

# S4-90M-R1-V5



## 8-Port Beamforming Antenna, 3300-4200 MHz, 1x RET

- Planer array antenna - 4 columns
- Single internal RET control for all four antenna arrays
- Designed for beamforming, including calibration port
- Optimized for software defined split six sector applications
- Fits in the ANDREW AEKT solution

## 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>	PVC, UV resistant
<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

# S4-90M-R1-V5

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

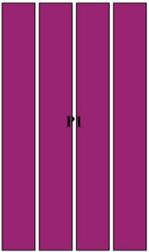
## Dimensions

**Width** 307 mm | 12.087 in  
**Depth** 118 mm | 4.646 in  
**Length** 850 mm | 33.465 in  
**Net Weight, antenna only** 8.5 kg | 18.739 lb

## Array Layout

Array ID	Frequency (MHz)	RF Connector	RET (MRET)	AISG RET UID
P1	3300-4200	1 - 8	1	CPxxxxxxxxxxxxMM.1

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



## Port Configuration

# S4-90M-R1-V5



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	3300 – 4200 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	400 W @ 50 °C

## Electrical Specifications

	<b>P1</b>	<b>P1</b>	<b>P1</b>	<b>P1</b>
<b>Frequency Band, MHz</b>	<b>3300–3400</b>	<b>3400–3700</b>	<b>3700–4000</b>	<b>4000–4200</b>
<b>RF Port</b>	1-8	1-8	1-8	1-8
<b>Gain, dBi</b>	16	16.7	17.6	17
<b>Beamwidth, Horizontal, degrees</b>	92	87	81	75
<b>Beamwidth, Vertical, degrees</b>	6.5	6.1	5.8	5.5
<b>Beam Tilt, degrees</b>	0–10	0–10	0–10	0–10
<b>Front-to-Back Ratio at 180°, dB</b>	31	31	31	30
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>	26	26	26	26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>	±2	±2	±2	±2

# S4-90M-R1-V5

Coupler, max Amp $\Delta$ , Antenna port to Cal port, dB	0.6	0.6	0.6	0.6
Coupler, max Phase $\Delta$ , Antenna port to Cal port, degrees	5	5	5	5
Isolation, Cross Polarization, dB	25	25	25	25
VSWR   Return loss, dB	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
Input Power per Port at 50°C, maximum, watts	75	75	75	75

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	3300–3400	3400–3700	3700–4000	4000–4200
Gain, dBi	17.3	17.7	17.8	18
Beamwidth, Horizontal at 10 dB, degrees	129	120	112	95
Beamwidth, Vertical, degrees	6.5	6.1	5.7	5.4
Beamwidth, Vertical Tolerance, degrees	$\pm 0.3$	$\pm 0.3$	$\pm 0.3$	$\pm 0.2$
Front-to-Back Total Power at 180° $\pm$ 30°, dB	28	27	25	26
USLS (First Lobe), dB	18	17	17	18

## Electrical Specifications, Envelope Pattern

Frequency Band, MHz	3300–3400	3400–3700	3700–4000	4000–4200
Gain, dBi	21.1	21.5	22	21.6
Beamwidth, Horizontal at 10 dB, degrees	129	121	119	118
Beamwidth, Vertical at 3 dB, degrees	6.5	6.2	5.7	5.5
Front-to-Back Total Power at 180° $\pm$ 30°, dB	29	28	28	26
USLS (First Lobe), dB	18	18	19	20

## Electrical Specifications, Service Beam

Frequency Band, MHz	3300–3400	3400–3700	3700–4000	4000–4200
Steered 0° Gain, dBi	21.1	21.5	22.3	21.9
Steered 0° Beamwidth, Horizontal, degrees	26	25	23	21
Steered 0° Front-to-Back Total Power at 180° $\pm$ 30°, dB	31	31	31	30

# S4-90M-R1-V5

<b>Steered 0° Horizontal Sidelobe, dB</b>	15	15	14	14
<b>Steered 30° Gain, dBi</b>	19.9	20.4	21.3	20.9
<b>Steered 30° Beamwidth, Horizontal, degrees</b>	30	29	26	23
<b>Steered 30° Front-to-Back Total Power at 180° ± 30°, dB</b>	30	29	29	28

## Electrical Specifications, Soft Split

<b>Frequency Band, MHz</b>	<b>3300–3400</b>	<b>3400–3700</b>	<b>3700–4000</b>	<b>4000–4200</b>
<b>Gain, dBi</b>	20	20.4	20.8	20.3

## Mechanical Specifications

<b>Effective Projective Area (EPA), frontal</b>	0.27 m <sup>2</sup>   2.906 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.05 m <sup>2</sup>   0.538 ft <sup>2</sup>
<b>Wind Loading @ Velocity, frontal</b>	284.0 N @ 150 km/h (63.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	56.0 N @ 150 km/h (12.6 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	286.0 N @ 150 km/h (64.3 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	343.0 N @ 150 km/h (77.1 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	413 mm   16.26 in
<b>Depth, packed</b>	257 mm   10.118 in
<b>Length, packed</b>	1035 mm   40.748 in
<b>Weight, gross</b>	19 kg   41.888 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



# S4-90M-R1-V5

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## 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

# 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.

## Product Classification

**Product Type** Downtilt mounting kit

## General Specifications

**Application** Outdoor

**Color** Silver

## Dimensions

**Compatible Diameter, maximum** 115 mm | 4.528 in

**Compatible Diameter, minimum** 60 mm | 2.362 in

**Weight, net** 6.2 kg | 13.669 lb

## Material Specifications

**Material Type** Galvanized steel

## Packaging and Weights

**Included** Brackets | Hardware

**Packaging quantity** 1

**Weight, gross** 6.4 kg | 14.11 lb

## Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.andrew.com/ProductCompliance">www.andrew.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant

# BSAMNT-3

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