

# INSTALLATION & OPERATION MANUAL

## MPEG-4 LAN CAMERA

Before trying to connect or operate this product, please read this manual completely

WIRELESS

**DDK-1000W**





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## SAFETY PRECAUTIONS

All the following safety and operational instructions to prevent harm or injury to the operator(s) or other persons should be read carefully before the unit is activated.

### WARNING

- To prevent fire or shock hazard, avoid exposing this unit to rain or moisture.
- Do not block ventilation openings.
- Do not place anything on top of the unit that might spill or fall into it.
- Do not attempt to service this unit yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Please refer all servicing to your distributor / retailer.
- Do not use liquid cleaners or aerosols for cleaning.
- To prevent fire or electric shock, do not overload wall outlets or extension cord.
- This unit must be grounded to reduce the risk of electric shock hazard.

### FCC B

NOTE: This equipment has been tested and found to comply with the limits for a Class B 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 an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### Notice:

- (1) *A Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.*
- (2) *Use only shielded cables to connect I/O devices to this equipment.*
- (3) *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

# 1. PRODUCT FEATURES

## 1.1 Product Introduction

The **Wireless Ipxcam DDK-1000W** is the state-of-the-art equipment in its field. It combines many digital video capabilities with the internal functions of the network video camera. The user can immediately connect to a standard network, and the device can transmit the digital images to a remote browser. It connects to the wireless LAN rather than the USB or other communication ports. Since the various types of Web Cameras must initially be connected and installed with a PC, the Web Camera is limited regarding some practical applications. The principle function of the Wireless Ipxcam is to remotely view, control and record over a digital network. By using the Wireless Ipxcam you can increase your surveillance capabilities and help monitor a store, house, factory, school, other public areas, and so forth. Image size and quality vary according to the user's requirements. Different settings have different picture qualities and compression ratios that can be regulated according to the user's needs. The digital images that are stored are more convenient to retrieve than analog images, and also enable the user to access the latest status instantly. The user can moreover use multiple modes of accessing images, such as schedule, time, and alarm.

The **Wireless Ipxcam** is a user-friendly product whose simplified installation and setup procedure make it easy to apply and handle. Additionally it provides all-weather automation-monitored control. Installation will automatically start up the Wireless Ipxcam, which further supports by default without disrupting the existing network clients. The user needs only to start up a browser such as the Microsoft Internet Explorer, and proceed with the connections.

## 1.2 Product Features

- ◆ Wireless access, complies with IEEE 802.11 b.
- ◆ The installation of a Codec or execution file is not necessary. The Ipxcam will automatically send the Codec or any component to a PC if the latter requires it.
- ◆ Supports two compression modes, the Motion - JPEG and the MPEG4. You can change from one to another as you wish.
- ◆ The MPEG4 is a very small size file, so it can save more images over a longer time and can be sent extremely fast.
- ◆ Synchronization of the video and audio functions.
- ◆ No latency. The unit will directly power on and run.
- ◆ Built-in Web Server and network connection.
- ◆ Position a camera any place you want – No PC required for operation.
- ◆ Supports the SD card as a local storage.
- ◆ Supports the VGA play mode.
- ◆ See live images in any network – connected PC.
- ◆ Surveillance your house or off via the Internet.
- ◆ Supports the MDIX protocol that recognizes both the normal and the crossover cables, either of which can connect up with an Ipxcam.

## 1.3 Technical Specifications

### General

- Built-in Web Server and network interface. You don't need a PC to operate.

### Installation

- Fast and simple installation – connect to your network and assign an IP address within a minute.

The null modem cable enclosed helps you to set up without a network.

### Camera

- Digital, 24-bit color.

### Image sensor:

- 1/4 inch Sony progressive scan RGB CCD.

- MPEG4 resolution (pixels): 640×480, 320×240

## **Exposure**

- Automatic AGC.
- White Balance: Indoor installation.
- Exposure times: 1/30-1/27,000s.

## **Sensitivity**

- Minimum Illumination: 1.5 Lux. F1.2

## **Image**

- Image frame rate: up to 30 frame/second.
- Supports two compression modes, the Motion - JPEG and the MPEG4.
- 5 levels of compression provided. The file size of a M-JPEG compressed image depends on the image's actual content. Images with a lot of detail will generate bigger files. The level of compression determines the image quality. High compression requires smaller files while low compression gives you finer image quality along with bigger files. The table below contains average file size in Kbytes, derived from real life tests.

## **General I/O**

- Input/Output connector to trigger the camera vis-a-vis external events, for instance a door sensor with a solenoid.

## **System Requirements**

- Compatible with operating systems such as Windows 2000 and Windows XP.
- Internet Explorer 6.x.
- Non-network modem installation needs Windows PC.

## **Supported Protocols**

- TCP/IP, DHCP, HTTP, UDP, SNTP, ICMP, DDNS, DNS, UPnP

## **Security**

- Password protection available, unless exposure is preferred.

## **Connections**

- 802.11b Standard for 2.4GHz Wireless.
- Wireless Security: WEP Encryption 64-bits and 128-bits.
- Input/Output connector to trigger the camera vis-a-vis external events.



## **Operating Environment**

- Operation temperature: 41-122° F (5-50° C).
- Humidity: 20-80% RHG, non-condensing.
- **Warning:** Avoid aiming the camera at the sun or other extremely bright lights. Irrespective if whether the camera is used or unused, the CCD image sensor may be damaged if exposed to very bright objects. Dimensions and weight are as follows.

## **Dimensions / Weight**

- Height: 55 (mm)
- Width: 95 (mm)
- Length: 62 (mm)
- Weight: 306 g

(not including power supply and mini-tripod.)

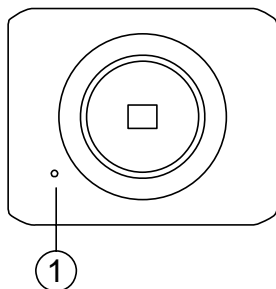
## **Accessories Included**

- 802.11b Wireless Antenna.
- CD-R x 1
- Power supply: 5V DC/2A.
- Instruction manual.

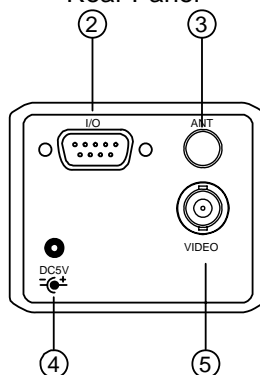
## 2. DESCRIPTION OF THE FRONT/REAR VIEW

### 2.1 Front Panel and Rear Panel

-- Front Panel --



-- Rear Panel --



#### 1. MICROPHONE:

The Wireless Ipxcam has an additional audio function. The device has a microphone built into its front panel which records sound.

#### 2. ALARM I/O & RS-232 Port:

The RS-232 communication port functions as a connector to an external control device. This port includes ALARM OUT, GROUND, ALARM IN, and ALARM RECOVER for connecting with external devices.

**WARNING:** You can't use general RS-232 cables to link up with the I/O connectors in the rear panel of the device (please see the next page for further details).

#### 3. ANTENNA:

This is a standard wireless access and complies with IEEE 802.11 b.

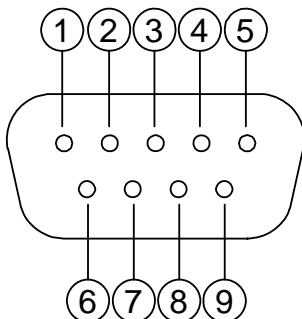
#### 4. Plug Inlet:

A DC 5V inlet that connects to an external power supply.

#### 5. VIDEO OUT Connector:

The connector provides the unit's composite video signals to a monitor.

## 2.2 RS-232 Port & ALARM I/O



### 1. RS-485 D-

2. **RX:** This pin is one of the RS-232 pins. It connects with the TX pin of another device.

3. **TX:** This pin is one of the RS-232 pins. It connects with the RX pin of another device.

Please refer to the note below on the standard RS-232 9 Pin Cable with Pin 2 and Pin 3 exchanged; and see the pin configuration chart below for details.

### 4. RS-485 D+

5. **GND:** Ground contact.

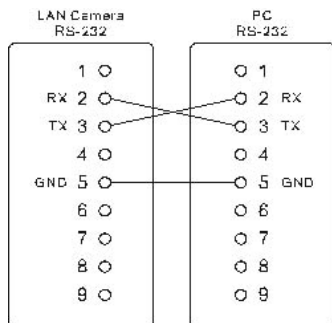
6. **ALARM RESET (INPUT):** This pin connects to an alarm-clear device for clearing an alarm. ( 5V, 20mA  
0V(Active) )

7. **ALARM IN (INPUT):** This is an alarm input that can be programmed in the menu system to active low. ( 5V, 20mA  
0V(Active) )

8. **ALARM OUT (OUTPUT):** This is an alarm output trigger. Connect this to external devices such as buzzers or lights. ( 5V, 20mA  
0V(Active) )

9. **AUDIO OUT:** This provides the unit's audio signal to a speaker.

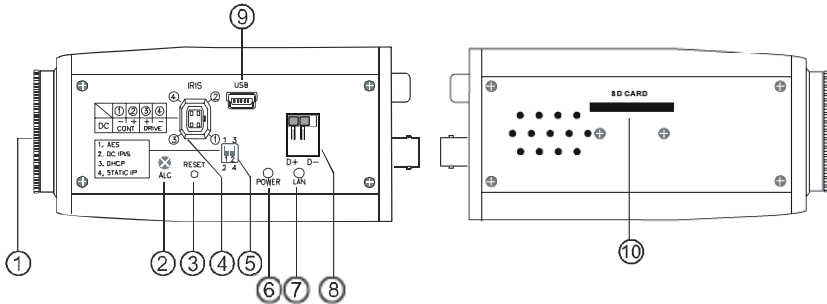
### The pin configuration chart:



## 2.3 Flank Panel


-- Right Flank Panel --

-- Left Flank Panel --



1. **Lens Mount:** This Ipxcam is used with either a C or a CS mount lens.
2. **ALC VR:** Iris control VR.  
When an auto iris (DC Drive) lens is used, this VR is used to adjust the iris for different lighting environments. Adjust the VR clock-wise to open the iris and counter-clockwise to close the iris of the camera.
3. **RESET:** Recover to factory default.
4. **IRIS:** Auto iris connector.  
This camera works with a DC drive auto iris lens. Please refer to the pin assignment marked on the camera when connecting the auto iris lens.

5. **DIP Switch:**

	1. <b>AES:</b> Auto electric shutter.
	2. <b>DC IRIS:</b> Use an auto iris (DC drive)
	3. <b>DHCP:</b> Turn On / Turn Off to use the DHCP protocol. If the switch points upwards, the device can change the setup of network function (enable/disable) via the network.
	4. <b>STATIC IP:</b> If the switch points down, the device can't obtain an IP address from the DHCP server. This option is needed to configure the network communication settings.

6. **POWER Indicator:** Indicates the power status of the unit. The green light indicates the unit is activating. The red light indicates the power is on and the SD card cannot be removed.
7. **LAN Indicator:** Indicates the LAN status of the unit. The green light indicates the 100 Mbps Ethernet network is activating. The red light signals the LAN is data linking.
8. **RS-485 Port:** The RS-485 communication ports function as connectors when two or more units are serially connected to an external control device.
9. **5pin MINI B Port:** The user can use a USB device cable to connect the Ipxcam to the USB port on the PC.
10. **SD CARD Slot:** This is used for system software updating and archiving / accessing critical images.

## 2.4 The USB function

By connecting the Ipxcam with a PC via the USB connector, the Ipxcam can provide two different functions.

### 1. Insert an SD card: As a card reader.

Insert an SD card into the Ipxcam, then connect to the PC. You might transfer files between the SD card and the PC. Once you've connected your Ipxcam to your computer, the Windows system will detect the connection and ask you what you want to do with your SD card.

In another words, if the user connects the Ipxcam with an SD card and the PC via the USB connector, the Ipxcam can be used as a normal card reader.

### 2. Remove an SD card: As a configuring tool.

Before using the USB configuration setting page, please remember to remove the SD card or your PC will read the SD card and won't show this window.

The image displays two side-by-side screenshots of the "USB Configuration v1.01" window, illustrating the configuration options for the Ipxcam's USB function. The window is divided into two main sections: "Network Setting" and "PPPoE Setting".

**Network Setting:** This section is highlighted by a red box and includes the following fields:

- DHCP:** A toggle switch set to "ON" in the left window and "OFF" in the right window.
- IP Address:** Four input fields showing the IP address (192, 168, 1, 79).
- Netmask:** Four input fields showing the netmask (255, 255, 255, 0).
- Gateway:** Four input fields showing the gateway (190, 168, 1, 254).
- DNS Server:** Four input fields showing the DNS server (192, 168, 1, 6).

**PPPoE Setting:** This section is also highlighted by a red box and includes the following fields:

- HTTP Port:** A dropdown menu showing the port number (80).
- PPPoE Enable:** A dropdown menu showing the status (OFF).
- Account:** An input field for the PPPoE account name.
- Password:** An input field for the PPPoE password.

Both windows also feature a "Mode Setting" section with radio buttons for "Infra-structure" and "Ad-Hoc", and a "WEP Key" section with radio buttons for "Disable", "64 bit", and "128 bit". The "Default Key" section includes radio buttons for "1", "2", "3", and "4". The "Key1", "Key2", "Key3", and "Key4" fields are also present.

Arrows point from the labels "Network Setting" and "PPPoE Setting" to their respective sections in the right window.

**DHCP ON**

**DHCP OFF**

**WARNING:** After changing the settings, please click the "Apply" button. All of the options will be effective after removing the USB connector.

### 3. UPDATING SYSTEM SOFTWARE

If the system software of the Wireless Ipxcam needs to be upgraded, please take the following steps to safely process it.

**Important:** Before carrying out the following procedures, please ensure the SD card is working and the file of the system firmware is intact.

1. Format an SD card using the FAT16 format if it is unformatted; there is no limitation on the SD card's capacity.
2. Create a directory named **IPXCAM** in the SD card, if it does not exist.
3. Copy the file of UPDATE.BIN in the **IPXCAM**-directory.
4. If the Ipxcam is running, please power it off first.
5. Insert the SD CARD in the Ipxcam.
6. In 5 to 10 seconds, the message "UPDATE PROCESSING" will show on the screen against a blue background; if not, please follow steps 1 to 6 carefully or else inform your technical support, and ignore the following steps.
7. DO NOT power off the Ipxcam while this update process is running until the message "UPDATE OK RESET PLEASE" appears on the screen; it might take 15 to 30 seconds to appear.
8. If the message "UPDATE NG RESET PLEASE" appears instead of "UPDATE OK RESET PLEASE", write down the error messages shown on the screen and inform your technical support, while ignoring the following steps.
9. Power off the Ipxcam when this update process is finished, and remove the SD card from the Ipxcam.
10. Turn on the Ipxcam and it will work normally if the entire updating procedure is followed correctly.
11. Verify the version of the system software.

#### **Warning:**

1. Don't use FAT32 or NTFS or other file formats in step 1.
2. Steps 1 to 3 have to be done on a PC.
3. Make sure the file of UPDATE.BIN is a correct one in step 3, or the Ipxcam will not work normally after being updated.
4. If the Ipxcam's power is suddenly lost in step 8, please remove the SD card first and turn on the Ipxcam next to test its operation. If the Ipxcam continues working normally, please go back to step 4; otherwise please inform your technical support.
5. In step 10, if the SD card is not removed and the Ipxcam does not go online either, the updating process must be repeated again after rebooting the Ipxcam.
6. Make sure that the SD card is inserted in the correct position in step 5, or the Ipxcam will suffer permanent physical damage.
7. If the message "CSUM ERROR" appears in step 8, it implies a problem in the file of UPDATE.BIN.
8. Don't interrupt the process while the unit is updating itself. Proceed with an SD card containing no system software of the unit which would cause the unit to crash.

## 4. NETWORK CONFIGURATION

### 4.1 Use an RS-232 cable to install a wireless setting in an Ipxcam.

**Installation accessories:** Ipxcam software (the IP Surveillance) and the RS-232 Cable.

Before you can set up the wireless camera kit for your viewing pleasure over the internet, you will need to install the wireless camera by either the Ad-hoc mode or the Infra-structure mode using the **LAN set up** guidelines.

**There are two WI-FI setup modes for the LAN environment** that are described in this guide:

**Ad-hoc** and **Infra-structure**.

**Ad-Hoc:** A connection between one computer and one wireless camera only.

**Infra-structure:** You have an Access Point (AP) through which you wish to communicate between a computer and a single (or many) wireless Ipxcam(s).

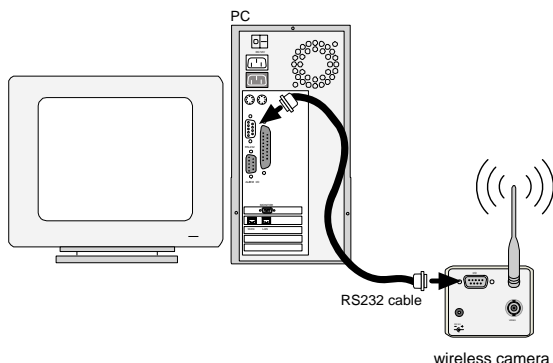
#### 4.1.1 Ad – hoc Wireless Ipxcam Installation on the LAN

Install the IP Surveillance software in a computer (or a laptop)

**Use an RS-232 cable to connect a wireless Ipxcam with a PC (or a laptop).**

*Special note (please refer to the Ipxcam manual, section 4.4 , TCP/IP Communication software):*

Since the Ipxcam Default Static IP address is: 192.168.1.168, the IP address for the PC Network TCP/IP Properties should be set at 192.168.1.X ( the X value can be set anywhere between 1 and 255, excluding 168).



**NOTE:** The wireless lpxcam is linked by its Video Out connection via a BNC connector to a monitor's Video In connection. If this connection is there, you can see some information on the monitor screen, such as the lpxcam Default Static IP address. But the lpxcam Static IP address can only appear if there is a wireless connection between the lpxcam and another wireless device. If there is no such connection, the lpxcam Default Static IP address will not appear on the monitor screen.

#### 4.1.2 Infra-structure Wireless lpxcam Installation on the LAN

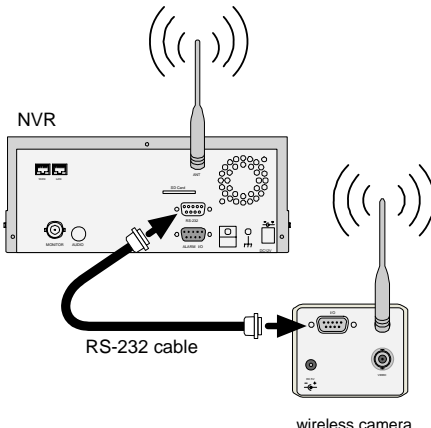
The two most frequently encountered scenarios are. 1. a quick setup with an existing **AP** device, and 2. a quick setup with a new **NVR** ( a network digital video recorder with a **built-in AP** device).

##### Set up with an existing AP device:

Please repeat the installation steps outlined in the “**ad hoc**” section (but do remember to choose the **infra-structure** mode in step 7).

##### Set up with a new NVR

1. Use an RS-232 cable to connect a wireless lpxcam with the wireless **NVR**.
2. Since the IPXCAM Default Static IP address is: 192.168.1.168, the IP address for the PC Network TCP/IP Properties should be set at 192.168.1.X ( the X value can be set anywhere between 1 and 255, excluding 168).





3. Assemble all components that come with the NVR and the Ipxcam.  
(i.e. attach the antenna to both the NVR and the Ipxcam. Add a lens to every Ipxcam.)
4. Connect the TV Monitor to the NVR with a BNC cable.
5. Power on the NVR: plug the NVR power cord into the outlet.
6. Power on every Ipxcam: plug every Ipxcam power cord into its corresponding outlet. Make sure the NVR is turned on before this step.
7. Register the Ipxcam to the NVR:
  - i. Connect the NVR and one of the Ipxcams using the RS-232 cable.
  - ii. Press the **Setup** button to enter the "**MAIN MENU**" page.
  - iii. Select the item titled "**COMMUNICATION**" and press the "**Enter**" button to access the "COMM. SETTING" page.
  - iv. Select the item termed "WIRELESS" and push the "**Enter**" button twice to access the "WIRELESS SETTING" page.
  - v. Choose the item labeled "OPERATION" and press the "**Enter**" button twice to go to the "OPERATIONAL SETTING" page.
  - vi. Select the item titled "ESSID" and push the "Enter" button twice to get into the "ESSID SETTING" page.
  - vii. Give the "ESSID" your local wireless network name, and use the "<", ">", "^" and "v" buttons to change the existing letters based on your network name.
  - viii. Press "**Enter**", select "OK" and go to the "**WIRELESS PAGE**".
  - ix. Push **Enter** to access the "WIRELESS SETTING" page and go to the item termed "IPXCAM SETUP".
  - x. Press **Enter**, choose "RS-232" and push **Enter** again, at which the messages "Waiting" and "SETUP OK" will flash on at the bottom of the screen.
  - xi. Push the **Setup** button to save the setup data.
  - xii. When the words "WAITING" flash on and off at the bottom of the screen, if the screen goes blank, you can reboot the camera by unplugging the "Power" adaptor at the back of the Ipxcam once to turn off the device and plug the adaptor back into the Ipxcam once more to resume operation.

8. Go to the **"IP/ACCOUNT"** option on the **"IPXCAM SETUP"** page on the NVR setup menu; and choose any channel (between 1 and 8) to set up the Ipxcam IP address. Push the **"Search"** button on the NVR to find all Ipxcam IP addresses and push the **"Enter"** button on the NVR to choose one of them to set the channel. Repeat step 6 to set each Ipxcam IP address.

**NOTE:** *The **wireless Ipxcam** is linked by its Video Out connection via a BNC connector to a monitor's Video In connection. If this connection is there, you can see some information on the monitor screen, such as the **Ipxcam** factory default Static IP address (192.168.1.168). But the **Ipxcam** Static IP address can only appear if there is a wireless connection between the **Ipxcam** and another wireless device. If there is no such connection, the **Ipxcam** Default Static IP address will not appear on the monitor screen.*

**NOTE:** *You need to use our proprietary RS-232 cable enclosed in our package and not any other cable, otherwise an error may occur.*

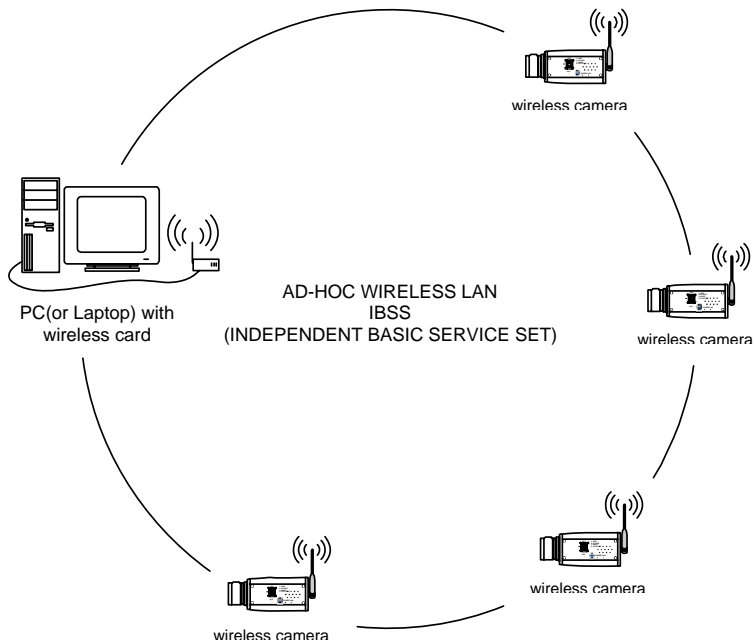
**NOTE:** *If the DHCP server of the NVR is activated, the default NVR IP address is set as 192. 168. 1. 205.*

## 4.2 Wireless Connections

Please follow the instructions below to connect your Ipxcam to a computer or network and to choose a proper wireless configuration for connections.

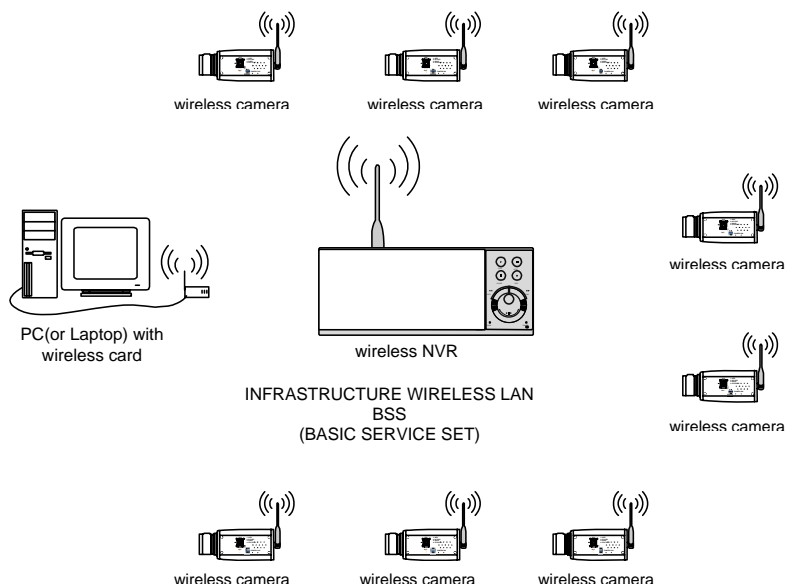
### 4.2.1 Connect to a computer

#### THE AD-HOC WIRELESS LAN CONFIGURATION



#### 4.2.2 Via a wireless NVR connecting with a PC (INTRANET)

##### INFRASTRUCTURE WIRELESS LAN CONFIGURATIONS



**NOTE:** The **wireless Ipxcam** is linked by its Video Out connection via a BNC connector to a monitor's Video In connection. If this connection is there, you can see some information on the monitor screen, such as the **Ipxcam** factory default Static IP address (192.168.1.168). But the **Ipxcam** Static IP address can only appear if there is a wireless connection between the **Ipxcam** and another wireless device. If there is no such connection, the **Ipxcam** Default Static IP address will not appear on the monitor screen.

### 4.3 Configure Your Ipxcam Network Settings

On connecting the network hardware, you need to activate the network function and configure the proper network settings of the Ipxcam.

#### 4.3.1 Enable DHCP Function

This function can only work if the LAN, which the unit is connected to, has a DHCP server. If the DHCP server is working, the DIP switch points up, and the device can get an IP automatically by setting this option. In that case please skip section 4.3.2 (Set IP address) and follow section 4.4 (TCP/IP Communication Software).

#### 4.3.2 Set IP Address

You need to set an IP address for the unit if the LAN unit isn't connected to a DHCP server.

Otherwise, please follow the instructions given below:

Set the **IP**, **MASK** and **GATEWAY**. The following is a sample setting.

IP:	192.168.1.X
MASK:	255.255.255.0
GATEWAY:	0.0.0.0

**NOTE:** When only one unit of the Ipxcam is connected to a computer or LAN, you can freely assign an IP address for the Ipxcam. For example, there is a range of Ipxcam IP addresses from 192.168.1.1 to 192.168.1.255. You can pick one for use from the IP range. It's not necessary to set MASK and GATEWAY; leave the settings as default.

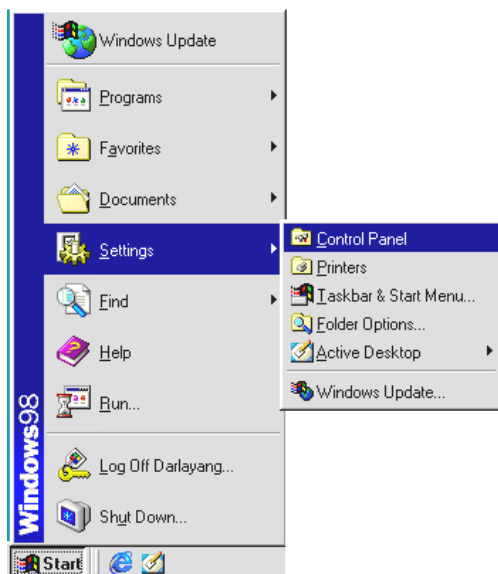
When an Ipxcam is connected to a WAN, you must acquire a unique, permanent IP address and correctly configure the MASK and GATEWAY settings according to your network architecture. If you have any questions regarding those settings, please contact a qualified MIS professional or your ISP.

**NOTE:** When connecting to a network, each connected lpxcam must be assigned a unique IP, which must be in the same class type as your network address. IP addresses are written as four sets of numbers separated by periods; for example, 192.168.1.1 Therefore, if the connected network is identified as Class C, for example, the first three sets of numbers of the lpxcam IP address must be the same as the network address. If the connected network is identified as Class B, the first two sets of numbers of the lpxcam IP address must be the same as the network address. If you have any questions regarding these settings, please contact a qualified MIS professional or your ISP.

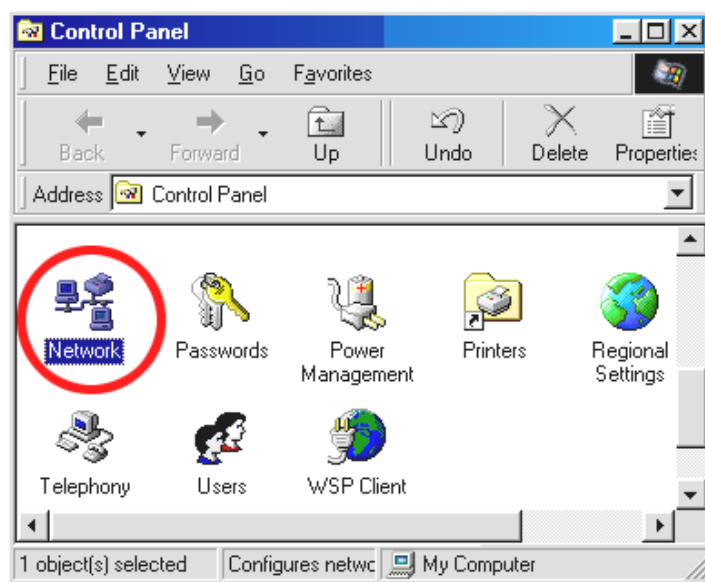
#### 4.4 TCP/IP Communication Software

Follow the instructions below to install the TCP/IP communication program in your computer.

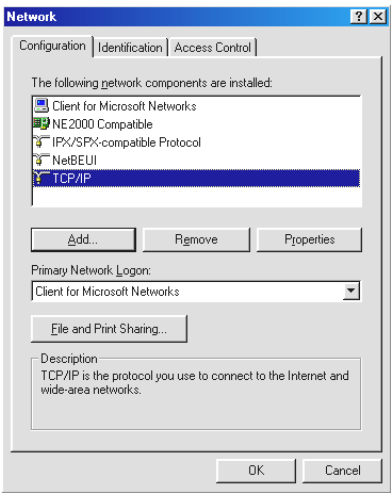
Click the **Start** menu from your computer, and point to the **Settings/Control panel**.



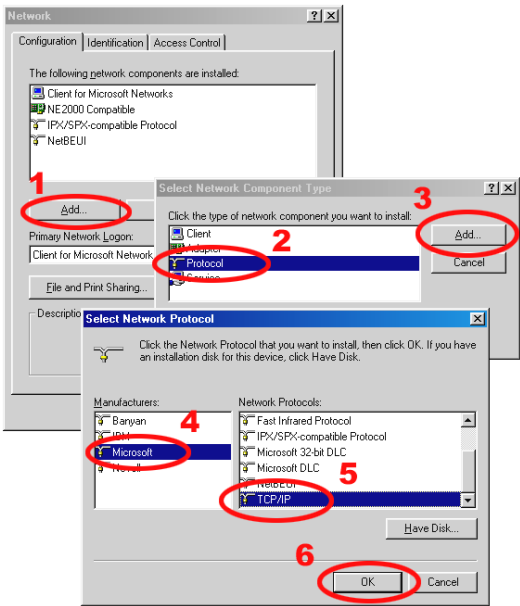
Click the **Network** icon twice to enter the same setting windows.



Click on the **Configuration** tag; and check if the TCP/IP is included among the network components list. If the TCP/IP is included, please process section 4.6. If it is not included, please follow section 4.5 to install the TCP/IP.



**4.5 TCP/IP Installation**



During the installation, you will be requested to insert the Windows CD-ROM. After installation, the PC can be restarted.

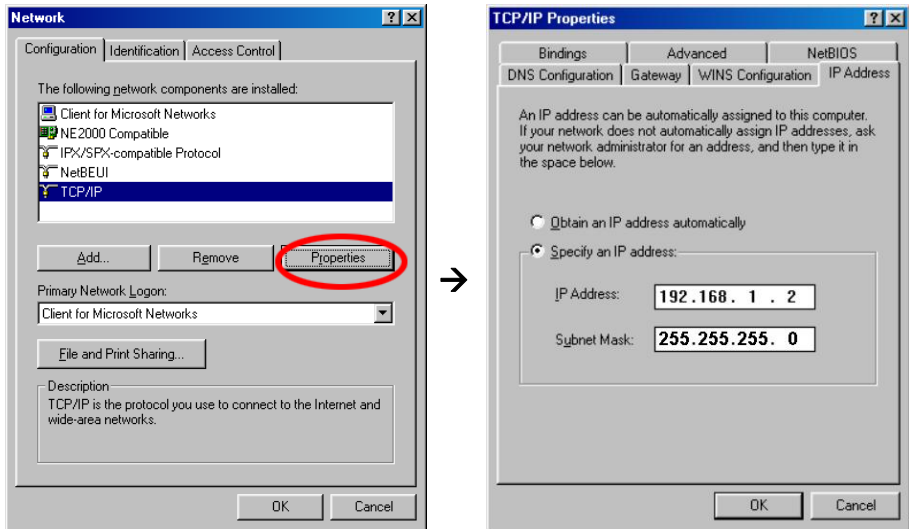


## 4.6 TCP/IP Configuration setting

Click **Start → Settings → Control Panel → Network**.

Select **TCP/IP**, and then click **Properties**.

Before processing the Ipxcam installation in a WAN, please make sure the Internet connection works properly. If not, please contact your ISP provider.



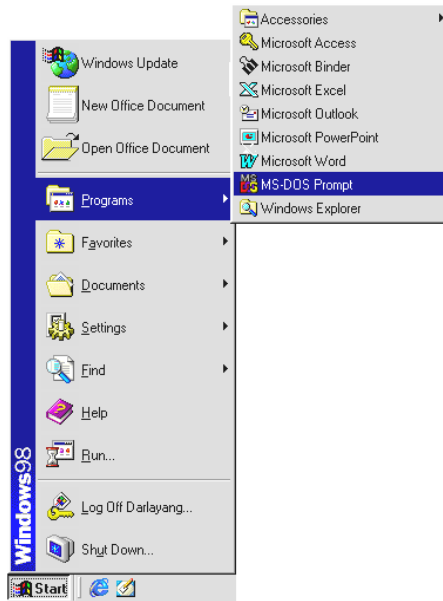
If you are using a DHCP server, please select **Obtain an IP address automatically**. Any assigned IP address for the connected Ipxcams must be in the same class type as the server. If there is no DHCP server, please select **specify an IP address** and type in the IP address of your PC. This IP address must be different from the Ipxcam IP but in the same class type.

**NOTE:** The IP address of an Ipxcam in a network must be unique in itself as opposed to those of the other chosen PCs, but in the same class type.

## 4.7 Connection Testing

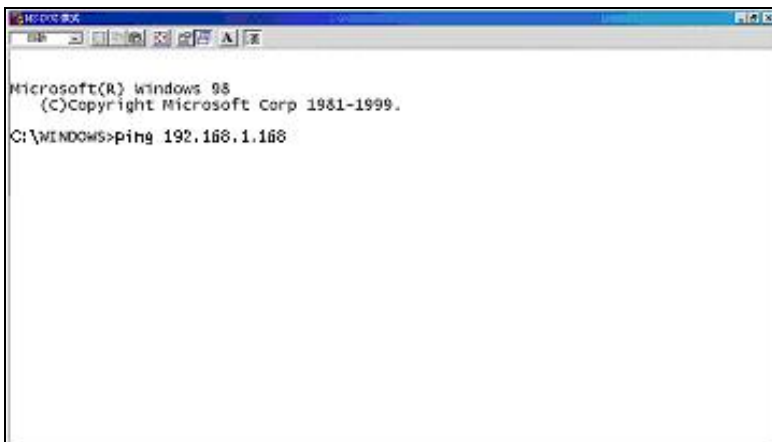
With the previous settings, follow the instructions below to ensure whether you have established the connection successfully.

Click **Start → Programs → MS-DOS Prompt**

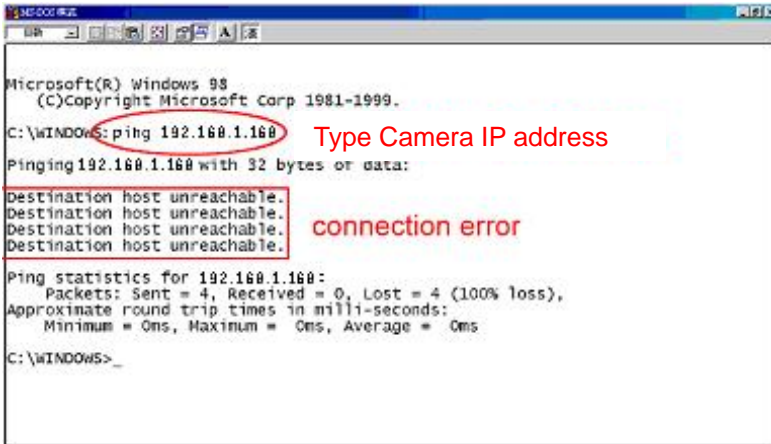


Type in **ping 192.168.1.168** then Enter. (See the sample screen below)

**\*\* This IP is the lpxcam IP address that is assigned the connected lpxcam in step2.**



If you receive a response as in the sample screen below, the connection hasn't been successfully established. Please re-check all the hardware and software installation by repeating section 4.1 to 4.7. If you still can't establish the connection after rechecking, please contact your dealer.



```
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.

C:\WINDOWS>ping 192.168.1.168
Pinging 192.168.1.168 with 32 bytes of data:

Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.

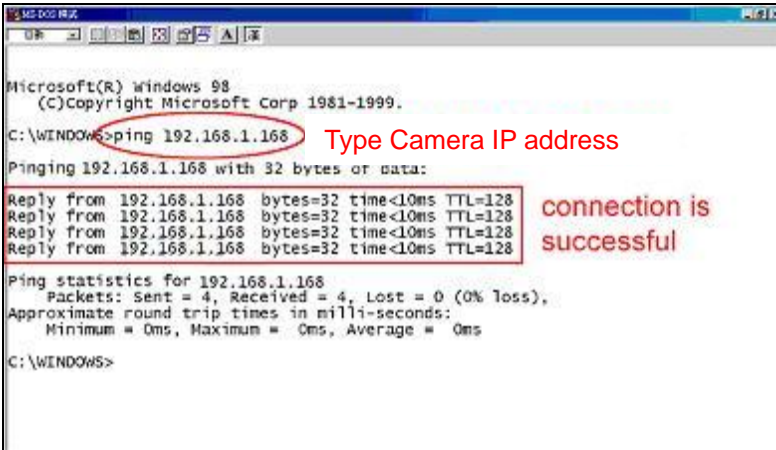
Ping statistics for 192.168.1.168:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\WINDOWS>
```

Type Camera IP address

connection error

If you receive a response as in the sample screen below, you have successfully made the connection.



```
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.

C:\WINDOWS>ping 192.168.1.168
Pinging 192.168.1.168 with 32 bytes of data:

Reply from 192.168.1.168 bytes=32 time<10ms TTL=128
Reply from 192.168.1.168 bytes=32 time<10ms TTL=128
Reply from 192.168.1.168 bytes=32 time<10ms TTL=128
Reply from 192.168.1.168 bytes=32 time<10ms TTL=128

Ping statistics for 192.168.1.168:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\WINDOWS>
```

Type Camera IP address

connection is successful

## 5. OPERATING INSTRUCTIONS FOR IMAGE SOFTWARE AND NETWORK

Two choices of software are available for linking with the Ipxcam: (1) the Microsoft Internet Explorer; and (2) the Ipxcam IP Surveillance, a network browser in a PC which provides the functions of monitoring remote zones or watching recorded data through the TCP/IP protocol. The details are listed as follows.

### System Requirements

- The Microsoft Internet Explorer 6.0 above.  
In the multi-channel recording mode, the HD data transfer rates must be 66MB or above (100MB or higher recommended).

### 5.1 Microsoft Internet Explorer

#### 5.1.1 Connecting the Ipxcam

1. Before starting up the Microsoft Internet Explorer, please refer to section 4.1 then follow the steps below to connect the Ipxcam.
2. Click the URL block at the top of the window.
3. Enter the URL address of the Ipxcam into the URL block and press the **"Enter"** button to enter the home page.
4. Scroll to the bottom of the page, with its five icons, "Image", "Network", "System", "Application" and "SD card". Whichever you click, a page headlined "Enter Network Password" will appear.
5. Type in the "User Name" and "Password" in the appropriate spaces.
6. Click the **"OK"** button to set your entries, and automatically exit the page.

**NOTE:** The default "User Name" and "Password" are root and Admin respectively.

**NOTE:** The page headlined "Enter Network Password" is shown below. Please enter the user name and password of the Ipxcam when you see it. If either the user name or the password is incorrect, please check the input data and rectify it as necessary.

**NOTE:** Once authorized successfully, it will not appear again until you close the window and reconnect it.

**NOTE:** The initial sequence of proceeding is to type in your IP address and click the "Enter" button to access the home page. If and when you revise or change data in the "SYSTEM USERS" page, the sequence will alter to initially show the "Enter Network Password" page.



## Browsing images from the Ipxcam





The images from the Ipxcam will be displayed on the home page while going online with the Ipxcam. Some buttons of the home page are provided for further setting. In MJPEG mode or in MPEG4 mode, there are different display formats of its home page.



Homepage of MJPEG mode



Homepage of MPEG4 mode

- Click the **Image** button to enter the image-setting page.
  - Click the **Network** button to enter the network-setting page.
  - Click the **System** button to enter the system-setting page.
  - Click the **Application** button to enter the application-setting page.
  - Click the **SD Card** button to open the SD card- FILELIST of the MEMORY CARD window, if the SD card is inserted.
  - Click the **Pan/Tilt** button to change the Pan/Tilt/Zoom settings.
  - Click the  button to change the time/date display mode.
  - Click the  button to switch high/low speed network.
  - Click the  button to play the live audio. Click once again to deactivate.
  - Click the  button to archive AVI videos into your PC. Click once again to deactivate.
- In the recording mode, there will appear a red twinkling icon  in the upper-right hand corner of the image. The AVI file will be saved in the path of c:\IPXCAM.
- **Digital zoom** function: Click the left mouse button on the video display area, and it will show the zoom-in images. Double click the left mouse button to see the maximum size. Click the right mouse button on the video display area, and it will show the zoom-out images. Double click the right mouse button to come back to the normal size.

## 5.1.2 Change Image Setting

Please follow the steps below to change the image setting through the network if necessary.

1. Click the **Image** button on the home page to enter the Image page.

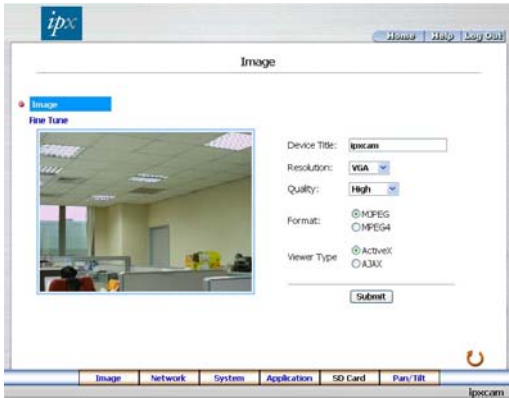


Image setting page of MJPEG mode



Image setting page of MPEG4 mode

2. Adjust the image setting including "Device Title", "Resolution", "Quality", "Frame rate" (MPEG4 mode only), "Format", and "Viewer Type" (MJPEG mode only) if necessary.
3. Click the **Submit** button to submit the new image setting.
4. Click the **Fine Tune** button to enter the IMAGE FINE TUNE page to set the details of the device including: "Brightness", "Saturation" and "Sense Up". Click the **Default** button to reset all the settings.

**NOTE: The revised image will appear immediately after any change in made.**



5. Click the **Home** button to return to the home page while the new image setting acts on the images to effect the desired changes instantly. (If the setting has not been changed by the above steps, any (re)entry onto the home page will find images in their earlier or original setting.)

### **Exchange the image format**

1. Tick on one of the formats then press the **Submit** button.
2. The lpxcam will restart automatically after several seconds.

### **Description of function keys:**

**Device Title:** Type in the camera title in the given space.

**Resolution:** Scroll to choose the image resolution from “VGA” or “QVGA”.

**Quality:** Scroll to choose the image quality out of a spectrum of qualities ranging from “highest”, “high”, “medium”, and “low” to “lowest”. In MPEG4 mode, you can also set the quality by typing in the value. The custom quality value must be in the range between 64 Kbps to 8192 Kbps.

**Frame rate:** Click the drop-down list to choose the frame rates of “15FPS”, “24FPS” or “30FPS”.

**Brightness:** Enter your desired quality of image brightness from a spectrum of 0 to 255.

**Saturation:** Type in the saturation level in the blank (0 to 255).

**Format:** Click to choose the “JPEG” or the “MPEG4” mode.

**Viewer type:** Click to choose the viewer type of the “ActiveX” or “AJAX” mode.

**Submit:** Click to submit the new image setting to the lpxcam.

**Default:** Click this button to install the default settings in all the entries for image parameters on this page.



### 5.1.3 Change the Network Setting

Please follow the steps below to change the network setting through the network if necessary.

- Set the network options and IP address.

1. Click the **Network** button in the home page to enter the Network page.

Home Help Log Out

Network

Use of Dynamic IP Configuration(BOOTP/DHCP) Allowed.

Network

SNTP

DDNS

Wireless

PPPoE

UPnP

Traffic

IP Address: 192 . 168 . 0 . 171

Netmask: 255 . 255 . 252 . 0

Default Gateway: 192 . 168 . 1 . 254

Primary Nameserver: 192 . 168 . 1 . 11

HTTP Port: 80

Submit

Image Network System Application SD Card Pan/Tilt

Camera

2. The accessible networks here are the SNTP, the DDNS the Wireless, the PPPoE, the UPnP and the Traffic.
3. Fill in the "IP Address", "Netmask", "Default gateway", "Primary nameserver", and "HTTP Port Number" if necessary.
4. Click the **Submit** button to submit the new network setting.
5. Click the **Home** button to return to the home page.

#### Description of function keys:

**IP Address:** Enter the 4-byte IP Address in the appropriate blank space (the value in each box may be anywhere between 0 and 255). Every Ipxcam has to own an IP address to be identified on the network.

**Netmask:** Fill in the 4-byte Subnet Mask in the required blank spaces (usually any numbers between 0 and 255). It is used to identify the subnet where the Ipxcam is sited.

**Default gateway:** Type in the 4-byte Gateway in the relevant blank spaces (each value unit is between 0 and 255).

**Primary nameserver:** Enter the 4-byte DNS Server Address in the blank spaces provided (each value unit may be between 0 and 255). The DNS Server is in charge of translating the Domain Name into the IP Address.

**HTTP Port Number:** Indicates the specific HTTP Port Number. The default is 80.

**Submit:** Click to submit the new network setting to the Ipxcam.

## ● Change the Network Setting — SNTP

Please follow the steps below to change the SNTP setting through the network if necessary.

1. Click the **SNTP** button at upper left above to enter the “SNTP Server Setting” page.

The screenshot shows a web browser window displaying the "SNTP Server Setting" page. At the top right, there are buttons for "Home", "Help", and "Log Out". On the left side, there is a vertical menu with links: "Network", "SNTP" (highlighted in blue), "DDNS", "Wireless", "PPPoE", "UPnP", and "Traffic". The main content area is titled "SNTP Server Setting" and contains the following fields and options:

- SNTP Server:** A text input field containing "192.168.1.6".
- Time Zone:** A dropdown menu showing "GMT+08 Taipei,Hong Kong,Beijing".
- ☐ Automatically Adjust for Daylight Saving Time Changes.
- Submit** button.

Below the main content area, there is a link "SNTP Date and Time". At the bottom of the page, there is a navigation bar with buttons: "Image", "Network" (highlighted), "System", "Application", "SD Card", "Pan/Tilt", and "Camera". There is also a circular arrow icon in the bottom right corner.

2. Enter the IP Address of the SNTP server, and choose one of the time zones as and when necessary.
3. Click the **Submit** button to submit the new SNTP setting.
4. Click the **Home** button to return to the home page.

### **Description of function keys:**

**SNTP Server:** Enter the SNTP server DOMAIN NAME in the blank space provided.

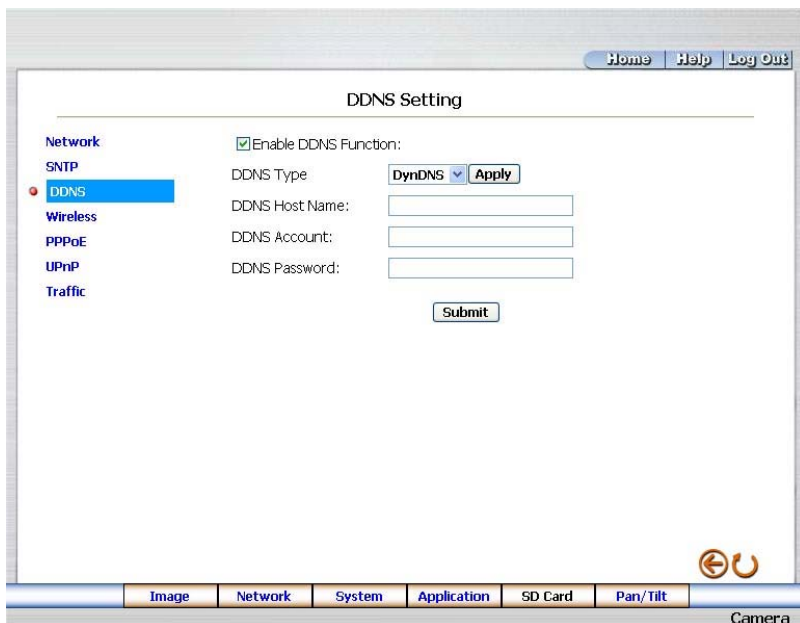
**Time Zone:** As we know, the globe is divided into various time zones. The user must enter his/her time zone. If this is not done, the time given by the unit may be incorrect.

**Submit:** Click to submit the new SNTP setting to the Ipxcam.

### ● Change the Network Setting — DDNS.

The “Network” page has, on its upper left, the “DDNS” icon. Please follow the steps below to change the DDNS setting through the network if necessary.

1. Click the **DDNS** button at upper left above to enter the “DDNS Setting” page.



The screenshot shows a web interface for "DDNS Setting". At the top right are buttons for "Home", "Help", and "Log Out". The main title is "DDNS Setting". On the left is a navigation menu with "Network" selected, and sub-items: "SNTP", "DDNS" (highlighted with a red dot), "Wireless", "PPPoE", "UPnP", and "Traffic". The main content area has a checkbox "Enable DDNS Function:" which is checked. Below it is "DDNS Type" with a dropdown menu showing "DynDNS" and an "Apply" button. There are three text input fields for "DDNS Host Name:", "DDNS Account:", and "DDNS Password:". A "Submit" button is at the bottom of the form. At the bottom of the page is a navigation bar with buttons: "Image", "Network", "System", "Application", "SD Card", "Pan/Tilt", and "Camera". A refresh icon is also present in the bottom right corner of the main content area.

2. Click the “Enable DDNS Function” to checkmark the attached box and activate the function.
3. Click the “DDNS Type” to open the list of three DDNS modes to choose from: “DynDNS”, “hn”, and “adslDNS”. Click the “Apply” button and connect their website automatically and visit it. Type in your dynamic IP Address and Email Address. If they are accepted by the Website, you will get an Email containing your DDNS Account and DDNS Password in your Email box.
4. Type in the “DDNS Host Name”, the “DDNS Account” and the “DDNS Password”.
5. Click the **Submit** button to submit the new setting.
6. Click the **Home** button to return to the home page.

**NOTE: Please refer to 5.1.8 PPPoE & DDNS section for more details.**

**Description of function keys:**

**Enable DDNS Function:** Use a check mark to activate the function.

**DDNS Type:** Click to open the list of three DDNS modes to choose from : "DynDNS", "hn", and "adslidns".

Click the "Apply" button and connect this website automatically and enter it. Type in your dynamic IP Address and Email Address. If they are accepted by the Website, you will get an Email containing your DDNS Account and DDNS Password in your Email box.

**DDNS Host Name:** Type in your host name in the attached space.

**DDNS Account :** Enter it in the given space.

**DDNS Password:** Enter it in the required space.

**Submit:** Click to set.

## Change the Network Setting — Wireless.

Please follow the steps below to change the wireless setting through the wireless network if and as necessary.

1. Click the **Wireless** button at upper left above to enter the “Wireless Setting” page.

The screenshot shows a web interface for configuring wireless settings. At the top right are buttons for 'Home', 'Help', and 'Log Out'. The main title is 'Wireless Setting'. On the left is a navigation menu with 'Network' (sub-items: SNTP, DDNS, **Wireless**, PPPoE, UPnP, Traffic) and 'Wireless Card Inserted.' in red. The main area contains the following fields: 'Mode Setting:' with a dropdown menu showing 'Infra-Structure'; 'ESSID:' with a text box containing 'rdtest'; 'Channel:' with a dropdown menu showing '11'; 'WEP:' with a dropdown menu showing 'Disable'; 'Default Key:' with a dropdown menu showing 'Key 1'; and four text boxes for 'Key 1:', 'Key 2:', 'Key 3:', and 'Key 4:', each containing a series of zeros. A 'Submit' button is at the bottom center. At the bottom of the interface is a navigation bar with buttons for 'Image', 'Network', 'System', 'Application', 'SD Card', 'Pan/Tilt', and 'Camera'.

2. Set the **Mode Setting** to choose “Ad-hoc” or “Infra-structure”.
3. Set the **ESSID** to change the wireless network name.
4. Adjust the wireless setting, including the “**WEP**”, and “**DEFAULT KEY**” as and when necessary. If **WEP** is set to “**DISABLE**”, the user cannot change the **DEFAULT KEY** and **WEP KEY 1 ... WEP KEY 4**. If **WEP** is set to “**WEP64**”, the web key can be set to a 10-hex number. If **WEP** is set to “**WEP128**”, the web key can be set to a 26-hex number.
5. Click the **Submit** button to submit the new wireless setting.
6. Click the **Home** button to return to the home page.

### **Description of function keys:**

**Mode Setting:** This item offers you one of two choices, "**Ad-hoc**" or "**Infra-structure**". Click to set one or the other.

**Ad-hoc:** The most basic WLAN configuration in which one unit will link up directly with a single device.

**Infra-structure:** A set of WLAN linked by access points in which a device connects via an access point to other devices in its locality.

**ESSID:** This option enables you to change the wireless network name.

**WEP:** The encryption setting sets the web encryption mechanism.

**DISABLE:** This deactivates the encryption function.

**WEP64:** This enables the short secret code to activate encryption.

**WEP128:** This enables the long secret code to activate encryption.

**DEFAULT KEY:** This option selects one of the WEP keys provided. There are 4 levels of WEP key to choose from: **KEY 1**, **KEY 2**, **KEY 3** and **KEY 4**.

**Submit:** Click to submit the new wireless setting to the lpxcam.

**NOTE:** If you use more than two access points units, take care not to use the same ESSID name for both, since the client device can only connect with one server each time and will automatically connect with the nearest unit.

## ● Change the Network Setting — PPPoE

The “Network” page has, on its upper left, the “PPPoE” icon. Please follow the steps below to change the PPPoE setting through the network if necessary.

1. Click the **PPPoE** button at upper left above to enter the “PPPoE Setting” page.

The screenshot shows a web interface for "PPPoE Setting". At the top right are links for "Home", "Help", and "Log Out". On the left is a navigation menu with "Network" selected, containing sub-items: "SNTP", "DDNS", "Wireless", "PPPoE" (highlighted with a red dot), "UPnP", and "Traffic". The main content area has the title "PPPoE Setting" and a status message "PPPoE is inactive,". Below this are fields for "PPPoE Mode:" (a dropdown menu showing "OFF"), "Account:" (a text input field), and "Password:" (a text input field). A "Submit" button is located below the password field. At the bottom of the main area is a red message: "All PPPoE setting takes effect after rebooting!". The footer contains a row of buttons: "Image", "Network", "System", "Application", "SD Card", "Pan/Tilt", and "Camera". A circular arrow icon is also present in the bottom right corner of the main content area.

2. Click the “PPPoE mode” to activate the function.
3. Type in the PPPoE “Account” and the PPPoE “Password”.
4. Click the Submit button to submit the new setting.
5. Click the Home button to return to the home page.

**NOTE:** Please refer to section 5.1.8 (PPPoE & DDNS) for more details.

### **Description of function keys:**

**PPPoE mode:** Click your choices to enable the PPPoE function.

**Account:** Enter it in the given space.

**Password:** Enter it in the required space.

**Submit:** Click to set.

- Change the Network Setting —UPnP

The “Network” page has, on its upper left, the “UPnP” icon. Please follow the steps below to change the UPnP setting through the network if necessary.

1. Click the **UPnP** button at upper left above to enter the “Universal Plug and Play” page.

Universal Plug and Play

Network ☒ Enable UPnP

SNTP Max Expired Age: 120 Seconds (10 ~ 3600)

DDNS SSDP Port: 1900 Default: 1900

Wireless UPnP Port: 5678

PPPoE ☐ Enable UPnP Memory Card Access

UPnP Submit

Traffic

Image Network System Application SD Card Pan/Tilt Camera

2. Click “Enable UPnP” to checkmark the attached box and activate the function.
3. Type in the UPnP “Max Expired Age”, the “SSDP Port” and the “UpnP Port”.
4. Click “Enable UpnP Memory Card Access” to checkmark the attached box and activate the function.
5. Click the **Submit** button to submit the new setting.
6. Click the **Home** button to return to the home page.

**Description of function keys:**

**Max Expired Age:** Enter it in the given space from a range of 10~3600.

**SSDP Port:** SSDP stands for Simple Service Discovery Protocol. SSDP searches for upstream Internet gateways using UDP port 1900.

**UpnP Port:** Type in the UpnP Port in the attached space.

**Submit:** Click to set.



- Change the Network Setting —Network Traffic.

The “Network” page has, on its upper left, the “Traffic” icon. Please follow the steps below to change the UPnP setting through the network if necessary.

1. Click the **Traffic** button at upper left above to enter the “Network Traffic” page.

Home Help Log Out

### Network Traffic

Specify the maximum download/upload bandwidth per each socket is a useful function when connecting your device to busy or heavily loaded networks.

Maximum Upload Bandwidth:  Kilo Bytes Per Second ( 0 ~ 102400 )

Maximum Download Bandwidth:  Kilo Bytes Per Second ( 0 ~ 102400 )

\* The value '0' means it will not monitor any traffic.

Image Network System Application SD Card Pan/Tilt Camera

2. Type in the “Maximum Upload Bandwidth” and the “Maximum Download Bandwidth”.
3. Click the **Submit** button to submit the new setting.
4. Click the **Home** button to return to the home page.

#### **Description of function keys:**

**Maximum Upload Bandwidth:** Enter it in the given space from a range of 0 to 102400.

**Maximum Download Bandwidth:** Enter it in the required space from a range of 0 to 102400.

**Submit:** Click to set.

### 5.1.4 Change the System Setting

Please follow the steps below to change the date and time of the system setting through the network if necessary.

- Set the Date and Time of the system

1. Click the **System** button in the home page to enter the “Date And Time” page (default).

Home Help Log Out

Date and Time

**Date and Time**

Users

Digital I/O

Audio Mechanism

RS232 Setting

RS485 Setting

Update

Events

**The Local Time**

Date: 2007/05/24 Time: 14:19:44

**The Desired Time**

☐ Set Manually

Date: 2007 / 05 / 24 (YYYY/MM/DD)

Time: 14 : 20 : 16 (HH:MM:SS)

☐ Synchronize with Computer Time

Date: 2007/05/24 Time: 14:19:19

☐ Synchronize with SNTP Server

SNTP Server: 192.168.1.6

Time Zone: GMT+08 Taipei, Beijing, Chongqing, Urumqi, Hong Kong, Perth, Singapore

☒ Manual ☐ Frequency Every never

Time Format: YYYY/MM/DD

Submit

Image Network System Application SD Card Pan/Tilt NetworkCam

2. Choose one of the three modes shown on the page to set the Date and Time of the system. The three modes are “Set Manually”, “Synchronize With Computer Time”, and “Synchronize With SNTP Server”.
3. Click the **Submit** button to submit the new Date and Time settings.
4. Click the **Home** button to return to the home page.

#### Description of function keys:

**The Local Time:** Shows the current date and time of the Ipxcam.

**Set Manually:** Manually sets the date and time of the Ipxcam.

**Synchronize With Computer Time:** Synchronizes with the linking computer.

**Synchronize With SNTP Server:** Synchronizes with the SNTP server. In this mode, two choices of adjusting are provided: doing it manually or setting the frequency to enable the system to do it automatically.

**Submit:** Click to submit the new setting to the Ipxcam.

- Change the System Setting — Users.

Please follow the steps below to change/add the users' authority through the network if necessary.

1. Click the **Users** button on the left side of the "Date and Time" page to enter the "Users" page.

2. Add, modify or delete any user's data if necessary.
3. Click the **Submit** button to submit the new user's settings.
4. Click the **Home** button to return to the home page.

#### **Description of function keys:**

**User List:** The list shows the registered user(s) and the corresponding authority.

**Delete:** Deletes a selected user.

**Name:** Enter the user's name, which will be added or modified.

**Password:** Enter the new password of the user's name above.

**Confirm:** Type in the password again for verification.

**Authority:** Choose an authority option of the user's name from: Admin, Operator, and Viewer.

**Submit:** Click to submit the new setting to the Ipxcam.

- Change the System Setting — Digital I/O.

Please follow the steps below to change the Digital I/O through the network if necessary.

1. Click the **Digital I/O** button on the left side of the “Date and Time” page to enter the “Digital I/O Setting” page.

2. Mark the “Digital Input” “ON” or “OFF” and the “Digital Output” “ON” or “OFF”. Click your choices to enable.
3. Click the **Submit** button to submit the new user’s settings.
4. Click the **Home** button to return to the home page.

#### **Description of function keys:**

**Digital Input:** Select “ON” or “OFF” to use the GPIO connector or shut it down.

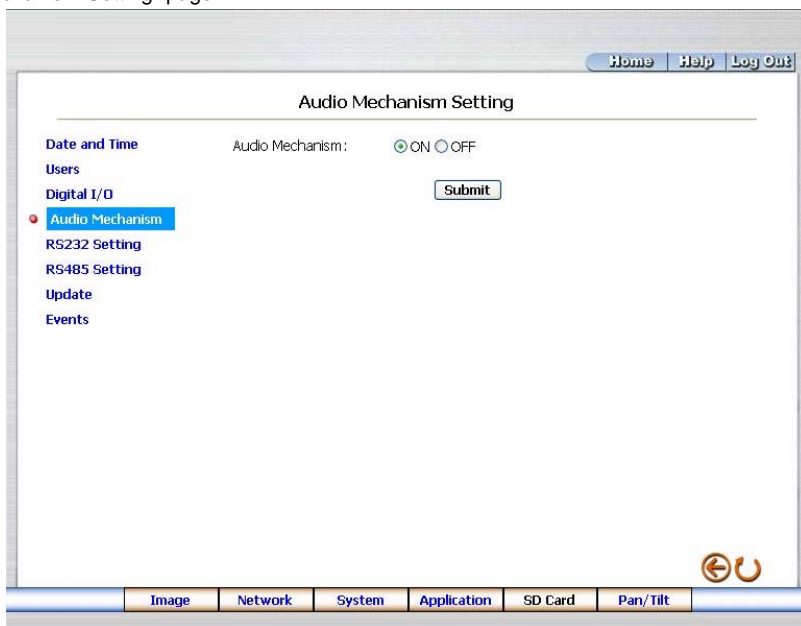
**Digital Output:** Select “ON” or “OFF” to use the GPIO connector or deactivate it.

**Active Type:** Choose the active type from “LOW” or “HIGH”.

- Change the System Setting — Audio Mechanism.

Please follow the steps below to change the Audio Mechanism through the network if necessary.

1. Click the **Audio Mechanism** button on the left side of the “Date and Time” page to enter the “Audio Mechanism Setting” page.



The screenshot shows a web browser window displaying the "Audio Mechanism Setting" page. At the top right, there are buttons for "Home", "Help", and "Log Out". The main title is "Audio Mechanism Setting". On the left side, there is a vertical menu with the following items: "Date and Time", "Users", "Digital I/O", "Audio Mechanism" (which is highlighted with a red dot and a blue background), "RS232 Setting", "RS485 Setting", "Update", and "Events". In the main content area, the "Audio Mechanism" is set to "ON" (indicated by a selected radio button). There is a "Submit" button to the right of the "Audio Mechanism" label. At the bottom of the page, there is a navigation bar with buttons for "Image", "Network", "System", "Application" (which is highlighted), "SD Card", and "Pan/Tilt". A circular arrow icon is located in the bottom right corner of the main content area.

2. Mark the “Audio Mechanism” “ON” or “OFF”.
3. Click the **Submit** button to submit the new user’s settings.
4. Click the **Home** button to return to the home page.

**NOTE:** This setting is for turning the audio mechanism of the Camera on/off automatically.

The Live audio service is only provided in the MPEG4 mode via the Web browser.

**Description of function keys:**

**Audio Mechanism:** Select “ON” or “OFF” to activate or deactivate the function.

- Change the System Setting — RS232 Setting.

Click the **RS232 Setting** button on the left side of the “Date and Time” page to enter the “RS232 Setting” page.

The screenshot shows a web browser window displaying the 'RS232 Setting' page. At the top right, there are links for 'Home', 'Help', and 'Log Out'. The main title is 'RS232 Setting'. On the left side, there is a vertical menu with the following items: 'Date and Time', 'Users', 'Digital I/O', 'Audio Mechanism', 'RS232 Setting' (which is highlighted with a red dot and a blue background), 'RS485 Setting', 'Update', and 'Events'. The main content area contains the following settings: 'Baud Rate:' with a dropdown menu set to '9600 bps', 'Type:' with a dropdown menu set to '8-N-1', and a 'Submit' button. Below these, there is a section titled 'Transmit Data Via RS232' with two radio buttons: 'Raw Format:' (unselected) and 'Canonical Format:' (selected). Each radio button is followed by a text input field. At the bottom of this section are 'Send' and 'Clear' buttons. At the bottom right of the main content area, there are two circular arrows icon. At the very bottom, there is a navigation bar with the following tabs: 'Image', 'Network', 'System', 'Application' (which is highlighted), 'SD Card', and 'Pan/Tilt'. The text 'NetworkCam' is displayed at the bottom right of the page.

### **Description of function keys:**

**Baud rate:** Eight different speeds can be used: 2400 baud per second, 4800 baud, 9600 baud, 19200 baud, 28800 baud, 38400 baud, 57600 baud and 115200 baud.

**Type:** Choose one of the types.

**Raw format:** Set to transmit the ASCII codes.

**Canonical format:** Set to transmit the character string.

- Change the System Setting — RS485 Setting.

Click the **RS485 Setting** button on the left side of the “Date and Time” page to enter the “RS485 Setting” page.

**Description of function keys:**

**Baud rate:** Eight different speeds can be used: 2400 baud per second, 4800 baud, 9600 baud, 19200 baud, 28800 baud, 38400 baud, 57600 baud and 115200 baud.

**Type:** Choose one of the types.

**Device ID:** You have the option of using an ID code (any number between 1 and 255).

**Raw format:** Set to transmit the ASCII codes.

**Canonical format:** Set to transmit the character string.

- Change the System Setting — Update Firmware.

Please follow the steps below to change the Audio Mechanism through the network if necessary.

1. Click the **Update Firmware** button on the left side of the “Date and Time” page to enter the “Update Firmware” page.

Home Help Log Out

### Update Firmware

Date and Time	Current Version Description	
Users	Kernel Version:	1.00
Digital I/O	BIOS Version:	1.16
Audio Mechanism	Software Version:	1.27
RS232 Setting	Compile Date & Time:	May 28 2007,12:48:05
RS485 Setting	HTML Version:	1.1.35
Update	ActiveX Version:	1,0,2,7
Events		

Update the device with the latest firmware.  
Specify the firmware to update :

and click

**Note:** Do not disconnect the power of the device, during the update.  
The device restarts automatically after the update has completed. (30-60 seconds.)

Image Network System Application SD Card Pan/Tilt NetworkCam

2. Click the “Browse...” button to select the UPDATE.BIN file which was copied into your computer.
3. Click the “Update” button.
4. DO NOT power off the Ipxcam while this update process is running.

**Note:** Don’t interrupt the process while the unit is updating itself.

**Note:** Please make sure that the UPDATE.BIN file is fit in with the model of the unit. Updating with the wrong UPDATE.BIN file may cause any physical damage to the device.



- [View the Event Logs.](#)

Please follow the steps below to view events through the network if necessary.

1. Click the **Events** button on the upper left above to enter the “Event Log” page.

Home Help Log Out

### Event Log

Date and Time	Item	Date and Time	Events
Users	1.	2007-05-24 14:42:42	admin LOGIN OK FROM 192.168.0.242
Digital I/O	2.	2007-05-24 14:34:26	admin LOGIN OK FROM 192.168.0.242
Audio Mechanism	3.	2007-05-24 14:19:36	admin LOGIN OK FROM 192.168.0.242
RS232 Setting	4.	2007-05-24 14:10:40	admin LOGIN OK FROM 192.168.0.242
RS485 Setting	5.	2007-05-24 14:04:56	CHECK DISK FILE SYSTEM FINISHED
Update	6.	2007-05-24 14:04:53	GET DHCP 192.168.0.92 FROM 192.168.1.11
Events	7.	2007-05-24 14:04:53	LOCAL IP ADDRESS IS 192.168.0.92
	8.	2007-05-24 14:04:52	SD CARD SIZE 3932160 KB
	9.	2007-05-24 14:04:49	SYSTEM ETHERNET RE-CONNECT
	10.	2007-05-24 14:04:49	LOAD 156 FILE(S) TO FLASH FILE SYSTEM
	11.	2007-05-24 14:04:49	IMAGE MODE IS JPEG
	12.	2007-05-24 14:04:49	SYSTEM BOOTING
	13.	2007-05-24 14:02:18	admin LOGIN OK FROM 192.168.0.242
	14.	2007-05-24 13:55:59	CHECK DISK FILE SYSTEM FINISHED
	15.	2007-05-24 13:55:56	GET DHCP 192.168.0.92 FROM 192.168.1.11
	16.	2007-05-24 13:55:56	LOCAL IP ADDRESS IS 192.168.0.92
	17.	2007-05-24 13:55:55	SD CARD SIZE 3932160 KB
	18.	2007-05-24 13:55:52	SYSTEM ETHERNET RE-CONNECT
	19.	2007-05-24 13:55:52	LOAD 156 FILE(S) TO FLASH FILE SYSTEM
	20.	2007-05-24 13:55:52	IMAGE MODE IS JPEG

First Page Previous 20 Next 20

↶ ↷

Image Network System Application SD Card Pan/Tilt

NetworkCam

2. Choose one of the three buttons shown on the page to view an event when necessary. The three buttons are titled “First Page”, “Previous 20”, and “Next 20”.

#### **Description of function keys:**

**First Page:** Displays the first page.

**Previous 20:** Displays the previous 20 pages.

**Next 20:** Displays the next 20 pages.

### 5.1.5 Change the Application Setting

Please follow the steps below to change the application setting through the network if necessary.

- Change the Application Setting — SD Card Application Setting.

Please follow the steps below to change the SD CARD setting via the network if necessary to upload recording data live. Click the **SD card** button on the top left to enter the "SD Card Application Setting" page.

The image displays two side-by-side screenshots of the 'SD Card Application Setting' web interface. Both screenshots show a navigation menu on the left with options like 'Setting', 'Record', 'Schedule', 'Alarm', and 'Motion Detection'. The 'SD Card' option is highlighted. The main content area is titled 'SD Card Application Setting' and includes a 'SD Card Storage Format Selection' section. In the left screenshot, the 'MJPEG Format' is selected, and the 'Max MJPEG Numbers' is set to 10. In the right screenshot, the 'AVI Format Audio Setting' is selected, showing a 'Recording Rate' of 30 FPS and an 'AVI Duration' of 30 seconds. Both screenshots have a 'Submit' button and a status bar at the bottom indicating 'SD Card Capacity: 14.02 MB', 'SD Card Usage: 17 %', and 'Storage Disk Format: SD Format'.

**SD Card setting page of MJPEG mode**

**SD Card setting page of MPEG4 mode**

1. You have an option as to which SD - card storage format to use, the MJPEG (MJPEG mode only) or the AVI. Click your selected format and click "Submit" to set it.
2. If it's MJPEG you want, fill in the "Max MJPEG Numbers" entry.
3. If AVI is your choice, enter its recording rate and duration in seconds, and click "Submit" for their setting.

#### **Description of function keys:**

**MJPEG Format:** One image per file.

**Max MJPEG Numbers:** Sets the number of file sequences you can save per second.

**AVI Format audio setting:** Unlike a single – image file, this option offers a selected section of a video record.

**Recording Rate:** Sets your chosen frame rate of frames per second.

**AVI Duration:** Predetermines the length of each video file in terms of seconds.

**Enable SD Card Rewrite:** Tick to activate the SD card rewrite function.

**SD Card Capacity:** The free capacity of the SD card.

**SD Card Usage:** The percentage of the recorded file on the SD card.

**SD Format:** Click and press the Yes button to format the SD card.

- Change the Application Setting —Language Setting.

Please follow the steps below to change the Language setting via the network if necessary.

1. Click the **Language** button on the left side to enter the “Language Setting” page.

The screenshot shows a web browser window displaying the 'Language Setting' page. At the top right, there are links for 'Home', 'Help', and 'Log Out'. The main title is 'Language Setting'. Below it, there is a 'Language:' label and a dropdown menu currently showing 'English(English)'. To the left of the dropdown is a 'Submit' button. On the left side of the page, there is a sidebar menu with the following items: 'Setting' (with a red dot next to it), 'SD Card', 'Record' (with sub-items 'Enable Record' and 'Schedule'), and 'Alarm' (with sub-items 'Enable Alarm' and 'Motion Detection'). The 'Language' item in the sidebar is highlighted with a blue background. At the bottom of the page, there is a navigation bar with tabs for 'Image', 'Network', 'System', 'Application' (which is active), 'SD Card', and 'Pan/Tilt'. In the bottom right corner, there is a 'Camera' label and a circular refresh icon.

2. You have an option as to which language to use. The default is “English”
3. Click your selected language and click "Submit" to set it.

## Change the Application Setting —RECORD APPLICATION ENABLE SETTING

Please follow the steps below to change the setting via the network if necessary.

1. Click the **Enable Record** button on the left side of the record to enter the “Record Application Enable Setting” page.

The screenshot shows a web browser window displaying the 'Record Application Enable Setting' page. At the top right, there are links for 'Home', 'Help', and 'Log Out'. The main title is 'Record Application Enable Setting'. On the left side, there is a navigation menu with categories: 'Setting' (containing 'SD Card' and 'Language'), 'Record' (containing 'Enable Record' which is highlighted with a red dot and a blue background, and 'Schedule'), and 'Alarm' (containing 'Enable Alarm' and 'Motion Detection'). In the main content area, there is a checkbox labeled 'Enable Record - Save Into SD Card' which is currently unchecked. To the right of this checkbox is a 'Submit' button. At the bottom of the page, there is a navigation bar with tabs: 'Image', 'Network', 'System', 'Application' (which is active), 'SD Card', and 'Pan/Tilt'. In the bottom right corner, there is a 'Camera' label and a circular icon with two arrows.

2. Click “Enable Record – Save Into SD Card” to checkmark the attached box and activate the function.
3. Click the **Submit** button to submit the new setting of the recording.
4. Click the **Home** button to return to the home page.

### **Description of function keys:**

**Enable Record – Save Into SD Card:** Activates or deactivates the recording to the SD card.

## Change the Application Setting —RECORD - SCHEDULE.

1. Click the **Application** button on the home page to enter the “Schedule” page.

Home Help Log Out

Schedule

Setting

☐ ☐ ☐ ☐ ☐ ☐ ☐ Sunday Sunday Sunday Sunday Sunday Sunday Sunday From 00 : 00 To 00 : 00

SD Card

Language

Record

☐ ☐ ☐ ☐ ☐ ☐ ☐ Sunday Sunday Sunday Sunday Sunday Sunday Sunday From 00 : 00 To 00 : 00

Enable Record

☒ ☐ ☐ ☐ ☐ ☐ ☐ Schedule Enable Alarm Motion Detection

Alarm

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

SUN

MON

TUE

WED

THU

FRI

SAT

Submit Remove All Schedules

Image Network System Application SD Card Pan/Tilt Camera

2. Check/uncheck any/all of the first seven boxes set vertically in the upper half of the “Schedule” page to enable/disable the programmed recording function, and vary the setting of the targeted item while it is enabled.
3. Click the **Submit** button to submit the new schedule setting.
4. Click the **Remove All Schedule** button to clear out all the data of the schedule setting.

### **Description of function keys:**

**Schedule:** Check / uncheck the first seven boxes in a vertical row on the left to enable/disable the programmed scheduled recording function if necessary. Vary any of the schedules of the recording setting if necessary (please refer to the above description).

**Chart:** Schedule list.

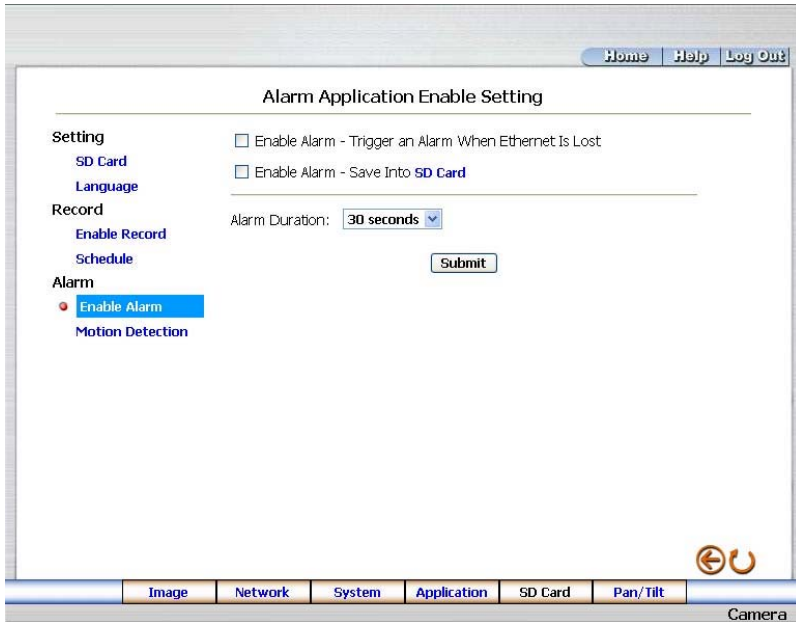
**Submit:** Click to submit the new setting to the Ipxcam.

**Remove All Schedules:** Click to clear out all the data of the schedule setting.

### Change the Application Setting — ALARM APPLICATION ENABLE SETTING

Please follow the steps below to change the setting via the network if necessary.

1. Click the **Enable Alarm** button on the left side of the record to enter the “Alarm Application Enable Setting” page.



2. Click “Enable Alarm – Save Into SD Card” to checkmark the attached box and activate the function.
3. Enter the "Alarm Duration" you have chosen.
4. Click the **Submit** button to submit the new setting of the recording.
5. Click the **Home** button to return to the home page.

#### **Description of function keys:**

**Enable Alarm – Save Into SD Card:** Activates or deactivates the alarm recording to be saved to the SD card.

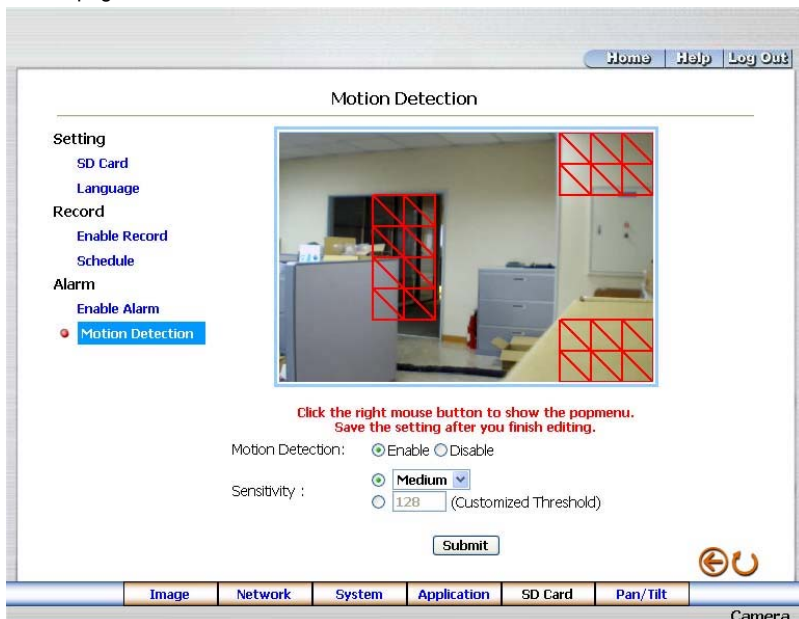
**Alarm Duration:** Predetermines the length of the alarm.

## Change the Application Setting — ALARM - MOTION DETECTION

Please follow the steps below to enable changes in the motion detection function of the alarm through the network if necessary.

Set the motion detection:

1. Click the **Motion Detection** button on the left side of the Alarm to enter the “Alarm – Motion Detection” page.



2. Click and drag the mouse across a targeted zone to draw a red rectangle on the image (coordinates provided below).
- NOTE:** You can set more than one targeted zone depending on your requirement.
3. Enables / disables the motion detection function.
  4. Set up the signal level.
  5. Click the **Submit** button to submit the new setting of the recording.
  6. Click the **Home** button to return to the home page.

### **Description of function keys:**

**The targeted zone:** Click and drag the mouse across the targeted zone to draw a red rectangle on the image.

**Detection Range:** The red rectangle's coordinates.

**Save:** Click to save the motion detection range.

**Motion Detection:** This option enables / disables the motion detection function.

**Sensitivity Level:** Selects any one of the given options for the setup signal level.

**Submit:** Click to submit the new setting to the Ipxcam.

5.1.6 Change the SD card Setting

Please follow the steps below to change the SD card setting through the network if necessary.

● Change the SD card Setting — FILELIST of MEMORY CARD.

Please follow the steps below to change the setting via the network if necessary.

- 1. Click the "SD card" button at the bottom of the home page to enter the page containing the "FILELIST of MEMORY CARD". The page comes in two modes, the JPEG and the AVI (please refer to the "SD card Application Setting Page").

FILELIST of MEMORY CARD				
Filename	Date	Time	Size	
 <a href="#">31VRB2E.AVI</a>	2004/02/13	15:50:38	96K	<a href="#">DELETE</a>
 <a href="#">31VRB3P.AVI</a>	2004/02/13	15:51:20	96K	<a href="#">DELETE</a>
 <a href="#">31VRB5H.AVI</a>	2004/02/13	15:52:16	96K	<a href="#">DELETE</a>
 <a href="#">31VRB9G.AVI</a>	2004/02/13	15:54:24	96K	<a href="#">DELETE</a>
 <a href="#">31VRBAM.AVI</a>	2004/02/13	15:55:02	96K	<a href="#">DELETE</a>
 <a href="#">31VRBF8.AVI</a>	2004/02/13	15:57:28	96K	<a href="#">DELETE</a>
 <a href="#">31VRBH6.AVI</a>	2004/02/13	15:58:30	96K	<a href="#">DELETE</a>
 <a href="#">31VRBQ7.AVI</a>	2004/02/13	16:03:18	96K	<a href="#">DELETE</a>
 <a href="#">31VRC7S.AVI</a>	2004/02/13	16:10:36	93K	<a href="#">DELETE</a>
9 file(s) and 895 KBytes free				
HTTP SERVER AT <a href="#">cam1</a>				

FILELIST of MEMORY CARD				
Filename	Date	Time	Size	
 <a href="#">31VRC02.TAG</a>	2004/02/13	16:12:08	266	<a href="#">DELETE</a>
 <a href="#">31VRC02.TAG</a>	2004/02/13	16:15:22	266	<a href="#">DELETE</a>
2 file(s) and 339 KBytes free				
HTTP SERVER AT <a href="#">cam1</a>				

- 2. Click the desired file to display the images therein.
- 3. Each file can be deleted by clicking the attached "DELETE" hyperlink.

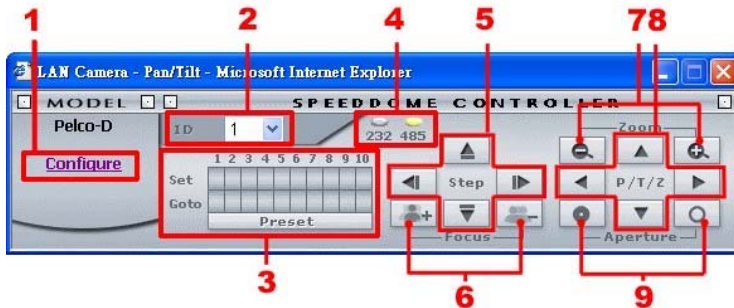
**NOTE:** You can't directly click the hyperlink of the file in the "FILELIST of MEMORY CARD" page with the right button of the mouse focus then click "**SAVE**" to save the file.

**CAUTION:** If you wish to save the SD CARD files from a camera to your computer, you can enter the JPEG column in the "FILELIST of MEMORY CARD " page to click in and enter the particular files in the column. When you click in, the images concerned will appear. Move your mouse focus within the image area and click the right button of the mouse. A table of item entries will show up. Click "**Save**" and select the path by which to save your files.



### 5.1.7 Change the Pan/Tilt setting

Click the **Pan/Tilt** button on the home page to open the Speed Dome Controller.



1. Click "**Configure**" to enter to the RS232 and RS485 setting pages (please refer to [\*Change the System Setting — RS232 Setting\*](#) & [\*Change the System Setting — RS485 Setting\*](#)).
2. Select a Speed Dome device ID from the drop-down list on the Speed Dome Controller. The Controller will display the corresponding ID.
3. Each of the ten buttons under 'Set' is connected with a specific position and angle of either panning or tilting of the camera. Click each button to activate its particular position and angle. Press the button under 'Preset' to turn the camera angle by angle in the set positions. Each of the ten buttons designated 'Go to' can be clicked to view the particular corresponding angle of the position in which it is set.
4. Select the connecting port. The RS-232 communication port functions as a connector to an external control device. The RS-485 communication ports function as connectors when two or more units are serially connected to an external control device.
5. Upon the buttons being clicked, a camera will move one short step only in any of the four designated directions.
6. Click the buttons to control the Focus setting on the Speed Dome Controller. Click "+" button to focus far and click the "-" button to focus near.
7. Click the buttons to control the Zoom setting on the Speed Dome Controller. Click "+" button to zoom in and click the "-" button to zoom out.
8. Upon the buttons being clicked, a camera will turn all the way, without stopping, in one of the four designated directions.
9. Click the buttons to control the Aperture setting on the Speed Dome Controller.

### 5.1.8 PPPoE & DDNS

#### Using the PPPoE

1. Install the XDSL software (obtained from your ISP dealer) in your PC.
2. Search your Ipxcam's IP address: you can use your IP Surveillance 's Scan IP program, or just connect the Ipxcam and the Video monitor. The monitor screen will show the IP address on its right side.
3. Change the switch on the Ipxcam's side panel to position # 4.
4. Installing an IP address in your PC or notebook.

Desktop → Move the mouse focus to the Network neighborhood and click the right key of the mouse → Choose the properties → Choose your local connection → Choose the properties and select the configuration → Select the TCP / IP → Choose the properties → Type in the IP address in a four-part formula, for example "192. 168. 1.101" (the first three parts must be identical to the above numbers, only the last part can be changed to your own number, which must never exceed 255) → Click the mask and the mask input, namely "255. 255. 255. 0" (a fixed formula) → Click "OK" → Click "OK".

5. Desktop → Choose IE browser → Type in the Ipxcam IP address in the URL (check step # 2 above) → Enter → Ipxcam images will appear.

#### PPPoE Settings

1. Enter the Ipxcam home page → Choose the network → Type in "User Name: **root**" and "Password: **Admin**" → Click "OK".
2. Choose PPPoE → PPPoE mode: Select "ON" → Type in "Account" → Type in "Password" → Submit → Unplug the power connection.
3. Plug in the Ipxcam and it will receive an IP address from the ISP dealer (this IP address is dynamic --- every time you unplug and plug in again you'll get a new IP address).

### **Test: Go to the Internet.**

1. Set your PC to enter the Internet.
2. Desktop → IE browser → Type in the lpxcam IP address (the same address as in the PPPoE settings and step 3 above) → You can see the lpxcam images.

### **DDNS settings**

1. Check your lpxcam's IP address ( Scan IP software or monitor ) → open your IE browser → Use the address to connect to the lpxcam or view the images → Choose the network → Type in "User name : **root**" and "Password : **Admin**" → Click "OK" .
2. Choose the "DDNS" → Click "Enable DDNS" → Enter the "DDNS host name", for example "abc123.homeip.net" → Type in "DDNS Account", for example "abc123" → Enter the "DNS Password", for example "7777" → Submit → The settings are now complete → Close the IE browser.
3. Open the IE browser again → Type in the Website address you just applied for, such as "abc123.homeip.net" → You can look at your lpxcam images right away. The procedure is complete.

**Note: These settings are only for your ADSL Dynamic IP configuration. If your configuration is fixed (true IP), you don't need to proceed with the PPPoE and DDNS settings. The DDNS is just for your convenience.**

## 5.2 The Ipxcam IP Surveillance

This section provides instructions for installing and using the IP surveillance and Image Viewer, which are included with the Ipxcam. The programs can be operated by a selected PC equipped with the following requirements.

### System Requirements

- Intel Pentium 1.5 GHz processor or above (2.8 GHz or higher recommended).
- 128-MB RAM at least (256-MB or higher recommended).
- Windows 2000, XP or above.
- 4 MB VGA card capable of 24-bit true color display.
- 100 MB free hard-disk space for software installation.
- 10/100 Base-TX network for LAN operation.
- The Microsoft Internet Explorer 6 above.

In the multi-channel recording mode, the HD data transfer rates must be 66MB or above (100MB or higher recommended).

### 5.2.1 Introduction to IP surveillance

The IP surveillance allows you to access many units of the Ipxcam from a remote desktop or a laptop in a TCP/IP networking environment. It can perform the following functions.

- View live images from the Ipxcam.
- Change a regular record, event record, and timer properties.

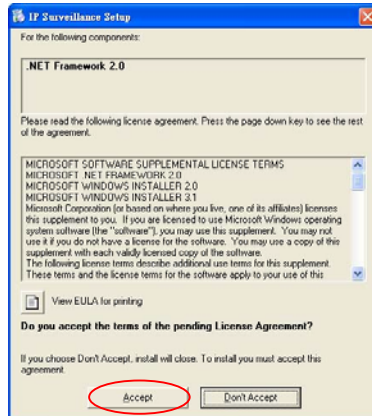
Before you are ready to view images from a desktop, you need to have your Ipxcam networked by obtaining a 10/100 base-TX Ethernet data cable (Standard RJ-45) to connect the Ipxcam to your LAN/WAN. Now enter the main menu to set the IP address.

## 5.2.2 Install the IP surveillance in your PC

### Install the IP surveillance from the supported CD-R.

1. Exit all applications currently running in the selected PC.
2. Insert the supported CD in the CD-ROM drive. The program will execute the installation automatically. Follow the on-screen instructions to proceed with the rest of the installation procedure as they appear.

**NOTE:** It will update the .NET Framework to version 2.0 automatically. Please click “Accept” to continue.




3. After the installation is complete, pop up the **START** menu from your computer, and point to **Programs / IP surveillance / IP surveillance** to open up the program selection page as shown below. Click the **IP surveillance** tag to start the **IP surveillance** program.

### Install the IP surveillance for the ZIP file.

1. Save the ZIP file to your PC and extract the file to a designated directory.
2. Open the extracted folder. The folder contains 1 file.



3. Click on the  icon to execute the installation and then follow the on-screen instructions to proceed with the rest of the installation procedure.
4. After the installation is complete, click the **START** menu from your computer, and point to **Programs / IP surveillance** to start the **IP surveillance** program.

**NOTE:** Please make sure the TCP/IP communication software has been properly set and configured in your computer. To check your TCP/IP settings, please refer to section 4.5 (TCP/IP configuration setting).

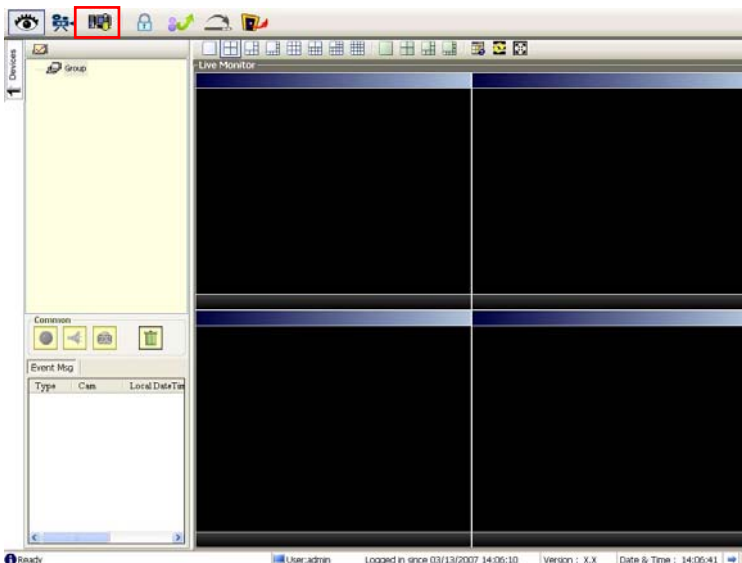
### 5.2.3 Login the lpxcam software




Once the IP surveillance is executed, a Login prompter will appear. You must enter the default User Name: **root**, and the password: **Admin** in the respective spaces. Click the “**OK**” button and enter the console page of the IP surveillance: both the user name and password must be entered correctly. Click the “**Cancel**” button and exit the login of the Network Viewer.



### View the lpxcam video from a remote PC

Follow the instructions below to use the IP surveillance to browse an lpxcam video from a remote location. Upon entering the IP surveillance, a connection box will appear as follows.



1. Press the  button to enter the **Settings** page.
2. Press the  button to add a new device group. After typing in the Group Name, please press the **OK** button.
3. Add a channel from the  button.

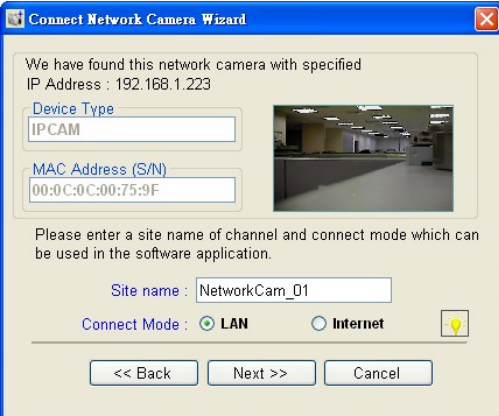


4. **(1)** Click the **Auto-Search** button at the bottom of the "Connect Ipxcam Wizard" page to discover the connection of the Ipxcam - type device in the LAN. Instantly the "Search Ipxcam" page will appear. Click the device of your choice and click **"Select"** at the bottom of the page to access the "Connect Ipxcam Wizard" page again.  
**(2)** Type in the IP Address or the domain name and HTTP port of the device and add the device to the Device List.
5. Type in the **Password** in the "Connect Ipxcam Wizard" page. Click "Next" button to open another "Add Device Wizard" page.




6. This page provides the IP Address, the device type, and the MAC Address. After

typing the Site name and selecting the Connect Mode, please click the "Next" button to access the next "Connect Ipxcam Wizard" page.

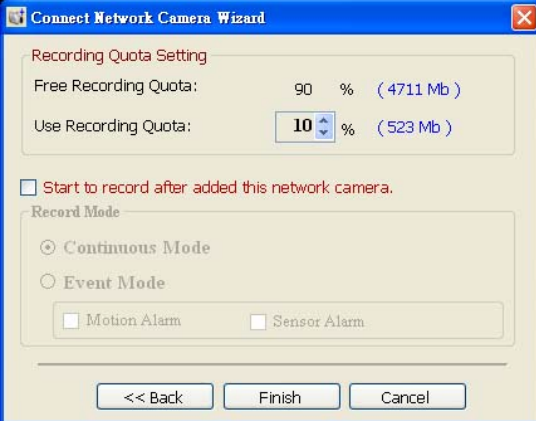


The dialog box is titled "Connect Network Camera Wizard". It contains the following information:

- Text: "We have found this network camera with specified IP Address : 192.168.1.223"
- Field "Device Type" with value "IPCAM"
- Field "MAC Address (S/N)" with value "00:0C:0C:00:75:9F"
- Image of a camera view on the right.
- Text: "Please enter a site name of channel and connect mode which can be used in the software application."
- Field "Site name" with value "NetworkCam\_01"
- Radio buttons for "Connect Mode": "LAN" (selected) and "Internet".
- Buttons: "<< Back", "Next >>", and "Cancel".
- A lightbulb icon on the right side of the "Connect Mode" section.

**NOTE:** Please click the  icon to see the details of the Connect Mode.

- After finishing the setting of the Device Recording, please click the "**Finish**" button to establish the connection between the device and the computer.



The dialog box is titled "Connect Network Camera Wizard". It contains the following information:

- Section "Recording Quota Setting":
  - Free Recording Quota: 90 % ( 4711 Mb )
  - Use Recording Quota: 10 % ( 523 Mb )
- Section "Record Mode":
  - Checkbox: "Start to record after added this network camera." (unchecked)
  - Radio buttons: "Continuous Mode" (selected) and "Event Mode"
  - Sub-section with checkboxes: "Motion Alarm" and "Sensor Alarm" (both unchecked)
- Buttons: "<< Back", "Finish", and "Cancel".

- Click the device title to begin viewing images with this camera from the Device List.


**NOTE:** To add more connections or units to the Ipxcam, please repeat the above instructions.

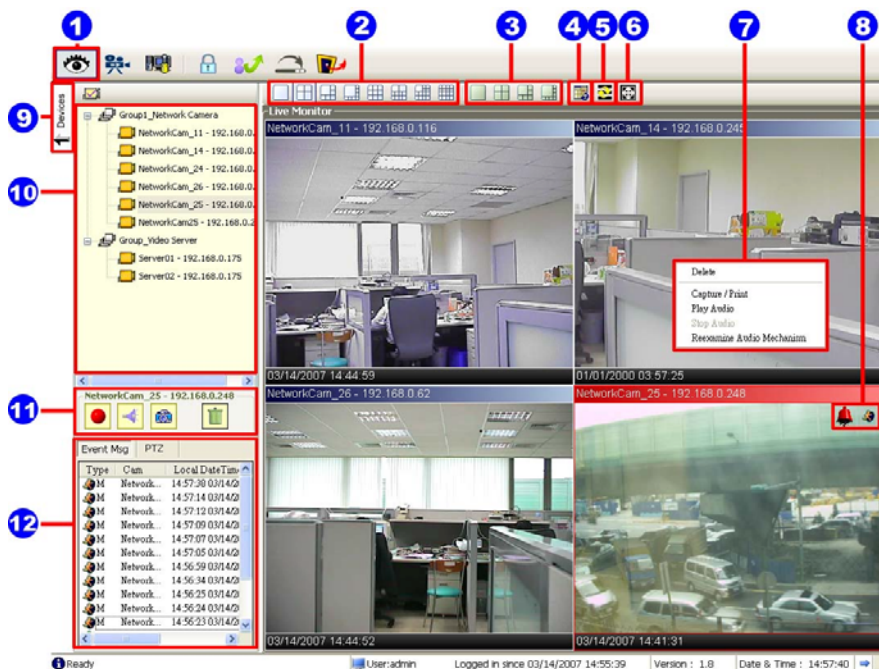


## 5.2.4 Operation

### 5.2.4.1 Live Monitor



Once the connection has been established, click the  button to enter the Live Monitor window. (See the sample screen below.) On the left side of the window is the connected device that has been arranged when you established the connection.



1. The Live Monitor icon.

#### ◇Add a camera video onto the Live Monitor area:

- (1) Click on the title of the camera that was connected.
  - (2) Hold down the right mouse button and drag onto the droppable Live Monitor area.  
The video from the new camera will be displayed.
  - (3) In the Live Monitor area, if you want to exchange the videos of different cameras, you can drag the video and drop it where you want to locate the video.
2. The Split-Screen display function bar: This allows you to display the connected device in the single channel and multi-format screens.
  3. The Sequence configuring button: Press to enter the sequential jumping mode, each

multi-screen, and one sequence; the picture will sequentially switch to different channels according to the Sequence Views setting (refer to 5.2.4.3).

**Note:** One can't use the common icon (#11) in the Sequence displaying mode or drag the video and drop it as s/he likes. For the further settings of each channel, please select the device title on the left side and click the right mouse key to operate.

4. The Circle configuring button: Click this button to see the following channels.
5. The Group Circle button: Click this button to change the different group of display.
6. The Full Screen button: Click this button to show the full screen for surveillance. If you want to return to the previous mode, please click the Normal Screen button.
7. Motion on/ Alarm on: The warning icons.



Motion-on icon: When there is a detection of motion in any channel, it will display this icon in the right upper corner of that channel to warn the user.



Alarm on-icon: When there is a detection of external devices such as a sensor, it will display this icon on the upper right corner of that channel to warn the user.

8. Pop-menu: You can use the mouse to move to each channel. Click the right key of the mouse to show a window. You can select "Delete", "Capture / Print", "Play/Stop Audio" or "Reexamine Audio Mechanism".
9. Click this button to hide the "devices list", "common" and "alarm message list" boxes from view behind the video display screen.
10. The section in the upper left margin will show the information in all the devices and its group names.

The users can click and hold on the device title on the list and drag it to the Live monitor area to see the live image of the camera.

11. common icons:



Play Audio: Click the button to play the live audio. Click once again to deactivate.



Record: Click the button to archive AVI videos into your PC. Click once again to deactivate. In the recording mode, there will appear a red twinkling icon in the upper-right hand corner of the image.




Capture / Print: Provides the image capturing and printing functions.



Delete: Drop the view here to delete it.

◇**Delete a camera video from the Live Monitor area:**

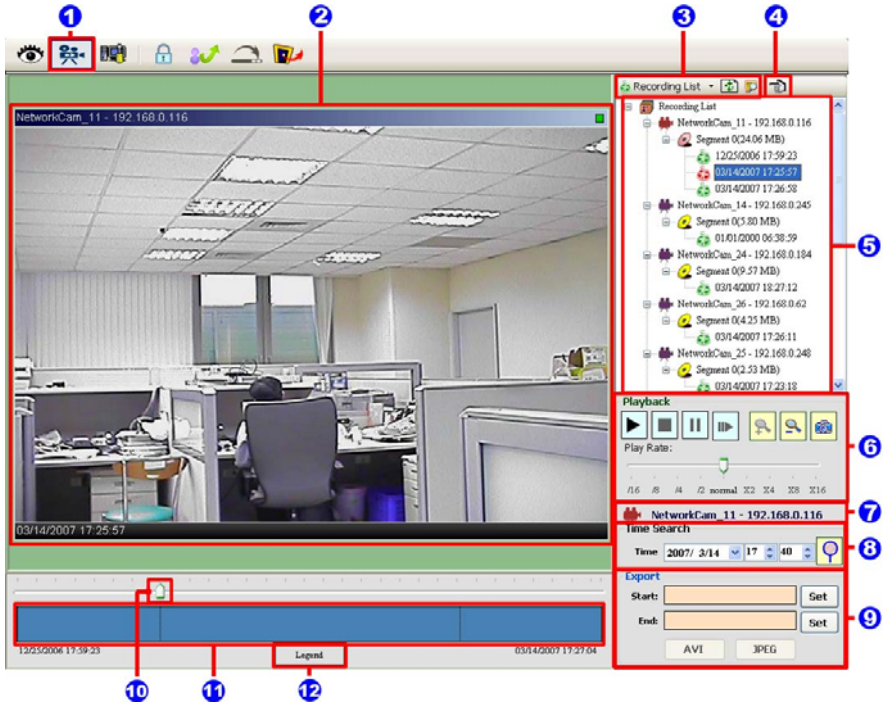
- (1) Select the video of the camera which you want to delete.
- (2) Press and hold the left mouse button. Then drag it to the trashcan  and release the mouse button.

12. Alarm list / PTZ Control: Shows the alarm types, the device names and the occurrence time. You can press the **PTZ** button to change to the PTZ Control mode.

### 5.2.4.2 Playback Viewer

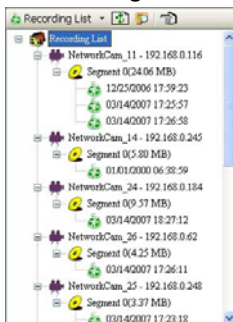


Press the button to enter the Playback Viewer setting page.

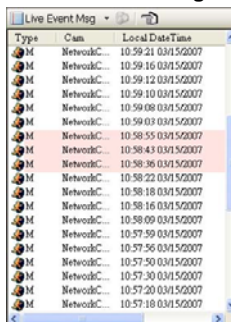


1. The Playback Viewer icon.
2. The display area.
3. Click to choose the Recording List / Live Event Msg

#### Recording List




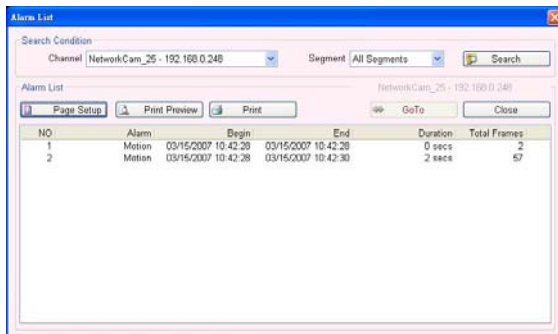
#### Live Event Message










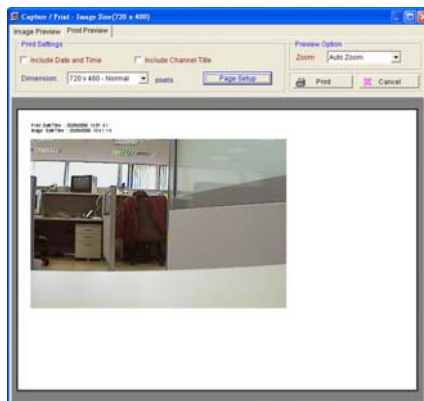
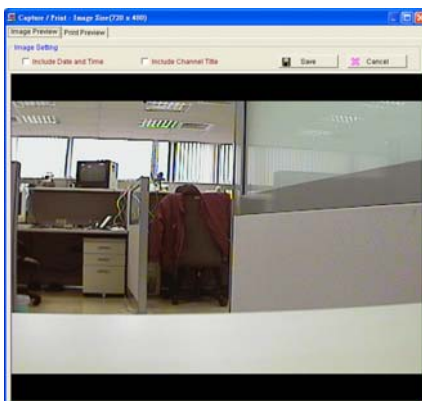
The alarm events which were recorded will be marked in pink color.

Click to refresh the recording list.


**NOTE:** To view the alarm lists of a camera which were recorded, please (1) click the  icon (2) the Alarm List window will appear as shown below, (3) select a camera from the drop-down list, then (4) click the “Search” button.



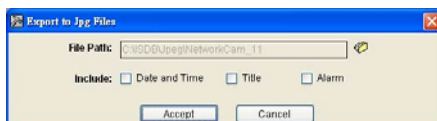
4. Move to the left/right area.
5. Recorded video list box. This box allows you to access all recorded video, which are stored in the HDD of the connected devices.
6. Playback function bar.
  -  Play - Click to a recorded video from the PLAY LIST.
  -  Stop - Click to stop playing back a recorded video or cease recording.
  -  Pause - Click to freeze the image.
  -  Step - Click to view images picture-by-picture.
  -  Zoom in – Enlarges the displayed image.
  -  Zoom out - Narrows the displayed image.
  -  Capture / Print: Provides the image capturing and printing functions.



- Play Rate: During play mode, please use the scroll bar to control the show speed.

- Shows the device title.
- This allows you to search a recorded video kept in the HDD of the device. Enter the MONTH /DAY /YEAR /HOUR /MINUTE you wish to search and click  to proceed.
- Functions to fit the starting and ending points of an image display, when the user wants to transfer a file.

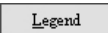
**JPEG:** Archives images in the JPEG format to save a single picture in every file.

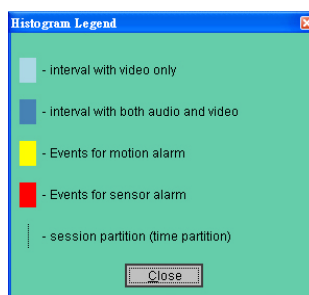


**AVI:** Archives images in the AVI format to save a sequence of images in a file.




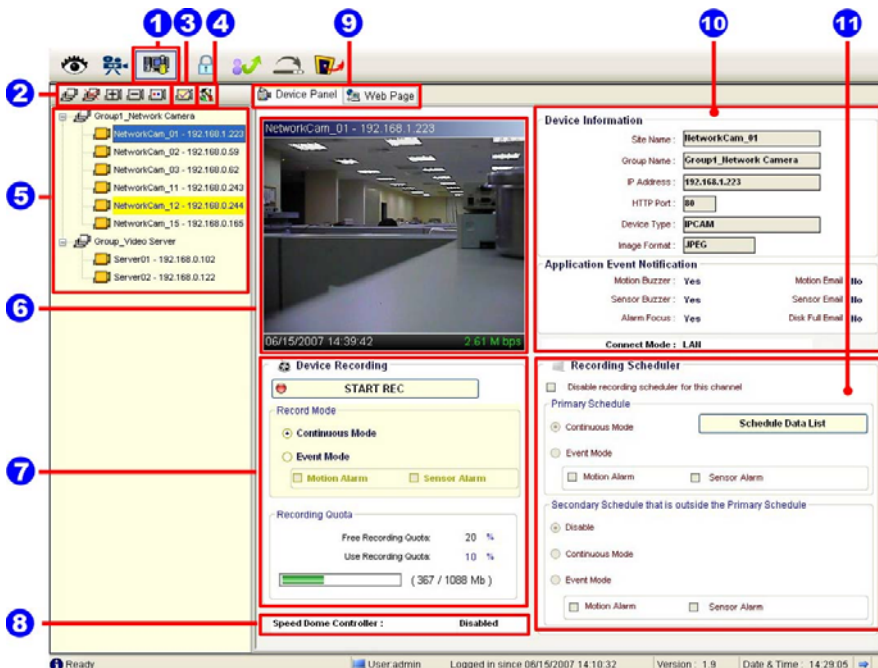
**Warning:** The audio and video signals would likely be unable to play back simultaneously because of incomplete files caused by unstable network transmission or altered setup while doing the AVI backup with the "Include Audio" function.

- Scroll bar for video searching: Drag the square on the bar to search the video. You can click or pull the indicator on the scroll bar to the point you want to see.
- Displays the recording mode of the video on the histogram.
- Press the  button to see the Histogram Legend. You can get the event's location in terms of time, and select a group of events or period from the event histogram area and show it on the display area.








### 5.2.4.3 Setting

Press the  button to enter the Setting page.



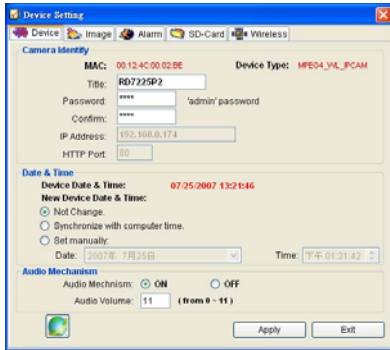
1. The Setting page.

2. Function buttons:

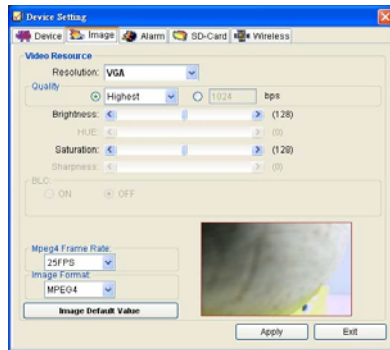
-  **Add a new device group:** Click this button and type in the new group, then press "OK" to save it.
-  **Remove a device group:** Click this button and select the group name, then press "OK" to delete the group.
-  **Add a new camera:** For mode details please refer to section 5.2.3.
-  **Remove a camera:** Click this button and select the group name and lpxcam, then "OK" to delete the device.
-  **To edit camera:** Please select a device, then click this button to edit the device.

3.  **Device Setting:** Provides four pages of settings.

### (1) Device Setting page

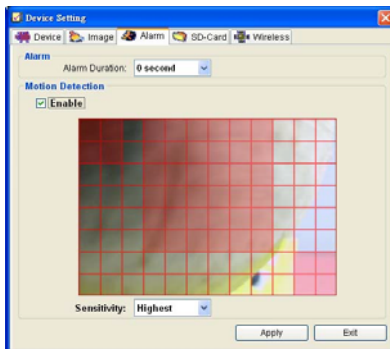


### (2) Image Setting page

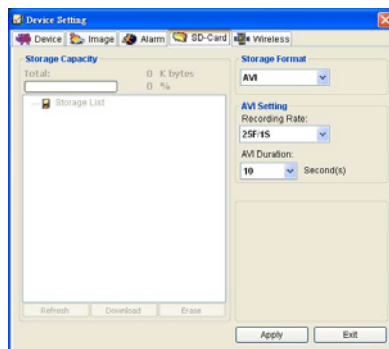


**NOTE:** The IP Surveillance software connects the Internet to a IPXCAM. There may be a problem if the bandwidth is not enough, in which case the speed rate of the image transmissions may become too low. So if you want a satisfactory speed rate in your displays, you can click the "Device Setting" button, opening a "Device Setting" screen, set the settings of the Device page where you can change the "Audio Mechanism" function to "OFF". Turning it "OFF" will save the bandwidth from wastage, and improve the image display.

### (3) Alarm Setting page



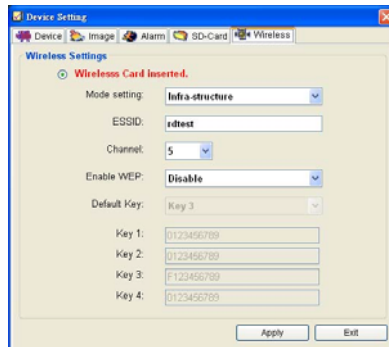
### (4) SD-card Setting page




### (5) Wireless Setting page

If you wish to change any setting, please select the new information in the window. The "Mode setting" has two options: "Infra-structure" and "Ad-hoc". You can select either of them as you wish.

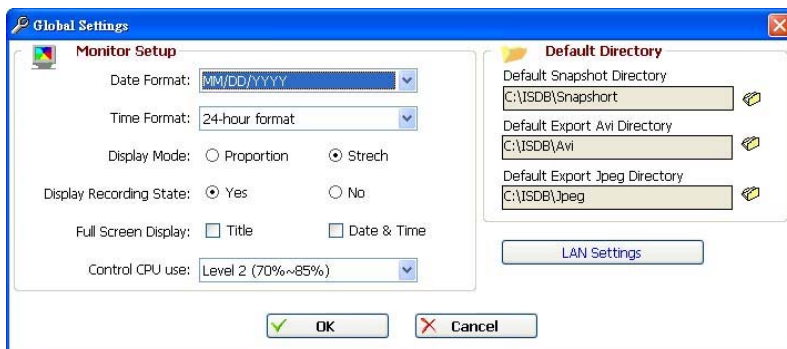
Click the "Apply" button to transfer the new settings to the IPXCAM.






4.  **System Setting:** Provides six pages of settings: the Global Settings, the Event Notification, the Recording Settings, the Scheduler, the Sequence Views, the Speed Dome and the Authority Setup.

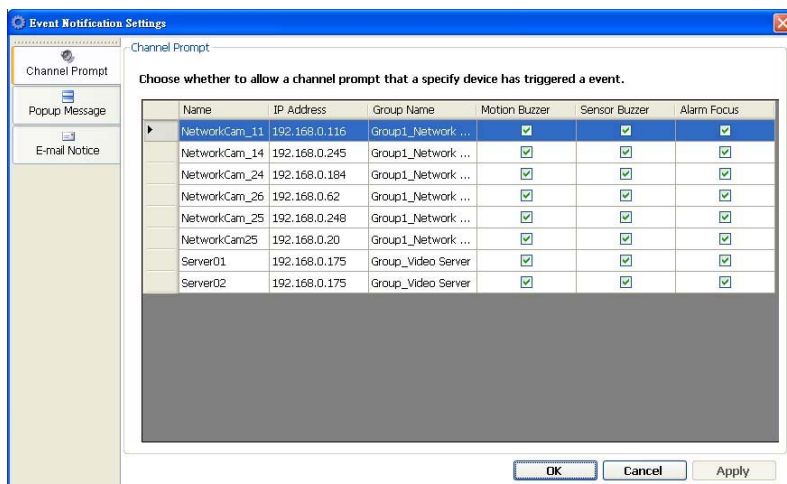
### (1) Global Settings



- Monitor setup: Sets the date/time mode and display mode, and controls the CPU use percentage on five levels.
- Default Directory: Sets the default files' saving path. Click  to select the directory.

### (2) Event Notification

- **Channel Prompt:** Sets each camera to activate or deactivate the three modes of "Motion Buzzer", "Sensor Buzzer", and "Alarm Focus". Tick mark the blank space for each device to activate it.



- **Popup Message:** Sets the maximum number of the pop-up messages, the displaying time and the pop-up forms. Tick mark the blank space for each device to activate it.

**Event Notification Settings**

Live Event Popup Message

Choose settings about live event popup message.

The maximum number of popup messages to display simultaneously : 5

The default period of time, a popup message will be displayed : 10 seconds

Select events that generate a POPUP notification. Please select the appropriate box.

	Motion Alarm	Sensor Alarm	Disk Full
Minimum Window	<input checked="" type="checkbox"/> Popup	<input checked="" type="checkbox"/> Popup	<input checked="" type="checkbox"/> Popup
Playback Viewer	<input type="checkbox"/> Popup	<input type="checkbox"/> Popup	<input checked="" type="checkbox"/> Popup
Settings Form	<input type="checkbox"/> Popup	<input type="checkbox"/> Popup	<input checked="" type="checkbox"/> Popup

OK Cancel Apply

- **E-mail Notice:** Sets each camera to activate the E-mail Notice function of the three situations: "**Motion Alarm**", "**Sensor Alarm**", and "**DISK Full**". Set the SMTP, the E-mail address and the attached file numbers to mail the user when the alarms occur. Tick mark the blank space for each device to activate it.

**Event Notification Settings**

E-mail Notice

Outgoing Server Settings

Outgoing Mail Server (SMTP) : Authentication...

Email Address : Test Settings

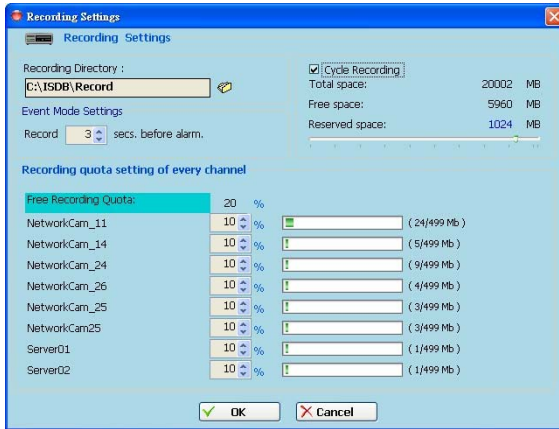
Attached File Numbers : 3

Enable Event Send Via Email

Name	IP Address	Group Name	Motion Alarm	Sensor Alarm	Disk Full
▶ NetworkCam_11	192.168.0.116	Group1_Network ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NetworkCam_14	192.168.0.245	Group1_Network ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NetworkCam_24	192.168.0.184	Group1_Network ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NetworkCam_26	192.168.0.62	Group1_Network ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NetworkCam_25	192.168.0.248	Group1_Network ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NetworkCam25	192.168.0.20	Group1_Network ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Server01	192.168.0.175	Group_Video Server	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Server02	192.168.0.175	Group_Video Server	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

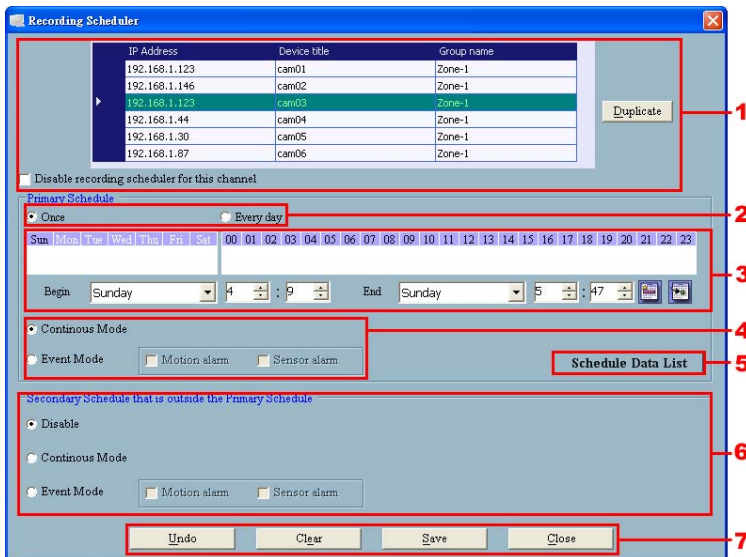
OK Cancel Apply

### (3) Recording Settings



- **Recording Settings:** You can control the HDD reserved space by using the scroll bar.
- **Recording quota setting:** Set the maximum recording quota of each channel.

### (4) Scheduler



- (1) Choose one of the devices to set its recording schedule.
- (2) Select the period: Click to set to record only once or record every day.

- (3) Select the recording time: Sets the periods of time in recording.

Select the Begin time and the End time the time markers will display above. Please use the up (increase) and down (decrease) arrows to adjust the setting.



Add the selected period schedule. You can also hold down the left mouse button to drag a period.



Erase the selected period schedule. You can also use the right mouse button to cancel the period.

- (4) Select the recording mode.
- (5) Press to show the scheduled recording list.
- (6) Set the secondary schedule: Activate or inactivate the other recording modes besides the primary schedule.
- (7) Option buttons:

Undo: Undo the latest changes.

Clear: Clear all the schedule markers in the current editing area.

Save: Apply the changes.

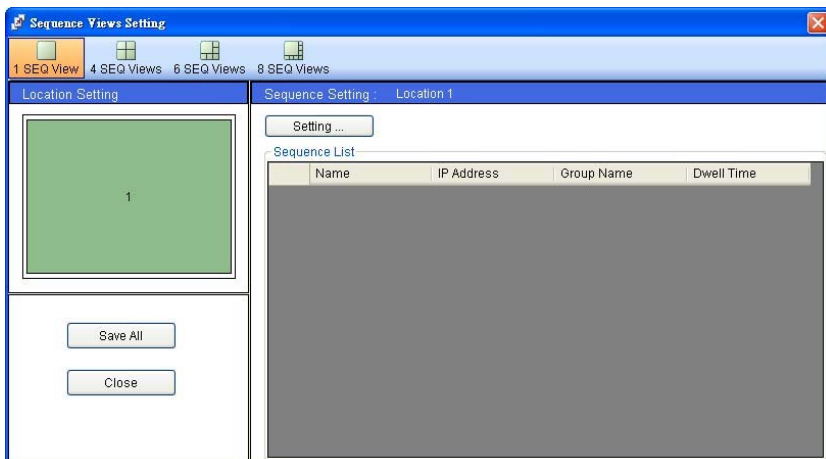
Close: Close the window.



## (5) Sequence Views


This function enables you to use four modes to set the sequence of displays you want for the

### **Sequence Mode of the Live Monitor.**



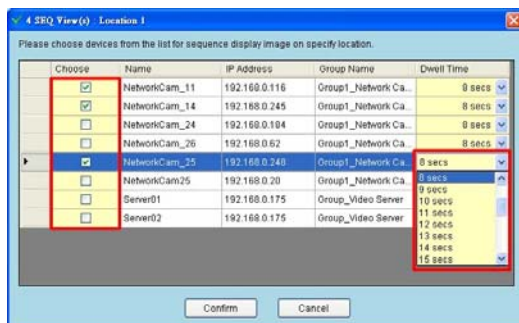
The user has to modify the “Sequence Views Setting” to make it work. For example, if you want to see the **4-window sequence**, please follow the steps given below:

**Step 1:** Click the Sequence Views button to enter the Sequence Views setting page.

**Step 2:** Select the “**4 SEQ views**” and the  4-windows will show in the Location Setting area.


**Step 3:** Select one of the four channels (Location1-4), then click the “**Setting**” button.

**Step 4:** The 4 SEQ View(s) page will show below. Choose the device(s) and set the Dwell Time (3-30seconds) from the drop-down list, then press the “**Confirm**” button.

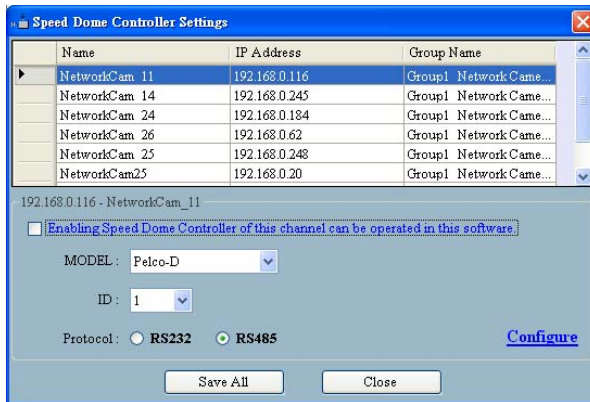


**Step 5:** Set the other channels as in step 3-4.

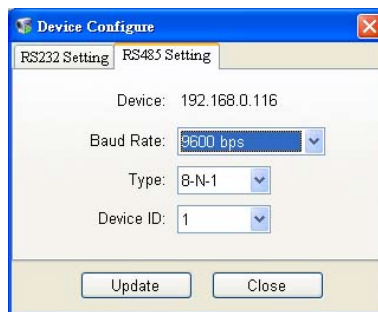
**Step 6:** Click “**Save all**” button, then press “**Close**” button to exit the setting page.

**Step 7:** Open the Live Monitor page, then click the  (4 SEQ views) button to see the 4-window sequence.

## (6) Speed Dome



- Tick mark to activate the Speed Dome Controller function of the selected channel. The user can set the model, ID and the protocol here.
- Click "**Configure**" to enter to the RS232 and RS485 setting pages.



## (7) Authority Setup

Authority setup: Change or add the user's authority.

There are three different levels of authority , namely

Admin, Operator and Viewer.



5. List of cameras and its groups:

The users can use the icons above the list to change the groups' names, the devices' titles and the channels' display modes.

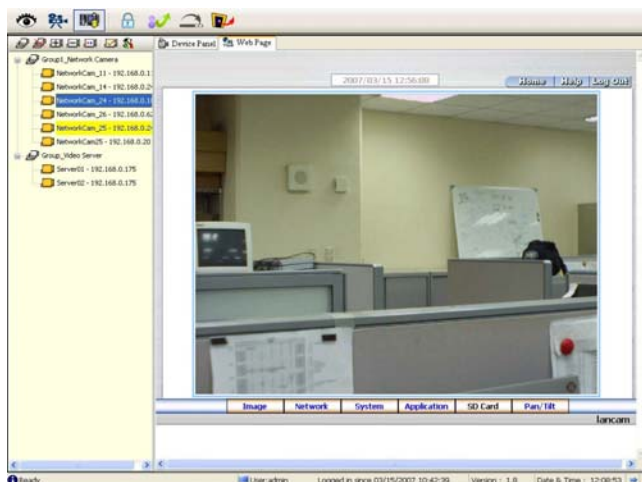
6. Display area: Click the title of the camera, and you will see the live image in this area.

7. Device Recording: Click the "Start Record" button to start the recording mode and click the "Config Record" button to set the details of the recording below.

8. Status of the speed dome controller.



9. You can interchange between two buttons here: the "Device Panel" and "Web page" buttons.

The web page (please refer to section 5.1 for more details):



10. Device information: The user can read a camera's information, such as "Site Name", "Group Name", "IP Address", "HTTP Port", "Device type", "Monitor Alarm Process" and the "Connect Mode".
11. Recording Scheduler: Shows the recording information of the selected channel.


#### 5.2.4.4 Lock

Press the  button to lock the operation of this software, and the IP Surveillance monitor will be minimized into the systray\* of the Windows taskbar. To unlock the command, please click the  button once, then type in the correct password.




\*: The Microsoft Windows systray is a portion of the Windows 95, Windows 98, Windows ME, Windows NT, Windows 2000, and Windows XP Operating Systems that helps display running programs. The systray is located on the taskbar and is commonly in the bottom right hand corner of the screen next to the time display.

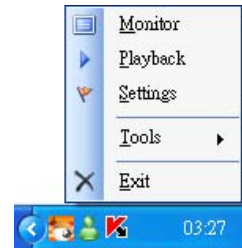
#### 5.2.4.5 Logout

Press the  button to logout the IP Surveillance software and the IP Surveillance monitor will be minimized into the systray of the Windows taskbar.


If you want to return to the IP Surveillance monitor, please click the


 button once, then select the page which you want to get into.

After typing in the correct user name and password, you can re-login to the software.



#### 5.2.4.6 Tray


Press the  button to minimize the IP Surveillance monitor into the systray of the Windows taskbar.

Click the  button once to go back to the IP surveillance software.



### 5.2.4.7 Exit Setting



Press the  button to exit the IP surveillance monitor which is minimized into the systray of the Windows taskbar.



Click the  button to select the functions on the list.



You can also change the password by clicking the “Tools” and “Change password” items on the list. Enter the old password once and the new password twice, then press the “OK” button to save it.

Change local admin's password!

Old Password:

New Password:

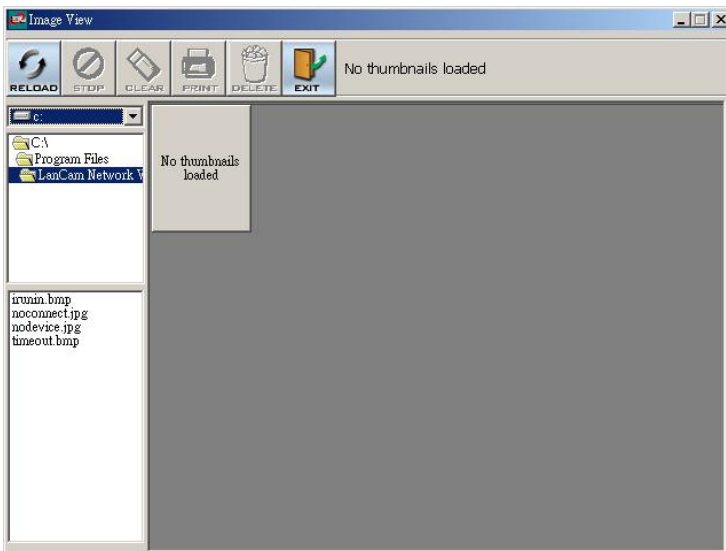
Confirm Password:

### 5.2.5 The Image Viewer

The Ipxcam is equipped with a digital watermark. It's a checking software which protects archived images and informs you whether the images have been modified or not. Follow the instructions below to open an archived image from an SD card or an HDD.

This is image integrity-protection software. It not only allows you to view an archived image from the SD card or HDD of a computer, but also protects an archived image from reproduction or interpolation. If an image isn't in the original format made by an Ipxcam, the Image Viewer will not display the image and instead will send a warning message, "**Not Correct Image**", right away. Close this message to enable you to see the image now.

1. Pop up the **START** menu in your computer, and point to **Programs / IP surveillance** to open up the program selection page. Click the **Image Viewer** tag to start the **Image Viewer** program (see a sample screen below).
2. Click the **RELOAD** tag to load the images from a path.
3. Click the **PRINT** tag to get a displayed image printed out from a printer.



## 6. ADVANCED OPERATION

### Question 1:

**How to view the live images of the IPXCAM via the Microsoft Internet Explorer on the Desktop PCs or the laptop computers in a situation where there are no monitors or television?**

◇The way to get the IP address of the IPXCAM without a monitor:

There are three way to get the IP address: Scan IP, Upnp and IP function.

Scan IP: Please refer to **APPENDIX 1**.

Upnp: Please refer to **APPENDIX 2**.

IP function: Please refer to **APPENDIX 3**.

### Question 2:

**How to set up the motion detection area and its sensitivity? How to record into the SD card for 30 seconds when the motion has been activated and use the Microsoft Internet Explorer to view the recorded files?**

#### ◇Set up the motion detection

1. Click the **application** button in the home page.
2. Click the **Motion detection** button on the left side of the page to enter the "ALARM – MOTION DETECTION" page.
3. Click and drag the mouse left button across a targeted zone to draw a red rectangle on the image. You can also draw the other targeted zones as you wish.
4. Please **Enable** the motion detection function.
5. Set up the sensitivity level from: Lowest, Low, Medium and High to Highest.
6. Click the **Submit** button to submit the setting.

#### ◇Recording the images into an SD card while the motion detection function is working

1. Click the **application** button in the home page.
2. Click the **Enable** button below the ALARM item on the left side of the page to enter the "ALARM APPLICATION ENABLE SETTING" page.

3. Tick on “**Enable ALARM-SAVE into SD Card**” to activate it.
4. Click the **Submit** button to submit the setting.

**NOTE:** Please remember to insert the SD card into the built-in SD slot of the unit first.

#### ◇Set the recording time (the AVI duration) of the SD card

1. Click the **application** button in the home page into the “SD-Card APPLICATION SETTING” page.
2. Choose the **AVI Duration** from the drop-down list.  
If you want to record the file into the SD card for 30 seconds, please choose 30 seconds.
3. Click the **Submit** button to submit the setting.

#### ◇Use IE to view the recorded files

1. Click the **SD Card** button in the home page to enter the page containing the “FILELIST of MEMORY CARD”.
2. Click the filename which you want to view.
3. It will ask you to enter the username and password.
4. If you didn't set the other player before, the AVI file will be played by the Windows Media Player.

### Question 3:

**How to use the DynDNS to connect the IPXCAM by using its Sub Hostname via the intranet?**

#### ◇Set the DDNS function

1. Click the **network** button in the home page.
2. Click the **DDNS** button on the left side of the page to enter the “DDNS SETTING” page.
3. Tick on the “Enable DDNS Function” to activate it.
4. Choose one of the DDNS Types from the drop-down list.  
If you didn't register for a DDNS before, please choose one of the DDNS Type then press “Apply” button to its registering homepage and register as a member.
5. Enter the DDNS Host Name, DDNS Account and DDNS Password which you created in the [www.dyndns.com](http://www.dyndns.com) website.
6. Click the **Submit** button to submit the setting.

**NOTE:** Please refer to the **APPENDIX 4** for more details.

#### ◇Set the PPPoE function

1. Click the **network** button in the home page.
2. Click the **PPPoE** button on the left side of the page to enter the "PPPoE SETTING" page.
3. Choose "ON" from the "PPPoE mode" list to activate it.
4. Enter the Account and the Password which are provided from your ISP.
5. Click the **Submit** button to submit the setting.

**NOTE:** Please refer to section 5.1.8 for more details.

#### ◇Use the Sub Hostname to view the IPXCAM

1. Click the URL block at the top of the PC screen.
2. Type in the DDNS Host Name of the IPXCAM into the URL block and press the "Enter" button to enter the login page.
3. Enter the user name and fill in the password.
4. Click the "OK" button and enter the home page of the IPXCAM.

### Question 4:

**How to add or modify the users and their authorities of using the IPXCAM?**

#### ◇Entering the setting page

1. Click the **system** button in the home page.
2. Click the **Users** button on the left side of the page to enter the "SYSTEM - USERS" page.

#### ◇Add a new user

1. Please enter the user name, the password, the confirmed password and choose the authority.

There are three different levels of authorities, namely Admin, Operator and Viewer.

**Admin:** The user who accesses with the admin name and password has the full power to even change the settings of the Ipxcam.

**Operator:** The suggested choice for normal use.

**Viewer:** The user who accesses with just the viewer name and password has only a limited power to view.

2. Click the **Submit** button to submit the new user's setting.

#### ◇ **Modify the user**

1. Click the user name you want to modify on the **User List**.
2. Enter the password, the confirmed password and choose the authority.
3. Click the **Submit** button to submit the new setting.

#### ◇ **Delete a user**

1. Click the user name you want to modify on the **User List**.
2. Click the **Delete** button.

## 6. SPECIFICATIONS

Model Number	DDK-1000W (NTSC)	
Image System	SONY VGA CCD	
CCD sensor	1/4 inch progressive CCD	
CCD resolution	330K pixels	
Network throughput	2.6 Mbytes /sec	
Video Output	1.0 Vpp, 75 ohm, composite, negative	
Audio	16bit, 8 kHz sample rate	
Microphone	Built-in	
Horizontal resolution	400 TV lines	
Exposure	AGC / AWB	
Electronic shutter	1/30 – 1/27000 sec	
Sensitivity	1.5 lux @ F1.2	
Auto iris type	DC-iris	
Compression	MJPEG / MPEG4	
MJPEG performance	Up to 12 frames/sec at VGA	
MJPEG picture size	4 ~ 64 KB	
MJPEG watermark	Digital Signature	
MJPEG motion detecton	Advanced MD (zone, position, sens)	
MPEG4 resolution	VGA, QVGA	
MPEG4 quality	5 Levels( Bitrate from 3Mbps to 128Kbps)	
MPEG4 framerate	30, 24, 15 fps at all resolutions	
Video fine tune	Brightness, Saturation	
RS-232	Yes	
Network Interface	802.11b Standard for 2.4GHz Wireless	
Network Protocol	TCP/IP, DHCP, HTTP, UDP, SNTP, ICMP, DDNS, DNS, UPnP	
Wireless Bit Rate	11, 5.5, 2, 1 Mbps	
Wireless Security	WEP Encryption 64-bits and 128-bits	
Operation Frequency	America	2.412 – 2.462 GHz(11Ch.)
	Europe CE	2.412 – 2.472 GHz (13 Ch.)
	Japan	2.412 – 2.484 GHz (14 Ch.)
	France	2.457 – 2.472 GHz (4 Ch.)
Wireless Output Power	20 dBm +/- 2 dBm	
SD socket	Yes	
Alarm I / O	Yes	
Secure password	Multi-level / Multi-user	
Software Upgrade	Upgrade via SD Card, RS-232 or Network	
Power input	5V DC / 2A	
Operation environmental	Requires proper environmental housing for outdoor use	
Weight	318g	
Dimensions	62 (W) x 50 (H) x 95 (D) mm	
Operation temperature	5° C ~ 50° C (41° F ~ 122° F)	
Regulation	FCC, CE	
Provided Accessories	AC Adapter x 1	
	Instruction manual x 1	
	802.11b Wireless Antenna x 1	
	CD-R x 1	


## 7. Function of Client PC

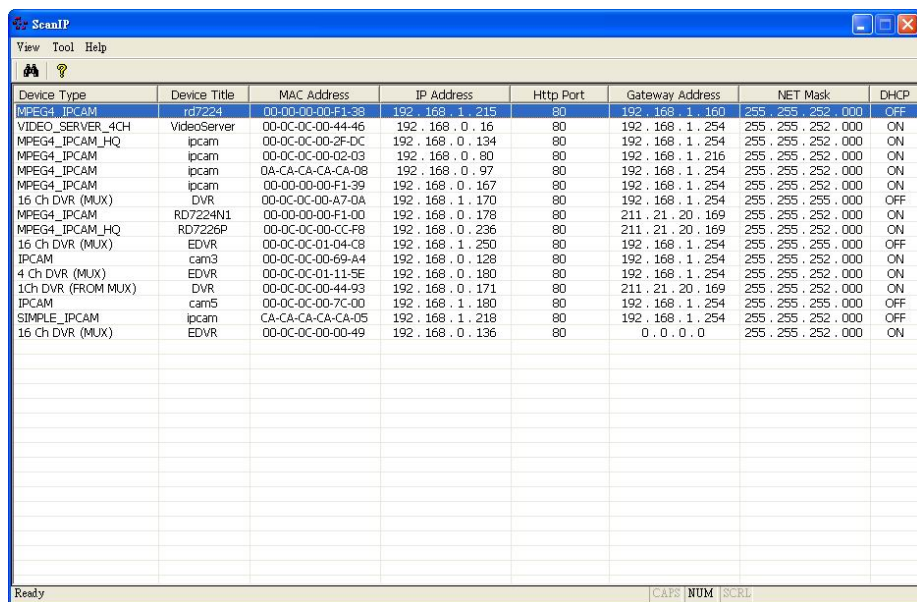
System requirement	Windows 2000, XP or above
Browser	IE 6.x
Live Monitor	Max. 16 Split , Real Time REC/ Capture/ Audio/ Live Event/ Full Screen
Playback Viewer	Playback, Time / live event Search / Export (JPEG / AVI)
Settings	Device/ System/ Camera management/ web page
Multi-camera link	Max. 16 camera



## APPENDIX 1. –SCANIP

Follow the instructions below to use the SCANIP software to search the Ipxcam devices from a local location.

1. Click the  button to discover the connection of the all-type device in the LAN. The **Device List** will display the connection of the all-type device.
2. Select the desired device from the **Device List**.
3. Click the desired device to show the window while the Ipxcam information acts to display the desired changes instantly.



Device Type	Device Title	MAC Address	IP Address	Http Port	Gateway Address	NET Mask	DHCP
MPEG4_IPCAM	rd7224	00-00-00-00-F1-38	192.168.1.215	80	192.168.1.160	255.255.252.000	OFF
VIDEO_SERVER_4CH	VideoServer	00-00-0C-00-44-46	192.168.0.16	80	192.168.1.254	255.255.252.000	ON
MPEG4_IPCAM_HQ	ipcam	00-0C-0C-00-2F-DC	192.168.0.134	80	192.168.1.254	255.255.252.000	ON
MPEG4_IPCAM	ipcam	00-0C-0C-00-02-03	192.168.0.80	80	192.168.1.216	255.255.252.000	ON
MPEG4_IPCAM	ipcam	0A-CA-CA-CA-CA-08	192.168.0.97	80	192.168.1.254	255.255.252.000	ON
MPEG4_IPCAM	ipcam	00-00-00-00-F1-39	192.168.0.167	80	192.168.1.254	255.255.252.000	ON
16 Ch DVR (MUX)	DVR	00-0C-0C-00-A7-0A	192.168.1.170	80	192.168.1.254	255.255.255.000	OFF
MPEG4_IPCAM	RD7224N1	00-00-00-00-F1-00	192.168.0.178	80	211.21.20.169	255.255.252.000	ON
MPEG4_IPCAM_HQ	RD7226P	00-0C-0C-00-CC-F8	192.168.0.236	80	211.21.20.169	255.255.252.000	ON
16 Ch DVR (MUX)	EDVR	00-0C-0C-01-04-C8	192.168.1.250	80	192.168.1.254	255.255.255.000	OFF
IPCAM	cam3	00-0C-0C-00-69-A4	192.168.0.128	80	192.168.1.254	255.255.252.000	ON
4 Ch DVR (MUX)	EDVR	00-0C-0C-01-11-5E	192.168.0.180	80	192.168.1.254	255.255.252.000	ON
1ch DVR (FROM MUX)	DVR	00-0C-0C-00-44-93	192.168.0.171	80	211.21.20.169	255.255.252.000	ON
IPCAM	cam5	00-0C-0C-00-7C-00	192.168.1.180	80	192.168.1.254	255.255.255.000	OFF
SIMPLE_IPCAM	ipcam	CA-CA-CA-CA-CA-05	192.168.1.218	80	192.168.1.254	255.255.252.000	OFF
16 Ch DVR (MUX)	EDVR	00-0C-0C-00-00-49	192.168.0.136	80	0.0.0.0	255.255.252.000	ON

4. Do you want to automatically search free IP?

If and when you want to automatically search the free IP, select "Yes" or "No". If clicked "Yes", the software will provide the "Free IP Address" boxes on the right side of the window. If you click "No", these address boxes will not show.



5. Manual insertion of "Free IP Address".

If you have clicked “No”, please manually type in insertions as required in the “Free IP Address”, “Gateway Address”, and “NET Mask”. Follow each insertion you make by typing in the “Login Name” and “Password”, and click “UPDATE” to send your alterations to the Ipxcam.

**DVR**

**System Setup**

Device Title: Iancam

**Address Setup**

MAC Number: 00 - 0C - 0C - 00 - 65 - A5

IP Address: 192 . 168 . 1 . 129

Gateway Address: 192 . 168 . 1 . 254

NET Mask: 255 . 255 . 255 . 000

**Login Setup**

Login Name:

Password:

UPDATE EXIT

Ready

6. Automatically search “Free IP Address”.

If you clicked “Yes”, the “Free IP Address” box will appear on the right.

**DVR**

**System Setup**

Device Title: Iancam

**Address Setup**

MAC Number: 00 - 0C - 0C - 00 - 65 - A5

IP Address: 192 . 168 . 1 . 129

Gateway Address: 192 . 168 . 1 . 254

NET Mask: 255 . 255 . 255 . 000

**Login Setup**

Login Name:

Password:

UPDATE EXIT

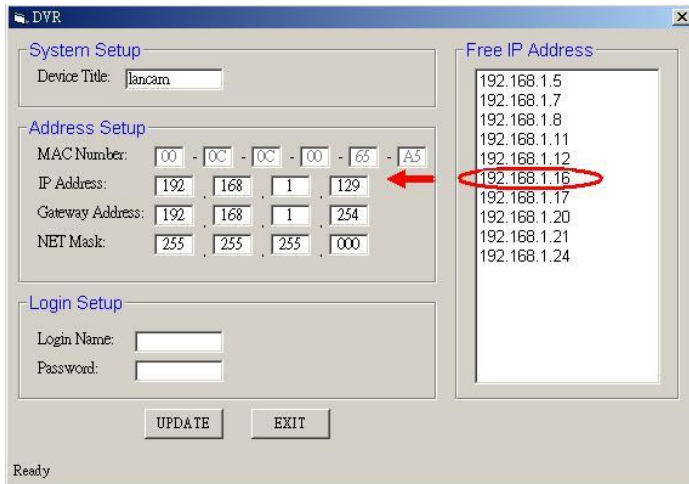
Ready

**Free IP Address**

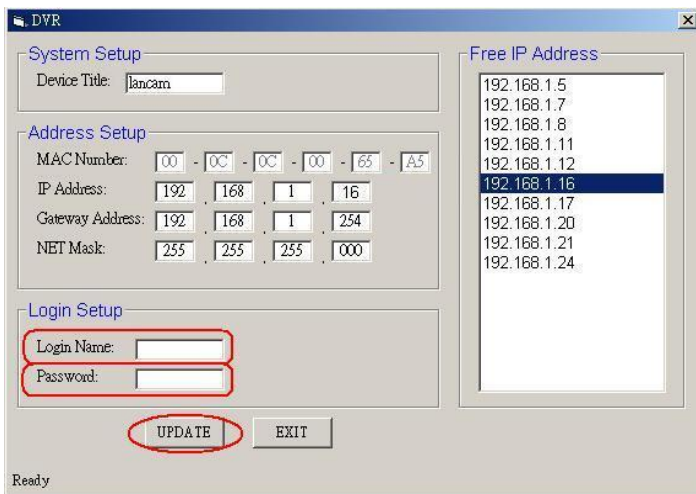
- 192.168.1.5
- 192.168.1.7
- 192.168.1.8
- 192.168.1.11
- 192.168.1.12
- 192.168.1.16
- 192.168.1.17
- 192.168.1.20
- 192.168.1.21
- 192.168.1.24

7. Select and double click any of the addresses in the “Free IP Address” box on the right to

enter it into an IP address on the left.



- To change any IP address, type in the new address in the "Free IP Address" box on the right as well as the device "Login Name" and "Password" in their respective spaces at bottom left, then click "UPDATE", and the new address will automatically be sent to the device.



- Click "Exit" at bottom right to shut the device.

## **APPENDIX 2. –Ipxcam SD - card Troubleshooting**

1. Ensure the SD card is in the correct position. Please refer to the manual for the relevant information.
2. After powering on the Ipxcam, insert the SD card in the correct position, and a little icon of "SD" will show up in the upper-right corner of the monitor screen. If not, it means the device detection has failed. Please contact your technical support and ignore the following steps
3. If no cross sign appears beside the "SD" icon, please go on to the next step. If a cross sign appears, please check the following:
  - a. Is it really an SD "Memory" Card?
  - b. Is this SD card formatted in the FAT16 format?
  - c. Connect the SD card with a PC and test whether the PC can read the data or not.
  - d. Does this SD card still have the capacity for storing data?
  - e. Is the SD card set to be writable?

If all the answers are "yes" but the cross sign still persists, please contact your technical support and ignore the following steps.

4. Please make sure the function of "SD CARD ENABLE" is activated in the ALARM and SCHEDULE pages if no cross sign appears beside the "SD" icon on the screen.
5. After recording, read the data via the web page of "sdget.htm". If the data cannot be read through the network, please read it by a PC, check the data stored in the " **IPXCAM** " directory, and please contact your technical support regardless of whether there is data or not.

### **Warning:**

1. **Performing this troubleshooting process may need a monitor, a PC, a card reader and some cables.**
2. **If the SD card is removed while storing or accessing data, the data will be lost.**
3. **If there is a cross sign beside the "SD" icon, it means the SD card has been inserted into the Ipxcam but cannot perform its writing function. Possible reasons are:**
  - a. **It is not an SD memory card.**
  - b. **The SD card is unformatted or formatted in a non-FAT16 or non-FAT12 format.**
  - c. **The file system is damaged.**
  - d. **The capacity of the SD card is full.**
  - e. **The SD card is set to be read only.**
4. **Shut off the power before inserting the SD card. Otherwise the unit may shut down.**

## APPENDIX 3. –FAQ

1. How to disable the DHCP function and use a static IP instead?

A : Turn the “DIP SWITCH” from “3” to “4” and change the relative network settings, the IP Address, NetMask and Gateway on the image web page.

2. Can the SD card be removed during recording?

A : No, it cannot be removed until the recording comes to a single point. The POWER LED flashing light signals the SD card is operating. The green light indicates the unit is activated. The red light warns the SD card cannot be removed. If the SD card is withdrawn in this mode, the card will break.

3. I've set the function of “Motion Detection” but it doesn't seem to work.

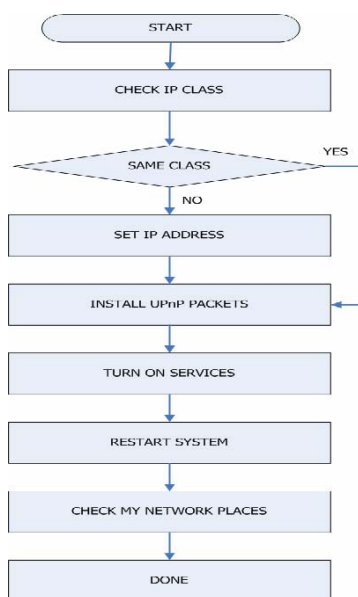
A : Check if “Motion range” and “Sensitivity” have been set before activating the function.

4. My AVI files recorded in the SD card cannot be displayed. What can I do to display the files?

A : Please visit “<http://www.morgan-multimedia.com/>” to download the “Morgan M-JPEG codec” and install it, and then check the selection of the “IJP Core”.

## APPENDIX 4. –Ipxcam UPnP How To

The most troublesome issue when you setup an Ipxcam is that you have no idea what the IP address of this device is. Now Ipxcam supports the UPnP (Universal Plug and Play) protocol which makes it easier for you to examine it; however, it is a pity that Microsoft Windows XP<sup>®</sup> doesn't start this service by default. Therefore, the following procedures will help you to turn it on and discover your Ipxcam step by step as shown in Figure1 below.



**Figure 1** UPnP Setup Flow Chart

### 1. Check the IP class of your PC

In most case Microsoft Windows XP<sup>®</sup> will assign an IP address, 169.254.\*.\*, automatically with a subnet mask, 255.255.0.0, if the DHCP server is absent, while the default IP address of an Ipxcam is 192.168.1.168 with a subnet mask of 255.255.255.0. There won't be any communication due to different IP class domains, and you have to modify the relative settings or the UPnP protocol won't work; however, checking your own IP address is necessary. Here are the procedures to check and modify them.

**Step 1:** From the **Start** menu, point to **Settings**, and then click **Control Panel**. See Figure 2.

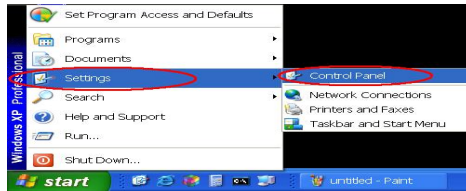


Figure 2

**Step 2:** When **Control Panel** appears, double-click the **Network Connections** icon. The **Network Connections** dialog box appears. See Figure 3.

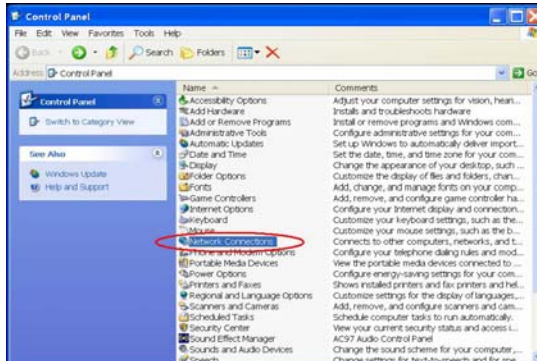


Figure 3

**Step 3:** Click the **Protocols** tab in the **Network Connections** dialog box. See Figure 4.

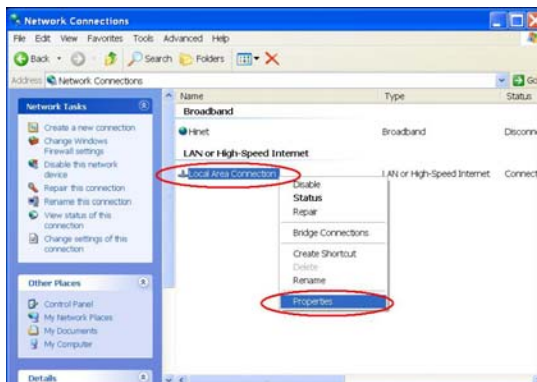


Figure 4

**Step 4:** When the **Local Area Connection Properties** dialog box shows up, choose **Internet Protocol (TCP/IP)** and click **Properties**. See Figure 5.

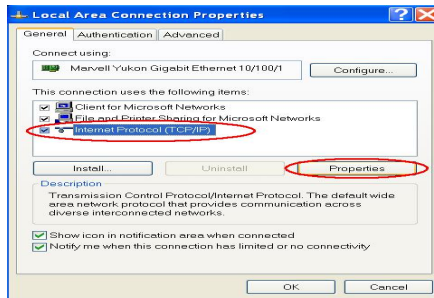


Figure 5

**Step 5:** In the **Internet Protocol(TCP/IP) Properties** dialog box, choose **Use the following IP Address** to indicate that you do not wish to use DHCP, and assign IP Address 192.168.1.200 with Subnet mask 255.255.255.0. Click **OK** when you finish it. See Figure 6.

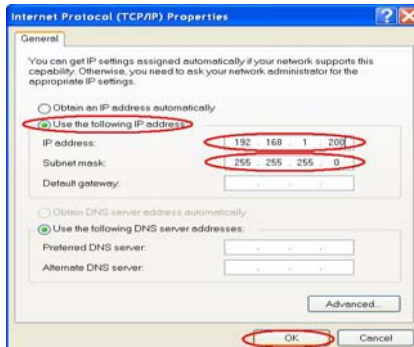


Figure 6

**Step 6:** Choose Close to finish the modification. See Figure 7.

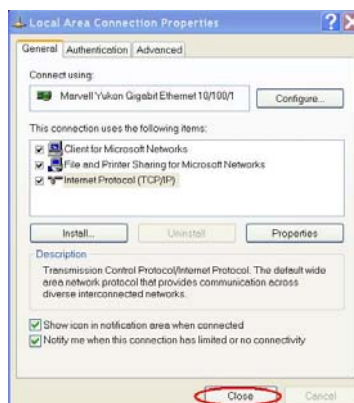


Figure7



## 2. Install UPnP Packets

As described before, Microsoft Windows XP<sup>®</sup> doesn't start the UPnP service by default; however, we have to install some packets before we initialize it. The following steps will help you to install them.

**Step1:** From the **Start** menu, point to **Set Program Access and Defaults**, and then click it. See

Figure 8



Figure 8

**Step 2:** When the **Add or Remove Programs** dialog box appears, click the **Add/Remove Windows Components** button. See Figure 9.

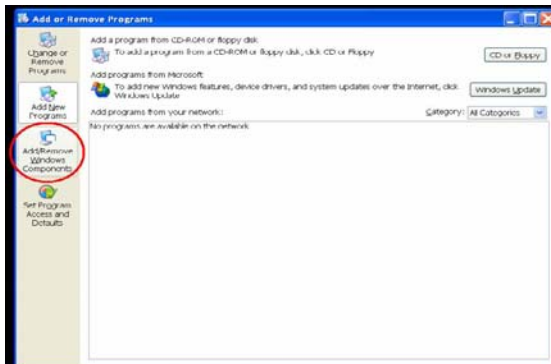


Figure 9

**Step 3:** Check the **Network Services** in the **Windows Component Wizard** dialog box, and then click **Details....** See Figure10.

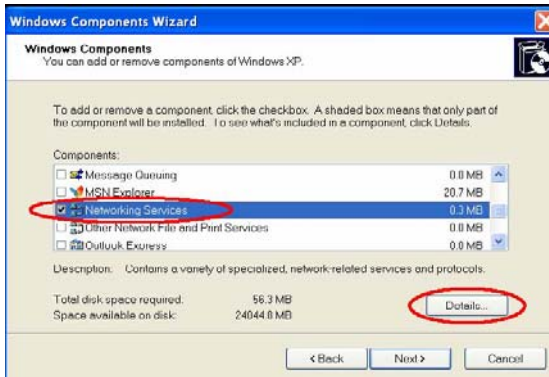


Figure 10

**Step 4:** Check **UPnP User Interface**, and choose **OK**. See Figure 11.

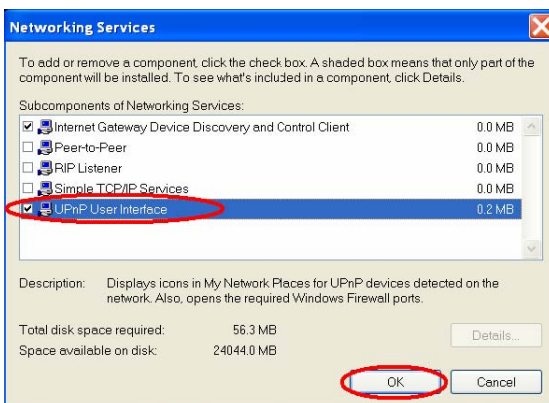


Figure 11

**Step 5:** When the original **Network Component Wizard** dialog box returns, click **Next**. See Figure 12.

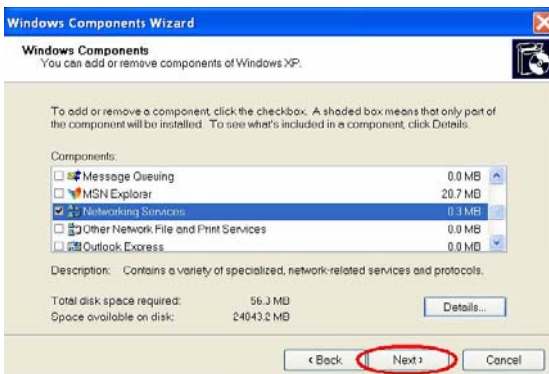


Figure 12

**Step 6:** After about one minute the UPnP installation will be done, and choose **Finish** to close it.

See Figure13.



Figure 13

### 3. Turn on Services

After installation, we should turn on the relative services to start the UPnP protocol. The following procedures will teach you how to do it.

**Step 1:** From the **Start** menu, point to **Settings**, and then click **Control Panel**. See Figure14.

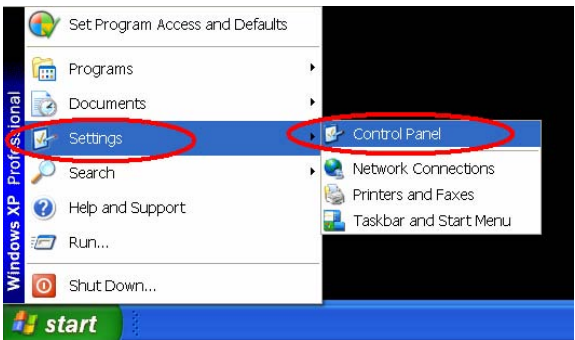


Figure 14

**Step 2:** When **Control Panel** appears, double-click the **Administrative Tools** icon. The **Administrative Tools** dialog box appears. See Figure15.

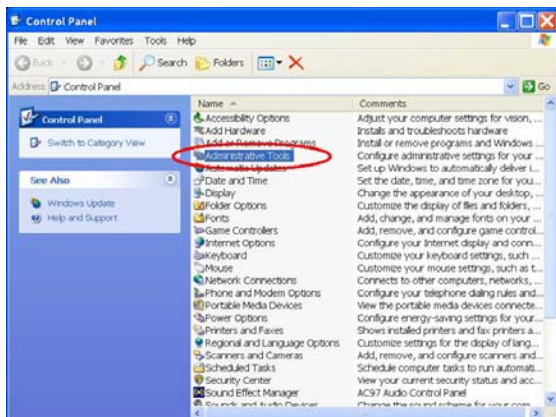


Figure15

**Step 3:** Click the **Services** icon in the **Administrative Tools** dialog box. See Figure16.

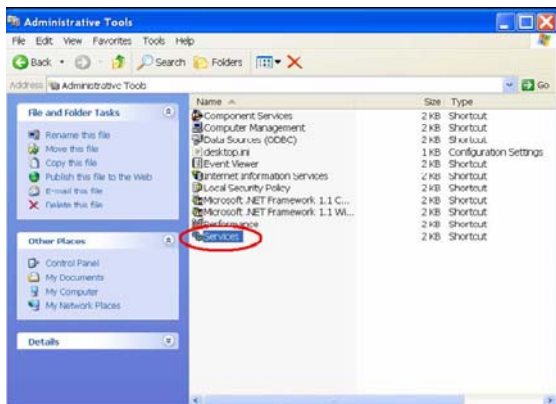


Figure16

**Step 4:** When the **Services** dialog box shows up, double click the **SSDP Discovery Service** icon. See Figure17.

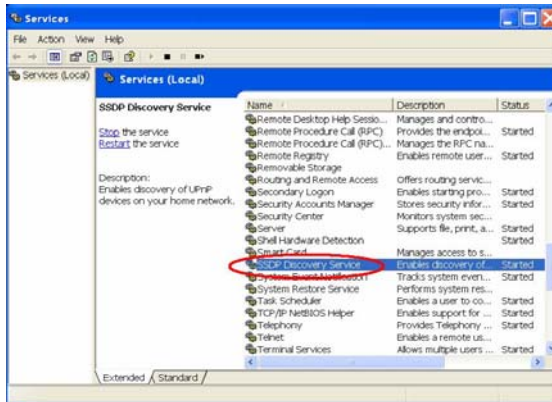


Figure17

**Step 5:** Choose **Automatic** in the **Startup type**, and click **OK** to start it. See Figure18.

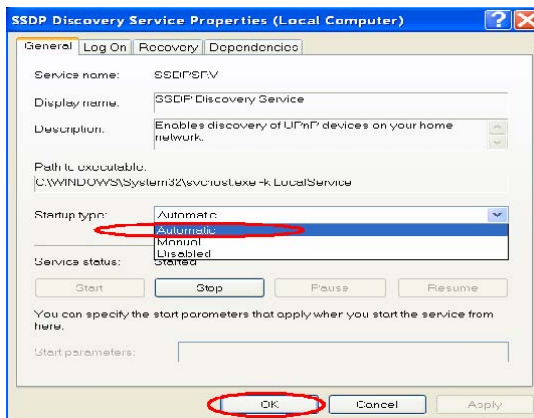


Figure18

**Step 6:** When the **Services** dialog box appears again, double click the **Universal Plug and Play Device Host** icon. See Figure19.

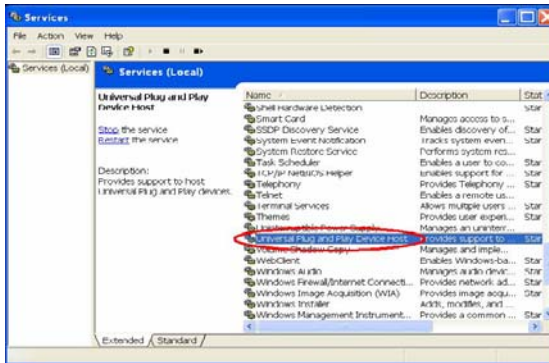


Figure19

**Step 7:** Choose **Automatic** in the Startup type, press the **Start** button, and click **OK** to start it.

See Figure20.

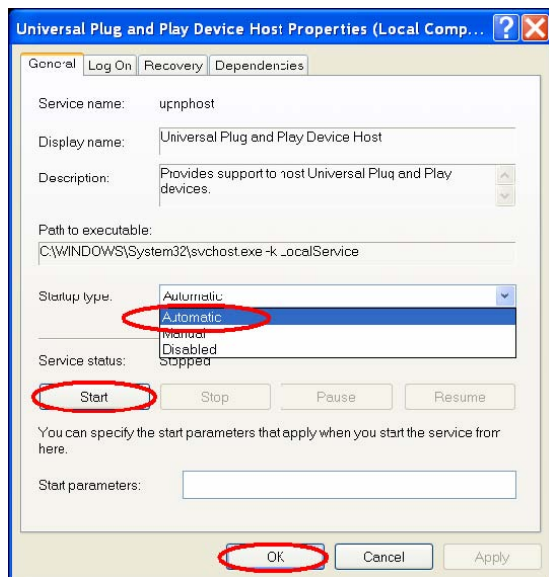


Figure20

**Step 8:** Restart your system.

#### 4. Scan lpxcam through My Network Place

After your installation and starting services, the UPnP protocol will take effect. You can scan all lpxcam in My Network Place like Figure21 below.

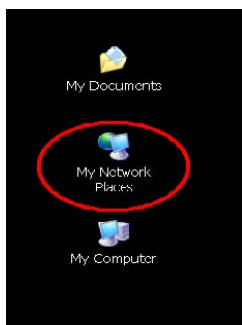


Figure21

Just double click the **lpxcam** icon, and the video live stream will pop up automatically without assigning any IP address in Microsoft Internet Explorer<sup>®</sup> .

## APPENDIX 5. –The ARP function

### Setting the IP Address

The Ethernet interface on the Ipxcam has a default IP address (192.168.1.168) that most likely needs to be changed to make it work on your local network. You need to acquire a unique IP address (ask your network administrator). For the initial setting of the IP address the Ipxcam needs to be connected to the same network segment as your client, and the IP address can then be configured by using a combination of ARP and ping command.

Use any of the following ways to set the IP address within thirty seconds after booting the Ipxcam (re-cycle the power). Setting IP using the method below can only be done on the Ethernet interface.

### ARP and ping from Windows or MS-DOS:

The user can open the PC's MS-DOS windows from the WINDOWS 98 operation system, or open the PC's Command Prompt windows from either the WINDOWS 2000 or the WINDOWS XP operation system.

1. Start a DOS prompt window
2. Type the following in 30 seconds after the booting:

```
arp -s <IP address> <Ethernet address>
```

```
[or arp -s <IP address> < MAC address>]
```

```
ping <IP address>
```

Example:

```
arp -s 192.168.1.100 00-0C-0C-00-00-01
```

```
ping 192.168.1.100
```

The IP address now is: 192.168.1.100.



## ARP and ping from UNIX or GNU/Linux:

1. Start a shell
2. Type the following as superuser (root):  
arp -s <IP address> <Ethernet address>  
[or arp -s <IP address> < MAC address>]

ping <IP address>

Example:

```
arp -s 192.168.1.100 00-0C-0C-00-00-01
```

```
ping 192.168.1.100
```

The device responds to the ping in the examples above if the new address was configured. Note, this method will set the IP address permanently.

**Note:** The default account and password after the reset are root and Admin.

## APPENDIX 6. –Register as a DDNS member

The DDNS (dynamic domain name system) is a function which is provided by an American company. Please refer to [www.dyndns.com](http://www.dyndns.com). This chapter provides the user with the basic instructions on how to register a free DDNS service.

### Registering for a DDNS

Enter the URL [www.dyndns.com](http://www.dyndns.com). In the upper right-hand corner of the main page, where there is an item, "Sign Up Now", as shown in Figure 1.

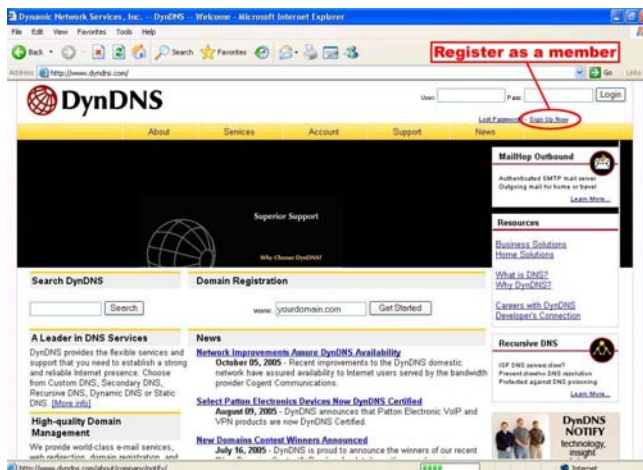


Figure 1

### Create an account

After clicking [Sign up now](#), you will enter the Create Account page. Please complete the form at the bottom of the page to create your account. You will receive an e-mail containing instructions to activate your account. If you do not follow the directions within 48 hours, you will need to recreate your account.

### Set up the DDNS

After creating the account successfully, please enter your user name and password in the upper right-hand corner of the main page to login, as shown in Figure 2.

After you login successfully, a text will appear saying "[My Services](#)", as shown in Figure 3.

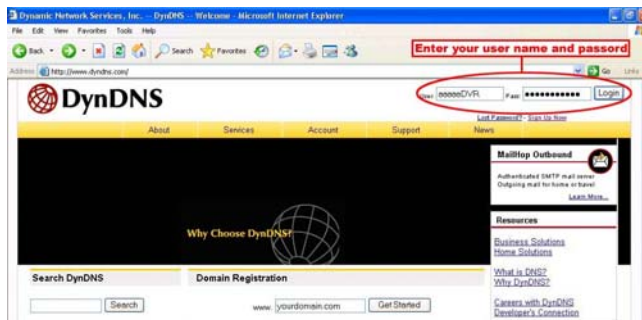


Figure 2

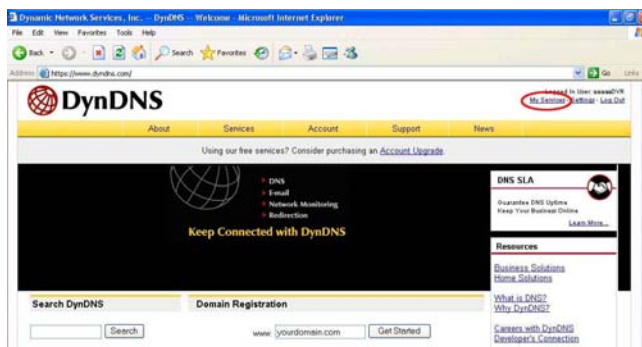


Figure 3

Click "My Services" to enter the service page. Please click the "Add Host Service" item which is below the "My Hosts" item, as shown in Figure 4.

Click "Add Host Service", and its 5 service items will appear. The Add Dynamic DNS Host item helps to add a new DDNS as shown in Figure 5. Each member may have only one free account, and one free account can have only five DDNS.

Click Add Dynamic DNS Host to enter the DDNS setting page as shown in Figure 6.

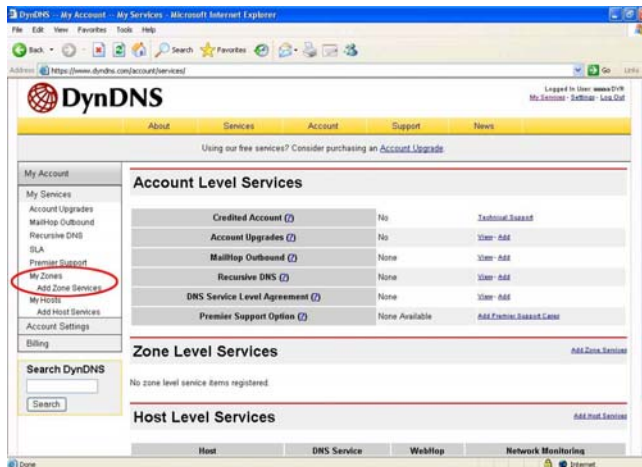


Figure 4

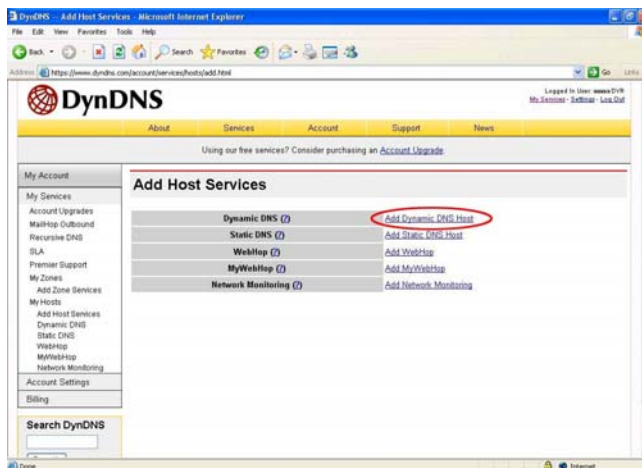


Figure 5

**DynDNS**

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**My Account**

- My Services
  - Account Upgrades
  - Mailbox Outbound
  - Recursive DNS
  - SLA
  - Premier Support
- My Zones
  - Add Zone Services
- My Hosts
  - Add Host Services
  - Dynamic DNS
  - Static DNS
  - WebHost
  - WebHost-IP
  - Network Monitoring
- Account Settings
- Billing

**New Dynamic DNS<sup>SM</sup> Host**

Sub Hostname

Hostname:

IP Address:

Enable Wildcard: ☐

Mail Exchanger (optional):  ☐ Backup MX

Figure 6

All we have to set in this page is the “Hostname” item. The user can choose a Sub Hostname as s/he likes from the right-hand side of the Hostname’s drop-down list.

**NOTE:** You don’t have to set the “IP Address” in the same format as the Ipxcam’s IP Address. It will renew the IP Address automatically.

After finishing the setting, please press the “Add Host” button as shown in Figure 6.

**DynDNS**

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  - Add Zone Services
- My Hosts
  - Add Host Services
  - Dynamic DNS
  - Static DNS
  - WebHost
  - WebHost-IP
  - Network Monitoring
- Account Settings
- Billing

**Hostname Created**

The hostname you have requested has been created. The information now in the database and DNS system is:

Hostname:

IP Address:

Wildcard:

Mail Exchanger:

Backup MX:

Figure 7

## APPENDIX 7. –MPEG4 Bit Rate Lookup Table of Ipxcam

1. When frame rate is higher than 15 frames/second (15 is not including):

	Highest	High	Medium	Low	Lowest
FULL D1	3	2.5	2	1.5	1
VGA	2.63	2.25	1.75	1.31	0.88
Half D1	1.5	1.25	1	0.75	0.5
Half VGA	1.31	1.13	0.88	0.67	0.44
CIF	0.75	0.63	0.5	0.38	0.25
QVGA	0.66	0.56	0.44	0.38	0.22
ZOOM * 2	3	2.5	2	1.5	1
ZOOM * 3	3	2.5	2	1.5	1
ZOOM * 4	3	2.5	2	1.5	1

2. When frame rate is lower or equal to 15 frames/second:

	Highest	High	Medium	Low	Lowest
FULL D1	2.25	1.94	1.5	1.13	0.75
VGA	1.94	1.69	1.31	0.98	0.66
Half D1	1.13	0.94	0.75	0.56	0.38
Half VGA	0.98	0.84	0.66	0.49	0.33
CIF	0.56	0.47	0.44	0.28	0.19
QVGA	0.5	0.44	0.34	0.25	0.19
ZOOM * 2	2.25	1.88	1.5	1.125	0.75
ZOOM * 3	2.25	1.88	1.5	1.125	0.75
ZOOM * 4	2.25	1.88	1.5	1.125	0.75

\*The unit is in Mbps/second.