FFV4S4-65B-R7-V2

20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 3100-4000 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 3100-4000 MHz, n77 and n78

General Specifications

Antenna Type	Sector and beamforming
Band	Multiband
Calibration Connector Interface	M-LOC
Calibration Connector Quantity	1
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
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

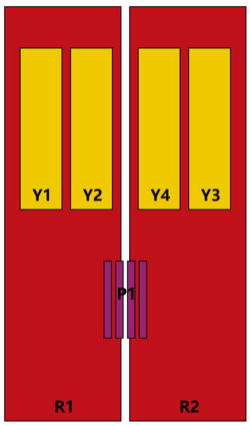
RET Hardware	CommRET v2
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) | Low band (2) | Mid band (4)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

FFV4S4-65B-R7-V2

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	HPBW	RET (SRET)	AISG No.	RET UID
R1	617-894	1 - 2	65°	1	AISG1	CPxxxxxxxxxxxxxxR1
R2	617-894	3 - 4	65°	2	AISG1	CPxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	65°	3	AISG1	CPxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	65°	4	AISG1	CPxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	65°	5	AISG1	CPxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	65°	6	AISG1	CPxxxxxxxxxxxxxxY4
P1	3100-4000	13 - 20	BF°	7	AISG1	CPxxxxxxxxxxxxxxP1

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

Port Configuration

FFV4S4-65B-R7-V2

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz | 3100 – 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	Y2,Y4	Y2,Y4	Y2,Y4
Frequency Band, MHz	**617–698**	**698–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2490–2690**	**1695–1880**	**1850–1990**	**1920–2200**	**2490–2690**
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	7,8,11,12	7,8,11,12	7,8,11,12
Gain, dBi	13.8	14.8	15.9	16.3	16.5	17	15.8	16.1	16.5	16.7
Beamwidth, Horizontal, degrees	68	59	72	72	70	56	63	64	60	59
Beamwidth, Vertical, degrees	13.8	11.7	7.7	7.3	6.9	5.7	8.1	7.7	7.3	6.1
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	16	17	19	18	19	16	18	17	18
Front-to-Back Ratio at 180°, dB	28	29	33	32	31	26	34	37	37	30
CPR at Boresight, dB	16	16	16	17	17	19	18	21	21	18
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	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	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20	-150	-150	-150	-150	-150	-150	-150	-150	-150	-150

W, dBc										
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	200	200	200	200	200

Electrical Specifications

	P1	**P1**	**P1**
Frequency Band, MHz	**3100–3300**	**3300–3800**	**3700–4000**
RF Port	13-20	13-20	13-20
Gain, dBi	15.7	15.8	16.1
Beamwidth, Horizontal, degrees	82	88	82
Beamwidth, Vertical, degrees	6.7	6.2	5.8
Beam Tilt, degrees	0–10	0–10	0–10
USLS (First Lobe), dB	11	14	14
Front-to-Back Ratio at 180°, dB	30	31	30
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,	7	7	7

Antenna port to Cal port, degrees			
CPR at Boresight, dB	16	16	16
Isolation, Cross Polarization, dB	21	25	25
Isolation, Inter-band, dB	25	25	25
Isolation, Co-polarization, dB	19	19	19
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-140	-140	-140
Input Power per Port at 50°C, maximum, watts	75	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**3100–3300**	**3300–3800**	**3700–4000**
Gain, dBi	17.1	17.5	18
Beamwidth, Horizontal, degrees	65	65	65
Beamwidth, Vertical, degrees	6.8	6.3	5.9
Front-to-Back Total Power at 180° ± 30°, dB	26	27	27
USLS (First	17	18	19

Lobe), dB

Electrical Specifications, Service Beam

Frequency Band, MHz	**3100–3300**	**3300–3800**	**3700–4000**
Steered 0° Gain, dBi	20.3	20.5	20.7
Steered 0° Beamwidth, Horizontal, degrees	26	25	25
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30	30	30
Steered 0° Horizontal Sidelobe, dB	14	14	14
Steered 30° Gain, dBi	18.5	19.6	20.2
Steered 30° Beamwidth, Horizontal, degrees	32	28	25
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	27	29	28

Electrical Specifications, Soft Split

Frequency Band, MHz	**3100–3300**	**3300–3800**	**3700–4000**
Gain, dBi	18.6	19.5	19.9
Beamwidth, Horizontal, degrees	35	32	29
Front-to-Back Total Power at 180° ± 30°, dB	27	29	29

Horizontal Sidelobe, dB	13	21	20

Mechanical Specifications

Wind Loading @ Velocity, frontal	688.0 N @ 150 km/h (154.7 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	210.0 N @ 150 km/h (47.2 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	826.0 N @ 150 km/h (185.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	474.0 N @ 150 km/h (106.6 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	2187 mm | 86.102 in
Weight, gross	51.8 kg | 114.199 lb

Regulatory Compliance/Certifications

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

Included Products

BSAMNT-4	–	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.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance