

# 3X-S4-90M-R3



24-port tri-sector Antenna, 3 planar arrays pointing 0-120-240 degrees, 3300–4000 MHz, 90° HPBW, 3x RET

- Designed for beamforming, includes calibration port
- Trisector, three 4-column beamforming arrays
- Three DualPol® antennas under one radome
- Fully integrated flange mounting system for ease of installation
- Ideal concealment solution for areas with special regulations regarding visual impact
- Includes M-LOC type cluster connector(s)

## General Specifications

<b>Antenna Type</b>	DualPol® tri-sector
<b>Band</b>	Single band
<b>Calibration Connector Interface</b>	M-LOC
<b>Calibration Connector Quantity</b>	3
<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>	ASA, UV stabilized
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	M-LOC
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	24
<b>RF Connector Quantity, mid band</b>	0
<b>RF Connector Quantity, low band</b>	0
<b>RF Connector Quantity, total</b>	24

## 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 (3)

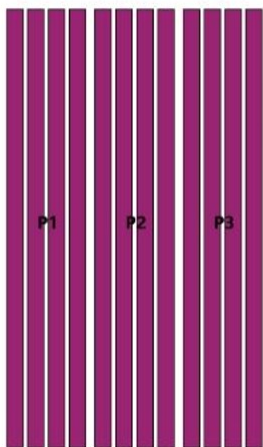
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<b>Power Consumption, active state, maximum</b>	10 W
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Protocol</b>	3GPP/AISG 2.0

## Dimensions

<b>Length</b>	880 mm   34.646 in
<b>Net Weight, without mounting kit</b>	21.9 kg   48.281 lb
<b>Outer Diameter</b>	370 mm   14.567 in
<b>TDD Column Spacing</b>	41 mm   1.614 in

## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET <small>(SRET)</small>	AISG No.	AISG RET UID
P1	3300-4000	1 - 8	1	AISG1	CPxxxxxxxxxxxxxxP1
P2	3300-4000	9 - 16	2	AISG1	CPxxxxxxxxxxxxxxP2
P3	3300-4000	17 - 24	3	AISG1	CPxxxxxxxxxxxxxxP3

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

## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	3300 – 4000 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

<b>Frequency Band, MHz</b>	<b>3300–3600</b>	<b>3600–4000</b>
<b>Gain, dBi</b>	15.2	15.7
<b>Beamwidth, Horizontal, degrees</b>	100	90
<b>Beamwidth, Vertical, degrees</b>	6.4	6
<b>Beam Tilt, degrees</b>	2–12	2–12
<b>USLS (First Lobe), dB</b>	15	15
<b>Front-to-Back Ratio at 180°, dB</b>	30	31
<b>Coupling level, Amp, Antenna port to Cal port, dB</b>	26	26
<b>Coupling level, max Amp Δ, Antenna port to Cal port, dB</b>	±2	±2
<b>Coupler, max Amp Δ, Antenna port to Cal port, dB</b>	0.9	0.9

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Coupler, max Phase $\Delta$ , Antenna port to Cal port, degrees	7	7
Isolation, Cross Polarization, dB	25	25
Isolation, Inter-band, dB	19	19
Isolation, Co-polarization, dB	19	19
VSWR   Return loss, dB	1.5   14.0	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	-145	-145
Input Power per Port at 50°C, maximum, watts	75	75

## Electrical Specifications, Broadcast 65°

Frequency Band, MHz	<b>3300–3600</b>	<b>3600–4000</b>
Gain, dBi	17.6	17.9
Beamwidth, Horizontal, degrees	65	64
Beamwidth, Vertical, degrees	6.5	6
Front-to-Back Total Power at 180° $\pm$ 30°, dB	30	29
USLS (First Lobe), dB	19	18

## Electrical Specifications, Service Beam

Frequency Band, MHz	<b>3300–3600</b>	<b>3600–4000</b>
Steered 0° Gain, dBi	20.6	21
Steered 0° Beamwidth, Horizontal, degrees	27	25
Steered 0° Front-to-Back Total Power at 180° $\pm$ 30°, dB	33	33
Steered 0° Horizontal Sidelobe, dB	13	12
Steered 0° USLS (First Lobe), dB	21	21
Steered 30° Gain, dBi	20	20.3
Steered 30° Beamwidth, Horizontal, degrees	29	27
Steered 30° Front-to-Back Total Power at 180° $\pm$ 30°, dB	32	31

## Electrical Specifications, Soft Split

Frequency Band, MHz	<b>3300–3600</b>	<b>3600–4000</b>
Gain, dBi	19.7	19.8
Beamwidth, Horizontal, degrees	33	32
Front-to-Back Total Power at 180° $\pm$ 30°, dB	32	31
Horizontal Sidelobe, dB	18	19
USLS (First Lobe), dB	20	21

## Mechanical Specifications

Effective Projective Area (EPA), frontal	0.17 m <sup>2</sup>   1.83 ft <sup>2</sup>
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<b>Effective Projective Area (EPA), lateral</b>	0.17 m <sup>2</sup>   1.83 ft <sup>2</sup>
<b>Wind Loading @ Velocity, frontal</b>	186.0 N @ 150 km/h (41.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	186.0 N @ 150 km/h (41.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	186.0 N @ 150 km/h (41.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	186.0 N @ 150 km/h (41.8 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	478 mm   18.819 in
<b>Depth, packed</b>	464 mm   18.268 in
<b>Length, packed</b>	1169 mm   46.024 in
<b>Weight, gross</b>	26.6 kg   58.643 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



## \* Footnotes

<b>Performance Note</b>	Severe environmental conditions may degrade optimum performance
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