WebView

MPEG4/JPEG Dual Mode

Network IP Camera

PROFESSIONAL SERIES

User Manual

[Model MNC-L200/MNC-W200]

Revision 1.0.0

This manual is intended for administrators and users of the WebView MPEG4/JPEG Dual Mode Network IP Camera**[Model MNC-L200/MNC-W200]**, and is applicable for software release 1.4.0 and later. It includes instructions for using and managing the WebView MPEG4/JPEG Dual Mode Network IP Camera on your network. Previous experience of networking will be of use when using this product. Some knowledge of UNIX or Linux-based systems may also be beneficial, for developing shell scripts and applications. Later versions of this document will be posted to www.micro-web.co.kr , as required.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures;

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a different circuit to the receiver.
- Consult your dealer or an experienced radio/TV technician for help.
- Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards.

This equipment has been tested and found to comply with the limits for Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his/her own expense will be required to take whatever measures may be required to correct the interference.

FCC Caution : Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of FCC Rules. Operation of the device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference that may cause undesired operation.

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Important Note:
FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. IEEE 802.11b or 802.11g operation of this product in U.S.A. is firmware-limited to channels 1through 11.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

This equipment generates and radiates radio frequency energy, and must be installed and operated while maintaining a minimum body-to-camera distance of 3 feet (1 meter).

Trademark Acknowledgments

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Video Standard and Product Classification

As the video standard varies country to country, users are asked to check it first and choose right model. The two most common video standards used are NTSC and PAL.
NTSC is the video system or standard used in North America and most of South America. In NTSC, 30 frames are transmitted each second. Each frame is made up of 525 individual scan lines.
PAL is the predominant video system or standard mostly used overseas. In PAL, 25 frames are transmitted each second. Each frame is made up of 625 individual scan lines.

Up to video standard, the models of MPEG4/JPEG dual mode Network IP Camera are as follows;

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MNC-L200N : Wired MPEG4/JPEG Dual Mode Network IP Camera for NTSC standard
MNC-L200P : Wired MPEG4/JPEG Dual Mode Network IP Camera for PAL standard
MNC-W200N : Wireless and wired MPEG4/JPEG Dual Mode Network IP Camera for NTSC standard
MNC-W200P : Wireless and wired MPEG4/JPEG Dual Mode Network IP Camera for PAL standard

To determine your video standard, refer to the chart below ;

PAL
Afghanistan, Algeria, Argentina (N), Austria, Australia, Bangladesh, Belgium, Brazil (M), China, Denmark, Finland, Germany, Hong Kong, Iceland, India, Indonesia, Iraq, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Liberia, Malaysia, Netherlands, Nigeria, Norway, New Guinea, Pakistan, Singapore, South Africa, South W. Africa, Sudan, Sweden, Switzerland, Thailand, Turkey, Uganda, United Kingdom, United Arab Emirates, Yugoslavia, Zambia

NTSC
Canada, Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, Japan, Mexico, Nicaragua, Panama, Peru, Philippines, Puerto Rico, South Korea, Taiwan, U.S.A.

MPEG4/JPEG Dual Mode Network IP Camera Family
[Model : MNC-L200/MNC-W200]
User Manual
Version 1.0.0
Oct. 2006

Important Notice

1. Camera surveillance laws may differ for each country. Please contact the local authorities to avoid any surveillance law violations.
2. Please note that the CCD lens that comes with the Mpeg4 Network IP Camera can be damaged permanently if the camera lens is exposed to direct sunlight. If your application demands prolonged exposure to sunlight, you should consider equipping it with a sun visor.
3. The Mpeg4 Network IP Camera is not weatherproof. Please be aware of environmental specifications included in the manual. For outdoor use, please use a weatherproof case to protect the Mpeg4 Network IP Camera from water, moisture, or temperature (higher or lower than specification). For Mpeg4 Network IP Camera cleaning, gently wipe with clean dry cloth.
4. Be sure to use only the DC adapter that is provided with your camera. Connecting the Mpeg4 Network IP Camera directly to AC current may cause electric damages to the Camera.
5. Be cautious when handling Network IP Camera. Physical shocks may cause serious damage.
6. Be sure to mount the Mpeg4 Network IP Camera securely to avoid any human injures. Please keep the Mpeg4 Network IP Camera out of reach of children.
7. If Mpeg4 Network IP Camera does not operate properly, please contact the closest local Mpeg4 Network IP Camera distributor for after sales service. In all cases, you are prohibited to disassemble the product. If so, warranty is invalid.

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1 Product Overview

1.1 About Mpeg4 Network IP Camera

[Model : MNC-L200]

[Model : MNC-W200]

The Mpeg4 Network IP Camera is an all-in-one networking device, which contains a digital color camera, powerful web server, optimized embedded operating system, hardware for image compression, and a physical Ethernet connection. The camera does not need any additional software or hardware. Simply provide power and connect an Ethernet Cable and view from any computer on the Network.

The Mpeg4 IP Camera is ideal for surveillance applications that require high quality, full motion video and audio, as well as comparatively low bandwidth demands on the network. Mpeg4 Network IP Camera provides an easy user interface for remote access to receive the optimal synchronized video and audio from anywhere anytime over the Internet with the popular Internet Explorer Web Browser, as easy as surfing any regular Web sites. More than just a high-performance Network Camera, the Mpeg4 Network IP Camera also possesses many advanced features to provide the adequate personal or SI solutions, such as, Remote Surveillance, Home/Business Security, Audio/Video Conference, motion detection etc....

1.2 Main Features and Benefits

Convenient Operation

The Mpeg4 Network IP Camera does NOT need any additional software or interaction with any other server. The only software needed is a common web browser, such as Microsoft Internet Explorer 4.x or above.

Open Standards

The Mpeg4 Network IP Camera supports TCP/IP networking, SMTP e-mail, FTP, HTTP and other Internet-related protocols; the Network IP Camera can be used in a mixed operating system environment with Windows, Unix, Mac and OS/2. It integrates easily into other www/Intranet applications and CGI scripts.

Simple Administration

Using a standard web browser, you can configure and manage the Mpeg4 Network IP Camera directly from its own embedded web pages. The embedded operating system is upgradeable through the network; please check with your local WEBVIEW dealer or visit www.micro-web.co.kr for firmware upgrades.

External Devices

The auxiliary Input/Output Connector on the camera allows you to connect your Network IP Camera to a variety of external devices; such as IR-sensors, switches, and alarm relays.

Security

Your MPEG4 Network IP Camera includes a self-contained web server, which means that digital images can be secured like any other Internet host. Your Network Administrator, using the unit's security settings in combination with an organization's Internet firewall, normally implements data protection. The Administrator can decide whether individuals, groups, or the whole world may access the camera. The Mpeg4 Network IP Camera supports multi-user password protection

Compression and Performance

With a variable frame rate dependent on the image quality & bit rate, the Network IP Camera delivers Mpeg4 video at up to 30 images per second.

Dual Mode Compression

For application providers, system integrators and other AP's, this camera also supports JPEG compression as well as MPEG4 video.

Full Duplex Two Way Audio supported.

Full duplex two way audio is available by connecting external microphone and speaker to MPEG4 Network IP Camera.

IEEE 802.3af Standard PoE(Power over Ethernet) supported.

Software

IP installer – for quick installation

Multi-Viewer for viewing 4 cameras

2 Physical Description

2.1 Contents

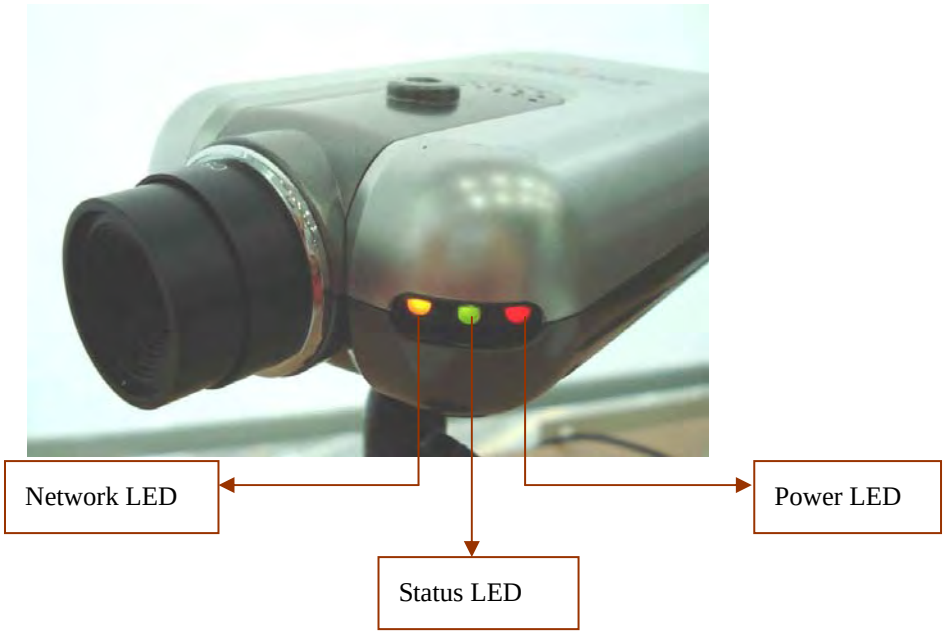
Check all items packed inside the box as below.

ITEM	DESCRIPTION	REMARKS
Network IP Camera	Mpeg4 Network Camera	
Installation CD	IP installer, Upgrade program, Manual, Multi-Viewer etc.	Program CD
Power Supply	AC Power adapter and power cord	AC adapter (AC110V-240V) and Power Black Cable
Stand	Wall & Table attached stand	Iron Material
Connection Cable	RS232 Cable	Black Cable
Installation Foldout	Quick Installation Guide	Printed Paper

- **You can use a general camera stand or tripod for MPEG4 Network IP Camera.**

2.2 Front Side View and LED Description

Power LED (Red): Once power is supplied to the Network IP Camera, the Red LED will be on.



Operating Status LED (Green): This LED indicates the Network IP Camera's operating status. Once power is supplied, it is on and then it blinks once every second as long as the video is transmitted on the network during its normal operation. When there is no video transmission the led stop blinking. Under event trigger situation, the green LED become red & blinks rapidly. During simultaneous operation of event trigger capture & video monitoring it blink rapidly & alternately red & green.

Network Activity LED (Orange): This LED indicates network activity. If orange LED is on, that means network is up and running & if it is off, that means network is down and not working.

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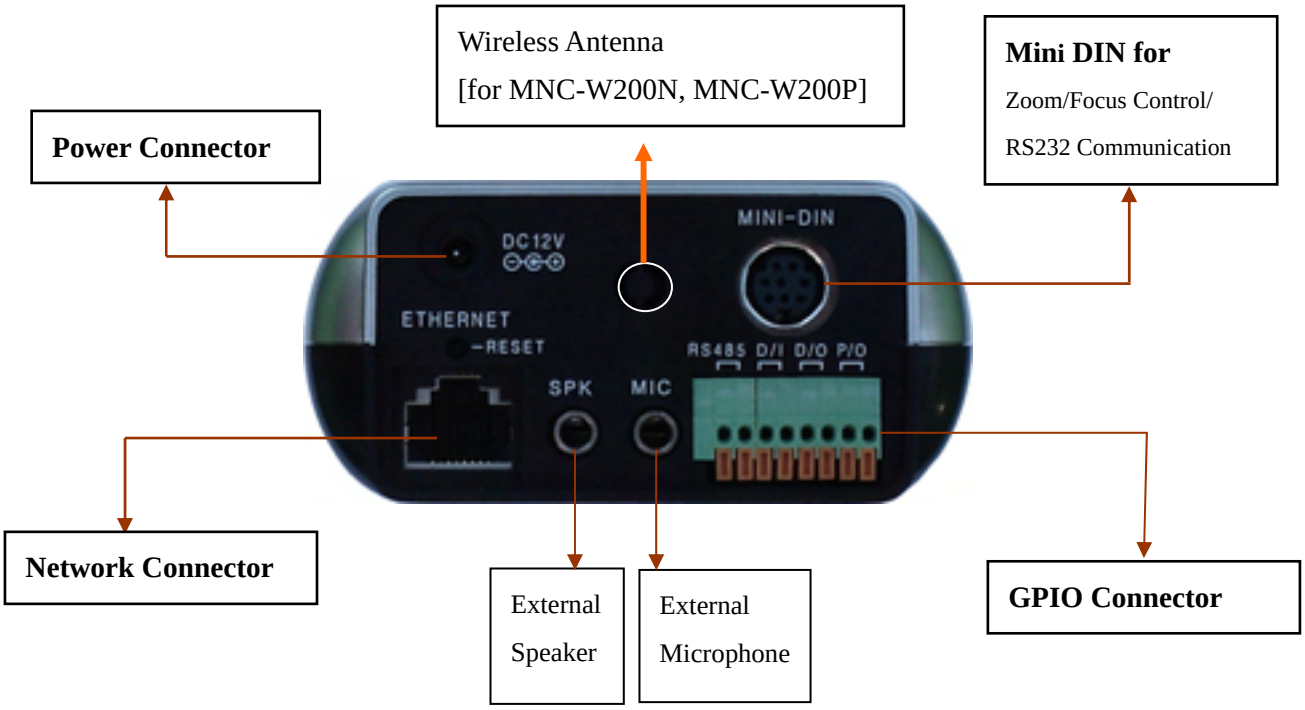
2.3 Rear View and Description



Power Connector: Only use the supplied AC Adapter to avoid any possible damage from electric shock.

Network Connector: Connect 10 baseT Ethernet or 100 base TX Fast Ethernet cable.

GPIO Connector: To connect external devices such as infrared Sensors, alarms, or motion detectors (please refer to **Appendix F – I/O Connectors**).

Mini DIN Connector: To connect external devices such as external Zoom/Focus Lens mechanism, or directly to a serial port for camera configuration via HyperTerminal (please refer to **Appendix G - RS 232 Cable**).

SPK: Use to connect to external speaker for Audio communication. The Audio sent over N/w from Connected Camera client can be delivered through this externally connected speaker.

MIC: The external MIC for Audio Input. The live Audio can be captured & transmitted to the connected camera client via the use of this MIC.

RESET : Return your camera to factory default settings

3 Installation summary

1. Connect Ethernet and Power to the Mpeg4 Network IP Camera.
2. Install and launch the "IP-Installer" program in a supplied CD
3. Assign an IP address and network settings
4. Securely mount the Mpeg4 Network IP Camera.
5. **Adjust the Lens Focus**

4 Assigning IP Address & Accessing Mpeg4 Network IP Camera's Homepage

4.1 Assigning IP Address

To access the Network IP Camera, you need to assign an appropriate network IP address.

Important

- Please use the newly assigned IP address, do NOT use any occupied IP address or the default or example IP address.
- It is highly recommended that you assign an IP address before placing the Network IP Camera in a remote place or remote network.

- **Network IP Address**:

A network IP address is an identification code for computers or devices on a TCP/IP network. Networks using TCP/IP protocol route messages based on the IP address of the destinations within a closed

Network. IP addresses can be assigned at random as long as each one is unique. However, connecting a private network to the Internet requires using registered, public IP address to avoid duplicates.

IP address can be acquired from a network administrator or an Internet service provider.

- **MAC** (Ethernet) **Address (Media Access Control Address)**

MAC address is a hardware identification code that uniquely identifies each device of a network.

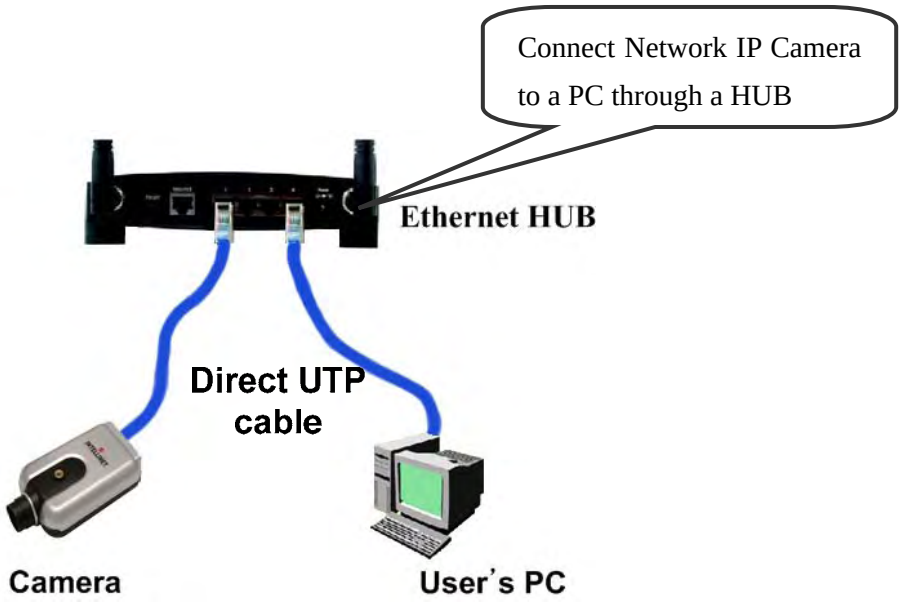
The MAC layer interfaces directly with the network media. Consequently, each type of network media requires a different MAC layer. The MAC address of Network IP Camera is a 12-digit number. A unique MAC address can be found on the label at the bottom of each Network IP Camera.

Please install the IP address installation program (IP Installer.exe) on a PC that is connected to the same local network as the Network IP Camera.

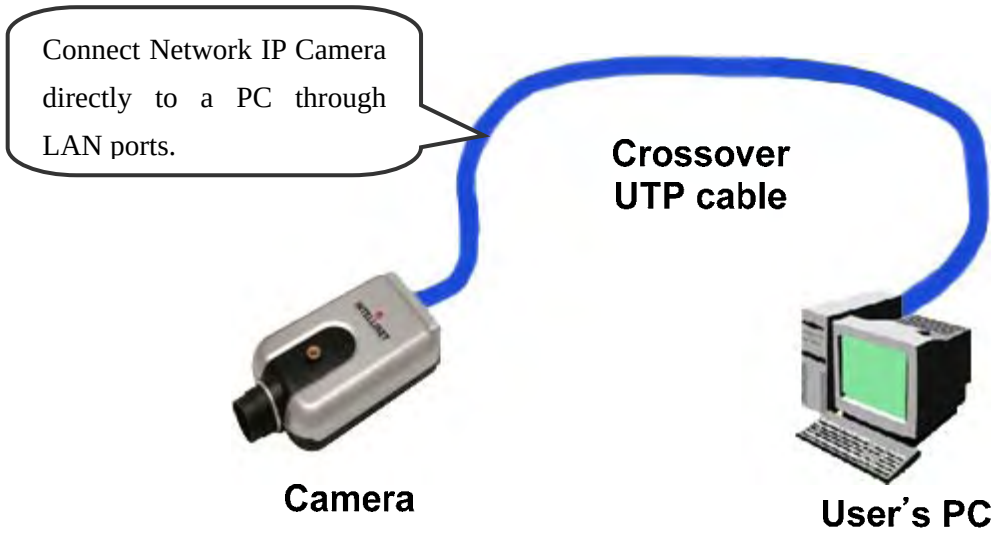
4.2 Assigning IP address by using IP installer

4.2.1 Connecting Network IP Camera to PC

1) Connecting with direct cable (Non Crossover UTP cable). Used when connecting the Network IP Camera to a switch, hub or router -



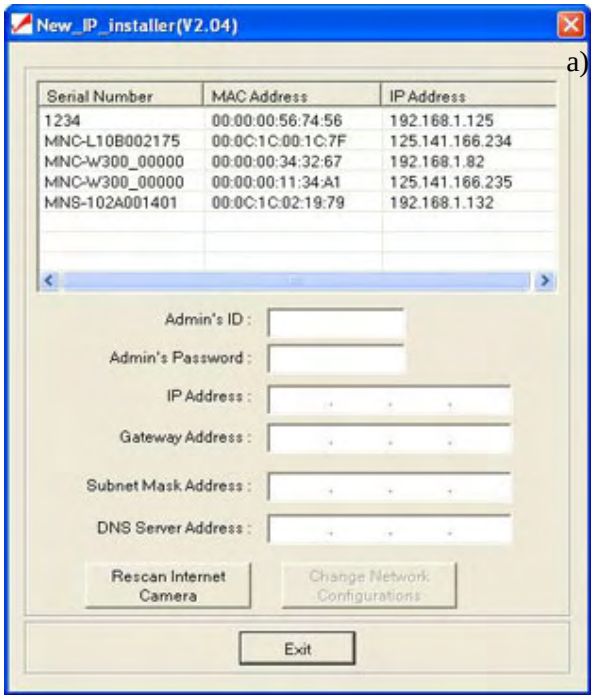
2) Connecting with Crossover UTP Cable. Use the crossover cable to directly connect the Network IP Camera to a PC -



4.2.2 Using IP Installer

To install an IP address, you should use the IP Installer provided with Network IP Camera.
You can download its program through the web site (http://www.micro-web.co.kr)

Note: System required for IP installer ; Microsoft Windows9X/NT/2000



a) a) Execute the IP Installer after the Network IP Camera completes its booting (wait until the operating LED blinks every second).
b) When the IP Installer is executed, the panel shows every Network IP Camera connected on the local network. From the Mpeg4 Network IP Cameras listed, select one to assign a new IP address (every Mpeg4 Network IP Camera has a factory default IP address).
c) Note: The MAC Address can be found on the underside label of the Mpeg4 Network IP Camera . To choose a Mpeg4 Network IP Camera , click on its list.

Enter the Administrator ID and Password in the blank (Default Administrator ID and Password are all "**admin**") to assign (or change) IP Address for the Mpeg4 Network IP Camera and set up.

Enter the IP address, Gateway address, Subnet Mask address, DNS Server address and Server IP address that are assigned from network administrator. (When the addresses are not assigned properly, you cannot access the Mpeg4 Network IP Camera).

The Server IP Address represents an IP address of a PC, which is being used to execute the upgrade program when updating the Mpeg4 Network IP Camera (please refer to **Section E - Updating Firmware**).

After entering all addresses for the Mpeg4 Network IP Camera, click the "Change Network Configurations" button.
The message shows up if all the information is set up properly. Then click the "OK" button.

NOTE

After changing Network Configuration, It will take a little time to reboot the Network IP Camera so that you may access the Network IP Camera's Homepage.

4.3 Assigning IP Address by using Hyper Terminal

You can assign an IP address by using Hyper Terminal. In this case, you should configure Hyper Terminal first

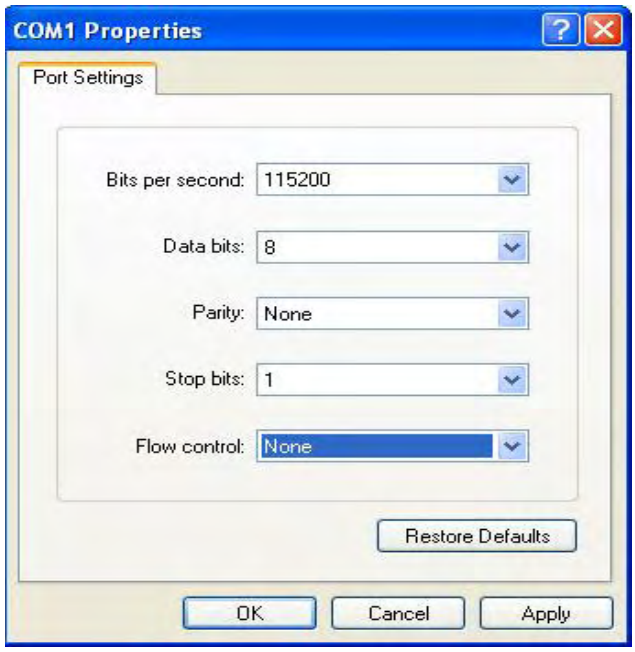
4.3.1 Configuring Hyper Terminal

Hyper Terminal is a basic program for Windows 9x/NT/2000. A PC can communicate with external devices through the serial port by using this program. The steps you should take to set the Hyper Terminal are as follows in the case of Windows 2000 OS:

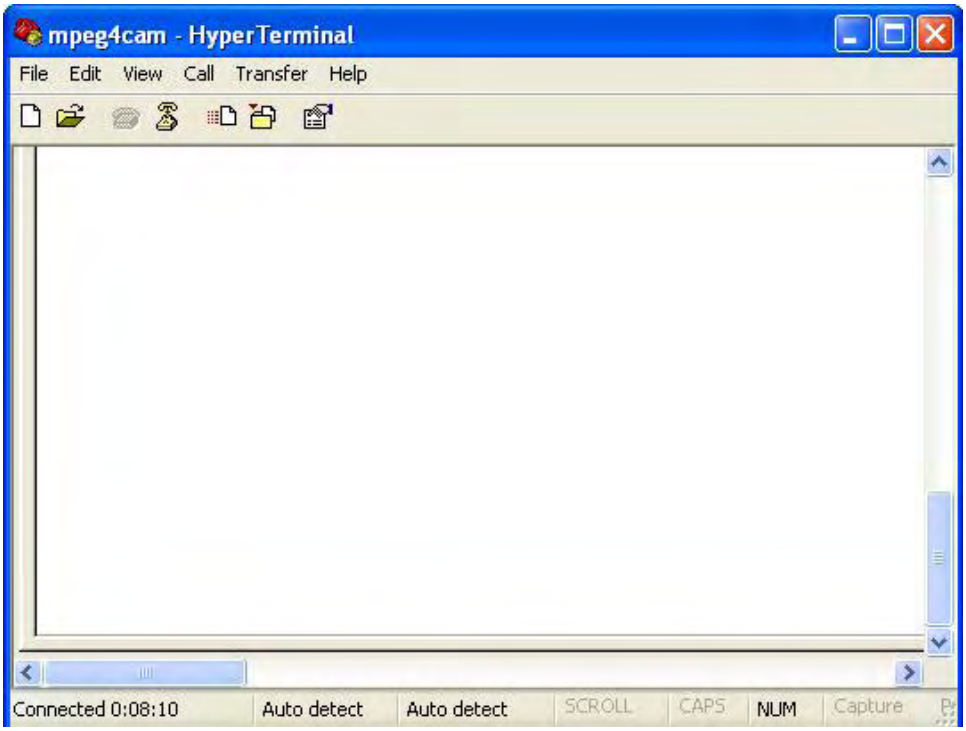
① Start → Programs → Accessories → Communications → Hyper Terminal. Select one of the icons and then enter an appropriate name in the box.

② Select a serial port of PC, then click "OK" button. (Usually COM1 or COM2 is recommended)

③ Configure bit/sec as 115200 and leave other settings at the default values.



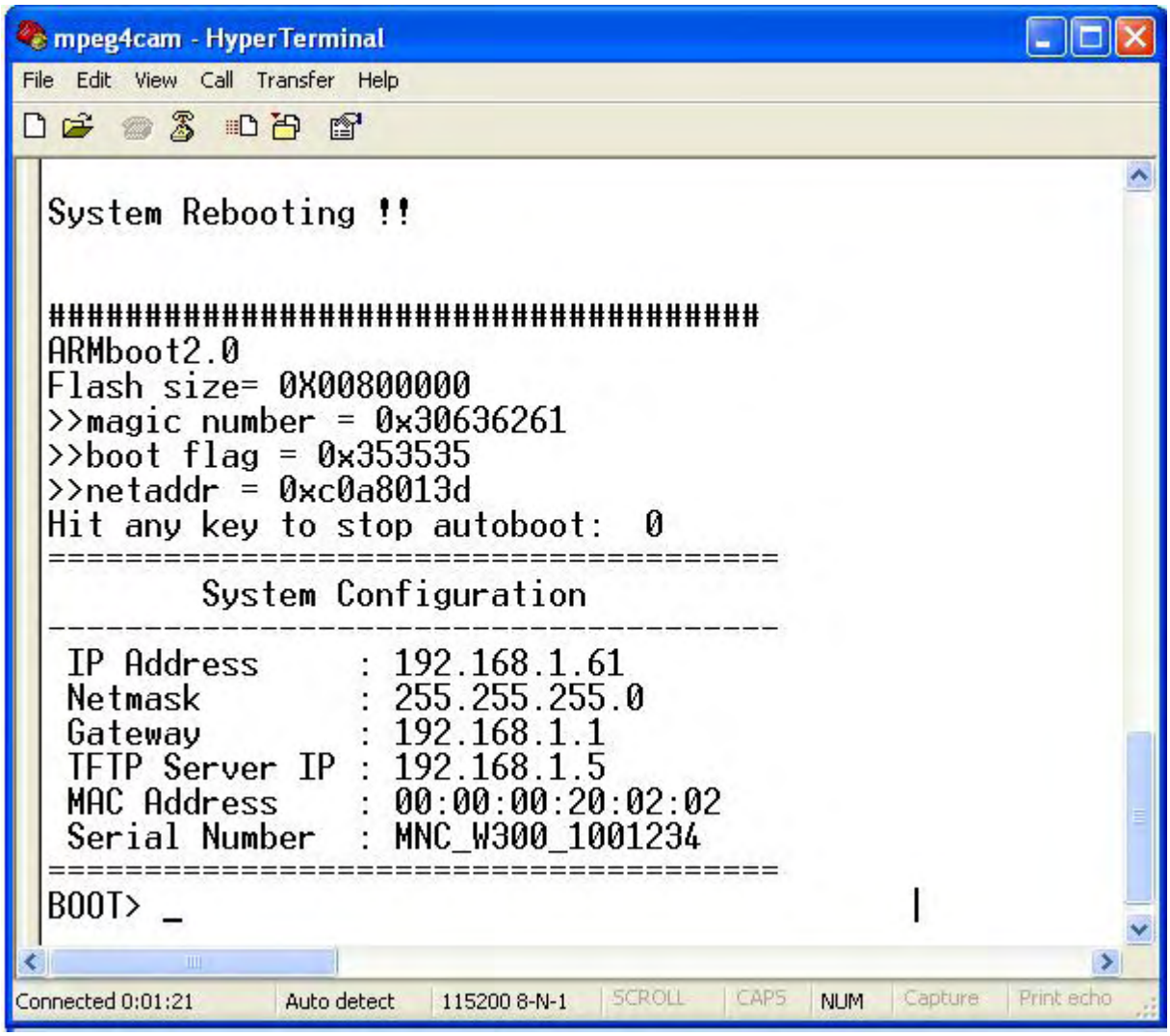
④ The panel shows up like thus image when configured properly. (If it doesn't, please try again from beginning)



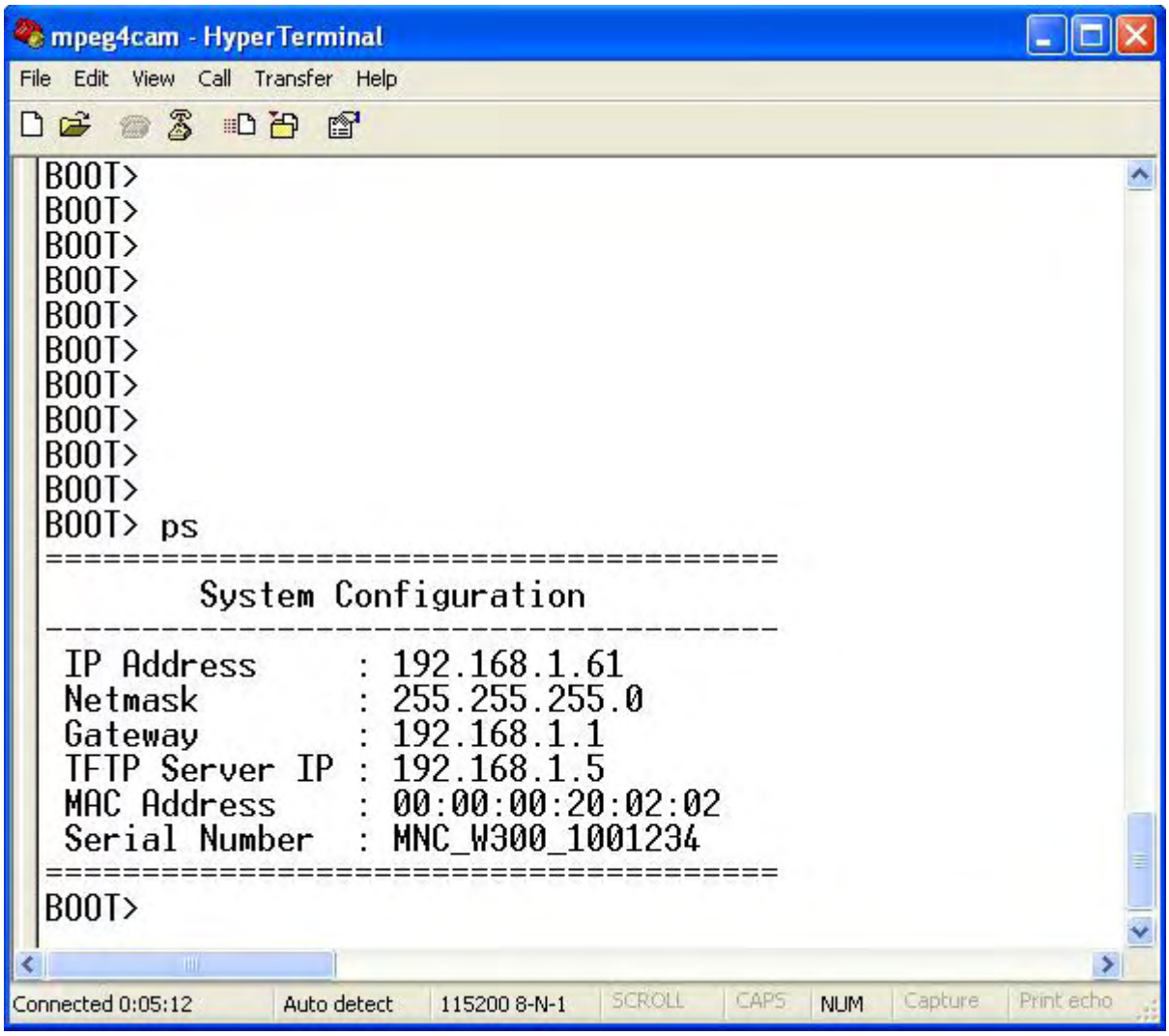
4.3.2 Assigning IP Address

Follow these steps to assign an IP address using Hyper Terminal

- Execute "Hyper Terminal" on your PC
- Connect RS232 Cable to the serial port of PC that you have selected in Chapter 4.3.1 - Configuring Hyper Terminal and the Mpeg4 Network IP Camera serial port while Hyper Terminal is executed.
- Supply power to the Mpeg4 Network IP Camera.
- A count down will start with the message "Press any key to stop auto-boot."
- Press any key and then "Boot" Prompt shall appear as below.



- You can see Network Configuration while [Boot] Prompt is running by pressing 'ps' keys again.



Here, IP Address, Netmask, gateway, TFTP server, & MAC address (Ethernet address) values are network configuration values. You should change these values in most case. If you don't know what value you should assign, refer to the network administrator.

IP address and **subnet mask** addresses are separated by colon (:). For example, IP address is represented by decimal numbers delimited by dot (.) like '192.168.1.27'. Hexadecimal numbers like 'ffffff00' in the case of '255.255.255.0' represents subnet mask address. Note that the numbers of subnet mask value are not delimited by dot.

Gateway (g) is the gateway address of Network Camera.

TFTP Server IP is the address to which Mpeg4 Network IP Camera tries to connect to upgrade its firmware program in flash memory. Mpeg4 Network IP Camera first search this host on the network on booting sequence. For more information on Mpeg4 Network IP Camera upgrade, refer to "**E. Updating Mpeg4 Network IP Camera's newly upgraded Program**".

MAC Address is the Ethernet address of Network IP Camera.

Type 'cs' keys to change the network configuration in [Boot] prompt. If you type 'cs' keys, Mpeg4 Network IP Camera shows you the information you can change its values and the current assigned values. You can change as the following figure.

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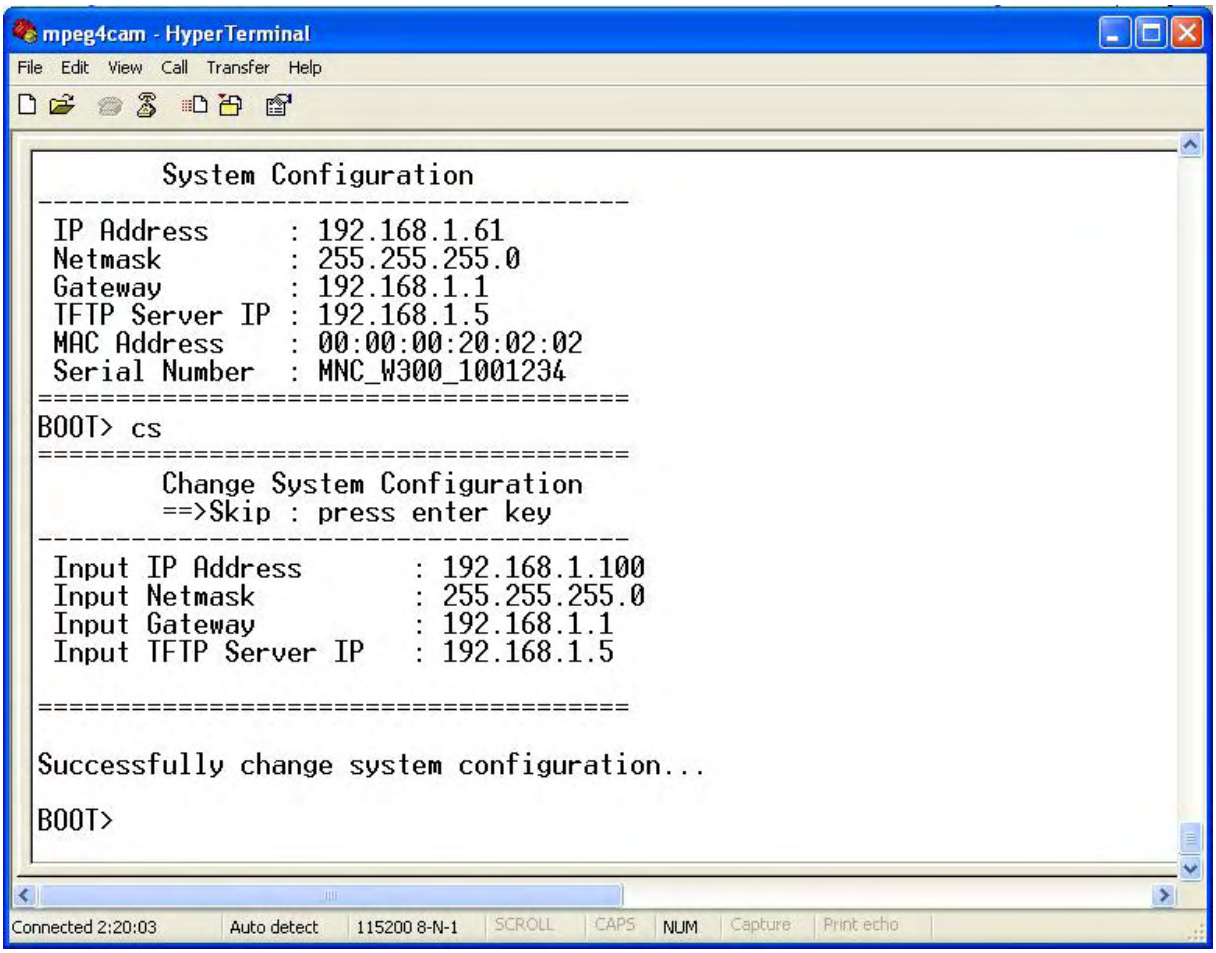
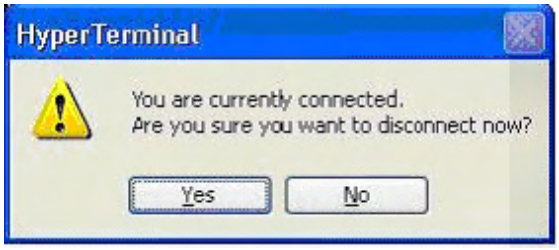


- When you terminate hyper-terminal program after you changed network configuration, hyper-terminal program asks you whether you save the session.

If you save the session, you can re-use the hyper-terminal. To re-use the session you saved, click Start --> Programs --> Accessories --> Communications --> HyperTerminal --> Mpeg4 Network IP Camera.ht in the case of Windows XP/2000.



4.4 Accessing Mpeg4 Network IP Camera Homepage

After assigning Mpeg4 Network IP Camera an IP address, you may access Mpeg4 Network IP Camera and monitor real-time image over the Internet. You may configure Mpeg4 Network IP Camera within its own pages through any standard Web browser on local or remote network.

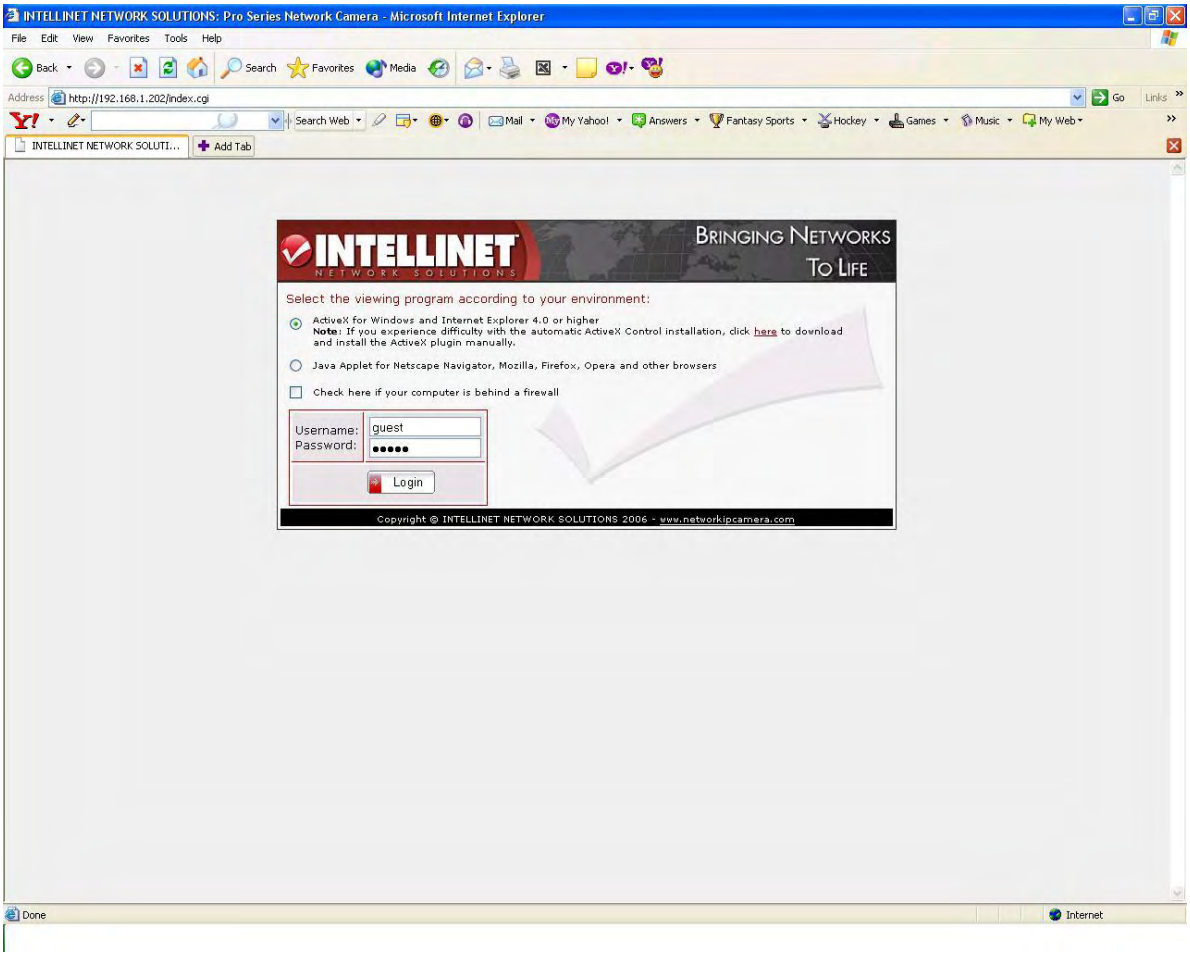
4.4.1 Starting Web Browser

Start your web browser by entering your Mpeg4 Network IP Camera's IP address. And then you can see a build-in homepage.

Address) http://211.111.168.163/

4.4.2 Login Page

This page is to enter the Mpeg4 Network IP Camera's built-in Homepage. To access this page, proper ID and Password are needed.



1) ID and Password

If you key in a user ID and password, you can access the camera to monitor real-time video.

With administrator's ID and password, you can access real-time video with administrator's authority. The default value of both user ID and password are "admin" and the administrator may change it at the Administrator Menu. Each ID and Password must be composed of no more than 10 bytes (e.g. 10 English letters and digits). For the guest, the Mpeg4 Network IP Camera has default ID and Password "guest", but guest can't configure administrator tools at all.

2) Behind Firewall

If your PC is connected on a network with a firewall, you may not view real time video properly because the video TCP port is blocked behind a firewall. If you are behind a firewall, you may view real time video through the Mpeg4 Network IP Camera's Server Push Viewer that transmits video through web TCP port instead of the video TCP port. By clicking on "Behind Firewall" menu, you may directly connect to the Server Push Viewer when you access the Mpeg4 Network IP Camera homepage.(In this case, the frame rate maybe a little bit deteriorated)

3) Active-X for MS Explorer Users

For all Microsoft Explorer users, the Active-X Control program is required. The program will be installed automatically when a user accesses the Mpeg4 Network IP Camera. For Active-X installation on your PC, just click 'Yes' to the question "do you want to install the program" on the pop-up window. If you cannot see images after installation, you should download and install Active-X manually.

Manual Installation of Active-X

If Active-X program fails to be installed automatically, you may install it manually.

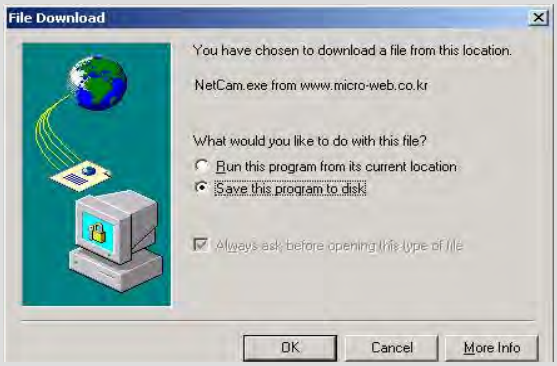
The manual installation program is to be downloaded by clicking 'here' as follows:

Note: If you have any problem when you install ActiveX, visit

http://www.intellinet-network.com/driver/NetCam.exe to download and install ActiveX manually.

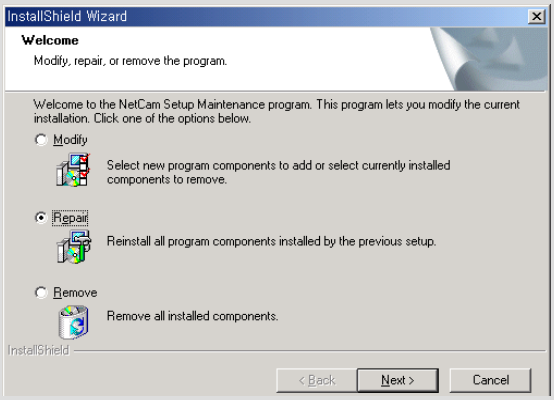
Please follow the instructions for manual installation of Active-X.

① When the panel appears, press "open" if you want to install right away.



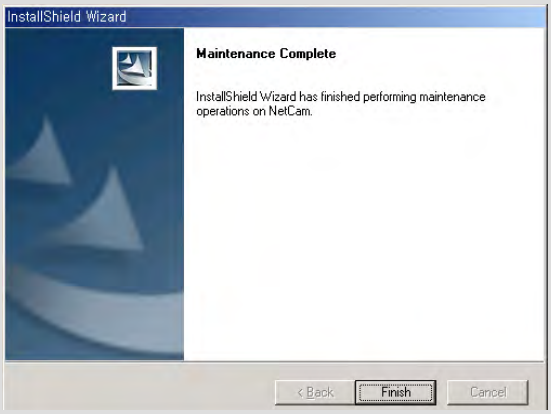
② InstallShield Wizard appears after finishing download.

③ Check "Repair" then click "Next"



④ When installation is completed, press "Finish"

⑤ Go back to the Login page to access Camera homepage.



4) Java Applet for Macintosh or Unix System users.

Java Applet viewer is for a user who access Mpeg4 Network IP Camera through a computer that does not utilize MS Windows (OS) such as Macintosh computer, etc. Java Applet viewer is run with Java Virtual Machine that is installed on User's computer.

Macintosh and Unix System

The Network IP Camera Active-X program is based on MS windows OS. Therefore it is impossible to access Network IP Camera and monitor real time image through default viewer. If a user access Network IP Camera through Macintosh or Unix systems, Network IP Camera detects that OS is not MS Windows and it operates Java based image viewer to show real time image.

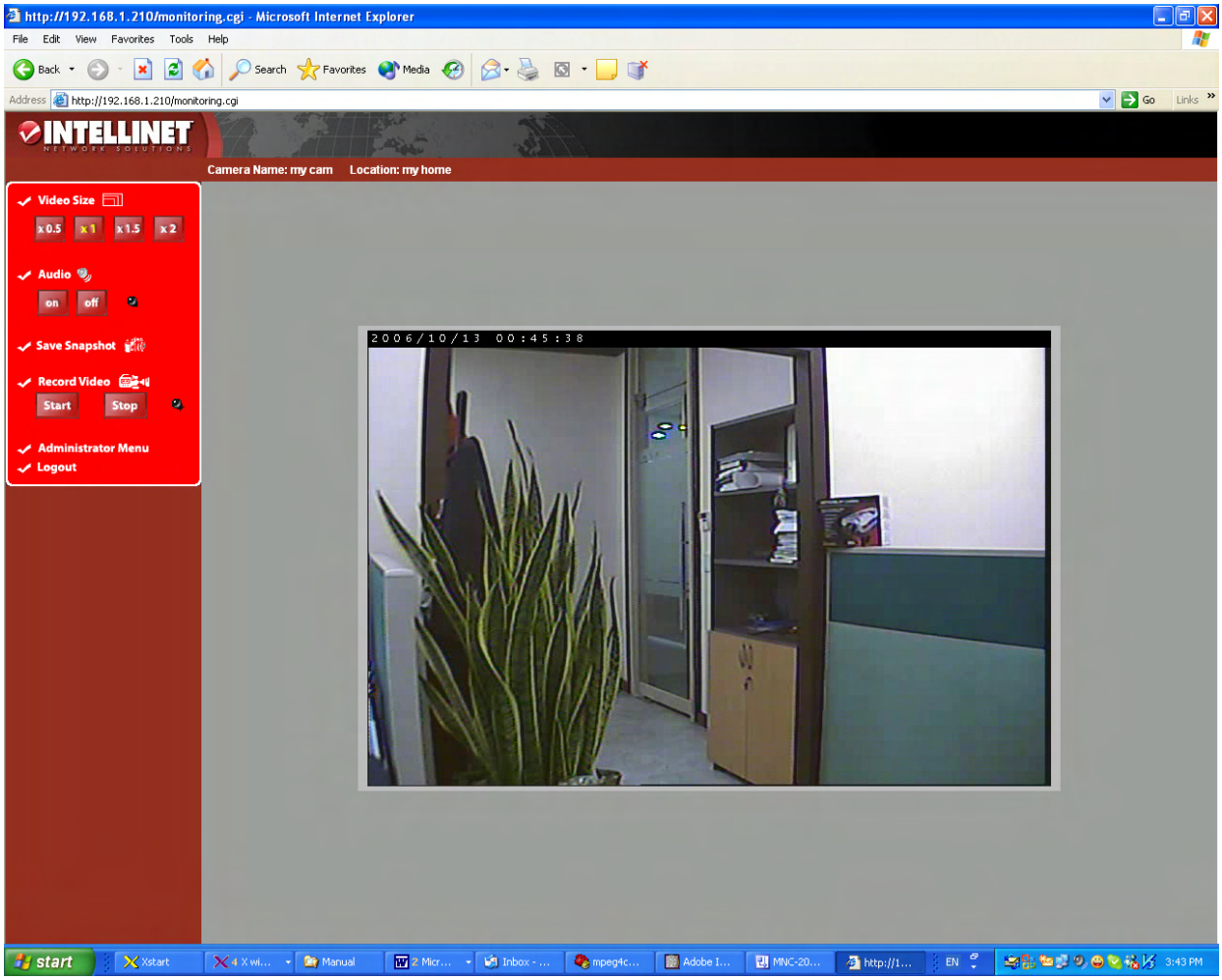
Some functions are not available for Java Applet.

NOTE

It is highly recommended that you select Internet Explore 4.0 or higher for ActiveX viewer for Windows 95, 98, 2000 or NT. If not, choose Java applet viewer.

4.4.3 Mpeg4 Network IP Camera's Homepage

Having completed the login procedure, you can see the Mpeg4 Network IP Camera homepage



Video Size

You may select the viewing image size from 0.5 to 2. This function may be used when you want to expand image size on your PC. (But resolution may not be changed at all)

Audio

Select audio "On" for starting audio communication & Select "Off" to stop audio communication over the network with the external microphone and speaker connected to Network IP Camera.

Administrator Menu

This button is to access the administration menu. However, only the user who has authority as an administrator can access the page with administrator's ID and Password **(please refer to Configuring Administration Menu**).

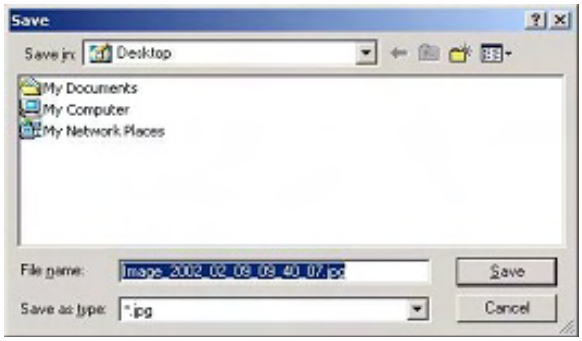
Logout

User can go back to Camera Login Page by using Logout button.

Save Snapshot To save only one image, press "snap shot" button and then select a folder.

Then, the image is saved as JPG file. (Default file name is composed with the date and time)

Ex) image_yyyy_mm_dd_hh_mm_ss.jpg



Record Video Users can save real time images from Mpeg4 Network IP Camera on PC. Press 'start' button then select folder that you want to save images. (The image is saved as an AVI file.) Once it starts to save images, The green LED indicator will start blinking.

To stop saving, press "stop" button & the LED indicator will stop blinking.

Camera Name It displays the camera Name entered via system configuration menu. You can set a camera name (please refer to Chapter 6.7 - System Configuration)

Location This shows where the camera is located (please refer to Chapter 6.7 - System Configuration).

NOTE

- **You may see the saved image by Window Media Player or Real Player.**
- **For initial playback of saved image, please click the "Install XviD"**
- **The AVI saving will be split every 20 minutes**

  For example) file name2002_04_22_15_00, file name 2002_04_22_15_20…

5 Adjusting the Camera Lens

5.1 Adjusting the Focus

To get the finest image, you are asked to adjust lens focus according to your environment. To do this adjustment, simply turn the lens in the clockwise or counter clockwise direction till you get the most accurate edge of image while reviewing the picture quality on your Web browser.

Turn this part counter clockwise to unscrew lens for replacing.

Turn this part clockwise or counter clockwise to adjust lens focus.

NOTE

- Do not force the lens over the clockwise or counter clockwise limit.
- A good level of focus is normally achievable throughout several planes within the camera's focusing spectrum.
- Since optimum focusing is dependent upon the camera's field of view, it is important to scan the focusing plane from the closest to furthest perspectives before attempting any fine-tuning

5.2 Replacing the Lens

Because Mpeg4 Network IP Camera is designed with a CS-Mount, the lens supplied with your product can be replaced with any standard C or CS lens, typically used within the surveillance industry.

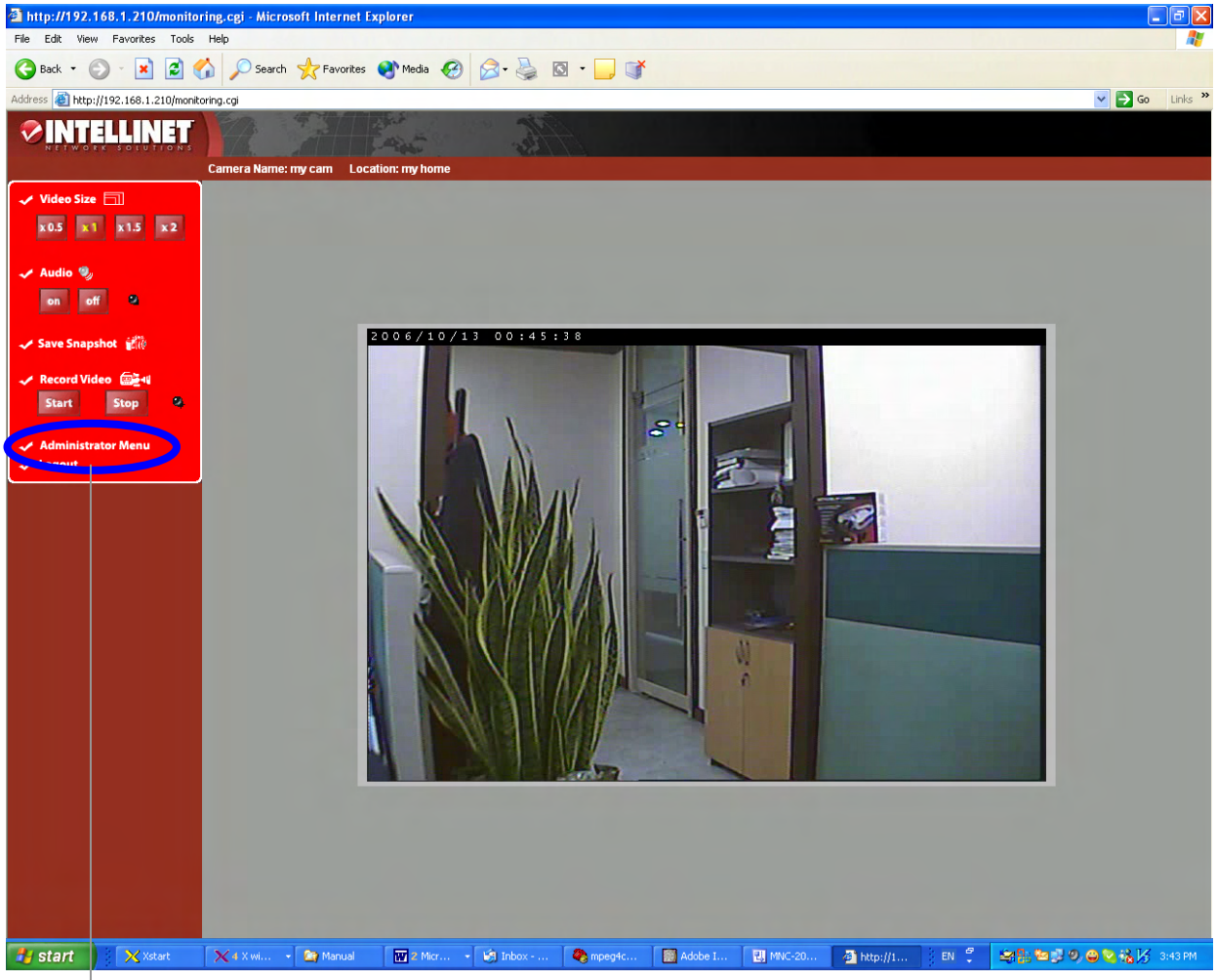
Follow the instructions below to replace the supplied lens with any C or CS type lens:

1. Unscrew Mpeg4 Network IP Camera lens turning the lens in the anti clockwise (See above figure)
2. C-lens only: Attach the new lens to a C-CS Adapter
3. Screw the new lens onto Mpeg4 Network IP Camera. If applicable, adjust the iris according to the prevailing light conditions.
4. Referring to Focusing the Camera under quiescent conditions, on page 29, **Adjusting the focus**.
5. Reload your Web browser and monitor the results from the product Home Page.

6 Configuring Administration Tools

You can control the configurations of Mpeg4 Network IP Camera by Administrator's Tool.

Only authorized user can access administrator tool. If non-authorized users try to access it, you may see the caution message " You are not an administrator".



Press "**Administrator Menu**".

6.1 Overview of Administration Menu

The table below provides a one-step overview of the Administrations Tools:

Image Configuration	To Configure compression rate, image size, brightness, contrast, etc…
Network Configuration	To configure camera IP, web server port, image transfer port
Admin, User Configuration	To configure user ID & Password
System Configuration	To Configure the camera name, location, and time settings
Event Trigger Configuration	To Configure trigger condition, image capture option, trigger output, etc…
Wireless Configuration (Wireless Camera Only)	To configure wireless parameter such as Wireless mode, SSID, Encryption etc.
Return to live View	To go back to monitoring page

To prevent any unauthorized use of Mpeg4 Network IP Camera, access is strictly restricted to defined users only. Administrator(s) has exclusive access to the product Administration Tools and can determine the registration, and access rights for all users.

Enter your ID and Password, and then click "**SUBMIT"**

(Default ID and Password are all "admin")

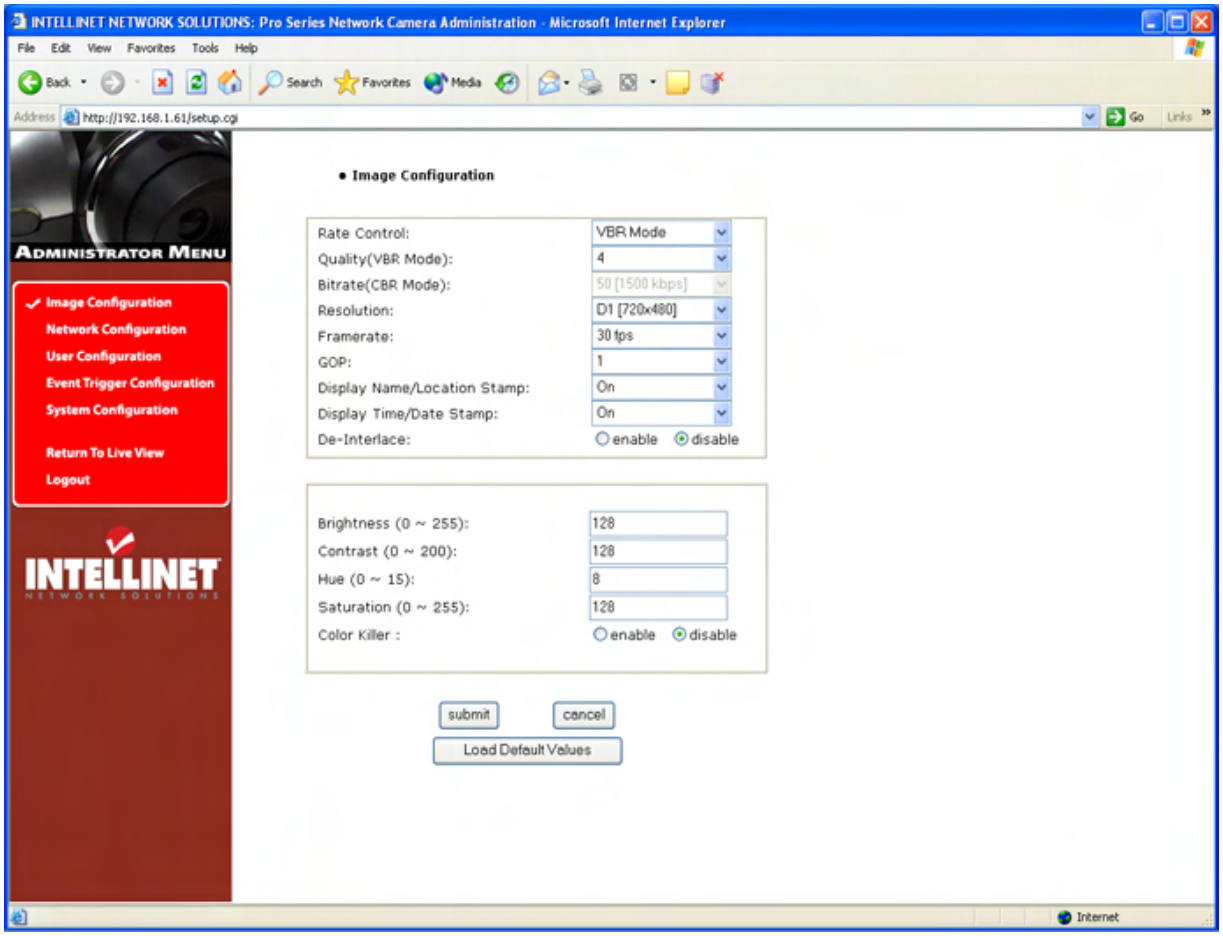
CAUTION

Although, the Administrator's default username and password (set to "admin" for all) can be used for logging in to the unit for the first time, it is highly recommended that you change this password for your Network IP Camera as soon as possible – since all Network IP Camera products are shipped with the same ID and Password as default.

NOTE

Make sure to click "**submit**" after verifying configuration, and then you can get the right configuration as you want. Otherwise, it won't be changed at all.

6.2 Image Configuration



Rate Control

Select the Rate control by selecting the VBR [Variable Bit Rate] or CBR [Constant Bit Rate] control.

In VBR mode, the picture quality is fixed with fixed quantization value and the bit rate varies automatically in reaction to the complexity of video to maintain the set quality. Thus using the more bandwidth for complex video and less bandwidth for lower activity video. VBR is appropriate for storage applications. VBR can be used where video needs to be streamed over a fixed-bandwidth link.

In CBR Mode, the bit rate is fixed irrespective of image complexity, and the picture quality is automatically adjusted by the MPEG4 encoder on a frame-by-frame basis to maintain the pre-set average bit rate. Thus the network bandwidth consumption is always fixed & predictable. CBR is of particular benefit where video needs to be streamed over a fixed-bandwidth link.

Quality: Set the quality of encoding images. Lower is the number higher is the quality. This option is available when user selects the VBR rate control. Note that to achieve the set quality, the maximum bit rate can be used in VBR mode. Thus, the higher the set quality is, the more bandwidth usage on network.

Bit rate: Set the target bit rate of encoding video. This option is available in CBR mode only. You can set the bit rate values from 30 kbps up to 5100 kbps at the interval of 30 kbps. The higher bit rate assures higher quality of live video but on the expense of the more network bandwidth usage. Controlling the maximum bit rate is the good idea for controlling the bandwidth used by Mpeg4 video stream.
As the bit rate is fixed, the frame rate and image quality can be affected adversely. That is, the frame rate and image quality are traded off when the bit rate is fixed.

Resolution
Select the resolution for output video. Mpeg4 network IP camera support two type of image resolution, D1[720x480] & CIF[352x240].

Frame rate:
Select frame rate according to the choice. The higher value of frame rate assures smoother video. But the more fps needs the more network-bandwidth.

GOP
Set the size of GOP (Group of Pictures). MPEG4 video stream consist continuous GOP and one GOP consists of one I frame and P frames. This value equals to the period of I frame. The more GOP size is given the little network-bandwidth will be occupied. Setting high value of GOP will save considerable network bandwidth.

Display Name/Location Stamp:
Select 'On' if you want to display camera name & location on the top of the transmitted images.

Display Time/Date Stamp :
Select 'On' if you want to display the camera time & date on the top of the transmitted images.

Brightness
Set the image brightness. The higher number means brighter image. (Input digits from 0 to 255)

De-Interlace
Select this filter if you want to monitor a de-interlaced video (a sequence of frame). The Mpeg4 Network

IP Camera generates, by default, interlaced video (a sequence of fields) which produces horizontal lines on the screen for moving objects. Users are recommended to select 'de-interlace enabled' in case their camera watches over moving objects.

In interlaced video, there appear horizontal lines when there are fast moving objects as below.

De-interlaced video gets rid of these lines from your screen. (See below de-interlaced video)

Contrast

Set the image contrast. The higher number in contrast setting makes brighter image. (Input digits from 0 to 200)

Hue

Set hue of the images. As a number is lower, color becomes pink. On the contrary, as a number is higher, color becomes green. (Possible to input digit from 0 to 15)

Saturation

Set the saturation value of images. The higher number in saturation makes deeper color (Possible input digits from 0 to 255)

Color Killer:

Enabling this will switch image into gray (monochrome) format.

Disabling this option set the images into original color.

Submit: Transfer a current configuration data to Mpeg4 Network IP Camera.

Cancel: Cancel the entire configuration you made.

Load Default Values:

Set the image configuration as default values. (No need to press "SUBMIT")