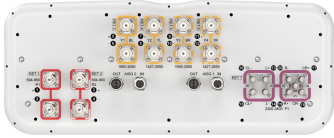


# RRZZVVQ4-65B-R7



20-port sector antenna, 4x 694-960 MHz (R1-R2), 4x 1427-2690 MHz (Y2-Y4) and 4x 1695-2690 (Y1-Y3) MHz 65° HPBW, 8x 2300-3800 MHz (P1), 90° HPBW, 7x RET

- Includes 1x 4-Column Array for 2300-3800MHz and calibration port. Column spacing optimized to support Soft Split Beamforming
- Q4 array uses M-LOC cluster connectors
- Seven internal RETs control the antenna arrays
- New aerodynamic endcaps for wind load optimization

## General Specifications

<b>Antenna Type</b>	Sector- and beamforming
<b>Band</b>	Multiband
<b>Calibration Connector Interface</b>	M-LOC
<b>Calibration Connector Quantity</b>	1
<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>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>	8
<b>RF Connector Quantity, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	20

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<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 (1)   Low band (2)   Mid band (4)

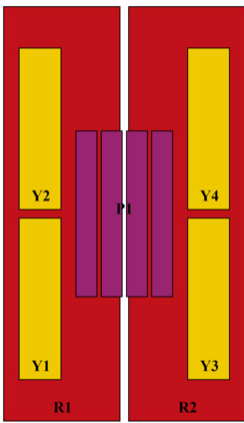
# RRZZVVQ4-65B-R7

<b>Power Consumption, active state, maximum</b>	8 W
<b>Power Consumption, idle state, maximum</b>	1 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, antenna only</b>	40 kg   88.185 lb

## Array Layout

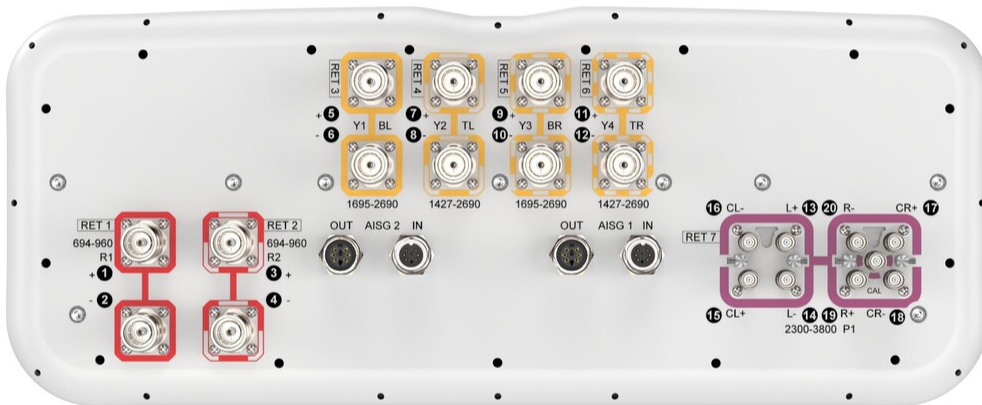


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxxY1
Y2	1427-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxxY3
Y4	1427-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxxY4
P1	2300-3800	13 - 20	7	AISG1	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 – 2690 MHz   1695 – 2690 MHz   2300 – 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	Y2,Y4	Y2,Y4	Y2,Y4	Y1,Y3	Y1,Y3	P1	P1
<b>Frequency Band, MHz</b>	694-790	790-890	890-960	1427-1518	1695-2200	2300-2690	1695-2200	2300-2690	2300-2690	3300-3800
<b>RF Port</b>	1-4	1-4	1-4	7,8,11,12	7,8,11,12	7,8,11,12	5,6,9,10	5,6,9,10	13-20	13-20

