3X-KVVQ4-65B-R12

42-port tri-sector antenna, 6x617-960, 12x1695-2690MHz, 65°HPBW, 24x2300-3800MHz Beamformer, 12x RET

- Pole mounting kit not included. Separate pole mounting kit TS-MNT-TOP-370 available for pole diameter from 150 mm (5.9 inch) to 273 mm (10.7 inch). Please check Optional Mounting Kits section for more details
- 42-Port, Tri-Sector Design: Covers low, mid, and high bands (6x617-960MHz, 12x1695-2690MHz, 24x2300-3800MHz) for versatile network applications
- Future-Proof & 5G-Ready: Integrates 4T4R in mid FDD bands (1695-2690MHz) and 8T8R in high TDD band (2300-3800MHz), supporting flexible deployment of 2.3/2.6 or 3.5 GHz configurations Beamforming and Soft Split
- Optimized RF Pattern: Symmetrical internal design ensures consistent performance across ports, with column spacing for enhanced beamforming in the 2300-3800MHz bands
- Compact Design: Space-efficient with flexible internal RET control for streamlined site integration. The TS-MNT-TOP-370 mounting kit is available to simplify installation on low-profile sites

General Specifications

Antenna Type	DualPol® tri-sector
Band	Multiband
Calibration Connector Interface	M-LOC Female
Calibration Connector Quantity	3
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	ASA, UV stabilized
RF Connector Interface	4.3-10 Female | M-LOC Female
RF Connector Location	Bottom
RF Connector Quantity, high band	24
RF Connector Quantity, mid band	12
RF Connector Quantity, low band	6
RF Connector Quantity, total	42

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2

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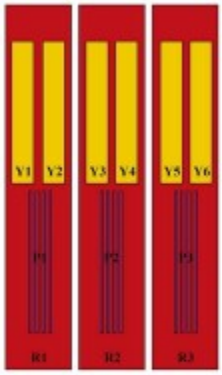
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	3 female | 3 male
Internal RET	High band (3) | Low band (3) | Mid band (6)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0

Dimensions

Length	2100 mm | 82.677 in
Outer Diameter	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	CPxxxxxxxxxxxxxxR1
Y1	1695-2690	7 - 8	2	AISG1	CPxxxxxxxxxxxxxxY1
Y2	1695-2690	9 - 10	3	AISG1	CPxxxxxxxxxxxxxxY2
P1	2300-3800	19 - 26	4	AISG1	CPxxxxxxxxxxxxxxP1
R2	617-960	3 - 4	5	AISG2	CPxxxxxxxxxxxxxxR2
Y3	1695-2690	11 - 12	6	AISG2	CPxxxxxxxxxxxxxxY3
Y4	1695-2690	13 - 14	7	AISG2	CPxxxxxxxxxxxxxxY4
P2	2300-3800	27 - 34	8	AISG2	CPxxxxxxxxxxxxxxP2
R3	617-960	5 - 6	9	AISG3	CPxxxxxxxxxxxxxxR3
Y5	1695-2690	15 - 16	10	AISG3	CPxxxxxxxxxxxxxxY5
Y6	1695-2690	17 - 18	11	AISG3	CPxxxxxxxxxxxxxxY6
P3	2300-3800	35 - 42	12	AISG3	CPxxxxxxxxxxxxxxP3

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

Port Configuration

3X-KVVQ4-65B-R12

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz | 2300 – 3800 MHz | 617 – 960 MHz
Polarization	±45°
Total Input Power, maximum	1,200 W @ 50 °C

Electrical Specifications

	R1-R3	R1-R3	R1-R3	R1-R3	Y1-Y6	Y1-Y6	Y1-Y6	Y1-Y6	P1-P3	P1-P3
Frequency Band, MHz	**617–698**	**698–806**	**790–894**	**890–960**	**1695–1995**	**1920–2300**	**2300–2500**	**2490–2690**	**2300–2690**	**3300–3800**
RF Port	1-6	1-6	1-6	1-6	7-18	7-18	7-18	7-18	19-42	19-42
Gain, Maximum, dBi	14.9	15.4	15.9	16	17.1	17.6	17.6	17.6	16.4	17.3
Gain at Mid Tilt, dBi	14.5	14.9	15.5	15.7	16.3	17.1	17.2	17.1	14.8	16.2
Beamwidth, Horizontal, degrees	78	77	73	70	65	62	62	60	87	65
Beamwidth, Vertical, degrees	12.3	11.3	10.1	9.3	7.8	6.9	6	5.7	8.5	6.2
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	16	22	21	16	17	17	18	16	10	13
Front-to-Back Ratio at 180°, dB	27	28	31	30	30	33	30	29	28	28
Coupling level, Amp, Antenna port to Cal									-26	-26

port, dB										
Coupling level, max Amp Δ, Antenna port to Cal port, dB									±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB									0.9	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees									7	7
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25	23	23
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25	25	25
Isolation, Co-polarization, dB									18	18
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	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	-150	-150	-140	-140
Input Power per Port at 50°C, maximum, watts	300	300	300	300	250	250	200	200	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2300–2690**	**3300–3800**
Gain, dBi	17.3	17.5
Beamwidth, Vertical, degrees	8.5	6.2
Front-to-Back Total Power at 180° ± 30°, dB	25	22
USLS (First Lobe), dB	15	14

Electrical Specifications, Service Beam

Frequency Band, MHz	**2300–2690**	**3300–3800**
Steered 0° Gain, dBi	20.3	21.5
Steered 0° Beamwidth, Horizontal, degrees	24	18
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	29	28

Steered 0° Horizontal Sidelobe, dB	13	10
Steered 30° Gain, dBi	19.4	19.6
Steered 30° Beamwidth, Horizontal, degrees	27	20
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	27	25

Electrical Specifications, Soft Split

Frequency Band, MHz	**2300–2690**
Gain, dBi	19.1
Beamwidth, Horizontal, degrees	28
Front-to-Back Total Power at 180° ± 30°, dB	29
Horizontal Sidelobe, dB	11

Mechanical Specifications

Wind Loading @ Velocity, frontal	1,070.0 N @ 150 km/h (240.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	375.0 N @ 150 km/h (84.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,385.0 N @ 150 km/h (311.4 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	240.0 N @ 150 km/h (54.0 lbf @ 150 km/h)
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	2461 mm | 96.89 in
Weight, gross	62.7 kg | 138.23 lb
Weight, net	53.9 kg | 118.829 lb

Regulatory Compliance/Certifications

Agency	**Classification**
UK-ROHS	Compliant

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance