JAYBEAMWireless

6890103

6890103A 6890103G

XXXXpol | 65° Az | 17.5 / 17.3 / 17.3 / 18.6 dBi | 0-10° / 0-12° / 0-12° / 0-10° | 3109 x 573 mm

TRIO Series

- Quad band, Tri-sector antenna, dual polarisation, 8 connectors per sector
- Independent tilt on each band 0-10° / 0-12° / 0-12° / 0-10°
- Independent azimuth panning ±15° on each sector
- MET and RET versions, AISG1.1 or 3GPP/AISG2.0

Presentation

The **6890103** is a Tri-Sector system that contains three Quad Band antennas installed at 120° in a cylindrical shroud with ±15° azimuth panning capability independent on each sector. A service area at the bottom can be opened for access to connectors and the manual adjustment of the electrical downtilt and azimuth panning. Variants can be delivered with only one or two sectors fitted. See below for ordering details.

Ordering Options	Three Sectors	Two Sectors	One Sector
Manual Electrical Tilt	**6890103**	6890102	6890101
Remote Electrical Tilt AISG1.1	**6890103A**	6890102A	6890101A
Remote Electrical Tilt 3GPP/AISG2.0	**6890103G**	6890102G	6890101G

Access Ports Description (Connectors)

Each sector has 8 colour-coded connectors per sector located at the bottom face.

R1	Extended Low Band	790-960 MHz Ports	(2x) 7/16-DIN Female Long Neck
W1	Wide Band (Top Array)	1710-2170 MHz Ports	(2x) 7/16-DIN Female Ultra Long Neck
B1	Wide Band (Bottom Array)	1710-2170 MHz Ports	(2x) 7/16-DIN Female Ultra Long Neck
Y1	Ultra Wide Band	1710-2690 MHz Ports	(2x) 7/16-DIN Female Long Neck

Electrical Characteristics		R1	W1 & B1		Y1		
Frequency Bands (MHz)		790...880...960	1710...1880	1900...2170	1710...1880	1900...2170	2500...2690
Gain (dBi)	Tilt 0° Tilt Mid Value Tilt Max Value	16.5...17.0...17.5 16.5...17.0...17.5 16.4...16.9...17.4	16.5...16.9 16.4...16.7 16.3...16.5	16.9...17.3 16.7...17.2 16.5...17.0	17.6...17.9 17.5...17.7 17.5...17.6	17.9...18.4 17.7...18.2 17.6...18.0	18.3...18.6 18.0...18.2 17.7...17.8
Input Impedance		50 ohms	50 ohms		50 ohms		
VSWR		< 1.5	< 1.5		< 1.5		
Polarisation		±45°	±45°		±45°		
Horizontal Beamwidth (-3 dB)		66° (±6°)	67° (±3°)	64° (±4°)	67° (±3°)	64° (±4°)	60° (±3°)
Vertical Beamwidth (-3 dB)		7.3°	7.2°	6.7°	5.5°	5.0°	4.0°
Electrical Downtilt Range		0-10°	0-12°		0-10°		
Intra Band Isolation		> 30 dB, > 28 dB from 0° to 2° tilt	> 30 dB > 28 dB from 0° to 2° tilt		> 30 dB > 28 dB from 0° to 2° tilt		
Isolation Between Bands		> 30 dB	> 30 dB		> 30 dB		
Upper Sidelobe Rejection (20° sector above main beam)		18 dB Typical	18 dB Typical		18 dB Typical		
Front-to-Back Ratio		> 30 dB	> 30 dB		> 30 dB		
Maximum Power (Per Port)		200 W	160 W		160 W		
Intermodulation 3rd Order for 2x20W Carriers		< -110 dBm	< -110 dBm		< -110 dBm		

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) 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 Module Part Number (one per sector)	MDCU-A0000	for AISG1.1 protocol (three units included in 6890103A)
	MDCU-G0000	for 3GPP/AISG2.0 protocol (three units included in 6890103G)

Environmental

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

3GPP A GLOBAL INITIATIVE

AISG Antenna Interface Standards Group

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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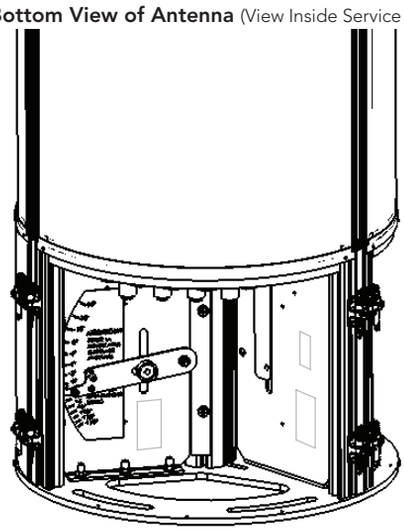
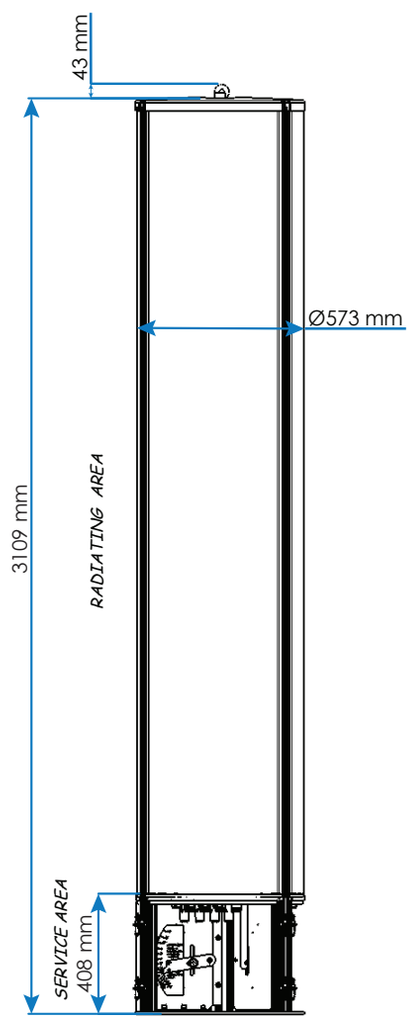
Mechanical Characteristics	
Dimensions	Total height: 3108 mm (includes 394 mm Service Area, Effective antenna height is 2676 mm) Diameter: 573 mm
Relative Directions of Internal Antennas (Sector Axis)	0° (±15°) 120° (±15°) 240° (±15°)
Weight	Three Sectors: 190 kg Two Sectors: 153 kg One Sector: 116 kg
Shroud	Outdoor Plastic, Grey RAL7035
Wind Speed	Operational: 160 km/hr Survival: 200 km/h
Wind load at 160 km/h	1055 N

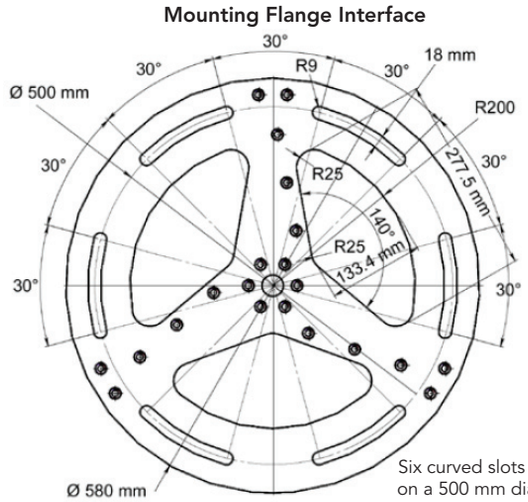
Bottom View of Antenna (View Inside Service Area)



Dimensions (in mm)



Mounting Flange Interface



Six curved slots 18 mm wide on a 500 mm diameter circle

TRIO Extension	
A TRIO Extension is a short mounting (0.85 m) mast which has the same diameter, same outside material and same colour as the antenna. The two major advantages of the extensions are getting the antenna higher and housing our TMA.	
Dimensions	Height: 850 mm Diameter: 573 mm
Weight	66 kg
Shroud	Outdoor Plastic, Grey RAL7035
Flange	Galvanised Steel
Wind Speed	Operational: 160 km/h Survival: 200 km/h

Refer to the separate documentation on TRIO Extensions for more details.

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