



**DS-7000HI-S Series Net DVR**  
**Technical Manual**

## Notices

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## 1. Overview

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DS-7000HI-S 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 the 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-S 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-S series device can be widely used in bank, telecommunication, transportation, factories, warehouse, irrigation, etc.



**DS-7016HI-S Front Panel**



**DS-7016HI-S Rear Panel**

## 2. Model Description

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**DS-7004HI-S:** 4-ch video input and 4-ch audio input. 1-ch composited video output and 1-ch spot video output. 4-ch video loop out. Support one VGA output. 4 SATA HDD supported.

**DS-7008HI-S:** 8-ch video input. 1-ch video output and 1-ch spot video output. 8-ch video loop out. Support one VGA output. 4 SATA HDD supported.

**DS-7016HI-S:** 16-ch video input and 4-ch audio input. 1-ch composited video output and 1-ch spot video output. 16-ch video loop out. Support one VGA output. 4 SATA HDD supported.

**Note: 1. The default DVRs are without HDD.**

**2. A factory recommended HDD should be used for this device.**

## **3. Features**

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### **3.1 Compression**

- Support max 16 channels video input (PAL/NTSC). Each channel is independent with H.264 hardware compression.
- Support both variable bit rate and frame rate
- Support 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. For DS-7016HI-S, first 4 channels support both composited stream and video-only stream, the rest channels merely support video-only stream.
- Support video loop out
- Support up to 4CIF (DS-7004HI-S), 2CIF (DS-7008HI-S & DS-7016HI-S) resolution

### **3.2 Local Functions**

#### **3.2.1 Recording**

- Support multiple recording types, including schedule recording, manual recording, alarm recording, motion detection recording, motion & alarm recording, motion | alarm recording.
- Support NAS Recording
- Support Event Recording Para. Setup
- Support max 4 SATA HDDs and each HDD can max support 2000GB
- Support FAT32 file system
- Support HDD S.M.A.R.T technology
- Support cycle or non cycle recording
- Support backup the recorded files and clips with USB DISK, USB HDD, USB CD-R/W, USB DVD-R/W, SATA CD-R/W or SATA DVD-R/W

#### **3.2.2 Preview & Playback**

- Support BNC analog monitor and VGA output
- Support multiple preview modes
- Support Privacy Mask
- Support view tampering alert
- Support video signal loss alert
- Support play forward, backward, pause, frame-by-frame, etc

- User-defined preview layout
- Support playback by files or by time
- Display local recording status

### **3.2.3 PTZ**

- Support various PTZ protocols.
- Preset, sequence and cruise

### **3.2.4 Alarms**

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

## **3.3 Network**

- Support Advanced Network Function: NTP, DDNS and E-mail
- Support TCP, UDP, RTP, and Multicast for network preview
- Support PPPoE
- Support remote parameters setup
- Alarm information can be sent to remote center.
- Network record live stream.
- RS-232 supports transparent channel function so that the remote PC can control serial devices through DVR.
- Support IE preview and configuration
- Support SADP protocol
- Remote download and playback the recorded files in DVR.
- Remote upgrade the DVR firmware
- Network PTZ control
- Support remote log query

## **3.4 Others**

- Support Mouse Operation Menu.
- IR remote control
- Multi-level user management.
- Support multi-area motion detection.
- Support OSD and changeable OSD position.
- Support multiple upgrade modes, including FTP, USB and CD.
- Automatically recovery from abnormal conditions.
- Network SDK and client demo source code available

## 4. Specifications

Model	DS-7004HI-S	DS-7008HI-S	DS-7016HI-S
<b>Video compression</b>	H.264		
<b>Preview resolution</b>	4CIF (PAL: 704*576, NTSC: 704*480)		
<b>Playback resolution</b>	4CIF/2CIF/CIF/QCIF	2CIF/CIF/QCIF	
<b>Video input</b>	4	8	16
<b>Video input interface</b>	BNC (1.0Vp-p, 75Ω)		
<b>Video output</b>	1 channel, BNC (1.0Vp-p, 75Ω)		
<b>Video spot out</b>	1 channel, BNC (1.0Vp-p, 75Ω)		
<b>Video loop out</b>	4	8	16
<b>Frame rate (per channel)</b>	4CIF: 8fps DCIF: 8fps 2CIF: 15fps CIF: 25(P)/30(N) fps	2CIF: 8fps CIF: 25(P)/30(N) fps	
<b>Stream type</b>	Video/Video&Audio	Video	Video/ Video&Audio(ch1-4)
<b>Bit rate</b>	32Kbps~2Mbps, user defined (Max. 8Mbps)		
<b>Audio input</b>	4	No	4
<b>Audio input interface</b>	RCA (2.0Vp-p, 1kΩ)	No	RCA (2.0Vp-p, 1kΩ)
<b>Audio output</b>	1 channel, RCA (Linear Electrical Level, 600Ω)	No	1 channel, RCA (Linear Electrical Level, 600Ω)
<b>Voice talk</b>	1 (Using 1 <sup>st</sup> channel of Audio IN)		1 (Using 1 <sup>st</sup> channel of Audio IN)
<b>Audio compression</b>	OggVorbis, 16Kbps	No	OggVorbis, 16Kbps
<b>Communication interface</b>	1 RJ45 10M/100M adaptive Ethernet Interface 1 RS232 interface (DB9) 1 RS485 interface (T+,T-,R+,R-)		
<b>SATA interface</b>	4 SATA interfaces, can max support 4 SATA HDD and each HDD can max support 2000GB, or 2 HDD and 1 SATA CD-RW/DVD-RW		
<b>USB interface</b>	1 USB interface can support USB disk, USB HDD, USB CD-RW/DVD-RW.		

<b>VGA interface</b>	1 VGA interface, supports resolution: 800*600/60Hz, 1024*768/60Hz 1280*1024/60Hz		
<b>External alarm in</b>	4	16	16
<b>Relay output</b>	2	4	4
<b>Power supply</b>	100~240VAC, 6.3A, 50~60HZ		
<b>Power consumption</b>	≤40W (without HDD or DVD-R/W)		
<b>Working temperature</b>	-10℃~+55℃		
<b>Working humidity</b>	10%~90%		
<b>Size</b>	440mm(W)*390mm(D)*70mm(H)		
<b>Weight</b>	≤8Kg (without HDD or DVD-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).