VMS01

128CH Network video Recording system

SATA







- Supports 8-Bay / 12-Bay hot-swappable hard drive configurations.
- Features a 19-inch 2U chassis design paired with a 500W 80+ Copper high-efficiency power supply unit, ideal for diverse professional rack-mount environments.
- Supports Intel® Core™ 14th and 13th processors with up to 20 cores and 28 threads, delivering exceptional performance.
- Equipped with 4 memory slots, supporting up to 128GB of high-speed DDR4 4800MHz memory to ensure lag-free processing of multiple surveillance streams.
- Supports SATA3 and SAS interfaces, compatible with 24TB+ high-capacity drives, 10K RPM high-speed SSDs to meet demanding recording and storage requirements.
- Built-in Intel Software RAID 0, 1, 5, 10, with options for Hardware SAS RAID 0, 1, 5, 6, 10, 50, and supports non-volatile cache protection modules.
- Supports email notifications for drive failures. The system enables automatic array rebuilding after replacement, ensuring uninterrupted recording.
- Equipped with three 4-pin high-speed fans featuring smart temperature-controlled variable speeds and a failure buzzer alarm to maintain system stability.
- Powered by an NVIDIA GeForce 2GB DDR4 discrete graphics card with DisplayPort and HDMI outputs, providing crisp, stable high-definition monitoring.

SPECIFICATIONS

CPU-	Supports Intel® Core™ 14th & 13th Gen Processors
	Equipped with 20 Cores and 28 Threads
Memory-	4x Memory Slots, Pre-installed with 32GB DDR4 4800MHz
	Supporting up to 128GB of DDR4 4800MHz high-speed RAM
Hard Drive-	8 / 12 SAS 12Gb/s Hot Swap
	Individual indicators for drive power, activity, and status/error
Network-	Intel® auto-sensing 10/100/1000Base-T Ethernet
Mainboard I/O-	RJ45 port x1
	DisplayPort x1
	HDMI x2
	USB 2.0 x4
	USB 3.0 x2
	PS/2 Keyboard/Mouse Combo Port x 1
	Audio Jacks x 3

Video Output-	NVIDIA GeForce 2GB DDR4 Display Card
Power Supply-	500W Power Supply (80 Plus Bronze)
Dimension-	437.5 (W) x 650 (D) x 88 (H) mm
Safety Certificate-	BSMI、CE

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NVR Recording software

1. The recording software features a Linux-based architecture installed on chassis-based servers and disk arrays, with the capability to be installed and run on existing virtualization management platforms.
   The software must run on a server-grade operating system Long-Term Support (LTS) version backed by official commercial technical support, or on certified enterprise-grade Linux devices. It shall provide a Traditional Chinese Graphical User Interface (GUI) for user operations.
2. The recording software must support the simultaneous ingestion, storage, and management of up to 128 channels of front-end video streams and must include valid software licenses. It shall be responsible for camera video reception, remote management, and recording storage, while supporting operations such as modifying, adding, and configuring cameras.
   Furthermore, the software must support video stream forwarding functions (such as RTSP) to enable video retrieval and integrated applications by third-party platforms.
3. The recording software shall operate as a system service that runs automatically in the background of the operating system and features a boot-start (auto-start on boot) capability. It must be equipped with a comprehensive automated recovery mechanism: following a system reboot, abnormal interruption, or power restoration after an outage, the system must automatically restore itself to its pre-outage operational state and restart all relevant services. This ensures continuous and normal video recording functionality without any service interruption caused by requiring manual login or human intervention.
4. The recording software shall utilize a disk round-robin writing mechanism. Once the designated drive letters for writing are configured, the system will automatically cycle and distribute data writes across the various disk bays.
   Based on pre-set thresholds, it will reserve the minimum required hard drive space before executing cyclic space overwriting.
5. The recording software shall support a multitasking operational mode, enabling simultaneous operations including real-time video streaming output, recording archiving, video playback, system parameter configuration, alarm event searching, server functional status monitoring, and various other concurrent tasks.
6. The recording software must be compatible with and integrate ONVIF Profile S compliant IP cameras or digital video recorders (NVRs & DVRs). It shall provide RTSP streams to facilitate the development of other surveillance applications through third-party system integration.
7. The recording software shall support mainstream video compression formats (H.264, H.265, MPEG4, or equivalent technologies).
   Additionally, it must support the camera's sub-stream (second stream) mode for live display to minimize network bandwidth consumption.
8. The storage resource allocation and performance tuning of the software must guarantee the capacity to sustain high-load concurrent writes from all video cameras under this project simultaneously. When retrieving historical video recordings while the system is operating at full load, the playback must remain smooth and complete, strictly free from video latency, image corruption, frame drops, or missing seconds. When hard drive space is insufficient, the software shall automatically purge the oldest video data and visually display the retention/overwrite period via diagrams or data metrics.

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NVR Recording software

9. The recording software shall support customized storage space configurations.
   The system must automatically delete video data when the specified retention days are exceeded or when the assigned storage space is full. The recorded video must include the year, month, day, hour, minute, second, and Traditional Chinese camera name, which shall be hardcoded/embedded directly into the recorded video files. During video playback, the date, time, and Traditional Chinese name must be displayed directly on the screen.
10. When exporting video files from this system, standard AVI and MP4 video recording formats must be supported.
11. The system shall support the detection of front-end devices and provide comprehensive alarm and alert functions, including but not limited to recording status, recording file anomalies, network connection/disconnection status, and video signal normal/abnormal status.
12. The system shall provide multiple types of front-end camera detection logs, including but not limited to motion detection logs, AI event logs, and user operation logs (audit trails), and must support the capability to export all log records.
13. The recording software must feature connection interruption video retrieval technology (Automatic Network Replenishment / ANR). Upon the restoration of network transmission, the recording software shall proactively retrieve the video segments recorded during the disconnection period from the camera's local storage. These retrieved files must be automatically archived into the playback system according to their original timestamps to guarantee the absolute integrity of historical video playback and queries.
14. The system shall feature Network Time Protocol (NTP) time synchronization to ensure that the clocks of all connected and managed cameras or hosts are fully synchronized, thereby achieving uniform time for site surveillance and incident investigation.
15. All products provided must be manufactured outside of China, must not originate from Chinese-funded brands, and must be fully compliant with the National Defense Authorization Act (NDAA). A Manufacturer's Certificate of Origin (COO) must be submitted at the time of delivery.

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