

Lightweight Optical Motion Analysis System

**Compact Optical Tracking
Pedestal mount**

Multiple Tracking Modes

Up to 150KG Payload

**Multiple Tracking
and Payload Camera
Options**



The Specialised Imaging LOMA system is the next generation of long range projectile tracking systems.

The system consists of an Azimuth module, Elevation module and payload platform, each constructed from steel and aluminium to ensure rigidity and precision tracking.

The advanced servo control provided accurate (± 100 micro-radians) movement of payloads up to 150Kg.

The LOMA system can be used in Manual, Slave or Optical tracking modes. IRIG-B timecode provided by existing range receiver or own receiver.

FEATURES

- ± 100 micro-radians angular accuracy
- Unlimited Azimuth rotation
- Elevation -20° to $+190^\circ$
- Turn and Plunge capable
- Ethernet communications
- Built in camera power, communications and trigger
- IR and Visible spectrum tracking options
- Customised Platforms

OPERATING MODES

Manual	Joystick control for alignment, positioning and maintenance purposes
Slave	External input of Longitude, Latitude & Elevation
Optical	Onboard camera tracking (Visible or IR)

INPUT / OUTPUT SIGNALS

Command interface	RS232 (Controller to Pedestal)
Control interface	Gigabit Ethernet
Payload interface	Gigabit Ethernet, Coaxial.
Tracking interface	Video (tracking camera to Controller)
Azimuth/Elevation transfer	RS232
Timecode interface	IRIG-B from existing generator
Software	Custom software compatible with Microsoft Windows Operating Systems for Control of Pedestal and Tracking cameras
Electrical input	Mains 100-240V AC 50-60Hz

MECHANICAL

Dimension (w/d/h)	Pedestal: 41cm x 39cm x 78.6cm (16.1" x 15.4" x 30.9") Control Unit: 72cm x 60cm x 50cm (28.3" x 23.6" x 19.7")
Weight	Pedestal: 70Kg (154lbs) without base or Payload Control Unit: 35Kg (77lbs)
Transit Locks	Locking stow pins in Azimuth & Elevation

OPERATING PARAMETERS

System Accuracy	± 100 micro-radians, 2σ
Travel	Azimuth: Continuous (360°) Elevation: -20° to +190°
Torque (azimuth & elevation)	27Nm continuous (40Nm peak)
Nominal Payload	150Kg (at rated payload Mol)
Angular Velocity (nominal payload)	Azimuth: 90° / second Elevation: 90° / second
Angular Acceleration (nominal payload)	Azimuth: 90° / second ² Elevation: 90° / second ²
Non-Orthogonality	± 10 arc seconds
Drive System	Direct drive
Encoders	25-bit absolute, both Azimuth and Elevation

ENVIRONMENTAL

Storage Temperature	-20°C to +70°C
Operating Temperature	-10C to +60°C
Humidity	20-80% RH non condensing
Vibration Shock	10-40 Hz Max. 10g in any direction
EMC	Meets all UKCA/EU harmonised standards

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