



HARFANG

Medium Altitude Long Endurance UAS for the Joint Armed Forces

Medium Altitude Long Endurance Unmanned Aerial System (MALE UAS) – with the HARFANG system, Joint Armed Forces will get real information dominance capability, one of today's major operational requirements: HARFANG provides permanent information in real-time at each level of the operational chain. Its design uses system redundancy to afford high reliability and efficiency. Fully integrated into current C4I systems, HARFANG is a major asset in network-centric operations. It can fulfil a wide range of missions, from surveillance to sensitive peacekeeping missions for all forces.

Missions

HARFANG is designed to perform Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) missions at strategic, operative and tactical levels.

- Real-time theatre intelligence, surveillance and reconnaissance
- Target detection/acquisition; battle damage assessment
- Coastal and off-shore surveillance; naval and law enforcement applications
- Anti-terrorism, border surveillance, anti-smuggling
- Pollution and forest fire detection and surveillance

Technical features

- Long endurance (24 h)
- Medium altitude (25,000 ft)
- All-weather capability (MILSPEC environmental conditions, anti-icing system...)
- Fully autonomous flight with automatic take-off and landing
- High reliability through back-up logic process
- Interoperability with NATO C4I standards

System

HARFANG integrates the most advanced UAS technologies, including EO/IR, laser designators, SAR-GMTI payloads, secured LOS and satellite data links, radio relay and a new generation of ground control stations integrating an already proven Mission Preparation System (MPS). HARFANG is failure-resistant and meets airworthiness criteria thanks to its multiple redundant architecture and its flight management system.

- Certified by the French military authorities
- Type Certificate and Airworthiness Certificate
- Allowed to fly over populated areas

HARFANG: real-time vision, around-the-clock, all-weather, on-the-spot targeting aerial system.



Effective

- Ensures flight safety during critical take-off and landing phases with ATOL using DGPS or RAPS, lands via LOS or SATCOM link in back-up mode
- Provides quick deployment and flexibility
- Reduces manpower workload and training requirements

Thus the HRFANG operator only needs to focus on the mission and on the exploitation of data.

Proven

- Over 1,100 missions with more than 12,000 flight hours at 90% availability for missions in Afghanistan, Libya and Mali.
- Regular national homeland security missions on French territory since the end of 2008.

Performance and Specifications

Altitude	25,000 ft
Endurance	24 h
Loiter time	12 h at 550 nm
Maximum take-off weight	1,250 kg
Payload	250 kg
Maximum speed	110 kts
Wingspan	16.60 m
Length	9.30 m
Height	2.30 m
Propulsion	Rotax 914, 115 hp turbocharged
Sensors	
Synthetic Aperture Radar	< 1 m resolution, Wide-Area Surveillance (WAS) / Spot mode
Electro-optical	WAS/Spot
Infrared	WAS/Spot
Laser designator	Compliant with NATO STANAG 3875
Panoramic camera	Pilot assistance for all ground and flight manoeuvres (e.g. taxiing or weather avoidance)
Communications	
Ku SATCOM Datalink	Command and Control + Imagery
LOS	Command and Control + Imagery
ATC Voice	Radio V/UHF and IFF civil & military modes
Remote Video Broadcasting	ROVER Mode IV for EO/IR broadcast to ground troops