

Installation and Operating Manual

LAN Camera ENC-501L

with Quick Start Installation Guide for

ENC-501W



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SAFETY PRECAUTIONS

- The instructions below must be followed for your own safety.
- Please read the safety instructions and operating instructions before connecting the device and putting it into operation.
- Keep the operating instructions safe for use at a later date.
- Never operate the camera outside of the specifications as this may prevent the camera functioning.
- Never point the camera towards the sun with the lens open as this may prevent the sensor functioning.
- When laying the connection cable, it is essential to follow the instructions below: the cable must be laid in such a way that it is not strained, bent or damaged and no moisture can penetrate.
- To prevent fire or shock hazard, avoid exposing this unit to rain or moisture.
- Do not block ventilation openings.
- Installation and maintenance of the system may only be carried out by persons with appropriate authorisation for this and in accordance with the installation instructions - taking into account all the applicable standards and guidelines.
- 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.
- Only original spare parts from the manufacturer.

1. PRODUCT FEATURES

1.1 Product Introduction

The **LAN CAMERA** is state-of-the-art equipment in its field. It combines many digital video capabilities with the internal functions of the network video camera. The user can immediately connect to a standard network, and the device can transmit the digital images to a remote browser. The LAN Camera is unlike any Web Camera, it connects to the LAN rather than the USB or other communication port. Since the various types of Web Cameras must initially be connected and installed with a PC, the Web Camera is limited regarding some practical applications. The principle function of the LAN Camera is remotely viewing and control and recording over a digital network. By using the LAN Camera you can increase your surveillance capabilities and help monitor the store, the house, the factory, the school, public areas, and so forth. Image size and quality vary according to the user's requirements. Different settings have different picture qualities and compression ratios that can be regulated according to user's needs. Network-attached storages (NAS) can be used as digital storage bins without the problems of consolidating and supporting different Networks (Windows 95/98/NT/2000, Macintosh, Novell and Unix). The digital images that are stored are more convenient in retrieving than analog images, and also enable the user to access the latest status instantly. The user can moreover use multiple modes of accessing images, such as schedule, time, and alarm.

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

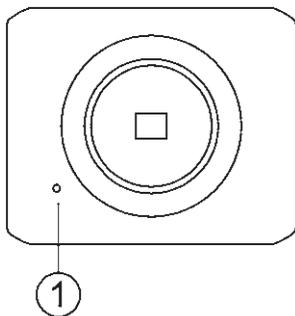
1.2 Product Features

- An inbuilt Web Server and Network Interface.
- Dual purpose: the LAN CAMERA can simultaneously export both the traditional analogs and the digital images.
- Motion detection: You can select the range and sensitivity of the detection.
- The user can use a Java browser to directly view the images, and can also modify the settings.
- 1/ 3 inch interlaced CCD (charge - coupled device)
- This product is a standard resolution device. It can support a resolution up to 270K pixels (NTSC), 320K pixels (PAL)
- 340 TV lines
- C / CS Mount Adjustable (adapter by delivery included)
- Automatic white balance programmable (AWB), Automatic gain control (AGC), Backlight Compensation (BLC), Electronic shutter speeds: (NTSC:1/50-1/100000 sec. PAL:1/60-1/100000sec)
- The sensitivity is 0.26Lux (measured).
- Image compression: MJPEG.
- There are 5 levels of image quality the user can select from: Lowest, Low, Medium, High, and Highest.
- There are 4 different Resolution levels the user can choose from:
NTSC: 352x240, 720x480 (Frame), 720x240, 720x480 (Field)
PAL: 352x288, 720x576 (Frame), 720x288, 720x576 (Field).
- The user can regulate the categories of Brightness, Contrast, Saturation, Hue and Camera Title.
- A pair of RJ-45 Fast Ethernet 10 / 100 Base-TX port. Using an Ethernet cable, The LAN CAMERA can be connected to the network.
- Protocol for remote control
- Networking:TCP/IP, DHCP, HTTP, UDP, FTP, SMTP, SNMP, NetBIOS, ICMP, DDNS, DNS
- Alarm sensor Input/Output Terminals
- Digital mode saves images via E-mail, FTP (only: Open Relais Servers) or SD card.
- The RECORD-SCHEDULE provides seven periods of time and the LAN CAMERA starts and stops recording according to the programmed schedule.
- The device will record as long as the alarm input is activated, and allow users to set the alarm for certain duration.
- The LAN CAMERA lets users to change the date and time.
- There are 3 levels of users' accounts: Admin, Operator, Viewer.
The total number of users' account included under these 3 levels is ten.
- The device is capable of working with various known multiplexers and quad processors.
- RS-232 communication port
- Distribution of live and recorded images through the TCP/IP network environment.
- Watchdog: In the event of any malfunction, the Watchdog immediately alerts the LAN CAMERA, which will restart operation automatically.
- The LAN CAMERA can automatically synchronize the time with the SNTP server.
- The device has a microphone installed in its front panel which records sound.
- Built-in SD card slot for recording video and image to SD card
- An SD card may be inserted into the SD card slot in the flank panel to update the device.

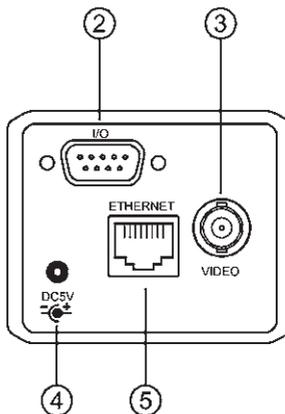
2. DESCRIPTION OF THE FRONT/REAR VIEW

2.1 Front Panel and Rear Panel

Front Panel



Rear Panel



1. MICROPHONE:

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

2. Alarm I/O and RS-232 Port:

This is a connector including ALARM OUT, GROUND, ALARM IN, and ALARM RECOVER for connecting with external devices. Please refer to the next section for details.

The RS-232 communication port functions as a connector to an external control device.

3. VIDEO OUT Connector:

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

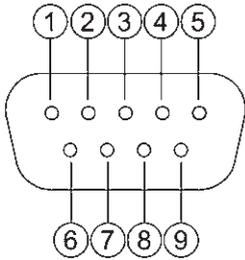
4. Plug Inlet:

The DC 5V inlet connects to an external power supply. Connect to the provided AC adapter.

5. ETHERNET 10/100 Connector:

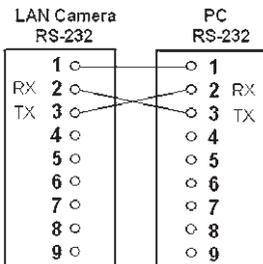
This is one standard RJ-45 connector for 10/100Mbps Ethernet networks.

2.2 RS-232 Port & ALARM I/O

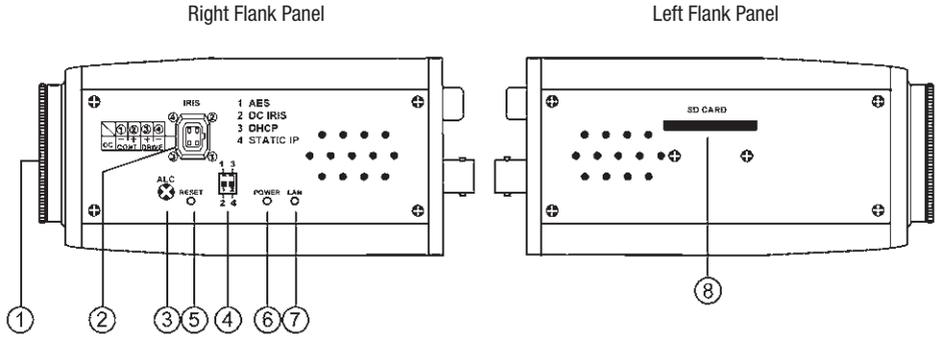


1. **GND:** Ground contact
2. **RX:** This pin is one of the RS-232 pins. It connects with the TX pin of another device.
3. **TX:** This pin is one of the RS-232 pins. It connects with the RX pin of another device.
Please refer to the note below on the standard RS-232 9 pin cable with pin 2 and pin 3 exchanged; see the pin configuration chart below for details.
4. **GND:** Ground contact
5. **GND:** Ground contact
6. **ALARM RESET (INPUT):** This pin connects to an alarm-clear device for clearing an alarm. ( 5V, 20mA
0V(Active))
7. **ALARM IN (INPUT):** This is an alarm input that can be programmed in the menu system to active low.
( 5V, 20mA
0V(Active))
8. **ALARM OUT (OUTPUT):** This is an alarm output trigger. Connect this to external devices such as buzzers or lights.
( 5V, 20mA
0V(Active))
9. **AUDIO OUT:** This provides the unit's audio signal to a speaker.

NOTE:



2.3 Flank Panel



1. Lens Mount: This LAN CAMERA is used with either C or CS mount lens.

2. IRIS: Auto iris connector

This camera works with DC drive auto iris lens. Please refer to the pin assignment marked on the camera when connecting the auto iris lens.

3. 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 will open the iris and counter-clockwise will close the iris of the camera.

4. DIP Switch:

	1. AES: Auto electric shutter
	2. DC IRIS: Use auto iris (DC drive)
	3. DHCP: Turn On / Turn Off use DHCP protocol. The switch points upwards, the device can get an IP automatically by setting this option, if provided with a DHCP server.
	4. STATIC IP: The switch points down, the device can't obtain an IP address from the DHCP server. This option is need to configure the network communication settings.

5. Reset: Recover to factory default

6. POWER Indicator: Indicates the power status of the unit. The green light indicates the unit is activating.

The red light indicates the power cannot move. If the SD Card is withdrawn in this mode, the card will break.

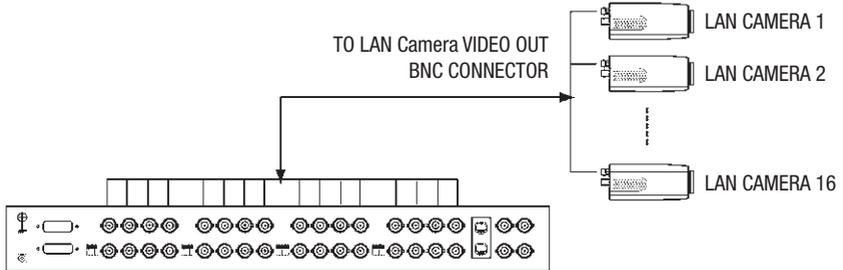
7. LAN Indicator: Indicates the LAN status of the unit. The green light indicates the 100 Mbps Ethernet network is activating. The red light signals the LAN is data linking.

8. SD CARD Slot: This is used for system software updating and archiving / accessing critical images.

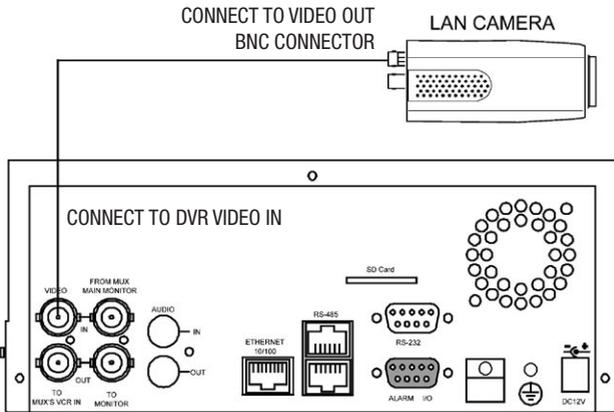
3. INSTALLATION

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

3.1 CONNECTING WITH A MULTIPLEXER

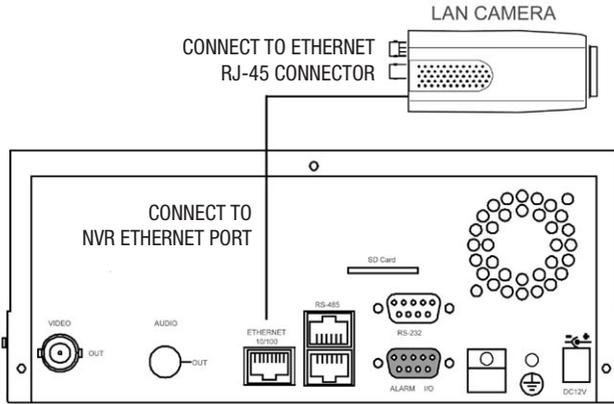


3.2 CONNECTING WITH A DVR



3.3 CONNECTING WITH AN NVR

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



3.4 UPDATING SYSTEM SOFTWARE

If the system software of the LAN CAMERA needs to be upgraded, please take the following steps to safely update 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 a SD Card using FAT16 format if it is unformatted; no limitation on SD Card's capacity.
2. Create a directory named LANCAM in the SD Card if it is not existed.
3. Copy the file of UPDATE.BIN to the LANCAM-directory.
4. If LANCAM is running, please power off LANCAM first.
5. Insert the SD CARD into LANCAM.
6. Remove the Ethernet cable from RJ-45 port and then, power on LANCAM.
7. In 5 to 10 seconds, a word of „UPDATE PROCESSING“ is shown up on the screen with a blue background; if not, please check out Step 1 to Step 6 carefully or inform your technical support instead, as well as ignore the following steps.
8. DO NOT power off LANCAM while this update process is running until „UPDATE OK RESET PLEASE“ appears on the screen; it might take 15 to 30 seconds for waiting.
9. If „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, as well as ignore the following steps.
10. Power off LANCAM when this update process is finished, and removes the SD Card from LANCAM.
11. Reconnect the Ethernet cable into RJ-45 port if necessary.
12. Power ON LANCAM and it will work normally if the entire update procedure is correctly going.
13. Verify the version of the system software.

Warning:

- 1. Don't use FAT32 or NTFS or other file formats in Step 1.**
- 2. Step 1 to Step 3 have to be done on a PC.**
- 3. Make sure the file of UPDATE.BIN is a correct one in Step 3, or LANCAM will not work normally after updated.**
- 4. If the power of LANCAM is suddenly lost in Step 8, please remove the SD Card first and power on LANCAM next for testing its operation. If LANCAM remains working normally, please go back to Step 4; oppositely, please inform your technical support.**
- 5. In Step 10, if the SD Card is not removed and LANCAM dose not get online as well, the update process will repeat again after rebooting LANCAM.**
- 6. Make sure that the SD Card is inserted with a correct position in Step 5, or LANCAM will suffer permanent physical damage.**
- 7. If „CSUM ERROR“ appears in Step 8, it implies a problem on the file of UPDATE.BIN.**
- 8. Don't Interrupt the process while the unit is updating itself and proceed with a SD card containing with no system software of the unit, which would cause the unit hang on.**

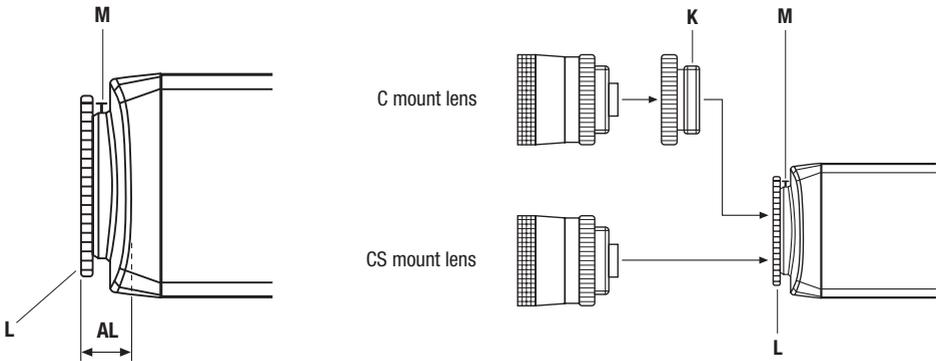
3.5 LAN CAMERA SD CARD TROUBLESHOOTING

1. Check out the SD Card position whether it is correct. Please refer to the manual for the related information.
2. After powering on LAN CAMERA, insert SD Card with a correct position and then, a little icon of „SD“ will show up in the upper-right corner of the screen of a monitor. If not, it means the device detection fails. Please contact your technical support and ignore the following steps.
3. If no cross sign appears beside the „SD“ icon, please go forward to the next step. If a cross sign appears, please check out the followings:
 - a. Is it really a SD „Memory“ Card ?
 - b. Is this SD Card formatted with the FAT16 format ?
 - c. Connect the SD Card with a PC and, test whether the PC can read the data or not ?
 - d. Dose this SD Card still have capacity for storing data ?
 - e. Is the SD Card set to be writable ?If all the answers are „yes“ but the cross sign still exists, please contact your technical support and ignore the following steps.
4. Please make sure the function of „SD CARD ENABLE“ is enabled on ALARM and SCHEDULE pages if no cross sign appears beside the „SD“ icon on the screen.
5. After recording, read the data through web page of „sdget.htm“. If the data cannot be read through networks, please read it by a PC instead and check out the data stored in „LANCAM“ directory and, please contact your technical support no matter 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 SD Card is removed while storing or accessing data, data would be lost.
3. If there is a cross sign beside the „SD” icon, it means the SD Card has inserted into LAN CAMERA but cannot perform writing function. Possible reasons are:
 - a. It is not a SD memory card.
 - b. SD Card is unformatted or formatted with non-FAT16 or non-FAT12 format.
 - c. Damage is happened on file system.
 - d. The capacity of SD Card is full.
 - e. SD Card is set to be read-only.
4. Shut the power before inserting the SD Card. Otherwise the unit may shut down.

3.6. 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)	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. 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).
Iris adjustment	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). 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). In the case of AI lenses, the level potentiometer is located on the lens (the AI amplifier is built into the lens).

4. NETWORK CONFIGURATION

4.1 Cable Connections

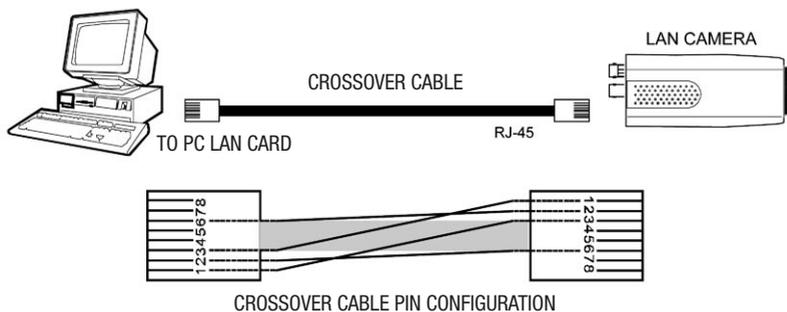
Please follow the instructions below to connect your LAN CAMERA to a computer or a network and to choose a proper RJ-45 cable configuration for connections.

Physical specification of RJ-45 cable for Ethernet

Wire Type	Cat. 5
Connector Type	RJ-45
Max. Cable Length	30m
Switch/Hub Wiring Configuration	Straight Through
PC Wiring Configuration	Cross Over

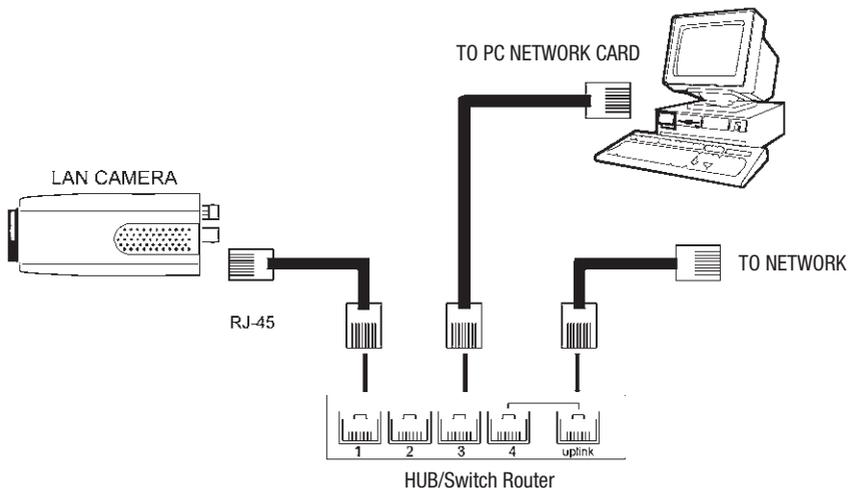
4.1.1 Connect to a computer

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



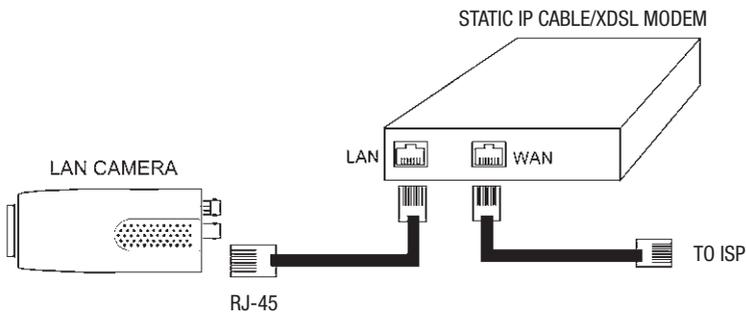
4.1.2 Connect to a LAN Hub (INTRANET)

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



4.1.3 Connect to WAN (INTERNET)

The RJ-45 PIN configuration for connecting to a WAN is the same as connecting to a LAN.



4.2 Configure Your LAN CAMERA Network Settings

Upon network hardware connection, you need to activate the network function and configure the proper network settings of the LAN CAMERA.

4.2.1 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 remove the dip switch points upwards to 3 on the flank panel. The LAN CAMERA will obtain an IP address automatically from the DHCP server. In that case please skip the section 4.2.2 (Set IP address) and follow section 4.3 (TCP/IP Communication Software).

4.2.2 Set IP Address

You need to set an IP address for the unit if the LAN that the unit isn't connected to a DHCP server. Otherwise, please follow the instructions given below:

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

IP: 192.168.1.X

SUBNET MASK: 255.255.255.0

GATEWAY: 0.0.0.

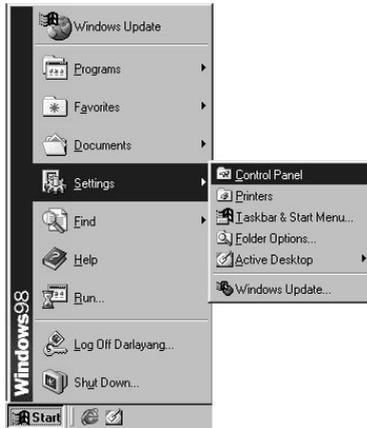
NOTE: When only one unit of the LAN CAMERA is connected to a computer or LAN, you can freely assign an IP address for the LAN CAMERA. For example, there are a range of LAN CAMERA IP addresses from 192.168.1.1 to 192.168.1.255. You can pick one for use from the range of the IP. It's not necessary to set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

When a LAN 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.

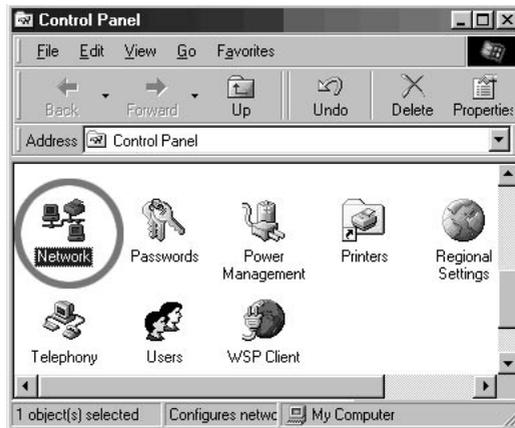
NOTE: When connecting to a network, each connected LAN CAMERA must be assigned a unique IP, which must be in the same class type as your network address. IP addresses are written as four sets of numbers separated by periods; for example, 192.168.1.1 Therefore, if the connected network is identified as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

4.3 TCP/IP Communication Software

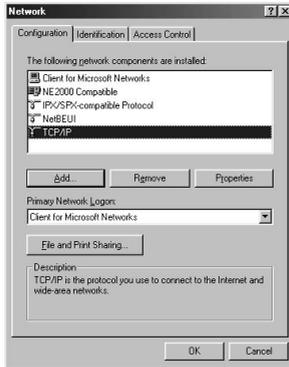
Follow the instructions below to install the TCP/IP communication program into your computer. Click the **Start** menu from your computer, and point to the **Settings/Control panel**.



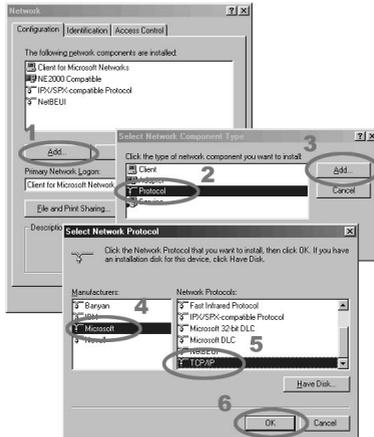
Click the **Network** icon twice to enter the same setting windows.



Click on the **Configuration** tag; check if the TCP/IP is included among the network components list. If the TCP/IP is included, please process section 4.5. If it is not included, please follow section 4.4 to install the TCP/IP.



4.4 TCP/IP Installation



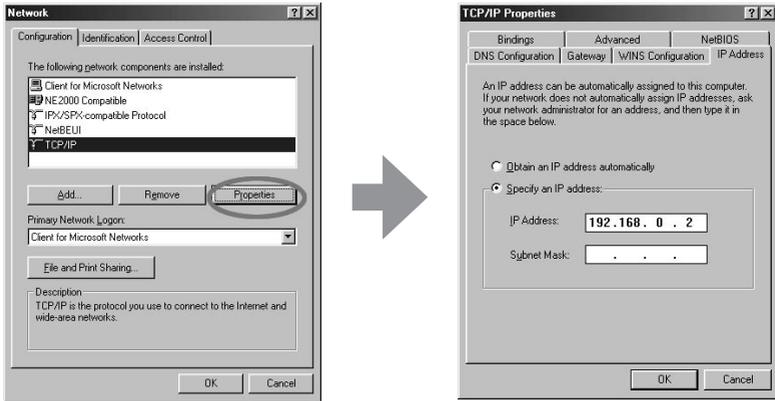
During the installation, you will be requested to insert the Windows CD-ROM. After installation, the PC can be restarted.

4.5 TCP/IP Configuration setting

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

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

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



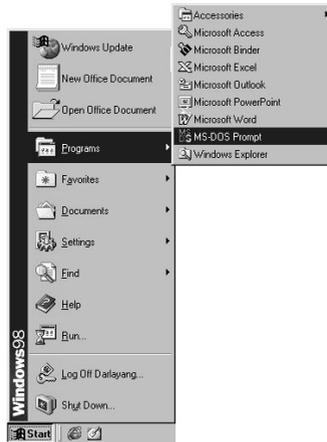
If you are using a DHCP server, please select **Obtain an IP address automatically**. Any assigned IP address for the connected LAN CAMERAs must be in the same class type as the server. If there is no DHCP server, please select **specify an IP address** and type in the IP address of your PC. This IP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

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

4.6 Connection Testing

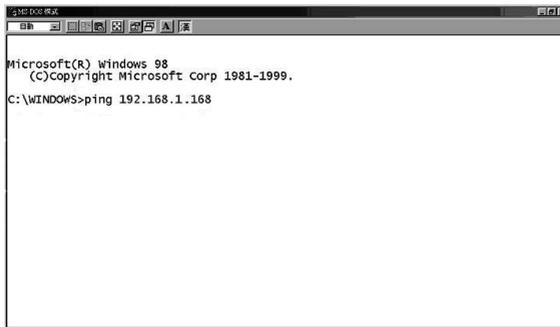
With the previous settings, follow the instructions below to ensure whether you have established the connection successfully.

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

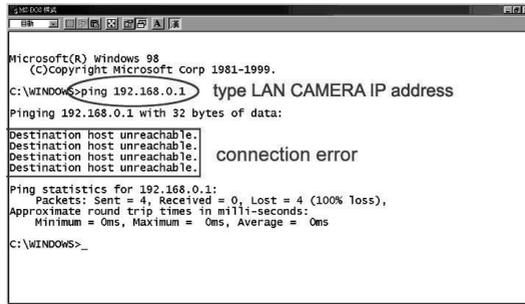


Type in **ping 192.168.1.168** then Enter. (See the sample screen below)

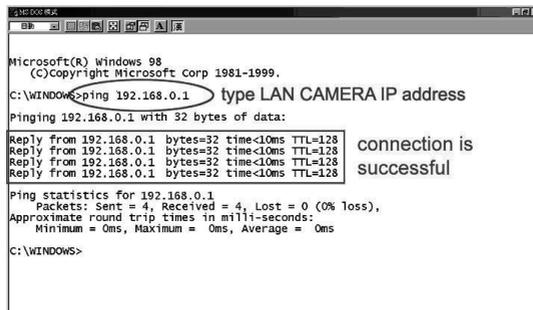
** This IP is the LAN CAMERA IP address that is assigned for the connected LAN CAMERA in step2.



If you receive a response as in the sample screen below, the connection hasn't been successfully established. Please re-check all the hardware and software installation by repeating steps 1 to 5. If you still can't establish the connection after rechecking, please contact your dealer.



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



5. OPERATING INSTRUCTIONS FOR IMAGE SOFTWARE AND NETWORK

Two choices of software are available for linking up with the LAN CAMERA: (1) the Microsoft Internet Explorer; and (2) the LAN 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.

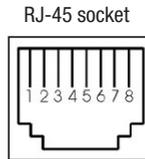
The details are listed as follows.

System Requirements

- Intel Pentium 233MHz processor or above
- At least 32MB RAM
- Window 98, NT, ME, 2000 and XP
- 4MB VGA card capable of 24-bit true color display
- 100MB free hard-disk space for software installation
- 10/100 Base-TX network for LAN operation
- The Microsoft Internet Explorer 5 above

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	30m
Switch/Hub Wiring Configuration	Straight Through
PC Wiring Configuration	Cross Over

5.1 Microsoft Internet Explorer

5.1.1 Connecting the LAN CAMERA

1. Start up the Microsoft Internet Explorer, and then follow the steps below to connect the LAN CAMERA.
2. Click the URL block at the top of the window.
3. Enter the URL address of the LAN 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 LAN 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 authorized successfully, it will not appear again until you close the window and reconnect it.

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



Browsing images from the LAN CAMERA

The images from the LAN CAMERA will be displayed on the home page while going online with the LAN CAMERA. There are some buttons provided at the bottom of the home page for further setting:



- 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.

5.1.2 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.

Camera Title:

Resolution:

Quality:

Fluorescent: YES NO

BLC: YES NO

Backlight: (0-255)

Brightness: (0-255)

Hue: (0-255)

Saturation: (0-255)

Sharpness: (0-255)

Viewer Type: ActiveX Java Applet

(Reset all image parameters)

* Possibly some auto iris lenses adjust Backlight and Brightness value

cam1

2. Adjust the image setting including „Camera Title”, „Resolution”, „Quality”, „Fluorescent”, „BLC”, „Brightness”, „Hue”, „Saturation”, „Sharpness”, and „Viewer Type” if and as necessary.
3. Click the **Submit** button to submit the new image setting.
4. 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.)

NOTE: Any change made to settings will take 3 seconds to show in the picture.

Description of function keys:

Camera Title: Type in the camera title in the given space.

Resolution: Scroll to choose the image resolution from a range of three sizes (352X224, 720X448 or 720X224).

Quality: Scroll to choose the image quality out of a spectrum of qualities ranging from „highest, high, medium, low, or lowest”.

Fluorescent: Click „YES” or „NO” as desired.

BLC: Similarly, click „YES” or „NO” as you require.

Backlight: Type in the backlight level you want, selecting out of an available range from 0 to 255.

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

HUE: Enter the hue value in the given space (0 to 255).

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

Sharpness: Fill in the sharpness level in the blank (0 to 255).

Submit: Click to submit the new image setting to the LAN CAMERA.

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

5.1.3 Change the Network Setting

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

- **Set the network options and IP address**

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

The screenshot shows a web-based configuration interface for a network camera. The main heading is "NETWORK". Below it, there is a sub-heading "Use of Dynamic IP configuration(DOIP/PPPoE) allowed." The form contains several input fields: "IP Address" (192.168.1.14), "Netmask" (255.255.255.0), "Default gateway" (192.168.1.254), "Primary nameserver" (192.168.1.1), and "HTTP Port Number" (80). A "Submit" button is located below the "HTTP Port Number" field. On the left side, there is a sidebar with a "NETWORK" button highlighted. At the bottom of the page, there is a navigation bar with buttons for "Image", "Network", "System", "Application", and "SD Card".

2. The accessible networks here are the FTP, the SMTP, the SNTP, the DDNS and the PPPoE.

3. Fill in the „IP Address”, „Netmask”, „Default gateway”, „Primary nameserver”, and „HTTP Port Number” if necessary.

4. Click the **Submit** button to submit the new network setting.

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

Description of function keys:

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

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

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

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

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

Submit: Click to submit the new network setting to the LAN CAMERA.

• Change the Network Setting - FTP

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 **FTP** button at top left to enter the „FTP SERVER SETTING” page.

The screenshot shows a web interface for configuring network settings. On the left, a sidebar menu is expanded to show 'FTP'. The main content area is titled 'FTP SERVER SETTING'. It contains several input fields: 'FTP Server Name' (with a dropdown menu), 'FTP Server' (text input with '192.168.1.1' and a 'Port' dropdown with '21'), 'User Name' (text input with 'juser'), and 'Password' (text input). Below these is the 'Image File Name' section with an 'Upload Path' text input and a 'Submit' button. At the bottom right, there are links for 'FTP Application Settings', 'FTP Schedule', 'FTP Record', 'FTP Alarm', and 'FTP Server Login'. The interface includes a top navigation bar with 'Home', 'Help', and 'Log Out' buttons, and a bottom navigation bar with 'Image', 'network', 'system', 'application', and 'SD Card' buttons, and a 'cam1' label.

2. Type in the „FTP Server” address, the „User Name”, and the „Password” of the FTP Server; and set the „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).

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

Submit: Click to submit the new FTP setting to the LAN CAMERA.

• Change the Network Setting - SMTP

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

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

The screenshot shows a web interface for configuring SMTP settings. On the left, a sidebar menu is expanded to show 'SMTP'. The main content area is titled 'SMTP SERVER SETTING'. It contains several input fields: 'Mail Server Name' (with a dropdown menu), 'SMTP Server' (text input with '192.168.1.1'), 'Mail' (text input), and 'Email Address' (text input with 'juser@localhost'). Below these is a 'Submit' button. At the bottom right, there are links for 'SMTP Application Settings' and 'SMTP Alarm'. The interface includes a top navigation bar with 'Home', 'Help', and 'Log Out' buttons, and a bottom navigation bar with 'Image', 'network', 'system', 'application', and 'SD Card' buttons, and a 'cam1' label.

2. Fill in the IP address of the SMTP server, and set the recipient's e-mail address when and as necessary.
3. Click the **Submit** button to submit the new SMTP setting.
4. Click the **Home** button to return to the home page.

Description of function keys:

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

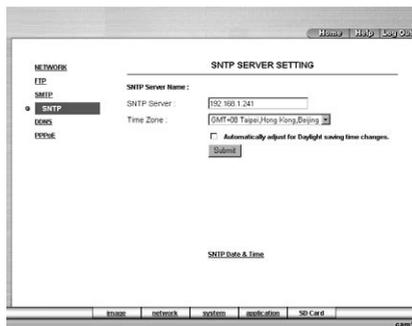
Email Address: The recipient's e-mail address

Submit: Click to submit the new SMTP setting to the LAN 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 the **Submit** button to submit the new SMTP setting.
4. Click the **Home** button to return to the home page.

Description of function keys:

SNTP Server: Enter the SNTP server DOMAIN NAME or IP address in the blank space provided.

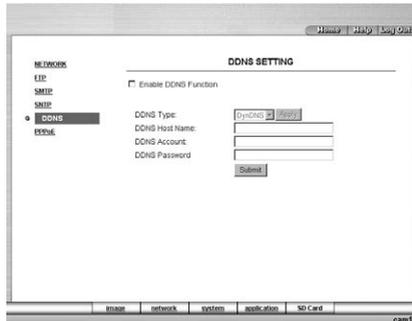
Time Zone: As we know, the globe is divided into various time zones. The user must enter his/her time zone. If this is not done, the time given by the unit may be incorrect.

Submit: Click to submit the new SNTP setting to the LAN 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.



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

NOTE: Please refer to 5.1.7 PPPoE & DDNS section for more details.

Description of function keys:

Enable DDNS Function: Checkmark to activate the function.

DDSN Type: Click to open the list of three DDNS modes to choose from : „DynDNS”, „hn”, and „adslDns”. 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.

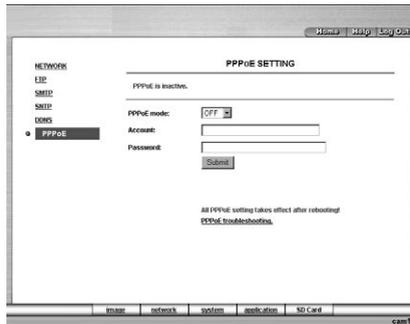
DDNS Password: Enter it in the required space.

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

NOTE: Please refer to 5.1.7 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.

5.1.4 Change the System Setting

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

- **Set the Date and Time of the system**

1. Click the **system** button in the home page to enter the „System - Date and Time” page (default).

The screenshot shows a web interface for configuring the system's date and time. At the top, there are navigation links for 'Home', 'Support', and 'Log Out'. The main content area is titled 'SYSTEM - DATE AND TIME'. It features three radio buttons to select a time synchronization mode: 'Set manually', 'Synchronize with computer time', and 'Synchronize with NTP server'. The 'Set manually' mode includes fields for 'Date' (year, month, day) and 'Time' (hour, minute, second). The 'Synchronize with NTP server' mode includes an 'SMTP address' field, a 'Time Zone' dropdown menu, and radio buttons for 'manual' and 'frequency every' with a 'hours' dropdown. A 'Submit' button is located at the bottom of the form. The interface also includes a sidebar on the left with 'Date and Time' and 'Users' options, and a footer bar with 'image', 'network', 'system', 'operation', and 'CF images' buttons.

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 NTP 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:

Current Camera Time: Shows the current date and time of the LAN CAMERA

Set manually: Manually sets the date and time of the LAN CAMERA.

Synchronize with computer time: Synchronizes with the linking computer.

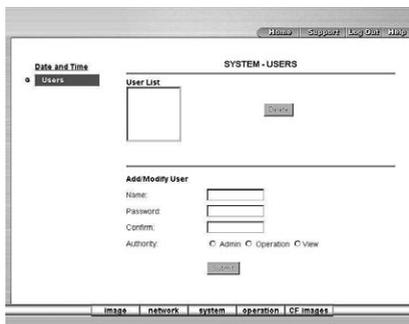
Synchronize with NTP server: Synchronizes with the NTP server. In this mode, two choices of adjusting are provided: doing it manually or setting the frequency to enable the system to do it automatically.

Submit: Click to submit the new setting to the LAN CAMERA.

- **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.

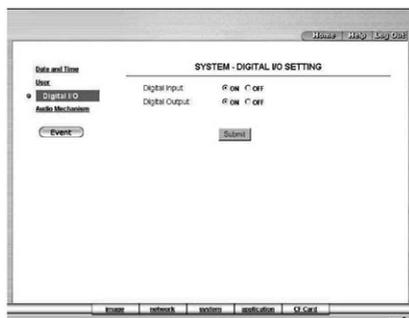
Authority: Choose an authority option of the user's name from: Admin, Operator, and Viewer.

Submit: Click to submit the new setting to the LAN 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 „System - Date and Time” page to enter the „SYSTEM - 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:

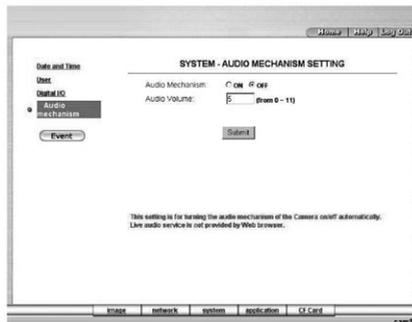
Digital Input: Select „ON” or „OFF” to use the GPIO connector, or shut it down.

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 „System - Date and Time” page to enter the „SYSTEM -AUDIO MECHANISM SETTING” page.



2. Mark „Audio Mechanism” „ON” or „OFF” and type in your desired audio volume level from a range of 0 to 11.
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. Live audio service is not provided by the Web browser.

Description of function keys:

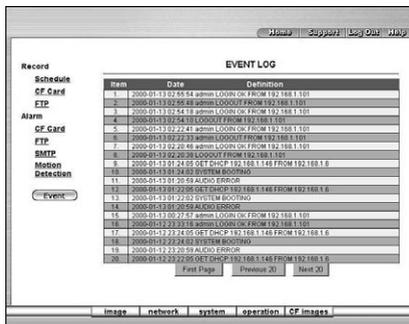
Audio Mechanism: Select „ON” or „OFF” to activate or deactivate the function.

Audio Volume: Enter your desired volume level.

- **View the Event Logs.**

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

1. Click the **Event** 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 page

Next 20: Displays the next 20 page

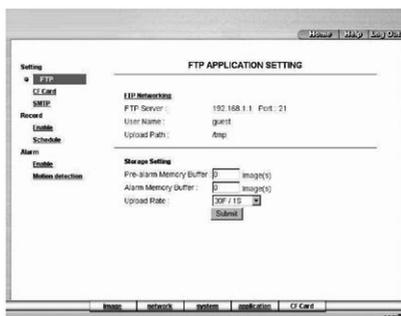
5.1.5 Change the Application Setting

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

- **Change the Application Setting - FTP APPLICATION SETTING.**

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).



2. For storage setting, type in the respective required numbers of images you wish to set in the „Pre - Alarm Memory Buffer” and the „Alarm Memory Buffer” 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.

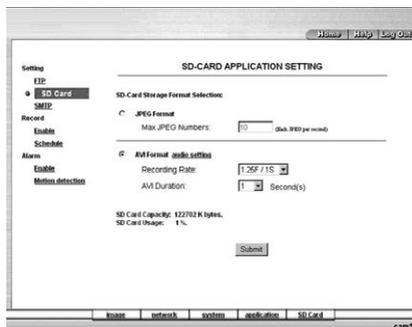
Alarm Memory Buffer: Determines the selected length of the image buffer after an alarm.

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 and as necessary to upload recording data live.

1. Click the **SD Card** button on the top left to enter the „SD CARD APPLICATION SETTING” page.



2. You have an option as to which SD - card storage format to use, the JPEG or the AVI. Click your selected format and click „**Submit**” to set it.
3. If it's JPEG you want, fill in the „Max JPEG 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:

JPEG Format: One image per file

Max JPEG 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.

- **Change the Application Setting -SMTP APPLICATION SETTING.**

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

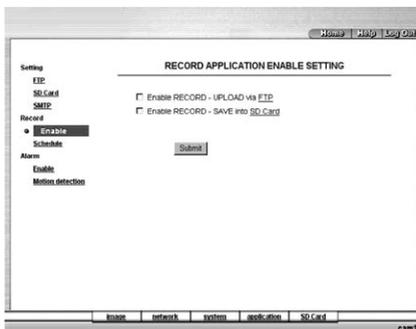
Description of function keys:

File numbers: Sets the quantity of images per Email.

- **Change the Application Setting -RECORD APPLICATION ENABLE SETTING.**

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

1. Click the **Enable** button on the left side of the record to enter the „RECORD APPLICATION ENABLE SETTING” page.



2. Click „Enable RECORD - UPLOAD via FTP” to checkmark the attached box and activate the function.
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 „RECORD - SCHEDULE” page.

MON	TUE	WED	THU	FRI	SAT	SUN

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

Description of function keys:

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

Chart: Schedule list

Submit: Click to submit the new setting to the LAN 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 and as necessary.

1. Click the **Enable** button on the left side of the record to enter the „ALARM APPLICATION ENABLE SETTING” page.

MON	TUE	WED	THU	FRI	SAT	SUN

2. Click „Enable ALARM - UPLOAD via FTP” to checkmark the attached box and activate the function.
3. Click „Enable ALARM - SAVE into SD Card” to checkmark the attached box and activate the function.
4. Click „Enable ALARM - UPLOAD via SMTP” to checkmark the attached box and activate the function.
5. Enter the „Alarm Duration” you have chosen.
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:

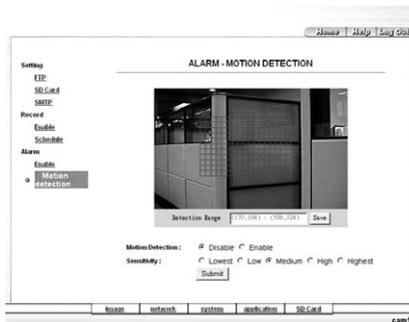
- Enable Alarm - Upload via FTP:** Activates or deactivates the alarm recording upload to the FTP.
- Enable Alarm - Save Into SD Card:** Activates or deactivates the alarm recording to be saved to the SD Card.
- Enable Alarm - Upload via SMTP:** Activates or deactivates the alarm recording upload to 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 and as 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).
3. Click the Save button to save the motion detection range.
4. 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.

Submit: Click to submit the new setting to the LAN CAMERA.

5.1.6 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 and as necessary.

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

FILELIST of MEMORY CARD				
Filename	Date	Time	Size	
 31VRB2E.AVI	2004/02/13	15:50:38	96K	DELETE
 31VRB3P.AVI	2004/02/13	15:51:20	96K	DELETE
 31VRB5H.AVI	2004/02/13	15:52:16	96K	DELETE
 31VRB9O.AVI	2004/02/13	15:54:24	96K	DELETE
 31VRBAM.AVI	2004/02/13	15:55:02	96K	DELETE
 31VRBP8.AVI	2004/02/13	15:57:28	96K	DELETE
 31VRBH6.AVI	2004/02/13	15:58:30	96K	DELETE
 31VRBQ7.AVI	2004/02/13	16:03:18	96K	DELETE
 31VRC7S.AVI	2004/02/13	16:10:36	93K	DELETE
9 file(s) and 895 KBytes free				
HTTP SERVER AT cam3				

FILELIST of MEMORY CARD				
Filename	Date	Time	Size	
 31VRCADZ.TAG	2004/02/13	16:12:08	266	DELETE
 31VRCGEZ.TAG	2004/02/13	16:15:22	266	DELETE
2 file(s) and 339 KBytes free				
HTTP SERVER AT cam3				

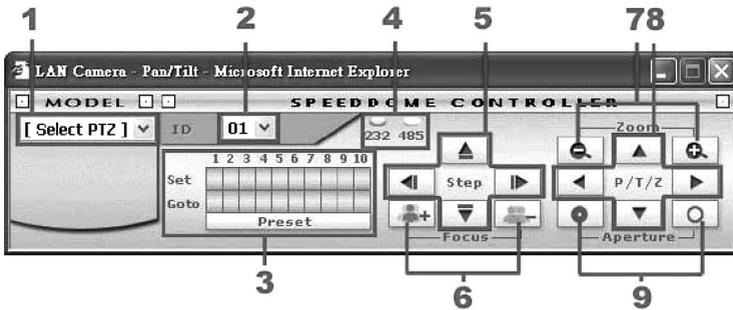
2. Click the desired file to display the images therein.
3. Every file can be deleted by clicking the attached „DELETE” hyperlink.

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 and click „SAVE”.

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

5.1.7 Change the Pan/Tilt setting

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



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

5.1.8 PPPoE & DDNS

Using the PPPoE

1. Install the XDSL software (obtained from your ISP dealer) in your PC.
2. Search your LAN 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 LAN CAMERA IP address in the URL (check step 2 above) → Enter → LAN CAM images will appear.

PPPoE Settings

1. Enter the LAN 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 LAN 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 LAN CAMERA IP address (the same address as in the PPPoE settings and step 3 above) → You can see the LAN CAM images.

Application for DDNS

1. Enter the LAN CAMERA home page → Choose the network → Type in „User name: admin” and „Password: 9999” → Click „OK”.
2. Choose DDNS → Enable DDNS → Choose DDNS type (preferably the Dyn DNS) → Click „Apply”
3. Auto enter the „DynDNS” Website home page → Select „Account” → Enter the „Account” page
4. Choose the left side of the „Create Account” page → Enter the „Create Account” page
5. Click „Agree” → Put in your „User name” (for example, „abc123”) → Put in your Email address (for example, „abc123@yahoo.com”) → Reconfirm your Email address → Enter „Password”, for example „7777” → Confirm your password again → Click „Create Account” (if successful, the words „Account Created” will appear - if false or flawed or identical to someone else's „User name”, the page will remain unchanged; you must now change the wrong items).
6. Enter your Email address to receive the Email sent by the DDNS Website (your address would, for example, be „abc12 @yahoo.com”) → Open the Email → Click the Email, which includes the formula „www.dyndns.org / account / confirm / ----.” → Enter the above Website page → Click „log in” → Type in your „User name” and „Password” („User name: abc123”, and „Password: 7777”) → Log in successful.

7. Click „Account” → Type in your „Account password” again → Click „Dynamic DNS (Add host)” → Enter the „New dynamic DNS host page” → Type in the „host name”, for example „abc123” → Choose a host name from the drop - down list to the right of the „host name” entry (for example, „Homeip.net”) → Click „Add host” → The procedure is successfully completed → You now have an „abc123.homeip.net” domain address → Close the Website page.

DDNS settings

1. Check your LAN 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 accomplished → 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 LAN 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.

5.2 The LAN CAMERA IP Surveillance

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

System Requirements for the Viewer Software:

- Standard PC with P-IV processor and >1.8GHz system clock
- 128MB RAM at least (512-MB or higher recommended)
- WIN 2000-SP4, WIN XP-SP2
- 4MB VGA card capable of 24-bit 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).

5.2.1 Introduction to IP Surveillance

The IP surveillance allows you to access many units of the LAN 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 LAN CAMERA.
- Store, search, and review recorded video from the PC, and SD card.
- Change a regular record, event record, and timer properties.

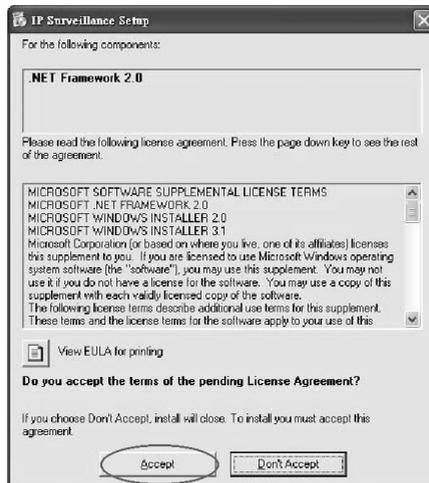
Before you are ready to view images from a desktop, you need to have your LAN CAMERA networked by obtaining a 10/100 base-TX Ethernet data cable (Standard RJ-45) to connect the LAN CAMERA to your LAN/WAN. Now enter the main menu to set the IP address.

5.2.2 Install the IP Surveillance in your PC

Install the IP surveillance from the supported CD-R.

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

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



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

Install the IP surveillance for the ZIP file.

1. Save the ZIP file to your PC and extract the file to a designated directory.
2. Open the extracted folder. The folder contains 1 file.
3. Click on the  icon to execute the installation and then follow the on-screen instructions to proceed with the rest of the installation procedure.
4. After the installation is complete, click the **START** menu from your computer, and point to **Programs / IP surveillance** to start the **IP surveillance** program.

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

5.2.3 LAN CAMERA software

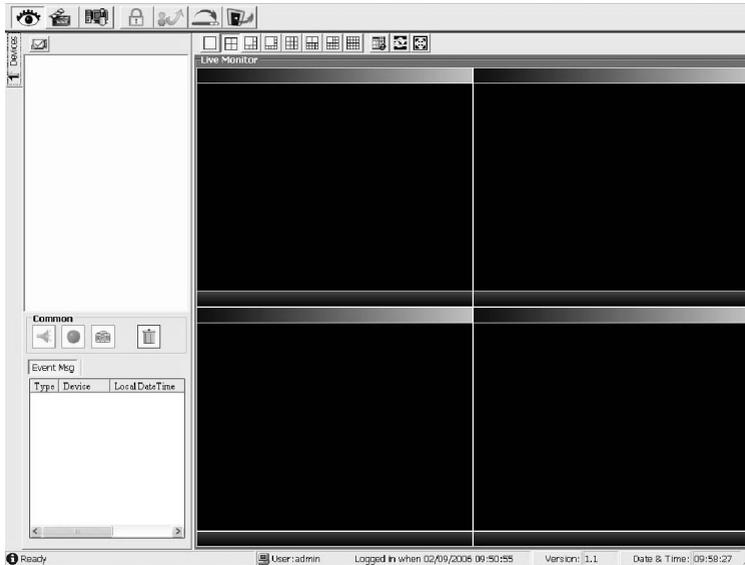
Login the LAN CAMERA software

Once the IP surveillance 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 IP surveillance: both the user name and password must be entered correctly. Click the „**Cancel**” button and exit the login of the Network Viewer.



View the LAN CAMERA video from a remote PC

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



1. Press the  button to enter the **Settings** page.
2. Press the  button to add a new device group. After typing 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 Lan Camera Wizard” page to discover the connection of the LAN CAMERA - type device in the LAN. Instantly the „Search Lan Camera „ page will appear. Click the device of your choice and click **„Select”** at the bottom of the page to access the „Connect Lan 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 Lan 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 Lan 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 LAN CAMERA, please repeat the above instructions.

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 Circle configuring button: Click this button to see the following channels.
4. The Group Circle button: Click this button to change the different group of display.
5. 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.

6. 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.

7. 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”.
8. Click this button to hide the „devices list”, „common” and „alarm message list” boxes from view behind the video display screen.
9. 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.
10. 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.

11. Live Event Msg: Shows the alarm types, the device names and the occurrence time.



Sensor alarm event: Detects a sensor alarm.



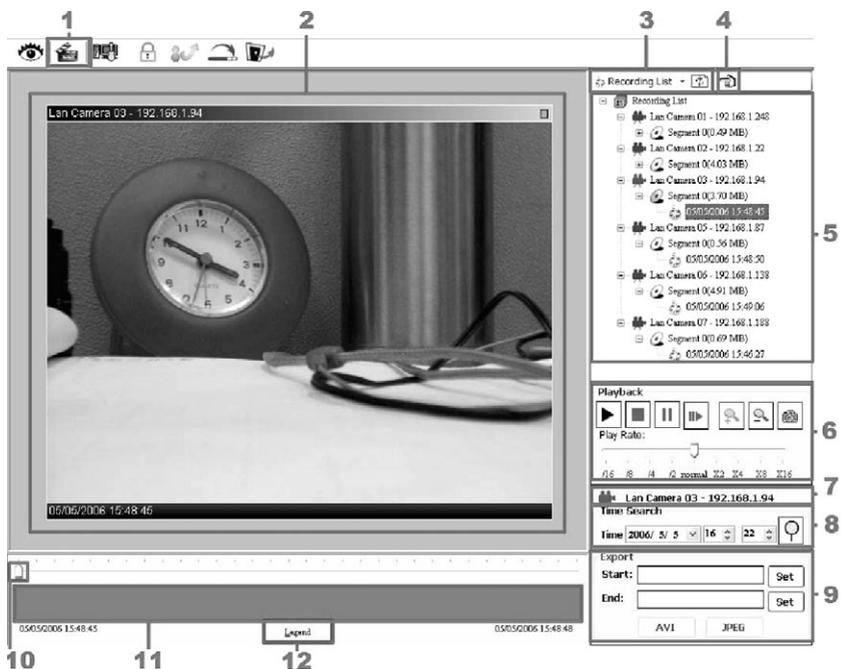
Motion alarm event: Detects a motion alarm.



Full Disk event: When the hard disk is full, the device will stop recording and the „Full Disk event” message will appear on the list. If the setting of recording is „Rewrite”, the device will continue recording by displacing the old data.

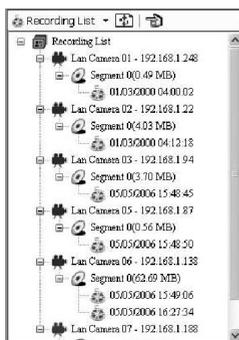
Playback Viewer

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

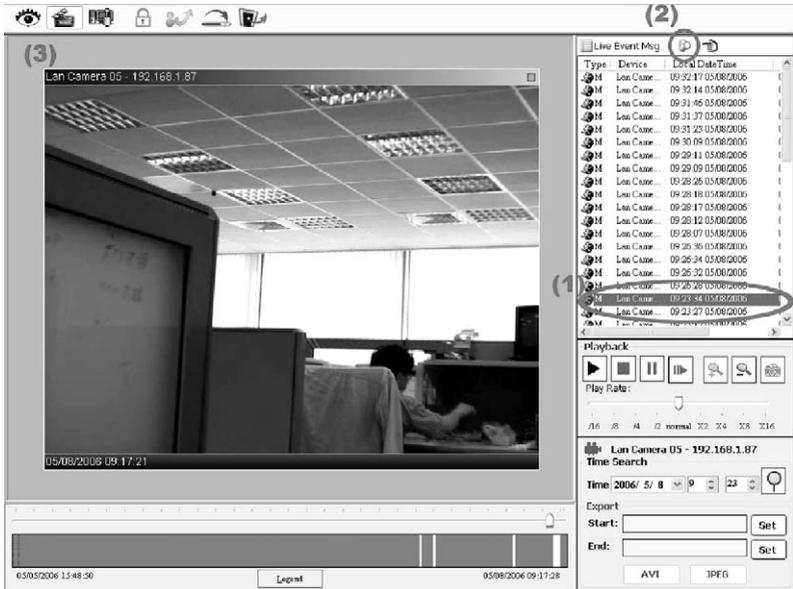


This alarm events which were recorded will be marked in pink colour.

Click  to refresh the recording list

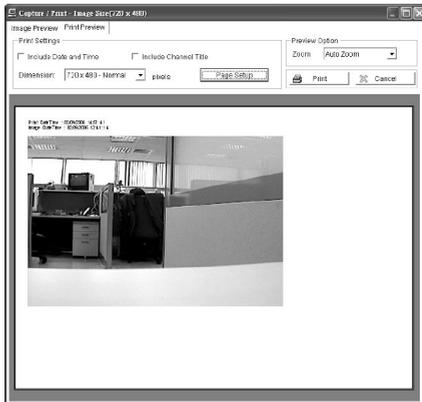
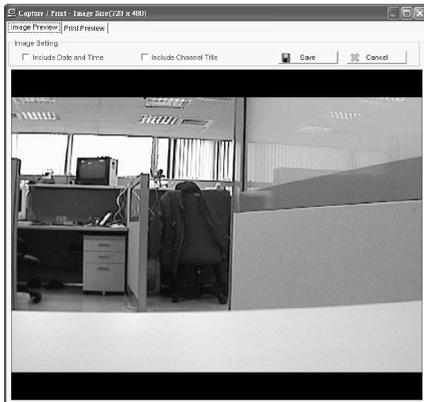
Click  to search a starting point of an alarm

NOTE: To view the starting point of an alarm which was recorded, please (1) select the recorded event and (2) click the  icon, then (3) the starting point will show on the display area.

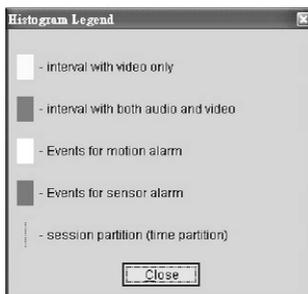


4. Move to left/right area.
5. Recorded video list box. This box allows you to access all recorded video, which are stored in the HDD of the connected devices.
6. Playback function bar
 -  Play - Click to a recorded video from the PLAY LIST.
 -  Stop - Click to stop playing back a recorded video or cease 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.
 - 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.



Setting

Press the  button to enter the Setting page.

1. Home icon, 2. Device Panel icon, 3. Web Page icon, 4. Device icon, 5. Device Panel icon, 6. Web Page icon, 7. Device icon, 8. Device Panel icon

2. Zone 1

- 192.168.1.123 - cam01
- 192.168.1.146 - cam02
- 192.168.1.123 - cam03
- 192.168.1.44 - cam04
- 192.168.1.30 - cam05
- 192.168.1.79:80 - LAN

3. 192.168.1.30 - cam05

02/14/2006 11:10:06

4. Device Recording

START REC

Record Mode

Continuous mode

Event mode

Motion alarm Sensor alarm

Recording Quota

Free Recording Quota: 40 %

Use Recording Quota: 10 %

(1 / 5 Mb)

5. Device Information

Device Title: Iancam

Group Name: Zone01

IP Address: 192.168.1.79

HTTP Port: 80

Device Type: MPEFv1_LANLAM

Image Format: MPEG4

Monitor Alarm Process

Motion Buzzer: Yes

Sensor Buzzer: Yes

Alarm Focus: Yes

Connect Mode: LAN

Recording Scheduler

Disable recording scheduler for this channel

Primary Schedules

Continuous Mode [Schedule Data List](#)

Event Mode

Motion alarm Sensor alarm

Secondary Schedules that is outside the Primary Schedule

Disable

Continuous Mode

Event Mode

Motion alarm Sensor alarm

Ready User: admin Logged in when 02/14/2006 11:12:23 Version: 1.1 Date & Time: 11:16:41

1. The Setting page
2. Function buttons:



Add a new device group. Click this button and type in the new group, then press „OK” to save it.



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



Add a new camera. For mode details please refer to section 5.2.3.



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

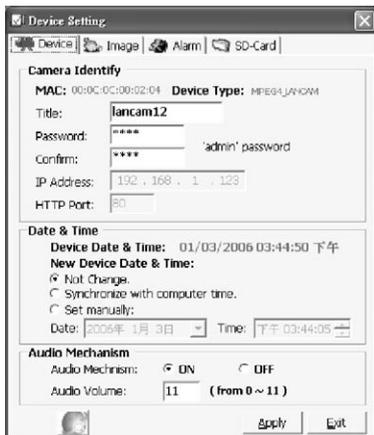


To edit camera. Please select a device then click this button to edit the device.

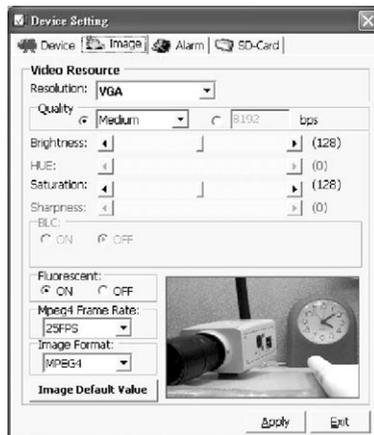


Device setting: Provides four pages of setting.

1. Device Setting page

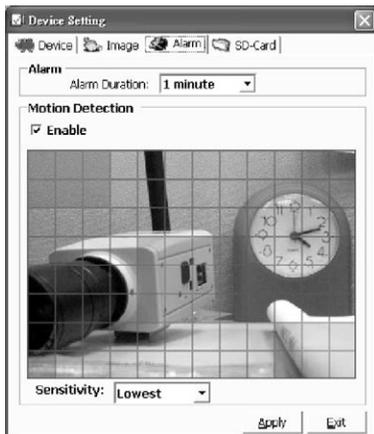


2. Image Setting page

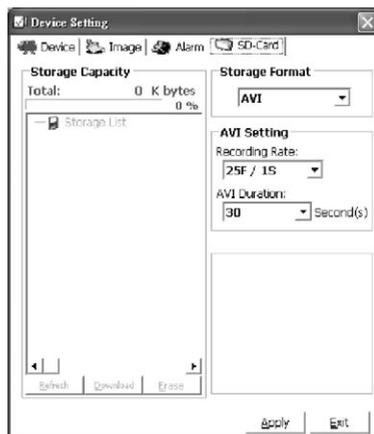


NOTE: The IP Surveillance software connects the Internet to a LANCAM. There may be a problem if the bandwidth is not enough, in which case the speed rate of the image transmissions may become too low. So if you want a satisfactory speed rate in your displays, you can click the „Device Setting” button,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

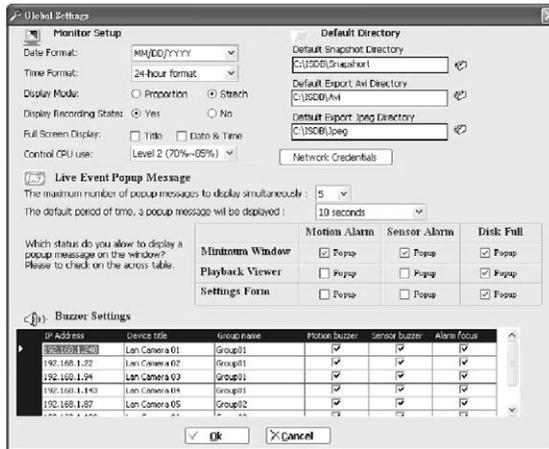


NOTE: Please remember to click the „Apply” button to save the settings.



Provides four pages of setting: the Global Settings, the Recording Settings, the Recording Scheduler and the Authority Setup.

Global Settings

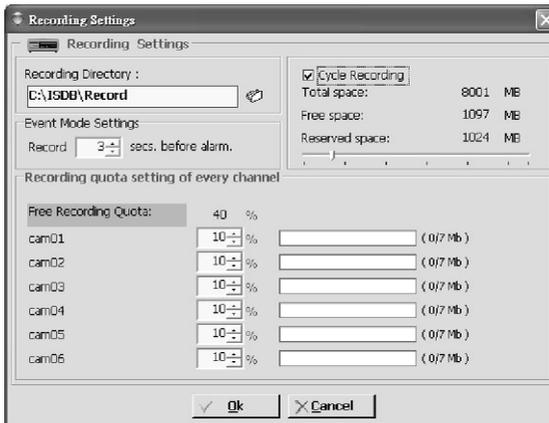


- 1) Monitor setup: Sets the date/time mode, display mode and control the CPU use percentage on five levels.
- 2) Default Directory: Sets the default files' saving path. Click  to select the directory.
- 3) Live Event Pop-up Message: Sets the maximum number of the pop-up messages, and the displaying time.
- 4) Buzzer settings: Sets the buzzer functions. Tick mark the blank space for each device to activate it.

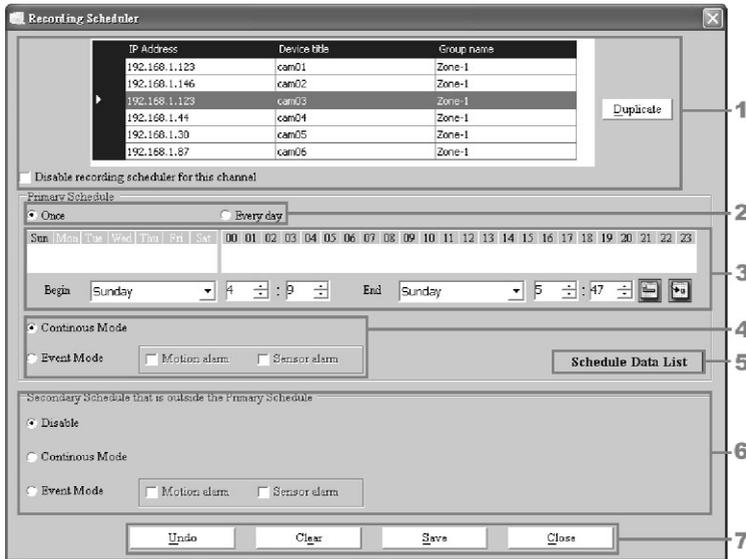


Recording Settings

- 1) Recording settings: You can control the HDD reserved space by using the scroll bar.
- 2) Recording quota setting: Set the maximum recording quota of each channel.



Recording 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.

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

- (7) Option buttons:

Undo: Undo the latest changes.

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

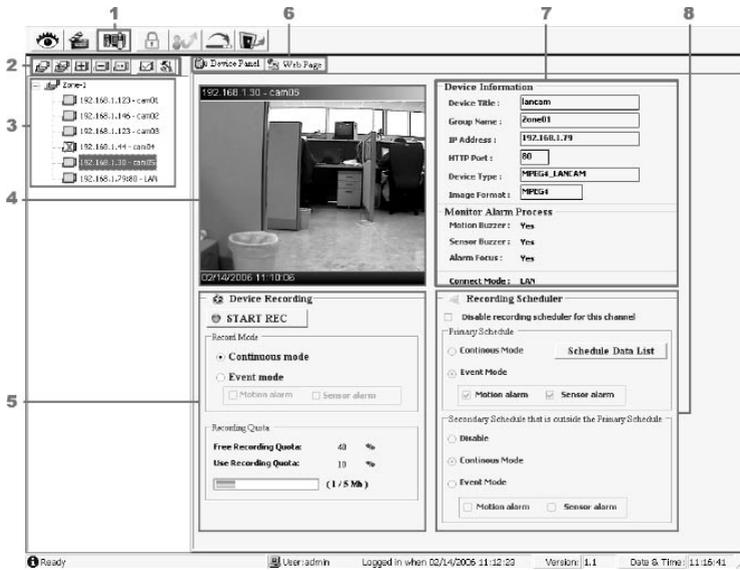
Save: Apply the changes.

Close: Close the window.



Authority Setup

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



3. 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.
4. Display area: Click the title of the camera, and you will see the live image in this area.
5. 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.
6. You can interchange between two buttons here: the „Device Panel” and „Web page” buttons.

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



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

Lock

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



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

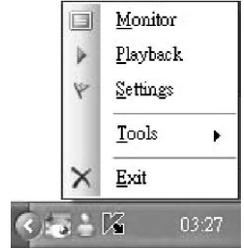
Logout

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

If you want to return to the IP Surveillance monitor, please click the  button once, then select the page which you want to get in.

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

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.



Tray

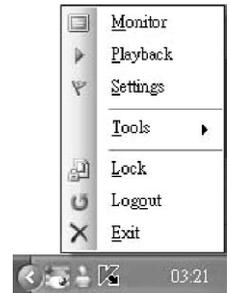
Press the  button to minimize the IP Surveillance monitor into the systray of the Windows taskbar.

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

Exit Setting

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

Click the  button to select the functions on the list.

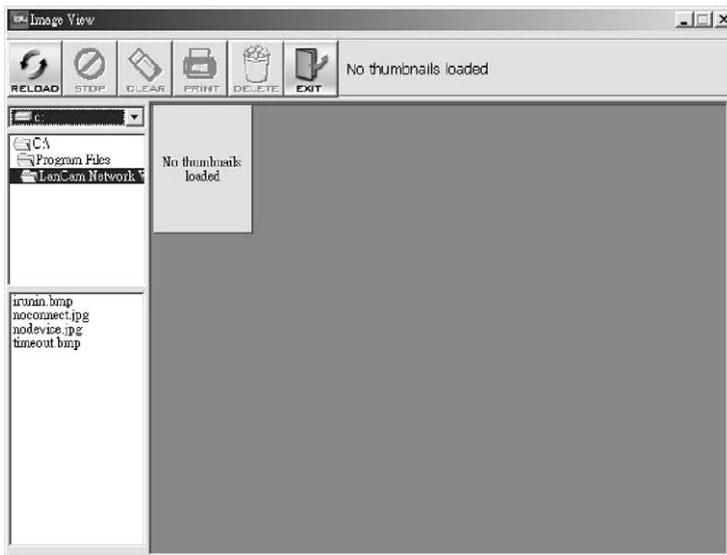


5.2.4 The Image Viewer

The LAN 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 LAN 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 / IP surveillance** to open up the program selection page. Click the **Image Viewer** tag to start the **Image Viewer** program (see a sample screen below).
2. Click the **RELOAD** tag to load the images from a path.
3. Click the **PRINT** tag to get a displayed image printed out from a printer.



6. SPECIFICATIONS

Type	ENC-501L
EDP No.	91423
Imager	1/3" interlaced CCD
System	CCIR/PAL
Resolution	340 TV lines (camera), 352x288 pixels
Sensitivity at 50% video signal	0.26Lux at F1.2 (VT measurement result)
Automatic shutter control (AES)	1/50-1/100,000/sec.
Activity detection	Integrated motion detector
Lens mount	C/CS
Usable iris controls	Manual/DC controlled iris
Secondary Storage	Via SD card
Video output	1Vp-p, CVBS, 75ohms, BNC
Compression standard	M-JPEG
Frame rate	25 frames/sec. max.(recording mode), up to 15 frames/sec. (streaming mode), Picture size: 4~64kB
Transmission rate (Network)	Up to 15 frames/sec.
Image display	Via Web Browser or LAN Cam Viewer Software
Alarm input	1 (software controlled)
Alarm outputs	Open collector (5V / 0.02A max.)
Alarm handling	Automatic connection setup to a specified IP address (PPP, FTP, TCP)
Ethernet interface	10/100 Base-TX, RJ45
Protocols	TCP/IP, UDP, ICMP, FTP, DHCP, PPP, HTTP, DNS, DNNS
Software upgrade	Via SD card
Operation protection	Multilevel and Multiuser - Password protected
Serial interfaces	RS-232, RJ 45 connector
Supply voltage	5DC \pm 10%
Camera mount	CS 1/4" - 20 UNC thread on bottom side
Housing	Metal
Colour	Grey
Temperature range	5°C - 50°C
Dimensions	See drawing
Weight	Approx. 300g
Parts supplied	LanCam Viewer Software, Power supply 230V/50Hz - 2A, C/CS mount ring, 6mm lens

Accessories

EDP No.	Description
70771	Wall mount bracket with ball joint, 1/4" camera fixing screw, Pantone 877
70769	Wall mount bracket with ball joint, 1/4" camera fixing screw, beige grey
71848	SD Memory card 256MB for DSR-01/-01N/-04N video recorder, ENC-501 camera series
76011	Surveillance Software for Network cameras from Eneo, Axis
76012	Client Software for Zelarix_AC S
47162	F1.2/2.2mm Fixed focal length lens with No Focus Shift, 1/3" CS mount
47156	F1.2/2.8mm Fixed focal length lens with No Focus Shift, 1/3" CS mount
47157	F1.2/4mm Fixed focal length lens with No Focus Shift, 1/3" CS mount
47158	F1.2/6mm Fixed focal length lens with No Focus Shift, 1/3" CS mount
47159	F1.2/8mm Fixed focal length lens with No Focus Shift, 1/3" CS mount
47161	F1.2/2.2mm DC lens with No Focus Shift, 1/3" CS mount
47147	F1.2/2.8mm DC lens with No Focus Shift, 1/3" CS mount
47148	F1.2/4mm DC lens with No Focus Shift, 1/3" CS mount
47149	F1.2/6mm DC lens with No Focus Shift, 1/3" CS mount
47154	F1.2/8mm DC lens with No Focus Shift, 1/3" CS mount
43252	F1.2/4.5-12.5mm lens / varifocal length with No Focus Shift, 1/2" CS mount
43237	F1.4/2.8-11mm DC lens / varifocal length with No Focus Shift, 1/3" CS mount
43238	F1.0/3-8mm DC lens / varifocal length with No Focus Shift, 1/3" CS mount
43248	F1.2/4-12mm DC lens / varifocal length with No Focus Shift, 1/2" C mount
43251	F1.2/4.5-12.5mm DC lens / varifocal length with No Focus Shift, 1/2" CS mount
45251	F1.6/5-50mm DC varifocal lens with No Focus Shift, 1/3" CS mount
43249	F1.3/7.5-50mm DC lens / varifocal length with No Focus Shift, 1/2" CS mount
43239	F1.4/10-40mm DC lens / varifocal length with No Focus Shift, 1/2" C mount

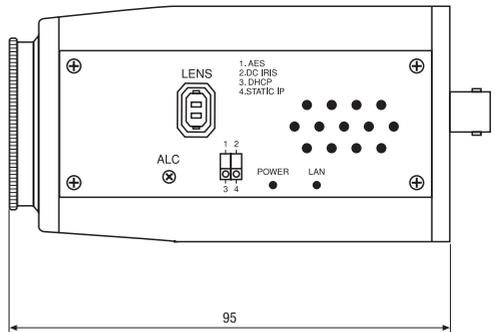
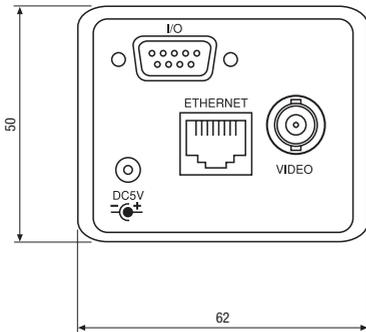
Accessory of

EDP No.	Description
71856	Digital IP Recorder, (8 Channel), 80GB, 12VDC/230VAC
71875	Digital W-LAN IP Recorder, (8 Channel), 80GB, 12VDC/230VAC

7. FUNCTION OF CLIENT PC

System requirement	Windows
Browser	IE 5.x 6.x
Camera setup	Username / IP / PROXY / Password / Time / Date / Motion / Alarm
Multi-camera link	> 4 Cameras
Viewer	1 / 4 SPLIT
Save file format	BMP / JPEG / AVI

8. DIMENSIONAL DRAWINGS



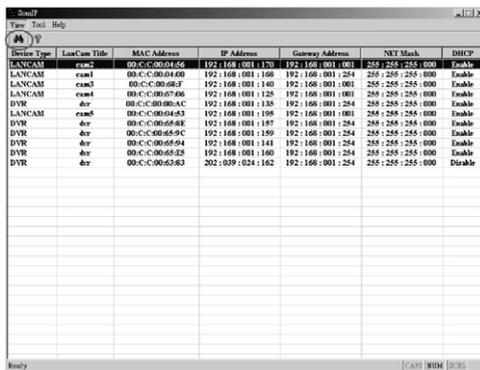
Dimensions: mm

APPENDIX 1.

SCAN IP

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

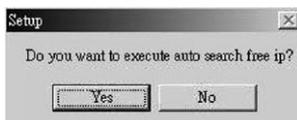
1. Click the  button to discover the connection of the all-type device in the LAN. The **Device List** will display the connection of the all-type device.
2. Select the desired device from the **Device List**.
3. Click the desired device to show the window while the LANCAMERA information acts to display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



Device Type	LANCam Title	MAC Address	IP Address	Gateway Address	NET Mask	DHCP
LANCAM	cam1	00-C-C00-04-00	192.168.001.108	192.168.001.254	255.255.255.000	Enable
LANCAM	cam3	00-C-C00-68-F	192.168.001.140	192.168.001.001	255.255.255.000	Enable
LANCAM	cam4	00-C-C00-67-06	192.168.001.125	192.168.001.001	255.255.255.000	Enable
DVR	dvr	00-C-C00-00-A-C	192.168.001.135	192.168.001.254	255.255.255.000	Enable
LANCAM	cam5	00-C-C00-64-63	192.168.001.106	192.168.001.001	255.255.255.000	Enable
DVR	dvr	00-C-C00-68-08	192.168.001.187	192.168.001.254	255.255.255.000	Enable
DVR	dvr	00-C-C00-68-9C	192.168.001.189	192.168.001.254	255.255.255.000	Enable
DVR	dvr	00-C-C00-65-94	192.168.001.141	192.168.001.254	255.255.255.000	Enable
DVR	dvr	00-C-C00-68-83	192.168.001.160	192.168.001.254	255.255.255.000	Enable
DVR	dvr	00-C-C00-63-63	202.039.024.162	192.168.001.254	255.255.255.000	Disable

4. Do you want to execute auto 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.



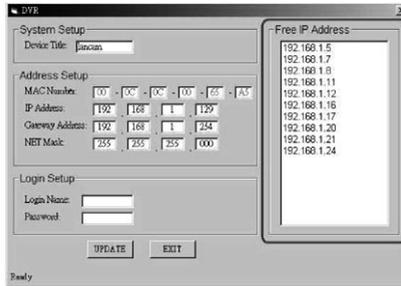
5. Manual insertion of „Free IP Address”

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

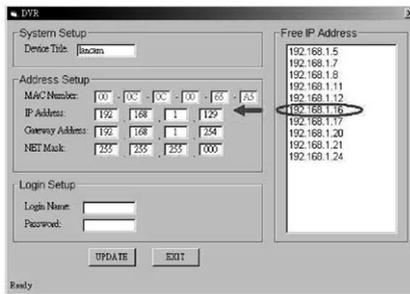


6. Auto search „Free IP Address”

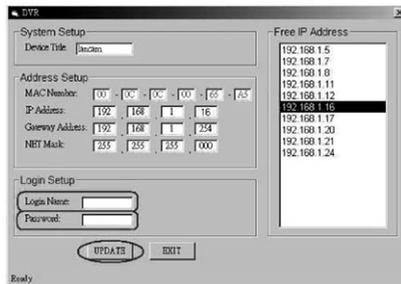
If you clicked „Yes” the „Free IP Address” box will appear on the right.



7. Select and double click any of the addresses in the „Free IP Address” box on the right to enter it into an IP Address on the left.



8. 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.



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

APPENDIX 2.

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

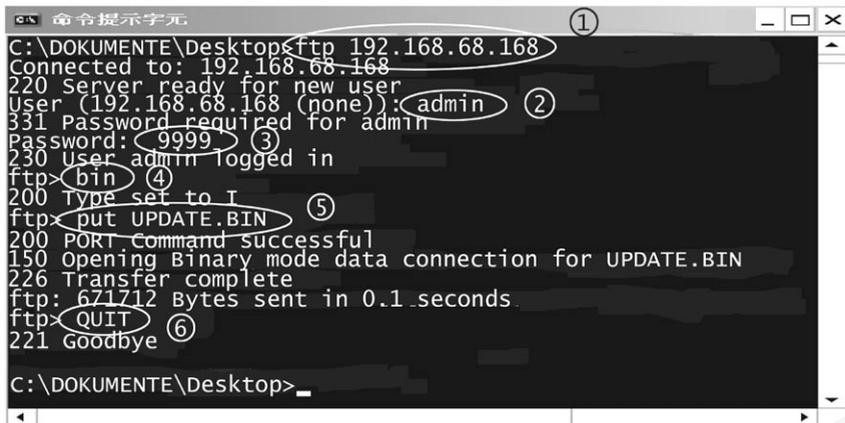
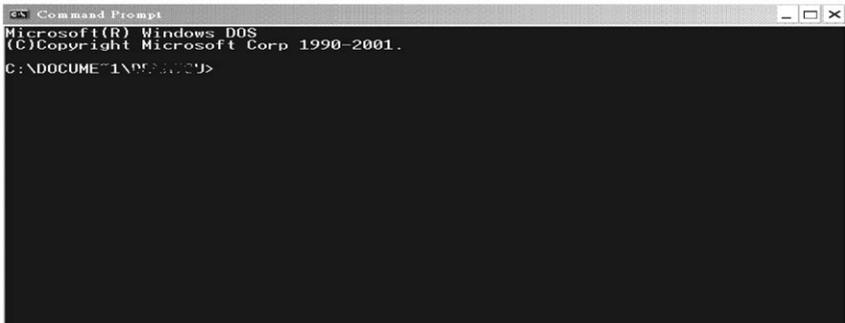
APPENDIX 3.

Lancam® FTP Update Procedure

1. Click on the „Start” menu (at the lower left of your screen) and select Run...”. Then type **command** or **cmd** into the box and click „OK”.



2. You should see an MS-DOS Prompt window appear.



3. Now we are ready to FTP! After you connect your computer to the network, type in **ftp 192.168.1.168** like procedure ① above.
Warning: The IP Address of 192.168.1.168 is an example, and it should be modified upon your own Lancam® setting.
4. Put in your login account and password like procedure ② and ③ .
0(Default setting of Lancam® is **admin** and **9999**).
5. Before you upload any file, you need to type in the command **bin** like procedure ④ . This is to ensure that the files get transferred from your computer to the FTP server in binary format instead of ASCII type.
6. To start uploading the update file, use the **put** command. For this case, you should write **put update.bin** like procedure ⑤ . After your file gets uploaded, a message will appear telling you that the transfer is complete and you will be provided with some basic statistics on the data transfer.
7. To end your FTP session, type in **quit** or **bye** like procedure ⑥ . And to quit out of MS-DOS prompt, type **exit**.
8. Lancam® itself will invoke an update procedure in 10 seconds after receiving your file. The red LED on its rear side will flicker during the update period. And it will reboot automatically after all steps were done correctly.

Notes

1. All illustrations may be a little varied under your Windows® OS.
2. The filename you uploaded during procedure ⑤ must be **update.bin** and make sure of its validity.
A vital error may be occurred due to wrong source.
3. Using **cd** command to change the path of uploading file if any necessary.
4. All network services will shutdown when processing updating; however, you should re-connect Lancam® after about one minute.
5. Please dont power-off Lancam® during step 8 above or physical damages will be caused.

Quick Start Installation Guide for

ENC-501W

Installation Accessories:

Lan Camera Software (The Network Viewer).

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

There are two WI-FI setup modes for LAN environment that are described in this guide: **Ad-hoc** and **Infra-structure**.

Ad-Hoc: One computer to one wireless camera connection only.

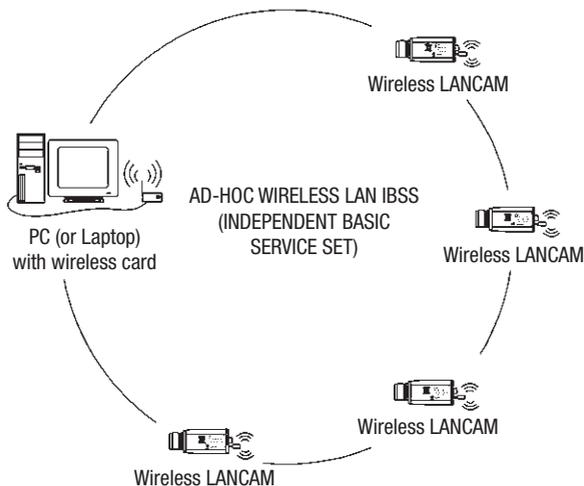
Infra-structure: You have an Access Point (AP) and through which you wish to communicate with a computer and a (or many) wireless Lan Camera.

Ad-hoc Wireless LanCam Installation on the LAN

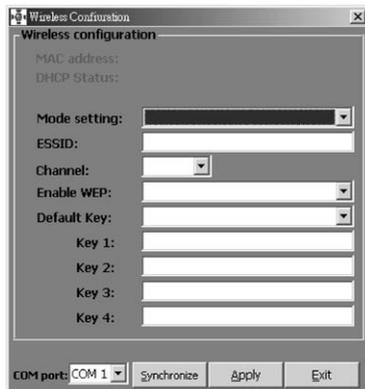
1. Install the Network Viewer software to a computer (or a laptop)
2. Use a RS-232 cable to connect a wireless LANCAM **with a PC** (or a laptop)

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

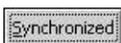
Since the Lan Cam Default Static IP address is: 192.168.1.168, the IP address for PC Network TCP/IP Properties should be set within 192.168.1.X (X value can be set as between 1 to 255, excluding 168).



3. Click on the „**START**” menu from your computer, and point to „**Programs / LanCam Network Viewer**” to start the „**Wireless Setup**” program. Open the „**wireless setup**” and you will see the window shown below.



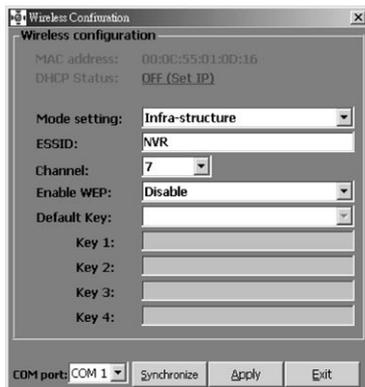
4. Click the „**Synchronized**” button to load the LANCAM's settings.



5. When the loading is complete, the window will show the message on the left. Click „**Yes**” to close the message.



6. The window now shows the LANCAM's settings.



- If you wish to change any of the above setting, type the new information directly into the window. The „**Mode setting**” has two options: „Infra-structure” and „Ad-hoc”. You should enter „**Ad-hoc**”, and click „**Apply**”.
- Click the „**Apply**” button to transfer the new settings to the LANCAM.



- Now the settings are complete.



NOTE: If your PC does not a wireless card, please insert a wireless card in your PC and use the card to search and join for the wireless connection.

- Once the settings are complete, while you are still on your PC, you can Login to the LAN camera software (the Network Viewer) and view the videos from your wireless LAN camera. Please refer to IV-101 LC-RT Installation manual, Section 5.2.3.1.

NOTE: The wireless LANCAM 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 LANCAM Default Static IP address. But the LANCAM Static IP address can only appear if there is a wireless connection between the LANCAM and another wireless device. If there is no such connection, the LANCAM Default Static IP address will not appear on the monitor screen.

Infra-structure Wireless LanCam Installation on the LAN

There are two most frequently encountered scenarios. (1) a quick set up with an existing **AP** device and (2) a quick set up with a new **NVR** (a network Digital video recorder with a **Built-in AP** device).

A. Set up with an existing AP Device:

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

B. Set up with a new NVR

- Use a RS-232 cable to connect a wireless LanCam with the wireless NVR

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

Since the Lan Cam Default Static IP address is: 192.168.1.168, the IP address for PC Network TCP/IP Properties should be set within 192.168.1.X (X value can be set as between 1 to 255, excluding 168).

- Assemble all components that came with the NVR and LANCAM. (i.e. attach the antenna to both the NVR. Add the Lens to every LANCAM.)
- Connect the TV Monitor to the NVR with a BNC cable.
- Power on the NVR: plug the NVR power cord into the outlet.

5. Power on every LANCAM: plug every LANCAM power cord into the outlet. Make sure the NVR is set at „**power on**” first before this step.
6. Register LANCAM to the NVR:
 - a. Connect the NVR and one of the LANCAMs using the RS-232 cable.
 - b. Press the **Setup** button to enter the „**MAIN MENU**” page.
 - c. Select the item titled „**COMMUNICATION**” and press the „**Enter**” button to access the „**COMM. SETTING**” page.
 - d. Select the item termed „**WIRELESS**” and push „**Enter**” button twice to access the „**WIRELESS SETTING**” page.
 - e. Choose the item labeled „**OPERATION**” and press the „**Enter**” button twice to go to the „**OPERATIONAL SETTING**” page.
 - f. Select the item titled „**ESSID**” and push „**Enter**” button twice to get into the „**ESSID SETTING**” page.
 - g. Give „**ESSID**” your local wireless network name, and use the „**<**”, „**>**”, „**^**” and „**v**” buttons to change the existing letters based on your network name.
 - h. Press „**Enter**”, select „**OK**” and go to the „**WIRELESS PAGE**”.
 - i. Push „**Enter**” to access the „**WIRELESS SETTING**” page and go to the item termed „**LANCAM SETUP**”.
 - j. Press „**Enter**”, choose „**RS-232**” and push „**Enter**” again, upon which the terms „**Waiting**” and „**SETUP OK**” will flash on at the bottom of the screen.
 - k. Push the „**Setup**” button to save the setup data.
 - l. When the words „**WAITING**” flash on and off at the bottom of the screen, and if the screen goes blank, you can **reboot** the camera by unplugging the „**Power**” adaptor at the back of the LANCAM once to turn off the device and plug the adaptor back into the LANCAM one more time to resume operation.
7. Go to the „**IP/ACCOUNT**” option on the „**LANCAM SETUP**” page on the NVR setup menu; choose any channel (between 1 and 8) to set up the LANCAM IP address. Push the „**Search**” button on the NVR to find all LANCAM IP addresses and push the „**Enter**” button on the NVR to choose one of them to set the channel.

Repeat step 6 to set each LANCAM IP address.

NOTE: Once the LANCAM power cord is plugged into the outlet, it will scan the AP or NVR device automatically and obtain an IP address from a DHCP server. This action will continue until a DHCP server is found. If the LANCAM cannot find it after two minutes, its IP address will change to static IP mode as 192.168.1.168. The user can push the DHCP DIP switch on the side of the LANCAM down and up once to reset the static IP to dynamic IP (DHCP client).

NOTE: If the DHCP server of the NVR is activated, the default NVR IP address is set as 192.168.1.205.



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