NNH4-65C-R6H4

12-port sector antenna, 4x 698–896 and 8x 1695–2360 MHz, 65° HPBW, 6x RET.

- Optimized for rooftop applications – Heavily suppressed lower sidelobes for elevation pattern
- 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
- 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
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, 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 (8) | Low band (4)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W

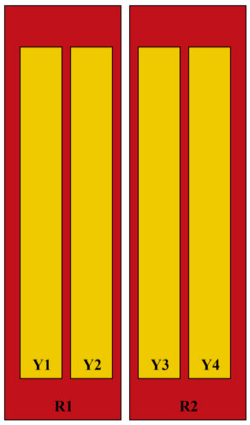
NNH4-65C-R6H4

Protocol	3GPP/AISG 2.0 (Multi-RET)

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	2438 mm | 95.984 in
Net Weight, antenna only	48.4 kg | 106.704 lb

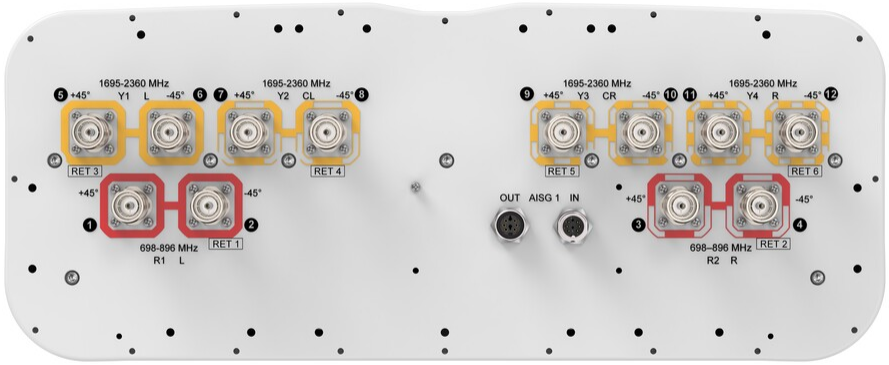
Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG RET UID
R1	698-896	1 - 2	1	ANxxxxxxxxxxxxxx1
R2	698-896	3 - 4	2	ANxxxxxxxxxxxxxx2
Y1	1695-2360	5 - 6	3	ANxxxxxxxxxxxxxx3
Y2	1695-2360	7 - 8	4	ANxxxxxxxxxxxxxx4
Y3	1695-2360	9 - 10	5	ANxxxxxxxxxxxxxx5
Y4	1695-2360	11 - 12	6	ANxxxxxxxxxxxxxx6

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

Port Configuration



Electrical Specifications

Impedance	50 ohm

NNH4-65C-R6H4

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,Y3,Y4	Y1,Y2,Y3,Y4	Y1,Y2,Y3,Y4	Y1,Y2,Y3,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	14.9	15.6	17.1	17.7	18.2	18.3
Beamwidth, Horizontal, degrees	71	65	69	67	63	58
Beamwidth, Vertical, degrees	11	9.2	5.6	5.2	5	4.5
Beam Tilt, degrees	0–10	0–10	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	12	11	19	20	22	24
Front-to-Back Ratio at 180°, dB	31	30	35	35	36	35
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	300	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	15.3	16.7	17.2	17.7	17.9
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.5	±0.6	±0.6	±0.6	±0.5
Beamwidth, Horizontal Tolerance, degrees	±7.4	±2.3	±7.9	±8.1	±6.3	±4.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.6	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	12	11	16	16	16	14
Front-to-Back Total Power at 180° ± 30°, dB	23	23	27	26	27	28

CPR at Boresight, dB	21	23	20	21	20	18
CPR at Sector, dB	11	10	9	8	8	6

Mechanical Specifications

Wind Loading @ Velocity, frontal	954.0 N @ 150 km/h (214.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	331.0 N @ 150 km/h (74.4 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,235.0 N @ 150 km/h (277.6 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	785.0 N @ 150 km/h (176.5 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm | 22.244 in
Depth, packed	309 mm | 12.165 in
Length, packed	2625 mm | 103.347 in
Weight, gross	63.1 kg | 139.112 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