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)
- **Stranger Mode**: Detect strangers’ faces (not in device’s face database). Similarity threshold can be set manually.

**Al 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**
- Gender, age, glasses, beard, mask.
- Support search target video by metadata.

**Video and Audio**

<table>
<thead>
<tr>
<th>Analog Camera Input</th>
<th>16 Channel, BNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDCVI Camera</td>
<td>4K, 6MP, 5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps</td>
</tr>
<tr>
<td>AHD Camera</td>
<td>5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps</td>
</tr>
<tr>
<td>TVI Camera</td>
<td>5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps</td>
</tr>
<tr>
<td>CVBS Camera</td>
<td>PAL/NTSC</td>
</tr>
<tr>
<td>IP Camera Input</td>
<td>64 Channel, each channel up to 12MP</td>
</tr>
<tr>
<td>Audio In/Out</td>
<td>16 Audio In, 1 Audio Out, BNC</td>
</tr>
<tr>
<td>Two-way Talk</td>
<td>1 Mic In, 1 Mic Out, BNC</td>
</tr>
</tbody>
</table>

**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)
- **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

**Network**
- **Interface**: 2 RJ-45 Ports (1000M)
- **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**: 6

**Playback and Backup**
- **Playback**: 1/4/8/16
- **Search Mode**: Time /Date, Alarm, MD and Exact Search (accurate to second)

**Storage**
- **Internal HDD**: 8 SATA Ports, up to 10TB capacity for each disk
- **eSATA**: 1 Port
- **Raid**: 0, 1, 5, 6, 10

**Auxiliary Interface**
- **USB**: 4 USB Ports (2 USB 2.0, 2 USB 3.0)
- **RS232**: 1 port, For PC communication & Keyboard
- **RS485**: 1 Port, for PTZ Control

**Electrical**
- **Power Supply**: AC100V-240V, 50/60Hz
- **Power Consumption**: <20W (Without HDD)
### Construction

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>2U, 440mm x 455mm x 95mm (17.3” x 17.9” x 3.7”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Weight</td>
<td>6.9 kg (15.2 lb)</td>
</tr>
<tr>
<td>Gross Weight</td>
<td>9.8 kg (21.6 lb)</td>
</tr>
<tr>
<td>Installation</td>
<td>Desktop installation</td>
</tr>
</tbody>
</table>

### Environmental

<table>
<thead>
<tr>
<th>Operating Conditions</th>
<th>-10°C ~ +55°C (+14°F ~ +131°F), 0~ 90% RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Conditions</td>
<td>-20°C ~ +70°C (-4°F ~ +158°F), 0~ 90% RH</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Certifications</th>
<th>FCC: Part 15 Subpart B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CE: CE-LVD: EN 60950-1/IEC 60950-1</td>
</tr>
<tr>
<td></td>
<td>CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 50024</td>
</tr>
</tbody>
</table>

### Rear Panel

DH-XVR8816S-4KL-I

1. VIDEO IN  
2. VIDEO OUT  
3. AUDIO IN, BNC Connector  
4. AUDIO OUT, BNC Connector  
5. MIC IN, BNC Connector  
6. MIC OUT, BNC Connector  
7. 2*Network port  
8. VGA port  
9. 2*HDMI port  
10. 2*USB port  
11. eSATA port  
12. RS232 port  
13. ALARM IN/OUT; RS485; RS422; Power Input  
14. Power Input  
15. Power Switch  

### Ordering Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Channel XVR</td>
<td>DH-XVR8816S-4KL-I</td>
<td>16 Channel Penta-brid 4K 2U Digital Video Recorder</td>
</tr>
</tbody>
</table>

### Dimensions (mm)

![Dimensions Diagram]