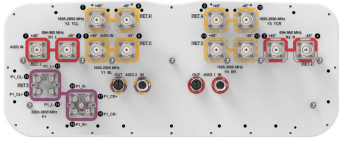


# RRV4S4-65D-R5



20-port sector antenna, 4x 694–960, 8x 1695–2690 MHz, 65° HPBW and 8x 3300–3800 MHz, 90° HPBW, 5x RET

- All Internal RET actuators are connected in “Cascaded SRET” configuration
- Cluster connectors for the beam-forming array, including eight RF ports plus one calibration port

## General Specifications

<b>Antenna Type</b>	Sector- and beamforming
<b>Band</b>	Multiband
<b>Calibration Connector Interface</b>	M-LOC
<b>Calibration Connector Quantity</b>	1
<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>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female   M-LOC
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	8
<b>RF Connector Quantity, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	20

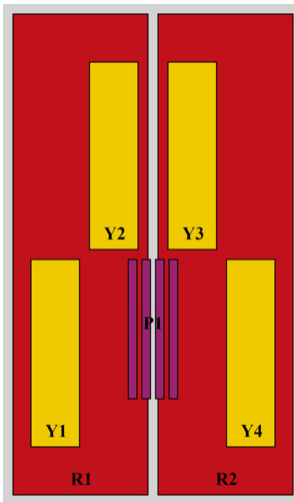
## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 5
<b>Internal RET</b>	High band (1)   Low band (2)   Mid band (2)
<b>Power Consumption, active state, maximum</b>	8 W

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<b>Power Consumption, idle state, maximum</b>	1 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)
<b>Dimensions</b>	
<b>Width</b>	498 mm   19.606 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	2688 mm   105.827 in
<b>Net Weight, without mounting kit</b>	52.5 kg   115.743 lb
<b>TDD Column Spacing</b>	42 mm   1.654 in

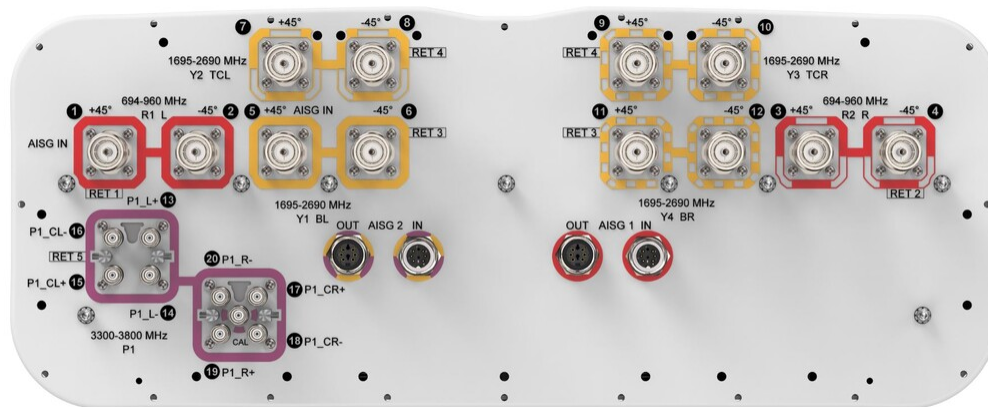
## Array Layout



RF Connector	Array ID	Frequency (MHz)	RET (SRET)	AISG RET UID
1 - 2	R1	694-960	1	CPxxxxxxxxxxxxxxxxR1
3 - 4	R2	694-960	2	CPxxxxxxxxxxxxxxxxR2
5 - 6	Y1	1695-2690	3	CPxxxxxxxxxxxxxxxxY1
11 - 12	Y4	1695-2690	3	CPxxxxxxxxxxxxxxxxY1
7 - 8	Y2	1695-2690	4	CPxxxxxxxxxxxxxxxxY2
9 - 10	Y3	1695-2690	4	CPxxxxxxxxxxxxxxxxY2
13 - 20	P1	3300-3800	5	CPxxxxxxxxxxxxxxxxP1

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

## Port Configuration



## Electrical Specifications

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<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2690 MHz   3300 – 3800 MHz   694 – 960 MHz
<b>Polarization</b>	±45°

## Electrical Specifications

Frequency Band, MHz	694–790	790–890	880–960	1695–1920	1920–2180	2300–2500	2500–2690	3300–3800
<b>Gain, dBi</b>	16	16	16.5	17.1	17.5	17.9	17.6	16.2
<b>Beamwidth, Horizontal, degrees</b>	72	65	62	64	66	63	63	88
<b>Beamwidth, Vertical, degrees</b>	8.8	8	7.3	6.6	5.9	5.2	5	6.1
<b>Beam Tilt, degrees</b>	1–11	1–11	1–11	0–10	0–10	0–10	0–10	2–12
<b>USLS (First Lobe), dB</b>	18	19	21	20	20	20	17	15
<b>Front-to-Back Ratio at 180°, dB</b>	32	32	38	32	31	33	31	29
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>								26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>								±2
<b>Coupler, max Amp Δ, Antenna port to Cal port, dB</b>								0.9
<b>Coupler, max Phase Δ, Antenna port to Cal port, degrees</b>								7
<b>Isolation, Cross Polarization, dB</b>	28	28	28	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	28	28	28	25	25	25	25	25
<b>Isolation, Co-polarization, dB</b>								20
<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	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-150	-145
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	300	250	250	250	200	75

## Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	880–960	1695–1920	1920–2180	2300–2500	2500–2690	3300–3800
<b>Gain by all Beam Tilts, average, dBi</b>	15.7	15.6	16.2	16.7	17	17.4	17	15.6
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.5	±0.4	±0.5	±0.6	±0.7	±0.9	±0.7

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<b>Beamwidth, Horizontal Tolerance, degrees</b>	±6.2	±2.8	±3.1	±9	±6.8	±5.5	±4.9	±18.6
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.6	±0.5	±0.4	±0.5	±0.4	±0.3	±0.3	±0.6
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	23	24	24	25	26	25	23	22
<b>CPR at Boresight, dB</b>	23	21	20	15	17	20	20	17
<b>CPR at Sector, dB</b>	13	10	14	10	9	9	8	8

## Electrical Specifications, Broadcast 65°

<b>Frequency Band, MHz</b>	<b>3300–3800</b>
<b>Gain, dBi</b>	16.7
<b>Beamwidth, Horizontal, degrees</b>	64
<b>Beamwidth, Vertical, degrees</b>	6.1
<b>USLS (First Lobe), dB</b>	17

## Electrical Specifications, Service Beam

<b>Frequency Band, MHz</b>	<b>3300–3800</b>
<b>Steered 0° Gain, dBi</b>	21.1
<b>Steered 0° Beamwidth, Horizontal, degrees</b>	24
<b>Steered 0° Front-to-Back Total Power at 180° ± 30°, dB</b>	27
<b>Steered 30° Gain, dBi</b>	20.1
<b>Steered 30° Beamwidth, Horizontal, degrees</b>	29
<b>Steered 30° Front-to-Back Total Power at 180° ± 30°, dB</b>	29

## Electrical Specifications, Soft Split

<b>Frequency Band, MHz</b>	<b>3300–3800</b>
<b>Gain, dBi</b>	20.1
<b>Beamwidth, Horizontal, degrees</b>	31
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	28

## Mechanical Specifications

**Wind Loading @ Velocity, frontal** 1,041.0 N @ 150 km/h (234.0 lbf @ 150 km/h)

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<b>Wind Loading @ Velocity, lateral</b>	360.0 N @ 150 km/h (80.9 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,346.0 N @ 150 km/h (302.6 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	857.0 N @ 150 km/h (192.7 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	565 mm   22.244 in
<b>Depth, packed</b>	309 mm   12.165 in
<b>Length, packed</b>	2935 mm   115.551 in
<b>Weight, gross</b>	73.5 kg   162.04 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-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.
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

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