

## Dual Band, Dual Input Sector Panel Antenna

The MSPDBDI244914NF sector panel antenna provides coverage of 2.4 GHz to 2.5 GHz and 4.9 GHz to 5.9 GHz frequencies in a single antenna housing. Its dual N female bulkhead inputs permit simultaneous operation of 4.9 GHz Public Safety, 802.11a, b, g and WiMAX radio devices. This antenna features a rugged UV resistant housing and includes a pipe mount for outdoor installations.

### Features

- Covers 2.4 to 2.5 GHz and 4.9 to 5.9 GHz frequencies with excellent VSWR performance.
- Outstanding front-to-back ratio and controlled sidelobe radiation ensures that the radiated energy is targeted towards the area of coverage.
- Included adjustable pipe mount permits uptilt, downtilt or vertical adjustment of +/-15 degrees for more precise coverage of the geographic area.
- Slim, low profile housing and included pipe mount provide added mounting flexibility for locations where space availability is limited.
- High isolation design - outstanding for both bands. 68 dB is typical when antennas are radially spaced and used for omnidirectional coverage (typically 3 antennas are used radially spaced, 120° apart).



This antenna is designed to cover frequencies from 2.4 GHz to 2.5 GHz and 4.9 GHz to 5.9 GHz. Its slim, low profile housing and pipe mount provide added mounting flexibility for locations where space availability is limited.

### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	Nominal Isolation (radially spaced 120° apart)
MSPDBDI244914NF	2.4-2.5 GHz	14 dBi +/- 0.5	- 68 dB
	4.925-5.925 GHz	14 dBi +/- 0.5	- 68 dB

Model	Frequency Range	Horizontal Plane Beamwidth	E-Plane Beamwidth	Front-to-Back Ratio
MSPDBDI244914NF	2.4-2.5 GHz	90°	15°	> 32 dB
	4.925-5.925 GHz	120°	8°	> 32 dB

### Mechanical Specifications

Model	Dimensions	Weight (Mass)
MSPDBDI244914NF	36" L x 5.5" W x 3" D (91.4 x 13.9 x 7.6 cm)	6 lbs (13.2 kg)

Temperature Range	Rated Wind Velocity	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
-30°C to +75°C	125 mph	67 lbf	0.68 ft <sup>2</sup>



### Technical Data

<b>General Specifications:</b> Dual band, dual input sector panel antenna
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> < 1.5:1 (2.4-2.5 GHz) < 1.7:1 (4.925-5.925 GHz)
<b>Radome Material:</b> Sky Gray UV resistant plastic
<b>ESD Protection:</b> Each input DC grounded
<b>Termination:</b> 2.4 to 2.5 GHz N female bulkhead 4.9 to 5.9 GHz N female bulkhead
<b>Mounting Method:</b> Adjustable mount Pipe mount included

For detailed specifications, visit <http://antenna.pctel.com>.



WISP4959018MBV



### Technical Data

General Specifications: 2.4 GHz sector panel antennas
Maximum Power Input: 10 watts
Polarization: Vertical
Nominal Impedance: 50 ohms
VSWR: < 1.7:1
Color: White
Radome Material: UV resistant ASA plastic
ESD Protection: DC grounded
Mounting Method: Adjustable pipe mount (included) +/- 15° of uptilt or downtilt (WISP2800 & WISP4900 models)

For detailed specifications, visit <http://antenna.pctel.com>.

## Wideband Adjustable Sector Panel Antenna

The PCTEL sector panel antennas cover frequencies of 4.9-6.0 GHz and are designed for use in sectorized WISP applications using a single sector or multiple sector antennas and multiple radios. They offer cost conscious antennas and system’s engineers an alternative to wall mounted omnidirectional antennas that can be susceptible to multipath interference and reduced coverage caused by wall-obstructed radiated signals. These sector antennas are ideal for use in apartment complexes, offices, medical facilities, schools, industrial parks and shopping centers.

### Features

- The antennas offer a choice of 45°, 60°, 90° or 120° single beamwidth sector. Multiple antennas can be utilized to cover several geographical sectors using additional radios. Great for use in place of an obstructed wall mounted omni.
- Industry leading front-to-back ratios. Ensure that the radiated energy is focused towards its target, and not to the back or sides of the antennas.
- Attractive, streamline design reduces wind loading for easier handling during installation.
- Includes adjustable pipe mount that permits uptilt or downtilt adjustment for more precise coverage of the geographic area.

### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain (+/- 0.5)	Horizontal Plane Beamwidth
WISP4959018MBV	4.9 GHz to 6.0 GHz	18 dBi @ 45° 16 dBi @ 60° 15 dBi @ 90° 14 dBi @ 120°	45°, 60°, 90° or 120° (adjustable)
E-Plane Beamwidth	Front-to-Back Ratio	Typical Cross Poll Discrimination	
8°	> 32 dB	> 20 dB	

### Mechanical Specifications

Model	Dimensions	Weight (Mass)	Temperature Range
WISP4959018MBV	24” L x 6” W x 3” D (609 L x 152 W x 76 mm D)	4.5 lbs (2.1 Kg)	-30° C to 75° C
Rated Wind Velocity	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area	
125 mph	60 lbf without flaps 120 lbf with flaps	.44 ft² without flaps 1.36 ft² with flaps	

## Dual Band Mast Mount Omnidirectional (MMO) Antenna

The MMO24580608 base antenna provides outstanding coverage in a rugged U.V. stable, plastic radome with an aluminum base that is ideal for indoor or outdoor applications.

### Features

- Covers dual band frequencies for a wide variety of indoor and outdoor applications.
- Pipe mount is included for added convenience.



MMO 5.8 GHz series antennas

### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	H-plane Beamwidth	E-plane Beamwidth
MMO24580608NF	2.4-2.48/ 5.15-5.85 GHz	6 dBi/ 8 dBi	360°	22° / 15°

### Mechanical Specifications

Model	Antenna Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plane Area
MMO24580608NF	26" (660.4 mm)	0.50 lbs (0.226 kg)	11.5 ft-lbs	10.6 lbs	0.12 ft <sup>2</sup>



### Technical Data

Maximum Power: 25 watts
Polarization: Vertical linear
Nominal Impedance: 50 ohms
VSWR: < 2.0:1
Wind Survival: 125 mph
Radome Material: White UV stable plastic
Connector: Type N female
Mounting Method: Pipe mount (included).

For detailed specifications, visit <http://antenna.pctel.com>.



MFB49009



MFB58009



Vented System



MMK1924



MMK8A

## White MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The wireless broadband omnidirectional antennas are designed to provide maximum performance and reliability under the toughest weather conditions. These antennas feature a UV stable, vented radome that provides ultimate protection against weather elements. They can be mast or wall mounted.

### Features

- UV stable, pultruded fiberglass radome. Allows outdoor installation even in harsh climates.
- Vented system design. Provides reliable performance by protecting the electrical design against extreme moisture and/or temperatures.
- Thread relief on connector. Improved accessibility for taping reduces installation time and improves overall effectiveness.
- Internal o-ring seal in the base of the antenna with integrated connector at the base. Assures a watertight seal to prevent water from migrating into the antenna connector.



### Technical Data

Maximum Power: 25 watts
Polarization: Vertical
Nominal Impedance: 50 ohms
VSWR: < 1.5:1
Radome Material: UV resistant pultruded fiberglass
ESD Protection: Not standard, but all models can be ordered with DC grounding. Add "DC" to the part number to order the antenna with DC grounding.
Termination: N female
Mounting Base Diameter: 1.25 inches
Mounting Method: MMK1924 - L bracket mount for wall or pipe mount MMK8A - Aluminum extruded bracket for mast mounting MMK11 - Ceiling mount bracket

For detailed specifications, visit <http://antenna.pctel.com>.

## Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB25007	2.5-2.7 GHz	7 dBi	200 MHz	13°
MFB49009	4.9-5.0 GHz	9 dBi	100 MHz	8°
MFB49009DC	4.9-5.0 GHz	9 dBi	100 MHz	8°
MFB51510	5.15-5.35 GHz	10 dBi	200 MHz	7°
MFB58009	5.725-5.875 GHz	9 dBi	150 MHz	8°

## Mechanical Specifications

Model	Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area	Wind Survival
MFB25007	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB49009	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB49009DC	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB51510	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB58009	15.7" (399 mm)	0.43 lbs (0.195 kg)	2.7 ft-lbs	4.1 lbs	.046 ft <sup>2</sup>	125 mph



Small housing panels are 5.1" H x 4.7" W x 1.5" D



13 dBi panel on MPAB12 corner wall mount



Small housing panel on MPAB11 wall mount



MP24018XFPT



### Technical Data

General Specifications: Directional panel antennas
Maximum Power Input: See Electrical Specifications
Polarization: Linear, vertical/horizontal
Nominal Impedance: 50 ohms
VSWR: See Electrical Specifications
Radome Material: UL 94-V0 plastic
Cable: See Mechanical Specifications
Connector Options: N female (part #NF) standard. Other connector options are available. Consult factory.

