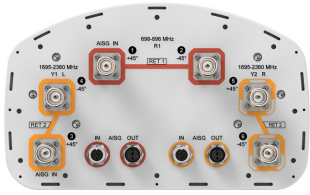


# NHH-65C-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- 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 RET for low band and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO

## General Specifications

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

## Remote Electrical Tilt (RET) Information

<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 3
<b>Internal RET</b>	High band (1)   Low band (1)
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Power Consumption, normal conditions, maximum</b>	13 W

# NHH-65C-R2B

**Protocol** 3GPP/AISG 2.0 (Single RET)

## Dimensions

**Width** 301 mm | 11.85 in

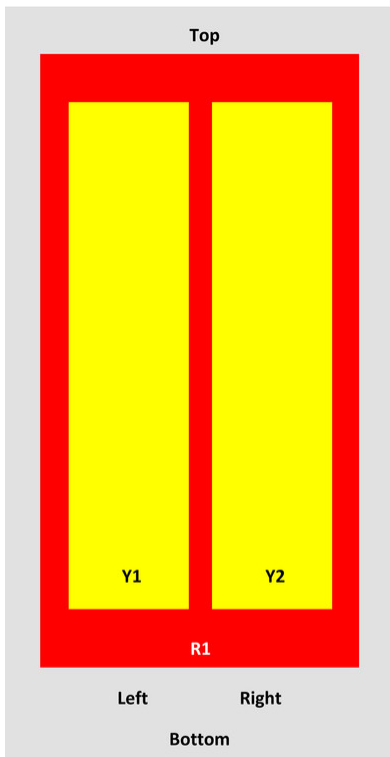
**Depth** 180 mm | 7.087 in

**Length** 2438 mm | 95.984 in

**Net Weight, without mounting kit** 23.4 kg | 51.588 lb

## Array Layout

NHH



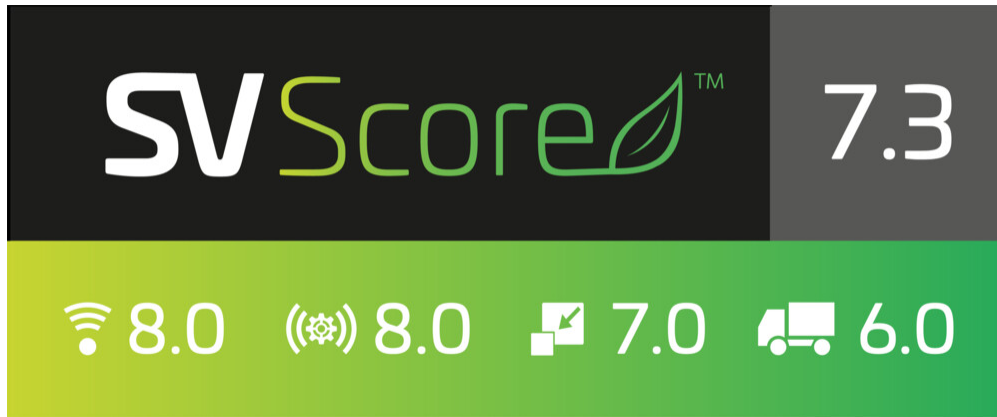
Array	Freq (MHz)	Coms	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANXXXXXXXXXXXXXXX1
Y1	1695-2360	3-4	2	ANXXXXXXXXXXXXXXX2
Y2	1695-2360	5-6		

View from the front of the antenna

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

## Logo Image

# NHH-65C-R2B



## Electrical Specifications

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

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
<b>Gain, dBi</b>	16	16.1	17.3	17.7	18.3	18.2
<b>Beamwidth, Horizontal, degrees</b>	65	62	74	66	62	59
<b>Beamwidth, Vertical, degrees</b>	9	7.9	5.6	5.2	4.9	4.5
<b>Beam Tilt, degrees</b>	0–11	0–11	0–7	0–7	0–7	0–7
<b>USLS (First Lobe), dB</b>	21	18	19	20	22	18
<b>Front-to-Back Ratio at 180°, dB</b>	35	31	33	29	29	30
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	30	30	30	30	30	30
<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
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153
<b>Input Power per Port, maximum, watts</b>	400	400	350	350	350	300

## Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
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# NHH-65C-R2B

<b>Gain by all Beam Tilts, average, dBi</b>	15.8	15.9	16.9	17.5	18	17.9
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.4	±0.4	±0.3	±0.6	±0.4
<b>Gain by Beam Tilt, average, dBi</b>	0° 15.9 5° 15.9 11° 15.5	0° 15.8 5° 16.0 11° 15.7	0° 16.9 4° 17.0 7° 16.9	0° 17.4 4° 17.5 7° 17.4	0° 17.9 4° 18.0 7° 18.0	0° 17.8 4° 17.9 7° 17.9
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.2	±1.6	±5.3	±3.4	±6	±3.1
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.6	±0.4	±0.3	±0.2	±0.2	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	15	14	17	16	17	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	25.6	23.8	28	25	25	24
<b>CPR at Boresight, dB</b>	18	26	20	25	20	17
<b>CPR at Sector, dB</b>	15	9	11	10	8	2

## Mechanical Specifications

<b>Effective Projective Area (EPA), frontal</b>	0.37 m <sup>2</sup>   3.983 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.31 m <sup>2</sup>   3.337 ft <sup>2</sup>
<b>Mechanical Tilt Range</b>	0°–12°
<b>Wind Loading @ Velocity, frontal</b>	393.0 N @ 150 km/h (88.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	330.0 N @ 150 km/h (74.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	757.0 N @ 150 km/h (170.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	398.0 N @ 150 km/h (89.5 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	380 mm   14.961 in
<b>Depth, packed</b>	295 mm   11.614 in
<b>Length, packed</b>	2571 mm   101.221 in
<b>Weight, gross</b>	35.9 kg   79.146 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

# NHH-65C-R2B

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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