

RRZZHHTTS4-65B-R7



24-port sector antenna, 4x 694–960, 4x 1427–2690, 4x 1695–2180, 4x 2490–2690 MHz 65° HPBW and 8x 3300–3800 MHz, 90° HPBW, 7x RET

- Antenna includes 2x Single Column X-Pol Arrays for 694-960MHz and 2x Single Column X-Pol Arrays for 1427-2690MHz, suitable for 4x MIMO applications
- Includes 2x Single Column X-Pol Diplexed Arrays providing 4-Ports x 1695-2180MHz and 4 Ports x 2490-2690MHz, suitable for 4x MIMO applications
- Includes 1x 4-Column Array for 3300-3800MHz and calibration port. Column spacing optimized to support Soft Split Beamforming
- Includes seven Internal RET's. All 1695-2180MHz (B1,B2) ports share common RET. All 2490-2690MHz (Y1,Y4) ports share common RET

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	20
RF Connector Quantity, low band	4
RF Connector Quantity, total	24

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v1 CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male

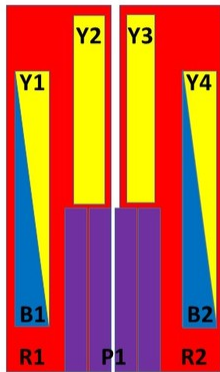
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RET Interface, quantity	1 female 1 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Cal Port
Internal RET	High band (5) Low band (2)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	9 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm 19.606 in
Depth	197 mm 7.756 in
Length	2100 mm 82.677 in
Net Weight, without mounting kit	47 kg 103.617 lb
TDD Column Spacing	42 mm 1.654 in

Array Layout



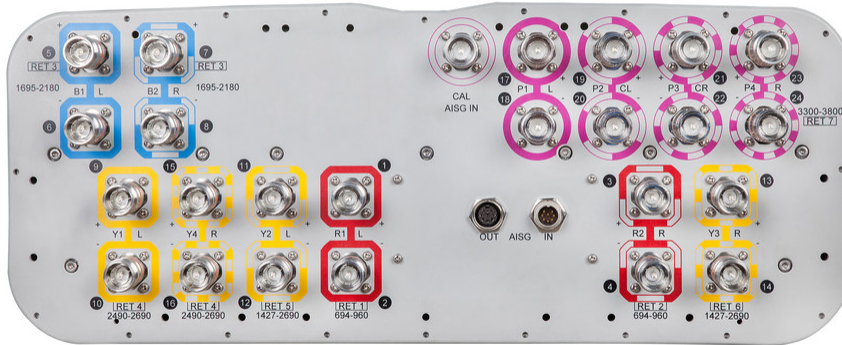
Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3-4	2	CPxxxxxxxxxxxxxxxxR2
B1	1695-2180	5-6	3	CPxxxxxxxxxxxxxxxxB1
B2	1695-2180	7-8		
Y1	2490-2690	9-10	4	CPxxxxxxxxxxxxxxxxY1
Y4	2490-2690	15-16		
Y2	1427-2690	11-12		
Y3	1427-2690	13-14		
P1	3300-3800	17-24	7	CPxxxxxxxxxxxxxxxxP1

Left Bottom Right

(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	1427 – 2690 MHz 3300 – 3800 MHz 694 – 960 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

	R1-R2	R1-R2	B1-B2	Y1&Y4	Y2-Y3	Y2-Y3	Y2-Y3	P1
Frequency Band, MHz	694-790	790-960	1695-2180	2490-2690	1427-1518	1695-2180	2300-2690	3300-3800
Gain, dBi	14.7	15.3	17.9	18.7	15	17	17.7	16
Beamwidth, Horizontal, degrees	71	63	66	59	66	62	58	89
Beamwidth, Vertical, degrees	10.5	8.8	5.2	4.1	9.3	7.3	5.6	6.5
Beam Tilt, degrees	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	15	16	18	25	18	18	20	15
Front-to-Back Ratio at 180°, dB	32	30	33	30	33	35	31	31
Coupling level, Amp, Antenna port to Cal port, dB								26
Coupling level, max Amp Δ,								±2

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Antenna port to Cal port, dB

Coupler, max Amp Δ , Antenna port to Cal port, dB 0.9

Coupler, max Phase Δ , Antenna port to Cal port, degrees 7

Isolation, Cross Polarization, dB 28 28 28 28 26 27 26 25

Isolation, Inter-band, dB 28 28 28 28 27 27 27 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 -150 -145

Input Power per Port at 50°C, maximum, watts 300 300 250 150 250 250 200 50

Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–960	1695–2180	2490–2690	1427–1518	1695–2180	2300–2690	3300–3800
Gain by all Beam Tilts, average, dBi	14.4	15	17.3	18.3	14.7	16.3	17.2	15.3
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.9	±0.5	±0.4	±0.9	±0.8	±0.8
Gain by Beam Tilt, average, dBi	2° 14.4 7° 14.5 12° 14.3	2° 15.0 7° 15.1 12° 14.8	2° 17.2 7° 17.4 12° 17.3	2° 18.1 7° 18.4 12° 18.1	2° 14.5 7° 14.7 12° 14.6	2° 16.0 7° 16.4 12° 16.3	2° 16.6 7° 17.4 12° 17.3	2° 15.0 7° 15.4 12° 15.3
Beamwidth, Horizontal Tolerance, degrees	±6.5	±4.7	±6.7	±4.7	±4.8	±6.4	±5.6	±20
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.8	±0.5	±0.2	±0.7	±0.8	±0.5	±0.6
USLS, beampeak to 20° above beampeak, dB	15	16	16	16	15	17	16	15
Front-to-Back Total Power at 180° ± 30°, dB	21	21	26	23	22	28	26	23
CPR at Boresight, dB	21	19	20	19	19	19	17	17
CPR at Sector, dB	15	10	7	6	8	8	3	9

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3300–3800
Gain, dBi	16.7
Beamwidth, Horizontal, degrees	58
Beamwidth, Vertical, degrees	6.6
Front-to-Back Total Power at	26

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180° ± 30°, dB

USLS (First Lobe), dB

16

Electrical Specifications, Service Beam

Frequency Band, MHz

3300–3800

Steered 0° Gain, dBi

20.8

Steered 0° Beamwidth,
Horizontal, degrees

24

Steered 0° Front-to-Back
Total Power at 180° ± 30°, dB

30

Steered 0° Horizontal
Sidelobe, dB

13

Steered 30° Gain, dBi

19.6

Steered 30° Beamwidth,
Horizontal, degrees

29

Steered 30° Front-to-Back
Total Power at 180° ± 30°, dB

28

Steered 30° Horizontal
Sidelobe, dB

9

Electrical Specifications, Soft Split

Frequency Band, MHz

3300–3800

Gain, dBi

19.8

Beamwidth, Horizontal,
degrees

31

Front-to-Back Total Power at
180° ± 30°, dB

29

Mechanical Specifications

Mechanical Tilt Range

0°–12°

Wind Loading @ Velocity, frontal

803.0 N @ 150 km/h (180.5 lbf @ 150 km/h)

Wind Loading @ Velocity, lateral

275.0 N @ 150 km/h (61.8 lbf @ 150 km/h)

Wind Loading @ Velocity, maximum

1,040.0 N @ 150 km/h (233.8 lbf @ 150 km/h)

Wind Loading @ Velocity, rear

661.0 N @ 150 km/h (148.6 lbf @ 150 km/h)

Wind Speed, maximum

288 km/h (179 mph)

Packaging and Weights

Width, packed

565 mm | 22.244 in

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Depth, packed	368 mm 14.488 in
Length, packed	2279 mm 89.724 in
Weight, gross	60.8 kg 134.041 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



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.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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