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

Alternative products available:

NNH4-45A-R3B-V1	12-port sector antenna, 4x 698–896 and 8x 1695–2360 MHz, 45° HPBW, 3x RET

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	8
RF Connector Quantity, mid band	0
RF Connector Quantity, low band	4
RF Connector Quantity, total	12

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female | 8-pin DIN Male

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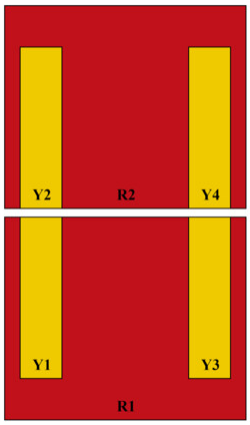
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (4) | Low band (2)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0

Dimensions

Width	457 mm | 17.992 in
Depth	178 mm | 7.008 in
Length	1399 mm | 55.079 in
Net Weight, antenna only	27.2 kg | 59.966 lb

Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (MRET)	AISG RET UID
R1	698-896	1 - 2	1	CPxxxxxxxxxxxxMM.1
R2	698-896	3 - 4	2	CPxxxxxxxxxxxxMM.2
Y1	1695-2360	5 - 6	3	CPxxxxxxxxxxxxMM.3
Y2	1695-2360	7 - 8	4	CPxxxxxxxxxxxxMM.4
Y3	1695-2360	9 - 10	5	CPxxxxxxxxxxxxMM.5
Y4	1695-2360	11 - 12	6	CPxxxxxxxxxxxxMM.6

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

Port Configuration

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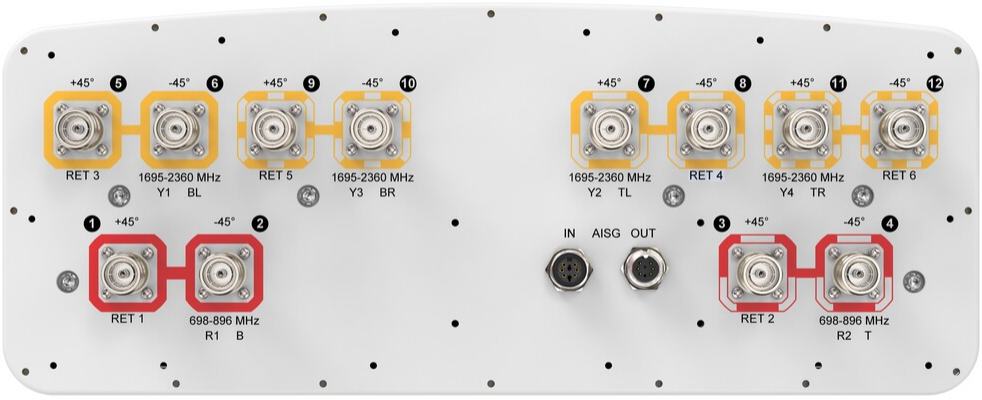

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

	R1,R2	R1,R2	Y1-Y4	Y1-Y4	Y1-Y4	Y1-Y4
Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2180**	**2300–2360**
RF Port	1-4	1-4	5-12	5-12	5-12	5-12
Gain, dBi	12.6	13.5	15.1	15.8	16.6	16.9
Beamwidth, Horizontal, degrees	49	44	45	42	40	36
Beamwidth, Vertical, degrees	36	30.4	15.2	13.7	12.9	11.5
Beam Tilt, degrees	2–18	2–18	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	17	15	17	17	18
Front-to-Back Ratio at 180°, dB	31	35	32	33	34	33
Isolation, Cross Polarization,	25	25	25	25	25	25

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

Mechanical Specifications

Wind Loading @ Velocity, frontal	788.0 N @ 150 km/h (177.1 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	157.0 N @ 150 km/h (35.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	788.0 N @ 150 km/h (177.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	692.0 N @ 150 km/h (155.6 lbf @ 150 km/h)
Wind Speed, maximum	241.4 km/h (150 mph)

Packaging and Weights

Width, packed	526 mm | 20.709 in
Depth, packed	283 mm | 11.142 in
Length, packed	1566 mm | 61.654 in
Weight, gross	36.9 kg | 81.35 lb

Regulatory Compliance/Certifications

Agency	Classification
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