ONSIP O2B5

speco technologies®

Directions

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

Do not disassemble the camera. No after service is assumed when disassembled.

Use only the power adapter provided with the camera.

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

All of 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 moisture through the wire for an 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.

<div style="border: 1px solid green; background: #d0f0c0;">

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.

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Revision History

Date	Revision	Details
Sep 13th, 2013	1.0	First manual revision creation.
Sep 16th, 2013	1.1	Text revisions

Contents

1. Introduction

1.1. Overview

The O2B5 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 O2B5 for 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, O2B5 can be applied to various application area such as video security, remote video monitoring, distance education, video conference or internet broadcasting system.

Vandal proof and weather proof housing will extend the application area to harsh environments of wide temperature range.

Integrated PoE (Power over Ethernet, IEEE 802.3af) will enable the owner to reduce the total cost of ownership by reducing on-site wiring for installation.

1.2. Specifications

Category	Sub-Category	Details	
Video	Compression	H.264 / MJPEG	
	Resolution	1920 x 1080	
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
	Mic/Line In	Selectable in Admin page	
	Line Out	1 V p-p output for amplified speaker	
Power Supply	PoE	Power over Ethernet (IEEE 802.3af)	
	DC Adapter	12V DC adapter (1 Amp)	
Housing	IP66 compliant Vandal Proof housing		
Motion Detection	3 zones	Separate zones with independent sensitivities	
Upgrade	Firmware upgrade over IP network		
Administration	Remote administration over IP network		
Client & Viewer	Web Viewer	Internet Explorer 8 and up	
	VMS	Speco NVR (Windows)	
Dynamic IP support	DDNS support	Speco DDNS (free of charge)	
Security	Video/Audio stream encryption		
	ID and Password protection		
	IP filtering for restricting administrative access		
Time management	Sync to PC	Synchronize to PC	
	Manual	Manual time setting	
	Internet Time Server	Synchronize to Time Server	

1.3. Applications of O2B5

• 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
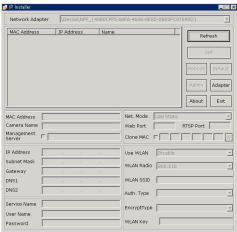
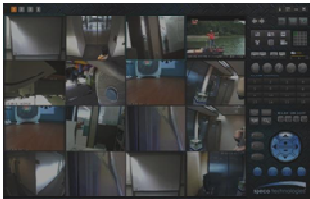• Weather and environmental observation

2. Product Description

2.1. Contents

The product package contains the following:

Contents	Description	Image	Remarks
Main Body	O2B5		
Tools and Mounting Screws	Screws (4 pieces of 1 type), Anchors (4 pieces of 1 type) and L-type wrench with six angles 1EA		
CD	Software & User's Guide		
Quick Reference Guide	Quick installation guide		

2.2. Product Preview

O2B5	IP Installer	VMS Software (Speco NVR)
Weather proof (Megapixel) bullet IP Camera	PC software to locate IP cameras on the network and assign IP addresses	PC software to view and record the A/V streaming data transmitted from IP camera. (Simultaneous support of up to 64 IP cameras@D1)

2.3. Physical description

2.3.1. External View

IR LED

Sun Visor

3 Axis Bracket

Figure 2-1. External view of O2B5

2.3.2. Dimensions
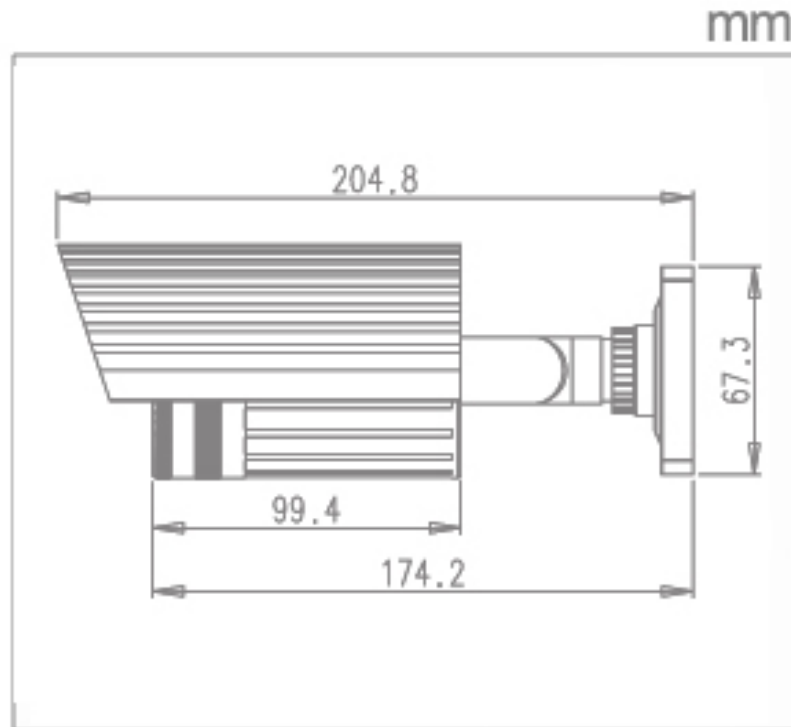

mm

204.8

67.3

99.4

174.2

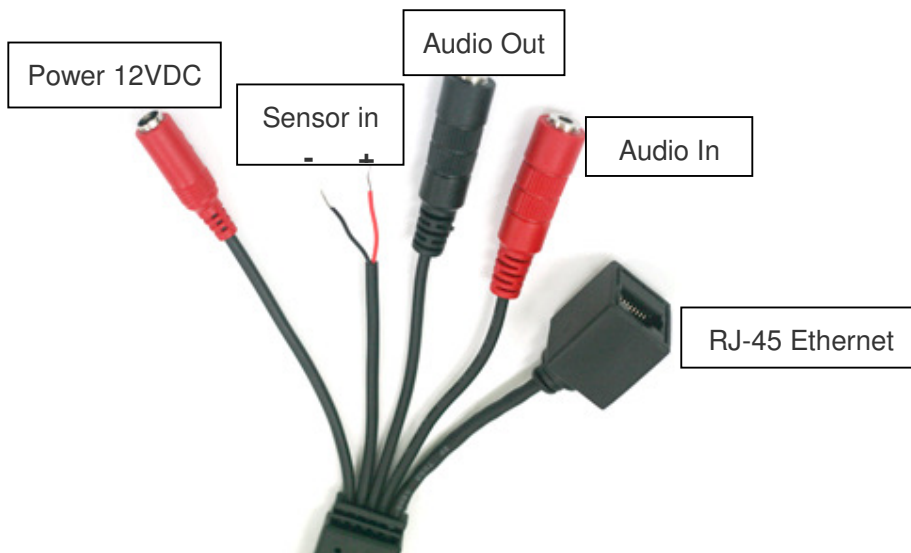**Figure 2-2. Dimensions**

2.3.3. Connector information

Figure 2-3. Connector information

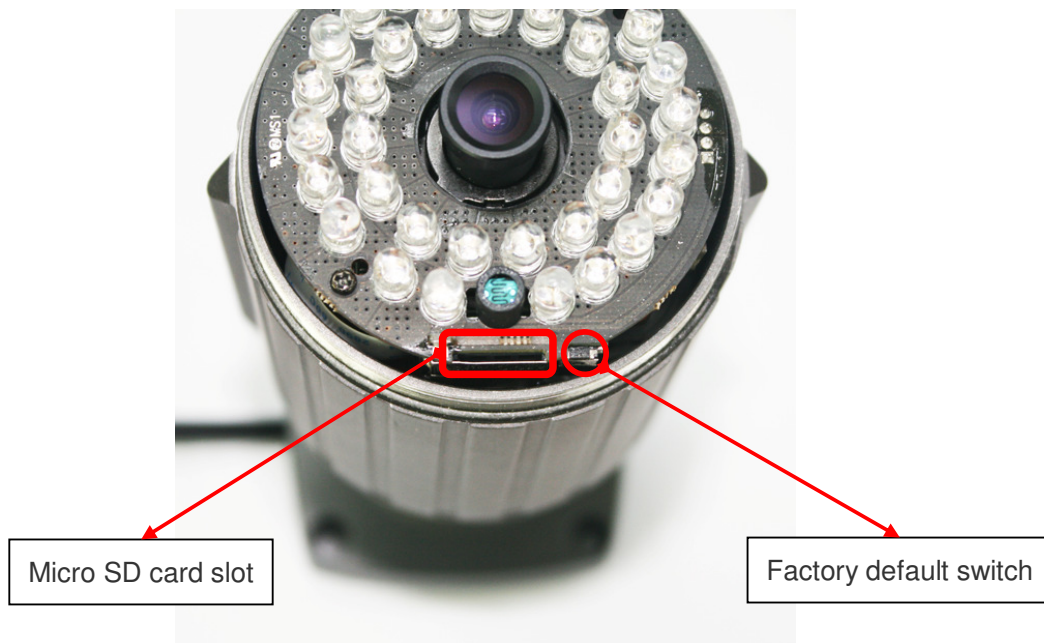2.3.4. Micro SD card and Factory default switch

Figure 2-4. Factory Default switch and Micro SD card slot

2.4. Functional Description

• Power

Power input for supplying 12V 1A DC power.

Caution: If O2B5 is powered by PoE, do not plug in DC Jack with active DC power into DC power connector.

• Audio (MIC/LINE) IN

Connect external audio source or microphone.

• Audio (Line) Out

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

• RJ-45 Ethernet (100Base-T) / **PoE (IEEE802.3af)**

100Mbps Ethernet connector (RJ-45) with standard PoE (802.3af).

