

# RRZZVVS4-65B-R7N43



20-port sector antenna, 4x 694-960, 4x 1427-2690, 4x 1695-2690 MHz, 65° HPBW and 8x 3300-3800 MHz, 90° HPBW, 7x RET.

- All Internal RET actuators are connected in "Cascaded SRET" configuration
- Cluster connectors for the beam-forming array, including eight RF ports plus one calibration port
- Antenna shape optimized for wind load reduction
- M-LOC cluster connector for 3.3-3.8GHz, equipped with calibration port
- Includes seven Internal RET's
- Retractable tilt indicator rods

## 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)

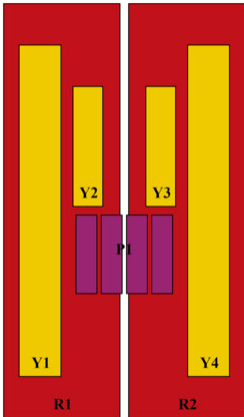
# RRZZVVS4-65B-R7N43

<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>	430 mm   16.929 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	2100 mm   82.677 in
<b>Net Weight, antenna only</b>	38.2 kg   84.216 lb
<b>TDD Column Spacing</b>	42 mm   1.654 in

## Array Layout

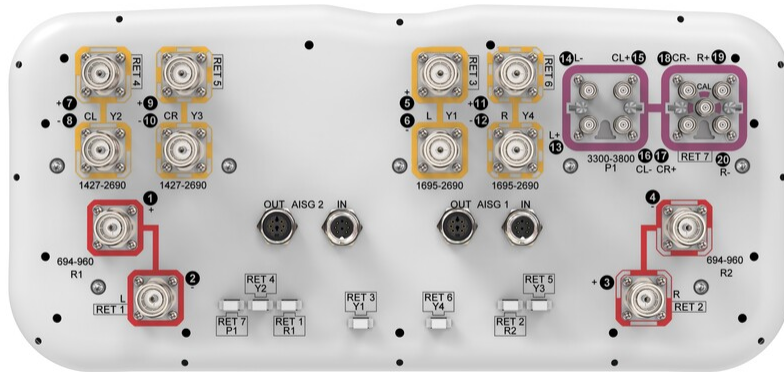


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxxY1
Y2	1427-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxxY2
Y3	1427-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxxY4
P1	3300-3800	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxxP1

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

## Port Configuration

# RRZZVVS4-65B-R7N43



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1427 – 2690 MHz   1695 – 2690 MHz   3300 – 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,Y3	Y2,Y3	Y2,Y3	Y2,Y3	Y2,Y3
<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>790–896</b>	<b>890–960</b>	<b>1427–1518</b>	<b>1695–1990</b>	<b>1920–2300</b>	<b>2300–2500</b>	<b>2490–2690</b>
<b>RF Port</b>	1,2,3,4	1,2,3,4	1,2,3,4	7,8,9,10	7,8,9,10	7,8,9,10	7,8,9,10	7,8,9,10
<b>Gain at Mid Tilt, dBi</b>	14	14.7	14.9	13.6	15	15.8	16.6	16.5
<b>Beamwidth, Horizontal, degrees</b>	71	62	58	67	62	62	59	59
<b>Beamwidth, Vertical, degrees</b>	10.5	9.3	8.5	9.8	7.9	7.1	6.4	6
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	17	18	15	12	16	19	22	22
<b>Front-to-Back Ratio at 180°, dB</b>	32	31	30	34	34	33	31	33
<b>Isolation, Cross Polarization, dB</b>	27	27	27	26	26	26	26	26

# RRZZVVS4-65B-R7N43

<b>Isolation, Inter-band, dB</b>	27	27	27	26	26	26	26	26
<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
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	250	250	250	200	200	200	150	150

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>790–896</b>	<b>890–960</b>	<b>1427–1518</b>	<b>1695–1990</b>	<b>1920–2300</b>	<b>2300–2500</b>	<b>2490–2690</b>
<b>Gain by all Beam Tilts, average, dBi</b>	13.9	14.7	14.8	13.5	14.9	15.7	16.4	16.3
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.8	±0.3	±0.5	±0.6	±1.1	±0.8	±0.4	±0.5
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±9	±5	±6	±8	±8	±7	±4	±4
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.9	±0.7	±0.6	±0.8	±0.7	±0.6	±0.3	±0.3
<b>USLS, beampeak to 20° above beampeak, dB</b>	16	15	13	12	15	16	15	14
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	21	22	21	23	28	28	26	26
<b>CPR at Boresight, dB</b>	22	22	23	13	18	18	23	17
<b>CPR at Sector, dB</b>	11	7	7	4	3	5	5	0

