Ver. 1.0

XNET

(IJB2000)

Installation Manual

CNB TECHNOLOGY Inc.

About this Installation Manual

A compatibility and durability test ensured this product's high performance.
This installation manual is for XNET Network Video Server users only, and it describes operations related to XNET Network Video Server.
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

Damages caused by use of not suggested parts and 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.
XNET is a trademark of CNB Technology Inc.
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 MJPEG, MPEG-4, and H.264. XNET provides stable real-time surveillance by real time video/ audio at D1 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/ Audio compression technology (MJPEG/MPEG-4/H.264, ADPCM/G726)
- 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 MJPEG or MPEG-4 (or H.264) 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
- Motion Detection – Alarm output and Video/ Audio data transmission to FTP site or e-mail upon detecting a motion.
- Supports Various resolutions - NTSC: 704x480, 352x240 PAL: 704x576, 352x288
- RS-485 interface for Remote Pan/Tilt control
- Remote Control over the network for software upgrade

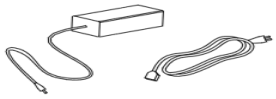
1.3. Applications

- 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.

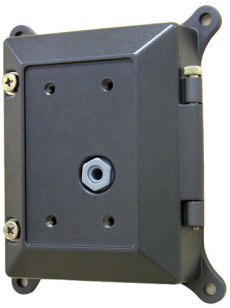
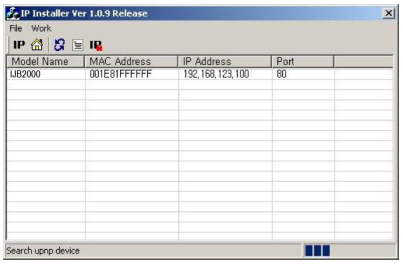
2. About the Product

2.1. Contents

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

Contents	Description	Additional info.
XNET Product	Network Video Server	
Power adapter	Input: 100~240VAC 50-60Hz Output : 12VDC, 5A	
AC power Cord	3 jack cable	
CD	Software and User's manual	

2.2. Product Information

XNET (IJB2000)	Install CD	
	IP-Installer	Viewer Program (XNET-NVR)
		
Network Video Server (Junction Box)	A software that assigns an IP address to the product	A software that monitors and records Audio and Video signal from the device (supports up to 16 channels)

2.3. Functions and designations

2.3.1. Outer View

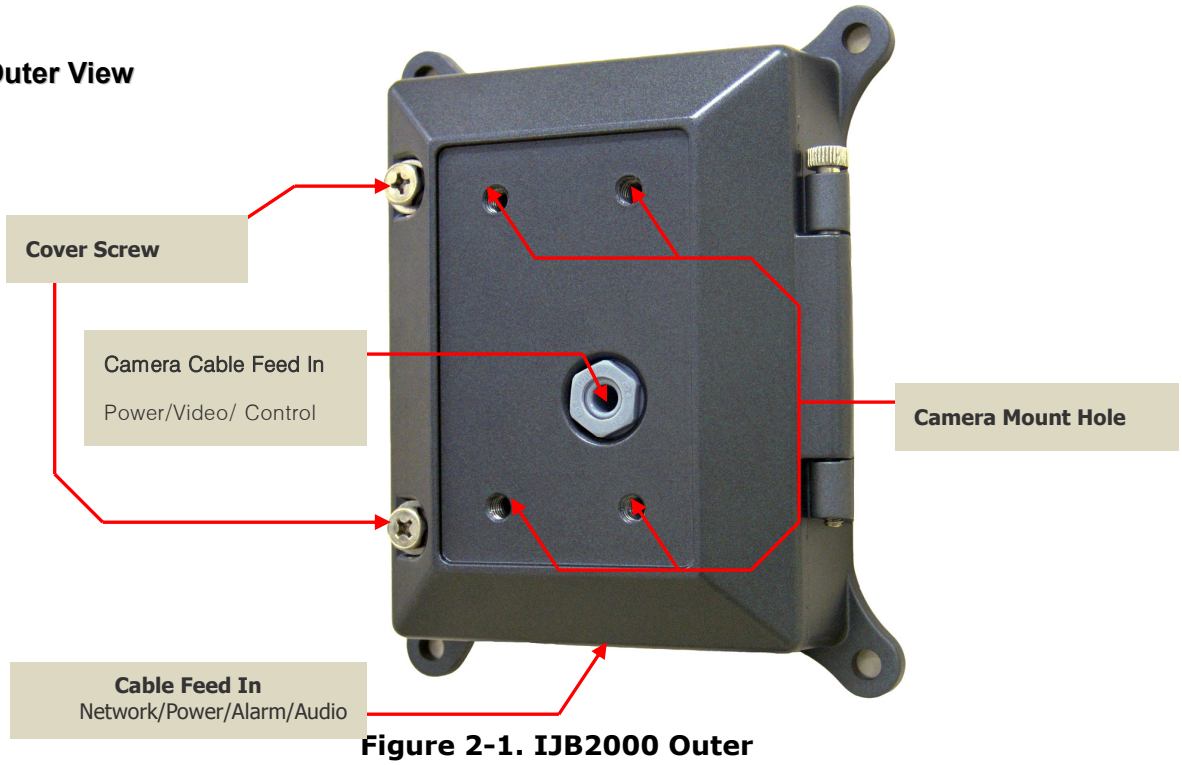


Figure 2-1. IJB2000 Outer

2.3.2. Inner View

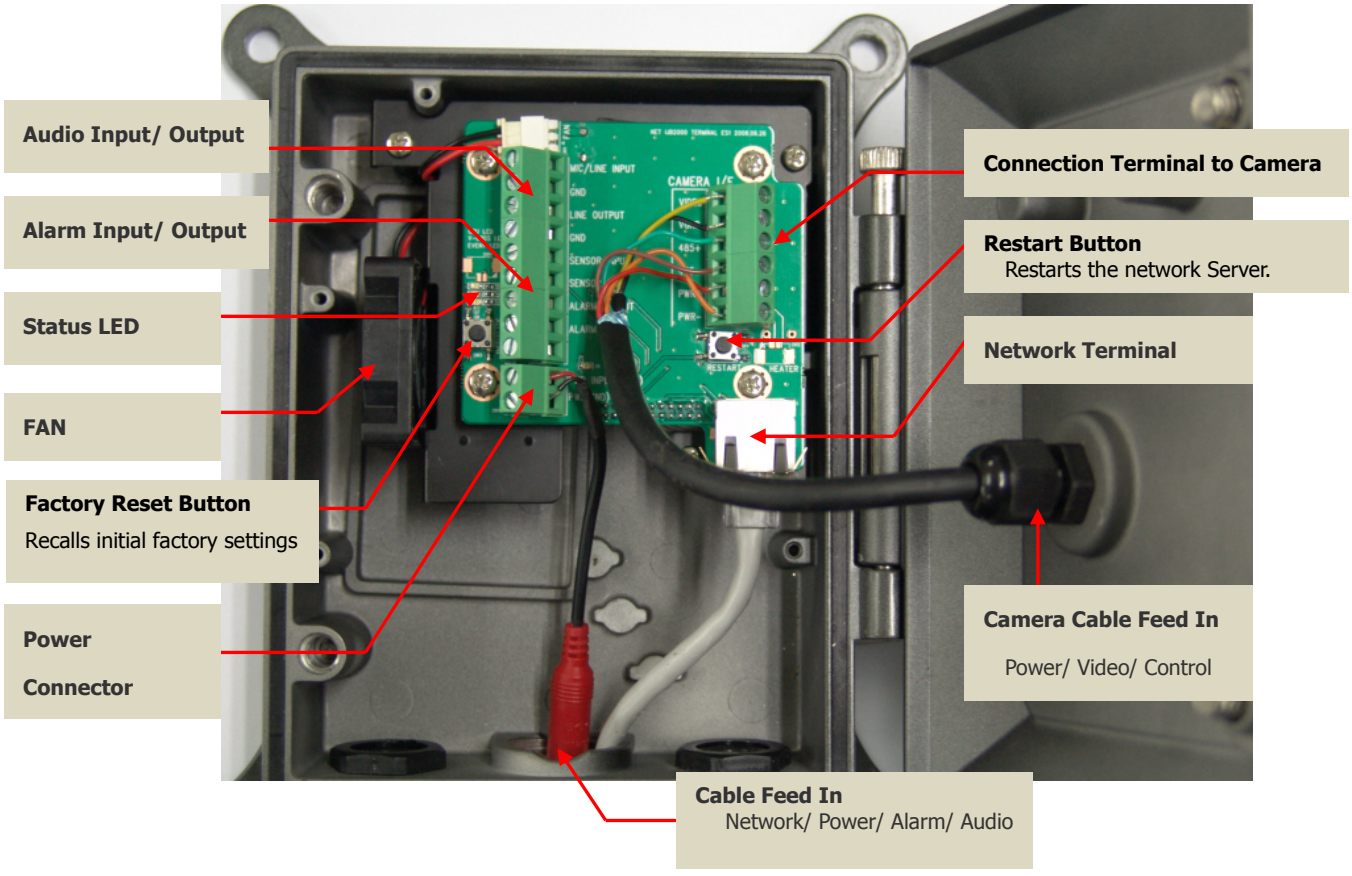


Figure 2-2. IJB2000 Inside

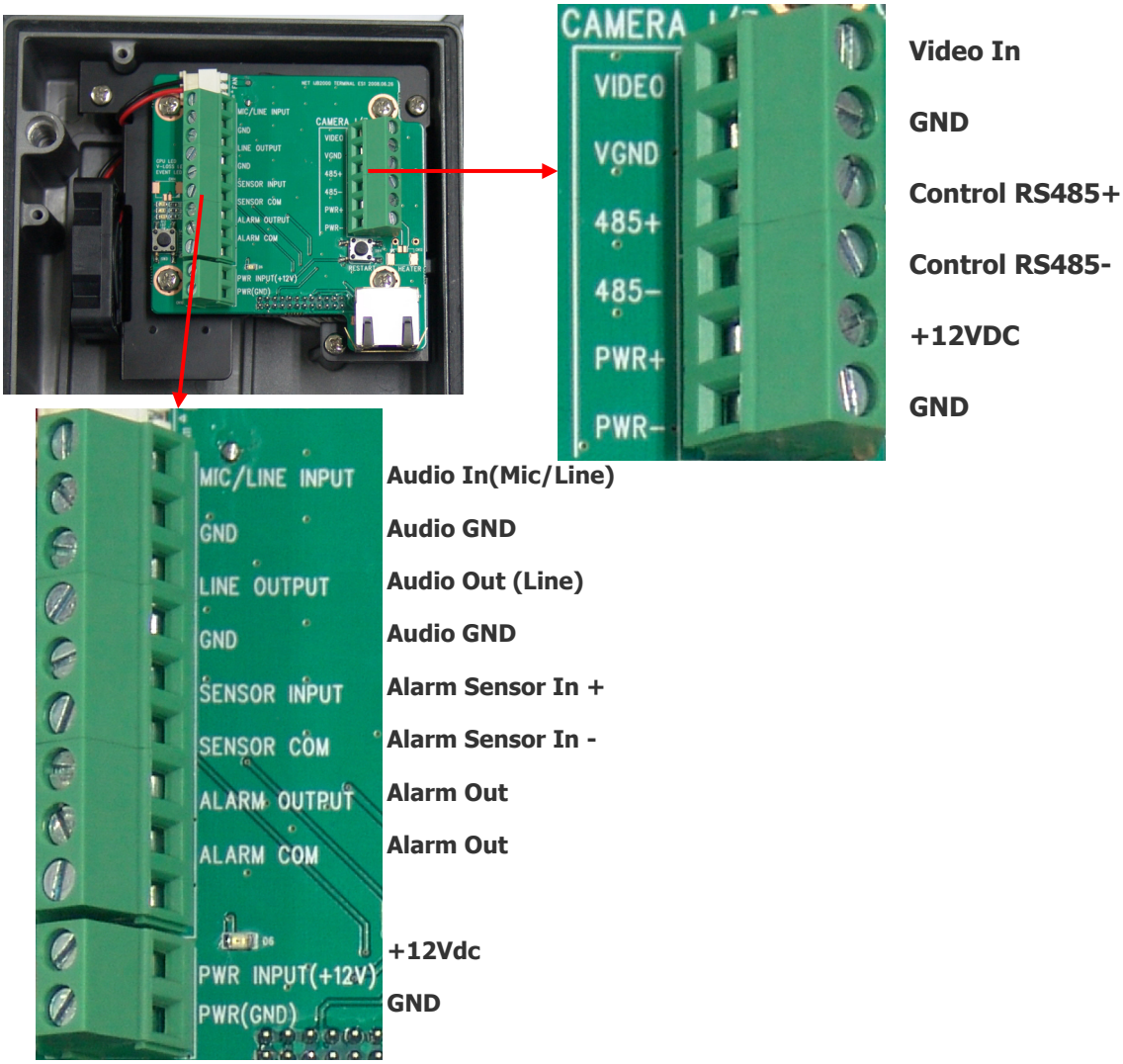


Figure 2-3. Connection Terminal Block

- **MIC/LINE IN :** Connects to auxiliary Audio Device or microphone.
- **LINE OUT** : 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 IN** : This connects to an Alarm Sensor signal. Only one sensor can be connected.
- **ALARM OUT** : This connects to an external Alarm device that operates by a relay such as Siren Lamp or Alarm Light. Only one Alarm device can be connected.
- **Factory Reset Button**: Press and hold for more than 3 seconds while power is on to recall factory default settings
- **Restart Button** : Press to restart the network system.
- **NETWORK** : This Ethernet terminal connects to 10Mbps or 100Mbps LAN through an RJ-45 connector. Status of network connection is displayed in the LEDs on this Terminal.
  - LINK : Green light indicates that the network is properly connected.
  - ACT : Yellow light indicates that the XNET system connected to 100Mbps LAN. This green lamp will blink if the system receives data.

- **Power INPUT:** Connect 12V DC Power to this terminal.

Please use the power adapter came in the package.

- **STATUS LED** : Indicates the operation status

- CPU LED : Green light will blink after 50 seconds on power.
- Video Loss LED : Red light indicates that there is no Video Input signal.
- EVENT LED : Green light indicates that Alarm Out signal is turned on.
- POWER LED : Red light indicates that 12V DC power is connected.

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.

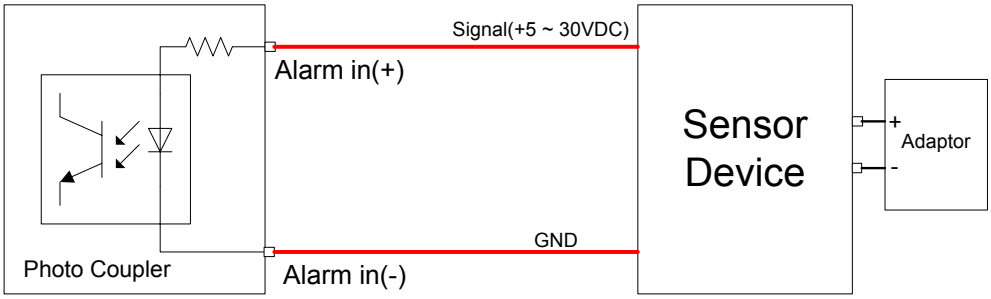


Figure 2-4. Connecting to Alarm Input

- **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.

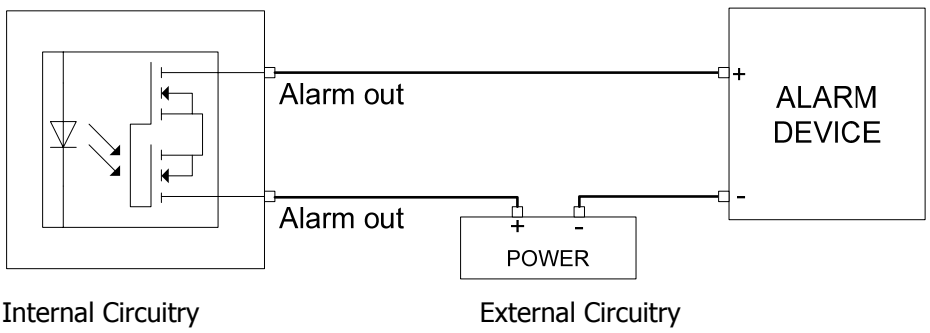


Figure 2-5. Connecting to Alarm Output

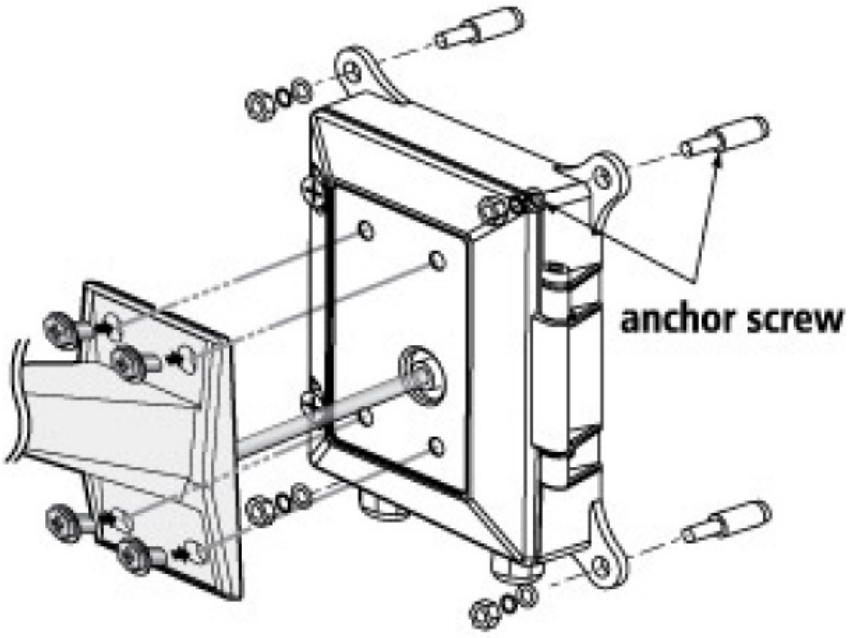
3. Product Installation

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.
Our homepage is ***http://www.cnbtec.com***.

3.1. Hardware Installation

3.1.1. Installation

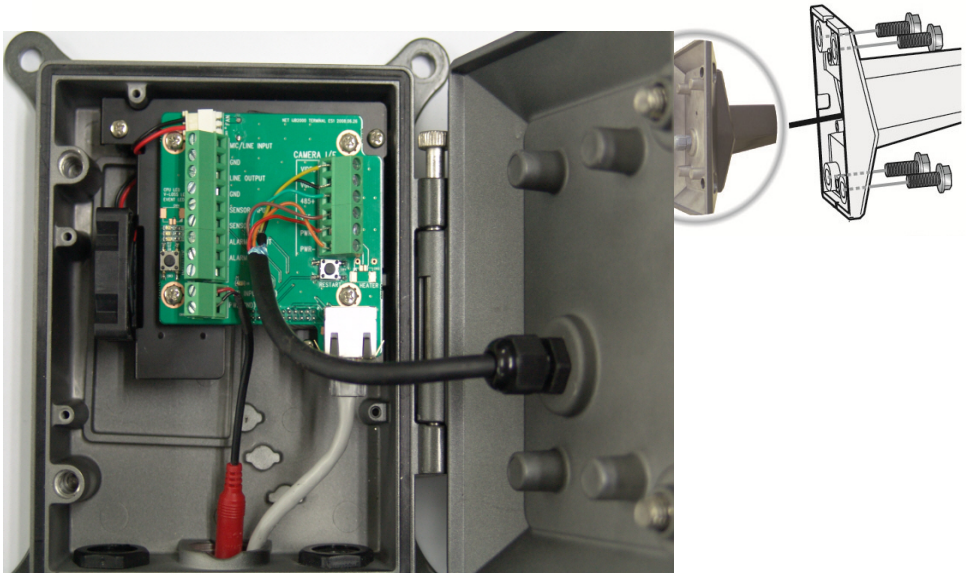
As shown in the picture, drill 4 screw holes using the guide pattern provided. Insert Anchor screws to the holes and fix the Video Server using screws. Make sure the wall is firm enough to hold the camera and the video server (junction box).



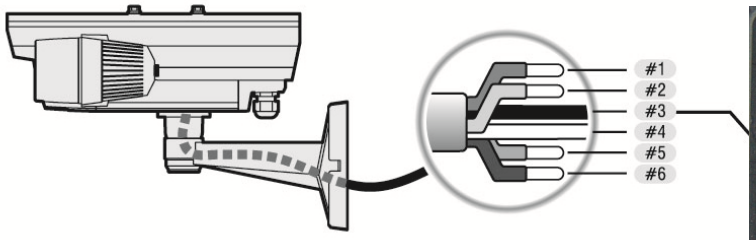
Guide Pattern

Insert the camera's cable into the feeding hole on the front cover of the junction box, and then mount the camera to the server using the screws.

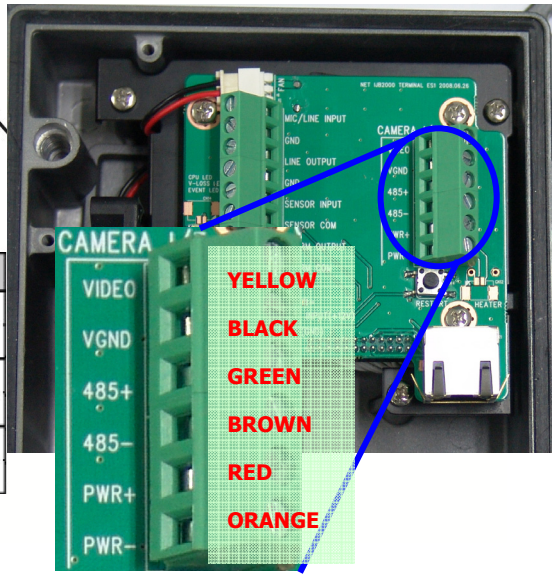
3.1.2. Connecting the Cable



1. Connect the wires according to the detail shown in the table below.
   (Cut wires if necessary.)



No.	Line Color	Function	Remark
#1	RED	DC12V	DC 12V / 2.5A
#2	ORANGE	GND	GND
#3	BLACK	GND(VIDEO)	GND
#4	YELLOW	VIDEO OUT	1.0Vp-p Composite
#5	GREEN	RS-485 (+)	-
#6	BROWN	RS-485 (-)	-



This Junction box is designed to be used with specific cameras. Please contact CNB dealer to ask about purchasing

2. 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
3. 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)

