PRODUCT CATALOG

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Powerwave®
technologies

POWERWAVE

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About Powerwave

Powerwave Technologies, Inc.

As a powerful global supplier of end-to-end wireless infrastructure solutions, Powerwave offers a broad product portfolio, including:

- Antenna Products
- Base Station Products
- Coverage Products

Powerwave has an extensive product line which includes Base Station Antennas, Antennas with Remote Electrical Tilt (RET), Clean Site™ Solutions, Tower Mounted Amplifiers, Filters, Power Amplifier Products, RF Conditioning Products, Full Range of Repeaters and Network Element Management Software along with VersaFlex™ Enclosure solutions.

Our product portfolio covers most major frequency bands and air interfaces. It is coupled with operational and engineering expertise, as well as experience forged by delivering into countless networks throughout the world with our entire range of wireless infrastructure products. This includes Single Carrier and Multi Carrier Power Amplifier products, base station antennas, tower mounted amplifiers (TMAs), coverage solution products, various filter products and a wide range of repeater products.

Leveraging comprehensive RF and digital signal processing capabilities, Powerwave provides network operators and OEMs with cost-efficient, reliable base station solutions. Highly integrated components provide greater efficiency and reduced power consumption, which provides our customers faster time to market, and lower total cost of ownership.

Powerwave delivers turn-key innovative commercial and public safety coverage and capacity solutions that give network operators, facilities owners and neutral hosts an edge over the competition. Designed for even the most challenging indoor and outdoor environments, Powerwave’s modular and integrated solutions speed rollout of services, help improve coverage, signal quality and capacity, and are designed to reduce capital and operating expenses.

POWERWAVE

Base Station Products

Power Amplifier Solutions

TMA Products

Filters

VersaFlex™ Enclosures

Base Station Products

A unique combination of capabilities sets Powerwave apart from other providers when it comes to rapidly delivering cost-efficient base station solutions to Operators & OEMs.

Comprehensive RF/Digital Competencies

Our engineering staff has expertise across all facets of RF and digital signal processing. Using all of these technological tools, we are able to create highly integrated base station solutions. Higher integration means fewer parts, optimum manufacturing efficiency and better value.

End-to-End System Provider

Because Powerwave is a proven provider for all categories of wireless infrastructure solutions-from antenna products to base station products to coverage products-you rely on us as a single-source and consolidate/streamline your supply chain.

POWERWAVE | **Base Station Products**

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POWERWAVE

Power Amplifier Solutions

Powerwave offers one of the industry's largest and most diverse line of Power Amplifier systems for Cellular, PCS and 3G wireless networks, with more than 350,000 MCPAs and SCPAs deployed worldwide. One key reason for this success is that we are able to rapidly roll out new solutions by leveraging the modular architecture of existing systems. Building upon field-proven components and technologies, our RF engineers are able to shorten design time and deliver systems with industry-leading density and efficiency that drive significant manufacturing, space and cost savings. This reduces both capital and operating expenses.

Power Amplifier Solutions

MCPA Modules

Title	Range (MHz)	Air Interface	Part Number	Page
120W Multi-Carrier Power Amplifier	1805-1880	GSM/EDGE/CDMA/WCDMA	G3L-1829-120	8
120W Multi-Carrier Power Amplifier	1930-1990	TDMA/GSM/EDGE/WCDMA/CDMA/1 x RTT/1XEVDO	G3L-1929-120	9
135W Multi-Carrier Power Amplifier	869-894	GSM/EDGE/CDMA/WCDMA	G3L-850-135	10
135W Multi-Carrier Power Amplifier	925-960 MHz	GSM/EDGE	G3L-929-135	11
160W Multi-Carrier Power Amplifier	869-894	TDMA/GSM/EDGE/CDMA/WCDMA	G3L-850-160	12
170W Multi-Carrier Power Amplifier	1930-1990	TDMA/GSM/EDGE/WCDMA/CDMA	G3L-1929-160	13
60W Multi-Carrier Power Amplifier	2100	WCDMA	G3L-2100-60	14

G3L-1829-120 | 120W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	1800
Frequency Range (MHz)	1805-1880
Instantaneous Bandwidth	35
Air Interface	GSM/EDGE/CDMA/WCDMA
Efficiency	13.4% (GSM)
RF Output Power	Typical: 120W (GSM/EDGE/WCDMA), 100W (CDMA)
Intermodulation Distortion	-65 dBc (Typical)
Harmonics	Better than -13 dBm/ 1MHz
Nominal RF Gain (dB)	63 dB +/- 0.5
Gain Flatness	+/-0.3 dB
Gain Variation with Temperature	+/-0.5 dB
Input Return Loss	17 dB (Max)
Output Return Loss	18 dB (Max)
DC Input Voltage Range	26 to 30 /Vdc (22 to 30 Vdc Operational)
DC Input Current	Typical: 33A (GSM), 31A (CDMA)
Alarms and Protections	Input over drive, VSWR, DC failure, High temperature, Loop failure, APC

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	23
Connectors DC Terminal Post	21W4 Combo-D w/size 8 contact
Connectors RF Input	21W4 Combo-D w/PkZ contact
Connectors RF Output	21W4 Combo-D w/PkZ contact
Connectors Alarm Output	21W4 Combo-D

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-33° C to 50° C
Storage Temperature Range	-40° to 70° C
Operating Humidity	5% to 95% (non condensing)
Storage Humidity	5% to 95% (non condensing)

G3L-1929-120 | 120W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	1900
Frequency Range (MHz)	1930-1990
Instantaneous Bandwidth	40
Air Interface	TDMA/GSM/EDGE/WCDMA/CDMA/1 x RTT/1XEVDO
Efficiency	13.4% (GSM)
RF Output Power	Typical: 120W (GSM/EDGE/WCDMA), 100W (CDMA)
Intermodulation Distortion	-65 dBc (Typical)
Harmonics	Better than -13 dBm/ 1MHz
Nominal RF Gain (dB)	63 dB +/- 0.5
Gain Flatness	+/-0.3 dB
Gain Variation with Temperature	+/-0.5 dB
Input Return Loss	18 dB (Max)
Output Return Loss	18 dB (Max)
DC Input Voltage Range	26 to 30 /Vdc (22 to 30 Vdc Operational)
DC Input Current	Typical: 35A (GSM), 32A (CDMA)
Alarms and Protections	Input over drive, VSWR, DC failure, High temperature, Loop failure, APC

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	23
Connectors DC Terminal Post	21W4 Combo-D w/size 8 contact
Connectors RF Input	21W4 Combo-D w/PkZ contact
Connectors RF Output	21W4 Combo-D w/PkZ contact
Connectors Alarm Output	21W4 Combo-D

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-20° C to +50° C
Storage Temperature Range	-40° to 70° C
Operating Humidity	5% to 95% (non condensing)
Storage Humidity	5% to 95% (non condensing)

G3L-850-135 | 135W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	850
Frequency Range (MHz)	869-894
Instantaneous Bandwidth	25
Air Interface	GSM/EDGE/CDMA/WCDMA
Efficiency	17%
RF Output Power	Typical: 135 Watts (GSM/EDGE/WCDMA), 110 Watts (CDMA)
Intermodulation Distortion	-65 dBc
Harmonics	Better than -13 dBm/1 MHz
Nominal RF Gain (dB)	63 dB ± 0.5 dB
Gain Flatness	± 0.5 dB
Gain Variation with Temperature	+/-0.5 dB
Input Return Loss	14 dB (Max)
Output Return Loss	16 dB (Max)
DC Input Voltage Range	26 to 28 Vdc (+21 to 30 Vdc Operational)
DC Input Current	Typical: 25A (GSM), 23A (CDMA)
Alarms and Protections	Input over drive, VSWR, DC failure, High temperature, Loop failure, APC, Low gain

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	19.8
Connectors DC Terminal Post	21W4 Combo-D w/size 8 contact
Connectors RF Input	21W4 Combo-D w/PkZ contact
Connectors RF Output	21W4 Combo-D w/PkZ contact
Connectors Alarm Output	21W4 Combo-D

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-33° C to 50° C
Storage Temperature Range	-40° to +85° C
Operating Humidity	5% to 95% (non condensing)
Storage Humidity	5% to 95% (non condensing)

G3L-929-135 | 135W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	900
Frequency Range (MHz)	925-960 MHz
Instantaneous Bandwidth	25 MHz
Air Interface	GSM/EDGE
Efficiency	19%
RF Output Power	135W (typical, GSM/EDGE)
Intermodulation Distortion	-65 dBc (Typical)
Harmonics	Better than -13 dBm/1 MHz
Nominal RF Gain (dB)	63 dB ± 0.5 dB
Gain Flatness	± 0.5 dB
Gain Variation with Temperature	± 0.5 dB
Input Return Loss	14 dB (Max)
Output Return Loss	16 dB (Max)
DC Input Voltage Range	26 to 28 Vdc (21 to 30 Vdc Operational)
DC Input Current	26A (nominal at rated power)
Alarms and Protections	Input over drive, VSWR, DC failure, High temperature, Loop failure, APC

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	20
Connectors DC Terminal Post	21W4 Combo-D w/size 8 contact
Connectors RF Input	21W4 Combo-D w/PkZ contact
Connectors RF Output	21W4 Combo-D w/PkZ contact
Connectors Alarm Output	21W4 combo-D

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-33 C to 50 C
Storage Temperature Range	-40 C to 70 C
Operating Humidity	5% to 95% non-condensing
Storage Humidity	5% ro 95% non-condensing

G3L-850-160 | 160W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	850
Frequency Range (MHz)	869-894
Instantaneous Bandwidth	25
Air Interface	TDMA/GSM/EDGE/CDMA/WCDMA
Efficiency	18%
RF Output Power	Typical: 160W (GSM/EDGE/WCDMA), 140W (CDMA)
Intermodulation Distortion	-65 dBc
Harmonics	Better than -13 dBm/ 1MHz
Nominal RF Gain (dB)	63 dB ± 0.5 dB
Gain Flatness	± 0.5 dB
Gain Variation with Temperature	+/-0.5 dB
Input Return Loss	16 dB (Max)
Output Return Loss	16 dB (Max)
DC Input Voltage Range	26 to 28 Vdc (+21 to 30 Vdc Operational)
DC Input Current	Typical: 30.5A (GSM), 29 (CDMA)
Alarms and Protections	Input over power, VSWR, DC failure, High temperature, Loop failure

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	24.3
Connectors DC Terminal Post	N/A
Connectors RF Input	Sub-miniature Combo D connector for RF & Digital interfaces
Connectors RF Output	N/A
Connectors Alarm Output	N/A

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-33° C to 50° C
Storage Temperature Range	-40° to 70° C
Operating Humidity	0% to 80% (non condensing)
Storage Humidity	0% to 95% (non condensing)

G3L-1929-160 170W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	1900
Frequency Range (MHz)	1930-1990
Instantaneous Bandwidth	Up to 60
Air Interface	TDMA/GSM/EDGE/WCDMA/CDMA
Efficiency	18.5%
RF Output Power	Typical: GSM/CDMA: 170/140 Watts @ 45MHz IBW
Intermodulation Distortion	-65 dBc
Harmonics	Better than -13 dBm/ 1MHz
Nominal RF Gain (dB)	63 dB ± 0.5 dB
Gain Flatness	± 0.5 dB
Gain Variation with Temperature	+/-0.5 dB
Input Return Loss	16 dB (Max)
Output Return Loss	16 dB (Max)
DC Input Voltage Range	26 to 28 Vdc (+21 to 30 Vdc Operational)
DC Input Current	34A@170W, 33A@160W
Alarms and Protections	Input over power, VSWR, DC failure, High temperature, Loop failure

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	26.4
Connectors DC Terminal Post	N/A
Connectors RF Input	Sub-miniature Combo D connector for RF & Digital interfaces
Connectors RF Output	N/A
Connectors Alarm Output	N/A

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-33° C to 50° C
Storage Temperature Range	-40° to 70° C
Operating Humidity	0% to 80% (non condensing)
Storage Humidity	0% to 95% (non condensing)

G3L-2100-60 60W Multi-Carrier Power Amplifier

ELECTRICAL SPECIFICATIONS	
Band (MHz)	2100
Frequency Range (MHz)	2100
Instantaneous Bandwidth	20
Air Interface	WCDMA
Efficiency	8.8%
RF Output Power	60W (Typical Performance) (WCDMA)
Intermodulation Distortion	-65 dBc (Typical)
Harmonics	-50 dBc
Nominal RF Gain (dB)	60 dB +/-0.5 dB
Gain Flatness	+/-0.2 dB over any 5 MHz channel
Gain Variation with Temperature	+/-0.5 dB
Input Return Loss	15 dB
Output Return Loss	18 dB
DC Input Voltage Range	26 to 28 /Vdc Nominal (21 to 30)
DC Input Current	27A (Typical)
Alarms and Protections	Input over drive, VSWR, DC failure, High temperature, Loop failure

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	355 x 99 x 450 (1'2"x4"x1'6")
Weight(lbs)	23
Connectors DC Terminal Post	21W4 Combo-D w/size 8 contact
Connectors RF Input	21W4 Combo-D w/PkZ contact
Connectors RF Output	21W4 Combo-D w/PkZ contact
Connectors Alarm Output	21W4 Combo-D

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-20° C to +60° C
Storage Temperature Range	-40° to +85° C
Operating Humidity	5% to 90% (non condensing)
Storage Humidity	5% to 90% (non condensing)

Power Amplifier Solutions

Single MCPA Outdoor Booster Systems

Title	Range (MHz)	Air Interface	Part Number	Page
OS-1 Outdoor Booster System	1800	GSM/EDGE/CDMA/WCDMA	OS-1851-H0-XXX	16
OS-1 Outdoor Booster System	1900	GSM/EDGE/CDMA/WCDMA	OS-1951-H0-XXX	17
OS-1 Outdoor Booster System	2100	WCDMA	OS-2151-S0-XXX	18
OS-1 Outdoor Booster System	800	GSM/EDGE/CDMA/WCDMA	OS-0851-P0-XXX	19
OS-1 Outdoor Booster System	900	GSM/EDGE	OS-0951-P0-XXX	20

OS-1851-H0-XXX | OS-1 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE/CDMA/WCDMA
Frequency (MHz) Down Link	1805-1880
Frequency (MHz) Up Link	1710-1785
System Output Power - GSM/EDGE/WCDMA	85** Watts
System Output Power - CDMA/CDMA 2000	71** Watts
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	35
Tx Gain Range (dB)	0 to +14
Rx Path Insertion Loss	2dB* (-000 version)
Supply Voltage	180-264 VAC, 47-63 Hz Single Phase, or +27 VDC
Noise Figure (dB)	2.3* @ max. Gain, 1.89* @ min. Gain
Rx Gain Range	0 to +13.0 variable (-003 version)
Input Intercept Point IIP3 (dBm)	+12 min.
Tx Rejection In Rx Band (dB)	100 min.
VSWR Alarm Threshold (dB)	
Return Loss, All Ports (dB)	15 min.
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	228 x 660 x 660 (9"x 2'2 x 2'2")
Weight(lbs)	102
RF Connectors	7/16 DIN Female X 6
Number of MCPAs per Sector	1
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
G3L-1829-120	120W MCPA module	1
930-00018-009	3 KW Rectifier	1
Choose one of:		
OS-1851-H0-000	Enclosure - TMA model - DC transparency	1
OS-1851-H0-003	Enclosure - LNA model - includes VSWR monitor, lightning arrestors	1

* Typical Performance.
** Typical, with G3L-1829-120 MCPA Module Inserted.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-1951-H0-XXX | OS-1 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE/CDMA/WCDMA
Frequency (MHz) Down Link	1930-1990
Frequency (MHz) Up Link	1850-1910
System Output Power - GSM/EDGE/WCDMA	125** Watts
System Output Power - CDMA/CDMA 2000	100** Watts
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	45/60
Tx Gain Range (dB)	0 to +14 variable
Rx Path Insertion Loss	2.0*
Supply Voltage	180-264 VAC or +27 VDC
Noise Figure (dB)	3dB
Rx Gain Range	+4dB Fixed (-002)
Input Intercept Point IIP3 (dBm)	+12dBm
Tx Rejection In Rx Band (dB)	100 min
VSWR Alarm Threshold (dB)	7+-2dB
Return Loss, All Ports (dB)	15 min.
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	228 x 660 x 660 (9"x 2'2 x 2'2")
Weight(lbs)	102
RF Connectors	7/16 DIN Female X 6
Number of MCPAs per Sector	1
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
930-00018-009	3 KW Rectifier	1
OS-1951-H0-002	Enclosure - TMA model with LNA - DC transparency	1
Choose one of:		
G3L-1929-120	120W MCPA module	1
G3L-1929-160	160W MCPA module	1

* Typical Performance.
** Typical, with G3L-1929-160 MCPA Module Inserted, 45 MHz IBW

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-2151-S0-XXX | OS-1 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	WCDMA
Frequency (MHz) Down Link	2110-2170
Frequency (MHz) Up Link	1920-1980
System Output Power - GSM/EDGE/WCDMA	N/A
System Output Power - CDMA/CDMA 2000	40** Watts (preliminary: 100W with G3L-2130-140)
IMD Specification	-63dBc*
Instantaneous Bandwidth (MHz)	20 (preliminary 60 with G3L-2130-140)
Tx Gain Range (dB)	0 to +15 variable
Rx Path Insertion Loss	2.0*
Supply Voltage	180-264 VAC, or +27 VDC
Noise Figure (dB)	N/A
Rx Gain Range	N/A
Input Intercept Point IIP3 (dBm)	N/A
Tx Rejection In Rx Band (dB)	100dB min.
VSWR Alarm Threshold (dB)	N/A
Return Loss, All Ports (dB)	14dB min.
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	228 x 660 x 660 (9"x 2'2 x 2'2")
Weight(lbs)	102 (46 Kg)
RF Connectors	7/16 DIN Female X 4
Number of MCPAs per Sector	1
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
OS-2151-S0-000	Enclosure - TMA model -DC transparency	1
930-00018-009	3 KW Rectifier	1
G3L-2100-60	40W MCPA module	1
OS-2151-S0-010	Enclosure - TMA model -DC transparency - preliminary	1
	Rectifier	1
G3L-2130-140	140W MCPA module (preliminary)	1

* Typical
** Typical, with G3L-2100-60 module installed.
All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-0851-P0-XXX | OS-1 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE/CDMA/WCDMA
Frequency (MHz) Down Link	869-894
Frequency (MHz) Up Link	824-849
System Output Power - GSM/EDGE/WCDMA	120**
System Output Power - CDMA/CDMA 2000	100**
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	25
Tx Gain Range (dB)	0 to +20
Rx Path Insertion Loss	2.5* (-000 version)
Supply Voltage	180-264 VAC or +27VDC
Noise Figure (dB)	2.5 @ max gain, 3.0 @ min gain* (-003 version)
Rx Gain Range	0 to +13.0 variable (-003 version)
Input Intercept Point IIP3 (dBm)	+12 min (-003 Version)
Tx Rejection In Rx Band (dB)	100 min
VSWR Alarm Threshold (dB)	7.0 (+/- 2 dB) (-003 version)
Return Loss, All Ports (dB)	15 min
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	228 X 660 X 660 (9"x 2'2 x 2'2")
Weight(lbs)	102
RF Connectors	7/16 DIN female X 6
Number of MCPAs per Sector	1
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
930-00018-009 (optional)	3 KW Rectifier	1
Choose one of the following MCPA Modules:		
G3L-850-160	160W MCPA Module	1
G3L-850-135	135W MCPA Module	1
Choose one of the following Enclosures:		
OS-0851-P0-000	Enclosure -TMA model - DC transparency	1
OS-0851-P0-003	Enclosure - LNA model with VSWR monitor - no DC transparency	1

* Typical Performance.
** Typical, with G3L-850-160 MCPA Module Inserted.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-0951-P0-XXX | OS-1 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE
Frequency (MHz) Down Link	925-960
Frequency (MHz) Up Link	880-915
System Output Power - GSM/EDGE/WCDMA	95 Watts**
System Output Power - CDMA/CDMA 2000	N/A
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	25
Tx Gain Range (dB)	0 to +13.0 variable
Rx Path Insertion Loss	2dB * (-000 version)
Supply Voltage	180-264 VAC, 47-63 Hz Single Phase or +27VDC
Noise Figure (dB)	2.2* @ max. gain, 3.0* @ min. gain (-003 and -004 versions)
Rx Gain Range	0 to +13.0 variable (-003 and -004 versions)
Input Intercept Point IIP3 (dBm)	+12 min.
Tx Rejection In Rx Band (dB)	90 min.
VSWR Alarm Threshold (dB)	9.5 (+/-2dB) (-004 version)
Return Loss, All Ports (dB)	15 min.
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	228 x 660 x 660 (9"x 2'2 x 2'2")
Weight(lbs)	46 (102)
RF Connectors	7/16 DIN Female X 6
Number of MCPAs per Sector	1
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 to +50
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
G3L-929-135	135W MCPA Module	1
930-00018-009	3 KW Rectifier	1
Choose one of:		
OS-0951-P0-000	Enclosure - TMA model -	1
OS-0951-P0-003	Enclosure - LNA model -	1
OS-0951-P0-004	Enclosure - LNA model w/Remote Tx Gain Adjust	1

* Typical Performance.
** Typical, with G3L-850-135 MCPA Module Inserted.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

Power Amplifier Solutions

Dual MCPA Outdoor Booster Systems

Title	Range (MHz)	Air Interface	Part Number	Page
OS-2 Outdoor Booster System	1800	GSM/EDGE	OS-1821-H0-XXX	22
OS-2 Outdoor Booster System	1900	GSM/EDGE/CDMA/WCDMA	OS-1921-H0-XXX	23
OS-2 Outdoor Booster System	900	GSM/EDGE	OS-0921-V0-XXX	24

OS-1821-H0-XXX | OS-2 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE
Frequency (MHz) Down Link	1805-1880
Frequency (MHz) Up Link	1710-1785
System Output Power - GSM/EDGE/WCDMA	160** Watts
System Output Power - CDMA/CDMA 2000	134** Watts
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	35
Tx Gain Range (dB)	1 MCPA Module 0 to +12, 2 MCPA Module 0 to +15
Rx Path Insertion Loss	2.5dB*, 0.5dB* (bypass)
Supply Voltage	180-264 VAC, 47-63 Hz Single Phase, or +27VDC
Noise Figure (dB)	2.5* @ max. Gain, 3.5* @ min. Gain (-001 version)
Rx Gain Range	0 to +12.0 variable (-001 version)
Input Intercept Point IIP3 (dBm)	+12dBm min.
Tx Rejection In Rx Band (dB)	100 min.
VSWR Alarm Threshold (dB)	N/A
Return Loss, All Ports (dB)	14 min
Impedance All Ports (Ohms)	50
Misc.	N/A

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	407 x 865 x 840 (1'4"x 2'10"x 2'9")
Weight(lbs)	151-183
RF Connectors	7/16 DIN Female X 4
Number of MCPAs per Sector	2
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
G3L-1829-120	120W MCPA Module	1-2
93-00018-009	3KW Rectifier	1-2
Choose one of the following Enclosures:		
OS-1821-H0-000	TMA Model - 12VDC supply to TMA	1
OS-1821-H0-001	LNA Model	1

* Typical
** Typical, with two G3L-1829-120 modules installed.
All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-1921-H0-XXX | OS-2 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE/CDMA/WCDMA
Frequency (MHz) Down Link	1930-1990
Frequency (MHz) Up Link	1850-1910
System Output Power - GSM/EDGE/WCDMA	160 Watts**
System Output Power - CDMA/CDMA 2000	134Watts**
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	45/60
Tx Gain Range (dB)	1 MCPA Module 0 to +12, 2 MCPA Modules 0 to +15
Rx Path Insertion Loss	2.5*
Supply Voltage	180-264 VAC, 47-63 Hz Single Phase, or +27VDC
Noise Figure (dB)	N/A
Rx Gain Range	N/A
Input Intercept Point IIP3 (dBm)	N/A
Tx Rejection In Rx Band (dB)	100 dB min
VSWR Alarm Threshold (dB)	N/A
Return Loss, All Ports (dB)	14dB min.
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	407 x 863 x 838 (16"x 34"x 33")
Weight(lbs)	151-183
RF Connectors	7/16 DIN Female X 8
Number of MCPAs per Sector	2
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
930-00018-009	3 KW rectifier	1-2
OS-1921-H0-000	Enclosure - TMA model - DC transparency or TMA bias Function (configurable)	1
Compatible with MCPA Module:		
G3L-1929-120	120W MCPA module	1-2

* Typical
** Typical, output power at antenna port with 2 G3L-1929-120 modules installed, 45 MHz IBW.
All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-0921-V0-XXX | OS-2 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE
Frequency (MHz) Down Link	935-960
Frequency (MHz) Up Link	890-915
System Output Power - GSM/EDGE/WCDMA	180** Watts
System Output Power - CDMA/CDMA 2000	N/A
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	25
Tx Gain Range (dB)	1 MCPA Module 0 to 17.5, 2 MCPA Module 0 to 20.5
Rx Path Insertion Loss	2dB*(-000 variant), 0.5dB*dB (bypass mode)
Supply Voltage	180-264 VAC, 47-63 Hz Single Phase, or +27VDC
Noise Figure (dB)	2.5* @ max. Gain, 3.5* @ min. Gain (-001 and -003 variants)
Rx Gain Range	0 to +11.0 variable (-001 and -003 variants)
Input Intercept Point IIP3 (dBm)	+12 min.
Tx Rejection In Rx Band (dB)	90 min.
VSWR Alarm Threshold (dB)	9.5 (+/-2dB) (-003 variant)
Return Loss, All Ports (dB)	14 min.
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	407 x 865 x 840 (1'4"x 2'10"x 2'9")
Weight(lbs)	151-183
RF Connectors	7/16 DIN Female X 4
Number of MCPAs per Sector	1 or 2
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 to +50
Ingress Protection Class	IP54
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
G3L-929-135	135W MCPA module	1-2
930-000-18-009	Rectifier	1-2
Choose one of the following Enclosures:		
OS-0921-V0-000	Enclosure - TMA model - 12V supply to TMA	1
OS-0921-V0-001	Enclosure - LNA model	1
OS-0921-V0-003	Enclosure - LNA model with VSWR monitor	1

* Typical
** Typical, with two G3L-929-135 modules installed.
All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

Power Amplifier Solutions

Triple MCPA Outdoor Booster Systems

Title	Range (MHz)	Air Interface	Part Number	Page
OS-3 3 Sector Outdoor Booster System		GSM/EDGE/CDMA/WCDMA	OS-1933-E0-XXX	26
OS-3 Outdoor Booster System	1900	IS-95B, 1xEV-DO CDMA2000, GSM, EDGE & WCDMA	OS-1991-H0-XXX	27

OS-1933-E0-XXX | OS-3 3 Sector Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	GSM/EDGE/CDMA/WCDMA
Frequency (MHz) Down Link	1930-1995
Frequency (MHz) Up Link	1850-1915
System Output Power - GSM/EDGE/WCDMA	125 W*
System Output Power - CDMA/CDMA 2000	110 W**
IMD Specification	-65 dBc*
Instantaneous Bandwidth (MHz)	65 (with G3L-1929-160 module)
Tx Gain Range (dB)	0-17 Variable
Rx Path Insertion Loss	0.5dB* (RF Bypass Mode)
Supply Voltage	180-264 VAC
Noise Figure (dB)	2.5 (Max @ 12dB Gain), 4.5 (Max @ 0 dB gain)
Rx Gain Range	0-12 dB
Input Intercept Point IIP3 (dBm)	0.0
Tx Rejection In Rx Band (dB)	100
VSWR Alarm Threshold (dB)	Adjustable
Return Loss, All Ports (dB)	14
Impedance All Ports (Ohms)	50
Misc.	

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	16" W x 40" H x 38" D
Weight(lbs)	385 (175 kg)
RF Connectors	7/16 DIN-F, N-F
Number of MCPAs per Sector	1
Number of Sectors	3

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 °C to +50 °C
Ingress Protection Class	IP55
Lightning Protection	20kA EIC 61000-4-5, 8/20 uS Waveform

ORDERING INFORMATION

Model Number	Description	Quantity
OS-1933-E0-003	OS-3, 1900 MHz, Trident 3 Sector, 3I/3O	
	Includes:	
	G3L-1929-160 modules	3
	RF Conditioning Units (RFCU) 800-22384-001	3
	Rectifiers	4
OS-1933-E0-001	OS-3, 1900 MHz, Trident 1 Sector, 3I/3O	
	Includes:	
	G3L-1929-160 module	1
	RF Conditioning Unit (RFCU) 800-22384-001	1
	Rectifiers	2
INST-1933-E0-001	1 Sector Upgrade Kit	
	Includes:	
	G3L-1929-160 module	1
	RF Conditioning Unit (RFCU) 800-22384-001	1
	Rectifier	1

* Typical Performance
** Typical, with G3L-1929-160 MCPA Module Inserted, 45 MHz IBW

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

OS-1991-H0-XXX | OS-3 Outdoor Booster System

ELECTRICAL SPECIFICATIONS

Air Interface	IS-95B, 1xEV-DO CDMA2000, GSM, EDGE & WCDMA
Frequency (MHz) Down Link	1930-1995
Frequency (MHz) Up Link	1850-1915
System Output Power - GSM/EDGE/WCDMA	335** Watts
System Output Power - CDMA/CDMA 2000	285** Watts
IMD Specification	-65* dBc
Instantaneous Bandwidth (MHz)	45/65
Tx Gain Range (dB)	duplex/simplex: 3 MCPA's: 0.0 to +16.2/17.0, 2 MCPA's: 0 to 14.4/15.2, 1 MCPA: 0 to +11.4/12.2
Rx Path Insertion Loss	3.0 max (-003, -103, -200 versions)
Supply Voltage	-36 to -60VDC (-103 version), 180-264VAC (-003,-004 versions),+26-28VDC (-200 version)
Noise Figure (dB)	2.5 at max Rx gain (-004 version)
Rx Gain Range	0-12 dB in 1 dB increments (-004 version only)
Input Intercept Point IIP3 (dBm)	0.0 (-004 version only)
Tx Rejection In Rx Band (dB)	100 min
VSWR Alarm Threshold (dB)	N/A
Return Loss, All Ports (dB)	14 min.
Impedance All Ports (Ohms)	50
Misc.	Remotely configurable via web GUI, accessible via Ethernet interface. TMA bias support through PDU functionality. DC bypass configurability on -004 version.

MECHANICAL SPECIFICATIONS

Dimension HxWxD mm(ft)	405 x 774 x 864 (1'4"x 2'6"x 2'10")
Weight(lbs)	255 lbs, fully populated, with 3 MCPA modules
RF Connectors	7/16 DIN Female
Number of MCPAs per Sector	3
Number of Sectors	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-20 C to +50 C
Ingress Protection Class	IP55
Lightning Protection	20kA EIC 61000-4-5, 8/20 us waveform

ORDERING INFORMATION

Model Number	Description	Quantity
Choose one of:		
G3L-1929-160	160W MCPA module	1-3
G3L-1929-120	120W MCPA module	1-3
Choose one of:		
OS-1991-H0-003	220 VAC Enclosure - TMA model	1
OS-1991-H0-004	220 VAC Enclosure - LNA with DC bypass option for TMA bias	1
OS-1991-H0-103	-48 VDC Enclosure - TMA model	1
OS-1991-H0-200	+27 VDC Enclosure - TMA model	1

* Typical performance
**Typical, with 3 G3L-1929-160 modules, 45 MHz IBW.
All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

POWERWAVE

TMA Products

TMA Products

Powerwave offers one of the most extensive Tower Mounted Amplifier (TMA) product portfolios, including single, twin and dual band TMAs. Our TMA design offers a balanced amplifier design and bypass function that provides superior receive system performance and reliability. Powerwave TMAs are designed for the harshest environments to include desert and polar climates and extreme environments such as rain forests. Powerwave TMAs are also part of the Powerwave Clean Site Solutions which provides multiple benefits such as reduced installation cost, reuse of existing building permits and reduced visual impact to base stations.

TMA Products

Tower Mounted Amplifiers

TMA Type	Up-Link (MHz)	Down-Link (MHz)	Part Number	Page
TMA Twin 800 AISG	824-849	869-894	24501	30
TMA Twin 900 AISG	890-915	935-960	25001	31
TMA Twin 900 AISG	880-908	925-953	25002	32
TMA-DD 900	890-915	935-960	LGP104nn	33
TNA-DD 2100	1920-1980	2100-2170	LGP167nn	34
TMA-DD 1900 MHz	1850-1910	1930-1990	LGP175nn	35
TMA-DD 1800 Twin	1710-1785	1805-1880	LGP185nn	36
TMA-DD 1900 Twin	1850-1910	1930-1990	LGP186nn	37
TMA-DD 800	824-849	869-894	LGP102nn	38
TMA-DD 850 MHz SMR Rejection	824-849	869-894	LGP174nn	39
TMA-DD EGSM	880-915	925-960	LGP192nn	40
TMA-DD Micro Twin 2100	1920-1980	2110-2170	LGP215nn	41
TMA Twin Dual Band 850/1900	824-849 / 1850-1910	869-894 / 1930-1990	TT08-19DB111-001	42
TMA Twin 1900 with 850 Bypass	1850-1910 with 824-894 bypass	1930-1990 with 824-894 bypass	TT19-08BP111-001	43
TMA Micro Twin AWS	1710-1755	2110-2155	TTAW-0000112-001	44
TMA Twin 2100 15 MHz	1920.5-1935.5	2110.5-2125.5	010-11182-02nn	45
TMA Twin 2100 15 MHz	1964.9-1979.9	2154.9-2169.9	010-11183-02nn	46

24501 TMA Twin 800 12 dB SL AISG

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	824-849
Down-link(MHz)	869-894
UL Rejection	>82 dB
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	1.4 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+25, Typical
UL Bypass Loss(dB)	2.0 dB, Typical
DL Frequency Range (MHz)	25 MHz, 869-894
DL Return Loss	>18 dB
DL Insertion Loss (dB)	0.4
Intermodulation	<-118 dBm (@ 2x43 dBm Tx carriers)
Alarm Functionality	AISG compatible or in case of no AISG command received, current alarm mode with 170-190 mA alarm current
Power Consumption	@12 VDC, 1.5W per LNA
Power Handling, RMS	>53.5 dBm
AISG Compatibility	24501 AISG 1.1 (Field upgradable to AISG 2.0); 24511 AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	228x169x120 (9"x6.7"x4.8")
Weight(lbs)	<6 kg (13.2 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 Female
Mounting Kit	Mounting kit for pole and wall included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40°C to +65°C (-40°F to +149°F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 8kA 8/20 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours per TMA
Ingress Protection	IP68

APPROVAL AND TESTS	
Safety	EN60950, UL 1950, ETL
EMC	ETS 300 342-3

25001 TMA Twin 900 12 dB SL AISG

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	890-915
Down-link(MHz)	935-960
UL Rejection	>82 dB
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	1.4 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+25, Typical
UL Bypass Loss(dB)	2.0 dB, Typical
DL Frequency Range (MHz)	25 MHz, 935-960
DL Return Loss	>18 dB
DL Insertion Loss (dB)	0.4
Intermodulation	<-118 dBm (@ 2x43 dBm Tx carriers)
Alarm Functionality	AISG compatible or in case of no AISG command received, current alarm mode with 170-190 mA alarm current
Power Consumption	@12 VDC, 1.5W per LNA
Power Handling, RMS	>53.5 dBm
AISG Compatibility	25001 AISG1.1 (Field upgradable to AISG 2.0); 25011 AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	228x169x120 (9"x6.7"x4.8")
Weight(lbs)	<6 kg (13.2 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 Female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40°C to +65°C (-40°F to +149°F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 8kA 8/20 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours per TMA
Ingress Protection	IP68

APPROVAL AND TESTS	
Safety	EN60950, UL1950, ETL
EMC	ETS 300 342-3

25002 TMA Twin 900 EGSM 28 MHz 12 dB SL AISG

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	880-908
Down-link(MHz)	925-953
UL Rejection	>82 dB
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	1.4 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+25, Typical
UL Bypass Loss(dB)	2.0, Typical
DL Frequency Range (MHz)	25 MHz, 925-953
DL Return Loss	>18 dB
DL Insertion Loss (dB)	0.4
Intermodulation	<-118 dBm (@ 2x43 dBm Tx carriers)
Alarm Functionality	AISG compatible or in case of no AISG command received, current alarm mode with 170-190 mA alarm current
Power Consumption	@ 12 VDC, 1.5W per LNA
Power Handling, RMS	>53.5 dBm
AISG Compatibility	25002 AISG 1.1 (Field upgradable to AISG 2.0); 25012 AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	228x169x120 (9"x6.7"x4.8")
Weight(lbs)	<6 kg (13.2 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 Female
Mounting Kit	Mounting kit for pole and wall included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40°C to +65°C (-40°F to +149°F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours per TMA
Ingress Protection	IP68

APPROVAL AND TESTS	
Safety	EN60950, UL 1950, ETL
EMC	ETS 300 342-3

LGP104nn Dual Duplex 900 MHz

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	890-915
Down-link(MHz)	935-960
UL Rejection	>80 dB
UL Gain(dB)	12
UL Return Loss	>16 dB
UL Noise Figure	< 1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	OIP3, > +25, Typical
UL Bypass Loss(dB)	<2.0
DL Frequency Range (MHz)	25 MHz, 935-960
DL Return Loss	> 18 dB
DL Insertion Loss (dB)	0.35 dB, Typical
Intermodulation	2 Tx@x43 dBm (dBc), -159
Alarm Functionality	LGP10411 current alarm 170-190 mA; LGP10401 current alarm compatible with PDU LGP121nn
Power Consumption	@12 VDC, 1.5 W
Power Handling, RMS	>53 dBm
AISG Compatibility	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	109 x 284 x 127 (4"x11"x5)
Weight(lbs)	<5.6 kg (12.3 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETS 300 342-3

LGP167nn Dual Duplex 2100 MHz Full Band

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1920-1980
Down-link(MHz)	2100-2170
UL Rejection	N/A
UL Gain(dB)	23-32 dB variable gain or 12 dB fixed gain
UL Return Loss	>18 dB
UL Noise Figure	1.4 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+37 dBm, Typical
UL Bypass Loss(dB)	<2.0 dB (12 dB variant), Typical
DL Frequency Range (MHz)	60 MHz, 2110-2170 MHz
DL Return Loss	> 20 dB
DL Insertion Loss (dB)	0.3 dB, Typical
Intermodulation	2 Tx @ x43 dBm (dBc), -125 (-168) dBc
Alarm Functionality	Two levels, individually supervised LNAs
Power Consumption	@12 VDC, 8 W per LNA (1.5 W 12 dB gain)
Power Handling, RMS	>49 dBm (4x43 dBm)
AISG Compatibility	AISG 1.1

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	169 x 272.5 x 67.7 (7"x11"x3")
Weight(lbs)	<4 kg (8.8 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETS 125 113

LGP175nn TMA DD 1900 MHz with 10 dB Rejection at 1912 MHz

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1850-1910
Down-link(MHz)	1930-1990
UL Rejection	@1912 MHz, >10 dB
UL Gain(dB)	12
UL Return Loss	>20 dB
UL Noise Figure	< 1.6 dB
UL Output 3rd Order Intercept Point(dBm)	> +23
UL Bypass Loss(dB)	<2.6 dB
DL Frequency Range (MHz)	60 MHz, 1930-1990
DL Return Loss	> 20 dB
DL Insertion Loss (dB)	< 0.5 dB
Intermodulation	2 Tx@43 dBm (dBc), <-158
Alarm Functionality	Two levels, individually supervised LNAs
Power Consumption	@12 VDC, 1.2 W
Power Handling, RMS	>54 dBm
AISG Compatibility	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	181 x 365 x 66 (7"x1'2x4")
Weight(lbs)	6.4 kg (14.1 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65

APPROVAL AND TESTS	
Safety	UL60 950
EMC	FCC Part 15

LGP185nn Twin Dual Duplex 1800 MHz Full Band

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1710-1785
Down-link(MHz)	1805-1880
UL Rejection	>80 dB
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	1.5 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+26 dBm, Typical
UL Bypass Loss(dB)	< 3.0 dB, Typical
DL Frequency Range (MHz)	75 MHz, 1805-1880
DL Return Loss	> 18 dB
DL Insertion Loss (dB)	0.4 dB, Typical
Intermodulation	@ 2 x 43 dBm Tx carriers, In receive band, <- 116 dBm, referred to Antenna port
Alarm Functionality	LGP18506: 170-190 mA alarm current; LGP18501: current alarm compatible with PDU LGP121nn; LGP18507, 10, 17, 20 AISG compatible or in case of no AISG command received current alarm mode: LGP18510, 20: 170-190 mA; LGP18507, 17: current alarm compatible with PDU LGP121nn
Power Consumption	@12 VDC, 1.5 W per LNA
Power Handling, RMS	>53 dBm
AISG Compatibility	LGP18501, 06 no AISG; LGP18507, 10 AISG 1.1 (field upgrdable to AISG 2.0), LGP18517, 20 AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	169 x 272.5 x 67.7 (7"x11"x3")
Weight(lbs)	<4.5kg (9.9 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	LGP18501, 06: IP 65; LGP18507, 10, 17, 20 IP 68

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETS 301 489

LGP186nn Twin Dual Duplex 1900 MHz Full Band

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1850-1910
Down-link(MHz)	1930-1990
UL Rejection	>80 dB
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	1.5 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+26 dBm, Typical
UL Bypass Loss(dB)	< 3.0 dB, Typical
DL Frequency Range (MHz)	60 MHz, 1930-1990
DL Return Loss	> 18 dB
DL Insertion Loss (dB)	0.4 dB, Typical
Intermodulation	@ 2 x +43 dBm Tx carriers, In receive band, <- 116 dBm, referred to Antenna port (<-159 dBc)
Alarm Functionality	LGP18606: 170-190 mA alarm current; LGP18601: current alarm compatible with PDU LGP121nn; LGP18607, 10, 17, 20 AISG compatible or in case of no AISG command received current alarm mode: LGP18610, 20: 170-190 mA; LGP18607, 17: current alarm compatible with PDU LGP121nn
Power Consumption	@12 VDC, 1.5 W per LNA
Power Handling, RMS	>53 dBm
AISG Compatibility	LGP18601, 06 no AISG; LGP18607, 10 AISG 1.1 (field upgrdable to AISG 2.0), LGP18617, 20 AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	169 x 272.5 x 67.7 (7"x11"x3")
Weight(lbs)	<4.5kg (9.9 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	LGP18601, 06: IP 65; LGP18607, 10, 17, 20 IP 68

APPROVAL AND TESTS	
Safety	UL60 950, ETL
EMC	FCC Part 15

LGP102nn Dual Duplex 800 MHz

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	824-849
Down-link(MHz)	869-894
UL Rejection	N/A
UL Gain(dB)	12
UL Return Loss	>16 dB
UL Noise Figure	< 1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	OIP3, > +25, Typical
UL Bypass Loss(dB)	< 2.0
DL Frequency Range (MHz)	25 MHz, 869-894
DL Return Loss	> 18 dB
DL Insertion Loss (dB)	0.35 dB, Typical
Intermodulation	2 Tx@x43 dBm (dBc), -159
Alarm Functionality	Two levels, individually supervised LNAs
Power Consumption	@12 VDC, 1.5 W
Power Handling, RMS	>53 dBm
AISG Compatibility	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	109 x 304 x 127 (4"x11"x5")
Weight(lbs)	<5.8 kg (12.8 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65

APPROVAL AND TESTS	
Safety	UL60 950, ETL
EMC	FCC Part 15

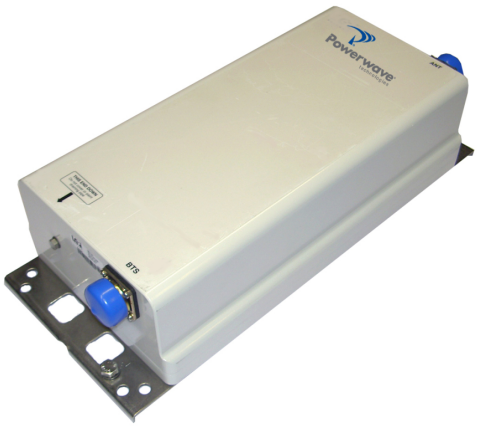
LGP174nn TMA DD 850 MHz with SMR Rejection

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	824-849
Down-link(MHz)	869-894
UL Rejection	SMR Rejection, >30 dB @ 851 MHz
UL Gain(dB)	12
UL Return Loss	>21 dB, Typical
UL Noise Figure	< 1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	> +23, Typical
UL Bypass Loss(dB)	N/A
DL Frequency Range (MHz)	25 MHz, 869-894
DL Return Loss	> 21 dB, Typical
DL Insertion Loss (dB)	< 0.45 dB, Typical
Intermodulation	@ 2 x 43 dBm Tx carrier dBm (dBc), <-118 (<-161)
Alarm Functionality	Two levels, individually supervised LNAs
Power Consumption	@12 VDC, 1.2 W
Power Handling, RMS	>57 dBm
AISG Compatibility	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	181 x 365 x 66 (7"x1'2x4")
Weight(lbs)	<7.9 kg (17.4 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65

APPROVAL AND TESTS	
Safety	UL60 950
EMC	FCC Part 15



LGP192nn Dual Duplex EGSM 900 MHz Full Band

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	880-915
Down-link(MHz)	925-960
UL Rejection	>83 dB
UL Gain(dB)	12
UL Return Loss	>20 dB, Typical
UL Noise Figure	< 1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	> +23
UL Bypass Loss(dB)	2.0, Typical
DL Frequency Range (MHz)	35 MHz, 925-960
DL Return Loss	> 20 dB, Typical
DL Insertion Loss (dB)	<0.7 dB, Typical
Intermodulation	@ 2 x 43 dBm Tx carrier (dBc), <-115 (<-158)
Alarm Functionality	LGP19203 alarm current 170-190 mA; LGP19201 current alarm compatible with PDU LGP121nn
Power Consumption	@12 VDC, 1.5 W
Power Handling, RMS	>52 dBm
AISG Compatibility	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	169 x 272 x 89 (7"x11"x4")
Weight(lbs)	<5.7 kg (12.3 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETS 300 342-3

LGP215nn

Micro Twin™ Tower Mounted Amplifier Dual Duplex 2100 MHz Full Band

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1920-1980
Down-link(MHz)	2110-2170
UL Rejection	>85 dB (2110-2170 MHz)
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	1.4 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+25, Typical
UL Bypass Loss(dB)	<2.0 dB, Typical
DL Frequency Range (MHz)	60 MHz, 2110-2170 MHz
DL Return Loss	>20 dB
DL Insertion Loss (dB)	0.3 dB
Intermodulation	@ 2 x 43 dBm Tx carriers, In receive band, <-125 dBm, referred to Antenna port
Alarm Functionality	AISG Compatible. In case of no AISG command received current alarm mode. LGP21509, 19: 170-190 mA; LGP21508, 18: current alarm compatible with PDU LGP121nn
Power Consumption	@12 VDC, 1.5 W per LNA
Power Handling, RMS	>49 dBm (4x43 dBm)
AISG Compatibility	LGP21508, 09 AISG 1.1 (field upgradable to AISG 2.0); LGP21518, 19 AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	154 x 192 x 50 (6"x8"x2")
Weight(lbs)	<3.5kg (7.7 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 8kA 8/20 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65 and IP68

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETSI 125 113

TT08-19DB111-001 TMA Twin Dual Band 850/1900 12 dB AISG 1.1

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	824-849 / 1850-1910
Down-link(MHz)	869-894 / 1930-1990
UL Rejection	SMR Rejection, >30 dB @ 851 MHz
UL Gain(dB)	12
UL Return Loss	>18 dB
UL Noise Figure	<1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	+25, Typical
UL Bypass Loss(dB)	2.5, Typical
DL Frequency Range (MHz)	869-894 / 1930-1990
DL Return Loss	> 18 dB
DL Insertion Loss (dB)	850 MHz, 0.4; 1900 MHz, 0.5
Intermodulation	@ 2 x +43 dBm Tx carriers, in receive band, <-160 dBc, referred to antenna port
Alarm Functionality	AISG compatibe or in case of no AISG command received current alarm mode 270-290 mA
Power Consumption	< 1.8 W per branch @ 12V
Power Handling, RMS	850: >57 dBm; 1900: >55 dBm
AISG Compatibility	AISG 1.1

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	360x169x137mm (14.2"x6.7"x5.4")
Weight(lbs)	<22
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female, long neck
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to + 149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours (per TMA)
Ingress Protection	IP65 and IP68

APPROVAL AND TESTS	
Safety	EN 60950
EMC	3GPP: TS 25.113

TT19-08BP111-001 TMA Twin 1900 with 850 Bypass 12 dB AISG 1.1

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1850-1910 with 824-894 bypass
Down-link(MHz)	1930-1990 with 824-894 bypass
UL Rejection	>77 dB
UL Gain(dB)	12
UL Return Loss	>18
UL Noise Figure	<1.7 dB, Typical
UL Output 3rd Order Intercept Point(dBm)	>+23
UL Bypass Loss(dB)	2.5, Typical
DL Frequency Range (MHz)	1930-1990 with 824-894 bypass
DL Return Loss	>18
DL Insertion Loss (dB)	850 MHz, <0.3; 1900 MHz, <0.5
Intermodulation	@ 2 x +43 dBm TX carriers, in receive band, <160 dBc, reffered to antenna port
Alarm Functionality	AISG compatible or in case of no AISG command received, current alarm mode 170-190 mA
Power Consumption	<1.1W @12V
Power Handling, RMS	850: >57 dBm; 1900: >55 dBm
AISG Compatibility	AISG 1.1

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	250x169x137 mm (9.9"x6.7"x5.4")
Weight(lbs)	<16
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female, long neck
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to +149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours per TMA
Ingress Protection	IP65 and IP68

APPROVAL AND TESTS	
Safety	EN60950
EMC	3GPP: TS 25.113

TTAW-0000112-001 TMA Micro Twin AWS 12 dB AISG 2.0

ELECTRICAL SPECIFICATIONS	
UL Frequency Range (MHz)	1710-1755
Down-link(MHz)	2110-2155
UL Rejection	>82 dB
UL Gain(dB)	12
UL Return Loss	>20
UL Noise Figure	<1.4 dB
UL Output 3rd Order Intercept Point(dBm)	>+23
UL Bypass Loss(dB)	<2.0, Typical
DL Frequency Range (MHz)	2110-2155
DL Return Loss	>20
DL Insertion Loss (dB)	<0.3
Intermodulation	@ 2 x +43 dBm Tx carriers in receive band, <-160 dBc, reffered to antenna port
Alarm Functionality	AISG compatible cor in case of no AISG command received current alarm mode 170-190 mA
Power Consumption	<1.1 W per branch @ 12V
Power Handling, RMS	>49 dBm (4x43 dBm)
AISG Compatibility	AISG 2.0

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	154x192x50 mm (5.9"x7.6"x2.0")
Weight(lbs)	<3.5kg (7.7 lbs)
Colors	Off white (NCS 1502-R)
RF Connectors	DIN 7/16 female, long neck
Mounting Kit	Mounting kit for pole and wall is included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40° C to +65° C (-40° F to + 149° F)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11
Lightning Protection	3 kA 10/350 µs; 8kA 8/20 µs; 20 kA (Shield)
Housing	Aluminium
MTBF	>1 million hours
Ingress Protection	IP65 and IP68

APPROVAL AND TESTS	
Safety	EN60950
EMC	3GPP: TS 25.113

010-11182-02nn Tower Mounted Amplifier

ELECTRICAL SPECIFICATIONS	
Up-Link(MHz)	1920.5-1935.5
Down-link(MHz)	2110.5-2125.5
Bypass(MHz)	N/A
UL Frequency Range Full band(MHz)	N/A
UL Rejection	3 dBc Bandwidth Ò30MHz; 10 dBc Bandwidth Ò40MHz; 50 dBc Bandwidth Ò55 MHz
UL Gain(dB)	N/A
UL Nominal Gain	12 dB
UL Return Loss	>18 dB
UL Noise Figure	Typical 1.2 dB, Max 1.7 dB
UL Output 3rd Order Intercept Point(dBm)	Ó+23
UL Rejection SMR	N/A
UL Bypass Loss(dB)	<1.8 Typical, 3.7 Max
DL Frequency Range Full Band(MHz)	N/A
DL Return Loss	>18 dB
DL Insertion Loss(dB) Typical	Max 0.4
Intermodulation	<-128 dBm in Rx Band (2 Tx carriers at +43 dBm)
Alarm Functionality	Alarm Current -0202: 250 mA, -0232: 180mA
Power Consumption	Typical 1.3 W per TMA (2.5 W Total)

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(in)	340x171x70mm (13.4x6.7x2.8 inch)
Weight(lbs)	<4.5 Kg (9.9)
Colors	Off White (NCS 1502-R)
RF Connectors	7/16 Female
Mounting Kit	Hose Clamps Included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40°C to +65°C(-40°F to +149°F)
Housing	Aluminum
MTBF	>350.000 hours
Ingress Protection	IP68
AISG Compatibility	2.0

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETS 125 113
Environmental	ETS 300 019

010-11183-02nn Tower Mounted Amplifier

ELECTRICAL SPECIFICATIONS	
Up-Link(MHz)	1964.9-1979.9
Down-link(MHz)	2154.9-2169.9
Bypass(MHz)	N/A
UL Frequency Range Full band(MHz)	N/A
UL Rejection	3 dBc Bandwidth Ò30MHz; 10 dBc Bandwidth Ò40MHz; 50 dBc Bandwidth Ò55 MHz
UL Gain(dB)	N/A
UL Nominal Gain	12 dB
UL Return Loss	>18 dB
UL Noise Figure	Typical 1.2 dB, Max 1.7 dB
UL Output 3rd Order Intercept Point(dBm)	Ó+23
UL Rejection SMR	N/A
UL Bypass Loss(dB)	<1.8 Typical, 3.7 Max
DL Frequency Range Full Band(MHz)	N/A
DL Return Loss	>18 dB
DL Insertion Loss(dB) Typical	Max 0.4
Intermodulation	<-128 dBm in Rx Band (2 Tx carriers at +43 dBm)
Alarm Functionality	Alarm Current -0202: 250 mA, -0232: 180mA
Power Consumption	Typical 1.3 W per TMA (2.5 W Total)

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(in)	340x171x70mm (13.4x6.7x2.8 inch)
Weight(lbs)	<4.5 Kg (9.9)
Colors	Off White (NCS 1502-R)
RF Connectors	7/16 Female
Mounting Kit	Hose Clamps Included

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40°C to +65°C(-40°F to +149°F)
Housing	Aluminum
MTBF	>350.000 hours
Ingress Protection	IP68
AISG Compatibility	2.0

APPROVAL AND TESTS	
Safety	EN 60 950
EMC	ETS 125 113
Environmental	ETS 300 019

TMA Products

Power Distribution Units

Title	Up-Link (MHz)	Down-Link (MHz)	Part Number	Page
PDU Lite – Indoor	N/A	N/A	LGP121nn	48
PDU Lite – Indoor	N/A	N/A	LGP18104	49

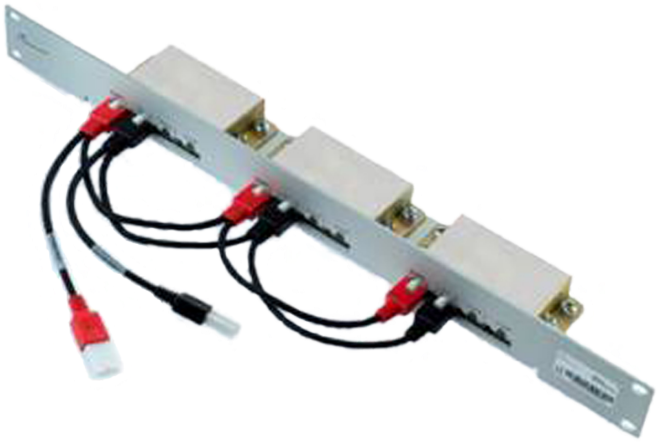
LGP121nn PDU Lite – Indoor

ELECTRICAL DATA	
Input Voltage	20 to 60 V DC, positive or negative
Input Current(Max)	1A
Input Protection and Polarity	Automatic Polarity Agile
Output Voltage	12 V DC +/- 1 V
Output Current(Max)	375 mA/port
Output Protection	Automatic short-circuit protection, auto recovery
Sum Alarm Output Port	Relay Normally Open and Normally Closed

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	3.9 x 0.8 x 2.4 in
Weight(lbs)	120 g (0.3 lbs.)

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-33° C to +60° C (-27° F to +140° F)
Humidity	5-95% RH non condensing
MTBF	>1 million hours

APPROVAL AND TESTS	
EMC	ETS 300 342-3
Environmental	ETS 300 019



*All specifications subject to change without notice. Contact your Powerwave representative for complete performance data.

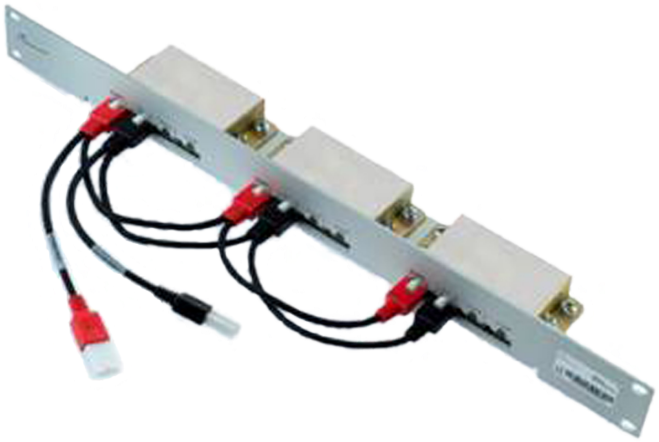
LGP18104 PDU Lite – Indoor

ELECTRICAL DATA	
Input Voltage	20-60 V DC, positive or negative
Input Current(Max)	3x1 A
Input Protection and Polarity	Automatic Polarity Agile
Output Voltage	12 V DC +/- 1 V
Output Current(Max)	375 mA/port
Output Protection	Automatic short-circuit protection, auto recovery
Sum Alarm Output Port	Relay Normally Open and Normally Closed

MECHANICAL SPECIFICATIONS	
Housing	Aluminum
Input Voltage Connector	3 Pole Connector, Molex. Daisy chain cable connecting the three modules
Output Connector	2 x 3 Pole Connector, Molex
Alarm Output Connector	3 Pole Connector, Molex. Daisy chain cable connecting the three modules
Dimension HxWxD mm(ft)	19” 1HU (19 x 1.75)
Weight(lbs)	700 (1.55)

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-33° to +60 ° (-27° to +140°)
Humidity	5-95% RH non condensing
MTBF	>1 000 000 hours (over 100 years)

APPROVAL AND TESTS	
Safety	EN 60 950, UL 1950
EMC	ETS 300 342-3
Environmental	ETS 300 019



*All specifications subject to change without notice. Contact your Powerwave representative for complete performance data.

TMA Products

Current Injectors

Frequency Range (MHz)	Return Loss (dB)	Insertion Loss (dB)	Part Number	Page
806 - 960MHz and 1710-2170	>20	< 0.1	LGP213nn	51
806-960 and 1710-2170	>20	< 0.1	LGP233nn	52
806 - 960MHz or 1710-1990	>25		LGP138nn	53

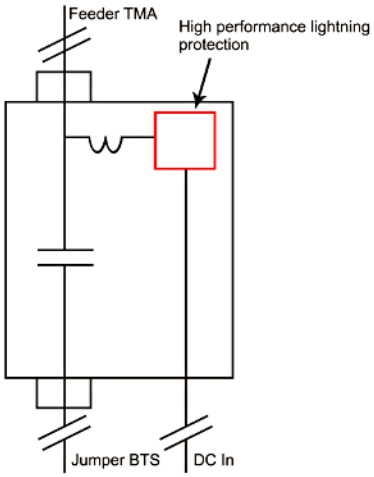
LGP213nn Outdoor Current Injector

TECHNICAL SPECIFICATIONS	
Frequency Range 2 Variants (MHz)	806 - 960MHz and 1710-2170
Return Loss (dB)	>20
Insertion Loss (dB)	< 0.1
DC Current (Max)	1.5 A
Intermodulation 2x 43 dBm Tx Carriers dBm	<-116 dBm (<-159)

MECHANICAL SPECIFICATIONS	
Dimensions - Without Mounting Plate - mm(in)	87 x 41 x 51 (3.4 x 1.6 x 2.0)
Weight kg(lbs)	0.32 (0.71)
Color	Off-white, NCS 1502R
Housing	Aluminum
RF Connectors	DIN 7/16 or type N female and male
DC Supply Connector	SMA Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-40° to +65 (-40° to +149°)
MTBF	>1 000 000 hours
Safety	EN 609 50, UL 60950, ETL
Ingress Protection IP 65	EN 60 529
Environmental	ETS 300 019
Lightning Protection	IEC 61312-1

*All specifications subject to change without notice. Contact your Powerwave representative for complete performance data.



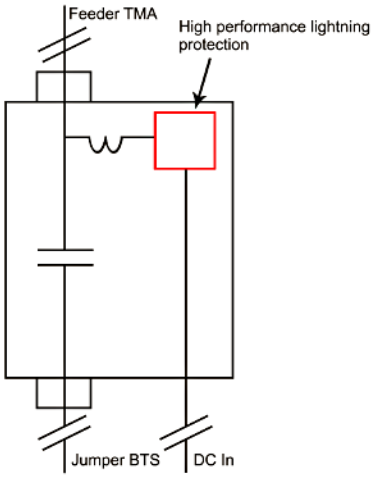
LGP233nn Indoor Current Injector

TECHNICAL SPECIFICATIONS	
Frequency Range 2 Variants (MHz)	806-960 and 1710-2170
Return Loss (dB)	>20
Insertion Loss (dB)	< 0.1
DC Current (Max)	1.5 A
Intermodulation 2x 43 dBm Tx Carriers dBm	<-116 dBm (<-159)

MECHANICAL SPECIFICATIONS	
Dimensions - Without Mounting Plate - mm(in)	87 x 41 x 51 (3.4 x 1.6 x 2.0)
Weight kg(lbs)	0.32 (0.71)
Color	Silver plating
Housing	Zink Alloy
RF Connectors	DIN 7/16 or type N female and male
DC Supply Connector	SMB Male

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-5° to +55° (23° to +131°)
MTBF	>1 000 000 hours (over 100 years)
Safety	EN 609 50, UL 609 50, ETL
Ingress Protection IP 65	EN 605 29
Environmental	ETS 300 019
Lightning Protection	IEC 61312-1

*All specifications subject to change without notice. Contact your Powerwave representative for complete performance data.



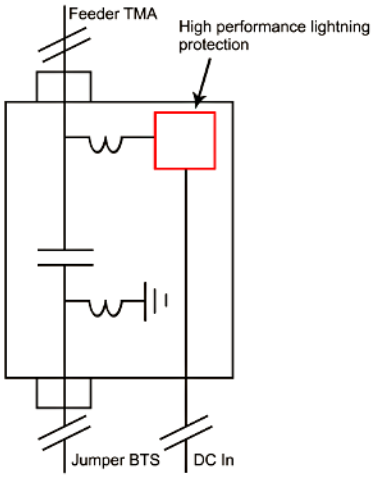
LGP138nn Outdoor Current Injector

TECHNICAL SPECIFICATIONS	
Frequency Range 2 Variants (MHz)	806 - 960MHz or 1710-1990
Return Loss (dB)	>25
Insertion Loss (dB)	
DC Current (Max)	NA
Intermodulation 2x 43 dBm Tx Carriers dBm	<-110 dBm, (<-153)

MECHANICAL SPECIFICATIONS	
Dimensions - Without Mounting Plate - mm(in)	107 x 48 x 62 (4.2 x 1.9 x 2.4)
Weight kg(lbs)	0.45 (<1)
Color	Off-white, NCS 1502R
Housing	Aluminum
RF Connectors	Type N
DC Supply Connector	Screw Terminal Block

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-40° to +65 (-40° to +149°)
MTBF	>1 000 000 hours
Safety	EN 609 50, UL 60950, ETL
Ingress Protection IP 65	EN 60 529
Environmental	ETS 300 019
Lightning Protection	IEC 1312-1

*All specifications subject to change without notice. Contact your Powerwave representative for complete performance data.



POWERWAVE

Filter Products

Base station co-siting and new technology overlays are growing trends around the globe and Powerwave is leading the way with a range of same band, dual band and triple band solutions. There are many reasons for adopting co-siting filter solutions, including limited tower space, zoning regulations and public opinion against new site locations. In addition, as newer technology platforms such as UMTS or LTE are deployed the need for straightforward, low loss, high performance overlay solutions are required to allow operators to maximize existing network CAPEX by reusing installed cable and antenna structures.

Base Station Products

Filters

Range (MHz)	Insertion Loss (dB)	Return Loss (dB)	Part Number	Page
817-869	1.0 dB maximum (Rx) 1.6 dB maximum (Tx)	14 dB minimum (Rx) 14 dB minimum (Tx)	010-11198-0002	56
824-894	4.2 dB maximum (Uplink) 0.6 dB maximum (Downlink)	18 dB minimum (Uplink) 18 dB minimum (Downlink)	3A0-18707	57
880-960	4.5 dB maximum (Uplink) 0.6 dB maximum (Downlink)	18 dB minimum (Uplink) 18 dB minimum (Downlink)	3A0-18708	58
880-2170	0.2 dB maximum (Low) 0.3 dB maximum (Rx), 0.6 dB maximum (Tx) (Mid) 0.5 dB maximum (Rx), 0.3 dB maximum (Tx) (High)	20 dB minimum (Low) 20 dB minimum (Mid) 20 dB minimum (High)	LGP141nn	59
1710-2170	0.3 dB maximum (Rx), 0.6 dB maximum (Tx) (Low) 0.5 dB maximum (Rx), 0.3 dB maximum (Tx) (High)	18 dB minimum (Low) 18 dB minimum (High)	LGP145nn	60
1850-1990	0.6 dB maximum (Rx) (Low) 0.5 dB maximum (Tx) (High)	18 dB minimum (Low) 18 dB minumum (High)	LGP146nn	61
890-960	-01: <1.5 dB (<3.5 dB 890-892 MHz) (Rx) -02: <1.0 dB (<1.8 dB 890-892 MHz) (Rx) -03: <1.5 dB (< 3.5 dB 896-898 MHz) (Rx)	>18 dB	LGP195nn	62
824-2170	<0.1 dB Typical (Low) <0.2 dB Typical (High)	20 dB minimum (Low) 20 dB minimum (High)	LGP219nn	63

010-11198-0002 850 MHz Rebanding Duplexer

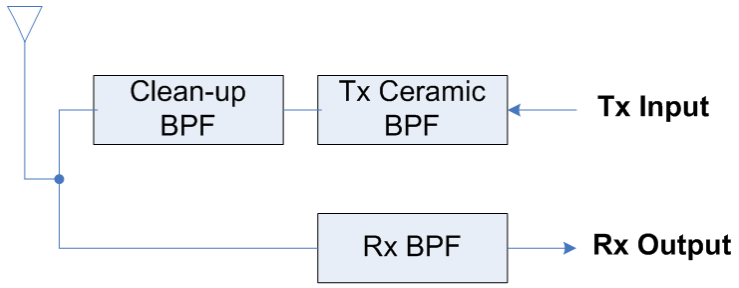
ELECTRICAL SPECIFICATIONS	
Filter Type	850 MHz Rebanding Duplexer
Range (MHz)	817-869
Antenna to Receive (Rx) Port:	
Passband	817-824
Passband Insertion Loss	1.0 dB maximum
Passband Loss Flatness	+/- 0.5 dB
Passband Return Loss	14 dB minimum
Rejection:	
DC - 650 MHz	70 dB minimum
650 - 680 MHz	85 dB minimum
680 - 750 MHz	70 dB minimum
780 - 790 MHz	40 dB minimum
862 - 869 MHz	80 dB minimum
869 - 2700 MHz	40 dB minimum
Transmit (Tx) to Antenna Port:	
Passband	862-869
Passband Insertion Loss	1.6 dB maximum
Passband Loss Flatness	+/- 0.5 dB
Passband Return Loss	14 dB minimum
Rejection:	
DC - 806 MHz	80 dB minimum
806 - 824 MHz	70 dB minimum
824 - 861.35 MHz	50 dB minimum
@ 861.50 MHz	30 dB minimum
@ 861.65 MHz	10 dB minimum
920 - 2700 MHz	40 dB minimum
Input Power Handling:	
Average	100 watts minimum
Peak Instantaneous	11,000 watts minimum

MECHANICAL SPECIFICATIONS	
Dimensions	389.2 x 212 x 135 max (not inc. connectors or mtg brackets)
Weight lb (kg)	25.4 (11.52) maximum

CONNECTORS	
Antenna	N-F
Transmit	N-F
Receive	SMA-F
Grounding Stud	Stainless M10x1.5 and hex nut for complete performance data

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range (Celsius)	0° C to +50° C
Operating Humidity	10-100%, non-condensing
Operating Altitude	Sea Level to 7500 feet (or equal barometric pressure)

Antenna



Block Diagram - Rebanding Duplexer

3A0-18707 850 MHz Same Band Combiner, w/AISG and DC Transparency Type 1

TECHNICAL SPECIFICATIONS

Filter Type	850 MHz Same Band Combiner, w/AISG and DC Transparency Type 1	
Range (MHz)	824-894	
Frequency Range (Full Band MHz)	Uplink, 824-849	Downlink, 869-894
Insertion Loss (dB)	4.2 dB maximum	0.6 dB maximum
Return Loss (dB)	18 dB minimum	18 dB minimum
Average Power Handling (dBm)	N/A	150 watts (+51.8)
Peak Power (dBm)	N/A	1200 watts (+60.8) PEP maximum at 3000m, +65C and 2:1 antenna mismatch
Intermodulation (IM) (dBc) (Products, Max)	-115 dBm (-158 dBc) maximum in Rx band, two/+43 dBm carriers in the Tx band	
Isolation Between Ports	Systems Isolation (GSM-UMTS), Downlink, 36 dB minimum, Uplink, 18 dB minimum	
Common Port	TMA DC Voltage & Control - BTS2 Main to ANT2 & BTS2 DIV to ANT1	
AISG Mode	Per AISG 1.1, 2.0	
AISG Control Signal Loss	1 dB maximum @ 2.176 MHz, 2 dB maximum @ 11 MHz	
Voltage Drop with 15W Power	1 V maximum @ 10-30VDC	
Supply Voltage Handling	0-35VDC	
Continuous Current Handling	5 A, 0-35VDC	
DC Load	100 mA, +/-20 mA at GSM BTS Ports	

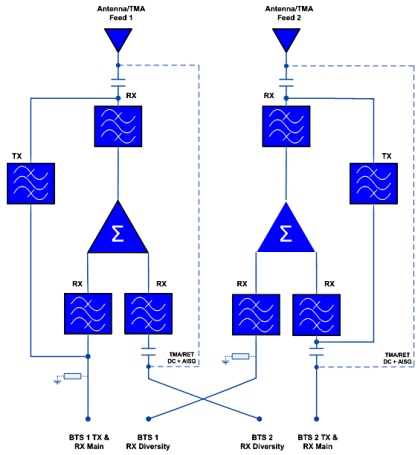
MECHANICAL SPECIFICATIONS

Dimensions mm(in)	437.8 x 228 x 61.4 (17.24"x 8.98"x 2.42") - Excluding Rack/Mast Brackets & Connectors
Weight kg(lbs)	8.15 (18)
Color	Off White (NCS 1502-R)
Housing	Aluminum, IP 67
RF Connectors	DIN 7/16 female
Mounting Kit - Rack Mount	19" Rack Mount Brackets (order P/N 3A0-18707-F1V1P)
Mounting Kit - Tower Mounting	Hose Clamps in Stainless Steel (order P/N 3A0-18707-F1V2P)

ENVIRONMENTAL SPECIFICATIONS

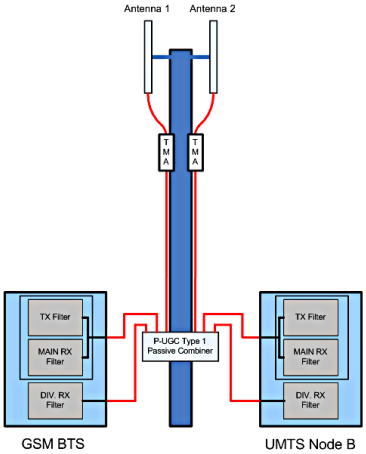
Temperature Range Celsius (Fahrenheit)	-40° C to +65° C (-40° to +149°)
MTBF	1 Million Hours
Surge Protection	IEC 61312-1
Safety	EN 60 950, UL 60 950, ETL
Ingress Protection	IP67
Environmental	ETS 300 019
EMC	3GPP: TS 25.113

The SAME BAND COMBINER products are intended to install either indoors in rack cabinets or on walls, or outdoors on towers or walls close to the Base Transceiver Stations. The main design criteria have been to optimize electrical performance and to make easy installation for different locations. There are two mounting bracket options available either for a cabinet or outdoor installation. The Same Band Combiners can be used for a variety of dual-technology combining on common antennas, such as TDMA + GSM, GSM + UMTS, GSM + LTE, UMTS + LTE or IS95 CDMA + 1X/3X EVDO. The product combines technology 1 and 2 to the same antenna lines. Technology 1 BTS TX carriers and RX main path are connected to the 1st antenna line and technology 2 BTS TX and RX main feeds are connected to 2nd antenna line. Technology 1 BTS RX diversity is connected from 2nd antenna line and technology 2 BTS RX diversity is fed from the 1st antenna line. In addition, the product provides AISG carrier signal (AC bandwidth to 11 MHz) and DC-power path from the diversity port BTS2 to the 1st antenna line and from main BTS2 port to the 2nd antenna line.



Block Diagram - Type 1 Same Band Combiner

Tower Mounting Brackets Option Shown



Typical Application - GSM & UMTS Combining

3A0-18708 GSM900 Same Band Combiner, w/AISG and DC Transparency Type 1

TECHNICAL SPECIFICATIONS

Filter Type	GSM900 Same Band Combiner, w/AISG and DC Transparency Type 1	
Range (MHz)	880-960	
Frequency Range (Full Band MHz)	Uplink, 880-915	Downlink, 925-960
Insertion Loss (dB)	4.5 dB maximum	0.6 dB maximum
Return Loss (dB)	18 dB minimum	18 dB minimum
Average Power Handling (dBm)	N/A	150 watts (+51.8)
Peak Power (dBm)	N/A	1200 watts (+60.8) PEP maximum at 3000m, +65C and 2:1 antenna mismatch
Intermodulation (IM) (dBc) (Products, Max)	-115 dBm (-158 dBc) maximum in Rx band, two/+43 dBm carriers in the Tx band	
Isolation Between Ports	Systems Isolation (GSM-UMTS), Downlink, 36 dB minimum, Uplink, 18 dB minimum	
Common Port	TMA DC Voltage & Control - BTS2 Main to ANT2 & BTS2 DIV to ANT1	
AISG Mode	Per AISG 1.1, 2.0	
AISG Control Signal Loss	1 dB maximum @ 2.176 MHz, 2 dB maximum @ 11 MHz	
Voltage Drop with 15W Power	1 V maximum @ 10-30VDC	
Supply Voltage Handling	0-35VDC	
Continuous Current Handling	5 A, 0-35VDC	
DC Load	100 mA, +/-20 mA at GSM BTS Ports	

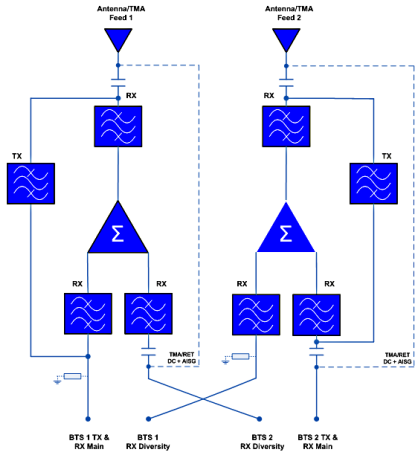
MECHANICAL SPECIFICATIONS

Dimensions mm(in)	437.8 x 228 x 61.4 (17.24"x 8.98"x 2.42") - Excluding Rack/Mast Brackets & Connectors
Weight kg(lbs)	8.15 (18)
Color	Off White (NCS 1502-R)
Housing	Aluminum, IP 67
RF Connectors	DIN 7/16 female
Mounting Kit - Rack Mount	19" Rack Mount Brackets (order P/N 3A0-18708-001)
Mounting Kit - Tower Mounting	Hose Clamps in Stainless Steel (order P/N 3A0-18708-002)

ENVIRONMENTAL SPECIFICATIONS

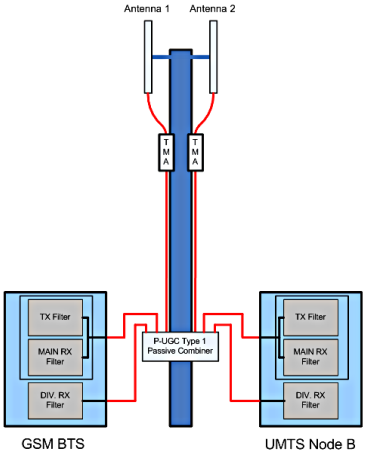
Temperature Range Celsius (Fahrenheit)	-40° C to +65° C (-40° to +149°)
MTBF	1 Million Hours
Surge Protection	IEC 61312-1
Safety	EN 60 950, UL 60 950, ETL
Ingress Protection	IP67
Environmental	ETS 300 019
EMC	3GPP: TS 25.113

The SAME BAND COMBINER products are intended to install either indoors in rack cabinets or on walls, or outdoors on towers or walls close to the Base Transceiver Stations. The main design criteria have been to optimize electrical performance and to make easy installation for different locations. There are two mounting bracket options available either for a cabinet or outdoor installation. The Same Band Combiners can be used for a variety of dual-technology combining on common antennas, such as TDMA + GSM, GSM + UMTS, GSM + LTE, UMTS + LTE or IS95 CDMA + 1X/3X EVDO. The product combines technology 1 and 2 to the same antenna lines. Technology 1 BTS TX carriers and RX main path are connected to the 1st antenna line and technology 2 BTS TX and RX main feeds are connected to 2nd antenna line. Technology 1 BTS RX diversity is connected from 2nd antenna line and technology 2 BTS RX diversity is fed from the 1st antenna line. In addition, the product provides AISG carrier signal (AC bandwidth to 11 MHz) and DC-power path from the diversity port BTS2 to the 1st antenna line and from main BTS2 port to the 2nd antenna line.



Block Diagram - Type 1 Same Band Combiner

Tower Mounting Brackets Option Shown



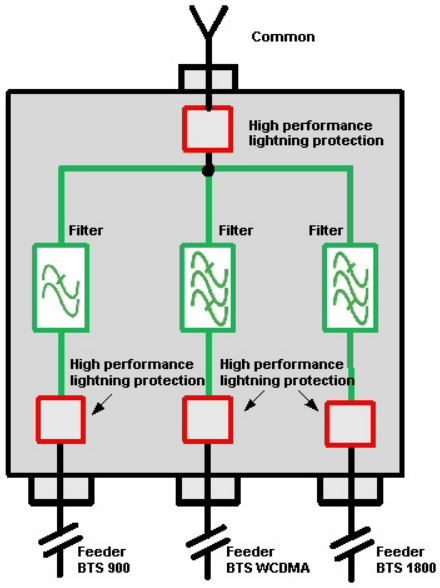
Typical Application - GSM & UMTS Combining

LGP141nn Triplex Filter for 900, 1800 MHz and UMTS with DC Transparency

TECHNICAL SPECIFICATIONS			
Range (MHz)	880-2170		
Frequency Range (Full Band MHz)	900 Port, 880-960	1800 Port, 1710-1880	UMTS Port, 1920-2170
Peak Power (dBm)	1600 W (+62) minimum	1600 W (+62) minimum	1600 W (+62) minimum
Insertion Loss (dB)	0.2 dB maximum	0.3 dB maximum (Rx), 0.6 dB maximum (Tx)	0.5 dB maximum (Rx), 0.3 dB maximum (Tx)
Return Loss (dB)	20 dB minimum	20 dB minimum	20 dB minimum
Average Power Handling (dBm)	200 W (+53) minimum	200 W (+53) minimum	80 W (+49) minimum
Intermodulation (IM) (dBc) (Products, Max)	-116 dBm @2x43 dBm in Tx band	-116 dBm @2x43 dBm in Tx band	-116 dBm @2Tx43 dBm in Tx band
Isolation Between Ports	Rejection Between Ports (except common), >50 dB		

MECHANICAL SPECIFICATIONS	
Dimensions mm(in)	169 x 228 x 68 (7"x 9"x 2")
Weight kg(lbs)	<3.0 (6.5)
Color	Off White (NCS 1502-R)
Housing	Aluminum, IP 65 (Optional IP 68)
RF Connectors	DIN 7/16 female
Mounting Kit	Hose Clamps in Stainless Steel

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-40° C to +65° C (-40° to +149°)
MTBF	10 Million Hours
Safety	EN 60 950, UL 60 950, ETL
Ingress Protection	IP65, EN 60 529
Environmental	ETS 300 019



LGP145nn Diplex Filter for 1800/UMTS with Configurable DC Transparency

TECHNICAL SPECIFICATIONS

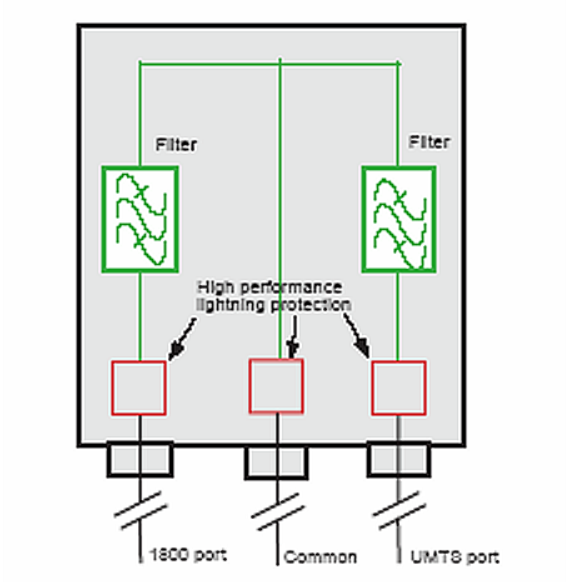
Filter Type	Diplexer for 1800/2100			
Range (MHz)	1710-2170			
Frequency Range (Full Band MHz)	1710-1880 MHz/1920-2170			
Frequency Range (MHz)	1800 Port, 1710-1880		UMTS Port, 1920-2170	
Insertion Loss (dB)	0.3 dB maximum (Rx), 0.6 dB maximum (Tx)		0.5 dB maximum (Rx), 0.3 dB maximum (Tx)	
Return Loss (dB)	18 dB minimum		18 dB minimum	
Rejection	74 dB min. 1920-1980 MHz & 59 dB min. 2110-2170 MHz		60 dB min. 1710-1880 MHz	
Average Power Handling (dBm)	240 watts (+53.8) minimum		80 watts (+49) minimum	
Peak Power (dBm)	1440 watts (+61) minimum		1600 watts (+62) minimum	
Intermodulation (IM) (dBc) (Products, Max)	-118 dBm (-161) maximum in Rx band, two/+43 dBm carriers in the Tx band			
Common+Port	TMA supply voltage, fed via the RF cable, +/-58.5 V maximum, 2 A			
DC Bias/AISG Passthru	-01: DC/AISG to issue 2.0 (UMTS Port to Antenna Port)	-02: DC/AISG to issue 2.0 (1800 Port to Antenna Port)	-03: DC/AISG to issue 2.0 (connected all ports)	-04: No Connection (DC Grounded)

MECHANICAL SPECIFICATIONS

Dimensions mm(in)	180 x 162 x 61 (7"x 6"x 2")
Weight kg(lbs)	3.6 (7.9)
Volume	N/A
Color	Off White (NCS 1502-R)
Housing	Aluminum
RF Connectors	DIN 7/16 female
Mounting Kit	Hose Clamps in Stainless Steel

ENVIRONMENTAL SPECIFICATIONS

Temperature Range Celsius (Fahrenheit)	-40°to +65°(-40°to +149°)
MTBF	10 Million Hours
Lightning Protection	3 kA 10/350 us; center pin (any port) to shield and 50 kA 10/350 us; shield-shield (Pulse forms per IEC61312-1)
Safety	EN60 950
Ingress Protection	IP65, EN 60 529
Environmental	ETS 300 019
EMC	N/A

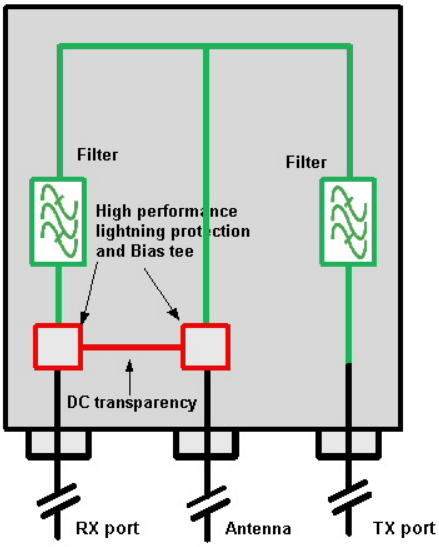


LGP146nn 1900 MHz Duplex filter Outdoor with DC Bypass

TECHNICAL SPECIFICATIONS				
Filter Type	Duplex Filter 1900			
Range (MHz)	1850-1990			
Frequency Range (Full Band MHz)	1850-1910 MHz/1930-1990 MHz			
Frequency Range (MHz)	RECEIVE,1850-1910		TRANSMIT, 1930-1990	
Insertion Loss (dB)	0.6 dB maximum (Rx)		0.5 dB maximum (Tx)	
Return Loss (dB)	18 dB minimum		18 dB minumum	
Rejection	40 dB minimum; 1930-1990 MHz		40 dB minimum; 1850-1910 MHz	
Average Power Handling (dBm)	N/A		200 watts (+53) minimum	
Peak Power (dBm)	N/A		TRANSMIT, 1000W (+60 dBm) minimum	
Intermodulation (IM) (dBc) (Products, Max)	-110 dBm (-153) maximum in Rx band, two/+43 dBm carriers in the Tx band			
Common+Port	TMA supply voltage, fed via the RF cable, +31 V maximum, 1.1 A			
DC Bias/AISG Passthru	-01: DC/AISG to issue 2.0 (Rx Port to Antenna Port)	N/A	N/A	N/A

MECHANICAL SPECIFICATIONS	
Dimensions mm(in)	163 x 181 x 65 (6"x 7"x 3")
Weight kg(lbs)	3.3 (7.3) maximum
Volume	N/A
Color	Off White (NCS 1502-R)
Housing	Aluminum
RF Connectors	DIN 7/16 female
Mounting_Kit	Hose Clamps in Stainless Steel

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-40°to +65°(-40°to +149°)
MTBF	10 Million Hours
Lightning Protection	IEC 61312-1
Safety	EN 60 950, UL 1950
Ingress Protection	IP65, EN 60 529
Environmental	ETS 300 019
EMC	N/A

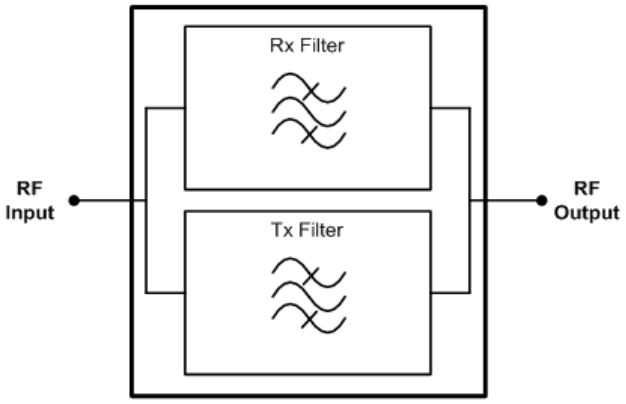


LGP195nn Co-Location Filter GSM900

TECHNICAL SPECIFICATIONS			
Filter Type	Co-Location Filter GSM900		
Frequency Range (MHz)	890-960		
Rx Passband Frequency Range (MHz)	-01: 890-915 MHz	-02: 890-915 MHz	-03: 896-915 MHz
Tx Passband Frequency Range (MHz)	-01: 935-960 MHz	-02: 935-960 MHz	-03: 941-960 MHz
Rx Passband Insertion Loss	-01: <1.5 dB (<3.5 dB 890-892 MHz)	-02: <1.0 dB (<1.8 dB 890-892 MHz)	-03: <1.5 dB (< 3.5 dB 896-898 MHz)
Tx Passband Insertion Loss	< 0.5 dB		
Passband Return Loss	>18 dB		
Rejection	-01: > 30 dB 869 to 889 MHz	-02: > 37 dB 869 to 888 MHz	-03: > 30 dB 869 to 895 MHz
Passband Power Handling (dBm)	200 watts (+53) minimum, 935 to 960 MHz (-01 & -02), 941 to 960 MHz (-03)		
Passband Peak Power Handling (dBm)	1585 watts (+62) minimum, 935 to 960 MHz (-01 & -02), 941 to 960 MHz (-03)		
Intermodulation IM dBc Products Max	-110 dBm (-153 dBc) maximum in Rx band, two/+43 dBm carriers in the Tx band		

MECHANICAL SPECIFICATIONS	
Dimensions mm(in)	169 x 228 x 68 (7"x 9"x 2")
Weight kg(lbs)	3.8 (8.4) maximum
Color	Off White (NCS 1502-R)
Housing	Aluminum, Powder Coated
RF Connectors	DIN 7/16 female
Mounting Kit	Hose Clamps in Stainless Steel

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-5° to +55° (23° to +131°)
Operating Humidity Range	0 to +95% Relative Humidity
MTBF	>10 Million Hours
Ingress Protection	IP65



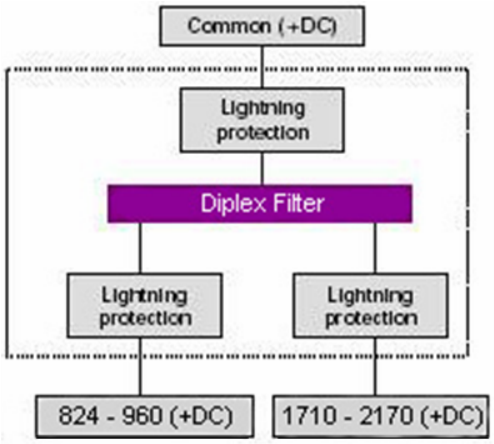
LGP219nn

Diplex Filter for 800/900 MHz and 1800/1900/2100 MHz with Configurable DC Transparency

TECHNICAL SPECIFICATIONS				
Filter Type	Diplex Filter for 800/900 MHz and 1800/1900/2100			
Range (MHz)	824-2170			
Frequency Range (Full Band MHz)	824-960 MHz/1710-2170 MHz			
Frequency Range (MHz)	824-960 Port, 824-960 MHz		1710-2100 Port, 1710-2170 MHz	
Insertion Loss (dB)	<0.1 dB Typical		<0.2 dB Typical	
Return Loss (dB)	20 dB minimum		20 dB minimum	
Rejection	52 dB minimum; 1710-2170 MHz		52 dB minimum; 824-960 MHz	
Average Power Handling (dBm)	850 MHz: 500 watts (+57); 900 MHz: 200 watts (+53) max.		1800 MHz: 200 watts (+53); 1900 MHz: 300 watts (+55) max.	
Peak Power (dBm)	850 MHz: 10 kW; 900 MHz: 1.6 kW		1800 MHz: 1.6 kW; 1900 MHz: 5 kW	
Intermodulation (IM) (dBc) (Products, Max)	-110 dBm (-153) maximum in Rx band, two/+43 dBm carriers in the Tx band			
Common+Port	TMA supply voltage, fed via the RF cable, +31 V maximum, 2 A			
DC Bias/AISG Passthru	-01: No Connection (DC Grounded)	-02: DC/AISG to issue 2.0 (connected all ports)	-03: DC/AISG to issue 2.0 (1710-2100 Port to Antenna Port)	-04: DC/AISG to issue 2.0 (824-960 Port to Antenna Port)

MECHANICAL SPECIFICATIONS	
Dimensions mm(in)	112 x 158 x 74 (4"x 6"x 3")
Weight kg(lbs)	2.5 (5.5) maximum
Volume	1.3 liter single unit
Color	Off White (NCS 1502-R)
Housing	Aluminum
RF Connectors	DIN 7/16 female
Mounting_Kit	Hose Clamps in Stainless Steel

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range Celsius (Fahrenheit)	-40°to +65°(-40°to +149°)
MTBF	10 Million Hours
Lightning Protection	According to IEC 61312-1, 3kA 10/350 uS;center pin (any port)-shield
Safety	EN 60 950, UL 1950, ETL
Ingress Protection	IP65, EN 60 529
Environmental	ETS 300 019
EMC	ETS 300 342-3



POWERWAVE

VersaFlex™ Enclosures

VersaFlex enclosures offer a high capacity, light weight, small footprint solution. Movable carriages coupled with a flexible cable management system provide unmatched future growth potential. The modular all aluminum construction provides flexibility for network roll-outs. VersaFlex's proven state of the art sub-floor thermal management system provides unparalleled environmental control. VersaFlex's total cost of ownership and reliability make Powerwave the smart choice for interior equipment deployments in an outdoor environment.

Base Station Products

VersaFlex™ Enclosures

Title	Length	Width	Height	Weight	Page
VersaFlex 7.0	10 (3.05)	7'6" (2.29)	8'6: (2.59)	4000 (1814)	66
VersaFlex 9.0	13'9" (4.19)	7'6" (2.29)	8'6: (2.59)	4750 (2155)	67

VersaFlex (7 Bay) | VersaFlex 7.0

SPECIFICATIONS	
Length ft (m)	10 (3.05)
Width ft (m)	7'6" (2.29)
Height in (m)	8'6: (2.59)
Weight lbs (kg)	4000 (1814)
HVAC	2x3 Ton
Radio Frames	7
Minimum Lease Required	10L x 7'6"W = 75 Sq. Ft. (3.05L x 2.29W = 6.98m2)

Note: Weights and lengths are approximate measurements and will vary based on specific customer requirements.
All specifications are subject to change without notice. Please contact your Powerwave representative for complete performance data.

VersaFlex (7 Bay) Enclosure

Key Features/Benefits:

- Utilizes approximately half the space of traditional Shelters.
- Standard weighs only 4,000 lbs (1814 kg) vs. the 30,000 (13608 kg) to 50,000 lbs (22680 kg) of traditional shelters.
- Internal sub-floor HVAC system that eliminates hot spots.
- Bi-fold door design reduces lease area requirements by eliminating door swing.
- Sliding equipment racks that reduce floor space required and utilizes a rolling cable tray

VersaFlex (9 Bay) | VersaFlex 9.0

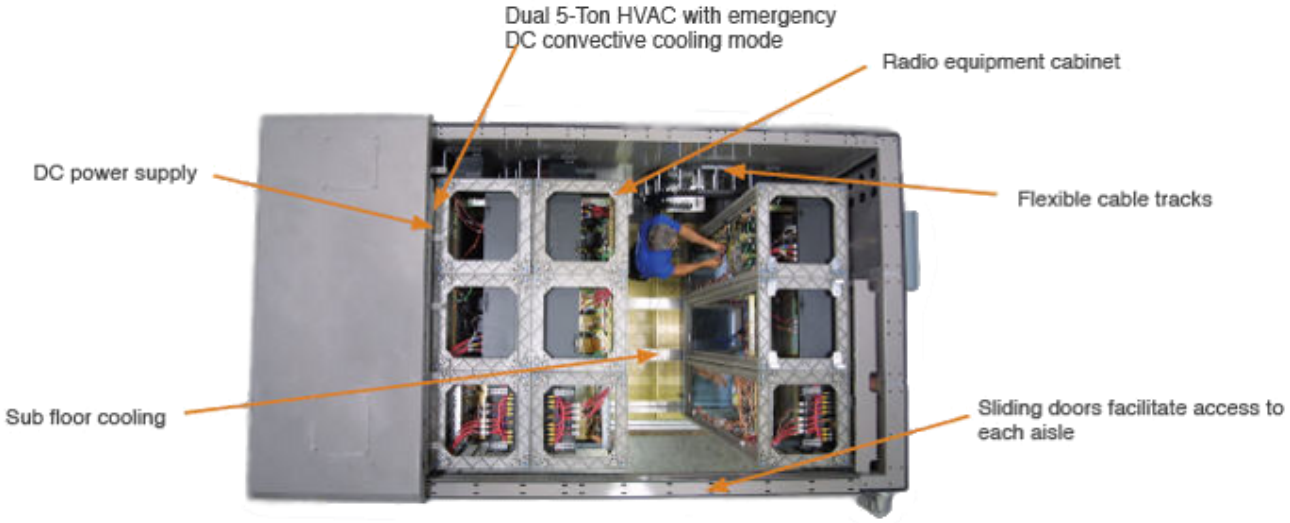
SPECIFICATIONS	
Length ft (m)	13'9" (4.19)
Width ft (m)	7'6" (2.29)
Height in (m)	8'6: (2.59)
Weight lbs (kg)	4750 (2155)
HVAC	2x5 Ton
Radio Frames	9
Minimum Lease Required	13'9"L x 7'6"W = 103.1 Sq. Ft (4.19L x 2.29W = 9.60m2)

Note: Weights and lengths are approximate measurements and will vary based on specific customer requirements.
All specifications are subject to change without notice. Please contact your Powerwave representative for complete performance data.

VersaFlex (9 Bay) Enclosure

Key Features/Benefits:

- Utilizes approximately half the space of traditional Shelters.
- Standard weighs only 4,750 lbs (2155 kg) vs. the 30,000 (13608 kg) to 50,000 lbs (22680 kg) of traditional shelters.
- Internal sub-floor HVAC system that eliminates hot spots.
- Sliding door design reduces lease area requirements by eliminating door swing.
- Sliding equipment racks that reduce floor space required and utilizes a rolling cable tray



POWERWAVE

Coverage Products

Repeater Products

In-Building DAS Products

Outdoor DAS Products

Powerwave's Coverage Systems products include turn-key coverage and capacity products and solutions that give network operators, facilities owners and neutral hosts an edge over the competition. We specialize in innovative products and solutions from the simplest to the most challenging indoor and outdoor environments that help improve coverage, signal quality and capacity. Our efficient, modular and integrated solutions drive down capital and operating expenses.

POWERWAVE

Coverage Products

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POWERWAVE

Repeater Products

Channel Selective Repeaters

Band Selective Repeaters

Advanced Train Repeaters

Repeater products provide cost-effective coverage solutions for airports, railway stations, tunnels, convention centers, canyons and other environments where structures or natural obstructions interfere with signals. What sets Powerwave repeater products apart is our exceptionally low total lifetime cost. This is due to a number of factors. Our high level of integration delivers a compact form factor that eliminates/minimizes site rental costs.

POWERWAVE | **Repeater Products**

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Repeater Products

Title	Range (MHz)	No. of Channels	Bandwidth (MHz)	Part Number	Page
Standard Channel Selective, 1800 MHz	GSM	1 to 8	200 KHz/channel	AR2700/00	73
Standard Channel Selective, 1900 MHz	GSM	1 to 8	200 KHz/channel	AR3700/00	74
Standard Channel Selective, 2100 MHz	WCDMA	1 to 4 [HP 1-2ch]	4.4 MHz/channel	AR6500/00	75
Standard Channel Selective, 900 MHz	GSM	1 to 8	200 KHz/channel	AR1700/00	76
Standard Channel Selective, 900 MHz	EGSM	1 to 8	200 KHz/channel	AR1700/90	77
Standard Channel Selective, 900 MHz	RGSM	1 to 4	200 KHz/channel	AR1700/80	78
Dual Band 900/2100 Channel Selective	WCDMA2100	1 to 2	4.4 channel	AR6517/01x family	79
Dual Band 900/2100 Channel Selective	WCDMA2100	1 to 2	4.4 channel	AR6517/91x family	80
Upgrade 2100 Standard	WCDMA 2100	1 to 2	4.4 channel	AR0065/001	81

AR2700/00 Standard Channel Selective, 1800 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	1710-1785
Frequency Band DL (MHz)	1805-1880
No. of Channels	1 to 8
Bandwidth	200 KHz/channel
Output Power DL (min)	2ch: +32 dBm/channel, 4ch: +28 dBm/channel, 6-8ch: +25 dBm/channel
Output Power UL (min)	2ch: +32 dBm/channel, 4ch: +28 dBm/channel, 6-8ch: +25 dBm/channel
Gain adjustment range	55 to 90 dB
Noise Figure	4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	2ch: 160W, 4ch: 250W, 6ch: 410W, 8ch: 500W (8-6ch Separate PSU's)

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR3700/00 Standard Channel Selective, 1900 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	1850-1910
Frequency Band DL (MHz)	1930-1990
No. of Channels	1 to 8
Bandwidth	200 KHz/channel
Output Power DL (min)	2ch: +32 dBm/channel, 4ch: +28 dBm/channel, 6-8ch: +25 dBm/channel
Output Power UL (min)	2ch: +32 dBm/channel, 4ch: +28 dBm/channel, 6-8ch: +25 dBm/channel
Gain adjustment range	55 to 90 dB
Noise Figure	4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	2ch: 160W, 4ch: 250W, 6ch: 410W, 8ch: 500W (8-6ch Separate PSU's)

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR6500/00 Standard Channel Selective, 2100 MHz

ELECTRICAL DATA*	
Range	WCDMA
Frequency Band UL (MHz)	1920 -1980
Frequency Band DL (MHz)	2110 - 2170
No. of Channels	1 to 4 [HP 1-2ch]
Bandwidth	4.4 MHz/channel
Output Power DL (min)	1ch +30 dBm [+37]/channel, 2ch +25 dBm [+32]/channel, 4ch +22 dBm/channel
Output Power UL (min)	1ch +20 dBm/channel, 2ch +15 dBm/channel, 4ch +12 dBm/channel
Gain adjustment range	DL 55 to 85 dB [65-95dB], UL 55 to 85 dB [55-85dB]
Noise Figure	DL 6 dB, UL 4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	1-2ch:160 W [HP 320W total], 2-4cH 320 W (HP and 2-4ch separate PSU)

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 125 106
Regulatory Compliance EMC	TS 125 113

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR1700/00 Standard Channel Selective, 900 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	890-915
Frequency Band DL (MHz)	935-960
No. of Channels	1 to 8
Bandwidth	200 KHz/channel
Output Power DL (min)	2ch: +33 dBm/channel, 4ch: +29 dBm/channel, 6-8ch: +26 dBm/channel
Output Power UL (min)	2ch: +33 dBm/channel, 4ch: +29 dBm/channel, 6-8ch: +26 dBm/channel
Gain adjustment range	55 to 90 dB
Noise Figure	4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	2ch:160W, 4ch:250W, 6ch:410W, 8ch:500W (8-6ch Separate PSU's)

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR1700/90 Standard Channel Selective, 900 MHz

ELECTRICAL DATA*	
Range	EGSM
Frequency Band UL (MHz)	890-915
Frequency Band DL (MHz)	925-960
No. of Channels	1 to 8
Bandwidth	200 KHz/channel
Output Power DL (min)	2ch: +33 dBm/channel, 4ch: +29 dBm/channel, 6-8ch: +26 dBm/channel
Output Power UL (min)	2ch: +33 dBm/channel, 4ch: +29 dBm/channel, 6-8ch: +26 dBm/channel
Gain adjustment range	55 to 90 dB
Noise Figure	4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	2ch: 160W, 4ch: 250W, 6ch: 410W, 8ch: 500W (8-6ch Separate PSU's)

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR1700/80 Standard Channel Selective, 900 MHz

ELECTRICAL DATA*	
Range	RGSM
Frequency Band UL (MHz)	876-880
Frequency Band DL (MHz)	921-925
No. of Channels	1 to 4
Bandwidth	200 KHz/channel
Output Power DL (min)	2ch: +33 dBm/channel, 4ch: +29 dBm/channel
Output Power UL (min)	2ch: +33 dBm/channel, 4ch: +29 dBm/channel
Gain adjustment range	55 to 90 dB
Noise Figure	4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	2ch: 160W, 4ch: 250W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x8")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR6517/01x family | Dual Band 900/2100 Channel Selective

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	WCDMA2100	GSM 900
Frequency Band UL (MHz)	1920 -1980	890-915
Frequency Band DL (MHz)	2110 - 2170	935-960
No. of Channels	1 to 2	1 to 4
Bandwidth (MHz)	4.4 channel	200 KHz/channel
Output Power DL	1ch +30 dBm/channel, 2ch +25 dBm/channel	2ch: +33 dBm/channel 4ch: +29 dBm/channel
Output Power UL	1ch +20 dBm/channel, 2ch +15 dBm/channel	N/A
Gain adjustment range	55 to 85 dB	55 to 90 dB
Noise Figure	UL 5 dB DL 7 dB	4 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	160 W	2ch:160W 4ch:250W

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 125 106	TS 45.005
Regulatory Compliance EMC	TS 125 113	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR6517/91x family | Dual Band 900/2100 Channel Selective

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	WCDMA2100	EGSM 900
Frequency Band UL (MHz)	1920 -1980	890-915
Frequency Band DL (MHz)	2110 - 2170	925-960
No. of Channels	1 to 2	1 to 4
Bandwidth (MHz)	4.4 channel	200 KHz/channel
Output Power DL	1ch +30 dBm/channel, 2ch +25 dBm/channel	2ch: +33 dBm/channel 4ch: +29 dBm/channel
Output Power UL	1ch +20 dBm/channel, 2ch +15 dBm/channel	N/A
Gain adjustment range	55 to 85 dB	55 to 90 dB
Noise Figure	UL 5 dB DL 7 dB	4 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	160 W	2ch:160W 4ch:250W

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 125 106	TS 45.005
Regulatory Compliance EMC	TS 125 113	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR0065/001 Upgrade 2100 Standard

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	WCDMA 2100	N/A
Frequency Band UL (MHz)	1920 -1980	N/A
Frequency Band DL (MHz)	2110 - 2170	N/A
No. of Channels	1 to 2	N/A
Bandwidth (MHz)	4.4 channel	N/A
Output Power DL	1ch +30 dBm/channel, 2ch +25 dBm/channel	N/A
Output Power UL	1ch +20 dBm/channel, 2ch +15 dBm/channel	N/A
Gain adjustment range	55 to 85 dB	N/A
Noise Figure	DL 6 dB UL 4 dB	N/A
Group Delay	6 µs	N/A

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	115/230 VAC	N/A
Power Supply (Optional)	21-60 VDC (optional)	N/A
Power Consumption	160 W	N/A

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N/A
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")	N/A
Weight kg (lbs)	22 (48)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	N/A
Housing Specification	NEMA 4 / IP65	N/A

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 125 106	N/A
Regulatory Compliance EMC	TS 125 113	N/A

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *Stand alone

Repeater Products

Title	Range (MHz)	No. of Channels	Bandwidth (MHz)	Part Number	Page
Compact Band Selective, 2100 MHz	WCDMA	Broad band	0.5 to 15 MHz	ALR6200/00	84
Compact Band Selective, 1800 MHz	GSM	Broad band	0.5 to 15/24 MHz	ALR2200/00	85
Compact Band Selective, 1800 MHz	GSM	Broad band	0.5 to 15/24 MHz	ALR2200/90	86
Compact Band Selective, 1900 MHz	TDMA	Broad band	0.5 to 15 MHz	ALR3200/00	87
Compact Band Selective, 1900 MHz	TDMA	Broad band	0.5 to 15 MHz	ALR3200/90	88
Compact Band Selective, 1900 MHz	CDMA	Broad band	0.5 to 15 MHz	ALR3200/01	89
Compact Band Selective, 1900 MHz	CDMA	Broad band	0.5 to 15 MHz	ALR3200/91	90
Compact Band Selective, 800 MHz	TDMA	Broad band	0.5 to 15/25 MHz	ALR4200/00	91
Compact Band Selective, 800 MHz	CDMA	Broad band	0.5 to 15/25 MHz	ALR4200/01	92
Compact Band Selective, 800 MHz	iDEN	Broad band	0.5 to 15/18 MHz	ALR4600/00	93
Compact Band Selective, 900 MHz	GSM	Broad band	0.5 to 15/25 MHz	ALR1200/00	94
Compact Band Selective, 900 MHz	EGSM	Broad band	0.5 to 15/25 MHz	ALR1200/90	95
Dual Band 1800/2100 Compact	WCDMA 2100	Broad band	0.5 to 15	ALR6222/001	96
Dual Band 1800/2100 Compact	WCDMA 2100	Broad band	0.5 to 15	ALR6222/901	97
Dual Band 800/1900 Band Selective	CDMA 1900	Broad band	0.5 to 16.9	AR3442/01x family	98
Dual Band 800/1900 Band Selective	CDMA 1900	Broad band	0.5 to 16.9	AR3442/91x family	99
Dual Band 800/1900 Compact	TDMA1900	Broad band	0.5 to 15	ALR3242/001	100
Dual Band 800/1900 Compact	TDMA1900	Broad band	0.5 to 15	ALR3242/901	101
Dual Band 900/1800 Band Selective	GSM 1800	Broad band	0.5 to 16.9	AR2212/052 family	102

Repeater Products

Title	Range (MHz)	No. of Channels	Bandwidth (MHz)	Part Number	Page
Dual Band 900/1800 Band Selective	GSM 1800	Broad band	0.5 to 16.9	AR2212/952 family	103
Upgrade 1900 Compact	TDMA 1900	Broad band	0.5 to 15	ALR0032/001	104
Upgrade 1900 Compact	TDMA 1900	Broad band	0.5 to 15	ALR0032/901	105
Dual Band 900/2100 Compact	WCDMA 2100	Broad band	0.5 to 15	ALR6212/001	106
Mini Repeater, 2100 MHz	WCDMA	Broad band	0.5 to 15 MHz	ALS6200/00	107
Standard Band Selective, 1800 MHz	GSM	Broad band	0.5 to 16.9 MHz	AR2200/00	108
Standard Band Selective, 1800 MHz	GSM	Broad band	0.5 to 16.9 MHz	AR2200/90	109
Standard Band Selective, 1900 MHz [HP]	TDMA	Broad band	0.5 to 16.9 MHz	AR3400/00	110
Standard Band Selective, 1900 MHz [HP]	CDMA	Broad band	0.5 to 16.9 MHz	AR3400/01	111
Standard Band Selective, 1900 MHz [HP]	TDMA	Broad band	0.5 to 16.9 MHz	AR3400/90	112
Standard Band Selective, 1900 MHz [HP]	CDMA	Broad band	0.5 to 16.9 MHz	AR3400/91	113
Standard Band Selective, 800 MHz [HP]	TDMA	Broad band	0.5 to 16.9/25 MHz	AR4200/00	114
Standard Band Selective, 800 MHz [HP]	CDMA	Broad band	0.5 to 16.9/25 MHz	AR4200/01	115
Standard Band Selective, 800 MHz [HP]	GSM	Broad band	0.5 to 25 MHz	AR4200/02	116
Standard Band Selective, 800 MHz [HP]	WCDMA	Broad band	0.5 to 15 MHz	AR4200/05	117
Standard Band Selective, 800 MHz [HP]	iDEN	Broad band	0.5 to 18 MHz	AR4600/00	118
Standard Band Selective, 900 MHz	GSM	Broad band	0.5 to 16.9/25 MHz	AR1200/00	119
Standard Band Selective, 900 MHz	EGSM	Broad band	0.5 to 16.9/25 MHz	AR1200/90	120
Dual Band 1900/iDEN Compact	TDMA 1900	Broad band	0.5 to 15	ALR3246/010 family	121
Dual Band 1900/iDEN Band Selective	CDMA 1900	Broad band	0.5 to 16.9	AR3446/01x family	122

ALR6200/00 Compact Band Selective, 2100 MHz

ELECTRICAL DATA*	
Range	WCDMA
Frequency Band UL (MHz)	1920 -1980
Frequency Band DL (MHz)	2110 - 2170
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+24 dBm Composit
Output Power UL (min)	+20 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	DL 5 dB UL 3 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 125 106
Regulatory Compliance EMC	TS 125 113

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR2200/00 Compact Band Selective, 1800 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	1710-1765
Frequency Band DL (MHz)	1805-1860
No. of Channels	Broad band
Bandwidth	0.5 to 15/24 MHz
Output Power DL (min)	+23 dBm Composit
Output Power UL (min)	+23 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x7")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR2200/90 Compact Band Selective, 1800 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	1730-1785
Frequency Band DL (MHz)	1825-1880
No. of Channels	Broad band
Bandwidth	0.5 to 15/24 MHz
Output Power DL (min)	+23 dBm Composit
Output Power UL (min)	+23 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x7")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR3200/00 Compact Band Selective, 1900 MHz

ELECTRICAL DATA*	
Range	TDMA
Frequency Band UL (MHz)	1850-1890
Frequency Band DL (MHz)	1930-1970
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+25 dBm Composit
Output Power UL (min)	+25 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR3200/90 Compact Band Selective, 1900 MHz

ELECTRICAL DATA*	
Range	TDMA
Frequency Band UL (MHz)	1870-1910
Frequency Band DL (MHz)	1950-1990
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+25 dBm Composit
Output Power UL (min)	+25 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR3200/01 Compact Band Selective, 1900 MHz

ELECTRICAL DATA*	
Range	CDMA
Frequency Band UL (MHz)	1850-1890
Frequency Band DL (MHz)	1930-1970
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+26 dBm Composit
Output Power UL (min)	+23 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR3200/91 Compact Band Selective, 1900 MHz

ELECTRICAL DATA*	
Range	CDMA
Frequency Band UL (MHz)	1870-1910
Frequency Band DL (MHz)	1950-1990
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+26 dBm Composit
Output Power UL (min)	+23 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR4200/00 Compact Band Selective, 800 MHz

ELECTRICAL DATA*	
Range	TDMA
Frequency Band UL (MHz)	824-849
Frequency Band DL (MHz)	869-894
No. of Channels	Broad band
Bandwidth	0.5 to 15/25 MHz
Output Power DL (min)	+25 dBm Composit
Output Power UL (min)	+25 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 22

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR4200/01 Compact Band Selective, 800 MHz

ELECTRICAL DATA*	
Range	CDMA
Frequency Band UL (MHz)	824-849
Frequency Band DL (MHz)	869-894
No. of Channels	Broad band
Bandwidth	0.5 to 15/25 MHz
Output Power DL (min)	+26 dBm Composit
Output Power UL (min)	+23 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 22

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR4600/00 Compact Band Selective, 800 MHz

ELECTRICAL DATA*	
Range	iDEN
Frequency Band UL (MHz)	806-824
Frequency Band DL (MHz)	851-869
No. of Channels	Broad band
Bandwidth	0.5 to 15/18 MHz
Output Power DL (min)	+25 dBm Composit
Output Power UL (min)	+25 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 90
Regulatory Compliance EMC	FCC Rule 90

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR1200/00 Compact Band Selective, 900 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	890-915
Frequency Band DL (MHz)	935-960
No. of Channels	Broad band
Bandwidth	0.5 to 15/25 MHz
Output Power DL (min)	+22 dBm Composit
Output Power UL (min)	+22 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR1200/90 Compact Band Selective, 900 MHz

ELECTRICAL DATA*	
Range	EGSM
Frequency Band UL (MHz)	880-905
Frequency Band DL (MHz)	925-950
No. of Channels	Broad band
Bandwidth	0.5 to 15/25 MHz
Output Power DL (min)	+22 dBm Composit
Output Power UL (min)	+22 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	8 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	60W

MECHANICAL DATA*	
RF Connection	N-female
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")
Weight kg (lbs)	10 (22)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR6222/001 Dual Band 1800/2100 Compact

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	WCDMA 2100	GSM 1800
Frequency Band UL (MHz)	1920 -1980	1710-1765
Frequency Band DL (MHz)	2110 - 2170	1805-1860
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 15	0.5 to 15/25 MHz
Output Power DL	+24 dBm Composit	+23 dBm Composit
Output Power UL	+20 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	55 to 70 dB
Noise Figure	DL 5 dB UL 3 dB	8 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	85-265 VAC	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	60W	60W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female	N-female
Dimension (WxHxD) mm (ft)	385x385x160 (1'3"x1'3"x6")	N/A
Weight kg (lbs)	18 (40)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 125 106	TS 45.005
Regulatory Compliance EMC	TS 125 113	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

ALR6222/901 Dual Band 1800/2100 Compact

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	WCDMA 2100	GSM 1800
Frequency Band UL (MHz)	1920 -1980	1730-1785
Frequency Band DL (MHz)	2110 - 2170	1825-1880
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 15	0.5 to 15/25 MHz
Output Power DL	+24 dBm Composit	+23 dBm Composit
Output Power UL	+20 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	55 to 70 dB
Noise Figure	DL 5 dB UL 3 dB	8 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	85-265 VAC	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	60W	60W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female	N-female
Dimension (WxHxD) mm (ft)	385x385x160 (1'3"x1'3"x6")	N/A
Weight kg (lbs)	18 (40)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 125 106	TS 45.005
Regulatory Compliance EMC	TS 125 113	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR3442/01x family | Dual Band 800/1900 Band Selective

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	CDMA 1900	CDMA 800
Frequency Band UL (MHz)	1850-1890	824-849
Frequency Band DL (MHz)	1930-1970	869-894
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 16.9	0.5 to 16.9/25 MHz
Output Power DL	+33 dBm	+33 dBm Composit
Output Power UL	+33 dBm	N/A
Gain adjustment range	55 to 85 dB	55 to 85 dB
Noise Figure	7 dB	7 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	200 W	200 W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 24	FCC Rule 22

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR3442/91x family | Dual Band 800/1900 Band Selective

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	CDMA 1900	CDMA 800
Frequency Band UL (MHz)	1870-1910	824-849
Frequency Band DL (MHz)	1950-1990	869-894
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 16.9	0.5 to 16.9/25 MHz
Output Power DL	+33 dBm	+33 dBm Composit
Output Power UL	+33 dBm	N/A
Gain adjustment range	55 to 85 dB	55 to 85 dB
Noise Figure	7 dB	7 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	200 W	200 W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 24	FCC Rule 22

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

ALR3242/001 Dual Band 800/1900 Compact

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	TDMA1900	TDMA 800
Frequency Band UL (MHz)	1850-1890	824-849
Frequency Band DL (MHz)	1930-1970	869-894
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 15	0.5 to 15/25 MHz
Output Power DL	+25 dBm Composit	+25 dBm Composit
Output Power UL	+25 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	55 to 70 dB
Noise Figure	8 dB	8 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	85-265 VAC	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	60W	60W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female	N-female
Dimension (WxHxD) mm (ft)	385x385x160 (1'3"x1'3"x6")	N/A
Weight kg (lbs)	18 (40)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 24	FCC Rule 22

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

ALR3242/901 Dual Band 800/1900 Compact

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	TDMA1900	TDMA 800
Frequency Band UL (MHz)	1870-1910	824-849
Frequency Band DL (MHz)	1950-1990	869-894
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 15	0.5 to 15/25 MHz
Output Power DL	+25 dBm Composit	+25 dBm Composit
Output Power UL	+25 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	55 to 70 dB
Noise Figure	8 dB	8 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	85-265 VAC	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	60W	60W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female	N-female
Dimension (WxHxD) mm (ft)	385x385x160 (1'3"x1'3"x6")	N/A
Weight kg (lbs)	18 (40)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 24	FCC Rule 22

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR2212/052 family | Dual Band 900/1800 Band Selective

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	GSM 1800	GSM 900
Frequency Band UL (MHz)	1710-1765	890-915
Frequency Band DL (MHz)	1805-1860	935-960
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 16.9	0.5 to 16.9/25 MHz
Output Power DL	+29 dBm Composit	+26 dBm Composit
Output Power UL	+29 dBm Composit	N/A
Gain adjustment range	55 to 85 dB	55 to 85 dB
Noise Figure	7 dB	7 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	200 W	200 W

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 45.005	TS 45.005
Regulatory Compliance EMC	EN 301 489-1	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR2212/952 family | Dual Band 900/1800 Band Selective

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	GSM 1800	GSM 900
Frequency Band UL (MHz)	1730-1785	890-915
Frequency Band DL (MHz)	1825-1880	935-960
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 16.9	0.5 to 16.9/25 MHz
Output Power DL	+29 dBm Composit	+26 dBm Composit
Output Power UL	+29 dBm Composit	N/A
Gain adjustment range	55 to 85 dB	55 to 85 dB
Noise Figure	7 dB	7 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	200 W	200 W

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 45.005	TS 45.005
Regulatory Compliance EMC	EN 301 489-1	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

ALR0032/001 Upgrade 1900 Compact

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	TDMA 1900	N/A
Frequency Band UL (MHz)	1850-1890	N/A
Frequency Band DL (MHz)	1930-1970	N/A
No. of Channels	Broad band	N/A
Bandwidth (MHz)	0.5 to 15	N/A
Output Power DL	+25 dBm Composit	N/A
Output Power UL	+25 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	N/A
Noise Figure	8 dB	N/A
Group Delay	6 µs	N/A

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	85-265 VAC	N/A
Power Supply (Optional)	21-60 VDC (optional)	N/A
Power Consumption	60W	N/A

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female	N/A
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")	N/A
Weight kg (lbs)	10 (22)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	N/A
Housing Specification	NEMA 4 / IP65	N/A

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	N/A
Regulatory Compliance EMC	FCC Rule 24	N/A

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered).NULL

ALR0032/901 Upgrade 1900 Compact

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	TDMA 1900	N/A
Frequency Band UL (MHz)	1870-1910	N/A
Frequency Band DL (MHz)	1950-1990	N/A
No. of Channels	Broad band	N/A
Bandwidth (MHz)	0.5 to 15	N/A
Output Power DL	+25 dBm Composit	N/A
Output Power UL	+25 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	N/A
Noise Figure	8 dB	N/A
Group Delay	6 µs	N/A

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	85-265 VAC	N/A
Power Supply (Optional)	21-60 VDC (optional)	N/A
Power Consumption	60W	N/A

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female	N/A
Dimension (WxHxD) mm (ft)	385x385x110 (1'3"x1'3"x4")	N/A
Weight kg (lbs)	10 (22)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	N/A
Housing Specification	NEMA 4 / IP65	N/A

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	N/A
Regulatory Compliance EMC	FCC Rule 24	N/A

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered).NULL

ALR6212/001 Dual Band 900/2100 Compact

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	WCDMA 2100	GSM 900
Frequency Band UL (MHz)	1920 -1980	890-915
Frequency Band DL (MHz)	2110 - 2170	935-960
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 15	0.5 to 15/25 MHz
Output Power DL	+24 dBm Composit	+22 dBm Composit
Output Power UL	+20 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	55 to 70 dB
Noise Figure	DL 5 dB UL 3 dB	8 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	85-265 VAC	85-265 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	60W	60W

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female	N-female
Dimension (WxHxD) mm (ft)	385x385x160 (1'3"x1'3"x6")	N/A
Weight kg (lbs)	18 (40)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	TS 125 106	TS 45.005
Regulatory Compliance EMC	TS 125 113	EN 301 489-1

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

ALS6200/00 Mini Repeater, 2100 MHz

ELECTRICAL DATA*	
Range	WCDMA
Frequency Band UL (MHz)	1920 -1980
Frequency Band DL (MHz)	2110 - 2170
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+18 dBm Composit
Output Power UL (min)	+18 dBm Composit
Gain adjustment range	55 to 70 dB
Noise Figure	DL 6 dB UL 4 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	100-240 VAC
Power Supply (Optional)	N/A
Power Consumption	42W

MECHANICAL DATA*	
RF Connection	SMA-female
Dimension (WxHxD) mm (ft)	270x365x70 (11"x1'3"x4")
Weight kg (lbs)	5 (11)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	0 to +104 ° (0 to +40 °)
Housing Specification	N/A

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 125 106
Regulatory Compliance EMC	TS 125 113

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR2200/00 Standard Band Selective, 1800 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	1710-1765
Frequency Band DL (MHz)	1805-1860
No. of Channels	Broad band
Bandwidth	0.5 to 16.9 MHz
Output Power DL (min)	+29 dBm Composit
Output Power UL (min)	+29 dBm Composit
Gain adjustment range	55 to 85 dB
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x7")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR2200/90 Standard Band Selective, 1800 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	1730-1785
Frequency Band DL (MHz)	1825-1880
No. of Channels	Broad band
Bandwidth	0.5 to 16.9 MHz
Output Power DL (min)	+29 dBm Composit
Output Power UL (min)	+29 dBm Composit
Gain adjustment range	55 to 85 dB
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x7")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR3400/00 Standard Band Selective, 1900 MHz [HP]

ELECTRICAL DATA*	
Range	TDMA
Frequency Band UL (MHz)	1850-1890
Frequency Band DL (MHz)	1930-1970
No. of Channels	Broad band
Bandwidth	0.5 to 16.9 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+33 dBm Composit
Gain adjustment range	55 to 85 dB [65-95 dB]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 [320] W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR3400/01 Standard Band Selective, 1900 MHz [HP]

ELECTRICAL DATA*	
Range	CDMA
Frequency Band UL (MHz)	1850-1890
Frequency Band DL (MHz)	1930-1970
No. of Channels	Broad band
Bandwidth	0.5 to 16.9 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+33 dBm Composit
Gain adjustment range	55 to 85 dB [65-95 dB]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 [320] W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR3400/90 Standard Band Selective, 1900 MHz [HP]

ELECTRICAL DATA*	
Range	TDMA
Frequency Band UL (MHz)	1870-1910
Frequency Band DL (MHz)	1950-1990
No. of Channels	Broad band
Bandwidth	0.5 to 16.9 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+33 dBm Composit
Gain adjustment range	55 to 85 dB [65-95 dB]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 [320] W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR3400/91 Standard Band Selective, 1900 MHz [HP]

ELECTRICAL DATA*	
Range	CDMA
Frequency Band UL (MHz)	1870-1910
Frequency Band DL (MHz)	1950-1990
No. of Channels	Broad band
Bandwidth	0.5 to 16.9 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+33 dBm Composit
Gain adjustment range	55 to 85 dB [65-95 dB]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 [320] W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 24
Regulatory Compliance EMC	FCC Rule 24

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR4200/00 Standard Band Selective, 800 MHz [HP]

ELECTRICAL DATA*	
Range	TDMA
Frequency Band UL (MHz)	824-849
Frequency Band DL (MHz)	869-894
No. of Channels	Broad band
Bandwidth	0.5 to 16.9/25 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+33dBm Composit
Gain adjustment range	55 to 85 dB [65 to 95 dB DL]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W [320W]

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 22

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR4200/01 Standard Band Selective, 800 MHz [HP]

ELECTRICAL DATA*	
Range	CDMA
Frequency Band UL (MHz)	824-849
Frequency Band DL (MHz)	869-894
No. of Channels	Broad band
Bandwidth	0.5 to 16.9/25 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+30 dBm Composit
Gain adjustment range	55 to 85 dB [65 to 95 dB DL]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W [320W]

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 22
Regulatory Compliance EMC	FCC Rule 22

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR4200/02 Standard Band Selective, 800 MHz [HP]

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	824-849
Frequency Band DL (MHz)	869-894
No. of Channels	Broad band
Bandwidth	0.5 to 25 MHz
Output Power DL (min)	+26 dBm Composit
Output Power UL (min)	+26 dBm Composit
Gain adjustment range	55 to 85 dB
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x8")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR4200/05 Standard Band Selective, 800 MHz [HP]

ELECTRICAL DATA*	
Range	WCDMA
Frequency Band UL (MHz)	824-849
Frequency Band DL (MHz)	869-894
No. of Channels	Broad band
Bandwidth	0.5 to 15 MHz
Output Power DL (min)	+30 dBm Composit
Output Power UL (min)	+30 dBm Composit
Gain adjustment range	55 to 85 dB
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x7")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 125 106
Regulatory Compliance EMC	TS 125 113

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR4600/00 Standard Band Selective, 800 MHz [HP]

ELECTRICAL DATA*	
Range	iDEN
Frequency Band UL (MHz)	806-824
Frequency Band DL (MHz)	851-869
No. of Channels	Broad band
Bandwidth	0.5 to 18 MHz
Output Power DL (min)	+33 [36] dBm Composit
Output Power UL (min)	+33 dBm Composit
Gain adjustment range	55 to 85 dB [65-95 dB]
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 [320] W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195[280] (1'5"x1'9"x8" [11"])
Weight kg (lbs)	22[37] (48[82])

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	FCC Rule 90
Regulatory Compliance EMC	FCC Rule 90

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR1200/00 Standard Band Selective, 900 MHz

ELECTRICAL DATA*	
Range	GSM
Frequency Band UL (MHz)	890-915
Frequency Band DL (MHz)	935-960
No. of Channels	Broad band
Bandwidth	0.5 to 16.9/25 MHz
Output Power DL (min)	+26 dBm Composit
Output Power UL (min)	+26 dBm Composit
Gain adjustment range	55 to 85 dB
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x8")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

AR1200/90 Standard Band Selective, 900 MHz

ELECTRICAL DATA*	
Range	EGSM
Frequency Band UL (MHz)	880-915
Frequency Band DL (MHz)	925-960
No. of Channels	Broad band
Bandwidth	0.5 to 16.9/25 MHz
Output Power DL (min)	+26 dBm Composit
Output Power UL (min)	+26 dBm Composit
Gain adjustment range	55 to 85 dB
Noise Figure	6 dB
Group Delay	6 µs

TECHNICAL SPECIFICATIONS*	
Power Supply	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)
Power Consumption	200 W

MECHANICAL DATA*	
RF Connection	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440x530x195 (1'5"x1'9"x8")
Weight kg (lbs)	22 (48)

ENVIRONMENTAL DATA*	
Operating Temperature Farenheit (Celsius)	-13 to +131 ° (-25 to +55 °)
Housing Specification	NEMA 4 / IP65

APPROVALS AND TESTS*	
Regulatory Compliance Radio	TS 45.005
Regulatory Compliance EMC	EN 301 489-1

* All specifications subject to change. Note: Values within [ ] is valid for a max configuration

ALR3246/010 family | Dual Band 1900/iDEN Compact

ELECTRICAL DATA*		
Section	Bottom Section	Door Section
Range	TDMA 1900	iDEN
Frequency Band UL (MHz)	1850-1890	806-824
Frequency Band DL (MHz)	1930-1970	851-869
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 15	0.5 to 15/18 MHz
Output Power DL	+25 dBm Composit	+25 dBm Composit
Output Power UL	+25 dBm Composit	N/A
Gain adjustment range	55 to 70 dB	55 to 70 dB
Noise Figure	8 dB	8 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*		
Section	Bottom Section	Door Section
Power Supply	85-265 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	60W	60 W

MECHANICAL DATA*		
Section	Bottom Section	Door Section
RF Connection	N-female	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	385x385x160 (1'3"x1'3"x6")	N/A
Weight kg (lbs)	18 (40)	N/A

ENVIRONMENTAL DATA*		
Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*		
Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	FCC Rule 90
Regulatory Compliance EMC	FCC Rule 24	FCC Rule 90

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

AR3446/01x family | Dual Band 1900/iDEN Band Selective

ELECTRICAL DATA*

Section	Bottom Section	Door Section
Range	CDMA 1900	iDEN
Frequency Band UL (MHz)	1850-1890	824-849
Frequency Band DL (MHz)	1930-1970	851-869
No. of Channels	Broad band	Broad band
Bandwidth (MHz)	0.5 to 16.9	0.5 to 16.9/18 MHz
Output Power DL	+33 dBm	+33 dBm Composit
Output Power UL	+33 dBm	N/A
Gain adjustment range	55 to 85 dB	55 to 85 dB
Noise Figure	7 dB	7 dB
Group Delay	6 µs	6 µs

TECHNICAL SPECIFICATIONS*

Section	Bottom Section	Door Section
Power Supply	115/230 VAC	115/230 VAC
Power Supply (Optional)	21-60 VDC (optional)	21-60 VDC (optional)
Power Consumption	200 W	200 W

MECHANICAL DATA*

Section	Bottom Section	Door Section
RF Connection	N-female (7/16 option)	N-female (7/16 option)
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")	N/A
Weight kg (lbs)	37 (82)	N/A

ENVIRONMENTAL DATA*

Section	Bottom Section	Door Section
Operating Temperature Farenheit (Celsius)	-13 to +131 (-25 to +55)	-13 to +131 (-25 to +55)
Housing Specification	NEMA 4 / IP65	NEMA 4 / IP65

APPROVALS AND TESTS*

Section	Bottom Section	Door Section
Regulatory Compliance Radio	FCC Rule 24	FCC Rule 90
Regulatory Compliance EMC	FCC Rule 24	FCC Rule 90

* All specifications subject to change.

Notes: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered). *If combined to common antenna, output power decrease 1dB and NF increase 1dB

Repeater Products

Title	Frequency Range Uplink (MHz)	Frequency Range Downlink (MHz)	Part Number	Page
Advanced Train Repeater Module 900 MHz	890-915	935-960	ATR1200/001xy (GSM 900)	124
Advanced Train Repeater Module 900 MHz	890-915	935-960	ATR1200/002xy (GSM900)	125
Advanced Train Repeater Module 900 MHz	880-905	925-950	ATR1200/901xy (EGSM900)	126
Advanced Train Repeater Module 900 MHz	880-905	925-950	ATR1200/902xy (EGSM900)	127
Advanced Train Repeater Module 1800 MHz	1710-1785	1805-1880	ATR2200/x0xx1 (GSM 1800)	128
Advanced Train Repeater Module 2100 MHz	1920-1980	2110-2170	ATR6200/001xy (UMTS)	129

ATR1200/001xy (GSM 900) Advanced Train Repeater Module 900 MHz

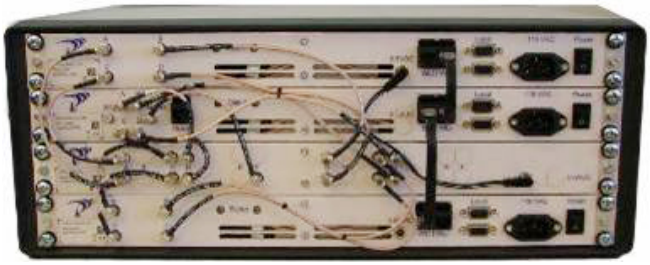
GSM, Bandwidth 15MHz (Advanced Train Repeater Module GSM 900MHz, bandwidth 15MHz)

ELECTRICAL SPECIFICATIONS	
Frequency Range Uplink (MHz)	890-915
Frequency Range Downlink (MHz)	935-960
Filter Bandwidth Adjustable (MHz)	0,5-15
Filter Settling Resolutions (KHz)	25
Gain Range	50-70 dB
Gain Step Resolution	1 dB
Gain Trail Dynamic Range	30 dB
Gain Trail Tracking Accuracy	2 dB
Output Power Composite (min)	+23 dBm
Noise Figure 70 dB Gain	8 dB
Maximum Input Power	+13 dBm
Power Supply	AC or DC
Power Consumption	< 50 W

MECHANICAL SPECIFICATIONS	
Dimensions WxDxH mm (in)	450 x 420 x 44 (17.7x 16.5 x 1.7)
Weight kg (lbs)	< 3 (6.6)
RF Connectors	SMA-Type Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25°C to +45 °C
Humidity	EC 60068-2-56
Vibration	EN 300 019-1-5 V2, IEC-61373
Ingress Protection	IP21

APPROVALS AND TESTS	
Safety	EN/ IEC 60 950
EMC	ETS 301 489-1
EMC for Railway Application	EN 50155, EN 50121-3-2
Radio	ETSI EN 300 609-4



xy: reserved for power supply type and remote control/GPS option.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

ATR1200/002xy (GSM900) Advanced Train Repeater Module 900 MHz

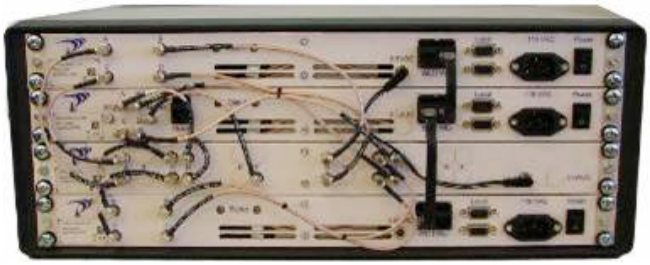
GSM, Bandwidth 25MHz (Advanced Train Repeater Module GSM 900MHz, bandwidth 25MHz)

ELECTRICAL SPECIFICATIONS	
Frequency Range Uplink (MHz)	890-915
Frequency Range Downlink (MHz)	935-960
Filter Bandwidth Adjustable (MHz)	0,5-25
Filter Settling Resolutions (KHz)	25
Gain Range	50-70 dB
Gain Step Resolution	1 dB
Gain Trail Dynamic Range	30 dB
Gain Trail Tracking Accuracy	2 dB
Output Power Composite (min)	+23 dBm
Noise Figure 70 dB Gain	8 dB
Maximum Input Power	+13 dBm
Power Supply	AC or DC
Power Consumption	< 50 W

MECHANICAL SPECIFICATIONS	
Dimensions WxDxH mm (in)	450 x 420 x 44 (17.7x 16.5 x 1.7)
Weight kg (lbs)	< 3 (6.6)
RF Connectors	SMA-Type Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25°C to +45 °C
Humidity	EC 60068-2-56
Vibration	EN 300 019-1-5 V2, IEC-61373
Ingress Protection	IP21

APPROVALS AND TESTS	
Safety	EN/ IEC 60 950
EMC	ETS 301 489-1
EMC for Railway Application	EN 50155, EN 50121-3-2
Radio	ETSI EN 300 609-4



xy: reserved for power supply type and remote control/GPS option.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

ATR1200/901xy (EGSM900) Advanced Train Repeater Module 900 MHz

EGSM, Bandwidth 15MHz (Advanced Train Repeater Module EGSM 900MHz, bandwidth 15MHz)

ELECTRICAL SPECIFICATIONS	
Frequency Range Uplink (MHz)	880-905
Frequency Range Downlink (MHz)	925-950
Filter Bandwidth Adjustable (MHz)	0,5-15
Filter Settling Resolutions (KHz)	25
Gain Range	50-70 dB
Gain Step Resolution	1 dB
Gain Trail Dynamic Range	30 dB
Gain Trail Tracking Accuracy	2 dB
Output Power Composite (min)	+24 dBm
Noise Figure 70 dB Gain	8 dB
Maximum Input Power	+13 dBm
Power Supply	AC or DC
Power Consumption	< 50 W

MECHANICAL SPECIFICATIONS	
Dimensions WxDxH mm (in)	450 x 420 x 44 (17.7x 16.5 x 1.7)
Weight kg (lbs)	< 3 (6.6)
RF Connectors	SMA-Type Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25°C to +45 °C
Humidity	EC 60068-2-56
Vibration	EN 300 019-1-5 V2, IEC-61373
Ingress Protection	IP21

APPROVALS AND TESTS	
Safety	EN/ IEC 60 950
EMC	ETS 301 489-1
EMC for Railway Application	EN 50155, EN 50121-3-2
Radio	ETSI EN 300 609-4

xy: reserved for power supply type and remote control/GPS option.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

ATR1200/902xy (EGSM900) Advanced Train Repeater Module 900 MHz

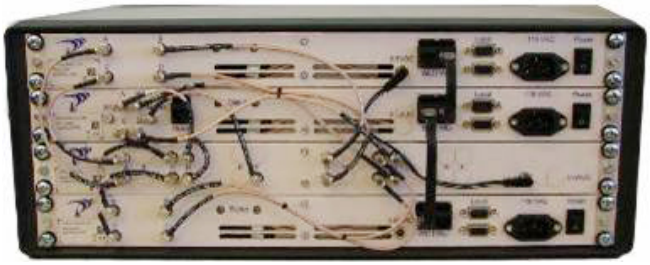
EGSM, Bandwidth 25MHz (Advanced Train Repeater Module EGSM 900MHz, bandwidth 25MHz)

ELECTRICAL SPECIFICATIONS	
Frequency Range Uplink (MHz)	880-905
Frequency Range Downlink (MHz)	925-950
Filter Bandwidth Adjustable (MHz)	0,5-25
Filter Settling Resolutions (KHz)	25
Gain Range	50-70 dB
Gain Step Resolution	1 dB
Gain Trail Dynamic Range	30 dB
Gain Trail Tracking Accuracy	2 dB
Output Power Composite (min)	+24 dBm
Noise Figure 70 dB Gain	8 dB
Maximum Input Power	+13 dBm
Power Supply	AC or DC
Power Consumption	< 50 W

MECHANICAL SPECIFICATIONS	
Dimensions WxDxH mm (in)	450 x 420 x 44 (17.7x 16.5 x 1.7)
Weight kg (lbs)	< 3 (6.6)
RF Connectors	SMA-Type Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25°C to +45 °C
Humidity	EC 60068-2-56
Vibration	EN 300 019-1-5 V2, IEC-61373
Ingress Protection	IP21

APPROVALS AND TESTS	
Safety	EN/ IEC 60 950
EMC	ETS 301 489-1
EMC for Railway Application	EN 50155, EN 50121-3-2
Radio	ETSI EN 300 609-4



xy: reserved for power supply type and remote control/GPS option.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

ATR2200/x0xx1 (GSM 1800) Advanced Train Repeater Module 1800 MHz

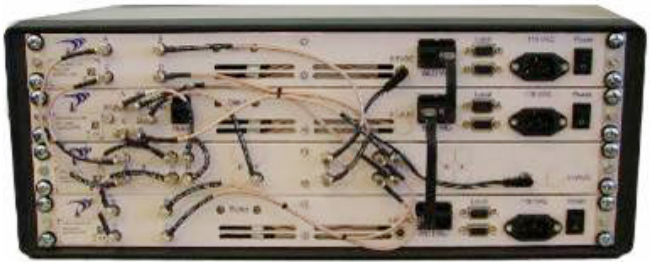
The part number needs to be changed to ATR2200/x0xx1

ELECTRICAL SPECIFICATIONS	
Frequency Range Uplink (MHz)	1710-1785
Frequency Range Downlink (MHz)	1805-1880
Filter Bandwidth Adjustable (MHz)	0,5-25
Filter Settling Resolutions (KHz)	
Gain Range	50-70 dB
Gain Step Resolution	1 dB
Gain Trail Dynamic Range	30 dB
Gain Trail Tracking Accuracy	2 dB
Output Power Composite (min)	+24 dBm
Noise Figure 70 dB Gain	8 dB
Maximum Input Power	+13 dBm
Power Supply	AC or DC
Power Consumption	< 50 W

MECHANICAL SPECIFICATIONS	
Dimensions WxDxH mm (in)	450 x 420 x 44 (17.7x 16.5 x 1.7)
Weight kg (lbs)	< 3 (6.6)
RF Connectors	SMA-Type Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25°C to +45 °C
Humidity	EC 60068-2-56
Vibration	EN 300 019-1-5 V2, IEC-61373
Ingress Protection	IP21

APPROVALS AND TESTS	
Safety	EN/ IEC 60 950
EMC	ETS 301 489-1
EMC for Railway Application	EN 50155, EN 50121-3-2
Radio	ETSI EN 300 609-4



xy: reserved for power supply type and remote control/GPS option.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

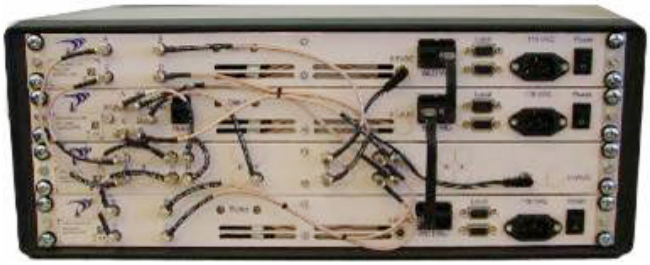
ATR6200/001xy (UMTS) Advanced Train Repeater Module 2100 MHz

ELECTRICAL SPECIFICATIONS	
Frequency Range Uplink (MHz)	1920-1980
Frequency Range Downlink (MHz)	2110-2170
Filter Bandwidth Adjustable (MHz)	0,5-15
Filter Settling Resolutions (KHz)	
Gain Range	50-70 dB
Gain Step Resolution	1 dB
Gain Trail Dynamic Range	30 dB
Gain Trail Tracking Accuracy	2 dB
Output Power Composite (min)	+24 dBm
Noise Figure 70 dB Gain	8 dB
Maximum Input Power	+13 dBm
Power Supply	AC or DC
Power Consumption	< 50 W

MECHANICAL SPECIFICATIONS	
Dimensions WxDxH mm (in)	450 x 420 x 44 (17.7x 16.5 x 1.7)
Weight kg (lbs)	< 3 (6.6)
RF Connectors	SMA-Type Female

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25°C to +45 °C
Humidity	EC 60068-2-56
Vibration	EN 300 019-1-5 V2, IEC-61373
Ingress Protection	IP21

APPROVALS AND TESTS	
Safety	EN/ IEC 60 950
EMC	ETS 301 489-1
EMC for Railway Application	EN 50155, EN 50121-3-2
Radio	ETSI EN 300 609-4

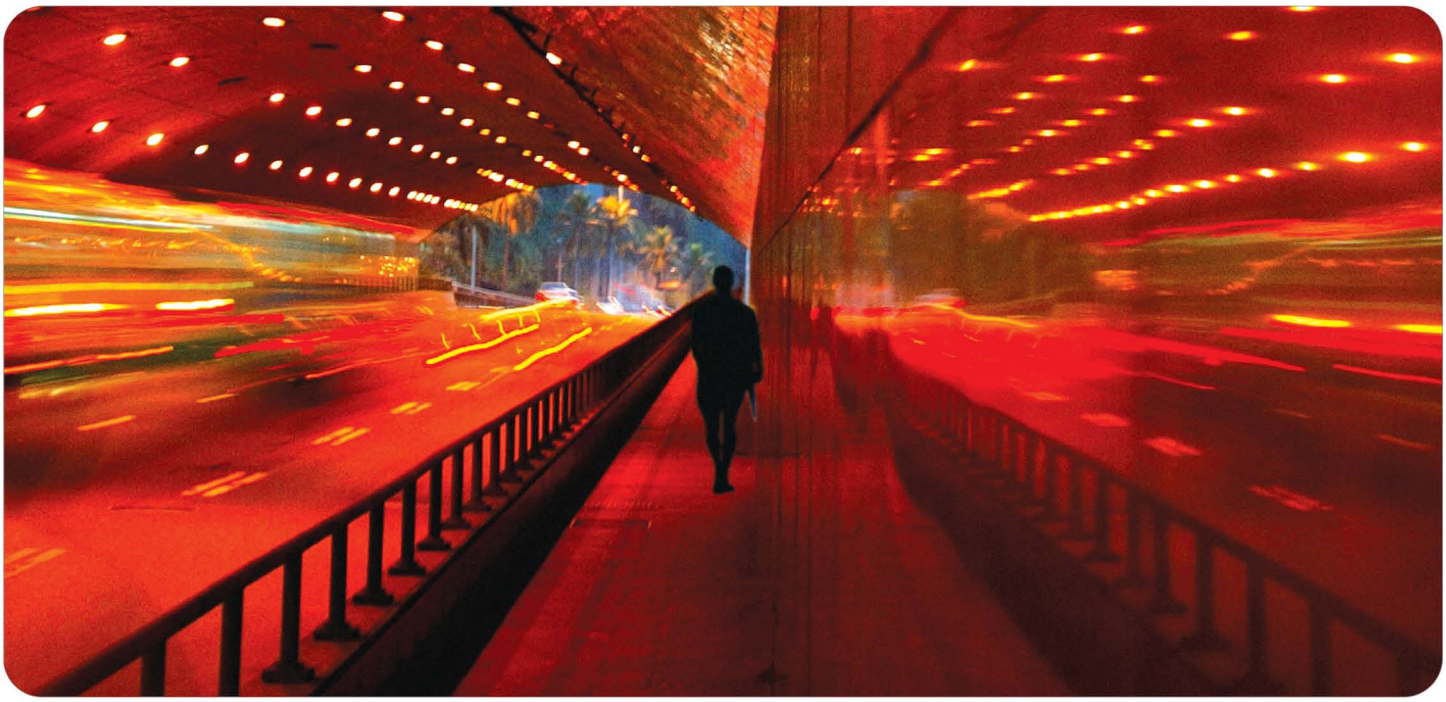


xy: reserved for power supply type and remote control/GPS option.

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

POWERWAVE

In-Building DAS Products



Turnkey Projects

We deliver complete turnkey solutions for wireless coverage. We manage the entire project with full responsibility, starting with analyzing and determining required signal strength, quality and planning for future expansion, right through implementation and operations. All Powerwave turnkey systems are backed by full performance and cost guarantees, with full product and component warranties for your peace of mind.

Powerwave Products

As new wireless services, technologies and opportunities emerge, the ability to rapidly adapt will become even more vital to network operators, building owners and public safety agencies. That's why Powerwave engineers flexibility into every system. It's why we choose components that are modular and adaptable. And it's why our coverage solutions are built from the ground up to be versatile.

In-Building DAS Products

Public Safety Networks

Title	Frequency Range (MHz)	Gain Range	Part Number	Page
In-Hancer™ Plus Series Bi-Directional Amplifier	380-430	28-70 dB, 28-40 dB (SB400-F2L & SB400-F4L)	SB400-A	132
In-Hancer™ Plus Series Bi-Directional Amplifier	450-512	28-70 dB, 28-40 dB (SB400-F2L & SB400-F4L)	SB400-B	133
In-Hancer™ Plus Series Bi-Directional Amplifier	Uplink: 794-806 MHz, Downlink: 764-776 MHz	30-80 dB	SB700-PS	134
In-Hancer™ Plus Series Bi-Directional Amplifier	Uplink: 896-902, Downlink: 935-941	30-80 dB	SB900-P	135
In-Hancer™ Plus Series Bi-Directional Amplifier	Uplink: 896-902, Downlink: 935-941	30-80 dB	SB900-PE	136

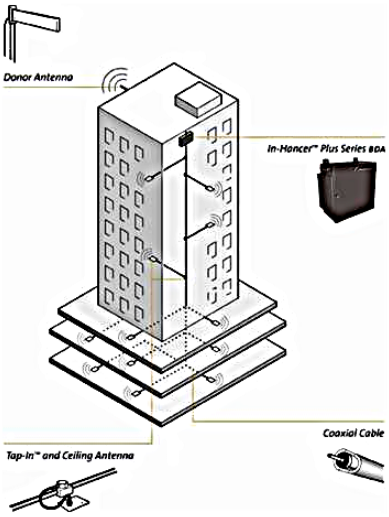
SB400-A In-Hancer™ Plus Series Bi-Directional Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	380-430
Passband Ripple	±2.5 dB
Digital Gain Adjustment	In 1 dB Increments
AGC Dynamic Range	25 dB
Gain Range	28-70 dB, 28-40 dB (SB400-F2L & SB400-F4L)
ID 3rd Order Intercept Point IP3	+44 dBm
Noise Figure	<12 dB
Propagation Delay	<1 εs
Input Impedance	50 q
VSWR	<2:1
Maximum RF Input	+10 dBm
Primary Power	120/240 VAC, 50-60 Hz 100 VA, 150 VA Max

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	26.28" x 24" x 12.25"
Weight (lbs)	120 lbs. approx
Operating Temperature Range (Celsius)	-100° to +500°
Enclosure	Painted Steel - Wall Mount (Stainless Steel upgrade available)

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-SB400
IC Type Acceptance	541A-SB400

Filtering Options	*Range	* Passband Bandwidth	Tx to Rx Separation
SB400-F1	380-430 MHz	1.0 MHz	5.0 MHz
SB400-F5	380-430 MHz	5.0 MHz	10.0 MHz
SB400-F2L	403-430 MHz	1.5 MHz	3.0 MHz
SB400-F2H1	403-430 MHz	1.5 MHz	3.0 MHz
SB400-F3	403-430 MHz	1.5 MHz	5.0 MHz
SB400-F4L	403-430 MHz	3.0 MHz	5.0 MHz
SB400-F4H1	403-430 MHz	3.0 MHz	5.0 MHz
SB400-F2H2	NA	1.5 MHz	3.0 MHz
SB400-F4H2	NA	3.0 MHz	5.0 MHz
SB400-F2H3	NA	1.5 MHz	3.0 MHz
SB400-F4H3	NA	3.0 MHz	5.0 MHz



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

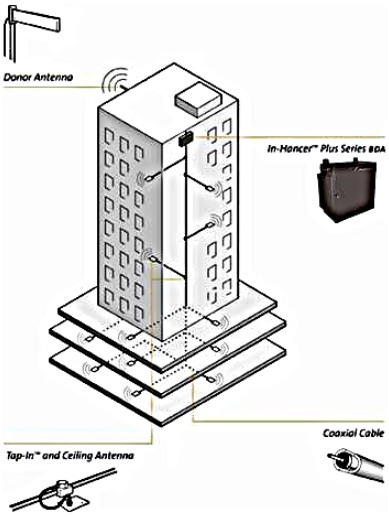
SB400-B In-Hancer™ Plus Series Bi-Directional Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	450-512
Passband Ripple	±2.5 dB
Digital Gain Adjustment	In 1 dB Increments
AGC Dynamic Range	25 dB
Gain Range	28-70 dB, 28-40 dB (SB400-F2L & SB400-F4L)
ID 3rd Order Intercept Point IP3	+44 dBm
Noise Figure	<12 dB
Propagation Delay	<1 εs
Input Impedance	50 q
VSWR	<2:1
Maximum RF Input	+10 dBm
Primary Power	120/240 VAC, 50-60 Hz 100 VA, 150 VA Max

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	26.28" x 24" x 12.25"
Weight (lbs)	120 lbs. approx
Operating Temperature Range (Celsius)	-100° to +500°
Enclosure	Painted Steel - Wall Mount (Stainless Steel upgrade available)

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-SB400
IC Type Acceptance	541A-SB400

Filtering Options	*Range	* Passband Bandwidth	Tx to Rx Separation
SB400-F1	450-512 MHz	1.0 MHz	5.0 MHz
SB400-F5	450-512 MHz	5.0 MHz	10.0 MHz
SB400-F2L	450-512 MHz	1.5 MHz	3.0 MHz
SB400-F2H1	NA	1.5 MHz	3.0 MHz
SB400-F3	450-512 MHz	1.5 MHz	5.0 MHz
SB400-F4L	450-512 MHz	3.0 MHz	5.0 MHz
SB400-F4H1	NA	3.0 MHz	5.0 MHz
SB400-F2H2	450-4 70 MHz	1.5 MHz	3.0 MHz
SB400-F4H2	450-4 70 MHz	3.0 MHz	5.0 MHz
SB400-F2H3	470-512 MHz	1.5 MHz	3.0 MHz
SB400-F4H3	470-512 MHz	3.0 MHz	5.0 MHz



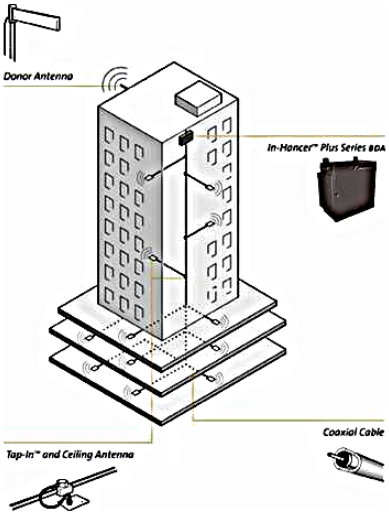
All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

SB700-PS In-Hancer™ Plus Series Bi-Directional Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	Uplink: 794-806 MHz, Downlink: 764-776 MHz
Passband Ripple	±2.5 dB
Digital Gain Adjustment	In 1 dB Increments
AGC Dynamic Range	40 dB
Gain Range	30-80 dB
ID 3rd Order Intercept Point IP3	+45 dB'm
Noise Figure	<8 dB
Propagation Delay	<1 εs
Input Impedance	50 q
VSWR	<2:1
Maximum RF Input	+10 dBm
Primary Power	120/240 VAC, 50-60 Hz 100 VA, 150 VA Max

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	12.9" x 17" x 8.4"
Weight (lbs)	60 lbs. approx.
Operating Temperature Range (Celsius)	-10° to +50°
Enclosure	Painted Metal - Wall Mount

ACCEPTANCE TYPE	
FCC Type Acceptance	E675JS0080
IC Type Acceptance	C:2868C-5JS0080



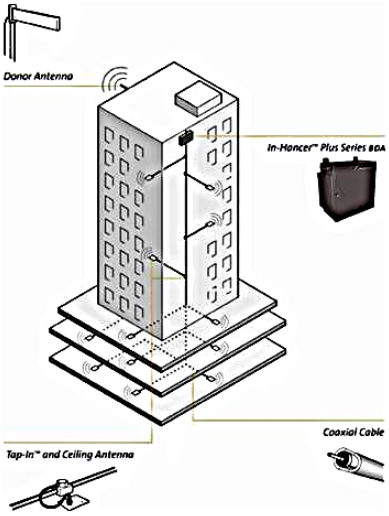
All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

SB900-P In-Hancer™ Plus Series Bi-Directional Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	Uplink: 896-902, Downlink: 935-941
Passband Ripple	±2.5 dB
Digital Gain Adjustment	In 1 dB Increments
AGC Dynamic Range	40 dB
Gain Range	30-80 dB
ID 3rd Order Intercept Point IP3	+45 dBm
Noise Figure	<8 dB
Propagation Delay	<1 εs
Input Impedance	50 q
VSWR	<2:1
Maximum RF Input	+10 dBm
Primary Power	120/240 VAC, 50-60 Hz 100 VA, 150 VA Max.

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	12.9" x 17" x 8.4"
Weight (lbs)	60 lbs. approx.
Operating Temperature Range (Celsius)	-10° to +50°
Enclosure	Painted Metal - Wall Mount

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-SB800
IC Type Acceptance	1541A-SB800



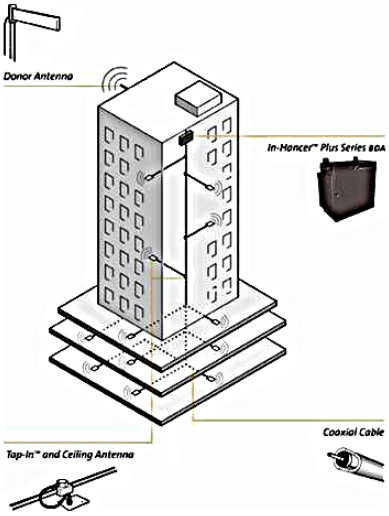
All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

SB900-PE In-Hancer™ Plus Series Bi-Directional Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	Uplink: 896-902, Downlink: 935-941
Passband Ripple	±2.5 dB
Digital Gain Adjustment	In 1 dB Increments
AGC Dynamic Range	40 dB
Gain Range	30-80 dB
ID 3rd Order Intercept Point IP3	+45 dBm
Noise Figure	<8 dB
Propagation Delay	<1 εs
Input Impedance	50 q
VSWR	<2:1
Maximum RF Input	+10 dBm
Primary Power	120/240 VAC, 50-60 Hz 100 VA, 150 VA Max.

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	12.9" x 17" x 8.4"
Weight (lbs)	60 lbs. approx.
Operating Temperature Range (Celsius)	-10° to +50°
Enclosure	Painted Metal - Wall Mount

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-SB800
IC Type Acceptance	1541A-SB800



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

In-Building DAS Products

Public Safety Networks

Title	Frequency Range (MHz)	Bandwidth	Part Number	Page
LNKA800 Amplifier	806-940	Broadband Amplifier	LNKA800	138
LNKA900	890-960	Broadband Amplifier	LNKA900	139
LNKC1800 Banded Repeater	NA	0.25 MHz, 1.25 MHz, 5 MHz, 15 MHz	LNKC1800	140
LNKC1900 Banded Repeater	NA	0.25 MHz, 1.25 MHz, 5 MHz, 15 MHz	LNKC1900	141
LNKF100	136 - 157, 155 - 174	Narrowband FM 12.5 or 25 KHz	LNKF100	142
LNKF400	406.125 - 430, 450 - 512 MHz	Narrowband FM 12.5 or 25 KHz	LNKF400	143
LNKF800	806-824,851-869,896-901,935-940	Narrowband FM 12.5 or 25 KHz	LNKF800	144
LNKA100 Amplifier	136-155	Broadband Amplifier	LNKA100	145

LNKA800 LNKA800 Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	806-940
Downlink Frequency Range (MHz)	NA
Uplink Frequency Range (MHz)	NA
Bandwidth	Broadband Amplifier
RF Gain Adjustment Range	+34 dB to +84 dB, in 1 dB increments
AGC Control Adjustment Range	+15 dBm to +30 dBm
RF Frequency Stability	NA
Maximum RF Output Power	NA
RF Output Power Range	NA
RF Output Power Variation	NA
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	NA
Input Sensitivity Adjust Range	NA
Input Hysteresis	NA
Adjacent Channel Sensitivity	NA
ID 3rd Order Intercept Point IP3	+47 dBm Typical
Noise Figure	<8 dB, 5 dB Typical
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm Maximum
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<200 nS
Audio Distortion and Noise	NA
Power Supply Module Requirements	40Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-LNKA800
IC Type Acceptance	1541311246A

* Module Family	Type	Frequency
LNKA800-A	Broadband Amplifier	806-824 MHz
LNKA800-B	Broadband Amplifier	851-869 MHz
LNKA800-C	Broadband Amplifier	824-849 MHz
LNKA800-D	Broadband Amplifier	869-894 MHz
LNKA800-E	Broadband Amplifier	896-902 MHz
LNKA800-F	Broadband Amplifier	928-940 MHz

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKA900 LNKA900

MODULE SPECIFICATIONS	
Frequency Range (MHz)	890-960
Downlink Frequency Range (MHz)	NA
Uplink Frequency Range (MHz)	NA
Bandwidth	Broadband Amplifier
RF Gain Adjustment Range	+34 dB to +84 dB, in 1 dB increments
AGC Control Adjustment Range	+15 dBm to +30 dBm
RF Frequency Stability	NA
Maximum RF Output Power	NA
RF Output Power Range	NA
RF Output Power Variation	NA
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	NA
Input Sensitivity Adjust Range	NA
Input Hysteresis	NA
Adjacent Channel Sensitivity	NA
ID 3rd Order Intercept Point IP3	+47 dBm Typical
Noise Figure	<8 dB, 5 dB Typical
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm Maximum
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<200 nS
Audio Distortion and Noise	NA
Power Supply Module Requirements	40Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	NA
IC Type Acceptance	NA

* Module Family	Type	Frequency
LNKA900-A	Broadband Amplifier	890-915 MHz
LNKA9800-B	Broadband Amplifier	935-960 MHz

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKC1800 LNKC1800 Banded Repeater

MODULE SPECIFICATIONS	
Frequency Range (MHz)	NA
Downlink Frequency Range (MHz)	1805-1880
Uplink Frequency Range (MHz)	1710-1785
Bandwidth	0.25 MHz, 1.25 MHz, 5 MHz, 15 MHz
RF Gain Adjustment Range	+65 dB to +95 dB, in 1 dB increments
AGC Control Adjustment Range	NA
RF Frequency Stability	Tracks input signal exactly
Maximum RF Output Power	NA
RF Output Power Range	NA
RF Output Power Variation	NA
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	NA
Input Sensitivity Adjust Range	NA
Input Hysteresis	NA
Adjacent Channel Sensitivity	NA
ID 3rd Order Intercept Point IP3	+44 dBm
Noise Figure	<6 dB
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm Maximum
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<5 εs for 0.25 MHz or 1.25 MHz Models, <3 εs for 5 MHz or 15 MHz Models
Audio Distortion and Noise	NA
Power Supply Module Requirements	40Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	NA
IC Type Acceptance	NA

* Module Family	Type	Frequency
LNKC1800-D.2	Downlink 0.25 MHz Bandwidth	1805-1880 MHz
LNKC1800-D	Downlink 1.25 MHz Bandwidth	1805-1880 MHz
LNKC1800-D5	Downlink 5 MHz Bandwidth	1805-1880 MHz
LNKC1800-D15	Downlink 15 MHz Bandwidth	1805-1880 MHz
LNKC1800-U.2	Uplink 0.25 MHz Bandwidth	1710-1785 MHz
LNKC1800-U	Uplink 1.25 MHz Bandwidth	1710-1785 MHz
LNKC1800-U5	Uplink 5 MHz Bandwidth	1710-1785 MHz
LNKC1800-U15	Uplink 15 MHz Bandwidth	1710-1785 MHz

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKC1900 LNKC1900 Banded Repeater

MODULE SPECIFICATIONS	
Frequency Range (MHz)	NA
Downlink Frequency Range (MHz)	1850-1910, 1930-1990
Uplink Frequency Range (MHz)	NA
Bandwidth	0.25 MHz, 1.25 MHz, 5 MHz, 15 MHz
RF Gain Adjustment Range	+65 dB to +95 dB, in 1 dB increments
AGC Control Adjustment Range	NA
RF Frequency Stability	Tracks input signal exactly
Maximum RF Output Power	NA
RF Output Power Range	NA
RF Output Power Variation	NA
Output Power 1	1 Carrier: +27 dBm
Output Power 2	2 Carrier: +23 dBm each
Output Power 3	3 Carrier: +21 dBm each
Input Dynamic Range	NA
Input Sensitivity Adjust Range	NA
Input Hysteresis	NA
Adjacent Channel Sensitivity	NA
ID 3rd Order Intercept Point IP3	+44 dBm
Noise Figure	<6 dB
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm Maximum
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<5 εs for 0.25 MHz or 1.25 MHz Models, <3 εs for 5 MHz or 15 MHz Models
Audio Distortion and Noise	NA
Power Supply Module Requirements	40Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-LNKC1900
IC Type Acceptance	1541311242A

* Module Family	Type	Frequency
LNKC1900-D.2	Downlink 0.25 MHz Bandwidth	1930-1990 MHz
LNKC1900-D	Downlink 1.25 MHz Bandwidth	1930-1990 MHz
LNKC1900-D5	Downlink 5 MHz Bandwidth	1930-1990 MHz
LNKC1900-D15	Downlink 15 MHz Bandwidth	1930-1990 MHz
LNKC1900-U.2	Uplink 0.25 MHz Band	1850-1910 MHz
LNKC1900-U	Uplink 1.25 MHz Bandwidth	1850-1910 MHz
LNKC1900-U5	Uplink 5 MHz Bandwidth	1850-1910 MHz
LNKC1900-U15	Uplink 15 MHz Bandwidth	1850-1910 MHz

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKF100 LNKF100

MODULE SPECIFICATIONS	
Frequency Range (MHz)	136 - 157, 155 - 174
Downlink Frequency Range (MHz)	NA
Uplink Frequency Range (MHz)	NA
Bandwidth	Narrowband FM 12.5 or 25 KHz
RF Gain Adjustment Range	NA
AGC Control Adjustment Range	NA
RF Frequency Stability	NA
Maximum RF Output Power	+37 dBm
RF Output Power Range	+20 dBm to +37 dBm
RF Output Power Variation	+/- 1 dB
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	-110 dBm to -30 dBml
Input Sensitivity Adjust Range	-110 dBm to -50 dBm
Input Hysteresis	1 dB to 10 dB
Adjacent Channel Sensitivity	60 dB minimum for 25 KHz modules, 55 dB for 12.5 Khz modules
ID 3rd Order Intercept Point IP3	NA
Noise Figure	NA
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm max for 25 KHz modules, -20 dBm max for 12.5 KHz modules
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<120 microsecs for 25 KHz modules, <160 microsecs for 12.5 KHz modules
Audio Distortion and Noise	<4% increase for 25 KHz modules, <5% increase for 12.5 KHz modules
Power Supply Module Requirements	45 Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode, Receive, Transmit
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	NA
IC Type Acceptance	NA

* Module Family	Type	Frequency
LNKF100-A1	25 KHz FM channels	136-157 MHz
LNKF100-A2	12.5 KHz FM channels	136-157 MHz
LNKF100-B1	25 KHz FM channels	155-174 MHz
LNKF100-B2	12.5 KHz FM channels	155-174 MHz

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKF400 LNKF400

MODULE SPECIFICATIONS	
Frequency Range (MHz)	406.125 - 430, 450 - 512 MHz
Downlink Frequency Range (MHz)	NA
Uplink Frequency Range (MHz)	NA
Bandwidth	Narrowband FM 12.5 or 25 KHz
RF Gain Adjustment Range	NA
AGC Control Adjustment Range	NA
RF Frequency Stability	Tracks input signal exactly
Maximum RF Output Power	+37 dBm
RF Output Power Range	+17 dBm to +37 dBm
RF Output Power Variation	+/- 1 dB
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	-110 dBm to -30 dBml
Input Sensitivity Adjust Range	-110 dBm to -50 dBm
Input Hysteresis	1 dB to 10 dB
Adjacent Channel Sensitivity	60 dB minimum for 25 KHz modules, 55 dB for 12.5 Khz modules
ID 3rd Order Intercept Point IP3	NA
Noise Figure	NA
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm max for 25 KHz modules, -20 dBm max for 12.5 KHz modules
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<120 microsecs for 25 KHz modules, <160 microsecs for 12.5 KHz modules
Audio Distortion and Noise	<4% increase for 25 KHz modules, <5% increase for 12.5 KHz modules
Power Supply Module Requirements	45 Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode, Receive, Transmit
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-OFR400-A, H6M-OFR400
IC Type Acceptance	1541195680A

* Module Family	Type	Frequency
LNKF400-A1	25 KHz FM channels	406.125-430 MHz
LNKF400-A2	12.5 KHz FM channels	406.125-430 MHz
LNKF400-C1	25 KHz FM channels	450-470 MHz
LNKF400-C2	12.5 KHz FM channels	450-470 MHz
LNKF400-D1	25 KHz FM channels	470-490 MHz
LNKF400-D2	12.5 KHz FM channels	470-490 MHz
LNKF400-E1	25 KHz FM channels	
LNKF400-E2	12.5 KHz FM channels	

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKF800 LNKF800

MODULE SPECIFICATIONS	
Frequency Range (MHz)	806-824,851-869,896-901,935-940
Downlink Frequency Range (MHz)	NA
Uplink Frequency Range (MHz)	NA
Bandwidth	Narrowband FM 12.5 or 25 KHz
RF Gain Adjustment Range	NA
AGC Control Adjustment Range	NA
RF Frequency Stability	Tracks input signal exactly
Maximum RF Output Power	+38 dBm (+37 dBm for G2, H2 models)
RF Output Power Range	+17 dBm to +38 dBm (+37 dBm)
RF Output Power Variation	+/- 1 dB
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	-110 dBm to -30 dBml
Input Sensitivity Adjust Range	-110 dBm to -50 dBm
Input Hysteresis	1 dB to 10 dB
Adjacent Channel Sensitivity	60 dB minimum for 25 KHz modules, 55 dB for 12.5 Khz modules
ID 3rd Order Intercept Point IP3	
Noise Figure	
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm max for 25 KHz modules, -20 dBm max for 12.5 KHz modules
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<120 microsecs for 25 KHz modules, <160 microsecs for 12.5 KHz modules
Audio Distortion and Noise	<4% increase for 25 KHz modules, <5% increase for 12.5 KHz modules
Power Supply Module Requirements	45 Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode, Receive, Transmit
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	H6M-OFR800, H6M-LNKF800
IC Type Acceptance	1541195685A, 1541196848A

* Module Family	Type	Frequency
LNKF800-A1	25 KHz FM channels	806-824 MHz
LNKF800-B1	25 KHz FM channels	851-869 MHz
LNKF800-C2	12.5 KHz FM channels	806-824 MHz
LNKF800-D2	12.5 KHz FM channels	851-869 MHz
LNKF800-G2	12.5 KHz FM channels	896-901 MHz
LNKF800-H2	12.5 KHz FM channels	935-940 MHz

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

LNKA100 LNKA100 Amplifier

MODULE SPECIFICATIONS	
Frequency Range (MHz)	136-155
Downlink Frequency Range (MHz)	NA
Uplink Frequency Range (MHz)	NA
Bandwidth	Broadband Amplifier
RF Gain Adjustment Range	+34 dB to +84 dB, in 1 dB increments
AGC Control Adjustment Range	+15 dBm to +30 dBm
RF Frequency Stability	NA
Maximum RF Output Power	NA
RF Output Power Range	NA
RF Output Power Variation	NA
Output Power 1	NA
Output Power 2	NA
Output Power 3	NA
Input Dynamic Range	NA
Input Sensitivity Adjust Range	NA
Input Hysteresis	NA
Adjacent Channel Sensitivity	NA
ID 3rd Order Intercept Point IP3	+47 dBm Typical
Noise Figure	<8 dB, 5 dB Typical
Transmit Duty Cycle	Continuous
Transmit Spurious	-13 dBm Maximum
Receive Conducted Spurious	-57 dBm Maximum
Group Delay	<200 nS
Audio Distortion and Noise	NA
Power Supply Module Requirements	40Watts Maximum
RF Connectors	SMA (50 q) Connectors on back of Chassis
Connections	DB-15 Connector on back of Chassis provides Per-Module Fault Relay, Interconnect to other Modules, and RS-232 connection.
Front Panel Indicators	Operating, Stand By, Fault, Program Mode, Receive, Transmit
Configuration Options	Modules may be configured via optional Gateway Module, or via PC and an RS-232 Connection

MECHANICAL CHARACTERISTICS	
Dimensions HxWxD in (mm)	2" x 9.11" x 14" (51 x 231.4 x 355.6)
Weight (lbs)	10
Operating Temperature Range (Celsius)	-10°C to +50°
Operating Humidity Range	10 to 90% RH, Non-Condensing

ACCEPTANCE TYPE	
FCC Type Acceptance	NA
IC Type Acceptance	NA

* Module Family	Type	Frequency

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

Optical and RF Conversion Modules | Powerwave Technologies, Inc.

When distributing wireless signals over large coverage areas or remote locations, a traditional coaxial based distribution approach may pose problems. This is due to the increase in RF signal loss over large distances, the length in which coaxial cable can be used and extensive equipment required on site to deliver balanced coverage. Our Optical Conversion Modules and RF Conversion/Point of Interconnect Modules are a solution to these problems.

Used in both In-Building and Outdoor DAS, Optical Conversion Modules and RF Conversion/Point of Interconnect Modules leverage the inherent attributes of fiber optic technology, such as low attenuation and noise, and provide extensive reach to deliver superior signal quality while reducing infrastructure and site development costs.

Optical Conversion Module (OCM)

- Resides in a 19" rack unit for in-building applications
- Simplex in/output
- 1310nm and/or 1550nm
- Wave Division Multiplexing (WDM)
- 0 to 20 dB TX and RX attenuation
- Settable alarm levels
- 1 to 12 remotes from a single OCM (up to 3 fiber optic nodes in a single OCM)

RF Conversion Module/Point of Interconnect

- Passive wide-band element, "mini" filters/splitters/combiners
- +40dBm max RF input
- Sectorization - POI Independent carrier needs

In-Building DAS Products

Public Safety Networks

Title	Part Number	Page
Tap-In Signal Distribution Taps	Tap-In	148

Tap-In | Tap-In Signal Distribution Taps

1/2" Taps for Frequencies 100 MHz – 520 MHz			
Model Number	FCT5-12	FCT5-16	FCT5-20
Nominal Coupling Loss	12 dB	16 dB	20 dB
Insertion Loss @ 150 MHz	0.7 dB	0.5 dB	0.3 dB
Line Input Power	15 W	15 W	15 W

5/8" Taps for Frequencies 100 MHz – 520 MHz			
Model Number	FCT7-12	FCT7-16	FCT7-20
Nominal Coupling Loss	12 dB	16 dB	20 dB
Insertion Loss @ 150 MHz	0.7 dB	0.5 dB	0.3 dB
Line Input Power	15 W	15 W	15 W

1/2" Taps for Frequencies 300 MHz – 1000 MHz			
Model Number	CCT5-12	CCT5-16	CCT5-20
Nominal Coupling Loss	12 dB	16 dB	20 dB
Insertion Loss @ 450 MHz	0.8 dB	0.5 dB	0.3 dB
Line Input Power	15 W	45 W	90 W

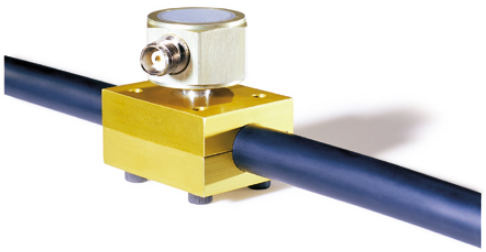
5/8" Taps for Frequencies 300 MHz – 1000 MHz			
Model Number	CCT7-12	CCT7-16	CCT7-20
Nominal Coupling Loss	12 dB	16 dB	20 dB
Insertion Loss @ 450 MHz	0.8 dB	0.5 dB	0.3 dB
Line Input Power	15 W	45 W	90 W

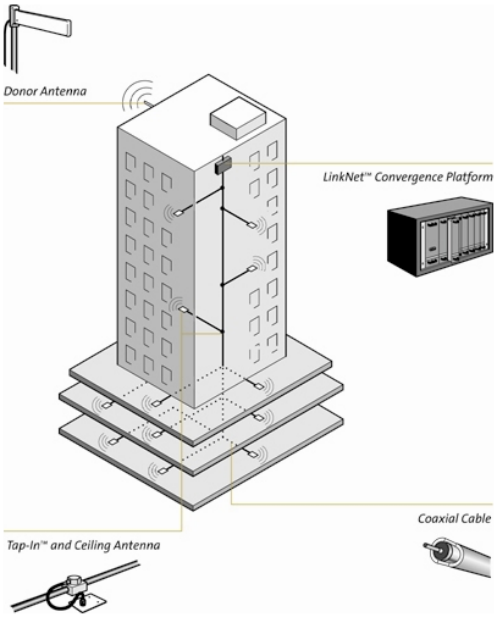
1/2" Taps for Frequencies 800 MHz – 2000 MHz			
Model Number	PCT5-12	PCT5-16	
Nominal Coupling Loss	12 dB	16 dB	
Insertion Loss @ 1.9 GHz	0.8 dB	0.5 dB	
Line Input Power	15 W	45 W	

5/8" Taps for Frequencies 800 MHz – 2000 MHz			
Model Number	PCT7-12	PCT7-16	
Nominal Coupling Loss	12 dB	16 dB	
Insertion Loss @ 1.9 GHz	0.8 dB	0.5 dB	
Line Input Power	15 W	45 W	

TAP-IN GENERAL SPECIFICATIONS	
RF Output Impedance	50 q
Dimensions, WxHxD (in)	2" x 2" x 1.5"
Output Connector	TNC Female
Output Power (Maximum)	1 W

EXACT TAP-IN DIAMETER MEASUREMENT	
Tap In Diameter in (mm) 1/2" Taps	0.58" (14.73)
Tap In Diameter in (mm) 5/8" Taps	0.83" (21)





All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

Commercial

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In-Building DAS Products

Commercial

Title	Dimension HxWxD mm (ft)	Weight kg (lbs)	Part Number	Page
Single Band 900	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH100000	151
Single Band 1800	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH200000	152
Dual Band 900/1800	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH210000	153
Single Band 2100	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH600000	154
Single Band 2100 HP	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH600010	155
Dual Band 900/2100	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH610000	156
Dual Band 1800/2100	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH620000	157
Triple Band 900/1800/2100HP	440 x 530 x 280 (1' 5"x1'9"x11")	<37 (82)	RH621010	158
Dual Band iDEN®/SMR 800/900	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (50)	RH850000	159
Dual Band 800/1900 HP	440 x 530 x 280 (1' 5"x1'9"x11")	<37 (82)	RH340010	160
Dual Band 800/1900	440 x 530 x 195 (1'5"x1'9"x8")	<22.5 (82)	RH340000	161
Dual Band iDEN®/SMR 800/900 HP	440 x 530 x 195 (1'5"x1'9"x8")	<37 (82)	RH850010	162
Triple Band GSM /CDMA 800/iDEN®800	440 x 530 x 280 (1' 5"x1'9"x11")	<37 (82)	RH34500/200	163

RH100000 Single Band 900

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM 900, 890-915
Frequency DL Band 1 (MHz)	GSM 900, 935-960
Frequency UL Band 2 (MHz)	N/A
Frequency DL Band 2 (MHz)	N/A
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8GSM 900 carrier, 18 dBm/carrier
Output Power DL, band 1, 8 carrier	16 GSM 900 carrier, 16 dBm/carrier
Output Power DL, band 2, 4 carrier	N/A
Output Power DL, band 2, 8 carrier	N/A
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	-36 dBm
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<110 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS300 019
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	ETS300 609-4

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH200000 Single Band 1800

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM 1800, 1710-1785
Frequency DL Band 1 (MHz)	GSM 1800, 1805-1880
Frequency UL Band 2 (MHz)	N/A
Frequency DL Band 2 (MHz)	N/A
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8GSM 1800 carrier, 20 dBm/carrier
Output Power DL, band 1, 8 carrier	16 GSM 1800 carrier, 18 dBm/carrier
Output Power DL, band 2, 4 carrier	N/A
Output Power DL, band 2, 8 carrier	N/A
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	-30 dBm
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<110 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	ETS300 609-4

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH210000 Dual Band 900/1800

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM 900, 890-915
Frequency DL Band 1 (MHz)	GSM 900, 935-960
Frequency UL Band 2 (MHz)	GSM 1800, 1710-1785
Frequency DL Band 2 (MHz)	GSM1800, 1805-1880
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8GSM 900 carrier, 18 dBm/carrier
Output Power DL, band 1, 8 carrier	16 GSM 900 carrier, 16 dBm/carrier
Output Power DL, band 2, 4 carrier	8GSM 1800 carrier, 20 dBm/carrier
Output Power DL, band 2, 8 carrier	16 GSM 1800 carrier, 18 dBm/carrier
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	GSM 900, -36 dBm
Intermodulation band 2	GSM 1800, -30 dBm
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<210 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	ETS300 609-4

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH600000 Single Band 2100

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	UMTS, 1920-1980
Frequency DL Band 1 (MHz)	UMTS, 2110-2170
Frequency UL Band 2 (MHz)	N/A
Frequency DL Band 2 (MHz)	N/A
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	RH600000, 4UMTS carrier, +22dBm/carrier
Output Power DL, band 1, 8 carrier	RH600000, 8UMTS carrier, +19 dBm/carrier (RMS),
Output Power DL, band 2, 4 carrier	N/A
Output Power DL, band 2, 8 carrier	N/A
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4.5 dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<110 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	TS125 113
Regulatory Compliance Radio	TS125 143

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH600010 Single Band 2100 HP

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	UMTS, 1920-1980
Frequency DL Band 1 (MHz)	UMTS, 2110-2170
Frequency UL Band 2 (MHz)	N/A
Frequency DL Band 2 (MHz)	N/A
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	RH600010, 4UMTS carrier, +29 dBM/carrier
Output Power DL, band 1, 8 carrier	RH600010, 8UMTS, +26 dBm/carrier
Output Power DL, band 2, 4 carrier	N/A
Output Power DL, band 2, 8 carrier	N/A
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4.5 dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<230 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	TS125 113
Regulatory Compliance Radio	TS125 143

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH610000 Dual Band 900/2100

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM 900, 890-915
Frequency DL Band 1 (MHz)	GSM 900, 935-960
Frequency UL Band 2 (MHz)	UMTS, 1920-1980
Frequency DL Band 2 (MHz)	UMTS, 2110-2170
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8GSM 900 carrier, 18 dBm/carrier
Output Power DL, band 1, 8 carrier	16 GSM 900 carrier, 16 dBm/carrier
Output Power DL, band 2, 4 carrier	4 UMTS carrier, +22 dBm/carrier
Output Power DL, band 2, 8 carrier	8 UMTS carrier, +19 dBm/carrier
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	GSM900 4 dB, UMTS2100 4.5 dB
Intermodulation band 1	GSM 900, -36 dBm
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote contro
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<210 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	EN301 489-1, TS125 113
Regulatory Compliance Radio	ETS300 609-4, TS125 143

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH620000 Dual Band 1800/2100

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM 1800, 1710-1785
Frequency DL Band 1 (MHz)	GSM 1800, 1805-1880
Frequency UL Band 2 (MHz)	UMTS, 1920-1980
Frequency DL Band 2 (MHz)	UMTS, 2110-2170
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8GSM 1800 carrier, 20 dBm/carrier
Output Power DL, band 1, 8 carrier	16 GSM 1800 carrier, 18 dBm/carrier
Output Power DL, band 2, 4 carrier	4 UMTS carrier, +22 dBm/carrier
Output Power DL, band 2, 8 carrier	8 UMTS carrier, +19 dBm/carrier
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	GSM1800 4 dB, UMTS2100 4.5 dB
Intermodulation band 1	GSM 1800, -30 dBm
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<210 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP66
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	EN301 489-1, TS125 113
Regulatory Compliance Radio	ETS300 609-4, TS125 143

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH621010 Triple Band 900/1800/2100HP

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM 900, 890-915
Frequency DL Band 1 (MHz)	GSM 900, 935-960
Frequency UL Band 2 (MHz)	GSM 1800, 1710-1785
Frequency DL Band 2 (MHz)	GSM1800, 1805-1880
Frequency UL Band 3 (MHz)	UMTS, 1920-1980
Frequency DL Band 3 (MHz)	UMTS 2110-2170
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	2 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8GSM 900 carrier, 18 dBm/carrier
Output Power DL, band 1, 8 carrier	16 GSM 900 carrier, 16 dBm/carrier
Output Power DL, band 2, 4 carrier	8GSM 1800 carrier, 20 dBm/carrier
Output Power DL, band 2, 8 carrier	16GSM 1800 carrier, 18 dBm/carrier
Output Power DL, band 3, 4 carrier	4 UTMS carrier, +29 dBm/carrier
Output Power DL, band 3, 8 carrier	8 UTMS carrier, +26 dBm/carrier
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	GSM900 4 dB, GSM1800 4 dB, UMTS2100 4.5 dB
Intermodulation band 1	GSM 900, -36 dBm
Intermodulation band 2	GSM 1800, -30 dBm
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<425 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")
Weight kg (lbs)	<37 (82)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP67
Ingression Protection	Lock

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019
Regulatory Compliance EMC	EN301 489-1, TS125 113
Regulatory Compliance Radio	ETS300 609-4, TS125 143

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH850000 Dual Band iDEN®/SMR 800/900

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	iDEN 900, 896-901
Frequency DL Band 1 (MHz)	iDEN 900, 935-940
Frequency UL Band 2 (MHz)	iDEN 800, 806-824
Frequency DL Band 2 (MHz)	iDEN 800, 851-869
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	N/A
Output Power DL, band 1, 8 carrier	8 iDEN 800 carrier, 23 dBm/carrier
Output Power DL, band 1, 16 carrier	16 iDEN 800 carrier, 21 dBm/carrier
Output Power DL, band 2, 4 carrier	N/A
Output Power DL, band 2, 8 carrier	8 iDEN 900, 23dBm/carrier, 16 iDEN900, 21dBm/carrier
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<210 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (50)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	N/A

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019-2.4E
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	FCC Part 90

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH340010 Dual Band 800/1900 HP

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	1900, 1850-1910
Frequency DL Band 1 (MHz)	1900, 1930-1990
Frequency UL Band 2 (MHz)	800, 824-849
Frequency DL Band 2 (MHz)	800, 869-894
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	4 carriers, 30 dBm TDMA, 30 dBM GSM, 29 dBm CDMA, 29 dBm WCDMA
Output Power DL, band 1, 8 carrier	8 carrier, 27 dBm TDMA, 27 dBM GSM, 26 dBm CDMA
Output Power DL, band 1, 16 carrier	16 carrier, 25 dBm TDMA, 25 dBM GSM, 24 dBm CDMA
Output Power DL, band 2, 4 carrier	4CDMA, 26dBm
Output Power DL, band 2, 8 carrier	8 CDMA, 23dBm
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<320 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")
Weight kg (lbs)	<37 (82)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	N/A

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019-2.4E
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	FCC Part 24, 22

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH340000 Dual Band 800/1900

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	1900, 1850-1910
Frequency DL Band 1 (MHz)	1900, 1930-1990
Frequency UL Band 2 (MHz)	800, 824-849
Frequency DL Band 2 (MHz)	800, 869-894
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	4 carriers, 27 dBm TDMA, 27 dBM GSM, 26 dBm CDMA, 26 dBm WCDMA
Output Power DL, band 1, 8 carrier	8 carrier, 24 dBm TDMA, 24 dBM GSM, 23 dBm CDMA
Output Power DL, band 1, 16 carrier	16 carrier, 22 dBm TDMA, 22 dBM GSM, 21 dBm CDMA
Output Power DL, band 2, 4 carrier	4CDMA, 26dBm
Output Power DL, band 2, 8 carrier	8 CDMA, 23dBm
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<210 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<22.5 (82)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	N/A

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019-2.4E
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	FCC Part 24, 22

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH850010 Dual Band iDEN®/SMR 800/900 HP

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	iDEN 900, 869-901
Frequency DL Band 1 (MHz)	iDEN 900, 935-940
Frequency UL Band 2 (MHz)	iDEN 800, 806-824
Frequency DL Band 2 (MHz)	iDEN 800, 851-869
Frequency UL Band 3 (MHz)	N/A
Frequency DL Band 3 (MHz)	N/A
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	N/A
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	8 iDEN 800 carrier, 26 dBm/carrier (RMS)
Output Power DL, band 1, 8 carrier	8 iDEN 900 carrier, 26 dBm/carrier
Output Power DL, band 1, 16 carrier	
Output Power DL, band 2, 4 carrier	N/A
Output Power DL, band 2, 8 carrier	N/A
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	N/A
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	4 dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	115/230 VAC or 24/48 VDC
Power Consumption	<320 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 195 (1'5"x1'9"x8")
Weight kg (lbs)	<37 (82)
RF Connection	N-type female or 7/16

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	N/A

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019-2.4E
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	FCC Part 90

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

RH34500/200 Triple Band GSM /CDMA 800/iDEN®800

ELECTRICAL DATA*	
Frequency UL Band 1 (MHz)	GSM1900, 1850-1910
Frequency DL Band 1 (MHz)	GSM1900, 1930-1990
Frequency UL Band 2 (MHz)	CDMA 800, 824-849
Frequency DL Band 2 (MHz)	CDMA 800, 869-894
Frequency UL Band 3 (MHz)	iDEN 800; 806-824
Frequency DL Band 3 (MHz)	iDEN 800; 851-869
Frequency UL Band 4 (MHz)	N/A
Frequency DL Band 4 (MHz)	N/A
Gain Adjustment Range	(1dBsteps), 30 dB
Gain Step Resolution	1 dB
Max Absolute Delay	<300 ns
Max Input Power in UL	+13 dBm damaging level
Output Power DL, band 1, 4 carrier	4 carriers, 27 dBm TDMA, 27 dBM GSM, 26 dBm CDMA, 26 dBm WCDMA
Output Power DL, band 1, 8 carrier	8 carrier, 24 dBm TDMA, 24 dBM GSM, 23 dBm CDMA
Output Power DL, band 1, 16 carrier	16 carrier, 22 dBm TDMA, 22 dBM GSM, 21 dBm CDMA
Output Power DL, band 2, 4 carrier	4CDMA, 26dBm
Output Power DL, band 2, 8 carrier	8 CDMA, 23dBm
Output Power DL, band 3, 4 carrier	N/A
Output Power DL, band 3, 8 carrier	8 iDEN 800, 23dBm/carrier 16 iDEN800, 21dBm/carrier
Output Power DL, band 4, 4 carrier	N/A
Output Power DL, band 4, 8 carrier	N/A
Noise Figure (excluding fiber)	GSM1900 4dB, CDMA800 4.5dB, iDEN800 4dB
Intermodulation band 1	N/A
Intermodulation band 2	N/A
Intermodulation band 3	N/A
Intermodulation band 4	N/A

MISCELLANEOUS SPECIFICATIONS*	
Alarm	Fault, LED and by remote control
Power Supply	GSM1900, 115-230 VAC; CDMA 800, 115-230 VAC ; iDEN 800, 115-230 VAC
Power Consumption	<300 W

MECHANICAL DATA*	
Dimension (WxHxD) mm (ft)	440 x 530 x 280 (1' 5"x1'9"x11")
Weight kg (lbs)	<37 (82)
RF Connection	N-type female

ENVIRONMENTAL DATA*	
Operating Temperature Celsius	-25 to +55
Housing Specification	NEMA 4 / IP65
Ingression Protection	N/A

APPROVALS AND TESTS*	
Safety	EN 60950, ETL,
Environment	ETS 300 019-2.4E
Regulatory Compliance EMC	EN301 489-1
Regulatory Compliance Radio	FCC Part 24, 22, 90

* All specifications subject to change.

Note: Performance is affected by the way Donor and Service antenna is configured (any combination of separate or combined connection can be ordered)

In-Building DAS Products

Commercial

Title	Frequency Band UL	Frequency Band DL	Gain Adjustment Range DL	Part Number	Page
Nexus FT Single Band EGSM900	880-915 MHz	925-960 MHz	20 dB (45 – 65 dB)	RH100020/101	166
Nexus FT Single Band EGSM900	880-915 MHz	925-960 MHz	20 dB (45 – 65 dB)	RH100020/211	167
Nexus FT Single Band DCS1800	1710-1785 MHz	1805-1880 MHz	20 dB (45 – 65 dB)	RH200020/101	168
Nexus FT Single Band DCS1800	1710-1785 MHz	1805-1880 MHz	20 dB (45 – 65 dB)	RH200020/211	169
Nexus FT Single Band 2100MHz UMTS	1920-1980 MHz	2110-2170 MHz	25 dB (45 – 70 dB)	RH600020/101	170
Nexus FT Single Band 2100MHz UMTS	1920-1980 MHz	2110-2170 MHz	25 dB (45 – 70 dB)	RH600020/211	171
Nexus FT Single Band AWS	1710-1755 MHz	2110-2155 MHz	25 dB (45 – 70 dB)	RH900020/101	172
Nexus FT Single Band AWS	1710-1755 MHz	2110-2155 MHz	25 dB (45 – 70 dB)	RH900020/211	173
Nexus FT Dual Band PCS/Cellular	1850-1910, 824-849 MHz	1930-1990, 869-894 MHz	25 dB (45 – 70 dB)	RH304022/101	174
Nexus FT Dual Band PCS/Cellular	1850-1910, 824-849 MHz	1930-1990, 869-894 MHz	25 dB (45 – 70 dB)	RH304022/211	175
Nexus FT Dual Band 900iDEN/800iDEN & Public Safety	806-824, 896 -902 MHz	851-869, 935-941 MHz	25 dB (45 – 70 dB)	RH805022/101	176
Nexus FT Dual Band 900iDEN/800iDEN & Public Safety	806-824, 896 -902 MHz	851-869, 935-941 MHz	25 dB (45 – 70 dB)	RH805022/211	177
Nexus FT Single Band 800iDEN & Public Safety	806 – 824 MHz	851 – 869 MHz	25 dB (45 – 70 dB)	RH500020/101	178
Nexus FT Single Band 800iDEN & Public Safety	806 – 824 MHz	851 – 869 MHz	25 dB (45 – 70 dB)	RH500020/211	179
Nexus FT Dual Band PCS/AWS	1850-1910, 1710-1755 MHz	1930-1990, 2110-2155 MHz	25 dB (45 – 70 dB)	RH309022/101	180
Nexus FT Dual Band PCS/AWS	1850-1910, 1710-1755 MHz	1930-1990, 2110-2155 MHz	25 dB (45 – 70 dB)	RH309022/211	181

In-Building DAS Products

Commercial

Title	Frequency Band UL	Frequency Band DL	Gain Adjustment Range DL	Part Number	Page
Nexus FT 1900 MHz Single Band	1850 – 1910 MHz	1930 - 1990 MHz	25 dB (45 – 70 dB)	RH300020/101	182
Nexus FT 1900 MHz Single Band	1850 – 1910 MHz	1930 - 1990 MHz	25 dB (45 – 70 dB)	RH300020/211	183
Nexus FT Dual Band 1800/900	1710-1785, 880-915 MHz	1805-1880, 925-960 MHz	20 dB (45 – 65 dB)	RH201022/101	184
Nexus FT Dual Band 1800/900	1710-1785, 880-915 MHz	1805-1880, 925-960 MHz	20 dB (45 – 65 dB)	RH201022/211	185
Nexus FT Dual Band EGSM900 & WCDMA2100	1920-1980, 880-915 MHz	2110-2170, 925-960 MHz	20 dB (45 – 65 dB)	RH601022/101	186
Nexus FT Dual Band EGSM900 & WCDMA2100	1920-1980, 880-915 MHz	2110-2170, 925-960 MHz	20 dB (45 – 65 dB)	RH601022/211	187
Nexus FT 850 MHz Single Band	824 – 849 MHz	869 – 894 MHz	25 dB (45 – 70 dB)	RH400020/101	188
Nexus FT 850 MHz Single Band	824 – 849 MHz	869 – 894 MHz	25 dB (45 – 70 dB)	RH400020/211	189
Nexus FT Dual Band DCS1800 & WCDMA2100	1920-1980, 1710-1785 MHz	2110-2170, 1805-1880 MHz	20 dB (45 – 65 dB)	RH602022/101	190
Nexus FT Dual Band DCS1800 & WCDMA2100	1920-1980, 1710-1785 MHz	2110-2170, 1805-1880 MHz	20 dB (45 – 65 dB)	RH602022/211	191

RH100020/101 Nexus FT Single Band EGSM900

RH100020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

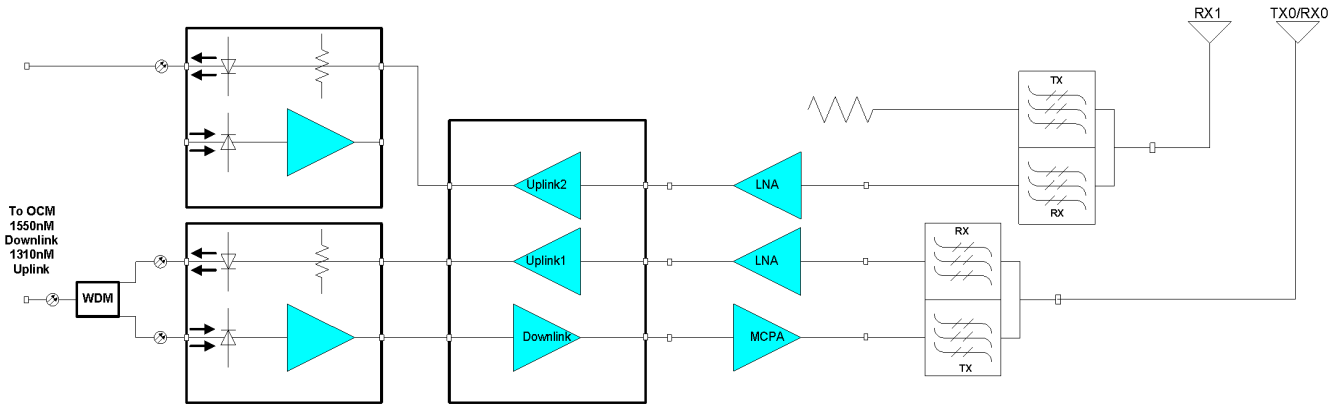
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	880-915 MHz
Frequency Band DL	925-960 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite Power +40dBm* (Multi-carrier GSM or EDGE)
Instantaneous Bandwidth	35 MHz
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by Remote Control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg. (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETS 300 609-4
Environment	ETS 300 019
EMC	EN 301 489

*Carrier Count	EGSM900 Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	29dBm	32dBm	NA	NA
4	29dBm	35dBm	NA	NA
8	29dBm	38dBm	NA	NA
16	28dBm	40dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH100020/211 Nexus FT Single Band EGSM900

RH100020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

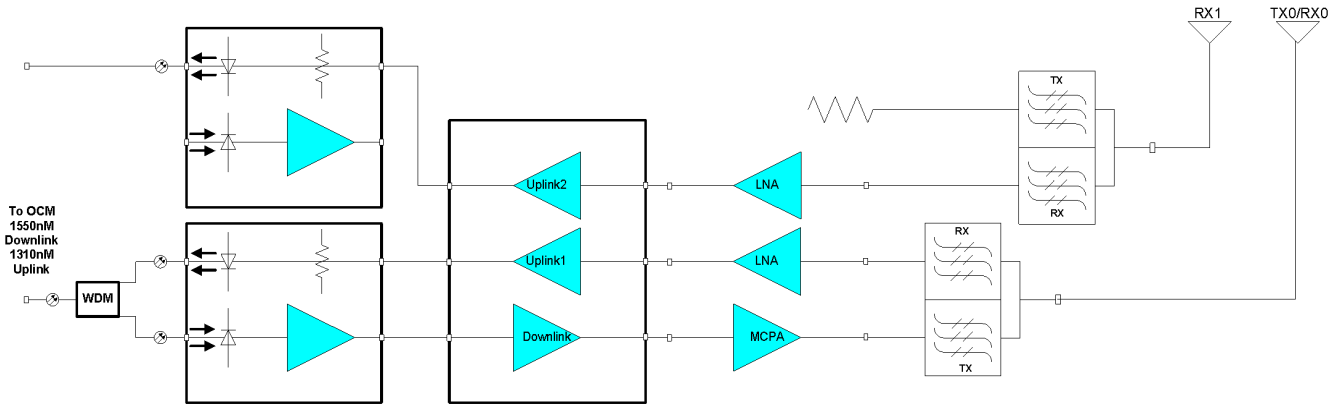
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	880-915 MHz
Frequency Band DL	925-960 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite Power +40dBm* (Multi-carrier GSM or EDGE)
Instantaneous Bandwidth	35 MHz
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by Remote Control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg. (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETS 300 609-4
Environment	ETS 300 019
EMC	EN 301 489

*Carrier Count	EGSM900 Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	29dBm	32dBm	NA	NA
4	29dBm	35dBm	NA	NA
8	29dBm	38dBm	NA	NA
16	28dBm	40dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH200020/101 Nexus FT Single Band DCS1800

RH200020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

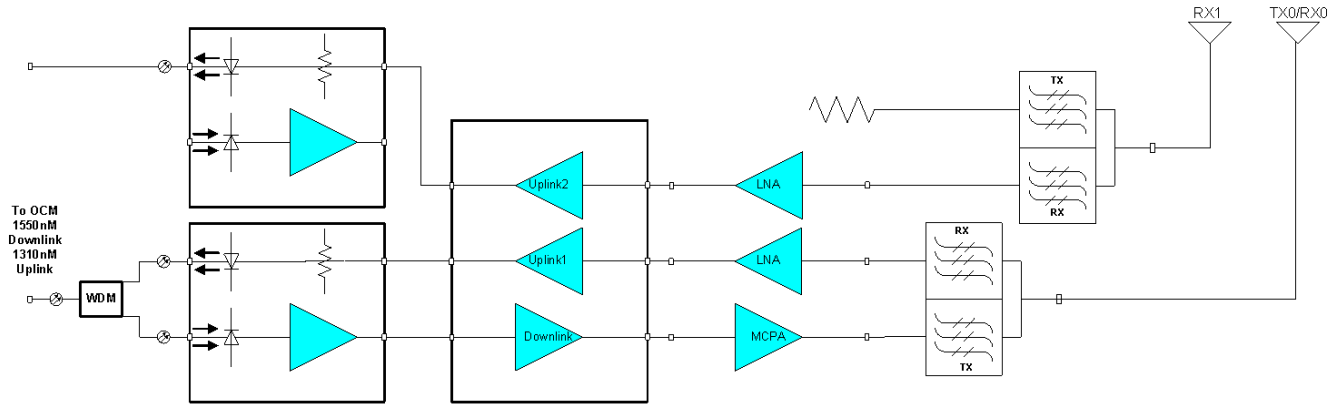
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1710-1785 MHz
Frequency Band DL	1805-1880 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite Power +40dBm* (Multi-carrier GSM or EDGE)
Instantaneous Bandwidth	75 MHz
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by Remote Control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg. (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETS 300 609-4
Environment	ETS 300 019
EMC	EN 301 489

*Carrier Count	DCS1800 Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	35dBm	38dBm	NA	NA
4	34dBm	40dBm	NA	NA
8	31dBm	40dBm	NA	NA
16	28dBm	40dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH200020/211 Nexus FT Single Band DCS1800

RH200020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

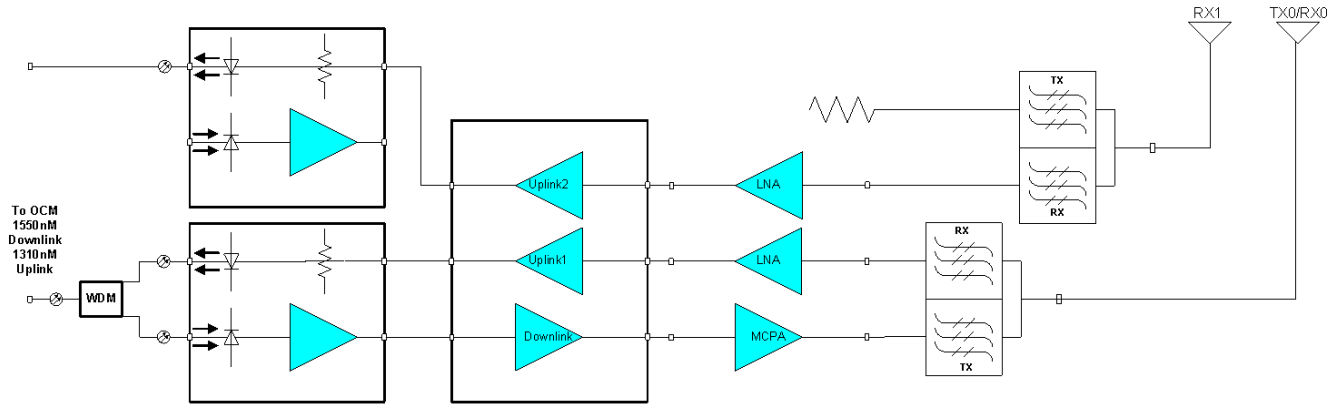
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1710-1785 MHz
Frequency Band DL	1805-1880 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite Power +40dBm* (Multi-carrier GSM or EDGE)
Instantaneous Bandwidth	75 MHz
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by Remote Control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg. (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETS 300 609-4
Environment	ETS 300 019
EMC	EN 301 489

*Carrier Count	DCS1800 Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	35dBm	38dBm	NA	NA
4	34dBm	40dBm	NA	NA
8	31dBm	40dBm	NA	NA
16	28dBm	40dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH600020/101 Nexus FT Single Band 2100MHz UMTS

RH600020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

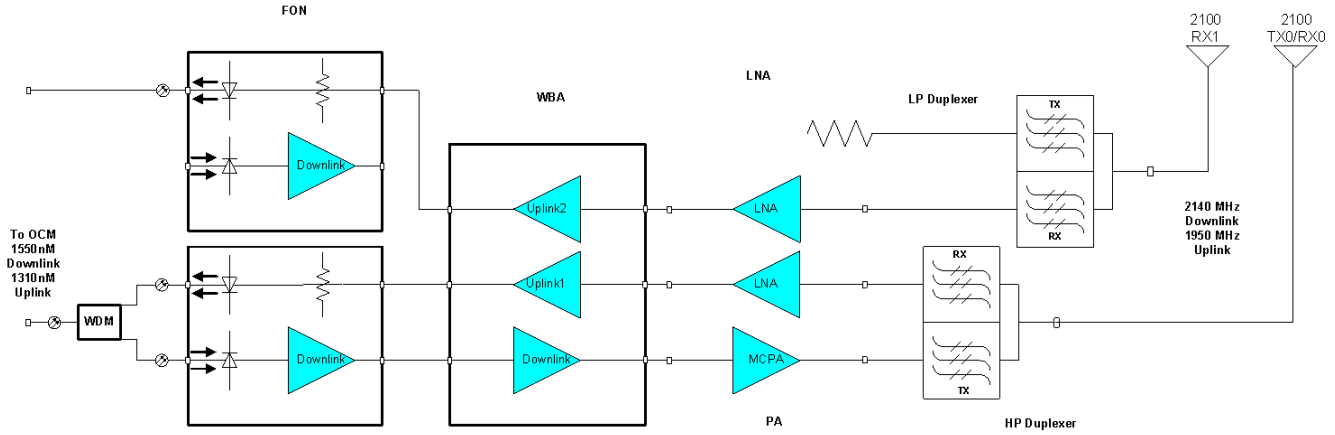
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1920-1980 MHz
Frequency Band DL	2110-2170 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum composite power +43dBm*
Instantaneous Bandwidth	60 MHz
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ESTI EN 301 908-11
Environment	ETS 300 019
EMC	ETS 300 489-1

*Carrier Count	Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH600020/211 Nexus FT Single Band 2100MHz UMTS

RH600020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

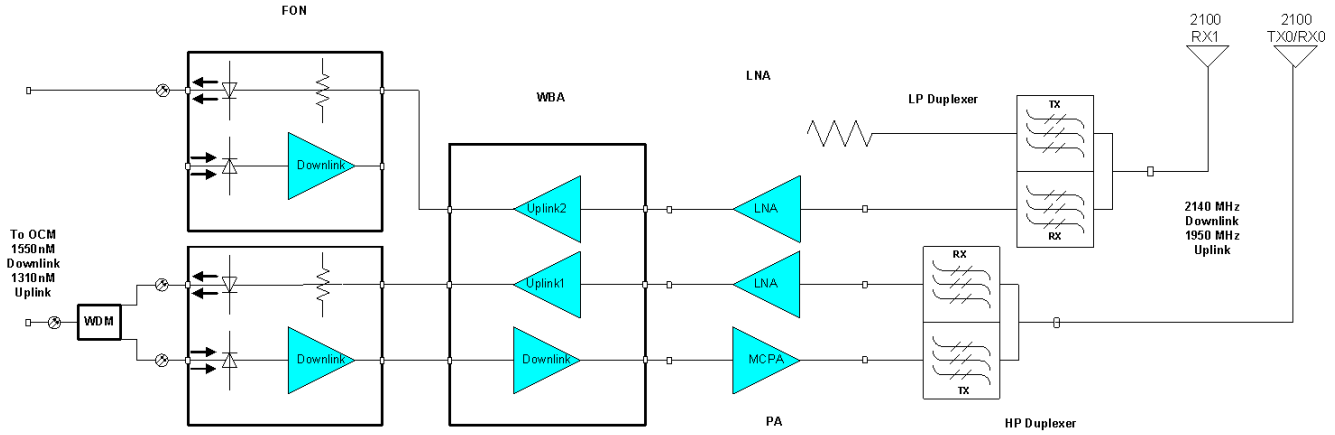
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1920-1980 MHz
Frequency Band DL	2110-2170 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum composite power +43dBm*
Instantaneous Bandwidth	60 MHz
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ESTI EN 301 908-11
Environment	ETS 300 019
EMC	ETS 300 489-1

*Carrier Count	Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH900020/101 Nexus FT Single Band AWS

RH900020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

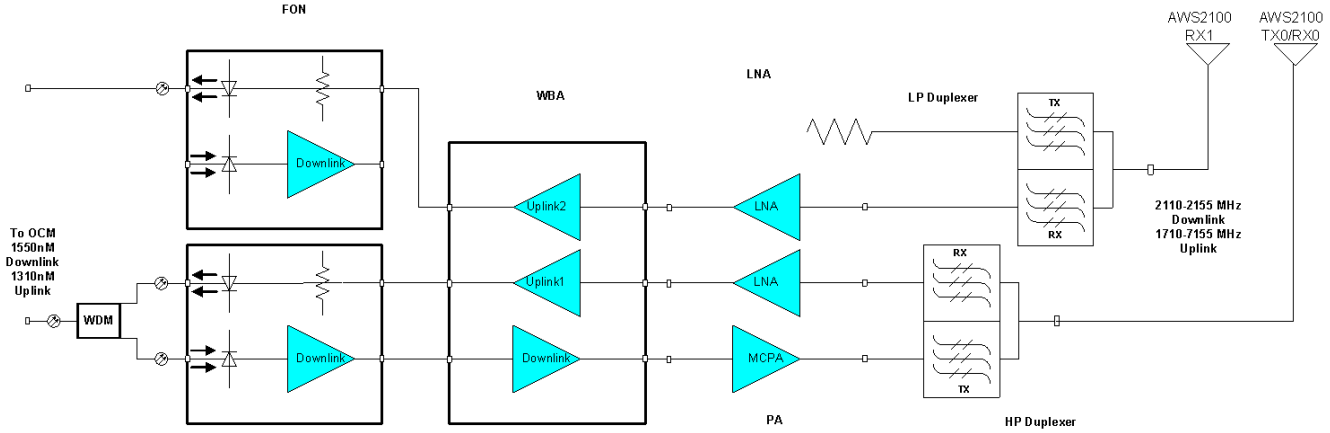
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1710-1755 MHz
Frequency Band DL	2110-2155 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum composite power +43dBm*
Instantaneous Bandwidth	45 MHz
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 27
Environment	ETS 300 019
EMC	ETS 300 489-1

*Carrier Count	Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH900020/211 Nexus FT Single Band AWS

RH900020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

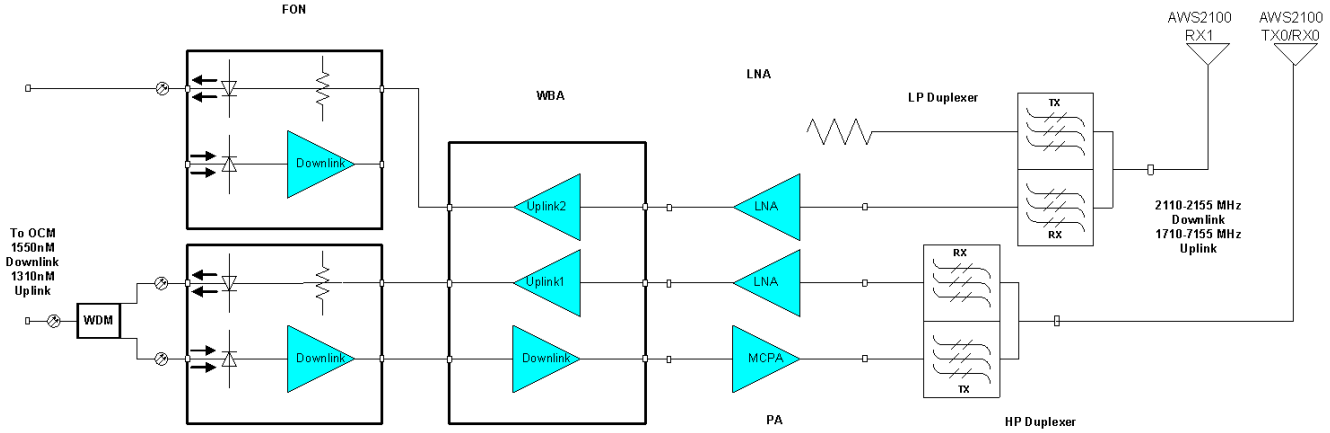
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1710-1755 MHz
Frequency Band DL	2110-2155 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum composite power +43dBm*
Instantaneous Bandwidth	45 MHz
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65/NEMA4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 27
Environment	ETS 300 019
EMC	ETS 300 489-1

*Carrier Count	Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH304022/101 Nexus FT Dual Band PCS/Cellular

RH304022/101 is AC powered, with two duplexed 7/16 DIN connector RF ports, one for each band

ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 824-849 MHz
Frequency Band DL	1930-1990, 869-894 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Output Power DL	+43 dBm (1900 MHz, Downlink , Composite)
Output Power DL 2	+43 dBm (800 MHz, Downlink , Composite)
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 280 (18.3 x 20.9 x 12)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 24, FCC part 22
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier	Composite Power
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm		NA
NA	NA			

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH304022/211 Nexus FT Dual Band PCS/Cellular

RH304022/211 is AC powered, with 4 duplexed 7/16 DIN connector RF ports to support main and RX diversity ports in each band

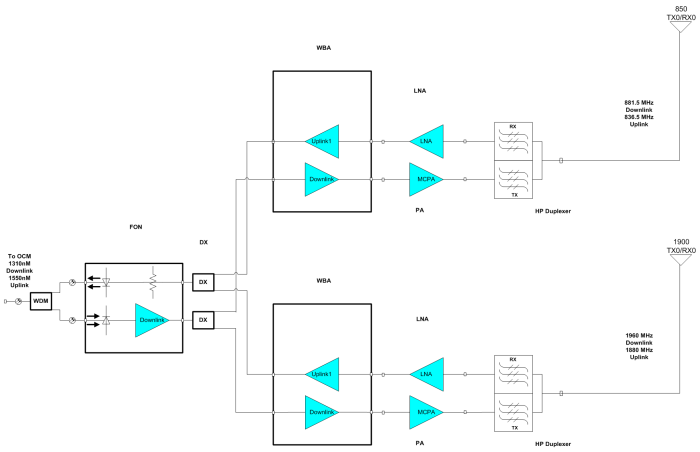
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 824-849 MHz
Frequency Band DL	1930-1990, 869-894 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Output Power DL	+43 dBm (1900 MHz, Downlink , Composite)
Output Power DL 2	+43 dBm (800 MHz, Downlink , Composite)
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 280 (18.3 x 20.9 x 12)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 24, FCC part 22
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier	Composite Power
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH805022/101 Nexus FT Dual Band 900iDEN/800iDEN & Public Safety

RH805022/101 is AC powered, with two duplexed 7/16 DIN connector RF ports, one for each band

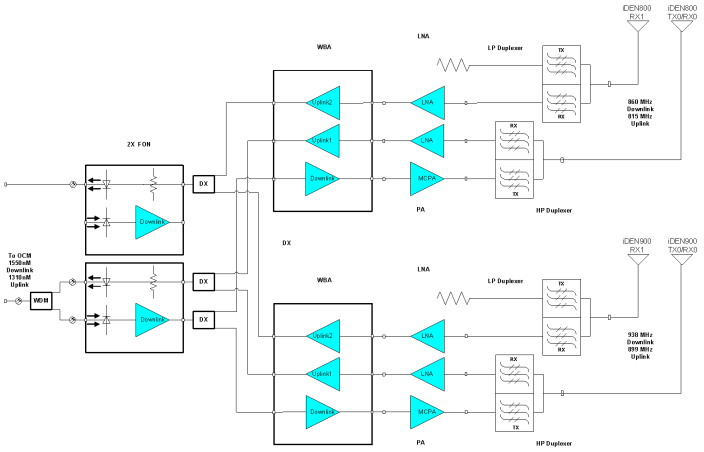
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	806-824, 896-902 MHz
Frequency Band DL	851-869, 935-941 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Output Power DL	+43 dBm (iDEN800, Downlink , Quad BR)
Output Power DL 2	+43 dBm (iDEN800, Downlink , Quad BR)
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 15, FCC part 90
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier	Composite Power
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH805022/211 Nexus FT Dual Band 900iDEN/800iDEN & Public Safety

RH805022/211 is AC powered, with 4 duplexed 7/16 DIN connector RF ports to support main and RX diversity ports in each band

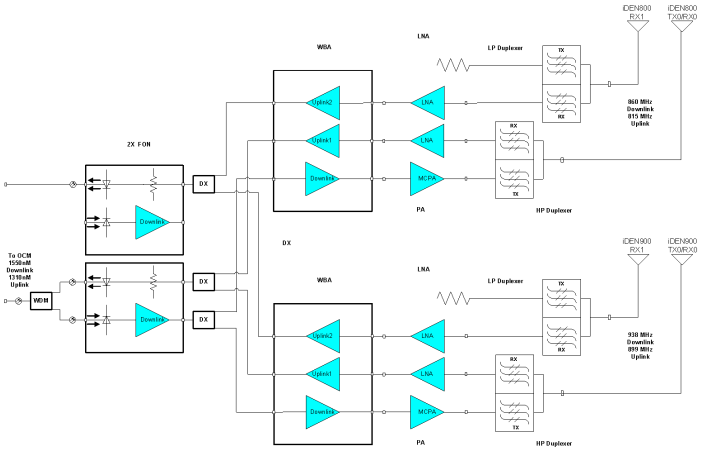
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	806-824, 896-902 MHz
Frequency Band DL	851-869, 935-941 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Output Power DL	+43 dBm (iDEN800, Downlink , Quad BR)
Output Power DL 2	+43 dBm (iDEN800, Downlink , Quad BR)
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 15, FCC part 90
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier	Composite Power
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH500020/101 Nexus FT Single Band 800iDEN & Public Safety

RH500020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

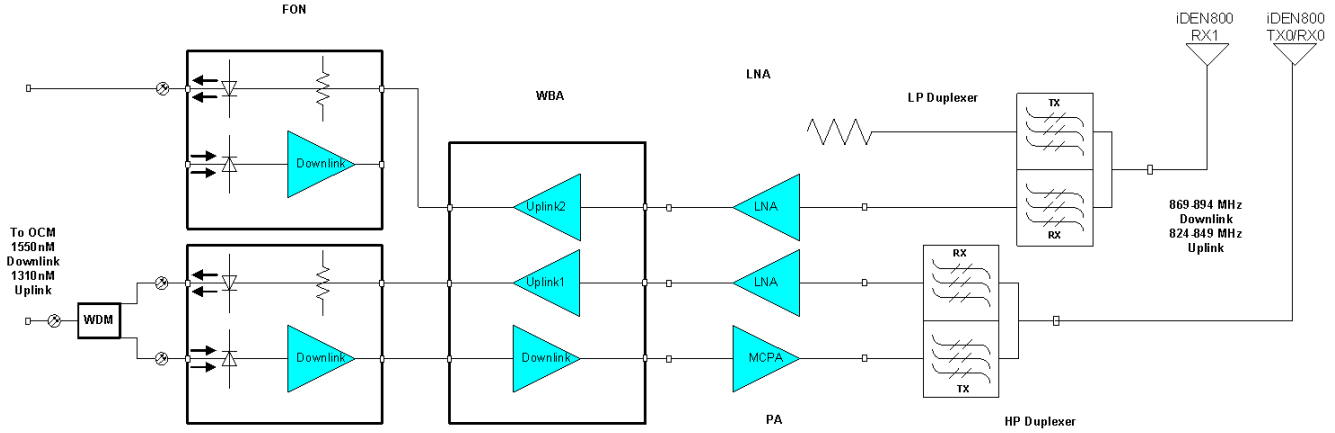
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	806 – 824 MHz
Frequency Band DL	851 – 869 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (45 – 70 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	+43 dBm (iDEN800, Downlink , Quad BR)
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 15, Part 90
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH500020/211 Nexus FT Single Band 800iDEN & Public Safety

RH500020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

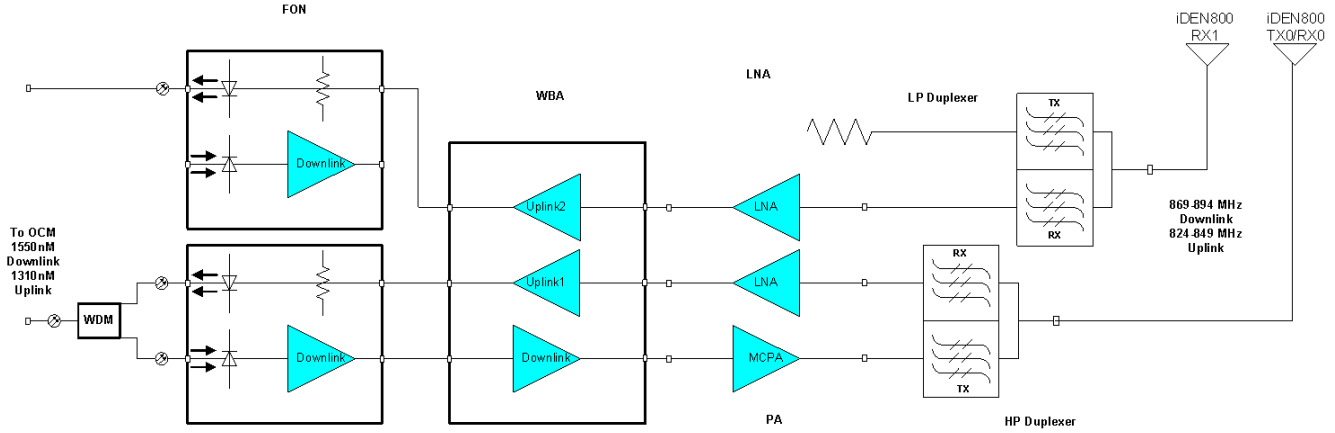
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	806 – 824 MHz
Frequency Band DL	851 – 869 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (45 – 70 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	+43 dBm (iDEN800, Downlink , Quad BR)
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 15, Part 90
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH309022/101 Nexus FT Dual Band PCS/AWS

RH309022/101 is AC powered, with two duplexed 7/16 DIN connector RF ports, one for each band

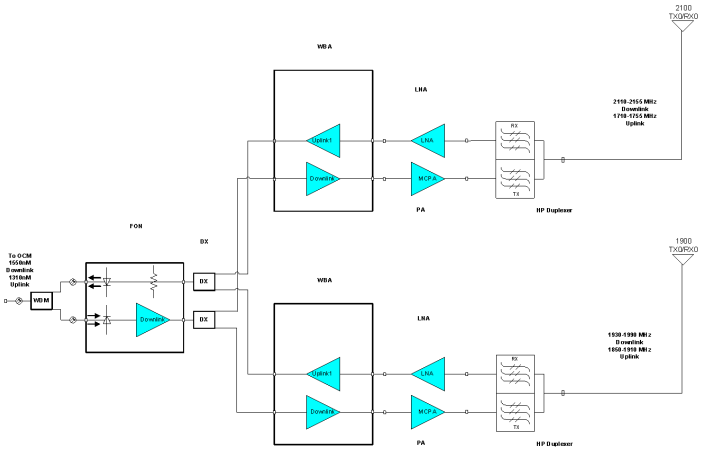
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 1710-1755 MHz
Frequency Band DL	1930-1990, 2110-2155 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Output Power DL	+43 dBm (1900 MHz, Downlink , Composite)
Output Power DL 2	+43 dBm (2100 MHz, Downlink , Composite)*
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 24, FCC part 27
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier	Composite Power
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH309022/211 Nexus FT Dual Band PCS/AWS

RH309022/211 is AC powered, with 4 duplexed 7/16 DIN connector RF ports to support main and RX diversity ports in each band

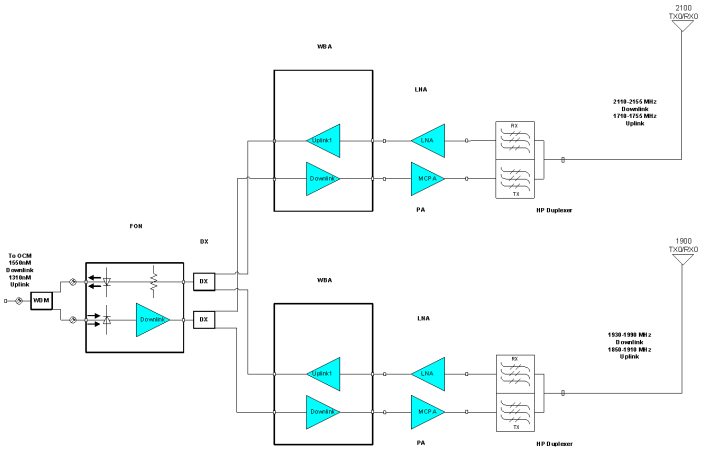
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 1710-1755 MHz
Frequency Band DL	1930-1990, 2110-2155 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Output Power DL	+43 dBm (1900 MHz, Downlink , Composite)
Output Power DL 2	+43 dBm (2100 MHz, Downlink , Composite)*
Instantaneous Bandwidth	NA
Intermodulation 9KHz - 1 GHz	NA
Intermodulation 1 GHz - 12.75 GHz ETSI	NA
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 25°C to + 55°C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC Part 24, FCC part 27
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

Carrier Count *	Power Per Carrier	Composite Power	Power Per Carrier	Composite Power
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
12	32dBm	43dBm	NA	NA
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH300020/101 Nexus FT 1900 MHz Single Band

RH300020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

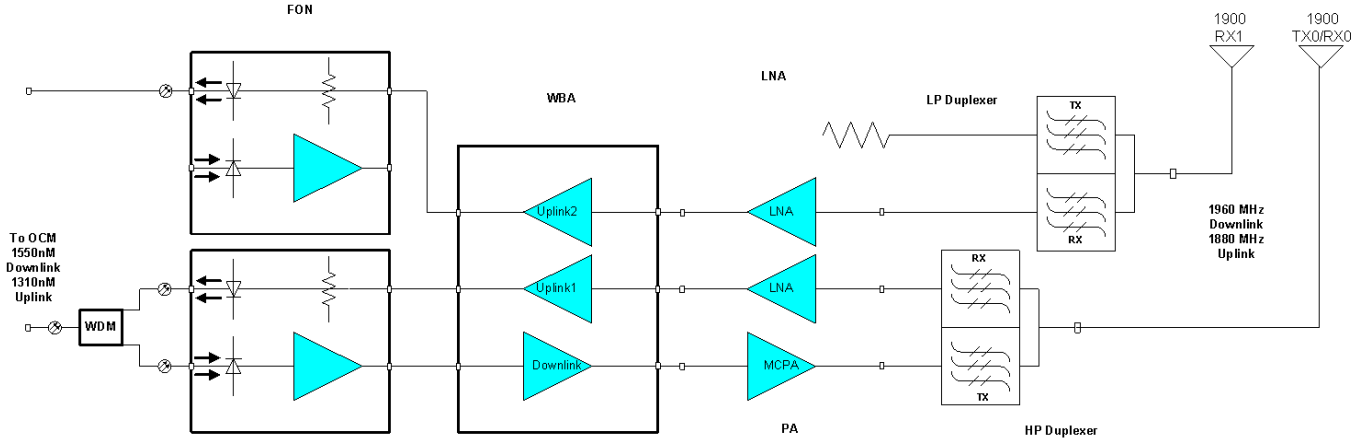
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850 – 1910 MHz
Frequency Band DL	1930 - 1990 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite power 43 dBm
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-13 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 15 and 24
Environment	
EMC	

*Carrier Count	Power Per Carrier FCC	Composite Power FCC	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
16	31dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH300020/211 Nexus FT 1900 MHz Single Band

RH300020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

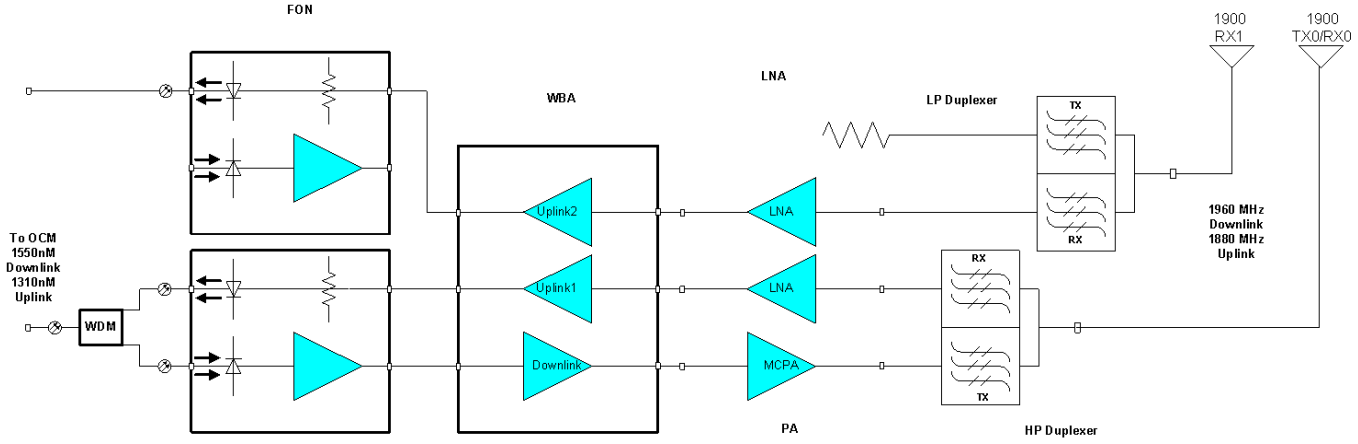
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850 – 1910 MHz
Frequency Band DL	1930 - 1990 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite power 43 dBm
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-13 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 15 and 24
Environment	
EMC	

*Carrier Count	Power Per Carrier FCC	Composite Power FCC	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
16	31dBm	43dBm	NA	NA



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH201022/101 Nexus FT Dual Band 1800/900

RH201022/101 is AC powered, with two duplexed 7/16 DIN connector RF ports, one for each band

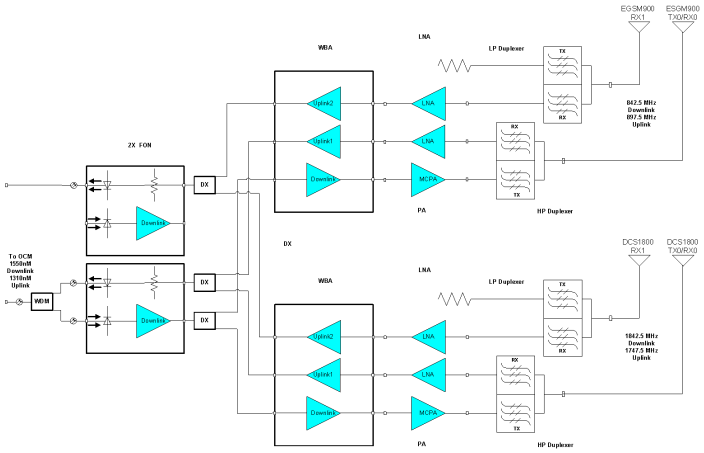
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1710-1785, 880-915 MHz
Frequency Band DL	1805-1880, 925-960 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Output Power DL	Maximum composite power DCS1800 +40 dBm*
Output Power DL 2	Maximum composite power EGSM900 +40 dBm*
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETSI EN 300 609-4
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

*Carrier Count	EGSM900 Power Per Carrier	EGSM900 Composite Power	DCS1800 Power Per Carrier	DCS1800 Composite Power
2	29dBm	32dBm	35dBm	38dBm
4	29dBm	35dBm	34dBm	40dBm
8	29dBm	38dBm	31dBm	40dBm
16	28dBm	40dBm	28dBm	40dBm
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH201022/211 Nexus FT Dual Band 1800/900

RH201022/211 is AC powered, with two duplexed 7/16 DIN connector RF ports, one each band and two RX diversity 7/16 DIN connector RF ports, one for each band

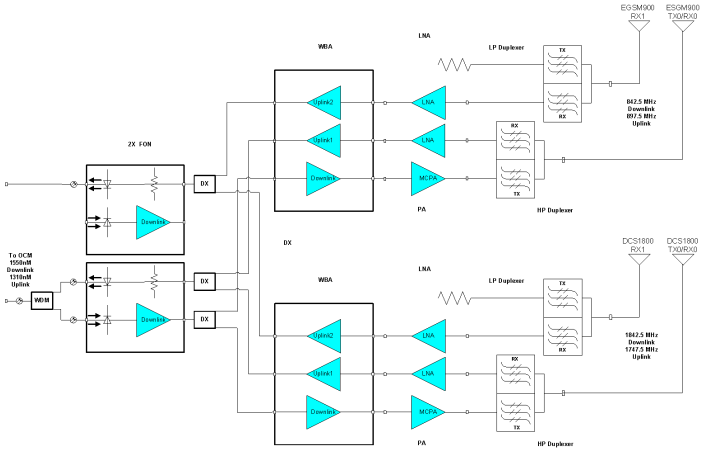
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1710-1785, 880-915 MHz
Frequency Band DL	1805-1880, 925-960 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Output Power DL	Maximum composite power DCS1800 +40 dBm*
Output Power DL 2	Maximum composite power EGSM900 +40 dBm*
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETSI EN 300 609-4
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

*Carrier Count	EGSM900 Power Per Carrier	EGSM900 Composite Power	DCS1800 Power Per Carrier	DCS1800 Composite Power
2	29dBm	32dBm	35dBm	38dBm
4	29dBm	35dBm	34dBm	40dBm
8	29dBm	38dBm	31dBm	40dBm
16	28dBm	40dBm	28dBm	40dBm
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH601022/101 Nexus FT Dual Band EGSM900 & WCDMA2100

RH601022/101 is AC powered, with two duplexed 7/16 DIN connector RF ports, one for each band

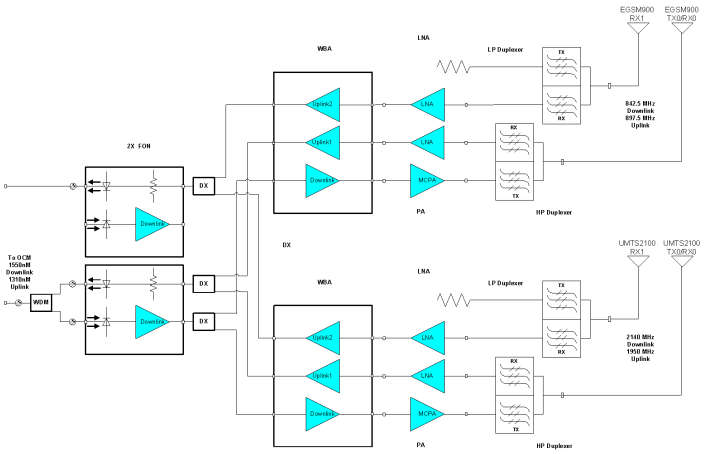
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1920-1980, 880-915 MHz
Frequency Band DL	2110-2170, 925-960 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Output Power DL	Maximum composite power WCDMA2100 +43dBm*
Output Power DL 2	Maximum composite power EGSM900 +40 dBm*
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETSI EN 300 609-4
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

*Carrier Count	EGSM900 Power Per Carrier	EGSM900 Composite Power	WCDMAS 2100 Power Per Carrier	WCDMAS 2100 Composite Power
2	29dBm	32dBm	40dBm	43dBm
4	29dBm	35dBm	37dBm	43dBm
8	29dBm	38dBm	34dBm	43dBm
16	28dBm	40dBm	31dBm	43dBm
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH601022/211 Nexus FT Dual Band EGSM900 & WCDMA2100

RH601022/211 is AC powered, with two duplexed 7/16 DIN connector RF ports, one each band and two RX diversity 7/16 DIN connector RF ports, one for each band

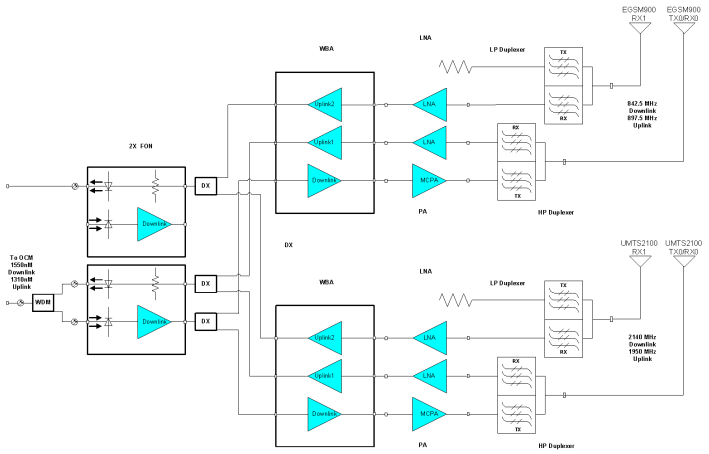
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1920-1980, 880-915 MHz
Frequency Band DL	2110-2170, 925-960 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Output Power DL	Maximum composite power WCDMA2100 +43dBm*
Output Power DL 2	Maximum composite power EGSM900 +40 dBm*
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETSI EN 300 609-4
Environment	ETS 300 019 -2.4E
EMC	ETS 300 489-1

*Carrier Count	EGSM900 Power Per Carrier	EGSM900 Composite Power	WCDMAS 2100 Power Per Carrier	WCDMAS 2100 Composite Power
2	29dBm	32dBm	40dBm	43dBm
4	29dBm	35dBm	37dBm	43dBm
8	29dBm	38dBm	34dBm	43dBm
16	28dBm	40dBm	31dBm	43dBm
NA	NA	NA		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH400020/101 Nexus FT 850 MHz Single Band

RH400020/101 is AC powered, with one duplexed 7/16 DIN connector RF port

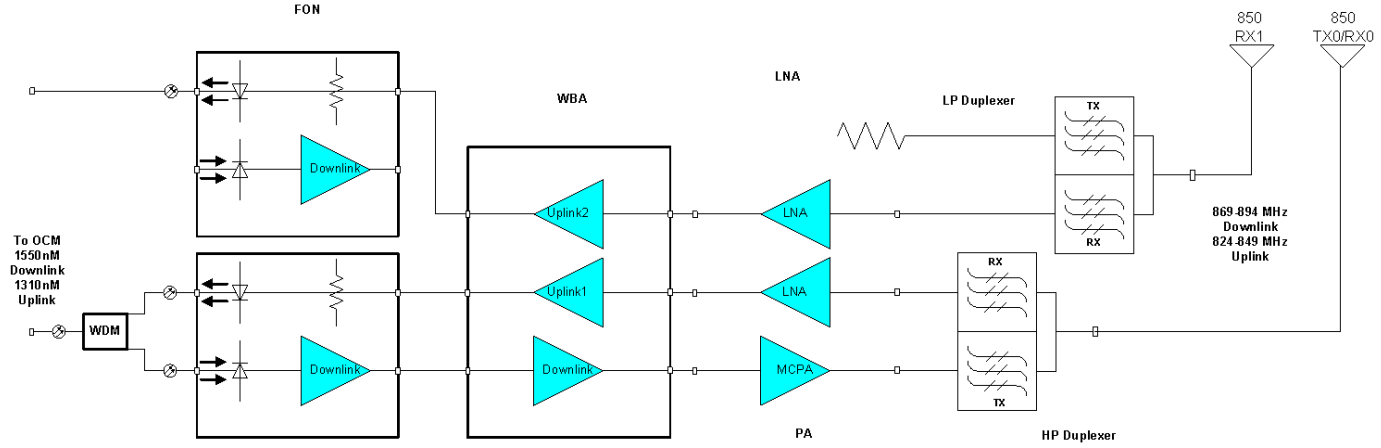
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	824 – 849 MHz
Frequency Band DL	869 – 894 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite power 43 dBm
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-13 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 22
Environment	
EMC	

*Carrier Count	Power Per Carrier FCC	Composite Power FCC	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	29dBm	32dBm
4	37dBm	43dBm	29dBm	35dBm
8	34dBm	43dBm	29dBm	38dBm
16	31dBm	43dBm	28dBm	40dBm



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH400020/211 Nexus FT 850 MHz Single Band

RH400020/211 is AC powered, with one duplexed 7/16 DIN connector RF port and one RX diversity 7/16 DIN connector RF port

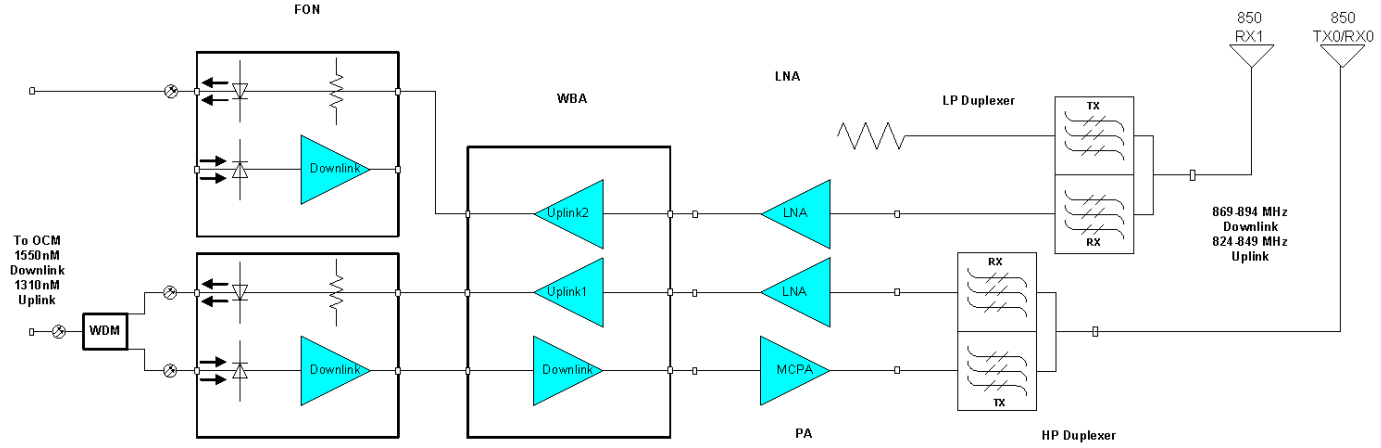
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	824 – 849 MHz
Frequency Band DL	869 – 894 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite power 43 dBm
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-13 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 211 (18 x 20.9 x 8.3)
Weight kg (lbs)	< 25 kg (55 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 22
Environment	
EMC	

*Carrier Count	Power Per Carrier FCC	Composite Power FCC	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	29dBm	32dBm
4	37dBm	43dBm	29dBm	35dBm
8	34dBm	43dBm	29dBm	38dBm
16	31dBm	43dBm	28dBm	40dBm



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH602022/101 Nexus FT Dual Band DCS1800 & WCDMA2100

RH602022/101 is AC powered, with two duplexed 7/16 DIN connector RF ports, one for each band

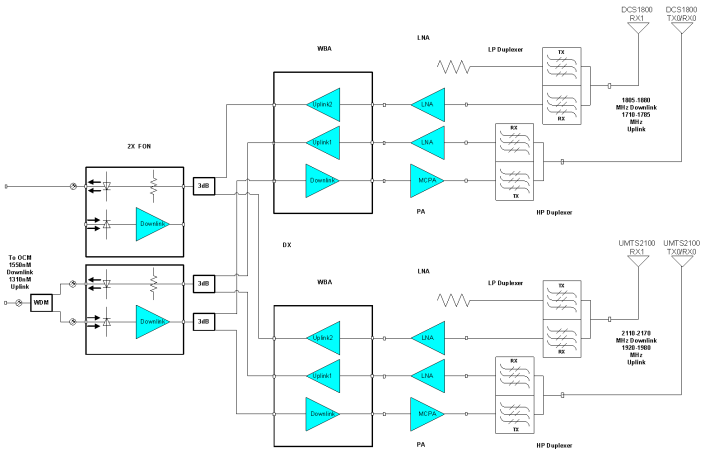
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1920-1980, 1710-1785 MHz
Frequency Band DL	2110-2170, 1805-1880 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Output Power DL	Maximum composite power WCDMA2100 +43dBm*
Output Power DL 2	Maximum composite power DCS1800 +40 dBm*
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETSI EN 300 609-4 and EN 301 908-11
Environment	ETS 300 019
EMC	ETS 300 489-1

*Carrier Count	DCS1800 Power Per Carrier	DCS1800 Composite Power	WCDMA 2100 Power Per Carrier	WCDMA 2100 Composite Power
2	35dBm	38dBm	40dBm	43dBm
4	34dBm	40dBm	37dBm	43dBm
8	31dBm	40dBm	34dBm	43dBm
12	29dBm	40dBm	32dBm	43dBm
	28dBm	40dBm		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH602022/211 Nexus FT Dual Band DCS1800 & WCDMA2100

RH602022/211 is AC powered, with two duplexed 7/16 DIN connector RF ports, one each band and two RX diversity 7/16 DIN connector RF ports, one for each band

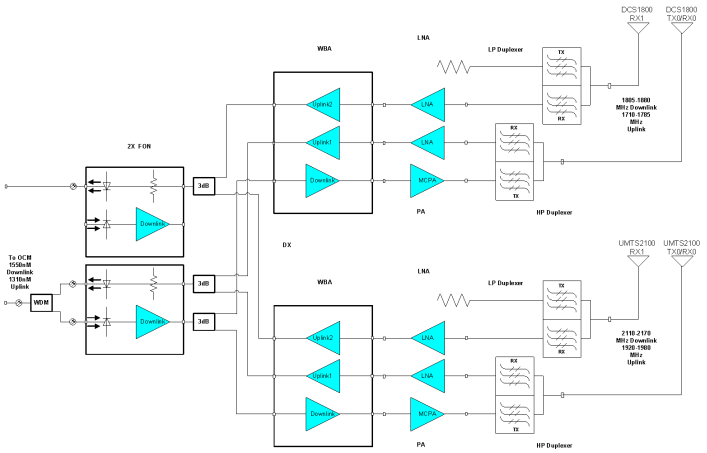
ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1920-1980, 1710-1785 MHz
Frequency Band DL	2110-2170, 1805-1880 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	20 dB (45 – 65 dB)
Gain Adjustment Range UL	20 dB (35 – 55 dB)
Gain Step Resolution	1 dB
Output Power DL	Maximum composite power WCDMA2100 +43dBm*
Output Power DL 2	Maximum composite power DCS1800 +40 dBm*
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-36 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-30 dBm
Alarm	LED and by remote control
Power Supply Options	115/230 VAC
Power Consumption	420 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	465 x 530 x 310 (18.3 x 20.9 x 12.3)
Weight kg (lbs)	< 44 kg (96 lbs)
RF Connectors	7/16 DIN female
Optical Connectors	FC/APC

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protection	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	ETSI EN 300 609-4 and EN 301 908-11
Environment	ETS 300 019
EMC	ETS 300 489-1

*Carrier Count	DCS1800 Power Per Carrier	DCS1800 Composite Power	WCDMA 2100 Power Per Carrier	WCDMA 2100 Composite Power
2	35dBm	38dBm	40dBm	43dBm
4	34dBm	40dBm	37dBm	43dBm
8	31dBm	40dBm	34dBm	43dBm
12	29dBm	40dBm	32dBm	43dBm
	28dBm	40dBm		



All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

In-Building DAS Products

Commercial

Title	Frequency Band UL	Frequency Band DL	Gain Adjustment Range DL	Part Number	Page
Nexus Dual Band Repeaters	1850-1910, 824-849 MHz	1930-1990, 869-894 MHz	25 (45 - 70) dB	RH304022/03A	193
Nexus Dual Band Repeaters	1850-1910, 806-824 MHz	1930-1990, 851-869 MHz	25 (45 - 70) dB	RH305022/03A	194
Nexus Dual Band Repeaters	1850-1910, 896-902 MHz	1930-1990, 935-941 MHz	25 (45 - 70) dB	RH308022/03A	195

RH304022/03A Nexus Dual Band Repeaters

Nexus FT Rack Mount Dual Band 1900 / 850, Simplex SMA donor ports and duplexed N service ports per band.

ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 824-849 MHz
Frequency Band DL	1930-1990, 869-894 MHz
Fiber Link Budget	n/a
Gain Adjustment Range DL	25 (45 - 70) dB
Gain Adjustment Range UL	25 (35 - 60) dB
Gain Step Resolution	1 db
Output Power DL	20 W
Output Power DL 2	20 W
Instantaneous Bandwidth	60 / 25 MHz
Intermodulation 9KHz - 1 GHz	-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	-13 dBm
Alarm	LED/SNMP
Power Supply Options	110 - 230 VAC
Power Consumption	420 W typical, 500 W Max

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	266 x 483 x 551 (10.5 x 19 x 21.7)
Weight kg (lbs)	30 (66)
RF Connectors	SMA (Donor), N (Service)
Optical Connectors	n/a -units require ORD for optical to RF conversion

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	0C to +55C
Ingression Protection	IP50

APPROVALS AND TESTS	
Safety	UL60950-1
Radio	FCC CFR47 Parts 22, 24
Environment	ETS 300 019
EMC	FCC CFR47 Part 22, 24

Carrier Count	Power Per Carrier	Composite Power		
2	40 dBm	43 dBm		
4	37 dBm	43 dBm		
8	34 dBm	43 dBm		
12	32 dBm	43 dBm		

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH305022/03A Nexus Dual Band Repeaters

Nexus FT Rack Mount Dual Band 1900 / 800iPS, Simplex SMA donor ports and duplexed N service ports per band.

ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 806-824 MHz
Frequency Band DL	1930-1990, 851-869 MHz
Fiber Link Budget	n/a
Gain Adjustment Range DL	25 (45 - 70) dB
Gain Adjustment Range UL	25 (35 - 60) dB
Gain Step Resolution	1 db
Output Power DL	20 W
Output Power DL 2	20 W
Instantaneous Bandwidth	60 / 18 MHz
Intermodulation 9KHz - 1 GHz	-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	-13 dBm
Alarm	LED/SNMP
Power Supply Options	110 - 230 VAC
Power Consumption	420 W typical, 500 W Max

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	266 x 483 x 551 (10.5 x 19 x 21.7)
Weight kg (lbs)	30 (66)
RF Connectors	SMA (Donor), N (Service)
Optical Connectors	n/a -units require ORD for optical to RF conversion

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	
Ingression Protection	IP50

APPROVALS AND TESTS	
Safety	UL60950-1
Radio	FCC CFR47 Parts 24, 90
Environment	ETS 300 019
EMC	FCC CFR47 Parts 24, 90

Carrier Count	Power Per Carrier	Composite Power		
2	40 dBm	43 dBm		
4	37 dBm	43 dBm		
8	34 dBm	43 dBm		
12	32 dBm	43 dBm		

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RH308022/03A Nexus Dual Band Repeaters

Nexus FT Rack Mount Dual Band 1900 / 900i, Simplex SMA donor ports and duplexed N service ports per band.

ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850-1910, 896-902 MHz
Frequency Band DL	1930-1990, 935-941 MHz
Fiber Link Budget	n/a
Gain Adjustment Range DL	25 (45 - 70) dB
Gain Adjustment Range UL	25 (35 - 60) dB
Gain Step Resolution	1 db
Output Power DL	20 W
Output Power DL 2	20 W
Instantaneous Bandwidth	60 / 6 MHz
Intermodulation 9KHz - 1 GHz	-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	-13 dBm
Alarm	LED/SNMP
Power Supply Options	110 - 230 VAC
Power Consumption	420 W typical, 500 W Max

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	266 x 483 x 551 (10.5 x 19 x 21.7)
Weight kg (lbs)	30 (66)
RF Connectors	SMA (Donor), N (Service)
Optical Connectors	n/a -units require ORD for optical to RF conversion

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	
Ingression Protection	IP50

APPROVALS AND TESTS	
Safety	UL60950-1
Radio	FCC CFR47 Parts 24, 90
Environment	ETS 300 019
EMC	FCC CFR47 Parts 24, 90

Carrier Count	Power Per Carrier	Composite Power		
2	40 dBm	43 dBm		
4	37 dBm	43 dBm		
8	34 dBm	43 dBm		
12	32 dBm	43 dBm		

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

POWERWAVE

Outdoor DAS Products

Turnkey Projects

We deliver complete turnkey solutions for wireless coverage. We manage the entire project with full responsibility, starting with analyzing and determining required signal strength, quality and planning for future expansion, right through implementation and operations. All Powerwave turnkey systems are backed by full performance and cost guarantees, with full product and component warranties for your peace of mind.

Powerwave Products

As new wireless services, technologies and opportunities emerge, the ability to rapidly adapt will become even more vital to network operators, building owners and public safety agencies. That's why Powerwave engineers flexibility into every system. It's why we choose components that are modular and adaptable. And it's why our coverage solutions are built from the ground up to be versatile.

Outdoor DAS Products

Title	Frequency Band UL	Frequency Band DL	Gain Adjustment Range DL	Part Number	Page
Nexus FT 1900 MHz Single Band	1850 – 1910 MHz	1930 - 1990 MHz	25 dB (45 – 70 dB)	RH300020/14A	198

RH300020/14A Nexus FT 1900 MHz Single Band

RH300020/14A is AC powered, with one duplexed N connector RF port

ELECTRICAL SPECIFICATIONS	
Frequency Band UL	1850 – 1910 MHz
Frequency Band DL	1930 - 1990 MHz
Fiber Link Budget	10 dBo
Gain Adjustment Range DL	25 dB (45 – 70 dB)
Gain Adjustment Range UL	25 dB (35 – 60 dB)
Gain Step Resolution	1 dB
Band 1 Output Power at Antenna Port	Maximum Composite power 43 dBm
Instantaneous Bandwidth	Full Band
Intermodulation 9KHz - 1 GHz	<-13 dBm
Intermodulation 1 GHz - 12.75 GHz ETSI	<-13 dBm
Alarm	LED and by remote control
Power Supply Type	115/230 VAC
Power Consumption	210 W Typical

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	241 x 254 x 381 (9.5 x 10 x 15)
Weight kg (lbs)	< 15.4 kg (34 lbs)
RF Connectors	N
Optical Connectors	Corning Opti Tap

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-25 °C to +55 °C
Ingression Protectioin	IP65 / NEMA 4

APPROVALS AND TESTS	
Safety	UL, EN 60950, ETL
Radio	FCC CFR 47 Part 15 and 24
Environment	
EMC	

*Carrier Count	Power Per Carrier FCC	Composite Power FCC	Power Per Carrier ETSI	Composite Power ETSI
2	40dBm	43dBm	NA	NA
4	37dBm	43dBm	NA	NA
8	34dBm	43dBm	NA	NA
16	31dBm	43dBm	NA	NA

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

DAS Monitoring Solutions

Powerwave Technologies, Inc.

ISG is an embedded module for Powerwave repeaters that provides a reliable, cost effective IP/SNMP communication interface to Powerwave's NetWay Manager (NWM) software. The ISG module supports both packet data transport and circuit switched data connections. The ISG module processes alarm messages from the repeater(s) it is connected to and uses SNMP traps to forward these messages to NWM. ISG, along with NWM, provides a user friendly web based interface for repeater control and management.

ISG can provide an interface to one repeater (its host) or to a network of repeaters. In mobile applications, ISG also provides the capability to automatically adjust repeater parameters based on the location of the repeater. In this scenario, ISG can manage tuning parameters for up to 12 interconnected repeaters.

This ISG provides support for Packet and Circuit switched data in 850 or 1900 MHz CDMA networks.

Outdoor DAS Products

DAS Monitoring Solutions

Title	Power Input	Modem Frequencies	GPS Receiver	Part Number	Page
ISG: Ethernet Interface Card	supplied by repeater	NA	NA	UA107 62/1	201
ISG: 900/1800 Dual Mode Wireless GPRS Packet Data Interface Card	supplied by repeater	900 / 1800 MHz	12 channel L1 (1575.42 MHz), position accuracy ~ 5 m	UA107 62/2	202
ISG: 850/1900 Dual Mode Wireless CDMA Packet Data Interface Card	supplied by repeater	850 / 1900 MHz	12 channel L1 (1575.42 MHz), position accuracy ~ 5 m	UA107 62/3	203
ISG: 850/1900 Dual Mode Wireless GPRS Packet Data Interface Card	supplied by repeater	850 / 1900 MHz	12 channel L1 (1575.42 MHz), position accuracy ~ 5 m	UA107 62/4	204

UA107 62/1 ISG: Ethernet Interface Card

Optional kit that provides wired Ethernet packet data interface for communication with Powerwave's NetWay Manager (NWM)

ELECTRICAL SPECIFICATIONS	
Power Input	supplied by repeater
Modem Frequencies	NA
GPS Receiver	NA
Battery Backup	10 minute minimum (for communications)
Battery Change Options	Continuous trickle or high charge

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	1.18 in (20 mm) x 7.29 in (185 mm) x 3.35 in (85 mm)
Operating Range	-25° C to +55° C (repeater ambient temps)
Repeater Interface	Use existing communication ports
Modem and GPS Interface	NA
Operational Conditions	ETSI 300 019 Class 3.1 (Stationary) and Class 5.1 (Ground Vehicle Operations)
Non-Operational Conditions	ETSI 300 019 Class 2.3 (Transportation) and Class 1.1 (Storage)
Certifications	EN60950-1 (Safety), ETSI 301 489-1 (EMC), UL 60950-1 (2007)

PROCESSING	
Processor	MPC8247, core speed 266 MHz
SDRAM	64 MB (64-bit wide)
Flash	32MB (32-bit wide) Up to 64 MB
Automated Location Based Tuning (via GPS)	NA
Repeater Management	Up to 96 repeaters

COMMUNICATIONS	
Packet Data Mode	IP Ethernet
Networks Supported	NA
Fallback Circuit Switched Mode	NA
Northbound Traffic	SNMP v1, v2c, v3 (including traps and informs), and http
Wireless Modem Type	NA
Network Management	NWM 3.2.2 and greater; local web interface
Maintenance Access (Local Craft Port)	10/100 BaseT Ethernet Port (DHCP managed) and RS232

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

UA107 62/2 ISG: 900/1800 Dual Mode Wireless GPRS Packet Data Interface Card

Optional kit that provides GPRS wireless packet data interface for communication with Powerwave's NetWay Manager (NWM)

ELECTRICAL SPECIFICATIONS	
Power Input	supplied by repeater
Modem Frequencies	900 / 1800 MHz
GPS Receiver	12 channel L1 (1575.42 MHz), position accuracy ~ 5 m
Battery Backup	10 minute minimum (for communications)
Battery Change Options	Continuous trickle or high charge

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	1.18 in (20 mm) x 7.29 in (185 mm) x 3.35 in (85 mm)
Operating Range	-25° C to +55° C (repeater ambient temps)
Repeater Interface	Use existing communication and antenna ports
Modem and GPS Interface	Mezzanine Board
Operational Conditions	ETSI 300 019 Class 3.1 (Stationary) and Class 5.1 (Ground Vehicle Operations)
Non-Operational Conditions	ETSI 300 019 Class 2.3 (Transportation) and Class 1.1 (Storage)
Certifications	EN60950-1 (Safety), ETSI 301 489-1 (EMC), UL 60950-1 (2007)

PROCESSING	
Processor	MPC8247, core speed 266 MHz
SDRAM	64 MB (64-bit wide)
Flash	32MB (32-bit wide) Up to 64 MB
Automated Location Based Tuning (via GPS)	Up to 12 repeaters; All repeater updates within 12 seconds
Repeater Management	Up to 96 repeaters

COMMUNICATIONS	
Packet Data Mode	GPRS and IP Ethernet
Networks Supported	NA
Fallback Circuit Switched Mode	GSM
Northbound Traffic	SNMP v1, v2c, v3 (including traps and informs), and http
Wireless Modem Type	Wavecom Quik series Extended (Q24 EX001)
Network Management	NWM 3.2.2 and greater; local web interface
Maintenance Access (Local Craft Port)	10/100 BaseT Ethernet Port (DHCP managed) and RS232

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

UA107 62/3 ISG: 850/1900 Dual Mode Wireless CDMA Packet Data Interface Card

Optional kit that provides CDMA wireless packet data interface for communication with Powerwave's NetWay Manager (NWM)

ELECTRICAL SPECIFICATIONS	
Power Input	supplied by repeater
Modem Frequencies	850 / 1900 MHz
GPS Receiver	12 channel L1 (1575.42 MHz), position accuracy ~ 5 m
Battery Backup	10 minute minimum (for communications)
Battery Change Options	Continuous trickle or high charge

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	1.18 in (20 mm) x 7.29 in (185 mm) x 3.35 in (85 mm)
Operating Range	-25° C to +55° C (repeater ambient temps)
Repeater Interface	Use existing communication and antenna ports
Modem and GPS Interface	Mezzanine Board
Operational Conditions	ETSI 300 019 Class 3.1 (Stationary) and Class 5.1 (Ground Vehicle Operations)
Non-Operational Conditions	ETSI 300 019 Class 2.3 (Transportation) and Class 1.1 (Storage)
Certifications	EN60950-1 (Safety), ETSI 301 489-1 (EMC), UL 60950-1 (2007)

PROCESSING	
Processor	MPC8247, core speed 266 MHz
SDRAM	64 MB (64-bit wide)
Flash	32MB (32-bit wide) Up to 64 MB
Automated Location Based Tuning (via GPS)	
Repeater Management	Up to 96 repeaters

COMMUNICATIONS	
Packet Data Mode	CDMA2000 1XRTT and IP ethernet
Networks Supported	Verizon
Fallback Circuit Switched Mode	NA
Northbound Traffic	SNMP v1, v2c, v3 (including traps and informs), and http
Wireless Modem Type	Wavecom Quik series (Q2438)
Network Management	NWM 3.2.2 and greater; local web interface
Maintenance Access (Local Craft Port)	10/100 BaseT Ethernet Port (DHCP managed) and RS232

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

UA107 62/4 ISG: 850/1900 Dual Mode Wireless GPRS Packet Data Interface Card

Optional kit that provides GPRS wireless packet data interface for communication with Powerwave's NetWay Manager (NWM)

ELECTRICAL SPECIFICATIONS	
Power Input	supplied by repeater
Modem Frequencies	850 / 1900 MHz
GPS Receiver	12 channel L1 (1575.42 MHz), position accuracy ~ 5 m
Battery Backup	10 minute minimum (for communications)
Battery Change Options	Continuous trickle or high charge

MECHANICAL SPECIFICATIONS	
Dimensions HxWxD mm (in)	1.18 in (20 mm) x 7.29 in (185 mm) x 3.35 in (85 mm)
Operating Range	-25° C to +55° C (repeater ambient temps)
Repeater Interface	Use existing communication and antenna ports
Modem and GPS Interface	Mezzanine Board
Operational Conditions	ETSI 300 019 Class 3.1 (Stationary) and Class 5.1 (Ground Vehicle Operations)
Non-Operational Conditions	ETSI 300 019 Class 2.3 (Transportation) and Class 1.1 (Storage)
Certifications	EN60950-1 (Safety), ETSI 301 489-1 (EMC), UL 60950-1 (2007)

PROCESSING	
Processor	MPC8247, core speed 266 MHz
SDRAM	64 MB (64-bit wide)
Flash	32MB (32-bit wide) Up to 64 MB
Automated Location Based Tuning (via GPS)	
Repeater Management	Up to 96 repeaters

COMMUNICATIONS	
Packet Data Mode	GPRS and IP Ethernet
Networks Supported	NA
Fallback Circuit Switched Mode	GSM
Northbound Traffic	SNMP v1, v2c, v3 (including traps and informs), and http
Wireless Modem Type	Wavecom Quik series Extended (Q24 EX001)
Network Management	NWM 3.2.2 and greater; local web interface
Maintenance Access (Local Craft Port)	10/100 BaseT Ethernet Port (DHCP managed) and RS232

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

A Tradition of Quality Since 1946

Powerwave delivers antennas to customers around the world, offering solutions for all mobile telephony standards. Our designers and engineers build on years of experience; we have developed and manufactured top-quality antennas since 1946 from our core platform; formerly under the industry leading Allgon brand name.

State of the Art Antennas are the Key to Reducing Total Cost of Ownership

The Powerwave broadband multiband antennas offer network operators fast and successful roll-out of next generation networks with excellent RF-performance. Our antennas are designed to overcome 3G deployment challenges, such as space and installation issues as well as various co-siting scenarios. The Powerwave broadband antenna technology simplifies logistics for network operators active in multiple markets.

Antenna Products

Broadband Antennas

The Powerwave broadband antenna design is based on a patented stacked aperture-coupled patch technology, which provides high isolation performance and a wide VSWR bandwidth. The antennas have superior radiation patterns due to a unique reflector design that provide a very small variation of the -3dB horizontal beam width over the frequency band as well as a high front-to-back ratio. Powerwave broadband antennas come with manually adjustable electrical tilt (MET) for tuning flexibility of tilt angles. This design ensures the highest possible cross-polar discrimination value.

Single Band Antennas

The Powerwave single band antenna's outstanding performance in the field derives from excellent VSWR (Voltage Standing Wave Ratio), isolation, beam squint and tracking. This design ensures minimized intermodulation issues, thus substantially enhancing system benefits. The Powerwave polarization diversity systems use one antenna with two orthogonal polarizations slanted at ±45° to provide the independently fading signals needed for achieving top-quality coverage. As a result of thorough, in-depth research and testing, Powerwave has produced a variety of designs that ensure the isolation, cross polarization discrimination and orthogonality between inputs needed to achieve the highest possible diversity gain, hence the most efficient system performance.

Dual Band Antennas

The Powerwave dual band, broadband antennas are available in a variety of designs combining a low broadband with a high broadband or a high broadband with another high broadband. The Powerwave dual band antennas are built on patented and well proven aperture-coupled patch technology and are available both as vertical polarized as well as cross polarized.

Easy-to-install dual band antennas from Powerwave are deployed in numerous, wireless networks worldwide. All have endured extensive field trials in close collaboration with cell planners and other communications providers to ensure Powerwave dual band antennas perform to expectations.

iRET Antennas

The iRET antenna family is the next iteration of Powerwave's innovative antenna product line, which integrates remote electrical tilt functionality under the antenna radome, delivering maximized functionality and improved aesthetics, while eliminating installation and reliability issues that can occur with typical exterior RET modules.

Remote Electrical Tilt Antennas (RET)

The Powerwave Remote Electrical Tilt (RET) system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment. The system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus. ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

Indoor Antennas

The indoor antenna is designed to blend into a wall or ceiling inside a building and is the base antenna for the Powerwave distributed antenna system. The indoor antenna covers all bands from 800 MHz up to 2500 MHz and supports multiband operation. Easy-to-install dual band antennas from Powerwave are deployed in numerous wireless networks worldwide. Using fewer antennas of discreetly functional design is an improvement over using numerous antennas of unsightly size and appearance, especially with today's aesthetic concerns.

Clean Site Solutions

Clean Site solutions minimize the visual impact of a complete antenna system and significantly reduces investment and operational costs for network operators when building new or upgrading existing networks. Building permits for existing antenna installations can be used when replacing old, passive antennas with the Clean Site solution. This simplifies the site acquisition process significantly and shortens roll-out time considerably.

All Clean Site antennas support Remote Electrical Tilt for optimization of the coverage footprint and tuning of network performance. By integrating all functionality into one single unit, Clean Site offers you a flexible and attractive solution in the most cost efficient way.

Mounting Solutions

Our mounting solutions consist of rugged brackets with an aesthetic design and the flexibility to address multiple situations and requirements. All Powerwave antennas are delivered with mounting brackets pre-mounted. The intent is to reduce logistic and tower crew installation costs for our customers. All brackets have a high quality surface treatment to maintain the Powerwave standard for product exposure to severe environments. By using steel in the sheet metal parts of the tilt brackets, a robust and rigid design is ensured.

POWERWAVE

Antenna Products

Broadband

Single and Dual Band

iRET

Remote Electrical Tilt (RET)

Indoor

Clean Site Solutions

Mounting Solutions

A Tradition of Quality Since 1946

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POWERWAVE

Broadband Antennas

The Powerwave broadband antenna design is based on a patented stacked aperture-coupled patch technology, which provides high isolation performance and a wide VSWR bandwidth. The antennas have superior radiation patterns due to a unique reflector design that provide a very small variation of the -3dB horizontal beam width over the frequency band as well as a high front-to-back ratio. Powerwave broadband antennas come with manually adjustable electrical tilt (MET) for tuning flexibility of tilt angles. This design ensures the highest possible cross-polar discrimination value.

POWERWAVE | **Broadband Antennas**

Single Broadband Antennas

Cross Polarized	Page
High Broadband Cross Polarized Antennas, 1710-2170 MHz	210
Low Broadband Cross Polarized Antennas, 806-960 MHz	226

Vertical Polarized	Page
ALP Broadband Vertical Polarized Antennas, 806-960 MHz	251

Dual Broadband Antennas

Cross Polarized	Page
Dual High Broadband Cross Polarized Antennas, 2x1710-2170 MHz	256
Dual Broadband Cross Polarized Antennas, 824-960/1710-2170 MHz	264

Triple Broadband Antennas

Cross Polarized	Page
Triple Broadband Cross Polarized Antennas, 824-960/2x1710-2170 MHz	278

Single Broadband Antennas

Cross Polarized

High Broadband Cross Polarized Antennas, 1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	15.6/13.5	MET	0.7m (2'3")	7720.00	211
65	15.8/13.7	FET	0.7m (2'3")	7700.00	212
65	15.8/13.7	FET	0.7m (2'3")	7700.06	213
65	18.1/16	FET	1.3m (4'3")	7701.02	214
65	18.1/16	FET	1.3m (4'3")	7701.06	215
65	18.1/16	MET	1.3m (4'3")	7721.02	216
65	18.1/16	MET	1.3m (4'3")	7721.10	217
65	18.2/16.1	FET	1.3m (4'3")	7701.00	218
65	18.3/16.2	MET	1.3m (4'3")	7721.00	219
65	18/15.9	FET	1.3 (4’3”)	7701.1ST.00 00.01	220
65	18/15.9	MET	1.3m (4'3")	7721.06	221
65	19.5/17.4	MET	2.0m (6’6")	7722.00	222
90	14.1/12	MET	0.7m (2'3")	7735.00A	223
90	16.7/14.6	MET	1.3m (4'3")	7740.00A	224
90	17.9/15.8	MET	2.0m (6’6")	7745.00A	225

7720.00 High Broadband Cross Polarized

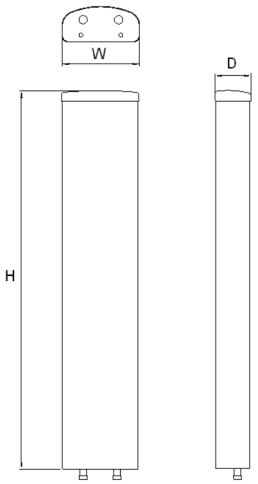
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.6/13.5
TILT: MET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15/12.9	15.1/13	15.6/13.5
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	64
Vertical beam width, -3 dB (°)	14.1	13.5	12.5
Electrical down tilt (°)	0 to 16		
Side lobe suppression, vertical 1st upper (dB)	>17,16,16,15,15@0,4,8,12,16°	>17,16,16,15,15@0,4,8,12,16°	>17,16,16,15,15@0,4,8,12,16°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.5	<1.5	<1.5
First null fill (dB)	>-29,typical>-25	>-29,typical>-25	>-29,typical>-25
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>15	>15	>18
Cross polar discrimination (XPD) ±60° (dB)	>15	>15	>13
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

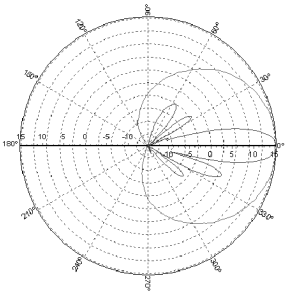
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	709x167x89.5 (2'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	8.2 (18)
Weight, without brackets, kg (lbs)	4.5 (9.9)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	286
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	880x200x200 (2'11"x8"x8")
Shipping weight, kg (lbs)	11.5 (25.3)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7700.00 High Broadband Cross Polarized

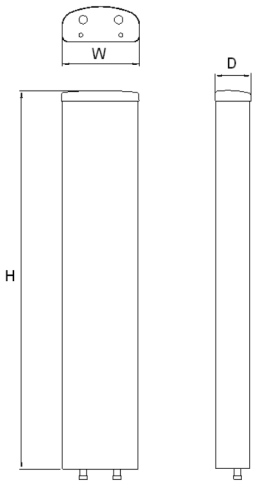
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.8/13.7
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15.1/13		15.8/13.7
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.3:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	14.7	13.8	12.8
Electrical down tilt (°)	0		
Side lobe suppression, vertical 1st upper (dB)	>19	>19	
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-20,typical>-18	>-20,typical>-18	>-20,typical>-18
Vertical beam squint (°)	0.6	0.6	0.6
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>26	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>19
Cross polar discrimination (XPD) ±60° (dB)	>17	>15	>11
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	709x167x89.5 (2'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	6.7 (14.8)
Weight, without brackets, kg (lbs)	3 (6.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	286
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	880x200x200 (2'11"x 8"x 8")
Shipping weight, kg (lbs)	10 (22)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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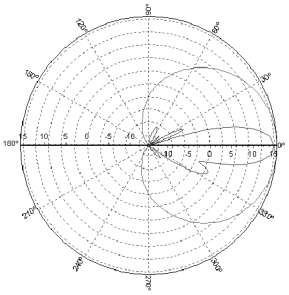


2140 MHz

7700.06 High Broadband Cross Polarized

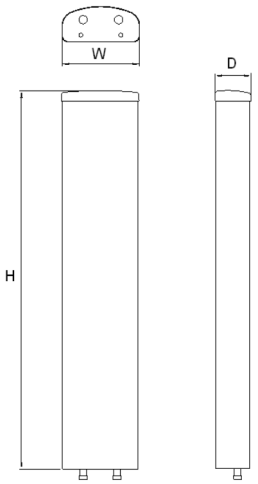
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.8/13.7
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15/12.9	15.5/13.4	15.8/13.7
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.3:1		
Horizontal beam width, -3 dB (°)	67	65	64
Vertical beam width, -3 dB (°)	14.7	13.8	12.8
Electrical down tilt (°)	6		
Side lobe suppression, vertical 1st upper (dB)	>17	>17	>17
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-26,typical>-20	>-26,typical>-20	>-26,typical>-20
Vertical beam squint (°)	0.6	0.6	0.6
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>26	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>19
Cross polar discrimination (XPD) ±60° (dB)	>17	>15	>11
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	709x167x89.5 (2'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	6.7 (14.8)
Weight, without brackets, kg (lbs)	3 (6.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	286
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	880x200x200 (2'11"x 8"x 8")
Shipping weight, kg (lbs)	10 (22)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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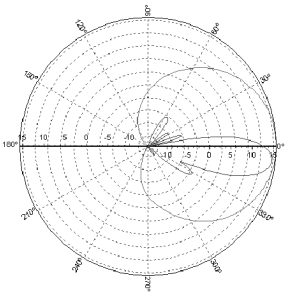


2140 MHz

7701.02 High Broadband Cross Polarized

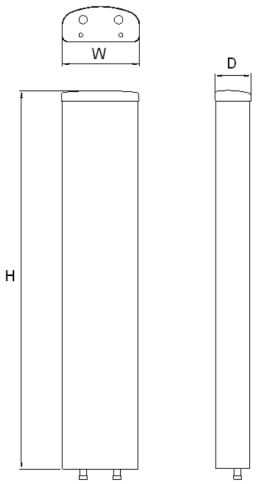
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.1/16
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.4/15.3	17.8/15.7	18.1/16
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.3:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	7.2	6.7	6.4
Electrical down tilt (°)	2		
Side lobe suppression, vertical 1st upper (dB)	>19	>19	>19
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-22,typical>-18	>-22,typical>-18	>-22,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>26	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>17	>14	>11
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-150	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	7.7 (16.9)
Weight, without brackets, kg (lbs)	4 (8.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	11.5 (25.3)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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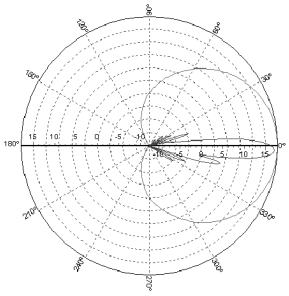


2140 MHz

7701.06 High Broadband Cross Polarized

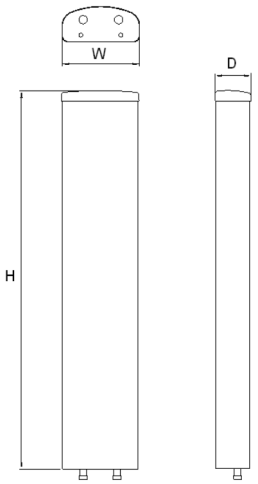
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.1/16
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.5/15.4	17.8/15.7	18.1/16
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.3:1		
Horizontal beam width, -3 dB (°)	67	65	64
Vertical beam width, -3 dB (°)	7.2	6.7	6.4
Electrical down tilt (°)	6		
Side lobe suppression, vertical 1st upper (dB)	>18	>18	>18
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-26,typical>-20	>-26,typical>-20	>-26,typical>-20
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>29	>29	>29
Front to back ratio, total power (dB)	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>17	>14	>11
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	7.7 (16.9)
Weight, without brackets, kg (lbs)	4 (8.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	11.5 (25.3)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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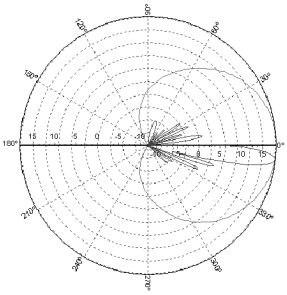


2140 MHz

7721.02 High Broadband Cross Polarized

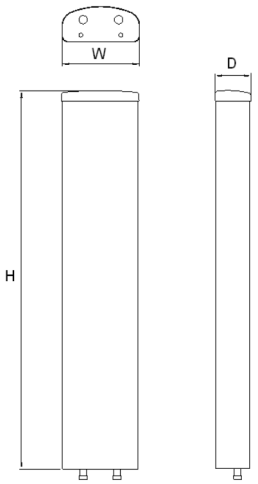
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.1/16
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.5/15.4	17.9/15.8	18.1/16
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	7	6.6	6.3
Electrical down tilt (°)	2 to 10		
Side lobe suppression, vertical 1st upper (dB)	>19,19,18,17,16@2,4,6,8,10°	>20,20,19,19,18@2,4,6,8,10°	>20,20,19,19,18@2,4,6,8,10°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>18	>14	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	13.5 (29.7)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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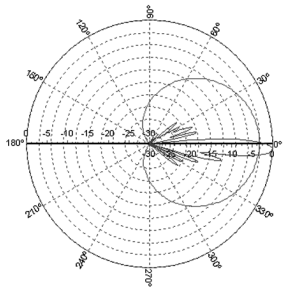


2140 MHz

7721.10 High Broadband Cross Polarized

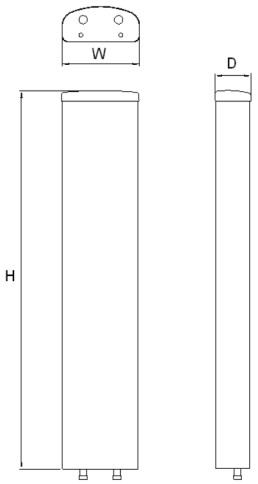
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.1/16
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.5/15.4	17.9/15.8	18.1/16
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	7	6.6	6.3
Electrical down tilt (°)	2 to 10		
Side lobe suppression, vertical 1st upper (dB)	>19,19,18,17,16@2,4,6,8,10°	>20,20,19,19,18@2,4,6,8,10°	>20,20,19,19,18@2,4,6,8,10°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>18	>14	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	No pre-mounted bracket.
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	13.5 (29.7)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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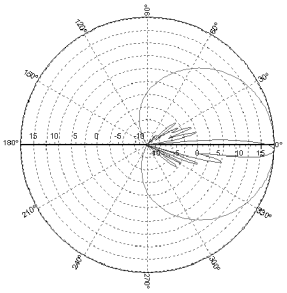
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7701.00 High Broadband Cross Polarized

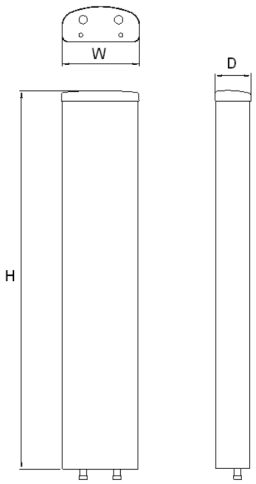
POLARIZATION: x-pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.2/16.1
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.5/15.4		18.2/16.1
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.3:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	7.2	6.7	6.4
Electrical down tilt (°)	0		
Side lobe suppression, vertical 1st upper (dB)	>20	>20	
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-20,typical>-18	>-20,typical>-18	>-20,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>17	>14	>11
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-150	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

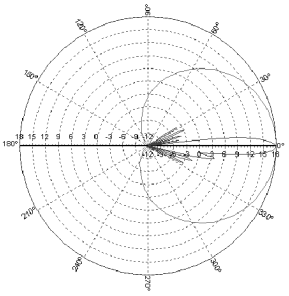
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	7.7 (16.9)
Weight, without brackets, kg (lbs)	4 (8.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	11.5 (25.3)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7721.00 High Broadband Cross Polarized

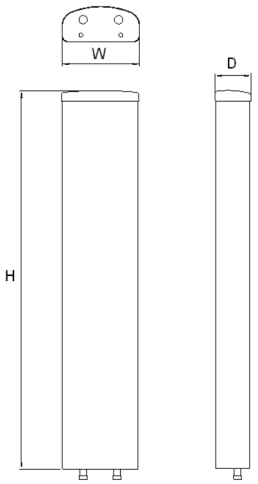
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.3/16.2
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.6/15.5	18/15.9	18.3/16.2
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	7	6.6	6.3
Electrical down tilt (°)	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,18,16,16,14,@0,2,4,6,8°	>18,18,16,16,14,@0,2,4,6,8°	>18,18,16,16,14,@0,2,4,6,8°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>18	>14	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

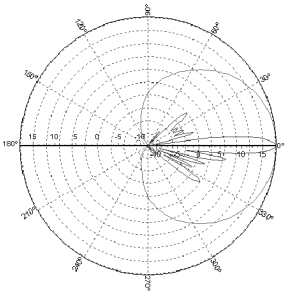
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	13.5 (29.7)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7701.1ST.0000.01 High Broadband Cross Polarized

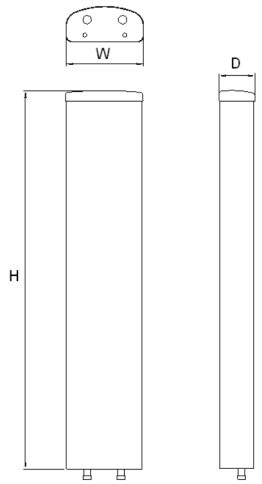
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: FET
LENGTH: 1.3 (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.0 14.9		18 15.9
Polarization	Dual Slant +/- 45		
Nominal Impedance (q)	50		
VSWR	1.3:1		
Horizontal beam width, -3 dB (°)	67	66	65
Vertical beam width, -3 dB (°)	7.2	6.7	6.4
Electrical down tilt (°)	2		
Side lobe suppression, vertical 1st upper (dB)		>20	
Isolation between inputs (dB)		>30	
Tracking, horizontal plane ±60° (dB)		<1.0	
First null fill (dB)		>13	
Vertical beam squint (°)		0.5	
Front to back ratio (dB)		>30	
Front to back ratio, total power (dB)		>30	
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>17	>14	>11
Far field coupling			
IM3, 2xTx@43dBm (dBc)	<-150	<-150	<-150
IM7, 2xTx@43dBm (dBc)			<-160
Power handling, average per input (W)	350		
Power handling, average total (W)	700		

MECHANICAL SPECIFICATIONS*

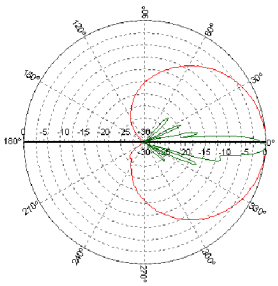
Connector	7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5
Mounting	
Weight, with brackets, kg (lbs)	10.1
Weight, without brackets, kg (lbs)	
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	54
Maximum operational wind speed, m/s (mph)	
Survival wind speed, m/s (mph)	70
Lightning protection	DC Grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200
Shipping weight, kg (lbs)	11
RET	
Brackets	



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7721.06 High Broadband Cross Polarized

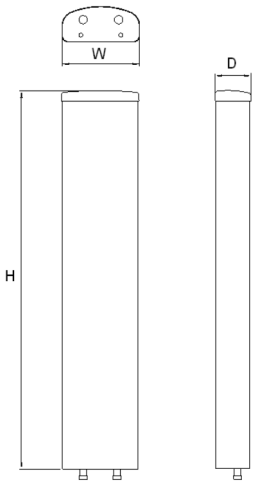
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.5/15.4	17.8/15.7	18/15.9
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	66	64
Vertical beam width, -3 dB (°)	7.3	6.9	6.6
Electrical down tilt (°)	6 to 14		
Side lobe suppression, vertical 1st upper (dB)	>19,19,18,17,16@6,8,10,12,14°	>20,20,20,19,18@6,8,10,12,14°	>20,20,20,19,18@6,8,10,12,14°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2	<2	<2
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>18	>14	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	13.5 (29.7)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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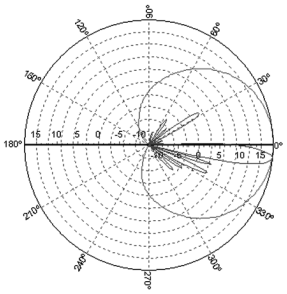
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7722.00 High Broadband Cross Polarized

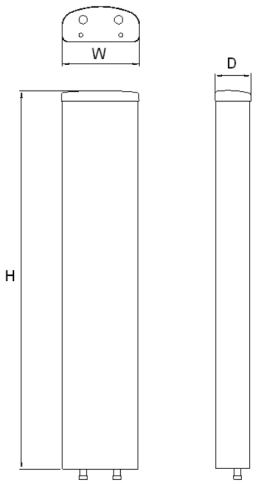
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 19.5/17.4
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	19/16.9	19.2/17.1	19.5/17.4
Polarization	Dual slant ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	66	65
Vertical beam width, -3 dB (°)	4.7	4.4	4.2
Electrical down tilt (°)	0 to 5.5		
Side lobe suppression, vertical 1st upper (dB)	>18,18,18,16,16,14,@0,1,2,3,4,5°	>18,18,18,16,16,14,@0,1,2,3,4,5°	>18,18,18,16,16,14,@0,1,2,3,4,5°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-20,typical>-16	>-20,typical>-16	>-20,typical>-16
Vertical beam squint (°)	0.4	0.4	0.4
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>19	>19	>21
Cross polar discrimination (XPD) ±60° (dB)	>20	>17	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1934x167x89.5 (6'4"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	14 (31)
Weight, without brackets, kg (lbs)	8.5 (18.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	780
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2105x200x200 (6'11"x8"x8")
Shipping weight, kg (lbs)	15.5 (34.1)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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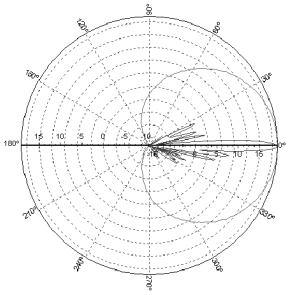


