Ver. 1.3

XNET Network Dome Camera

(IDC4050IR/IDC4050F/IDC4050VR/IDC4050VF)

Installation Manual

CNB
TECHNOLOGY Inc.

About this Manual

A compatibility and durability test ensured this product's high performance.

This manual is for XNET IP Dome Camera users only, and it describes operations related to XNET IP Dome Camera.

Please read this manual thoroughly paying attention to cautions and warnings before using the product even if you have used similar products before.

Important Notices

It is illegal to copy and distribute this manual without permission.
Damages caused by use of parts not recommended and by misuse will not be applicable for support.
Contact the store or the manufacturer immediately if (you think) there is any problem with the product.
Contact the store or the manufacturer before disassembling the product for alteration or repair.
This product complies for CE (Europe) and FCC (USA) regulations for industrial/home use electrical device.

INFORMATION

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 when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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1. About XNET

1.1. About XNET

XNET is an internet based security and surveillance system that is compatible with various network conditions through easy installation and user interface as well as multi-functional compressor Codec such as H.264, MJPEG. XNET provides stable real-time surveillance by real time video/ audio at 1080P level, local storage for any network problems, and hybrid IP technology that can be used with existing analog CCTV devices.

1.2. Features of XNET

- Most advanced Video compression technology (H.264/MJPEG)
- Progressive technology - Progressive scan makes the image sharp and clear without ghost effect.
- Hybrid IP Technology - CCTV analog video output can be used for existing analog CCTV devices.
- Transmission of Multi-Codec stream - Live video signal can be compressed to H.264 or MJPEG and sent to meet various applications of network or user.
- 2-way Audio Communication (Bi-directional voice communication between Client's PC and XNET)
- Smart Event feature - On the top of motion detection and sensor/alarm feature, pre- and post- alarm feature allows automated surveillance without an attendant's monitoring.
- Install/ Operation Wizard - Install/ Operation Wizard not only makes it easy for installers and users, but also offers a unified installation setup for massive scale installations.
- Up to 3 motion detection areas and Video data transmission to FTP site or e-mail upon detecting a motion.
- Supports Various resolutions   - 1080P(1920x1080), SXGA(1280x1024), 720P(1280x720), D1(720x480), VGA(640x480), CIF(320x240)
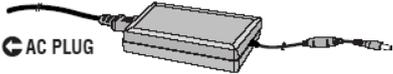- Remote Control over the network for software upgrade

1.3. Applications

- Surveillance (Building, store, factory, parking lot, financial institutions, government buildings, military facilities, etc.)
- Remote video monitoring (Hospital, kindergarten, traffic monitoring, remote branch office, weather, environment preservation, and illegal disposal of trash, etc.)
- Real time broadcasting over the internet (Resort facility, parties, festivals, etc), remote business meetings, and educational trainings, etc.
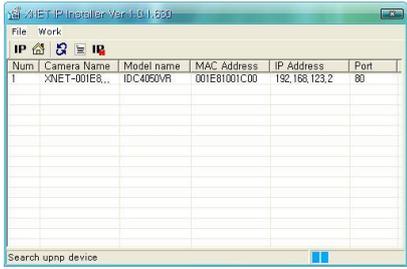
2. About the Product

2.1. Contents

Please make sure the following contents are included when you open the package.

Contents	Description	Additional info.
XNET	XNET IP Dome Camera	
AC Power Cable	2Jack Cable	
POWER ADAPTOR	INPUT : 100~240VAC 50-60Hz OUTPUT : 12VDC 2A	
GUIDE PATTERN	Guide Pattern	
CD	Software and User's manual	
Accessory	Terminal (8P) 1EA, SCREW 3EA, Wall Anchors 3EA	
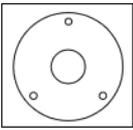
2.2. Product Information

