Electric Tilt-Rotor VTOL UAV

The **AETHER-250** is a fully electric tilt-rotor VTOL UAV designed for silent, eco-friendly operations, rapid deployment, and mission versatility. Its tilt-rotor system combines precise vertical lift with efficient fixed-wing flight, enabling long-range ISR missions across military, civilian, and humanitarian scenarios.

Flexibility & Deployment

• VTOL Capability ensures operational readiness without the need for runways or prepared infrastructure.
• Tilt-Rotor Transition allows smooth changeover from vertical flight to fixed-wing mode, maximizing endurance, range, and mission speed.
• Compact Foldable Design makes the AETHER-250 easy to transport, assemble, and deploy, even in rugged or remote environments.

Sensors & Autonomous Operation

• Advanced EO/IR Payloads enable day/night monitoring with AI-powered automatic target detection, validation, and tracking.
• Modular Multi-Mission Payload Bay allows integration of cameras, sensors, or electro-optical systems tailored to mission requirements.
• Autonomous Flight Profiles: The AETHER-250 can execute fully automated missions with flexible programming and remote piloting.

Power & Stealth

• Fully Electric Propulsion with LiPo Batteries provides silent, emission-free operation with a low thermal signature—ideal for discreet missions.
• Eco-Friendly & Efficient: Zero CO emissions and minimal environmental footprint.
• Lightweight CFRP Composite Structure ensures durability, stress resistance, and optimized performance.

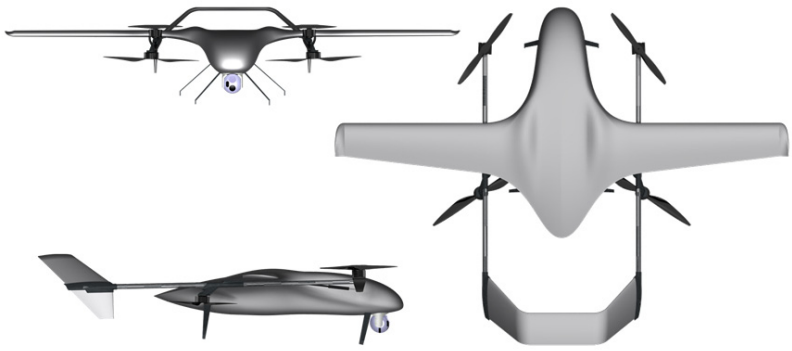
Technical Specifications

PARAMETER	SPECIFICATION
Type	Electric Tilt-Rotor VTOL UAV
Propulsion	Fully Electric, LiPo Batteries
Take-Off & Landing	Vertical (VTOL) – Tilt-Rotor Transition
Endurance	2h (> 6 h with Fuel Cells H2 optional)
Cruise Speed	90Km/h
Operational Range	Dependent on communication link
Payload Capacity	EO/IR sensors, ISR payloads, multi-mission bay
Structure	CFRP Composite (lightweight & durable)
Deployment	Foldable design, rapid assembly
Operation Mode	Remote piloting & autonomous flight profiles
Signature	Silent operation, zero CO_2 emissions, low thermal footprint

System Advantages

- **Quick Deployment & Portability:** Foldable design enables immediate field readiness.
- **Runway Independence:** VTOL capability ensures deployment in confined or infrastructure-limited areas.
- **Extended Endurance & Range:** Tilt-rotor configuration with fixed-wing transition enhances operational efficiency.
- **Silent, Eco-Friendly Operation:** Fully electric propulsion delivers zero emissions and minimal acoustic/thermal signature.
- **Mission Versatility:** Effective across military, civilian, and humanitarian applications.
- **Advanced Surveillance:** EO/IR payloads with AI-driven real-time target tracking and intelligence gathering.
- **High Durability:** Designed for demanding environments and adverse weather conditions.

H2 & Battery Powerplant: Eco-Friendly, Low-Noise, High Mission Adaptability



1. **Four Rotor VTOL Tilt-Rotor Configuration**
2. **MTOW 55Kg with 15 kg useful load**
3. **High Level Architecture BVLOS CONTROL**
4. **Cutting Edge Liquid/ Gas H2 Powerplant**
5. **Endurance and Range Adaptable to Mission**
6. **Triple Redundancy GPS Assisted IMU**
7. **Light Weight CFRP**

Eco Friendly – Low Noise Battery – Liq/Gas H2 Hybrid Powerplant

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