

NNH4-65A-R6H4-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
- Non-stacked high band array design provides higher gain and narrower vertical beamwidth than traditional antenna designs
- 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
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios

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, mid band	0
RF Connector Quantity, low band	4
RF Connector Quantity, total	12

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male

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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	1499 mm 59.016 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

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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	13.2	13.7	16.1	17	17.6	18.2
Beamwidth, Horizontal, degrees	69	66	71	67	61	57
Beamwidth, Vertical, degrees	17.1	15.4	7.5	6.9	6.4	5.7
Beam Tilt, degrees	2–16	2–16	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	19	19	15	17	18	21
Front-to-Back Ratio at 180°, dB	32	31	33	33	34	33
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	300	300	300	250	250	200

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.52 m ² 5.597 ft ²
Effective Projective Area (EPA), lateral	0.17 m ² 1.83 ft ²
Mechanical Tilt Range	0°–15°
Wind Loading @ Velocity, frontal	549.0 N @ 150 km/h (123.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	183.0 N @ 150 km/h (41.1 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	712.0 N @ 150 km/h (160.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	452.0 N @ 150 km/h (101.6 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm 22.244 in
Depth, packed	309 mm 12.165 in
Length, packed	1682 mm 66.221 in
Weight, gross	46.2 kg 101.853 lb

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
UK-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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