# $\ge$ CP PLUS

# CP-UNR-216F2-I2

## 16Ch. AI Network Video Recorder

- 16 Channel IP video access
- Instastream /H.265/Smart H.264+/H.264/MJPEG
- Max. decoding capability: 6 × 1080p@30fps. Supports adaptive decoding
- 1-channel face detection and recognition (AI by NVR); 1-channel perimeter protection (AI by NVR); up to 10 face databases and 5,000 face images
- Al by camera: Face detection and recognition, perimeter protection and SMD

**CP PLUS** 

- Support 2 SATA HDDs up to 10TB Each, 2 USB Ports
- 1 HDMI/ 1 VGA simultaneous video output
- Support Multi-brand network cameras
- Mobile Software: iCMOB, gCMOB
- CMS Software: KVMS Pro



#### **System Overview**

This highly intelligent video surveillance server is now combining the latest video management features to the authentic video storage functions within a single device, making this Series surpass all ordinary NVR products. This NVR works effectively in detecting and recognizing faces and can be installed in a wide-variety of situations. The deep learning artificial intelligence technology in this product uses the video image metadata technology, which offers you highly accurate face recognition and efficient perimeter protection at all times. This product has been given the revolutionary UI design that allows you to operate and manage your device with increased ease and comfort, improving the value and experience of the surveillance conducted by you.



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# **CP-UNR-216F2-I2** 16Ch. AI Network Video Recorder

#### **Functions**

#### **Face Recognition**

This technology is just the most proficient element of the current video surveillance industry as the NVRs that have been integrated with the real-time face recognition technology accurately detects facial attributes in the video stream in real-time. The technology analyzes every facial attribute ranging from gender, age, expression to wearing glasses, mask, and even mustaches.

#### **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. This facial recognition technology uses biometrics to map facial features from a photograph or video and compares the information with a database of known faces to find a match.

#### Smart Motion Detection (SMD) By Camera

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.

#### 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.

#### 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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## **CP-UNR-216F2-I2** 16Ch. AI Network Video Recorder

Feature	Specification
Processor	Industrial-grade embedded micro-processor
IP Camera Input	16 channel
Operating System	Embedded LINUX
User Interface	Web; local GUI
AI by Camera	Face detection; face recognition; perimeter protection; SMD
AI by Device	Face detection; face recognition; perimeter protection
Perimeter Performance AI by Device (Number of Channels)	1
Perimeter Performance of AI by Camera (Number of Chan- nels)	4
Face Detection Performance of AI by Device (1080P) (Number of Channels)	1 (up to 12 face images/second)
Face Attributes	6 attributes: Gender; age group (6); glasses; expressions (8); mouth mask; beard
Face Detection Performance of AI by Camera (Number of Channels)	5
Face Database Capacity	Up to 10 face databases with 5,000 images
Face Recognition Perfor- mance of AI by Device (1080P) (Number of Channels)	1 (up to 4 face images/second)
Face Recognition Perfor- mance of AI by Camera (Number of Channels)	5
SMD By Camera	4-channel SMD (AI by camera): Detects tripwire and intrustion of human or vehicle; filters false alarms caused by leaves, raindrops and change of brightness away
Compression	H.265/Smart H.264+/H.264/MJPEG



