

DS-40xx HCI/HSI/MDI

User Guide

Version 2.0

Thank you for purchasing our product. If there is any question or request, please feel free to contact us.

This manual is about Hikvision DS-40XX HCI/HSI compression card series and DS-40XX MDI matrix decode card series. It may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual. We will readily improve or update the product or procedure described in the manual.

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System Requirements

Software Requirements

- Windows: Windows 2000(SP4), Windows XP (SP2), Windows Server 2003

Hardware Requirements

Recommended requirements:

- CPU: Intel Series, Pentium III 500MHz or above
- Motherboard: based on Intel 845/865/915/925/945 Chipset
- Memory: 256MB or above
- Display adaptor: Standard VGA, 32 bit true color mode

Compatible video display adapter

- Nvidia Tnt/Tnt2, Geforce MX 400/ 40/ 4000/ 6600 Fx5200/ 5600 Series
- ATI Radeon 7000/ 7200/ 7500/ 8500/ 9000/ 9200 / 9500/ 9600 Series, ATI X300/ X700 series
- Intel 845/865/915 integrated Extreme Graphics
- MatroxG450/550/P750

Driver Installation

To install the DS-40xxHCI card to your PC, please follow these steps:

1. Insert the DS-40xxHCI card into an empty PCI slot.
2. Turn on your PC and start Windows.
3. Windows Hardware Wizard detects this newly installed card and appears automatically. Ignore the wizard window and keep on the following steps.
4. Locate to the folder of DS-40xxHCI Driver, run the Driver Install.exe, and then the Driver Install dialog box will be displayed.



Figure 1 Driver Install

5. Click “Install or Update Driver” to install/update the driver. Window OS will pop up a window as following :

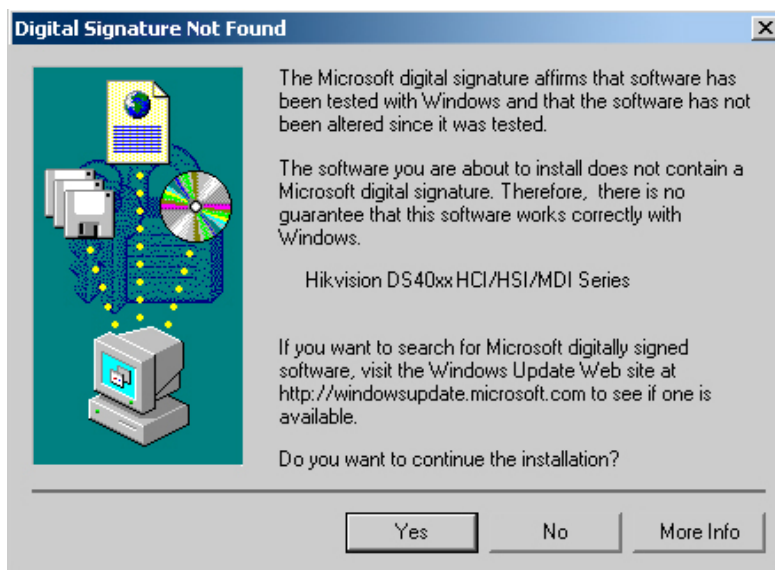


Figure 2 Hardware Installation on Windows 2000 OS



Figure 3 Hardware Installation on Windows XP OS

6. Click "Yes" or "Continue Anyway" to continue the hardware installation. If there are more than one card inserted in the PC or more than one DSP in one card, the operation system will remind you of repeating the above process.
7. When the installation is done, this message will appear: Driver Installed Successfully!

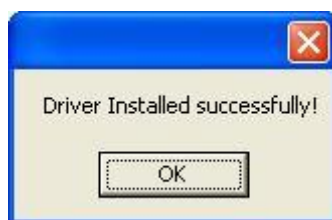
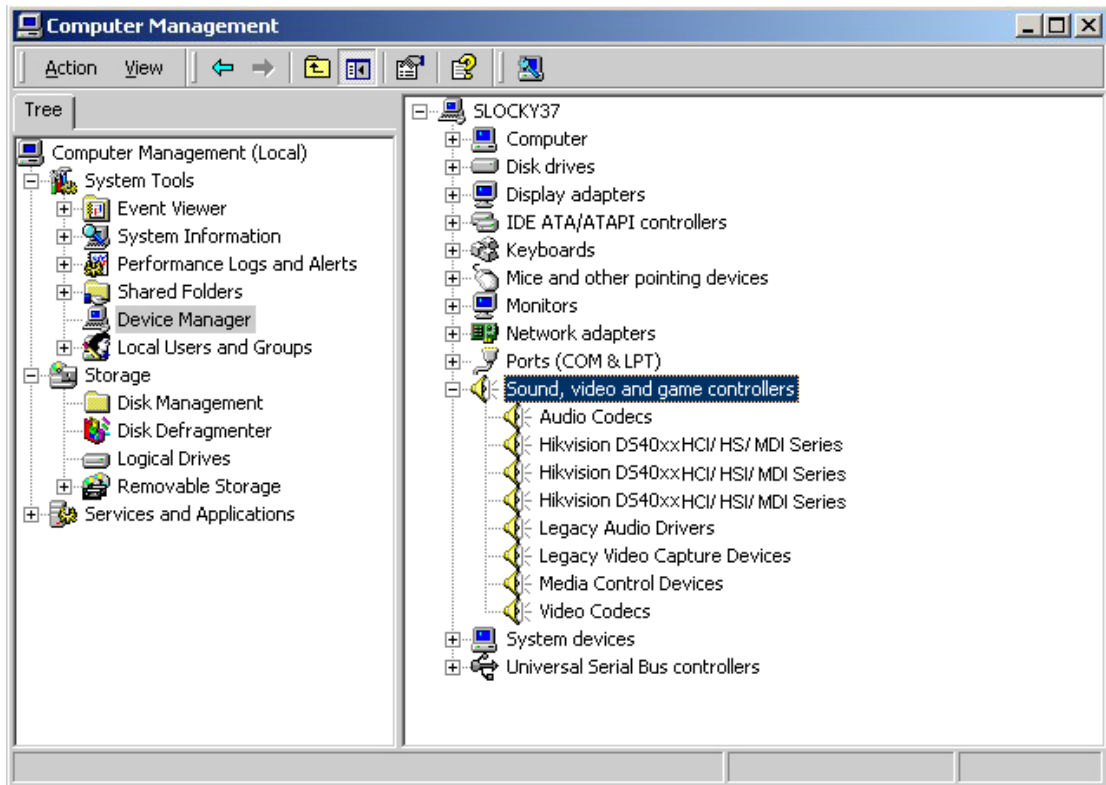
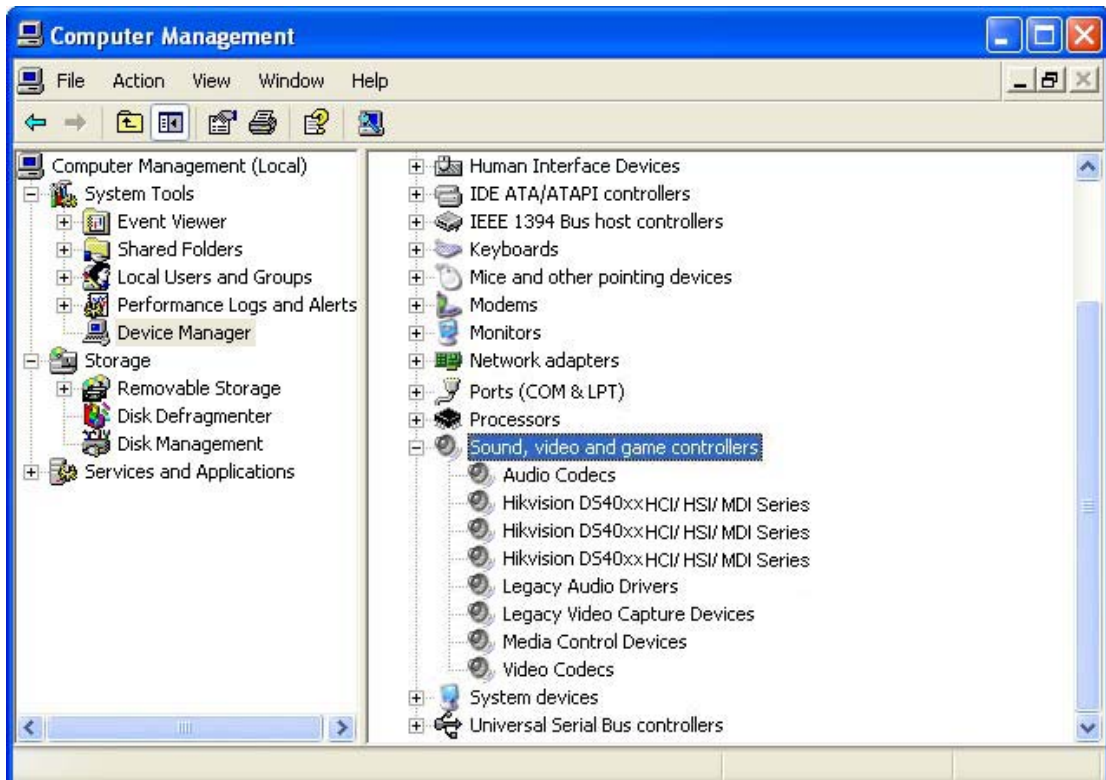


Figure 4 Driver Installed Successfully

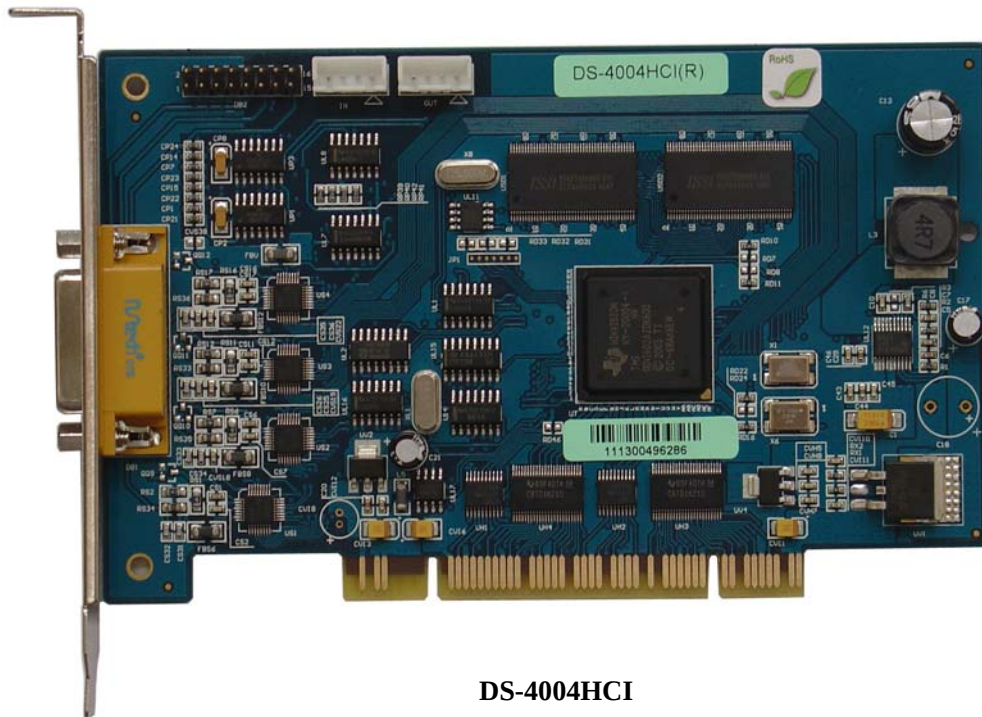
8. Click Exit to quit the driver installation.
9. At last you will find the detail information of the card on the device manager (it depends on the total number of cards you installed in the computer).

**Figure 5 Driver Installed Successfully on Windows 2000 OS****Figure 6 Driver Installed Successfully on Windows XP OS**

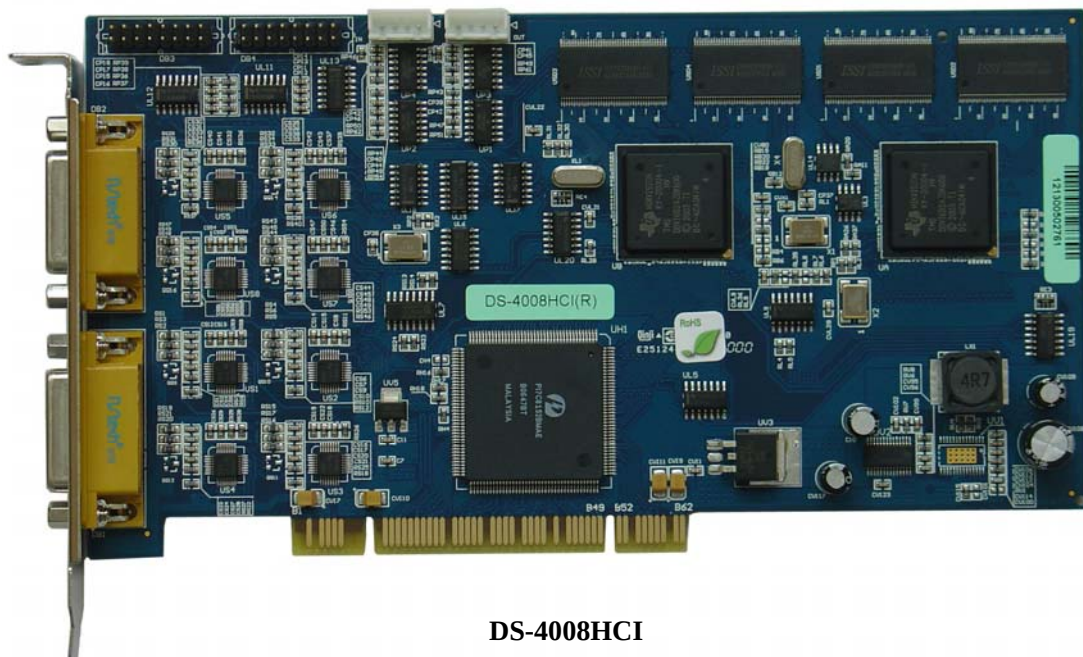
Hardware Connection

DS-4004HCI and DS-4008HCI/HSI Hardware Connection

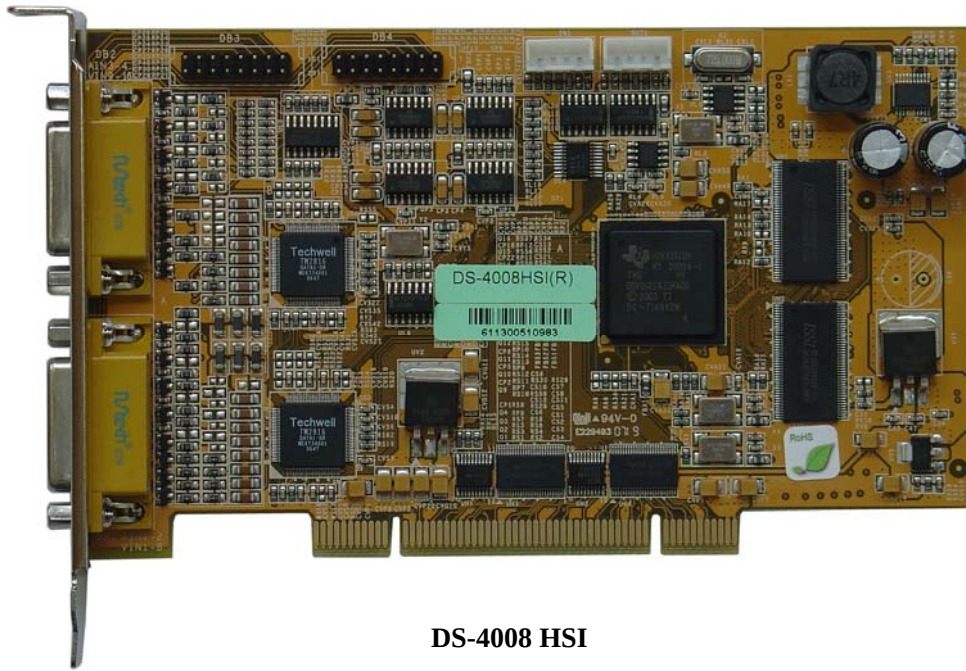
1. External video and audio input connector (DB1 for 4004HCI, DB1 & DB2 for 4008HCI/HSI) on the left side of the card. Please refer to “Video and Audio Pin Definition” for more details.



DS-4004HCI

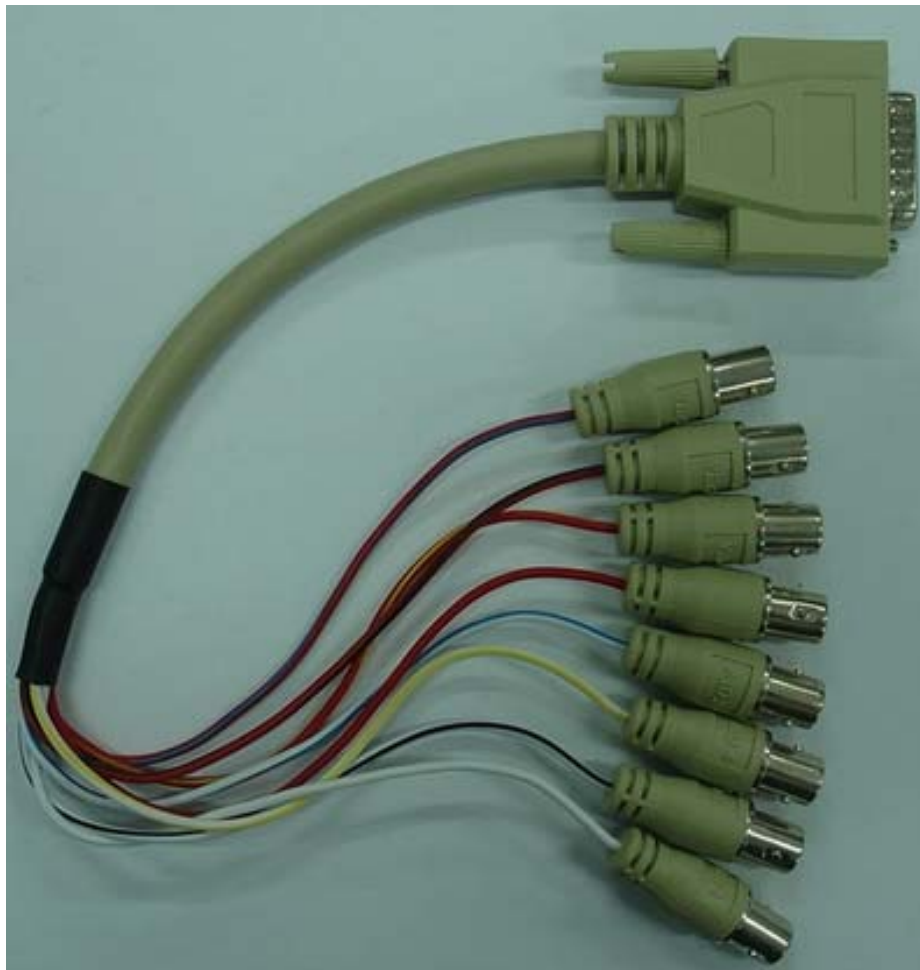


DS-4008HCI



DS-4008 HSI

2. External video input and audio input cables, the red cables are for video input and the white cables are for audio input:



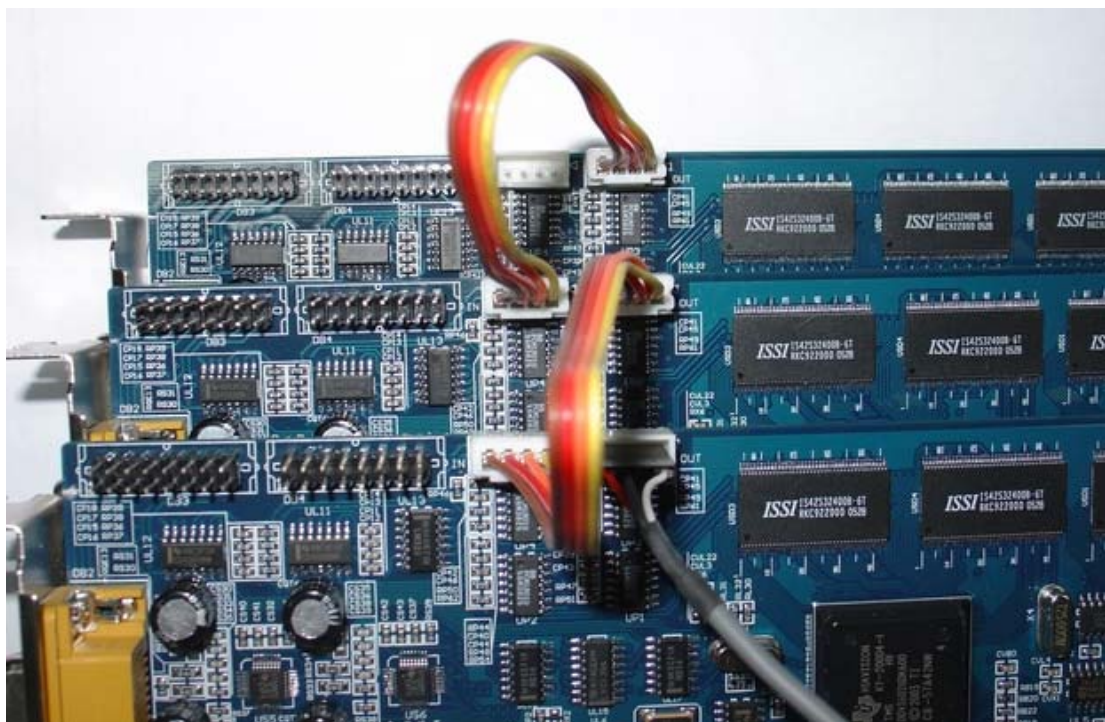
3. Internal audio connection cable between DS-40xxHCI/HSI compression cards:



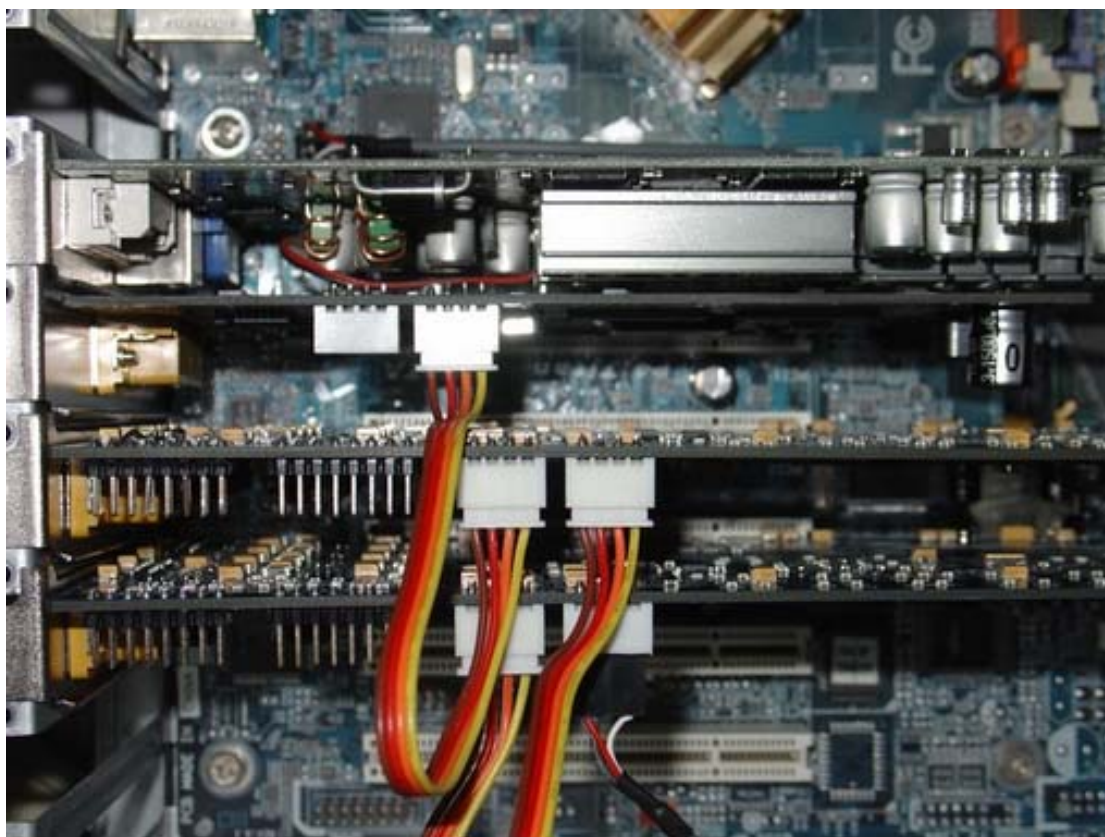
4. Internal audio cable, connect the DS-40xxHCI/HSI compression card to PC motherboard:



5. Cards internal audio connection: Connect audio output of the first HCI/HSI card with the audio input of the second HCI/HSI card; connect the audio output of the second HCI/HSI card with the audio input of the third HCI/HSI card, the rest may be deduced by analogy.



6. Connect the last audio output of HCI/HSI card with the CD_IN interface of PC motherboard or PCI sound card:

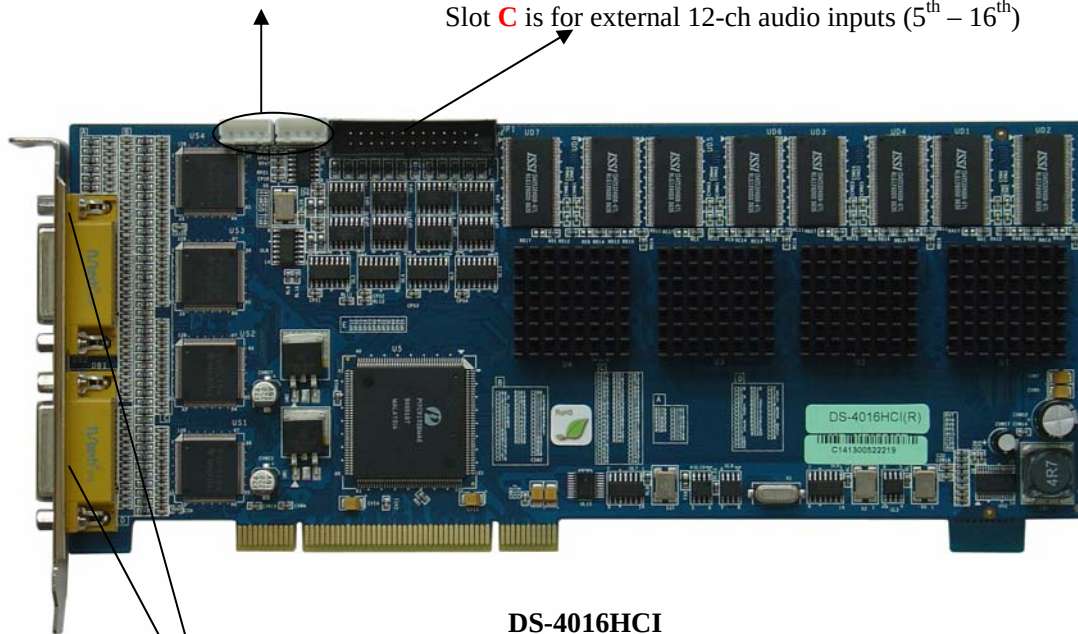


DS-4016HCI/HSI Hardware Connection

Take DS-4016HCI as an example, the hardware connection is shown below.

Internal audio connector, the same usage as DS-4004HCI and DS-4008HCI/HSI

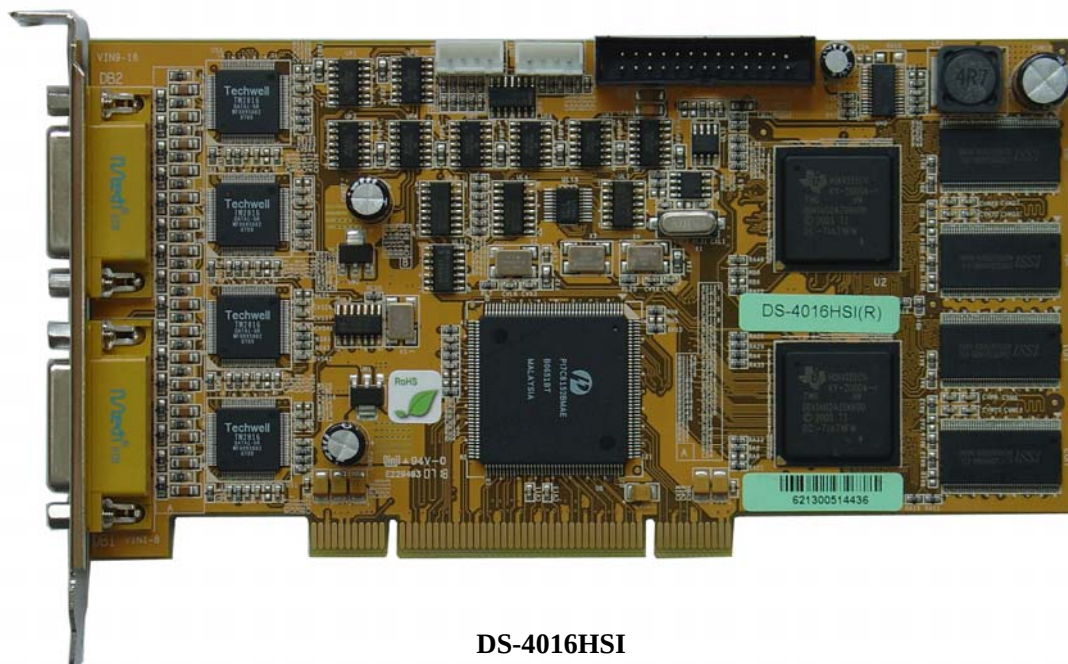
Slot **C** is for external 12-ch audio inputs (5th – 16th)