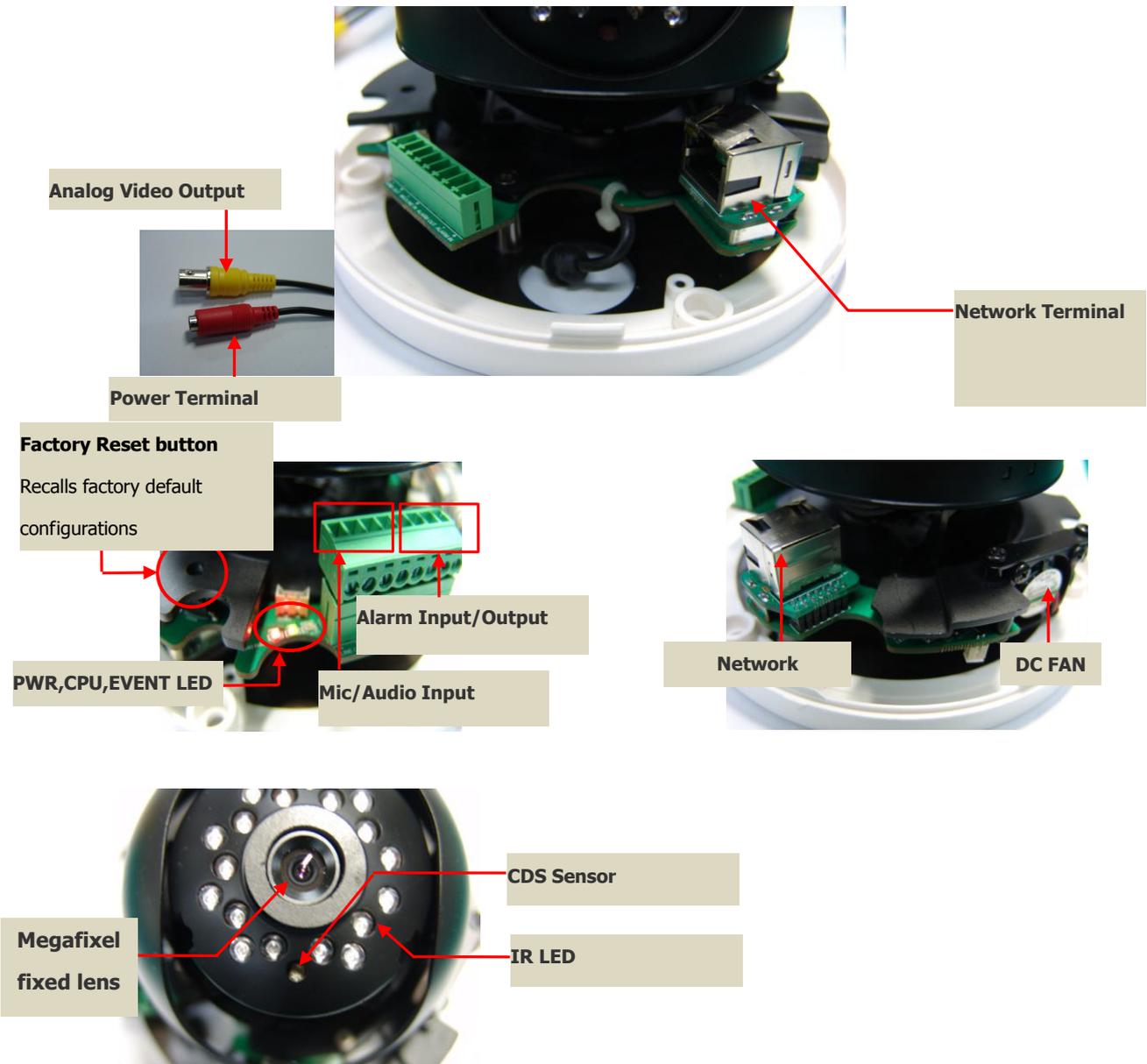| XNET (IDC4050IR, IDC4050F, IDC4050VR, IDC4050VF)	Install CD	
	IP-Installer	Viewer Program (XNET-CMS)
IP Dome Camera (IDC4050VR)	A software that assigns an IP address to the product	A software that monitors and records Audio and Video signal from the device

2.2.1 Product Composition

XNET Product	LENS	IR LED	DC FAN
IDC4050IR	FIXED LENS	O	O
IDC4050F	FIXED LENS	X	X
IDC4050VR	VARIFOCAL LENS	O	O
IDC4050VF	VARIFOCAL LENS	X	X

2.3. Hardware Designation

2.3.1. Switch and Controls

This shows Camera module inside the dome cover.

Analog Video Output

Power Terminal

Network Terminal

Factory Reset button

Recalls factory default

configurations

Alarm Input/Output

PWR,CPU,EVENT LED

Mic/Audio Input

Network

DC FAN

CDS Sensor

Megafixel fixed lens

IR LED

- **Factory Reset**

Press and hold for more than 3 seconds while power is on to recall factory default settings

- **Adjusting Lens**

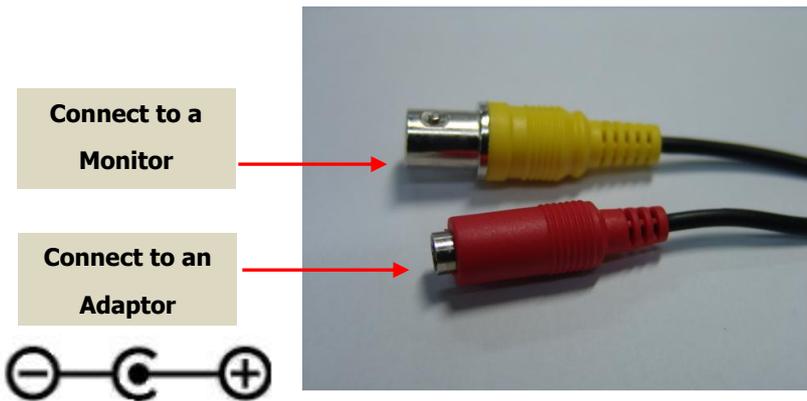Focus Adjust: Adjust the Focus using a knob.

2.3.2 Connecting Cables
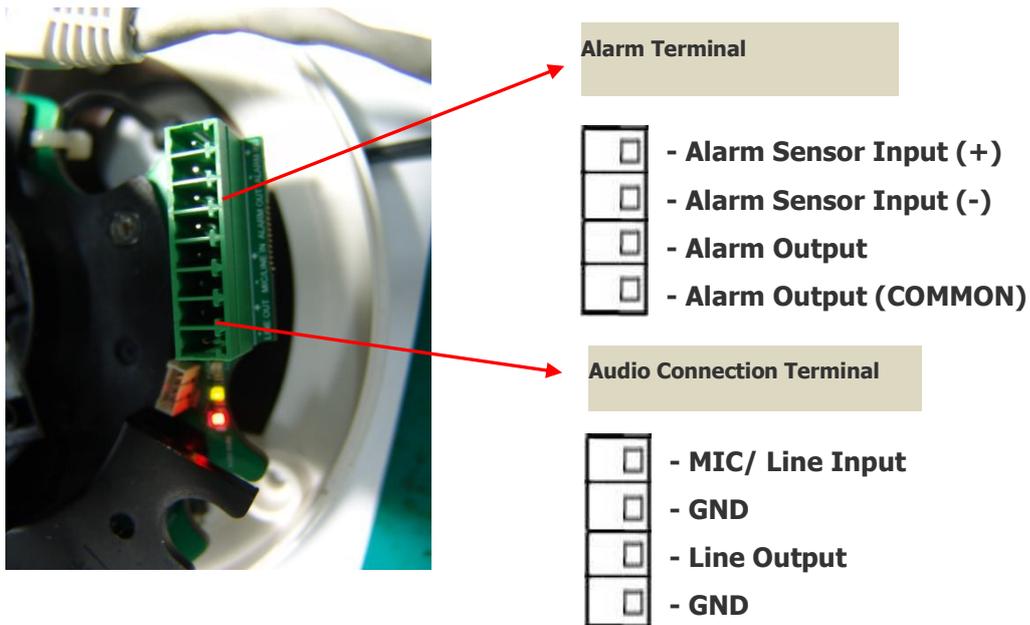
- **Analog Video Output**

  Use this output to monitor the analog video signal while installing.

  (Select Video Out at menu screen to enable this output)

- **Power**

  Supplies Power to the Xnet product. Use 12V DC Adapter in the package.

Connect to a Monitor

Connect to an Adaptor

⚠	Do not use this connector when powering up the product through LAN cable. (PoE) The product is not covered under warranty when it is damaged by connecting both Ethernet power and 12V DC power to this terminal.

Alarm Terminal

- Alarm Sensor Input (+)
- Alarm Sensor Input (-)
- Alarm Output
- Alarm Output (COMMON)

Audio Connection Terminal

- MIC/ Line Input
- GND
- Line Output
- GND

- **Audio Connection**
  - **MIC/Line Input (Mono)**

Connects to auxiliary Audio Device or microphone.

  - **Line Output (Mono)**

Audio signal output to a Power Amplified device or Speaker. This can be used to listen to the audio signal sent from a remote PC for Bi-directional Audio communication.

- **ALARM Input/Output**

Connect to Alarm Input and Output

  - Sensor Input : Wires from various sensor type (IR, heat, and magnetic) can be connected.

  - Relay Output : Connect to an external Alarm device that operates by a relay such as Siren Lamp or Alarm Light.

Please refer to **"2.3.3 Connecting to Alarm devices"** for Sensor and Relay connection.

**Network Terminal**

This Ethernet terminal connects to 100Mbps LAN through an RJ-45 connector. When optional PoE is used, the power will be supplied from the Network Cable.

  - **Link LED**

Yellow light indicates that the network is properly connected.

  - **Act LED**

Green light indicates that the XNET system connected to 100Mbps LAN. This green lamp will blink if the system receives data.
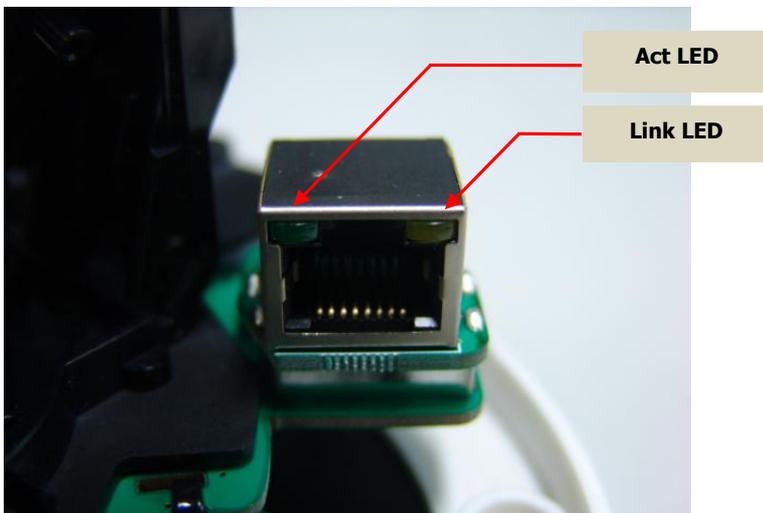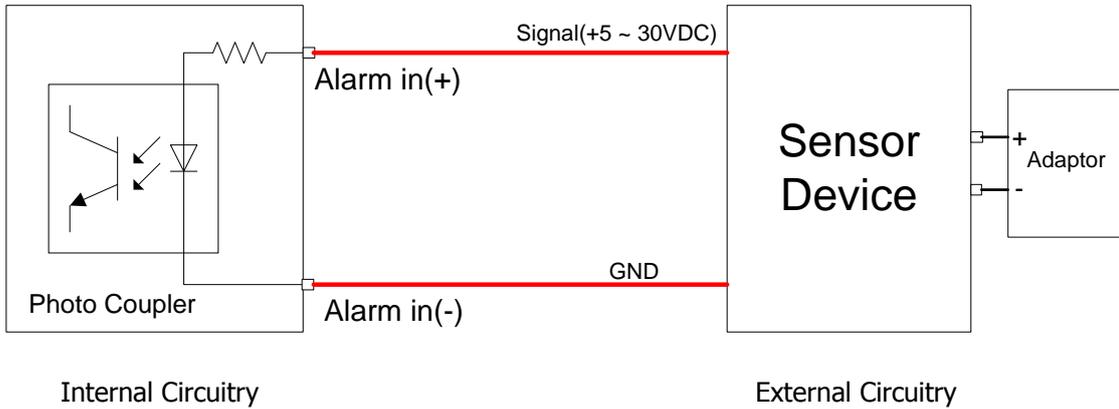
2.3.3 Connecting to Alarm Devices
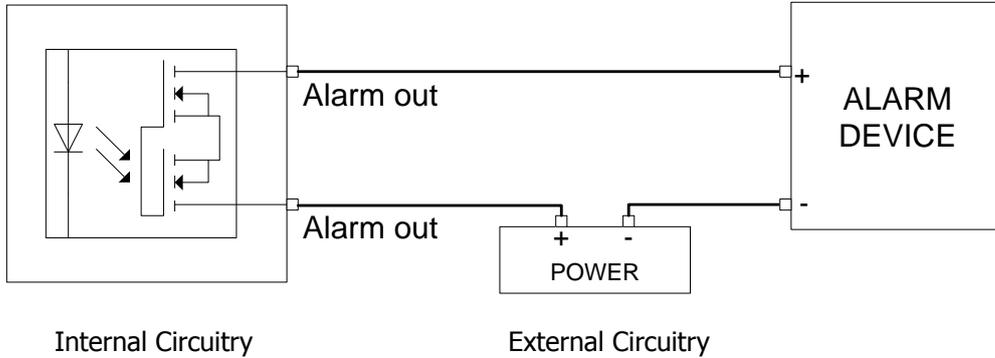
● **Alarm Input**

Wires from various sensor type (IR, heat, and magnetic) can be connected to Alarm in(+)/(-) terminal as shown in figure 2.5. (NC or NO of sensor input can be selected at Menu screen.)

Alarm Sensor device requires a separate power source.

```
Signal(+5 ~ 30VDC)
Alarm in(+)

Sensor          + Adaptor
Device          -

GND
Photo Coupler    Alarm in(-)
```

Internal Circuitry   External Circuitry

● **Alarm Output**

This terminal can only be connected up to DC 30V/400mA.   An additional relay device has to be used to control higher voltage or current.

```
Alarm out                              + ALARM
                                         DEVICE
Alarm out                              -
             + -
             POWER
```

Internal Circuitry   External Circuitry

3. Software Installation

This section provides brief guidelines to install the XNET quickly and to monitor XNET's Video and Audio signals easily. If you have questions about details not explained in this section or if the product is not functioning as described, please refer to FAQ before contacting the store.

3.1. Installing XNET
3.1.1. Installation

Mount the Camera to a ceiling or a wall. Make sure the base is firm enough to hold the Camera.
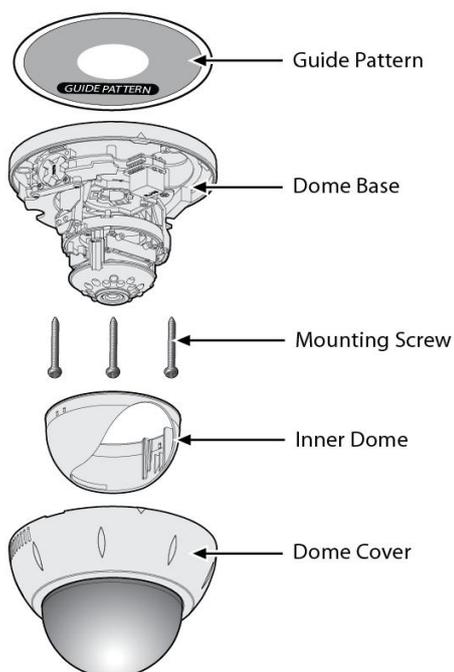
IDC4050IR Model

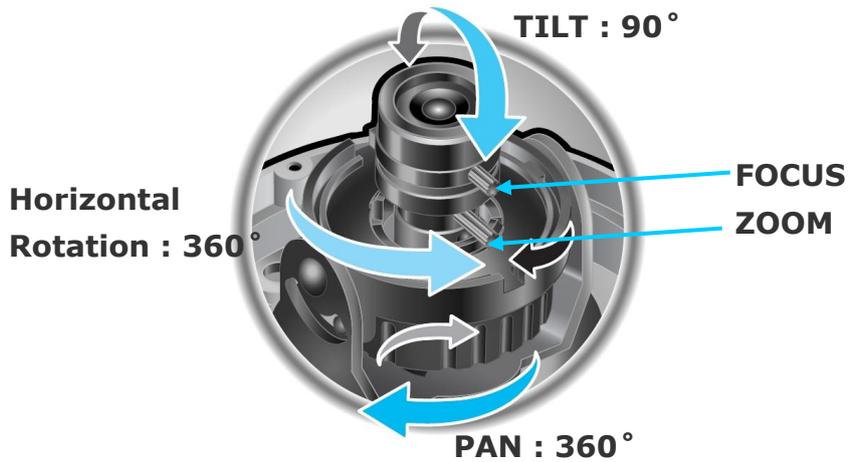Adjust the position, zoom, and focus as shown below:

3.1.2. Cable Connection

1. A PC or a laptop computer is required to set up an IP address.

- Compatible operating system: Windows 2000/ Windows XP/ Windows Vista
- Since the default IP address of the device is 192.168.123.100, set up the IP address of the computer like the following:

    IP Address : 192.168.123.101   Subnet Mask : 255.255.255.0

2. Connect LAN cable to the Network Terminal of the product. (Use a crossover cable when connecting it directly to a PC, and use a direct cable when connecting it to a HUB)
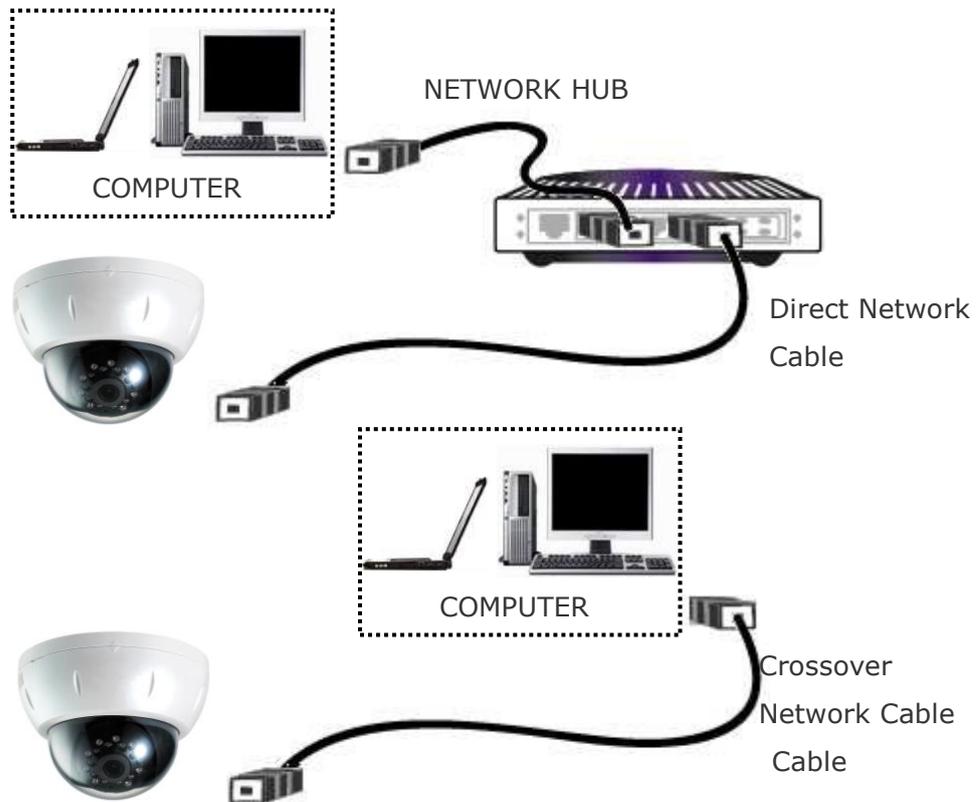
3. Connect the camera to the power.
4. Use the Alarm Sensor/ output and audio terminal if necessary.

3.2. Installing IP-Installer Software and Configuring IP address

3.2.1. About IP-Installer

A unique IP address has to be configured in order to connect IP camera and monitoring PC to a network. IP-Installer software provided in the Installation CD (included in the package) will configure IP address easily. If your network have a DHCP server that automatically assigns IP addresses to IP cameras. If your network does not have a DHCP server, the default IP address of the device is 192.168.123.100. Refer to IP Installer user's manual for detail.

3.2.2. Configuring IP Address

1. The following box will appear when you start the IP-installer software.

Figure 3-2. IP Installer Start box

2. Select the camera of which you wish to change the IP address and click **IP** (Set IP Address) button to bring up the following box in Figure 3-3.
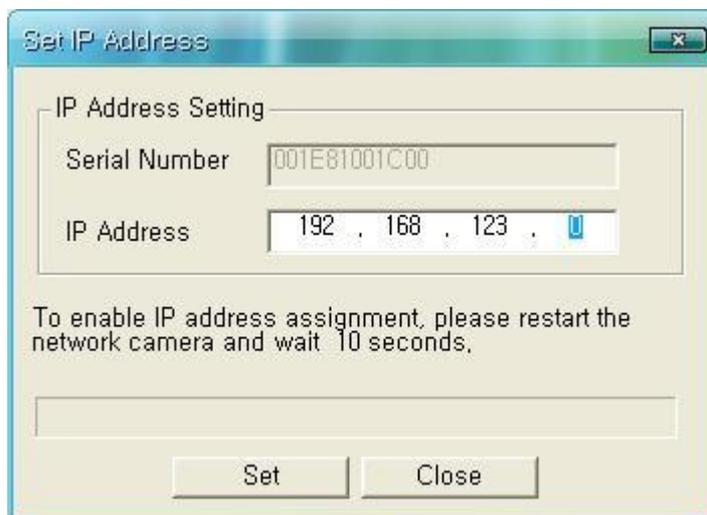

Figure 3-3. IP Address box

3. When you enter the IP address and click Set button, the box shown in Figure 3-4 will appear.
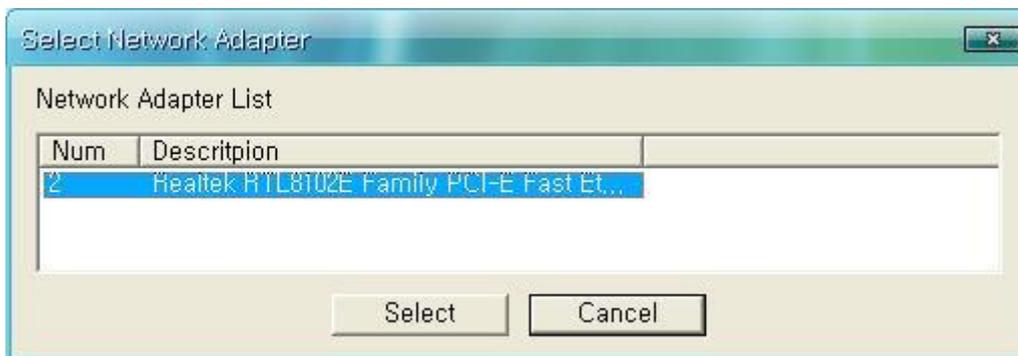

Figure 3-4. Select Network Adapter Box

4. Select the adapter and click select button to change the IP address of the camera.

4. Using Web Viewer

Connecting to network devices can be done using internet web browser or "XNET-CMS" software.   This guide explains about using internet web browser only. For instructions on how to configure network connection using XNET-CMS software, please refer to XNET-CMS Manual, which can be found in the installation CD.

4.1. Logging In

Enter the IP address of the device on the address bar of your web browser and press enter key. Then the following webpage will appear:
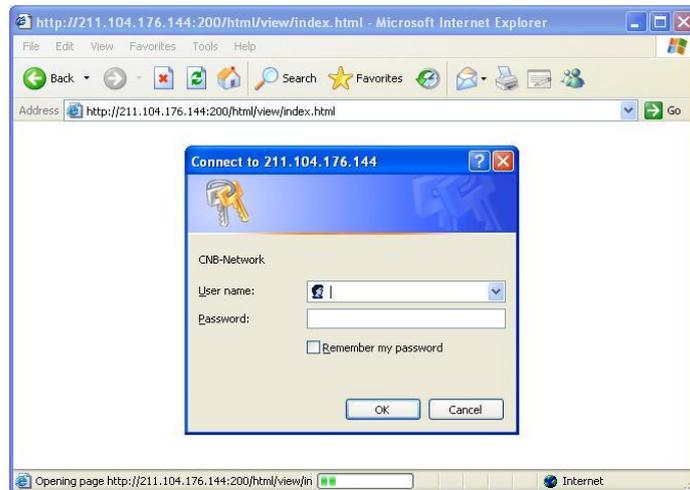

Figure 4-1 Log-in Box

Enter the user name and password to bring up the web viewer page. The default id and password is "**root**", "**admin**" respectively. If you want to use a different HTTP port number from the default value, simply put a colon and port number at the end of the IP address. (For example, enter the following address when changing the port to 8080: **http://192.168.123.100:8080**)

<Address format for accessing as an administrator>

(When using default IP address and port number)   ***http://192.168.123.100***

(When IP address and port number changed)   **http://IP** *address: new port number*

💡	For security purpose, it is recommended to change the administrator's id and password from their default values. Please be careful not to forget them or expose them to others. Please refer to [**Web Viewer Manual]** for detail.

⚠	If you forget the administrator's password, "Factory Reset" is the only way to regain access. However, since this will retrieve all default settings, you need to configure the network settings using IP installer software again.

4.2. Web Viewer Page

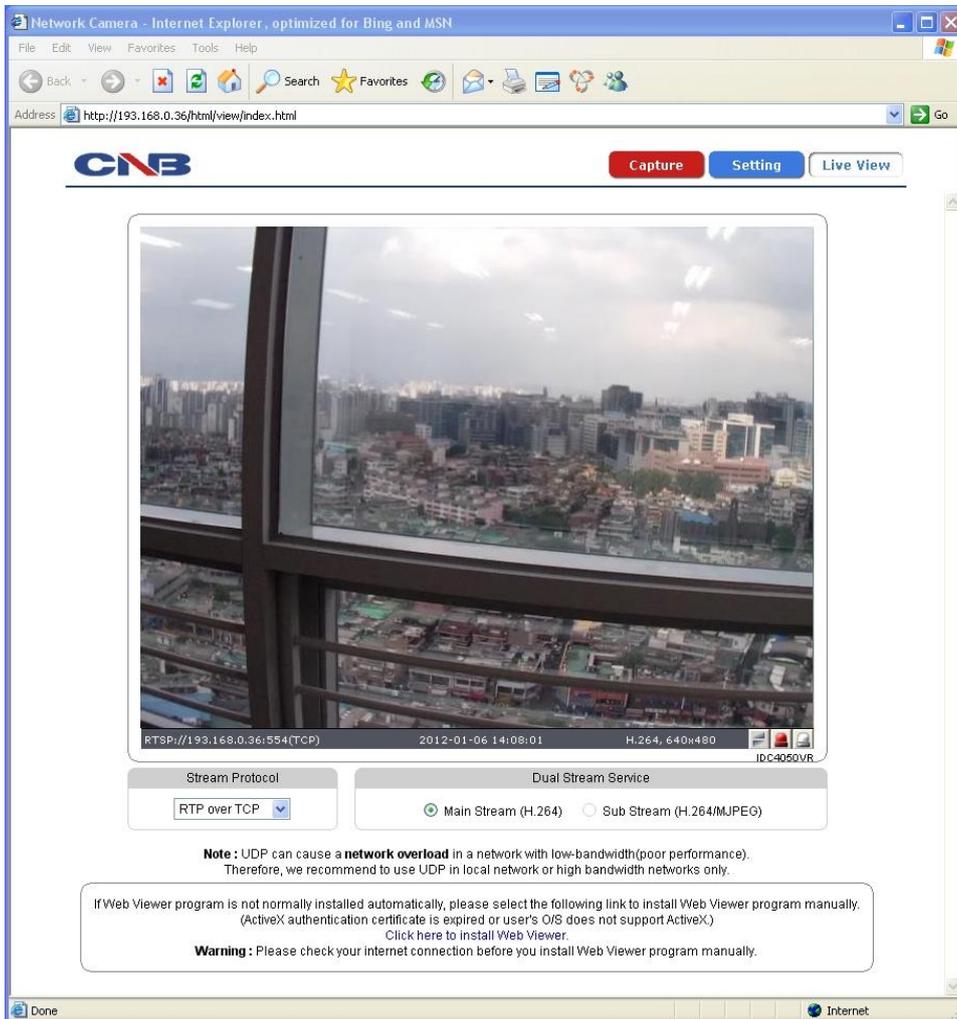Web viewer page consists of Video monitor screen and menu option buttons.

Figure 4-2 Web Viewer Page

Item	Sub Item	Description
Capture	-	Captures and saves the current image as a still picture. The image is saved as jpeg file in the following folder: C:\ xNetCapture
Setting	-	Brings up Menu screen. Setup page for each XNET feature can be opened from this Menu screen. **Please refer to [XNET Owner's Manual] for detail.**
Live View	Main Stream	When this box is checked, Main Stream Video is displayed.
	Sub Stream	When this box is checked, Sub Stream Video is displayed. Dual-Codec needs to be enabled in Video Setup Page in order for Sub Stream to be displayed. **Please refer to [XNET Owner's Manual] for detail.**

5. Specification

IDC4050F/IDC4050IR/IDCP4050VF/IDC4050VR		Specifications
Camera	Signal System	Progressive image processing
	Scanning System	16:9 Progressive
	Pixel Clock	80MHz
	Image Sensor	1/3" Progressive CMOS Sensor
	Sync. System	Internal
	Effective Pixels Number	1920 (H) x 1080(V) 2.0 Mega
	Horizontal Resolution	1100 TV Lines
	Video Output Level	Select NTSC/PAL 1.0Vp-p (BNC 75Ω, composite)
	Lens	Built-in Fixed Mega pixel Lens, f=4.0mm, F 1.8　　　*IDC4050F / IDC4050IR Built-in DC Iris Vari-focal Lens, f=3 ~ 10mm, F 1.3　　*IDC4050VF / IDC4050VR
	Min. Illumination	1Lux (Color, DSS On), 0.05Lux (B/W, DSS On)　　*IDC4050F 1Lux (Color, DSS On), 0.00Lux (IR LED On)　　*IDC4050IR 0.8Lux (Color, DSS On), 0.1Lux(B/W), 0.05Lux (B/W, DSS On)　　*IDC4050VF 0.8Lux (Color, DSS On), 0.1Lux(B/W), 0.00 Lux (IR LED On)　　*IDC4050VR
	IR LED and Sensor	850nm / 45° IR LED 18EA, Sensor 1EA *IDC4050IR / IDC4050VR (IR model Only)
	IR LED Lighting Distance	Max. 15m
	Day & Night System	ICR(CDS Type)
	Back Light Compensation	On/Off
	Flickerless	On/Off
	White Balance	Auto/Manual
	Exposure	Auto/Manual
	Functions	B/W
	Electronic Shutter Speed	NTSC : 1/7.5 ~ 1/8000 (21 Step) PAL : 1/7.5 ~ 1/8000 (21 Step)
Video / Audio	Compression	H.264 / MJPEG
	Frame rate	Single Mode : Main(H.264@30fps)　　　*1080p Mode : Main(H.264@30fps) 　　　Second(H.264@30fps/MJPEG)　　*Main(720p)/Second(D1)
	Resolution	Full HD(1920 x 1080), SXGA(1280 x 1024, 1280 x 960) 720P(1280x720), D1(720 x 480 / 720 x 576), VGA(640x480), CIF(352 x 240 / 352 x 288)
	Audio	Two-way (Full duplex / G.711)
Network	Protocol	IPv4, HTTP, HTTPs, UDP, TCP, RTSP, RTP, SMTP, FTP, ICMP, DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, NTP, IGMP(Multicast) , QoS, SNMP　*) OnVif
	Supported DDNS	1. DDNS　2. DynDNS.org 3. Reference code with SDK
	LAN Interface	Ethernet 10/100 Base-T (RJ-45 Type)
	Support PoE	Standard IEEE 802.3af supported
Security	Access level setup	Multiple user access levels with password protection
	Network Security	IP Filtering
Alarm and Event Management	Image detection	Motion detection (Select 3 Regions - each area)
	Sensor detection	Sensor In, Scheduling, Alarm out
	After Event process	JPEG Image upload over FTP server / SMTP (E-mail server)
Applications	Browser	Internet Explorer 6.0 or later
	Monitoring Application	NVR, CMS and Utility (IP-Installer, etc)
Maintenance	System Upgrade	Firmware upgrade over HTTP
Mechanical	Operating Temperature	0℃ ~ 40℃
	Power	DC 12V Max. 7 W
	Dimensions / Weight (Net)	92(Ø) mm