Communicate via **Micro network**

Micronet®
Making Communication Easier

Micronet SP5319

720p HD Starlight Box IP Camera

User manual

Version: 1.0

Welcome

Thank you for purchasing this network camera. The camera adopts the Progressive Scan technology with low-bit-rate video compression, providing the high image resolution, outstanding picture quality, real time performance, and clear image under motion for your surveillance solution.

The camera comes with a browser-based configuration utility that allows you to integrate it into your network easily. It also provided the computer utilities that allow you to search and manage the camera installed within your network (after the utilities are installed on your computer).

With the trouble-free hardware installation, user-friendly management utilities and comprehensive applications supported, the camera is your best choice for remote monitor, high quality, and high performance video images.

Important information for using the manual

This manual has been prepared to guide you through the operation of your camera from first set-up through to continuous use, which includes:

Chapter 1. Knowing your camera
You will know the components and functions of the camera.

Chapter 2. Hardware and Software Installation
Helps you install the camera according to your application. You will be able to set up the camera at home, at work, at any where you want.

Chapter 3. Managing the Camera
Helps you operate and manage your camera without trouble.

Appendix: Provides the specification and general information of the camera.

It is important to understand the terms and typographical conventions used in this manual. The following kinds of formatting in the text identify special information:

- **Bold** — indicates the items displayed on the screen, including buttons, headings, field names and options. Example: click the **Browse** button to locate the firmware file.
- *Italics* — indicates the name of a screen. Example: the *Network Setting* screen of the Configuration Utility.

Please read this manual carefully before using your camera for the first time. Keep this manual in a safe place and use as your first point of reference.

Disclaimer

The manufacturer operates a policy of ongoing development. The manufacturer reserves the right to make changes and improvements to any of the products described in this document without prior notice. The manufacturer does not warrant that this document is error-free.

Not all models are available in all regions. Depending on the specific model purchased, the color and look of your device and accessories may not exactly match the graphics shown in this document.

The screenshots and other presentations shown in this manual may differ from the actual screens and presentations generated by the actual product.

All such differences are minor and the actual product will deliver the described functionality as presented in this User Manual in all material respects.

Copyright

Revision: 1.0

(04/2012)

Contents

Chapter 1. Knowing Your Camera

Package contents

Check the following items that are included in the package. Contact the authorized dealer of your locale immediately if any item contained is damaged or missing.

- One network camera
- One L-type hex key wretch
- One 2-pin Power Terminal Block
- One 5-pin DI/DO Terminal Block
- One Ethernet cable (RJ-45 type)
- One Installation CD
- One Quick Installation Guide
- One DC power adapter (Optional)

Camera components and functions

1. **Socket set screws**

   Fasten lens to camera by using L-type hex key wretch.

2. **Reset button**

   Press the button to restart the camera.

   Press and hold the button for 5 seconds to restore the factory default settings for the camera.

3. **Audio output**

   The audio output connects an external active speaker (2-way audio supported).

4. **Line In**

   The audio line input allows you to connect an external microphone.

5. **DC-Iris control cable socket**

   The socket allows camera automatically to adjust iris opening that responds to change in light level.

6. **BNC Video output**

   The connector allows camera to connect the analog display device to fine tune the camera focus through BNC cable.

7. **DC 12V power input**

   The power input connects the DC power adapter to supply power to the camera.

8. **DI/DO terminal**

   The terminal allows camera to send and receive signal to external device.

9. **Ethernet port**

   The port is used to connect the camera to your network via the Ethernet cable (RJ-45 type). The port supports the NWay protocol so that the system will be able to detect the network speed automatically.

   The port on the PoE model is compliant with IEEE802.3af PoE (Power over Ethernet) standard. The camera can be powered on by the Ethernet cable so that you can install the camera anywhere without a power outlet supported.

10. **MicroSD card slot**

    The slot allows you to insert a memory card for expansion of storage.

    Hold the MicroSD card by the edges and gently insert it into the slot. To remove a card, gently push the top edge of the card inwards to release it and then pull it out of the slot.

11. **RS485 terminal**

    The RS485 terminal connect camera to PTZ driver or scanner via RS485 interface.

System requirements

When the camera is installed in your network for remote surveillance applications, ensure the computer is in good network connection and meet system requirements as below:

- **Minimum system requirement for connecting one camera**

  CPU: Pentium 4 class, 2.0GHz

  Memory: 512MB RAM

  Hard disk drive: 500MB of available space

  GPU: AGP card, 128MB RAM; resolution @ 800x600 or above

  Operating system: Microsoft Windows XP, Vista, and Win 7

  Browser: Microsoft Internet Explorer 7.0 and above

- **Recommended system requirements for connecting multiple cameras**

  CPU: Intel Core 2 Duo, 2.0GHz

  Memory: 2GB RAM or more

  Hard disk drive: 500MB of available space

  GPU: High performance graphic card, 256MB RAM or more; resolution @ 1024x768 or above

  Operating system: Microsoft Windows XP, Vista, and Win 7

  Browser: Microsoft Internet Explorer 7.0 and above

Note: When you connect multiple cameras to monitor different places within your surveillance application, it is recommended to use high-performance computer and networking to approach better effect while transmitting the image.

Camera features

- Capture high resolution video with the mega-pixel CMOS sensor.
- Minimum Illumination 0.007 lux in color image.
- Real-Time Dual Streams.
- 30ftps @ 720P or 1.3MP.
- True Day/Night function
- H.264, Mpeg4 and MJPEG compression supported.
- Motion detection supported.
- Compliant with IEEE802.3af standard, allowing the camera to be powered by the Ethernet cable.
- Firmware upgradeable through the browser-based Configuration Utility.

Chapter 2. Hardware and Software Installation

Installing the camera Hardware

Mount the lens by turning it clockwise onto the camera then connect the DC-iris control cable to the socket.

Connecting the cables

- **Connecting the Ethernet cable**

  Use the RJ-45 type Ethernet cable to connect the camera to your local area network (LAN).

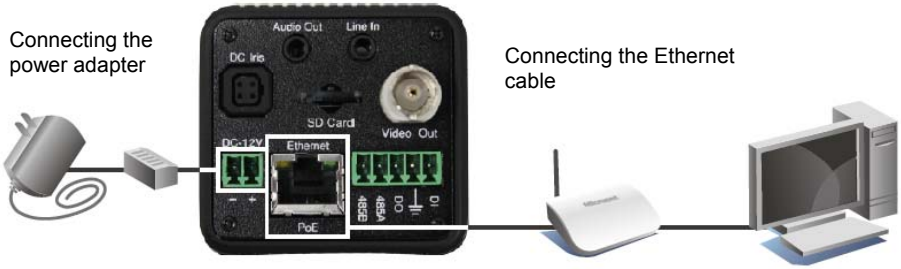
  Plug one end of the Ethernet cable to the Ethernet port on the bottom panel of the camera and the other end to an active port on the switch/router of the network.

- **Connecting the DC power adapter***

  If the switch/router is POE compliant, this step can be ignored. Please jump to next step.

  Plug the DC power adapter cable with the 2-pin terminal block to the DC power input on the bottom panel of the camera and the power plug to the wall socket.

  * Optional for non-PoE environment.



- **Connect to external device***

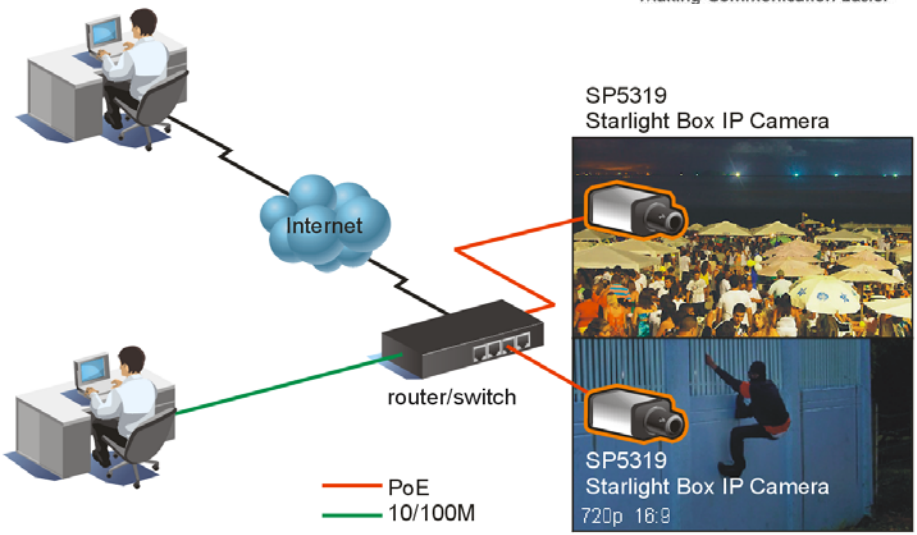
  If there is any external device, connect them to DI or DO terminal.

Applications of the Camera

The camera installed in your network can be applied in multiple applications, including:

- Monitor different places, such as bank, airports, factories, entrances, hall ways and parking lots, and objects remotely via the Internet or Intranet.
- Capture still images and record video clips.
- Alert function that includes FTP upload and email messages.

The following explains how to set up the camera in the network and how does it work in your surveillance applications.

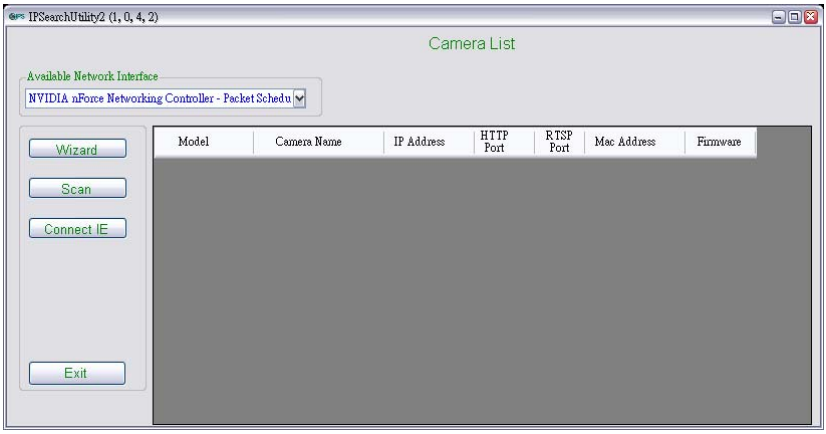

SP5319
Starlight Box IP Camera
Internet
router/switch
PoE
10/100M
SP5319
Starlight Box IP Camera
720p 16:9

Installing software

The camera setup wizard, IPSearchUtility2, that comes with your camera is a conveniently utility to search the connected camera within the network from your computer.

To install the utility on your computer:

1. Insert the Installation CD into the computer's CD-ROM/DVD-ROM drive.
2. The CD Menu should pop up automatically. Go into "Software/Utility" and double click "IPSearchUtility2" to initiate the setup. Follow the prompts to complete the installation.
3. When done, the **IPSearchUtility2** icon will display on the desktop. Double-click on the icon to launch the utility.



4. From the Control Panel, you can:
   - Check the connected camera(s) from the **Camera List**, such as the IP Address, Camera Name, Mac Address, and more.
   - Click **Wizard** to change the IP address of the selected camera.
   - Click **Scan** to search the camera within the network.
   - Click **Connect IE** to access the camera using Internet Explorer.
   - Click **Exit** to end the utility.

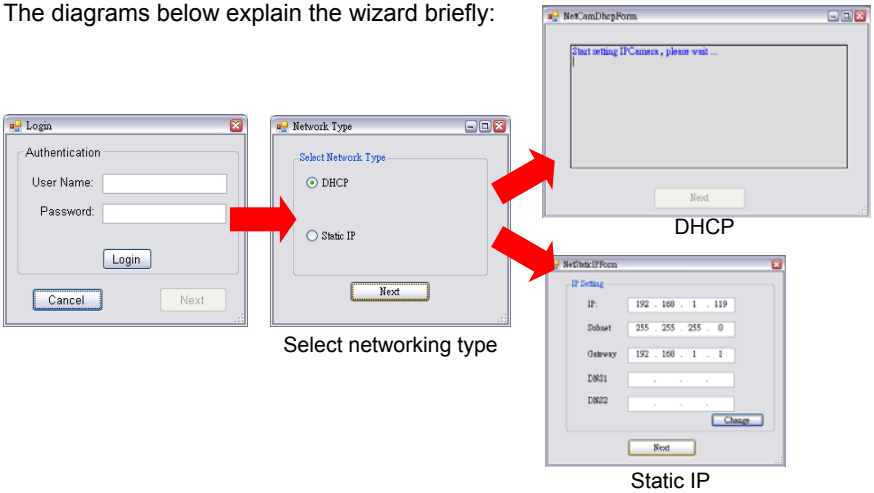
Chapter 3. Managing the Camera

Setting up the camera's networking by setup wizard

IPSearchUtility2 lets you configure your camera's networking easily and quickly. The wizard will guide you through the necessary settings step-by-step.

1. Launch IPSearchUtility2 on your computer.
2. Select the camera you want and then click **Wizard**.
3. When prompted, enter the **User Name** and **Password** to access the camera. **The default User name is "root" and the default password is "pass".**
4. Follow the prompts to complete the networking settings for the camera, including:
   - select networking type (**DHCP** or **Static IP**)
   - configure wireless network (for wireless model only)

   The diagrams below explain the wizard briefly:



5. When done, re-connect the Ethernet cable and then click **Scan** again from the wizard's Control Panel.

Accessing the camera's Configuration Utility

You can manage the camera via the computer's Web browser easily. The following sections will guide you through the basic and advanced settings of the camera by using the browser-based Configuration Utility.

1. You can access the camera through IPSearchUtility2 or via Internet Explorer:

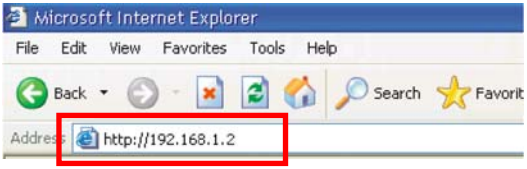
   - **Access from IPSearchUtility2**

     Launch IPSearchUtility2. From the Camera List, select the desired camera and then click **Connect IE**.

     Tip: To learn more of using IPSearchUtility2, see the "Installing software" section in Chapter 2.

   - **Access from Internet Explorer**

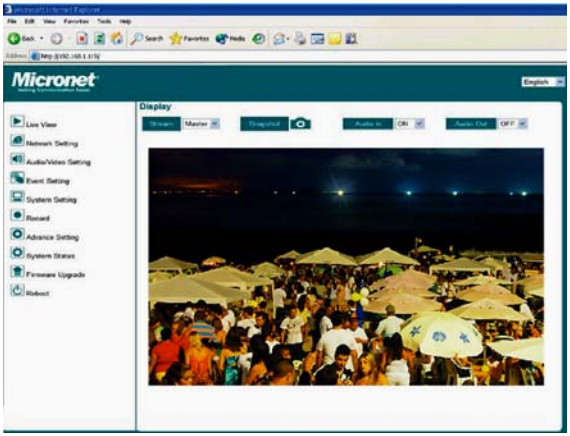
     Launch Internet Explorer. Enter the camera's IP address in the URL bar of the browser and then press ENTER. **The default IP address of the camera is "192.168.1.2".**



2. Enter the User name and password in the Login window. **The default User name is "root" and the default password is "pass".**

   Note: If you are the first time to access the camera, it may be required to install a plug-in for the camera. Permission request depends on the Internet security settings of your computer. Follow the prompts to complete the plug-in installation.

3. When you access the camera's Configuration Utility, the *Main* screen will appear as below:



Using the Configuration Utility

The *Main* screen of the Configuration Utility provides you with many useful information and functions, including the menus on the left column, the control buttons on the top of the screen, and the Live View area for displaying the real-time video image. You can also change the display language from the **Language** drop-down menu.

- **The menus**

  The menus contain the basic and advanced settings of the camera. Click the desired button to display the menu screen.

Menu	Description
	**Live View** — Display the real-time video image of the connected camera on the *Main* screen.
	**Network Setting** — Change the network settings of the camera, such as LAN, PPPoE, DDNS, and more.
	**Audio/Video Setting** — Change the audio and video settings of the camera.
	**Event Setting** — Complete the required settings so that you can upload images to FTP and send email messages by events.
	**System Setting** — Change the camera's basic settings. For example, change the displayed camera name.
	**Record** — Change the settings for recording.
	**Advance Setting** — Set the schedule profile and DI/D for the camera.
	**System Status** — Display the current configuration of the camera.
	**Firmware Upgrade** — Upgrade the latest firmware (if available) for your camera.
	**Reboot** — Restart the camera.

- **The control buttons**

  The control buttons allow you to control the camera's function from the screen.

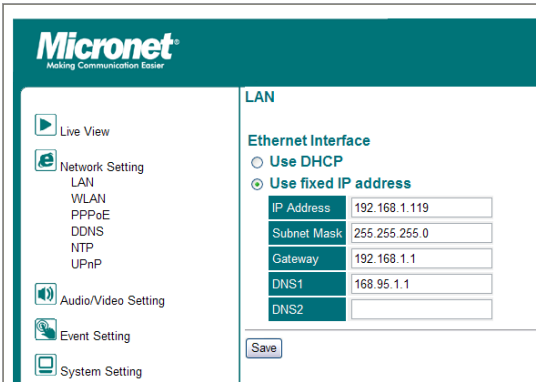
Button	Description
Stream	Change the stream to **Master** or **Slave**.
Snapshot	Capture and save a still image*.
Audio In	Enable or disable the microphone to receive the on-site sound and voice from the camera.
Audio Out	Enable or disable the speaker to speak out via the camera.

* The folder that stores the captured image will be displayed on the screen for 2 seconds after you click the Snapshot button.

Network Setting

- **LAN**

  This sub-menu allows you to select the IP address mode and set up the related configuration.



- **Ethernet Interface:**

  Select the **Use DHCP** option when your network uses the DHCP server. When the camera starts up, it will be assigned an IP address from the DHCP server automatically.

  Otherwise, select the **Use fixed IP address option** to assign the IP address for the camera directly, including **IP Address**, **Subnet Mask**, **Gateway**, **DNS1**, and **DNS2**.

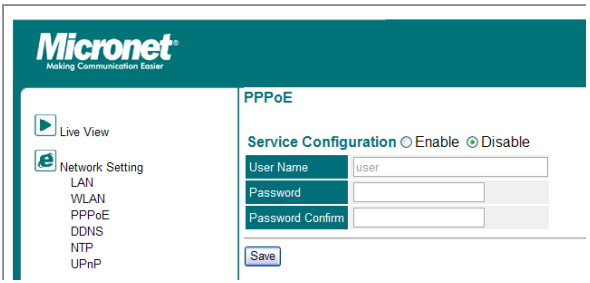
Option	Description
IP Address	Enter the IP address of the camera. The default setting is “192.168.1.2”.
Subnet Mask	Enter the Subnet Mask of the camera. The default setting is “255.255.255.0”.
Gateway	Enter the default Gateway of the camera. The default setting is “192.168.1.1”.
DNS1/2	DNS (Domain Name System) translates domain names into IP addresses. Enter the DNS1 (Primary DNS) and DNS2 (Secondary DNS) that are provided by ISP (Internet Service Provider).

When done, click **Save**.

- **PPPoE**

  This sub-menu is used when you use a direct connection via the ADSL modem. Select the **Enable** option to enable this feature.

  To activate PPPoE mode, you should have a PPPoE account from your Internet service provider. Enter the **User Name** and **Password** (twice). The camera will get an IP address from the ISP as starting up.



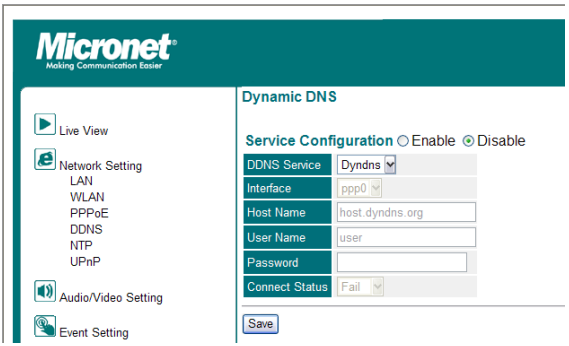
  When done, click **Save**.

-

- **DDNS**

  This sub-menu allows you to assign a fixed host and domain name to a dynamic Internet IP address. Select the **Enable** option to enable this feature.

  Note: You need to sign up for DDNS service with the service provider before configuring this feature and accessing the server.



  To set up the DDNS:

  b. Select the **DDNS Service** type.

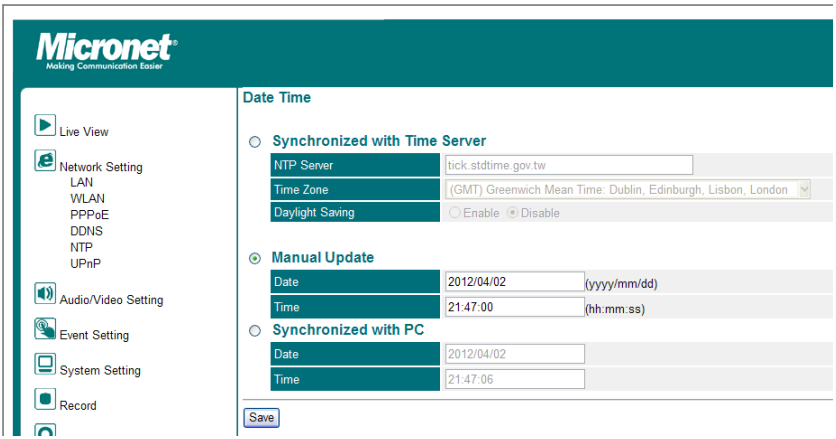
  c. Select the **Interface**.

  d. Enter the required information in the **Host Name**, **User Name**, and **Password** options.

  e. When done, click **Save**.

- **NTP**

  This sub-menu lets you set the correct date and time for the camera.



  - **Synchronized with Time Server:**

    Select the option and the time will be synchronized with the NTP Server. Then, select the proper **Time Zone** for the region from the drop-down menu and enable or disable **Daylight Saving**.

  - **Manual Update:**

    You can also enter the date and time manually by selecting the option.

  - **Synchronized with PC:**

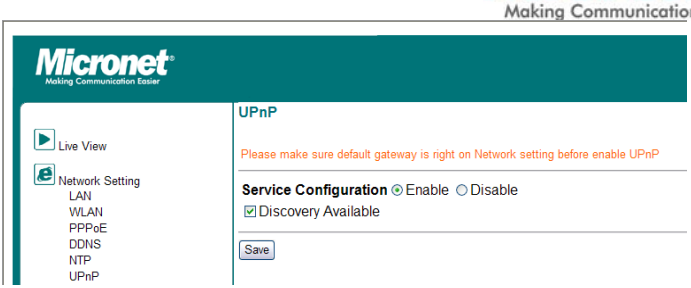
    Select the option and the date/time settings of the camera will be synchronized with the connected computer.

  When done, click **Save**.

- **UPnP**

  This sub-menu allows you to enable of disable the UPnP function for the camera. Select the **Enable** option to enable this function.(Default is set to **Enable**)

  The UPnP (Universal Plug and Play) function is a set of computer network protocols that enable the device-to-device interoperability. It also supports port auto mapping function so that you can access the camera if it is behind an NAT router or firewall.



- **Discovery Available:**

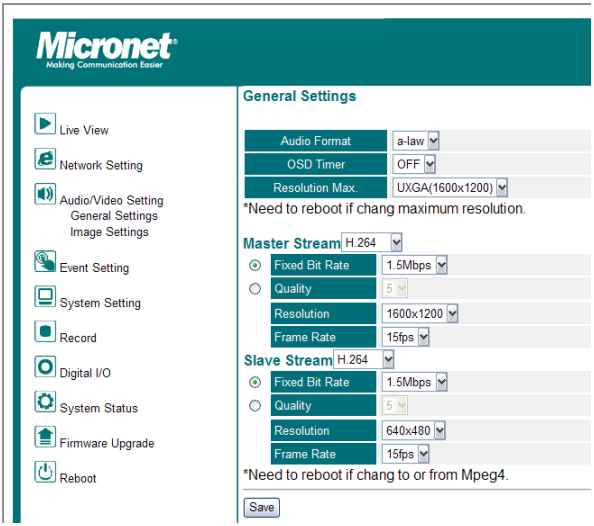
  Select the option and the camera will be able to announce to control points that it has become available on the network.

When done, click **Save**.

Audio/Video Setting

- **General Settings**

  This sub-menu allows you to set up the audio function for the camera



- **Audio Format:**

  From the drop-down menu, set the encoding laws as A law (**a-law**) ,μ law (**u-law**) or **amr**. The A law option is usually used in European PCM systems and the μ law option is used in American PCM systems.

- **OSD Timer:**

  Select the **ON** or **OFF** option from the drop-down menu to display or hide the date & time information on the live view image.

- **Resolution Max.:**

  From the drop-down menu, select the maximum resolution. Once you change the maximum resolution, you need to restart the system.

- **Master/Slave Stream:**

  From the drop-down menu, select to transmit and record the video using **MPEG4**, **MJPEG** or **H.264** compression.

Option	Description
MPEG4	Select the option and then you can determine the video streaming by **Fixed Bit Rate** or **Quality**. Once you change the compression mode to/from MPEG4, you need to restart the system.
MJPEG	Select the option and then you can determine the video streaming by **Quality**.

H.264	Select the option and then you can determine the video streaming by **Fixed Bit Rate** or **Quality**.

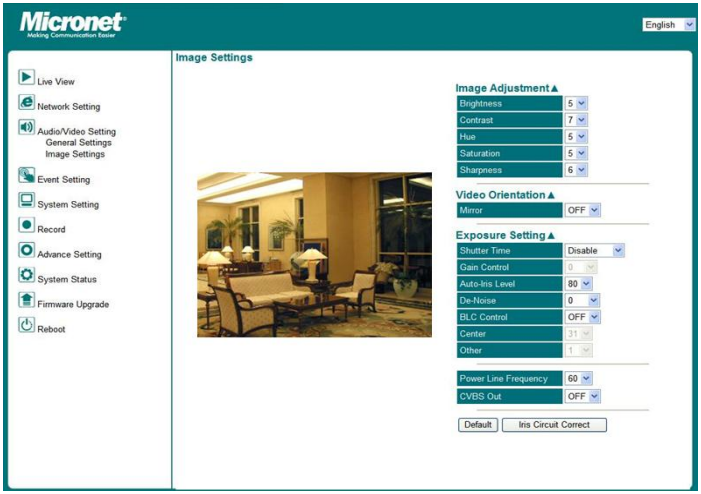
You also need to set the proper **Resolution** and **Frame Rate** depending on your network status. Please note that higher setting obtains better video quality while it uses more resource within your network.

Note: The camera supports H.264, MPEG4 and MJPEG compression. The MJPEG mode captures the images in JPEG format, requiring higher bandwidth to view smooth video. You should control the bandwidth of each connection well through the setting options above.

When done, click **Save**.

- **Image Settings**

This sub-menu allows you to change the image related settings.



- **Image Adjustment:**

In the field, you can set the image's **Brightness**, **Contrast**, **Hue**, **Saturation**, and **Sharpness** from the corresponding drop-down menus.

Option	Description
Brightness	Adjust the brightness level from 0 ~ 9. The default setting is 5.
Contrast	Adjust the contrast level from 0 ~ 3. The default setting is 7.
Hue	Adjust the hue level from 0 ~ 9. The default setting is 5.
Saturation	Adjust the saturation level from 0 ~ 9. The default setting is 5.
Sharpness	Adjust the sharpness level from 0 ~ 9. The default setting is

	6.

- **Video Orientation:**

  In the field, the **Mirror** option allow you to mirror the image horizontally. Select the **ON** or **OFF** option from corresponding drop-down menu to enable or disable the function.

- **Exposure Setting:**

  In the field, these settings is used to adapt to the amount of light used

Option	Description
Shutter Time	Adjust the Shutter Time level from 1/30 sec~ 1/10000sec. If "**Disable**" is selected, the shutter speed is automatically set to product optimum image quality.
Gain Control	Adjust the Gain control level from 0 ~ 255. You can manually adjust the AGC level. The high gain control value will generate a certain amount of noise
Auto-Iris Level	Adjust the Auto-iris level from 0 ~ 99 according to the light of the subject. This item can be adjustable when **Shutter Time** is set as **Disable**. With this function, the lens maintains the iris opening at an optimal level.
De-Noise	Adjust the De-Noise level from 0 ~ 7. Reduce the noise effect by adjusting this item
BLC Control	Enable/Disable **BLC** (back light compensation) control function
Center	Adjust the BLC level in center area from 0 ~ 31. The option will give the necessary light compensation in the center weighted area
Other	Adjust the BLC level in edge area from 0 ~ 31. The option will give the necessary light compensation in the edge weighted area

The images that are not properly corrected may look either bleached out or too dark. From the **Gamma Correct** drop-down menu, select the proper value to fix the overall brightness of the image.

The **Power Line Frequency** option allows you to select the proper frequency according to the camera's location: **50** or **60** Hz. This option is used to reduce the noise of image.

The **CVBS Out** option allows you to enable the analog video signal output to external display device or integrate into an existing CCTV network. Default is set as **OFF**

Click **Default** to restore the factory default for the settings above.

Event Setting

- **Motion Detection**

  This sub-menu allows you to set up the motion detection feature of the camera.

  The camera provides three detecting areas. To activate the detecting area, select the **Enable** option in the **Window 1/2/3** fields. When the detecting area is activated, select the desired window and then you can use the mouse to move the detecting area and change the area coverage.

  - **Sensitivity:**

    Select the value from the drop-down menu to increase or decrease the sensitivity of motion detection. The higher value indicates the higher sensitivity.

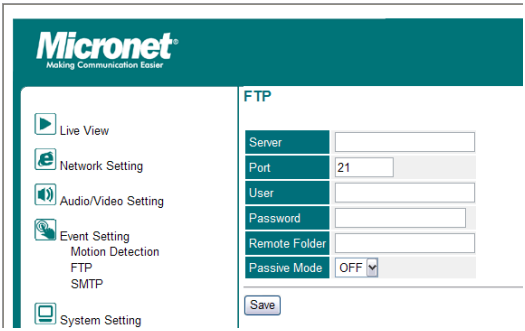
  - **Threshold:**

    Select the value from the drop-down menu to adjust the level for detecting motion to record video. The higher value indicates the higher threshold.

  When done, click **Save**.

- **FTP**

  This sub-menu allows you set up the FTP server so the camera will be able to upload images per events.



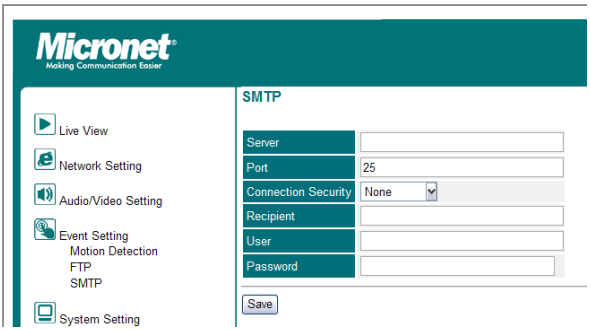
To set up the FTP server, complete the required settings in the FTP field, including: **Server**, **Port**, **User**, **Password**, **Remote Folder**, and **Passive Mode**.

Option	Description
Server	Enter the IP address of the target FTP server.
Port	Enter the port number that is assigned for the FTP server. The default FTP port is **21**.
User	Enter the user name to login the FTP server.
Password	Enter the password to login the FTP server.
Remote Folder	Enter the destination folder for uploading the images. Example: /Test/
Passive Mode	Select the **Enable** option to enable passive mode.

When done, click **Save**.

- **SMTP**

This sub-menu allows you set up the SMTP server so the camera will be able to send email messages per events.



To set up the SMTP server, complete the required settings in the FTP field, including: **Server**, **Port**, **Connection Security**, **Recipient**, **User**, and **Password**.

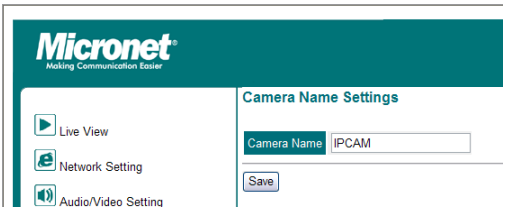
Option	Description
Server	Enter the mail server address. Example: yourmail.com
Port	Assign the SMTP port. The default SMTP port is **25**.
Connection Security	Select **None**, **STARTTLS**, or **SSL/TLS** according to the mail server's configuration.
Recipient	Enter the email address of the user who will receive the notification message.
User	Enter the user name to login the mail server.
Password	Enter the password to login the mail server.

When done, click **Save**.

System Setting

- **Camera Name**

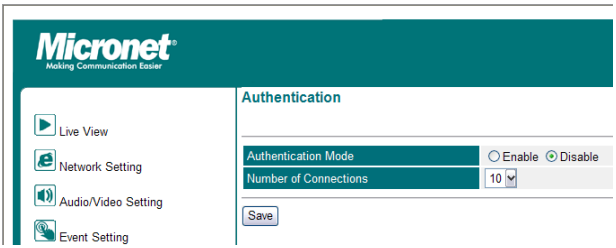
  This sub-menu lets you enter a descriptive name for the camera in the **Camera Name** option. This is helpful to identify the camera easily while multiple cameras are connected within the network.



  When done, click **Save**.

- **Authentication**

  This sub-menu lets you set the security for the camera.



  - **Authentication Mode:**

    Select the **Enable** of **Disable** option to enable or disable the security for the camera.

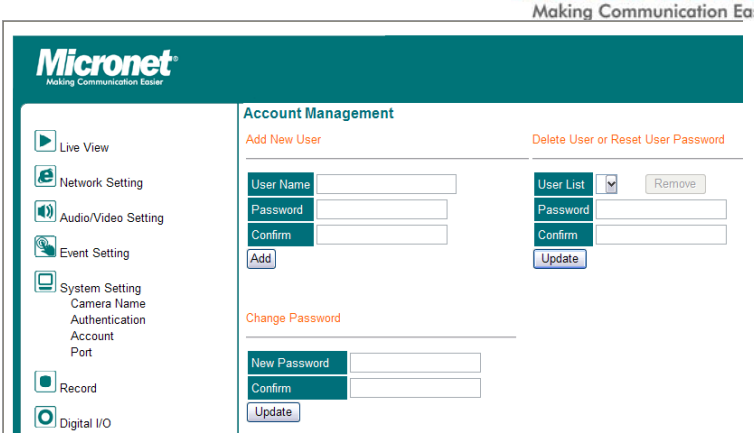
  - **Number of Connections:**

    From the drop-down menu, select the number of users (from 1 to 10) that are allowed to access the camera simultaneously.

  When done, click **Save**.

- **Account**

  This sub-menu lets you manage the users for the camera.



- **Add New User:**

  In the **User Name** option, enter the user's name you want to add to use the camera. Then, enter the **Password** (twice) for the new user.

  When done, click **Add**.

- **Delete User or Reset User Password:**

  You can manage the users for the camera by removing the user or changing the account's password. From the **User List** drop-down menu, select the desired user and then click **Remove** to delete the account, or enter the new password (twice) to change the account's password.

  When done, click **Update**.

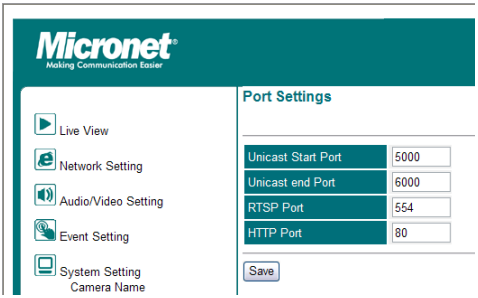
- **Change Password:**

  To prevent unauthorized access to the camera's Configuration Utility, you are strongly recommend to change the default administrator password. Enter the new password (twice) to reset and confirm the administrator's password.

  When done, click **Update**.

▪ **Port**

This sub-menu lets you manage the port numbers for the camera.



- **Unicast Start/End port:**

  Set the start port and end port for the unicast service of the camera. The default start port is **5000** and the end port is **6000**.

- **RTSP Port:**

  Set the transmission of streaming data within the network. The default RTSP (Real Time Streaming Protocol) port is **554**.

  RTSP is a technology that allows you to view streaming media via the network. You can view the real-time video using Quick Time player or RealPlayer. To view the real-time streaming video on your computer, open the Web browser and then enter the RTSP link (for example, rtsp://camera's IP address/mpeg4).

- **HTTP Port:**

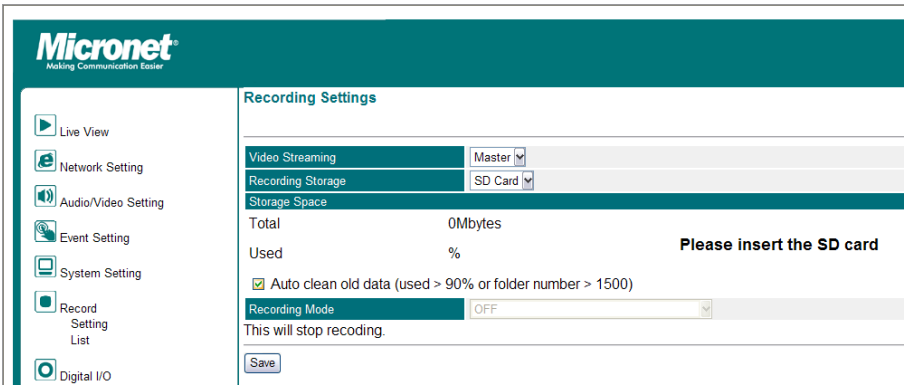
  Enter the HTTP port for the camera. The default setting is **80**.

When done, click **Save**.

Record

- **Setting**

  This sub-menu allows you to configure the recording settings.



  - **Video Streaming:**

    From the drop-down menu, select the video streaming as **Master** mode or **Slave** mode.

  - **Recording Storage:**

    The recorded video files will be stored to the MicroSD card (when it is inserted). The status of the inserted MicroSD card will be displayed in the **Storage Space** field.

  - **Auto clean old date:**

    Select the option so the system will delete the old files when the storage space of the MicroSD card is less than 10%.

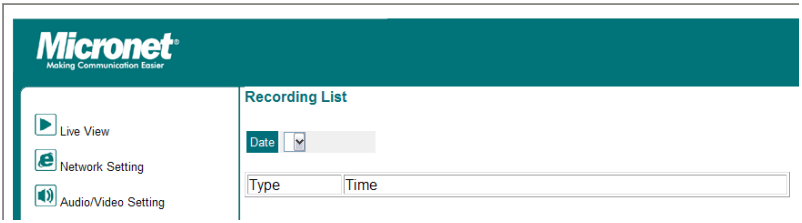
  - **Recording Mode:**

    From the drop-down menu, select the recording mode.

  When done, click **Save**.

- **List**

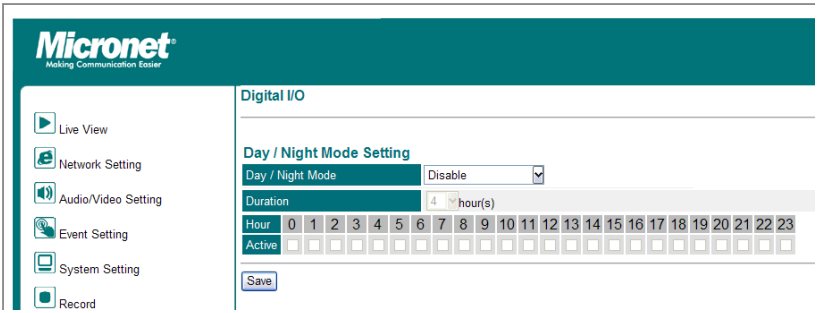
  This sub-menu displays the recorded video of the camera.



Advance Setting

- **Day/Night Mode Setting**

  This menu allows you to set up the schedule for recording.



  - **Day / Night Mode:**

    From the drop-down menu, select the **Disable** option to disable the trigger function or select the **Trigger by schedule** option to set up the schedule profile for the camera.

  - **Duration:**

    From the drop-down menu, specifies the schedule time interval by hours.

  - **Hour/Active:**

    In this field, select the time period that you want to assign for the recording schedule. The assigned time period will be displayed with a check mark (✓).

- **DI1 Setting**

  This settings allow the camera to use an external digital input device or sensor as a trigger source.

  - **Input:**

    Enable or Disable the digital input to receive a signal from external triggered device..

  - **Active:**

    Select **RisingEdge**, **FallingEdge**, **LevelHigh** or **LevelLow** to define the normal status for the digital input.

- **DO1 Setting**

  This me

  - **Output:**

    Enable or Disable the digital output to send a signal to external device when there is a triggered event..

  - **Relay Output:**

    Turn on/off to open/close relay output

- **Alarm in trigger:**

  Generate an alarm when there is an triggered event from external device through DI port.

- **Duration:**

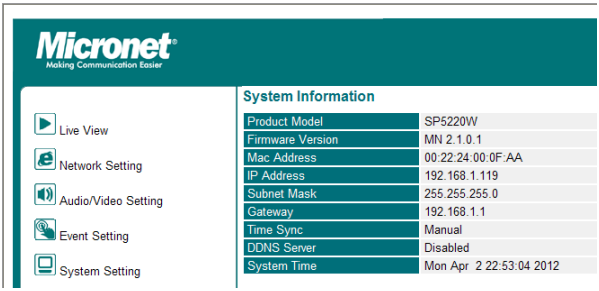
  The item allows you to specify the length of the trigger interval.

When done, click **Save**.

System Status

- **System Information**

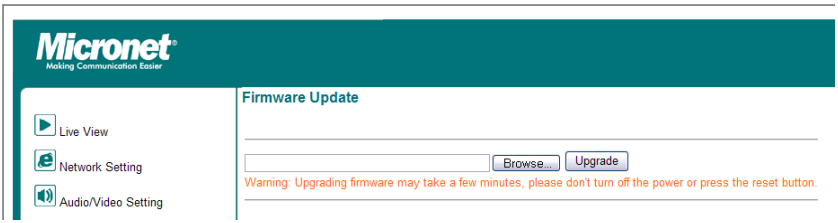
  This menu displays the current configuration of the camera.



Firmware Upgrade

- **Firmware Update**

  This menu displays the current configuration of the camera.



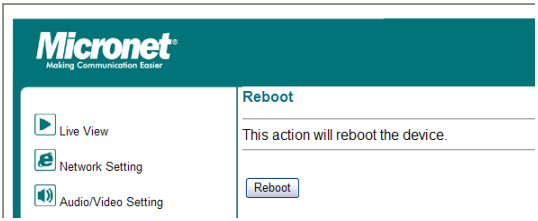
To upgrade your camera to the latest firmware (if available), click **Browse** to locate the firmware file and then click **Upgrade**.

Note: Ensure to keep the camera connected to the power source during the process of upgrading firmware.

Reboot

- **Reboot**

  This menu lets you restart the camera just like turning the device off and on.



  Click **Reboot**. The system will keep the configuration status after rebooting.

Appendix

Specifications

Model	SP5319
Image sensor	1/3" progressive CMOS sensor
Min. illumination	Color mode: 0.007 lux @ F1.0; B/W mode: 0.001 lux @ F1.0
Mount Type	CS/C Mount
DC-Iris	Yes
ICR	Yes (IR Cut Filter Removable)
Video compression	H.264 / MPEG-4 Simple Profile / M-JPEG
Video resolution	**Mode 1:** Major Stream: 1280x1024; Slave Stream: 640x480, 320x240, 160x112 **Mode 2:** Major Stream: 1280x720; Slave Stream: 640x480, 320x240, 160x112
Max. Frame Rate	Up to 30ftps at 1280x1024 or 720P
Stream bit rate	16 Kbps~4 Mbps, VBR or CBR
Audio format	**Audio in:** G.711μ-Law / G.711a-Law/ Amr **Audio out:** G.711μ-Law
Audio input/output	Line in/ 3.5mm phone jack
External I/O	Digital Input x 1 Alarm Output x 1 Video Output (BNC) x 1 Control port (RS485) x 1
LAN	10/100Base-T , RJ-45 connector
Protocol	TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, DDNS, ARP, ICMP, IGMP, RTP, RTSP, 3GPP
PoE	Yes
Storage	MicroSD card Slot x 1
RTC support	Yes
Software support	**Operating system:** Windows XP/Vista, and Win 7 **Browser:** Internet Explorer 7.0 and above
Power input	12Vdc
Power	7W

consumption	
Operational temperature	0ºC ~ +40ºC
Operational humidity	RH85% or less
Storage temperature	-20ºC ~ +70ºC
Dimension	158(L) x 61(W) x 57(H) mm
Weight	405g
Emission	CE, FCC

Note: The product specifications are subject to change without prior notice

Configuring the IP Address of the computer

The camera's default IP address is "192.168.1.2". If you cannot access the camera by entering the default IP address froom the browser, check the settings of your computer. When you connect the camera to your computer directly to configure the camera, you have to set the computer's IP address to be in the same segment as the camera's to communicate.

1. On your computer, click **Start → Control Panel** to open the *Control Panel* window.
2. Double-click **Network Connection** to open the *Network Connection* window.
3. Right-click **Local Area Connection** and then click **Properties** from the shortcut menu.
4. When the *Local Area Connection Properties* window appears, select the **General** tab.
5. Select **Internet Protocol [TCP/IP]** and then click **Properties** to bring up the *Internet Protocol [TCP/IP] Properties* window.
6. To configure a fixed IP address that is within the segment of the camera, select the **Use the following IP address** option. Then, enter an IP address into the empty field. The suggested IP address is "192.168.1.X" (X is 1~254 except 119), and the suggested **Subnet mask** is "255.255.255.0".
7. When done, click **OK**.