

# NNH4SS-65C-R3BT8



16- Port sector antenna, 4x 698-896, 8x 1695-2360 and 4x 3550-3700MHz, 65° HPBW, 3x RETs and 3x SBTs

- Features broadband Low Band (698-896 MHz), Mid Band(1695-2360 MHz) and High Band (3550-3700 MHz) arrays for 4T4R (4X MIMO) capability for bands 5, 13, 25, 66 and 48. Also covers bands 12, 14, 29, and 30
- Perfect antenna to add 3.5GHz CBRS to macro sites
- Non-stacked high band array design provides higher gain and narrower vertical beamwidth than traditional antenna designs
- Array configuration provides capability for 4T4R (4X MIMO) on Low Band, dual 4T4R (4X MIMO) on Mid Band and 4T4R (4X MIMO) on High Band)
- Excellent wind loading characteristics

## 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  | 8                                                                                |
| RF Connector Quantity, low band  | 4                                                                                |
| RF Connector Quantity, total     | 16                                                                               |

## Remote Electrical Tilt (RET) Information

|                         |                                   |
|-------------------------|-----------------------------------|
| RET Hardware            | CommRET v2                        |
| RET Interface           | 8-pin DIN Female   8-pin DIN Male |
| RET Interface, quantity | 3 female   3 male                 |
| Input Voltage           | 10–30 Vdc                         |

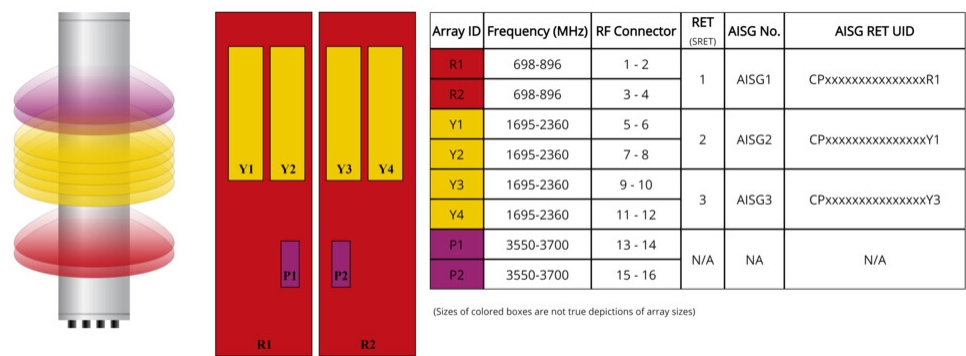
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|                                          |                             |
|------------------------------------------|-----------------------------|
| Internal Bias Tee                        | Port 1   Port 5   Port 9    |
| Internal RET                             | Low band (1)   Mid band (2) |
| Power Consumption, active state, maximum | 10 W                        |
| Power Consumption, idle state, maximum   | 2 W                         |
| Protocol                                 | 3GPP/AISG 2.0 (Single RET)  |

## Dimensions

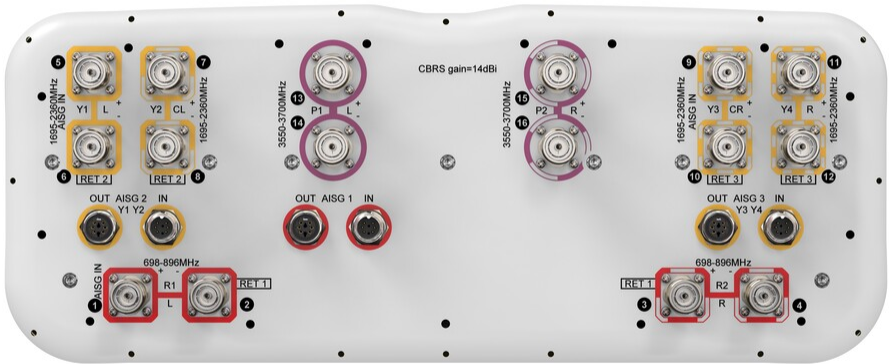
|                          |                      |
|--------------------------|----------------------|
| Width                    | 498 mm   19.606 in   |
| Depth                    | 197 mm   7.756 in    |
| Length                   | 2438 mm   95.984 in  |
| Net Weight, antenna only | 46.4 kg   102.294 lb |

