

DS-9000HWI-ST Series HDVR

Introduction:

DS-9000HWI-ST series HDVR (Hybrid Digital Video Recorder) is a new generation recorder developed by Hikvision independently which can both connect analog and network cameras and provide powerful monitoring functionality. Combined with multiple advanced technologies, such as audio and video encoding & decoding technology, embedded system technology, storage technology, network technology and intelligent technology. It can both work alone as a recorder and cooperate with other devices to build a comprehensive surveillance system.

Thanks to these features, the DS-9000HWI-ST series HDVR is widely applied to the surveillance projects of finance, public security, military, education, communication, transportation, etc.

Available Models:

DS-9004HWI-ST, DS-9008HWI-ST, DS-9016HWI-ST

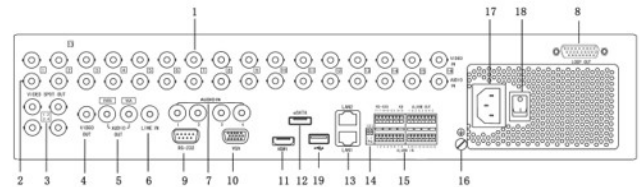
Main Features:

- Pluggable HDD design provides convenient HDD installation and maintenance way;
- Connectable to the third-party network cameras like ACTI, Arecont, AXIS, Brickcom, Bosch, Canon, PANASONIC, Pelco, SAMSUNG, SANYO, SONY, Vivotek and ZAVIO;
- Live view, storage and playback of video at up to 5MP resolution;
- Simultaneous HDMI, VGA and CVBS outputs; HDMI output and VGA output at up to 1920×1080 resolution; And respective live view and playback via VGA and HDMI outputs;
- Configurable redundant recording, holiday recording and capture schedule
- Instant playback for assigned camera during multi-channel live view;
- Support up to 16-ch synchronous playback at 720P resolution; and reverse playback for multi-camera;
- Support frame-extracting recording and playback for analog cameras;
- Support 15 VCA detection types for analog camera 01~04 (line crossing detection, intrusion detection and etc.);
- Support 4 VCA searching types: behavior search, face search, people counting and heat map;
- Smart playback to go through less effective information;
- Smart search for the selected area in the video;
- Customization of tags, searching and playing back by tags;
- Manual video quality diagnostics for analog channels;
- Locking and unlocking record files;
- Support HDD quota and group management; different capacity can be assigned to different cameras under quota mode;
- Up to 8 SATA interfaces and 1 eSATA interface for recording and backup;
- Support disk clone;
- Either normal or hot spare working mode is configurable to constitute an N+1 hot spare system;
- 2 self-adaptive 10M/100M/1000M network interfaces, supporting three working modes: multi-address, load balance and network fault tolerance;
- Support Hikvision DDNS (Dynamic Domain Name System);
- Support Channel-zero encoding to decrease the bandwidth requirement when viewing multiple cameras;
- Network detection function;

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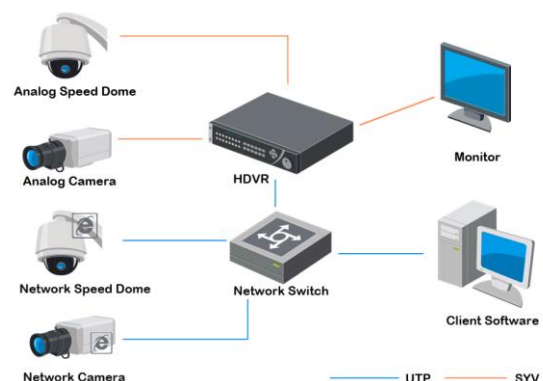


Physical Interfaces:



| Index | Name |
|-------|--|
| 1 | VIDEO IN |
| 2 | LOOP OUT |
| 3 | VIDEO SPOT OUT |
| 4 | VIDEO OUT |
| 5 | CVBS AUDIO OUT, VGA AUDIO OUT |
| 6 | LINE IN |
| 7 | AUDIO IN, RCA Connector |
| 8 | AUDIO IN, DB26 Connector (not available for DS-9004HWI-ST) |
| 9 | RS-232 Serial Interface |
| 10 | VGA Interface |
| 11 | HDMI Interface |
| 12 | eSATA Interface |
| 13 | LAN1, LAN2 Network Interface |
| 14 | Termination Switch |
| 15 | RS-485 Serial Interface, Keyboard Interface, ALARM IN, ALARM OUT |
| 16 | GND |
| 17 | 100~240VAC Power Input |
| 18 | Power Switch |
| 19 | USB Interface |

Typical Application:



- Adopt pioneering dual-OS design to ensure the security of system running.

Specifications:

| Model | | DS-9004HWI-ST | DS-9008HWI-ST | DS-9016HWI-ST |
|------------------------------|--|---|---|---|
| Video/Audio input | Analog video input | 4-ch BNC (1.0 Vp-p, 75 Ω), PAL / NTSC self-adaptive | 8-ch | 16-ch |
| | IP video input | Up to 8-ch | Up to 16-ch | Up to 32-ch |
| | Composite video input | Up to 8-ch (Analog video + IP video) | Up to 16-ch (Analog video + IP video) | Up to 32-ch (Analog video + IP video) |
| | Audio input | 4-ch, RCA (2.0 Vp-p, 1 KΩ) | 8-ch, Audio 1-4: RCA (2.0 Vp-p, 1 KΩ) Audio 5-8: DB26 connector | 16-ch, Audio 1-4: RCA (2.0 Vp-p, 1 KΩ) Audio 5-16: DB26 connector |
| | Incoming bandwidth | 25 Mbps (50 Mbps when all analog cameras disabled); | 50 Mbps (100 Mbps when all analog cameras disabled) | 100 Mbps (200 Mbps when all analog cameras disabled) |
| Video/Audio output | HDMI / VGA output | 1920 × 1080 / 60 Hz (1080P), 1600 × 1200 / 60 Hz, 1280 × 1024 / 60 Hz, 1280 × 720 / 60 Hz, 1024 × 768 / 60 Hz | | |
| | CVBS output | 2-ch (1 Main output + 1 Spot output) BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480 | 5-ch (1 Main output + 4 Spot outputs) | 5-ch (1 Main output + 4 Spot outputs) |
| | Video loop out | 4-ch BNC (1.0 Vp-p, 75 Ω) | 8-ch | 16-ch |
| | Audio output | 2-ch, RCA (2.0 Vp-p, 1 KΩ) | | |
| | Max. remote connection | 128-ch | | |
| | Outgoing bandwidth | 240 Mbps | 240 Mbps | 240 Mbps |
| Encoding/Decoding Parameters | Video compression | H.264 | | |
| | Encoding resolution | Main stream: WD1 / 4CIF / 2CIF / CIF / QCIF Sub-stream: CIF / QCIF | | |
| | Frame rate | Main stream: 25 fps (P) / 30 fps (N) Sub-stream: 25 fps (P) / 30 fps (N) | | |
| | Video bitrate | 32 Kbps ~ 8 Mbps | | |
| | Audio compression | OggVorbis | | |
| | Audio bitrate | 16 Kbps | | |
| | Stream type | Video, Video & Audio | | |
| | Dual-stream | Support | | |
| | Playback resolution | 5MP/3MP/1080p/UXGA/720P/WD1/VGA/4CIF/DCIF/2CIF/CIF/QCIF | | |
| Synchronous playback | 8-ch | 16-ch | 16-ch | |
| Record | Record/Capture mode | Manual record/capture, Continuous record/capture, Motion detection record/capture, Alarm record/capture, Motion Alarm record/capture, Motion & Alarm record/capture, Event record/capture | | |
| | Playback mode | Instant playback, Normal playback, Event playback, Sub-periods playback, Tag playback, Smart playback, External file playback, Picture playback | | |
| | Backup mode | Normal backup, Event backup, Picture backup | | |
| Network | Protocol | IPv6, HTTPS, NAT, SNMP, NTP, SADP, SMTP, NFS, iSCSI, PPPoE, etc. | | |
| Hard disk | Type | 8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs; 1 eSATA interface | | |
| | Capacity | Up to 6 TB capacity for each disk | | |
| External interface | Two-way audio | 1-ch, RCA (2.0 Vp-p, 1 KΩ) | | |
| | Network interface | 2; 10M/100M/1000M self-adaptive Ethernet interface | | |
| | Serial interface | RS-232, RS-485, Keyboard | | |
| | USB port | 3 × USB2.0 | | |
| | Alarm in/out | 4 / 2 | 16 / 4 | 16 / 4 |
| General | Power supply | 100 ~ 240 VAC, 50 ~ 60 Hz | | |
| | Consumption (without hard disk or DVD-R/W) | Max. 35W | Max. 40W | Max. 45W |
| | Working temperature | -10 °C ~ +55 °C (14 °F ~ 131 °F) | | |
| | Working humidity | 10%~90% | | |
| | Chassis | 19-inch rack-mounted 2U chassis | | |
| Dimensions | 445 × 470 × 90 mm (17.5 × 18.5 × 3.5 in) | | | |

| | | |
|--|-------------|---|
| | (W × D × H) | |
| | Weight | Approx. 8 kg / 17.6 lb (without hard disk or DVD-R/W) |



The formula to calculate the incoming bandwidth and the IPC connected is: $A = B/(C+D)$.

A refers to the number of IP camera you connected.

B refers to the value of the incoming bandwidth.

C refers to the bitrate value of the main stream of the connected IPC.

And D refers to the bitrate value of the sub-stream of the connected IPC.

Example: The incoming bandwidth of 8016HWI-ST HDVR is 80Mbps and the IPC to connect is with resolution of 720P (1280*720) / 25 (30) fps. The bitrate for the main stream and sub-stream of the IPC is set as 4Mbps and 1Mbps respectively. In this example, $B=80\text{Mbps}$, $C=4\text{Mbps}$, $D=1\text{Mbps}$ and $A = B/(C+D) = 80 / (4+1) = 16$. So the number of IP cameras can be connected with is 16.