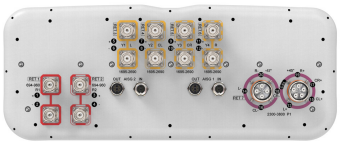
RRV4Q4-65D-R7V4



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 2300-3800 MHz and callibration port. Column spacing optimized to support soft split beamforming
- Q4 array uses MQ4/5 cluster connectors
- Seven internal RETs control the antenna arrays
- New aerodynamic endcaps for wind load optimization

General Specifications

Antenna Type	Sector and beamforming
Band	Multiband
Calibration Connector Interface	MQ5
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 | MQ4 | MQ5
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

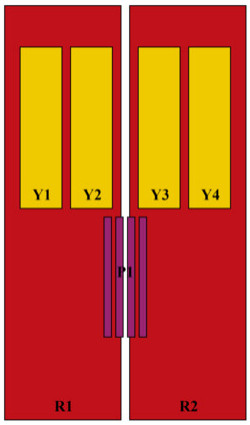
RRV4Q4-65D-R7V4

Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	2688 mm | 105.827 in
Net Weight, antenna only	44.5 kg | 98.106 lb
TDD Column Spacing	58 mm | 2.283 in

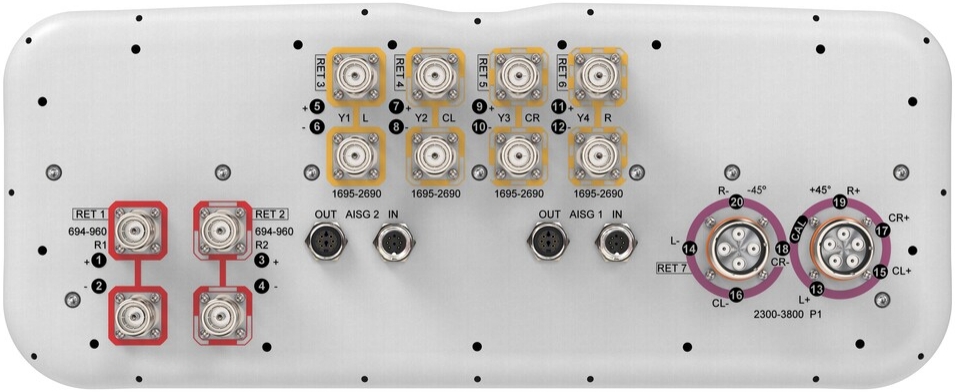
Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	694-960	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxR1
R2	694-960	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxY4
P1	2300-3800	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxP1

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

Port Configuration



Electrical Specifications

RRV4Q4-65D-R7V4

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	-130	-130
Input Power per Port at 50°C, maximum, watts	300	300	300	250	250	200	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2300–2690**	**3400–3800**
Gain, dBi	17.7	17.4

Beamwidth, Horizontal, degrees	65	65
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
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	12
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

Effective Projective Area (EPA), frontal	0.89 m² | 9.58 ft²
Effective Projective Area (EPA), lateral	0.27 m² | 2.906 ft²
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 kg | 143.3 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

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