



CV-8IP-4DOME-2TB-W

8CH 4CAM 4K AI NVR & 4MP Full-Colour Turret Kit, 2TB Storage



RECORDER FEATURES:

- H.264/.H265/Smart H.264+/Smart H.265+/MJPEG, H.265 auto switch
- 1-channel face detection and recognition (AI by NVR); or 2-channel perimeter detection (AI by NVR); or 4-channel SMD (AI by NVR); up to 10 face databases and 5,000 face images
- 1 VGA/1 HDMI simultaneous video output by default, the maximum resolution of HDMI is 4K; and non-simultaneous video output is also supported, the maximum resolution is 1080P
- Max. decoding capability: 4×1080P@30fps. Supports adaptive decoding
- Supports mainstream cameras of ONVIF and RTSP protocols



CAMERA FEATURES:

- 4MP, 1/3" CMOS image sensor, low illuminance, high image definition
- Outputs 4MP (2560 × 1440) @ 25/30 fps, Max. supports 4MP (2688 × 1520) @ 20 fps
- H.265 codec, high compression rate, ultra-low bit rate
- Built-in warm lights, max. illumination distance: 30 m
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- Built-in Mic
- IP67 protection



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- H.265 codec, high compression rate, ultra-low bit rate
- Built-in warm lights, max. illumination distance: 30 m
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
- Intelligent detection: Intrusion, tripwire
- Abnormality detection: Motion detection, video tampering, scene changing, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, voltage detection
- Built-in Mic
- Supports max. 256 GB Micro SD card
- 12V DC/PoE power supply
- IP67 protection



Series Overview

With upgraded H.265 encoding technology, this network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest full-colour technology and displays better colour image in the condition of low illuminance. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying to the standards of IP67.

Functions

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, smart encoding technology realizes a higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

Full-colour

With high-performance sensor and large aperture lens, Full-colour technology can display clear colourful imagery in the environment of ultra-low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colourful image details.

WDR

With advanced Wide Dynamic Range (WDR) technology, this network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

IVS

With advanced video algorithm, IVS technology supports intelligent functions, such as tripwire and intrusion.

Protection (IP67, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure works as normal after soaking in 1 m deep water for 30 minutes.

Wide voltage: The camera allows $\pm 30\%$ input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with unstable voltage.

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Technical Specification

Camera

Image Sensor	1/3"4Megapixel progressive CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Minimum Illumination	0.004 Lux@F1.0
S/N Ratio	> 56 dB
Illumination Distance	30 m (98.4 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	2 (Warm light)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal				
Mount Type	φ14				
Focal Length	2.8 mm				
Max. Aperture	2.8 mm: F1.0				
Field of View	2.8 mm: 96° (Horizontal) × 51° (Vertical) × 115° (Diagonal)				
Iris Type	Fixed				
Close Focus Distance	2.8 mm: 1.3 m (4.3 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	56.0 m (183.7 ft)	22.4 m (73.5 ft)	11.2 m (36.7 ft)	5.6 m (17.1 ft)
	3.6mm	72.0 m (236.2 ft)	28.8 m (94.5 ft)	14.4 m (47.2 ft)	7.2 m (23.6 ft)

Smart event

General IVS Analytics	Tripwire; intrusion
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Video

Video Compression	H.265; H.264; H.264B; MJPEG (only supported by the sub stream)
Smart Codec	Smart H.265+ / Smart H.264+
Video Frame Rate	Main stream: 2688 × 1520 (1 fps–25/30 fps) 2560 × 1440 (1 fps–25/30 fps) Sub stream: 704 × 576 (1 fps–20/25 fps) 704 × 480 (1 fps–20/30 fps)
Stream Capability	2 streams

Resolution	2688 × 1520 (2688 × 1520); 2560 × 1440 (2560 × 1440); 2304 × 1296 (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	Colour/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest(RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688×1520 resolution and lower.)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711A; G.711Mu; G.726; AAC

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; motion detection; video tampering; tripwire; intrusion; illegal access; voltage detection; audio detection; safety exception
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Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; QoS; UPnP; NTP; RTMP; Multicast; HTTPS; SFTP; 802.1x; ICMP; IGMP; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec
User/Host	20 (Total bandwidth: 72 M.)
Storage	Dahua Cloud; FTP; Micro SD card (support max. 256 G); NAS; SFTP
Browser	IE Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

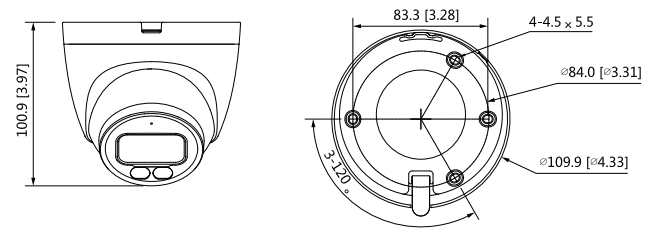
Certification

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Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B
Power	
Power Supply	12V DC/PoE (802.3af)
Power Consumption	< 7.4W
Environment	
Operating Conditions	-40°C to +60°C (-40°F to +140°F)/less than ≤ 95% RH
Storage Temperature	-40°C to +60°C (-40°F to +140°F)
Protection Grade	IP67
Structure	
Casing	Inner core: metal; cover: plastic (pedestal: plastic)
Dimensions	100.9 mm × Φ109.9 mm (4.0" × Φ4.3")
Net Weight	0.365 kg (0.8 lb)
Gross Weight	0.527 kg (1.2 lb)

Dimensions (mm[inch])





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These products adopt independent AI chip and deep learning algorithms. It focuses on people and vehicles with high accuracy, enabling users to act fast on defined targets.

System Overview

This AI network video recorder is a highly cost-effective economical product, providing functions such as local live view, multi-screen display, real-time storage on local HDD, fast operation by mouse, and remote management and control. This product is suitable for face detection and recognition at entrances/exits, and perimeter protection of people and vehicles.

Functions

New User Interface

Local and web interfaces adopt the new UI 4.0 style which caters to users habits. Functional modules are divided more clearly and easier to understand.

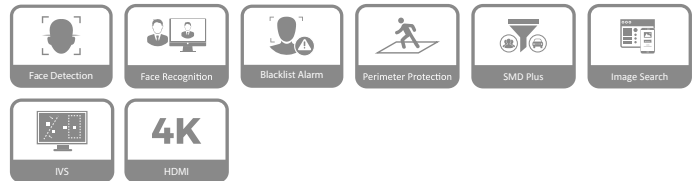
Decoding (Smart H.265+/Smart H.264+)

Smart encoding (H.265+/H.264+) is the optimized implementation of (H.265/H.264) codec that uses a scene-adaptive code rate control algorithm, providing more efficiency in the encoding process and higher video quality, and reducing the cost of storage and transmission significantly. This NVR supports the corresponding decoding.

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 sends alarms only when person or vehicle intrudes.

- New 4.0 user interface
- Remote surveillance, live view and video play on mobile phone App
- Max. decoding capability: 4x1080P@30fps. Supports adaptive decoding
- Supports mainstream cameras of ONVIF and RTSP protocols
- H.264/.H265/Smart H.264+/Smart H.265+/MJPEG, H.265 auto switch
- 1 VGA/1 HDMI simultaneous video output by default, the maximum resolution of HDMI is 4K; and non-simultaneous video output is also supported, the maximum resolution is 1080P
- 1-channel face detection and recognition (AI by NVR); or 2-channel perimeter detection (AI by NVR); or 4-channel SMD (AI by NVR); up to 10 face databases and 5,000 face images
- All-channel AI by camera: face detection and comparison, perimeter protection and SMD
- Security baseline 2.1



Face Detection

Face detection detects if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.

