

# NNH4-45A-R6



12-port sector antenna, 4x 698–896 and 8x 1695–2360 MHz, 45° HPBW, 6x RET

- 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
- 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
- Independent tilt for all arrays

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

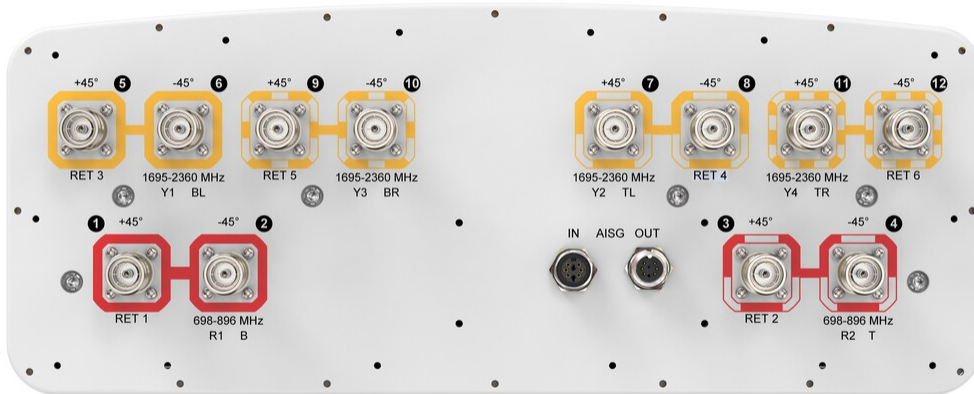
## Remote Electrical Tilt (RET) Information

<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>	High band (4)   Low band (2)
<b>Power Consumption, active state, maximum</b>	8 W

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<b>Power Consumption, idle state, maximum</b>	1 W
<b>Protocol</b>	3GPP/AISG 2.0
<b>Dimensions</b>	
<b>Width</b>	457 mm   17.992 in
<b>Depth</b>	178 mm   7.008 in
<b>Length</b>	1399 mm   55.079 in
<b>Net Weight, antenna only</b>	27.2 kg   59.966 lb

## Port Configuration



## 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

	R1,R2	R1,R2	Y1-Y4	Y1-Y4	Y1-Y4	Y1-Y4
<b>Frequency Band, MHz</b>	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360

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<b>RF Port</b>	1-4	1-4	5-12	5-12	5-12	5-12
<b>Gain, dBi</b>	12.6	13.5	15.1	15.8	16.6	16.9
<b>Beamwidth, Horizontal, degrees</b>	49	44	45	42	40	36
<b>Beamwidth, Vertical, degrees</b>	36	30.4	15.2	13.7	12.9	11.5
<b>Beam Tilt, degrees</b>	2-18	2-18	2-12	2-12	2-12	2-12
<b>USLS (First Lobe), dB</b>	17	17	15	17	17	18
<b>Front-to-Back Ratio at 180°, dB</b>	31	35	32	33	34	33
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<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>	12.2	13.3	14.6	15.5	16.1	16.6
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.6	±0.6	±0.8	±0.5	±0.8	±0.7
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±3	±3	±4	±3	±3	±2
<b>Beamwidth, Vertical Tolerance, degrees</b>	±2.7	±2.8	±1.4	±1	±1	±0.7
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	23	24	25	27	28	27
<b>CPR at 10 dB Horizontal Beamwidth, dB</b>	9	9	6	8	9	12

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	788.0 N @ 150 km/h (177.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	157.0 N @ 150 km/h (35.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	788.0 N @ 150 km/h (177.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	692.0 N @ 150 km/h (155.6 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

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## Packaging and Weights

<b>Width, packed</b>	563 mm   22.165 in
<b>Depth, packed</b>	355 mm   13.976 in
<b>Length, packed</b>	1572 mm   61.89 in
<b>Weight, gross</b>	36.4 kg   80.248 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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.
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## \* Footnotes

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