DSS-1000

User Manual

For V1.02.09 Firmware

Ver. 2014/10/03

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- 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.

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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 DSS 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.

Technical Support

If you have any questions during system installation, please feel free to contact our engineers via our **Customer Help Desk** platform.

Table of Contents

Chapter 1: Hardware Overview 10

1.1 Introduction 11

Package Contents 11
Device Overview 12
System Requirements 13
Supported Video Format 13
Decoding Limitation 13

1.2 Connecting Devices 15

Connection Architecture 15
Preparing the Power Adaptor 16
Connecting to Local Display 17
Local Display via HDMI Connection 17
Local Display via Composite Connection 17
Connecting the Cameras 18

1.3 Accessing DSS-1000 19

Local Access 19
Remote Access 19
Local vs. Remote Access 19

1.4 Device Maintenance 20

Resetting the Device 20
Switching Between NTSC and PAL Mode 20

Chapter 2: Local Management 21

2.1 Accessing for the First Time 22

Quick Setup 23
Step 1: Login 23
Step 2: Change the IP Address (If necessary) 23
Step 3: Add Cameras 24

2.2 The Live View Screen 27

The Menu Panel **28**
Changing the Layout **29**
Viewing Channels in Full Screen **30**
Viewing Channels by Patrol **31**
Repositioning Channels **31**

2.3 The Login Screen 33

Using the On-Screen Keyboard **34**

2.4 Using the PTZ Control Panel 35

Setting Preset Points **37**
Setting Tours **39**

2.5 Accessing the Setup Screen 42

The Setup Screen **42**

2.6 Configuring System Settings 43

System Information **43**
Module **44**
Date and Time **44**
Automatically Set the Date and Time 44
Manually Change the Date and Time 45
Sync Date and Time with NTP Server 46
Language **46**
Mouse **47**
Local Display **47**
Local Audio Out **48**

2.7 Configuring Network Settings 49

Viewing the Network Information **49**
Configuring the Network Connection **50**
Setting the IP Address Manually 50
Obtaining the IP Address Automatically 51
Configuring Port Mapping **51**

2.8 Configuring the Cameras 52

The Camera Setup Page **52**
Adding Cameras **53**
Searching Cameras to Add 53
Adding Cameras Manually 55
Adding ONVIF-Compliant Cameras Manually 57
Adding Cameras Manually via RTSP 58
Modifying Camera Settings **61**
Reconnecting Cameras **64**
Deleting Cameras **64**

2.9 Managing Network Loss Event 65

Scheduling Network / Video Loss Trigger **65**
Enabling Beep Sound Trigger **67**
Copying Event Schedule Settings **68**

2.10 Rebooting the Device 69

Chapter 3: Remote Management 70

3.1 Accessing DSS-1000 Remotely 71

How to Access DSS-1000? **71**
Accessing From a Network with DHCP Server 71
Accessing From a Network without DHCP Server 73
The Login Screen **74**
The Setup Wizard **75**

3.2 The Live View Page 78

Viewing the Cameras **80**
Changing the Window Layout **82**
Patrolling Channels **83**
Syncing Remote and Local Live View Display **84**
Reconnecting the Cameras **84**
Removing Video Stream from Live View **84**
Using Optical / Digital PTZ **85**
Taking Snapshots **86**
Using the PTZ Control Panel **87**
Viewing by Preset Point and Tour **88**
Using the Toolbar **89**

3.3 The Setup Screen 91

3.4 Configuring the System Settings 92

System Information 92
Date and Time 93
Automatically Set the Date and Time 93
Manually Change the Date and Time 93
Sync Date and Time with NTP Server 94
Module 95
Language 95
Local Display 96

3.5 Configuring the Network Settings 97

Viewing the Network Information 97
Configuring the Network Connection 98
Setting the IP Address Manually 98
Obtaining the IP Address Automatically 98
Configuring Port Mapping 99

3.6 Configuring the Cameras 99

Adding Cameras 101
Searching Cameras to Add 101
Adding Cameras Manually 104
Modifying Camera Settings 108
Deleting Cameras 111
Setting Preset Points on the Remote Client 112
Setting Preset Tours on the Remote Client 113

3.7 Configuring User Access 115

Creating Groups 115
Adding Users 117
Granting Access Permission 118
Managing Groups and Users 119

3.8 Managing Network Loss 120

Scheduling Network Loss Trigger 120
Enabling Beep Sound Trigger 122

Deleting Beep Trigger 122
Copying Event Schedule Settings 123

3.9 System Maintenance 124
Upgrading the Firmware.....124
Saving Backup Settings 125
Restoring Backed Up Settings.....126
Troubleshooting.....127

3.10 Managing the System Log..... 128

3.11 Rebooting the Device 128

Chapter 4: Installation and Maintenance 129

4.1 How to Surface Mount? 129

4.2 How to Use VESA Mount?..... 130

4.3 How to Use the Pole Mount? 131

Chapter 1: Hardware Overview

This chapter contains the following topics:

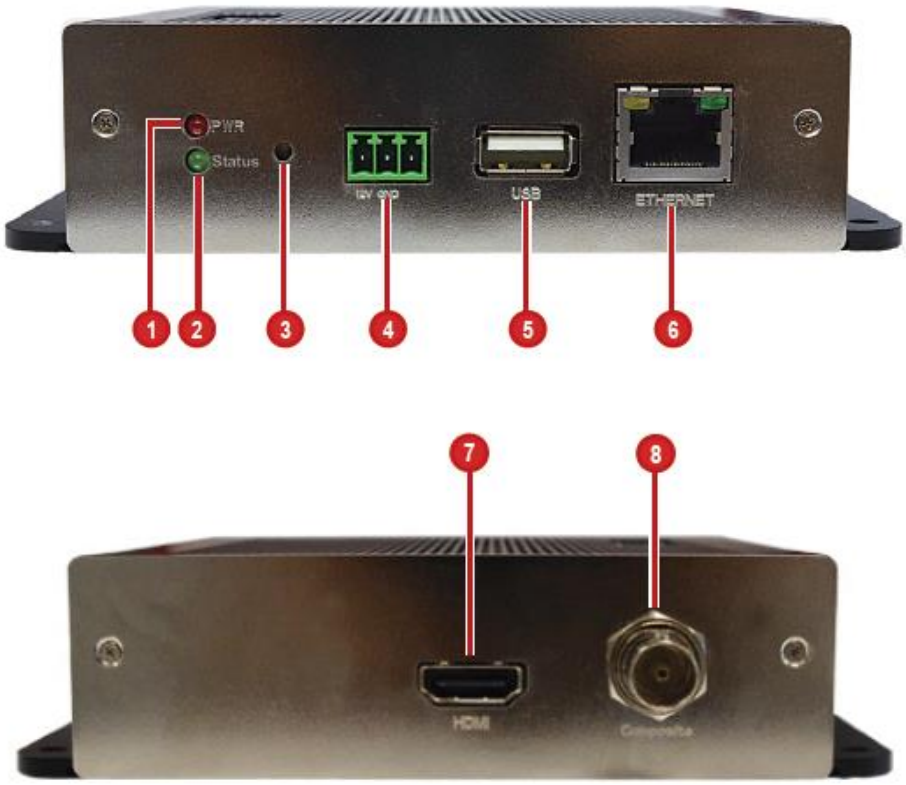
- **Introduction**: Describes the package contents, device overview, and the connection architecture.
- **Connecting Devices**: Describes how to connect DSS-1000 to other devices and how to use the bundled accessories.
- **Accessing the Device**: Describes the different methods on how to access the device via local display or remote management.

1.1 Introduction

Package Contents

DSS-1000	Screw Packs x 2	Cable Straps
Mounting Bracket	**Power Adaptor**	**Terminal Block**
Quick Installation Guide		

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 DSS-1000 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 DSS-1000 is ready for use.
3	Reset Button / NTSC and PAL Switch	• Use to restore DSS-1000 to its factory default setting. • Use to switch between NTSC and PAL functions.
4	DC 12V Power Connector	Connects the bundled power adaptor and terminal block to DSS-1000. See ***Preparing the Power Adaptor*** on page 16.
5	USB Port	Connects a USB device, such as a mouse, keyboard or hub, to DSS-1000.
6	Ethernet Port	Connects to the network using an Ethernet cable.

Item		Description
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 DSS-1000:

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 **2 megapixels**	Up to **10 megapixels**

DSS-1000 conforms to the display standard of composite and 1080p HDMI monitors. Therefore, to reserve as much computing power for DSS-1000 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, DSS-1000 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, when viewing 9 channels with 1920 x 1080 resolution in a 9-channel mode, DSS-1000 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.

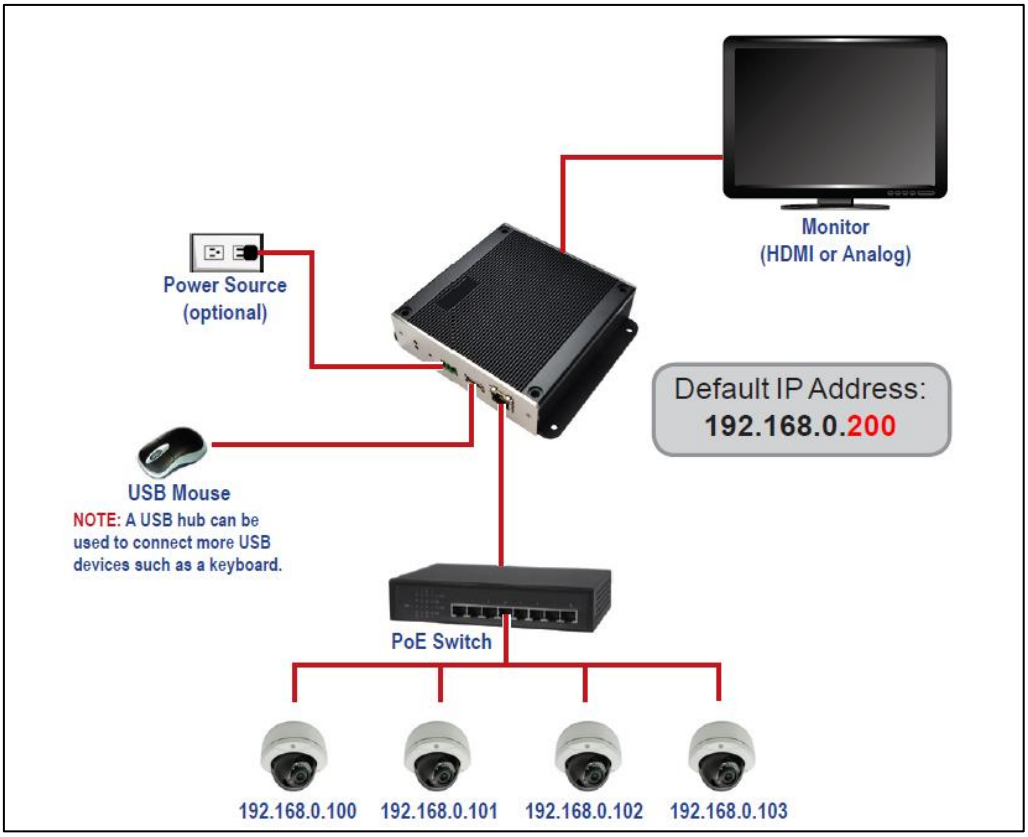
<table>
<tr><th>Video Stream Resolution</th><th>4-Channel Mode</th><th>9-Channel Mode</th><th>12-Channel Mode</th><th>16-Channel Mode</th></tr>
<tr><td>VGA
(640 x 480)</td><td>4 channels
@ 30 fps</td><td>9 channels
@ 30 fps</td><td>12 channels
@ 30 fps</td><td>16 channels
@ 30 fps</td></tr>
<tr><td rowspan="2">720p
(1280 x 720)</td><td rowspan="2">4 channels
@ 30 fps</td><td>7 channels
@ 30 fps</td><td>7 channels
@ 30 fps</td><td>7 channels
@ 30 fps</td></tr>
<tr><td>9 channels
@ 25 fps</td><td>12 channels
@ 16 fps</td><td>16 channels
@ 12 fps</td></tr>
<tr><td rowspan="2">1.3M
(1280 x 1024)</td><td rowspan="2">4 channels
@ 30 fps</td><td>6 channels
@ 30 fps</td><td>6 channels
@ 30 fps</td><td rowspan="2">1~16 channels
Decode I Frame only</td></tr>
<tr><td>9 channels
@ 20 fps</td><td>12 channels
@ 15 fps</td></tr>
<tr><td rowspan="2">1080p
(1920 x 1080)</td><td rowspan="2">4 channels
@ 30 fps</td><td>4 channels
@ 30 fps</td><td>4 channels
@ 30 fps</td><td rowspan="2">1~16 channels
Decode I Frame only</td></tr>
<tr><td>9 channels
@ 12 fps</td><td>9 channels
@ 10 fps</td></tr>
</table>

NOTE: Regardless of the configured frame rate of a camera video stream, DSS-1000 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 DSS-1000 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 DSS-1000.

2. Connect a monitor to DSS-1000 via HDMI or Composite port connection (see ***Connecting to Local Display*** on page 17).

3. Connect a USB mouse.

4. Connect DSS-1000 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).

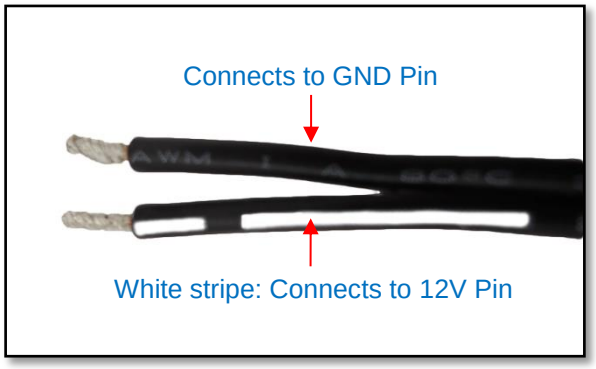
Preparing the Power Adaptor

In case of using a non-PoE Ethernet switch, use the bundled power adaptor to directly connect DSS-1000 to a power outlet. The power adaptor must be connected to the supplied terminal block before use.

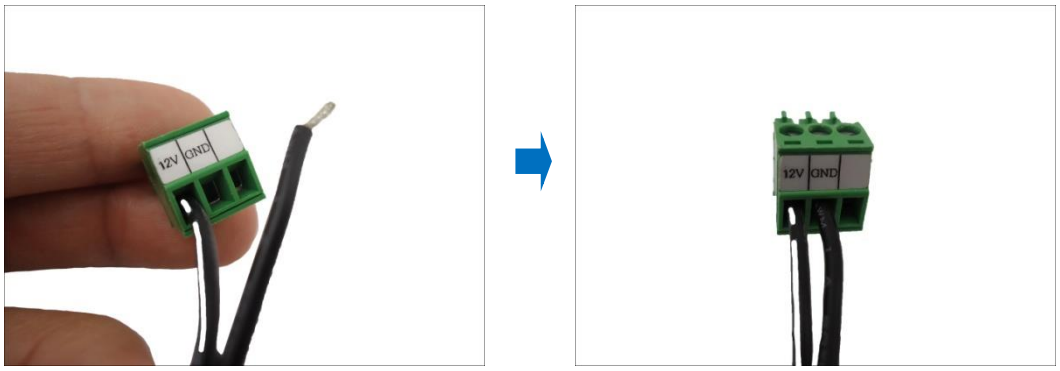
To do this, follow the procedures below:

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

DSS-1000 supports up to two display outputs via HDMI and 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 DSS-1000 using an HDMI cable (not included in the package).

Local Display via Composite Connection

Connect a composite monitor to the **Composite port** of DSS-1000 using a video cable with BNC connector (not included in the package).

Connecting the Cameras

DSS-1000 can decode up to 16 IP cameras or video encoders 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 DSS-1000, 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 DSS-1000 user interface to search and finalize the camera connection (see ***Quick Setup*** on page 23).

1.3 Accessing DSS-1000

DSS-1000 can be accessed and managed in two ways: via **Local access** or **Remote access**.

Local Access

A monitor that is directly connected to DSS-1000 via the HDMI or Composite port is considered **Local Access** by a **Local Client**. Users can view the videos from the camera and manage network configurations right through the monitor.

To access DSS-1000 user interface, simply connect a USB mouse and a monitor to DSS-1000.

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

Remote Access

Remote Access is connected over the TCP/IP network and communicates through HTTP protocol. **Remote access** can either be from a web or mobile client. A computer with a web browser is a web client and a mobile device with the **Active Mobile Client** software is a mobile client. Both are considered **Remote Clients**.

On a computer with Internet Explorer, users can access DSS-1000 web interface by typing the IP address of DSS-1000 without installing any client program beforehand. Logging in is as simple as visiting a website.

Users can also view the videos via **Active Mobile Client** using mobile devices, like iPhone, iPad, iPod and Android devices. This feature only allows the users to view videos, advanced configurations must still be done through the local client or remote access through a web client. For more information, please refer to the Mobile Client documentation downloadable from the website.

NOTE: For simplicity, the term "**Remote access**" all throughout this documentation refers to remote access by a web client (PC).

Local vs. Remote Access

In most cases, it is recommended to perform the initial configurations, before DSS-1000 is even mounted to its location, using local access. Once the initial configurations are complete, install DSS-1000 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 DSS-1000, either by connecting the power adaptor or connecting DSS-1000 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 DSS-1000 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 DSS-1000 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 DSS-1000 for the first time. This includes changing DSS-1000 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

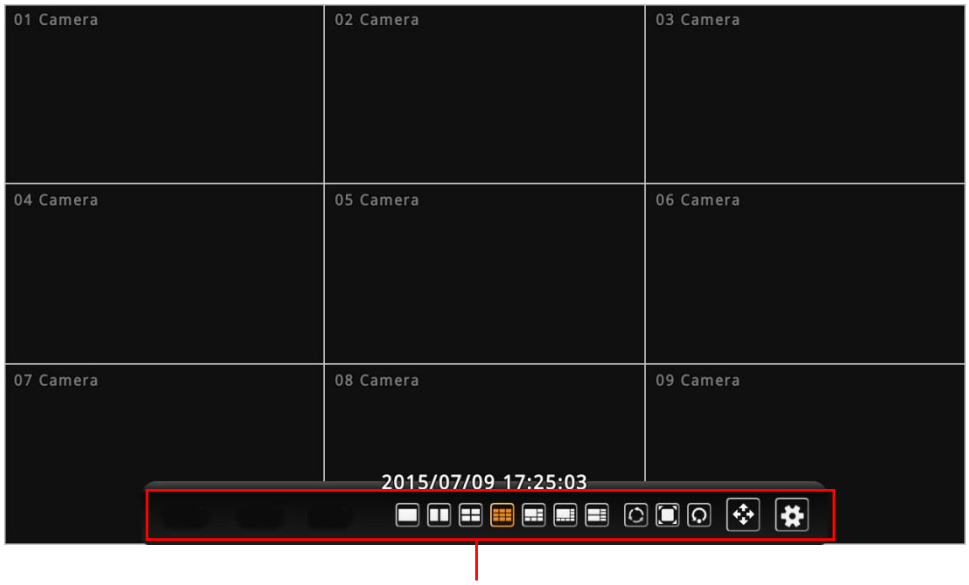
Once all devices are connected, turn on the monitor to see the **Live View** screen.

Network Connection Status:

Network Disconnected Cable is unplugged Connected

DSS-1000 comes with a default static IP address of **192.168.0.200**. If your network has a DHCP server, DSS-1000 will automatically switch the connection type to DHCP and be assigned an IP address.

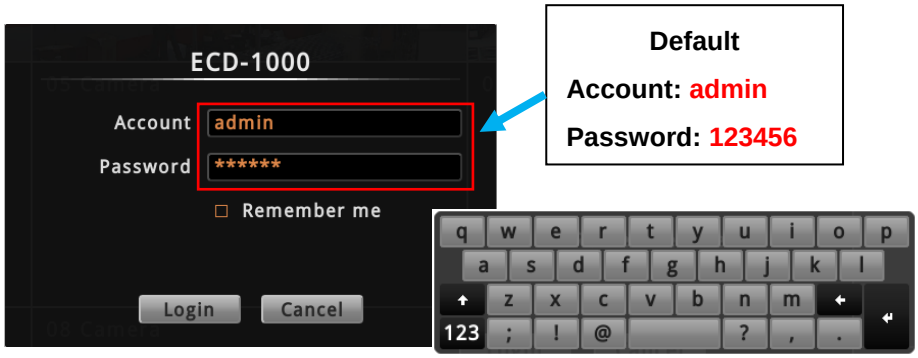
Use the USB mouse to navigate through the user interface. Move the mouse cursor towards the bottom of the screen to display the **Menu Panel**



Quick Setup

Step 1: Login

1. Click to access the **Setup** screen.
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 34.

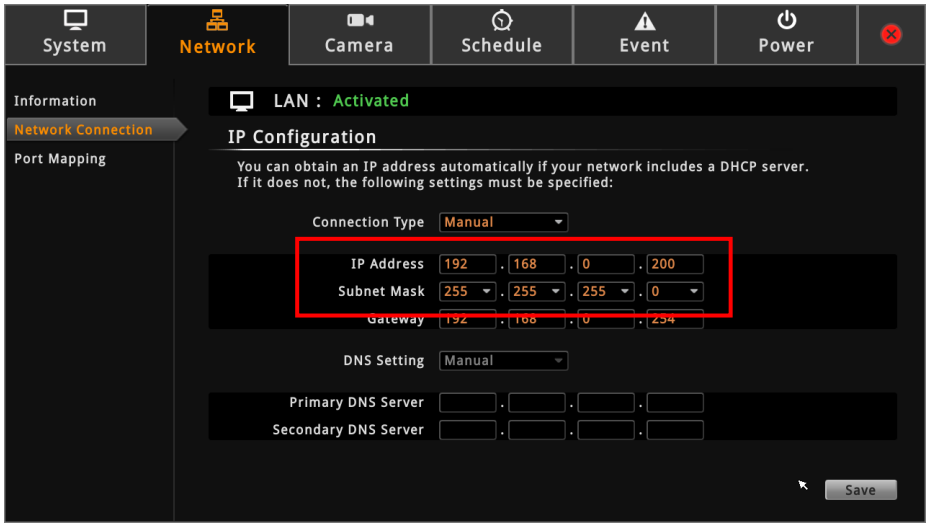
Step 2: Change the IP Address (If necessary)

If the network has a DHCP server, DSS-1000 is automatically assigned an IP address so users do not need to change anything. If the network does not have a DHCP server, DSS-1000 uses its default IP address of **192.168.0.200**.

Change the IP Address on Network without DHCP Server

Remember that DSS-1000 must be on the same network segment as the cameras. In case you need to change the IP address of DSS-1000, follow the procedures below on how to do this.

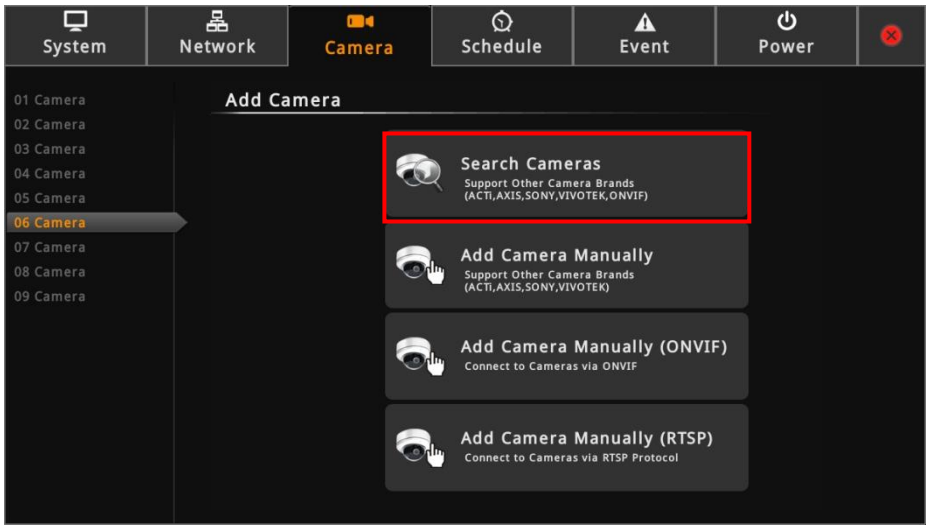
1. Click **Network** > **Network Connection**.
2. Make sure **Connection Type** is **Manual**.
3. Change the **IP address** using the on-screen keyboard (see ***Using the On-Screen Keyboard*** on page 34 for information on using the on-screen keyboard).



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

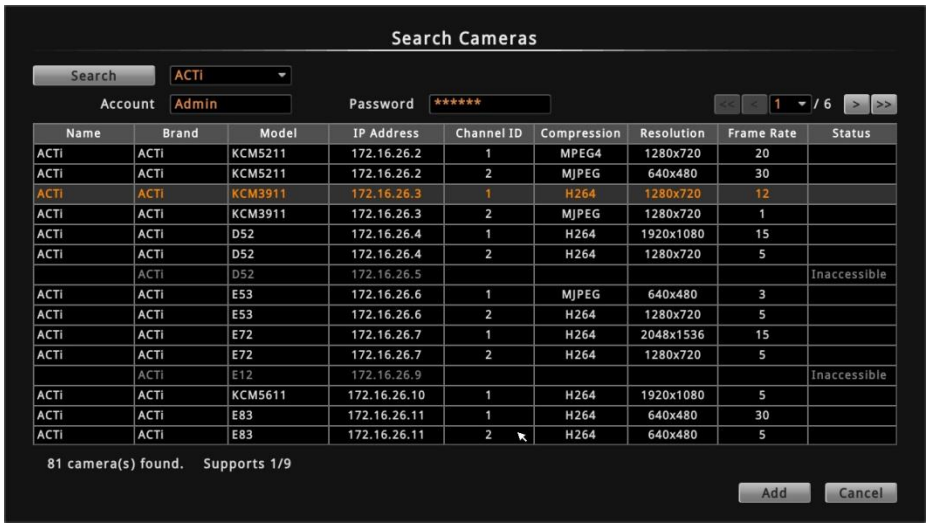
Step 3: Add Cameras

1. On the **Setup** screen, click **Camera** > **Search Cameras**.



NOTE: To add cameras by IP address or connect to camera via RTSP protocol, see ***Adding Cameras*** on page 53.

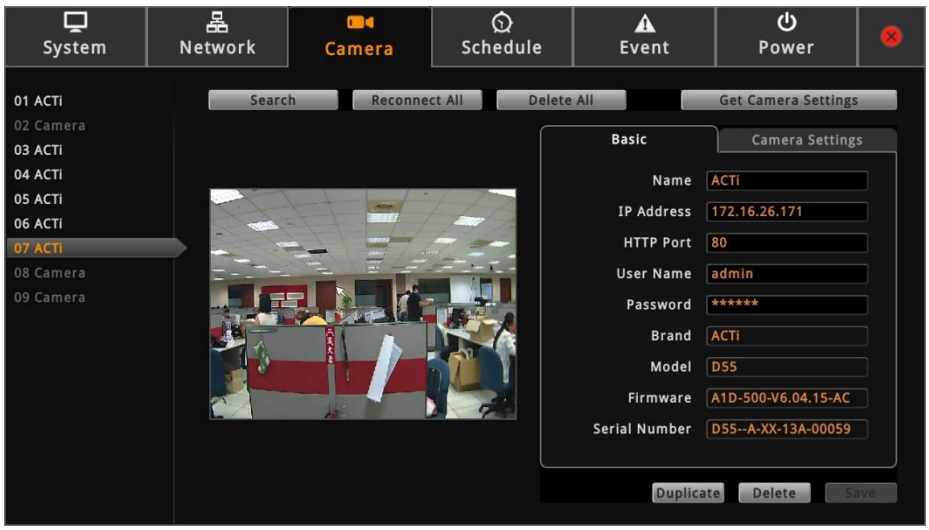
2. The **Search Cameras** screen appears with the list of cameras on the same network. By default, the camera manufacturer, user account name and password for access are already filed with default values. Modify these values as needed.



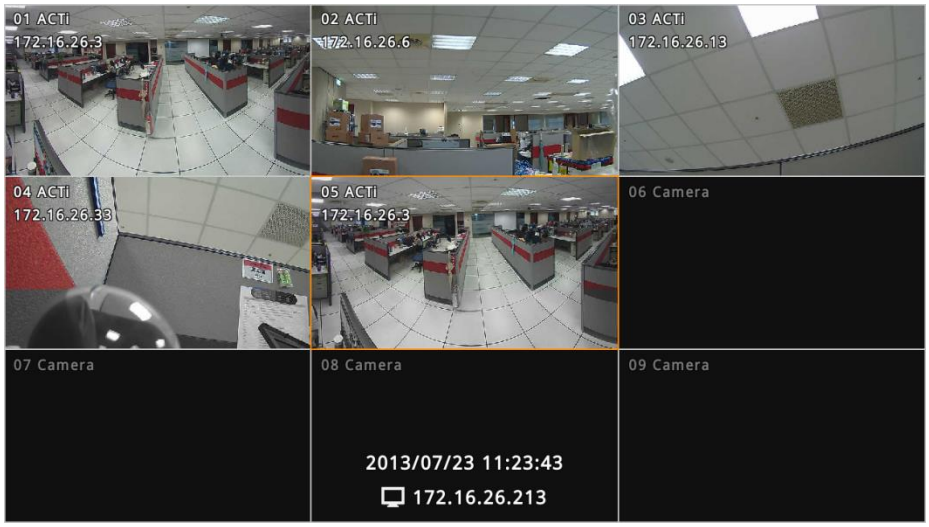
NOTE: DSS-1000 supports third-party cameras. To validate specific camera models that can be integrated, visit our website.

3. Click one or more camera model(s). Selected cameras are displayed in orange.
NOTE: By default, a maximum of nine cameras can be added. You can add more than nine cameras later by configuring **Module** to 12-channel or 16-channel mode, see ***Module*** on page 44.

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.



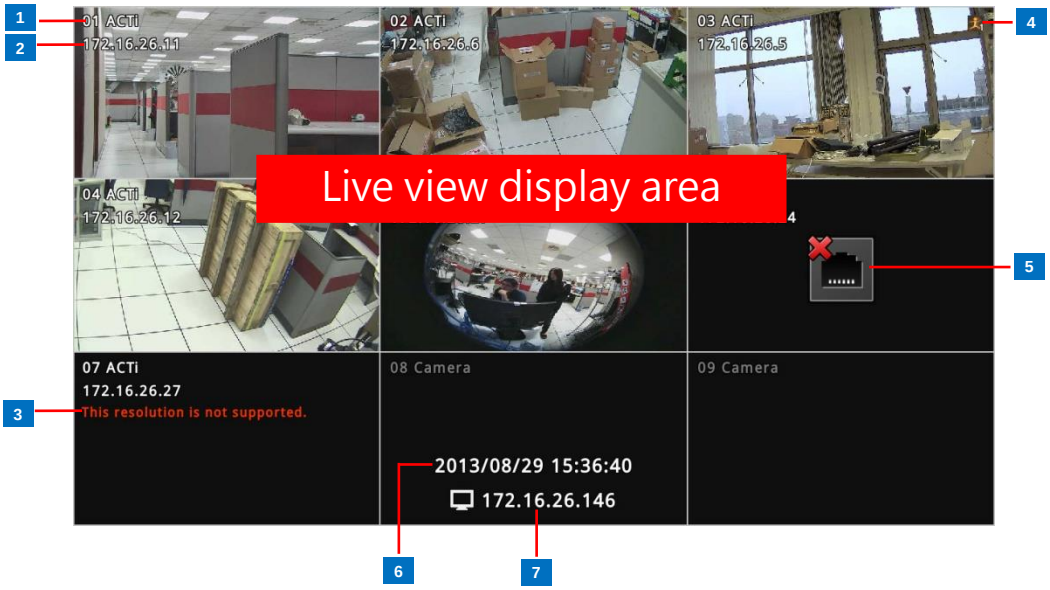
5. Click to close the **Setup** screen. The **Live View** screen appears with the added cameras.



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 47 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. These triggers are based on the events configured on the camera side.
5	Connection Error	Indicates the camera is disconnected from the network.
6	System Date and Time	The system date and time.
7	DSS-1000 IP Address	The IP address of DSS-1000.

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 31.
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	**PTZ Control**	Click to display the PTZ control panel. See ***2.4 Using the PTZ Control Panel*** on page 35.
6	**Setup**	Click to access the **Setup** screen. See ***2.5 Accessing the Setup Screen*** on page 42.

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. Available layout varies depending on current channel mode (see ***Module*** on page 44).

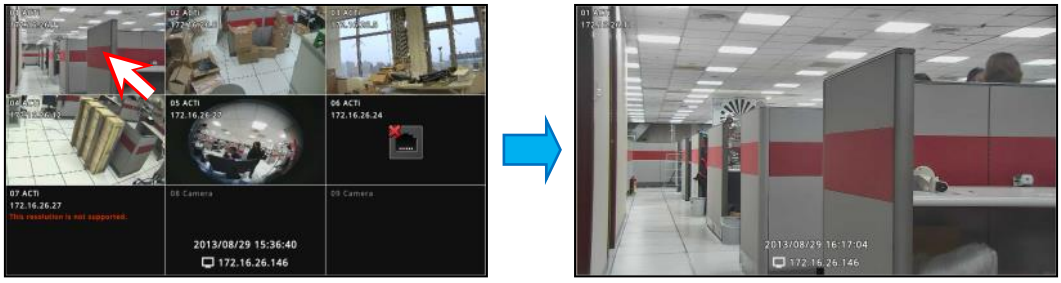
Layout 1	Layout 2	Layout 4
Click to display one channel on full screen.	Click to display 2 channels at a time.	Click to display 4 channels at a time.
Layout 9	**Layout 12**	**Layout 16**
Click to display 9 channels at a time.	Click to display 12 channels at a time.	Click to display 16 channels at a time.
Layout 1+5	**Layout 1+7**	**Layout 1+12**
Click to display 6 channels at a time on a 1+5 layout.	Click to display 8 channels at a time on a 1+7 layout.	Click to display 13 channels at a time on a 1+12 layout.

Layout 2+4	Layout 2+8	
Click to display 8 channels at a time on a 2+4 layout. 	Click to display 10 channels at a time on a 2+8 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

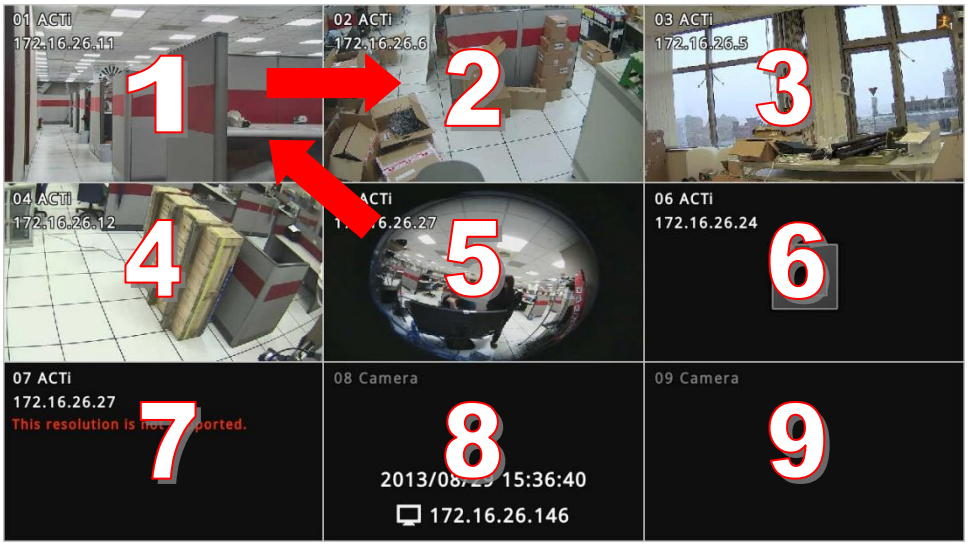
Instead of viewing all channels at the same time, users may want to view one channel in full screen and scroll through all the channels at a time. To do this, follow the procedures below:

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 34). Then click **OK**.

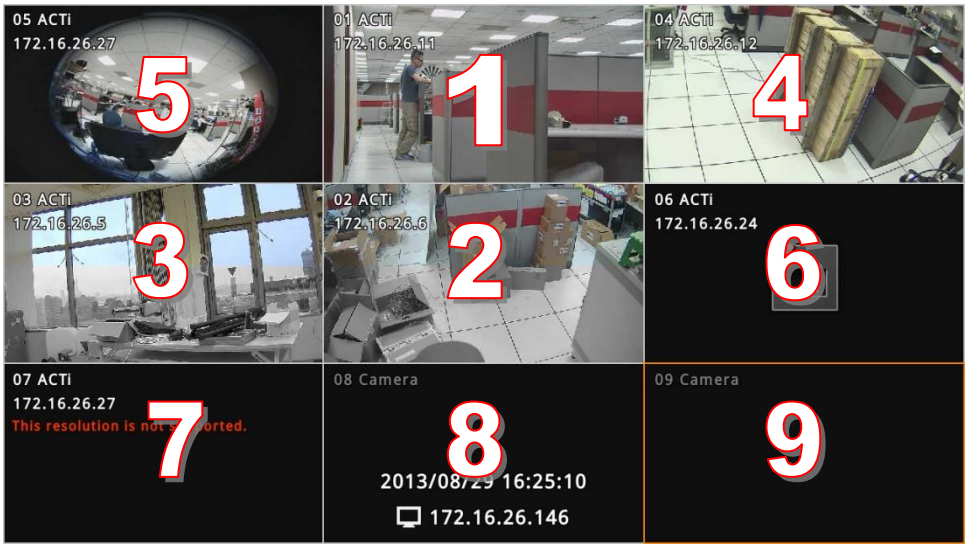
3. **Sequence Patrol** starts. To stop the patrol, click .

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 The Login Screen

The Login screen appears before users can access the **PTZ Control Panel** and the **Setup Page**.

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

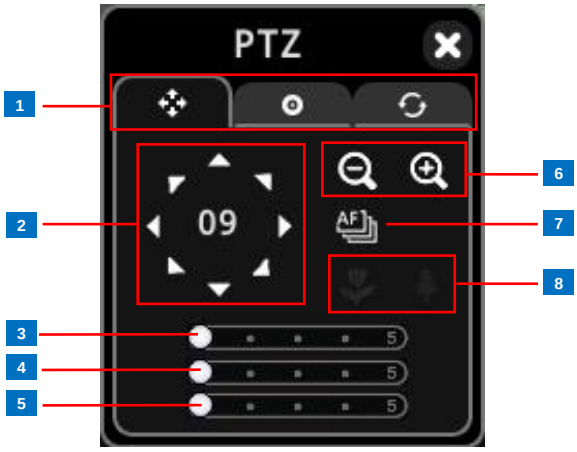
Numeric Keyboard

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

2.4 Using the PTZ Control Panel

You can pan, tilt and zoom PTZ cameras locally using the **PTZ Control Panel**, as well as create preset points and start tour.

To display the **PTZ Control Panel**, move the mouse over the bottom of the screen to display the Menu Panel, then click . You must login as an administrator to have PTZ control access (see ***2.3 The Login Screen*** on page 33 for details).



TIP: Move the mouse over the icon to display the function name.

NOTE:

- The PTZ control panel is enabled only when a PTZ or zoom camera is selected. Although the panel appears when a non-PTZ/zoom camera is selected, all the controls are disabled.
- Digital PTZ is available on all cameras when using a remote client. See ***How to Use Digital PTZ*** on page 86.

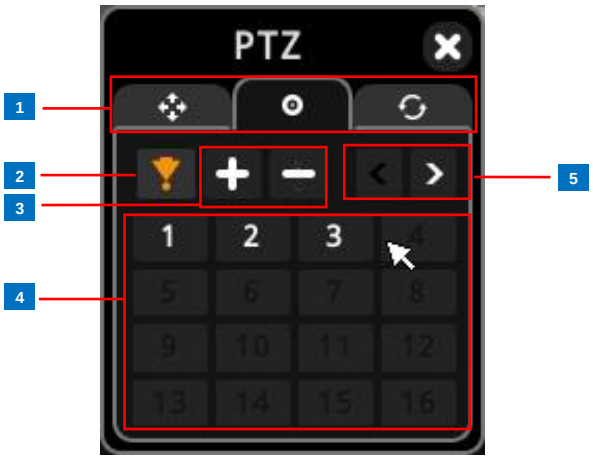
Item		Description
1	**PTZ Control Tab**	Click the tab to display the page: • PTZ • Preset Points (see • ***Setting Preset*** Points on page 37) • Tour (see ***Setting Tours*** on page 39)
2	**Pan / Tilt Controls**	Click the arrows to pan / tilt the camera according to the configured speed on the sliders. The enclosed number indicates the currently selected channel.
3	**Pan Speed**	Drag the slider to adjust the pan speed; 1 (slowest) to 5 (fastest).

Item		Description
4	**Tilt Speed**	Drag the slider to adjust the tilt speed; 1 (slowest) to 5 (fastest).
5	**Zoom Speed**	Drag the slider to adjust the zoom speed; 1 (slowest) to 5 (fastest).
6	**Zoom Control**	Click the icons to zoom in or zoom out the camera view.
7	**Focus Mode**	Click the icon to toggle between modes: • **Auto Focus** • **Manual Focus** : When **Manual Focus** is selected, the **Near Focus** and **Far Focus** icons become enabled. Click one of the focus icons to adjust the focus manually; you may also need to adjust zoom (6) to achieve the best focus and viewing angle.

Setting Preset Points

A preset point is a user-defined area where the camera zooms in. Up to 32 preset points can be configured on DSS-1000. When preset points are created on DSS-1000, they are automatically synced on the camera side, and vice versa.

On the Live View screen, move the mouse over the bottom of the screen to display the Menu Panel, then click . You must login as an administrator to have PTZ control access (see ***2.3 The Login Screen*** on page 33 for details). Then click the **Preset Point Tab** .

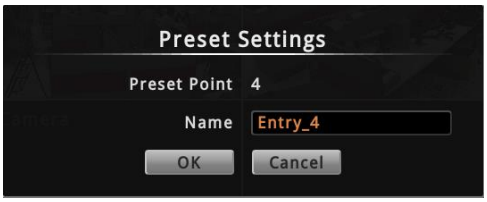


Item		Description
1	**PTZ Control Tab**	Click the tab to display the page: • PTZ (see ***2.4 Using the PTZ Control Panel*** on page 33). • Preset Points • Tour (see ***Setting Tours*** on page 39)
2	**Go to Preset**	Click to enable “go to” preset mode, then click a preset point number below to make the camera zoom into the defined preset point. The orange icon indicates the function is currently selected.
3	**Add / Remove Preset**	Click **+** to add a new preset point. See below. Click **–** to remove a preset point.
4	**Preset Point**	The numbers indicate the preset point ID. Once a preset point is configured, the number turns white. Up to 32 preset points can be configured.
5	**Back / Next Page**	Click **<** to go back the previous page and **>** to go to the next page.

How to Create / Modify Preset Points

1. On the Live View screen, move the mouse over the bottom of the screen to display the Menu Panel, then click . You must login as an administrator to have PTZ control access (see ***2.3 The Login Screen*** on page 33 for details).
2. Pan, tilt and zoom the camera to the desired preset point.
3. Click the **Preset Point Tab** .
4. Click , the icon turns orange. Then click a preset point number to assign.

   NOTE: Numbers in red are already configured; when red numbers are selected, the original preset setting will be overridden with the current preset point.
5. Type a preset point name using the on-screen keyboard (see ***Using the On-Screen Keyboard*** on page 34).



6. Click **OK** to complete.

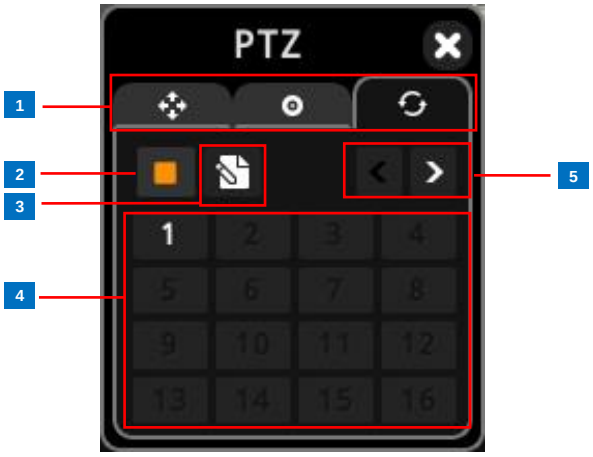
How to Delete Preset Points

1. On the **Preset Point** page tab, click , the icon turns orange.
2. Click the preset point number to remove. The number icon turns gray to indicate that the preset point is already deleted.

Setting Tours

Several preset points can be grouped into a “Tour” which directs the camera to cycle through the series of preset points at specific interval time. Up to 32 tours can be set on DSS-1000. The tour configuration is saved only on DSS-1000, not on the camera side.

On the Live View screen, move the mouse over the bottom of the screen to display the Menu Panel, then click . You must login as an administrator to have PTZ control access (see ***2.3 The Login Screen*** on page 33 for details). Then click the **Preset Point Tab** .

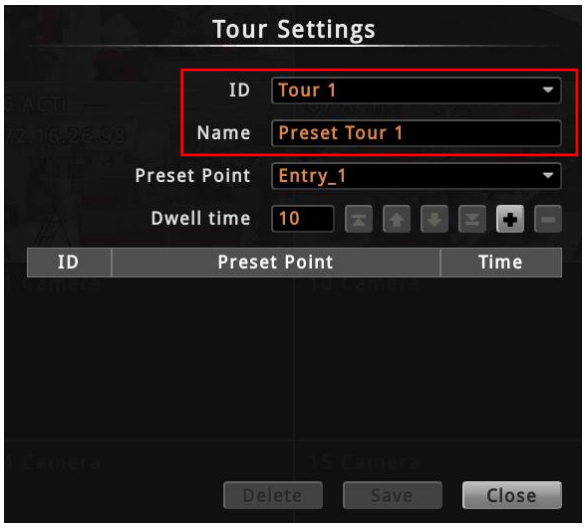


Item		Description
1	**PTZ Control Tab**	Click the tab to display the page: • PTZ (see page 33). • Preset Points (see page 37). • Tour
2	**Stop Tour**	When the camera is on tour, click this icon to stop the tour.
3	**Create / Edit Tour**	Click this icon to create or modify a tour. See ***How to Create / Modify Tours*** on page 40.
4	**Tour ID Number**	The numbers indicate the tour ID. If the number is: • Red: The tour is currently running. • White: The tour is set but not running. • Gray: The tour is not set. Click a tour ID number to start the tour.
5	**Back / Next Page**	Click **<** to go back the previous page and **>** to go to the next page.

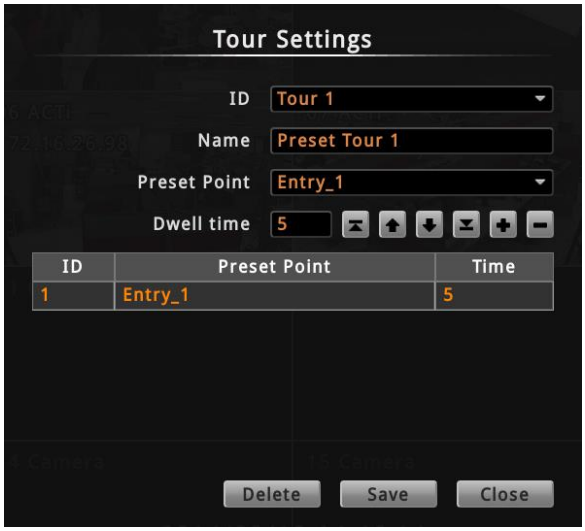
How to Create / Modify Tours

To create tours, make sure one or more preset points have already been created. The tour configuration on DSS-1000 is not synced with the tour configuration on the camera side.

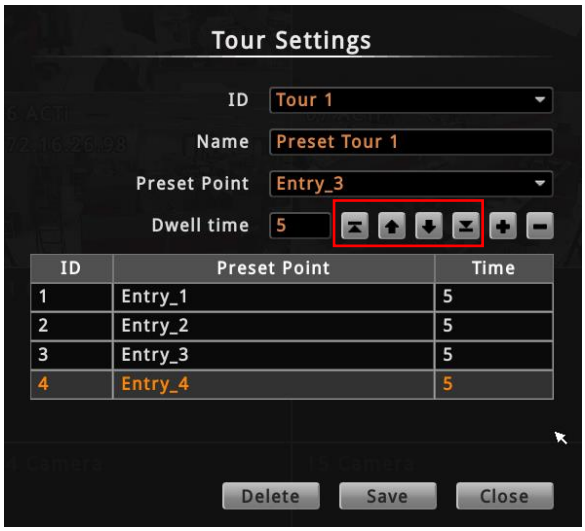
1. On the Live View screen, move the mouse over the bottom of the screen to display the Menu Panel, then click . You must login as an administrator to have PTZ control access (see ***2.3 The Login Screen*** on page 33 for details).
2. Click the **Tour** tab .
3. Click .
4. Select the tour **ID** and type the desired tour **Name** (see ***Using the On-Screen Keyboard*** on page 34).



5. On **Preset Point**, select the preset point that you want to include in the tour and set the **Dwell time**. Dwell time is the amount of time (in seconds) where the camera stays in that preset point. Then, click . The selected preset point is added to the table below.



6. Repeat steps 4 to 5 to add more preset points to the tour.

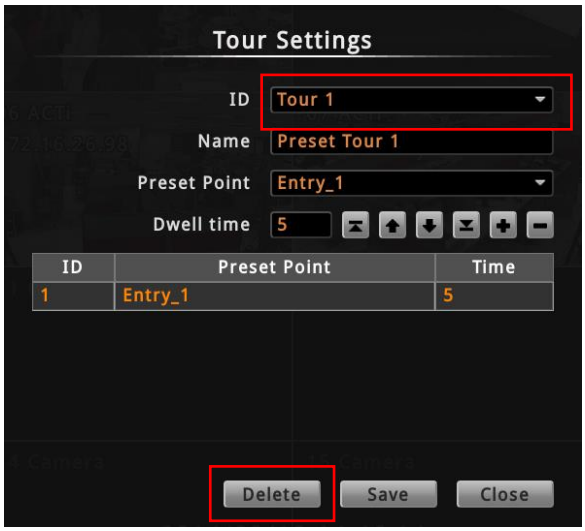


TIP: Use the arrow keys to change the order sequence of preset points. Or, to remove a preset point from the tour, click .

7. When done, click **Save** to complete the tour configuration.

How to Delete Tours

1. On the **Tour** page tab, click .
2. On **ID**, select the tour you want to remove.
3. Click **Delete**.
4. Click **Close** to close **Tour Settings**.



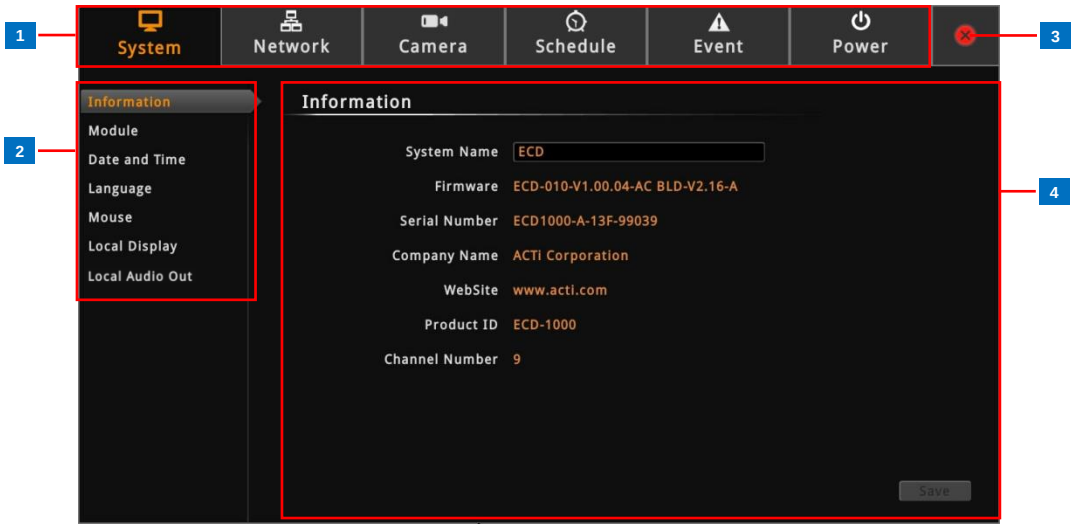
2.5 Accessing the Setup Screen

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 (see *2.3 The Login Screen* on page 33).

The Setup Screen

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

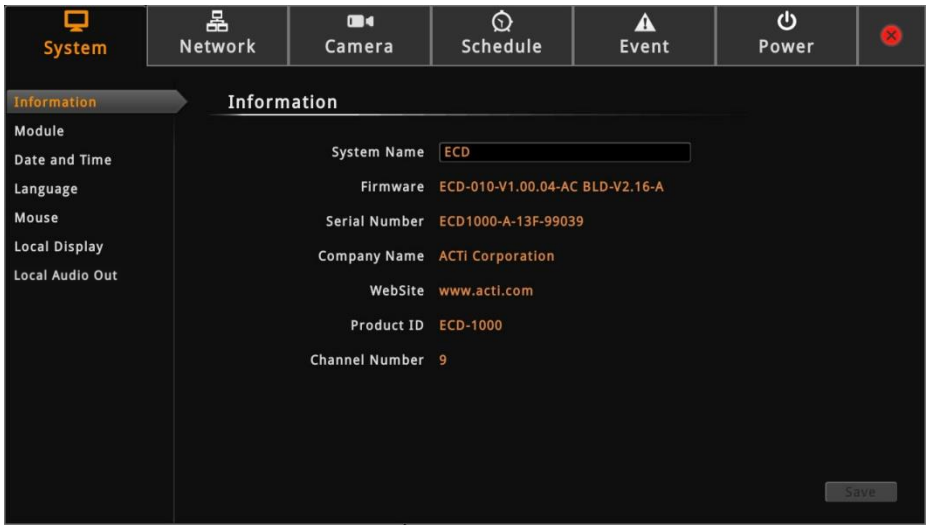


Item		Description
1	**Setup Menu**	Click a tab to display the submenu.
2	**Submenu Panel**	Displays the submenu options. Click a submenu to view the settings page.
3	**Exit**	Click to close the **Setup** screen. Once closed, the system automatically logs out the account and the **Live View** screen is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

2.6 Configuring System Settings

System Information

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



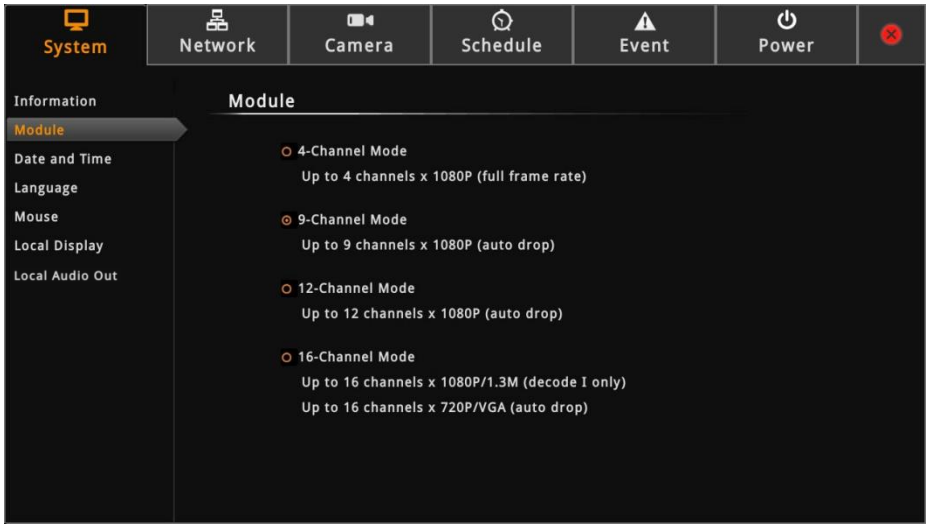
The system information is displayed.

- **System Name**: Name assigned to DSS-1000; 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 DSS-1000 manufacturer.
- **Product ID**: Product model name.
- **Channel Number**: Maximum number of supported cameras.

Module

The **Module** page allows you to select the maximum number of cameras that you can view through DSS-1000. Options are: 4-channel, 9-channel (default mode), 12-channel, and 16-channel.



To ensure video stream performance, take note of the ***Decoding Limitation*** on page 13.

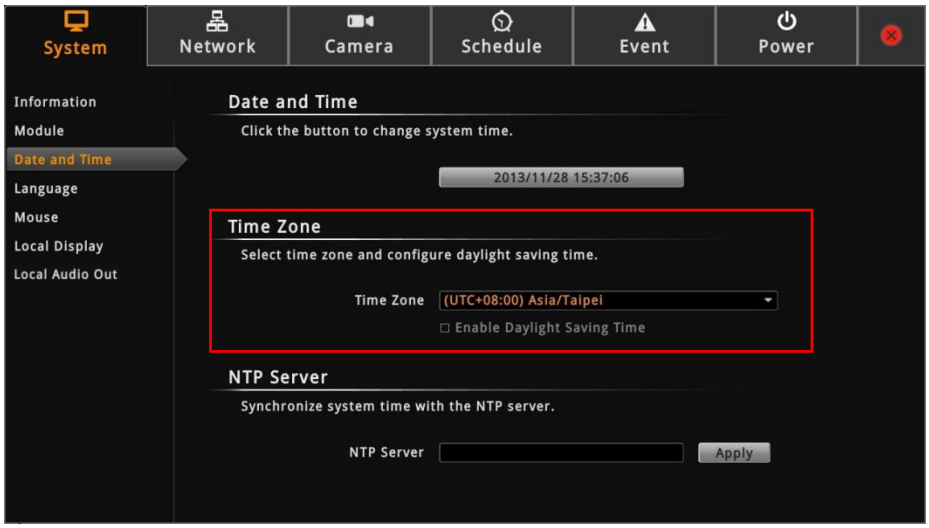
Date and Time

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**.



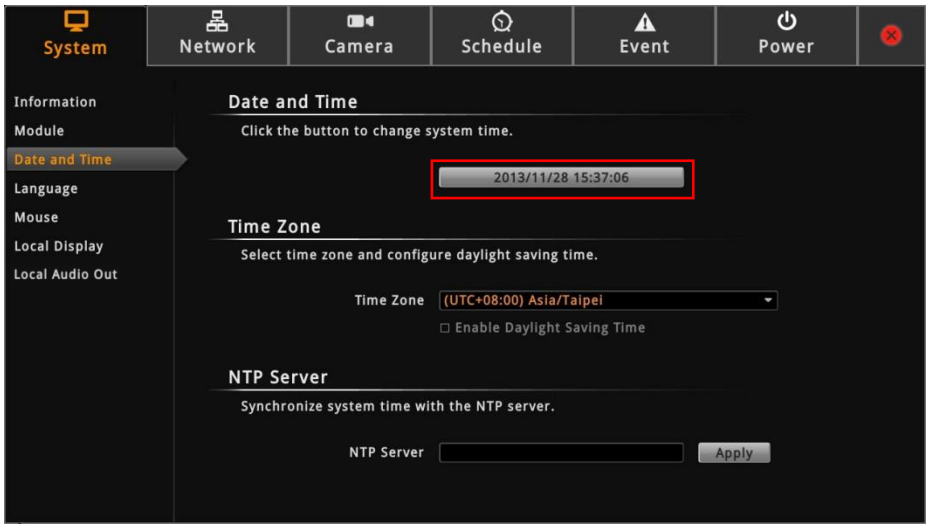
2. On **Time Zone**, select the desired time zone. The system date and time automatically

changes according to the current date and time of the time zone.

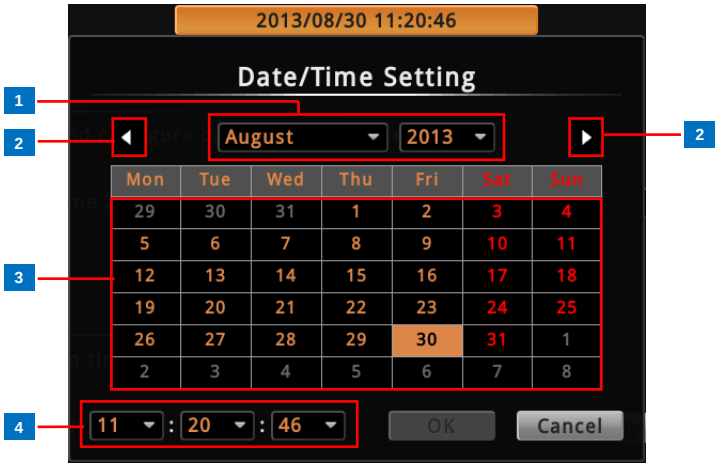
3. If applicable, check the **Enable Daylight Saving Time** box. Note that this box becomes enabled only if the Daylight saving time can be applied to the selected time zone.

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.

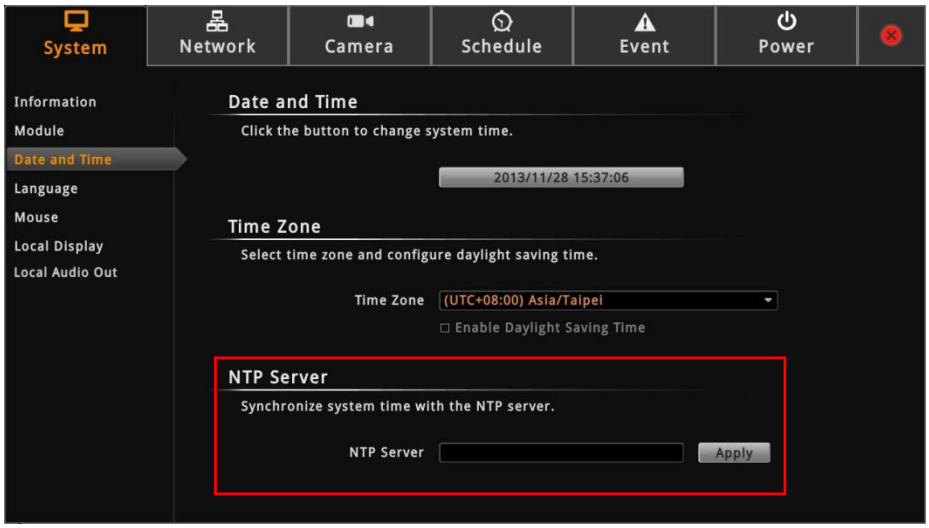


Item		Description
1	**Month and Year**	Select the month and year from the box.
2	**Scroll Icons**	Click to view the calendar of the previous or the next month.
3	**Date**	Click a date to set the date. Selected date is highlighted in orange, while the current date is in yellow.
4	**Time**	Select the hour,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

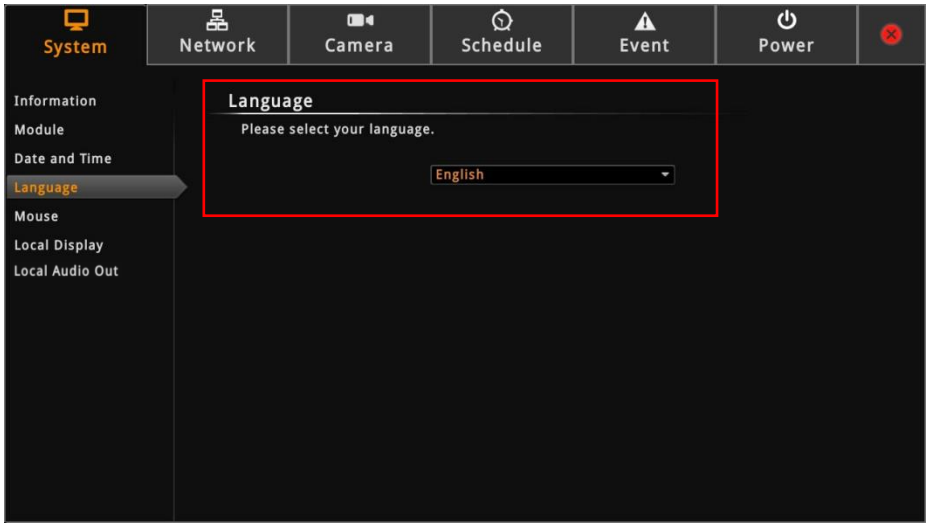
   NOTE: If the NTP Server is a domain name, make sure the IP setting and DNS setting of the system gateway are correct.

To delete NTP Server

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

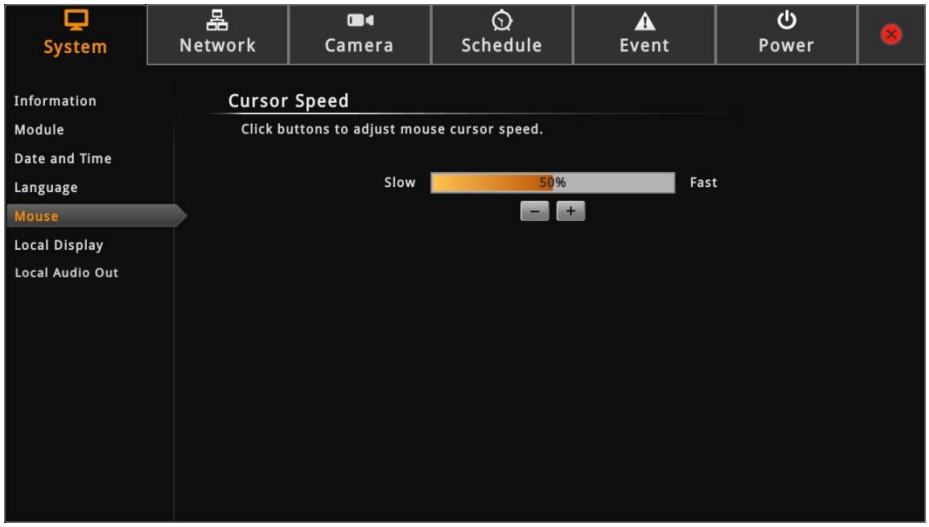
Language

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**.

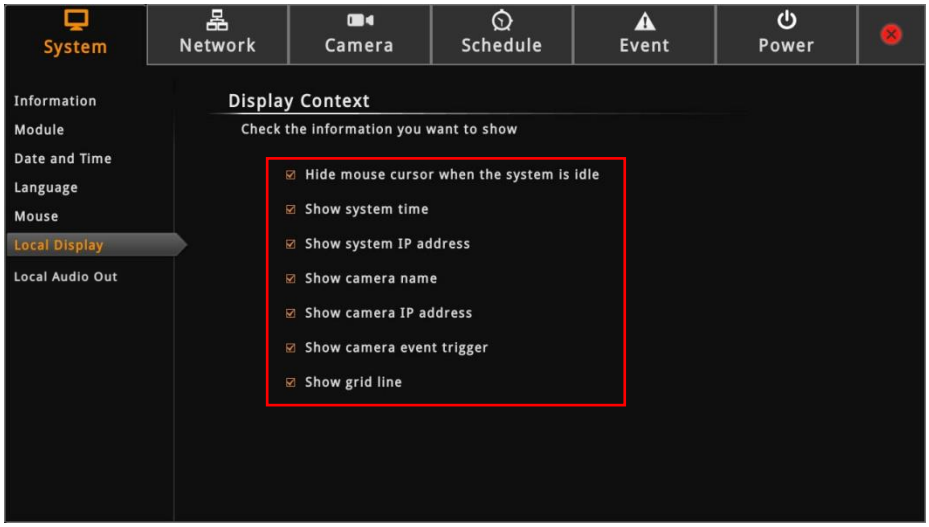


Click "**-**" to reduce the mouse cursor speed or "**+**" to increase the speed one notch at a time. Click and hold "**-**" or "**+**" to continuously reduce or increase speed.

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.

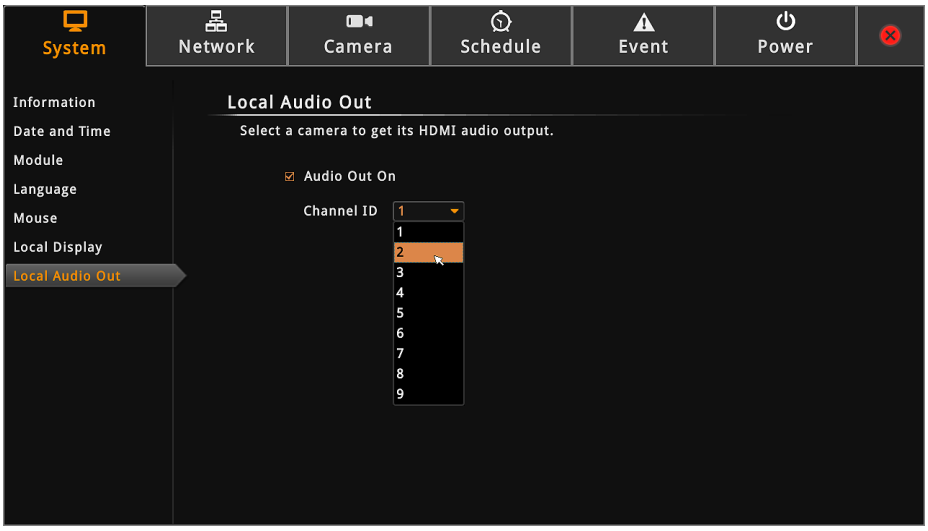
- **Hide mouse cursor when the system is idle**: If checked, the mouse cursor is hidden from the Local display if there is no mouse movement within 5 seconds.

- **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.

Local Audio Out

By default, all the channels are muted. You can play the audio recorded by a specific channel via HDMI cable.

On the **Setup** screen, click **System** > **Local Audio Out**.

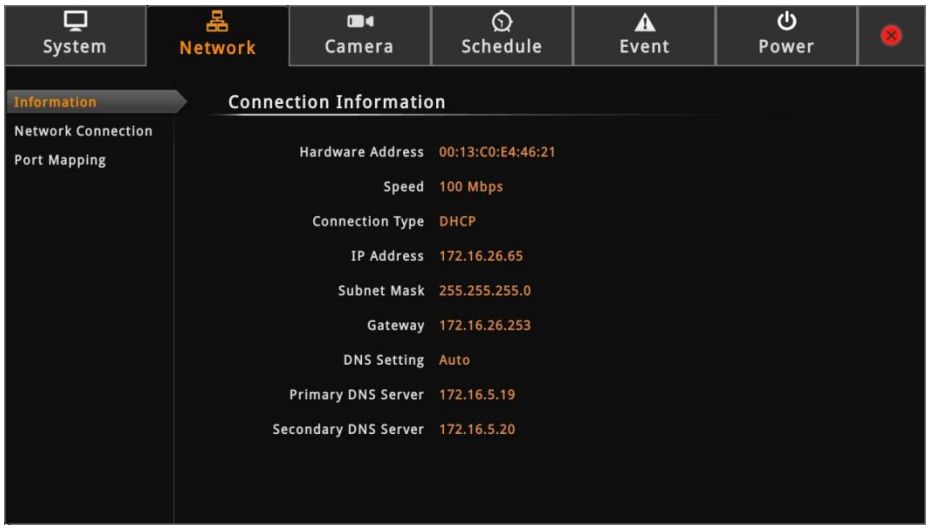


Enable "**Audio Out On**" and then select the channel from **Channel ID** list.

2.7 Configuring Network Settings

Viewing the Network Information

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



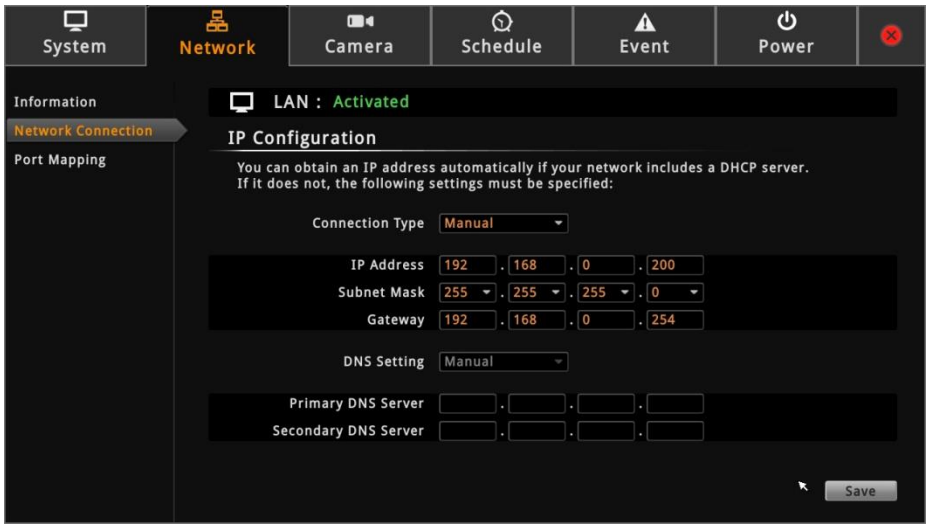
The network information, such as the **Hardware Address** (MAC address), **Speed**, **Connection Type**, **IP Address**, **Subnet Mask**, **Gateway**, **DNS Setting**, and **Primary** and **Secondary DNS Server** are displayed.

