

# 2H-33A-R2



4-port multibeam antenna, 4x 1695–2400 MHz, 2x 38° HPBW, 2x RET

- Enhances network capacity through six sectors site application with only three antenna faces
- Maximizes frequency spectrum utilization to increase Average Revenue Per User (ARPU)
- Reduces antenna count to minimize Cap-Ex and Op-Ex costs
- High gain with excellent sector edge roll-off and azimuth sidelobe suppression
- Each antenna downtilt can be independently adjusted for greater flexibility in network optimization

## General Specifications

<b>Antenna Type</b>	Multibeam
<b>Band</b>	Single band
<b>Color</b>	Light gray
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, total</b>	4

## Remote Electrical Tilt (RET) Information, General

<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male

## Dimensions

<b>Width</b>	350 mm   13.78 in
<b>Length</b>	1400 mm   55.118 in
<b>Depth</b>	208 mm   8.189 in

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## Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
B1	1695-2400	1-2	1	CPxxxxxxxxxxxxxxxxxB1
B2	1695-2400	3-4	2	CPxxxxxxxxxxxxxxxxxB2

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

## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2400 MHz
<b>Polarization</b>	±45°

## Remote Electrical Tilt (RET) Information, Electrical

<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Power Consumption, normal conditions, maximum</b>	13 W
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (2)

## Electrical Specifications

Frequency Band, MHz	1695–1880	1850–1990	1920–2180	2300–2400
<b>Gain, dBi</b>	19.1	19.6	19.9	19.1
<b>Beam Centers, Horizontal, degrees</b>	±27	±27	±27	±27
<b>Beamwidth, Horizontal, degrees</b>	38	35.8	34	30
<b>Beamwidth, Vertical, degrees</b>	7.5	7	6.5	5.9
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	20	20	19	18

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<b>Front-to-Back Ratio at 180°, dB</b>	34	37	37	30
<b>Isolation, Cross Polarization, dB</b>	28	28	28	28
<b>Isolation, Inter-band, dB</b>	16	16	16	16
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150
<b>Input Power per Port, maximum, watts</b>	250	250	250	250

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2180</b>	<b>2300–2400</b>
<b>Gain by all Beam Tilts, average, dBi</b>	18.7	19.3	19.6	18.7
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.4	±0.6	±0.6
<b>Gain by Beam Tilt, average, dBi</b>	2° 18.6 7° 18.8 12° 18.6	2° 19.1 7° 19.4 12° 19.2	2° 19.5 7° 19.8 12° 19.0	2° 19.0 7° 18.8 12° 18.3
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.3	±1.3	±2.2	±1.7
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.4	±0.3	±0.5	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	14	15	15	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	28	29	27	24
<b>CPR at Boresight, dB</b>	23	24	19	13

## Mechanical Specifications

<b>Wind Loading at Velocity, frontal</b>	221.0 N @ 150 km/h   49.7 lbf @ 150 km/h
<b>Wind Loading at Velocity, lateral</b>	185.0 N @ 150 km/h   41.6 lbf @ 150 km/h
<b>Wind Loading at Velocity, maximum</b>	105.4 lbf @ 150 km/h   469.0 N @ 150 km/h
<b>Wind Loading at Velocity, rear</b>	234.0 N @ 150 km/h   52.6 lbf @ 150 km/h
<b>Wind Speed, maximum</b>	241 km/h   149.75 mph

## Packaging and Weights

<b>Width, packed</b>	447 mm   17.598 in
<b>Depth, packed</b>	354 mm   13.937 in
<b>Length, packed</b>	1544 mm   60.787 in
<b>Net Weight, without mounting kit</b>	17.6 kg   38.801 lb
<b>Weight, gross</b>	30 kg   66.139 lb

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## 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



## 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