

Active Optoelectronic Detection System



Active optoelectronic detection systems converge active detection, intelligent identification, target positioning, evidence collection and tracking, and other functions into one. Based on the design concept of "autonomous driving, independent operating", it integrates visual analysis, model training, and deep learning of the three core technologies, breaking the traditional photoelectric system's reliance on radar/radio detection. It supports 7*24 uninterrupted detection, identification, and tracking of low-altitude drones. It is widely used in airports, high-speed railway stations, prisons, and urban low-altitude security.



Active Detection

Autonomous search and detection of airborne targets, real-time detection of low-altitude drones 24/7



Evidence Collection and Tracking

Capable of recording drone trajectory and image information, providing reliable evidence for subsequent processing, and completing the entire closed-loop disposition process



Multi-spectral Detection

All-weather target detection (applicable to day/night/bad weather) by integrating visible light and infrared thermal imaging technologies



Accurate Ranging

Using laser pulse ranging, image enhancement algorithms and deep learning models to improve the accuracy of target feature extraction and matching



Intelligent Identification

Applicable to low-altitude target detection and identification using a long-range small target algorithm based on a high-definition camera module and AI vision deep learning



Real-time Monitoring

Provides the ability to view detection results and UAV information in real time, enabling rapid response and decision making



Flexible Expansion

Supports integration and linkage with other systems to form a comprehensive, multi-level, three-dimensional defense system for low-altitude security



Strong Applicability

It can operate in a variety of environments and scenarios, whether urban or rural and continue to operate and perform

Stationary: VAR200

Based on the design concept of AI learning, the system integrates the RF sensor and optoelectronic. It has outstanding performance, complete functions, and distinct characteristics. The system integrates the functions of active detection, intelligent identification, target positioning, and evidence collection and tracking. It can continuously detect, identify, and track the drones in the low-altitude range for 24 hours. The whole system has high integration, good scalability, and strong adaptability, and can be widely used for long-term fixed deployment in critical areas such as airports, petrochemicals, and key infrastructure.



Run Independently

The system operates independently as a stand-alone system, it doesn't rely on any other equipment such as radar or radio frequency equipment



Cost Effective

Single set of equipment has full functions, can be used for individual operations and easy to deploy, can also work in coordination with other equipment



Active Detection

Based on the servo gimbal, it automatically scans and searches the surrounding airspace. Once a drone is detected, the alarm will be immediately triggered



User-friendly

By a simple click, the system runs automatically, carrying out automatic detection and alarm functions



Network Coordination

By adopting self-developed intelligent visual analysis and AI recognition algorithms, it can accurately recognize and give early warning to various drones



High Applicability

The system is integrated as one High protection level Suitable for various security scenarios



Detection Mode Active scanning, searching, identifying, and tracking (without the guidance of other devices)

Detection Function It detects and shows the captured images of the drone, target similarity, direction, and other information

Detection Distance 0 ~ 1km

Focal Length 40 x optical zoom

Resolution 3840x2160dpi

Horizontal View Angle >50° (Max)

Detection Speed 30°/second

Stationary: VAR300

VAR300 is a stationary high-performance multi-integrated active photoelectric detection device that adopts multi-spectrum and multi-technology fusion design, incorporates thermal imaging technology and laser rangefinder technology based on VAR200. It also makes full use of deep neural network algorithms to automatically extract and classify features from image data to improve the accuracy and effectiveness of detection and identification of "low, slow and small" drones. It is suitable for airports, prisons, critical activities and other scenarios.



Active Detection

Autonomous search and real-time detection of drones in the low altitude range nearby 24/7



Forensic Tracking

Capable of recording the flight path and image information of the drone, providing reliable evidence for subsequent processing and completing the entire process of closed-loop disposal



Multi-spectral Detection

Integrate visible light and infrared thermal imaging technologies to realize all-weather detection (applicable to all day, all weather)



Accurate Ranging

Using laser pulse ranging, image enhancement algorithms and deep learning models to improve the accuracy of target feature extraction and matching



Intelligent Identification

Long-range small target algorithm based on high-resolution camera module and AI vision deep learning, applicable to low-altitude target detection and identification



Target Localization

Automatically locks on to the target after detecting a drone, and displays information such as the number and Geo-location



Detection Mode Active scanning, searching, identifying, and tracking (without the guidance of other devices)

Detection Distance Daytime: 0 ~ 1.5km, Nighttime: 0 ~ 1km

Ranging Distance 0 ~ 1km

Ranging Accuracy ≤2m (RMS)

Total Pixel ≥200W dpi

Infrared Thermal Imaging

·Detection Type VOx Uncooled Focal Plane

·Resolution 640*512dpi

Working Hours 24-hours continuous operation

IP Level IP66