

# 24-bay Embedded Video Storage

SAS/SATA Hot-swappable, RAID Support



- 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\*

## 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 security 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 Retail, Agriculture, Gaming, Healthcare, and Commercial that demand flexibility, reliability, and centralized storage management.

This EVS is compatible with numerous third-party devices making it the perfect solution for security stems 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.

### 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.

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                              |
| 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  |
| HDD Compatibility   | Capacity | 1 TB, 2 TB, 3 TB, 4 TB, 5 TB, 6 TB, 8 TB, 10 TB, 12 TB, 14 TB, 16 TB   |
|                     | Size     | 2.5 in. and 3.5 in. HDD  |
|                     | Support  | Simultaneous Connection to SATA and SAS  |
| HDD Installation    |          | Independent Rack   |
| RAID Type           |          | <ul style="list-style-type: none"><li>• Single Disk,</li><li>• RAID 0/1/5/6/10/50/60</li><li>• SRAID</li><li>• JBOD</li><li>• Hotspare</li></ul> |
| 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)<br>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  |

## Electrical

|                   |   |
|-------------------|---|
| Power Supply      | 100 VAC to 240 VAC, 50/60 Hz, 5 A / 2.5 A<br>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,<br>Drawer-like removable HDD bracket |
| Dimensions (W x D x H) | 4U, 482.60 mm x 494.0 mm x 175.0 mm<br>(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,<br>EN 61000-3-2, EN 61000-3-3, EN 62368 |
| Electromagnetic Compatibility | CFR 47 FCC Part 15 Subpart B<br>ANSI C63.4  |

## Ordering Information

| Type                        | Part Number | Description                   |
|-----------------------------|-------------|-------------------------------|
| 24-HDD Video Storage Device | EVS7124S    | 24-HDD Embedded Video Storage |