

TOGAN M

MINI RECONNAISSANCE AND
SURVEILLANCE UAV SYSTEM



TECHNICAL SPECIFICATIONS

MINI RECONNAISSANCE AND SURVEILLANCE UAV SYSTEM

TOGAN-M is a multi-rotor mini UAV system developed with STM's proprietary flight control and ground control software, specifically engineered for critical reconnaissance and surveillance missions. With its compact, foldable structure and a take-off weight of under 2.5 kg, the system can be easily deployed by a single soldier from a backpack. It provides the rapid and reliable Intelligence, Reconnaissance, and Surveillance (ISR) solutions required by agile units, especially in asymmetric warfare environments.

Featuring an electronic warfare-resistant architecture and advanced imaging technologies, TOGAN-M offers a cost-effective and indigenous solution for both military and strategic civilian use cases. Equipped with integrated high-resolution day and thermal (night) camera systems on a 3-axis stabilized gimbal, TOGAN-M delivers effective results through various optical zoom levels and flight control software customized to military standards.

The system is designed for full compatibility with military coordinate systems and military-grade map overlays, providing superior ISR capabilities in both confined urban settings and open terrains across diverse environmental conditions.

SYSTEM CAPABILITIES

- › Rapid Deployment: Ready for mission in under 1 minute.
- › Compact Design: Lightweight and foldable for easy man-portability.
- › Hybrid Zoom: Dual EO cameras providing both optical and digital hybrid zoom.
- › Night Vision: Integrated thermal imaging for 24/7 operations.
- › Precision Targeting: Integrated Laser Range Finder (LRF) for accurate distance measurement.
- › Mission Planning: Advanced autonomous mission and route planning.
- › GNSS-Denied Operation: Optical flow camera for autonomous flight in GNSS-denied environments.
- › Autonomous Landing & Take-Off: Full autonomy independent of GNSS.
- › Data Transmission: High-speed photo/video recording and real-time streaming.
- › LTE Connectivity: Extended operational capability via LTE link.
- › Micro GCS: Compact and ergonomic Ground Control Station.
- › Embedded Simulation: Built-in training simulator accessible via GCS.
- › Obstacle Avoidance: Advanced collision avoidance algorithms for flight safety.

SPECIFICATIONS

Geometric Configuration	Quadrotor (4-Motor) UAV	GNSS-Denied Capabilities	Autonomous Take-off, Landing, and Hover
Take-off Weight	2350 g (Including Camera)	Autonomous Vision Modes	Target Tracking and Moving Target Tracking
Flight Endurance	30 Minutes	Visual Landing Capability	Fully Autonomous Landing based on Visual Reference Markers
Autonomous Cruise Speed	15 m/s	Gimbal Capabilities	3-Axis High-Precision Camera Stabilization and Control System
Wind Resistance	10 m/s	Camera Payload (Integrated POD)	Integrated Multi-Sensor POD: (EO / IR / LRF) Dual 4K Ultra HD Electro-Optical (EO) Cameras 5x Optical Zoom 30x Hybrid Zoom
Operating Temperature	-10 °C to +40 °C	Data Link	Frequency Hopping Spread Spectrum (FHSS) Communication Range: 6500 m
Communication Range	6500 m (Line of Sight)	LTE Capability	UAV Control and Video Streaming (Auto-activates on link loss)
Mission Altitude (AGL/MSL)	500 m / 3000 m		

STM SAVUNMA TEKNOLOJİLERİ MÜHENDİSLİK VE TİCARET A.Ş.

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