

## 6638318v

5-Band, 10-Port, 35°, 65°, XPOL, Panel Antenna, Variable Tilt, 2199 mm

- Penta band antenna, Dual polarisation, 10 connectors
- Independent, continuously adjustable tilt on each band 2-12° / 2-12° / 2-12° / 2-12° / 2-12°
- RET version, 3GPP/AISG2.0 with five integrated RCU

ACCESS PORT DESCRIPTION (CONNECTORS)					
The antenna has 10 colour-coded connectors located at the bottom face.					
Frequency Designation	R1	Y1	Y2	Y3	Y4
Frequency Range	698-960 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	35°	35°	35°	35°
Electrical Downtilt Range	2-12°	2-12°	2-12°	2-12°	2-12°
Connector Type	(2x) 4.3/10 Female or 7/16 DIN Female	(2x) 4.3/10 Female or 7/16 DIN Female	(2x) 4.3/10 Female or 7/16 DIN Female	(2x) 4.3/10 Female or 7/16 DIN Female	(2x) 4.3/10 Female or 7/16 DIN Female

### ORDERING OPTIONS

Select from the different options listed below

SELECT ELECTRICAL DOWNTILT CONTROL & AISG PROTOCOL	SELECT ACTUATOR	SELECT CONNECTOR TYPE	ANTENNA MODEL NUMBER
Manual Electrical Tilt (MET)	---	4.3-10 Female	6638318Nv
		7/16 DIN Female	6638318v
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	Multi-Device Control Unit (MDCU)	4.3-10 Female	6638318NGv
		7/16 DIN Female	6638318Gv

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ELECTRICAL CHARACTERISTICS		R1		
Frequency Bands		698-960 MHz		
		698-803 MHz	824-880 MHz	880-960 MHz
Gain	at Mid Tilt	14.8 dBi	15.3 dBi	15.5 dBi
	Over All Tilts	14.7 ± 0.6 dBi	15.2 ± 0.6 dBi	15.5 ± 0.6 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Return loss		> 14 dB		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		67° ± 6°	66° ± 6°	63° ± 6°
Vertical Beamwidth (-3 dB)		10.7° ± 1.1°	9.2° ± 0.9°	8.8° ± 0.9°
Electrical Downtilt Range		2-12°		
Intra-Band Isolation		≥ 25 dB		
Inter-Band Isolation		≥ 25 dB		
First Upper Sidelobe Suppression		≥ 15 dB	≥ 15 dB	≥ 15 dB
Squint		< 3 deg	< 3 deg	< 3 deg
Front-to-Back Ratio (@ 180° ± 30°)		≥ 22 dB	≥ 23 dB	≥ 24 dB
Cross Polar Ratio	Main Direction (0°)	≥ 15 dB	≥ 15 dB	≥ 15 dB
	Sector Edges (±60°)	≥ 8 dB	≥ 8 dB	≥ 8 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		250 W		
Intermodulation 3rd Order, 2 x 43 dBm carrier		<-150 dBc		
Grounding		DC Ground		

Standard values based on NGMN-P-BASTA version 11.1 recommendation.

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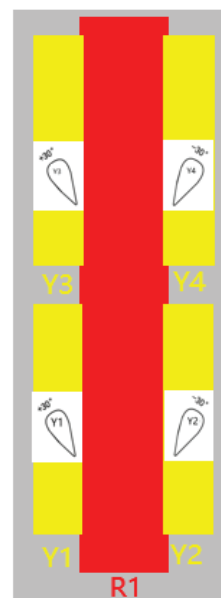
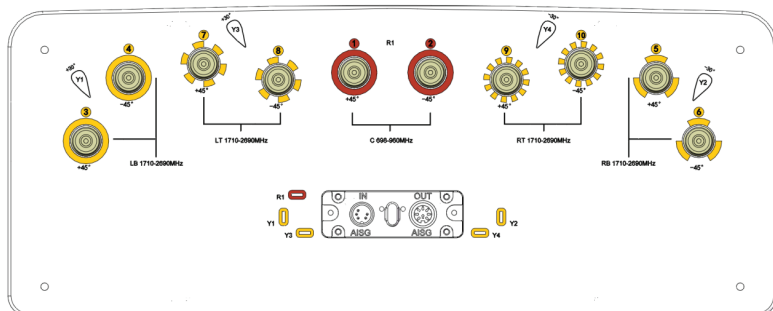
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ELECTRICAL CHARACTERISTICS		Y1, Y2, Y3, Y4		
Frequency Bands		1710-2690 MHz		
		1710-1880 MHz	1920-2170 MHz	2500-2690 MHz
Gain	at Mid Tilt	17.3 dBi	18.0 dBi	18.6 dBi
	Over All Tilts	17.2 ± 0.6 dBi	17.9 ± 0.6 dBi	18.5 ± 0.6 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Return loss		> 14 dB		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		39° ± 3°	35° ± 3°	30° ± 3°
Azimuth Beam centers		(±30°) ± 3°	(±30°) ± 3°	(±30°) ± 3°
Vertical Beamwidth (-3 dB)		9.8° ± 1.0°	8.7° ± 0.9°	6.9° ± 0.7°
Electrical Downtilt Range		2-12°		
Intra-Band Isolation		Same beam: ≥ 25 dB		
Beam to beam Isolation		≥ 25 dB		
Inter-Band Isolation		≥ 25 dB		
First Upper Sidelobe Suppression		≥ 15 dB	≥ 15 dB	≥ 15 dB
Squint		< 3 deg	< 3 deg	< 3 deg
Front-to-Back Ratio (@ 180° ± 30°)		≥ 25 dB	≥ 25 dB	≥ 25 dB
Cross Polar Ratio	Main Direction (0°)	≥ 15 dB	≥ 15 dB	≥ 15 dB
	Sector Edges (±60°)	≥ 8 dB	≥ 8 dB	≥ 8 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		200 W		
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -150 dBc		
Grounding		DC Ground		

