DS-7000HI Series Net DVR

Technical Manual

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Contents

1. Overview

DS-7000HI series network digital video recorder is an excellent digital surveillance product applies the embedded MCU and real time operating system, along with the most advanced technology in Information Technology Industry such as video and audio encoding/decoding, hard disk record and TCP/IP. The firmware is burned into the flash, making the product more stable and reliable.

DS-7000HI series device has advantages of digital video recorder (DVR) and digital video server (DVS). It can work standalone, also be used to build up a powerful surveillance network. DS-7000HI series device can be widely used in bank, telecommunication, transportation, factories, warehouse, irrigation, etc.

DS-7000HI Front Panel

DS-7004HI Rear Panel
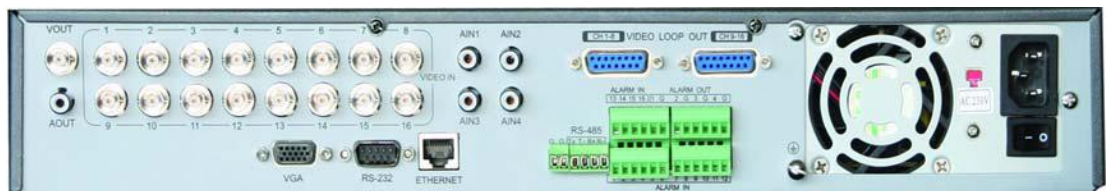
DS-7016HI Rear Panel

2. Model Description

DS-7004HI: 4-ch video input and 4-ch audio input. One VGA output. 1-ch composited video output. 4-ch video loop out.

DS-7008HI: 8-ch video input. One VGA output. 1-ch video output. 8-ch video loop out.

DS-7016HI: 16-ch video input and 4-ch audio input. One VGA output. 1-ch composited video output. 16-ch video loop out.

Note: The default DVRs are without HDD.

3. Features

3.1   Compression

- Supports max 16 channels video input (PAL/NTSC) at most. Each channel is independent with H.264 hardware compression.
- For DS-7016HI, first 4 channels support both composited stream and video-only stream, the rest channels merely support video-only stream. Frame rate: 1/16~8 (ch-1); the rest channels: 1/16~30(NTSC), 1/16~25(PAL). Resolution: ch-1 supports up to 2CIF, the rest channels support CIF.
- Supports both variable bit rate and fixed bit rate.
- Supports 4 channels audio input. Each channel is independent with OggVorbis compression at a bit rate of 16Kbps.
- Compressed video and audio are synchronous. Either composited stream or video-only stream can be selected.
- Supports video loop out.
- Supports 4CIF (DS-7004HI), 2CIF (DS-7008HI & DS-7016HI) resolution.

3.2   Local Functions

3.2.1 Recording

- Supports multiple recording types, including real time, manual record, motion detection, external alarm, motion & alarm, motion|alarm.
- Supports NAS Recording.
- Supports Event Recording Para. Setup.
- Supports max 4 IDE HDDs and each HDD can max support 2000GB.
- Supports FAT32 file system.
- Supports HDD S.M.A.R.T technology.
- Supports cycle or none cycle recording.
- Supports backup the recorded files and clips with USB DISK, USB HDD, USB CD-R/W, USB DVD-R/W, IDE CD-R/W or IDE DVD-R/W.

3.2.2 Preview & Playback

- Supports analog monitor and VGA output.
- Supports multiple preview modes.
- Supports sensitive area masking.
- Supports view tampering alert.
- Supports multi-channel playback by files or by time.
- Supports video signal loss alert.

- Supports play forward, backward, pause, frame-by-frame, etc.
- User-defined preview layout.
- Display local recording status.

3.2.3 PTZ
- Supports various PTZ protocols.
- Preset, sequence and cruise

3.2.4 Alarms
- Exception alarm, motion detection alarm, external alarm, etc.

3.3 Network
- Supports Advanced Network Function: NTP, DDNS and E-mail.
- Supports TCP, UDP, RTP, and Multicast for network preview.
- Supports PPPoE for board band dialup.
- Supports PSTN for narrow band dialup.
- Supports remote parameters setup.
- Alarm information can be sent to remote center.
- Network control PTZ.
- Network record live stream.
- RS-232 supports transparent channel function so that the remote PC can control serial devices through DVR.
- Supports advanced IE plug-in to preview and configure DVR via browser.
- Supports SADP protocol that enables modification of IP address, mask and port via SADP Client.
- Remote download and playback the recorded files in DVR.
- Remote upgrade the DVR firmware
- Network PTZ control
- IE to preview and configure DVR.
- View and search log through client software

3.4 Others
- Supports Mouse Operation Menu.
- IR remote control
- Multi-level user management.
- Supports multi-area motion detection.
- Supports OSD and changeable OSD position.
- Supports LOGO and changeable LOGO position.
- Supports multiple upgrade modes, including FTP, USB and CD.
- Supports writing player when burning CD.
- Supports Scaler.

- Automatically recovery from abnormal conditions.
- Network SDK and client demo source code available

4.Specifications

Model name	DS-7004HI	DS-7008HI	DS-7016HI
Video compression	H.264		
Preview resolution	PAL: 704*576 (4CIF), NTSC: 704*480 (4CIF)		
Playback resolution	2CIF/CIF/QCIF		
Video input	4	8	16
Video input interface	BNC (Electrical Level: 1.0Vp-p, resistance: 75Ω)		
Video output	1 channel, BNC (Electrical Level: 1.0Vp-p, resistance: 75Ω)		
Video loop out	4	8	16
Total frame rate	Total frame 100/120 fps CIF 70/84 fps 2CIF	Total frame 200/240fps CIF 60/72 fps 2CIF	Total frame 400/480fps CIF 120/144 fps 2CIF
Stream type	Video/Video&Audio	Video	Video/ Video&Audio(ch1-4)
Max bit rate	32Kbps~2Mbps, user-defined		
Audio input	4	--	4
Audio input interface	RCA (Linear Electrical Level, Resistance: 600Ω)	--	RCA (Linear Electrical Level, Resistance: 600Ω)
Audio output	1 channel, RCA (Linear Electrical Level, Resistance: 600Ω)	--	1 channel, RCA (Linear Electrical Level, Resistance: 600Ω)
Audio compression	OggVorbis	--	OggVorbis
Audio compression rate	16Kbps	--	16Kbps
Communication interface	1 RJ45 10M/100M Self-adaptive Ethernet Interface 1 RS232 interface 1 RS485 interface		
HDD IDE interface	2 IDE interfaces, they can support 4 IDE HDD and each HDD can support 2000GB or 2 HDD +1 IDE CD-RW/DVD-RW		
USB interface	1 USB interface, USB1.1, can support USB flash memory, USB HDD, USB CD-RW/DVD-RW.		

VGA interface	1 VGA interface, supports resolution: 800×600/60Hz, 800×600/75Hz, 1024×768/60Hz		
External alarm in	4	8	16
Relay output	2	4	4
Power supply	100~240VAC, 6.3A, 50~60 HZ		
Power consumption	20~42W (without HDD)		
Working temperature	-10℃~＋55℃		
Working humidity	10%~90%		
Size	14.25 inch standard (440mm*390mm*70mm)		
Weight	≤8Kg (without HDD and CD-R/W)		

PAL: 176×144(QCIF), 352×288(CIF), 704×288(2CIF), 528×384(DCIF), 704×576(4CIF);

NTSC: 176×120(QCIF), 352×240(CIF), 704×240(2CIF), 528×320(DCIF), 704×480(4CIF).