SINGULAR AIRCRAFT

COMPANY PROFILE

01 WHO WE ARE

Singular Aircraft is a pioneering aerospace company that designs, manufactures and delivers autonomous UAVs built for high-endurance, multi-mission operations. The company offers end-to-end unmanned solutions that meet the needs of both the defense sector and the civil market.

Our Difference

Singular Aircraft stands out for its fully integrated, in-house UAV ecosystem, combining its aircraft's long endurance with an advanced Ground Control Station for real-time mission control and predictive maintenance. Its diversified revenue model — aircraft sales, technology sales and engineering services — adds scalability and flexibility. With production entirely in-house, Singular delivers a cost-effective, mission-ready solution that redefines unmanned aviation.

Track Record

Backed by more than 11 years of in-house R&D, the team combines deep expertise in UAV design, engineering and manufacturing. It includes aerospace engineers, defense specialists and industry veterans with proven experience in avionics, autonomous systems and mission-critical operations.

SINGULAR AIRCRAFT AT A GLANCE

11+ Years IN-HOUSE R&D	**4** BUSINESS LINES	**100%** IN-HOUSE PRODUCTION
Defense & Civil DUAL MARKET	**High Endurance** UAV PLATFORM	**Global** MARKET REACH

02 BUSINESS LINES & ECOSYSTEM

Singular Aircraft is structured around three established business lines, and is progressively developing a fourth line focused on mission services and operations.

Aircraft Sales

Manufacturing and delivery of ready-to-deploy autonomous UAVs, with full systems integration: avionics, autopilot, ground control station and mission management capabilities.

Technology Sales

Monetization of proprietary UAV technology through three channels: direct sale or licensing of the core technology, a royalty model with operator partners, and sale of parts and components to clients manufacturing under license.

Engineering Services

Tailored engineering services: converting third-party manned aircraft into fully autonomous drones, integrating external payloads (telecommunications antennas, ISR sensors) and mission-specific modifications.

Figure 1. Flyox platform in flight — the backbone of Singular Aircraft's UAV ecosystem.

Mission & Operations Services

In development: deployment of aircraft and technology through mission execution and operational services — cargo delivery, maritime surveillance, ISR and defense missions —, under a comprehensive service model covering operators, pilots, MRO teams and mission data analysis.

Platform Ecosystem

PLATFORM	FUNCTION
FLYOX	**High-endurance UAV aircraft**
SINGULAR AIRCRAFT GROUND STATION	**Ground segment**
SINGULAR OS	**Mission management & control**
ORBIT	**Operations & services**

03 VERTICAL INTEGRATION & CAPABILITIES

Singular Aircraft controls the entire UAV production process in-house, from raw materials to final assembly. This vertically integrated approach ensures cost efficiency, faster production and superior quality, setting it apart within the aerospace industry.

Manufacturing Process

- **1. Structure Manufacturing** — nose, wings and fittings; heat and priming treatment; quality control at every stage.
- **2. Fuselage Assembly** — integration of the main sections with continuous quality checks.
- **3. Electronics & Wiring** — control and power boxes, sensors, multiple quality checks before integration.
- **4. Ground Station, Autopilot & ECU Mapping** — integration of autopilot and mission systems, final inspection before delivery.

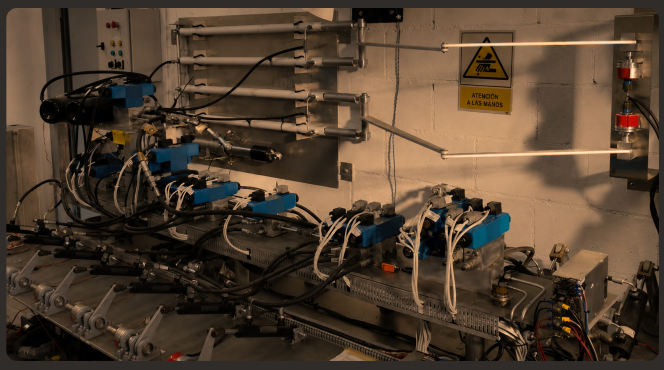

Figure 2. In-house hydraulic and electronics test lab.

In-House Capabilities by Area

DESIGN & ENGINEERING

- **Mechanical Design** & PROTOTYPING
- **PCB Design** & ELECTRONICS

PRODUCTION & TESTING

- **CNC, Heat Treatment** & COMPOSITES
- **Hardware-in-the-Loop** LAB

ASSEMBLY & QUALITY

- **Final Assembly** & PAINTING
- **Final Inspection** OF PRODUCT & ISO

04 TECH STACK: TECHNOLOGY ARCHITECTURE

Our technology offering spans aircraft design and manufacturing through to mission software, communications and ground support systems. Everything is conceived as an integrated, modular and scalable architecture to maximize availability and the customer's technological sovereignty.

IN-HOUSE DESIGN & MANUFACTURING | MODULAR & SCALABLE | TECHNOLOGICAL SOVEREIGNTY | 100% IN-HOUSE INTEGRATION

Flight Control & Autonomy Suite

Governs flight stability, navigation and profiles, with automatic modes and operator assistance.

REDUNDANCY Triple active	LATENCY <5 ms
AUTONOMOUS MODES 4 levels	CERTIFICATION DO-178C Level B

Singular OS

Mission management system to plan, execute and monitor complex missions in real time.

ARCHITECTURE Microservices	AVAILABILITY 99.97%
INTEGRATION Open API	UPDATES Signed OTA

Communications & SATCOM

Combines long-range LOS links with BLOS capability via SATCOM to operate beyond line of sight.

BLOS RANGE 5,000 km	SATCOM BAND Ku / Ka
ENCRYPTION AES-256 E2E	FALLBACK Auto Multi-band

Ground Control Station

Ergonomic, redundant work environment for pilots and operators, natively integrated with Singular OS.

CONFIGURATIONS Fixed·Mobile·Exped.	DEPLOYMENT <20 min
MULTI-UAS CONTROL Up to 4 UAS	C2 INTEGRATION NATO STANAG

Sensors & Payloads

Wide range of sensors and payloads under an open architecture: EO/IR, maritime surveillance radar, LIDAR and more.

TYPES EO/IR·SAR·LIDAR	MAX PAYLOAD 400 kg
INTEGRATION Plug-and-play	PROCESSING Edge AI

Iron Bird & Validation

Iron-bird test rigs and progressive test campaigns validate systems before entry into service.

TYPE Full-size HIL	VALIDATION Mandatory Pre-flight
SOFTWARE OTA + Regression	FRAMEWORK EASA Certification

05 CERTIFICATIONS & REGULATORY COMPLIANCE

Singular Aircraft operates under a demanding regulatory framework, combining civil, quality and military certifications that reinforce its credibility with both defense and civil customers.

Certifications Held

Spanish Ministry of Defense (DGAM – RPAS 1405)

Confirms Singular Aircraft as an official supplier to the Ministry of Defense: authorization for military UAV contracts, recognized supplier status, and compliance with security and defense regulations — essential for bidding credibly in the sector.

ISO 9001:2015 — Quality Management System

Improves efficiency, customer satisfaction and risk management through standardized processes, continuous improvement in production and services, and management focused on UAV reliability.

EN 9100:2018 — Aerospace & Defense QMS

Quality management specific to the aerospace and defense sector: supply-chain traceability, risk management and safety protocols, and strict documentation and production controls. Recognized by EASA, the FAA and the Ministry of Defense.

NATO STANAG 4671 — Military Airworthiness

Airworthiness certification for UAVs in NATO-controlled airspace: technical and operational requirements, safety and reliability criteria, and interoperability among NATO forces and defense programs.

Certification in Progress

EASA SORA SAIL II — Civil UAV Risk Assessment

Required to operate UAVs in European airspace under civil aviation regulations: it establishes operational safety levels based on the UAV's risk classification, regulatory compliance for flights over populated areas, and airworthiness and safety assessments under EASA oversight.

06 FLYOX: OPERATIONAL ADVANTAGE

Flyox I, Singular Aircraft's flagship aircraft, is a large autonomous UAV designed for cargo transport, firefighting, surveillance and agriculture. Its combination of high payload capacity, long endurance and advanced performance makes it unique in the market.

KEY PERFORMANCE

1,850 kg PAYLOAD CAPACITY	**24+ Hours** ENDURANCE	**2,600 NM** RANGE
18,000 ft MAX ALTITUDE	**66%** LOWER OPERATING COST	**85 kts** AVG CRUISE SPEED

Key Differentiators

- Autonomous navigation and BVLOS operations (beyond visual line of sight).
- AI-based mission management system (MMS).
- Advanced composite materials for lightness and durability.
- Fully automatic takeoff and landing operations (ATOL).
- 200+ km LOS range, extendable via relay, ground station handover or SATCOM.

Onboard Systems

- Encrypted communications and redundant radio link.
- Triple-redundant air data and IMU; backup GPS.
- Automatic takeoff and landing, with automatic braking and in-flight engine restart.
- Twin-engine solution, with real-time data transfer (GCS, ATC, SATLINK).

07 SINGULAR ECOSYSTEM: SINGULAR AIRCRAFT GROUND STATION, SINGULAR OS & ORBIT

Alongside Flyox, Singular Aircraft's ecosystem is completed by three layers that enable end-to-end operation of complete fleets: command and control, mission software, and operational services.

Singular Aircraft Ground Station — Real-Time Command & Control

Singular Aircraft Ground Station is Singular Aircraft's command, control and communications platform: it centralizes the operation of entire UAV fleets in real time from a single interface, with low latency, military-grade encryption and signal redundancy. It integrates natively with Flyox I, Singular OS and the rest of the ecosystem, with certified LOS and BLOS support and an open API for C4ISR integration.

<8 ms CONTROL LATENCY	**250 km** MAX LOS RANGE	**200 UAVs** SIMULTANEOUS FLEET
99.97% OPERATIONAL AVAILABILITY		

Singular OS — Mission Management Software

Singular OS is Singular Aircraft's mission management and control system: the software layer that plans, conducts and audits unmanned operations from a single console. One interface drives the entire platform family and chains together missions as diverse as persistent ISR, maritime surveillance or firefighting, with governed, auditable command aligned with NATO (STANAG) and civil standards.

Multi-Platform ONE CONSOLE, THE WHOLE FLEET	**NATO STANAG** MILITARY INTEROPERABILITY	**Active Geofencing** AUTONOMOUS SAFETY
ENS DATA SOVEREIGNTY		

ORBIT — Operational Services

ORBIT is Singular Aircraft's services layer: it accompanies every customer from their first mission to full operational autonomy, with five service lines — mission operation, certified training, maintenance, ongoing technical support and regulatory support — covering the entire operational lifecycle.

<2 h RESPONSE SLA	**+30** COUNTRIES WITH OPERATIONS	**24/7** TECHNICAL SUPPORT
EASA REFERENCE CERTIFICATION		

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