

DH-XVR8216A-4KL-I

16 Channel Penta-brid 4K 1U Digital Video Recorder



AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc.

The complete lineup of Dahua AI series includes network (PTZ) cameras, network video recorders, digital video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

Dahua new XVR8000-4KL/4K-I series XVR delivers excellent performance and high recording quality that is ideally applicable to a wide range of industries ranging from retail to banking and real estate. Holding Dahua Technology's patented HDCVI signature technology, these new AI XVR products are featured with long distance transmission, seamless upgrading, and IoT into analog monitoring—all while maintaining perfect 4K resolution over coax.

With build-in deep learning module, XVR8000-4KL/4K-I series products adopt video image structuring technology based on deep learning algorithms, achieving high-precision human face recognition and perimeter protection. By applying deep learning artificial intelligence, XVR8000-4KL/4K-I allows users to focus on what matters most, improves event response time and helps make video actionable.

With its extensive portfolio of front-end and back-end products with HDCVI technology, Dahua solutions can be easily integrated into self-contained systems to satisfy the needs of both system integrators and users.

Functions

Perimeter Protection

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

- H.265+/H.265 dual-stream video compression
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Supports 64 channels of IPC access, each channel up to 12MP input; Max 256Mbps incoming bandwidth
- HDMI1 4K@60fps output
- Up to 16 channel perimeter protection
- Up to 4 channel video stream face recognition
- Up to 24 face pictures /sec processing
- Up to 20 face databases with 100,000 face images in total



Real Time Face Recognition

Video stream real time face recognition. Facial attributes analysis features including gender, age, expression, glasses, moustache, mouth mask. Identify people and also capture, record faces with metadata. Facial feature filtering while real time display, only show faces with target features.

Face Database Management

Configurable multiple face databases. Powerful face database management. Face database can be applied to video channels independently. Name, gender, birthday, nationality, address, ID information can be added to each face picture.

Common/Stranger Mode

Supports regular and stranger mode. In stranger mode, when XVR detects a strange face(not in device's face database), it can trigger alarm, buzzer, snapshot, record, etc. Similarity threshold can be set manually. This function is developed for important infrastructure sites for which access control is critical.

Smart Search

Supports search by metadata of human face. Support uploading face pictures to XVR and compare them with recorded faces in XVR by similarity. Enable operators to quickly and easily search through multi channels and long duration, efficiently find out when and where a person of interest appeared.

| Technical Specification | |
|-----------------------------|--|
| System | |
| Main Processor | Embedded Processor |
| Operating System | Embedded LINUX |
| Perimeter Protection | |
| Performance | 16 channel, 10 IVS rules for each channel |
| Object classification | Human/Vehicle secondary recognition for tripwire and intrusion |
| AI Search | Search by target classification (Human, Vehicle) |
| Face Recognition | |
| Performance | Max 24 face pictures /sec processing (modeling and comparing) 4 channel video stream face recognition |
| Stranger Mode | Detect strangers' faces(not in device's face database).Similarity threshold can be set manually. |
| AI Search | Up to 8 target face images search at same time, similarity threshold can be set for each target face image. |
| Database Management | Up to 20 face databases with 100,000 face images in total. Name, gender, birthday, nationality, address, ID information can be added to each face picture. |
| Database Application | Each database can be applied to video channels independently. |
| Trigger Events | Buzzer, Voice Prompts, Email, Snapshot, Recording, Alarm Out, PTZ Activation, etc. |
| Metadata | |
| Face | Gender, age, glasses, beard, mask. |
| AI Search | Support search target video by metadata. |
| Video and Audio | |
| Analog Camera Input | 16 Channel, BNC |
| HDCVI Camera | 4K, 6MP, 5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps |
| AHD Camera | 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps |
| TVI Camera | 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps |
| CVBS Camera | PAL/NTSC |
| IP Camera Input | 64 Channel, each channel up to 12MP |
| Audio In/Out | 4/1, RCA |
| Two-way Talk | Mic in & reuse Audio out for Mic out, RCA |
| Recording | |
| Compression | H.265+/H.265/H.264+/H.264 |
| Resolution | 4K, 6MP, 5MP, 4MP, 3MP, 1080P, 720P, 960H, D1, CIF |
| Record Rate | Main stream: 4K(1~7fps); 6MP(1~10fps); 5MP(1~12fps); 4MP/3MP(1~15fps); 4M-N/1080P/720P/960H/D1/CIF/QCIF (1~25/30fps) Sub stream: 960H(1~15fps); D1/CIF/QCIF(1~25/30fps) |
| Bit Rate | 32Kbps ~ 8192Kbps Per Channel |
| Record Mode | Manual, Schedule (General, Continuous), MD (Video detection: Motion Detection, Video Loss, Tampering), Alarm, Stop |
| Record Interval | 1 ~ 60 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec |

| Display | |
|----------------------|--|
| Interface | 2 HDMI, 1 VGA |
| Resolution | HDMI 1:3840×2160, 2560×1440, 1920×1080, 1280×1024, 1280×720 HDMI2/VGA: 1920×1080, 1280×1024, 1280×720 |
| Multi-screen Display | When IP extension mode not enabled: 1/4/8/9/16 When IP extension mode enabled: 1/4/8/9/16/25/36 |
| OSD | Camera title, Time, Video loss, Camera lock, Motion detection, Recording |

| Network | |
|------------------|---|
| Interface | 2 RJ-45 Ports (1000M) |
| Network Function | HTTP, HTTPS, TCP/IP, IPv4/IPv6, Wi-Fi, 3G/4G, SNMP, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, P2P, IP Search (Supports Dahua IP camera, DVR, NVS, etc.) |
| Max. User Access | 128 users |
| Smart Phone | iPhone, iPad, Android |
| Interoperability | ONVIF 16.12, CGI Conformant |

| Video Detection and Alarm | |
|---------------------------|--|
| Trigger Events | Recording, PTZ, Tour, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips |
| Video Detection | Motion Detection, MD Zones: 396 (22 × 18), Video Loss, Tampering and Diagnosis |
| Alarm input | 16 |
| Relay Output | 3 |

| Playback and Backup | |
|---------------------|---|
| Playback | 1/4/9/16 |
| Search Mode | Time /Date, Alarm, MD and Exact Search (accurate to second) |
| Playback Function | Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom |
| Backup Mode | USB Device/Network |

| Storage | |
|--------------|---|
| Internal HDD | 2 SATA Ports, up to 10TB capacity for each disk |
| eSATA | N/A |

| Auxiliary Interface | |
|---------------------|---|
| USB | 3 USB Ports (1 USB 2.0 , 2 USB 3.0) |
| RS232 | 1 port, For PC communication & Keyboard |
| RS485 | 1 Port, for PTZ Control |

| Electrical | |
|-------------------|--------------------|
| Power Supply | DC12V/5A |
| Power Consumption | <20W (Without HDD) |

Construction

| | |
|--------------|---|
| Dimensions | 1U, 375mm×328mm×50mm (14.8" x 12.9" x 2.0") |
| Net Weight | 2.35kg (5.2lb) (without HDD) |
| Gross Weight | 3.2kg (7.05lb) |
| Installation | Desktop installation |

Environmental

| | |
|----------------------|---|
| Operating Conditions | -10°C ~ +55°C (+14°F ~ +131°F), 0~ 90% RH |
| Storage Conditions | -20°C ~ +70°C (-4°F ~ +158°F), 0~ 90% RH |

Third-party Support

| | |
|---------------------|---|
| Third-party Support | Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and more |
|---------------------|---|

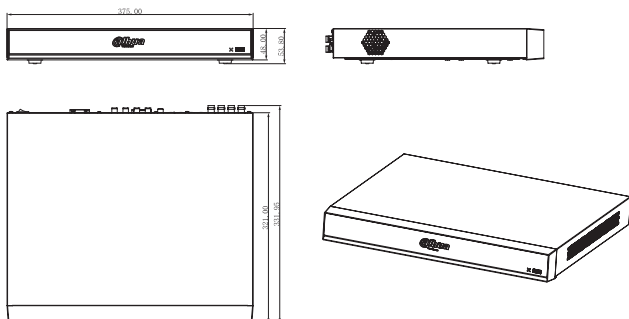
Certifications

| | |
|----------------|--|
| Certifications | FCC: Part 15 Subpart B |
| | CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024 |
| | UL: UL 60950-1 |

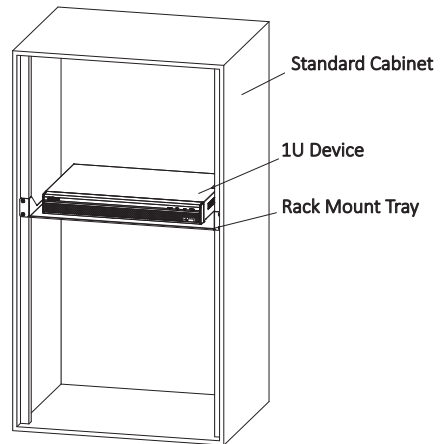
Ordering Information

| Type | Part Number | Description |
|---------------|-------------------|--|
| 8 Channel XVR | DH-XVR8216A-4KL-I | 16 Channel Penta-brid 4K 1U Digital Video Recorder |

Dimensions (mm)

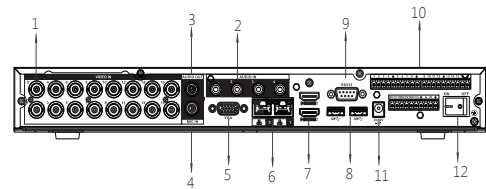


Installation on Rack Mount Tray



Rear Panel

DH-XVR8216A-4KL-I



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|----------------------------|-------------------------|
| 1 VIDEO IN | 7 HDMI Interface |
| 2 AUDIO IN, RCA Connector | 8 USB Interface |
| 3 AUDIO OUT, RCA Connector | 9 RS232 Interface |
| 4 MIC IN Interface | 10 ALARM IN/OUT; RS485; |
| 5 VGA Interface | 11 Power Input |
| 6 Network Interface | 12 Power Switch |