



Secure, Smart, Reliable

Dahua Under Vehicle Surveillance System

Key Features



Clear and Sharp Image

- High resolution with 2K per line, max image resolution up to 20MP
- Low image distortion, high image grey level up to 11



High Efficiency

- Supports max 80km/h vehicle speed
- Less than 1s to synthesize a whole image



Full Integration

- Supports automatic number-plate recognition for various countries with ANPR camera
- Supports barrier integration and centralized management system



High Reliability

- Wide working temperature $-35^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- IP68 dustproof and waterproof

Solution Overview

Vehicle inspection is critical to prevent illegal items from entering places with high security. Dahua UVSS (Under Vehicle Surveillance System) uses machine vision technology to grab the full and high resolution image of vehicle chassis.

Two types of UVSS are developed to meet different applications. Stationary UVSS is an ideal option for fixed applications where ground can be dug up for installation, such as at prisons, military base, borders, hotels and airports. Portable UVSS is convenient to be removed, and is suitable for temporary checkpoints, such as important exhibition centers, conferences etc.

PC-based client software provides an easy-to-use GUI which can review clear images of vehicle chassis, live videos and image records.

UVSS can also integrate with ANPR camera, barrier and centralized management such as PMS to meet different application scenarios. In a word, various solutions are available for customers.

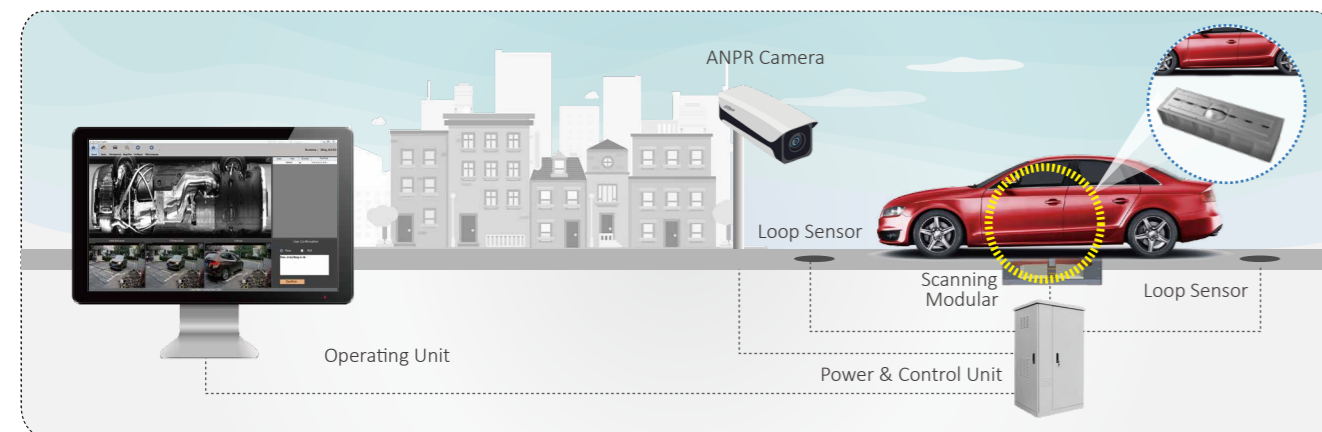


Technical Specifications

UVSS Scanning Module	Stationary	Portable
Image		
Resolution	Max 20MP	Max 20MP
Field of View	180°	170°
Imaging Time After Exit Trigger	<1s	<1s
Max Vehicle Speed	80km/h, 49.7mph (recommendation <50km/h, 31mph)	80km/h, 49.7mph (recommendation <50km/h, 31mph)
Compatibility	Chassis height: ≥60mm (0.19ft), Chassis width: ≤4500mm (14.8ft)	Chassis height: ≥80mm (0.26ft), Chassis width: ≤4500mm (14.8ft)
Load-Bearing	50t (110000lb)	10t (22000lb)
Case Material	Stainless steel	Stainless steel
Power Supply	100-240V AC	100-240V AC
Illumination	480W dynamic LED array	250W dynamic LED array
Weight	50kg (110lb)	15kg (33lb)
Dimensions (mm)	1200x322x290 (47.2"x12.7"x11.4")	490x398x88 (19.3"x15.7"x3.5")
Operating Temperature	-35°C ~ +70°C (-31°F ~ 158°F)	-35°C ~ +70°C (-31°F ~ 158°F)
Protection	IP68	IP68

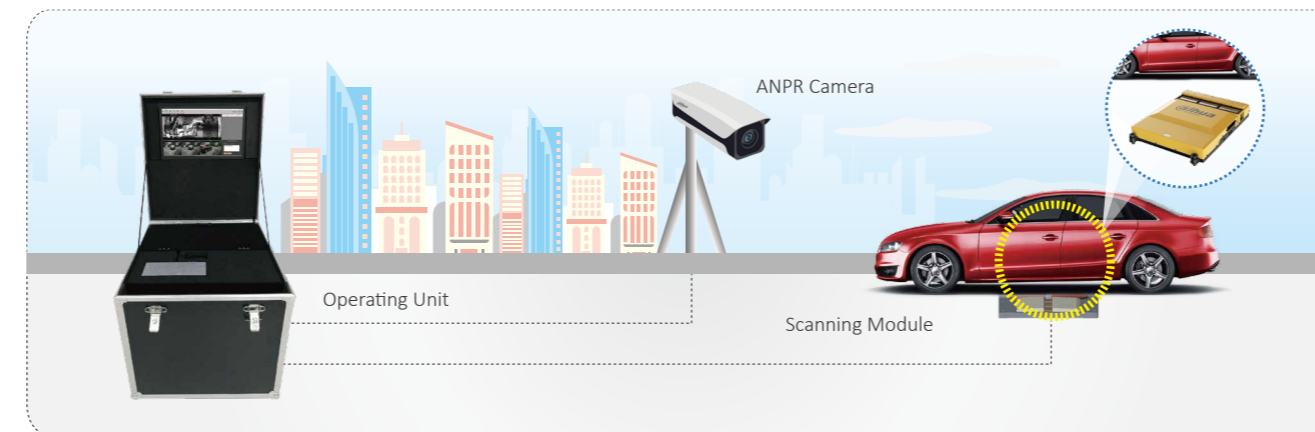
Classic Stationary UVSS Solution

- Loop sensor detects the moving vehicle.
- The image of the vehicle chassis and the license plate will be captured at the same time then transferred to computer.
- The UVSS client presents the stitched image of full chassis and recognizes the license plate automatically.



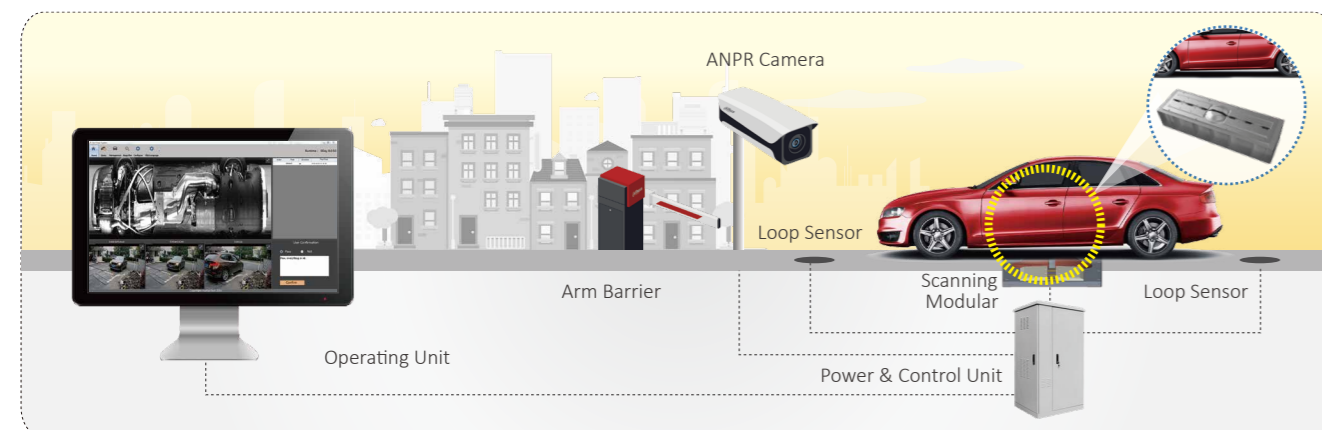
Classic Portable UVSS Solution

- Photoelectric sensor detects the vehicle.
- The image of the vehicle chassis and the license plate will be captured at the same time then transferred to computer.
- The UVSS client presents the stitched image of full chassis and recognizes the license plate automatically.



Advanced UVSS Solution

- Loop sensor detects the moving vehicle.
- The image of the vehicle chassis and the license plate will be captured at the same time then to computer.
- Confirm if the license plate is in white list and check if any abnormality under the vehicles.
- If result is pass, open the barrier to let the vehicle to enter in.



Centralized Management

- When vehicles enter from entrances, loop sensors detect the moving vehicles.
- The images of the vehicle chassis and the license plate will be captured at the same time then transferred to PMS.
- Open the arm barrier automatically if the license plate is in white list and no warning of abnormality under vehicle.
- When vehicles drive to the exit, UVSS capture the image of the vehicle chassis and compare with the entrance image. (optional)
- All information will be recorded in PMS server.



Figure 1: UVSS client

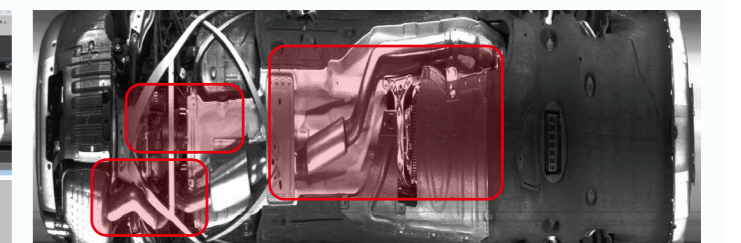


Figure 2: High resolution image of a vehicle's under chassis

Success Cases



Turkey Ministry of Health

To protect its facilities from threats brought in by vehicles, the Ministry of Health was equipped with a Dahua stationary under vehicle scanning system .

After installing the UVSS, the Ministry of Health is now able to better secure its facilities from vehicle threats. The system provides quick and high-quality images to check vehicles, which improves access management efficiency and saves labor costs.



XinJiang Zeller Security Station



Beijin Prison

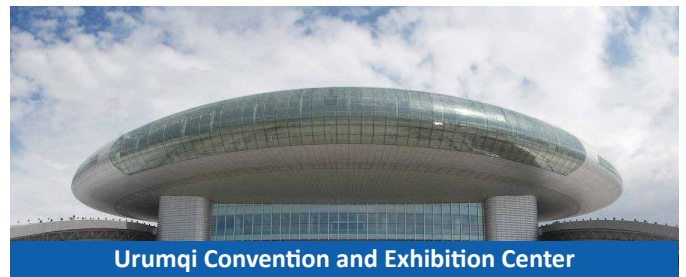
Belgrade Nikola Tesla Airport needs an effective and easy-to-use under vehicle detection system urgently to meet its growing vehicle security requirement. Dahua provides two sets of UVSS for the vehicle entrance and exit. Compared with the traditional human manual inspection the new system provides quick and easy-to-use GUI to improve the check efficiency, and stores the records in the database. And up to now the customers are very satisfied with Dahua under vehicle scanning system.



Belgrade Nikola Tesla Airport



Pakistan Military Base



Urumqi Convention and Exhibition Center



International Airport in Vietnam

Dahua provides two sets of UVSS in the vehicle entrance of international airport in Vietnam. It helped them to resolve the low efficiency problem that ever used reflective mirrors to do inspection.



Tianjin Olympic Center



Fujian Nuclear Station

ENABLING A SAFER SOCIETY AND SMARTER LIVING

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* Design and specifications are subject to change without notice.

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