

RVVT4-65D-R4



14-port sector antenna, 2x 694–960, 4x 1695-2690 and 8x 2300–2690 MHz, 65° HPBW, 4x RET

- Combination of Tri-Band antenna and 2.4/2.6 GHz 8T8R beam forming antenna
- Internal SBT RET support via Calibration Port of 2.4/2.6 GHz array
- Optimized for Software Defined Split Six Sector applications on 2.4/2.6 GHz
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios

General Specifications

Antenna Type	Sector
Band	Multiband
Calibration Connector Interface	4.3-10 Female
Calibration Connector Quantity	1
Color	Light Gray (RAL 7035)
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
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	12
RF Connector Quantity, mid band	0
RF Connector Quantity, low band	2
RF Connector Quantity, total	14

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male
Input Voltage	10–30 Vdc

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Internal Bias Tee	Cal Port
Internal RET	High band (3) Low band (1)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	350 mm 13.78 in
Depth	208 mm 8.189 in
Length	2688 mm 105.827 in
Net Weight, without mounting kit	37.8 kg 83.335 lb
TDD Column Spacing	58 mm 2.283 in

Array Layout



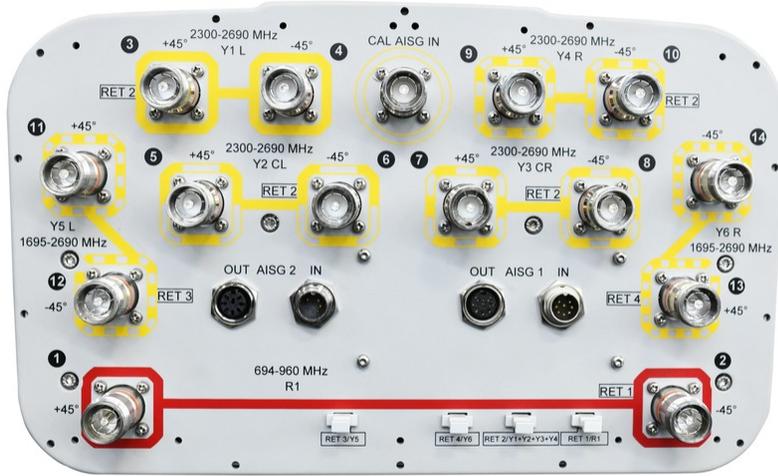
Left Bottom Right

Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxxxR1
Y1	2300-2690	3-4	2	CPxxxxxxxxxxxxxxxxY1
Y2	2300-2690	5-6		
Y3	2300-2690	7-8		
Y4	2300-2690	9-10		
Y5	1695-2690	11-12	3	CPxxxxxxxxxxxxxxxxY5
Y6	1695-2690	13-14	4	CPxxxxxxxxxxxxxxxxY6

(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 2300 – 2690 MHz 694 – 960 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

	R1	R1	R1	Y1-Y4	Y1-Y4	Y5-Y6	Y5-Y6	Y5-Y6
Frequency Band, MHz	694–790	790–890	890–960	2300–2500	2490–2690	1695–1920	1920–2200	2300–2690
Gain, dBi	16.6	17	17.3	16.4	16.3	16.8	17.3	17.6
Beamwidth, Horizontal, degrees	68	67	65	94	95	62	61	63
Beamwidth, Vertical, degrees	8.4	7.5	6.9	5.7	5.3	7.3	6.5	5.5
Beam Tilt, degrees	0–10	0–10	0–10	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	19	20	16	17	16	18	21
Front-to-Back Ratio at 180°, dB	30	32	35	31	30	34	38	33
Coupling level, Amp, Antenna port to Cal port, dB				26	26			
Coupling level, max Amp Δ,				±2	±2			

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Antenna port to Cal port, dB

Coupler, max Amp Δ, Antenna port to Cal port, dB				0.9	0.9			
Coupler, max Phase Δ, Antenna port to Cal port, degrees				7	7			
Isolation, Cross Polarization, dB	28	28	28	28	28	28	28	28
Isolation, Inter-band, dB	30	30	30	20	20	30	30	30
VSWR Return loss, dB	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	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-150	-150
Input Power per Port at 50°C, maximum, watts	250	250	250	150	150	200	200	150

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2500	2490–2690
Gain, dBi	17.2	17.1
Beamwidth, Horizontal, degrees	62	62
Beamwidth, Horizontal Tolerance, degrees	±3.4	±3.7
Beamwidth, Vertical, degrees	5.7	5.3
Beamwidth, Vertical Tolerance, degrees	±0.4	±0.2
USLS (First Lobe), dB	17	17

Electrical Specifications, Service Beam

Frequency Band, MHz	2300–2500	2490–2690
Steered 0° Gain, dBi	21.3	21.2
Steered 0° Gain Tolerance, dBi	±0.4	±0.5
Steered 0° Beamwidth, Horizontal, degrees	26	25
Steered 0° CPR over 10 dB Beamwidth, dB	18	19
Steered 0° Horizontal Sidelobe, dB	13	11
Steered 30° Gain, dBi	20.6	20.5
Steered 30° Gain Tolerance, dBi	±0.4	±0.6
Steered 30° Beamwidth,	27	26

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Horizontal, degrees

Steered 30° CPR over 10 dB	13	13
Beamwidth, dB		

Electrical Specifications, Soft Split

Frequency Band, MHz	2300–2500	2490–2690
Gain, dBi	20.3	20.3
Beamwidth, Horizontal, degrees	31	30
Horizontal Sidelobe, dB	21	19

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.45 m ² 4.844 ft ²
Effective Projective Area (EPA), lateral	0.38 m ² 4.09 ft ²
Mechanical Tilt Range	0°–12°
Wind Loading @ Velocity, frontal	477.0 N @ 150 km/h (107.2 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	409.0 N @ 150 km/h (91.9 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,010.0 N @ 150 km/h (227.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	506.0 N @ 150 km/h (113.8 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	460 mm 18.11 in
Depth, packed	350 mm 13.78 in
Length, packed	2830 mm 111.417 in
Weight, gross	51.8 kg 114.199 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
UK-ROHS	Compliant/Exempted



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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.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance