

Installation and Operating Manual

1/3" Day/Night Network Colour Camera, integr. Web Server GLC-1601



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1. Safety Instructions

- Read these safety instructions and the operation manual first before you install and commission the camera.
- Keep the manual in a safe place for later reference.
- Protect your camera from contamination with water and humidity to prevent it from permanent damage. Never switch the camera on when it gets wet. Have it checked at an authorized service center in this case.
- Never operate the camera outside of the specifications as this may prevent the camera functioning.
- Do not operate the cameras beyond their specified temperature, humidity or power ratings. Operate the camera only at a temperature range of +5°C to +40°C and at a humidity of max. 80%.
- To disconnect the power cord of the unit, pull it out by the plug. Never pull the cord itself.
- Pay attention when laying the connection cable and observe that the cable is not subject to heavy loads, kinks, or damage and no moisture can get in.
- Never point the camera towards the sun with the lens open as this may prevent the sensor functioning.
- Do not block ventilation openings.
- The installer is responsible for maintaining the protection class.
- Only use rust-proof screws should be used to mount the housing and camera outside.
- Do not place anything on top of the unit that might spill or fall into it.
- The warranty becomes void if repairs are undertaken by unauthorized persons. Do not open the camera housing.
- Maintenance and repair have to be carried out only by authorized service centers. Before opening the cover disconnect the unit from mains input.
- Only use original parts and original accessories from Videor E. Hartig GmbH.
- Do not use strong or abrasive detergents when cleaning the dome. Use a dry cloth to clean the dome surface. In case the dirt is hard to remove, use a mild detergent and wipe gently.

NOTE: This is a class A digital device. This digital device can cause harmful interference in a residential area; in this case the user may be required to take appropriate corrective action at his/her own expense.

2. Product Features

2.1 Product Introduction

This user-friendly device combines cutting-edge sophistication with practical reliability and convenience, high performance with smooth remote communication. Just plug in the network cable ! You'll get live streaming Video & Audio anytime any place ! You'll have security you can rely on ! The especially high resolution has 520 TV lines, a built-in web server and a Network interface to connect you with the Internet securely and fast.

Other special features include the masking of personal private images with flexible mask-area positioning and size, the self-downloading automatic video codec and other components, and the whole unit is very easy to set up. You can access the network to get smooth images through the real-time and synchronized audio / visual stream provided by the device, because it supports two compression modes, the MJPEG and the MPEG4 - you can change from one to the other as you wish. The MPEG4 file format is a very small size file, so it can save more images over a longer time and can be set extremely fast. The device also has a built-in website server providing many Internet functions and protocols, including the MDIX protocol which recognizes both the normal and the crossover cables, either of which can connect up with a IP camera.

We hope this device makes it easier for you to get your IP address information. This unit supports the USB interface which helps you to very easily get an IP address to open the IE browser: Just type in your IP address to the browser and you can access your IP camera.

The device can hopefully provide the advanced motion detection function to improve your network surveillance with both the powerful and enhanced multi-zone and multi-sensitivity modes of detection. We believe this unit is the right answer to all your network surveillance problems. Try it and you'll see.

NOTE: Our camera already has a built-in refocus for its Day and Night function. So users don't need to have an IR lens in this camera, they can just use a normal lens. If an IR lens is used, the focus will become blurred.

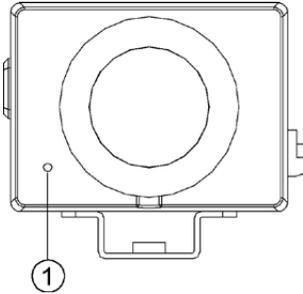
2.2 General Description

- High Resolution Day&Night (Super HAD CCD)
- Horizontal Resolution of 480 TV Lines (colour)
- Removable IR Cut Filter
- MJPEG and MPEG-4 Video Compression
- Simultaneous Video and Audio Signal Transmission
- E-Mail and FTP Transmission of Important Events
- Integrated Activity Detection
- Ethernet Interface: 10/100Base-TX
- Supports Various Network Environments
- Alarm In/Output, Audio Output
- Upgrade via SD Card, USB Interface and Network
- SD Socket for Local Video Storage by SD Cards

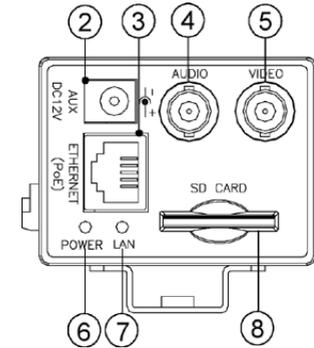
3. Description of the Front/Rear View

3.1 Front Panel and Rear Panel

Front Panel



Rear Panel



1. Microphone

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

2. Plug Inlet

A 12VDC inlet that connects to an external power supply.

3. ETHERNET (PoE)

This is a standard RJ-45 connector for 10/100 Mbps Ethernet networks.

PoE (Power over Ethernet) function: Provides power to the device via the same cable as used for the network connection.

4 AUDIO OUT Connector:

The connector provides the unit's audio signal to a speaker.

5. VIDEO OUT Connector

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

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.

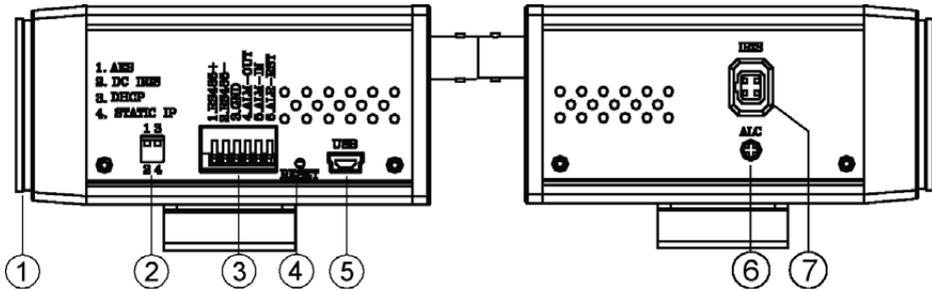
8 SD CARD slot

This is used for system software updating and archiving / accessing critical images.

3.2 Flank Panel

Right Flank Panel

Left Flank Panel



1. **Lens Mount:** This IP camera is used with either C or CS mount lens.
2. **DIP Switch:**

	1. AES: Auto electric shutter
	2. DC IRIS: Use auto iris (DC drive)
	3. DHCP: Turn On / Turn Off use DHCP protocol. If the switch points upwards, the device can change the setup of network function (enable/disable) via the network.
	4. STATIC IP: 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.

3. **ALARM I/O:** This is a 6-PIN connector including the **ALARM IN/OUT**, **ALARM RESET** and **GROUND** items for connecting with external devices.
 - **RS-485 pin:** D+
 - **RS-485 pin:** D-
 - **GND:** Ground Contact
 - **ALARM IN (INPUT):** This is an alarm input which can be programmed in the menu system to Normally Open or Normally Closed. ($\frac{5V}{OV(Active)}$)
 - **ALARM OUT (OUTPUT):** This is an alarm-output trigger. Connect this to external devices such as buzzers or lights. ($\frac{5V}{OV(Active)}$)
 - **ALARM RST (RESET):** This pin connects to an alarm-clear device for clearing an alarm. ($\frac{5V}{OV(Active)}$)
4. **RESET:** Recover to factory default.
5. **5 pin MINI USB Port:** The user can use a USB device cable to connect the IP camera to the USB port on the PC.
6. **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.

7. **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.

3.3 The USB Function

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

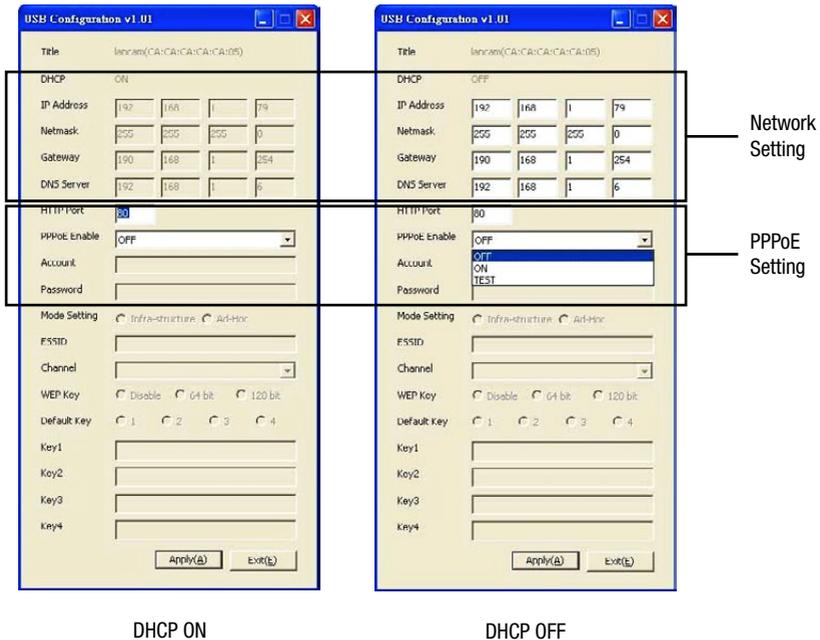
1. **Insert an SD card:** As a card reader

Insert an SD card into the IP camera, then connect to the PC. You might transfer files between the SD card and the PC. Once you've connected your IP camera 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 IP camera with an SD card and the PC via the USB connector, the IP camera 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.



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

3.4 PoE (Power over Ethernet)

These technologies will enable the development of new networked appliances, by providing power as well as data over existing Ethernet cables.

The Summary Comparison of PoE Standards (Table 1) is listed as follows.

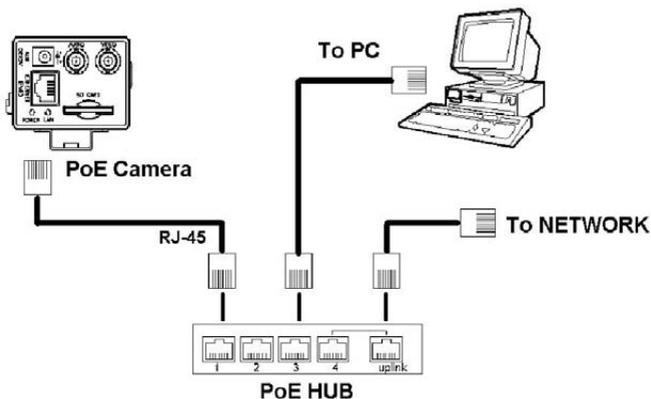
STANDARD	SOURCE									LOAD		REMARKS
	Source Voltage	Ethernet RJ-45 connector pin number *								Load Voltage	DC Load Connector	
		1	2	3	4	5	6	7	8			
IEEE 802.3af using data pairs	48VDC, protected	RX, DC+	RX, DC+	TX, DC-	spare	spare	TX, DC-	spare	spare	(embedded)	Industry Standard for embedded PoE	
IEEE 802.3af using spare pairs	48VDC, protected	RX	RX	TX	DC+	DC+	TX	DC-	DC-	(embedded)	Industry Standard for embedded PoE	

The compatible PoE Hubs (Table 2), which can be used with the unit, are shown in the tables below.

Manufacturer	Model	Port	Note
PLANET	FSP-804P	4 Port	PoE HUB
	POE-151	1 Port	PoE HUB
D-Link	DWL-P200	1 Port	PoE HUB

Connect to a PoE HUB

The Standard RJ-45 PIN configuration for connecting with a PoE HUB is shown below.



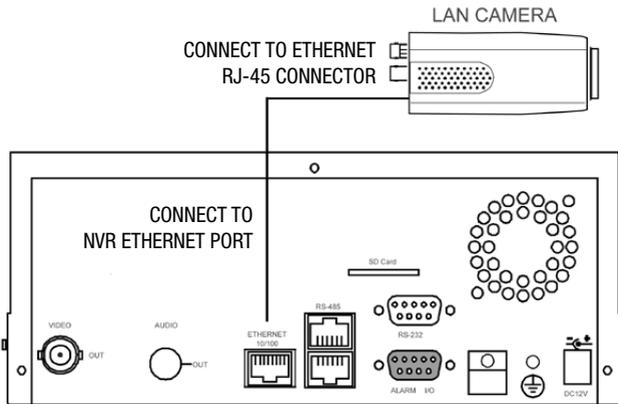
4. Installation

Please follow the instructions and the diagram below to set up the system.

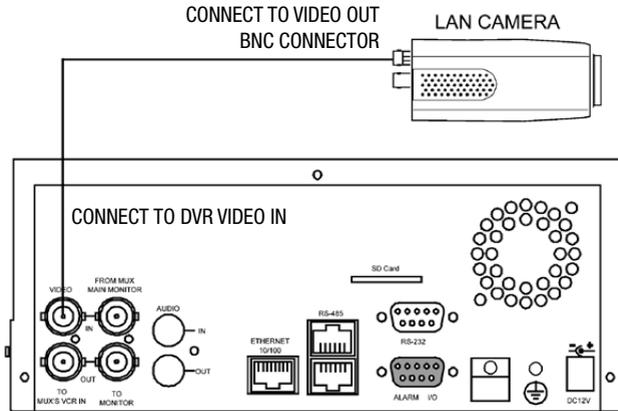
NOTE: The IP camera is linked by its Video Out connection via a BNC connector to a monitor's Video In connection. If this connection is there, you can see some information on the monitor screen, such as the IP camera factory default Static IP address (192.168.1.168). But the IP camera Static IP address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

4.1 Connecting with an NVR

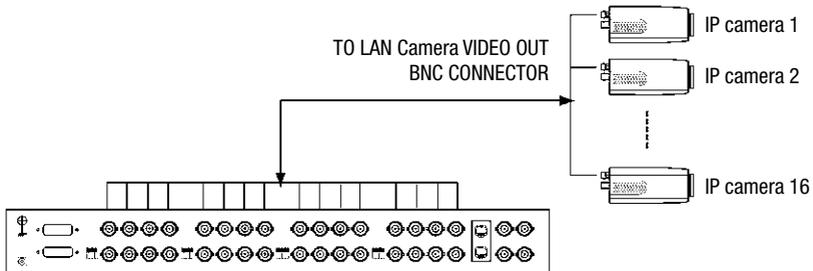
Use a crossover LAN cable to connect directly to an NVR.



4.2 Connecting with a DVR



4.3 Connecting with a Multiplexer



4.4 Updating System Software

If the system software of the IP camera 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 system firmware is intact.

1. Format an SD card using the FAT16 format if it is unformatted; there are no limitations to an SD card's capacity.
2. Create a directory named LANCAM in the SD card if it does not exist.
3. Copy the file of UPDATE.BIN to the LANCAM-directory.
4. If the IP camera is running, please power it off first.
5. Insert the SD CARD into the IP camera.
6. Remove the Ethernet cable from the RJ-45 port and then power on the IP camera.
7. In 5 to 10 seconds, a message reading „UPDATE PROCESSING” will show up on the screen on a blue background; if not, please check out steps 1 to 6 carefully or else inform your technical support while ignoring the following steps.
8. DO NOT power off the IP camera 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.
9. If the message „UPDATE NG RESET PLEASE” appears rather than „UPDATE OK RESET PLEASE”, please write down the error messages shown on the screen and inform your technical support, while ignoring the following steps.
10. Power off the IP camera when this update process is finished, then remove the SD card from the IP camera.
11. Reconnect the Ethernet cable to the RJ-45 port if necessary.
12. Power ON the IP camera and it will work normally if the entire update procedure goes correctly.
13. 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 IP camera will not work normally after being updated.**
4. **If the power of the IP camera is suddenly lost in step 8, please remove the SD card first and turn on the IP camera next to test its operation. If the IP camera remains 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 IP camera does not get online as well, the updating process must be repeated again after rebooting the IP camera.**
6. **Make sure that the SD card is inserted in a correct position in step 5, or the IP camera 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 not including any system software of the unit, or else the unit will crash.**

4.5 IP camera SD Card Troubleshooting

1. Check if the SD card position is correct or not. Please refer to the manual for the related information.
2. After powering the IP camera on, correctly insert the SD card, 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 to see 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 write?

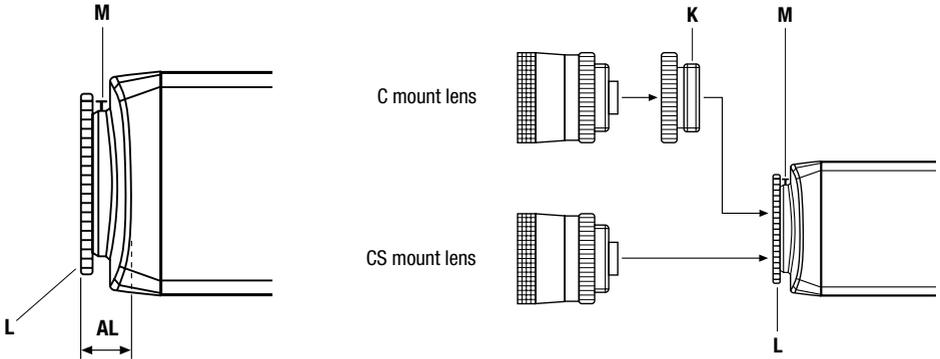
If all the answers are „yes” but the cross sign still persists, please contact your technical support and ignore the following steps.

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 on the web page of „sdget.htm”. If the data cannot be read through the network, please read it instead in a PC, check the data stored in the „LANCAM” directory and 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 IP camera 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. **Turn off the power before inserting the SD card. Otherwise the unit may shut down.**

4.6. Adjustment of Lenses



Adjustment of flange focus for fixed focus lenses	This adjustment (distance between lens casing and sensor surface) is required if a sharp definition cannot be obtained with the lens focussing, or in order to adjust the ∞ position
	To obtain a sharp definition, point the camera at an object which is at least 2000 times further away from the front of the lens than the focal length. (If the focal length is 7.5mm, the object must be at least 15m distant from the camera).
	Open the aperture fully and set the focus to ∞ (infinite). If the lens has automatic exposure control, select a dark object, or better use an ND filter (64-x) to ensure that the aperture is fully open.
	Undo set screw M . Turn the lens with the CS mount connection until the definition is sharp.
	When finished, retighten screw M .
Adjustment of flange focus for variable focus lenses	To obtain a sharp definition, point the camera at an object which is at least 5 times the minimum lens distance (MOD) of the lens. (If this is 1m, the object must be at least 5m distant from the camera).
	Open the iris fully and set the lens to the maximum tele position and focus with the focus ring. If the lens has automatic iris control, select a dark object (or use an ND filter, 64-x) to ensure that the iris is fully open.
	Set the lens to the maximum wide-angle position.
	Undo set screw M and turn the C/CS ring on the camera until an optimal sharpness is reached. Repeat the process for checking purposes, if necessary.
	When finished, retighten screw M .
Note	The value stated in the diagram as AL (depth of thread of the lens with CS mount: <- 5mm) must be observed. The camera may be damaged if this value is exceeded. When installing a lens with CS mount, never use the C-mount adapter ring.
Addition when using cameras for day/night application	Even if the lens is IR corrected (0-focus shift), a minor flange focus is possible between visible light and IR light. If there is a day/night application with IR illumination, the flange focus should be set under IR light conditions. This is because the iris is generally opened when used at night due to the poor level of light and low depth of focus. During the day, the iris is continuously closed further, there is a greater depth of focus and the difference in the flange focus is compensated.

Explanation of terms for iris setting	
AGC (automatic gain control)	This starts cooperate when the light intensity is insufficient to deliver a full video signal (1Vp-p). The greater the gain, the greater the signal noise in the picture. It is generally activated between 0.8 and 1.0Vp-p.
White clip	Signal limitation at high image amplitudes. The white clip value generally lies between 1.1 and 1.2 Vp-p.
AES (automatic shutter control)	<p>This automatically controls the shutter times, it starts when the light intensity becomes stronger and the signal would otherwise be limited/over-regulated by the white clip feature. Automatic shutter control is mainly applied for manual lenses.</p> <p>If a camera is operated with controlled lenses, regardless of whether DC or AI, the AES must be switched off. Problems arise if this is not done because both control systems try to steer the volume of light for the camera. As the AES generally reacts faster, the iris remains fully opened and the shutter resumes the control work, which produces major drawbacks. As the iris is open, the depth of focus is very low. When shutter times are short, this can cause a smear effect (bright, vertical stripes in light parts of the picture).</p>
Iris adjustment	<p>The working point of the iris should always be above the AGC start and below that of the white clip. This range is very small with some cameras, making it difficult to adjust the lens. It is therefore advisable to switch off the AGC (if possible) when adjusting the iris. Once the lens has been focussed, the AGC must be switched back on (only for cameras which allow the AGC to be switched off).</p> <p>In the case of DC lenses, the working point of the iris is adjusted at the camera's level potentiometer (the AI amplifier is built into the camera).</p> <p>In the case of AI lenses, the level potentiometer is located on the lens (the AI amplifier is built into the lens).</p>

5. Network Configuration

5.1 Cable Connections

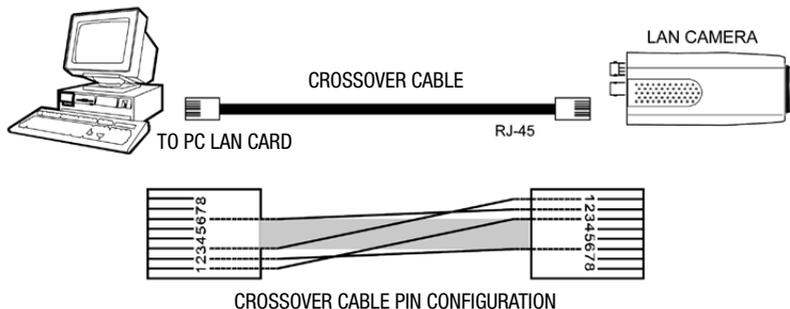
Please follow the instructions below to connect your IP camera to a computer or a network and to choose a proper RJ-45 cable configuration for connections.

Physical specification of RJ-45 cable for Ethernet

Wire Type	Cat. 5
Connector Type	RJ-45
Max. Cable Length	100m
Hub Wiring Configuration	Straight Through
PC Wiring Configuration	Straight

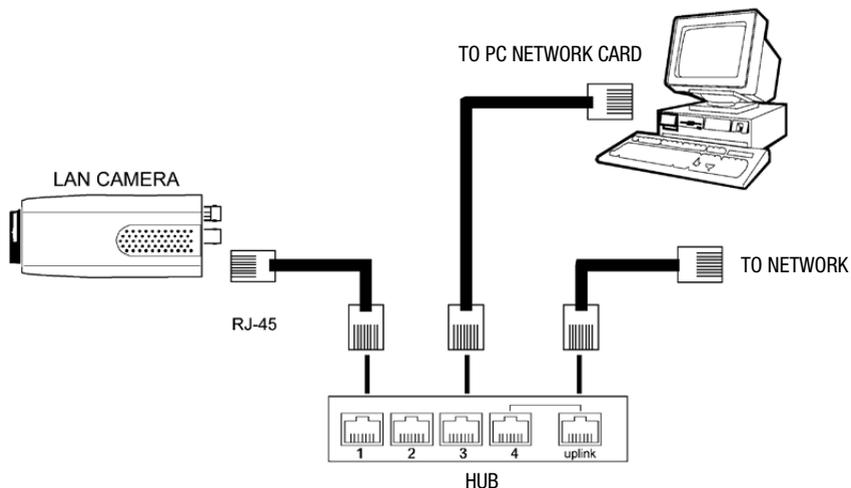
5.1.1 Connect to a Computer

Use a straight LAN cable to connect directly to a computer.



5.1.2 Connect to a LAN Hub (INTRANET)

The RJ-45 PIN configuration for connecting with a LAN Hub is shown below.



5.2 Configure your IP camera Network Settings

Upon connecting with the network hardware, you need to activate the network function and configure the proper network settings of the IP camera.

5.2.1 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, please move the dip switch points up to 3 on the flank panel; now the IP camera will obtain an IP address automatically from the DHCP server. In that case, please skip section 5.2.2 (Set IP address) and follow section 5.3 (TCP/IP Communication Software).

5.2.2 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**, **SUBNET MASK** and **GATEWAY**. The following is a sample setting.

IP: 192.168.1.X
MASK: 255.255.255.0
GATEWAY: 0.0.0.

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

When a IP camera 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.

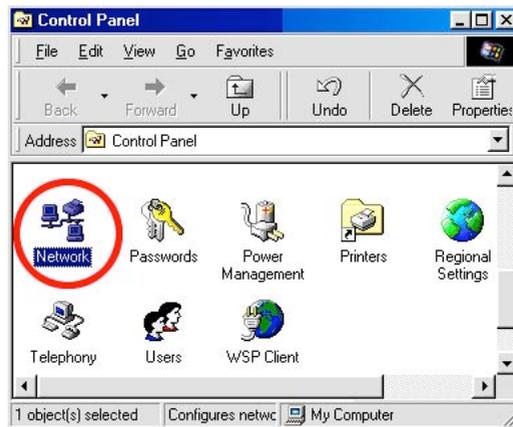
NOTE: When connecting to a network, each connected IP camera must be assigned a unique IP, which must be in the same class type as your network address. IP addresses are written as four sets of numbers separated by periods; for example, 192.168.1.1 Therefore, if the connected network is identified as Class C, for example, the first three sets of numbers of the LANCAMERA 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 IP camera 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.

5.3 TCP/IP Communication Software

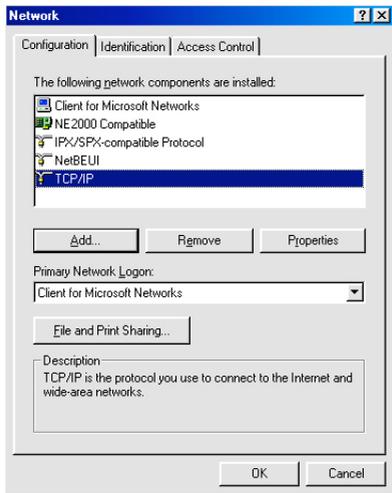
Follow the instructions below to install the TCP/IP communication program into your computer. Click the **Start** menu from your computer, and point to the **Settings/Control panel**.



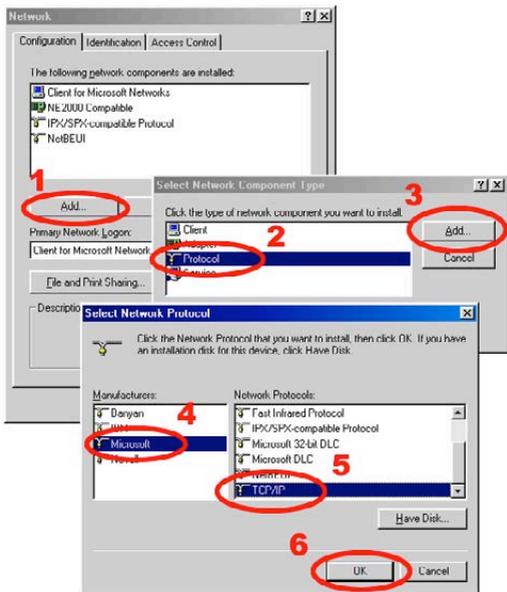
Double click the **Network** icon to enter the windows.



Click 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 5.5. If it is not included, please follow section 5.4 to install the TCP/IP.



5.4 TCP/IP Installation



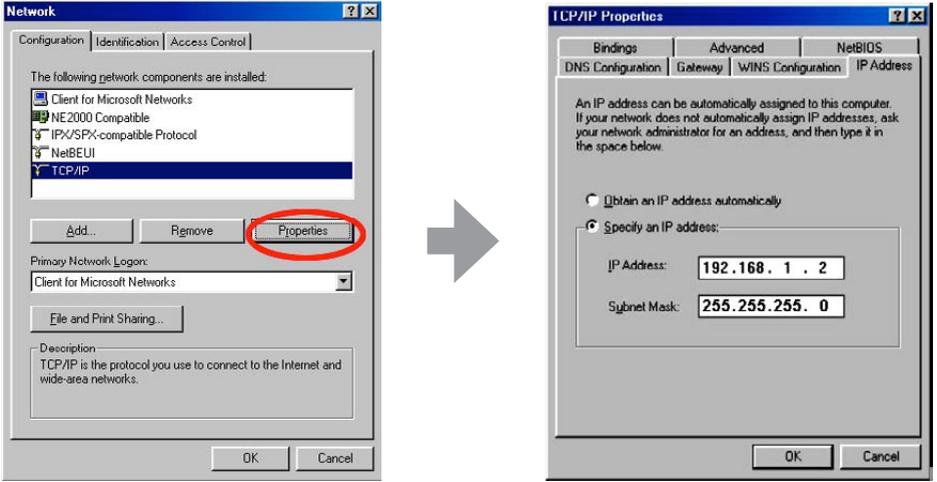
During the installation, you will be requested to insert the Windows CD-ROM. After installation, the PC may be restarted.

5.5 TCP/IP Configuration Setting

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

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

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



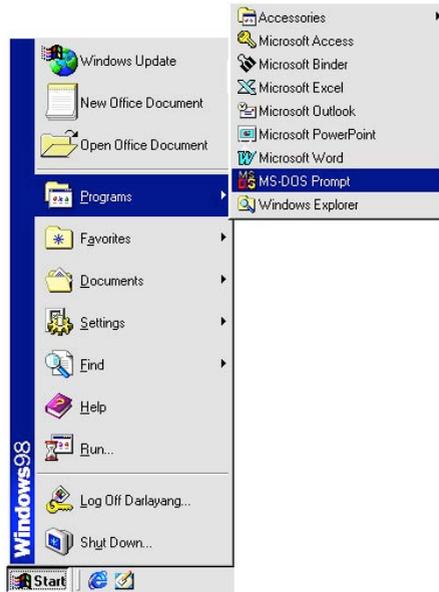
If you are using a DHCP server, please select **Obtain an IP address automatically**. Any assigned IP address for the connected LAN CAMERAs must be in the same class type as the server. If there is no DHCP server, please select **specify an IP address** and type in the IP address of your PC.

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

5.6 Connection Testing

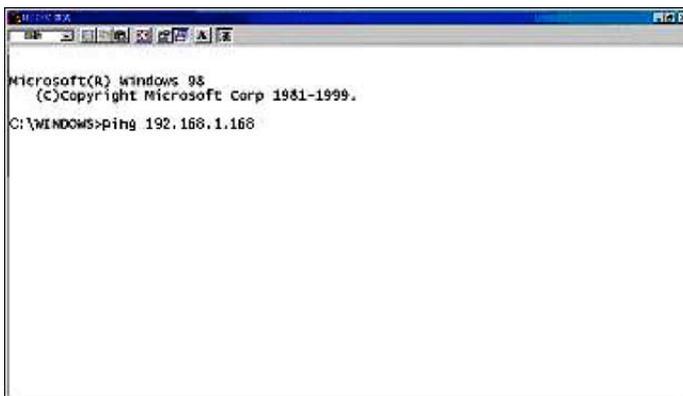
With the previous settings, follow the instructions below to ensure whether you have established the connection successfully.

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



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

- This IP is the IP camera IP address that is assigned for the connected IP camera in step 2.



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 steps 1 to 5. If you still can't establish the connection after re-checking, please contact your dealer.

```
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.
C:\WINDOWS>ping 192.168.1.168 type CAMERA IP address
Pinging 192.168.1.168 with 32 bytes of data:
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable. connection error
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>
```

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 type CAMERA IP address
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 connection is successful
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>
```

6. Operating Instructions for Image Software and Network

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

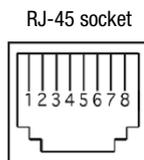
The details are listed as follows.

System Requirements

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

RJ-45 PIN configuration for Ethernet

PIN NO.	PIN Assignment
1.	TX +
2.	TX -
3.	RX +
4.	Not Connected
5.	Not Connected
6.	RX -
7.	Not Connected
8.	Not Connected



Physical specification for Ethernet

Wire Type	Cat. 5
Connector Type	RJ-45
Max. Cable Length	100m
Hub Wiring Configuration	Straight Through or Cross Over
PC Wiring Configuration	Straight Through or Cross Over

6.1 Microsoft Internet Explorer

6.1.1 Connecting the IP camera

1. Start up the Microsoft Internet Explorer, and then follow the steps below to connect the IP camera.
2. Click the URL block at the top of the window.
3. Enter the URL address of the IP camera 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, the 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 admin and 9999 respectively.

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

NOTE: Once completed and passed, 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.



Connect to 192.168.0.92

NETWORK

User name:

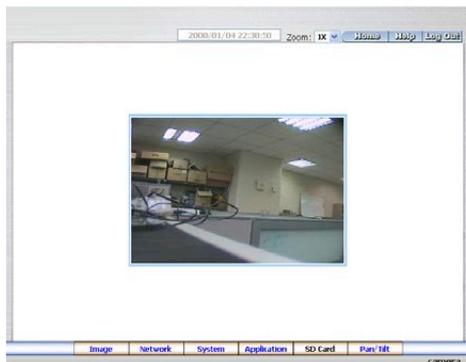
Password:

Remember my password

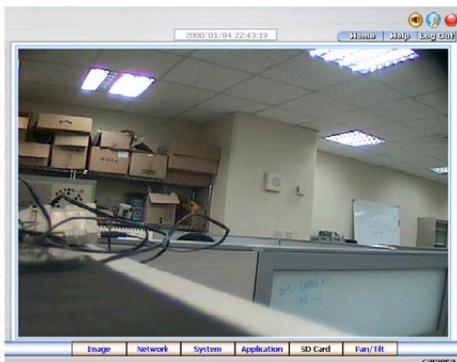
OK Cancel

Browsing images from the IP camera

The images from the IP camera will be displayed on the home page while going online with the IP camera. Some buttons provided at the bottom of the home page 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:\.

- **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.

6.1.2 Change Image Setting

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

1. Click the **image** button on the home page to enter the image-setting page.

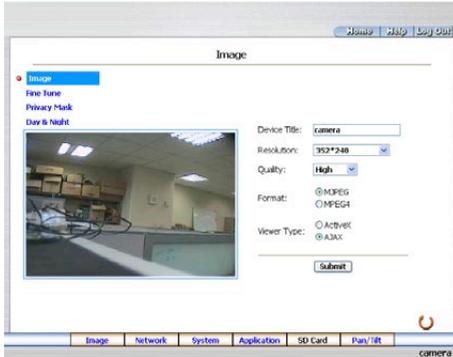


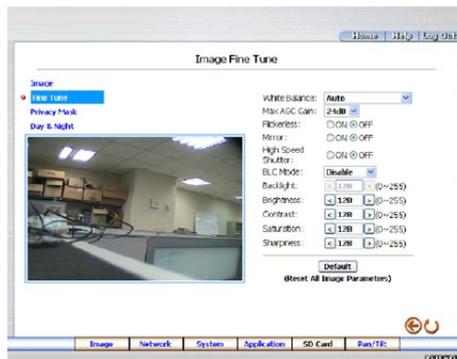
Image setting page of MJPEG mode



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.

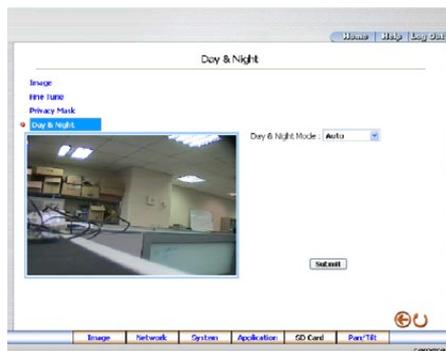
NOTE: The revised image will appear immediately after any change in made.



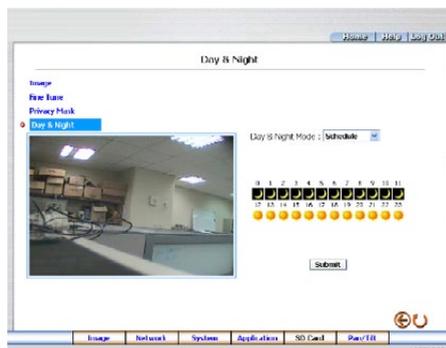
5. Click the **Privacy Mask** button to enter the Privacy Mask page.



6. Click the **Day & Night** button to enter the Privacy Mask page. Click the drop-down list to choose the Day & Night mode of „Auto”, „Day mode”, „Night mode” and „Schedule”.



NOTE: In the „Schedule” mode, you can click the icon to set the Day ☀️ or Night 🌙 mode of each hour. „0” means „00:00~00:59”, „1” means „01:00~01:59”, and so on.



7. 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 IP camera will restart automatically after several seconds.

Description of function keys

MPEG4 mode

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 „25FPS”.

Format: Click to choose the „MJPEG” or the „MPEG4” mode.

Fine Tune mode

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).

MJPEG mode

Viewer type: Click to choose the viewer type of the „ActiveX” or „JAVA Applet” mode.

Submit: Click to submit the new image setting to the IP camera.

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

6.1.3 Change the Network Setting

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

• Set the network options and IP address

1. Click the **network** button in the home page to enter the network-setting page.

The screenshot shows a web-based network configuration interface. On the left is a vertical menu with 'Network' selected. The main area contains a form with the following fields and values: IP Address: 192.168.0.163; Netmask: 255.255.252.0; Default Gateway: 192.168.1.1; Primary Nameserver: 192.168.1.11; HTTP Port: 80. A 'Submit' button is located below the form. The page has a top navigation bar with 'Home', 'Help', and 'Log Out' links, and a bottom navigation bar with 'Image', 'Network', 'System', 'Application', 'SD Card', and 'Pan/Tilt' links. A 'ipcam' logo is in the bottom right corner.

2. The accessible networks here are the „FTP”, „SMTP”, „SNTP”, „DDNS”, „PPPoE”, „UPnP”, „IP Filter” 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 4Byte IP Address in the appropriate blank space (the value in each box may be anywhere between 0 and 255). Every IP camera has to own an IP address to be identified on the network.

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

Default gateway: Type in the 4Byte Gateway in the relevant blank spaces (each unit value must be between 0 and 255).

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

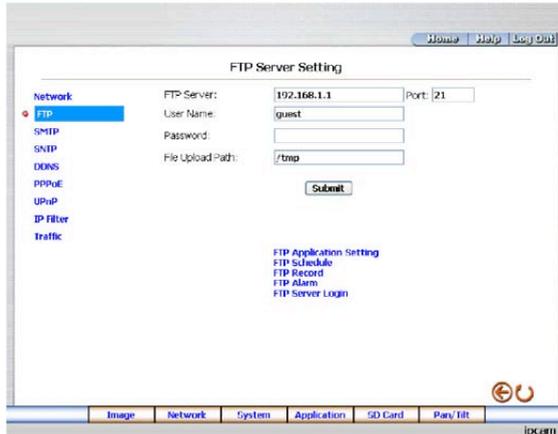
HTTP Port Number: Indicates the specific HTTP Port Number. The default is 80.

Submit: Click to submit the new network setting to the IP camera.

- **Change the Network Setting - FTP (MJPEG mode only)**

Please follow the steps below to change the FTP setting via the network if necessary to upload recording data live.

1. Click the **FTP** button at top left to enter the „FTP Server Setting” page.



2. Type in the „FTP Server” address, the „User Name”, and the „Password” of the FTP Server; and set the „File Upload Path” of the image files when necessary.
3. Click the **Submit** button to submit the new FTP setting of the recording.
4. Click the **Home** button to return to the home page.

Description of function keys

FTP IP Address: Enter the FTP server DOMAIN NAME or IP address in the appropriate blank spaces.

User Name: Fill in the FTP user name in the attached blank space (if the data is not provided, warning messages will show up).

Password: Type in the FTP password in the attached blank space (if the space is blank, warning messages will show up).

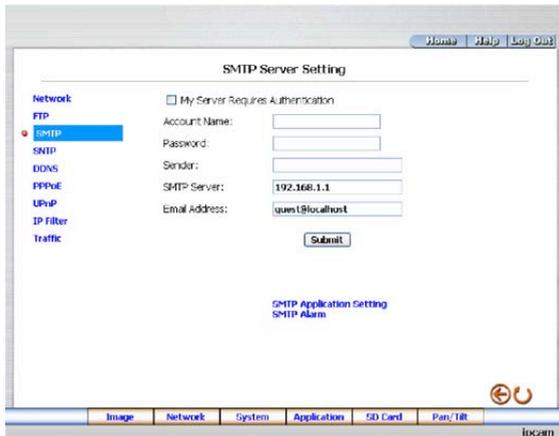
File Upload Path: Enter the upload path while doing the FTP.

Submit: Click to submit the new FTP setting to the network camera.

- **Change the Network Setting - SMTP (MJPEG mode only)**

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

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



2. Click "My Server Requires Authentication" to checkmark the attached box and activate the function.
3. Fill in the Sender name, DOMAIN NAME of the SMTP server, and set the recipient's e-mail address if necessary.
4. Click the **Submit** button to submit the new SMTP setting.
5. Click the **Home** button to return to the home page.

Description of function keys

Account Name & Password: Fill in the account name and password if you check marked the „My Server Requires Authentication” function

SMTP Server: Enter the SMTP server DOMAIN NAME or IP address in the given blank space.

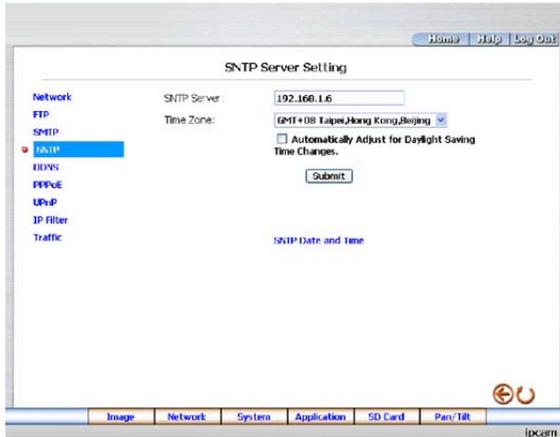
Email Address: The recipient's e-mail address

Submit: Click to submit the new SMTP setting to the network camera.

- **Change the Network Setting - SNTP**

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

1. Click the **SNTP** button at upper left above to enter the „SNTP SERVER SETTING” page.



2. Enter the IP Address of the SNTP server, and choose one of the time zones as and when necessary.
3. Click „Automatically Adjust for Daylight Saving Time Changes” to checkmark the attached box and activate the function.
4. Click the **Submit** button to submit the new SMTP setting.
5. 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 IP camera.

• 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 and as necessary.

1. Click the **DDNS** button at upper left above to enter the „DDNS SETTING“ page.

The screenshot shows a web browser window with the title "DDNS Setting". At the top right, there are links for "Home", "Help", and "Log Out". On the left side, there is a navigation menu with "Network" selected. The main content area contains the following fields and controls:

- Enable DDNS Function:
- DDNS Type: DynDNS (with a dropdown arrow) and an Apply button.
- DDNS Host Name: [Text input field]
- DDNS Account: [Text input field]
- DDNS Password: [Text input field]
- Submit button.

At the bottom of the page, there is a navigation bar with tabs for "Image", "Network", "System", "Application", "SD Card", and "Perf. Tst.". The "ipcam" logo is visible in the bottom right corner.

2. Click the „Enable DDNS Function“ to checkmark the attached box and activate the function.
3. Click „DDNS Type“ to open the list of two DDNS modes to choose from: „DynDNS“ and „hn“.
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: Checkmark to activate the function

DDNS Type: Click to open the list of two DDNS modes to choose from: „DynDNS“ and „hn“.

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.

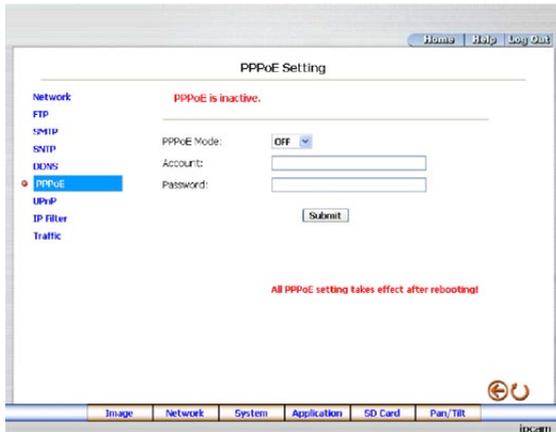
DDNS Password: Enter it in the required space).

Submit: Click to set.

- **Change the Network Setting - 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.



2. Please read the „PPPoE Troubleshooting” document first, then press „Close” button.
3. Click the „PPPoE mode” to activate the function.
4. Type in the PPPoE „Account” and the PPPoE „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

PPPoE mode: Click your choices to enable the PPPoE function

Account: Enter it in the given space.

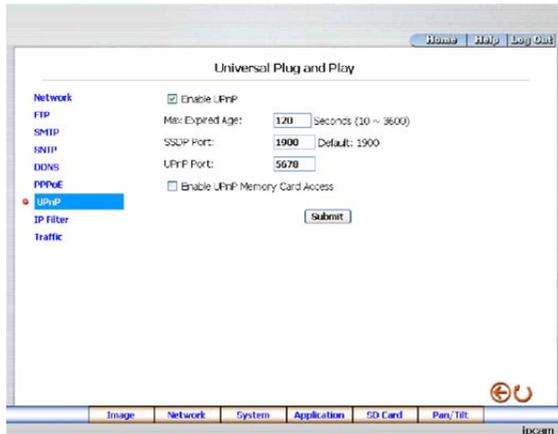
Password: Enter it in the required space.

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.



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.

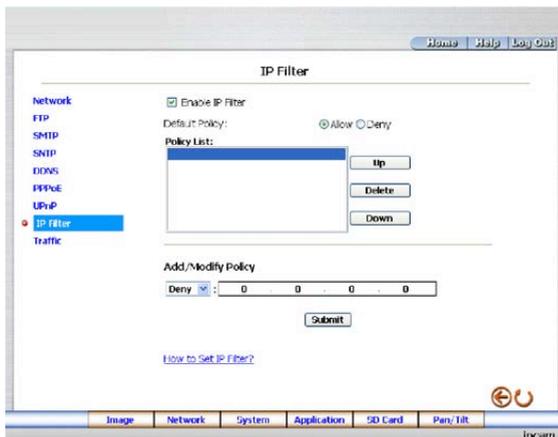
UPnP Port: Type in the UPnP Port in the attached space.

Submit: Click to set.

- **Change the Network Setting - IP Filter**

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

1. Click the **IP Filter** button at upper left above to enter the „Network Setting” page.



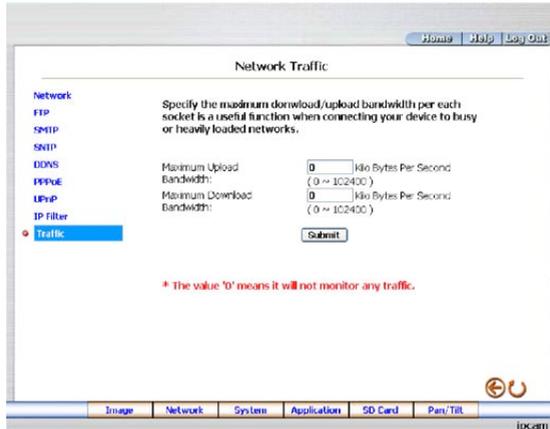
2. Click „Enable IP Filter” to checkmark the attached box and activate the function.
3. Select the Default policy.
4. Set the Allow/Deny IP Filter policy and enter its IP address.
5. After setting the policies, they will be shown on the **Policy List**. The user can use the „Up” or „Down” to select a policy and use the „Delete” button to erase it.
6. Click the **Submit** button to submit the new setting.
7. Click the **Home** button to return to the home page.

NOTE: The settings of the IP Filter must be correct or you may not able to operate the device regularly. In case of the wrong setting of the IP Filter and you can't access the device normally, please press the „Default” button on the rear panel of the camera for back to the factory default setting.

- **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.



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.

6.1.4 Change the System Setting

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



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 setting.
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 Network camera.

Set Manually: Manually sets the date and time of the network camera.

Synchronize With Computer Time: Synchronizes with the linking computer.

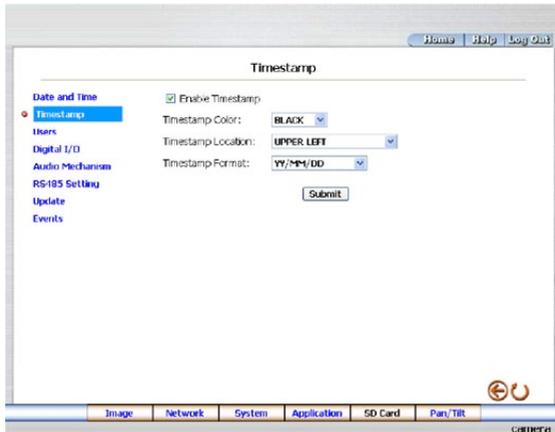
Synchronize With SNTP Server: Synchronizes with the SNTP server. In this mode, two choices of adjusting are provided: doing it manually or setting the frequency to enable the system to do it automatically.

Submit: Click to submit the new setting to the network camera.

• Change the System Setting - Timestamp

Please follow the steps below to change/add the timestamp through the network if necessary.

1. Click the **Timestamp** button on the left side of the „System - Date and Time” page to enter the „System-Timestamp” page.



2. Click „**Enable Timestamp**” to checkmark the attached box and activate the function
3. Add or modify any timestamp's data if necessary.
4. Enter the „Timestamp Color” you have chosen.
5. Enter the „Timestamp Location” you have chosen.
6. Enter the „Timestamp Format” you have chosen.
7. Click the **Submit** button to submit the new user's setting.
8. Click the **Home** button to return to the home page.

Description of function keys

Enable Timestamp: Checkmark to activate the function.

Timestamp Color: Click to open the list of eight color modes to choose from: „BLACK”, „WHITE”, „RED”, „ORANGE”, „YELLOW”, „GREEN”, „BLUE”, and „PURPLE”.

Timestamp Location: Click to open the list of four location modes to choose from: „UPPER LEFT”, „UPPER RIGHT”, „BOTTOM LEFT”, and „BOTTOM RIGHT”.

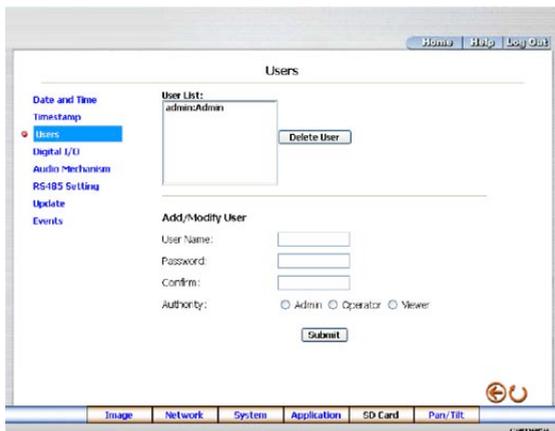
Timestamp Format: Click to open the list of six format modes to choose from: „YY/MM/DD”, „MM/DD/YY”, „DD/MM/YY”, „YY/MM/DD TITLE”, „MM/DD/YY TITLE”, and „DD/MM/YY TITLE”.

Submit: Click to set.

- **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 „System - Date and Time” page to enter the „System - Users” page.



2. Add, modify or delete any user's data if and as necessary.
3. Click the **Submit** button to submit the new user's setting.
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 the user selected.

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.

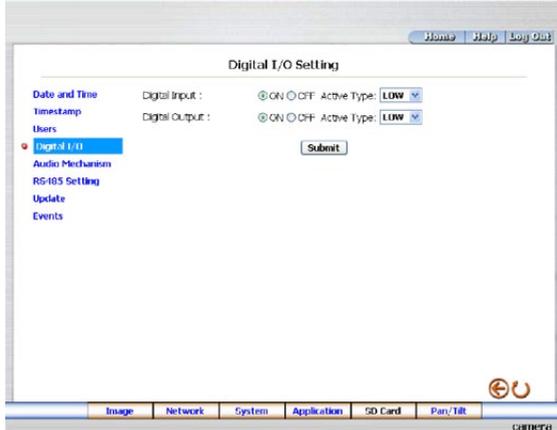
Authority: Choose an authority option of the user's name from: Admin, Operator, and Viewer.

Submit: Click to submit the new setting to the network camera.

• 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 „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 setting.

4. Click the **Home** button to return to the home page.

Description of function keys

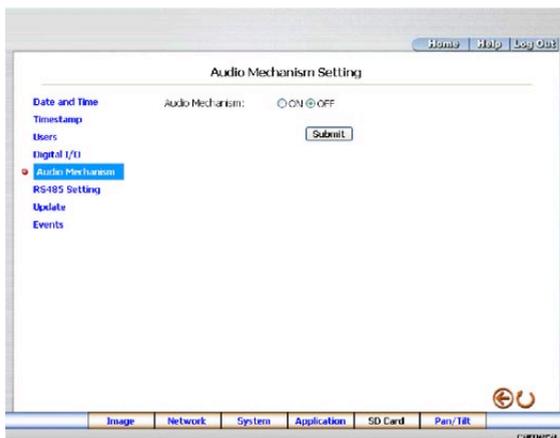
Digital Input: Select „ON” or „OFF” to use the GPIO connector, or shut it down.

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

- **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.



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

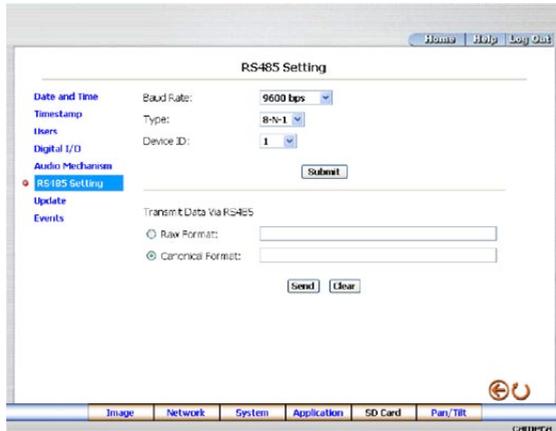
NOTE: This setting is for turning the audio mechanism of the Camera on/off automatically. The Live audio service is not provided in the MPEG4 mode via the Web browser.

Description of function keys

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

- **Change the System Setting - 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**).

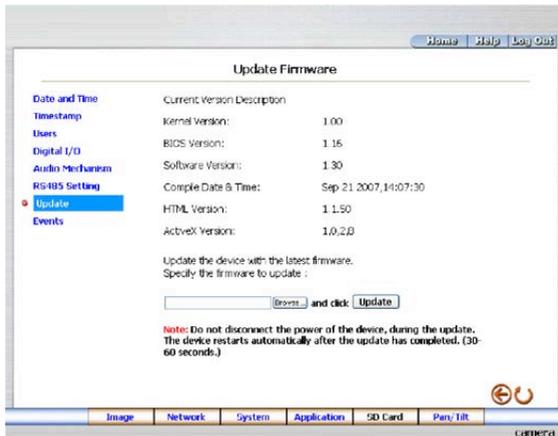
Raw format: Set to transmit the ASCII codes.

Canonical format: Set to transmit the character string.

- **Change the System Setting - Update Firmware**

Please follow the steps below to update the firmware 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.



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 Network camera 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.

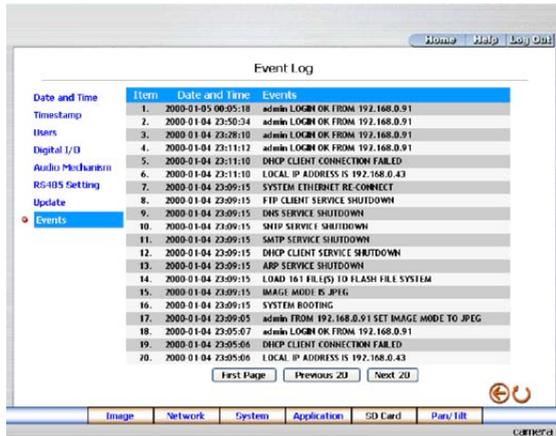
NOTE: The Temporary Internet Files (or cache) folder contains Web page content that is stored on your hard disk for quick viewing. We suggest deleting the Temporary Internet Files immediately after updating the firmware. To delete the files in the Temporary Internet Files folder, follow these steps:

5. Quit Internet Explorer and quit any instances of Windows Explorer.
6. Click **Start**, click **Control Panel**, and then double-click **Internet Options**.
7. On the **General** tab, click **Delete Files** under **Temporary Internet Files**.
8. In the **Delete Files** dialog box, click to select the **Delete all offline content** check box, and then click **OK**.
9. Click **OK**.

- **View the Event Logs**

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

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



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

6.1.5 Change the Application Setting

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

- **Change the Application Setting - FTP Application Setting (MJPEG mode only)**

Please follow the steps below to change the FTP setting via the network if and as necessary to upload recording data live.

1. Click the **Application** button on the home page to enter the „FTP Application Setting” page (default).



The screenshot shows a web browser window displaying the "FTP Application Setting" page. The page has a navigation bar at the top with "Home", "Help", and "Log Out" buttons. On the left side, there is a menu with categories: "Setting" (containing FTP, SD Card, SMTP, Language), "Record" (containing Enable Record, Schedule), and "Alarm" (containing Enable Alarm, Motion Detection). The "FTP" option is selected. The main content area is titled "FTP Application Setting" and contains the following fields: "FTP Server:" (192.168.1.1 Port:21), "User Name:" (guest), and "File Upload Path:" (/tmp). Below these is a "Storage Setting" section with "Pre-Alarm Memory Buffer:" (0 Images), "Alarm Memory Buffer:" (0 Images), and "Upload Rate:" (29/15). A "Submit" button is located at the bottom of the form. At the bottom of the browser window, there is a navigation bar with buttons for "Image", "Network", "System", "Application", "SD Card", and "Param", along with a refresh icon and the "ipcam" logo.

2. For storage setting, type in the required number of images you wish to set in the „Pre- Alarm Memory Buffer” and the „Alarm Memory Buffer” respectively in their corresponding blank spaces.
3. Enter the „Upload Rate” you have chosen.
4. Click **Submit** after each of the above entries for their setting.
5. Click the **Home** button to return to the home page.

Description of function keys

Pre - Alarm Memory Buffer: Fixes the desired number of images to prelude an alarm.

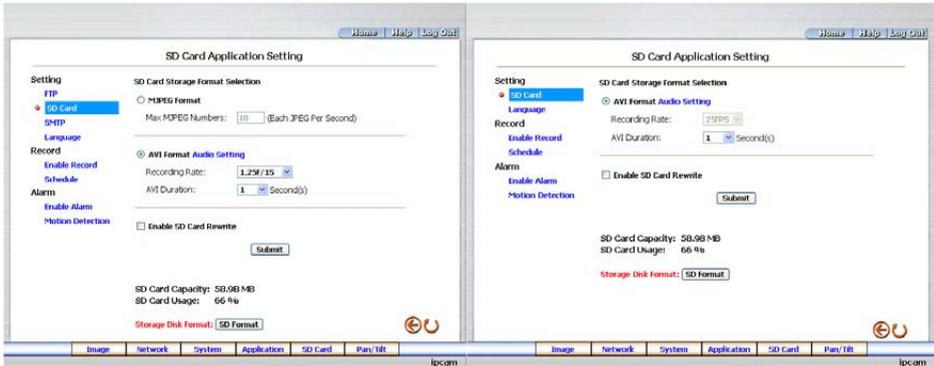
Alarm Memory Buffer: Determines the selected length of the image buffer after an alarm.

Upload Rates: Sets the upload speed rate.

• 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.

1. Click the **SD card** button on the top left to enter the „SD-Card Application Setting” page.



SD Card setting page of MJPEG mode

SD Card setting page of MPEG4 mode

2. 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.
3. If it's MJPEG you want, fill in the „Max MJPEG Numbers” entry.
4. 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 - SMTP Application Setting (MJPEG mode only)**

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

1. Click the **SMTP** button on the left side to enter the „SMTP Application Setting” page.



2. Enter the attached file number as and when necessary. The maximum number which can be used is 8.
3. Click the **Submit** button to submit the new SMTP setting of the recording.
4. Click the **Home** button to return to the home page.

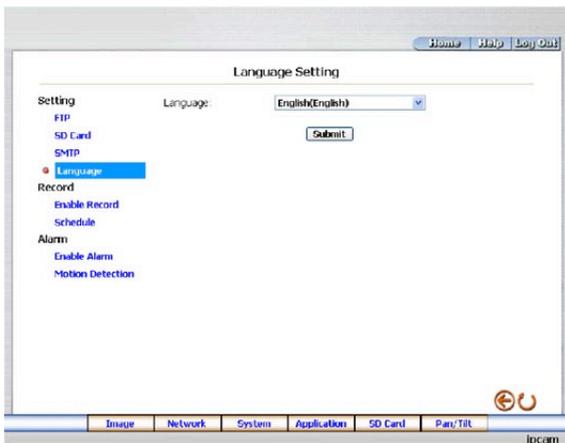
Description of function keys

File numbers: Sets the quantity of images per Email.

- **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.



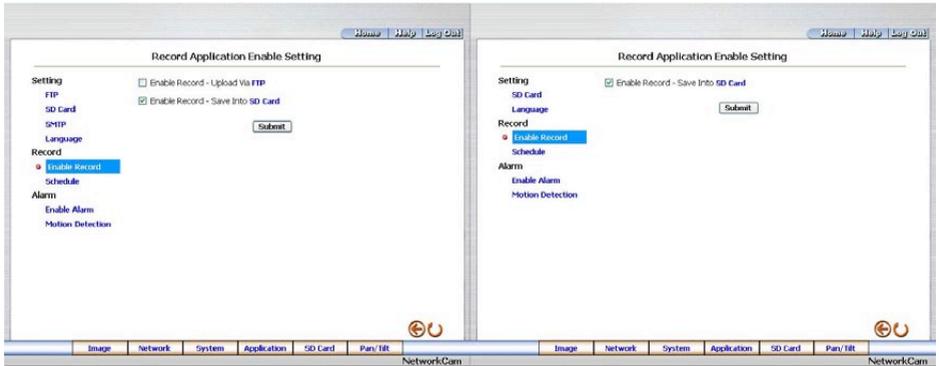
2. You have an option as to which language to use. The default is „English”

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.



Record setting page of MJPEG mode

Record setting page of MPEG4 mode

2. Click „Enable Record - UPLOAD Via FTP” to checkmark the attached box and activate the function (MJPEG mode only).
3. Click „Enable Record - Save Into SD card” to checkmark the attached box and activate the function.
4. Click the **Submit** button to submit the new setting of the recording.
5. Click the **Home** button to return to the home page.

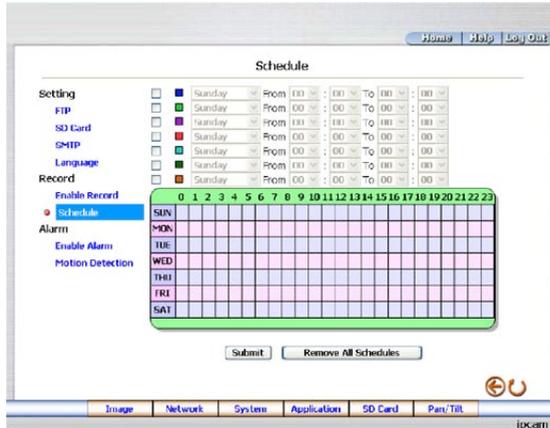
Description of function keys

Enable Record - Upload Via FTP: Activates or deactivates the recording to the FTP server.

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.



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 Schedules** 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

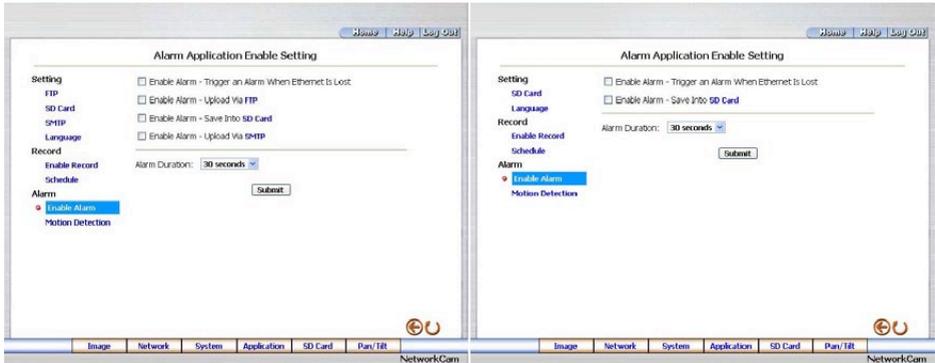
Submit: Click to submit the new setting to the IP camera.

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.



MJPEG mode

MPEG4 mode

2. Click „Enable Alarm – Trigger an Alarm When Ethernet Is Lost” to checkmark the attached box and activate the function.
3. Click „Enable ALARM - UPLOAD via FTP” to checkmark the attached box and activate the function (MJPEG mode only).
4. Click „Enable ALARM - SAVE Into SD Card” to checkmark the attached box and activate the function.
5. Click „Enable ALARM - UPLOAD Via SMTP” to checkmark the attached box and activate the function (MJPEG mode only).
6. Enter the „Alarm Duration” you have chosen.
7. Click the **Submit** button to submit the new setting of the recording.
8. Click the **Home** button to return to the home page.

Description of function keys

Enable ALARM - Trigger an Alarm When Ethernet Is Lost: Activates or deactivates the alarm triggering while the Ethernet lost.

Enable Alarm - Upload via FTP: Activates or deactivates the alarm recording upload to the FTP.

Enable Alarm - Save Into SD Card: Activates or deactivates the alarm recording to be saved to the CF Card.

Enable Alarm - Upload via SMTP: Activates or deactivates the alarm recording upload to the SMTP.

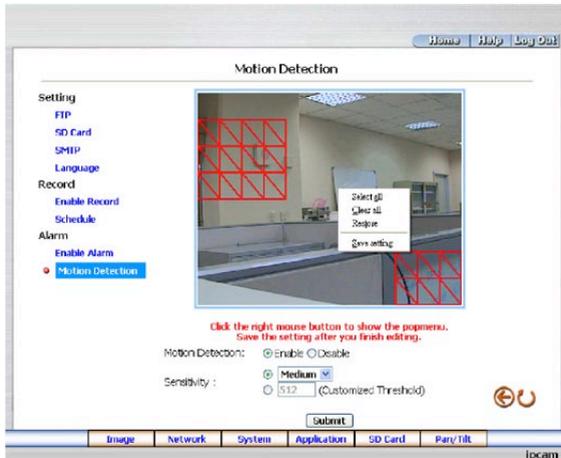
Alarm Duration: Predetermines the length of the alarm.

• 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.
5. Set up the signal level.
6. Click the **Submit** button to submit the new setting of the recording.
7. 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 or just type in the value of Customized Threshold.

6.1.6 Change the SD Card Setting

Please follow the steps below to change the SD Card setting through the network if and as 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 chapter „SD card Application Setting” page).

FILELIST of MEMORY CARD				
Filename	Date	Time	Size	
 31VRE2E.AVI	2004/02/13	15:50:38	96K	DELETE
 31VRE3P.AVI	2004/02/13	15:51:20	96K	DELETE
 31VRE5H.AVI	2004/02/13	15:52:16	96K	DELETE
 31VRE9G.AVI	2004/02/13	15:54:24	96K	DELETE
 31VREAM.AVI	2004/02/13	15:55:02	96K	DELETE
 31VREFA.AVI	2004/02/13	15:57:28	96K	DELETE
 31VREHG.AVI	2004/02/13	15:58:30	96K	DELETE
 31VREO7.AVI	2004/02/13	16:03:18	96K	DELETE
 31VRE7S.AVI	2004/02/13	16:10:36	93K	DELETE
0 file(s) and 895 KBytes free				
HTTP SERVER AT cam1				

FILELIST of MEMORY CARD				
Filename	Date	Time	Size	
 31VREAOZ.TAG	2004/02/13	16:12:00	266	DELETE
 31VREGRZ.TAG	2004/02/13	16:15:22	266	DELETE
2 file(s) and 339 KBytes free				
HTTP SERVER AT cam1				

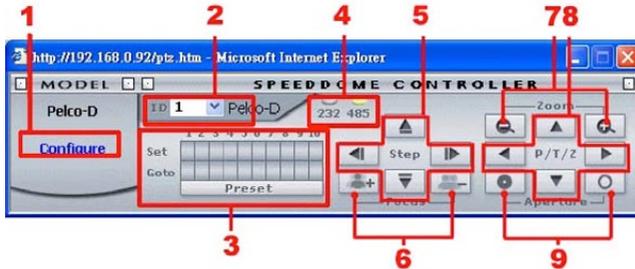
2. Click the desired file to display the images therein.
3. Every file can be deleted by clicking the attached „DELETE” hyperlink.

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.

6.1.7 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 RS485 setting page (please refer to 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.
5. Upon the buttons being clicked, a camera will move a 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.

6.1.8 PPPoE & DDNS

Using the PPPoE

1. Install the XDSL software (obtained from your ISP dealer) in your PC.
2. Search your IP camera's IP address: you can use your Network Viewer's Scan IP program, or just connect the LAN CAM and the Video monitor. The monitor screen will show the IP address on its right side.
3. Change the switch on the LAN CAM'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 IP camera IP address in the URL (check step 2 above) → Enter → LAN CAM images will appear.

PPPoE Settings

1. Enter the IP camera home page → Choose the network → Type in „User Name: admin” and „Password: 9999” → Click „OK”.
2. Choose PPPoE → PPPoE mode: Select „ON” → Type in „Account” → Type in „Password” → Submit → Unplug the power connection.
3. Plug in the IP camera 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 IP camera IP address (the same address as in the PPPoE settings and step 3 above) → You can see the LAN CAM images.

DDNS settings

1. Check your IP camera's IP address (Scan IP software or monitor) → open your IE browser → Use the address to connect to the LAN CAM or view the images → Choose the network → Type in „User name : admin” and „Password : 9999” → 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 IP camera 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.

6.2 The IP camera eneo GL-Manager

This section provides instructions for installing and using the eneo GL-Manager and Image Viewer, which are included with the network camera. The programs can be operated by a selected PC equipped with the following requirements.

System Requirements

- Intel Pentium 1.5GHz processor or above (2.8GHz or higher recommended).
- 128MB RAM at least (256MB or higher recommended).
- Windows 2000, XP or above.
- 4MB VGA card capable of 24Bit true color display.
- 100MB 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).

6.2.1 Introduction to eneo GL-Manager

The eneo GL-Manager allows you to access many units of the network camera from a remote desktop or a laptop in a TCP/IP networking environment. It can perform the following functions.

- View live images from the network camera.
- Store, search, and review recorded video from an FTP server, PC, and SD card.
- Change a regular record, event record, and timer properties.

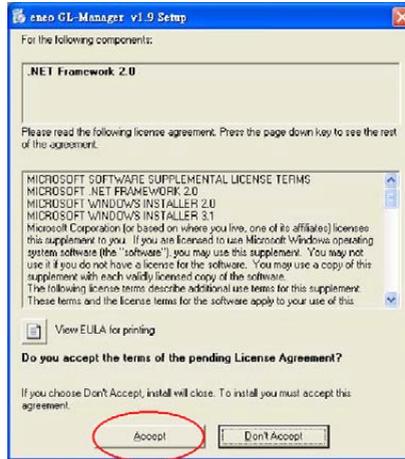
Before you are ready to view images from a desktop, you need to have your network camera networked by obtaining a 10/100 base-TX Ethernet data cable (Standard RJ-45) to connect the network camera to your LAN/WAN. Now enter the main menu to set the IP address.

6.2.2 Install the eneo GL-Manager in your PC

Install the eneo GL-Manager 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 / eneo GL-Manager / eneo GL-Manager** to open up the program selection page as shown below. Click the **eneo GL-Manager** tag to start the **eneo GL-Manager** program.

Install the eneo GL-Manager 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 / eneo GL-Manager** to start the **eneo GL-Manager** 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 5.5 (TCP/IP configuration setting).

6.2.3 IP camera software

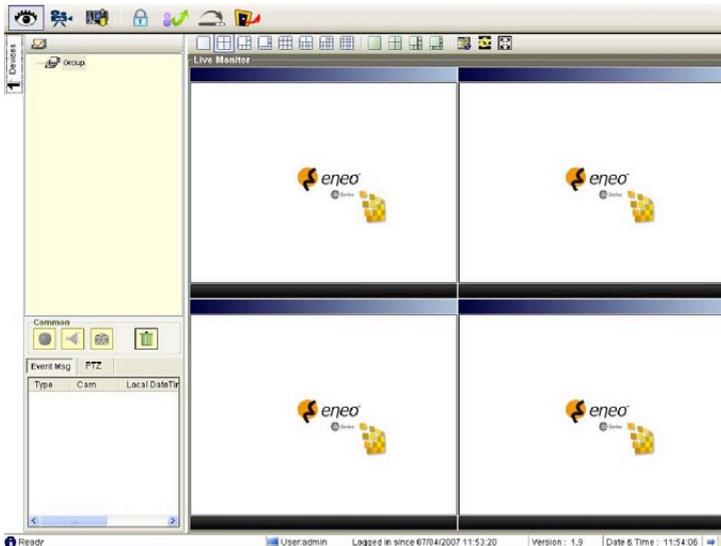
Login the IP camera software

Once the eneo GL-Manager is executed, a Login prompter will appear. You must enter the default User Name: **admin**, and the password: **9999** in the respective spaces. Click the „**OK**” button and enter the console page of the eneo GL-Manager: both the user name and password must be entered correctly. Click the „**Cancel**” button and exit the login of the Network Viewer.



View the Network camera video from a remote PC

Follow the instructions below to use the eneo GL-Manager to browse a network camera video from a remote location. Upon entering the eneo GL-Manager, 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 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 Network Camera Wizard” page to discover the connection of the network camera - type device in the LAN. Instantly the „Search Network Camera „ page will appear.
Click the device of your choice and click „**Select**” at the bottom of the page to access the „Connect Network Camera 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 Network Camera 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 Device Title and selecting the Connect Mode, please click the „Next” button to access the next „Connect Network Camera Wizard” page.



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

7. After finishing the setting of the Device Recording, please click the „Finish” button to establish the connection between the device and the computer.



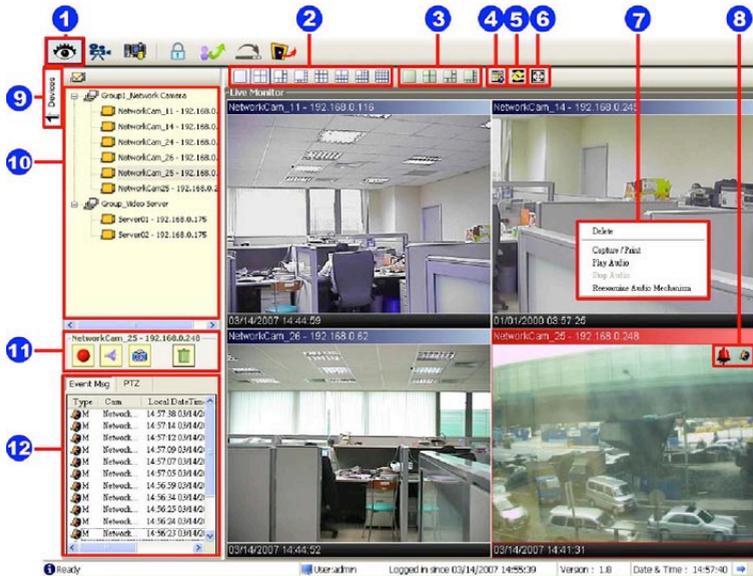
8. Click the device title to begin viewing images with this camera from the Device List.

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

6.2.4 Operation

6.2.4.1 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 6.2.4.3).

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



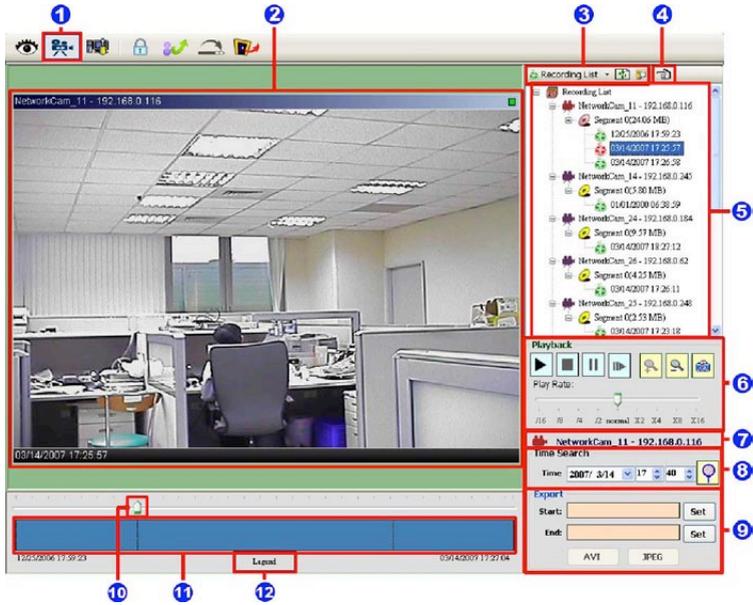
Delete: Drop the view here to delete it.

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

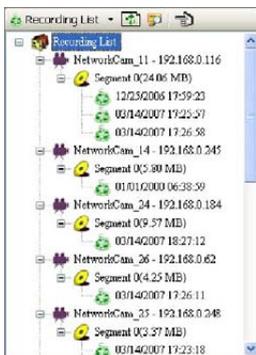
- (1) Select the video of the camera which you want to delete.
- (2) Press and hold the left mouse button. Then drag it to the trash can  and release the mouse button.
12. **Alarm list / PTZ Control:** Shows the alarm types, the device names and the occurrence time. You can press the **PTZ** button to change to the PTZ Control mode.

6.2.4.2 Playback Viewer

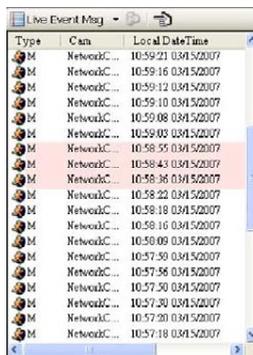
Press the  button to enter the Playback Viewer setting page.



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



Recording List

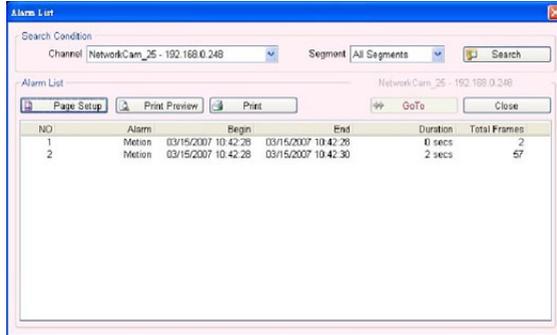


Live Event Message

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

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.

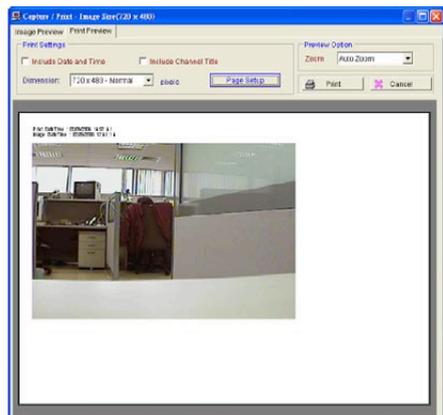
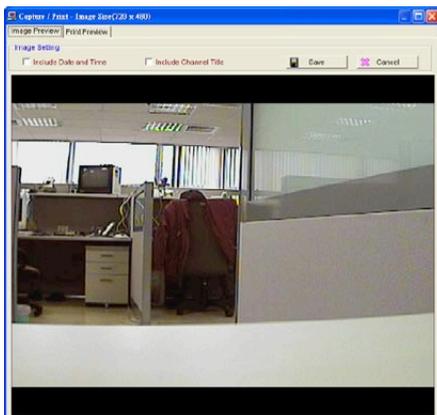


4. Move to left/right area.

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 displaying image
-  Zoom out - Narrows the displaying 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.



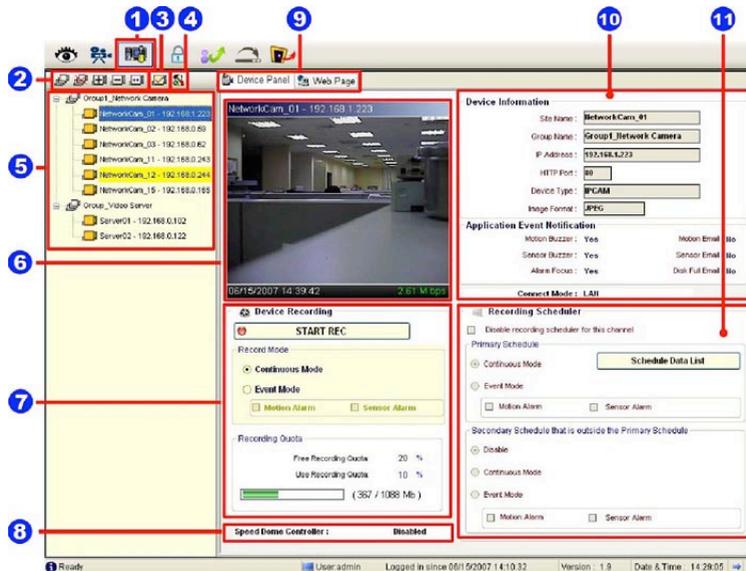
WARNING: The audio and video signals would likely be unable to play back simultaneously because of incomplete files caused by unstable network transmission or altered setup while doing the AVI backup with the „Include Audio” function.

- 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.



6.2.4.3 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 more details please refer to section 6.2.3.



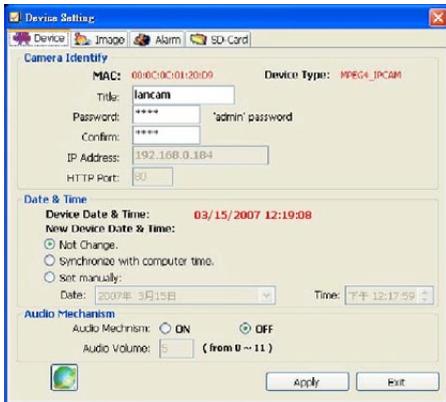
Remove a camera. Click this button and select the group name and Lan camera, then „OK” to delete the device.



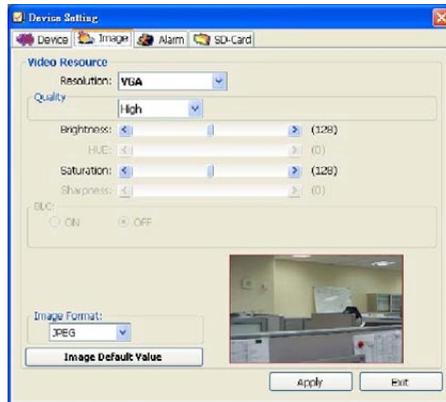
To edit camera. Please select a device then click this button to edit the device.

3.  Device setting: Provides four pages of setting

1. Device Setting page

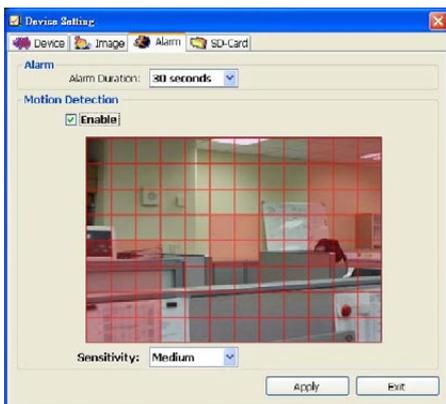


2. Image Setting page

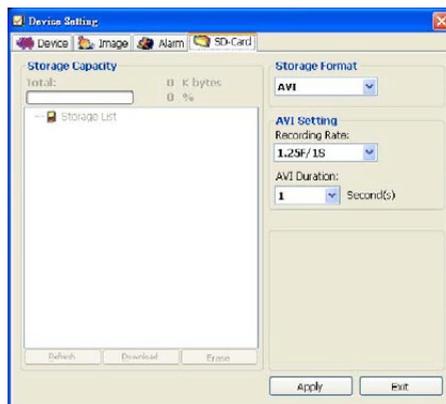


NOTE: The eneo GL-Manager software connects the Internet to a network camera. There may be a problem if the bandwidth is not enough, in which case the speed rate of the image transmissions may become too low. So if you want a satisfactory speed rate in your displays, you can click the „Device Setting” 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



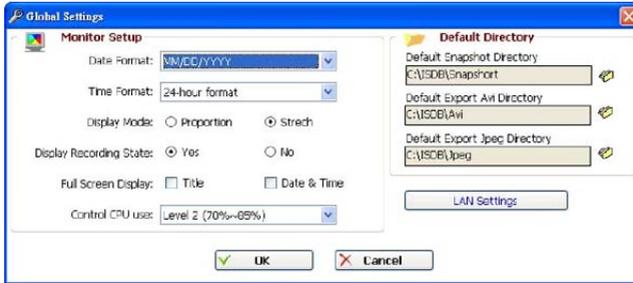
4. SD-card Setting page



NOTE: Please remember to click the „Apply” button to save the settings.

 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.

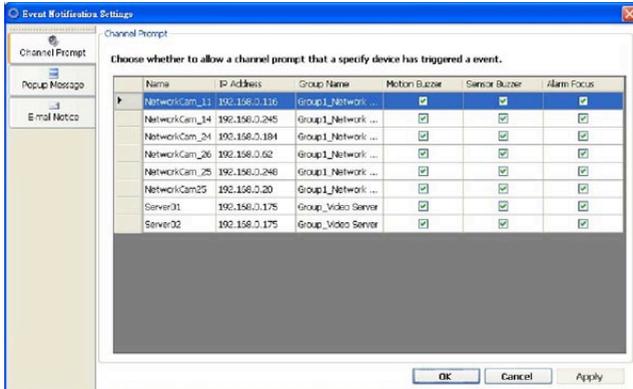
(1) Global Settings



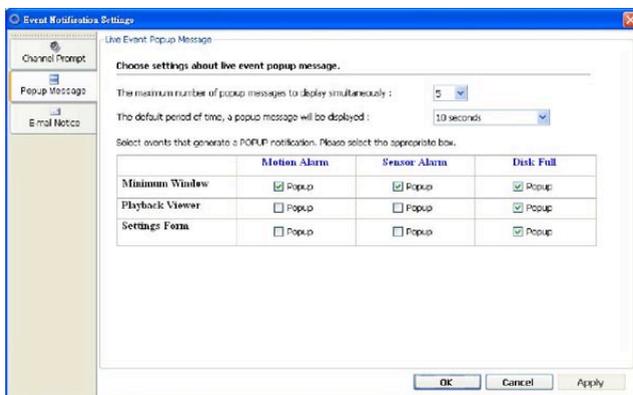
- Monitor setup: Sets the date/time mode, display mode, and controls the CPU use percentage on five levels.
- Default Directory: Sets the default files' saving path. Click  to select the directory.

(2) Event Notification

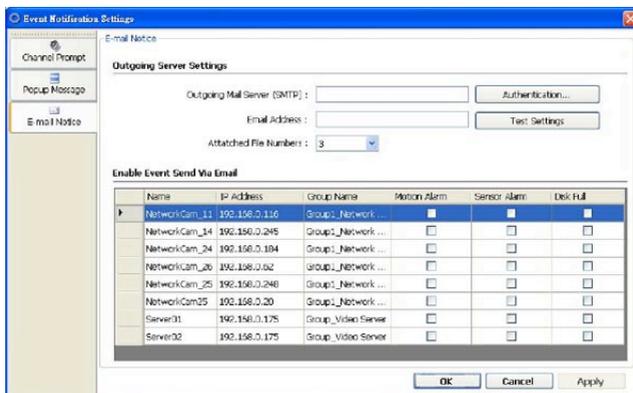
- **Channel Prompt:** Sets each camera to activate or deactivate the three modes of „Motion Buzzer”, „Sensor Buzzer”, and „Alarm Focus”. Tick mark the blank space for each device to activate it.



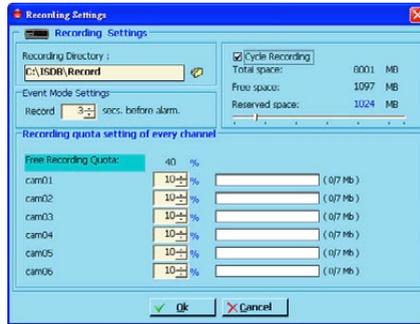
- **Popup Message:** Sets the maximum number of the pop-up messages, the displaying time and the pop-up forms. Tick mark the blank space for each device to activate it.



- **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.

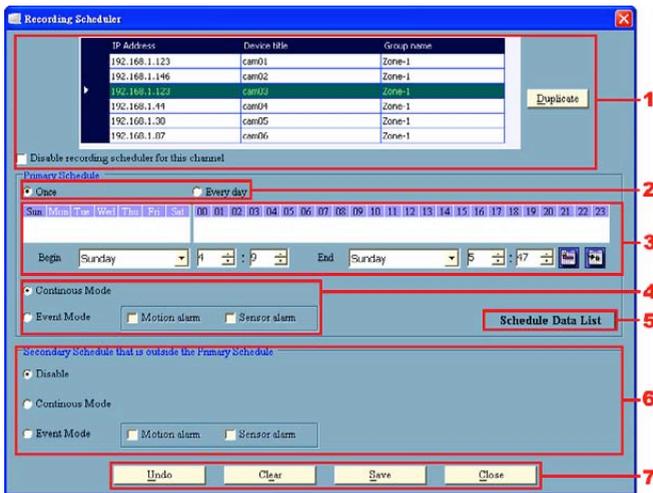


(3) Recording Settings



- **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 then the time markers will display above. Please use the up (increase) and down (decrease) arrows to adjust the setting.

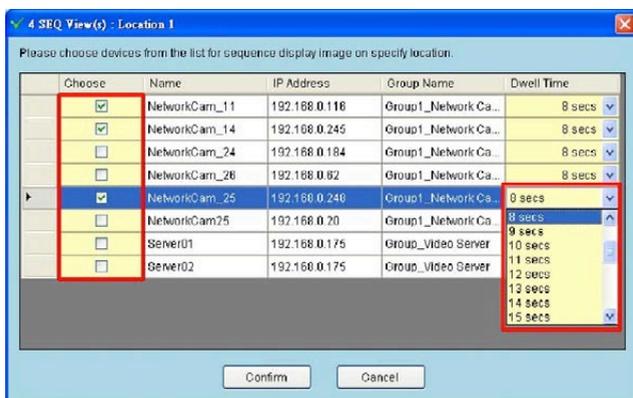


Add the selected period schedule. You can also hold down the left mouse button to drag a period.



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

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

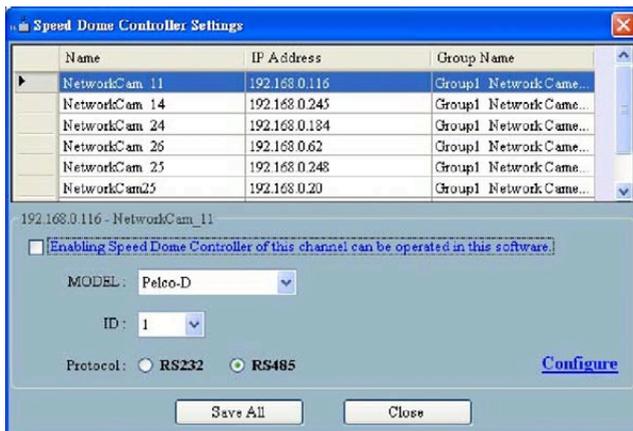


Step 5: Set the other channels as in step 3-4.

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.

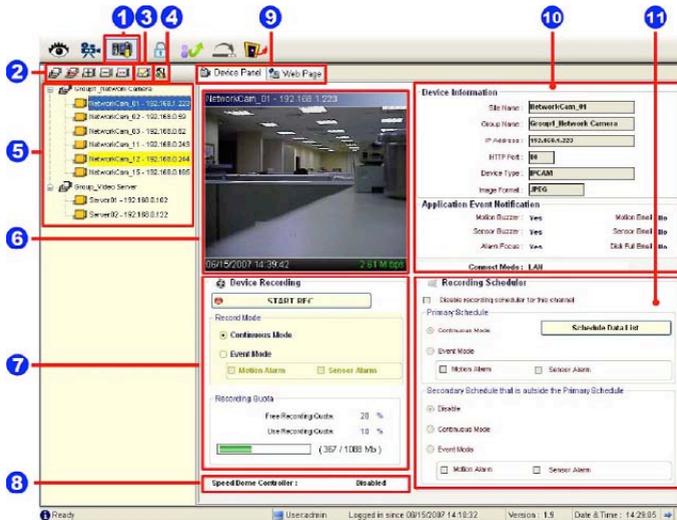
- Click „**Configure**” to enter to the RS485 setting page.



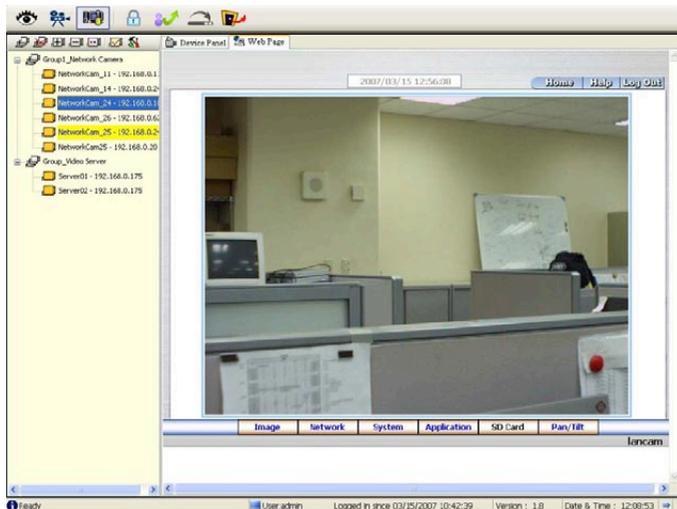
(7) Authority Setup

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 6.1 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.

6.2.4.4 Lock

Press the  button to lock the operation of this software and the eneo GL-Manager 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.

6.2.4.5 Logout

Press the  button to logout the eneo GL-Manager software and the eneo GL-Manager monitor will be minimized into the systray of the Windows taskbar.

If you want to return to the eneo GL-Manager monitor, please click the  button once, then select the page which you want to get in.

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



6.2.4.6 Tray

Press the  button to minimize the eneo GL-Manager monitor into the systray of the Windows taskbar.

Click the  button once to back to the eneo GL-Manager software.

6.2.4.7 Exit Setting

Press the  button to exit the eneo GL-Manager 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.

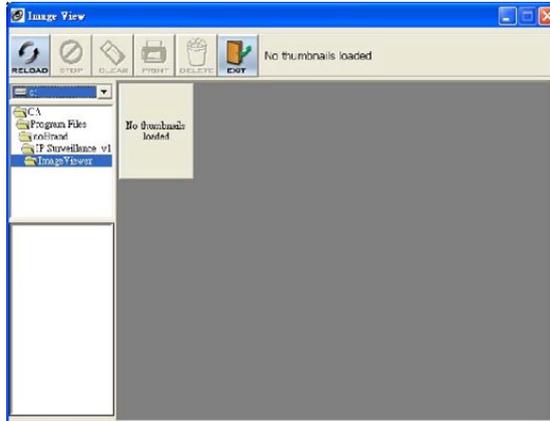


6.2.5 The Image Viewer

The network camera 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 a IP camera, 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 / eneo GL-Manager** 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.



7. Advanced Operation

Question 1:

How to view the live images of the IP camera 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 IP camera 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 IP camera 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 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 IP camera**

1. Click the URL block at the top of the PC screen.
2. Type in the DDNS Host Name of the IP camera 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 IP camera.

Question 4:

How to add or modify the users and their authorities of using the IP camera ?

- **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 IP camera.

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.

8. Specifications

Type	GLC-1601
Art. No.	91575
System	Colour
Video standard	PAL
Sensor size	1/3"
Imager	Sony Super HAD Interline Transfer CCD (with HQ1 DSP), CCD
Sensitivity (at 50% video signal)	1,2Lux, (colour); 0,6Lux (B&W). Videor measurement result at F1.2
Horizontal resolution	480TVL, (Colour), 510TVL (B&W)
Active picture elements	approx. 440,000, 752(H) x 582(V)
Automatic gain control (AGC)	24/30dB selectable
Automatic shutter control (AES)	1/50 ~ 1/100,000sec.
Digital noise reduction (DNR)	no
Integration rate	no
Manual electronic shutter (MES)	1/1000sec., fixed
White balance (AWB)	2500 ~ 9500K
Backlight compensation	BLC
IR cut filter	yes
Mirror function	Supplied
Privacy Zone masking	3 areas
Activity detection	yes, Integrated motion detector, 96 zones, 5 levels sensitivity (MJPEG)
Picture adjustments	Max. AGC gain, Contrast, Brightness, BLC, Sharpness, Colour saturation and Fluorescent light
External connections	Video (BNC), Audio (BNC), USB1.1, Network (RJ-45), Alarm In/Out, Reset, Power input
Video outputs (type)	CVBS
Video outputs	1Vp-p, composite, 75ohms, BNC
Digital signature	M-JPEG watermark
Audio support	yes
Audio	Built-in Microphone, 16Bit, 8kHz
Alarm input	1 (software controlled)
Alarm inputs	yes
Alarm output	1x open collector
Alarm handling	Automatic connection setup to a specified IP address (FTP)
Internal storage	no
Compression standard	MJPEG, MPEG4
Resolution max.	704 x 576 (D1)
Resolution	704x576 (D1), 704x288 (1/2 D1), 352x288 (CIF)
MPEG4 Quality	5 fixed levels and customized Bitrate (from 64kBps ~ 8MBps)
Transmission rate (Network)	30(25), 24, 15 fields/sec. (MPEG4 at all resolutions), 2.4MBit/sec. via Network
Maximum image transmission rate	30B./sec.
Frame rate	25 frames/sec. max. PAL, (recording mode), Picture size: 4 - 64KB (M-JPEG)
Image display	Via Web Browser or Lan-Cam-Viewer Software

USB Interface	Supplied
Ethernet interface	10Base-T, 100Base-TX, RJ-45
Web browser	MS Internet Explorer Vers. 6.0
Network protocols	TCP/IP, DHCP, HTTP, ICMP, FTP, ARP, SMTP, DDNS, DNS, UPnP, PPPoE
Lens mount	C/CS
Usable iris controls	Manual iris, DC controlled iris
Secondary Storage	Via SD card
Memory card	SD card (for software upgrades as well)
Serial interfaces	RS-485
Software upgrade	SD card / USB / FTP
Operation protection	Multilevel and Multiuser - Password protected
Password protection	yes
PTZ Support	yes
Camera mount	1/4" - 20 UNC thread on bottom
Supply voltage	12VDC
Power over Ethernet	yes
Power consumption	approx. 6watts
19" Rack mountable	no
Temperature range (Operation)	0 ~ +50°C
Housing	Metal
Colour	Grey
Dimensions	See drawing
Weight	360g
Parts supplied	Lan-Cam-Viewer Software, Power supply 230V/50Hz - 2A, C/CS mount ring, Manual
Product information	
Viewer Software for the recording of upto 16 cameras GLC-1601. System requirements for the Viewer Software: Standard PC with P IV processor and >1.8GHz system clock, Windows 2000 or Win XP, Network connection 10/100 Base-Tx-, Internet Explorer 5 or higher, Hard disk 80GB, depend on recording demand, RAM 512MB (recommended)	

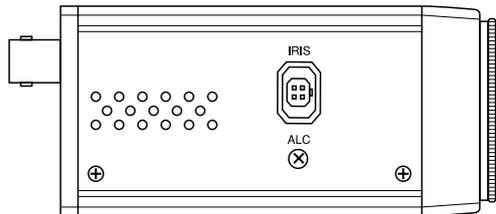
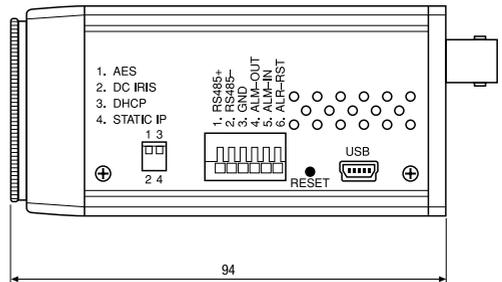
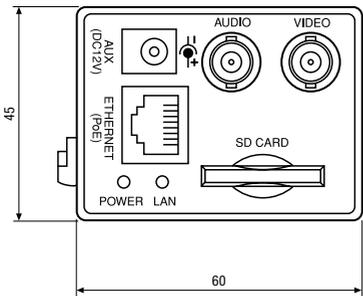
Accessories

Art. No.	Type	Description
70771	WD-23	Wall Mount Bracket with Ball Joint, 1/4" Camera Fixing Screw, Pantone 877
70769	WD-22	Wall Mount Bracket with Ball Joint, 1/4" Camera Fixing Screw, Beige Grey
76011	ZELARIS_AC S	Surveillance Software for Network Cameras from Eneo, Axis
76012	ZELARIS_AC C	Client Software for Zelaris_AC S
76023	ZELARIS_AC SMO	Site Map Option for Zelaris_AC S
76001	ZELARIS V08	Digital Video Network Crosslink, 8 Inputs, not Extentable, USB 2.0 Dongle
76002	ZELARIS V16	Digital Video Network Crosslink, 16 Inputs, not Extentable, USB 2.0 Dongle
76003	ZELARIS VC	Video Client S/W for NW Cameras/Encoder, USB 2.0 Dongle
76004	ZELARIS S08	Server 8 Camera License, USB 2.0 Dongle
76006	ZELARIS S64	Server 64 Camera Lisense, USB 2.0 Dongle
76051	ZELARIS V04	Digital Video Network Crosslink, 4 Inputs, USB 2.0 Dongle
76053	ZELARIS S04	Server 4 Camera License, USB 2.0 Dongle

9. 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 cameras

10. Dimensional Drawings



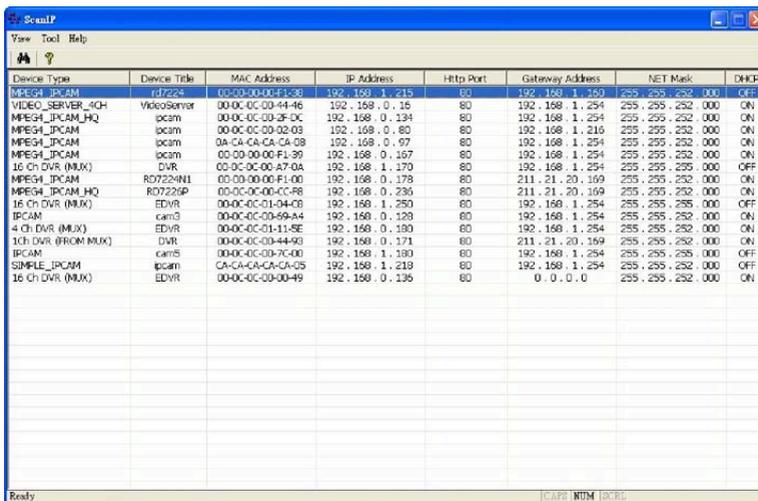
Dimensions: mm

APPENDIX 1

SCAN IP

Follow the instructions below to use the SCAN IP software to search the IP camera 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 IP camera information acts to display the desired changes instantly.



Device Type	Device Title	MAC Address	IP Address	Http Port	Gateway Address	NET Mask	DHCP
MPEG_IPCAM	rd7224	00-00-00-00-F1-30	192.168.1.215	80	192.168.1.150	255.255.252.000	OFF
VIDEO_SERVER_4CH	VideoServer	00-0C-0C-00-44-46	192.168.0.16	80	192.168.1.254	255.255.252.000	ON
MPEG_IPCAM_HQ	ipcam	00-0C-0C-00-3F-DC	192.168.0.134	80	192.168.1.254	255.255.252.000	ON
MPEG_IPCAM	ipcam	00-0C-0C-00-02-03	192.168.0.80	80	192.168.1.216	255.255.252.000	ON
MPEG_IPCAM	ipcam	0A-CA-CA-CA-CA-08	192.168.0.97	80	192.168.1.254	255.255.252.000	ON
MPEG_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	0C-0C-0C-00-A7-0A	192.168.1.170	80	192.168.1.254	255.255.255.000	OFF
MPEG_IPCAM	RD7224HL	00-00-00-00-F1-00	192.168.0.178	80	211.21.20.169	255.255.252.000	ON
MPEG_IPCAM_HQ	RD7224P	00-0C-0C-00-4C-86	192.168.0.236	80	211.21.20.169	255.255.252.000	ON
16 Ch DVR (MUX)	EDVR	00-0C-0C-01-04-08	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-01-11-8E	192.168.0.190	80	192.168.1.254	255.255.252.000	ON
1Ch DVR (FROM MUX)	DVR	00-0C-0C-00-44-83	192.168.0.171	80	211.21.20.169	255.255.252.000	ON
IPCAM	cam5	00-0C-0C-00-7C-00	192.168.1.193	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

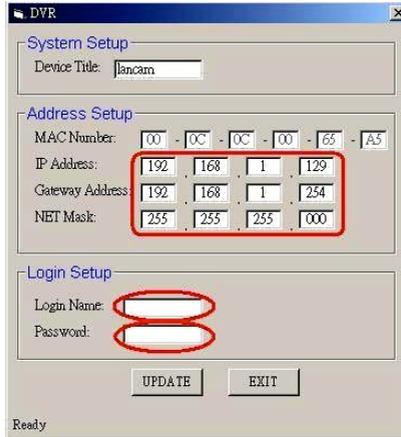
4. Do you want to automatically search free IP?

If and when you want to auto 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.



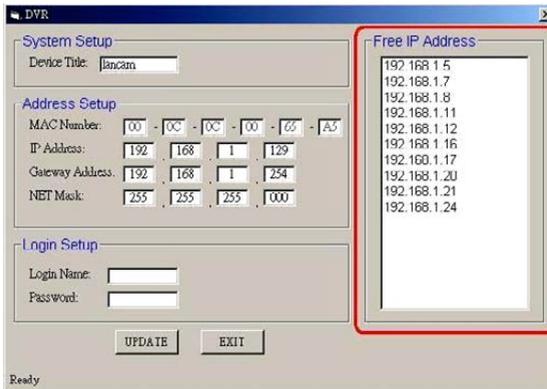
Manual insertion of „Free IP Address”

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 IP Camera.

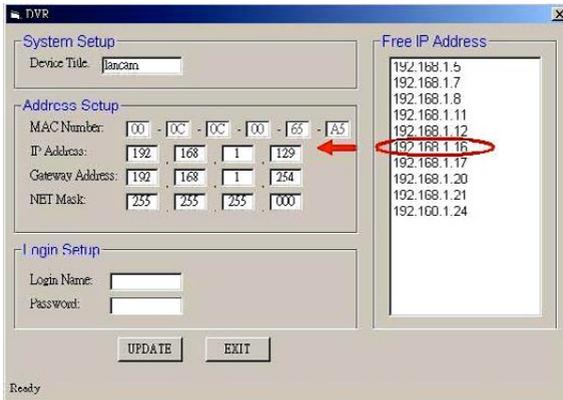


Automatically search „Free IP Address”

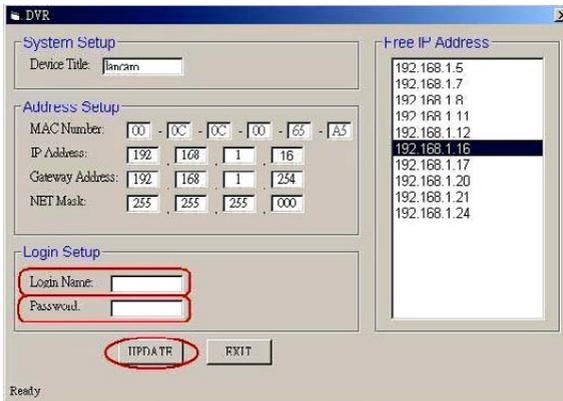
1. If you clicked „Yes” the „Free IP Address” box will appear on the right.



2. 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.



3. 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 blanks at bottom left, then click „UPDATE”, and the new address will automatically be sent to the device.

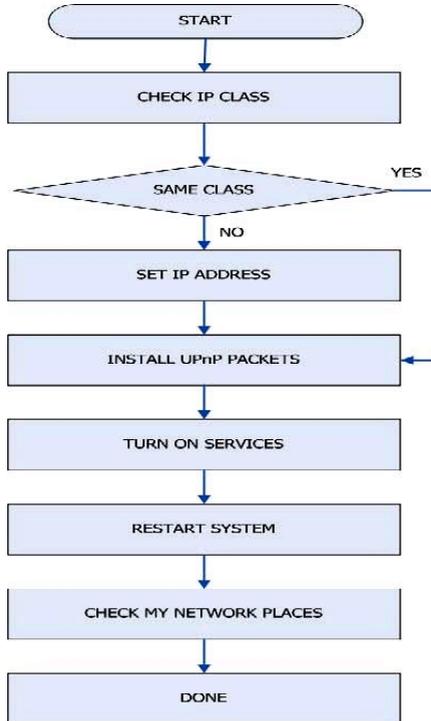


4. Click „Exit” at bottom right to shut the device.

APPENDIX 2

IP Camera UPnP

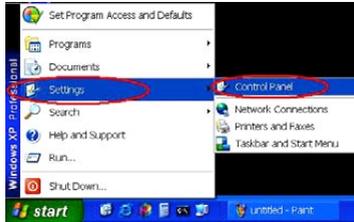
The most troublesome issue when you setup a network camera is that you have no idea what the IP address of this device is. Now the network camera supports the UPnP (Universal Plug and Play) protocol which makes it easier for you to examine it; however, it is a pity that Microsoft Windows XP® doesn't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



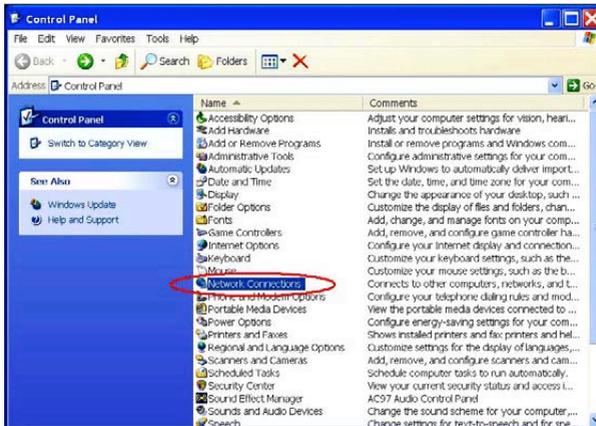
1. Check the IP class of your PC

In most case Microsoft Windows XP® 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 a LANCam® 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.

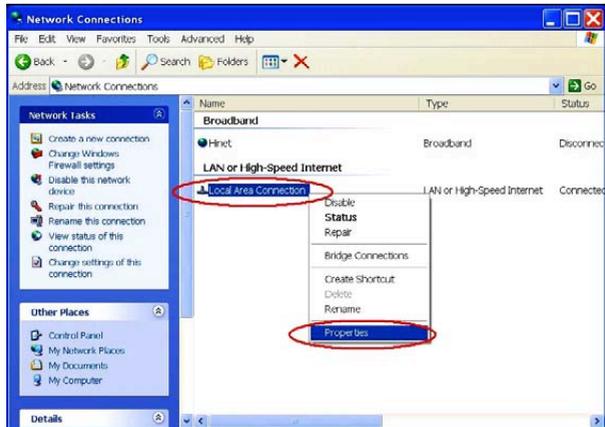
Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**.



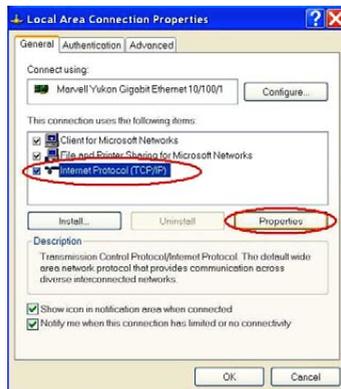
Step 2: When **Control Panel** appears, double-click the **Network Connections** icon. The **Network Connections** dialog box appears.



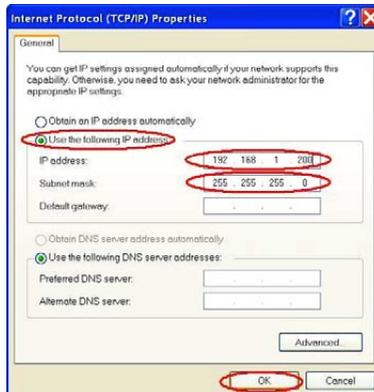
Step 3: Click the **Properties** tab in the **Network Connections** dialog box.



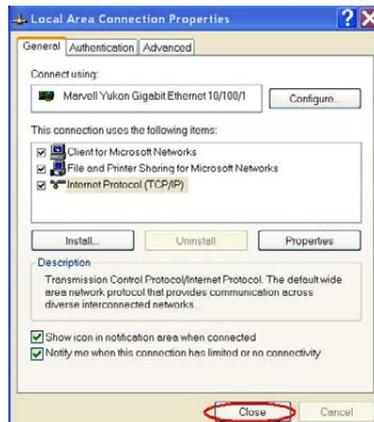
Step 4: When the **Local Area Connection Properties** dialog box shows up, choose **Internet Protocol (TCP/IP)** and click **Properties**.



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.



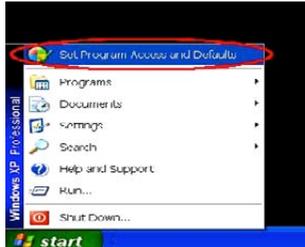
Step 6: Choose **Close** to finish the modification.



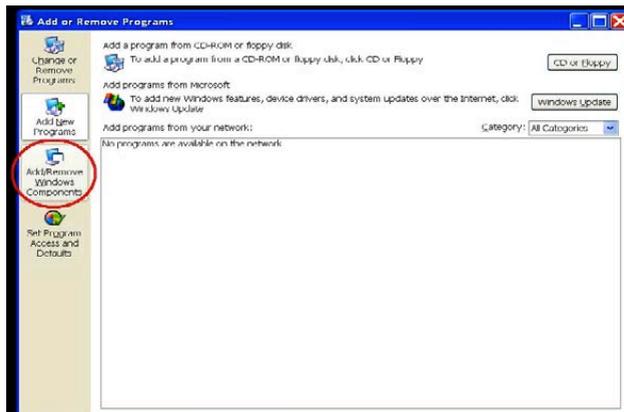
2. Install UPnP Packets

As described before, Microsoft Windows XP® 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.

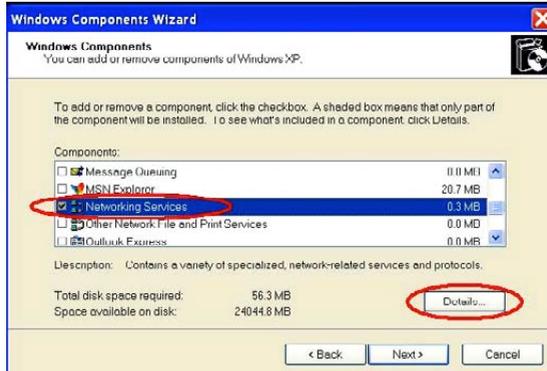
Step1: From the **Start menu**, point to **Set Program Access and Default**, and then click it.



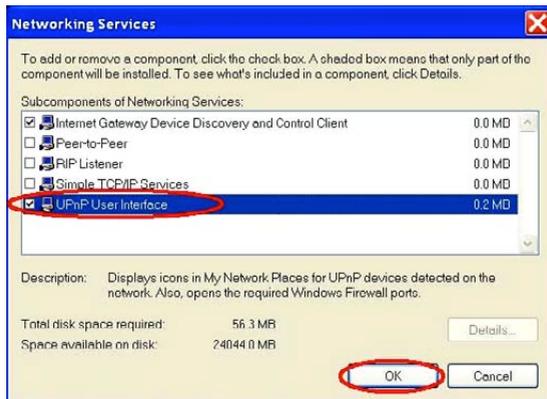
Step 2: When the **Add or Remove Programs** dialog box appears, click the **Add/Remove Windows Components** button.



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



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



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



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



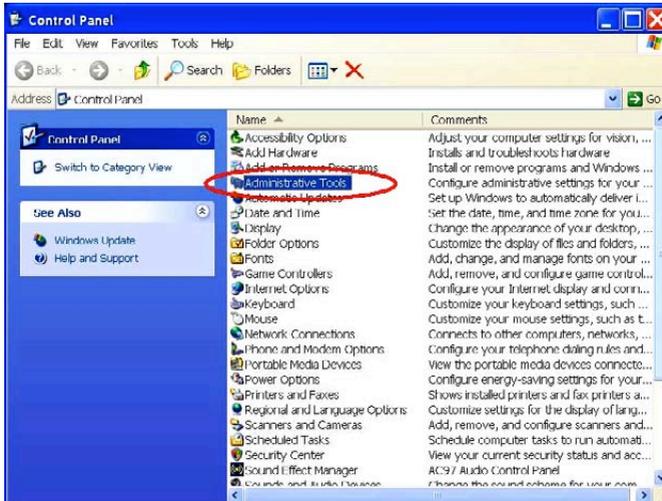
3. Turn on Services

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

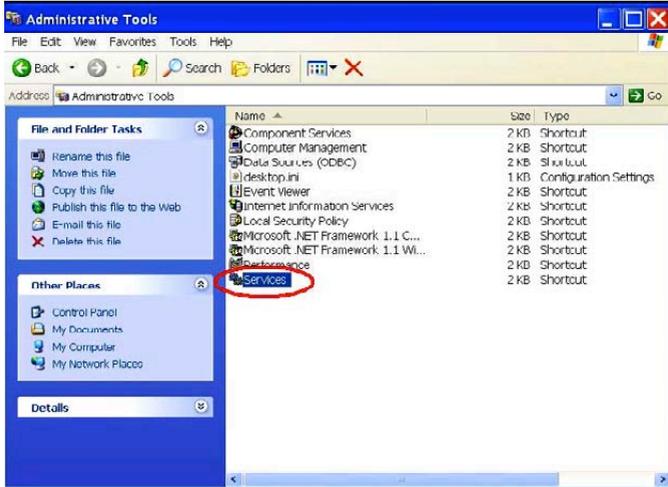
Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**.



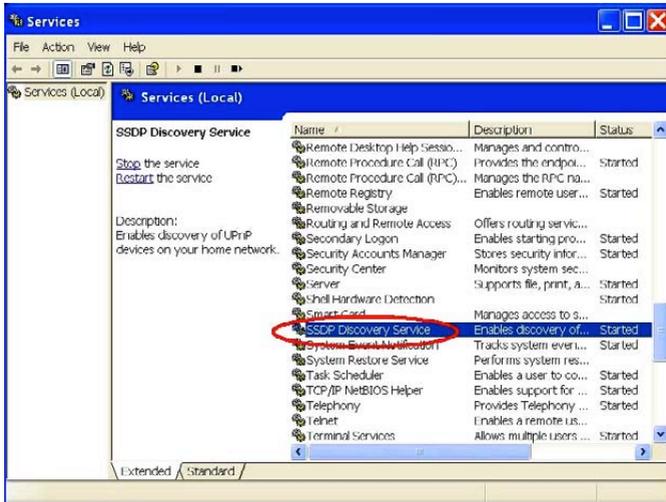
Step 2: When **Control Panel** appears, double-click the **Administrative Tools** icon. The **Administrative Tools** dialog box appears.



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



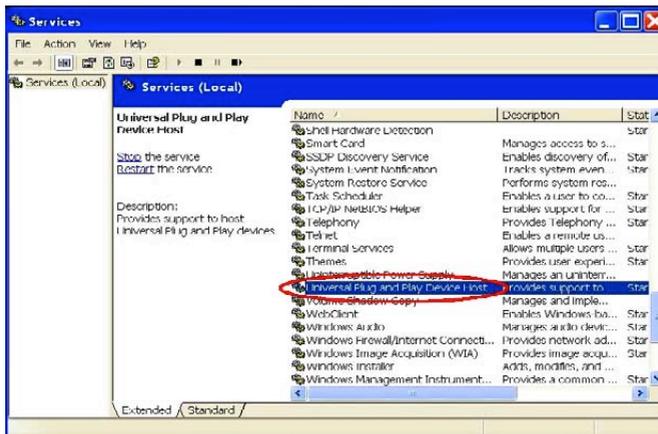
Step 4: When the **Services** dialog box shows up, double click the **SSDP Discovery Service** icon.



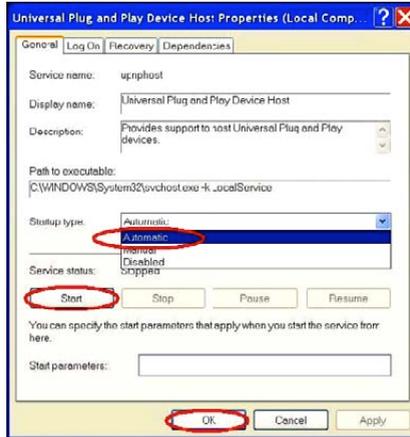
Step 5: Choose **Automatic** in the **Startup type**, and click **OK** to start it.



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



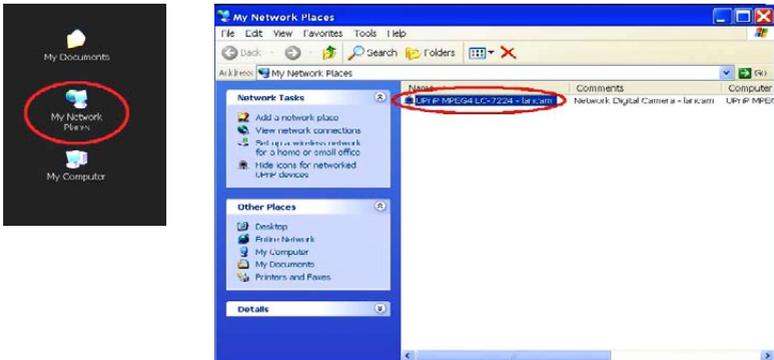
Step 7: Choose **Automatic** in the Startup type, press the **Start** button, and click **OK** to start it.



Step 8: Restart your system.

4. Scan LANcams® through My Network Place

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



Just double click the **UPnP MPEG4 IP camera** icon, and the video live stream will pop up automatically without assigning any IP address in Microsoft Internet Explorer®.

APPENDIX 3

The ARP Function

Setting the IP Address

The Ethernet interface on the LANCam 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 LANCam 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 LANCam (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.

- Start a DOS prompt window
- 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

- Start a shell
- 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 „admin” and „9999”.

APPENDIX 4

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. 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. In the upper right-hand corner of the main page, where there is an item, „[Create Account](#)”, as shown below.



Create an account

After clicking „[Create Account](#)”, 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 below.



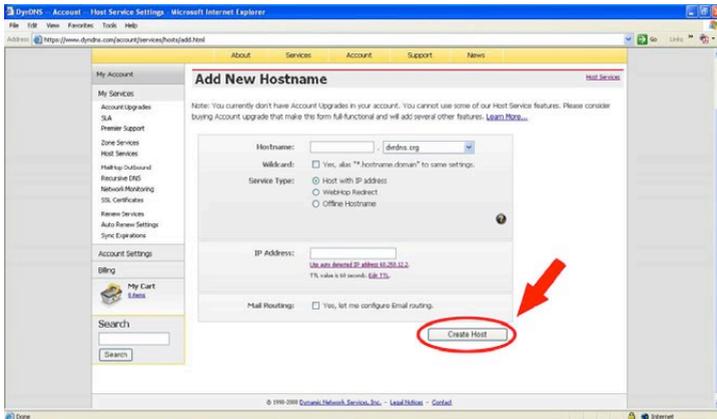
After you login successfully, a text will appear saying „My Services”, as shown below.



Click „My Services” to enter the service page. Please click the „Add Host Service” item which is below the „My Hosts” item, as shown below.



Click „Add Host Service”, and its service items will appear. The Add Dynamic DNS Host item helps to add a new DDNS. 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 below.



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 camera’s IP Address. It will renew the IP Address automatically.

After finishing the setting, please press the „Create Host” button as shown below.



APPENDIX 5

MPEG4 Bit Rate Lookup Table of IP Camera

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

APPENDIX 6

FAQ

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

A: Turn the „DIP SWITCH” from „3” to „4” and vary 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 activating. 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 „Morgan M-JPEG codec” and install it, and then check the selection of the „LJP Core”.

5. How to turn on/off the OSD (on screen display) on/off on the IP camera ?

A: Visit the homepage - [tailpage.htm](#) of the device, and select „ON” or „OFF” in the OSD column.

Example: suppose the IP address of the device is 192.168.1.168

Type in <http://192.168.1.168/tailpage.htm> (a registration is needed) and select „ON” or „OFF” in the OSD column.

WARNING: Please write down the IP address of the device before you turn off the OSD.



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