RRZZT4S4-65B-R6V4

24-port sector antenna, 4x 694–960 and 4x 1427-2690 MHz 65° HPBW, 8x 2300–2690 and 8x 3300-3800MHz, 90° HPBW, 6x RET with MQ4 /MQ5 cluster connectors.

- 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
- Also includes 1x 4-Column Array for 2300-2690 MHz and a separate 1x 4-Column Array for 3300-3800MHz. Column spacing optimized to support Soft Split Beamforming
- A calibration port is provided for each 4-Column Array. Six Internal RET's provide independent electrical tilt control for each array
- Antenna shape optimized for wind load reduction
- 2x MQ4 and 2x MQ5 cluster connectors (comprising 16 RF ports + 2 calibration ports in total) are provided for the beam-forming arrays

General Specifications

Antenna Type	Sector- and beamforming
Band	Multiband
Calibration Connector Interface	MQ5
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 | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female | MQ4 | MQ5
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	12
RF Connector Quantity, low band	4
RF Connector Quantity, total	24

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2

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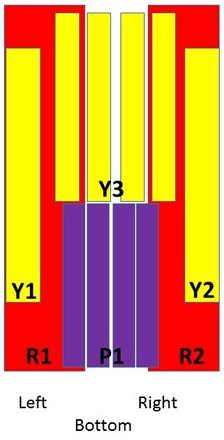
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) | Low band (2) | Mid band (3)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	2100 mm | 82.677 in
Net Weight, antenna only	46.5 kg | 102.515 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxR1
R2	694-960	3-4	2	CPxxxxxxxxxxxxxxR2
Y1	1427-2690	5-6	3	CPxxxxxxxxxxxxxxY1
Y2	1427-2690	7-8	4	CPxxxxxxxxxxxxxxY2
Y3	2300-2690	9-16	5	CPxxxxxxxxxxxxxxY3
P1	3300-3800	17-24	6	CPxxxxxxxxxxxxxxP1

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

Port Configuration

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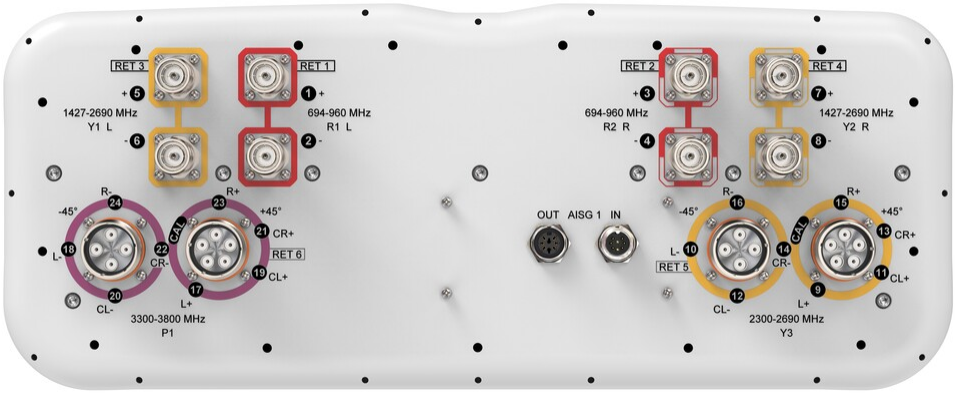

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1427 – 2690 MHz | 2300 – 2690 MHz | 3300 – 3800 MHz | 694 – 960 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	**694–790**	**790–890**	**890–960**	**1427–1518**	**1695–2180**	**2300–2690**	**2300–2690**	**3300–3800**
Gain, dBi	15.1	15.4	15.6	16	17.8	18.3	15.3	15.9
Beamwidth, Horizontal, degrees	71	65	63	77	70	59	94	90
Beamwidth, Vertical, degrees	10.4	9.4	8.4	7	5.5	4.4	6.3	6.6
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	15	17	17	19	16	17	15	15
Front-to-Back Ratio at 180°, dB	32	33	31	31	30	29	31	28
Coupling level, Amp, Antenna port to Cal port, dB							26	26
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	25	25
Isolation, Co-polarization, dB							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	-130	-130
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**	**2300–2690**	**2300–2690**	**3300–3800**
Gain by all Beam Tilts, average, dBi	14.7	15.1	15.4	15.6	17	18	14.7	15.2
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3	±0.3	±0.4	±0.8	±0.4	±0.7	±0.7
Beamwidth, Horizontal Tolerance, degrees	±6.2	±3.7	±3.4	±5.4	±6.6	±6.4	±13.9	±17.7
Beamwidth, Vertical Tolerance, degrees	±0.6	±0.5	±0.5	±0.2	±0.7	±0.3	±0.5	±0.6
USLS, beampeak to 20° above beampeak, dB	14	17	17	17	16	14	14	14
Front-to-Back Total Power at 180° ± 30°, dB	21	20	21	25	24	24	23	21
CPR at Boresight, dB	20	20	18	16	17	17	15	16
CPR at Sector, dB	13	9	11	8	4	3	10	8

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2300–2690**	**3300–3800**
Gain, dBi	17.3	17.1
Beamwidth, Horizontal, degrees	57	56
Beamwidth, Vertical, degrees	6.2	6.5
USLS (First Lobe), dB	14	16

Electrical Specifications, Service Beam

Frequency Band, MHz	**2300–2690**	**3300–3800**
Steered 0° Gain, dBi	20.6	20.9
Steered 0° Beamwidth, Horizontal, degrees	26	24

Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	33	30
Steered 0° Horizontal Sidelobe, dB	11	13
Steered 0° USLS (First Lobe), dB	16	17
Steered 30° Gain, dBi	19.8	19.7
Steered 30° Beamwidth, Horizontal, degrees	28	28
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	30	28

Electrical Specifications, Soft Split

Frequency Band, MHz	**2300–2690**	**3300–3800**
Gain, dBi	19.5	19.6
Beamwidth, Horizontal, degrees	32	32
Front-to-Back Total Power at 180° ± 30°, dB	33	28
Horizontal Sidelobe, dB	18	16
USLS (First Lobe), dB	17	17

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.68 m² | 7.319 ft²
Effective Projective Area (EPA), lateral	0.21 m² | 2.26 ft²
Wind Loading @ Velocity, frontal	728.0 N @ 150 km/h (163.7 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	223.0 N @ 150 km/h (50.1 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	873.0 N @ 150 km/h (196.3 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	501.0 N @ 150 km/h (112.6 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	2287 mm | 90.039 in
Weight, gross	60.8 kg | 134.041 lb

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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

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