ECD-1000

Product Manual

For V1.00.02 Firmware

Ver. 2013/09/24

ACTi
Connecting Vision

Legal Notice

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Regulatory Compliance Information

Federal Communications Commission Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING: Changes or modifications to the equipment that are not expressly approved by the responsible party for compliance could void the user's authority to operate the equipment.

European Community Compliance Statement

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022 and EN 55024. In a domestic environment, this product may cause radio interference in which cause the user be require to take adequate measures.

About This Manual

Target Audience

This manual is intended for **System Administrators** who are responsible for installing and setting up video surveillance system as well as **End Users** who will be operating the Decoder on a daily basis. System Administrators are expected to know the fundamentals of IP surveillance system integration and to own the administrative privileges to install and configure all the devices.

For the latest product updates and documentation, visit our website:
http://www.acti.com/product/category/Video_Decoder

Technical Support

If you have any questions during system installation, please feel free to contact our engineers via our **Customer Help Desk** platform http://www.acti.com/CHD.

Table of Contents

Chapter 1: Hardware Overview

This chapter contains the following topics:

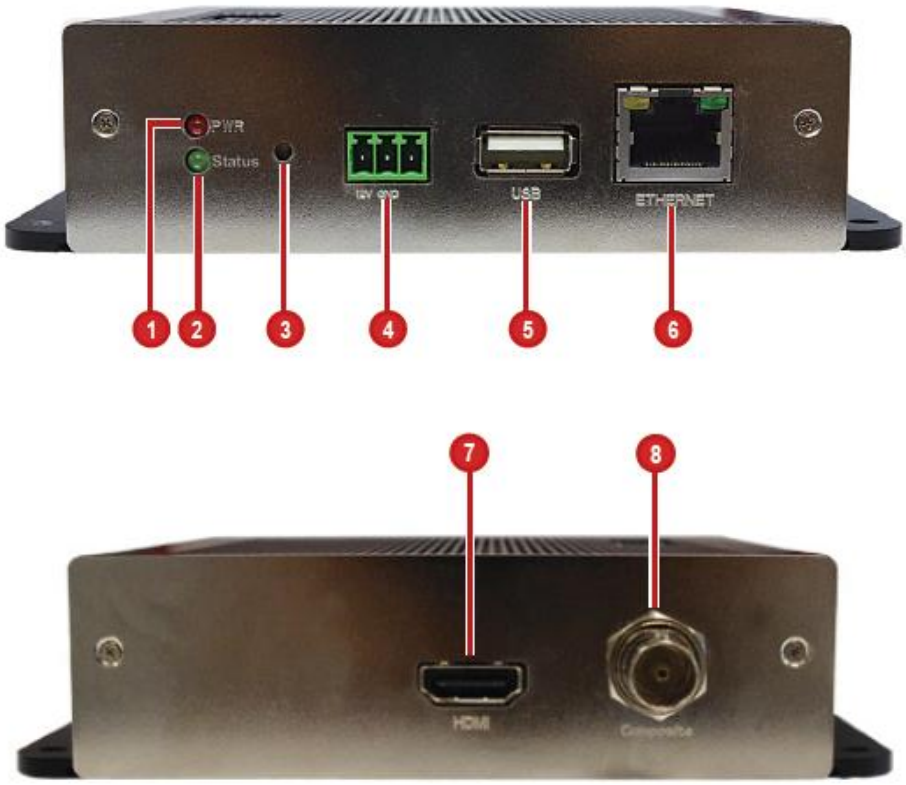
- **Introduction**: Describes the package contents, device overview, and the connection architecture.
- **Connecting Devices**: Describes how to connect the decoder to other devices and how to use the bundled accessories.
- **Accessing the Device**: Describes the different methods on how to access the device via local display or remote management.

1.1 Introduction

Package Contents

Video Decoder	Screw Packs x 2	Cable Straps
		
Mounting Bracket	**Power Adaptor**	**Terminal Block**
		
Quick Installation Guide	**Warranty Card**	
		

Device Overview



Item		Description
1	Power LED	Lights RED when the power is on.
2	System Ready LED / Factory Default LED	• Lights GREEN after the boot up process is complete to indicate the Decoder is ready. • When doing a factory reset, this LED lights GREEN briefly to indicate factory default setting restoration has started. The LED turns off and lights up again when the restoration completes and the Decoder is ready for use.
3	Reset Button / NTSC and PAL Switch	• Use to restore the Decoder to its factory default setting. • Use to switch between NTSC and PAL functions.
4	DC 12V Power Connector	Connects the bundeled power adaptor and terminal block to the Decoder. See ***Preparing the Power Adaptor*** on page 16.
5	USB Port	Connects a USB device, such as a mouse, keyboard or hub, to the Decoder.

Item		Description
6	Ethernet Port	Connects to the network using an Ethernet cable.
7	HDMI Port	Connects to an HDMI monitor (1080p) using an HDMI cable.
8	Composite Port	Connects to a composite monitor using a video cable with BNC connector.

System Requirements

For remote computer access, the following system requirements must be met to ensure compatibility with the Decoder:

PC Spec	Minimum Requirement
CPU Processor	Intel Core 2 Quad 2.66 GHz or newer
RAM	At least 4GB
Operating System	Windows 7 (32/64-bit), Windows 8 (All versions)
Browser	Internet Explorer 9.0 or 10.0

Supported Video Format

	Local Live View	Remote Live View
Codec	H.264	MPEG4 MJPEG H.264
Resolution	Up to **1920** x **1080** pixels	Up to **2592** x **1944** pixels

The Decoder conforms to the display standard of composite and 1080p HDMI monitors. Therefore, to reserve as much computing power for the Decoder as possible, only up to 2 megapixels H.264 video stream can be displayed on the Local Live View. A black screen with a message will appear for channels using other codecs or those with higher resolution.

Decoding Limitation

Depending on the video stream resolution, the Decoder automatically adjusts the frame rate of the stream in order to achieve smooth video performance as well as support the most number of channels as possible. For example, for 9 channels with 1920 x 1080 resolution, the Decoder automatically switches the frame rate to 12 fps on each camera to display all the 9 channels. Other frames are automatically dropped in the process.

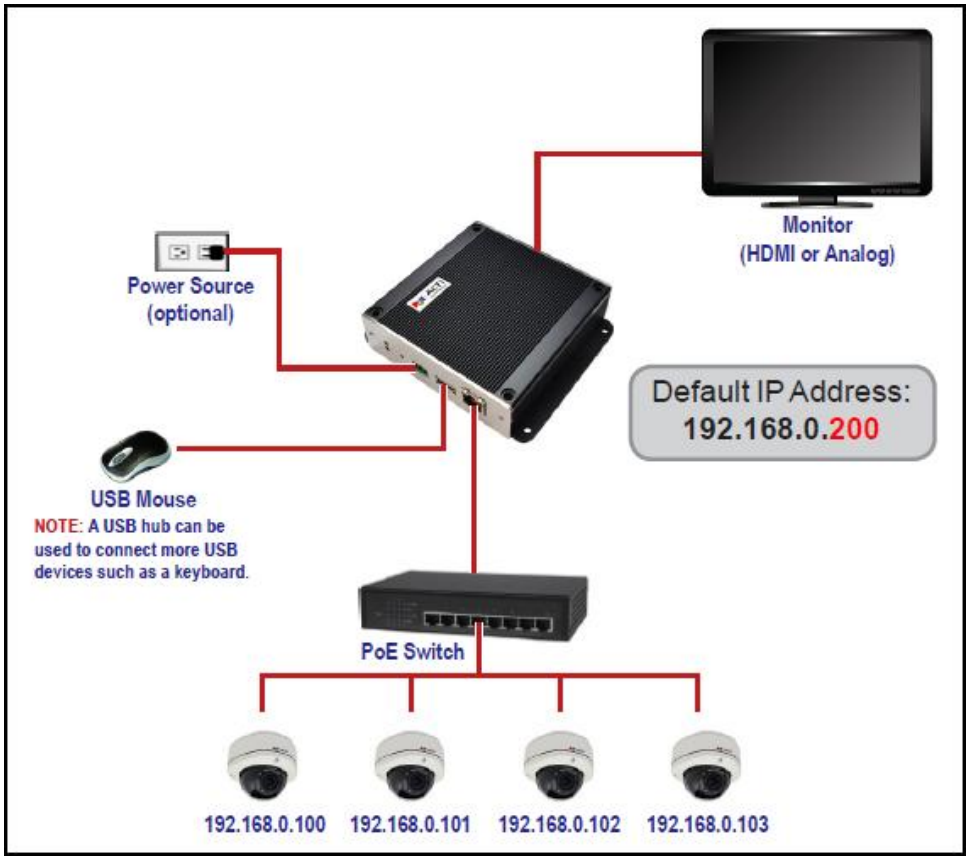
Video Stream Resolution	Number of channels	Framerate
VGA (640 x 480)	9 channels	30 fps
720p (1280 x 720)	7 channels	30 fps
	9 channels	25 fps
1.3M (1280 x 1024)	6 channels	30 fps
	9 channels	20 fps
1080p (1920 x 1080)	4 channels	30 fps
	9 channels	12 fps

NOTE: Regardless of the configured frame rate of a camera video stream, the Decoder automatically adjusts the frame rate according to the table above.

1.2 Connecting Devices

Connection Architecture

The diagram below illustrates a sample connection within a local area network.



Local Area Network Connection Architecture

1. Connect the power adaptor to the Decoder and power outlet (see ***Preparing the Power Adaptor*** on page 16).

   NOTE: This step may be skipped if a Power-over-Ethernet (PoE) switch or injector will be connected to the Decoder.

2. Connect a monitor to the Decoder via HDMI or Composite port connection (see ***Connecting to Local Display*** on page 17).

3. Connect a USB mouse.

4. Connect the Decoder to a Power-over-Ethernet (PoE) switch or injector.

   NOTE: If using the bundled power adaptor, a non-PoE switch may also be used.

5. Connect the cameras to the switch (see ***Connecting the Cameras*** on page 18).

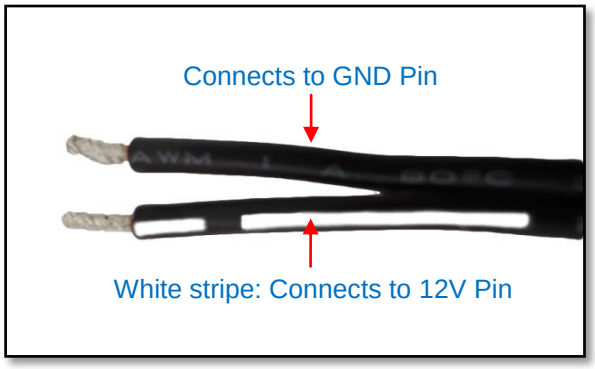
Preparing the Power Adaptor

In case of using a non-PoE Ethernet switch, use the bundled power adaptor to directly connect the Decoder to a power outlet. The power adaptor must be connected to the supplied terminal block before use.

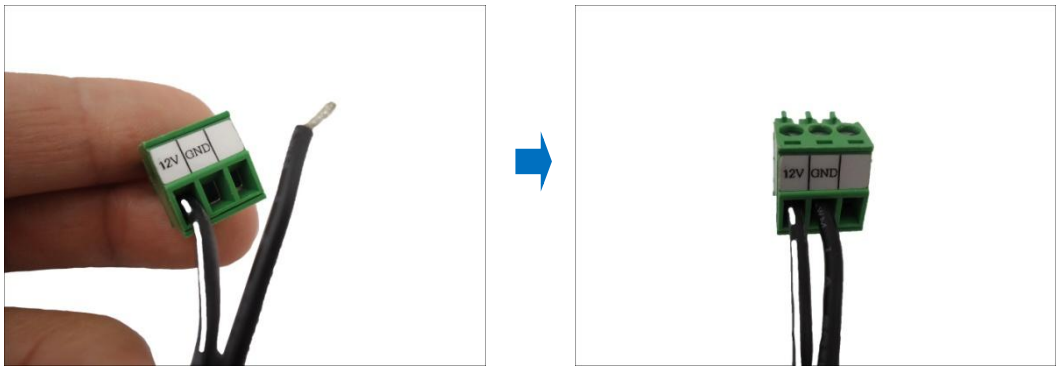
To do this, follow the procedures below:

1. Loosen the screws of the **12V** and **GND** pins of the power terminal block.

2. Take note that the power adaptor cable has two (2) different wires:



3. Connect the wire with the white stripe to the **12V** pin and the other to the **GND** pin.



4. Tighten the screws of the **12V** pin and the **GND** pins to secure the wire connection.

Connecting to Local Display

The Decoder supports up to two display outputs via HDMI or Composite connection at one time. These display outputs can be referred to as the local display or the local client.

Local Display via HDMI Connection

Connect an HDMI monitor (1080p) to the **HDMI port** of the Decoder using an HDMI cable (not included in the package).

Local Display via Composite Connection

Connect a composite monitor to the **Composite port** of the Decoder using a video cable with BNC connector (not included in the package).

Connecting the Cameras

The Decoder can decode up to 9 IP cameras and display the videos through an HDMI (1080p) or composite monitor or display remotely via PC or a mobile client.

To connect a camera, do the following:

1. Connect the camera to a PoE switch, within in the same network segment as the Decoder, using an Ethernet cable.
2. Configure the IP address of the camera, if necessary (please refer to the camera hardware manual on how to do this).
3. Once ready, access the Decoder user interface to search and finalize the camera connection (see ***Quick Setup*** on page 23).

1.3 Accessing the Decoder

The Decoder can be accessed in two ways: via **Local client** or **Remote client**.

Local Client Access

A monitor that is directly connected to the Decoder via the HDMI or Composite port is considered a **Local Client**. Users can view the videos from the camera and manage network configurations right through the monitor.

To access the Decoder user interface, simply connect a USB mouse and a monitor to the Decoder.

See ***Chapter 2: Local Management*** on page 21 for more information.

Remote Client Access

A **Remote Client** is connected over the TCP/IP network and communicates through HTTP protocol. A computer with a web browser or a mobile device with the **Mobile Client** software are considered **Remote Clients**.

On a computer with Internet Explorer, users can access the Decoder web interface by typing the IP address of the Decoder without installing any client program beforehand. Logging in is as simple as visiting a website.

Users can also view the videos using Mobile Client on mobile devices. For more information, please refer to the Mobile Client documentation downloadable from the website (www.acti.com).

Local vs. Remote Access

In most cases, it is recommended to perform the initial configurations, before the Decoder is even mounted to its location, using local access. Once the initial configurations are complete, install the Decoder and start viewing the videos through the local display. Further management or advanced security settings may be done through remote access.

1.4 Device Maintenance

This section describes how to reset the device and switch between NTSC and PAL system.

Resetting the Device

In case there is a need to reset the device to its default factory settings, perform the following:

1. With the device powered off, press and hold the **Reset** button with a pointed object (e.g. pen).
2. Power on the Decoder, either by connecting the power adaptor or connecting the Decoder to a PoE switch.
3. Continue to press the **Reset** button for 5 seconds or when the **Factory Default LED** lights green. The **Factory Default LED** indicates resetting has started. The **Factory Default LED** lights on and off several times until it completely lights up to indicate reset is complete.

Switching Between NTSC and PAL Mode

When the Decoder is powered on, briefly press the **NTSC and PAL switch** (also the **Reset** button) to switch between NTSC and PAL mode.

Chapter 2: Local Management

This chapter describes the Decoder operation and management on the Local Client side. It contains the following topics:

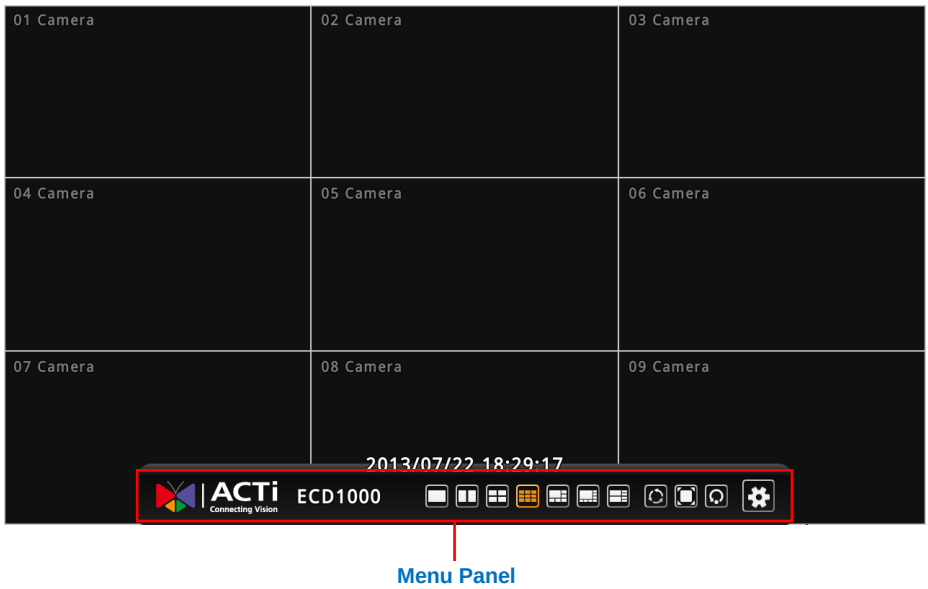
- **Accessing for the First Time**: Describes the setup procedures involve when accessing the Decoder for the first time. This includes changing the Decoder IP address and adding the cameras.
- **The Live View Screen**: Describes how to use the Live View screen, changing the layout, channel patrolling and resetting the channel position.
- **Accessing the Setup Screen**: Describes how to access the Setup menu, using the on-screen keyboard to login, and an overview of the Setup menu.
- **Configuring System Settings**: Describes how to view and modify the system settings such as date and time, language, and how to filter information shown on the local display.
- **Configuring Network Settings**: Describes how to modify the IP configurations, port mapping and other network settings.
- **Configuring the Cameras**: Describes how to add and view the cameras and manage the camera settings.
- **Rebooting the Device**: Describes how to do a system reboot.

2.1 Accessing for the First Time

Once all devices are connected, turn on the monitor to see the Live View screen.

The Decoder comes with a default static IP address of **192.168.0.200**. If your network has a DHCP server, the Decoder will automatically switch the connection type to DHCP and be assigned an IP address..

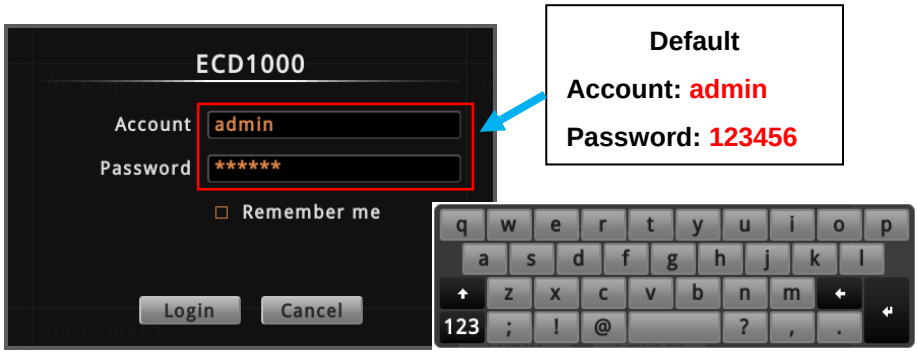
Use the USB mouse to navigate through the user interface. Move the mouse cursor towards the bottom of the screen to display the **Menu Panel**.



Quick Setup

Step 1: Login

1. Click  to access the **Setup** page.
2. When prompted to login, enter the default **Account** and **Password** using the on-screen keyboard.



NOTE: For more information on using the on-screen keyboard, see *Using the On-Screen Keyboard* on page 33.

Step 2: Change the IP Address (If necessary)

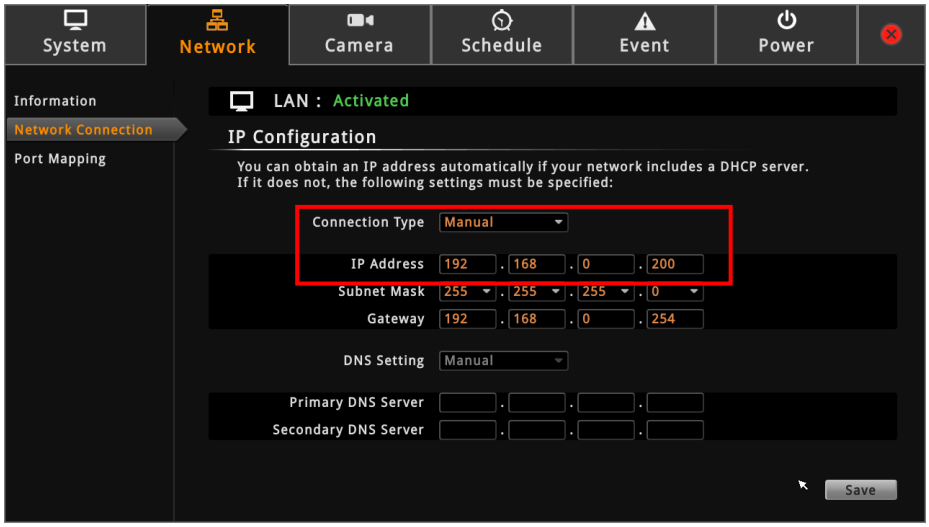
If the network has a DHCP server, the Decoder is automatically assigned an IP address so users do not need to change anything. If the network does not have a DHCP server, the Decoder uses its default IP address of **192.168.0.200**.

Change the IP Address on Network without DHCP Server

Remember that the Decoder must be on the same network segment as the cameras. In case you need to change the IP address of the Decoder, follow the procedures below on how to do this.

1. Click **Network** > **Network Connection**.
2. Make sure **Connection Type** is **Manual**.

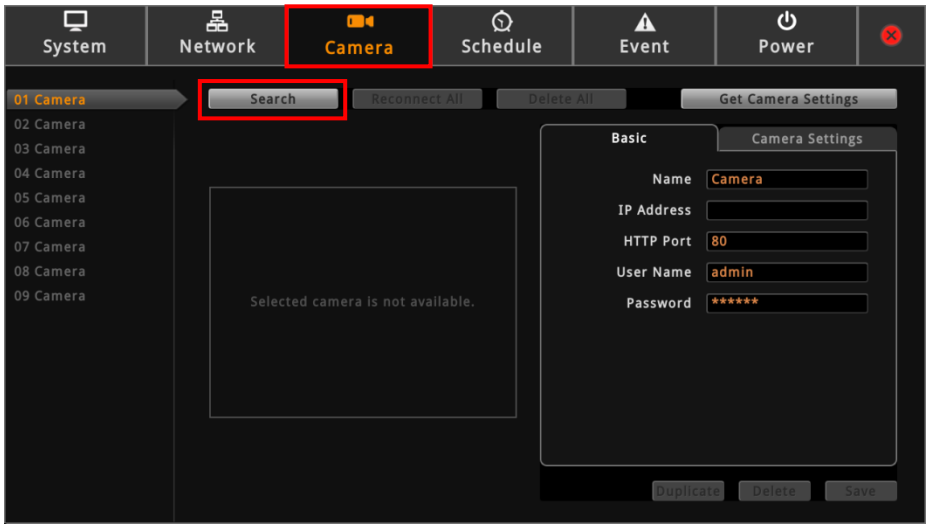
3. Change the **IP address** using the on-screen keyboard (see ***Using the On-Screen Keyboard*** on page 33 for information on using the on-screen keyboard).



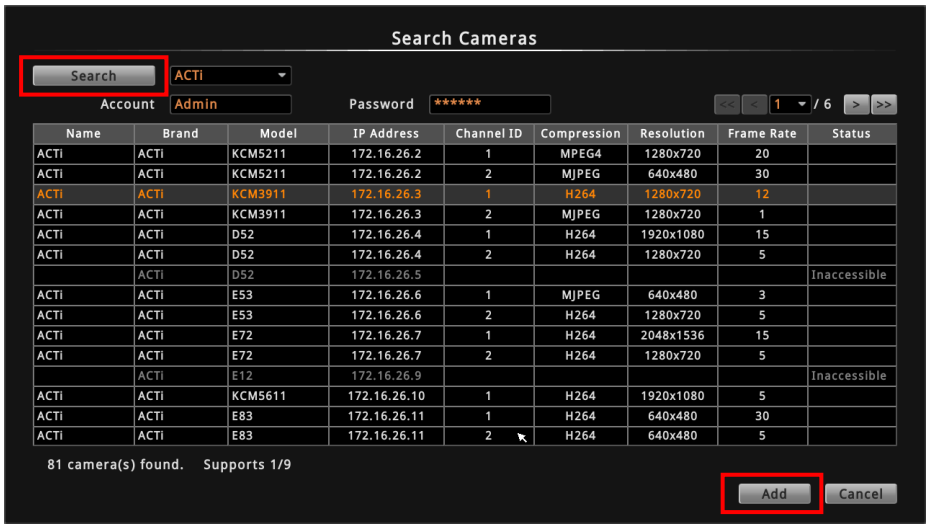
4. Click **Save**.
5. When **LAN** shows "**Activated**", the IP address configuration is complete.

Step 3: Add Cameras

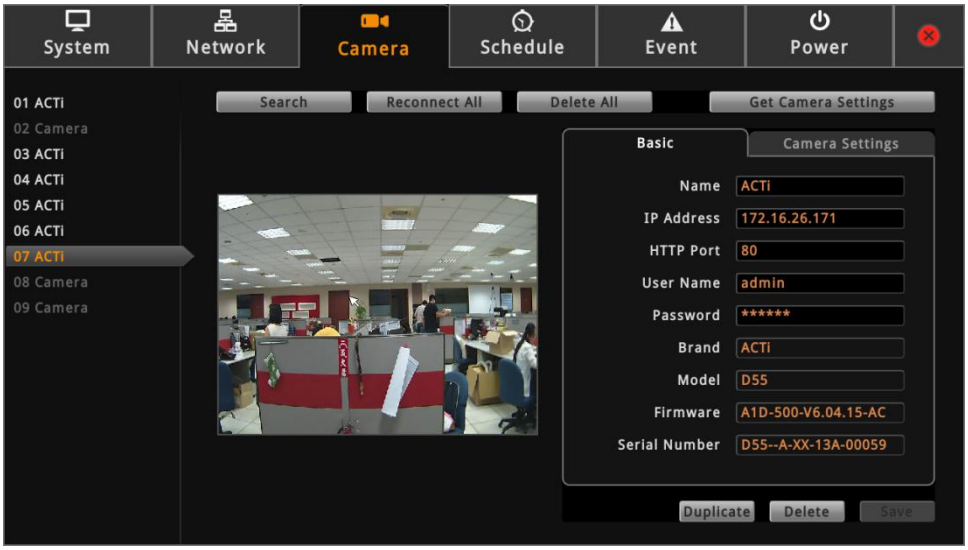
1. On the **Setup** page, click **Camera** > **Search**.



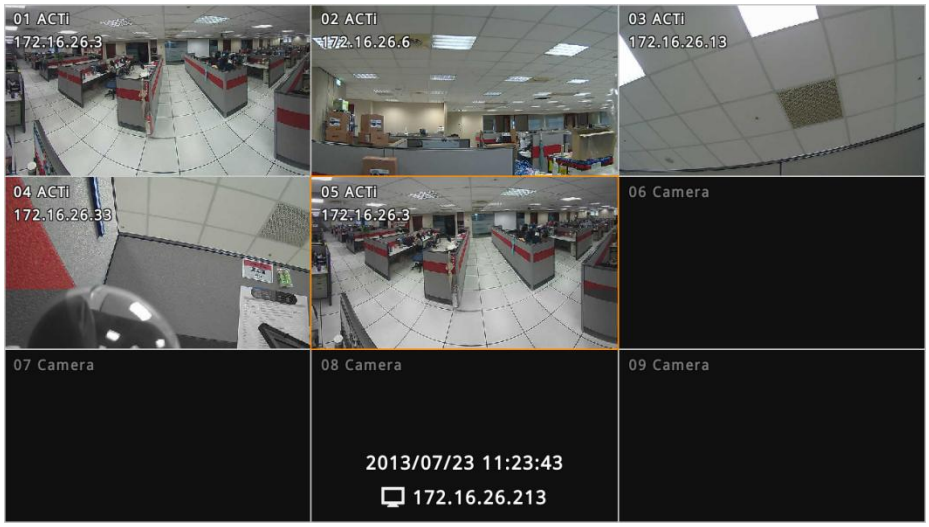
2. Click **Search**. Cameras on the same network are displayed.



3. Click a camera model (maximum of 9 cameras). Selected cameras are displayed in orange.
4. Click **Add**. The Camera screen appears with the list of the selected cameras on the left panel. In the illustration below, only seven cameras are added.



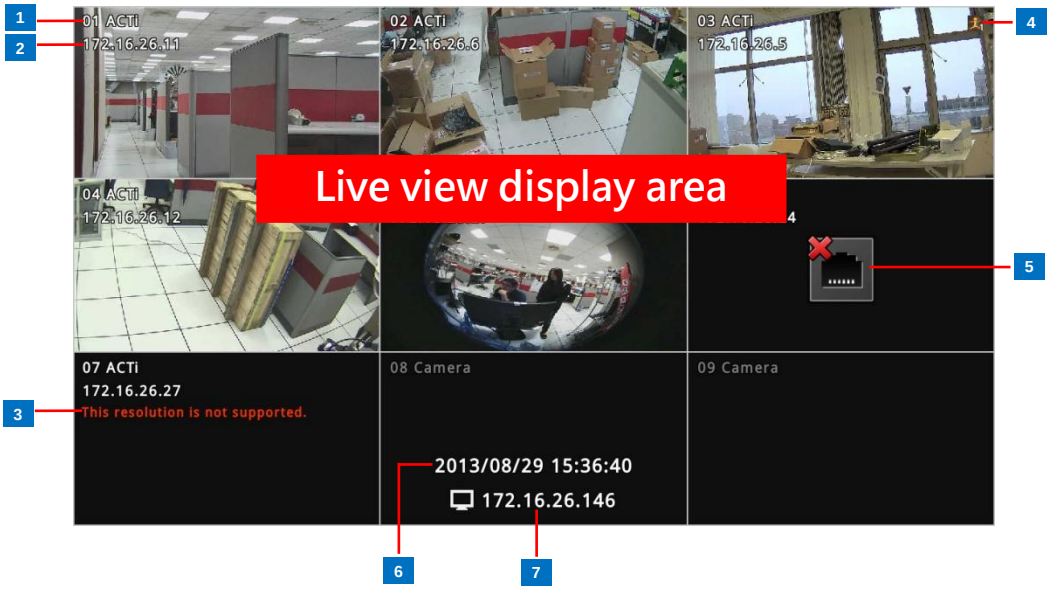
5. Click  to close the **Setup** screen. The Live View screen appears with the added cameras.



By default, information such as the camera name, IP address, etc. are displayed on the local display. For security purposes, these information may be hidden, see ***Local Display*** on page 39 for more information.

2.2 The Live View Screen

Different types of information are displayed on the Live View screen.



Item		Description
1	Channel Number and Name	Displays the channel number and camera name.
2	Channel IP Address	Displays the IP address of the camera.
3	Warning Message	Displays the warning message: • **This resolution is not supported**: Local display supports camera resolution of up to 1920 x 1080 only. If the resolution exceeds this value, this message is displayed. • **The compression is not supported**: Local display supports H.264 compression only.
4	Event Trigger Icon	Indicates an event has happened, such as motion is detected or a digital input is triggered.
5	Connection Error	Indicates the camera is disconnected from the network.
6	System Date and Time	The system date and time.
7	Decoder IP Address	The IP address of the Decoder.

The Menu Panel

Move the mouse cursor towards the bottom of the screen to display the **Menu Panel**.

From the Menu Panel, users can modify the channel layout, start viewing channels on patrol, stretch image, reposition the channels, and access the **Setup** screen.

Item		Description
1	**Layout Icons**	Click an icon to change the layout of channels. The current layout is indicated by an orange icon. Moving the mouse over the icon displays the icon name. See ***Changing the Layout*** on page 29.
2	**Sequence Patrol**	Sequence Patrol allows users to view the one or more channels at a time and patrols with a specific interval time. See ***Viewing Channels by Patrol*** on page 30.
3	**Stretch / Un-stretch Video**	Click to stretch or un-stretch the video.
4	**Reset Channel Position**	Click to reposition the channels according to channel sequence. See ***Repositioning Channels*** on page 31.
5	**Setup**	Click to access the **Setup** screen. See ***2.3 Accessing the Setup Screen*** on page 32.

Changing the Layout

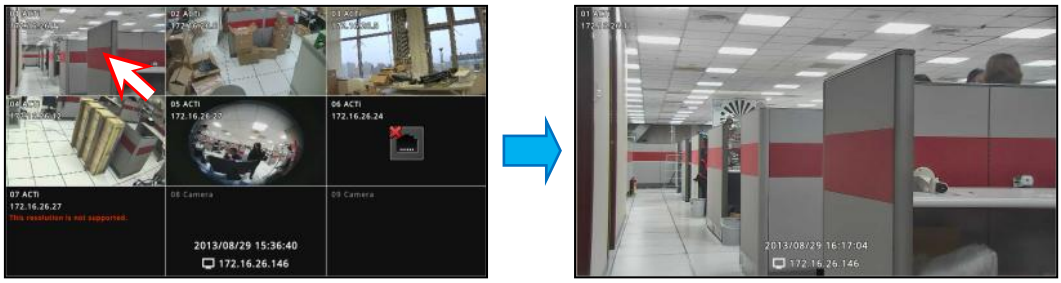
By default, the local Live View is displayed with a 9-channel layout. The layout can be changed into a 1-channel, 2-channel, 1+7-channel display, etc.

Layout 1	Layout 2	Layout 4
Click to display one channel on full screen. 	Click to display two channels at a time. 	Click to display four channels at a time. 
Layout 9	**Layout 1+5**	**Layout 1+7**
Click to display 9 channels at a time. 	Click to display six channels at a time on a 1+5 layout. 	Click to display eight channels at a time on a 1+7 layout. 
Layout 2+4		
Click to display eight channels at a time on a 2+4 layout. 		

To view succeeding channels, click the layout icon again. For example, if viewing on a 2-channel layout, and you want to view the next 2 channels, click .

Viewing Channels in Full Screen

Double-click a channel to view the channel in full screen.



Double-click again to switch back to the previous layout.

Viewing Channels by Patrol

Instead of viewing all 9 channels at the same time, users may want to view one channel in full screen and scroll through all the channels at a time. To do this, follow the procedures below:

1. Click  to start **Sequence Patrol**.
2. Enter the interval time (in seconds) using the on-screen keyboard (see ***Using the On-Screen Keyboard*** on page 33). Then click **OK**.

3. **Sequence Patrol** starts. To stop the patrol, click  .

Repositioning Channels

By default the channels are displayed according to the sequence of the channel numbers. To reposition the channel, use the mouse to drag the channel from its location to another location. See examples below.

Default Channel Position

Repositioned Channels

To reset the default channel position, click  .

2.3 Accessing the Setup Screen

The **Setup** screen allows users to configure the system and network settings and add or delete cameras for viewing. Users must login with an administrator account first to access the **Setup** screen.

To access the **Setup** screen, click  on the menu panel. The Login screen appears.

The Login Screen

When prompted to login, enter the default **Account** and **Password** using the on-screen keyboard.

For security purposes, it is recommended to modify the account name and password through a remote client computer.

Item		Description
1	**Remember Me**	Check to allow the system to remember the account name. Users just need to enter the password to login.
2	**Remember Password**	Check to allow the system to remember the account password so users do not need to type the password anymore. This option is shown only if **Remember me** is checked. **NOTE:** This can be a security risk for any other use may be able to access the Setup screen.

Using the On-Screen Keyboard

The on-screen keyboard allows users to enter text without using a physical computer keyboard. The on-screen keyboard appears when users click on fields that require character or numeric input, such as account name, password, etc. Using the mouse, click the keys on the on-screen keyboard to enter characters or numbers.

The type of on-screen keyboard that appears may vary depending on the required text for input.

Standard Alphabet +Symbol Keyboard

Number + Symbol Keyboard

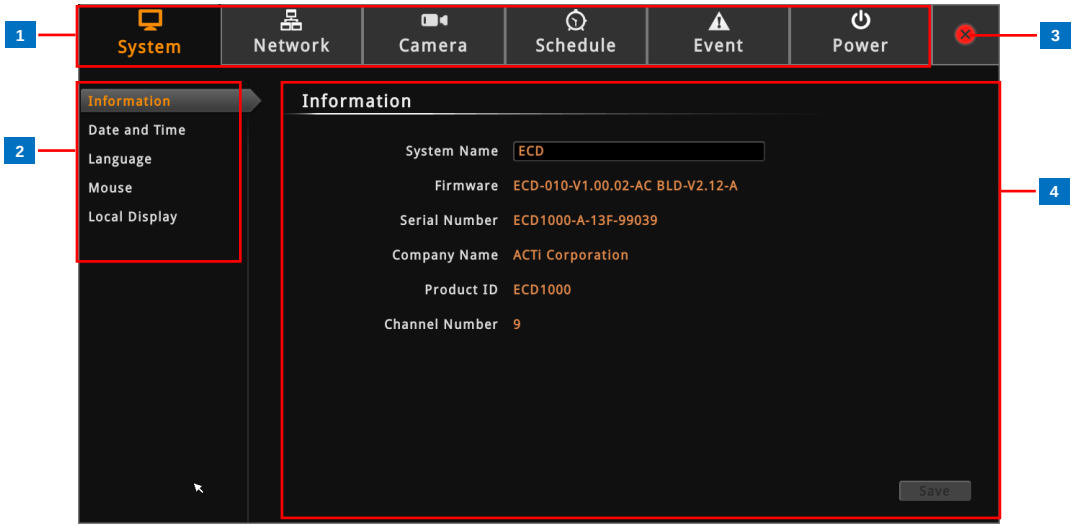
Symbol Keyboard

Numeric Keyboard

NOTE: The on-screen keyboard may also contain tips or hints for input.

The Setup Screen

After a successful login, the **Setup** screen appears.

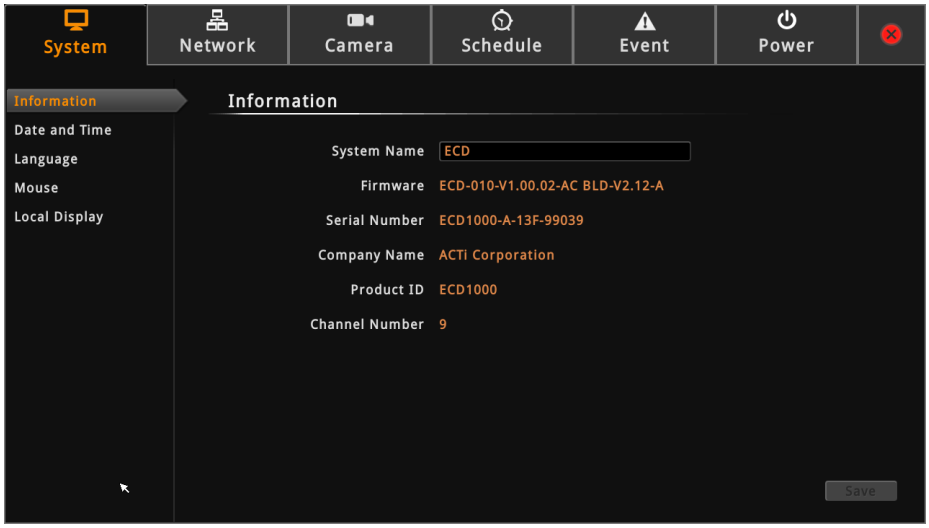


Item		Description
1	**Setup Menu**	Click a tab to display the submenu.
2	**Submenu Panel**	Displays the submenu options. Click a submenu to view the settings page.
3	**Exit**	Click to close the **Setup** screen. Once closed, the system automatically logs out the account and the Live View screen is displayed.
4	**Settings page**	Displays the settings and information of a selected submenu.

2.4 Configuring System Settings

System Information

On the **Setup** screen, click **System**.



The system information is displayed.

- **System Name**: Name assigned to the Decoder; can be modified. To modify the **System Name**, click the box and use the on-screen keyboard to enter the characters.

NOTE: The system name can be up to 10 alphanumeric characters only.

- **Firmware**: System firmware version
- **Serial Number**: Product serial number
- **Company Name**: Name of the manufacturer
- **Product ID**: Product model name
- **Channel Number**: Maximum number of supported cameras.

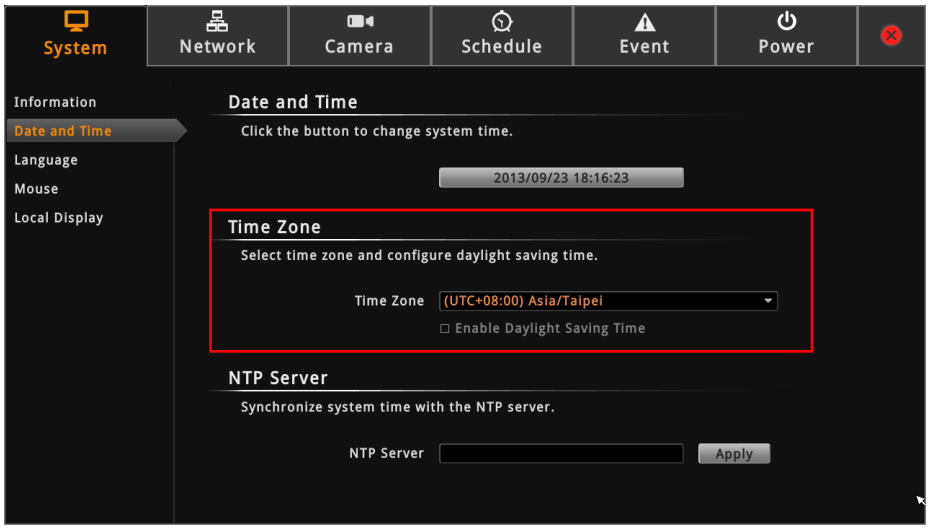
Date and Time

The Date and Time page allows you to manually change the system date and time or sync with an NTP server.

Automatically Set the Date and Time

Select the time zone to automatically set the date and time.

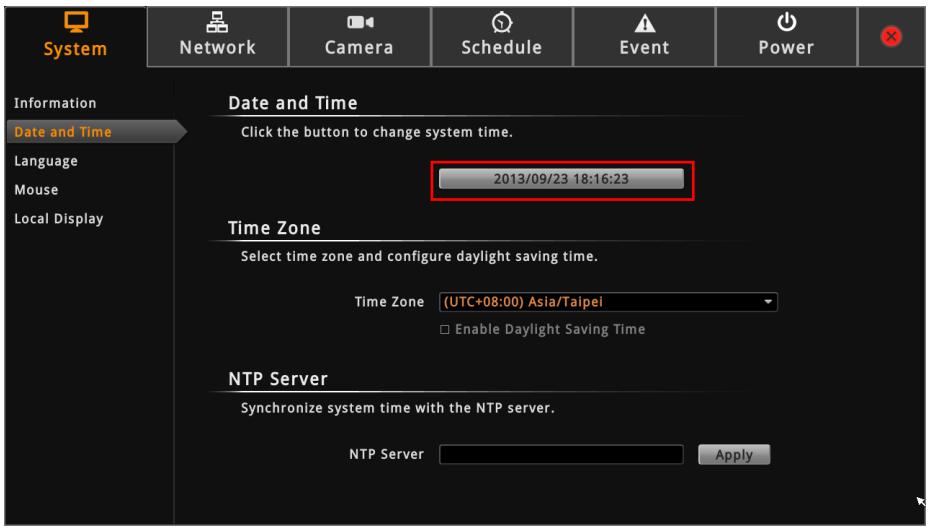
1. On the **Setup** screen, click **System** > **Date and Time**.



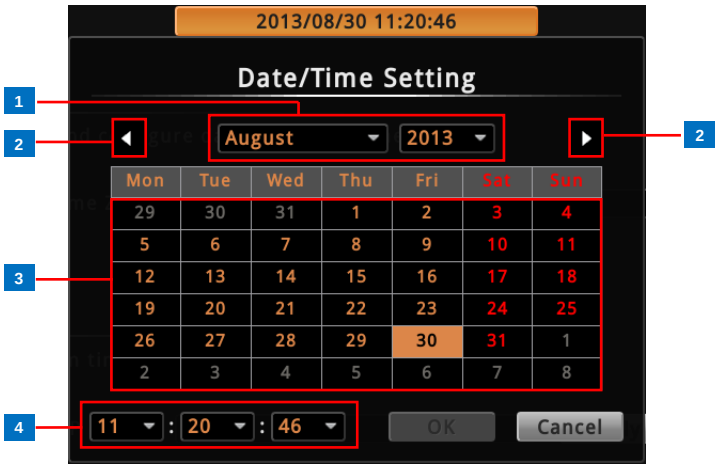
2. On **Time Zone**, select the desired time zone. The system date and time automatically changes according to the current date and time of the time zone.
3. If applicable, check the **Enable Daylight Saving Time** box. Note that this box becomes enabled only if the Daylight saving time can be applied to the selected time zone.

Manually Change the Date and Time

1. On the **Setup** screen, click **System** > **Date and Time**.
2. Click the system date and time button.



3. Modify the date and time.

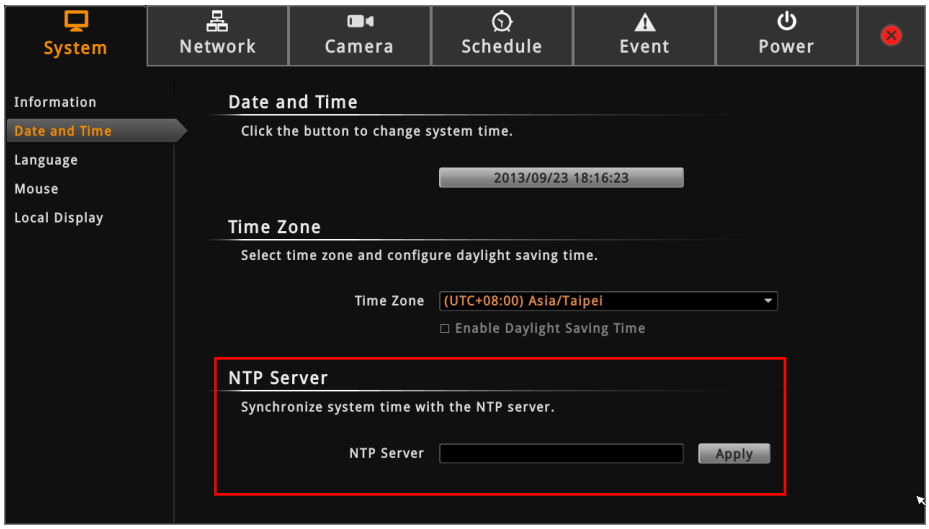


Item		Description
1	**Month and Year**	Select the month and year from the box.
2	**Scroll Icons**	Click to view the calendar of the previous or the next month.
3	**Date**	Click a date to set the date. Selected date is highlighted in orange, while the current date is in yellow.
4	**Time**	Select the hour, minute, and second from the corresponding boxes.

4. When done, click **OK** to save.

Sync Date and Time with NTP Server

1. On the **Setup** screen, click **System** > **Date and Time**.
2. On **NTP Server**, type the URL address of the NTP server.



3. Click **Apply**. A message will appear to confirm if synchronization is successful.

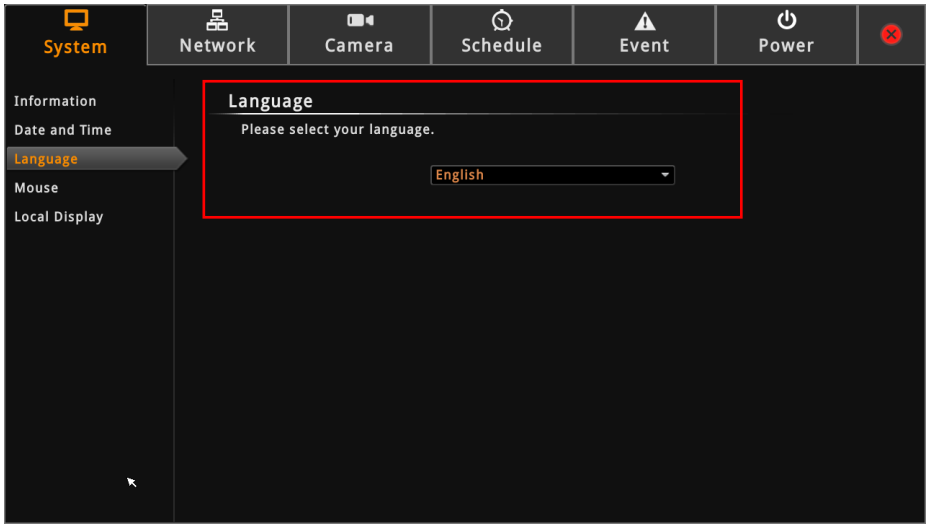
NOTE: If the NTP Server is a domain name, make sure the IP setting and DNS setting of the system gateway are correct.

To delete NTP Server

To delete an NTP server, delete the URL address on the field and click **Apply**.

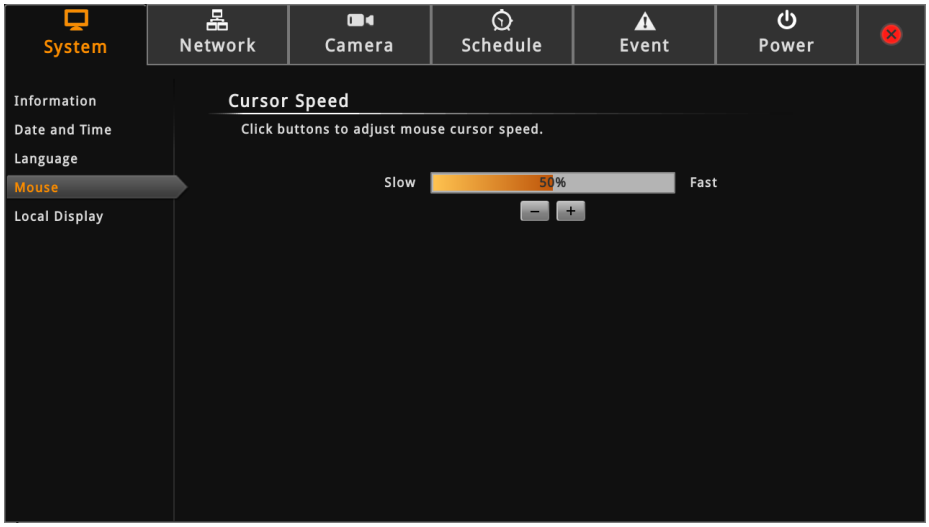
Language

To change the user interface language, click **System** > **Language** on the Setup screen. Then, select the desired language from the box.



Mouse

Click **System** > **Mouse**.

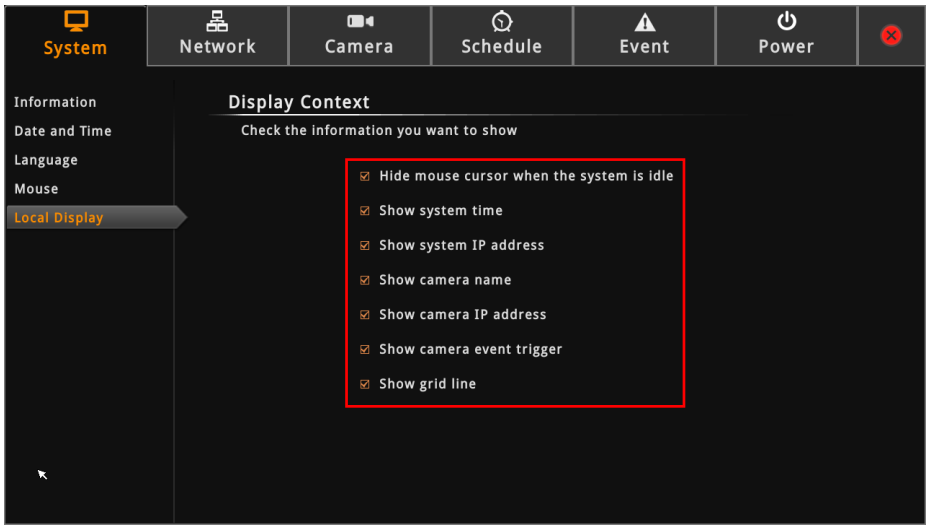


Click "**-**" to reduce the mouse cursor speed or "**+**" to increase the speed one notch at a time. Click and hold "**-**" or "**+**" to continuously reduce or increase speed.

Local Display

The Local Display allows users to show or hide information, such as the IP address, system date and time, or event trigger icons, on the Live View screen.

On the **Setup** screen, click **System** > **Local Display**.



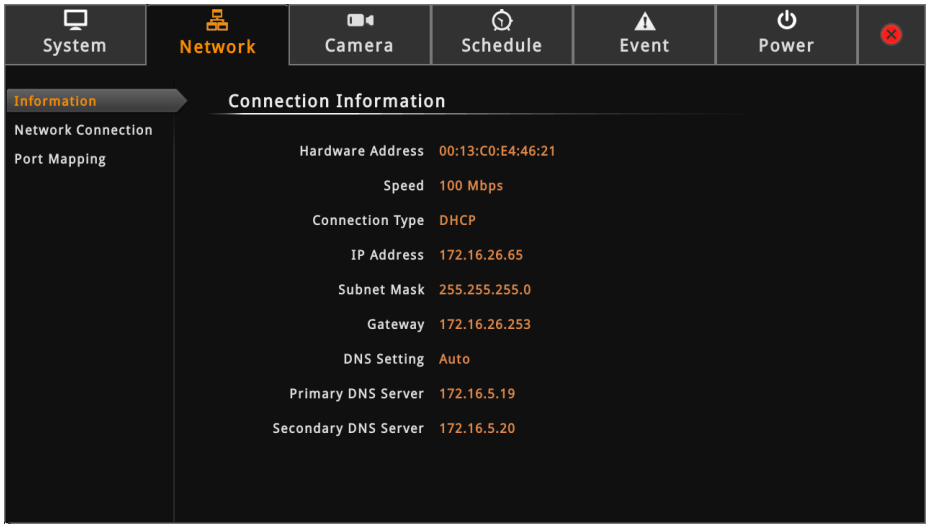
By default, all options are enabled. To disable a function, remove the check from its corresponding box.

- **Hide mouse cursor when the system is idle**: If checked, the mouse cursor is hidden from the Local display if there is no mouse movement within 5 seconds.
- **Show system time**: If checked, the system date and time is displayed on the bottom of the Live View screen.
- **Show system IP address**: If checked, the system IP address is displayed on the bottom of the Live View screen.
- **Show camera name**: If checked, the camera name is displayed on the upper left corner of the channel.
- **Show camera IP address**: If checked, the camera IP address is displayed on the upper left corner of the channel. For security reasons, it is recommended to uncheck this function to hide the IP address from showing on the local display.
- **Show camera event trigger**: If checked, an event trigger icon, such as motion detection, will appear on the upper right corner of the channel when an event occurs.
- **Show grid line**: If checked, the lines separating the camera channels are displayed on the Live View screen.

2.5 Configuring Network Settings

Viewing the Network Information

On the **Setup** screen, click **Network**.



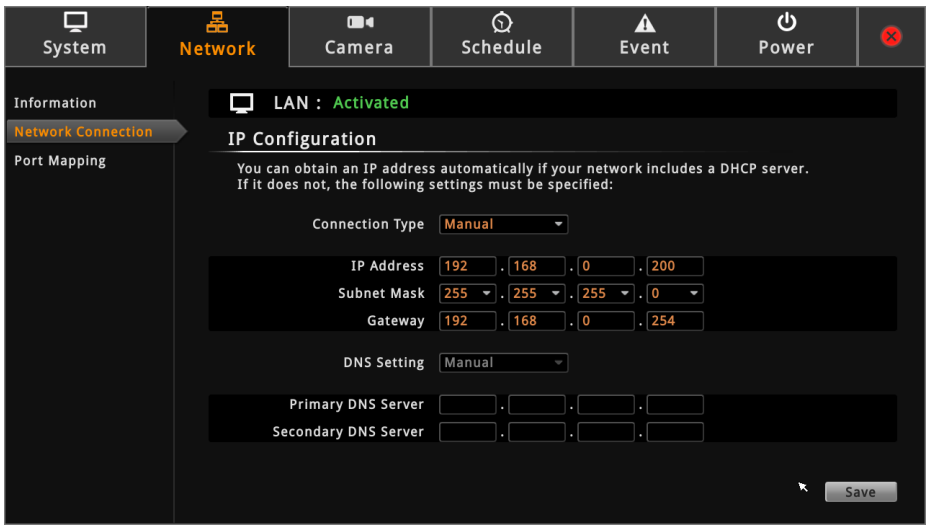
The network information, such as the **Hardware Address** (MAC address), **Speed**, **Connection Type**, **IP Address**, **Subnet Mask**, **Gateway**, **DNS Setting**, and **Primary** and **Secondary DNS Server** are displayed.

Configuring the Network Connection

Use the **Network Connection** to configure the network settings of the Decoder, which includes setting of the connection type and IP address.

There are two types of connection: **Manual** and **DHCP**.

- **Manual**: The IP address must be assigned manually, so are other network configurations like Subnet Mask, Gateway, etc. Note that the IP address must be unique for each device on the network. By default, the Decoder has a default IP of **192.168.0.200** and subnet mask of **255.255.255.0**. Users may need to change the default IP and subnet mask to ensure the Decoder belongs to the same network segment as the cameras.
- **DHCP Connection**: On a DHCP network, the DHCP server assigns the IP address automatically. By default, the Decoder will automatically switch to DHCP connection mode and be assigned an IP address. However, if this does not happen, users need to manually change the **Connection Type** to **DHCP**. See ***Obtaining the IP Address Automatically*** on page 42.



Setting the IP Address Manually

If your network does not have a DHCP server, perform the following to manually configure the network settings:

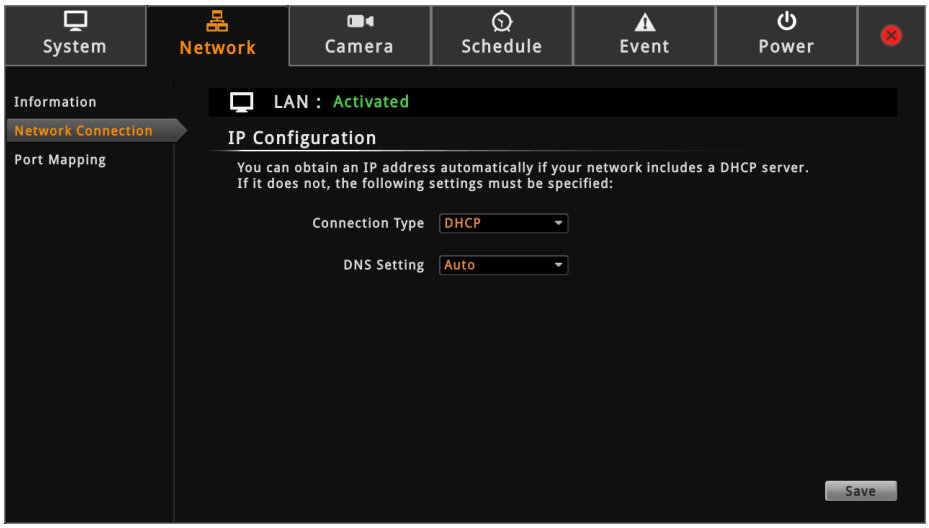
1. On the **Setup** screen, click **Network** > **Network Connection**.
2. On **Connection Type**, select **Manual**.
3. Obtain the information from your network service provider and enter the **IP Address**, **Subnet Mask**, and other necessary settings.

   NOTE: The IP Address and Subnet Mask must be filled in. Other settings may be left blank if not required by the network service.
4. When done, click **Save**.

Obtaining the IP Address Automatically

If your network has a DHCP server, the Decoder will automatically be assigned an IP address. However, in case the Decoder does not detect the DHCP connection, perform the following procedures to obtain the IP address:

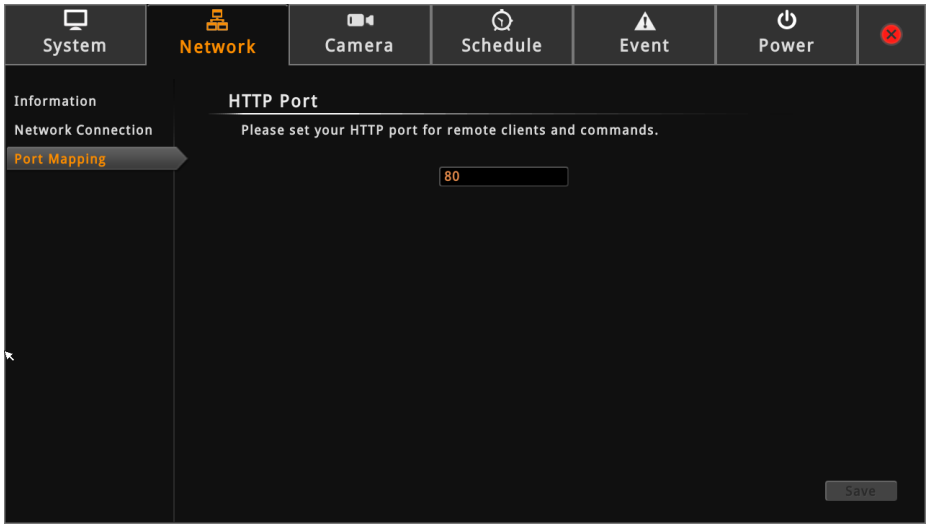
1. On the **Setup** screen, click **Network** > **Network Connection**.
2. On **Connection Type**, select **DHCP**.



3. Leave the default **DNS Setting** as "**Auto**".
4. Click **Save**. Connection is complete when **LAN** shows "**Activated**".

Configuring Port Mapping

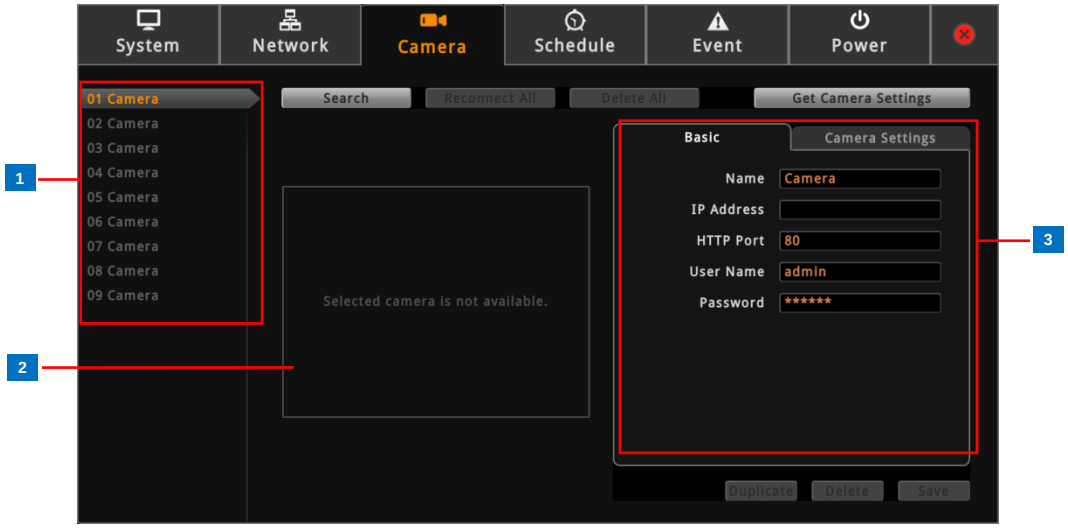
By default, the Decoder port number is 80. To change this value, click **Network** > **Port Mapping** on the Setup screen.



2.6 Configuring the Cameras

The Camera Setup Screen

On the **Setup** screen, click **Camera**.



Item		Description
1	**Camera List Panel**	Displays the camera name. Click a channel to view its display and settings.
2	**Display Window**	Displays the current live view of the selected camera.
3	**Camera Properties**	Displays the camera connection and streaming properties. It has two page tabs: • **Basic**: Displays the connection properties, such as the IP address, HTTP port, User Name (account) and Password used to access the camera. You can also use this page to manually add a camera by entering these properties. See ***Adding Cameras*** on page 44. • **Camera Settings**: Displays the camera video streaming properties, such as Channel ID, Resolution, Encoder, etc. These properties can be modified on the Decoder and will also take effect on the camera side. See ***Modifying Camera Settings*** on page 49.

Adding Cameras

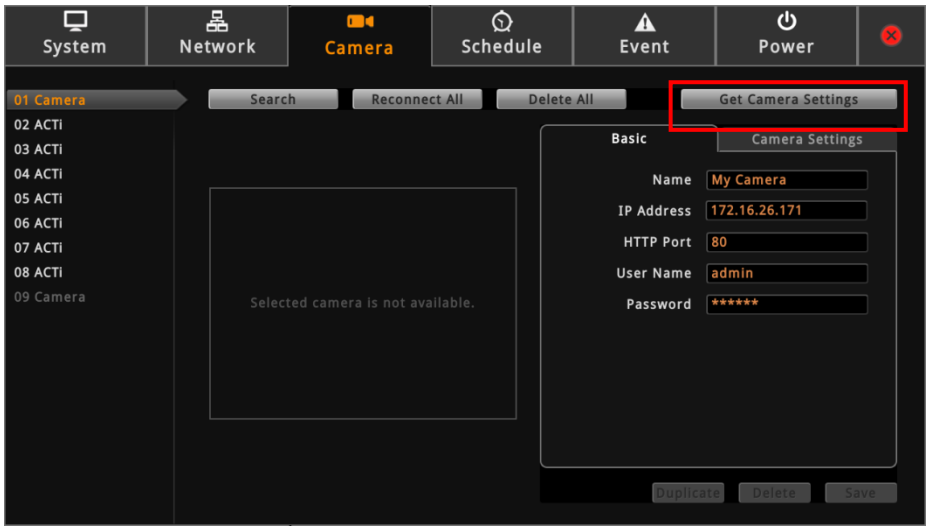
There are two ways to add cameras for viewing: by manually entering the IP address of the camera or by searching the cameras on the network.

Adding Cameras Manually

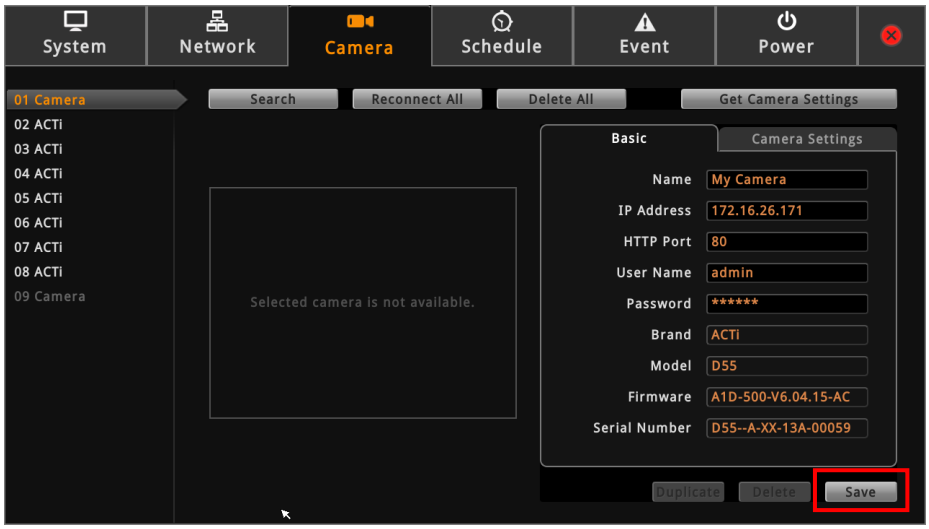
To add cameras manually, you need to know the IP address, HTTP port, User Name and Password of the camera you want to connect to.

1. On the **Setup** screen, click **Camera**.
2. On **Name**, type a name you want to use to identify the camera (maximum of 24 alphanumeric characters, no spaces nor symbols). This name is saved only on the Decoder and does not affect the settings on the camera side.
3. Enter the **IP Address**, **HTTP Port**, **User Name** and **Password** of the camera you want to connect to.

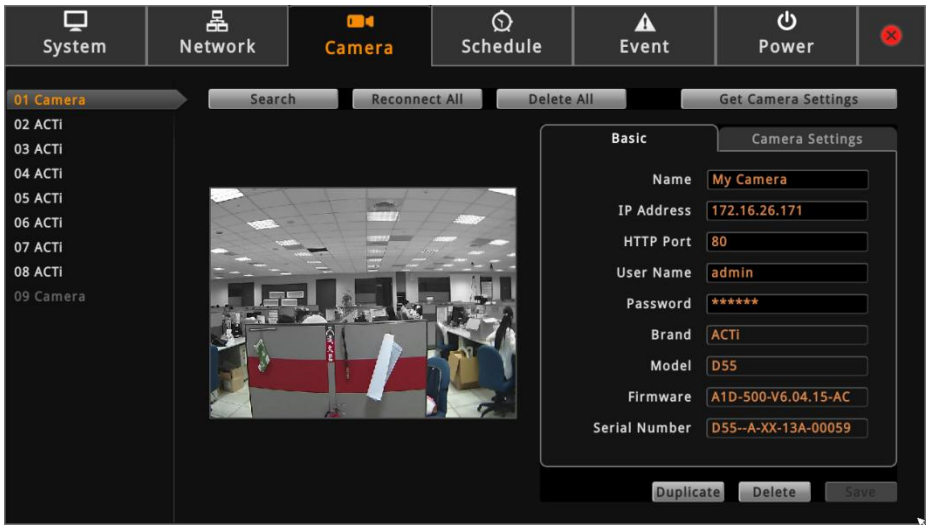
4. Click **Get Camera Settings**. The decoder connects and retrieves the camera settings. At this point, nothing is shown on the Display window yet.



5. Click **Save**.



Once camera settings are saved, the camera Live View is shown on the Display window.



TIP: Use the **Duplicate** button to add another camera with almost similar camera settings to another channel.

Duplicating Cameras

Use this function to add another camera with almost the same camera settings as the selected camera. So instead of entering all the information one by one, duplicate the camera settings first and then modify afterwards. However, to use this function, there must be at least one available channel without a connected camera.

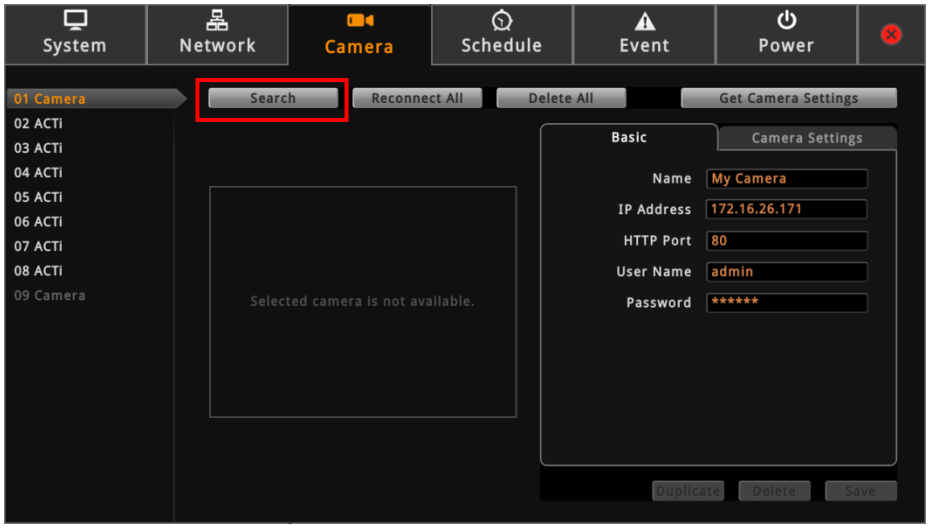
1. On the **Camera** screen, select the camera you want to duplicate on the **Camera List** panel, and then click **Duplicate**.

2. Available channels are shown under **To**. Check the box(es) of the channel(s) to copy the camera settings to.
3. Click **Duplicate**.

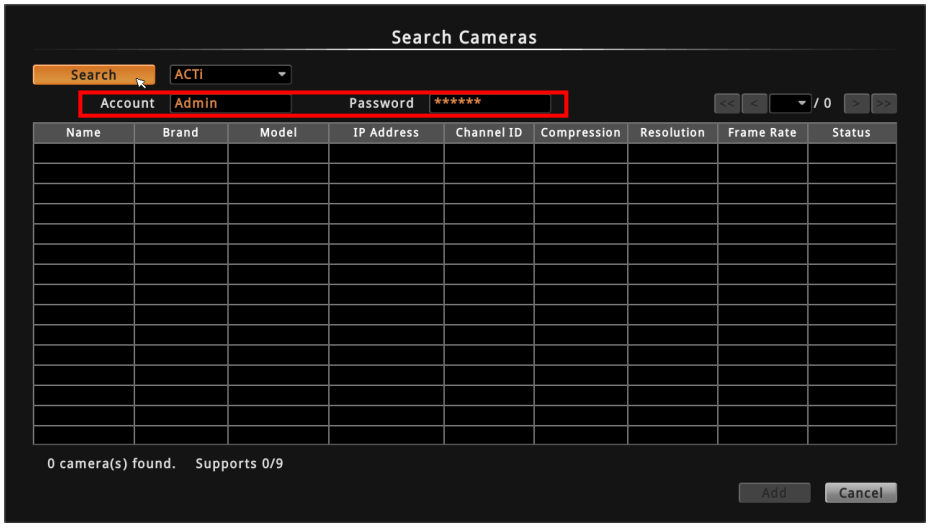
Searching Cameras to Add

If you do not know the IP address of the camera or you want to add several cameras at the same time, you can search the cameras connected to the network and choose up to 9 cameras to connect to the Decoder.

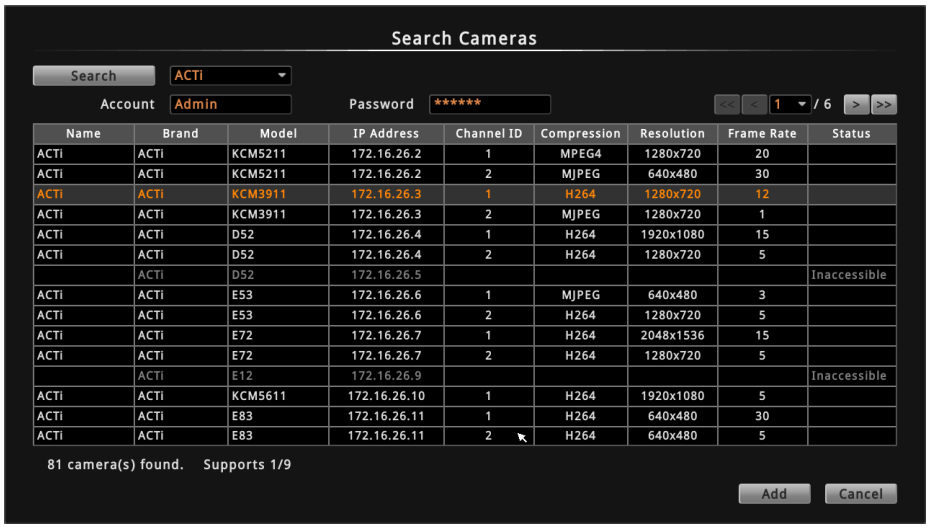
1. On the **Setup** screen, click **Camera**.



2. Click **Search**. The **Search Cameras** screen appears.
3. The default **Account** “Admin” and **Password** “123456” are pre-entered. If the camera you want to add has different account and password, enter them on the **Account** and **Password** fields.



4. Click **Search**. The cameras connected in the network are listed on the table.

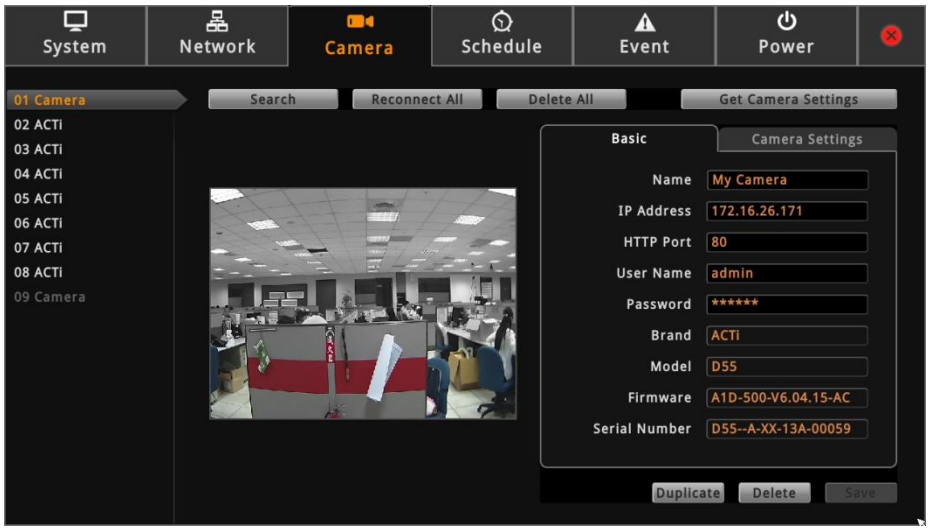


5. Click on a camera to select it. You can select up to 9 cameras. Selected cameras appear in orange text.

   NOTE: The **Status** column shows the status of the camera:

   - **Inaccessible**: The camera account or password may be different from what you have entered on **Account** and **Password** fields. So that camera cannot be accessed.
   - **In Use**: The camera is already added to the Decoder for live viewing.

6. Click **Add** to add the selected cameras to the Decoder for live viewing. The cameras are then displayed on the **Camera List** panel.

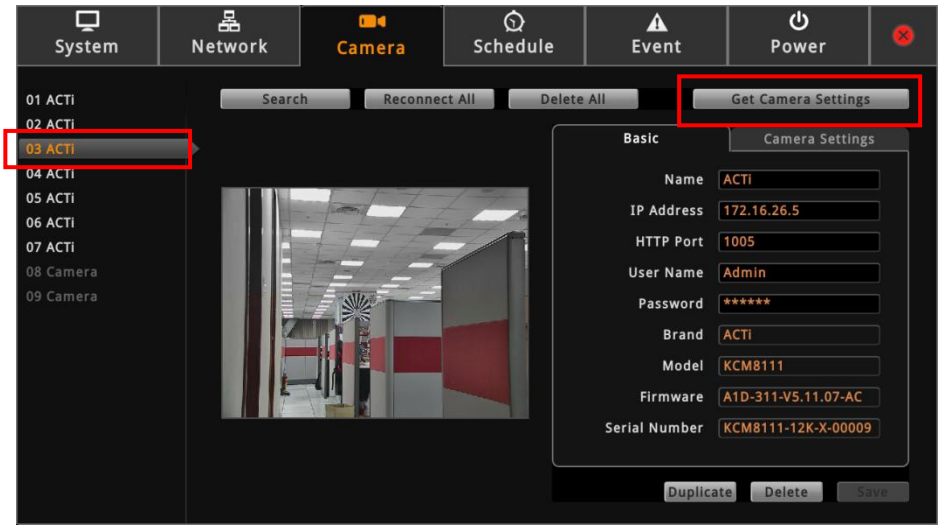


7. Click  to close the **Setup** screen. The **Live View** screen displays the live view of the selected cameras.

Modifying Camera Settings

In some cases, you may need to modify the camera connection and streaming properties. To do this, follow the procedures below:

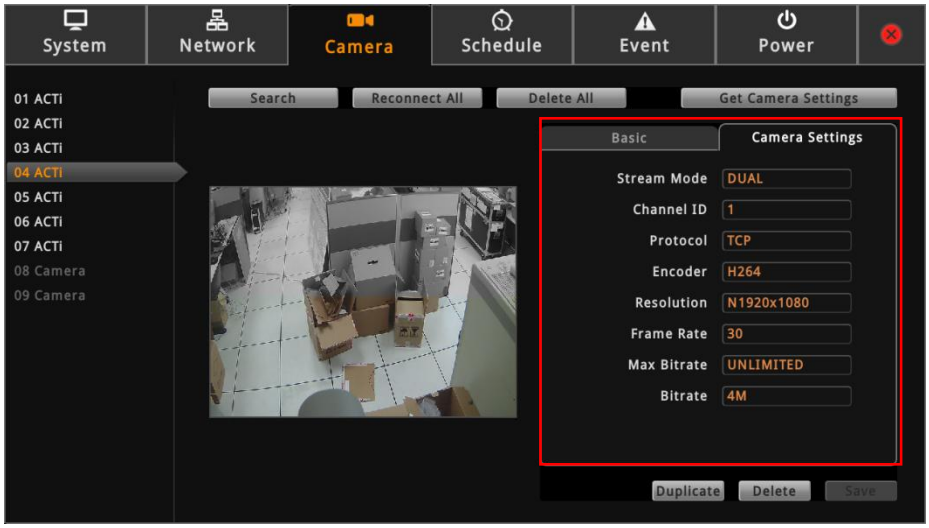
1. On the **Setup** screen, click **Camera**.
2. Select the camera from the **Camera List** panel.
3. Click **Get Camera Settings**.



4. To modify the connection properties, click the **Basic** tab. Modify the **Name**, **IP Address**, **HTTP Port** (port used by remote IE clients), **User Name** and **Password**, as needed.

   NOTE: The Name is the camera name displayed on the Decoder. This name is not saved or shown on the camera side. The maximum length is 24 alphanumeric characters, symbols are not allowed. In case of a space in between the characters, the Decoder automatically removes that space.

5. To modify streaming properties, click the **Camera Settings** tab, and modify the settings, as needed.



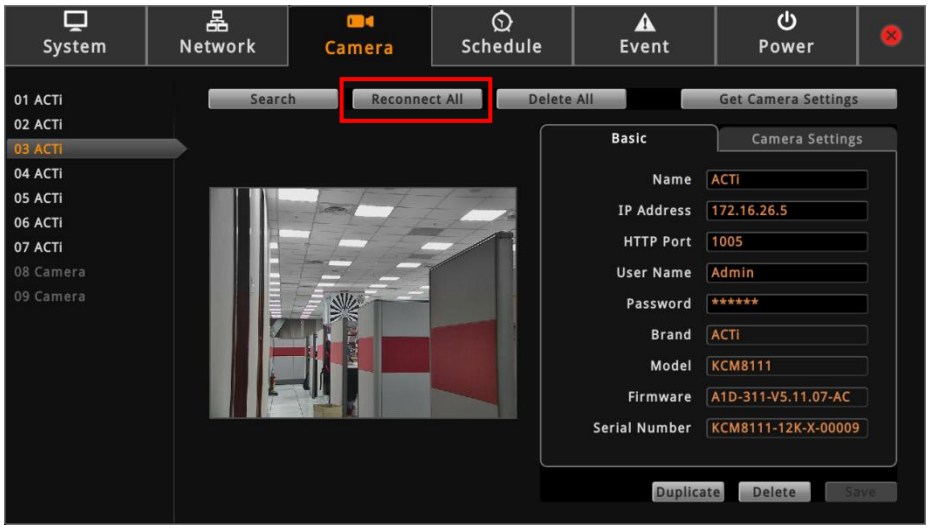
Item	Description
Stream Mode	Displays whether the camera has Single or Dual stream mode. This field is not editable.
Channel ID	For dual stream cameras, select the stream to view. Usually, stream 1 or **Channel ID** 1 is configured to be the best quality stream for Network Video Recorder (NVR) recording purposes and stream 2 or **Channel ID** 2 with basic quality for live viewing on the NVR and the Decoder. Once the Channel ID is selected, the succeeding camera properties, such as encoder, resolution, etc., change according to the compression settings of the selected stream.
Protocol	Displays the video stream protocol. You can modify the video stream protocol, as needed.
Encoder	Displays the video stream encoder type. You can modify the encoder type for the current stream, as needed. Note that for local viewing, only H.264 is supported.
Resolution	Displays the video stream resolution. You can modify the resolution, as needed. Note that for local viewing, only up to 2 megapixel (1920 x 1080) is supported.
Frame Rate	This is the amount of frame per second of the video stream. You can modify the frame rate, as needed.
Max Bitrate (only for H.264)	Defines the upper limit of the bitrate. The bitrate will be floating slightly under that limit. For example, if the limit is set as 2M, the bitrate will be floating around 1.6~2.0 Mbps.

Item	Description
	If the **Max Bitrate** is “Unlimited”, then the **Bitrate** selection box will appear that defines the bit rate level.
Bitrate (only for H.264)	When Max Bitrate is “Unlimited”, the user can define the AVERAGE bit rate. For example, if the Bitrate is 2M, then occasionally, the actual bit rate may go below or beyond 2M, but in the long run, the average bit rate will be very close to 2M. This mode allows the most accurate storage estimations, however, while planning the bandwidth, please consider the occasional peaks of bit rate.
Video Quality (only for MJPEG)	The user can define the quality with the numeric scale from 1 to 100. The default MJPEG quality is 60. The higher is the quality level, the more bit rate the camera will use to achieve the target quality. However, note that local Live View cannot display streams other than H.264.

6. When done, click **Save**. The camera properties are saved and the Decoder restarts the connection.

Reconnecting Cameras

If there is a need to refresh the camera connection, click **Reconnect All**. All the cameras will be reconnected.

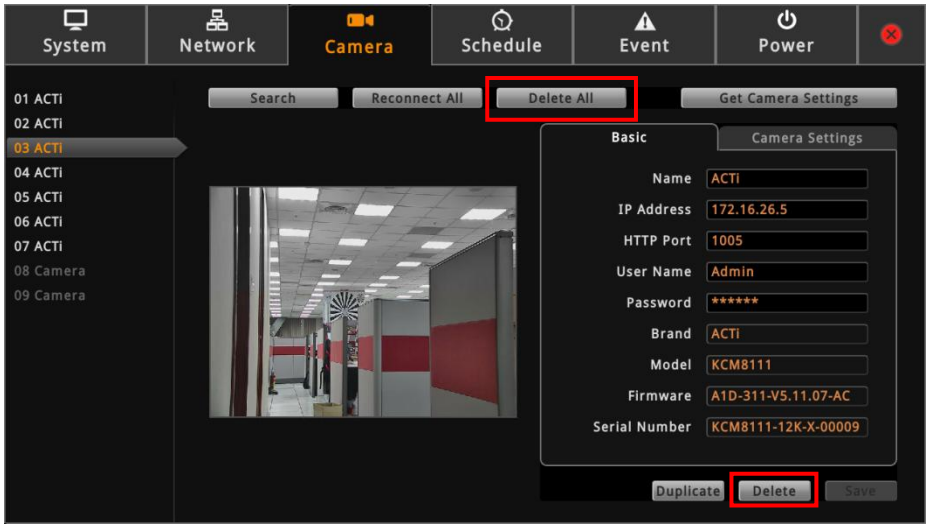


NOTE: All video streams will be lost for a few seconds until the reconnection is finished.

Deleting Cameras

Cameras can be removed one at a time or all cameras at the same time.

On the **Setup** screen, click **Camera**.



- To remove a camera, click the camera from the **Camera List** panel, and then click **Delete**.
- To remove all the cameras at the same time, click **Delete All**.

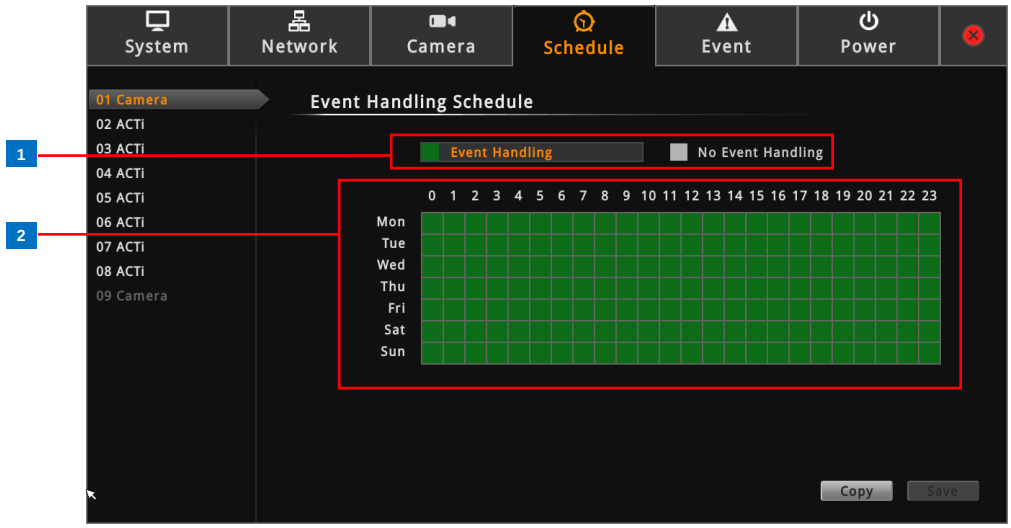
2.7 Managing Network Loss Event

When a camera suddenly disconnects from the network, the Decoder will trigger a network loss notification icon on the Live View window and will beep.

By default, the trigger is enabled for 24 hours a day and 7 days a week. However, the beep sound must be enabled and configured separately.

Scheduling Network Loss Trigger

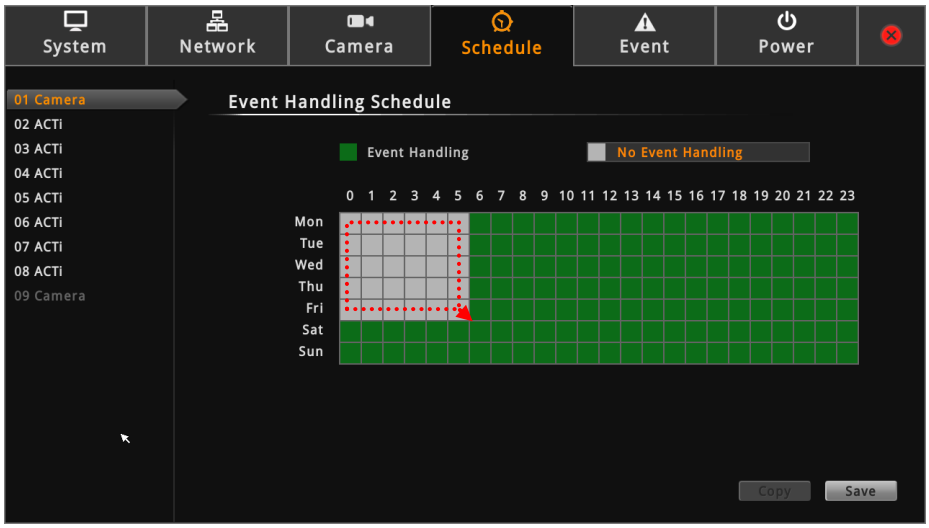
1. On the **Setup** screen, click **Schedule**.
2. Select the camera from the camera list panel.



Item		Description
1	**Event Handling Schedule**	• **Event Handling**: Enables event trigger. • **No Event Handling**: Disables event trigger.
2	**Time Table**	Shows green cell if event trigger is enabled and gray cell if event trigger is disabled.

3. Select either **Event Handling** or **No Event Handling**.

4. Drag the mouse over the time table to select the day and time period.



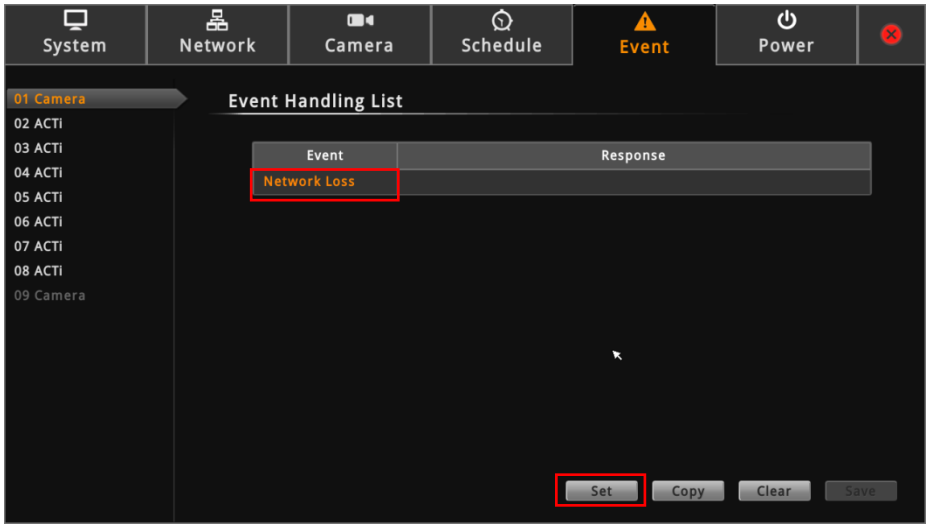
5. When done, click **Save**.

TIP: Instead of manually modifying the event trigger on all cameras, users can copy the schedule to other channels. See ***Copying Event Schedule Settings*** on page 56.

Enabling Beep Sound Trigger

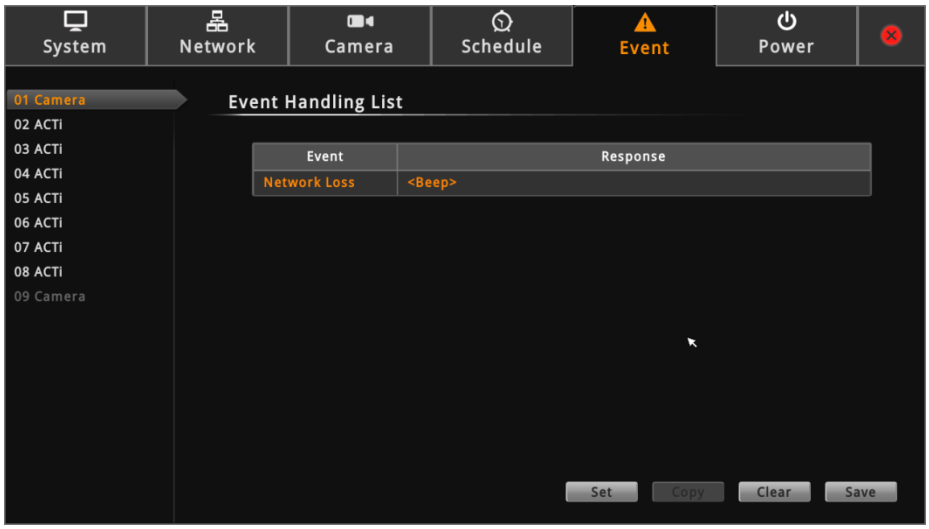
To enable the beep sound when a camera is disconnected from the network, do the following:

1. On the **Setup** screen, click **Event**.
2. Click **Network Loss**, and then click **Set**.



3. Check **Beep** to enable the beep sound.

4. Set the beep duration and the number of beeps to sound when the event is triggered.
5. Click **OK**.



6. Click **Save** to save the configurations. The Decoder will demonstrate and emit the beep sound as configured.

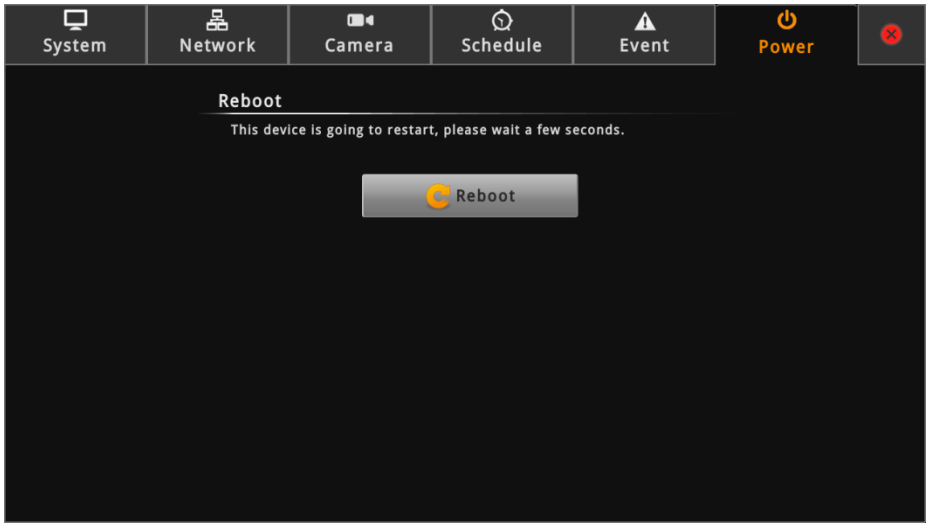
Copying Event Schedule Settings

Instead of manually modifying the event schedule and beep settings on all cameras one by one, users can copy the settings to other channels.

1. After setting the event schedule or beep settings, click **Copy**. The **Copy Schedule** window appears.

2. Check to select the camera(s) under **To**.
3. Click **Copy**. The current camera event schedule or beep settings will be copied to the selected camera(s) under **To**.
4. A message appears when copy is complete. Click **OK** to close the window.

2.8 Rebooting the Device



1. On the **Setup** screen, click **Power**.
2. Click **Reboot**.
3. When the confirmation message appears, click **OK** to restart.

   NOTE: All video streams will be lost for a few seconds until the Decoder completes the reboot process.

Chapter 3: Remote Management

This chapter describes the Decoder operation and management on a Remote Client side. It contains the following topics:

- **Accessing the Device**: Describes the setup procedures involve when accessing the Decoder for the first time through a computer on the network. This includes changing the Decoder IP address and adding the cameras.
- **The Live View Screen**: Describes how to use the Live View screen, changing the layout, channel patrolling, resetting the channel position, and syncing local and remote display layout.
- **Accessing the Setup Screen**: Provides an overview of the Setup menu.
- **Configuring System Settings**: Describes how to view and modify the system settings such as date and time, language, and how to filter information shown on the local display.
- **Configuring Network Settings**: Describes how to modify the IP configurations, port mapping and other network settings.
- **Configuring the Cameras**: Describes how to add and view the cameras and manage the camera settings.
- **Configuring User Access**: Describes how to add groups and users who can access the Setup screen and limit the type of access granted to each group.
- **Viewing the System Log**: Describes the information shown on the System Log screen.
- **Rebooting the Device**: Describes how to do a system reboot.

3.1 Accessing the Decoder Remotely

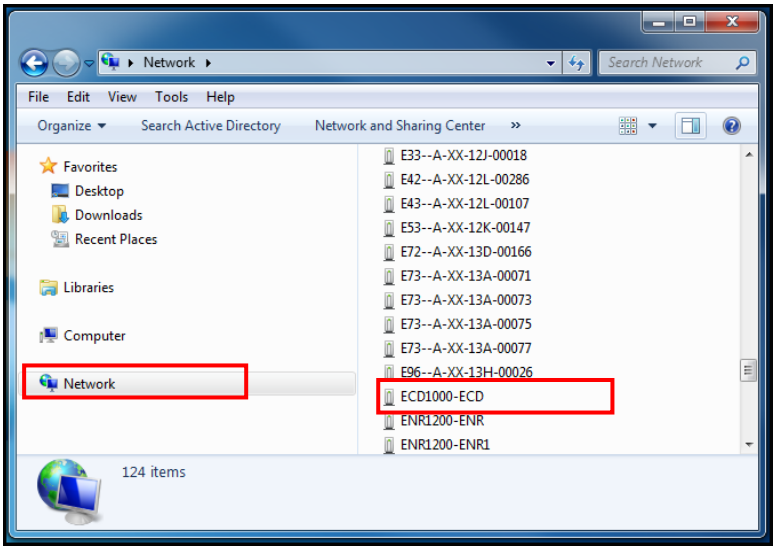
In most cases, it is recommended to perform the initial configurations, before the Decoder is even mounted to its location, using local access. This is because of the limitation of the Decoder to decode some video resolution and compression. If monitoring will be mainly done on a local display, it is recommended to directly test and view the camera live view on the local display to ensure the video stream properties are supported for local display. Note that streams higher than 2 Megapixels (MP) or encoder other than H.264 can be properly viewed on a remote client (i.e. Web Client) but cannot be viewed on the local display. After the initial configurations and installation, further management or advanced security settings may be done through remote access by a client computer with web browser (supports Internet Explorer only).

How to Access the Decoder?

Accessing From a Network with DHCP Server

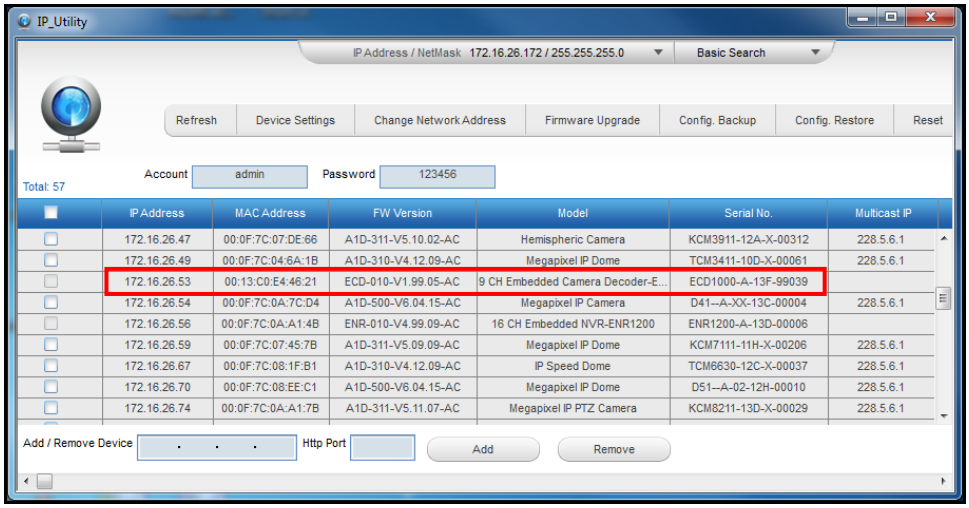
If the network has a DHCP server, the DHCP server automatically assigns the IP address to the Decoder. There are several ways to access the Decoder, options are:

- From Windows, click **Start** > **Computer** > **Network**. Double-click on the Decoder model to open the user interface on the web browser.



NOTE: Set the computer default web browser to Internet Explorer to use this feature.

- From **IP Utility** (downloaded from the website www.acti.com), click the IP address of the Decoder to open the user interface on the web browser.



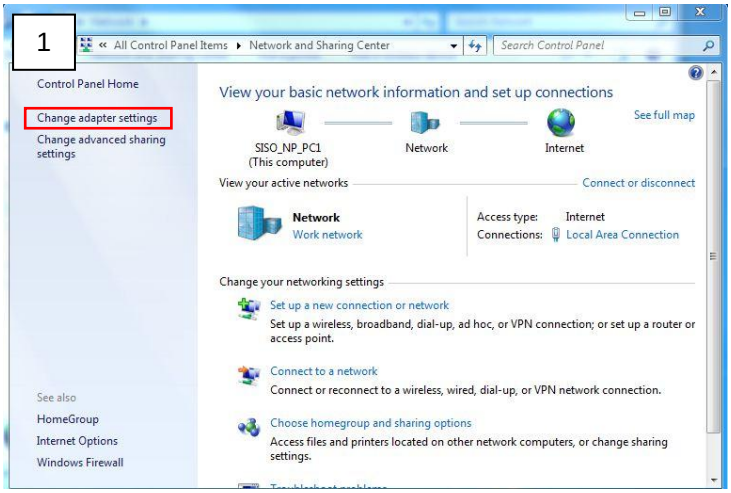
- If you already know the IP address of the Decoder, open the web browser and directly type the IP address on the address bar.

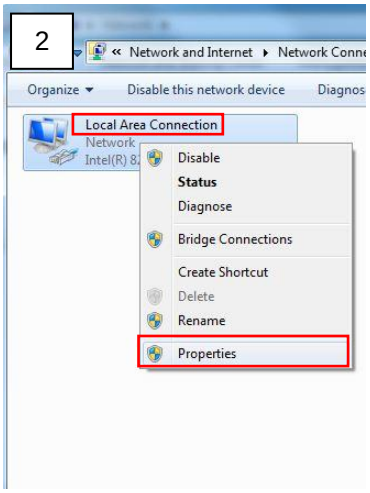
TIP: The quickest way to know the IP address of the Decoder is to check the local display. The IP address is shown on the bottom of the Live View screen.

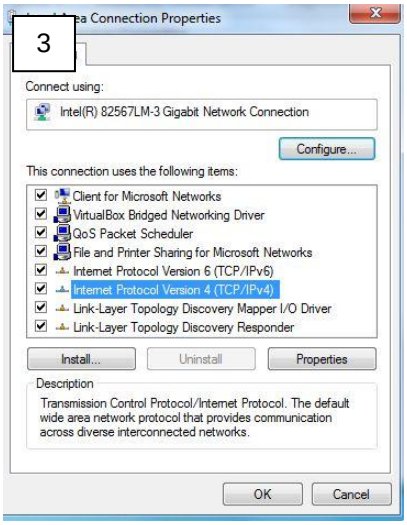
Accessing From a Network without DHCP Server

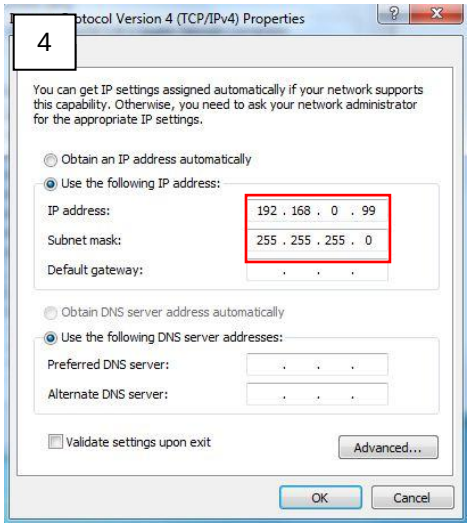
The default IP address of the Decoder is **192.168.0.200**. If the network does not have a DHCP server, then this is the IP address of the Decoder, whereas the default port number is **80**. Take note that the computer must be within the same network segment. For example, the computer must have an IP address of 192.168.0.**X** (where **X** is any number between 1 ~ 255, except 200) and Subnet Mask of 255.255.255.0.

For example, based on Windows 7, configure the IP address to **192.168.0.99** and set Subnet Mask to **255.255.255.0** by using the steps below:









To access the Decoder, open the web browser and type the default IP address on the address bar:

192.168.0.200

The Login Screen

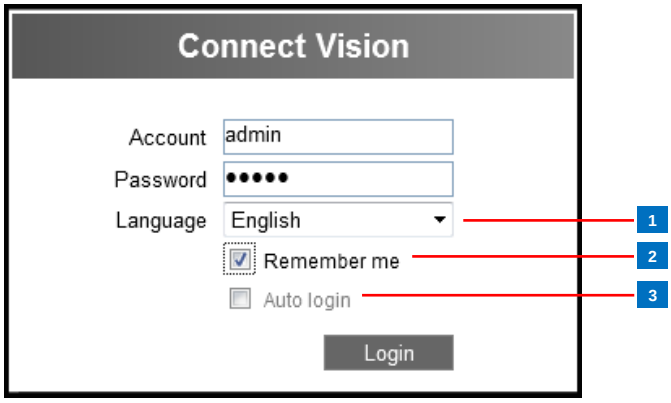
When logging in for the first time or after a firmware upgrade, users will be prompted to install required ActiveX components. Follow the on-screen instructions to install the ActiveX components.

When prompted to login, enter the default **Account** and **Password** and click **Login**.

Account: admin

Password: 123456

For security purposes, it is recommended to modify the password in the Setup Wizard or see *3.6 Configuring User Access* on page 93.

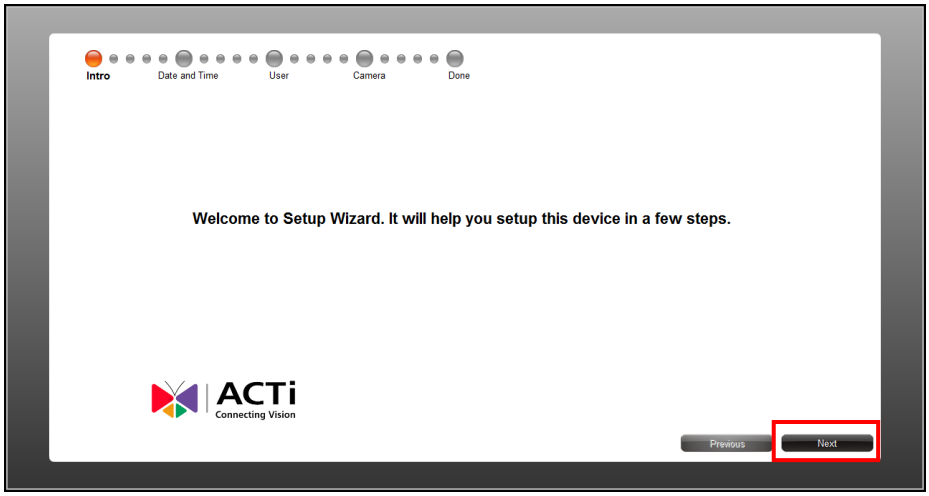


Item		
1	**Language**	The default user interface language is English. To change the language, select the preferred language from the box.
2	**Remember Me**	Check to allow the system to remember the account name. Users just need to enter the password to login.
3	**Auto Login**	Check to skip the login page and go directly to the Live View page every time the user logs in from the current computer. This feature takes effect on the succeeding log in. **NOTE:** This can be a security risk for any other user will be able to access the Decoder.

The Setup Wizard

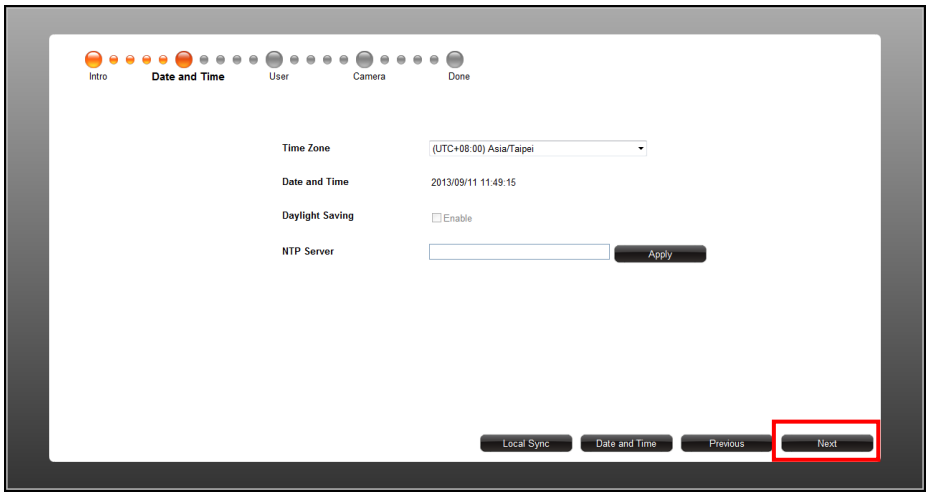
When accessing the Decoder for the first time on a client computer, the **Setup Wizard** appears to facilitate easy camera connection. All settings can still be modified in the **Setup** page.

1. Click **Next**.



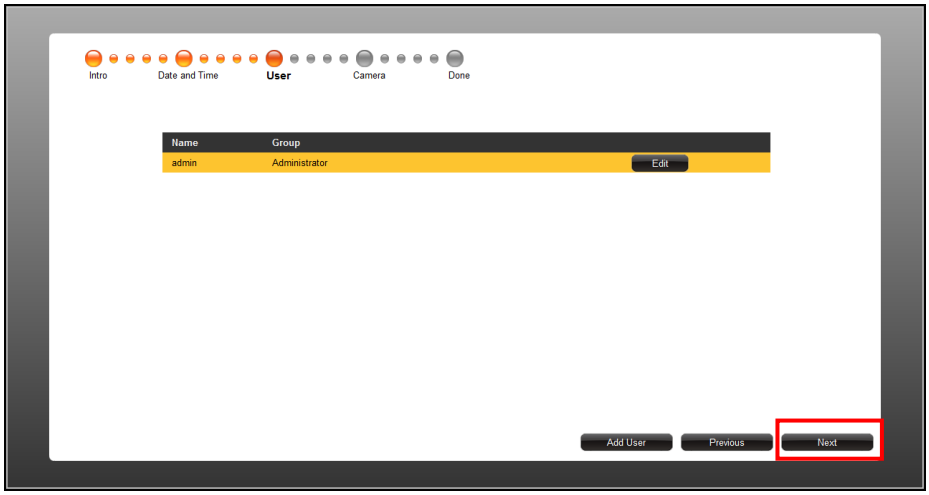
2. Set the date and time by one of the following options:

   - Select the **Time Zone**.
   - Sync with an **NTP Server**.
   - Click the **Local Sync** button to sync with the client computer date and time.
   - Click the **Date and Time** button to set the date and time manually.

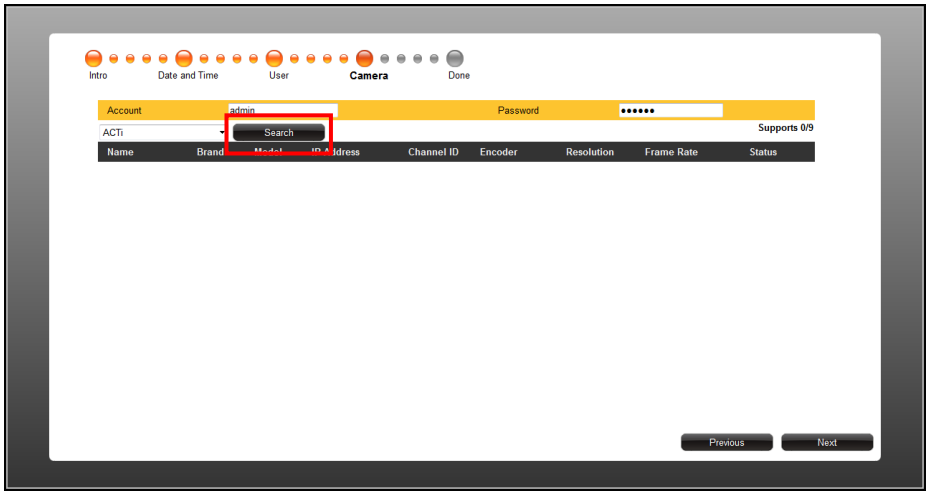


3. Click **Next** to continue.

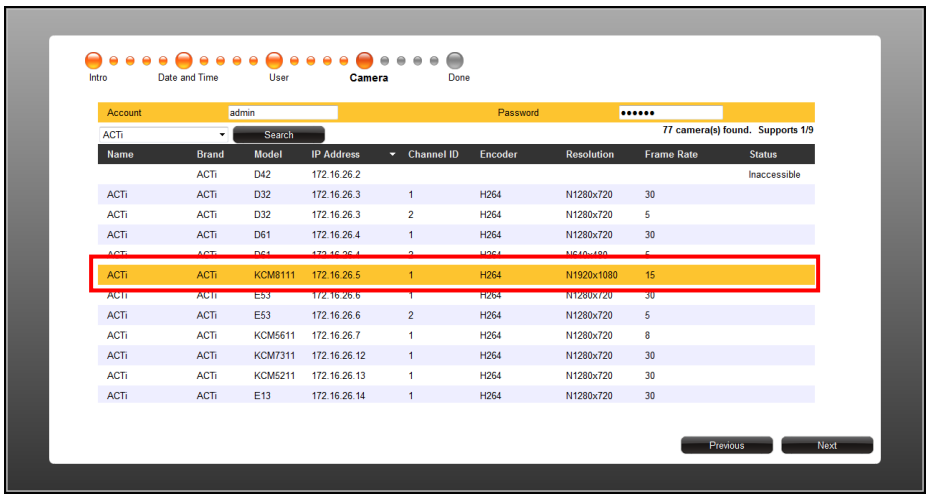
4. The default **User** is “admin” and the **Password** is “123456”. To modify the password, click **Edit**. Or, click **Next** to continue.



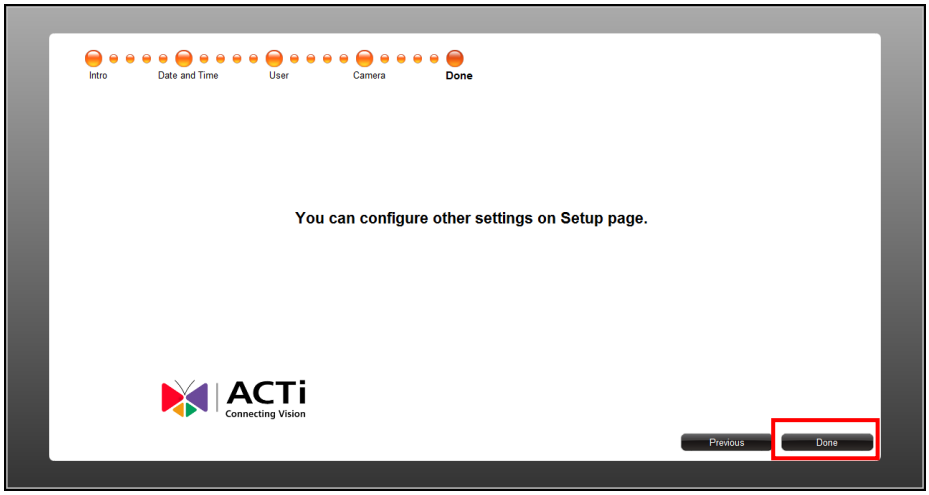
5. Click **Search** to search for cameras.



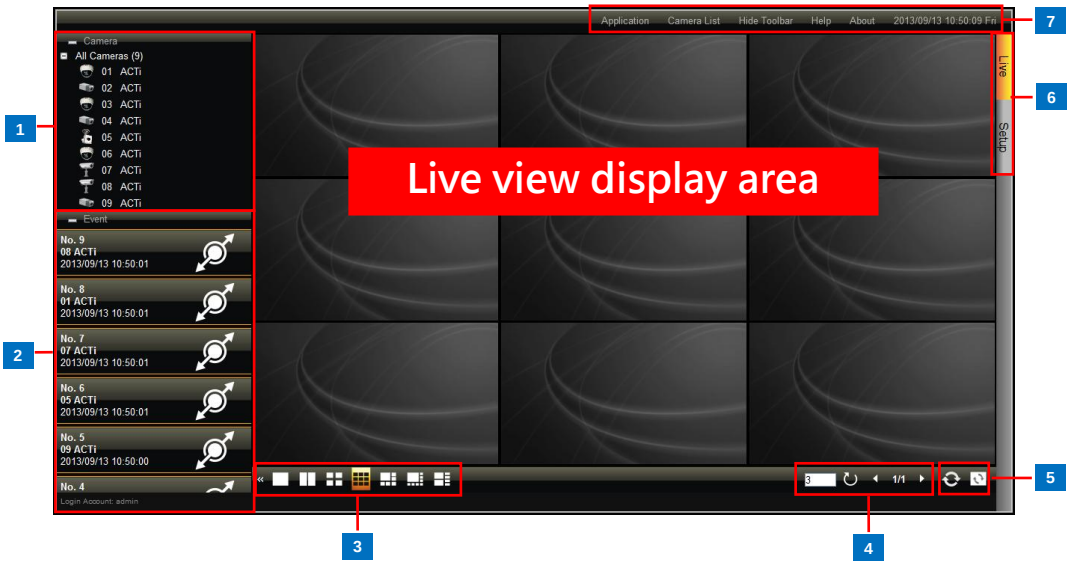
6. The list of cameras connected on the network appears. Click on a camera to select it. You can select up to 9 cameras to add. Selected cameras are highlighted in orange.



7. Click **Next** to continue.
8. Click **Done** to close the wizard.



3.2 The Live View Page



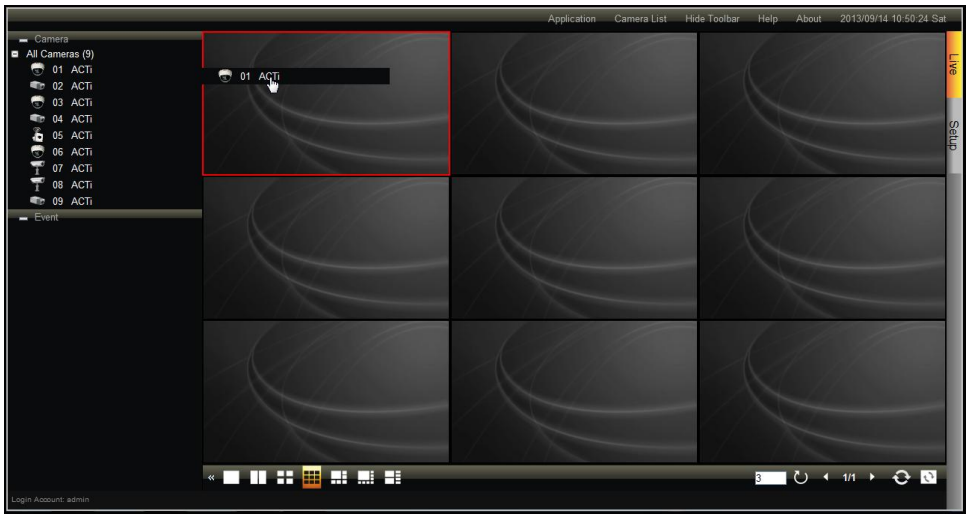
Item		Description
1	**Camera List**	Displays the channel number and camera name of the cameras connected to the Decoder. Drag a channel to a window on the Live View display area to view the video stream. Or, double-click **All Cameras** to automatically view all cameras on the list to the Live View display area. See ***Viewing the Cameras*** on page 68.
2	**Event List**	Displays connection and event notifications.
		Indicates the camera has been connected.
		Indicates the camera is disconnected.
		Indicates motion is detected. The number indicates the area where motion is detected.
3	**Layout Icons**	Click an icon to change the layout of channels. The current layout is indicated by an orange icon. Moving the mouse over the icon displays the icon name. See ***Changing the Window Layout*** on page 70.
4	**Viewing Icons**	Use for managing the sequence patrol. See ***Patrolling Channels*** on page 71.
		By default, the sequence patrol interval time is 3 seconds. To modify, type the desired interval time on this field.

Item			Description
4			Click to start / stop sequence patrol.
			The number indicates the current page view over the total number of pages that can be viewed. Click the left or right arrow to go back or go to the next page manually.
5	**Sync Icons**		Use to sync the remote display to the local display or vise versa.
			Click to sync the remote display according to the local client display.
			Click to sync the local display according to the remote client display.
6	**Page Tabs**		Click a tab to view the page.
7	**Toolbar**		Click a menu to access the submenu options. See ***Using the Toolbar*** on page 72.
	Application		Allows users to display or hide the video title bar, disconnect channels, decode I-frame, or logout.
	Camera List		Allows users to display or hide camera details, such as resolution, IP address, etc., to be shown on the Camera List.
	Hide Toolbar		Click to hide the toolbar. Press the **ESC** key to display the toolbar again.
	Help		Click to access the help tools on the website.
	About		Click to view the firmware version.
	System Date and Time		The system date and time. Click the date and time to access the Date and Time menu.

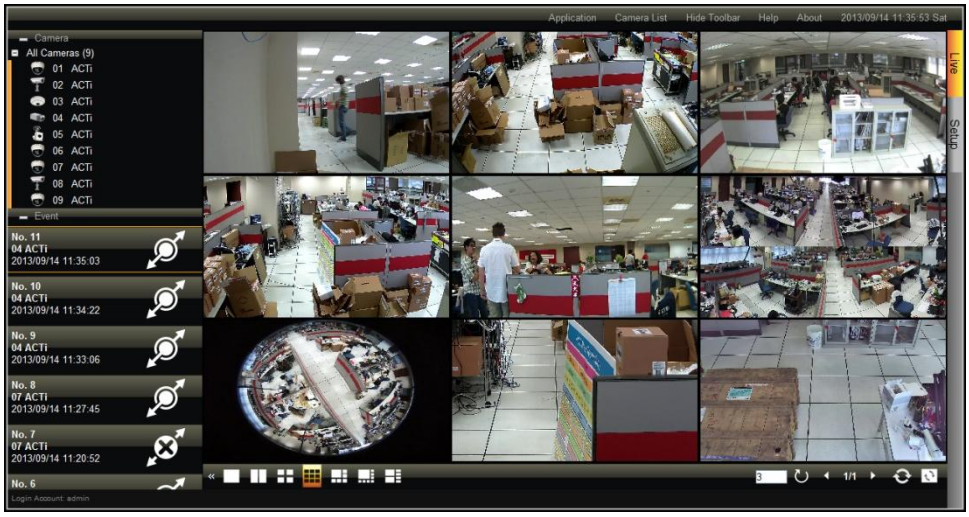
Viewing the Cameras

There are several ways to view cameras on the Live View page.

- Drag a camera from the list to a window to view it on the Live view display area.



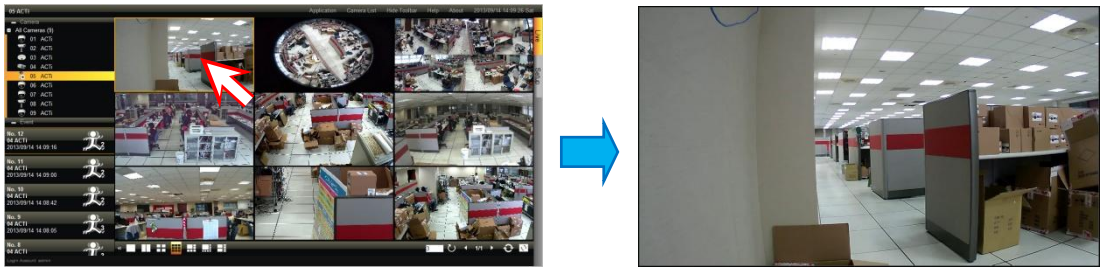
- Double-click a camera from the list to view it on the next available window.
- Double-click **All Cameras** to view all cameras on the Live View display area.



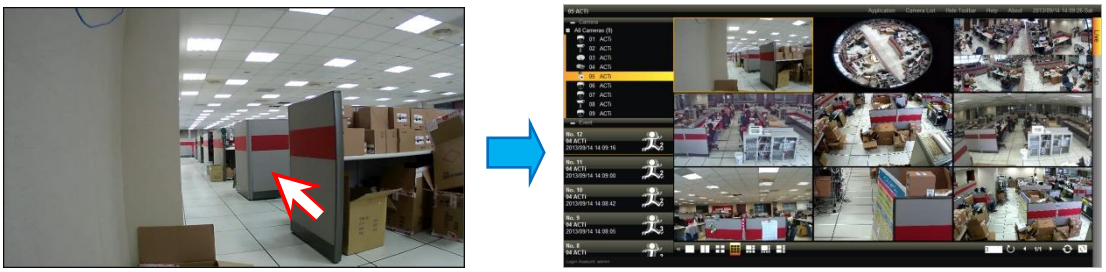
NOTE: The Decoder does not save the displayed channel settings; so every time users access the Decoder, the Live View display area is empty and cameras must be added to the Live View display area again.

Viewing Channels in Full Screen

Double-click a channel to view the channel in full screen.



Double-click again to switch back to the previous layout.



Zooming In

To zoom in on an area, click and drag the mouse to box the area to magnify.

The whole camera view is shown on the lower right corner and the zoomed area is indicated by a red box.

Changing the Window Layout

By default, the Live View is displayed with a 9-channel layout. The layout can be changed into a 1-channel, 2-channel, 1+7-channel display, etc.

Layout 1	Layout 2	Layout 4
Click  to display one channel on full screen. 	Click  to display two channels at a time. 	Click  to display four channels at a time. 
Layout 9	**Layout 1+5**	**Layout 1+7**
Click  to display 9 channels at a time. 	Click  to display six channels at a time on a 1+5 layout. 	Click  to display eight channels at a time on a 1+7 layout. 
Layout 2+4		
Click  to display eight channels at a time on a 2+4 layout. 		

To view succeeding channels, use the  icon. For example, if viewing on a 2-channel layout, and you want to view the next 2 channels, click  . Or, click on the number and select the page to view.

Patrolling Channels

Instead of viewing all 9 channels at the same time, users may want to view one channel in full screen or two channels at a time and scroll through all the channels alternately. To do this, follow the procedures below:

1. Select the desired window layout for patrolling (i.e. Layout 1 for full screen or Layout 2 for two channels at a time, etc.).
2. Click  to start **Sequence Patrol**.
3. By default, 3 seconds is the interval between changing one screen to another. If necessary, type a different number to modify the interval time.
4. **Sequence Patrol** starts. To stop the patrol, click  again.

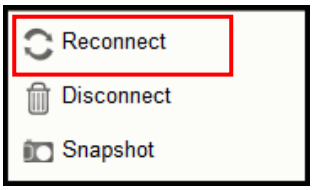
Syncing Remote and Local Live View Display

The displayed cameras and window layout on the remote client and local client can be synced.

- Click  to sync the Live View based on the local client display. So instead of dragging the camera to a window on the Live View display area every time the user access the Decoder, click  to simply view the cameras as how users will see it on the local client display.
- Click  to sync the local Live View based on the current remote client display.

Reconnecting the Cameras

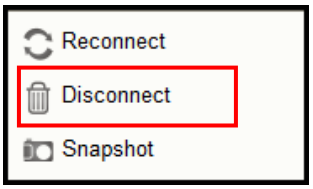
If there is a need to refresh the camera connection, right-click on the live view window of the camera, and click **Reconnect**.



NOTE: All video streams will be lost for a few seconds until the reconnection is finished.

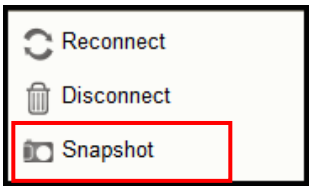
Removing Video Stream from Live View

To remove the video stream from showing on the Live View, right-click on the window of the camera, and click **Disconnect**.



Taking Snapshots

To take snapshots from the live video stream, perform the following:



1. Right-click on the window of the camera, and click **Snapshot**. The snapshot is saved on the clipboard.
2. Open a graphics utility software (i.e. Paint).
3. Press **[Ctrl]** + **V** to paste the snapshot.
4. Save the snapshot as a new file.

Using the Toolbar

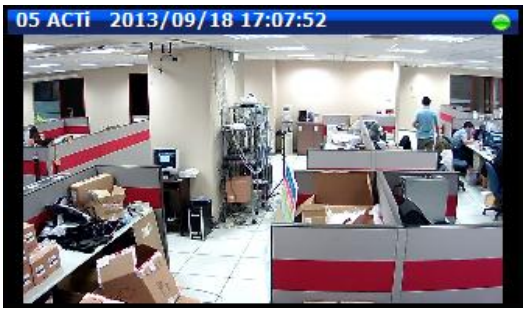
Click a menu and submenu option to use its function. The function is applied to all the cameras in the Live View.

Application Menu

- **Video Title Bar**: Click to hide or display the video title bar on top of every channel window. The bar contains the camera name and the system date and time.

- **Stretch / Un-stretch Video**: Select to stretch or un-stretch the video display.

Stretched Video



Un-stretched Video

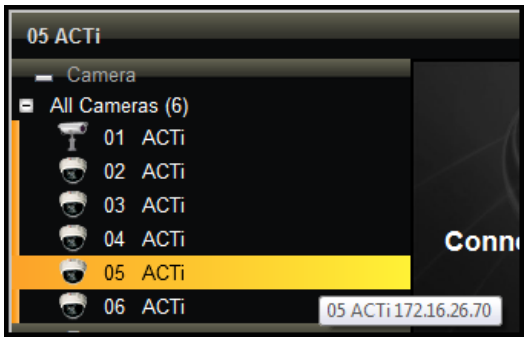
- **Disconnect All Channels**: Select to disconnect all channels from the Live View display window. When disconnected, the Live View window will be blank but the cameras will still be listed on the camera list panel.
- **Decode I-frame / Auto Drop Frame**: Select **Decode I-frame** to save computing power. With this function, the Decoder decodes only the I-frames, so the frame rate of each channel becomes 1 fps. This function is useful when using a computer which is also used for other applications.

  When **Decode I-frame** is selected, the selection toggles to **Auto Drop Frame**.
  By default, the Decoder is set to **Auto Drop Frame**. With this setting, the Decoder displays as many video frames as possible to achieve smooth video performance. However, this function uses more computing power. When the computer loading exceeds 80%, random channels start to decode I frame for about 15 seconds, and then return to the original frame rate afterwards. This process continues until the computer loading drops under 80% or when the user switches to other layout or page.
- **Logout**: Click to logout from the Decoder but remains in Internet Explorer.
- **Quit**: Click to quit the entire session and close Internet Explorer.

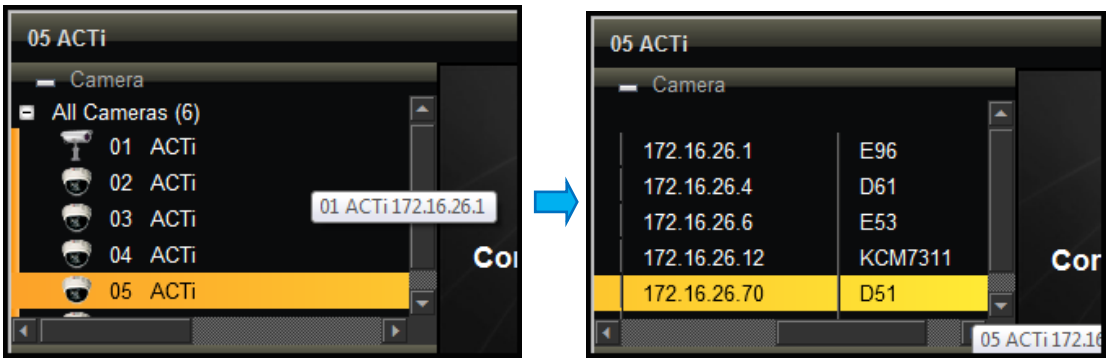
Camera List Menu

The **Camera List** menu defines how the cameras are listed on the left panel.

- **List**: Click to list the cameras by channel ID and name only.



- **Detail**: Click to list the cameras with details such as IP address and camera model. When the mouse goes over to the camera list panel, the scroll bars appear to enable users to scroll through the camera details.



Hide Toolbar

Click **Hide Toolbar** to hide the toolbar from the Live View screen. Press the **<ESC>** key to display the toolbar again.

Help

Click **Help** to access the website for more product information and documentation.

About

Click **About** to display the firmware version.

System Date and Time

Click the date and time to access the Date and Time setup page. See ***Date and Time*** on page 77.

3.3 The Setup Page

Click the **Setup** tab to access the **Setup** page.

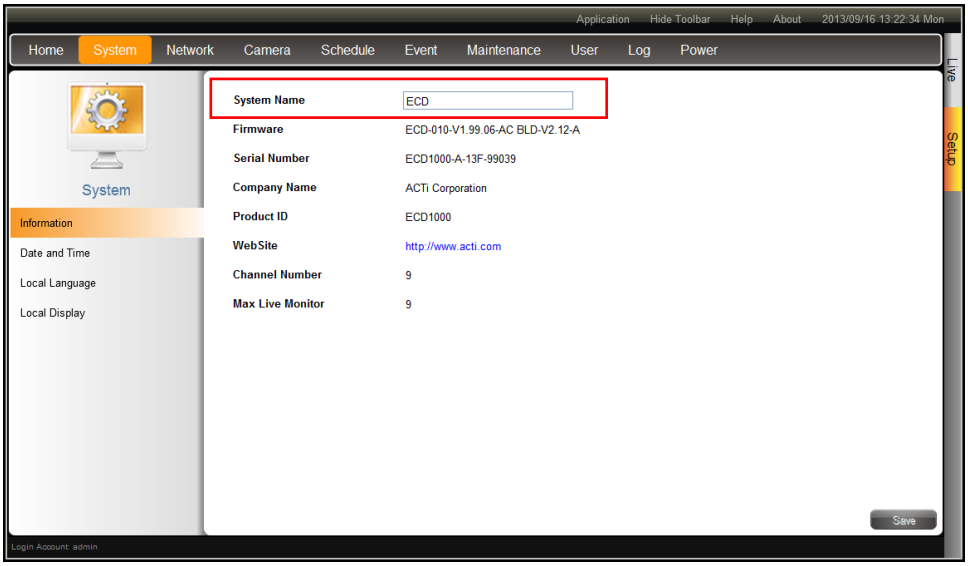
Click an icon from the **Home** menu or a page tab to access the menu page:

- System
- Network Menu
- Camera
- Schedule
- Event
- Maintenance
- User
- Log
- Power

3.4 Configuring the System Settings

System Information

On the **Setup** page, click **System**.



The system information is displayed.

- **System Name**: Name assigned to the Decoder; can be modified. To modify the **System Name**, type the preferred name on the box. Click the **Save** button at the bottom of the screen to apply and save changes.

  NOTE: The system name can be up to 10 alphanumeric characters, spaces and symbols are not allowed.

- **Firmware**: System firmware version
- **Serial Number**: Product serial number
- **Company Name**: Name of the manufacturer
- **Product ID**: Product model name
- **WebSite**: Click the website to access the manufacturer website.
- **Channel Number**: Maximum number of supported cameras.
- **Max Live Monitor**: Maximum number of supported live channels.

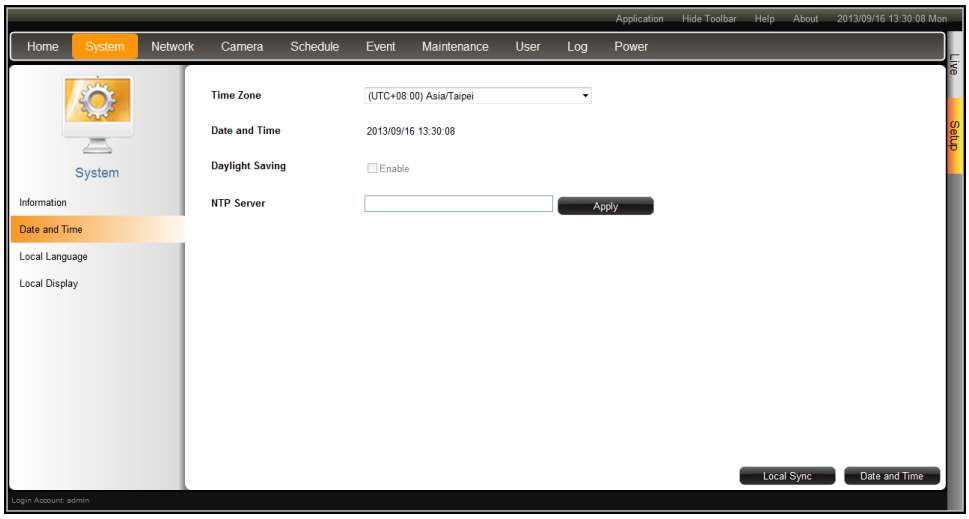
Date and Time

The Date and Time page allows you to manually change the system date and time or sync with an NTP server.

Automatically Set the Date and Time

Select the time zone to automatically set the date and time.

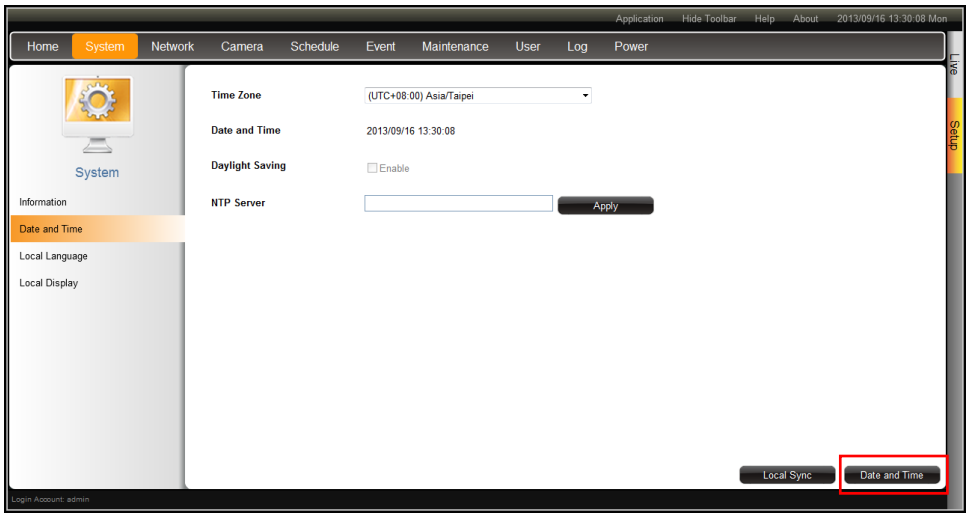
1. On the **Setup** page, click **System** > **Date and Time**.



