

A white MANTIS Mini Unmanned Aerial Vehicle (UAV) is shown from a high-angle perspective on a concrete surface. The aircraft has long, slender wings and a T-tail configuration. A white rectangular inset box highlights the nose section of the aircraft, showing a camera lens and sensor array.

MANTIS

Mini Unmanned Aerial Vehicles Intelligence System

An advanced low cost solution for intelligence, surveillance, target acquisition and reconnaissance (ISTAR) missions in short range tactical operations

MANTIS is an advanced low cost solution for intelligence, surveillance, target acquisition and reconnaissance (ISTAR) missions in short range tactical operations, both day and night, requiring a rapid deployment.

MANTIS is a robust, modular and very light system, portable. The recovery is done by means of gliding at low speed. The system has automatic take-off and landing (ATOL) capacity.

MANTIS is mounting state of the art avionics and precision navigation equipment (GPS/INS), allowing manual override, with Flight Director assisted or full automatic

navigation. Its capacity to control on forward and lateral motions allows Mini UAV to perform coordinated turns, being able to fix targets easily. It has a Line-Of-Sight (LOS) of 25 Km and 2 hours endurance.

MANTIS transmits color or infrared images in real time to Remote Pilot Station (RPS) using a three-axis gyro-stabilized camera (hardware stabilization) supported by software stabilization.

MANTIS has interfaces for integration with Command and Control Systems of operative Armed Forces.



Missions

Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR). Examples:

- Air Surveillance for Armed Forces protection.
- Military Operations on Urban Terrain (MOUT).
- Zone Surveillance / Convoy Security.
- Law Enforcement and Civilian Support.
- Patrol for Base perimeter, landing/take-off runways...
- Target Acquisition Support.

Standard (RPAS) system

- Three (3) aircrafts (RPA).
- Payload: gyro-stabilized camera with electro-optical and infrared sensors (EO/IR).
- Remote Pilot Station (RPS).
- Communications System (Data Link) with frequency hopping and STANAG 4586 compliant.
- High capacity batteries with different technologies depending on mission type.
- Batteries chargers for use in base or field with universal power supply (AC/DC).
- Spares, Supplies, Maintenance set, Manuals.
- Boxes to transport a complete UAS System.

Length / wingspan

- 1.48 / 2.10 m.

Max. weight (MTOW)

- 6.5 kg.

Operative range

- To 25 Km (LOS).

Endurance

- Up to 120 min (rechargeable battery).

Speed

- 50-92 Km/h
(Max. autonomy speed: 60 Km/h).

Navigation

- Manual override, Flight Director assisted or fully automatic (programmed and using spline navigation). GPS/INS.

Launching / recovery

- Automatic Take-Off and Landing (ATOL) with bungees.

Remote Pilot Station (RPS)

- Compact, ruggedized anti dust and waterproof capability. Also available in laptop version.
- Intuitive Interface.
- RPAS operation by one operator.
- 2 RPA simultaneous operation capability.
- Flight Simulator.
- Both Video Digital Recording and screenshot capture in RPS.
- Large autonomy and screen Information visible under high luminosity conditions or direct solar radiation.
- Interface for Command & Control Systems Integration.
- Possibility of RPA Comand & Control Interchange from one RPS to another RPS.

Payload

- Interchangeable heads with different payloads: daylight (EO) with optical zoom x10 and nightlight (IR) with digital zoom x8 cameras.

Data Link C2

- Digital several frequencies available depending on the operation.

Ground Datalink Terminal (GDT)

- Version for fix configuration or for mounting on a moving vehicle, with directional antennas. Maximum range, of 25 km.
- Version with low weight for short range operation, including directional antennas with a range of 15 km and omnidirectional antennas with a range of 10 km.

Portability and deployment

- Complete System transportable in light waterproof and dust resistant boxes.
- Mounting/Dismounting in 5-10 min.

Payload control

- Manual Pointing Control. Automatic Tracking Control.
- Automatic Targets Tracking.

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