

DHI-EVS7148S 48-bay Embedded Video Storage



- 64-bit High-performance multi-core processor
- Max 512-ch IP camera inputs
- Max 1024 Mbps incoming/recording/forwarding bandwidth
- 48 HDDs, SAS/SATA, Hot-Swap
- Supports RAID 0/1/5/6/10/50/60, JBOD, Hot spare
- Supports video stream/ Picture direct storage mode and IPSAN storage mode
- Supports N+M cluster
- Supports Automatic Network Replenishment (ANR)
- SAS cascade for expanded storage space
- · Modular and drawer-like design
- 1+1 redundant 80PLUS platinum power supply

System Overview

DHI-EVS7148S offers unparalleled storage technology. It is designed and developed to meet the needs of medium-range to high-end IP video surveillance applications. It supports 512 channels of IP camera inputs, and 1024 Mbps incoming/recording/forwarding bandwidth.

Combined with hot-swap power supplies, fans and hard disk drives, the EVS offers real Enterprise Class availability. This EVS is ideal for a wide range of applications such as public safety, transportation stations, government institutions, hotel resorts, shopping malls, city centers, and financial institutions, where demand expansion flexibility, high 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. Its open architecture supports multi-user access and is compatible with ONVIF 2.4.

Functions

Modular Design

All key modules are hot-swap and redundant configuration. Redundant fans, redundant power, and multi-redundant design ensure stability. The brand new design for disk carrier ensures good cooling, stability and safety for hard disks.

Storage Extension Capacity

Local extension, connecting to expansion storage cabinet by mini SAS interface. Extension storage supports redundant power and RAID.

RAID 0/1/5/6/10/50/60

Offering a balance between storage performance, storage capacity, and data integrity, the EVS features fruitful RAID 0/1/5/6/10/50/60 for faster and safer recording.

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 to ensure no data is lost.

ANR (Automatic Network Replenishment Technology)

Video is recorded in SD card in IP cameras when the network breaks down, and after the network is recovered, the video will be transferred to EVS and then recorded on it.

EVS7 Series | DHI-EVS7148S

Technical Specification

System

| System | | | | |
|--|---|--|--|--|
| Main Processor | 64-bit multi-core processor | | | |
| Operating System | Embedded LINUX | | | |
| Operation Interface | Web | | | |
| Controller | Single controller | | | |
| RAM | 8 GB by default (extendable to 64 GB) | | | |
| Power Redundancy | 1+1 | | | |
| External Ports | | | | |
| SAS | 2 mini SAS HD ports with maximum speed 12Gb/s | | | |
| Network | 1 × 1GbE management port; 4 × 1GbE LAN ports | | | |
| Network Extension | $4\times1\text{-}\text{GbE}$ LAN ports and $2\times10\text{-}\text{GbE}$ optical fiber ports are optional | | | |
| eSATA | 1 × eSATA | | | |
| RS-232 | 1 × DB9 | | | |
| HDMI | 1 × HDMI | | | |
| Internal Expansion | | | | |
| M.2 SSD | 2 × NVMe SSD ports | | | |
| PCI-E | 1 × PCI-E X8; 1 × PCI-E X4 | | | |
| Disk | 1 × 2.5-inch SATA | | | |
| Disk | | | | |
| Disk Bay | 48 | | | |
| Disk Type | 1TB; 2TB; 3TB; 4TB; 5TB; 6TB; 8TB; 10TB; 12TB; 14TB; 16TB; 2.5-inch and 3.5-inch HDD Support simultaneously connecting to SATA/ SAS/SSD | | | |
| Disk Installation | Independent disk tray | | | |
| Hot Swapping | Yes | | | |
| RAID Type | RAID 0/1/5/6/10/50/60; JBOD; hot-spare | | | |
| Disk Processing | Bad sector mapping | | | |
| Disk Management | Non-working disks automatic sleep | | | |
| Disk Inspection | Inspection before use and during use | | | |
| Performance | | | | |
| Video Direct Storage (Private Protocol) | Up to 512-channel (1024 Mbps) access, storage, and forwarding; 32-channel (64 Mbps) online playback | | | |
| Video Direct Storage (ONVIF) | Up to 512-channel (1024 Mbps) access, storage, and forwarding; 32-channel (64 Mbps) online playback | | | |
| Video Direct Storage (Auto Register) | Up to 512-channel (1024 Mbps) access, storage, and forwarding; 32-channel (64 Mbps) online playback | | | |
| Picture Direct Storage | Up to 512-channel access, storage, and forwarding (250 KB/Picture) | | | |
| IPSAN Performance | Write-through: 900 Mbps Write-back: 1200 Mbps | | | |
| | | | | |

