NHH-33C-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	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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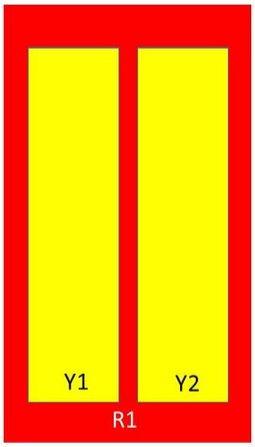
Power Consumption, normal conditions, maximum	10 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	640 mm | 25.197 in
Depth	235 mm | 9.252 in
Length	2438 mm | 95.984 in
Net Weight, without mounting kit	58.8 kg | 129.632 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

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

Port Configuration

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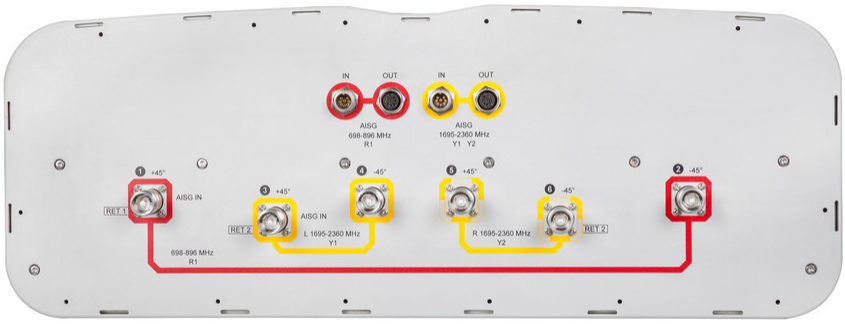

Electrical Specifications

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	18.1	18.9	19.5	19.9	20.5	21.4
Beamwidth, Horizontal, degrees	36	31	34	34	33	29
Beamwidth, Vertical, degrees	9.9	8.7	5.8	5.4	5.1	4.6
Beam Tilt, degrees	0–10	0–10	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	20	24	17	19	19	18
Front-to-Back Ratio at 180°, dB	33	37	36	38	39	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	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

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	17.8	18.6	19.1	19.7	20.1	21
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.3	±0.7	±0.4	±0.5	±0.4
Gain by Beam Tilt, average, dBi	0 ° | 17.6 5 ° | 17.8 10 ° | 17.7	0 ° | 18.4 5 ° | 18.7 10 ° | 18.7	2 ° | 18.7 7 ° | 19.1 12 ° | 19.2	2 ° | 19.4 7 ° | 19.7 12 ° | 19.8	2 ° | 19.9 7 ° | 20.2 12 ° | 20.2	2 ° | 20.7 7 ° | 21.1 12 ° | 20.9
Beamwidth, Horizontal Tolerance, degrees	±2.9	±0.8	±1.6	±1.2	±1.7	±1.4
Beamwidth, Vertical Tolerance, degrees	±0.6	±0.4	±0.3	±0.2	±0.3	±0.3
USLS, beampeak to 20° above beampeak, dB	17	15	16	17	18	17
Front-to-Back Total Power at 180° ± 30°, dB	29	28	29	31	31	31
CPR at Boresight, dB	18	17	17	20	19	18
CPR at Sector, dB	11	14	12	14	14	11

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.99 m² | 10.656 ft²
Effective Projective Area (EPA), lateral	0.33 m² | 3.552 ft²
Mechanical Tilt Range	0°–15°
Wind Loading @ Velocity, frontal	954.0 N @ 150 km/h (214.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	355.0 N @ 150 km/h (79.8 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,434.0 N @ 150 km/h (322.4 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	788.0 N @ 150 km/h (177.1 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	752 mm | 29.606 in
Depth, packed	382 mm | 15.039 in
Length, packed	2590 mm | 101.969 in

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Weight, gross	84.5 kg | 186.29 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
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

Included Products

BSAMNT-4	–	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-M4	–	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