# NHH-45B-HG-R2B

## 6-port Next Generation PerforMax™ sector antenna, 2x 698–896 and 4x 1695–2200 MHz, 45° HPBW, 2x RETs and 2x SBTs

- Powered by Andrew's SEED® technology (Sustainable Energy Efficient Design)
- Antenna optimized for higher gain with superior radiation efficiency
- Internal SBTs allow remote RET control from the radio over the RF jumper cable
- Interleaved dipole technology results into an attractive, low wind load mechanical package
- Designed to reduce SUB 1 alarm triggers with pattern consistency between low band and mid band
- Superior patterns for enhanced interference mitigation resulting in improved SINR, higher throughput, and more capacity
- Best in class PIM immunity

## 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 |
| **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, mid band** | 4 |
| **RF Connector Quantity, low band** | 2 |
| **RF Connector Quantity, total** | 6 |

## 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 Bias Tee** | Port 1 \| Port 3 |

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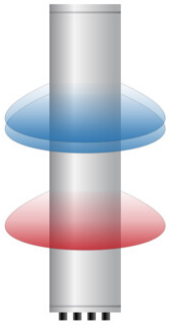
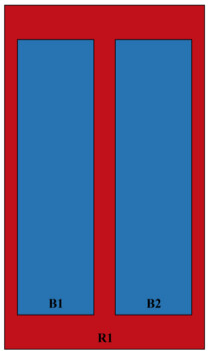
| | |
|---|---|
| **Internal RET** | Low band (1) \| Mid band (1) |
| **Power Consumption, active state, maximum** | 10 W |
| **Power Consumption, idle state, maximum** | 2 W |
| **Protocol** | 3GPP/AISG 2.0 |

## Dimensions

| | |
|---|---|
| **Width** | 457 mm \| 17.992 in |
| **Depth** | 178 mm \| 7.008 in |
| **Length** | 1829 mm \| 72.008 in |
| **Net Weight, without mounting kit** | 30 kg \| 66.139 lb |

## Array Layout






| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | SBT RF PORT | SBT No. | RET UID |
|---|---|---|---|---|---|---|---|
| R1 | 698-896 | 1 - 2 | 1 | AISG1 | 1 | 1 | CPxxxxxxxxxxxxxxR1 |
| B1 | 1695-2200 | 3 - 4 | 2 | AISG2 | 3 | 2 | CPxxxxxxxxxxxxxxB1 |
| B2 | 1695-2200 | 5 - 6 | | | | | |

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

## Port Configuration

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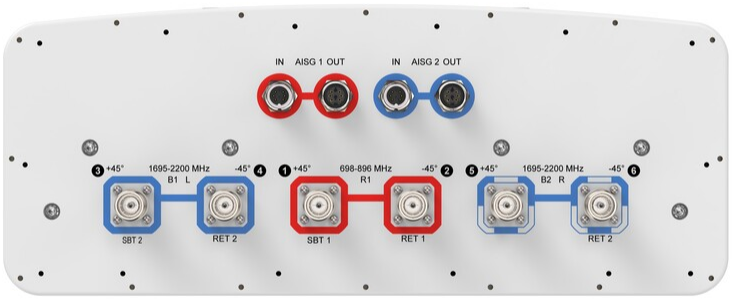


## Electrical Specifications

| | |
|---|---|
| **Impedance** | 50 ohm |
| **Operating Frequency Band** | 1695 – 2200 MHz \| 698 – 896 MHz |
| **Polarization** | ±45° |
| **Total Input Power, maximum** | 800 W @ 50 °C |

## Electrical Specifications

| | R1 | R1 | B1-B2 | B1-B2 | B1-B2 |
|---|---|---|---|---|---|
| **Frequency Band, MHz** | **698–806** | **806–896** | **1695–1880** | **1850–1990** | **1920–2200** |
| **RF Port** | 1-2 | 1-2 | 3-6 | 3-6 | 3-6 |
| **Gain, Maximum, dBi** | 17.6 | 18.2 | 20.5 | 20.8 | 21.1 |
| **Gain, dBi** | 17.2 | 17.9 | 20.2 | 20.6 | 20.9 |
| **Beamwidth, Horizontal, degrees** | 47 | 43 | 44 | 43 | 42 |
| **Beamwidth, Vertical, degrees** | 12.1 | 10.8 | 5.3 | 5 | 4.7 |
| **Beam Tilt, degrees** | 0–10 | 0–10 | 0–8 | 0–8 | 0–8 |
| **USLS (First Lobe), dB** | 17 | 16 | 18 | 19 | 20 |
| **Front-to-Back Ratio at 180°, dB** | 27 | 34 | 35 | 36 | 35 |

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|---|---|---|---|---|---|
| **CPR at Boresight, dB** | 19 | 20 | 18 | 23 | 19 |
| **Isolation, Cross Polarization, dB** | 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 |
| **PIM, 3rd Order, 2 x 20 W, dBc** | -153 | -153 | -153 | -153 | -153 |
| **Input Power per Port at 50°C, maximum, watts** | 300 | 300 | 250 | 250 | 250 |

## Mechanical Specifications

| | |
|---|---|
| **Wind Loading @ Velocity, frontal** | 1,065.0 N @ 150 km/h (239.4 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, lateral** | 220.0 N @ 150 km/h (49.5 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, maximum** | 1,065.0 N @ 150 km/h (239.4 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, rear** | 935.0 N @ 150 km/h (210.2 lbf @ 150 km/h) |
| **Wind Speed, maximum** | 241 km/h (150 mph) |

## Packaging and Weights

| | |
|---|---|
| **Width, packed** | 526 mm \| 20.709 in |
| **Depth, packed** | 283 mm \| 11.142 in |
| **Length, packed** | 1996 mm \| 78.583 in |
| **Weight, gross** | 43.5 kg \| 95.901 lb |

## Regulatory Compliance/Certifications

| **Agency** | **Classification** |
|---|---|
| UK-ROHS | Compliant |

## 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 |