Dual Mode CMOS Internet Camera

ICA-151

User's Manual

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE mark Warning

The is a class A device, In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Warning

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET Dual Mode CMOS Internet Camera
Model: ICA-151
Rev: 1.0

Part No.: EM-ICA151

Table of Contents

1. Introduction

With the experience accumulated from the IP surveillance product design, PLANET proudly introduce our Dual Mode CMOS Internet Camera, the ICA-151, to you. The ICA-151 is an all-functioned network camera that could express high quality video and audio to any corner in the world.

Inside ICA-151, there is a build-in microprocessor which is dedicated for video and audio processing. With this microprocessor, the ICA-151 could deliver MPEG-4 and M-JPEG video streaming at the same time, manipulate the audio captured by its microphone or even play the sound sent out by the remote administrator. Furthermore, the ICA-151 also supports the cell phone user. The 3GPP feature lets the administrator watch the video just by clicking on a few buttons on his cell phone.

ICA-151 could work with Cam Viewer, a multi-camera video surveillance application that enables you to set up a comprehensive and effective surveillance system quickly and easily. The Cam Viewer works with PLANET network cameras and video server to provide video monitoring, recording and event management functions.

The thin, light, fancy and fashion style makes the ICA-151 suit for many occasions. You could use it for home security purpose or as a professional surveillance camera. You might just put it on your desktop or mount it on the ceiling of your office.

1.1 Package Contents

Please inspect your package. The following items should be included in the package:

- 1 x ICA151
- 1 x Camera Stand
- 1 x Power Adapter
- 1 x CD-Rom
- 2 x Quick Installation Guide

1.2 System Requirements

Network Interface	10/100 Base-TX Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or later
System Hardware	· CPU: Pentium 4, 1.5GHz or above · Memory Size : 512 MB or above · VGA card resolution : 1024 x 768 or above · **Network bandwidth: In VGA resolution mode, minimum upload bandwidth is 1Mbps.** Optional: . Sound Card . Microphone (for PC) . Speaker (for PC and ICA-151)

1.3 Features

- **Multiple Video and Two Way Audio Supports**

  Enhanced MPEG-4 and Motion-JPEG Video Compression maximize image quality while minimizing bandwidth requirement. G.726 Audio Compression is the most popular audio compression standard. It is able to synchronize with video streams. The two way audio communication allows user to use IP camera as intercom.

- **Motion Detection & E-mail Alerts**

  User may set up 4 motion-detection regions, each with adjustable size and sensitivity. When motion is detected at the specified regions, the system can send an E-mail alert or FTP upload with a video image or files attached.

- **Support most Popular Internet Services**

  DDNS (Dynamic DNS) makes Internet connection easier - when your Internet Gateway uses a dynamic IP address; NTP (Network Time Protocol) would calibrate the system clock from an Internet Time Server, ensuring the time stamp on video accurate.

- **User-Friendly Design**

  ICA-151 has streamlined design, attractive for indoor use. It supports both Desktop Stand and Wall Mounting for flexible installation. And it features web-based management interface, with minimal setup effort.
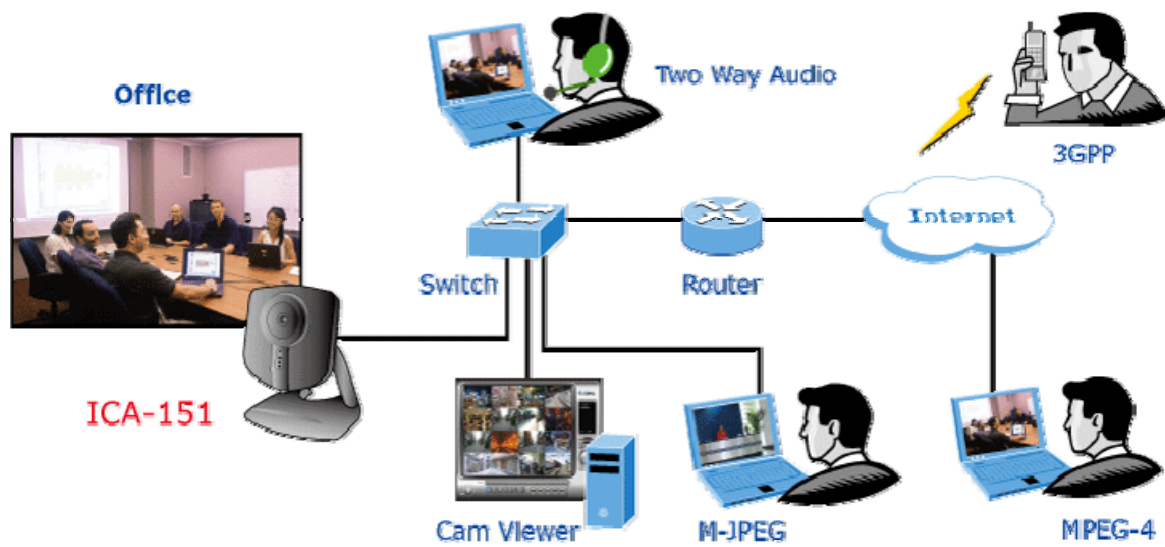
- **Cam Viewer Support**

  A Windows surveillance utility, Cam Viewer, is provided for monitoring and recording video on the remote PC. It supports up to 64 videos simultaneously, multiple layout, motion detection, instant & scheduled recording ... etc.

1.4 Application

Remote Monitoring applications

1.5 Outlook

1.5.1 Front Panel

The front panel of ICA-151 is shown below.
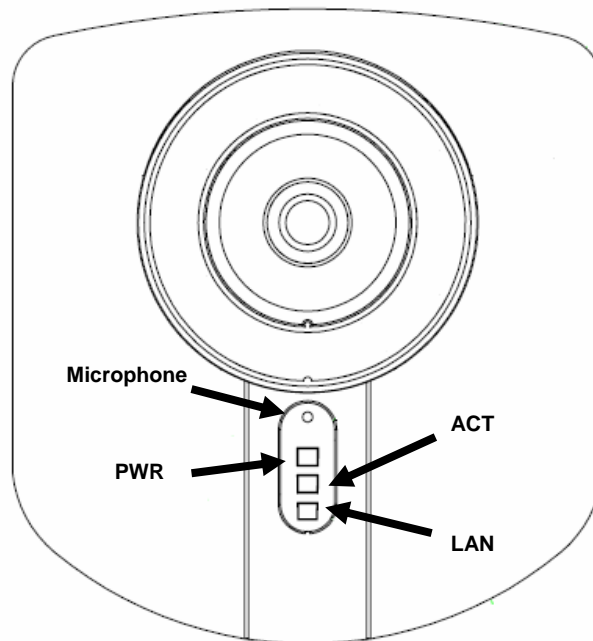
LED Definition
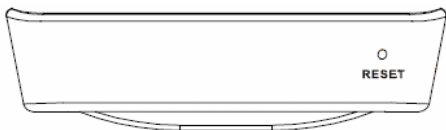
LED	Status	LED Description
PWR	Off	No power.
	On	Power on.
	Blinking	The Power LED will blink during start up (15 ~ 20 sec).
ACT	Off	Camera is not capturing video.
	Blinking	Camera is capturing video.
LAN	Off	LAN is not connected or camera is not sending/receiving data.
	Blinking	Data is being transmitted or received via the LAN connection.

1.5.2 Rear Panel

The rear panel of ICA-151 is shown below.
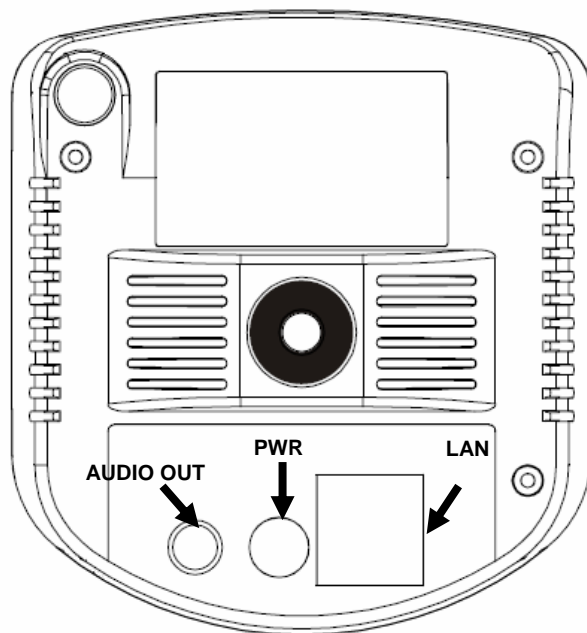
Port Definition

PORT	PORT Description
AUDIO OUT	An external speaker can be plugged in.
PWR	nnect the supplied power adapter.
LAN	nnect your Camera to a 10/100Base-TX hub or switch.
Reset	set to manufacturer default valued and reboot. When pressed and held over 10 seconds, the settings of IP Camera will be set to the default values. Upon completion, the PWE LED will blink three times. **Bottom Panel of ICA-151**

1.6 Technical Specifications

Hardware	
Image Sensor	CMOS, 1/6" VGA Resolution
Lens	F2.8 Fixed Focus
	Effective Range:0.2M to infinity
Video	
Video Codec	MPEG-4 / M-JPEG Dual Stream
Resolution	640x480
	320x240
	160x120
Frame Rate	Up to 30 fps @ all resolution
Image Control	AWB, AGC, Contrast, Brightness
3GPP	160x120@15fs, MPEG-4 for mobile phone viewing
Audio	
Audio Codec	G.726 ADPCM
Microphone/Speaker	Two Way Audio, built-in Microphone and external Speaker
Network and Configuration	
LAN	RJ-45, Ethernet 10/100 Base T
Supported Protocols	TCP/IP, SMTP, HTTP, DHCP, NTP, RTSP/RTP, UPnP
E-mail Notification	Triggered by motion detection
Motion Detection Area	4 Area definable
Hardware	
Power Adapter	5V DC, 1A
Dimensions(H x W x D)	135 x 107 x 55 mm
Weight	235g without stand , 386g with stand

2. Installation

The followings are instructions for setting up the ICA-151. Refer to the illustration and follow the simple steps to quickly install.

2.1 Hardware Installation

1. Connect an Ethernet cable
Connect one end of an Ethernet cable to the LAN port located on the camera's rear panel and connect the other end to the network device (hub or switch).

2. Attach the external power supply
Attach the provided power adapter to the camera's connector labeled "PWR" on the rear panel.

3. Check the LEDs
a. The Power LED will turn on briefly, and then start blinking during startup. After startup is completed, the Power LED will remain ON.

b. The LAN LED will be ON.

2.2 Software Quick Configuration

Initial setup should be performed by using the supplied Windows-based Setup Wizard as follows:

1. Insert the bundled product CD into CD-Rom drive to launch the autorun program.

2. After the CD's menu displaying, click the **"Setup Wizard"** hyperlink on the menu to start the configuration process.
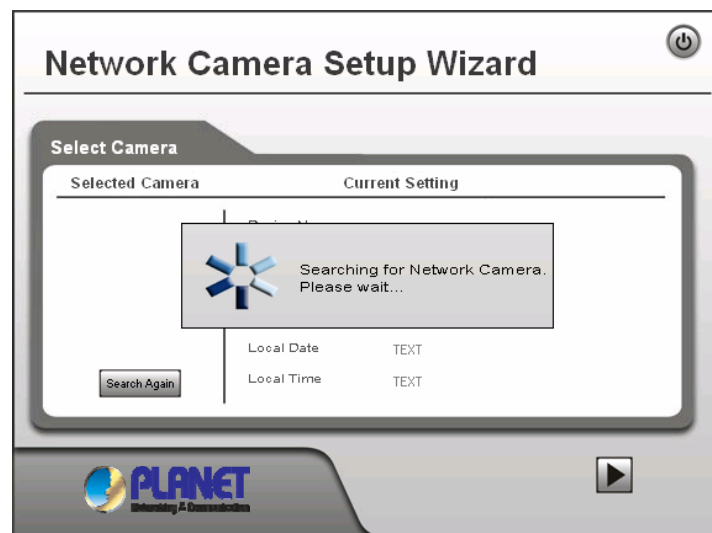
Note:

If the CD's menu does not appear, click "Start" on the task bar and select "Run" to type **"X:\Utility\ SetupWizard \SetupWizard.exe"**, assume X is your CD-Rom drive.

3. The welcome screen appears. Click on **"Setup Camera"** button to start the wizard.

4. After clicking the setup camera button, it will auto search for the cameras on your network. Click on ▶ to continue.
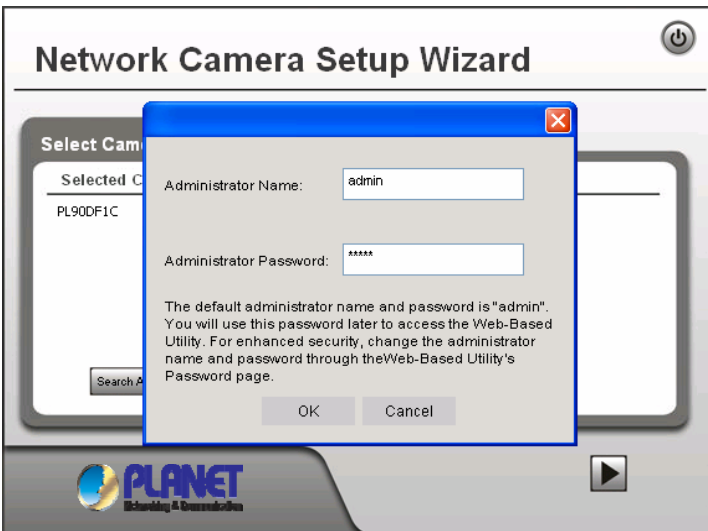
5. The next screen below will list the camera on your network. Select it from the list on the left side, the current settings table will be displayed on the right side. Click on ▶ to continue.

6. The administrator login window will pop up. If the Administrator Name and Administrator Password have been set, you will be prompted to enter them. If using the default values, please enter **"admin"** for both the name and the password. Click on **"OK"** to continue.

7. On the following Camera Settings screen, you can fill and configure the Device Name, Description, Time Zone, Local Date and time here. Click on ▶ to continue.

8. You can choose **"Fixed IP Address"** or **"Dynamic IP Address"** here**.** Click on ▶ to continue.
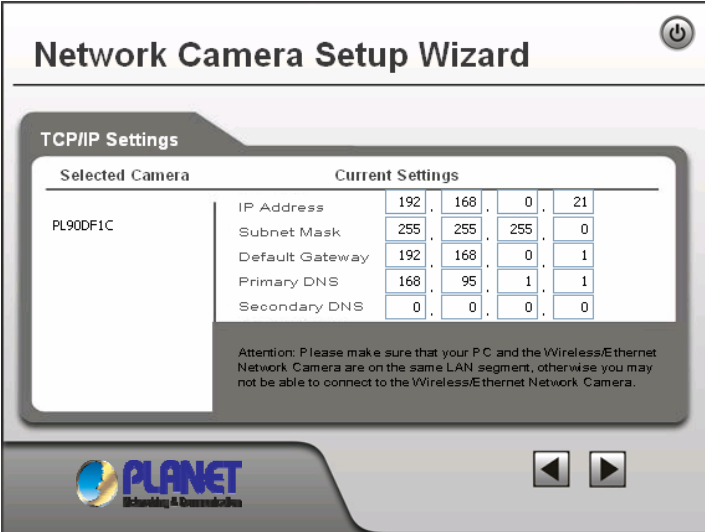
Note:

1. Fixed IP Address is recommended, and can always be used.

2. Dynamic IP Address can only be used if your LAN has a DCHP Server.

---

9. If you chose to use Fixed IP Address, the following TCP/IP Settings screen will be displayed. You can configure the IP Address, Subnet Mask, Default Gateway, Primary and secondary DNS. Click on ▶ to continue.

Network Camera Setup Wizard

TCP/IP Settings

Selected Camera	Current Settings				
PL90DF1C	IP Address	192	168	0	21
	Subnet Mask	255	255	255	0
	Default Gateway	192	168	0	1
	Primary DNS	168	95	1	1
	Secondary DNS	0	0	0	0

Attention: Please make sure that your PC and the Wireless/Ethernet Network Camera are on the same LAN segment, otherwise you may not be able to connect to the Wireless/Ethernet Network Camera.

10. The next screen below will display all details of the camera. Click on ▶ to continue if those settings are correct, or click on ◀ back to modify any incorrect values.

Network Camera Setup Wizard

Camera Settings

Selected Camera	New Settings	
PL90DF1C	Device Name	ICA-151
	IP Address	192.168.0.21
	Subnet	255.255.255.0
	Default Gateway	192.168.0.1
	Local Date	09/26/2007
	Local Time	15:42:00

11. In this confirmation window below, click on **"OK"** to confirm that you want to save the new settings. If you want to cancel your changes, please click on **"Cancel"**.

12. After confirming, the wizard will start to save the new settings as below screen.
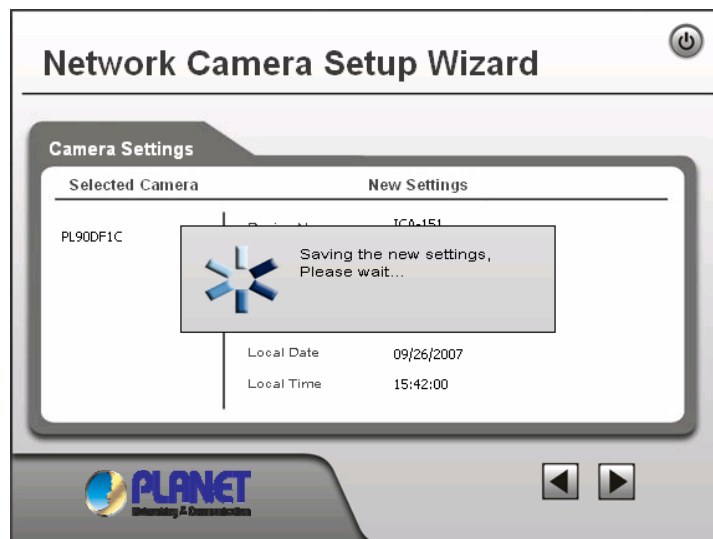
13. When the saving process is completed, the prompt window will be displayed as below screen. Click on **"OK"** to finish.

14. The setup wizard now is completed. Click on **"Exit"** to close the setup wizard.

After modifications, you may now connect the camera with the new configuration via web browser.

3.1 Connecting ICA-151 on your LAN

After finishing the Setup Wizard, all LAN users can view live video by using the Internet Explorer. This Chapter has details of viewing live video on your LAN.

1. Start the Web browser.

2. In the Address box, please enter "http://address". The "address" is the LAN IP address which up to your new configuration from Setup Wizard.

Note:

The LAN IP address of factory default setting is "192.168.0.20".

3. When you connect, the following home page will be displayed.

4. Click on **"View Video"**.

Note:

If the Administrator has restricted access to known users, you will then be prompted for a username and password.

5. The first time you view the camera, you will be prompted to install an ActiveX component as below. **You must install this ActiveX component in order to view the video stream in Internet Explorer.** Click on **"Install"** to install.

6. After installing, you will be able to view the live video stream in its own window as below.

Note:

1. Video will start playing automatically. There may be a delay of a few seconds while the video stream is buffered.
2. There are a number of options available on this screen, accessed by select list, button or icon. The details are described in **Chapter 3.3 – General Options**.

3.2 Connecting ICA-151 via Internet

To establish a connection from your PC to the camera via Internet, please obtain the following information from the Administrator of the camera you wish to connect:

- Internet IP Address or Domain Name of the camera.
- Port number for HTTP connection.
- Login (username, password) if required.

Note:

You can NOT connect to a camera via the Internet unless the camera Administrator has configured the camera and the Internet Gateway / Router used by the camera. Dial-up connections are NOT supported.

The following has details of viewing live video via Internet.

1. Start the Web browser.

2. In the Address box, please enter "http://address:port". The "address" is public IP address or public domain name, and "port" is the port number.

3. When you connect, the following home page will be displayed.

4. Click on **"View Video"**.

Note:

If the Administrator has restricted access to known users, you will then be prompted for a username and password.

---

5. The first time you view the camera, you will be prompted to install an ActiveX component as below. **You must install this ActiveX component in order to view the video stream in Internet Explorer.** Click on **"Install"** to install.

6. After installing, you will be able to view the live video stream in its own window as below.

Note:

1. Video will start playing automatically. There may be a delay of a few seconds while the video stream is buffered.
2. There are a number of options available on this screen, accessed by select list, button or icon. The details are described in **Chapter 3.3 – General Options**.

3.3 General Options

These options are always available, regardless of the type of camera you are connected to.

AUTO ▾	**Resolution** Use this drop-down list to select the desired video size.
⊕	**Zoom** A digital zoom feature is available. To zoom in on a section of the window, click this icon. Then use your mouse to select the section you want to magnify. Click the icon again to disable the zoom feature.
◉	**Snapshot** Click this to take a single JPEG "snapshot" image of the current video.
◉	**Flip** Click this to have the image swapped top-to-bottom.
◉	**Mirror** Click this to have the image swapped left-to-right.
◉	**Audio On** This icon is displayed if audio is On. Click on the icon to turn audio Off.
◉	**Audio Upload** This icon is displayed when the Speaker option is enabled.
▬▮▬	**Volume** If audio is enabled, use this slider to adjust the volume.
✖	**Setup** Select the desired setup format from the drop-down list.

4. Web Management

This Chapter is for the Administrator only and provides setup details of the camera's Web-based Interface. The camera can be configured via your Web Browser. That must have an IP address which is compatible with your network.

Note:

The recommended method to ensure this to use the supplied Windows-based Setup Wizard is described in **Chapter 2.2 – Software Quick Configuration**.

1. After connecting to the camera, click on **"Administration"** of the home page.

2. You will then be prompted for a username and password.

Note:

1. If using the default values, enter "**admin"** for the name, and **"admin"** for the password.

2. The Administrator's ID / Password can be set on the **"Maintenance"** of administration menu.

3. After login, the administration page will be displayed as below.

4. The administration menu contains following options.

Setup	System
	Network
	DDNS
Video & Audio	Video & Audio
	Video Access
	User Database
Event	Motion Detection
	E-Mail
	FTP
	HTTP
	Event Trigger
Administration	Maintenance
	Status
	Log

4.1 Setup

4.1.1 System

This page will be displayed after clicking on **"Administration"** of the home page or **"Setup > System"** of the administration menu. It allows you to modify the system information.

System Settings	
Device ID	This displays the name for the camera.
Camera Name	This field is used for entering a name to the camera
Description	This field is used for entering a description, such as the location.
Date & Time	
Date Format	Select the desired date format, it will also be used to display the date and time as an overlay on the video image. The date formats are list as follows: 1. YYYY-MM-DD = Year-Month-Day, e.g. 2007-10-10 2. MM/DD/YYYY = Month/Day/Year, e.g. 10/10/2007 3. DD/MM/YYYY = Day/Month/Year, e.g. 10/10/2007
Current Date & Time	This displays the current date and time on the camera.
Change Button	This allows you to modify the date/time settings. This button will open a sub-page where you have 2 options: 1. **Sync with PC:** Set the date and time to match your PC.

	2. **Set New Time:** Manual enter the correct date and time.
Time Zone	Choose the Time Zone for your location from the drop-down list. If your location is currently using Daylight Saving, enable the **"Adjust for daylight saving"** checkbox. You must **UNCHECK** this checkbox when Daylight Saving finishes.
Network Time Protocol	Enable or disable the Time Server feature as required. If Enabled, the camera will contact a Network Time Server at regular intervals and update its internal timer.
NTP Server Address	Enter the address for the desired NTP server.
Update	The Schedule determines how often the camera contacts the NTP Server. You can select the desired options.
LED Operation	Enable this if you want to use this function.

4.1.2 Network

This page will be displayed after clicking on **"Setup > Network"** of the administration menu. It allows you to set the network configuration.

IP Address	
Obtain an IP Address Automatically	If selected, the camera will obtain its IP address and related info from a DHCP Server. Only select this option if your LAN has a DHCP Server.
Use the following IP Address	If selected, you must assign the following data to the camera. **IP Address:** Enter an unused IP address from the range used on your LAN. **Subnet Mask:** Use the same value as PCs on your LAN. **Default Gateway:** Use the same value as PCs on your LAN.
DNS Server Address	
Obtain DNS server address automatically	If selected, the camera will use the DNS address or addresses provided by the DHPC server. This option is only available if the IP address setting is Obtain an IP address automatically.
Use the following DNS server address	**Primary DNS server:** Use the same value as PCs on your LAN. **Secondary DNS server:**

	This DNS will be used if the Primary DNS does not respond.
Secondary Port	
Enable HTTP Secondary Port	This sets the port number for HTTP connection to the camera, whether for administration or viewing video. If enabled, you can connect with either port 80 or the secondary port. You must enter the secondary port number (1024~65535) in the field provided.
RTP / RTSP	
RTSP Port	The RTSP (Real Time Streaming Protocol) is a standard for connected clients to control streaming data (MPEG-4) over the World Wide Web. Enter the RTSP Port number (1024~65535) in the field provided. The default RTSP Port is 554.
RTP Data Port	The RTP (Real Time Transport Protocol) is an Internet protocol for transmitting real-time data such as audio and video.
Max RTP Data Port	Max RTP Data Packet field will let users limit the size of the file. Enter the desired value between 400 and 1400.
Multicast RTP / RTSP	
Video Address	Enter the address of video.
Video Port	Enter the desired value (1024~65534) in the field provided. The number you entered must be even values.
Audio Address	Enter the address of the audio.
Audio Port	Enter the desired value (1024~65534) in the field provided. The number you entered must be even values.
Time to Live	Enter the desired value (1~255), if the packets fail to be delivered to their destination within.
UPnP	
Enable Discovery	If enabled, the camera will broadcast its availability through UPnP. UPnP compatible systems such as Windows XP will then be able to detect the presence of the camera.
Enable Traversal	If enabled, the HTTP connection from your Web browser can use secondary port instead of port 80 to access the camera.
QoS	
Enable QoS Mode	If enabled, the throughput level (for Video and Audio) is guaranteed through QoS (Quality of Service).

4.1.3 DDNS

This page will be displayed after clicking on **"Setup > DDNS"** of the administration menu. It allows you to set DDNS for other Internet users to connect to your camera via domain name allocated by the DDNS service provider.

Dynamic DNS	
Enable DDNS	Enable or disable the DDNS function, as required.
Service Provider	Choose a service provider from the list.
Web Site Button	This allows you to open a new window and connect to the Web site for the selected DDNS service provider.
Domain (Host) Name	Enter the Domain Name (Host Name) allocated to you by the DDNS server provider.
Account / E-Mail	Enter the login name for the DDNS account.
Password / Key	Enter the password for the DDNS account.
Check WAN IP Address	Set the schedule for checking if the Internet IP address has changed. If the IP address has changed, the DDNS Server will be notified. **NOTE:** If the DDNS service provider provides some software to perform this IP address update or notification, you should **NOT** use this software. The update is performed by the camera.

4.2 Video & Audio

4.2.1 Video & Audio

This page will be displayed after clicking on **"Video & Audio > Video & Audio"** of the administration menu. It allows you to adjust the video and audio configuration.

MPEG-4 Settings	
Resolution	Select the desired video resolution format.
Video Quality Control	**Constant Bit Rate:** Select the desired bit rate. **Fixed Quality:** Select the desired option.
Max. Frame Rate	Select the desired Maximum bandwidth for the video stream. Note that you can specify **EITHER** the Bandwidth OR the Frame Rate, not both. If the Bandwidth is defined, the frame rate will be adjusted as necessary to achieve the specified frame rate. The default value for bandwidth is **Unlimited**, which allows you to specify the desired frame rate.

MJPEG Setting	
Resolution	Select the desired video resolution format.
Fixed Video Quality	Select the desired fix quality.
Max. Frame Rate	Select the desired Maximum bandwidth for the video stream. Note that you can specify **EITHER** the Bandwidth OR the Frame Rate, not both. If the Bandwidth is defined, the frame rate will be adjusted as necessary to achieve the specified frame rate. The default value for bandwidth is **Unlimited**, which allows you to specify the desired frame rate.
Mobile Settings	
Enable Mobile Streaming	Enable streaming video for the mobile device by checking this checkbox.
Resolution	The default resolution is set to 160x120.
Video Quality Control	**Constant Bit Rate:** Select the desired fix bit rate. **Fixed Quality:** Select the desired option.
Max. Frame Rate	Select the desired Maximum bandwidth for the video stream.
Access Code	Enter the code for accessing the live video from camera through mobile phone connection.
Video Adjustments	
Power Line Frequency	Select the power line frequency (50Hz or 60Hz) used in your region, to improve the picture quality under florescent lighting.
White Balance	Select the desired option to match the current environment and lighting.
Brightness	If necessary, you can adjust the brightness to obtain a better image. For example, if the camera is facing a bright light, the image may be too dark. In this case, you can increase the brightness.
Sharpness	Select the desired option for the sharpness.
Options	
Microphone	Enable audio by checking this checkbox. Using audio will increase the bandwidth requirements slightly.
Speaker	Enable speaker sound by checking this checkbox.
Flip	Enable this to have the image swapped top-to-bottom.
Mirror	Enable this to have the image swapped left-to-right.
Time Stamp	If enabled, the current time will be displayed on the Video image.
Text Display	Enable this setting if you want text to be displayed on the Video image, and enter the desired text - up to 20 characters. This feature is often used to identify each camera when multiple cameras are installed.

4.2.2 Video Access

This page will be displayed after clicking on **"Video & Audio > Video Access"** of the administration menu. It allows you to set the rules of accessing.

User Access	
Enable Security Checking	**If enabled:** Require login, users will be prompted for a username and password when they connect to the camera to view video. The camera administrator must use the "User Database" option to create the desired users. **If disabled:** No login required, all users do not have to provide a username and password when they connect to the camera to view video.
Video Access	
Enable Scheduled Video Access	**If enabled:** Camera is available during the scheduled periods and unavailable at other times. If this option is selected, you need to define a schedule. If no schedule is defined, this option is always disabled. **If disabled:** The option will remain disabled until you enable it. Note that regardless of which setting is chosen, Administrator can ALWAYS access the camera and view live video.
Access Schedule	
Scheduled Periods	This displays all periods you have entered into the database. If you have not entered any periods, this list will be empty.
Delete Button	Use the Delete button to delete the selected item in the list.

Add New Schedule	
Day	Choose the desired option for the period.
Start Time	Enter the start time using a 24 hr clock.
End Time	Enter the end time using a 24 hr clock.
Add Button	Click this button to add a new period.
Clear Button	Click this button to clear the adjust values.

4.2.3 User Database

This page will be displayed after clicking on **"Video & Audio > User Database"** of the administration menu. It allows you to create the desired users.

Existing Users	
User List	This displays all users you have entered into the User database. If you have not entered any users, this list will be empty.
Edit Button	Use these buttons to manage the user database.
Delete Button	Use these buttons to manage the user database.
Delete All Button	Use these buttons to manage the user database.
User Properties	
User Name	Enter the name for the user here. Spaces, punctuation, and special characters must NOT be used in the name. The name is case insensitive (case is ignored), so you can not have 2 names which differ only by case.
User Password	Enter the password for the user.
Confirm Password	Re-enter the password for the user, to ensure it is correct.
Add Button	Click this button to add a new user, using the data shown on screen.
Clear Button	Click this button to clear the input fields, ready to add a new user.

4.3 Event

4.3.1 Motion Detection

This page will be displayed after clicking on **"Event > Motion Detection"** of the administration menu. It allows you to set detection areas.

Set Detection Areas	
Area Screen	You can set the full screen or areas of the video image to be examined. Note that Motion detection can be triggered by rapid changes in lighting condition, as well as by moving objects. For this reason, it should only be used indoors.
Threshold	Adjust the threshold of detection for each area.

4.3.2 E-Mail

This page will be displayed after clicking on **"Event > E-Mail"** of the administration menu. It allows you to set the E-Mail alert.

Primary SMTP Server	
SMTP Server Address	Enter the address of the SMTP Server to be used to send E-Mail.
Authentication	Select the desired Authentication type for the SMTP Server.
SMTP Login name	Enter your login name for the SMTP Server.
SMTP Password	Enter your password for the SMTP Server.
POP server name	Enter the name for the POP Server.
Show "From" as	Enter the E-Mail address to be shown in the "From" field when the E-Mail is received.
Secondary SMTP Server	
Secondary SMTP	Check the box to upload to the Secondary SMTP if the camera can not connect to the primary SMTP.
SMTP Server Address	Enter the address of the SMTP Server to be used to send E-Mail.
Authentication	Select the desired Authentication type for the SMTP Server.
SMTP Login name	Enter your login name for the SMTP Server.

SMTP Password	Enter your password for the SMTP Server.
POP server name	Enter the name for the POP Server.
Show "From" as	Enter the E-Mail address to be shown in the "From" field when the E-Mail is received.
E-Mail Setup	
E-mail Address	Enter at least one E-Mail address; the 2nd and 3rd addresses are optional. The alert will be sent to the addresses specified here.
Subject	Enter the desired text to be shown as the "Subject" for the E-Mail when it is received. Subject up to 20 characters.

4.3.3 FTP

This page will be displayed after clicking on **"Event > FTP"** of the administration menu. It allows you to set FTP upload.

Primary FTP	
FTP Server	Enter the address of the FTP Server.
Port	Enter the Port of the FTP Server to be connected.
Login name	Enter your login name for the FTP Server.
Password	Enter your password for the FTP Server.
Enable Passive Mode	Check the box to enable the Passive mode feature of the FTP.
File Path Name	Enter the file path/name of the FTP.
Secondary FTP	
Secondary FTP	Check the box to upload to the Secondary FTP if the camera can not connect to the primary FTP.
FTP Server	Enter the address of the FTP Server.
Port	Enter the Port of the FTP Server to be connected.
Login name	Enter your login name for the FTP Server.
Password	Enter your password for the FTP Server.
Enable Passive Mode	Check the box to enable the Passive mode feature of the FTP.
File Path Name	Enter the file path/name of the FTP.

4.3.4 HTTP

This page will be displayed after clicking on **"Event > HTTP"** of the administration menu. It allows you to set HTTP notification.

HTTP Notification	
Enable	Enable this checkbox to use the HTTP Notification.
URL	Enter the URL of your HTTP notification server.
Proxy Server Name	Specify the proxy server name in the provided field if the camera needs to pass through a Proxy Server to do the HTTP notification.
Port Number	Enter the port number for the proxy server.
Method	Select the desired method of form data encoding. **Get:** It should be used if and only if the form processing is independent, which typically means a pure query form. Generally it is advisable to do so. **Post:** If there are problems related to long URLs and non-ASCII character repertoires, which can make it necessary to use "POST" even for independent processing.

4.3.5 Event Trigger

This page will be displayed after clicking on **"Event > Event Trigger"** of the administration menu. It allows you to set the schedule and actions of the event.

Event Schedule	
Schedule List	The Event Schedule shows all the event types currently configured in the camera
New Schedule	
Effective Time Frame	Choose the desired option for the period.
Start Time	Choose the desired start time using a 24 hr clock.
End Time	Choose the desired end time using a 24 hr clock.
Trigger Event	
Motion Detection	If enabled, movement in a motion detection window can be used to trigger events.
Interval	Select the desired option for the events interval. (* "0" = No Delay)
Actions	**E-Mail:** If checked, an E-Mail (with "Attachment") will be delivered to the SMTP server. (SMTP Server must be configured on the E-Mail page.) **FTP:** If checked, an FTP upload will be activated to the FTP server. (FTP servers must be configured on the FTP page.) **HTTP:** If checked, a notification will be delivered to the HTTP Notification server. (HTTP Notification server must be configured on the HTTP page.)

Attachment Type	**JPEG Image type -** **Frame Rate:** Select the desired capture rate for the JPEG image here. **Pre/Post Capture:** Select the desired length. The snapshot of the JPEG image depends on this setting, and also the file size and degree of compression. **Video type -** **Video Format:** Select the desired type for the video file. **Pre/Post Capture:** Select the desired length. The size of the file depends on this setting, and also the Video size and degree of compression.

4.4 Administration

4.4.1 Maintenance

This page will be displayed after clicking on **"Administration > Maintenance"** of the administration menu.

Administrator Login	
Administrator ID	Enter the name for the Administrator here.
Administrator Password	The password for the Administrator.
Verify Password	Re-enter the password to ensure it is correct.
Firmware Upgrade	
Upgrade File	Click on **"Browse"** button and browse to the location on your PC where you stored the firmware file. Select this file.
Start Button	Click on this button to start the firmware. When the upgrade is finished, the camera will restart, and this management connection will be unavailable during the restart.
Clear File Name Button	This does NOT stop the Upgrade process if it has started. It only clears the input for the "Upgrade File" field.
Backup & Restore	
Backup Configuration File	Click on **"Backup"** button to save the current configuration information to a text file.

Restore Configuration File	Click on **"Restore"** button to reinitialize the camera to load the new updated software. Do this after loading the upgrade file.
Clear File Name	This does NOT stop the Restore process if it has started. It only clears the input for the "Restore Configuration File" field.
Restore Factory Defaults	Click on **"Defaults"** button to reloads all default settings on the camera.
Restart Camera	Click on **"Restart"** button to restarts the camera.

4.4.2 Status

This page will be displayed after clicking on **"Administration > Status"** of the administration menu.

System	
Device Name	This shows the name of the camera.
Description	This shows the description of the camera, such as location.
F/W version	The version of the current firmware installed.
Network	
MAC Address	The current IP address of the camera.
IP Address	The IP Address of the camera.
Network Mask	The network mask associated with the IP address above.
Gateway	The IP Address of the remote Gateway associated with the IP Address above.
MPEG-4 / MJPEG	
Resolution	The image size of the video stream.
Video Quality	This displays the image quality of the video stream.
Frame Rate	This displays the frame rate of the video stream.

Buttons	
Help	Click on this button will call the help window.
Refresh	Update the log and any other data on screen.

4.4.3 Log

This page will be displayed after clicking on **"Administration > Log"** of the administration menu.

Log	
System Log	This is a log of system activity.
Refresh Button	Click on this to update the data shown on screen.
Clear Log	Click this button to restart the log.
Enable Syslog Service	Check the box to enable the System Log Server feature.
Syslog Server Address	Enter the address of the Syslog Server.

Appendix A --- Streaming Video / Audio Solution

Streaming video is a sequence of "moving images" that are sent in compressed form over the Internet and displayed by the viewer as they arrive. With streaming, a Web user does not have to wait to download a large file before seeing the video or hearing the sound. Instead, the media is sent in a continuous stream and is played as it arrives.

• To snapshot a JPEG image from the camera with specified resolution and quality:

http://<ip>/img/snapshot.cgi?[size=<value>][&quality=<value>]

Size = 1 (160*120)

      2 (320*240)

      3 (640*480)

Quality = 5 (Very low)

      4 (Low)

      3 (Normal)

      2 (High)

      1 (Very high)

• To stream M-JPEG video from the camera (M-JPEG mode only)

http://<ip>/img/mjpeg.htm

• To stream video through the RTP/RTSP protocol from camera (MPEG-4 mode only)

rtsp://<ip>/img/media.sav

Note:

Users need to specify the desired protocol in the players.

• To snapshot a JPEG image (160*120, very low quality) through a 3G mobile phone:

http://<ip>/img/mobile.cgi

Appendix B --- Enable ActiveX options on your PC

Your Internet Explorer security settings must allow for the web page to work correctly. To use the ICA-151, user must setup his IE browser as follows:

From your IE browser ➔ "Tools" ➔ "Internet Options…" ➔ "Security" ➔"Custom Level…", please setup your "Settings" as follow.

Enable the 3 options as below,
• Download the signed ActiveX controls
• Download the unsigned ActiveX controls
• Initialize and script the ActiveX controls not masked as safe to Prompt
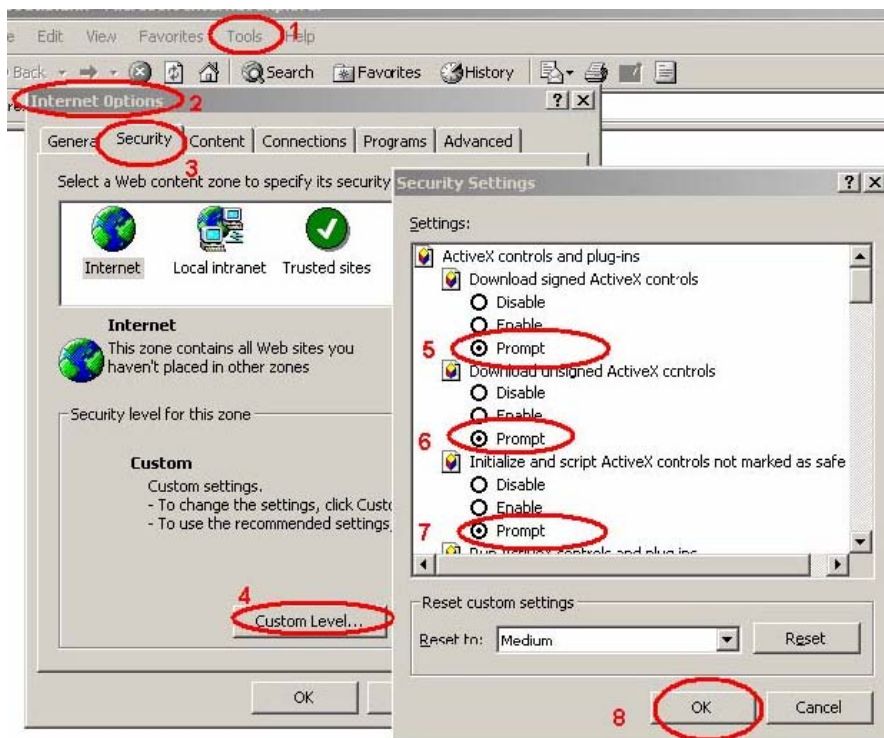
By now, you have finished your entire PC configuration.

Appendix C --- Bandwidth Estimation

The frame rate of video transmitted from the ICA-151 depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your ICA-151.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the ICA-151 may be varying.

Quality	640 x 480 (VGA)	320 x 240 (QVGA)	160 x 120 (QQVGA)
Very Good	4000 Kbps @ 30fps	1000 Kbps @ 30fps	800 Kbps @ 30fps
Good	3200 Kbps @ 30fps	800 Kbps @ 30fps	400 Kbps @ 30fps
Normal	1200 Kbps @ 30fps	300 Kbps @ 30fps	200 Kbps @ 30fps
Low	480 Kbps @ 30fps	120 Kbps @ 30fps	100 Kbps @ 30fps
Very Low	160 Kbps @ 30fps	40 Kbps @ 30fps	40 Kbps @ 30fps

Note:

Audio streaming also takes bandwidth around 5 kbps to 64kbps. Most xDSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.