

2VV-33C-R4-V4



8-port multibeam antenna, 8x 1695–2690 MHz, 4x 33° HPBW, 4x RET

- Enhances network capacity and spectrum utilization when used in six sector applications
- Reduces antenna count to minimize Cap-Ex and Op-Ex costs – 3 antennas required for 6 sector configurations

General Specifications

Antenna Type	Multibeam
Band	Single band
Color	Light gray
Effective Projective Area (EPA), frontal	0.49 m ² 5.274 ft ²
Effective Projective Area (EPA), lateral	0.36 m ² 3.875 ft ²
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male

Dimensions

Width	395 mm 15.551 in
Length	2499 mm 98.386 in
Depth	228 mm 8.976 in

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Array Layout



Bottom

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

Port Configuration

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Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz
Polarization	$\pm 45^\circ$
Total Input Power, maximum	1,200 W @ 50 °C

Remote Electrical Tilt (RET) Information, Electrical

Protocol	3GPP/AISG 2.0 (Single RET)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Input Voltage	10–30 Vdc
Internal RET	High band (4)

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Electrical Specifications

Frequency Band, MHz	1695–1880	1850–1990	1920–2180	2300–2400	2490–2690
Gain, dBi	18.4	19	19.4	19.8	20.2
Beam Centers, Horizontal, degrees	±27	±27	±27	±27	±27
Beamwidth, Horizontal, degrees	39	37	36	34	29
Beamwidth, Vertical, degrees	7.9	7.4	6.9	6.2	5.6
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	16	16	16	20	19
Front-to-Back Ratio at 180°, dB	32	33	33	33	31
Isolation, Cross Polarization, dB	25	25	25	25	25
Isolation, Beam to Beam, dB	28	28	28	28	28
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	200	200	200

Electrical Specifications, BASTA

Frequency Band, MHz	1695–1880	1850–1990	1920–2180	2300–2400	2490–2690
Gain by all Beam Tilts, average, dBi	17.8	18.6	18.8	19.4	19.7
Gain by all Beam Tilts Tolerance, dB	±0.9	±0.6	±0.5	±0.6	±0.7
Gain by Beam Tilt, average, dBi	2° 17.7 7° 17.9 12° 17.7	2° 18.3 7° 18.7 12° 18.5	2° 18.6 7° 19.0 12° 18.7	2° 19.1 7° 19.5 12° 19.3	2° 19.4 7° 19.9 12° 19.4
Beamwidth, Horizontal Tolerance, degrees	±1.9	±2.1	±2.2	±3.9	±1.1
Beamwidth, Vertical Tolerance, degrees	±0.6	±0.3	±0.5	±0.3	±0.3
USLS, beampeak to 20° above beampeak, dB	15	16	16	17	16
Front-to-Back Total Power at 180° ± 30°, dB	23	25	25	27	25
CPR at Boresight, dB	21	23	24	20	27
CPR at 10 dB Horizontal Beamwidth, dB	11	16	16	14	10

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Mechanical Specifications

Wind Loading at Velocity, frontal	118.7 lbf @ 150 km/h 525.0 N @ 150 km/h
Wind Loading at Velocity, lateral	386.0 N @ 150 km/h 86.8 lbf @ 150 km/h
Wind Loading at Velocity, maximum	199.9 lbf @ 150 km/h 898.0 N @ 150 km/h
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	505 mm 19.882 in
Depth, packed	386 mm 15.197 in
Length, packed	2631 mm 103.583 in
Net Weight, without mounting kit	36.8 kg 81.13 lb
Weight, gross	52.6 kg 115.963 lb

Regulatory Compliance/Certifications

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



Included Products

BSAMNT-4 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

RET-PMOD-A20-4A24 — RET KIT, 2VV-33C-R4-V4, AISG 2.0 default protocol

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance