

# NNH4-65C-R6-V4



12-Port sector antenna, 4x 698-896 and 8x 1695-2360 MHz, 65° HPBW, 6x RET.

- Optimized design providing high gain performance for Low and Mid bands
- Array configuration provides capability for 4T4R (4x MIMO) on Low band and Mid band
- Optimized SPR performance across all operating bands
- Superior wind loading characteristics

## 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>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, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	12

## Remote Electrical Tilt (RET) Information

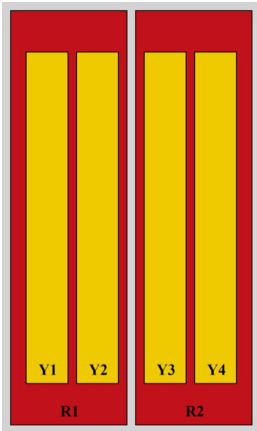
<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	AISG1 8-pin DIN Female   AISG1 8-pin DIN Male
<b>RET Interface, quantity</b>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	Low band (2)   Mid band (4)
<b>Power Consumption, active state, maximum</b>	8 W
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Protocol</b>	3GPP/AISG 2.0

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## 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, antenna only</b>	42.5 kg   93.696 lb

## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (MRET)	AISG RET UID
R1	698-896	1 - 2	1	CPxxxxxxxxxxxxMM.1
R2	698-896	3 - 4	2	CPxxxxxxxxxxxxMM.2
Y1	1695-2360	5 - 6	3	CPxxxxxxxxxxxxMM.3
Y2	1695-2360	7 - 8	4	CPxxxxxxxxxxxxMM.4
Y3	1695-2360	9 - 10	5	CPxxxxxxxxxxxxMM.5
Y4	1695-2360	11 - 12	6	CPxxxxxxxxxxxxMM.6

(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 – 2360 MHz   698 – 896 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>Y1,Y2,Y3,Y4</b>	<b>Y1,Y2,Y3,Y4</b>	<b>Y1,Y2,Y3,Y4</b>	<b>Y1,Y2,Y3,Y4</b>
<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>2300–2360</b>
<b>RF Port</b>	1-4	1-4	5-12	5-12	5-12	5-12
<b>Gain, dBi</b>	16	16.2	18	18.6	19.1	19.4
<b>Beamwidth, Horizontal, degrees</b>	62	60	69	65	61	58
<b>Beamwidth, Vertical, degrees</b>	9.5	8.3	5.7	5.3	5	4.5
<b>Beam Tilt, degrees</b>	0–10	0–10	0–10	0–10	0–10	0–10
<b>USLS (First Lobe), dB</b>	18	16	16	17	18	18
<b>Front-to-Back Ratio at 180°, dB</b>	30	30	35	32	32	32
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	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
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	250	250	250	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>2300–2360</b>
<b>CPR at Boresight, dB</b>	20	20	19	21	22	17

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	865.0 N @ 150 km/h (194.5 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	268.0 N @ 150 km/h (60.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,037.0 N @ 150 km/h (233.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	595.0 N @ 150 km/h (133.8 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241.4 km/h (150 mph)

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## 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>	2625 mm   103.347 in
<b>Weight, gross</b>	55.5 kg   122.356 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-2F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
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## \* Footnotes

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