2140 MHz

7735.00A High Broadband Cross Polarized

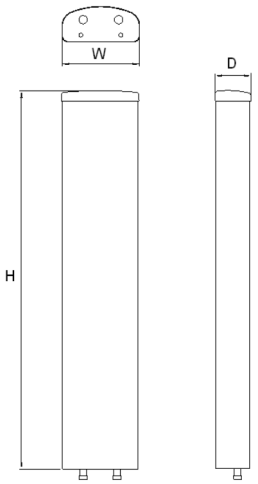
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14.1/12
TILT: MET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	13.6/11.5	13.8/11.7	14.1/12
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	86	86	87
Vertical beam width, -3 dB (°)	14.7	13.4	12.2
Electrical down tilt (°)	0 to 16		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,15,14@0,4,8,12,16°	>18,17,16,15,14@0,4,8,12,16°	>18,17,16,15,14@0,4,8,12,16°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.8	0.8	0.8
Front to back ratio (dB)	>25	>25	>25
Front to back ratio, total power (dB)	>23	>23	>23
Cross polar discrimination (XPD) 0° (dB)	>13	>13	>12
Cross polar discrimination (XPD) ±60° (dB)	>10	>10	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	-153	-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	709x167x89.5 (2'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	286
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	880x200x200 (2'11"x8"x8")
Shipping weight, kg (lbs)	13 (28.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



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ANTENNA PATTERNS*

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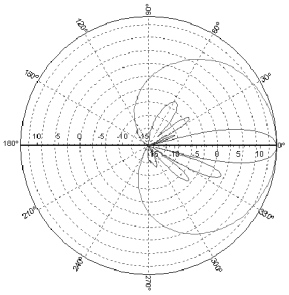


2140 MHz

7740.00A High Broadband Cross Polarized

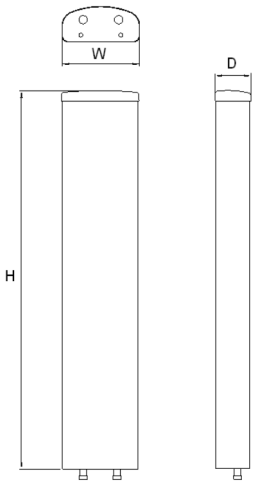
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16.7/14.6
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	16.2/14.1	16.4/14.3	16.7/14.6
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	86	86	86
Vertical beam width, -3 dB (°)	7.1	6.6	6.3
Electrical down tilt (°)	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,17,15,15,14@0,2,4,6,8°	>18,17,15,15,14@0,2,4,6,8°	>18,17,15,15,14@0,2,4,6,8°
Isolation between inputs (dB)	30	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.4	0.4	0.4
Front to back ratio (dB)	>29	>29	>29
Front to back ratio, total power (dB)	>23	>23	>23
Cross polar discrimination (XPD) 0° (dB)	>14	>14	>12
Cross polar discrimination (XPD) ±60° (dB)	>10	>10	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

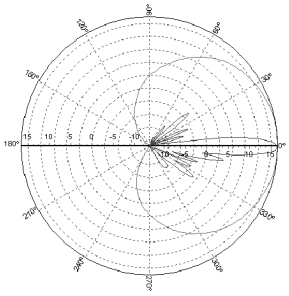
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	11.7 (25.7)
Weight, without brackets, kg (lbs)	8 (17.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200 (4'10"x8"x8")
Shipping weight, kg (lbs)	15.5 (34.1)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

7745.00A High Broadband Cross Polarized

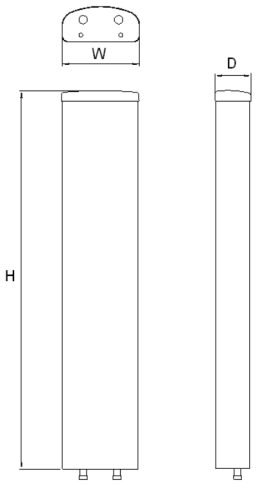
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 17.9/15.8
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.5/15.4	17.6/15.5	17.9/15.8
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	86	86	86
Vertical beam width, -3 dB (°)	4.7	4.5	4.2
Electrical down tilt (°)	0 to 5.5		
Side lobe suppression, vertical 1st upper (dB)	>18,18,16,16,14,14,@0,1,2,3,4,5°	>18,18,16,16,14,14,@0,1,2,3,4,5°	>18,18,16,16,14,14,@0,1,2,3,4,5°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.3	0.3	0.3
Front to back ratio (dB)	>29	>29	>29
Front to back ratio, total power (dB)	>23	>23	>23
Cross polar discrimination (XPD) 0° (dB)	>14	>14	>12
Cross polar discrimination (XPD) ±60° (dB)	>10	>10	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

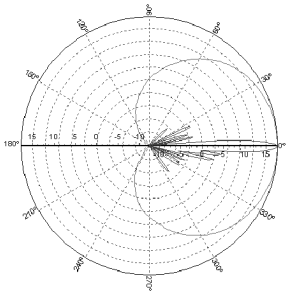
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1934x167x89.5 (6'4"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	15.9 (35)
Weight, without brackets, kg (lbs)	10.4 (22.9)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	780
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2105x200x200 (6'11"x8"x8")
Shipping weight, kg (lbs)	18 (39.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

Single Broadband Antennas

Cross Polarized

Low Broadband Cross Polarized Antennas, 806-960 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	14.5/12.4, 15/12.9	FET	1.3m (4'3")	7476.00	227
65	14.6/12.5, 15.1/13	FET	1.3m (4'3")	7476.02	228
65	14.6/12.5, 15.1/13	FET	1.3m (4'3")	7476.06	229
65	14.6/12.5, 15/12.9	MET	1.3m (4'3")	7471.00	230
65	15.6/13.5, 16.2/14.1	FET	2.0m (6'6")	7477.00	231
65	15.8/13.7, 16.3/14.2	FET	2.0m (6'6")	7477.02	232
65	16.9/14.8, 17.3/15.2	FET	2.6m (8'6")	7478.00	233
65	16/13.9, 16.5/14.4	FET	2.0m (6'6")	7477.06	234
65	17/14.9, 17.4/15.3	FET	2.6m (8'6")	7478.02	235
65	17/14.9, 17.4/15.3	FET	2.6m (8'6")	7478.06	236
66	16/13.9, 16.5/14.4	MET	2.0m (6'6")	7472.00	237
66	17.2/15.1, 17.5/15.4	MET	2.6m (8'6")	7473.00	238
90	13.5/11.4, 14/11.9	MET	1.3m (4'3")	7481.00	239
90	13.5/11.4, 14/11.9	FET	1.4m (4'7")	7486.00	240
90	13.6/11.5, 14.1/12	FET	1.4m (4'7")	7486.02	241
90	13.6/11.5, 14/11.9	FET	1.4m (4'7")	7486.06	242
90	14.8/12.7, 15.4/13.3	FET	2.0m (6'6")	7487.00	243
90	14.8/12.7, 15.5/13.4	MET	2.0m (6'6")	7482.00	244
90	15.8/13.7, 16.3/14.2	FET	2.6m (8'6")	7488.00	245
90	15.8/13.7, 16.3/14.2	FET	2.6m (8'6")	7488.02	246
90	15.9/13.8, 16.3/14.2	MET	2.6m (8'6")	7483.00	247
90	15.9/13.8, 16.4/14.3	FET	2.6m (8'6")	7488.06	248
90	15/12.9, 15.5/13.4	FET	2.0m (6'6")	7487.02	249
90	15/12.9, 15.5/13.4	FET	2.0m (6'6")	7487.06	250

7476.00 Low Broadband Cross Polarized

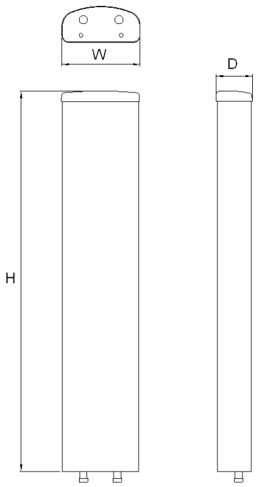
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.5/12.4, 15/12.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.5/12.4	15/12.9
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	15.9	15.3
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>19	>19
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-25	<-25
Vertical beam squint (°)	1	1
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

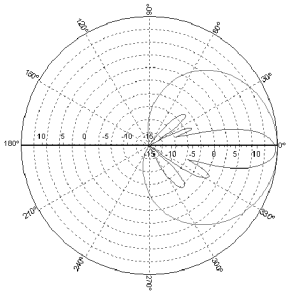
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14 (30.8)
Weight, without brackets, kg (lbs)	8.5 (18.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	18 (39.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7476.02 Low Broadband Cross Polarized

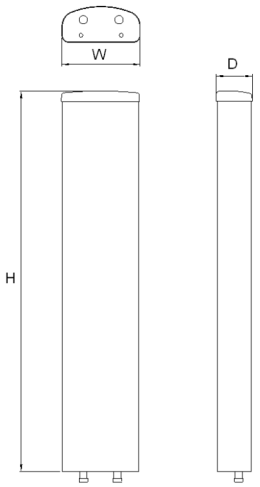
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.6/12.5, 15.1/13
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.6/12.5	15.1/13
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	14.9	13.8
Electrical down tilt (°)	2	
Side lobe suppression, vertical 1st upper (dB)	>19	>19
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-25	<-25
Vertical beam squint (°)	1	1
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

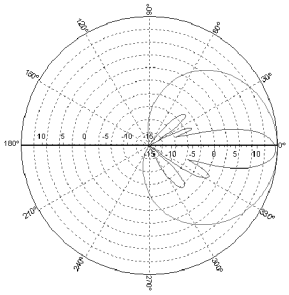
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14 (30.8)
Weight, without brackets, kg (lbs)	8.5 (18.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	18 (39.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7476.06 Low Broadband Cross Polarized

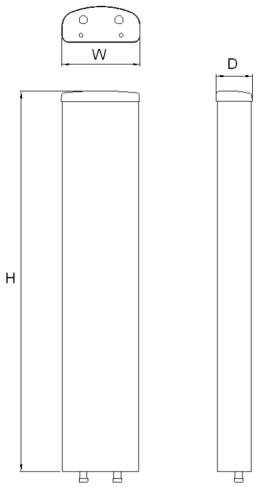
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.6/12.5, 15.1/13
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.6/12.5	15.1/13
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	15.3	13.9
Electrical down tilt (°)	6	
Side lobe suppression, vertical 1st upper (dB)	>19	>19
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-25	<-25
Vertical beam squint (°)	1	1
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

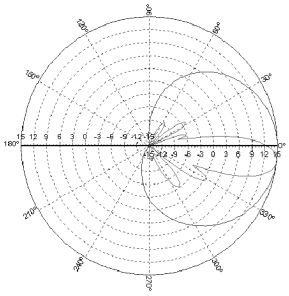
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14 (30.8)
Weight, without brackets, kg (lbs)	8.5 (18.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	18 (39.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7471.00 Low Broadband Cross Polarized

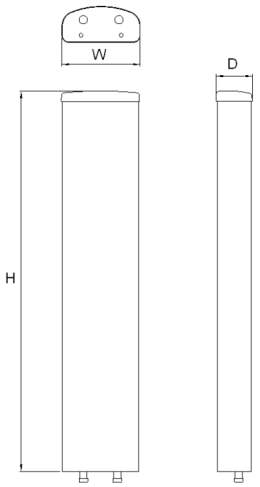
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.6/12.5, 15/12.9
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.6/12.5	15/12.9
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.5:1	
Horizontal beam width, -3 dB (°)	65	65
Vertical beam width, -3 dB (°)	15.3	14.2
Electrical down tilt (°)	2 to 12	
Side lobe suppression, vertical 1st upper (dB)	>19,18,17@2,7,12°	>19,18,17@2,7,12°
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	<-25	<-25
Vertical beam squint (°)	1	1
Front to back ratio (dB)	>25	>25
Front to back ratio, total power (dB)	>24	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

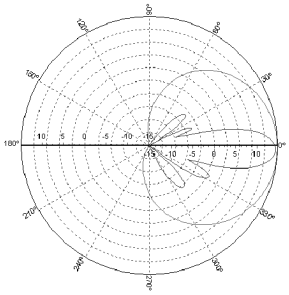
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.5 (31.9)
Weight, without brackets, kg (lbs)	9 (19.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	18.5 (40.7)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7477.00 Low Broadband Cross Polarized

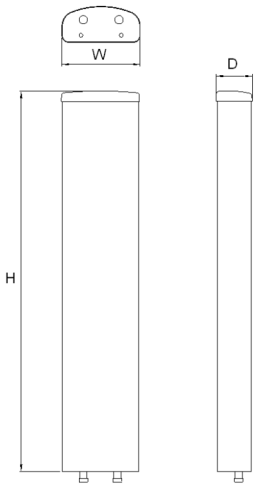
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.6/13.5, 16.2/14.1
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15.6/13.5	16.2/14.1
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	9.5	9
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.5	0.5
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

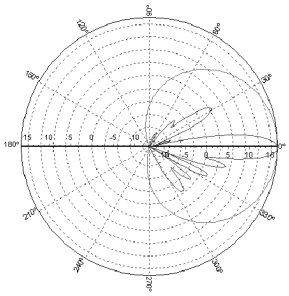
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	18.5 (40.7)
Weight, without brackets, kg (lbs)	13 (28.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	23 (50.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7477.02 Low Broadband Cross Polarized

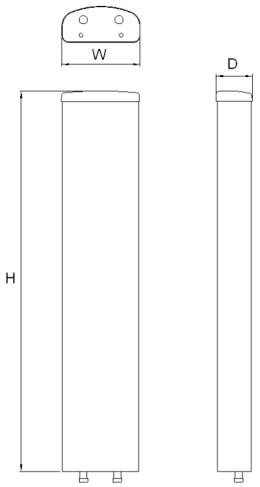
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.8/13.7, 16.3/14.2
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15.8/13.7	16.3/14.2
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	9.5	9
Electrical down tilt (°)	2	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.5	0.5
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

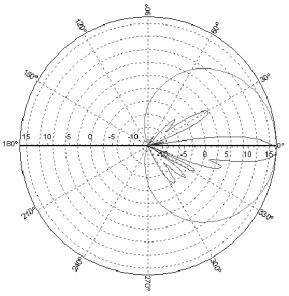
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	18.5 (40.7)
Weight, without brackets, kg (lbs)	13 (28.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	23 (50.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7478.00 Low Broadband Cross Polarized

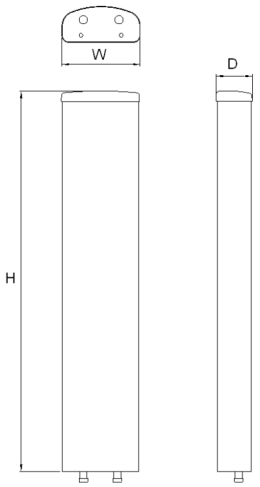
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.9/14.8, 17.3/15.2
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	16.9/14.8	17.3/15.2
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	7.3	7
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.3	0.3
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

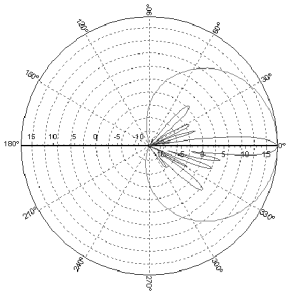
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	22.5 (49.6)
Weight, without brackets, kg (lbs)	17 (37.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7477.06 Low Broadband Cross Polarized

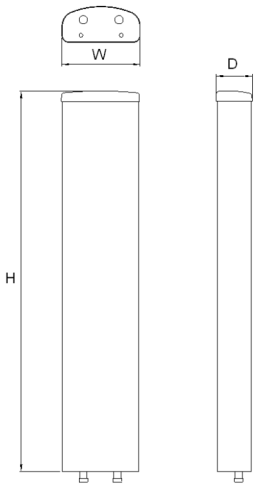
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16/13.9, 16.5/14.4
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	16/13.9	16.5/14.4
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	9.5	9
Electrical down tilt (°)	6	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.5	0.5
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

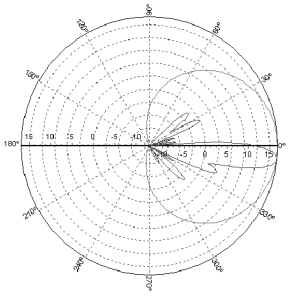
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	18.5 (40.7)
Weight, without brackets, kg (lbs)	13 (28.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	23 (50.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7478.02 Low Broadband Cross Polarized

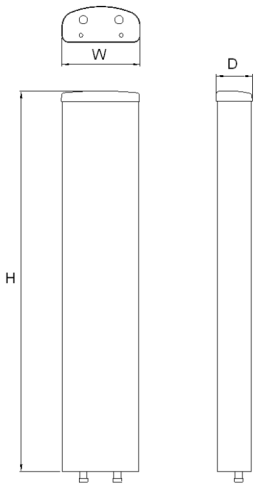
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17/14.9, 17.4/15.3
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	17/14.9	17.4/15.3
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	7.3	7
Electrical down tilt (°)	2	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.3	0.3
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

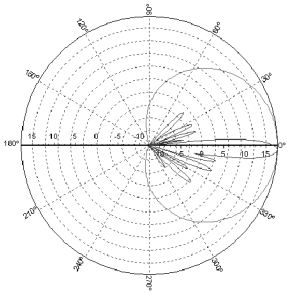
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	22.5 (49.6)
Weight, without brackets, kg (lbs)	17 (37.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7478.06 Low Broadband Cross Polarized

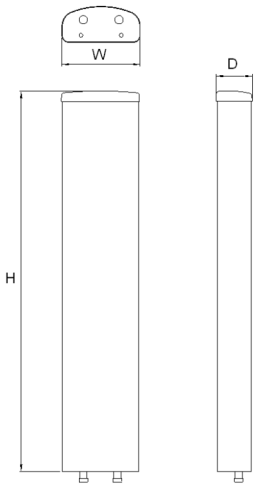
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17/14.9, 17.4/15.3
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	17/14.9	17.4/15.3
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	66	64
Vertical beam width, -3 dB (°)	7.3	7
Electrical down tilt (°)	6	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.3	0.3
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

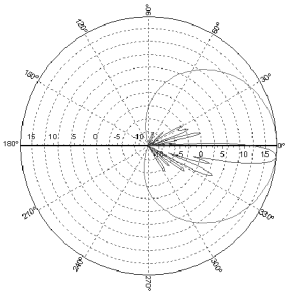
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	22.5 (49.6)
Weight, without brackets, kg (lbs)	17 (37.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7472.00 Low Broadband Cross Polarized

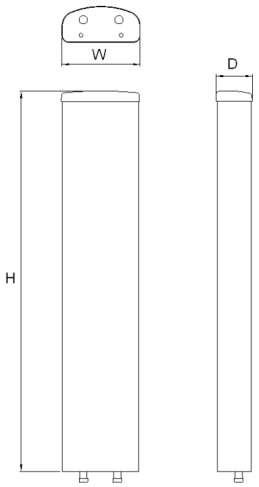
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 66
GAIN (dBi/dBd): 16/13.9, 16.5/14.4
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	16/13.9	16.5/14.4
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	67	64
Vertical beam width, -3 dB (°)	10	9
Electrical down tilt (°)	0 to 7.5	
Side lobe suppression, vertical 1st upper (dB)	>20,17,15@0,4,7°	>20,17,15@0,4,7°
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.5	0.5
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

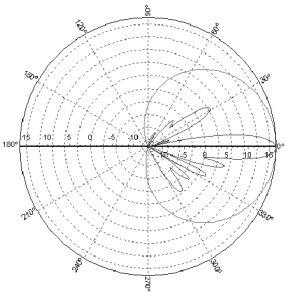
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	20 (44)
Weight, without brackets, kg (lbs)	14.5 (31.9)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	24.5 (54)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7473.00 Low Broadband Cross Polarized

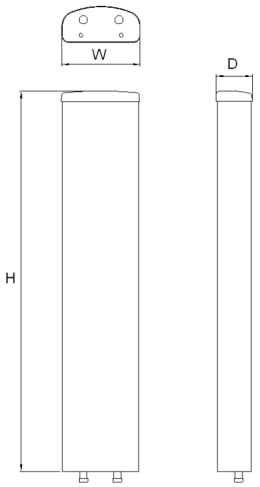
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 66
GAIN (dBi/dBd): 17.2/15.1, 17.5/15.4
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	17.2/15.1	17.5/15.4
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	67	64
Vertical beam width, -3 dB (°)	7.5	7
Electrical down tilt (°)	0 to 5.5	
Side lobe suppression, vertical 1st upper (dB)	>20,17,15@0,2,5°	>20,17,15@0,2,5°
Isolation between inputs (dB)	30	30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.3	0.3
Front to back ratio (dB)	>30	>30
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	800	

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	24 (52.9)
Weight, without brackets, kg (lbs)	18.5 (40.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	28 (61.7)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



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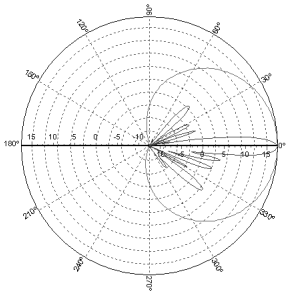
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7481.00 Low Broadband Cross Polarized

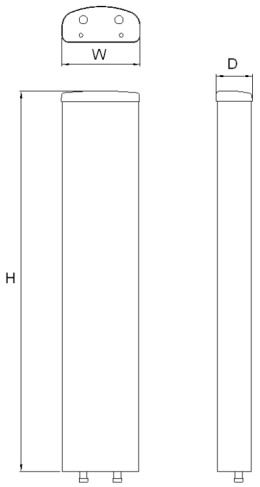
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/11.4, 14/11.9
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	13.5/11.4	14/11.9
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	85
Vertical beam width, -3 dB (°)	15	14
Electrical down tilt (°)	2 to 12	
Side lobe suppression, vertical 1st upper (dB)	>19,18,17@2,7,12°	>19,18,17@2,7,12°
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2	<2
First null fill (dB)	<-18	<-18
Vertical beam squint (°)	0.5	0.5
Front to back ratio (dB)	>27	>27
Front to back ratio, total power (dB)	>23	>23
Cross polar discrimination (XPD) 0° (dB)	-	-
Cross polar discrimination (XPD) ±60° (dB)	>9	>9
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

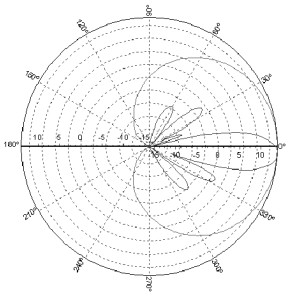
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	18.5 (40.7)
Weight, without brackets, kg (lbs)	13 (28.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	22.5 (49.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7486.00 Low Broadband Cross Polarized

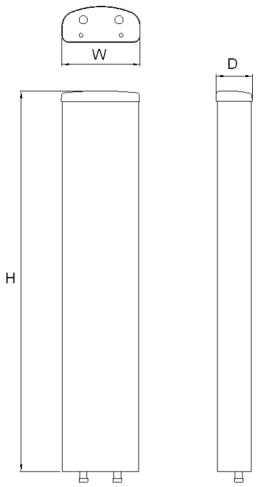
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/11.4, 14/11.9
TILT: FET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	13.5/11.4	14/11.9
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	15.5	14
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-21	>-25
Vertical beam squint (°)	0.6	0.4
Front to back ratio (dB)	>27	>27
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>21	>21
Cross polar discrimination (XPD) ±60° (dB)	>10	>11
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

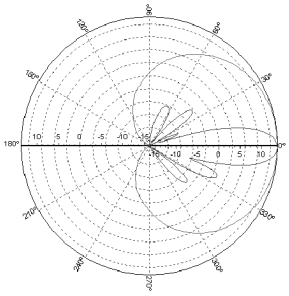
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	20.5 (45.1)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7486.02 Low Broadband Cross Polarized

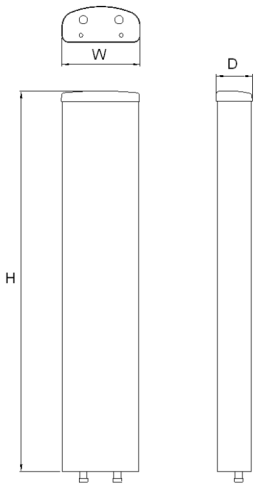
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.6/11.5, 14.1/12
TILT: FET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	13.6/11.5	14.1/12
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	15.4	14
Electrical down tilt (°)	2	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-23	>-25
Vertical beam squint (°)	0.4	0.4
Front to back ratio (dB)	>28	>28
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>21	>21
Cross polar discrimination (XPD) ±60° (dB)	>10	>11
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

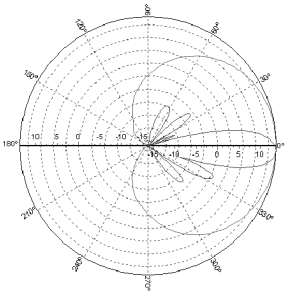
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	20.5 (45.1)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7486.06 Low Broadband Cross Polarized

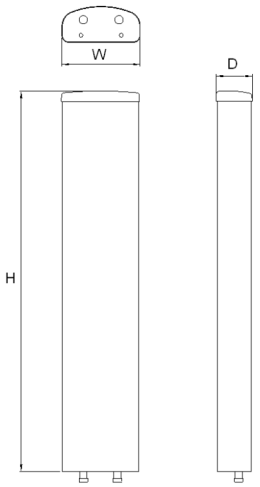
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.6/11.5, 14/11.9
TILT: FET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	13.6/11.5	14/11.9
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	85
Vertical beam width, -3 dB (°)	15.5	13.9
Electrical down tilt (°)	6	
Side lobe suppression, vertical 1st upper (dB)	>18	>18
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-25	>-25
Vertical beam squint (°)	0.6	0.6
Front to back ratio (dB)	>27	>28
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>22	>22
Cross polar discrimination (XPD) ±60° (dB)	>10	>11
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

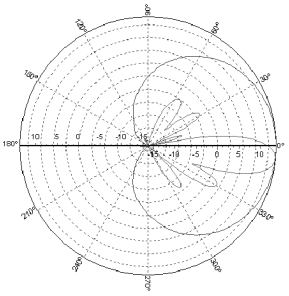
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1270x280x125 (4'2"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	859
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1475x355x255 (4'10"x1'2"x10")
Shipping weight, kg (lbs)	20.5 (45.1)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7487.00 Low Broadband Cross Polarized

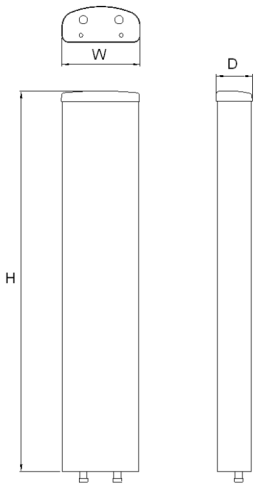
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14.8/12.7, 15.4/13.3
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.8/12.7	15.4/13.3
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	9.7	9
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-20	>-18
Vertical beam squint (°)	0.1	0.2
Front to back ratio (dB)	>28	>29
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>20	>20
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

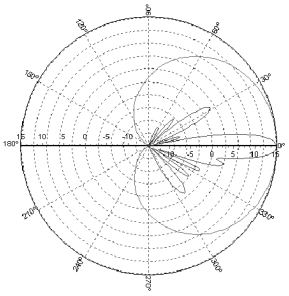
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	20.5 (45.1)
Weight, without brackets, kg (lbs)	15 (33)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	25 (55.1)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7482.00 Low Broadband Cross Polarized

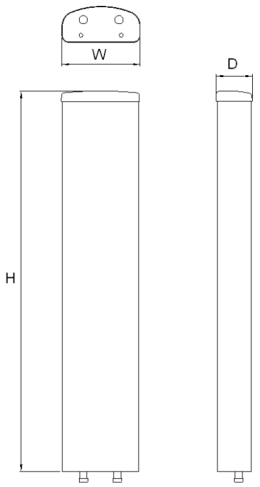
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14.8/12.7, 15.5/13.4
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.8/12.7	15.5/13.4
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	88	86
Vertical beam width, -3 dB (°)	9.6	9
Electrical down tilt (°)	0 to 7.5	
Side lobe suppression, vertical 1st upper (dB)	>20,17,15@0,4,7°	>20,17,15@0,4,7°
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-25	>-20
Vertical beam squint (°)	0.4	0.4
Front to back ratio (dB)	>27	>27
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>20	>20
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

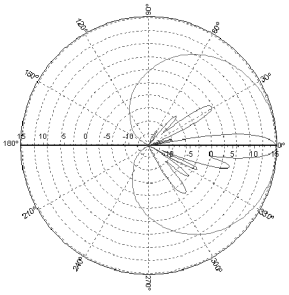
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	22.5 (49.6)
Weight, without brackets, kg (lbs)	17 (37.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	27 (59.5)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7488.00 Low Broadband Cross Polarized

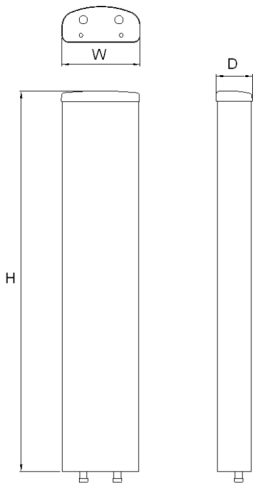
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15.8/13.7, 16.3/14.2
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15.8/13.7	16.3/14.2
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	7.6	7
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-18	>-18
Vertical beam squint (°)	0.2	0.1
Front to back ratio (dB)	>27	>27
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>21	>21
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

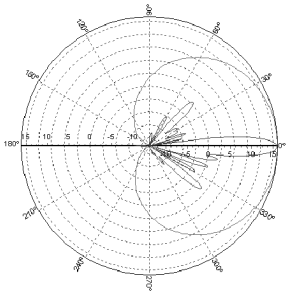
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	24.5 (54)
Weight, without brackets, kg (lbs)	19 (41.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	29.5 (65)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7488.02 Low Broadband Cross Polarized

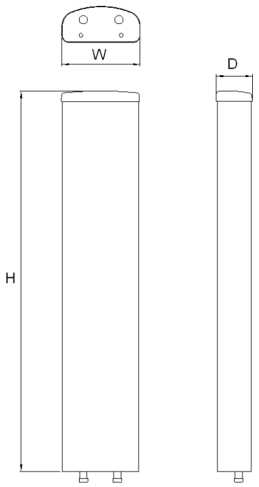
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15.8/13.7, 16.3/14.2
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15.8/13.7	16.3/14.2
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	7.6	7
Electrical down tilt (°)	2	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-18	>-18
Vertical beam squint (°)	0.3	0.2
Front to back ratio (dB)	>26	>27
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>20	>20
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

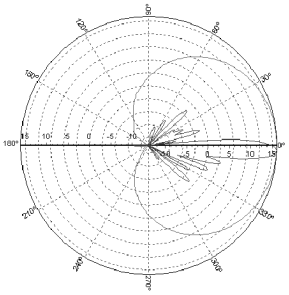
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	24.5 (54)
Weight, without brackets, kg (lbs)	19 (41.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	29.5 (65)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7483.00 Low Broadband Cross Polarized

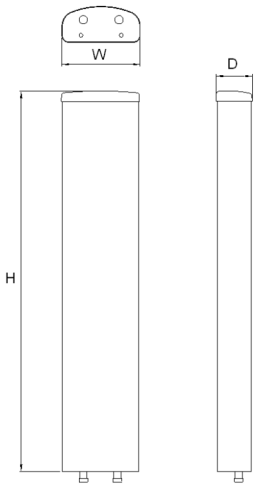
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15.9/13.8, 16.3/14.2
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15.9/13.8	16.3/14.2
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	7.5	6.9
Electrical down tilt (°)	0 to 5.5	
Side lobe suppression, vertical 1st upper (dB)	>20,17,15@0,2,5°	>20,17,15@0,2,5°
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-23	>-21
Vertical beam squint (°)	0.3	0.3
Front to back ratio (dB)	>27	>28
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>21	>21
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

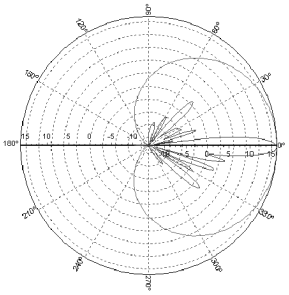
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	26.5 (58.4)
Weight, without brackets, kg (lbs)	21 (46.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	31.5 (69.4)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7488.06 Low Broadband Cross Polarized

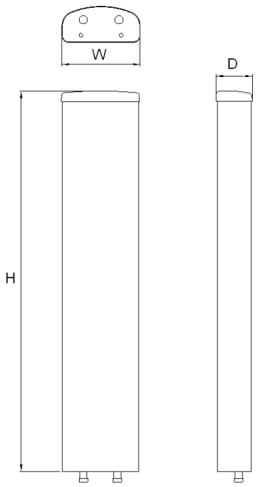
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15.9/13.8, 16.4/14.3
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15.9/13.8	16.4/14.3
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	7.6	7
Electrical down tilt (°)	6	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	0.1	0.2
Front to back ratio (dB)	>26	>27
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>20	>20
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

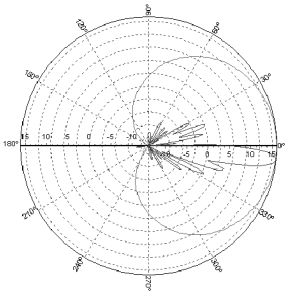
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2520x280x125 (8'3"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	24.5 (54)
Weight, without brackets, kg (lbs)	19 (41.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1704
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2725x355x255 (8'11"x1'2"x10")
Shipping weight, kg (lbs)	29.5 (65)
RET	-
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7487.02 Low Broadband Cross Polarized

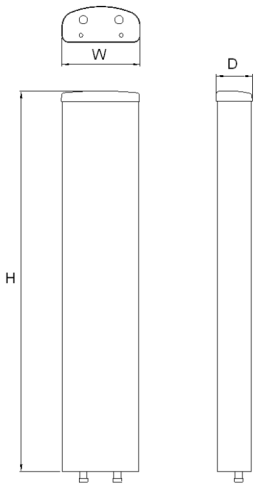
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15/12.9, 15.5/13.4
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15/12.9	15.5/13.4
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	9.7	9
Electrical down tilt (°)	2	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-20	>-18
Vertical beam squint (°)	0.3	0.2
Front to back ratio (dB)	>28	>29
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>20	>20
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	20.5 (45.1)
Weight, without brackets, kg (lbs)	15 (33)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	25 (55.1)
RET	-
Brackets	7256.00, 7454.00, 2210.10



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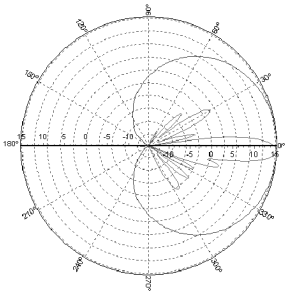
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

7487.06 Low Broadband Cross Polarized

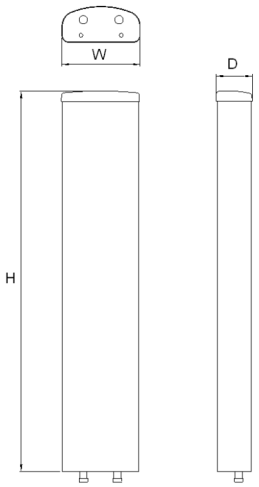
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15/12.9, 15.5/13.4
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	15/12.9	15.5/13.4
Polarization	Dual linear ±45°	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	87	84
Vertical beam width, -3 dB (°)	9.7	9
Electrical down tilt (°)	6	
Side lobe suppression, vertical 1st upper (dB)	>17	>20
Isolation between inputs (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	0.1	0.2
Front to back ratio (dB)	>28	>28
Front to back ratio, total power (dB)	>22	>22
Cross polar discrimination (XPD) 0° (dB)	>20	>20
Cross polar discrimination (XPD) ±60° (dB)	>10	>10
Far field coupling	-	-
IM3, 2xTx@43dBm (dBc)	<-150	
Power handling, average per input (W)	400	
Power handling, average total (W)	600	

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2020x280x125 (6'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	20.5 (45.1)
Weight, without brackets, kg (lbs)	15 (33)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1366
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2225x355x255 (7'3"x1'2"x10")
Shipping weight, kg (lbs)	25 (55.1)
RET	-
Brackets	7256.00, 7454.00, 2210.10



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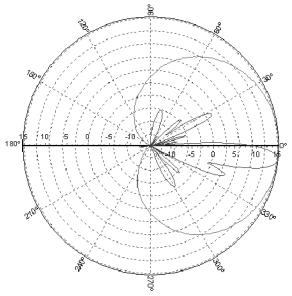
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz

Single Broadband Antennas

Vertical Polarized

ALP Broadband Vertical Polarized Antennas, 806-960 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
40	17.5/15.4	FET	2.7m (8'10")	7804.00	252
80	14.5/12.4	FET	2.7m (8'10")	7824.00	253
90	14.0/11.9	FET	2.7m (8'10")	7834.00	254
90	16.8/14.7	FET	2.7m (8'10")	7838.00	255

7804.00 ALP Broadband Vertical Polarized

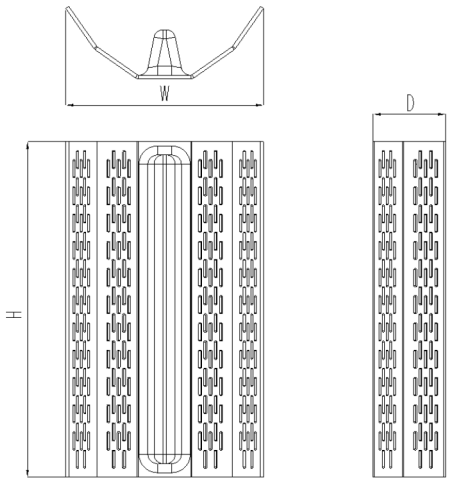
POLARIZATION: Vertical Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 40
GAIN (dBi/dBd): 17.5/15.4
TILT: FET
LENGTH: 2.7m (8'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	17.5/15.4	17.5/15.4
Polarization	Linear vertical	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	40	40
Vertical beam width, -3 dB (°)	15	15
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>18	>18
First null fill (dB)	none	none
Vertical beam squint (°)	<0.2	<0.2
Front to back ratio (dB)	>35	>35
IM3, 2xTx@43dBm (dBc)	<-146	
Power handling, average total (W)	500	

MECHANICAL SPECIFICATIONS*

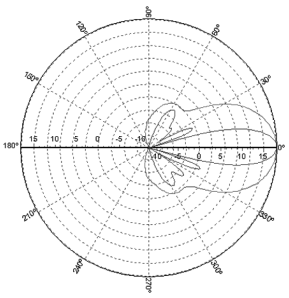
Connector	1 x 7/16 DIN female
Connector position	Back
Dimensions, HxWxD, mm (ft)	1320x590x350 (4'4"x1'11"x1'1")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	11 (23.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1881
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1389x627x394 (4'7"x2'1"x1'4")
Shipping weight, kg (lbs)	17.3 (38)
Brackets	7256.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7824.00 ALP Broadband Vertical Polarized

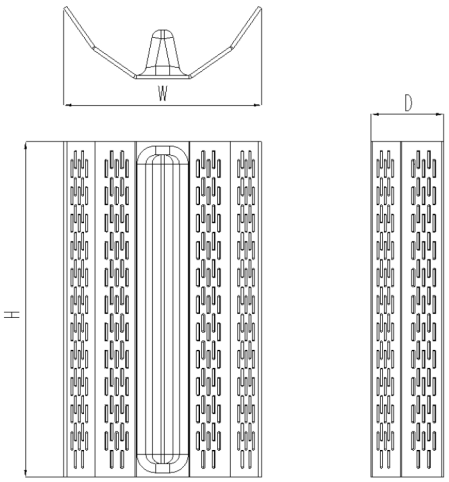
POLARIZATION: Vertical Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 80
GAIN (dBi/dBd): 14.5/12.4
TILT: FET
LENGTH: 2.7m (8'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.5/12.4	14.5/12.4
Polarization	Linear vertical	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	80	80
Vertical beam width, -3 dB (°)	15	15
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>18	>18
First null fill (dB)	none	none
Vertical beam squint (°)	<0.2	<0.2
Front to back ratio (dB)	>28	>28
IM3, 2xTx@43dBm (dBc)	<-146	
Power handling, average total (W)	500	

MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Back
Dimensions, HxWxD, mm (ft)	1320x330x290 (4'4"x1'1"x11")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.9 (28.4)
Weight, without brackets, kg (lbs)	7.4 (16.3)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1052
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1346x360x335 (4'5"x1'2"x1'1")
Shipping weight, kg (lbs)	13 (28.6)
Brackets	7256.00, 2210.10



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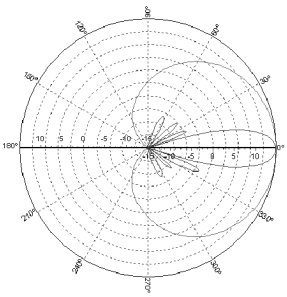
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7834.00 ALP Broadband Vertical Polarized

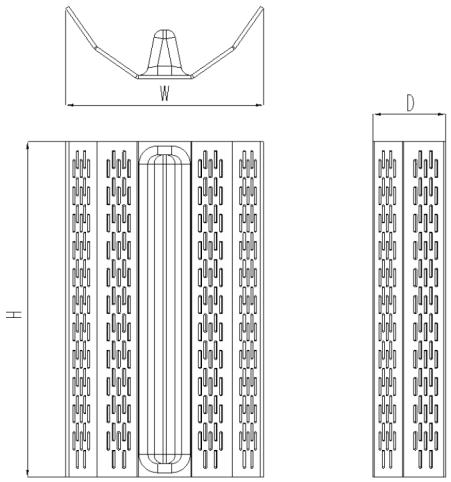
POLARIZATION: Vertical Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14.0/11.9
TILT: FET
LENGTH: 2.7m (8'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	14.0/11.9	14.0/11.9
Polarization	Linear vertical	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	90	90
Vertical beam width, -3 dB (°)	15	15
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>18	>18
First null fill (dB)	none	none
Vertical beam squint (°)	<0.2	<0.2
Front to back ratio (dB)	30	30
IM3, 2xTx@43dBm (dBc)	<-146	
Power handling, average total (W)	500	

MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Back
Dimensions, HxWxD, mm (ft)	1320x290x290 (4'4"x11"x11")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.4 (27.3)
Weight, without brackets, kg (lbs)	6.9 (15.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	925
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1346x275x335 (4'5"x11"x1'1")
Shipping weight, kg (lbs)	12 (26.5)
Brackets	7256.00, 2210.10



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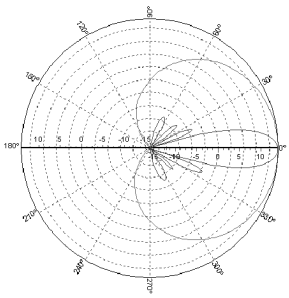
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7838.00 ALP Broadband Vertical Polarized

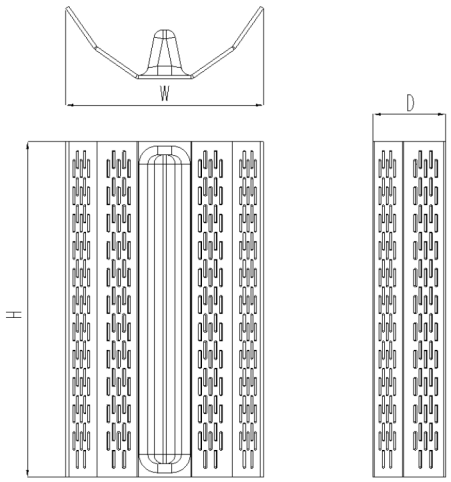
POLARIZATION: Vertical Pol
FREQUENCY (MHz): 806-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16.8/14.7
TILT: FET
LENGTH: 2.7m (8'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-960	
Frequency band (MHz)	806-896	880-960
Gain (dBi/dBd)	16.8/14.7	16.8/14.7
Polarization	Linear vertical	
Nominal Impedance (q)	50	
VSWR	<1.4:1	
Horizontal beam width, -3 dB (°)	90	90
Vertical beam width, -3 dB (°)	7.4	7.4
Electrical down tilt (°)	0	
Side lobe suppression, vertical 1st upper (dB)	>20	>20
First null fill (dB)	20	20
Vertical beam squint (°)	<0.2	<0.2
Front to back ratio (dB)	30	30
IM3, 2xTx@43dBm (dBc)	<-146	
Power handling, average total (W)	500	

MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Back
Dimensions, HxWxD, mm (ft)	2600x290x290 (8'6"x11"x11")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	16.6 (36.5)
Weight, without brackets, kg (lbs)	11.1 (24.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1821
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2650x275x335 (8'8"x11"x1'1")
Shipping weight, kg (lbs)	24 (53)
Brackets	7256.00, 2210.10



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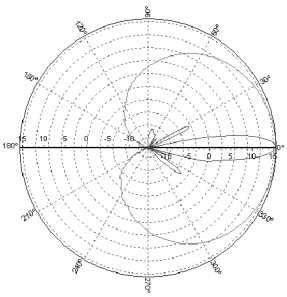
ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

Dual Broadband Antennas

Cross Polarized

Dual High Broadband Cross Polarized Antennas, 2x1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	17.7/15.6, 17.7/15.6, 17.9/15.8	MET	1.3m (4'3")	7760.02	257
65	17.7/15.6, 17.9/15.8, 18.1/16	MET	1.3m (4'3")	7760.00	258
65	18/15.9	MET	1.3m (4'3")	7760.03	259
65	18/15.9	MET	1.3m (4'3")	7760.06	260
65	19/16.9, 19.2/17.1, 19.4/17.3	MET	2.0m (6'6")	7765.00	261
90	16.1/14, 16.2/14.1, 16.5/14.4	MET	1.3m (4'3")	7762.00	262
90	17.4/15.3, 17.5/15.4, 17.7/15.6	MET	2.0m (6'6")	7766.00	263

7760.02 Dual High Broadband Cross Polarized

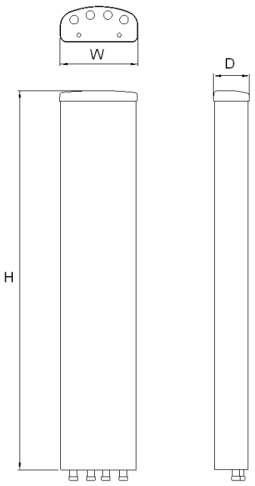
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.7/15.6, 17.7/15.6, 17.9/15.8
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.7/15.6	17.7/15.6	17.9/15.8
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	63
Vertical beam width, -3 dB (°)	7.1	6.8	6.2
Electrical down tilt (°)	2 to 10		
Side lobe suppression, vertical 1st upper (dB)	>19,19,18,17,16@2,4,6,8,10°	>19,19,18,17,16@2,4,6,8,10°	>19,19,18,17,16@2,4,6,8,10°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>28	>28	>28
Front to back ratio, total power (dB)	>28	>28	>28
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>20
Cross polar discrimination (XPD) ±60° (dB)	>16	>13	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	<-153
IM7, 2xTx@43dBm (dBc)	<-160	<-160	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

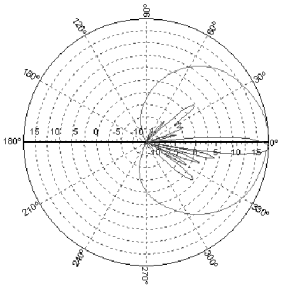
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x343x100 (4'4"x1'1"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.5 (42.9)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1093
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1430x400x200 (4'8"x1'3"x7")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



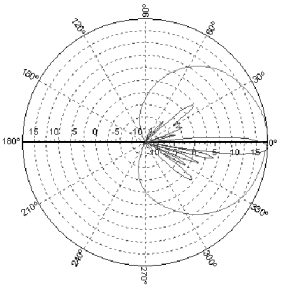
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz



2140 MHz

7760.00 Dual High Broadband Cross Polarized

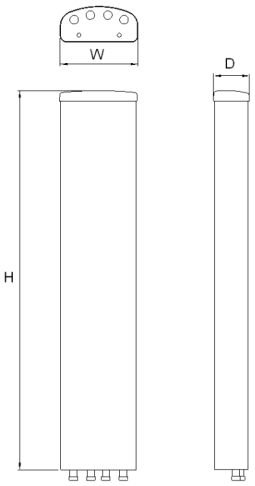
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.7/15.6, 17.9/15.8, 18.1/16
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.7/15.6	17.9/15.8	18.1/16
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	64
Vertical beam width, -3 dB (°)	7.1	6.8	6.2
Electrical down tilt (°)	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>22,20,18,16,14@0,2,4,6,8°	>22,20,18,16,14@0,2,4,6,8°	>22,20,18,16,14@0,2,4,6,8°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>28	>28	>28
Front to back ratio, total power (dB)	>28	>28	>28
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>20
Cross polar discrimination (XPD) ±60° (dB)	>16	>13	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	<-153
IM7, 2xTx@43dBm (dBc)	<-160	<-160	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

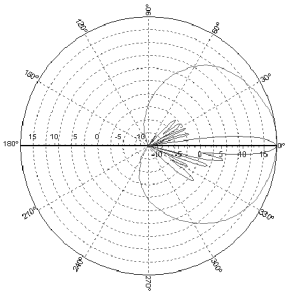
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x343x100 (4'4"x1'1"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.5 (42.9)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1093
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1430x430x250 (4'8"x1'3"x9")
Shipping weight, kg (lbs)	23.5 (51.8)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



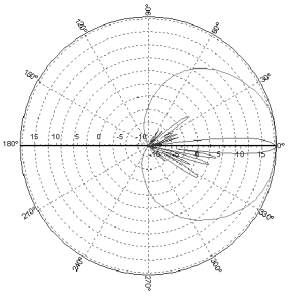
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz



2140 MHz

7760.03 Dual High Broadband Cross Polarized

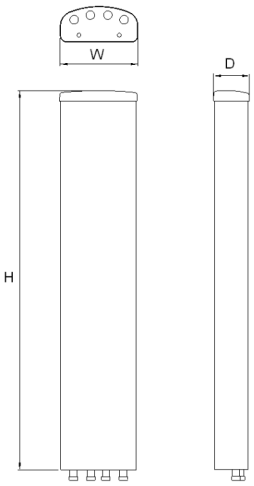
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.7/15.6	17.7/15.6	17.9/15.8
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	63
Vertical beam width, -3 dB (°)	7.1	6.8	6.2
Electrical down tilt (°)	2 to 10 and 6 to 14		
Side lobe suppression, vertical 1st upper (dB)	>19,19,18,17,16@2,4,6,8,10°	>19,19,18,17,16@2,4,6,8,10°	>19,19,18,17,16@2,4,6,8,10°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>28	>28	>28
Front to back ratio, total power (dB)	>28	>28	>28
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>20
Cross polar discrimination (XPD) ±60° (dB)	>16	>13	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

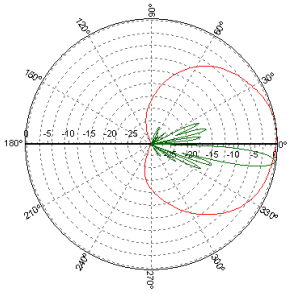
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x343x100 (4'4"x1'1"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.5 (42.9)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1093
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1430x400x200 (4'8"x1'3"x7")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz

2140 MHz

7760.06 Dual High Broadband Cross Polarized

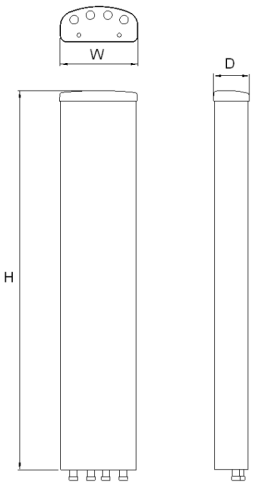
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.7/15.6	17.7/15.6	17.9/15.8
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	63
Vertical beam width, -3 dB (°)	7.1	6.8	6.2
Electrical down tilt (°)	6 to 14		
Side lobe suppression, vertical 1st upper (dB)	>17,16@6,8,10°	>17,16@6,8,10°	>17,16@6,8,10°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>28	>28	>28
Front to back ratio, total power (dB)	>28	>28	>28
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>20
Cross polar discrimination (XPD) ±60° (dB)	>16	>13	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

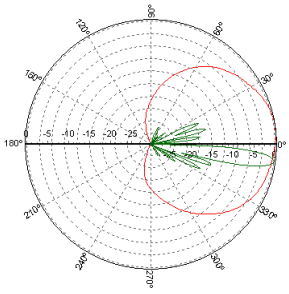
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	x343x100 (4'4"x1'1"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.5 (42.9)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1093
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1430x400x200 (4'8"x1'3"x7")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz

2140 MHz

7765.00 Dual High Broadband Cross Polarized

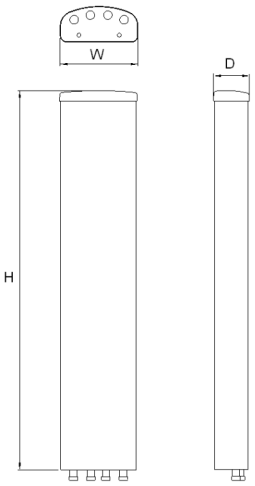
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 19/16.9, 19.2/17.1, 19.4/17.3
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	19/16.9	19.2/17.1	19.4/17.3
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	63
Vertical beam width, -3 dB (°)	4.7	4.4	4.2
Electrical down tilt (°)	0 to 5.5		
Side lobe suppression, vertical 1st upper (dB)	>22,20,18,16,15,14@0,1,2,3,4,5°	>22,20,18,16,15,14@0,1,2,3,4,5°	>22,20,18,16,15,14@0,1,2,3,4,5°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-22,typical>-18	>-22,typical>-18	>-22,typical>-18
Vertical beam squint (°)	<0.5	<0.5	<0.5
Front to back ratio (dB)	>28	>28	>28
Front to back ratio, total power (dB)	>28	>28	>28
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>20
Cross polar discrimination (XPD) ±60° (dB)	>16	>13	>10
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	<-153
IM7, 2xTx@43dBm (dBc)	<-160	<-160	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

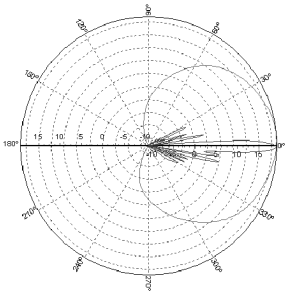
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1934x343x100 (6'4"x11"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	22.5 (49.6)
Weight, without brackets, kg (lbs)	17 (37.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1602
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2085x430x250 (6'10"x1'3"x9")
Shipping weight, kg (lbs)	27 (59.5)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



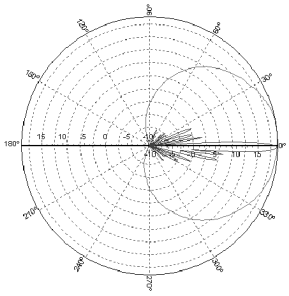
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz



2140 MHz

7762.00 Dual High Broadband Cross Polarized

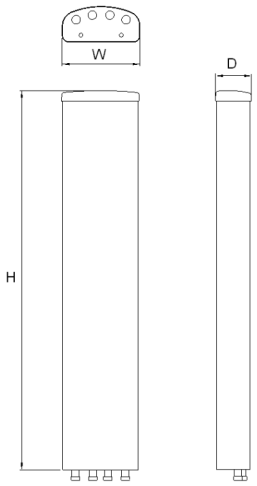
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16.1/14, 16.2/14.1, 16.5/14.4
TILT: MET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	16.1/14	16.2/14.1	16.5/14.4
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	89	93	90
Vertical beam width, -3 dB (°)	7.0	6.7	6.3
Electrical down tilt (°)	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>17,17,16,15,14@0,2,4,6,8°	>17,17,16,15,14@0,2,4,6,8°	>20,18,17,16,15@0,2,4,6,8°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-25,typical>-18	>-25,typical>-18	>-25,typical>-18
Vertical beam squint (°)	<0.5	<0.5	<0.5
Front to back ratio (dB)	>24	>25	>26
Front to back ratio, total power (dB)	>23	>23	>23
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>12
Cross polar discrimination (XPD) ±60° (dB)	>7	>7	>7
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	<-153
IM7, 2xTx@43dBm (dBc)	<-160	<-160	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

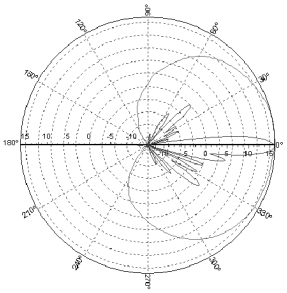
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x343x100 (4'4"x1'1"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	23.5 (51.8)
Weight, without brackets, kg (lbs)	18 (39.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1093
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1430x400x200 (4'8"x1'3"x7")
Shipping weight, kg (lbs)	27.5 (60.6)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



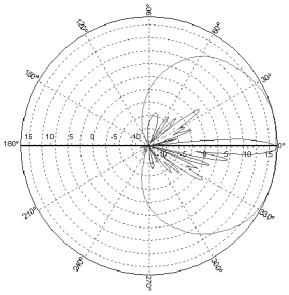
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz



2140 MHz

7766.00 Dual High Broadband Cross Polarized

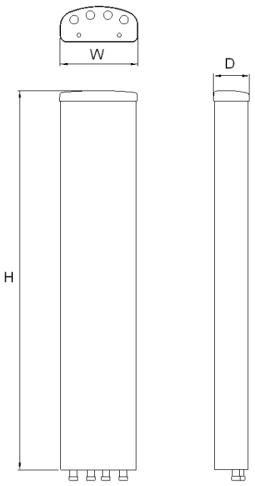
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 17.4/15.3, 17.5/15.4, 17.7/15.6
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.4/15.3	17.5/15.4	17.7/15.6
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	89	93	90
Vertical beam width, -3 dB (°)	4.7	4.4	4.2
Electrical down tilt (°)	0 to 5.5		
Side lobe suppression, vertical 1st upper (dB)	>18,18,15,14,13,11@0,1,2,3,4,5°	>20,20,17,16,14,14@0,1,2,3,4,5°	>22,20,18,16,15,14@0,1,2,3,4,5°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-25,typical>-18	>-25,typical>-18	>-25,typical>-18
Vertical beam squint (°)	<0.5	<0.5	<0.5
Front to back ratio (dB)	>25	>25	>25
Front to back ratio, total power (dB)	>23	>23	>23
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>12
Cross polar discrimination (XPD) ±60° (dB)	>8	>8	>8
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	<-153
IM7, 2xTx@43dBm (dBc)	<-160	<-160	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

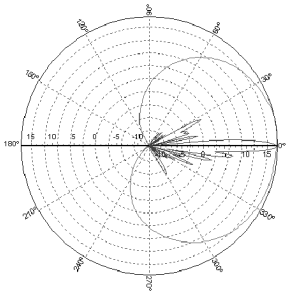
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1934x343x100 (6'4"x11"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	27.5 (60.6)
Weight, without brackets, kg (lbs)	22 (48.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1602
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2085x430x250 (6'10"x1'3"x9")
Shipping weight, kg (lbs)	32 (70.5)
RET	7010.00, 7011.00, 7012.00
Brackets	7256.00, 7454.00, 2210.10



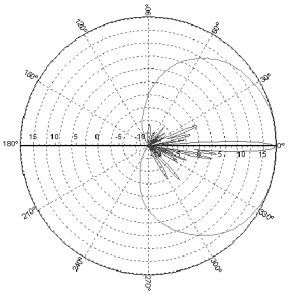
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz



2140 MHz

Dual Broadband Antennas

Cross Polarized

Dual Broadband Cross Polarized Antennas, 824-960/1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	15.2/13.1, 18/15.9	MET	1.4m (4'7")	7750.00	265
65	15.2/13.1, 18/15.9	MET	1.4m (4'7")	7750.0S0.0000.00	266
65	15.2/13.1, 18/15.9	MET	1.4m (4'7")	7750.1ST.0000.00	267
65	15.2/13.1, 18/15.9	MET	1.4m (4'7")	7750.90	268
65	15/12.9, 18/15.9	MET (with Integrated Diplexer)	1.4m (4'7")	7750.0ST.0002.00	269
65	16.7/14.6, 17.4/15.3	MET (with Integrated Diplexer)	2.0m (6'6")	7752.0ST.0002.00	270
65	16.7/14.6, 17.6/15.5	MET	2.0m (6'6")	7752.00	271
65	16.7/14.6, 17.6/15.5	MET	2.0m (6'6")	7752.0S0.0000.00	272
65	16.7/14.6, 17.6/15.5	MET	2.0m (6'6")	7752.90	273
65	17.3/15.2, 17.8/15.7	MET	2.6m (8'6")	7755.00	274
65	17.3/15.2, 17.8/15.7	MET	2.6m (8'6")	7755.0S0.0000.00	275
65	17.3/15.2, 17.8/15.7	MET	2.6m (8'6")	7755.90	276
65	17.3/15.2, 17.8/15.7	MET (with Integrated Diplexer)	2.6m (8'6")	7755.0ST.0002.00	277

7750.00 Dual Broadband Cross Polarized

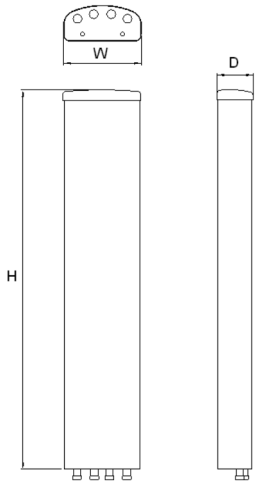
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.2/13.1, 18/15.9
TILT: MET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	14.6/12.5	15.2/13.1	17.5/15.4	17.7/15.6	18/15.9
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	<1.5:1		<1.5:1		
Horizontal beam width, -3 dB (°)	69	67	65	65	62
Vertical beam width, -3 dB (°)	14.9	13.7	6.9	6.6	6.2
Electrical down tilt (°)	2 to 12		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<2.0
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.3	0.3	0.3
Front to back ratio (dB)	>27	>27	>27	>27	>27
Front to back ratio, total power (dB)	>24	>24	>24	>24	>24
Cross polar discrimination (XPD) 0° (dB)	15	15	20	20	20
Cross polar discrimination (XPD) ±60° (dB)	10	8	7	> 7	> 7
Far field coupling	<0.33	<0.48	<0.62	<0.62	<0.62
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

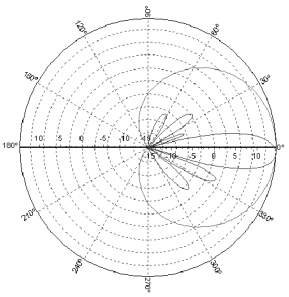
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm (4'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	17.6 (39)
Weight, without brackets, kg (lbs)	12.1 (27)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	1550x355x255 (5'1"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	21.5 (47.3)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



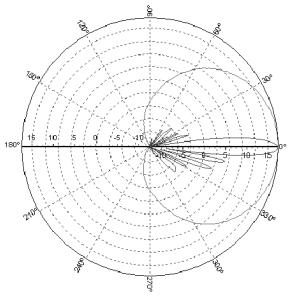
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

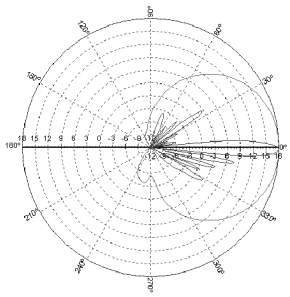
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7750.0S0.0000.00 Dual Broadband Cross Polarized

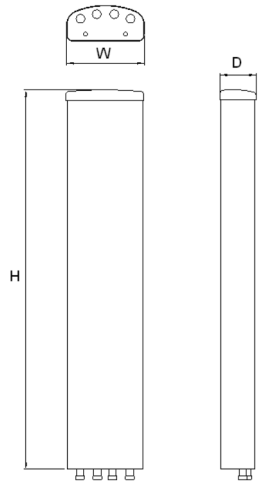
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.2/13.1, 18/15.9
TILT: MET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	14.6/12.5	15.2/13.1	17.5/15.4	17.7/15.6	18/15.9
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	<1.5:1		<1.5:1		
Horizontal beam width, -3 dB (°)	69	67	65	65	62
Vertical beam width, -3 dB (°)	14.9	13.7	6.9	6.6	6.2
Electrical down tilt (°)	2 to 8		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<2.0
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.3	0.3	0.3
Front to back ratio (dB)	>27	>27	>27	>27	>27
Front to back ratio, total power (dB)	>24	>24	>24	>24	>24
Cross polar discrimination (XPD) 0° (dB)	15	15	20	20	20
Cross polar discrimination (XPD) ±60° (dB)	10	8	7	> 7	> 7
Far field coupling	<0.33	<0.48	<0.62	<0.62	<0.62
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

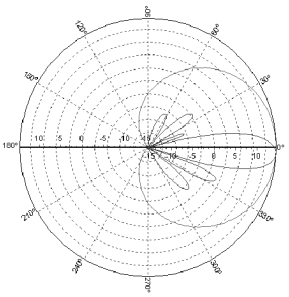
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm (4'7"x11"x4")
Mounting	No brackets
Weight, with brackets, kg (lbs)	NA
Weight, without brackets, kg (lbs)	12.1 (27)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	1550x355x255 (5'1"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	16 (35.3)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



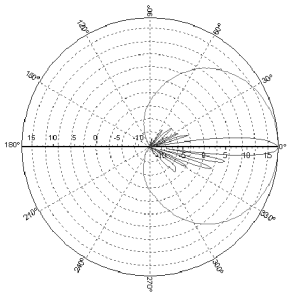
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

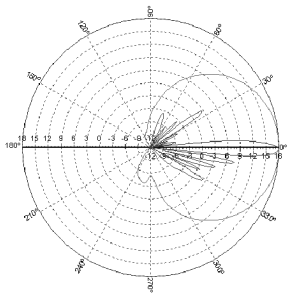
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7750.1ST.0000.00 Dual Broadband Cross Polarized

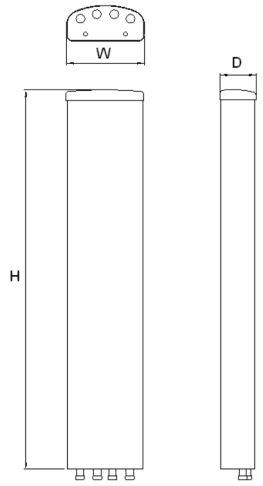
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.2/13.1, 18/15.9
TILT: MET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	14.6/12.5	15.2/13.1	17.5/15.4	17.7/15.6	18/15.9
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	<1.5:1		<1.5:1		
Horizontal beam width, -3 dB (°)	69	67	65	65	62
Vertical beam width, -3 dB (°)	14.9	13.7	6.9	6.6	6.2
Electrical down tilt (°)	8 to 18		4 to 12		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<2.0
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.3	0.3	0.3
Front to back ratio (dB)	>27	>27	>27	>27	>27
Front to back ratio, total power (dB)	>24	>24	>24	>24	>24
Cross polar discrimination (XPD) 0° (dB)	15	15	20	20	20
Cross polar discrimination (XPD) ±60° (dB)	10	8	7	> 7	> 7
Far field coupling	<0.33	<0.48	<0.62	<0.62	<0.62
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

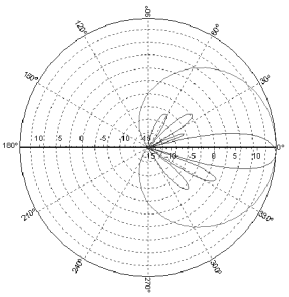
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm (4'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	17.6 (39)
Weight, without brackets, kg (lbs)	12.1 (27)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	1550x355x255 (5'1"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	21.5 (47.3)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



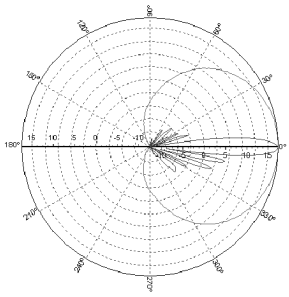
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

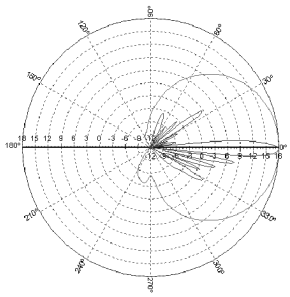
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7750.90 Dual Broadband Cross Polarized

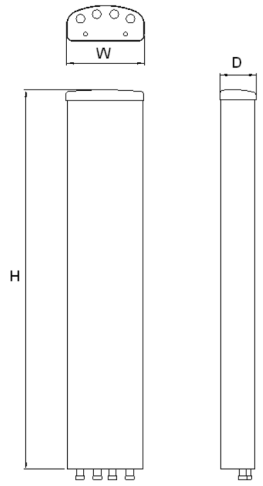
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.2/13.1, 18/15.9
TILT: MET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	14.6/12.5	15.2/13.1	17.5/15.4	17.7/15.6	18/15.9
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	<1.5:1		<1.5:1		
Horizontal beam width, -3 dB (°)	69	67	65	65	62
Vertical beam width, -3 dB (°)	14.9	13.7	6.9	6.6	6.2
Electrical down tilt (°)	2 to 12		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,17,16,16,15,15@ 2,4,6,8,10,12°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<2.0
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.3	0.3	0.3
Front to back ratio (dB)	>27	>27	>27	>27	>27
Front to back ratio, total power (dB)	>24	>24	>24	>24	>24
Cross polar discrimination (XPD) 0° (dB)	15	15	20	20	20
Cross polar discrimination (XPD) ±60° (dB)	10	8	7	> 7	> 7
Far field coupling	<0.33	<0.48	<0.62	<0.62	<0.62
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

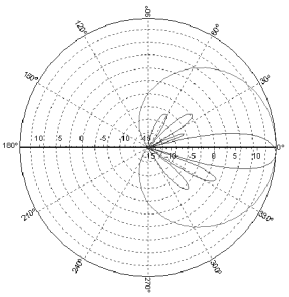
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm (4'7"x11"x4")
Mounting	Pre mounted fixed tilt brackets
Weight, with brackets, kg (lbs)	15.6 (34.4)
Weight, without brackets, kg (lbs)	12.1 (27)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	1550x355x255 (5'1"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	19.5 (43)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



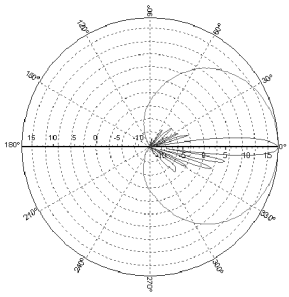
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

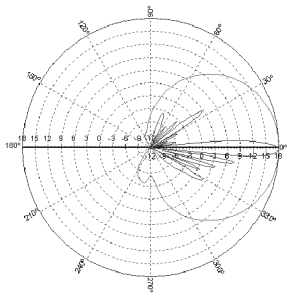
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7750.0ST.0002.00 Dual Broadband Cross Polarized With Integrated Diplexer

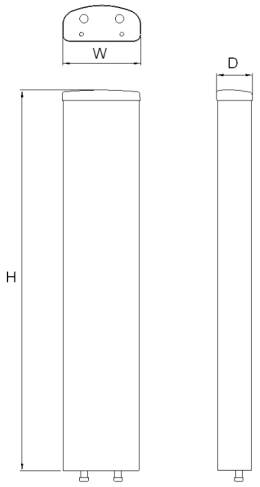
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15/12.9, 18/15.9
TILT: MET (with Integrated Diplexer)
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-880	880-960	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15/12.9	15/12.9	17.3/15.2	17.3/15.2	18/15.9
Polarization	Dual linear ± 45º		Dual linear ± 45º		
Nominal Impedance (q)	50		50		
VSWR	>1.5:1		>1.5:1		
Horizontal beam width, -3 dB (°)	68 ± 3º	68 ± 3º	67 ± 2º	67 ± 2º	62 ± 4º
Vertical beam width, -3 dB (°)	14	14	7	7	6.2
Electrical down tilt (°)	2 - 12		0 - 8		
Side lobe suppression, vertical 1st upper (dB)	>21,20,17,16 @ 2,4,8,12º	>21,20,17,16 @ 2,4,8,12º	>18,17,15,14 @ 0,2,4,8º	>18,17,15,14 @ 0,2,4,8º	>18,17,15,14 @ 0,2,4,8º
Isolation between inputs (dB)	>30	>30	>30	>30	>30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.5	<1.5	<1.5
First null fill (dB)	>20	>20	>20	>20	>20
Vertical beam squint (°)	<1	<1	<1	<1	<1
Front to back ratio (dB)	>26	>26	>30	>30	>30
Front to back ratio, total power (dB)	>26	>26	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>18	>18	>18
Cross polar discrimination (XPD) ±60° (dB)	>11	>11	>10	>10	>10
Far field coupling	-	-	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	NA		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

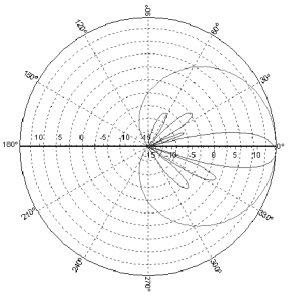
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm (4'9"x11"x5")
Mounting	Pre-Mounted Heavy Duty Brackets
Weight, with brackets, kg (lbs)	18 (39.6)
Weight, without brackets, kg (lbs)	14.3 (31.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	435
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC Grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	1550x355x255mm (61"x14"x10")
Radome colour	Grey (RAL 7035 on all visible plastic parts)
Shipping weight, kg (lbs)	23 (50.6)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7456.00A, 7454.00, 2210.00, 7455.00, 7458.00



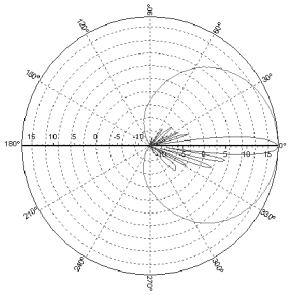
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

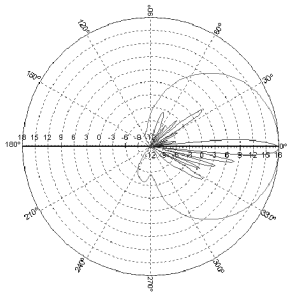
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7752.0ST.0002.00 Dual Broadband Cross Polarized With Integrated Diplexer

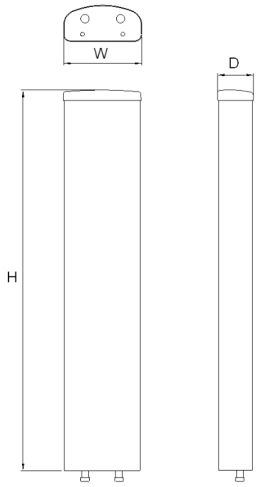
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.7/14.6, 17.4/15.3
TILT: MET (with Integrated Diplexer)
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15.7/14.0	16.6/14.5	17.0/14.9	17.2/15.1	17.5/15.4
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	63	63	60
Vertical beam width, -3 dB (°)	9.6	8.9	7	7	6.2
Electrical down tilt (°)	2-9		0-8		
Side lobe suppression, vertical 1st upper (dB)	>17,16,15,14 @ 2,4,6,8º	>17,16,15,14 @ 2,4,6,8º	>18,17,15,14 @ 0,2,4,8º	>18,17,15,14 @ 0,2,4,8 0,2,4,8º	>18,17,15,14 @ 0,2,4,8 0,2,4,8º
Isolation between inputs (dB)	>30	>30	>30	>30	>30
Inter band Isolation (dB)					
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.5	<1.5	<1.5
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	<1	<1	<1	<1	<1
Front to back ratio (dB)	>30	>30	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>16	>15	>16	>16	>16
Cross polar discrimination (XPD) ±60° (dB)	> 12	> 9.5	> 6.2	>6.5	> 7.5
Far field coupling	<0.26	<0.39	<0.5	<0.59	<0.59
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)			<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2033x280x125mm (6'8"x11"x4")
Mounting	Pre-Mounted Heavy Duty Brackets
Weight, with brackets, kg (lbs)	19.8 (44)
Weight, without brackets, kg (lbs)	16.0 (35)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1375
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2175x355x255 (7'2"x14"x10")
Radome colour	Grey (RAL 7035 on all visible plastic parts)
Shipping weight, kg (lbs)	27 (59.5)
RET	7020.00, 7031.00, 7032.00, 7033.00, 8220.40, 8210.40
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.