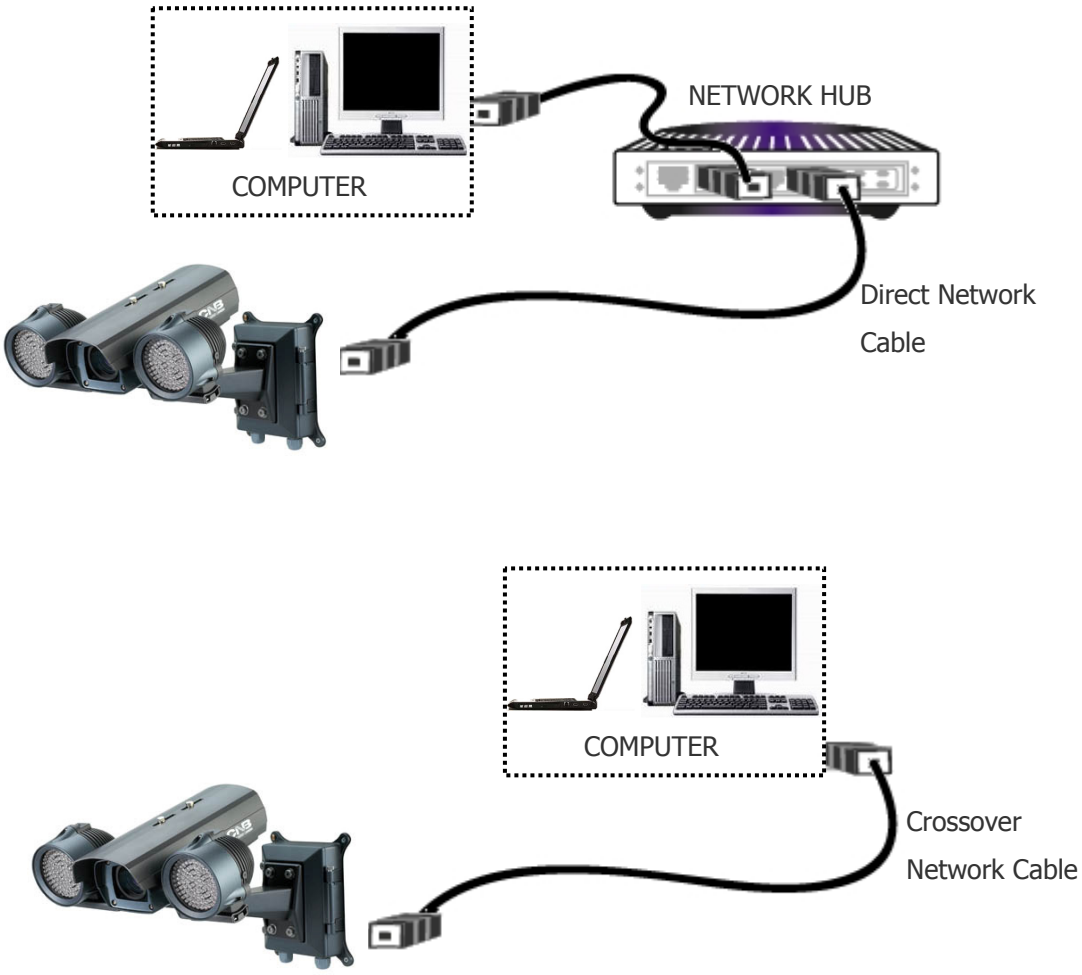


Figure 3-1. Network Connection

4. Connect the device to the power.
5. 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 network device and monitoring PC to a network. IP-Installer software provided in the Installation CD (included in the package and also available to download from our website http://**www.cnbtec.com**) will configure IP address easily. If your network have a DHCP server that automatically assigns IP addresses to network devices. 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.

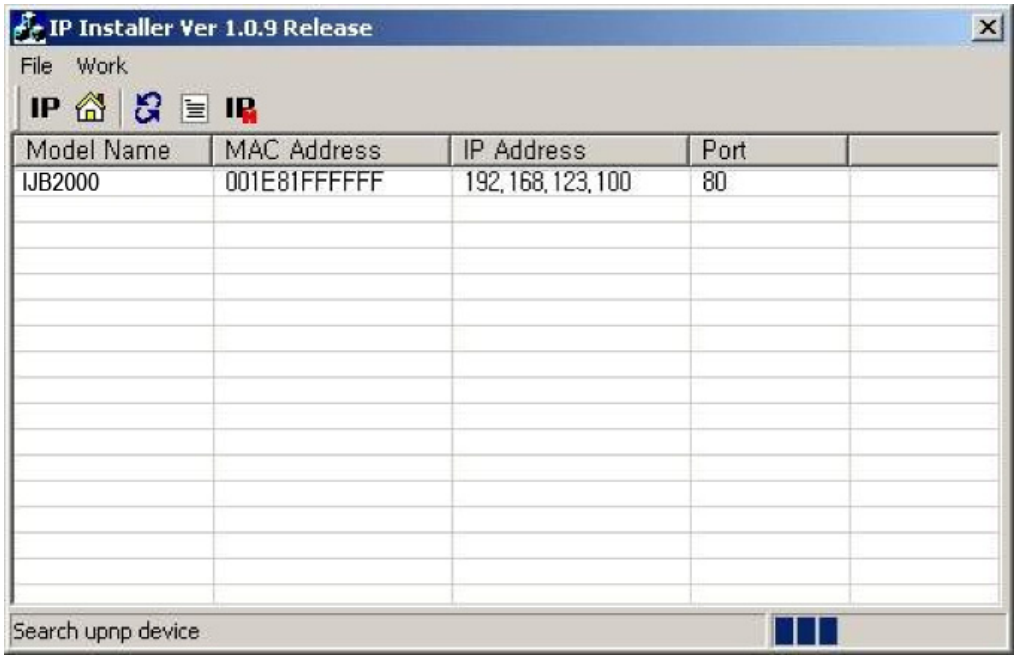


Figure 3-2. IP Installer Start box

2. Select the device 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.

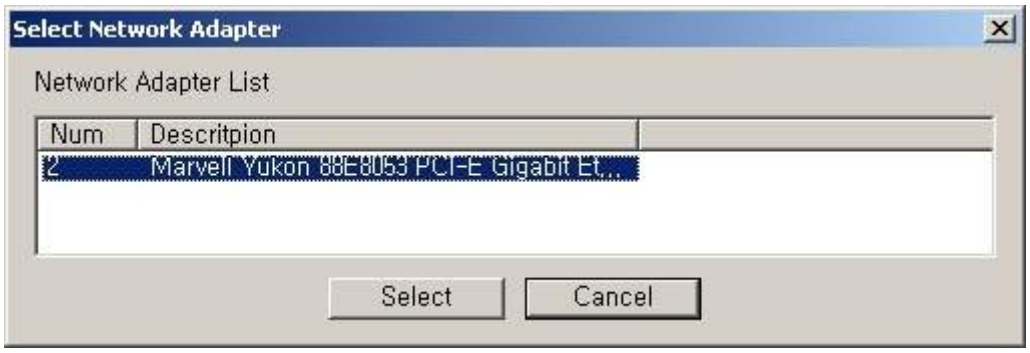


Figure 3-4. Select Network Adapter Box

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

4. Using Web Viewer

Connecting to network devices can be done using internet web browser or "XNET-CMS" software. This manual 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:

