

FFV4Q4-65A-R7



20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 2500-4000 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

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

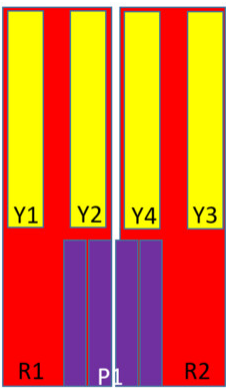
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Protocol 3GPP/AISG 2.0 (Single RET)

Dimensions

Width 498 mm | 19.606 in
Depth 197 mm | 7.756 in
Length 1499 mm | 59.016 in
Net Weight, antenna only 35 kg | 77.162 lb
TDD Column Spacing 58 mm | 2.283 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	2500-4000	13-20	7	CPxxxxxxxxxxxxxxxxP1

Left Right
Bottom

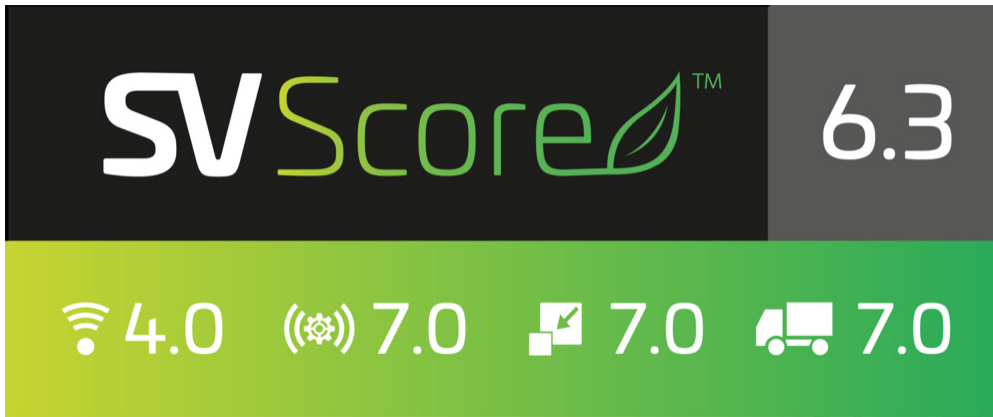
(Sizes of colored boxes are not true depictions of array sizes)

Port Configuration



Logo Image

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Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz 2500 – 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	Y2,Y4	Y2,Y4	Y2,Y4	P1	P1	P1
Frequency Band, MHz	617-698	698-894	1695-1920	1920-2200	2490-2690	1695-1920	1920-2200	2490-2690	2500-2690	3300-3800	3700-4000
RF Port	1-4	1-4	5,6,9,10	5,6,9,10	5,6,9,10	7,8,11,12	7,8,11,12	7,8,11,12	13-20	13-20	13-20
Gain, dBi	12.9	13.4	16	16.7	17.1	15.8	16.5	16.7	11.8	13.4	13.7
Beamwidth, Horizontal, degrees	69	59	74	69	56	68	64	58	93	65	65
Beamwidth, Vertical, degrees	18.2	15.5	6.6	6	5.1	8.8	7.9	6.4	16.9	12.1	11.7
Beam Tilt, degrees	4-18	4-18	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	17	17	19	18	19	18	18	17	12	15	15
Front-to-Back Ratio at 180°, dB	28	30	32	33	27	35	36	31	28	25	24
Coupling level, Amp, Antenna									26	26	26

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port to Cal port, dB											
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
Isolation, Cross Polarization, dB	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
Isolation, Co-polarization, dB									18	18	18
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
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-150	-150	-140	-140	-140
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	200	200	200	80	80	80

Electrical Specifications, BASTA

Frequency Band, MHz 617-698 698-894 1695-1920 1920-2200 2490-2690 1695-1920 1920-2200 2490-2690 2500-2690 3300-3800 3700-4000

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Gain by all Beam Tilts, average, dBi	12.5	13	15.6	16.3	16.6	15.4	16.1	16.4	11.3	12.8	13
Gain by all Beam Tilts Tolerance, dB	±0.6	±0.8	±0.8	±0.4	±0.7	±0.7	±0.5	±0.6	±0.8	±0.7	±0.8
Beamwidth, Horizontal Tolerance, degrees	±10	±9	±5	±7	±5	±5	±7	±5	±18	±12	±11
Beamwidth, Vertical Tolerance, degrees	±1.8	±1.9	±0.4	±0.5	±0.4	±0.7	±0.6	±0.5	±2	±1.5	±1.3
USLS, beampeak to 20° above beampeak, dB			16	15	13	16	16	12		14	15
Front-to-Back Total Power at 180° ± 30°, dB	19	20	23	25	21	26	29	26	22	18	18
CPR at Boresight, dB	14	14	19	20	16	17	20	18	19	16	16
CPR at Sector, dB	8	7	7	6	3	7	9	5	7	7	7

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	2500-2690 3300-3800 3700-4000		
Gain, dBi	14	14.5	14.8
Beamwidth, Horizontal, degrees	65	65	65
Beamwidth, Vertical, degrees	16.5	11.9	11.5
Front-to-Back Total	26	21	21

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Power at
180° ± 30°,
dB

USLS (First
Lobe), dB

18 16 17

Electrical Specifications, Envelope Pattern

Frequency
Band, MHz

2500-2690 3300-3800 3700-4000

Gain, dBi

16.5 18.3 18.4

Beamwidth,
Horizontal
at 10 dB,
degrees

120 124 122

Beamwidth,
Vertical at 3
dB, degrees

16.7 12 11.4

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

26 23 22

USLS (First
Lobe), dB

20 20 20

Electrical Specifications, Service Beam

Frequency
Band, MHz

2500-2690 3300-3800 3700-4000

Steered 0°
Gain, dBi

16.6 18.3 18.4

Steered 0°
Beamwidth,
Horizontal,
degrees

25 19 18

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

28 25 23

Steered 0°

12 12 11

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Horizontal Sidelobe, dB

Steered 30° Gain, dBi	15.8	16.3	16.4
Steered 30° Beamwidth, Horizontal, degrees	29	21	19
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	28	22	21

Electrical Specifications, Soft Split

Frequency Band, MHz	2500–2690
Gain, dBi	15.7
Beamwidth, Horizontal, degrees	32
Front-to-Back Total Power at 180° ± 30°, dB	28
Horizontal Sidelobe, dB	17

Mechanical Specifications

Wind Loading @ Velocity, frontal	510.0 N @ 150 km/h (114.7 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	133.0 N @ 150 km/h (29.9 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	677.0 N @ 150 km/h (152.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	351.0 N @ 150 km/h (78.9 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	1686 mm 66.378 in

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Weight, gross

45 kg | 99.208 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-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