

Antenna 4000 2L 2M 2.4m

80010966

Capacity

Compact

Coverage

65° | 2x 698–960 MHz | 16.5 dBi

65° | 2x 1695–2690 MHz | 18.0 dBi

FlexRET



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Left side, lowband		R1, connector 1–2			
Frequency Range	MHz	698 – 806	791 – 862	824 – 894	880 – 960
Gain at mid Tilt	dBi	15.7	16.1	16.4	16.5
Gain over all Tilts	dBi	15.6 ± 0.4	16.1 ± 0.3	16.3 ± 0.3	16.4 ± 0.3
Horizontal Pattern:					
Azimuth Beamwidth	°	66 ± 2.9	65 ± 2.3	65 ± 2.6	64 ± 2.9
Front-to-Back Ratio, Total Power, ± 30°	dB	> 23	> 23	> 24	> 25
Cross Polar Discrimination over Sector	dB	> 10.0	> 9.5	> 10.0	> 11.5
Vertical Pattern:					
Elevation Beamwidth	°	9.7 ± 0.7	9.0 ± 0.5	8.7 ± 0.5	8.3 ± 0.4
Electrical Downtilt continuously adjustable	°	1.0 – 10.0			
Tilt Accuracy	°	< 0.4	< 0.4	< 0.4	< 0.4
First Upper Side Lobe Suppression	dB	> 16	> 18	> 18	> 20
Cross Polar Isolation	dB	> 30			
Port to Port Isolation	dB	> 27 (R1 // R2) > 30 (R1 // Y1, Y2)			
Max. Effective Power per Port	W	400 (at 50 °C ambient temperature)			
Max. Effective Power Ports R1	W	800 (at 50 °C ambient temperature)			

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

Right side, lowband		R2, connector 3–4			
Frequency Range	MHz	698 – 806	791 – 862	824 – 894	880 – 960
Gain at mid Tilt	dBi	15.5	16.0	16.3	16.6
Gain over all Tilts	dBi	15.5 ± 0.6	16.0 ± 0.5	16.3 ± 0.4	16.5 ± 0.4
Horizontal Pattern:					
Azimuth Beamwidth	°	67 ± 3.5	65 ± 2.6	64 ± 3.0	63 ± 4.3
Front-to-Back Ratio, Total Power, ± 30°	dB	> 22	> 23	> 24	> 26
Cross Polar Discrimination over Sector	dB	> 9.5	> 10.5	> 10.0	> 11.5
Vertical Pattern:					
Elevation Beamwidth	°	9.8 ± 0.6	9.0 ± 0.7	8.6 ± 0.4	8.1 ± 0.5
Electrical Downtilt continuously adjustable	°	1.0 – 10.0			
Tilt Accuracy	°	< 0.4	< 0.4	< 0.4	< 0.3
First Upper Side Lobe Suppression	dB	> 18	> 21	> 20	> 20
Cross Polar Isolation	dB	> 30			
Port to Port Isolation	dB	> 27 (R2 // R1) > 30 (R2 // Y1, Y2)			
Max. Effective Power per Port	W	400 (at 50 °C ambient temperature)			
Max. Effective Power Ports R2	W	800 (at 50 °C ambient temperature)			

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

Left side, midband		Y1, connector 5–6				
Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2180	2300 – 2400	2500 – 2690
Gain at mid Tilt	dBi	17.6	18.0	18.3	18.1	17.9
Gain over all Tilts	dBi	17.5 ± 0.4	17.9 ± 0.4	18.1 ± 0.5	18.0 ± 0.6	17.8 ± 0.6
Horizontal Pattern:						
Azimuth Beamwidth	°	64 ± 4.9	64 ± 5.0	62 ± 5.4	57 ± 5.7	61 ± 7.1
Front-to-Back Ratio, Total Power, ± 30°	dB	> 24	> 26	> 26	> 25	> 24
Cross Polar Discrimination over Sector	dB	> 8.5	> 11.5	> 10.0	> 7.5	> 9.0
Vertical Pattern:						
Elevation Beamwidth	°	6.4 ± 0.5	5.9 ± 0.3	5.5 ± 0.4	4.8 ± 0.3	4.4 ± 0.2
Electrical Downtilt continuously adjustable	°	2.5 – 12.0				
Tilt Accuracy	°	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
First Upper Side Lobe Suppression	dB	> 19	> 19	> 17	> 19	> 17
Cross Polar Isolation	dB	> 28				
Port to Port Isolation	dB	> 30 (Y1 // R1, R2, Y2)				
Max. Effective Power per Port	W	200 (at 50 °C ambient temperature)				
Max. Effective Power Ports Y1	W	400 (at 50 °C ambient temperature)				