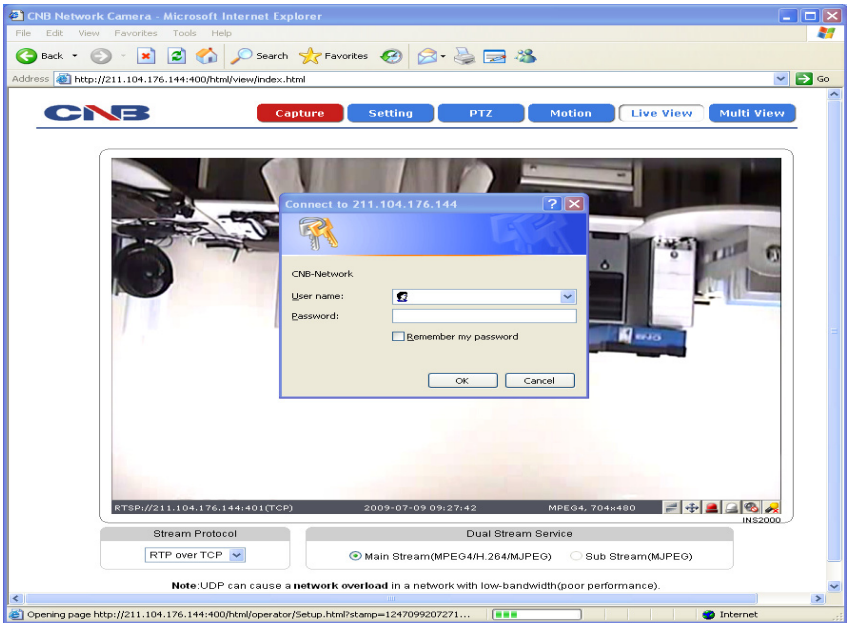


Figure 4-1. Log-in Box

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, please change the administrator's id and password from their default values. Please save the changed ID and password in a place only accessible by an administrator. 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, the network settings have to be configured again using the IP installer.

4.2. Web Viewer Page

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

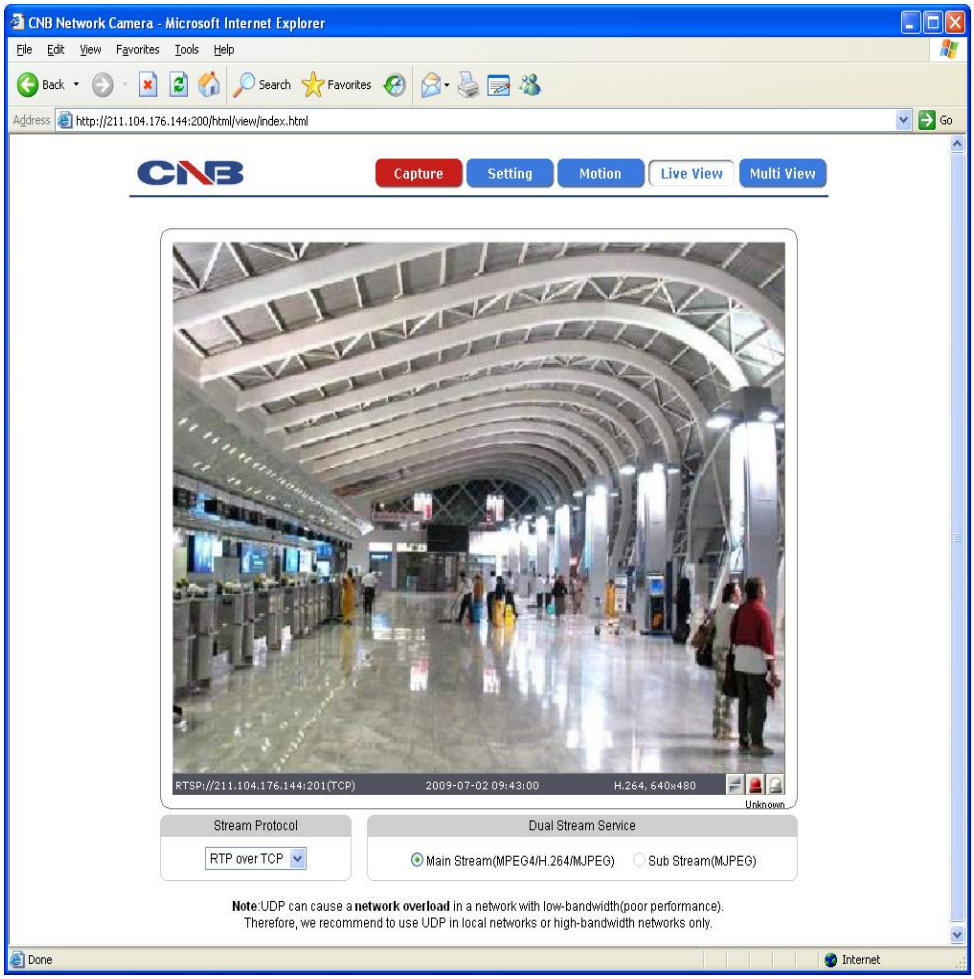
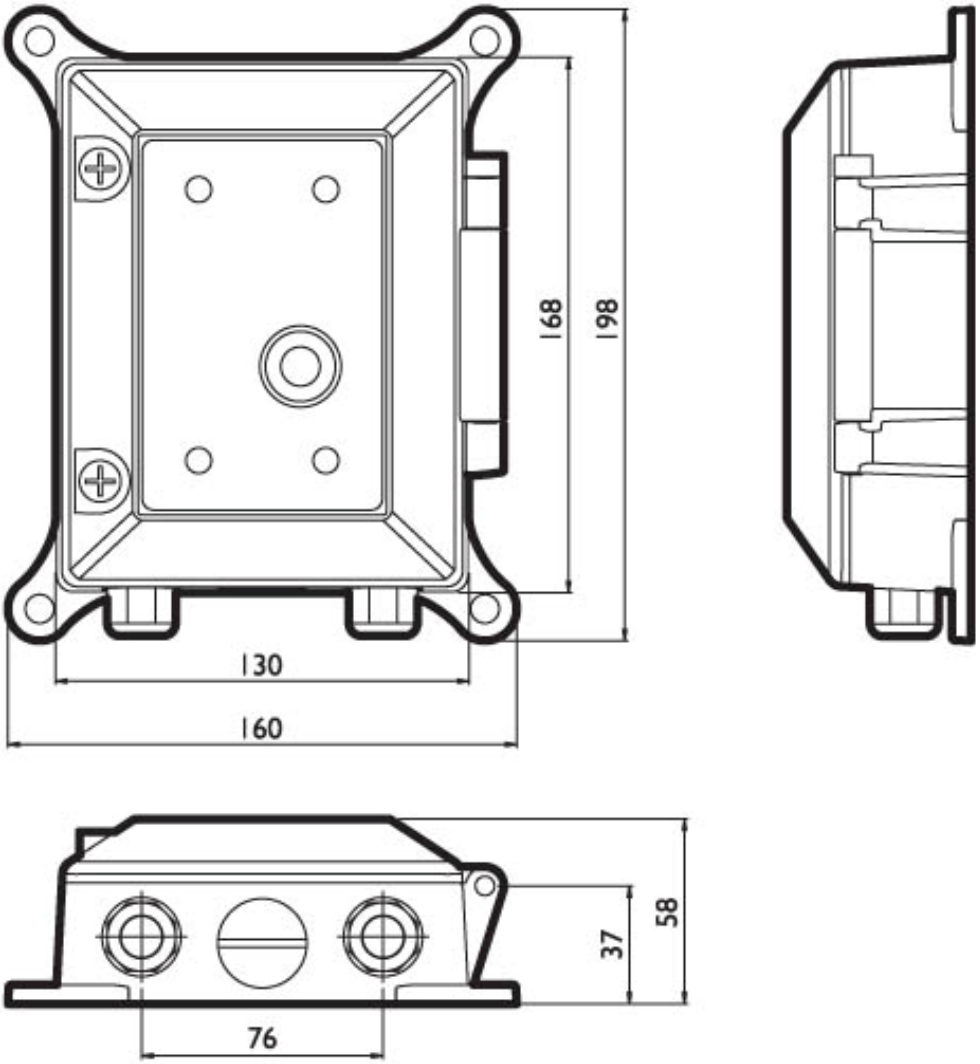


