

# ONSIP 02D4



speco technologies®

### **Directions**

Be careful not to cause any physical damage by dropping or throwing ONSIP O2D4. Especially keep the device out of reach from children.

Do not disassemble ONSIP O2D4. No after service is assumed when disassembled.

Use only the power adapter provided with ONSIP O2D4.

Be careful to prevent moisture or water penetration into the unit. Particular attention is needed when installing ONSIP O2D4. The screw holes for the installation screws and pipe should be maintained water tight during the whole life time of the product.

All the electrical connection wires running into the unit should be prepared so that water from the outside cannot flow into the unit through the surface of the wires. Penetration of the moisture through the wire for extended period can cause malfunction of the unit or deteriorated image.

### **Note**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into and outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

**Caution**

Any changes or modifications in construction of this device which are not explicitly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Revision History**

Date	Revision	Details
May 13 <sup>th</sup> , 2013	1.0	First manual revision creation.
May 24 <sup>th</sup> , 2013	1.1	Text revisions
June, 19 <sup>th</sup> , 2013	1.3	Updated package contents, drawings

Contents..... 4

1. Introduction ..... 5

    1.1. Overview..... 5

    1.2. Specification ..... 6

    1.3. Applications of ONSIP O2D4..... 8

2. Product Description ..... 9

    2.1. Contents ..... 9

    2.2. Product Preview ..... 9

    2.3. Physical description ..... 10

    2.4. Functional Description ..... 12

3. Getting Started ..... 15

    4.1. PC Requirement..... 15

    4.2. Quick Installation Guide ..... 16

4. Troubleshooting..... 22

    5.1. No power is applied..... 22

    5.2. Cannot connect to the Video ..... 23

    5.3. Windows Vista or Windows 7 ..... 24

    5.4. Technical Assistance ..... 27

## **1. Introduction**

### **1.1. Overview**

The ONSIP O2D4 is a state-of-the-art mega-pixel, dual-codec (H.264, MJPEG) IP/network camera built with embedded software and hardware technology. It enables real time transmission of synchronized video of up to 1080p and audio data. Remote clients can connect to ONSIP O2D4 for the real time video/audio data through various client solutions running on PC, PDA or mobile phones. Real time 2-way communication is available through bidirectional audio communication feature.

Designed to be a stand-alone streaming audio & video transmission device, ONSIP O2D4 can be applied to various application area such as video security, remote video monitoring, distance education, video conference or internet broadcasting system.

IP-66 compliant housing will extend the application area to harsh environments of wide temperature range.

Embedded PoE (Power over Ethernet, IEEE 802.3af) will enable the owner to reduce TCO (Total Cost of Ownership) by reducing on-site wiring works for the installation.

**1.2. Specification**

Category	Sub-Category	Details	
Video	Compression	H.264 / MJPEG	
	Resolution	* Refer to the datasheet.	
Camera Module	Mounting Gimbal	2 Axis Gimbal (Manual Pan/Tilt adjustment)	
Audio (Bi-directional)	Up	32 Kbps G.726	
	Down	64 Kbps PCM	
Network	Interface	RJ-45, 10/100 Mbps, PoE (802.3af)	
	Access network	Static, DHCP, PPP/PPPoE	
	Application	RTP, RTSP, SMTP, FTP, HTTP, SDP, NTP, DNS	
I/O	Sensor In	1	NC, NO Selectable
	Relay Output	1	For alarm annunciation or remote ON/OFF control (30V, 1A)
	Mic/Line In	Selectable in Admin page	
	Line Out	1 V p-p output for amplified speaker	
Power Supply	PoE	Power over Ethernet	
	DC Adapter	12V DC adapter (2 Amp)	
Housing	IP66 compliant Vandal Proof housing		
Motion Detection	3 zones	Arbitrary shape with independent sensitivity	
Upgrade	Firmware upgrade over IP network		
Administration	Remote administration over IP network		
Client & Viewer	Web Viewer	Simple viewing over internet explorer	
	Speco-NVR	Standard VMS software	
Dynamic IP support	DDNS support	Supported	
Security	Video/Audio stream encryption		
	ID and Password protection		

	IP filtering for restricting administrative access for audio and bi-audio	
Time management	Sync to PC	Synchronize to PC
	Manual	Manual time setting
	Internet Time Server	Synchronize to Time Server
SDK support	Active-X	
	HTTP	

### **1.3. Applications of ONSIP O2D4**

- Security surveillance (buildings, stores, manufacturing facilities, parking lots, banks, government facilities, military, etc.)
- Remote monitoring (hospitals, kindergartens, traffic, public areas, etc.)
- Teleconference (Bi-directional audio conference). Remote Learning, Internet broadcasting
- Weather and environmental observation




## 2. Product Description

### 2.1. Contents

The product package contains followings:

Contents	Description	Remarks
<b>ONSIP O2D4</b>	IP camera ONSIP O2D4 main unit	
<b>Tools and Mounting Screws</b>	Screws(M4x16L 4EA, 4x16L 4EA), L-wrench	
<b>CD</b>	Software & User's Guide	
<b>Quick Reference Guide</b>	Quick installation guide	

### 2.2. Product Preview

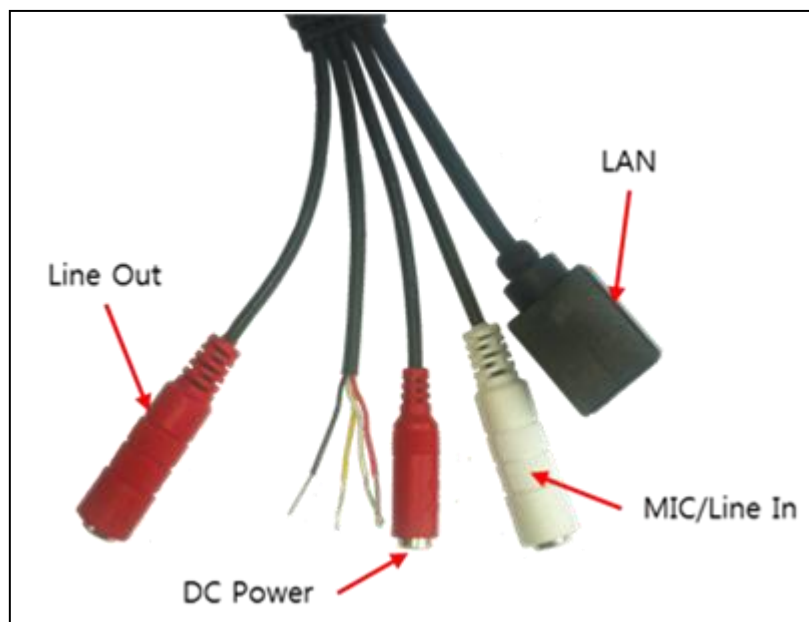
ONSIP O2D4	IP Installer	VMS Software (Speco NVR)
		
