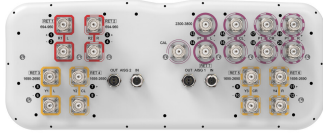


RRV4Q4-65D-R7V2



20-port sector antenna, 4 x 694-960 MHz (R1-R2), and 8 x 1695-2690 MHz (Y1-Y4) 65° HPBW, 8 x 2300-3800 MHz (P1), 90° HPBW, 7 x RET

- Includes 1x 4-Column Array for 2300-3800MHz and calibration port. Column spacing optimized to support Soft Split Beamforming
- Seven internal RETs control the antenna arrays
- New aerodynamic endcaps for wind load optimization
- Q4 array uses 4.3-10 female connectors including calibration port

General Specifications

Antenna Type	Sector- and beamforming
Band	Multiband
Calibration Connector Interface	4.3-10 Female
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
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	8
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	High band (1) Low band (2) Mid band (4)
Power Consumption, active state, maximum	8 W

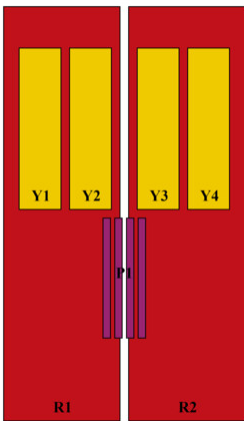
RRV4Q4-65D-R7V2

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

Dimensions

Width 498 mm | 19.606 in
Depth 197 mm | 7.756 in
Length 2688 mm | 105.827 in
Net Weight, antenna only 45 kg | 99.208 lb
TDD Column Spacing 58 mm | 2.283 in

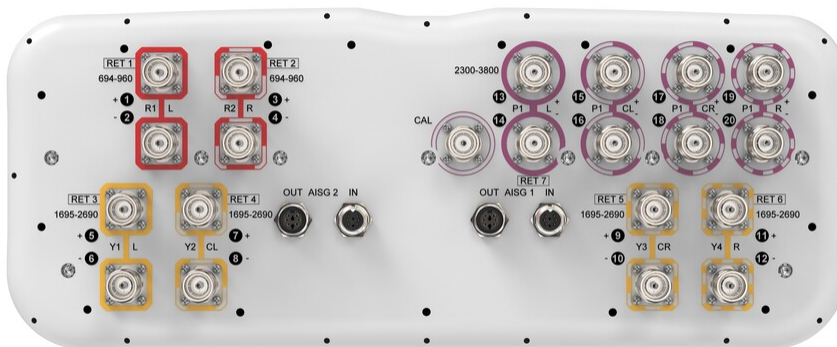
Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxxY4
P1	2300-3800	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxxP1

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

Port Configuration



RRV4Q4-65D-R7V2

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz 2300 – 3800 MHz 694 – 960 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

	R1-R2	R1-R2	R1-R2	Y1-Y4	Y1-Y4	Y1-Y4	P1	P1
Frequency Band, MHz	694–790	790–890	890–960	1695–1920	1920–2200	2300–2690	2300–2690	3400–3800
RF Port	1-4	1-4	1-4	5-12	5-12	5-12	13-20	13-20
Gain, dBi	15.8	16.2	16.4	15.8	17	17.6	15.9	16.6
Beamwidth, Horizontal, degrees	71	64	63	70	62	59	88	64
Beamwidth, Vertical, degrees	8.9	8	7.3	7.4	6.5	5.4	6	5.1
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	16	16	16	16	16	16	14	14
Front-to-Back Ratio at 180°, dB	30	30	30	30	30	30	30	28
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	28	28	28	25	25	25	23	23
Isolation, Inter-band, dB	28	28	28	25	25	25	25	25
Isolation, Co-polarization, dB							20	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	-140	-140
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	200	75	75

Electrical Specifications, BASTA

RRV4Q4-65D-R7V2

Frequency Band, MHz	694–790	790–890	890–960	1695–1920	1920–2200	2300–2690	2300–2690	3400–3800
Gain by all Beam Tilts, average, dBi	15.5	15.8	16.1	15.4	16.5	17.1	15.1	15.9
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.4	±0.5	±0.7	±0.6	±1.1	±1
Beamwidth, Horizontal Tolerance, degrees	±6	±4	±3	±5	±7	±6	±18	±12
Beamwidth, Vertical Tolerance, degrees	±0.4	±0.6	±0.3	±0.5	±0.6	±0.4	±0.5	±0.3
USLS, beampeak to 20° above beampeak, dB	16	17	17	15	16	16	11	11
Front-to-Back Total Power at 180° ± 30°, dB	22	22	22	26	25	26	24	23
CPR at Boresight, dB	20	20	18	19	21	20	16	16
CPR at Sector, dB	12	9	12	8	6	3	8	5

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2300–2690	3400–3800
Gain, dBi	17.7	17.4
Beamwidth, Horizontal, degrees	37	59
Beamwidth, Vertical, degrees	5.9	5.1
Front-to-Back Total Power at 180° ± 30°, dB	28	25
USLS (First Lobe), dB	14	15

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	2300–2690	3400–3800
Gain, dBi	20.4	21.8
Beamwidth, Horizontal at 10 dB, degrees	125	120
Beamwidth, Vertical at 3 dB, degrees	5.9	5.1
Front-to-Back Total Power at 180° ± 30°, dB	28	27
USLS (First Lobe), dB	15	15

Electrical Specifications, Service Beam

Frequency Band, MHz	2300–2690	3400–3800
Steered 0° Gain, dBi	20.5	21.8

RRV4Q4-65D-R7V2

Steered 0° Beamwidth, Horizontal, degrees	24	18
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	29
Steered 0° Horizontal Sidelobe, dB	12	13
Steered 30° Gain, dBi	20	19.9
Steered 30° Beamwidth, Horizontal, degrees	28	22
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	30	25

Electrical Specifications, Soft Split

Frequency Band, MHz	2300–2690
Gain, dBi	19.7
Beamwidth, Horizontal, degrees	30
Front-to-Back Total Power at 180° ± 30°, dB	30
Horizontal Sidelobe, dB	18

Mechanical Specifications

Wind Loading @ Velocity, frontal	944.0 N @ 150 km/h (212.2 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	292.0 N @ 150 km/h (65.6 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,130.0 N @ 150 km/h (254.0 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	650.0 N @ 150 km/h (146.1 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm 22.244 in
Depth, packed	309 mm 12.165 in
Length, packed	2935 mm 115.551 in
Weight, gross	65.5 kg 144.403 lb

Regulatory Compliance/Certifications

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

RRV4Q4-65D-R7V2



Included Products

- BSAMNT-3 – 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-M – 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