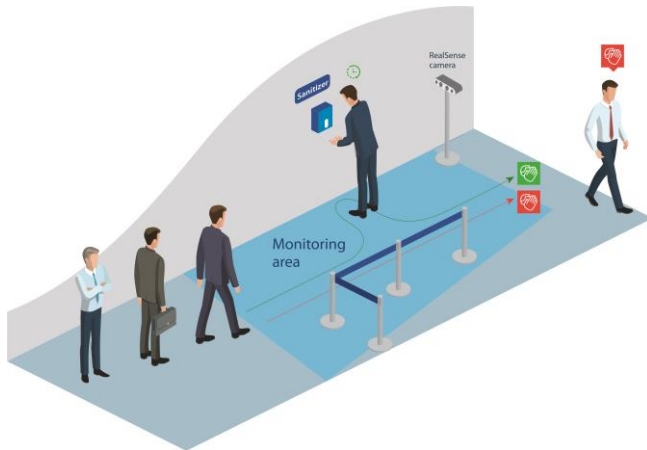




SecurOS™ Hand Sanitizing Detection

Intelligent Hand Sanitizing Control System



SecurOS™ Hand Sanitizing Detection is a hardware and software system designed to analyze human behavior related to compliance with the health standards and provides automatic control of hand sanitizing stations.

The system can be quickly deployed and easily configured to operate wherever hand sanitizing regulations are in place. The detection results from multiple systems can be processed by one operator using the specialized SecurOS™ Inspector module for labor protection and industrial safety.

OBJECTIVES

1. Motivate people to comply with the established sanitary standards.
2. Detect violations 24/7 unaffected by “human factor”.
3. Collect evidence automatically: screenshots, video and metadata. Resolve disputed situations and apply disciplinary actions based on evidence.
4. Optimize the costs of supporting the staff of field inspectors. There is no need to place a supervisor in each detection area.
5. Measure the impact of actions taken and identify further actions to ensure labor protection and industrial safety.

APPLICATIONS



Food industry



Catering



Medical facilities,
pharmaceutical
companies



Government
buildings



Business centers



Education
facilities

The SecurOS Hand Sanitizing Detection system is designed to be used in public and government buildings at checkpoints, as well as at the boundary of “dirty” and “clean” zones on the territories of enterprises of different industrial branches. The system makes it possible to automatically monitor the compliance with the established sanitary regulations.

SYSTEM HARDWARE / SOFTWARE COMPONENTS

Hardware components:

- Intel® RealSense™ Depth Camera
- SecurOS video server based on Intel hardware components with pre-installed SecurOS software components
- SecurOS Inspector operator workstation
- USB Type-C cable

Software components:

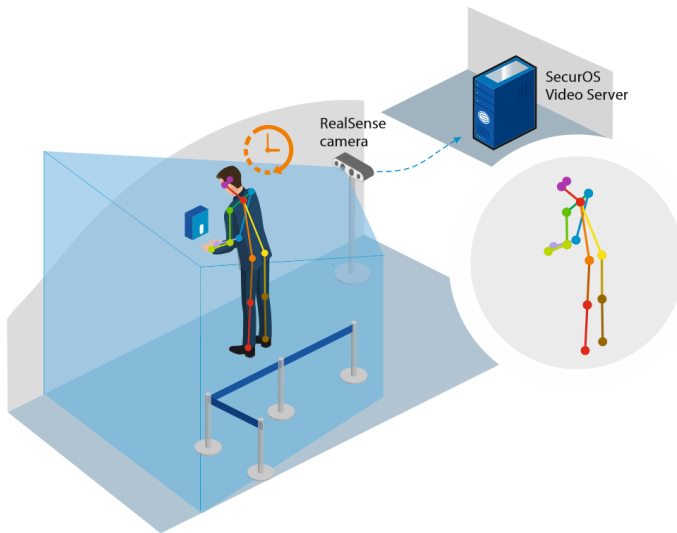
- SecurOS Video Management Platform
- SecurOS ActionTracker RS video analytic module
- SecurOS Inspector module
- Intel® RealSense™ SDK

HOW IT WORKS

The SecurOS Hand Sanitizing Detection system is based on the principle of stereo vision technology, Markerless Motion Capture neural network algorithm, and an expert system (semantic analyzer). This combination enables to retrieve 3D coordinates of key points (head, shoulders, elbows, hands, etc.) of the human skeleton in the 3D space of the analyzed scene and interpret human behavior.

Human behavior analysis and event detection

People should enter the controlled area one at a time, keeping a safe distance of 5 – 6.5 feet (1.5 – 2.0 meters), come to a sanitizer device or a sink, and wash their hands or use sanitizer. The system detects human presence within a distance of 13 feet (4 meters) from the camera and analyzes its behavior up to the point of exit from the control zone.

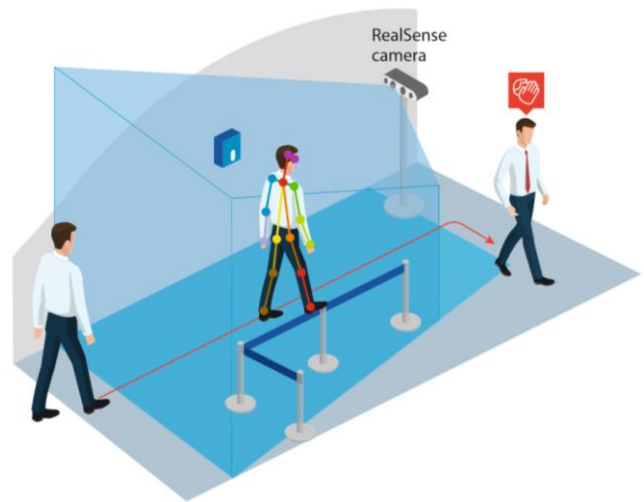
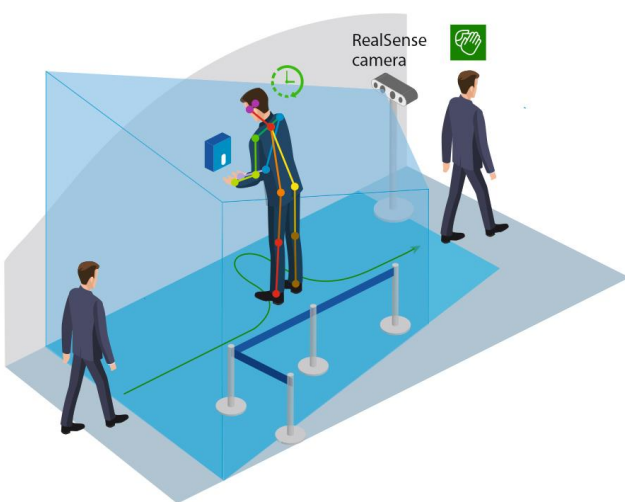


Video and metadata received from the Intel® RealSense™ camera are transmitted to the SecurOS server, where the ActionTracker RS video analytic module processes the data, creates a 3D model of a person and analyzes their posture and movements.

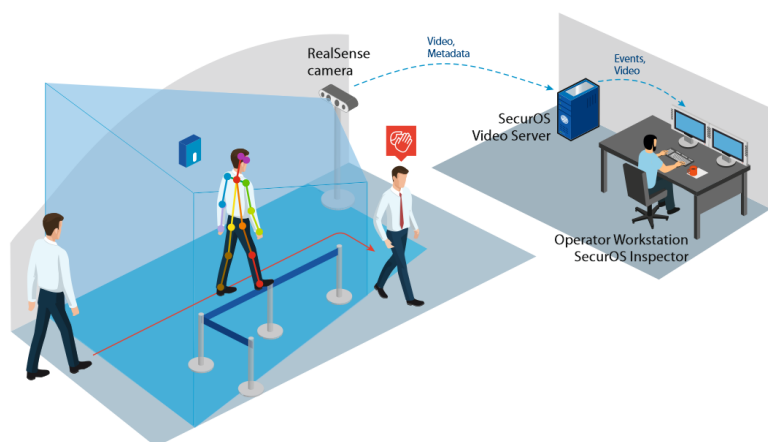
Event detection

Based on the analysis of human behavior during their stay in the control zone, the system generates one of two events:

1. «*Violation is not detected*», if a person in a predefined sanitizing area, performed a sequence of actions identified as hand washing (sanitizing).
2. «*Violation is detected*», if a person crossed the predefined sanitizing area without sanitizing/washing their hands, or if the sanitization was not performed properly.



Event management



Each event is registered by the system and transmitted to the SecurOS Inspector workstation.

SecurOS Inspector ensures timely retrieval of reliable data about all violations at each controlled area. The operator has access to the following data on each violation:

- type of violation
- violation status (new, confirmed, rejected)
- date and time of the detected violation
- camera name (place of violation)
- full name of the violator
- screenshot of the violation
- links to view and download a video clip of the violation

After review of the event data, the operator has the ability to confirm or reject the “violation detected” events and then act according to the company’s internal regulations.

In addition, SecurOS Inspector provides the following capabilities to process the statistical data about violations:

- Display customized reports in a form that is user-friendly for administrative staff and management.
- Work with built-in “Directory of Employees”. With the data of the Directory, an operator can associate the violation to a certain person, and then it is possible to get statistics of violations for a specific person and to control the employees of the enterprise much more effectively.

SYSTEM ADVANTAGES

- An innovative solution based on neural network algorithms, an expert system, and the modern stereo vision technologies provides exceptional detection accuracy.
- Provides continuous control — 24/7.
- Independence from the “human factor”. The whole process: from detecting a violation to statistical processing of the received data and generating reports, is performed automatically — without the involvement of a person, who can miss a violation involuntarily or intentionally.
- The tools for processing and managing events, collected by the SecurOS Inspector module, provide a complete and reliable set of statistical data that can be transformed into reports of the desired types both for supervising employees and for the management of the customer company.
- Easy and quick installation and setup. There is no need for complicated or time-consuming installation and further maintenance. There is a special calibration mode for quick start-up.
- Support for centralized or distributed architecture according to the customer’s requirements. All control areas of a local or territorially distributed facility, if necessary, can be controlled “from one point”. In this case, the processed data will be transmitted to one SecurOS Inspector workstation.
- Ability to expand the functionality of the solution by incorporating ISS’ face recognition module (SecurOS FaceX) with an access control system using single-factor or multi-factor authentication, etc.
- Integration with 3rd-party systems does not require significant resources due to the wide range of available SecurOS APIs.

TECHNICAL SPECIFICATIONS

Supported Operating Systems	Windows 10 — Pro, Enterprise, Education
Availability in SecurOS editions	SecurOS Premium; SecurOS Enterprise
Camera	Intel® RealSense™ D435, D435i
Control area dimensions, maximum	6.5 ft (width) x 13.1 ft (length) (2 m x 4 m)
Camera install height	3.9 – 4.6 feet (1.2 – 1.4 m)
SecurOS video server based on Intel hardware components with the pre-installed SecurOS Software	Nettop Intel NUC BOXNUC8I7HVKVA2 <i>It is possible to use similar hardware components.</i>
USB cable	USB Type C (max length = 1 m) Reference cable: http://www.newnex.com/usb-type-c-cables-legacy.php

ORDERING INFO

IF-ATRS-HAND-S	SecurOS™ Hand Sanitizing Detection Module – Software license (per camera). Module is designed to analyze human behavior related to compliance with health standards and to provide automatic control of hand sanitizing stations.
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