Mast Mount Omnidirectional (MMO) Antennas

The MMO series 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
- The MMO24005PTRPC provides a broad elevation pattern antenna radiation pattern that has been shaped to direct energy where it is needed, while suppressing the misdirected upper and lower sidelobe energy.
- Pipe mount is included for added convenience.
- Multiple band coverage supports 2.4 GHz and 5.15-5.8 GHz broadband networks, eliminating the need for a second or third antenna in POP locations where mounting space is limited or costly. (MMO24580608 model).
- Optimized elevation pattern. Minimizes misdirected energy by suppressing sidelobe energy and directing the radiated energy towards the desired area of coverage.

Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Nominal Gain</th>
<th>H-plane Beamwidth</th>
<th>E-plane Beamwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMO24005PTNF</td>
<td>2.4-2.485 GHz</td>
<td>5.5 dBi +/-0.5</td>
<td>360°</td>
<td>32°</td>
</tr>
<tr>
<td>MMO24005PT36NF</td>
<td>2.4-2.485 GHz</td>
<td>5.5 dBi +/-0.5</td>
<td>360°</td>
<td>32°</td>
</tr>
<tr>
<td>MMO24580608NF</td>
<td>2.4-2.485/5.15-5.85 GHz</td>
<td>6 dBi/8 dBi</td>
<td>360°</td>
<td>22°/15°</td>
</tr>
<tr>
<td>MMO58004NF</td>
<td>5.15-5.85 GHz</td>
<td>4 dBi</td>
<td>360°</td>
<td>30°</td>
</tr>
<tr>
<td>MMO58007NF</td>
<td>5.15-5.85 GHz</td>
<td>7 dBi</td>
<td>360°</td>
<td>12°</td>
</tr>
<tr>
<td>MMO58010NF</td>
<td>5.15-5.85 GHz</td>
<td>10 dBi</td>
<td>360°</td>
<td>10°</td>
</tr>
</tbody>
</table>

Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Antenna Height</th>
<th>Weight (Mass)</th>
<th>Bending Moment at Rated Wind</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Equivalent Flat Plane Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMO24005PTNF</td>
<td>11.3” (287 mm)</td>
<td>0.5 lbs (0.23 kg)</td>
<td>2.2 ft-lbs</td>
<td>4.6 lbs</td>
<td>0.5 ft²</td>
</tr>
<tr>
<td>MMO24005PT36NF</td>
<td>11.3” (287 mm)</td>
<td>0.5 lbs (0.23 kg)</td>
<td>2.2 ft-lbs</td>
<td>4.6 lbs</td>
<td>0.5 ft²</td>
</tr>
<tr>
<td>MMO24580608NF</td>
<td>26” (660.4 mm)</td>
<td>0.50 lbs (0.226 kg)</td>
<td>11.5 ft-lbs</td>
<td>10.6 lbs</td>
<td>0.12 ft²</td>
</tr>
<tr>
<td>MMO58004NF</td>
<td>5” (127 mm)</td>
<td>12 oz (0.34 kg)</td>
<td>0.4 ft-lbs</td>
<td>2.0 lbs</td>
<td>0.02 ft²</td>
</tr>
<tr>
<td>MMO58007NF</td>
<td>14” (355.6 mm)</td>
<td>1 lb (0.45 kg)</td>
<td>3.3 ft-lbs</td>
<td>5.7 lbs</td>
<td>0.06 ft²</td>
</tr>
<tr>
<td>MMO58010NF</td>
<td>18.5” (469.9 mm)</td>
<td>1.1 lbs (0.50 kg)</td>
<td>5.8 ft-lbs</td>
<td>7.6 lbs</td>
<td>0.09 ft²</td>
</tr>
</tbody>
</table>

Technical Data

- Maximum Power: 25 watts
- Polarization: Vertical linear
- Normal Impedance: 50 ohms
- VSWR: < 1.5:1 (MMO24005 series) < 2.0:1 (except MMO24005 series)
- Wind Survival: 125 mph
- Radome Material: White UV stable plastic
- Connector: Type N female (except MMO24005 series). 12” or 36” RG-58/U pigtail with RP-TNC plug connector (MMO24005 series only). Other connector options available (MMO24005 series only).

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 (all models except MFB24012). Provides reliable performance by protecting the electrical design against extreme moisture and/or temperatures.
- Thread relief on connector (all models, except MFB24012 which has a pigtail). 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 (all models, except MFB24012 which has a pigtail).
- Electrical downtilt options on select models. Provide system planners flexibility in challenging operating environments.

Technical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power</td>
<td>25 watts</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
</tr>
<tr>
<td>Normal Impedance</td>
<td>50 ohms</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt; 1.5:1</td>
</tr>
<tr>
<td>Radome Material</td>
<td>UV resistant pultruded fiberglass</td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>Not standard, but all models can be ordered with DC grounding. Add “DC” to the part number to order the antenna with DC grounding.</td>
</tr>
<tr>
<td>Termination</td>
<td>N female (except MFB24012). N male connector option available. To order, add “NM” to part number. N female, reverse polarity and reverse threaded connectors optional on most models. 16” RG-213 pigtail with N female connector (for model MFB24012 only.)</td>
</tr>
<tr>
<td>Mounting Base Diameter</td>
<td>1.25 inches (all models except MFB24012) 1.5 inches (model MFB24012)</td>
</tr>
<tr>
<td>Mounting Method</td>
<td>MMK1924 - L bracket mount for wall or pipe mount (except MFB24010 and MFB24012) MMK8A - Aluminum extruded bracket for mast mounting (except model MFB24012) MMK11 - Ceiling mount bracket (for MFB24004, MFB24006 and MFB24008 only) MMK12 - Heavy duty bracket for mast mounting the MFB24012 MMK14 - Light duty mounting clamp for MFB24012</td>
</tr>
</tbody>
</table>

## Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Vertical Beamwidth @ 1/2 Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB19008A</td>
<td>1850-1990 MHz</td>
<td>8 dBi</td>
<td>140 MHz</td>
<td>12°</td>
</tr>
<tr>
<td>MFB24004</td>
<td>2400-2483.5 MHz</td>
<td>4 dBi</td>
<td>100 MHz</td>
<td>30°</td>
</tr>
<tr>
<td>MFB24006</td>
<td>2400-2483.5 MHz</td>
<td>6 dBi</td>
<td>100 MHz</td>
<td>20°</td>
</tr>
<tr>
<td>MFB24008</td>
<td>2400-2483.5 MHz</td>
<td>8 dBi</td>
<td>100 MHz</td>
<td>13°</td>
</tr>
<tr>
<td>MFB24008DT7</td>
<td>2400-2483.5 MHz</td>
<td>8 dBi</td>
<td>100 MHz</td>
<td>13°</td>
</tr>
<tr>
<td>MFB24008DT12</td>
<td>2400-2483.5 MHz</td>
<td>8 dBi</td>
<td>100 MHz</td>
<td>13°</td>
</tr>
<tr>
<td>MFB2410</td>
<td>2400-2483.5 MHz</td>
<td>10 dBi</td>
<td>100 MHz</td>
<td>9°</td>
</tr>
<tr>
<td>MFB2412</td>
<td>2400-2500 MHz</td>
<td>12 dBi</td>
<td>100 MHz</td>
<td>7°</td>
</tr>
<tr>
<td>MFB49009</td>
<td>4.9-5.0 GHz</td>
<td>9 dBi</td>
<td>100 MHz</td>
<td>8°</td>
</tr>
<tr>
<td>MFB51510</td>
<td>5.15-5.35 GHz</td>
<td>10 dBi</td>
<td>200 MHz</td>
<td>7°</td>
</tr>
<tr>
<td>MFB58009</td>
<td>5.725-5.875 GHz</td>
<td>9 dBi</td>
<td>150 MHz</td>
<td>8°</td>
</tr>
<tr>
<td>MFB58010</td>
<td>5.725-5.825 GHz</td>
<td>10 dBi</td>
<td>100 MHz</td>
<td>6°</td>
</tr>
</tbody>
</table>

## Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Weight (Mass)</th>
<th>Bending Moment at Rated Wind</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Equivalent Flat Plate Area</th>
<th>Wind Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB19008A</td>
<td>24.0&quot; (609.6 mm)</td>
<td>0.70 lbs (0.318 kg)</td>
<td>5.7 ft-lbs</td>
<td>5.9 lbs</td>
<td>.07 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB24004</td>
<td>8.1&quot; (205.7 mm)</td>
<td>0.34 lbs (0.154 kg)</td>
<td>0.7 ft-lbs</td>
<td>2.1 lbs</td>
<td>.02 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB24006</td>
<td>11.6&quot; (294.6 mm)</td>
<td>0.38 lbs (0.172 kg)</td>
<td>1.4 ft-lbs</td>
<td>3.0 lbs</td>
<td>.04 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB24008</td>
<td>20.2&quot; (513.1 mm)</td>
<td>0.50 lbs (0.226 kg)</td>
<td>4.4 ft-lbs</td>
<td>5.2 lbs</td>
<td>.06 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB24008DT7</td>
<td>20.2&quot; (513.1 mm)</td>
<td>0.50 lbs (0.226 kg)</td>
<td>4.4 ft-lbs</td>
<td>5.2 lbs</td>
<td>.06 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB24010</td>
<td>36.0&quot; (914.4 mm)</td>
<td>0.65 lbs (0.295 kg)</td>
<td>14.7 ft-lbs</td>
<td>10.1 lbs</td>
<td>.11 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB24012</td>
<td>44.0&quot; (1,118 mm)</td>
<td>3.00 lbs (1.400 kg)</td>
<td>41 ft-lbs</td>
<td>22.4 lbs</td>
<td>.25 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB49009</td>
<td>20.2&quot; (513.1 mm)</td>
<td>0.5 lbs (0.226 kg)</td>
<td>4.4 ft-lbs</td>
<td>5.2 lbs</td>
<td>.06 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB51510</td>
<td>20.2&quot; (513.1 mm)</td>
<td>0.5 lbs (0.226 kg)</td>
<td>4.4 ft-lbs</td>
<td>5.2 lbs</td>
<td>.06 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB58009</td>
<td>15.7&quot; (398.8 mm)</td>
<td>0.43 lbs (0.195 kg)</td>
<td>2.7 ft-lbs</td>
<td>4.1 lbs</td>
<td>.046 ft²</td>
<td>125 mph</td>
</tr>
<tr>
<td>MFB58010</td>
<td>20.2&quot; (513.1 mm)</td>
<td>0.5 lbs (0.226 kg)</td>
<td>4.4 ft-lbs</td>
<td>5.2 lbs</td>
<td>.06 ft²</td>
<td>125 mph</td>
</tr>
</tbody>
</table>
900/800 MHz MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The MFB 900/800 MHz series are base matched half wave antennas encapsulated in heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

Features
- White ultra-violet resistant pultruded fiberglass radome
- Thick walled aluminum mounting base
- Unity/3 dB/5 dB/7 dB models
- UPS shippable
- Exceptional value

Technical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power</td>
<td>150 watts</td>
</tr>
<tr>
<td>Normal Impedance</td>
<td>50 ohms</td>
</tr>
<tr>
<td>Radome Material</td>
<td>.65” pultruded white fiberglass</td>
</tr>
<tr>
<td>Radiator Material</td>
<td>Coated steel wire</td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>DC grounded</td>
</tr>
<tr>
<td>Wind Survival</td>
<td>100 mph</td>
</tr>
<tr>
<td>Termination</td>
<td>Unity and 3 dB models, N Female</td>
</tr>
<tr>
<td></td>
<td>5 dB and 7 dB models: N male with 16” jumper</td>
</tr>
<tr>
<td></td>
<td>RPC: reverse polarity TNC</td>
</tr>
<tr>
<td>Mounting Base Diameter</td>
<td>1-5/16”</td>
</tr>
<tr>
<td>Mounting Method</td>
<td>Mast or wall mounted.</td>
</tr>
<tr>
<td></td>
<td>Mounting hardware is sold separately.</td>
</tr>
<tr>
<td></td>
<td>MMK1: light duty mast mount for antennas under 30”</td>
</tr>
<tr>
<td></td>
<td>MMK3: light duty mast mount for antennas over 30”</td>
</tr>
<tr>
<td></td>
<td>MMK4: heavy duty mast mount</td>
</tr>
<tr>
<td></td>
<td>MMK6: cast mounting bracket</td>
</tr>
<tr>
<td></td>
<td>MMK9: Aluminum mast mount for 1-5/16” OD antennas</td>
</tr>
<tr>
<td></td>
<td>MBSWM: wall mounting bracket for antennas over 30” (two are required)</td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).
## Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Factory Tuned Frequency</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Vertical Beamwidth @ 1/2 Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB8130</td>
<td>806-866 MHz</td>
<td>813 MHz</td>
<td>Unity</td>
<td>40 MHz</td>
<td>75°</td>
</tr>
<tr>
<td>MFB8133</td>
<td>806-866 MHz</td>
<td>813 MHz</td>
<td>3 dB</td>
<td>30 MHz</td>
<td>40°</td>
</tr>
<tr>
<td>MFB8135</td>
<td>806-866 MHz</td>
<td>813 MHz</td>
<td>5 dB</td>
<td>20 MHz</td>
<td>22°</td>
</tr>
<tr>
<td>MFB8580</td>
<td>806-866 MHz</td>
<td>858 MHz</td>
<td>Unity</td>
<td>40 MHz</td>
<td>75°</td>
</tr>
<tr>
<td>MFB8583</td>
<td>806-866 MHz</td>
<td>858 MHz</td>
<td>3 dB</td>
<td>30 MHz</td>
<td>40°</td>
</tr>
<tr>
<td>MFB8585</td>
<td>806-866 MHz</td>
<td>858 MHz</td>
<td>5 dB</td>
<td>20 MHz</td>
<td>22°</td>
</tr>
<tr>
<td>MFB8353</td>
<td>824-896 MHz</td>
<td>835 MHz</td>
<td>3 dB</td>
<td>30 MHz</td>
<td>40°</td>
</tr>
<tr>
<td>MFB8963</td>
<td>896-940 MHz</td>
<td>898 MHz</td>
<td>3 dB</td>
<td>30 MHz</td>
<td>40°</td>
</tr>
<tr>
<td>MFB8965</td>
<td>896-940 MHz</td>
<td>898 MHz</td>
<td>5 dB</td>
<td>20 MHz</td>
<td>22°</td>
</tr>
<tr>
<td>MFB9387</td>
<td>896-940 MHz</td>
<td>938 MHz</td>
<td>7 dB</td>
<td>20 MHz</td>
<td>17°</td>
</tr>
<tr>
<td>MFB8967</td>
<td>896-940 MHz</td>
<td>898 MHz</td>
<td>7 dB</td>
<td>20 MHz</td>
<td>17°</td>
</tr>
<tr>
<td>MFB9150</td>
<td>902-928 MHz</td>
<td>915 MHz</td>
<td>Unity</td>
<td>20 MHz</td>
<td>75°</td>
</tr>
<tr>
<td>MFB9153</td>
<td>902-928 MHz</td>
<td>915 MHz</td>
<td>3 dB</td>
<td>20 MHz</td>
<td>40°</td>
</tr>
<tr>
<td>MFB915(NF)</td>
<td>902-928 MHz</td>
<td>915 MHz</td>
<td>5 dB</td>
<td>20 MHz</td>
<td>22°</td>
</tr>
<tr>
<td>MFB9157(NF)</td>
<td>902-928 MHz</td>
<td>915 MHz</td>
<td>7 dB</td>
<td>20 MHz</td>
<td>17°</td>
</tr>
</tbody>
</table>
## Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Weight (Mass)</th>
<th>Bending Moment at Rated Wind</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Equivalent Flat Plate Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB8130</td>
<td>14”</td>
<td>.75 lbs</td>
<td>1.4 ft-lbs</td>
<td>2.3 lbs</td>
<td>.06 sq ft</td>
</tr>
<tr>
<td>MFB8133</td>
<td>26”</td>
<td>1.25 lbs</td>
<td>4.7 ft-lbs</td>
<td>4.3 lbs</td>
<td>.12 sq ft</td>
</tr>
<tr>
<td>MFB8135*</td>
<td>48”</td>
<td>1.75 lbs</td>
<td>14.2 ft-lbs</td>
<td>8.0 lbs</td>
<td>.22 sq ft</td>
</tr>
<tr>
<td>MFB8580</td>
<td>14”</td>
<td>.75 lbs</td>
<td>1.4 ft-lbs</td>
<td>2.3 lbs</td>
<td>.06 sq ft</td>
</tr>
<tr>
<td>MFB8583</td>
<td>26”</td>
<td>1.25 lbs</td>
<td>4.7 ft-lbs</td>
<td>4.3 lbs</td>
<td>.12 sq ft</td>
</tr>
<tr>
<td>MFB8585*</td>
<td>48”</td>
<td>1.75 lbs</td>
<td>14.2 ft-lbs</td>
<td>8.0 lbs</td>
<td>.22 sq ft</td>
</tr>
<tr>
<td>MFB8353</td>
<td>26”</td>
<td>1.25 lbs</td>
<td>4.7 ft-lbs</td>
<td>4.3 lbs</td>
<td>.12 sq ft</td>
</tr>
<tr>
<td>MFB8963</td>
<td>26”</td>
<td>1.25 lbs</td>
<td>4.7 ft-lbs</td>
<td>4.3 lbs</td>
<td>.12 sq ft</td>
</tr>
<tr>
<td>MFB8965*</td>
<td>48”</td>
<td>1.75 lbs</td>
<td>14.2 ft-lbs</td>
<td>8.0 lbs</td>
<td>.22 sq ft</td>
</tr>
<tr>
<td>MFB9387*</td>
<td>96”</td>
<td>4.00 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 sq ft</td>
</tr>
<tr>
<td>MFB8967*</td>
<td>96”</td>
<td>4.00 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 sq ft</td>
</tr>
<tr>
<td>MFB9150</td>
<td>14”</td>
<td>.75 lbs</td>
<td>1.4 ft-lbs</td>
<td>2.3 lbs</td>
<td>.06 sq ft</td>
</tr>
<tr>
<td>MFB9153</td>
<td>23.25”</td>
<td>1.25 lbs</td>
<td>4.7 ft-lbs</td>
<td>4.3 lbs</td>
<td>.12 sq ft</td>
</tr>
<tr>
<td>MFB9155*</td>
<td>48”</td>
<td>1.75 lbs</td>
<td>14.2 ft-lbs</td>
<td>8.0 lbs</td>
<td>.22 sq ft</td>
</tr>
<tr>
<td>MFB9157*</td>
<td>96”</td>
<td>4.00 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 sq ft</td>
</tr>
</tbody>
</table>

