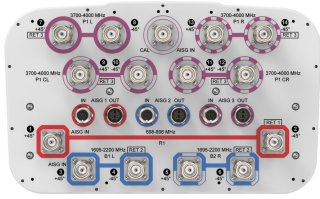


NHHS4-65B-R3B



14 Port Sector Antenna, 2x698-896 MHz, 4x1695-2200 MHz 65° HPBW, and 8x3700-4000 MHz Beamformer, 3XRET

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	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	14

Remote Electrical Tilt (RET) Information

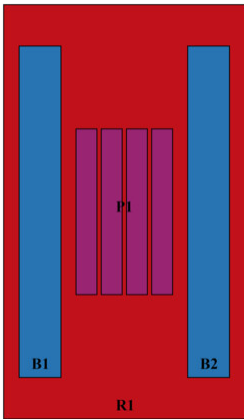
RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	3 female 3 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Cal Port Port 1 Port 3
Internal RET	High band (1) Low band (1) Mid band (1)
Protocol	3GPP/AISG 2.0 (Single RET)

NHHS4-65B-R3B

Dimensions

Width	350 mm 13.78 in
Depth	208 mm 8.189 in
Length	1828 mm 71.969 in
Net Weight, antenna only	27 kg 59.525 lb

Array Layout

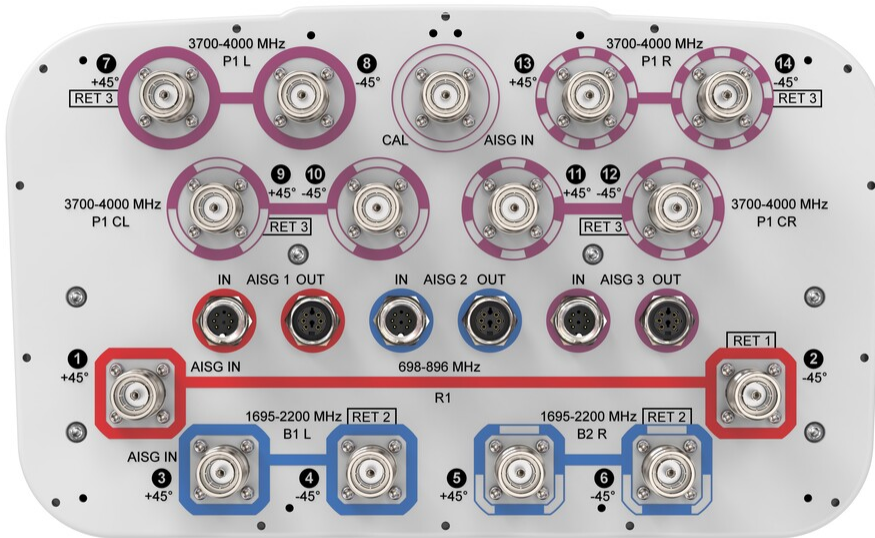


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG RET UID
R1	698-896	1 - 2	1	CPxxxxxxxxxxxxR1
B1	1695-2200	3 - 4	2	CPxxxxxxxxxxxxB1
B2	1695-2200	5 - 6		
P1	3700-4000	7 - 14	3	CPxxxxxxxxxxxxP1

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

Port Configuration

NHHS4-65B-R3B



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2200 MHz 3700 – 4000 MHz 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,040 W @ 50 °C

Electrical Specifications

	R1	R1	B1,B2	B1,B2	B1,B2	P1
Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3700–4000
RF Port	1-2	1-2	3-6	3-6	3-6	7-14
Gain, dBi	15	15.1	17.7	18.1	18.2	15.9
Beamwidth, Horizontal, degrees	66	64	63	61	64	85
Beamwidth, Vertical, degrees	11.5	10.4	5.6	5.3	5	5.7
USLS (First Lobe), dB	15	15	17	20	21	13
Front-to-Back Ratio at 180°, dB	37	34	34	35	33	30
Coupling level, Amp, Antenna						26

NHHS4-65B-R3B

port to Cal port, dB

Coupling level, max Amp Δ , Antenna port to Cal port, dB ± 2

Coupler, max Amp Δ , Antenna port to Cal port, dB 0.5

Coupler, max Phase Δ , Antenna port to Cal port, degrees 5

Isolation, Cross Polarization, dB 25 25 25 25 25 25

Isolation, Inter-band, dB 25 25 25 25 25 25

Isolation, Co-polarization, dB 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

PIM, 3rd Order, 2 x 20 W, dBc -153 -153 -153 -153 -153 -145

Input Power per Port at 50°C, maximum, watts 300 300 250 250 250 75

Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3700–4000
Gain by all Beam Tilts, average, dBi	14.7	14.9	17.4	17.9	17.9	15.2
Gain by all Beam Tilts Tolerance, dB	± 0.5	± 0.3	± 0.7	± 0.2	± 0.3	± 0.9
Beamwidth, Horizontal Tolerance, degrees	± 3	± 1	± 4	± 3	± 5	± 19
Beamwidth, Vertical Tolerance, degrees	± 0.7	± 0.7	± 0.3	± 0.2	± 0.3	± 0.5
Front-to-Back Total Power at 180° \pm 30°, dB	27	25	26	28	27	22
CPR at Boresight, dB	23	19	18	21	23	14
CPR at Sector, dB	14	9	11	11	11	5

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3700–4000
Gain, dBi	16.8
Beamwidth, Horizontal, degrees	65
Beamwidth, Vertical, degrees	5.7
Beamwidth, Vertical Tolerance, degrees	± 0.3

NHHS4-65B-R3B

**Front-to-Back Total Power at
180° ± 30°, dB** 25

USLS (First Lobe), dB 15

Electrical Specifications, Envelope Pattern

Frequency Band, MHz 3700–4000

Gain, dBi 20.5

Electrical Specifications, Service Beam

Frequency Band, MHz 3700–4000

Steered 0° Gain, dBi 20.5

Steered 0° Gain Tolerance, dBi ±0.5

**Steered 0° Beamwidth,
Horizontal, degrees** 22

**Steered 0° Front-to-Back
Total Power at 180° ± 30°, dB** 29

**Steered 0° Horizontal
Sidelobe, dB** 12

Steered 30° Gain, dBi 19.5

**Steered 30° Gain Tolerance,
dBi** ±0.9

**Steered 30° Beamwidth,
Horizontal, degrees** 28

**Steered 30° Front-to-Back
Total Power at 180° ± 30°, dB** 26

Electrical Specifications, Soft Split

Frequency Band, MHz 3700–4000

Gain, dBi 18.9

**Beamwidth, Horizontal,
degrees** 32

**Front-to-Back Total Power at
180° ± 30°, dB** 26

Horizontal Sidelobe, dB 16

Mechanical Specifications

Wind Loading @ Velocity, frontal 301.0 N @ 150 km/h (67.7 lbf @ 150 km/h)

Wind Loading @ Velocity, lateral 254.0 N @ 150 km/h (57.1 lbf @ 150 km/h)

Wind Loading @ Velocity, maximum 638.0 N @ 150 km/h (143.4 lbf @ 150 km/h)

NHHS4-65B-R3B

Wind Loading @ Velocity, rear	319.0 N @ 150 km/h (71.7 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	456 mm 17.953 in
Depth, packed	357 mm 14.055 in
Length, packed	1975 mm 77.756 in
Weight, gross	39.7 kg 87.523 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-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