T4S4-90A-R2-V4

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

- For use in beamforming systems includes one calibration port per band
- 2x MQ4 and 2x MQ5 cluster connectors (comprising 16 RF ports + 2 calibration ports in total) are provided for the beam-forming arrays

General Specifications

Antenna Type	Sector & beamforming
Band	Multiband
Calibration Connector Interface	MQ5
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
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	MQ4 | MQ5
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, mid band	8
RF Connector Quantity, low band	0
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
Input Voltage	10–30 Vdc
Internal RET	High band (1) | Mid band (1)
Power Consumption, active state, maximum	8 W
Power Consumption, idle state, maximum	1 W

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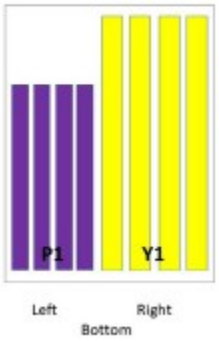
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	498 mm | 19.606 in
Depth	197 mm | 7.756 in
Length	1499 mm | 59.016 in
Net Weight, antenna only	33 kg | 72.752 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
Y1	2300-2690	1-8	1	CPxxxxxxxxxxxxxxY1
P1	3300-3800	9-16	2	CPxxxxxxxxxxxxxxP1

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

Port Configuration

Electrical Specifications

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T4S4-90A-R2-V4

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**
RF Port	1-8	1-8	9-16	9-16
Gain at Mid Tilt, dBi	16.5	16.5	15.7	16.1
Beamwidth, Horizontal, degrees	103	97	99	92
Beamwidth, Vertical, degrees	5.2	5	6.7	6.3
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
CPR at Boresight, dB	15	15	17	14
Isolation, Cross Polarization, dB	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30
Isolation, Co-polarization, dB	18	18	19	19
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	-130	-130	-130	-130
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, Vertical, degrees	5.2	4.9	6.7	6.3

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Front-to-Back Total Power at 180° ± 30°, dB	27	26	23	22
USLS (First Lobe), dB	18	20	16	16

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° Beamwidth, Horizontal, degrees	27	25	25	23
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	31	31	28	28
Steered 0° Horizontal Sidelobe, dB	12	11	12	12
Steered 0° USLS (First Lobe), dB	20	22	16	15
Steered 30° Gain, dBi	21.2	21.2	19.8	19.9
Steered 30° Beamwidth, Horizontal, degrees	29	27	29	27
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	30	30	24	25

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
Front-to-Back Total Power at 180° ± 30°, dB	30	29	26	27
Horizontal Sidelobe, dB	18	17	18	17
USLS (First Lobe), dB	16	17	16	16

Mechanical Specifications

Wind Loading @ Velocity, frontal	498.0 N @ 150 km/h (112.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	148.0 N @ 150 km/h (33.3 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	597.0 N @ 150 km/h (134.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	342.0 N @ 150 km/h (76.9 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	565 mm | 22.244 in

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Depth, packed	309 mm | 12.165 in
Length, packed	1686 mm | 66.378 in
Weight, gross	45.7 kg | 100.751 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.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

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