# CP-UNR-4K4164-I

## 16 Ch. 4K Network Video Recorder

- Up to 16 channel IP camera input
- Access, storage or forwarding at 256 Mbps (160 Mbps when AI function enabled)
- Support 4 SATA HDDs up to 10TB Each, 2 USB Ports
- 1 HDMI / 1 VGA simultaneous video output
- Support Multi-brand network cameras
- AI by NVR: 1-channel face detection and recognition; 2-channel perimeter protection; up to 10 face databases and 20,000 face images; 4-channel SMD Plus
- AI by Camera: Face detection and recognition, perimeter protection; SMD Plus; ANPR; people counting; stereo analysis; heat map
- Mobile Software: iCMOB, gCMOB
- CMS Software: KVMS Pro

16 Ch | Linux POWERED | H.265 COMPRESSION | HI-SPEED CERTIFIED USB | GUI | CMS

## System Overview

This NVR has gathered momentum across the globe for its outstanding performance and premium recording quality as it can be applied in any situation for IP video surveillance. This Series of NVRs supports the input, recording and transmission functions. Along with that, this NVR also enjoys the help of a built-in deep learning module as this product adopts the video image that is structured on deep learning algorithms. This NVR lets you achieve high-precision human face-recognition and efficient perimeter protection.

This product has been crafted to pay attention to what matters the most through applying deep learning artificial intelligence, which makes it fasten the event response time and helps in making the video more actionable.

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## Functions

### Face Recognition

This technology can be used to extract faces from a range of cameras and is capable of processing large quantities of faces in real-time or post-event and can provide alerts to help with access and authentication, border security, and crowd control.

### Instastream

Instastream is the latest innovation among the standard video compression designs. This technology is beneficial for minimizing storage costs and provides big savings on resolution and the rate of frame in the video through the use of Intelligent Region Perception to detect motion in each frame.

### Smart Motion Detection (SMD Plus)

CPPLUS has introduced Smart Motion Detection, AI-based SMD, which use an advanced algorithm to differentiate human and vehicular shapes within a scene and send alarms only when a person or vehicle is detected.

### Face Detection

With the help of the deep learning algorithm that is used in this technology, people can easily be detected, tracked, recorded, and captured. It takes only a second to detect one human face. Face detection is useful in cameras to help with auto-focus. This technology is mainly used to identify the presence of a human face.

### gCMOB/ iCMOB

Designed to allow users to access and control live streaming from CP PLUS IP Cameras, DVRs/ NVRs and Video Door Phones, the CP PLUS gCMOB/ iCMOB application offers a host of features such as Easy GUI, up to 16 live viewing split-ups; InstaOn cloud support; Playback; digital zoom ins; two-way talk, and more.

### KVMS Pro

The KVMS Pro is a hybrid security management software that allows the management of various surveillance devices such as cameras, DVRs/ NVRs, encoders/ decoders, etc. It is released with the surveillance hardware and exclusively supports CP PLUS devices.

## About CP PLUS

The brand that is on its way to lead the world when it comes to the security and surveillance industry, CP PLUS, keeps bombarding the market with the most reliable range of products that have been designed carefully and methodically to automate the whole surveillance and security process, no matter how big your premises are.

It was the initiative to help the public in the area where they are the most vulnerable and to empower the sense of safety in our hearts that had conceptualized CP PLUS. And embarking on its mission to make the world a safer and more secure place has taken the brand's journey to unprecedented levels even when compared to international competitors.

