

# T4-90A-R1-V2



## 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

This product will be discontinued on: November 30, 2024

Replaced By:

T4-90A-R1-V6

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

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Single band
<b>Calibration Connector Interface</b>	N Female
<b>Calibration Connector Quantity</b>	1
<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>	PVC, UV resistant
<b>Radiator Material</b>	Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	8
<b>RF Connector Quantity, total</b>	8

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v1
<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

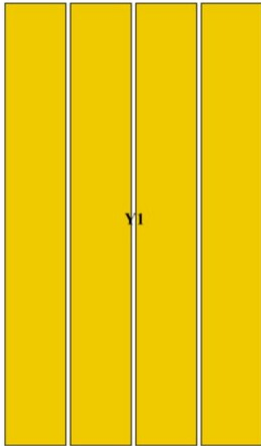
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<b>Internal Bias Tee</b>	Cal Port
<b>Internal RET</b>	High band (1)
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Power Consumption, normal conditions, maximum</b>	8 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

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

## Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
Y1	2300-2690	1 - 8	1	AISG1	CPxxxxxxxxxxxxxxY1

(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>	2300 – 2690 MHz
<b>Polarization</b>	±45°

## Electrical Specifications

Frequency Band, MHz	2300–2400	2496–2690
Beam Tilt, degrees	2–12	2–12
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	0.9	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees	7	7
Isolation, Cross Polarization, dB	24	24
Isolation, Co-polarization, dB	20	20
VSWR   Return loss, dB	1.5   14.0	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	150	150
Input Power per Port at 50°C, maximum, watts	150	150

## Electrical Specifications, Broadcast 65°

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Frequency Band, MHz	2300–2400	2496–2690
Gain, dBi	18.8	19.2
Beamwidth, Vertical, degrees	5	4.6
CPR at Boresight, dB	20	17
Front-to-Back Total Power at $180^\circ \pm 30^\circ$ , dB	32	32
USLS (First Lobe), dB	19	17

## Electrical Specifications, Service Beam

Frequency Band, MHz	2300–2400	2496–2690
Steered $0^\circ$ Gain, dBi	21.9	22.3
Steered $0^\circ$ Gain Tolerance, dBi	$\pm 0.4$	$\pm 0.6$
Steered $0^\circ$ Beamwidth, Horizontal, degrees	27	26
Steered $0^\circ$ CPR at Beampeak, dB	24	20
Steered $0^\circ$ Front-to-Back Total Power at $180^\circ \pm 30^\circ$ , dB	35	35
Steered $30^\circ$ Gain, dBi	21	21.4
Steered $30^\circ$ Gain Tolerance, dBi	$\pm 0.5$	$\pm 0.7$
Steered $30^\circ$ Beamwidth, Horizontal, degrees	30	28
Steered $30^\circ$ CPR at Beampeak, dB	20	19
Steered $30^\circ$ Front-to-Back Total Power at $180^\circ \pm 30^\circ$ , dB	32	33

## Electrical Specifications, Single Column

Frequency Band, MHz	2300–2400	2496–2690
Gain, dBi	16.4	16.4
Beamwidth, Horizontal, degrees	90	90
Beamwidth, Vertical, degrees	5.1	4.7
Beamwidth, Vertical Tolerance, degrees	$\pm 0.2$	$\pm 0.3$
CPR at Sector, dB	11	8

## Electrical Specifications, Soft Split

Frequency Band, MHz	2300–2400	2496–2690
Gain, dBi	20.8	21.1
Beamwidth, Horizontal, degrees	35	33
CPR at Beampeak, dB	22	20
Front-to-Back Total Power at $180^\circ \pm 30^\circ$ , dB	32	31

## Mechanical Specifications

**Wind Loading @ Velocity, frontal** 586.0 N @ 150 km/h (131.7 lbf @ 150 km/h)

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<b>Wind Loading @ Velocity, lateral</b>	123.0 N @ 150 km/h (27.7 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	709.0 N @ 150 km/h (159.4 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	413 mm   16.26 in
<b>Depth, packed</b>	257 mm   10.118 in
<b>Length, packed</b>	1740 mm   68.504 in
<b>Weight, gross</b>	25.5 kg   56.218 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
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



## 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.
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## \* Footnotes

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