

Precision Pan-Tilt Unit

Miniature Pan-Tilt Units

Miniature Computer Controlled Pan-Tilt Unit

The PTU-D46 family of pan-tilt units provide fast, precise positioning in an extremely small and lightweight package. They are fully computer-controlled and offer programmability of speed, acceleration, power, and other parameters. The included controller handles precise kinematic motion control according to user set parameters.

Real-time Control with Rich Command Set

The controller includes built-in RS-232 and RS-485 interfaces and the units can be networked. They accept ASCII and binary command formats. Commands can be sent at up to 60 Hz (commands/second) for demanding applications such as laser scanning and video tracking.

Features Include:

- Fast - speeds to 300°/second
- Resolutions to 0.003°
- Load capacity over 9 lbs (4 kg)
- Precise control of position, speed & acceleration
- On-the-fly position and speed changes
- Small form factor (< 5.2" tall)
- Light weight (head < 3 lbs)
- Single DC power input suited for battery operation
- Low cost



Applications

- Robotic & Computer vision
- Security & surveillance
- Industrial automation
- Tracking
- Webcams
- Laser ranging
- Teleconferencing/distance learning
- Antenna pedestal
- Photography, video & special effects



General Features

- Simple to use from any RS-232 terminal or computer
- Rigid worm gear design. No belts/pulleys.
- Fast and accurate camera positioning at low cost
- Precise control of position, speed & acceleration
- Extremely small form factor
- Allows on-the-fly position and speed changes
- ASCII command mode for simplicity, binary commands available for efficient

Options

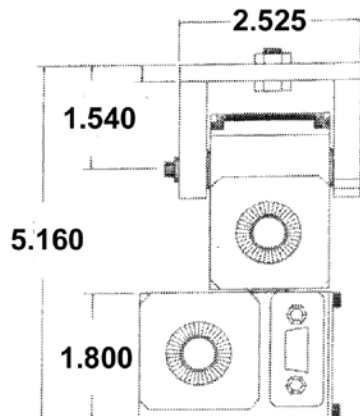
- International AC/DC Power Supply
- Weatherized option provides outdoor use
- Nodal (gimbal) - payload aligned to motion axes
- C Programmer's Interface
- PTU network cabling kits
- Trackball and analog joystick interfaces
- Geo-Pointing Module (aim using GPS coordinates)

Pan-Tilt Performance

	PTU-D46-17	PTU-D46-70	PTU-D46-17P70T
Rated Payload	6 lbs (2.72 kg)	9 lbs (4.08 kg)	9 lbs (4.08 kg)
Max Unloaded Speed (@ 30 VDC)	300°/second	60°/second	300°/second (Pan) 60°/second (Tilt)
Resolution	0.013°	0.003°	Pan: 0.013° Tilt: 0.003°

Pan-Tilt Features

Tilt Range	-47° to +31° from level (78° range) with extended range enabled for 80° down (111° range)
Pan Range	+/- 159° (+/- 180° with extended range mode enabled)
Pan Speed Min	<min. resolution> /second
Tilt Speed Min	<min. resolution> /second
Duty Cycle	High duty cycle, or 3-5 million cycles
Acceleration/Deceleration	Trapezoidal. On-the-fly speed and position changes.



Mechanical

Pan Tilt Unit Weight	3 lbs
Dimensions	3" wide x 5.13" high x 4.25" deep
Payload Mounting	Hole for 1/4-20 screw standard. Camera mounting plate removes for easy customizing.
Pan-Tilt Unit Mounting	Bottom or front 1/4-20 mounting
Controller Weight	8 oz.
Dimensions	3.25" wide x 4.5" long x 1.25" high

Connections & Communications

Host Interface	RS-232 (DB-9 female connector) RS-422/485 (RJ-12 connector)
Networking	Control of multiple pan-tilt units from one or more host computers. Multidrop RS-485 network using RJ-12.
Control Protocols	DP (ASCII, Binary)

Power Requirements

Input Voltage	Input Voltage: 8-30VDC unregulated
Power Consumption (Measured at 30VDC)	13W continuous peak (full-power mode) 6W continuous peak (low-power mode) 1W continuous peak (holding power off mode)

Packaging & Environmental

Standards	Designed to IP65 (head only, with weatherized)
Operating Temperature	-20°C to 60°C
Non-Operating Temperature	-20°C to 60°C
Humidity	100% relative humidity, non-condensing
Dust/Sand (Operating)	Sustain exposure to blowing dust/sand
Wind/Rain/Fog	IP65
Color/Finish	Black anodized
EMI	CE Mark, FCC Part 15, part B Class B

Specifications subject to change without notice.



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