PTU-D300™
E-SERIES-GigE

Large, Multi-Payload, Durable Pan/Tilt Unit with Gigabit Ethernet pass through and configurable I/O

The PTU-D300 E Series supports any type of single or multi-part payload through a flexible bracketing system of top and/or side mounting. It has been designed to be simple to integrate. The PTU-D300 E Series is an open platform that provides the flexibility needed while minimizing your development and integration effort.

The PTU-D300 E Series has been proven in a wide range of mission-critical applications for positioning of cameras, lasers, antennas, or other instruments in both fixed and mobile environments. The real-time command interface supports advanced applications such as video tracking. It is designed for high duty cycles and reliable operation 24/7 in harsh all-weather environments. The low parts count, and highly integrated design provides unsurpassed system reliability.

The latest update to the D300 E Series family, the D300E-GigE offers Gigabit Ethernet pass through to the payload, and configurable I/O, making integration with high speed payloads even easier.

**KEY FEATURES INCLUDE:**

- Large payload capacity to 70 Lbs - or 90 Lbs with EX gearing
- Extremely precise positioning (to 0.0064° with microstep), or 0.003° with EX gearing
- Wide range of pan speeds 0.0064°/sec to 50° or 22° with EX gearing for smooth, precise control
- 360-continuous pan
- Gigabit Ethernet pass through
- Software-configurable payload wiring
- Precise, real-time control of position, speed and acceleration
- Rigid worm gear design (no belts/pulleys) provides steady positioning in windy environments
- Integrated Ethernet and Web interfaces
- Increased command rates, reduced jitter
- Advanced microstep control

**OPTIONS**

- Payload brackets (top, side)
- Alternate colors/finishes
- Inertial stabilization available
- Geo-pointing built in

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Specifications

Pan/Tilt Performance

<table>
<thead>
<tr>
<th>Side Mount</th>
<th>Top Mount</th>
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</thead>
<tbody>
<tr>
<td>Max. Payload</td>
<td>70 lb (31.7 kg)</td>
</tr>
<tr>
<td>Pan Speed Range</td>
<td>0.006°/sec – 50°/sec</td>
</tr>
<tr>
<td>Tilt Speed Range</td>
<td>0.006°/sec – 50°/sec</td>
</tr>
<tr>
<td>Resolution – Pan</td>
<td>0.0064° (with microstep)</td>
</tr>
<tr>
<td>Resolution – Tilt</td>
<td>0.0064° (with microstep)</td>
</tr>
</tbody>
</table>

Pan/Tilt Features

- Tilt Range: Programmable up to +30° to -90° from upright (120° range) (up to +/-90° with side mount, if specified at time of order.)
- Pan Range: Programmable up to +/- 168° or 360° continuous
- Duty Cycle: Up to 100% Duty Cycle, or 3-5 million cycles
- Acceleration/Deceleration: Programmable, on-the-fly speed and position changes

Power Requirements

- Input Voltage: Unregulated 12-30 VDC (fastest performance & torque @ 30 VDC)
- Input Protection: Over-voltage/over-current protection meets MIL-STD-1275D
- Power Consumption (Measured at 30 VDC): 33.0W (Low move power mode), 45.0W (Regular move power mode), 63.0W (High move power mode), 3.3W (Hold power off mode)

Connections & Communications

- Base Connectors: PRIMARY: 32-pin (MIL-C-26482) Includes: PTU-Power (3c) - 9-30 VDC + shield, PTU-Control (11c) - RS-232/-422/-485/Ethernet (4c) pan/tilt configuration/control Payload Signals (9-12c)
- Payload Signal Pass-Through: Configurable: Power (2c): 30 VDC max Ô3A max, Shield (1c), Video (4c), Other (14c): 30 VDC max Ô 1A max, Gigabit Ethernet Pass-Through (8c)
- Computer Controls: RS-232, RS-485/422, Ethernet
- Control Protocols: DP (ASCII, Binary), Pelco-D (option), Nexus-compatible

Mechanical

- PTU Weight: 28 lb (12.7 kg) (Standard bracket: 1.25 lb)
- PTU Dimensions: 13.01”(h) × 7.07”(w) × 8.53”(d) (Note: side cover panel dimension increased by 1.5mm, CAD model available)
- Payload Mounting: Single/dual-side mount, top mount
- PTU Mounting: Pedestal
- Material: Aluminum

Packaging & Environmental

- Standards: IP67 Certified
- Operating Temperature: -38°C to 70°C (no heaters)
- Humidity: 100% relative humidity, non-condensing
- Ice (Operating): Sustained operation with 0.25” ice buildup
- Dust/Sand (Operating): Sustained exposure to blowing dust/sand
- Wind/Rain/Fog: IP55
- Salt Spray: MIL-810G Salt Spray
- Color/Finish: Black anodized & powder coated; custom colors/finishes available
- Shock/Vibration: MIL-STD-810G Method 514.6 Vibration, Method 516.6 Drop Test, Method 516.6 Shock
- EMI: CE Mark and FCC Part 15, Subpart B, Class A

1 Over-the-top payload assumes COG < 6” from tilt axis; over the side payload assumes balanced COG.
2 Maximum speed may depend on exact payload inertia and input voltage.
3 Reduced speeds may be required for low temperature operation.

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