

# NIGHTWATCH PRO AI Bundle

8 Channel PoE Network Video Recorder & Smart Dual Illumination IPC Bundle



- Built-in 8 Port PoE, Smart H.265+/H.265 Support
- Includes 4MP Smart Dual Illumination Cameras
- Up to 8MP Resolution for Preview and Playback
- Up to 4 channels of Intelligent Motion Detect by NVR
- Supports Perimeter Protection and Face Detection and Recognition by camera
- Bundles include HDD up to 4TB, Supports up to 16TB max
- Made in South Korea and conforms to the Trade Agreements Act (TAA).

## System Overview

IC Realtime's **NIGHTWATCH PRO AI Bundle** features the **NVR-MX08POE-1U-4KM1** supporting 8MP/4K resolution and output, H.265 encoding technology as well as Bridge Mode- boasting excellent performance at an affordable price. This NVR has a built in 8 port PoE for easy-install and includes up to 4TB HDD for storage expandable for up to 16TB. The bundle includes **IPEG-E40F-DIW1** cameras equipped with **Smart Dual Illumination** (IR and white light) and supporting IVS + AI such as Perimeter Protection and Intelligent Motion Detect.

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## Functions

### Smart Dual Illumination

The camera's default illumination is set to IR, with the warm LED turning on when a motion or Smart event like IVS is triggered. This technology leverages the IR and Warm Light LED equipped in this camera by providing a discreet appearance at night, while providing a color image in relevant situations.

### Bridge Mode

This NVR's built-in POE includes Bridge Mode, allowing for more complex setups like home integration or easy addition of third-party devices. Bridge mode allows the access to devices plugged into the NVR built-in POE from the local network.

### iMD (Intelligent Motion Detect) by NVR

This is an upgraded version of motion detection currently known as Intelligent Motion Detection (iMD). The upgraded Plus version greatly improves alarm accuracy by pre-loading a deep learning algorithm that recognizes people and vehicles. Motion detection alerts containing a human and/or vehicle intrusion event are now possible with up to 95% accuracy. Eliminate false alarms, save time and keep stress levels low knowing you're protected. This NVR supports 4 channels of iMD by recorder, allowing cameras without any intelligence to have this iMD.

### 4K Resolution

4K resolution is a revolutionary breakthrough in image processing technology. 4K delivers four times the resolution of standard HDTV 1080p cameras and offers superior picture quality and image details. 4K resolution improves the clarity of a magnified scene to view or record crisp forensic video from large areas.

### Intelligent Video System

Working with IVS-enabled IP cameras, the NVR recognizes and records video that contains IVS data on all IP channels. The NVR records standard intelligence at-the-edge features, as well as premium IVS features that detect abandoned or missing objects, Tripwire violations, and intrusion violations. The NVR is also capable of recording business analysis data – Facial Detection, People Counting, and Heat Map – from IP cameras with built-in Intelligent Business Analytics.

## Bundle Information

NIGHTWATCH-PRO-AI-4ED-2TB	NVR-MX08POE-1U-4KM1 preinstalled with 2TB HDD + (4x) IPEG-E40F-DIW1 cameras
NIGHTWATCH-PRO-AI-6ED-2TB	NVR-MX08POE-1U-4KM1 preinstalled with 2TB HDD + (6x) IPEG-E40F-DIW1 cameras
NIGHTWATCH-PRO-AI-8ED-4TB	NVR-MX08POE-1U-4KM1 preinstalled with 4TB HDD + (8x) IPEG-E40F-DIW1 cameras

## NVR Technical Specification

## System

Model Name	NVR-MX08POE-1U-4KM1
Main Processor	Industrial-grade embedded processor
Operating System	Embedded LINUX, ICR 4.0

## Video

Max IP Channels	8 Channels
Throughput	<b>Access:</b> 160 Mbps/ 80 Mbps when AI is enabled
	<b>Storage:</b> 160 Mbps/ 80 Mbps when AI is enabled
	<b>Forward:</b> 80 Mbps/ 60 Mbps when AI is enabled
Video Compression	Smart H.265+; H.265; Smart H.264+; H.264
Image Resolution	12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF; QCIF
Record Mode	General, motion detection; intelligent; alarm

## Audio

Audio Compression	G.711a; G.711u; PCM; G726
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## Display

Interface	<b>1 HDMI, 1 VGA, Simultaneous:</b> HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
	<b>Different Outputs:</b> HDMI: 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Resolution	HDMI: 3840 × 2160; 1920 × 1080; 1280 × 1024; 1280 × 720 VGA: 1920 × 1080; 1280 × 1024; 1280 × 720
Display Decode	<b>AI disabled:</b> 1-channel 12 MP@30 fps; 2-channel 8 MP@30 fps; 3-channel 5 MP@30 fps; 4-channel 4 MP@30 fps; 8-channel 1080p@30 fps <b>AI enabled:</b> 1-channel 12 MP@30 fps; 1-channel 8 MP@30 fps; 2-channel 5 MP@30 fps; 3-channel 4 MP@30 fps; 7-channel 1080p@30 fps
Display Split	<b>Main Screen:</b> 1/4/8/9 <b>Sub Screen:</b> 1/4/8/9
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

## Intelligence

IVS	People Counting, Heat Map, ANPR, Smart Sound and Smart Object Detection, Tripwire & Intrusion (AI by Camera)
Perimeter Protection	6 Channels (AI by Camera) Tripwire & intrusion; Recognition of human and vehicle
Intelligent Motion Detect	4 Channels ( <b>AI by NVR</b> )
	6 Channels (AI by Camera)
	Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
Face Detection	6 Channels (AI by Camera)
Face Recognition	6 Channels (AI by Camera)

## Playback &amp; Backup

Multi-channel Playback	1/4/8
Record Mode	Manual record; alarm recording; SMD recording; smart recording
Playback Functions	1. Play/pause/stop/slow/quick/backward/by frame 2. Full screen, backup (video clip/file), partial zoom in, and audio on/off
Backup Mode	USB Device, Network

## Network

Ethernet	1 (10/100/1000 Mbps Ethernet port, RJ-45)
PoE	8 Ports, 10/100 Mbps, IEEE 802.3 af/at
Bridge Mode	Supported
Network Functions	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; DDNS; FTP; Alarm Server; IP Search(Supports IC Realtime IP cameras, NVR, NVS, etc.); P2P; auto register
Smart Phone	Android, iOS, iPhone (IC Vlew+)
Interoperability	ONVIF 2.12(Profile T; Profile S; Profile G); CGI; SDK
Browser Compatibility	Chrome, IE 9 or later, Edge, Safari, Firefox

## Alarm

Alarm Input / Output	N/A
General Alarm	Motion detection; privacy masking; video loss; scene changing; PIR alarm; IPC external alarm
Anomaly Alarm	Camera disconnection; storage error; disk full; IP conflict; MAC conflict; login locked; and cybersecurity exception
Intelligent Alarm	Face detection; face recognition; perimeter protection; iMD; people counting; stereo analysis; heat map
Alarm Linkage	Recording, snapshot, audio, buzzer, log, preset, and email

## Storage

Internal HDD	Equipped with 1 SATA III Ports, supporting up to max 16 TB capacity
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## Auxiliary Interface

Interface	1 Channel Input, 1 Channel Output, RCA
Two-way Talk	Supported
USB	2 (1 × front USB2.0; 1 × back USB2.0)
RS232	N/A
RS485	N/A

## General

Power Supply	53 VDC, 1.81 A ≤ 10W (idling, without HDD)
Power Consumption	Total output power of PoE: 72W, Maximum output power of a single port is 25.5W
Operating Humidity	10%–93% (RH)
Operating Conditions	+10 °F to +131 °F (–10 °C to +55 °C)
Storage Conditions	–4 °F to +140 °F (–20 °C to +60 °C)
Installation Type	Rack or Desktop mount
Dimensions (W×D×H)	1U, 10.24" × 9.15" × 1.98" (260 mm × 232.5 mm × 50.3 mm)
Weight	2.03 lb (0.92 kg) (without HDD)
Gross Weight	4.52 lb (2.05 kg) (without HDD)

## Certifications

Certifications	FCC: Part 15 Subpart B, UL Certified
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## Camera Technical Specification

Model Name	IPEG-E40F-DIW1
Image Sensor	1/2.9" CMOS
Effective Pixels	2688 (H) × 1520 (V) (4 Megapixels)
RAM/ROM	128MB/ 128MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Minimum Illumination	0.006 lux@F1.6 (Color, 30 IRE) 0.0006 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
Illumination Distance	Up to 98.43 ft (30 m) (IR); Up to 98.43 ft (30 m) (Warm light)
LED On/Off Control	Auto / Manual/ Smart Dual Illumination
IR LEDs	1 IR; 1 Full Color,Warm Light LED

### Lens

Lens Type		Fixed-focal			
Mount Type		M12			
Focal Length		2.8 mm			
Max. Aperture		F1.6			
Iris Type		Fixed			
Angle of View		Horizontal: 95°; Vertical: 52°			
Close Focus Distance		2.95 ft (0.9 m)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	208 ft	83 ft	41 ft	21 ft

### Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation:0°–360°
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### Video

Compression	H.264H; H.265; H.264; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Streaming Capability	2 Streams
Resolution	4M (2688 × 1520/2560 × 1440); 3M (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)
Frame Rate	Main Stream: 2688 × 1520@(1–20 fps)/ 2560 × 1440@(1–25/30 fps) Sub Stream: 704 × 576@(1–25 fps)/ 704 × 480@(1–30 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC Mode	BLC / HLC / WDR (120 dB)
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto / Manual
Noise Reduction	3D DNR
Region of Interest	Off / On (4 Zone)
Flip	0°/90°/180°/270° (Supports 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Off / On
Privacy Masking	8 areas

### Intelligence

Basic IVS	Tripwire; Intrusion
Perimeter Protection	Tripwire; Intrusion(These functions support the classification and detection of vehicle and human objects)
Intelligent Motion Detect	Supported
AI Search	Works together with the NVR08-V1 and other AI enabled IC Realtime NVRs to perform refined intelligent search, event extraction and merging to event videos

### Audio

Compression	G.711a; G.711Mu; PCM; G.726
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### Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP;SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP; P2P
Interoperability	ONVIF(Profile S/ Profile G/ Profile T);CGI;P2P
Cyber Security	Configuration encryption; Trusted execution; Digest; Security logs; WSSE; Account lockout; syslog; Video encryption; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Generation and importing of X.509 certification
Streaming Method	Unicast / Multicast
Max. User Access	6 (Total bandwidth: 36 M)
Edge Storage	FTP; SFTP; Micro SD card (support max. 256 GB)
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	IC Now
Smart Phone	IOS, Android

### Certifications

Certifications	FCC Part 15, Subpart B
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### Interface

Audio Interface	Built-In Mic
RS485	N/A
Alarm	N/A

### Electrical

Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2.1 W (12 VDC); 2.5 W (PoE) Max. (H.265 + intelligence on + WDR + warm light): 4.4 W (12 VDC); 5.2 W (PoE)

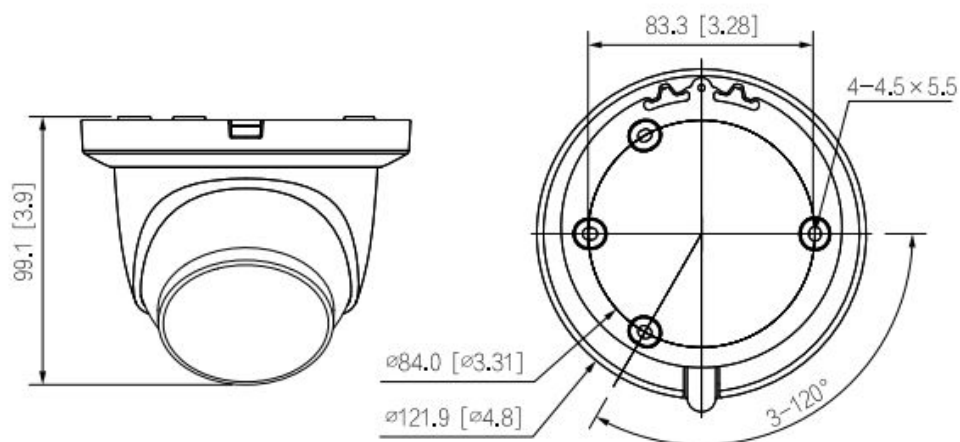
### Environmental

Operating Conditions	–40 °F to +140 °F(–40 °C to +60 °C )/less than 95%
Storage Conditions	–40°F to +140°F (-40°C to +60°C)
Ingress Protection	IP67

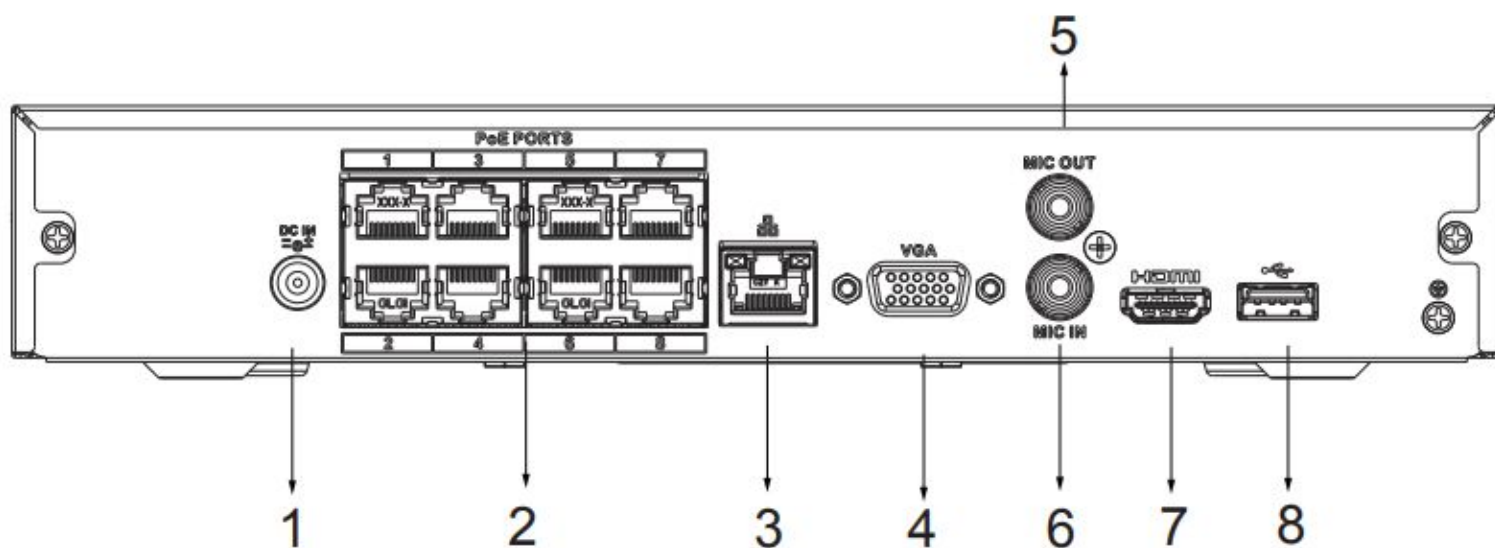
### Construction

Casing	Metal Inner core and Cover, Plastic decoration ring
Dimensions	3.90" × Φ4.80" (99.1 mm × Φ121.9 mm)
Net Weight	1.01 lb (0.46 kg)
Gross Weight	1.43 lb (0.65 kg)

## Camera Dimensions (mm/in)



## NVR Panels



- |   |                         |   |                          |
|---|-------------------------|---|--------------------------|
| 1 | DC Power Input          | 2 | PoE Ports                |
| 3 | Network Port            | 4 | VGA Port                 |
| 5 | AUDIO IN, RCA Connector | 6 | AUDIO OUT, RCA Connector |
| 7 | HDMI Port               | 8 | USB Port                 |