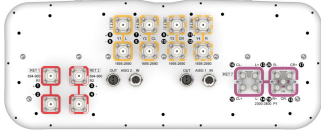


# RRV4Q4-65D-R7



20-port sector antenna, 4 x 694-960 MHz (R1-R2), and 8 x 1695-2690 MHz (Y1-Y4) 65° HPBW, 8 x 2300-3800 MHz (P1), 90° HPBW, 7 x RET

- Includes 1x 4-Column Array for 2300-3800MHz and calibration port. Column spacing optimized to support Soft Split Beamforming
- Q4 array uses M-LOC cluster connectors
- Seven internal RETs control the antenna arrays
- New aerodynamic endcaps for wind load optimization

## General Specifications

<b>Antenna Type</b>	Sector- and beamforming
<b>Band</b>	Multiband
<b>Calibration Connector Interface</b>	M-LOC
<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   M-LOC
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	8
<b>RF Connector Quantity, mid band</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	20

## 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>	2 female   2 male
<b>Input Voltage</b>	10-30 Vdc
<b>Internal RET</b>	High band (1)   Low band (2)   Mid band (4)
<b>Power Consumption, active state, maximum</b>	8 W

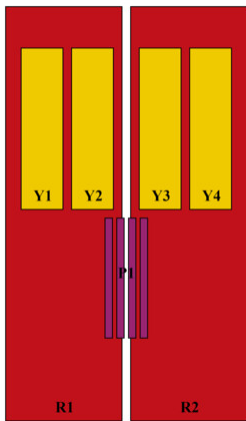
# RRV4Q4-65D-R7

**Power Consumption, idle state, maximum** 1 W  
**Protocol** 3GPP/AISG 2.0

## Dimensions

**Width** 498 mm | 19.606 in  
**Depth** 197 mm | 7.756 in  
**Length** 2688 mm | 105.827 in  
**Net Weight, antenna only** 44.5 kg | 98.106 lb  
**TDD Column Spacing** 58 mm | 2.283 in

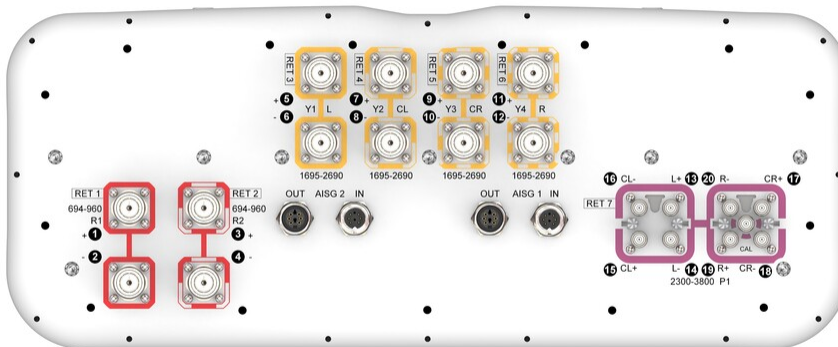
## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxxY4
P1	2300-3800	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxxP1

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

## Port Configuration



# RRV4Q4-65D-R7

## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2690 MHz   2300 – 3800 MHz   694 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

	<b>R1-R2</b>	<b>R1-R2</b>	<b>R1-R2</b>	<b>Y1-Y4</b>	<b>Y1-Y4</b>	<b>Y1-Y4</b>	<b>P1</b>	<b>P1</b>
<b>Frequency Band, MHz</b>	<b>694–790</b>	<b>790–890</b>	<b>890–960</b>	<b>1695–1920</b>	<b>1920–2200</b>	<b>2300–2690</b>	<b>2300–2690</b>	<b>3400–3800</b>
<b>RF Port</b>	1-4	1-4	1-4	5-12	5-12	5-12	13-20	13-20
<b>Gain, dBi</b>	15.8	16.2	16.4	15.8	17	17.6	15.9	16.6
<b>Gain at Mid Tilt, dBi</b>	15.6	16	16.3	15.6	16.7	17.4	15.2	16
<b>Beamwidth, Horizontal, degrees</b>	71	64	63	70	62	59	88	64
<b>Beamwidth, Vertical, degrees</b>	8.9	8	7.3	7.4	6.5	5.4	6	5.1
<b>Beam Tilt, degrees</b>	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	16	16	16	16	16	16	14	14
<b>Front-to-Back Ratio at 180°, dB</b>	30	30	30	30	30	30	30	28
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>							26	26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>							±2	±2
<b>Coupler, max Amp Δ, Antenna port to Cal port, dB</b>							0.9	0.9
<b>Coupler, max Phase Δ, Antenna port to Cal port, degrees</b>							7	7
<b>Isolation, Cross Polarization, dB</b>	28	28	28	25	25	25	23	23
<b>Isolation, Inter-band, dB</b>	28	28	28	25	25	25	25	25
<b>Isolation, Co-polarization, dB</b>							20	20
<b>VSWR   Return loss, dB</b>	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
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-140	-140
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	300	250	250	200	75	75

# RRV4Q4-65D-R7

## Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	890–960	1695–1920	1920–2200	2300–2690	2300–2690	3400–3800
Gain by all Beam Tilts, average, dBi	15.5	15.8	16.1	15.4	16.5	17.1	15.1	15.9
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.4	±0.5	±0.7	±0.6	±1.1	±1
Gain by Beam Tilt, average, dBi	2° 15.4 7° 15.6 12° 15.4	2° 15.6 7° 16.0 12° 15.8	2° 16.0 7° 16.3 12° 15.8	2° 15.3 7° 15.6 12° 15.3	2° 16.3 7° 16.7 12° 16.3	2° 16.9 7° 17.4 12° 16.9	2° 14.9 7° 15.2 12° 15.0	2° 15.4 7° 16.0 12° 16.0
Beamwidth, Horizontal Tolerance, degrees	±6	±4	±3	±5	±7	±6	±18	±12
Beamwidth, Vertical Tolerance, degrees	±0.4	±0.6	±0.3	±0.5	±0.6	±0.4	±0.5	±0.3
USLS, beampeak to 20° above beampeak, dB	16	17	17	15	16	16	11	11
Front-to-Back Total Power at 180° ± 30°, dB	22	22	22	26	25	26	24	23
CPR at Boresight, dB	20	20	18	19	21	20	16	16
CPR at Sector, dB	12	9	12	8	6	3	8	5

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2690	3400–3800
Gain, dBi	17.7	17.4
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	5.9	5.1
Front-to-Back Total Power at 180° ± 30°, dB	28	25
USLS (First Lobe), dB	14	15

## Electrical Specifications, Envelope Pattern

Frequency Band, MHz	2300–2690	3400–3800
Gain, dBi	20.4	21.8
Beamwidth, Horizontal at 10 dB, degrees	125	120
Beamwidth, Vertical at 3 dB, degrees	5.9	5.1
Front-to-Back Total Power at 180° ± 30°, dB	28	27
USLS (First Lobe), dB	15	15

# RRV4Q4-65D-R7

## Electrical Specifications, Service Beam

	2300–2690	3400–3800
<b>Frequency Band, MHz</b>		
<b>Steered 0° Gain, dBi</b>	20.5	21.8
<b>Steered 0° Beamwidth, Horizontal, degrees</b>	24	18
<b>Steered 0° Front-to-Back Total Power at 180° ± 30°, dB</b>	30	29
<b>Steered 0° Horizontal Sidelobe, dB</b>	12	13
<b>Steered 30° Gain, dBi</b>	20	19.9
<b>Steered 30° Beamwidth, Horizontal, degrees</b>	28	22
<b>Steered 30° Front-to-Back Total Power at 180° ± 30°, dB</b>	30	25

## Electrical Specifications, Soft Split

	2300–2690
<b>Frequency Band, MHz</b>	
<b>Gain, dBi</b>	19.7
<b>Beamwidth, Horizontal, degrees</b>	30
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	30
<b>Horizontal Sidelobe, dB</b>	18

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	944.0 N @ 150 km/h (212.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	292.0 N @ 150 km/h (65.6 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,130.0 N @ 150 km/h (254.0 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	650.0 N @ 150 km/h (146.1 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>	2935 mm   115.551 in
<b>Weight, gross</b>	65 kg   143.3 lb

# RRV4Q4-65D-R7

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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.
- 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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant

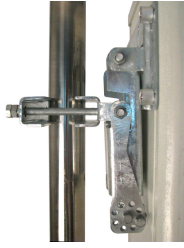
# BSAMNT-3

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# 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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant

