

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

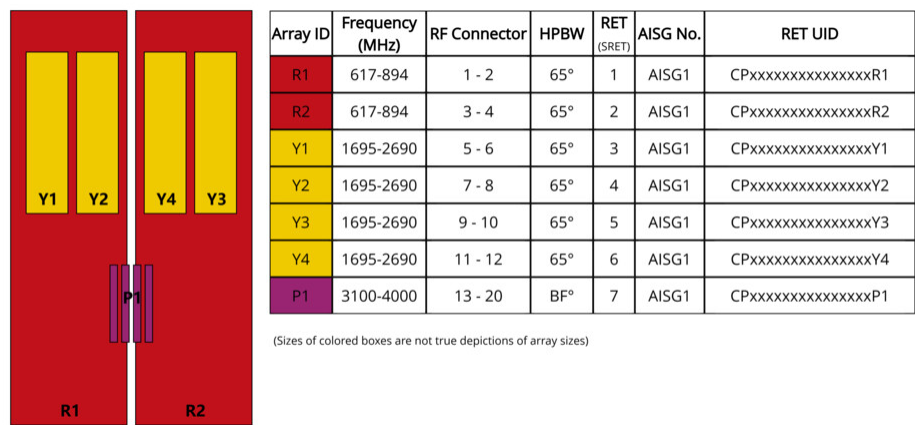
RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) Low band (2) Mid band (4)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W
Protocol	3GPP/AISG 2.0 (Single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

Dimensions

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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



Port Configuration



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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
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 W, dBc	-150	-150	-150	-150	-150	-150	-150	-150	-150	-150
Input Power per Port at	250	250	200	200	200	200	200	200	200	200

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50°C,
maximum,
watts

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, Antenna port to Cal port, degrees	7	7	7

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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 Lobe), dB	17	18	19

Electrical Specifications, Service Beam

Frequency Band, MHz	3100–3300	3300–3800	3700–4000
Steered 0°	20.3	20.5	20.7

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Gain, dBi			
Steered 0°	26	25	25
Beamwidth, Horizontal, degrees			
Steered 0°	30	30	30
Front-to-Back Total Power at 180° ± 30°, dB			
Steered 0°	14	14	14
Horizontal Sidelobe, dB			
Steered 30°	18.5	19.6	20.2
Gain, dBi			
Steered 30°	32	28	25
Beamwidth, Horizontal, degrees			
Steered 30°	27	29	28
Front-to-Back Total Power at 180° ± 30°, dB			

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)

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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.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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