



## The Intelligent Surveillance Solution

# Hardware & Software NDVR Installation Guide

Ver. 99.340.A112.001

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## System Requirement

### 1000 SERIES; 3000 SERIES

#### Product Specification

G3 Card

	3000 Series	1000 Series
Display Rate	120fps(NTSC); 100fps (PAL)	30fps(NTSC); 25fps (PAL)
Recording Rate	120fps(NTSC); 100fps (PAL)	30fps(NTSC); 25fps (PAL)
Maximum Card	2	4
Video Input	4; 8; 16	4; 8
Audio Input	4	1
Video Resolution	NTSC: 704x480 ; 640 x 480 ; 352x240 PAL: 704x576 ; 640 x 576 ;352x288	
Compression Format	Software Compression MPEG 4	

#### System Requirement

The system requirement is depend on the number of camera connections and the total bit rate of the IP cameras. Please refer [Appendix - Minimum Hardware Requirement](#) or check NUUO Calculator on <http://support.nuuo.com/calculator/>

## Hardware Installation

### Hardware Installation

For G3-card and R-card, the hardware installation steps are all the same except the connection of Audio/Video Cable. The following figure shows the detail.

**Step 1:** Insert the card onto an empty PCI slot. Connect the **Audio/Video Cable** to the connector in the same color.

**Step 2:** Turn on your PC and start Windows.

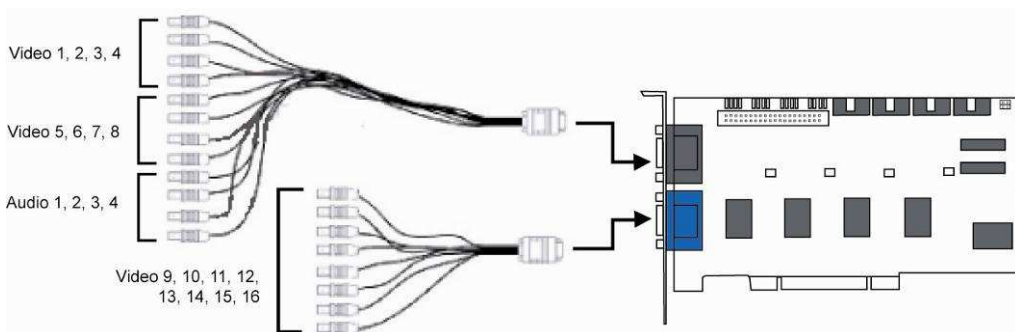
**Step 3:** Insert the included Software CD into CD-ROM.

**Step 4:** Refer the section Driver Installation on page 21 to install driver.

**Step 5:** After driver being installed, restart your PC.

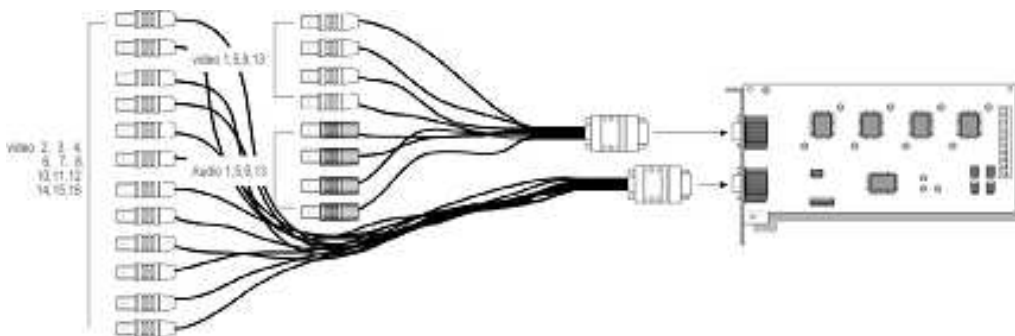
## Connect the Audio/Video Cable

### 1. G3-card



Note: for G3-3000 series, audio channels are located at 1, 2, 3, 4.

### 2. R-card



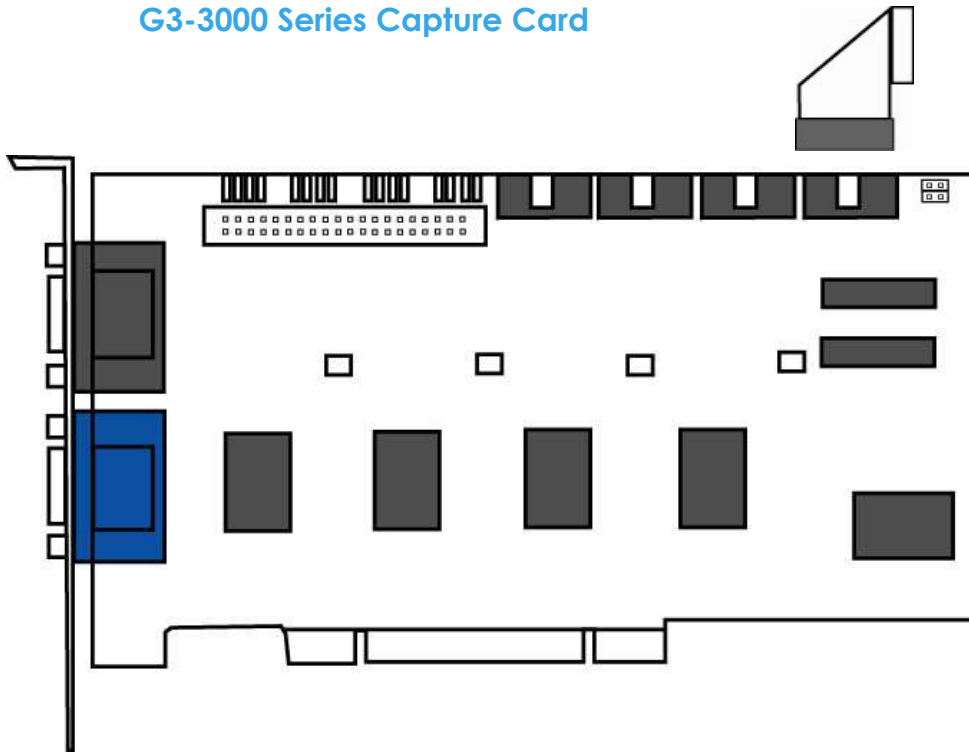
Note: for R- 3000 series, audio channels are located at 1,5,9,13.

**Optional I/O Card** referring to the figures on the following pages.

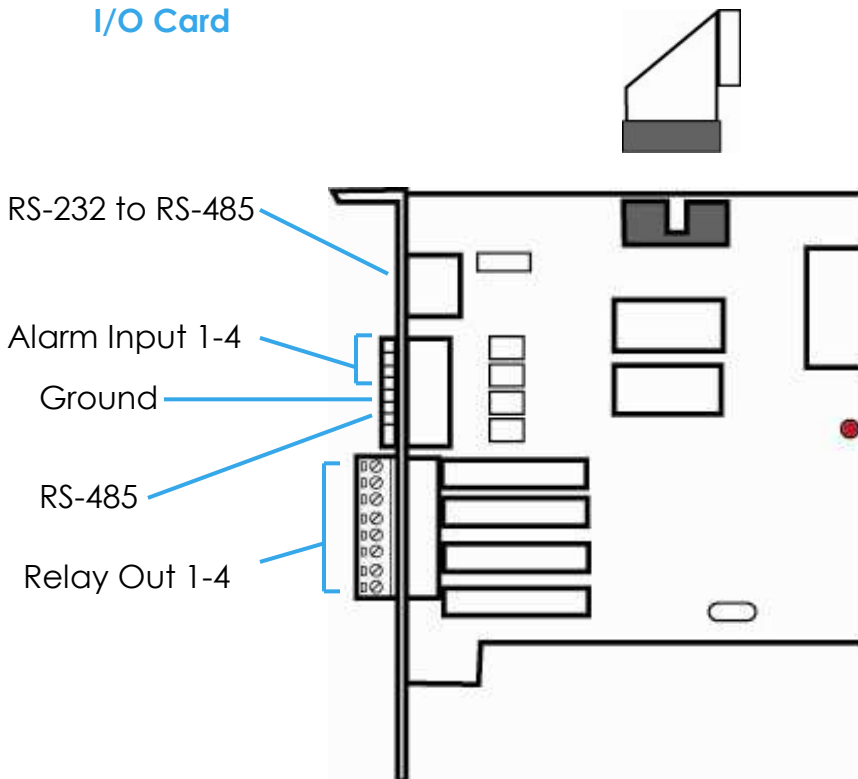
Insert the card onto your PC.

Connect the Capture Card and the I/O Card with an included ribbon cable. You may connect the ribbon cable to one of the I/O ports on the Capture Card.

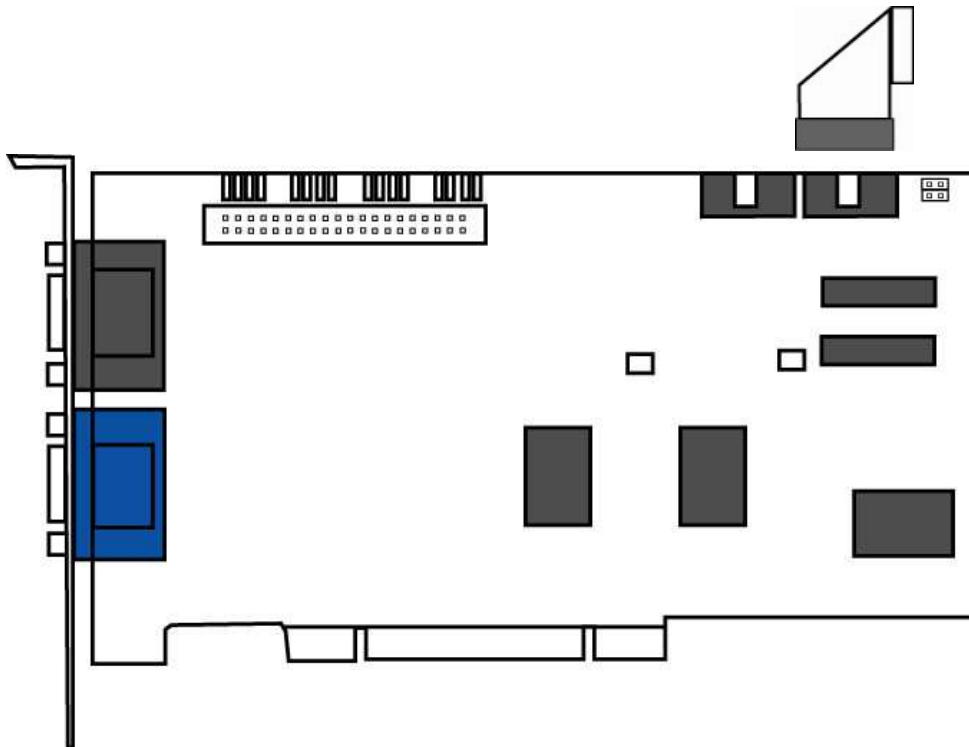
### G3-3000 Series Capture Card



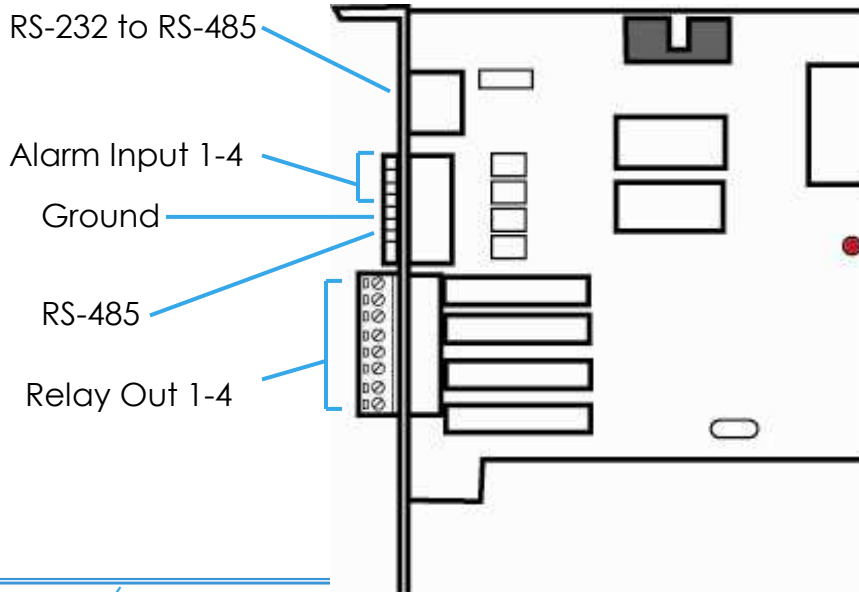
### I/O Card



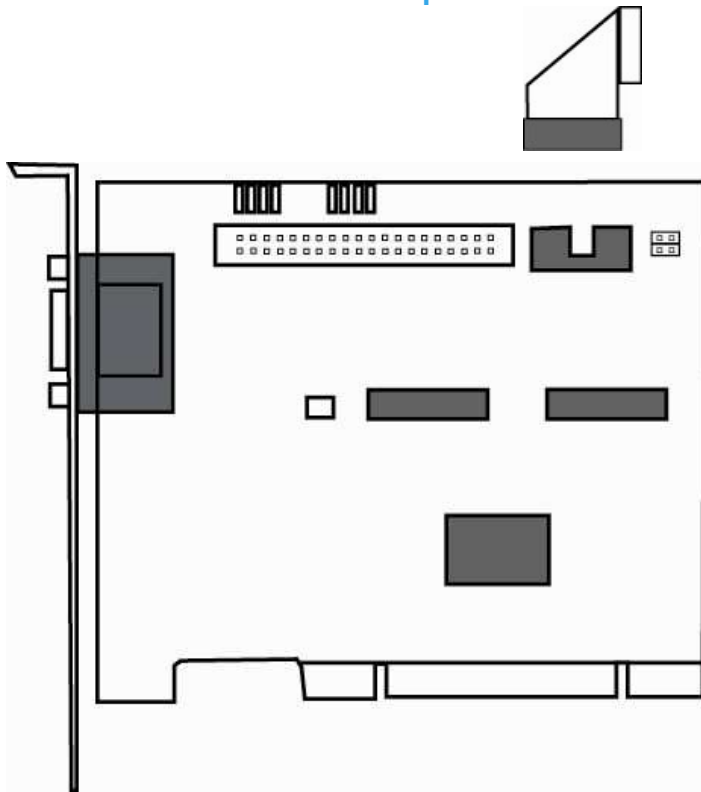
### G3-2000 Series Capture Card



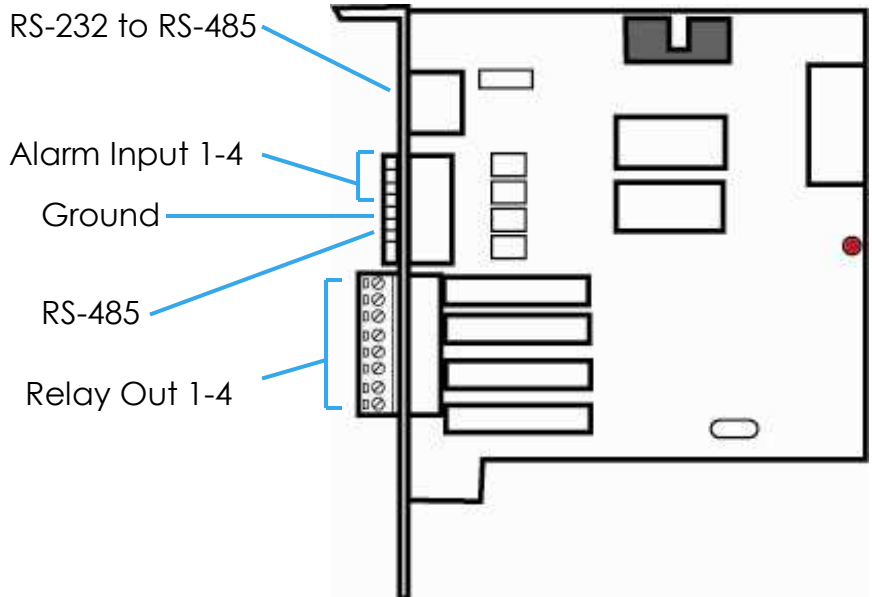
### I/O Card



### G3-1000 Series Capture Card

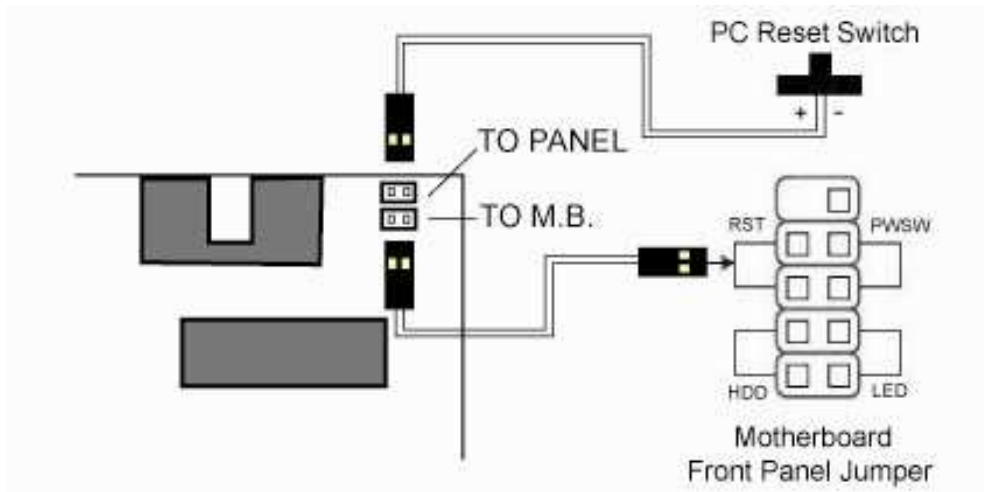


### I/O Card





### G3-card Watchdog Installation



## Product Specification

### 5000 SERIES

#### Product Specification

	5016	5008	5004
Display Rate	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)	120fps(NTSC); 100fps (PAL)
Recording Rate	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)	120fps(NTSC); 100fps (PAL)
Maximum Card	4	4	4
Video Input	16	8	4
Audio Input	16	8	4
Video Resolution	NTSC: 176x120; 352x240; 528x320; 704x480 PAL: 176x144; 352x240; 528x320; 704x480		
Compression Format	Hardware Compression H.264		

#### System Requirement

The system requirement is depend on the number of camera connections and the total bit rate of the IP cameras. Please refer [Appendix - Minimum Hardware Requirement](#) or check NUUO Calculator on <http://support.nuuo.com/calculator/>

