

## TWIN658LU000G-T

TWIN DUAL BAND | 8-PORT PANEL | XPOL | 65° | 2449 MM (96.4 IN)

PRODUCT OVERVIEW	Frequency Range (MHz)	617-906	617-906	1695-2700	1695-2700
	Array	■ R1	■ R2	■ Y1	■ Y2
	Connector	1-2	3-4	5-6	7-8
	Connector Type	4.3-10 Female Long Neck	4.3-10 Female Long Neck	4.3-10 Female Long Neck	4.3-10 Female Long Neck
	Polarization	XPOL	XPOL	XPOL	XPOL
	Azimuth Beamwidth (avg)	65°	65°	65°	65°
	Electrical Downtilt	0-10°	0-10°	2-10°	2-10°
	Dimensions	2449 x 666 x 216 mm (96.4 x 26.2 x 8.5 in)			



### ELECTRICAL SPECIFICATIONS Low Band

■ R1 ■ R2

Frequency Range		MHz	(2x) 617-906		
Frequency Sub-Range		MHz	617-698	698-798	800-906
Polarization		---	(2x) ±45°		
Gain	Low Tilt	dBi	15.6	15.9	15.3
	Mid Tilt	dBi	15.5	15.9	15.3
	High Tilt	dBi	15.4	15.8	15.1
	Over all Tilts	dBi	15.5 ± 0.8	15.9 ± 0.5	15.3 ± 0.5
	Max Gain	dBi	16.3	16.4	15.8
Azimuth Beamwidth (3 dB)		degrees	73.1 ± 5.8	73.0 ± 5.7	69.6 ± 6.4
Elevation Beamwidth (3 dB)		degrees	11.5 ± 1.0	9.9 ± 0.7	8.7 ± 0.7
Electrical Downtilt		degrees	0-10		
Impedance		Ohms	50		
VSWR		---	1.5:1		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBm (dBc)	< -110 (< -153)		
Front-to-Back Ratio ± 30° @ 180° from boresite		dB	> 32	> 32	> 32
Upper Sidelobe Rejection 20° Sector Above Main Beam		dB	> 20	> 21	> 19
Cross Polar Discrimination at Mechanical Boresight (0°)		dB	> 22	> 21	> 18
Maximum Power Per Port		Watts	500		
Interband/Intraband Isolation		dB	25/30	25/30	25/30

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

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### ELECTRICAL SPECIFICATIONS Mid Band

■ Y1 ■ Y2

Frequency Range		MHz	(2x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(2x) $\pm 45^\circ$			
Gain	Low Tilt	dBi	16.8	17.2	17.3	17.3
	Mid Tilt	dBi	17.0	17.4	17.5	17.5
	High Tilt	dBi	17.1	16.9	17.2	17.1
	Over all Tilts	dBi	$17.0 \pm 0.6$	$17.2 \pm 0.6$	$17.4 \pm 0.7$	$17.4 \pm 0.9$
	Max Gain	dBi	17.6	17.8	18.1	18.3
Azimuth Beamwidth (3 dB)		degrees	$63.1 \pm 9.7$	$63.1 \pm 12.1$	$52.1 \pm 15.0$	$51.8 \pm 7.4$
Elevation Beamwidth (3 dB)		degrees	$6.2 \pm 0.5$	$5.8 \pm 0.3$	$5.4 \pm 0.5$	$4.7 \pm 3.2$
Electrical Downtilt		degrees	2-10			
Impedance		Ohms	50			
VSWR		---	1.5:1			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBm (dBc)	< -110 (< -153)			
Front-to-Back Ratio $\pm 30^\circ$ @ $180^\circ$ from boresite		dB	> 35	> 38	> 37	> 34
Upper Sidelobe Rejection 20° Sector Above Main Beam		dB	> 16	> 16	> 16	> 16
Cross Polar Discrimination at Mechanical Boresight (0°)		dB	> 14	> 15	> 13	> 11
Maximum Power Per Port		Watts	300			
Interband/Intraband Isolation		dB	25/30	25/30	25/30	25/30

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

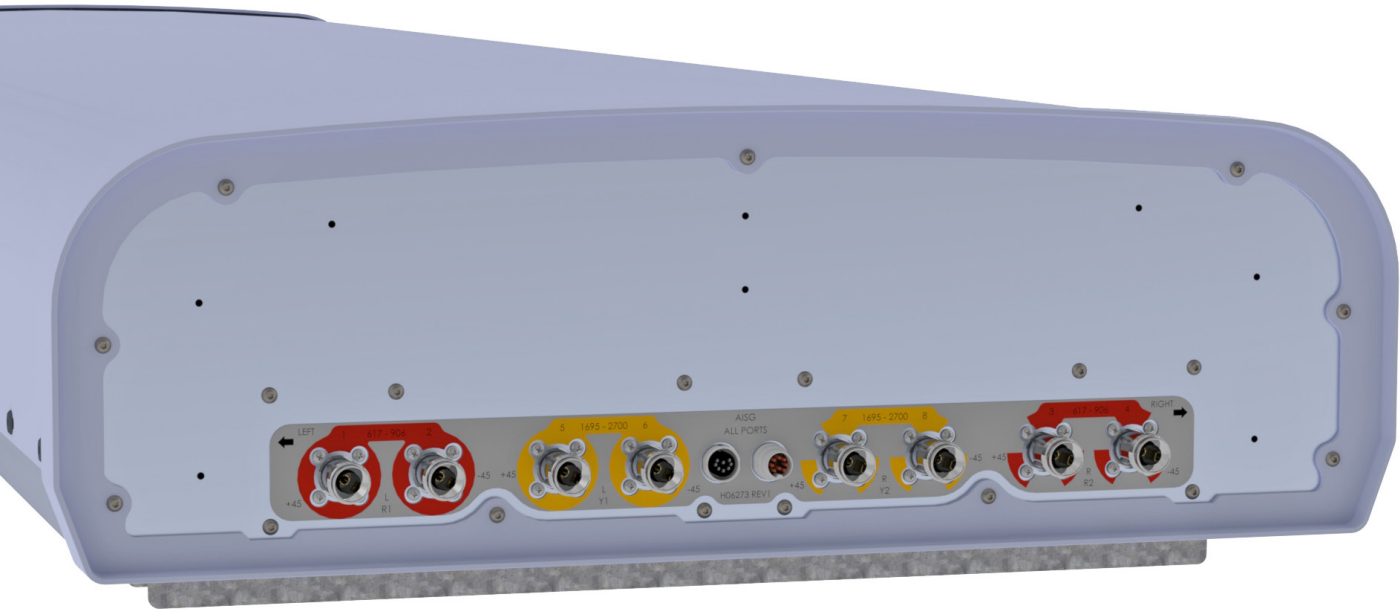
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RET ACTUATOR

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.

Input Voltage		Vdc	10-30
Power Consumption	Idle State, maximum	Watts	0.5
	Normal Conditions, maximum	Watts	10.0
Protocol		---	3GPP/AISG v2.0 (Single RET)
RET Interface		---	DIN Male and DIN Female
Field Replaceable Unit		---	No

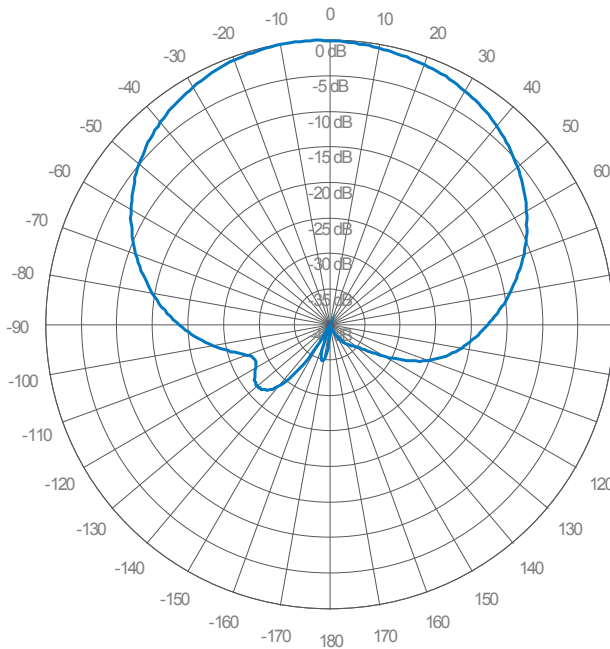


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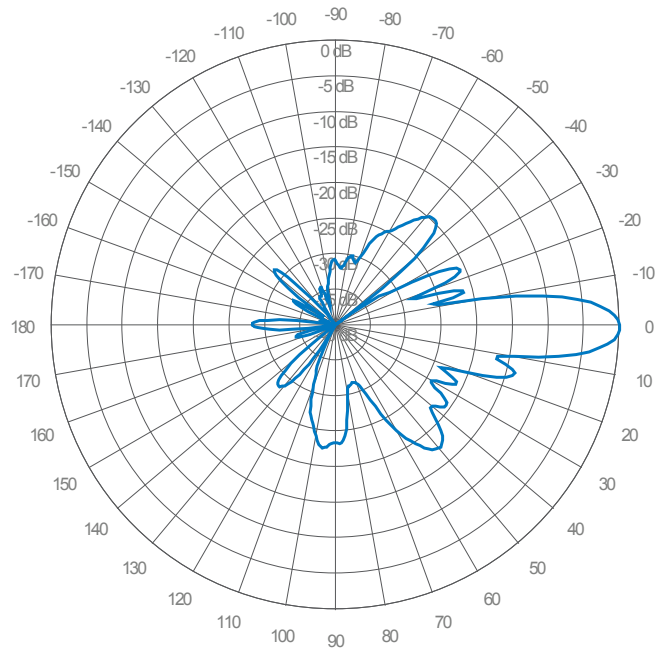
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LOW BAND

