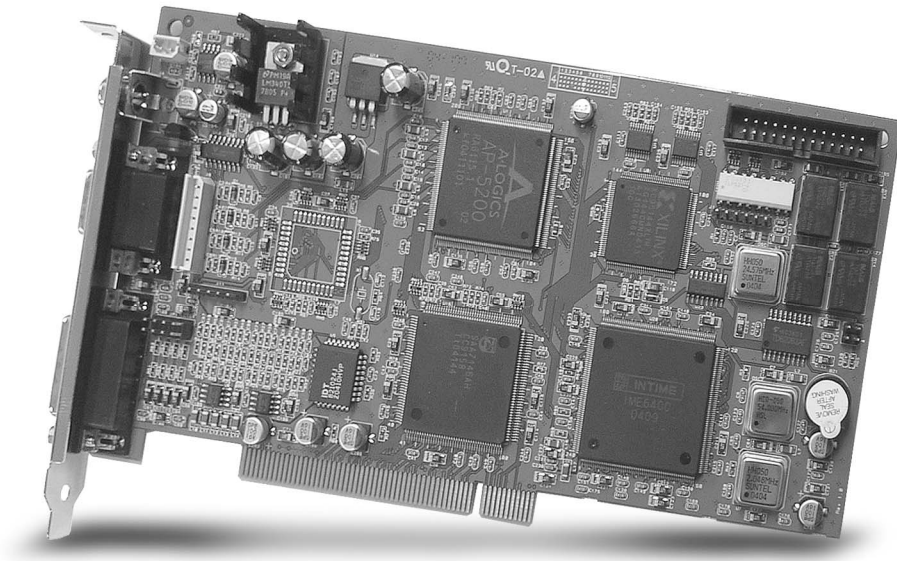


Installation manual



NVB-A

NOVUS™

IMPORTANT SAFEGUARDS AND WARNINGS

1. Read, keep, and follow these instructions.
2. Heed all warnings.
3. This unit contains sensitive electric components, which can be damaged by static electricity; this equipment should be left inside its original packing until the installation process.
4. Unpacking and installation should proceed on a grounded anti-static surface. The installer should use special anti-static wristband, grounded at the same point as the anti-static surface.
5. Inspect the unit packing box for any damage. Before proceeding with installation make sure that no damages occurred to this unit during shipping and handling process cause damage to this unit. Be sure that during the shipping and handling process damages on the card before proceeding.

DO NOT APPLY POWER TO YOUR SYSTEM IF THE CARD HAS BEEN DAMAGED.

6. Install in accordance with the manufacturer's instructions.
7. There are no user-serviceable parts within this unit. Only authorized service personnel may service this unit.
8. Installation and servicing should only be done by qualified service personnel and conform to all local codes.
9. This unit is designed for indoor use only and it must not be installed where exposed to rain or moisture.
10. Do not install near any heat source or near water (any wet area).
11. Only use attachments/accessories specified by the manufacturer.

The product and/or manual may bear the following marks:

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

This product is carrying the CE-mark in accordance with the related European Directives. Responsible for CE-marking is Novus Security sp. Z o. o.

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Preface

This guide book describes the hardware components and the installation process of the hardware of series of Capture Cards.

For detailed instructions of Capture Cards software installation and operation please refer to “CAPTURE CARD USER'S MANUAL” / “Capture Card DVR-NET Installation”

The detailed design of these boards as well as specific names may be slightly different according to the client's model and /or versions. These Capture Cards are subject to change in accordance to hardware upgrade.







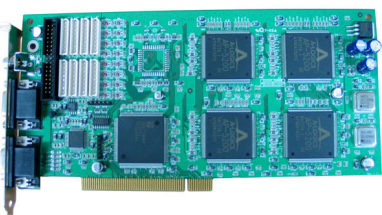
1. Specification of DVR:




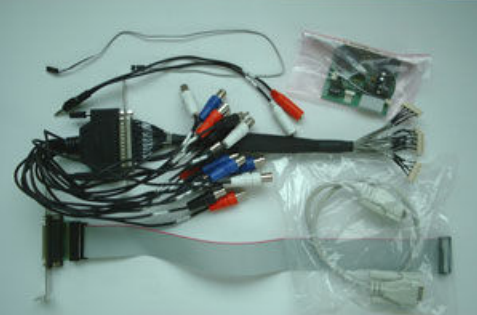


Please refer to the enclosed manual named “CAPTURE CARD USER'S MANUAL”

2. Installation note:

1. Recommend to use an Intel chip main board .
2. More than 256MB of memory and 40GB hard disk space .
3. Compatible OS: Windows 2000,XP.
4. Screen Savers must be “Disable”.
5. In C-MOS Set-Up , Various configurable Mode such as System standby, monitor energy saving, and hard disk energy saving should be checked to be “ Disable”.
6. For Sound recording, Apparently Direct 8.0 or higher version shall be installed.
7. Program version number and driver’s information must be tagged for the reminding.
8. VGA shall be ATI Product , or , higher than 128 Radon.
9. If you try to use over than 160 GB of HDD, your OS should be updated with the latest Service Pack.



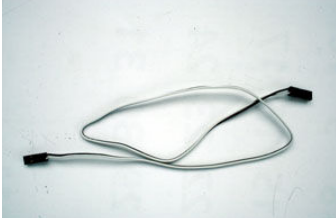

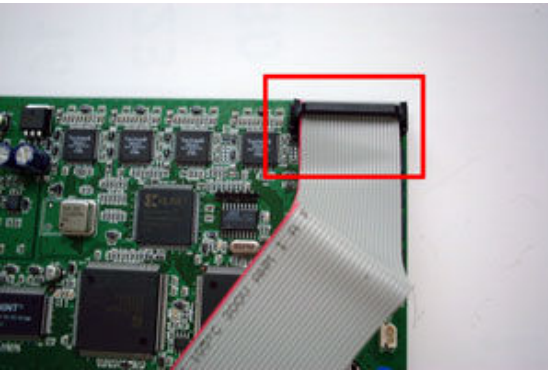
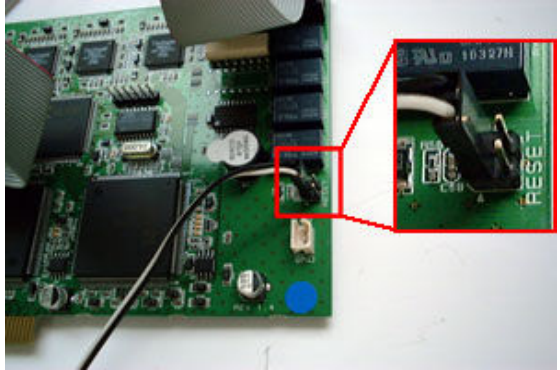
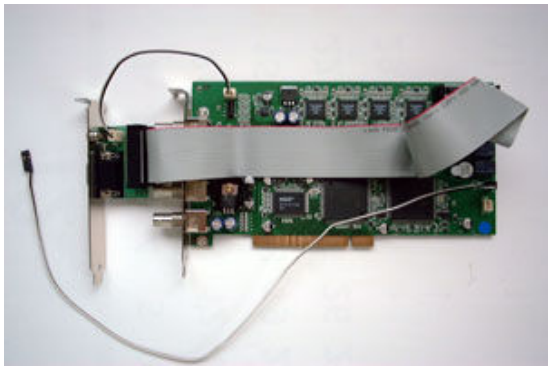
3. Products and Components:

	
<p>NVB-025/4A(25Frame, 4Channel)</p>	<p>NVB-050/4A (50Frame, 4Channel)</p>
	
<p>NVB-050/8A (50Frame, 8Channel) NVB-050/16A(50Frame, 16Channel)</p>	<p>NVB-100/4A (100Frame, 4Channel)</p>
	
<p>NVB-100/8A (100Frame, 8Channel) NVB-100/16A (100Frame, 16Channel) NVB-200/8A-Master(200Frame, 8Channel) NVB-200/16A -Master(200Frame,16Channel)</p>	<p>Slave8(200Frame, 8Channel) Slave16(200Frame, 16Channel)</p>
	
<p>NVB-LIVE08(Display 200Frame, 8Channel) NVB-LIVE16(Display 400Frame, 16Channel)</p>	

	
<p>4 Channel Capture Card Accessory</p>	<p>8 Channel Capture Card Accessory</p>
	
<p>16 Channel Capture Card Accessory</p>	<p>16 Channel Capture Card Accessory (LIVE)</p>
	
<p>NVB-LIVE08 Cable</p>	<p>NVB-LIVE16 Cable</p>

4. Install Capture Board:

4.1. (NVB-025/4A, NVB-050/4A, NVB-100/4A) 4 Channel Board:

4 channel Board and Accessories		
		
<p>4 Channel Board</p>	<p>TV-Out, Sensor, Relay cable</p>	<p>Watchdog cable</p>
<p>1 Connect the TV-Out line</p> 		<p>2 Connect the Sensor Relay cable</p> 
<p>3 Connect the Watchdog line</p> 	<p>4 Assembly View</p> 	


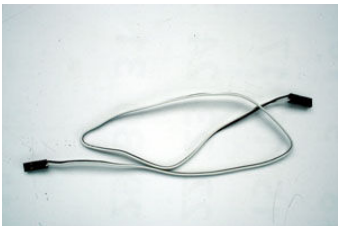
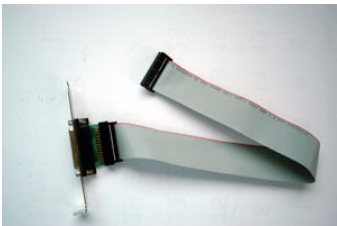

- General Notes -

The other end of Watchdog cable should be connected with the reset pin of PC main board.

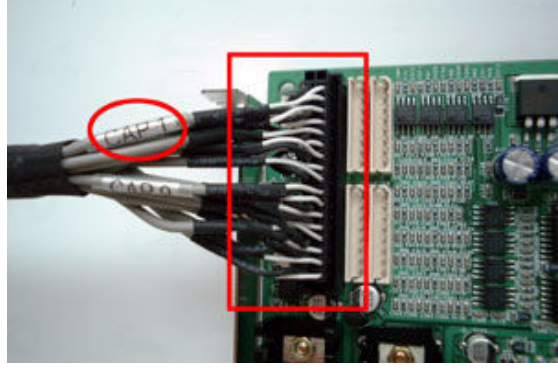
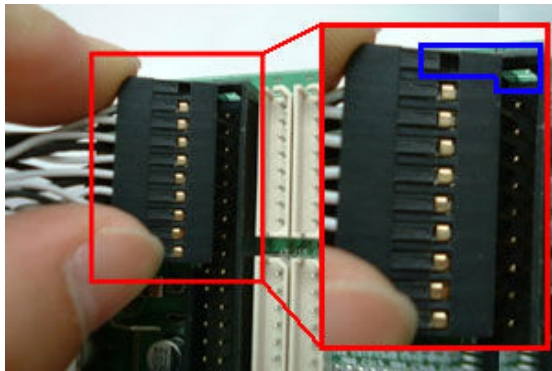
The cable from the system reset switch should be connected with the reset pin on DVR capture board, which is located aside from No. 1 cable.

Unless Watchdog cable is properly connected, system may not boot on power on. In this case, please try to insert the pin switching “black and white” to “white and black” cable connection.

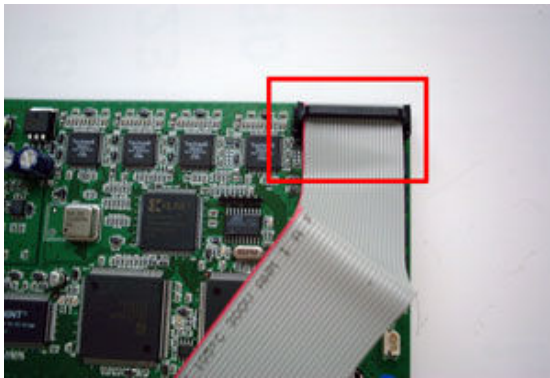
4.2. (NVB-050/16A, NVB-100/16A) 16 Channel Board:

16 channel board and accessories	
	
16 Channel Board	Watchdog Cable
	
Sensor, Relay cable	Camera I/O cable

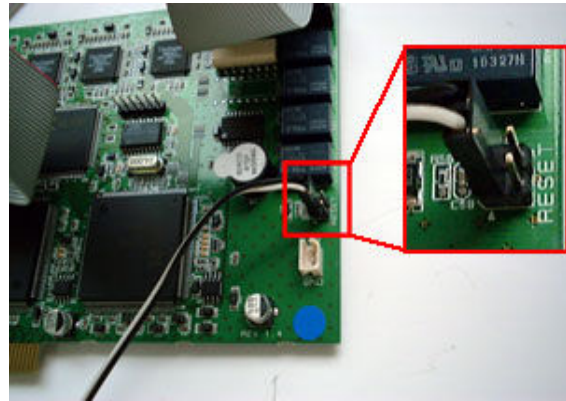
1 Connect the Camera I/O line



2 Connect the Sensor Relay Cable



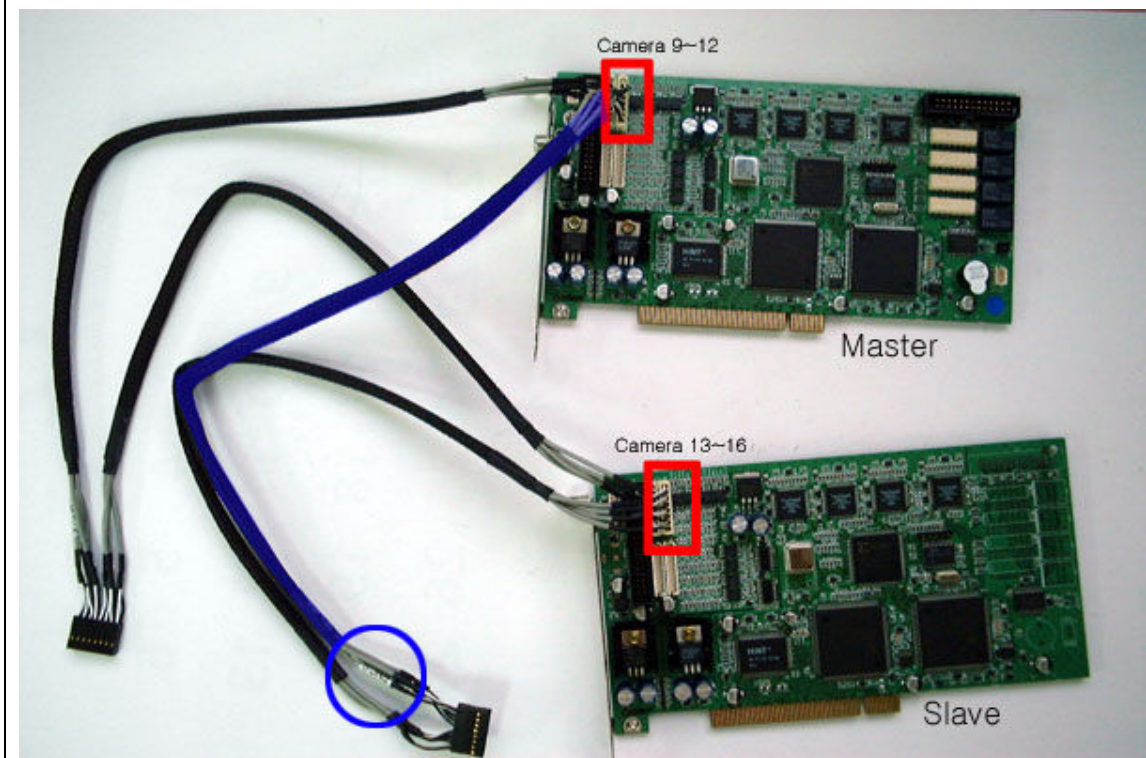
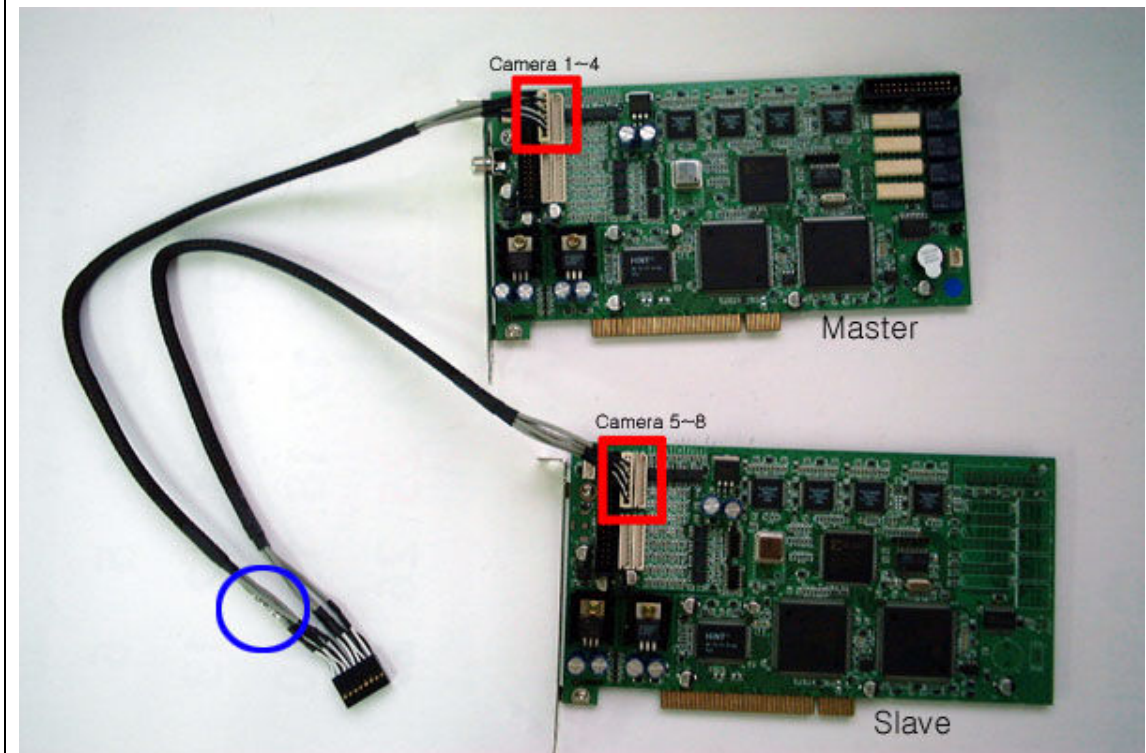
3 Connect the Watchdog cable

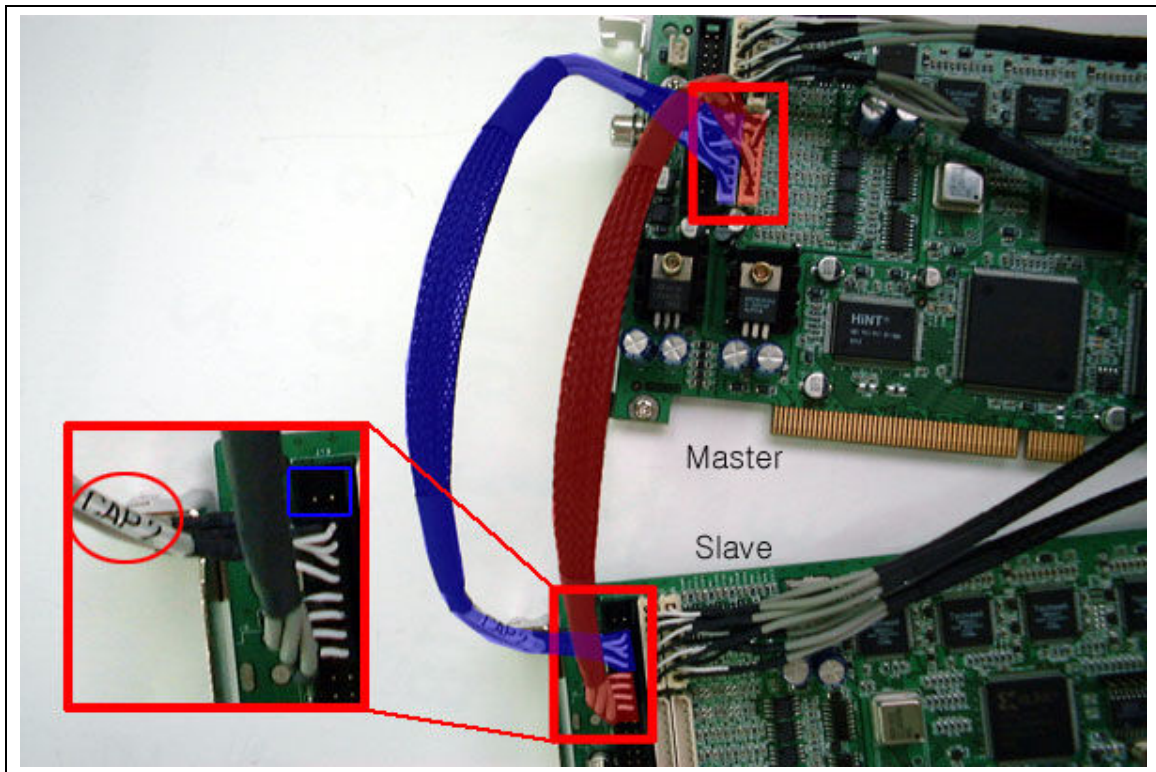


4.3. (NVB-200/16A) 16 Channel Board:

16 Channel Board and Accessories	
A green printed circuit board (PCB) with various electronic components, including integrated circuits, capacitors, and connectors. It has a PCI edge connector at the bottom.	A green printed circuit board (PCB) similar to the master board, but with a different component layout, specifically a different set of connectors and components on the right side.
16 Channel Board(Master)	16 Channel Board(Slave)
A flat, grey ribbon cable with a green connector on one end and a black connector on the other.	A black cable with a multi-pin connector on one end and several individual colored cables (red, white, blue) on the other.
Sensor, Relay cable	Camera I/O cable
A black cable with two multi-pin connectors at both ends.	A thin, black cable with a small black connector at one end and a longer, thin wire at the other.
Inter connecting cable from Slave to Master board	Watchdog line

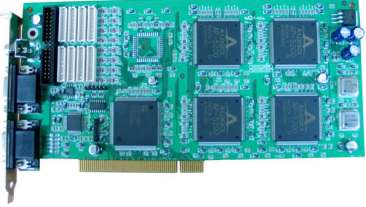

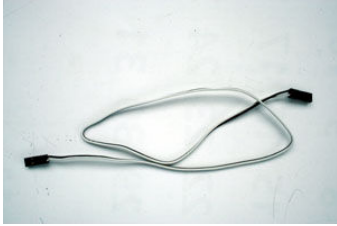
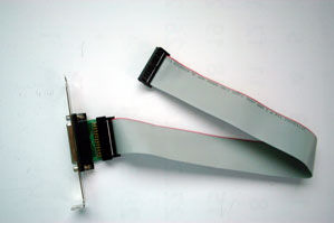
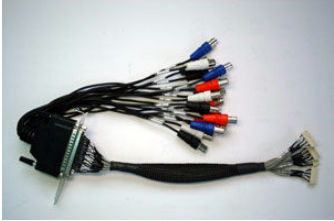

Connect the Camera I/O cable



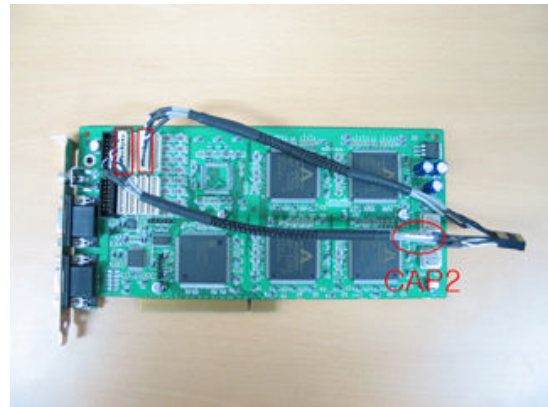
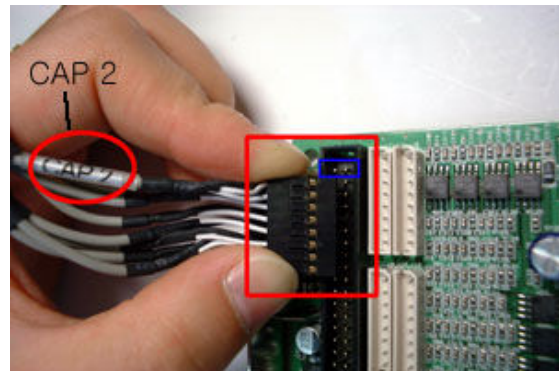
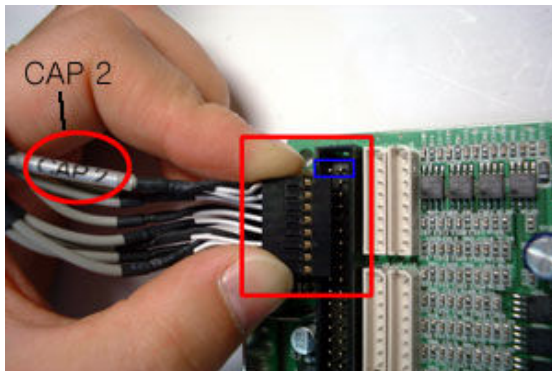
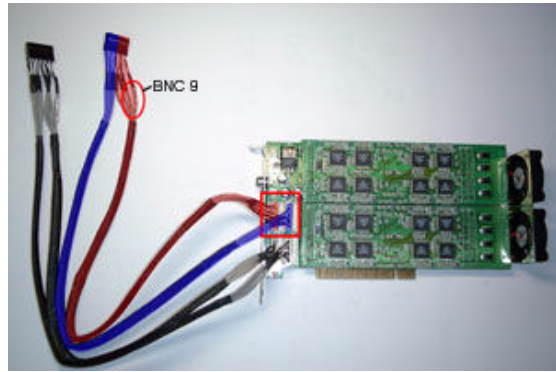
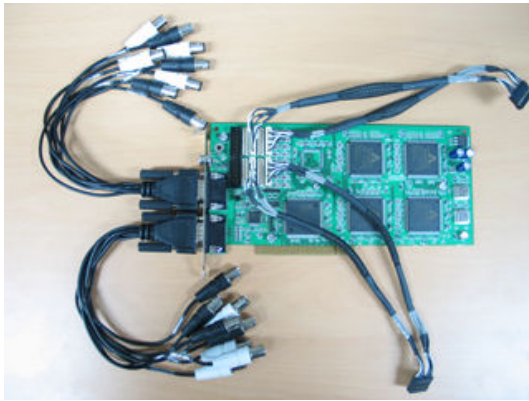
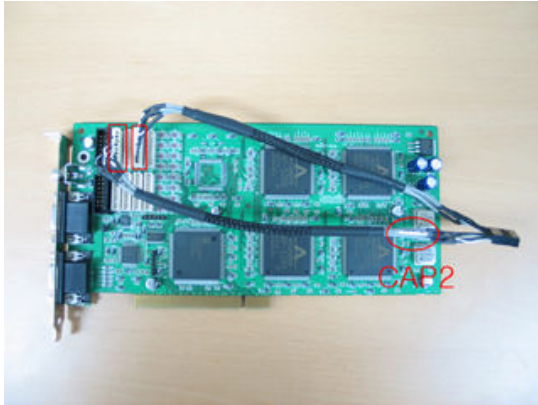


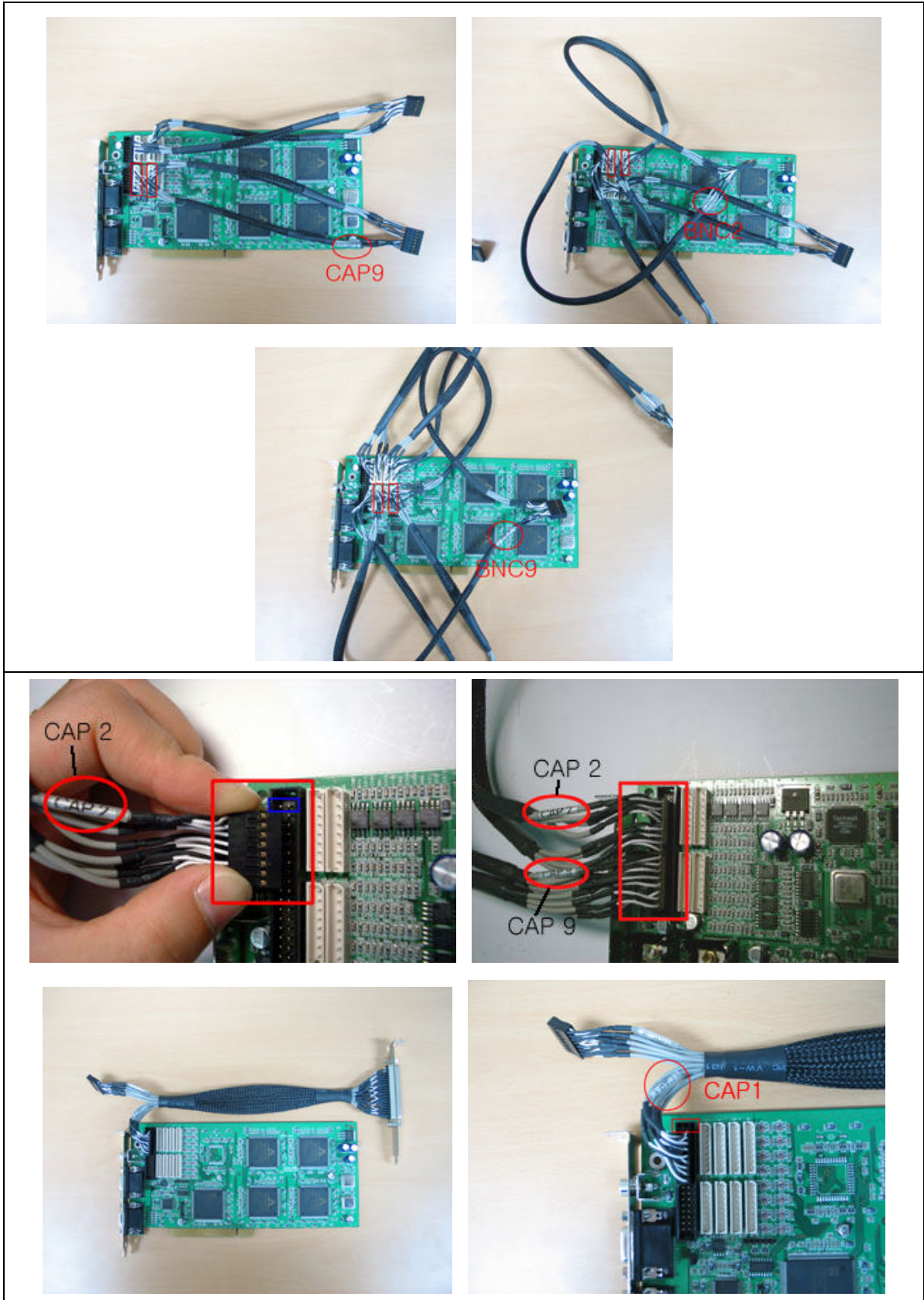
5. Install Live Video Board:

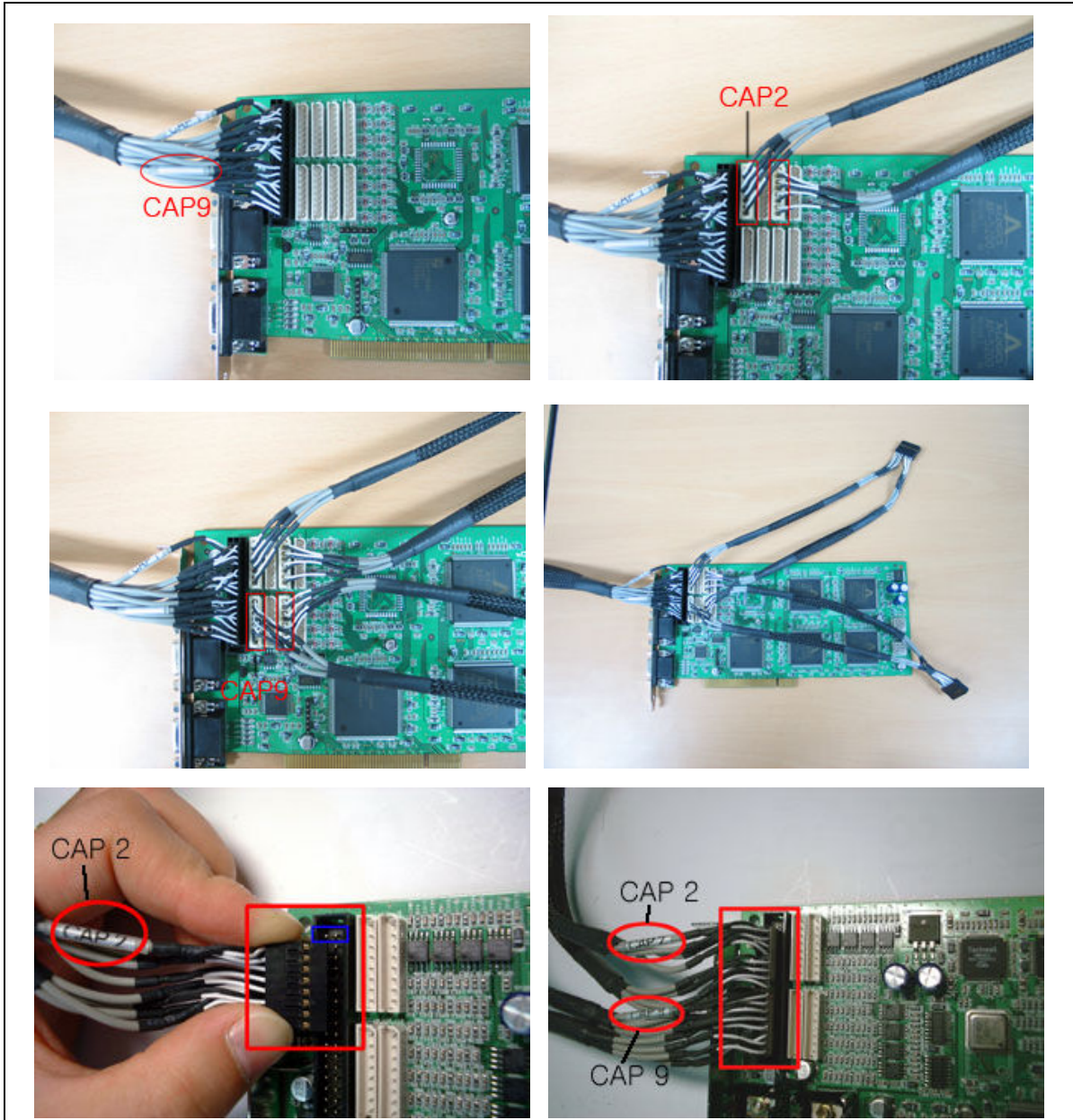
5.1. NVB-100/16 + NVB-LIVE16:

Live Video Board and Accessories	
	
Live Video (16Channel) Board	Capture (16channel) Board
	
Watchdog line	Sensor, Relay cable
	
Camera I/O cable	CAP cable (for connection to Capture Card)

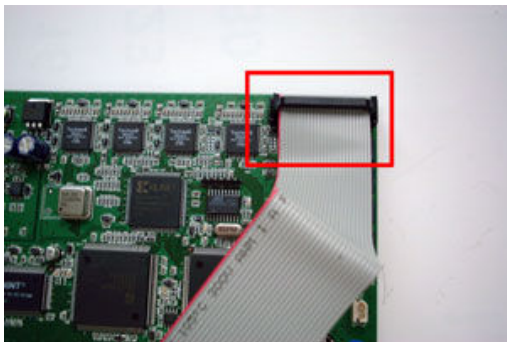
1 Connect cables as follows



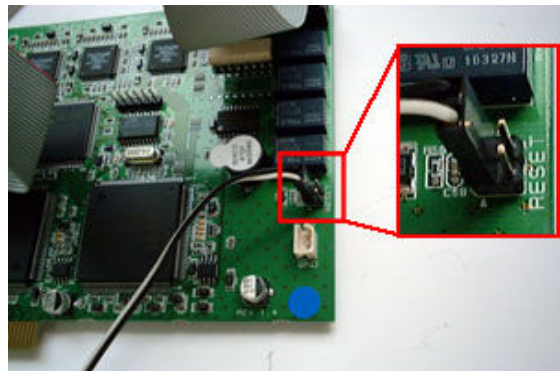




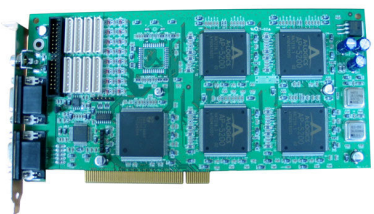


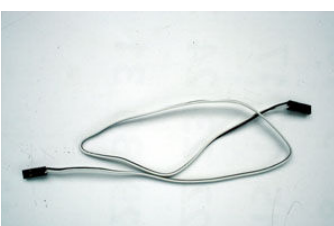
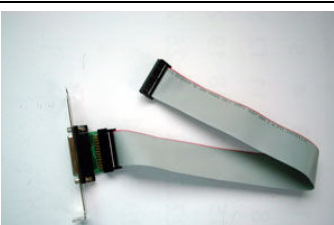
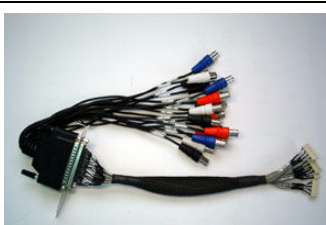


2. Connect the Sensor Relay cable



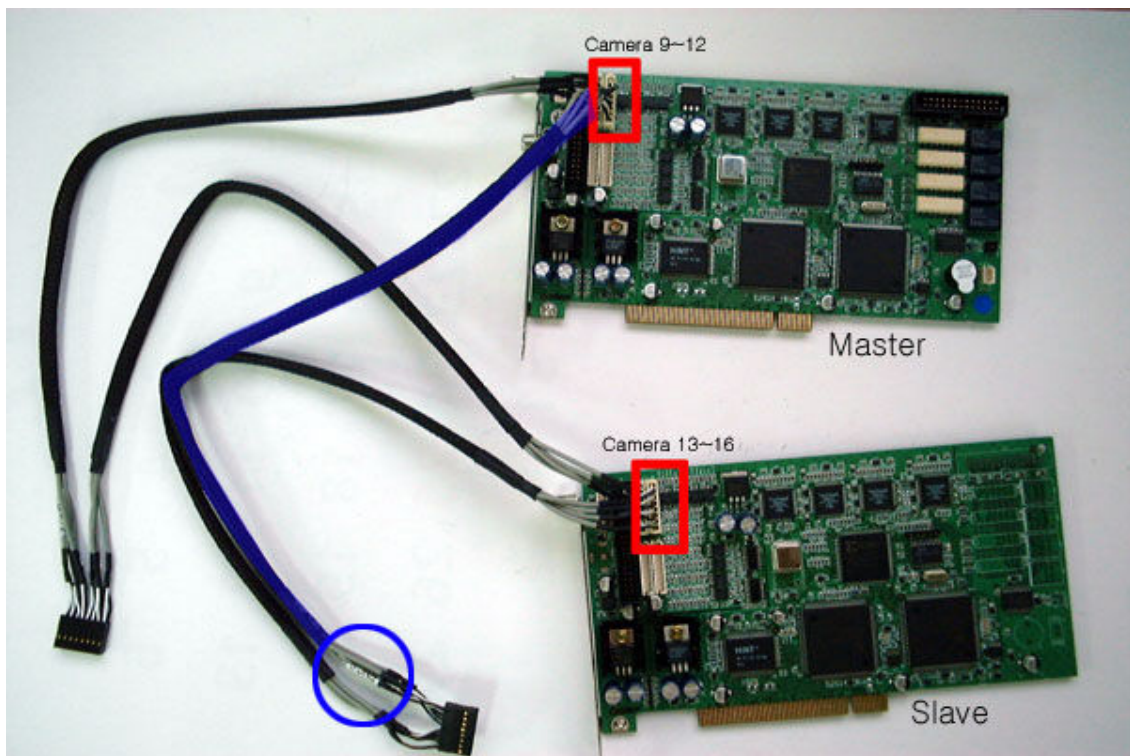
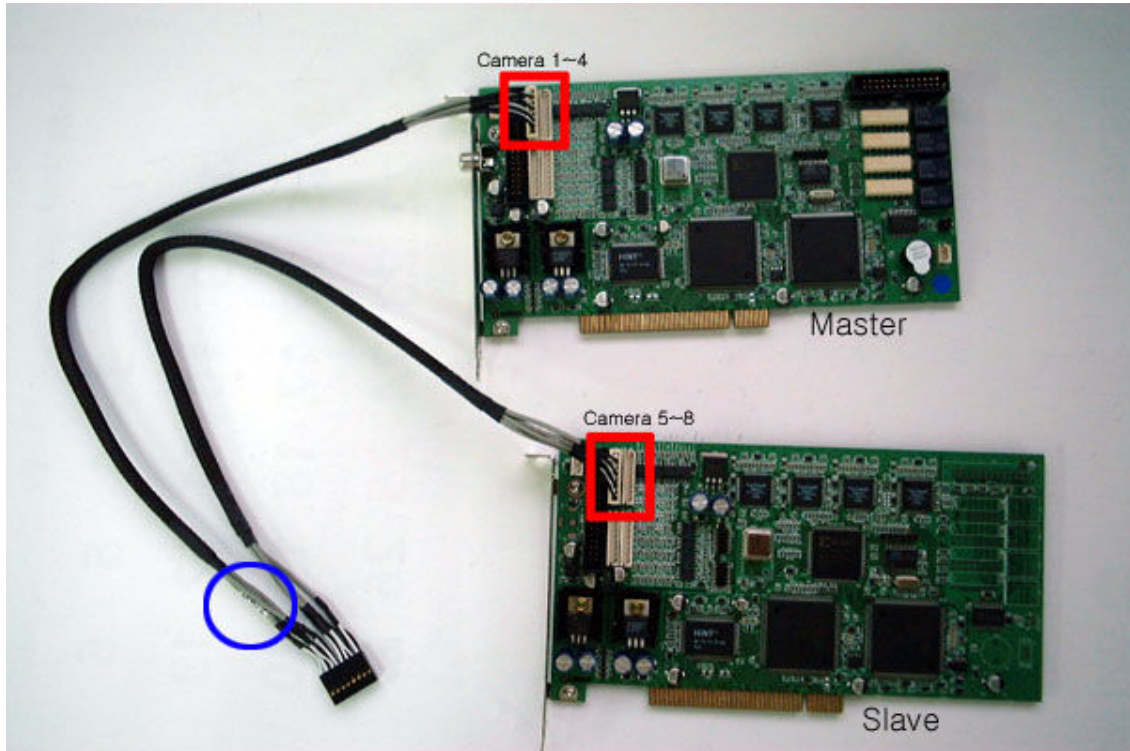
3. Connect the Watchdog line

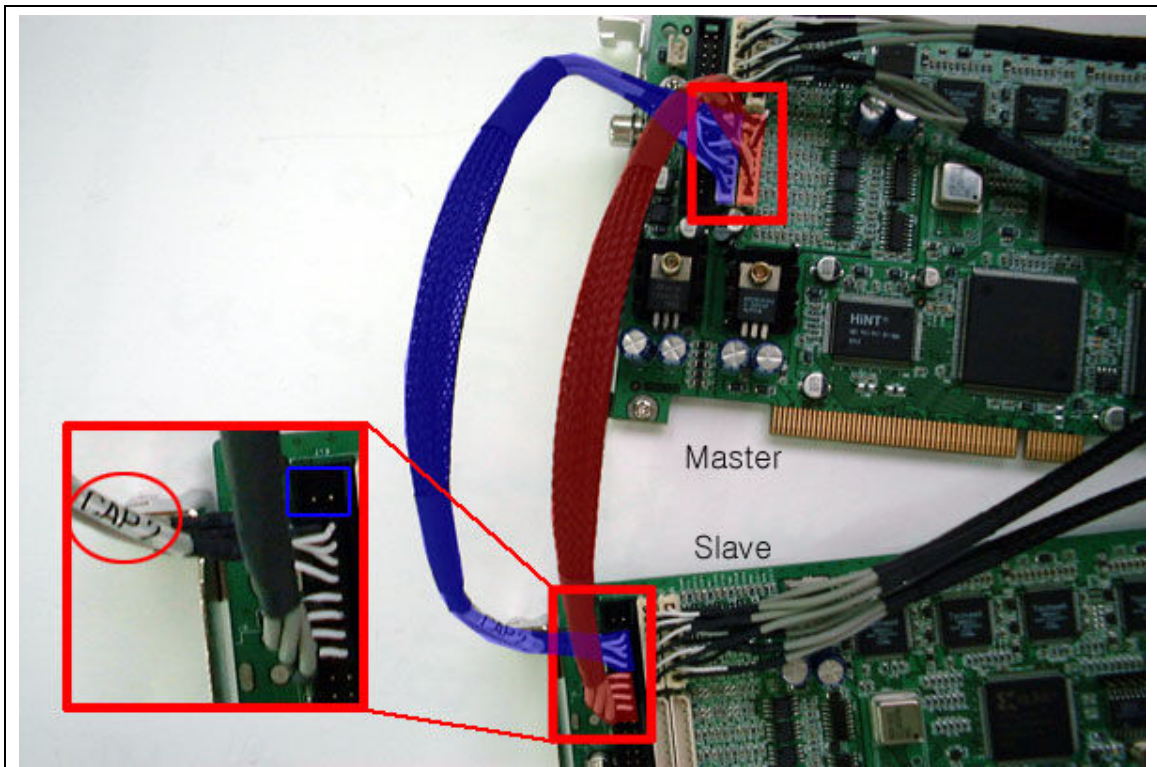


5.2. NVB-200/16A + LIVE16:

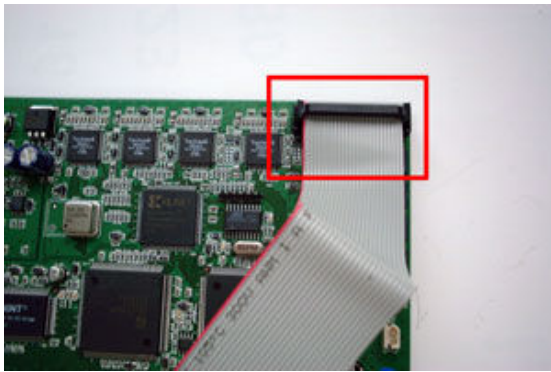
Live Video Board and Accessories	
	
Live Video(16 Channel) Board	Master Capture Board
	
Slave Capture Board	Watchdog line
	
Sensor, Relay cable	Camera cable
	
Inter connecting cable from Slave to Master board	CAP cable (for connection to Capture Card)

1 Connect the Camera I/O cable

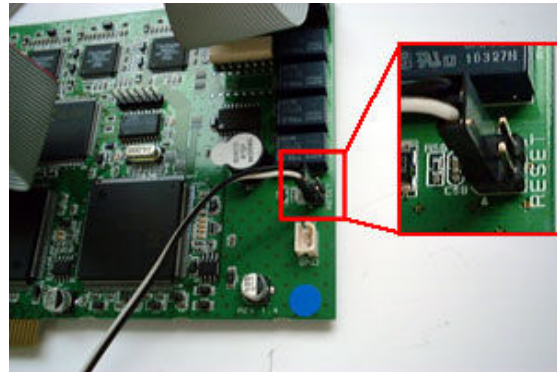




2 Connect the Sensor Relay cable (Master Board)



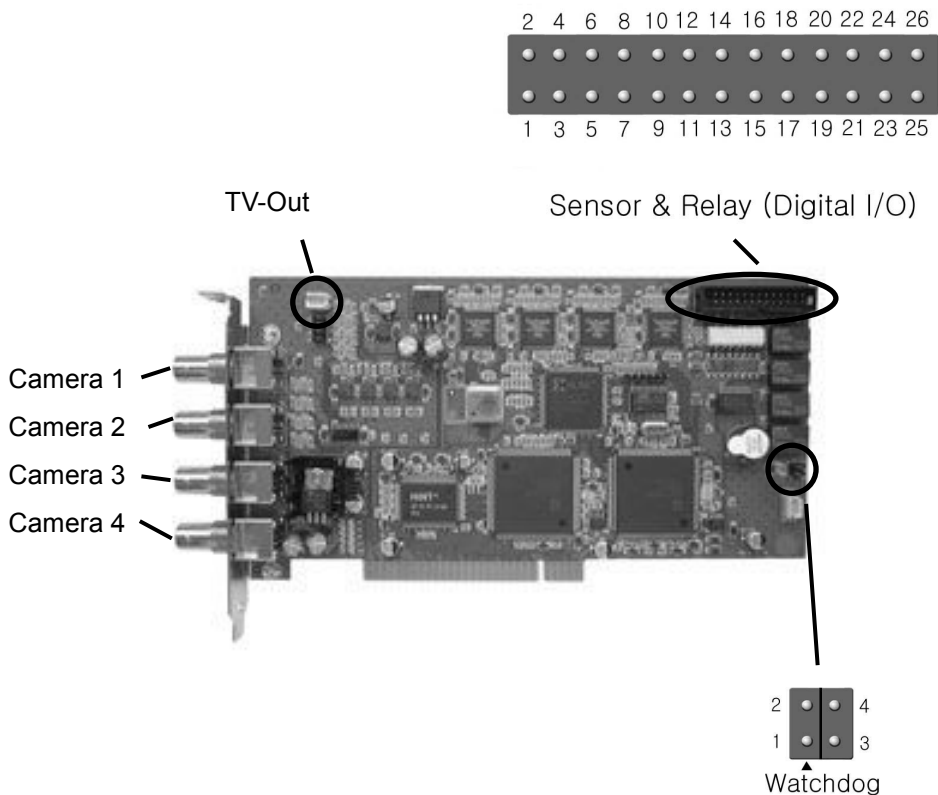
3 Connect the Watchdog (Master Board)



