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EAGLE EYE

The Eagle Eye is a versatile Unmanned Aerial System (UAS) built on a foundation of modular engineering. This is a highly robust platform designed to eliminate the logistical constraints of specialized, single-use drones.

Its core capability lies in its inherent adaptability, enabling operators to rapidly reconfigure the system's power and propulsion modules to match mission parameters precisely. From rapid-response surveillance to heavy-lift, long-endurance tasks, the Eagle Eye transitions fluidly. This ensures optimal performance across the operational spectrum, delivering reliable, high-precision results while maximizing asset utilization. The Eagle Eye is the singular UAS solution for complex, evolving aerial requirements.

Key Features and Benefits

Modular Propulsion (Quad/Octo-rotor)

- Maximum Adaptability. Quickly switch between speed/efficiency and heavy-lift/stability.

Triple-Option Power (Battery, Hydrogen, Hybrid)

- Unmatched Endurance. Optimize for multi-hour flight time or instantaneous power delivery.

ADSB Transceiver

- Aviation-Grade Safety. Operate legally and safely in complex airspace; the drone can see and be seen.

RTK & GNSS Positioning

- Centimeter Accuracy. Guarantees precise data collection for mapping and forensic monitoring.

Hydrogen Power Cell

- Revolutionary Range. Enables persistent, long-linear inspections and minimizes mission downtime.

Single-Platform Design

- Superior Asset ROI. One system handles the tasks of multiple drones, reducing cost and complexity.





Applications for Ultimate Protection

The Eagle Eye is engineered to deliver persistent, high-precision security in the most demanding operational environments. Its unique combination of endurance and advanced avionics makes it the definitive asset for protecting critical infrastructure and high-value operations.

Core Security Applications

- **Persistent Patrol & Surveillance:** The Hydrogen Cell power system enables multi-hour flight times, eliminating security gaps over vast infrastructure like pipelines, borders, and utility networks. It provides continuous, unblinking aerial watch.
 - **Precision Anomaly Detection:** Leveraging RTK/GNSS centimeter accuracy, the Eagle Eye flies repeatable routes to detect minute changes, unauthorized intrusions, or security threats with verifiable data integrity.
 - **Airspace Safety & Integration:** The built-in ADSB Transceiver ensures safe operation in complex or regulated airspace, providing collision avoidance and reliable identification alongside manned traffic.
 - **Rapid Incident Response:** Offers immediate aerial intelligence to security teams responding to perimeter breaches, suspicious activity, or high-risk tactical scenarios, minimizing risk to personnel.
- The Eagle Eye delivers mission reliability and persistent awareness where failure is not an option.

TECHNICAL SPECIFICATIONS

System	Specification	Operational Benefit
Positioning	RTK & GNSS (Multi-Constellation)	Centimeter-level accuracy (Horizontal: $\pm 1\text{ cm} + 1\text{ ppm}$). Essential for repeatable flight paths and high-precision photogrammetry.
Airspace Safety	ADSB Transceiver (IN/OUT)	Provides awareness of nearby manned aircraft, ensuring collision avoidance and compliance with growing global UAS traffic management.
Core Flight	Advanced Redundant Flight Controller	Ensures stable flight and reliable performance even under high-load conditions or partial system failure.
Range (Control)	63km (Standard LOS)	Ensures reliable command and control for extended-range missions, especially when leveraging hydrogen endurance.

Propulsion Layout	Configuration	Max Payload Capacity (Estimate)	Key Advantage
Standard	4 Motors / 4 Blades (Quadcopter)	11.0 kg	Maximum energy efficiency and flight speed. Highly maneuverable.
Heavy Lift	8 Coaxial Motors / 8 Blades (Octocopter)	24.0+ kg	Superior lift capacity for LiDAR/heavy gimbals. Higher stability and inherent motor redundancy.



The Eagle Eye defines operational flexibility by offering three specialized power plant versions on the same robust platform. Version One (Proprietary Battery) is optimized for high instantaneous power and rapid deployment, ideal for standard or short-duration missions. For unparalleled endurance, Version Two (Hydrogen Cell) provides revolutionary multi-hour flight times with near-instant refueling via tank swap, making it the definitive choice for persistent surveillance and long-linear inspections. Finally, Version Three (Hybrid) combines the extended range of Hydrogen with the battery's stability and burst power, creating a reliable, balanced system perfect for dynamic tasks like Search & Rescue or complex high-wind operations. This power adaptability ensures the Eagle Eye always matches its capability to your mission demands.

Metric	Version One: AG Battery	Version Two: Hydrogen Cell	Version Three: Hybrid (H ₂ + AG Battery)
Max Flight Time	45 Minutes	2.5 - 3.0+ Hours	Up to 3.5 Hours
Operational Advantage	High instantaneous power, fast deployment.	Extreme Endurance and zero emissions (water vapor). Ideal for long- linear missions.	Balanced Performance. Combines hydrogen range with battery burst power (take- off/wind).
Refuel/Rec harge Time	60 - 90 minutes (Recharge) or 2 minutes battery swap	3 - Minutes (Hydrogen Tank Swap)	3 - 5 Minutes (H ₂ Tank Swap) + Battery Charge Time
Best-Suited Mission	Short-range inspection, high- power bursts (cinematography).	Persistent surveillance, border patrol, long-range pipeline/utility inspection.	Search & Rescue (SAR), dynamic cargo delivery, complex terrain mapping.