

# RRYYHHTTT4S4-65BR8



32-port sector antenna, 4x 694–960, 4x 1427–1518, 4x 1695–2180 & 4x 2490–2690 MHz 65° HPBW; 8x 2300–2690 and 8x 3300–3800MHz, 90° HPBW, 8x RET

- Includes 2x Single Column X-Pol Arrays for 694-960MHz, suitable for 4x MIMO applications
- Includes 2x Single Column X-Pol Tri-plexed Arrays providing 4-Ports x 1427-1518MHz, 4-Ports x 1695-2180MHz and 4-Ports x 2490-2690MHz, suitable for 4x MIMO applications
- Includes 1x 4-Column X-Pol Array for 2300–2690 MHz and a separate 1x 4-Column X-Pol Array for 3300-3800MHz including a calibration port for each Array. Column spacing optimized to support Soft Split Beam-forming
- 8 Internal RET's are provided. All 1427-1518MHz (G1, G2) ports share a common RET. All 2490-2690MHz (Y1, Y2) ports share a common RET
- 4x M-LOC cluster connectors (comprising 16 RF ports + 2 calibration ports in total) are provided for the beam-forming arrays

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Calibration Connector Interface</b>	M-LOC
<b>Calibration Connector Quantity</b>	2
<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   M-LOC
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	28
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	32

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
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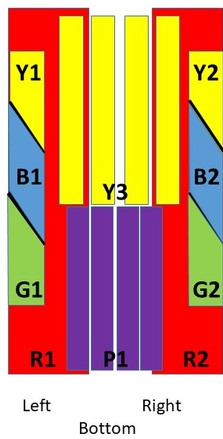
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<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (6)   Low band (2)
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Power Consumption, normal conditions, maximum</b>	8 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

<b>Width</b>	498 mm   19.606 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	2100 mm   82.677 in
<b>Net Weight, without mounting kit</b>	52 kg   114.64 lb

## Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3-4	2	CPxxxxxxxxxxxxxxxxR2
G1	1427-1518	5-6	3	CPxxxxxxxxxxxxxxxxG1
G2	1427-1518	7-8		CPxxxxxxxxxxxxxxxxG2
B1	1695-2180	9-10	4	CPxxxxxxxxxxxxxxxxB1
B2	1695-2180	11-12	5	CPxxxxxxxxxxxxxxxxB2
Y1	2490-2690	13-14	6	CPxxxxxxxxxxxxxxxxY1
Y2	2490-2690	15-16		CPxxxxxxxxxxxxxxxxY2
Y3	2300-2690	17-24		CPxxxxxxxxxxxxxxxxY3
P1	3300-3800	25-32	8	CPxxxxxxxxxxxxxxxxP1

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

## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1427 – 1518 MHz   1695 – 2180 MHz   2300 – 2690 MHz   2490 – 2690 MHz   3300 – 3800 MHz   694 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

	R1-R2	R1-R2	R1-R2	G1-G2	B1-B2	Y1-Y2	Y3	P1
<b>Frequency Band, MHz</b>	<b>694–790</b>	<b>790–890</b>	<b>890–960</b>	<b>1427–1518</b>	<b>1695–2180</b>	<b>2490–2690</b>	<b>2300–2690</b>	<b>3300–3800</b>
<b>Gain, dBi</b>	15	15.2	15.5	15.4	16.9	17.7	14.9	16.1
<b>Beamwidth, Horizontal, degrees</b>	73	66	65	78	70	56	92	91
<b>Beamwidth, Vertical, degrees</b>	10.4	9.3	8.4	6.9	5.2	4.2	6.4	6.4
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	15	17	18	15	17	24	16	17
<b>Front-to-Back Ratio at 180°, dB</b>	33	33	31	29	31	32	32	30
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>							26	26

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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							9	9
Isolation, Cross Polarization, dB	28	28	28	25	25	25	25	25
Isolation, Inter-band, dB	28	28	28	25	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	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-145	-145
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	200	150	75

## Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	890–960	1427–1518	1695–2180	2490–2690	2300–2690	3300–3800
Gain by all Beam Tilts, average, dBi	14.6	15	15.2	15	16.4	17.3	14.5	15.2
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.3	±0.4	±0.9	±0.6	±0.4	±0.6	±1
Gain by Beam Tilt, average, dBi	2° 14.5 7° 14.6 12° 14.6	2° 14.9 7° 15.1 12° 14.9	2° 15.2 7° 15.3 12° 15.0	2° 15.0 7° 14.9 12° 14.8	2° 16.2 7° 16.4 12° 16.3	2° 17.2 7° 17.4 12° 17.1	2° 14.4 7° 14.6 12° 14.1	2° 14.9 7° 15.3 12° 15.1
Beamwidth, Horizontal Tolerance, degrees	±5.2	±4.7	±3.4	±11.9	±8.2	±4.6	±14.5	±17.5
Beamwidth, Vertical Tolerance, degrees	±0.8	±0.7	±0.6	±0.3	±0.5	±0.2	±0.4	±0.6
USLS, beampeak to 20° above beampeak, dB	16	17	16	15	16	17	14	16
Front-to-Back Total Power at 180° ± 30°, dB	21	21	21	20	25	24	24	23
CPR at Boresight, dB	20	22	21	17	19	16	16	16
CPR at Sector, dB	12	8	9	9	4	1	10	7

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2690	3300–3800
Gain, dBi	16.4	16.9
Beamwidth, Horizontal, degrees	60	61
Beamwidth, Vertical, degrees	6.4	6.5

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<b>USLS (First Lobe), dB</b>	17	19
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## Electrical Specifications, Service Beam

	<b>2300–2690</b>	<b>3300–3800</b>
<b>Frequency Band, MHz</b>		
<b>Steered 0° Gain, dBi</b>	20	20.9
<b>Steered 0° Beamwidth, Horizontal, degrees</b>	26	24
<b>Steered 0° Front-to-Back Total Power at 180° ± 30°, dB</b>	33	32
<b>Steered 0° Horizontal Sidelobe, dB</b>	12	13
<b>Steered 30° Gain, dBi</b>	19.1	19.9
<b>Steered 30° Beamwidth, Horizontal, degrees</b>	28	27

## Electrical Specifications, Soft Split

	<b>2300–2690</b>	<b>3300–3800</b>
<b>Frequency Band, MHz</b>		
<b>Gain, dBi</b>	19.5	19.6
<b>Beamwidth, Horizontal, degrees</b>	32	32
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	33	29
<b>Horizontal Sidelobe, dB</b>	19	15

## Mechanical Specifications

<b>Mechanical Tilt Range</b>	0°–12°
<b>Wind Loading @ Velocity, frontal</b>	803.0 N @ 150 km/h (180.5 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	275.0 N @ 150 km/h (61.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,040.0 N @ 150 km/h (233.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	661.0 N @ 150 km/h (148.6 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>	2287 mm   90.039 in
<b>Weight, gross</b>	66.5 kg   146.607 lb

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## Regulatory Compliance/Certifications

Agency	Classification
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.

## \* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance