LVSS ADA C-UAS

Mobile Surveillance with Air Domain Awareness (ADA) and Counter-UAS (C-UAS) Capabilities

APPLICATIONS

- FORCE PROTECTION
- BORDER SURVEILLANCE
- TACTICAL RECONNAISSANCE
- PIPELINE SECURITY
- MOBILE COMMAND CENTER
- MOBILE SECURITY
- TARGET TRACKING
- LONG RANGE SURVEILLANCE



LVSS C-UAS adds proven Air Domain Awareness and Counter-UAS capabilities to the market-leading LVSS platform. LVSS C-UAS utilizes 3D Radar, EO/IR Camera, and RF detection and mitigation sensors to provide early warning alerts, detection, and non-kinetic countermeasures for various UAS systems. Threats are detected and displayed simultaneously, with position and elevation available for all radar tracks. The system is standalone, relocatable, and rapidly deployable.

Cameleon software provides advanced command and control (C2) capabilities, allowing individual control of sensors along with automated point-and-click or slew-to-cue functionality. Fixed sector, alternating sector, or continuous scan are the various radar operation sets. LVSS C2 leverages man-in-loop autonomy and artificial intelligence/machine learning (AI/ML) to identify targets, classify threats, cue RF sensors, and streamline the decision cycle.

All sensors and effectors are high technology readiness level (TRL) as currently implemented. The base LVSS system can be retrofit in the field to add ADA or C-UAS configurations to meet user requirements.

FEATURES

RAPID RELOCATION PERIMETER PROTECTION

The LVSS system is rapidly deployable (and stowed) to provide relocatable surveillance solutions to large areas. The sensors integrate to allow complete hemispherical detection of land and air targets.

ON-THE-MOVE EFFECTIVE, NON-KINETIC COUNTERMEASURES

Non-kinetic RF countermeasures provide the system with full C-UAS kill chain capabilities. Threats are detected simultaneously. Details are provided to the operator when the system is either fully deployed or while the vehicle is on-the-move.

ACT FASTER WITH HIGH PERFORMING VIDEO ANALYTICS

Gain additional insight into selected threats by engaging comprehensive video analytics models to identify and track. The analytics model can be used to control the camera autonomously.

INTEGRATE COMPLEX SYSTEMS, OPTIMIZING AWARENESS ACROSS DOMAINS

Cameleon integrates with operational features from all onboard sensors. It supports advanced device features and bi-directional communications.

REDUCE CYBER RISK

A cyber security tool provides high resistance to hacker attacks that can compromise mission effectiveness.

SPECIFICATIONS

ARCHITECTURE	
Base Platform	Ford F-250 Standard Truck
Size	
Weight	Approx. 7,700 lbs. (3,500 kg)
Length	Approx. 265 in. (673 cm)
Width	Approx. 100 in. (254 cm)
Height (mast stowed)	22 in. (56 cm)
Height (mast deployed)	16 ft. (4.9m) from ground to center of camera for Ford F-250
Radar and EO/IR Sensors	
Radar Standard Option	R20SS-3D Long Range Ground Surveillance Radar
Camera Standard Option	TacFLIR-380HD
Camera Wavelength Options	High Definition (HD) Mid-Wave Infrared (MWIR), Short Wave Infrared
Lasers	Laser Rangefinder Laser Pointer (NIR wavelength)
Illuminators	NIR wavelength
Other Sensors	Differential GPS, Weather Station, Inclinometers, Perimeter Intrusion
Command & Control	
Cameleon V5	Track blending of multiple sensors, slew-to-cue of camera to radar, mapping functionality, zone management, video archiving and distribution, and alarm notification and management
Simultaneously Tracking	>500 Targets
Counter Drone Technology	
Radio Frequency Sensor	Standard RF Sensor Kit: 2.4 GHz / 5.8 GHz / Wi-Fi; Extended Frequency Kit: 433 / 868 / 915 MHz / 1.2 GHz / Wi-Fi
Detection Range	Up to 3 km horizontal; 457 m vertical (variable with noise floor & environment)
Defeat Range	Up to 1.5 km horizontal; 457 m vertical (variable with noise floor & environment)
Operator Console	Provides two 17" HD displays, mouse, keyboard, and camera remote controller. Plus, a mobile tablet for RF detection and mitigation on the move.

Environmental	
Power Options	Battery, Vehicle and Shore Power
RF Power Output	Up to 30 Watts (dependent on control protocol, frequency, and antennas)
Deployment	
Mast Deploy and Fully Operational	< 60 seconds
System and Mast Stow	< 30 seconds
US Export Classification	ITAR VIIC



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