* For N Female connector add $10.00. Mount sold separately.
746-869 MHz, 3 dB Gain MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

This is an omnidirectional base station antenna that provides 3 dB gain within the specified frequency. It is designed for mast mounting.

**Features**
- N female connector
- Thick walled aluminum mounting base
- White fiberglass radome

### Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Nominal Gain</th>
<th>Vertical Beamwidth at Half Power</th>
<th>Horizontal Beamwidth at Half Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFBW7463</td>
<td>746-869 MHz</td>
<td>3 dB</td>
<td>40°</td>
<td>360°</td>
</tr>
</tbody>
</table>

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Antenna Length</th>
<th>Weight (Mass)</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFBW7463</td>
<td>27”</td>
<td>1.5 lbs</td>
<td>-40°C to +70°C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Lateral Thrust at Rated Wind with 1/2” of Ice</th>
<th>Equivalent Flat Plate Area with 1/2” of Ice</th>
<th>Wind Survival with 1/2” of Ice</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFBW7463</td>
<td>20 lbf</td>
<td>.22 ft²</td>
<td>125 mph</td>
</tr>
</tbody>
</table>

### Technical Data

- **General Specifications:**
  - 746-869 MHz omnidirectional antenna
- **Maximum Power:**
  - 50 watts
- **Normal Impedance:**
  - 50 ohms
- **Polarization:**
  - Vertical
- **VSWR:**
  - < 1.8:1
- **Termination:**
  - N female
- **Mounting Method:**
  - MMK12 heavy duty cast mast mount (sold separately)

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).
UHF White MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

These 340-512 MHz white fiberglass omnidirectional antennas series consists of base matched half wave antennas encapsulated in heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and are UPS shippable.

Features
- UPS shippable
- Effective “J” pole design requires no radials or ground plane
- Exceptional value

Technical Data

<table>
<thead>
<tr>
<th>Maximum Power: 250 watts</th>
<th>Normal Impedance: 50 ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radome Material: Pultruded white fiberglass</td>
<td>Radiator Material: Coated steel wire</td>
</tr>
<tr>
<td>Lightning Protection: DC grounded</td>
<td>Wind Survival: 100 mph</td>
</tr>
<tr>
<td>Termination: N male with 16” jumper; N female and SO-239 are optional</td>
<td>Mounting Hardware:</td>
</tr>
<tr>
<td>MMK1: light duty mast mounting for antennas under 30”</td>
<td>MMK3: light duty mast mounting for antennas over 30”</td>
</tr>
<tr>
<td>MMK4: heavy duty mast mounting bracket</td>
<td>MMK6: cast mount bracket</td>
</tr>
<tr>
<td>Hardware is sold and ordered separately</td>
<td>MMK9: Aluminum mast mount for 1-5/16” OD antennas (two required with the 10” sleeve antenna models)</td>
</tr>
<tr>
<td>MBSWM: wall mounting bracket for antennas over 30” (2 required)</td>
<td></td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).
## Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Factory Tuned Frequency</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Vertical Beamwidth @ 1/2 Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB4500</td>
<td>450-460 MHz</td>
<td>455 MHz</td>
<td>Unity</td>
<td>10 MHz</td>
<td>90°</td>
</tr>
<tr>
<td>MFB4503</td>
<td>450-460 MHz</td>
<td>455 MHz</td>
<td>3 dB</td>
<td>10 MHz</td>
<td>38°</td>
</tr>
<tr>
<td>MFB4505(NF)</td>
<td>450-460 MHz</td>
<td>455 MHz</td>
<td>5 dB</td>
<td>10 MHz</td>
<td>27°</td>
</tr>
<tr>
<td>MFB4600</td>
<td>460-470 MHz</td>
<td>465 MHz</td>
<td>Unity</td>
<td>10 MHz</td>
<td>90°</td>
</tr>
<tr>
<td>MFB4603</td>
<td>460-470 MHz</td>
<td>465 MHz</td>
<td>3 dB</td>
<td>10 MHz</td>
<td>38°</td>
</tr>
<tr>
<td>MFB4605(NF)</td>
<td>460-470 MHz</td>
<td>465 MHz</td>
<td>5 dB</td>
<td>10 MHz</td>
<td>27°</td>
</tr>
<tr>
<td>MFB4705</td>
<td>470-480 MHz</td>
<td>475 MHz</td>
<td>5 dB</td>
<td>10 MHz</td>
<td>27°</td>
</tr>
</tbody>
</table>

## Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight (Mass)</th>
<th>Height</th>
<th>Bending Moment at Rated Wind</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Equivalent Flat Plate Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB4500</td>
<td>1.0 lbs</td>
<td>30”</td>
<td>5.2 ft-lb</td>
<td>5 lbs</td>
<td>.11 sq ft</td>
</tr>
<tr>
<td>MFB4503</td>
<td>4.0 lbs</td>
<td>71”</td>
<td>29.0 ft-lb</td>
<td>10.8 lbs</td>
<td>.30 sq ft</td>
</tr>
<tr>
<td>MFB4505</td>
<td>4.5 lbs</td>
<td>77”</td>
<td>40.4 ft-lb</td>
<td>12.6 lbs</td>
<td>.35 sq ft</td>
</tr>
<tr>
<td>MFB4600</td>
<td>1.0 lbs</td>
<td>30”</td>
<td>5.2 ft-lb</td>
<td>5 lbs</td>
<td>.11 sq ft</td>
</tr>
<tr>
<td>MFB4603</td>
<td>4.0 lbs</td>
<td>71”</td>
<td>29.0 ft-lb</td>
<td>10.8 lbs</td>
<td>.30 sq ft</td>
</tr>
<tr>
<td>MFB4605</td>
<td>4.5 lbs</td>
<td>77”</td>
<td>40.4 ft-lb</td>
<td>12.6 lbs</td>
<td>.35 sq ft</td>
</tr>
<tr>
<td>MFB4705</td>
<td>4.5 lbs</td>
<td>77”</td>
<td>40.4 ft-lb</td>
<td>12.6 lbs</td>
<td>.35 sq ft</td>
</tr>
</tbody>
</table>
VHF White MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The 118-225 MHz white fiberglass antenna series consists of base matched half wave antennas encapsulated in a heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

Features
- Effective “J” pole design requires no radials or ground plane
- White ultra-violet resistant pultruded fiberglass radome
- Thick-walled aluminum mounting base
- Unity/3 dB models
- UPS shippable

Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Impedance</td>
<td>50 ohms</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt; 1.5:1 VSWR</td>
</tr>
<tr>
<td>Radome Material</td>
<td>Pultruded white fiberglass</td>
</tr>
<tr>
<td>Radiator Material</td>
<td>Coated steel wire</td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>DC grounded</td>
</tr>
<tr>
<td>Wind Survival</td>
<td>100 mph</td>
</tr>
<tr>
<td>Termination</td>
<td>N male with 16” jumper; N female and SO-239 optional</td>
</tr>
<tr>
<td>Mounting Base Diameter</td>
<td>1-5/16”</td>
</tr>
<tr>
<td>Mounting Method</td>
<td>(Sold separately)</td>
</tr>
<tr>
<td></td>
<td>MMK3: light duty mast mounting</td>
</tr>
<tr>
<td></td>
<td>MMK4: heavy duty mast mounting</td>
</tr>
<tr>
<td></td>
<td>MMK6: cast mount bracket</td>
</tr>
<tr>
<td></td>
<td>MMK9: Aluminum mast mount for 1-5/16” OD antennas (two required with the 10” sleeve antenna models)</td>
</tr>
<tr>
<td></td>
<td>MBSWM: wall mounting bracket (2 required)</td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).
**Antenna Electrical Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Factory Tuned Frequency</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Vertical Beamwidth @ 1/2 Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB1443</td>
<td>144-150 MHz</td>
<td>144 MHz</td>
<td>3 dB*</td>
<td>3.5 MHz</td>
<td>29°</td>
</tr>
<tr>
<td>MFB1500</td>
<td>150-156 MHz</td>
<td>153 MHz</td>
<td>Unity</td>
<td>3.0 MHz</td>
<td>80°</td>
</tr>
<tr>
<td>MFB1503</td>
<td>150-156 MHz</td>
<td>150 MHz</td>
<td>3 dB*</td>
<td>3.5 MHz</td>
<td>29°</td>
</tr>
<tr>
<td>MFB1560</td>
<td>156-162 MHz</td>
<td>159 MHz</td>
<td>Unity</td>
<td>3.0 MHz</td>
<td>80°</td>
</tr>
<tr>
<td>MFB1563</td>
<td>156-162 MHz</td>
<td>156 MHz</td>
<td>3 dB*</td>
<td>3.5 MHz</td>
<td>29°</td>
</tr>
<tr>
<td>MFB1683</td>
<td>168-174 MHz</td>
<td>168 MHz</td>
<td>3 dB*</td>
<td>3.5 MHz</td>
<td>29°</td>
</tr>
</tbody>
</table>

*Note: 3 dB gain antennas are factory tuned to the lowest side of the frequency range. Field tuning to the desired frequency is required.*

**Mechanical Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Height (Mass)</th>
<th>Weight (Mass)</th>
<th>Bending Moment at Rated Wind</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Equivalent Flat Plate Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFB1443</td>
<td>129”</td>
<td>4 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 ft²</td>
</tr>
<tr>
<td>MFB1500</td>
<td>71”</td>
<td>3 lbs</td>
<td>29.2 ft-lbs</td>
<td>10.8 lbs</td>
<td>.30 ft²</td>
</tr>
<tr>
<td>MFB1503</td>
<td>129”</td>
<td>4 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 ft²</td>
</tr>
<tr>
<td>MFB1560</td>
<td>71”</td>
<td>3 lbs</td>
<td>29.2 ft-lbs</td>
<td>10.8 lbs</td>
<td>.30 ft²</td>
</tr>
<tr>
<td>MFB1563</td>
<td>129”</td>
<td>4 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 ft²</td>
</tr>
<tr>
<td>MFB1683</td>
<td>129”</td>
<td>4 lbs</td>
<td>62.5 ft-lbs</td>
<td>15.8 lbs</td>
<td>.44 ft²</td>
</tr>
</tbody>
</table>

*Mount sold separately. For SO-239 connector, please add $27.00; for N female connector, please add $10.00.*
**SWIFT Series, IMD Rated UHF Omnidirectional Antennas**

The SWIFT range of collinears is specially designed for Public Safety and Public Access Digital PMR networks.

Corporate feed design ensures true omnidirectional patterns with excellent control of electrical tilt. The radiation pattern of the SWIFTON is omnidirectional better than ± 0.5 dB. The SWIFTOF radiation pattern is directional with front-to-back ratio of 4 dB. This provides extra gain to facilitate network planning for optimized coverage in a preferred direction.

The outer radome is a glass fibre pultrusion. The radiating elements are copper laid on glass-reinforced substrate. The central support of rectangular brass section facilitates DC grounding for lightning protection.

This innovative antenna series offers network planners maximum flexibility within a compact design.

### Technical Data

- **Maximum Power**: 250 watts
- **Polarization**: Vertical
- **Normal Impedance**: 50 ohms
- **VSWR**: < 1.5:1 Typical
- **Color**: Grey
- **Radome Material**: Glass Fibre Tube
- **Radiator Material**: (On glass-reinforced substrate)
  - 2.56” diameter (65 mm) Copper
- **Lightning Protection**: DC Ground
- **Support Tube**: 3.5” diameter (90 mm)
  - Aluminium Casting
- **Horizontal Thrust**: 379N (39 kg) @ 200 km/hr
  - 592N (61 kg) @ 250 km/hr
- **Add Rated Wind Velocity**: On horizontal tube mount:
  - 124 mph (200 km/hr)
  - 155 mph (250 km/hr)
- **Intermediate Modulation**: IMP3 <-140 dBc
- **Connector**: 7/16 DIN female socket
- **Mounting Hardware**: 50-115 mm Ø pipe
  - Heavy duty cross-over/parallel (part #964183)

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).

### Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Gain (1/2 wave)</th>
<th>H-plane Beamwidth</th>
<th>E-plane Beamwidth</th>
<th>Electrical Downtilt</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWIFTON30T0</td>
<td>380-400 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>Circular to within +/- 0.5 dB</td>
<td>+/- 9°</td>
<td>0°</td>
</tr>
<tr>
<td>SWIFTON30T8</td>
<td>380-400 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>Circular to within +/- 0.5 dB</td>
<td>+/- 9°</td>
<td>8°</td>
</tr>
<tr>
<td>SWIFTONF30T8</td>
<td>380-400 MHz</td>
<td>7.5 dBd (9.7 dBi)</td>
<td>+/- 100°</td>
<td>+/- 9°</td>
<td>8°</td>
</tr>
<tr>
<td>SWIFTON320T0</td>
<td>410-430 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>Circular to within +/- 0.5 dB</td>
<td>+/- 9°</td>
<td>0°</td>
</tr>
<tr>
<td>SWIFTON320T8</td>
<td>410-430 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>Circular to within +/- 0.5 dB</td>
<td>+/- 9°</td>
<td>8°</td>
</tr>
<tr>
<td>SWIFTONF320T0</td>
<td>410-430 MHz</td>
<td>7.5 dBd (9.7 dBi)</td>
<td>+/- 100°</td>
<td>+/- 9°</td>
<td>0°</td>
</tr>
<tr>
<td>SWIFTONF320T8</td>
<td>410-430 MHz</td>
<td>7.5 dBd (9.7 dBi)</td>
<td>+/- 100°</td>
<td>+/- 9°</td>
<td>8°</td>
</tr>
</tbody>
</table>

**Mechanical Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Antenna Length</th>
<th>Weight (Mass)</th>
<th>Grounding Cross Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omnidirectional (OM) Models*</td>
<td>9.186’ (2800 mm)</td>
<td>10.58 lbs (4.8 kg)</td>
<td>2.2 in² (57 mm²)</td>
</tr>
<tr>
<td>Offset (OF) Models**</td>
<td>9.186’ (2800 mm)</td>
<td>10.58 lbs (4.8 kg)</td>
<td>1.7 in² (42 mm²)</td>
</tr>
</tbody>
</table>

* Models with 5 dBd gain.
** Models with 7.5 dBd gain.
CATC Series Fiberglass Omnidirectional Antennas

Type CATC is a medium gain collinear antenna suitable for masthead mounting or stand-off mounting from a tower or a mast. A high degree of decoupling from the support structure and the feeder cable is achieved without the use of ground plane rods. The radiating elements are encapsulated in low-loss polyurethane foam which bonds them firmly to the inside of the radiator housing thus ensuring good mechanical stability. The antenna is fitted with a short length of URM67 coaxial cable terminated in a type N series plug.

**Features**
- Slim tapered design
- Integral mounting clamp
- Rugged glass fibre protection

**Technical Data**

<table>
<thead>
<tr>
<th>Maximum Power:</th>
<th>See Antenna Electrical Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarization:</td>
<td>Vertical</td>
</tr>
<tr>
<td>Nominal Impedance:</td>
<td>50 ohms</td>
</tr>
<tr>
<td>VSWR:</td>
<td>&lt; 1.5:1 typical</td>
</tr>
<tr>
<td>Radiator Housing Diameter:</td>
<td>32 mm max O.D</td>
</tr>
<tr>
<td>Radiator Housing:</td>
<td>Green tapered glass fibre tube</td>
</tr>
<tr>
<td>Radiator Material:</td>
<td>Copper</td>
</tr>
<tr>
<td>Lightning Protection:</td>
<td>DC ground</td>
</tr>
<tr>
<td>Termination:</td>
<td>Type N male</td>
</tr>
<tr>
<td>(Other terminations available)</td>
<td></td>
</tr>
<tr>
<td>Feeder Tail:</td>
<td>3 ft (915 mm) URM67 coaxial cable</td>
</tr>
<tr>
<td>Mounting:</td>
<td>Integral clamp mounts to a 32-51 mm pipe for in-line, offset or stand-off fixing</td>
</tr>
<tr>
<td>Integral clamp:</td>
<td>Aluminium casting, stainless steel U-bolts and fasteners</td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).
# Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Centre Frequency</th>
<th>Gain</th>
<th>Bandwidth</th>
<th>E-Plane Beamwidth (-3 dB)</th>
<th>Maximum Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATC140</td>
<td>138-147 MHz</td>
<td>142.5 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC150</td>
<td>142-152 MHz</td>
<td>147.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC155</td>
<td>147-157 MHz</td>
<td>152.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC160</td>
<td>152-163 MHz</td>
<td>157.5 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC165</td>
<td>158-168 MHz</td>
<td>163.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC170</td>
<td>163-174 MHz</td>
<td>168.5 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC180</td>
<td>177-188 MHz</td>
<td>182.5 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC230</td>
<td>221.235 MHz</td>
<td>228.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>6% typical</td>
<td>36° typical</td>
<td>100 watts</td>
</tr>
<tr>
<td>CATC390/G3</td>
<td>380-396 MHz</td>
<td>388.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC395/G3</td>
<td>387-404 MHz</td>
<td>395.5 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC410/G3</td>
<td>403-421 MHz</td>
<td>412.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC420/G3</td>
<td>412-430 MHz</td>
<td>421.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC430/G3</td>
<td>421-439 MHz</td>
<td>430.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC440/G3</td>
<td>430-450 MHz</td>
<td>440.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC450/G3</td>
<td>441-460 MHz</td>
<td>450.5 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC460/G3</td>
<td>450-470 MHz</td>
<td>460.0 MHz</td>
<td>3 dBd (5.2 dBi)</td>
<td>4% typical</td>
<td>32° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC390</td>
<td>380-396 MHz</td>
<td>388.0 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>4% typical</td>
<td>16° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC410</td>
<td>403-421 MHz</td>
<td>412.0 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>4% typical</td>
<td>16° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC420</td>
<td>412-430 MHz</td>
<td>421.0 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>4% typical</td>
<td>16° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC440</td>
<td>430-450 MHz</td>
<td>440.0 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>4% typical</td>
<td>16° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC450</td>
<td>441-460 MHz</td>
<td>450.5 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>4% typical</td>
<td>16° typical</td>
<td>75 watts</td>
</tr>
<tr>
<td>CATC460</td>
<td>450-470 MHz</td>
<td>460.0 MHz</td>
<td>5 dBd (7.2 dBi)</td>
<td>4% typical</td>
<td>16° typical</td>
<td>75 watts</td>
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</table>
## Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Overall Length</th>
<th>Weight (Mass)</th>
<th>Rated Wind Velocity</th>
<th>Horizontal Thrust at Rated Wind</th>
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<tbody>
<tr>
<td>CATC140</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC150</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC155</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC160</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC165</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC170</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC180</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC230</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC390/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC395/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC410/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC420/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC430/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC440/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC450/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC460/G3</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>CATC390</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC410</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC420</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC440</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC450</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
<tr>
<td>CATC460</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.10 lbs (8.2 kg)</td>
</tr>
</tbody>
</table>
UHF/VHF End Fed Dipole Fiberglass Omnidirectional Antennas

Type RDTC is an end-fed vertical dipole suitable for masthead mounting or stand-off mounting from a tower or mast. A high degree of decoupling from the support structure and the feeder cable is achieved without the use of groundplane rods. The radiating elements are encapsulated in low-loss polyurethane foam which bonds them firmly to the inside of the radiator housing thus ensuring good mechanical stability. The antenna is fitted with a short length of URM67 coaxial cable terminated in a type N series plug.

Features
- Unity gain
- Slim tapered design
- Integral mounting clamp
- Rugged glass fibre protection
- Digital PMR applications

Technical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power</td>
<td>100 watts</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>50 ohms</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt; 1.5:1 typical</td>
</tr>
<tr>
<td>Radiator Housing Diameter</td>
<td>32 mm max O.D</td>
</tr>
<tr>
<td>Radiator Housing</td>
<td>Green tapered glass fibre tube</td>
</tr>
<tr>
<td>Radiator Material</td>
<td>Copper</td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>DC ground</td>
</tr>
<tr>
<td>Termination</td>
<td>N male</td>
</tr>
<tr>
<td>(Other terminations available)</td>
<td></td>
</tr>
<tr>
<td>Feeder Tail</td>
<td>3 ft (915 mm) URM67 coaxial cable</td>
</tr>
<tr>
<td>Mounting</td>
<td>Integral clamp mounts to a 32-51 mm pipe for in-line, offset or stand-off fixing</td>
</tr>
<tr>
<td>Integral clamp</td>
<td>Aluminium casting, stainless steel U-bolts and fasteners</td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).
### Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Band</th>
<th>Gain (Rel. 1/2 wave dipole)</th>
<th>Bandwidth</th>
<th>E-Plane Beamwidth (-3 dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDTC80</td>
<td>79-85 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC85</td>
<td>83-89 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC130</td>
<td>126-138 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC150</td>
<td>143-156 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC155</td>
<td>148-160 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC160</td>
<td>152-167 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
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<tr>
<td>RDTC165</td>
<td>157-171 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC170</td>
<td>160-176 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC380</td>
<td>365-395 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC400</td>
<td>380-410 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC410</td>
<td>395-427 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC430</td>
<td>410-440 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC440</td>
<td>425-459 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>RDTC460</td>
<td>440-480 MHz</td>
<td>Unity</td>
<td>8% typical</td>
<td>90° typical</td>
</tr>
</tbody>
</table>

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Antenna Length</th>
<th>Weight (Mass)</th>
<th>Rated Wind Velocity</th>
<th>Windloading @ 119.93 mph (193 km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDTC80</td>
<td>8.6' (2630 mm)</td>
<td>2.6 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.1 lbs (8.2 kg)</td>
</tr>
<tr>
<td>RDTC85</td>
<td>8.6' (2630 mm)</td>
<td>2.6 lbs (1.2 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>18.1 lbs (8.2 kg)</td>
</tr>
<tr>
<td>RDTC130</td>
<td>4.8' (1460 mm)</td>
<td>1.9 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.4 lbs (6.1 kg)</td>
</tr>
<tr>
<td>RDTC150</td>
<td>4.8' (1460 mm)</td>
<td>1.9 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.4 lbs (6.1 kg)</td>
</tr>
<tr>
<td>RDTC160</td>
<td>4.8' (1460 mm)</td>
<td>1.9 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.4 lbs (6.1 kg)</td>
</tr>
<tr>
<td>RDTC165</td>
<td>4.8' (1460 mm)</td>
<td>1.9 lbs (0.85 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>13.4 lbs (6.1 kg)</td>
</tr>
<tr>
<td>RDTC170</td>
<td>2.8' (860 mm)</td>
<td>1.5 lbs (0.7 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>6.8 lbs (3.1 kg)</td>
</tr>
<tr>
<td>RDTC380</td>
<td>2.8' (860 mm)</td>
<td>1.5 lbs (0.7 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>6.8 lbs (3.1 kg)</td>
</tr>
<tr>
<td>RDTC410</td>
<td>2.8' (860 mm)</td>
<td>1.5 lbs (0.7 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>6.8 lbs (3.1 kg)</td>
</tr>
<tr>
<td>RDTC430</td>
<td>2.8' (860 mm)</td>
<td>1.5 lbs (0.7 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>6.8 lbs (3.1 kg)</td>
</tr>
<tr>
<td>RDTC440</td>
<td>2.8' (860 mm)</td>
<td>1.5 lbs (0.7 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>6.8 lbs (3.1 kg)</td>
</tr>
<tr>
<td>RDTC460</td>
<td>2.8' (860 mm)</td>
<td>1.5 lbs (0.7 kg)</td>
<td>119.93 mph (193 km/h)</td>
<td>6.8 lbs (3.1 kg)</td>
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</tbody>
</table>
VHF/UHF Wideband End Fed Dipole Fiberglass Omnidirectional Antennas

Type WDTC is a wide band end-fed vertical dipole suitable for masthead mounting or stand-off mounting from a tower or mast. A high degree of decoupling from the support structure and the feeder cable is achieved without the use of groundplane rods.

The radiating elements are encapsulated in low-loss polyurethane foam which bonds them firmly to the inside of the radiator housing thus ensuring good mechanical stability. The antenna is fitted with a short length of URM67 coaxial cable terminated in a type N series plug.

Features
- Unity gain
- Exceptional bandwidth
- Slim tapered design
- Integral mounting clamp
- Rugged glass fibre protection
- Digital PMR applications

Technical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Maximum Power</td>
<td>100 watts</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>50 ohms</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt; 1.7:1 typical</td>
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<tr>
<td>Radiator Housing Diameter</td>
<td>32 mm max OD</td>
</tr>
<tr>
<td>Radiator Housing</td>
<td>Green tapered glass fibre tube</td>
</tr>
<tr>
<td>Radiator Material</td>
<td>Copper</td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>DC ground</td>
</tr>
<tr>
<td>Termination</td>
<td>N male</td>
</tr>
<tr>
<td></td>
<td>(Other terminations available)</td>
</tr>
<tr>
<td>Feeder Tail</td>
<td>3 ft (915 mm) URM67 coaxial cable</td>
</tr>
<tr>
<td>Mounting</td>
<td>Integral clamp mounts to a 32-51 mm pipe for in-line, offset or stand-off fixing</td>
</tr>
<tr>
<td>Integral clamp</td>
<td>Aluminium casting, stainless steel U-bolts and fasteners</td>
</tr>
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</table>

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### Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Band</th>
<th>Gain (Rel. 1/2 wave dipole)</th>
<th>Bandwidth</th>
<th>E-Plane Beamwidth (-3 dB)</th>
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<tbody>
<tr>
<td>WDTC70</td>
<td>70-83 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC75</td>
<td>72-85 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
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<tr>
<td>WDTC80</td>
<td>75-88 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC130</td>
<td>116-138 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC150</td>
<td>136-160 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC160</td>
<td>145-175 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC260</td>
<td>240-279 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC410</td>
<td>370-440 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC440</td>
<td>400-480 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
</tr>
<tr>
<td>WDTC480</td>
<td>430-530 MHz</td>
<td>Unity</td>
<td>15% typical</td>
<td>90° typical</td>
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</table>

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Antenna Length</th>
<th>Weight (Mass)</th>
<th>Rated Wind Velocity</th>
<th>Windloading (kg) @ 193 km/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDTC70</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>18.1 lbs (8.2 kg)</td>
</tr>
<tr>
<td>WDTC75</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>18.1 lbs (8.2 kg)</td>
</tr>
<tr>
<td>WDTC80</td>
<td>8.63 ft (2630 mm)</td>
<td>2.65 lbs (1.2 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>18.1 lbs (8.2 kg)</td>
</tr>
<tr>
<td>WDTC130</td>
<td>6.07 ft (1850 mm)</td>
<td>2.20 lbs (1.0 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>15.0 lbs (6.8 kg)</td>
</tr>
<tr>
<td>WDTC150</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>WDTC160</td>
<td>4.79 ft (1460 mm)</td>
<td>1.87 lbs (0.85 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>13.49 lbs (6.1 kg)</td>
</tr>
<tr>
<td>WDTC260</td>
<td>2.82 ft (860 mm)</td>
<td>1.54 lbs (0.7 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>6.83 lbs (3.1 kg)</td>
</tr>
<tr>
<td>WDTC410</td>
<td>2.82 ft (860 mm)</td>
<td>1.54 lbs (0.7 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>6.83 lbs (3.1 kg)</td>
</tr>
<tr>
<td>WDTC440</td>
<td>2.82 ft (860 mm)</td>
<td>1.54 lbs (0.7 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>6.83 lbs (3.1 kg)</td>
</tr>
<tr>
<td>WDTC480</td>
<td>4.79 ft (1460 mm)</td>
<td>1.54 lbs (0.7 kg)</td>
<td>119.925 mph (193 km/h)</td>
<td>6.83 lbs (3.1 kg)</td>
</tr>
</tbody>
</table>
2.4 GHz ISM All Terrain Sectorized Omnidirectional Antenna

The MSO24014 all-terrain adjustable omnidirectional antenna allows sector adjustments of up to +/- 15 degrees, permitting installers to contour the coverage area according to the specific geographic conditions of the territory. For applications with more specific coverage demands this antenna offers various azimuth (horizontal plane beamwidth) pattern options optimized to address differing coverage, cost control and tower space limitation challenges. As the subscriber base grows, they can accommodate increased throughput capacity without the need to replace the antenna.