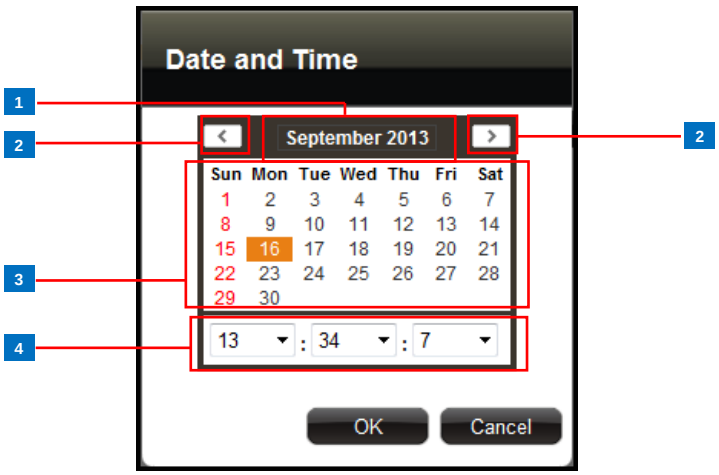
2. On **Time Zone**, select the desired time zone. The system date and time automatically changes according to the current date and time of the time zone.
3. If applicable, check the **Daylight Saving** box. Note that this box becomes enabled only if the Daylight saving time can be applied to the selected time zone.

Manually Change the Date and Time

1. On the **Setup** page, click **System** > **Date and Time**.



2. Click the system date and time button.
3. Modify the date and time.

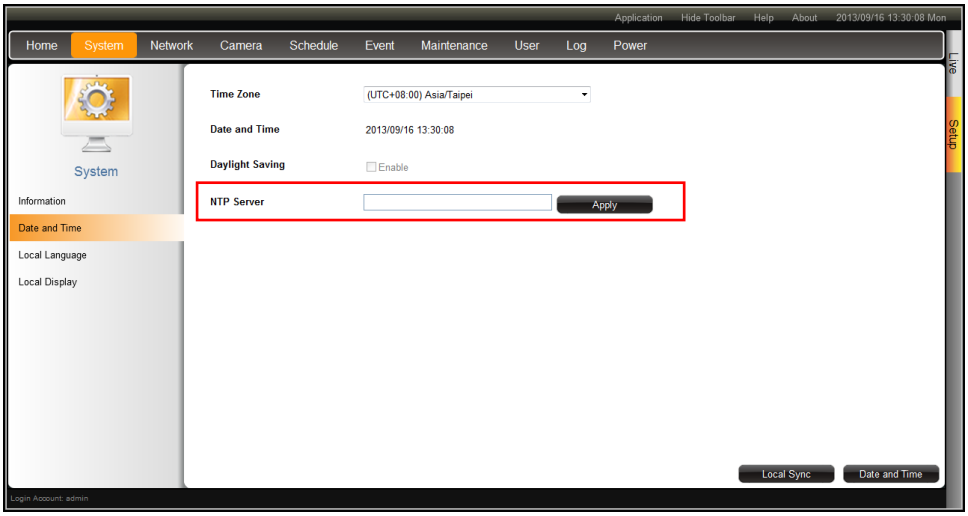


Item		Description
1	**Month and Year**	Select the month and year from the box.
2	**Scroll Icons**	Click to view the calendar of the previous or the next month.
3	**Date**	Click a date to set the date. Selected date is highlighted in orange, while the current date is in yellow.
4	**Time**	Select the hour, minute, and second from the corresponding boxes.

4. When done, click **OK** to save.

Sync Date and Time with NTP Server

1. On the **Setup** page, click **System** > **Date and Time**.
2. On **NTP Server**, type the URL address of the NTP server.



3. Click **Apply**. A message will appear to confirm if synchronization is successful.

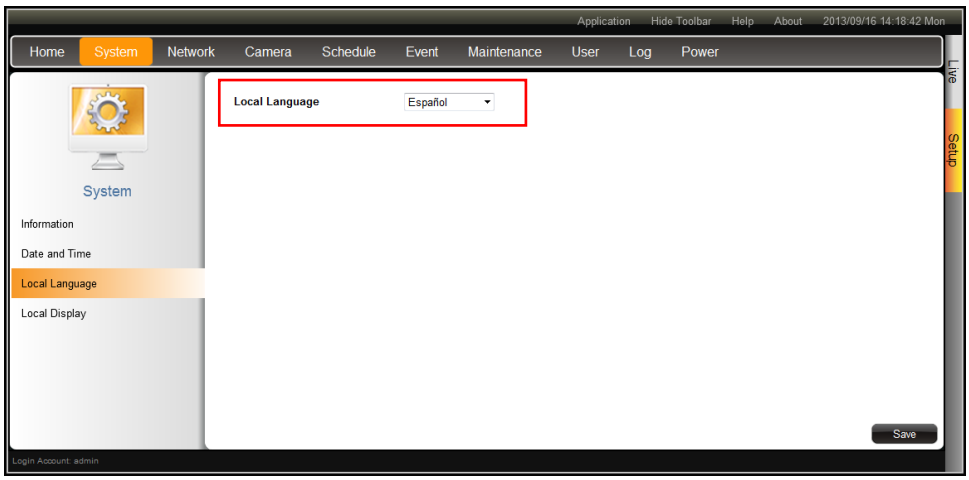
   NOTE: If the NTP Server is a domain name, make sure the IP setting and DNS setting of the system gateway are correct.

To delete NTP Server

To delete an NTP server, delete the URL address on the field and click **Apply**.

Language

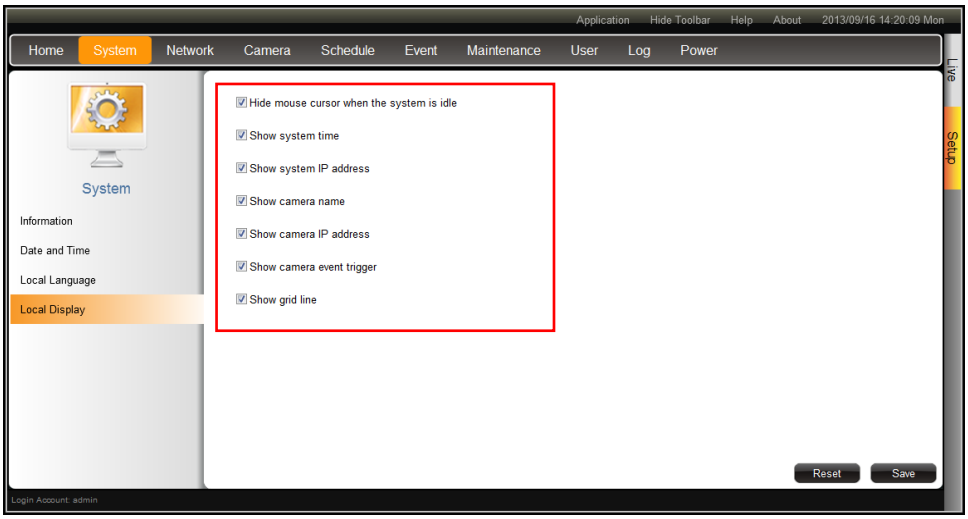
To change the language of the local display interface, click **System** > **Local Language** on the **Setup** page. Then, select the desired language from the box.



Local Display

The Local Display allows users to show or hide information, such as the IP address, system date and time, or event trigger icons, on the Live View screen. By default, all options are enabled.

1. On the **Setup** screen, click **System** > **Local Display**.



2. By default, all options are enabled. To disable a function, remove the check from its corresponding box.

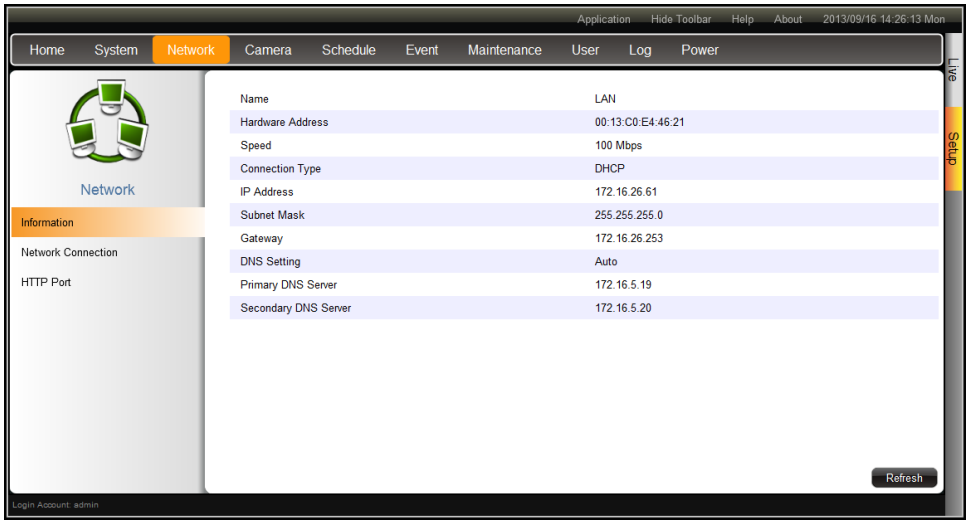
   - **Hide mouse cursor when the system is idle**: If checked, the mouse cursor is hidden from the Local display if there is no mouse movement within 5 seconds.
   - **Show system time**: If checked, the system date and time is displayed on the bottom of the Live View screen.
   - **Show system IP address**: If checked, the system IP address is displayed on the bottom of the Live View screen.
   - **Show camera name**: If checked, the camera name is displayed on the upper left corner of the channel.
   - **Show camera IP address**: If checked, the camera IP address is displayed on the upper left corner of the channel. For security reasons, it is recommended to uncheck this function to hide the IP address from showing on the local display.
   - **Show camera event trigger**: If checked, an event trigger icon, such as motion detection, will appear on the upper right corner of the channel when an event occurs.
   - **Show grid line**: If checked, the lines separating the camera channels are displayed on the Live View screen.

3. When modifications are done, click **Save** to apply and save the changes. Or, click **Reset** to re-check all the boxes back to its default.

3.5 Configuring the Network Settings

Viewing the Network Information

On the **Setup** screen, click **Network**.



The network information, such as the **Hardware Address** (MAC address), **Speed**, **Connection Type**, **IP Address**, **Subnet Mask**, **Gateway**, **DNS Setting**, and **Primary** and **Secondary DNS Server** are displayed.

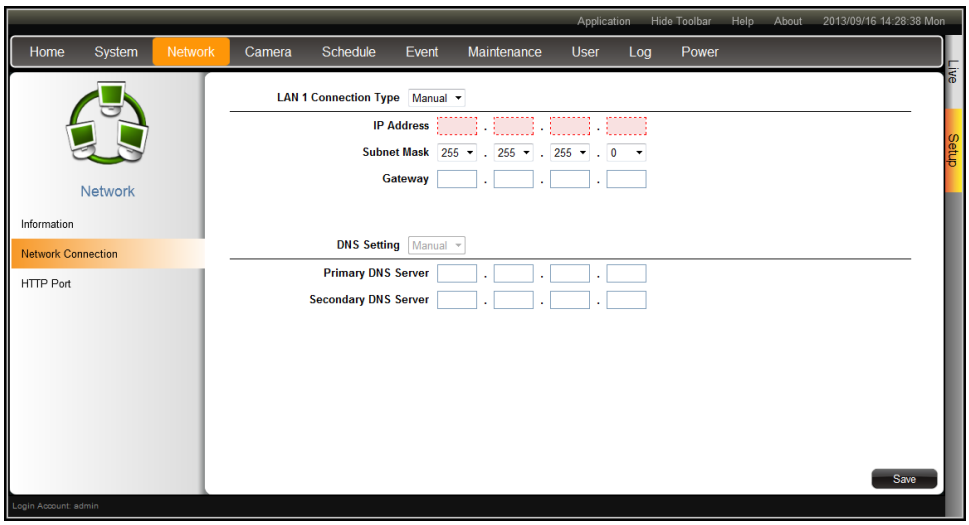
To refresh the page, click **Refresh**.

Configuring the Network Connection

Use the **Network Connection** to configure the network settings of the Decoder, which includes setting of the connection type and IP address.

There are two types of connection: **Manual** and **DHCP**.

- **Manual**: The IP address must be assigned manually, so are other network configurations like Subnet Mask, Gateway, etc. Note that the IP address must be unique for each device on the network. By default, the Decoder has a default IP of **192.168.0.200** and subnet mask of **255.255.255.0**. Users may need to change the default IP and subnet mask to ensure the Decoder belongs to the same network segment as the cameras.
- **DHCP Connection**: On a DHCP network, the DHCP server assigns the IP address automatically. By default, the Decoder will automatically switch to DHCP connection mode and be assigned an IP address. However, if this does not happen, users need to manually change the **Connection Type** to **DHCP**. See ***Obtaining the IP Address Automatically*** on page 83.



Setting the IP Address Manually

If your network does not have a DHCP server, perform the following to manually configure the network settings:

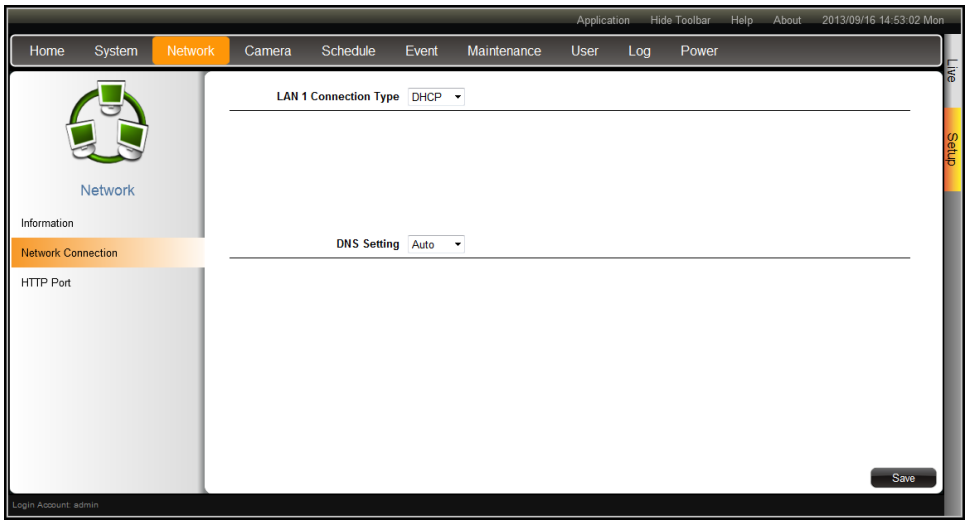
1. On the **Setup** page, click **Network** > **Network Connection**.
2. On **Connection Type**, select **Manual**.
3. Obtain the information from your network service provider and enter the **IP Address**, **Subnet Mask**, and other necessary settings.

   NOTE: The IP Address and Subnet Mask must be filled in. Other settings may be left blank if not required by the network service.
4. When done, click **Save**.

Obtaining the IP Address Automatically

If your network has a DHCP server, the Decoder will automatically be assigned an IP address. However, in case the Decoder does not detect the DHCP connection, perform the following procedures to obtain the IP address:

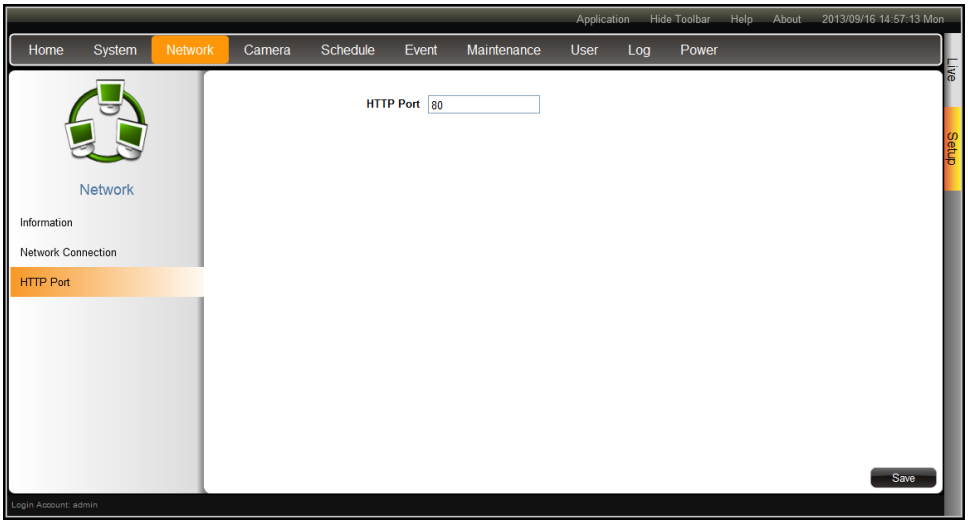
1. On the **Setup** page, click **Network** > **Network Connection**.
2. On **Connection Type**, select **DHCP**.



3. Leave the default **DNS Setting** as "**Auto**".
4. Click **Save**.

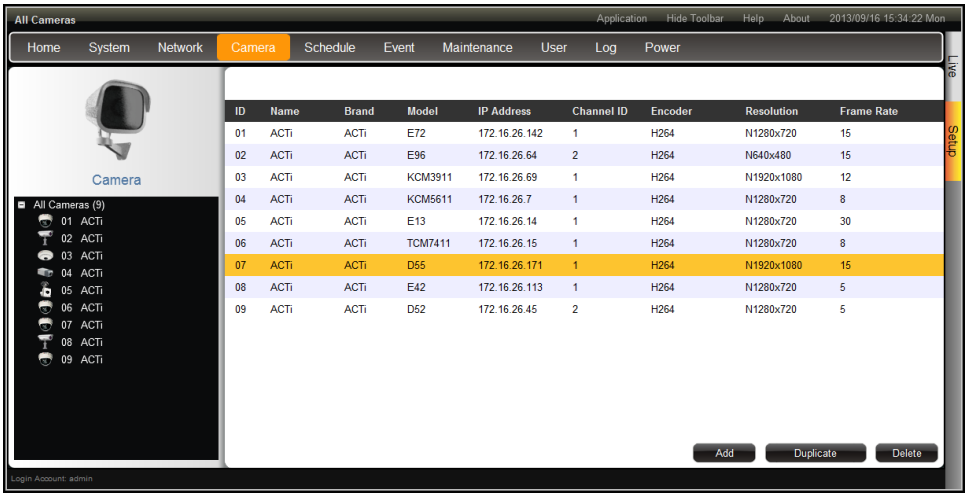
Configuring Port Mapping

By default, the Decoder port number is 80. To change this value, click **Network** > **Port Mapping** on the **Setup** page. Click **Save** to apply and save the changes.



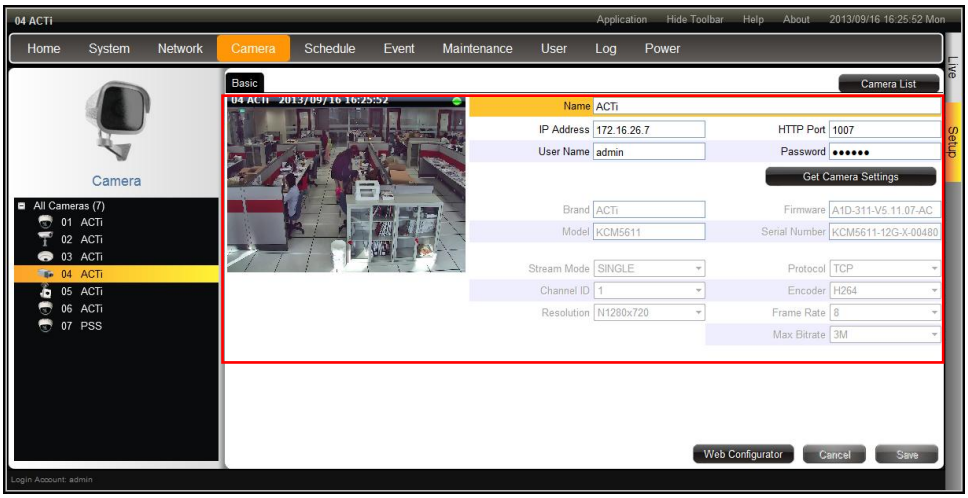
3.5 Configuring the Cameras

On the **Setup** page, click **Camera**. The camera list table is displayed.



- To add cameras, click **Add**. See ***Adding Cameras*** on page 85.
- To add cameras with almost the same setting as an existing channel, see ***Duplicating Cameras*** on page 89.
- To delete cameras, see ***Deleting Cameras*** on page 92.

To access the camera properties, click a camera name from the camera list panel or double-click a camera from the table. The camera properties are displayed.



- To access the camera Web Configuration, click **Web Configurator**.
- To view the camera list table, click **Camera List**.
- To view other cameras, click the camera from the camera list panel on the left.

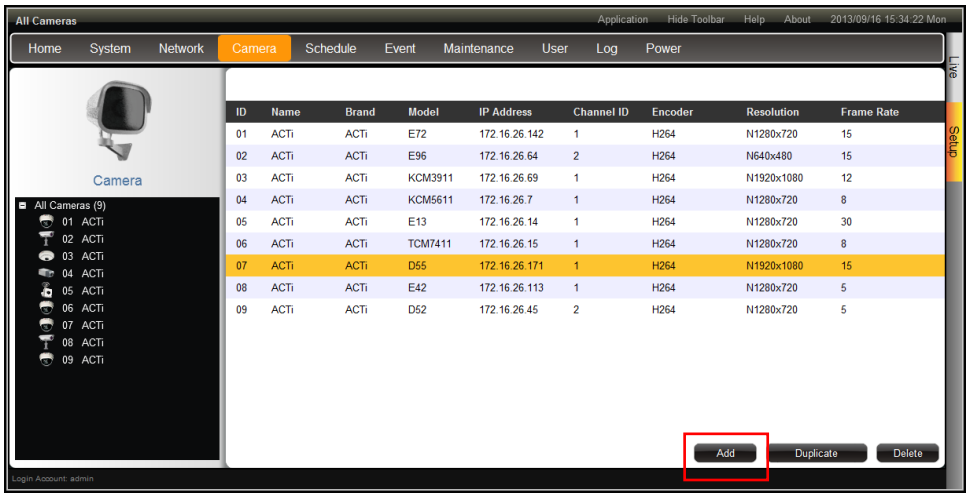
Adding Cameras

There are two ways to add cameras for viewing: by manually entering the IP address of the camera or by searching the cameras on the network.

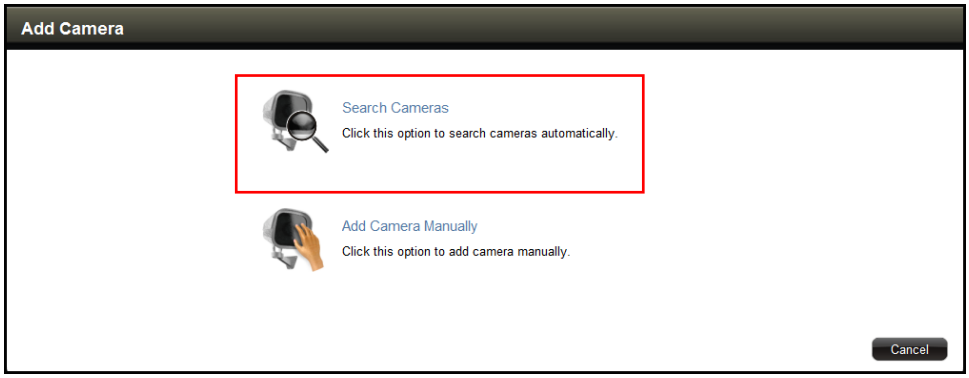
Searching Cameras to Add

If you do not know the IP address of the camera or you want to add several cameras at the same time, you can search the cameras connected to the network and choose up to 9 cameras to connect to the Decoder.

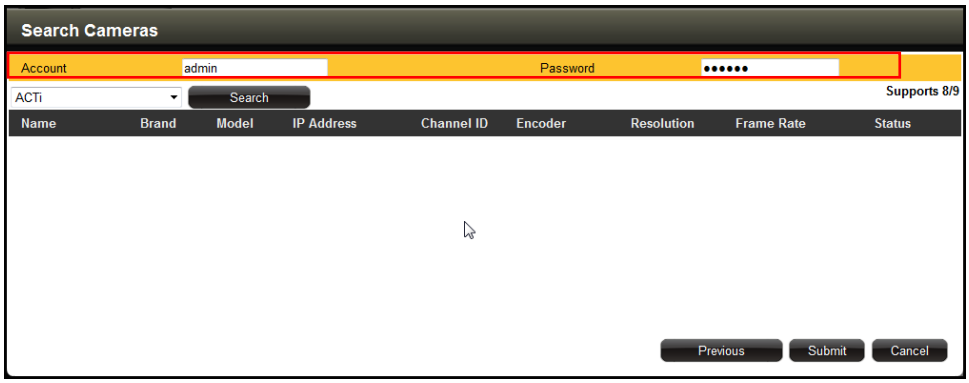
1. On the **Setup** page, click **Camera**.
2. On the camera list table, click **Add**.



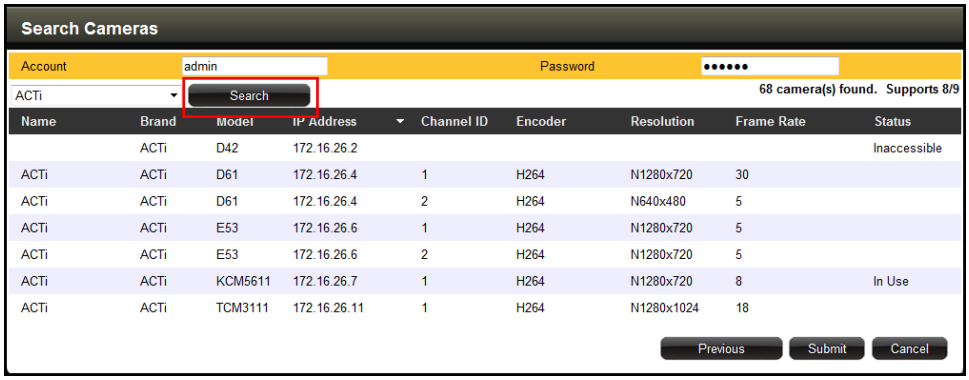
3. Click **Search Cameras**.



4. The **Search Cameras** screen appears. The default **Account** “Admin” and **Password** “123456” are pre-entered. If the camera you want to add has different account and password, enter them on the **Account** and **Password** fields.



5. Click **Search**. The cameras connected in the network are listed on the table.



6. Click on a camera to select it. You can select up to 9 cameras. Selected cameras are highlighted in orange.

   NOTE: The **Status** column shows the status of the camera:

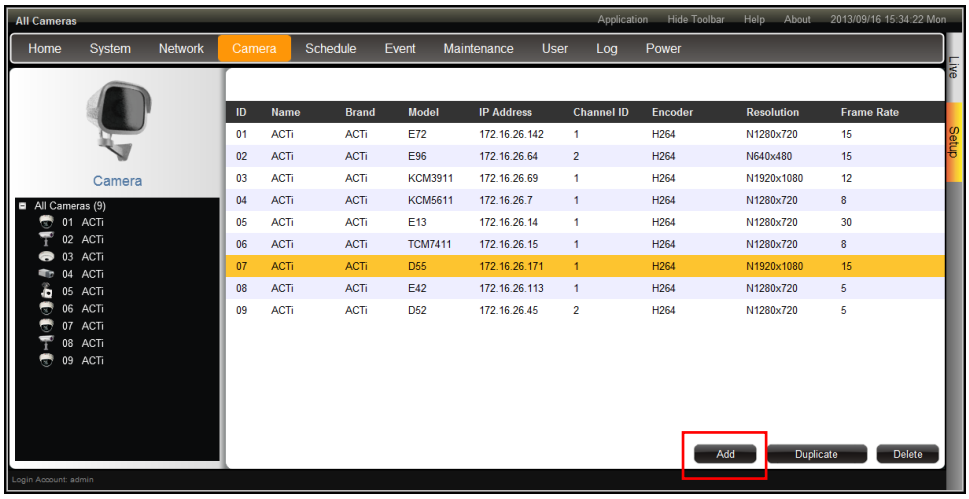
   - **Inaccessible**: The camera account or password may be different from what you have entered on **Account** and **Password** fields. So that camera cannot be accessed.
   - **In Use**: The camera is already added to the Decoder for live viewing.

7. Click **Submit** to add the selected cameras to the Decoder for live viewing.

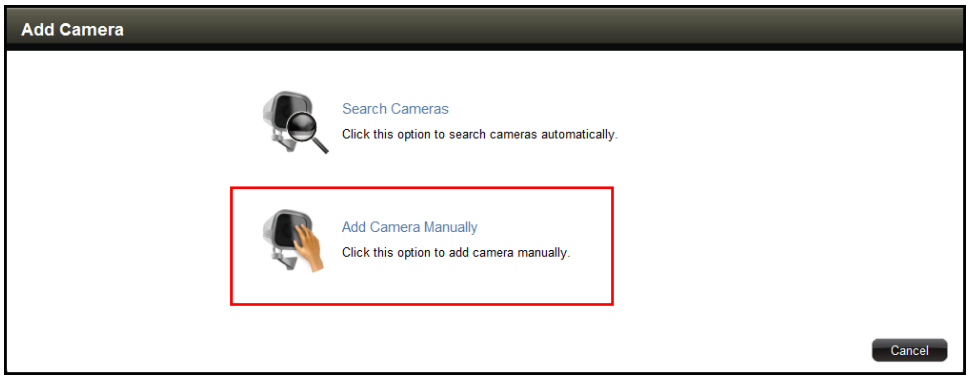
Adding Cameras Manually

To add cameras manually, you need to know the IP address, HTTP port, User Name and Password of the camera you want to connect to.

1. On the **Setup** page, click **Camera**.
2. If the camera list table is not shown, click **All Cameras** or **Camera List**.
3. On the camera list table, click **Add**.

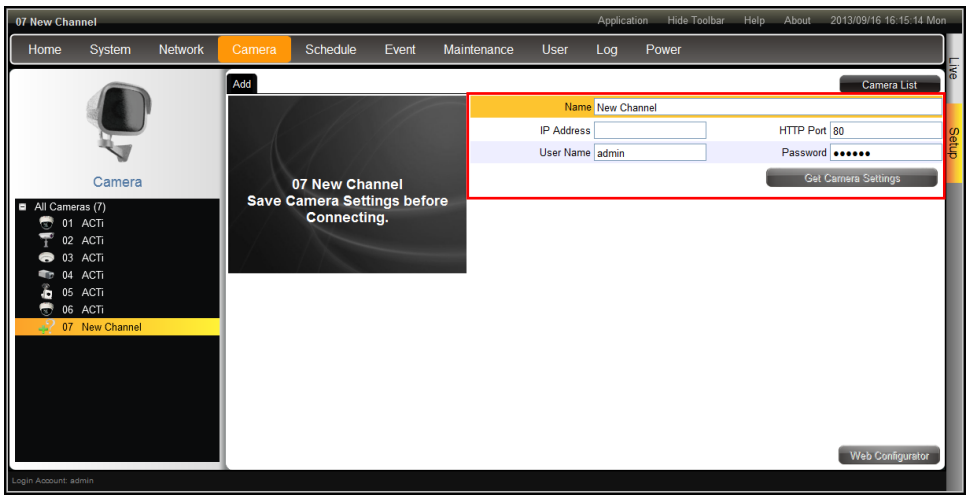


4. Click **Add Camera Manually**.

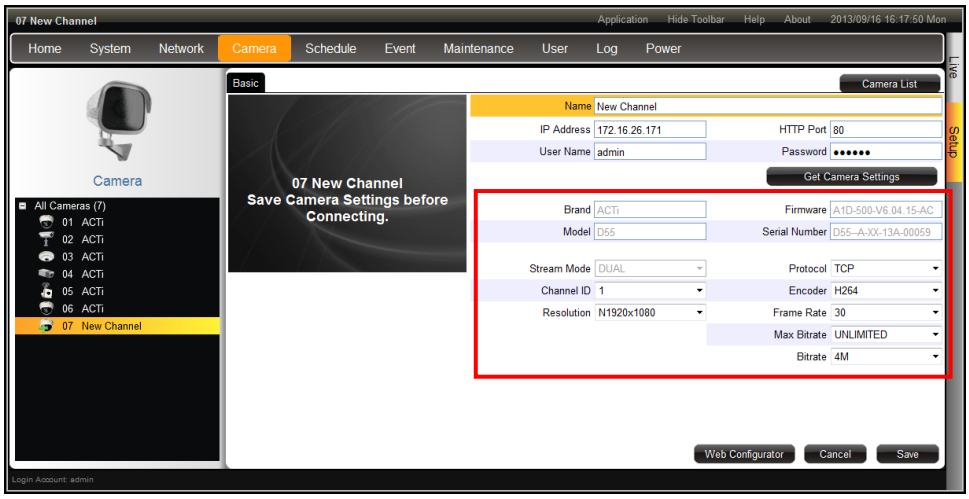


5. Type a name you want to use to identify the camera (maximum of 24 alphanumeric characters, no spaces nor symbols). This name is saved only on the Decoder and does not affect the settings on the camera side.

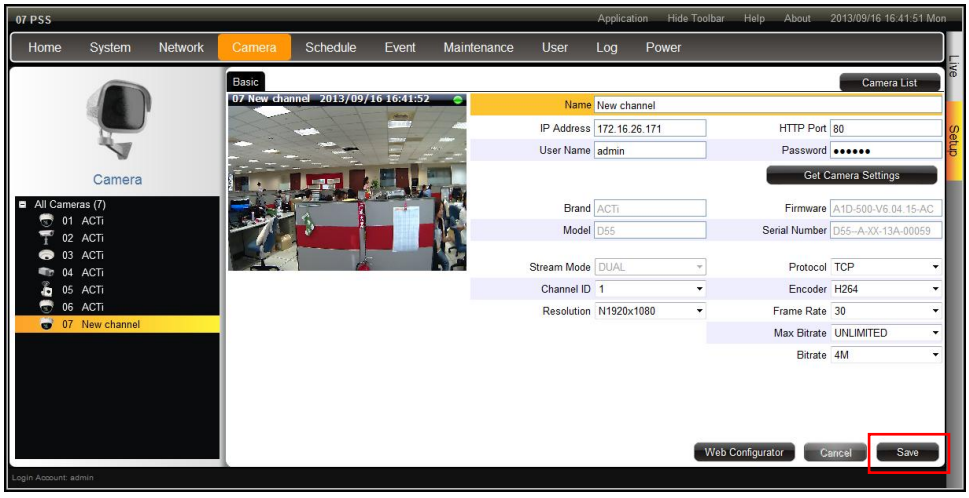
6. Enter the **IP Address**, **HTTP Port**, **User Name** and **Password** of the camera you want to connect to.



7. Click **Get Camera Settings**. The decoder connects and retrieves the camera settings. The camera streaming properties are shown on the page however the video display is still empty at this point.



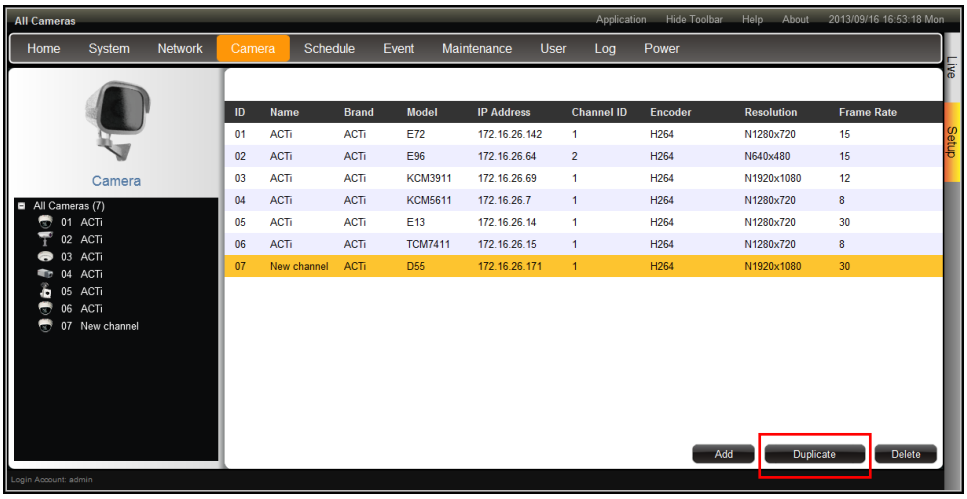
8. Click **Save**. The live video appears on the display window.



Duplicating Cameras

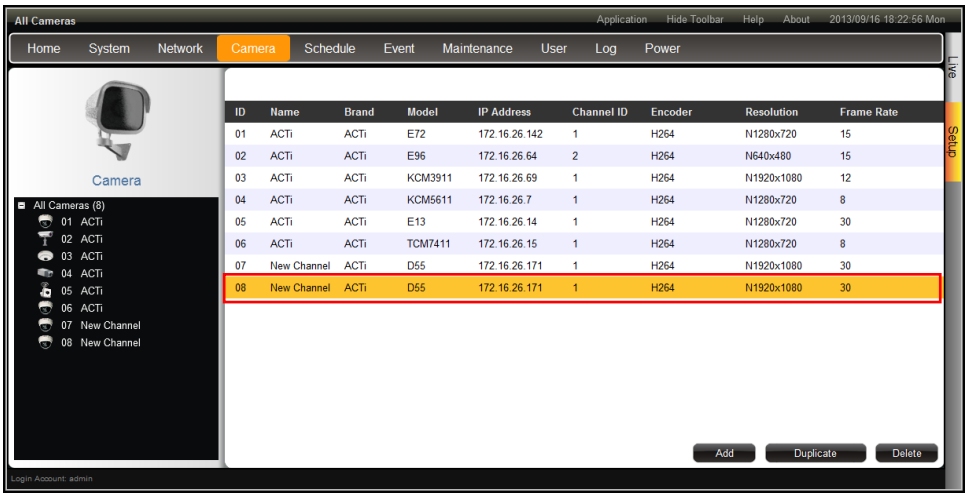
Use this function to add another camera with almost the same camera settings as the selected camera. So instead of entering all the information one by one, duplicate the camera settings first and then modify afterwards. However, to use this function, there must be at least one available channel without a connected camera.

1. Select the camera you want to duplicate from the table, and then click **Duplicate**.



2. A confirmation message appears. Click **OK** to continue.

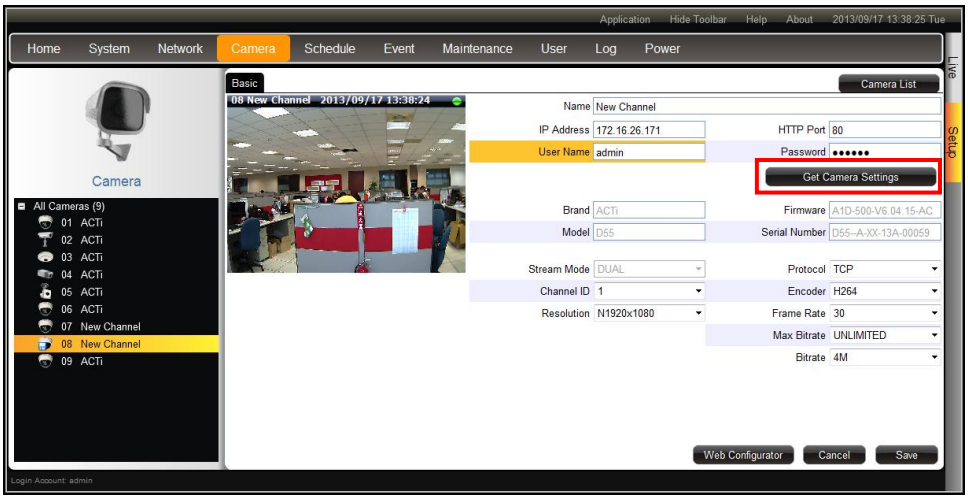
3. The copied camera is automatically added to the next available channel. Double-click the camera from the table to access the camera properties and modify the settings.



Modifying Camera Settings

In some cases, you may need to modify the camera connection and streaming properties. To do this, follow the procedures below:

1. On the **Setup** page, click **Camera**.
2. Select the camera from the camera list panel.
3. Click **Get Camera Settings**.



4. Modify the camera connection and streaming properties, as needed. Other properties can only be modified on the camera configuration webpage, in this case, click **Web Configurator**.

Item	Description
Name	Enter a descriptive name to assign to the Decoder, e.g. location of camera, etc. This name is not saved or shown on the camera side. The maximum length is 24 alphanumeric characters, symbols and spaces are not allowed.
IP Address	Enter the camera IP address.
HTTP Port	Enter the HTTP port. Default port is 80.
User Name	Enter the user name to log in to the camera. Default is “admin”.
Password	Enter the password to log in to the camera. Default is “123456”.
Brand	Displays the camera brand name. This field cannot be modified
Firmware	Displays the camera firmware version. This field cannot be modified
Model	Displays the camera model. This field cannot be modified
Serial Number	Displays the camera serial number. This field cannot be modified.
Stream Mode	Displays whether the camera has Single or Dual stream mode.

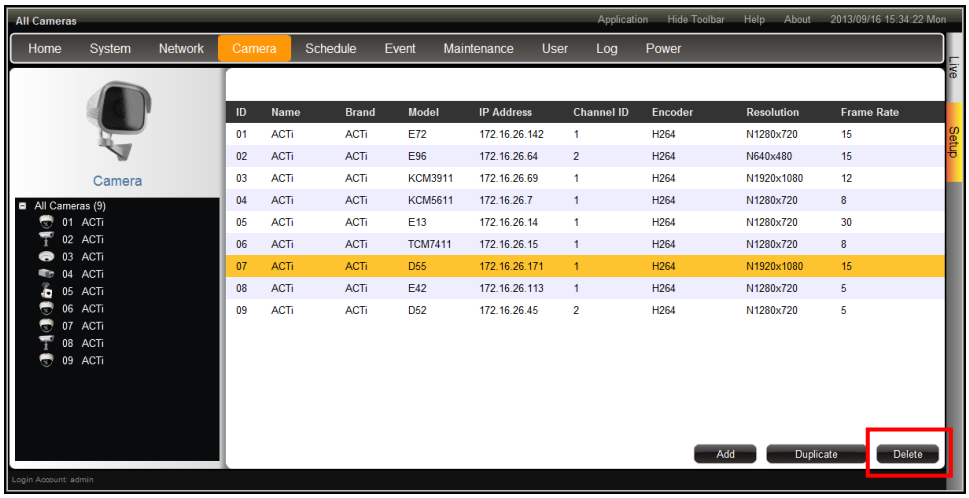
Item	Description
	This field cannot be modified.
Protocol	Displays the video stream protocol. You can modify the video stream protocol, as needed.
Channel ID	For dual stream cameras, select the stream to view. Usually, stream 1 or **Channel ID** 1 is configured to be the best quality stream for recording purposes and stream 2 or **Channel ID** 2 with basic quality for live viewing, like viewing through the Decoder. Once the Channel ID is selected, the succeeding camera properties, such as encoder, resolution, etc., change according to the compression settings of the selected stream.
Encoder	Displays the video stream encoder type. You can modify the encoder type for the current stream, as needed. Note that for local viewing, only H.264 is supported.
Resolution	Displays the video stream resolution. You can modify the resolution, as needed. Note that for local viewing, only up to 2 megapixel (1920 x 1080) is supported.
Frame Rate	This is the amount of frame per second of the video stream. You can modify the frame rate, as needed.
Max Bitrate (only for H.264)	Defines the upper limit of the bitrate. The bitrate will be floating slightly under that limit. For example, if the limit is set as 2M, the bitrate will be floating around 1.6~2.0 Mbps. If the **Max Bitrate** is “Unlimited”, then the **Bitrate** selection box will appear that defines the bit rate level.
Bitrate (only for H.264)	When Max Bitrate is “Unlimited”, the user can define the AVERAGE bit rate. For example, if the Bitrate is 2M, then occasionally, the actual bit rate may go below or beyond 2M, but in the long run, the average bit rate will be very close to 2M. This mode allows the most accurate storage estimations, however, while planning the bandwidth, please consider the occasional peaks of bit rate.
Video Quality (only for MJPEG)	The user can define the quality with the numeric scale from 1 to 100. The default MJPEG quality is 60. The higher is the quality level, the more bit rate the camera will use to achieve the target quality. However, note that local Live View cannot display streams other than H.264.
Mounting Type (only for Fisheye cameras)	Displays the mounting type of the camera. This field appears only on Fisheye camera models and cannot be modified.

Item	Description
Installation Angle (only for Fisheye cameras)	Displays the installation angle of the camera. This field appears only on applicable Fisheye camera models and cannot be modified.

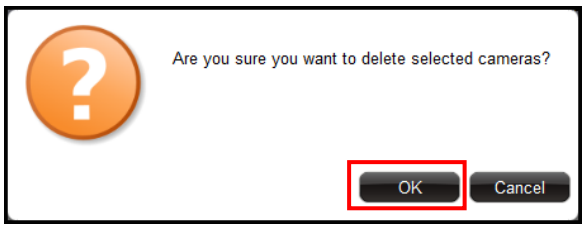
5. When done, click **Save**. The camera properties are saved and the Decoder restarts the connection.

Deleting Cameras

1. On the **Setup** page, click **Camera**.
2. If the camera list table is not shown, click **All Cameras** or **Camera List**.
3. On the camera list table, click the camera(s) to delete. Click as many cameras as needed.



4. Click **Delete**.
5. A message appears, click **OK** to confirm.



3.6 Configuring User Access

User access permissions are managed by **Groups**. **Groups** define what functions and devices are allowed for each user. Different **Groups** may have different access rights, like **Live View**, **Setup Access**, and **Remote Access**.

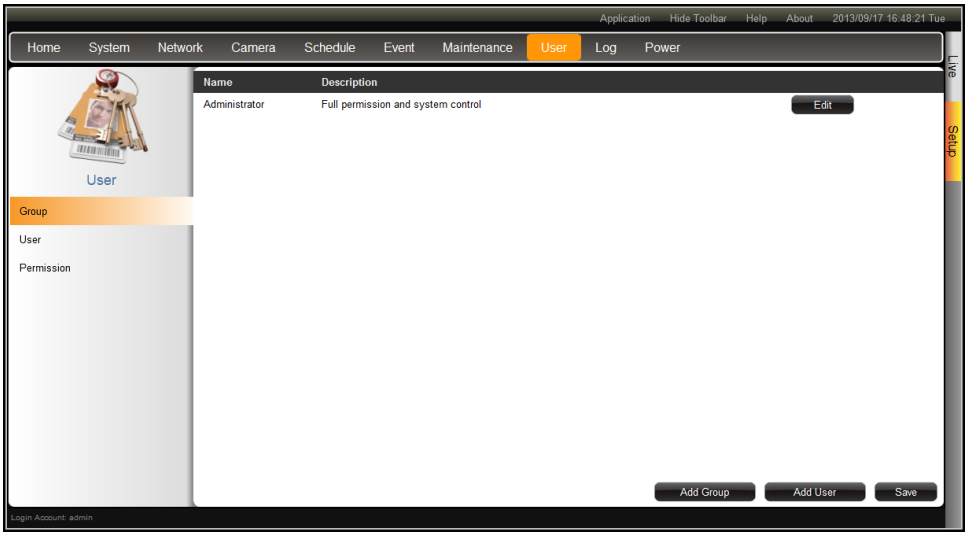
To setup access permissions, perform the following:

1. Create a group. See below.
2. Add users to the group. See ***Adding Users*** on page 95.
3. Set the access rights. See ***Granting Access Permission*** on page 96.

Creating Groups

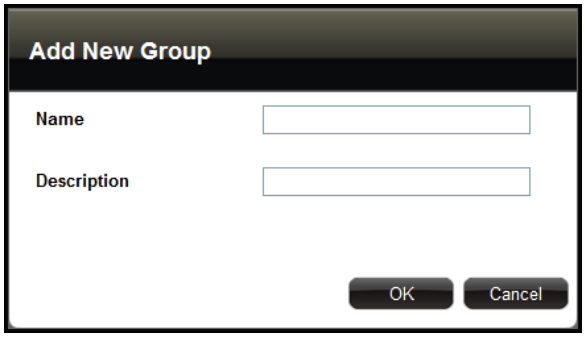
By default, an **Administrator** group with the "**admin**" user is preset with **Live View**, **Setup Access** and **Remote Access** rights.

1. On the **Setup** page, click **User** > **Group**.

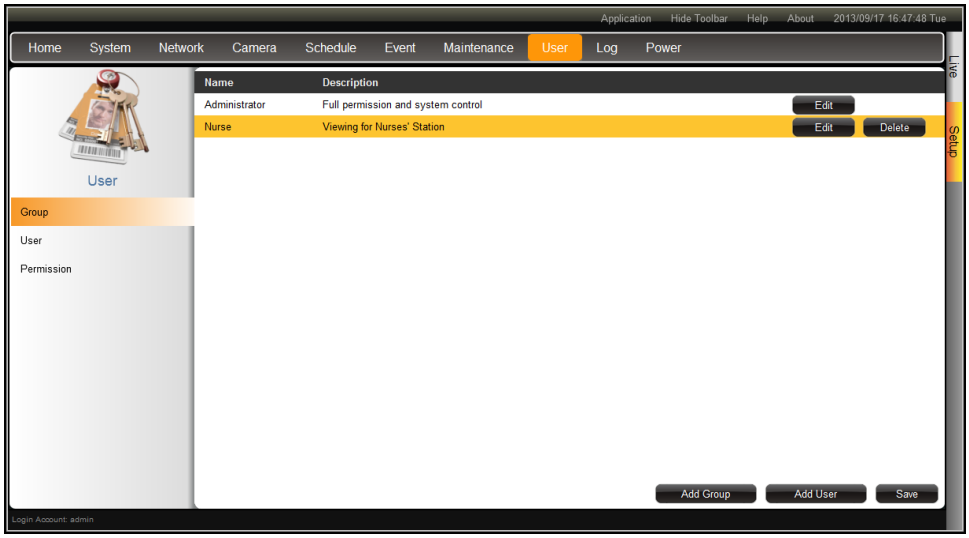


2. Click **Add Group**.
3. Enter the group **Name** (up to 32 characters) and **Description** (up to 128 characters).

   NOTE: The group name can be up to 32 alphanumeric characters; symbols and spaces are not allowed.

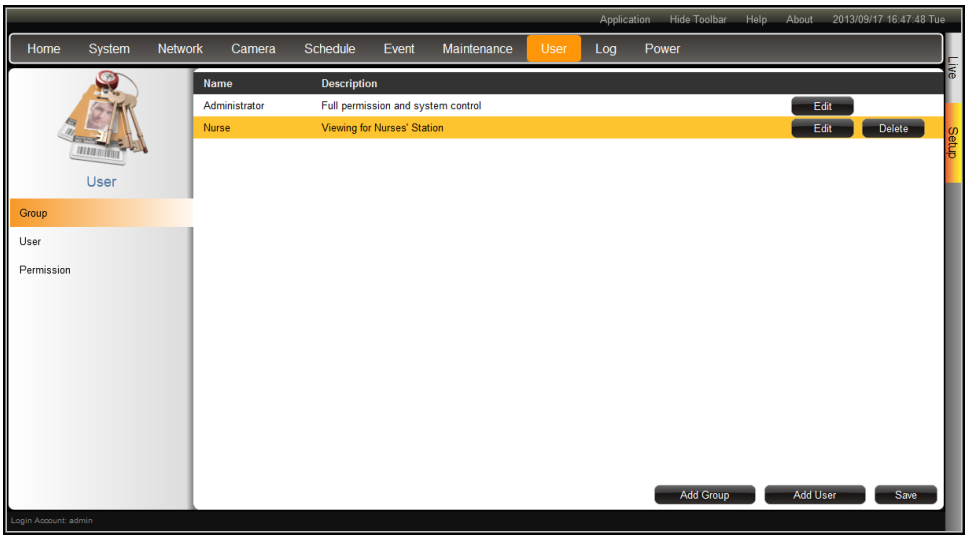


4. Click **OK**. The new group appears on the group table.

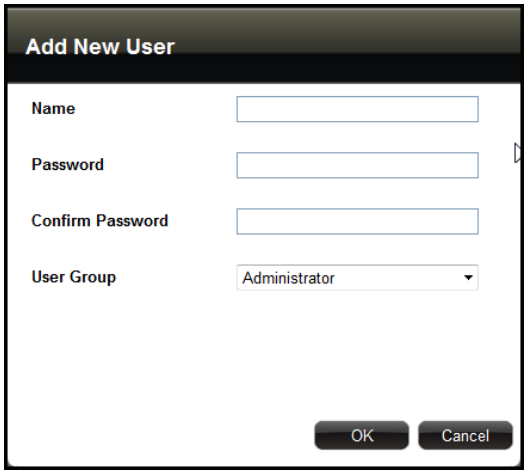


Adding Users

1. On the **Setup** page, click **User** > **User**. By default, the "**admin**" user is preset and cannot be deleted.



2. Click **Add User**.
3. Enter the following information:

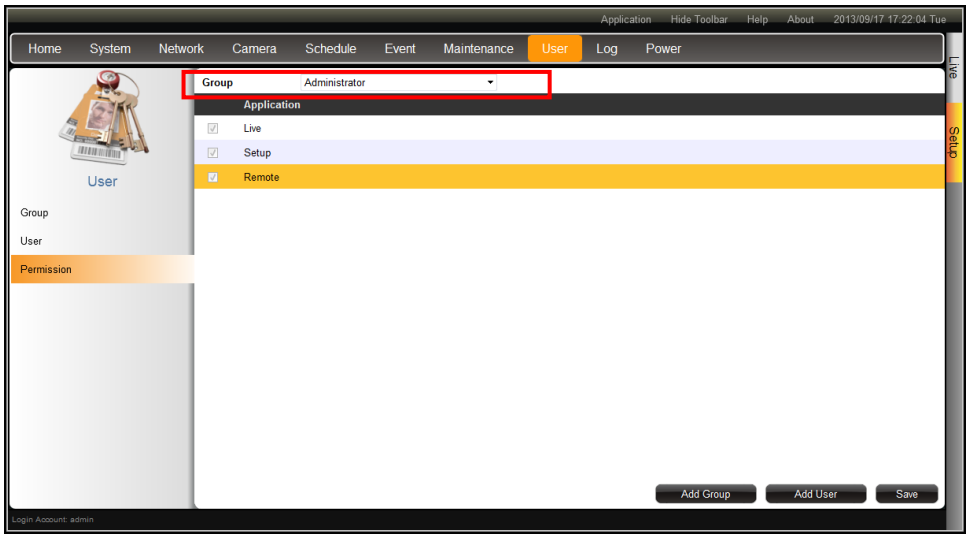


Item	Description
Name	Enter a user name. The name can be up to 63 alphanumeric characters; symbols are not allowed.
Password	Enter the password that will be used by the user to log into the Decoder.
Confirm Password	Re-type the password here. The two passwords must match.
User Group	Select the group to where the user belongs. This group defines the access rights granted for the user.

4. Click **OK**. The new user is added to the user table.

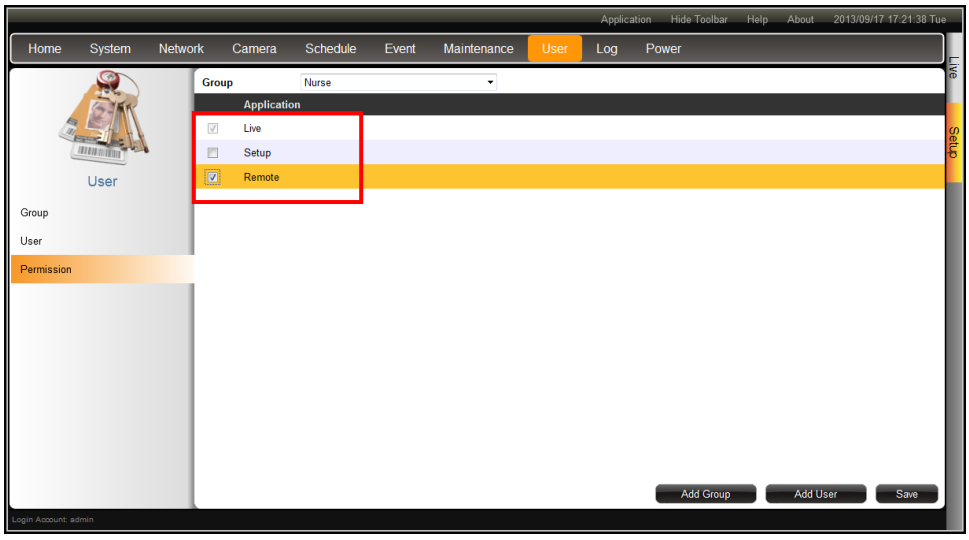
Granting Access Permission

1. On the **Setup** page, click **User** > **Permission**.
2. On **Group**, select the group.



3. Check the box to grant its access permission, options are:

   - **Live**: Permission for Live View. Live View access is always enabled.
   - **Setup**: Permission to access the **Setup** page from both the local and remote client. Granting this access enables the user to modify the camera and system settings.
   - **Remote**: Permission to access the Decoder through a remote client computer.



4. When done, click **Save**.

Managing Groups and Users

Except for the **Administrator** group, all user-defined groups and users can be modified.

- To modify a group or user, click the corresponding **Edit** button.
- To delete a group or user, click the corresponding **Delete** button.

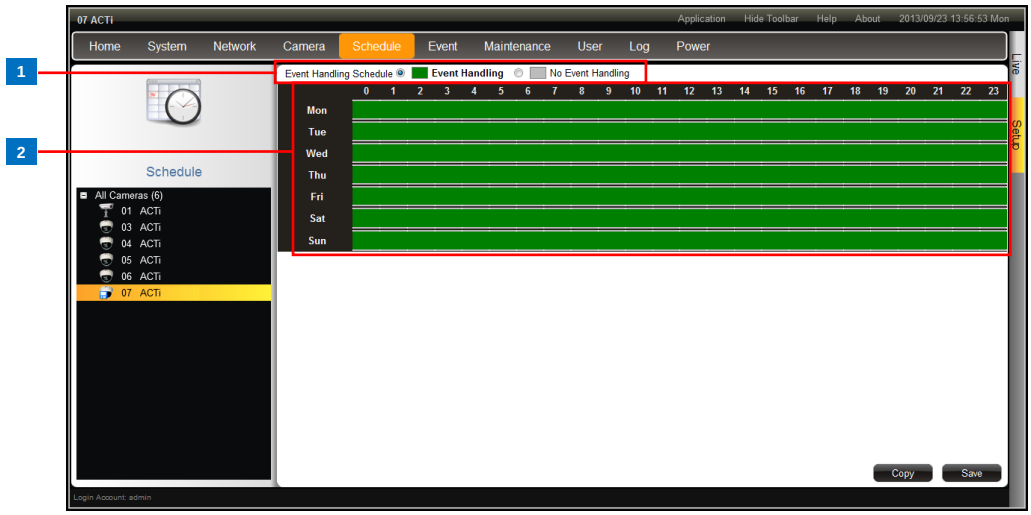
3.7 Managing Network Loss

When a camera suddenly disconnects from the network, the Decoder will trigger a network loss notification by displaying a network loss icon and a beep sound.

By default, the trigger is enabled for 24 hours a day and 7 days a week. However, the beep sound must be enabled and configured separately.

Scheduling Network Loss Trigger

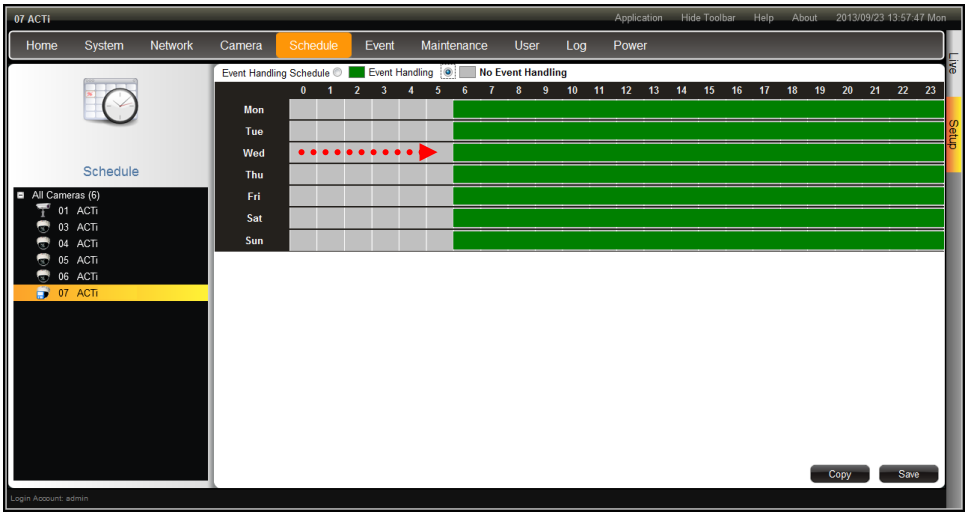
6. On the **Setup** page, click **Schedule**.
7. Select the camera from the camera list panel.



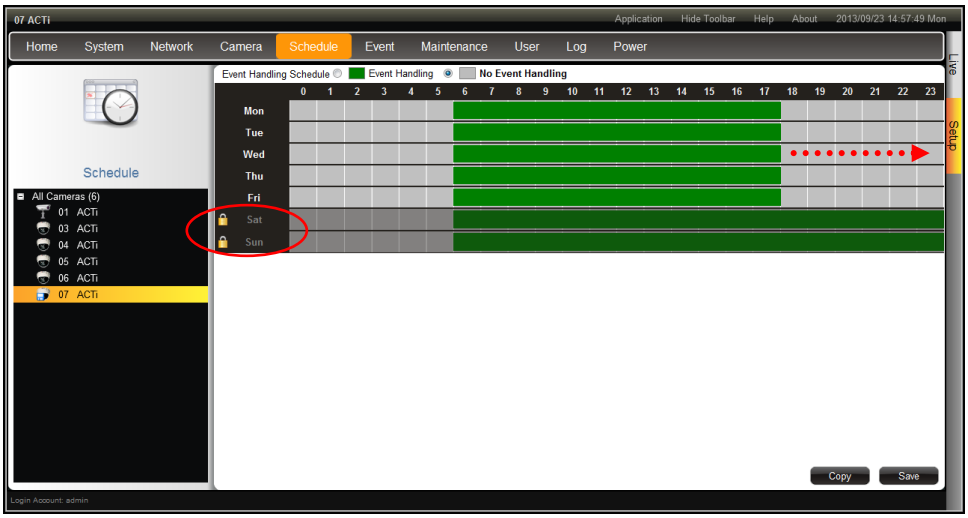
Item		Description
1	**Event Handling Schedule**	• **Event Handling**: Enables event trigger. • **No Event Handling**: Disables event trigger.
2	**Time Table**	Shows green cell if event trigger is enabled and gray cell if event trigger is disabled.

8. Select either **Event Handling** or **No Event Handling**.

9. Drag the mouse over the time table to select the time period. By default, the schedule affects all the days of the week.



10. To exempt a particular day from time selection, click the day. A lock icon appears. In the example below, Saturday and Sunday are locked so both days are not included in the time selection.



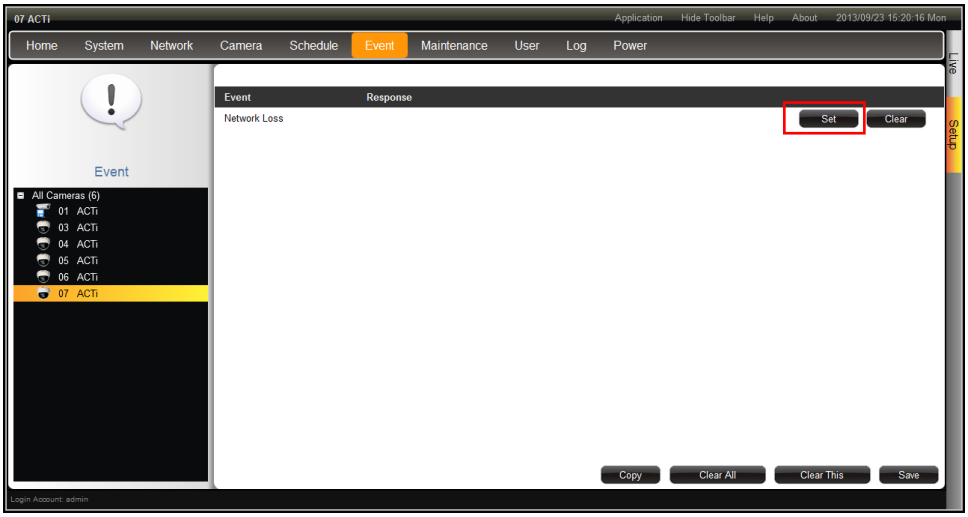
11. When done, click **Save**.

TIP: Instead of manually modifying the event trigger on all cameras, users can copy the schedule to other channels. See ***Copying Event Schedule Settings*** on page 101.

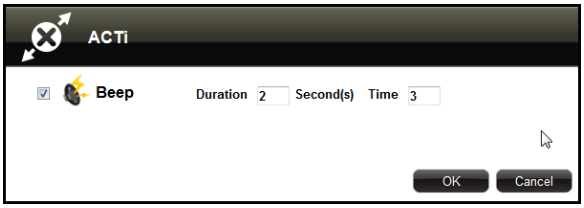
Enabling Beep Sound Trigger

To enable the beep sound when a camera is disconnected from the network, do the following:

7. On the **Setup** page, click **Event**.
8. Click the **Set** button on **Network Loss**.



9. Check **Beep** to enable the beep sound.

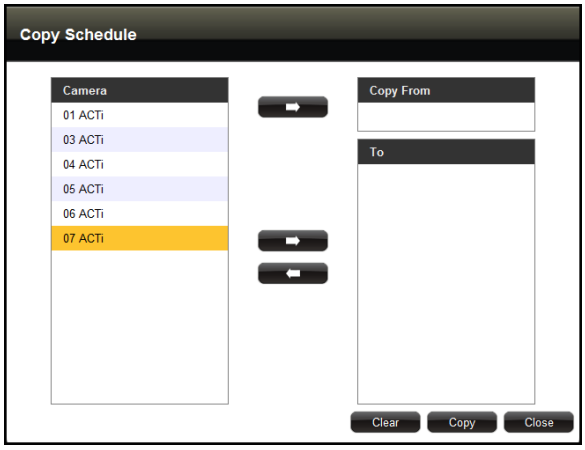


10. Set the beep duration and the number of beeps to sound when the event is triggered.
11. Click **OK**.
12. Click **Save** to save the configurations. The Decoder will demonstrate and emit the beep sound as configured.

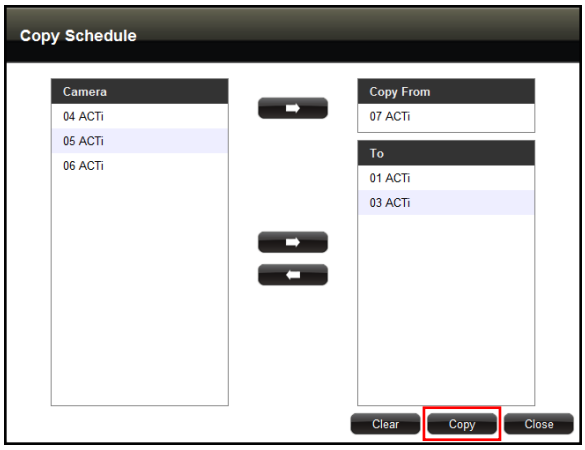
Copying Event Schedule Settings

Instead of manually modifying the event schedule and beep settings on all cameras one by one, users can copy the settings to other channels.

5. After setting the event schedule or beep settings, click **Copy**. The **Copy Schedule** window appears.
6. The current camera is highlighted in orange. Click the **Copy From** button. This sets the current camera as the source.



7. Select camera(s) from the left panel and click the **To** button.
8. Click **Copy**. The current camera event schedule or beep settings will be copied to the camera(s) under **To**.



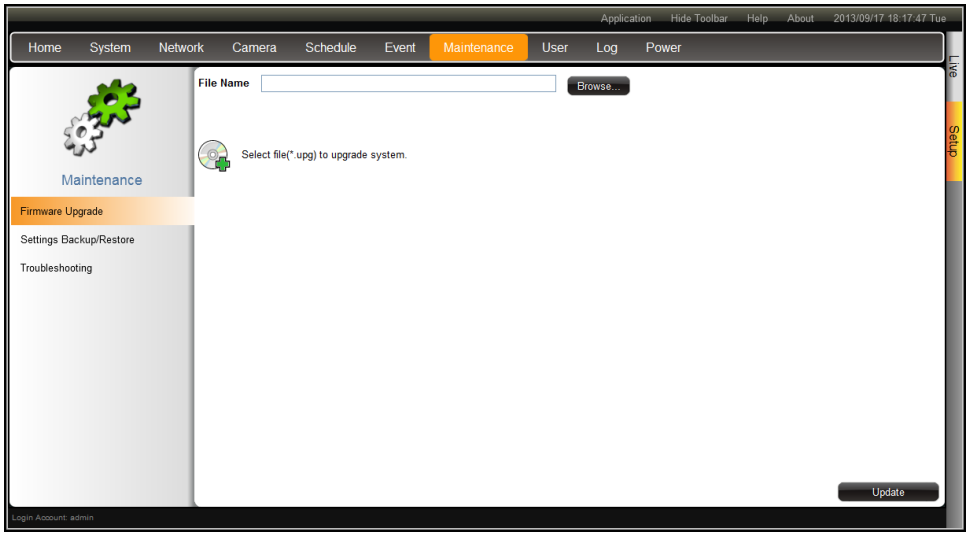
9. A message appears when copy is complete. Click **OK** to close the window.

3.8 System Maintenance

The **Maintenance** page allows users to upgrade the firmware, backup or restore the system settings, and save error reports for troubleshooting.

Upgrading the Firmware

1. Check and download the latest firmware package from the website (www.acti.com).
2. On the **Setup** page, click **Maintenance** > **Firmware Upgrade**.



3. Click **Browse**, and then browse for the downloaded firmware file (*.upg).
4. Click **Update** to start the upgrade.

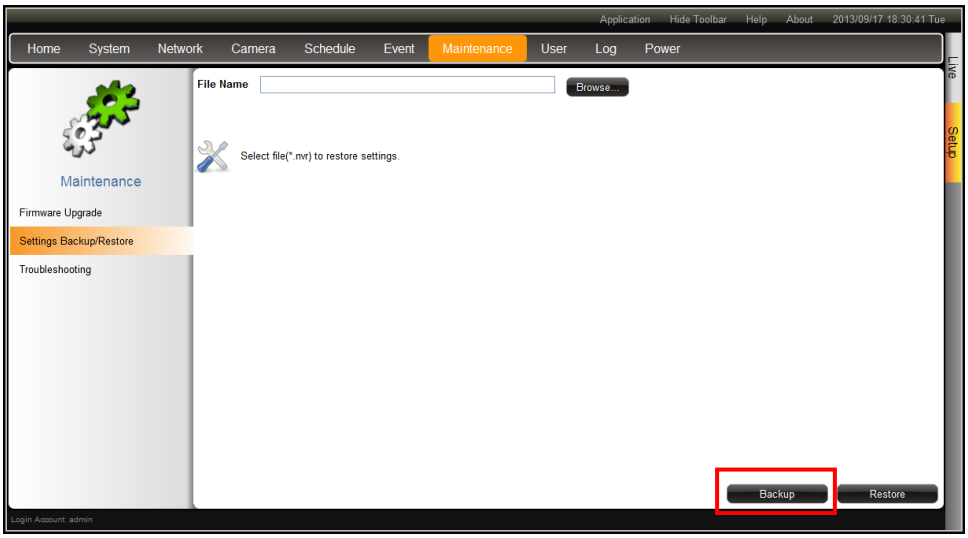
   WARNING: Do not restart or turn off the remote computer while the system is upgrading the firmware!
5. A message appears when upgrade is complete, click **OK** to reboot the Decoder.

   NOTE: All video streams will be lost for a few seconds until the Decoder completes the reboot process.

Saving Backup Settings

It is recommended to make regular system backup in case of unexpected disasters or accidents.

1. On the **Setup** page, click **Maintenance** > **Settings Backup/Restore**.
2. Click **Backup**.

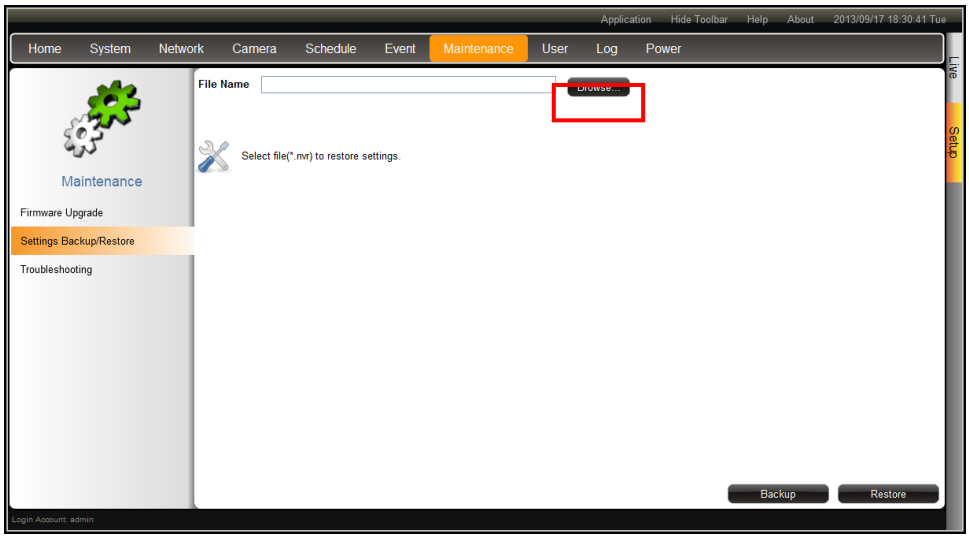


3. A pop up message appears. The Decoder creates a backup file of the whole system settings as ***Backup_[yyyymmdd]*.nvr** file. Save the file to the hard disk or to a USB disk connected to the remote computer.

The backed up settings include the following properties: (1) **System Settings** including **System Name**, **Date & Time**, **Network**, and **Mouse**, (2) **Camera Settings,** (3) **Schedule Settings,** and (4) **Event Management**.

Restoring Backed Up Settings

1. On the **Setup** page, click **Maintenance** > **Settings Backup/Restore**.
2. Click **Browse**. Then browse for the backed up file (***Backup_[yyyymmdd]*.nvr**).

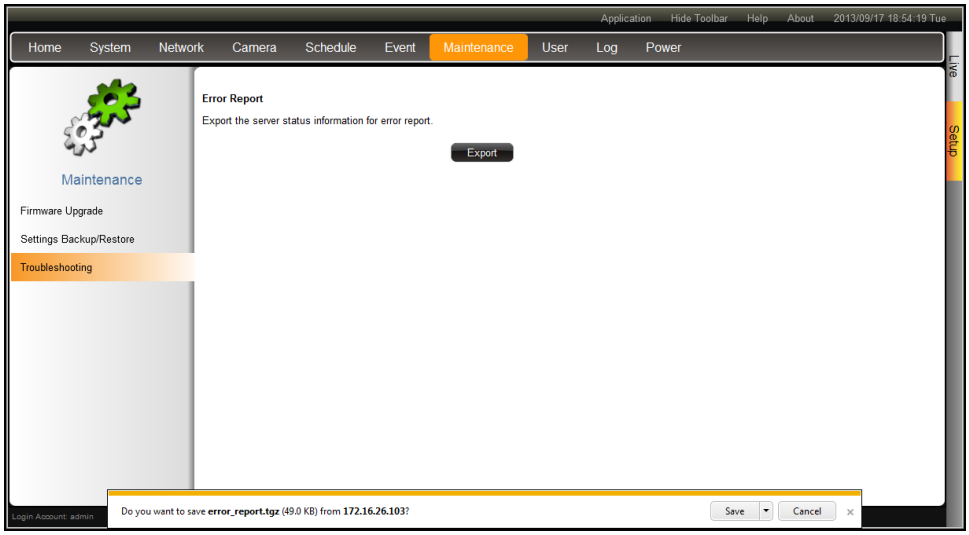


3. Click **Restore**.
4. A confirmation message appears, click **OK** to continue.
5. When done, click **OK** to restart the system for the changes to take effect.

Troubleshooting

The **Troubleshooting** page allows users to export an error report (*.tgz) to be sent to the Customer's Help Desk (CHD) for troubleshooting purposes.

1. On the **Setup** page, click **Maintenance** > **Troubleshooting**.
2. Click **Export**.

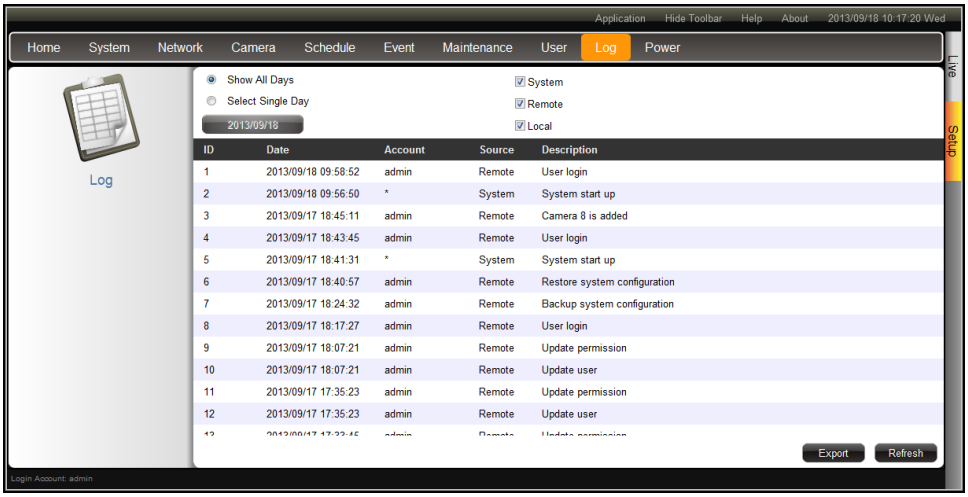


An error report (**error_report.tgz**) is generated. Save the file and send it to the CHD for troubleshooting.

3.8 Managing the System Log

The **Log** page allows users to view the Decoder activity log and save a log report as an XML file. The Decoder saves the latest 3000 logs. Logs can be filtered according to date and the source of activity.

1. On the **Setup** page, click **Log**.



2. To filter according to date, select **Show All Days** to display all the logs or select **Select Single Day** and click the date to change the date. The table is updated automatically.
3. To filter by source of activity, check or uncheck **System**, **Remote**, and/or **Local**. The table is updated automatically.
4. To save the log report, click **Export**.
5. Browse for the target location and save the log report file (*.xml).
6. When log export is complete, click **OK**.
7. To refresh the list, click **Refresh**.

3.9 Rebooting the Device

1. On the **Setup** page, click **Power**.
2. Click **Reboot**.
3. When the confirmation message appears, click **OK** to reboot.

   NOTE: All video streams will be lost for a few seconds until the Decoder completes the reboot process.

Chapter 4: Installation and Maintenance

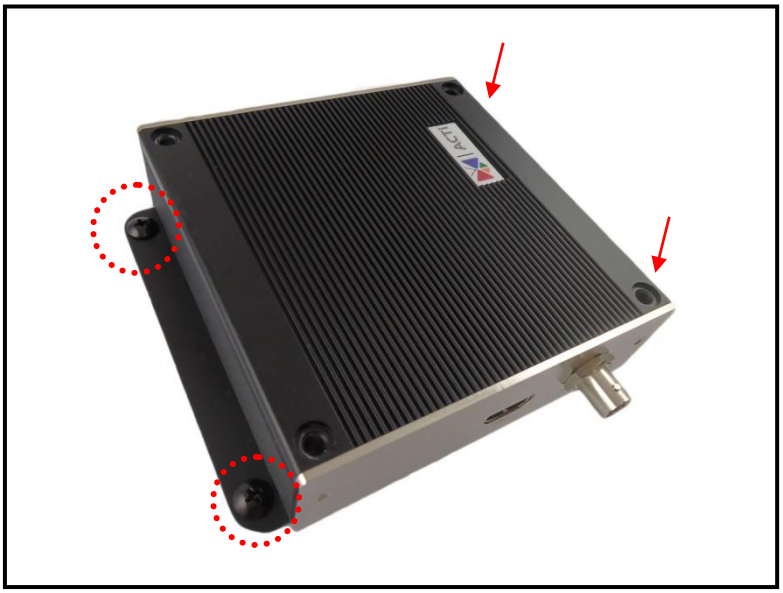
This chapter describes the different ways to install the Decoder:

- Surface Mount
- VESA Mount
- Pole Mount

4.1 How to Surface Mount?

The Decoder can be mounted on a straight wall or on a table or pedestal. For wall installation, it is recommended to install the Decoder with the HDMI and Composite connectors facing down.

1. Mark the 4 screw holes on the surface.
2. If necessary, drill the holes and insert the plastic plugs.
3. Attach the 4 supplied screws to secure the device.



4.2 How to Use VESA Mount?

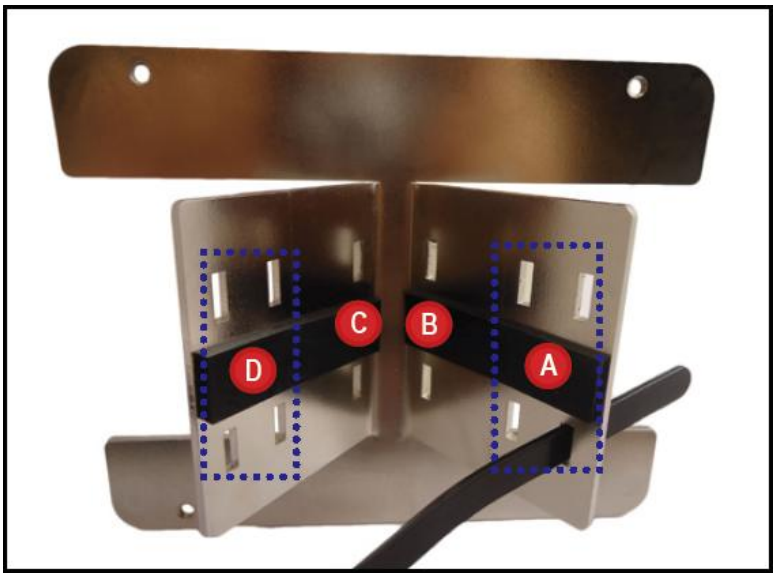
The Decoder is designed to be directly installed between a VESA mount and a monitor.

1. Place the device in between a VESA mount (10 x 10) and the monitor, with the top side of the device facing the monitor while the bottom side facing the VESA mount.
2. Attach the 4 supplied long screws to secure the Decoder.

4.3 How to Use the Pole Mount?

The Decoder comes bundled with pole mount accessories, like the cable straps and the bracket. The cable straps can hold poles with 1” to 2” diameter.

1. With the smooth side outwards, insert the supplied cable straps through the holes (A ⟶ B ⟶ C ⟶ D).



NOTE: Use the inner A and D holes if mounting on a pole with 1” diameter or the outer A and D holes for a 2” diameter pole.

2. Align the pole mount to the pole.
3. Insert the cables through the latches and push all the way until they fit snugly to the pole.

4. Align the Decoder to the mount with the Ethernet port side up and HDMI port side down.
5. Attach the 4 supplied long screws to secure the Decoder to the mount.