

NHHSS-45A-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	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

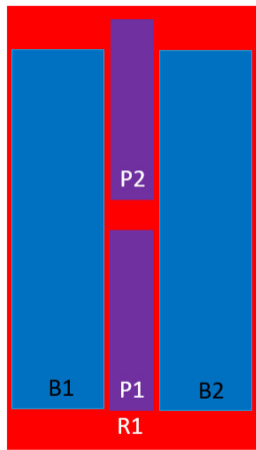
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Input Voltage	10–30 Vdc
Internal RET	Low band (1) Mid band (1)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0

Dimensions

Width	457 mm 17.992 in
Depth	178 mm 7.008 in
Length	1220 mm 48.032 in
Net Weight, without mounting kit	26.5 kg 58.422 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 Right
Bottom

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

Port Configuration

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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

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3100–3550	3550–3700	3700–4200
Gain, dBi	15.6	16.5	18	18.7	19.1	16.9	17.3	16.7
Beamwidth, Horizontal, degrees	46	41	46	44	41	48	43	44
Beamwidth, Vertical, degrees	18.7	16.7	7.7	7.2	6.8	9.7	9	8.4
Beam Tilt, degrees	2–18	2–18	1–9	1–9	1–9	4	4	4
USLS (First Lobe), dB	15	16	15	15	14	18	17	15
Front-to-Back Ratio at 180°, dB	29	32	33	33	33	33	34	32
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25
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

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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

Electrical Specifications, BASTA

Frequency Band, MHz	698-806	806-896	1695-1880	1850-1990	1920-2200	3100-3550	3550-3700	3700-4200
Gain by all Beam Tilts, average, dBi	15.3	16.2	17.6	18.3	18.7	16.2	17	16.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.4	±0.8	±0.5	±0.6	±0.6	±0.5	±0.6
Beamwidth, Horizontal Tolerance, degrees	±2.2	±2.1	±3	±2.1	±2.2	±6.7	±2.5	±3.4
Beamwidth, Vertical Tolerance, degrees	±1.1	±1.1	±0.5	±0.3	±0.5	±0.7	±0.4	±0.6
USLS, beampeak to 20° above beampeak, dB			14	14	14	16	16	14
Front-to-Back Total Power at 180° ± 30°, dB	22	23	24	26	27	26	27	23
CPR at Boresight, dB	18	19	16	18	17	14	15	16
CPR at Sector, dB	10	11	3	3	4	6	7	6

Mechanical Specifications

Wind Loading @ Velocity, frontal	677.0 N @ 150 km/h (152.2 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	135.0 N @ 150 km/h (30.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	677.0 N @ 150 km/h (152.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	595.0 N @ 150 km/h (133.8 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	563 mm 22.165 in
Depth, packed	355 mm 13.976 in
Length, packed	1393 mm 54.843 in
Weight, gross	37.6 kg 82.894 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

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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.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance