

# NNH4-65A-R6

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



- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Array configuration provides capability for 4T4R (4x MIMO) on Low band and Dual 4T4R (4x MIMO) on High band
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics
- The antenna is supplied with mounting kits that provide 0 degree of mechanical downtilt; optional downtilt mounting kits are available

## 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>	8
<b>RF Connector Quantity, mid band</b>	0
<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>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (4)   Low band (2)

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<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>	1400 mm   55.118 in
<b>Net Weight, without mounting kit</b>	33.5 kg   73.855 lb

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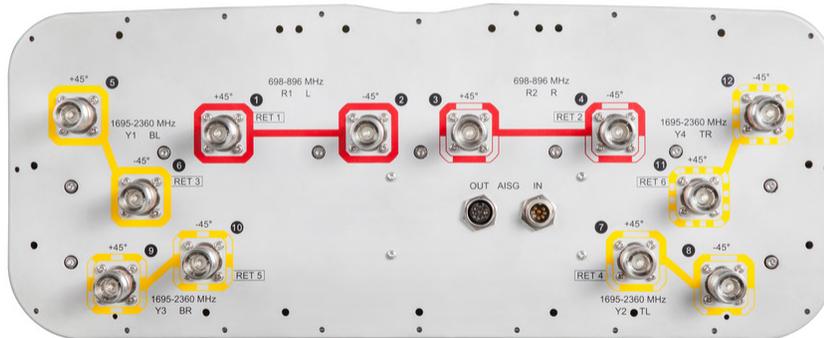
## Array Layout

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	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxxmm.3
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxxmm.4
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxxxmm.5
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxxxmm.6

Left Bottom Right

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

## Port Configuration



## Electrical Specifications

**Impedance**

50 ohm

**Operating Frequency Band**

1695 – 2360 MHz | 698 – 896 MHz

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<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

<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>Gain, dBi</b>	13.2	13.8	14	14.7	14.8	15.2
<b>Beamwidth, Horizontal, degrees</b>	72	63	59	60	62	59
<b>Beamwidth, Vertical, degrees</b>	16.4	14.9	15.7	14.6	13.9	12.4
<b>Beam Tilt, degrees</b>	2–16	2–16	2–16	2–16	2–16	2–16
<b>USLS (First Lobe), dB</b>	15	19	16	18	17	18
<b>Front-to-Back Ratio at 180°, dB</b>	29	30	34	35	34	35
<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>	-150	-150	-150	-150	-150	-150
<b>Input Power per Port at 50°C, maximum, watts</b>	250	250	250	250	250	200

## Mechanical Specifications

<b>Effective Projective Area (EPA), frontal</b>	0.48 m <sup>2</sup>   5.167 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.16 m <sup>2</sup>   1.722 ft <sup>2</sup>
<b>Mechanical Tilt Range</b>	0°–15°
<b>Wind Loading @ Velocity, frontal</b>	509.0 N @ 150 km/h (114.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	169.0 N @ 150 km/h (38.0 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	660.0 N @ 150 km/h (148.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	419.0 N @ 150 km/h (94.2 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>	1582 mm   62.283 in

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**Weight, gross**

41 kg | 90.389 lb

## Regulatory Compliance/Certifications

**Agency**

**Classification**

CHINA-ROHS

Below maximum concentration value

ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system

REACH-SVHC

Compliant as per SVHC revision on [www.commscope.com/ProductCompliance](http://www.commscope.com/ProductCompliance)

ROHS

Compliant

UK-ROHS

Compliant



## Included Products

BSAMNT-2F

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Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.

## \* Footnotes

**Performance Note**

Severe environmental conditions may degrade optimum performance