

# NNV4-65B-R6



12-port sector antenna, 4x 694–896 and 8x 1695–2690 MHz, 65° HPBW, 6x RET

- Uses the 4.3-10 connector which is 40 percent smaller than the 7-16 DIN connector
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios
- All internal RET actuators are connected in “Cascaded MRET” configuration

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Grounding Type</b>	RF connector inner conductor and 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>	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>	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>	High band (4)   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)

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## Dimensions

<b>Width</b>	498 mm   19.606 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	1848 mm   72.756 in
<b>Net Weight, without mounting kit</b>	37.8 kg   83.335 lb

## Array Layout



Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	694-896	1-2	1	CPxxxxxxxxxxxxxxxxmm.1
R2	694-896	3-4	2	CPxxxxxxxxxxxxxxxxmm.2
Y1	1695-2690	5-6	3	CPxxxxxxxxxxxxxxxxmm.3
Y2	1695-2690	7-8	4	CPxxxxxxxxxxxxxxxxmm.4
Y3	1695-2690	9-10	5	CPxxxxxxxxxxxxxxxxmm.5
Y4	1695-2690	11-12	6	CPxxxxxxxxxxxxxxxxmm.6

Left Bottom Right

(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   694 – 896 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	694–806	806–896	1695–1880	1850–1990	1920–2180	2300–2500	2500–2690
<b>Gain, dBi</b>	14.3	14.9	16.9	17.5	18.1	18.5	18.3
<b>Beamwidth, Horizontal, degrees</b>	68	64	71	67	62	59	59
<b>Beamwidth, Vertical, degrees</b>	11.4	10.2	6.9	6.5	6.1	5.2	4.9
<b>Beam Tilt, degrees</b>	2–14	2–14	2–12	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	16	18	16	19	20	19	20
<b>Front-to-Back Ratio at 180°, dB</b>	31	30	33	35	34	32	29
<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	300	250	250	200	250

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>694-806</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>	13.8	14.5	16.3	17	17.6	18	17.9
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.6	±0.5	±0.9	±0.5	±0.7	±0.5	±0.6
<b>Gain by Beam Tilt, average, dBi</b>	2°   14.0 8°   13.9 14°   13.5	2°   14.6 8°   14.6 14°   14.1	2°   16.2 7°   16.4 12°   16.3	2°   16.8 7°   17.0 12°   17.0	2°   17.3 7°   17.7 12°   17.5	2°   17.7 7°   18.2 12°   17.9	2°   17.5 7°   18.1 12°   17.8
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±6.1	±3.1	±6.3	±7.3	±6.2	±5	±6.3
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.9	±0.8	±0.6	±0.3	±0.4	±0.3	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	16	15	12	15	15	15	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	20	21	28	27	27	27	23
<b>CPR at Boresight, dB</b>	25	23	19	19	19	15	17
<b>CPR at Sector, dB</b>	13	10	7	6	6	7	6

## Mechanical Specifications

<b>Mechanical Tilt Range</b>	0°-17°
<b>Wind Loading @ Velocity, frontal</b>	694.0 N @ 150 km/h (156.0 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	235.0 N @ 150 km/h (52.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	900.0 N @ 150 km/h (202.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	571.0 N @ 150 km/h (128.4 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	608 mm   23.937 in
<b>Depth, packed</b>	352 mm   13.858 in
<b>Length, packed</b>	2030 mm   79.921 in
<b>Weight, gross</b>	53.1 kg   117.065 lb

## Regulatory Compliance/Certifications