## Electrical Specifications

	<b>Y1,Y4</b>	<b>Y1,Y4</b>	<b>Y1,Y4</b>	<b>Y1,Y4</b>
<b>Frequency Band, MHz</b>	<b>1695–1990</b>	<b>1920–2300</b>	<b>2300–2500</b>	<b>2490–2690</b>
<b>RF Port</b>	5,6,11,12	5,6,11,12	5,6,11,12	5,6,11,12
<b>Gain at Mid Tilt, dBi</b>	16.7	17.6	18.3	18.4
<b>Beamwidth, Horizontal, degrees</b>	70	67	64	64
<b>Beamwidth, Vertical, degrees</b>	5.3	4.9	4.4	4.2
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	18	18	18	18
<b>Front-to-Back Ratio at 180°, dB</b>	34	34	35	32
<b>Isolation, Cross Polarization, dB</b>	27	27	27	27
<b>Isolation, Inter-band, dB</b>	26	26	26	26
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0

# RRZZVVS4-65B-R7N43

<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	200	200	150	150

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>1695–1990</b>	<b>1920–2300</b>	<b>2300–2500</b>	<b>2490–2690</b>
<b>Gain by all Beam Tilts, average, dBi</b>	16.6	17.5	18.2	18.2
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.7	±0.4	±0.4
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±5	±6	±4	±3
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.4	±0.4	±0.2	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	16	17	17	16
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	27	26	27	26
<b>CPR at Boresight, dB</b>	18	20	22	20
<b>CPR at Sector, dB</b>	8	8	9	6

## Electrical Specifications

	<b>P1</b>	<b>P1</b>
<b>Frequency Band, MHz</b>	<b>3300–3600</b>	<b>3600–3800</b>
<b>RF Port</b>	13-20	13-20
<b>Gain at Mid Tilt, dBi</b>	15.1	15.6
<b>Beamwidth, Horizontal, degrees</b>	85	81
<b>Beamwidth, Vertical, degrees</b>	6.4	6
<b>Beam Tilt, degrees</b>	2–12	2–12
<b>USLS (First Lobe), dB</b>	17	15
<b>Front-to-Back Ratio at 180°, dB</b>	29	29
<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,</b>	7	7

# RRZZVVS4-65B-R7N43

Antenna port to Cal port,  
degrees

Isolation, Cross Polarization, dB	25	25
Isolation, Inter-band, dB	25	25
Isolation, Co-polarization, dB	19	19
VSWR   Return loss, dB	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-140	-140
Input Power per Port at 50°C, maximum, watts	75	75

## Electrical Specifications, BASTA

Frequency Band, MHz	3300–3600	3600–3800
Gain by all Beam Tilts, average, dBi	15	15.3
Gain by all Beam Tilts Tolerance, dB	±0.7	±0.8
Beamwidth, Horizontal Tolerance, degrees	±21	±20
Beamwidth, Vertical Tolerance, degrees	±0.5	±0.4
USLS, beampeak to 20° above beampeak, dB	14	13
Front-to-Back Total Power at 180° ± 30°, dB	22	22
CPR at Boresight, dB	17	16
CPR at Sector, dB	9	7

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3300–3600	3600–3800
Gain, dBi	18.2	18.5
Beamwidth, Horizontal at 3 dB, degrees	65	65
Beamwidth, Horizontal at 10 dB, degrees	111	102
Beamwidth, Vertical, degrees	6	6
Front-to-Back Total Power at 180° ± 30°, dB	25	26
USLS (First Lobe), dB	21	20

# RRZZVVS4-65B-R7N43

## Electrical Specifications, Service Beam

Frequency Band, MHz	3300–3600	3600–3800
Steered 0° Gain, dBi	20.6	20.8
Steered 0° Beamwidth, Horizontal, degrees	25	22
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	28	29
Steered 0° Horizontal Sidelobe, dB	13	13
Steered 30° Gain, dBi	19.3	19.4
Steered 30° Beamwidth, Horizontal, degrees	30	28
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	26	28

## Electrical Specifications, Soft Split

Frequency Band, MHz	3300–3600	3600–3800
Gain, dBi	19.4	19.7
Beamwidth, Horizontal, degrees	32	29
Front-to-Back Total Power at 180° ± 30°, dB	26	27
Horizontal Sidelobe, dB	14	15

## Mechanical Specifications

Wind Loading @ Velocity, frontal	494.0 N @ 150 km/h (111.1 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	266.0 N @ 150 km/h (59.8 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	780.0 N @ 150 km/h (175.4 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	319.0 N @ 150 km/h (71.7 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

## Packaging and Weights

Width, packed	530 mm   20.866 in
Depth, packed	349 mm   13.74 in
Length, packed	2272 mm   89.449 in
Weight, gross	53.2 kg   117.286 lb

# RRZZVVS4-65B-R7N43

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## 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-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