

RRZZT4-65A-R5



16-port sector antenna, 4x 694–960, 4x 1427–2690 MHz 65° HPBW and 8x 2300–2690 MHz, 90° HPBW, 5x RET

- 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
- Also includes 1x 4-Column Array for 2300-2690 MHz with calibration port. Column spacing optimized to support Soft Split Beamforming
- A calibration port is provided for the 4-Column Array
- 5 Internal RET's provide independent electrical tilt control for each array
- 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, low band	4
RF Connector Quantity, total	16

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

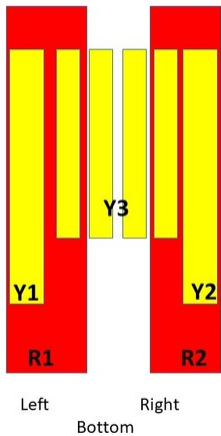
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Input Voltage	10–30 Vdc
Internal RET	High band (3) Low band (2)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm 19.606 in
Depth	197 mm 7.756 in
Length	1499 mm 59.016 in
Net Weight, without mounting kit	36.5 kg 80.469 lb
TDD Column Spacing	58 mm 2.283 in

Array Layout

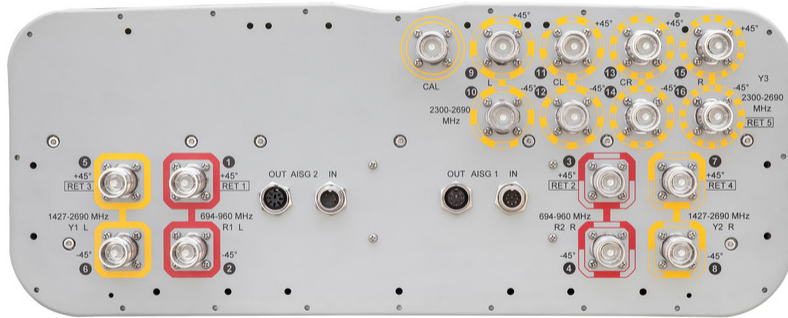


Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3-4	2	CPxxxxxxxxxxxxxxxxR2
Y1	1427-2690	5-6	3	CPxxxxxxxxxxxxxxxxY1
Y2	1427-2690	7-8	4	CPxxxxxxxxxxxxxxxxY2
Y3	2300-2690	9-16	5	CPxxxxxxxxxxxxxxxxY3

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

Electrical Specifications

	R1-R2	R1-R2	R1-R2	Y1-Y2	Y1-Y2	Y1-Y2	Y3	Y3
Frequency Band, MHz	694–790	790–890	890–960	1427–1518	1695–2180	2300–2690	2300–2500	2490–2690
Gain, dBi	13.2	13.4	13.5	15.4	17.1	18.3	16.5	16.5
Beamwidth, Horizontal, degrees	70	66	63	68	73	55	95	94
Beamwidth, Vertical, degrees	17	15.3	13.9	8.9	6.9	5.2	5.3	5
Beam Tilt, degrees	2–16	2–16	2–16	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	20	22	16	21	17	19	17	19
Front-to-Back Ratio at 180°, dB	31	29	26	33	30	31	34	31
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	27	27	27	25	25	25	25	25
Isolation, Inter-band, dB	27	27	27	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	-150	-150
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	200	200	200

Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	890–960	1427–1518	1695–2180	2300–2690	2300–2500	2490–2690
Gain by all Beam Tilts, average, dBi	12.9	13.1	13.2	15	16.3	18	16	15.9
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.5	±0.4	±0.5	±0.8	±0.5	±0.6	±0.9
Gain by Beam Tilt, average, dBi	2° 13.0 9° 12.9 16° 12.7	2° 13.3 9° 13.2 16° 12.7	2° 13.4 9° 13.3 16° 13.1	2° 15.0 7° 15.1 12° 15.0	2° 16.0 7° 16.4 12° 16.2	2° 17.5 7° 18.1 12° 17.8	2° 16.0 7° 16.1 12° 15.9	2° 15.8 7° 16.1 12° 15.8
Beamwidth, Horizontal Tolerance, degrees	±8.9	±5.7	±5.5	±5.7	±9.3	±4.8	±13.1	±10.9
Beamwidth, Vertical Tolerance, degrees	±1.1	±1.2	±1.2	±0.4	±0.9	±0.5	±0.3	±0.3
USLS, beampeak to 20° above beampeak, dB				16	16	16	17	17
Front-to-Back Total Power at 180° ± 30°, dB	20	21	21	25	25	26	25	24
CPR at Boresight, dB	20	19	19	20	18	17	15	14
CPR at Sector, dB	12	8	11	4	4	2	11	9

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2500	2490–2690
Gain, dBi	18.3	18.2
Beamwidth, Horizontal, degrees	60	60
Beamwidth, Horizontal Tolerance, degrees	±3.2	±5.2

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Beamwidth, Vertical, degrees	5.2	5
Beamwidth, Vertical Tolerance, degrees	±0.2	±0.2
USLS (First Lobe), dB	18	19

Electrical Specifications, Service Beam

Frequency Band, MHz	2300–2500	2490–2690
Steered 0° Gain, dBi	21.4	21.4
Steered 0° Beamwidth, Horizontal, degrees	26	25
Steered 0° Horizontal Sidelobe, dB	12	10
Steered 30° Gain, dBi	21.3	20.9
Steered 30° Beamwidth, Horizontal, degrees	28	30

Electrical Specifications, Soft Split

Frequency Band, MHz	2300–2500	2490–2690
Gain, dBi	20.9	20.8
Beamwidth, Horizontal, degrees	32	33
Horizontal Sidelobe, dB	21	17

Mechanical Specifications

Mechanical Tilt Range	0°–15°
Wind Loading @ Velocity, frontal	549.0 N @ 150 km/h (123.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	183.0 N @ 150 km/h (41.1 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	712.0 N @ 150 km/h (160.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	452.0 N @ 150 km/h (101.6 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	1686 mm 66.378 in
Weight, gross	49.2 kg 108.467 lb

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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-3 – 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