

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
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

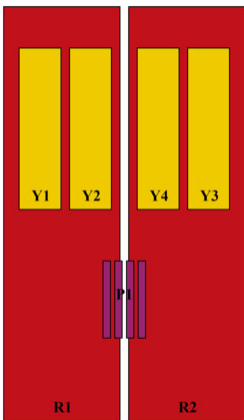
Depth 197 mm | 7.756 in

Length 2000 mm | 78.74 in

Net Weight, without mounting kit 41.6 kg | 91.712 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	CPxxxxxxxxxxxxxxxxR1
R2	617-894	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxxY4
P1	3300-4000	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxxP1

(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

Frequency Band, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200	2490-2690	1695-1880	1850-1990	1920-2200	2490-2690	3300-3800	3700-4000
Gain, dBi	13.8	14.8	15.9	16.3	16.5	17	15.8	16.1	16.5	16.7	15.8	16.3
Beamwidth, Horizontal, degrees	68	59	72	72	70	56	63	64	60	59	88	82
Beamwidth, Vertical, degrees	13.8	11.7	7.7	7.3	6.9	5.7	8.1	7.7	7.3	6.1	6.2	5.8
Beam Tilt, degrees	2-14	2-14	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12	0-10	0-10
USLS (First Lobe), dB	17	16	17	19	18	19	16	18	17	18	14	14
Front-to-	28	29	33	32	31	26	34	37	37	30	31	30

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Back Ratio at 180°, dB													
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	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25	25	25	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	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	-150	-140	-140
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	200	200	200	200	200	200	75	75

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Electrical Specifications, BASTA

Frequency Band, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200	2490-2690	1695-1880	1850-1990	1920-2200	2490-2690	3300-3800	3700-3800
Gain by all Beam Tilts, average, dBi	13.4	14.3	15.3	15.9	16.1	16.6	15.2	15.8	16.2	16.3	15.2	15.2
Gain by all Beam Tilts Tolerance, dB	±0.7	±0.6	±1	±0.4	±0.4	±0.5	±0.9	±0.4	±0.5	±0.5	±0.7	±0.7
Beamwidth, Horizontal Tolerance, degrees	±5.2	±5.3	±6.5	±4	±3.6	±4.8	±4.3	±3.4	±6.3	±6.8	±17.4	±17.4
Beamwidth, Vertical Tolerance, degrees	±0.8	±1.4	±0.6	±0.3	±0.5	±0.4	±0.5	±0.3	±0.6	±0.3	±0.4	±0.4
USLS, beampeak to 20° above beampeak, dB		16	13	15	15	14	13	15	16	13	13	12
Front-to-Back Total Power at 180° ± 30°, dB	21	22	24	27	25	20	25	28	29	25	23	23
CPR at Boresight, dB	16	16	16	17	17	19	18	21	21	18	16	16
CPR at Sector, dB	9	7	9	8	6	4	7	7	9	5	6	6

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3300-3800	3700-3800
Gain, dBi	17.5	18
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	6.3	5.5

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Vertical,
degrees

Front-to-
Back Total
Power at
 $180^\circ \pm 30^\circ$,
dB

27

27

USLS (First
Lobe), dB

18

19

Electrical Specifications, Service Beam

Frequency
Band, MHz

3300-380037

Steered 0°
Gain, dBi

20.5

20

Steered 0°
Beamwidth,
Horizontal,
degrees

25

25

Steered 0°
Front-to-
Back Total
Power at
 $180^\circ \pm 30^\circ$,
dB

30

30

Steered 0°
Horizontal
Sidelobe, dB

14

14

Steered 30°
Gain, dBi

19.6

20

Steered 30°
Beamwidth,
Horizontal,
degrees

28

25

Steered 30°
Front-to-
Back Total
Power at
 $180^\circ \pm 30^\circ$,
dB

29

28

Electrical Specifications, Soft Split

Frequency

3300-380037

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Band, MHz		
Gain, dBi	19.5	19
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	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 149.75 mph

Packaging and Weights

Width, packed	597 mm 23.504 in
Depth, packed	349 mm 13.74 in
Length, packed	2149 mm 84.606 in
Weight, gross	55.7 kg 122.797 lb

Regulatory Compliance/Certifications

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



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

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Performance Note Severe environmental conditions may degrade optimum performance