

# CP-UNR-4K516R8-FI

## 16Ch. 4K AI Network Video Recorder

- Up to 16 channel IP camera input
- Max. 384 Mbps incoming/recording/outgoing bandwidth
- Instastream, H.265, H.264+, H.264, MJPEG codec decoding
- AI by Recorder: 2 Channel face detection and recognition, up to 20 face databases and 20,000 face images, 4 Channel perimeter protection, 8 Channel SMD Plus
- AI by Camera: Face detection and recognition, Perimeter protection, SMD Plus, Metadata, ANPR, Stereo analysis, Heat map, People counting
- Support 8 SATA HDDs up to 20TB Each, 4 USB Ports (2 front USB 2.0 ports, 2 rear USB 3.0 ports)
- Support RAID 0/1/5/6/10
- Support Multi-brand network cameras
- Mobile Software: iCMOB, gCMOB
- CMS Software: KVMS Pro Lite



### System Overview

The CP Plus Pro Series of NVRs have been meticulously designed for providing you with upgraded performance and higher recording quality in your IP video surveillance solution. The robust processor that has been inculcated in this NVR lets you enjoy 4K resolution and brings out every little detail from the picture in a clear view. This NVR is being used worldwide at a variety of places because of its easy-to-install design. This NVR also supports the features of open architecture that enable multi-user access and is also compatible with ONVIF 2.4 protocol which makes it interoperable with 4K cameras.

### Functions

#### ANPR by Camera

The automatic number plate recognition technology is being widely used these days as this enables accurate, automatic reading of every vehicle's number plate that is crossing a border or an entrance and then automatically runs that number through the system to detect if the vehicle should be allowed to enter or not.



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#### Functions

##### 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.

##### Instastream

This camera has been designed with the latest and most efficient innovation among the standard video compression designs. Smart encoding algorithms developed by CP PLUS help in saving up to 70% more bandwidth than H.265 along with making it more beneficial for minimizing bandwidth and storage costs. It enhances video coding efficiency while providing high resolution and the rate of frame in the video using 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.

##### 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 Lite

The KVMS Pro Lite 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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## 16Ch. 4K AI Network Video Recorder

Feature	Specification
Processor	Industrial-grade processor
IP Camera Input	16 Channel
Operating System	Embedded LINUX
User Interface	Web, Local GUI
Video Output	2 VGA:1920 × 1080, 1280 × 1024, 1280 × 720 2 HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 Heterogeneous video source output for HDMI1 and HDMI2 Simultaneous video source output for VGA1 and HDMI1 Simultaneous video source output for VGA2 and HDMI2
Video Compression	Instastream, H.265, H.264+, H.264, MJPEG
Decoding Capability	AI disabled: 2 Channel 32 MP@25 fps, 2 Channel 24 MP@25 fps, 4 Channel 16 MP@30 fps, 5 Channel 12 MP@30 fps, 8 Channel 8 MP@30 fps, 10 Channel 6 MP@30 fps, 12 Channel 5 MP@30 fps, 16 Channel 4 MP@30 fps AI enabled: 1 Channel 32 MP@25 fps, 1 Channel 24 MP@25 fps, 2 Channel 16 MP@30 fps, 4 Channel 12 MP@30 fps, 6 Channel 8 MP@30 fps, 8 Channel 6 MP@30 fps, 8 Channel 5 MP@30 fps, 12 Channel 4 MP@30 fps
AI by NVR	Face detection, Face recognition, Perimeter protection, SMD Plus
AI by Camera	Face detection, Face recognition, Video metadata (Human, Motor vehicles, Non-motor vehicles), Perimeter protection, SMD Plus, Stereo analysis, Crowd distribution, People counting, ANPR, Vehicle density, Heat map
IntelliCheck AI by Camera + Recorder	Max. 16 Channel, 1 combined event per Channel/s
Resolution	32 MP, 24 MP, 16 MP, 12 MP, 8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 2MP, 720p, 960p, D1, CIF, QCIF
Network Bandwidth	AI disabled: 384 Mbps incoming, 384 Mbps recording and 384 Mbps outgoing AI enabled: 200 Mbps incoming, 200 Mbps recording and 200 Mbps outgoing
Video Display Split	Main screen: 1/4/8/9/16, Sub screen: 1/4/8/9/16

Feature	Specification
Perimeter Performance AI by NVR (Number of Channels)	4 channels, 10 IVS rules for each Channel
Perimeter Performance of AI by Camera (Number of Channels)	All Channels (16 Targets/s)
Face Attributes	Gender, Age group, Glasses, Expressions, Face mask, Beard
Face Detection Performance of AI by Recorder (Number of Channels)	2 Channels (up to 12 face images/s each Channel)
Face Detection Performance of AI by Camera (Number of Channels)	16 Channels
Face Database Capacity	Up to 20 face databases with 20,000 images, with a total capacity of 2.5 G. Name, Gender, Birthday, Address, Credential type, Credential No., Countries & Regions and state can be added to each face image.
Face Recognition Performance of AI by NVR (Number of Channels)	1. 16 Channel FD (by camera) + FR (by NVR), image stream: 16 face images/s 2. 2 Channel FD (by recorder) + FR (by NVR), video stream: 12 face images/s
Face Recognition Performance of AI by Camera (Number of Channels)	16 Channels
SMD Plus by NVR	8 Channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD Plus by Camera	All Channels (32 Targets/s)
Metadata Performance of AI by Camera (Number of Channels)	8 Channels
Human Attributes	Top color, Top type, Bottom color, Bottom type, Hat, Bag, Age, Gender and Umbrella
Motor Vehicle Attributes	License plate, Plate color, Vehicle body, Vehicle model, Vehicle logo, Calling, Seatbelt, Vehicle Interior, Vehicle registration location
Non-motor Vehicle Attributes	Vehicle model, Vehicle color, Number of persons, Helmet
ANPR by Camera (Number of Channels)	All Channels (8 Targets/s)

Feature	Specification
License Plate Database Capacity	1. Create up to 20,000 plate numbers, 2. Blocklist and allowlist
Abnormality Alarm	Camera offline, Storage error, Disk full, IP conflict, MAC conflict, Login lock, Abnormal behaviour of fan, Cyber security exception
Intelligent Alarm	Face detection, Perimeter protection, Face recognition, Video metadata (Human, Motor vehicles, Non-motor vehicles), SMD Plus, Stereo analysis, Crowd distribution, People counting, ANPR, Vehicle density, Heat map
General Alarm	Motion detection, Local alarm, Alarm box, Camera external alarm, Network alarm, Scene changing, PIR alarm, Thermal alarm
Alarm Linkage	Record, Snapshot (panoramic), Local alarm output, IPC external alarm output, Access controller, Audio, Buzzer, Log, Preset, Email
Audio Input	1 Channel RCA
Audio Output	2 Channel RCA
Audio Compression	G.711a, G.711u, PCM, G726, AAC
Disk Group	Support
Alarm Input	16 Channel
Alarm Output	8 Channels (1 Channel 12 V 1 A output)
Hard Disk	8 SATA ports, each disk can contain up to 20 TB. This limit varies depending on the environment temperature
Multi-channel Playback	Up to 16 Channels
Record Mode	General, Motion detection, Intelligent, Alarm, POS
Backup Method	USB device and network
Playback Mode	Instant playback, General playback, Event playback, Tag playback, Smart playback (face and motion detection)
Protocols	HTTP, HTTPS, TCP/IP, IPv4, UDP, NTP, DHCP, DNS, SMTP, UPnP, DDNS, Alarm Server, Multicast, P2P, Auto Registration, iSCSI, ONVIF 2.3.12(Profile T, Profile S, Profile G), CGI, SDK
RAID	RAID 0/1/5/6/10
Interface Ports	4 (2 front USB 2.0 ports, 2 rear USB 3.0 ports), 1 eSATA Port, 1 RS232, 2 RS485 (1 port for half-duplex serial communication, 1 port for full-duplex serial communication)

Feature	Specification
Smart Phone	iPhone, iPad, Android Phone
Browser	Chrome, IE, Safari, Edge, Firefox
Network Mode	Multi-address mode, load balance, fault tolerance and other network port binding modes
Ethernet	2 (10/100/1000 Mbps Ethernet port, RJ-45)
Power Supply	100–240 VAC, 50-60 Hz
Power Consumption	Total output of NVR is $\leq 13$ W (without HDD)
Operating Temperature	-10 °C to +55 °C (14 °F to +131 °F)
Operating Humidity	10%–93% (RH), non-condensing
Storage Temperature	-20 °C to +60 °C (–4 °F to +140 °F)
Dimensions	439.9 mm × 457.9 mm x 89.0 mm
Weight	6.40 kg

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