<p>Vandal Proof (Megapixel) Mini Dome IP Camera</p>	<p>PC software to allocate an IP address to the IP Camera</p>	<p>PC software to view and record the A/V streaming data transmitted from IP camera. (Simultaneous support of up to 64 IP cameras@D1)</p>

## **2.3. Physical description**

### **2.3.1. External View**



**Figure 2-1. External view of ONSIP O2D4**



**Figure 2-2. Connection Cable of O2D4**

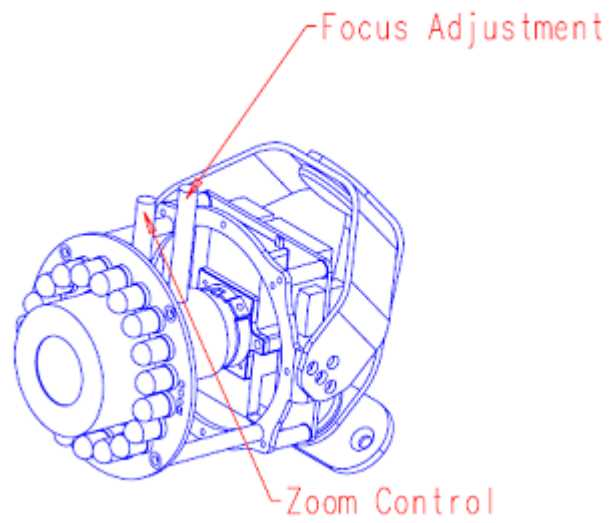


Figure 2-3. Adjustment knobs for the Camera

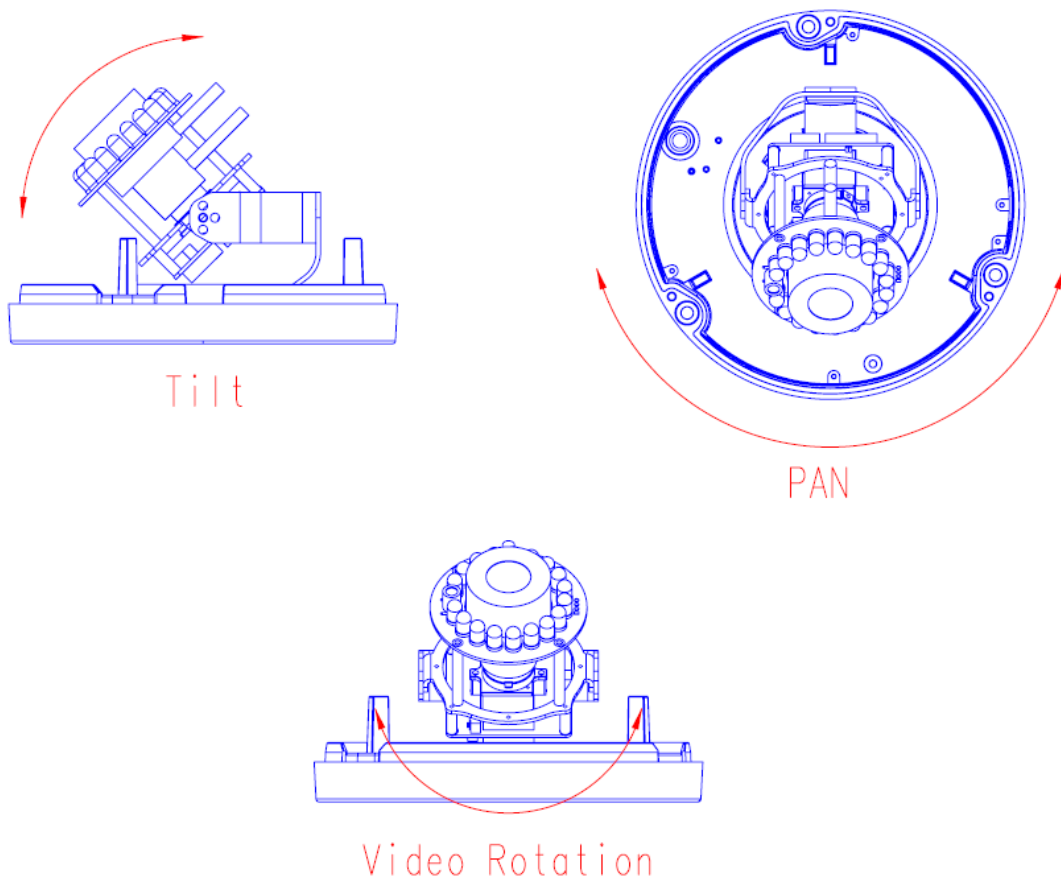


Figure 2-4. 3 axis based camera position control  
(Manual adjustment of Pan, Tilt and Video rotation.)

## 2.4. Functional Description

- **DC 12V, 2A:** Power input for supplying 12V DC power.



**Caution:** If ONSIP O2D4 is powered by PoE, do not plug in DC Jack with active DC power into DC power connector.

- **MIC/LINE IN**

Connect external audio source or microphone.

- **Line Out**

Connect speakers with built in amplifier. Audio from remote site is output through Line out in bi-directional audio mode.

- **100Base-T**

100Mbps Ethernet connector (RJ-45) with PoE standard (802.3af). 2 LEDs on the Ethernet connector show the status of ONSIP O2D4 as the following:

- **Status LED (Dual Color - Red/Green):** It will be lit in green or red depending on the status.
  - ① Green: Green color indicates that the camera is in normal operation mode. Continuous green indicates that data transmission is possible. Blinking green means that someone is connected to ONSIP O2D4.
  - ② Red: Continuous or blinking red indicates that hardware is in abnormal condition.



Red/Green LED will be lit with red momentarily and it will be lit with green after a while when power is applied into ONSIP O2D4

- **LINK/LAN LED (Orange)**

It will be lit with orange color when network cable is connected correctly. Blinking orange color indicates normal data transmission. Off state indicates that there is trouble with the network connection.

- **Alarm In/Out and Audio In/Out**

Used for connecting alarm sensor, alarm annunciation device, microphone and speaker to ONSIP O2D4.

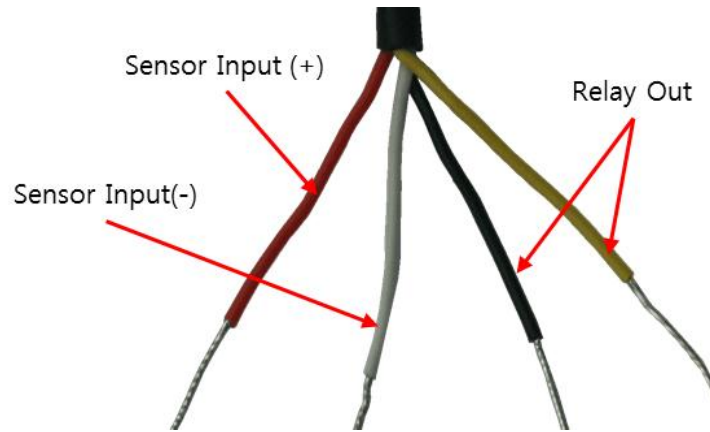


Figure 2-2 ALARM IN/OUT of ONSIP O2D4

- RLY Out:** Relay output is provided for connecting alarm devices or for remote on/off control of devices such as light. Relay is normal open and it will be closed upon alarm annunciation or remote on. The relay is capable of switching **30V AC/DC, 2A**. For the application which needs power switching beyond this limit, use additional relay switch as shown in the right of Figure 2-8.

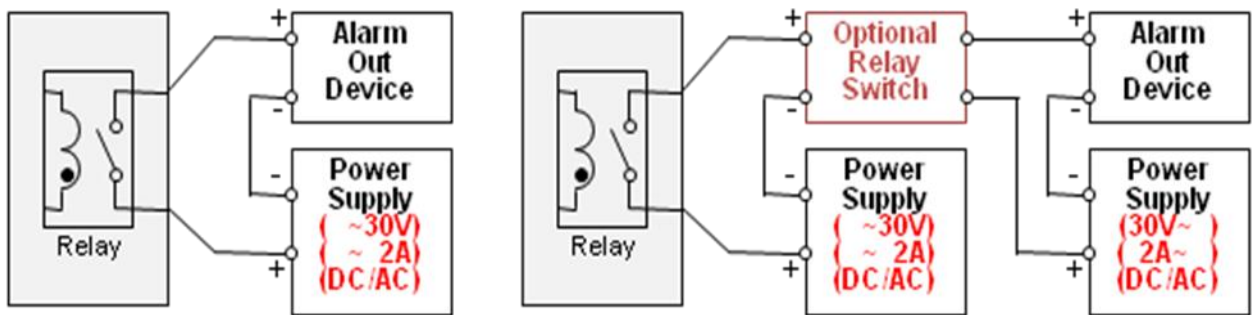


Figure 2-3. RELAY Output connection

(left: switching requirement below 30V, 2A), (right: switching requirement higher than 30V, 2A. Apply this connection when either voltage or current exceed the limit.)

- SENSOR IN:** Connect external alarm sensor. Examples of sensing devices are infrared sensor, motion sensor, heat/smoke sensor, magnetic sensor, etc. Connect the two wires of the sensors to “SNS In”. The sensor type (NC/NO) can be set in admin page. Multiple sensor devices can be connected in parallel.

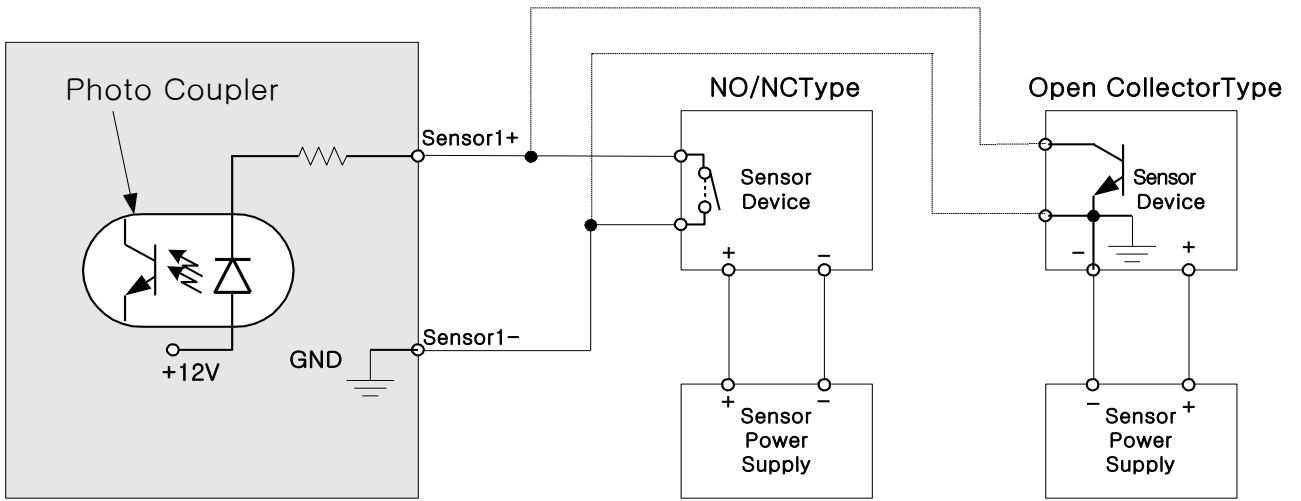


Figure 2-4. SENSOR input and connection of the sensor

• **Factory Default Switch**

A switch provided for returning the IP camera to factory default state. Open the dome cover to access the switch. Press the switch for a few seconds while power is applied.



Figure 2-5. Factory Default Switch of ONSIP O2D4



**Caution: Restoring the factory default will erase all settings.**

### 3. Getting Started

Brief information for the initial operation of ONSIP O2D4 is provided in this chapter.

#### 4.1. PC Requirement

Audio/Video streaming data received from ONSIP O2D4 can be displayed or stored in a PC running client programs. Minimum requirement of the PC is described below:

	Minimum Requirement	Recommended Specification
CPU	Intel Core i3 3Ghz	Intel Core i7
Main Memory	2GB	4GB
Operating System*	Windows XP	Windows 7 (64bit)
Web Browser	Internet Explorer 8, 9	Internet Explorer 8, 9
Graphic Card	Video RAM 256MB Resolution 1920x1080	Video RAM 1GB Higher than 1920x1080
Network	100 Base-T Ethernet	100 Base-T Ethernet

\* Operating Systems supported: Windows 2000 Professional, Windows XP / Vista / 7

## 4.2. Quick Installation Guide

### 1. Connect PC and ONSIP O2D4 to network.

- 1) Prepare a PC to run programs for the installation and video connection  
(PC is needed to assign IP address to ONSIP O2D4)
- 2) In the case of using PoE, connect the PC and ONSIP O2D4 to the network using one of the following ways.

