

# NHH-45A-HG-R2B



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

- Internal SBTs allow remote RET control from the radio over the RF jumper cable
- Antenna optimized for higher gain with superior radiation efficiency
- Interleaved dipole technology results into an attractive, low wind load mechanical package
- Powered by Andrew's SEED® technology (Sustainable Energy Efficient Design)
- 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 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, 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                   |

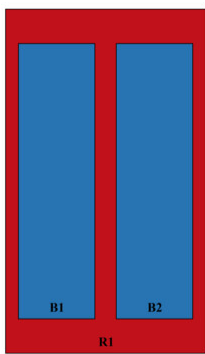
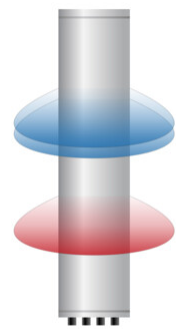
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|                                          |                             |
|------------------------------------------|-----------------------------|
| Internal RET                             | Low band (1)   Mid band (1) |
| Power Consumption, active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

## Dimensions

|        |                     |
|--------|---------------------|
| Width  | 457 mm   17.992 in  |
| Depth  | 178 mm   7.008 in   |
| Length | 1399 mm   55.079 in |

## Array Layout

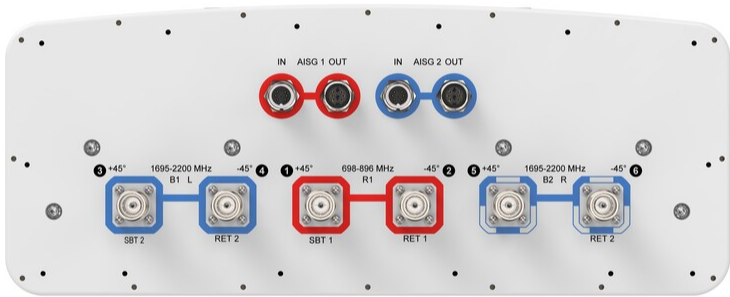


| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | SBT RF PORT | SBT No. | RET UID            |
|----------|-----------------|--------------|------------|----------|-------------|---------|--------------------|
| R1       | 698-896         | 1 - 2        | 1          | AISG1    | 1           | 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              | 16.1    | 16.7    | 19.5      | 20.1      | 20.4      |
| Gain, dBi                       | 15.7    | 16.4    | 19.2      | 19.8      | 20.1      |
| Beamwidth, Horizontal, degrees  | 47      | 42      | 43        | 42        | 40        |
| Beamwidth, Vertical, degrees    | 18.6    | 16.1    | 6.5       | 6.1       | 5.8       |
| Beam Tilt, degrees              | 2–18    | 2–18    | 1–9       | 1–9       | 1–9       |
| USLS (First Lobe), dB           | 16      | 17      | 15        | 17        | 18        |
| Front-to-Back Ratio at 180°, dB | 27      | 33      | 33        | 35        | 35        |

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|                                              |            |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|------------|
| CPR at Boresight, dB                         | 18         | 23         | 19         | 21         | 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 | 788.0 N @ 150 km/h (177.1 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 159.0 N @ 150 km/h (35.7 lbf @ 150 km/h)  |
| Wind Loading @ Velocity, maximum | 788.0 N @ 150 km/h (177.1 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear    | 692.0 N @ 150 km/h (155.6 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 | 1566 mm   61.654 in |
| Weight, gross  | 37.4 kg   82.453 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 |
|------------------|-----------------------------------------------------------------|