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| Feature | Specification |
|---|---|
| Processor | Industrial-grade embedded processor |
| IP Camera Input | 16 channel |
| Operating System | Embedded LINUX |
| RCA Input/ Output | 1 channel Input, 1 channel Output, RCA |
| User Interface | Web; local GUI |
| Video Output | 1-ch VGA output and 1-ch HDMI output; simultaneous/heterogeneous video sources output for VGA and HDMI is configurable |
| Video Compression | H.265/Smart H.264+/H.264/MJPEG |
| Encode Strategy | Instastream |
| Audio Compression | PCM; G.711A; G.711U; G.726 |
| Perimeter Performance AI by Device (Number of Channels) | 2 |
| Perimeter Performance of AI by Camera (Number of Channels) | 8 |
| SMD Plus by Device | 4 |
| SMD Plus by Camera | 16-channel SMD Plus (AI by camera): Detects tripwire and intrusion of human or vehicle; filters false alarms caused by leaves, raindrops and change of brightness away |
| ANPR by Camera | 4 |
| AI by Camera | Face detection; face recognition; perimeter protection; SMD Plus; ANPR; people counting; stereo analysis; heat map |
| AI by Device | Face detection; face recognition; perimeter protection; SMD Plus |
| Face Attributes | 6 attributes: Gender; age group (6); glasses; expressions (8); mouth mask; beard |
| Face Detection Performance of AI by Device (1080P) | 1 (up to 12 face images/second) (Number of Channels) |
| Face Detection Performance of AI by Camera | 8 (Number of Channels) |

| Feature | Specification |
|---|---|
| Face Database Capacity | Up to 10 face databases with 20,000 images |
| Face Recognition Performance of AI by Device (1080P) | 1 (up to 4 face images/second) (Number of Channels) |
| Face Recognition Performance of AI by Camera | 8 (Number of Channels) |
| Network Bandwidth | AI off: Access: 256 Mbps; Storage: 256 Mbps; Forward: 256 Mbps<br>AI on: Access: 160 Mbps; Storage: 160 Mbps; Forward: 160 Mbps |
| Video Display Split | 1st Screen: 1/4/8/9/16 ; 2nd Screen: 1/4/8/9 |
| Resolution | 16MP; 12MP; 8MP; 5MP; 4MP; 3MP; 2MP; 720P; D1 |
| Multi-channel Playback | Up to 16 channels |
| Playback Function | 1. Play; pause; stop; fast forward; fast backward; rewind; play by frame<br>2. Full screen; backup (cut/file) ; partially enlarge; audio on/off |
| Decoding Capability | AI off: 1 channel × 16MP@20fps; 1 channel × 12MP@20fps; 2 channels × 8MP@30fps; 4 channels × 5MP@30fps; 5 channels × 4MP@30fps; 10 channels × 1080p@30fps<br>AI on: 1 channel × 16MP@20fps; 1 channel × 12MP@20fps; 2 channels × 8MP@30fps; 3 channel × 5MP@30fps; 4 channels × 4MP@30fps ; 8 channels × 1080p@30fps |
| Record Mode | Manual; schedule (general; MD; alarm; MD & alarm; intelligent) |
| Storage Method | Local HDD; network |
| Backup | USB device |
| Alarm Input | 16 Channel |
| Alarm Output | 6 Channel |
| 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; SMD Plus; people counting; stereo analysis; heat map |
| Alarm Linkage | Record; snapshot; IPC external alarm output; audio; buzzer; log; preset; email |
| Smart Phone | iPhone, iPad, Android Phone |
| Hard Disk | 4 SATA ports, up to 10 TB. The maximum HDD capacity varies with environment temperature |
| Interface Ports | 1 front USB 2.0 port, 1 rear USB 3.0 port , 1 RS485, 1 RS232 |
| Max User Account | 128 users |

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| Feature | Specification |
|---|---|
| Protocols | HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; PPPoE; DDNS; FTP; Alarm Server; IP Search; InstaOn; auto register; ONVIF (profile T/S/G); CGI; SDK |
| Ethernet | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet ports |
| Power Supply | Single, 100 V–240 V AC, 50 Hz–60 Hz |
| Power Consumption | Total output of NVR is ≤ 8 W (without HDD) |
| Operating Temperature | -10 °C to +55 °C (+10 °F to +131 °F) |
| Operating Humidity | 10%–93% |
| Storage Temperature | 0 °C to +40 °C (32 °F to 104 °F) |
| Storage Humidity | 30%–85% |
| Operating Altitude | 3,000 m |
| Dimensions | 440.0 mm × 415.6 mm x 76.0 mm (17.32" × 16.36" × 2.99") (W × L × H) |
| Weight | 4.25 kg |

*Product casing and specifications are subject to change without prior notice