

RRVVT4S4-65D-R6



24-port sector antenna, 4x 694–960 and 4x 1695–2690 MHz 65° HPBW, 8x 2300–2690 and 8x 3300–3800MHz, 90° HPBW, 6x RET

- Antenna Includes 1x 4-Column Array for 2300–2690MHz and a separate 1x 4-Column Array for 3300–3800MHz that support 8T8R beamforming operation. Column spacing optimized for Soft Split Beamforming
- Cluster connectors are used for beamforming 4-column arrays with separate calibration port for each band. Six Internal RET's provide independent electrical tilt control for each array
- Antenna includes 2x Single Column X-Pol Arrays for 694-960MHz and 2x Single Column X-Pol Arrays for 1695-2690MHz, suitable for 4x MIMO applications

General Specifications

Antenna Type	Sector
Band	Multiband
Calibration Connector Interface	M-LOC
Calibration Connector Quantity	2
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female M-LOC
RF Connector Location	Bottom
RF Connector Quantity, high band	20
RF Connector Quantity, low band	4
RF Connector Quantity, total	24

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

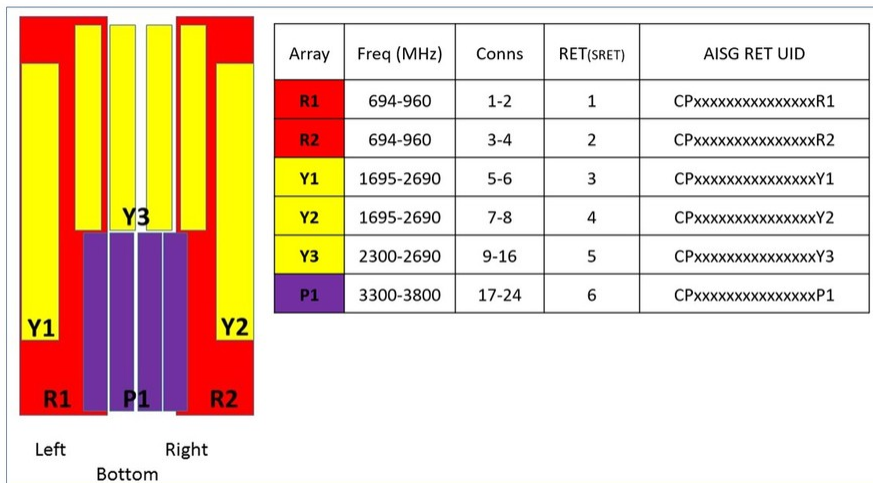
RRVVT4S4-65D-R6

Internal RET	High band (4) Low band (2)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm 19.606 in
Depth	197 mm 7.756 in
Length	2688 mm 105.827 in
Net Weight, without mounting kit	56.8 kg 125.222 lb

Array Layout



Port Configuration

RRVVT4S4-65D-R6



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz 2300 – 2690 MHz 3300 – 3800 MHz 694 – 960 MHz
Polarization	±45°
Total Input Power, maximum	1,600 W @ 50 °C

Electrical Specifications

	R1-R2	R1-R2	R1-R2	Y1-Y2	Y1-Y2	Y3	P1
Frequency Band, MHz	694–790	790–890	890–960	1695–2200	2300–2690	2300–2690	3300–3800
Gain, dBi	15.8	16.1	16.5	18.3	19.2	16	15.9
Beamwidth, Horizontal, degrees	71	65	62	70	60	93	88
Beamwidth, Vertical, degrees	8.9	8	7.3	5.1	4.2	4.9	6.6
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	14	18	21	14	19	18	16
Front-to-Back Ratio at 180°, dB	32	30	29	33	32	32	29
Coupling level, Amp, Antenna port to Cal port, dB						26	26

RRVVT4S4-65D-R6

Coupling level, max Amp Δ, Antenna port to Cal port, dB						± 2	± 2
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	9
Isolation, Cross Polarization, dB	28	28	28	25	25	25	25
Isolation, Inter-band, dB	28	28	28	25	25	20	20
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
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-145
Input Power per Port at 50°C, maximum, watts	300	300	300	250	200	150	75

Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	890–960	1695–2200	2300–2690	2300–2690	3300–3800
Gain by all Beam Tilts, average, dBi	15.5	15.9	16.2	17.5	18.8	15.4	15.2
Gain by all Beam Tilts Tolerance, dB	± 0.3	± 0.4	± 0.3	± 0.9	± 0.6	± 0.8	± 1
Gain by Beam Tilt, average, dBi	2° 15.3 7° 15.6 12° 15.4	2° 15.6 7° 15.9 12° 15.8	2° 15.9 7° 16.3 12° 16.1	2° 17.4 7° 17.7 12° 17.3	2° 18.8 7° 19.1 12° 18.5	2° 15.3 7° 15.5 12° 15.3	2° 14.9 7° 15.3 12° 15.1
Beamwidth, Horizontal Tolerance, degrees	± 6.2	± 4.0	± 2.8	± 6.6	± 4.4	± 8.3	± 22
Beamwidth, Vertical Tolerance, degrees	± 0.4	± 0.6	± 0.4	± 0.6	± 0.3	± 0.3	± 0.6
USLS, beampeak to 20° above beampeak, dB	14	16	17	14	16	15	15
Front-to-Back Total Power at 180° \pm 30°, dB	22	21	23	26	26	23	22
CPR at Boresight, dB	21	21	20	20	21	14	16
CPR at Sector, dB	12	8	11	5	5	9	9

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2690	3300–3800
Gain, dBi	17.5	16.6
Beamwidth, Horizontal, degrees	59	58
Beamwidth, Vertical, degrees	4.9	6.6

RRVVT4S4-65D-R6

USLS (First Lobe), dB	19	16
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Electrical Specifications, Service Beam

	2300–2690	3300–3800
Frequency Band, MHz		
Steered 0° Gain, dBi	20.9	20.5
Steered 0° Beamwidth, Horizontal, degrees	26	24
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	32	29
Steered 0° Horizontal Sidelobe, dB	12	13
Steered 30° Gain, dBi	20.4	19.8
Steered 30° Beamwidth, Horizontal, degrees	28	27

Electrical Specifications, Soft Split

	2300–2690	3300–3800
Frequency Band, MHz		
Gain, dBi	20.2	19.7
Beamwidth, Horizontal, degrees	31	30
Front-to-Back Total Power at 180° ± 30°, dB	33	29
Horizontal Sidelobe, dB	19	15

Mechanical Specifications

Mechanical Tilt Range	0°–12°
Wind Loading @ Velocity, frontal	1,070.0 N @ 150 km/h (240.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	375.0 N @ 150 km/h (84.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,385.0 N @ 150 km/h (311.4 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	880.0 N @ 150 km/h (197.8 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm 22.244 in
Depth, packed	309 mm 12.165 in
Length, packed	2935 mm 115.551 in
Weight, gross	77.8 kg 171.519 lb

RRVVT4S4-65D-R6

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



Included Products

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| 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. |
| BSAMNT-M4 | - | Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set. |

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance