INSTALLATION &

OPERATION MANUAL

DDK-1800BC

Fixed Indoor/Outdoor IP Bullet Camera

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SAFETY PRECAUTIONS

Please read the following safety and operational instructions carefully to prevent harm or injury to the operator.

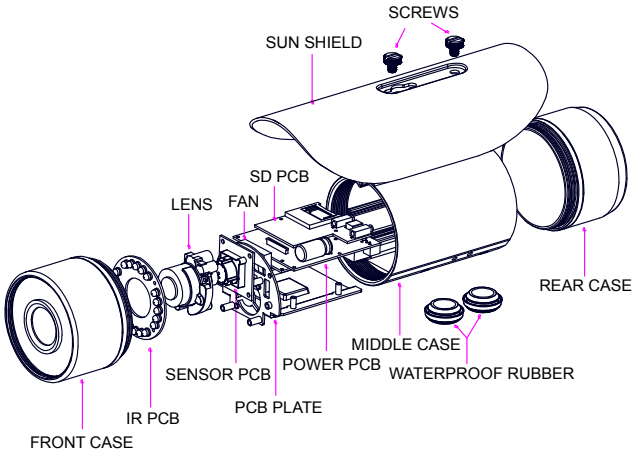
WARNING

- To prevent fire or shock, avoid exposing this unit to moisture.
- Do not block ventilation openings.
- Never spill liquid of any kind on the camera
- Do not attempt to service the DDK-1800BC yourself. Opening the DDK-1800BC's enclosure may expose the user to electrical shock. Please refer all servicing to your reseller.
- Do not use liquid cleaners or aerosols for cleaning.

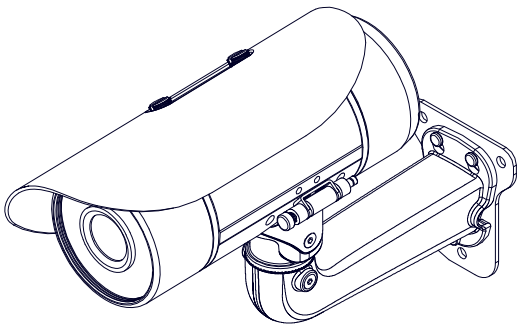
1. DESCRIPTION

1.1 PHYSICAL DESCRIPTION

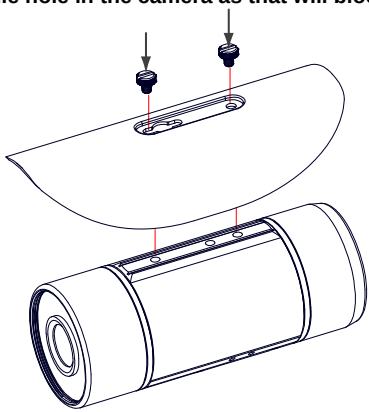
Internal View



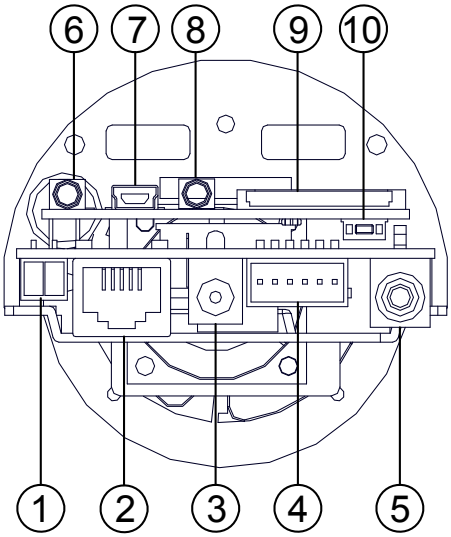
External View



NOTE: Use the 2 provided screws to attach the sun shield (above) into the 2 extreme holes shown in the picture below to get an unobstructed viewing angle. Do not use the middle hole in the camera as that will block the view.



The PCB board:



1. **Power Input:** AC 24V input that connects to an external power supply.
2. **ETHERNET 10/100 Connector:** Standard RJ-45 connector for 10/100 Mbps Ethernet networks. PoE (Power over Ethernet) function: Provides power to the device via the same cable as used for the network connection.
3. **Plug Input:** DC 12V input that connects to an external power supply.
4. **GPIO:** 6-PIN connector including **Digital output/input, DC output** and **GROUND** for connecting with external devices.
5. **VIDEO OUT Connector:** Connector providing composite video output.
6. **AUDIO IN:** Connector to receive audio input from external devices.
7. **USB port:** Connects DDK-1800BC to a USB port on a computer.
8. **AUDIO OUT: Provides** audio to an external device.
9. **SD/ SDHC CARD slot:** Used for updating system software and archiving video.
10. **RESET: Reset to factory d**efault. (Refer to section 2.4 The Reset Button.)

1.2 The Reset Button

The **Reset Button** will bring the DDK-1800BC back to its factory default settings. Press the **Reset Button** for about 10 seconds. A Blue screen will be displayed and a text that says “RESETTING…” will appear. The device will then auto reboot. All settings will then be back to default. The following items will return back to default.

[SETUP]

Network Setup
a. LAN Settings (You can manually reset this function.)
b. PPPOE Settings (You can manually reset this function.)

Dynamic DNS
a. DYNAMIC DNS SETTING (You can manually reset this function.)

IMAGE SETUP
a. Privacy Mask Setting
b. IMAGE SETTINGS

AUDIO AND VIDEO
a. VIDEO PROFILE 1
b. VIDEO PROFILE 2
c. AUDIO SETTINGS

MOTION DECTION
a. Video Motion setting

TIME AND DATE
a. TIME CONFIGURATION
b. AUTOMATIC TIME CONFIGURATION
c. SET DATE AND TIME MANUALLY

Event Setup
a. Server
b. Media
c. Event
d. Recording

[ADVANCED]

DI and DO
a. DI and DO
b. LED
c. VIDEO OUTPUT

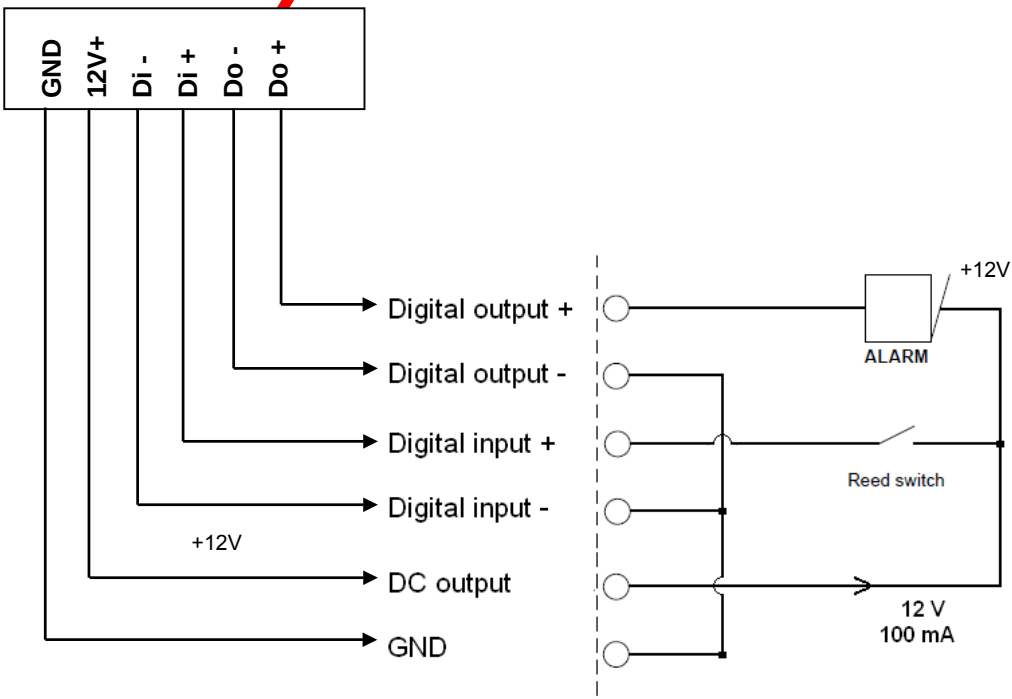
ICR
a. ICR

HTTPS
a. HTTPS

Access List
a. Allow List
b. Deny List

1.3 Alarm wiring diagram

DDK-1800BC



1.4 The USB function

The DDK-1800BC can provide two separate functions by connecting the DDK-1800BC with a PC via the USB connector

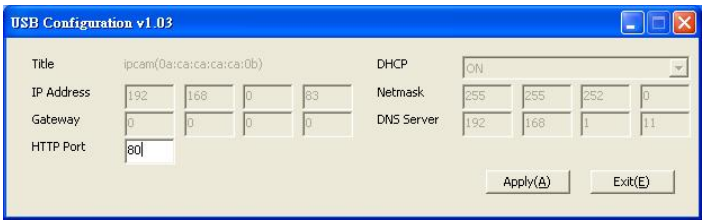
1. Using an SD card as a card reader.

   Insert an SD card into the DDK-1800BC and then connect to the PC. You may then transfer files between the SD card and the PC. Once you've connected your DDK-1800BC to your computer Windows will detect the connection and ask you what you want to do with the SD card.

2. Using an SD card as a configuration tool.

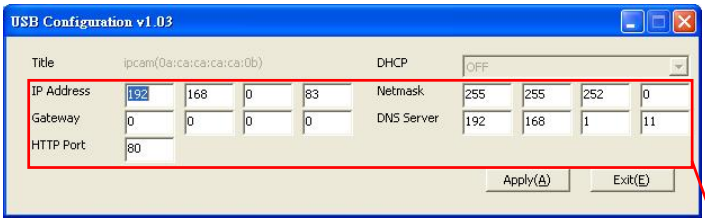
   Before using the USB configuration setting page remember to remove the SD card or the PC won't show this window.

DHCP ON



DHCP OFF

(default)



Network Setting

NOTE: After changing the settings, click the "Apply" button. All changes will be effective after removing the USB connector.

NOTE: After the IP address has been changed or reset, unplug the network cable and then plug it in again to make sure the network connection is in normal mode.

2. INSTALLATION

Follow the instructions and the diagram below to set up the system.

NOTE: The DDK-1800BC's Video Out connector can be connected to a monitor via RCA connection.

When connected you will see information on the monitor screen including the DDK-1800BC's factory default IP address (192.168.1.168). The DDK-1800BC's IP address will only appear if there is a connection between the DDK-1800BC and another device.

2.1 Hardware Installation

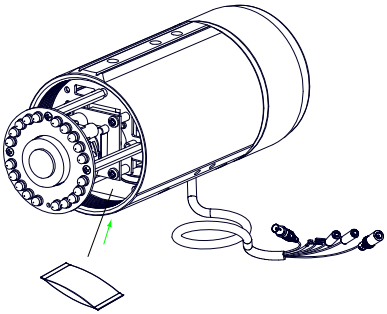
1. If using external power, connect the power adapter to the DDK-1800BC.
2. Connect network cable to the DDK-1800BCs RJ45 connection.
3. Confirm the correct network connection status.
4. Enter DDK-1800BC's IP address into your browser.

2.2 Placing a Desiccant Pack Inside the DDK-1800BC

The DDK-1800BC comes with a desiccant pack which should be placed inside the camera using two-sided adhesive tape. The desiccant pack is for reducing the moisture and humidity inside the camera and prevents moisture from condensing on the lens or its cover.

If the user decides to remove the DDK-1800BC cover after more than a few months of use, the used desiccant pack should be removed and place a replacement pack inside the camera.

1. Adhere the desiccant pack to the inner side of the DDK-1800BC.
2. Use two-sided adhesive tape to attach the desiccant pack.
3. Reattach the cover of the DDK-1800BC.



2.3 Updating System Software

If the system software of the DDK-1800BC needs to be upgraded, follow these steps

Important: Before carrying out this procedure, please ensure the SD card is working and the file of the system firmware is intact

1. Create a directory with the name **DDK-1800BC** on the SD card if it does not already exist.
2. Copy the file UPDATE.BIN to the **DDK-1800BC** -directory.
3. Shut down DDK-1800BC's power.
4. Insert the SD CARD into the DDK-1800BC.
5. Remove the Ethernet cable from the RJ-45 port and then power on camera.
6. Within 5 to 10 seconds, a message reading "UPDATE PROCESSING" will show up on the screen in a blue background. DO NOT power off the DDK-1800BC while update process is running until the message "UPDATE OK RESET PLEASE" appears on the screen. This may take 15 to 30 seconds to appear.
7. If the message "UPDATE NG RESET PLEASE" appears, write down the error messages shown on the screen and contact manufacturer. Power off the DDK-1800BC when the update process is finished and then remove the SD card from the camera.
8. Reconnect the Ethernet cable to the RJ-45 port. Power ON the IP camera.
9. Verify the version of the system software.

WARNING:

- **If the power of the DDK-1800BC is suddenly lost in step 7, remove the SD card first and then power the camera on. If the DDK-1800BC operates normally repeat step 3. Otherwise contact the manufacturer.**
- **If the message "CSUM ERROR" appears in step 7, there is a problem with the UPDATE.BIN file. .**

3. Network Configuration

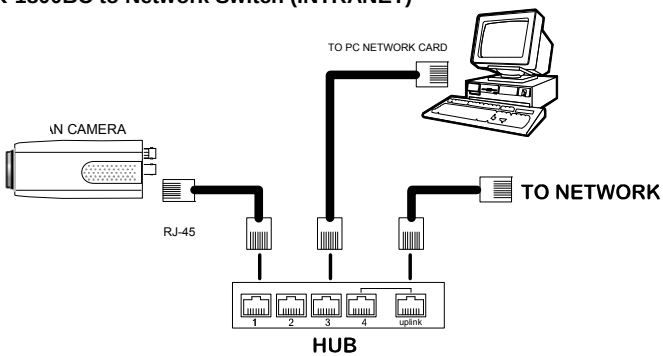
3.1 Cable Connections

Physical specifications of RJ-45 cable for Ethernet

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

3.1.1 DDK-1800BC to Computer connection

3.1.2 DDK-1800BC to Network Switch (INTRANET)



3.2 Network Settings Configuration

3.2.1 Enabling DHCP Function

The DDK-1800BC's default setting is **DHCP OFF**. Users can build the camera working environment with a static IP address. The default static IP is **192.168.1.168.**

3.2.2 Setting an IP Address

You need to set an IP address for the unit if DHCP is not supported on the network. Otherwise, please follow the instructions given below:

Note: The default static IP is **192.168.1.168.**

Set the **IP**, **MASK** and **GATEWAY** settings to the following:

IP:	192.168.1.X
MASK:	255.255.255.0
GATEWAY:	0.0.0.0

NOTE:

When a DDK-1800BC is connected to a WAN, you must acquire a unique, permanent IP address and correctly configure the MASK and GATEWAY settings according to your network architecture. If you have any questions regarding those settings, please consult a qualified MIS professional or your ISP.

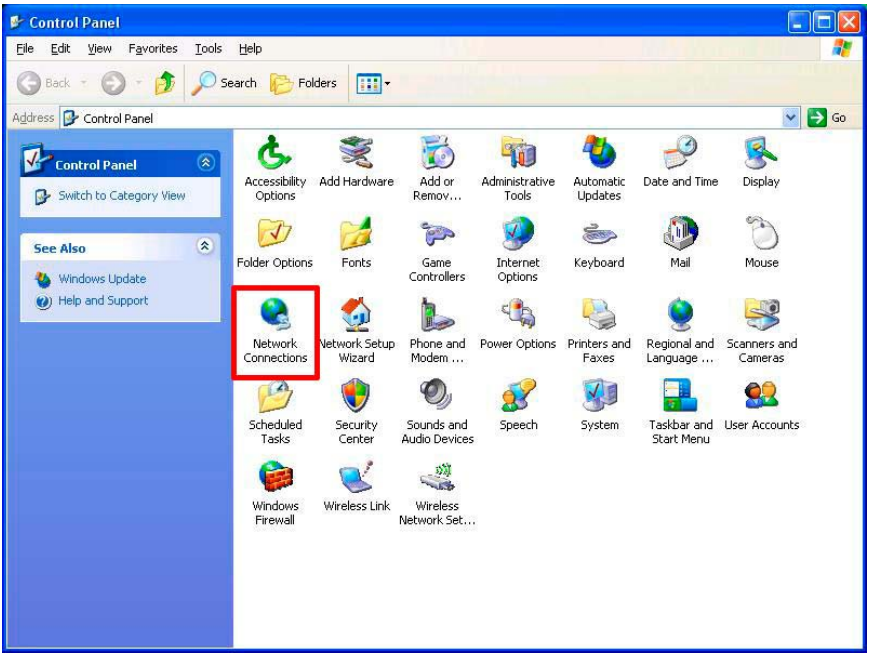
NOTE: When connecting to a network, each connected DDK-1800BC must be assigned a unique IP address, which must be in the same class type as your network address. IP addresses are written as four sets of numbers separated by periods; for example, 192.168.1.1 Therefore, if the connected network is identified as Class C, for example, the first three sets of numbers of the DDK-1800BC IP address must be the same as the network address. If the connected network is identified as Class B, the first two sets of numbers of the DDK-1800BC IP address must be the same as the network address. If you have any questions regarding these settings, please consult a qualified MIS professional or your ISP.

3.3 TCP/IP Communication Software

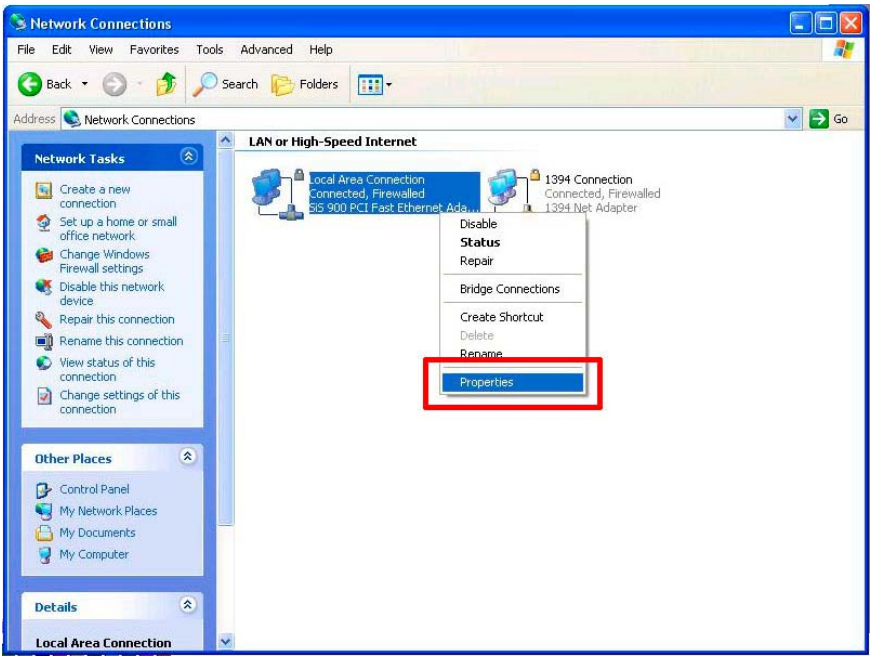
Follow the procedure below to install the TCP/IP communication program on your computer.

1. Click **Start**, and then click **Control Panel**.

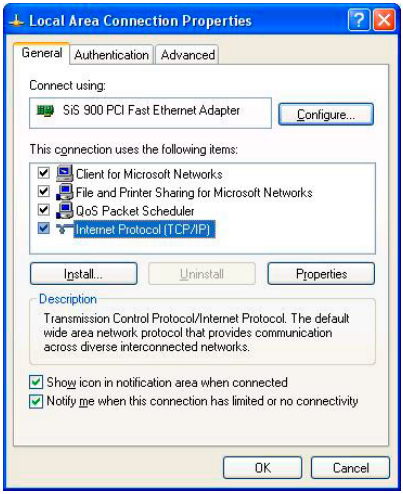
2. Double click the **Network Connections** icon



3. Right-click your network connection and then click **Properties**.

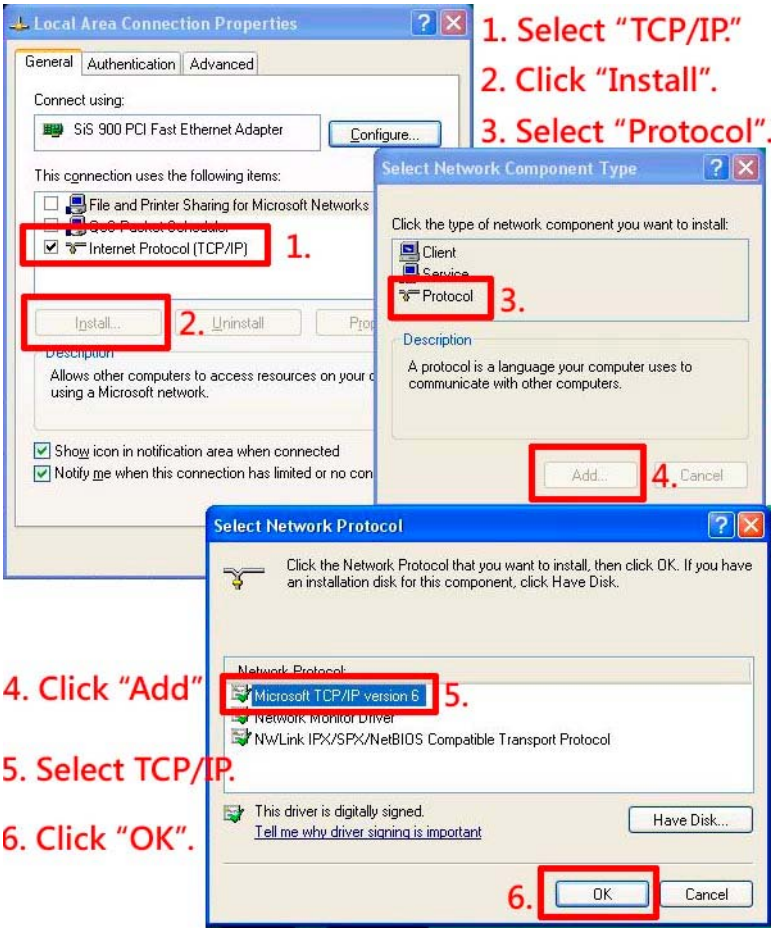


4. On the **General** tab, check if the Internet Protocol (TCP/IP) is included in the list. If the TCP/IP is included, proceed to section 3.5. If it is not included, please follow section 3.4 to install the TCP/IP.



3.4 TCP/IP Installation

On the **General** tab of Connection Properties, under “This connection uses the following items”, click **Internet Protocol (TCP/IP)**. Then click **Install**. Select **Protocol** from the network component type then click **Add**. Select **Microsoft TCP/IP** from the network protocol then click **OK**. Click **Close** to return to the **Network Connections** window.

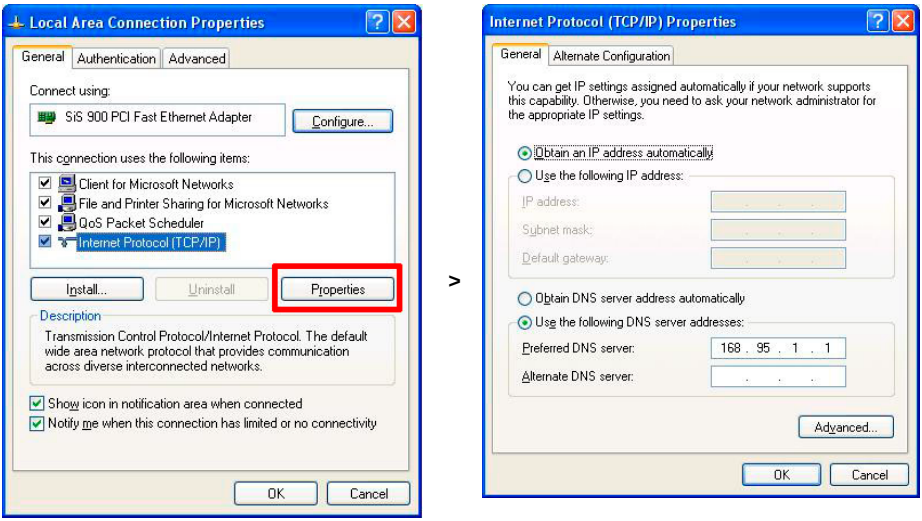


3.5 TCP/IP configuration setting

Click **Start** > **Control Panel** > **Network Connections**.

Select **Internet Protocol (TCP/IP)**, and then click **Properties**.

Before completing installation to the LAN, make sure the Internet connection works properly.

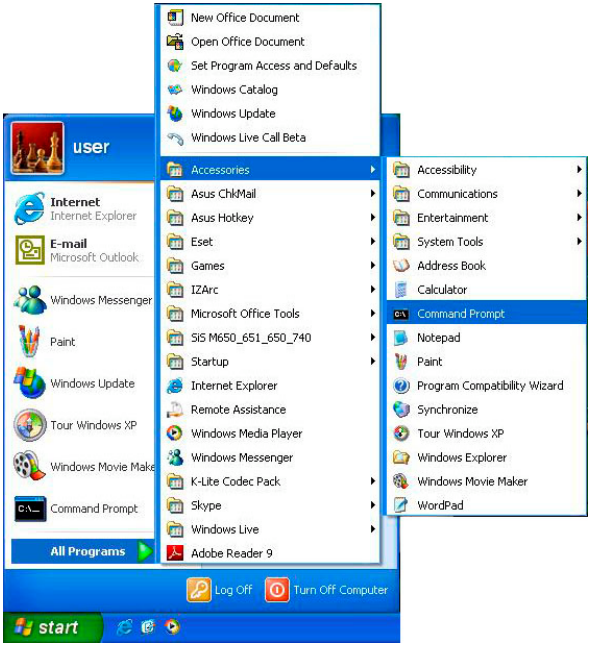


If you are using a DHCP server, select **Obtain an IP address automatically**. Any assigned IP address for the connected DDK-1800BC must be in the same class type as the server. If there is no DHCP server, please select **specify an IP address** and enter the IP address, subnet mask and default gateway of your choosing to your PC. This IP address must be different from other network IP devices but in the same class type.

3.6 Connection Testing

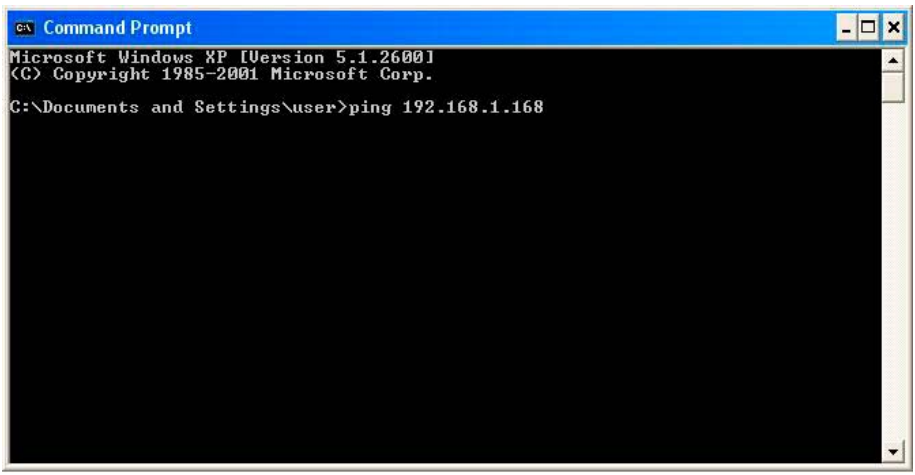
With the previous settings, follow the instructions below to ensure whether you have established the connection successfully.

1. Click **Start** > **All Programs** > **Command Prompt**.

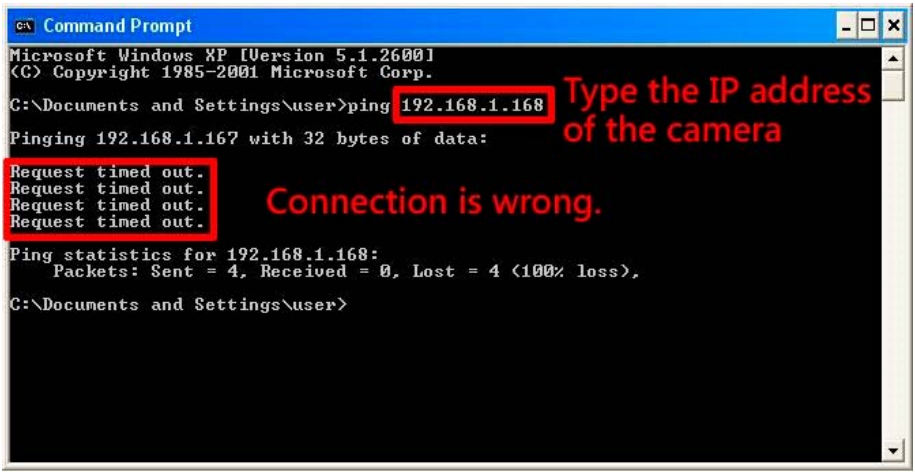


2. Enter **ping XXX.XXX.XXX.XXX** (the DDK-1800BC's IP address), then enter. (See the sample screen below).

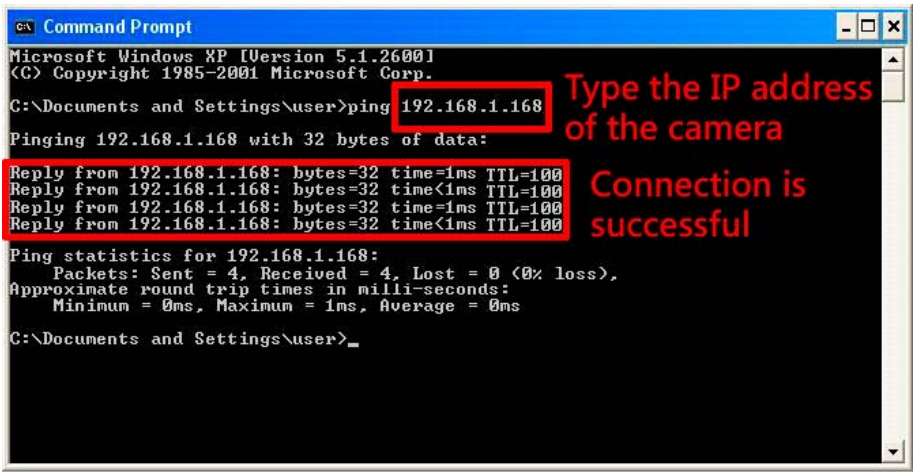
   *** This is the IP address for a DDK-1800BC that is assigned for the connected camera.*



If you receive a response as in the screen below, the connection hasn't been successfully established. Please re-check all the hardware and software installations by repeating sections 3.4 and 3.5. If you still can't establish the connection after rechecking, please contact your dealer.



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



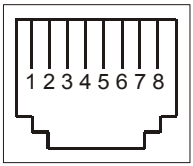
4. Operating Instructions for Network Connection

The DDK-1800BC may be accessed through a Web Brower.

RJ-45 PIN configuration for Ethernet

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

RJ-45 socket



Physical specification for Ethernet

Wire type	Cat. 5
Connector type	RJ-45
Max. cable length	100 m
Hub wiring configuration	Straight Through or Cross Over
PC wiring configuration	Straight Through or Cross Over

4.1 Web Browser

4.1.1 Connecting the DDK-1800BC

1. Start up your Web Browser, and then follow the steps below to connect the DDK-1800BC.
2. Click on the URL box at the top of the window.
3. Enter the URL address of the DDK-1800BC into the URL box and press the “**Enter**” key to enter the home page.
4. Enter the "User Name" and "Password" in the appropriate spaces.
5. Click on the “**OK**” button to set your entries.

NOTE: The default "User Name" and "Password" are root and Admin, respectively.

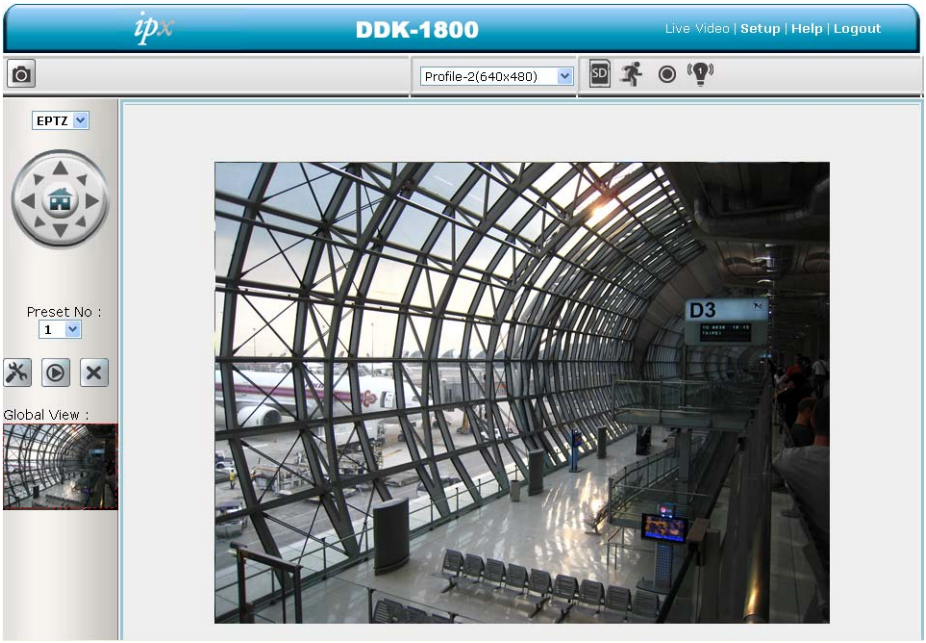
NOTE: The page headlined "Enter Network Password” is shown below. Enter the user name and password of the DDK-1800BC.

NOTE: Once authenticated, the login page will not appear again unless you close and reconnect.

4.1.2 Live Video

Live video from the DDK-1800BC is displayed on the home page when your Camera is present in your browser. Additional settings are provided on the home page. AJAX (default) and the ActiveX viewer types display different formats on the home page.

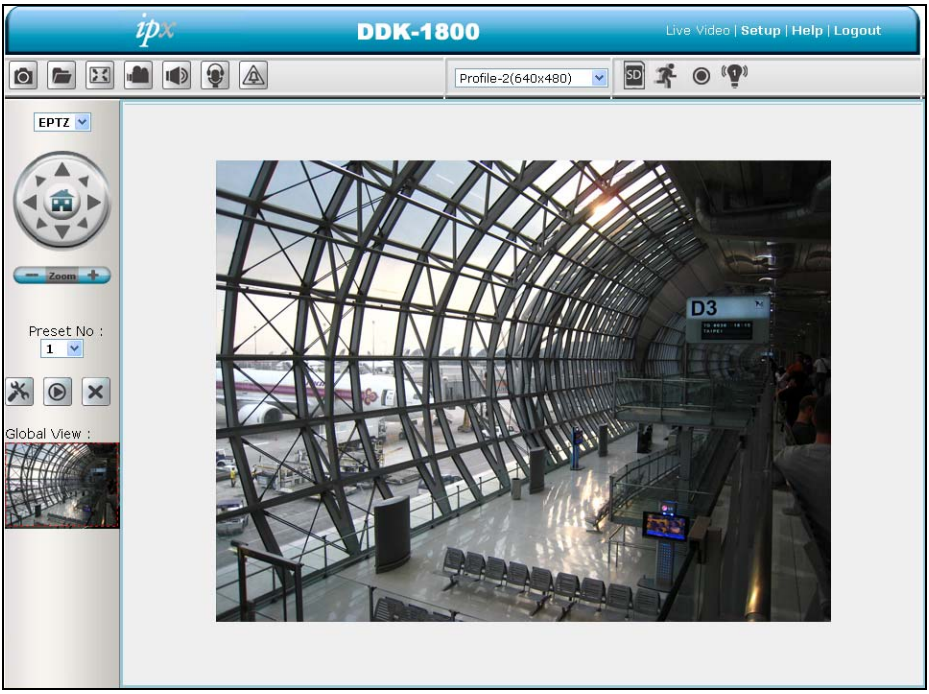
The AJAX viewer: Non-IE browsers support (for the JPEG mode only).



- Snapshot: Click the button to take a snapshot. The icon will change to a blue color while working effectively.
- Click Profile-1(640x480) to change the video resolution and quality. SD card icon: When a SD card is inserted, the icon becomes red .
- Motion-on icon: When motion detection is configured the icon will appear in the right upper corner. When motion detection is triggered the icon will blink red .
- Recording Status icon: This icon appears upper right corner. When recording the icon becomes red.
- Alarm on-icon: Detects external alarms. When an alarm is triggered the icon will blink red .

ActiveX viewer:

Select from the thumbnail options for taking snapshots, setting-up a Storage Folder, selecting Full Screen mode, Recording, Listening, Talking and Zooming.



- Snapshot: Click the button to take a snapshot. The icon will change to a blue color when working properly.
- Set Storage Path: Click on the button to set a storage folder for saving snapshots and video clips.
- Full Screen: Click the button to enter full screen mode. The icon will change to a blue color when working properly.
- Record Button: Click the button to record a video clip. The icon will change to a blue color when working properly.
- Audio Button: Click the button to start/stop the audio-in function (listen/stop listening). The icon will change to a blue color when working properly.
- Talk Button: Click the button to start/stop audio out function (talk/stop talking). The

icon will change to a blue color when working properly

- Digital output: Click the button to start/stop digital output. The icon will change to a blue color when working properly.
- EPTZ Digital Zoom mode. This mode utilizes the megapixel resolution of the DDK-1800BC to simulate the functions of a mechanical PTZ camera. When the digital zoom mode is active, the image can be zoomed in and out.

  Hold down the left key of your mouse and move to the desired location in the Global View area. As the mouse moves, the live view area shows the corresponding image until the border of the image appears.
- Live Video: Click to go back to the device's homepage.
- Setup: Click to proceed to the advanced settings.
- Logout: Click to Logout.

4.1.3 Setup

Click the **Setup** button on the home page to access advanced settings.

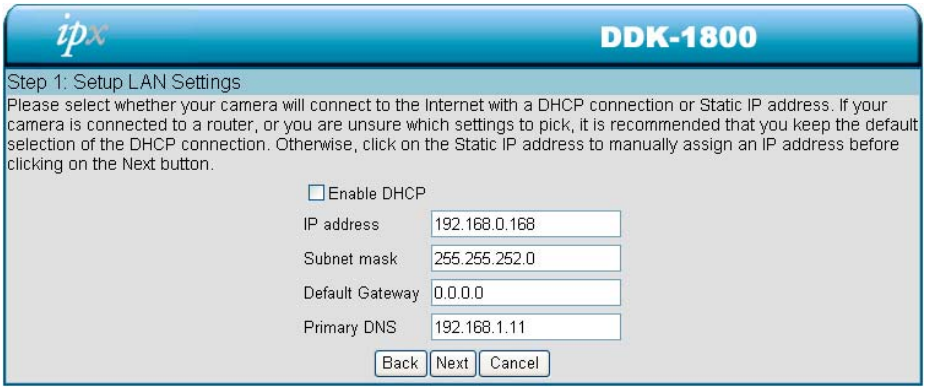
4.1.3.1 Wizard

For quick configuration, click **Wizard** at the top of the Setup pages.

This wizard will guide you through a step-by-step process to configure your DDK-1800BC.

Click **Next** to continue.

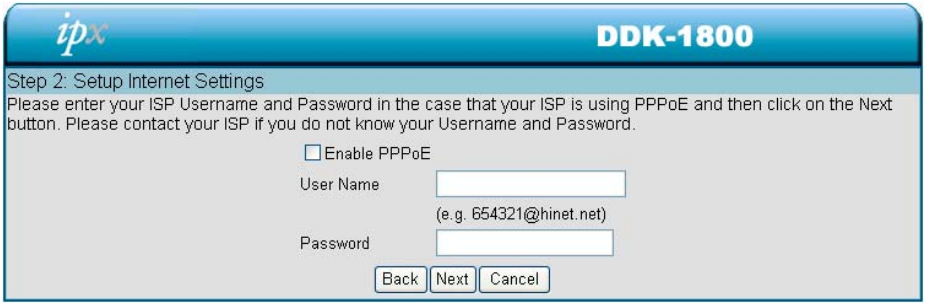
Step 1:



The DDK-1800BC default setting is DHCP OFF. Users can build the DDK-1800BC working environment with a static IP address. The DDK-1800BC's default IP is 192.168.1.168. You can set an IP address for the DDK-1800BC if the LAN unit isn't connected to a DHCP server. Or use DHCP protocol if DHCP is supported on your LAN. The DDK-1800BC will obtain an IP address automatically from the DHCP server.

Click **Next** to continue.

Step 2:



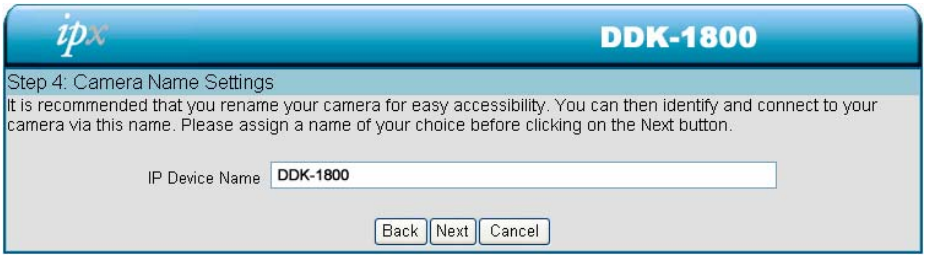
If using PPPoE, select Enable and enter user name and password. Otherwise select Disable and click **Next** to continue.

Step 3:

If using a Dynamic DNS account, select **Enable** and enter your host information.

Click **Next** to continue.

Step 4:

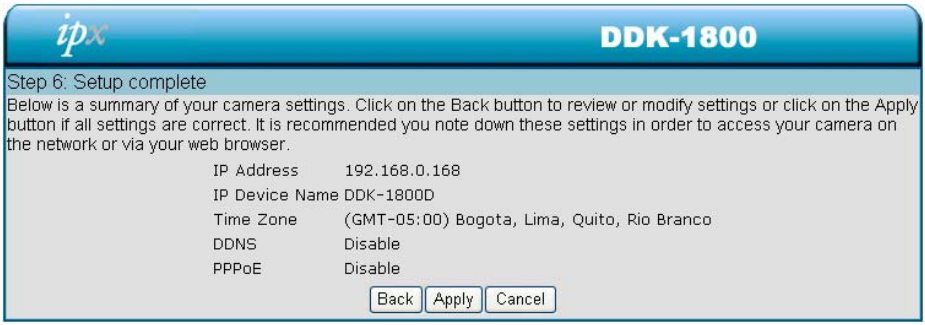


Enter a name for your DDK-1800BC and click **Next** to continue.

Step5:

Select a time zone to ensure that all events will be triggered, captured and scheduled at the correct time. Click **Next** to continue.

Step 6:



If **DHCP is** selected, a summary of the DDK-1800BC's settings will be displayed. Write down all this information as it is needed to access the camera over the network.

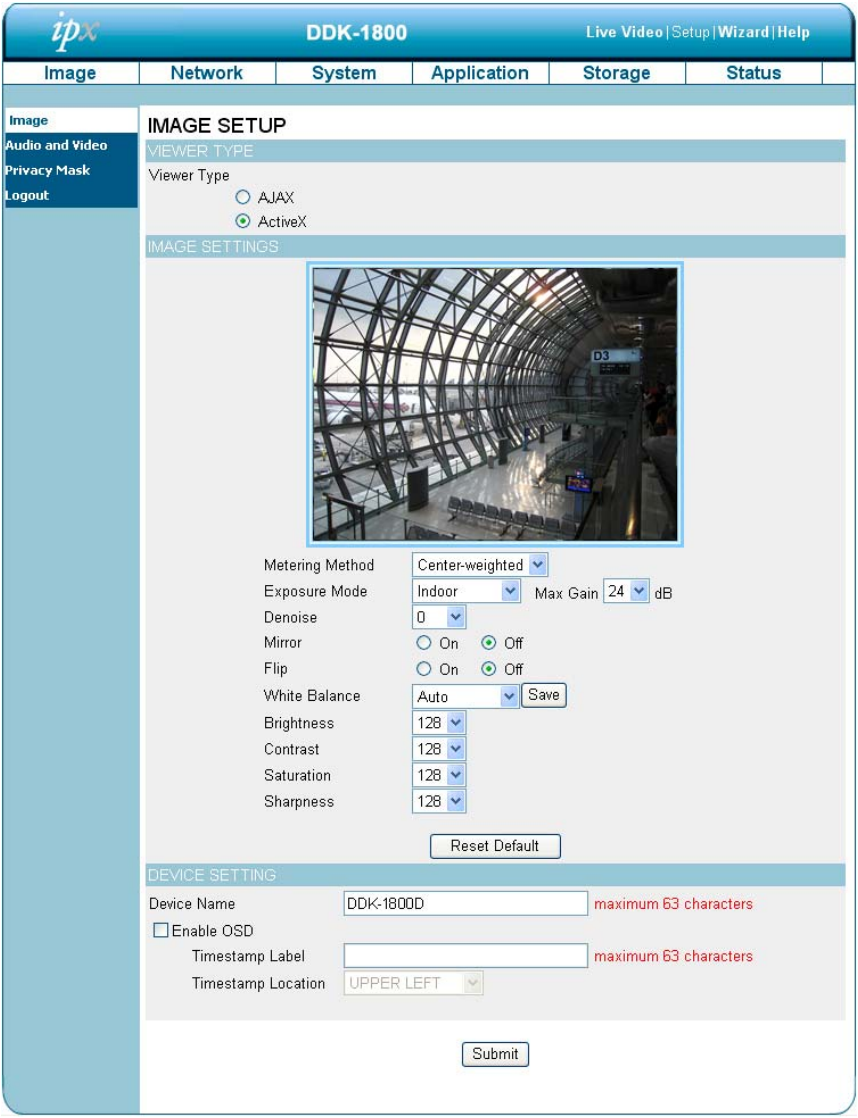
Click **Apply** to save settings.

4.1.3.2 Changing Image Settings

Follow the steps below to change the cameras video settings. A preview of the image will be shown in the Live Video window. . Click **Submit** to activate and save changes.

- *The Image Setup setting page*

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



2. **VIEWER TYPE**. Select “AJAX” or “ActiveX” mode.

3. **IMAGE SETTINGS.** Includes “Metering Method”, “Exposure Mode”, “Denoise”, “Mirror”,

"Flip", "White Balance", "Brightness", "Contrast", "Saturation" and "Sharpness".

4. **DEVICE SETTINGS**. Includes "Device Name" and "Timestamp".
    - Click "**Enable OSD**" and checkmark the box to activate this function.
    - Enter "Timestamp Label".
    - Enter "Timestamp Location".
5. Click the **Submit** button to submit new image settings

Functions:

Metering Method	The metering method determines the exposure. Different metering methods measure the subject brightness differently. **Center-weighted:** The metering is weighted at the center and then averaged for the entire scene. **Spot:** This is for metering the central part of the entire scene.
Exposure Mode	Exposure Mode controls a camera by shutter speed and the lens aperture. **Indoor:** The optimum exposure setting is pre-programmed for the indoor environment. The default shutter time is 1/30~1/120 (1/25~1/100) and the maximum gain is 36 dB. **Outdoor:** The optimum exposure setting is pre-programmed for the outdoor environment. The default shutter time is 1/30~1/750 (1/25~1/750) and the maximum gain is 36 dB. **Night:** The optimum exposure setting is pre-programmed for the night environment. The default shutter time is 1/30~1/750 (1/25~1/500) and the maximum gain is 12 dB. **Moving:** The optimum exposure setting is pre-programmed for moving subjects. The default shutter time is 1/120~1/1,000 (1/100~1/1,000) and the maximum gain is 36 dB. **Low noise:** The optimum exposure setting is pre-programmed to reduce the noise. The default shutter time is 1/8~1/30 (1/7.5~1/25) and the maximum gain is 36 dB. **Customize 1-3:** You can customize an exposure mode by adjusting individual parameters like Gain and Shutter. **Schedule:** In the Schedule mode, you can set the customize schedule. Select a schedule and set the time period. You can assign one of the exposure modes to be the function mode of the Remaining time. Check and press to Save. **Note: The period of the schedule can't be set across midnight. For example, if you want to set a schedule of Night mode from 22:00 to 04:00, you have to (1) check a schedule and select the Night mode and set the period from 22:00 to 24:00, then (2) enable the next schedule and set it to Night mode and set the period from 00:00 to 04:00. Remember to click Save to activate.**
Denoise	**Denoise** (noise reduction) is the process of removing noise from signals.

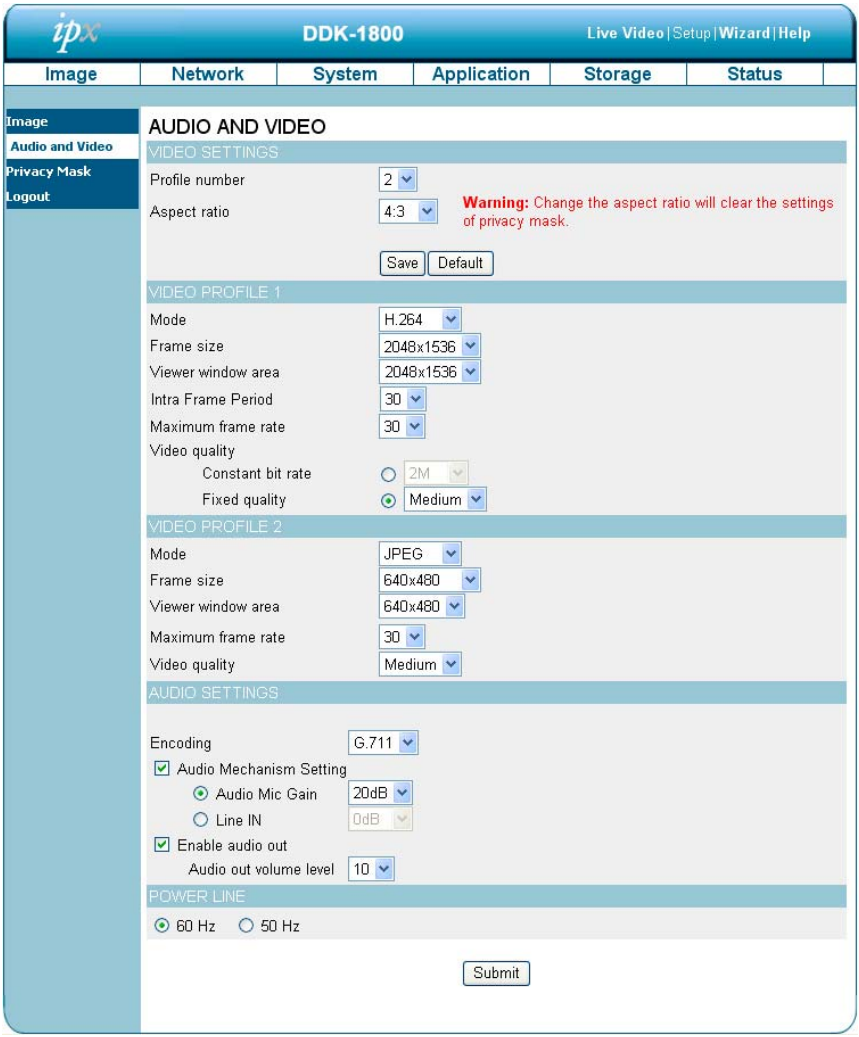
Mirror:	Reverses image display.
Flip:	To flip the DDK-1800BC's image 180 degrees.
White Balance	White balance corrects unnatural color shades. Select your options from "Auto", "Outdoor", "Indoor", "Fluorescent" and "Push Hold".
Brightness:	Setting to compensate for backlighting.
Contrast:	Controls color intensity/strength.
Saturation:	Controls the strength of colors from black and white to bold.
Sharpness	Sets clarity of detail in images.
Timestamp Label:	Enter the timestamp label.
Timestamp Location:	Click to choose location.
Submit:	Click to save settings.

NOTE: The default setting table of the exposure mode--

NTSC		
Exposure Mode	**Shutter**	**Max Gain**
Indoor	1/30~1/120	36 dB
Outdoor	1/30~1/750	36 dB
Night	1/30~1/500	12 dB
Moving	1/120~1/1,000	36 dB
Low noise	1/8~1/30	36 dB
PAL		
Exposure Mode	**Shutter**	**Max Gain**
Indoor	1/25~1/100	36 dB
Outdoor	1/25~1/750	36 dB
Night	1/25~1/500	12 dB
Moving	1/100~1/1,000	36 dB
Low noise	1/7.5~1/25	36 dB

- *The Audio and Video setting page*

1. Click on the **Audio and Video** button to enter the Audio and Video settings page. Here you may configure multiple video profiles with different settings. Click **Submit** to save your changes.



2. Select the Profile Number from 1-3. Then set the Aspect ratio of 4:3 or 16:9. Click Save to activate it.
3. Set the “Mode”, “Frame size”, “Viewer window area”, “Maximum frame rate” and “Video quality” of each Video Profile.

4. Set the details of the audio functions.
5. Select 50 Hz or 60Hz Power.
6. Click on the **Submit** button to save settings.

Functions:

Profile Number	Select the Profile Number from 1-3 and the default video profile number is 2.
Aspect ratio	The aspect ratio of an image is the ratio of the width of the image to its height. Select 4:3 or 16:9 of the ratio that best suits your needs.
Mode:	Choose the video format from H.264, JPEG or MPEG4 compression.
Frame size:	This option allows the user to choose the video resolution of the camera: 4:3 - "2048x1536" (H.264 & MJPEG only), "1600x1200", "1024x768", "800x600", "640x480", "480x360", "320x240" and "176x144". 16:9 - "1920x1080", "1280x720", "800x450", "640x360", "480x270", "320x176" and "176x144".
Viewer window area:	This option allows the user to choose the video resolution of the live view area: 4:3 - "2048x1536" (H.264 & MJPEG only), "1600x1200", "1024x768", "800x600", "640x480", "480x360", "320x240" and "176x144". 16:9 - "1920x1080", "1280x720", "800x450", "640x360", "480x270", "320x176" and "176x144".
Intra Frame Period:	Setting for compression frequency between frames.
Maximum frame rate:	Sets number of frames per second.
Video quality:	Sets video stream to constant bit rate or constant quality.
Audio Settings:	Switches microphone on/off and adjusts volume.
Encoding:	Setting for type of audio encoding.
Audio Mechanism Setting:	Check to activate this function and select MIC or Line In. The resistance value of the MIC is 2 kΩ. The resistance value of the Line In is 10 kΩ. **NOTE: The option of 26dB is for long-distance audio receiving, normally longer than 3 meters.**
Enable audio out:	Check to activate this function and set the Audio out volume level.
Power Line	Select 50 Hz or 60Hz.

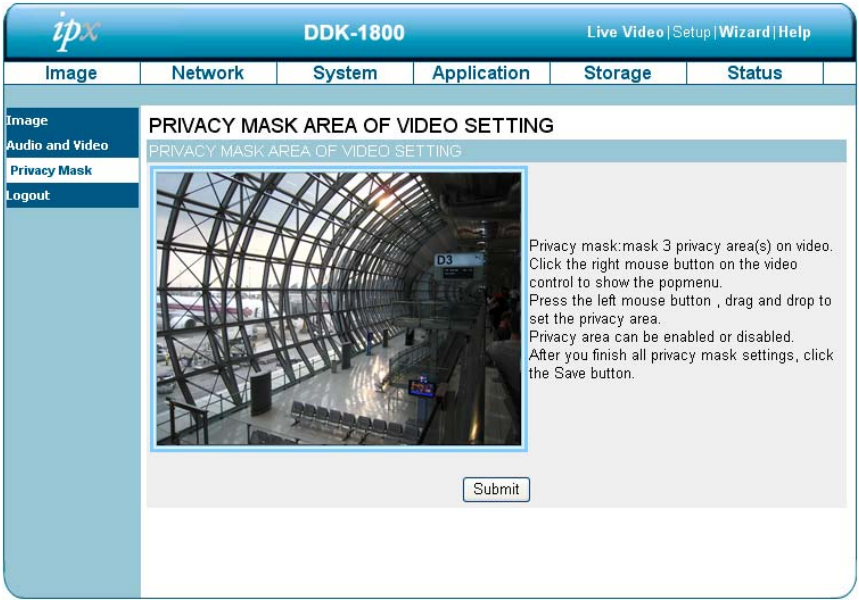
NOTE:
Audio In/Out:

Follow the steps.

1. Connect DDK-1800BC through browser.
2. Ensure “Audio Mechanism Setting” & “Enable audio out” are both selected. Click Submit.
3. Connect Mic to the PC, and connect the DDK-1800BC Audio out to the speaker.
4. Select “Talk” → ; speak to the PC-connected microphone.
5. Confirm audio from connected speaker.
6. Connect Mic to DDK-1800BC--Audio in; connect speaker to PC--AUDIO Out.
7. Click “Listen” in the webpage → ; the Mic will send an audio signal to the DDK-1800BC.
8. Confirm audio from PC speaker.

- *The Privacy Mask settings page*

Click on the **Privacy Mask** button to enter the Privacy Mask Area setting page. Mask up to 3 privacy areas on the displayed video to specify the areas on the DDK-1800BC's image to be blocked/excluded from recordings and snapshots.

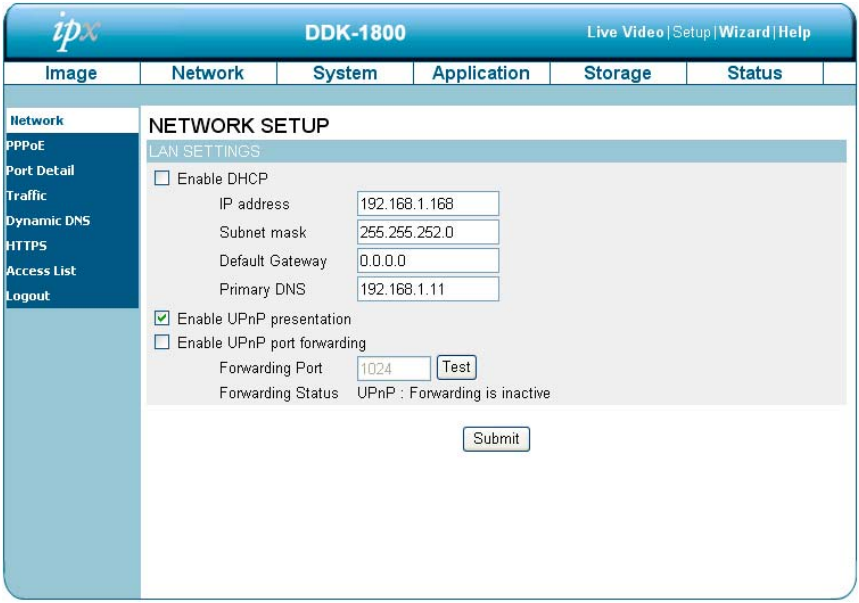


1. Use the right mouse button on video control to show the pop-menu.
2. Use the left mouse button and drag and drop to set the privacy area.
3. A privacy area can be enabled or disabled.
4. Click the Submit button.

4.1.3.3 Changing the Network Settings

Follow the steps below to change the network settings. *Set network options and IP address.*

1. Click on the **Network** button on the home page to enter the Network Setup page.



2. The accessible network protocols are “PPPoE”, “Port Detail”, ”Traffic”, “Dynamic DNS”, “HTTPS” and ”Access List”.

3. Input your network setting details. Click the **Submit** button to save settings**.**

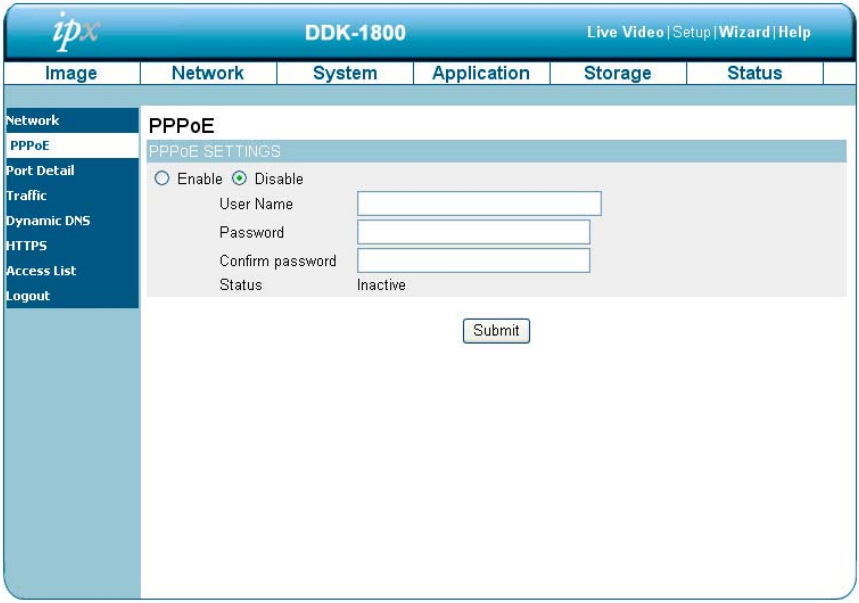
Functions:

DHCP:	Enables DHCP for dynamic IP address assignment.
DNS	(The Domain Name System) is an Internet service that translates domain names into IP addresses (e.g., 192.168.0.20). An address can be obtained from your ISP or network gateway.
Enable UPnP Presentation:	Enable this setting to allow your DDK-1800BC to be configured as a UPnP device on your network.
Enable UPnP port forwarding:	Enable this setting to allow the DDK-1800BC to add port forwarding entries into your router automatically.

- *Changing the PPPoE Network Setting.*

The Network page has a PPPoE icon the upper left. Follow the steps below to change the PPPoE setting.

1. Click the **PPPoE** button on the upper left menu to enter the “PPPoE Settings” page.



2. Activate the “Enable” or “Disable” status of the PPPoE Settings.
3. Enter the PPPoE “Username” and the PPPoE “Password” then confirm the password again.
4. Click on the **Submit** button to save the setting.

   NOTE: Please refer to section 4.1.3.8 (PPPoE & DDNS) for more details.

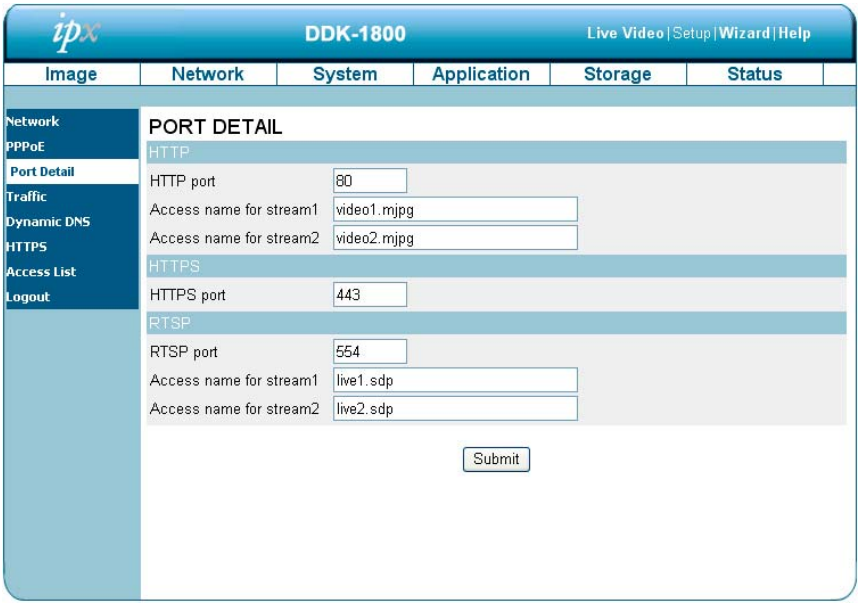
Functions:

PPPoE Setting	If you use the DDK-1800BC to connect directly to the Internet, you will need to enter the username and password which were given to you when you set up your account with your Internet Service Provider. If the DDK-1800BC is behind a router or a gateway you do not need to configure this setting.
Username:	Enter Username here
Password:	Enter Password here

- *Changing the Network Settings — Port Detail.*

The “Network” page has a “Port Detail” icon at the upper left. This allows you to specify and reserve ports for both HTTP and RSTP streaming. Follow the steps below to change the Port Detail settings.

1. Click on the **Port Detail** button on the upper left menu to enter the “Port Detail” page.



2. Enter the “HTTP port” and the “Access name for stream” for the MJPEG streams.
3. Enter the “HTTPS port”. The default value is 443.
4. Enter the “RSTP port” and the “Access name for stream” for the MJPEG or JPEG streams.
5. Click the **Submit** button to save the new settings.

NOTE: To use an RTSP player to access the DDK-1800BC, use the following RTSP URL command to request transmission of the streaming data.

Functions

HTTP Port	HTTP ports allow you to connect to the DDK-1800BC via a standard web browser. This port can be set to a number other than the default HTTP port 80. A corresponding port must be opened on the router. For example, if the port is changed to 8080, users must type in the web browser 'http://192.168.0.100:8080'
HTTPS Port	The HTTPS Port connects the DDK-1800BC with a PC via a secure web browser.
RTSP Port	This port number is used for RTSP streaming to mobile devices, such as mobile phones or PDAs. You may specify the address of a particular stream. For example, live1.sdp can be accessed at rtsp://x.x.x.x/video1.sdp where the x.x.x.x represents the IP address of your DDK-1800BC.

NOTE: To view the MPEG4 streaming media Players that support RTSP streaming, such as Quick Time Player, Real Player, can be used to view the MPEG4 streaming media.

(1) Launch the RTSP player.

(2) Choose “File”, and an “Open URL” dialog box will pop up.

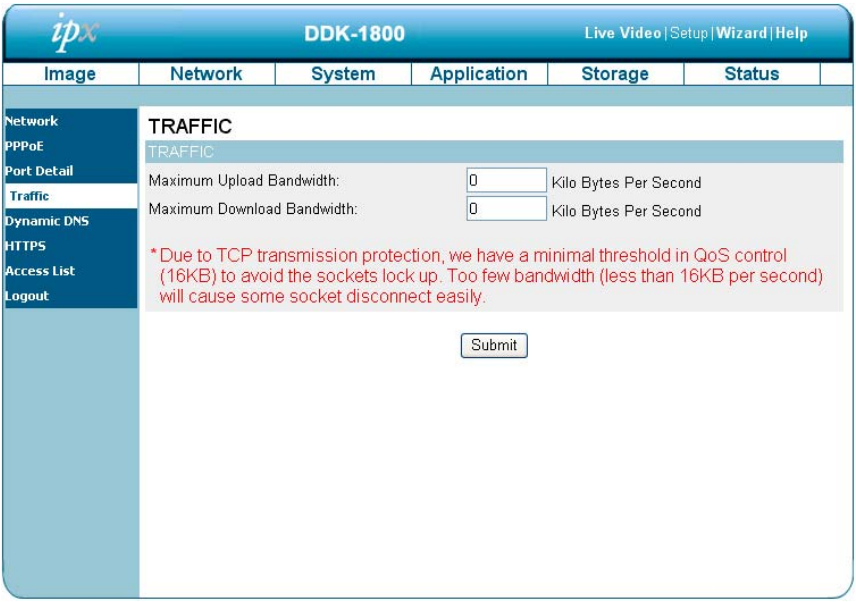
(3) Enter an Internet URL to open. The address format is rtsp://<ip address>:<rtsp port>/<RTSP streaming access name for stream1, stream2 or stream3>

(4) The live video will be displayed in your player.

- *Changing the Network Settings —Network Traffic.*

The “Network” page has a “Traffic” icon at the upper left. Specifying the maximum download/upload bandwidth for each socket is useful when connecting your device to a busy or heavily loaded network. Please follow the steps below to change the setting through the network.

1. Click on the **Traffic** button on the upper left menu to enter the “Traffic” page.



2. Enter the “Maximum Upload Bandwidth” and the “Maximum Download Bandwidth”.
3. Click on the **Submit** button to save the new settings.

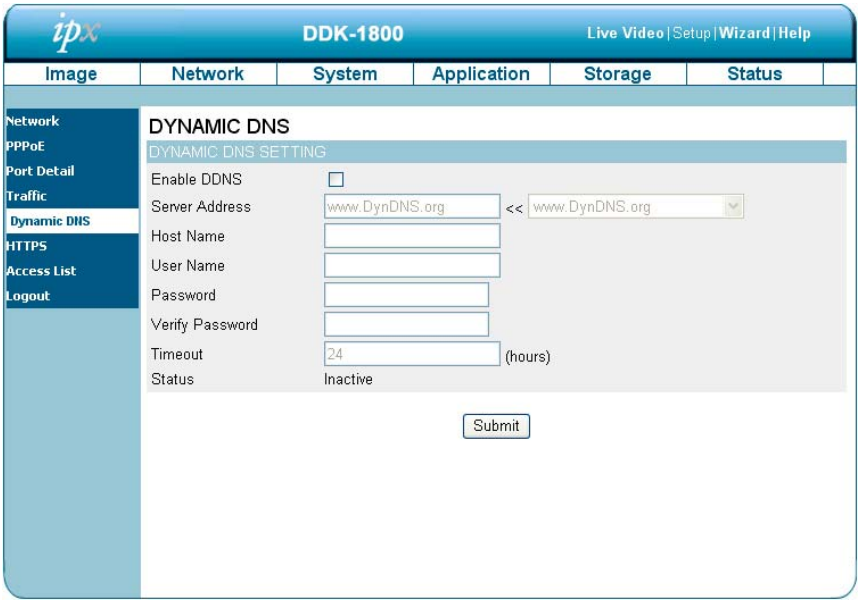
Description of function keys:

Maximum Upload Bandwidth:	Enter in a range from 0 to 102400.
Maximum Download Bandwidth:	Enter in a range from 0 to 102400.
Submit:	Click to save settings.

- *Changing the Network Settings — DDNS.*

The DDNS (Dynamic Domain Name Server) will use a DNS host name and synchronize it with the public IP address of the router when it changes. A user name and password are required when using a DDNS service. On the “Network” page click the “DDNS” icon at the upper left of page and follow the steps below to change the DDNS settings.

1. Click on the **Dynamic DNS** button on the upper left menu to enter the “Dynamic DNS” page.



2. Check the “Enable DDNS” box to activate this function.
3. Fill in the dynamic “Server Address”, “Host Name”, “User Name”, “Password”, “Verify Password”, “Timeout”, “IP Address” and “Email Address”.
4. Click the **Submit** button to save the settings.

NOTE: Please refer to section 4.1.3.8 (PPPoE & DDNS) for more details.

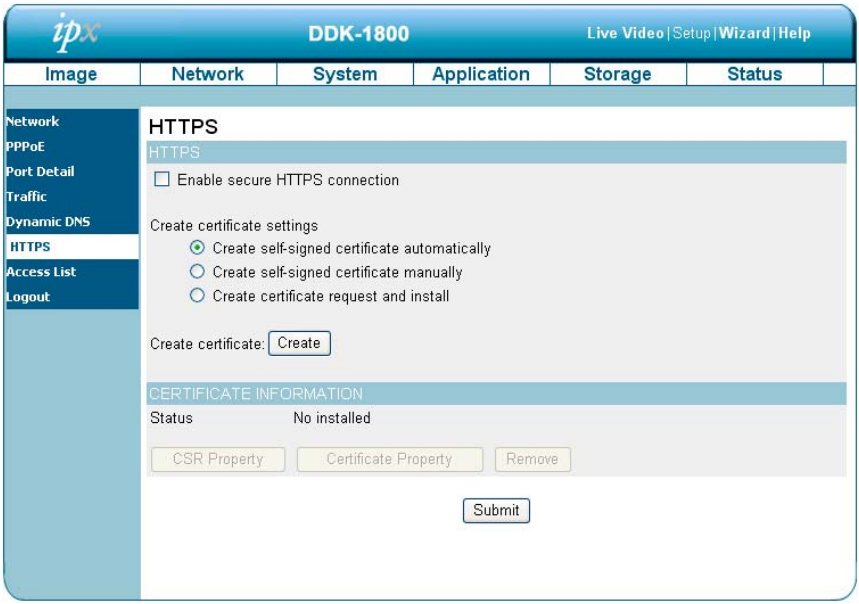
Functions

Enable DDNS Function:	Check to activate this function.
DNS	(The Domain Name System) is an Internet service that translates domain names into IP addresses (i.e. 192.168.0.20). The address can be obtained from your ISP or network gateway.
Server Address:	Select your Dynamic DNS provider from the pull down menu or enter the server address manually.
Host Name:	Enter the host name of the DDNS server.
User name:	Enter your user name or e-mail used to connect to the DDNS
Password:	Enter your password used to connect to the DDNS server.
Verify Password	Enter your password again to connect to the DDNS server.
Timeout:	Enter the DNS Timeout values for registering the IP address.
Status:	Indicate the connection status, automatically determined by the system.

- *Changing the Network Settings — HTTPS.*

Click the “HTTPS” icon at the upper left of the “Network” page. Follow the steps below to change the HTTPS setting.

1. Click on the **HTTPS** button on the upper left menu to enter the “HTTPS Setting” page.



2. Select the “Enable HTTPS secure connection” to activate this function.
3. Click to select the “Create certificate method” from “Create self-signed certificate automatically”, “Create self-signed certificate manually” and “Create certificate request and install”.
4. Click “Create” to save the create certificate settings.
5. The Certification Information will show below.
6. Click “CSR Property” to see the Certificate Signing Request information.
7. Click “Certificate Property” to see the Certificate information.
8. Click “Remove” to remove the created certificate.
9. Click on the **Submit** button to submit the new setting.

NOTE: The certificate cannot be removed while the HTTPS is still enabled. To remove the certificate you must first uncheck Enable HTTPS secure connection.

Methods of creating and installing certificates:

1. Create self-signed certificate automatically

(1) Enable HTTPS secure connection.

(2) Select the “Create self-signed certificate automatically” option.

(3) Click the Create button.

(4) The new Certification Information will show in the third column on the HTTPS setting page.

(5) Click Home to return to the main page. Change the address from “http://” to “https://“ in the address bar and press Enter on your keyboard. Some Security Alert dialogs will pop up. Click OK or Yes to enable HTTPS.

2. Create self-signed certificate manually

(1) Enable HTTPS secure connection.

(2) Click “Create self-signed certificate manually” to open the Create certificate column.

(3) Click the Create button.

(4) The new Certification Information will show in the third column on the HTTPS setting page.

3. Create certificate request and install

(1) Enable HTTPS secure connection.

(2) Click “Create self-signed certificate automatically” to open the Create certificate column.

(3) Click the Create button.

(4) If you see an Information bar, click OK and click on the Information bar at the top of the page to allow pop-ups.

(5) The pop-up windows will show a certificate request.

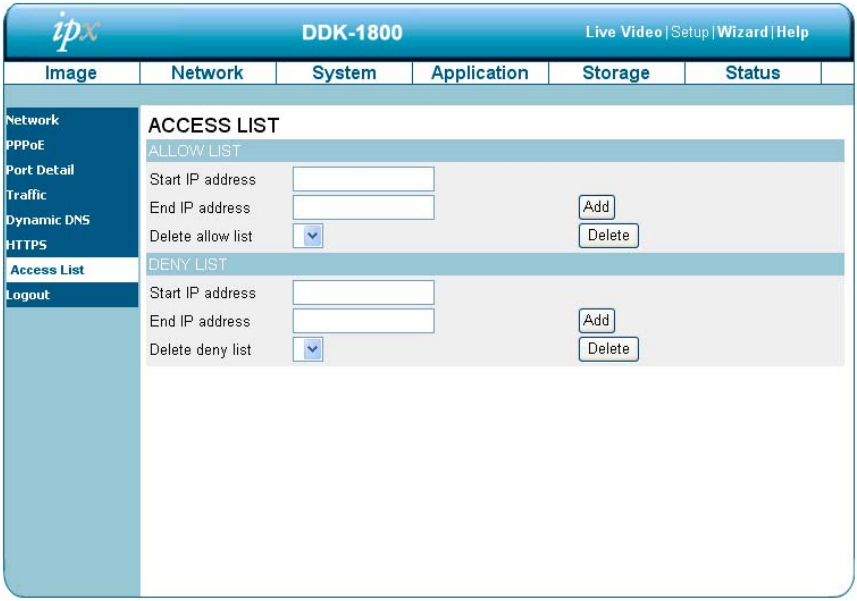
(6) Look for a trusted certificate authority that issues digital certificates. Enroll the DDK-1800BC. Wait for the certificate authority to issue a SSL certificate; click “Browse...” to search for the issued certificate and then click “Upload” on the Create certificate column.

(7) The new Certification Information will show in the third column on the HTTPS setting page.

- *Changing the Network Settings —Access List.*

On the “Network” page at the upper left is the “Access List” icon. Follow the steps below to change the Access List settings.

1. Click on the **Access List** button on the upper left menu to enter the “Access List” page.



2. Enter the “Start IP address”, “End IP address” and “Delete allow list” details in the “Allow List” area. Select “Add” to add or “Delete” to delete entries.
3. Enter the “Start IP address”, “End IP address” and “Delete deny list” details in the “Deny List” area. Select “Add” to add or “Delete” to delete entries.
4. Click the **Submit** button to submit new settings.

Functions

Allow List:	
Start IP Address	The starting IP Address of the devices (such as a computer) which have permission to access the DDK-1800BC.
End IP Address	The ending IP Address of the devices (such as a computer) which have permission to access the DDK-1800BC.
Delete Allow List	Removes the customized settings from the Permission List.

Deny List:	
Start IP Address	The starting IP Address of the devices (such as a computer) which don't have permission to access the DDK-1800BC.
End IP Address	The ending IP Address of the devices (such as a computer) which don't have permission to access the DDK-1800BC.
Delete Deny List	Removes the customized settings from the Permission List.

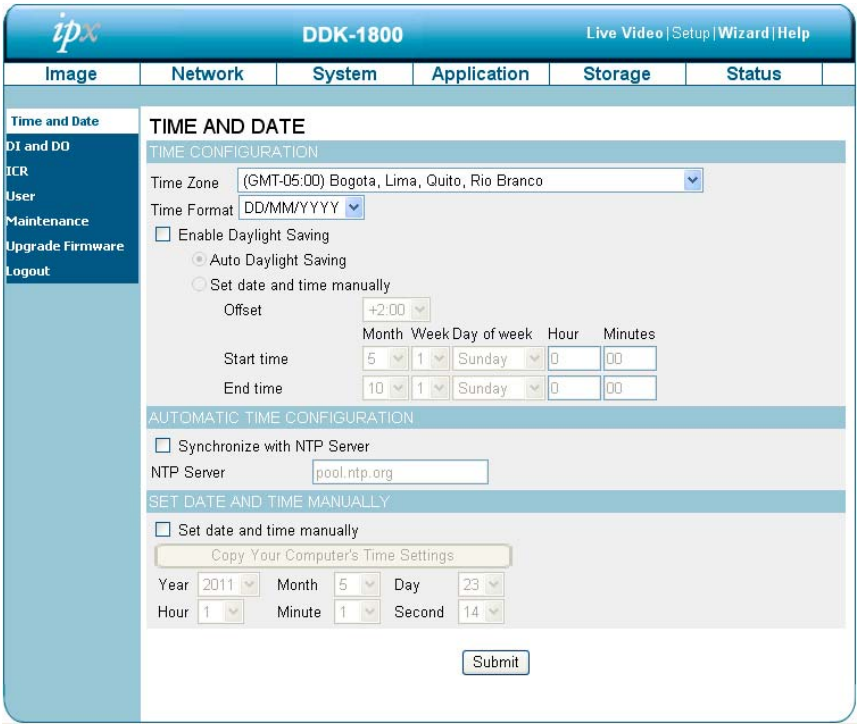
NOTE: If there are conflicts between the range of the Allow List and the range of the Deny List, the Access List within the range of the Deny List has the higher priority over the range of the Allow List.

4.1.3.4 Changing the System Settings

Follow the steps below to change the system date and time settings.

- *Setting the Time and Date of the system*

1. Click on the **System** button to enter the “Time and Date” page (default). In this area you may automatically or manually configure, update, and maintain the internal system clock of the DDK-1800BC.



2. To set the Time Configuration select a time zone from the drop-down menu. Select Enable Daylight Saving Time if required. Then select ”Auto Daylight Saving” or “Set date and time manually”.
3. To set the Automatic Time Configuration select “Synchronize with NTP Server” and enter the address of the NTP Server.
4. To set the Date and Time manually select “Set date and time manually” and then select “Copy Your Computer’s Time Settings” or manually set the date and time from the drop-down menus.
5. Click the **Submit** button to save the Date and Time settings.

Functions:

Time Zone:	Select time zone from the drop-down menu.
Enable Daylight Saving:	Select to enable daylight saving time.
Auto Daylight Saving:	Select this option to configure Daylight Saving setting automatically.
Set date and time manually:	Select this option to configure Daylight Saving date and time manually.
Offset:	Sets the amount of time to be added or removed when Daylight Saving is enabled.
Synchronize with NTP server:	Enable this feature to obtain time configuration automatically from the NTP server.
NTP Server:	The Network Time Protocol (NTP) synchronizes the device with an Internet time server. Choose one close to your location.
Set the date and time manually:	Allows for setting time and date manually.
Copy Your Computer's Time Settings:	Will synchronize time information from Computer.

- *Changing the System Settings — Digital Input &Output.*

1. Click on the **DI and DO** button on the left side of the “System” page to enter the “DI and DO” page.

2. Select the active state of the Digital Input 1 from the drop-down list.
3. Select the active state of the Digital Output 1 from the drop-down list.
4. Click to set the LED “On” or “Off’.
5. Select “ON” or “OFF” to enable or disable video output. Select “ON” or “OFF” to enable or disable OSD output.
6. Click the **Submit** button to submit the new user’s settings.

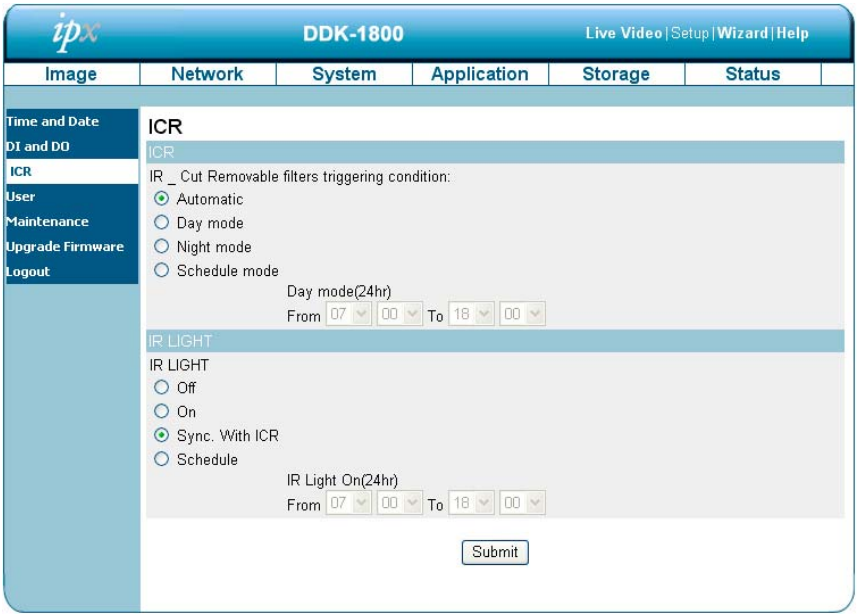
Functions:

Digital Input:	Select “N.O.” or “N.C.” as the active state of the Digital Input, in order to use the GPIO connector function.
Digital Output:	Select “N.O.” or “N.C.” as the active state of the Digital Output, in order to use the GPIO connector function.
LED	Select “ON” or “OFF” to turn this function on and off.
VIDEO OUTPUT	Select “ON” or “OFF” to enable or disable video output.
OSD OUTPUT	Select “ON” or “OFF” to enable or disable OSD output.

- *Changing the System Settings — ICR.*

Follow the steps below to change the IR cut filter function settings.

1. Click on the **ICR** button on the left side of the “System” page to enter the “ICR” page.



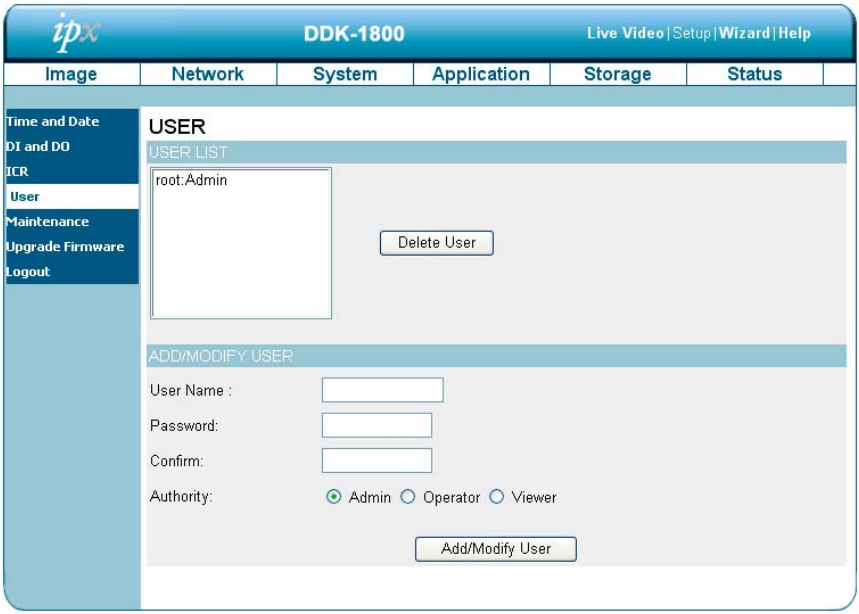
2. Select option for “IR-Cut Removable filter trigger condition”: “Automatic”, “Day Mode”, “Night Mode” or “Schedule”.
3. Select IR light power “Off”, “On”, “Sync, with ICR” or “Schedule”.
4. Click the **Submit** button to save the new settings.

Functions:

Automatic	Day/Night mode will change automatically depending on lighting conditions.
Day mode	Day mode disables the IR Cut Filter.
Night mode	Night mode enables the IR Cut Filter.
Schedule mode	Sets the Day/Night mode using a schedule. Starting time begins Day mode end time returns to the Night mode.

- *Changing the System Settings — Users.*

1. Click the **Users** button on the left side of the “System” page to enter the “Users” page.



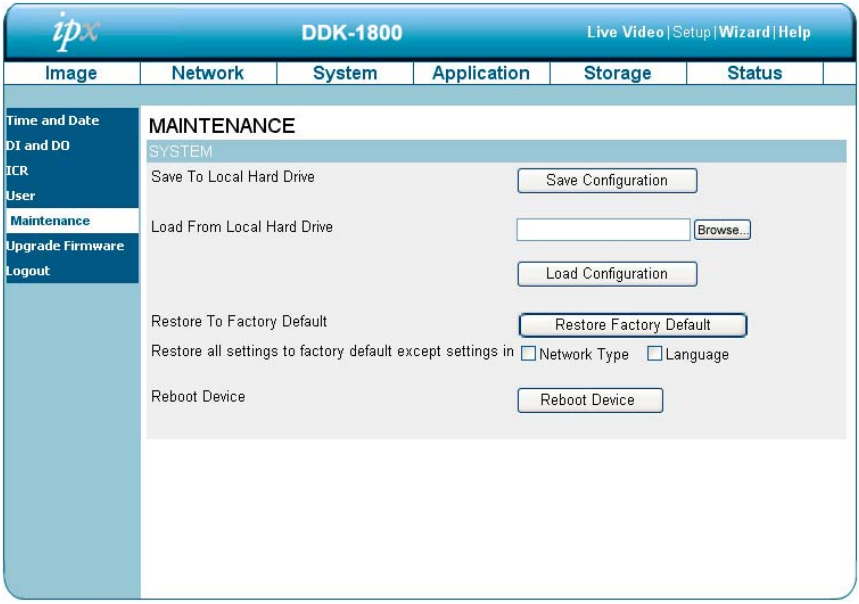
2. Add, modify or delete a user’s data.
3. Click **Add/ Modify User** button to save new user settings.
4. Click the **Home** button to return to the home page.

Functions:

User List:	The list shows the registered user(s) and their corresponding authority.
Delete:	Deletes a selected user.
Name:	Enter user’s name to be added.
Password:	Enter the new password for the user’s name.
Confirm:	Enter the password again for verification.
Authority:	Choose user authority: Admin, Operator, and Viewer.
Add/ Modify User:	Click to save new settings.

- *Changing the System Settings — Maintenance.*

Click the **Maintenance** button on the left side of the “Date and Time” page to enter “Maintenance” page.

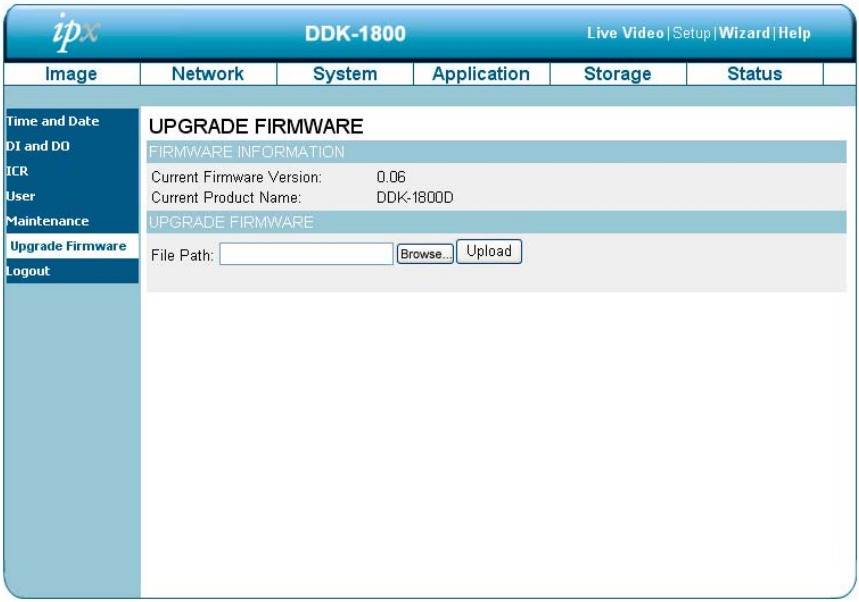


Functions:

Save Configuration:	Click “Save Configuration” to save the configuration files to local hard drive.
Load Configuration:	Browse and click on “Load Configuration” to load configuration files to the local hard drive.
Restore Factory Defaults:	Click “Restore Factory Defaults” to restore factory defaults. You may browse and load saved configuration files to restore saved settings
Reboot Device:	Click “Reboot Device” to reboot the device. This option will restart the DDK-1800BC.

- *Changing the System Settings — Update Firmware.*

1. Click the **Firmware Upgrade** button on left side of “Date and Time” page to enter the “Firmware Upgrade” page.



2. Click the “Browse…” button to find and select the UPDATE.BIN file which was saved to computer
3. Click the “Upload” button.

NOTE: DO NOT power off DDK-1800BC while updating firmware.

NOTE: Don’t interrupt the process while the unit is updating.

NOTE: Updating with the wrong UPDATE.BIN file may cause physical damage to the device.

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

4.1.3.5 Changing the Application Settings

- *Changing the Application Settings —Language Setting.*

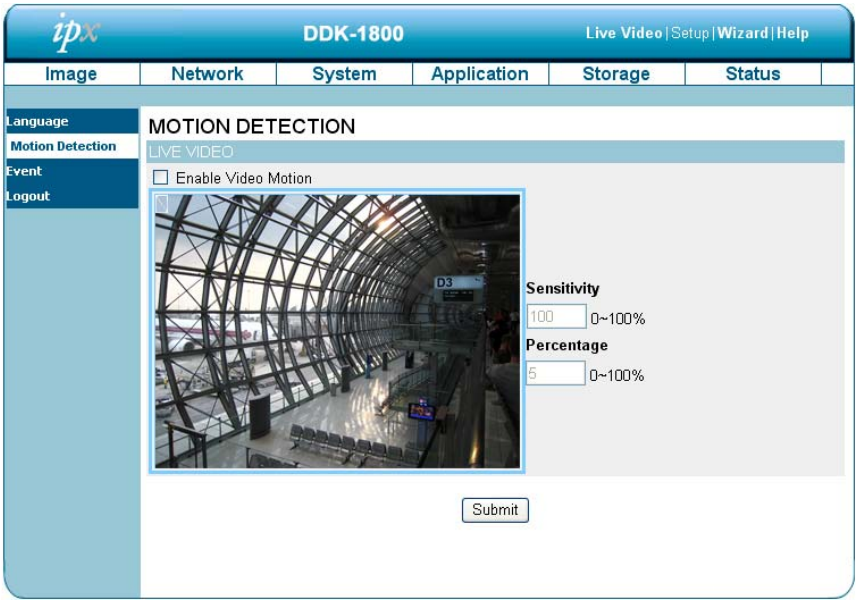
1. Click on the **Language** button on the left side to enter the “Language Settings” page.

2. Select language and click "Submit" to save.

- *Changing the Application Settings —Motion Detection.*

Setting motion detection:

1. Click the **Motion Detection** button on the left side of the Application page to enter the "Motion Detection" page.



2. Drag the mouse across a targeted zone to draw a rectangle on the image.

   NOTE: You can set more than one targeted zone.

3. Enable / disable the motion detection function.
4. Click the **Submit** button to save the settings.

- *Changing the Application Settings —Event.*

Click the Event bottom at left of Application page and then click on “Add” to enter the setting pages for the Server, Media, Event and Recording settings. Click “Delete” to erase settings.

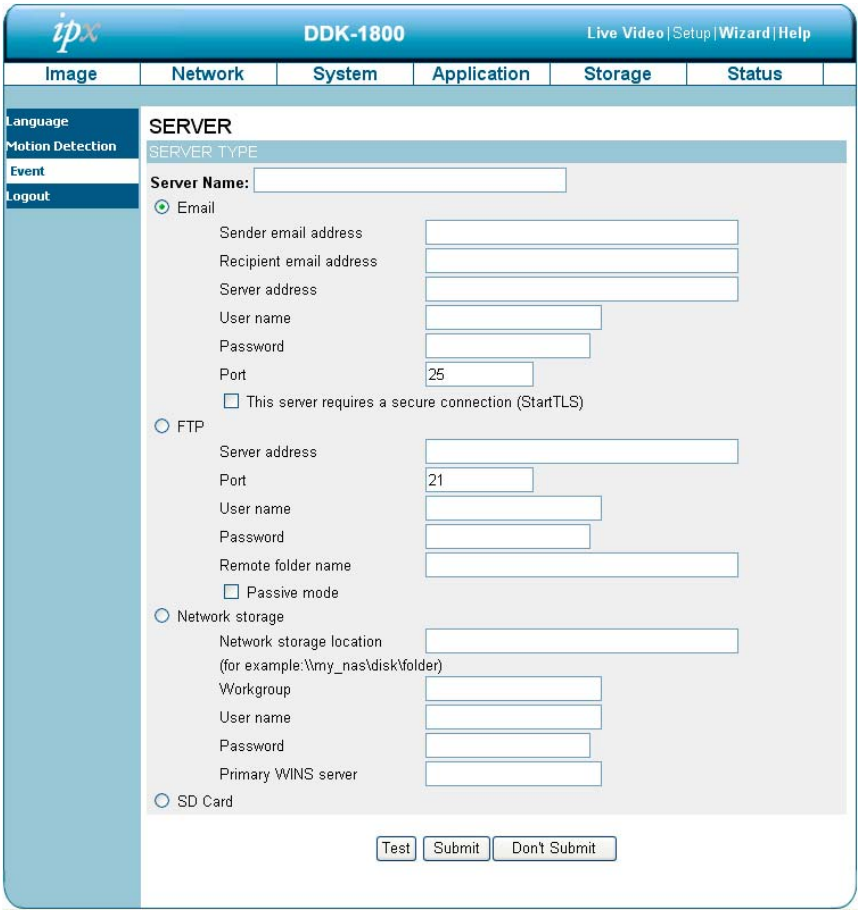
The Event Setup page has 4 sections: Server, Media, Event, and Recording.

1. To add a new setting click add under EVENT, SERVER, or MEDIA
2. To delete a setting from a drop-down click Delete.
3. Click on a setting name to enter a window to modify.

NOTE: You can add up to five servers, five media fields, three event schedules, and two recording schedules.

Server:

Click the **Add** button in the Server area to enter the “Server” settings page.



1. Enter the unique Server name. There are four types of servers supported: email server, FTP server, HTTP server and network storage.
2. Set Email the details. **"Sender email address"**, the email address of the sender. **"Recipient email address"**, the email address of the recipient.
3. Set FTP details. **"Remote folder name":** Must be an authorized folder on the external FTP server. The string must conform to that of the external FTP server. Some FTP servers cannot accept a preceding slash symbol before the path without virtual path mapping. Refer to the instructions for the external FTP server for details. The folder privilege must be open

for uploading. **"Passive Mode":** Set details for Network storage. Only one network storage device is supported. **"Network storage location"** is the path to upload the media. **"Workgroup"** is the workgroup for network storage.

4. Click on SD card to activate this function. The SD card is used for recording video data.
5. Click “Submit” to save or click on “Don’t Submit” to go back to the Event main page.

Server settings:

(1) Click **Add** in the Sever area on the Event Settings page to open the Server setting page. On this page, you can specify where a notification has been sent when a trigger is activated. A total of 5 server settings can be configured.

NOTE: The maximum number of server settings is five. Network storage or SD card can only be set for one.

(2) Enter the Server Name for the server setting.

(3) Select the Server Type. There are four choices of server types available: Email, FTP, Network storage and SD card. Select the server types.

- **Email:** Select to send media files via email when a trigger is activated.
  - (a) Sender email address: Enter the email address of the sender.
  - (b) Recipient email address: Enter the email address of the recipient.
  - (c) Server address: Enter the domain or IP address of the email server.
  - (d) User name: Enter the user name of the email account.
  - (e) Password: Enter the password of the email account.
  - (f) Port: The default email server port is 25. You can also manually set different port.
  - (g) To verify if the email setting is correctly configured click the Test button. The result will be shown above the setting page (TEST OK or TEST ERROR). If successful, you will receive an email indicating the result.
  - (h) Click Submit to activate the setting.

- **FTP:** Select to send media files to an FTP server when a trigger is activated.
  (a) Server address: Enter the domain or IP address of the FTP server.
  (b) Port: The default FTP server port is 21. It can also be assigned a different port number.
  (c) User name: Enter the login name of the FTP account.
  (d) Password: Enter the password of the FTP account.
  (e) Remote folder name: Enter the folder name where the media file will be sent. If the folder name does not exit the DDK-1800BC will create one on the FTP server.
  (f) Passive mode: Most firewalls do not accept new connections initiated from external requests. If the FTP server supports passive mode, select this option to enable passive mode FTP and allow data transmission to pass through the firewall.
  (g) To verify if the FTP setting is correctly configured, click the Test button. The result will be shown above the setting page (TEST OK or TEST ERROR).
  (h) Click Submit to activate the setting.

- **Network storage:** Select to send media files to a network storage location when a trigger is activated.
  (a) Network storage location: Enter the network storage path (\\ server name or IP address\ folder name).
  (b) Workgroup: Enter the workgroup name for the network storage server.
  (c) User name: Enter the user name for the server.
  (d) Password: Enter the password for the server.
  (e) Primary WINS server:
  (f) To verify if the storage setting is correctly configured, click the Test button. The result will be shown above the setting page (TEST OK or TEST ERROR).
  (g) Click Submit to activate the setting.

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· **SD card:** Select to send media files to an SD card when a trigger is activated.

(a) Insert SD card.

(b) To verify if the storage setting is correctly configured click the Test button. The result will be shown above the setting page (TEST OK or TEST ERROR).

(c) Click Submit to activate the setting.

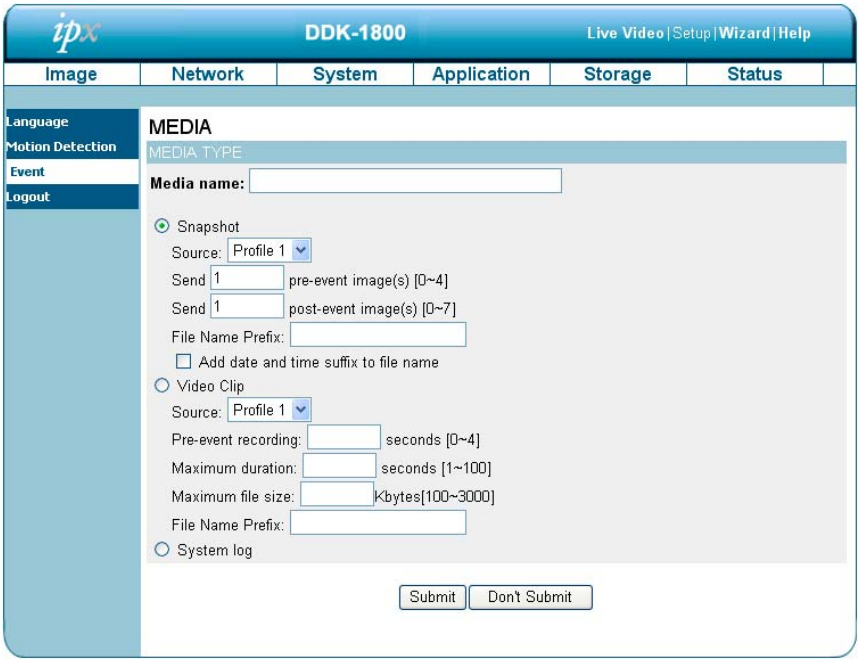
(4) When completed, click Submit to enable the settings and exit the page. The new server settings will appear in the Event Settings page.

NOTE: To remove a server setting from the list (Application> Event>), select a server name from the drop-down list and click Delete.

Note that only when the server setting is not being applied to an event setting (Application> Event> Event> The "Action" option) can it be deleted or the DDK-1800BC won't take any action when a trigger is activated.

Media:

Click the **Add** button in the Media area to enter the “Media” settings page.



1. Enter the unique Media name. There are three types of supported media: snapshot, video clip and system log.
2. Set details of the Snapshot.

   "Source": Select the video source.

   "Send Pre-event images": The number of pre-event images.

   "Send Post-event images": The number of post-event images.

   "File name prefix": The prefix name will be added on the file name of the snapshot images.

   "Add date and time suffix to file name": Check to add time information as file name suffix.
3. Set details of Video Clip.

   "Source": Select the video source.

   "Pre-event recording": The interval of pre-event recording in seconds. There are two limitations for video clip file:

"Maximum duration": The maximum recording file duration in seconds.

"Maximum file size": The maximum file size would be generated.

4. Click on the System log to activate this function.
5. Click on “Submit” to save, or click on “Don’t Submit” to go back to the Event main page.

Media settings:

(1) Click **Add** in the Media area of the Event Settings page to open. On this page, you can specify the type of media that will be sent when a trigger is activated. A total of 5 media settings can be configured.

(2) Enter the Media Name for the media setting.

(3) Select the Media Type. There are three choices of media types available: Snapshot, Video Clip and System log.

- **Snapshot:**

  (a) Source: Select to take snapshots from the video profile.

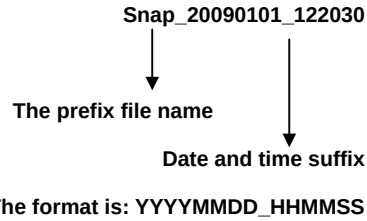
  (b) Send pre-event image(s) [0~4]: The DDK-1800BC has a buffer area; it temporarily holds data up to a certain limit. Enter the number of how many images to be captured before a trigger is activated. Up to 4 images can be generated.

  (c) Send post-event image(s) [0~7]: Enter the number of images to capture after a trigger is activated. Up to 7 images can be generated.

  NOTE: For example, if both the Send pre-event images and Send post-event images are set to 4, a total of 8 images are generated after a trigger is activated.

  (d) File Name Prefix: Enter the text that will be appended to the front of the file name.

For example, the file name will be in this form:



(e) Add date and time suffix to file name: Select the option to add date/ time suffix to the file name.

(f) Click Submit to save the setting.

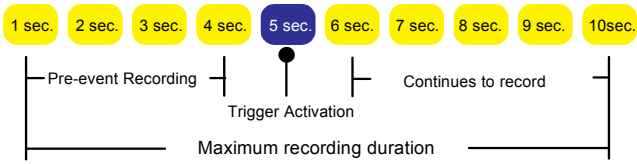
- **Video Clip:** Select to send video clips when a trigger is activated.

(a) Source: Select to record video clips from a video profile.

(b) Pre-event recording: The DDK-1800BC has a memory buffer that temporarily holds data. Enter the number of seconds of recording to be saved before a trigger is activated. There is a 4 second maximum setting.

(c) Maximum duration: Enter the maximum recording duration in seconds. Up to 100 seconds can be set.

Example: If pre-event recording is set to 4 seconds and the maximum duration is set to 10 seconds, the DDK-1800BC continues to record for another 5 seconds after a trigger is activated.



(d) Maximum file size: Specify the maximum file size.

(e) File Name Prefix: Enter the text that will be appended to the front of the file name.

(f) Click Submit to save the setting.

- **System log:** Select to send a system log when a trigger is activated. Click Submit to activate the setting.

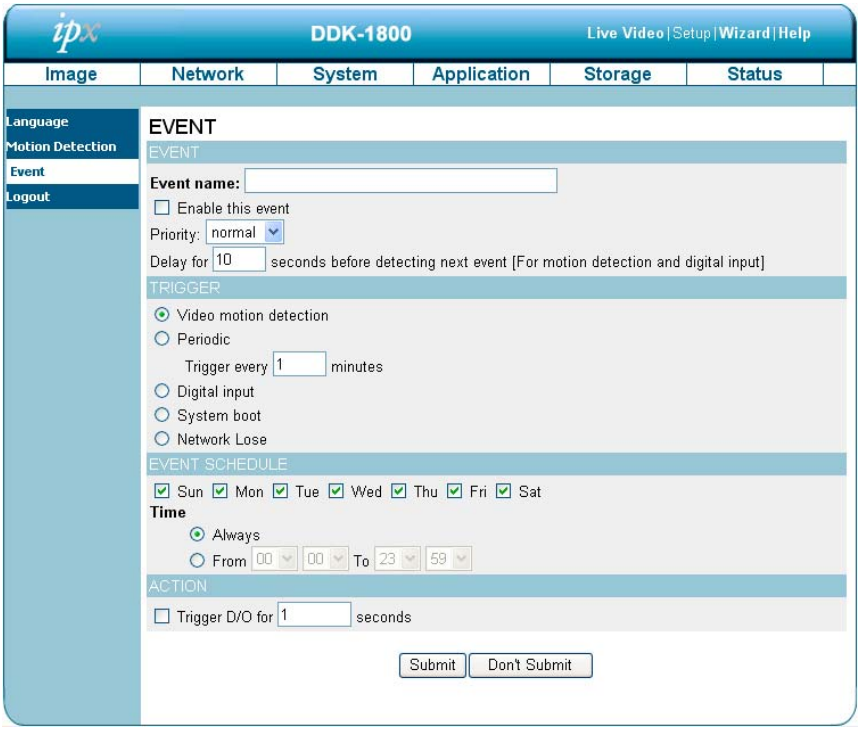
(4) Click Submit to enable the settings and exit the page. The new media settings will appear on the Event Settings page.

NOTE: To remove a media setting from the list (Application> Event>), select a media name from the drop-down list and click Delete.

Note that only when the media setting is not being applied to an event setting (Application> Event> Event> The "Attached media" item) can it be deleted or you can't get the images/ logs when a trigger is activated.

Event:

Click the **Add** button in the Event area to enter the “Event” settings page.



1. Enter an Event name. Check the “Enable this event” box to activate this function. Then set the Priority and the Source from the drop-down list.

   "Priority": The event with higher priority will be executed first.

2. Select the event trigger mode.

   "Video motion detection": Motion triggered events.

   "Periodic": An event is triggered in specified intervals. The unit of trigger interval is 1 minute.

   "Digital input": An event is triggered when the DI status is changed by an external device.

   "System boot": An event is triggered when the system boots up.

   "Network Loss": An event is triggered when the network disconnect.

3. Set the recording schedule time.

4. Sets the D/O Event Trigger. Check to trigger digital output for number of specified seconds when an event is triggered.
5. Click “Submit” to save or click on “Don’t Submit” to go back to the Event main page.

Event settings:

(1) Click **Add** in the Event area on Event Settings page to open the Event setting page. On this page, you can configure three settings: Trigger, Event Schedule, and Action to set an event. A total of 3 different event settings can be configured.

(2) Enter the Event Name for the event setting.

(3) Select “Enable this event” option to enable the event setting.

(4) Set the event priority from: “normal”, “high” and “highest”. Events with a higher priority will be executed first.

(5) Enter the duration in seconds to restart motion detection after a motion is detected

(6) An event is the action initiated by the user-defined trigger source. Set the event details for each as follows.

- **Trigger:** This option defines when to trigger the DDK-1800BC. The trigger source can be configured to use the DDK-1800BC’s built-in motion detection, periodic, external digital input devices, or system boot:
  (a) Video motion detection: This option makes use of the built-in motion detection mechanism as a trigger source. To enable this function, you need to first configure a motion detection windows.
  (b) Periodic: This option allows the DDK-1800BC to trigger periodically as defined in minute intervals up to 99999 minutes.
  (c) Digital input: This option allows the DDK-1800BC to use an external digital input device or sensor as a trigger source.
  (d) System boot: This option triggers the DDK-1800BC when the power to the DDK-1800BC is disconnected.
  (e) Network Loss: This option triggers the DDK-1800BC when the network to the DDK-1800BC is disconnected.

- **Event Schedule:** Specify the period for the event.
  (a) Select the days of the week.
  (b) Set the recording schedule in the 24-hour time format.

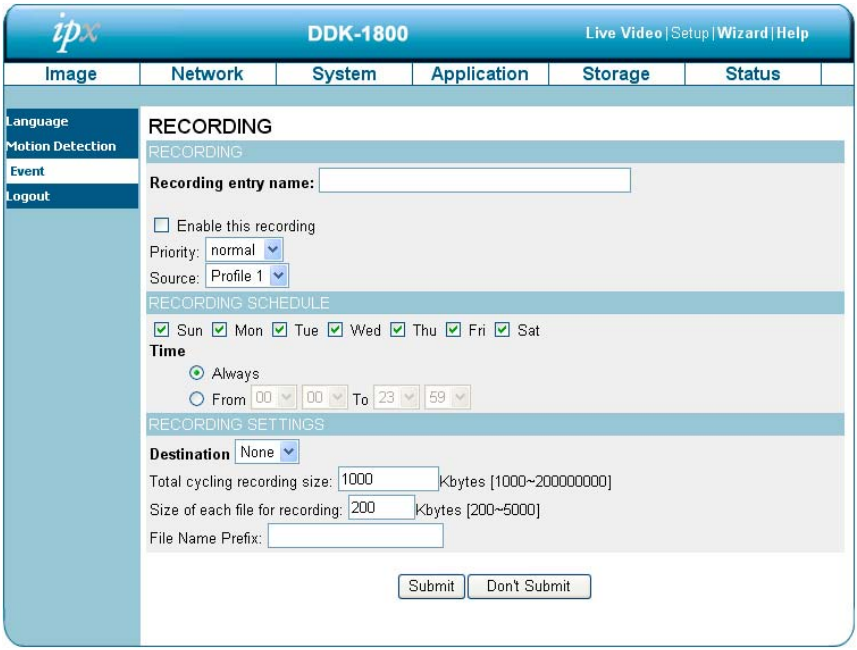
- **Action:** Define the actions to be performed by the DDK-1800BC when a trigger is activated.
  (a) Trigger D/O for ~ seconds: Select this option to turn on the external digital output device when a trigger is activated. Specify the length of the trigger interval in the text box.
  (b) For setting an event with recorded video or snapshots it is necessary to configure the server and media settings first so that the DDK-1800BC will know what action to take when a trigger is activated.
  Check a Server Name and then select the Attached media (the media name) from the drop-down list.

(7) Click Submit to enable the settings to exit this page. The new event settings will appear on the Event Settings page.

NOTE: The new event settings / server settings / media settings will appear in the event drop-down list on the "Application> Event>" page.

Recording:

Click the **Add** button in the Recording area to enter the “Recording” settings page.



1. Enter the Recording entry name. Check the “Enable this recording” box to activate this function. Enable this option if you want to upload the recording to a shared folder on the network. Then set the Priority and the Source from the drop-down list.
2. Set the recording schedule time. Select the day(s) for recording to be enabled
3. Select Always or From.

   "Always": This enables the DDK-1800BC to make video clips continuously.

   "From": The time range specified for the video clip.
4. Click “Submit” to save or click “Don’t Submit” to go back to the Event main page.

Record settings:

(1) Click **Add** in the Record area on the Event Settings page to open the Record settings page. In this page recording source, recording schedule and recording capacity can be defined. A total of 2 recording settings can be configured.

(2) Enter the Record entry name for the event setting.

(3) Select “Enable this recording” option to enable the recording setting.

(4) Select the recording priority from: “normal”, “high” and “highest”. Recording with a higher priority will be executed first.

(5) Select the recording source from the drop-down list (profiles).

