2NN2HH-33B-R4

16-port multibeam antenna, 8x 698–896 MHz, 2x 2-beam 33° HPBW and 8x 1695–2400 MHz, 2x 2-beam 33° HPBW, 4x RET

- Provides 4T4R capability in low and mid bands
- Full spectrum operation for Band 14, AWS, PCS and WCS bands
- Twin beam patterns are optimized for minimum beam crossover providing for improved LTE data throughput
- Excellent Front-to-Back and SPR performance

General Specifications

Antenna Type	Multibeam
Band	Multiband
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	0
RF Connector Quantity, mid band	8
RF Connector Quantity, low band	8
RF Connector Quantity, total	16

Remote Electrical Tilt (RET) Information

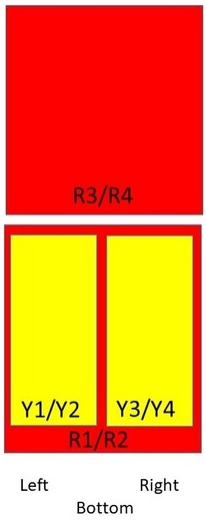
RET Hardware	CommRET v2
RET Interface	AISG1 8-pin DIN Female | AISG1 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (2) | Low band (2)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Multi-RET)

2NN2HH-33B-R4

Dimensions

Width	640 mm | 25.197 in
Depth	235 mm | 9.252 in
Length	1828 mm | 71.969 in
Net Weight, antenna only	57 kg | 125.663 lb

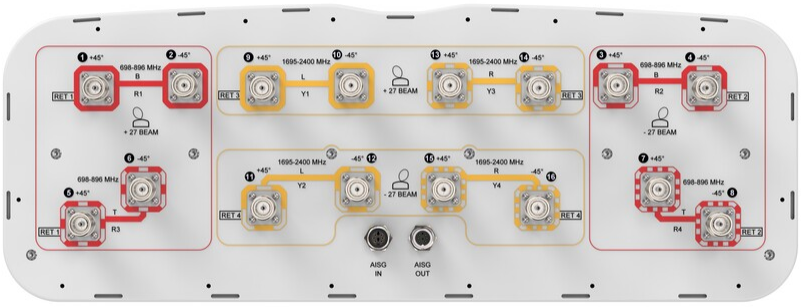
Array Layout



Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxMM1
R3	698-896	5-6		
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxMM2
R4	698-896	7-8		
Y1	1695-2400	9-10	3	CPxxxxxxxxxxxxxxxMM3
Y3	1695-2400	13-14		
Y2	1695-2400	11-12	4	CPxxxxxxxxxxxxxxxMM4
Y4	1695-2400	15-16		

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

Port Configuration



Electrical Specifications

2NN2HH-33B-R4

Impedance	50 ohm
Operating Frequency Band	1695 – 2400 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,500 W @ 50 °C

Electrical Specifications

	R1-R4	R1-R4	Y1-Y6	Y1-Y6	Y1-Y6	Y1-Y6
Frequency Band, MHz	**698–806**	**824–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2400**
RF Port	1-8	1-8	9-16	9-16	9-16	9-16
Gain, dBi	13.7	14.8	17.7	18.3	19.1	19.1
Beam Centers, Horizontal, degrees	±27	±27	±27	±27	±27	±27
Beamwidth, Horizontal, degrees	42	35	35	33	32	28
Beamwidth, Vertical, degrees	23.7	21.5	7.7	7.3	6.9	6.3
Beam Tilt, degrees	2–20	2–20	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	15	17	16	17	18	22
Front-to-Back Ratio at 180°, dB	26	29	36	37	36	34
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25
Isolation, Beam to Beam, dB	17	17	17	17	17	17
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	-153
Input Power per Port at 50°C, maximum, watts	200	200	200	200	200	150

Mechanical Specifications

Wind Loading @ Velocity, frontal	764.0 N @ 150 km/h (171.8 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	251.0 N @ 150 km/h (56.4 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,039.0 N @ 150 km/h (233.6 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	787.0 N @ 150 km/h (176.9 lbf @ 150 km/h)
Wind Speed, maximum	241.4 km/h (150 mph)

Packaging and Weights

2NN2HH-33B-R4

Width, packed	752 mm | 29.606 in
Depth, packed	387 mm | 15.236 in
Length, packed	1982 mm | 78.032 in
Weight, gross	74 kg | 163.142 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant
UK-ROHS	Compliant

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.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance