

Model PTU-D100

Intelligent Pan/Tilt Unit Real-Time Positioning Module

Fully-Integrated, Advanced Positioner

The PTU-D100 is a modular, computer-controlled pan-tilt unit designed for intelligent positioning and control of payloads up to 25 pounds. It is designed to support today's sophisticated applications in automated detection and tracking including human and no-human in the loop. It offers compact size and multiple mounting options for single or multi-part payloads. The PTU-D100 withstands high duty-cycles and offers long life in harsh, all-weather environments for both fixed and mobile applications.

Key features include:

- Smooth, repeatable motion and rigid design provides smooth visual tracking and 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
- Solid and vibration-tolerant for vehicle-mounted applications
- Rigid worm gear design; no belts/pulleys
- Wide range of pan speeds (< 0.0075°/sec to over 120°/sec)
- Extremely precise positioning (0.0075°) allows translating object positions to map coordinates accurately
- 360° continuous-pan option including pass-through for multiple cameras and other payload types (Video, IR, Laser)
- Single connector for all video, control, power interfaces
- Flexible payload mounting (top or dual-side)
- Integrated enclosure for custom electronics
- Computer interface via RS-232/-485
- Precise control of position, speed, and acceleration
- Fully sealed for outdoor/marine applications (IP67)
- CE Mark, FCC, RoHS certification

Options

- Custom payload brackets
- Geo-Pointing Module (GPM)
- Ethernet/IP Interface
- Gyro-Stabilization Module (ISM)
- Custom external housing/finish



Applications

- Long-range and perimeter surveillance
- Harbor and port monitoring systems
- Laser ranging systems
- Automated video detection and tracking systems
- Industrial automation
- Vehicle and shipboard surveillance systems
- Force protection
- Antenna pointing



Surveillance



Military



Remote Sensing



Robotics



Maritime



Antennas



Motion Control Systems

Model PTU-D100

Technical Specifications

Pan/Tilt Performance (Standard)

	Side Mount	Top Mount
Max. Payload¹	25 lb	15 lb
Max. Pan Speed²	120°/second	120°/second
Max Tilt Speed²	120°/second	120°/second

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 configuration and dynamics.

Pan/Tilt Features

Tilt Range	+30° to -90° from upright (120° range) (up to +/-90° with single side-mount)
Pan Range	+/- 175° or 360° continuous (option)
Min. Pan Speed	.0075°/second
Max. Pan Speed	120°/second
Min. Tilt Speed	.0075°/second
Max. Tilt Speed	120°/second
Pan Position Resolution	0.0075° (with microstep)
Tilt Position Resolution	0.0075° (with microstep)
Duty Cycle	Up to 100% duty cycle, or 3-5 million cycles
Acceleration/Deceleration	On-the-fly speed and position changes

Power Requirements

Input Voltage	Unregulated 12-30 VDC (fastest performance & torque @ 30 VDC)
Power Consumption (Measured at 30 VDC)	60 W continuous peak (full power mode) 45 W continuous peak (default lower power mode) 1 W continuous peak (holding power off mode)

Connections & Communications

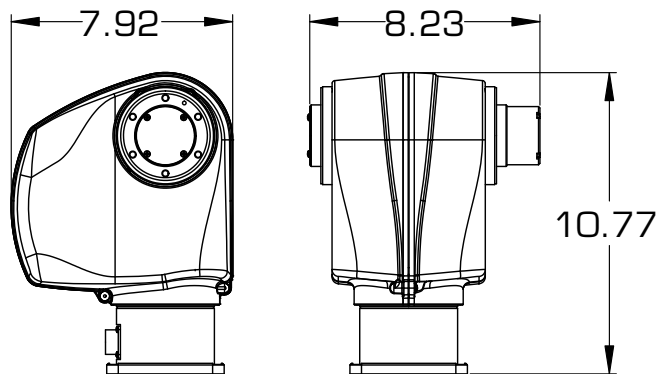
Base Connectors	PRIMARY: 19-pin AMP (MIL-C-26482) Includes: PTU-Power (3c) - 9-30 VDC + shield PTU-Control (7c) - RS-232/RS-485 Payload Signals (9-13c)
Payload Signal Pass-Through	Power (2c): 50 VDC max. @ 2 A max Video (4c): 2x Video, or 1x (10baseT) Serial/Aux (3-10c): RS-232/-422 Custom: various
Computer Controls	RS-232/RS-485 standard; Built-in multi-drop RS-485 networking
Control Protocols	DP (ASCII, Binary)

Mechanical

Weight	18.5 lb (8.4 kg) with top bracket
Dimensions	Pan/Tilt Only: 11.2"(h) x 7.0"(w) x 7.9"(d) w/top mount bracket: 12.23" (h)
Payload Mounting	Single/dual-side, top
PTU Mounting	Pedestal
Material	Machined aluminum, stainless fittings

Packaging & Environmental

Standards	Designed to IP67
Operating Temperature	-30°C to 70°C
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-810F Salt Spray
Color/Finish	Black anodized; custom colors/ finishes available
EMI	CE Mark and FCC Part 15, Subpart B, Class A
Certifications	RoHS Compliant



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