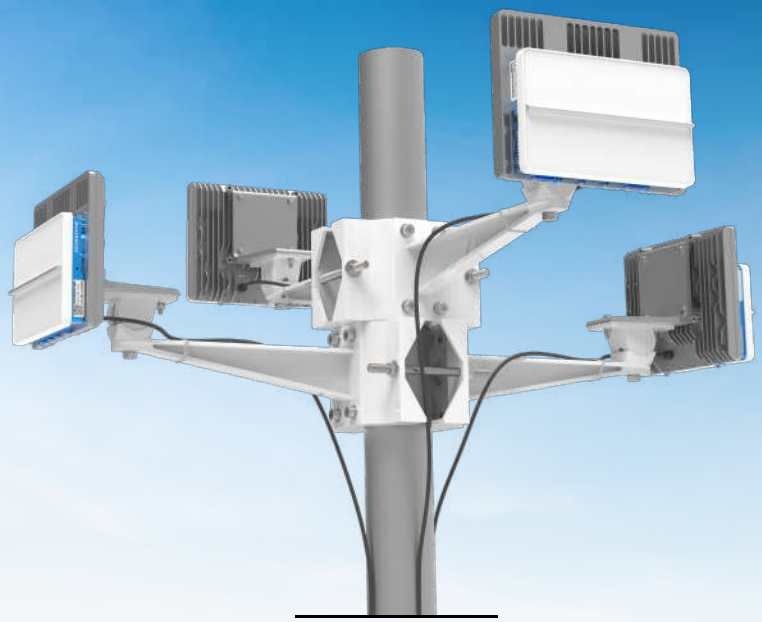

HyperSensing™

HyperSensing™

A Potent Mix Of Sensing Technologies

HyperSensingTM technology is a cutting-edge detection system that has been developed to identify the presence of drones in large areas up to 100 square km. It combines active RF technologies like radar with passive RF technologies such as ESM (Electronic Support Measures) and acoustic sensing technologies to detect a wide variety of drones in almost any environment.

The active RF technology used in HyperSensing™ is radar, which sends out high-frequency electromagnetic waves that bounce back off objects in their path. This allows the system to detect drones that may be hidden from view or located in areas that are difficult to access. The passive RF technology, ESM, allows the system to detect signals emitted by drones, such as communication signals, GPS signals, and other radio frequency emissions. Acoustic sensing technology can also identidy a drone's location by sensing its sound.

HyperSensing™ technology uses advanced algorithms to analyze the data collected from these different sensors to accurately identify drones and distinguish them from other aerial objects, such as birds or planes. The system can also differentiate between different types of drones, such as fixed-wing or quadcopters, and can provide real-time information on their location and trajectory.

HyperSensing™ technology provides a powerful solution for detecting drones over large areas, and is an ideal solution for both urban and military settings.

Types of sensors used in HyperSensing™:

Radar Sensors: Radars, which emit radio waves, can determine the presence, location, speed, and direction of drones, aiding in threat identification and response. However, radars can struggle to accurately differentiate drones from birds or small aircraft, leading to false alarms or missed detections. Integrating additional technologies, such as advanced algorithms and sensor fusion, can improve the accuracy and reliability of drone detection systems.

Optical Sensors: Optical sensors are cost-effective, offer high precision, and don't interfere with existing communication systems.They detect drones using image recognition, infrared cameras, or LiDAR. However, optical sensors need good visibility, making them less effective in adverse weather or low-light environments. Physical barriers like trees or buildings limit their coverage area. Optical sensors also struggle with distinguishing between drones and birds or other flying objects, leading to false alarms. Optical sensors should be complemented with other detection technologies for more comprehensive drone detection.

Acoustic Sensors: Acoustic sensors leverage sound signatures for early identification. They're cost-effective, offer wide coverage and can detect various drone models. However, they can't distinguish between authorized and unauthorized drones, potentially leading to false alarms and increased complexity in filtering legitimate aerial activity.

ESM Sensors: ESM (Electronic Support Measures) sensors can detect the electronic signatures emitted by drones, such as their communication signals and radar emissions. ESM sensors analyze these signals and accurately identify the presence and location of drones, enabling effective countermeasures. But ESM sensors are vulnerable to electronic countermeasures. Sophisticated drones can evade detection by manipulating their electronic signatures or emitting false signals. This may deceive ESM sensors and compromise their effectiveness. Continuous advancements in ESM technology are necessary to stay ahead of the evolving drone threat landscape and enhance the sensor's resilience to countermeasures.

RF/DF Sensors: RF/DF sensors employ radio frequency and direction-finding techniques to identify and monitor drones. But they may struggle to differentiate between authorized and unauthorized drones, potentially leading to false alarms and increased operational complexity.

Specifications

Detection Range: 50m to 20km
Detection Drone Size: Nano to large drones
Detection of Other Assets: People, boats, vehicles and planes
Terrain Support: Land, sea, mountains, desert and forests
False Positives: 98% noise reduction using AI-based recognition