T4S4-90A-R2

16-port Planar Array Antenna, 8x 2300–2690 and 8x 3300-3800 MHz, 90° HPBW, 2x RET

- For use in beamforming systems includes one calibration port per band

General Specifications

Antenna Type	Sector
Band	Multiband
Calibration Connector Interface	4.3-10 Female
Calibration Connector Quantity	2
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	16
RF Connector Quantity, total	16

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
Internal RET	High band (2)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm | 19.606 in

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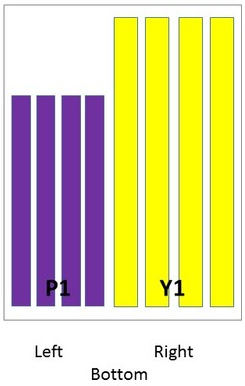
Depth	197 mm | 7.756 in
Length	1499 mm | 59.016 in
Net Weight, without mounting kit	31.5 kg | 69.446 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
Y1	2300-2690	1-8	1	CPxxxxxxxxxxxxxxxY1
P1	3300-3800	9-16	2	CPxxxxxxxxxxxxxxxP1

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

Port Configuration

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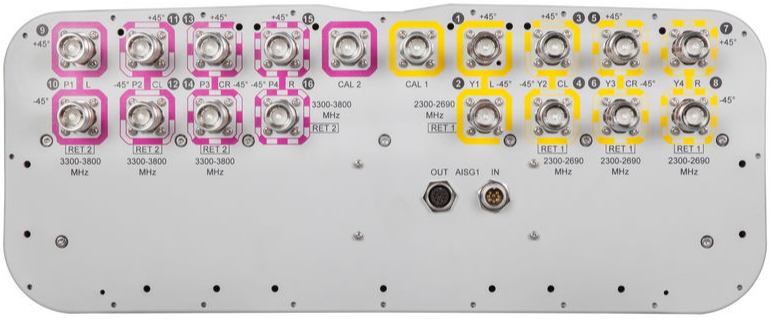

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	2300 – 2690 MHz | 3300 – 3800 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

	Y1	**Y1**	**P1**	**P1**
Frequency Band, MHz	**2300–2500**	**2500–2690**	**3300–3600**	**3600–3800**
Gain, dBi	16.5	16.5	15.7	16.1
Beamwidth, Horizontal, degrees	102.5	96.5	98.8	92
Beamwidth, Vertical, degrees	5.2	5	6.7	6.3

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Beam Tilt, degrees	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	18	20	15	14
Front-to-Back Ratio at 180°, dB	35	35	30	29
Coupling level, Amp, Antenna port to Cal port, dB	26	26	26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±2	±2	±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.9	0.9	0.9	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees	7	7	7	7
Isolation, Inter-band, dB	18	18	18	18
Isolation, Cross Polarization, port to port, dB	25	25	25	25
Isolation, Cross Polarization, port to port, between two columns, dB	30	30	30	30
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	-140	-140	-140	-140
Input Power per Port at 50°C, maximum, watts	150	150	75	75

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2300–2500**	**2500–2690**	**3300–3600**	**3600–3800**
Gain, dBi	17.9	17.9	16.2	16.3
Beamwidth, Horizontal, degrees	63	62	67	65
Beamwidth, Horizontal Tolerance, degrees	±4.9	±3.2	±7.8	±4.9
Beamwidth, Vertical, degrees	5.2	4.9	6.7	6.3
Beamwidth, Vertical Tolerance, degrees	±0.2	±0.2	±0.4	±0.4

Electrical Specifications, Service Beam

Frequency Band, MHz	**2300–2500**	**2500–2690**	**3300–3600**	**3600–3800**
Steered 0° Gain, dBi	21.6	21.8	20.6	20.8
Steered 0° Gain Tolerance, dBi	±0.3	±0.4	±0.4	±0.6
Steered 0° Beamwidth, Horizontal, degrees	27	25	25	23
Steered 0° CPR at Beampeak, dB	16	16	20	15
Steered 0° Horizontal Sidelobe, dB	12	11	12	12

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Steered 13° USLS (First Lobe), dB	3	4	4	6
Steered 30° Gain, dBi	21.2	21.2	19.8	19.9
Steered 30° Gain Tolerance, dBi	±0.3	±0.5	±0.4	±0.5
Steered 30° Beamwidth, Horizontal, degrees	29	27	29	27
Steered 30° Horizontal Sidelobe, dB	10	9	10	9
Steered 42° Front-to-Back Total Power at 180° ± 30°, dB	3	5	4	5

Electrical Specifications, Soft Split

Frequency Band, MHz	**2300–2500**	**2500–2690**	**3300–3600**	**3600–3800**
Gain, dBi	21.1	21.1	19.7	19.9
Beamwidth, Horizontal, degrees	32	31	32	30
CPR at Beampeak, dB	16	15	18	16
Horizontal Sidelobe, dB	18	17	18	17

Mechanical Specifications

Mechanical Tilt Range	0°–15°
Wind Loading @ Velocity, frontal	549.0 N @ 150 km/h (123.4 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	183.0 N @ 150 km/h (41.1 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	712.0 N @ 150 km/h (160.1 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	452.0 N @ 150 km/h (101.6 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	608 mm | 23.937 in
Depth, packed	352 mm | 13.858 in
Length, packed	1682 mm | 66.221 in
Weight, gross	44 kg | 97.003 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

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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

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