

Antenna 9014 2L 4M 0.5m

KRE 101 2570/1

Capacity

Compact

Coverage

65° | 2x 690–960 MHz | 8.5 dBi
65° | 2x 1695–2690 MHz | 12.5 dBi
65° | 2x 3300–4200 MHz | 11.0 dBi



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Center, upper lowband		R1, connector 1–2			
Frequency Range	MHz	690 – 806	791 – 862	824 – 894	880 – 960
Gain	dBi	7.8 ± -0.2	7.8 ± -0.2	8.2 ± -0.2	8.5 ± -0.6
Horizontal Pattern:					
Azimuth Beamwidth	°	69 ± 5.3	68 ± 8.2	64 ± 5.6	65 ± 1.6
Front-to-Back Ratio, Total Power, ± 30°	dB	> 14	> 17	> 20	> 20
Cross Polar Discrimination at Boresight	dB	> 16	> 21	> 22	> 22
Vertical Pattern:					
Elevation Beamwidth	°	72.5 ± 16.5	79.9 ± 4.8	75.5 ± 5.0	68.7 ± 5.2
Electrical Downtilt	°	0; fixed			
Tilt Accuracy	°	< 13.2	< 8.6	< 3.9	< 3.6
Intra-Cluster Isolation	dB	> 20			
Inter-Cluster Isolation	dB	> 20 (R1 // R2) > 25 (R1 // Y1, Y2, P1, P2)			
Max. Effective Power per Port	W	200 (at 50° C ambient temperature)			
Max. Effective Power Ports R1	W	400 (at 50° C ambient temperature)			

Values based on NGMN-P-BASTA (version 11.1) requirements.

Center, lower lowband		R2, connector 3–4			
Frequency Range	MHz	690 – 806	791 – 862	824 – 894	880 – 960
Gain	dBi	7.2 ± -0.5	7.4 ± -0.5	7.8 ± -0.1	8.7 ± -0.3
Horizontal Pattern:					
Azimuth Beamwidth	°	71 ± 7.1	69 ± 6.4	68 ± 6.9	61 ± 2.0
Front-to-Back Ratio, Total Power, ± 30°	dB	> 14	> 13	> 14	> 20
Cross Polar Discrimination at Boresight	dB	> 15	> 15	> 15	> 21
Vertical Pattern:					
Elevation Beamwidth	°	80.5 ± 10.8	71.2 ± 5.4	71.7 ± 3.7	66.0 ± 4.1
Electrical Downtilt	°	0; fixed			
Tilt Accuracy	°	< 2.4	< 3.9	< 4.6	< 5.8
Intra-Cluster Isolation	dB	> 20			
Inter-Cluster Isolation	dB	> 20 (R2 // R1) > 25 (R2 // Y1, Y2, P1, P2)			
Max. Effective Power per Port	W	200 (at 50° C ambient temperature)			
Max. Effective Power Ports R2	W	400 (at 50° C ambient temperature)			

Values based on NGMN-P-BASTA (version 11.1) requirements.

Left side, upper midband

Y1, connector 5–6

Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2200	2300 – 2400	2490 – 2690
Gain	dBi	11.5 ± 0.0	11.9 ± -0.1	12.5 ± 0.0	12.0 ± 0.4	12.5 ± 0.0
Horizontal Pattern:						
Azimuth Beamwidth	°	56 ± 7.5	47 ± 4.0	52 ± 9.8	68 ± 9.5	61 ± 1.6
Front-to-Back Ratio, Total Power, ± 30°	dB	> 23	> 22	> 22	> 25	> 24
Cross Polar Discrimination at Boresight	dB	> 24	> 24	> 23	> 19	> 18
Vertical Pattern:						
Elevation Beamwidth	°	32.6 ± 4.1	27.9 ± 2.5	27.4 ± 1.9	25.7 ± 1.9	24.6 ± 1.1
Electrical Downtilt	°	0; fixed				
Tilt Accuracy	°	< 2.9	< 2.8	< 2.7	< 2.3	< 2.0
Intra-Cluster Isolation	dB	> 25				
Inter-Cluster Isolation	dB	> 25 (Y1 // R1, R2, Y2, P1, P2)				
Max. Effective Power per Port	W	150 (at 50° C ambient temperature)				
Max. Effective Power Ports Y1	W	300 (at 50° C ambient temperature)				

Values based on NGMN-P-BASTA (version 11.1) requirements.

Right side, upper midband

Y2, connector 7–8

Frequency Range	MHz	1695 – 1880	1850 – 1990	1920 – 2200	2300 – 2400	2490 – 2690
Gain	dBi	11.5 ± 0.1	12.0 ± 0.1	12.5 ± 0.1	12.3 ± 0.2	12.5 ± 0.1
Horizontal Pattern:						
Azimuth Beamwidth	°	56 ± 5.5	49 ± 3.3	50 ± 4.5	62 ± 9.3	59 ± 2.9
Front-to-Back Ratio, Total Power, ± 30°	dB	> 23	> 23	> 25	> 28	> 24
Cross Polar Discrimination at Boresight	dB	> 26	> 21	> 23	> 25	> 19
Vertical Pattern:						
Elevation Beamwidth	°	33.0 ± 4.5	27.8 ± 2.9	27.1 ± 2.2	26.1 ± 1.1	25.3 ± 1.1
Electrical Downtilt	°	0; fixed				
Tilt Accuracy	°	< 3.1	< 3.1	< 3.0	< 3.0	< 2.3
Intra-Cluster Isolation	dB	> 25				
Inter-Cluster Isolation	dB	> 25 (Y2 // R1, R2, Y1, P1, P2)				
Max. Effective Power per Port	W	150 (at 50° C ambient temperature)				
Max. Effective Power Ports Y2	W	300 (at 50° C ambient temperature)				

Values based on NGMN-P-BASTA (version 11.1) requirements.

Left side, lower midband		P1, connector 9–10				
Frequency Range	MHz	3300 – 3400	3400 – 3600	3600 – 3800	3800 – 4000	4000 – 4200
Gain	dBi	9.9 ± 0.2	10.8 ± 0.2	10.8 ± 0.1	10.6 ± 0.1	10.7 ± 0.1
Horizontal Pattern:						
Azimuth Beamwidth	°	72 ± 16.6	70 ± 7.9	74 ± 9.3	62 ± 15.2	40 ± 15.6
Front-to-Back Ratio, Total Power, ± 30°	dB	> 16	> 20	> 19	> 18	> 18
Cross Polar Discrimination at Boresight	dB	> 7	> 10	> 10	> 11	> 9
Vertical Pattern:						
Elevation Beamwidth	°	29.9 ± 3.9	26.7 ± 4.1	26.6 ± 4.3	24.1 ± 4.8	24.1 ± 6.8
Electrical Downtilt	°	0; fixed				
Tilt Accuracy	°	< 5.2	< 5.5	< 6.6	< 8.3	< 10.2
Intra-Cluster Isolation	dB	> 25				
Inter-Cluster Isolation	dB	> 25 (P1 // R1, R2, Y1, Y2, P2)				
Max. Effective Power per Port	W	50 (at 50° C ambient temperature)				
Max. Effective Power Ports P1	W	100 (at 50° C ambient temperature)				

Values based on NGMN-P-BASTA (version 11.1) requirements.

Right side, lower midband		P2, connector 11–12				
Frequency Range	MHz	3300 – 3400	3400 – 3600	3600 – 3800	3800 – 4000	4000 – 4200
Gain	dBi	10.0 ± 0.0	10.8 ± 0.5	11.1 ± 0.1	10.4 ± 0.0	10.6 ± 0.1
Horizontal Pattern:						
Azimuth Beamwidth	°	70 ± 18.0	68 ± 14.9	56 ± 15.1	56 ± 16.9	44 ± 7.4
Front-to-Back Ratio, Total Power, ± 30°	dB	> 18	> 20	> 20	> 18	> 18
Cross Polar Discrimination at Boresight	dB	> 8	> 11	> 10	> 12	> 16
Vertical Pattern:						
Elevation Beamwidth	°	24.5 ± 4.6	27.2 ± 3.5	26.9 ± 3.7	27.4 ± 4.3	24.1 ± 10.1
Electrical Downtilt	°	0; fixed				
Tilt Accuracy	°	< 5.1	< 5.3	< 7.8	< 10.0	< 15.1
Intra-Cluster Isolation	dB	> 24				
Inter-Cluster Isolation	dB	> 25 (P2 // R1, R2, Y1, Y2, P1)				
Max. Effective Power per Port	W	50 (at 50° C ambient temperature)				
Max. Effective Power Ports P2	W	100 (at 50° C ambient temperature)				

Values based on NGMN-P-BASTA (version 11.1) requirements.

Electrical specifications, all ports

Impedance	Ω	50
VSWR		< 1.5
Return Loss	dB	> 14
Inter-Cluster Isolation	dB	> 20
Passive Intermodulation	dBc	< -153 (2 x 43 dBm carrier)
Polarization	$^{\circ}$	+45, -45
Max. Effective Power for the Antenna	W	800 (at 50 $^{\circ}$ C ambient temperature)

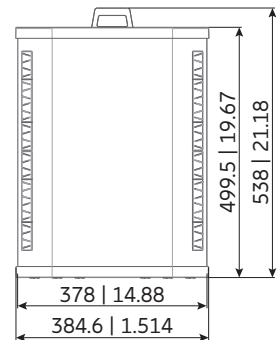
Values based on NGMN-P-BASTA (version 11.1) requirements.

Mechanical specifications

Input	12x 4.3-10 female	
Connector Position	bottom	
Wind load (at Rated Wind Speed: 150 km/h)	N lbf	Maximal: 150 34 Frontal: 110 25
Wind Load Standard	EN 1994-1-4	
Wind Load Laboratory	TU Dresden; Göttinger-type wind tunnel	
Max. Wind Velocity	km/h mph	241 150
Height / Width / Depth	mm inches	500 / 378 / 164 19.7 / 14.9 / 6.5
Category of Mounting Hardware	M (Medium)	
Weight	kg lb	9.6 / 11.8 (clamps incl.) 21.2 / 26.0 (clamps incl.)
Packing Size	mm inches	560 / 400 / 220 22.0 / 15.7 / 8.7
Scope of Supply	Panel and 2 units of clamps for 42–115 mm 1.7–4.5 inches diameter	

Accessories (order separately if required)

Type No.	Description	Remarks mm inches	Units per antenna
731651	1 clamp	Mast diameter: 28 – 60 1.1 – 2.4	2
85010002	1 clamp	Mast diameter: 110 – 220 4.3 – 8.7	2
85010003	1 clamp	Mast diameter: 210 – 380 8.3 – 15.0	2
737978	1 downtilt kit	Downtilt angle: 0 $^{\circ}$ –20 $^{\circ}$	1



Accessories (included in the scope of supply)

Type No.	Description	Remarks mm inches	Units per antenna
738546	1 clamp	Mast diameter: 42 – 115 1.7 – 4.5	2

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

Material:

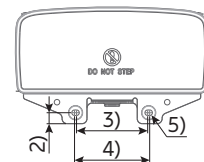
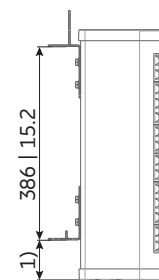
Reflector screen: Aluminum.