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ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	R1	698-960	1-2	4.3/10 Female or 7/16 DIN Female
	Y1	1710-2690	3-4	4.3/10 Female or 7/16 DIN Female
	Y2	1710-2690	5-6	4.3/10 Female or 7/16 DIN Female
	Y3	1710-2690	7-8	4.3/10 Female or 7/16 DIN Female
	Y4	1710-2690	9-10	4.3/10 Female or 7/16 DIN Female

Diagram shown at right depicts the view from the front of the antenna. The illustration is not shown to scale.

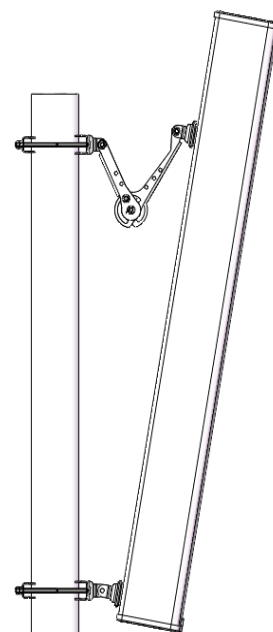
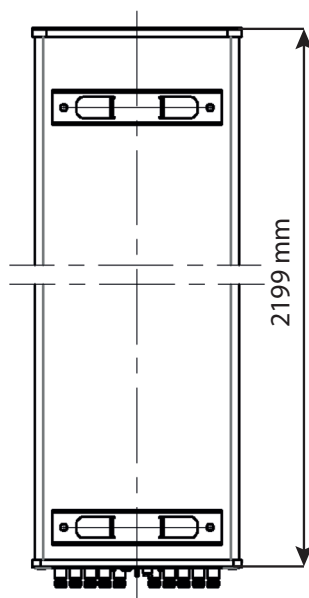
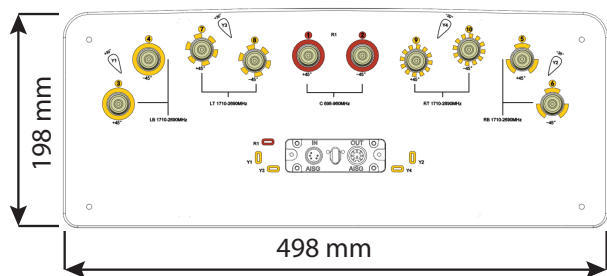
INTEGRATED RET PROPERTIES	
Protocols	Compliant With AISGV2.0 And 3GPP
Power Supply	10-30VDC
Power Consumption	< 1W (Idle), < 10W (In Motion)
Angular Accuracy	≤ 0.5 deg
Hardware Interface	RS485 And Power
Safety Standard	Compliant to EN 60950/UL 60950/RoHS, CE
Remote Control	Can management from OMC, BTS/NodeB
Adjustment Time (Full Range)	≤ 90 s (typical, depending on Antenna type)
Adjustment Cycles	> 20,000
Torque Max	≥ 160 mN.m
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, 8kA (8/20 μs), 2.5 kA (10/350 μs)
Housing Material	Aluminum
Housing Color	Silvery white
Mounting	Directly onto Antenna
Protection Class	IP65
Operating Temperature	-40° to +60° C
Weight	≤ 500 g
Connectors	2 x 8 Pin Circle Connector According To IEC 60130-9 And AISG. Daisy Chain In : Male, Daisy Chain Out : Female Pin3:RS485+; Pin5:RS485-; Pin6:10~30V; Pin7:GND Female connector: 8 PINs ,Male connector: 5 PINs

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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MECHANICAL CHARACTERISTICS		PACKAGING
Dimensions (Height x Width x Depth)	2199 x 498 x 198 mm (86.5 x 19.6 x 7.7 in)	<b>Carton Box</b> 2.418 x 0.593 x 0.318 m (95.1 x 23.3 x 12.5 in)
Weight (excluding mounting accessory)	35.5 kg (78.2 lbs)	
Weight with brackets	41 kg (90.3 lbs)	
Radome Material	Fiberglass (UV, Resistant)	
Radome Color	Pantone Cool Gray 1C	
Maximum Wind Speed	200 km/h (124.3 mph)	
Wind Load at 150 km/h	Frontal	1020 N (229.3 lbf)
	Rear	1140 N (256.2 lbf)
	Lateral	500 N (112.4 lbf)
Operating/Storage Temperature	-40° to +60° C (-40° to 140° F)	
MOUNTING KIT OPTIONS	POLE DIAMETER	MECHANICAL TILT
All mounting bracket kits are ordered separately unless otherwise indicated.		
Mounting and Downtilt Bracket Kit (Included)	Ø50-Ø125 mm (Ø1.9-Ø4.9 in)	0-10°



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