

RR2VVT4-6533D-R7V4

20-port sector/multibeam antenna, 4x 694–960 MHz 65° HPBW and 8x 1710–2690MHz 4x33° HPBW, 8x 2300–2690MHz, 90° HPBW 7x RET

- Enhances network capacity through six sectors on high band while maintaining low band coverage layer through three sectors with only three antenna faces
- Also includes 1x 4-Column Array for 2300-2690 MHz with calibration port. Column spacing optimized to support Soft Split Beamforming
- A calibration port is provided for the 4-Column Array. Seven Internal RET's provide independent electrical tilt control for each array
- T4 array uses MQ4/5 cluster connectors

General Specifications

Antenna Type	Sector and beamforming
Band	Multiband
Calibration Connector Interface	MQ5 Male
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
RF Connector Interface	4.3-10 Female MQ4 Male MQ5 Male
RF Connector Location	Bottom
RF Connector Quantity, mid band	16
RF Connector Quantity, low band	4
RF Connector Quantity, total	20

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	Low band (2) Mid band (5)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0

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Dimensions

Width	579 mm 22.795 in
Depth	212 mm 8.346 in
Length	2688 mm 105.827 in
Net Weight, antenna only	63.5 kg 139.993 lb

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1710 – 2690 MHz 2300 – 2690 MHz 694 – 960 MHz
Polarization	±45°
Total Input Power, maximum	1,800 W @ 50 °C
BASTA Version, electrical	BASTA v12

Electrical Specifications

	R1,R2	R1,R2	R1,R2	Y1,Y2,Y3,Y4	Y1,Y2,Y3,Y4	Y1,Y2,Y3,Y4	Y1,Y2,Y3,Y4	Y5
Frequency Band, MHz	694–790	790–890	890–960	1710–1880	1850–1990	1920–2180	2300–2690	2300–2690
RF Port	1-4	1-4	1-4	5-12	5-12	5-12	5-12	13-20
Beam Centers, Horizontal, degrees				±27	±27	±27	±27	
Beamwidth, Horizontal, degrees	69	62	60	33	32	31	27	99
Beamwidth, Vertical, degrees	8.7	8	7.2	7.4	7	6.6	5.4	5.2
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	20	18	18	18	18	19	18
Front-to-Back Ratio at 180°, dB	32	32	33	36	35	36	33	29
Coupling level, Amp, Antenna port to Cal port, dB								26
Coupling level, max Amp Δ, Antenna port to Cal port, dB								±2
Coupler, max Amp Δ, Antenna port to Cal port, dB								0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees								7
Isolation, Cross Polarization, dB	28	28	28	25	25	25	25	25

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Isolation, Inter-band, dB	28	28	28	25	25	25	25	25
Isolation, Co-polarization, dB								20
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
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-150	-140
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	250	200	150

Electrical Specifications, BASTA

Frequency Band, MHz	694–790	790–890	890–960	1710–1880	1850–1990	1920–2180	2300–2690	2300–2690
Gain by all Beam Tilts, average, dBi	15.7	16.2	16.4	17.7	18.7	19.3	19.9	15.7
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.3	±0.3	±1.3	±0.5	±0.7	±0.8	±0.5
Beamwidth, Horizontal Tolerance, degrees	±7	±4	±5	±4	±3	±3	±3	±9
Beamwidth, Vertical Tolerance, degrees	±0.6	±0.4	±0.3	±0.5	±0.4	±0.5	±0.4	±0.4
USLS, beampeak to 20° above beampeak, dB	15	16	14	14	16	17	16	16
Front-to-Back Total Power at 180° ± 30°, dB	26	25	25	30	30	31	28	23
CPR at Boresight, dB	17	19	19	14	16	19	20	16
CPR at Sector, dB	9	6	7					9
CPR at 10 dB Horizontal Beamwidth, dB				6	9	11	13	

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2690
Gain, dBi	17.6
Beamwidth, Horizontal, degrees	64
Beamwidth, Vertical, degrees	5.1
Front-to-Back Total Power at 180° ± 30°, dB	25
USLS (First Lobe), dB	18

Electrical Specifications, Service Beam

Frequency Band, MHz	2300–2690
Steered 0° Gain, dBi	21.5

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Steered 0° Beamwidth, Horizontal, degrees	26
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	31
Steered 0° USLS (First Lobe), dB	21
Steered 30° Gain, dBi	20.8
Steered 30° Beamwidth, Horizontal, degrees	28
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	28

Electrical Specifications, Soft Split

Frequency Band, MHz	2300–2690
Gain, dBi	20.5
Beamwidth, Horizontal, degrees	33
Front-to-Back Total Power at 180° ± 30°, dB	30
Horizontal Sidelobe, dB	20
USLS (First Lobe), dB	20

Mechanical Specifications

BASTA Version, mechanical	BASTA v12
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)
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	82 kg 180.779 lb

Regulatory Compliance/Certifications

RR2VVT4-6533D-R7V4

Agency

ISO 9001:2015

UK-ROHS

Classification

Designed, manufactured and/or distributed under this quality management system

Compliant/Exempted

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