



# Advanced Perimeter Security Solution



- With global surveillance markets expected to grow significantly, the capabilities offered are positioned to capitalise on both military and civilian demand for intelligent security systems. The system has already demonstrated its commercial potential in related industries and is ready for deployment in a variety of high-stakes security environments.

## Introduction

The capabilities offer cutting-edge perimeter intrusion detection by integrating multiple sensor technologies like visual, LIDAR, infrared, and thermal imaging. The system provides real-time situational awareness and response capabilities, ensuring maximum protection of sensitive facilities from potential threats such as intruders, drones, and vehicles.

## Key Features

- **Multi-Modal Sensor Integration:** Leverages a variety of sensors to non-biometrically identify, detect, track, and re-identify targets, even after a tracking break.
- **AI-Powered Analysis:** Uses advanced AI algorithms for object identification and behavioural analysis, ensuring accurate detection of potential threats.
- **Autonomous Robotics:** Ability to integrate with commercial robotic platforms to provide flexible, mobile security patrols, including active threat engagement and verbal communication.

## How it Works

We use a modular system architecture, which includes:

- **LIDAR & CCTV Cameras:** For comprehensive perimeter surveillance.
- **AI Interpretation:** To distinguish between human, animal, and vehicle activity, reducing false alarms.
- **Autonomous Response:** Optional use of robots to autonomously approach threats and interact using onboard sound systems.
- **Scalable & Customisable:** Can be adapted for various environments, including military bases, critical infrastructure, and crowded civilian areas like airports and stadiums.

Protect your facility and ensure you know who and what is inside your perimeter with non-biometric identification, tracking and re-identification utilising existing CCTV and new LIDAR sensors, with optional thermal cameras providing perimeter intrusion detection indoors and outdoors.



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**Monitor** – static and mobile CCTV, LIDAR, RADAR, Thermal etc

**Detect and Alert** – AI interpretation of data, image recognition, change detection, non-biometric identification and re-identification

**Interrogate** – check and validate alert, agree action (human in the loop)

**Respond** – gather data, make announcements, locate issue and go scene

## Our solution provides:

- Non-biometric identification (and re-identification) of subjects using multiple sensors
- A digital twin of the environment allowing the tracking of objects
- Powerful user interface for filtering and searching for specific subject characteristics

## Operational Scenarios

A subject is detected near a perimeter fence. The solution tracks the subject using LIDAR and optical sensors. If the subject's behaviour becomes suspicious (e.g., attempting to breach the fence), the system raises the threat level and dispatches a human or robot to intervene. The system allows for both autonomous actions and human oversight, with supervisors able to take control at any time.

## Dual-Use Potential

The capabilities are equally effective in defence and civilian environments, enhancing security for public utilities, transport hubs, festivals, and smart cities. Its ability to track and re-identify individuals without biometric data is a key advantage in civilian settings, ensuring privacy while maintaining security.

## Potential Applications

- Military Bases
- Airports & Critical Infrastructure
- Crowded Public Spaces
- Policing & Law Enforcement

## Proven Technology

- Advanced LIDAR-based perimeter surveillance.
- Non-biometric re-identification technology for tracking individuals through visual and infrared data.

## Key Benefits

- **Reduced Human Risk:** Automation reduces the need for human intervention in dangerous situations.
- **Efficient & Scalable:** Capable of covering large areas with minimal sensor installations.
- **Real-Time Adaptive Responses:** Smart sensors and AI algorithms enable instant adaptation to changing threat levels.

## Why Choose this solution?

The capability provides unmatched perimeter protection by combining smart sensors, AI-powered detection, and autonomous robotic patrols. Flexible, scalable, and ready for deployment in both military and civilian sectors, it's the next generation of perimeter security. Contact [info@rheinberry.com](mailto:info@rheinberry.com) for a demo.