If your LAN Switch does not support standard PoE, connect ONSIP O2D4 as shown in dotted line in Figure 4-1. The DC power is applied through DC adapter.

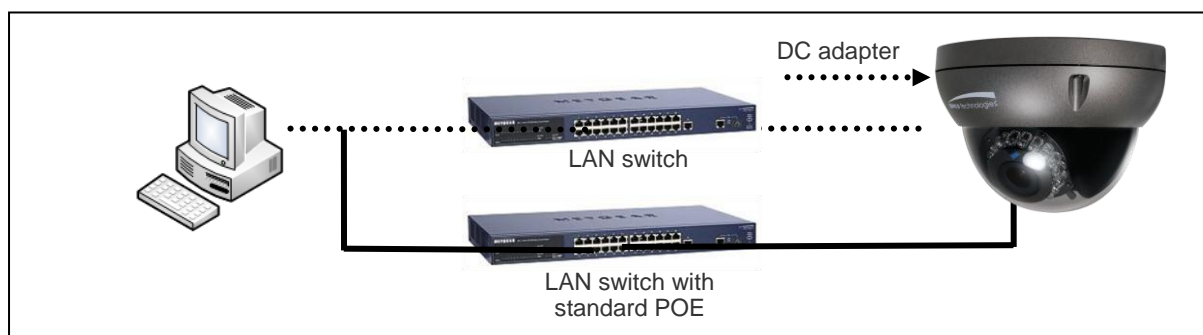
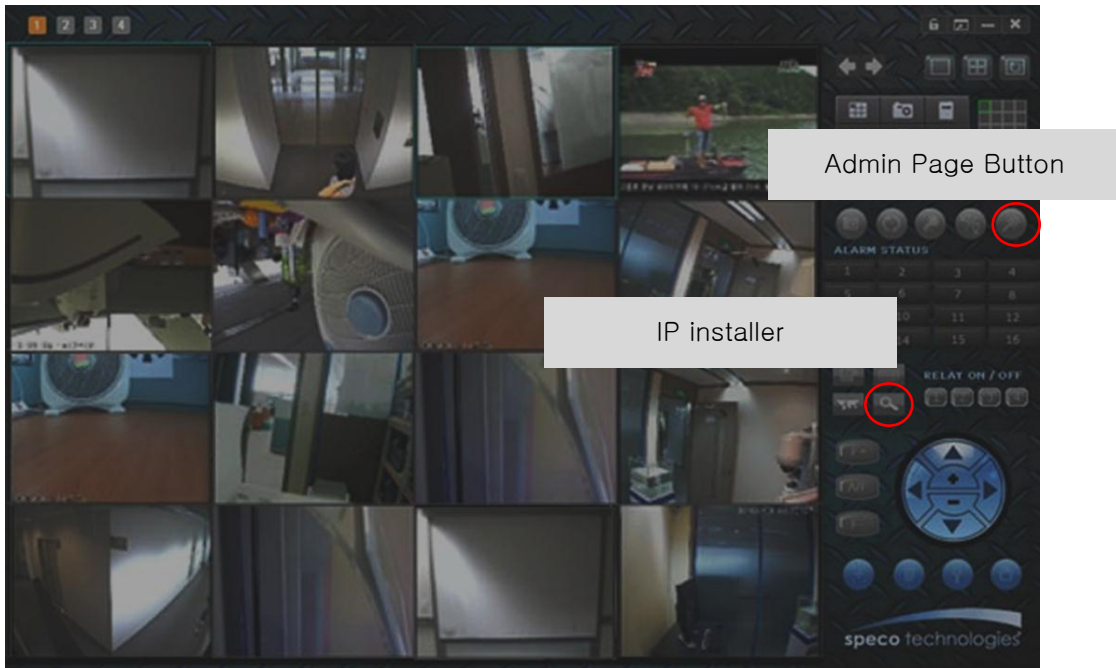


Figure 4-1. Power and network connection

## 2. Install Speco-NVR

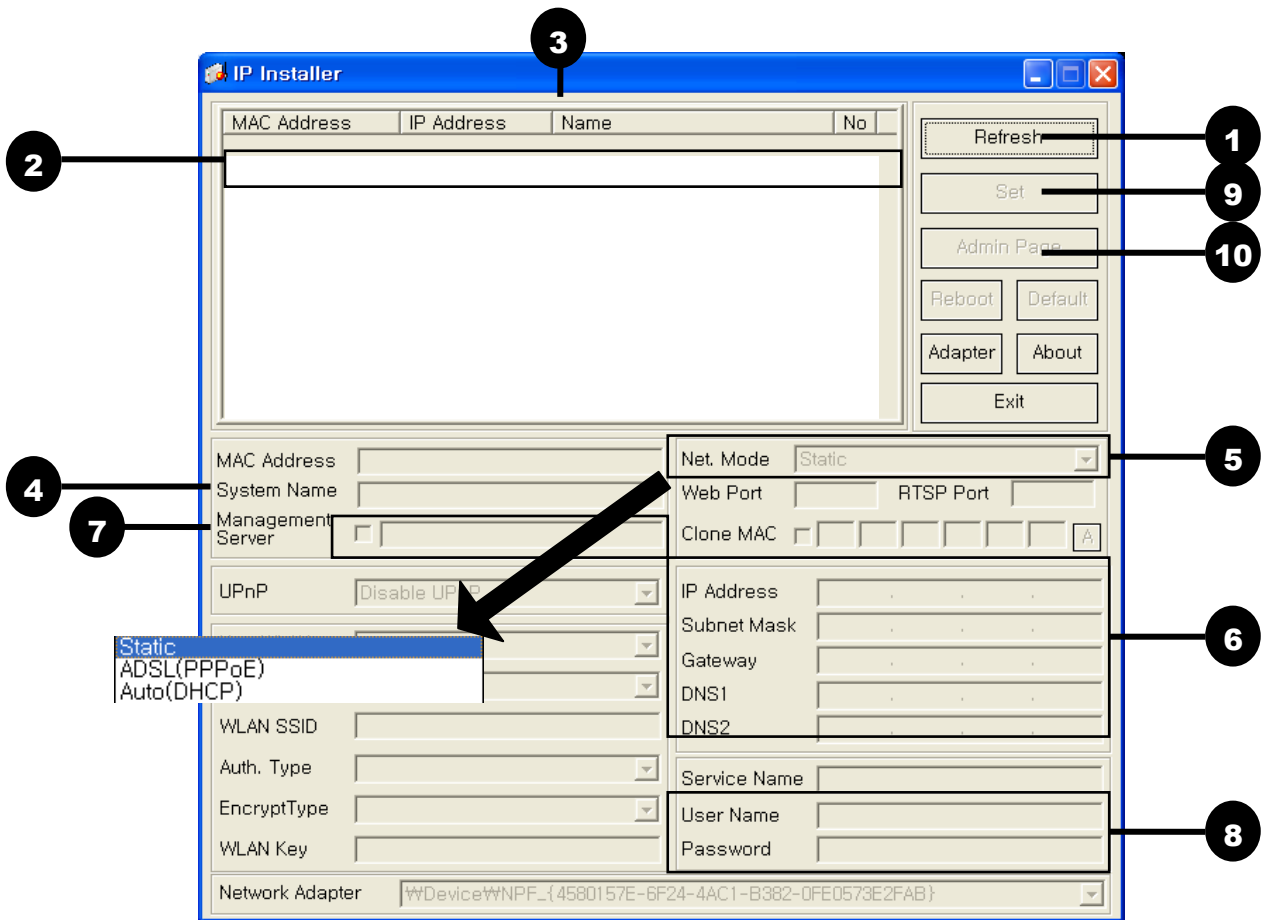
Speco-NVR is a multi-channel VMS program for the IP camera. Install Speco-NVR on remote PC to connect to these products. It is needed to assign connection information to Speco-NVR program before connection. Insert the CD provided with product into the PC and install Speco-NVR.



**Figure 4-2. Speco-NVR**

Follow the sequence below for setting the IP parameter

- i) Run IP installer
- ii) Click (1) in ONSIP installer window.> Double click on (2) > Fill in (4) > make a selection in (5) > Fill the parameters in (6)
- iii) Click on (9) to apply the settings.
- iv) You can connect to admin page by clicking on (10).



Click on the field in (3) for sorting and rearranging the list.



Select network mode that best suits from the drop down list in (5). You can choose either Static or ADSL and Auto (DHCP), respectively. If ADSL and Auto are selected, the fields in (6) are deactivated.

In case of ADSL, fill the User Name and Password in (8) with the values provided by your ISP.

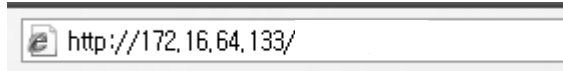
If DDNS service is needed, Check at the box and fill the empty field with hostname you want in (7).

### 3. Remote video connection to ONSIP O2D4

#### 1) Connection through Web Viewer

Web Viewer offers the simplest way of video connection to ONSIP O2D4. For video connection, enter the IP address of ONSIP O2D4 in the URL window of Internet Explorer as:

[e.g.] Port 80



Port 80 (default) can be omitted

[e.g.] Port 8080



Note : Active-X module should be installed on your PC before actual connection. If your PC is not connected to the internet, you cannot download Active-X module. Most convenient way of installing the Active-X module is installing Speco-NVR which is available from the CD or our web site.

#### Connection to Admin Page

#### Basic Control Buttons

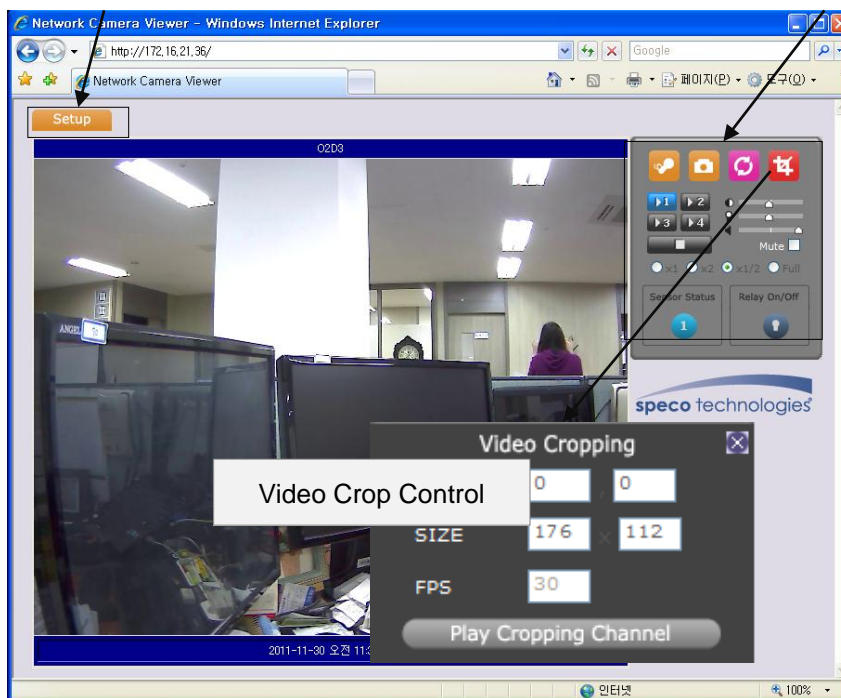


Figure 4-3. Web Viewer

Default ID and password of Admin Page are **admin, 1234**. For more detailed information, please refer to the [\[Configuration\\_Guide\]](#) Guide.

2) Connection through Speco-NVR

Click the camera assignment button for setting the camera address. Input the description, address, Ch#, User ID, Password and port and then click the save button. After assignment procedure, you must click the SAVE button. You can see the live video when you click the live view button as below. When you exit Speco-NVR, you have to input the ID/PW, admin/1234. Details for Speco-NVR can be found in [Speco-NVR User's Guide].

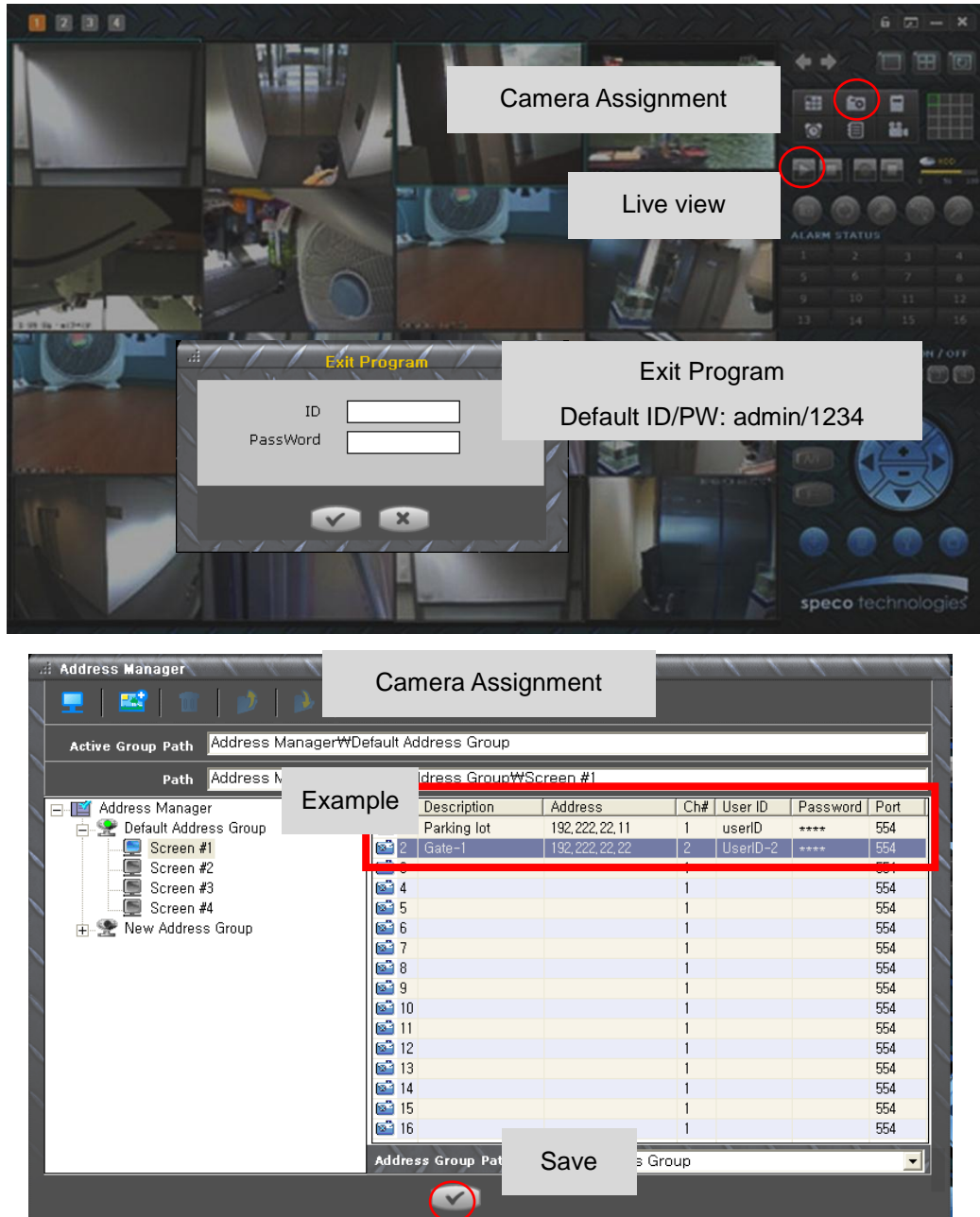


Figure 4-4. Speco-NVR

### 4. Additional settings through connection to the Admin Page

All parameters of the camera are factory default out of the box. For a more sophisticated target application, parameters need to be changed through the admin page. The admin page can be connected through

"[http://IP\\_address:HTTP\\_port\\_number](http://IP_address:HTTP_port_number)"/admin.htm

ID and password of the administrator are required. Default ID and password are **admin, 1234**. It is highly recommended to change the ID and password to prevent illegal access to the IP camera. For more detailed information, please refer to the [\[Configuration\\_Guide\]](#) Guide.

## **4. Troubleshooting**

### **5.1. No power is applied**

- In case of Standard PoE (Power over Ethernet)

Power supply through standard PoE is possible only when the following conditions are met.

1. Standard PoE is supported on the product.
2. The LAN switch supports standard PoE.

Make sure that both the IP camera and the LAN switch support standard PoE (IEEE 802.3af)

- In case of DC adapter

If PoE is not applied, the power and network connection should be made through separate cables.

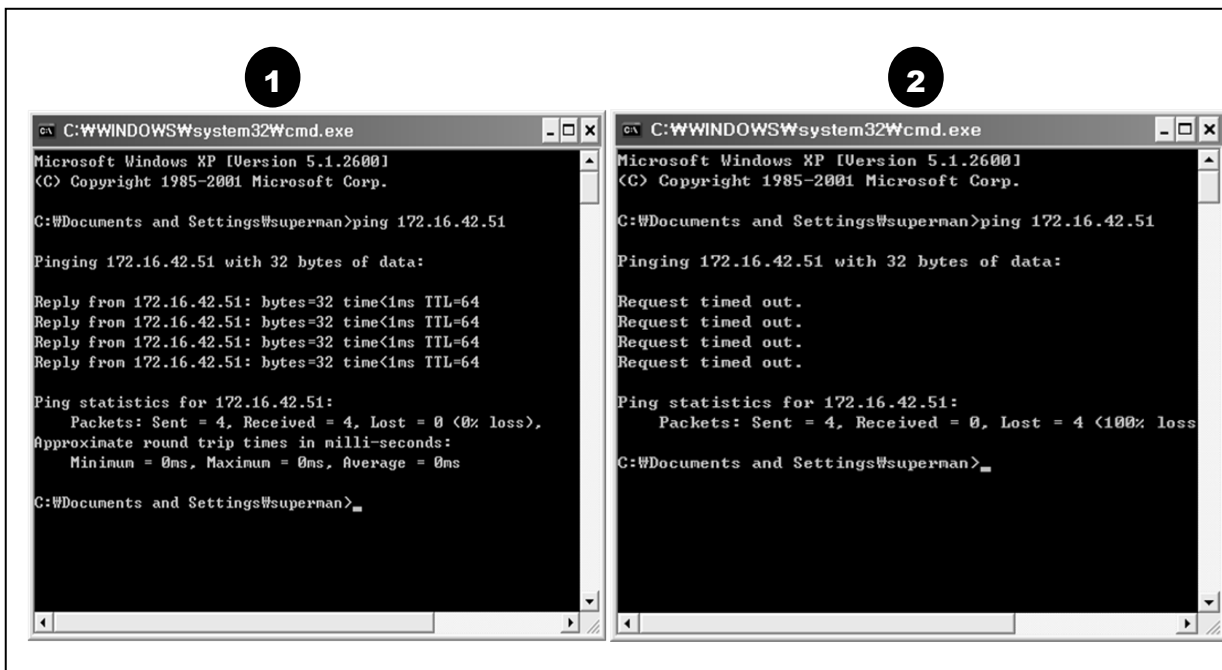
It is recommended to use DC adapter supplied by provider for the feeding of the power. In case of replacing the DC power supply, make sure that the power supply meets with the power requirement of the IP camera to prevent damage or malfunction.

## 5.2. Cannot connect to the Video

Check the status of the network connection through PING test.

Try the following on your PC:

- Start > Run > Cmd > Ping IP address (Ex : Ping 172.16.42.51)
- If “Reply from ~” message is returned (① in the figure below), the network connection is in normal state. Try connection to the video again. If the problem persists, or refer to other trouble shooting notes.
- If “Request timed out” message is returned. (② in the figure below), the network connection or network setting is not in normal state. Check the network cable and settings.



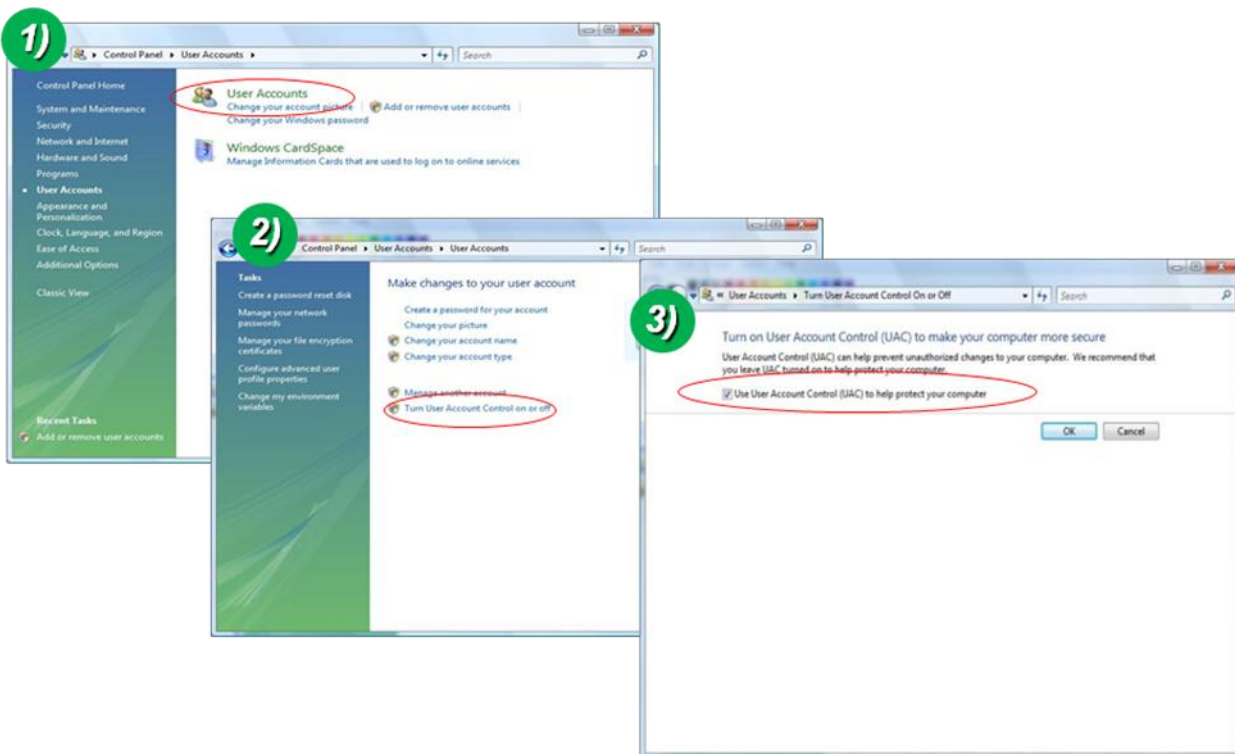
### 5.3. Windows Vista or Windows 7

Windows Vista and Windows 7 users need to configure UAC (User Access Control) and Privilege Level for proper recording and still video capture in Speco-NVR and Web Viewer.

#### <Windows Vista>

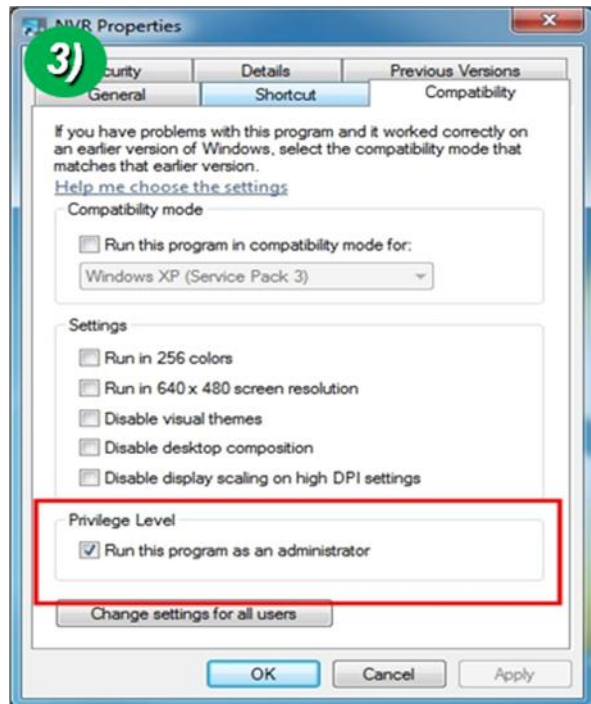
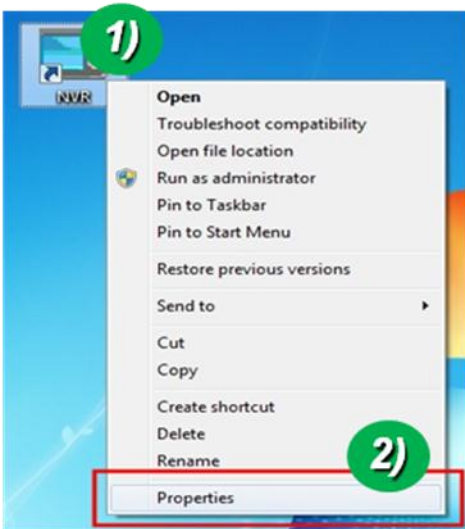
##### 1. UAC (User Access Control) configuration

