6800400N_B

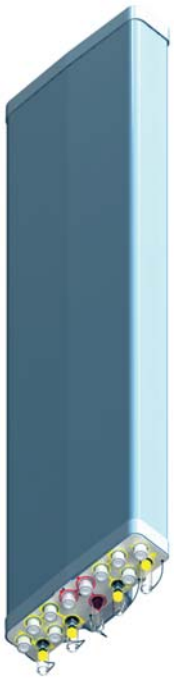
6800400N_BA 6800400N_BG

5Xpol | 65° Az | 17.5 / 18.0 / 18.0 / 18.0 / 18.0 dBi | 0-10° / 0-12° / 0-12° / 0-12° / 0-12° | 2690 x 392 x 114 mm

- Penta band antenna, dual polarisation, 10 connectors
- Independent tilt on each band 0-10° / 0-12° / 0-12° / 0-12° / 0-12°
- UltraLine platform with multi-array capability
- 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)
- Smart Bias-T is integrated on +45° port of 698-960 MHz band

UltraLine LTE Ready

ORDERING OPTIONS	MODEL NUMBER
Manual Electrical Tilt Antenna	**6800400N_B**
Remote Electrical Tilt Antenna AISG1.1	**6800400N_BA**
Remote Electrical Tilt Antenna 3GPP/AISG2.0 with an MDCU RET Actuator	**6800400N_BG**



ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 6 colour-coded connectors located at the bottom face.

Frequency Designation	R1	Y1	Y2	Y3	Y4
Frequency Range	698-960 MHz	1695-2690 MHz	1695-2690 MHz	1695-2690 MHz	1695-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	70°	65°	65°	65°	65°
Electrical Downtilt Range	0-10°	0-12°	0-12°	0-12°	0-12°
Connector Type	(2x) 4.3/10 Female	(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	698-960 MHz		
	698-790 MHz	790-890 MHz	890-960 MHz
Gain	16.5 dBi	17.0 dBi	17.5 dBi
Input Impedance	50Ω		
VSWR	< 1.5		
Polarisation	±45°		
Horizontal Beamwidth (-3 dB)	68° ± 1°	68° ± 2°	71° ± 2°
Vertical Beamwidth (-3 dB)	8.7° ± 0.8°	7.7° ± 0.5°	7.0° ± 0.5°
Electrical Downtilt Range	0-10°		
Inter/Intra Band Isolation	> 25 dB		
Upper Sidelobe Rejection (20° sector above main beam)	> 15.0 dB	> 15.0 dB	> 15.0 dB
Front-to-Back Ratio @ 180° ±30°	> 25 dB	> 25 dB	> 25 dB
Cross Polar Ratio - Main Direction	> 19.3 dB	> 21.8 dB	> 21.2 dB
Maximum Power (Per Port)	400 W		
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm		

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

698-960 | 1695-2690 | 1695-2690 | 1695-2690 | 1695-2690 MHz

6800400N_B

6800400N_BA 6800400N_BG

5Xpol | 65° Az | 17.5 / 18.0 / 18.0 / 18.0 / 18.0 dBi | 0-10° / 0-12° / 0-12° / 0-12° / 0-12° | 2690 x 392 x 114 mm

ELECTRICAL CHARACTERISTICS	Y1			
Frequency Bands	1695-2690 MHz			
	1695-1880 MHz	1920-2170 MHz	2200-2490 MHz	2490-2690 MHz
Gain	17.0 dBi	17.5 dBi	18.0 dBi	18.0 dBi
Input Impedance	50Ω			
VSWR	< 1.5			
Polarisation	±45°			
Horizontal Beamwidth (-3 dB)	65° ± 4°	67° ± 3°	64° ± 2°	59° ± 3°
Vertical Beamwidth (-3 dB)	7.2° ± 0.4°	6.1° ± 0.6°	5.2° ± 0.2°	5.0° ± 0.3°
Electrical Downtilt Range	0-12°			
Inter/Intra Band Isolation	> 25 dB			
Upper Sidelobe Rejection (20° sector above main beam)	> 16.0 dB	> 16.0 dB	> 16.0 dB	> 16.0 dB
Front-to-Back Ratio @ 180° ±30°	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross Polar Ratio - Main Direction	> 21.4 dB	> 24.0 dB	> 23.2 dB	> 20.5 dB
Maximum Power (Per Port)	300 W			
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm			

