



2.4/ 5 GHz 9 dBi Dual Band / Polarized 2x2 Omni Antenna

Antennas Technical Data Sheet

PE51OM1010

Features

- MIMO - Multiple-Input and Multiple-Output
- Dual polarity/dual frequency feed system in single enclosure
- Separate inputs horizontal and vertical polarization
- UV-Resistant radome for all-weather operation
- Heavy duty industrial grade design

Applications

- 2.4/5 GHz IEEE 802.11a/b/g and 802.11ac applications
- Supports 1x2 and 2x2 MIMO AP/Routers
- WiMax, WISP and WiFi applications
- Wireless video systems
- Point-to-multipoint applications

Description

The HyperLink PE51OM1010 is a professional high gain dual band/dual polarity omnidirectional base station antenna designed and optimized for 2.4 and 5 GHz frequencies. This antenna is ideally suited for multipoint applications where long range and wide coverage is desired.

The PE51OM1010 is actually two antennas in one, a 2.4/5 GHz horizontal polarized antenna and a 2.4/5 GHz vertical polarized antenna together in a single radome. Each polarization features separate dual band feeds, two N-Female connectors in total. This antenna incorporates advanced dual polarization technology that allows for the interoperability of two radio transmit and receive paths. This technology allows for the attenuation of unwanted signals from adjacent channels and/or co-located equipment.

The PE51OM1010 construction features a heavy-duty UV resistant PVCs radome for durability and aesthetics. Designed to operate in the harshest of environments, the PE51OM1010 far exceeds other omnidirectional antennas. The included mounting system features twin heavy-duty mounting clamps and bolts for superior strength.

Configuration

Design	Omni
Band Type	Dual
Radiation Pattern	Omni Directional
Polarization	Vertical/Horizontal
Connector Type	N Female
Interface 2	N Female
Number of Ports	2
Lightning Protection	DC Ground

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Input VSWR			1.6:1	
Impedance		50		Ohms
Isolation	28			dB
Input Power			100	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2.4/ 5 GHz 9 dBi Dual Band / Polarized 2x2 Omni Antenna PE51OM1010](#)

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Specifications by Band

Description	Band 1	Band 2	Band 3	Band 4	Band 5	Units
Range	2,400-2,500	5,100-5,800				MHz
Gain	6	6				dBi
Horizontal Beam Width	360	28				Degrees
Vertical Beam Width	28	28				Degrees
VSWR Max 1.6:1	1.9:1					
Maximum Input Power	100	100				Watts

Mechanical Specifications

Radome Material

PVC

Size

Radome Diameter

2.9 in [73.66 mm]

Overall Length

38.3 in [972.82 mm]

Width

2.9 in [73.66 mm]

Height

2.9 in [73.66 mm]

Mounting Mast Diameter

1.6 to 3.5 in [40.64 to 88.90 mm]

Weight

7 lbs [3.18 kg]

Mechanical Specification Notes:

Radome material is UV resistant PVC.

Environmental Specifications

Temperature

Operating Range

-40 to +60 deg C

Wind Loading

130 MPH [209.21 KPH]

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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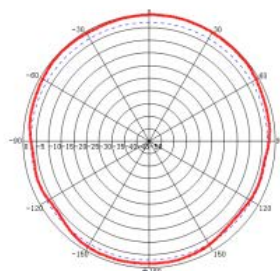
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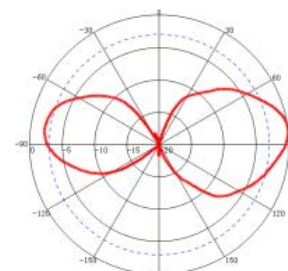
Typical Radiation Pattern

RF Antenna Patterns

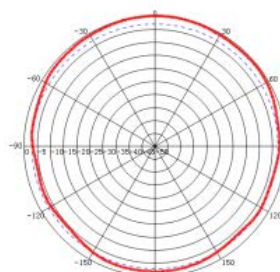
Horizontal Polarization



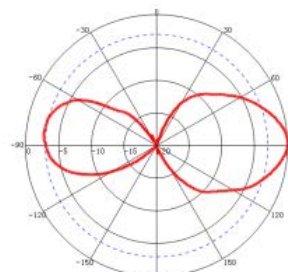
H-Plane: 2400 MHz



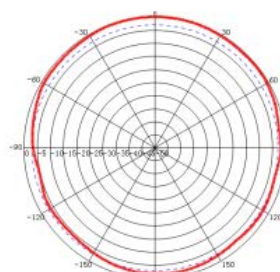
V-Plane: 2400 MHz



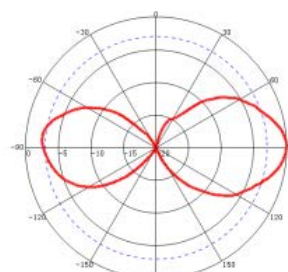
H-Plane: 2450 MHz



V-Plane: 2450 MHz



H-Plane: 2500 MHz



V-Plane: 2500 MHz

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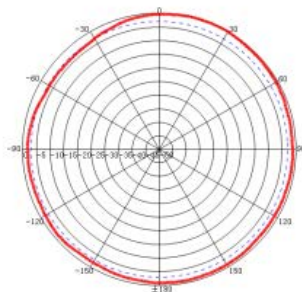
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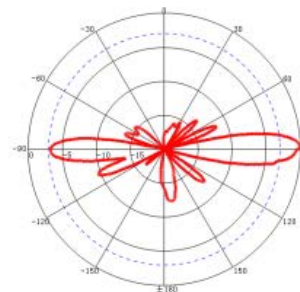
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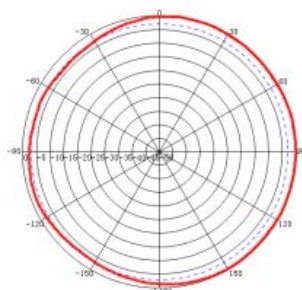
Horizontal Polarization



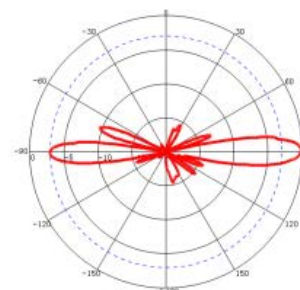
H-Plane: 5100 MHz



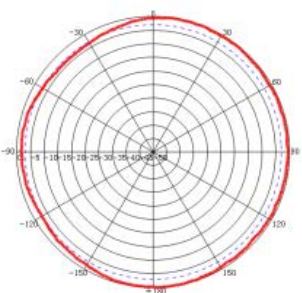
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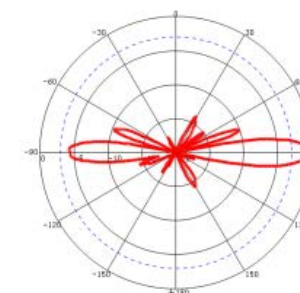
H-Plane: 5500 MHz



V-Plane: 5500 MHz



H-Plane: 5800 MHz



V-Plane: 5800 MHz

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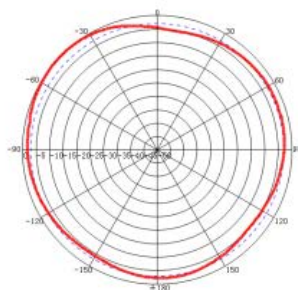
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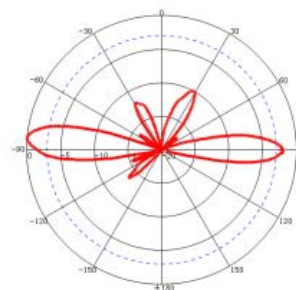
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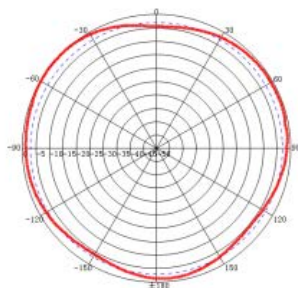
Vertical Polarization