## Array Layout



## Port Configuration

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## Electrical Specifications

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Impedance                  | 50 ohm                                            |
| Operating Frequency Band   | 1695 – 2360 MHz   3550 – 3700 MHz   698 – 896 MHz |
| Polarization               | ±45°                                              |
| Total Input Power, maximum | 1,600 W @ 50 °C                                   |

## Electrical Specifications

|                                 | R1,R2   | R1,R2   | Y1-Y4     | Y1-Y4     | Y1-Y4     | Y1-Y4     | P1,P2     |
|---------------------------------|---------|---------|-----------|-----------|-----------|-----------|-----------|
| Frequency Band, MHz             | 698–806 | 806–896 | 1695–1880 | 1850–1990 | 1920–2180 | 2300–2360 | 3550–3700 |
| RF Port                         | 1-4     | 1-4     | 5-12      | 5-12      | 5-12      | 5-12      | 13-16     |
| Gain, dBi                       | 15.5    | 16      | 17.1      | 17.6      | 18.2      | 18.4      | 14        |
| Beamwidth, Horizontal, degrees  | 73      | 65      | 69        | 68        | 64        | 59        | 63        |
| Beamwidth, Vertical, degrees    | 9.6     | 8.4     | 5.7       | 5.3       | 5         | 4.6       | 16.6      |
| Beam Tilt, degrees              | 0–10    | 0–10    | 0–10      | 0–10      | 0–10      | 0–10      | 8         |
| USLS (First Lobe), dB           | 15      | 18      | 18        | 19        | 20        | 21        | 18        |
| Front-to-Back Ratio at 180°, dB | 31      | 31      | 31        | 31        | 32        | 33        | 33        |
| CPR at Boresight, dB            | 25      | 27      | 21        | 24        | 24        | 21        | 19        |

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|                                              |            |            |            |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
| Isolation, Cross Polarization, dB            | 25         | 25         | 25         | 25         | 25         | 25         | 25         |
| Isolation, Inter-band, dB                    | 25         | 25         | 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 | 1.5   14.0 | 1.5   14.0 |
| PIM, 3rd Order, 2 x 20 W, dBc                | -153       | -153       | -153       | -153       | -153       | -153       | -145       |
| Input Power per Port at 50°C, maximum, watts | 300        | 300        | 300        | 250        | 250        | 200        | 100        |

## Mechanical Specifications

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Wind Loading @ Velocity, frontal | 865.0 N @ 150 km/h (194.5 lbf @ 150 km/h)   |
| Wind Loading @ Velocity, lateral | 268.0 N @ 150 km/h (60.2 lbf @ 150 km/h)    |
| Wind Loading @ Velocity, maximum | 1,037.0 N @ 150 km/h (233.1 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear    | 595.0 N @ 150 km/h (133.8 lbf @ 150 km/h)   |
| Wind Speed, maximum              | 241 km/h (150 mph)                          |

## Packaging and Weights

|                |                      |
|----------------|----------------------|
| Width, packed  | 565 mm   22.244 in   |
| Depth, packed  | 309 mm   12.165 in   |
| Length, packed | 2685 mm   105.709 in |
| Weight, gross  | 66.3 kg   146.166 lb |

## Regulatory Compliance/Certifications

| Agency     | Classification                    |
|------------|-----------------------------------|
| CHINA-ROHS | Above maximum concentration value |
| ROHS       | Compliant/Exempted                |
| 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. |
| BSAMNT-M | – | Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.                            |

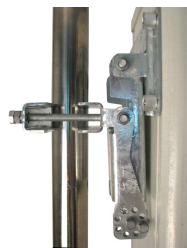
## \* Footnotes

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**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

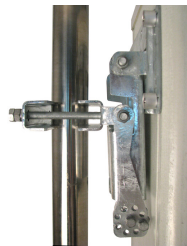
**Weight, gross** 6.4 kg | 14.11 lb

## 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-M



Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor 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** 4.5 kg | 9.921 lb

## Material Specifications

**Material Type** Galvanized steel

## Packaging and Weights

**Included** Brackets | Hardware

**Packaging quantity** 1

## Regulatory Compliance/Certifications

| Agency        | Classification                                                                                                           |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                |

