

# NHH-33A-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 33° HPBW, 2x RETs and 2x SBTs

- Narrow beamwidth capacity antenna for higher level of densification and enhanced data throughput
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Separate RS-485 RET input/output for low and high band
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x Rx or 4x MIMO

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector 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>	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>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 3
<b>Internal RET</b>	High band (1)   Low band (1)
<b>Power Consumption, idle state, maximum</b>	1 W

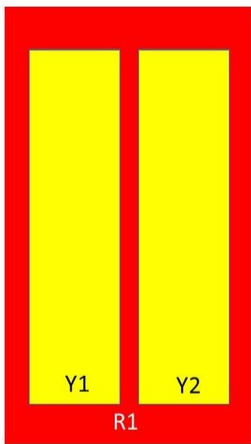
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<b>Power Consumption, normal conditions, maximum</b>	10 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

<b>Width</b>	640 mm   25.197 in
<b>Depth</b>	235 mm   9.252 in
<b>Length</b>	1219 mm   47.992 in
<b>Net Weight, without mounting kit</b>	33 kg   72.752 lb

## Array Layout



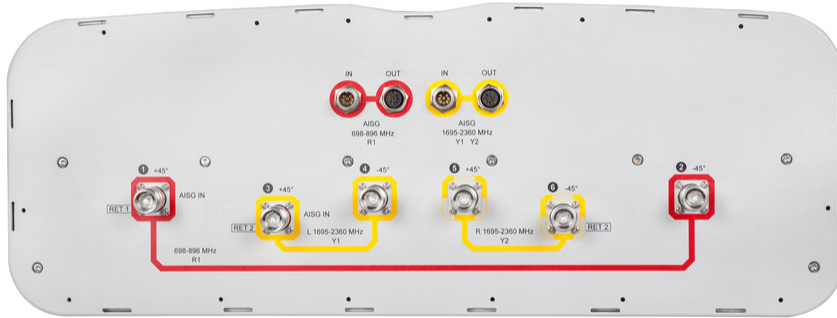
Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

Left Right  
Bottom

(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	1920–2200	2300–2360
<b>Gain, dBi</b>	15.7	16.3	18	18.2	18.6	19.4
<b>Beamwidth, Horizontal, degrees</b>	34	30	34	33	31	29
<b>Beamwidth, Vertical, degrees</b>	21.5	19	8.6	8	7.5	6.7
<b>Beam Tilt, degrees</b>	0–18	0–18	0–10	0–10	0–10	0–10
<b>USLS (First Lobe), dB</b>	20	17	15	15	15	15
<b>Front-to-Back Ratio at 180°, dB</b>	33	38	36	37	36	38
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	28	28	28	28	28	28
<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>	300	300	250	250	250	200

## 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>1920–2200</b>	<b>2300–2360</b>
<b>Gain by all Beam Tilts, average, dBi</b>	15.3	16.1	17.4	17.9	18.2	19
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.3	±0.7	±0.5	±0.7	±0.6
<b>Gain by Beam Tilt, average, dBi</b>	0°   15.3 9°   15.4 18°   15.1	0°   16.0 9°   16.1 18°   15.9	0°   16.9 5°   17.4 10°   17.6	0°   17.4 5°   17.9 10°   18.1	0°   17.6 5°   18.3 10°   18.5	0°   18.3 5°   19.1 10°   19.2
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±2.3	±1	±1.5	±1.6	±1.3	±0.9
<b>Beamwidth, Vertical Tolerance, degrees</b>	±1.6	±0.7	±0.5	±0.3	±0.5	±0.3
<b>USLS, beampeak to 20° above beampeak, dB</b>			15	15	15	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	25	26	30	30	29	30
<b>CPR at Boresight, dB</b>	21	21	18	20	19	18
<b>CPR at Sector, dB</b>	13	9	11	11	12	11

## Mechanical Specifications

<b>Effective Projective Area (EPA), frontal</b>	0.47 m <sup>2</sup>   5.059 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.15 m <sup>2</sup>   1.615 ft <sup>2</sup>
<b>Mechanical Tilt Range</b>	0°–19°
<b>Wind Loading @ Velocity, frontal</b>	503.0 N @ 150 km/h (113.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	155.0 N @ 150 km/h (34.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	685.0 N @ 150 km/h (154.0 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	728.0 N @ 150 km/h (163.7 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	797 mm   31.378 in
<b>Depth, packed</b>	402 mm   15.827 in
<b>Length, packed</b>	1370 mm   53.937 in

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**Weight, gross**

50 kg | 110.231 lb

## Regulatory Compliance/Certifications

**Agency**

ISO 9001:2015



**Classification**

Designed, manufactured and/or distributed under this quality management system

## 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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