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:

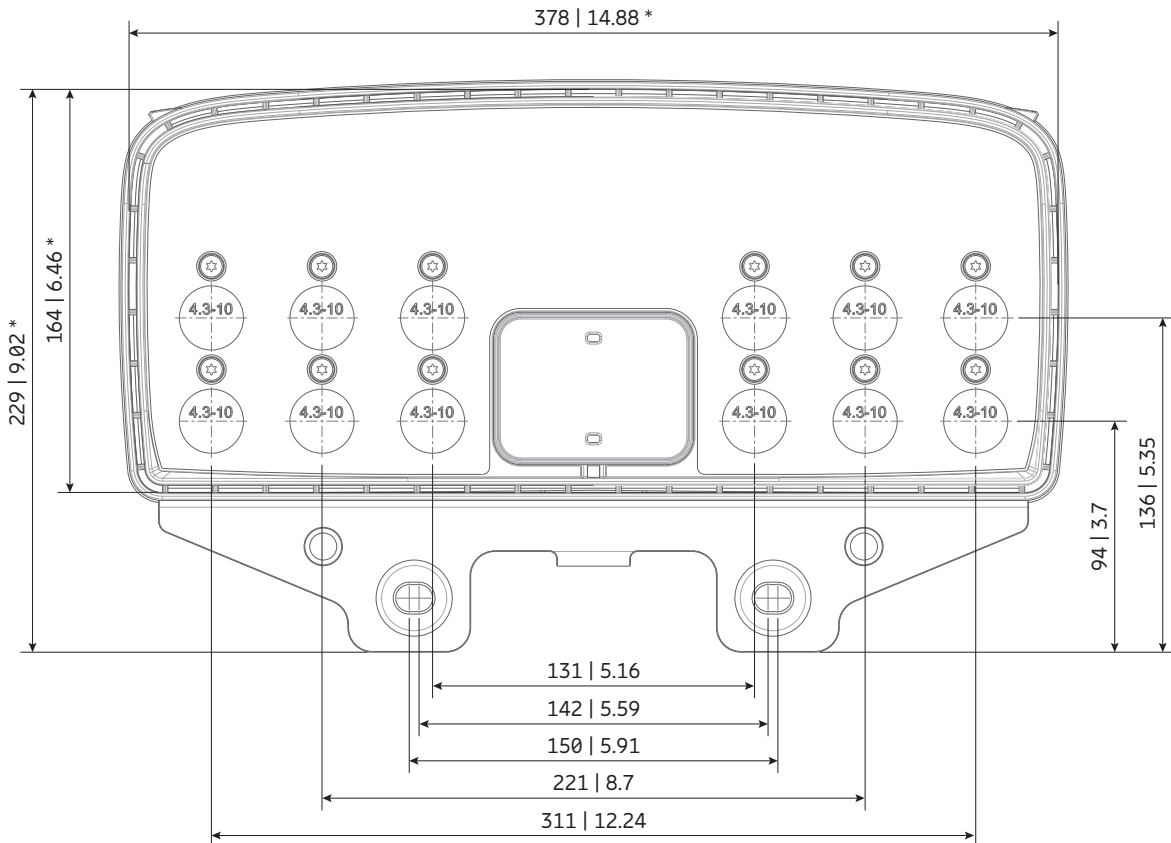
The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.



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

All dimensions
in mm | inches

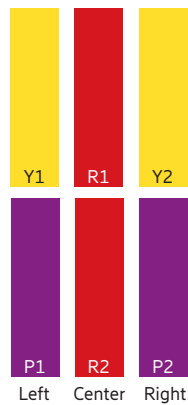
Layout of interface



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

Correlation Table

Frequency range	Array	Connector / Ports
690–960 MHz	R1	1–2
690–960 MHz	R2	3–4
1695–2690 MHz	Y1	5–6
1695–2690 MHz	Y2	7–8
3200–4200 MHz	P1	9–10
3200–4200 MHz	P2	11–12



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