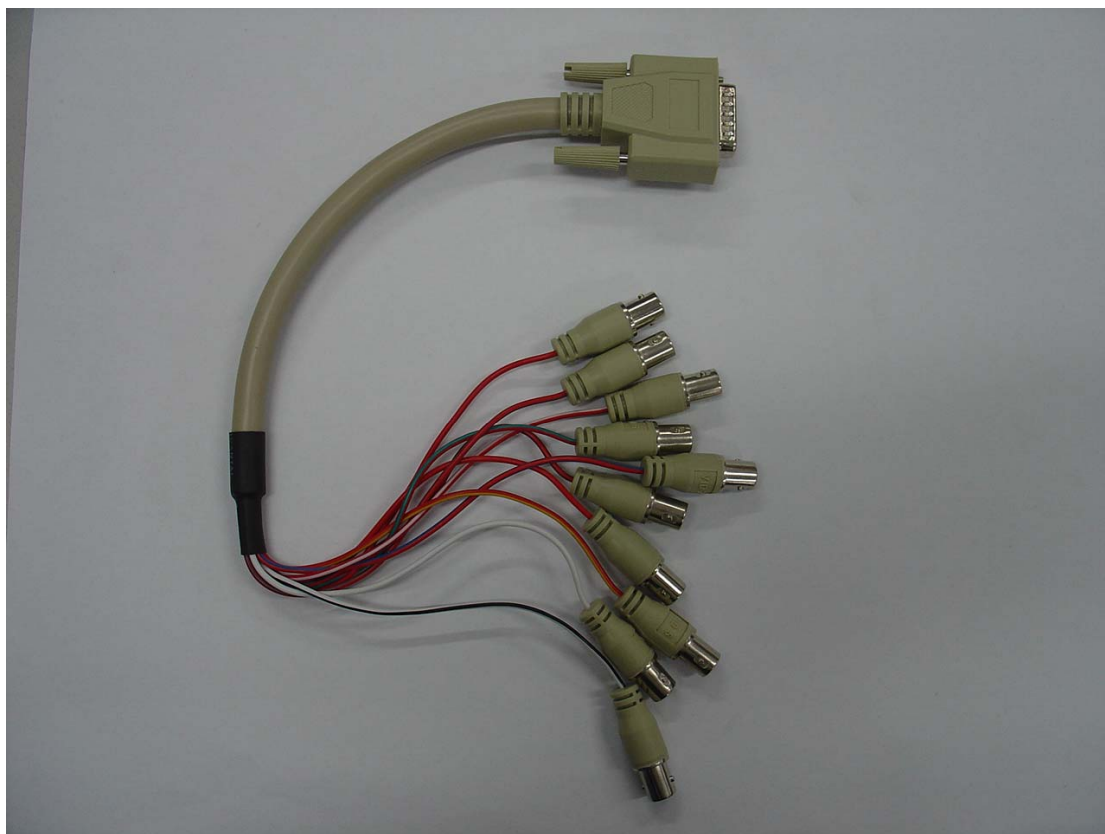
DS-4016HCI

Connector **A** and **B** are for external 8-ch video + 2-ch audio inputs

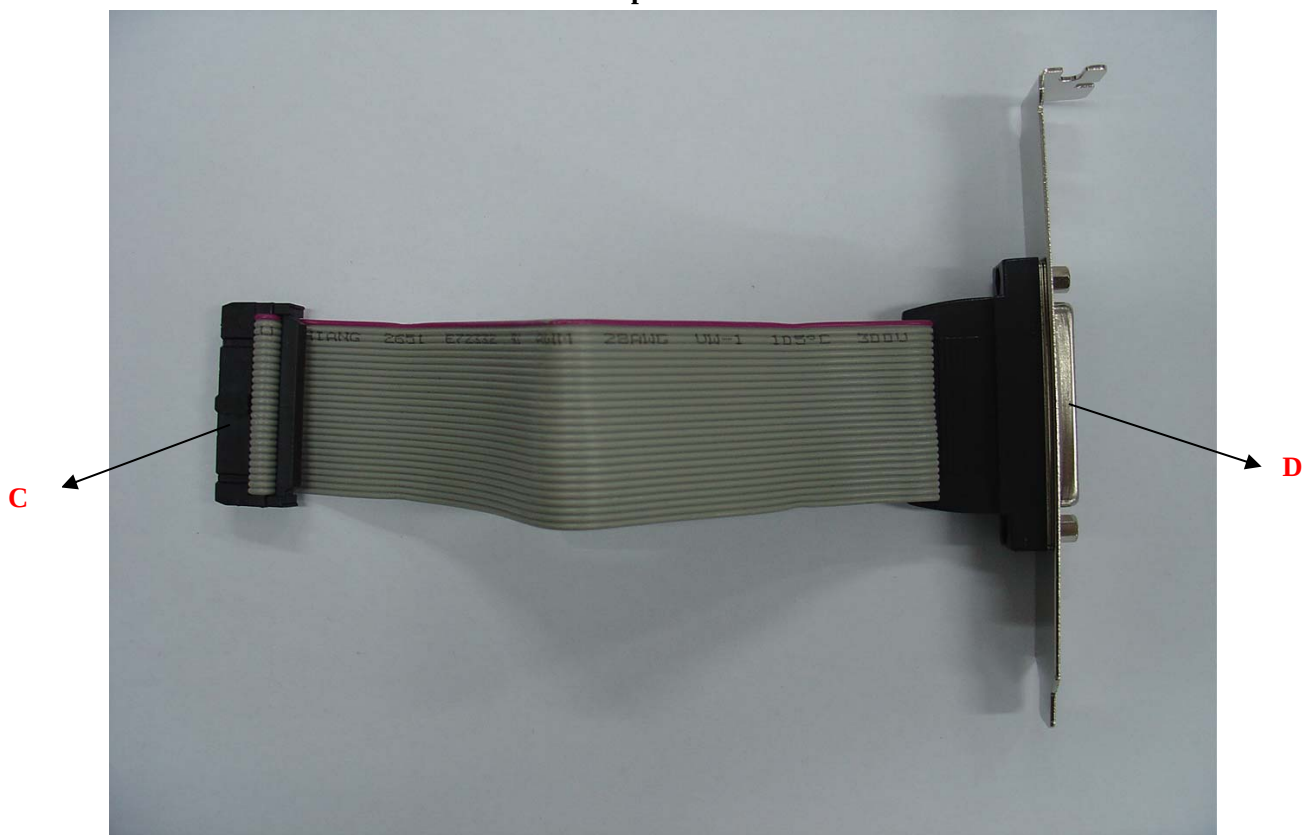
Hardware connection for DS-4016HSI is the same as DS-4016HCI.



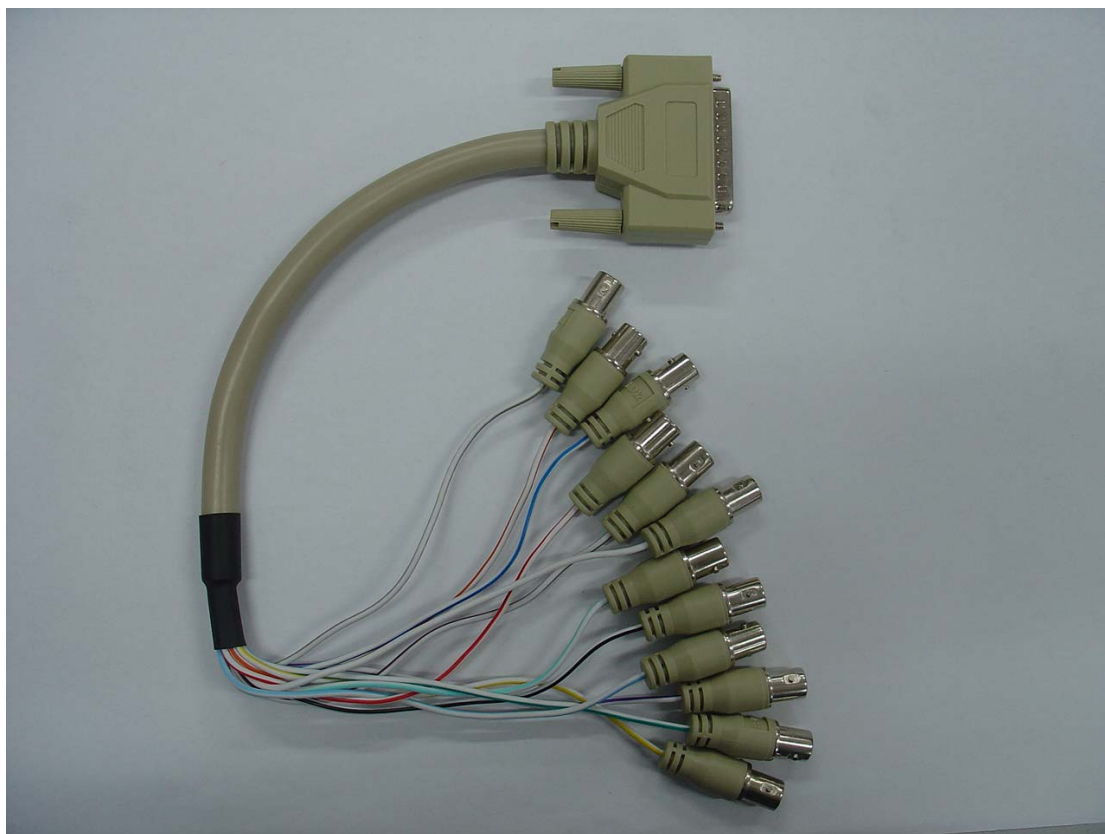
DS-4016HSI



8-ch video & 2-ch audio input cable for connector **A** and **B**



12-ch external audio input converter cable for slot **C** on DS-4016HCI/HSI



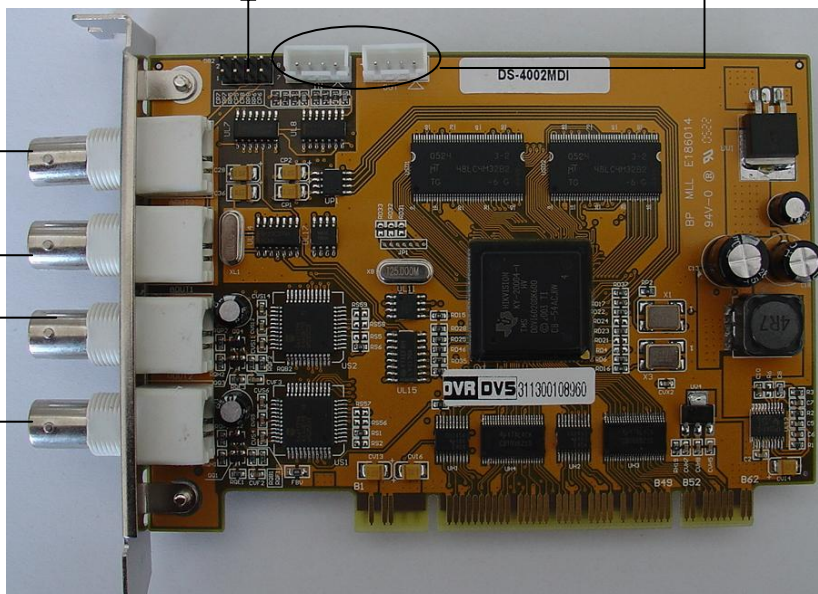
12-ch external audio input cable for connector **D**

DS-4002MDI and DS-4004MDI Hardware Connection

1. External BNC interface (DS-4002MDI) or connector (DS-4004MDI) for video and audio output on the left side of the card. Refer to “Video and Audio Pin Definition” for more details.

External 2-ch audio output

Internal audio connector, the same usage as DS-4004HCI and DS-4008HCI/HSI
Optional internal PIN for video & audio output

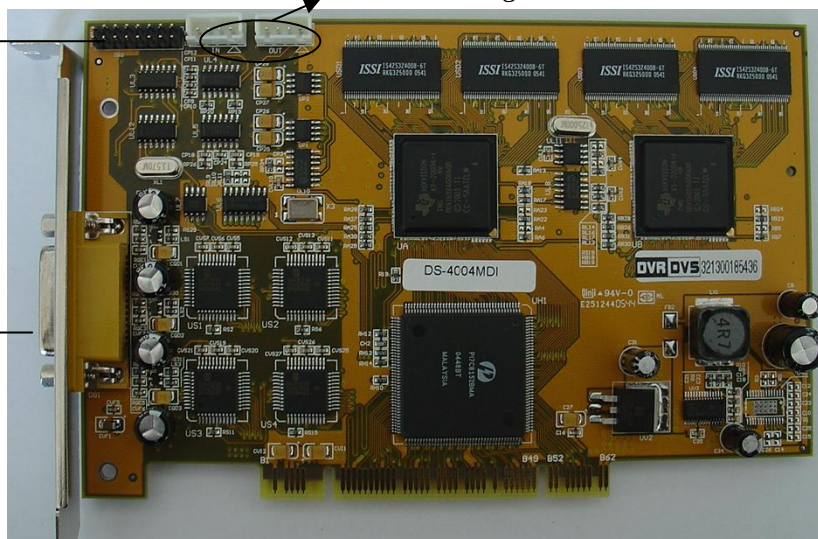


DS-4002MDI

External 2-ch video Output

Optional internal PIN for video & audio output

Internal audio connector, the same usage as DS-4004HCI and DS-4008HCI/HSI



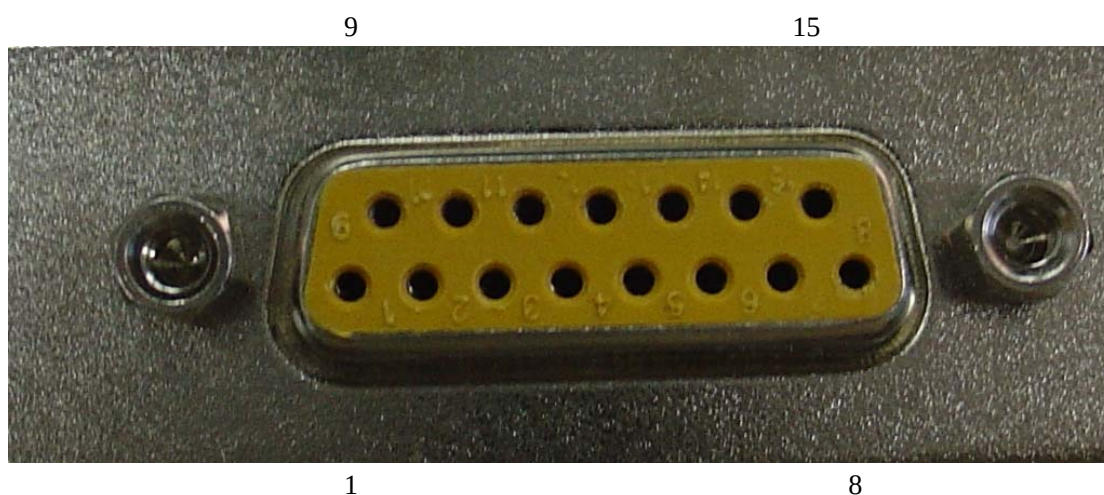
External connector for video & audio output

DS-4004MDI

Video and Audio Pin Definition

DS-4004HCI

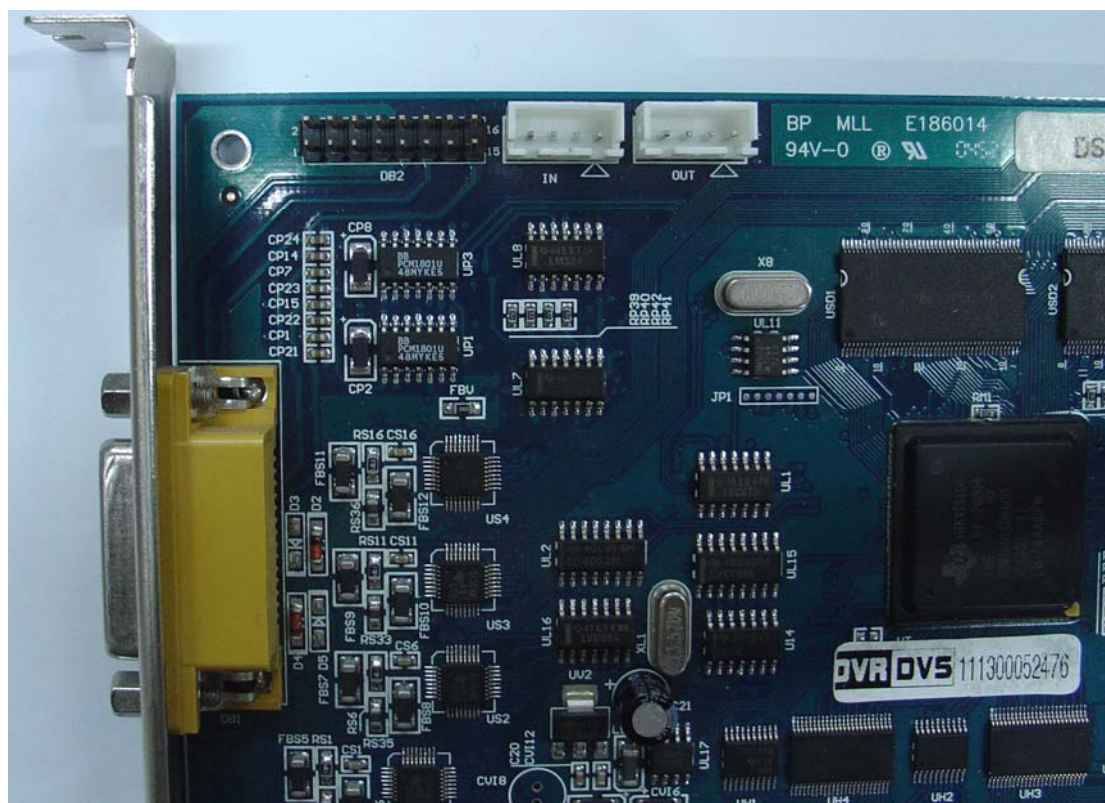
The DS-4004HCI provides a DB 15-pin female connector to input 4-channel video and audio signal (DB1).



Pin	Signal Description
1	Video in 1
2	Video in 2
3	Video in 3
4	Video in 4
5	Audio in 1
6	Audio in 2
7	Audio in 3
8	Audio in 4
9	GND
10	GND
11	GND
12	GND
13	GND
14	GND
15	GND

DB1 pin description

The DS-4004HCI also provides optional internal PIN for video and audio input (DB2).



DS-4008HCI/HSI

The DS-4008HCI/HSI provides two DB 15-pin female connectors to input 8-channel video and audio signal. (DB1 and DB2)



DB1

DB2

Pin	Signal Description
1	Video in 1
2	Video in 2
3	Video in 3
4	Video in 4
5	Audio in 1
6	Audio in 2
7	Audio in 3
8	Audio in 4
9	GND
10	GND
11	GND
12	GND
13	GND
14	GND
15	GND

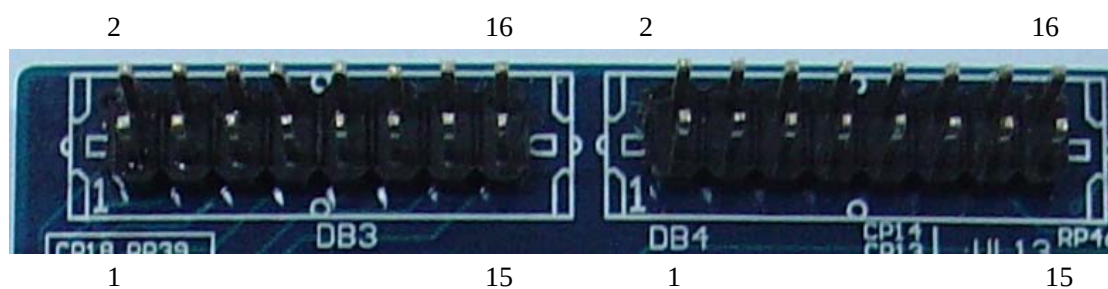
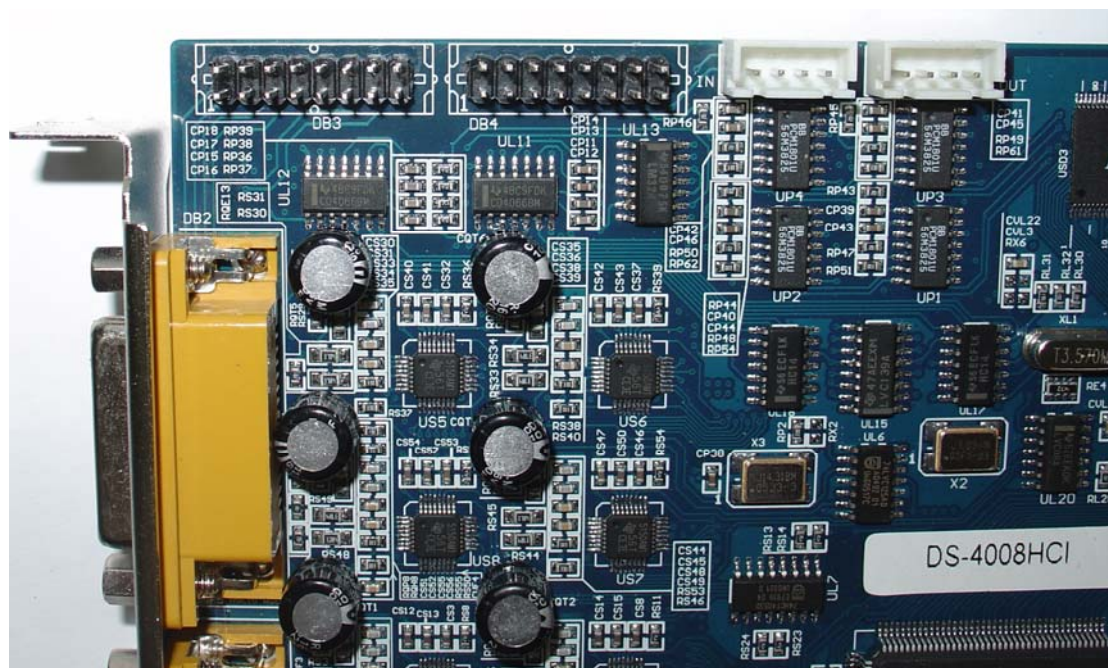
DB1 pin description

Pin	Signal Description
1	Video in 5
2	Video in 6
3	Video in 7
4	Video in 8
5	Audio in 5
6	Audio in 6
7	Audio in 7
8	Audio in 8
9	GND
10	GND
11	GND
12	GND

13	GND
14	GND
15	GND

DB2 pin description

The DS-4008HCI/HSI also provides optional internal PIN for video and audio input (DB3 and DB4).



Pin	Description	Pin	Description
1	Video in 1	2	GND
3	Video in 2	4	GND
5	Video in 3	6	GND
7	Video in 4	8	GND
9	Audio in 1	10	GND
11	Audio in 2	12	GND
13	Audio in 3	14	GND
15	Audio in 4	16	GND

DB3 pin description

Pin	Description	Pin	Description
1	Video in 5	2	GND
3	Video in 6	4	GND
5	Video in 7	6	GND
7	Video in 8	8	GND
9	Audio in 5	10	GND
11	Audio in 6	12	GND
13	Audio in 7	14	GND
15	Audio in 8	16	GND

DB4 pin description

DS-4016HCI/HSI

The DS-4016HCI/HSI provides two DB 15-pin female connectors to input 16-ch video and 4-ch audio signal (DB1 and DB2).



DB1

DB2

Pin	Signal Description
1	Video in 1
2	Video in 2
3	Video in 3
4	Video in 4
5	Video in 5
6	Video in 6
7	Video in 7
8	Video in 8
9	Audio in 1
10	GND
11	GND
12	GND
13	GND
14	GND
15	Audio in 2

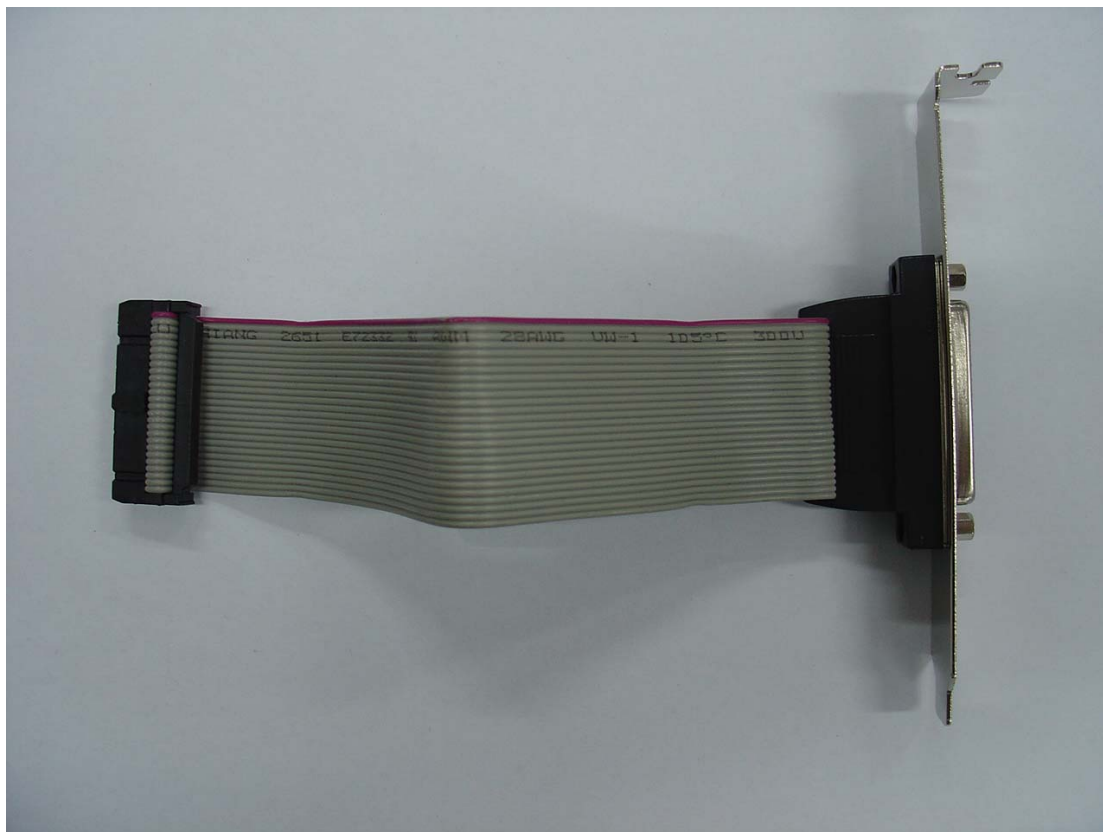
DB1 pin description (8-ch video & 2-ch audio)

Pin	Signal Description
1	Video in 9
2	Video in 10
3	Video in 11
4	Video in 12
5	Video in 13
6	Video in 14
7	Video in 15
8	Video in 16
9	Audio in 3
10	GND
11	GND
12	GND

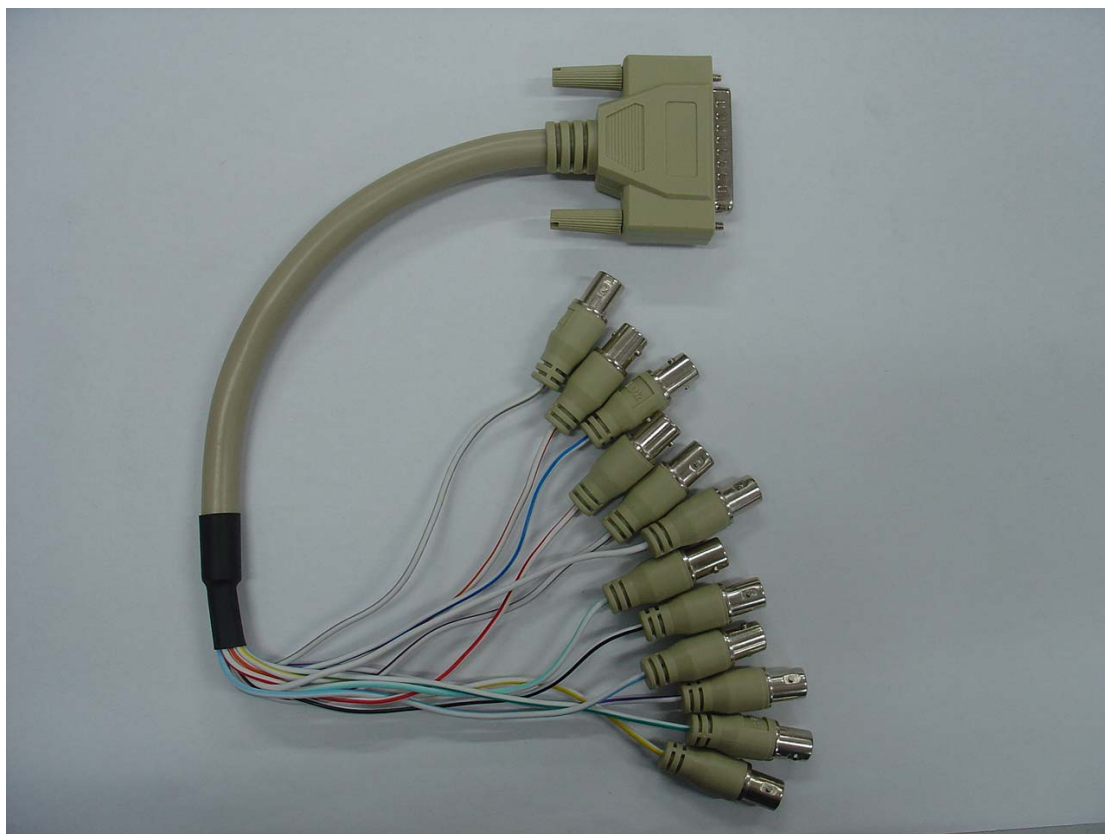
13	GND
14	GND
15	Audio in 4

DB2 pin description (8-ch video & 2-ch audio)

Other 12-ch audio input (5th – 16th) will use the following cables to connect with slot C on DS-4016HCI/HSI card.