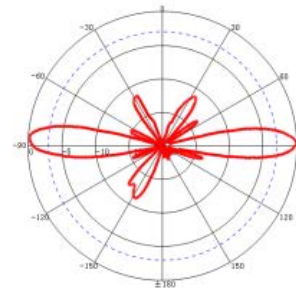
H-Plane: 5100 MHz



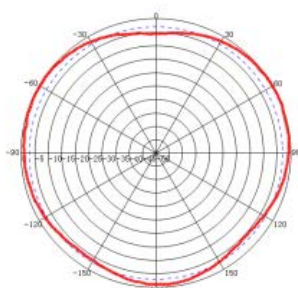
V-Plane: 5100 MHz



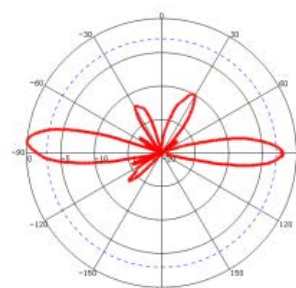
H-Plane: 5500 MHz



V-Plane: 5500 MHz



H-Plane: 5800 MHz



V-Plane: 5800 MHz

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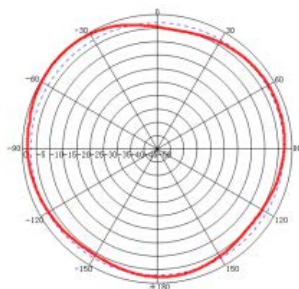
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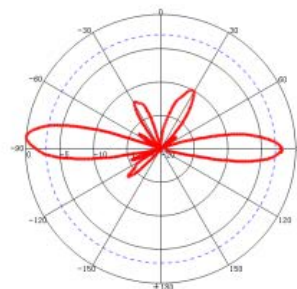
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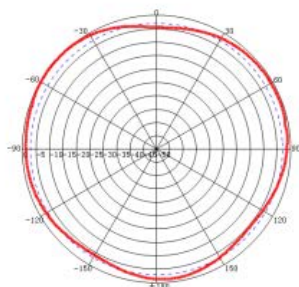
Vertical Polarization



