Functions

Perimeter Protection
Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improves alarm accuracy.

Face Detection
Face detection is to detect if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.

Face Recognition
Face Recognition technology extracts the features of captured faces and compares them with that in face database to recognize the person identity.

Heat Map by Camera
Heat map technology is used to display the crowd density and people appearance probability. Export and display the crowd status by different colors. Generally, the crowd status is the statistics of people quantity in space and time dimensions.

ANPR by Camera
With deep learning algorithm, ANPR technology can recognize the number plate information of vehicles in the image with ANPR cameras. Support blocklist/allowlist mode, searching target vehicles from recorded video.

SMD Plus
With intelligent algorithm, Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

230320

System

Main Processor	Industrial-Grade Processor
Operating System	Embedded Linux
Operating Interface	Web, Local GUI

AI

AI by Recorder	Face Detection; Face Recognition; Perimeter Protection; SMD Plus
AI by Camera	Face Detection; Face recognition; Video Metadata (Human, Motor Vehicles, and Non-Motor Vehicles); SMD Plus; Stereo Analysis; Crowd Distribution; People Counting; ANPR; Vehicle Density; Heat Map

Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	4 Channels, 10 IVS Rules for Each Channel
Perimeter Performance of AI by Camera (Number of Channels)	16 Channels

Face Detection

Face Attributes	Gender; Age Group; Glasses; Expressions; Face Mask; Beard
Face Detection Performance of AI by Recorder (Number of Channels)	2 Channels (Up to 12 Face Images/s Each Channel)
Face Detection Performance of AI by Camera (Number of Channels)	16 Channels

Face Recognition

Face Database Capacity	Up to 20 Face Databases with20,000 Images, with a Total Capacity of 2.5 G. Name, Gender, Birthday, Address, Credential Type, Credential No., Countries & Regions and State can be Added to Each Face Image.
Face Recognition Performance of AI by Recorder (Number of Channels)	1. 16 Channels FD (By Camera) + FR (By Recorder), Image Stream: 16 Face Images/s
	2. 2 Channels FD (By Recorder) + FR (By Recorder), Video Stream: 12 Face Images/s
Face Recognition Performance of AI by Camera (Number of Channels)	16 Channels

SMD Plus

SMD Plus by Recorder	8-Channel: Secondary Filtering for Human and Motor Vehicle , Reducing False Alarms Caused By Leaves, Rain and Lighting Condition Change
SMD Plus by Camera	16 Channels

Video Metadata

Metadata Performance of AI by Recorder (Number of Channels)	8 Channels
Human Attributes	Top Color, Top Type, Hat, Bag, Age, Gender and Umbrella
Motor Vehicle Attributes	License Plate, Plate Color, Vehicle Body, Vehicle Model, Vehicle Logo, Calling, Seatbelt, Vehicle Interior, Vehicle Registration Location.
Non-motor Vehicle Attributes	Vehicle Model, Vehicle Color, Number of Persons, Helmet.

Vehicle License Plate Comparison

ANPR by Camera (Number of Channels)	8 Channels
License Plate Database Capacity	1. Create Up to 20,000 Plate Numbers 2. Blocklist and Allowlist

Audio and Video	
Access Channel	32 Channels
Network Bandwidth	AI Disabled: 384 Mbps Incoming, 3824 Mbps Recording and384 Mbps Outgoing
	AI Enabled: 200 Mbps Incoming, 200 Mbps Recording and 200 Mbps Outgoing
Resolution	32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 5 MP; 4 MP; 1080p; 720p; D1
Decoding Capability	AI Disabled: 2-Channel 32 MP@20 fps; 2-Channel 24 MP@20 fps; 4-Channel 16 MP@30 fps; 5-Channel 12 MP@30 fps; 8-Channel 8 MP@30 fps; 12-Channel 5 MP@30 fps; 16-Channel 4 MP@30 fps; 32-Channel 1080p@30 fps AI Enabled: 1-Channel 32 MP@20 fps; 1-Channel 24 MP@20 fps; 2-Channel 16 MP@30 fps; 4-Channel 12 MP@30 fps; 4-Channel 8 MP@30 fps; 8-Channel 5 MP@30 fps; 12-Channel 4 MP@30 fps; 24-Channel 1080p@30 fps
Video Output	2-Channel VGA, 2-Channel HDMI Video Output. Heterogeneous video source output for HDMI1 and HDMI2 Simultaneous video source output for VGA1 and HDMI1 Simultaneous video source output for VGA2 and HDMI2 Supports 4K display
Multi-Screen Display	Main Screen: 1/4/8/9/16/25/36
	Sub Screen: 1/4/8/9/16/25/36
Third-Party Camera Access	ONVIF; RTSP; Sony; Axis; Arecont; Pelco; Canon; Samsung
Compression Standard	
Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Audio Compression	G.711a; G.711u; PCM; G726
Network	
Network Protocol	HTTP; HTTPS; TCP/IP; IPv4/IPv6; RTSP; UDP; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search (Supports Dahua IP Camera, DVR, NVS, etc.); Multicast; P2P; Auto Registration
Mobile Phone Access	iOS; Android
Interoperability	ONVIF (Profile S/profile T/Profile G); CGI; SDK
Browser	Chrome
	IE 9 or Later
	Firefox
Network Mode	Multi-Address Mode, Load Balance, Fault Tolerance and Other Network Port Binding Modes
Recording Playback	
Multi-Channel Playback	Up to 16 Channels
Record Mode	General, Motion Ddetection; Intelligent; Alarm; POS
Backup Method	USB Device and Network
Playback Mode	Instant Playback, General Playback, Event Playback, Tag Playback, Smart Playback (Face and Motion Detection)
Storage	
Disk Group	Yes
Alarm	
General Alarm	Motion Detection; Video Tampering; Video Loss; Scene Changing, PIR Alarm, IPC External Alarm
Anomaly Alarm	Camera Offline; Storage Error; Disk Full; IP Conflict; MAC Conflict; Login Lock; Abnormal Behavior of Fan; Cybersecurity Exception

Alarm	
Intelligent Alarm	Face Detection; Face Recognition; Perimeter Protection (Intrusion and Tripwire); SMD Plus Alarms; ANPR; People Counting; Stereo Analysis; Crowd Distribution; Heat Map
Alarm Linkage	Record; Snapshot; IPC External Alarm Output; Buzzer; Log, Preset; Email
Port	
Audio Input	1-Channel RCA
Audio Output	2-Channel RCA
Alarm Input	16 Channels
Alarm Output	6 Channels (1-Channel 12V 1A Output)
HDD Interface	4 SATA Ports, Up to 16 TB. The Maximum HDD Capacity Varies with Environment Temperature.
eSATA	1
RS-232	1
RS-485	1 (Half-Duplex Serial Communication)
USB	3 (1 Front USB 2.0 Ports, 2 Rear USB 3.0 Ports)
HDMI	2
VGA	2
Network Port	2 (10/100/1000/2500 Mbps Ethernet Port, RJ-45)
General	
Power Supply	100–240 VAC, 50/60 Hz
Power Consumption	Total Output of NVR is ≤ 13 W (Without HDD)
Net Weight	4.74 kg (10.45 lb)
Gross Weight	6.11 kg (13.47 lb)
Product Dimensions	440.0 mm × 415.1 mm x 70.0 mm (17.32" × 16.34" × 2.76") (W ×D × H)
Packaging Dimensions	530.0 mm × 500.0 mm × 210.0 mm (20.87" × 19.69" × 8.27")(W × D × H)
Operating Temperature	–10 °C to +55 °C (14 °F to +131 °F)
Storage Temperature	–20 °C to +60 °C (–4 °F to +140 °F)
Operating Humidity	10%–93% (RH)
Installation	Rack or Desktop

Dimensions (mm[inch])