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

Right side, midband		Y2, connector 7–8				
Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2180	2300 – 2400	2500 – 2690
Gain at mid Tilt	dBi	17.5	17.9	18.2	18.3	18.1
Gain over all Tilts	dBi	17.4 ± 0.5	17.8 ± 0.4	18.0 ± 0.6	18.2 ± 0.6	17.9 ± 0.6
Horizontal Pattern:						
Azimuth Beamwidth	°	66 ± 3.0	66 ± 5.5	63 ± 6.9	56 ± 7.1	57 ± 7.7
Front-to-Back Ratio, Total Power, ± 30°	dB	> 25	> 24	> 25	> 27	> 25
Cross Polar Discrimination over Sector	dB	> 9.5	> 11.0	> 10.0	> 9.5	> 10.5
Vertical Pattern:						
Elevation Beamwidth	°	6.4 ± 0.5	5.9 ± 0.3	5.6 ± 0.4	4.9 ± 0.4	4.4 ± 0.2
Electrical Downtilt continuously adjustable	°	2.5 – 12.0				
Tilt Accuracy	°	< 0.2	< 0.2	< 0.2	< 0.2	< 0.1
First Upper Side Lobe Suppression	dB	> 19	> 18	> 18	> 19	> 18
Cross Polar Isolation	dB	> 28				
Port to Port Isolation	dB	> 30 (Y2 // R1, R2, Y1)				
Max. Effective Power per Port	W	200 (at 50 °C ambient temperature)				
Max. Effective Power Ports Y2	W	400 (at 50 °C ambient temperature)				

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

Electrical specifications, all ports

Impedance	Ω	50
VSWR		< 1.5
Return Loss	dB	> 14
Interband Isolation	dB	> 27
Passive Intermodulation	dBc	< -153 (2 x 43 dBm carrier)
Polarization	°	+45, -45
Max. Effective Power for the Antenna	W	1200 (at 50 °C ambient temperature)

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

Mechanical specifications

Input	8x 4.3-10 female	
Connector Position	bottom	
Adjustment Mechanism	FlexRET, continuously adjustable	
Wind load (at Rated Wind Speed: 150 km/h)	N lbf	Frontal: 1400 315 Maximal: 1405 316
Max. Wind Velocity	km/h mph	241 150
Height / Width / Depth	mm inches	2438 / 508 / 175 96.0 / 20.0 / 6.9
Category of Mounting Hardware	XH (X-Heavy)	
Weight	kg lb	47.1 / 52.1 (clamps incl.) 103.8 / 114.9 (clamps incl.)
Packing Size	mm inches	2635 / 542 / 268 103.7 / 21.3 / 10.6
Scope of Supply	Panel, FlexRET and clamps for 55–115 mm 2.2–4.5 inches diameter	

Accessories (order separately if required)

Product No.	Description	Remarks mm inches	Units per antenna
85010097	2 clamps	Mast diameter: 110–220 4.3–8.7	1
85010099	1 downtilt kit	Downtilt angle: 0°–10°	1
86010154	Site Sharing Adapter	3-way (see figure below)	
86010155	Site Sharing Adapter	6-way (see figure below)	
86010162	Gender Adapter	Solely to be used in combination with a compatible FlexRET module	1
KRY 121 108/1	Port Extender		1

Accessories (included in the scope of supply)

Product No.	Description	Remarks mm inches	Units per antenna
85010096	2 clamps	Mast diameter: 55–115 2.2–4.5	1
86010153V01	FlexRET	Compliant to 3GPP / AISG 2.0	1

For downtilt mounting use the clamps for an appropriate mast diameter together with the downtilt kit.
Wall mounting: No additional mounting kit needed.

Material:

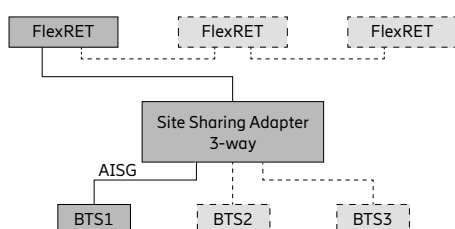
Reflector screen: Aluminum.

Fiberglass housing: It covers totally the internal antenna components. The special design reduces the sealing areas to a minimum and guarantees the best weather protection. Fiberglass material guarantees optimum performance with regards to stability, stiffness, UV resistance and painting. The color of the radome is light grey.
All nuts and bolts: Stainless steel or hot-dip galvanized steel.

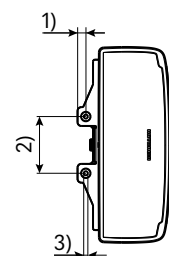
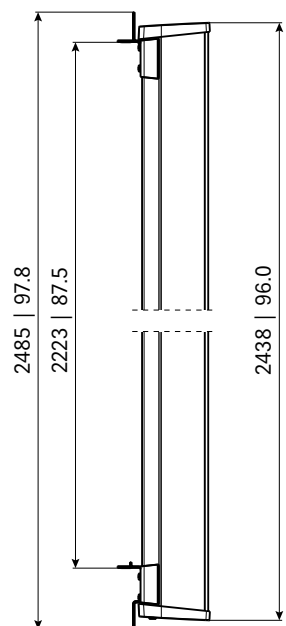
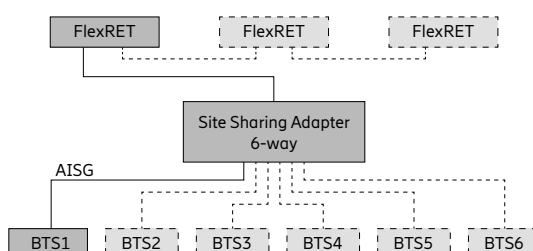
Grounding:

The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.

Configuration example with Site Sharing Adapter 86010154



Configuration example with Site Sharing Adapter 86010155

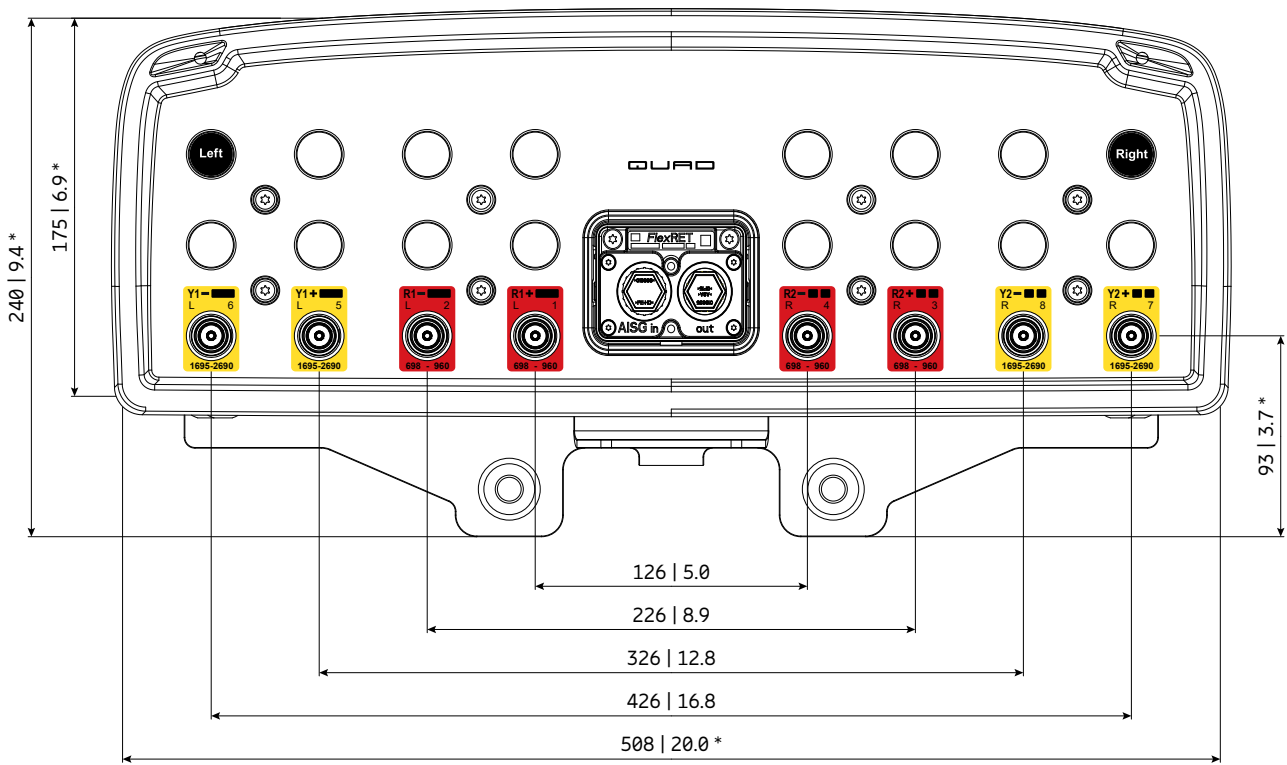


- 1) 22 | 0.9
2) 150 | 5.9
3) Ø 11 | 0.4

All dimensions
in mm | inches

For more information please refer to the respective data sheets.

Layout of interface



Bottom view
* Dimensions refer to radome
All dimensions in mm | inches

Correlation Table

Frequency range	Array	Connector / Ports
698–960 MHz	R1	1–2
698–960 MHz	R2	3–4
1695–2690 MHz	Y1	5–6
1695–2690 MHz	Y2	7–8