(6) Specify the recording schedule and the recording settings.

- **Recording Schedule:**
  - (a) Select the days of the week.
  - (b) Set the recording schedule in the 24-hour time format.

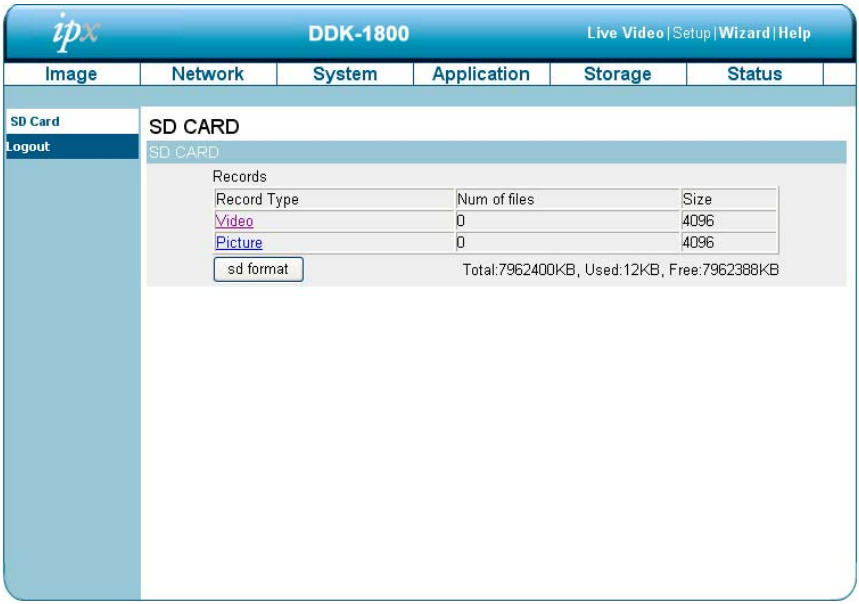
- **Recording Settings:**
  - (a) Destination: You can select the SD card or SAMBA (Network storage).
  - (b) Total cycling recording size: When the maximum capacity setting the oldest files will be overwritten by the newest.
  - (c) Size of each file for recording: Set the maximum file size for each video files.
  - (d) File Name Prefix: Enter the text that will be appended to the front of the file name.

(7) Click Submit to enable the settings and exit the page. The new media settings will appear on the Event Settings page.

4.1.3.6 Changing the Storage Settings

- *Changing the SD card Settings.*

1. Click the “storage” button at the top of the Setup page to enter the “SD Card” screen.



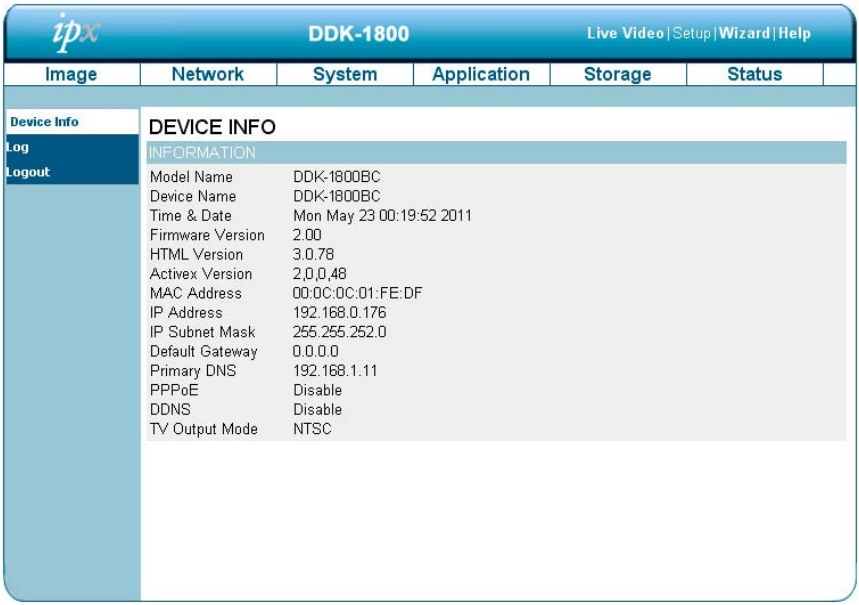
2. The SD Card page contains two image modes: Video and Picture.
3. Click “Video” or “Picture” to enter the sub year-month folder.
4. Click to enter sub date folder.
5. Click the file to display images.
6. Files can be deleted by checking and then clicking the OK button.

4.1.3.7 Status

- *Device information.*

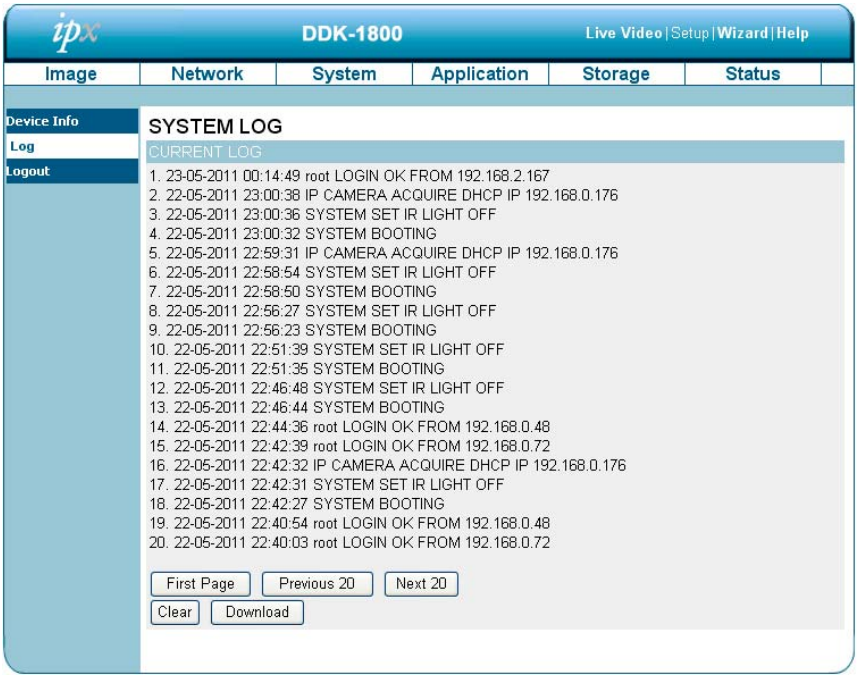
This page displays information about device and network connection.

Click the “Device info” button on the Status page to enter the “Device info” screen.



- *Device information.*

This page displays the DDK-1800BC log information.



1. Click the “Device info” button on the Status page to enter the “Device info” screen.
2. Click “Clear “ to erase all system logs. You may also download by clicking “Download”.

4.1.3.8 PPPoE & DDNS

Using PPPoE

1. Install the XDSL software (obtained from your ISP dealer) on a PC.
2. Search DDK-1800BC's IP address: you can connect the DDK-1800BC to a Video monitor. The monitor screen will show the IP address on the right side.
3. Turn off the DHCP function of the DDK-1800BC if it is “ON”.
4. Installing an IP address in your PC or notebook.

   Desktop → Move the mouse to the Network neighborhood and click the right key of the mouse → Choose properties → Choose your local connection → Choose the properties and select the configuration → Select the TCP / IP → Choose the properties → Enter the IP address in a quad formula, for example “192. 168. 1.101” (the first three parts must be identical to the above example. The last part can be changed to any number not to exceed 255) → Click on the mask and the mask input: “255. 255. 255. 0” (a fixed formula) → Click “OK” → Click “OK”.
5. Desktop → open browser → Enter the DDK-1800BC’s IP address in the URL→ Enter →DDK-1800BC will load.

PPPoE Settings

1. Launch DDK-1800BC’s home page → Choose network → Enter User Name: ”root” and Password: Admin” → Click “OK’.
2. Choose PPPoE → PPPoE mode: Select “ON” → Enter “Account” → Enter “Password” → Submit → Unplug the power connection.
3. Power up the DDK-1800BC to receive an IP address from the ISP (this IP address is dynamic --- Each time the DDK-1800BC is powered off and on a new IP address will be obtained).

Test:

1. Desktop → IE browser → Enter the DDK-1800BC IP address (as in the PPPoE settings in step 3 above) → DDK-1800BC should load.

DDNS settings

1. Launch browser → Enter address to connect to DDK-1800BC → Choose network → Enter User name : ”root” and Password : ”Admin” → Click “OK” .
2. Select “DDNS” → Click “Enable DDNS” → Enter the “DDNS host name”, for example “abc123. homeip.net” → Enter “DDNS Account”, for example “abc123” → Enter the “DNS Password”, for example “7777” → Submit → The settings are now complete → Close browser.
3. Re-open browser → Enter address,→ view DDK-1800BC images. The procedure is complete.

NOTE: These settings are only for an ADSL Dynamic IP configuration. If your configuration is fixed, it is not required to set the PPPoE and DDNS settings.

5. ADVANCED OPERATION

Question 1:

How do I view live images of the DDK-1800BC via Internet Explorer on a Desktop PC or a laptop computer in a situation where there are no monitors?

◇To obtain the IP address of the DDK-1800BC without a monitor, use one of the following two methods:

UPnP: Please refer to **APPENDIX 1**.

IP function: Please refer to **2.6 The USB function**.

Question 2:

How do I activate UPnP?

1. Follow the default settings to set up the related settings and connect hardware.
2. Activate the Web browser and enter the DDK-1800BC's URL.
3. SETUP→Network button.
4. Select "Enable UPnP presentation".
5. Select "Enable UPnP port forwarding"; make the "Forwarding Port" setting.

NOTE:

1. Follow step 4 above then turn on computer's "My Web Neighbors" to find the DDK-1800BC. Then click to go to the DDK-1800BC's home page.
2. Follow step 5 above and make the Route UPnP port forwarding setting.
3. Your computer can access a DDK-1800BC through a router by opening a port on the router (port forwarding) if the router is configured to a specific port. For example, port "8080", you can enter the IP address as http://xxx.xxx.xxx.xxx:8080 on the URL entry box of the web browser to access the DDK-1800BC.

Question 3:

How do I change Video Profiles 1, 2, 3?

1. On Live page click Profiles 1, 2 & 3.

Question 4:

How do I set up the motion detection area and its sensitivity?

2. Go to SETUP→ Application button →Motion Detection button.
3. Select "Enable Video Motion".
4. Set up the target zone and setup the Sensitivity and Percentage.
5. Click the **Submit** button to submit the setting.
6. When a person or object moves within the target zone under a setting, the Motion Detection will display the response signal in the Live Video and Video Out.

Question 5:

How do I use the DynDNS to connect the DDK-1800BC by using its Sub Hostname via the intranet?

◇Set the DDNS function

1. Click on the **Network** button on the home page.
2. Click on the **Dynamic DNS** button on the left side of the page to enter the "Dynamic DNS" page.
3. Click "Enable DDNS" to activate.
4. Enter the DDNS Host Name, DDNS Account and DDNS Password which you created in the www.dyndns.com website.
5. Click on the **Submit** button to submit the setting.

   NOTE: Please refer to the **APPENDIX 2** for more details.

◇Set the PPPoE function

1. Click the **Network** button on the home page.
2. Click the **PPPoE** button on the left side of the page to enter the "PPPoE" page.
3. Choose "Enable" to activate the function.
4. Enter the Account and the Password which are provided by your ISP.
5. Click the **Submit** button to submit the setting.

NOTE: Please refer to section **4.1.3.8** for more details.

◇Use the Sub Hostname to view the DDK-1800BC

1. Click on the URL block at the top of the PC screen.
2. Enter the DDNS Host Name of the DDK-1800BC into the URL block and press the "**Enter**" key to enter the login page.
3. Enter the user name and password.
4. Click the "**OK**" button and enter the home page of the DDK-1800BC.

Question 6:

How do I add or modify users and their authority to use the DDK-1800BC?

◇Entering the setting page

1. Click the **System** button on the Setup page.
2. Click the **User** button on the left side of the page to enter the "USER" page.

◇Add a new user

1. Enter the user name, the password, the confirmed password and choose the authority level. There are three levels of authority: Admin, Operator and Viewer.

   Admin: The user who accesses with the admin name and password has the full rights to change the settings of the DDK-1800BC.

   Operator: Has access to viewing and functionality.

   Viewer: Has limited viewing rights.
2. Click the **Add/Modify User** button to submit new user setting.

◇**Modify the user**

1. Click the user name you want to modify from the **USER LIST**.
2. Enter the password, the confirmed password and choose authority level.
3. Click the **Add/Modify User** button to submit new setting.

◇**Delete a user**

1. Click the user name you want to delete from the **USER LIST**.
2. Click the **Delete User** button.

Question 7:

How do I to create the self-signed certificate manually?

3. Go to Setup→Network button →HTTPS button
4. Select “Enable secure HTTPS connection”.
5. Create certificate settings→ Create self-signed certificate manually→Create.
6. Fill in the relevant data in the text boxes titled Country, State or province, Locality, Organization, Organization Unit, Common Name & Validity; click “Create”.

Question 8:

How do I download the log list?

1. Click Set up→ Status →Log.
2. The display will show the log list page.
3. Click First Page, Previous 20 or Next 20 to view the recording list.
4. Click Download; select the file path, and download the recording list.

6. SPECIFICATIONS

DDK-1800BC	Image sensor	1/2.8" 3M Sony IMX036 CMOS sensor.
	Lens	3~9mm Vari-Focal board type Megapixel Lens
	Minimum illumination	Color: 0.2 Lux @ F1.2; B/W: 0.01 Lux @ F1.2
	IR cut filer	Yes
	Day & Night	Auto / Day / Night / Schedule.
Image	Video Compression	H.264 / MPEG4 / MJPEG.
	Resolution	· 4:3 - "2048x1536" (H.264 & MJPEG only), "1600x1200", "1024x768", "800x600", "640x480", "480x360", "320x240" and "176x144". · 16:9 - "1920x1080", "1280x720", "800x450", "640x360", "480x270", "320x176" and "176x144".
	Video streaming	- Simultaneous H.264, MPEG4 and MJPEG. - Multi-profile: resolution / compression / frame rate / video quality.
	Profiles	3 (selectable)
	Frame rate	15 fps at 2048x1536
	Image settings	- Adjustable image size, quality, and bit rate. - Day / Night mode. - Flip & Mirror. - AGC, AWB, AES. - Time stamp and text caption overlay. - Privacy masks.
	Video management software	SDK, including HTTP-API / ActiveX / ONVIF.
Audio	Audio streaming	Two-way.
	Compression	G.711u / G.726.
	Audio bit rate	G.711u 64kbps / G.726 32kbps.
	Inputs / outputs:	1 x input / 1 x output (3.5mm earphone jack).
Network	Security	Multi-level password protections, IP address filtering, HTTPS encryption, User access log.
	Protocols	IPv4, HTTPS, HTTP, TCP, UDP, RTP/RTCP/RTSP, DHCP, NTP, FTP, SMTP, UPnP, ICMP, ARP, DDNS, PPPoE, SAMBA
	Users	Access by 10 simultaneous users.
	Firmware update	SD card / HTTP.
Alarm	Recording	SD card, SAMBA, FTP
	Pre-alarm recording	Yes.
	Advanced motion	512 zones. Sensitivity: 0 - 100 %.
	Trigger	Motion Detection Schedule Alarm input Ethernet loss Network/Remote digital alarm input
	Notification	SD card recording, SMTP, FTP, HTTP, alarm output.

Connectors	RJ-45	10 BASE - T / 100 BASE -TX.
	Digital I / O	Push-in: 2 x digital input / 2 x digital output / 1 X DC output (12V DC) / 1 x ground
	Earphone jack	2 x 3.5 mm (1 x Audio in [mic. in / line in], 1 x Audio out [line output]).
	Reset	Reset for factory default.
	Local storage device	SD / SDHC card slot.
General	LED indicators	Power / Network / SD card.
	Power consumption	≦10W
	Power	- 12V DC (DC power jack). - 24V AC (2 pin terminal block). - 802.3af compliant Power over Ethernet (IEEE 802.3af. Class 3).
	Processors	TMS320DM368.
	OS	Linux 2.6 kernel.
	Operating Temperature	-40℃ to 50℃ (-40℉ to 122℉).
	Approval	CE, FCC, RoHS.
	Dimensions / Package Weights	92 x 97 x 226 mm. (H x W x D) / 1.9 kg
	Accessories included	- Installation Guide. - CD x 1 (Includes User's Manual). - Power adapter: (Input: 100-240 VAC, 50 / 60 Hz, Output: 12VDC, 1A). - RJ-45 cable x 1

* Design and specifications are subject to change without notice.

7. Client System Requirements

System requirement	Windows XP or higher
Browser	IE 6.x
Live Monitor	Max. 16 Split, Real Time REC/ Capture/ Audio/ Live Event/ Full Screen
Playback Viewer	Playback, Time / live event Search / Export (JPEG / AVI)
Settings	Device/ System/ DDK-1800BC management/ web page
Client PCs	One DDK-1800BC can supports 10 simultaneous client PCs.

APPENDIX 1. –How to run DDK-1800BC UPnP

The DDK-1800BC® supports the UPnP (Universal Plug and Play) protocol which makes it easier for set-up. Follow these steps for UPnP use:

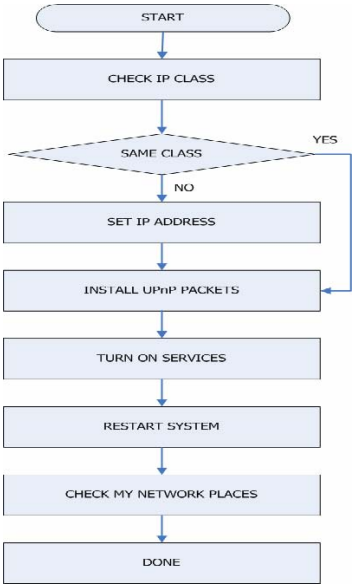


Figure 1 UPnP Setup Flow Chart

1. Check the IP class of your PC

In most case Microsoft Windows® will assign an IP address of 169.254.*.* automatically with a subnet mask of 255.255.0.0 if the DHCP server is absent. The default IP address of a DDK-1800BC® is 192.168.1.168 with a subnet mask of 255.255.255.0. There won't be any communication due to different IP class domains and you have to modify the relative settings or the UPnP protocol won't work. It may be necessary to check you IP address. Follow this procedure:

Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**. See Figure 2.

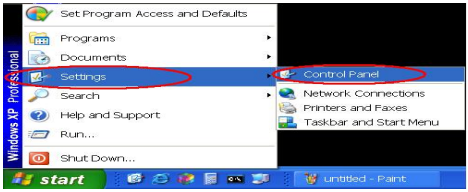


Figure 2

Step 2: When **Control Panel** appears, double-click the **Network Connections** icon. The **Network Connections** dialog box appears. See Figure 3.

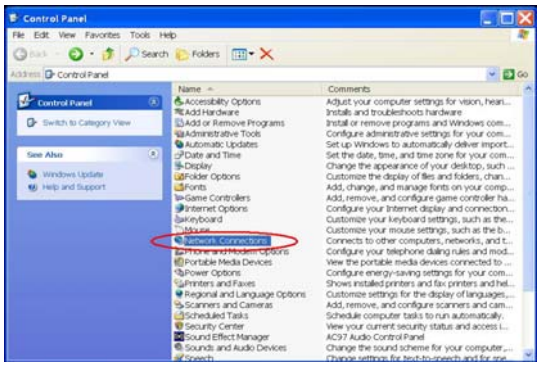


Figure 3

Step 3: Click the **Protocols** tab in the **Network Connections** dialog box. See Figure 4.

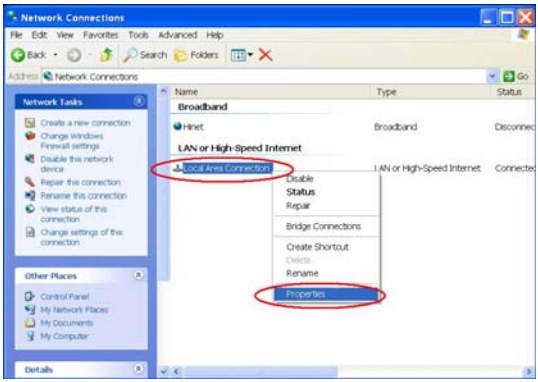


Figure 4

Step 4: When the **Local Area Connection Properties** dialog box comes up, choose **Internet Protocol (TCP/IP)** and click **Properties**. See Figure 5.

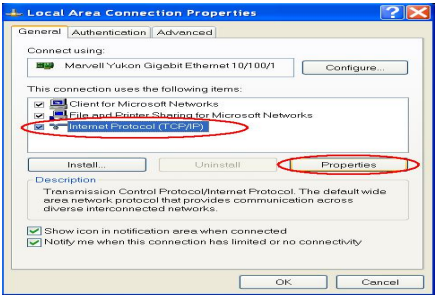


Figure 5

Step 5: In the **Internet Protocol (TCP/IP) Properties** dialog box, choose **Use the following IP Address** to indicate that you do not wish to use DHCP, and assign IP Address 192.168.1.200 with Subnet mask 255.255.255.0.

Click **OK** when finished. See Figure 6.

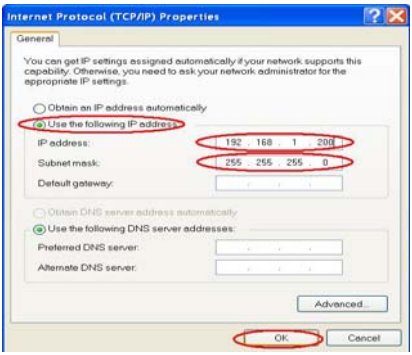


Figure 6

Step 6: Choose Close to finish the modification. See Figure 7.

Figure7

2. Install UPnP Packets

Follow these steps:

Step1: In the **Start menu**, point to **Set Program Access and Default** and click. See Figure 8

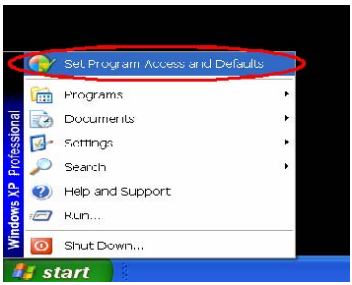


Figure 8

Step 2: When the **Add or Remove Programs** dialog box appears, click **Add/Remove Windows Components** button. See Figure 9.

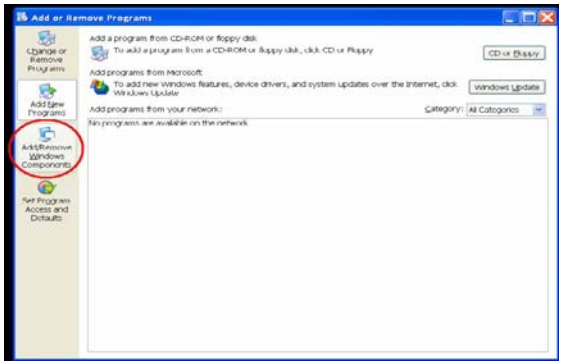


Figure 9

Step 3: Check the **Network Services** in the **Windows Component Wizard** dialog box, and then click **Details…**. See Figure10.

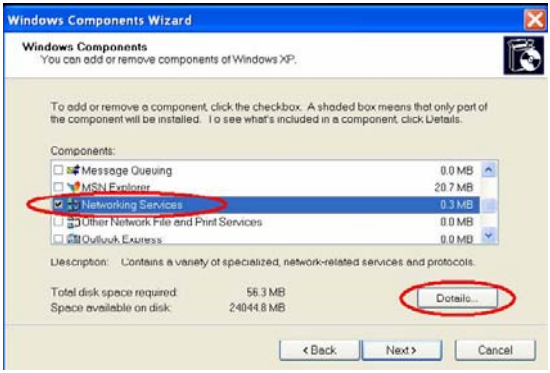


Figure 10

Step 4: Check **UPnP User Interface**, and choose **OK**. See Figure 11.

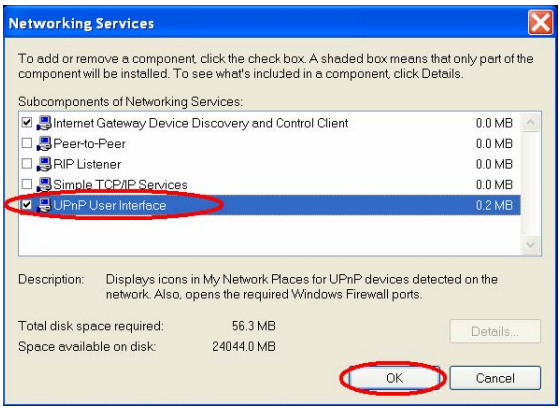


Figure 11

Step 5: When the original **Network Component Wizard** dialog box returns, click **Next**. See Figure12.

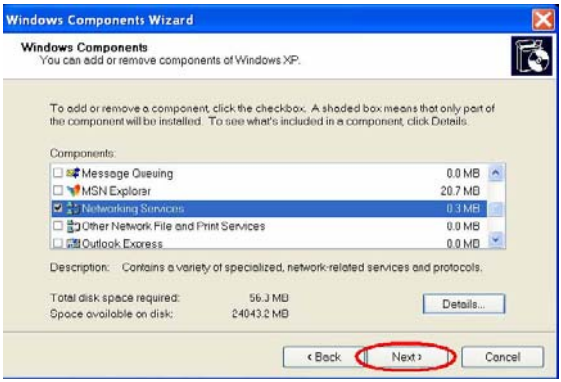


Figure 12

Step 6: After about one minute the UPnP installation will be finished. Click finish. See Figure13.

Figure 13

3. Turn on Services

After installation services must be tuned on to start UPnP protocol. Follow these procedures:

Step 1: In the **Start** menu, point to **Settings**, and then click **Control Panel**. See Figure14.

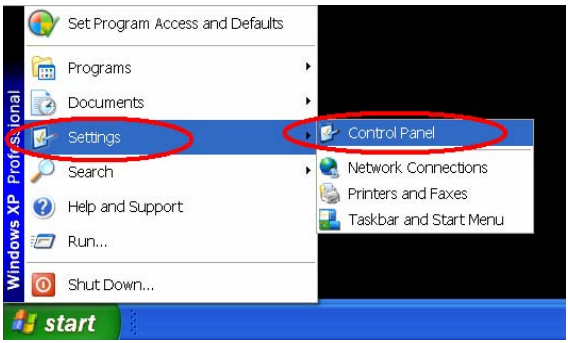


Figure 14

Step 2: When **Control Panel** appears, double-click the **Administrative Tools** icon. The **Administrative Tools** dialog box appears. See Figure15.

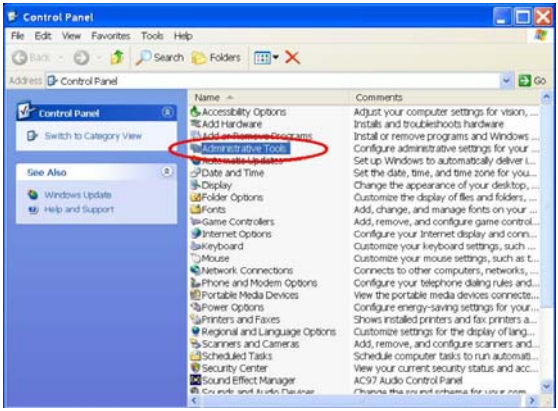


Figure15

Step 3: Click the **Services** icon in the **Administrative Tools** dialog box. See Figure16.

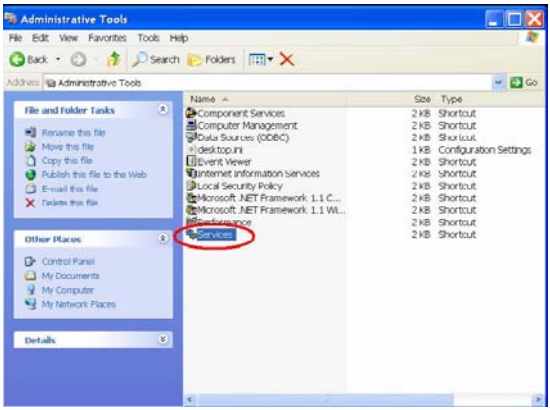


Figure16

Step 4: When the **Services** dialog box comes up, double click the **SSDP Discovery Service icon**. See Figure17.

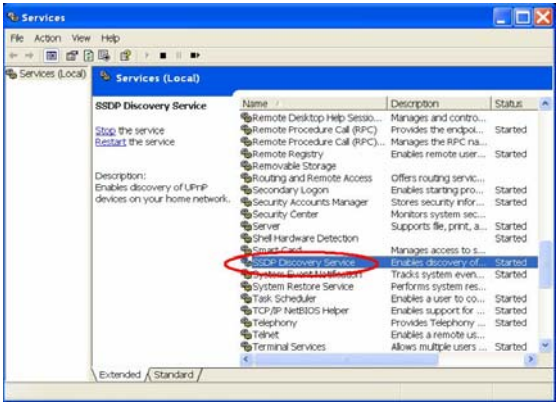


Figure17

Step 5: Choose **Automatic** in the **Startup type** and click **OK** to start it. See Figure18.

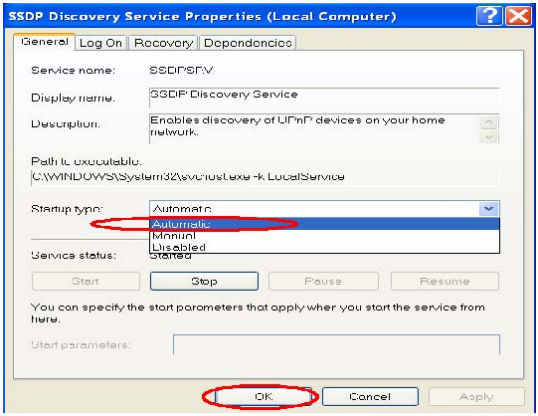


Figure18

Step 6: When the **Services** dialog box appears again, double click the **Universal Plug and Play Device Host** icon. See Figure19.

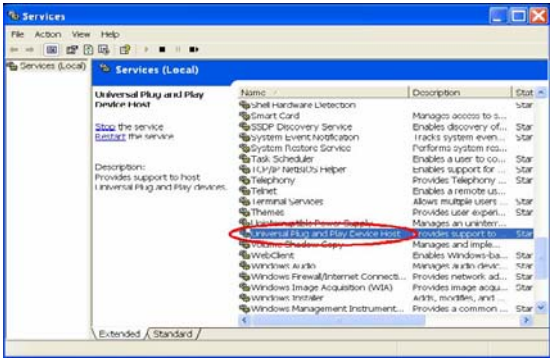


Figure19

Step 7: Choose **Automatic** in the Startup type, click the **Start** button, and click **OK**. See Figure20.

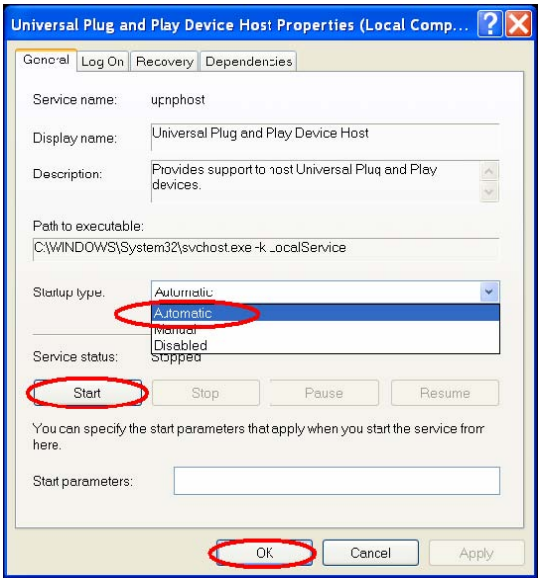


Figure20

Step 8: Restart your system.

4. Scan DDK-1800BCs® through My Network Place

After you complete the installation and have started services, the UPnP protocol will take effect.

You can scan all DDK-1800BCs® in My Network Place, as in Figure21 and Figure22 below.

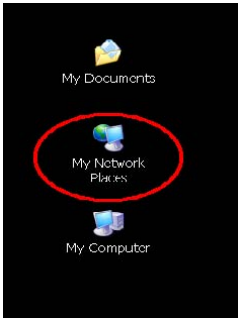


Figure21

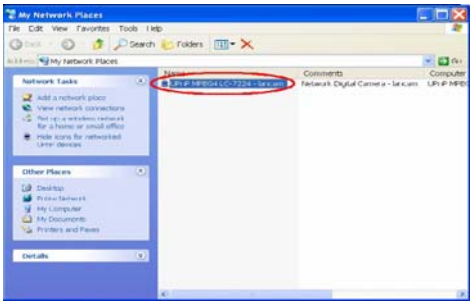


Figure22

Double click the **UPnP DDK-1800BC** icon, and the video live stream will pop up automatically without assigning any IP address in Microsoft Internet Explorer®.

APPENDIX 2. –Register as a DDNS member

This chapter provides the user with the basic instructions on how to register a free DDNS service.

Registering for a DDNS

Enter the URL www.dyndns.com. In the upper right-hand corner of the main page, where there is an item, "Create Account", as shown in Figure 1.

Figure 1

Create an account

After clicking "Create Account", you will enter the Create Account page. Please complete the form at the bottom of the page to create your account. You will receive an e-mail containing instructions to activate your account. If you do not follow the directions within 48 hours, you will need to recreate your account.

Set up the DDNS

After creating the account successfully, please enter your user name and password in the upper right-hand corner of the main page to login, as shown in Figure 2.
After you login successfully, a text will appear saying "My Services", as shown in Figure 3.

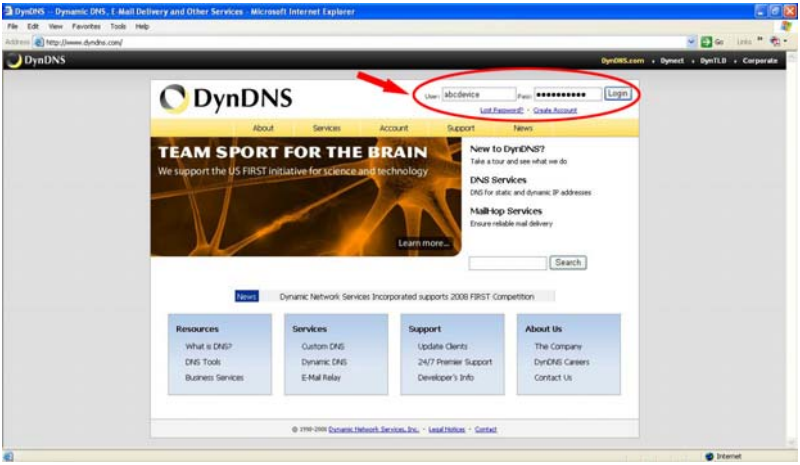


Figure 2

Figure 3

Click “My Services” to enter the service page. Please click the “Add Host Service” item which is below the ”My Hosts“ item, as shown in Figure 4.
Click “Add Host Service”, and its service items will appear. The Add Dynamic DNS Host item helps to add a new DDNS. Each member may have only one free account, and one free account can have only five DDNS.
Click Add Dynamic DNS Host to enter the DDNS setting page as shown in Figure 5.

Figure 4

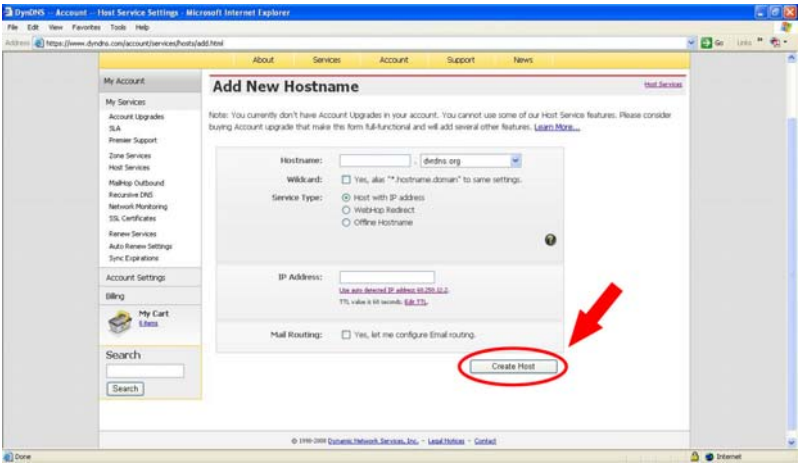


Figure 5

In this page the “Hostname” is set. The user can choose a Sub Hostname from the right-hand side of the Hostname’s drop-down list.

NOTE: You don’t have to set the “IP Address” in the same format as the DDK-1800BC’s IP Address. It will renew the IP Address automatically.

After finishing this setting, click the “Create Host” button as shown in Figure 5.

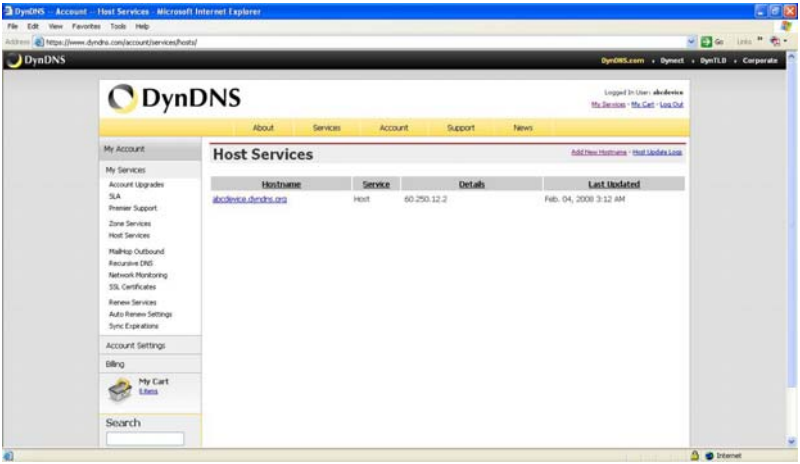


Figure 6