

EVS7124S 24-bay Embedded Video Storage

SAS/SATA Hot-swappable, RAID Support



System Overview

The EVS7124S Embedded Video Storage device offers unparalleled storage technology. It is designed and developed to meet the needs of medium-range to high-end IP video surveillance applications; and supports 512 IP camera channels with 1024 Mbps incoming/recording/forwarding bandwidth.

Combined with hot-swap power supplies, fans, and hard disk drives, the EVS offers Enterprise Class availability. This EVS is ideal for a wide range of applications including public safety, transportation, government institutions, hotels, shopping malls, city centers, and financial institutions that demand flexibility, reliability, and centralized storage management.

This EVS is compatible with numerous third-party devices making it the perfect solution for surveillance systems with or without a video management system (VMS). Its open architecture supports multi-user access and is compatible with ONVIF 2.4.

Functions

Modular Design

The Enterprise Video Storage is rack mountable and designed to manage up to 512 channels of digital video for scalability. Powered by Intel® technology, the unit features dual redundant power supplies, redundant fans and a hot-swappable configuration to ensure stability.

Storage Extension Capacity

Local extension, connect to ESS extension storage by mini SAS interface. Extension storage support redundant power and RAID.

RAID Support

The Embedded Video Storage device provides the processor and RAID enclosure in one chassis, resulting in both space and cost savings. RAID 0/1/4/5/6/10/50/60 support is available through a hardware-based RAID controller that removes the loading on the processor that software RAID can bring. A convenient web browser interface is used to manage the RAID controller.

- 64-bit High-performance Multi-core Processor
- 512 Video Input Channels
- 1024 Mbps Incoming/Recording/Forwarding Bandwidth
- 24 HDDs, SAS/SATA, Hot-Swap
- Supports RAID 0/1/5/6/10/50/60, SRAID, JBOD, Hotspare
- Video Stream Direct Storage Mode
- IPSAN Storage Mode
- Supports N+M Cluster
- Automatic Network Replenishment (ANR)
- SAS Cascade for Expanded Storage Space
- Modular Design
- 1 + 1 Redundant 80 PLUS Platinum Power Supply
- Five-year Warranty*

Video Recording Capability

The Enterprise Video Storage device not only stores video data but is capable of simultaneous record, playback, live view and transmission of IP video. The device records 512 channels at 2 Mbps plus 256 channels of video transfer

N+M Hot Standby

The highly reliable redundancy N+M Hot Standby design provides a secure, failover technique ensuring immediate backup. In the event of a system failure, the slave instantly takes over the master ensuring no data is lost.

Automatic Network Replenishment (ANR) Technology

Video storage devices with the ANR function automatically store video data on an IP camera SD card when the network is disconnected. After recovery of the network, the NVR automatically retrieves the video data stored on the camera.

Interoperability

The EVS conforms to the ONVIF (Open Network Video Interface Forum) and to the CGI specifications, ensuring interoperability between network video products regardless of manufacturer.

Environmental

The storage device features a wide operating temperature range of 0° C to +45° C (+32° F to +113° F) and a working altitude range of 5000 m above (16,404.20 ft) above sea level.

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Technical Specification

System

Main Processor	64-bit High-performance Multi-core Processor
Operating System	Embedded LINUX
User Interface	Web-based
Controller	Single Controller
Memory	8 GB by default (expandable to 64 GB)
Redundant Power	1+1 Redundant Power

Interface

Network	1 x 1 GbE Management Port, 4 x 1 GbE LAN Ports
Network Extension	4 x 1 GbE LAN ports, 2 x 10 GbE Optical Fiber Ports
SAS	Two (2) Mini-SAS HD Ports, maximum speed 12 Gb/s
eSATA	One (1)
RS232	One (1) Port, for PC communication and keyboard
HDMI	One (1) Output Port

Storage

Internal HDD	24 Bays
Capacity	1 TB, 2 TB, 3 TB, 4 TB, 5 TB, 6 TB, 8 TB, 10 TB, 12 TB, 14 TB, 16 TB
HDD Compatibility	Size: 2.5 in. and 3.5 in. HDD
Support	Simultaneous Connection to SATA and SAS
HDD Installation	Independent Rack
RAID Type	• Single Disk, • RAID 0/1/5/6/10/50/60 • SRAID • JBOD • Hotspare
Quick RAID Creation	Use RAID immediately after creation
RAID Recreation	Dynamic adjustment of RAID recreation speed to ensure system load balance
RAID Write Sync	RAID writing synchronization technology to ensure data security

Storage Management

HDD Manager	Non-working HDD hibernation facilitates heat dissipation and reduced power consumption to extend HDD life
Disposal	Supports Bad-track mapping to extend HDD life
Status Detection	HDD inspection before and during use

Playback and Backup

Record Mode		Schedule, Manual, Motion Detection, Alarm
Record Playback		Web Video Playback, Slice Playback, Synchronous Playback, Record Search by Seconds, Playback Speed Adjustment
Backup Mode		USB Flash Drive, Network Storage, eSATA Storage
Camera Support	Encoding	Smart H.265+, H.265, Smart H.264+, H.264, MPEG4, MJPEG, SVAC
	Lenses	Multi-sensor and Thermal
	Analytics	Face Detection, Human/Vehicle Detection, Behavior Analysis

Direct Video Storage

Private Protocol	
Access, Storage, Forwarding	512 Channels, 1024 Mbps
Network Playback	32 Channels, 64 Mbps
ONVIF Protocol	
Access, Storage, Forwarding	512 Channels, 1024 Mbps
Network Playback	32 Channels, 64 Mbps
Auto-Register	
Access, Storage, Forwarding	300 Channels, 600 Mbps
Network Playback	32 Channels, 64 Mbps
International Protocol	
Access, Storage, Forwarding	512 Channels, 1024 Mbps
Network Playback	32 Channels, 64 Mbps

Network

Interface	One (1) Management Port, RJ-45 (10/100/1000 Mbps) Four (4) Data Ports, RJ-45 (10/100/1000 Mbps)
IPSAN Mode	IPSAN Direct Storage
IPSAN Function	Dynamic Online Extension of Logical Volumes
Video Stream Mode	Direct Storage
Network Mode	Fault-tolerance, Load balance, and other modes
Network Protocol	RTP, RTCP, RTSP, UDP, HTTP; NTP, SNMP, iSCSI
Interoperability	ONVIF, GB28181, and others
N + M	Supported
Automatic Network Replenishment	Supported
Smart Phone	IOS, Android
Interoperability	ONVIF 2.4, CGI Conformant

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Electrical

Power Supply 100 VAC to 240 VAC, 50/60 Hz, 5 A / 2.5 A
Hot-swap support

Power Consumption < 500 W (with HDD)

Fan MTBF: > 100,100 hours, Hot-swap

Environmental

Working Conditions 0° C to +45° C (+32° F to +113° F), 10 % to 80% RH

Storage Conditions -20° C to +70° C (-4° F to +158° F), 5% to 90% RH

Working Altitude up to 5000.0 m (16,404.20 ft)

Construction

Chassis 1.20 mm extra-thick, hot-dip galvanized steel,
Drawer-like removable HDD bracket

Dimensions (W x D x H) 4U, 482.60 mm x 494.0 mm x 175.0 mm
(19.0 in. x 19.45 in. x 6.89 in.)

Net Weight 29.0 kg (63.93 lb), without HDD

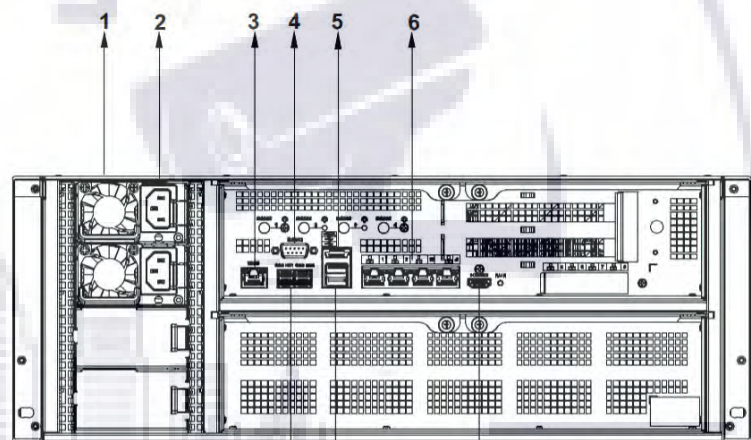
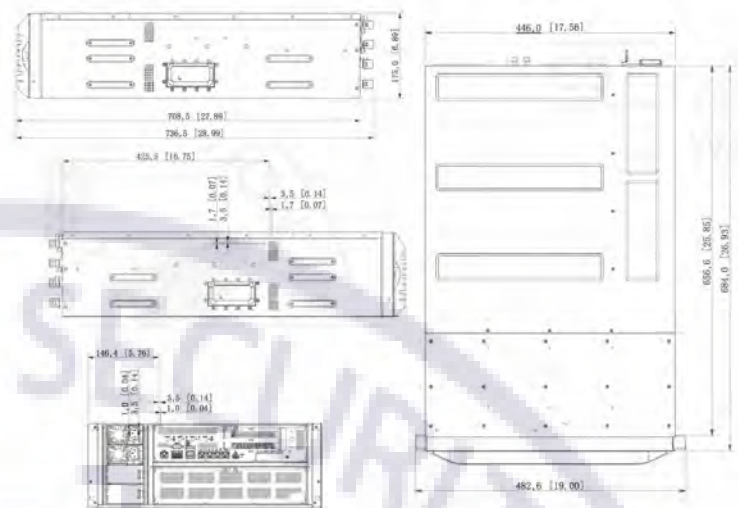
Gross Weight 44.0 kg (97.0 lb)

Installation Standard 19-in. rack installation

Certifications

CE EN 55024, EN 55032, EN 55035, EN 50130-4,
EN 61000-3-2, EN 61000-3-3, EN 62368

Electromagnetic Compatibility CFR 47 FCC Part 15 Subpart B
ANSI C63.4



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|---------------|---------------|-------------------|
| 1 Fan | 2 Power Input | 3 Management Port |
| 4 RS-232 Port | 5 eSATA Port | 6 Network Port |
| 7 SAS HD Port | 8 USB Port | 9 HDMI Port |

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