

# 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

<b>Antenna Type</b>	Sector and beamforming
<b>Band</b>	Multiband
<b>Calibration Connector Interface</b>	MQ5 Male
<b>Calibration Connector Quantity</b>	1
<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>RF Connector Interface</b>	4.3-10 Female   MQ4 Male   MQ5 Male
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	0
<b>RF Connector Quantity, mid band</b>	16
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	20

## 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>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	Low band (2)   Mid band (5)

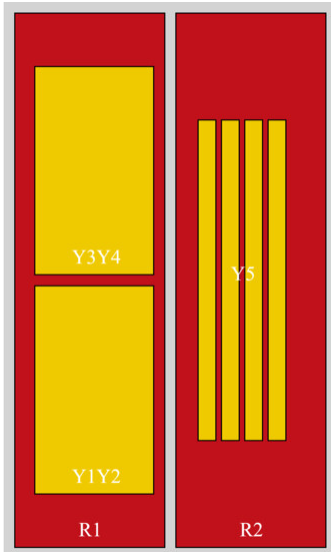
# RR2VVT4-6533D-R7V4

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

## Dimensions

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

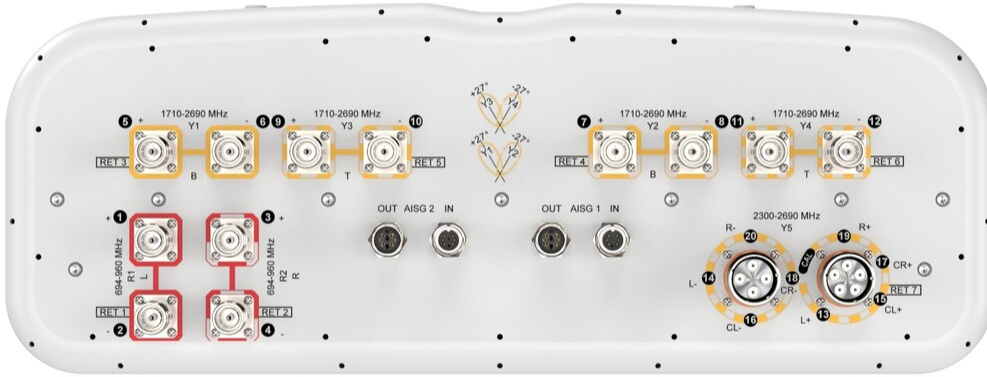
## Array Layout



RF Connector	Array ID	Frequency (MHz)	RET	AISG RET UID
1 - 2	R1	694-960	1	CPxxxxxxxxxxxxR1
3 - 4	R2	694-960	2	CPxxxxxxxxxxxxR2
5 - 6	Y1	1710-2690	3	CPxxxxxxxxxxxxY1
7 - 8	Y2	1710-2690	4	CPxxxxxxxxxxxxY2
9 - 10	Y3	1710-2690	5	CPxxxxxxxxxxxxY3
11 - 12	Y4	1710-2690	6	CPxxxxxxxxxxxxY4
13 - 20	Y5	2300-2690	7	CPxxxxxxxxxxxxY5

## Port Configuration

# RR2VVT4-6533D-R7V4



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1710 – 2690 MHz   2300 – 2690 MHz   694 – 960 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	1,800 W @ 50 °C
<b>BASTA Version, electrical</b>	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
<b>Frequency Band, MHz</b>	<b>694–790</b>	<b>790–890</b>	<b>890–960</b>	<b>1710–1880</b>	<b>1850–1990</b>	<b>1920–2180</b>	<b>2300–2690</b>	<b>2300–2690</b>
<b>RF Port</b>	1-4	1-4	1-4	5-12	5-12	5-12	5-12	13-20
<b>Beam Centers, Horizontal,</b>				±27	±27	±27	±27	

# RR2VVT4-6533D-R7V4

degrees

<b>Beamwidth, Horizontal, degrees</b>	69	62	60	33	32	31	27	99
<b>Beamwidth, Vertical, degrees</b>	8.7	8	7.2	7.4	7	6.6	5.4	5.2
<b>Beam Tilt, degrees</b>	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12
<b>USLS (First Lobe), dB</b>	17	20	18	18	18	18	19	18
<b>Front-to-Back Ratio at 180°, dB</b>	32	32	33	36	35	36	33	29
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>								26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>								±2
<b>Coupler, max Amp Δ, Antenna port to Cal port, dB</b>								0.9
<b>Coupler, max Phase Δ, Antenna port to Cal port, degrees</b>								7
<b>Isolation, Cross Polarization, dB</b>	28	28	28	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	28	28	28	25	25	25	25	25
<b>Isolation, Co-polarization, dB</b>								20
<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
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-150	-150	-150	-150	-150	-150	-140
<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	300	250	250	250	200	150

## Electrical Specifications, Broadcast 65°

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

## Electrical Specifications, Service Beam

<b>Frequency Band, MHz</b>	<b>2300-2690</b>
<b>Steered 0° Gain, dBi</b>	21.5

# RR2VVT4-6533D-R7V4

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

## Electrical Specifications, Soft Split

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

## Mechanical Specifications

<b>BASTA Version, mechanical</b>	BASTA v12
<b>Wind Loading @ Velocity, frontal</b>	764.0 N @ 150 km/h (171.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	328.0 N @ 150 km/h (73.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,220.0 N @ 150 km/h (274.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	774.0 N @ 150 km/h (174.0 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	681 mm   26.811 in
<b>Depth, packed</b>	368 mm   14.488 in
<b>Length, packed</b>	2827 mm   111.299 in
<b>Weight, gross</b>	82 kg   180.779 lb

## Regulatory Compliance/Certifications

# RR2VVT4-6533D-R7V4

---

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



## 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