

# DH- XVR7816S-4KL-X

## 16 Channel Penta-brid 4K 2U Digital Video Recorder



### System Overview

With the surveillance operators pursuing to HD/UHD which further adds the storage and transmission cost, HDCVI H.265+/H.265 has been released to incredibly decrease the required bitrate while ensuring the video quality in realizing high resolution surveillance such as 4MP/4K. Designed as a collection of intelligent encoding algorithm based on H.265, H.265+ significantly improves encoding efficiency and save bandwidth/storage cost, which fully meet the needs of users facing budget constraints who both require quality and performance.

Besides smart codec, the series supports various advanced functions like IoT and POS functionalities, making the whole system smarter and more convenient which is a perfect choice for mid to large-scale business and projects where both high reliability and flexibility are required.

### Functions

#### Smart H.265+

Smart Codec, H.265+ can reduce up to 90% bit rate and storage requirements compared with H.264 without having to invest in new cameras.

#### HDCVI/AHD/TVI/CVBS Auto-detect

The XVR can auto recognize the signal of front-camera without any setting. It makes operation more friendly and convenient.

#### High Definition Camera Input

The XVR supports up to 8MP HD resolution (3840 x 2160) HDCVI camera and 12MP IP camera input.

#### Coaxial Audio/Upgrade/Alarm

The integrated design can reduce wiring troubles which makes it much more cost-effective and convenient for installation.

- H.265+/H.265 dual-stream video compression
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Supports 32 channels of IPC access, each channel up to 12MP input; Max 128Mbps incoming bandwidth
- IoT & POS functionalities
- All channels support Tripwire & Intrusion; First 4 channels support Object Abandoned & Missing
- Supports HDMI2 for spot output



#### IoT Functionality

HDCVI IoT can achieve multi-dimensional surveillance by integrating sensors with monitoring video, which not only can generate the report for analysis but also prevent risk in advance.

#### POS Functionality

This function is mainly used in retail programs which can superimpose POS ticket information on the video channel to preview and record.

#### Smart Fan Design

The smart fan can automatically turn on or turn off according to the CPU temperature. This function can effectively reduce the fan noise to provide a better user experience.

#### Spot Output

HDMI2 port is made for a secondary monitor. This allows the operator to view one special monitor that assigned to selected cameras or video inputs from higher security areas.

#### Intelligent Video System (IVS)

With built-in intelligent video analytics, the XVR has the ability to detect and analyze moving objects for improved video surveillance. The XVR provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed.

#### Face Detection

It is a typical technology being used in a variety of applications that search or identify individuals which show front cameras.

#### Smart Search

This function helps you get more motion detect video during a short time through drawing a region when playback. It is very useful when an emergency occurs.



## Technical Specification

### System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

### Video and Audio

Analog Camera Input	16 Channel, BNC
HDCVI Camera	4K, 5MP, 6MP, 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	16+16 Channels, each channel up to 12MP
Audio In/Out	16 Audio In, 1 Audio Out, BNC
Two-way Talk	1 Mic In, 1 Mic Out, BNC

### Recording

Compression	H.265+/H.265/H.264+/H.264
Resolution	4K, 6MP, 5MP, 4MP, 3MP, 4M-N, 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(1~25/30fps) Sub stream: 960H(1~15fps); D1/CIF(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
Audio Compression	AAC(only for the 1st channel), G.711A, G.711U, PCM
Audio Sample Rate	8KHz, 16 bit Per Channel
Audio Bit Rate	64Kbps Per Channel

### Display

Interface	2 HDMI, 1 VGA, 1 TV
Resolution	HDMI 1: 3840x2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 HDMI 2 /VGA: 1920x1080, 1280x1024, 1280x720
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 x 18), Video Loss, Tampering and Diagnosis
Alarm input	16
Relay Output	6

## 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	8 SATA Ports, up to 10TB capacity for each disk
eSATA	1 Port

## 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
RS422	1 Port, for PTZ Control

## Electrical

Power Supply	AC100V-240V, 50/60Hz
Power Consumption	<35W (Without HDD)

## Construction

Dimensions	2U, 440mmx455mmx95mm (17.3" x 17.9" x 3.7")
Net Weight (without HDD)	6.9kg (15.2lb)
Gross Weight	9.8kg (21.6lb)
Installation	Desktop installation/Rack-mounted

## Environmental

Operating Conditions	-10°C ~ +55°C (+14°F ~ +131°F), 10%~ 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
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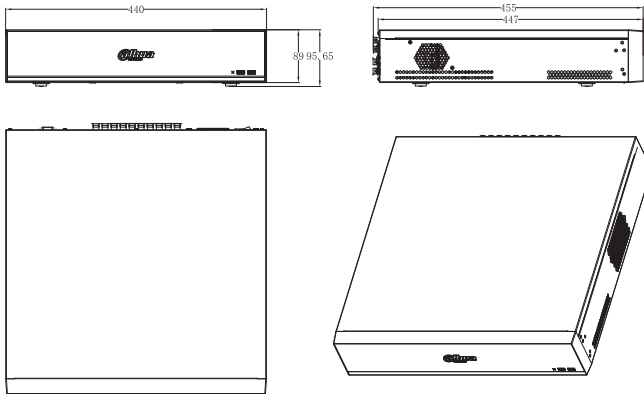
## Certifications

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**

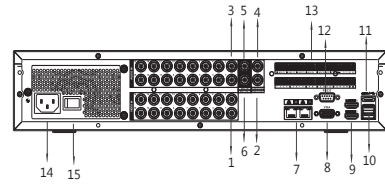
Type	Part Number	Description
16 Channel XVR	DH-XVR7816S-4KL-X	16 Channel Penta-brid 4K 2U Digital Video Recorder

**Dimensions (mm)**



**Rear Panel**

DH-XVR7816S-4KL-X



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