RRVV2VVQ4-6533D-R9

24-port sector/multibeam antenna, 4x 694–960, 4x 1695-2690MHz 65° HPBW, 8x 1710-2690MHz 4x33° HPBW and 8x 2300-3800MHz, 90° HPBW 9x RET

- Enhances network capacity through six sectors on high band while maintaining low band coverage layer through three sectors with only three antenna faces
- Includes 1x 4-Column Array for 2300-3800MHz and calibration port. Column spacing optimized to support Soft Split Beamforming

General Specifications

Antenna Type	Sector and beamforming
Band	Multiband
Calibration Connector Interface	M-LOC
Calibration Connector Quantity	1
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	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female | M-LOC
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	12
RF Connector Quantity, low band	4
RF Connector Quantity, total	24

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) | Low band (2) | Mid band (6)

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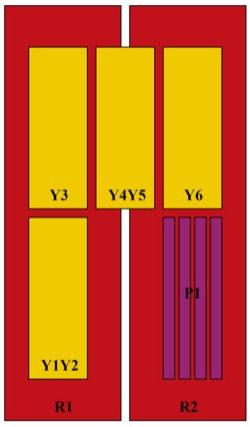
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0

Dimensions

Width	579 mm | 22.795 in
Depth	212 mm | 8.346 in
Length	2688 mm | 105.827 in
Net Weight, antenna only	67 kg | 147.71 lb

Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxR2
Y1	1710-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxY1
Y2	1710-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxY3
Y4	1710-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxY4
Y5	1710-2690	13 - 14	7	AISG1	CPxxxxxxxxxxxxxxY5
Y6	1695-2690	15 - 16	8	AISG1	CPxxxxxxxxxxxxxxY6
P1	2300-3800	17 - 24	9	AISG1	CPxxxxxxxxxxxxxxP1

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

Port Configuration

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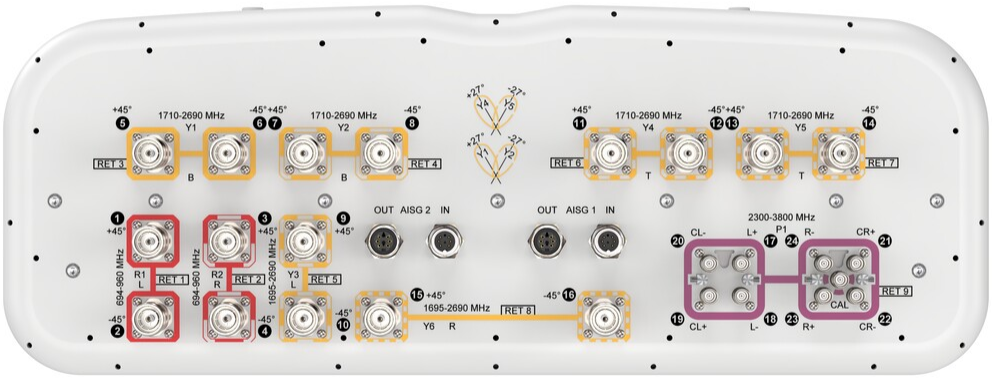

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz | 1710 – 2690 MHz | 2300 – 3800 MHz | 694 – 960 MHz
Polarization	±45°

Electrical Specifications

	R1,R2	R1,R2	R1,R2	Y1,Y2,Y4,Y5	Y1,Y2,Y4,Y5	Y1,Y2,Y4,Y5	Y3,Y6	Y3,Y6	Y3,Y6	P1	P1
Frequency Band, MHz	694–790	790–890	890–960	1710–1920	1920–2180	2300–2690	1695–1920	1920–2180	2300–2690	2300–2690	3300–3800
RF Port	1-4	1-4	1-4	5-8,11-14	5-8,11-14	5-8,11-14	9,10,15,16	9,10,15,16	9,10,15,16	17-24	17-24
Gain, dBi	16.2	16.7	16.8	18.7	19.8	20.5	16.2	17.4	17.8	15.8	16.6
Gain at Mid Tilt, dBi	15.9	16.5	16.6	18.1	19.6	20.3	15.8	17.1	17.6	14.9	15.8
Beam Centers, Horizontal, degrees				±27	±27	±27					
Beamwidth, Horizontal, degrees	70	61	60	35	32	27	67	61	58	90	66
Beamwidth,	8.9	8	7.4	7.3	6.5	5.4	7.1	6.5	5.4	6	5.5

Vertical, degrees											
Beam Tilt, degrees	2–12	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	20	19	17	18	20	15	16	17	11	14
Front-to-Back Ratio at 180°, dB	32	31	30	33	35	34	33	34	32	28	27
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
CPR at Boresight, dB	21	22	22	16	21	21	18	23	20	14	16
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25	25	23	23
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25	25	25	25
Isolation, Co-polarization, dB										18	18

Isolation, Beam to Beam, dB				17	17	17					
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	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-150	-150	-150	-143	-143
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	200	250	250	200	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2300–2690**	**3300–3800**
Gain, dBi	17.6	16.9
Beamwidth, Horizontal at 3 dB, degrees	65	65
Beamwidth, Vertical, degrees	5.9	5.6
Front-to-Back Total Power at 180° ± 30°, dB	25	23
USLS (First Lobe), dB	12	14

Electrical Specifications, Service Beam

Frequency Band, MHz	**2300–2690**	**3300–3800**
Steered 0° Gain, dBi	20.4	21.2
Steered 0° Beamwidth,	26	18

Horizontal, degrees		
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	27
Steered 0° Horizontal Sidelobe, dB	12	11
Steered 30° Gain, dBi	19.6	19.4
Steered 30° Beamwidth, Horizontal, degrees	27	21
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	28	27

Electrical Specifications, Soft Split

Frequency Band, MHz	**2300–2690**
Gain, dBi	19.3
Beamwidth, Horizontal, degrees	31
Front-to-Back Total Power at 180° ± 30°, dB	28
Horizontal Sidelobe, dB	15

Mechanical Specifications

Wind Loading @ Velocity, frontal	764.0 N @ 150 km/h (171.8 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	328.0 N @ 150 km/h (73.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,220.0 N @ 150 km/h (274.3 lbf @ 150 km/h)

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Wind Loading @ Velocity, rear	774.0 N @ 150 km/h (174.0 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	681 mm | 26.811 in
Depth, packed	368 mm | 14.488 in
Length, packed	2827 mm | 111.299 in
Weight, gross	85.5 kg | 188.495 lb

Regulatory Compliance/Certifications

Agency	**Classification**
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

Included Products

BSAMNT-4	–	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-M4	–	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