| AnswersenONVIF; GB28181RTSPONVIF; GB28181ClusterN+MAutomatic Network Replenishment (ANR)Videos during network failure upload to EVS automatically afterwardsNetwork ModeMultiple-address, link aggregation, fault-tolerance, load balanceQuick RAIDYesRAID Instant UseYesRAID-write SynchronizationScheduled, manual, motion-triggered and alarm triggeredRvideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo CodecScheduled, manual, motion-triggered and slame triggeredVideo CodecAccess by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by until-sensor cameras, thermal cameras, and panoranic camerasVideo BackupBack up video through USB, network, and eSATA CeneralPower Supply100–127V/200–240V AC, S0/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption<800 W (include disks)Operating Temperature-20 °C to 470 °C (-4 °F to +158 °F)Operating Temperature-20 °C to 470 °C (-4 °F to +158 °F)Operating AltitudeS5000 (16404.20 ft) mChassis.12 mm hot ding galvanized steel plate EC: ANSI CG3.4, 47 CFR PART 15B Subpart BChassis.12 mm hot ding galvanized steel plate Medependent developed pul-uot disk tray | Function | |
|---|----------------------------|---|
| Video StorageDirect storageVideo StorageDirect storageNetwork ProtocolRTP;RTCP;RTSP;UDP;HTTP;HTTPS;NTP;SNMP;SCSRTSPONVIF; GB28181ClusterN+MAutomatic Network Replenishment (ANR)'sutomatically afterwardsNetwork Mode'fault-tolerance, load balanceQuick RAIDYesRAID Instant UseYesRAID RebuildingSelf-adaptive rebuildingRecord ModeScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo CodecAccess by cameras with encoding formats of Adjustable playback, spice playback, spice playback, spice playback spicedVideo Backup00-127V/200-240V AC, 50/60Hz, 8A/AAFanDual ball-bearing fansPower Supply101-127V/200-240V AC, 50/60Hz, 8A/AAFan014 ball-bearing fansPower Supply0°-t to 45 °C (32 °F to 113 °F)Operating Temperature0° to to 45 °C (32 °F to 113 °F)Operating Humidity1%-80% (RH) (non-condensation)Storage Temperature0° to to 45 °C (32 °F to 113 °F)Operating Humidity5%-90% (RH) (non-condensation)Storage Temperature5%-90% (RH) (non-condensation)Operating Altitude5%-90% (RH) (non-condensation)Chassis0:2 °C to A5 °C (23 °F N 5035; EN 55035; | IPSAN Mode | Yes |
| Network ProtocolRTP;RTCP;RTSP;UDP;HTTP;HTTPS;NTP;SNMP;SSSRTSPONVIF; G828181ClusterN+MAutomatic Network'uideos during network failure upload to EVS automatically afterwardsNetwork ModeMultiple-address, link aggregation, fault-tolerance, load balanceQuick RAIDYesRAID Instant UseYesRAID RebuildingSelf-adaptive rebuildingRAID RebuildingSelf-adaptive rebuildingRAID RebuildingSelf-adaptive rebuildingRAID-write SynchronizationYesRecord ModeScheduled, manual, motion-triggered and alarm riggeredVideo PlaybackScheduled, synchronous playback, slice playback, synchronous playback, slice adjustable playback speedVideo CodecMPEG4, MJPEG, H.264, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo BackupBack up video through USB, network, and eSATAGeneralOuen 127V/200-240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | IPSAN Function | Dynamic online extension of logic volumes |
| Access by cameras with encoding formats of MPEG4, MUPEG, H.265, H.265, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras, and panoratic cameras the coding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras, and panoratic cameras the coding formats of MPEG4, MUPEG, H.265, and SVAC Access by cameras, and panoratic cameras the coding formats of MPEG4, MUPEG, H.265, H.265, and SVAC Access by cameras, and panoratic cameras the coding formats of MPEG4, MUPEG, H.265, H.265, and SVAC Access by cameras, and panoratic cameras the coding formats of MPEG4, MUPEG, H.265, H.265, and SVAC Access by cameras, and panoratic cameras the cameras, and panoratic cameras the cameras, and panoratic camerasForwer Supply100–1271/200–240V AC, S0/60Hz, 8A/4AFan0al ball-bearing fansformared-20°C to +70°C (-4 °F to +158 °F)Querating Humidity0%–80% (RH) (non-condensation)Grarege Hum | Video Storage | Direct storage |
| ClusterN+MAutomatic Network Replenishment (ANR)Videos during network failure upload to EVS automatically afterwardsNetwork ModeMultiple-address, link aggregation, fault-tolerance, load balanceQuick RAIDYesRAID Instant UseYesRAID RebuildingSelf-adaptive rebuildingRAID-write SynchronizationYesRecord ModeScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo CodecScheduled, manual, motion-triggered and slamm triggeredVideo CodecScheduled, MapleG, H.265, and SVAC Access by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo Backup100–127V/200–240V AC, S0/60Hz, 8A/4AFanDual ball-bearing fansPower Supply0°C to 45°C (32°F to 113°F)Operating Temperature0°C to 45°C (32°F to 113°F)Operating Temperature5%–90% (RH) (non-condensation)Storage Temperature5%–90% (RH) (non-condensation)Operating Altitude\$S000 (16404.20 ft) mCertificationsSice EN S5032; EN S5032; EN S50332; EN S50 | Network Protocol | RTP;RTCP;RTSP;UDP;HTTP;HTTPS;NTP;SNMP;iSCSI |
| Automatic Network Replenishment (ANR)Videos during network failure upload to EVS automatically afterwardsNetwork ModeMultiple-address, link aggregation, fault-tolerance, load balanceQuick RAIDYesRAID Instant UseYesRAID RebuildingSelf-adaptive rebuildingRAID-write SynchronizationScheduled, manual, motion-triggered and alarm triggeredRecord ModeScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm adjustable playback, spectorVideo CodecAccess by cameras with encoding formats of MPEG4, MIPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo Backup100–127V/200–240V AC, S0/60Hz, 8A/4AFanDual ball-bearing fansPower Supply0°C to 45 °C (32 °F to 113 °F)Operating Temperature0°C to 470 °C (-4 °F to +158 °F)Operating Temperature5%-90% (RH) (non-condensation)Storage Temperature5%-90% (RH) (non-condensation)Operating Altitude\$%-90% (RH) (non-condensation)CatificationsSic: EN S5032; EN S5032; EN S5035; EN S0130-4 EC: EN S5032; EN S | RTSP | ONVIF; GB28181 |
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| Network Modefault-tolerance, load balanceQuick RAIDYesRAID Instant UseYesRAID RebuildingSelf-adaptive rebuildingRAID-write SynchronizationYesRecord ModeScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo CodecScheduled, manual, motion-triggered and slarm triggeredVideo CodecScheduled, manual, motion-triggered and slarm triggeredVideo CodecScheduled, manual, motion-triggered and slarm triggeredVideo CodecScheduled, manual, motion-triggered and slarm carears by cameras with encoding formats of Adjustable playback, speedVideo CodecSccess by cameras with encoding formats of Adjustable playback speedVideo BackupBack up video through USB, network, and eSATAGeneral100–127V/200–240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | | 0 |
| And DYesRAID RebuildingSelf-adaptive rebuildingRAID-write SynchronizationYesRecord ModeScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackWeb playback, soncentrated playback, slice playback, synchronous playback seerch video by second Adjustable playback, speedVideo CodecMPEG4, MJPEG4, MJPEG4, HJ.265, and SVAC Access by cameras with encoding formats of MPEG4, MJPEG4, MJPEG4, HJ.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo BackupBack up video through USB, network, and eSATAGeneral100–127V/200–240V AC, S0/60Hz, SA/4AFanDual ball-bearing fansPower Consumption<800 W (include disks) | Network Mode | |
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| RAID-write SynchronizationYesRecord ModeScheduled, manual, motion-triggered and alarm triggeredVideo PlaybackWeb playback, concentrated playback, slice playback, synchronous playback Search video by second Adjustable playback speedVideo CodecAccess by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo BackupBack up video through USB, network, and eSATAGeneralVolabal-bearing fansPower Supply100–127V/200–240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | RAID Instant Use | Yes |
| Record ModeScheduled, manual, motion-triggered and alarm triggeredNideo PlaybackWeb playback, concentrated playback, slice playback, synchronous playback search video by second Adjustable playback speedVideo CodecAccess by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo BackupBack up video through USB, network, and eSATAGeneralUal ball-bearing fansPower Supply100–127V/200–240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | RAID Rebuilding | Self-adaptive rebuilding |
| Record ModetriggeredtriggeredVideo PlaybackWeb playback, concentrated playback, slice playback, synchronous playback search video by second Adjustable playback speedVideo CodecAccess by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo BackupBack up video through USB, network, and eSATAGeneralDual ball-bearing fansPower Supply100–127V/200–240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | RAID-write Synchronization | Yes |
| Video Playbackplayback, synchronous playback Search video by second Adjustable playback speedVideo CodecAccess by cameras with encoding formats of MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal cameras, and panoramic camerasVideo BackupBack up video through USB, network, and eSATA GeneralPower Supply100–127V/200–240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | Record Mode | , , |
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| GeneralPower Supply100-127V/200-240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption<800 W (include disks) | Video Codec | MPEG4, MJPEG, H.264, H.265, and SVAC Access by multi-sensor cameras, thermal |
| Power Supply100–127V/200–240V AC, 50/60Hz, 8A/4AFanDual ball-bearing fansPower Consumption< 800 W (include disks) | Video Backup | Back up video through USB, network, and eSATA |
| FanDual ball-bearing fansPower Consumption< 800 W (include disks) | General | |
| Power Consumption< 800 W (include disks)Operating Temperature0 °C to 45 °C (32 °F to 113 °F)Operating Humidity10%–80% (RH) (non-condensation)Storage Temperature-20 °C to +70 °C (-4 °F to +158 °F)Storage Humidity5%–90% (RH) (non-condensation)Operating Altitude< 5000 (16404.20 ft) m | Power Supply | 100–127V/200–240V AC, 50/60Hz, 8A/4A |
| Operating Temperature0 °C to 45 °C (32 °F to 113 °F)Operating Humidity10%–80% (RH) (non-condensation)Storage Temperature-20 °C to +70 °C (-4 °F to +158 °F)Storage Humidity5%–90% (RH) (non-condensation)Operating Altitude< 5000 (16404.20 ft) m | Fan | Dual ball-bearing fans |
| Operating Humidity 10%-80% (RH) (non-condensation) Storage Temperature -20 °C to +70 °C (-4 °F to +158 °F) Storage Humidity 5%-90% (RH) (non-condensation) Operating Altitude < 5000 (16404.20 ft) m | Power Consumption | < 800 W (include disks) |
| Storage Temperature -20 °C to +70 °C (-4 °F to +158 °F) Storage Humidity 5%-90% (RH) (non-condensation) Operating Altitude < 5000 (16404.20 ft) m | Operating Temperature | 0 °C to 45 °C (32 °F to 113 °F) |
| Storage Humidity 5%–90% (RH) (non-condensation) Operating Altitude ≤ 5000 (16404.20 ft) m Certifications CE: EN 55024; EN 55032; EN 55035; EN 50130-4 EN 61000-3-2; EN 61000-3-3; EN 62368 FCC: ANSI C63.4, 47 CFR PART 15B Subpart B Chassis 1.2 mm hot dip galvanized steel plate Independent developed pull-out disk tray With hanger: 482.6 mm × 261.4 mm × 736.5 mm | Operating Humidity | 10%–80% (RH) (non-condensation) |
| Operating Altitude < 5000 (16404.20 ft) m | Storage Temperature | –20 °C to +70 °C (–4 °F to +158 °F) |
| Certifications CE: EN 55024; EN 55032; EN 55035; EN 50130-4 EN 61000-3-2; EN 61000-3-3; EN 62368 FCC: ANSI C63.4, 47 CFR PART 15B Subpart B Chassis 1.2 mm hot dip galvanized steel plate Independent developed pull-out disk tray With hanger: 482.6 mm × 261.4 mm × 736.5 mm | Storage Humidity | 5%–90% (RH) (non-condensation) |
| CertificationsEN 61000-3-2; EN 61000-3-3; EN 62368 FCC: ANSI C63.4, 47 CFR PART 15B Subpart BChassis1.2 mm hot dip galvanized steel plate Independent developed pull-out disk trayWith hanger: 482.6 mm × 261.4 mm × 736.5 mm | Operating Altitude | ≤ 5000 (16404.20 ft) m |
| Chassis Independent developed pull-out disk tray With hanger: 482.6 mm × 261.4 mm × 736.5 mm | Certifications | |
| * | Chassis | |
| Dimensions (19" × 10.29" × 29") (W × H × D) Without hanger: 446 mm × 261.4 mm × 736.5 mm (17.56" × 10.29" ×29") (W × H × D) | Dimensions | |
| Net Weight 36 kg (79.37 lb) | Net Weight | 36 kg (79.37 lb) |
| Gross Weight 75 kg (165.35 lb) | Gross Weight | 75 kg (165.35 lb) |
| Installation Standard 19 inch rack | Installation | Standard 19 inch rack |

EVS Series | DHI-EVS7148S

Ordering Information

| - | | |
|------------|--------------|----------------------------------|
| Туре | Model | Description |
| 48-bay EVS | DHI-EVS7148S | 48-bay Embedded Video Storage |
| 24-bay ESS | ESS3124S-JR | 24-bay Expansion Storage Cabinet |

Expansion Storage Cabinet

| T BBBBT | | |
|---------|---------|---------|
| TEBEET | | |
| EBBB | | 1 2322 |
| | TERES I | 8888 |
| T BBBBT | | LEEEE I |

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