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<b>Beamwidth, Horizontal, degrees</b>	65	61	61	64	56	57	61	58	95	66
<b>Beamwidth, Vertical, degrees</b>	10.7	9.5	8.7	9.9	7.8	6	8.6	6.9	5.8	5.5
<b>Beam Tilt, degrees</b>	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12
<b>USLS (First Lobe), dB</b>	19	16	15	17	17	20	14	19	15	14
<b>Front-to-Back Ratio at 180°, dB</b>	29	28	29	31	29	29	30	28	31	28
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>									26	26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>									±2	±2
<b>Coupler, max Amp Δ, Antenna port to Cal port, dB</b>									0.9	0.9
<b>Coupler, max Phase Δ, Antenna port to Cal port, degrees</b>									7	7
<b>Isolation, Cross Polarization, dB</b>	28	28	28	25	25	25	25	25	23	23
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25	25	25	25	25
<b>Isolation, Co-polarization, dB</b>									20	20
<b>VSWR   Return loss, dB</b>	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	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-150	-150	-140	-140
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	300	250	250	200	250	200	75	75

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>694-790 790-890 890-960 1427-1518 1695-2200 2300-2690 1695-2200 2300-2690 2300-2690 3300-3800</b>									
<b>Gain by all Beam Tilts, average, dBi</b>	14.9	15.4	15.7	14.3	16	17.1	15.6	16.9	14.8	15.5
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.4	±0.3	±0.6	±0.6	±0.3	±0.9	±0.4	±0.8	±0.8

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<b>Beamwidth, Horizontal Tolerance, degrees</b>	±6	±5	±4	±7	±4	±4	±9	±5	±12	±15
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.7	±0.7	±0.4	±0.5	±1	±0.6	±1.1	±0.6	±0.4	±0.3
<b>USLS, beampeak to 20° above beampeak, dB</b>	19	16	15	14	16	16	14	17	11	11
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	21	22	23	24	24	24	25	23	23	23
<b>CPR at Boresight, dB</b>	18	18	18	18	20	16	16	17	15	13
<b>CPR at Sector, dB</b>	13	10	12	7	4	4	7	8	9	5

## Electrical Specifications, Broadcast 65°

<b>Frequency Band, MHz</b>	<b>2300–2690 3300–3800</b>	
<b>Gain, dBi</b>	17.5	17.1
<b>Beamwidth, Horizontal at 3 dB, degrees</b>	65	65
<b>Beamwidth, Horizontal at 10 dB, degrees</b>	117	108
<b>Beamwidth, Vertical, degrees</b>	5.8	5.5
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	28	25
<b>USLS (First Lobe), dB</b>	15	14

## Electrical Specifications, Envelope Pattern

<b>Frequency Band, MHz</b>	<b>2300–2690 3300–3800</b>	
<b>Gain, dBi</b>	20.4	21.2
<b>Beamwidth, Horizontal at 10 dB, degrees</b>	126	121
<b>Beamwidth, Vertical</b>	5.8	5.4

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at 3 dB, degrees

Front-to-Back Total Power at 180° ± 30°, dB 28 26

USLS (First Lobe), dB 16 16

## Electrical Specifications, Service Beam

Frequency Band, MHz 2300–2690 3300–3800

Steered 0° Gain, dBi 20.4 21.4

Steered 0° Beamwidth, Horizontal, degrees 25 18

Steered 0° Front-to-Back Total Power at 180° ± 30°, dB 31 29

Steered 0° Horizontal Sidelobe, dB 13 13

Steered 30° Gain, dBi 20 18.9

Steered 30° Beamwidth, Horizontal, degrees 28 23

Steered 30° Front-to-Back Total Power at 180° ± 30°, dB 29 25

## Electrical Specifications, Soft Split

Frequency Band, MHz 2300–2690

Gain, dBi 19.8

Beamwidth, Horizontal, degrees 31

Front-to-Back Total Power at 180° ± 30°, dB 29

Horizontal Sidelobe, dB 19

USLS (First Lobe), dB 17

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## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	728.0 N @ 150 km/h (163.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	223.0 N @ 150 km/h (50.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	873.0 N @ 150 km/h (196.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	501.0 N @ 150 km/h (112.6 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>	54.3 kg   119.711 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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

<b>Performance Note</b>	Severe environmental conditions may degrade optimum performance
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