

# 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.

- 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

## General Specifications

Antenna Type	Sector
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	Aluminum   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, mid band	4
RF Connector Quantity, low band	2
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

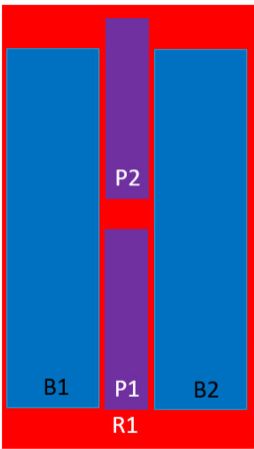
# NHHSS-45C-R2BT4

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



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxR1
B1	1695-2200	3-4	2	CPxxxxxxxxxxxxxxxxB1
B2	1695-2200	5-6		
P1	3100-4200	7-8	n/a	n/a
P2	3100-4200	9-10	n/a	n/a

Left  
Bottom  
Right

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

## Port Configuration

# NHHSS-45C-R2BT4



## Electrical Specifications

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

## Electrical Specifications

	R1	R1	B1,B2	B1,B2	B1,B2	P1,P2	P1,P2	P1,P2
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3100–3550	3550–3700	3700–4200
RF Port	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
Gain, dBi	18	18.6	19.3	19.7	20.3	16.9	17.4	17.4
Beamwidth, Horizontal, degrees	46	41	45	43	41	49	42	40
Beamwidth, Vertical, degrees	9.3	8.2	5.7	5.4	5.1	9.7	9	8.4
Beam Tilt, degrees	0–10	0–10	0–8	0–8	0–8	4	4	4
USLS (First Lobe), dB	18	22	15	16	16	18	17	13
Front-to-Back Ratio at 180°, dB	32	34	33	34	36	32	33	29
CPR at Boresight, dB	20	21	19	19	17	14	16	17
Isolation, Cross Polarization,	25	25	25	25	25	25	25	25

# NHHSS-45C-R2BT4

dB								
Isolation, Inter-band, dB	30	30	28	28	28	28	28	28
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	1.5   14.0	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-140	-140	-140
Input Power per Port at 50°C, maximum, watts	250	250	250	250	250	100	100	100

## Mechanical Specifications

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

## Packaging and Weights

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

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant



## 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
------------------	---