For detailed specifications, visit <http://antenna.pctel.com>.

## Directional Panel Antennas for Indoor or Outdoor Applications

These directional panel antennas are designed to cover PCS, 4.9 GHz Public Safety band, 2.4 GHz and 5.8 GHz ISM frequencies, obtaining maximum gain in an attractive, low-profile package. All models provide efficient and stable performance across their specified bands and can be mounted indoors or outdoors. Multi-band models covering public safety and 802.11a/b/g standards are available.

### Features

- Printed circuit board design provides the best performance-to-price ratio.
- UL94-V0 plastic and PC board. Provides UL's high flame retardant rating allowing maximum placement flexibility and meeting stringent building fire rating codes.
- Attractive, low profile housing. Blends well with indoor and outdoor environments where aesthetic considerations are important.
- Corner exit RG-58/U pigtail design (PCS and 2.4 GHz models), .141 semi-rigid (5.1 and 5.8 GHz models), and high performance Plenum Rated ML195 (dual band models). Permits the linear polarized panel to be mounted in vertical or horizontal polarity with a wide variety of connectors.
- Optional UL 910 rated Plenum cable. Allows the cable to be installed in any indoor mounting location, including air ducts.
- Adjustable mounting brackets for indoor and outdoor mounting. Provide maximum flexibility for indoor or outdoor installations.

### Mounting Method

Model/Mount	MPAB7	MPAB8	MPAB11	MPAB12
MP24008XFPT	N/A	N/A	included	optional
MP24013XFPT	optional	optional	optional	optional
MP24580809XFPT	N/A	N/A	N/A	optional
MP24581820PT	optional	optional	N/A	N/A
MP495913XFPT	N/A	N/A	included	optional
Mount Description	Heavy duty outdoor adjustable mount with +/-35° uptilt/downtilt. If used with MP24018XFPT the mount provides +/-18° uptilt/downtilt. Same as MPAB8 but bracket is longer.	Heavy duty outdoor adjustable mount with 17° uptilt/downtilt. If used with MP24018XFPT the mount provides +/-9° uptilt/downtilt.	Short adjustable indoor mount. It may be used outdoors with small housing panels only.	Long adjustable indoor corner mount.

## Antenna Electrical Specifications

Model	Frequency Range	Gain	3 dB Horizontal Beamwidth	3 dB Vertical Beamwidth	Front-to-Back Ratio	Max. Power Input	VSWR
MP24008XFPT	2.30-2.50 GHz	8.5 dBi	60°	60°	> 15 dB	20 watts	< 1.5:1
MP24013XFPT	2.30-2.50 GHz	13.0 dBi	35°	35°	> 18 dB	20 watts	< 1.5:1
MP24580809PT	2.40-2.48/ 4.94-5.85 GHz	8 dBi/ 9 dBi	60°/50°	60°/40°	> 22 dB/ > 15 dB	25 watts	< 2.0:1/ < 2.0:1
MP24581820PT	2.40-2.48/ 4.94-5.85 GHz	18 dBi/ 20 dBi	21°/9°	21°/9°	> 30 dB/ > 25 dB	25 watts	< 2.0:1/ < 2.0:1
MP495913XFPT	4.9-5.9 GHz	13.0 dBi	40°	27°	>25 dB	25 watts	<1.5:1

## Mechanical Specifications

Model	Dimensions	Weight (Mass)	Temperature Range	Wind Loading (Frontal) @100 mph Wind	Cable
MP24008XFPT	5.1" x 4.7" x 1.5" (12.9 x 11.9 x 3.8 cm)	0.5 lbs (0.23 kg)	-40°C to +70°C	9.3 lbs	12" (30.5 cm) RG58/U**
MP24013XFPT	8.8" x 8.1" x 1.6" (22.4 x 20.6 x 4.06 cm)	1.2 lbs (0.54 kg)	-40°C to +70°C	27.9 lbs	12" (30.5 cm) RG58/U**
MP24580809PT	5.1" x 4.7" x 1.5" (12.9 x 11.9 x 3.8 cm)	0.5 lbs (0.23 kg)	-40°C to +70°C	9.3 lbs	12" (30.5 cm) ML195*
MP24581820PT	15.1" x 13.9" x 1.9" (38.4 x 35.3 x 4.8 cm)	3.9 lbs (1.8 kg)	-40°C to +70°C	85 lbs	12" (30.5 cm) .141 semi-rigid*
MP495913XFPT	5.1" x 4.7" x 1.5" (12.9 x 11.9 x 3.8 cm)	0.5 lbs (0.23 kg)	-40°C to +70°C	9.3 lbs	6" (15.25 cm) .141 semi-rigid*

\* Plenum Rated cable

\*\* UL910 Plenum Rated cable optional for these models



WISP Directional Panels



Technical Data

General Specifications: Directional panel antennas
Maximum Power Input: 20 watts
Polarization: Linear, vertical/horizontal
Nominal Impedance: 50 ohms
VSWR: < 1.6:1
Radome Material: UV stable plastic
Cable: 12" RG58/U with attached female N connector
Temperature Range: -40°C to +70°C

For detailed specifications, visit <http://antenna.pctel.com>.

