

475788A AQQQ AirScale MAA 32T32R n78 Technical Datasheet

HW Unit Technical Datasheet
V1.1

AQQQ AirScale MAA 32T32R 128AE n78 240W

Technical data

Product Specifications	
Standard	3GPP/CEPT-A/ISED, TDD
Supported RAT by HW	5G/LTE
Band / Frequency range	3420 – 3800 MHz
Max. supported modulation	256 QAM
Number of TX/RX paths	32T / 32R
MIMO streams	16
Instantaneous bandwidth IBW	380 MHz
Occupied bandwidth OBW	200 MHz
Total average EIRP	76.8 dBm
Max. output power per TRX	7.5 W / TRX (240 W total), SW settable up to 13 dB down
Dimensions / Volume	607 mm x 395 mm x 95mm/135 mm (H x W x D) / 26L
Weight	17.3 kg, without mounting brackets
Wind load , Front/Rear/Side	329/329/83 N ,EN1991-1-4, wind velocity 42m/s (150 km/h)
Supply voltage / Connector type	DC -36 V... -60V / Nokia 2 pole connector
Power consumption	676 W (75% DL duty cycle, ETSI 24h average load, target)
Optical ports	4 x SFP28 / AOPC
Other interfaces / Connector type	AISG / RS-485, External Alarms / MDR26, 6 status LEDs
Operational temperature range	-40 °C ... +55 °C
Cooling	Forced cooling
Installation options	Pole / wall, ± 20° mechanical vertical tilt with AMPF
Ingress / Surge protection	IP65 / Class II 20 kA

AirScale High Power Wide Band MAA benefits

- 5G Adaptive Antenna System for optimized capacity and coverage
- Beamforming capable 32T32R with total 240W output power
- Optimized operation for n78



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Antenna Specifications	
Antenna configuration	8, 8, 2 ($\pm 45^\circ$ X-polarized), Logical (2,8,2)
Typical antenna gain(as defined by BASTA) (*)	23dBi \pm 1dB
Minimum azimuth beamwidth ($^\circ$), HPBW	$13^\circ \pm 2^\circ$ (boresight)
Azimuth scanning range	$\pm 45^\circ$ (3dB), $\pm 50^\circ$ (4dB)
Envelope azimuthal beamwidth($^\circ$)	$\pm 60^\circ$ (7dB)
Minimum elevation beamwidth ($^\circ$), HPBW	$8.5^\circ \pm 1^\circ$
Envelope elevation beamwidth ($^\circ$), HPBW	$+14^\circ \dots +1^\circ$ (upper SLS > 6dB), $+12^\circ \dots +3^\circ$ (upper SLS > 10dB)
Elevation scanning range(**)	$\pm 3^\circ$ (upper SLS > 6dB); $\pm 1^\circ$ (upper SLS > 10dB)
Vertical tilt (pre-tilt) angle	$+7.5^\circ$
Front to back ratio	> 25 dB
Cross-Polar discrimination (Boresight)	> 18 dB

(* Typical Antenna gain measured over the frequency range (boresight)

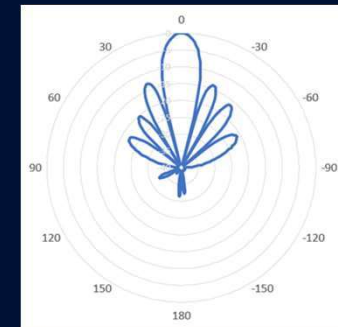
(** Dynamic Elevation Scanning range

Max steering values given are excluding SW algorithm enhancements

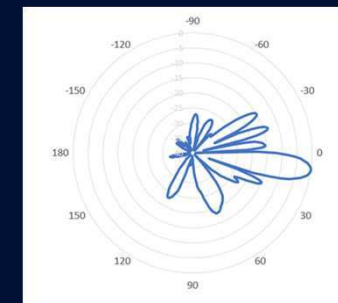
HPBW = Half power beamwidth, SLS = Sidelobe suppression

Radiating Pattern

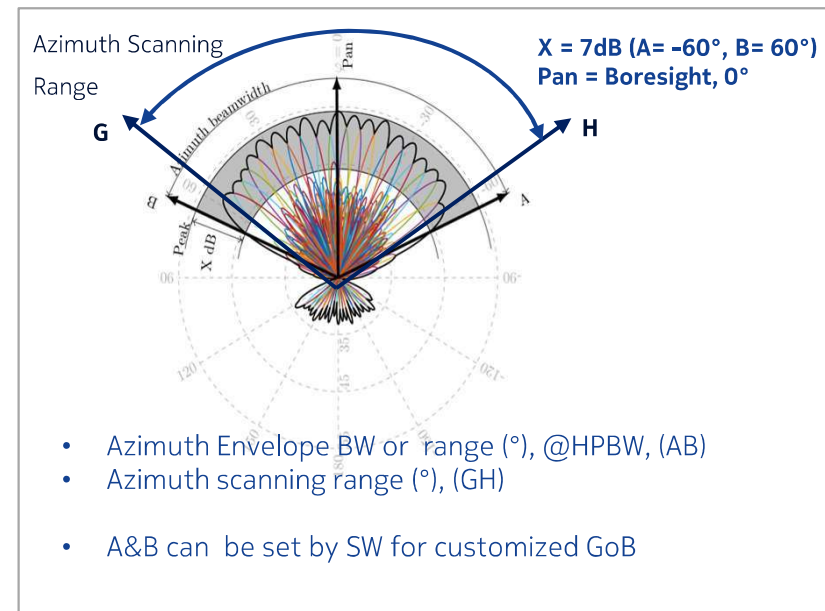
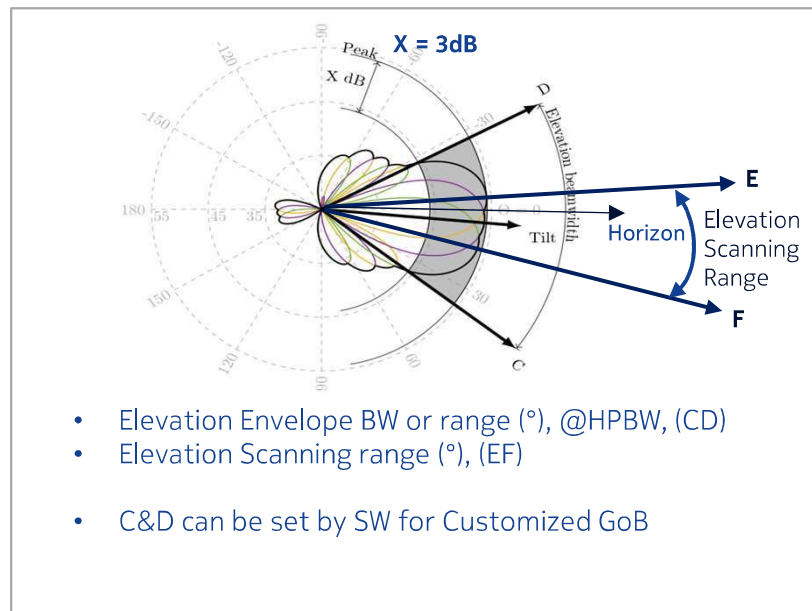
- Horizontal (boresight, Pan 0, example)



- Vertical (7.5° DT example)



AirScale mMIMO radios – Angle definitions (based on BASTA)



Scanning Range defines the range of angles in azimuth and elevation in which the AAS is optimized and intended to be operated.

The minimum azimuth and elevation beamwidth can be achieved when all the radiators in the AAS are active and fed with uniform phase and amplitude

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