

PENDVR-EL164K-AI

16 Channel 2U 4K DVR



System Overview

Our massive 2U 16 Channel Pentabrid (or 32 Channel Hybrid via IP in a 16+16 configuration) has room for up to 8 SATA HDs, features 16 BNC audio inputs, 16 alarm inputs with 6 relay outputs, BNC and RCA audio out, BNC video out to go with 2 HDMI and 1 VGA supporting Spot Video Out, dual Gigabit Ethernet, and POS integration making it a true connectivity king.

Features

Real Time Face Recognition

With real time face recognition you can use facial features including gender, age, expression, glasses, or even facial hair to identify faces on a real time video stream. This allows you to identify people and also be able to capture a face for storage and record faces with metadata. You can use facial feature filtering while monitoring in real time to show faces with target features.

Perimeter Protection

Perimeter Protection functions significantly improve accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or a mobile client reduces system requirements as well as resources, resulting in greater surveillance system efficiency.

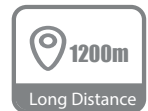
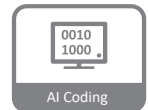
SMD Plus

SMD Plus, referred to as Smart Motion Detection Plus, which is an upgraded version of SMD that greatly improves the alarm accuracy by loading deep-learning algorithm. It analyzes person and vehicle shapes based on motion detection and send alarms only when a person or vehicle intrudes.

AI Coding

Compared with H.265, AI codec can reduce up to 50% bit rate and storage requirements while have no loss of decoding compatibility, providing clear human and vehicle details.

- H.265+/H.265 dual-stream video compression
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Up to 2 channels video stream (analog channel) perimeter protection
- Up to 16 channels video stream (analog channel) SMD plus
- Up to 2 channels video stream (analog channel) human face recognition
- IoT & POS functionalities
- Max 32 channels IP camera inputs, each channel up to 12MP
Max 128 Mbps incoming bandwidth



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

This unit can auto recognize the signal of the camera without having to change settings.

Coaxial Audio/Upgrade/Alarm

This integrated design can reduce wiring troubles and makes it easier to run audio, upgrade your camera, or trigger alarms all via the coax cable.

Long Distance Transmission

This recorder supports long distance transmission over coaxial cable and UTP 700m for 4K&4MP, 800m for 1080P, 1200m for 720P.

AI Search

Using stored information you can quickly identify people and vehicles from massive video data. This makes it easier to trace back to a certain person vehicle or point in time. Now you can search for targets with ease.

Technical Specification

System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

Perimeter Protection

Performance	2 channels, 10 IVS for each channel
Object classification	Human/Vehicle secondary recognition for tripwire and intrusion
AI Search	Search by target classification (Human, Vehicle)

Face Recognition

Performance	2 channels, max 12 face pictures/sec processing
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 10 face databases with 20,000 face images in total. Name, gender, birthday, address, certificate type, cerificate No., countries®ions and state 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.

SMD Plus

Performance	16 channels
AI Search	Search by target classification (Human, Vehicle)

Video and Audio

Analog Camera Input	16 channels, BNC
HDCVI Camera Input	4K, 6MP, 5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps
AHD Camera Input	4K, 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
TVI Camera Input	4K, 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
CVBS Camera Input	PAL/NTSC
IP Camera Input	16+16 channels, each channel up to 12MP
Audio In/Out	16/1, BNC
Two-way Talk	1 Mic In, 1 Mic Out, BNC

Recording

Compression	AI Coding/H.265+/H.265/H.264+/H.264
Resolution	4K, 6MP, 5MP, 4K-N, 4MP, 3MP, 4M-N, 1080P, 720P, 960H, D1, CIF
Record Rate	Main stream: All channel 4K(1fps~7fps); 6MP(1fps~10fps); 5MP(1fps~12fps); 4K-N, 4MP/3MP(1fps~15fps); 4M-N/1080P/720P/960H/D1/CIF (1fps~25/30fps); Sub steram:960H(1fps~15fps); D1/CIF(1fps~25/30fps)
Bit Rate	32 Kbps~6144 Kbps 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 s~30 s, Post-record: 10 s~300 s
Audio Compression	G.711A, G.711U, PCM
Audio Sample Rate	8 KHz, 16 bit Per Channel
Audio Bit Rate	64 Kbps Per Channel

Display

Interface	2 HDMI, 1 VGA, 1 TV
Resolution	HDMI 1:3840×2160, 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 (1000 Mbps)
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)
RS485	1 Port, for PTZ Control
RS232	1 Port, for PC Communication & Keyboard

Electrical

Power Supply	AC100V-240V, 50/60Hz
Power Consumption (Without HDD)	<20W

Technical Specification

Construction

Dimensions	2U, 440 mm × 463 mm × 95 mm (17.32" × 18.23" × 3.73")
Net Weight (without HDD)	6.8 kg (14.9 lb)
Gross Weight	9.3 kg (20.1 lb)
Installation	Desktop/racklet mounted

Environmental

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

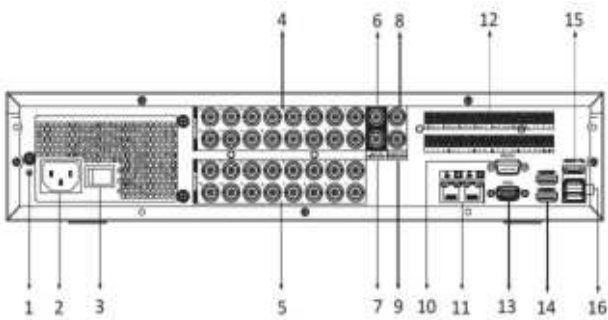
Third-party Support

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

Rear Panel



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|------------------|-----------------------|
| 1 Ground | 2 Power Input |
| 3 Power Switch | 4 Audio In |
| 5 Video In | 6 Mic In |
| 7 Mic Out | 8 Audio Out |
| 9 Video Out | 10 RS-232 Port |
| 11 Network Ports | 12 Alarm Input/Output |
| 13 VGA Port | 14 HDMI Ports |
| 15 eSATA Port | 16 USB Ports |

Dimensions

