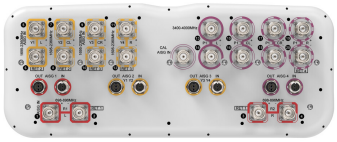
NNH4S4-65B-R4B-V1



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

- Multi-band FDD antenna featuring C-Band 8T8R functionality
- Includes a separate RET for C-band array
- 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
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, 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	4 female | 4 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) | Low band (2)

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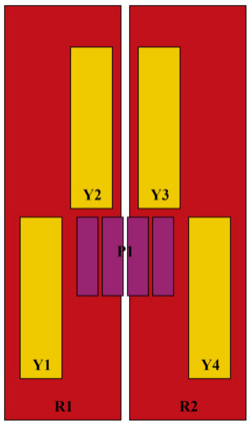
Protocol	3GPP/AISG 2.0

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	1848 mm | 72.756 in
Net Weight, antenna only	41.1 kg | 90.61 lb

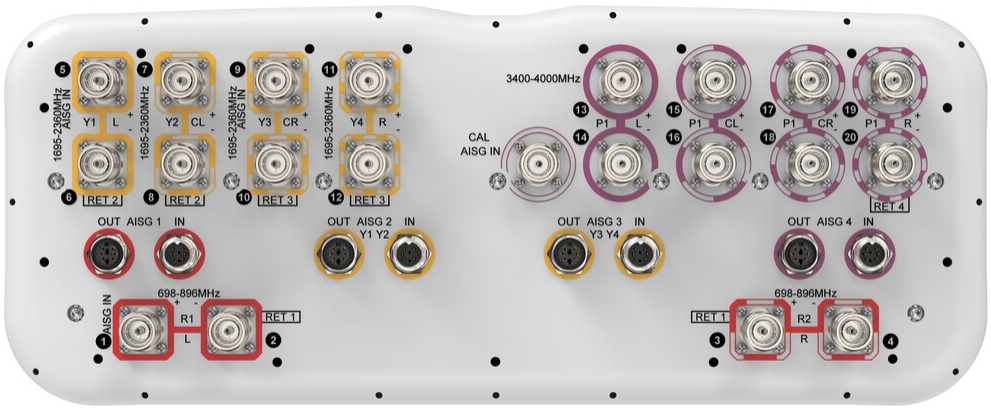
Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxR1
R2	698-896	3 - 4			
Y1	1695-2360	5 - 6	2	AISG2	CPxxxxxxxxxxxxxxxY1
Y2	1695-2360	7 - 8			
Y3	1695-2360	9 - 10	3	AISG3	CPxxxxxxxxxxxxxxxY3
Y4	1695-2360	11 - 12			
P1	3400-4000	13 - 20	4	AISG4	CPxxxxxxxxxxxxxxxP1

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

Port Configuration



Electrical Specifications

NNH4S4-65B-R4B-V1

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 3400 – 4000 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,500 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2180**	**2300–2360**	**3400–3550**	**3700–4000**
Gain, dBi	14.3	15	15.5	16	16.5	16.7	15.6	16.3
Beamwidth, Horizontal, degrees	73	65	67	66	62	60	91	74
Beamwidth, Vertical, degrees	12.1	10.5	9.2	8.7	8.3	7.4	6.2	5.6
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12	0–10	0–10
USLS (First Lobe), dB	19	18	17	17	18	21	16	15
Front-to-Back Ratio at 180°, dB	30	27	34	34	36	36	30	31
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	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	-153	-153	-153	-153	-153	-153	-145	-145
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	200	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**3400–3550**	**3700–4000**
Gain, dBi	17.2	18.4
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	6.1	5.7

USLS (First Lobe), dB	18	21

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**3400–3550**	**3700–4000**
Gain, dBi	20.6	21

Electrical Specifications, Service Beam

Frequency Band, MHz	**3400–3550**	**3700–4000**
Steered 0° Gain, dBi	20.6	20.9
Steered 0° Beamwidth, Horizontal, degrees	24	24
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	31
Steered 0° Horizontal Sidelobe, dB	13	12
Steered 30° Gain, dBi	19.1	20
Steered 30° Beamwidth, Horizontal, degrees	32	26

Electrical Specifications, Soft Split

Frequency Band, MHz	**3400–3550**	**3700–4000**
Gain, dBi	18.9	19.9
Beamwidth, Horizontal, degrees	37	27
Front-to-Back Total Power at 180° ± 30°, dB	27	29
Horizontal Sidelobe, dB	14	12

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.59 m² | 6.351 ft²
Effective Projective Area (EPA), lateral	0.18 m² | 1.938 ft²
Wind Loading @ Velocity, frontal	629.0 N @ 150 km/h (141.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	191.0 N @ 150 km/h (42.9 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	755.0 N @ 150 km/h (169.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	433.0 N @ 150 km/h (97.3 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

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Width, packed	565 mm | 22.244 in
Depth, packed	309 mm | 12.165 in
Length, packed	2035 mm | 80.118 in
Weight, gross	54.9 kg | 121.034 lb

Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
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-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.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance