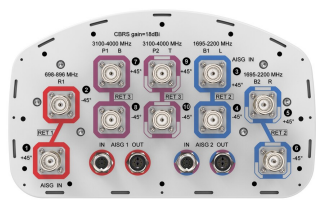


# NHHSS-65C-R3B



10-port sector antenna, 2x 698–896, 4x 1695–2200 and 4x 3100–4000 MHz, 65° HPBW, 3x RETs and 2x SBTs, active RET on C-Band, 2.4m Length.

- Perfect antenna to add 3.5GHz CBRS to macro sites
- Low band and mid band performance mirrors the performance of existing NHH hex port antennas
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and mid band allow remote RET control from the radio over the RF jumper cable
- Both mid bands are controlled by the same RET to ensure same tilt level for 4x MIMO. The high band RET is controlled via the mid band RET bus

**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  |
| Radome Material                  | Fiberglass, UV resistant   |
| Reflector Material               | Aluminum   |
| RF Connector Interface           | 4.3-10 Female  |
| RF Connector Location            | Bottom   |
| RF Connector Quantity, high band | 4  |
| RF Connector Quantity, mid band  | 4  |
| RF Connector Quantity, low band  | 2  |
| RF Connector Quantity, total     | 10   |

## Remote Electrical Tilt (RET) Information

|              |            |
|--------------|------------|
| RET Hardware | CommRET v2 |
|--------------|------------|

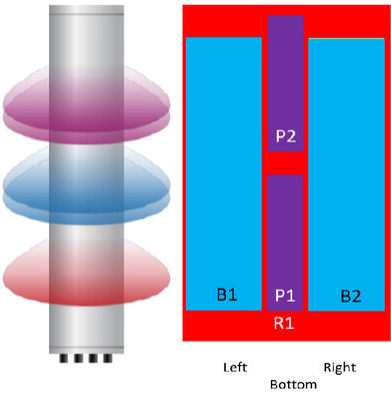
# NHHSS-65C-R3B

|  |   |
|--|---|
| 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                             |
| Internal RET                             | High band (1)   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                    | 301 mm   11.85 in   |
| Depth                    | 181 mm   7.126 in   |
| Length                   | 2438 mm   95.984 in |
| Net Weight, antenna only | 28.1 kg   61.95 lb  |

## Array Layout

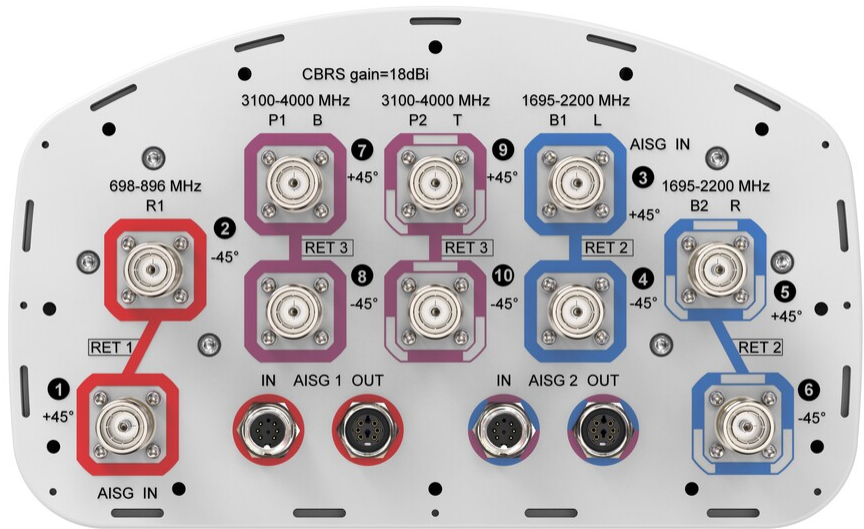


| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID         |
|-------|------------|-------|------------|----------------------|
| R1    | 698-896    | 1-2   | 1          | CPxxxxxxxxxxxxxxxxR1 |
| B1    | 1695-2200  | 3-4   | 2          | CPxxxxxxxxxxxxxxxxB1 |
| B2    | 1695-2200  | 5-6   | 2          | CPxxxxxxxxxxxxxxxxB1 |
| P1    | 3100-4000  | 7-8   | 3          | CPxxxxxxxxxxxxxxxxP1 |
| P2    | 3100-4000  | 9-10  | 3          | CPxxxxxxxxxxxxxxxxP1 |

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

## Port Configuration

# NHHSS-65C-R3B



## Electrical Specifications

|                            |   |
|----------------------------|---|
| Impedance                  | 50 ohm  |
| Operating Frequency Band   | 1695 – 2200 MHz   3100 – 4000 MHz   698 – 896 MHz |
| Polarization               | ±45°  |
| Total Input Power, maximum | 1,000 W @ 50 °C                                   |

## Electrical Specifications

|                                   | R1      | R1      | B1,B2     | B1,B2     | B1,B2     | P1,P2     | P1,P2     | P1,P2     |
|-----------------------------------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
| Frequency Band, MHz               | 698–806 | 806–896 | 1695–1880 | 1850–1990 | 1920–2200 | 3100–3550 | 3550–3700 | 3700–4000 |
| RF Port                           | 1,2     | 1,2     | 3,4,5,6   | 3,4,5,6   | 3,4,5,6   | 7,8,9,10  | 7,8,9,10  | 7,8,9,10  |
| Gain, dBi                         | 15.8    | 16      | 17.5      | 17.8      | 18        | 17.8      | 17.7      | 17.5      |
| Beamwidth, Horizontal, degrees    | 64      | 62      | 67        | 62        | 63        | 59        | 63        | 62        |
| Beamwidth, Vertical, degrees      | 8.9     | 7.9     | 5.6       | 5.2       | 5         | 5.7       | 5.3       | 5.1       |
| Beam Tilt, degrees                | 0–11    | 0–11    | 0–7       | 0–7       | 0–7       | 0–10      | 0–10      | 0–10      |
| USLS (First Lobe), dB             | 19      | 19      | 19        | 21        | 23        | 17        | 18        | 18        |
| Front-to-Back Ratio at 180°, dB   | 28      | 31      | 32        | 31        | 28        | 30        | 32        | 32        |
| Isolation, Cross Polarization, dB | 25      | 25      | 25        | 25        | 25        | 25        | 25        | 25        |
| Isolation, Inter-band, dB         | 25      | 25      | 25        | 25        | 25        | 30        | 30        | 30        |

# NHHSS-65C-R3B

|   |            |            |            |            |            |            |            |            |
|---|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>VSWR   Return loss, dB</b>                       | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -153       | -153       | -153       | -153       | -153       | -145       | -145       | -145       |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 300        | 300        | 300        | 300        | 300        | 100        | 100        | 100        |

## Mechanical Specifications

|   |   |
|---|---|
| <b>Wind Loading @ Velocity, frontal</b> | 393.0 N @ 150 km/h (88.3 lbf @ 150 km/h)  |
| <b>Wind Loading @ Velocity, lateral</b> | 330.0 N @ 150 km/h (74.2 lbf @ 150 km/h)  |
| <b>Wind Loading @ Velocity, maximum</b> | 757.0 N @ 150 km/h (170.2 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, rear</b>    | 398.0 N @ 150 km/h (89.5 lbf @ 150 km/h)  |
| <b>Wind Speed, maximum</b>              | 241 km/h (150 mph)                        |

## Packaging and Weights

|                       |                      |
|-----------------------|----------------------|
| <b>Width, packed</b>  | 380 mm   14.961 in   |
| <b>Depth, packed</b>  | 295 mm   11.614 in   |
| <b>Length, packed</b> | 2571 mm   101.221 in |
| <b>Weight, gross</b>  | 40.5 kg   89.287 lb  |

## Regulatory Compliance/Certifications

|               |  |
|---------------|--|
| <b>Agency</b> | <b>Classification</b>  |
| CHINA-ROHS    | Above maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| ROHS          | Compliant/Exempted   |
| UK-ROHS       | Compliant/Exempted   |



## 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

|                         |   |
|-------------------------|---|
| <b>Performance Note</b> | Severe environmental conditions may degrade optimum performance |
|-------------------------|---|