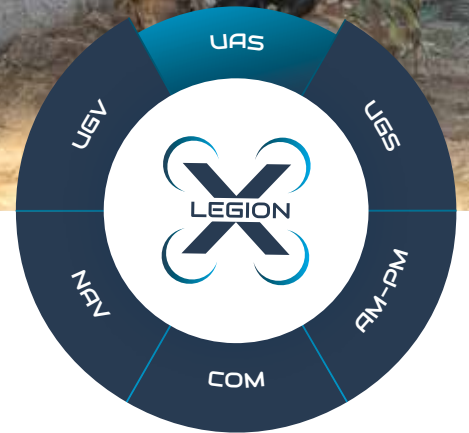


# LANIUS

Drone-based loitering munition for complex environments



Part of the Legion-X robotic and autonomous combat solution, LANIUS is a highly maneuverable and versatile drone-based loitering munition designed for short-range operation in the urban environment. The system can autonomously scout and map buildings and points of interest for possible threats, detecting, classifying and syncing to Elbit Systems' Legion-X solutions. LANIUS can carry lethal or non-lethal payloads, capable of performing a broad spectrum of mission profiles for special forces, military, law enforcement, and HLS.

# LANIUS

## Drone-based loitering munition for complex environments

### System Highlights

The LANIUS loitering weapon system maneuvers close to the target and uses video analytics to determine entry points into a structure, map the inside of unknown buildings performing simultaneous localization and mapping (SLAM), and identify combatants and non-combatants among the building occupants. The system is equipped to defeat threats using explosive payloads with man-in-the-loop control.

**Command and Control:** LANIUS has two operational modes:

- Legion-X interfaces for command and control, real-time video and data synchronization, and direct viewing capability
- Standalone operation – a handheld unit with Human-Machine Teaming (HMT) advanced interfaces.

**Autonomous operation:** An onboard companion computer interfaces with the camera assembly and drone flight computer for autonomous control. The computer can execute a full flight profile, takeoff, navigation, and scouting, without user intervention.

**Scout and detect:** LANIUS is equipped with cameras fitted with multiple visual sensors and IMU. The system incorporates a SLAM algorithm, using image processing to identify points of interest and displays relevant data and identification information to the operator. Threat classification and location are synced in real-time with Legion-X or standalone applications.

**Engagement:** LANIUS can carry lethal or non-lethal payloads to eliminate or neutralize the target. A dedicated integrated arming mechanism Electronic Safe and Arm (ESA) allows for safe transition between safe-to-arm-to-safe operational modes. Human attack missions require man-in-the-loop approval for fire procedures.



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### Operational Advantages

- BLOS ISR and attack capabilities (search and attack in one for complex environments)
- Equipped to engage with target (man-in-the-loop)
- Extreme maneuverability
- Minimal user interaction – HMT mode
- Electronic safe & arm
- Low collateral damage

### Key Features

- Legion-X compatible
- Racer Quadcopter drone frame and motor – high-speed engagement
- Navigation and mapping indoor/outdoor/transition
- Onboard computing power supporting AI advanced algorithm for collision avoidance/mapping/classification
- Wi-Fi or SDR communication
- Highly autonomous tactical sUAS

### Technical Specifications

Parameter	Description
Dimensions LxWxH	294 x 294 x 167 mm – not including battery
Max takeoff weight	1.25 kg
Payload weight	0.150 kg
Operational speed	Up to 20 m/s in an outdoor environment
Flight time	7 minutes
Battery type	Li-Po 4 Cell, 14.8 V, 1800 mAh
Companion	NVIDIA Jetson TX2
Communication	Wi-Fi / SDR