

# **HIKVISION**

## **DS-7200HVI-ST/SE Series DVR Technical Manual**

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## Notices

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## Overview

Developed on the basis of the latest technologies, DS-7200HVI-ST/SE Series Digital Video Recorder combines with the advanced H.264 video encoding and decoding standard and maintains high performance rock-solid reliability and longer recording service time.

DS-7200HVI-ST/SE Digital Video Recorder can be used as a standalone video surveillance product, as well as to build up a powerful surveillance network which is suitable for home or small-scale business applications.



**DS-7204HVI-ST/SE**



**DS-7208HVI-ST/SE**



**DS-7216HVI-ST/SE**

## Main Features

- **User-friendly GUI for easy operation**
- **Up to 1024×768 VGA output resolution**
- **Simultaneous VGA and CVBS output**
- **4CIF/2CIF/CIF resolution**
- **Normal and event recording parameters configurable per individual camera**
- **Partial digital zoom by using mouse when in PTZ control mode**
- **4/8/16-ch synchronous playback**
- **Support dual stream**
- **Different recording storage period configurable for each channel**
- **NTP, SADP, DHCP protocols supported**

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## Functions & Performances

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### Compression

- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- OggVorbis 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/2CIF/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 1 SATA hard disk for DS-7204HVI-ST/SE and DS-7208HVI-ST/SE models and 2 SATA hard disks for DS-7216HVI-ST/SE; each HDD 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.

- Normal and event video encoding parameters.
- Multiple recording types, including manual, normal, motion detection, etc.
- 8 recording time periods with separate recording types.
- Pre-record and post-record time for 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.
- 4/8/16-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**

- Various exception 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 exception handling methods: pop-up alarm image on monitor, audible warning, notify surveillance center, etc.
- DS-7208HVI-ST/SE and DS-7216HVI-ST/SE support sending of alarm images by Email.
- Auto recovery from exceptions.

### **Others**

- Control of DVR via front panel keys, mouse, IR control and special keyboard.
- 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.

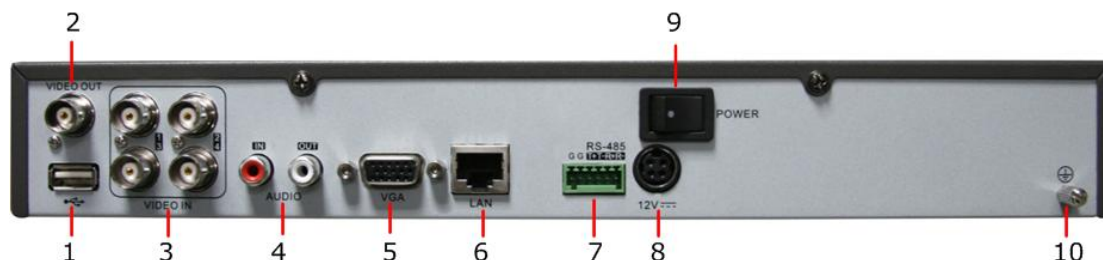
- Unicast and multicast supported; TCP and UDP protocols applicable in unicast transmission.
- Remote search, playback and download, lock/unlock of video files; support breakpoint resume.
- Remote access and configuration of parameters; remote import/export of device configuration parameters.
- Remote access of device running status, alarm and system log.
- 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.
- Exceptions upload to remote management host.
- Remote manual recording.
- Remote video image capture in JPEG format.
- 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.

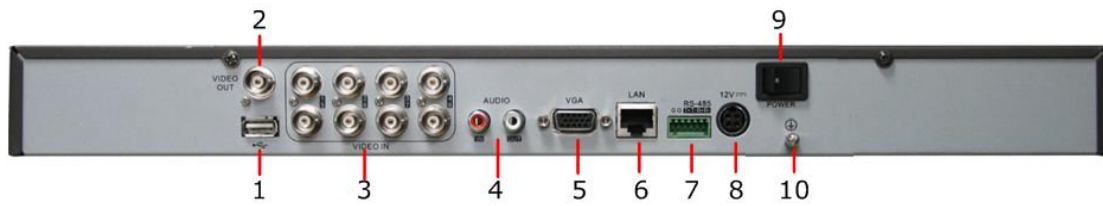
## Rear Panel & Interfaces

### Rear Panel of DS-7204HVI-ST/SE



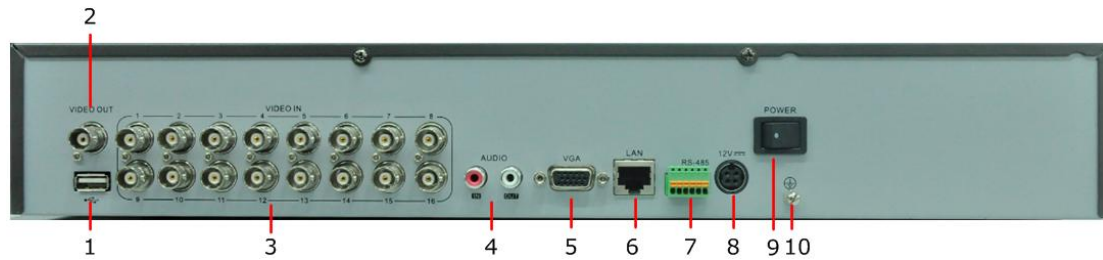
- ① USB Interface
- ② VIDEO OUT
- ③ VIDEO IN
- ④ AUDIO IN, AUDIO OUT
- ⑤ VGA Interface
- ⑥ LAN
- ⑦ RS-485 Interface
- ⑧ 12VDC Power Supply Interface
- ⑨ POWER
- ⑩ GND

## Rear Panel of DS-7208HVI-ST/SE



- ① USB Interface
- ② VIDEO OUT
- ③ VIDEO IN
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## Rear Panel of DS-7216HVI-ST/SE



- ① USB Interface
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- ③ VIDEO IN
- ④ AUDIO IN, AUDIO OUT
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## Specifications

Model	DS-7204HVI-ST/SE	
Video/Audio input	Video compression	H.264
	Analog video input	4-ch, BNC connector (1.0 Vp-p, 75 Ω); PAL / NTSC adaptive
	Audio compression	G.711
	Audio input	1-ch, RCA connector (2 Vp-p, 1 kΩ)
	Voice talk input	1-ch, RCA (2.0 Vp-p, 1 kΩ) (Using AUDIO IN)
	VGA output	1-ch, resolution: 1024 × 768 / 60 Hz
	CVBS output	1-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
	Frame rate	4CIF / 2CIF: 12 fps CIF: 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 (sub stream at CIF / QCIF resolution)
	Synchronous playback	4-ch
Hard disk	Type	1 SATA interface
	Capacity	Up to 2TB capacity for each interface
External interface	Network interface	1, RJ45 10 M / 100 M adaptive Ethernet interface
	Serial interface	1 RS-485 interface
	USB interface	2, USB 2.0
Others	Power supply	12 VDC
	Consumption	≤10 W (without hard disk or DVD-R/W)
	Working temperature	-10°C ~ +55°C
	Working humidity	10% ~ 90%
	Dimensions (W x D x H)	315 × 230 × 45 mm
	Weight	≤2 kg (without hard disk or DVD-R/W)

Model	<b>DS-7208HVI-ST/SE</b>	
<b>Video/Audio input</b>	<b>Video compression</b>	H.264
	<b>Analog video input</b>	8-ch, BNC connector (1.0 Vp-p, 75 Ω); PAL / NTSC adaptive
	<b>Audio compression</b>	G.711
	<b>Audio input</b>	1-ch, RCA connector (2 Vp-p, 1 kΩ)
	<b>Voice talk input</b>	1-ch, RCA (2.0 Vp-p, 1 kΩ) (Using AUDIO IN)
	<b>VGA output</b>	1-ch, resolution: 1024 × 768 / 60 Hz
	<b>CVBS output</b>	1-ch, BNC connector (1.0 Vp-p, 75 Ω); Resolution: PAL: 704 × 576, NTSC: 704 × 480
	<b>Audio output</b>	1-ch, RCA connector (Linear, 1 kΩ)
<b>Video/Audio output</b>	<b>Recording resolution</b>	4CIF / 2CIF / CIF
	<b>Frame rate</b>	4CIF / 2CIF: 8 fps CIF: 25 fps (P) / 30 fps (N)
	<b>Video bit rate</b>	32 kbps ~ 2048 kbps, or user-defined (Max. 3072 kbps)
	<b>Stream type</b>	Video/ Video & Audio
	<b>Audio bit rate</b>	64 kbps
	<b>Dual stream</b>	Support (sub stream at CIF / QCIF resolution)
	<b>Synchronous playback</b>	8-ch
<b>Hard disk</b>	<b>Type</b>	1 SATA interface
	<b>Capacity</b>	Up to 2TB capacity for each interface
<b>External interface</b>	<b>Network interface</b>	1, RJ45 10 M / 100 M adaptive Ethernet interface
	<b>Serial interface</b>	1 RS-485 interface
	<b>USB interface</b>	2, USB 2.0
<b>Others</b>	<b>Power supply</b>	12 VDC
	<b>Consumption</b>	≤10 W (without hard disk or DVD-R/W)
	<b>Working temperature</b>	-10°C ~ +55°C
	<b>Working humidity</b>	10% ~ 90%
	<b>Chassis</b>	19-inch rack-mounted 1U chassis
	<b>Dimensions (W x D x H)</b>	445 × 290 × 45 mm
	<b>Weight</b>	≤4 kg (without hard disk or DVD-R/W)

Model	<b>DS-7216HVI-ST/SE</b>	
<b>Video/Audio input</b>	<b>Video compression</b>	H.264
	<b>Analog video input</b>	16-ch, BNC connector (1.0 Vp-p, 75 Ω); PAL / NTSC adaptive
	<b>Audio compression</b>	G.711
	<b>Audio input</b>	1-ch, RCA connector (2 Vp-p, 1 kΩ)
	<b>Voice talk input</b>	1-ch, RCA (2.0 Vp-p, 1 kΩ) (Using AUDIO IN)
	<b>VGA output</b>	1-ch, resolution: 1024 × 768 / 60 Hz
	<b>CVBS output</b>	1-ch, BNC connector (1.0 Vp-p, 75 Ω); Resolution: PAL: 704 × 576, NTSC: 704 × 480
	<b>Audio output</b>	1-ch, RCA connector (Linear, 1 kΩ)
<b>Video/Audio output</b>	<b>Recording resolution</b>	4CIF / 2CIF / CIF
	<b>Frame rate</b>	4CIF / 2CIF: 6 fps CIF: 25 fps (P) / 30 fps (N)
	<b>Video bit rate</b>	32 kbps ~ 2048 kbps, or user-defined (Max. 3072 kbps)
	<b>Stream type</b>	Video/ Video & Audio
	<b>Audio bit rate</b>	64 kbps
	<b>Dual stream</b>	Support (sub stream at CIF / QCIF resolution)
	<b>Synchronous playback</b>	16-ch
<b>Hard disk</b>	<b>Type</b>	2 SATA interfaces
	<b>Capacity</b>	Up to 2TB capacity for each interface
<b>External interface</b>	<b>Network interface</b>	1, RJ45 10 M / 100 M adaptive Ethernet interface
	<b>Serial interface</b>	1 RS-485 interface
	<b>USB interface</b>	2, USB 2.0
<b>Others</b>	<b>Power supply</b>	12 VDC
	<b>Consumption</b>	≤15 W (without hard disk or DVD-R/W)
	<b>Working temperature</b>	-10°C ~ +55°C
	<b>Working humidity</b>	10% ~ 90%
	<b>Chassis</b>	19-inch rack-mounted 1.5U chassis
	<b>Dimensions (W x D x H)</b>	445 × 390 × 70 mm
	<b>Weight</b>	≤8 kg (without hard disk or DVD-R/W)