

1.0 Manufacturer

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Manufacturer shall warrant the CMX1108, CMX Recorder, to be free from defects in material and workmanship for one year from the installation date.

2.0 Description

Central Management Software Recorder (CMX Recorder) is a total solution for managing network video products including IP cameras, NVR, and DVRs. CMX Software HD 3.6 contains (1) network video recording software, (2) eMap Manager, (3) Database Manager, (4) Web Server, and (5) Remote DVR playback and file download.

Major features including 108-channel H.264/JPEG IP cameras and DVR's cameras recording, remote DVR video playback and file download, and camera groupings with user authentication are integrated within one system application.

One important feature of eMap is the central management system for live monitoring, alarm snapshot management, and map management. IP devices installed at different locations can be represented and managed by using maps.

Circular recording, schedule recording, NAS recording, individual HDD recording configurable, and individual camera recording configurable provide the flexibilities in managing recording storages. CMX Software HD 3.6 is designated for hybrid solution for IP camera, video server, IP Fast Dome, NVRs, and DVRs. It provides total solutions for digital surveillance. Major features are:

3.0 General Specifications

CMX shall provide H.264 decoding from IP cameras at the resolution of 1920 * 1080 up to 108 channels via dual monitors in a PC. Each camera frame rate shall be up to 30 FPS.

CMX shall provide 3 mega-pixel and 5 mega-pixel video H.264 decoding capacity.

CMX shall provide video recording for IP cameras, DVRs, and NVRs via network to CMX's hard disk drivers and/or network storage such as NAS.

CMX shall provide digital zoom feature for live monitoring and video playback.

CMX shall control IP PTZ features including PTZ preset recall, pan tilt, zoom, and PTZ preset saving operations.

Video inputs shall be two gigabit RJ-45 inputs for IP cameras' connections. Video outputs shall provide dual monitors for HDMI output and VGA output.

CMX shall provide network IP cameras scanning. The scanning result shall be listed for IP addresses of the cameras which can be used for assigning a channel of CMX.

Each camera shall be adjusted for its video including contrast, brightness, hue, and saturation via network. CMX shall provide load default for the camera video setting.

CMX shall support motion detection area setup for each channel. The motion detector shall provide levels for motion detection sensitivity.

CMX shall receive an external alarm/event notification from an digital input, face detection, motion detection, audio, and tampering from an IP camera and redirect the event notification outputs to another IP camera's digital output, activate PC sound, recall IP PTZ's preset, activate pre-alarm recording, and post-alarm recording.

If a camera supports virtual fence feature and polygonal fence detection, CMX shall receive the event notifications and redirect to various alarm outputs.

When an alarm/event is triggered, CMX can be set for triggering full screen mode at main monitor output. NVR can be set for sending email message notification with alarm snapshot attached or sending alarm snapshot to an FTP server.

CMX shall be able to provide TCP/IP network digital I/O integration for supporting digital inputs or output without using IP cameras' digital inputs or outputs.

CMX shall be able to provide automatic number plate recognition (ANPR) integration for support ANPR feature where black list and white list can be supported.

CMX shall be able to perform pre-alarm and post-alarm recording after receiving an event.

CMX shall have electronic map representation in which an alarm notification can show blinking effect, snapshot, and switching map for a site.

CMX shall document alarm notifications into database for quick video playback.

CMX shall be set for different recording frame rate for each IP camera. CMX shall be set in different recording mode including alarm/motion recording, schedule recording, or continuous recording.

CMX shall be able record video from JPEG and/or H.264 streaming.

CMX shall provide scheduling recording for continuous recording, no recording, and alarm/event recording based on hourly basis in a week.

CMX shall be installed for * 3TB hard disk drivers. CMX shall have the function of HDD circular recording feature in which the oldest recordings get overwritten automatically. CMX should be capable for recording 24 hard disk drivers for longer recording days.

CMX shall support hardware RAID for RAID 0, 1, 5, 6, 10, 50, and 60. It should provide HDD failure detection and warning for a HDD hot-swapping replacement.

CMX shall support redundant power management where if one power supplier source is broken. Alarm notification will be activated for warning purpose.

CMX shall support 36-channel simultaneously playback feature. In 36-channel playback mode, up to fast forward and rewind at 16X speed shall be supported.

CMX shall provide 36-channel simultaneously remote playback via network. In 36-channel playback mode, up to fast forward and rewind at 16X speed shall be supported.

CMX shall provide SmartSearch motion detection feature for playback where a motion instance can be

ARCHITECTURAL & ENGINEER SPECIFICATIONS

fast forwarded for quick video search with alarm snapshots for review purpose.

CMX shall provide remote backup feature for multiple channels playback with a player or multiple AVI files for both local CMX recordings and/or remote CMX recordings.

CMX shall be able to be controlled by a PIH-931D joystick keyboard.

CMX shall be able to connect to point of sales (POS) systems where the transactions of cash registers can be document into CMX database. The transactions of the cash registers can be used for quick playback purpose.

CMX shall be able to provide the feature where it can support serial communication over TCP/IP for POS system.

CMX shall be able to change the font and size for text overlay feature.

CMX shall be able to receive text inputs for text overlay feature where the text can be used for quick playback purpose.

CMX shall be able to connect another CMX for its live video.

CMX shall provide recorded video conversion into JPEG and AVI file format.

CMX shall be able to group cameras into a window from DVRs, NVRs, and IP cameras.

CMX shall provide configurations importing and exporting. There is no configuration needed for re-installing new software.

CMX shall build-in web service for providing live access.

CMX shall be able to limit CPU usage for preventing system overloading.

CMX shall be able to provide a run-time recording calculator for estimating recording days.

CMX shall be accessed by entering user credential. Different users can access specific features and specific cameras based on groupings.

CMX shall be able to entering camera titles for cameras.

CMX shall provide run-time cameras' arrangement by using a mouse drag-n-drop.

CMX shall provide watch-dog timer for rebooting Windows system if a system crashed is encountered.

CMX shall be able to provide 6 monitor outputs.

CMX operating system (OS) should be installed in a solid state driver apart from the video clips to avoid hard drive accesses.

CMX is capable of supporting Failover for monitoring other cameras' connectivity and performing failover recording for the cameras if necessary.