

## 5963308NG

4Xpol | 65° Az | 15.8 / 15.8 / 17.9 / 17.9 | 2-12° / 2-12° / 2-12° / 2-12° | 2000 x 499 x 180 mm

- Quad band antenna, dual polarisation, 8 connectors
- Independent tilt on each band 2-12° / 2-12° / 2-12° / 2-12°
- Internal RET versions 3GPP/AISG2.0
- Integrated RET modules to control all tilt angles, fully inserted inside the antenna

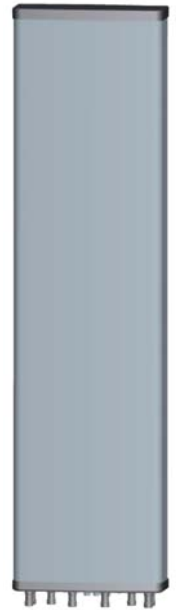
### ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 8 colour-coded connectors located at the bottom face.

Frequency Designation	R1	R2	Y1	Y2
Frequency Range	690-960 MHz	690-960 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°	65°
Electrical Downtilt Range	2-12°	2-12°	2-12°	2-12°
Connector Type	(2x) 4.3/10 Female	(2x) 4.3/10 Female	(2x) 4.3/10 Female	(2x) 4.3/10 Female

### ELECTRICAL CHARACTERISTICS

		R1		
Frequency Bands		690-960 MHz		
		690-806 MHz	790-896 MHz	870-960 MHz
Gain	At Mid Tilt	15 dBi	15.4 dBi	15.9 dBi
	Over All Tilts	14.8 ± 0.4 dBi	15.3 ± 0.4 dBi	15.8 ± 0.4 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		68° ± 3.8°	65° ± 4°	63° ± 3.6°
Vertical Beamwidth (-3 dB)		10.5° ± 0.8°	9° ± 0.8°	8.5° ± 0.5°
Electrical Downtilt Range		2-12°		
Interband Isolation		≥ 28 dB		
Cross Polar Isolation		≥ 25 dB		
Upper Sidelobe Rejection (first lobe above main beam)		≥ 15 dB	≥ 15 dB	≥ 15 dB
Front-to-Back Ratio, 180° ± 30°		≥ 24 dB	≥ 25 dB	≥ 25 dB
Cross Polar Ratio	Main Direction (0°)	≥ 15 dB		
	Sector Edges (±60°)	≥ 8 dB		
Maximum Power (Per Port, 50° C)		500 W		
Intermodulation 3rd Order for 2 x 43 dBm Carriers		< -153 dBc		



Several patents pending regarding this product. Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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ELECTRICAL CHARACTERISTICS		R2		
Frequency Bands		690-960 MHz		
		690-806 MHz	790-896 MHz	870-960 MHz
Gain	At Mid Tilt	15 dBi	15.4 dBi	15.9 dBi
	Over All Tilts	14.8 ± 0.4 dBi	15.3 ± 0.4 dBi	15.8 ± 0.4 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		68° ± 3.8°	65° ± 4°	63° ± 3.6°
Vertical Beamwidth (-3 dB)		10.5° ± 0.8°	9° ± 0.8°	8.5° ± 0.5°
Electrical Downtilt Range		2-12°		
Interband Isolation		≥ 28 dB		
Cross Polar Isolation		≥ 25 dB		
Upper Sidelobe Rejection (first lobe above main beam)		≥ 15 dB	≥ 15 dB	≥ 15 dB
Front-to-Back Ratio, 180° ± 30°		≥ 24 dB	≥ 25 dB	≥ 25 dB
Cross Polar Ratio	Main Direction (0°)	≥ 15 dB		
	Sector Edges (±60°)	≥ 8 dB		
Maximum Power (Per Port, 50° C)		500 W		
Intermodulation 3rd Order for 2 x 43 dBm Carriers		< -153 dBc		

ELECTRICAL CHARACTERISTICS		Y1		
Frequency Bands		1710-2690 MHz		
		1710-1920 MHz	1920-2300 MHz	2300-2690 MHz
Gain	At Mid Tilt	17.4 dBi	17.8 dBi	18 dBi
	Over All Tilts	17.4 ± 0.5	17.8 ± 0.5	17.9 ± 0.4
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		66° ± 3.5°	65° ± 4.5°	63° ± 4°
Vertical Beamwidth (-3 dB)		6.5° ± 0.5°	5.8° ± 0.4°	4.8° ± 0.4°
Electrical Downtilt Range		2-12°		
Interband Isolation		≥ 28 dB		
Cross Polar Isolation		≥ 25 dB		
Upper Sidelobe Rejection (first lobe above main beam)		≥ 15 dB	≥ 15 dB	≥ 15 dB
Front-to-Back Ratio, 180° ± 30°		≥ 25 dB	≥ 25 dB	≥ 25 dB
Cross Polar Ratio	Main Direction (0°)	≥ 15 dB		
	Sector Edges (±60°)	≥ 8 dB		
Maximum Power (Per Port, 50° C)		250 W		
Intermodulation 3rd Order for 2 x 43 dBm Carriers		< -153 dBc		

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ELECTRICAL CHARACTERISTICS		Y2		
Frequency Bands		1710-2690 MHz		
		1710-1920 MHz	1920-2300 MHz	2300-2690 MHz
Gain	At Mid Tilt	17.4 dBi	17.8 dBi	18 dBi
	Over All Tilts	17.4 ± 0.5	17.8 ± 0.5	17.9 ± 0.4
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		66° ± 3.5°	65° ± 4.5°	63° ± 4°
Vertical Beamwidth (-3 dB)		6.5° ± 0.5°	5.8° ± 0.4°	4.8° ± 0.4°
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Cross Polar Ratio	Main Direction (0°)	≥ 15 dB		
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Maximum Power (Per Port, 50° C)		250 W		
Intermodulation 3rd Order for 2 x 43 dBm Carriers		< -153 dBc		

ELECTRICAL DOWNTILT CONTROL		
This antenna features an integrated RCU		
Protocol	3GPP/AISG2.0	
Input Voltage Range	+10 to +30 V DC (pin 6)	
Power Consumption	Operating	< 13 W
	Standby	< 2 W
AISG Connectors		(2x) 8 pin connector according to IEC 60130-9; Daisy Chain In: Male; Daisy Chain Out: Female
AISG Hardware Interface	Pin 5 / Pin 3	RS485A/B
	Pin 6	Power Supply
	Pin 7	DC Return
Adjustment Time (full range)	40 seconds, typical (dependent on antenna)	
Adjustment Cycles	≥ 10,000	
Torque Max	≥ 160mN·m	
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, 8/20 μs 10 Repetitions Min. @ 6kA IEC 61312-1 Annex B Current Pulse Profile, 10/350 μs, 200 Repetitions Min. @ 0.6kA	

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690-960 | 690-960 | 1710-2690 | 1710-2690 MHz

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ENVIRONMENTAL CHARACTERISTICS		PACKAGING
Operating Temperature Range	-40° C to +65° C	<b>Carton Box</b> 2.330 x 0.61 x 0.318 m 52 kg <i>Includes Mounting Kit</i>
Operational Humidity	< 95%	
Lightning Protection	DC Ground	
MECHANICAL CHARACTERISTICS		
Dimensions (see drawing)	Height: 2000 mm    Width: 499 mm    Depth: 180 mm	
Weight	39 kg (excluding mounting accessory)	
Shroud	Fibreglass, Light Grey	
Wind Speed	Survival: 200 km/h	
Wind Load at 150 km/h	Frontal: 1390 N    Lateral: 390 N    Rear: 1542 N	
MOUNTING KIT OPTIONS	MECHANICAL TILT RANGE	
All mounting bracket kits are ordered separately unless otherwise indicated.		
Brackets for pole Ø50 to Ø115 mm (included)	0°-10°	

### BOTTOM VIEW

