



DS-7300HFI-S Embedded Net DVR
Technical Manual

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Overview

DS-7300HFI-S embedded net DVR is an excellent digital surveillance product adopts embedded Linux OS and DaVinci Processor, along with the most advanced technology in the Information technology Industry such as video encoding/decoding, hard disk recording and TCP/IP transmission. The firmware is burned into the flash, making it more stable and reliable than software programs running from a standard disk drive.

Based on the latest TI DaVinci platform and adopt the advanced H.264 video compression standard, it is widely applied as a stand-alone unit or a part of a powerful surveillance system.



DS-7300HFI-S Embedded Net DVR

Order Models

DS-7304HFI-S, DS-7308HFI-S, DS-7316HFI-S

Note:

- 1. The default DVRs are without HDD or CD-R/W.**
- 2. A factory recommended HDD should be used for this device.**

Main Features

User-friendly menu and easy to operate

VGA output resolution supports up to 1024×768

Support preview, backup and playback high definition image

Support digital zoom when preview and playback

Support digital zoom by using mouse when in PTZ control mode

Different channels can be set different recording expired time

Support normal and event video encoding parameters

Support redundant recording

Support hard disk group management

Support NTP, SADP and SMTP protocols

Functions & Performances

Compression

- PAL/NTSC video input.
- H.264 video compression standard.
- OggVorbis audio compression standard.
- Video encoding parameters of each channel can be set separately, including resolution, frame rate, bit rate, image quality and 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 4CIF or CIF video image in JPEG format.

Local Functions

- Up to 1024×768 VGA output resolution.
- 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.
- User-defined preview layout.
- Multiple alarm types: motion detection, view tampering, video exception and video loss alarm.
- Privacy masking capability.
- Support various PTZ control protocols.
- 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

- Up to 4 SATA HDDs, each of them can support up to 2TB capacity
- S.M.A.R.T. technology
- HDD standby function
- Hard disk group management
- HDD file system is compatible with Windows. Use pre-allocating hard disk management technology, and no disk fragments.

Recording and Playback

- 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.

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, 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.
- Support TCP/IP protocol suites, PPPoE, DHCP, DNS, DDNS, NTP, SADP and SMTP 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.

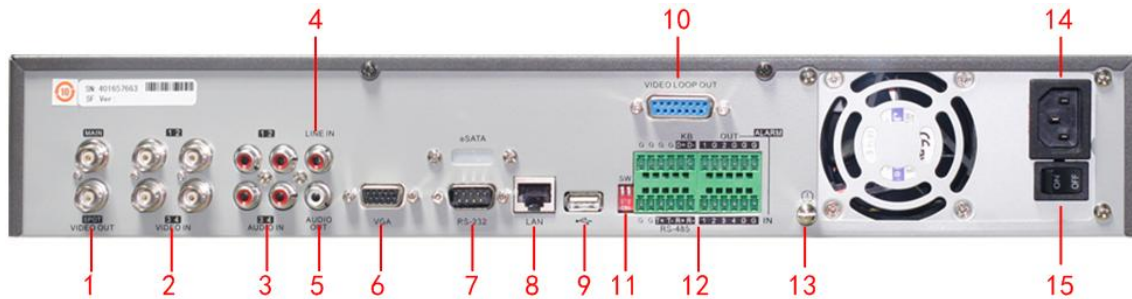
- Remote lock/unlock of panel buttons and mouse.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS-232 and RS-485 transparent channel transmission.
- Event alarm and exceptions upload to remote management host.
- Remote manual recording.
- Remote enabling/disabling of alarm output.
- Remote video image capture in JPEG format.
- Remote PTZ control.
- Voice talk and broadcast.
- Built-in WEB Server.

Development

- Provide Windows and Linux SDK
- Provide software source code as demo
- Provide development support and application system training

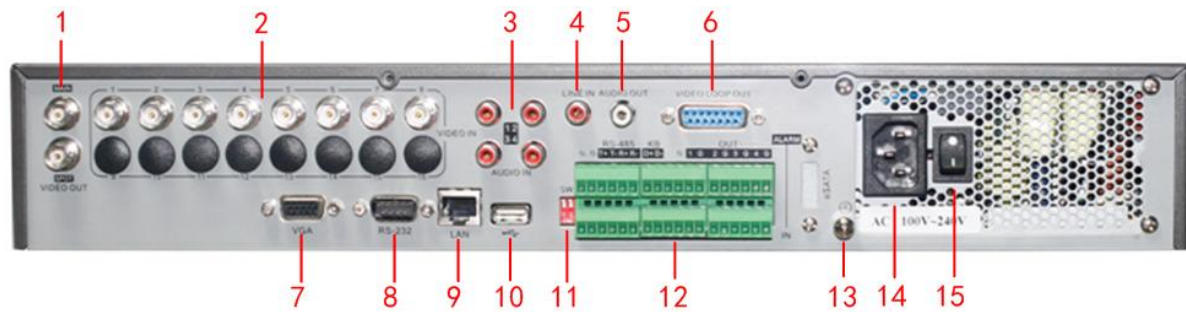
Panels & Interfaces

DS-7304HFI-S Rear Panel:



