# DHI-EVS5016S-V2

16-bay Embedded Video Storage

- 64-bit high-performance multi-core processor.
- Max 320-ch IP camera inputs.
- Max 800 Mbps incoming/recording/forwarding bandwidth.
- 16 bays, SATA, Hot-Swap.
- Supports RAID 0/1/5/6/10/50/60,Hot spare.
- Supports video stream direct storage mode and IPSAN storage mode.
- Supports N+M cluster.
- Supports Automatic Network Replenishment (ANR).
- Modular and drawer-like design.

## System Overview

EVS5 Series offers unparalleled storage technology. It is designed and developed to meet the needs of medium-range to high-end IP video surveillance applications.

Combined with hot-swap power supplies 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 (VMS). Its open architecture supports multi-user access and is compatible with ONVIF 2.4.

## Functions

**Modular Design**

The hard disk and the main controller have a modular hardware design, and key modules such as the fan and power supply have a redundant design that improve the reliability of the overall hardware. The hard disk, fan, power supply and other modules are pluggable, and can be replaced for quick and easy maintenance.

**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 sub server instantly takes over the main server to ensure no data is lost.

**Automatic Network Replenishment (ANR)**

Videos are recorded and saved to the SD card of cameras when the network breaks down. When the network recovers, the videos will be transferred to EVS and then recorded through it.

## Technical Specification

### System

| | |
|---|---|
| Main Processor | 64-bit high-performance multi-core processor |
| Operating System | Embedded Linux OS |
| Operating Interface | Web (PCAPP) |
| Controller | Single controller |
| Cache | 8 GB by default (extendable to 32 GB) |

### AI Applications

| | |
|---|---|
| AI by Camera | Face detection, face recognition, IVS (abandoned object, missing object, loitering, crowd gathering, parking, fence-crossing, fast moving, tripwire and intrusion), video metadata (human, vehicle, non-motor vehicle), vehicle recognition, people counting (fisheye or people counting camera required),face & body detection, crowd distribution, smart thermal (call detection, visible channel- smoking detection, thermal channel-smoking detection) |

### Camera Compatibility

| | |
|---|---|
| Thermal | Works with camera for fire alarm, temperature alarm, temperature difference alarm, hot spot, cold spot, smoking and calling |
| People Counting | Works with camera for tripwire people counting, regional people counting and queue people counting |
| Bullet-PTZ Smart Track | Works with camera for manual tracking, auto tracking, click positioning and select positioning |
| Fisheye Dewarp | Supports dewarping for fisheye cameras |

### Cluster

| | |
|---|---|
| Cluster | N+M |

### Audio and Video

| | |
|---|---|
| Third-party Camera Access | Onvif, Onvifs, RTSP, Sony, Panasonic, Axis, Arecont, Pelco, Canon, Samsung, Hikvision |

### Compression Standard

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|---|---|
| Video Compression | Smart H.265+; H.265; Smart H.264+; H.264; MJPEG |
| Audio Compression | G.711A; G.711U; PCM; G726 |

### Network

| | |
|---|---|
| Network Protocol | HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; P2P; GAT1400; iSCSI; FTP ; SMB ; NFS |
| Mobile Phone Access | DMSS |
| Interoperability | ONVIF (Profile S); CGI; SDK |
| Browser | Chrome; PCAPP; IE9 or higher; Firefox |
| Network Mode | NIC binding mode such as multiple-address mode, load balance, fault-tolerance, etc |

### Recording Playback

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|---|---|
| Multi-channel Playback | Max. 16-channel playback |
| Record Mode | Auto record; manual record; search video detection; IO alarm; thermal imaging; intelligent event; all record file |
| Storage Method | Internal HDD and network disk |
| Backup Method | HDD, peripheral USB storage device |
| Playback Function | 1. Play, pause, stop, fast forward, fast backward, reverse play, frame by frame<br>2. Full-screen, backup (clip; file), snapshot, digital zoom, audio on; off |

### Storage

| | |
|---|---|
| Video Direct Storage (Private Protocol) | Incoming: 320-channel (bandwidth: 800 Mbps)<br>Recording: 320-channel (bandwidth: 800 Mbps)<br>Outgoing: 320-channel (bandwidth: 800 Mbps)<br>Playback: 32-channel (bandwidth: 64 Mbps) |
| Video Direct Storage (Onvif) | Incoming: 320-channel (bandwidth: 800 Mbps)<br>Recording: 320-channel (bandwidth: 800 Mbps)<br>Outgoing: 320-channel (bandwidth: 800 Mbps)<br>Playback: 32-channel (bandwidth: 64 Mbps) |
| Video Direct Storage (Auto Register) | Incoming: 320-channel (bandwidth: 800 Mbps)<br>Recording: 320-channel (bandwidth: 800 Mbps)<br>Outgoing: 320-channel (bandwidth: 800 Mbps)<br>Playback: 32-channel (bandwidth: 64 Mbps) |
| Video Direct Storage (International Protocol) | Incoming: 320-channel (bandwidth: 800 Mbps)<br>Recording: 320-channel (bandwidth: 800 Mbps)<br>Outgoing: 320-channel (bandwidth: 800 Mbps)<br>Playback: 32-channel (bandwidth: 64 Mbps) |
| Picture Direct Storage | Incoming: 120-channel (550 KB/picture)<br>Recording: 120-channel (550 KB/picture)<br>Outgoing: 120-channel (550 KB/picture)<br>Playback: 32-channel (550 KB/picture) |
| Disk Group | Yes |
| iSCSI | Supports client and Server |
| Network Disk | Supports client |
| RAID | "RAID 0/1/5/6/10/50/60;<br>(with enterprise-grade HDD)" |
| Record Management | Supports record control (continuous, event-based, scheduled, scheduled & event-based). |
| Storage Pool | Yes |

### IPSAN

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|---|---|
| IPSAN Performance | 280-channel × 2 Mbps video stream writing and 24-channel × 2 Mbps video playback (I/O size of VMS is 64 KB)<br>400-channel × 2 Mbps video stream writing and 24-channel × 2 Mbps video playback (I/O size of VMS is 512 KB) |

### Alarm

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|---|---|
| General Alarm | Motion detect; tampering; IPC external alarm |
| Anomaly Alarm | IPC offline alarm; storage error; HDD full; video frame loss; SSD exception; IP conflict; MAC conflict; login lock; fan malfunction; no HDD; network security exception; power exception; disk health exception; RAID exception; storage pool exception;<br>temperature alarm; share service |
| Alarm Linkage | Record; snapshot (full image); alarm uploading; remote device alarm output;<br>camera audio; buzzer; log; preset; email, smart tracking and warning light.<br>Disarming alarm linkage action by period or one-click sync disarm config with channels |

### Port

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|---|---|
| HDD Interface | 16 slots,<br>SATA<br>Max.18 T/HDD<br>hot swapping<br>CMR<br>support enterprise-grade HDD |
| eSATA | 1 port |

| | |
|---|---|
| RS-232 | 1 port, for debug or COM data transmission |
| USB | 2 ports. 2 USB3.0 ports at the rear panel |
| HDMI | 1 port, only for debug |
| VGA | 1 port, only for debug |
| Network Port | 2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet ports. (gigabit electrica port) |
| Power | 1 port |
| Network Port Extension | 4 × 1-GbE LAN ports (optional)<br>2 × 10-GbE optical fiber ports (optional) |

### General

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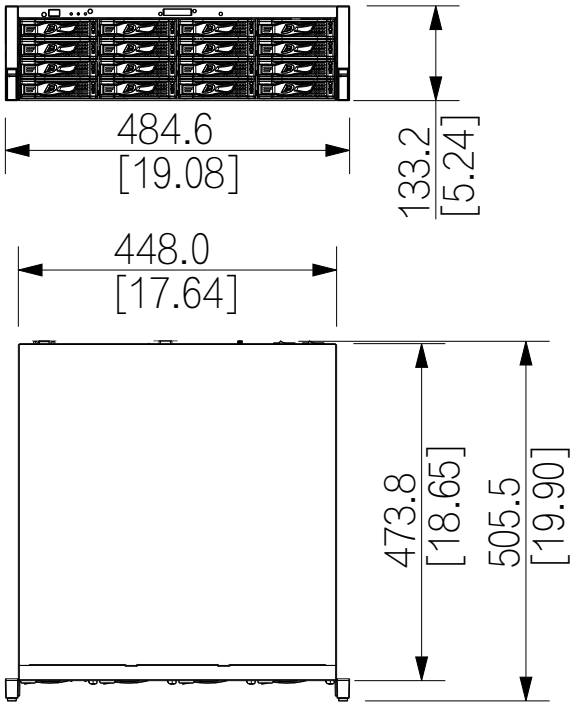
|---|---|
| Power Supply | 100-240 VAC 50-60 Hz, 6.3A-3.5A |
| Power Consumption | <60 W (without HDD, idling)<br><220 W (all HDDs connected) |
| Fan | Intelligent speed regulation fan |
| Net Weight | 15.5 kg (34.17 lb) |
| Gross Weight | 17.2 kg (37.92 lb) |
| Product Dimensions | Chassis: 484.6 mm × 133.2 mm × 473.6 mm (19.08" × 5.24" × 18.65") (W × L × H) |
| Packaging Dimensions | With packaging: 589mm × 619 mm × 290 mm (23.19" × 24.37" × 11.42") (W × L × H)<br>Protection box: 605 mm × 635 mm × 312 mm (23.82" × 25.00" × 12.28"") (W × L × H) |
| Operating Temperature | 0 °C to 45 °C (+32 °F to +113 °F) |
| Operating Humidity | 10%–80% (RH), non-condensing |
| Operating Altitude | 5000 m (16404.20 ft) |
| Installation | Standard 19 inch rack |
| Certifications | CE: CE-LVD: EN 60950-1/IEC 60950-1<br>CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024<br>FCC: Part 15 Subpart B |

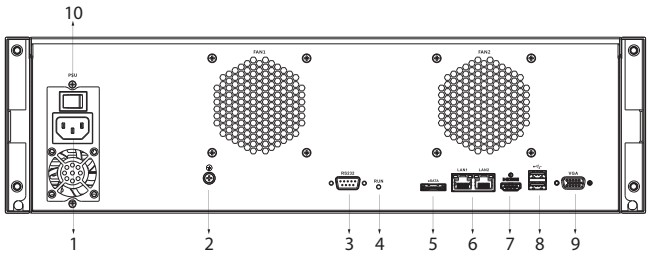
## Ordering Information

| Type | Model | Description |
|---|---|---|
| 16-bay EVS | DHI-EVS5016S-V2 | 16-bay Embedded Video Storage |

## Dimensions (mm[inch])




## Panels




1 Power Input
2 Ground
3 RS-232 Port
4 Operation Indicator Light
5 eSATA Port
6 Network Ports
7 HDMI Port
8 USB Ports
9 VGA Port
10 Power Switch