

## 6888300N-C-K03, 6888320-K03

6888300NG-C-K03

6888320G-K03

4-Band, 8-Port, 65°, XPOL, Cylindrical Sector Antenna, Variable Tilt, CylLine, 1920 mm



- Quad band, Cylindrical base-mounted sector antenna, dual polarisation, 8 connectors
- 350 mm Diameter
- Same RF characteristics as our 6888300 antenna
- MET and RET versions, 3GPP/AISG2.0
- Service area under the antenna

<b>PRODUCT OVERVIEW</b>	Frequency Range (MHz)	698-960	1695-2180	1695-2690	2490-2690
	Array	<span style="color: red;">■</span> R1	<span style="color: blue;">■</span> B1	<span style="color: yellow;">■</span> Y1	<span style="color: yellow;">■</span> Y2
	Connector	1-2	3-4	5-6	7-8
	Polarization	XPOL	XPOL	XPOL	XPOL
	Azimuth Beamwidth (avg)	65°	65°	65°	65°
	Electrical Downtilt	0-10°	0-10°	0-10°	0-10°
	Dimensions	1920 x Ø350 mm			



### 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	6888300N-C-K03
		7/16-DIN Female	6888320-K03
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	Multi-Device Control Unit (MDCU)	4.3-10 Female	6888300NG-C-K03
		7/16-DIN Female	6888320G-K03



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## 6888300N-C-K03, 6888320-K03

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4-Band, 8-Port, 65°, XPOL, Cylindrical Sector Antenna, Variable Tilt, CylLine, 1920 mm

### ELECTRICAL SPECIFICATIONS Ultra Low Band

■ R1

Frequency Range		MHz	698-960			
		MHz	698-806	790-862	824-894	880-960
Polarization		---	±45°			
Gain	Over all Tilts	dBi	14.7 ± 0.3	15.5 ± 0.3	15.8 ± 0.4	15.8 ± 0.4
Azimuth Beamwidth		degrees	71.5° ± 2.0°	67.6° ± 2.4°	67.2° ± 1.3°	67.5° ± 2.0°
Elevation Beamwidth		degrees	12.0° ± 0.5°	10.5° ± 0.6°	9.9° ± 0.9°	9.5° ± 0.6°
Electrical Downtilt		degrees	0°-10°			
Impedance		Ohms	50			
VSWR		---	< 1.5			
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBm	< -110			
Front-to-Back Ratio, Total Power, ±30°		dB	> 24.2	> 26.5	> 25.1	> 24.2
Upper Sidelobe Suppression, 0° to 20°		dB	> 15.9	> 18.0	> 17.9	> 16.8
Cross Polar Ratio - Main Direction		dB	> 16.1	> 17.1	> 16.0	> 15.9
Maximum Effective Power Per Port		Watts	250 W			
Inter/Intra Band Isolation		dB	> 25			

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

### ELECTRICAL SPECIFICATIONS Filtered Array (Y2)

■ B1

Frequency Range		MHz	1695-2180			
		MHz	1695-1880	1850-1990	1920-2180	
Polarization		---	±45°			
Gain	Over all Tilts	dBi	17.2 ± 0.2	17.2 ± 0.2	17.3 ± 0.2	
Azimuth Beamwidth		degrees	63.5° ± 3.9°	62.9° ± 3.5°	60.9° ± 4.2°	
Elevation Beamwidth		degrees	6.0° ± 0.2°	5.6° ± 0.4°	5.1° ± 0.5°	
Electrical Downtilt		degrees	0°-10°			
Impedance		Ohms	50			
VSWR		---	< 1.5			
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBm	< -110			
Front-to-Back Ratio, Total Power, ±30°		dB	> 26.9	> 25.1	> 25.2	
Upper Sidelobe Suppression, 0° to 20°		dB	> 18.0	> 17.4	> 17.6	
Cross Polar Ratio - Main Direction		dB	> 21.0	> 22.5	> 23.4	
Maximum Effective Power Per Port		Watts	200 W			
Inter/Intra Band Isolation		dB	> 28			

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

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## 6888300N-C-K03, 6888320-K03

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4-Band, 8-Port, 65°, XPOL, Cylindrical Sector Antenna, Variable Tilt, CylLine, 1920 mm

### ELECTRICAL SPECIFICATIONS Ultra Wide Band

Y1

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2180	2300-2500	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	17.2 ± 0.2	17.3 ± 0.3	17.5 ± 0.2	17.7 ± 0.2	17.7 ± 0.3
Azimuth Beamwidth		degrees	65.6° ± 4.5°	64.5° ± 4.9°	62.1° ± 4.4°	62.6° ± 4.5°	65.9° ± 4.0°
Elevation Beamwidth		degrees	6.1° ± 0.3°	5.7° ± 0.3°	5.3° ± 0.4°	4.6° ± 0.3°	4.2° ± 0.2°
Electrical Downtilt		degrees	0°-10°				
Impedance		Ohms	50				
VSWR		---	< 1.5				
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBm	< -110				
Front-to-Back Ratio, Total Power, ±30°		dB	> 23.4	> 23.6	> 24.9	> 25.6	> 25.5
Upper Sidelobe Suppression, 0° to 20°		dB	> 18.4	> 18.3	> 17.8	> 16.0	> 15.9
Cross Polar Ratio - Main Direction		dB	> 14.9	> 15.0	> 15.7	> 14.8	> 15.3
Maximum Effective Power Per Port		Watts	200 W				
Inter/Intra Band Isolation		dB	> 25				

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

### ELECTRICAL SPECIFICATIONS Filtered Array (B1)

Y2

Frequency Range		MHz	2490-2690				
		MHz	2490-2690				
Polarization		---	±45°				
Gain	Over all Tilts	dBi	17.5 ± 0.3				
Azimuth Beamwidth		degrees	61.3° ± 3.7°				
Elevation Beamwidth		degrees	4.1° ± 0.2°				
Electrical Downtilt		degrees	0°-10°				
Impedance		Ohms	50				
VSWR		---	< 1.5				
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBm	< -110				
Front-to-Back Ratio, Total Power, ±30°		dB	> 28.1				
Upper Sidelobe Suppression, 0° to 20°		dB	> 16.2				
Cross Polar Ratio - Main Direction		dB	> 18.2				
Maximum Effective Power Per Port		Watts	200 W				
Inter/Intra Band Isolation		dB	> 28				

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

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## 6888300N-C-K03, 6888320-K03

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4-Band, 8-Port, 65°, XPOL, Cylindrical Sector Antenna, Variable Tilt, Cylline, 1920 mm

### ELECTRICAL DOWNTILT CONTROL

For multiband antennas, 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 colored knob at the end of the tilt indicator allows change of the tilt without need of a tool. The knob color is identical to the corresponding connector color. To access the knob, remove the cap by turning it counter-clockwise. It is re-installed by opposite rotation. <b>Do not remove the transparent cap(s) from the antenna.</b>
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. <i>See details below and refer to the ordering options to see which actuators are available with this particular antenna.</i> 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). <b>Do not remove the transparent cap(s) from the antenna.</b>

### RET ACTUATOR

Amphenol's **RET-READY** antennas are delivered with the RET Actuator 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 ACTUATORS	Multi-Device Control Unit (MDCU). The MDCU is an electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. The MDCU is factory installed. <i>Refer to the ORDERING OPTIONS for availability with this model</i>				
	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). The MDDU is factory installed. <i>Refer to the ORDERING OPTIONS for availability with this model.</i>				
Number of RET-READY Actuators	One per antenna				
Input Voltage	+10 to +30 V				
Power Consumption	<table border="1"> <tr> <td data-bbox="333 1512 596 1561">Idle State</td> <td data-bbox="596 1512 1503 1561">0.5 W</td> </tr> <tr> <td data-bbox="333 1561 596 1608">Operating</td> <td data-bbox="596 1561 1503 1608">4 W typical / 10 W maximum</td> </tr> </table>	Idle State	0.5 W	Operating	4 W typical / 10 W maximum
Idle State	0.5 W				
Operating	4 W typical / 10 W maximum				
Protocol	3GPP/AISG 2.0				
Tilt Change Duration	Less than 15 seconds, typical (may vary dependent on antenna type and outdoor temperature)				
Precision	±0.5°				
Tilt Change Capability	50,000 minimum				
RET Interface	1 pair of AISG Male and Female (type IEC60130-9)				
Field Replaceable Unit	Yes				

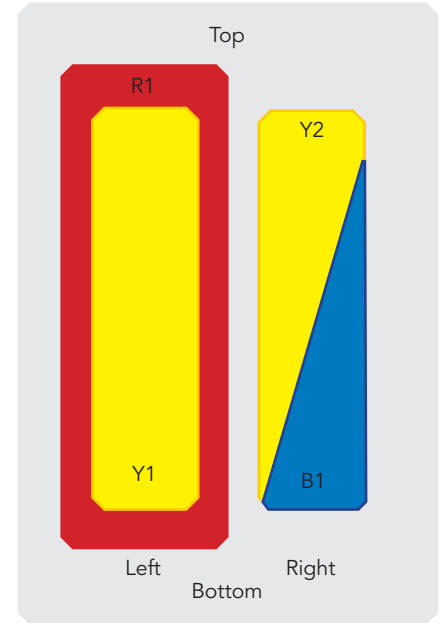
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## 6888300N-C-K03, 6888320-K03

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4-Band, 8-Port, 65°, XPOL, Cylindrical Sector Antenna, Variable Tilt, CyLLine, 1920 mm



ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	R1	698-960	1-2	7/16-DIN Female Long Neck or 4.3-10 Female
	Y1	1695-2180	3-4	7/16-DIN Female Ultra Long Neck or 4.3-10 Female
	Y1	1695-2690	5-6	7/16-DIN Female Ultra Long Neck or 4.3-10 Female
	Y2	2490-2690	7-8	7/16-DIN Female Long Neck or 4.3-10 Female

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

### MECHANICAL SPECIFICATIONS

The CyLLine system comes as an antenna and a service area section acting as an installation mast. The cylindrical shroud covers the whole antenna with the exception of the rear of the antenna where the aluminum structure profile is apparent. The service area, mounted under the antenna, is closed by a removable shroud, in order to give access to the connectors and to the tilt indicators for tuning. A TMA may be installed in the service area.

Please note that it is MANDATORY that the antenna be installed with the provided service area.

Length	mm (in)	1920 (75.6)	
Diameter	mm (in)	350 (13.8)	
Net Weight	Total Weight	kg (lbs) 86 (189.6)	
	Antenna Only	kg (lbs) 49 (108.0)	
	Service Area	kg (lbs) 37 (81.6)	
Windload (Wind Tunnel Coefficients)	Calculation	km/h (mph) 160 (99.4)	
	Frontal	N (lbf) 915 (205.7)	
Operational Wind Speed	km/h (mph)	160 (99.4)	
Survival Wind Speed	km/h (mph)	200 (124)	
Radome Color	---	Gray RAL7035	
Radome Material	---	Outdoor Plastic	
Lightning Protection	---	Direct Ground	
Shipping	Antenna	Shipping Dimensions (Length x Width x Depth)	mm (in) 2160 x 480 x 480 (85.0 x 18.9 x 18.9)
		Shipping Weight	kg (lbs) 54 (119.0)
		Shipping Volume	m <sup>3</sup> (ft <sup>3</sup> ) 0.5 (17.7)
	Extension Packaging	Shipping Dimensions (Length x Width x Depth)	mm (in) 1500 x 480 x 480 (59.1 x 18.9 x 18.9)
		Shipping Weight	kg (lbs) 40 (88.2)
		Shipping Volume	m <sup>3</sup> (ft <sup>3</sup> ) 0.345 (12.2)

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4-Band, 8-Port, 65°, XPOL, Cylindrical Sector Antenna, Variable Tilt, Cylline, 1920 mm

