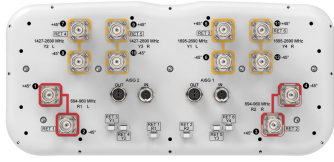


# RRZZVV-65BR6NV1



12-port sector antenna, 4x 694-960, 4x 1427-2690 and 4x 1695-2690 MHz, 65° HPBW, 6x RET

- All Internal RET actuators are connected in “Cascaded SRET” configuration
- Retractable tilt indicator rods
- Antenna shape optimized for wind load reduction

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<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
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	12

## Remote Electrical Tilt (RET) Information

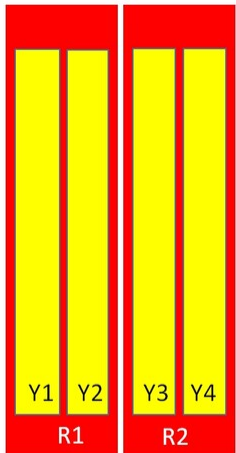
<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male
<b>Input Voltage</b>	10-30 Vdc
<b>Internal RET</b>	Low band (2)   Mid band (4)
<b>Power Consumption, active state, maximum</b>	8 W
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

# RRZZVV-65BR6NV1

<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>	36.9 kg   81.35 lb

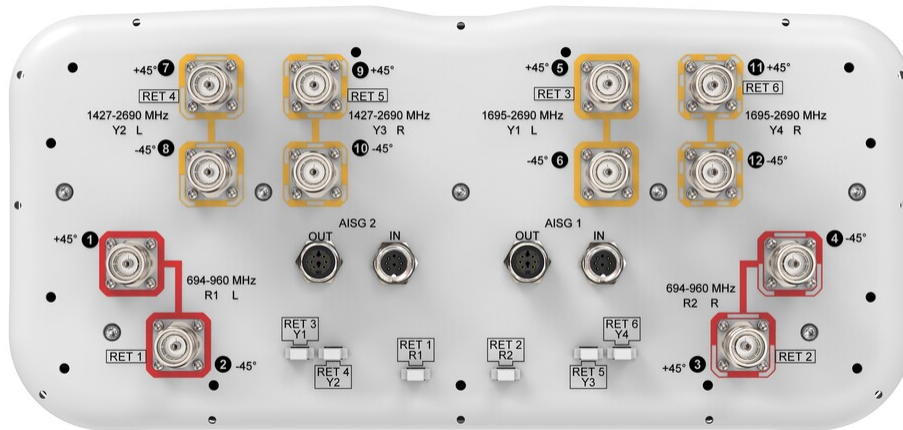
## Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3-4	2	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5-6	3	CPxxxxxxxxxxxxxxxxY1
Y2	1427-2690	7-8	4	CPxxxxxxxxxxxxxxxxY2
Y3	1427-2690	9-10	5	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2690	11-12	6	CPxxxxxxxxxxxxxxxxY4

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

## Port Configuration



## Electrical Specifications

**Impedance** 50 ohm

# RRZZVV-65BR6NV1

<b>Operating Frequency Band</b>	1427 – 2690 MHz   1695 – 2690 MHz   694 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

	<b>R1,R2</b>	<b>R1,R2</b>	<b>R1,R2</b>	<b>Y2,Y3</b>	<b>Y2,Y3</b>	<b>Y2,Y3</b>	<b>Y2,Y3</b>	<b>Y2,Y3</b>
<b>Frequency Band, MHz</b>	<b>694–806</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>	1-4	1-4	1-4	7-10	7-10	7-10	7-10	7-10
<b>Gain at Mid Tilt, dBi</b>	14.6	15.1	15.2	15.3	16.7	17.5	17.9	17.6
<b>Beamwidth, Horizontal, degrees</b>	64	60	59	77	63	58	59	58
<b>Beamwidth, Vertical, degrees</b>	10.3	9.3	8.6	6.8	5.7	5.2	4.7	4.5
<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	15	15	20	16	17	18	17
<b>Front-to-Back Ratio at 180°, dB</b>	28	31	29	31	34	33	33	32
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	21	22	22	22	27	27	27	26
<b>Isolation, Cross Polarization, dB</b>	25	25	25	26	26	26	26	26
<b>Isolation, Inter-band, dB</b>	25	25	25	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>	300	300	300	250	250	250	200	200

## Electrical Specifications, BASTA

	<b>694–806</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>Frequency Band, MHz</b>	<b>694–806</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>	14.5	15	15.1	15.2	16.5	17.3	17.7	17.3
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.3	±0.5	±0.5	±0.8	±0.5	±0.4	±0.6
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±7	±6	±7	±10	±7	±4	±7	±5
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.6	±0.6	±0.6	±0.2	±0.4	±0.4	±0.3	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	17	15	14	15	16	17	16	16

# RRZZVV-65BR6NV1

CPR at Boresight, dB	23	23	22	18	22	21	17	15
CPR at Sector, dB	11	11	11	8	8	7	8	-3

## Electrical Specifications

	Y1,Y4	Y1,Y4	Y1,Y4	Y1,Y4
<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>	16.9	17.8	18.3	18
<b>Beamwidth, Horizontal, degrees</b>	65	61	60	61
<b>Beamwidth, Vertical, degrees</b>	5.7	5.2	4.6	4.4
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	15	16	17	18
<b>Front-to-Back Ratio at 180°, dB</b>	31	30	33	34
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	25	25	27	25
<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
<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>	250	250	200	200

## Electrical Specifications, BASTA

	1695–1990	1920–2300	2300–2500	2490–2690
<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>	16.8	17.6	18.1	17.8
<b>Gain by all Beam Tilts Tolerance, dB</b>	±1	±0.5	±0.4	±0.3
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±6	±7	±5	±5
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.4	±0.4	±0.2	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	14	15	17	17
<b>CPR at Boresight, dB</b>	20	21	18	19
<b>CPR at Sector, dB</b>	9	8	7	6

# RRZZVV-65BR6NV1

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## Mechanical Specifications

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

## Packaging and Weights

<b>Width, packed</b>	530 mm   20.866 in
<b>Depth, packed</b>	349 mm   13.74 in
<b>Length, packed</b>	2272 mm   89.449 in
<b>Weight, gross</b>	49.4 kg   108.908 lb

## Regulatory Compliance/Certifications

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



## 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.
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## \* Footnotes

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