PTU-D100 E-SERIES

Midsize, Programmable, Rugged Pan/Tilt Unit

The PTU-D100 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-D100 E Series is an open platform that provides the flexibility needed while minimizing your development and integration effort.

The PTU-D100 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 25 Lbs
- Extremely precise positioning (to 0.0075° with microstep)
- Wide range of pan speeds 0.0075°/sec to 120° 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
- Solid and vibration-tolerant for vehicle-mounted applications
- 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

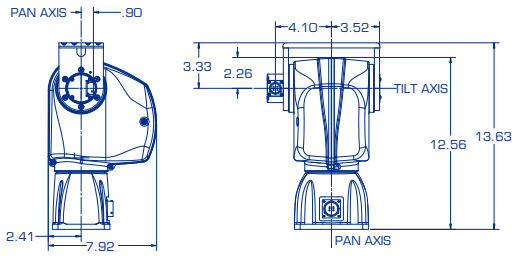
Specifications

Pan/Tilt Performance	Side Mount	Top Mount
Max. Payload[1]	25 lb	15 lb
Pan Speed Range[2]	0.0075°/sec – 120°/sec	0.0075°/sec – 120°/sec
Tilt Speed Range[2]	0.0075°/sec – 120°/sec	0.0075°/sec – 120°/sec
Resolution – Pan	0.0075° (with microstep)	0.0075° (with microstep)
Resolution – Tilt	0.0075° (with microstep)	0.0075° (with microstep)
Pan/Tilt Features		
Tilt Range	Programmable up to +30° to -90° from level (120° range) (up to +/-90° with side mount if specified at time of order)	
Pan Range	Programmable up to +/- 168° or 360° continuous	
100% Duty Cycle	High 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 RS-232/-422/-485/Ethernet (4c) pan/tilt configuration/ control Payload Signals (9-13c)	
Payload Signal Pass-Through	19-pin (MIL-C-26482) includes: Power (2c): 50 VDC max @ 3 A max Video (4c): 2x Video, Serial/Aux (3-6c): RS-232/-422/-485 High-Speed Pass-Through (4c): capable of 10baseTCustom: various (optional)	
Computer Controls	RS-232, RS-485/422, Ethernet	
Control Protocols	DP (ASCII, Binary), Pelco-D (option), Nexus-compatible	
Mechanical		
PTU Weight	< 20 lb (with top bracket)	
PTU Dimensions	Pan/Tilt Only: 12.56" (h) × 7.92" (w) × 8.2" (d) (without bracket)	
Payload Mounting	Single/dual-side mount, top mount	
PTU Mounting	Pedestal	
Material	Machined & cast aluminum	
Packaging & Environmental		
Standards	IP67 Certified	
Operating Temperature[3]	-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; 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	

[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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