

# NNH4SS-65B-R3BT8



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

- Array configuration provides capability for 4T4R (4x MIMO) on Low band and Dual 4T4R (4x MIMO) on High band
- Excellent wind loading characteristics
- Features broadband Low Band (698-896 MHz) and High Band (1695-2360 MHz) arrays for 4T4R (4X MIMO) capability for Band 14, AWS, PCS and WCS applications
- Perfect antenna to add 3.5GHz CBRS to macro sites
- Non-stacked high band array design provides higher gain and narrower vertical beamwidth than traditional antenna designs

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	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, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	16

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	3 female   3 male
<b>Input Voltage</b>	10-30 Vdc
<b>Internal RET</b>	Low band (1)   Mid band (2)

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**Protocol** 3GPP/AISG 2.0

## Dimensions

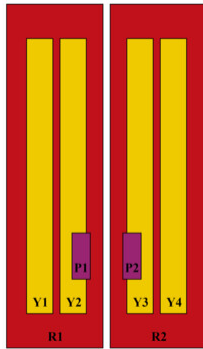
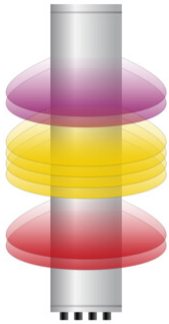
**Width** 498 mm | 19.606 in

**Depth** 197 mm | 7.756 in

**Length** 1848 mm | 72.756 in

**Net Weight, without mounting kit** 34.9 kg | 76.941 lb

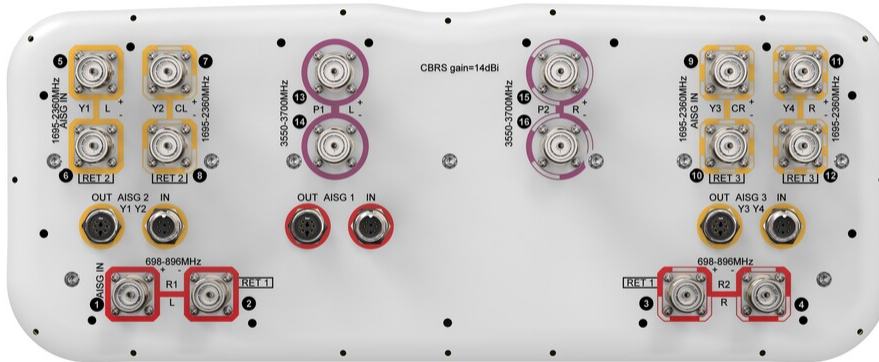
## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	698-896	3 - 4			
Y1	1695-2360	5 - 6	2	AISG2	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2360	7 - 8			
Y3	1695-2360	9 - 10	3	AISG3	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2360	11 - 12			
P1	3550-3700	13 - 14	N/A	NA	N/A
P2	3550-3700	15 - 16			

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

## Port Configuration



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## Electrical Specifications

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

## Electrical Specifications

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>806–896</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2180</b>	<b>2300–2360</b>	<b>3550–3700</b>
<b>Gain, dBi</b>	14.3	14.9	16.7	17.3	17.8	18.1	13.9
<b>Beamwidth, Horizontal, degrees</b>	71	63	71	67	62	60	62
<b>Beamwidth, Vertical, degrees</b>	11.4	10.1	6.9	6.4	6.1	5.6	16.2
<b>Beam Tilt, degrees</b>	2–14	2–14	2–12	2–12	2–12	2–12	8
<b>USLS (First Lobe), dB</b>	16	17	15	17	18	20	15
<b>Front-to-Back Ratio at 180°, dB</b>	30	28	36	35	34	36	33
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25	25
<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	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153	-145
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	250	250	250	200	100

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>806–896</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2180</b>	<b>2300–2360</b>	<b>3550–3700</b>
<b>Gain by all Beam Tilts, average, dBi</b>	13.9	14.6	16.2	16.9	17.4	17.8	13.5
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.6	±0.5	±0.8	±0.5	±0.5	±0.4	±0.6
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	20	21	27	26	27	28	25
<b>CPR at Boresight, dB</b>	24	26	23	22	21	21	18
<b>CPR at Sector, dB</b>	15	11	7	4	5	6	7

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	629.0 N @ 150 km/h (141.4 lbf @ 150 km/h)
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<b>Wind Loading @ Velocity, lateral</b>	191.0 N @ 150 km/h (42.9 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	755.0 N @ 150 km/h (169.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	433.0 N @ 150 km/h (97.3 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	599 mm   23.583 in
<b>Depth, packed</b>	349 mm   13.74 in
<b>Length, packed</b>	1989 mm   78.307 in
<b>Weight, gross</b>	50.1 kg   110.451 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant



## 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.
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## \* Footnotes

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