

# PIX-NVR321K

## 32 Channel 1.5U 4HDDs 4K & H.265 Pro Network Video Recorder



Pixvideo 's new NVR321K network video recorder delivers excellent performance and high recording quality that is ideally suitable for IP video surveillance applications. This professional NVR adopts powerful processor, providing the capability of 4K resolution processing for applications where image details are highly required. Additionally, the NVR can be served as edge storage, central storage or backup storage with an intuitive shortcut operation menu for remote management and control.

### Series Overview

The NVR is compatible with numerous third-party devices, which make it the perfect solution for surveillance systems that work independently of video management system (VMS). It features an open architecture that supports multi-user access and is compatible with ONVIF 2.4 protocol, enabling interoperability with 4K cameras.

### Functions

#### Perimeter Protection by Camera

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

#### Face Recognition by Camera

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

#### SMD Plus by Camera

With intelligent algorithm, Pixvideo 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.

#### Video Metadata by Camera

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

- 16/32/64-channel IP video access
- Smart H.265+/Smart H.264+/H.265/H.264/MJPEG; H.265 auto switch
- Max 320 Mbps incoming bandwidth
- Up to 24MP resolution for live view and playback
- 1-channel fisheye dewarping (AI by NVR)
- AI by Camera: Perimeter protection; face detection and recognition; SMD Plus; video metadata; ANPR; people counting; stereo analysis; crowd distribution; heat map



#### ANPR by Camera

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

#### Fisheye Dewarping

Fisheye dewarping solves the problem of distortion in the circular panoramic view. The device offers various dewarping modes for different installations and configurations that enhance the video, in both live or playback modes. Each dewarping mode offers options to adjust each scene.

#### People Counting by Camera

With deep learning algorithm, Pixvideo People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with management platform, it outputs early/monthly/weekly/daily reports to meet your requirements.

#### Stereo Analysis by Camera

With deep learning algorithm and scene 3-dimensional information, Pixvideo stereo analysis technology can recognize people's behaviors, such as fall detection, violence detection, strand detection, and space exception, and then generates alarm signals and triggers linkage.

#### DMSS

The DMSS app is available on the iOS App Store and Google Play. It makes surveillance easy and simple, allowing you to remotely access back-end devices, view live video, receive event push notifications, and search for recorded videos from an iPhone, iPad, or Android phone at anytime from virtually anywhere.

## Technical Specification

### System

|                     |                                     |
|---------------------|-------------------------------------|
| Main Processor      | Industrial embedded micro-processor |
| Operating System    | Embedded Linux                      |
| Operation Interface | Web; local GUI                      |

### Perimeter Protection by Camera

|             |                                                     |
|-------------|-----------------------------------------------------|
| Performance | 16/20/20 channels                                   |
| AI Search   | Search for pictures by channel, time and event type |

### Face Recognition by Camera

|                 |                                                                   |
|-----------------|-------------------------------------------------------------------|
| Performance     | 14 channels                                                       |
| Face Attributes | 6 attributes: Gender; age; glasses; expression; mouth mask; beard |
| AI Search       | Search for pictures by channel, time and face attributes          |

### SMD Plus by Camera

|             |                                                  |
|-------------|--------------------------------------------------|
| Performance | 16/32/64 channels                                |
| AI Search   | Search by target classification (human, vehicle) |

### Video Metadata by Camera

|                   |                                                                                              |
|-------------------|----------------------------------------------------------------------------------------------|
| Performance       | 16 channels                                                                                  |
| Human Body        | Top; top color; bottom; bottom color; hat; bag; gender; age; umbrella                        |
| Vehicle           | Plate No.; type; color; vehicle type; logo; plate color; ornament; calling; seatbelt; region |
| Non-motor Vehicle | Type; color; number of passengers; helmet                                                    |
| AI Search         | Supports searching for target video by metadata                                              |

### ANPR by Camera

|             |            |
|-------------|------------|
| Performance | 4 channels |
|-------------|------------|

### Stereo Analysis by Camera

|             |                                                                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Performance | 16 channels                                                                                                                                               |
| AI Search   | Search by target classification (fall detection; people approach detection; people No. exception detection; people staying detection; violence detection) |

### Video

|                      |                                                                                                                                                                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Access Channel       | 16/32/64                                                                                                                                                                                                                                                     |
| Network Bandwidth    | 320 Mbps for access, 320 Mbps for storage and 320 Mbps for forwarding                                                                                                                                                                                        |
| Resolution           | 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080p, 1.3MP, 720p, D1, and more                                                                                                                                                                                              |
| Decoding Capability  | 16-channel@1080P (30 fps)                                                                                                                                                                                                                                    |
| Video Output         | HDMI1: 3840 × 2160; 1920 × 1080; 1280 × 1024; 1280 × 720<br>VGA1: 1920 × 1080; 1280 × 1024; 1280 × 720<br>HDMI2/VGA2: 1920 × 1080<br>VGA1/HDMI1 homologous output, VGA2/HDMI2 homologous output, and VGA1/HDMI1 and VGA2/HDMI2 supports heterogeneous output |
| Multi-screen Display | 1st Screen: 16-channel: 1/4/8/9/16<br>32-channel: 1/4/8/9/16/25/36<br>64-channel: 1/4/8/9/16/25/36/64                                                                                                                                                        |
|                      | 2nd screen: 1/4/8/9/16                                                                                                                                                                                                                                       |

### Third Party Camera Access

Panasonic, Sony, Samsung, Axis, Pelco, Arecont, ONVIF, Canon and more

### Compression

|       |                                                 |
|-------|-------------------------------------------------|
| Video | Smart H.265+; Smart H.264+; H.265; H.264; MJPEG |
| Audio | PCM; G.711A; G.711U; G.726                      |

### Network

|                     |                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network Protocol    | HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; PPPoE; DDNS; FTP; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, and more.) ; P2P |
| Mobile Phone Access | Android; iOS                                                                                                                                                                            |
| Interoperability    | ONVIF (profile T/S/G); CGI; SDK                                                                                                                                                         |
| Browser             | Chrome; IE9 or later; Firefox                                                                                                                                                           |

### Record Playback

|                        |                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Multi-channel Playback | 1/4/9/16                                                                                                                                        |
| Record Mode            | Manual; schedule (general; MD; alarm; MD & alarm; intelligent; POS)                                                                             |
| Storage Method         | Local HDD and network                                                                                                                           |
| Backup                 | USB device                                                                                                                                      |
| Playback Function      | 1. Play; pause; stop; fast forward; fast backward; rewind; play by frame<br>2. Full screen; backup (cut/file) ; partially enlarge; audio on/off |

### Storage

|            |     |
|------------|-----|
| Disk Group | Yes |
|------------|-----|

### Alarm

|                   |                                                                                                                                                                                              |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Alarm     | Motion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarm                                                                                                             |
| Anomaly Alarm     | Camera offline; storage error; full storage; IP conflict; MAC conflict; login lock; network security anomaly                                                                                 |
| Intelligent Alarm | Perimeter protection; face detection; face recognition; SMD; video metadata (human; motor-vehicle; non-motor vehicle) ; ANPR; people counting; stereo analysis; crowd distribution; heat map |
| Alarm Linkage     | Record; snapshot; IPC external alarm output; buzzer; log; preset; email                                                                                                                      |

### External Port

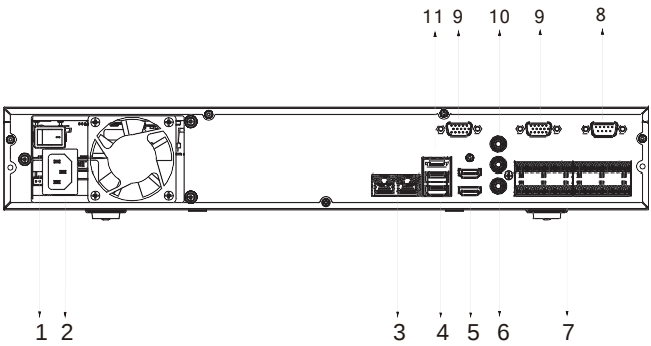
|              |                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------|
| Audio Input  | 1 channel, RCA connector                                                                                     |
| Audio Output | 2 channels, RCA connector, which supports voice intercom output                                              |
| HDD          | 4 SATA III ports, up to 10 TB for a single HDD. The maximum HDD capacity varies with environment temperature |
| Alarm Input  | 16 channels                                                                                                  |
| Alarm Output | 6 channels                                                                                                   |
| eSATA        | 1 eSATA                                                                                                      |
| RS-232       | 1 channel, used to debug and pass through serial data                                                        |
| RS-485       | 1 channel, used to control PTZ, and it supports multiple protocols                                           |
| USB          | 1 front USB 2.0 port, 2 rear USB 3.0 ports                                                                   |

|         |                                                       |
|---------|-------------------------------------------------------|
| HDMI    | 2                                                     |
| VGA     | 2                                                     |
| Network | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet ports |

General Parameter

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| Power Supply          | Single, 100V–240V AC, 50 Hz–60 Hz                                                                       |
| Power Consumption     | < 16.7W (without HDD)                                                                                   |
| Net Weight            | 4.3 kg (9.5 lb) (without HDD)                                                                           |
| Gross Weight          | 7 kg (15.4 lb) (without HDD)                                                                            |
| Product Dimensions    | 440 mm × 412.2 mm × 76.0 mm (17.3" × 16.2" × 3.0")                                                      |
| Package Dimensions    | 522 mm × 492 mm × 200 mm (20.6" × 19.4" × 7.9")                                                         |
| Operating Temperature | -10°C to +55°C (+14°F to +131°F)                                                                        |
| Storage Temperature   | 0°C to +40°C (+32°F to +104°F)                                                                          |
| Operating Humidity    | 10%–93% (RH)                                                                                            |
| Storage Humidity      | 30%–85% (RH)                                                                                            |
| Operating Altitude    | 3,000 m (9,843 ft)                                                                                      |
| Certifications        | CE: EN55032; EN55024; EN50130-4; EN60950-1<br>FCC: Part 15 Subpart B; ANSI C63.4-2014<br>UL: UL 60950-1 |

Panels



- 1 Power Switch
2 Power Input
3 Network Ports
4 USB Ports
5 HDMI Ports
6 AUDIO IN, RCA Connector
7 Alarm In/Out
8 RS-232 Port
9 VGA Ports
10 AUDIO OUT, RCA Connector
11 eSATA Port

Dimensions (mm[inch])

