



DS-7200HFI-ST/SN Series DVR
Technical Manual

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Please send any comments regarding the documentation to:

overseasbusiness@hikvision.com

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Overview

Developed on the basis of the latest technologies, DS-7200HFI-ST/SN 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-7200HFI-ST/SN 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-7204HFI-ST/SN, DS-7208HFI-ST/SN



DS-7216HFI-ST/SN

Main Features

- **User-friendly GUI for easy operation**
- **1280 × 1024 /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**
- **Sending of alarm images by Email**
- **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/2CIF/CIF resolution.
- Watermark technology.

Local Monitoring

- Up to 1280×1024 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-7204HFI-ST/SN and DS-7208HFI-ST/SN models and 2 SATA hard disks for DS-7216HFI-ST/SN; 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, send Email, etc.
- Auto recovery from exceptions.

Others

- Control of DVR via 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.

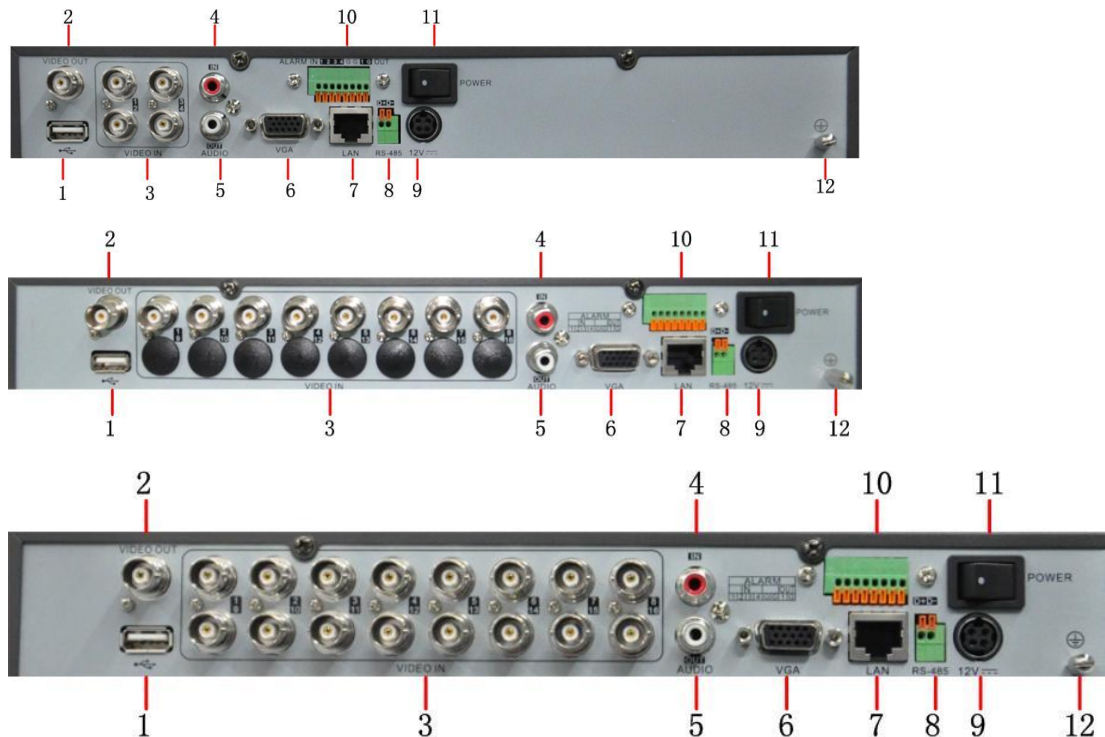
- Remote search, playback and download, lock/unlock of video files; support breakpoint resume.
- Remote access and configuration of parameters; remote import/export of device configuration parameters.
- Remote access of device running status, alarm and system log.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS-485 half-duplex 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-7200HFI-ST/SN



- ① USB Interface
- ② VIDEO OUT
- ③ VIDEO IN
- ④ AUDIO IN
- ⑤ AUDIO OUT
- ⑥ VGA Interface
- ⑦ LAN
- ⑧ RS-485 Interface
- ⑨ 12VDC Power Supply Interface
- ⑩ Alarm input and output
- ⑪ POWER
- ⑫ GND

Specifications

Model		DS-7204HFI-ST/SN	DS-7208HFI-ST/SN	DS-7216HFI-ST/SN
Video/Audio input	Video compression	H.264		
	Analog video input	4-ch	8-ch	16-ch
	Video input interface	BNC connector (1.0 Vp-p, 75 Ω); PAL / NTSC adaptive		
	Audio compression	G.711		
	Audio input	1-ch, RCA connector (2.0 Vp-p, 1 kΩ)		
	Voice talk input	1-ch, RCA (2.0 Vp-p, 1 kΩ) (Using AUDIO IN)		
	VGA output	1-ch, resolution: 1280 × 1024 / 60 Hz, 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	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: 6fps, QCIF: 25 fps (P) / 30 fps (N))		
	Synchronous playback	4-ch	8-ch	16-ch
Hard disk	Type	1 SATA interface	1 SATA interface	2 SATA interfaces
	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 half-duplex interface		
	USB interface	2, USB 2.0		
	Alarm in	4	4	4
	Alarm out	1	1	1
Others	Power supply	12 VDC		
	Consumption	≤10 W (without hard disk or DVD-R/W)	≤10 W (without hard disk or DVD-R/W)	≤15 W (without hard disk or DVD-R/W)
	Working temperature	-10 °C ~ +55 °C		
	Working humidity	10% ~ 90%		
	Chassis	Stand-alone 1U chassis	Stand-alone 1U chassis	19-inch rack-mounted 1U chassis
	Dimensions (W x D x H)	315 × 230 × 45 mm	315 × 230 × 45 mm	445 × 290 × 45 mm
	Weight	≤2 kg (without hard disk or DVD-R/W)	≤ 2 kg (without hard disk or DVD-R/W)	≤ 4 kg (without hard disk or DVD-R/W)