

- 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

|                                         |                                                                                  |
|-----------------------------------------|----------------------------------------------------------------------------------|
| <b>Antenna Type</b>                     | Sector                                                                           |
| <b>Band</b>                             | Multiband                                                                        |
| <b>Color</b>                            | Light Gray (RAL 7035)                                                            |
| <b>Grounding Type</b>                   | RF connector inner conductor and body grounded to reflector and mounting bracket |
| <b>Performance Note</b>                 | Outdoor usage                                                                    |
| <b>Radome Material</b>                  | Fiberglass, UV resistant                                                         |
| <b>Reflector Material</b>               | Aluminum                                                                         |
| <b>RF Connector Interface</b>           | 4.3-10 Female                                                                    |
| <b>RF Connector Location</b>            | Bottom                                                                           |
| <b>RF Connector Quantity, high band</b> | 4                                                                                |
| <b>RF Connector Quantity, mid band</b>  | 4                                                                                |
| <b>RF Connector Quantity, low band</b>  | 2                                                                                |
| <b>RF Connector Quantity, total</b>     | 10                                                                               |

|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>RET Hardware</b>            | CommRET v2                        |
| <b>RET Interface</b>           | 8-pin DIN Female   8-pin DIN Male |
| <b>RET Interface, quantity</b> | 2 female   2 male                 |
| <b>Input Voltage</b>           | 10–30 Vdc                         |
| <b>Internal RET</b>            | High band (1)   Low band (1)      |

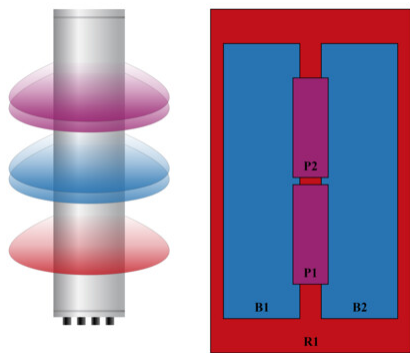
# NHHSS-65B-R2BT10

|                                          |                            |
|------------------------------------------|----------------------------|
| 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                   | 1828 mm   71.969 in |
| Net Weight, antenna only | 23.1 kg   50.927 lb |

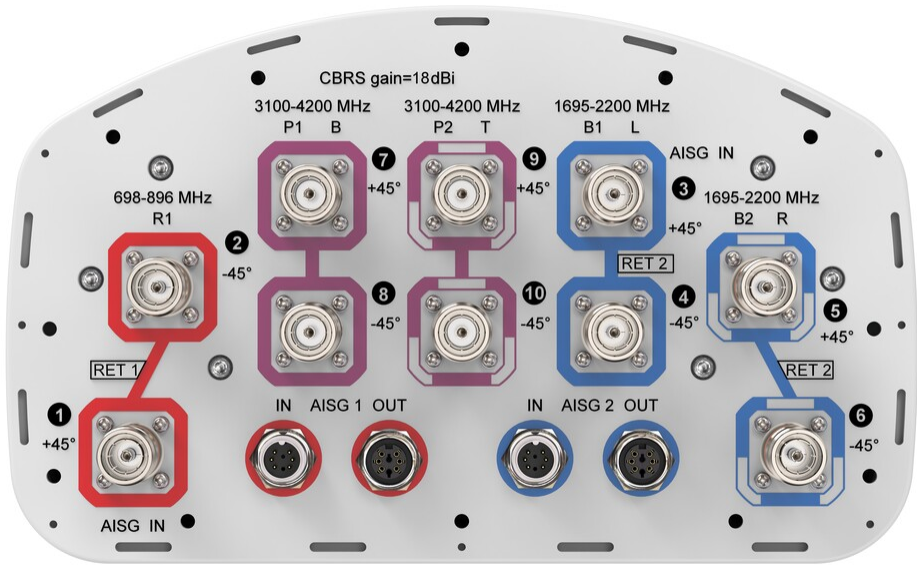
## Array Layout



| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID     |
|----------|-----------------|--------------|------------|----------|------------------|
| R1       | 698-896         | 1 - 2        | 1          | AISG1    | CPxxxxxxxxxxxxR1 |
| B1       | 1695-2200       | 3 - 4        | 2          | AISG2    | CPxxxxxxxxxxxxB1 |
| 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-65B-R2BT10

## 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                                    | 14.8       | 15.2       | 17.4       | 17.8       | 18         | 17.8       | 17.6       | 17.2       |
| Beamwidth, Horizontal, degrees               | 65         | 62         | 66         | 61         | 64         | 52         | 60         | 62         |
| Beamwidth, Vertical, degrees                 | 13         | 11.6       | 5.5        | 5.2        | 4.9        | 5.7        | 5.3        | 5.1        |
| Beam Tilt, degrees                           | 0–14       | 0–14       | 0–7        | 0–7        | 0–7        | 10         | 10         | 10         |
| USLS (First Lobe), dB                        | 15         | 15         | 16         | 18         | 18         | 15         | 19         | 18         |
| Front-to-Back Ratio at 180°, dB              | 26         | 29         | 31         | 28         | 27         | 30         | 34         | 31         |
| CPR at Boresight, dB                         | 24         | 17         | 16         | 21         | 19         | 15         | 17         | 14         |
| Isolation, Cross Polarization, dB            | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         |
| Isolation, Inter-band, dB                    | 25         | 25         | 25         | 25         | 25         | 28         | 28         | 28         |
| 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       | -145       | -145       | -145       |
| Input Power per Port at 50°C, maximum, watts | 300        | 300        | 300        | 300        | 300        | 100        | 100        | 100        |

## Mechanical Specifications

|                                  |                                           |
|----------------------------------|-------------------------------------------|
| Wind Loading @ Velocity, frontal | 278.0 N @ 150 km/h (62.5 lbf @ 150 km/h)  |
| Wind Loading @ Velocity, lateral | 230.0 N @ 150 km/h (51.7 lbf @ 150 km/h)  |
| Wind Loading @ Velocity, maximum | 537.0 N @ 150 km/h (120.7 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear    | 282.0 N @ 150 km/h (63.4 lbf @ 150 km/h)  |
| Wind Speed, maximum              | 241 km/h (150 mph)                        |

## Packaging and Weights

# NHHSS-65B-R2BT10

---

|                |                     |
|----------------|---------------------|
| Width, packed  | 380 mm   14.961 in  |
| Depth, packed  | 295 mm   11.614 in  |
| Length, packed | 1956 mm   77.008 in |
| Weight, gross  | 34.4 kg   75.839 lb |

## Regulatory Compliance/Certifications

| Agency        | Classification                                                                 |
|---------------|--------------------------------------------------------------------------------|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

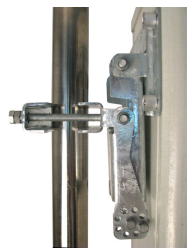
## Included Products

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

---

