

8-port sector antenna, 2x 698–798, 2x 824-894 and 4x 1695–2360 MHz, 45° HPBW, low bands each have a RET and the high bands share a RET. Two internal SBTs.

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band
- Narrow beamwidth capacity antenna for higher level of densification and enhanced data throughput

#### Alternative products available:

NNHH-65C-R4 8-port sector antenna, 4x 698-896 and 4x 1695-2360 MHz, 65° HPBW, 4x RETs

#### General Specifications

Antenna Type Sector

Band Multiband

Color Light Gray (RAL 7035)

**Grounding Type** RF connector body grounded to reflector and mounting bracket

Performance Note Outdoor usage | Wind loading figures are validated by wind tunnel

measurements described in white paper WP-112534-EN

**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

RF Connector Quantity, low band

RF Connector Quantity, total 8



#### Remote Electrical Tilt (RET) Information

**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 5

**Internal RET** High band (1) | Low band (2)

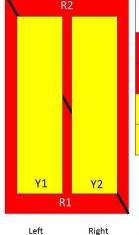
Power Consumption, idle state, maximum 1 W Power Consumption, normal conditions, maximum 8 W

**Protocol** 3GPP/AISG 2.0 (Single RET)

**Dimensions** 

Width 457 mm | 17.992 in **Depth** 178 mm | 7.008 in Length 2437 mm | 95.945 in Net Weight, without mounting kit 48.2 kg | 106.263 lb

### Array Layout



| Array | Freq (MHz) | Conns | RET<br>(SRET) | AISG RET UID                           |
|-------|------------|-------|---------------|--|
| R1    | 698-798    | 1-2   | 1             | ANxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx |
| R2    | 824-894    | 3-4   | 2             | ANxxxxxxxxxxxxxx2                      |
| Y1    | 1695-2360  | 5-6   | 2             | ANImanananananana 2                    |
| Y2    | 1695-2360  | 7-8   | 3             | ANxxxxxxxxxxxxx3                       |

Right Bottom

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

### Port Configuration





## **Electrical Specifications**

**Impedance** 50 ohm

**Operating Frequency Band** 1695 – 2360 MHz | 698 – 798 MHz | 824 – 894 MHz

Polarization ±45°

Total Input Power, maximum  $800 \text{ W} \ \text{@} \ 50 \ ^{\circ}\text{C}$ 

## **Electrical Specifications**

| Frequency Band, MHz                | 698-798    | 824-894    | 1695-1880  | 1850-1990  | 1920-2200  | 2300-2360  |
|------------------------------------|------------|------------|------------|------------|------------|------------|
| Gain, dBi                          | 17.7       | 18.2       | 19.5       | 20         | 20.5       | 20.8       |
| Beamwidth, Horizontal,<br>degrees  | 48         | 43         | 44         | 42.6       | 42         | 38         |
| Beamwidth, Vertical, degrees       | 9.1        | 8.2        | 5.8        | 5.4        | 5          | 4.5        |
| Beam Tilt, degrees                 | 0-10       | 0-10       | 0-8        | 0-8        | 0-8        | 0-8        |
| USLS (First Lobe), dB              | 17         | 20         | 17         | 18         | 18         | 18         |
| Front-to-Back Ratio at 180°,<br>dB | 35         | 35         | 36         | 37         | 39         | 40         |
| Isolation, Cross Polarization, dB  | 25         | 25         | 25         | 25         | 25         | 25         |
| Isolation, Inter-band, dB          | 30         | 30         | 28         | 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 |

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| PIM, 3rd Order, 2 x 20 W, dBc | -153 | -153 | -153 | -153 | -153 | -153 |
|-------------------------------|------|------|------|------|------|------|
| Input Power per Port,         | 200  | 200  | 300  | 300  | 300  | 250  |
| maximum, watts                |      |      |      |      |      |      |

0°-10°

### Mechanical Specifications

**Mechanical Tilt Range** 

Effective Projective Area (EPA), frontal $1.4 \text{ m}^2$  |  $15.069 \text{ ft}^2$ Effective Projective Area (EPA), lateral $0.3 \text{ m}^2$  |  $3.229 \text{ ft}^2$ 

 Wind Loading @ Velocity, frontal
 1,485.0 N @ 150 km/h (333.8 lbf @ 150 km/h)

 Wind Loading @ Velocity, lateral
 315.0 N @ 150 km/h (70.8 lbf @ 150 km/h)

 Wind Loading @ Velocity, maximum
 1,485.0 N @ 150 km/h (333.8 lbf @ 150 km/h)

 Wind Loading @ Velocity, rear
 1,304.0 N @ 150 km/h (293.2 lbf @ 150 km/h)

Wind Speed, maximum 241 km/h (150 mph)

### Packaging and Weights

 Width, packed
 526 mm | 20.709 in

 Depth, packed
 283 mm | 11.142 in

 Length, packed
 2604 mm | 102.52 in

 Weight, gross
 67.2 kg | 148.15 lb

### Regulatory Compliance/Certifications

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

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



**Performance Note** 

Severe environmental conditions may degrade optimum performance

