



# PTU-D300 E-SERIES

## Large, Multi-Payload, Durable Pan/Tilt Unit

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 evolution of FLIR pan-tilts incorporates a powerful 32-bit core electronics platform and real-time operating system to deliver superior motion control fidelity and improve performance.

### KEY FEATURES INCLUDE:

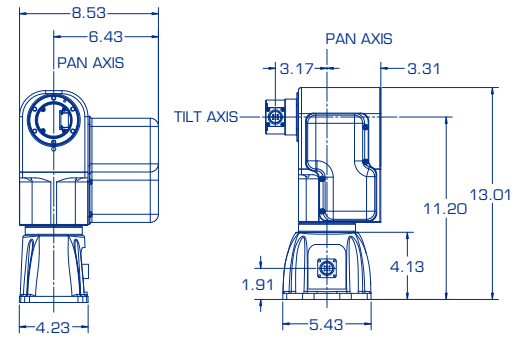
- Large payload capacity to 70 Lbs
- Extremely precise positioning (to 0.0064° with microstep)
- Wide range of pan speeds 0.0064°/sec to 50° for smooth, precise control
- 360-continuous pan
- Precise, real-time control of position, speed and acceleration
- Rigid worm gear design (no belts/pulleys) provides 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
- Geo-pointing built in

# Specifications

Pan/Tilt Performance	Side Mount	Top Mount
Max. Payload <sup>1</sup>	70 lb (31.7 kg)	35 lb (15.8 kg)
Pan Speed Range <sup>2</sup>	0.0064°/sec – 50°/sec	0.0064°/sec – 50°/sec
Tilt Speed Range <sup>2</sup>	0.0064°/sec – 50°/sec	0.0064°/sec – 50°/sec
Resolution – Pan	0.0064° (with microstep)	0.0064° (with microstep)
Resolution – Tilt	0.0064° (with microstep)	0.0064° (with microstep)
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	Power (2c): 30 VDC max @ 3 A max Video (4c) Other (3-6c): 30 VDC max @ 1 A max High-Speed Pass-Through (4c): capable of 10baseT	
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) x 7.07"(w) x 8.53"(d)	
Payload Mounting	Single/dual-side mount, top mount	
PTU Mounting	Pedestal	
Material	Aluminum	
Packaging & Environmental		
Standards	IP67 Certified	
Operating Temperature <sup>3</sup>	-30°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	IP67	
Salt Spray	MIL-810G Salt Spray	
Color/Finish	Black anodized & powder coated; custom colors/finishes available	
Shock/Vibration Certifications	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	



<sup>1</sup>Over-the-top payload assumes COG < 6" from tilt axis; over the side payload assumes balanced COG.

<sup>2</sup>Maximum speed may depend on exact payload inertia and input voltage.

<sup>3</sup>Reduced speeds may be required for low temperature operation.

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