• 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 "Sensor In".   The sensor type (NC/NO) can be set in admin page. Multiple sensor devices can be connected in parallel.
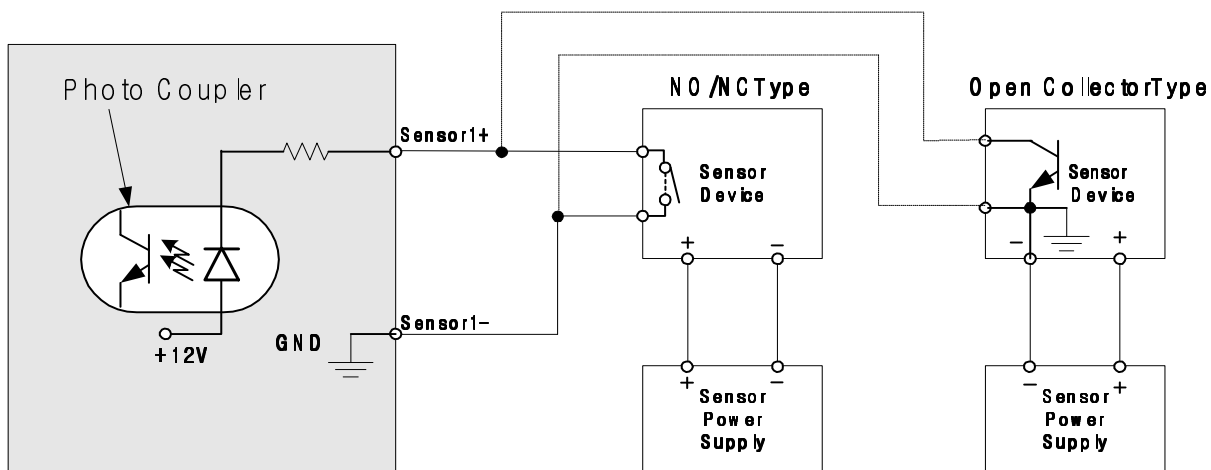

Figure 2-4. SENSOR input and connection of the sensor

• **Factory Default Switch**

A switch provided for returning the IP camera to factory default state. Unscrew the cover to access the switch. Press the switch about 5 seconds while power is applied.
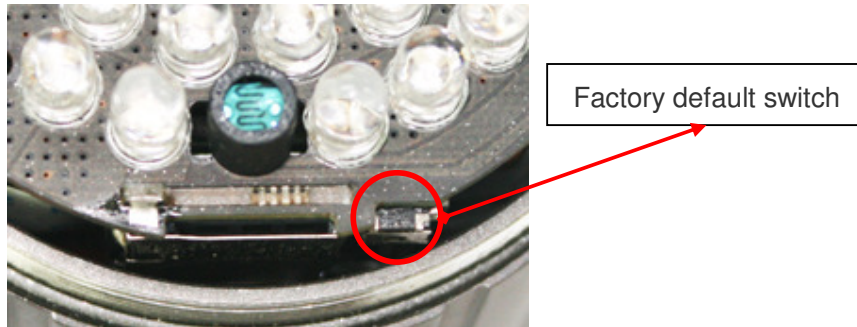

Figure 2-5. Factory Default Switch

2.5. Accessories for installation

Figure 2-6. Accessories for installation of O2B5.

3. On Site Installation

Use cables and conduits that are suitable for the installation. Close attention should be paid to the installation so that no moisture is allowed to penetrate into the unit through the cables or conduits during the lifetime of the product. Products that have internal parts exposed to moisture due to improper installation are not covered by warranty.

3.1. Bracket

1. If you want to install the camera on a concrete wall, you need to drill four 8mm diameter holes. Minimum depth is 28mm.

2. Fix the base on the wall.

3. Adjust the position of the camera for desired viewing of the site using 3 Axis.

3 Axis Bracket   **Base**

Figure 3-1. Bracket Installation

3.2. Micro SD-card

1. Disassemble the sun visor

Figure 3-2. Disassemble Sun Visor
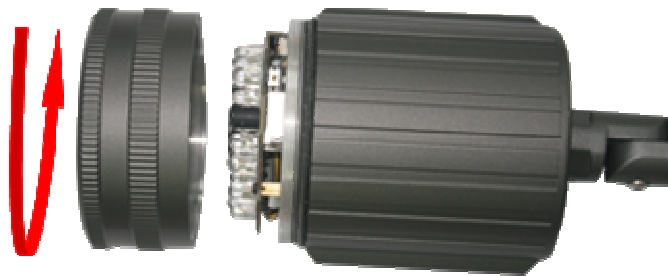
2. Unscrew lens cover

Figure 3-3. Unscrew Lens Cover

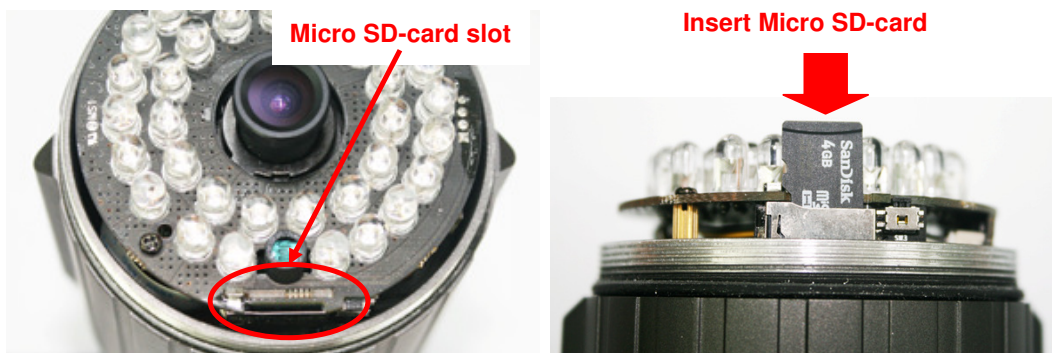3. Insert micro SD card in slot

Figure 3-4 Insertion of Micro SD card

4. Getting Started

Brief information for the initial operation of O2B5 is provided in this chapter.

4.1. PC System Requirements

Audio/Video streaming data received from O2B5 can be displayed or stored in a PC running client programs. Minimum requirements of the PC is described below:

	Minimum Requirements	Recommended Specifications
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 or higher
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 XP / Vista / 7

4.2. Quick Installation Guide

1. **Connect PC and O2B5 to network.**

   1) Prepare a PC to run programs for the installation and video connection

   2) In the case of using PoE, connect the PC and O2B5 to the network using one of the following ways.

   If your LAN Switch does not support standard PoE, connect O2B5 as shown in dotted line in Figure 4-1.
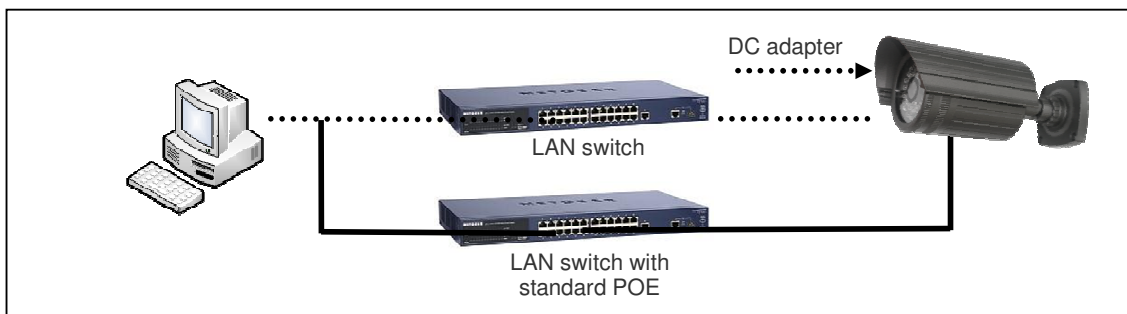
   The DC power is applied through DC adapter.

DC adapter

LAN switch

LAN switch with
standard POE

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.
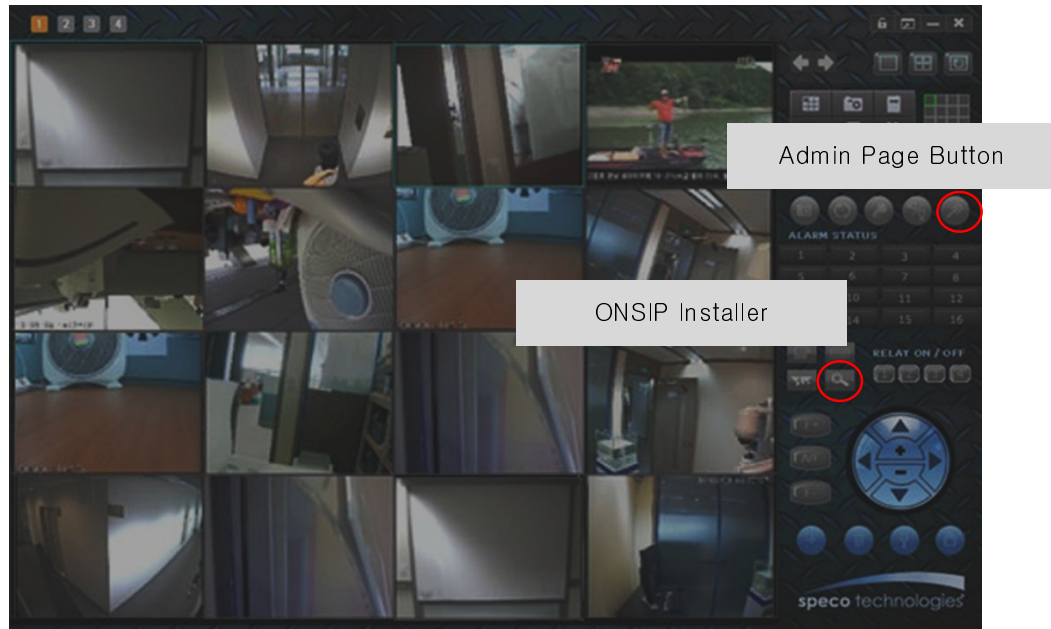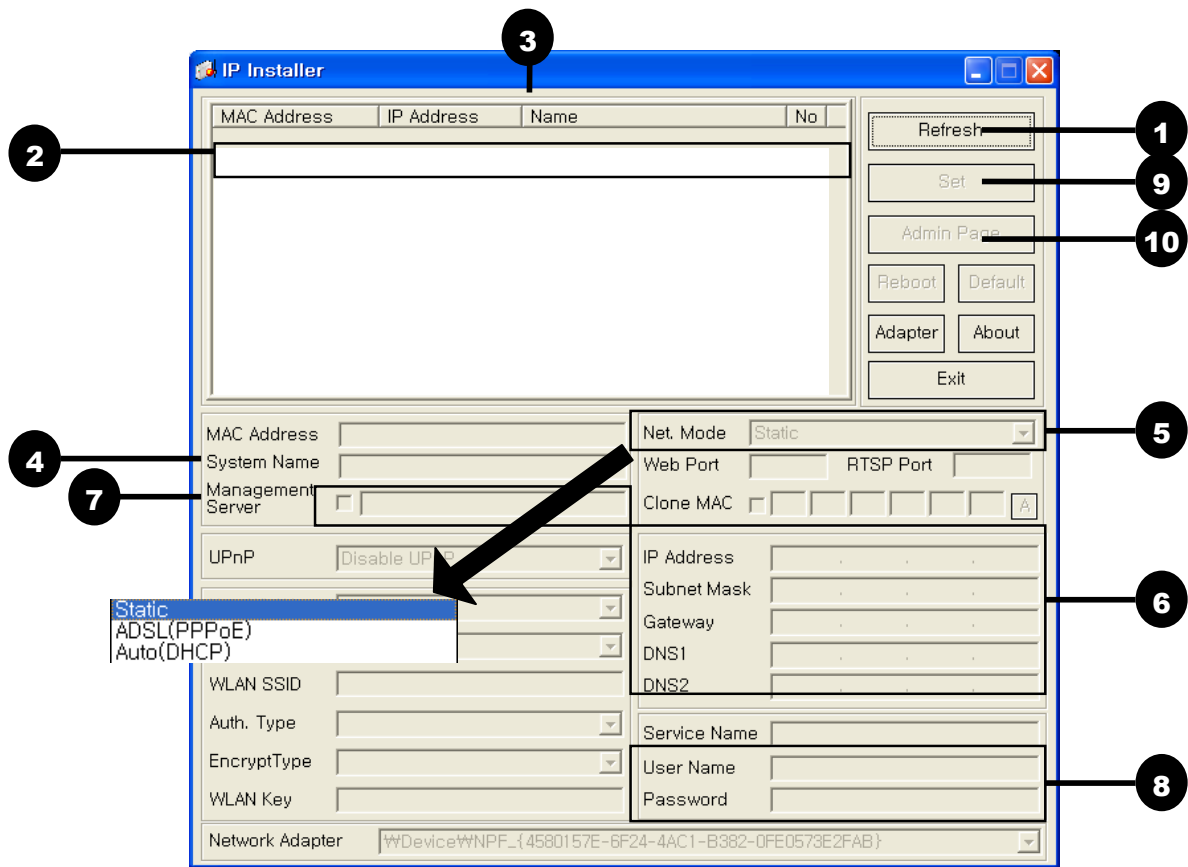

Figure 4-2. Speco-NVR

Follow the sequence below for setting the IP parameter

i)   Run ONSIP 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 the box and fill the empty field with hostname you want in (7).

3. Remote video connection to O2B5

    1)   Connection through Web Viewer

        Web Viewer offers the simplest way of video connection to O2B5. For video connection, enter the IP address of O2B5 in the URL window of Internet Explorer as:

[e.g.] Port 80   http://172.16.64.133/   Port 80 (default) can be omitted

[e.g.] Port 8080   http://172.16.64.133 : 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 the website.

Connection to Admin Page   Basic Control Buttons
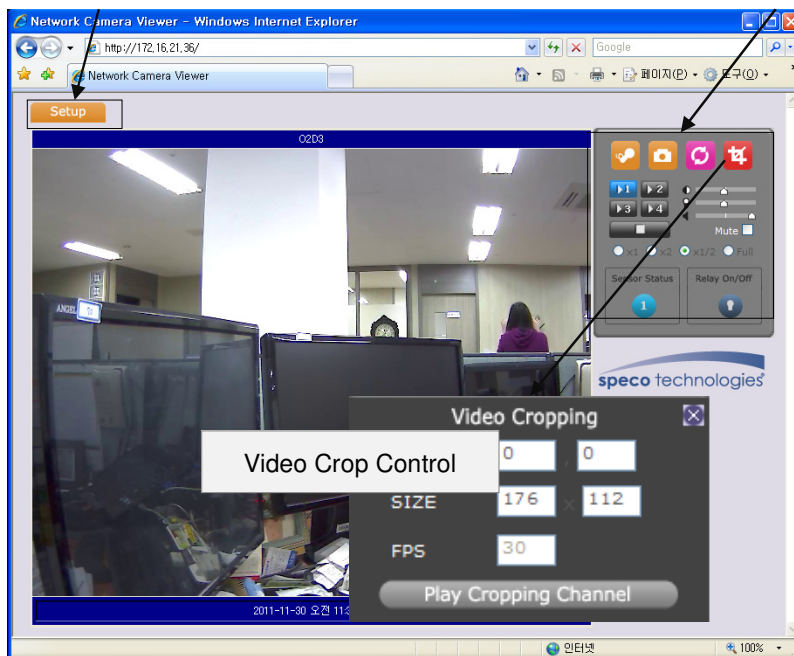

Figure 4-3. Web Viewer

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]**.
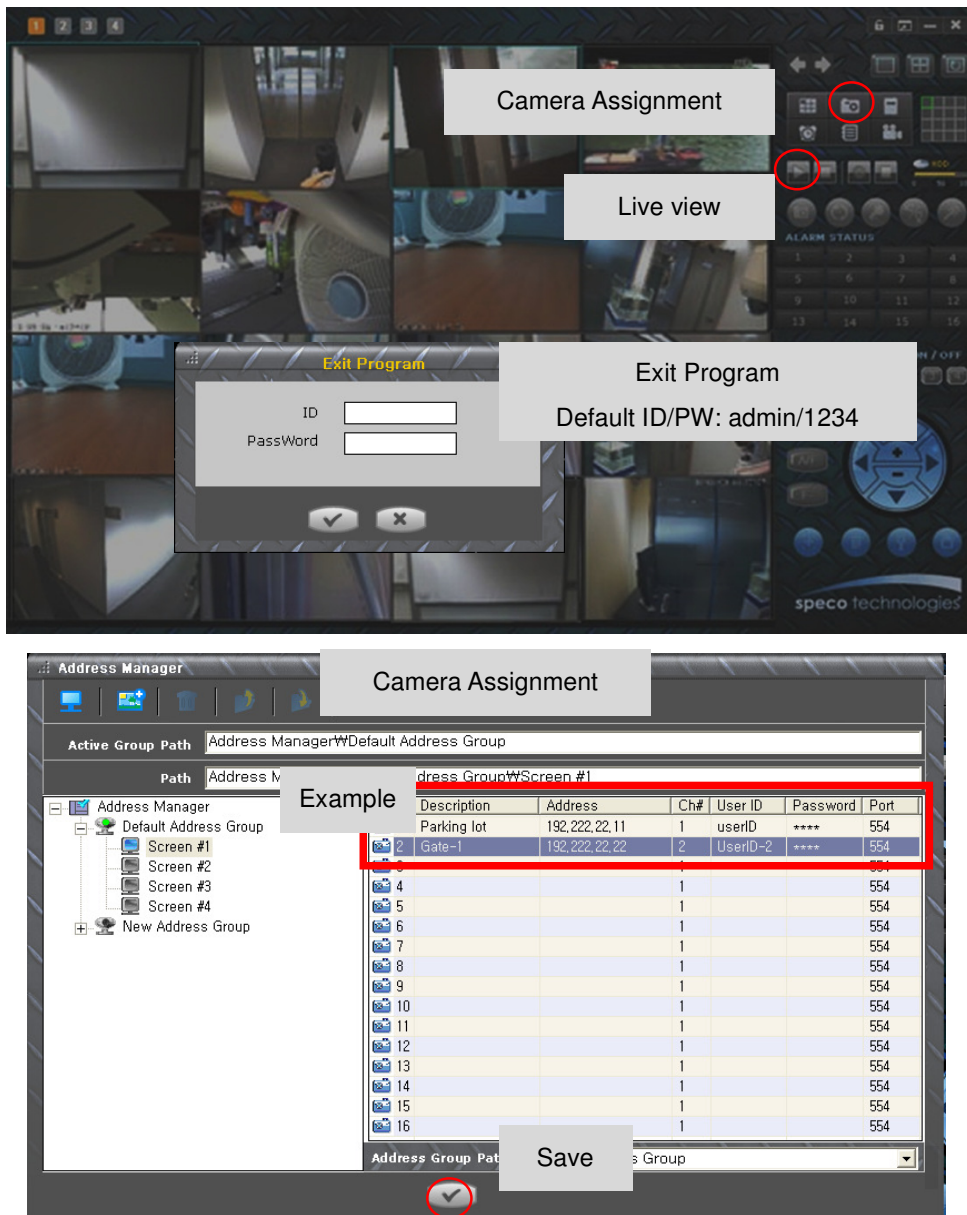

Figure 4-4. Speco-NVR

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**"/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.

5. 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)
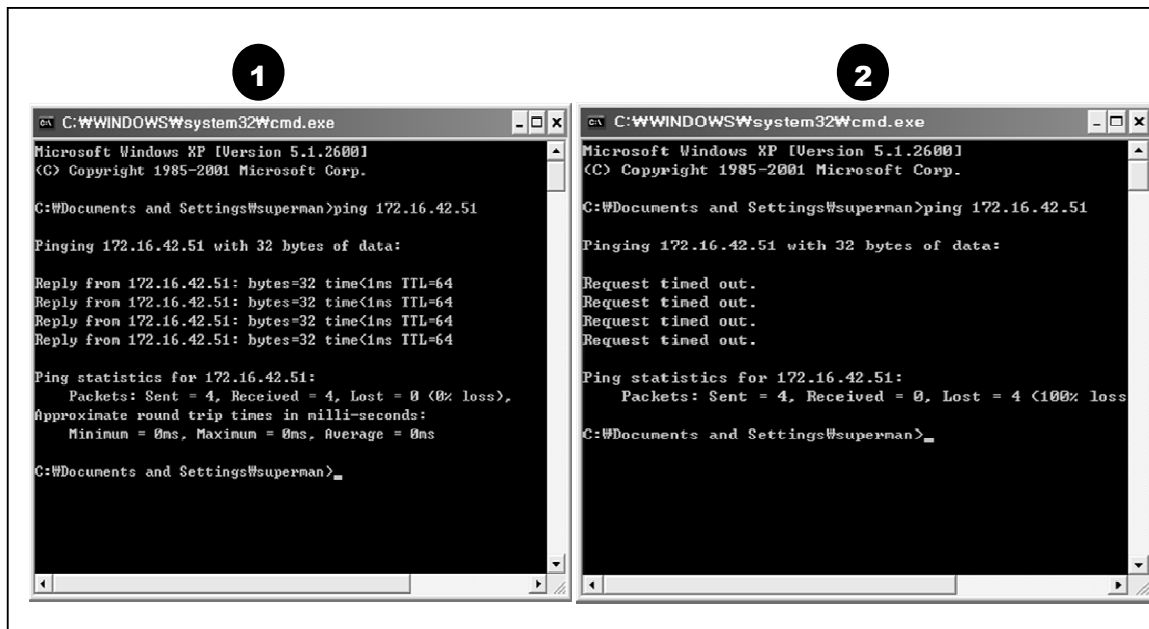
- In case of DC adapter

    If PoE is not applied, the power and network connection should be made through separate cables. Use the DC adapter recommended by the provider. In case of replacing the DC power supply, make sure that the power supply meets 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.
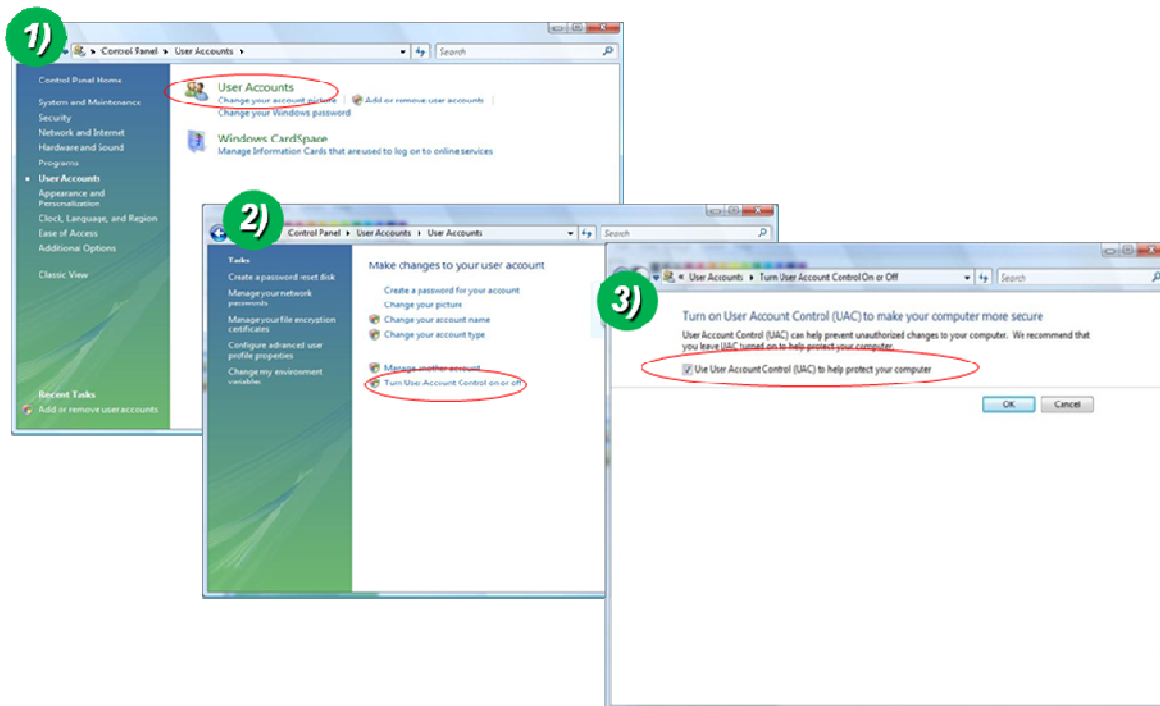
5.3. Windows Vista or Windows 7

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.
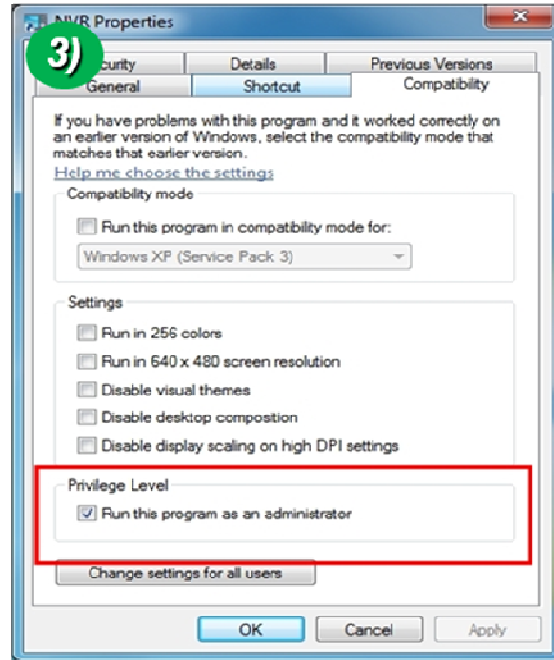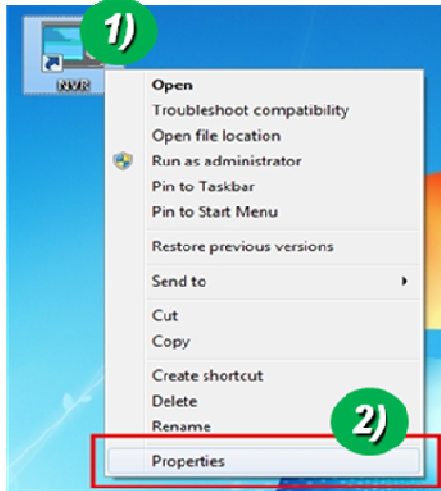
<Windows Vista>

1. UAC (User Access Control) configuration

1) Double-click "User Accounts" in control panel

2) Double-click "Turn User Account Control on or off"

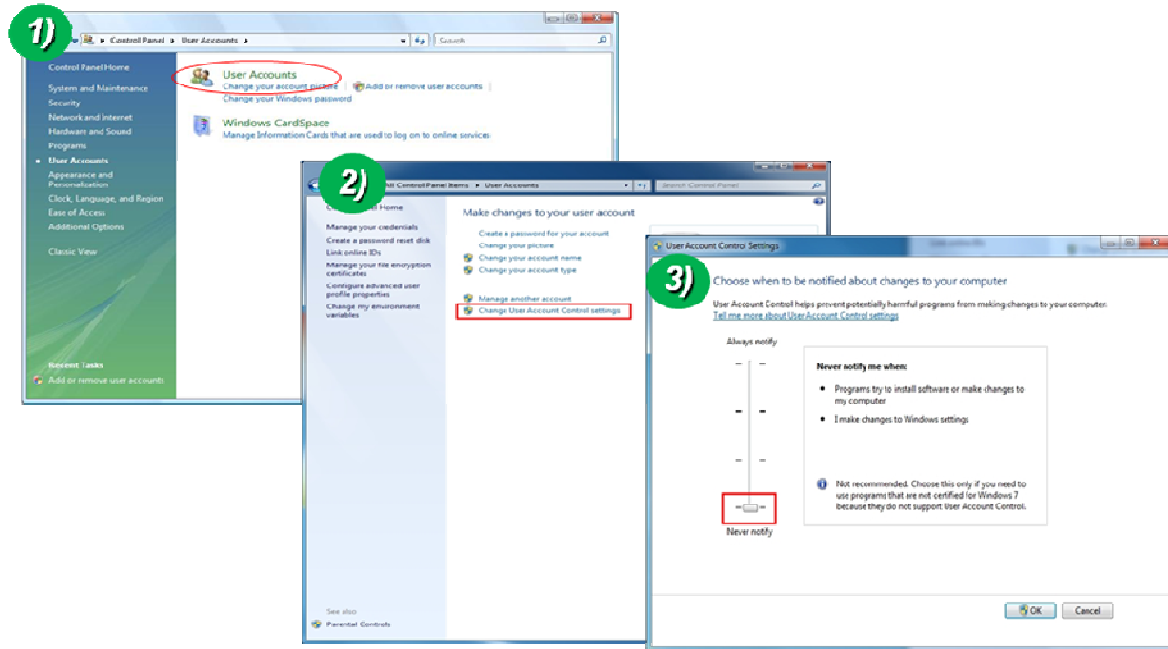3) Uncheck "Use UAC to help protect your computer"

2. Privilege Level Control

1) Select "NVR" icon on the desktop

2) Click right mouse button and select "Properties"

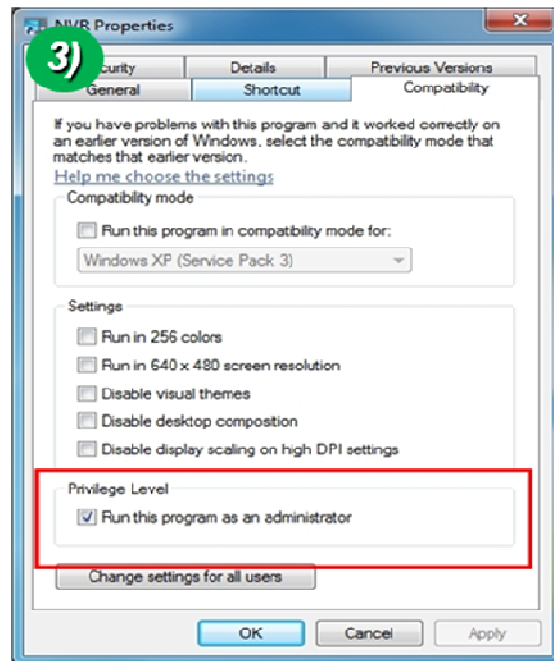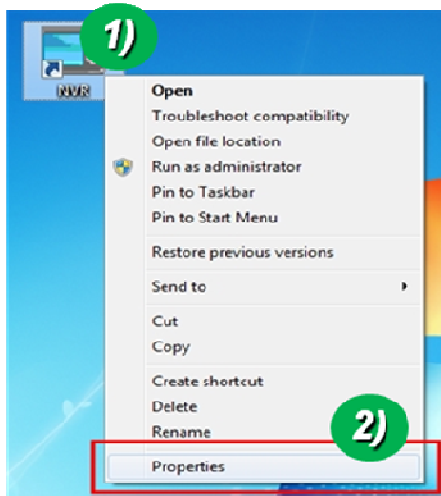3) Check "Privilege Level" in "Compatibility" tab

<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**

Appendix A – Important Notice in Exchanging (micro)SD-card

(micro)SD card is a non-volatile memory device for storing video and audio data on the product. Continued writing to the (micro)SD card will cause wear-off of the memory cell.

When you plug out the (micro)SD card for replacement or other purpose, follow the steps below in order to prevent data loss.

1. Press factory default button for 1 sec to unmount the (micro)SD card.
    a. (micro)SD card can also be unmounted by going to Admin Page -> Sensor&Capture Setup and clicking on CONFIRM button at the right of SD Card Unmount menu.
2. Unplug the (micro)SD card.
    a. If no action is taken within 1 minute, SD card will be mounted again.
3. Plug in new (micro)SD card
4. If the (micro)SD card is a new one for the IP camera, format the (micro)SD card by following through the steps below.
    a. Go to Admin Page -> Sensor&Capture Setup
    b. In the SD card management menu, click on CONFIRM button at the right of SD card Format.

For more detailed information regarding connection to admin page, please refer to the [Configuration_Guide].