

NNH4-65B-R6H4



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 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
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, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0 (Multi-RET)

Dimensions

Width	498 mm 19.606 in
Depth	197 mm 7.756 in
Length	1828 mm 71.969 in
Net Weight, antenna only	34 kg 74.957 lb

Array Layout



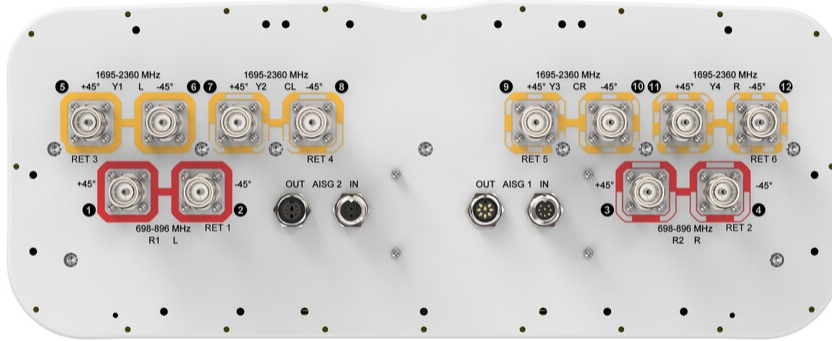
Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxmm.1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxxmm.2
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxxmm.3
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxxmm.4
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxxxmm.5
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxxxmm.6

Left Bottom Right 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

	R1-R2	R1-R2	Y1-Y4	Y1-Y4	Y1-Y4	Y1-Y4
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
RF Port	1-4	1-4	5-12	5-12	5-12	5-12
Gain, dBi	14.2	14.8	16.7	17.3	17.9	18.4
Beamwidth, Horizontal, degrees	68	64	70	67	61	59
Beamwidth, Vertical, degrees	11.5	10.2	6.9	6.5	6	5.4
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	16	18	16	19	19	19
Front-to-Back Ratio at 180°, dB	30	30	33	34	34	34
Isolation, Cross Polarization, dB	25	25	25	25	25	25

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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
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200

Electrical Specifications, BASTA

	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Frequency Band, MHz						
Gain by all Beam Tilts, average, dBi	13.8	14.5	16.1	16.9	17.5	18
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.5	±0.7	±0.6	±0.6	±0.5
Beamwidth, Horizontal Tolerance, degrees	±6	±3	±6	±8	±6	±4
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.7	±0.5	±0.3	±0.4	±0.2
USLS, beampeak to 20° above beampeak, dB	16	15	12	15	15	16
Front-to-Back Total Power at 180° ± 30°, dB	20	21	27	26	27	28
CPR at Boresight, dB	24	23	19	19	20	17
CPR at Sector, dB	12	10	7	5	6	8

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.65 m ² 6.997 ft ²
Effective Projective Area (EPA), lateral	0.22 m ² 2.368 ft ²
Wind Loading @ Velocity, frontal	694.0 N @ 150 km/h (156.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	235.0 N @ 150 km/h (52.8 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	900.0 N @ 150 km/h (202.3 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	571.0 N @ 150 km/h (128.4 lbf @ 150 km/h)
Wind Speed, maximum	241.4 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm 22.244 in
Depth, packed	309 mm 12.165 in
Length, packed	2035 mm 80.118 in
Weight, gross	45.2 kg 99.649 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
UK-ROHS	Compliant/Exempted



Included Products

BSAMNT-2F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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BSAMNT-2F



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

Product Classification

Product Type Fixed tilt mounting kit

General Specifications

Application Outdoor

Color Silver

Dimensions

Compatible Diameter, maximum 115 mm | 4.528 in

Compatible Diameter, minimum 60 mm | 2.362 in

Weight, net 3.8 kg | 8.378 lb

Material Specifications

Material Type Galvanized steel

Packaging and Weights

Included Brackets | Hardware

Packaging quantity 1

Weight, gross 4 kg | 8.818 lb

Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
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

BSAMNT-2F

