



ASIO - Mini Vertical Take-Off and Landing (VTOL) Unmanned Aerial System

ASIO is a fully automatic electrical Unmanned Aerial System (UAS) VTOL Unit, specifically designed for “hover and stare”, “perch and stare” battlefield surveillance, forward scout missions and Special Operations support.

The ASIO UAS is man portable in a compact lightweight backpack, which includes ground control station and antenna. ASIO can be operated in automatic or semi automatic modes and is programmed through its ground control station. The payload can be controlled manually at any time during the flight. ASIO is a critical node in a fully integrated Networked surveillance system.

TYPICAL APPLICATIONS

FPASS and situational awareness:

- Force Protection Aerial Surveillance System
- Force protection battlespace
- Urban operations
- Area surveillance
- Support to special ops
- Patrolling base perimeter
- Patrolling runway proximity
- Convoy Over-Watch.



Ruggedised Ground Control Station

TECHNICAL SPECIFICATIONS

| | |
|---|---------------|
| Diameter: | 0.48m |
| Height: | 0.75m |
| Weight: | 6.0 Kg MTOW |
| Max payload weight: | 1.5 kg |
| Data link range: | 10 km/6miles |
| Operational speed: | 0-24 kt |
| Endurance: | >30min (±10%) |
| Completely autonomous or semi autonomous | |
| Way-point navigation | |
| Autonomous take-off and landing. The landing can be assisted for perch and stare mission. | |

PAYLOADS

A variety of payloads can be installed. The following is typical.

STABILISED PLATFORM

| | |
|-----------------------------------|--------------|
| 2 gimbals system for pan and tilt | |
| Field of manoeuvre | |
| pan: | -70° <> +70° |
| tilt: | -40° <> +70° |
| Angular velocity: | 120 °/s |
| Stabilisation: | 180 mrad RMS |

IR CAMERA

| | |
|-------------------------|--|
| Sensor: | Vanadium oxide Micro Bolometer |
| Array sensor: | 320x240 |
| Field of view: | 36° |
| Digital Zoom: | 2x |
| Video standard: | PAL |
| Spectral response: | 7.5 to 13.5 µm (Long wave infrared) |
| Video output: | 1.0 Vp-p, 75 W, composite |
| Refresh frequency rate: | 25 Hz |
| as per PAL standard | |

DAY/NIGHT CAMERA

| | |
|---|--|
| CCD TOTAL PIXEL: | 537(H) X 597(V) pixel |
| Auto focus | |
| Zoom: | optical : 10x digital : 10x Optional: 26x |
| Field of view: | wide : 46° tele : 4.6° |
| Video standard: | PAL |
| Min illumination: | 1.0 Lux @F1.8; 0,07 Lux F1.8 Star; (0,07 Lux @F1.2 Star fixed camera) light mode |
| (The day/night camera switches automatically from day to night mode when the level of light falls below 2.5lux) | |
| S/N ratio: | > 48 dB |
| Video output: | 1.0 Vp-p, 75 W, composite |
| Refresh frequency rate | 25 Hz |
| as per PAL standard | |

Optional

| |
|--------------------------------|
| X-Ray CAMERA |
| 1000x1000 effective pixel |
| Electronic Stabilisation |
| Imagery colour enhancement |
| Imagery resolution enhancement |

FEATURES

- Man portable back pack
- Ready to fly in less than 5 minutes
- One operator, user friendly interfaces .

Complete Backpack weight: 20 kg.

- 1 Vehicle Ready to Fly @ MTOW
- 2 Camera Payloads
- 1 GCS (including ground data link for the video and the telemetry data with the related antennas)
- 1 Back Pack (including system user manuals).



Asio Air Vehicle



Typical Ground Control Station Layout

In conjunction with

