PDVR-E16W2N2-AI
1U 1080P 16 Channel DVR

· H.265+/H.265 dual-stream video compression

· Supports HDCVI/AHD/TVI/CVBS/IP video inputs

· Up to 2 BNC channels of Perimeter Protection

· Up to 16 BNC channels of SMD Plus

· Up to 2 BNC channels of human face recognition

· IoT & POS functionalities

Face Recognition | Perimeter Protection | SMD Plus | AI Coding

H.265 | 4K HDMI | Coax Audio | 1200m Long Distance

System Overview

The PDVR-E16W2N2-AI leverages many of today's best technologies and integrates them into a powerful, flexible recorder suitable for a wide range of users. Whether you're finally replacing that 5-10 year old system or looking for the best value for your money, this unit should be a strong contender for your dollar. The PDVR-E16W2N2-AI is a Pentabrid recorder, which means that not only is it compatible with all the major coax standards (analog/CVI/TVI/AHD) it also handles IP cameras.

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, 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 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.

SMART H.265+
Smart H.265+ technology is a collection of intelligent encoding algorithms based on H.265. To meet the characteristics of video surveillance, Smart H.265+ adopts some key video encoding techniques can be flexibly added/deleted or combined according to different applications and products. Smart H.265+ codec can effectively enhance video encoding efficiency according to the characteristics of different surveillance environments; furthermore, it can greatly reduce transmission bit rate, storage capacity to improve the overall system.

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
The HDCVI system supports long distance transmission over coaxial cable and UTP, max. 700m for 4K/4MP, 800m for 1080P and 1200m for 720P.

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

Onvif

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	Max 12 face pictures/sec processing
	2 channels video stream face recognition, only support analog camera
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 10,000 face images in total. Name, gender, birthday, address, certificate type, cerificate No., countries&regions 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	5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps
AHD Camera Input	5MP, 4MP, 1080P@25/30, 720P@25/30fps
TVI Camera Input	5MP, 4MP, 1080P@25/30, 720P@25/30fps
CVBS Camera Input	PAL/NTSC
IP Camera Input	16+8 channels, each channel up to 6MP
Audio In/Out	1/1, RCA
Two-way Talk	Reuse audio in/out, RCA

Recording

Compression	AI Coding/H.265+/H.265/H.264+/H.264
Resolution	5M-N, 4M-N, 1080P, 1080N, 720P, 960H, D1, CIF
Record Rate	Main stream: All channel 5M-N (1fps–10fps); 4M-N/1080P (1fps–15fps); 1080N/720P/960H/D1/CIF (1fps–25/30fps) Sub stream: D1/CIF (1fps–15fps)
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

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	1 HDMI ,1 VGA
Resolution	VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 It changes to 1920 × 1080, 1280 × 1024, 1280 × 720 when Face or IVS&SMD is selected in AI Mode.
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
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Network

Interface	1 RJ-45 Port (1000 MB)
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	N/A
Relay Output	N/A

Playback and Backup

Playback	1/4/9/16 It changes to 1/4/9 split when Face or IVS&SMD is selected in AI Mode.
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	2 USB Ports (1 USB 2.0 , 1 USB 3.0)
RS485	1 Port, for PTZ Control
RS232	N/A

Electrical

Power Supply	DC 12V/4A
Power Consumption (Without HDD)	<12W

Technical Specification

Construction

Dimensions	1U, 375 mm × 288 mm × 53 mm (14.76'' × 11.37'' × 2.09'')
Net Weight (without HDD)	1.8 kg (4.0 lb)
Gross Weight	3.1 kg (6.8 lb)
Installation	Desktop installation

Environmental

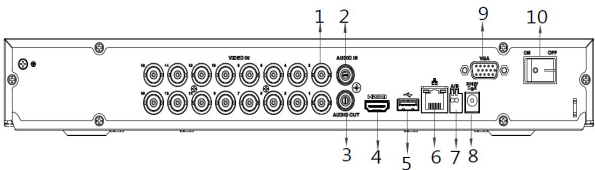|	
Operating Conditions	-10°C to +55°C (+14°F to +131°F), 0–90% RH
Storage Conditions	-20°C to +70°C (-4°F to +158°F) , 0–90% RH

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

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

1	VIDEO IN	6	Network Interface
2	AUDIO IN, RCA Connector	7	RS485 Interface
3	AUDIO OUT, RCA Connector	8	DC 12V Power Input
4	HDMI Interface	9	VGA Interface
5	USB Interface	10	Power Switch

Dimensions