Antenna Pattern Not Available

925 MHz

Antenna Pattern Not Available

1850 MHz

Antenna Pattern Not Available

2140 MHz

7752.00 Dual Broadband Cross Polarized

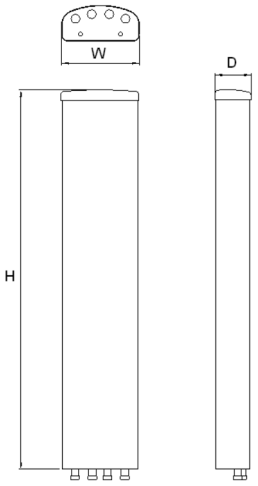
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.7/14.6, 17.6/15.5
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	15.8/13.7	16.7/14.6	17.1/15	17.3/15.2	17.6/15.5
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	63	63	61
Vertical beam width, -3 dB (°)	9.6	8.9	7.1	6.6	6.3
Electrical down tilt (°)	2 to 9		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>17,16,15,14@ 2,4,6,8°	>17,16,15,14@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>18,18,17,16,16@ 2,4,6,8°	>20,19,19,18,17@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<3
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.4
Front to back ratio (dB)	>27	>27	>27	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	15	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	> 12	> 9.5	> 6.2	> 6.5	> 7.5
Far field coupling	<0.26	<0.39	<0.5	<0.59	<0.59
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

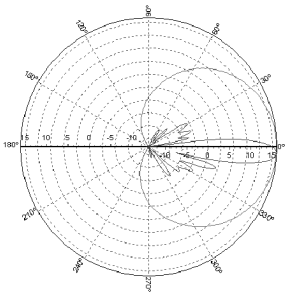
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2033x280x125mm (6'8"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.8 (44)
Weight, without brackets, kg (lbs)	16.0 (35)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1375
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2175x355x255 (7'2"x14"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	27 (59.5)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



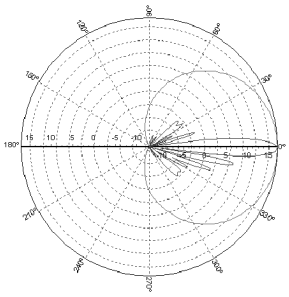
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

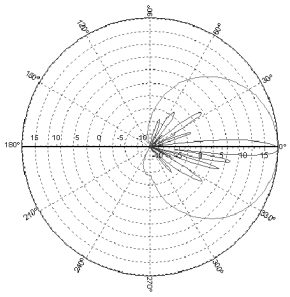
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7752.0S0.0000.00 Dual Broadband Cross Polarized

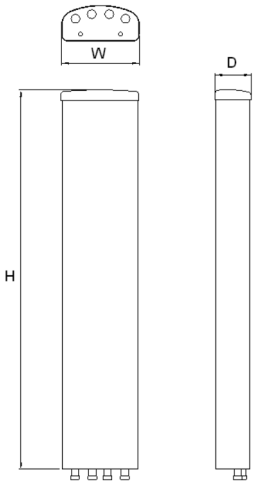
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.7/14.6, 17.6/15.5
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	15.8/13.7	16.7/14.6	17.1/15	17.3/15.2	17.6/15.5
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	63	63	61
Vertical beam width, -3 dB (°)	9.6	8.9	7.1	6.6	6.3
Electrical down tilt (°)	2 to 9		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>17,16,15,14@ 2,4,6,8°	>17,16,15,14@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°	>20,19,19,18,17@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<3.0
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.4
Front to back ratio (dB)	>27	>27	>27	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	15	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	> 12	> 9.5	> 6.2	> 6.5	> 7.5
Far field coupling	<0.26	<0.39	<0.5	<0.59	<0.59
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

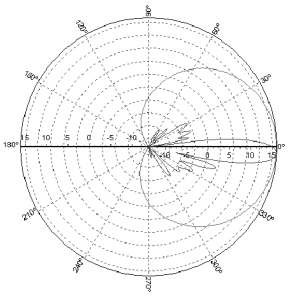
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2033x280x125mm (6'8"x11"x4")
Mounting	No brackets
Weight, with brackets, kg (lbs)	NA
Weight, without brackets, kg (lbs)	16.0 (35)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1375
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2175x355x255 (7'2"x14"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	27 (59.5)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



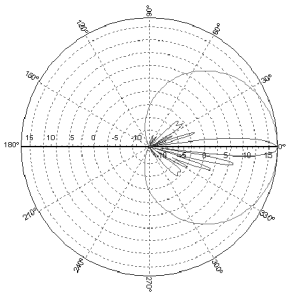
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

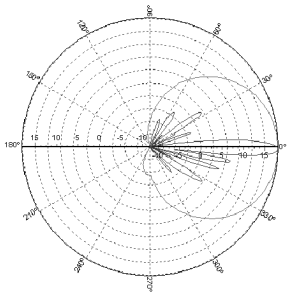
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7752.90 Dual Broadband Cross Polarized

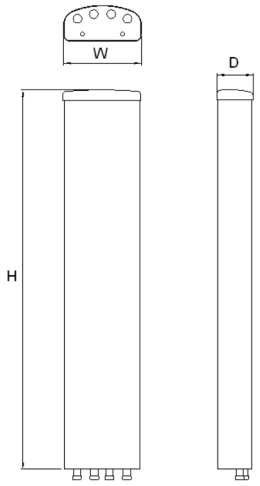
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.7/14.6, 17.6/15.5
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	15.8/13.7	16.7/14.6	17.1/15	17.3/15.2	17.6/15.5
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	63	63	61
Vertical beam width, -3 dB (°)	9.6	8.9	7.1	6.6	6.3
Electrical down tilt (°)	2 to 9		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>17,16,15,14@ 2,4,6,8°	>17,16,15,14@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>18,18,16,15,14@ 2,4,6,8°	>20,19,19,18,17@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<2.0	<2.0	<3.0
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.4
Front to back ratio (dB)	>27	>27	>27	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	15	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	> 12	> 9.5	> 6.2	> 6.5	> 7.5
Far field coupling	<0.26	<0.39	<0.5	<0.59	<0.59
IM3, 2xTx@43dBm (dBc)	<-153		<-153		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

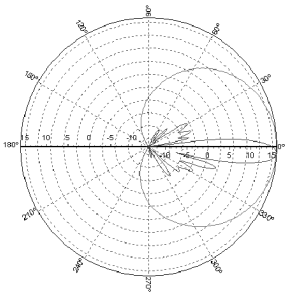
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2033x280x125mm (6'8"x11"x4")
Mounting	Pre-mounted fixed tilt bracket
Weight, with brackets, kg (lbs)	16.0 (35)
Weight, without brackets, kg (lbs)	19.8 (44)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1375
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2175x355x255 (7'2"x14"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	27 (59.5)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



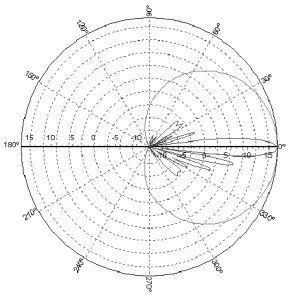
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

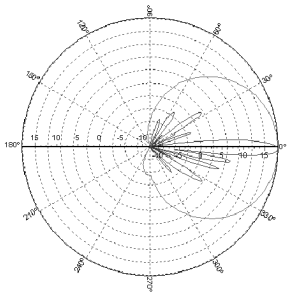
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7755.00 Dual Broadband Cross Polarized

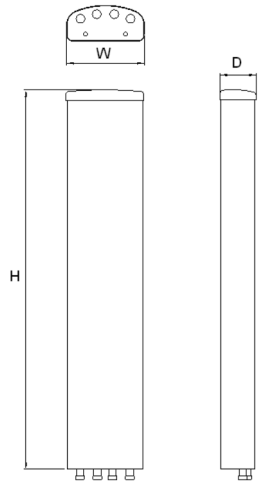
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.3/15.2, 17.8/15.7
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	16.6/14.5	17.3/15.2	17.3/15.2	17.6/15.5	17.8/15.7
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	65	65	62
Vertical beam width, -3 dB (°)	7.4	7	6.9	6.4	6.1
Electrical down tilt (°)	2 to 8		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,18,17,16,16@ 2,4,6,8°	>18,18,17,16,16@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	38				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.5	<1	<3.5
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	14	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	>11	> 9.5	> 6.3	>7.2	>7.5
Far field coupling	<0.3	<0.41	<0.53	<0.58	<0.58
IM3, 2xTx@43dBm (dBc)	<-150		<-150		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

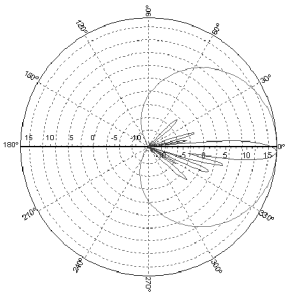
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2658x280x125mm (8'8"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	25.1 (55)
Weight, without brackets, kg (lbs)	19.6 (43)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1797
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2800x355x255 (9'2"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	32.5 (71.6)
RET	7020.00, 7031.00, 7032.00, 7033.10
Brackets	7256.00, 7454.00, 2210.10



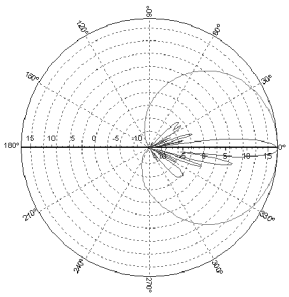
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

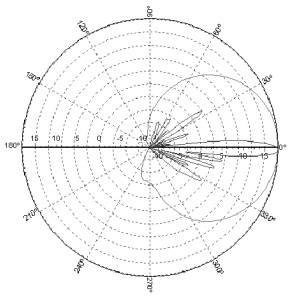
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7755.0S0.0000.00 Dual Broadband Cross Polarized

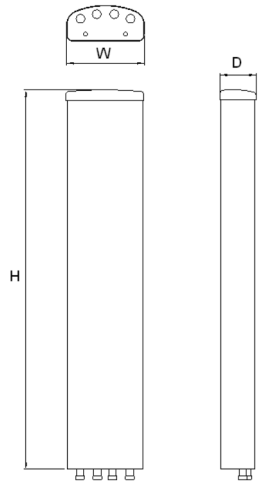
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.3/15.2, 17.8/15.7
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	16.6/14.5	17.3/15.2	17.3/15.2	17.6/15.5	17.8/15.7
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	65	65	62
Vertical beam width, -3 dB (°)	7.4	7	6.9	6.4	6.1
Electrical down tilt (°)	2 to 8		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,18,17,16,16@ 2,4,6,8°	>18,18,17,16,16@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	38				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.5	<1.0	<3.5
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	14	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	>11	> 9.5	> 6.3	>7.2	>7.5
Far field coupling	<0.3	<0.41	<0.53	<0.58	<0.58
IM3, 2xTx@43dBm (dBc)	<-150		<-150		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

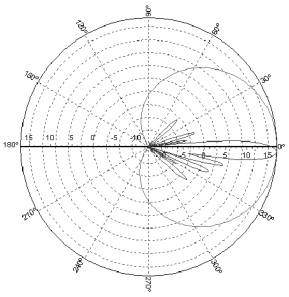
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2658x280x125mm (8'8"x11"x4")
Mounting	No brackets
Weight, with brackets, kg (lbs)	NA
Weight, without brackets, kg (lbs)	19.6 (43)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1797
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2800x355x255 (9'2"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	32.5 (71.6)
RET	7020.00, 7031.00, 7032.00, 7033.10
Brackets	7256.00, 7454.00, 2210.10



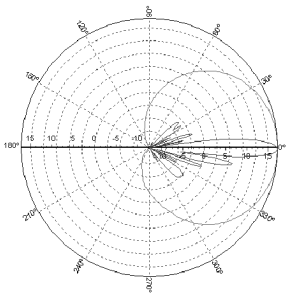
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

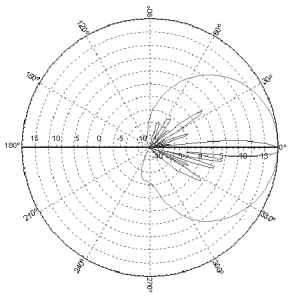
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7755.90 Dual Broadband Cross Polarized

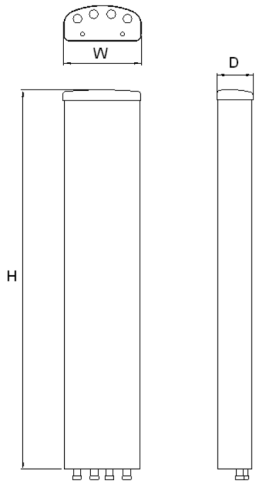
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.3/15.2, 17.8/15.7
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	16.6/14.5	17.3/15.2	17.3/15.2	17.6/15.5	17.8/15.7
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	<1.5:1		<1.5:1		
Horizontal beam width, -3 dB (°)	71	67	65	65	62
Vertical beam width, -3 dB (°)	7.4	7	6.9	6.4	6.1
Electrical down tilt (°)	2 to 8		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	18,18,17,16,16@ 2,4,6,8°	18,18,17,16,16@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	40				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.5	<1.0	<3.5
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	14	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	>11	>9.5	> 6.3	>7.2	>7.5
Far field coupling	<0.3	<0.41	<0.53	<0.58	<0.58
IM3, 2xTx@43dBm (dBc)	<-150		<-150		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

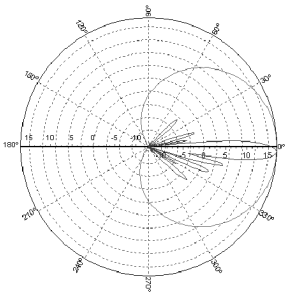
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2658x280x125mm (8'8"x11"x4")
Mounting	Pre-mounted fixed tilt bracket
Weight, with brackets, kg (lbs)	23.1 (51)
Weight, without brackets, kg (lbs)	19.6 (43)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	2800x355x255 (9'2"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	30.5 (67.1)
RET	7020.00, 7031.00, 7032.00, 7033.10
Brackets	7256.00, 7454.00, 2210.10



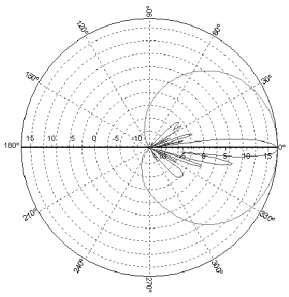
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

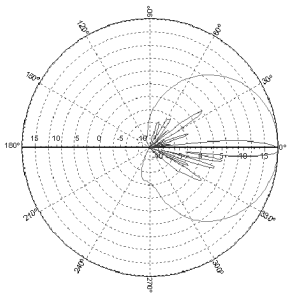
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

7755.0ST.0002.00 Dual Broadband Cross Polarized With Integrated Diplexer

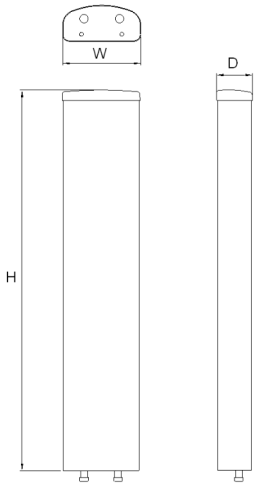
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-960, 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.3/15.2, 17.8/15.7
TILT: MET (with Integrated Diplexer)
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-960		1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	16.6/14.5	17.3/15.2	17.3/15.2	17.6/15.5	17.8/15.7
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1:5:1		
Horizontal beam width, -3 dB (°)	71	67	65	65	62
Vertical beam width, -3 dB (°)	704	7	6.9	6.4	6.1
Electrical down tilt (°)	2 to 8		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18,18,17,16,16@ 2,4,6,8°	>18,18,17,16,16@ 2,4,6,8°	>17,16,15,14,13@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°	>17,17,16,15,14@ 2,4,6,8°
Isolation between inputs (dB)	30	30	30	30	30
Inter band Isolation (dB)	38				
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.5	<1	<3.5
First null fill (dB)	<-25	<-25	<-25	<-25	<-25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	16	14	16	16	16
Cross polar discrimination (XPD) ±60° (dB)	>11	> 9.5	> 6.3	>7.2	>7.5
Far field coupling	<0.3	<0.41	<0.53	<0.58	<0.58
IM3, 2xTx@43dBm (dBc)	<-150		<-150		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		600		

MECHANICAL SPECIFICATIONS*

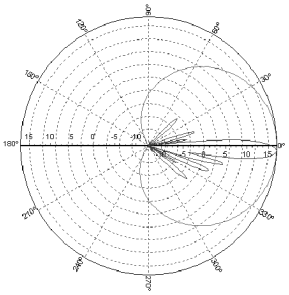
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2658x280x125mm (8'8"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	25.1 (55)
Weight, without brackets, kg (lbs)	19.6 (43)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1797
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Packet size, HxWxD, mm (ft)	Light Grey
Radome colour	2800x355x255 (9'2"x1'2"x10")
Shipping weight, kg (lbs)	32.5 (71.6)
RET	7020.00, 7031.00, 7032.00, 7033.10
Brackets	7256.00, 7454.00, 2210.10



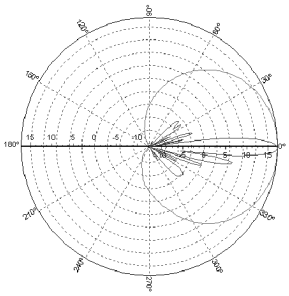
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

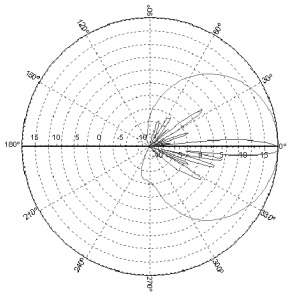
For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1850 MHz



2140 MHz

POWERWAVE **Triple Broadband Cross Polarized Antennas, 824-960/2x1710-2170 MHz**

Triple Broadband Antennas

Cross Polarized

Triple Broadband Cross Polarized Antennas, 824-960/2x1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	14.7/12.6, 14.6/12.5, 14.6/12.5	MET	1.4m (4'7")	7780.00	279
65	16.2/14.1, 16.5/14.4, 16.5/14.4	MET	2.0m (6'6")	7782.00	280
65	17.3/15.2, 17.9/15.8, 17.9/15.8	MET	2.6m (8'6")	7785.00	281

7780.00 Triple Broadband Cross Polarized

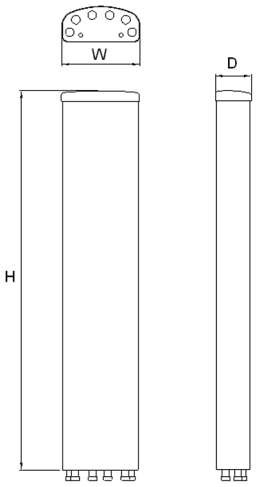
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896, 2x1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.7/12.6, 14.6/12.5, 14.6/12.5
TILT: MET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896		2x1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	14.1/12	14.7/12.6	14.4/12.3	14.6/12.5	14.8/12.7
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	65	64	64
Vertical beam width, -3 dB (°)	14.9	13.9	13.3	12.6	12
Electrical down tilt (°)	2 to 12		0 to 12		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,16@ 2,4,8,12°	>17,16,15,14@ 2,4,8,12°	>17,16,15,14@ 0,4,8,12°	>17,16,15,14@ 0,4,8,12°	>17,16,15,14@ 0,4,8,12°
Isolation between inputs (dB)	30	30	30	30	>30
Inter band Isolation (dB)	38		38		
Tracking, horizontal plane ±60° (dB)	<1	<2	<1.5	<1.2	<4
First null fill (dB)	25	25	25	25	25
Vertical beam squint (°)	0.7	0.7	0.7	1	1
Front to back ratio (dB)	>27	>28	>28	>28	>28
Front to back ratio, total power (dB)	>24	>24	>24	>24	>24
Cross polar discrimination (XPD) 0° (dB)	15	14	16	18	18
Cross polar discrimination (XPD) ±60° (dB)	> 9.3	>7.7	>6	>5.5	> 5.5
Far field coupling	< 0.35	< 0.50	< 0.55	< 0.74	< 0.74
IM3, 2xTx@43dBm (dBc)	-153		-		
IM7, 2xTx@43dBm (dBc)	-		-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

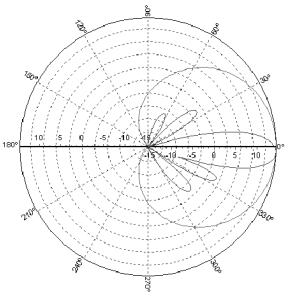
Connector	6 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm (4'7"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19 (42)
Weight, without brackets, kg (lbs)	13.5 (30)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	1550x355x200 (5'1"x1'2"x7")
Radome colour	Light Grey
Shipping weight, kg (lbs)	23 (50.7)
RET	7030.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



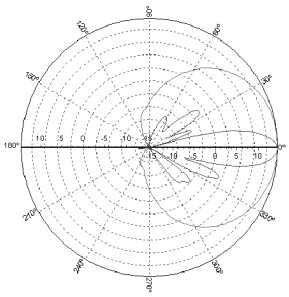
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

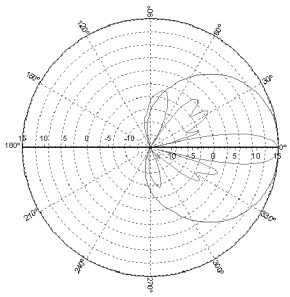
For detailed patterns visit http://www.powerwave.com/rpa/.



900 MHz



1800 MHz



2100 MHz

7782.00 Triple Broadband Cross Polarized

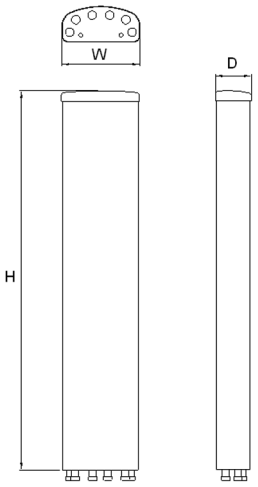
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896, 2x1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.2/14.1, 16.5/14.4, 16.5/14.4
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896		2x1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	15.8/13.7	16.2/14.1	16.0/13.9	16.1/14	16.5/14.4
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	65	65	63
Vertical beam width, -3 dB (°)	9.6	8.6	10	9.4	8.7
Electrical down tilt (°)	2 to 9		0 to 10		
Side lobe suppression, vertical 1st upper (dB)	>18,17,16,16@ 2,5,7,9°	>18,17,16,16@ 2,5,7,9°	>17,15,13@ 0,6,10°	>17,15,14@ 0,6,10°	>17,16,15@ 0,6,10°
Isolation between inputs (dB)	>30	>30	>30	>30	>30
Inter band Isolation (dB)	>34		>34		
Tracking, horizontal plane ±60° (dB)	<1.0	<1	<1.5	<2	<4
First null fill (dB)	25	25	25	25	25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.5
Front to back ratio (dB)	>28	>30	>27	>28	>30
Front to back ratio, total power (dB)	>26	>26	>25	>27	>27
Cross polar discrimination (XPD) 0° (dB)	16	15	16	16	15
Cross polar discrimination (XPD) ±60° (dB)	>11	>9.2	>6.7	>6.3	>6.3
Far field coupling	<0.27	<0.47	<0.52	<0.66	<0.66
IM3, 2xTx@43dBm (dBc)	<-153		-		
IM7, 2xTx@43dBm (dBc)	-		<-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

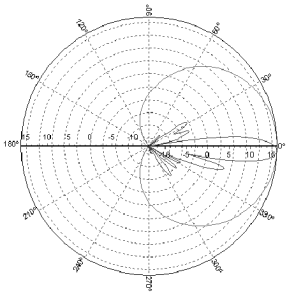
Connector	6 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2033x280x125mm (6'8"x11"x4")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	23.4 (48)
Weight, without brackets, kg (lbs)	17.9 (39)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1375
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	2175x355x255 (7'2"x14"x10")
Radome colour	RAL 7035 on all visible plastic part
Shipping weight, kg (lbs)	28 (61.7)
RET	7030.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



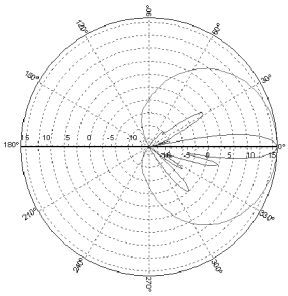
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

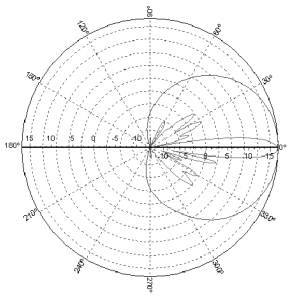
For detailed patterns visit http://www.powerwave.com/rpa/.



900 MHz



1800 MHz



2100 MHz

7785.00 Triple Broadband Cross Polarized

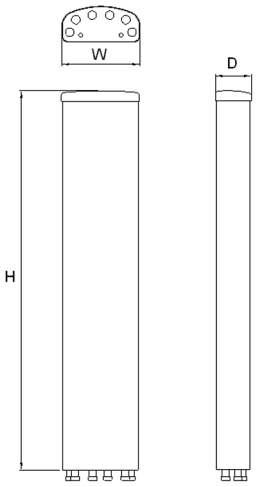
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896, 2x1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.3/15.2, 17.9/15.8, 17.9/15.8
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896		2x1710-2170		
Frequency band (MHz)	824-896	880-960	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	16.7/14.6	17.3/15.2	17.3/15.2	17.5/15.4	17.9/15.8
Polarization	Dual linear ±45°		Dual linear ±45°		
Nominal Impedance (q)	50		50		
VSWR	1.5:1		1.5:1		
Horizontal beam width, -3 dB (°)	71	67	66	65	62
Vertical beam width, -3 dB (°)	7.4	6.9	6.7	6.4	6.2
Electrical down tilt (°)	2 to 8		0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>17,16,15,14@ 2,4,6,8°	>17,16,15,14@ 2,4,6,8°	>17,16,15,14,13@ 0,2,4,6,8°	>17,16,15,14,13@ 0,2,4,6,8°	>17,16,16,15,15@ 0,2,4,6,8°
Isolation between inputs (dB)	30	30	>30	30	>30
Inter band Isolation (dB)	38		38		
Tracking, horizontal plane ±60° (dB)	<1	<1	<1.1	<1.0	<2.9
First null fill (dB)	25	25	25	25	25
Vertical beam squint (°)	0.5	0.5	0.5	0.5	0.5
Front to back ratio (dB)	>28	>28	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27	>27	>25
Cross polar discrimination (XPD) 0° (dB)	16	15	16	15	17
Cross polar discrimination (XPD) ±60° (dB)	>12	>9.5	>7.0	>7.5	>7.7
Far field coupling	<0.24	<0.44	<0.47	<0.52	<0.52
IM3, 2xTx@43dBm (dBc)	-153		-		
IM7, 2xTx@43dBm (dBc)	-		-160		
Power handling, average per input (W)	300		250		
Power handling, average total (W)	600		500		

MECHANICAL SPECIFICATIONS*

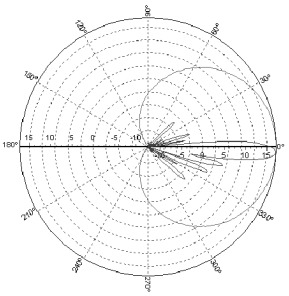
Connector	6 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2658x280x125mm (8'8"x11"x4")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	27.7 (61)
Weight, without brackets, kg (lbs)	22.2 (49)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1797
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	2800x355x255 (9'2"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	33 (72.7)
RET	7030.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



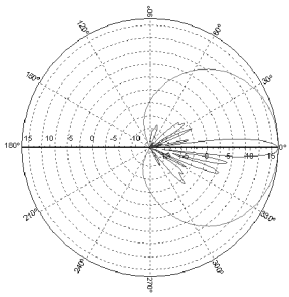
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

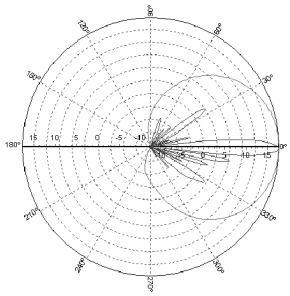
For detailed patterns visit http://www.powerwave.com/rpa/.



900 MHz



1800 MHz



2100 MHz

POWERWAVE

Single and Dual Band Antennas

The Powerwave single band antenna's outstanding performance in the field derives from excellent VSWR (Voltage Standing Wave Ratio), isolation beam squint and tracking. This design ensures minimized intermodulation products, thus substantially enhancing system benefits. The Powerwave polarization diversity systems use one antenna with two orthogonal polarizations slanted at ±45° to provide the independently fading signals needed for achieving top-quality coverage. As a result of thorough, in-depth research and testing, Powerwave has produced a variety of designs that ensure the isolation, cross polarization discrimination and orthogonality between inputs needed to achieve the highest possible diversity gain, hence the most efficient system performance.

POWERWAVE | **Single and Dual Band Antennas**

Single Band Antennas

Cross Polarized	Page
ALX Cross Polarized Antennas, 806-896 MHz	284
X-Urban Cross Polarized Antennas, 824-896/870-960 MHz	286

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Urban Vertical Polarized Antennas, 824-896/870-960 MHz	308

Dual Band Antennas

Cross Polarized	Page
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DBB90 Cross Polarized Antennas, 806-960/1850-1990 MHz	342

Vertical Polarized	Page
ALVC Vertical Polarized Antennas, 806-896/1850-1990 MHz	346

POWERWAVE | **ALX Cross Polarized Antennas, 806-896**

Single Band Antennas

Cross Polarized

ALX Cross Polarized Antennas, 806-896 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
90	10.5/8.4	FET	0.7m (2'3")	7390.00B	285

7390.00B ALX Cross Polarized

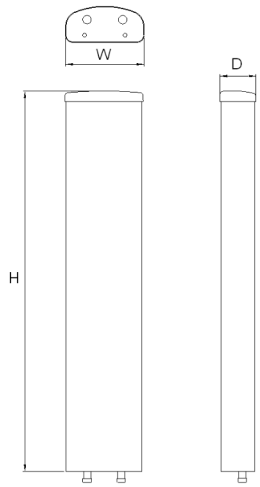
POLARIZATION: X-Pol
FREQUENCY (MHz): 806-896
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 10.5/8.4
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896
Frequency band (MHz)	806-896
Gain (dBi/dBd)	10.5/8.4
Polarization	Linear slanted
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	29
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>13
Isolation between inputs (dB)	30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<2
Front to back ratio (dB)	>19
Front to back ratio, total power (dB)	>17
Cross polar discrimination (XPD) 0° (dB)	>13
Cross polar discrimination (XPD) ±60° (dB)	
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

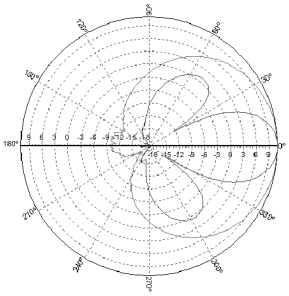
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	710x280x125 (2'4"x11"x5")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7.7
Weight, without brackets, kg (lbs)	4
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	480
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	850x355x200 (2'9"x1'2"x10")
Radome colour	
Shipping weight, kg (lbs)	6.5 (141)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

POWERWAVE | X-Urban Cross Polarized Antennas, 824-896/870-960 MHz

Single Band Antennas

Cross Polarized

X-Urban Cross Polarized Antennas, 824-896/870-960 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	12.5/10.4	FET	0.7m (2'3")	7216.03	287
65	12.5/10.4	FET	0.7m (2'3")	7282.03	288
65	14.5/12.4	FET	1.3m (4'3")	7217.11	289
65	15.5/13.4	FET	1.3m (4'3")	7217.04	290
65	15/12.9	FET	1.3m (4'3")	7217.03	291
65	15/12.9	FET	1.3m (4'3")	7263.01	292
65	15/12.9	FET	1.3m (4'3")	7263.04	293
65	16.5/14.4	FET	1.9m (6'2")	7255.03	294
65	16.5/14.4	FET	1.9m (6'2")	7281.02	295
65	16.5/14.4	FET	1.9m (6'2")	7281.04	296
65	17/14.9	FET	1.9m (6'2")	7255.04	297

7216.03 X-Urban Cross Polarized

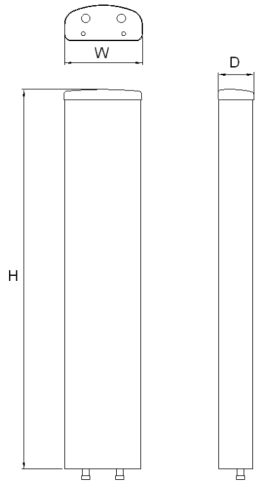
POLARIZATION: X-Pol
FREQUENCY (MHz): 880-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 12.5/10.4
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	880-960
Frequency band (MHz)	880-960
Gain (dBi/dBd)	12.5/10.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	26
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>10
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

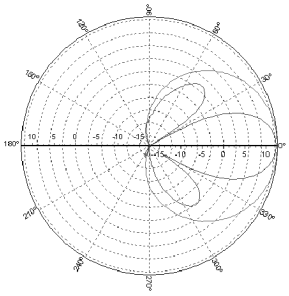
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	660x256x50 (2'2"x10'x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7.3 (16)
Weight, without brackets, kg (lbs)	3.6 (7.9)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	408
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	
Package size, HxWxD, mm (ft)	770x308x121 (2'6"x1'x5')
Shipping weight, kg (lbs)	7.5 (16.5)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7282.03 X-Urban Cross Polarized

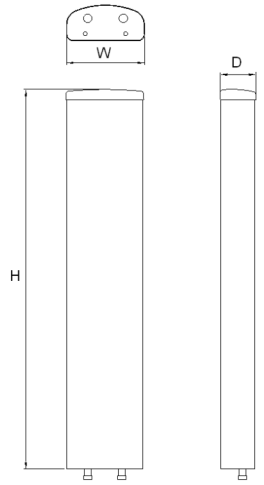
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 12.5/10.4
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	12.5/10.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	25
Electrical down tilt (°)	4
Side lobe suppression, vertical 1st upper (dB)	>9
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>22
Front to back ratio, total power (dB)	>18
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

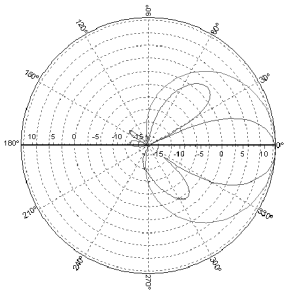
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	660x256x50 (2'2"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7.7 (16.9)
Weight, without brackets, kg (lbs)	4 (8.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	408
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	750x308x121 (2'6"x1'x5')
Shipping weight, kg (lbs)	5 (11)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7217.11 X-Urban Cross Polarized

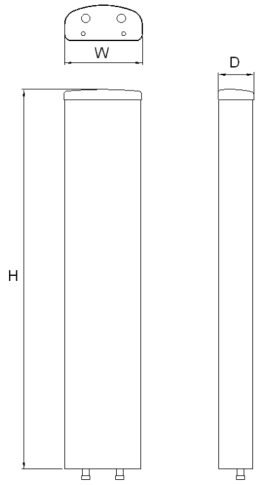
POLARIZATION: X-Pol
FREQUENCY (MHz): 880-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.5/12.4
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	880-960
Frequency band (MHz)	880-960
Gain (dBi/dBd)	14.5/12.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	13
Electrical down tilt (°)	9
Side lobe suppression, vertical 1st upper (dB)	>14
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>23
Front to back ratio, total power (dB)	>19
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

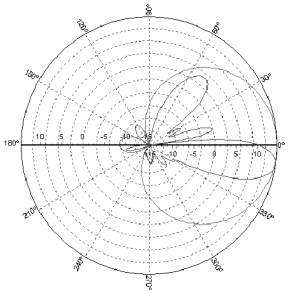
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	8.5 (18.7)
Weight, without brackets, kg (lbs)	4.8 (10.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	10 (22)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7217.04 X-Urban Cross Polarized

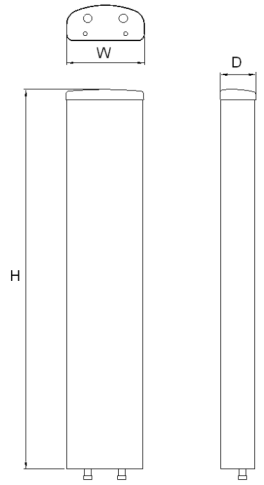
POLARIZATION: X-Pol
FREQUENCY (MHz): 880-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	880-960
Frequency band (MHz)	880-960
Gain (dBi/dBd)	15.5/13.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	13
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>14
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

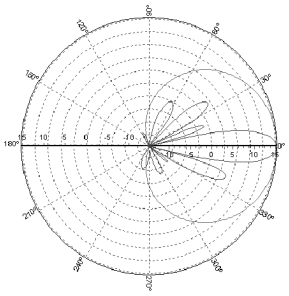
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	8.5 (18.7)
Weight, without brackets, kg (lbs)	4.8 (10.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	10 (22)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7217.03 X-Urban Cross Polarized

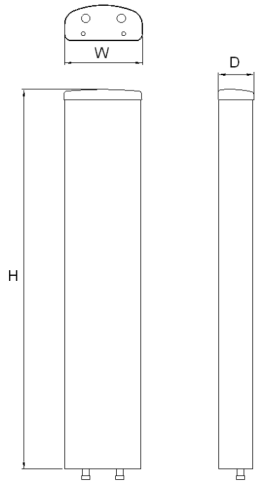
POLARIZATION: X-Pol
FREQUENCY (MHz): 880-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15/12.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	880-960
Frequency band (MHz)	880-960
Gain (dBi/dBd)	15/12.9
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	13
Electrical down tilt (°)	7
Side lobe suppression, vertical 1st upper (dB)	>14
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

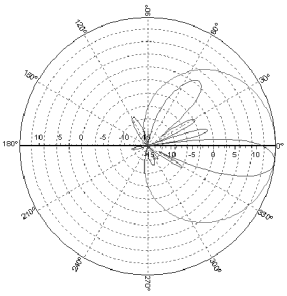
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	8.5 (18.7)
Weight, without brackets, kg (lbs)	4.8 (10.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	10 (22)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7263.01 X-Urban Cross Polarized

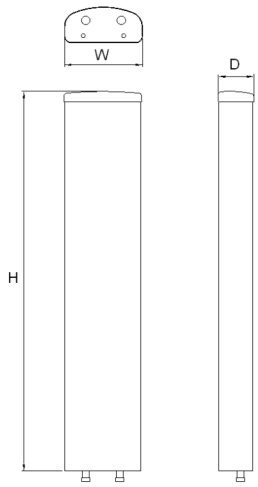
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15/12.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	15/12.9
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	13
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>14
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>22
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

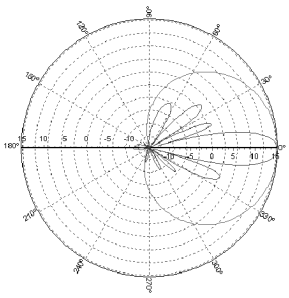
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (52"x10.4"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7.5 (16.5)
Weight, without brackets, kg (lbs)	7.5 (16.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (56"x12"x5")
Shipping weight, kg (lbs)	8.5 (19)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7263.04 X-Urban Cross Polarized

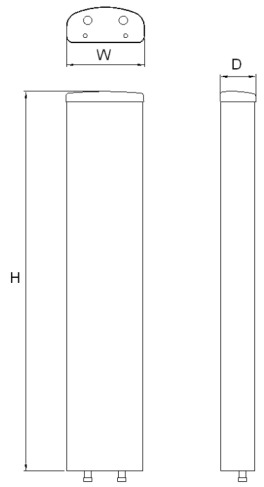
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15/12.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	15/12.9
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	13
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>14
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>22
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

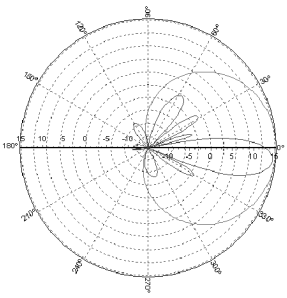
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (52"x10.4"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7.5 (16.5)
Weight, without brackets, kg (lbs)	7.5 (16.5)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (56"x12"x5")
Shipping weight, kg (lbs)	8.5 (19)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7255.03 X-Urban Cross Polarized

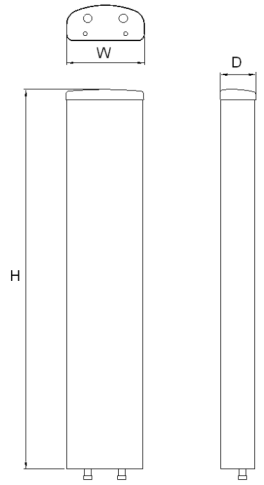
POLARIZATION: X-Pol
FREQUENCY (MHz): 880-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	880-960
Frequency band (MHz)	880-960
Gain (dBi/dBd)	16.5/14.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>15
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

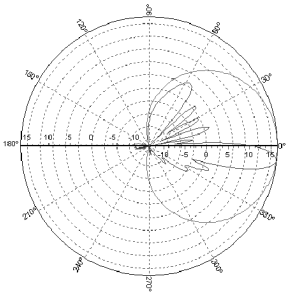
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x256x50 (6'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	14.2 (31.3)
Weight, without brackets, kg (lbs)	10.5 (23.1)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1199
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x308x121 (6'9"x1'x5')
Shipping weight, kg (lbs)	12 (26.5)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7281.02 X-Urban Cross Polarized

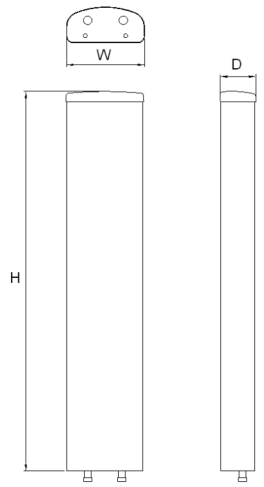
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	16.5/14.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>15
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

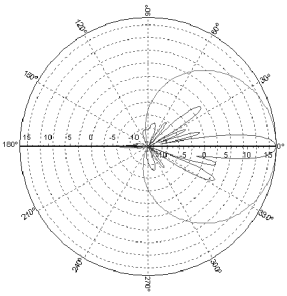
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x256x50 (6'4"x10"x2")
Mounting	Pre-mounted heavy duty bracket
Weight, with brackets, kg (lbs)	14.5 (31.9)
Weight, without brackets, kg (lbs)	9 (19.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1199
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x308x121 (6'9"x1'x5')
Shipping weight, kg (lbs)	10 (22)
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7281.04 X-Urban Cross Polarized

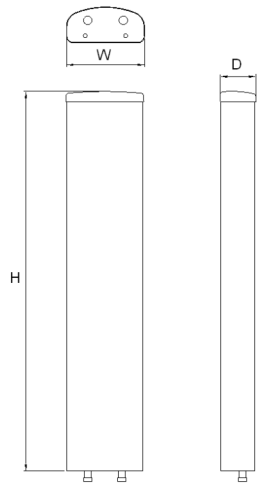
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	16.5/14.4
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>14
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

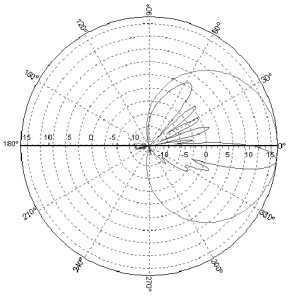
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x256x50 (6'4"x10"x2")
Mounting	Pre-mounted heavy duty bracket
Weight, with brackets, kg (lbs)	14.5 (31.9)
Weight, without brackets, kg (lbs)	9 (19.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1199
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x308x121 (6'9"x1'x5')
Shipping weight, kg (lbs)	10 (22)
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7255.04 X-Urban Cross Polarized

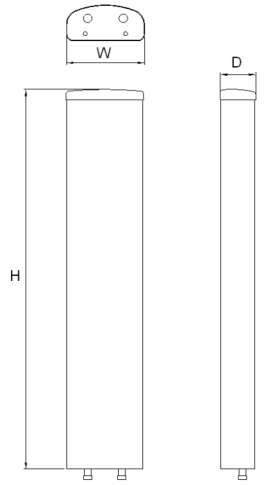
POLARIZATION: X-Pol
FREQUENCY (MHz): 880-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17/14.9
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	880-960
Frequency band (MHz)	880-960
Gain (dBi/dBd)	17/14.9
Polarization	Linear slanted ±45°
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>17
Isolation between inputs (dB)	>30
Inter band Isolation (dB)	-
Tracking, horizontal plane ±60° (dB)	<1
First null fill (dB)	-
Vertical beam squint (°)	<0.3
Front to back ratio (dB)	>24
Front to back ratio, total power (dB)	>20
Cross polar discrimination (XPD) 0° (dB)	>20
Cross polar discrimination (XPD) ±60° (dB)	>10
Far field coupling	-
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average per input (W)	250
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

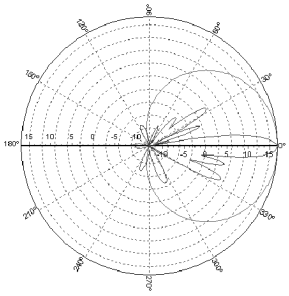
Connector	2 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x256x50 (6'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	14.2 (31.3)
Weight, without brackets, kg (lbs)	10.5 (23.1)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1199
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x308x121 (6'9"x1'x5')
Shipping weight, kg (lbs)	12 (26.5)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

POWERWAVE | **City Vertical Polarized Antennas, 806-896 MHz**

Single Band Antennas

Vertical Polarized

City Vertical Polarized Antennas, 806-896 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
90	13.5/11.4	MET	1.2m (3'11")	7144.24.33.50B	299

7144.24.33.50B City Vertical Polarized

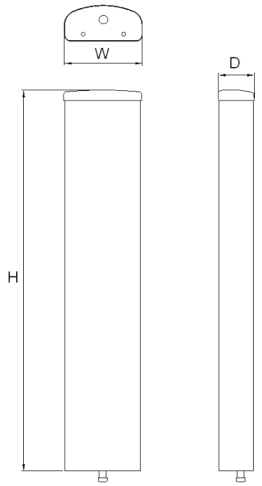
POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/11.4
TILT: MET
LENGTH: 1.2m (3'11")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896
Frequency band (MHz)	806-896
Gain (dBi/dBd)	13.5/11.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.5:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	17
Electrical down tilt (°)	0-17
Side lobe suppression, vertical 1st upper (dB)	>16
First null fill (dB)	-
Vertical beam squint (°)	1.0
Front to back ratio (dB)	>21
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

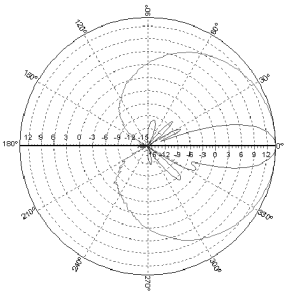
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1200x300x130 (3'11"x1'x5")
Mounting	Pre-mounted heavy duty bracket
Weight, with brackets, kg (lbs)	13.4 (29)
Weight, without brackets, kg (lbs)	7.9 (17)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	869
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1320x350x210 (4'4"x2"x8")
Shipping weight, kg (lbs)	14 (31)
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

Single Band Antennas

Vertical Polarized

Omni Vertical Polarized Antennas, 806-896 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
360	11/8.9	FET	3.14m (10'4")	4168.21.33.00	301
360	11/8.9	FET	3.14m (10'4")	4168.21.33.03	302
360	11/8.9	FET	3m (9‘10")	4168.11.33.00	303
360	11/8.9	FET	3m (9‘10")	4168.11.33.02	304
360	11/8.9	FET	3m (9‘10")	4168.11.33.03	305
360	11/8.9	FET	3m (9‘10")	4168.11.33.06	306
360	11/8.9	FET	3m (9‘10")	4168.11.33.52	307

4168.21.33.00 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3.14m (10'4")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

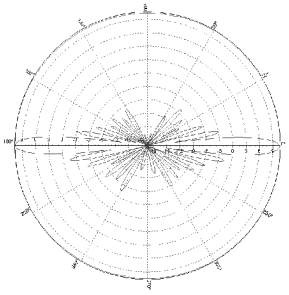
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3140x78 (10'4"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	433
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

4168.21.33.03 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3.14m (10'4")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	3
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

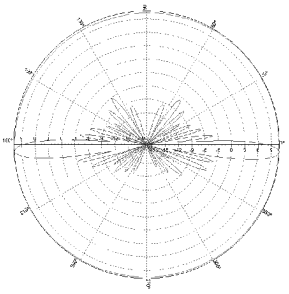
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3140x78 (10'4"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	433
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

4168.11.33.00 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3m (9'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

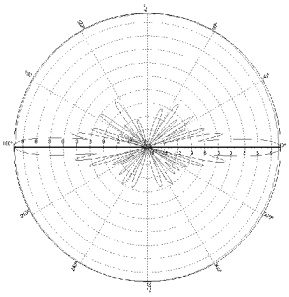
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3000x78 (9'10"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	413
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

4168.11.33.02 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3m (9'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	2
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

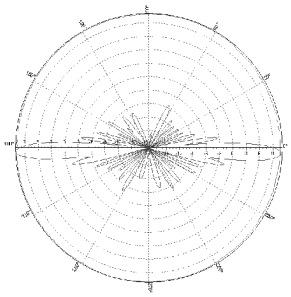
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3000x78 (9'10"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	413
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

4168.11.33.03 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3m (9'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	3
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

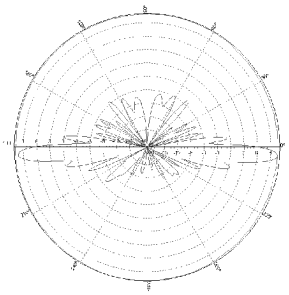
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3000x78 (9'10"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	413
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

4168.11.33.06 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3m (9'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

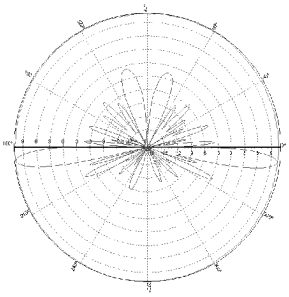
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3000x78 (9'10"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	413
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

4168.11.33.52 Omni Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 11/8.9
TILT: FET
LENGTH: 3m (9'10")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	11/8.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	360
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	2 uptilt
Side lobe suppression, vertical 1st upper (dB)	12
First null fill (dB)	-
Vertical beam squint (°)	0.5
IM3, 2xTx@43dBm (dBc)	<-146
Power handling, average total (W)	500

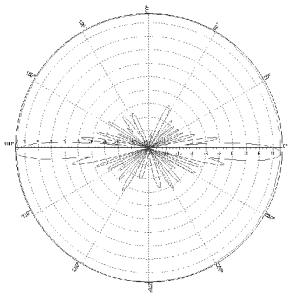
MECHANICAL SPECIFICATIONS*

Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	3000x78 (9'10"x3")
Mounting	Pre-mounted bracket
Weight, with brackets, kg (lbs)	12.5 (27.5)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	413
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	3300x150x170 (10'10"x6"x7")
Shipping weight, kg (lbs)	16 (35.2)
Brackets	included

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

Single Band Antennas

Vertical Polarized

Urban Vertical Polarized Antennas, 824-896/870-960 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	12.5/10.4	FET	0.7m (2'3")	7270.02	309
65	13/10.9	FET	0.7m (2'3")	7225.04	310
65	15.5/13.4	FET	1.3m (4'3")	7226.03	311
65	15.5/13.4	FET	1.3m (4'3")	7226.04	312
65	15.5/13.4	FET	1.3m (4'3")	7271.02	313
65	15/12.9	FET	1.3m (4'3")	7271.03	314
65	17.5/15.4	FET	2.6m (8'6")	7273.03	315
65	17/14.9	FET	1.9m (6'2")	7227.04	316
65	17/14.9	FET	2m (6'6")	7272.02	317
65	18/15.9	FET	2.6m (8'6")	7228.03	318
65	18/15.9	FET	2.6m (8'6")	7228.04	319
65	18/15.9	FET	2.6m (8'6")	7228.06	320
65	18/15.9	FET	2.6m (8'6")	7228.08	321
65	18/15.9	FET	2.6m (8'6")	7273.02	322
90	12/9.9	FET	0.7m (2'3")	7230.04	323
90	14/11.9	FET	1.3m (4'3")	7231.04	324
90	14/11.9	FET	1.3m (4'3")	7231.06	325
90	15/12.9	FET	1.9m (6'2")	7232.04	326
90	15/12.9	FET	1.9m (6'2")	7232.07	327
90	16.5/14.4	FET	2.6m (8'6")	7233.04	328
90	16.5/14.4	FET	2.6m (8'6")	7233.06	329
90	16.5/14.4	FET	2.6m (8'6")	7233.08	330

7270.02 Urban Vertical Polarized

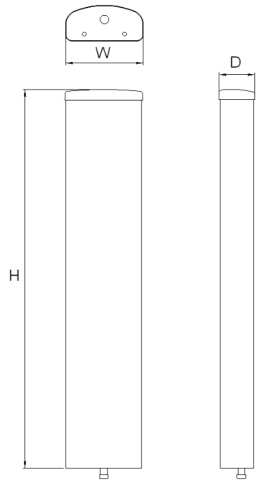
POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 12.5/10.4
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	12.5/10.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	28
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>10
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>24
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	300

MECHANICAL SPECIFICATIONS*

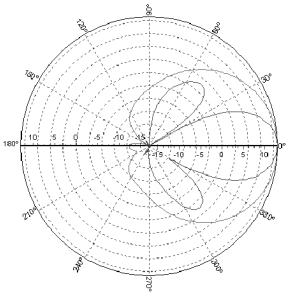
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	660x256x50 (2'2"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7.7 (16.9)
Weight, without brackets, kg (lbs)	4 (8.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	408
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	770x308x121 (2'6"x1'x5")
Shipping weight, kg (lbs)	8.3 (18.2)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7225.04 Urban Vertical Polarized

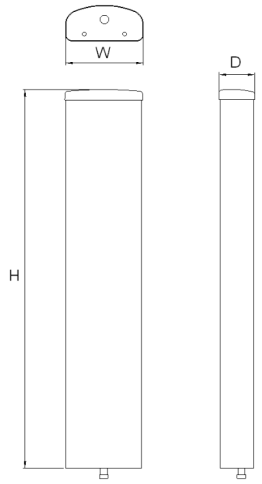
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 13/10.9
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	13/10.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	26
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>9
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>25
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	300

MECHANICAL SPECIFICATIONS*

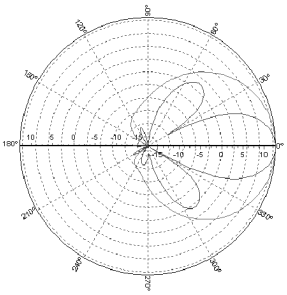
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	660x256x50 (2'2"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	8.7 (19.1)
Weight, without brackets, kg (lbs)	5 (11)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	408
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	770x308x121 (2'6"x1'x5")
Shipping weight, kg (lbs)	6 (13.2)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7226.03 Urban Vertical Polarized

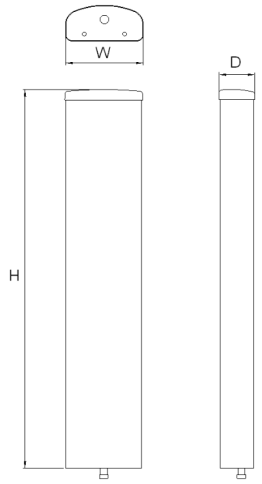
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	15.5/13.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	24
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>25
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

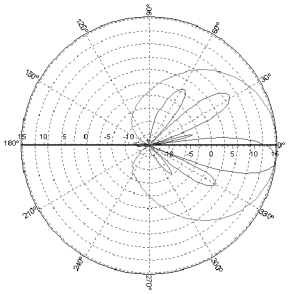
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	10.7 (23.5)
Weight, without brackets, kg (lbs)	7 (15.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	8.5 (18)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7226.04 Urban Vertical Polarized

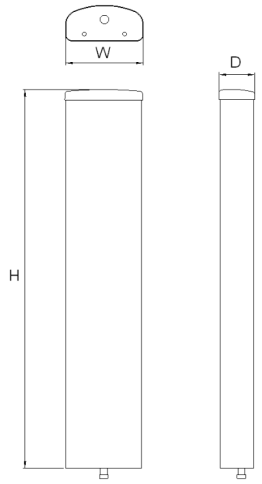
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	15.5/13.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	14
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>23
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

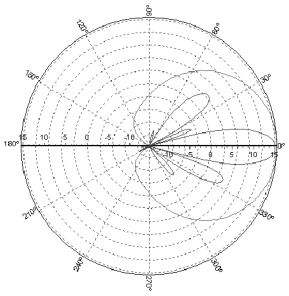
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	10.7 (23.5)
Weight, without brackets, kg (lbs)	7 (15.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	8.5 (18)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7271.02 Urban Vertical Polarized

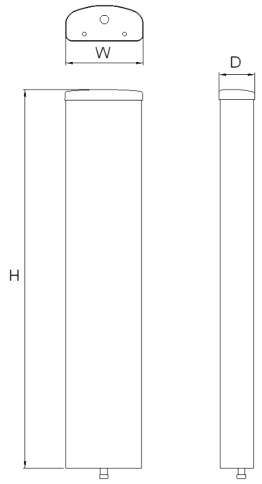
POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	15.5/13.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	14
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>24
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

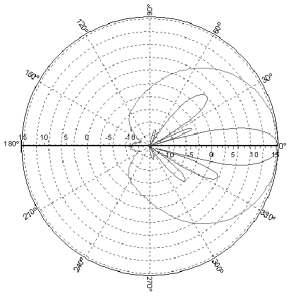
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	10.7 (23.5)
Weight, without brackets, kg (lbs)	7 (15.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	8.5 (18.7)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7271.03 Urban Vertical Polarized

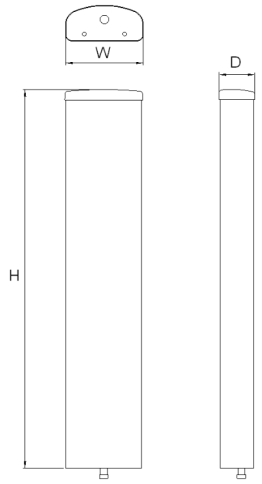
POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15/12.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	15/12.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	14
Electrical down tilt (°)	5
Side lobe suppression, vertical 1st upper (dB)	>15
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>24
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

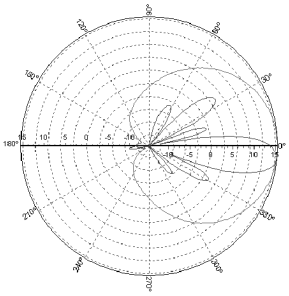
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x256x50 (4'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	10.7 (23.5)
Weight, without brackets, kg (lbs)	7 (15.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	8.5 (18.7)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7273.03 Urban Vertical Polarized

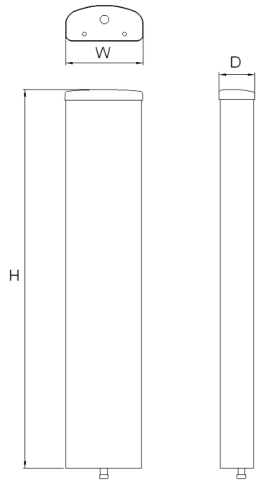
POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17.5/15.4
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	17.5/15.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	7
Electrical down tilt (°)	4
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>22
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

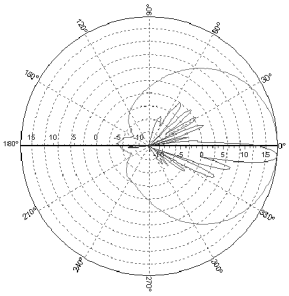
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x256x50 (8'6"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	17.7 (39)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1595
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2650x308x121 (8'8"x1'x5")
Shipping weight, kg (lbs)	18.8 (41.4)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7227.04 Urban Vertical Polarized

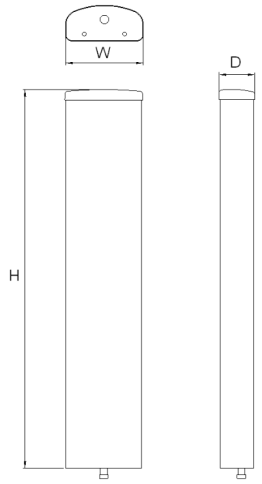
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17/14.9
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	17/14.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-13
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>23
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

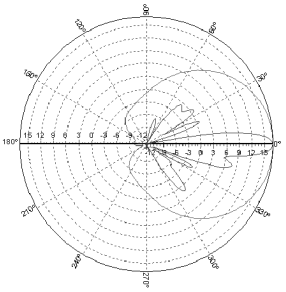
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x256x50 (6'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	14.1 (31)
Weight, without brackets, kg (lbs)	10.4 (22.9)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1199
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x308x121 (6'9"x1'x5")
Shipping weight, kg (lbs)	13 (29)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7272.02 Urban Vertical Polarized

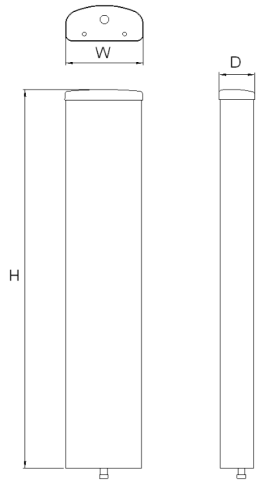
POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 17/14.9
TILT: FET
LENGTH: 2m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	17/14.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.4:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	9.5
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>18
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>24
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

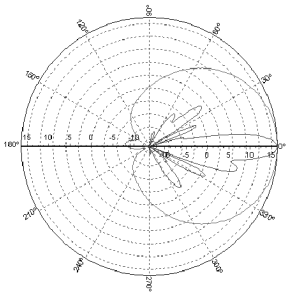
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x256x50 (6'4"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	14.7 (32.4)
Weight, without brackets, kg (lbs)	11 (24.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	816
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x308x121 (4'8"x1'x5")
Shipping weight, kg (lbs)	14.8 (32.6)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7228.03 Urban Vertical Polarized

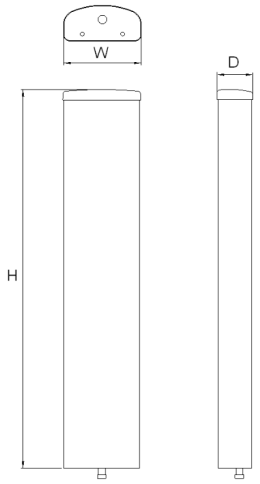
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	18/15.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>19
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>23
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

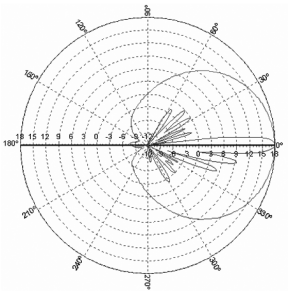
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x256x50 (8'6"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	10.3 (22.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1595
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x308x121 (8'10"x1'x5")
Shipping weight, kg (lbs)	17 (379)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7228.04 Urban Vertical Polarized

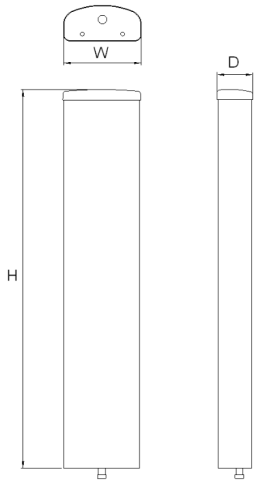
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	18/15.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>19
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>23
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

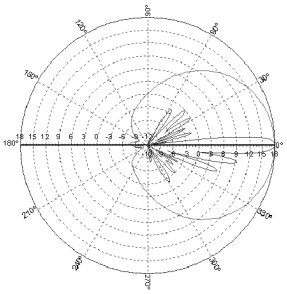
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x256x50 (8'6"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	10.3 (22.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1595
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x308x121 (8'10"x1'x5")
Shipping weight, kg (lbs)	17 (379)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7228.06 Urban Vertical Polarized

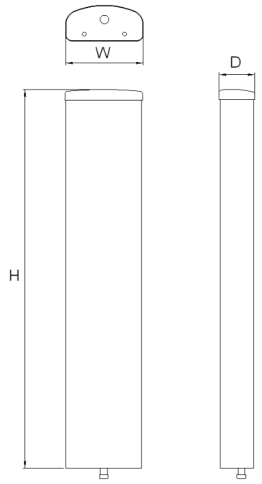
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	18/15.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>25
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

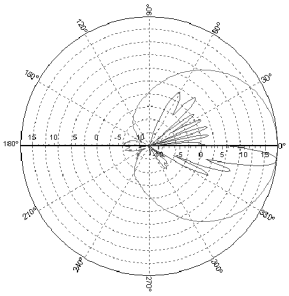
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x256x50 (8'6"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	10.3 (22.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1595
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x308x121 (8'10"x1'x5")
Shipping weight, kg (lbs)	17 (379)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7228.08 Urban Vertical Polarized

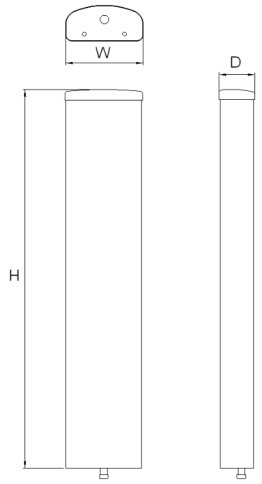
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	18/15.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	2
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>25
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

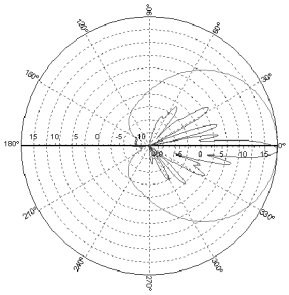
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x256x50 (8'6"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	16.5 (36.3)
Weight, without brackets, kg (lbs)	10.3 (22.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1595
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x308x121 (8'10"x1'x5")
Shipping weight, kg (lbs)	17 (379)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7273.02 Urban Vertical Polarized

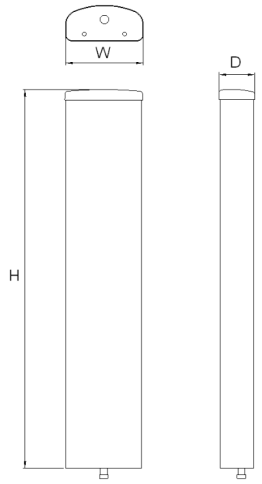
POLARIZATION: V-Pol
FREQUENCY (MHz): 824-896
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18/15.9
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896
Frequency band (MHz)	824-896
Gain (dBi/dBd)	18/15.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	65
Vertical beam width, -3 dB (°)	7
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>18
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>24
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

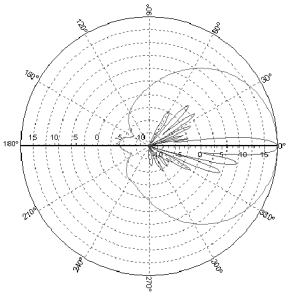
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x256x50 (8'6"x10"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	17.7 (39)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1595
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2650x308x121 (8'8"x1'x5")
Shipping weight, kg (lbs)	18.8 (41.4)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7230.04 Urban Vertical Polarized

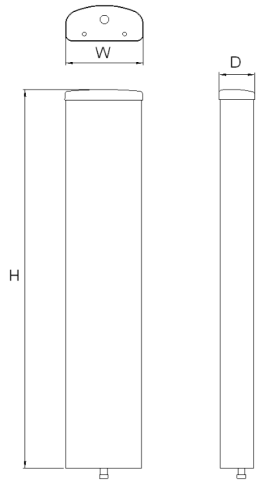
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 12/9.9
TILT: FET
LENGTH: 0.7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	12/9.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	27
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>12
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	300

MECHANICAL SPECIFICATIONS*

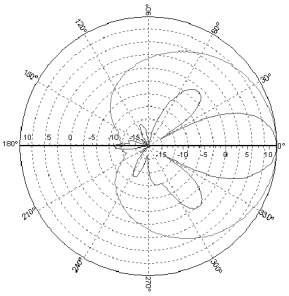
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	695x160x55 (2'3"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	7 (15.4)
Weight, without brackets, kg (lbs)	3.3 (7.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	269
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	805x216x156 (2'8"x9'x6")
Shipping weight, kg (lbs)	7.5 (16.5)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7231.04 Urban Vertical Polarized

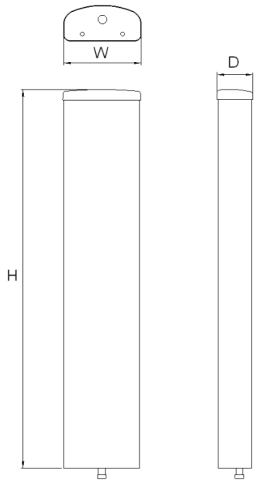
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14/11.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	14/11.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	14
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>15
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

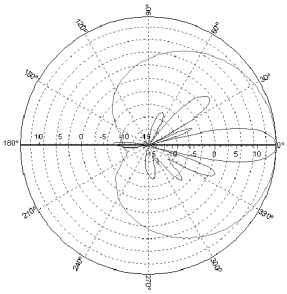
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x160x55 (4'4"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	510
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x216x156 (4'8"x9'x6")
Shipping weight, kg (lbs)	11 (24.2)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7231.06 Urban Vertical Polarized

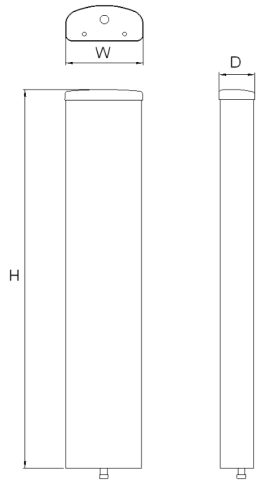
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14/11.9
TILT: FET
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	14/11.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	14
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

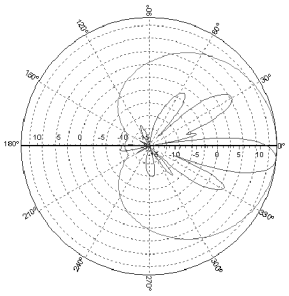
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x160x55 (4'4"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	9.7 (21.3)
Weight, without brackets, kg (lbs)	6 (13.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	510
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	1430x216x156 (4'8"x9'x6")
Shipping weight, kg (lbs)	11 (24.2)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7232.04 Urban Vertical Polarized

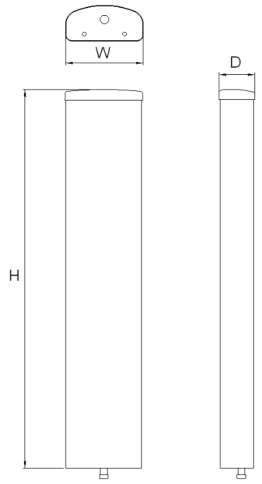
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15/12.9
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	15/12.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>15
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

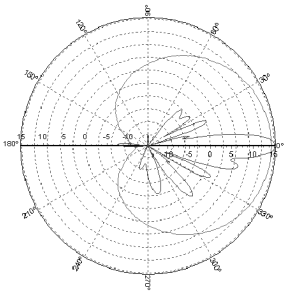
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x160x55 (6'4"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	13.7 (30.2)
Weight, without brackets, kg (lbs)	10 (22)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	750
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x216x156 (6'9"x9'x6")
Shipping weight, kg (lbs)	15 (33)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7232.07 Urban Vertical Polarized

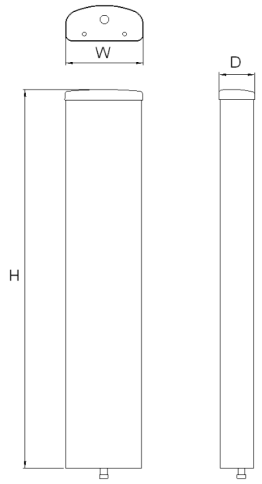
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15/12.9
TILT: FET
LENGTH: 1.9m (6'2")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	15/12.9
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	9
Electrical down tilt (°)	4
Side lobe suppression, vertical 1st upper (dB)	>15
First null fill (dB)	>-15
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

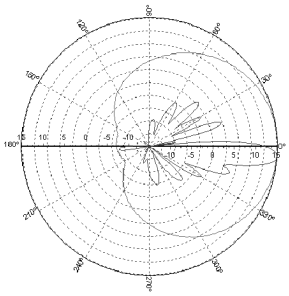
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1940x160x55 (6'4"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	13.7 (30.2)
Weight, without brackets, kg (lbs)	10 (22)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	750
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2050x216x156 (6'9"x9'x6")
Shipping weight, kg (lbs)	15 (33)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7233.04 Urban Vertical Polarized

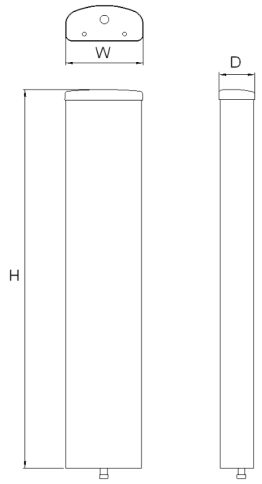
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16.5/14.4
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	16.5/14.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	0
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

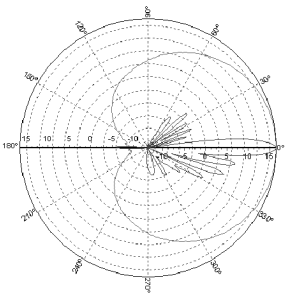
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x160x55 (8'6"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	13.8 (30.4)
Weight, without brackets, kg (lbs)	8.3 (18.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	997
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x216x156 (8'10"x9'x6")
Shipping weight, kg (lbs)	15 (33)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7233.06 Urban Vertical Polarized

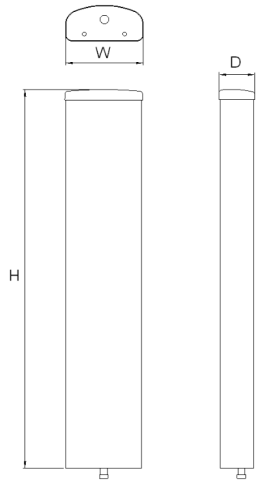
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16.5/14.4
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	16.5/14.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	6
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

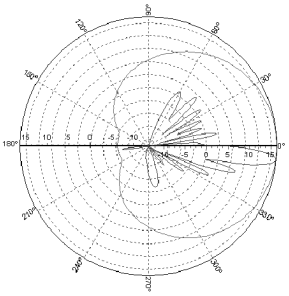
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x160x55 (8'6"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	13.8 (30.4)
Weight, without brackets, kg (lbs)	8.3 (18.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	997
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x216x156 (8'10"x9'x6")
Shipping weight, kg (lbs)	15 (33)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7233.08 Urban Vertical Polarized

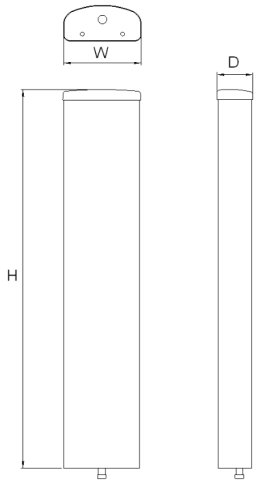
POLARIZATION: V-Pol
FREQUENCY (MHz): 870-960
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16.5/14.4
TILT: FET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960
Frequency band (MHz)	870-960
Gain (dBi/dBd)	16.5/14.4
Polarization	Linear vertical
Nominal Impedance (q)	50
VSWR	<1.3:1
Horizontal beam width, -3 dB (°)	90
Vertical beam width, -3 dB (°)	6.5
Electrical down tilt (°)	2
Side lobe suppression, vertical 1st upper (dB)	>17
First null fill (dB)	>-20
Vertical beam squint (°)	0.5
Front to back ratio (dB)	>20
IM3, 2xTx@43dBm (dBc)	<-150
Power handling, average total (W)	500

MECHANICAL SPECIFICATIONS*

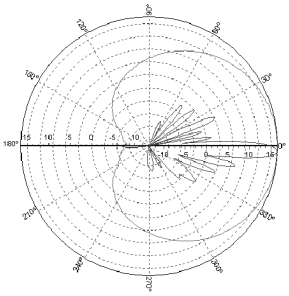
Connector	1 x 7/16 DIN female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2580x160x55 (8'6"x6"x2")
Mounting	Pre-mounted standard bracket
Weight, with brackets, kg (lbs)	13.8 (30.4)
Weight, without brackets, kg (lbs)	8.3 (18.2)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	997
Maximum operational wind speed, m/s (mph)	42
Survival wind speed, m/s (mph)	55
Lightning protection	DC grounded
Radome material	PVC
Radome colour	Light Gray
Package size, HxWxD, mm (ft)	2690x216x156 (8'10"x9'x6")
Shipping weight, kg (lbs)	15 (33)
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

POWERWAVE | ALXC Cross Polarized Antennas, 870-960/1710-1880 MHz

Dual Band Antennas

Cross Polarized

ALXC Cross Polarized Antennas, 870-960/1710-1880

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	15.5/13.4, 15.0/12.9	FET	1.5m (4'11")	7329.00B	332
65	15.5/13.4, 15.0/12.9	FET	1.5m (4'11")	7329.06B	333
65	15.5/13.4, 17.5/15.4	FET	1.5m (4'11")	7330.00B	334
65	15.5/13.4, 17.5/15.4	FET	1.5m (4'11")	7330.02B	335
65	15.5/13.4, 17.5/15.4	FET	1.5m (4'11")	7330.04B	336
65	15.5/13.4, 17.5/15.4	FET	1.5m (4'11")	7330.06B	337
65	16.5/14.4, 16.0/13.9	FET	2.0m (6'6")	7331.00B	338
65	16.5/14.4, 16.0/13.9	FET	2.0m (6'6")	7331.02B	339
65	16.5/14.4, 16.0/13.9	FET	2.0m (6'6")	7331.04B	340
65	16.5/14.4, 16.0/13.9	FET	2.0m (6'6")	7331.06B	341

7329.00B ALXC Cross Polarized

POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4, 15.0/12.9
TILT: FET
LENGTH: 1.5m (4'11")

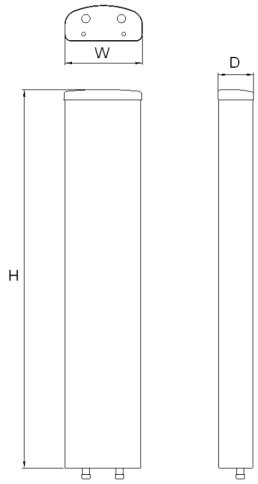
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	15.5/13.4	15/12.9
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	65	65
Vertical beam width, -3 dB (°)	13	13
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>13	>15
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
Front to back ratio, total power (dB)	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>12	>12
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

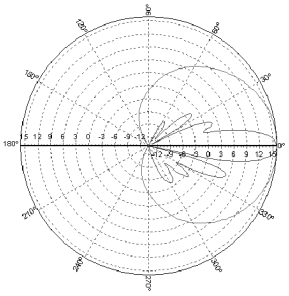
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1450x280x125 (4'9"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.6 (27.7)
Weight, without brackets, kg (lbs)	7.1 (15.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	981
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	1620x355x255 (5'4"x1'2"x10")
Shipping weight, kg (lbs)	15.3 (13.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

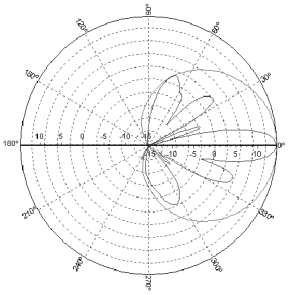


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7329.06B ALXC Cross Polarized

POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4, 15.0/12.9
TILT: FET
LENGTH: 1.5m (4'11")

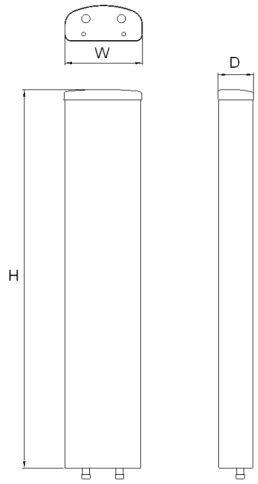
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	15.5/13.4	14.5/12.4
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	65	65
Vertical beam width, -3 dB (°)	13	13
Electrical down tilt (°)	6	6
Side lobe suppression, vertical 1st upper (dB)	>8	>13
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
Front to back ratio, total power (dB)	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>11	>9
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

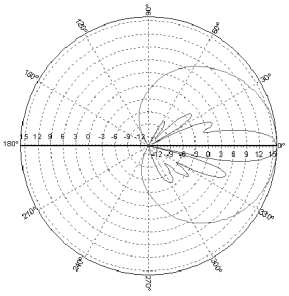
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1450x280x125 (4'9"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.6 (27.7)
Weight, without brackets, kg (lbs)	7.1 (15.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	981
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	1620x355x255 (5'4"x1'2"x10")
Shipping weight, kg (lbs)	15.3 (13.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

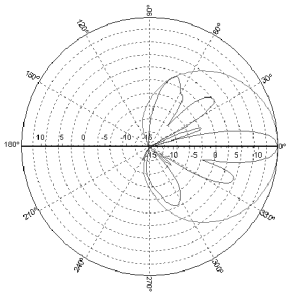


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7330.00B ALXC Cross Polarized

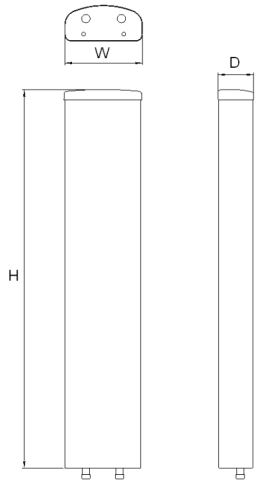
POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4, 17.5/15.4
TILT: FET
LENGTH: 1.5m (4'11")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	15.5/13.4	17.5/15.4
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	66
Vertical beam width, -3 dB (°)	13.4	7
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
Front to back ratio, total power (dB)	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>12	>13
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

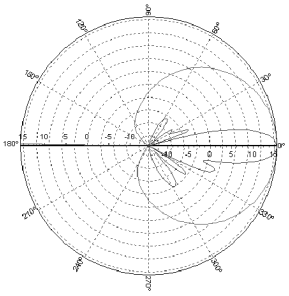
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1450x280x125 (4'9"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.6 (27.7)
Weight, without brackets, kg (lbs)	7.1 (15.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	981
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	1620x355x255 (5'4"x1'2"x10")
Shipping weight, kg (lbs)	15.3 (13.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10



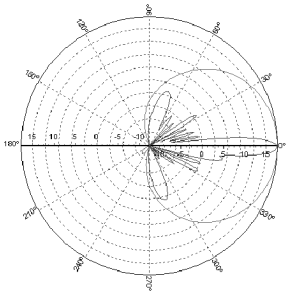
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7330.02B ALXC Cross Polarized

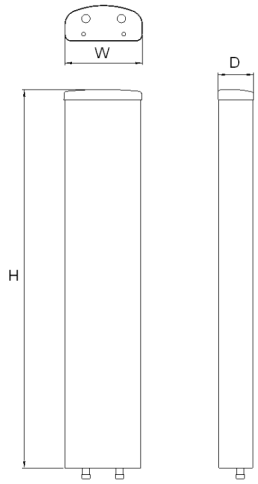
POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4, 17.5/15.4
TILT: FET
LENGTH: 1.5m (4'11")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	15.5/13.4	17.5/15.4
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	66
Vertical beam width, -3 dB (°)	13.4	7
Electrical down tilt (°)	2	2
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
Front to back ratio, total power (dB)	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>12	>13
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

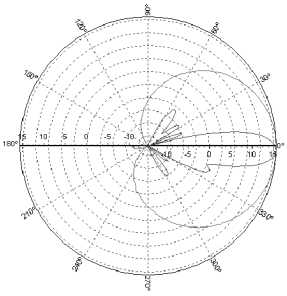
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1450x280x125 (4'9"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.6 (27.7)
Weight, without brackets, kg (lbs)	7.1 (15.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	981
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	1620x355x255 (5'4"x1'2"x10")
Shipping weight, kg (lbs)	15.3 (13.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10



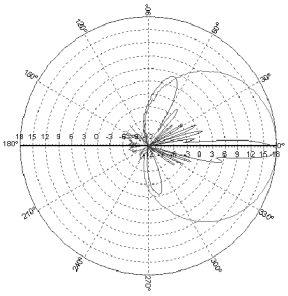
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7330.04B ALXC Cross Polarized

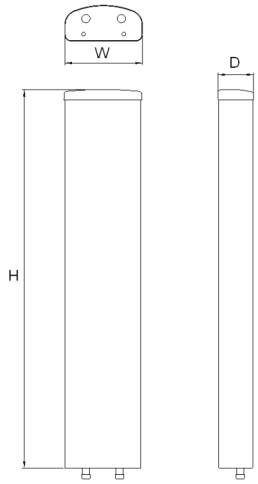
POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4, 17.5/15.4
TILT: FET
LENGTH: 1.5m (4'11")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	15.5/13.4	17.5/15.4
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	66
Vertical beam width, -3 dB (°)	13.4	7
Electrical down tilt (°)	4	4
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
Front to back ratio, total power (dB)	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>12	>13
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

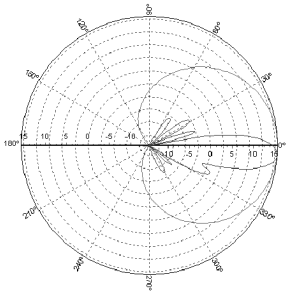
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1450x280x125 (4'9"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.6 (27.7)
Weight, without brackets, kg (lbs)	7.1 (15.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	981
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	1620x355x255 (5'4"x1'2"x10")
Shipping weight, kg (lbs)	15.3 (13.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10



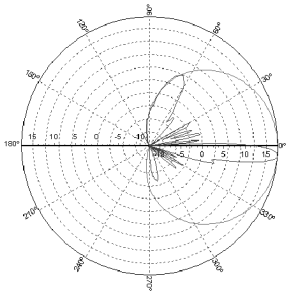
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7330.06B ALXC Cross Polarized

POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.5/13.4, 17.5/15.4
TILT: FET
LENGTH: 1.5m (4'11")

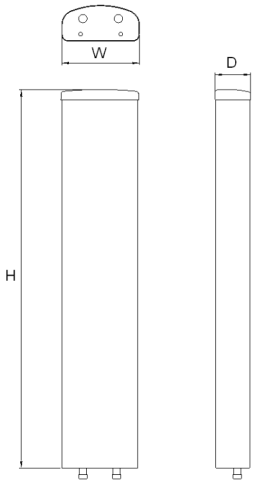
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	15.6/13.5	17.3/15.2
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	66
Vertical beam width, -3 dB (°)	13	7
Electrical down tilt (°)	6	6
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-20	>-20
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
Front to back ratio, total power (dB)	>26	>26
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

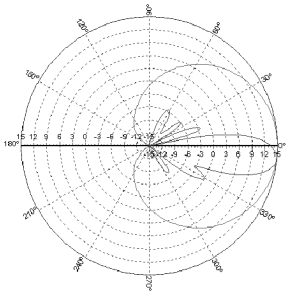
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1450x280x125 (4'9"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	12.6 (27.7)
Weight, without brackets, kg (lbs)	7.1 (15.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	981
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	1620x355x255 (5'4"x1'2"x10")
Shipping weight, kg (lbs)	15.3 (13.7)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

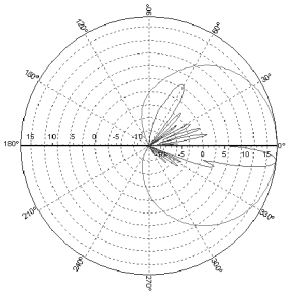


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7331.00B ALXC Cross Polarized

POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4, 16.0/13.9
TILT: FET
LENGTH: 2.0m (6'6")

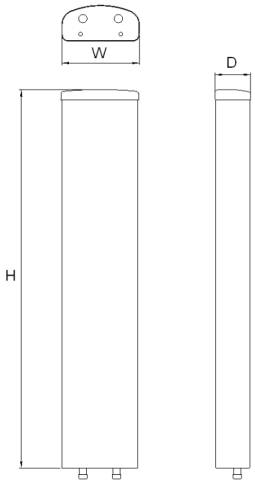
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	16.6/14.5	16.1/14
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	64
Vertical beam width, -3 dB (°)	9	9
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-22	>-22
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>25	>25
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

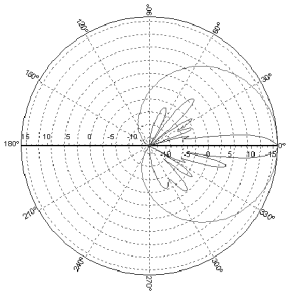
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1990x280x125 (6'6"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	15.3 (33.7)
Weight, without brackets, kg (lbs)	9.8 (21.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1346
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	2160x355x255 (7'1"x1'2"x10")
Shipping weight, kg (lbs)	18.3 (40.3)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

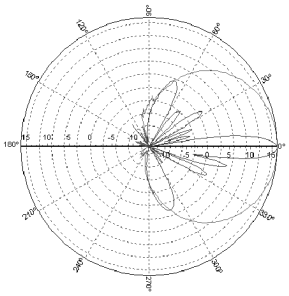


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7331.02B ALXC Cross Polarized

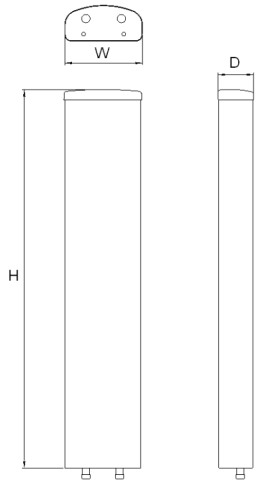
POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4, 16.0/13.9
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	16.6/14.5	15.6/13.5
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	64
Vertical beam width, -3 dB (°)	9	9
Electrical down tilt (°)	2	2
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-22	>-22
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>25	>25
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

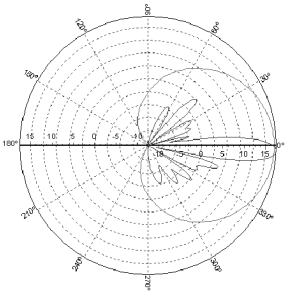
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1990x280x125 (6'6"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	15.3 (33.7)
Weight, without brackets, kg (lbs)	9.8 (21.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1346
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	2160x355x255 (7'1"x1'2"x10")
Shipping weight, kg (lbs)	18.3 (40.3)
RET	-
Brackets	7256.00, 7454.00, 2210.10



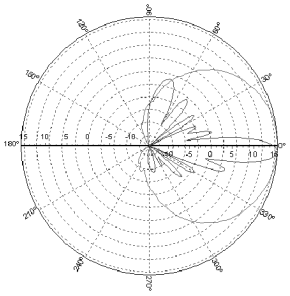
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7331.04B ALXC Cross Polarized

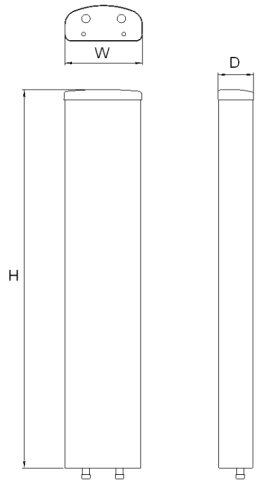
POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4, 16.0/13.9
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	16.6/14.5	15.4/13.3
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	64
Vertical beam width, -3 dB (°)	9	9
Electrical down tilt (°)	4	4
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-22	>-22
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>25	>25
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

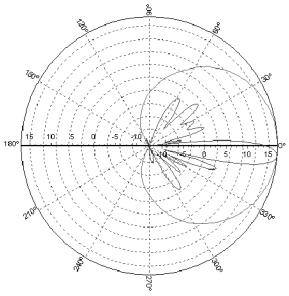
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1990x280x125 (6'6"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	15.3 (33.7)
Weight, without brackets, kg (lbs)	9.8 (21.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1346
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	2160x355x255 (7'1"x1'2"x10")
Shipping weight, kg (lbs)	18.3 (40.3)
RET	-
Brackets	7256.00, 7454.00, 2210.10



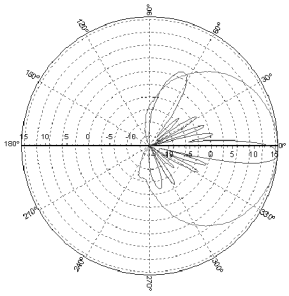
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

7331.06B ALXC Cross Polarized

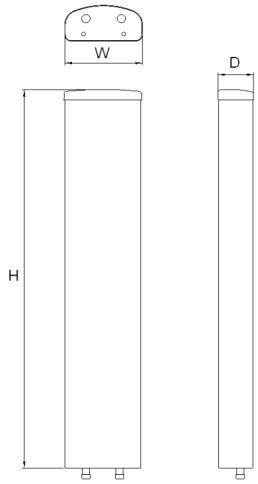
POLARIZATION: X-Pol
FREQUENCY (MHz): 870-960, 1710-1880
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.5/14.4, 16.0/13.9
TILT: FET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	870-960	1710-1880
Frequency band (MHz)	870-960	1710-1880
Gain (dBi/dBd)	16.6/14.5	16.1/14
Polarization	Dual linear slanted	
Nominal Impedance (q)	50	
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	67	64
Vertical beam width, -3 dB (°)	9	9
Electrical down tilt (°)	6	6
Side lobe suppression, vertical 1st upper (dB)	>16	>16
Isolation between inputs (dB)	>30	>30
Inter band Isolation (dB)	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0
First null fill (dB)	>-22	>-22
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>25	>25
Front to back ratio, total power (dB)	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>13	>13
Cross polar discrimination (XPD) ±60° (dB)	>11	>11
IM3, 2xTx@43dBm (dBc)	>-150	>-150
Power handling, average per input (W)	300	300
Power handling, average total (W)	600	600

MECHANICAL SPECIFICATIONS*

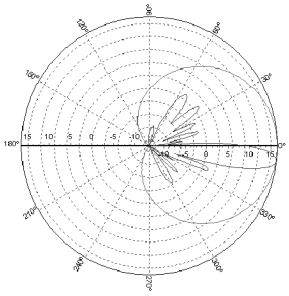
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1990x280x125 (6'6"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	15.3 (33.7)
Weight, without brackets, kg (lbs)	9.8 (21.6)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1346
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray
Package size, HxWxD, mm (ft)	2160x355x255 (7'1"x1'2"x10")
Shipping weight, kg (lbs)	18.3 (40.3)
RET	-
Brackets	7256.00, 7454.00, 2210.10



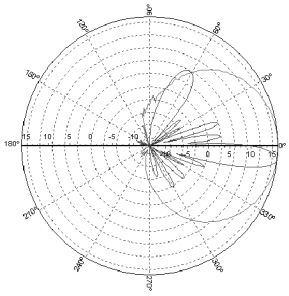
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



925 MHz



1805 MHz

POWERWAVE | DBB90 Cross Polarized Antennas, 824-896/1710-2170 MHz

Dual Band Antennas

Cross Polarized

DBB90 Cross Polarized Antennas, 824-896/1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
90	13.5/11.4, 15.5/13.4	MET	1.4m (4'7")	7770.00A	343
90	15/12.9, 16/13.9	MET	2.0m (6'6")	7772.00A	344
90	16/13.9, 16/13.9	MET	2.6m (8'6")	7775.00A	345

7770.00A DBB90 Broadband Cross Polarized

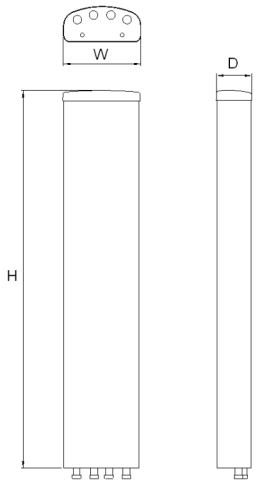
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896, 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/11.4, 15.5/13.4
TILT: MET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896	1710-2170		
Frequency band (MHz)	824-896	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	13.5/11.4	15.5/13.4	15.5/13.4	15.5/13.4
Polarization	Dual linear ±45°	Dual linear ±45°		
Nominal Impedance (q)	50	50		
VSWR	<1.5:1	<1.5:1		
Horizontal beam width, -3 dB (°)	85	90	90	90
Vertical beam width, -3 dB (°)	15	7	7	7
Electrical down tilt (°)	0 to 10	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>18	>18	>18	>18
Isolation between inputs (dB)	>30	30	>30	-
Inter band Isolation (dB)	>36	>36		
Tracking, horizontal plane ±60° (dB)	<2	<2	<2	<2
First null fill (dB)	-	-	-	-
Vertical beam squint (°)	<1.0	<0.5	<0.5	<0.5
Front to back ratio (dB)	>25	>25	>25	>25
Front to back ratio, total power (dB)	>22	>21	>21	>21
Cross polar discrimination (XPD) 0° (dB)	-	-	-	-
Cross polar discrimination (XPD) ±60° (dB)	>10	>10	>10	>10
Far field coupling	-	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153		
IM7, 2xTx@43dBm (dBc)	-	<-160		
Power handling, average per input (W)	500	250		
Power handling, average total (W)	800	500		

MECHANICAL SPECIFICATIONS*

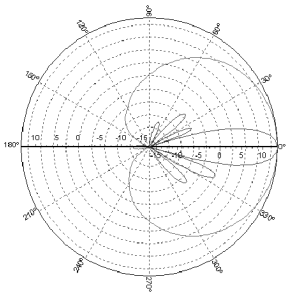
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1408x280x125mm
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	17.6 (39)
Weight, without brackets, kg (lbs)	12.1 (27)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	952
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	1550x355x255 (61"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	21.5 (47.4)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



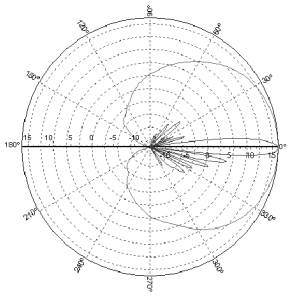
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visithttp://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna



Typical Horizontal and Vertical Pattern for Above Antenna

7772.00A DBB90 Broadband Cross Polarized

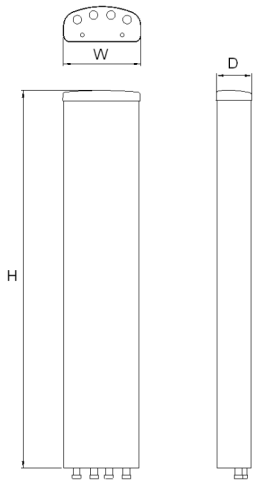
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896, 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 15/12.9, 16/13.9
TILT: MET
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896	1710-2170		
Frequency band (MHz)	824-896	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	15/12.9	16/13.9	16/13.9	16/13.9
Polarization	Dual linear ±45°	Dual linear ±45°		
Nominal Impedance (q)	50	50		
VSWR	<1.5:1	<1.5:1		
Horizontal beam width, -3 dB (°)	85	90	90	90
Vertical beam width, -3 dB (°)	9.5	6.5	6.5	6.5
Electrical down tilt (°)	0 to 7	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>17	>15	>15	>15
Isolation between inputs (dB)	>30	>30	>30	-
Inter band Isolation (dB)	>38	>38		
Tracking, horizontal plane ±60° (dB)	<1	<2	<2	<2
First null fill (dB)	-	-	-	-
Vertical beam squint (°)	<1.0	<0.5	<0.5	<0.5
Front to back ratio (dB)	>25	>25	>25	>25
Front to back ratio, total power (dB)	>22	>21	>21	>21
Cross polar discrimination (XPD) 0° (dB)	-	-	-	-
Cross polar discrimination (XPD) ±60° (dB)	>10	>9	>9	>9
Far field coupling	-	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153		
IM7, 2xTx@43dBm (dBc)	-	-		
Power handling, average per input (W)	400	250		
Power handling, average total (W)	800	500		

MECHANICAL SPECIFICATIONS*

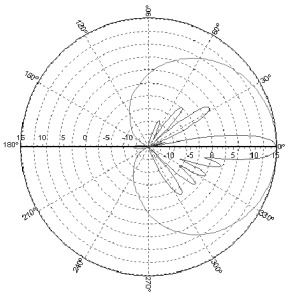
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2033x280x125mm
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.8 (44)
Weight, without brackets, kg (lbs)	16.0 (35)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1375
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	2175x355x255 (7'2"x14"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	27 (59.5)
RET	7020.00, 7031.00, 7032.00, 7033.00
Brackets	7256.00, 7454.00, 2210.10



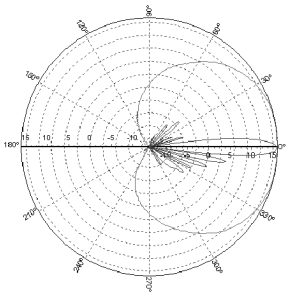
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visithttp://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna



Typical Horizontal and Vertical Pattern for Above Antenna

7775.00A DBB90 Broadband Cross Polarized

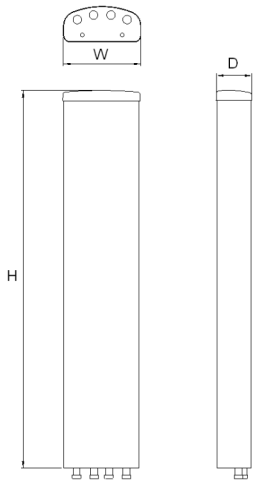
POLARIZATION: X-Pol
FREQUENCY (MHz): 824-896, 1710-2170
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 16/13.9, 16/13.9
TILT: MET
LENGTH: 2.6m (8'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	824-896	1710-2170		
Frequency band (MHz)	824-896	1710-1880	1850-1990	1900-2170
Gain (dBi/dBd)	16/13.9	16/13.9	16/13.9	16/13.9
Polarization	Dual linear ±45°	Dual linear ±45°		
Nominal Impedance (q)	50	50		
VSWR	<1.5:1	<1.5:1		
Horizontal beam width, -3 dB (°)	85	90	90	90
Vertical beam width, -3 dB (°)	7	6.5	6.5	6.5
Electrical down tilt (°)	0 to 6	0 to 8		
Side lobe suppression, vertical 1st upper (dB)	>16	>16	>16	>16
Isolation between inputs (dB)	>30	>30	>30	-
Inter band Isolation (dB)	>36	>36		
Tracking, horizontal plane ±60° (dB)	<1	<2	<2	<2
First null fill (dB)	-	-	-	-
Vertical beam squint (°)	<0.5	<0.5	<0.5	<0.5
Front to back ratio (dB)	>25	>25	>25	>25
Front to back ratio, total power (dB)	>23	>21	>21	>21
Cross polar discrimination (XPD) 0° (dB)	-	-	-	-
Cross polar discrimination (XPD) ±60° (dB)	>12	>9	>9	>9
Far field coupling	-	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153		
IM7, 2xTx@43dBm (dBc)	-	-		
Power handling, average per input (W)	400	250		
Power handling, average total (W)	800	500		

MECHANICAL SPECIFICATIONS*

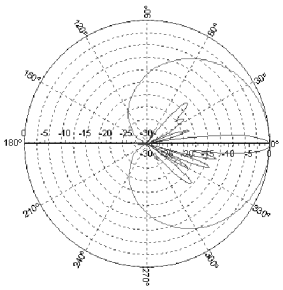
Connector	4 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	2658x280x125mm
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	25.1 (55)
Weight, without brackets, kg (lbs)	19.6 (43)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1797
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	GRP
Package size, HxWxD, mm (ft)	2800x355x255 (9'2"x1'2"x10")
Radome colour	Light Grey
Shipping weight, kg (lbs)	32.5 (71.6)
RET	7020.00, 7031.00, 7032.00, 7033.10
Brackets	7256.00, 7454.00, 2210.10



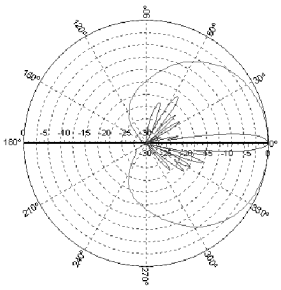
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visithttp://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna



Typical Horizontal and Vertical Pattern for Above Antenna

POWERWAVE | **ALVC Vertical Polarized Antennas, 806-896/1850-1990 MHz**

Dual Band Antennas

Vertical Polarized

ALVC Vertical Polarized Antennas, 806-896/1850-1990 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	14.5/12.4, 17.5/15.4	MET	1.3m (4'3")	7840.00	347
70	12/9.9, 15/12.9	FET	0.7m (2'3")	7337.00B	348
70	14.5/12.4, 17.5/15.4	FET	1.4m (4'7")	7333.00B	349
70	14.5/12.4, 17.5/15.4	FET	1.4m (4'7")	7333.02B	350
70	14.5/12.4, 17.5/15.4	FET	1.4m (4'7")	7333.06B	351
80	11.5/9.4, 14.5/12.4	FET	0.7m (2'3")	7338.00B	352
80	14.0/11.9, 17.0/14.9	FET	1.4m (4'7")	7332.02B	353
80	14.0/11.9, 17.0/14.9	FET	1.4m (4'7")	7332.06B	354
90	11.0/8.9, 14.0/11.9	FET	0.7m (2'3")	7339.00B	355
90	13.5/12.4, 16.5/14.4	FET	1.4m (4'7")	7332.00B	356
90	13.5/12.4, 16.5/14.4	FET	1.4m (4'7")	7334.00B	357
90	13.5/12.4, 16.5/14.4	FET	1.4m (4'7")	7334.02B	358
90	13.5/12.4, 16.5/14.4	FET	1.4m (4'7")	7334.06B	359
90	14.0/11.9, 17.0/14.9	MET	1.3m (4'3")	7850.00B	360

7840.00 ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 14.5/12.4, 17.5/15.4
TILT: MET
LENGTH: 1.3m (4'3")

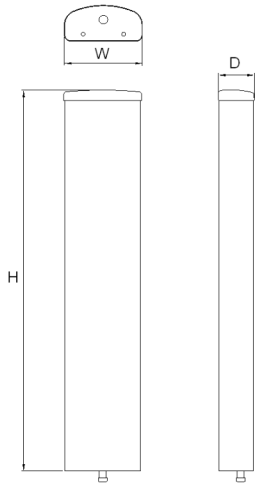
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	824-896	1850-1990
Gain (dBi/dBd)	14/11.9	17.5/15.4
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	73	68
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	0-12	0-8
Side lobe suppression, vertical 1st upper (dB)	>15	>15
First null fill (dB)	-	-18
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>25	>25
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	400	200

MECHANICAL SPECIFICATIONS*

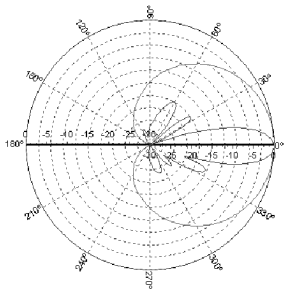
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1331x280x125 (4'4"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	17.5 (38.5)
Weight, without brackets, kg (lbs)	12 (26.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	900
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1495x355x255 (4'11"x1'2"x10")
Shipping weight, kg (lbs)	15.8 (34.8)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

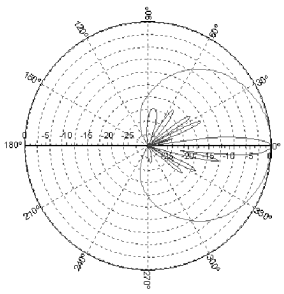


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7337.00B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 70
GAIN (dBi/dBd): 12/9.9, 15/12.9
TILT: FET
LENGTH: 0.7m (2'3")

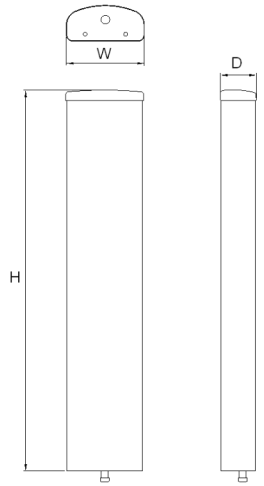
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	12.2/10.1	15.4/13.3
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	70	71
Vertical beam width, -3 dB (°)	29	13
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>14	>14
First null fill (dB)	-	-18
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>28	>28
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

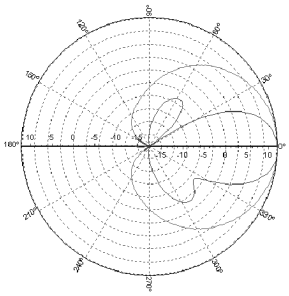
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	710x280x125 (2'4"x11"x5")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.2 (20.2)
Weight, without brackets, kg (lbs)	5.5 (12.1)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	480
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	850x355x200 (2'9"x1'2"x10")
Shipping weight, kg (lbs)	6.5 (14)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

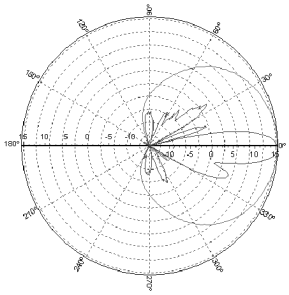


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7333.00B ALVC Vertical Polarized

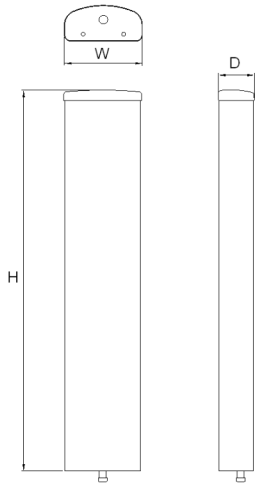
POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 70
GAIN (dBi/dBd): 14.5/12.4, 17.5/15.4
TILT: FET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	14.8/12.7	17.6/15.5
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	72	70
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>16	>16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>28	>28
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

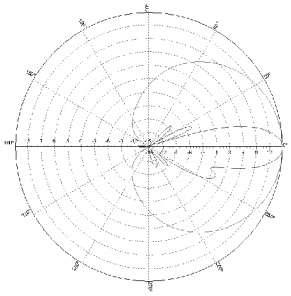
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



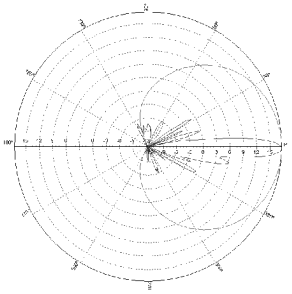
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7333.02B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 70
GAIN (dBi/dBd): 14.5/12.4, 17.5/15.4
TILT: FET
LENGTH: 1.4m (4'7")

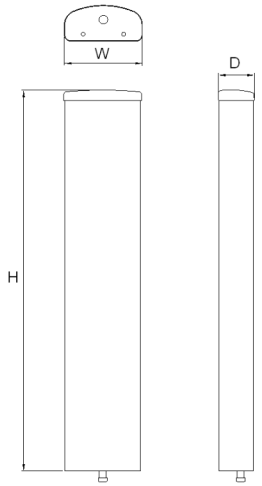
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	14.8/12.7	17.6/15.5
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	72	71
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	2	2
Side lobe suppression, vertical 1st upper (dB)	>16/16	>16/16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>28	>28
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

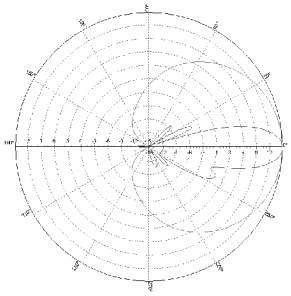
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

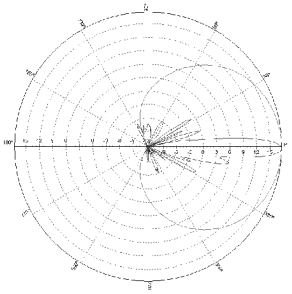


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7333.06B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 70
GAIN (dBi/dBd): 14.5/12.4, 17.5/15.4
TILT: FET
LENGTH: 1.4m (4'7")

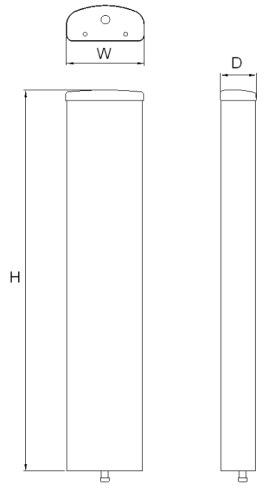
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	14.8/12.7	17.6/15.5
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	72	71
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	6	6
Side lobe suppression, vertical 1st upper (dB)	>16/16	>16/16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>28	>28
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

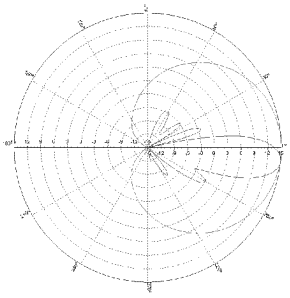
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

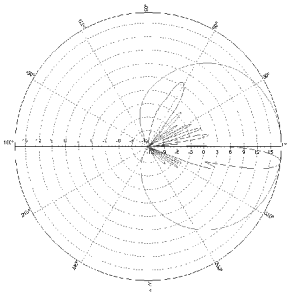


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7338.00B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 80
GAIN (dBi/dBd): 11.5/9.4, 14.5/12.4
TILT: FET
LENGTH: 0.7m (2'3")

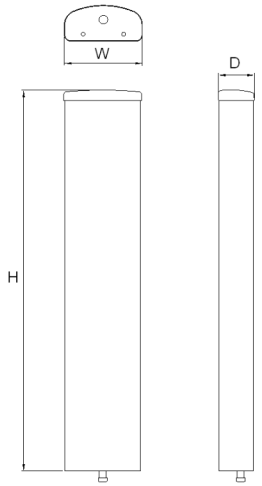
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	11.7/9.6	14.5/12.4
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	79	79
Vertical beam width, -3 dB (°)	29	13
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>15	>15
First null fill (dB)	-	-18
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

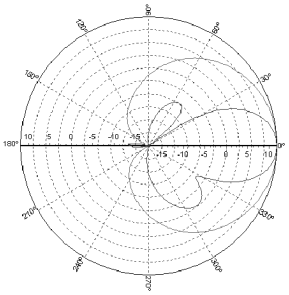
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	710x280x125 (2'4"x11"x5")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.2 (20.2)
Weight, without brackets, kg (lbs)	5.5 (12.1)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	480
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	850x355x200 (2'9"x1'2"x10")
Shipping weight, kg (lbs)	6.5 (14)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

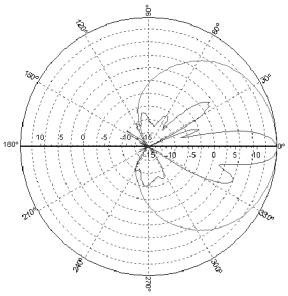


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7332.02B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 80
GAIN (dBi/dBd): 14.0/11.9, 17.0/14.9
TILT: FET
LENGTH: 1.4m (4'7")

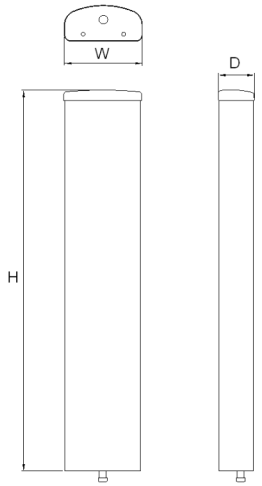
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	14/11.9	17.2/15.1
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	81	79
Vertical beam width, -3 dB (°)	15.5	7
Electrical down tilt (°)	2	2
Side lobe suppression, vertical 1st upper (dB)	>16	>16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>27	>27
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	350

MECHANICAL SPECIFICATIONS*

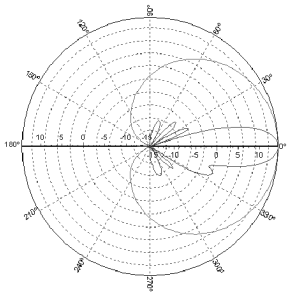
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

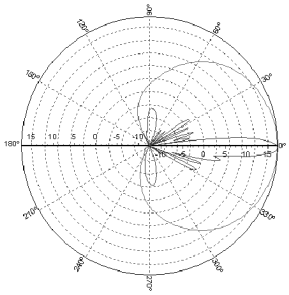


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7332.06B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 80
GAIN (dBi/dBd): 14.0/11.9, 17.0/14.9
TILT: FET
LENGTH: 1.4m (4'7")

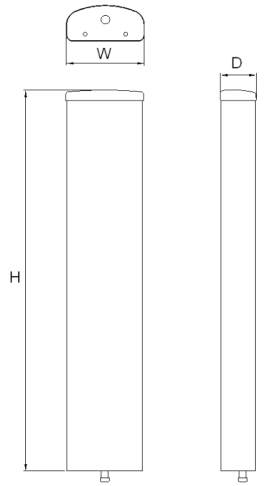
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	14/11.9	17.2/15.1
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	81	79
Vertical beam width, -3 dB (°)	15.5	7
Electrical down tilt (°)	6	6
Side lobe suppression, vertical 1st upper (dB)	>16	>16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>27	>27
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	350

MECHANICAL SPECIFICATIONS*

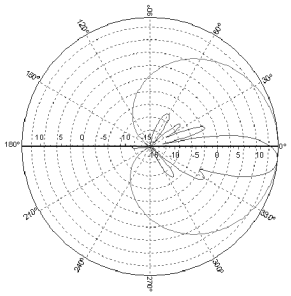
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

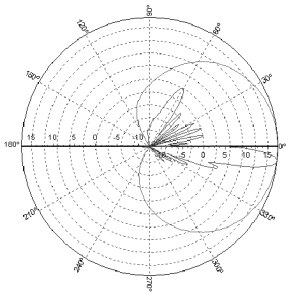


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7339.00B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 11.0/8.9, 14.0/11.9
TILT: FET
LENGTH: 0.7m (2'3")

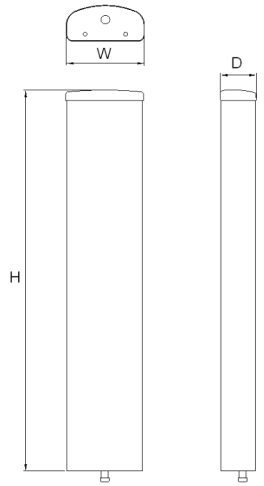
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	11.2/9.1	14/11.9
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	88	92
Vertical beam width, -3 dB (°)	29	14
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>15	>15
First null fill (dB)	-	-18
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>25	>25
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

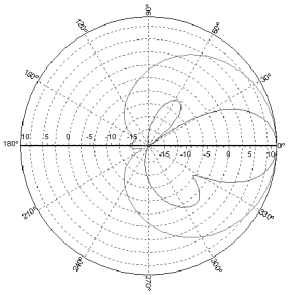
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	710x280x125 (2'4"x11"x5")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	9.2 (20.2)
Weight, without brackets, kg (lbs)	5.5 (12.1)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	480
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	850x355x200 (2'9"x1'2"x10")
Shipping weight, kg (lbs)	6.5 (14)
RET	-
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

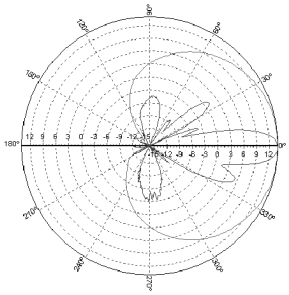


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7332.00B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/12.4, 16.5/14.4
TILT: FET
LENGTH: 1.4m (4'7")

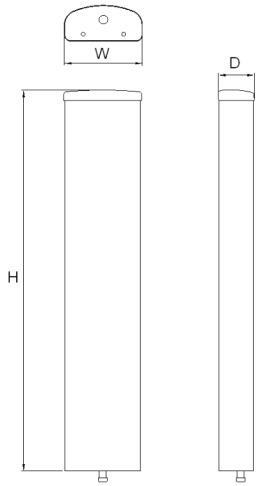
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	13.5/12.4	17.6/15.516.5/14.4
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	89	91
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	2	2
Side lobe suppression, vertical 1st upper (dB)	>16	>16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

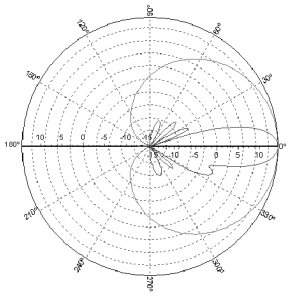
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

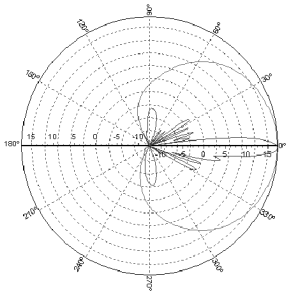


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7334.00B ALVC Vertical Polarized

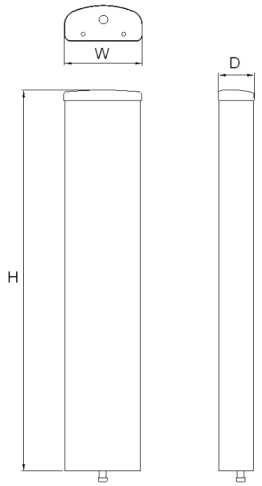
POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/12.4, 16.5/14.4
TILT: FET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	14/11.9	16.5/14.4
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	89	91
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	0	0
Side lobe suppression, vertical 1st upper (dB)	>16	>16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

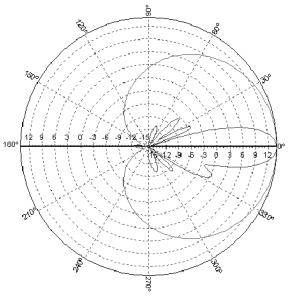
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



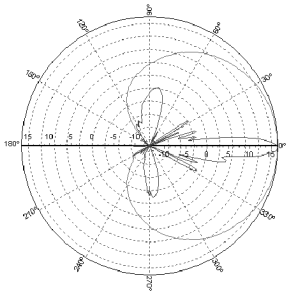
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7334.02B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/12.4, 16.5/14.4
TILT: FET
LENGTH: 1.4m (4'7")

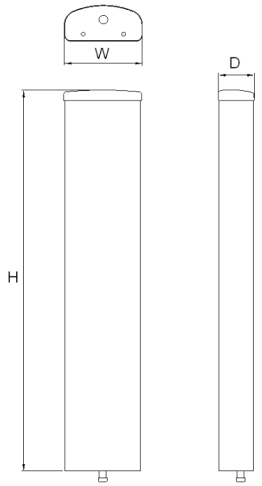
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	13.5/11.4	16.5/14.4
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	89	91
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	2	2
Side lobe suppression, vertical 1st upper (dB)	>16/16	>16/16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

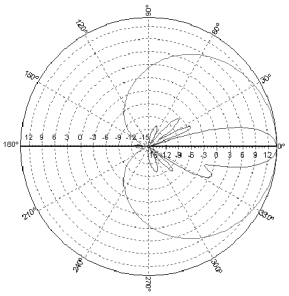
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

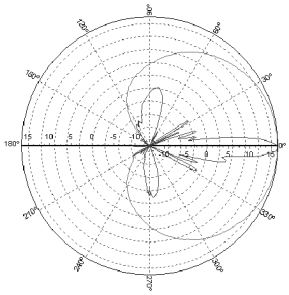


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7334.06B ALVC Vertical Polarized

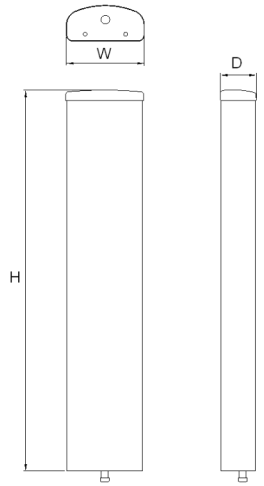
POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 13.5/12.4, 16.5/14.4
TILT: FET
LENGTH: 1.4m (4'7")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	13.5/11.4	16.5/14.4
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.4:1	<1.4:1
Horizontal beam width, -3 dB (°)	89	91
Vertical beam width, -3 dB (°)	15	7
Electrical down tilt (°)	6	6
Side lobe suppression, vertical 1st upper (dB)	>16/16	>16/16
First null fill (dB)	-	-17
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	350	175

MECHANICAL SPECIFICATIONS*

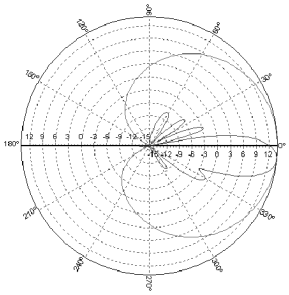
Connector	1 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1350x280x125 (4'5"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	14.9 (32.8)
Weight, without brackets, kg (lbs)	9.4 (20.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	913
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1520x355x200 (5'x1'2"x10")
Shipping weight, kg (lbs)	13.9 (30.6)
RET	-
Brackets	7256.00, 7454.00, 2210.10



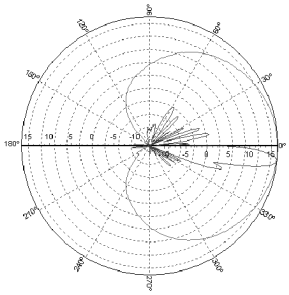
*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

7850.00B ALVC Vertical Polarized

POLARIZATION: V-Pol
FREQUENCY (MHz): 806-896, 1850-1990
HORIZONTAL BEAM WIDTH (°): 90
GAIN (dBi/dBd): 14.0/11.9, 17.0/14.9
TILT: MET
LENGTH: 1.3m (4'3")

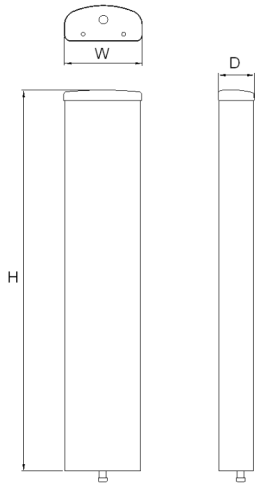
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	806-896	1850-1990
Frequency band (MHz)	806-896	1850-1990
Gain (dBi/dBd)	13.8/11.7	16/13.9
Polarization	Vertical linear	Vertical linear
Nominal Impedance (q)	50	50
VSWR	<1.5:1	<1.5:1
Horizontal beam width, -3 dB (°)	90	90
Vertical beam width, -3 dB (°)	15	6.5
Electrical down tilt (°)	0-12	0-8
Side lobe suppression, vertical 1st upper (dB)	>18	>18
First null fill (dB)	-	-18
Vertical beam squint (°)	<0.5	<0.5
Front to back ratio (dB)	>26	>26
IM3, 2xTx@43dBm (dBc)	<-150	<-150
Power handling, average per input (W)	400	200

MECHANICAL SPECIFICATIONS*

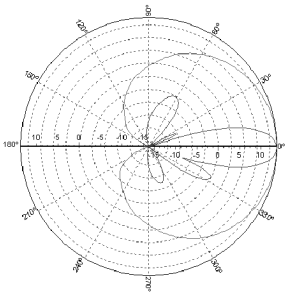
Connector	2 x 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1331x280x125 (4'4"x11"x5")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	17.5 (38.5)
Weight, without brackets, kg (lbs)	12 (26.4)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	900
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (198)
Lightning protection	DC grounded
Radome material	GRP
Radome colour	Light gray RAL 7035 on all visible plastic parts
Package size, HxWxD, mm (ft)	1495x355x255 (4'11"x1'2"x10")
Shipping weight, kg (lbs)	15.8 (34.8)
RET	-
Brackets	7256.00, 7454.00, 2210.10

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

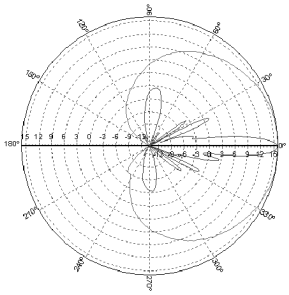


ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



860 MHz



1930 MHz

POWERWAVE

iRET Antennas

The iRET antenna family is the next iteration of Powerwave's innovative antenna product line, which integrates remote electrical tilt functionality under the antenna radome, delivering maximized functionality and improved aesthetics, while eliminating installation and reliability issues that can occur with typical exterior RET modules.

POWERWAVE iRET

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Dual High Broadband Cross Polarized iRET Antennas, 1710-2170 MHz	367

POWERWAVE | **High Broadband Cross Polarized iRET Antennas, 1710-2170 MHz**

Single Broadband Antennas

Cross Polarized

High Broadband Cross Polarized iRET Antennas, 1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	15.6/13.5	Integrated Electrical Tilt (iRET)	.7m (2'3")	8720.0ST.B100.00	364
65	18.3/16.2	Integrated Electrical Tilt (iRET)	1.3m (4’3”)	8721.0ST.B100.00	365
65	19.5/17.4	Integrated Electrical Tilt (iRET)	2.0m (6’6”)	8722.0ST.B100.00	366

8720.0ST.B100.00 High Broadband Cross Polarized iRET

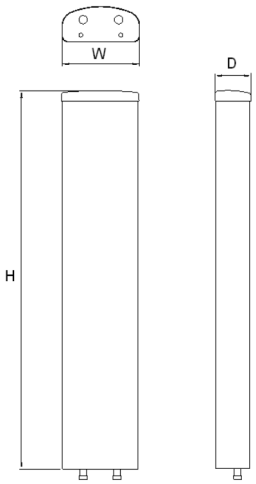
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 15.6/13.5
TILT: Integrated Electrical Tilt (iRET)
LENGTH: .7m (2'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15/12.9	15.1/13	15.6/13.5
Polarization	Dual Linear ± 45º		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	64
Vertical beam width, -3 dB (°)	14.1	13.5	12.5
Electrical down tilt (°)	0 to 16		
Side lobe suppression, vertical 1st upper (dB)	>17,16,16,15,15@0,4,8,12,16º	>17,16,16,15,15@0,4,8,12,16º	>17,16,16,15,15@0,4,8,12,16º
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.5	<1.5	<1.5
First null fill (dB)	>-29, typical >-25	>-29, typical >-25	>-29, typical >-25
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>25	>25	>25
Cross polar discrimination (XPD) 0° (dB)	>15	>15	>18
Cross polar discrimination (XPD) ±60° (dB)	>15	>15	>13
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	
IM7, 2xTx@43dBm (dBc)			<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

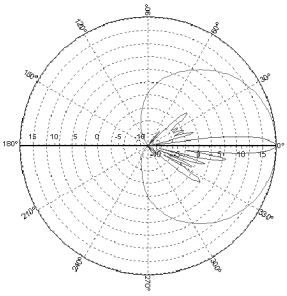
Connector	2x7/16 DIN Female, 1xAISG(M), 1xAISG(F)
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	709x167x89.5 (2'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	8.2 (18)
Weight, without brackets, kg (lbs)	4.5 (9.9)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	286
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	880x200x200 (2'11"x8"x8")
Shipping weight, kg (lbs)	11.5 (25.3)
RET	internal AISG 1.1
Brackets	7456.00A, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

8721.0ST.B100.00 High Broadband Cross Polarized iRET

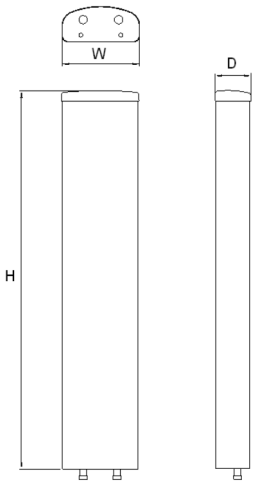
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.3/16.2
TILT: Integrated Electrical Tilt (iRET)
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.6/15.5	18/15.9	18.3/16.2
Polarization	Dual Linear ± 45º		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67º	66º	64º
Vertical beam width, -3 dB (°)	7º	6.6º	6.3º
Electrical down tilt (°)	0 - 10º		
Side lobe suppression, vertical 1st upper (dB)	>18,18,16,16,14,12 @ 0,2,4,6,8,10º	>18,18,16,16,14,12 @ 0,2,4,6,8,10º	>18,18,16,16,14,12 @ 0,2,4,6,8,10º
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-24 typical >-17	>-24 typical >-17	>-24 typical >-17
Vertical beam squint (°)	0.5	0.5	0.5
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>17	>17	>20
Cross polar discrimination (XPD) ±60° (dB)	>18	>14	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	NA
IM7, 2xTx@43dBm (dBc)	NA	NA	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

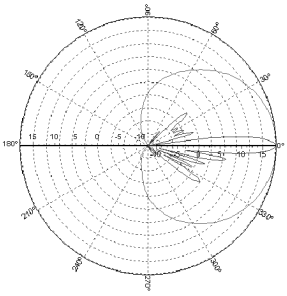
Connector	2x7/16 DIN Female, 1xAISG(M), 1xAISG(F)
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1309x167x89.5 mm (4'3"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	11 (24)
Weight, without brackets, kg (lbs)	7.3 (16)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	528
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC Grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1480x200x200mm (4'10"x8"x8")
Shipping weight, kg (lbs)	14.7 (32.4)
RET	Internal AISG 1.1
Brackets	7456.00, 2201.11, 7454.00, 7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

8722.0ST.B100.00 High Broadband Cross Polarized iRET

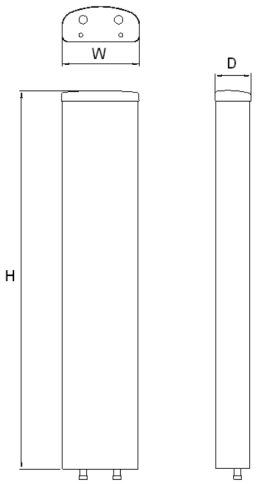
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 19.5/17.4
TILT: Integrated Electrical Tilt (iRET)
LENGTH: 2.0m (6'6")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	19/16.9	19.2/17.1	19.5/17.4
Polarization	Dual Linear ± 45º		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	66	65
Vertical beam width, -3 dB (°)	4.7	4.4	4.2
Electrical down tilt (°)	0 to 6		
Side lobe suppression, vertical 1st upper (dB)	>18,18,18,16,16,14,14@0,1,2,3,4,5,6	>18,18,18,16,16,14,14@0,1,2,3,4,5,6	>18,18,18,16,16,14,14@0,1,2,3,4,5,6
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<1.0	<1.0	<1.0
First null fill (dB)	>-20, typical >-16	>-20, typical >-16	>-20, typical >-16
Vertical beam squint (°)	0.4	0.4	0.4
Front to back ratio (dB)	>30	>30	>30
Front to back ratio, total power (dB)	>27	>27	>27
Cross polar discrimination (XPD) 0° (dB)	>19	>19	>21
Cross polar discrimination (XPD) ±60° (dB)	>20	>17	>12
Far field coupling	-	-	-
IM3, 2xTx@43dBm (dBc)	<-153	<-153	-
IM7, 2xTx@43dBm (dBc)	-	-	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	500		

MECHANICAL SPECIFICATIONS*

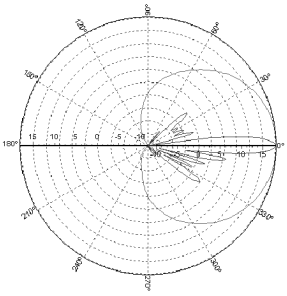
Connector	2x7/16 DIN Female, 1xAISG(M), 1xAISG(F)
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1934x167x89.5 (6'4"x6"x3")
Mounting	Pre-mounted standard brackets
Weight, with brackets, kg (lbs)	14 (31)
Weight, without brackets, kg (lbs)	8.5 (18.7)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	780
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	2105x200x200 (6'11"x8"x8")
Shipping weight, kg (lbs)	15.5 (34.1)
RET	internal AISG 1.1
Brackets	7456.00A, 2201.11, 7454.00,7455.00, 7458.00



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



2140 MHz

POWERWAVE | **Dual High Broadband Cross Polarized iRET Antennas, 1710-2170 MHz**

Single Broadband Antennas

Cross Polarized

High Broadband Cross Polarized iRET Antennas, 1710-2170 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
65	18.1/16	Integrated Remote Eletrical Tilt (iRET)	1.3m (4’3”)	8760.0ST.B100.00	368

8760.0ST.B100.00 Dual High Broadband Cross Polarized iRET

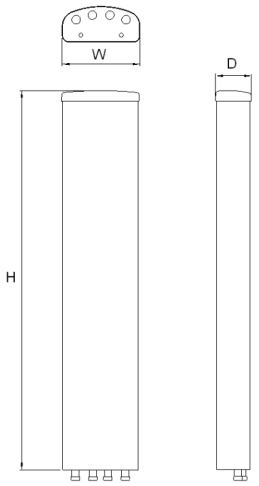
POLARIZATION: X-Pol
FREQUENCY (MHz): 1710-2170
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 18.1/16
TILT: Integrated Remote Eletrical Tilt (iRET)
LENGTH: 1.3m (4'3")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	1710-2170		
Frequency band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	17.7/15.6	17.9/15.8	18.1/16
Polarization	Dual linear ±45°		
Nominal Impedance (q)	50		
VSWR	<1.4:1		
Horizontal beam width, -3 dB (°)	67	65	64
Vertical beam width, -3 dB (°)	7.1	6.8	6.2
Electrical down tilt (°)	0-10		
Side lobe suppression, vertical 1st upper (dB)	>22,20,18,16,14,14@0,2,4,6,8, 10°	>22,20,18,16,14,14@0,2,4,6,8, 10°	>22,20,18,16,14,14@0,2,4,6,8, 10°
Isolation between inputs (dB)	>30	>30	>30
Tracking, horizontal plane ±60° (dB)	<2.0	<2.0	<2.0
First null fill (dB)	>-24,typical>-18	>-24,typical>-18	>-24,typical>-18
Vertical beam squint (°)	<2.0	<2.0	<2.0
Front to back ratio (dB)	>28	>28	>28
Front to back ratio, total power (dB)	>28	>28	>28
Cross polar discrimination (XPD) 0° (dB)	>16	>16	>20
Cross polar discrimination (XPD) ±60° (dB)	>16	>13	>10
Far field coupling			
IM3, 2xTx@43dBm (dBc)	<-153	<-153	<-153
IM7, 2xTx@43dBm (dBc)	<-160	<-160	<-160
Power handling, average per input (W)	250		
Power handling, average total (W)	1000		

MECHANICAL SPECIFICATIONS*

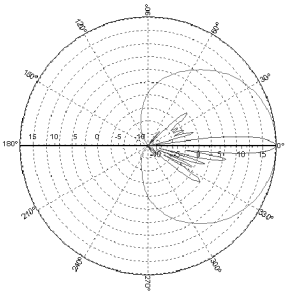
Connector	4x7/16 DIN Female, 2x AISG
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	1320x343x100 (4'4"x1'1"x3")
Mounting	Pre-mounted heavy duty brackets
Weight, with brackets, kg (lbs)	19.5 (42.9)
Weight, without brackets, kg (lbs)	14 (30.8)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1093
Maximum operational wind speed, m/s (mph)	42 (93)
Survival wind speed, m/s (mph)	55 (123)
Lightning protection	DC grounded
Radome material	ASA
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	1430x400x200 (4'8"x1'3"x7")
Shipping weight, kg (lbs)	23.5 (51.8)
RET	internal AISG 1.1
Brackets	7256.00, 7454.00, 2210.10



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



1850 MHz 2140 MHz

POWERWAVE

Remote Electrical Tilt Antennas

The Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment. The system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus. ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

POWERWAVE Remote Electrical Tilt (RET)

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Remote Electrical Tilt

Single Band RET

Standard	Power Supply	Start-up Surge	Current Consumption (idle)	Part Number	Page
AISG 1.1	+9 to +30V	<1mC	<100 mA at Vin <19 V, <50 mA at Vin <19 V	7010.00	372
AISG (Siemens)	+9 to +30V	<1mC	<100 mA at Vin <19 V, <50 mA at Vin <19 V	7012.00	373
AISG 1.1	+9 to +30V	<1mC	<100 mA at Vin <19 V, <50 mA at Vin <19 V	7032.00	374
AISG (Siemens)	+9 to +30V	<1mC	<100 mA at Vin <19 V, <50 mA at Vin <19 V	7033.00	375
AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable	+10 to +30 V	<1mC	<100mA at Vin <19V, <50mA at Vin >19V	8110.40	376
AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable	+10 to +30 V	<1mC	<100mA at Vin <19V, <50mA at Vin >19V	8210.40	377

7010.00 Single Band RET

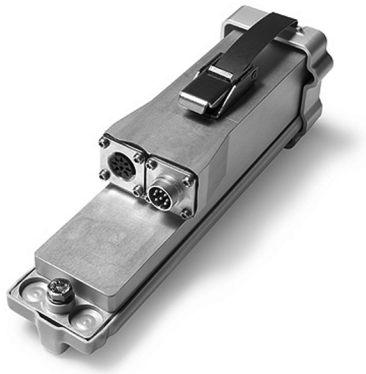
ELECTRICAL SPECIFICATIONS*

Product Number	7010.00
Standard	AISG 1.1
Power supply	+9 to +30V
Start up surge	<1mC
Current Consumption during tilting	<500 mA at Vin <10 V, <400 mA at Vin <19 V, <250 mA at Vin <19 V
Current Consumption idle	<100 mA at Vin <19 V, <50 mA at Vin <19 V
AISG Data Rate	9.6 kbps, 38.4 kbps
Rod positioning accuracy	<+/-0.8 mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

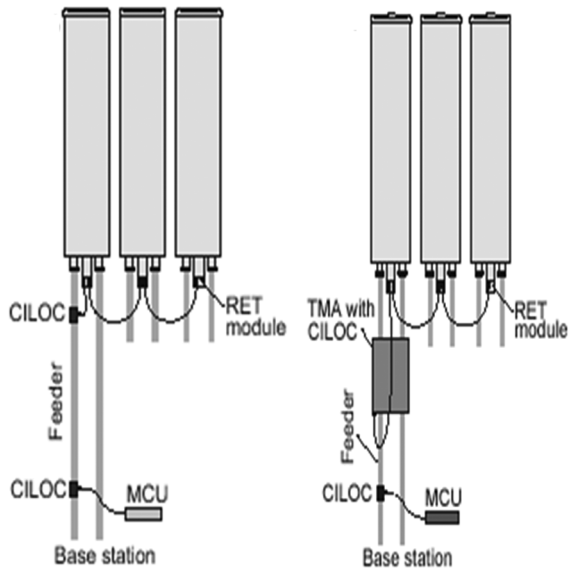
MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	62 x 78 x 216
Connector Protection Ground	M6 screw
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.



RET SYSTEM*



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This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

7012.00 Single Band RET

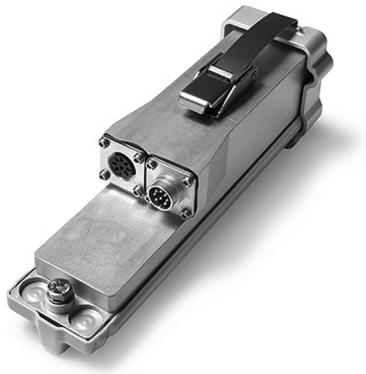
ELECTRICAL SPECIFICATIONS*

Product Number	7012.00
Standard	AISG (Siemens)
Power supply	+9 to +30V
Start up surge	<1mC
Current Consumption during tilting	<500 mA at Vin <10 V, <400 mA at Vin <19 V, <250 mA at Vin <19 V
Current Consumption idle	<100 mA at Vin <19 V, <50 mA at Vin <19 V
AISG Data Rate	9.6 kbps, 38.4 kbps
Rod positioning accuracy	<+/-0.8 mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

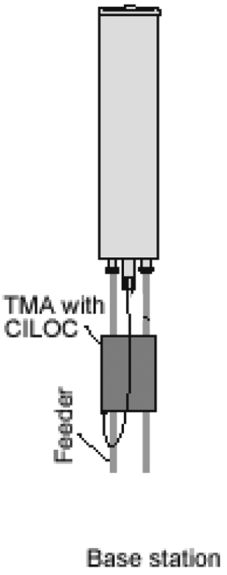
MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	62 x 78 x 216
Connector Protection Ground	M6 screw
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.



RET SYSTEM*



Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

Node B controls and supplies DC Power to the ALDs via the feeder.

7032.00 Single Band RET for Multiband Antennas

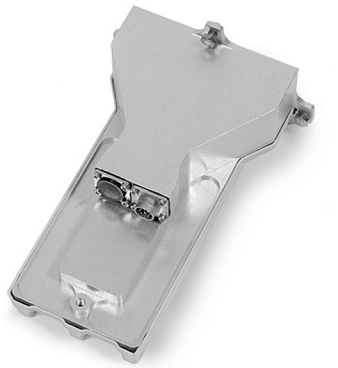
ELECTRICAL SPECIFICATIONS*

Product Number	7032.00
Standard	AISG 1.1
Power supply	+9 to +30V
Start up surge	<1mC
Current Consumption during tilting	<500 mA at Vin <10 V, <400 mA at Vin <19 V, <250 mA at Vin <19 V
Current Consumption idle	<100 mA at Vin <19 V, <50 mA at Vin <19 V
AISG Data Rate	9.6 kbps, 38.4 kbps
Rod positioning accuracy	<+/-0.3 mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

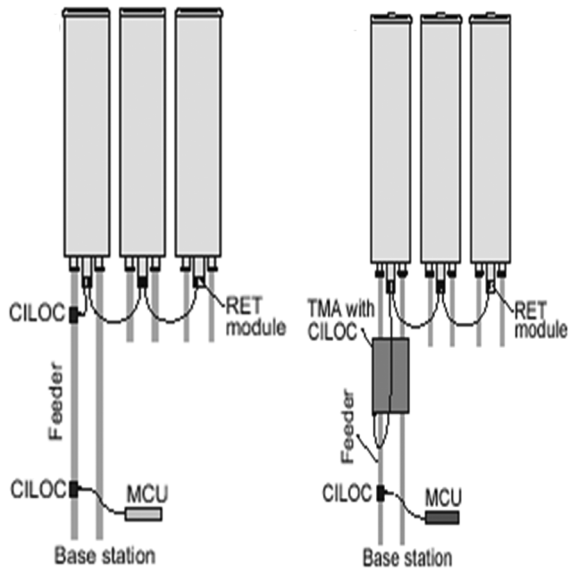
MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	Grounded via antenna
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.



RET SYSTEM*



Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

7033.00 Single Band RET for Multiband Antennas

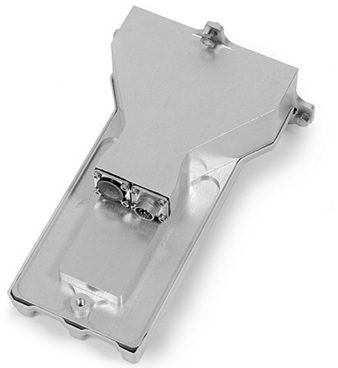
ELECTRICAL SPECIFICATIONS*

Product Number	7033.00
Standard	AISG (Siemens)
Power supply	+9 to +30V
Start up surge	<1mC
Current Consumption during tilting	<500 mA at Vin <10 V, <400 mA at Vin <19 V, <250 mA at Vin <19 V
Current Consumption idle	<100 mA at Vin <19 V, <50 mA at Vin <19 V
AISG Data Rate	9.6 kbps, 38.4 kbps
Rod positioning accuracy	<+/-0.8 mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

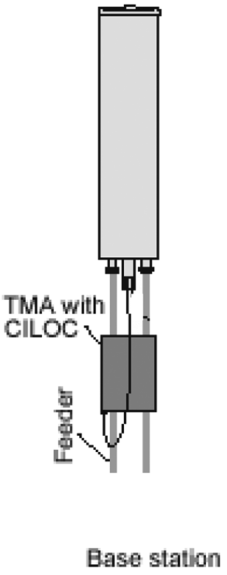
MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	Grounded via antenna
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.



RET SYSTEM*



Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

Node B controls and supplies DC Power to the ALDs via the feeder.

8110.40 Single Band RET

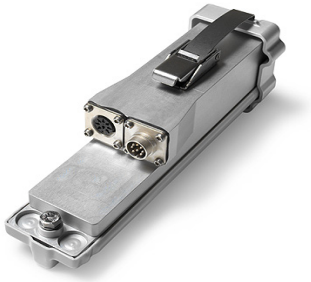
ELECTRICAL SPECIFICATIONS*

Product Number	8110.40
Standard	AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable
Power supply	+10 to +30 V
Start up surge	<1mC
Current Consumption during tilting	<400mA at Vin <19V, <250 mA at Vin <19V
Current Consumption idle	<100mA at Vin <19V, <50mA at Vin >19V
AISG Data Rate	9.6 kbps
Rod positioning accuracy	< +/- 0.8mm
Operation temperature range	-40 to +65C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	62 x 78 x 216
Connector Protection Ground	M6 screw
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.



RET SYSTEM*

Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

8210.40 Single Band RET for Multiband Antennas

ELECTRICAL SPECIFICATIONS*

Product Number	8210.40
Standard	AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable
Power supply	+10 to +30 V
Start up surge	<1mC
Current Consumption during tilting	<400mA at Vin <19V, <250 mA at Vin <19V
Current Consumption idle	<100mA at Vin <19V, <50mA at Vin >19V
AISG Data Rate	9.6 kbps
Rod positioning accuracy	< +/- 0.8mm
Operation temperature range	-40 to +65C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	M6 screw
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RET SYSTEM*

Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

Remote Electrical Tilt

Dual Band RET

Standard	Power Supply	Start-up Surge	Current Consumption (idle)	Part Number	Page
AISG 1.1	+9 to +30V	<1mC	<100 mA at Vin <19 V, <50 mA at Vin <19 V	7020.00	379
AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable	+10 to +30 V	<1mC	<100mA at Vin <19V, <50mA at Vin >19V	8220.40	380

7020.00 Dual Band RET

ELECTRICAL SPECIFICATIONS*

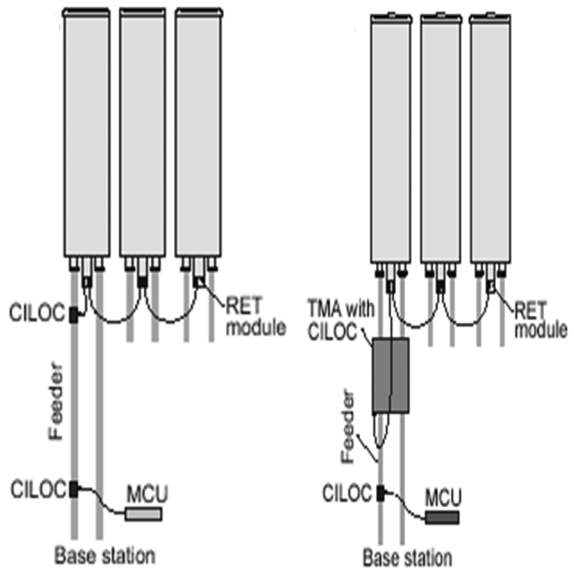
Product Number	7020.00
Standard	AISG 1.1
Power supply	+9 to +30V
Start up surge	<1mC
Current Consumption during tilting	<500 mA at Vin <10 V, <400 mA at Vin <19 V, <250 mA at Vin <19 V
Current Consumption idle	<100 mA at Vin <19 V, <50 mA at Vin <19 V
AISG Data Rate	9.6 kbps, 38.4 kbps
Rod positioning accuracy	<+/-0.3 mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	Grounded via antenna
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RET SYSTEM*



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This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

8220.40 Dual Band RET

ELECTRICAL SPECIFICATIONS*

Product Number	8220.40
Standard	AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable
Power supply	+10 to +30 V
Start up surge	<1mC
Current Consumption during tilting	<400mA at Vin <19V, <250 mA at Vin <19V
Current Consumption idle	<100mA at Vin <19V, <50mA at Vin >19V
AISG Data Rate	9.6 kbps
Rod positioning accuracy	< +/- 0.8mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	M6 screw
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RET SYSTEM*

Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

Remote Electrical Tilt

Triple Band RET

Standard	Power Supply	Start-up Surge	Current Consumption (idle)	Part Number	Page
AISG 1.1	+9 to +30V	<1mC	<100 mA at Vin <19 V, <50 mA at Vin <19 V	7030.00	382
AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable	+10 to +30 V	<1mC	<100mA at Vin <19V, <50mA at Vin >19V	8230.40	383

7030.00 Triple Band RET

ELECTRICAL SPECIFICATIONS*

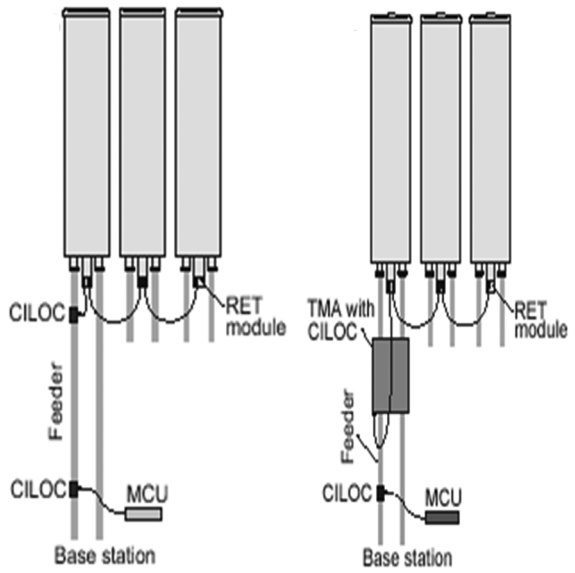
Product Number	7030.00
Standard	AISG 1.1
Power supply	+9 to +30V
Start up surge	<1mC
Current Consumption during tilting	<500 mA at Vin <10 V, <400 mA at Vin <19 V, <250 mA at Vin <19 V
Current Consumption idle	<100 mA at Vin <19 V, <50 mA at Vin <19 V
AISG Data Rate	9.6 kbps, 38.4 kbps
Rod positioning accuracy	<+/-0.3 mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	Grounded via antenna
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RET SYSTEM*



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This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

8230.40 Triple Band RET

ELECTRICAL SPECIFICATIONS*

Product Number	8230.40
Standard	AISG1.1 , Ericsson, 3GPP/AISG V2.0 configurable
Power supply	+10 to +30 V
Start up surge	<1mC
Current Consumption during tilting	<400mA at Vin <19V, <250 mA at Vin <19V
Current Consumption idle	<100mA at Vin <19V, <50mA at Vin >19V
AISG Data Rate	9.6 kbps
Rod positioning accuracy	< +/- 0.8mm
Operation temperature range	-40 to +65° C
Type Approvals	Conformity with the relevant provision(s) of the directives RTTE 99/5/EG and LVD 73/23/EEG
MTBF	>500.000 hrs.

MECHANICAL SPECIFICATIONS*

Weight	1 kg
Dimensions (W,L,H) (mm)	125 x 213 x 62 (excluding mounting screws)
Connector Protection Ground	M6 screw
Connector AISG	IEC 60130-9 (Ed 3.0)
Ingress protection	IP65
Environmental	ETSI 300 019

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

RET SYSTEM*

Powerwave RET system is designed to meet the high requirements for reliability, flexibility and efficiency in remote control of tower-mounted telecommunication equipment.

This system consists of a Master Control Unit (MCU) that controls the Antenna Line Devices (ALDs) and supplies DC power to them via a common bus, ALDs are connected to the MCU using a separate ALD system cable or by using the existing RF feeders in your system.

Remote Electrical Tilt

Master Control Units

Type	Current Consumption	Power Supply	Part Number	Page
Master Control Unit	115/230 VAC 1.7 / 1.0A	AC	7070.10 (AC)	385
Master Control Unit	24V / <5.0A	24V	7070.30 (24 V)	386
Master Control Unit	48V / <2.5A	-48V	7070.50 (-48V)	387
Layer One Converter Master Control Unit	115/230 VAC 1.7 / 1.0A	AC	7072.10 (AC)	388
Layer One Converter Master Control Unit	24V / <5.0A	24V	7072.30 (24 V)	389
Layer One Converter Master Control Unit	48V / <2.5A	-48V	7072.50 (-48V)	390

7070.10 (AC) Master Control Unit

ELECTRICAL SPECIFICATIONS	
Power supply	AC
AC / Current consumption	115/230 VAC 1.7 / 1.0A
ALD supply voltage	+24 V DC
Max current draw per connector	2.7 A
Total current draw all connectors	3.48 A
Surge at start up all connectors	54 mC during <10 ms

LOCAL ALARM PORTS (IN port)	
Output voltage at open	5 ±1 V
Output current at closed	5 ± 2mA

LOCAL CONTROL PORTS (Out ports, 3-pole relays)	
Max input Voltage	30 V DC
Max input current	0.5 A
AISG data rate	9.6 kbps, 38.4 kbps
Weight	< 2.5 kg
Dimensions	Width 19” rack, Height 44mm, Depth 207mm

ENVIRONMENTAL SPECIFICATIONS	
DC power supply	CAP 2 Circuit universal MATE-N-LOK 350778-1
AC power supply	IEC/EB60320-1 Male
RET 1 to 3	IEC 60130-9 (Ed. 3.0)
Site LAN	4-pole RJ45 MDI
Local (Ethernet port)	4-pole RJ45 MDI
RS-232	9-pin d-SUB male
Local alarm	Connector panel
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG.
MTBF	>250.000 hrs
Operating temperature	-5C to 60C
Environmental	ETSI 300 019 * Weather-protected locations*

7070.30 (24 V) Master Control Unit

ELECTRICAL SPECIFICATIONS	
Power supply	24V
DC / Current consumption	24V / <5.0A
ALD supply voltage	+24 V DC
Max current draw per connector	2.7 A
Total current draw all connectors	3.48 A
Surge at start up all connectors	54 mC during <10 ms

LOCAL ALARM PORTS (IN port)	
Output voltage at open	5 ±1 V
Output current at closed	5 ± 2mA

LOCAL CONTROL PORTS (Out ports, 3-pole relays)	
Max input Voltage	30 V DC
Max input current	0.5 A
AISG data rate	9.6 kbps, 38.4 kbps
Weight	< 2.5 kg
Dimensions	Width 19” rack, Height 44mm, Depth 207mm

ENVIRONMENTAL SPECIFICATIONS	
DC power supply	CAP 2 Circuit universal MATE-N-LOK 350778-1
AC power supply	IEC/EB60320-1 Male
RET 1 to 3	IEC 60130-9 (Ed. 3.0)
Site LAN	4-pole RJ45 MDI
Local (Ethernet port)	4-pole RJ45 MDI
RS-232	9-pin d-SUB male
Local alarm	Connector panel
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG.
MTBF	>250.000 hrs
Operating temperature	-5C to 60C
Environmental	ETSI 300 019 * Weather-protected locations*

7070.50 (-48V) Master Control Unit

ELECTRICAL SPECIFICATIONS	
Power supply	-48V
DC / Current consumption	48V / <2.5A
ALD supply voltage	+24 V DC
Max current draw per connector	2.7 A
Total current draw all connectors	3.48 A
Surge at start up all connectors	54 mC during <10 ms

LOCAL ALARM PORTS (IN port)	
Output voltage at open	5 ±1 V
Output current at closed	5 ± 2mA

LOCAL CONTROL PORTS (Out ports, 3-pole relays)	
Max input Voltage	30 V DC
Max input current	0.5 A
AISG data rate	9.6 kbps, 38.4 kbps
Weight	< 2.5 kg
Dimensions	Width 19” rack, Height 44mm, Depth 207mm

ENVIRONMENTAL SPECIFICATIONS	
DC power supply	CAP 2 Circuit universal MATE-N-LOK 350778-1
AC power supply	IEC/EB60320-1 Male
RET 1 to 3	IEC 60130-9 (Ed. 3.0)
Site LAN	4-pole RJ45 MDI
Local (Ethernet port)	4-pole RJ45 MDI
RS-232	9-pin d-SUB male
Local alarm	Connector panel
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG.
MTBF	>250.000 hrs
Operating temperature	-5C to 60C
Environmental	ETSI 300 019 * Weather-protected locations*

7072.10 (AC) Layer One Converter Master Control Unit

ELECTRICAL SPECIFICATIONS	
Power supply	AC
AC / Current consumption	115/230 VAC 1.7 / 1.0A
ALD supply voltage	+24 V DC
Max current draw per connector	2.7 A
Total current draw all connectors	3.48 A
Surge at start up all connectors	54 mC during <10 ms

LOCAL ALARM PORTS (IN port)	
Output voltage at open	5 ±1 V
Output current at closed	5 ± 2mA

LOCAL CONTROL PORTS (Out ports, 3-pole relays)	
Max input Voltage	30 V DC
Max input current	0.5 A
AISG data rate	9.6 kbps, 38.4 kbps
Weight	< 2.5 kg
Dimensions	Width 19” rack, Height 44mm, Depth 207mm

ENVIRONMENTAL SPECIFICATIONS	
DC power supply	CAP 2 Circuit universal MATE-N-LOK 350778-1
AC power supply	IEC/EB60320-1 Male
RET 1 to 3	SMA (female)
Site LAN	4-pole RJ45 MDI
Local (Ethernet port)	4-pole RJ45 MDI
RS-232	9-pin d-SUB male
Local alarm	Connector panel
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG.
MTBF	>250.000 hrs
Operating temperature	-5C to 60C
Environmental	ETSI 300 019 * Weather-protected locations*

7072.30 (24 V) Layer One Converter Master Control Unit

ELECTRICAL SPECIFICATIONS	
Power supply	24V
DC / Current consumption	24V / <5.0A
ALD supply voltage	+24 V DC
Max current draw per connector	1.16 A
Total current draw all connectors	3.48 A
Surge at start up all connectors	54 mC during <10 ms

LOCAL ALARM PORTS (IN port)	
Output voltage at open	5 ±1 V
Output current at closed	5 ± 2mA

LOCAL CONTROL PORTS (Out ports, 3-pole relays)	
Max input Voltage	30 V DC
Max input current	0.5 A
AISG data rate	9.6 kbps, 38.4 kbps
Weight	< 2.5 kg
Dimensions	Width 19” rack, Height 44mm, Depth 207mm

ENVIRONMENTAL SPECIFICATIONS	
DC power supply	CAP 2 Circuit universal MATE-N-LOK 350778-1
AC power supply	IEC/EB60320-1 Male
RET 1 to 3	SMA (female)
Site LAN	4-pole RJ45 MDI
Local (Ethernet port)	4-pole RJ45 MDI
RS-232	9-pin d-SUB male
Local alarm	Connector panel
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG.
MTBF	>250.000 hrs
Operating temperature	-5C to 60C
Environmental	ETSI 300 019 * Weather-protected locations*

7072.50 (-48V) Layer One Converter Master Control Unit

ELECTRICAL SPECIFICATIONS	
Power supply	-48V
DC / Current consumption	48V / <2.5A
ALD supply voltage	+24 V DC
Max current draw per connector	1.16 A
Total current draw all connectors	3.48 A
Surge at start up all connectors	54 mC during <10 ms

LOCAL ALARM PORTS (IN port)	
Output voltage at open	5 ±1 V
Output current at closed	5 ± 2mA

LOCAL CONTROL PORTS (Out ports, 3-pole relays)	
Max input Voltage	30 V DC
Max input current	0.5 A
AISG data rate	9.6 kbps, 38.4 kbps
Weight	< 2.5 kg
Dimensions	Width 19” rack, Height 44mm, Depth 207mm

ENVIRONMENTAL SPECIFICATIONS	
DC power supply	CAP 2 Circuit universal MATE-N-LOK 350778-1
AC power supply	IEC/EB60320-1 Male
RET 1 to 3	SMA (female)
Site LAN	4-pole RJ45 MDI
Local (Ethernet port)	4-pole RJ45 MDI
RS-232	9-pin d-SUB male
Local alarm	Connector panel
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG.
MTBF	>250.000 hrs
Operating temperature	-5C to 60C
Environmental	ETSI 300 019 * Weather-protected locations*

Remote Electrical Tilt

Current Injector Layer One Coverter

Frequency Range (MHz)	Insertion Loss (dB)	Return Loss (dB) ANT Port	Return Loss (dB) BTS Port	Part Number	Page
806-960 MHz and 1710-2180 MHz	<0.2 dB	>20 dB	>20 dB	7060.00 (ANT)	392
806-960 MHz and 1710-2180 MHz	<0.2 dB	>20 dB	>20 dB	7060.10 (BTS)	393
800-2300	<0.1 dB	>22 dB	>22 dB	1001940 (BTS side)	394
800-2300	<0.1 dB	>22 dB	>22 dB	1001983 (ANT side)	395

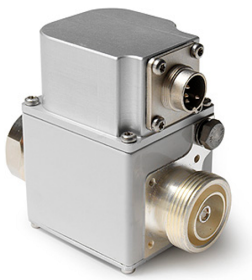
7060.00 (ANT) Current Injector Layer One Coverter

ELECTRICAL DATA	
Range(MHz)	806-960 MHz and 1710-2180 MHz
Frequency Range	806-960 MHz and 1710-2180 MHz
Insertion Loss(dB)	<0.2 dB
Return Loss(dB) ANT Port	>20 dB
Return Loss(dB) BTS Port	>20 dB
Passive Intermodulation 2X43 dBm	<-116 dBm
Power Handling(dBm)	Average (RMS) 55 dBm, Peak (pulse duration <0.1 ms) 68 dBm
Power Supply	+9 to +31 V
Current Consumption	< 50 mA
Current Handling	Ò1.3 A
AISG Data Rate	9.6 kbps, 38.4 kbps
Up-Link(MHz)	1850-1910
Down-link(MHz)	1930-1990
Power Consumption	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	<48 x 92 x 80
Weight(lbs)	<750 kg
RF Connectors	DIN 7/16 female/ male
AISG Output	IEC 60130-9 E (Ed 3.0)
Protection Ground	M8 screw
Environmental	ETSI 300 019
Type Approvals	Conformity with the relevant provision (s) of the directive RTTE 99/5/EG and LVD 73/23/EEG
Ingress Protection IP65	N/A

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40 to +65 C
MTBF	> 500,000 hrs
Ingress Protection	IP65

APPROVAL AND TESTS	
Environmental	ETSI 300 019
Type Approvals	Conformity with the relevant provision (s) of the directive RTTE 99/5/EG and LVD 73/23/EEG



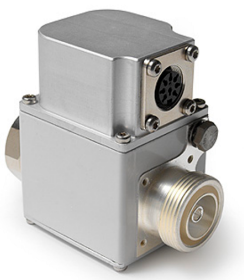
7060.10 (BTS) Current Injector Layer One Coverter

ELECTRICAL DATA	
Range(MHz)	806-960 MHz and 1710-2180 MHz
Frequency Range	806-960 MHz and 1710-2180 MHz
Insertion Loss(dB)	<0.2 dB
Return Loss(dB) ANT Port	>20 dB
Return Loss(dB) BTS Port	>20 dB
Passive Intermodulation 2X43 dBm	<-116 dBm
Power Handling(dBm)	Average (RMS) 55 dBm, Peak (pulse duration <0.1 ms) 68 dBm
Power Supply	+9 to +31 V
Current Consumption	< 50 mA
Current Handling	Ò1.3 A
AISG Data Rate	9.6 kbps, 38.4 kbps
Up-Link(MHz)	1850-1910
Down-link(MHz)	1930-1990
Power Consumption	N/A

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	<48 x 92 x 80
Weight(lbs)	<750 kg
RF Connectors	DIN 7/16 female/ male
AISG Output	IEC 60130-9 E (Ed 3.0)
Protection Ground	M8 screw
Environmental	ETSI 300 019
Type Approvals	Conformity with the relevant provision (s) of the directive RTTE 99/5/EG and LVD 73/23/EEG
Ingress Protection IP65	N/A

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40 to +65 C
MTBF	> 500,000 hrs
Ingress Protection	IP65

APPROVAL AND TESTS	
Environmental	ETSI 300 019
Type Approvals	Conformity with the relevant provision (s) of the directive RTTE 99/5/EG and LVD 73/23/EEG



1001940 (BTS side) Current Injector Layer One Coverter

ELECTRICAL DATA	
Range(MHz)	
Frequency Range	800-2300
Insertion Loss(dB)	<0.1 dB
Return Loss(dB) ANT Port	>22 dB
Return Loss(dB) BTS Port	>22 dB
Passive Intermodulation 2X43 dBm	<-130 dBm (7th)
Power Handling(dBm)	750W =500W (800 MHz)+ 250W (1900MHz)
Power Supply	+10 to+30V
Current Consumption	
Current Handling	<4.0 A
AISG Data Rate	9.6 kbps,38.4 kbps
Up-Link(MHz)	
Down-link(MHz)	
Power Consumption	

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	< 3.7 x 1.7 x 5.7 excl. conn
Weight(lbs)	< 2
RF Connectors	DIN 7/16 female/male
AISG Output	
Protection Ground	
Environmental	
Type Approvals	Bellcore #TA-NWT-000487 Procedure 4.11
Ingress Protection IP65	

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40 to +85C
MTBF	>500.000 hrs.
Ingress Protection	IP67

APPROVAL AND TESTS	
Environmental	
Type Approvals	Bellcore #TA-NWT-000487 Procedure 4.11

1001983 (ANT side) Current Injector Layer One Coverter

ELECTRICAL DATA	
Range(MHz)	
Frequency Range	800-2300
Insertion Loss(dB)	<0.1 dB
Return Loss(dB) ANT Port	>22 dB
Return Loss(dB) BTS Port	>22 dB
Passive Intermodulation 2X43 dBm	<-130 dBm (7th)
Power Handling(dBm)	750W =500W (800 MHz)+ 250W (1900MHz)
Power Supply	+10 to+30V
Current Consumption	
Current Handling	<4.0 A
AISG Data Rate	9.6 kbps,38.4 kbps
Up-Link(MHz)	
Down-link(MHz)	
Power Consumption	

MECHANICAL SPECIFICATIONS	
Dimension HxWxD mm(ft)	< 2
Weight(lbs)	< 3.7 x 1.7 x 5.7 excl. conn
RF Connectors	DIN 7/16 female/male
AISG Output	
Protection Ground	
Environmental	
Type Approvals	Bellcore #TA-NWT-000487 Procedure 4.11
Ingress Protection IP65	

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	-40 to +85C
MTBF	>500.000 hrs.
Ingress Protection	IP67

APPROVAL AND TESTS	
Environmental	
Type Approvals	Bellcore #TA-NWT-000487 Procedure 4.11

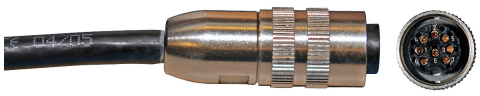
Remote Electrical Tilt

RET System Cables

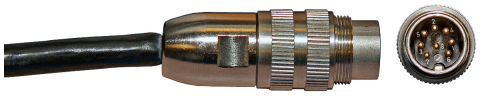
Continuous Current DC Ports	Continuous AISG Output Input	Operation Temperature Range	Conductor Area	Part Number	Page
3.5 A	IEC 60130-9 (Ed. 3.0)	-40 to +65	2x 0.25mm2 (388 mil2) + 3x 0.75mm2 (1162 mil2)	7085.XX	397
3.5 A	IEC 60130-9 (Ed. 3.0)	-40 to +65C	2x 0.25mm2 (388 mil2) + 3x 0.75mm2 (1162 mil2)	7095.xx	398

7085.XX RET System Cables

SPECIFICATIONS	
Product Number	7085.XX
Continuous Current DC Ports	3.5 A
Connectors AISG Output Input	IEC 60130-9 (Ed. 3.0)
Operation Temperature Range	-40 to +65
Conductor Area	2x 0.25mm2 (388 mil2) + 3x 0.75mm2 (1162 mil2)
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG
Ingress Protection	IP67 mated
Environmental	ETSI 300 019
Color	Black

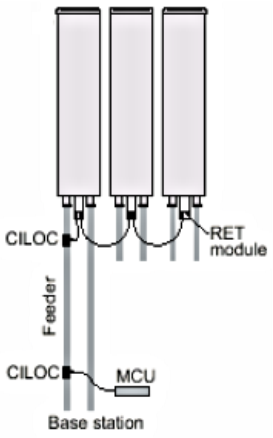


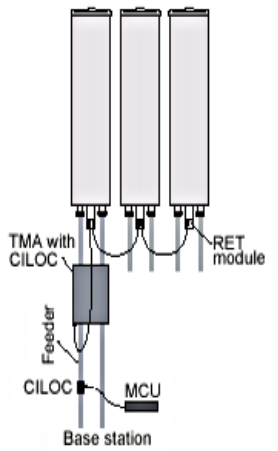
Female



Male

7085.05	RET short cable 0.5m
7085.15	RET short cable 1.5m
7085.30	RET short cable 3.0m
7085.50	RET short cable 5.0m

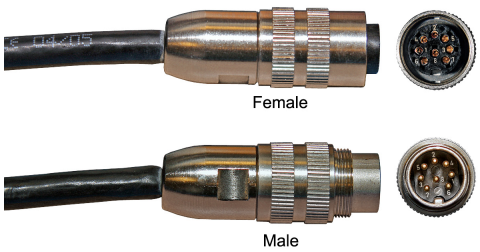




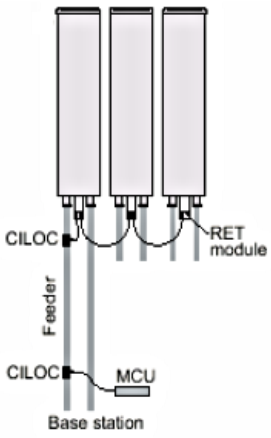
8-Pin Connector	 Female	 Male
Pin 1	+12 V	+12 V
Pin 2	Not connected	Not connected
Pin 3	RS-485B	RS-485B
Pin 4	Not connected	Not connected
Pin 5	RS-485A	RS-485A
Pin 6	+24 V	+24 V
Pin 7	DC return	DC return
Pin 8	Not connected	Not connected

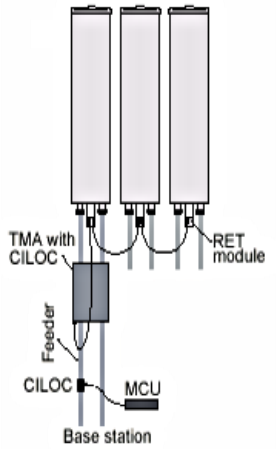
7095.XX RET Systems Cable

SPECIFICATIONS	
Product Number	7095.XX
Continuous Current DC Ports	3.5 A
Connectors AISG Output Input	IEC 60130-9 (Ed. 3.0)
Operation Temperature Range	-40 to +65C
Conductor Area	2x 0.25mm2 (388 mil2) + 3x 0.75mm2 (1162 mil2)
Type Approvals	Conformity with the relevant provision(s)of the directives RTTE 99/5/EG and LVD 73/23/EEG
Ingress Protection	IP67 mated
Environmental	ETSI 300 019
Color	Black



7095.10	RET long cable 10m
7095.20	RET long cable 20m
7095.30	RET long cable 30m
7095.40	RET long cable 40m
7095.50	RET long cable 50m
7095.60	RET long cable 60m
7095.70	RET long cable 70m
7095.80	RET long cable 80m
7095.90	RET long cable 90m
7095.110	RET long cable 110m





8-Pin Connector	 Female	 Male
Pin 1	+12 V	+12 V
Pin 2	Not connected	Not connected
Pin 3	RS-485B	RS-485B
Pin 4	Not connected	Not connected
Pin 5	RS-485A	RS-485A
Pin 6	+24 V	+24 V
Pin 7	DC return	DC return
Pin 8	Not connected	Not connected

POWERWAVE

Indoor Antennas

The indoor antenna is designed to blend into a wall or ceiling inside a building and is the base antenna for the Powerwave distributed antenna system. The indoor antenna covers all bands from 800 MHz up to 2500 MHz and supports multiband operation. Easy-to-install dual band antennas from Powerwave are deployed in numerous wireless networks worldwide. Using fewer antennas of discreetly functional design beats using numerous antennas of unsightly size and appearance especially with today's aesthetic concerns.

POWERWAVE | **Indoor Antennas**

Dual Band Indoor Antennas

Cross Polarized	Page
Indoor Dual Band Cross Polarized Antennas, 824-896/850-990 MHz	401

Multiband Indoor Antennas

Vertical Polarized	Page
Indoor Multiband Vertical Polarized Antennas, 800-2500 MHz	403

POWERWAVE | **Indoor Dual Band Cross Polarized Antennas, 824-896/1850-1990 MHz**

Dual Band Indoor Antennas

Cross Polarized

Indoor Dual Band Cross Polarized Antennas, 824-896/1850-1990 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
70	9/6.9, 9/6.9	0	216mm (8.5")	7999.00	402

7999.00 Indoor Dual Band Cross Polarized

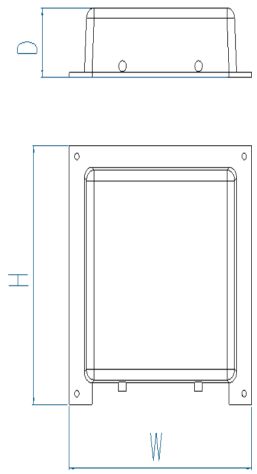
POLARIZATION: X-Pol
FREQUENCY (MHz): 800/1900
HORIZONTAL BEAM WIDTH (°): 70
GAIN (dBi/dBd): 9/6.9, 9/6.9
TILT: 0
LENGTH: 216mm (8.5")

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	800/1900	
Frequency band (MHz)	824-896	1850-1990
Gain (dBi/dBd)	9/6.9	9/6.9
Polarization	X-Pol	
Nominal Impedance (q)	50	
VSWR	1.5:1	1.5:1
Horizontal beam width, -3 dB (°)	72	56
Vertical beam width, -3 dB (°)	70	60
Electrical down tilt (°)	0	0
Front to back ratio (dB)	16	28
Cross polar discrimination (XPD) 0° (dB)	20	15
Cross polar discrimination (XPD) ±60° (dB)	8	4
IM3, 2xTx@43dBm (dBc)	<-141	
Power handling, average total (W)	50	

MECHANICAL SPECIFICATIONS*

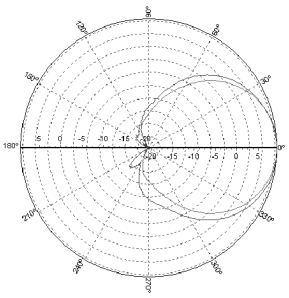
Connector	2 x N Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	216x216x73.7 (8.5"x8.5"x2.9")
Mounting	-
Weight, kg (lbs)	0.73 (1.6)
Radome material	-
Radome colour	RAL 7035, Light grey
Package size, HxWxD, mm (ft)	-
Shipping weight, kg (lbs)	-



*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

POWERWAVE | Indoor Multiband Vertical Polarized Antennas

Multiband Indoor Antennas

Vertical Polarized

Indoor Multiband Vertical Polarized Antennas, 800-2500 MHz

Horizontal Beamwidth	Gain dBi dBd	Tilt	Length	Part Number	Page
60/90	6/3.9, 9/6.9	0	0.210m (8")	7336.10	404
360	3/0.9	0	0.185m (7”)	7336.00	405

7336.10 Indoor Multiband Panel Vertical Polarized

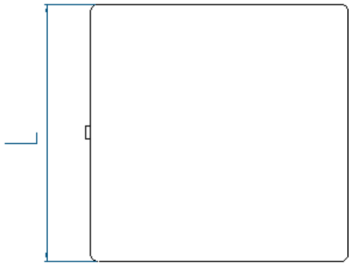
POLARIZATION: V-Pol
FREQUENCY (MHz): 800-2500
HORIZONTAL BEAM WIDTH (°): 60/90
GAIN (dBi/dBd): 6/3.9, 9/6.9
TILT: 0
LENGTH: 0.210m (8")

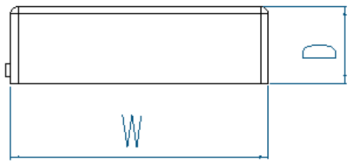
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	800-2500			
Frequency band (MHz)	806-896	890-960	1700-1900	1900-2500
Gain (dBi/dBd)	6.5/4.4	6.5/4.4	9.5/7.4	10/7.9
Polarization	Vertical			
Nominal Impedance (q)	50			
VSWR	<1.9:1	<1.5:1	<1.9:1	<1.8:1
Horizontal beam width, -3 dB (°)	95	85	65	60
Vertical beam width, -3 dB (°)	85	80	40	40
Electrical down tilt (°)	0			
Front to back ratio (dB)	16	15	12	17
IM3, 2xTx@43dBm (dBc)	<-150			
Power handling, average total (W)	50			

MECHANICAL SPECIFICATIONS*

Connector	1 x N Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	210 x 180 x 42 (8"x7"x2")
Mounting	-
Weight, kg (lbs)	1.0 (2.2)
Radome material	ASA
Radome colour	White
Package size, HxWxD, mm (ft)	240x280x45 (9"x11"x2")
Shipping weight, kg (lbs)	1.2 (2.6)

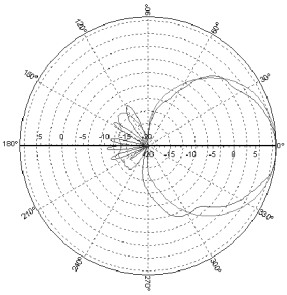




*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

7336.00 Indoor Multiband Vertical Polarized

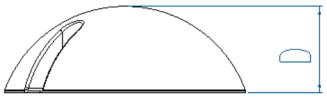
POLARIZATION: V-Pol
FREQUENCY (MHz): 800-2500
HORIZONTAL BEAM WIDTH (°): 360
GAIN (dBi/dBd): 3/0.9
TILT: 0
LENGTH: 0.185m (7")

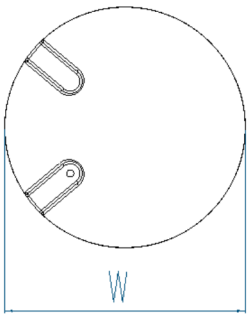
ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)	800-2500			
Frequency band (MHz)	806-896	880-960	1700-1900	1900-2500
Gain (dBi/dBd)	3/0.9	3/0.9	3/0.9	3/0.9
Polarization	Vertical			
Nominal Impedance (q)	50			
VSWR	1.5:1	1.5:1	1.5:1	1.5:1
Beam width: Ceiling Mounted (°)	360	360	360	360
Beam width: Wall Mounted (°)	70	70	70	70
IM3, 2xTx@43dBm (dBc)	<-150			
Power handling, average total (W)	-			

MECHANICAL SPECIFICATIONS*

Connector	1 x N Female
Connector position	Back
Dimensions, diameter x depth, mm (ft)	65 x185 (2.5" x 7")
Mounting	-
Weight, kg (lbs)	0.2 (0.44)
Radome material	ABS
Radome colour	White
Package size, HxWxD, mm (ft)	210x200x115 (8"x8"x5")
Shipping weight, kg (lbs)	0.36 (0.8)

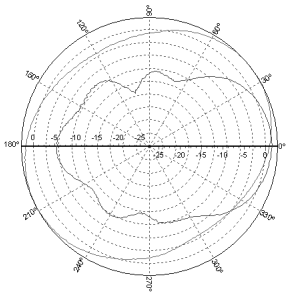




*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

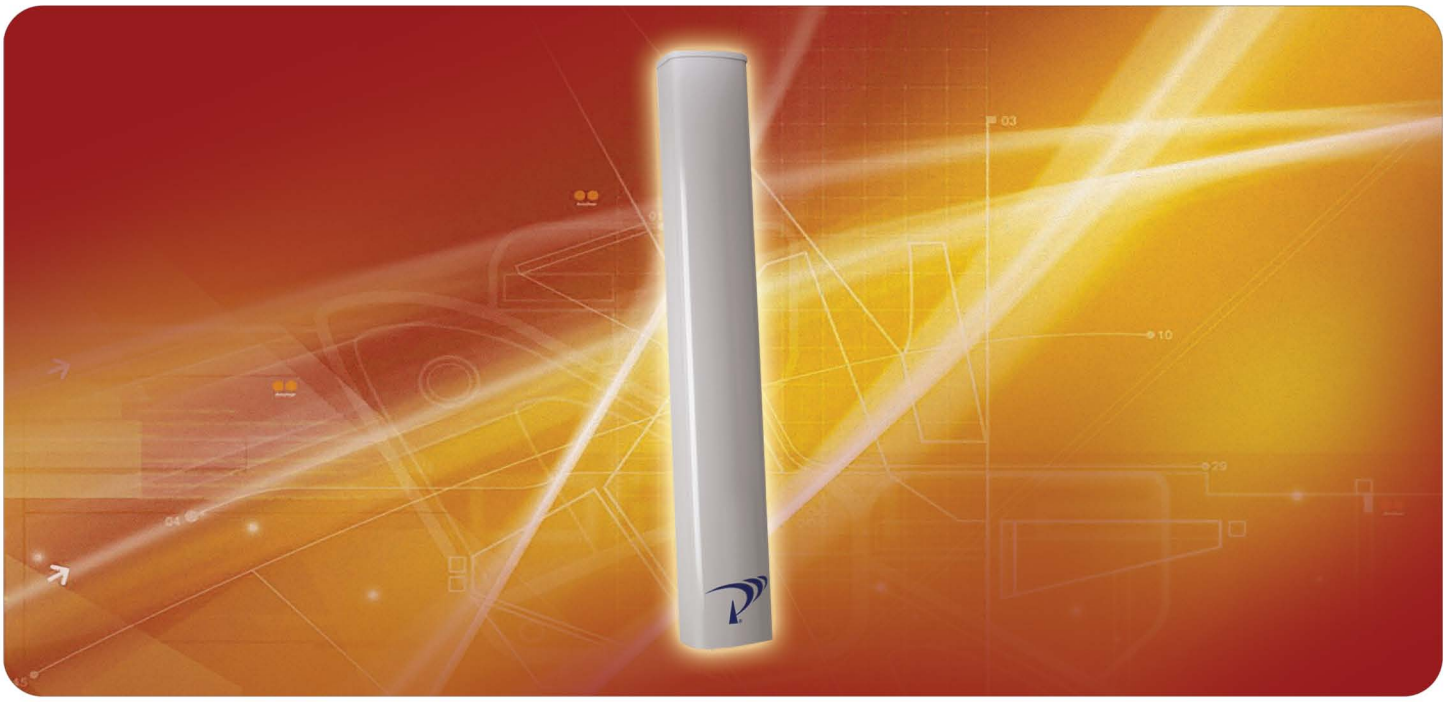
For detailed patterns visit http://www.powerwave.com/rpa/.



Typical Horizontal and Vertical Pattern for Above Antenna

POWERWAVE

Clean Site Solutions



Powerwave's Clean Site solutions minimize the visual impact of a complete antenna system and significantly reduce investment and operational costs for network operators when building new or upgrading existing networks.

Building permits for existing antenna installations can be used when replacing old, passive antennas with the Clean Site solution. This simplifies the site acquisition process significantly and shortens roll-out time considerably.

All Clean Site antennas support Remote Electrical Tilt for optimization of the coverage footprint and tuning of network performance. By integrating all functionality into one single unit, Clean Site offers you a flexible and attractive solution in the most cost efficient way.

POWERWAVE

Clean Site Solutions: Overview

The Powerwave Clean Site program integrates a full range of multiband solutions to make the most of tower space. High-volume production in several countries ensures rapid delivery.

Our products provide design and installation flexibility that meet a variety of needs, such as enabling co-siting of networks and systems and dealing with space and zoning issues limiting the appearance and location of new installations.

Single System

The baseline for the Clean Site single system is our single band broadband antenna portfolio with cross polar diversity for either low band or high band.

Our low band antenna covers the full frequency range from 806-960 MHz while the high band antenna covers 1710- 2170 MHz. Customize your Clean Site single unit by combining a low band antenna with a Remote Electrical Tilt (RET) Unit or a high band antenna with a Tower Mounted Amplifier (TMA) for either an 1800, 1900 or 2100 frequency band and RET Unit. No matter the combination, your customized Clean Site Single System is contained in one single housing enclosure.

Dual System

The Clean Site Dual solution's basic configuration stems from the Powerwave dual band low band/high band antennas. Combine the dual band antenna with Remote Electrical Tilt (RET) units, Tower Mounted Amplifiers (TMA) and diplex filters to suit your network requirements. As with all Clean Site units, all of the necessary components are contained in one discrete enclosure.

Triple System

The Powerwave Clean Site Triple solution is the most advanced antenna system within the Clean Site program. The Clean Site Triple solution is based on the high performance triple band antenna platform and is the superior solution for co-siting. An old installed passive antenna can be replaced by a Clean Site Triple System with Remote Electrical Tilt (RET) Control and two dual TMAs and two triplexers without changing the visual impact.

IntelliMast™

As a part of the Powerwave Clean Site program, the IntelliMast offers a flexible way of integrating multi-sector solutions in a pole configuration under one single radome. IntelliMast-CS, supporting the full broad band antenna range, is the mounting solution to use when more than one sector is covered from a single location. If a crane free installation is required, the super light weight Intellimast-PL is the solution to use, supporting the 1.4m (4 feet) multiband antennas. The IntelliMast solution offers maximum sector coverage with minimum visual impact.

POWERWAVE

Mounting Solutions

All Powerwave antennas are delivered with mounting brackets pre-mounted. The intent is to reduce logistic and tower crew installation costs for our customers. All brackets have a high quality surface treatment to maintain the Powerwave standard for product exposure to severe environments. By using steel in the sheet metal parts of the tilt brackets, a robust and rigid design is ensured.

POWERWAVE Mounting Solutions

Wall and Panning Kit

Part Numbers	Page
2201.11	410
2210.10	411

Heavy Duty Tilt Bracket Kit

Part Numbers	Page
7256.00	412

Tilt Bracket Kit

Part Numbers	Page
7456.00A	413

Triple Mount Bracket

Part Numbers	Page
7454.00A	414

Large Pole Mounting Adapter

Part Numbers	Page
7458.00A	415

Flush Wall/Pole Hose Clamp

Part Numbers	Page
7455.00	416

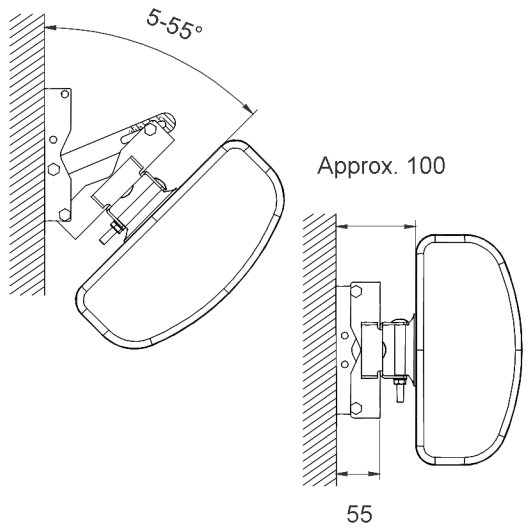
2201.11 Wall and Panning Kit

ANTENNA LENGTH: <1.5 meter/ 5 feet
WEIGHT: 0.3 kg/ 0.7 lbs

CROSS REFERENCE TABLE

Family	Part Number
LBB65	NA
LBB90	NA
DHBB	NA
DBB65	NA
DBB90	NA
TBB65	NA
ALP	NA
City	NA
Urban	7225.0x, 7226.0x, 7227.0x, 7228.0x, 7230.0x, 7231.0x, 7232.0x, 7233.0x, 7270.0x, 7271.0x, 7272.0x, 7273.0x, 7275.0x, 7276.0x, 7277.0x, 7278.0x
Xurban	7216.0x, 7217.0x, 7218.0x, 7255.0x, 7263.0x, 7281.0x, 7282.0x
AL Antennas	7337.0x, 7338.0x, 7339.0x
5 Series	570x.0x, 572x.x, 5735.x0, 5740.x0, 5745.x0

MECHANICAL DRAWINGS



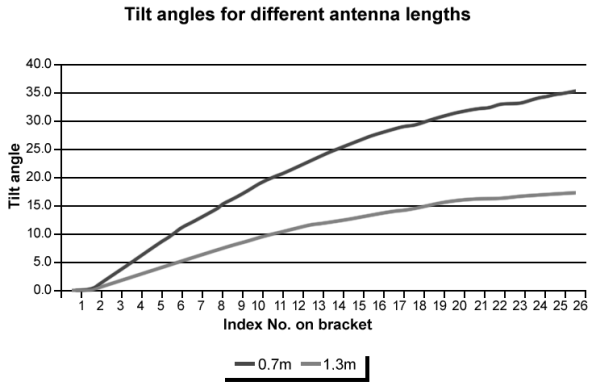
MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	0.3 kg/ 0.7 lbs
Material	Galvanized steel, stainless screws & nuts
Packing size, H x W x D	200 x 200 x 20 (mm)
Shipping weight	0.3 kg/ 0.7 lbs
Tilt range	See diagram
Pole dimension	NA
Panning range	5-55°
Accessory products	To be used with antenna tilt brackets 7456.00A

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: IEC 60068-2-64
Sinus Vibration: IEC 60028-2-6
Salt Mist: IEC 68-2-11, test Ka, 35° C, 48h, 5% salt

TILT ANGLE GRAPH



2210.10 Wall and Panning Kit

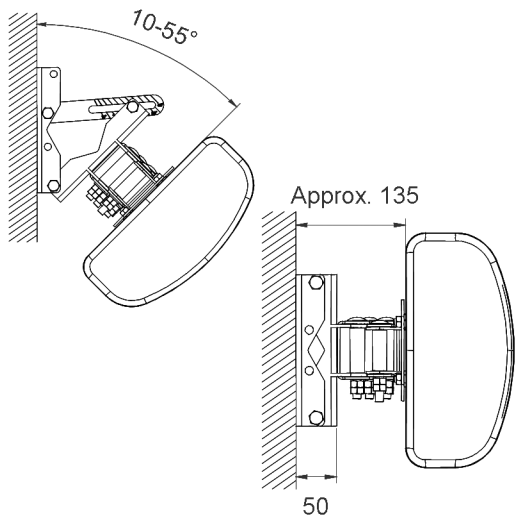
ANTENNA LENGTH: Ó1.5 meter/5 feet
WEIGHT: 1.0 kg/ 2.2 lbs

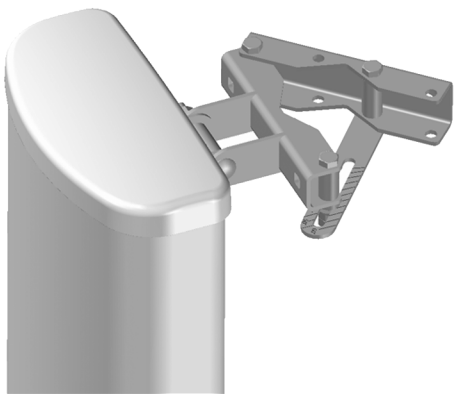
Only one kit per antenna.

CROSS REFERENCE TABLE

Family	Part Number
LBB65	747x.xx
LBB90	748x.xx
DHBB	776x.xx
DBB65	775x.x0
DBB90	777x.x0
TBB65	778x.x0
ALP	7804.00, 7824.00, 7834.00, 7838.00
City	7143.xx.xx.xx, 7144.xx.xx.xx, 7145.xx.xx.xx
Urban	7218.1x
Xurban	7227.1x
AL Antennas	7840.x0, 7850.x0, 7329.0x, 7330.0x, 7331.0x, 7332.0x, 7333.0x, 7334.0x
5 Series	747x.xx, 748x.xx, 776x.xx, 775x.x0, 777x.x0, 778x.x0

MECHANICAL DRAWINGS





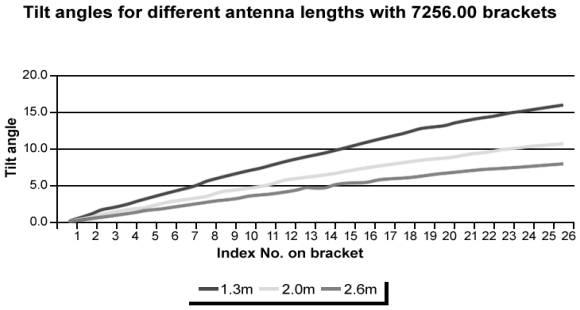
MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	1.0kg/ 2.2 lbs
Material	Galvanized steel, stainless screws & nuts
Packing size, H x W x D	200 x 200 x 20 (mm)
Shipping weight	1 kg/ 2.2 lbs
Tilt range	See diagram
Pole dimension	NA
Panning range	2210.10
Accessory products	To be used with antenna tilt brackets 7256.00

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: IEC 60068-2-64
Sinus Vibration: IEC 60028-2-6
Salt Mist: IEC 68-2-11, test Ka, 35° C, 48h, 5% salt

TILT ANGLE GRAPH



7256.00 Heavy Duty Tilt Bracket Kit

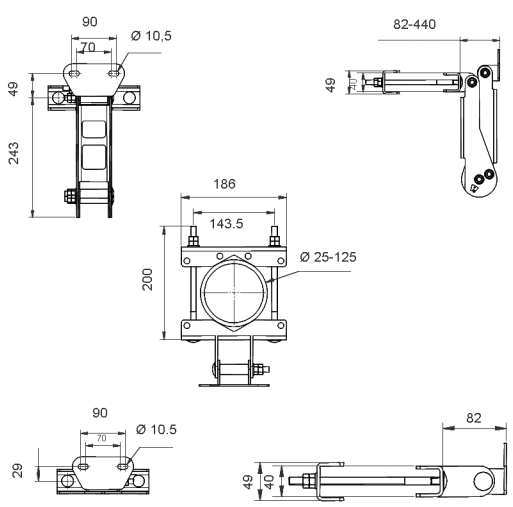
ANTENNA LENGTH: Ó1.5 meter/5 feet
WEIGHT: 5.5 kg/ 12.1 lbs

All Powerwave Antennas larger than 1.5 meter (5 feet) shall be installed with Powerwave heavy duty bracket, 7256.00. Below is a list outlining which antennas come with pre-mounted heavy duty brackets.

CROSS REFERENCE TABLE

Family	Part Number
LBB65	747x.xx
LBB90	748x.xx
DHBB	776x.xx
DBB65	775x.x0
DBB90	777x.x0
TBB65	778x.x0
ALP	7804.00, 7824.00, 7834.00, 7838.00
City	7143.xx.xx.xx, 7144.xx.xx.xx, 7145.xx.xx.xx
Urban	7218.1x
Xurban	7227.1x
AL Antennas	7840.x0, 7850.x0, 7329.0x, 7330.0x, 7331.0x, 7332.0x, 7333.0x, 7334.0x
5 Series	747x.xx, 748x.xx, 776x.xx, 775x.x0, 777x.x0, 778x.x0

MECHANICAL DRAWINGS



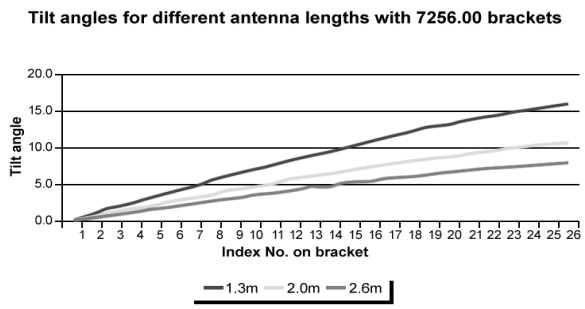
MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	5.5 kg/ 12.1 lbs
Material	Galvanized steel, stainless screws & nuts
Packing size, H x W x D	Call for info
Shipping weight	5.9 kg/ 13 lbs
Tilt range	See diagram
Pole dimension	25-125 mm
Panning range	NA
Accessory products	Heavy Duty Bracket Panning Kit 2210.10 and Triple Mount Bracket 7454.00

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: IEC 60068-2-64
Sinus Vibration: IEC 60028-2-6
Salt Mist: IEC 68-2-11, test Ka, 35° C, 48h, 5% salt

TILT ANGLE GRAPH



7456.00A Tilt Bracket Kit

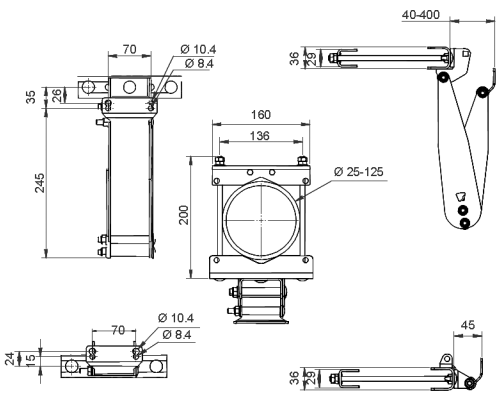
ANTENNA LENGTH: <1.5 meter/ 5 feet
WEIGHT: 3.6 kg/7.9 lbs

All Powerwave antennas shorter than 1.5 meter (5 feet) * shall be installed with Powerwave tilt bracket, 7456.00. The Family/ Part Number column is a list outlining which antennas come with pre-mounted tilt brackets. For a reference list of accessory products see Mechanical Specifications (*Urban antennas longer than 1.5 meter with three brackets use 7456.00)

CROSS REFERENCE TABLE

Family	Part Number
LBB65	NA
LBB90	NA
DHBB	NA
DBB65	NA
DBB90	NA
TBB65	NA
ALP	NA
City	NA
Urban	7225.0x, 7226.0x, 7227.0x, 7228.0x, 7230.0x, 7231.0x, 7232.0x, 7233.0x, 7270.0x, 7271.0x, 7272.0x, 7273.0x, 7275.0x, 7276.0x, 7277.0x, 7278.0x
Xurban	7216.0x, 7217.0x, 7218.0x, 7255.0x, 7263.0x, 7281.0x, 7282.0x
AL Antennas	7337.0x, 7338.0x, 7339.0x
5 Series	570x.0x, 572x.x, 5735.x0, 5740.x0, 5745.x0

MECHANICAL DRAWINGS



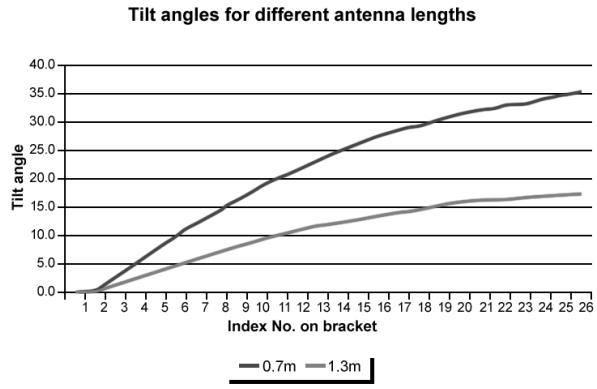
MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	3.6 kg/7.9 lbs
Material	Galvanized steel, stainless screws & nuts
Packing size, H x W x D	Call for info
Shipping weight	4.0 kg/ 8.8 lbs
Tilt range	See diagram
Pole dimension	25-125 mm
Panning range	NA
Accessory products	Panning Kit 2201.11/ Big Pole Clamp, 7458.00/ Flush wall, pole clamp 7455.00 and Triple Mount Bracket 7454.00

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: IEC 60068-2-64
Sinus Vibration: IEC 60028-2-6
Salt Mist: IEC 68-2-11, test Ka, 35° C, 48h, 5% salt

TILT ANGLE GRAPH



7454.00A Triple Mount Bracket

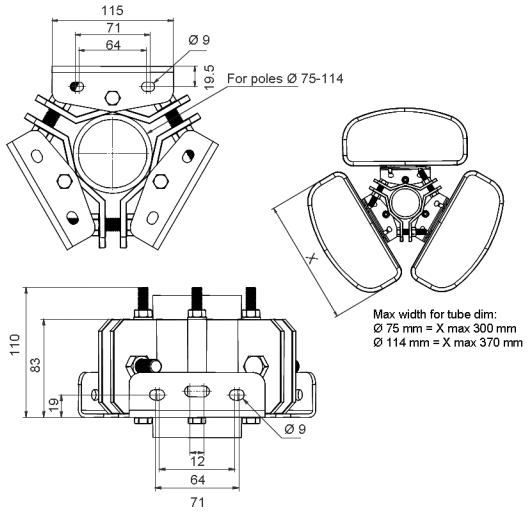
ANTENNA LENGTH: Ó1.5 meter/5 feet
WEIGHT: 1.5 kg/3.3 lbs

The Powerwave Triple Mount Bracket allows the mounting of three antennas on a single support for a sturdy and elegant installation. The Triple Mount Bracket permits independent mechanical and electrical tilting of each sector, offering unparalleled versatility. Antennas may be used with their standard mounting hardware, with or without mechanical tilt. The Model 7454.00 Triple Mount Bracket is compatible with all directional Powerwave panel antennas up to 370 mm/14.5" width. Antennas shorter than 1.5 m/5 feet can use the full tilt range of 7456.00A antenna tilt bracket. Antennas longer than 1.5 m/5 feet shall not be tilted. Only one kit for all three antennas.

CROSS REFERENCE TABLE

Family	Part Number
LBB65	747x.xx
LBB90	748x.xx
DHBB	776x.xx
DBB65	775x.x0
DBB90	777x.x0
TBB65	778x.x0
ALP	7804.00, 7824.00, 7834.00, 7838.00
City	7143.xx.xx.xx, 7144.xx.xx.xx, 7145.xx.xx.xx
Urban	7218.1x, 7225.0x, 7226.0x, 7227.0x, 7228.0x, 7230.0x, 7231.0x, 7232.0x, 7233.0x, 7270.0x, 7271.0x, 7272.0x, 7273.0x, 7275.0x, 7276.0x, 7277.0x, 7278.0x
Xurban	7227.1x, 7216.0x, 7217.0x, 7218.0x, 7255.0x, 7263.0x, 7281.0x, 7282.0x
AL Antennas	7337.0x, 7338.0x, 7339.0x, 7840.x0, 7850.x0, 7329.0x, 7330.0x, 7331.0x, 7332.0x, 7333.0x, 7334.0x
5 Series	747x.xx, 748x.xx, 570x.0x, 572x.x, 5735.x0, 5740.x0, 5745.x0, 776x.xx, 775x.x0, 777x.x0, 778x.x0

MECHANICAL DRAWINGS



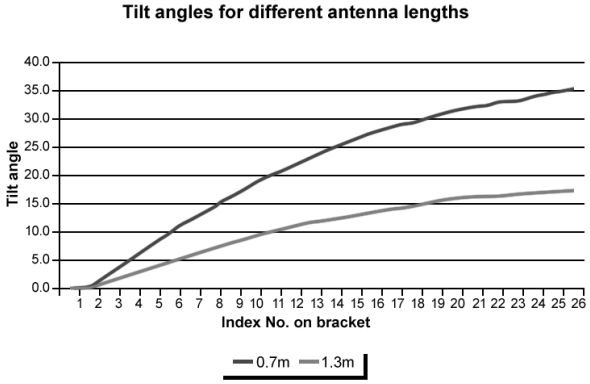
MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	6.8 kg/15 lbs
Material	Steel
Packing size, H x W x D	Call for info
Shipping weight	Call for info
Tilt range	See diagram, Only antennas <1.5 m/ 5 feet
Pole dimension	75-114 mm
Panning range	Call for info
Accessory products	Can be used with antenna tilt brackets 7456.00A and 7256.00

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: NA
Sinus Vibration: NA
Salt Mist: NA

TILT ANGLE GRAPH



7458.00A Large Pole Mounting Adapter

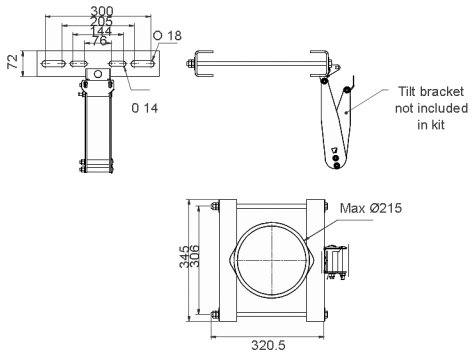
ANTENNA LENGTH: <1.5 meter/ 5 feet
WEIGHT: 9.5 kg/ 20.9 lbs

Powerwave large pole mounting adapter is to be used with Powerwave antennas shorter than 1.5 meter/5 feet, see table below. Only one kit per antenna.

CROSS REFERENCE TABLE

Family	Part Number
LBB65	NA
LBB90	NA
DHBB	NA
DBB65	NA
DBB90	NA
TBB65	NA
ALP	NA
City	NA
Urban	7225.0x, 7226.0x, 7227.0x, 7228.0x, 7230.0x, 7231.0x, 7232.0x, 7233.0x, 7270.0x, 7271.0x, 7272.0x, 7273.0x, 7275.0x, 7276.0x, 7277.0x, 7278.0x
Xurban	7216.0x, 7217.0x, 7218.0x, 7255.0x, 7263.0x, 7281.0x, 7282.0x
AL Antennas	7337.0x, 7338.0x, 7339.0x
5 Series	NA

MECHANICAL DRAWINGS



MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	9.5 kg/ 20.9 lbs
Material	Galvanized steel, stainless screws & nuts
Packing size, H x W x D	200 x 200 x 20 (mm)
Shipping weight	10 kg/22 lbs
Tilt range	NA
Pole dimension	Max 215/ mm 78.5"
Panning range	NA
Accessory products	To be used with antenna tilt brackets 7456.00A

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: IEC 60068-2-64
Sinus Vibration: IEC 60028-2-6
Salt Mist: IEC 68-2-11, test Ka, 35° C, 48h, 5% salt

TILT ANGLE GRAPH

NA

7455.00 Flush Wall/Pole Hose Clamp

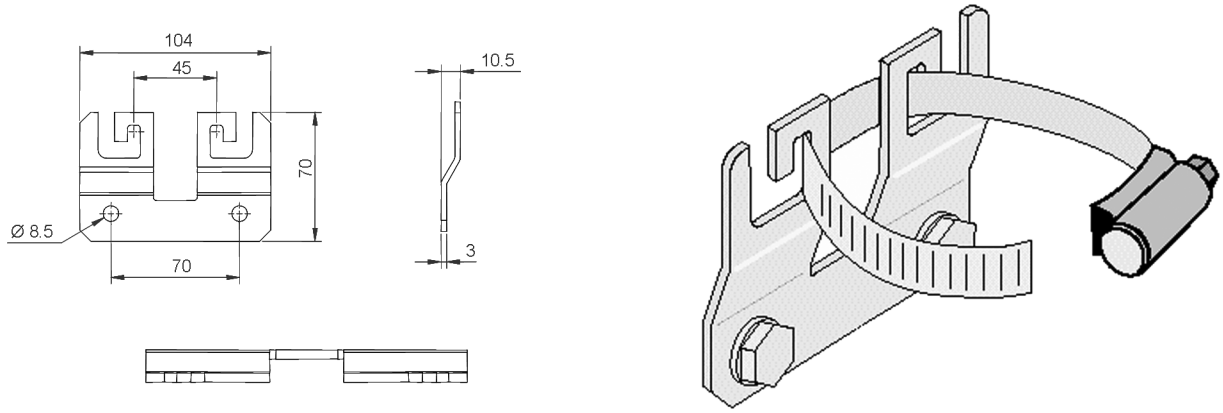
ANTENNA LENGTH: <1.5 meter/ 5 feet
WEIGHT: 0.4/0.9 lbs

Powerwave hose clamp is to be used with Powerwave antennas shorter than 1.5 meter/5 feet. Only one kit per antenna.

CROSS REFERENCE TABLE

Family	Part Number
LBB65	NA
LBB90	NA
DHBB	NA
DBB65	NA
DBB90	NA
TBB65	NA
ALP	NA
City	NA
Urban	7225.0x, 7226.0x, 7227.0x, 7228.0x, 7230.0x, 7231.0x, 7232.0x, 7233.0x, 7270.0x, 7271.0x, 7272.0x, 7273.0x, 7275.0x, 7276.0x, 7277.0x, 7278.0x
Xurban	7216.0x, 7217.0x, 7218.0x, 7255.0x, 7263.0x, 7281.0x, 7282.0x
AL Antennas	7337.0x, 7338.0x, 7339.0x
5 Series	570x.xx, 572x.xx, 735.x0A, 5740.x0A, 5745.x0A

MECHANICAL DRAWINGS



MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	See Drawings
Weight	0.4 kg/ 0.9 lbs
Material	Galvanized steel, stainless screws & nuts
Packing size, H x W x D	200 x 200 x 20 (mm)
Shipping weight	0.4 kg/ 0.9 lbs
Tilt range	NA
Pole dimension	40-100 mm/ 1.57"-3.9"
Panning range	NA
Accessory products	To be used with antenna tilt brackets 7456.00A

TILT ANGLE GRAPH

NA

All brackets fulfill the requirements stated in the standards to follow. Antennas are tested together with their corresponding brackets.

Random Vibration: IEC 60068-2-64
Sinus Vibration: IEC 60028-2-6
Salt Mist: IEC 68-2-11, test Ka, 35° C, 48h, 5% salt

POWERWAVE **Antenna FAQ**

Q: Are your indoor antennas broadband (7336.00, 7336.10)?

A: Yes, these antennas work from 806 MHz through 2.5 GHz, providing an effective solution for multiple technologies such as iDEN, CDMA, GSM, UMTS, WiFi to name a few.

Q: Why do you specify different gain for the same antenna in your data sheet?

A: The gain is dependent on the frequency used. The stacking distance of the elements is changed relative to the frequency. This means that the gain will increase with a higher frequency. Powerwave always tries to give you the best information possible, and therefore we specify the gain at common used frequency to help you implement the antennas easily in your network.

Q: Why do you use different materials in your radomes?

A: Mechanical structure of antennas are designed in different ways. Powerwave uses either the reflector as the structure, or the radome in a combination with the reflector. When using the reflector as the base for the mechanical structure, the radome is only used for weather protection, and therefore we use a light plastic radome (ASA/GRP). When increasing the size of an antenna there is no benefit to use the reflector as the mechanical structure as it would increase the overall weight of the product. Therefore, when building larger sized antennas, Powerwave utilizes a combination of reflector and radome as the mechanical structure. Normally, a glass fibre radome is used in the latter instances. Thus, the mechanical structures of the Powerwave antennas are designed to minimize product weight while maintaining a robust and reliable solution.

Q: Why do you have different gain on your triple band antennas?

A: Powerwave designs triple band antennas by using one low band antenna throughout the whole length, while you have the two upper band antennas on top of each other. This means that the high band antenna at the upper part of the antenna needs more internal cabling compared to the high band antenna at the lower part. This extra internal cabling introduces some more losses, and the result is that the gain of the upper high band antenna is slightly lower.

Q: How do I get antenna patterns?

A: The antenna patterns are available at our webpage, please visit: www.powerwave.com/antennapatterns.asp. On this page you are able to download our antenna patterns for many different planning tools. Please contact us if you need assistance.

Q: You are mentioning broadband antennas - how do you define that?

A: When Powerwave is stating broadband antennas, we are indicating that these can be used for more than one system. We usually state low broadband, meaning that the antennas can be used for systems operating from 806 to 960 MHz. High band usually means that the antennas can be used for systems from 1710 to 2170. Some antennas may differ from this. The reason why we design and produce broadband antennas is to achieve logistical benefits for our global customer base, allowing for deployments in all markets worldwide.

POWERWAVE

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