Outdoor Miniature Pan-Tilt Unit
Rugged, Compact, Precise

Fully Integrated, Computer-Controlled Positioning

The PTU-D48 is a family of integrated computer-controlled pan-tilt units designed for intelligent positioning and control of camera, laser, antenna, and other payloads to 15 lbs. It is a fully integrated design with single weatherized connection for power, control, and camera/payload signals. Its compact size and light weight make it ideal for mast/pole mount and vehicle applications. Payloads can be side and/or top mounted. The PTU-D48 withstands high duty-cycles and offers long-life in harsh all-weather environments. Key features include:

- Positions any payload: IP cameras, antennas, lasers
- Smooth, repeatable motion and rigid design provides steady images in windy environments
- Powerful command set supports real-time detection and tracking applications: absolute angle, relative angle, velocity control, geo-pointing (lat/lon) with GPM option, continuous velocity control
- Solid and vibration-tolerant for vehicle applications
- Wide-range of speeds (< 0.006°/sec. to 100°/sec.)
- Extremely precise positioning (0.006°) allows translating object positions to map coordinates accurately
- Single connector for all video, control, power
- Flexible payload mounting (top and/or side)
- Integrated controller - no other electronics box required
- Computer interface via RS-232/485 or Ethernet (option)
- Fully sealed for outdoor applications (IP67)

Applications

- Perimeter surveillance
- Automated antenna pointing
- Harbor / Port monitoring
- Laser ranging systems
- Video detection & tracking
- Industrial automation
- Vehicle surveillance systems
- Law Enforcement
- Force Protection
Technical Specifications

Model PTU-D48

General Features
- Rigid worm gear design. No belts/pulleys.
- Solid and vibration-tolerant
- Single connector for all video, control, power
- Flexible payload mounting (top and/or side)
- Integrated controller - no external box
- Precise control of position, speed & acceleration
- FCC and CE Mark certified
- Single DC power input

Options
- Side-mount payload brackets
- Geo-Pointing Module (Part# PTU-DGPM)
- Ethernet/IP Interface Module (Part# PTU-DGPM)
- Payload pass-through wiring

Pan-Tilt Performance

<table>
<thead>
<tr>
<th></th>
<th>Side Mount</th>
<th>Top Mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Payload</td>
<td>15 lbs</td>
<td>10 lbs</td>
</tr>
<tr>
<td>Max Pan Speed*</td>
<td>100°/second</td>
<td>100°/second</td>
</tr>
<tr>
<td>Max Tilt Speed</td>
<td>50°/second</td>
<td>50°/second</td>
</tr>
<tr>
<td>Resolution - Pan</td>
<td>0.006°</td>
<td>0.006°</td>
</tr>
<tr>
<td>Resolution - Tilt</td>
<td>0.003°</td>
<td>0.003°</td>
</tr>
</tbody>
</table>

* Unloaded. Max speed may depend on exact payload configuration and input voltage.

Pan-Tilt Features
- Tilt Range: +30° to -90° from level (120° range)
- Pan Range: +/- 168° (+/- 220° range) extended mode
- Duty Cycle: Up to 100% duty cycle
- Acceleration/Deceleration: Trapezoidal, on-the-fly speed and position changes

Power Requirements

- Input Voltage: Unregulated 12-30VDC (fastest performance & torque @ 30VDC)
- Power Consumption (Measured at 30VDC):
  - 48 W continuous peak (high-power mode)
  - 30 W continuous peak (regular-power mode (default))
  - 7.5 W average (holding power off mode)

Connections & Communications

- Base Connector: PRIMARY: AMP (MIL-C-26482). Includes:
  - PTU-Power (3C) - 9-30VDC + shield
  - PTU-Control (7C) - RS-232(3C) and RS-485 (4C)
- Payload Signal Pass Through (option):
  - Power (2C): 30VDC max @ 3A
  - Video-1 (2C): NTSC/PAL/RS-170
  - Video-2 (2C): NTSC/PAL/RS-170
  - Other (3C): 30VDC max @ 1A
  - Connector: AMP (MIL-C-26482)
- Computer Controls: RS-232 standard; RS-485 with networking
- Control Protocols: DP (ASCII, Binary)

Mechanical
- Weight: 8.75 lbs. (9.25 lbs. with top bracket)
- Dimensions: 7.78” H x 5.35” W x 5.43” D (no payload connector)
- Payload Mounting: Side and/or Top
- PTU Mounting: Pedestal mount
- Material: Machined aluminum

Packaging & Environmental
- Standards: Designed to IP67
- Operating Temperature: -30°C to 70°C
- Non-Operating Temperature: -30°C to 70°C
- Humidity: 100% relative humidity, non-condensing
- Dust/Sand (Operating): Sustained exposure to blowing dust/sand
- Wind/Rain/Fog: IP67
- Salt Spray: Sustain operation in salt spray environments
- Color/Finish: Black anodized
- EMI: CE Mark and FCC Part 15, part B Class B
- Certifications: RoHS Compliant

Specifications subject to change without notice.