



**Pacific Wireless**  
 693 E. Draper Heights Way Suite 210  
 Draper, UT 84020  
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**New Product**

**SA24**  
**DATA SHEET**

**Vertically Polarized Sector Antennas**  
**2400 to 2485 MHz Operation**

**Features**

- Vertically Polarized
- 90 deg and 120 deg models with gains from 9dBi to 17dBi
- Type N Female Integrated Connector
- Extremely Rugged for long service life in extreme environments
- Weatherproof

**Applications**

- 2.4 GHz ISM Band Applications
- 802.11b and 802.11g Wireless Systems
- Point to Multi-point Systems
- Base Station Antennas
- Wireless Broadband Systems
- WiFi Access Points



17dBi Sector

**Description**

The Vertically Polarized Sector antenna systems offered by Pacific Wireless are constructed of UV stable fiberglass radomes for extremely long service life in the most demanding conditions. The antennas are constructed using corrosion resistant metal elements which are more stable than PCB based antenna systems because they don't absorb moisture, which can degrade the performance of PCB based antenna systems. The 17dB sector comes with a stainless steel scissor bracket system for ease of installation and aligning. The 9dBi sector comes with a galvanized steel bracket with stainless steel hardware.

**Specifications**

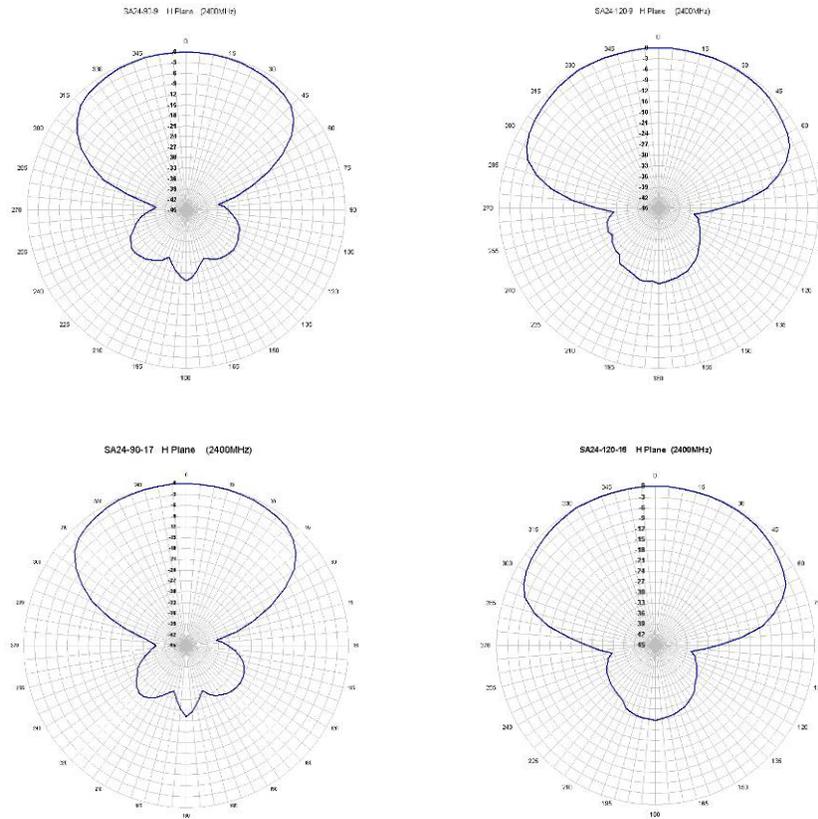
Parameter	Min	Typ	Max	Units
<i>Frequency Range</i>	2400		2485	MHz
<i>Input Return Loss (S<sub>11</sub>)</i>		-14		dB
<i>VSWR</i>		1.5:1		
<i>Impedance</i>		50		OHM
<i>Input Power</i>			100	W
<i>Pole Diameter (OD)</i>	1" (25)		2" (50)	Inch (mm)
<i>Operating Temperature</i>	-40		+70	Deg C



9dBi Sector

2400 - 2485 MHz	SA24-90-9	SA24-120-9	SA24-90-17	SA24-120-16
<i>Gain</i>	9.5 dBi	9 dBi	17 dBi	16.4 dBi
<i>Horizontal Beam Width</i>	90 deg	120 deg	90 deg	120 deg
<i>Vertical Beam Width</i>	40 deg		7 deg	
<i>Front to Back</i>	25 dB		25 dB	
<i>Mechanical Downtilt</i>	45 deg		10 deg	
<i>Weight</i>	25oz (0.7kg)		9.9lb (4.5kg)	
<i>Dimensions (LxWxH)</i>	10" x 6.5" x 2.5" (254 x 165 x 63.5mm)		38" x 6.5" x 2.5" (965 x 165 x 63.5mm)	

## Antenna Patterns at 2.4GHz



Wind Loading				
Model	Sq. In	100MPH	125MPH	100MPH 1/2" radial ice
SA24-xx-9	65	16.3 lb	25.4 lb	17 lb
SA24-xx-17	247	61.8 lb	96.5 lb	62 lb

**Notes:**

- All shipments F.O.B. Pacific Wireless Bluffdale, UT 84065
- All antennas carry a 2 Year Warranty

**System Ordering:** SA24 -   -

Horizontal Beamwidth

90 = 90deg  
120 = 120deg

Antenna Gain

9 = 9dBi  
16 = 16dBi  
17 = 17dBi



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# PAWOD24 DATA SHEET

## Vertically Polarized Omni Directional Antennas

### 2400 to 2485 MHz Operation

#### Features

- 9 and 12 dB Antenna Gain
- 12dB has 3 Deg Electrical Downtilt Standard
- 9dBi has 0 deg or 7deg electrical downtilt options
- Type N Female Integrated Bulkhead Connector
- 12dB has optional 24" Pigtail with N Male or N Female Connector
- Rugged, Lightweight and Waterproof

#### Applications

- 2.4 GHz ISM Band Applications
- 802.11b and 802.11g Wireless Systems
- Point to Multi-point Systems
- Base Station Antennas
- Wireless Broadband Systems
- WiFi Access Points



9dB Omni

#### Description

The Omni Directional antenna systems offered by Pacific Wireless are constructed of UV-stable fiberglass with all stainless steel brackets standard. They come standard with Type N female bulkhead connectors with extra heavy duty nuts for optional standoff type mounting. The 12dBi has a 3 Deg Electrical Downtilt standard. It also has 24" pigtail option with N Female or N Male connectors for direct connection to outdoor access points. The 9dBi is available with 0 degree electrical downtilt and 7 degree electrical downtilt which is perfect for close-in wireless systems such as apartment complexes. Because of their unique high performance design which eliminates nulls, they can be used in a wide variety of wireless systems.

#### Specifications

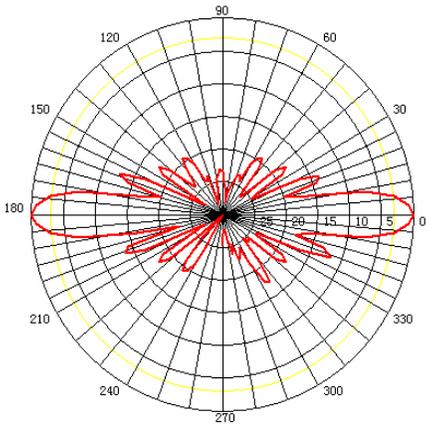
Parameter	Min	Typ	Max	Units
<i>Frequency Range</i>	2400		2485	MHz
<i>Input Return Loss (S<sub>11</sub>)</i>		-14		dB
<i>VSWR</i>		1.5:1		
<i>Impedance</i>		50		OHM
<i>Input Power</i>			100	W
<i>Pole Diameter (OD)</i>	1 25		2 50	inch mm
<i>Operating Temperature</i>	-40		+70	Deg C

2400 - 2485 MHz	OD24-9	OD24-12
<i>Gain</i>	9dBi	12dBi
<i>Vertical Beam Width</i>	14deg	7 deg
<i>Electrical Downtilt</i>	0 deg or 7 deg	3 deg
<i>Rated Wind Velocity</i>	125mph (56 M/sec)	125mph (56 M/sec)
<i>Weight</i>	1.1 Lbs (0.5Kg)	1.4 Lbs (0.6Kg)
<i>Dimension (L +/-1.0")</i> <i>Diameter Approx. 0.6" (15mm)</i>	27" (69cm)	48" (122cm)

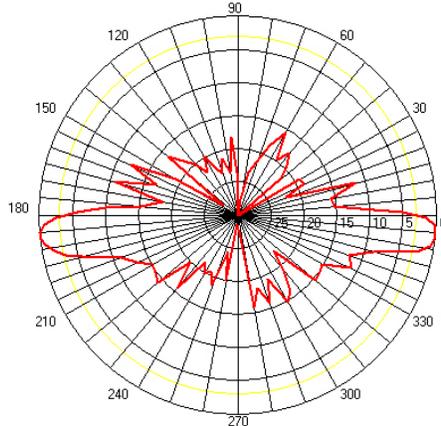


12dB Omni with Pigtail

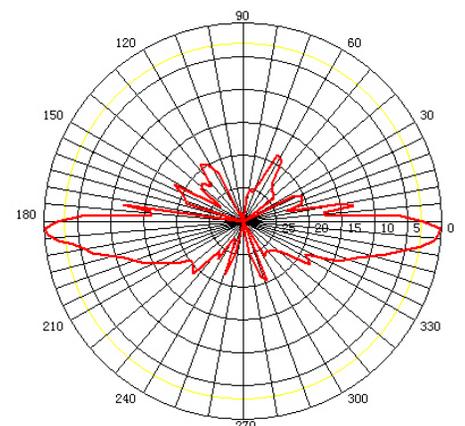
## Antenna Patterns at 2.45GHz



9dB Vertical Antenna Pattern  
0 Deg Elec Downtilt – E Plane



9dB Vertical Antenna Pattern  
7 Deg Elec Downtilt – E Plane



12dB Vertical Antenna Pattern  
3 Deg Elec Downtilt – E Plane

Wind Loading	
100MPH	8.75 Lbs
125MPH	13.7 Lbs

### Notes:

- All shipments F.O.B. Pacific Wireless Bluffdale, UT 84065
- All antennas carry a 2 Year Warranty



Closeup of standard stainless steel bracket and bulkhead N connector

**System Ordering:** OD24-  -  -

**Antenna Gain**

9 = 9dBi  
12 = 12dBi

**Electrical Downtilt Options – (9dBi Only)**

Blank = 0 Degrees Electrical Downtilt  
D7 = 7 Degrees Electrical Downtilt

**Options**

Blank = N Female Integrated Connector and stainless steel bracket  
SM = N Female Integrated Connector and Powder Coat Painted Standoff Mount  
P = 24” Pigtail with N Male (12dBi only)  
PF = 24” Pigtail with N Female (12dBi Only)



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# PAWDC24 DATA SHEET

## Directional Antenna System 1700 to 2700 MHz Operation

### Features

- Small Size/Reduced Shipping Cost
- 50 Ω 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
- Point to Point Repeaters
- Wireless Internet Access
- MMDS Applications
- Wireless Bridges
- Streaming Video

