

# NHHSS-45C-R2BT2



10-port sector antenna, 2x 698–896, 4x 1695–2200 MHz and 4x 3100–4200, 45° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

- Perfect antenna to add 3.5GHz CBRS to macro sites
- Low band and mid band performance mirrors the performance of existing NHH hex port antennas
- 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
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x MIMO

## OBSOLETE

This product was discontinued on: **March 30, 2023**

### Replaced By:

NHHSS-45C-R2BT4      10-port sector antenna, 2x 698–896, 4x 1695–2200 MHz and 4x 3100–4200, 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
<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, mid band</b>	4
<b>RF Connector Quantity, low band</b>	2

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**RF Connector Quantity, total** 10

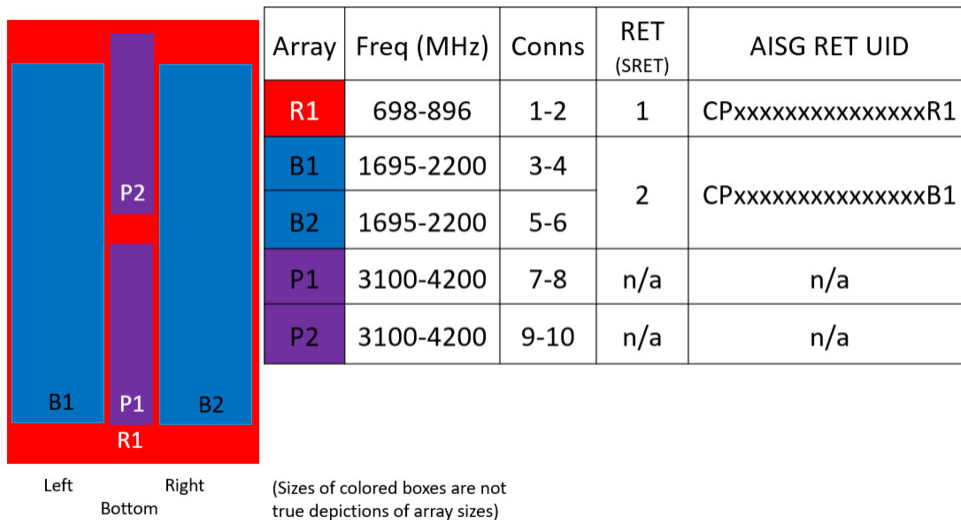
## Remote Electrical Tilt (RET) Information

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

## Dimensions

**Width** 457 mm | 17.992 in  
**Depth** 178 mm | 7.008 in  
**Length** 2437 mm | 95.945 in  
**Net Weight, antenna only** 41.5 kg | 91.492 lb

## Array Layout



## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2200 MHz   3100 – 4200 MHz   698 – 896 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	1,000 W @ 50 °C

## Electrical Specifications

	R1	R1	B1,B2	B1,B2	B1,B2	P1,P2	P1,P2	P1,P2
<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>3100–3550</b>	<b>3550–3700</b>	<b>3700–4200</b>
<b>RF Port</b>	1,2	1,2	3,4,5,6	3,4,5,6	3,4,5,6	7,8,9,10	7,8,9,10	7,8,9,10
<b>Gain, dBi</b>	18	18.6	19.3	19.7	20.3	16.7	17.2	17.5
<b>Beamwidth, Horizontal, degrees</b>	46	41	45	43	41	49	43	39
<b>Beamwidth, Vertical, degrees</b>	9.3	8.2	5.7	5.4	5.1	9.7	9.2	8.4
<b>Beam Tilt, degrees</b>	0–10	0–10	0–8	0–8	0–8	2	2	2
<b>USLS (First Lobe), dB</b>	18	22	15	16	16	17	15	13
<b>Front-to-Back Ratio at 180°, dB</b>	32	34	33	34	36	30	30	28
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25	25	25

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<b>Isolation, Inter-band, dB</b>	30	30	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	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-145	-145	-145
<b>Input Power per Port at 50°C, maximum, watts</b>	250	250	250	250	250	100	100	100

## 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>3100–3550</b>	<b>3550–3700</b>	<b>3700–4200</b>
<b>Gain by all Beam Tilts, average, dBi</b>	17.6	18.4	18.9	19.5	19.8	16.3	17	17.1
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.8	±0.3	±0.8	±0.4	±0.5	±0.6	±0.4	±0.6
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±2	±2	±3	±2	±2	±8	±4	±4
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.6	±0.3	±0.3	±0.2	±0.4	±0.8	±0.7	±0.9
<b>USLS, beampeak to 20° above beampeak, dB</b>	16	15	15	15	15	16	15	13
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	24	25	24	26	27	27	25	23
<b>CPR at Boresight, dB</b>	20	21	19	19	17	14	15	16
<b>CPR at Sector, dB</b>	13	10	3	3	4	5	7	5

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	1,485.0 N @ 150 km/h (333.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	315.0 N @ 150 km/h (70.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,485.0 N @ 150 km/h (333.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	1,304.0 N @ 150 km/h (293.2 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	526 mm   20.709 in
<b>Depth, packed</b>	283 mm   11.142 in
<b>Length, packed</b>	2604 mm   102.52 in
<b>Weight, gross</b>	60.5 kg   133.38 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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# NHHSS-45C-R2BT2

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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