

# NNH4-45B-R6-V1

12-port sector antenna, 4x 698–896 and 8x 1695–2360MHz, 45° HPBW, 6x RET



- Features broadband Low Band (698-896 MHz) and High Band (1695-2360 MHz) arrays for 4T4R (4X MIMO) capability for Band 14, AWS, PCS and WCS applications
- Independent tilt for all arrays
- Array configuration provides capability for 4T4R (4x MIMO) on Low band and Dual 4T4R (4x MIMO) on High band
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics

## 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>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	12

## 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>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (4)   Low band (2)
<b>Power Consumption, idle state, maximum</b>	1 W

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**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** 1848 mm | 72.756 in  
**Net Weight, without mounting kit** 36.4 kg | 80.248 lb

## Array Layout



Left Right  
Bottom

Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxxxY4

(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 – 2360 MHz   698 – 896 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
<b>Gain, dBi</b>	13.9	14.9	16.9	17.5	18	18.7
<b>Beamwidth, Horizontal, degrees</b>	49	42	44	42	41	37
<b>Beamwidth, Vertical, degrees</b>	24.4	21.7	10.6	10	9.5	8.4
<b>Beam Tilt, degrees</b>	0–16	0–16	0–10	0–10	0–10	0–10
<b>USLS (First Lobe), dB</b>	18	21	17	18	17	18
<b>Front-to-Back Ratio at 180°, dB</b>	35	33	35	36	36	34
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25
<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

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<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	150	150	300	300	300	250

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>806–896</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2180</b>	<b>2300–2360</b>
<b>Gain by all Beam Tilts, average, dBi</b>	13.6	14.6	16.5	17.1	17.6	18.3
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.4	±0.5	±0.5	±0.6	±0.4
<b>Gain by Beam Tilt, average, dBi</b>	0°   13.6 8°   13.6 16°   13.5	0°   14.6 8°   14.6 16°   14.4	0°   16.5 5°   16.6 10°   16.5	0°   17.0 5°   17.1 10°   17.1	0°   17.5 5°   17.6 10°   17.6	0°   18.3 5°   18.4 10°   18.2
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.9	±3.2	±2.1	±1.6	±2.2	±2.1
<b>Beamwidth, Vertical Tolerance, degrees</b>	±1.5	±1.5	±0.6	±0.4	±0.7	±0.4
<b>USLS, beampeak to 20° above beampeak, dB</b>	8	10	18	19	17	18
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	25	24	28	29	30	28
<b>CPR at Boresight, dB</b>	23	24	16	19	20	21
<b>CPR at 10 dB Horizontal Beamwidth, dB</b>	12	13	7	8	11	14

## Mechanical Specifications

<b>Effective Projective Area (EPA), frontal</b>	1.01 m <sup>2</sup>   10.872 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.21 m <sup>2</sup>   2.26 ft <sup>2</sup>
<b>Mechanical Tilt Range</b>	0°–15°
<b>Wind Loading @ Velocity, frontal</b>	1,077.0 N @ 150 km/h (242.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	222.0 N @ 150 km/h (49.9 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,077.0 N @ 150 km/h (242.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	946.0 N @ 150 km/h (212.7 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	608 mm   23.937 in
<b>Depth, packed</b>	346 mm   13.622 in

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**Length, packed** 1991 mm | 78.386 in

**Weight, gross** 57 kg | 125.663 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

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

