

NNH4-65B-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:

NNH4-65B-R6H4-V1 12-port sector antenna, 4x 698–896 and 8x 1695–2360 MHz, 65° HPBW, 6x RET.

General Specifications

Antenna Type	Sector
Band	Multiband
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, low band	4
RF Connector Quantity, total	12

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
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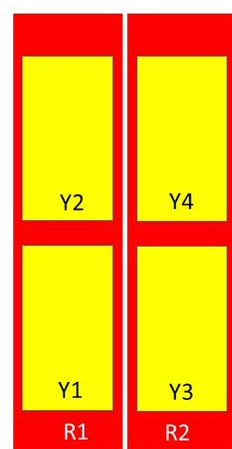
NNH4-65B-R6-V1

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (4) Low band (2)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

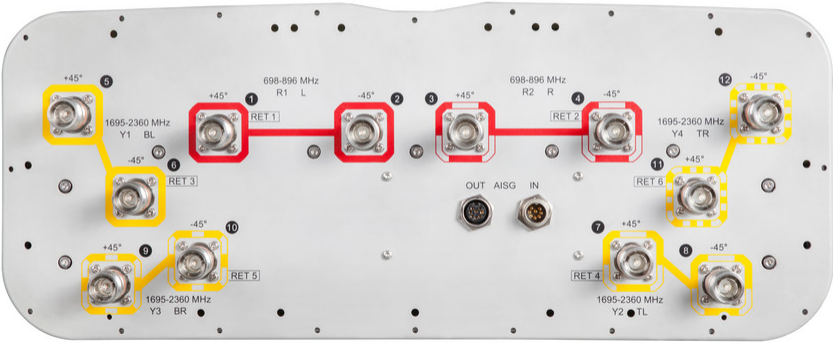
Width	498 mm 19.606 in
Depth	197 mm 7.756 in
Length	1828 mm 71.969 in
Net Weight, without mounting kit	37.7 kg 83.114 lb

Array Layout

		<table><tr><th>Array</th><th>Freq (MHz)</th><th>Conns</th><th>RET (SRET)</th><th>AISG RET UID</th></tr><tr><td>R1</td><td>698-896</td><td>1-2</td><td>1</td><td>CPxxxxxxxxxxxxxxR1</td></tr><tr><td>R2</td><td>698-896</td><td>3-4</td><td>2</td><td>CPxxxxxxxxxxxxxxR2</td></tr><tr><td>Y1</td><td>1695-2360</td><td>5-6</td><td>3</td><td>CPxxxxxxxxxxxxxxY1</td></tr><tr><td>Y2</td><td>1695-2360</td><td>7-8</td><td>4</td><td>CPxxxxxxxxxxxxxxY2</td></tr><tr><td>Y3</td><td>1695-2360</td><td>9-10</td><td>5</td><td>CPxxxxxxxxxxxxxxY3</td></tr><tr><td>Y4</td><td>1695-2360</td><td>11-12</td><td>6</td><td>CPxxxxxxxxxxxxxxY4</td></tr></table>	Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID	R1	698-896	1-2	1	CPxxxxxxxxxxxxxxR1	R2	698-896	3-4	2	CPxxxxxxxxxxxxxxR2	Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxY1	Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxY2	Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxY3	Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxY4
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R1	698-896	1-2	1	CPxxxxxxxxxxxxxxR1																																	
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxR2																																	
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxY1																																	
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxY2																																	
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxY3																																	
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxY4																																	
Left Right Bottom		(Sizes of colored boxes are not true depictions of array sizes)																																			

Port Configuration

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Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Gain, dBi	14.4	15.1	15.8	16.3	16.5	17
Beamwidth, Horizontal, degrees	69	65	58	60	60	58
Beamwidth, Vertical, degrees	12	10.5	11.2	10.4	9.8	8.8
Beam Tilt, degrees	2–14	2–14	2–14	2–14	2–14	2–14
USLS (First Lobe), dB	16	18	18	20	19	17
Front-to-Back Ratio at 180°, dB	28	32	33	38	35	37
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0

NNH4-65B-R6-V1

PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200

Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Gain by all Beam Tilts, average, dBi	14	14.7	15.2	16	16.1	16.5
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.6	±0.8	±0.5	±0.4	±0.5
Gain by Beam Tilt, average, dBi	2° 14.1 8° 14.1 14° 13.7	2° 14.8 8° 14.8 14° 14.3	2° 15.2 8° 15.2 14° 15.0	2° 16.0 8° 16.0 14° 15.9	2° 16.1 8° 16.2 14° 16.0	2° 16.5 8° 16.4 14° 16.4
Beamwidth, Horizontal Tolerance, degrees	±3.7	±4.0	±5.7	±1.8	±2.8	±6.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.9	±0.8	±0.5	±0.6	±0.4
USLS, beampeak to 20° above beampeak, dB	16	16	18	19	17	16
Front-to-Back Total Power at 180° ± 30°, dB	21	21	28	32	28	28
CPR at Boresight, dB	23	24	15	21	21	17
CPR at Sector, dB	10	5	9	8	7	9

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.64 m ² 6.889 ft ²
Effective Projective Area (EPA), lateral	0.22 m ² 2.368 ft ²
Wind Loading @ Velocity, frontal	685.0 N @ 150 km/h (154.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	232.0 N @ 150 km/h (52.2 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	889.0 N @ 150 km/h (199.9 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	564.0 N @ 150 km/h (126.8 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	608 mm 23.937 in
Depth, packed	352 mm 13.858 in
Length, packed	2010 mm 79.134 in
Weight, gross	53 kg 116.845 lb

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Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted



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

Performance Note	Severe environmental conditions may degrade optimum performance
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