DS-7216HVI-ST Series DVR

Technical Manual

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Overview

Developed by Hikvision on the basis of the latest technology, DS-7216HVI-ST Series Digital Video Recorder combines the latest in advanced H.264 video encoding and decoding technologies delivering high performance rock-solid reliability and longer recording times.

DS-7216HVI-ST Digital Video Recorder can be used as a standalone video surveillance product, as well as to build up a powerful surveillance network making it is perfect for home or small business applications.

DS-7216HVI-ST

Main Features

- **User-friendly GUI for easy operation**
- **1024×768 VGA output resolution**
- **Simultaneous VGA and CVBS output**
- **Up to 4CIF resolution**
- **Scheduled and event recording parameters configurable per individual camera**
- **Partial digital zoom by using mouse when in PTZ control mode**
- **16-ch synchronous playback**
- **Support dual stream**
- **Different recording storage period configurable for each channel**
- **NTP, SADP, DHCP protocols supported**

Functions & Performances

Compression
- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- G.711 audio compression standard.
- Independent video encoding parameters, including frame rate, resolution, bit rate, video quality, etc.
- Scheduled and event recording parameters configurable for per individual camera.
- Support dual stream.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Compression, storage and network transmission of video image at 4CIF or CIF resolution.
- Watermark technology.

Local Monitoring
- Up to 1024×768 resolution for VGA output display.
- Simultaneous VGA and CVBS output.
- 1/4/9/16-camera video live view, with the camera order adjustable.
- Group switch, manual switch and automatic cycle modes selectable for video live view, with the auto cycle period configurable.
- Digital zoom in live view mode.
- Shield of assigned channel for live view.
- Privacy masking capability.
- Multiple PTZ protocols supported, and settings and callup of presets, patrols and patterns.
- Video image zoom-in by clicking the mouse and tracing by dragging mouse in PTZ control mode.

Hard Disk Management
- Connection to 2 SATA hard disks supported, with up to 2TB storage capacity.
- S.M.A.R.T technology.
- HDD standby function.
- HDD file system is compatible with Windows. Use pre-allocating hard disk management technology, and no disk fragments.

Recording
- Cycle and non-cycle recording mode.
- Scheduled and event video encoding parameters.

- Multiple recording types, including manual, continuous, alarm, motion, motion | alarm and motion & alarm recording, etc.
- 8 recording time periods with separate recording types.
- Pre-record and Post-record time for alarm and motion detection, and pre-record time for schedule and manual recording.
- Lock and unlock of video files.
- HDD property can be set to read-only.
- Video data search and playback by channel number, recording type, time etc.
- Digital zoom function in playback mode.
- Pause, play fast, play slow, skip forward, and skip backward when playback, locating in progress bar by dragging the mouse.
- 16-channel synchronous playback.

Backup

- Record files backed up via USB device.
- Bunch backup by file or by time.
- Record files edited for backup in playback.
- Management and maintenance for backup devices.

Alarm & Exception

- Configurable arming time for alarm in/out.
- Various alarm types supported: alarms for video loss, motion detection, video tempering, video signal abnormal, video in/out format unmatched, illegal access, network disconnection, IP conflict, hard disk error and hard disk full.
- Various alarm response actions supported: camera recording, relay out, on-screen warning, audible warning and upload to center, etc.
- Auto recovery from exceptions.

Others

- Control of DVR via front panel keys, mouse and IR remote control.
- Three-level user management, each user with individual operating permission for DVR and camera.
- Powerful record and search for log of operation, alarm and exceptions.
- Import/export of device configuration files.

Network

- 10/100M adaptive network interface.
- TCP/IP protocol suites, PPPoE, DHCP, DNS, DDNS, NTP, SADP protocols, etc.
- Unicast and multicast supported; TCP and UDP protocols applicable in unicast transmission.
- Remote search, playback and download, lock/unlock of video files;
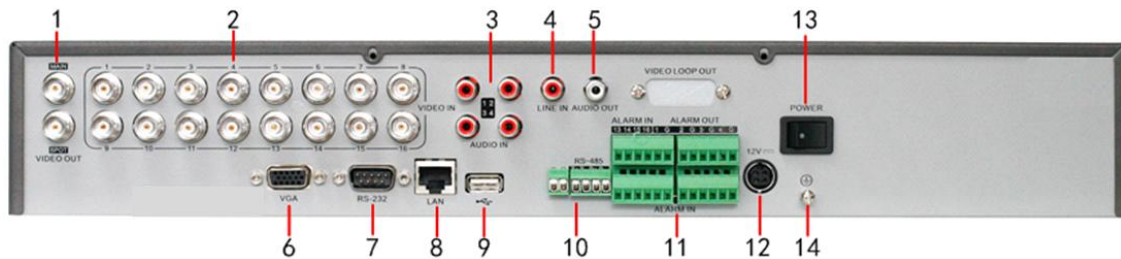
support breakpoint resume.

- Remote access and configuration of parameters; remote import/export of device configuration parameters.
- Remote access of device running status, system log and alarm status.
- Remote control of DVR via button operation.
- Remote lock/unlock of panel buttons and mouse.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS-485 transparent channel transmission.
- Event alarm and exceptions upload to remote management host.
- Remote manual recording.
- Remote video image capture in JPEG format.
- Remote PTZ control.
- Voice talk and broadcast.
- Built-in WEB Server.

Development

- Provision of SDK in Windows and Linux operating systems.
- Application software source code of Demo.
- Support and training service for application system development.

Rear Panel & Interfaces

Rear Panel of DS-7216HVI-ST

① MAIN/SPOT VIDEO OUT

② VIDEO IN

③ AUDIO IN

④ LINE IN

⑤ AUDIO OUT

⑥ VGA Interface

⑦ RS-232 Serial Interface

⑧ LAN

⑨ USB Interface

⑩ RS-485 Interface

⑪ ALARM IN, ALARM OUT

⑫ 12VDC Power Supply Interface

⑬ POWER

⑭ GND

Specifications

Model		DS-7216HVI-ST
Video/Audio input	Video compression	H.264
	Analog video input	16-ch, BNC connector (1.0 Vp-p, 75 Ω); PAL / NTSC adaptive
	Audio compression	G.711
	Audio input	4-ch, RCA connector (2 Vp-p, 1 kΩ)
	Voice talk input	1-ch, RCA (2.0 Vp-p, 1 kΩ)
	VGA output	1-ch, resolution: 1024 × 768/60 Hz
	CVBS output	2-ch, BNC connector (1.0 Vp-p, 75 Ω); Resolution: PAL: 704 × 576, NTSC: 704 × 480
	Audio output	1-ch, RCA connector (Linear, 1 kΩ)
Video/Audio output	Recording resolution	4CIF / 2CIF / CIF / QCIF
	Frame rate	4CIF / 2CIF: 6 fps CIF / QCIF: 25 fps (P) /30 fps (N)
	Video bit rate	32 kbps ~ 2048 kbps, or user-defined (Max. 3072 kbps)
	Stream type	Video / Video & Audio
	Audio bit rate	64 kbps
	Dual stream	Support
	Synchronous playback	16-ch
Hard disk	Type	2 SATA interfaces
	Capacity	Up to 2 TB capacity for each interface
External interface	Network interface	1, RJ45 10 M / 100 M adaptive Ethernet interface
	Serial interface	1 RS-485 interface, 1 RS-232 interface
	USB interface	2, USB 2.0
	Alarm in	16
	Alarm out	4
Others	Power supply	12 VDC
	Consumption	≤15 W (without hard disk or DVD-R/W)
	Working temperature	- 10℃ ~ + 55℃
	Working humidity	10% ~ 90%
	Chassis	19-inch standard rack-mounted 1.5 U chassis
	Dimensions (W x D x H)	440 ×390 ×70 mm
	Weight	≤8 kg (without hard disk or DVD-R/W)