

NNH4-65B-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
- By default AISG input port 1 controls all RET motors

General Specifications

| | |
|---|--|
| Antenna Type | Sector |
| Band | Multiband |
| 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, 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 | 1848 mm 72.756 in |
| Net Weight, without mounting kit | 38.3 kg 84.437 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 | 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 |
| 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 | 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 | 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 |
| Gain by Beam Tilt, average, dBi | 2° 14.0 8° 13.9 14° 13.5 | 2° 14.6 8° 14.6 14° 14.1 | 2° 15.9 7° 16.2 12° 16.0 | 2° 16.6 7° 17.0 12° 16.9 | 2° 17.1 7° 17.6 12° 17.4 | 2° 17.7 7° 18.0 12° 17.9 |
| Beamwidth, Horizontal Tolerance, degrees | ±5.7 | ±3.2 | ±6.4 | ±7.5 | ±5.9 | ±3.6 |
| 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 |
| Mechanical Tilt Range | 0°–17° |
| 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 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 |

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Weight, gross

51.9 kg | 114.42 lb

Regulatory Compliance/Certifications

Agency

Classification

ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system

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

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.

Product Classification

Product Type Downtilt 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 6.2 kg | 13.669 lb

Material Specifications

Material Type Galvanized steel

Packaging and Weights

Included Brackets | Hardware

Packaging quantity 1

Weight, gross 6.4 kg | 14.11 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 |