## Hardware Installation

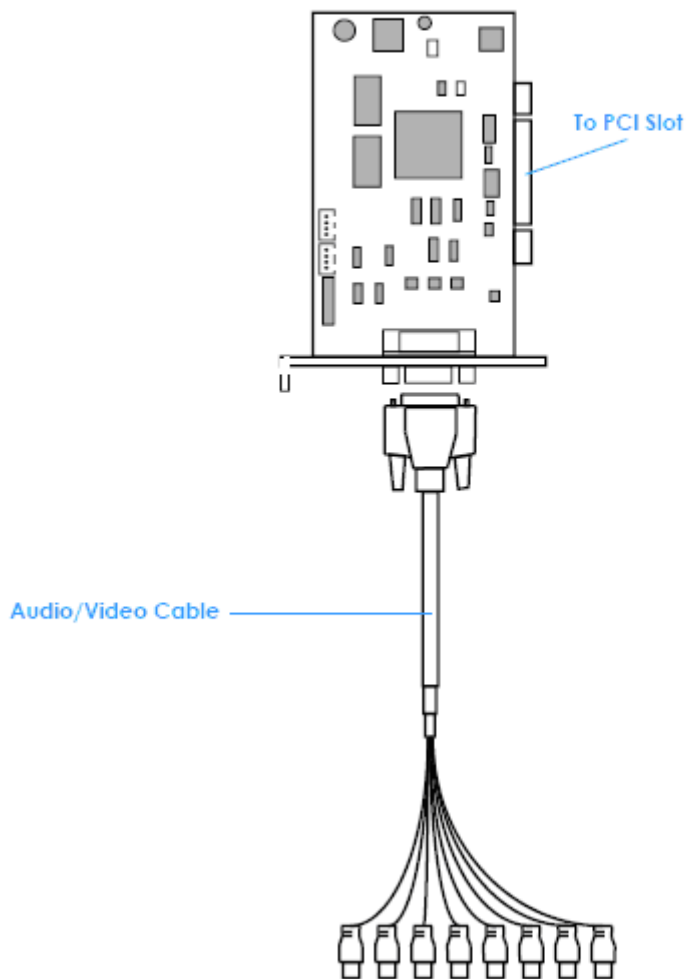
### Hardware Installation

**Connecting the Audio/Video Cable** - referring to the figure on next page.

The audio input connectors are with white wires and marks of "AID" on them; the video input connectors are with red wires and the marks of "VID".

*Note:* It is known that NUUO **5004 card** has compatibility problem with PPCI slot. NUUO 5004 cards can only be installed in **SPCI slots**. Normally, those 3 PCI slots nearest to CPU are PPCI slots. Avoid install 5004 card in these 3 slots. If driver was installed okay but one still encountered a problem shown below, try to install this 5004 card in another PCI slot.

### 5000 Series Capture Card



## Product Specification

### 6000 SERIES

#### Product Specification

	6016	6008	6004
Display Rate	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)	120fps(NTSC); 100fps (PAL)
Recording Rate (CIF)	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)	120fps(NTSC); 100fps (PAL)
Maximum Card	2	4	4
Video Input	16	8	4
Audio Input	16	8	4
Video Resolution	NTSC: 176x120; 352x240; 704x480 PAL: 176x144; 352x288; 704x576		
Compression Format	Hardware Compression H.264		

#### System Requirement

The system requirement is depend on the number of camera connections and the total bit rate of the IP cameras. Please refer [Appendix - Minimum Hardware Requirement](#) or check NUUO Calculator on <http://support.nuuo.com/calculator/>

## Hardware Installation

### Hardware Installation

**Connecting the Audio/Video Cable** - referring to the figure on next page.

The audio input connectors are with yellow wires and marks of "A" on them (such as "A1/9"); the video input connectors are with black wires and the marks of "V" (such as "V8/16").

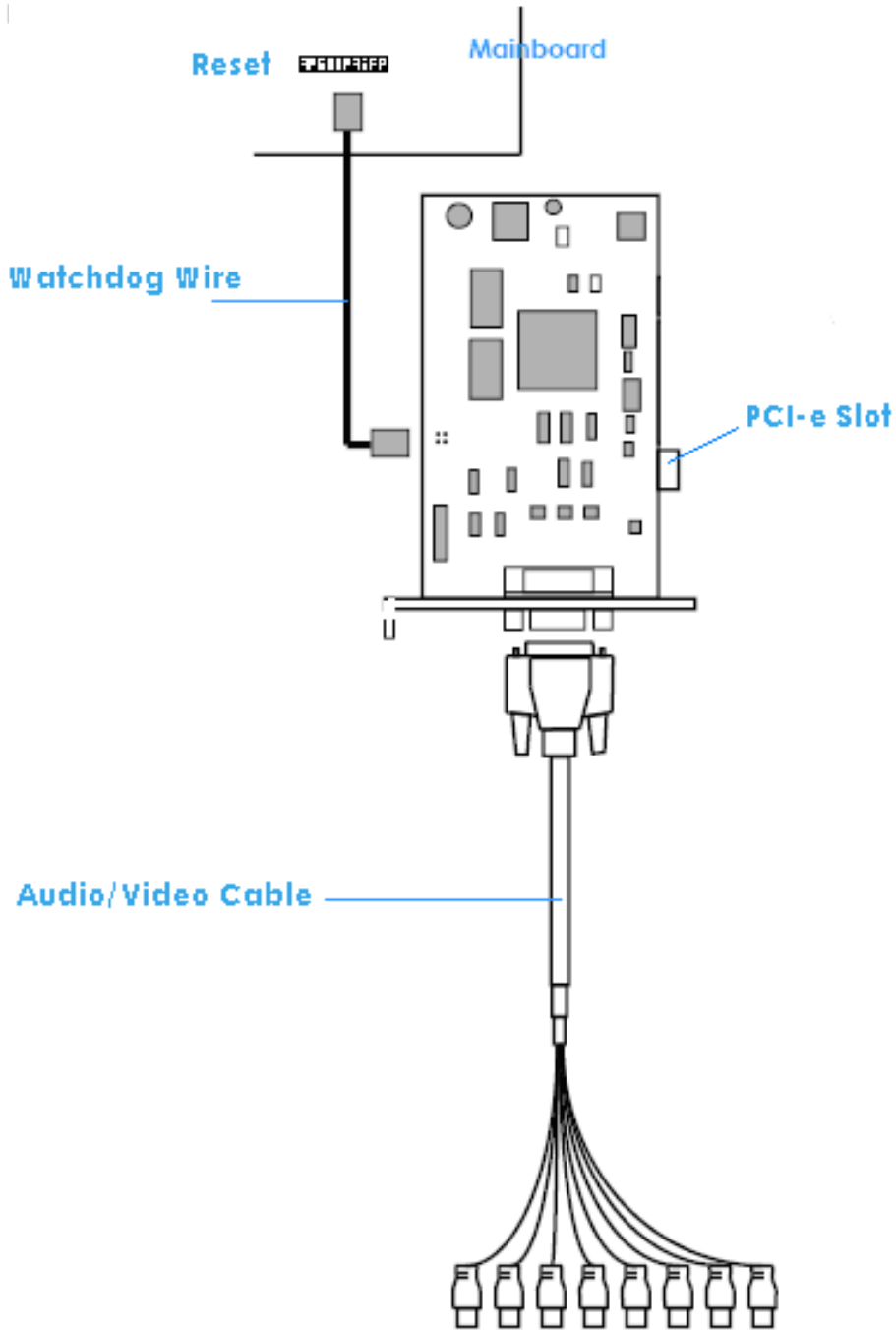
**Connecting the Watchdog Wire** - referring to the figure on next page.

Plug the **Watchdog Wire** to the **Reset** connector of the Hardware Compression Card and then connect it to the **Reset** connector on the main board.

With the **Watchdog Wire** connected, the system will be restarted if any abnormal conditions.

Product Specification

6000 Series Capture Card



## Product Specification

### 7000 SERIES

#### Product Specification

	7016	7008	7004
Display Rate	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)	120fps(NTSC); 100fps (PAL)
Recording Rate (D1)	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)	120fps(NTSC); 100fps (PAL)
Maximum Card	2	4	4
Video Input	16	8	4
Audio Input	16	8	4
Video Resolution	NTSC: 176x120; 352x240; 704x480 PAL: 176x144; 352x288; 704x576		
Compression Format	Hardware Compression H.264		

#### System Requirement

The system requirement is depend on the number of camera connections and the total bit rate of the IP cameras. Please refer [Appendix - Minimum Hardware Requirement](#) or check NUUO Calculator on <http://support.nuuo.com/calculator/>



## Hardware Installation

**Connecting the Audio/Video Cable** - referring to the figure on next page.

The audio input connectors are with yellow wires and marks of "A" on them (such as "A1/9"); the video input connectors are with black wires and the marks of "V" (such as "V8/16").

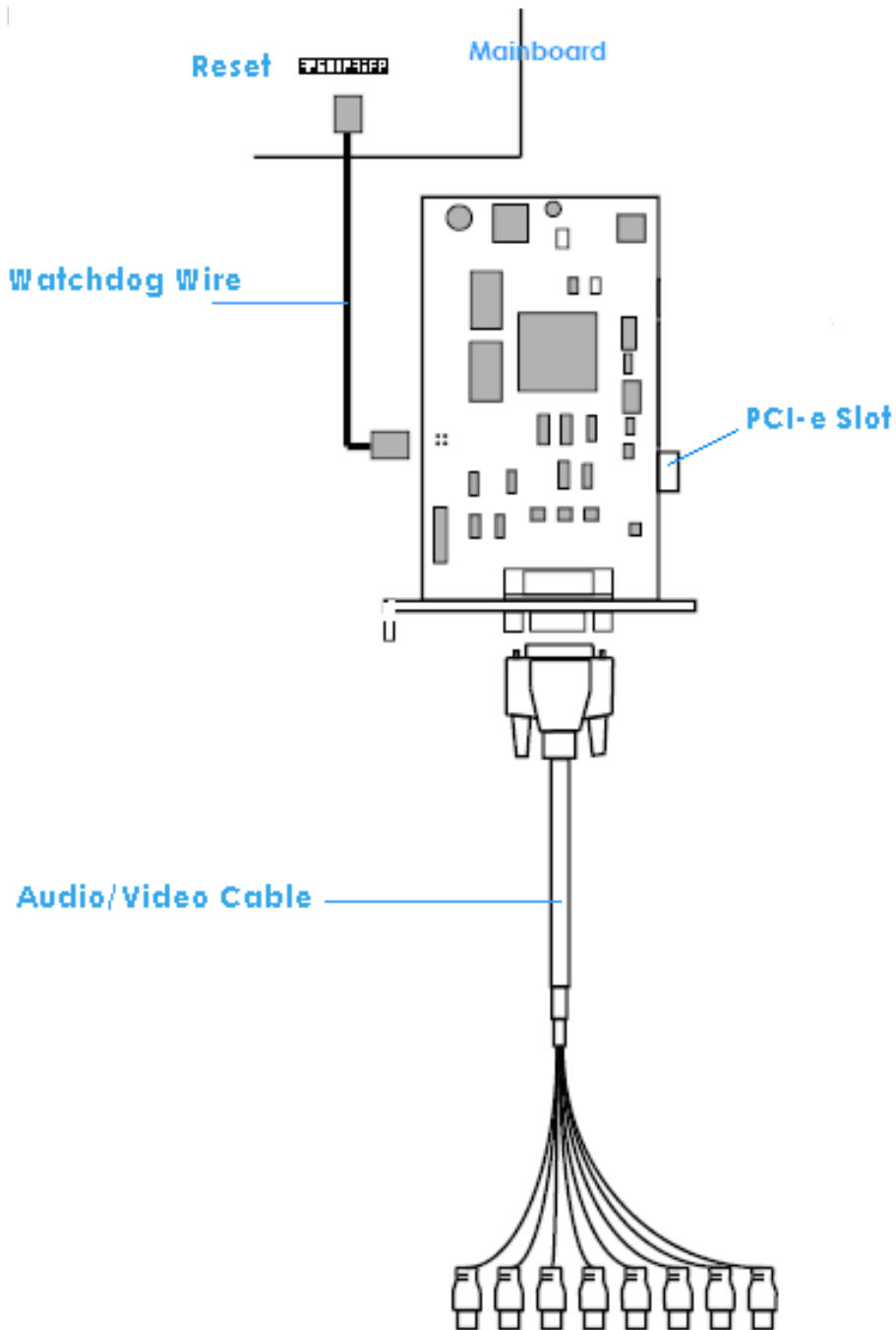
**Connecting the Watchdog Wire** - referring to the figure on next page.

Plug the **Watchdog Wire** to the **Reset** connector of the Hardware Compression Card and then connect it to the **Reset** connector on the main board.

With the **Watchdog Wire** connected, the system will be restarted if any abnormal conditions.

Product Specification

7000 Series Capture Card



## Product Specification

### 7100 SERIES

#### Product Specification

	7116	7108
Display Rate	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)
Recording Rate (D1)	480fps(NTSC); 400fps (PAL)	240fps(NTSC); 200fps (PAL)
Maximum Card	1	1
Video Input	16	8
Audio Input	16	8
Video Resolution	NTSC: 176x120; 352x240; 704x480 PAL: 176x144; 352x288; 704x576	
Compression Format	Hardware Compression H.264	

#### System Requirement

The system requirement is depend on the number of camera connections and the total bit rate of the IP cameras. Please refer [Appendix - Minimum Hardware Requirement](#) or check NUUO Calculator on <http://support.nuuo.com/calculator/>

## Product Specification

### Hardware Installation

**Connecting the Audio/Video Cable** - referring to the figure on next page.

The audio input connectors are with yellow wires and marks of "A" on them (such as "A1/9"); the video input connectors are with black wires and the marks of "V" (such as "V8/16").

**Connecting the Watchdog Wire** - referring to the figure on next page.

Plug the **Watchdog Wire** to the **Reset** connector of the Hardware Compression Card and then connect it to the **Reset** connector on the main board.

