



MIMOS Self-Monitoring Analytics Reporting Technology (SMART) Lock-Up

Monitoring detainees such as in police lock-ups often rely on manual detection of events and results in post-event action. Such safety levels within lock-ups risk the well-being of detainees. MIMOS SMART Lock-up utilises video analytics to automatically detect and issue alerts. These are done on suspicious or violation activities in the lock-up cells and the perimeter of a lock-up building, in the absence of patrolling officers.

Overview

MIMOS SMART Lock-Up is a versatile video surveillance solution for lock-up environments. It includes intelligent elements of advanced video analytics in a flexible architecture. The solution is capable of detecting suspicious or violation activities based on the movement and behaviour of the object in the lock-up cell and perimeter of the lock-up during day and night.

Features

MIMOS SMART Lock-Up comprises intelligent video analytics as well as complementary management features:

- **Cell-Based Video Analytics**
 - a. Climbing Detection – detects climbing activity in a cell.
 - b. Loitering in Toilet Area Detection – detects object presence in a toilet for a fixed long duration.
 - c. Aggression Detection – detects fast movement or aggressive activity in a cell such as pushing and punching.
 - d. Tampering Detection – detects any attempt to move or distort a camera's position or view.
- **Perimeter-Based Video Analytics**
 - a. Restricted Region Detection – detects an object's presence at a location with limited access.
 - b. In/Out Detection – detects ins and outs of an object's movement in any location of a lock-up.
 - c. Crowd Density Detection – detects the presence of high people occupancy.
- **Event Metadata Display and Management**

Event metadata is displayed and managed by a Smart Client or by third party clients (event metadata is accessible through provided socket connection libraries and HTTP POST (JSON)).
- **Smart Client (for large lock-ups)**

Smart client comprises:

 - a. Real-time camera view for live monitoring
 - b. Real-time event alerts (video and audio)
 - c. Location-based 3D event indicator
 - d. Historical event analysis

Technology Benefits

The main impacts of MIMOS SMART Lock-Up are:

- **Patented Algorithms and Technology**

MIMOS' in-house algorithms provide high accuracy and low false alarm rates.
- **Real-Time Monitoring and Offline Event Detection**

MIMOS SMART Lock-up can be applied in automated real-time video monitoring and offline forensics event detection.
- **Increased Operational Efficiency**

Video monitoring and analysis potentially increases daily work efficiency by providing situational awareness to users through various event fusion and analysis.
- **Uncompromised Quality with Reduced Cost**

Security personnel can efficiently run the grounds without the need for stationary personnel to watch surveillance monitors.

Technology Summary

MIMOS SMART Lock-Up

A versatile video surveillance solution for lock-up environments.

Industries: Enterprise, Government, Public Safety

Features

- Cell-based video analytics
- Perimeter-based video analytics
- Event metadata display and management
- Smart Client (for large lock-ups)

Technology Benefits

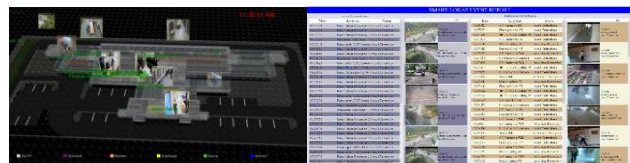
- Patented algorithms and technology
- Real-time monitoring and offline event detection
- Increased operational efficiency
- Uncompromised quality with reduced cost



Cell-based video analytics



Perimeter-based video analytics



Smart Client

System Requirements

MIMOS SMART Lock-Up		
Configuration Requirements		
Resolution	352 x 288 (CIF)	
Frame/Second	10fps (office, foot walk), 15fps (vehicle, sports, fast movement)	
Hardware Requirements		
Server Machine	Processor: Intel® Core i7-7567U CPU @ 3.50 GHz (2 cores) Memory: Min. 4GB Disk Storage: Min. 1 TB	Supports 6 cameras*
Network	Processor: Intel® Xeon® CPU E5-2630 @ 2.3GHz (12 cores) Memory: Min. 24 GB Disk Storage: Min. 6TB	Supports 36 cameras*
Client Machine	Processor: Intel® Core i5-7260U CPU @ 2.20 GHz (2 cores) Memory: Min. 4GB Disk Storage: Min. 256GB	Supports each Smart Client, separately. Able to support 42 camera views display.
Network Bandwidth	2Mbps per camera	
Software Requirements		
Operating System	Windows® 7/Windows® Server 2012 and above	
.Net Framework	Microsoft® .NET 4.5 and above	
Database	Microsoft® SQL Server Express 2012	

* Each cell-based camera is supported by three video analytics features.

