NNH4-65C-R6N17

12-port sector antenna, 4x 698–896 and 8x 1695–2360 MHz, 65° 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
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios
- 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
Band	Multiband
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, 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	2 female | 2 male
Input Voltage	10–30 Vdc
Internal RET	High band (4) | Low band (2)

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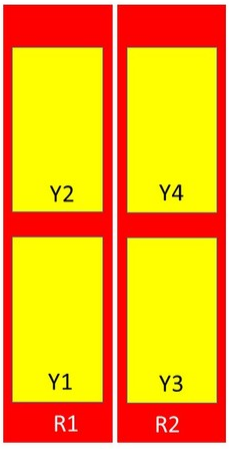
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Multi-RET)

Dimensions

Width	430 mm | 16.929 in
Depth	197 mm | 7.756 in
Length	2438 mm | 95.984 in
Net Weight, without mounting kit	42.2 kg | 93.035 lb

Array Layout



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

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2180**	**2300–2360**
Gain, dBi	14.9	15.7	16.4	17.2	17.6	17.7
Beamwidth, Horizontal, degrees	59	55	65	64	62	63
Beamwidth, Vertical, degrees	9.7	8.5	8	7.4	7	6.2
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	18	19	16	16	18	22
Front-to-Back Ratio at 180°, dB	29	29	32	34	34	32
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

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2180**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.5	15.4	15.7	16.8	17.1	17.4
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.3	±0.8	±0.7	±0.5	±0.5
Gain by Beam Tilt, average, dBi	2 ° | 14.5 7 ° | 14.6 12 ° | 14.4	2 ° | 15.3 7 ° | 15.5 12 ° | 15.3	2 ° | 15.5 7 ° | 15.9 12 ° | 15.7	2 ° | 16.5 7 ° | 16.9 12 ° | 16.7	2 ° | 16.9 7 ° | 17.3 12 ° | 17.0	2 ° | 17.2 7 ° | 17.4 12 ° | 17.4
Beamwidth, Horizontal Tolerance, degrees	±8.6	±5.5	±7.1	±4.9	±5.4	±5.9
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.5	±0.5	±0.4	±0.6	±0.2
USLS, beampeak to 20° above beampeak, dB	17	17	13	15	16	15
Front-to-Back Total Power at 180° ± 30°, dB	22	22	27	29	29	27
CPR at Boresight, dB	25	24	16	21	20	19
CPR at Sector, dB	12	10	9	10	8	11

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.61 m² | 6.566 ft²
Effective Projective Area (EPA), lateral	0.32 m² | 3.444 ft²
Mechanical Tilt Range	0°–12°
Wind Loading @ Velocity, frontal	651.0 N @ 150 km/h (146.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	339.0 N @ 150 km/h (76.2 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,052.0 N @ 150 km/h (236.5 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	1,182.0 N @ 150 km/h (265.7 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	530 mm | 20.866 in
Depth, packed	349 mm | 13.74 in
Length, packed	2620 mm | 103.15 in

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Weight, gross	55.2 kg | 121.695 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.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance