

W4-90A-R1

8-port Planar Array Antenna, 2300–2400 MHz, 90° HPBW, 1x RET



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

General Specifications

Antenna Type	Sector
Band	Single band
Calibration Connector Interface	N Female
Calibration Connector Quantity	1
Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	8
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male

Dimensions

Width	307 mm 12.087 in
Length	1610 mm 63.386 in
Depth	118 mm 4.646 in
Column Spacing	58 mm 2.283 in

Electrical Specifications

Impedance	50 ohm
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Operating Frequency Band 2300 – 2400 MHz

Electrical Specifications, Broadcast 65°

Beamwidth, Horizontal 65 °
Beamwidth, Horizontal Tolerance ±5°
Beamwidth, Vertical 5 °
Beamwidth, Vertical Tolerance ±0.5°
Front-to-Back Total Power at 180° ± 30° 23 dB
Gain 18 dBi

Electrical Specifications, Service Beam

Steered 0° Beamwidth, Horizontal 27 °
Steered 0° CPR at Beampeak 18 dB
Steered 0° Front-to-Back Total Power at 180° ± 30° 30 dB
Steered 0° Gain 21.5 dBi
Steered 30° CPR at Beampeak 18 dB
Steered 30° Front-to-Back Total Power at 180° ± 30° 30 dB
Steered 30° Gain 21 dBi
Steered 30° Horizontal Sidelobe 10 dB

Electrical Specifications, Single Column

Beamwidth, Horizontal 97 °
Beamwidth, Horizontal Tolerance ±15°
Beamwidth, Vertical 5.1 °
Beamwidth, Vertical Tolerance ±0.5°
CPR at Boresight 19 dB
CPR at Sector 11 dB
Front-to-Back Total Power at 180° ± 30° 23 dB
Gain 16.7 dBi
Input per Port, maximum 250 W
USLS (First Lobe) -16 dB

Electrical Specifications, Soft Split

Beamwidth, Horizontal 35 °
CPR at Beampeak 19 dB

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Front-to-Back Total Power at 180° ± 30°	30 dB
Gain	19.3 dBi
Horizontal Sidelobe	-15 dB

Remote Electrical Tilt (RET) Information, Electrical

Protocol	3GPP/AISG 2.0 (Single RET)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	13 W
Internal Bias Tee	Cal Port
Internal RET	High band (1)

Electrical Specifications

Frequency Band, MHz	2300–2400
Beam Tilt, degrees	2–12
Beam Tilt Tolerance, degrees	±1
Coupling level, Amp, Antenna port to Cal port, dB	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees	7
Isolation, Beam to Beam, dB	19
Isolation, Cross Polarization, port to port, dB	23
Isolation, Cross Polarization, port to port, between two columns, dB	20
VSWR Return loss, dB	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150

Material Specifications

Radiator Material	Low loss circuit board
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Mechanical Specifications

Wind Loading at Velocity, frontal	128.6 lbf @ 150 km/h 559.0 N @ 150 km/h
Wind Loading at Velocity, lateral	114.0 N @ 150 km/h 25.6 lbf @ 150 km/h

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Wind Speed, maximum 241 km/h | 149.75 mph

Packaging and Weights

Width, packed 415 mm | 16.339 in

Depth, packed 255 mm | 10.039 in

Length, packed 1735 mm | 68.307 in

Net Weight, without mounting kit 15 kg | 33.069 lb

Weight, gross 25.9 kg | 57.1 lb

Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance



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