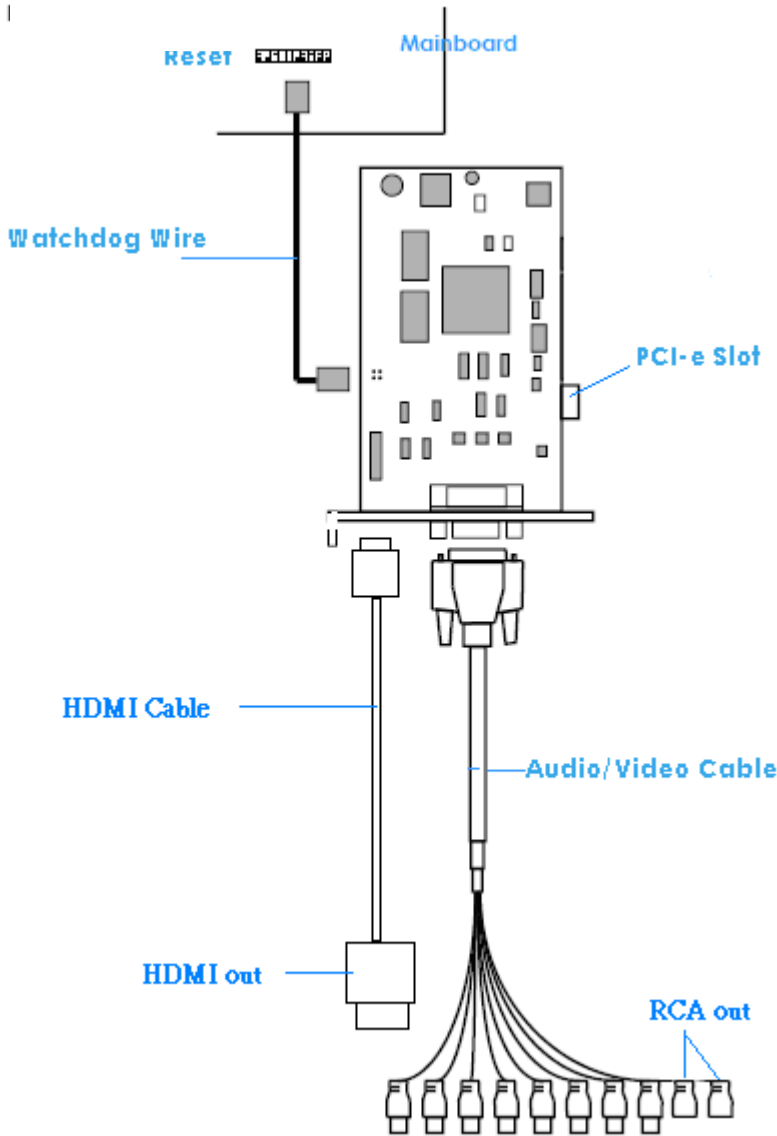
With the **Watchdog Wire** connected, the system will be restarted if any abnormal conditions.

**Note 1:** Before installing SCB-7100 Series cards, please connecting HDMI cable first then it would be easier to fix the card onto the PCI-e slot.

**Note 2:** Some chassis may not be suitable for installing SCB-7100 series due to the original design, please check the dimension of the chassis before installing.

Hardware Installation

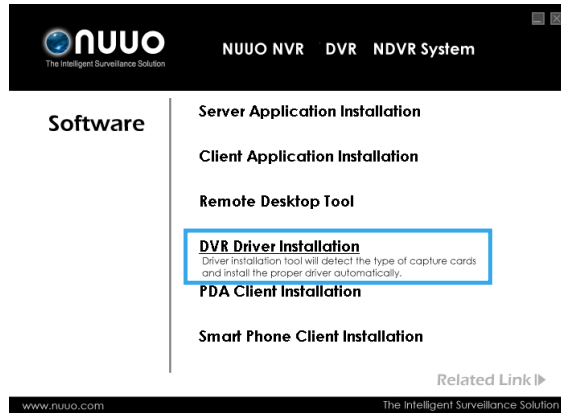
7100 Series Capture Card



## Driver Installation

### DRIVER INSTALLATION

**Step 1:** Insert the Installation CD. Run autostartup.exe  from the CD-ROM directly to start the installation.

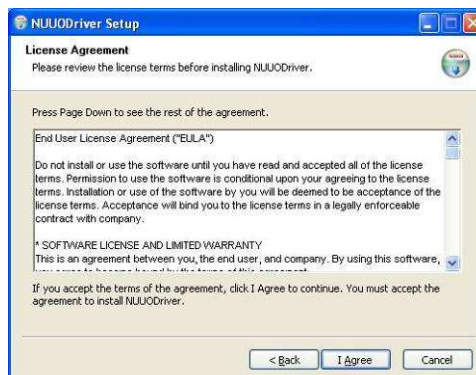


**Step 2:** Select "DVR Driver Installation" then click on it.

**Step 3:** In the NUUODriver Setup Wizard dialog box, click Next to continuous.

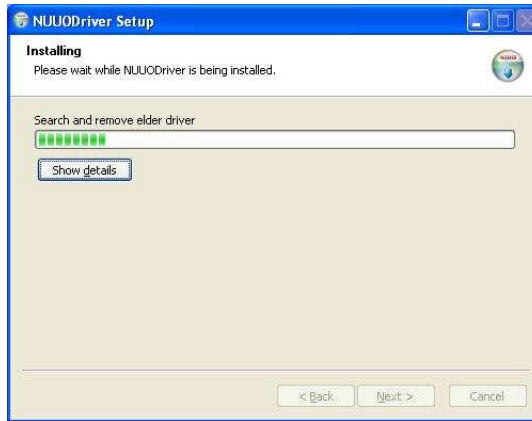


**Step 4:** Check the "License agreement". Click "I Agree" to continuous.



## Driver Installation

Step 5: Installing NUUODriver.

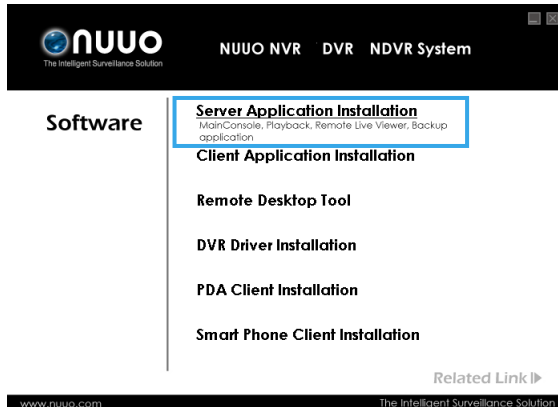


Step 6: Click “**Finish**” after installing the system completely, and then choose to reboot now or later.



### SOFTWARE INSTALLATION

**Step 1:** Insert the Installation CD. Run Autorun Tool from the CD-ROM directly to start the installation.

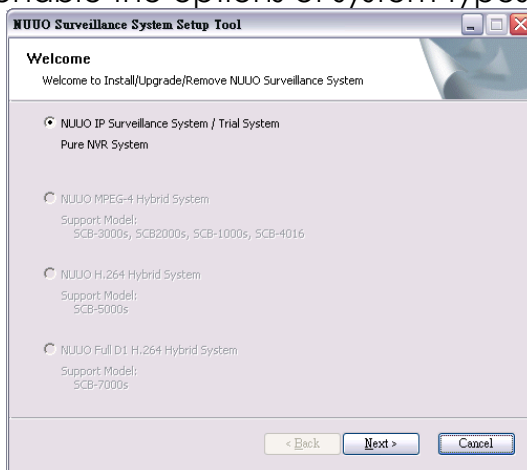


**Step 2:** Select "Server Application Installation" then click on it.

**Step 3:** There are 4 system types of options in "System Setup Tool" window, select one and click Next to start the installshield of Server package.

- NUUO IP Surveillance System/Trial System
- NUUO MPEG-4 Hybrid System
- NUUO H.264 Hybrid System
- NUUO Full D1H.264 Hybrid System

**Note:** The SetupTool will detect the type of capture cards installs on PC and enable the options of system types automatically.



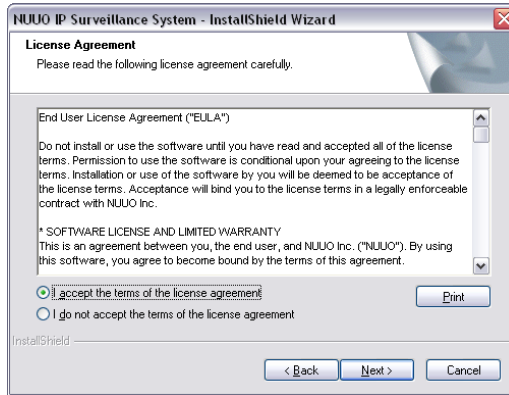


## Software Installation

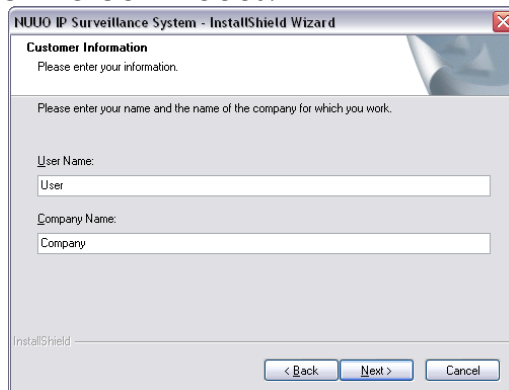
**Step 4:** In the InstallShield Wizard dialog box, click **Next** to continuous.



**Step 5:** Check the option "I accept the terms of the license agreement". Click **Next** to continuous.

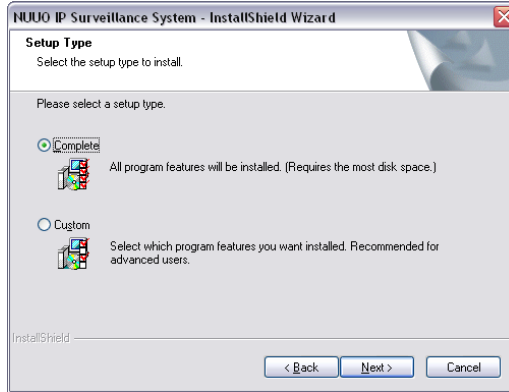


**Step 6:** Please enter your name and the company name for which you work. Click **Next** to continuous.



## Software Installation

**Step 7:** Select “Complete Setup Type” or “Custom Setup Type” to install the System.



### **COMPLETE SETUP TYPE**

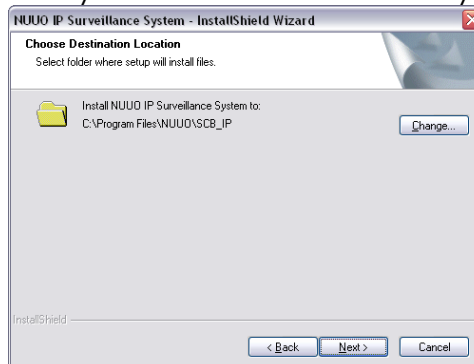
Install all program features into the default directory.

- Check the option “**Complete**”, and then click “**Next**”. All program features will be installed. [Require the most disk space.]

### **CUSTOM SETUP TYPE**

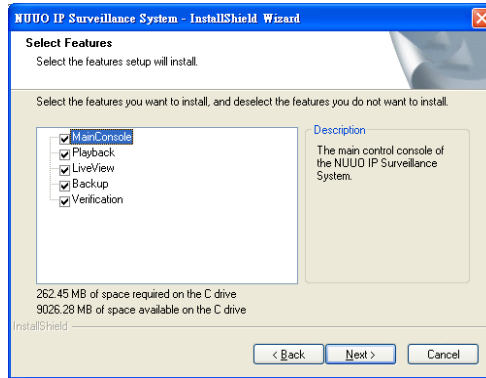
Install the system to a preferred directory. Or select whichever program feature(s) to install. This is recommended for advanced users.

- Check the option “**Custom**”, and then click “**Next**”.
- Select appointed folder where setup will install files to. Click “**Change**” to modify the installation directory.

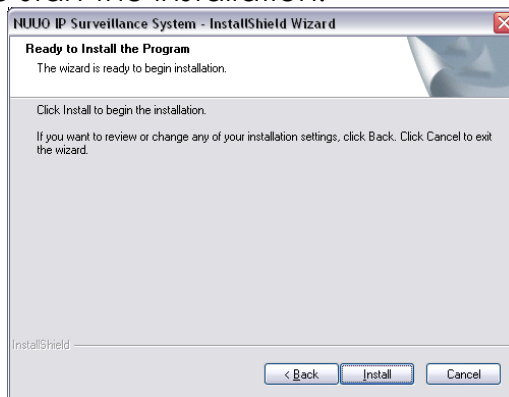


- Select the features setup will install. There are 4 features to choose in the server setup process: MainConsole, Playback, LiveView, Backup, and Verification tool. Click “**Next**” after confirmation.

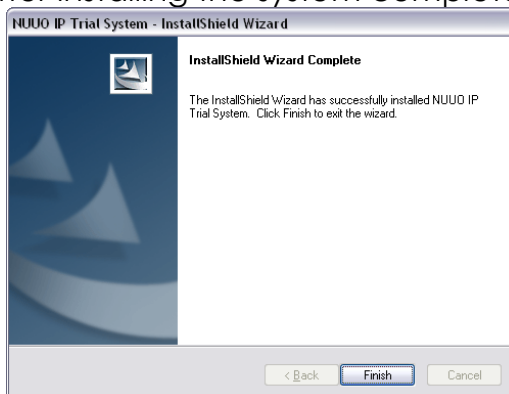
## Software Installation



**Step 8:** Click install to start the installation.

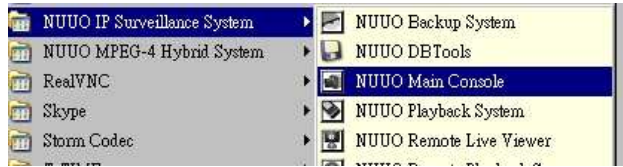


**Step 9:** Click Finish after installing the system completely.



Software Installation

Execute the Main Console



Enter the password you like into the edit box and enter again at the edit of Password Confirm. And then press "OK". Now enjoy our Intelligent Surveillance Solution.



**Appendix – Minimum Hardware Requirement**

**APPENDIX - MINIMUM HARDWARE REQUIREMENT**

This document is to illustrate the hardware requirement for NUUO DVR, NVR, and hybrid system. The requirement specified in this document is the minimum requirement indicated for the desire system.

**Note:**

1. Different chipset for motherboard and display card may have slightly different effect.
2. For detail **Hardware Compatibility List**, please refer [http://support.nuuo.com/mediawiki/index.php/Hardware\\_compatibility\\_list](http://support.nuuo.com/mediawiki/index.php/Hardware_compatibility_list)

**H.264 Hardware Compression Card (SCB-7100/7000/6000 series)**

	32 ch	16 ch	8 ch	4 ch
CPU	<b>Intel Core 2 Quad Q9400*</b>		<b>Intel Core 2 Duo E5300</b>	
RAM	2 GB			
Motherboard	Intel P45 or P43 chip or above, MB vendor Asus, Gigabyte or MSI with Intel Chipset recommended			
Display card	ATI Radeon 3850/4850 , nVIDIA GeForce GF-9600 or above (ATI Driver V9-2 recommended · ATI Driver V10 not support)			
Ethernet	100 baseT or above, gigabit LAN recommended			
Hard Disk	250 GB or above			
OS	MS Windows XP pro SP3 / 2003/ Vista SP1 / Win 7			

\* Refer the document "System Requirements of NUUO SCB-7000 Series" for more details.

**MPEG-4 Software Compression Card (SCB-1000/3000 series)**

	SCB-3000s x 2	SCB-3000s	SCB-1000
CPU	<b>Intel Core 2 DuoE5300</b>		
RAM	2 GB		
Motherboard	Intel P45 or P43 chip or above, MB vendor Asus, Gigabyte or MSI with Intel Chipset recommended		
Display card	ATI Radeon 4650 , nVIDIA GeForce GF-9600 or above (ATI recommended)		
Ethernet	100 baseT or above, gigabit LAN recommended		
Hard Disk	250 GB or above		
OS	MS Windows XP pro SP3 / 2003 / Vista SP1/ Win 7		

**Appendix – Minimum Hardware Requirement  
Pure IP NVR**

<b>S of all cam.</b>	<b>D 2200~1400</b>	<b>C 1400~1050</b>	<b>B 1050~550</b>	<b>A 550~</b>
CPU	<b>Intel Core I7</b>	<b>Intel Core I5</b>	<b>Intel Core 2 Quad Q9400</b>	<b>Intel Core 2 Duo E5300</b>
RAM	2 GB	2 GB	2 GB	1 GB
Motherboard	Intel 55 or 57 chip or above, MB vendor Asus, Gigabyte or Intel with Intel Chipset recommended		Intel 35 or 33 chip or above, MB vendor Asus, Gigabyte or Intel with Intel Chipset recommended	
Display card	ATI Radeon 4650 , nVIDIA GeForce GF-9600 or above (ATI recommended)			
Ethernet	100 baseT or above, Gigabit LAN recommended			
Hard Disk	250 GB or above			
OS	MS Windows XP pro SP3 / Vista SP1 / Win 7 / Server 2008 RC2			

Parameter definitions:

**S = M\*N**

**M:** parameter of resolution of IP camera

Resolution	5 M	3 M	2 M	1 M	VGA / D1	CIF
Value of <b>M</b>	37	27	22	14	3	1

**N:** FPS of Camera

**For example:** 8 channels system

- a) 1 camera at 1 Mega-pixel resolution with 10FPS
- b) 2 cameras at D1 resolution with 15FPS
- c) 5 cameras at CIF resolution with 30FPS

a)  $M=14; N=10, S=14*10=140$

b)  $M=3; N=15, S=3*15=45$

c)  $M=1; N=30, S=1*30=30$

**S of All Cam. =  $1*140+2*45+5*30=380$**

Therefore, the Minimum Hardware Requirement is **A level**.

## Appendix – Minimum Hardware Requirement Hybrid System

<b>S of all cam.</b>	<b>D</b> 2200~1400	<b>C</b> 1400~1050	<b>B</b> 1050~550	<b>A</b> 550~
CPU	Intel Core I7	Intel Core I5	Intel Core 2 Quad Q9400	Intel Core 2 Duo E5300
RAM	2 GB	2 GB	2 GB	1 GB
Motherboard	Intel 55 or 57 chip or above, MB vendor Asus, Gigabyte or Intel with Intel Chipset recommended		Intel 35 or 33 chip or above, MB vendor Asus, Gigabyte or Intel with Intel Chipset recommended	
Display card	ATI Radeon 4650 , nVIDIA GeForce GF-9600 or above (ATI recommended)			
Ethernet	100 baseT or above, Gigabit LAN recommended			
Hard Disk	250 GB or above			
OS	MS Windows XP pro SP3 / 2003 / Vista SP1*/ Win 7			

### Parameter definitions:

$$S = M * N + P$$

**M:** parameter of resolution of IP camera

Resolution	5 M	3 M	2 M	1 M	VGA / D1	CIF
Value of <b>M</b>	37	27	22	14	3	1

**N:** FPS of Camera

**P:** parameter of NUUO compression card

Card	SCB-3000	SCB-1000
Value of <b>P</b>	120	30

Card	SCB-7016	SCB-7008	SCB-7004
Value of <b>P</b>	480	240	120

### For example: 16 channels system

- 1 camera at 1 Mega-pixel resolution with 10FPS
- 2 cameras at D1 resolution with 15FPS
- 5 cameras at CIF resolution with 30FPS
- 8 cameras with 2pcs SCB-5004

a)  $M=14; N=10, S = 14*10=140$

b)  $M=3; N=15, S = 3*15=45$

c)  $M=1; N=30, S = 1*30=30$

d)  $P=60$

$$S \text{ of All Cam.} = 1*140 + 2*45 + 5*30 + 2*60 = 500$$

Therefore, the Minimum Hardware Requirement is **A level**.