S4-90M-R1B-V1

8-Port Beamforming Antenna, 3700-4200 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
- Internal SBT on the calibration port allow remote RET control from the radio over the RF jumper cable
- Compatible with the TS-MNT-3 tri-sector mount kit

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	PVC, 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

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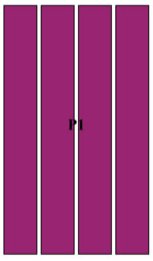
Internal Bias Tee	Cal Port
Internal RET	High band (1)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	307 mm | 12.087 in
Depth	118 mm | 4.646 in
Length	850 mm | 33.465 in
Net Weight, antenna only	8.8 kg | 19.401 lb

Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
P1	3700-4200	1 - 8	1	AISG1	CPxxxxxxxxxxxxxxP1

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

Port Configuration

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Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	3.7 – 4.2 GHz
Polarization	±45°
Total Input Power, maximum	400 W @ 50 °C

Electrical Specifications

	P1	P1
Frequency Band, MHz	**3700–4000**	**4000–4200**
RF Port	1-8	1-8
Gain, dBi	17.6	17
Beamwidth, Horizontal, degrees	81	75

Beamwidth, Vertical, degrees	5.8	5.5
Beam Tilt, degrees	0–10	0–10
Front-to-Back Ratio at 180°, dB	31	30
Coupling level, Amp, Antenna port to Cal port, dB	26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.6	0.6
Coupler, max Phase Δ, Antenna port to Cal port, degrees	5	5
Isolation, Cross Polarization, dB	25	25
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	**3700–4000**	**4000–4200**
Gain, dBi	17.8	17.3
Front-to-Back Total Power at 180° ± 30°, dB	25	25
USLS (First Lobe), dB	17	17

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**3700–4000**	**4000–4200**
Gain, dBi	22.1	21.6
Beamwidth, Horizontal at 10 dB, degrees	119	118
Beamwidth, Vertical at 3 dB, degrees	5.7	5.5
Front-to-Back Total Power at 180° ± 30°, dB	28	26
USLS (First Lobe), dB	19	20

Electrical Specifications, Service Beam

Frequency Band, MHz	**3700–4000**	**4000–4200**
Steered 0° Gain, dBi	22.3	21.9
Steered 0° Beamwidth, Horizontal, degrees	23	21
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	31	30
Steered 0° Horizontal Sidelobe, dB	14	14
Steered 30° Gain, dBi	21.3	20.9
Steered 30° Beamwidth, Horizontal, degrees	26	23
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	29	28

Electrical Specifications, Soft Split

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Frequency Band, MHz	3700–4000	4000–4200
Gain, dBi	20.8	20.3

Mechanical Specifications

Wind Loading @ Velocity, frontal	284.0 N @ 150 km/h (63.8 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	56.0 N @ 150 km/h (12.6 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	286.0 N @ 150 km/h (64.3 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	343.0 N @ 150 km/h (77.1 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	516 mm | 20.315 in
Depth, packed	243 mm | 9.567 in
Length, packed	969 mm | 38.15 in
Weight, gross	11.5 kg | 25.353 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance