



# System Controls Technology Solutions Pvt Ltd

## PAN & TILT UNIT – 20 KG PAYLOAD

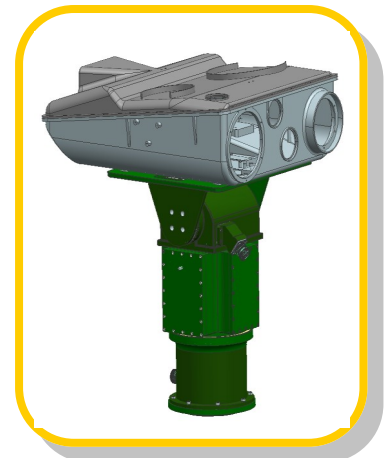
### Products:

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

### Services:

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

The Pan & Tilt Unit gives precise dynamic motion in both Azimuth & Elevation Axes. The elevation and azimuth axes movements are controlled through two DC motors with precision gear mechanism. The Unit is most suitable for all payloads like Antenna, Electro-optic, Sensor etc. The unit meets the requirement of EMI/EMC as per MIL-STD-461E and for vibration MIL-STD-810F. This system is useful for tracking through remote control. Reliable slip rings are provided for control of data link, video link and power supply if customer requires continuous rotation in azimuth axis. Azimuth rotation can either be  $N \times 360^\circ$  continuous or non-continuous. Suitable Rotary Joint / Slip Ring will be provided in case of continuous rotation. Pan & Tilt Unit is mountable on Tripod, Mast, etc.





Versatility is Reality

# Technical Specifications

Model No.: SC-PT20-A-000-000

## Azimuth Drive

|                   |  |
|-------------------|--|
| Movement Control  | : Closed loop position control                   |
| Scanning Velocity | : Settable by command between 0.001°/s to 100°/s |
| Range             | : N x 360° (non-continuous or continuous)        |
| Resolution        | : 50 microrad                                    |
| Accuracy          | : 100 microrad                                   |

## Elevation Drive

|                                |  |
|--------------------------------|--|
| Movement Control               | : Closed loop position control                   |
| Scanning Velocity              | : Settable by command between 0.001°/s to 100°/s |
| Range                          | : -15° to +90°                                   |
| Resolution                     | : 50 microrad                                    |
| Accuracy                       | : 100 microrad                                   |
| Brake requirement in elevation | : Available                                      |

## Others

|                            |  |
|----------------------------|--|
| Payload & Payload Mounting | : 25 kg max; Top / Side / Top & Side Mount               |
| Pedestal weight            | : 15 kg max  |
| Power input                | : 20 – 30V DC, 3A  |
| Interface                  | : RS422 / Ethernet                                       |
| Finish                     | : Painting or Powder Coating as per customer requirement |
| Control Unit               | : Hard Control Panel with Joystick or through Computer   |
| Dimension                  | : L - 220 mm; B - 240 mm; H - 400 mm                     |

## Slip Ring (if required)

|   |  |
|---|--|
| Pass through wires through slip ring to the payload |  |
| Communication                                       | : 8  |
| Video1 and Video2                                   | : 4  |
| Payload power, 24VDC @ 5A                           | : 2  |
| Operating Modes                                     | : Standby / Safe mode; Go-to Point mode; Joystick/Keypad |
| Safety  | : Soft limits, Electrical limits and Mechanical limits   |
| Controls & Monitoring                               | : PC based GUI systems working on Windows / Linux        |

## Environmental \*\*

| Conditions             | Operating   | Storage             |
|------------------------|---|---------------------|
| Temperature            | -30°C to +55°C  | -30°C to +70°C      |
| Altitude               | 10000 ft above MSL  | 10000 ft above MSL  |
| Humidity               | 95% at 45°C   | 95% at 45°C         |
| Wind                   | 85 kmph   | 120 kmph – Survival |
| EMI/EMC                | MIL-STD-461E  |                     |
| Vibration, Bump, Shock | MIL-STD-810F  |                     |
| Salt Fog               | Sea shore environment of 5% of NaCl & 100% humidity, also wind borne salt |                     |
| Sealing                | IP65  |                     |

## Accessories

Heavy Duty Tripod (as per customer requirement)

\*\* Designed to meet the specifications