
INTRO TO AI AND SMART MOTION DETECTION

WEBINAR



Smart Motion Detection (SMD)

The next revolution of the surveillance industry is here!



AI / SMD

Smart Motion Detection (SMD) Technology differentiates human and vehicular shapes within a scene and send alarms to secure your business and family



Reduced False Alarms



False alarm rate



Through the upgrading of its AI capacities, false alarms caused by animals, leaves, and lights, etc. are significantly reduced.

AI / SMD



Longer Detection Distance



Detection distance
(2.8mm fixed-focal camera)



By constantly improving its AI capacities, the detection range of the same device has increased by as much as 80%.



Higher Detection Accuracy



Detection accuracy rate
(Human & Vehicle)

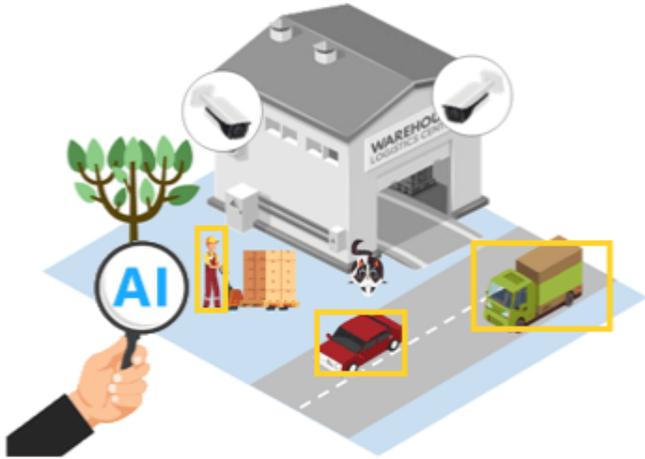


Through the upgrade of its AI capacities, the maximum detection accuracy for human and vehicle can reach up to 99%.

AI / SMD



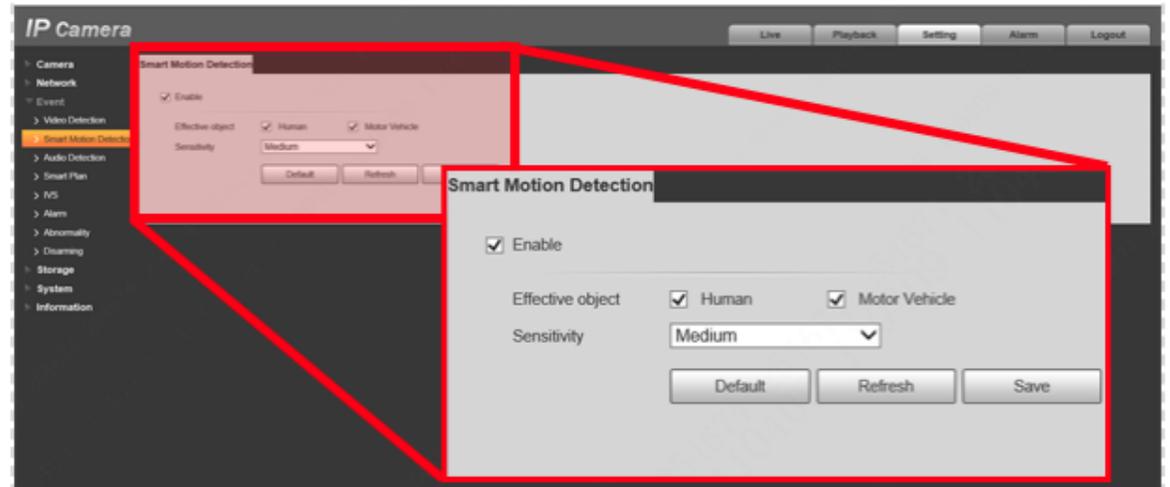
Quick Target Search



Data about humans and vehicles can be extracted and classified from the video, allowing users to play back, review and retrieve data history.

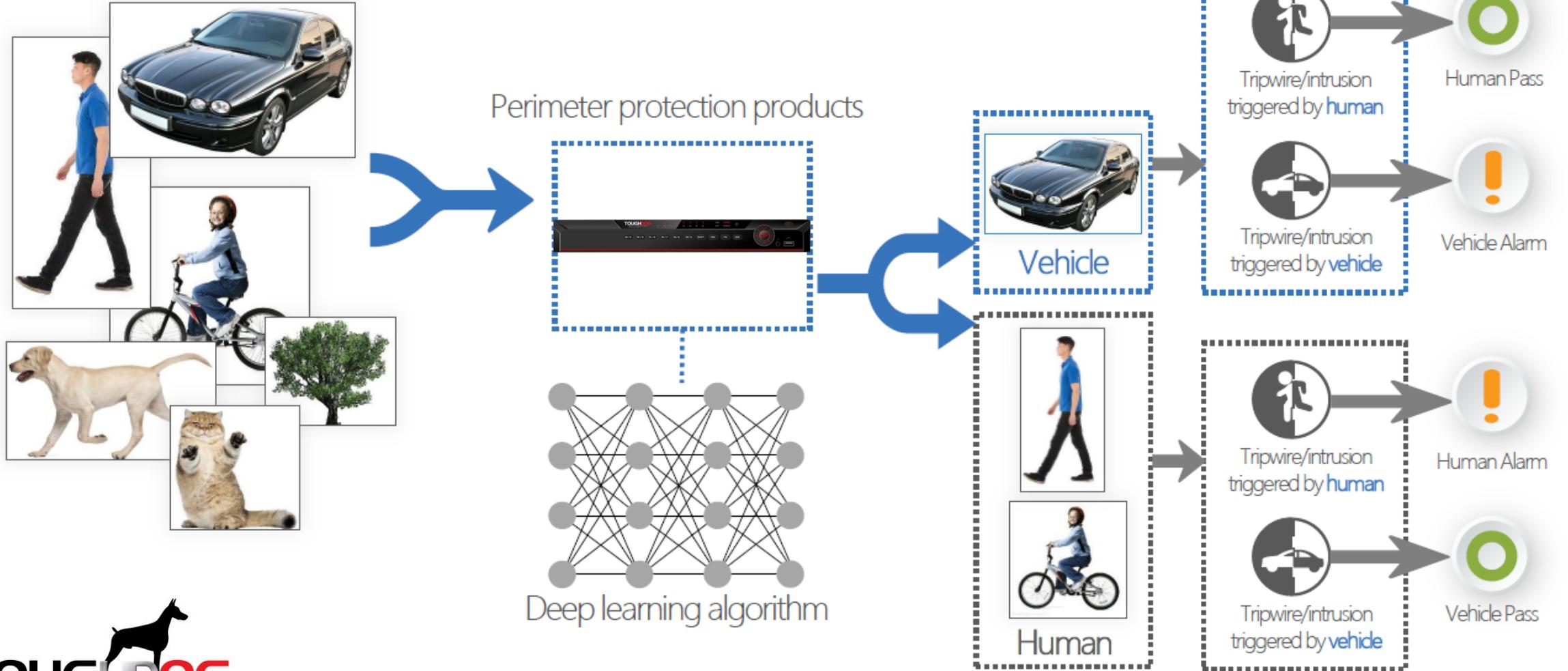


Simple Configuration



SMD 3.0 is enabled by default. It also supports classification settings for human and vehicle.

AI / SMD



AI / SMD

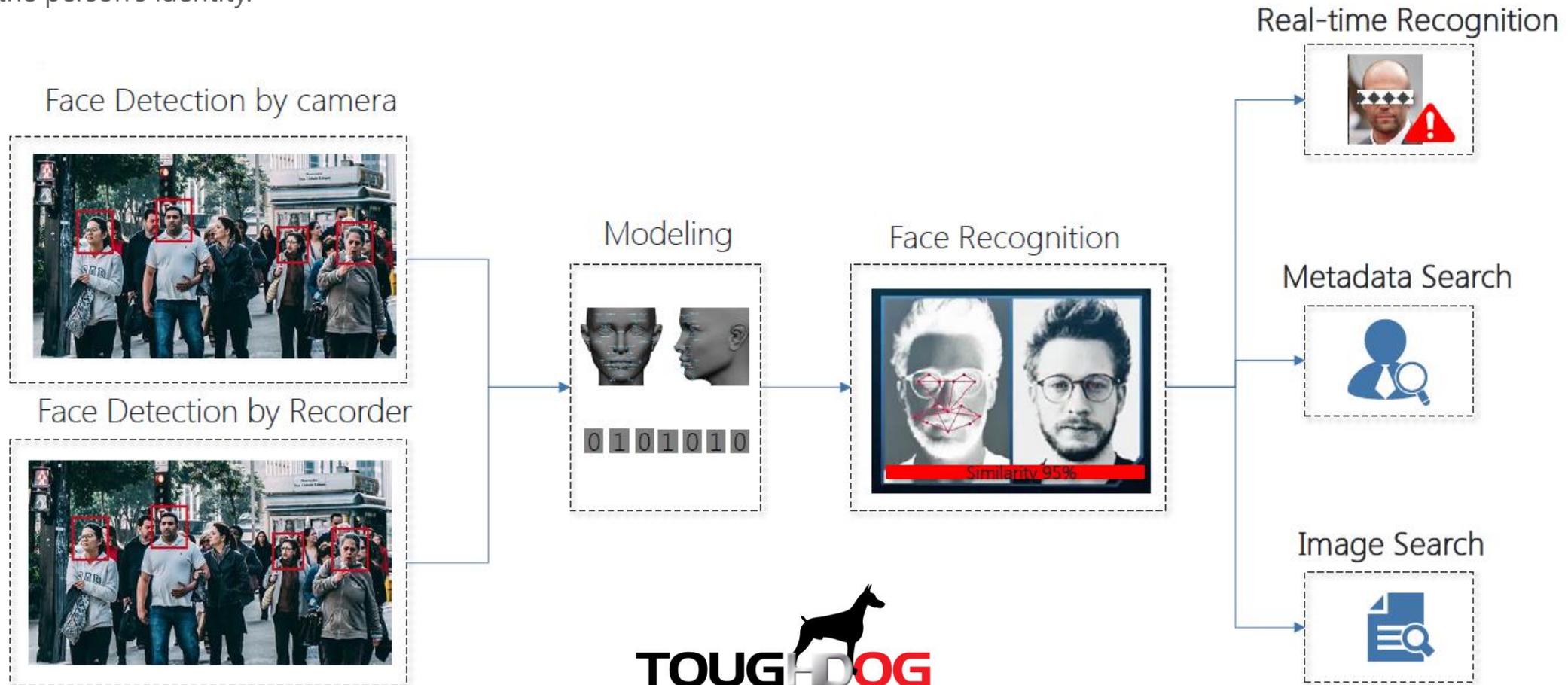


Face Recognition



AI / FACE RECOGNITION

The face recognition extracts the features of a captured face image and compares it with those in the face image database to recognize the person's identity.

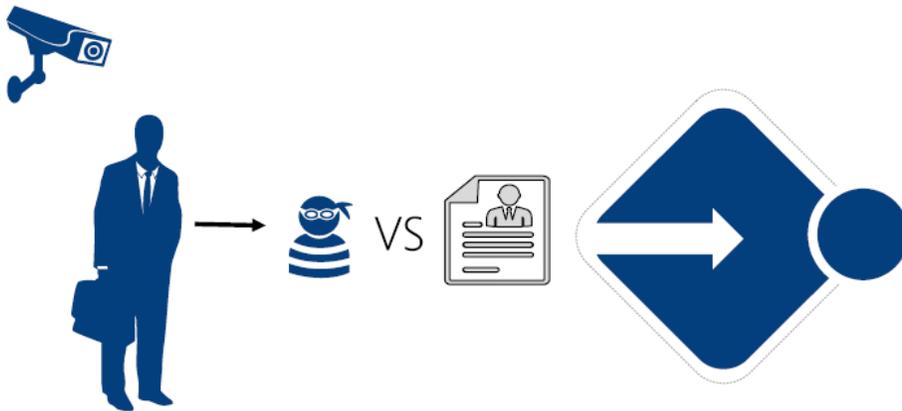


AI / FACE RECOGNITION



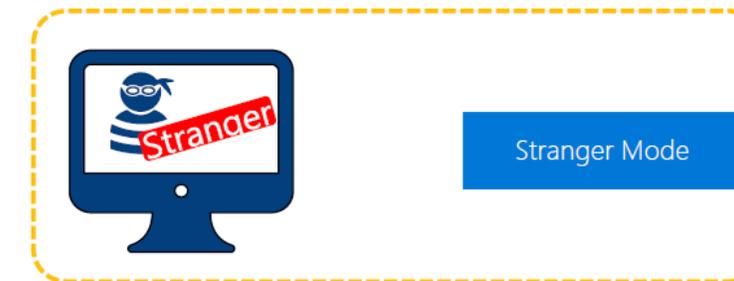
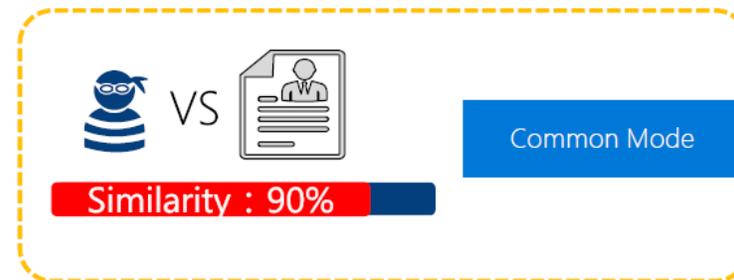
It provides features such as **Blocklist Alarm, VIP Recognition, Stranger Alarm, Mask Detection, AI Search, Face Tracking, Statistics** etc.

Real-time Recognition



Real-time Recognition

- Preview and verification of personals in real-time
- Active comparison with database, setting alarm trigger
- Supports up to 24 pic/s face recognition and 20 databases with up to 100,000 face images,.



ANPR/ LPR



AI / LPR



ANPR (automatic number-plate recognition) is a technology that uses optical character recognition on images to read vehicle registration plates

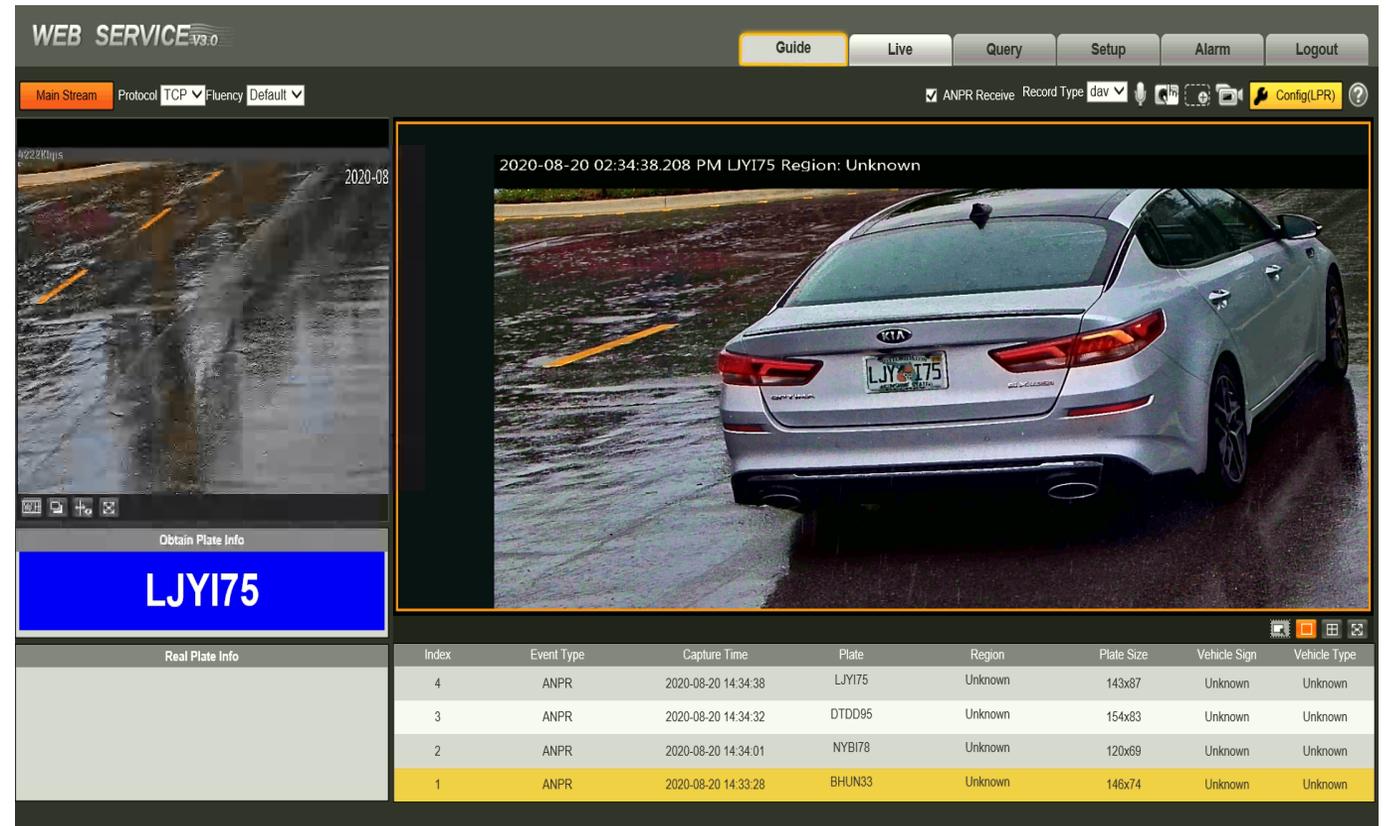


AI / LPR

ANPR solutions include cameras and software that runs on either the camera or a server. It automatically captures license plates in real time

Relying on big image data and well train deep-learning models, the ANPR engine includes following features

- Multilingual Recognition.
- High Recognition Rate – 95%-98% with alphanumeric number plates
- Fast Recognition - The full reading process takes around 100 milliseconds
- Cost-effective Technology - Outstanding price/performance ratio



WEB SERVICE v3.0

Guide Live Query Setup Alarm Logout

Main Stream Protocol TCP Fluency Default

ANPR Receive Record Type dav

2020-08-20 02:34:38.208 PM LJI75 Region: Unknown

Obtain Plate Info

LJI75

Real Plate Info

Index	Event Type	Capture Time	Plate	Region	Plate Size	Vehicle Sign	Vehicle Type
4	ANPR	2020-08-20 14:34:38	LJI75	Unknown	143x87	Unknown	Unknown
3	ANPR	2020-08-20 14:34:32	DTDD95	Unknown	154x83	Unknown	Unknown
2	ANPR	2020-08-20 14:34:01	NYBI78	Unknown	120x69	Unknown	Unknown
1	ANPR	2020-08-20 14:33:28	BHUN33	Unknown	146x74	Unknown	Unknown

AI / LPR



License Plate Recognition search on AI DVR/NVR

Motor Vehicle Detection

All Backup Export Lock Add Tag

 <p>Logo: Unknown Color: Blue Type: Other Plate No.: 3500</p> <p>CH2 04-27-2021 16:28:02 <input type="checkbox"/></p>	 <p>Logo: Audi Color: White Type: Sedan Plate No.: MCK6565</p> <p>CH2 04-27-2021 16:27:31 <input type="checkbox"/></p>	 <p>Logo: Ford Color: Black Type: SUV Plate No.: PDD6033</p> <p>CH2 04-27-2021 16:26:12 <input type="checkbox"/></p>	 <p>Logo: FAW Color: White Type: Heavy Truck Plate No.: JWM7907</p> <p>CH2 04-27-2021 16:20:02 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: Silver Type: Other Plate No.: 11386V8</p> <p>CH2 04-27-2021 16:18:07 <input type="checkbox"/></p>	 <p>Logo: Cadillac Color: White Type: SUV Plate No.: JWM7907</p> <p>CH2 04-27-2021 16:17:37 <input type="checkbox"/></p>	 <p>Logo: Kia Color: Gray Type: SUV Plate No.: SBG</p> <p>CH2 04-27-2021 16:13:55 <input type="checkbox"/></p>
 <p>Logo: Nissan Color: Pink Type: SUV Plate No.: Unknown</p> <p>CH2 04-27-2021 16:09:34 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: Blue Type: Other Plate No.: NMR1984</p> <p>CH2 04-27-2021 16:06:52 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: White Type: Other Plate No.: KKH7911</p> <p>CH2 04-27-2021 16:04:08 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: Red Type: Other Plate No.: MSG2778</p> <p>CH2 04-27-2021 16:02:49 <input type="checkbox"/></p>	 <p>Logo: Chenglong Color: White Type: Heavy Truck Plate No.: KYF2461</p> <p>CH2 04-27-2021 15:55:21 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: White Type: Other Plate No.: NMG3221</p> <p>CH2 04-27-2021 15:47:03 <input type="checkbox"/></p>	 <p>Logo: Hyundai Color: Red Type: SUV Plate No.: MGT3607</p> <p>CH2 04-27-2021 15:43:19 <input type="checkbox"/></p>
 <p>Logo: Chevrolet Color: White Type: SUV Plate No.: Unknown</p> <p>CH2 04-27-2021 15:35:39 <input type="checkbox"/></p>	 <p>Logo: TOYOTA Color: Black Type: SUV Plate No.: KKH7911</p> <p>CH2 04-27-2021 15:34:15 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: White Type: Other Plate No.: 2SFXC</p> <p>CH2 04-27-2021 15:24:26 <input type="checkbox"/></p>	 <p>Logo: Ford Color: Blue Type: Medium Bus Plate No.: FRM2474</p> <p>CH2 04-27-2021 15:23:25 <input type="checkbox"/></p>	 <p>Logo: Unknown Color: Silver Type: Other Plate No.: NTX1501</p> <p>CH2 04-27-2021 15:22:58 <input type="checkbox"/></p>	 <p>Logo: Honda Color: Gray Type: Sedan Plate No.: MVD5831</p> <p>CH2 04-27-2021 15:22:39 <input type="checkbox"/></p>	 <p>Logo: Beiben Color: Black Type: Heavy Truck Plate No.: JXV1244</p> <p>CH2 04-27-2021 15:19:37 <input type="checkbox"/></p>

2/5

Display 51 - 100 , Total 228



Plate No. MCK6565
Color White
Type Sedan
Logo Audi
Plate Color Blue
Region Unknown

Perimeter Protection IVS



AI / IVS



With the perimeter making the first line of defense against unwanted intruders, industrial, civil and residential security solution providers are experiencing an increase in the demand for leading-edge techniques to reshaping the system used for perimeter protection and wide area surveillance

Perimeter protection solutions are designed to provide a high-efficiency, reliable, cost-effective and visual system powered by artificial intelligence technology. High-definition and AI-enabled security products can offer precise and predictive intrusion alert, and record detailed visual information at the right time.

Challenge:



High False Rate

The false rate of infrared sensor and traditional visual detection system for perimeter intrusion detection is higher than 95%. Animals, shaking leaves and light changes often trigger false alarms.



Invisible

The physical fence with fence sensor can provide precise alarm. But it cannot record the visual information of the intrusion event.



High Cost

Some new and high-end technology is becoming more and more popular in recent years, but the high application cost is unaffordable for small and medium sized customers.



Influenced by the weather and environment

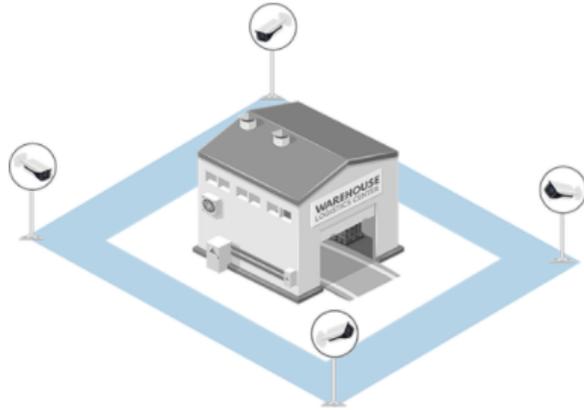
Strong sunshine, stormy weather and other heavy weather will seriously affect the detection accuracy of the sensor.

AI / IVS



Monitoring Area

Plant perimeter, Fence, Important control area



Limited Access Area

No parking area, military base, danger area, river bank



Solution benefits



Accuracy

The rate of false alarms triggered by small animals, tree movement, shadows, and bright lights is significantly lower than traditional IVS solutions.



Farther Detection

Requires 64% less pixels for recognition compared to traditional IVS solutions, allowing each perimeter protection camera to cover larger areas from further away.



Alarm Target Classification

Differentiate alarm trigger type into human and vehicle. Rules can be set to limit different trigger type according to the real requirements.



Quick Tracing

Utilize "smart search" feature to quickly search video footage by trigger type of human or vehicle. Easy for end users to trace historical information and analyze.

AI / IVS

Tripwire Intrusion Missing/Abandoned object



AI Search

Parameters

Smart Plan

Face Detection

Face Recognition

> IVS

Stereo Analysis

Crowd Distribution

People Counting

Heat Map

ANPR

SMD

Database



IFC

Draw Rule

Remove

Target Filter

Max Size

Min Size

Draw Target

Remove

Channel: 6

Type: AI by Recorder

No.	Name	Preset	Type	
<input checked="" type="checkbox"/>	1	FullScreen	--	Intrusion

Parameters

Action: Appear Cross

Direction: Both

Target Filter:

Effective Target: Human Motor Vehicle

Schedule: Setting

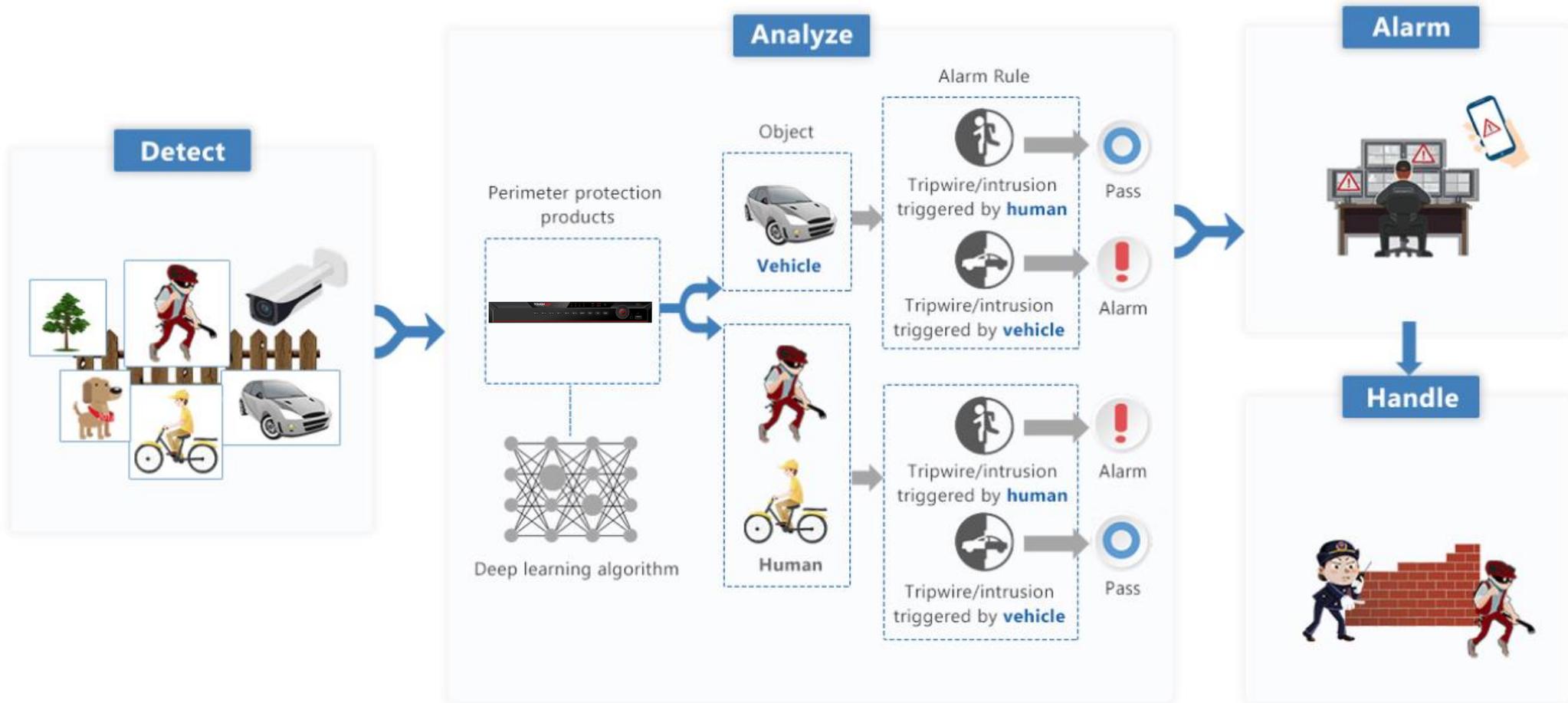
Post-Record: 10 sec.

Alarm-out Port: Setting

Record Channel: 1 2 3 4 5 6 7

Tour: 1 2 3 4 5 6 7

Processing Flow

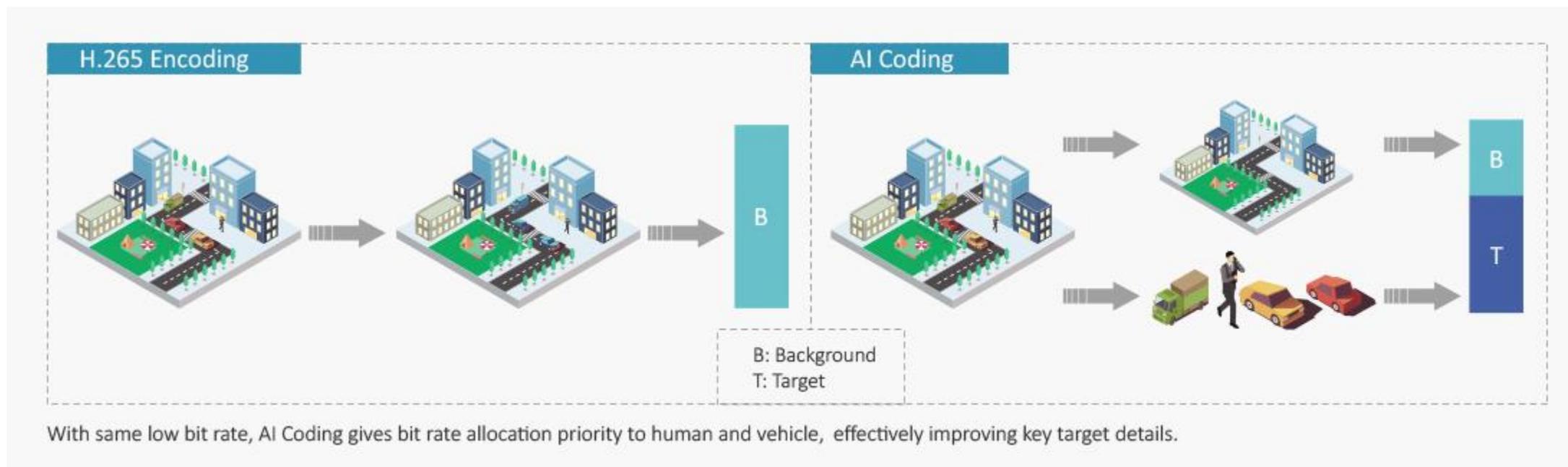


AI CODING



AI CODING

As video moves toward high definition, how to save storage costs while maintaining image quality has become one of the users' concerns. AI Coding puts emphasis on human and vehicle while encoding, ensuring the target image quality while saving 50% bandwidth and storage costs compared with H.265. AI Coding function is enabled by default in the newest firmware version.



AI / VIDEO ANALYTICS

Cost-saving



2MP / 8-ch

Storage for 1 month of video footage

AI Coding : 3T



H.265 : 6T



H.264 : 12T



Saves 50% of bandwidth and storage space!

AI / VIDEO ANALYTICS



Compatible



Through CBR (Constant Bit Rate), AI Coding does not lose its decoding compatibility when integrated with 3rd party players or platforms.

Stable



AI Coding based on CBR requires fixed bandwidth construction, ensuring system stability.

AI / VIDEO ANALYTICS



Test Drive

