

# NNH4SS-65A-R3BT8



16- Port sector antenna, 4x 698-896, 8x 1695-2360 and 4x 3550-3700MHz, 65° HPBW, 3x RETs and 3x SBTs

- Features broadband Low Band (698-896 MHz), Mid Band(1695-2360 MHz) and High Band (3550-3700 MHz) arrays for 4T4R (4X MIMO) capability for bands 5, 13, 25, 66 and 48. Also covers bands 12, 14, 29, and 30
- Perfect antenna to add 3.5GHz CBRS to macro sites
- Non-stacked mid band array design provides higher gain and narrower vertical beamwidth than traditional antenna designs
- Array configuration provides capability for 4T4R (4X MIMO) on Low Band, dual 4T4R (4X MIMO) on Mid Band and 4T4R (4X MIMO) on High Band
- Excellent wind loading characteristics

## 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	8
RF Connector Quantity, low band	4
RF Connector Quantity, total	16

## Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female   8-pin DIN Male
RET Interface, quantity	3 female   3 male
Input Voltage	10–30 Vdc

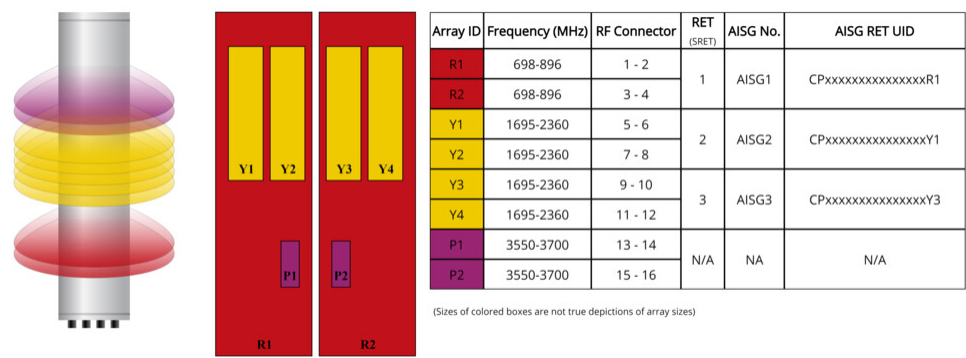
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Internal Bias Tee	Port 1   Port 5   Port 9
Internal RET	Low band (1)   Mid band (2)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

## Dimensions

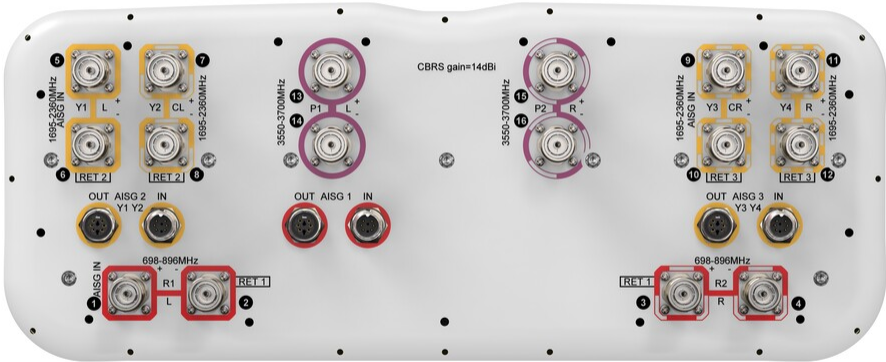
Width	498 mm   19.606 in
Depth	197 mm   7.756 in
Length	1499 mm   59.016 in
Net Weight, antenna only	31 kg   68.343 lb

## Array Layout



## Port Configuration

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## Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz   3550 – 3700 MHz   698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,600 W @ 50 °C

## Electrical Specifications

	R1,R2	R1,R2	Y1-Y4	Y1-Y4	Y1-Y4	Y1-Y4	P1,P2
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360	3550–3700
RF Port	1-4	1-4	5-12	5-12	5-12	5-12	13-16
Gain at Mid Tilt, dBi	13.1	13.4	15.8	16.5	17.3	17.8	13.8
Beamwidth, Horizontal, degrees	72	64	71	69	63	59	66
Beamwidth, Vertical, degrees	17.2	15	8	7.4	7	6.3	17.3
Beam Tilt, degrees	2–16	2–16	2–12	2–12	2–12	2–12	8
USLS (First Lobe), dB	19	15	14	16	16	18	19
Front-to-Back Ratio at 180°, dB	30	28	32	32	32	33	35
Isolation, Cross Polarization,	25	25	25	25	25	25	25

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dB							
Isolation, Inter-band, dB	25	25	25	25	25	25	25
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
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153	-145
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200	100

## Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360	3550–3700
Gain by all Beam Tilts, average, dBi	12.6	13.1	15.3	16.1	16.8	17.5	13.4
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.7	±0.7	±0.7	±0.5	±0.6
Front-to-Back Total Power at 180° ± 30°, dB	23	22	24	24	25	27	27
CPR at Boresight, dB	21	22	20	21	23	24	23
CPR at Sector, dB	13	9	8	7	6	7	6

## Mechanical Specifications

Wind Loading @ Velocity, frontal	498.0 N @ 150 km/h (112.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	148.0 N @ 150 km/h (33.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	597.0 N @ 150 km/h (134.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	342.0 N @ 150 km/h (76.9 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

## Packaging and Weights

Width, packed	565 mm   22.244 in
Depth, packed	309 mm   12.165 in
Length, packed	1686 mm   66.378 in
Weight, gross	43.7 kg   96.342 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

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## Included Products

- |          |   |   |
|----------|---|---|
| BSAMNT-3 | – | Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members.<br>Kit contains one scissor top bracket set and one bottom bracket set. |
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## \* Footnotes

<b>Performance Note</b>	Severe environmental conditions may degrade optimum performance
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