### Description

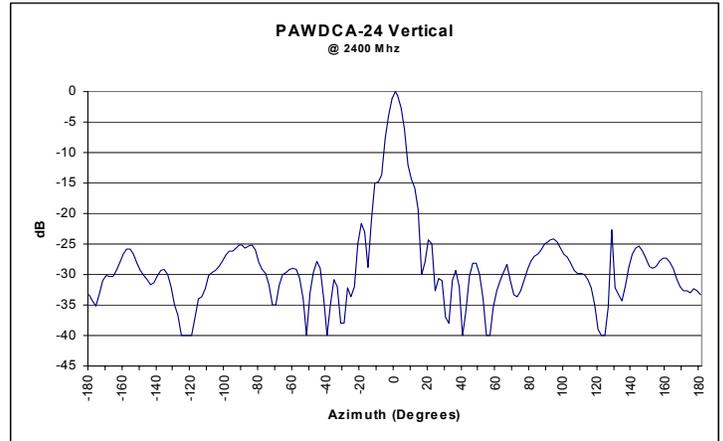
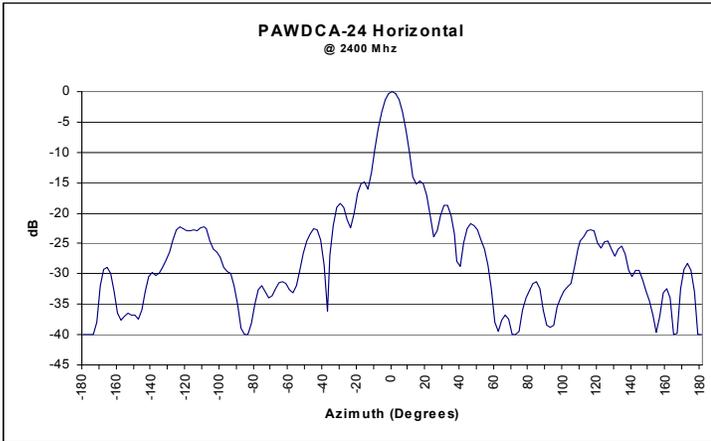
The DC24 is a directional antenna system, which incorporates a 2-piece aluminum die cast parabolic grid type antenna reflector with the PMPF, patented 50-ohm passive feed dipole. Dipoles come in 2 basic configurations, PMPF-xx with integral N type Female connector and PMPF-xxP with 24” pigtail equipped 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
<i>Frequency Range</i>	PMPF-1 PMPF-2 PMPF-19 PMPF-18	2400 2100 1880 1750		2483 2686 1930 1850	MHz
<i>Gain</i>			24		dBi
<i>Input Return Loss (S<sub>11</sub>)</i>			-14		dB
<i>VSWR</i>			1.5:1		
<i>3dB Beam Angle</i>			8		deg
<i>Cross Pole</i>			26		dB
<i>Front to Back</i>		24			dB
<i>Side Lobe</i>				-20	dB
<i>Impedance</i>			50		OHM
<i>Input Power</i>				50	W
<i>Focal Length</i>			16 (40.6)		Inch (cm)
<i>Dimension (LxW)</i>			42 (107) x 24 (61)		Inch (cm)
<i>Weight</i>			5.5 (2)		Lbs (Kgs)
<i>Pole Diameter (OD)</i>		1 (25)		2 (50)	Inch (mm)
<i>Operating Temperature</i>		-45		+70	Deg C
<i>Wind Loading:</i> 100MPH 140MPH 100MPH: ½” Radial Ice				96 (36) 188 (70) 176 (66)	Lbs (Kgs)

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

## Antenna Patterns



Typical azimuth plots

### Standard Packaging:

Model	Units per box	L x W x H	Weight	Dimensional Weight <small>(For Air Freight Calculations)</small>
DC24	5 Pack	24" x 22" x 10" (61 x 56 x 25cm)	46Lbs. (21Kgs)	46Lbs. (21Kgs)

### 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.
- All shipments F.O.B. Pacific Wireless in Bluffdale, UT 84065
- All antennas carry a 2 Year Warranty

### System Ordering: DC24-HD-PF□□□□



#### Freq Range

- PF1 – PMPF-1 2.4 GHz ISM Band
- PF2 – PMPF-2 2.5 GHz MMDS Band
- PF18 – PMPF-18 1.75 to 1.85 GHz
- PF19 – PMPF-19 1.88 to 1.93 GHz DECT

#### Feed Option

- Blank –N Type Integrated Connector
- P – Pigtail with N Male connector
- PF - Pigtail with N Female connector

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