**ENVIRONMENTAL SPECIFICATIONS**

Environmental	---	ETS 300 019
Operating Temperature	° C (° F)	-40° to +60° (-40° to +140°)
Product Environmental Compliance	---	Product is RoHs Compliant

**PARTS SUPPLIED**

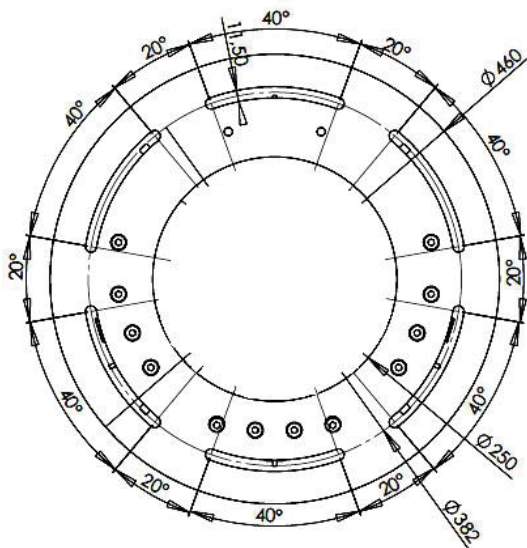
The supply list for this antenna includes: one antenna (6888320 or 6888320G); one service area of 1m length; all nuts, screws and washers required for assembly.

**INSTALLATION OF CABLES**

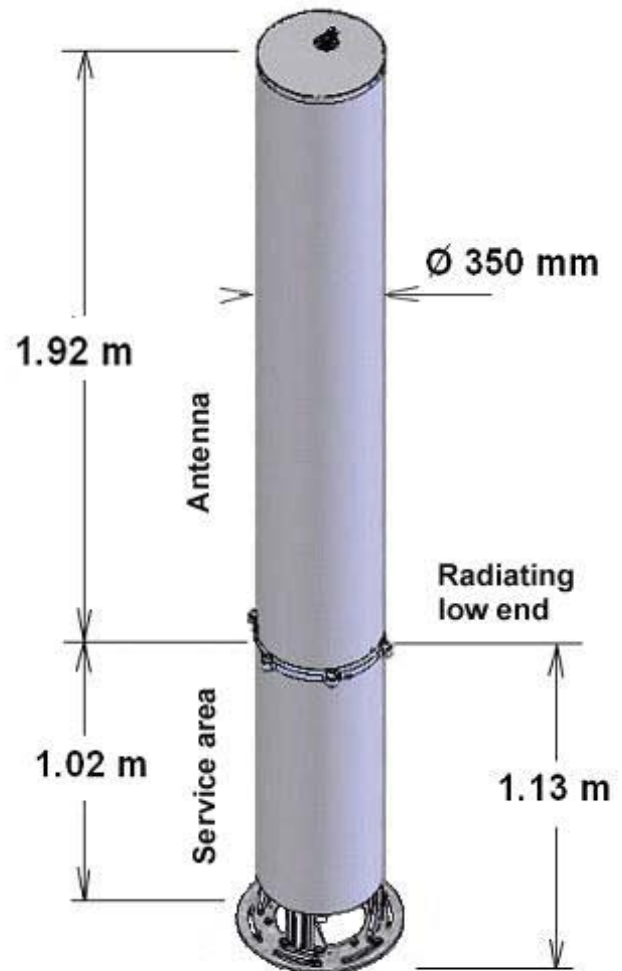
The flange at the base of the service area is the mounting base for the entire system. This flange (Ø<sub>ext</sub> 460 mm / thickness 10 mm) has six slots, each 40° long on a bolt circle diameter of 382 mm. These slots are used to tune the azimuth of the antenna. Mounting must be achieved with one bolt per slot (total six bolts M10, provided). The shroud of the service area is left open on 14 cm at the bottom in order to accommodate the cables.

1/2" Super-Flexible coaxial jumpers are recommended for easier installation in the service area, due to the minimal bending radius (see installation guide).

**Mounting Flange Interface**



**Dimensions**



**Service Area (Opened Shroud)**



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