

SecurOS® UVSS

Enterprise Level Under Vehicle Surveillance Solution



Technology Overview

The SecurOS® UVSS is designed to improve facility safety by optimizing the vehicle screening process. Simple to deploy, the system enables organizations to realize significant cost savings related to infrastructure investments and operations by streamlining what has traditionally been a multi-step procedure into a single tool.

SecurOS® UVSS is a cost-effective compact solution for automated visual inspection of all types of vehicles: from passenger vehicles to trucks. It is perfect for government, military, corporate, and transportation facilities - wherever vehicle's undercarriage visual inspection has to be performed.

SecurOS® UVSS has a wide range of applications including detection of explosives and dangerous objects, detection of smuggling of prohibited items, as well as searching the vehicle's undercarriage for damages and anomalies.

Applications



Industrial Enterprises



Critical Infrastructure & Restricted Access Facilities



Customs Control & Border Management



State Institutions



Vehicle Checkpoints at Airports and Sea Ports



Cultural & Sports Venues, Public Parking Areas, etc.

System Architecture

HARDWARE

- SecurOS® UVSS Platform - IP68 scanning system with area scan machine vision camera and fish-eye lens (mounted on the roadway).
- SecurOS® UVSS Controller - processing server with data storage and built-in video management platform - SecurOS® Enterprise.
- LPR/ANPR camera.
- Operator workstation.
- SecurOS® Driver Camera (optional) - capture and recognition of driver and passenger face through vehicle windshield.
- SecurOS® UVSS Cleaning and/or Heating system (optional).

SOFTWARE

- SecurOS® Platform providing hardware-software system management, video monitoring and recording, allowing surveillance of the undercarriage of vehicles and cross-referencing with video archive.
- Single embedded customizable SecurOS® UVSS GUI providing vehicle's single and multifactor passage inspection, combination of undercarriage image and data for survey, as well as report and image export.
- SecurOS® Auto and FaceX (optional) native modules providing license plate and face recognition, advanced search and watchlist capabilities, etc.
- Interaction and integration with 3rd-party devices and systems via embedded SecurOS® APIs (optional).

Key Features

ADVANCED DATA HANDLING

- Undercarriage images are saved together with respective recognized vehicle license plates, driver and passenger faces (optional) allowing for future searches and analysis.
- Undercarriage scans of a particular vehicle can be used as a reference image for comparison and FOD (Foreign Object Detection) when this vehicle appears again.
- Operator can simultaneously compare both images, search and mark suspicious zones, access or deny subsequent vehicle's movement in single GUI.
- Professional customizable UVSS GUI for seamless vehicle passage checks workflow.
- Advanced AI-based algorithms for automated FOD and corresponding map overlay in single GUI.
- Visual overlay highlighting magnetic anomalies from integrated magnetic field sensors in single GUI.
- Simultaneous use of FOD algorithms with magnetic anomalies for advanced undercarriage survey in single GUI.
- Detailed 3D-magnifier view of vehicle's undercarriage in single GUI.
- Processing captured and recognized faces from UVSS Driver Camera, in single GUI.
- Single/Multifactor authentication and vehicle inspection in single GUI.
- Several checkpoints with UVSS installed can be combined into a single distributed solution. Data access to checkpoints from a single monitoring center in single GUI, data synchronization within checkpoint.
- Embedded reporting system.
- Data and undercarriage image export, 3rd party system integration.

EASY INSTALLATION AND MAINTENANCE

- Compact UVSS-platform does not require heavy construction work to deploy and is easy to maintain.
- No need for physical sensors to detect vehicle presence due to build-in video analytic detectors.
- Highly durable construction is capable of resisting a vehicle accidentally running over the UVSS platform with its wheels.
- Air-liquid UVSS platform cleaning system (optional) minimizes maintenance process.

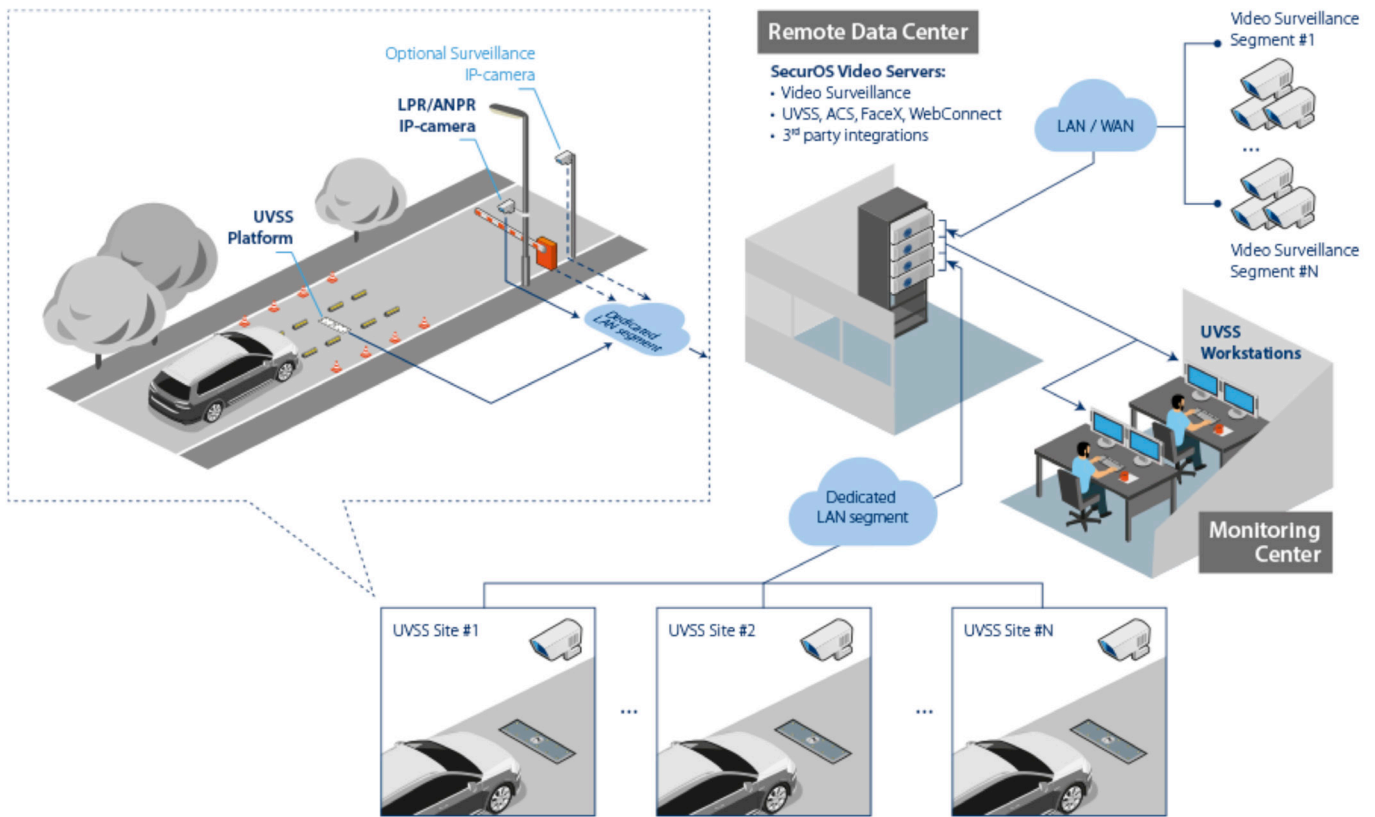
HIGH QUALITY UNDERCARRIAGE SCANNING

- High resolution and high frame rate machine vision camera, advanced 12bit-HDR processing and automatic gain system, provides images with uniform illumination in different lighting conditions.
- Image quality is not affected by changes of a vehicle's speed, nor by vehicles coming to a complete stop.
- Consistent and reliable high-quality undercarriage scanning not affected by human factors, fatigue, or distractions, ensuring that security measures are maintained 24/7 without lapses.
- Supports different vehicle passage speeds depending on ground clearance.
- Automatically controlled dynamic lighting system with 12 LEDs depending on vehicle type.
- Patented dewarping technologies for correction of distortion and composite image stitching.

SECUROS® ECO-SYSTEM

- Compact UVSS-platform does not require heavy construction work to deploy and is easy to maintain.
- Built-in SecurOS® VMS for additional enterprise level surveillance system including additional native video analytics, scripting engine, health monitoring, user rights management with AD/LDAP, etc. (optional).
- Built-in SecurOS® FaceX for vehicle driver and passenger face recognition (optional).
- Built-in SecurOS® ACS module for integration with ACS, Fire & Alarm systems (optional).
- Built-in SecurOS® Failover Cluster functionality for SecurOS® UVSS Controllers, SecurOS® VMS and Analytics servers (optional).
- Ability to display real-time and archived video from all cameras: scanning camera, LPR/ANPR camera, Driver Camera and surveillance cameras.
- Streamlining security operations for faster vehicle processing at access points, reducing congestion and improving the overall efficiency of security procedures.
- A comprehensive audit trail for forensic investigations, compliance audits, and legal purposes.
- Wide range of APIs to support integration of traffic lights/controllers, X-Ray scanners, automatic road barriers and bollards, informational displays, and other devices.

Distributed Solution Architecture

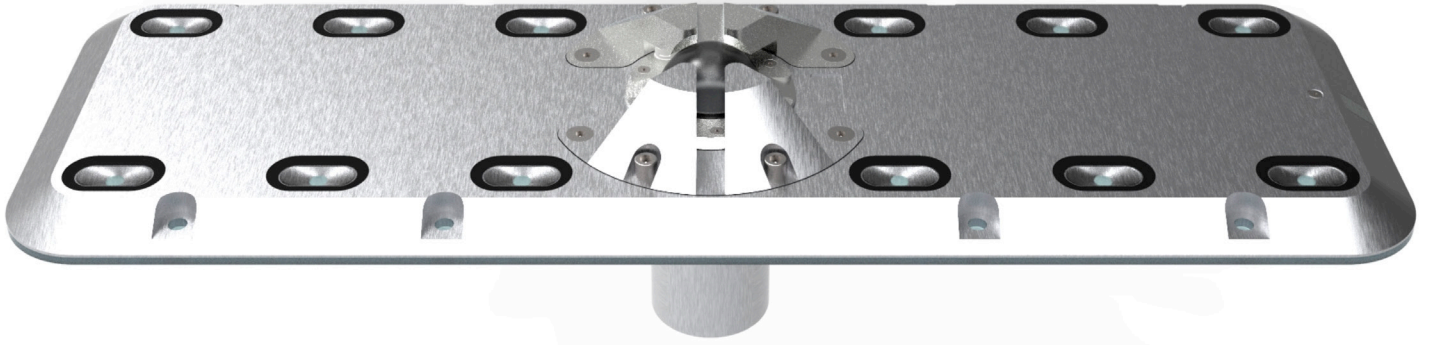


A distributed solution architecture provides additional benefits:

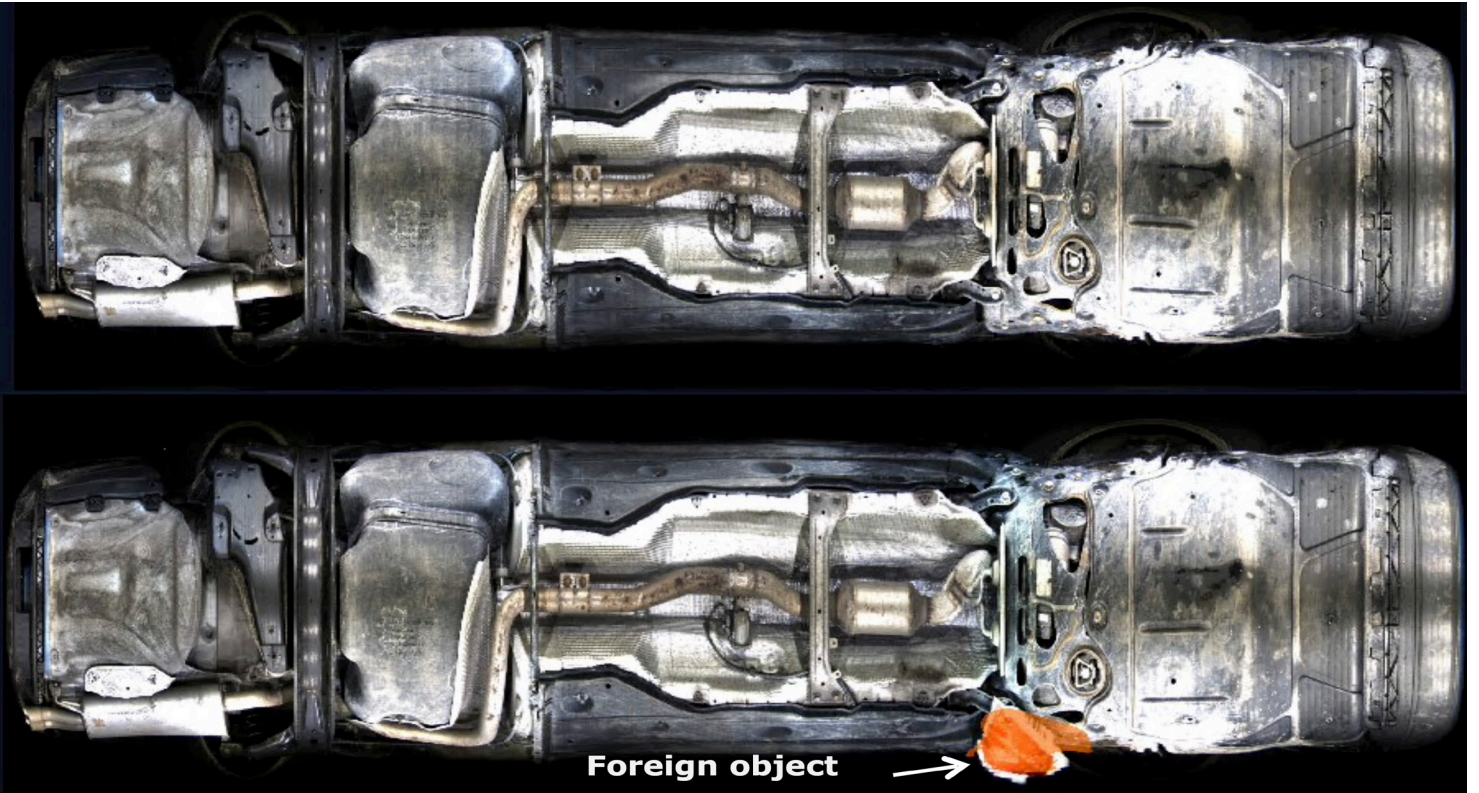
- Ability to manage the data of any UVSS Controller or Video Server from any workstation of the security system.
- Extended functionality in combination with other ISS SecurOS® software modules: Facial recognition (SecurOS® FaceX), Access Control and Fire Alarm (SecurOS® ACS), 2D and 3D maps, GIS, situational awareness analytics (SecurOS® Tracking Kit), and more.

SecurOS® UVSS User Interface

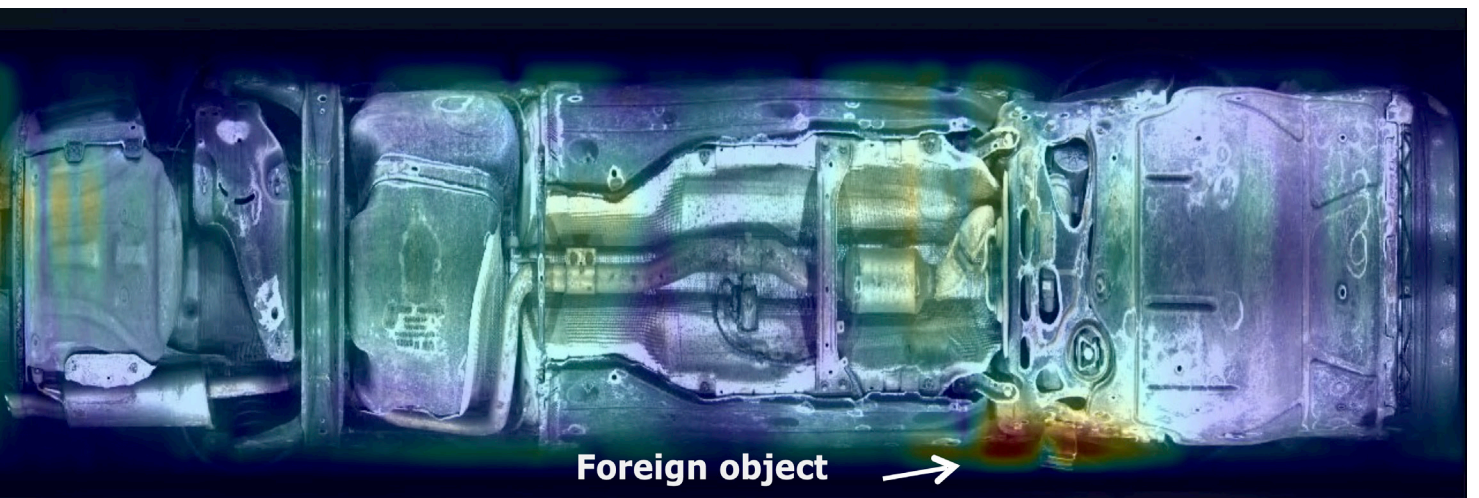




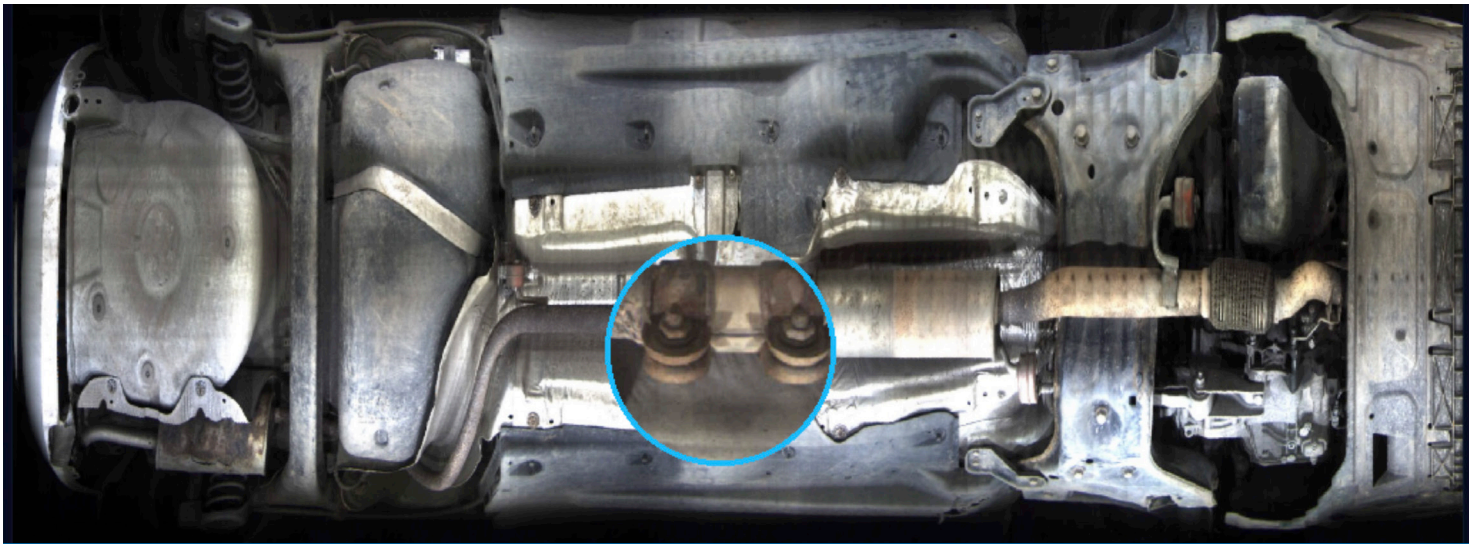
UVSS Platform



High-resolution undercarriage image with suspicious zone overlay produced by SecurOS® UVSS



High-resolution undercarriage image with magnetic anomalies area overlay produced by SecurOS® UVSS



High-resolution undercarriage image with 3D magnifier view

Ordering Information

ISS-UVSS-H	SecurOS® UVSS Scanning Platform. Includes Power supply - 48 VDC output (120 W). ** Cannot be purchased separately without SecurOS® UVSS Module Software (ISS-UVSS-S).
ISS-UVSS-S	SecurOS® UVSS Module Software license (1 license required for each UVSS Scanning Platform). ** Cannot be purchased separately without SecurOS® UVSS Scanning Platform (ISS-UVSS-H).
ISS-UVSS-HS	SecurOS® UVSS Scanning Platform PLUS SecurOS® UVSS Module Software BUNDLE. Includes Power supply - 48 VDC output (120 W).
ISS-UVSS-CON-R	SecurOS® UVSS Controller (Server). Includes 5 Year Parts Warranty.
ISS-UVSS-CON-T	SecurOS® UVSS Controller (Tower). Includes 5 Year Parts Warranty.
SOE-CAM	SecurOS® Enterprise - Camera license (per channel) (optional)
SOS-ACM3	SecurOS® ACS - Access Control Module - Video Integration (Site License) Module for pushing video from SecurOS® to 3rd party Access Control System User Interface. (optional)
IF-FR1	SecurOS® FaceX - Face Recognition Module (per channel) (optional)
SOS-FL-STBY	SecurOS® - 1 Standby Server (for "1 to 1" Failover) (optional)
SOS-FL-CLUS	SecurOS® - 1 Server in Failover Cluster (license needed for each server in SecurOS® Cluster) Need minimal 3 servers; Need central storage for recording - connected via CIFS/SMB, or iSCSI. (optional)
SOS-API	SecurOS® - Rest API (per system) (optional)
SMT-VO21-X	SecurOS® Motus VO21 - Driver Camera. B/W Machine Vision Camera. Includes housing, fixed lens, built-in strobe illuminator, 48VDC power supply, GigE. (optional)
SMT-LT556-XRWL	SecurOS® Motus LT556 XR 4MP IP Camera with White Light Illuminator. Includes housing, motorized lens, built-in WL illuminator, 12 VDC / 24 VAC power supply. (optional)
ISS-UVSS-SPx	Spare parts (Network cable IP68 connector, Network Extender, etc.)(optional)