6. Pin number:

6.1. Capture Board with 4 Channels:

Pin Arrangement of NVB-025/4A, -050/4A and -100/4A Boards are exactly the same

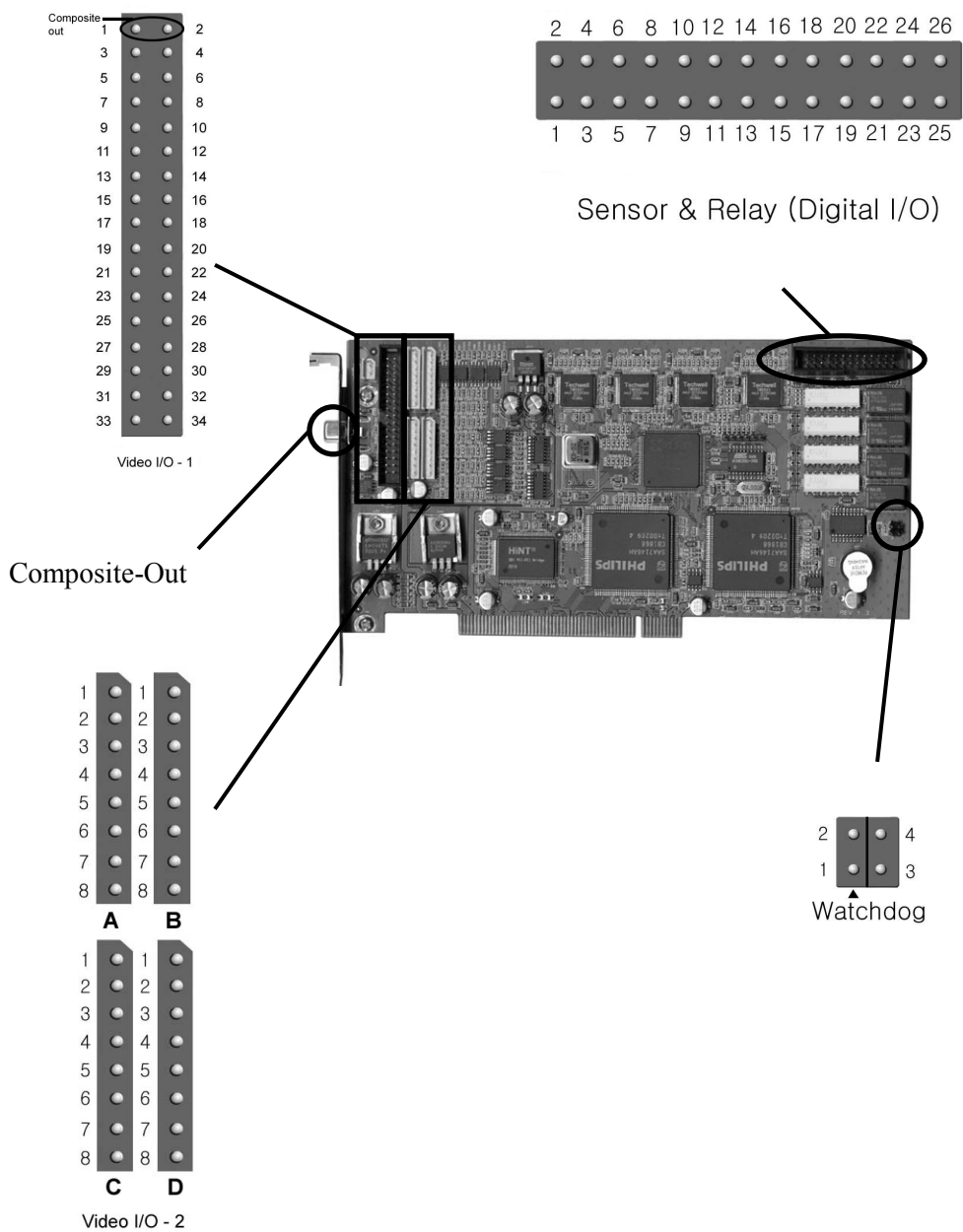


Sensor & Relay(digital I/O)	
Pin name	Pin number
Sensor Input 0~3	1~4
Input Common 0~1	17, 18
Relay(Digital) Output 0~3	19~22
Output Common 0~1	23, 24

Watchdog	
Pin name	Pin number
Signal Ground	2, 4
Reset Signal	1, 3

6.2. Capture Board 8, 16 Channel:

1 Pin Arrangement of NVB-050/8A, -50/16A,-100/8A,-100/16A is the same.



Video I/O - 1	
Pin name	Pin number
Signal Ground	1, 3, 5 ~ 29, 31, 33
Composite Out	2
Video In 0~15	4, 6, 8 ~ 30, 32, 34

At 8 channels board: Video In 0~7: 4,6,8,10,12,14,16,18

Video I/O - 2	
Pin name	Pin number
Video In	1, 3, 5, 7
Signal	2, 4, 6, 8

Video I/O - 2 (Camera Connector)	
Group name	Camera number
A	Camera 1~4
B	Camera 5~8
C	Camera 9~12
D	Camera 13~16

* At 8 channels board, Only Group A and B are applied

Sensor & Relay(digital I/O)	
Pin name	Pin number
Sensor Input 0~15	1~16
Input Common 0~1	17, 18
Relay(Digital) Output 0~3	19~22
Output Common 0~1	23, 24

Watchdog	
Pin name	Pin number
Signal Ground	2, 4
Reset Signal	1, 3

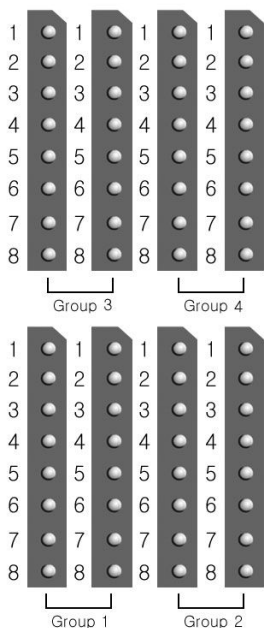
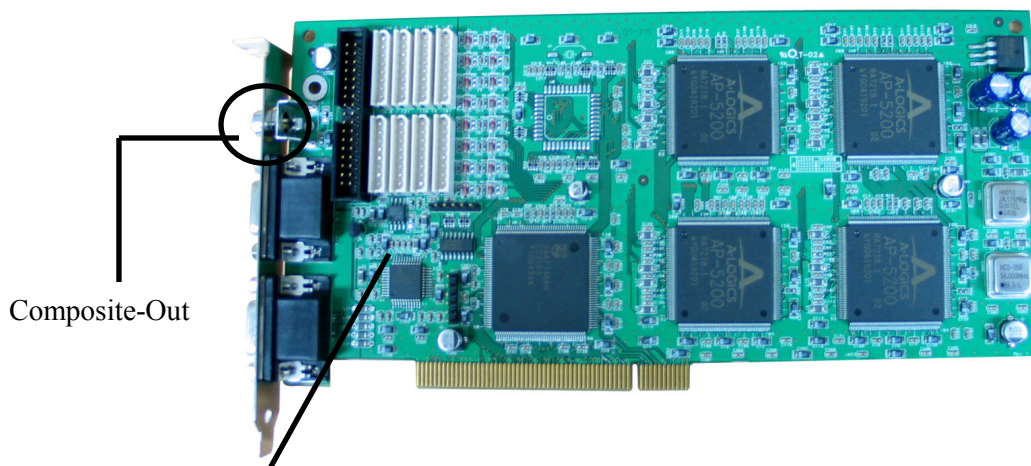
*At 8 channels board, Sensor Input pin are 0~7

2 Pin arrangements for NVB-200/8A, -200/16A are as follows

Video I/O – 2 (Camera Connector)			
Master Board		Slave Board	
Group name	Camera number	Group name	Camera number
A	Camera 1~4	A	Camera 5~8
B	Camera 9~12	B	Camera 13~16

* At 8 channels board, only A Group is used in Master or Slave Board.

6.3. Live Video Board:



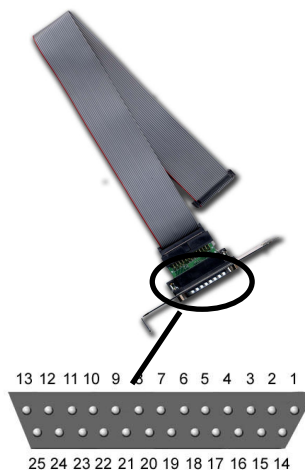
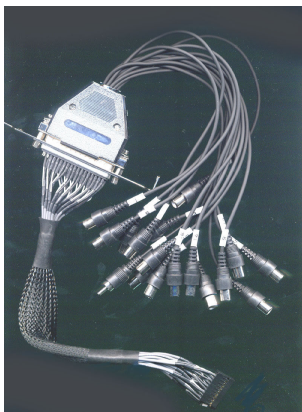
Pin	
Pin name	Pin number
Video In	1,3,5,7
Signal	2,4,6,8

Camera Connector	
Group name	Camera number
Group 1	Camera 1~4
Group 2	Camera 5~8
Group 3	Camera 9~12
Group 4	Camera 13~16

* 8 channel board, only group 1, 2 are used

6.4. Accessories:

*** Pig tail Type**



Video I/O

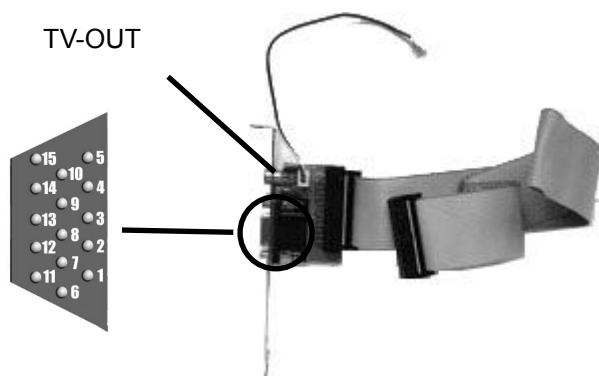
Sensor & Relay (Digital I/O)

Video I/o	
Pin name	Pin number
Signal Ground	1, 3, 5~29, 31, 33
Composite	2
Video in 0~15	4, 6, 8~30, 32, 34

8 channel board, Video In are 0~7

Sensor & Relay(Digital I/O)	
Pin name	Pin number
Sensor Input 0~15	1~16
Input Common 0~1	17, 18
Relay(Digital) Output 0~3	19~22
Output Common 0~1	23, 24

*** 4. Channel Type:**

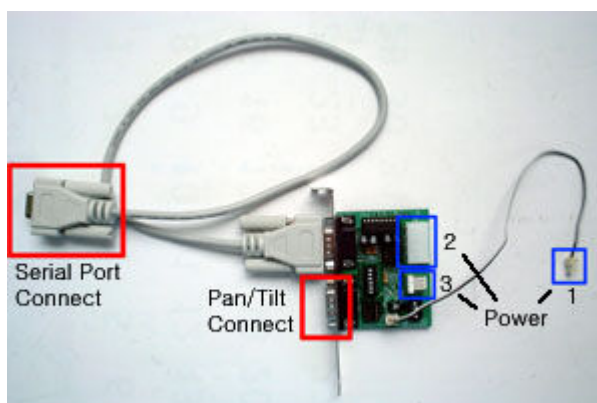


<< Sensor & Relay, TV-Out >>

Sensor & Relay Connector	
Pin name	Pin number
Sensor Input 0, 1, 2, 3	12, 13, 14, 15
Input Common 0, 1	4, 9
Relay (Digital) Output 0, 1, 2, 3	8, 3, 7, 2
Output Common 0, 1	1, 6

7. RS422/485 Converter:

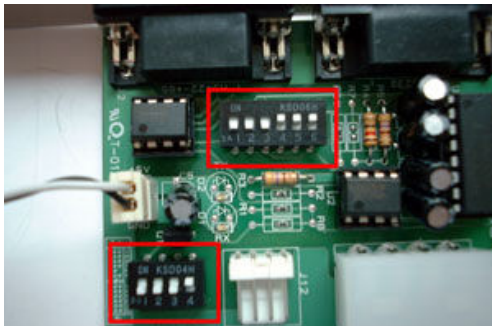
This converter controls cameras Pan / Tilt features which are supported with: RS485/422 Port



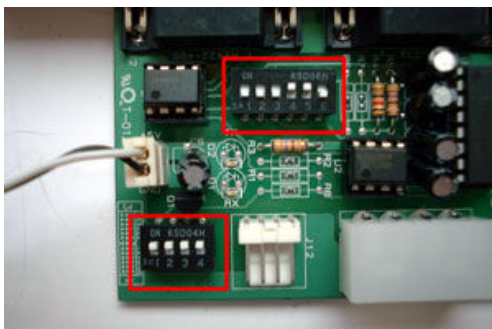
1. Connect 15 pin cable to serial Port in main board and RS232 port in this converter.
2. Power connection is available from 3 different sources:

- a) Connect the power cable from power unit to socket No.2 (+5V)
- b) Connect the power cable from power unit to socket No.3
- c) Connect power cable from capture board to socket No.1 (Optional)

For RS-422 Pan / Tilt settings, set the jumper as follows:

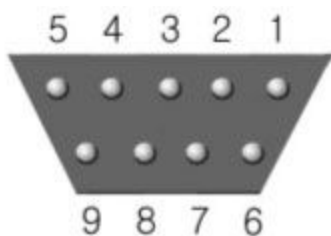


For RS-485 Pan / Tilt settings, set the jumper as follows:



- 4. Connect the cable from RS485/422 port to PTZ driver like expressed on figure below.
- 5. If you use PTZ cameras supporting 232 Pan / Tilt, you need to connect the cable from PTZ camera to PC serial port directly.

RS-422/485 Pin number

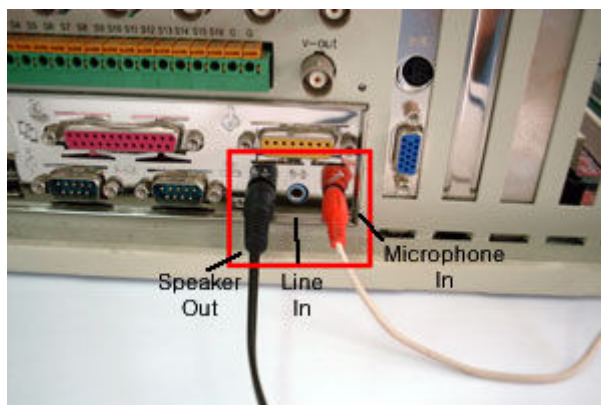


RS-422/485 Connector	
Pin name	Pin number
- TxData	1
+ TxData	2
- RxData	3
+ RxData	4
Signal	5

8. Audio Cables connection, audio recording:

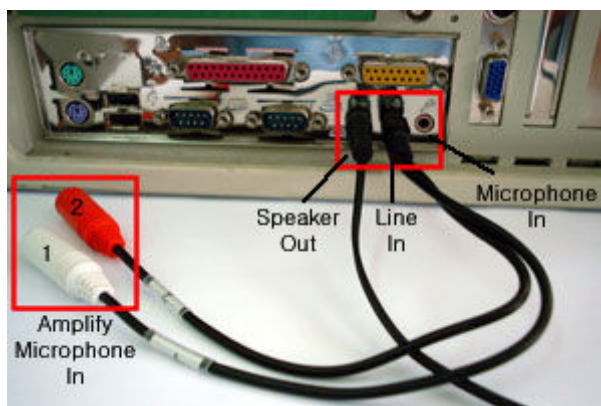
Before connecting the microphone into the Mic-In socket, make sure that the Sound Settings are enabled in Line-In and Microphone-In options. DirectX 8.0 or higher version should be installed for proper sound recording.

8.1. One channel Sound:



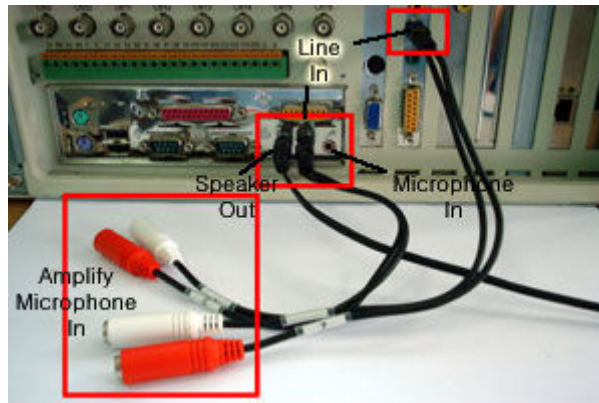
Put the Microphone into “MIC-IN” of Sound card.

8.2. Two Channel Sound:



1. Put the enclosed special cable into the “Line-In” of Sound card like shown on picture above.
2. Like shown on above picture, connect the amplified microphone to each of two lines cables. You should use Amplified Microphone.

8.3. Four Channel Sound:



1. You should install two sets of sound cards to be able to use four channels of sound. Usually, main boards are equipped with only one sound card. So, additional card must be installed manually.
2. Using two special cables mentioned in chapter 8.2, put these cables into each of these two sound cards "Line-In" ports.
3. Use 4 sets of the amplified microphone.

Note) When 3 sets of microphones are being used; setting is same as in the systems with 4 sets of microphones.

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