- ① MAIN/SPOT VIDEO OUT
- ② VIDEO IN
- ③ AUDIO IN
- ④ LINE IN
- ⑤ AUDIO OUT
- ⑥ VGA Interface
- ⑦ RS-232 Interface
- ⑧ LAN Interface
- ⑨ USB Interface
- ⑩ VIDEO LOOP OUT
- ⑪ Termination Switch
- ⑫ RS-485 Interface, KB Control Interface, ALARM IN, ALARM OUT
- ⑬ GND
- ⑭ 100~240VAC Power Supply
- ⑮ POWER On/Off

DS-7308/7316HFI-S Rear Panel:



- ① MAIN/SPOT VIDEO OUT
- ② VIDEO IN
- ③ AUDIO IN
- ④ LINE IN
- ⑤ AUDIO OUT
- ⑥ VIDEO LOOP OUT
- ⑦ VGA Interface
- ⑧ RS-232 Interface
- ⑨ LAN Interface
- ⑩ USB Interface
- ⑪ Termination Switch
- ⑫ RS-485 Interface, KB Control Interface, ALARM IN, ALARM OUT
- ⑬ GND
- ⑭ 100~240VAC Power Supply
- ⑮ POWER On/Off

Specifications

| Model | | DS-7304HFI-S | DS-7308HFI-S | DS-7316HFI-S |
|---------------------|-----------------------|--|--------------|--------------|
| Video/Audio input | Video compression | H.264 | | |
| | Video input | 4-ch | 8-ch | 16-ch |
| | Video input interface | BNC(1.0Vp-p, 75Ω), PAL/NTSC adaptive | | |
| | Audio compression | OggVorbis | | |
| | Audio input | 4-ch, RCA(2.0Vp-p, 1kΩ) | | |
| | Voice talk input | 1-ch, RCA(2Vp-p, 1kΩ) | | |
| Video/Audio output | Preview resolution | PAL: 704×576 NTSC: 704×480 | | |
| | VGA output | 1-ch, Resolution: 1024×768/60Hz | | |
| | Encoding resolution | 4CIF/DCIF/2CIF/CIF/QCIF | | |
| | Video output | 2-ch, BNC(1.0Vp-p, 75Ω) Resolution: PAL: 704×576, NTSC: 704×480 1 video spot output | | |
| | Video loop out | 4-ch | 8-ch | 16-ch |
| | Frame rate | Each channel supports real time 4CIF: 25(P)/30(N)fps DCIF: 25(P)/30(N)fps 2CIF: 25(P)/30(N)fps CIF: 25(P)/30(N)fps | | |
| | Video bit rate | 32Kbps~2048Kbps, or user-defined | | |
| | Audio output | 1-ch, RCA(Linear, 600Ω) | | |
| | Audio bit rate | 16kbps | | |
| | Dual stream | Support(sub stream at CIF resolution) | | |
| | Stream type | Video/Video & Audio | | |
| | Synchronous playback | 4-ch | 8-ch | 16-ch |
| Hard disk | Type | 4 SATA Interfaces | | |
| | Capacity | Each supports up to 2TB capacity | | |
| External interfaces | Network interface | 1, RJ45 10M/100M/1000M adaptive Ethernet interface | | |
| | Serial interfaces | 1 RS-232 serial interface; 1 RS-485 serial interface | | |
| | USB interface | 2, USB2.0 | | |
| | Alarm in | 4 | 16 | 16 |
| | Alarm out | 2 | 4 | 4 |
| Others | Power supply | 100~240VAC, 6.3A, 50~60Hz | | |
| | Consumption | ≤50W(without hard disk or DVD-R/W) | | |
| | Working temperature | -10℃~+55℃ | | |
| | Working humidity | 10%~90% | | |
| | Chassis | 19" standard 1.5U chassis | | |
| | Size(mm) | 70mm(H)×440mm(W)×390mm(D) | | |
| | Weight | ≤8Kg(without hard disk or DVD-R/W) | | |

