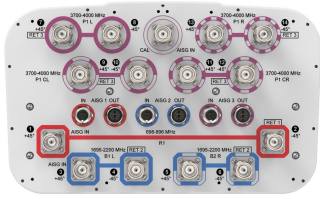


# NHHS4-65B-R3B



14 Port Sector Antenna, 2x698-896 MHz, 4x1695-2200 MHz 65° HPBW, and 8x3700-4000 MHz Beamformer, 3XRET

## General Specifications

|   |  |
|---|--|
| <b>Antenna Type</b>                     | Sector- and beamforming  |
| <b>Band</b>                             | Multiband  |
| <b>Calibration Connector Interface</b>  | 4.3-10 Female  |
| <b>Calibration Connector Quantity</b>   | 1  |
| <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>Radiator Material</b>                | Low loss circuit board   |
| <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> | 8  |
| <b>RF Connector Quantity, mid band</b>  | 4  |
| <b>RF Connector Quantity, low band</b>  | 2  |
| <b>RF Connector Quantity, total</b>     | 14   |

## Remote Electrical Tilt (RET) Information

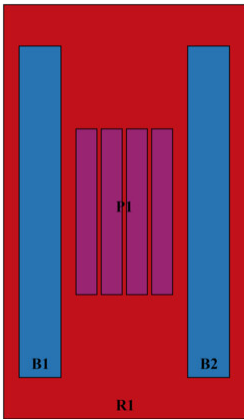
|                                |   |
|--------------------------------|---|
| <b>RET Hardware</b>            | CommRET v2                                  |
| <b>RET Interface</b>           | 8-pin DIN Female   8-pin DIN Male           |
| <b>RET Interface, quantity</b> | 3 female   3 male                           |
| <b>Input Voltage</b>           | 10–30 Vdc                                   |
| <b>Internal Bias Tee</b>       | Cal Port   Port 1   Port 3                  |
| <b>Internal RET</b>            | High band (1)   Low band (1)   Mid band (1) |
| <b>Protocol</b>                | 3GPP/AISG 2.0 (Single RET)                  |

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## Dimensions

|                                 |                     |
|---------------------------------|---------------------|
| <b>Width</b>                    | 350 mm   13.78 in   |
| <b>Depth</b>                    | 208 mm   8.189 in   |
| <b>Length</b>                   | 1828 mm   71.969 in |
| <b>Net Weight, antenna only</b> | 27 kg   59.525 lb   |

## Array Layout

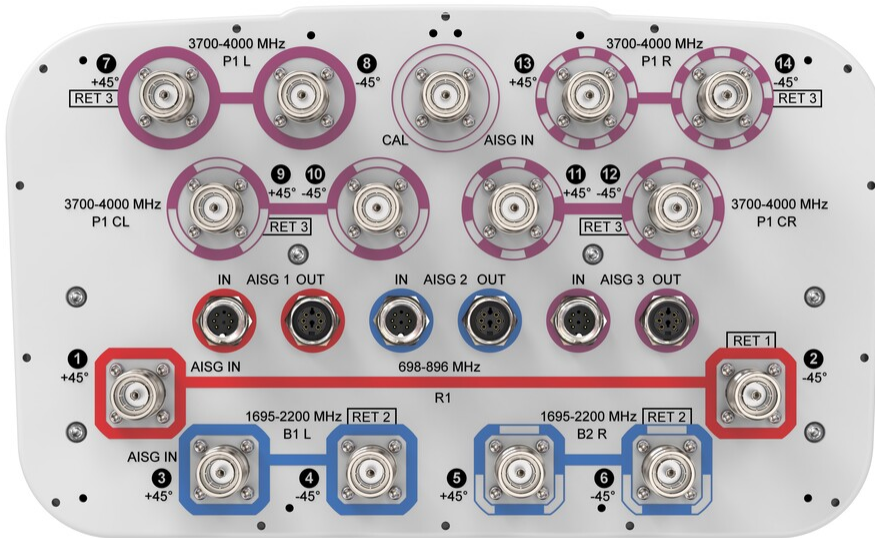


| Array ID | Frequency (MHz) | RF Connector | RET<br>(SRET) | AISG RET UID     |
|----------|-----------------|--------------|---------------|------------------|
| R1       | 698-896         | 1 - 2        | 1             | CPxxxxxxxxxxxxR1 |
| B1       | 1695-2200       | 3 - 4        | 2             | CPxxxxxxxxxxxxB1 |
| B2       | 1695-2200       | 5 - 6        |               |                  |
| P1       | 3700-4000       | 7 - 14       | 3             | CPxxxxxxxxxxxxP1 |

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

## Port Configuration

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## Electrical Specifications

|                                   |   |
|-----------------------------------|---|
| <b>Impedance</b>                  | 50 ohm  |
| <b>Operating Frequency Band</b>   | 1695 – 2200 MHz   3700 – 4000 MHz   698 – 896 MHz |
| <b>Polarization</b>               | ±45°  |
| <b>Total Input Power, maximum</b> | 1,040 W @ 50 °C                                   |

## Electrical Specifications

|  | <b>R1</b>      | <b>R1</b>      | <b>B1,B2</b>     | <b>B1,B2</b>     | <b>B1,B2</b>     | <b>P1</b>        |
|--|----------------|----------------|------------------|------------------|------------------|------------------|
| <b>Frequency Band, MHz</b>             | <b>698–806</b> | <b>806–896</b> | <b>1695–1880</b> | <b>1850–1990</b> | <b>1920–2200</b> | <b>3700–4000</b> |
| <b>RF Port</b>                         | 1-2            | 1-2            | 3-6              | 3-6              | 3-6              | 7-14             |
| <b>Gain, dBi</b>                       | 15             | 15.1           | 17.7             | 18.1             | 18.2             | 15.9             |
| <b>Beamwidth, Horizontal, degrees</b>  | 66             | 64             | 63               | 61               | 64               | 85               |
| <b>Beamwidth, Vertical, degrees</b>    | 11.5           | 10.4           | 5.6              | 5.3              | 5                | 5.7              |
| <b>USLS (First Lobe), dB</b>           | 15             | 15             | 17               | 20               | 21               | 13               |
| <b>Front-to-Back Ratio at 180°, dB</b> | 37             | 34             | 34               | 35               | 33               | 30               |
| <b>Coupling level, Amp, Antenna</b>    |                |                |                  |                  |                  | 26               |

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port to Cal port, dB

Coupling level, max Amp  $\Delta$ , Antenna port to Cal port, dB ±2

Coupler, max Amp  $\Delta$ , Antenna port to Cal port, dB 0.5

Coupler, max Phase  $\Delta$ , Antenna port to Cal port, degrees 5

Isolation, Cross Polarization, dB 25

Isolation, Inter-band, dB 25

Isolation, Co-polarization, dB 19

VSWR | Return loss, dB 1.5 | 14.0

PIM, 3rd Order, 2 x 20 W, dBc -153

Input Power per Port at 50°C, maximum, watts 300

## Electrical Specifications, BASTA

| Frequency Band, MHz                         | 698–806 | 806–896 | 1695–1880 | 1850–1990 | 1920–2200 | 3700–4000 |
|---|---------|---------|-----------|-----------|-----------|-----------|
| Gain by all Beam Tilts, average, dBi        | 14.7    | 14.9    | 17.4      | 17.9      | 17.9      | 15.2      |
| Gain by all Beam Tilts Tolerance, dB        | ±0.5    | ±0.3    | ±0.7      | ±0.2      | ±0.3      | ±0.9      |
| Beamwidth, Horizontal Tolerance, degrees    | ±3      | ±1      | ±4        | ±3        | ±5        | ±19       |
| Beamwidth, Vertical Tolerance, degrees      | ±0.7    | ±0.7    | ±0.3      | ±0.2      | ±0.3      | ±0.5      |
| Front-to-Back Total Power at 180° ± 30°, dB | 27      | 25      | 26        | 28        | 27        | 22        |
| CPR at Boresight, dB                        | 23      | 19      | 18        | 21        | 23        | 14        |
| CPR at Sector, dB                           | 14      | 9       | 11        | 11        | 11        | 5         |

## Electrical Specifications, Broadcast 65°

| Frequency Band, MHz                    | 3700–4000 |
|--|-----------|
| Gain, dBi                              | 16.8      |
| Beamwidth, Horizontal, degrees         | 65        |
| Beamwidth, Vertical, degrees           | 5.7       |
| Beamwidth, Vertical Tolerance, degrees | ±0.3      |

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**Front-to-Back Total Power at  
180° ± 30°, dB** 25

**USLS (First Lobe), dB** 15

## Electrical Specifications, Envelope Pattern

**Frequency Band, MHz** 3700–4000

**Gain, dBi** 20.5

## Electrical Specifications, Service Beam

**Frequency Band, MHz** 3700–4000

**Steered 0° Gain, dBi** 20.5

**Steered 0° Gain Tolerance, dBi** ±0.5

**Steered 0° Beamwidth,  
Horizontal, degrees** 22

**Steered 0° Front-to-Back  
Total Power at 180° ± 30°, dB** 29

**Steered 0° Horizontal  
Sidelobe, dB** 12

**Steered 30° Gain, dBi** 19.5

**Steered 30° Gain Tolerance,  
dBi** ±0.9

**Steered 30° Beamwidth,  
Horizontal, degrees** 28

**Steered 30° Front-to-Back  
Total Power at 180° ± 30°, dB** 26

## Electrical Specifications, Soft Split

**Frequency Band, MHz** 3700–4000

**Gain, dBi** 18.9

**Beamwidth, Horizontal,  
degrees** 32

**Front-to-Back Total Power at  
180° ± 30°, dB** 26

**Horizontal Sidelobe, dB** 16

## Mechanical Specifications

**Wind Loading @ Velocity, frontal** 301.0 N @ 150 km/h (67.7 lbf @ 150 km/h)

**Wind Loading @ Velocity, lateral** 254.0 N @ 150 km/h (57.1 lbf @ 150 km/h)

**Wind Loading @ Velocity, maximum** 638.0 N @ 150 km/h (143.4 lbf @ 150 km/h)

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|                                      |  |
|--------------------------------------|--|
| <b>Wind Loading @ Velocity, rear</b> | 319.0 N @ 150 km/h (71.7 lbf @ 150 km/h) |
| <b>Wind Speed, maximum</b>           | 241 km/h (150 mph)                       |

## Packaging and Weights

|                       |                     |
|-----------------------|---------------------|
| <b>Width, packed</b>  | 456 mm   17.953 in  |
| <b>Depth, packed</b>  | 357 mm   14.055 in  |
| <b>Length, packed</b> | 1975 mm   77.756 in |
| <b>Weight, gross</b>  | 39.7 kg   87.523 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

**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.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a> |
| ROHS          | Compliant  |
| UK-ROHS       | Compliant  |

# BSAMNT-3

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