NVR616H-64-XI
64 Channel Pro AI Network Video Recorder

| AcuPick | Perimeter Protection | Face Detection | Face Recognition | Search by Image | Heat Map |
| ANPR | Blocklist Alarm | People Counting | SMD Plus | | |

Onvif

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.

Dual Stream
Dual stream CCTV refers to a feature in video surveillance systems where a camera transmits two separate video streams simultaneously

Overview

As a new generation of network video recorders, NVR600-XI series offers high-grade recording technology and has AI capabilities that are ideal for IP video surveillance applications. This enterprise-level NVR has a powerful processor, built-in deep learning modules, and video metadata technology. It also comes with high-precision human face recognition, perimeter protection and 4K resolution, which together shorten the response time to events and provide critical information that allows surveillance personnel to take immediate action. This NVR is compatible with numerous third-party devices, making it a perfect solution for surveillance systems with or without a video management system.

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

Video Metadata
With deep learning algorithm, Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

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.

Technical Specification

System

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

AI

AI by Recorder	Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD Plus
AI by Camera	Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD; stereo analysis; crowd distribution; people counting; ANPR; heat map; PPE detection
AcuPick AI by Camera + Recorder	Max. 64-channel, 1 combined event per channel

Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	Simultaneous mode: 32 channels, 10 IVS rules for each channel. Heterogeneous mode: 24 channels, 10 IVS rules for each channel. Refer to the information on video output for details on the mode
Perimeter Performance of AI by Camera (Number of Channels)	All channels (64 targets/s)

CE FC

ISO 9001 QUALITY ASSURANCE MANAGEMENT

ISO 14001 ENVIRONMENTAL MANAGEMENT

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Face Recognition

Face Database Capacity	Up to 40 face databases with 300,000 images, with a total capacity of 48 G.
Face Recognition Performance of AI by Recorder (Number of Channels)	Simultaneous mode: 32-channel FD (by camera) + FR (by recorder),image stream: 32 face images/s; 8-channel FD (by recorder) + FR (by recorder), video stream: 16 face images/s Heterogeneous mode: 16-channel FD (by camera) + FR (by recorder),image stream: 16 face images/s; 5-channel FD (by recorder) + FR (by recorder), video stream: 10 face images/s Refer to the information on video output for details on the mode
Face Recognition Performance of AI by Camera (Number of Channels)	64 channels

SMD Plus

SMD Plus by Recorder	32 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD Plus by Camera	All channels (128 targets/s)

Video Metadata

Metadata Performance of AI by Recorder (Number of Channels)	8 channels, 23 attributes extraction.
Metadata Performance of AI by Camera (Number of Channels)	64 channels
People Attributes	9 human body attributes
Motor Vehicle Attributes	9 attributes
Non-motor Vehicle Attributes	4 attributes

Vehicle License Plate Comparison

ANPR by Camera (Number of Channels)	All channels (64 targets/s)
License Plate Database Capacity	1. Up to 20,000 plate numbers. 2. Blocklist and allowlist

Audio and Video

Access Channel	64 channels
Network Bandwidth	AI disabled: 1280 Mbps incoming, 1280 Mbps recording and 1024 Mbps outgoing AI enabled: 640 Mbps incoming, 640 Mbps recording and 512 Mbps outgoing
Resolution	32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF

Decoding Capability	AI disabled: 2-channel 32 MP@30 fps; 2-channel 24 MP@30 fps; 4-channel 16 MP@30 fps; 5-channel 12 MP@30 fps; 8-channel 8 MP@30 fps; 11-channel 6 MP@30 fps; 12-channel 5 MP@30 fps; 16-channel 4 MP@30 fps; 32-channel 1080p@30 fps；128-channel D1@30 fps AI enabled: 1-channel 32 MP@30 fps; 1-channel 24 MP@30 fps; 2-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 5-channel 6 MP@30 fps; 6-channel 5 MP@30 fps; 8-channel 4 MP@30 fps; 16-channel 1080p@30 fps；80-channel D1@30 fps
Video Output	2 VGA, 4 HDMI; VGA: 1920 × 1080, 1280 × 1024, 1280 × 720; HDMI1&2: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720; HDMI3: 7680 × 4320, 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720; HDMI4: 1920 × 1080, 1280 × 1024, 1280 × 720 Simultaneous mode (simultaneously outputs video sources for all the HDMI1-4 and VGA1-2 ports) Max. resolution of VGA1 and VGA2 is 1080p; max. resolution of HDMI1 and HDMI2 is 4K; max. resolution of HDMI3 is 8K; max. resolution of HDMI4 is 1080p Heterogeneous mode (simultaneously outputs video sources for the VGA1 and HDMI1, or VGA2 and HDMI2. It also outputs heterogeneous video sources for HDMI1–4) Max. resolution of VGA1 and VGA2 is 1080p; max. resolution of HDMI1, HDMI2 and HDMI3 is 4K; max. resolution of HDMI4 is 1080p
Multi-screen Display	Main Screen: 1/4/8/9/16/25/36/64 Sub Screen: 1/4/8/9/16/25/36
Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Hanwha

Compression Standard

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264
Audio Compression	G.711a; G.711u; PCM; G726

Network

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; IPv6; UDP; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search (Supports IP camera, DVR, NVS, etc.); Multicast; P2P; Auto Registration; iSCSI
Mobile Phone Access	iOS; Android
Interoperability	ONVIF 22.06(Profile T; Profile S; Profile G); CGI; SDK
Browser	Chrome; IE; Safari; Edge; Firefox
Network Mode	Multi-address; load balance; fault tolerance

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Recording Playback

Multi-channel Playback	Up to 16 channels (Synchronous)
Record Mode	General, motion detection; intelligent; alarm; POS
Backup Method	USB device and network
Playback Mode	Instant playback; general playback; event playback; tag playback; smart playback

Storage

Disk Group	Yes
RAID	RAID 0/1/5/6/10
Hot Swapping	Yes

Alarm

General Alarm	Motion detection; local alarm; alarm box; camera external alarm; network alarm; scene changing; PIR alarm; VCA alarm; thermal alarm
Anomaly Alarm	Error (no disk, disk error, low space, RAID exception, low quota space; abnormal disk health; network disconnection; IP conflict; MAC conflict; abnormal fan speed); video loss; video tampering; camera offline; audio detection
Intelligent Alarm	Face detection; face and body detection; face recognition; perimeter protection; SMD; video metadata; stereo analysis, crowd distribution; ; ANPR; heat map
Alarm Linkage	Record; snapshot (panoramic); local alarm output; IPC external alarm output; access controller; audio; buzzer; log, preset; email

Port

Audio Input	1-channel RCA
Audio Output	2-channel RCA
Alarm Input	32 channels
Alarm Output	16 channels
Disk Interface	16 SATA ports, each disk can contain up to 20 TB This limit varies depending on the environment temperature.
eSATA	1
RS-232	1
RS-485	2 (1 port for half-duplex serial communication, 1 port for full-duplex serial communication)
USB	4 (2 front USB 2.0 ports, 2 rear USB 3.0 ports)
HDMI	4
VGA	2
Network Port	4 (10/100/2500 Mbps Ethernet port, RJ-45)

General

Power Supply	100–240 VAC, 50±2% Hz
Power Consumption	<25 W (without HDD)
Net Weight	11.95 kg (26.35 lb)
Gross Weight	16.14 kg (35.58 lb)
Product Dimensions	485.0 mm × 508.3 mm × 133.2 mm(19.09" × 20.01" × 5.24") (W × D × H)
Packaging Dimensions	634.0 mm × 709.0 mm × 429.0 mm(24.96" × 27.91" × 16.89") (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), non-condensing
Installation	19-inch Standard Rack or desktop
Certifications	Class A CE-EMC: EN 55032:2015+A1:2020; EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A1:2019+A2:2021; EN 55035:2017+A11:2020; EN 50130-4:2011+A1:2014 CE-LVD: EN 62368-1:2014

Dimensions

mm [inch]

485.0 [19.09]

133.2 [5.24]

508.3 [20.01]

502.2 [19.77]