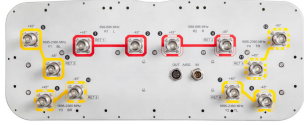


# NNH4-65A-R6-V1

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



- Features broadband Low Band (698-896 MHz) and High Band (1695-2360 MHz) arrays for 4T4R (4X MIMO) capability for Band 14, AWS, PCS and WCS applications
- Independent tilt for all arrays
- 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

## OBSOLETE

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

### Replaced By:

NNH4-65A-R6H4-V1    12-port sector antenna, 4x 698–896 and 8x 1695–2360 MHz, 65° HPBW, 6x 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>	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
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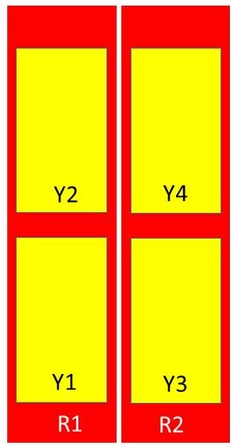
# NNH4-65A-R6-V1

<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)
<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 (Single 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

## Array Layout



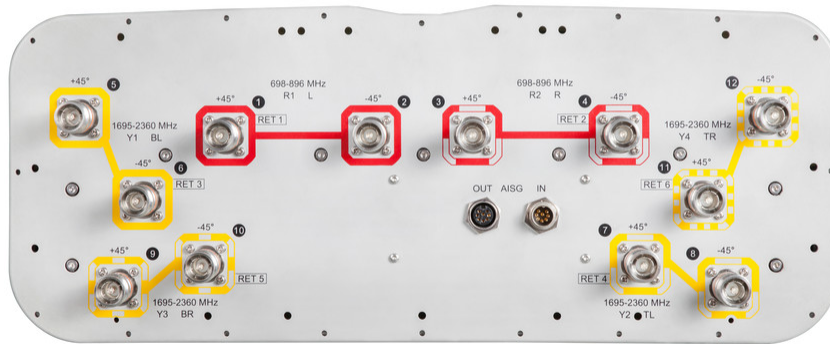
Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxxxY4

Left Bottom Right

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

## Port Configuration

# NNH4-65A-R6-V1



## 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

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
<b>Gain, dBi</b>	13.2	13.8	14	14.7	14.9	15.3
<b>Beamwidth, Horizontal, degrees</b>	72	63	59	60	62	59
<b>Beamwidth, Vertical, degrees</b>	16.4	14.8	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

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<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>	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
<b>Weight, gross</b>	46.7 kg   102.956 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant



## 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

# NNH4-65A-R6-V1

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