FFV4S4-65B-R7-V2

20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 3300-4000 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
- Beamforming array for 3300-4000 MHz, n77 and n78

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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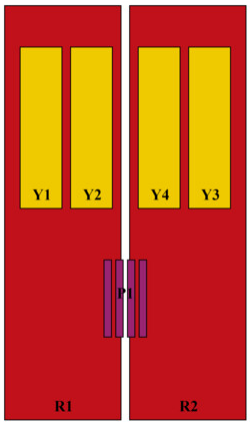
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	2000 mm | 78.74 in
Net Weight, antenna only	38 kg | 83.776 lb
TDD Column Spacing	41 mm | 1.614 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	3300-4000	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxP1

(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 | 3300 – 4000 MHz | 617 – 894 MHz
Polarization	±45°
Total Input Power, maximum	1,400 W @ 50 °C

Electrical Specifications

	R1,R2	R1,R2	Y1,Y3	Y1,Y3	Y1,Y3	Y1,Y3	Y2,Y4
Frequency Band, MHz	**617–698**	**698–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2490–2690**	**1695–1880**
RF Port	1,2,3,4	1,2,3,4	5,6,9,10	5,6,9,10	5,6,9,10	5,6,9,10	7,8,11,12
Gain, dBi	13.8	14.8	15.9	16.3	16.5	17	15.8
Beamwidth, Horizontal, degrees	68	59	72	72	70	56	63
Beamwidth, Vertical, degrees	13.8	11.7	7.7	7.3	6.9	5.7	8.1
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	16	17	19	18	19	16
Front-to-Back Ratio at 180°, dB	28	29	33	32	31	26	34
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25

Isolation, Inter-band, dB	25	25	25	25	25	25	25
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
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-150
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	200	200

Electrical Specifications, BASTA

Frequency Band, MHz	**617–698**	**698–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2490–2690**	**1695–1880**
Gain by all Beam Tilts, average, dBi	13.4	14.3	15.3	15.9	16.1	16.6	15.2
Gain by all Beam Tilts Tolerance, dB	±0.7	±0.6	±1	±0.4	±0.4	±0.5	±0.9
Beamwidth, Horizontal Tolerance, degrees	±5	±5	±7	±4	±4	±5	±4
Beamwidth, Vertical Tolerance, degrees	±0.8	±1.4	±0.6	±0.3	±0.5	±0.4	±0.5
USLS, beampeak to 20° above beampeak, dB		16	13	15	15	14	13
Front-to-Back Total Power at 180° ± 30°, dB	21	22	24	27	25	20	25
CPR at Boresight, dB	16	16	16	17	17	19	18
CPR at Sector, dB	9	7	9	8	6	4	7

Electrical Specifications

	Y2,Y4	**Y2,Y4**	**Y2,Y4**	**P1**	**P1**
Frequency Band, MHz	**1850–1990**	**1920–2200**	**2490–2690**	**3300–3800**	**3700–4000**
RF Port	7,8,11,12	7,8,11,12	7,8,11,12	13-20	13-20
Gain, dBi	16.1	16.5	16.7	15.8	16.1
Beamwidth, Horizontal, degrees	64	60	59	88	82
Beamwidth, Vertical, degrees	7.7	7.3	6.1	6.2	5.8
Beam Tilt, degrees	2–12	2–12	2–12	0–10	0–10
USLS (First Lobe), dB	18	17	18	14	14
Front-to-Back Ratio at 180°, dB	37	37	30	31	30
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	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25
Isolation, Co-polarization, dB				19	19
VSWR | Return loss, dB	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	-140	-140
Input Power per Port at 50°C, maximum, watts	200	200	200	75	75

Electrical Specifications, BASTA

Frequency Band, MHz	**1850–1990**	**1920–2200**	**2490–2690**	**3300–3800**	**3700–4000**
Gain by all Beam Tilts, average, dBi	15.8	16.2	16.3	15.2	15.5
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.5	±0.5	±0.7	±0.5
Beamwidth, Horizontal Tolerance, degrees	±3	±6	±7	±17	±13
Beamwidth, Vertical Tolerance, degrees	±0.3	±0.6	±0.3	±0.4	±0.5
USLS, beampeak to 20° above beampeak, dB	15	16	13	13	12
Front-to-Back Total Power at 180° ± 30°, dB	28	29	25	23	23
CPR at Boresight, dB	21	21	18	16	16
CPR at Sector, dB	7	9	5	6	6

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**3300–3800**	**3700–4000**
Gain, dBi	17.5	18
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	6.3	5.9
Front-to-Back Total Power at 180° ± 30°, dB	27	27
USLS (First Lobe), dB	18	19

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Electrical Specifications, Service Beam

Frequency Band, MHz	3300–3800	3700–4000
Steered 0° Gain, dBi	20.5	20.7
Steered 0° Beamwidth, Horizontal, degrees	25	25
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	30
Steered 0° Horizontal Sidelobe, dB	14	14
Steered 30° Gain, dBi	19.6	20.2
Steered 30° Beamwidth, Horizontal, degrees	28	25
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	29	28

Electrical Specifications, Soft Split

Frequency Band, MHz	3300–3800	3700–4000
Gain, dBi	19.5	19.9
Beamwidth, Horizontal, degrees	32	29
Front-to-Back Total Power at 180° ± 30°, dB	29	29
Horizontal Sidelobe, dB	21	20

Mechanical Specifications

Wind Loading @ Velocity, frontal	680.0 N @ 150 km/h (152.9 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	178.0 N @ 150 km/h (40.0 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	904.0 N @ 150 km/h (203.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	468.0 N @ 150 km/h (105.2 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	2187 mm | 86.102 in
Weight, gross	49.1 kg | 108.247 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.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance