

## MANTIS

*High Performance Motorised Pan & Tilt Head for Long Range Precision Surveillance Applications*



### Main Advantages & Features

- Modular unit, adaptable to suit a wide range of larger payload configurations and long range precision applications
  - Gyro stabilised (option)
  - Auto tracking (option)
  - Marine environment (option)
- Azimuth slipping as standard
- Rugged compact design
- Environmentally sealed (IP67)
- Payload support for two channel 1000Base-T Gigabit Ethernet\*
- Ethernet / RS422 control
- Precise speed control
- High accuracy, high axis speed (50°/s)
- Highly resistant to shock and vibration

### Applications

- Fixed and mobile border surveillance
- Coastal surveillance
- Port and shipping control
- Customs and coastguard applications
- Vehicle mounted applications
- Maritime applications
- Security & perimeter defence
- Auto tracking applications
- Line of sight stabilisation

\* Slipping dependent

## High Performance Motorised Pan & Tilt Head for Long Range Precision Surveillance Applications

### Outline Specification

Weight (approx)**	26kg - 31kg (57.2lbs - 68.2lbs)
Output torque** (nominal)	100Nm
Elevation (Tilt) range ***	±90°
Azimuth (Pan) range	Continuous 360°
User programmable software stops	Yes (In elevation)
Minimum velocity	0.0056°/s
Maximum velocity	50°/s
Positional accuracy	0.056° 1σ
Operating voltage	20 - 32Vdc
Safety cut-out	Yes
Fail safe brake	Yes
Electrical connection	38999 type
Communications	Ethernet / RS422
Support arm spacers	Yes Option
Marinisation	Yes Option
Stabilisation	Yes Option
Autotracking	Yes Option
Environmentally sealed	Yes (IP67)
Operating temperature	-32°C to 71°C

\*\* Depends on application and configuration

\*\*\* Payload and bracket dependent

### Dimensions (approx)

Mantis L 593mm H x 406mm W x 253mm D

Mantis U 593mm H x 549mm W x 253mm D

Space for payload as standard is 385mm (Mantis U). Wider payloads are accommodated by the use of a support arm spacer.

### Stabilisation performance (Option)

The stabilised Mantis is capable of stabilising to  $\leq 0.067^\circ$  RMS under a disturbance of  $\pm 3.5^\circ$  in a three second period with a 40kg payload, at an ambient temperature of 21°C.

The Mantis is Instro's high capacity family of high performance motorised pan and tilts.

Based on a rugged 'L' shaped design with a slipping assembly as standard, the Mantis can be configured to handle an extensive range of sensors and sensor suites for long range precision surveillance tasks.

The Mantis is capable of axis speeds up to 50° per second and ideally suited for homeland security in permanent installations and vehicle applications where a high degree of controllability and positional accuracy at longer ranges is required.

With the addition of a tripod mount adapter, the Mantis is equally suited to tripod mounted applications.

The Mantis is available in two standard versions, basic 'L' configuration and 'U' configuration which benefits from the addition of a support arm.

The capabilities of the Mantis motorised pan & tilt can be further extended with the addition of factory options such as gyro stabilisation, auto tracking and support arm spaces to achieve optimum payload mass distribution.

### Options

- Gyro stabilisation
- Automatic video tracker
- Maritime environmental protection
- 37, 73 or 113 way slipping
- Support arm spacers
- Bespoke payload bracket design service
- Customer specific paint colour



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