

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

Antenna Type	Sector
Band	Multiband
Color	Light Gray (RAL 7035)
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
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, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 Port 3
Internal RET	High band (1) Low band (1)
Power Consumption, idle state, maximum	1 W

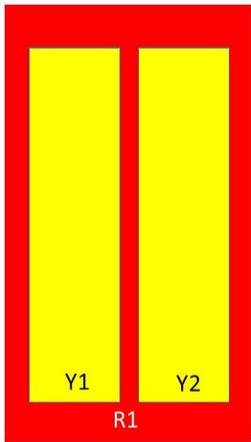
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Power Consumption, normal conditions, maximum	10 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

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

Array Layout



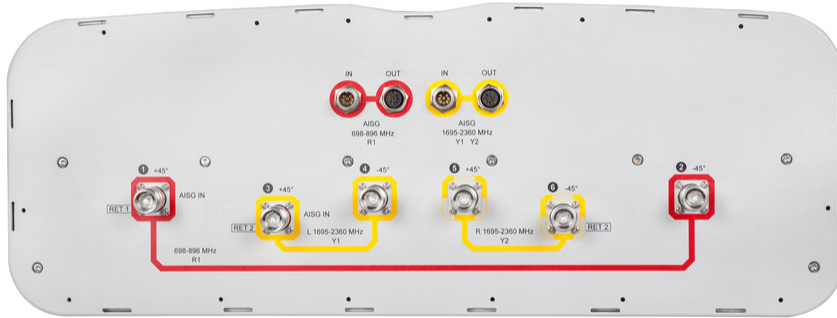
Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

Left Right
Bottom

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

Port Configuration

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Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	15.7	16.3	18	18.2	18.6	19.4
Beamwidth, Horizontal, degrees	34	30	34	33	31	29
Beamwidth, Vertical, degrees	21.5	19	8.6	8	7.5	6.7
Beam Tilt, degrees	0–18	0–18	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	20	17	15	15	15	15
Front-to-Back Ratio at 180°, dB	33	38	36	37	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	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

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PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200

Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	15.3	16.1	17.4	17.9	18.2	19
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3	±0.7	±0.5	±0.7	±0.6
Gain by Beam Tilt, average, dBi	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
Beamwidth, Horizontal Tolerance, degrees	±2.3	±1	±1.5	±1.6	±1.3	±0.9
Beamwidth, Vertical Tolerance, degrees	±1.6	±0.7	±0.5	±0.3	±0.5	±0.3
USLS, beampeak to 20° above beampeak, dB			15	15	15	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	30	30	29	30
CPR at Boresight, dB	21	21	18	20	19	18
CPR at Sector, dB	13	9	11	11	12	11

Mechanical Specifications

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

Packaging and Weights

Width, packed	797 mm 31.378 in
Depth, packed	402 mm 15.827 in
Length, packed	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