**Features**

- Increased system capacity
- Superior isolation
- Electrical and mechanical beamtilt adjustments
- Pattern selectivity
- Mounting flexibility
- Downtime reduction

**Technical Data**

<table>
<thead>
<tr>
<th>General Specifications: 2.4 GHz ISM sectorized omnidirectional antennas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power: 50 watts**</td>
</tr>
<tr>
<td>Polarization: Vertical</td>
</tr>
<tr>
<td>Normal Impedance: 50 ohms</td>
</tr>
<tr>
<td>VSWR: &lt; 1.5:1</td>
</tr>
<tr>
<td>Radome Material: ASA-ABS, UV resistant</td>
</tr>
<tr>
<td>Lightning Protection: DC grounded</td>
</tr>
<tr>
<td>Cable: 18” Pro-Flex™ Plus 195</td>
</tr>
<tr>
<td>Termination: N, female connector at power divider input</td>
</tr>
<tr>
<td>Mounting Method: Center pipe mount (1.25” OD pipe included)</td>
</tr>
<tr>
<td>Direct tower leg mount</td>
</tr>
<tr>
<td>Pattern Shaping Kits: Standard omnidirectional. Power divider is included. Other options are available*** Consult the factory for details.</td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com).

** Power limitation of power divider 10 watts.
*** Optional patterns require use of one radio.
## Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Nominal Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Power Divider</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSO24014NF</td>
<td>2400-2500 MHz</td>
<td>14 dBi*</td>
<td>16°</td>
<td>3-way equal split</td>
</tr>
</tbody>
</table>

* antenna gain specified when sectors are fed individually.

## Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions</th>
<th>Weight (Mass)</th>
<th>Temperature Range</th>
<th>Wind Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSO24014NF</td>
<td>19.75&quot; x 5&quot; OD (501 L x 127 mm OD)</td>
<td>8 lbs (3.6 kg)</td>
<td>-42°C to +75°C</td>
<td>125 mph (200 km/hr)</td>
</tr>
</tbody>
</table>
All Terrain Maximum Isolation Sectorized Antenna Array

The ISOMAX24014PTNM maximum isolation sectorized antenna array complements our popular MSO24014NF sectorized omni by providing providers the ability to use three (3) co-located radios per compact antenna, while retaining the flexibility to individually adjust each sector from 5° uptilt to 10° downtilt. The antenna provides typical port-to-port isolation of -68 dB. It is the ideal solution for wireless Internet service providers operating three (3) separate radios in high capacity urban locations where maximum isolation between radios is important to keep potential interference from reducing data throughput.

Features

- Increased system capacity. Individually fed sectors increase the number of users, achieve higher gain, and increased data throughput.
- Typical port-to-port isolation of -68 dB. Minimizes interference issues with adjacent antennas allowing greater data throughput.
- Mechanical beamtilt adjustments. The flexibility to adjust the antenna radiation pattern to the surrounding terrain allows installers to maximize pattern performance for optimal customer base coverage.
- Downtime reduction. Radio/antenna damage in single mast mount omnis result in 100% failure of the effected radio/antenna. The modular design of the ISOMAX24014PTNM minimizes downtime periods by maintaining links of the un-damaged, individually-fed sectors. This could increase system survivability by up to 66%.

Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Nominal Gain</th>
<th>Nominal Isolation</th>
<th>E-Plane Beamwidth</th>
<th>Single Sector Front-to-Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOMAX24014PTNM</td>
<td>2400-2500 MHz</td>
<td>14 dBi</td>
<td>-68 dB</td>
<td>16° per sector</td>
<td>-33 dB</td>
</tr>
</tbody>
</table>

Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions (per sector)</th>
<th>Weight (Mass)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOMAX24014PTNM</td>
<td>19.75” L x 4.7” W x 3” D (501 x 120 x 76 mm)</td>
<td>9 lbs (4 kg)</td>
</tr>
</tbody>
</table>

Temperature Range

-40°C to +85°C

Lateral Thrust at Rated Wind: 138 lbs

Wind Survival: 125 mph
MBS Series, UHF/VHF Aluminum Omnidirectional Antennas

The MBS VHF/UHF base station antennas feature 6061-T6 seamless aluminum construction and a no ground plane design for simplified mounting.

Features
- Base matched 1/2 wave vertical antenna requiring no ground plane or radials for effective operation
- Easily adjusted to exact operating frequency
- All stainless steel hardware
- 6061-T6 seamless aluminum

Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Factory Tuned Frequency</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Vertical Beamwidth @ 1/2 Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBS150</td>
<td>144-174 MHz</td>
<td>Antennas are field tunable within the specified frequency range.</td>
<td>Unity</td>
<td>6 MHz</td>
<td>70°</td>
</tr>
<tr>
<td>MBS450</td>
<td>450-470 MHz</td>
<td></td>
<td>Unity</td>
<td>20 MHz</td>
<td>52°</td>
</tr>
</tbody>
</table>

Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Antenna Height (Mass)</th>
<th>Weight (Mass)</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Bending Moment at Rated Wind</th>
<th>Equivalent Flat Plate Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBS150</td>
<td>43”</td>
<td>1.1 lbs</td>
<td>6.7 lbs</td>
<td>12 ft-lbs</td>
<td>.17 ft²</td>
</tr>
<tr>
<td>MBS450</td>
<td>15”</td>
<td>.4 lbs</td>
<td>2.0 lbs</td>
<td>1.2 ft-lbs</td>
<td>.05 ft²</td>
</tr>
</tbody>
</table>

Technical Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power:</td>
<td>250 watts</td>
</tr>
<tr>
<td>Normal Impedance:</td>
<td>50 ohms</td>
</tr>
<tr>
<td>Radiator Material:</td>
<td>6061-T6 aluminum tubing</td>
</tr>
<tr>
<td>Lightning Protection:</td>
<td>DC grounded</td>
</tr>
<tr>
<td>Wind Survival:</td>
<td>90 mph</td>
</tr>
<tr>
<td>Termination:</td>
<td>SO-239 standard; N female connector is optional</td>
</tr>
<tr>
<td>Maximum Mounting Pipe Diameter:</td>
<td>VHF: 1-1/4&quot;</td>
</tr>
<tr>
<td></td>
<td>UHF: 1&quot;</td>
</tr>
<tr>
<td>Mounting Method:</td>
<td>Built-in clamp (included)</td>
</tr>
</tbody>
</table>


Suffix N indicates N connector option. Please add $3.00 for N connector.
MXB Series, UHF/VHF Aluminum Omnidirectional Antennas

The MBX VHF/UHF antennas offer an economical choice for omnidirectional high gain applications. The 6061-T6 aluminum tubing and stainless steel hardware provides years of trouble free service.

Features

- Base matched vertical collinear antenna with phasing stub coupling for efficient operation without radials
- Adjustment to exact operation frequency with stainless steel full-lock clamps

Antenna Electrical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Factory Tuned Frequency</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Vertical Beamwidth @ 1/2 Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBX150(N)</td>
<td>144-174 MHz</td>
<td>Antennas are field tunable within the specified frequency range.</td>
<td>3 dB</td>
<td>4 MHz</td>
<td>27°</td>
</tr>
<tr>
<td>MBX450(N)</td>
<td>450-470 MHz</td>
<td></td>
<td>3 dB</td>
<td>14 MHz</td>
<td>30°</td>
</tr>
</tbody>
</table>

Mechanical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Height at Lowest Frequency</th>
<th>Weight (Mass)</th>
<th>Lateral Thrust at Rated Wind</th>
<th>Bending Moment at Rated Wind</th>
<th>Equivalent Flat Plate Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBX150(N)</td>
<td>110”</td>
<td>1.7 lbs</td>
<td>12.4 lbs</td>
<td>56.7 ft-lbs</td>
<td>.32 sq ft</td>
</tr>
<tr>
<td>MBX450(N)</td>
<td>30”</td>
<td>0.6 lbs</td>
<td>3.2 lbs</td>
<td>4 ft-lbs</td>
<td>.09 sq ft</td>
</tr>
</tbody>
</table>

For detailed specifications, visit [http://antenna.pctel.com](http://antenna.pctel.com)

Suffix N indicates N connector option. Please add $3.00 for N connector.
MBS Series Base Station Adapters

The MBS VHF/UHF/800 MHz series is ideal for temporary installations. The MBS adapter allows a mobile VHF, UHF or 800 MHz antenna to be used as a base station. By providing radials, the antenna can be used in areas where a ground plane is not available.

Features

- Will accept any antenna that utilizes 1-1/8”-18 thread mounts
- Mounts on 1” - 1.75” outside diameter masts
- Converts any 136-940 MHz mobile antenna into a base station

Technical Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>Factory Tuned Frequency</th>
<th>Gain</th>
<th>Bandwidth @ 1.5:1 VSWR</th>
<th>Insertion Loss at Highest Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBS</td>
<td>132-512 MHz</td>
<td>Dependent upon the antenna</td>
<td>.1 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBSUHF</td>
<td>406-512 MHz</td>
<td>Dependent upon the antenna</td>
<td>.1 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBS800</td>
<td>806-940 MHz</td>
<td>Dependent upon the antenna</td>
<td>.2 dB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


*Antenna is not included.
## Base Station Mounts

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Application</th>
<th>Qty per Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBSWM</td>
<td>Wall mount</td>
<td>For wall mounting antennas of up to 2-1/4” in diameter.</td>
<td>1</td>
</tr>
<tr>
<td>MMK1</td>
<td>3-groove backing plate</td>
<td>For mounting a 1-5/16” outer diameter antenna to a 1-1/4” maximum outer diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MMK1924</td>
<td>Stainless steel “L” bracket mount for wall or pipe mount</td>
<td>For mounting an omnidirectional antenna to a 2” maximum diameter mast. Bracket is 6” long with a 5/8” diameter hole for mounting the antenna.</td>
<td>1</td>
</tr>
<tr>
<td>MMK2</td>
<td>1-1/2” stainless steel “L” bracket</td>
<td>For mounting an antenna with a base connector to a 2” maximum diameter mast. Bracket is 9” long with a 5/8” diameter hole for mounting the antenna.</td>
<td>1</td>
</tr>
<tr>
<td>MMK3</td>
<td>Base station mount bracket</td>
<td>For mounting a 1-5/16” outer diameter antenna to a 1-1/4” maximum outer diameter mast.</td>
<td>2</td>
</tr>
<tr>
<td>MMK4</td>
<td>Heavy duty fiberglass base station mount</td>
<td>For mounting an antenna with 2-2/2” maximum diameter onto a 2-1/2” maximum outer diameter mast.</td>
<td>2</td>
</tr>
<tr>
<td>MMK6</td>
<td>MFB base station mount bracket</td>
<td>For mounting a 1-5/16” outer diameter antenna base without a pigtail to a maximum 2” diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MMK8A</td>
<td>Aluminum MFB mount bracket</td>
<td>For mounting a 1-1/4” diameter antenna to a 2-1/2” maximum diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MMK9</td>
<td>Aluminum MFB mount bracket</td>
<td>For mounting a 1-5/16” diameter antenna to a 2-1/2” maximum diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MPAB7</td>
<td>Heavy duty outdoor adjustable mount with +/-35° uptilt/downtilt adjustment</td>
<td>Adjustable outdoor mounting bracket for MP XF 800/900 MHz directional panel antennas. One 6” and one 8” bracket.</td>
<td>2</td>
</tr>
<tr>
<td>MPAB8</td>
<td>Heavy duty outdoor adjustable mount with 17° uptilt/downtilt adjustment</td>
<td>Adjustable outdoor mounting bracket for MPXF 800/900 MHz directional panel antennas. Two 6” brackets.</td>
<td>2</td>
</tr>
<tr>
<td>MPAB11</td>
<td>Short adjustable indoor mount</td>
<td>Short adjustable indoor mounting bracket for MPXF 800/900 MHz directional panel antennas.</td>
<td>1</td>
</tr>
<tr>
<td>MPAB12</td>
<td>Long adjustable corner mount</td>
<td>Long adjustable indoor corner mount for MPXF 800/900 MHz directional panel antennas.</td>
<td>1</td>
</tr>
<tr>
<td>MYK1</td>
<td>Mount kit for 7/8” boom yagis</td>
<td>For mounting 7/8” diameter boom yagis to a 1-5/8” maximum diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MYK2</td>
<td>Mount kit for 1-1/4” boom yagis</td>
<td>For mounting 1-1/4” diameter boom yagis to a 2” maximum diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MYK3</td>
<td>Heavy duty mount for 7/8” boom yagis</td>
<td>For mounting 7/8” diameter boom yagis to a 2” maximum diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MYK4</td>
<td>Mounting kit for bottom dipole fiberglass base station antennas</td>
<td>For mounting to a 2” maximum diameter mast.</td>
<td>1</td>
</tr>
<tr>
<td>MYK10</td>
<td>Heavy duty cast yagi bracket</td>
<td>For mounting a 7/8” OD yagi to a 2-1/2” maximum OD mast. Adjustable for vertical or horizontal polarization.</td>
<td>1</td>
</tr>
<tr>
<td>MYK14</td>
<td>Sand cast mounting bracket for 3/4”-7/8” boom yagis</td>
<td>For mounting antennas with boom diameters of 3/4” to 7/8” to 3” maximum diameter masts.</td>
<td>1</td>
</tr>
<tr>
<td>MYK17</td>
<td>Mounting bracket for 0.75” diameter boom yagis</td>
<td>For mounting to masts measuring 1-5/8” in diameter.</td>
<td>1</td>
</tr>
</tbody>
</table>
**MMK Mounts for Base Station Antennas**

- MMK1
- MMK2
- MMK3
- MMK4
- MMK6
- MMK8
- MMK9
- MMK1924
- MBSWM

**MYK Mounts for Yagi Antennas and MPAB Mounts for Panel Antennas**

- MYK1
- MYK2 (front)
- MYK3
- MYK4 (front)
- MYK10
- MYK11
- MYK14
- MYK16
- MYK17
- MPAB3
- MPAB4
- MPAB8
- MPAB12
## Replacement Parts

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGB</td>
<td>DC grounding block used for grounding coax to ground (earth)</td>
</tr>
<tr>
<td>MMA1</td>
<td>Adapts internal thread marine mount to 3/4” M style mount. N female connector.</td>
</tr>
</tbody>
</table>