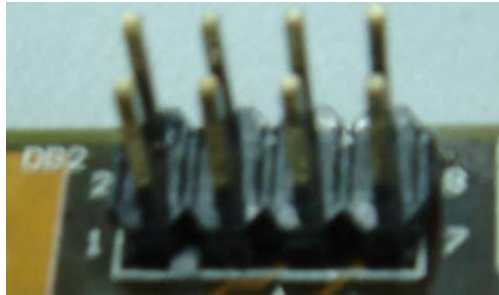
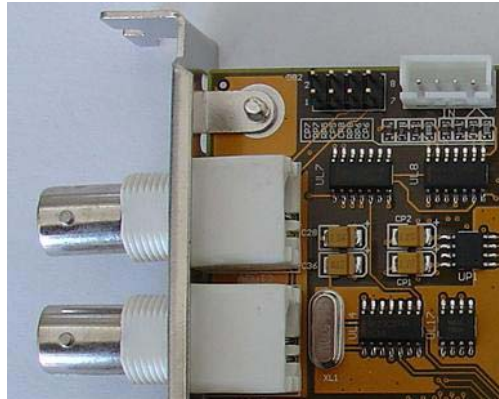
Connector for audio input cable and Slot **C**



12-ch audio input (5th – 16th)

DS-4002MDI

The DS-4004MDI provides optional internal PIN for video and audio output (DB2) besides the 4 external BNC interface for video/audio output.

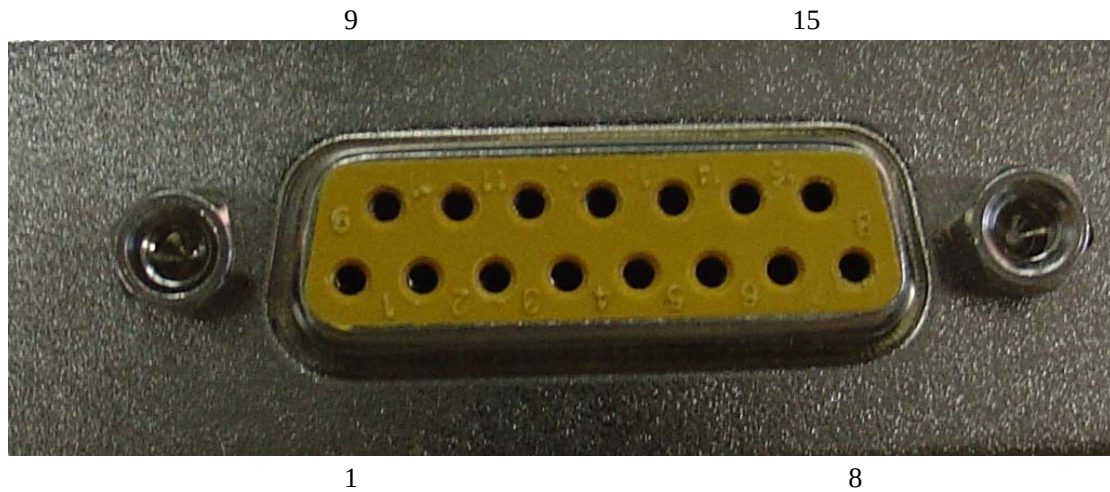


Pin	Description	Pin	Description
1	Video out 1	2	GND
3	Video out 2	4	GND
5	Audio out 1	6	GND
7	Audio out 2	8	GND

DB2 pin description

DS-4004MDI

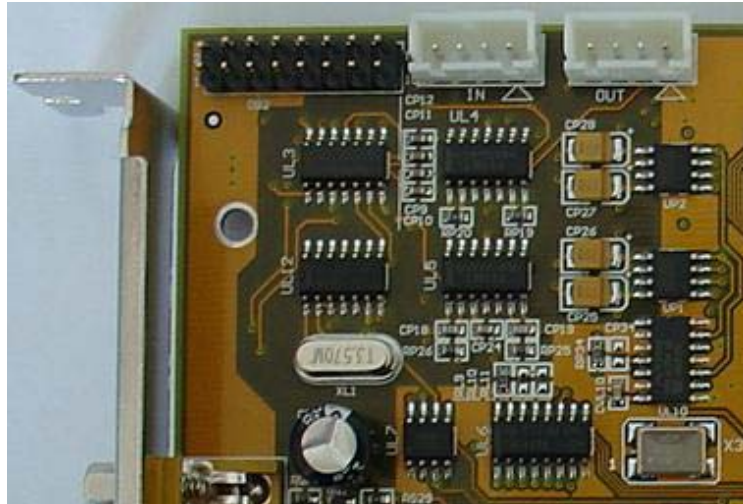
The DS-4004MDI provides a DB 15-pin female connector to input 4-channel video and audio signal (DB1).



Pin	Signal Description
1	Video out 1
2	Video out 2
3	Video out 3
4	Video out 4
5	Audio out 1
6	Audio out 2
7	Audio out 3
8	Audio out 4
9	GND
10	GND
11	GND
12	GND
13	GND
14	GND
15	GND

DB1 pin description

The DS-4004MDI also provides optional internal PIN for video and audio output (DB2).



Pin	Description	Pin	Description
1	Video out 1	2	GND
3	Video out 2	4	GND
5	Video out 3	6	GND
7	Video out 4	8	GND
9	Audio out 1	10	GND
11	Audio out 2	12	GND
13	Audio out 3	14	GND
15	Audio out 4	16	GND

DB2 pin description

Technical Specification

Specification of Compression Card

Model	DS-4004HCI	DS-4008HCI /DS-4008HC I-E	DS-4016HCI	DS-4008HSI	DS-4016HSI
Video compression standard	H.264				
Preview resolution	4CIF real time				
Compression resolution	4-ch CIF/2CIF real time Or 2-ch 4CIF real time Or 4-ch DCIF/4CIF not real time	8-ch CIF/2CIF real time Or 4-ch 4CIF real time Or 8-ch DCIF/4CIF not real time	16-ch CIF/2CIF real time Or 8-ch 4CIF real time Or 16-ch DCIF/4CIF not real time	8-ch CIF real time Or 8-ch 2CIF/DCIF/4 CIF not real time	16-ch CIF real time Or 16-ch 2CIF/DCIF/4 CIF not real time
Video input	4 channel	8 channel	16 channel	8 channel	16 channel
	BNC, 1.0Vp-p, 75Ohm				
Max frame rate	25FPS/30FPS (PAL/NTSC) per channel				
Bit rate	32Kbps ~ 2Mbps per channel				
Stream type	Video stream or Video & Audio stream				
Audio input	4 channel	8 channel	16 channel	8 channel	16 channel
	BNC, 2.0Vp-p, 1KOhm				
Audio compression	OggVorbis, 16Kbps				
Dual stream	Yes	Yes	Yes	~	~
Power consumption	< 3.5W	< 7W	< 22W	< 4.5W	< 9W
Working temperature	-10°C ~ +50°C				
Working humidity	10% ~ 90%				
Dimension	155mm*95mm	201mm*109mm	250mm*106mm	178mm*99mm	198mm*100mm
System	OS: Windows 2000/XP/Server 2003, Redhat 9.0, Fedora 3, Fedora 4, Fedora 5				

requirements	CPU: Intel series Motherboard: based on Intel 845 / 865 /915/925/945 Chipset Memory: 256MB or above Display Adapter: - NVIDIA GeForce Mx400/440/4000 or above series - FX 5200/5600 GeForce 6600 or above series - ATI Radeon 7000/7500/8500/9000/9200/9550/9600 or above series - ATI X300/X550/X700/X1300/X1600 or above series - Intel 845G/865G/915G integrated Graphics Controller
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Specification of Matrix Decode Card

Model	DS-4002MDI	DS-4004MDI
Video output	2 channel	4 channel
	BNC, 1.0Vp-p, 75Ohm	
Decoding resolution	4CIF/DCIF/2CIF/CIF/QCIF	
Audio output	2 channel	4 channel
	BNC, Linear output, 600Ohm	
Audio decoding	4 channel	8 channel
Power consumption	< 3.5W	< 7.5W
Working temperature	-10°C ~ +50°C	
Working humidity	10% ~ 90%	
Dimension	133mm*96mm	158mm*108mm
System requirements	OS: Windows2000/XP/Server2003, Redhat9.0, Fedora 3, Fedora 4, Fedora 5 CPU: Intel series Motherboard: based on Intel 845 / 865 /915/925/945 Chipset Memory: 256MB or above Display Adapter: NVIDIA GeForce Mx400/440/4000 or above series FX 5200/5600 GeForce 6600 or above series ATI Radeon 7000/7500/8500/9000/9200/9550/9600 or above series ATI X300/X550/X700/X1300/X1600 or above series Intel 845G/865G/915G integrated Graphics Controller	