



FALCO UAV SYSTEM

The Falco is a tactical UAV System, designed and manufactured by SELEX GALILEO to supply Command and Control net-centers with a tactical overview of the operational scenario and target cueing in real time. The Falco specific characteristics of deployability, endurance, survivability and its wide suite of payloads, make it particularly suitable for missions of persistent surveillance, target detection, localization, identification, designation, up to the Dangerous, Dull and Dirty missions.

GENERAL DESCRIPTION

The Falco UAV System meets requirements of civil and military surveillance and Homeland Security. Its capability of 7/24, all-weather, persistent surveillance allows it to perform missions ranging from border patrol, coastal watch, immigration prevention, law enforcement to power and pipelines surveillance, illegal fishery prevention, and environmental monitoring. The Falco features a redundant and fault-tolerant architecture, meeting EASA Airworthiness guidelines for both civil and military oriented products. The Falco air vehicle, besides its inherent automatic Short-Take-Off ability from semi-prepared airstrips, can also be launched from a pneumatic catapult in a tactical environment.

Recovery is accomplished by automatic conventional Wheeled Landing, Tactical Short Landing, or by parachute. Landing gear is designed to prevent payloads and aircraft structure damages due to heavy landings (decks landings or parachute recovery) and for semi-prepared landing strips operations.

FEATURES

- Wide suite of payloads, including EO/IR, SAR, Maritime Surveillance Radar, ESM, self-protection equipment, hyperspectral, NBC sensors;
- The Falco System can be easily adapted to meet Customer's requirements;
- Automatic conventional Short Take Off or Catapult launch;
- Automatic landing, Tactical Short Landing or parachute recovery;
- Mission pre-planning, retasking, mission simulation, rehearsal and play back;
- Autonomous navigation and control system with SELEX GALILEO own developed equipment (NSU, ECI).

GROUND CONTROL STATION

The Falco UAV System configuration is made of a Ground Control Station (GCS), Ground Data Terminal (GDT), Ground Support Equipment (GSE) and four Falco air vehicles housing payloads tailored to customer's requirements: e.g. EO/IR, SAR, Maritime Surveillance Radar, ESM, self-protection equipment, hyperspectral, NBC sensors.

The Falco Ground Control Station enables mission planning and retasking, mission simulation for operator training, mission rehearsal and play back.

From the GCS, the operator can either control payloads and sensors and handle the collected data in real time or to pre-program their tasks during the mission planning phase, enhancing UAV autonomous operation features.

The aircraft can be flown in manual and 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 diffusion through the C4I net.

The Ground Data Terminal provides a higher-than-200 Km redundant link range between the Ground Control Station and the Falco air vehicle, through a jam-resistant option data transmission in real time.

The Ground Support Equipment supports maintenance, pre and post flight aircraft tests and reconditioning of the entire system. The Falco UAV System is an effective net-enabled tool for any civil and military decision maker in peacekeeping, peace enforcing, persistent surveillance and homeland security operations.



Falco Ground Control Station



Falco on the flight line

TECHNICAL SPECIFICATIONS

Physical

Air vehicle length:	5,25 m
Wing span:	7,20 m
Height:	1,80 m
MTOW:	420 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)

Payloads

EO/IR
Laser designator
SAR
Maritime surveillance radar
ESM
Chaff/Flares dispenser
NBC sensors
Hyperspectral sensor