

<b>12-Port Antenna</b>	<b>R1</b>	<b>R2</b>	<b>Y1</b>	<b>Y2</b>	<b>Y3</b>	<b>Y4</b>
<b>Frequency Range</b>	698-960	698-960	1695-2690	1427-2690	1695-2690	1427-2690
<b>Dual Polarization</b>	X	X	X	X	X	X
<b>HPBW</b>	65°	65°	65°	65°	65°	65°
<b>Gain</b>	15dBi	15dBi	16dBi	16dBi	16dBi	16dBi
<b>Adjust. Electr. DT set by FlexRET</b>	2.5°-11.5°	2.5°-11.5°	2°-12°	2°-12°	2°-12°	2°-12°



## ▪ Ultra compact width

12-Port Antenna 2LB/4HB 2.0m 65° | 2x698-960 15dBi | 2x1695-2690 16dBi | 2x1427-2690 16dBi

<b>Type No.</b>		<b>800372991</b>			
<b>Left side, lowband</b>		<b>R1, connector 1-2</b>			
		698-960			
Frequency Range	MHz	698 - 806	791 - 862	824 - 894	880 - 960
Gain at mid Tilt	dBi	14.0	14.7	15.0	15.4
Gain over all Tilts	dBi	14.0 ± 0.5	14.7 ± 0.4	15.0 ± 0.4	15.4 ± 0.4
<b>Horizontal Pattern:</b>					
Azimuth Beamwidth	°	62 ± 6.6	59 ± 4.5	57 ± 3.9	55 ± 5.7
Front-to-Back Ratio, Total Power, ± 30°	dB	> 20	> 22	> 23	> 21
<b>Vertical Pattern:</b>					
Elevation Beamwidth	°	11.8 ± 1.1	10.9 ± 0.7	10.7 ± 0.6	10.1 ± 0.8
Electrical Downtilt continuously adjustable	°	2.5 - 11.5			
Tilt Accuracy	°	< 0.5	< 0.4	< 0.5	< 0.5
First Upper Side Lobe Suppression	dB	> 17	> 20	> 19	> 18
Cross Polar Isolation	dB	> 25			
Port to Port Isolation	dB	> 25 (R1 // R2, Y1, Y2, Y3, Y4)			
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 10.0) requirements.

Right side, lowband		R2, connector 3-4			
		698-960			
Frequency Range	MHz	698 – 806	791 – 862	824 – 894	880 – 960
Gain at mid Tilt	dBi	14.0	14.8	15.0	15.5
Gain over all Tilts	dBi	14.0 ± 0.5	14.7 ± 0.4	15.0 ± 0.4	15.4 ± 0.4
<b>Horizontal Pattern:</b>					
Azimuth Beamwidth	°	62 ± 6.8	59 ± 4.3	57 ± 3.9	55 ± 5.9
Front-to-Back Ratio, Total Power, ± 30°	dB	> 20	> 22	> 23	> 22
<b>Vertical Pattern:</b>					
Elevation Beamwidth	°	11.9 ± 1.4	10.9 ± 0.6	10.7 ± 0.6	10.1 ± 0.7
Electrical Downtilt continuously adjustable	°	2.5 – 11.5			
Tilt Accuracy	°	< 0.5	< 0.5	< 0.5	< 0.5
First Upper Side Lobe Suppression	dB	> 19	> 21	> 20	> 19
Cross Polar Isolation	dB	> 25			
Port to Port Isolation	dB	> 25 (R2 // R1, Y1, Y2, Y3, Y4)			
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 10.0) requirements.

Left side, lower highband		Y1, connector 5-6				
		1695-2690				
Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2170	2300 – 2400	2500 – 2690
Gain at mid Tilt	dBi	15.5	15.7	15.9	15.6	15.8
Gain over all Tilts	dBi	15.5 ± 0.4	15.7 ± 0.6	15.9 ± 0.6	15.6 ± 0.5	15.8 ± 0.5
<b>Horizontal Pattern:</b>						
Azimuth Beamwidth	°	65 ± 3.5	65 ± 4.5	65 ± 5.0	63 ± 5.1	57 ± 5.3
Front-to-Back Ratio, Total Power, ± 30°	dB	> 25	> 26	> 26	> 26	> 28
<b>Vertical Pattern:</b>						
Elevation Beamwidth	°	10.7 ± 0.6	10.2 ± 0.6	9.8 ± 0.5	8.9 ± 0.4	8.2 ± 0.5
Electrical Downtilt continuously adjustable	°	2.0 – 12.0				
Tilt Accuracy	°	< 0.4	< 0.5	< 0.5	< 0.4	< 0.4
First Upper Side Lobe Suppression	dB	> 16	> 16	> 17	> 22	> 18
Cross Polar Isolation	dB	> 25				
Port to Port Isolation	dB	> 28 (Y1 // R1, R2, Y2, Y3, Y4)				
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 10.0) requirements.

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Left side, upper highband		Y2, connector 7-8					
		1427-2690					
Frequency Range	MHz	1427 – 1518	1695 – 1880	1850 – 1990	1920 – 2170	2300 – 2400	2500 – 2690
Gain at mid Tilt	dBi	15.1	15.8	16.1	16.3	16.1	15.9
Gain over all Tilts	dBi	15.0 ± 0.4	15.7 ± 0.5	16.0 ± 0.6	16.3 ± 0.6	16.0 ± 0.9	15.8 ± 0.8
<b>Horizontal Pattern:</b>							
Azimuth Beamwidth	°	63 ± 3.3	65 ± 4.1	66 ± 4.6	67 ± 4.4	67 ± 5.0	61 ± 6.1
Front-to-Back Ratio, Total Power, ± 30°	dB	> 26	> 27	> 25	> 28	> 26	> 28
<b>Vertical Pattern:</b>							
Elevation Beamwidth	°	11.6 ± 0.9	9.7 ± 0.6	9.1 ± 0.4	8.6 ± 0.6	7.8 ± 0.4	7.4 ± 0.4
Electrical Downtilt continuously adjustable	°	2.0 – 12.0					
Tilt Accuracy	°	< 0.5	< 0.4	< 0.4	< 0.3	< 0.3	< 0.4
First Upper Side Lobe Suppression	dB	> 15	> 19	> 18	> 18	> 18	> 19
Cross Polar Isolation	dB	> 25					
Port to Port Isolation	dB	> 28 (Y2 // R1, R2, Y1, Y3, Y4)					
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 10.0) requirements.

Right side, lower highband		Y3, connector 9-10				
		1695-2690				
Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2170	2300 – 2400	2500 – 2690
Gain at mid Tilt	dBi	15.5	15.9	15.9	15.6	15.8
Gain over all Tilts	dBi	15.5 ± 0.4	15.7 ± 0.6	15.9 ± 0.5	15.6 ± 0.5	15.8 ± 0.6
<b>Horizontal Pattern:</b>						
Azimuth Beamwidth	°	67 ± 4.5	65 ± 5.2	64 ± 4.9	64 ± 8.4	58 ± 5.4
Front-to-Back Ratio, Total Power, ± 30°	dB	> 24	> 24	> 25	> 24	> 26
<b>Vertical Pattern:</b>						
Elevation Beamwidth	°	10.8 ± 0.7	10.2 ± 0.7	9.7 ± 0.7	8.8 ± 0.5	8.2 ± 0.5
Electrical Downtilt continuously adjustable	°	2.0 – 12.0				
Tilt Accuracy	°	< 0.5	< 0.5	< 0.5	< 0.5	< 0.4
First Upper Side Lobe Suppression	dB	> 17	> 18	> 18	> 20	> 18
Cross Polar Isolation	dB	> 25				
Port to Port Isolation	dB	> 28 (Y3 // R1, R2, Y1, Y2, Y4)				
Max. Effective Power per Port	W	200 (at 50 °C ambient temperature)				
Max. Effective Power Ports Y3	W	400 (at 50 °C ambient temperature)				

Values based on NGMN-P-BASTA (version 10.0) requirements.

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Right side, upper highband		Y4, connector 11-12					
		1427-2690					
Frequency Range	MHz	1427 – 1518	1695 – 1880	1850 – 1990	1920 – 2170	2300 – 2400	2500 – 2690
Gain at mid Tilt	dBi	15.0	15.8	16.1	16.4	16.0	15.9
Gain over all Tilts	dBi	15.0 ± 0.4	15.7 ± 0.5	16.0 ± 0.6	16.3 ± 0.6	16.0 ± 0.9	15.8 ± 0.8
<b>Horizontal Pattern:</b>							
Azimuth Beamwidth	°	63 ± 3.3	67 ± 4.4	65 ± 3.3	66 ± 3.5	68 ± 6.2	61 ± 5.7
Front-to-Back Ratio, Total Power, ± 30°	dB	> 24	> 26	> 25	> 26	> 26	> 27
<b>Vertical Pattern:</b>							
Elevation Beamwidth	°	11.8 ± 0.7	9.8 ± 0.6	9.1 ± 0.4	8.6 ± 0.6	7.8 ± 0.4	7.4 ± 0.4
Electrical Downtilt continuously adjustable	°	2.0 – 12.0					
Tilt Accuracy	°	< 0.4	< 0.3	< 0.3	< 0.3	< 0.3	< 0.4
First Upper Side Lobe Suppression	dB	> 15	> 18	> 18	> 17	> 16	> 18
Cross Polar Isolation	dB	> 25					
Port to Port Isolation	dB	> 28 (Y4 // R1, R2, Y1, Y2, Y3)					
Max. Effective Power per Port	W	200 (at 50 °C ambient temperature)					
Max. Effective Power Ports Y4	W	400 (at 50 °C ambient temperature)					

Values based on NGMN-P-BASTA (version 10.0) requirements.

Electrical specifications, all ports		
Impedance	Ω	50
VSWR		< 1.5
Return Loss	dB	> 14
Interband Isolation	dB	> 25
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 10.0) requirements.  
\* not applicable for L-band

Mechanical specifications		
Input	12 x 4.3-10 female	
Connector Position	bottom	
Adjustment Mechanism	FlexRET, continuously adjustable	
Wind load (at Rated Wind Speed: 150 km/h)	N   lbf	Frontal: 465   105 Maximal: 815   183
Max. Wind Velocity	km/h mph	241 150
Height / Width / Depth	mm inches	1978 / 378 / 164 77.9 / 14.9 / 6.5
Category of Mounting Hardware	XM (X-Medium)	
Weight	kg lb	34.0 / 38.5 (clamps incl.) 74.9 / 84.8 (clamps incl.)
Packing Size	mm inches	2125 / 440 / 293 83.7 / 17.3 / 11.5
<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
85010110	1 downtilt kit	Downtilt angle: 0°-10°	8.5   18.7	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	To be used in combination with the FlexRET module	0.045   0.099	1
86010163	Port Extender		0.16   0.35	1

## Accessories (included in the scope of supply)

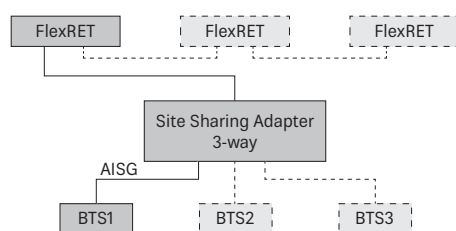
85010111	2 clamps	Mast diameter: 55-115   2.2-4.5	4.5   9.9	1
86010165	FlexRET	Compliant to 3GPP / AISG 2.0 / AISG 3.0		1

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

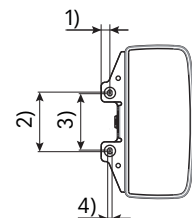
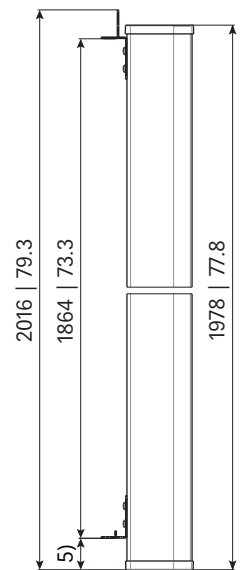
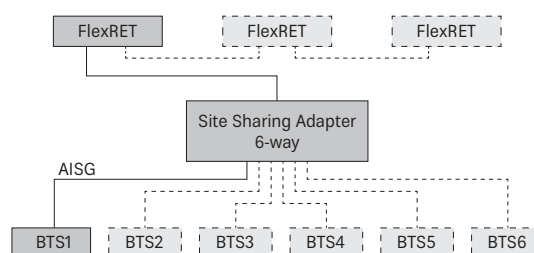
**Material:** **Reflector screen:** Aluminum.  
**Fiberglass housing:** It covers totally the internal antenna components. The special design reduces the sealing areas to a minimum and guarantees the best weather protection. Fiberglass material guarantees optimum performance with regards to stability,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

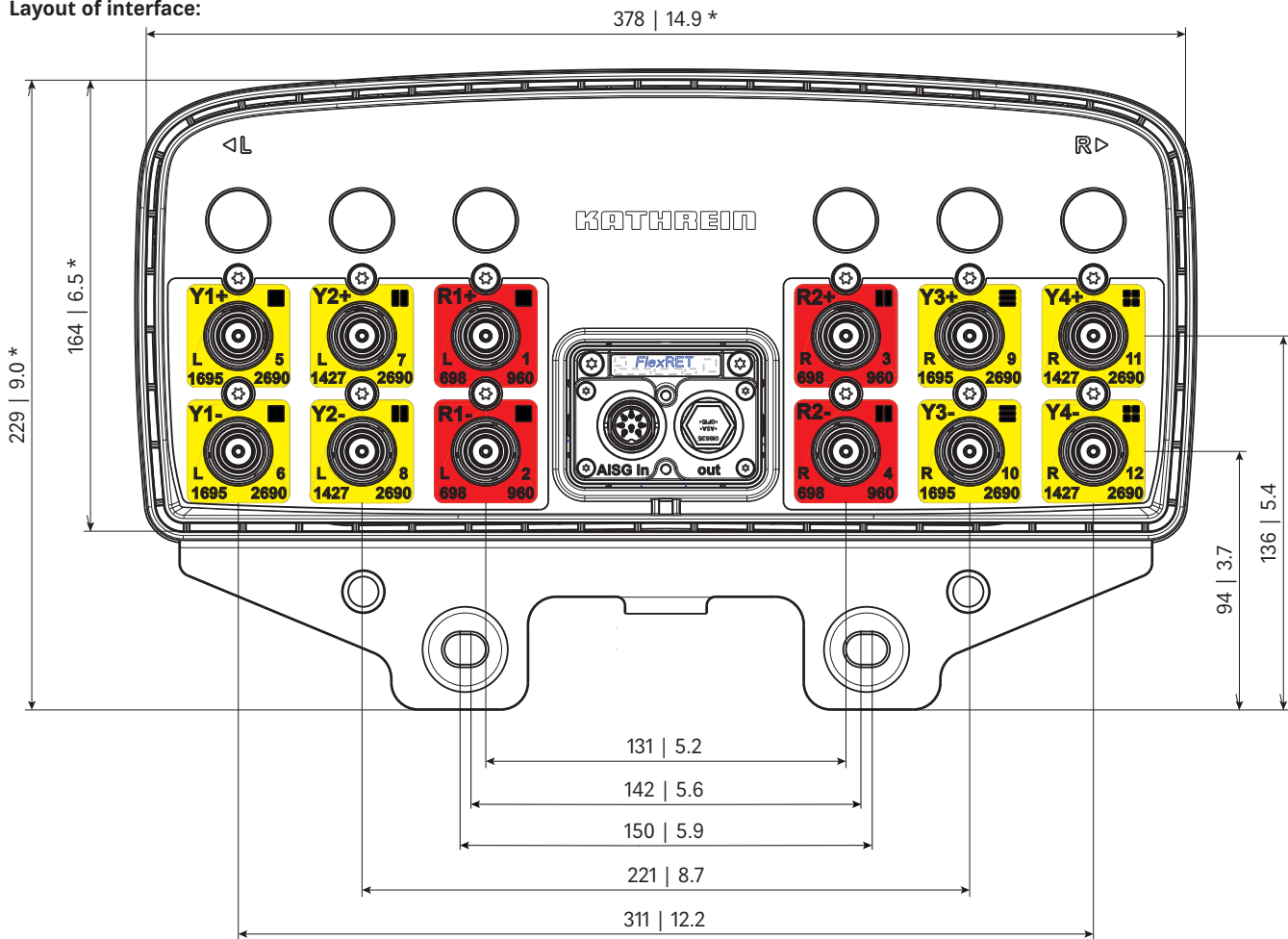


- 1) 22 | 0.9
- 2) 150 | 5.9
- 3) 142 | 5.6
- 4) 11 | 0.4
- 5) 79 | 3.1

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
1427-2690 MHz	Y2	7-8
1695-2690 MHz	Y3	9-10
1427-2690 MHz	Y4	11-12



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