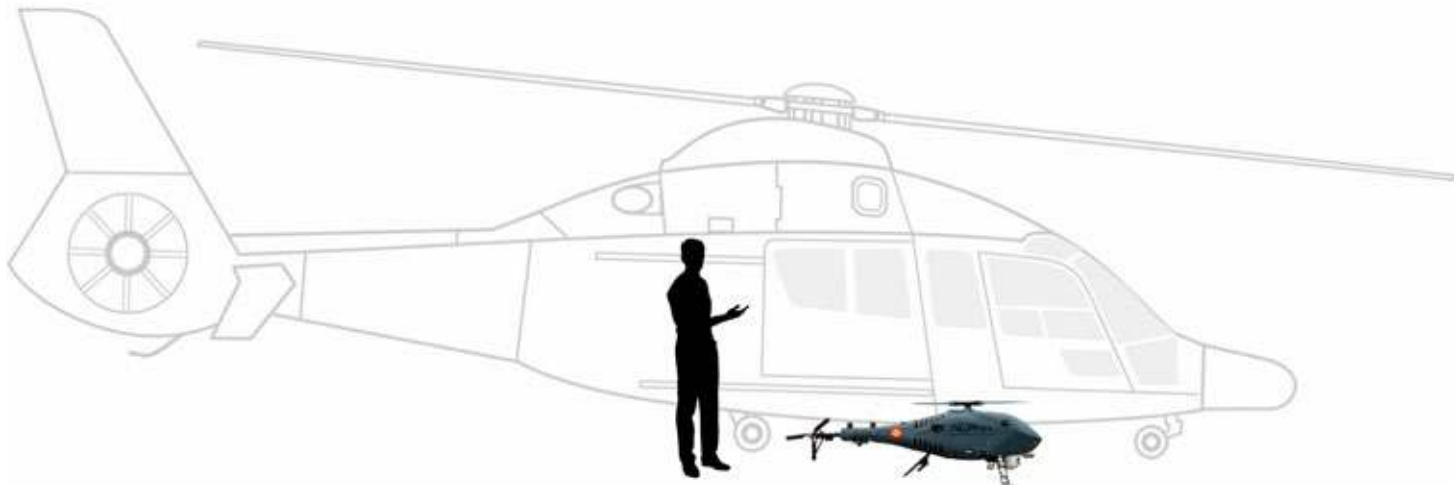




ALPHA[®]
UNMANNED SYSTEMS



**RELIABLE, ROBUST, MULTI-PURPOSE
UAV HELICOPTER**



The A900 can be used for many missions, from ISR and border control to infrastructure inspections, communications relays, advance observation and as aerial targets.

The A900 has an onboard generator that provides up to 150W of power for power-intensive payloads, a radar altimeter, navigation lights and technology designed to enable navigation in GPS denied environments.

COMMON MISSIONS AND NEEDS

MARITIME SURVEILLANCE

Alpha UAV helicopters are the ideal support tool for the Coast Guard and Navies. Heavy fuel powered, STANAG compliant, day and night operations.

BORDER CONTROL

Alpha technology complements other fixed and mobile surveillance systems. Real time target tracking, EO/IR sensors, 100km range. Alpha's platforms can cover large distances and hover for significant times.

ISR MISSIONS

The ability to obtain data immediately from the field can be critical to your mission. Our technology is designed to provide the very best in unmanned surveillance, whether of borders, infrastructure, or subjects/objects of interest.





COMMON MISSIONS AND NEEDS

SAR OPERATIONS

Provide your operatives with a reliable and highly autonomous tool to conduct search and rescue operations quickly and safely in any environment.

TARGET SYSTEMS

Current and evolving threats require target simulation of manned helicopters. Alpha's platforms are effective and efficient VTOL targets.

INFRASTRUCTURE INSPECTION & MAPPING

Electric Transmission lines, Bridges, Critical facilities, Railways... require visual inspections. Alpha's platforms fly the most advanced sensors available including LiDAR and others.



A900

A900 CAPABILITIES

- Autonomous VTOL from moving vessels
- 4H flight time
- +2'5h autonomous hovering
- Heavy-fuel powered
- GPS denied navigation
- Minimal logistical footprint
- 4 payload bays with 4kg total payload capacity
- Redundant critical systems
- Autorotation
- MTOW <25 KG
- Cruise Speed: 60 - 100 Km/h (32-54 knots)
- Emergency flotation devices
- Boxer low vibration engine

A900 CAPABILITIES



In the maritime environment, the A900's autonomy and speed of deployment exponentially increases its operational reach.



Alpha's UAVs video stream and KLV metadata are STANAG 4609 compliant, allowing seamless integration with other information and control centres or Combat Management Systems.

The A900 has been integrated into both NAIAD and IRIS systems during different NATO exercises (REPMUS and DYMESS), operating from both ground and vessel.



WEATHER PROOF

TOP SPECS

- Sea State 5 (Beaufort Scale)
- Automatic Landing on moving vessels
- Landing with Pitch and roll up to 10°
- Autorotation and Flotation devices



A800



A800 CAPABILITIES

- +2'5h flight time
- 2,5Kg payload
- Autorotation
- Range up to 30Km
- Lightweight and strong chassis:
Composition of aircraft aluminum and carbon fiber.
- 2-stroke petrol engine and on-board generator.
- All electronics are IP64 or higher.
- Automatic auto-rotation.
- Fully automatic flight.
- Precise navigation: high-precision GNSS antenna and sensors.

CONTROL SYSTEMS



THE VCS

The vessel-based control station is a mobile tracking antenna and control station for UAVs, USVs or long range communications.

An All-in-one system that includes gyrostabilized high-gain tracking antenna, an IP67 Ethernet Joystick for take-off and landing assistance, and two rugged laptops for UAV and payload control.

- **Capable of maintaining accurate heading for several minutes after GNSS outage.**
- **Multiple datalink options with ranges up to 60 km.**
- **Configurable to be used on moving ground vehicles.**
- **Total control over UAV & payload.**
- **High accuracy RTK positioning.**
- **Encrypted communications.**
- **VTA Radome configuration available.**
- **High-end IMU & dual GNSS receivers for accurate heading in any environment.**





**GCS-Duo and VCS for land and sea operations.
Both control stations are designed and manufactured
by Alpha and are independent of the UAV platforms.**

THE GCASE

**SIMPLE
RUGGED
MAN-PORTABLE
EASY TO DEPLOY.**



- Easy to set up antennas on a light & robust aluminum tripod.
- Directional antennas & tracking system.
- Encrypted telemetry & video link based on a MIMO data link.
- Many frequencies available.
- Radio ranges from 5 to 100 km.
- Controls UAV & Payload
- User accessible payload bay.
- Connectivity with external systems.
- Internal redundant batteries.
- Joystick for manual UAV control.
- Dual sun-readable 15" HD screens.



COMPANY

Alpha Unmanned Systems manufactures small tactical helicopter UAVs.

The company was founded in 2014 and is based in Madrid.

With over 10 years of experience working closely with the world's most important defense customers, Alpha's UAV helicopters are used frequently for maritime security and ISR missions.

The A800 and A900 platforms are fully autonomous and use either gasoline or heavy fuel. Alpha is an independent privately held company and is an ISO9001 manufacturer.

Alpha is committed to designing and manufacturing drones that weigh under 25kg, that are reliable, safe, versatile and "weather-proof."

Our team consists of 23 professionals, including aeronautical, mechanical, electronic and software engineers, marketing and operations experts, and a distinguished board of external advisors.

WORLD CLASS CLIENTS



CERTIFIED QUALITY

Alpha Unmanned Systems adheres to aviation standards and design procedures. The company is an ISO9001 certified company with an integrated holistic ERP system to ensure maximum traceability of all company processes and components. The A900 airframe and systems architecture have been designed to comply with STANAG 4738.

Its critical systems have been tested to withstand demanding conditions, such as the autopilot, which is MIL-STD 416F and 810F, and the servos, which comply with EN61000 and IP64 standards.

They have a MTBF of more than 1000h, calculated by Weibull analysis and tested up to 3000h endurance.

Using these standards and the AMCs and GMs provided by the European Union Aviation Safety Agency (EASA), products designed and manufactured by Alpha Unmanned Systems are suitable for certification by both civil and military authorities.





TACTICAL UAV HELICOPTERS FOR HARD WORK SINCE 2014

ALPHA[®]

UNMANNED SYSTEMS

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Funded by
the European Union

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