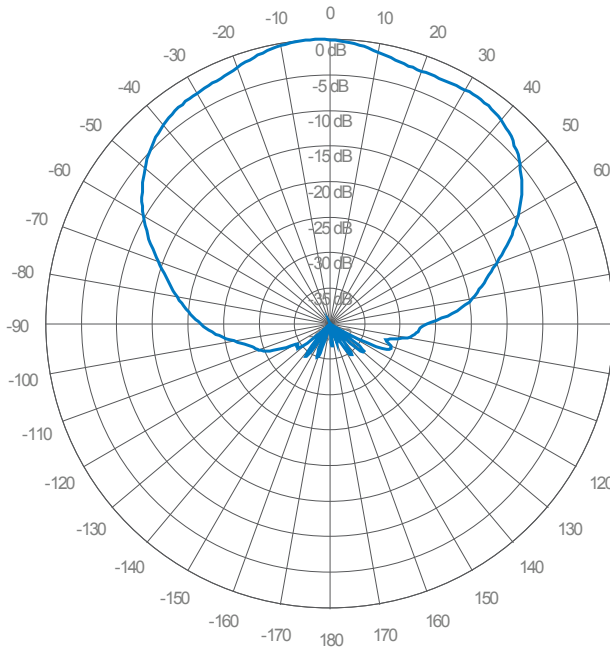


AZIMUTH  
617-960 MHz

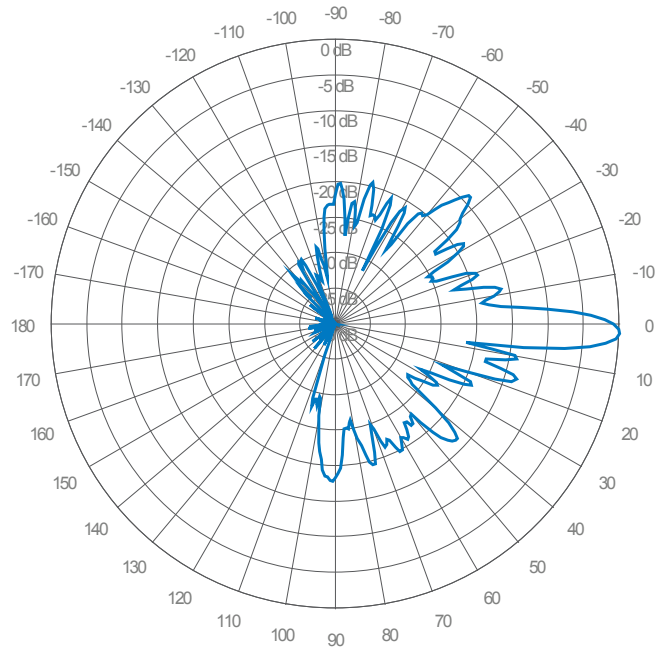


ELEVATION  
617-960 MHz

MID BAND



AZIMUTH  
1695-2700 MHz



ELEVATION  
1695-2700 MHz

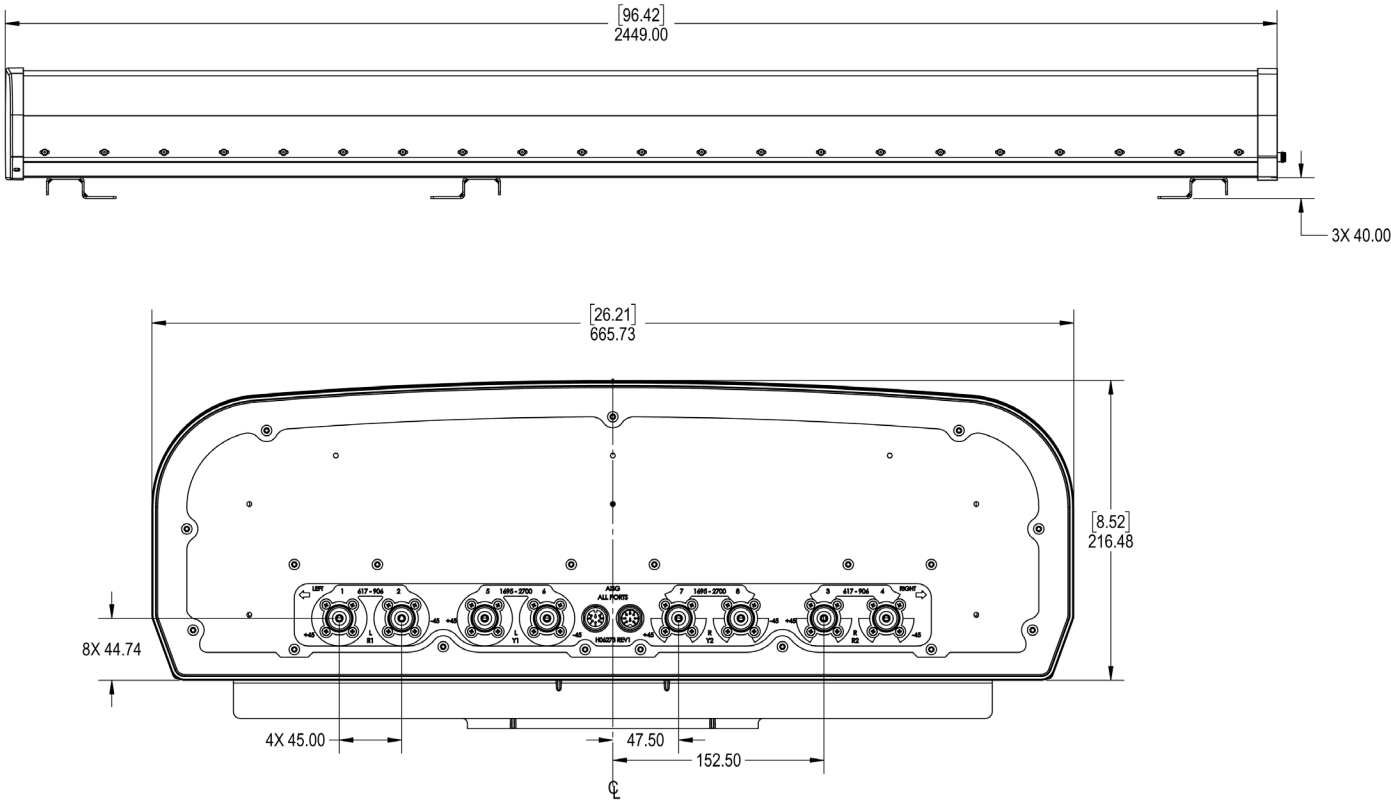
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MECHANICAL SPECIFICATIONS

Antenna	Length	mm (in)	2449 (96.4)
	Width	mm (in)	666 (26.2)
	Depth	mm (in)	216 (8.5)
Net Weight - Antenna Only		kg (lbs)	44 (98)
Windload	Calculation	km/h (mph)	161 (100)
	Frontal	N (lbf)	1671 (376)
	Lateral	N (lbf)	436 (98)
Survival Wind Speed		km/h (mph)	241 (150)
Connector	Type	---	4.3-10 Female
	Quantity	---	8
	Position	---	Bottom
Radome Color		---	ANSI 70 Gray
Radome Material		---	UV Stabilized ABS or Hips
Lightning Protection (Grounding Type)		---	Direct Ground





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**MOUNTING KITS** The default mounting kit is included in the price of the antenna. Any other mounting kits are optional and must be ordered separately.

	MODEL NUMBER	DESCRIPTION	FITS PIPE DIAMETER	WEIGHT
<b>DEFAULT MOUNTING KIT</b> <i>Shipped as standard and included in the price of the antenna</i> 	MKS10T02	3-Point, Scissor Tilt, Mounting & Downtilt Bracket Kit	50-115 mm (2.0-4.5 in)	9.3 kg (20.6 lbs)
<b>OPTIONAL MOUNTING KIT</b> <i>Must be ordered separately</i> 	MKS10P02	3-Point Mounting Bracket Kit	50-115 mm (2.0-4.5 in)	6.4 kg (14.0 lbs)

**INSTALLATION** Please read all installation notes before installing this product.



Always attach the antenna using all mounting points.

Do not install the antenna with the connectors facing upwards.