

## Pacific Wireless

693 E Draper Heights Way Suite 210  
Draper, UT 84020  
TEL (801) 572-3024  
FAX (801) 572-3025  
www.pacwireless.com

# PAWES24-16 DATA SHEET

## Echo Series Antenna

### 2400 to 2483 MHz Operation

#### Features

- 14 dBi Antenna Gain
- Aesthetic design for high-end CPE installations
- Pole mount or surface mount
- Full tilt and rotation adjustments
- Vertical or Horizontal Polarization
- Type N Female Connector
- Optimized for 2.4GHz ISM Band
- Rugged, Lightweight and Waterproof



\*Picture shown with standard pole mount bracket

#### Applications

- 2.4 GHz ISM Band Applications
- Point to Multi-point Systems
- Wireless Broadband Systems
- Wireless Internet Access
- Wireless Networks
- Building to building high speed links

#### Description

The Echo Series antenna system offered by Pacific Wireless is constructed of aluminum alloy with powder-coat painted finish. They come standard with an integral N Female connector and heavy duty U-bolt bracket. A cone mount bracket is also available for surface installations. The echo antenna can be used in a wide variety of wireless systems.

#### Specifications

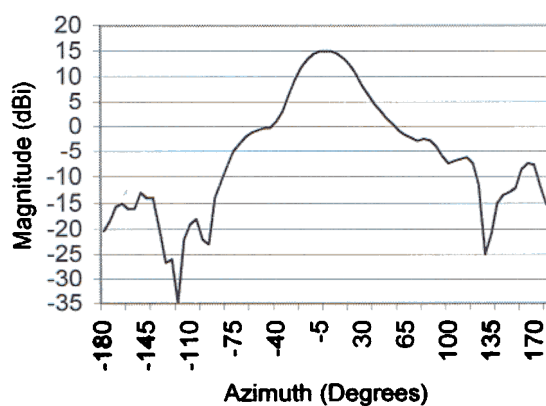
Parameter	Model	Min	Typ	Max	Units
Frequency Range	PAWES24-16	2400		2483	MHz
Input Return Loss ( $S_{11}$ )			-12		dB
VSWR			1.5:1		
Impedance			50		OHM
Input Power			50		W
Pole Diameter (OD)		1 25		2 51	inch mm
Operating Temperature		-45		+70	Deg C

\*Note: Pacific Wireless does not supply the mounting pole or coax cable.

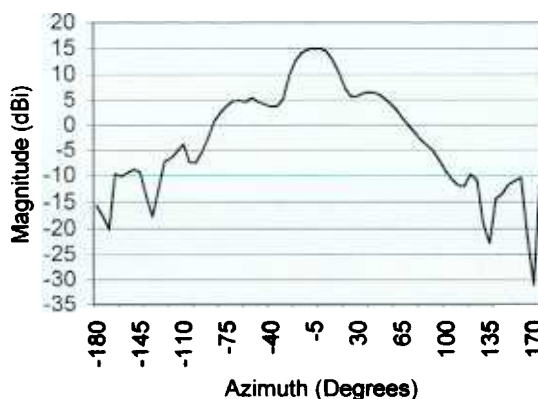
2400 - 2484 MHz		PAWES24-16
<b>Gain</b>		14dB
<b>3db Beam Angle</b>		26 deg
<b>Front to Back</b>		> 30dB
<b>Rated Wind Velocity</b>		125mph
<b>Weight</b>		3 Lbs (1.2Kg)
<b>Dimension (Diameter)</b>		10.24" (260mm)

## Antenna Patterns at 2.4GHz

Echo Series Antenna Performance  
Vertical Polarization - 2.4Ghz



Echo Series Antenna Performance  
Horizontal Polarization - 2.4Ghz



### Notes:

- All shipments F.O.B. Draper, UT 84020
- All antennas carry a 2 Year Warranty

### System Ordering:

PAWES24-16 14dB Echo Series Antenna with pole mount

PAWES-CM Optional Cone Mount for surface mount applications (Sold Separately)

### For further information contact:



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# PAWES24-16

## Instruction Sheet

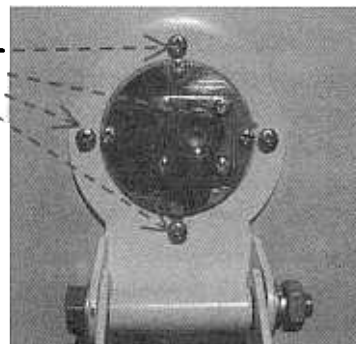
### Echo Series Antenna

**Step 1 Polarization:** Antenna comes standard in Vertical polarization (Picture 1). To change polarity, remove the 4 outer screws and rotate the bracket 90 degrees until the holes line up with the bracket and then re-insert and tighten the 4 screws to 45 in lbs (Picture 2). N Female connector will then be oriented as shown in picture 3.

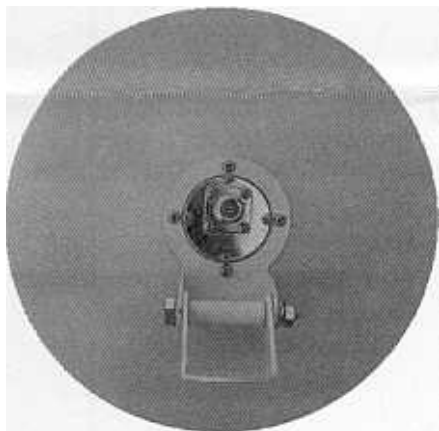
**Step 2 Mounting:** Antenna comes standard with a U-bolt mounting bracket. Detach 1/4" bolt from U-bolt mounting bracket and insert into back hole of antenna (use washer). Place another washer on other side of bracket and tighten nut to 65 in lbs. (Picture 4).

**Optional Cone Mount instructions:** Detach 1/4" bolt from U-bolt mounting bracket and insert into back hole of antenna (use washer). Insert bolt into cone mount and tighten bolt to 65 in lbs. (Picture 5)

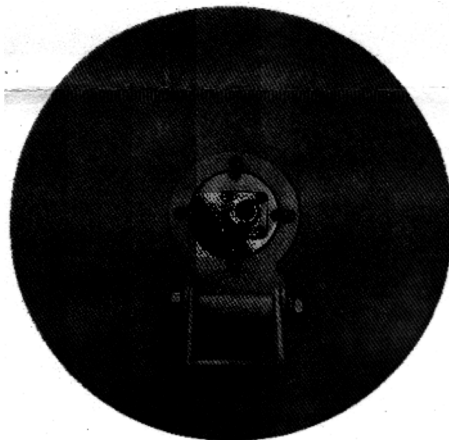
Remove 4-outer screws and rotate 90 degrees as shown.



Picture 2 – Horizontal Polarity



Picture 1 – Vertical Polarity



Picture 3 – Horizontal Polarity



Picture 4 U-bolt Bracket



Picture 5 – Cone Mount Bracket

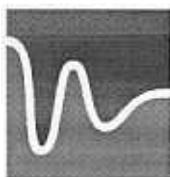
Parameter	Min	Typ	Max	Units
<b>Frequency Range</b>	2400		2483	MHz
<b>Input Return Loss (S<sub>11</sub>)</b>		-12		dB
<b>VSWR</b>		1.5:1		
<b>Impedance</b>		50		OHM
<b>Input Power</b>		50		W
<b>Pole Diameter (OD)</b>	1 25		2 51	inch mm
<b>Gain</b>			14dB	
<b>3db Beam Angle</b>			26 deg	
<b>Front to Back</b>			> 30dB	
<b>Rated Wind Velocity</b>			125mph	
<b>Weight</b>			4.4 Lbs (2Kg)	
<b>Dimension (Diameter)</b>			10.24" (260mm)	

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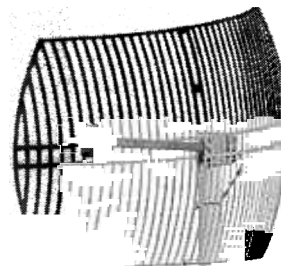
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# PAWDC24 DATA SHEET

## Directional Antenna System 1700 to 2700 MHz Operation

### Features

- Small Size/Reduced Shipping Cost
- 50  $\Omega$  Passive Feed Dipole
- Integrated Type N Female Connector or 24" pigtail with N Male or N Female Connector
- 24 dBi Antenna Gain; Horizontal or Vertical Polarity
- Rugged, Lightweight and Waterproof
- Heavy Duty Adjustable Tilt Bracket
- 2-Piece Powder Coat Painted Die Cast Aluminum



24dBi Antenna System\*

### Applications

- 2.4 GHz ISM Band Applications
- Wireless Internet Access
- Wireless Bridges
- Point to Point Repeaters
- MMDS Applications
- Streaming Video

### Description

The PAWDC24 is a directional antenna system, which incorporates a 2-piece aluminum die cast parabolic grid type antenna reflector with the PMPF, patented 50-ohm passive feed dipole. Dipoles come in 2 basic configurations, PMPF-xx with integral N type Female connector and PMPF-xxP with 24" pigtail equipped with an N type Male connector or PMPF-xxPF with an N type Female Connector. Installation is simple with the Pacific Wireless adjustable tilt "Heavy Duty" bracket that comes standard. The bracket accommodates poles from 1" up to 2.5" OD. Brackets are full galvanized for extreme corrosion protection and each reflector comes complete with stainless steel hardware and complete assembly instructions.

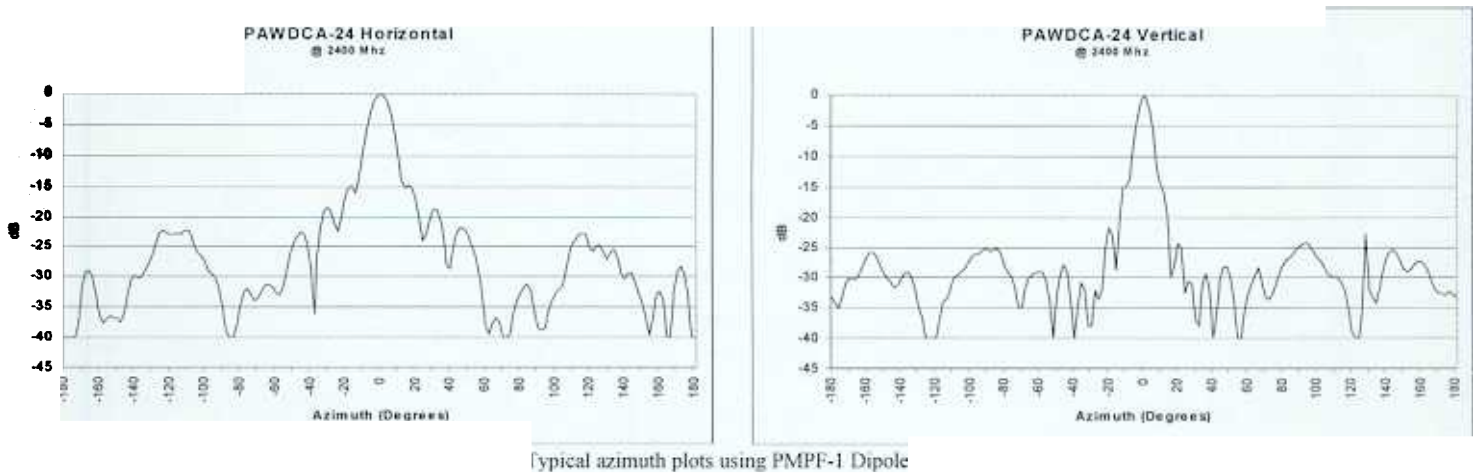
### Specifications

Parameter	Model	Min	Typ	Max	Units
Frequency Range	PMPF-1	2300		2500	MHz
	PMPF-2	2500		2685	
	PMPF-19	1880		1930	
	PMPF-18	1750		1850	
	PMPF-18S	1700		1850	
Gain			24		dBi
Input Return Loss ( $S_{11}$ )				-12	dB
VSWR				1.5:1	
3dB Beam Angle			8		deg
Cross Pole			26		dB
Front to Back		24			dB
Side Lobe				-20	dB
Impedance			50		OHM
Input Power				100	W
Focal Length			16 (40.6)		Inch (cm)
Dimension (LxW)			42 (107) x 24 (61)		Inch (cm)
Weight			5.5 (2)		Lbs (Kgs)
Pole Diameter (OD)		1 (25)		2.5 (60)	Inch (mm)
Operating Temperature		-45		+70	Deg C
Wind Loading:	100MPH			96 (36)	Lbs (Kgs)
	140MPH			188 (70)	
	100MPH: 1/2" Radial Ice			176 (66)	

\*Note: Pacific Wireless does not supply the mounting pole or coax cable. Antenna system assembly is required.



# Integrated Antenna Patterns



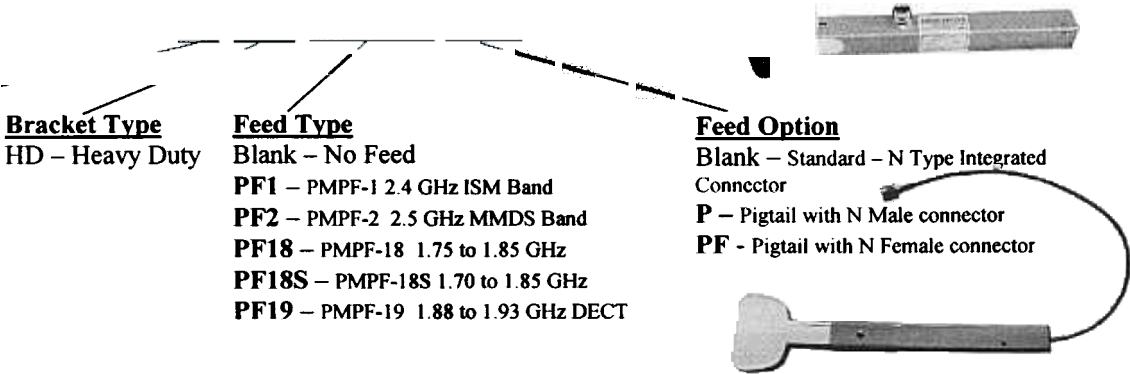
## Standard Packaging:

Model	Units per box	L x W x H	Weight	Dimensional Weight (For Air Freight Calculations)
PAWDC24	5 Pack	25" x 22" x 9" (64 x 56 x 23cm)	45Lbs. (17Kgs)	45Lbs. (17Kgs)

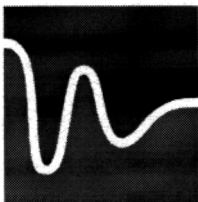
## Notes:

- Antenna is a 2-piece design requiring assembly. Mounting brackets are disassembled from the antenna reflector so the reflectors stack compactly, which saves volume in both shipping and warehouse storage.
- A complete antenna system includes one PMPF-xx, one antenna reflector assembly and adjustable tilt bracket with all necessary hardware for pole mounting.
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- All antennas carry a 2 Year Warranty

## System Ordering:



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