

# NNVV-65C-R4

8-port sector antenna, 4x 698–896 and 4x 1695–2690 MHz, 65° HPBW, 4x RET



- All internal RET actuators are connected in “Cascaded MRET” configuration
- Uses the 4.3-10 connector which is 40 percent smaller than the 7-16 DIN connector

## OBSOLETE

This product was discontinued on: **March 31, 2021**

### Replaced By:

RRVV-65D-R4

8-port sector antenna, 4x 694–960 and 4x 1695–2690 MHz, 65° HPBW, 4x RET

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Aluminum   Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	8

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male

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<b>RET Interface, quantity</b>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (2)   Low band (2)
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Power Consumption, normal conditions, maximum</b>	8 W
<b>Protocol</b>	3GPP/AISG 2.0 (Multi-RET)

## Dimensions

<b>Width</b>	498 mm   19.606 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	2438 mm   95.984 in
<b>Net Weight, without mounting kit</b>	45 kg   99.208 lb

## Array Layout



Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxmm.1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxxmm.2
Y1	1695-2690	5-6	3	CPxxxxxxxxxxxxxxxxmm.3
Y2	1695-2690	7-8	4	CPxxxxxxxxxxxxxxxxmm.4

Left Bottom Right Bottom

(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>	1695 – 2690 MHz   698 – 896 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2500	2500–2690
<b>Gain, dBi</b>	15.7	16.2	18.3	18.9	19.1	19.5	18.9
<b>Beamwidth, Horizontal, degrees</b>	73	71	58	59	61	61	67
<b>Beamwidth, Vertical, degrees</b>	9.7	8.7	5.4	5	4.7	4.2	4
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	19	19	19	20	20	22	22
<b>Front-to-Back Ratio at 180°, dB</b>	28	31	36	39	38	37	35
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25	25
<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

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<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-150
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	250	250	250	200	200

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698-806</b>	<b>806-896</b>	<b>1695-1880</b>	<b>1850-1990</b>	<b>1920-2180</b>	<b>2300-2500</b>	<b>2500-2690</b>
<b>Gain by all Beam Tilts, average, dBi</b>	15.4	15.9	17.8	18.7	18.8	19.1	18.6
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.5	±0.9	±0.3	±0.3	±0.4	±0.4
<b>Gain by Beam Tilt, average, dBi</b>	2°   15.3 7°   15.4 12°   15.3	2°   15.8 7°   16.0 12°   15.7	2°   17.7 7°   17.9 12°   17.7	2°   18.6 7°   18.8 12°   18.5	2°   18.6 7°   19.0 12°   18.6	2°   19.0 7°   19.3 12°   18.8	2°   18.3 7°   18.7 12°   18.3
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±2.9	±3.2	±4.6	±2.8	±3.4	±5	±5.2
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.8	±0.7	±0.4	±0.2	±0.3	±0.1	±0.1
<b>USLS, beampeak to 20° above beampeak, dB</b>	16	16	15	17	18	17	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	23	22	29	33	29	29	29
<b>CPR at Boresight, dB</b>	22	23	18	22	22	17	17
<b>CPR at Sector, dB</b>	10	7	9	10	8	9	6

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	954.0 N @ 150 km/h (214.5 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	331.0 N @ 150 km/h (74.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,235.0 N @ 150 km/h (277.6 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	785.0 N @ 150 km/h (176.5 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>	2685 mm   105.709 in
<b>Weight, gross</b>	65.8 kg   145.064 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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# NNVV-65C-R4

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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. |
| BSAMNT-M | - | Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.                            |

## \* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance