



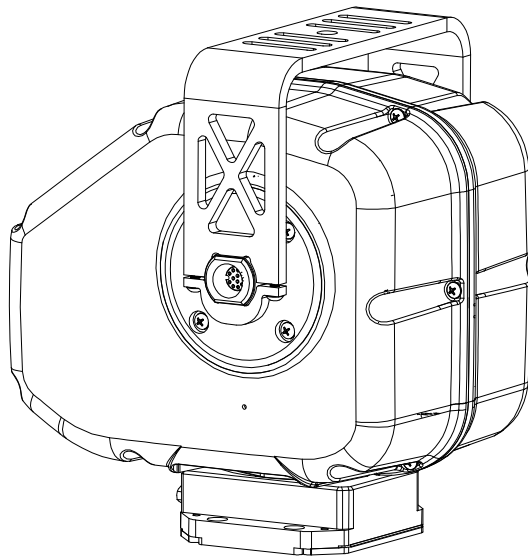
# Pan-Tilt Unit

**MODEL:** PTU-5

**VERSION:** 1.00

**REVISION DATE:** March 31, 2017

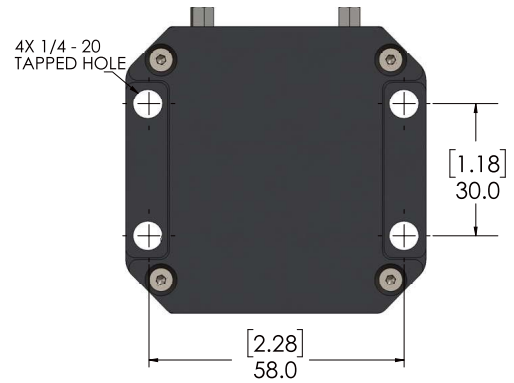
# Quick Start Guide



**1. Make sure that your PTU package contains all of the following items:**

- PTU-5 unit
- AC/DC power supply with cord (part number PT-PS-30V-NA; if ordered)
- Side payload mounting brackets (261-2664-00; if ordered)
- Mating connector for payload
- Breakout cable (308-0278-XX-00; if ordered)
- USB to RS-485 adapter cable (PTU-CONV-USB-RS485; if ordered)

**2. Mount the PTU to a secure lab bench, tripod, or other platform. Verify that there is enough clearance around the unit.**



**3. Connect the cables to the PTU.**

- Connect the optional breakout cable or customer-supplied cable to the 26-pin connector at the base of the PTU.
- Connect the AC plug on the power supply into a power strip with a switch, and then connect the DC connector to either the breakout cable or customer-supplied cable.
- Connect Ethernet or serial wiring to the either the breakout cable or customer-supplied cable, as appropriate for your needs.

**4. Power on the PTU.**

When the PTU 5 is powered up, it goes through a short reset in both axes. The amount of motion on reset will vary at different areas of the axis, but generally it will move no more than 12 degrees in either direction.

**5. Establish communications with the PTU.**

See **ETHERNET Communications** or **SERIAL Communications** on the next page, as appropriate.

**6. Mount and wire your payload (such as a camera) to the PTU using the top or side bracket(s).**

- Top-mounted payloads must weigh less than 5lbs (~2.25kg).
- Side-mounted payloads must weigh less than 6lbs (~2.70kg).

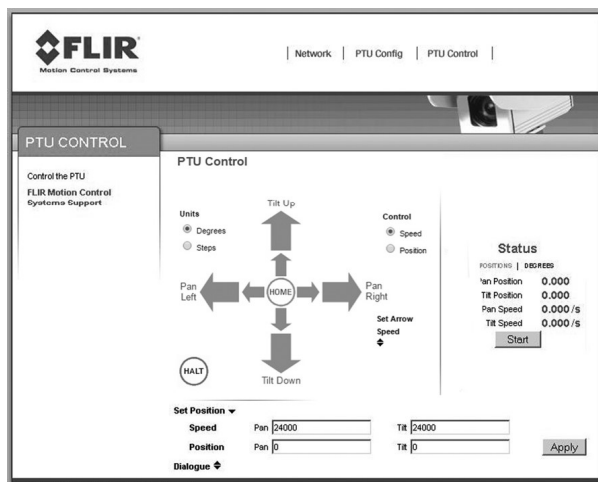
Balanced loads are recommended for stability with either mounting option.



### ETHERNET Communications:

To communicate with the PTU via Ethernet:

1. Launch a Web browser
2. Navigate to the IP address of the PTU (use the **PTU Finder** utility available from FLIR, if needed).
3. In the PTU web interface, navigate to the **PTU Control** page.
4. Click the arrows on the screen to pan and tilt the PTU.



### SERIAL Communications:

To communicate with the PTU via a serial connection:

1. Either:
  - Connect a standard RS-232 cable to both a port on the host computer and an RS232-485 adapter, and then connect an RJ11 cable between the adapter and the PTU.
  - Connect a USB-RS485 adapter to the PTU.
2. Open a terminal program.
3. Set the communications parameters as follows:
  - 9600 baud
  - 8 data bits
  - 1 stop bit
  - no parity
  - no handshaking
4. Test the following commands:
  - `pp2500 *` (set pan axis to 2500)
  - `tp-900 *` (set tilt axis to -900)
  - `PS1900 *` (set pan speed to 1900)
  - `PP0 *` (return pan position to Home)

### Wiring Specifications

The PTU-5 is offered with the following wiring:

- 1 power circuit (4C)
- Chassis ground (2C)
- 1 Ethernet connection (4C; to PTU internal electronics only)
- 1 RS485 connection (4C)
- 11 general I/O lines (11C; all lines are 1A)

### General Specifications

- **Payload (top mount):** 5lbs
- **Payload (side mount):** 6lbs (two 3lb loads)
- **Dimensions:** 6.2" x 4.9" x 6" (approximately 158mm x 125mm x 153mm)
- **Swept volume:** 0.17 cubic feet, with no external motor cable
- **Weight:** 4lbs (approximately 1.81kg)
- **Pan and Tilt Resolution:** 0.005°
- **Accuracy/Repeatability:** 0.1°
- **Range of Motion:** 360° continuous pan, +/-180° tilt (side mount only)
- **Axis Speeds:** 100°/second continuous
- **Slip Ring Channels:** 11 (including power, video, serial, and Ethernet)
- **Connectors:** HD26 (base), M12 (payload; Phoenix Contact 1411979, mates to 1411987)
- **Voltage:** 12-30VDC input, 24VDC internal



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FLIR Systems, Inc. provides a range of technical support options:

- **Email:** [MCS-Support@flir.com](mailto:MCS-Support@flir.com)
- **Web:** [www.FLIR.com/MCS](http://www.FLIR.com/MCS)
- **Phone:** (888)747-3547

The preferred method of contacting Technical Support is via email, which helps ensure proper dispatching and tracking to address your questions promptly. When contacting Technical Support, please provide the following information:

- PTU model and configuration
- Payload (Please include photos, if possible.)
- Parameter settings
- Description of issue/symptoms

User documentation can be downloaded from FLIR.

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