HAIKON
By Hikvision Digital Technology

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:

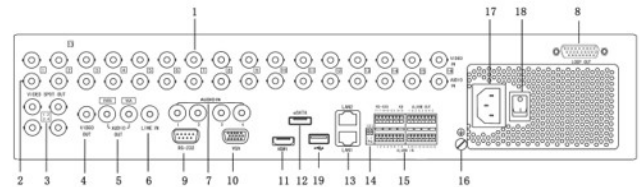DS-9004HWI-ST, DS-9008HWI-ST, DS-9016HWI-ST

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;
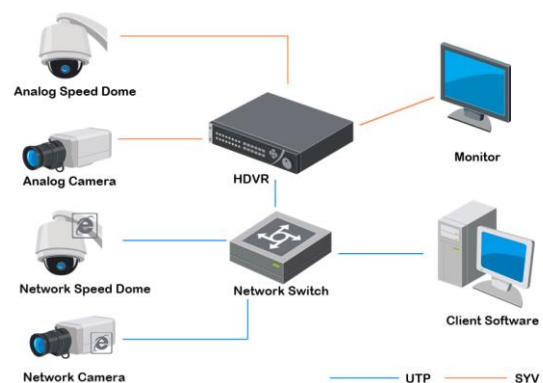- Network detection function;

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:

Specifications:

Model		DS-9004HWI-ST	DS-9008HWI-ST	DS-9016HWI-ST
Video/Audio input	Analog video input	4-ch	8-ch	16-ch
		BNC (1.0 Vp-p, 75 Ω), PAL / NTSC self-adaptive		
	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)	5-ch (1 Main output + 4 Spot outputs)	5-ch (1 Main output + 4 Spot outputs)
		BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480		
	Video loop out	4-ch	8-ch	16-ch
		BNC (1.0 Vp-p, 75 Ω)		
	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 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)		
	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)

NOTE

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=80Mbps, C=4Mbps, D=1Mbps and A = B/(C+D) = 80 / (4+1) = 16. So the number of IP cameras can be connected with is 16.