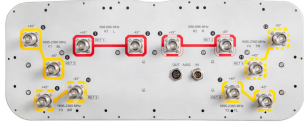


NNH4-65A-R6-V1

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

Antenna Type	Sector
Band	Multiband
Color	Light Gray (RAL 7035)
Grounding Type	RF connector 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	Aluminum 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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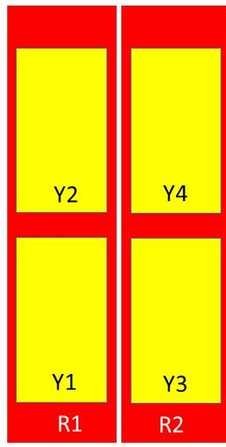
NNH4-65A-R6-V1

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	1400 mm 55.118 in
Net Weight, without mounting kit	33.5 kg 73.855 lb

Array Layout



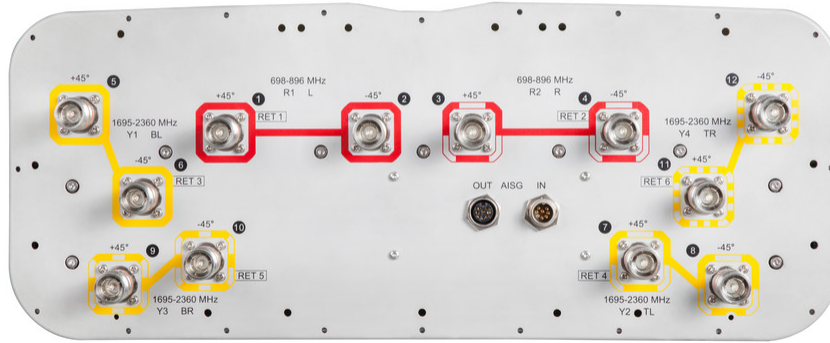
Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxxxY4

Left Bottom Right

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

Port Configuration

NNH4-65A-R6-V1



Electrical Specifications

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	13.2	13.8	14	14.7	14.9	15.3
Beamwidth, Horizontal, degrees	72	63	59	60	62	59
Beamwidth, Vertical, degrees	16.4	14.8	15.7	14.6	13.9	12.4
Beam Tilt, degrees	2–16	2–16	2–16	2–16	2–16	2–16
USLS (First Lobe), dB	15	19	16	18	17	18
Front-to-Back Ratio at 180°, dB	29	30	34	35	34	35
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

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PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	250	250	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	12.9	13.4	13.5	14.4	14.5	14.9
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.6	±0.8	±0.5	±0.4	±0.5
Gain by Beam Tilt, average, dBi	2° 13.0 9° 12.9 16° 12.7	2° 13.6 9° 13.5 16° 13.0	2° 13.6 9° 13.6 16° 13.4	2° 14.5 9° 14.4 16° 14.2	2° 14.6 9° 14.5 16° 14.3	2° 15.1 9° 14.9 16° 14.6
Beamwidth, Horizontal Tolerance, degrees	±4.1	±4.3	±5.6	±3.8	±3.7	±7.4
Beamwidth, Vertical Tolerance, degrees	±1.1	±1.3	±1.3	±0.8	±0.9	±0.8
USLS, beampeak to 20° above beampeak, dB	17	19	18	19	18	18
Front-to-Back Total Power at 180° ± 30°, dB	23	21	28	30	28	26
CPR at Boresight, dB	21	22	16	21	21	19
CPR at Sector, dB	11	4	7	9	9	11

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.48 m ² 5.167 ft ²
Effective Projective Area (EPA), lateral	0.16 m ² 1.722 ft ²
Mechanical Tilt Range	0°–15°
Wind Loading @ Velocity, frontal	509.0 N @ 150 km/h (114.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	169.0 N @ 150 km/h (38.0 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	660.0 N @ 150 km/h (148.4 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	419.0 N @ 150 km/h (94.2 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	608 mm 23.937 in
Depth, packed	352 mm 13.858 in
Length, packed	1582 mm 62.283 in

NNH4-65A-R6-V1

Weight, gross

46.7 kg | 102.956 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
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.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance