FLYBY ROBOTICS

MACHINE LEARNING UNMANNED AIRCRAFT

Made in America

F-11 SERIES | SPECIFICATIONS

F-11 AEGIS

Introducing the Flyby F-11 AEGIS, an industrial powerhouse designed to integrate autonomy capabilities with pilot expertise. Equipped with an NVIDIA Orin machine learning module, it delivers over 50 trillion operations per second of computational power, rivaling the processing capability of self-driving cars. Together with its modular Ouster OS-1 LiDAR, the F-11 AEGIS provides 360-degree obstacle avoidance with an unmatched range of up to 295 ft, ensuring hazard detection with centimeter-level precision even in fog and nighttime conditions. By complementing pilots' skills with precision autonomy, the F-11AEGIS reduces workload and stress, empowering pilots to focus on higher-level decision-making, mission strategy, and safety.

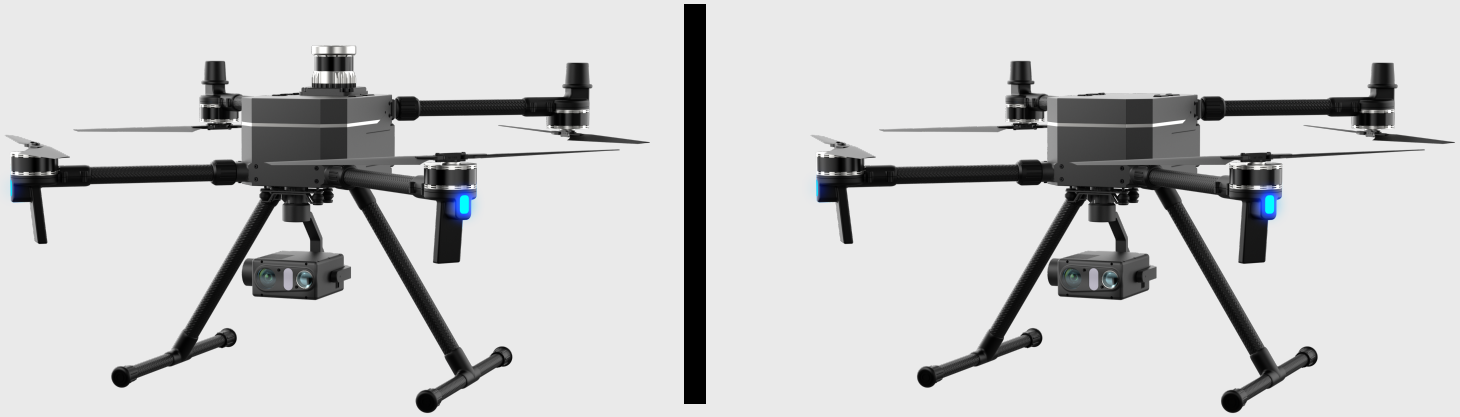
The F-11 AEGIS drone is capable of fielding type-certification grade, triple-redundant ELSIGHT HALO 5G/LTE module with a secondary 10 km range radio link, enabling operators to economically access 5G/LTE BVLOS capabilities through a "pay-as-you-go" data plan in addition to traditional radio-based control. With a 3kg/6.6lbs payload capacity and quick-release modular mounts, the F-11 AEGIS is the ideal solution for diverse commercial and public safety applications, such as critical infrastructure inspections, gas leak detection, mapping/surveying, search-and-rescue, and tactical reconnaissance/overwatch.

F-11 ENTRY

The F-11 ENTRY is an American-made and NDAA compliant drone designed to offer exceptional value while maintaining performance comparable to the F-11 AEGIS. Ideal for budget-conscious operations, the F-11 ENTRY boasts the same payload capacity, performance, and powerful NVIDIA computing module as the F-11 AEGIS for running on-edge ML applications. While it does not include the Ouster OS-1 LiDAR, the F-11 ENTRY remains a reliable, cost-effective solution for a wide range of applications and is the perfect alternative for operators looking to reduce dependence on overseas hardware.

NDAA COMPLIANCE

Committed to systems security, the Flyby F-11 Series is assembled in America with an NDAA-compliant supply chain. Experience the unmatched performance of this flying supercomputer, crafted to elevate your operations and redefine the possibilities of autonomous flight.



F-11 SERIES | SPECIFICATIONS

PAYLOADS

Available Payloads	Gremsy VIO (Sony Block 4K, FLIR Boson 640, and laser range finder) Sony ILX-LR1 (Gimbaled Full Frame Camera) Gremsy ZIO (4K hybrid 30x zoom, 20x optical, 12x digital) Sierra-Olympia Ventus OGI (OGI MWIR) Supports 12v and 24v mapping LiDARs Contact us for additional payloads
Maximum Gross for Takeoff	9500 grams (20.1 lbs)
Maximum Payload	3000 grams (6.6 lbs)

AUTONOMY

On-board AI Module	NVIDIA Jetson Orin NX
Ampere GPU	1024 NVIDIA CUDA cores, 32 Tensor cores
AI Performance (Sparse)	<100 trillion operations per second (TOPs)
AI Performance (Dense)	>50 trillion operations per second (TOPs)
Custom On-Edge ML Applications	Contact us for custom apps, developer support ready. This is what we built the F-11 Series for.
AI Obstacle Avoidance (F-11 AEGIS)	360 degree LiDAR based obstacle avoidance, effective up to 295 ft, fog & night capable

AIRCRAFT GENERAL INFO

Unfolded Dimensions	990 mm (Diameter w/o Props)
Folded Length x Width	585 mm x 380 mm
Folded Height (w/o Landing Gear)	300 mm
Default Landing Gear	290 mm height from ground, 355 mm length
Flight Modes	Position Mode, Sports Mode, Altitude Mode
Maximum Speed	56 km/h (35 mph) in Position & Altitude Modes 80 km/h (50 mph) Sports Mode
Flight Time (No Payload)	50 mins
Operating Temperature	-20 to 50 C (-4°F to 122° F)
RTK	Dual RTK 1 cm+1 ppm horizontal
GNSS	L1/L2 GPS, GLONASS, Beidou and Galileo bands
Transmission	Primary: 10km RF Transmission Secondary: Triple Redundant Elsight 5G/LTE (AEGIS)
Remote ID	FAA and EASA compliant

F-11 SERIES | SPECIFICATIONS

F-11 SERIES MOUNT OPTIONS:
With 3 mounting areas, 6 data & power ports (24v, 12v, 5v) and 12 mounting hardpoints, the F-11 Series is designed to maximize your customizability.

TOP: F-11 AEGIS Module
BOTTOM: Gremsy VIO

TOP: Integrated Ventus OGI, Parachute
BOTTOM: F-11 AEGIS Module

TOP: F-11 AEGIS Module, Parachute
BOTTOM: Integrated Ventus OGI

F-11 SERIES | SPECIFICATIONS

LiDAR (F-11 AEGIS)

LiDAR Module	Ouster OS1 128 REV7
Form Factor	Modular and Removable (Included w/ F-11A)
Detection Range	170 m (560 ft) at 80% Lambertian reflectivity 90 m (295 ft) at 10% Lambertian reflectivity
Field of View	Horizontal: 360° Vertical: 45° (+22.5° to -22.5°)
Points Output Per Second	5,242,880
LiDAR Classification	Class 1 eye-safe per IEC/EN 60825-1: 2014
Ingress Protection	IP68 / IP69k
Vertical/Range Resolution	128 channels/0.1 cm

POWER PLANT & BATTERY

Number of Motors	4
Equivalent Kv	320
Max RPM	8000
Propeller Diameter	533 mm (21 in)
Propeller Material	Carbon Fiber Reinforced Nylon
Number of Batteries Per Aircraft	2
Battery Capacity	7.3 Ah
Battery Life Cycle	300+ cycles
Operating Temp	-20 to 50 C (-4°F to 122° F)
Cell Chemistry	LiPo

QUESTIONS & ORDERS? CONTACT US

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