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

ELECTRICAL CHARACTERISTICS	Y2			
Frequency Bands	1695-2690 MHz			
	1695-1880 MHz	1920-2170 MHz	2200-2490 MHz	2490-2690 MHz
Gain	17.0 dBi	17.5 dBi	18.0 dBi	18.0 dBi
Input Impedance	50Ω			
VSWR	< 1.5			
Polarisation	±45°			
Horizontal Beamwidth (-3 dB)	65° ± 4°	67° ± 3°	64° ± 2°	59° ± 3°
Vertical Beamwidth (-3 dB)	7.2° ± 0.4°	6.1° ± 0.6°	5.2° ± 0.2°	5.0° ± 0.3°
Electrical Downtilt Range	0-12°			
Inter/Intra Band Isolation	> 25 dB			
Upper Sidelobe Rejection (20° sector above main beam)	> 16.0 dB	> 16.0 dB	> 16.0 dB	> 16.0 dB
Front-to-Back Ratio @ 180° ±30°	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross Polar Ratio - Main Direction	> 21.4 dB	> 24.0 dB	> 23.2 dB	> 20.5 dB
Maximum Power (Per Port)	300 W			
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm			

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

6800400N_B

6800400N_BA 6800400N_BG

5Xpol | 65° Az | 17.5 / 18.0 / 18.0 / 18.0 / 18.0 dBi | 0-10° / 0-12° / 0-12° / 0-12° / 0-12° | 2690 x 392 x 114 mm

ELECTRICAL CHARACTERISTICS	Y3			
Frequency Bands	1695-2690 MHz			
	1695-1880 MHz	1920-2170 MHz	2200-2490 MHz	2490-2690 MHz
Gain	17.0 dBi	17.5 dBi	18.0 dBi	18.0 dBi
Input Impedance	50Ω			
VSWR	< 1.5			
Polarisation	±45°			
Horizontal Beamwidth (-3 dB)	65° ± 4°	67° ± 3°	64° ± 2°	59° ± 3°
Vertical Beamwidth (-3 dB)	7.2° ± 0.4°	6.1° ± 0.6°	5.2° ± 0.2°	5.0° ± 0.3°
Electrical Downtilt Range	0-12°			
Inter/Intra Band Isolation	> 25 dB			
Upper Sidelobe Rejection (20° sector above main beam)	> 16.0 dB	> 16.0 dB	> 16.0 dB	> 16.0 dB
Front-to-Back Ratio @ 180° ±30°	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross Polar Ratio - Main Direction	> 21.4 dB	> 24.0 dB	> 23.2 dB	> 20.5 dB
Maximum Power (Per Port)	300 W			
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm			

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

ELECTRICAL CHARACTERISTICS	Y4			
Frequency Bands	1695-2690 MHz			
	1695-1880 MHz	1920-2170 MHz	2200-2490 MHz	2490-2690 MHz
Gain	17.0 dBi	17.5 dBi	18.0 dBi	18.0 dBi
Input Impedance	50Ω			
VSWR	< 1.5			
Polarisation	±45°			
Horizontal Beamwidth (-3 dB)	65° ± 4°	67° ± 3°	64° ± 2°	59° ± 3°
Vertical Beamwidth (-3 dB)	7.2° ± 0.4°	6.1° ± 0.6°	5.2° ± 0.2°	5.0° ± 0.3°
Electrical Downtilt Range	0-12°			
Inter/Intra Band Isolation	> 25 dB			
Upper Sidelobe Rejection (20° sector above main beam)	> 16.0 dB	> 16.0 dB	> 16.0 dB	> 16.0 dB
Front-to-Back Ratio @ 180° ±30°	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross Polar Ratio - Main Direction	> 21.4 dB	> 24.0 dB	> 23.2 dB	> 20.5 dB
Maximum Power (Per Port)	300 W			
Intermodulation 3rd Order for 2 x 20W Carriers	< -110 dBm			

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

6800400N_B

6800400N_BA 6800400N_BG

5Xpol | 65° Az | 17.5 / 18.0 / 18.0 / 18.0 / 18.0 dBi | 0-10° / 0-12° / 0-12° / 0-12° / 0-12° | 2690 x 392 x 114 mm

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-Ready antennas are delivered with the RET Actuator (MDCU) 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. Part Number MDCU-A0000 for AISG1.1 Protocol One MDCU-A0000 unit included in 6800400A Part Number MDCU-G0000 for 3GPP/AISG2.0 Protocol One MDCU-G0000 unit included in 6800400G

ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature Range	-40° C to +60° C
Environmental	ETS 300 019
RoHS Compliant	Yes
MECHANICAL CHARACTERISTICS	
Dimensions (see drawing)	Height: 2690 mm Width: 392 mm Depth: 114 mm
Weight	40.0 kg (excluding mounting accessory)
Shroud	Outdoor plastic, Grey RAL7035
Wind Speed	Operational: 160 km/hr Survival: 200 km/h
Wind Load at 150 km/h	Frontal: 1464 N Lateral: 637 N Rear: 1592 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)	0900393/00	5.1 kg
Kit to add mechanical tilt (0°-10°) to above brackets (included)	0900394/00	3.1 kg
Wall mounting brackets are available upon request.		

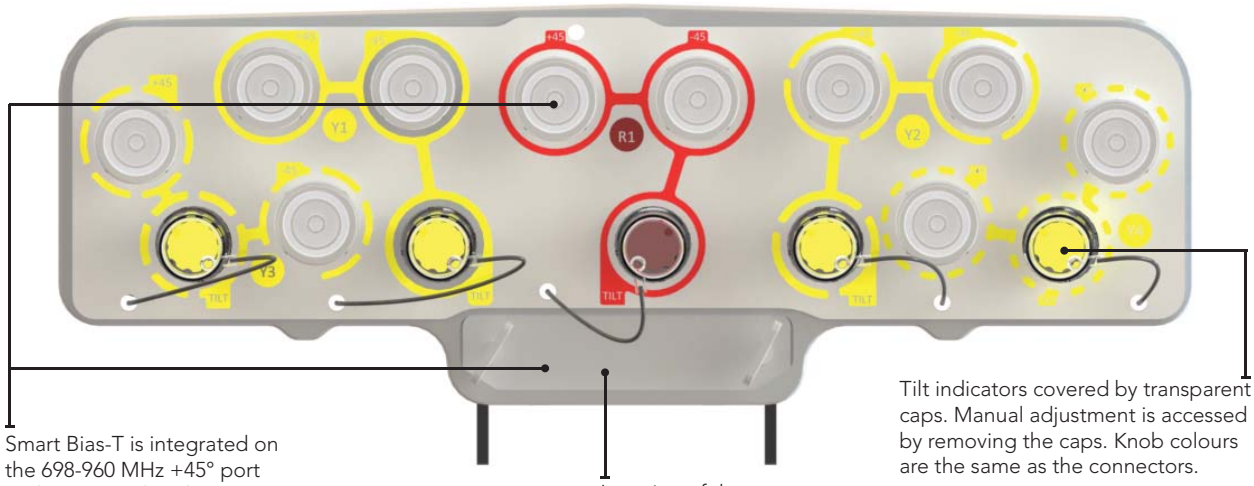
698-960 | 1695-2690 | 1695-2690 | 1695-2690 | 1695-2690 MHz

6800400N_B

6800400N_BA 6800400N_BG

5Xpol | 65° Az | 17.5 / 18.0 / 18.0 / 18.0 / 18.0 dBi | 0-10° / 0-12° / 0-12° / 0-12° / 0-12° | 2690 x 392 x 114 mm

Bottom View of Antenna

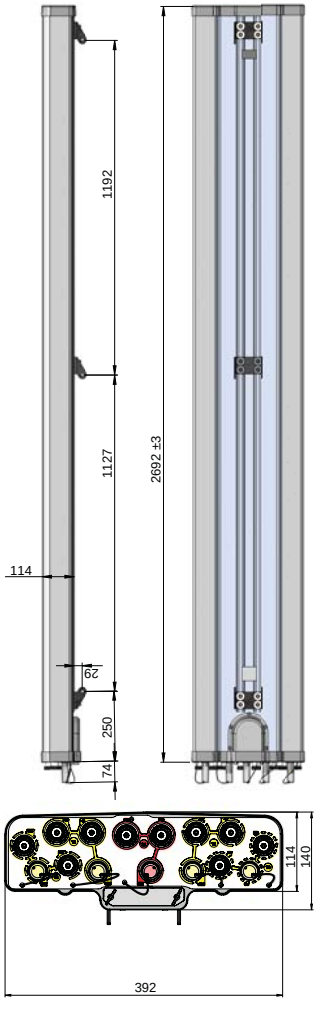


Smart Bias-T is integrated on the 698-960 MHz +45° port and connected to the MDCU during production.

Location of the MDCU for RET Control

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

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.