

# RRYYHHTTS4-65AR7V4



24-port sector antenna, 4x 694–960, 4x 1427–1518, 4x 1695–2180, 4x 2490–2690 65° HPBW and 8x 3300–3800 MHz, 7x RET

- Integrated with a calibration board
- Optimized for Software Defined Split 6 Sector applications
- 2 columns for 694-960 MHz and 2 columns for 1427-1518 / 1695-2180 / 2490-2690 MHz and 4 columns for 3300-3800 MHz
- Seven internal RETs control the antenna arrays
- MQ4/MQ5 cluster connector for 3.3-3.8GHz, equipped with calibration port

## General Specifications

<b>Antenna Type</b>	Sector- and beamforming
<b>Band</b>	Multiband
<b>Calibration Connector Interface</b>	MQ5
<b>Calibration Connector Quantity</b>	1
<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
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female   MQ4   MQ5
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	8
<b>RF Connector Quantity, mid band</b>	12
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	24

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<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 (1)   Low band (2)   Mid band (4)

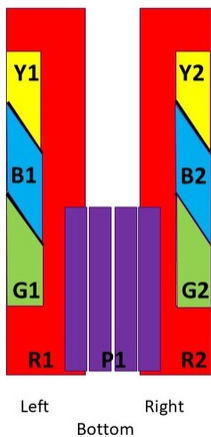
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<b>Power Consumption, active state, maximum</b>	8 W
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Protocol</b>	3GPP/AISG 2.0

## Dimensions

<b>Width</b>	498 mm   19.606 in
<b>Depth</b>	197 mm   7.756 in
<b>Length</b>	1499 mm   59.016 in
<b>Net Weight, antenna only</b>	37.8 kg   83.335 lb
<b>TDD Column Spacing</b>	42 mm   1.654 in

## Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	694-960	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3-4	2	CPxxxxxxxxxxxxxxxxR2
G1	1427-1518	5-6	3	CPxxxxxxxxxxxxxxxxG1
G2	1427-1518	7-8		
B1	1695-2180	9-10	4	CPxxxxxxxxxxxxxxxxB1
B2	1695-2180	11-12	5	CPxxxxxxxxxxxxxxxxB2
Y1	2490-2690	13-14	6	CPxxxxxxxxxxxxxxxxY1
Y2	2490-2690	15-16		
P1	3300-3800	17-24	7	CPxxxxxxxxxxxxxxxxP1

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

COMMSCOPE

## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1427 – 1518 MHz   1695 – 2180 MHz   2496 – 2690 MHz   3300 – 3800 MHz   694 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	694–790	790–890	890–960	1427–1518	1695–2180	2490–2690	3300–3800
<b>Gain, dBi</b>	13.4	13.5	13.8	14.9	15.9	16.8	15.9
<b>Beamwidth, Horizontal, degrees</b>	60	60	60	59	68	57	91
<b>Beamwidth, Vertical, degrees</b>	17.2	15.8	15	8.1	6.5	4.9	6.5
<b>Beam Tilt, degrees</b>	2–16	2–16	2–16	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	21	17	17	17	17	16	16
<b>Front-to-Back Ratio at 180°, dB</b>	30	29	29	31	29	30	28
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>							26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>							±2

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Coupler, max Amp $\Delta$ , Antenna port to Cal port, dB							0.9
Coupler, max Phase $\Delta$ , Antenna port to Cal port, degrees							7
Isolation, Cross Polarization, dB	26	26	26	25	25	25	25
Isolation, Inter-band, dB	26	26	26	28	28	28	28
Isolation, Co-polarization, dB							20
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
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-130
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	150	75

## Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	890–960	1427–1518	1695–2180	2490–2690	3300–3800
Gain by all Beam Tilts, average, dBi	13.1	13.1	13.5	14.5	15.3	16.2	15.2
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.6	±0.4	±0.8	±0.8	±0.9	±0.8
Beamwidth, Horizontal Tolerance, degrees	±8.4	±6.8	±5.2	±5	±5.5	±4.6	±19.2
Beamwidth, Vertical Tolerance, degrees	±1.1	±1.2	±1.1	±0.5	±0.8	±0.3	±0.6
USLS, beampeak to 20° above beampeak, dB	16	16	15	13	15	13	14
Front-to-Back Total Power at 180° ± 30°, dB	20	19	21	24	23	25	21
CPR at Boresight, dB	20	19	19	13	18	16	15

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	<b>3300–3800</b>
Gain, dBi	16.5
Beamwidth, Horizontal, degrees	63
Beamwidth, Vertical, degrees	6.6
USLS (First Lobe), dB	17

## Electrical Specifications, Service Beam

Frequency Band, MHz	<b>3300–3800</b>
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<b>Steered 0° Gain, dBi</b>	20.6
<b>Steered 0° Beamwidth, Horizontal, degrees</b>	24
<b>Steered 0° Front-to-Back Total Power at 180° ± 30°, dB</b>	27
<b>Steered 0° Horizontal Sidelobe, dB</b>	15
<b>Steered 0° USLS (First Lobe), dB</b>	17
<b>Steered 30° Gain, dBi</b>	19.7
<b>Steered 30° Beamwidth, Horizontal, degrees</b>	27
<b>Steered 30° Front-to-Back Total Power at 180° ± 30°, dB</b>	26

## Electrical Specifications, Soft Split

<b>Frequency Band, MHz</b>	<b>3300–3800</b>
<b>Gain, dBi</b>	19.6
<b>Beamwidth, Horizontal, degrees</b>	32
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	26
<b>Horizontal Sidelobe, dB</b>	19
<b>USLS (First Lobe), dB</b>	18

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	498.0 N @ 150 km/h (112.0 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	148.0 N @ 150 km/h (33.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	597.0 N @ 150 km/h (134.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	342.0 N @ 150 km/h (76.9 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	565 mm   22.244 in
<b>Depth, packed</b>	309 mm   12.165 in
<b>Length, packed</b>	1686 mm   66.378 in
<b>Weight, gross</b>	50.7 kg   111.774 lb

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## 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