NNH4-45B-R6-V1

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

- 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.
- 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

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum | 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, 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
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (4) | Low band (2)
Power Consumption, idle state, maximum	1 W

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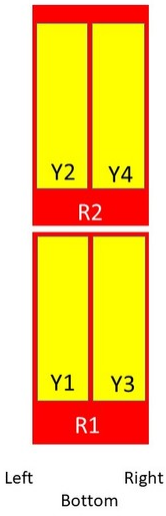
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	457 mm | 17.992 in
Depth	178 mm | 7.008 in
Length	1848 mm | 72.756 in
Net Weight, without mounting kit	36.4 kg | 80.248 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxR1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxR2
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxY1
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxY2
Y3	1695-2360	9-10	5	CPxxxxxxxxxxxxxxxY3
Y4	1695-2360	11-12	6	CPxxxxxxxxxxxxxxxY4

(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

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2180**	**2300–2360**
Gain, dBi	13.9	14.9	16.9	17.5	18	18.7
Beamwidth, Horizontal, degrees	49	42	44	42	41	37
Beamwidth, Vertical, degrees	24.4	21.7	10.6	10	9.5	8.4
Beam Tilt, degrees	0–16	0–16	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	21	17	18	17	18
Front-to-Back Ratio at 180°, dB	35	33	35	36	36	34
Isolation, Cross Polarization, dB	25	25	25	25	25	25
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	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	150	150	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2180**	**2300–2360**
Gain by all Beam Tilts, average, dBi	13.6	14.6	16.5	17.1	17.6	18.3
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.5	±0.5	±0.6	±0.4
Gain by Beam Tilt, average, dBi	0 ° | 13.6 8 ° | 13.6 16 ° | 13.5	0 ° | 14.6 8 ° | 14.6 16 ° | 14.4	0 ° | 16.5 5 ° | 16.6 10 ° | 16.5	0 ° | 17.0 5 ° | 17.1 10 ° | 17.1	0 ° | 17.5 5 ° | 17.6 10 ° | 17.6	0 ° | 18.3 5 ° | 18.4 10 ° | 18.2
Beamwidth, Horizontal Tolerance, degrees	±1.9	±3.2	±2.1	±1.6	±2.2	±2.1
Beamwidth, Vertical Tolerance, degrees	±1.5	±1.5	±0.6	±0.4	±0.7	±0.4
USLS, beampeak to 20° above beampeak, dB	8	10	18	19	17	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	28	29	30	28
CPR at Boresight, dB	23	24	16	19	20	21
CPR at 10 dB Horizontal Beamwidth, dB	12	13	7	8	11	14

Mechanical Specifications

Effective Projective Area (EPA), frontal	1.01 m² | 10.872 ft²
Effective Projective Area (EPA), lateral	0.21 m² | 2.26 ft²
Wind Loading @ Velocity, frontal	1,077.0 N @ 150 km/h (242.1 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	222.0 N @ 150 km/h (49.9 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,077.0 N @ 150 km/h (242.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	946.0 N @ 150 km/h (212.7 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	608 mm | 23.937 in
Depth, packed	346 mm | 13.622 in
Length, packed	1991 mm | 78.386 in

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Weight, gross	57 kg | 125.663 lb

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

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.
BSAMNT-M	–	Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance