S4-90M-R1-P8

8-Port Beamforming Antenna, 3300–3800 MHz, 1xRET

- For use in beamforming systems for 3300-3800 MHz with calibration ports

General Specifications

Antenna Type	Sector and beamforming
Band	Single band
Calibration Connector Interface	4.3-10 Female
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
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, total	8

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)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

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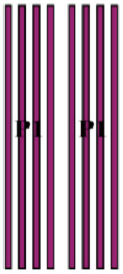
Dimensions

Width	430 mm | 16.929 in
Depth	197 mm | 7.756 in
Length	850 mm | 33.465 in
Net Weight, antenna only	18.5 kg | 40.785 lb
TDD Column Spacing	42 mm | 1.654 in

Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
P1	3300-3800	1 - 8	1	AISG1	ANxxxxxxxxxxxxxxx1

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

Port Configuration

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	3300 – 3800 MHz

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Polarization	±45°
Total Input Power, maximum	400 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	**3300–3400**	**3400–3700**	**3700–3800**
RF Port	1-8	1-8	1-8
Beam Tilt, degrees	0–10	0–10	0–10
Coupling level, Amp, Antenna port to Cal port, dB	26	26	26
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
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	**3300–3400**	**3400–3700**	**3700–3800**
Gain, dBi	16	16.5	17
Front-to-Back Total Power at 180° ± 30°, dB	25	24	24
USLS (First Lobe), dB	12	15	16

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**3300–3400**	**3400–3700**	**3700–3800**
Gain, dBi	22.1	22.6	23.2
Beamwidth, Horizontal at 10 dB, degrees	138	130	123
Beamwidth, Vertical at 3 dB, degrees	6.5	6.2	6.1
Front-to-Back Total Power at 180° ± 30°, dB	26	27	27
USLS (First Lobe), dB	15	17	18

Electrical Specifications, Service Beam

Frequency Band, MHz	**3300–3400**	**3400–3700**	**3700–3800**
Steered 13° Gain, dBi	22.1	22.5	23.2
Steered 13° Beamwidth, Horizontal, degrees	18	17	16
Steered 13° Front-to-Back Total Power at 180° ± 30°, dB	33	33	32
Steered 13° USLS (First Lobe), dB	15	16	17

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Steered 42° Gain, dBi	20.2	21.2	21.8
Steered 42° Beamwidth, Horizontal, degrees	21	20	19
Steered 42° Front-to-Back Total Power at 180° ± 30°, dB	25	26	27
Steered 42° USLS (First Lobe), dB	16	16	17

Electrical Specifications, Soft Split

Frequency Band, MHz	**3300–3400**	**3400–3700**	**3700–3800**
Gain, dBi	19	19.2	19.5
Beamwidth, Horizontal, degrees	49	48	47
Front-to-Back Total Power at 180° ± 30°, dB	27	27	26
Horizontal Sidelobe, dB	16	16	16

Mechanical Specifications

Wind Loading @ Velocity, frontal	189.0 N @ 150 km/h (42.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	91.0 N @ 150 km/h (20.5 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	284.0 N @ 150 km/h (63.8 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	121.0 N @ 150 km/h (27.2 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	530 mm | 20.866 in
Depth, packed	349 mm | 13.74 in
Length, packed	1022 mm | 40.236 in
Weight, gross	29 kg | 63.934 lb

Regulatory Compliance/Certifications

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

Included Products

BSAMNT-3	–	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

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