

# 3X-KVVSS-65A-R9



30-ports tri-sector antenna, 6x 617-960, 12x 1695-2690 and 12x 3300-4000 MHz, 65° HPBW, 9x RETs.

- Small size tri-sector macro cell canister antenna
- Ideal for deploying low band, mid band and CBRS/C-Band in flagpoles and concealment solutions
- Pole mounting kit not included. Separate pole mounting kit TS-MNT-TOP-370 available for pole diameter from 150mm (5.9 inch) to 273 mm (10.7 inch). Please check Optional Mounting Kits section for more details

## General Specifications

<b>Antenna Type</b>	DualPol® tri-sector
<b>Band</b>	Multiband
<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>	ASA, UV stabilized
<b>RF Connector Interface</b>	4.3-10 Female   M-LOC
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	12
<b>RF Connector Quantity, mid band</b>	12
<b>RF Connector Quantity, low band</b>	6
<b>RF Connector Quantity, total</b>	30

## Remote Electrical Tilt (RET) Information

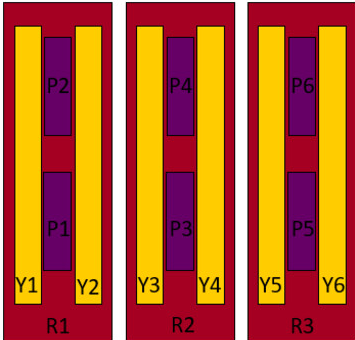
<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	3 female   3 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (3)   Low band (3)   Mid band (3)
<b>Power Consumption, active state, maximum</b>	10 W
<b>Power Consumption,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

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## Dimensions

<b>Length</b>	1446 mm   56.929 in
<b>Net Weight, antenna only</b>	40.2 kg   88.626 lb
<b>Outer Diameter</b>	370 mm   14.567 in

## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	617-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxR1
Y1	1695-2690	7 - 8	2	AISG1	CPxxxxxxxxxxxxY1
Y2	1695-2690	9 - 10			
P1	3300-4000	19 - 20	3	AISG1	CPxxxxxxxxxxxxP1
P2	3300-4000	21 - 22			
R2	617-960	3 - 4	4	AISG2	CPxxxxxxxxxxxxR2
Y3	1695-2690	11 - 12	5	AISG2	CPxxxxxxxxxxxxY3
Y4	1695-2690	13 - 14			
P3	3300-4000	23 - 24	6	AISG2	CPxxxxxxxxxxxxP3
P4	3300-4000	25 - 26			
R3	617-960	5 - 6	7	AISG3	CPxxxxxxxxxxxxR3
Y5	1695-2690	15 - 16	8	AISG3	CPxxxxxxxxxxxxY5
Y6	1695-2690	17 - 18			
P5	3300-4000	27 - 28	9	AISG3	CPxxxxxxxxxxxxP5
P6	3300-4000	29 - 30			

## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2690 MHz   3300 – 4000 MHz   617 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	1,500 W

## Electrical Specifications

	R1-R3	R1-R3	R1-R3	R1-R3	Y1-Y6	Y1-Y6	Y1-Y6	P1-P6	P1-P6	P1-P6
<b>Frequency Band, MHz</b>	617-698	698-806	806-894	894-960	1695-1920	1920-2200	2300-2690	3300-3550	3550-3700	3700-4000
<b>RF Port</b>	1-6	1-6	1-6	1-6	7-18	7-18	7-18	19-30	19-30	19-30
<b>Gain at Mid Tilt, dBi</b>	12.6	13.1	13.4	13.2	16.6	17.2	17	15.5	15.3	14.8
<b>Beamwidth, Horizontal, degrees</b>	76	75	74	71	64	61	70	60	60	61

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<b>Beamwidth, Vertical, degrees</b>	18.7	16.9	15.1	14.1	7	6.2	5.2	7.4	7	6.7
<b>Beam Tilt, degrees</b>	4-14	4-14	4-14	4-14	2-12	2-12	2-12	2-12	2-12	2-12
<b>USLS (First Lobe), dB</b>	16	17	17	17	15	12	12	16	15	15
<b>Front-to-Back Ratio at 180°, dB</b>	27	29	29	27	30	30	30	30	30	30
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25	25	25	25	25
<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	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-150	-145	-145	-145
<b>Input Power per Port at 50°C, maximum, watts</b>	250	250	250	250	200	200	200	100	100	100

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>617-698</b>	<b>698-806</b>	<b>806-894</b>	<b>894-960</b>	<b>1695-1920</b>	<b>1920-2200</b>	<b>2300-2690</b>	<b>3300-3550</b>	<b>3550-3700</b>	<b>3700-4000</b>
<b>Gain by all Beam Tilts, average, dBi</b>	12.6	13.1	13.3	13.1	16.4	16.9	16.6	15.4	15	14.4
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.3	±0.4	±0.7	±0.7	±0.5	±0.7	±0.8	±0.8	±1.2
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±2	±2	±2	±3	±4	±8	±6	±9	±14	±15
<b>Beamwidth, Vertical Tolerance, degrees</b>	±1.2	±1.2	±0.9	±0.7	±0.5	±0.6	±0.5	±0.7	±0.6	±0.6
<b>USLS, beampeak to 20° above beampeak, dB</b>					12	12	11	12	11	11
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	21	22	22	21	24	26	24	29	30	30
<b>CPR at Boresight, dB</b>	16	20	19	22	18	21	18	13	13	15
<b>CPR at Sector, dB</b>	11	8	8	4	3	3	4	4	6	5

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	319.0 N @ 150 km/h (71.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	319.0 N @ 150 km/h (71.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	319.0 N @ 150 km/h (71.7 lbf @ 150 km/h)

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**Wind Speed, maximum** 241 km/h (150 mph)

## Packaging and Weights

**Width, packed** 478 mm | 18.819 in  
**Depth, packed** 464 mm | 18.268 in  
**Length, packed** 1784 mm | 70.236 in  
**Weight, gross** 46.8 kg | 103.176 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



## \* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance