



2.4/4.9-5.8 GHz Six Element, Dual Polarized MIMO Flat Panel Antenna

Antennas Technical Data Sheet

PE51FP1002

Features

- Six independent antennas
- MIMO - Multiple-Input and Multiple-Output
- Dual polarity feed system in single enclosure
- Four vertical and two horizontal elements
- UV-resistant radome for all-weather operation

Applications

- 2.4/4.9-5.8 GHz Indoor/Outdoor Wireless LAN systems
- Supports IEEE 802.11 a/b/g/n and 802.11ac applications
- MIMO wireless access points and routers
- Homeland Security and Public Safety Band
- Hospitality, Industrial, Municipality

Description

The HyperLink PE51FP1002 Flat Panel Antenna combines six dual band antennas in a single housing. The unit consists of four vertically and two horizontally polarized multi-patch antennas. It is a professional quality antenna designed primarily for MIMO point-to-multipoint and point-to-point applications in the 2.4 GHz and the 4.9-5.8 GHz frequency bands. The unit can be used with APs and Routers with one to six antenna ports.

This antenna incorporates advanced dual polarization technology that allows for the interoperability of two radios to transmit and receive paths. This technology allows for the attenuation of unwanted signals from adjacent channels and/or co-located equipment.

Configuration

Design	Panel
Band Type	Multi
Radiation Pattern	Directional
Polarization	Vertical/Horizontal
Connector Type	N Female
Interface 2	N Female
Interface 3	N Female
Interface 4	N Female
Number of Ports	6
Lightning Protection	DC Ground

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Input VSWR			2:1	
Impedance		50		Ohms
Front to Back Ratio		25		dB
Input Power			25	Watts

Specifications by Band

Description	Band 1	Band 2	Band 3	Band 4	Band 5	Units
Range	2,400-2,500	4,900-5,850				MHz
Gain	9	10				dBi

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2.4/4.9-5.8 GHz Six Element, Dual Polarized MIMO Flat Panel Antenna PE51FP1002](#)



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Horizontal Beam Width	85	50	Degees
Vertical Beam Width	55	45	Degees
VSWR Max 2:1	2:1		
Maximum Input Power	25	25	Watts

Mechanical Specifications

Radome Material

ASA

Size

Overall Length

12.4 in [314.96 mm]

Width

12.4 in [314.96 mm]

Height

0.98 in [24.89 mm]

Mounting Mast Diameter

0.75 to 2 in [19.05 to 50.80 mm]

Weight

3.5 lbs [1.59 kg]

Mechanical Specification Notes:

Radome material is UV-resistant ASA.

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

Plotted and Other Data

Notes:

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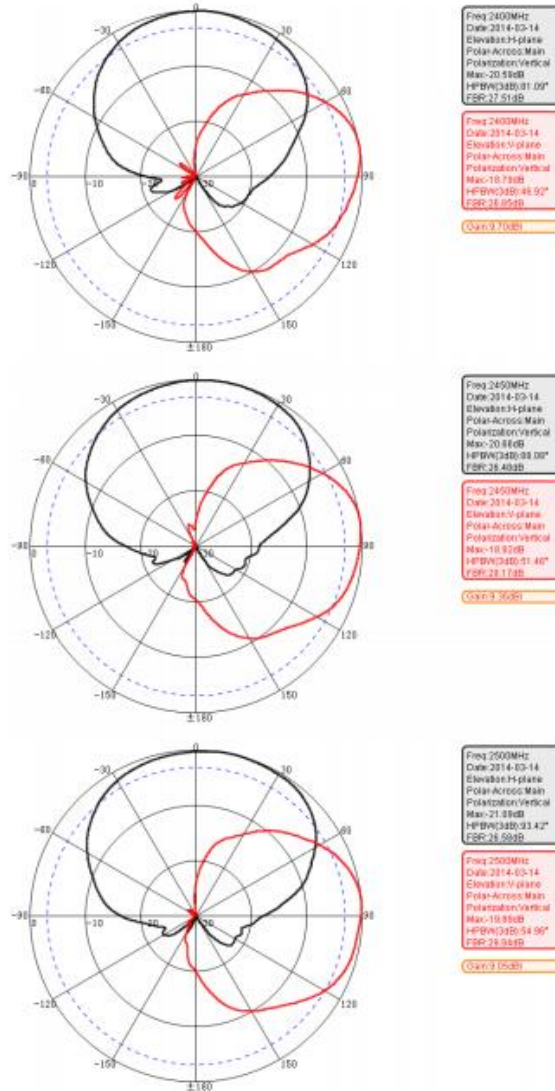
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Typical Radiation Pattern

RF Antenna Patterns – V-Pol



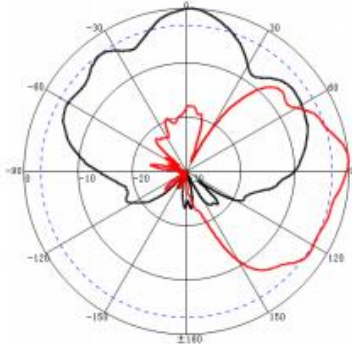
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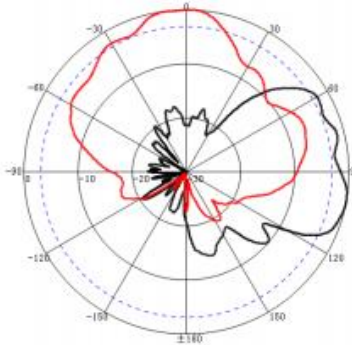
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Freq 4500MHz
Date 2014-02-12
Elevation Plane
Polarization: Main
Polarization: Vertical
Max: 23.82dB
HPBW: 348.22.04°
FSR: 23.09dB

Freq 4500MHz
Date 2014-02-12
Elevation Plane
Polarization: Main
Polarization: Vertical
Max: 25.29dB
HPBW: 445.42.70°
FSR: 21.23dB

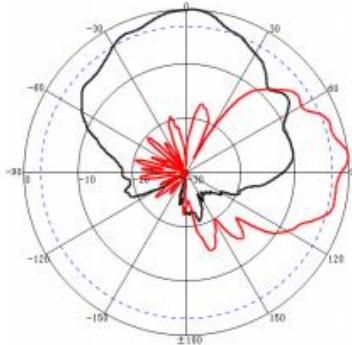
Gain: 1.90dB



Freq 5400MHz
Date 2014-02-12
Elevation Plane
Polarization: Main
Polarization: Vertical
Max: 21.58dB
HPBW: 330.38.30°
FSR: 21.77dB

Freq 5400MHz
Date 2014-02-12
Elevation Plane
Polarization: Main
Polarization: Vertical
Max: 20.10dB
HPBW: 330.50.50°
FSR: 20.39dB

Gain: 1.20dB



Freq 5850MHz
Date 2014-02-12
Elevation Plane
Polarization: Main
Polarization: Vertical
Max: 21.81dB
HPBW: 340.51.20°
FSR: 21.50dB

Freq 5850MHz
Date 2014-02-12
Elevation Plane
Polarization: Main
Polarization: Vertical
Max: 23.75dB
HPBW: 340.28.01°
FSR: 21.20dB

Gain: 1.26dB

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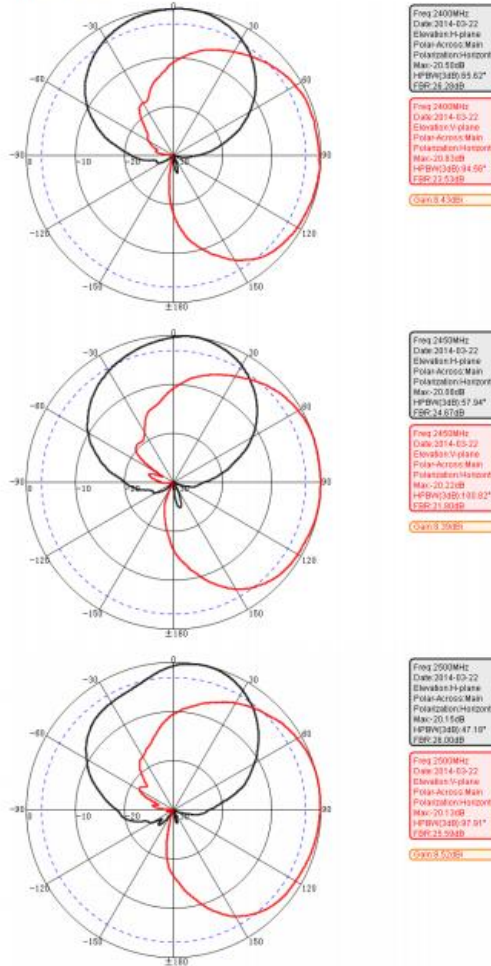


