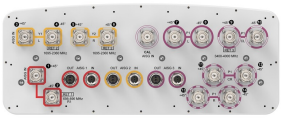
NHHS4-45C-R3B



14 Port Sector Antenna, 2x 698-896 MHz, 4x 1695-2360 MHz 45° HPBW, and 8x 3400-3550/3700-4000 MHz Beamformer, 3x RETs and 3x SBTs

- Narrow beamwidth capacity antenna for higher level of densification and enhanced data throughput
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Separate RS-485 RET input/output for low and high band
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x Rx or 4x MIMO

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

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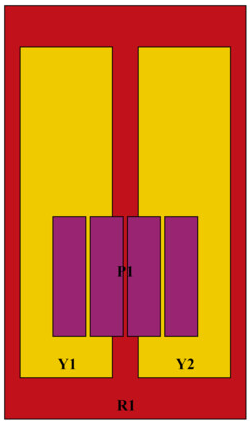
RET Interface, quantity	3 female | 3 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Cal Port | Port 1 | Port 3
Internal RET	High band (1) | Low band (1) | Mid band (1)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	457 mm | 17.992 in
Depth	178 mm | 7.008 in
Length	2437 mm | 95.945 in
Net Weight, antenna only	44.5 kg | 98.106 lb

Array Layout



Array ID	Frequency (MHz)	RF Connector	HPBW	RET (SRET)	AISG No.	RET UID
R1	698-896	1 - 2	45°	1	AISG1	CPxxxxxxxxxxxxxxR1
Y1	1695-2360	3 - 4	45°	2	AISG2	CPxxxxxxxxxxxxxxY1
Y2	1695-2360	5 - 6	45°			
P1	3400-4000	7 - 14	BF°	3	AISG3	CPxxxxxxxxxxxxxxP1

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

Port Configuration

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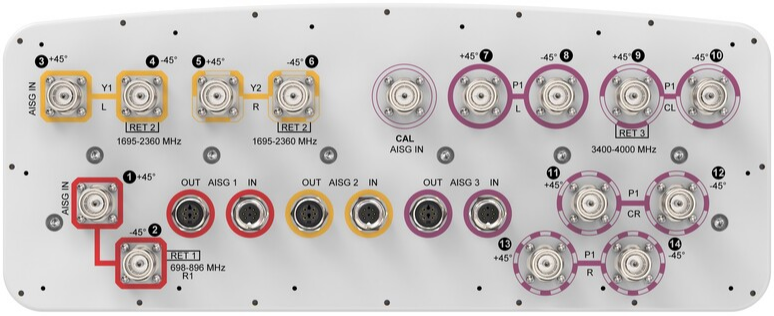

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 3400 – 4000 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,040 W @ 50 °C

Electrical Specifications

	R1	R1	Y1,Y2	Y1,Y2	Y1,Y2	Y1,Y2	P1	P1
Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**	**3400–3550**	**3700–4000**
RF Port	1,2	1,2	3-6	3-6	3-6	3-6	7-14	7-14
Gain, dBi	18	18.6	19.2	19.7	20.1	20.5	15.7	15.9
Beamwidth, Horizontal, degrees	45	40	44	43	42	39	92	87
Beamwidth, Vertical, degrees	9.7	8.7	5.9	5.5	5.2	4.7	6.5	6.2
Beam Tilt, degrees	0–10	0–10	0–8	0–8	0–8	0–8	0–10	0–10
USLS (First Lobe), dB	20	16	21	22	23	26	19	16
Front-to-Back Ratio at 180°, dB	31	35	36	36	34	35	27	27

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	28	28	28	28	28	28	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	-153	-153	-153	-153	-153	-153	-145	-145
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	250	50	50

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**3400–3550**	**3700–4000**
Gain, dBi	17.8	18.7
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	6.6	6.3
Front-to-Back Total Power at 180° ± 30°, dB	24	26
USLS (First Lobe), dB	21	19

Electrical Specifications, Broadcast 45°

Frequency Band, MHz	**3400–3550**	**3700–4000**
Beamwidth, Vertical, degrees	6.6	6.3
Front-to-Back Total Power at 180° ± 30°, dB	25	25
USLS (First Lobe), dB	20	18

Electrical Specifications, Service Beam

Frequency Band, MHz	**3400–3550**	**3700–4000**
Steered 0° Gain, dBi	20.8	21.2
Steered 0° Beamwidth,	25	25

Horizontal, degrees		
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	29	29
Steered 0° Horizontal Sidelobe, dB	15	14
Steered 0° USLS (First Lobe), dB	23	21
Steered 30° Gain, dBi	19.7	20.7
Steered 30° Beamwidth, Horizontal, degrees	31	25
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	26	27

Electrical Specifications, Soft Split

Frequency Band, MHz	**3400–3550**	**3700–4000**
Gain, dBi	20.1	20.6
Front-to-Back Total Power at 180° ± 30°, dB	27	28
Horizontal Sidelobe, dB	17	
USLS (First Lobe), dB	23	21

Mechanical Specifications

Wind Loading @ Velocity, frontal	1,485.0 N @ 150 km/h (333.8 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	315.0 N @ 150 km/h (70.8 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,485.0 N @ 150 km/h (333.8 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	1,304.0 N @ 150 km/h (293.2 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	526 mm | 20.709 in
Depth, packed	283 mm | 11.142 in
Length, packed	2604 mm | 102.52 in
Weight, gross	63.5 kg | 139.993 lb

Regulatory Compliance/Certifications

Agency	**Classification**
CHINA-ROHS	Above maximum concentration value

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ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

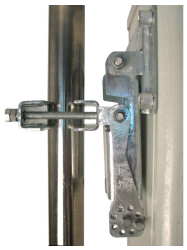
Included Products

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.
BSAMNT-M	–	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

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.

Product Classification

Product Type	Downtilt mounting kit

General Specifications

Application	Outdoor
Color	Silver

Dimensions

Compatible Diameter, maximum	115 mm | 4.528 in
Compatible Diameter, minimum	60 mm | 2.362 in
Weight, net	6.2 kg | 13.669 lb

Material Specifications

Material Type	Galvanized steel

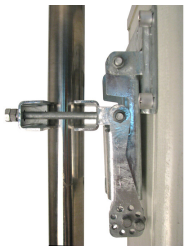
Packaging and Weights

Included	Brackets | Hardware
Packaging quantity	1
Weight, gross	6.4 kg | 14.11 lb

Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.andrew.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

BSAMNT-M



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.

Product Classification

Product Type	Downtilt mounting kit

General Specifications

Application	Outdoor
Color	Silver

Dimensions

Compatible Diameter, maximum	115 mm | 4.528 in
Compatible Diameter, minimum	60 mm | 2.362 in
Weight, net	4.5 kg | 9.921 lb

Material Specifications

Material Type	Galvanized steel

Packaging and Weights

Included	Brackets | Hardware
Packaging quantity	1

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.andrew.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant