NNHH-65A-R4



8-port sector antenna, 4x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 4x RETs

- Ideal for 4T4R applications
- Excellent wind loading characteristics
- Array configuration provides capability for 4T4R (4x MIMO) on Low band and High band
- Optimized SPR performance across all operating bands
- The antenna is supplied with mounting kits that provide 0 degree of mechanical downtilt; optional downtilt mounting kits are available

Alternative products available:

NNHH-65A-R4-V2 8-port sector antenna, 4x 698-896 and 4x 1695-2360 MHz, 65° HPBW, 4x RETs

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 Aluminum | Low loss circuit board

Reflector Material Aluminum

RF Connector Interface 4.3-10 Female

RF Connector LocationBottom

RF Connector Quantity, high band 4

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

RF Connector Quantity, total 8

Remote Electrical Tilt (RET) Information

RET Hardware CommRET v2

RET Interface 8-pin DIN Female | 8-pin DIN Male

ANDREW® an Amphenol company

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RET Interface, quantity 1 female | 1 male

Input Voltage 10-30 Vdc

Internal RET High band (2) | Low band (2)

Power Consumption, idle state, maximum 1 W

Power Consumption, normal conditions, maximum 8 W

Protocol 3GPP/AISG 2.0 (Multi-RET)

Dimensions

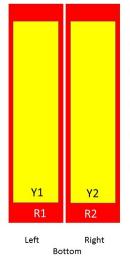
 Width
 498 mm | 19.606 in

 Depth
 197 mm | 7.756 in

 Length
 1400 mm | 55.118 in

Net Weight, without mounting kit 31 kg | 68.343 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	CPxxxxxxxxxxxxxxxmm.3
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxmm.4

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

Port Configuration





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

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Frequency Band, MHz	698-806	806-896	1695-1880	1850-1990	1920-2180	2300-2360
Gain, dBi	13.4	13.9	17.2	17.7	17.8	18.3
Beamwidth, Horizontal, degrees	71	63	59	60	62	60
Beamwidth, Vertical, degrees	16.6	14.7	7.3	6.9	6.5	5.9
Beam Tilt, degrees	2-16	2-16	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	18	19	16	17	18	20
Front-to-Back Ratio at 180°, dB	27	29	35	36	37	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

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

Mechanical Specifications

Effective Projective Area (EPA), frontal $0.48 \text{ m}^2 \mid 5.167 \text{ ft}^2$ Effective Projective Area (EPA), lateral $0.16 \text{ m}^2 \mid 1.722 \text{ ft}^2$

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

 Weight, gross
 41 kg | 90.389 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

ROHS Compliant UK-ROHS Compliant



Included Products

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

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance



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

ApplicationOutdoorColorSilver

Dimensions

Compatible Diameter, maximum115 mm | 4.528 inCompatible Diameter, minimum60 mm | 2.362 inWeight, net3.8 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.andrew.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant



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