

FFV4Q4-65B-R7



20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 2500-4000 MHz, Beamformer, 7x RET

- All Internal RET actuators are connected in "Cascaded SRET" configuration
- Cluster connectors for the beam-forming array, including eight RF ports plus one calibration port

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	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	1 female 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) Low band (2) Mid band (4)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W

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Protocol 3GPP/AISG 2.0 (Single RET)

Dimensions

Width 498 mm | 19.606 in

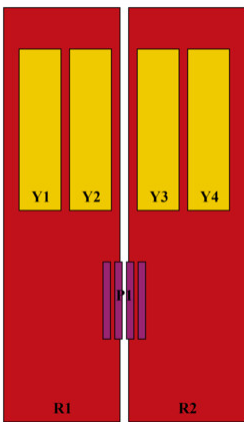
Depth 197 mm | 7.756 in

Length 2100 mm | 82.677 in

Net Weight, antenna only 44.3 kg | 97.665 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	617-894	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
R2	617-894	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	2500-4000	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxxP1

(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 2500 – 4000 MHz 617 – 894 MHz
Polarization	±45°
Total Input Power, maximum	1,400 W @ 50 °C

Electrical Specifications

	R1,R2	R1,R2	Y1-Y4	Y1-Y4	Y1-Y4	P1	P1	P1
Frequency Band, MHz	617-698	698-894	1695-1920	1920-2200	2490-2690	2500-2690	3300-3800	3700-4000
RF Port	1,2,3,4	1,2,3,4	5-12	5-12	5-12	13-20	13-20	13-20
Gain, dBi	14.5	15.1	16.2	17.1	17.4	14.1	15.4	15.1
Beamwidth, Horizontal, degrees	66	56	65	60	56	87	64	65
Beamwidth, Vertical, degrees	11.7	10.1	6.7	6	5	9	6.6	6.2
Beam Tilt, degrees	2-14	2-14	2-12	2-12	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	16	16	16	16	16	15	16	16
Front-to-Back Ratio at 180°, dB	28	29	30	30	29	29	26	23

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Coupling level, Amp, Antenna port to Cal port, dB						26	26	26
Coupling level, max Amp Δ , Antenna port to Cal port, dB						± 2	± 2	± 2
Coupler, max Amp Δ , Antenna port to Cal port, dB						0.9	0.9	0.9
Coupler, max Phase Δ , Antenna port to Cal port, degrees						7	7	7
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25
Isolation, Co-polarization, dB						18	18	18
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	-140	-140	-140
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	80	80	80

Electrical Specifications, BASTA

Frequency Band, MHz	617-698	698-894	1695-1920	1920-2200	2490-2690	2500-2690	3300-3800	3700-4000
Gain by all Beam Tilts, average, dBi	14	14.5	15.7	16.6	17	13.6	14.7	14.4
Gain by all Beam Tilts Tolerance, dB	± 0.6	± 0.6	± 0.8	± 0.6	± 0.5	± 0.6	± 0.8	± 0.9
Beamwidth, Horizontal Tolerance, degrees	± 8	± 6	± 8	± 7	± 4	± 20	± 14	± 12
Beamwidth, Vertical Tolerance, degrees	± 0.7	± 1	± 0.5	± 0.5	± 0.3	± 0.8	± 0.8	± 0.6
USLS, beampeak to 20° above beampeak, dB	17	15	14	14	15	14	12	12
Front-to-Back Total Power at 180° \pm 30°, dB	21	21	25	27	23	23	21	19
CPR at Boresight, dB	19	19	19	21	16	17	14	14
CPR at Sector, dB	11	8	8	7	4	9	6	6

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2500-2690	3300-3800	3700-4000
Gain, dBi	16.2	15.8	15.6
Beamwidth, Horizontal, degrees	65	65	65

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Beamwidth, Vertical, degrees	9.1	6.6	6.3
Front-to-Back Total Power at 180° ± 30°, dB	27	22	21
USLS (First Lobe), dB	20	17	19

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	2500–2690	3300–3800	3700–4000
Gain, dBi	18.9	20.2	20
Beamwidth, Horizontal at 10 dB, degrees	120	125	125
Beamwidth, Vertical at 3 dB, degrees	9	6.6	6.3
Front-to-Back Total Power at 180° ± 30°, dB	28	24	23
USLS (First Lobe), dB	20	18	20

Electrical Specifications, Service Beam

Frequency Band, MHz	2500–2690	3300–3800	3700–4000
Steered 0° Gain, dBi	19	20.1	19.9
Steered 0° Beamwidth, Horizontal, degrees	25	19	19
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	31	26	25
Steered 0° Horizontal Sidelobe, dB	13	12	11
Steered 30° Gain, dBi	18.2	18.5	18
Steered 30° Beamwidth, Horizontal, degrees	27	21	18
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	29	24	22

Electrical Specifications, Soft Split

Frequency Band, MHz	2500–2690
Gain, dBi	18.2
Beamwidth, Horizontal, degrees	31
Front-to-Back Total Power at 180° ± 30°, dB	30
Horizontal Sidelobe, dB	17

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Mechanical Specifications

Wind Loading @ Velocity, frontal	728.0 N @ 150 km/h (163.7 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	223.0 N @ 150 km/h (50.1 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	873.0 N @ 150 km/h (196.3 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	501.0 N @ 150 km/h (112.6 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	2287 mm 90.039 in
Weight, gross	56 kg 123.459 lb

Regulatory Compliance/Certifications

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



Included Products

BSAMNT-2F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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