

NNHH-65B-R4



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

- Array configuration provides capability for 4T4R (4x MIMO) on Low band and High band
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics

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	Aluminum Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information

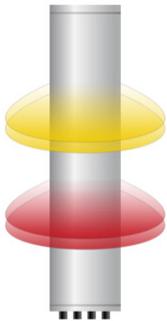
RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (2) Low band (2)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

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Dimensions

Width	498 mm 19.606 in
Depth	197 mm 7.756 in
Length	1828 mm 71.969 in
Net Weight, antenna only	31 kg 68.343 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	2	AISG1	CPxxxxxxxxxxxxMM.2
Y1	1695-2360	5 - 6	3	AISG1	CPxxxxxxxxxxxxMM.3
Y2	1695-2360	7 - 8	4	AISG1	CPxxxxxxxxxxxxMM.4

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

Port Configuration



Electrical Specifications

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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,Y2	Y1,Y2	Y1,Y2	Y1,Y2
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
RF Port	1,2,3,4	1,2,3,4	5,6,7,8	5,6,7,8	5,6,7,8	5,6,7,8
Gain, dBi	14.8	15.5	17.1	17.6	18	18.1
Beamwidth, Horizontal, degrees	68	59	63	60	62	62
Beamwidth, Vertical, degrees	12	10.6	7	6.5	6.1	5.5
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	19	17	15	16	16	17
Front-to-Back Ratio at 180°, dB	29	27	35	35	34	33
Front-to-Back Total Power at 180° ± 30°, dB	21	21	30	31	29	26
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	-150	-150	-150	-150	-150	-150
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200

Electrical Specifications, BASTA

	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Gain by all Beam Tilts, average, dBi	14.3	15.1	16.6	17.3	17.5	17.7
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.6	±0.6	±0.4	±0.4	±0.4
Beamwidth, Horizontal Tolerance, degrees	±5	±4	±4	±3	±5	±3
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.4	±0.3	±0.4	±0.3
USLS, beampeak to 20° above	18	16	14	15	14	14

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beampeak, dB

CPR at Boresight, dB	20	19	19	19	19	24
CPR at Sector, dB	10	7	8	8	7	9

Mechanical Specifications

Wind Loading @ Velocity, frontal	622.0 N @ 150 km/h (139.8 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	188.0 N @ 150 km/h (42.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	746.0 N @ 150 km/h (167.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	428.0 N @ 150 km/h (96.2 lbf @ 150 km/h)
Wind Speed, maximum	241.4 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm 22.244 in
Depth, packed	309 mm 12.165 in
Length, packed	2015 mm 79.331 in
Weight, gross	42.1 kg 92.815 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-2F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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