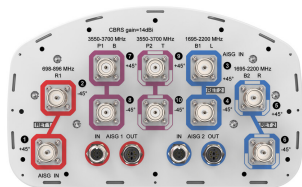


# NHHSS-65C-R2BT8-V2



10-port sector antenna, 2x 698–896, 4x 1695–2200 and 4x 3550–3700 MHz, 65° HPBW, 2x RETs and 2x SBTs

- 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
- One LB RET and one MB RET, both Mid bands are controlled by one RET to ensure same tilt level for 4x MIMO

## 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, 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                        |
| 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                   |

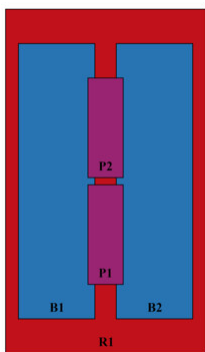
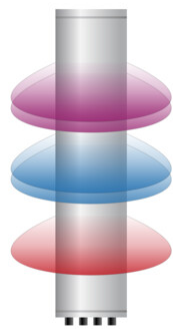
# NHHSS-65C-R2BT8-V2

|                                          |                             |
|------------------------------------------|-----------------------------|
| 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                            | 301 mm   11.85 in   |
| Depth                            | 181 mm   7.126 in   |
| Length                           | 2438 mm   95.984 in |
| Net Weight, without mounting kit | 24.7 kg   54.454 lb |

## Array Layout

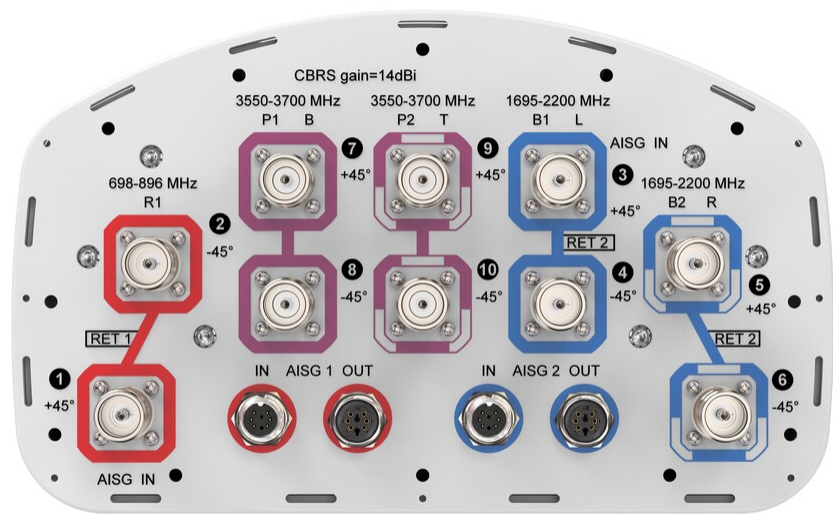


| Array ID | Frequency (MHz) | RF Connector | HPBW | RET (SRET) | AISG No. | AISG RET UID       |
|----------|-----------------|--------------|------|------------|----------|--------------------|
| R1       | 698-896         | 1 - 2        | 65°  | 1          | AISG1    | CPxxxxxxxxxxxxxxR1 |
| B1       | 1695-2200       | 3 - 4        | 65°  | 2          | AISG2    | CPxxxxxxxxxxxxxxB1 |
| B2       | 1695-2200       | 5 - 6        | 65°  |            |          |                    |
| P1       | 3550-3700       | 7 - 8        | 65°  | N/A        | NA       | N/A                |
| P2       | 3550-3700       | 9 - 10       | 65°  |            |          |                    |

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

## Port Configuration

# NHHSS-65C-R2BT8-V2



## Electrical Specifications

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Impedance                  | 50 ohm                                            |
| Operating Frequency Band   | 1695 – 2200 MHz   3550 – 3700 MHz   698 – 896 MHz |
| Polarization               | ±45°                                              |
| Total Input Power, maximum | 1,000 W @ 50 °C                                   |

## Electrical Specifications

| Frequency Band, MHz               | 698–806 | 806–896 | 1695–1880 | 1850–1990 | 1920–2200 | 3550–3700 |
|-----------------------------------|---------|---------|-----------|-----------|-----------|-----------|
| Gain, dBi                         | 15.6    | 15.8    | 17.5      | 17.7      | 18.1      | 12.9      |
| Beamwidth, Horizontal, degrees    | 69      | 67      | 65        | 62        | 63        | 62        |
| Beamwidth, Vertical, degrees      | 8.9     | 8       | 5.6       | 5.3       | 5.1       | 17.3      |
| Beam Tilt, degrees                | 0–11    | 0–11    | 0–7       | 0–7       | 0–7       | 8         |
| USLS (First Lobe), dB             | 18      | 17      | 18        | 17        | 18        | 14        |
| Front-to-Back Ratio at 180°, dB   | 34      | 35      | 31        | 34        | 31        | 34        |
| CPR at Boresight, dB              | 26      | 24      | 18        | 23        | 24        | 16        |
| Isolation, Cross Polarization, dB | 25      | 25      | 25        | 25        | 25        | 25        |
| Isolation, Inter-band, dB         | 25      | 25      | 25        | 25        | 25        | 25        |

# NHHSS-65C-R2BT8-V2

|                                                     |            |            |            |            |            |            |
|-----------------------------------------------------|------------|------------|------------|------------|------------|------------|
| <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 |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -153       | -153       | -153       | -153       | -153       | -145       |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 300        | 300        | 250        | 250        | 250        | 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>  | 441 mm   17.362 in   |
| <b>Depth, packed</b>  | 337 mm   13.268 in   |
| <b>Length, packed</b> | 2583 mm   101.693 in |
| <b>Weight, gross</b>  | 37.4 kg   82.453 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 |
|-------------------------|-----------------------------------------------------------------|