ISS

SecurOS®
Helmet
Detection

Screen for protective gear

Use video intelligence to ensure safety and security in facilities

Technology Overview

Construction sites, manufacturing facilities, and warehouses require strict compliance with safety rules, including the use of protective equipment, such as helmets and hardhats. SecurOS® Helmet Detection is a specialized AI video analytic module for monitoring and increasing industrial safety.

The solution identifies persons from a video stream and detects if they are wearing a protective helmet/hardhat. If there is no hardhat detected on their head, the module will generate an alarm and send real-time alerts, including SMS, email, audio notifications, and more, to all required supervisors.

As part of the ISS Safety package, Helmet Detection is an essential part of an organization's safety intelligence that provides facilities with additional oversight into unsafe behavior. The ability to export violations reports and pinpoint hardhat usage makes it a critical piece of training for occupational safety efforts.

Applications

Manufacturing Sites

Warehouses

Logistics Management

Construction Sites

Key Features

INTEGRATED SOLUTIONS
In addition to other ISS products, Helmet Detection complements the detection of hardhats with facial recognition, access control integration, people detection during restricted time periods, and more.

SECUROS® INSPECTOR
Events from Helmet Detection can be a data source for the ISS system of automation and production control and behavioral security auditing processes, SecurOS® Inspector.

REGULATORY AGENCY COMPLIANCE
The module can be used to meet OSHA 1910.135 compliance requirements.

SUPPORTS VARIOUS HARDHAT TYPES
All ANZI Z89.1 compliant hardhats and all colors are supported with the module.

ADVANCED HARDHAT LOCATOR
Module will know if the hardhat is not on a person's head; for example, the detection capabilities can alert users if the hardhat is in the person's hand.
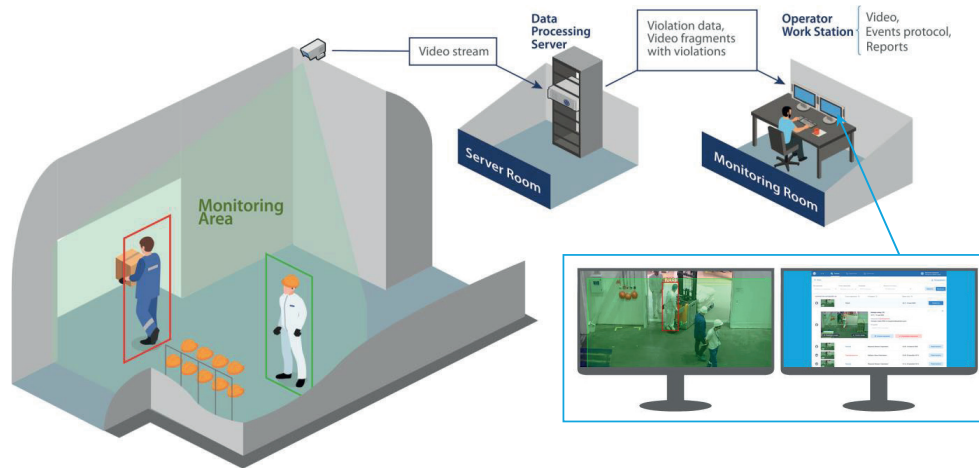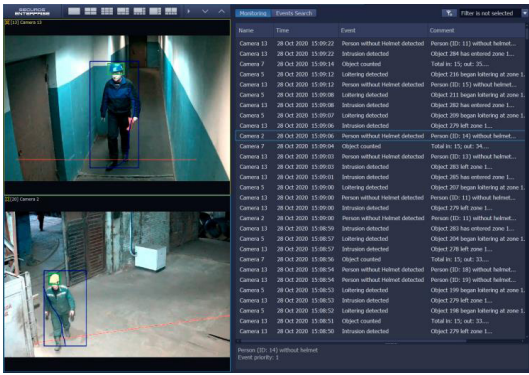
THIRD-PARTY INTEGRATION
Wide rage of available APIs makes it simple to integrate third-party systems to build a comprehensive solution.

SecurOS® Helmet Detection at Work

The SecurOS® Helmet Detection module significantly improves the efficiency of the occupational safety system, which generally leads to increased enterprise economic efficiency because of:

- Steady improvement in labor discipline and reduction in the number of industrial violations and accidents causing occupational injuries.
- Reduced costs on liability insurance and the cost of inspection staff.
- Ability to investigate incidents.
- Prevention of downtime because of incidents.
- Reduced reputational risks for the company.

Specifications

ISS Platform Support

Operating System	Windows 10/11 Pro Windows Server 2016/2019/2022
SecurOS® Edition	SecurOS® Premium, Enterprise, MCC

Camera Technical Data

Varifocal or motorized lens	2.8 - 12 mm or higher
Camera view	Angle, Overhead, Horizontal
Minimal required resolution	FullHD (1920 x 1080)
Minimal required FPS	15 frames per second
Camera angle	The angle of inclination relative to the horizontal plane is from 35° to 70°
Camera mounting height	11.5 - 13 feet (3.5 - 4 meters)

Additional Technical Data

Supported type of helmet/hardhat	All ANSI Z89.1 compliant hardhats; All colors supported
Size of a person in frame	No less than 10% by height
Helmet size in pixels	Minimal: 50x40 pixels; Recommended: 80x60 pixels
GPU requirements	NVIDIA® GPU - CUDA Compute 6.1, 7.5, 8.6
Violation record data	• Type of violation • Date and time of each violation • Place of the violation • Links to view and download a video clip of the violation

Ordering Information

Part numbers	**IF-TK-HEL** SecurOS® Helmet Detection (per camera)

ISS

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INTELLIGENT VIDEO. DEFINED.®