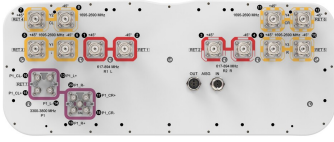


FFV4S4-65B-R7



20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 3300-3800 MHz, 90° HPBW, 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

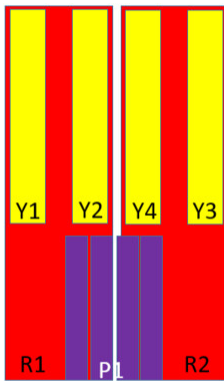
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Protocol 3GPP/AISG 2.0 (Single RET)

Dimensions

Width 498 mm | 19.606 in
Depth 197 mm | 7.756 in
Length 2000 mm | 78.74 in
Net Weight, antenna only 43 kg | 94.799 lb
TDD Column Spacing 42 mm | 1.654 in

Array Layout



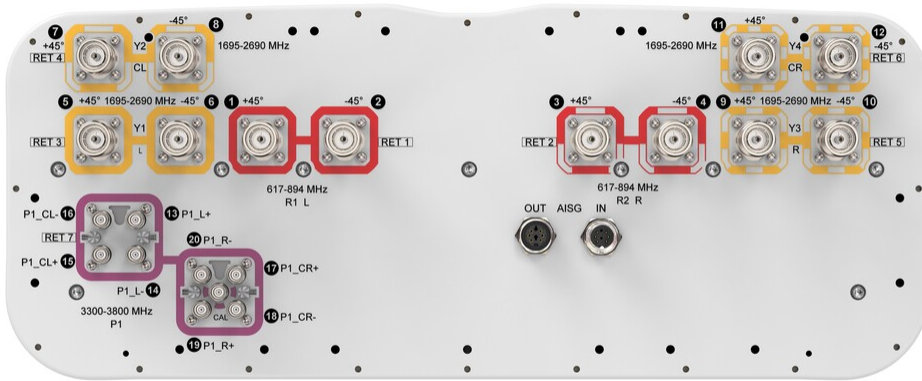
Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	617-894	1-2	1	CPxxxxxxxxxxxxxxxxR1
R2	617-894	3-4	2	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5-6	3	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2690	7-8	4	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2690	9-10	5	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2690	11-12	6	CPxxxxxxxxxxxxxxxxY4
P1	3300-3800	13-20	7	CPxxxxxxxxxxxxxxxxP1

Left Bottom Right

(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 – 3800 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	13.7	14.7	16	16.4	16.5	17	15.8
Beamwidth, Horizontal, degrees	69	60	70	71	69	55	62
Beamwidth, Vertical, degrees	13.8	11.8	7.6	7.2	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	16	15	17	19	19	20	17
Front-to-Back Ratio at 180°, dB	28	29	34	33	32	25	36
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25

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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	14.2	15.4	16.1	16.2	16.6	15.2
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.7	±1	±0.4	±0.4	±0.7	±0.9
Beamwidth, Horizontal Tolerance, degrees	±6.5	±6.1	±5.8	±4.7	±3.8	±4.6	±6.1
Beamwidth, Vertical Tolerance, degrees	±0.9	±1.4	±0.7	±0.4	±0.6	±0.4	±0.7
USLS, beampeak to 20° above beampeak, dB		15	12	14	14	13	12
Front-to-Back Total Power at 180° ± 30°, dB	21	21	24	26	25	19	25
CPR at Boresight, dB	16	16	17	19	18	19	18
CPR at Sector, dB	9	7	9	8	7	3	7

Electrical Specifications

	Y2,Y4	Y2,Y4	Y2,Y4	P1
Frequency Band, MHz	1850–1990	1920–2200	2490–2690	3300–3800
RF Port	7,8,11,12	7,8,11,12	7,8,11,12	13,14,15,16,17,18,19,20
Gain, dBi	16	16.2	16.5	15.7
Beamwidth, Horizontal, degrees	64	62	59	86
Beamwidth, Vertical, degrees	7.8	7.4	6.1	6.1
Beam Tilt, degrees	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	18	18	17	15
Front-to-Back Ratio at 180°, dB	37	36	31	28
Coupling level, Amp, Antenna port to Cal port, dB				26
Coupling level, max Amp Δ, Antenna port to Cal port, dB				±2

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Coupler, max Amp Δ, Antenna port to Cal port, dB				0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees				7
Isolation, Cross Polarization, dB	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25
Isolation, Co-polarization, dB				20
VSWR Return loss, dB	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
Input Power per Port at 50° C, maximum, watts	200	200	200	75

Electrical Specifications, BASTA

Frequency Band, MHz	1850–1990	1920–2200	2490–2690	3300–3800
Gain by all Beam Tilts, average, dBi	15.7	15.9	16.1	15.1
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.4	±0.5	±0.7
Beamwidth, Horizontal Tolerance, degrees	±4.9	±5.3	±5.9	±16.6
Beamwidth, Vertical Tolerance, degrees	±0.4	±0.6	±0.4	±0.6
USLS, beampeak to 20° above beampeak, dB	14	15	13	13
Front-to-Back Total Power at 180° ± 30°, dB	28	28	25	22
CPR at Boresight, dB	21	20	17	15
CPR at Sector, dB	8	8	5	6

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3300–3800
Gain, dBi	17.3
Beamwidth, Horizontal, degrees	65
Beamwidth, Vertical, degrees	6.2
Front-to-Back Total Power	25

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at 180° ± 30°, dB

USLS (First Lobe), dB 20

Electrical Specifications, Service Beam

Frequency Band, MHz 3300–3800

Steered 0° Gain, dBi 20.3

Steered 0° Beamwidth, Horizontal, degrees 25

Steered 0° Front-to-Back Total Power at 180° ± 30°, dB 29

Steered 0° Horizontal Sidelobe, dB 14

Steered 30° Gain, dBi 19.7

Steered 30° Beamwidth, Horizontal, degrees 27

Steered 30° Front-to-Back Total Power at 180° ± 30°, dB 28

Electrical Specifications, Soft Split

Frequency Band, MHz 3300–3800

Gain, dBi 19.1

Beamwidth, Horizontal, degrees 32

Front-to-Back Total Power at 180° ± 30°, dB 27

Horizontal Sidelobe, dB 18

Mechanical Specifications

Wind Loading @ Velocity, frontal 759.0 N @ 150 km/h (170.6 lbf @ 150 km/h)

Wind Loading @ Velocity, lateral 259.0 N @ 150 km/h (58.2 lbf @ 150 km/h)

Wind Loading @ Velocity, maximum 984.0 N @ 150 km/h (221.2 lbf @ 150 km/h)

Wind Loading @ Velocity, rear 625.0 N @ 150 km/h (140.5 lbf @ 150 km/h)

Wind Speed, maximum 241 km/h (150 mph)

Packaging and Weights

Width, packed 565 mm | 22.244 in

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Depth, packed	309 mm 12.165 in
Length, packed	2187 mm 86.102 in
Weight, gross	56.8 kg 125.222 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



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