# NNHH-45C-R4

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

- Independent tilt for all arrays
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics

## General Specifications

| | |
|---|---|
| **Antenna Type** | Sector with internal RET |
| **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, low band** | 4 |
| **RF Connector Quantity, total** | 8 |

## Remote Electrical Tilt (RET) Information

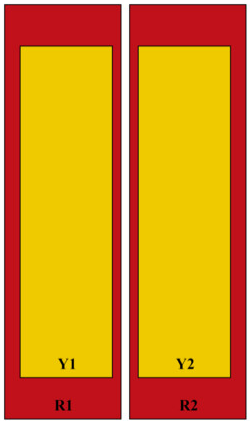
| | |
|---|---|
| **RET Hardware** | CommRET v2 |
| **RET Interface** | 8-pin DIN Female \| 8-pin DIN Male |
| **RET Interface, quantity** | 1 female \| 1 male |
| **Input Voltage** | 10–30 Vdc |
| **Internal RET** | High band (2) \| Low band (2) |
| **Power Consumption, active state, maximum** | 10 W |
| **Power Consumption, idle state, maximum** | 2 W |
| **Protocol** | 3GPP/AISG 2.0 (Multi-RET) |

# NNHH-45C-R4

## Dimensions

| | |
|---|---|
| **Width** | 640 mm \| 25.197 in |
| **Depth** | 235 mm \| 9.252 in |
| **Length** | 2437 mm \| 95.945 in |
| **Net Weight, antenna only** | 61 kg \| 134.482 lb |

## Array Layout




| Array ID | Frequency (MHz) | RF Connector | RET (MRET) | AISG No. | AISG RET UID |
|---|---|---|---|---|---|
| R1 | 698-896 | 1 - 2 | 1 | AISG1 | CPxxxxxxxxxxxxMM.1 |
| R2 | 698-896 | 3 - 4 | 2 | AISG1 | CPxxxxxxxxxxxxMM.2 |
| Y1 | 1695-2360 | 5 - 6 | 3 | AISG1 | CPxxxxxxxxxxxxMM.3 |
| Y2 | 1695-2360 | 7 - 8 | 4 | AISG1 | CPxxxxxxxxxxxxMM.4 |

(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 – 896 MHz |
| **Polarization** | ±45° |
| **Total Input Power, maximum** | 900 W @ 50 °C |

# NNHH-45C-R4

## Electrical Specifications

| | R1,R2 | R1,R2 | Y1,Y2 | Y1,Y2 | Y1,Y2 | Y1,Y2 |
|---|---|---|---|---|---|---|
| **Frequency Band, MHz** | **698–806** | **806–896** | **1695–1880** | **1850–1990** | **1920–2180** | **2300–2360** |
| **RF Port** | 1,2,3,4 | 1,2,3,4 | 5,6,7,8 | 5,6,7,8 | 5,6,7,8 | 5,6,7,8 |
| **Gain, dBi** | 16.4 | 17.1 | 18.8 | 19.2 | 20 | 20.5 |
| **Gain at Mid Tilt, dBi** | 16 | 17 | 18.4 | 19.1 | 19.6 | 20.5 |
| **Beamwidth, Horizontal, degrees** | 51 | 45 | 46 | 49 | 47 | 38 |
| **Beamwidth, Vertical, degrees** | 9.6 | 8.4 | 5.7 | 5.3 | 5 | 4.5 |
| **Beam Tilt, degrees** | 2–14 | 2–14 | 2–12 | 2–12 | 2–12 | 2–12 |
| **USLS (First Lobe), dB** | 14 | 15 | 15 | 16 | 16 | 18 |
| **Front-to-Back Ratio, Copolarization 180° ± 30°, dB** | 28 | 30 | 26 | 26 | 27 | 26 |
| **Isolation, Cross Polarization, dB** | 25 | 25 | 25 | 25 | 25 | 25 |
| **Isolation, Inter-band, dB** | -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 |
| **PIM, 3rd Order, 2 x 20 W, dBc** | -150 | -150 | -150 | -150 | -150 | -150 |
| **Input Power per Port, maximum, watts** | 350 | 350 | 300 | 300 | 300 | 250 |

## Electrical Specifications, BASTA

| **Frequency Band, MHz** | **698–806** | **806–896** | **1695–1880** | **1850–1990** | **1920–2180** | **2300–2360** |
|---|---|---|---|---|---|---|
| **Gain by all Beam Tilts, average, dBi** | 15.9 | 16.9 | 18.3 | 18.9 | 19.4 | 20.2 |
| **Gain by all Beam Tilts Tolerance, dB** | ±0.7 | ±0.5 | ±0.7 | ±0.4 | ±0.7 | ±0.7 |
| **Gain by Beam Tilt, average, dBi** | 2 ° \| 16.0<br>8 ° \| 16.0<br>14 ° \| 15.7 | 2 ° \| 16.9<br>8 ° \| 17.0<br>14 ° \| 16.7 | 2 ° \| 18.3<br>7 ° \| 18.4<br>12 ° \| 18.1 | 2 ° \| 18.9<br>7 ° \| 19.1<br>12 ° \| 18.8 | 2 ° \| 19.4<br>7 ° \| 19.6<br>12 ° \| 19.3 | 2 ° \| 20.5<br>7 ° \| 20.5<br>12 ° \| 19.4 |
| **Beamwidth, Horizontal Tolerance, degrees** | ±8 | ±4 | ±4 | ±2 | ±3 | ±3 |
| **Beamwidth, Vertical Tolerance, degrees** | ±0.7 | ±0.4 | ±0.4 | ±0.3 | ±0.3 | ±0.1 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 23 | 21 | 24 | 26 | 26 | 24 |
| **CPR at Boresight, dB** | 20 | 20 | 16 | 17 | 18 | 20 |

## Mechanical Specifications

# NNHH-45C-R4

| | |
|---|---|
| **Wind Loading @ Velocity, frontal** | 954.0 N @ 150 km/h (214.5 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, lateral** | 355.0 N @ 150 km/h (79.8 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, maximum** | 1,434.0 N @ 150 km/h (322.4 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, rear** | 1,086.0 N @ 150 km/h (244.1 lbf @ 150 km/h) |
| **Wind Speed, maximum** | 241.4 km/h (150 mph) |

## Packaging and Weights

| | |
|---|---|
| **Width, packed** | 752 mm \| 29.606 in |
| **Depth, packed** | 382 mm \| 15.039 in |
| **Length, packed** | 2590 mm \| 101.969 in |
| **Weight, gross** | 79.2 kg \| 174.606 lb |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| CHINA-ROHS | Below maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| ROHS | Compliant |
| UK-ROHS | Compliant |

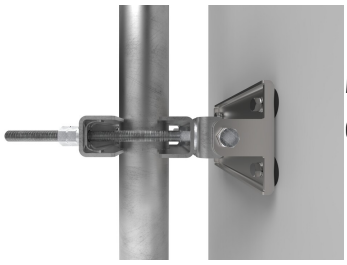
## Included Products

| | | |
|---|---|---|
| BSAMNT-3F | – | Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications. |

## * Footnotes

| | |
|---|---|
| **Performance Note** | Severe environmental conditions may degrade optimum performance |

# BSAMNT-3F



Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.

## Product Classification

| | |
|---|---|
| **Product Type** | Fixed tilt 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** | 5.6 kg \| 12.346 lb |

## Material Specifications

| | |
|---|---|
| **Material Type** | Galvanized steel |

## Packaging and Weights

| | |
|---|---|
| **Included** | Brackets \| Hardware |
| **Packaging quantity** | 1 |
| **Weight, gross** | 5.8 kg \| 12.787 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 www.commscope.com/ProductCompliance |
| ROHS | Compliant |
| UK-ROHS | Compliant |

# BSAMNT-3F