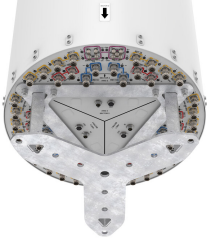


3X-RRZZHHTTS4-BR24



72-port sector antenna, 12x 694-960, 12x 1427-2690, 12x 1695-2180, 12x 2490-2690MHz 65° HPBW and 24x 3300-3800 MHz, 90° HPBW, 24x RET

- Separated Extension KIT available for this antenna, check Optional Mounting Kits section
- No pole mounting kit for this antenna

General Specifications

Antenna Type	DualPol® tri-sector
Band	Multiband
Calibration Connector Interface	M-LOC
Calibration Connector Quantity	3
Color	Light Gray (RAL 7035)
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
RF Connector Interface	4.3-10 Female M-LOC
RF Connector Location	Bottom
RF Connector Quantity, high band	24
RF Connector Quantity, mid band	36
RF Connector Quantity, low band	12
RF Connector Quantity, total	72

Remote Electrical Tilt (RET) Information

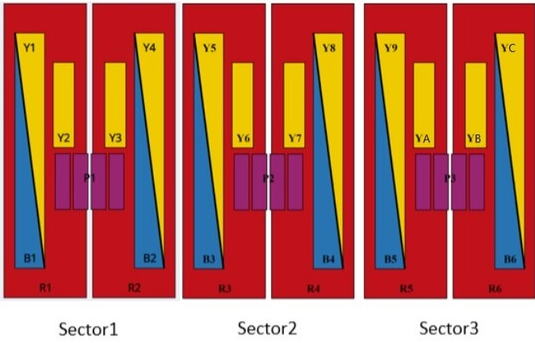
RET Hardware	CommRET v2
RET Interface, quantity	3 female 3 male
Internal RET	High band (3) Low band (6) Mid band (15)
Protocol	3GPP/AISG 2.0

Dimensions

Length	2100 mm 82.677 in
Net Weight, antenna only	110 kg 242.508 lb
Outer Diameter	580 mm 22.835 in

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Array Layout

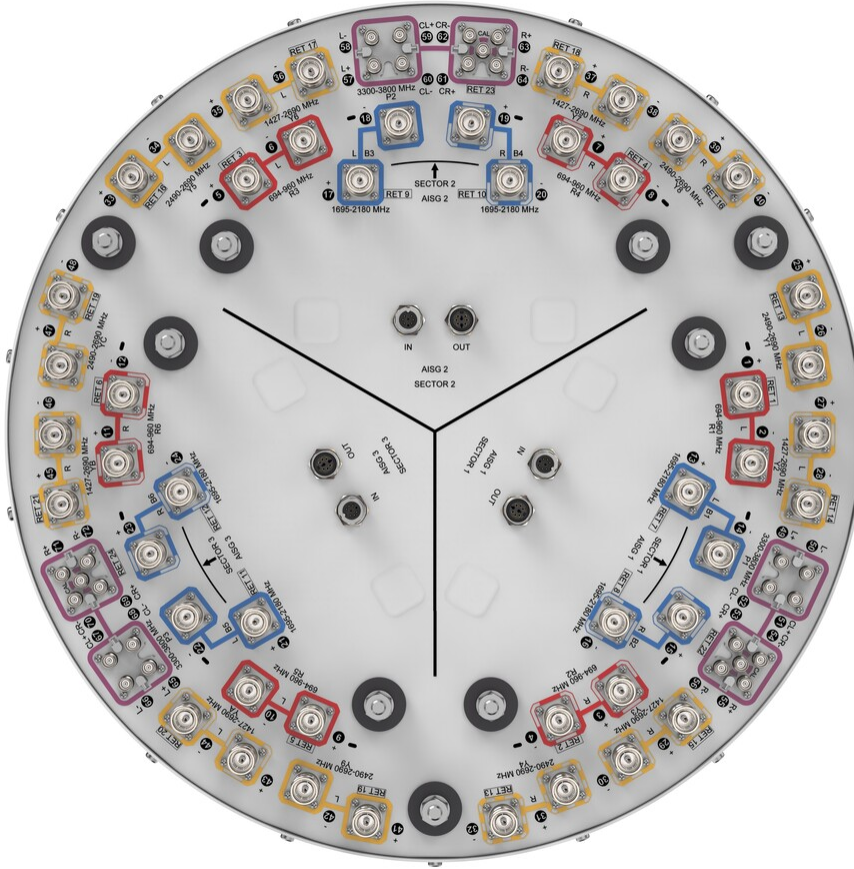


Array ID	Frequency (MHz)	RF Connector	RET count	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2		CPxxxxxxxxxxxxxxxxR2
B1	1695-2180	13 - 14	3		CPxxxxxxxxxxxxxxxxB1
B2	1695-2180	15 - 16	4		CPxxxxxxxxxxxxxxxxB2
Y1	2490-2690	25 - 26	5	AISG2	CPxxxxxxxxxxxxxxxxY1
Y4	2490-2690	31 - 32	6		CPxxxxxxxxxxxxxxxxY2
Y2	1427-2690	27 - 28	7		CPxxxxxxxxxxxxxxxxY3
Y3	1427-2690	29 - 30	8	AISG3	CPxxxxxxxxxxxxxxxxP1
P1	3300-3800	49 - 56	9		CPxxxxxxxxxxxxxxxxR3
R3	694-960	5 - 6	10		CPxxxxxxxxxxxxxxxxR4
R4	694-960	7 - 8	11		CPxxxxxxxxxxxxxxxxB3
B3	1695-2180	17 - 18	12	AISG2	CPxxxxxxxxxxxxxxxxB4
B4	1695-2180	19 - 20	13		CPxxxxxxxxxxxxxxxxY5
Y5	2490-2690	33 - 34	14		CPxxxxxxxxxxxxxxxxY6
Y8	2490-2690	39 - 40	15	CPxxxxxxxxxxxxxxxxY7	
Y6	1427-2690	35 - 36	16	AISG3	CPxxxxxxxxxxxxxxxxP2
Y7	1427-2690	37 - 38	17		CPxxxxxxxxxxxxxxxxR5
P2	3300-3800	57 - 64	18		CPxxxxxxxxxxxxxxxxR6
R5	694-960	9 - 10	19		CPxxxxxxxxxxxxxxxxB5
R6	694-960	11 - 12	20	AISG2	CPxxxxxxxxxxxxxxxxB6
B5	1695-2180	21 - 22	21		CPxxxxxxxxxxxxxxxxY9
B6	1695-2180	23 - 24	22		CPxxxxxxxxxxxxxxxxYA
Y9	2490-2690	41 - 42	23	AISG3	CPxxxxxxxxxxxxxxxxYB
YC	2490-2690	47 - 48	24		CPxxxxxxxxxxxxxxxxYB
YA	1427-2690	43 - 44	24		CPxxxxxxxxxxxxxxxxP3
YB	1427-2690	45 - 46	24		
P3	3300-3800	65 - 72	24		

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

Port Configuration

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Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1427 – 2690 MHz 1695 – 2180 MHz 2490 – 2690 MHz 3300 – 3800 MHz 694 – 960 MHz
Polarization	±45°

Electrical Specifications

	R1-R6	R1-R6	R1-R6	Y2,Y3,Y6,Y7,YA,YB	Y2,Y3,Y6,Y7,YA,YB
Frequency Band, MHz	694–806	790–896	890–960	1427–1518	1695–1990
RF Port	1-12	1-12	1-12	27-30,35-38,43-46	27-30,35-38,43-46
Gain at Mid Tilt, dBi	13.9	14.6	14.7	13.1	15.1
Beamwidth, Horizontal,	67	59	57	61	67

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degrees

Beamwidth, Vertical, degrees	10.4	9.5	9.1	10	8.1
Beam Tilt, degrees	2-12	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	18	17	15	16	18
Isolation, Cross Polarization, dB	27	27	27	25	25
Isolation, Inter-band, dB	27	27	27	25	25
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, typical, 2 x 20 W, dBc	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	250	250	250	200	200

Electrical Specifications, BASTA

Frequency Band, MHz	694-806	790-896	890-960	1427-1518	1695-1990
Gain by all Beam Tilts, average, dBi	13.9	14.5	14.6	13	14.9
Front-to-Back Total Power at 180° ± 30°, dB	25	25	25	24	28
CPR at Boresight, dB	19	18	19	15	21
CPR at Sector, dB	13	9	9	1	5

Electrical Specifications

	Y2,Y3,Y6,Y7,YA,YB	Y2,Y3,Y6,Y7,YA,YB	Y2,Y3,Y6,Y7,YA,YB	B1-B6
Frequency Band, MHz	1920-2300	2300-2500	2490-2690	1695-1990
RF Port	27-30,35-38,43-46	27-30,35-38,43-46	27-30,35-38,43-46	13-16,17-20,21-24
Gain at Mid Tilt, dBi	16.3	16.8	17	16.7
Beamwidth, Horizontal, degrees	59	60	57	72
Beamwidth, Vertical, degrees	7.2	6.4	5.9	5.5
Beam Tilt, degrees	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	19	20	18	17
Isolation, Cross Polarization, dB	25	25	25	27
Isolation, Inter-band, dB	25	25	25	26
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, typical, 2 x 20 W, dBc	-153	-153	-153	-153

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Input Power per Port at 50°C, maximum, watts	200	150	150	200
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Electrical Specifications, BASTA

Frequency Band, MHz	1920–2300	2300–2500	2490–2690	1695–1990
Gain by all Beam Tilts, average, dBi	16.1	16.6	16.7	16.5
Front-to-Back Total Power at 180° ± 30°, dB	28	27	30	24
CPR at Boresight, dB	19	19	19	18
CPR at Sector, dB	6	6	1	4

Electrical Specifications

	B1-B6	Y1,Y4,Y5,Y8,Y9,YC	P1,P2,P3	P1,P2,P3
Frequency Band, MHz	1920–2180	2490–2690	3300–3600	3600–3800
RF Port	13-16,17-20,21-24	25-26,31-34,39-42,47-48	49-72	49-72
Gain at Mid Tilt, dBi	17	17.8	15.1	15.4
Beamwidth, Horizontal, degrees	69	63	84	81
Beamwidth, Vertical, degrees	5	4	6.5	6
Beam Tilt, degrees	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	17	14	15
Coupling level, Amp, Antenna port to Cal port, dB			26	26
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	27	27	25	25
Isolation, Inter-band, dB	26	27	25	25
Isolation, Co-polarization, dB			19	19
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, typical, 2 x 20 W, dBc	-153	-153	-140	-140
Input Power per Port at 50°C,	200	150	75	75

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maximum, watts

Electrical Specifications, BASTA

Frequency Band, MHz	1920–2180	2490–2690	3300–3600	3600–3800
Gain by all Beam Tilts, average, dBi	16.9	17.4	14.8	15.2
Front-to-Back Total Power at 180° ± 30°, dB	24	26	30	31
CPR at Boresight, dB	20	20	16	15
CPR at Sector, dB	4	4	6	6

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3300–3600	3600–3800
Gain, dBi	16.4	16.4
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Horizontal at 10 dB, degrees	117	112
Beamwidth, Vertical, degrees	6.5	6.1
Front-to-Back Total Power at 180° ± 30°, dB	33	33
USLS (First Lobe), dB	18	18

Electrical Specifications, Service Beam

Frequency Band, MHz	3300–3600	3600–3800
Steered 0° Gain, dBi	19.8	20.7
Steered 0° Beamwidth, Horizontal, degrees	28	24
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	36	
Steered 0° Horizontal Sidelobe, dB	14	14
Steered 30° Gain, dBi	19.3	19.3
Steered 30° Beamwidth, Horizontal, degrees	29	29
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	36	35
Steered 30° Horizontal Sidelobe, dB	9	10

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Electrical Specifications, Soft Split

Frequency Band, MHz	3300–3600	3600–3800
Gain, dBi	19.3	19.2
Beamwidth, Horizontal, degrees	31	33
Front-to-Back Total Power at 180° ± 30°, dB	35	35
Horizontal Sidelobe, dB	16	19

Mechanical Specifications

Wind Loading @ Velocity, frontal	745.0 N @ 150 km/h (167.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	745.0 N @ 150 km/h (167.5 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	745.0 N @ 150 km/h (167.5 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	745.0 N @ 150 km/h (167.5 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	714 mm 28.11 in
Depth, packed	692 mm 27.244 in
Length, packed	2537 mm 99.882 in
Weight, gross	131.5 kg 289.908 lb

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



* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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