

# T4-90A-R1-V5



## Planar Array Antenna, 2300–2690 MHz, 90° HPBW, 1xIntRET

- For use in beamforming system, includes a calibration port
- Planar array antenna – 4 columns
- Single internal RET control for all four antenna arrays
- Optimized for software defined split six sector applications

### OBSOLETE

This product was discontinued on: March 30, 2024

## General Specifications

Antenna Type	Sector
Band	Single band
Calibration Connector Interface	MQ5
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
Reflector Material	Aluminum
RF Connector Interface	MQ4   MQ5
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 v1
RET Interface	8-pin DIN Female   8-pin DIN Male
RET Interface, quantity	1 female   1 male
Input Voltage	10–30 Vdc

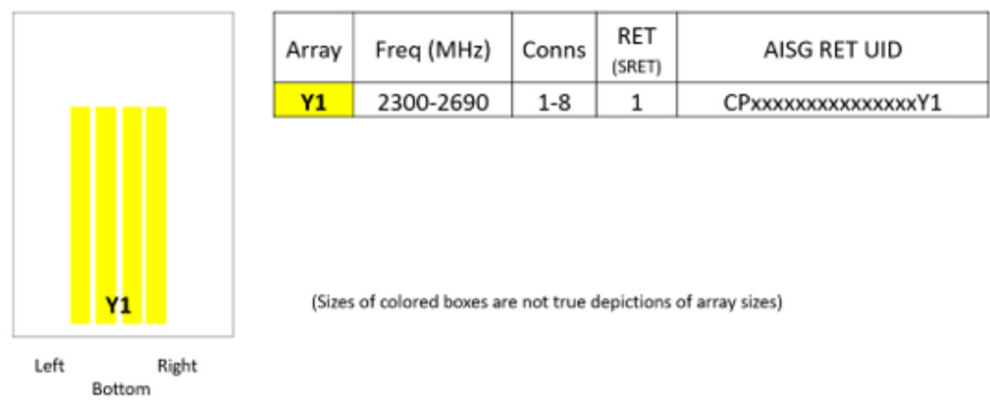
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Internal Bias Tee	Cal Port
Internal RET	High band (1)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	8 W
Protocol	3GPP/AISG 2.0 (Single RET)

## Dimensions

Width	307 mm   12.087 in
Depth	118 mm   4.646 in
Length	1610 mm   63.386 in
Net Weight, without mounting kit	15.6 kg   34.392 lb
TDD Column Spacing	58 mm   2.283 in

## Array Layout



## Port Configuration



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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	2300 – 2690 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	500 W @ 50 °C

## Electrical Specifications

<b>Frequency Band, MHz</b>	<b>2300–2400</b>	<b>2496–2690</b>
<b>Gain, dBi</b>	17.3	17.8
<b>Beamwidth, Horizontal, degrees</b>	99	95
<b>Beamwidth, Vertical, degrees</b>	5.1	4.8
<b>Beam Tilt, degrees</b>	2–12	2–12
<b>USLS (First Lobe), dB</b>	16	17
<b>Front-to-Back Ratio at 180°, dB</b>	30	30
<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
<b>Coupler, max Phase Δ, Antenna port to Cal port, degrees</b>	7	7
<b>CPR at Boresight, dB</b>	20	17
<b>Isolation, Cross Polarization, dB</b>	24	24
<b>Isolation, Co-polarization, dB</b>	18	18
<b>VSWR   Return loss, dB</b>	1.5   14.0	1.5   14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-130	-130
<b>Input Power per Port at 50°C, maximum, watts</b>	150	150

## Electrical Specifications, Broadcast 65°

<b>Frequency Band, MHz</b>	<b>2300–2400</b>	<b>2496–2690</b>
<b>Gain, dBi</b>	18	18.6
<b>Beamwidth, Horizontal, degrees</b>	65	65
<b>Beamwidth, Vertical, degrees</b>	5.1	4.8
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	31	32
<b>USLS (First Lobe), dB</b>	16	16

## Electrical Specifications, Service Beam

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Frequency Band, MHz	2300–2400	2496–2690
Steered 0° Gain, dBi	22.3	22.3
Steered 0° Beamwidth, Horizontal, degrees	27	26
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	33	33
Steered 0° Horizontal Sidelobe, dB	12	11
Steered 30° Gain, dBi	21.6	21.6
Steered 30° Beamwidth, Horizontal, degrees	30	28
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	31	31

## Electrical Specifications, Soft Split

Frequency Band, MHz	2300–2400	2496–2690
Gain, dBi	20.7	21
Beamwidth, Horizontal, degrees	35	33
Front-to-Back Total Power at 180° ± 30°, dB	32	32
Horizontal Sidelobe, dB	22	20

## Mechanical Specifications

Wind Loading @ Velocity, frontal	586.0 N @ 150 km/h (131.7 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	123.0 N @ 150 km/h (27.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,385.0 N @ 150 km/h (311.4 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	709.0 N @ 150 km/h (159.4 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

## Packaging and Weights

Width, packed	413 mm   16.26 in
Depth, packed	257 mm   10.118 in
Length, packed	1740 mm   68.504 in
Weight, gross	25.5 kg   56.218 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
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.<br>Kit contains one scissor top bracket set and one bottom bracket set. |
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## \* Footnotes

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