

<b>8-Port Antenna</b>	<b>R1</b>	<b>R2</b>	<b>Y1</b>	<b>Y2</b>
<b>Frequency Range</b>	698-960	698-960	1695-2690	1695-2690
<b>Dual Polarization</b>	X	X	X	X
<b>HPBW</b>	65°	65°	65°	65°
<b>Adjust. Electr. DT</b> set by <b>FlexRET</b>	2°-12°	2°-12°	2.5°-12°	2.5°-12°



**8-Port Antenna 698-960/698-960/1695-2690/1695-2690 65°/65°/65°/65° 15.5/15.5/18/18dBi**  
**2°-12°/2°-12°/2.5°-12°/2.5°-12°T**

<b>Type No.</b>		<b>80010965</b>			
<b>Left side, lowband</b>		<b>R1, connector 1-2</b>			
		<b>698-960</b>			
Frequency Range	MHz	698 – 806	790 – 862	824 – 894	880 – 960
Gain at mid Tilt	dBi	14.8	15.4	15.6	15.9
Gain over all Tilts	dBi	14.8 ± 0.6	15.4 ± 0.4	15.6 ± 0.2	15.8 ± 0.2
<b>Horizontal Pattern:</b>					
Azimuth Beamwidth	°	62 ± 3.9	61 ± 3.2	60 ± 2.7	60 ± 2.1
Front-to-Back Ratio, Total Power, ± 30°	dB	> 22	> 25	> 27	> 25
<b>Vertical Pattern:</b>					
Elevation Beamwidth	°	11.9 ± 0.8	11.0 ± 0.8	10.5 ± 0.4	10.2 ± 0.4
Electrical Downtilt continuously adjustable	°	2.0 – 12.0			
Tilt Accuracy	°	< 0.7	< 0.7	< 0.7	< 0.7
First Upper Side Lobe Suppression	dB	> 14	> 14	> 15	> 14
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 Port 1-2	W	800 (at 50 °C ambient temperature)			



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

Right side, lowband		R2, connector 3-4			
		698-960			
Frequency Range	MHz	698 – 806	790 – 862	824 – 894	880 – 960
Gain at mid Tilt	dBi	14.8	15.3	15.5	15.8
Gain over all Tilts	dBi	14.8 ± 0.6	15.3 ± 0.3	15.5 ± 0.3	15.7 ± 0.3
<b>Horizontal Pattern:</b>					
Azimuth Beamwidth	°	63 ± 3.6	62 ± 1.8	62 ± 2.1	60 ± 3.7
Front-to-Back Ratio, Total Power, ± 30°	dB	> 22	> 24	> 26	> 27
<b>Vertical Pattern:</b>					
Elevation Beamwidth	°	11.6 ± 0.7	11.0 ± 0.6	10.7 ± 0.4	10.2 ± 0.5
Electrical Downtilt continuously adjustable	°	2.0 – 12.0			
Tilt Accuracy	°	< 0.7	< 0.6	< 0.6	< 0.5
First Upper Side Lobe Suppression	dB	> 14	> 16	> 16	> 16
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 Port 3-4	W	800 (at 50 °C ambient temperature)			

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

Left side, highband		Y1, connector 5-6				
		1695-2690				
Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2180	2300 – 2400	2490 – 2690
Gain at mid Tilt	dBi	17.6	17.9	18.3	18.1	18.1
Gain over all Tilts	dBi	17.5 ± 0.4	17.8 ± 0.4	18.1 ± 0.5	18.0 ± 0.6	18.0 ± 0.4
<b>Horizontal Pattern:</b>						
Azimuth Beamwidth	°	62 ± 5.1	65 ± 4.1	62 ± 7.2	56 ± 4.1	57 ± 5.1
Front-to-Back Ratio, Total Power, ± 30°	dB	> 22	> 25	> 25	> 25	> 25
<b>Vertical Pattern:</b>						
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	< 0.1	< 0.2	< 0.3	< 0.2
First Upper Side Lobe Suppression	dB	> 19	> 18	> 16	> 18	> 16
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 Port 5-6	W	400 (at 50 °C ambient temperature)				

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

Right side, highband		Y2, connector 7-8				
		<b>1695-2690</b>				
Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2180	2300 – 2400	2490 – 2690
Gain at mid Tilt	dBi	17.5	18.0	18.3	18.2	17.9
Gain over all Tilts	dBi	17.4 ± 0.4	17.8 ± 0.4	18.1 ± 0.6	18.0 ± 0.7	17.8 ± 0.7
<b>Horizontal Pattern:</b>						
Azimuth Beamwidth	°	65 ± 4.7	66 ± 4.7	62 ± 7.8	57 ± 3.8	59 ± 7.1
Front-to-Back Ratio, Total Power, ± 30°	dB	> 24	> 26	> 26	> 25	> 24
<b>Vertical Pattern:</b>						
Elevation Beamwidth	°	6.4 ± 0.4	5.9 ± 0.3	5.5 ± 0.5	4.8 ± 0.3	4.4 ± 0.3
Electrical Downtilt continuously adjustable	°	2.5 – 12.0				
Tilt Accuracy	°	< 0.2	< 0.2	< 0.2	< 0.3	< 0.2
First Upper Side Lobe Suppression	dB	> 18	> 18	> 15	> 17	> 16
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 Port 7-8	W	400 (at 50 °C ambient temperature)				

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

Electrical specifications, all systems		
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	8 x 4.3-10 female	
Connector Position	bottom	
Adjustment Mechanism	FlexRET, continuously adjustable	
Wind load (at Rated Wind Speed: 150 km/h) (93 mph)	N   lbf	Frontal: 1130   254 Maximal: 1140   256 Lateral: 200   45
EPA (m <sup>2</sup>   ft <sup>2</sup> )	Front: 1.041   11.21 Lateral: .183   1.97	
Max. Wind Velocity	km/h mph	241 150
Height / Width / Depth	mm inches	1999 / 508 / 175 78.7 / 20.0 / 6.9
Category of Mounting Hardware	XH (X-Heavy)	
Weight	kg lb	44.3 / 49.3 (clamps incl.) 97.6 / 108.6 (clamps incl.)
Packing Size	mm inches	2200 / 542 / 268 86.6 / 21.3 / 10.6
<b>Scope of Supply</b>	Panel, FlexRET and clamps for 55–115 mm   2.2–4.5 inches diameter	

### Accessories (order separately if required)

Type No.	Description	Remarks mm   inches	Weight approx. kg   lb	Units per antenna
85010097	2 clamps	Mast diameter: 110 – 220   4.3 – 8.7	9.4   20.7	1
85010099	1 downtilt kit	Downtilt angle: 0° – 13°	10.6   23.4	1
86010154	Site Sharing Adapter	3-way (see figure below)	0.7   1.5	
86010155	Site Sharing Adapter	6-way (see figure below)	1.4   3.1	
86010162	Gender Adapter	Solely to be used in combination with the FlexRET module 86010153v01	0.045   0.099	1
86010163	Port Extender		0.16   0.35	1

### Accessories (included in the scope of supply)

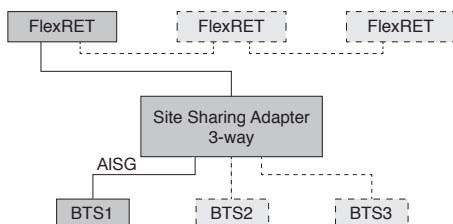
85010096	2 clamps	Mast diameter: 55 – 115   2.2 – 4.5	5.0   11.0	1
86010153v01	FlexRET			1

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

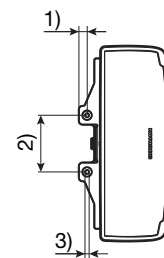
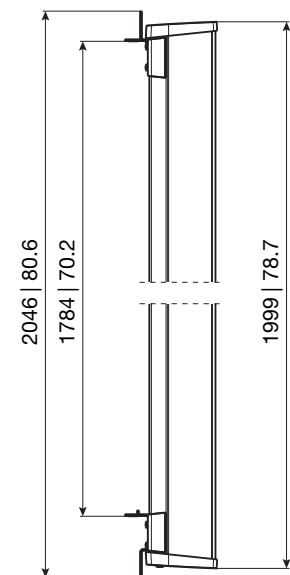
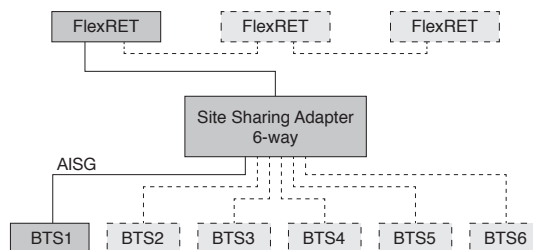
**Material:** **Reflector screen:** Aluminum.  
**Fiberglass housing:** It covers totally the internal antenna components. The special design reduces the sealing areas to a minimum and guarantees the best weather protection. Fiberglass material guarantees optimum performance with regards to stability, 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

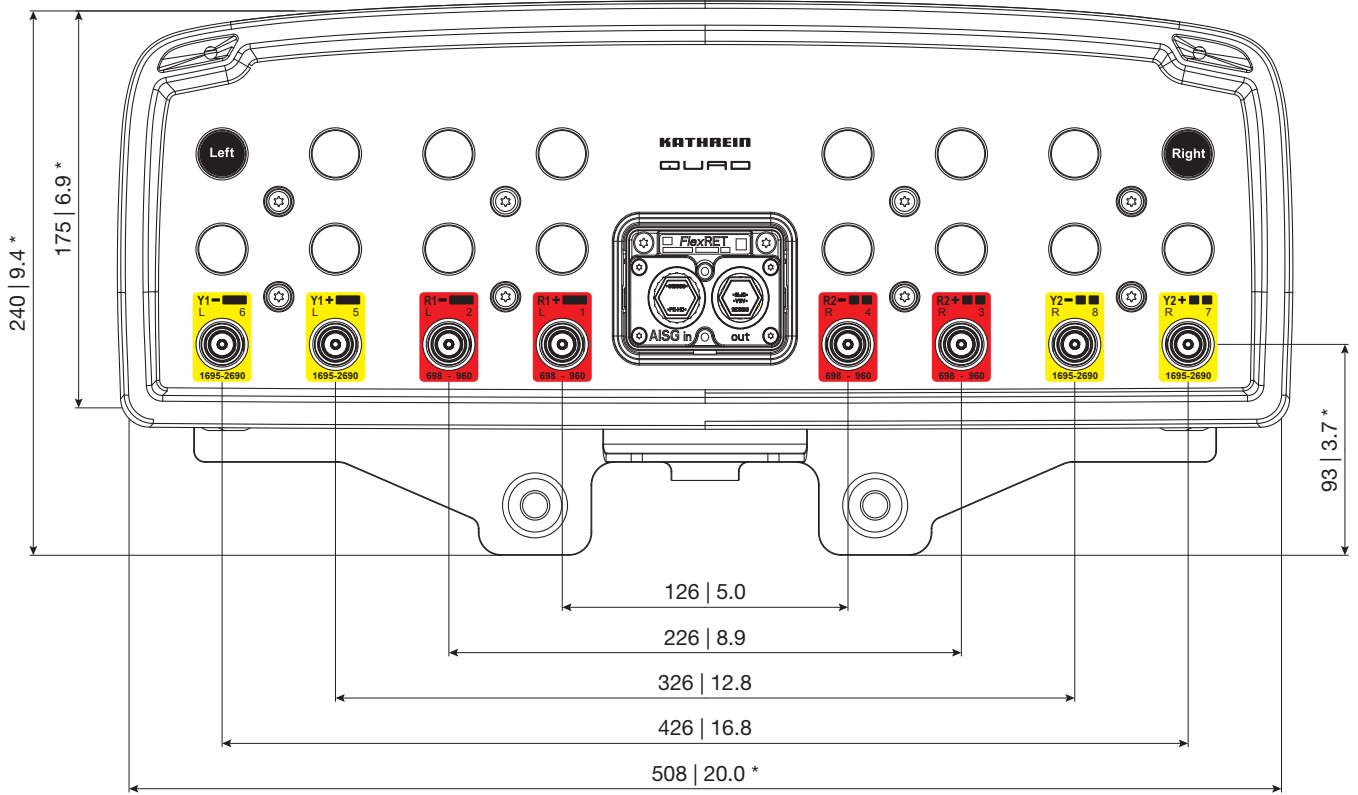


- 1) 22 | 0.9
- 2) 150 | 5.9
- 3) ∅ 11 | 0.4

All dimensions in mm | inches

936.5306/b.1 ngmn 04.24.02.03 Subject to alteration.

**Layout of interface:**



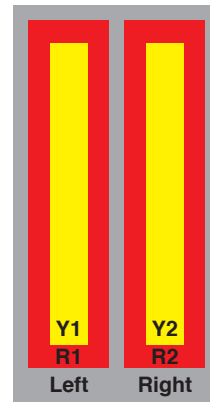
Bottom view  
 \* Dimensions refer to radome  
 All dimensions in mm | inches

**Correlation Table**

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

**Order Information**

Model	Description
80010965	8-Port antenna with mounting bracket
80010965K	8-Port antenna with mounting bracket and mechanical tilt bracket



**Any previous data sheet issues have now become invalid.**

All specifications are subject to change without notice.  
 The latest specifications are available at [www.kathreinusa.com](http://www.kathreinusa.com)