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RF Antenna Patterns - H-Pol



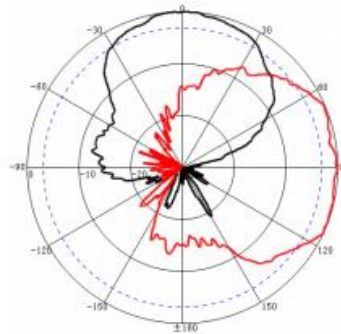
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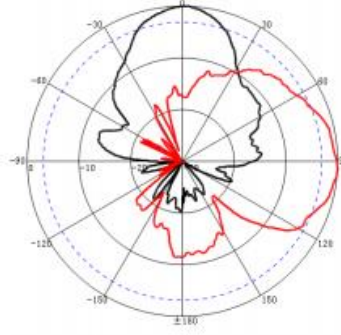
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Freq: 4900MHz
Date: 2014-03-22
Elevation: H-plane
Polarization: Horizontal
Max: 41.4 dB
HPBW(3dB): 48.41°
FSR: 21.56 dB

Freq: 4900MHz
Date: 2014-03-22
Elevation: V-plane
Polarization: Horizontal
Max: 42.1 dB
HPBW(3dB): 71.38°
FSR: 21.07 dB

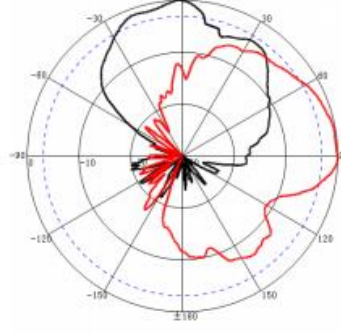
Gain: 9.7 dBi



Freq: 5400MHz
Date: 2014-03-22
Elevation: H-plane
Polarization: Horizontal
Max: 38.8 dB
HPBW(3dB): 35.13°
FSR: 21.25 dB

Freq: 5400MHz
Date: 2014-03-22
Elevation: V-plane
Polarization: Horizontal
Max: 39.2 dB
HPBW(3dB): 44.59°
FSR: 21.03 dB

Gain: 11.7 dBi



Freq: 5550MHz
Date: 2014-03-22
Elevation: H-plane
Polarization: Horizontal
Max: 38.8 dB
HPBW(3dB): 38.60°
FSR: 21.09 dB

Freq: 5550MHz
Date: 2014-03-22
Elevation: V-plane
Polarization: Horizontal
Max: 38.8 dB
HPBW(3dB): 43.27°
FSR: 21.02 dB

Gain: 11.7 dBi

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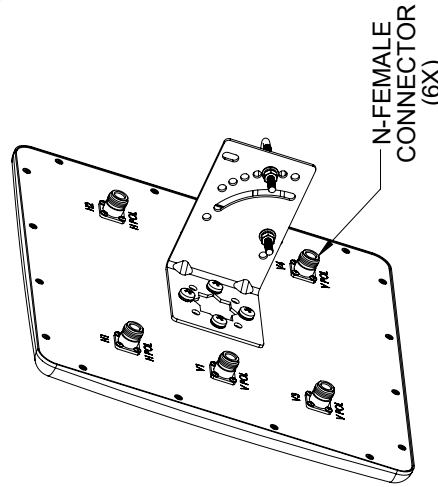
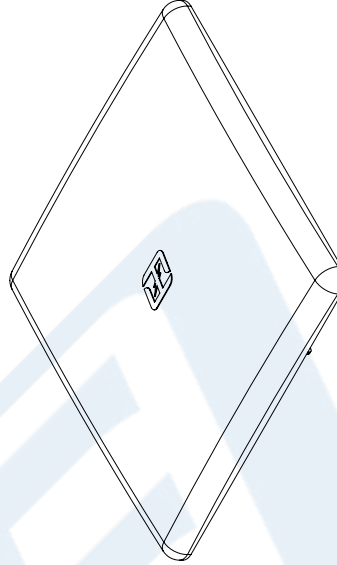
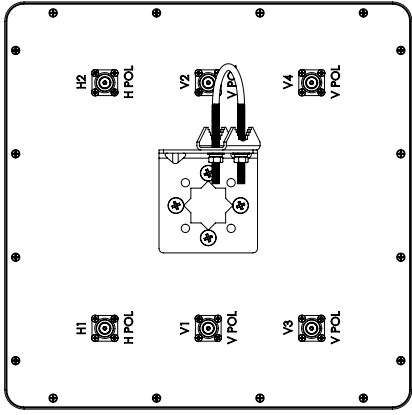
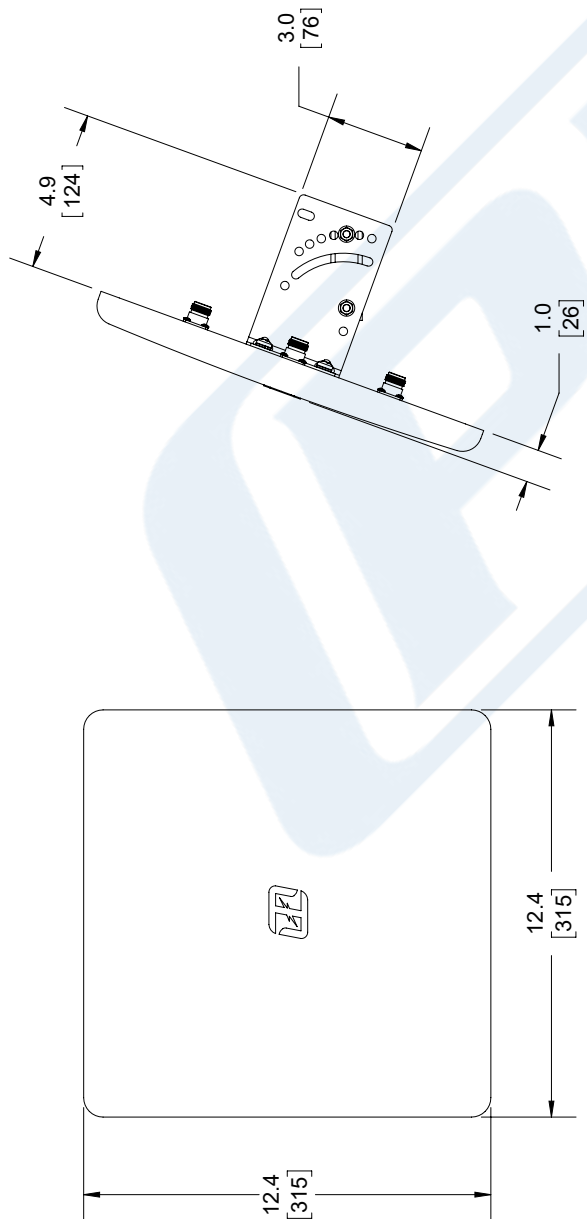
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PE51FP1002 CAD Drawing

2.4/4.9-5.8 GHz Six Element, Dual Polarized MIMO Flat Panel Antenna

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/11/2020	M.MILLER



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS ± 1/32
.XX = ±.02 [.51]	ANGLES ± 1°
.XXX = ±.005 [.13]	

CABLE LENGTH (L) TOLERANCES:

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

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

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