FFV4Q4-65D-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

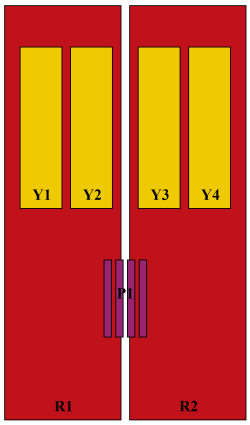
FFV4Q4-65D-R7

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
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	CPxxxxxxxxxxxxxxR1
R2	617-894	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxY4
P1	2500-4000	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxP1

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

Port Configuration

FFV4Q4-65D-R7

Logo Image

SVScore™ 5.5

4.0 7.0 5.0 6.0

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

FFV4Q4-65D-R7

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	15.2	16.1	16.6	17.3	17.6	16	16.4	15.9
Beamwidth, Horizontal, degrees	69	60	60	57	49	90	66	64
Beamwidth, Vertical, degrees	9.5	8.1	6.5	5.9	5.2	5.9	6	6.2
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	16	17	15	16	15	17	15	15
Front-to-Back Ratio at 180°, dB	29	29	35	34	30	33	27	25
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	14.8	15.7	16.1	16.8	17.3	15.5	15.6	15.1
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.5	±0.8	±0.7	±0.6	±0.7	±0.8	±0.7
Beamwidth, Horizontal Tolerance, degrees	±6	±5	±8	±7	±10	±18	±14	±9
Beamwidth, Vertical	±0.6	±0.9	±0.4	±0.4	±0.3	±0.5	±0.7	±0.6

Tolerance, degrees								
USLS, beampeak to 20° above beampeak, dB	14	14	13	13	13	12	12	11
Front-to-Back Total Power at 180° ± 30°, dB	21	22	26	27	23	25	22	20
CPR at Boresight, dB	20	20	20	24	21	16	13	12
CPR at Sector, dB	14	9	7	7	5	11	8	8

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2500–2690**	**3300–3800**	**3700–4000**
Gain, dBi	18.2	17.4	16.6
Beamwidth, Horizontal, degrees	55	59	61
Beamwidth, Vertical, degrees	5.9	5.9	6.2
Front-to-Back Total Power at 180° ± 30°, dB	30	23	19
USLS (First Lobe), dB	17	17	17

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**2500–2690**	**3300–3800**	**3700–4000**
Gain, dBi	21	21	20.6
Beamwidth, Horizontal at 10 dB, degrees	120	125	126
Beamwidth, Vertical at 3 dB, degrees	5.8	6	6
Front-to-Back Total Power at 180° ± 30°, dB	31	26	23
USLS (First Lobe), dB	19	18	16

Electrical Specifications, Service Beam

Frequency Band, MHz	**2500–2690**	**3300–3800**	**3700–4000**
Steered 0° Gain, dBi	20.4	20.9	20.4
Steered 0° Beamwidth, Horizontal, degrees	25	19	19
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	33	28	25
Steered 0° Horizontal Sidelobe, dB	13	11	11
Steered 30° Gain, dBi	20.3	19.3	18.8

Steered 30° Beamwidth, Horizontal, degrees	27	22	18
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	32	26	23

Electrical Specifications, Soft Split

Frequency Band, MHz	**2500–2690**
Gain, dBi	20.2
Beamwidth, Horizontal, degrees	30
Front-to-Back Total Power at 180° ± 30°, dB	32
Horizontal Sidelobe, dB	17

Mechanical Specifications

Wind Loading @ Velocity, frontal	970.0 N @ 150 km/h (218.1 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	304.0 N @ 150 km/h (68.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,162.0 N @ 150 km/h (261.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	667.0 N @ 150 km/h (149.9 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	2875 mm | 113.189 in
Weight, gross	64.5 kg | 142.198 lb
Weight, net	47.2 kg | 104.058 lb

Regulatory Compliance/Certifications

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

Included Products

BSAMNT-3F	–	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance