

# NNHHS4-65C-R5



16 Port Sector Antenna & Beamforming, 4x698-896 MHz, 4x1695-2360 MHz, 65° HPBW and 8x3400-4000 MHz Beamformer, 5XRET

- Multi-band FDD antenna featuring C-Band 8T8R functionality
- New endcap designs provide improved wind loading performance
- The C-band RET is factory set to AISG2. All other RET are assigned to AISG1
- The antenna is supplied with mounting kits that provide 0 degree of mechanical downtilt; optional downtilt mounting kits are available

## General Specifications

Antenna Type	Sector- and beamforming
Band	Multiband
Calibration Connector Interface	4.3-10 Female
Calibration Connector Quantity	1
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	8
RF Connector Quantity, mid band	4
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	2 female   2 male
Input Voltage	10–30 Vdc
Internal RET	High band (1)   Low band (2)   Mid band (2)

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**Protocol** 3GPP/AISG 2.0

## Dimensions

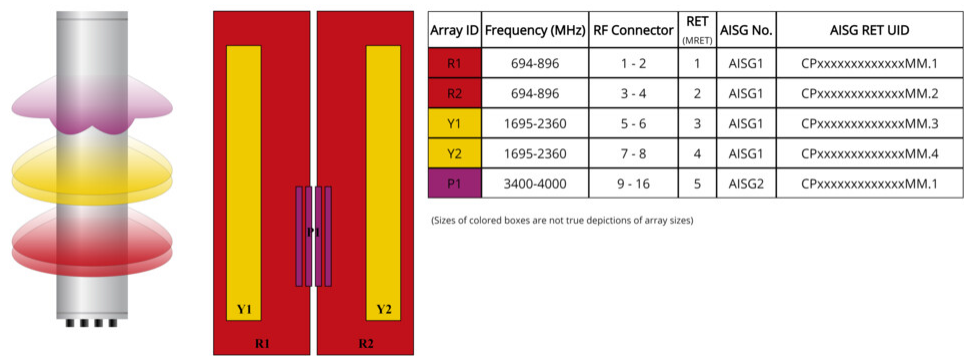
**Width** 498 mm | 19.606 in

**Depth** 197 mm | 7.756 in

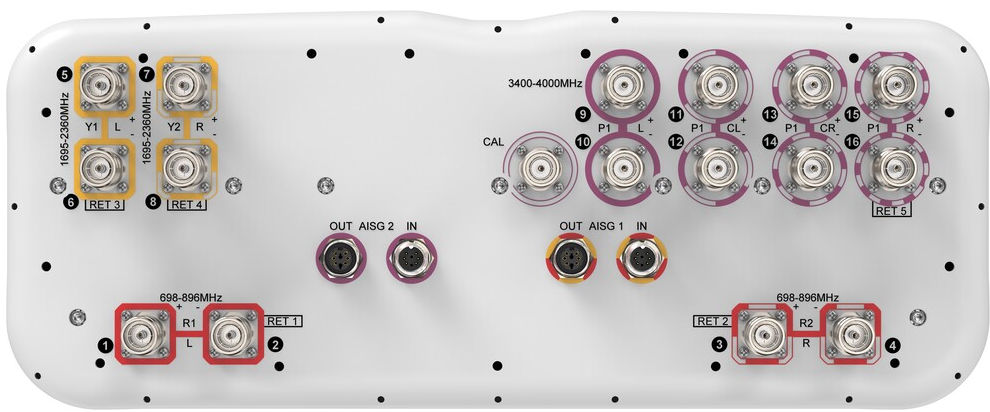
**Length** 2438 mm | 95.984 in

**Net Weight, antenna only** 48.9 kg | 107.806 lb

## Array Layout



## Port Configuration



## Electrical Specifications

**Impedance** 50 ohm

**Operating Frequency Band** 1695 – 2360 MHz | 3400 – 4000 MHz | 698 – 896 MHz

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Polarization	±45°
Total Input Power, maximum	1,200 W @ 50 °C

## Electrical Specifications

	R1,R2	R1,R2	Y1,Y2	Y1,Y2	Y1,Y2	Y1,Y2	P1	P1
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360	3400–3700	3700–4000
RF Port	1-4	1-4	5-8	5-8	5-8	5-8	9-16	9-16
Gain, dBi	15.5	16	17.4	17.7	18.3	18.9	15.9	17
Beamwidth, Horizontal, degrees	72	64	64	68	60	53	95	78
Beamwidth, Vertical, degrees	9.6	8.3	6	5.5	5.2	4.7	6.1	5.6
Beam Tilt, degrees	0–10	0–10	0–10	0–10	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	15	16	16	16	16	15	16	17
Front-to-Back Ratio at 180°, dB	32	31	35	35	35	36	30	30
Coupling level, Amp, Antenna port to Cal port, dB							26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB							±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB							0.6	0.6
Coupler, max Phase Δ, Antenna port to Cal port, degrees							5	5
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25
Isolation, Co-polarization, dB							19	19
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	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-145	-145
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200	75	75

## Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360	3400–3700	3700–4000
Gain by all Beam Tilts, average, dBi	15.2	15.8	17.1	17.3	18	18.6	15.4	16.4
Gain by all Beam Tilts	±0.6	±0.4	±0.6	±0.5	±0.7	±0.3	±0.6	±0.8

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Tolerance, dB								
Front-to-Back Total Power at 180° ± 30°, dB	24	23	28	28	28	26	24	24
CPR at Boresight, dB	23	25	17	22	24	24	15	15
CPR at Sector, dB	14	9	9	11	8	7	5	7

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3400–3700 3700–4000	
Gain, dBi	18	18.8
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	6.1	5.8
Beamwidth, Vertical Tolerance, degrees	±0.4	±0.2
Front-to-Back Total Power at 180° ± 30°, dB	26.1	26.4
USLS (First Lobe), dB	16	18

## Electrical Specifications, Envelope Pattern

Frequency Band, MHz	3400–3700 3700–4000	
Gain, dBi	20.7	21.6

## Electrical Specifications, Service Beam

Frequency Band, MHz	3400–3700 3700–4000	
Steered 0° Gain, dBi	20.8	21.6
Steered 0° Beamwidth, Horizontal, degrees	25	24
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	29
Steered 30° Gain, dBi	19.3	20.1
Steered 30° Beamwidth, Horizontal, degrees	34	30
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	28	28

## Electrical Specifications, Soft Split

Frequency Band, MHz	3400–3700 3700–4000	
Gain, dBi	19.4	20
Beamwidth, Horizontal,	36	31

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degrees		
Front-to-Back Total Power at 180° ± 30°, dB	29	28
Horizontal Sidelobe, dB	17	14
USLS (First Lobe), dB	19	20

## Mechanical Specifications

Effective Projective Area (EPA), frontal	0.81 m²   8.719 ft²
Effective Projective Area (EPA), lateral	0.25 m²   2.691 ft²
Wind Loading @ Velocity, frontal	865.0 N @ 150 km/h (194.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	268.0 N @ 150 km/h (60.2 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,037.0 N @ 150 km/h (233.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	595.0 N @ 150 km/h (133.8 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	2625 mm   103.347 in
Weight, gross	65.3 kg   143.962 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-3F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
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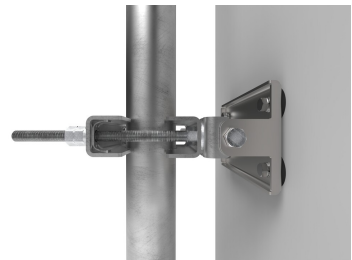
## \* Footnotes

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

# BSAMNT-3F



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** 5.6 kg | 12.346 lb

## Material Specifications

**Material Type** Galvanized steel

## Packaging and Weights

**Included** Brackets | Hardware

**Packaging quantity** 1

**Weight, gross** 5.8 kg | 12.787 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-3F

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