

# SBNHH-1D45B-SR



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 45° HPBW, 3x RET

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Three internal RETs for independent tilt on all three bands

## OBSOLETE

This product was discontinued on: **March 31, 2022**

### Replaced By:

NHH-45B-R2B

6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 45° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

## General Specifications

|   |  |
|---|--|
| <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   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN |
| <b>Radome Material</b>                  | Fiberglass, UV resistant   |
| <b>Radiator Material</b>                | Aluminum   Low loss circuit board  |
| <b>Reflector Material</b>               | Aluminum   |
| <b>RF Connector Interface</b>           | 7-16 DIN Female  |
| <b>RF Connector Location</b>            | Bottom   |
| <b>RF Connector Quantity, high band</b> | 4  |
| <b>RF Connector Quantity, low band</b>  | 2  |
| <b>RF Connector Quantity, total</b>     | 6  |

## Remote Electrical Tilt (RET) Information

|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>RET Interface</b>           | 8-pin DIN Female   8-pin DIN Male |
| <b>RET Interface, quantity</b> | 1 female   1 male                 |
| <b>Input Voltage</b>           | 10–30 Vdc                         |

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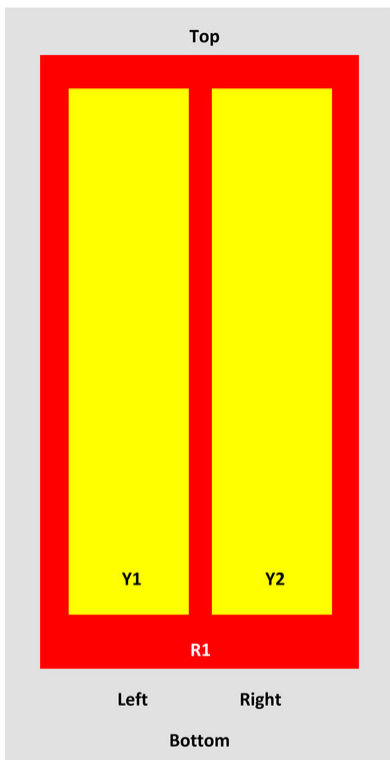
|  |                              |
|--|------------------------------|
| <b>Internal RET</b>                                  | High band (2)   Low band (1) |
| <b>Power Consumption, idle state, maximum</b>        | 2 W                          |
| <b>Power Consumption, normal conditions, maximum</b> | 13 W                         |
| <b>Protocol</b>                                      | 3GPP/AISG 2.0 (Single RET)   |

## Dimensions

|   |                     |
|---|---------------------|
| <b>Width</b>                            | 457 mm   17.992 in  |
| <b>Depth</b>                            | 178 mm   7.008 in   |
| <b>Length</b>                           | 1829 mm   72.008 in |
| <b>Net Weight, without mounting kit</b> | 29.2 kg   64.375 lb |

## Array Layout

SBNHH... SR



| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID     |
|-------|------------|-------|------------|------------------|
| R1    | 698-896    | 1-2   | 1          | ANXXXXXXXXXXXXX1 |
| Y1    | 1695-2360  | 3-4   | 2          | ANXXXXXXXXXXXXX2 |
| Y2    | 1695-2360  | 5-6   | 3          | ANXXXXXXXXXXXXX3 |

View from the front of the antenna

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

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## Electrical Specifications

|                                 |                                 |
|---------------------------------|---------------------------------|
| <b>Impedance</b>                | 50 ohm                          |
| <b>Operating Frequency Band</b> | 1695 – 2360 MHz   698 – 896 MHz |
| <b>Polarization</b>             | ±45°                            |

## Electrical Specifications

| Frequency Band, MHz                         | 698–806  | 806–896  | 1695–1880 | 1850–1990 | 1920–2200 | 2300–2360 |
|---|----------|----------|-----------|-----------|-----------|-----------|
| <b>Gain, dBi</b>                            | 16.9     | 17.6     | 19.6      | 20.1      | 20.5      | 21        |
| <b>Beamwidth, Horizontal, degrees</b>       | 47       | 43       | 45        | 42        | 42        | 39        |
| <b>Beamwidth, Vertical, degrees</b>         | 12.4     | 11.4     | 5.8       | 5.3       | 5.1       | 4.5       |
| <b>Beam Tilt, degrees</b>                   | 0–14     | 0–14     | 0–8       | 0–8       | 0–8       | 0–8       |
| <b>USLS (First Lobe), dB</b>                | 16       | 16       | 18        | 17        | 17        | 16        |
| <b>Front-to-Back Ratio at 180°, dB</b>      | 34       | 33       | 35        | 37        | 37        | 39        |
| <b>Isolation, Cross Polarization, dB</b>    | 25       | 25       | 25        | 25        | 25        | 25        |
| <b>Isolation, Inter-band, dB</b>            | 30       | 30       | 30        | 30        | 30        | 30        |
| <b>VSWR   Return loss, dB</b>               | 1.5 14.0 | 1.5 14.0 | 1.5 14.0  | 1.5 14.0  | 1.5 14.0  | 1.5 14.0  |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>        | -153     | -153     | -153      | -153      | -153      | -153      |
| <b>Input Power per Port, maximum, watts</b> | 350      | 350      | 350       | 350       | 350       | 300       |

## Electrical Specifications, BASTA

| Frequency Band, MHz                             | 698–806                        | 806–896                        | 1695–1880                     | 1850–1990                     | 1920–2200                     | 2300–2360                     |
|---|--------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>Gain by all Beam Tilts, average, dBi</b>     | 16.6                           | 17.3                           | 19.2                          | 19.8                          | 20.1                          | 20.8                          |
| <b>Gain by all Beam Tilts Tolerance, dB</b>     | ±0.4                           | ±0.3                           | ±0.5                          | ±0.4                          | ±0.5                          | ±0.4                          |
| <b>Gain by Beam Tilt, average, dBi</b>          | 0° 16.6<br>7° 16.7<br>14° 16.4 | 0° 17.3<br>7° 17.4<br>14° 17.1 | 0° 19.3<br>4° 19.3<br>8° 19.0 | 0° 19.9<br>4° 19.9<br>8° 19.6 | 0° 20.1<br>4° 20.2<br>8° 20.0 | 0° 20.7<br>4° 20.9<br>8° 20.4 |
| <b>Beamwidth, Horizontal Tolerance, degrees</b> | ±1.5                           | ±2.8                           | ±2.1                          | ±1.7                          | ±1                            | ±1.7                          |
| <b>Beamwidth, Vertical Tolerance, degrees</b>   | ±0.8                           | ±0.6                           | ±0.3                          | ±0.2                          | ±0.4                          | ±0.1                          |
| <b>USLS, beampeak to 20° above beampeak, dB</b> | 19                             | 23                             | 16                            | 15                            | 16                            | 16                            |
| <b>Front-to-Back Total Power at</b>             | 24                             | 24                             | 28                            | 30                            | 31                            | 30                            |

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## 180° ± 30°, dB

|  |    |    |    |    |    |    |
|--|----|----|----|----|----|----|
| <b>CPR at Boresight, dB</b>                  | 28 | 29 | 23 | 24 | 20 | 19 |
| <b>CPR at 10 dB Horizontal Beamwidth, dB</b> | 13 | 17 | 13 | 13 | 13 | 13 |

## Mechanical Specifications

|   |   |
|---|---|
| <b>Wind Loading @ Velocity, frontal</b> | 1,038.0 N @ 150 km/h (233.4 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, lateral</b> | 234.0 N @ 150 km/h (52.6 lbf @ 150 km/h)    |
| <b>Wind Loading @ Velocity, rear</b>    | 1,091.0 N @ 150 km/h (245.3 lbf @ 150 km/h) |
| <b>Wind Speed, maximum</b>              | 241 km/h (150 mph)                          |

## Packaging and Weights

|                       |                     |
|-----------------------|---------------------|
| <b>Width, packed</b>  | 567 mm   22.323 in  |
| <b>Depth, packed</b>  | 311 mm   12.244 in  |
| <b>Length, packed</b> | 1950 mm   76.772 in |
| <b>Weight, gross</b>  | 42.5 kg   93.696 lb |

## Regulatory Compliance/Certifications

| Agency        | Classification   |
|---------------|--|
| CE            | Compliant with the relevant CE product directives  |
| CHINA-ROHS    | Above 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/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

|                         |   |
|-------------------------|---|
| <b>Performance Note</b> | Severe environmental conditions may degrade optimum performance |
|-------------------------|---|