# Installing the ML-2452-PNL6M3-N36 (2400-2500/4900-5900 MHz)

## Application

Designed for wireless LAN service, ML-2452-PNL6M3-N36 is a 3- port directional patch array enclosed in a uv-stable weatherproof radome. The focused radiation pattern may be used to extend point-to-point link coverage or to provide targeted sector coverage in the 2.4 and 5 GHz band.

## Safety

MML-2452-PNL6M3-N36 and all associated equipment should be installed in accordance with applicable local and national electrical code guidelines to ensure safe operation.

## Antenna Location

ML-2452-PNL6M3-N36 may be mounted at interior or exterior locations. A line-of-sight signal path works best for point-to-point links. Although 5 GHz signals penetrate cubical dividers and interior partitions with little attenuation, reinforced block walls, banks of metal cabinets, or steel shelving may attenuate signals or cause multipath, a condition where reflected signal is interfered with primary signal. Because antenna beam width is narrow, it is important to aim the antenna accurately during installation in order to provide optimum gain and best performance.

## Mounting

ML-2452-PNL6M3-N36 is supplied with a universal articulating mount that accepts mast diameters up to 2 inches (5.1 cm) or mounts to any flat vertical surface. This mount is especially designed to provide wide-range articulation in both the azimuth and elevation planes.

## Grounding

System grounding and lightning protection are Essential especially for exterior-mounted antennas exposed to the elements. Never install an antenna where it may fall and contact electrical lines (refer to the National Electrical Code).

## Parts

| Key | Display | Desc. | Size | Qty. |
|---|---|---|---|---|
| 7 | | Flat Washer | 1/4" | 2 |
| 11 | | Hose Clamp | | 2 |
| 2 | | Articulating Arm | | 1 |
| 1 | | Wall/Mast Mount | | 1 |
| 3 | | Antenna Mount | | 1 |
| 9 | | Plastic Wall Anchor | #8 | 4 |
| 10 | | SS Machine Screw | #8-18 x 3/4" | 4 |
| 5 | | Machine Screw | 1/4" -20 x 1-1/4" | 2 |
| 6 | | SS Split Lock Washer | 1/4" | 2 |
| 8 | | SS Hex Nut | 1/4" -20 | 2 |
| 4 | | SS Nylon Hex Nut | #8-32 | 4 |

## Installation

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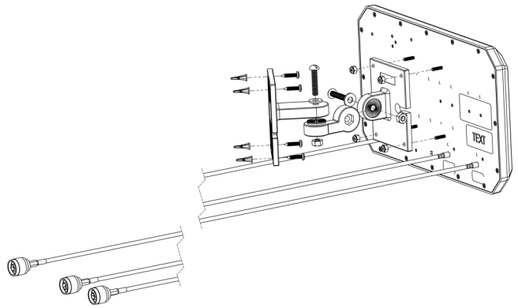
**Figure 1 Installing the articulating mount to the antenna back plane**



1 Find the molded antenna mount (3) and four 8-32 nylon lock nuts (4). Use the nuts to attach the mount to the exposed studs on the back of the antenna.

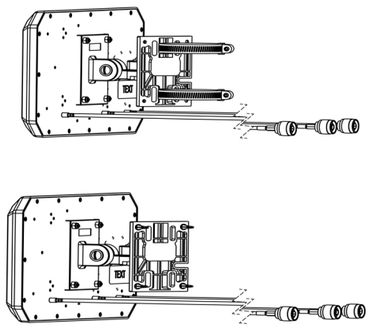
2 Find the molded articulating arm (2). Also, find a 1/4"-20 x 1-1/4" machine screw (5), 1/4" lock washer (6), 1/4" flat washer (7), and 1/4"-20 hex nut (8). Use hardware to secure the molded arm to the antenna mount as shown in Figure-1.

3 For installation on flat surfaces, find the molded wall/mast mount (1) and use it as a drill template to mark hole locations. Drill four 3/16" diameter pilot holes and install wall anchors (9). Install the mount using four 8-18 x 3/4" self-tapping screws (10).

4 For pole or mast installations, find two worm clamps (11) and install as shown on the molded wall-mast mount (1). Encircle pole with each band and tighten.

5 To attach the antenna assembly to the wall/mast mount, find a 1/4" x 1-1/4" machine screw (5) and install a 1/4" lock washer (6) and a 1/4"-flat washer (7) as shown. Use the screw to attach the free end of the articulating arm to the mount, securing in place with a 1/4"-20 nut (8).

6 Loosen 1/4" pivot screws as needed to position antenna for desired azimuth and elevation steering. When antenna is in adjusted, tighten all hardware securely.



## Specifications

| Model | | ML-2452-PNL6M3-N36 |
|---|---|---|
| Parameter | | Performance |
| Laird Part Number | | PDM24496-ZB1 |
| Part Number | | ML-2452-PNL6M3-N36 |
| Antenna Type | | Panel |
| Gain | 2400-2500 MHz, | 5.0 dBi TYP/5.5 dBi MAX |
| | 4900-5000 MHz, | 4.5 dBi TYP/4.9 dBi MAX |
| | 5150-5875 MHz, | 5.2 dBi TYP/5.7 dBi MAX |
| VSWR MAX | | 2.0:1 |
| Azimuth Plane Beamwidth | | 107°@2.45GHz 116°@4.95GHz 115°@5.5GHz |
| Elevation Plane 3 dB Beamwidth | | (H) 39°, (V) 96°@2.45GHz / (H) 30°, (V) 63°@4.95GHz / (H)55°, (V) 65°@5.5GHz |
| Polarization | | Linear, 2-Vertical, 1 Horizontal |
| Power (Watts) | | 10W Max |
| Weight | | 0.8kg (1.8lb) w/out ART. MNT 1.7kg (3.8lb) with ART. MNT |
| Storage Temperature | | -40°C to +70°C |
| Operational Temperature | | -30°C to +65°C (Cable Install Low Temp -20°C) |
| Outdoor Rated | | Yes |
| Water/Dust Seal Rating | | IP-67 |
| Radome Material | | Polycarbonate |
| Mounting | | (44-57 mm) Mast or Wall Articulated Mount |
| Wind Surface Area | | @0°, 0.062m² (0.66ft²) @90°, 0.008m² (0.09ft²) |
| Wind Survival | | 200 km/h (125 mph) |

# ExtremeWireless™ Accessory

## Quick Reference

ML-2452-PNL6M3-N36 Antenna

## Notice



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