- 1) Double-click "User Accounts" in control panel
- 2) Double-click "Turn User Account Control on or off"
- 3) Uncheck "Use UAC to help protect your computer"



##### 2. Privilege Level Control

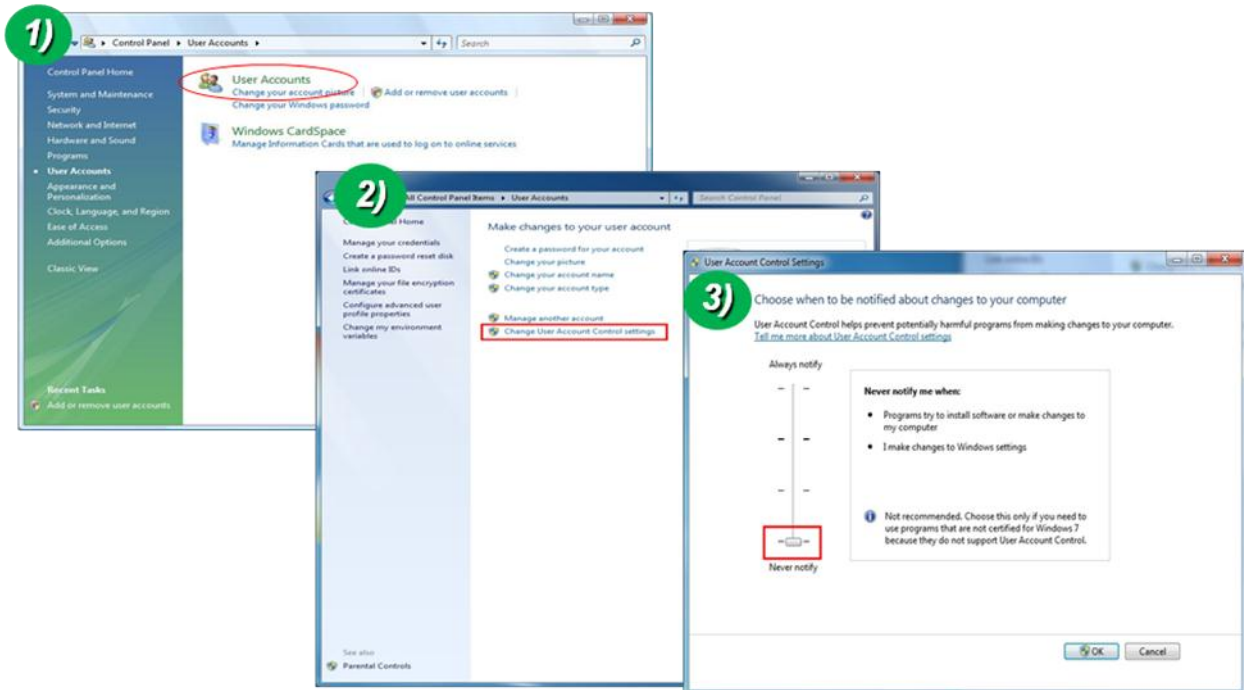
- 1) Select "NVR" icon on the desktop
- 2) Click right mouse button and select "Properties"
- 3) Check "Privilege Level" in "Compatibility" tab



<Windows 7>

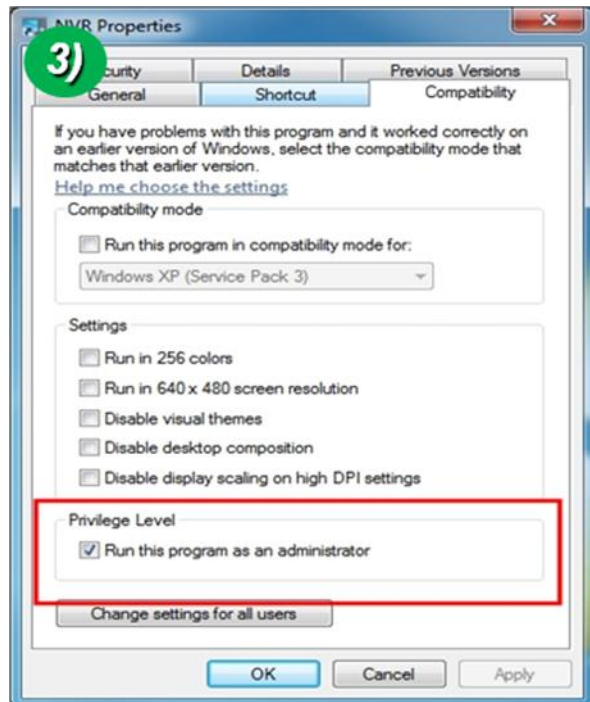
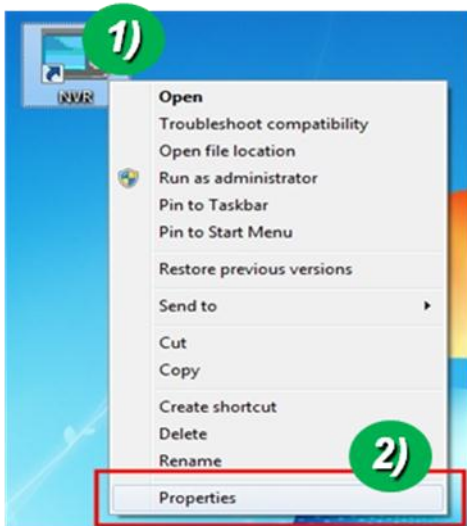
1. UAC (User Access Control) configuration

- 1) Double-click "User Accounts" in control panel
- 2) Double-click "Change User Account Control setting"
- 3) Set to "Never notify"



## 2. Privilege Level Control

- 1) Select "NVR" icon on the desktop
- 2) Click right mouse button and select "properties"
- 3) Check "Privilege Level" in "Compatibility" tab



## **5.4. Technical Assistance**

If you need any technical assistance, please contact your dealer. For immediate service please provide the following information.



1. **Model name**
2. **MAC address and Registration number**
3. **Purchase date**
4. **Description of the problem**
5. **Error message**