

# 2RR2VV-33C-R4



16-port multibeam antenna, 8x 694–960 MHz, 2x 2-beam 33° HPBW and 8x 1695–2690 MHz, 2x 2-beam 33° HPBW, 4x RET

- Provides 4T4R capability in low and mid bands
- Twin beam patterns are optimized for minimum beam crossover providing for improved LTE data throughput
- GREEN and High Capacity Antenna Solution
- Innovative aerodynamic shape optimized for reduced wind loading in every direction
- Enhances network capacity through six sectors on high band while maintaining low band coverage layer through three sectors with only three antenna faces
- "Green" packaging of reduced size and gross weight that uses less material and reduces shipping pollution
- Optional Mounting Kits with mechanical tilt capacity need to be ordered separately

## General Specifications

<b>Antenna Type</b>	Multibeam
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, mid band</b>	8
<b>RF Connector Quantity, low band</b>	8
<b>RF Connector Quantity, total</b>	16

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	Low band (2)   Mid band (2)

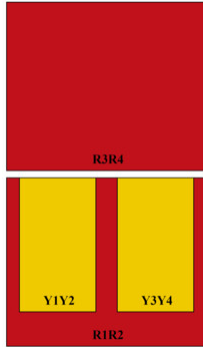
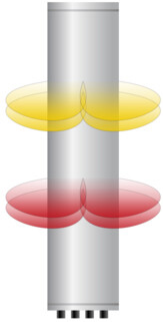
# 2RR2VV-33C-R4

<b>Power Consumption, active state, maximum</b>	10 W
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Protocol</b>	3GPP/AISG 2.0 (Multi-RET)

## Dimensions

<b>Width</b>	640 mm   25.197 in
<b>Depth</b>	235 mm   9.252 in
<b>Length</b>	2235 mm   87.992 in
<b>Net Weight, antenna only</b>	63.5 kg   139.993 lb

## Array Layout

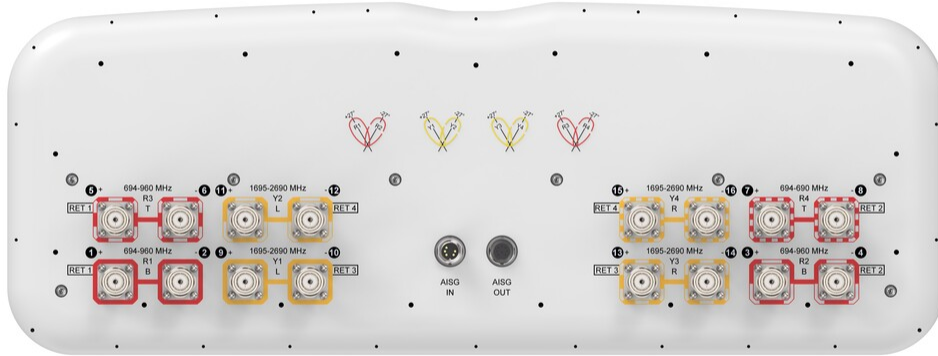


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxR1
R3	694-960	5 - 6			
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxR2
R4	694-960	7 - 8			
Y1	1695-2690	9 - 10	3	AISG1	CPxxxxxxxxxxxxY1
Y3	1695-2690	13 - 14			
Y2	1695-2690	11 - 12	4	AISG1	CPxxxxxxxxxxxxY2
Y4	1695-2690	15 - 16			

(Sizes of colored boxes are not true depictions of array sizes)

## Port Configuration

# 2RR2VV-33C-R4



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2690 MHz   694 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	1,500 W @ 50 °C

## Electrical Specifications

	R1-R4	R1-R4	R1-R4	Y1-Y4	Y1-Y4	Y1-Y4	Y1-Y4
Frequency Band, MHz	698-806	790-896	890-960	1710-1990	1920-2300	2300-2500	2490-2690
<b>RF Port</b>	1-8	1-8	1-8	9-16	9-16	9-16	9-16
<b>Gain at Mid Tilt, dBi</b>	14.1	15.2	15.7	17.4	18.4	18.7	18.4
<b>Beamwidth, Horizontal, degrees</b>	40	37	34	34	31	28	25
<b>Beamwidth, Vertical, degrees</b>	19.4	17.6	16.2	7.8	7.2	6.3	5.9
<b>Beam Tilt, degrees</b>	2-16	2-16	2-16	2-12	2-12	2-12	2-12
<b>USLS (First Lobe), dB</b>	16	17	16	15	16	17	14
<b>Front-to-Back Ratio at 180°, dB</b>	28	33	32	33	34	32	30
<b>Isolation, Cross Polarization,</b>	25	25	25	25	25	25	25

# 2RR2VV-33C-R4

## dB

<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25	25
<b>Isolation, Beam to Beam, dB</b>	17	17	17	17	17	17	17
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-150
<b>Input Power per Port at 50°C, maximum, watts</b>	200	200	200	200	200	150	150

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>790–896</b>	<b>890–960</b>	<b>1710–1990</b>	<b>1920–2300</b>	<b>2300–2500</b>	<b>2490–2690</b>
<b>Gain by all Beam Tilts, average, dBi</b>	14.1	15.2	15.6	17.3	18.2	18.5	18.2
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.8	±0.9	±0.8	±1.1	±0.7	±0.9	±0.8
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±3	±2	±3	±3	±2	±2	±3
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.4	±0.2	±0.5	±0.2	±0.2	±0.2	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	23	20	19	12	15	15	14
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	22	26	26	27	28	27	25
<b>CPR at Boresight, dB</b>	17	17	18	17	19	20	16
<b>CPR at 10 dB Horizontal Beamwidth, dB</b>	5	8	9	11	12	9	6

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	895.0 N @ 150 km/h (201.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	262.0 N @ 150 km/h (58.9 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,140.0 N @ 150 km/h (256.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	558.0 N @ 150 km/h (125.4 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	744 mm   29.291 in
<b>Depth, packed</b>	346 mm   13.622 in
<b>Length, packed</b>	2364 mm   93.071 in
<b>Weight, gross</b>	79.5 kg   175.267 lb

# 2RR2VV-33C-R4

---

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant



## Included Products

BSAMNT-3F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
-----------	---	--------------------------------------------------------------------------------------------------------------------

## \* Footnotes

<b>Performance Note</b>	Severe environmental conditions may degrade optimum performance
-------------------------	-----------------------------------------------------------------