

# NNH4-65C-R3



12-Port sector antenna, 4x 698-896 and 8x 1695-2360 MHz, 65° HPBW, 3xRET

- Features a downtilt range of 0-10° to provide for improved interference performance
- 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
- Array configuration provides capability for 4T4R (4x MIMO) on Low band and Dual 4T4R (4x MIMO) on High band
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics

## 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, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	12

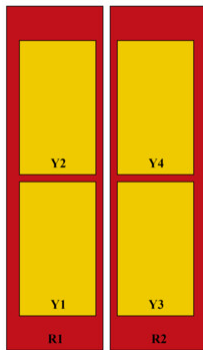
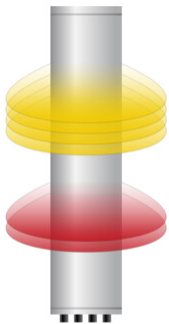
## Remote Electrical Tilt (RET) Information

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

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<b>Power Consumption, idle state, maximum</b>	2 W
<b>Protocol</b>	3GPP/AISG 2.0
<b>Dimensions</b>	
<b>Width</b>	498 mm   19.606 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	2438 mm   95.984 in
<b>Net Weight, antenna only</b>	39.2 kg   86.421 lb

## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (MRET)	AISG No.	AISG RET UID
R1	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxMM.1
R2	698-896	3 - 4			
Y1	1695-2360	5 - 6	2	AISG1	CPxxxxxxxxxxxxMM.2
Y3	1695-2360	9 - 10			
Y2	1695-2360	7 - 8	3	AISG1	CPxxxxxxxxxxxxMM.3
Y4	1695-2360	11 - 12			

(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   698 – 896 MHz
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

	R1-R2	R1-R2	Y1-Y4	Y1-Y4	Y1-Y4	Y1-Y4
<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>RF Port</b>	1-4	1-4	5-12	5-12	5-12	5-12
<b>Gain, dBi</b>	15.5	15.9	16.8	17.5	17.7	17.7
<b>Beamwidth, Horizontal, degrees</b>	77	69	62	57	57	55
<b>Beamwidth, Vertical, degrees</b>	9.7	8.6	7.8	7.3	6.9	6.3
<b>Beam Tilt, degrees</b>	0–10	0–10	0–10	0–10	0–10	0–10
<b>USLS (First Lobe), dB</b>	19	17	15	16	15	16
<b>Front-to-Back Ratio at 180°, dB</b>	27	30	34	36	37	33
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25

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<b>Isolation, Inter-band, dB</b>	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
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	250	250	250	200

## 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>Gain by all Beam Tilts, average, dBi</b>	15.1	15.7	16.3	17	17.3	17.4
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.6	±0.3	±0.6	±0.6	±0.6	±0.7
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±3	±4	±4	±4	±4	±5
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.7	±0.5	±0.4	±0.4	±0.5	±0.3
<b>USLS, beampeak to 20° above beampeak, dB</b>	16	15	13	13	13	12
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	20	20	27	30	30	27
<b>CPR at Boresight, dB</b>	17	18	23	24	26	23
<b>CPR at Sector, dB</b>	11	7	7	9	7	6

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	865.0 N @ 150 km/h (194.5 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	268.0 N @ 150 km/h (60.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,037.0 N @ 150 km/h (233.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	595.0 N @ 150 km/h (133.8 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	565 mm   22.244 in
<b>Depth, packed</b>	309 mm   12.165 in
<b>Length, packed</b>	2625 mm   103.347 in
<b>Weight, gross</b>	51.9 kg   114.42 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system

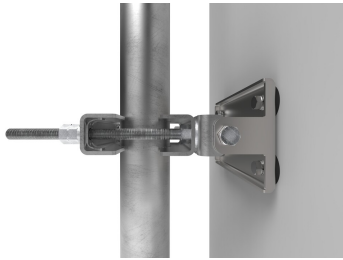
## Included Products

- BSAMNT-2F – Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.

## \* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance

# BSAMNT-2F



Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.

## Product Classification

**Product Type** Fixed tilt mounting kit

## General Specifications

**Application** Outdoor

**Color** Silver

## Dimensions

**Compatible Diameter, maximum** 115 mm | 4.528 in

**Compatible Diameter, minimum** 60 mm | 2.362 in

**Weight, net** 3.8 kg | 8.378 lb

## Material Specifications

**Material Type** Galvanized steel

## Packaging and Weights

**Included** Brackets | Hardware

**Packaging quantity** 1

**Weight, gross** 4 kg | 8.818 lb

## Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
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

# BSAMNT-2F

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