

# 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, mid band	0
RF Connector Quantity, low band	0
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

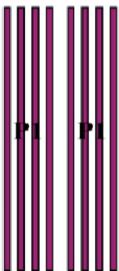
# S4-90M-R1-P8

**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

# S4-90M-R1-P8

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 $\Delta$ , Antenna port to Cal port, dB	0.9	0.9	0.9
Coupler, max Phase $\Delta$ , 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

# S4-90M-R1-P8

30°, dB			
Steered 13° USLS (First Lobe), dB	15	16	17
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
30°, dB			
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.
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# S4-90M-R1-P8

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\* Footnotes

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

