

Edge-Intelligent Applications

SafeZone-edge for Axis cameras

Real-time edge-based intrusion detection and sterile zone monitoring



Digital Barriers

SafeZone-edge is an intelligent 'edge' device-based video analytics solution for automatic monitoring of zone-based intrusions and suspicious activity.

An advanced real-time engine mitigates environmental effects and false alarms, while an auto-calibration function ensures simple installation.

Reliable real-time video analytics for real-world security

SafeZone automated intrusion detection is a world-class technology for more effective surveillance and security monitoring in real-world situations. Its unique processing engine is able to analyse events in 3D for a more accurate interpretation of security scenarios. SafeZone-edge runs on edge-based devices for ease of deployment – yet it still delivers performance levels that are comparable to that of conventional server-based video analytics solutions.

SafeZone-edge is one of the very few truly edge-based video analytics solutions to have been certified by the internationally renowned UK Government i-LIDS[®] scheme as an approved primary detection system for operational alert use in sterile zone monitoring applications. It is also certified as an i-LIDS[®] approved event-based recording system for sterile zone monitoring. The SafeZone engine has been optimised to run efficiently on edge processors, thereby avoiding the need for costly and complex servers.

Practical operational benefits

SafeZone-edge was developed with input from security and surveillance installers – ensuring a focus on accurate detection as well as ease of configuration, scalability and cost effectiveness. Zone-based detection scenarios can be defined remotely on each camera to address four typical security situations – and multiple scenarios can run on a single processor concurrently. A unique auto-calibration function allows a single or multiple cameras to be setup quickly with minimal effort required from the installer.

Intelligent processing enables reliable monitoring in both benign and harsh conditions – across internal and external environments. The advanced reasoning engine mitigates external effects (adverse weather, camera movement, shadows and variable lighting) that can often lead to false alarms on other systems. In short, SafeZone-edge offers the optimal combination of operational performance, simplicity, intuitive installation...and affordability.

Product code

SZe-AX Advanced real-time 'edge' video analytics for automated security monitoring (Axis devices)

Key features

- Unique 3D video analytics engine for highly accurate automated perimeter and sterile zone monitoring
- Unique single/multi-camera* auto-calibration tool with intuitive and simple security scenario editor
- Optimised for edge processing on cameras/encoders, without the cost of back-end server infrastructure
- An i-LIDS[®] approved primary detection system for operational alert use in sterile zone monitoring applications (the highest performance attainable)
- Automatic mitigation of environmental effects such as poor weather, variable illumination and shadows
- Integration of alarms and metadata* with major VMS (Genetec, Milestone) and Axis output formats

*Note, some features may only be available on future releases

Operational domains and installed base

SafeZone video analytics have already been deployed to secure a number of large, complex sites spanning several thousand cameras. It can be used for a range of security scenarios (such as intrusions and loitering) and is suitable for monitoring sterile zones in internal/external settings:

- Defence and high-security sites
- Transportation networks and facilities
- Industrial and critical infrastructure facilities



SafeZone-edge is optimised for cameras/encoders on the ACAP (Axis Camera Application Platform)

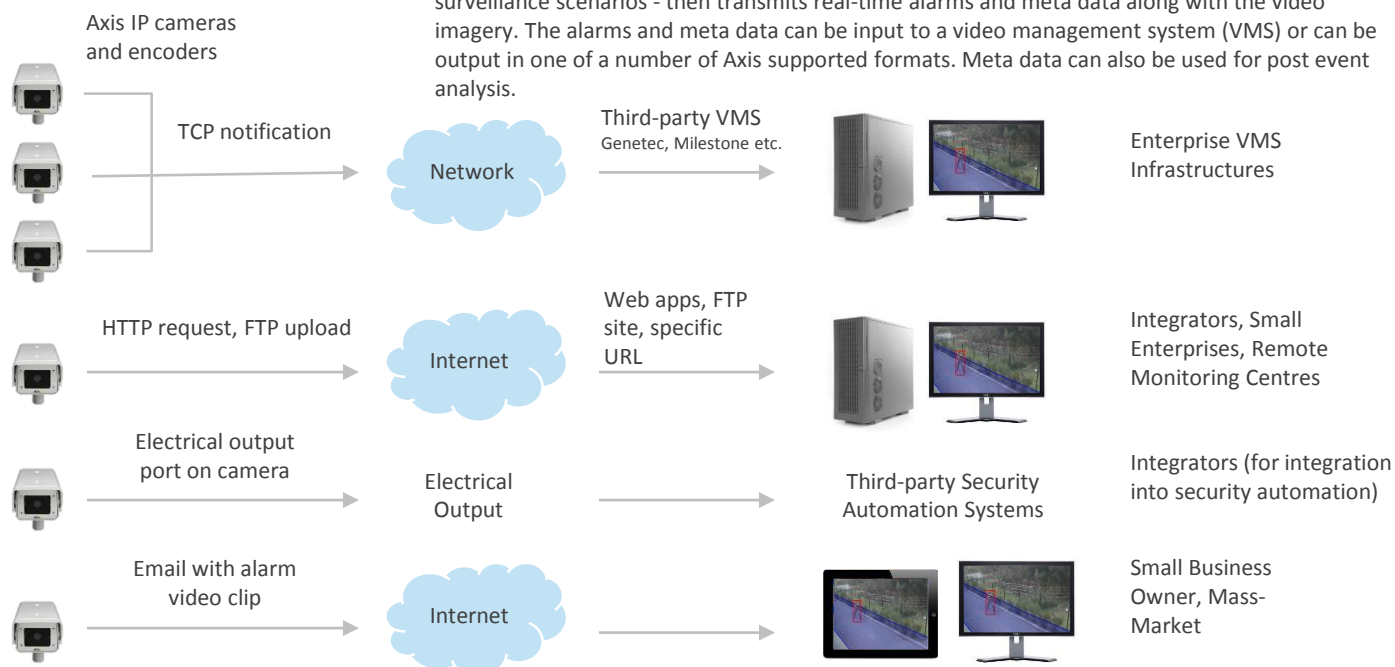


Imagery Library for Intelligent
Detection Systems
Sterile Zone Monitoring
2014 Evaluation
Digital Barriers
SafeZone-edge
Version 1.0



APPLICATION
DEVELOPMENT
MEMBER

Typical System Set-up Options



Video Analytics Alarm Scenarios



Entrance Security
(intrusion detection)



Fence Line Security
(detection of passage)



Perimeter Monitoring
(conditional alarm)



Internal Security
(intrusion detection)



Loitering Detection
(detection of presence)

- Intrusion:** An alarm is triggered when one or more person(s) and/or vehicle(s) enter a selected or targeted zone or area (from any direction and with any trajectory)
- Zone-Crossing:** An alarm is triggered when a person and/or a vehicle passes through two targeted zones in a given sequence or in an incorrect direction
- Loitering:** An alarm is triggered when a person and/or a vehicle remains in a target zone, area, or defined place greater than the predefined number of seconds
- Conditional:** An alarm is triggered when a person and/or a vehicle enters a target zone but did not first pass through or originate from one or more selected zones

SafeZone can discriminate between people, vehicles or people and vehicles.

This is achieved without any user configuration by using 3D models that have been validated against a significant amount of video and contexts.

Compatible Axis Network Devices

The supported Axis units are all cameras and encoders which are both ACAP (Axis Camera Application Platform) and artpec-4 / artpec-5. Some examples are:

- P1353, P1353-E, P1354, P1354-E, P1355, P1355-E, P1357, P1357-E, Q1602/Q1604/Q1614, Q1602-E/Q1604-E/Q1614-E, Q1765-LE, P3353, P3354, P3363-VE, P3364-LV (6mm)
- P3353, P3354, P3363-VE, P3364-LV (12mm)
- P3367-V/P3384-V, P3364-LVE (12mm)
- Q6042/Q6042-E/Q6042-C/Q6042-S, P5414-E/P5415-E, Q7411/Q7424-R (encoders).

For device compatibility enquiries, please contact Digital Barriers.

Simple Installation (in minutes)

- Install:**
1. Install the SafeZone-edge Setup Interface
 2. Upload SafeZone-edge application package and install the license (using the Setup Interface)
- Configure:**
1. Automatically calibrate the cameras/encoders
 2. Adjust the automatically defined intrusion scenario (or define advanced scenarios)
 3. Configure the output formats (e.g. TCP/IP notification, electrical output on camera)