Face Recognition

Face recognition is to analyse out the captured face with target features, and compare them with the face database

Perimeter Protection

Based on deep learning algorithms, perimeter protection provides accurate human and vehicle classification detection. It greatly reduces false alarms by smartly detecting behaviors such as tripwire and intrusion according to the detected object in restricted areas (e.g., for people or vehicles).



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Technical Specification

System

Main Processor	Industrial-grade embedded processor
Operating System	Embedded Linux
Operation Interface	Web/operating in local GUI

Video

Access Channel	8 channels
Network Bandwidth	200 Mbps for access, 200 Mbps for storage and 100 Mbps for forwarding.
Resolution	12M/8M/5M/4M/3M/2M/720P/D1
Decoding Capability	1ch 8MP@30fps 4ch 1080P@30fps
Video Output	1 VGA/1 HDMI simultaneous video output by default, the maximum resolution of HDMI is 4K
Multi-screen Display	1/4/8/9
Third Party Camera Access	Onvif, RTSP

Compression

Video	H.264/.H265/Smart H.264+/Smart H.265+/MJPEG
Audio	PCM/G711A/G711U/G26/AAC

Network

Network Protocol	HTTP, HTTPS, TCP/IP, IPv4, IPv6, RTSP, UDP, NTP, DHCP, DNS
Mobile Phone Access	Android, iOS
Interoperability	ONVIF (profile T/profile S/profile G), CGI, SDK
Browser	Chrome, IE9 or above, Firefox

Record Playback

Multi-channel Playback	Up to 8 channels playback
Record Mode	Priority of record mode: Manual recording > alarm recording > motion detection recording > timed recording
Storage	Local HDD and network
Backup	USB device
Playback Function	1. Play, pause, stop, fast forward, fast backward, rewind, play by frame 2. Full screen, backup (cut/file), partially enlarge, audio on/off

SMD Plus

Performance	4 channels
AI Search	Search by target classification (Human, Vehicle)

Face Recognition

Performance	Max 8 face pictures/sec processing 1 channel video stream face recognition
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 5,000 face images in total. Name, gender, birthday, address, certificate type, certificate 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.

Alarm Linkage

Video recording, snapshot, log, preset, tour

Perimeter Protection

Performance

2 channels

Object classification

Human/Vehicle secondary recognition for tripwire and intrusion

AI Search

Search by target classification (Human, Vehicle)

Alarm

General Alarm

Motion detection, privacy masking, video loss, PIR alarm, IPC alarm

Anomaly Alarm

Front-end device going offline, storage error, full storage, IP conflict, MAC conflict, login lock, network security anomaly

Alarm Linkage

Video recording, snapshot, log, preset, tour

External Port

HDD

1 SATA port, up to 8 TB. The maximum HDD capacity varies with environment temperature

USB

1 front USB 2.0 port, 1 rear USB 2.0 port

HDMI

1

VGA

1

Network

1 RJ-45 port (10/100/1000 Mbps), 8 RJ-45 ports with PoE power supply (10/100 Mbps)

RCA Input

1

RCA Output

1

General Parameter

Power Supply

DC53V, 1.8A

Power Consumption

Total output of NVR is ≤ 10W (without HDD) Total output power of PoE is 72W, the maximum output power of a single port is 25.5W

Net Weight

0.92 kg (2.03 lb)

Gross weight

2.07 kg (4.56 lb)

Product Dimensions

260mm × 232.7mm × 47.6mm (W × L × H)
10.24 inch × 9.16 inch × 8.77 inch (W × L × H)

Package Dimensions

117 mm × 373 mm × 307 mm (W × L × H)
4.61 inch × 14.69 inch × 12.09 inch (W × L × H)

Operating Temperature

-10°C to 55°C (+14°F to +113°F)

Storage Temperature

0°C to 40°C (+32°F to +104°F)

Operating Humidity

10%–93%

Storage Humidity

30%–85%

Operating Altitude

3000 m (9843 ft)

Installation

Desktop mounting

Certifications

CE/FCC

Dimensions (mm[inch])

