ⅾahua TECHNOLOGY

DH-XVR7816S-4KL-X-LP
16 Channel Penta-brid 4K 2U Digital Video Recorder

· 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 320Mbps incoming bandwidth
· IoT & POS functionalities
· All channels support Tripwire & Intrusion; First 4 channels support Object Abandoned & Missing
· Supports HDMI2 for spot output

Pro Series | H.265 | 16CH | 4K HDMI
IoT | POS | Coax Audio | Smart Fan

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.

Loop Functionality
Replacing the video distributor, this function simply provides an additional output to use as you wish. Users can achive recording as well as video matrix at the same time. Supports Loop video out transmission of more than 300m for CVBS/720P as well as more than 200m for 1080P and above.

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 funcion 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.

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Technical Specification

System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

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	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 steram: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	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 1:3840×2160, 2560×1440, 1920×1080, 1280×1024, 1280×720 HDMI 2 /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	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
Loop Out	16 Channel, BNC, support HDCVI/AHD/TVI/CVBS

Electrical

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

Construction

Dimensions	2U, 440mm×455mm×95mm (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

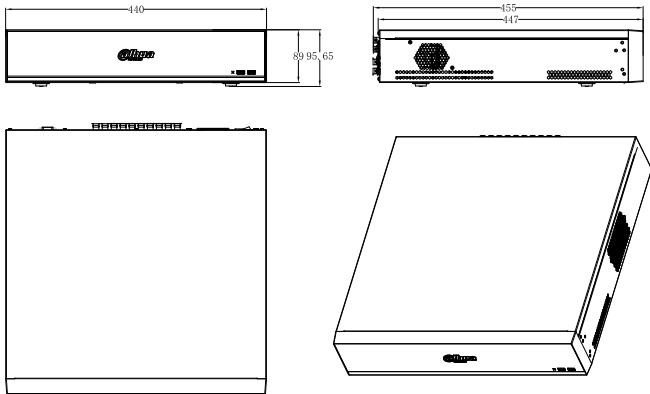|	
Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and more

Certifications

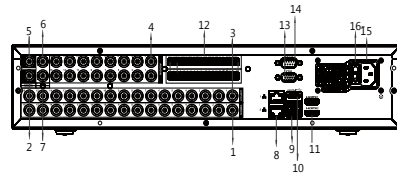|	
Certifications	FCC: Part 15 Subpart B
	CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024
	UL: UL 60950-1

Ordering Information

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

Dimensions (mm)

Rear Panel

DH-XVR7816S-4KL-X-LP

1	VIDEO IN	9	2*USB port
2	VIDEO OUT	10	eSATA port
3	LOOP OUT	11	2*HDMI port
4	AUDIO IN, BNC Connector	12	ALARM IN/OUT; RS485; RS422;
5	AUDIO OUT, BNC Connector	13	VGA port
6	MIC IN, BNC Connector	14	RS232 port
7	MIC OUT, BNC Connector	15	Power Input
8	2*Network port	16	Power Switch