WISP Directional Panel Antennas

The directional panel antennas are designed to provide maximum gain at 2.4 GHz frequencies. With a VSWR of less than 1.6:1, all models provide efficient and stable performance across the band. These robust antennas are designed for outdoor applications.

Features

- Patented printed circuit board design. Best performance-to-price ratio.
- Attractive, low profile UV stable housing. Blends well with indoor and outdoor environments where aesthetic considerations are important.
- Corner exit RG-58/U pigtail design. Permits the panel to be mounted in vertical or horizontal polarity.
- Adjustable mounting brackets for outdoor mounting. Provide maximum flexibility for outdoor installations.

Antenna Electrical Specifications

Model	Frequency Range	Gain	3 dB Horizontal Beamwidth	3 dB Vertical Beamwidth	Front-to-Back Ratio
WISP24009PTNF	2.3-2.5 GHz	9.0 dBi	60°	60°	> 15 dB
WISP24013PTNF	2.3-2.5 GHz	13.0 dBi	35°	35°	> 18 dB
WISP24018PTNF	2.3-2.5 GHz	18.0 dBi	18°	19°	> 25 dB

Mechanical Specifications

Model	Dimensions Range	Weight (Mass)	Temperature Range	Frontal Wind Loading @100 mph
WISP24009PTNF	5.1" x 4.7" x 1.5"	0.5 lbs	-40°C to +70°C	9.3 lbs
WISP24013PTNF	8.8" x 8.1" x 1.6"	1.2 lbs	-40°C to +70°C	27.9 lbs
WISP24018PTNF	15.1" x 13.9" x 1.9"	3.9 lbs	-40°C to +70°C	85 lbs

Mounting Method

Model	Included Mount
WISP24009PTNF	Indoor/outdoor articulating mount
WISP24013PTNF	Heavy duty outdoor adjustable mount
WISP24018PTNF	Heavy duty outdoor adjustable mount



## Enclosed Yagi Antenna Series

The MYP directional yagis can be used as bridge antennas between two networks or for point-to-point communications. They are field adjustable for vertical or horizontal polarization with matched principal plane beamwidths for optimum performance in either orientation. This design also provides improved front-to-back ratio and sidelobe suppression that reduces interference. All models feature a robust mounting structure for consistent performance regardless of weather conditions.

### Features

- Field adjustable to allow vertical or horizontal polarity. Eliminates co-channel interference from neighboring radiators. Polarity markings molded on the antenna ensure installation in the correct orientation.
- Optional, articulating mount. Allows precise adjustment of the antenna both vertically and horizontally.
- All antennas include a robust mast mount bracket designed to withstand 125 mph wind.
- Matched principal plane beamwidths with excellent sidelobe suppression and cross-polarization rejection of more than 20 dB. Provides superior signal quality with enhanced gain performance and minimal interference from neighboring radiators.
- 30 dB front-to-back ratio permits less physical separation on the tower thus adding mounting flexibility at installation sites where space is limited.
- Attractive weather-proof radome constructed of UV resistant material. Provides robust and trouble-free use in harsh outdoor environments.



MYP24015PT



MYK18



### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	Horizontal Beamwidth @ 1/2 Power	Vertical Beamwidth @ 1/2 Power	Front-to-Back Ratio
MYP24015PTNF	2.4-2.686 GHz	15 dBi	30°	30°	30 dB

### Mechanical Specifications

Model	Dimensions	Weight (Mass)	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
MYP24015PTNF	14" L x 3" OD (356 x 76 mm)	1 lb (0.5 kg)	18.3 lbs	0.20 ft <sup>2</sup>

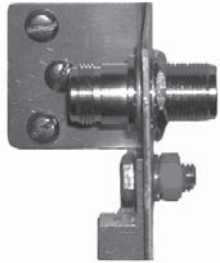
### Technical Data

General Specifications: 2.4 GHz ISM enclosed yagi antenna series
Maximum Power: 5 watts
Polarization: Vertical or horizontal, linear (user adjustable)
Nominal Impedance: 50 ohms
VSWR: < 1.5:1
Wind Survival: 125 mph
Cable: 12" (305 mm) Pro-Flex™ Plus 195
Termination: N, female is standard, NM optional
Mounting Method: Heavy duty yagi mounting bracket (included) permits mast mounting on masts up to 2" O.D. MYK18 adjustable wall/pipe mount allows 180° (included angle) azimuth and elevation adjustment (sold separately.)

For detailed specifications, visit <http://antenna.pctel.com>.

## Cable Assemblies and Accessories

### Cable Assemblies



MGB Grounding Block

Model	Description
MCA195FSMAMN	Pro-Flex™ Plus 195 cable assembly with type SMA female and N male connectors
MCA195FSMA-NC	Pro-Flex™ Plus 195 high performance RG-58/U cable assembly with SMA female jack connector
MCA195MSMAFSMA	Pro-Flex™ Plus 195 cable assembly with SMA male and N female connectors
MCA195NFFSMA	Pro-Flex™ Plus 195 cable assembly with SMA female and N female connectors
MCA195NFNM	Pro-Flex Plus™ 195 cable assembly with SMA female and N male connectors
MCA195NMFME	Pro-Flex Plus™ 195 cable assembly with N male and FME connectors
MCA195NMMU	Pro-Flex™ Plus 195 cable assembly with N male and mini-UHF connectors
MCA195NMNM	Pro-Flex™ Plus 195 cable assembly with N male and N male connectors
MCA195NMRPC	Pro-Flex™ Plus 195 cable assembly with N male and reverse polarity TNC connectors
MCA195NMRPMSMA	Pro-Flex™ Plus 195 one-foot cable assembly with N male and SMA reverse polarity connectors
MCA195NMTFRPC	Pro-Flex™ Plus 195 cable assembly with Teflon N male and reverse polarity TNC connectors
MCA195PL259MN	Pro-Flex™ Plus 195 cable assembly with PL259 and male N connectors
MCA195PLPL	Pro-Flex™ Plus 195 cable assembly with mini UHF connectors on both ends
MCA195RANMC	Pro-Flex™ Plus 195 cable assembly with TNC male and right angle "N" male connectors
MCA195RPCJNM	Pro-Flex™ Plus 195 cable assembly with male TNC and reverse polarity TNC Jack 999 (female) connectors
MCA195RPCJRPC	Pro-Flex™ Plus 195 cable assembly with male TNC and reverse polarity TNC Jack (female) connectors
MCA400NFNM//50	Cable assembly with 50 ft. of LMR400 with SMA female and N male connectors
MCA400NMNM5	LMR400 cable assembly 5 ft. with N male and N male connectors

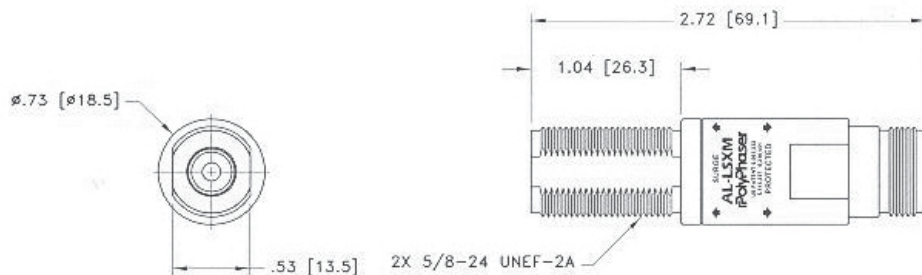
### Cable Accessories

Model	Description
MGB	Grounding block. Grounded N female pass through connector and mounting bracket. Low cost way to make your installation meet National Electrical Codes without using a lightning arrestor.

# Lightning Arrestor

Patented protection for single or multi-channel transmitters and/or receivers. One of the industry's BEST RF performance, fully weatherized, compact integrated connector housing, Industry's lowest throughput energy, maintenance free, and multi-strike compatible for 2.0-6.0 GHz. Weatherproof when installed.

The BWS26 is UL approved and listed (UL497B).



## Mechanical Specifications

Model	Frequency Range	VSWR	Insertion Loss
BWS26	2.0-6.0 GHz	1.3:1	0.1 dB

## Technical Data

Application: DC Blocked RF
Maximum Power: 10 watts
Unit Impedance: 50 Ω
Thoroughput Energy: ≤ 0.5000 μJ
Connector: NF to NF
Mounting: Bulkhead