



FALCO UAV SYSTEM

The FALCO is an Unmanned Airborne System (UAS) designed for day/night multispectral Tactical and Theatre UAV surveillance roles and tasks, with demonstrated airspace integration capability.

Developed and manufactured by Selex ES the FALCO System provides reliable and persistent surveillance over its assigned area of operations becoming an information and intelligence node integral with the Customer's C4I network.

The FALCO specific characteristics of deployability, endurance, survivability and its wide suite of mission payload, make it particularly suitable for missions of stand-off persistent surveillance, target detection, localization, identification, designation and network data dissemination. Since the FALCO allows the performance of fully automatic missions, including automatic area scanning, waypoint navigation and Automatic Take Off and Landing (ATOL), the resulting crew workload is reduced.

GENERAL DESCRIPTION

The FALCO UAV System configuration includes a Ground Control Station (GCS) connected to a Ground Data Terminal (GDT), Ground Support Equipment (GSE) and, typically, four air vehicles with associated mission payload suites tailored to Customer's requirements.

The FALCO UAV System meets all the needs of civil and military surveillance and adjacent Homeland Security missions. Its capability of 7/24, all-weather, persistent surveillance allows it to perform missions ranging from territory/installations/border patrol, coastal/littoral watch, illegal activities prevention, peace keeping/ enforcement to power and pipelines surveillance and environmental monitoring.

The FALCO air vehicle features a redundant and fault-tolerant architecture, meeting EASA Air worthiness guidelines for dual-use operations. Besides its inherent automatic Take-Off and Landing ability from semi-prepared airstrips, it can also be launched from a pneumatic catapult in a tactical environment. Recovery is accomplished by automatic conventional landing and has provision for an emergency parachute.

The FALCO UAV System is a truly flexible and effective net-enabled asset for the decision makers in peacekeeping, peace enforcing, persistent surveillance and homeland security domains.

Features

- Wide suite of multispectral payloads, including EO/IR/LRF/LD, SAR, Multimode Surveillance Radar, ESM, hyperspectral
- The FALCO System can be easily adapted to meet Customer's requirements and mission payload
- Automatic conventional Take Off and Landing or Catapult launch
- System mobility, seamless airport operations integration and reduced logistic foot-print
- Mission pre-planning, retasking, mission simulation, rehearsal and play back
- ITAR free System

GROUND CONTROL STATION

The FALCO Ground Control Station enables mission planning and execution, mission retasking, mission rehearsal and play back, mission simulation for operators training.

From the GCS, the operators can either control/monitor the air vehicle and the mission sensors. Prior to the mission, the operator can pre-program the mission tasks during the mission planning phase, enhancing overall UAV autonomous operational modes to lower operator's workload. The aircraft can be flown in manual or in fully automatic mode, including automatic take-off and landing operations.

The Ground Control Station is capable of off-line target data evaluation and processing, for further data diffusion through the C4I net in STANAG 4609 format. Real Time data can also be received by small front line units via Remote Video Terminals (RVT).

TECHNICAL SPECIFICATIONS

Physical	
Air vehicle length	5.25 m
Wing span	7.20 m
Height	1.80 m
MTOW	490 Kg
Performances (ISA conditions)	
Endurance	8-14 hours
Max payload weight	70Kg
Ceiling	5000+ m
Max airspeed	60 m/s
Link range	200+ Km (extendable with relay capability or GCS handover)

The Ground Data Terminal provides a System range in excess of 200+ Km with a redundant C&C data link range between the Ground Control Station and the FALCO air vehicle, allowing jam-resistant (option) data/images transmission in real time.

The Ground Support Equipment supports field maintenance of the entire system, pre and post flight tests via user-friendly BIT equipment.



Payloads

- EO/IR/LRF
- Laser designator (LD)
- SAR (Synthetic Aperture Radar)/GMTI
- Multimode Surveillance Radar
- AIS (Automatic Identification System)
- ESM
- COMINT
- Relay Package
- Hyperspectral sensor