



Precision Pan-Tilt Unit

High-speed positioning of heavy payloads

Rugged, High Torque, Feature-rich

The PTU-D300-EX provides fast, accurate positioning of very large payloads. It features an all steel gear drive for outstanding long-term performance and wear under very high duty-cycles. It provides high torque for payloads up to 90 lbs while maintaining speed, precision, and a small form-factor. It offers multiple mounting options and a single connection point. It is designed for demanding applications that require high duty-cycles and long-life in harsh all-weather environments. Key features include:

- All steel gear drive system
- Solid and vibration-tolerant for vehicle-mounted applications
- Large payload capacity (60 lbs. top-mount; 90 lbs. side-mount)
- Wide-range of pan speeds (< 0.0064°/sec. to 22°/sec.)
- Extremely precise positioning (0.0064° with microstep) allows translating object positions to global coordinates accurately
- 360° continuous-pan including pass-through for many payload types (Video, IR, Microwave, Laser)
- Single connector for all video, control, power
- Flexible payload mounting (top or side)
- Precise control of position, speed & acceleration
- Simple control from host computer via RS-232/485
- Fully sealed for outdoor/marine applications (IP67)



Applications

- Long-range surveillance
- Airborne Sensors & Communications
- Antenna positioning systems
- Satellite communications systems
- Laser ranging systems
- Automated video detection & tracking systems
- Industrial automation
- Port security
- Vehicle & shipboard surveillance systems



General Features

- All steel gear drive system
- Solid and vibration-tolerant
- 360° continuous-pan with pass-through for any payload
- Flexible payload mounting (top or side)
- Precise control of position, speed & acceleration
- CE Mark & FCC certified

Options

- Microwave payload pass-through (rotary joint) (Special Order)
- Alternate ranges of motion

Pan-Tilt Performance (Standard)

	Side Mount	Top Mount
Max Payload ^a	90 lbs. (40.8 kg.)	60 lbs. (27.2 kg.)
Max Speed ^b	22°/second	22°/second

^a Over-the top payload assumes COG 6" from tilt axis; over the side payload assumes balanced COG.

^b Max speed may depend on exact payload configuration and dynamics.

Pan-Tilt Features

Tilt Range (approx)	+30° to -90° from upright (120° range)
Pan Range (approx)	360° continuous
Pan Speed Min	.0064° /second
Tilt Speed Min	.0064° /second
Pan Position Resolution	.0064° (with microstepping)
Tilt Position Resolution	.0064° (with microstepping)
Duty Cycle	Up to 100% duty cycle, or 3-5 million cycles
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) (includes gyro, does not include ISM module)	49.2W avg, peak 2.25A (high power mode) 34.2W avg, peak 1.60A (regular power mode) 18.2W avg, peak 0.78A (low power mode(default)) 1.6W (holding power off mode)

Connections & Communications

Base Connectors	PRIMARY: AMP (MIL-C-26482). Includes: PTU-Power (3c) - 9-30VDC + shield PTU-Control (7c) - RS-232/RS-485 Payload Signals (9-12c)
Payload Signal Pass Through	Power (2c): 30VDC max @ 3A max Video (4c): Video or ethernet (10baseT) Other (3-9c): 30VDC max @ 1A max Custom: Various (Optional)
Computer Controls	RS-232/485
Control Protocols	DP (ASCII, Binary)

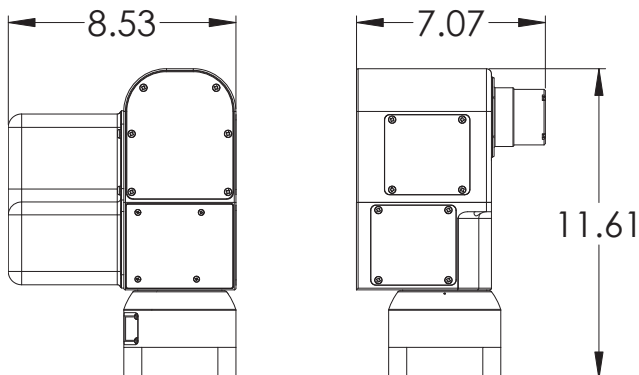
Mechanical

Weight	26 lbs. (11.8 kg) (Standard bracket: 1.25 lbs.)
Dimensions	Pan Tilt Only: 11.61" H x 5.53" W x 8.53" D w/top mount bracket: 13.12" H w/side mount bracket: 13.16" W
Payload Mounting	Top-mount plus single/dual side mount
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
Ice (Operating)	Sustain operation with 0.25" ice buildup
Dust/Sand (Operating)	Sustain exposure to blowing dust/sand
Wind/Rain/Fog	IP67
Salt Spray	Sustain operation in salt spray environments
Color/Finish	Black anodized
EMI	FCC Part 15, part B Class B
Certifications	RoHS Compliant

Specifications subject to change without notice.



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890C Cowan Road Burlingame, California 94010

Office 650-692-3900 | Fax 650-692-3930

sales@DPerception.com | www.DPerception.com