

# 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

<b>Antenna Type</b>	Sector and beamforming
<b>Band</b>	Single band
<b>Calibration Connector Interface</b>	4.3-10 Female
<b>Calibration Connector Quantity</b>	1
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	8
<b>RF Connector Quantity, mid band</b>	0
<b>RF Connector Quantity, low band</b>	0
<b>RF Connector Quantity, total</b>	8

### Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (1)
<b>Power Consumption, active state, maximum</b>	10 W
<b>Power Consumption, idle state, maximum</b>	2 W

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**Protocol** 3GPP/AISG 2.0 (Single RET)

## Dimensions

**Width** 430 mm | 16.929 in

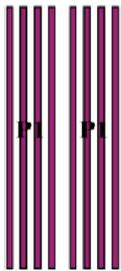
**Depth** 197 mm | 7.756 in

**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	ANxxxxxxxxxxxxxx1

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

## Port Configuration



## Electrical Specifications

**Impedance** 50 ohm

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Operating Frequency Band	3300 – 3800 MHz
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° ±	33	33	32

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## 30°, dB

<b>Steered 13° USLS (First Lobe), dB</b>	15	16	17
<b>Steered 42° Gain, dBi</b>	20.2	21.2	21.8
<b>Steered 42° Beamwidth, Horizontal, degrees</b>	21	20	19
<b>Steered 42° Front-to-Back Total Power at 180° ± 30°, dB</b>	25	26	27
<b>Steered 42° USLS (First Lobe), dB</b>	16	16	17

## Electrical Specifications, Soft Split

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

## Mechanical Specifications

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

## Packaging and Weights

<b>Width, packed</b>	530 mm   20.866 in
<b>Depth, packed</b>	349 mm   13.74 in
<b>Length, packed</b>	1022 mm   40.236 in
<b>Weight, gross</b>	29 kg   63.934 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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.
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\* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance

