

AI Video Motion Detection  
AI Privacy Guard  
AI Sound Classification  
AI Face Detection  
AI People Detection  
AI Vehicle Detection  
i-PRO Active Guard



## Install Various types of applications to keep your i-PRO network camera on the cutting edge.

There are many types of AI applications that can be installed on network cameras at no additional cost. Although i-PRO network cameras are edge devices, they are in charge of various detection processes. As a result, the camera is responsible for the advanced processing and the server does not require expensive hardware.

### i-PRO AI applications

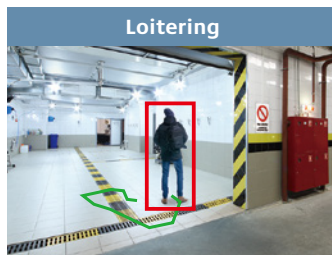
#### AI Video Motion Detection (AI-VMD)

- AI differentiates between vehicles, motorcycles, bicycles, and people. It further detects and sends warning notifications when they enter a specified area.



Intruders

- It is possible to issue an alarm when a moving object enters a specified area.



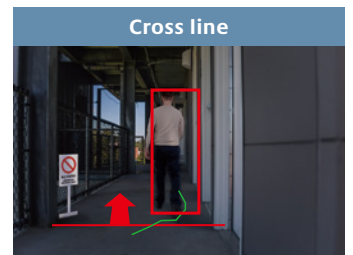
Loitering

- It is possible to issue an alarm when a moving object enters a specified area and stays there for a specified amount of time.



Direction

- It is possible to issue an alarm when a moving object enters a specified area and moves in the specified direction.



Cross line

- It is possible to issue an alarm when an object moving in the specified direction crosses a specified threshold.

#### AI Privacy Guard

- To protect privacy and portrait rights, it is possible to automatically apply a mosaic the entire face and figure of a person photographed by the camera.

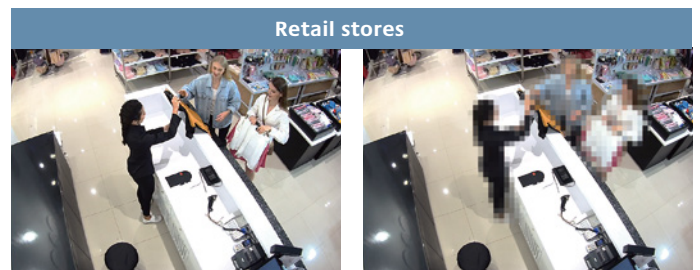


Factory

Original image



Processed image



Retail stores

Original image

Processed image

## AI Sound Classification

- AI detects and identifies (gunshot / yell / vehicle horn / glass break) sound. It then sends a warning notification according to the sound identified.



Gunshot



Yell



Vehicle horn



Glass break

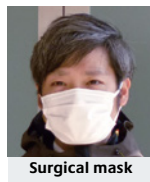
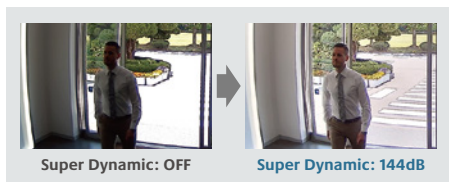
Classification target	1.Gunshot 2.Yell 3.Vehicle horn 4.Glass break
Classification condition	Target sound is 6 dB louder than crowd. Target sound continues more than a second. (except for gunshot)

External microphone is required.\*

\*Frequency characteristics: support 200 Hz to 8 kHz, Omnidirectional microphone.

## AI Face Detection

- The i-PRO network camera utilizing an AI engine and i-PRO Active Guard realize real-time face recognition without an expensive face recognition server. AI detection enables highly accurate face detection, and is also effective for detection in low lighting, backlit environments, or for detecting faces obscured by masks.

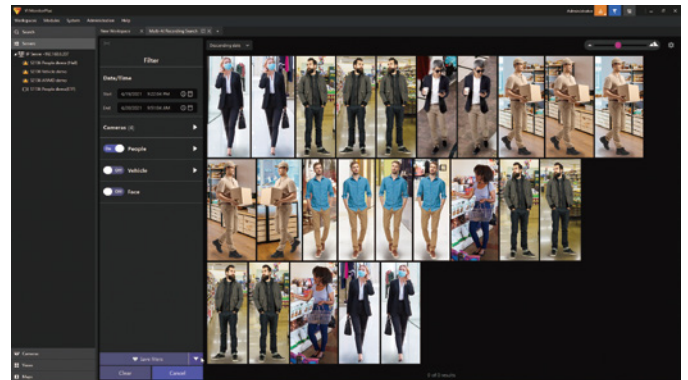


Range of angle	Horizontal : 0° - 45°, Vertical : 0° - 30°
Detection number at the same time	Max. 8 faces
Size of face image	Min. size : width 30 pix Recommend : 60 pix
Min. illumination level	100 lux
Max. number of cameras	20 when installed with VMS server PC 60 when installed in dedicated server PC
Max. number of watchlist	1,000 faces
Recommended model	WV-S1136

## AI People Detection

- Characteristics of the human face and clothing are extracted and classified into useful categories such as gender, age, and clothing color. This abundant attribute information can then be searched to easily find the target person.

Attributes	Values
Gender	Male / Female
Age	Child (0-10) / Young Adult (11-20) / Adult (21-60) / Senior (61+)
Mask	Mask / No Mask
Hair type	Long hair / Short hair / Hat
Hair color	Black / Brown / White / Gray / Gold
Sunglasses	Sunglass / No Sunglasses
Beard	Beard / No Beard
Top type	Long sleeves / Short sleeves
Top color	Black / Brown / White / Gray / Green / Red / Blue / Yellow / Orange / Purple / Pink
Bottom type	Long / Short
Bottom Color	Black / Brown / White / Gray / Green / Red / Blue / Yellow / Orange / Purple / Pink



Conditions	Range of angle	Vertical: 0° to 45°
	Detection number at the same time	Max. 20 people
	Size of people image	Min. size: width 60 pix Recommended size : width 100 pix
	Min. illumination level	Min. illumination level : 10 lux Recommended illumination level : 50 lux
Mask Area (non-detection area)		Max. 8 areas (polygonal) can be set

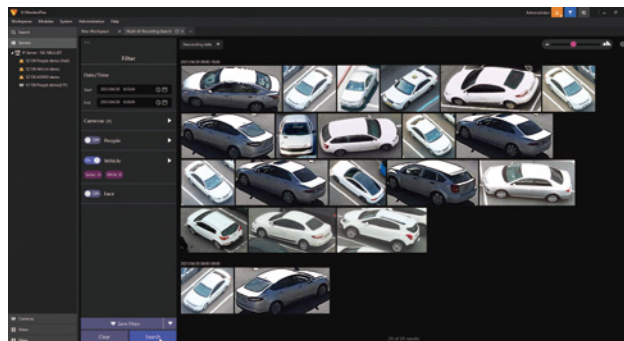
## AI Vehicle Detection

- Vehicle characteristics are extracted and classified into useful categories such as type and color. This abundant attribute information can then be searched to easily find the target vehicle.

### Vehicle Type



### Vehicle Color

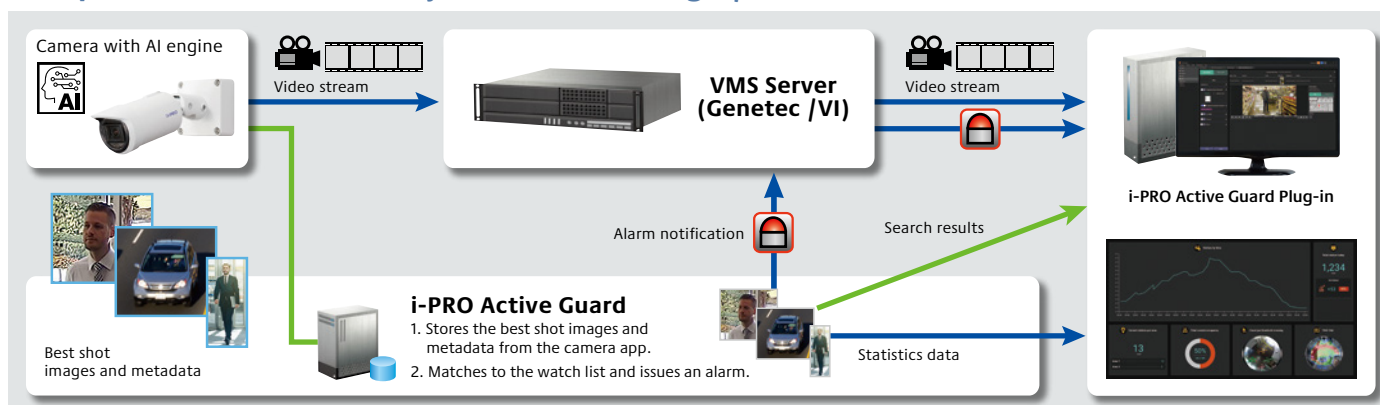


Conditions	Range of angle	Vertical: 0 to 90°
	Detection number at the same time	Max. 20 vehicle
	Size of vehicle image	Min. size: 70 pix for the shorter axis (about 15-20 m ahead) Recommended size: 112 pix for the shorter axis
	Min. illumination level	5 lux
Mask Area (non-detection area)		Max. 8 areas (polygonal) can be set

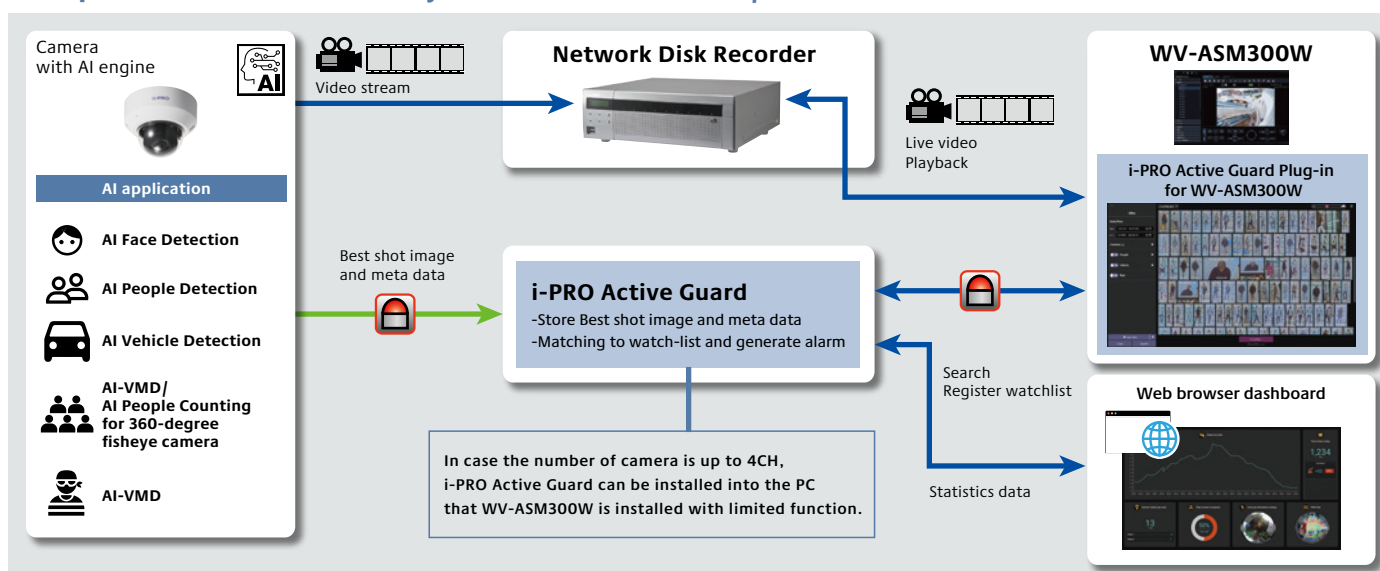
## i-PRO Active Guard

- i-PRO Active Guard stores the best shot images and metadata captured by i-PRO network cameras. Then, it collates this data with the watch list registered in the client software and issues an alarm when a match is found. The server does not require expensive hardware because i-PRO network cameras handle the advanced processing. The server can also be installed on the same hardware as the VMS. The system comprises the i-PRO Active Guard, the AI application installed on i-PRO network cameras utilizing AI engines, and the i-PRO Active Guard Plug-in software for the VMS client.

### Example of a basic connection system for Video Insight/Genetec



### Example of a basic connection system for WV-ASM300W/Network disk recorder



			Video Insight system	Genetec system	WV-ASM300W/ Network disk recorder system
System (i-PRO Active Guard)	Scale	Supported camera	AI camera X series (4K or 5MP), New S-Series (2MP), Edge AI 360-degree fisheye camera		
		Number of camera	1 to 100 CH when installed with VMS server (AI Face Detection is up to 20) 1 to 300CH when installed in dedicated server (AI Face Detection is up to 60)		1 to 4CH when installed with WV-ASM300W (AI Face Detection is up to 4) 1 to 300CH when installed in dedicated server (AI Face Detection is up to 60)
		Number of client	No limitation (depending on limitation of VMS)		
		Number of Recording server	12 VI IP servers	- (only main server should be registered)	12 Network disk recorders
		Number of i-PRO Active Guard per a client	No limitation (depending on capability of whole system)	1	100
	Supported AI applications	For plugin	AI-VMD / AI Sound Classification / AI Face Detection / AI People Detection / AI Vehicle Detection	AI Face Detection / AI People Detection / AI Vehicle Detection	AI-VMD / AI Sound Classification / AI Face Detection / AI People Detection / AI Vehicle Detection / AI-VMD/AI People Counting for 360-degree fisheye camera
		For dashboard	AI-VMD / AI Sound Classification / AI Face Detection / AI People Detection / AI Vehicle Detection AI-VMD/AI People Counting for 360-degree fisheye camera		
	Store	Retention period	Max. 31 days limitation for face, people or vehicle data Max. 92 days limitation for people counting data		
	Post Search	Filter	People, Vehicle (attribute, date & time, camera, moving direction) Face (only for specific date & time and camera)		People, Vehicle (attribute, date & time, camera, moving direction) Face (similar face, date & time and camera)
		Similar search	Yes (by same attribute information) *People and Vehicle only		Yes (by same attribute information) *People and Vehicle(by same attribute information) and Face
		Sort	Descending, Ascending, Relevance (People and Vehicle only)		
	Alarm	Watch list alarm	Up to 1,000 face Up to 12 people attributes		
		Detection alarm	AI Sound Classification (Gunshot / Yell / Vehicle horn / Glass break) AI-VMD (Intruder / Loitering / Direction / Line cross)	AI-VMD, AI Sound Classification are supported in Genetec Security Center and Security Desk (not plugin)	AI Sound Classification (Gunshot / Yell / Vehicle horn / Glass break) AI-VMD (Intruder / Loitering / Direction / Line cross) / AI Occupancy detection
		Related function	Show alarm on real-time, Alarm search, VMS's Rules configuration, Map overlay, Notification to mobile app		Alarm destination (plugin or camera) and alarm trigger can be configured. Show alarm on real-time, Alarm search, Manage alarm status, AUX control of camera
	Playback/Export	Playback	Playback video around the time of the best shot on full and multi-view	Playback video around the time of the best shot on full screen	
		Export video	Save best shot image, Export video from Recording server		
		Export Search result	—		HTML and CSV
	Dashboard	Supported browser	Microsoft Edge, Google Chrome and Firefox		
		Chart	People counting and heat map when using AI-VMD/AI People Counting for 360-degree fisheye camera. Data update interval is minimum 15 seconds for people counting and 1 min for heat map. Age and gender statistics when using AI Face Detection. Data update interval is minimum 1 hour. People attribute statistics when using AI People Detection. Data update interval is minimum 1 hour. Vehicle attribute statistics when using AI Vehicle Detection. Data update interval is minimum 1 hour.		
		Customize	Contents, display size, location for each chart. 3 Layouts per user can be saved and 24 user can be registered. (Up to 4 user can be log-in at the same time) Basic display color theme (dark or light)		

#### Trademarks and registered trademarks

– All other trademarks identified herein are the property of their respective owners.

#### Important

- Safety Precautions : Carefully read the Basic Information, Installation Guide and Operating Instructions before using this product.
- i-PRO Co., Ltd. cannot be held responsible for the performance of the network and/or other manufacturers' products used on the network.
- When monitoring remotely, please pay attention to the network design. For details, please contact your local i-PRO sales representatives.

• All images are for illustrative purposes only. • Specifications are subject to change without notice.

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The Power of Truth

**i-PRO Co., Ltd.**  
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(2A-286CA)