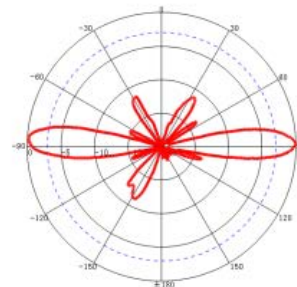
H-Plane: 5100 MHz



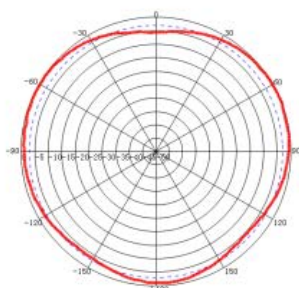
V-Plane: 5100 MHz



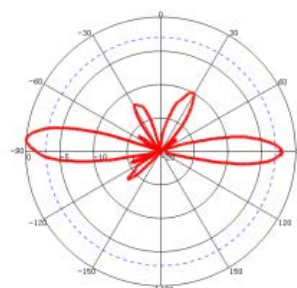
H-Plane: 5500 MHz



V-Plane: 5500 MHz



H-Plane: 5800 MHz



V-Plane: 5800 MHz

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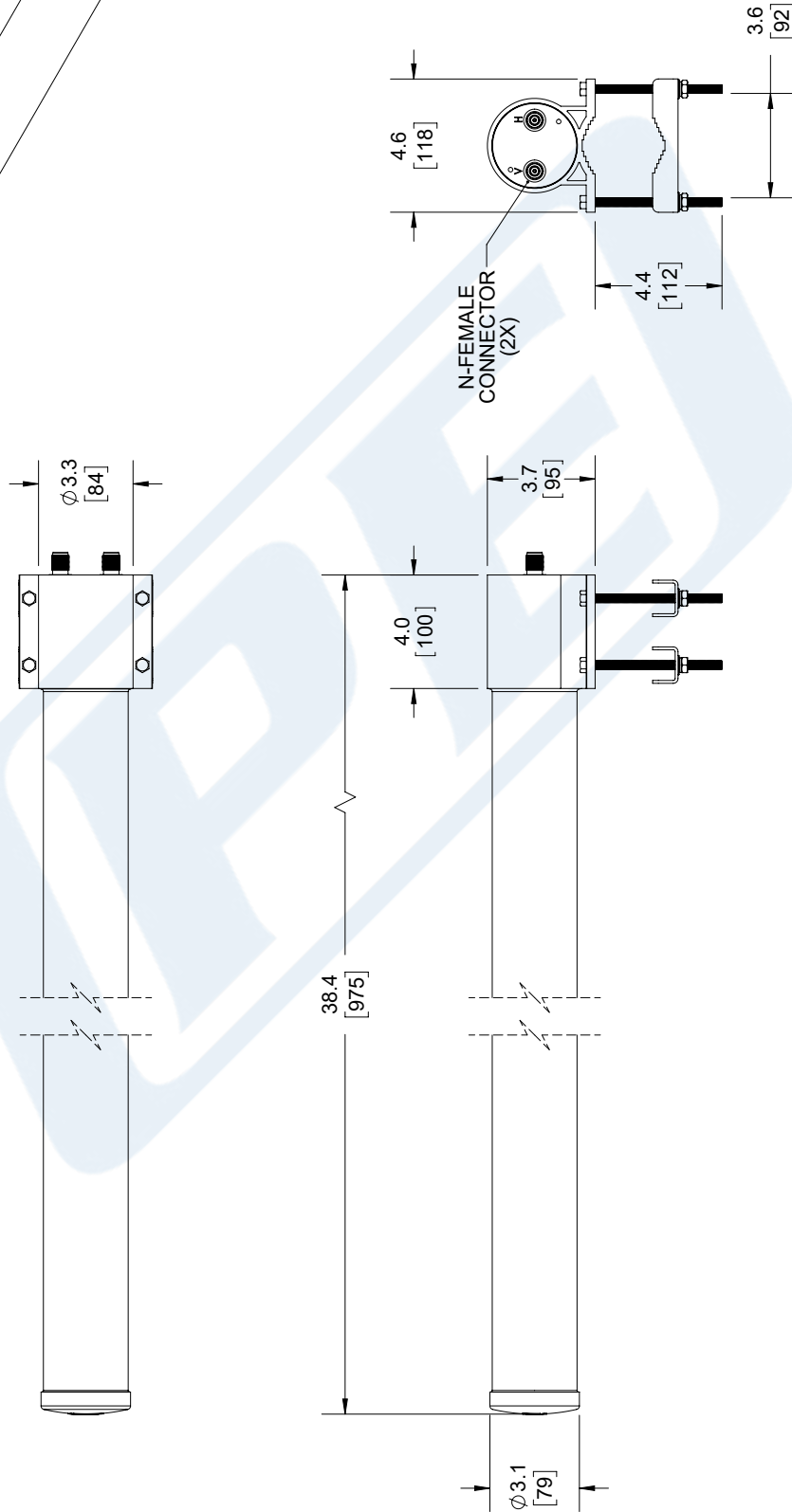
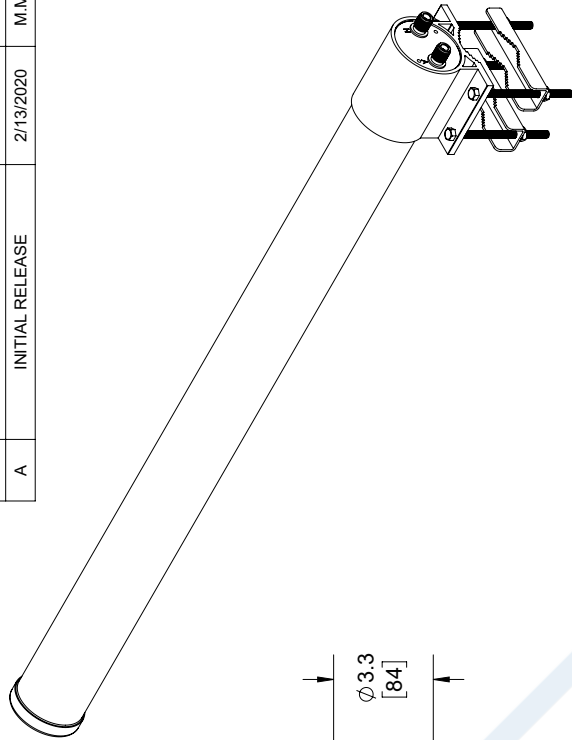
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PE510M1010 CAD Drawing
2.4/ 5 GHz 9 dBi Dual Band / Polarized 2x2 Omni Antenna

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/13/2020	M.MILLER



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.XX = ± .02	[.51]	± 1/32
.XXX = ± .005	[.13]	ANGLES ± 1°

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L ≤ 12 [305]	± .1 [25]	/ -0
12 [305] < L ≤ 60 [1524]	± .2 [51]	/ -0
60 [1524] < L ≤ 120 [3048]	± .4 [102]	/ -0
120 [3048] < L ≤ 300 [7620]	± .6 [152]	/ -0
300 [7620] < L	± .5% L	/ -0

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