



### Products:

- Stabilized Platforms
- Gimbals
- Positioners
- Pointing Systems
- Pan Tilt Units
- Radar Subsystems
- Electro-Optical Systems
- Opto-Mechanical Systems
- Motion Control Systems
- Test Benches

### Services:

- Engineering Design & Development
- Electronic Testing & Assembly
- CNC Machining & Manufacturing
- System Integration

The Pan & Tilt Unit is a custom-built subsystem. It is a stand-alone, compact and rugged system and has an Elevation over Azimuth configuration. The Unit consists of Azimuth Drive, Azimuth Motor, Elevation Drive and Elevation Motor. The Pan and Tilt Motors are driven by their drives respectively. The pan range is 360° continuous and the tilt range is +30° to -90° and both these ranges are programmable. Pan and Tilt Unit receives commands from the host processor. The PTU is designed to rigidly mount the specified sensor payloads both as top and dual side mount. Pan is continuously rotating system with zero backlash and DC Motor with an encoder and is coupled to precision gear trains to achieve required position and rate control. Tilt is a non-continuously rotating system with zero backlash and DC Motor with an encoder and gear reduction. A high precision encoder is mounted on the motor shaft that provides feedback to the controller. Motion Controller receives commands from the host through interfacing converters and makes movement of both axes as per protocol. The payloads are mountable on the Tilt Assembly as top and side mounts using the dedicated adopters provided for the same. The major modules of PTU consist of Pan Assembly, Tilt Assembly, Payload Mounting Hardware, Tripod, Controller with Joystick and Connector & Cable Assemblies.





## Pan & Tilt Unit Specifications

Payload Mounting	: Top & Dual Side Payload Mounting
PTU Mounting	: Pedestal
Payload Capacity	: 10 kg max
Payload Bracket	: 1 top and 2 side payload mounting brackets / as per requirement
Power Supply	: 24 V DC
Motor Controls	: Precise Position, Speed & Acceleration Control
Positioning	: Integrated digital encoder for robust positioning
Pan Range	: N x 360° continuous with Slip Ring
Tilt Range	: +30° to -90°
Pan Speed Range	: 0.008°/sec to 120°/sec
Tilt Speed Range	: 0.008°/sec to 120°/sec
Pan Resolution	: 0.002° or higher
Tilt Resolution	: 0.002° or higher
Cables and Connectors	: As per requirement
Material	: Aluminium Alloy 6061-T6
Finish	: Paint or Powder Coating
Computer Controls	: RS232/RS485 or 422/Ethernet
GUI	: Windows 7/8.1/10
Joystick Controller	: Rugged Joystick with PTU Controller
Dimensions of PTU	: Height - 370 mm, Width - 250 mm, Depth - 210 mm
Standard	: IP65
Operating Temperature	: -20° to +55°C
Environmental Specifications	: JSS55555 compliant

## Heavy Duty Tripod Specifications

Load Carrying Capacity	: 200 kg
Weight of Tripod	: 10 kg (max)
Folded Height	: 950 mm (± 10%)
Maximum Height	: 1300 mm (± 50 mm)
Minimum Height	: 720 mm (± 10%)
Payload Mounting	: Top Mounting
Material	: Aluminium
Base	: Flat
No. of Stages	: Two
Accessories	: Mid Level Spreader
Finish	: Paint/ Powder Coating
Features	: Ability to adjust on uneven surfaces, Spirit Level Bubble Indicator, Light weight metallic construction, Swiveling Feet, JSS 55555 Compliant