

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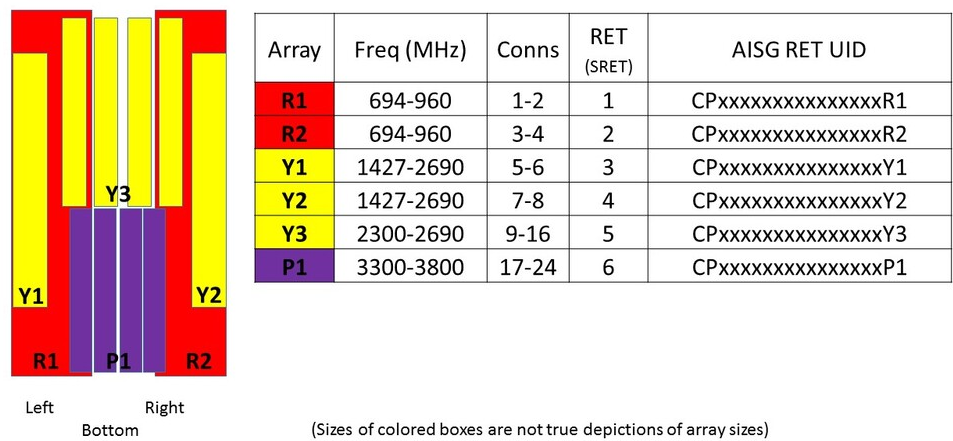
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RET Interface	8-pin DIN Female   8-pin DIN Male
RET Interface, quantity	1 female   1 male
Input Voltage	10–30 Vdc
Internal RET	High band (1)   Low band (2)   Mid band (3)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum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

## Dimensions

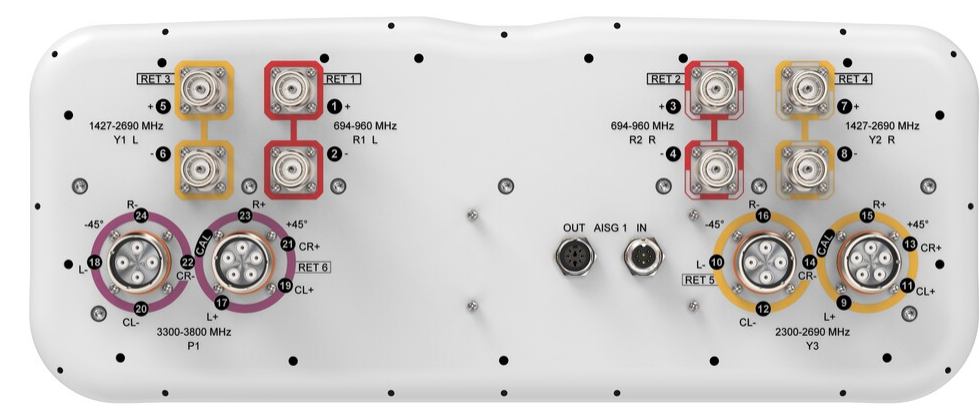
Width	498 mm   19.606 in
Depth	197 mm   7.756 in
Length	2100 mm   82.677 in
Net Weight, antenna only	46.5 kg   102.515 lb

## Array Layout



## 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

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CPR at Boresight, dB	20	20	18	16	17	17	15	16
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, 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,	32	32

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degrees		
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

## 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.
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## \* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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