5964300

5964300A 5964300G 5964300DG

3Xpol | 65° Az | 15.8 / 15.7 / 16.8 dBi | 0-10° / 0-10° / 0-10° | 1915 x 432 x 153 mm

- Tri band antenna, dual polarisation, 6 connectors
- Independent tilt on each band 0-10° / 0-10° / 0-10°
- Lightweight TwinLine platform and low windload
- MET and RET versions, AISG1.1 or 3GPP/AISG2.0
- Single RET module to control all tilt angles, fully inserted inside the antenna (field replaceable)

TwinLine

ORDERING OPTIONS	MODEL NUMBER
Manual Electrical Tilt Antenna	**5964300**
Remote Electrical Tilt Antenna AISG1.1	**5964300A**
Remote Electrical Tilt Antenna 3GPP/AISG2.0 with an MDCU RET Actuator	**5964300G**
Remote Electrical Tilt Antenna 3GPP/AISG2.0 with an MDDU RET Actuator	**5964300DG**

ACCESS PORT DESCRIPTION (CONNECTORS)			
The antenna has 6 colour-coded connectors located at the bottom face.			
Frequency Designation	R1	R2	Y1
Frequency Range	698-960 MHz	698-960 MHz	1695-2690 MHz
Polarisation	Xpol	Xpol	Xpol
Horizontal Beamwidth	70°	70°	65°
Electrical Downtilt Range	0-10°	0-10°	0-10°
Connector Type	(2x) 7/16-DIN Female Long Neck	(2x) 7/16-DIN Female Long Neck	(2x) 7/16-DIN Female Long Neck

ELECTRICAL CHARACTERISTICS	R1			
Frequency Bands	698-960 MHz			
	698-806 MHz	790-862 MHz	824-894 MHz	880-960 MHz
Gain	14.7 dBi ± 0.6 dB	15.6 dBi ± 0.3 dB	15.7 dBi ± 0.4 dB	15.8 dBi ± 0.3 dB
Input Impedance	50Ω			
VSWR	< 1.5			
Polarisation	±45°			
Horizontal Beamwidth (-3 dB)	74.4° ± 6.5°	71.1° ± 4.7°	72.2° ± 2.9°	70.9° ± 1.8°
Vertical Beamwidth (-3 dB)	11.7° ± 1.1°	10.3° ± 0.5°	10.1° ± 0.4°	9.6° ± 0.6°
Electrical Downtilt Range	0-10°			
Inter/Intra Band Isolation	> 25 dB			
Upper Sidelobe Rejection (20° sector above main beam)	> 15.5 dB	> 17.3 dB	> 16.8 dB	>17.0 dB
Front-to-Back Ratio @ 180° ±30°	> 21.0 dB	> 21.3 dB	> 21.4 dB	> 23.6 dB
Cross Polar Ratio - Main Direction	> 16.1 dB	> 17.0 dB	> 16.7 dB	> 16.6 dB
Maximum Power (Per Port)	250 W			
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm			

Values based on NGMN-P-BASTA version 9.6 requirements.

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ELECTRICAL CHARACTERISTICS	R2			
Frequency Bands	698-960 MHz			
	698-806 MHz	790-862 MHz	824-894 MHz	880-960 MHz
Gain	14.5 dBi ± 0.5 dB	15.2 dBi ± 0.4 dB	15.4 dBi ± 0.5 dB	15.7 dBi ± 0.4 dB
Input Impedance	50Ω			
VSWR	< 1.5			
Polarisation	±45°			
Horizontal Beamwidth (-3 dB)	75.1° ± 5.5°	70.5° ± 3.6°	70.3° ± 2.6°	72.1° ± 2.2°
Vertical Beamwidth (-3 dB)	11.8° ± 1.0°	10.6° ± 0.5°	10.4° ± 0.6°	9.6° ± 0.6°
Electrical Downtilt Range	0-10°			
Inter/Intra Band Isolation	> 25 dB			
Upper Sidelobe Rejection (20° sector above main beam)	> 18.6 dB	> 17.1 dB	> 17.1 dB	> 15.9 dB
Front-to-Back Ratio @ 180° ±30°	> 21.7 dB	> 22.5 dB	> 24.3 dB	>25.1 dB
Cross Polar Ratio - Main Direction	> 17.0 dB	> 17.2 dB	> 16.8 dB	> 16.2 dB
Maximum Power (Per Port)	250 W			
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm			

Values based on NGMN-P-BASTA version 9.6 requirements.

ELECTRICAL CHARACTERISTICS	Y1				
Frequency Bands	1695-2690 MHz				
	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2500 MHz	2490-2690 MHz
Gain	16.4 dBi ± 0.4 dB	16.5 dBi ± 0.4 dB	16.7 dBi ± 0.4 dB	16.6 dBi ± 0.4 dB	16.8 dBi ± 0.4 dB
Input Impedance	50Ω				
VSWR	< 1.5				
Polarisation	±45°				
Horizontal Beamwidth (-3 dB)	66.9° ± 4.1°	66.4° ± 3.8°	63.0° ± 4.4°	64.9° ± 3.6°	65.5° ± 4.2°
Vertical Beamwidth (-3 dB)	7.5° ± 0.6°	7.0° ± 0.4°	6.5° ± 0.6°	5.6° ± 0.1°	5.1° ± 0.4°
Electrical Downtilt Range	0-10°				
Inter/Intra Band Isolation	> 25 dB				
Upper Sidelobe Rejection (20° sector above main beam)	> 16.6 dB	> 16.9 dB	> 16.9 dB	> 16.8 dB	> 16.5 dB
Front-to-Back Ratio @ 180° ±30°	> 23.4 dB	>23.0 dB	> 23.3 dB	> 24.6 dB	> 25.3 dB
Cross Polar Ratio - Main Direction	> 14.6 dB	> 14.6 dB	> 15.1 dB	> 14.9 dB	> 14.9 dB
Maximum Power (Per Port)	200 W				
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm				

Values based on NGMN-P-BASTA version 9.6 requirements.

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ELECTRICAL DOWNTILT CONTROL		
Electrical downtilt for each band can be controlled separately. Tilt indicator(s) are covered by removable transparent cap(s).		
Manual Electrical Tilt (MET) Control		A coloured knob at the end of the tilt indicator allows change of the tilt without need of a tool. The knob colour is identical to the corresponding connector ring colour. To access the knob, remove the cap by turning it counter-clockwise. It is re-installed by opposite rotation. Do not remove the transparent cap(s) from the antenna.
Remote Electrical Tilt (RET) Control		The remote control of the electrical tilt is managed by a Multi-Device Control Unit (MDCU) or a Multi-Device Dual Unit (MDDU) inserted in the bottom of the antenna. A single actuator individually controls the tilt of each band (no need for daisy chain cables between the bands). This module does not add any additional length to the antenna. For RET control, the transparent caps must be in place and locked. The tilt angle indicators always remain visible and the antenna still has manual tilt control (manual override).
RET-Ready antennas are delivered with the RET Actuator (MDCU or MDDU) already installed and pre-commissioned with all antenna parameters. Every RET device is factory configured and calibrated so the antenna is ready to be used once delivered to the site which means that there is no need for further installation of RET devices or for programming their configuration or for running a calibration process.		
RET-Ready Actuator (one per antenna)	Multi-Device Control Unit (MCDU)	The MDCU is an electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. Refer to ordering options.
	Multi-Device Dual Unit (MDDU)	The MDDU allows two separate RET Controllers to independently drive the RETs in antennas with factory embedded motors (for antenna sharing or two technologies). Refer to ordering options.

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ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature Range	-40° C to +60° C
Environmental	ETS 300 019
RoHS Compliant	Yes

MECHANICAL CHARACTERISTICS	
Dimensions (see drawing)	Height: 1915 mm Width: 432 mm Depth: 153 mm
Weight	28 kg (excluding mounting accessory)
Shroud	Outdoor fibreglass, Grey RAL7035
Wind Speed	Operational: 160 km/hr Survival: 200 km/h
Wind Load at 150 km/h	Frontal: 635 N Lateral: 395 N Rear: 656 N

MOUNTING KIT OPTIONS	PART NUMBER	WEIGHT
All mounting bracket kits are ordered separately unless otherwise indicated.		
Brackets for pole Ø48 to Ø115 mm (delivered as standard)	0900181/00	3.4 kg
Brackets for pole Ø70 to Ø150 mm (optional)	0900182/00	3.9 kg
Kit to add mechanical tilt (0°-10°) to above brackets (optional)	0900397/00	3.0 kg
Wall mounting brackets are available upon request.		

PACKAGING

Carton Box
2.15 x 0.55 x 0.28 m
0.33 m^3
38 kg
Includes 0900181/00 Kit

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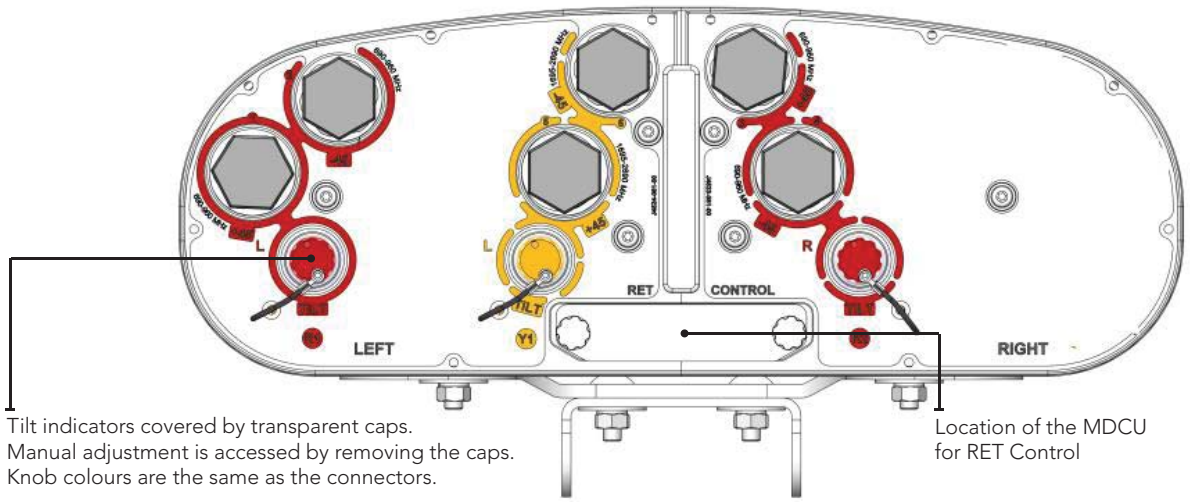
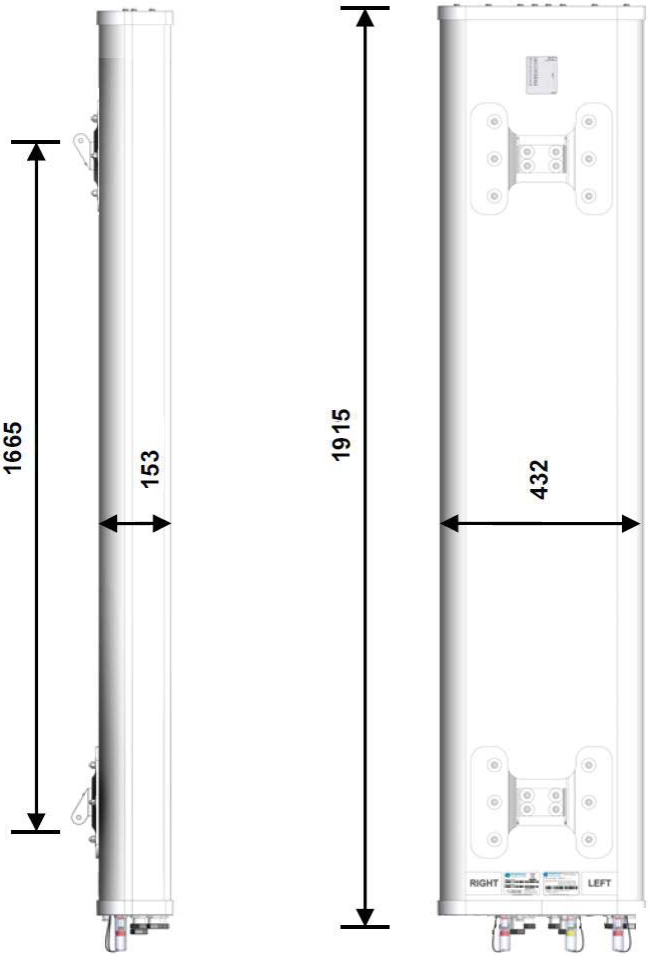
Bottom View of Antenna



Tilt indicators covered by transparent caps.
Manual adjustment is accessed by removing the caps.
Knob colours are the same as the connectors.

Location of the MDCU for RET Control

Dimensions (in mm)



Installation

Always attach the antenna by the two mounting points. Do not install the antenna with the connectors facing upward.

In order to operate RET control, the transparent cap covering the tilt adjustment indicator must be engaged and locked. Do not cut it from the antenna.