DroneNet Vehicle

Vehicular Counter Drone Solution for Convoy Protection

Multi-Layered Tactical Counter Drone Defense

Netline's Vehicular DroneNet platform offers a multi-layered, counter drone solution for Detection , Localization and Mitigation of hostile drones, providing a safe environment while driving military vehicles or senior VIP convoys. The DroneNet system is, in fact, creating a virtual protection dome over the tactical forces, preventing unauthorized drones to compromise the forces in action.

The DroneNet system is based on Netline's C-Guard family design concept, using a Slider modular architecture, with each module being a self-contained element, forming the jamming and sensing segments.
The DroneNet sensor & jammer are installed in the mission vehicle, designed to support convoy operations, whether on a temporary deployment or on-the-move operations.

System Dynamics International is the Authorized US Reseller of the Netline *DroneNet* Counter UAS line of products. Contact us for more information or to arrange a demonstration.

Authorized US Reseller
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Detection & Identification

Sensing Segment - The DroneNet's detection techniques are based on continuous analysis of time & frequency domains by RF sensors. Preloaded spectral signatures of all commercially available drones are used as the system's database. During the detection phase, the DroneNet searches for activity patterns corresponding to the stored signatures. Once a match is found the C4I console alerts a drone has been detected, as well as its type and controller type.

DroneNet's low false alarm rate of is achieved by using an SDR, modular SIGINT receiver, capable of detecting drones based on their spectral signature, being completely agnostic to the drone's protocol data (which might be encrypted or technically challenging to acquire) resulting in a fast-evolved signatures database.

Localization

DF Segment - The DF sensor continuously scans the spectrum, analyzing the spectral activity around a target in risk. A single DF sensor, installed in a vehicle, is capable not only to detect unauthorized drones, but also to point the direction from which the drones are trying to enter the airspace. The identity and direction of the drone is displayed on a C4I console installed in the vehicle.

Mitigation

Jamming Segment - Upon detection the system blocks the communication between the drone and its operator on ISM bands, as well as the GPS signal used by the drone.

Netline's DroneNet jammer is composed of 5 bands covering all potential drone frequencies. Each band addresses a different communication channel used by the drone for a different purpose;
• Disabling the drone's control & telemetry channel, resulting in loss of control over the drone
• Blocking the video downlink transmission
• Jamming the GPS signal, disabling the drone's navigation & stabilization capabilities
The system's modular design enables future upgrade and insertion of additional frequencies and threats.

Main Features

• Covers all drone threats, simultaneously; 433MHz, 900MHz, GPS, 2.4GHz, 5.8GHz

• Passive detection and localization

• Does not require Line of Sight to the drone

• Very low Mean Time to Repair (MTTR), no periodic maintenance required

• Based on an SDR platform, enabling DDS / AWG signal generation

• Omni-directional / Directional according to mission requirements

• Zeroize function to delete sensitive data from the system

Technical Specifications:

Jamming Bands .... 433MHz, 900MHz, GPS, 2.4GHz, 5.8GHz
Detection Bands 433MHz, 900MHz, 2.4GHz, 5.8GHz
DF Bands 2.4GHz, 5.8GHz
Input Power .... 18-36 DC
Environmental .... Operating temperature: -10o to +49o C, Humidity: 90%
MIL-STD-810F/G Compliance ....Temp. (501.4, 502.4), Vibrations (514.6), Rain (506.4), Humidity (507.4),
                                 Dust (510.4), Shock (516.6), Low pressure /High altitude (500.4),
                                 Salt fog (509.4), Solar radiation (505.5), Immersion (512.5),