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Resolution12MP; 8MP; 5MP; 4MP; 3MP; 2MP; 720P; D1Video Output1 × VGA, 1 × HDMI (max. resolution: 4K) (simultaneous)Video Display Split1/4/8/9/16Network BandwidthAl off: Access - Incoming: 144Mbps, Outgoing: 72Mbps, Access: 144Mbps Al on: Access - Incoming: 72 Mbps, Outgoing: 36 Mbps, Access: 72 MbpsDecoding CapabilityAl disabled: 1-channel 12MP@30fps; 1-channel 8MP@30fps; 2-channel 5MP@30fps; 3-channel 4MP@30fps; 1-channel 5MP@30fps; 2-channel 4MP@30fps; 4-channel 1080p@30fpsAudio CompressionPCM; 6.711A; 6.711U; 6.726RCA Input1 channelGeneral AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlard Disk2 SATA III ports, up to 107B for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsBackupUSB deviceLinerace Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Feature	Specification
Video Output   1 × VGA, 1 × HDMI (max. resolution: 4K) (simultaneous)     Video Display Split   1/4/8/9/16     Network Bandwidth   Al off: Access - Incoming: 144Mbps, Outgoing: 72Mbps, Access: 144Mbps     Decoding Capability   Al disabled: 1-channel 12MP@30fps; 1-channel 3MP@30fps; 2-channel 5MP@30fps; 3-channel 4MP@30fps; 3-channel 4MP@30fps; 3-channel 4MP@30fps; 2-channel 4MP@30fps; 3-channel 1080p@30fps     Decoding Capability   Al disabled: 1-channel MP@30fps; 1-channel 5MP@30fps; 2-channel 4MP@30fps; 4-channel 1080p@30fps     Audio Compression   PCM; 6.711A; G.711U; G.726     RCA Input   1 channel     General Alarm   Motion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarm     Abnormal Alarm   Gamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exception     Intelligent Alarm   Face detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMD     Alarn Linkage   Record; snapshot; buzzer; log; preset; email; tour     Smart Phone   IPhone, iPad, Android Phone     Hard Disk   2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperature     Playback Function   . Play; pause; stop; fast forward; fast backward; rewind; play by frame     2 Full screen; backup (cut/file) ; partially enlarge; audio on/off   Record; alarm record; alarm recordings	Encode Strategy	Instastream
Video Display Split1/4/8/9/16Network BandwidthAl off: Access - Incoming: 144Mbps, Outgoing: 72Mbps, Access: 12MbpsAl on: Access - Incoming: 72 Mbps, Outgoing: 36 Mbps, Access: 72 MbpsDecoding CapabilityAl disabled: 1-channel 12MP@30fps; 1-channel SMP@30fps; 2-channel 5MP@30fps; 3-channel 4MP@30fps; 4-channel 1080p@30fpsDecoding CapabilityAl disabled: 1-channel 12MP@30fps; 1-channel 5MP@30fps; 2-channel 4MP@30fps; 4-channel 1080p@30fpsAudio CompressionPCM; G.711A; G.711U; G.726RCA Input1 channelRCA Output1 channelGeneral AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneIPhone, IPad, Android PhoneHard DiskUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file); partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsStorage MethodLocal HDD and networkBackupUSB device2. USB Ports (1 × front USB2.0; 1 × back USB2.0)	Resolution	12MP; 8MP; 5MP; 4MP; 3MP; 2MP; 720P; D1
Network BandwidthAl off: Access - Incoming: 144Mbps, Outgoing: 72Mbps, Access: 12MbpsNetwork BandwidthAl off: Access - Incoming: 72 Mbps, Outgoing: 36 Mbps, Access: 72 MbpsDecoding CapabilityAl off: Access - Incoming: 72 Mbps, Outgoing: 36 Mbps, Access: 72 MbpsDecoding CapabilityAl enabled: 1-channel 12MP@30fps; 1-channel 5MP@30fps; 2-channel 5MP@30fps; A-channel 1080p@30fpsAudio CompressionPCM; G.711A; G.711U; G.726RCA Input1 channelRCA Output1 channelGeneral AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlard DiskUp to 16 ChannelHard DiskUp to 16 ChannelPlayback FunctionLi play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file); partially enlarge; audio on/offRecord ModeLocal HDD and networkBackupUSB Ports (1 × front USB2.0; 1 × back USB2.0)	Video Output	$1 \times VGA$ , $1 \times HDMI$ (max. resolution: 4K) (simultaneous)
Network Bandwidth Al on: Access - Incoming: 72 Mbps, Outgoing: 36 Mbps, Access: 72 Mbps   Decoding Capability Al disabled: 1-channel 12MP@30fps; 1-channel 8MP@30fps; 2-channel 5MP@30fps; 3-channel 4MP@30fps; 6-channel 1080p@30fps   Audio Compression PCM; G.711A; G.711U; G.726   RCA Input 1 channel   RCA Output 1 channel   General Alarm Motion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarm   Abnormal Alarm Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exception   Intelligent Alarm Face detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMD   Alarm Linkage Record; snapshot; buzzer; log; preset; email; tour   Band Wide 1 channel   Hard Disk Up to 16 Channel   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   Record Mode Monual record; alarm recordings; motion detection recordings; scheduled recordings   Storage Method Local HDD and network   Backup USB Ports (1 × front USB2.0; 1 × back USB2.0)	Video Display Split	1/4/8/9/16
Decoding Capability3-channel 4MP@30fps; 6-channel 1080p@30fps Al enabled: 1-channel 8MP@30fps; 1-channel 5MP@30fps; 2-channel 4MP@30fps; 4-channel 1080p@30fpsAudio CompressionFCM; G.711A; G.711U; G.726RCA Input1 channelRCA Output1 channelGeneral AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard DiskUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file); partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsBackupUSB Ports (1 × front USB2.0; 1 × back USB2.0)	Network Bandwidth	
RCA Input1 channelRCA Output1 channelGeneral AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard DiskUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeLocal HDD and networkBackupUSB deviceLocal HDD and network2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Decoding Capability	3-channel 4MP@30fps; 6-channel 1080p@30fps Al enabled: 1-channel 8MP@30fps; 1-channel 5MP@30fps; 2-channel 4MP@30fps;
RCA Output1Bread AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard DiskUp to 16 ChannelNulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offStorage MethodUSB deviceBackupUSB Ports (1 × front USB2.0; 1 × back USB2.0)	Audio Compression	PCM; G.711A; G.711U; G.726
General AlarmMotion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarmAbnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard Disk2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeUSB deviceBackupUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	RCA Input	1 channel
Abnormal AlarmCamera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard Disk2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeLocal HDD and networkBackupUSB deviceLocal PDT Survers2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	RCA Output	1 channel
Abnormal AlarmexceptionIntelligent AlarmFace detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMDAlarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard Disk2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsBackupUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	General Alarm	Motion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarm
Alarm LinkageRecord; snapshot; buzzer; log; preset; email; tourSmart PhoneiPhone, iPad, Android PhoneHard Disk2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeLocal HDD and networkBackupUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Abnormal Alarm	
Smart PhoneiPhone, iPad, Android PhoneHard Disk2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsStorage MethodUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Intelligent Alarm	Face detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMD
Hard Disk2 SATA III ports, up to 10TB for a single HDD. The maximum HDD capacity varies with environment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsStorage MethodLocal HDD and networkBackupUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Alarm Linkage	Record; snapshot; buzzer; log; preset; email; tour
Hard Diskenvironment temperatureMulti-channel PlaybackUp to 16 ChannelPlayback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsStorage MethodLocal HDD and networkBackupUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Smart Phone	iPhone, iPad, Android Phone
Playback Function1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/offRecord ModeManual record; alarm recordings; motion detection recordings; scheduled recordingsStorage MethodLocal HDD and networkBackupUSB deviceInterface Ports2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Hard Disk	
Playback Function   2. Full screen; backup (cut/file); partially enlarge; audio on/off     Record Mode   Manual record; alarm recordings; motion detection recordings; scheduled recordings     Storage Method   Local HDD and network     Backup   USB device     Interface Ports   2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Multi-channel Playback	Up to 16 Channel
Storage Method Local HDD and network   Backup USB device   Interface Ports 2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Playback Function	
Backup USB device   Interface Ports 2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Record Mode	Manual record; alarm recordings; motion detection recordings; scheduled recordings
Interface Ports 2 USB Ports (1 × front USB2.0; 1 × back USB2.0)	Storage Method	Local HDD and network
	Backup	USB device
Ethernet 1 RJ-45 10/100/1000 Mbps	Interface Ports	2 USB Ports (1 × front USB2.0; 1 × back USB2.0)
	Ethernet	1 RJ-45 10/100/1000 Mbps



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Feature	Specification
Protocols	HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; DDNS; Alarm Server; IP Search; RTSP; P2P; Auto Registration; ONVIF (profile T; profile S; profile G); CGI; SDK
Power Supply	12V DC, 4A
Power Consumption	Total output of NVR is $\leq$ 10 W (without HDD)
Working Temperature	-10°C to +55°C (+14°F to +131°F)
Storage Temperature	0°C to 40°C (32°F to 104°F)
Operating Altitude	3,000 m
Dimensions	375 mm × 284.3 mm × 53 mm (14.76" × 11.19" × 2.09") (W × L × H)
Weight	1.51 kg

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