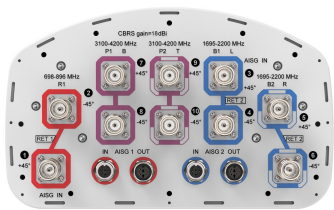


# NHHSS-65C-R2BT4



10-port sector antenna, 2x 698–896, 4x 1695–2200 and 4x 3100–4200 MHz, 65° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

- 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 high band allow remote RET control from the radio over the RF jumper cable
- One LB RET and one HB RET. Both high 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                | Aluminum   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 | 4x 8 pin connector as per IEC 60130-9 Daisy chain in: Male / Daisy chain out: Female Pin3: RS485A(AISG_B), Pin5: RS485B(AISG_A), Pin6: DC 10~30V, Pin7: DC_ Return |

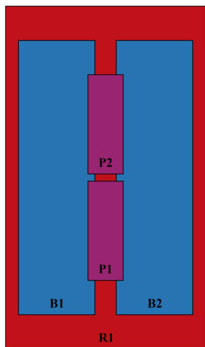
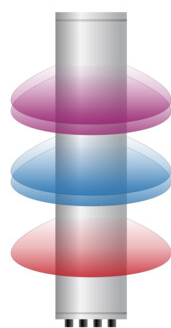
# NHHSS-65C-R2BT4

|                                          |                             |
|------------------------------------------|-----------------------------|
| RET Interface, quantity                  | 2 female   2 male           |
| Input Voltage                            | 10–30 Vdc                   |
| Internal Bias Tee                        | Port 1   Port 3             |
| 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, antenna only | 28.1 kg   61.95 lb  |

## Array Layout

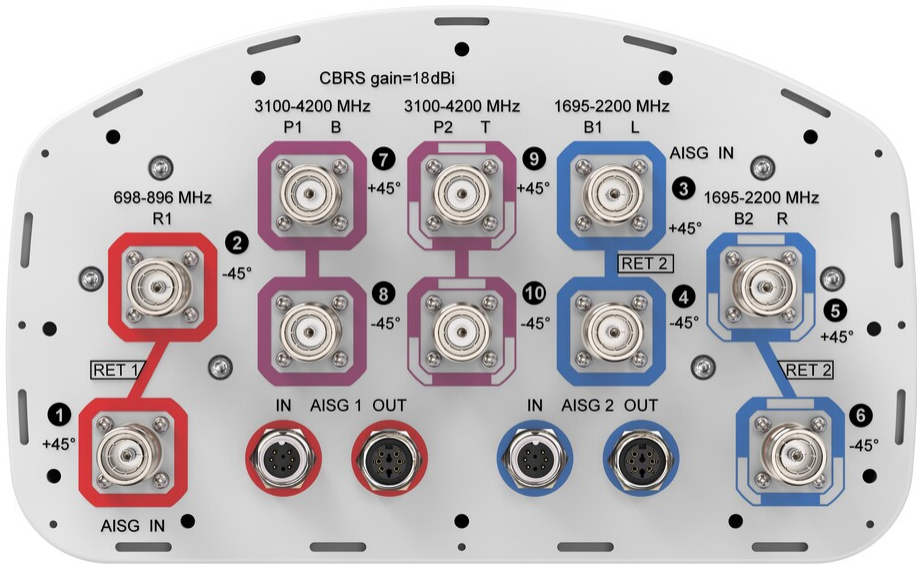


| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID       |
|----------|-----------------|--------------|------------|----------|--------------------|
| R1       | 698-896         | 1 - 2        | 1          | AISG1    | CPxxxxxxxxxxxxxxR1 |
| B1       | 1695-2200       | 3 - 4        | 2          | AISG2    | CPxxxxxxxxxxxxxxB1 |
| B2       | 1695-2200       | 5 - 6        |            |          |                    |
| P1       | 3100-4200       | 7 - 8        | N/A        | NA       | N/A                |
| P2       | 3100-4200       | 9 - 10       |            |          |                    |

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

## Port Configuration

# NHHSS-65C-R2BT4



## Electrical Specifications

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Impedance                  | 50 ohm                                            |
| Operating Frequency Band   | 1695 – 2200 MHz   3100 – 4200 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 | 3700–4200 |
| 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        | 17.7      | 17.4      | 17.4      |
| Beamwidth, Horizontal, degrees    | 64      | 62      | 67        | 62        | 63        | 59        | 65        | 63        |
| Beamwidth, Vertical, degrees      | 8.9     | 7.9     | 5.6       | 5.2       | 5         | 5.6       | 5.2       | 4.9       |
| Beam Tilt, degrees                | 0–11    | 0–11    | 0–7       | 0–7       | 0–7       | 4         | 4         | 4         |
| USLS (First Lobe), dB             | 19      | 19      | 19        | 21        | 23        | 18        | 18        | 17        |
| Front-to-Back Ratio at 180°, dB   | 28      | 31      | 32        | 31        | 28        | 30        | 33        | 31        |
| CPR at Boresight, dB              | 23      | 19      | 18        | 19        | 19        | 17        | 17        | 16        |
| Isolation, Cross Polarization, dB | 25      | 25      | 25        | 25        | 25        | 25        | 25        | 25        |

# NHHSS-65C-R2BT4

|                                              |            |            |            |            |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Isolation, Inter-band, dB                    | 25         | 25         | 25         | 25         | 25         | 30         | 30         | 30         |
| 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 | 1.5   14.0 | 1.5   14.0 |
| PIM, 3rd Order, 2 x 20 W, dBc                | -153       | -153       | -153       | -153       | -153       | -140       | -140       | -140       |
| Input Power per Port at 50°C, maximum, watts | 300        | 300        | 300        | 300        | 300        | 100        | 100        | 100        |

## Mechanical Specifications

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

## Packaging and Weights

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

## Regulatory Compliance/Certifications

| Agency     | Classification                    |
|------------|-----------------------------------|
| CHINA-ROHS | Above maximum concentration value |
| ROHS       | Compliant/Exempted                |
| UK-ROHS    | Compliant/Exempted                |



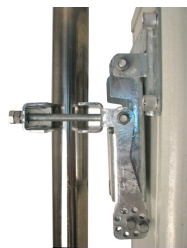
## Included Products

|          |   |                                                                                                                                                                  |
|----------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

|                  |                                                                 |
|------------------|-----------------------------------------------------------------|
| 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 <a href="http://www.andrew.com/ProductCompliance">www.andrew.com/ProductCompliance</a> |
| ROHS          | Compliant                                                                                                                |
| UK-ROHS       | Compliant                                                                                                                |

# BSAMNT-3

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