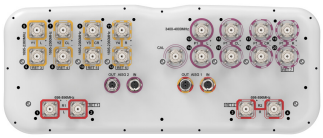
NNH4S4-65D-R7



20-port sector antenna, 4x 698–896, 8x 1695–2360 MHz, 65° HPBW and 8x 3400-4000 MHz, 90° HPBW, 7x RET

- Multi-band FDD antenna featuring C-Band 8T8R functionality
- The C-band RET is factory set to AISG2. All other RET are assigned to AISG1
- Feature the same dimensions as existing 8 and 12-port FDD capable antennas
- New endcap designs provide improved wind loading performance

General Specifications

Antenna Type	Sector and beamforming
Band	Multiband
Calibration Connector Interface	4.3-10 Female
Calibration Connector Quantity	1
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
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	8
RF Connector Quantity, low band	4
RF Connector Quantity, total	20

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 (1) | Low band (2) | Mid band (4)
Power Consumption, active state, maximum	8 W

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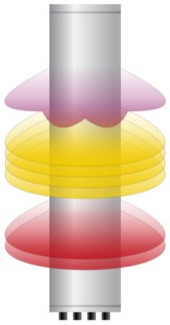
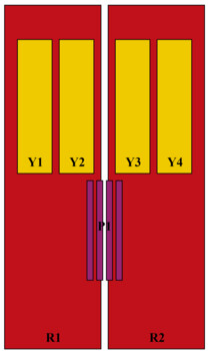
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0 (Multi-RET)

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	2688 mm | 105.827 in
Net Weight, without mounting kit	57 kg | 125.663 lb
TDD Column Spacing	41 mm | 1.614 in

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
Y3	1695-2360	9 - 10	5	AISG1	CPxxxxxxxxxxxxMM.5
Y4	1695-2360	11 - 12	6	AISG1	CPxxxxxxxxxxxxMM.6
P1	3400-4200	13 - 20	7	AISG2	CPxxxxxxxxxxxxMM.1

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

Port Configuration

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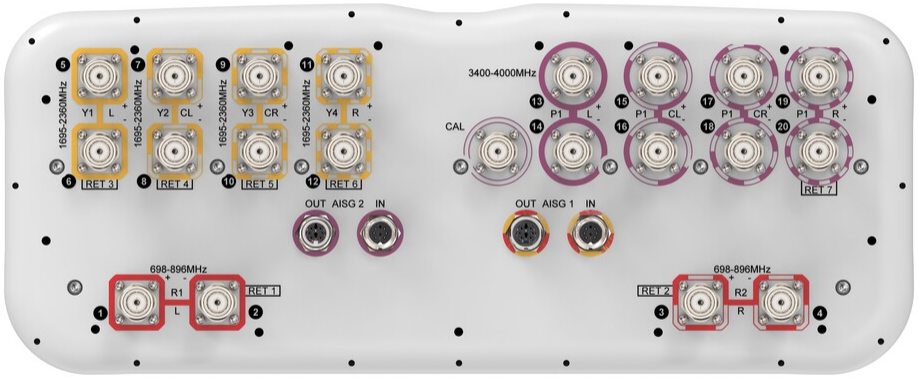

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 3400 – 4000 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**	**3400–3800**	**3700–4000**
Gain, dBi	15.8	16.5	16.4	17.2	17.8	18	16.4	16.6
Beamwidth, Horizontal, degrees	70	63	73	66	61	58	86	73
Beamwidth, Vertical, degrees	8.8	7.8	6.1	5.8	5.5	5	6.1	5.8
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	0–10	0–10
USLS (First Lobe), dB	16	16	16	17	17	17	15	15
Front-to-Back Ratio at 180°, dB	29	29	33	31	31	33	28	29
Coupling level, Amp, Antenna port to Cal port, dB							26	26

Coupling level, max Amp Δ, Antenna port to Cal port, dB							±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB							0.9	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees							7	7
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25
Isolation, Co-polarization, dB							19	19
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	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-145	-145
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	250	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**3400–3800**	**3700–4000**
Gain, dBi	18	18.7
Beamwidth, Horizontal, degrees	73	65
Beamwidth, Vertical, degrees	6.1	5.8
Front-to-Back Total Power at 180° ± 30°, dB	24	25
USLS (First Lobe), dB	16	17

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**3400–3800**	**3700–4000**
Gain, dBi	21	21.2

Electrical Specifications, Service Beam

Frequency Band, MHz	**3400–3800**	**3700–4000**
Steered 0° Gain, dBi	20.8	21.1
Steered 0° Beamwidth, Horizontal, degrees	25	26
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	30
Steered 0° Horizontal Sidelobe, dB	14	14
Steered 0° USLS (First Lobe),	17	17

dB		
Steered 30° Gain, dBi	19.8	20.5
Steered 30° Beamwidth, Horizontal, degrees	30	25
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	26	27

Electrical Specifications, Soft Split

Frequency Band, MHz	**3400–3800**	**3700–4000**
Gain, dBi	19.8	20.2
Beamwidth, Horizontal, degrees	30	27
Front-to-Back Total Power at 180° ± 30°, dB	27	27
Horizontal Sidelobe, dB	15	15
USLS (First Lobe), dB	16	16

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.91 m² | 9.795 ft²
Effective Projective Area (EPA), lateral	0.29 m² | 3.122 ft²
Wind Loading @ Velocity, frontal	970.0 N @ 150 km/h (218.1 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	304.0 N @ 150 km/h (68.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,162.0 N @ 150 km/h (261.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	667.0 N @ 150 km/h (149.9 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm | 22.244 in
Depth, packed	368 mm | 14.488 in
Length, packed	2874 mm | 113.15 in
Weight, gross	78.9 kg | 173.945 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

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UK-ROHS	Compliant/Exempted

Included Products

BSAMNT-4	–	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-M4	–	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