

NNH4-65B-R6H4-V2



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
- Optimized for rooftop applications – Heavily suppressed lower sidelobes for elevation pattern

OBSOLETE

This product was discontinued on: March 30, 2024

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
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	0
RF Connector Quantity, mid band	8
RF Connector Quantity, low band	4
RF Connector Quantity, total	12

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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
Input Voltage	10–30 Vdc
Internal RET	Low band (2) Mid band (4)
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	1848 mm 72.756 in
Net Weight, antenna only	38.6 kg 85.098 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 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	14.4	16.7	17.5	17.9	18.4
Beamwidth, Horizontal, degrees	67	61	70	65	61	57
Beamwidth, Vertical, degrees	13.5	12	7	6.5	6.1	5.4
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	15	16	16	17	18	17
Front-to-Back Ratio at 180°, dB	30	30	33	34	34	34
CPR at Boresight, dB	25	25	21	23	24	21
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

Mechanical Specifications

Wind Speed, maximum241.4 km/h (150 mph)

Packaging and Weights

Width, packed565 mm | 22.244 in
Depth, packed309 mm | 12.165 in
Length, packed2035 mm | 80.118 in
Weight, gross49.8 kg | 109.79 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.andrew.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant



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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