Figure 4-2. Web Viewer Page

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.**
PTZ	-	Opens up PTZ page. This page can set up control of PTZ movement. **Please refer to [XNET Owner's Manual] for detail.**
Motion	-	Opens up Motion Detection page. You can add or delete areas for detecting motion in this page. **Please refer to [XNET Owner's Manual] for detail.**
Multi View	-	Opens up Multi View page. You can view videos from cameras that are programmed in Multi Video Player setup page. **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. Specifications

IJB2000		Specifications
Video Signal	Input Signal	1ch Input Composite by B3, B4, B5, B6 Series
	Signal Select	NTSC/PAL (Manual)
	Compatible Camera Model	B3 / B4 / B5 / B6 Series all models
Video / Audio	Compression	MJPEG / MPEG4 / H.264
	Frame rate	Single Mode : Main(H.264@30fps) *D1 Dual Mode : Main(H.264/MPEG4, 30fps), Second(MPJEG) *D1
	Resolution	D1 (NTSC: 704 x 480 / PAL: 704 x 576) CIF (NTSC : 352 x 240 / PAL: 352 x 288)
	Video streaming	MJPEG / H.264(or MPEG4) Dual mode Constant and variable bit rate in MPEG4 (128kbps ~ 3M bps) Controllable frame rate and bandwidth
	Image settings	Compression level setting Configurable Brightness, Sharpness, White Balance
	Audio	Two-way (full duplex / ADPCM, G.726)
Network	Protocol	Ipv4, HTTP, HTTPs, UDP, TCP, RTSP, RTP, SMTP, FTP, ICMP, DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, NTP, IGMP(Multicast) *) OnVif
	Supported DDNS	1. CNB DDNS 2. DynDNS.org 3. Reference code with SDK
	LAN Interface	Ethernet 10/100 Base-T (RJ-45 Type)
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)
	Local storage	JPEG Image write to Internal memory - Internal memory : Max 32MByte
	Pre / Post alarm	Detail time-set : Max Pre alarm 5 sec / Post alarm 8 sec Local storage (Internal memory : JPEG image)
Applications	Browser	Internet Explorer 6.0 over
	Monitoring Application	XNET NVR, CNB CMS and Utility (IP-Installer, etc), 3rd party SW
Maintenance	System Upgrade	Firmware upgrade over HTTP
	PTZ control (RS-485)	PTZ Protocol Service (User define update)
Mechanical	Operating Temperature	-10℃ ~ 50℃
	Power	DC 12V Max. 5 W
	Dimensions	198(D) x 160(W) x 58(H)mm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