

# 2HH-38A-R4-V2



8-port multibeam antenna, 8x 1695–2200 MHz, 4x 38° HPBW, 4x 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 (RAL 7035)
<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>	8
<b>RF Connector Quantity, total</b>	8

## Remote Electrical Tilt (RET) Information

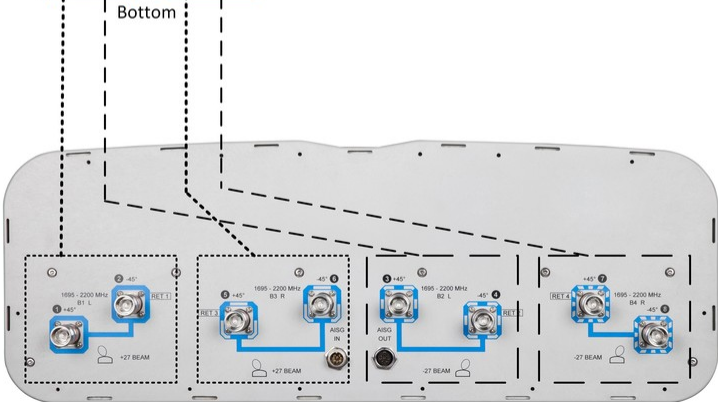
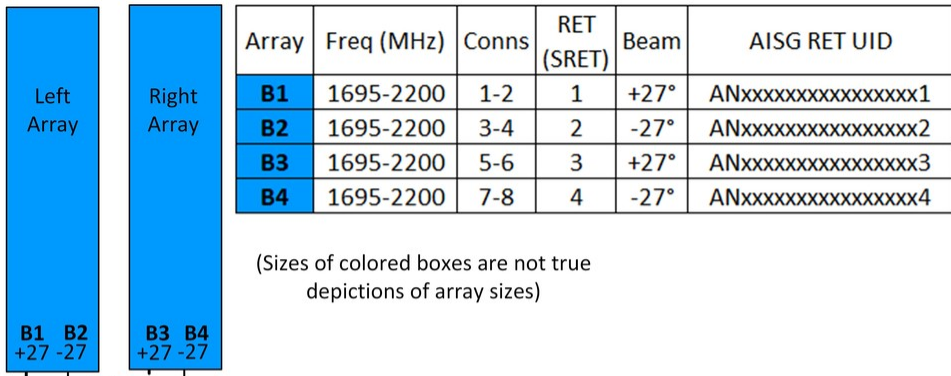
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (4)
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Power Consumption, normal conditions, maximum</b>	10 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

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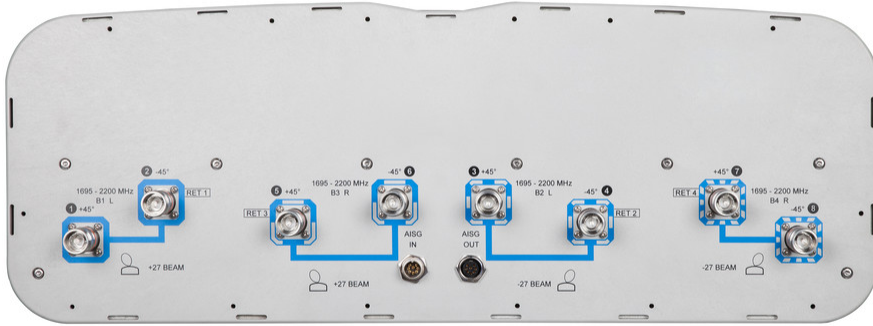
<b>Width</b>	640 mm   25.197 in
<b>Depth</b>	235 mm   9.252 in
<b>Length</b>	1224 mm   48.189 in
<b>Net Weight, without mounting kit</b>	29.7 kg   65.477 lb

## Array Layout



## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2200 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	1695–1880	1850–1990	1920–2200
<b>Gain, dBi</b>	19.3	19.7	20
<b>Beam Centers, Horizontal, degrees</b>	±27	±27	±27
<b>Beamwidth, Horizontal, degrees</b>	38	35.8	34
<b>Beamwidth, Vertical, degrees</b>	7.7	7.3	6.8
<b>Beam Tilt, degrees</b>	2–10	2–10	2–10
<b>Horizontal Sidelobe, dB</b>	24	24	23
<b>USLS (First Lobe), dB</b>	24	24	24
<b>Front-to-Back Ratio at 180°, dB</b>	36	36	34
<b>Isolation, Cross Polarization, dB</b>	30	30	30
<b>Isolation, Inter-band, dB</b>	17	17	17
<b>VSWR   Return loss, dB</b>	1.43   15.0	1.43   15.0	1.43   15.0

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<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	200	200	200

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2200</b>
<b>Gain by all Beam Tilts, average, dBi</b>	18.9	19.4	19.6
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.4	±0.7
<b>Gain by Beam Tilt, average, dBi</b>	2°   18.8 6°   19.0 10°   18.9	2°   19.3 6°   19.5 10°   19.4	2°   19.8 6°   19.7 10°   19.2
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.6	±1.7	±3.2
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.4	±0.3	±0.6
<b>USLS, beampeak to 20° above beampeak, dB</b>	18	19	19
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	28	29	28
<b>CPR at Boresight, dB</b>	21	22	21
<b>CPR at Sector, dB</b>	11	13	12

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	505.0 N @ 150 km/h (113.5 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	156.0 N @ 150 km/h (35.1 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	688.0 N @ 150 km/h (154.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	520.0 N @ 150 km/h (116.9 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	752 mm   29.606 in
<b>Depth, packed</b>	387 mm   15.236 in
<b>Length, packed</b>	1379 mm   54.291 in
<b>Weight, gross</b>	44.1 kg   97.224 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

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## 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