



Stationary Under Vehicle Surveillance System

iRAYPLE UVSS (Under Vehicle Surveillance System) uses machine vision technology to grab the full and high resolution image of under vehicle to provide a high level security solution. Stationary UVSS is an ideal system for fixed applications to prevent illegal items from entering places such as prisons, military base, hotels and airport etc. PC-based client software provides an easy-to-use GUI which can review clear images of vehicle chassis, live video and image records.

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(optional)

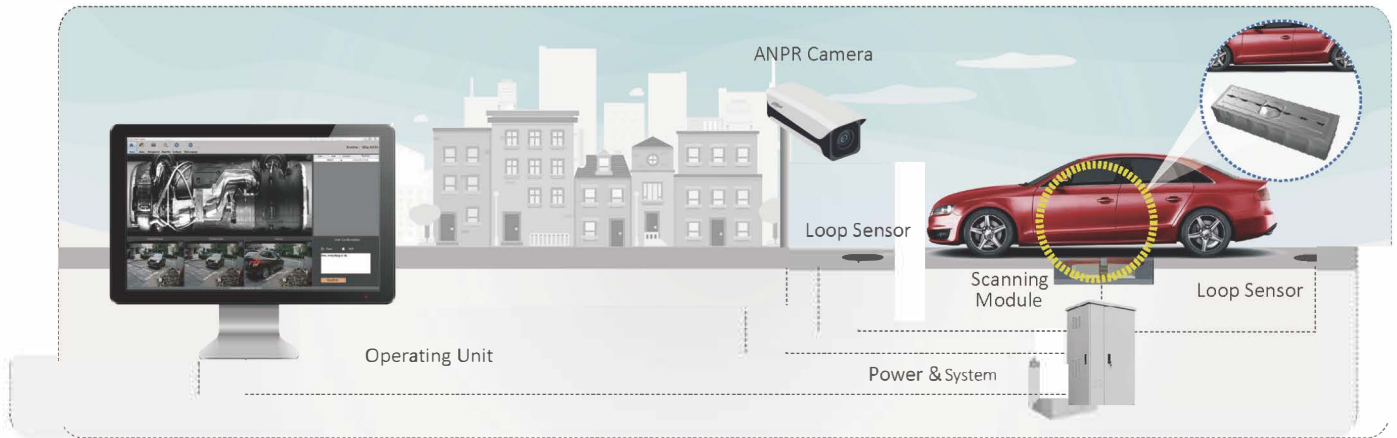


High Reliability

- Wide working temperature $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ (Scanning Module)
- IP68 dustproof and waterproof (Scanning Module)

Stationary Under Vehicle Surveillance System

System Topology



- 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.

UVSS Software

PC-based software with an easy-to-use GUI provides linear image stitching, plate number integration and live video on the home page. It supports quick retrieval of the history records and checking the under vehicle image details.

The screenshot shows the Dahua Under Vehicle Surveillance System software interface. The main window displays a stitched image of a vehicle chassis with a red box highlighting the "Window of vehicle chassis". On the left, a sidebar shows vehicle details: Speed: 39 km/h, Temperature: 17.7 °C, Humidity: 47.3 %, and Alarm: . Below this is a "window of vehicle and plate" showing a car on a road. In the center, there are two "window of entrance/exit and scene camera" views, both labeled "Not Enabled Yet". On the right, there is a "Window of history records" table with columns for Index, Plate, Direct., and PassTime. Below the table are "Enter:3Cars" and "Exit:3Cars" statistics, and a "Window of vehicle confirmation" section with a "Confirm" button. At the bottom, there is a "window of plate-number correction" section with a "Confirm" button. The status bar at the bottom reads "Status of entrance/exit and line-scan" and "Copyright (c) 2016 Dahua Technology. All rights reserved."

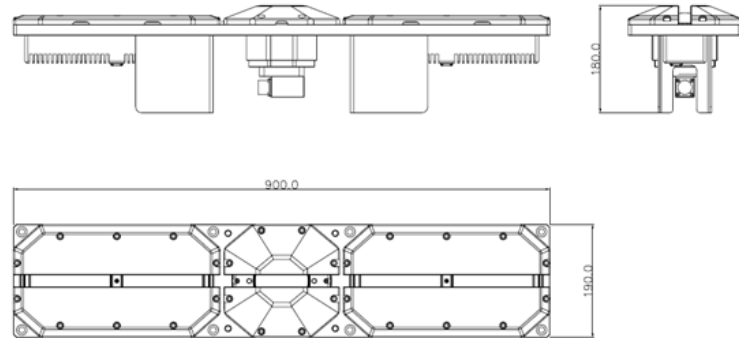
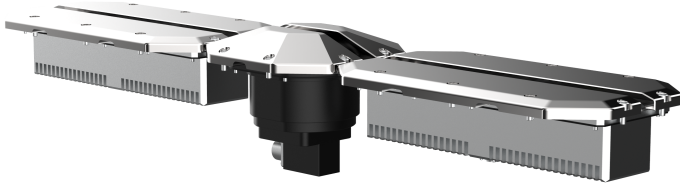
Index	Plate	Direct.	PassTime
5	浙A1W21H	Out	2023-02-27 16:49:27.361
5	-	In	2023-02-27 16:36:56.053
4	-	In	2023-02-27 16:34:56.160
3	-	In	2023-02-27 15:24:33.779
2	浙AWG936	Out	2023-02-27 14:51:11.019
1	浙A8089	Out	2023-02-27 14:47:54.030

Stationary Under Vehicle Surveillance System

VDF5042CBE-00

UVSS-Scanning Module

Dimensions(mm)



UVSS | VDF5042CSE-00

Technical Specifications

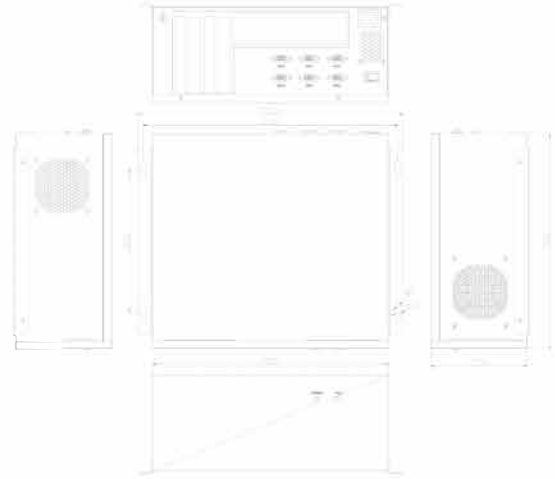
Resolution	Max 20MP
Field of View	180°
Imaging Time After Exit Trigger	<1s
Max Vehicle Speed	80km/h,49.7mph (recommendation<50Km/h,31mph)
Compatibility	Chassis height: ≥60mm(0.19ft) Chassis width: ≤4500mm(14.8ft)
Load-Bearing	50T(110000lb)
Case Material	Stainless steel
Power Supply	100-240V AC
Illumination	240W dynamic LED array
Weight	50kg(1101b)
Dimensions	900mm*190mm*180mm (35.4"*7.5"*7.0")
Operating Temperature	-40°C ~ +85°((-40°F ~ 185°F)
Protection	IP68

Stationary Under Vehicle Surveillance System

ARC-3600-G3-00A5

UVSS-Computer

Dimensions(mm)



UVSS | ARC-3600-G3-00A5

Technical Specifications

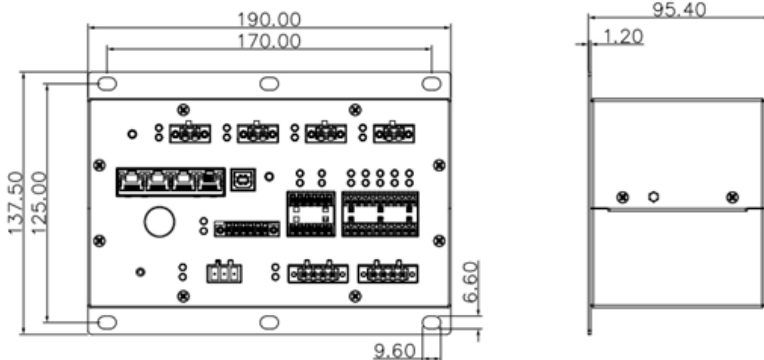
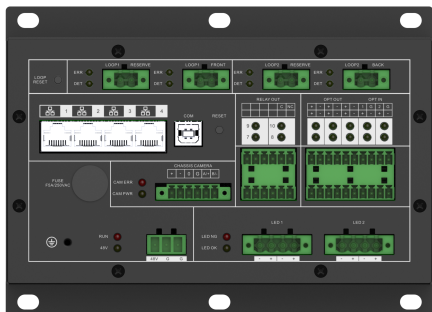
Processor System	CPU: Intel Core i5-4570, 3.2GHZ System Chipset: Intel H81 BIOS: AMI 64 MB SPI BIOS
Memory	8G DDR3L
Storage	1TB SATA HDD+128GB SSD
Graphics	VGA&HDMI supports max resolution 1920x1200@ 60hz
Ethernet	2*10/100/1000Mbps. 1*10/100 Mbps
Audio	RealtekHD Audio with Line -IN Line -OUT Mic-IN
IO	Seral:2* RS232 USB:4*USB3.0+2*USB2.0
OS	Win Pro7 SPI 64-bit EN
Expansion Slot	1*PCI
Power	Great Wall Switch Power Supply AC input:100-240V, S-3A 60/50HZ, ≤250W
Dimensions	330mm*135mm*300mm(W*H*D)
Environment	Operating Temperature:0°C ~ 60°C Storage Temperature:-20°C ~ 80°C Relative Humidity : 95%@40°C (non-condensing) Vibration : 1Grms Shock : 10G(with 11ms duration ,half sine wave) EMC :CE/FCC Class A

Stationary Under Vehicle Surveillance System

VDF5042CCE-00

UVSS-Controller

Dimensions(mm)



UVSS | VDF5042CCE-00

Technical Specifications

Power in		48V/240W
Power out	Scan Camera	48V
	LED modules	48V/1A/50W
Trigger	Input	Two isolate channels signal of photoelectric input via loop sensor
	Output	Scan Camera
		ANPR Camera
Communication	Scan Camera	GIGE&RS485
	ANPR Camera	GIGE
	Host PC	GIGE
Certifications		CE/FCC/UL
Operating Conditions		-35℃~+60℃(-31℉~+140℉)/Less than 95% RH *Start up should be done at above -35℃(-40℉)
Storage Conditions		-40℃~+70℃(-40℉~+158℉)/Less than 95% RH
Dimensions		137.5mm*190mm*95.4mm (5.4"*7.48"*3.76")

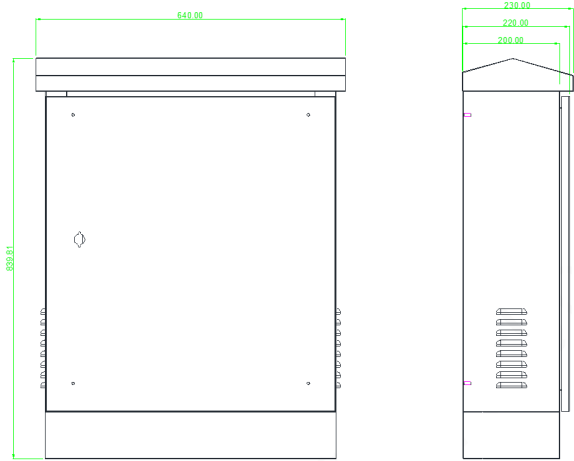
Stationary Under Vehicle Surveillance System

VDF5042CPE-00

Power System



Dimensions(mm)



UVSS | VDF5042CPE-00

Technical Specifications

Switch Power: LRS-350-48

Voltage input	90~132V ; 180~264V
Power Frequency input	47~63Hz
Alternating current input	6.8A/115VAC ; 3.4A/230VAC
Voltage output	DC 48V
Rated Current	7.3A
Current Output Range	0 ~ 7.3A
Voltage Output Range	43.2V ~ 52.8V
Rated Power	350 W
Leakage Current	<2mA/240VAC
Power overload	110% ~ 140% rated power
	Protection mode: current-limiting
Voltage overland	55.2 ~ 64.8V
	Protection mode: switch off output
Over Temperature	Protection mode: switch off output
Operating Conditions	-20℃ ~ +70℃ (-20℉ ~ +158℉) Less than 90% RH
Storage Conditions	-40℃ ~ +85℃ (-40℉ ~ +185℉) Less than 95% RH

Stationary Under Vehicle Surveillance System

Technical Specifications

Air Switch-IC65N-2P-C10

Power Input	400V /230V
Rated Current	10A
Breaking Current	6000A
Thermal Release Temperature	30 °C
Insulation Voltage	500VAC
Impulse Resistance Voltage	6KV
Electrical Life	10000 Times
Mechanical Life	20000 Times
Operating Conditions	-35 °C ~ +70 °C (-31 °F ~ +158 °F)
Storage Conditions	-40 °C ~ +85 °C (-40 °F ~ +185 °F)

Technical Specifications

Lightning Preventer-DXH06-FCS/1+1R40

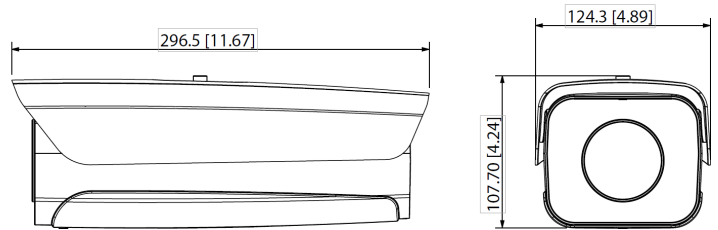
Max Continuous Working Voltage	385V
Nominal Discharge Current	20KA(8/20 μs)
Max Discharge Current	40KA(8/20 μs)
Protection Mode	L-N,N-PE
Protection Level	≤1.8KV
Response Time	<20ns
Grounding Resistance	≤4Ω
Operating Conditions	-40 °C ~ +70 °C (-40 °F ~ +158 °F)/Less than 90% RH

Stationary Under Vehicle Surveillance System

ITC215-PW6M-IRLZF

UVSS-ANPR

Dimensions(mm)



UVSS | ITC215-PW6M-IRLZF

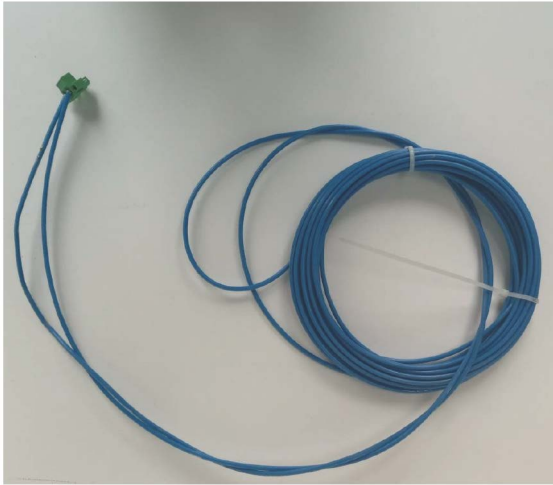
Technical Specifications

Image Sensor	1/2.8" CMOS
Effective Pixels	1920(H) x 1080(V)
Scanning System	Progressive
Minimum Illumination	0.002Lux/(Built-in IR on)
Focal Length	3.2mm~10.5mm
Max Aperture	F1.6
Angle of View	H:108°~ 30.3°, V:56.3° ~17.1°
Focus Control	Auto
Focus Distance Range	3-6m
Compression	H.264B/H.264M/H.264H/H.265/MJPEG
Frame Rate	1920 x 1080@25 fps
Ethernet	RJ-45 (100/1000Base-T)

Stationary Under Vehicle Surveillance System

FVN1.5

UVSS-Loop Sensor



UVSS | Loop Sensor-FVN1.5

Technical Specifications

Cross Section	1.5mm ²
Working Voltage	≤AC250V/DC500V
Flame Retardant Rating	105 °C
Protective Cover	FVN
Operating Condition	-60 °C ~ +80 °C / Less than 98% RH

Ordering Information

P/N	Model Name	Description
1.0.01.36.R0041	VDF5042CSE-00	Classic UVSS Kits, including of UVSS scanning module, ANPR, industry computer, controller power system, loop sensor and related accessory.
1.0.01.36.R1067	VDF5042CSE-02	Lite UVSS Kits, including of UVSS scanning module, industry computer, controller power system, loop sensor and related accessory.

*Design and specifications are subject to change without notice.

Stationary Under Vehicle Scanning System - March 2023



HUARAY TECHNOLOGY

590 Chang'he Road, Binjiang District, Hangzhou, Zhejiang, China 310053

Tel: +86-400-681-8858

Email: overseas@irayple.com

www.irayple.com/en/home

iRAYPLE

©HuaRay Technology, All rights reserved