Configuring the Network Connection

Use the **Network Connection** to configure the network settings of DSS-1000, 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, DSS-1000 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 DSS-1000 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, DSS-1000 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 51.



Setting the IP Address Manually

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

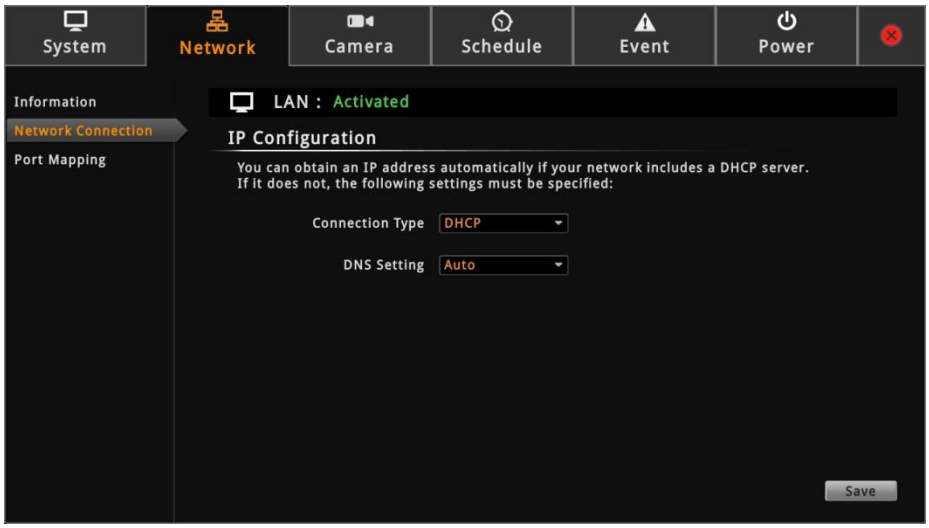
1. On the **Setup** screen, click **Network** > **Network Connection**.
2. On **Connection Type**, select **Manual**.
3. Obtain the information from your network service provider and enter the **IP Address**, **Subnet Mask**, and other necessary settings.

   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, DSS-1000 will automatically be assigned an IP address. However, in case DSS-1000 does not detect the DHCP connection, perform the following procedures to obtain the IP address:

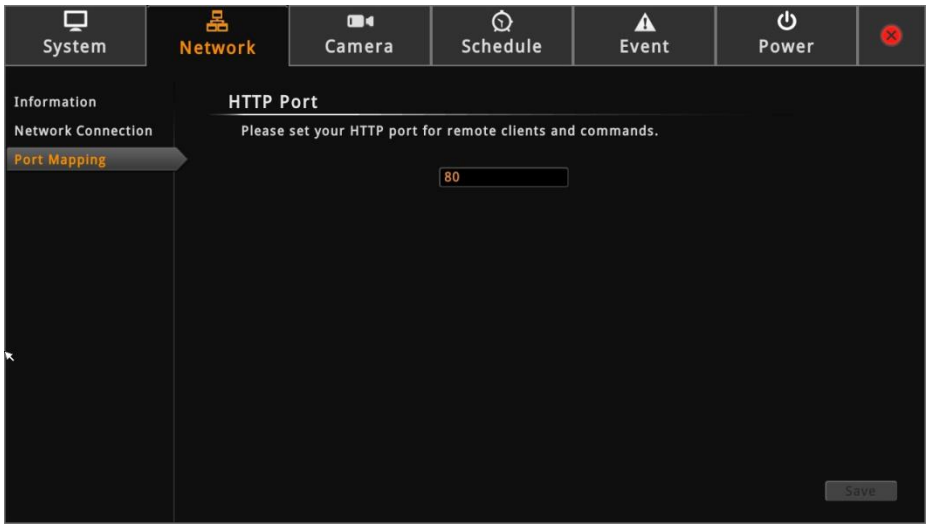
1. On the **Setup** screen, click **Network** > **Network Connection**.
2. On **Connection Type**, select **DHCP**.



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

Configuring Port Mapping

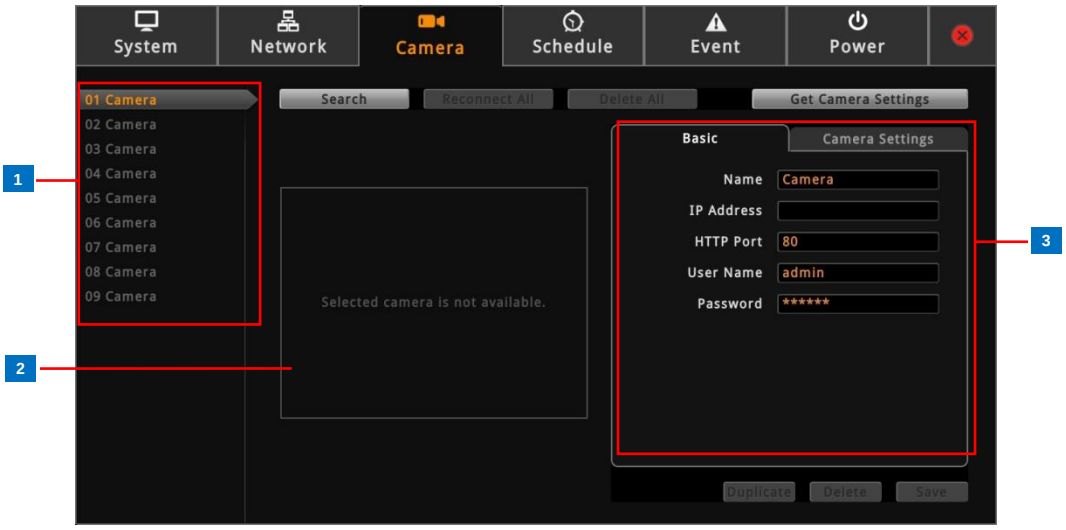
By default, DSS-1000 port number is 80. To change this value, click **Network** > **Port Mapping** on the **Setup** screen.



2.8 Configuring the Cameras

The Camera Setup Page

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 53. • **Camera Settings**: Displays the camera video streaming properties, such as Channel ID, Resolution, Encoder, etc. These properties can be modified on DSS-1000 and will also take effect on the camera side. See ***Modifying Camera Settings*** on page 61.

Adding Cameras

There are three ways to add cameras for viewing:

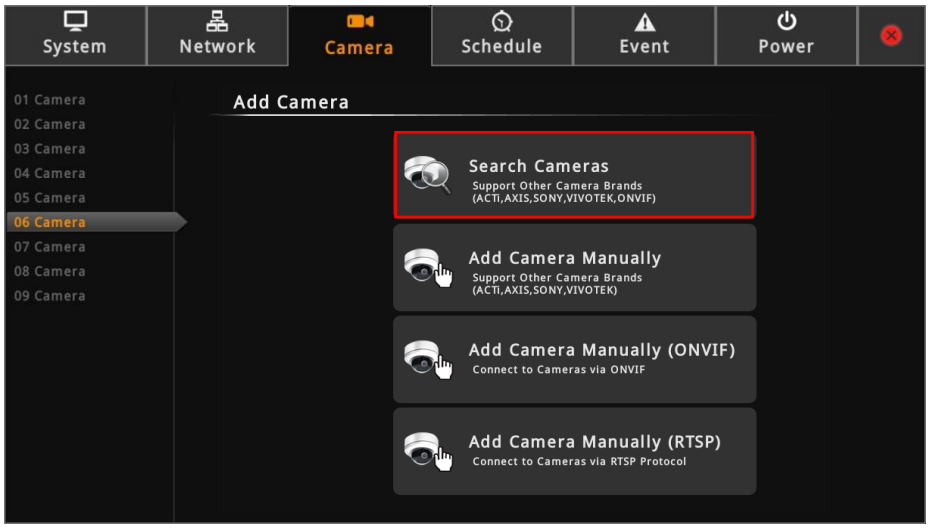
- By automatically searching the cameras on the network
- By manually entering the IP address of the camera
- By manually entering the IP address of an ONVR-compppliant camera
- By manually entering the IP address of the camera and connect via RTSP protocol

NOTE: DSS-1000 supports third-party cameras. To validate specific camera models that can be integrated, visit our website.

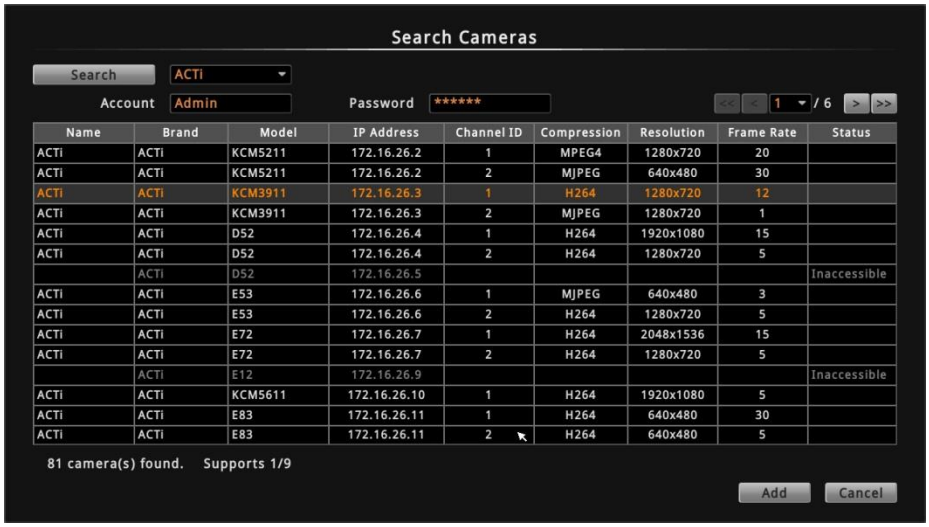
Searching Cameras to Add

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 4, 9, 12 or 16 cameras to connect to DSS-1000. The maximum number of cameras to be added varies depending on the selected module (see ***Module*** on page 44).

1. On the **Setup** screen, click **Camera**.
2. Click **Search** or an empty channel number from the left panel. The **Add Camera** screen appears.



3. Click **Search Cameras**. The **Search Cameras** screen appears.
4. By default, the camera manufacturer, user account name and password for access are already filed with default values. If you want to add camera from other manufacturers or the camera has different account and password, modify these values as needed. The cameras connected on the network are listed.



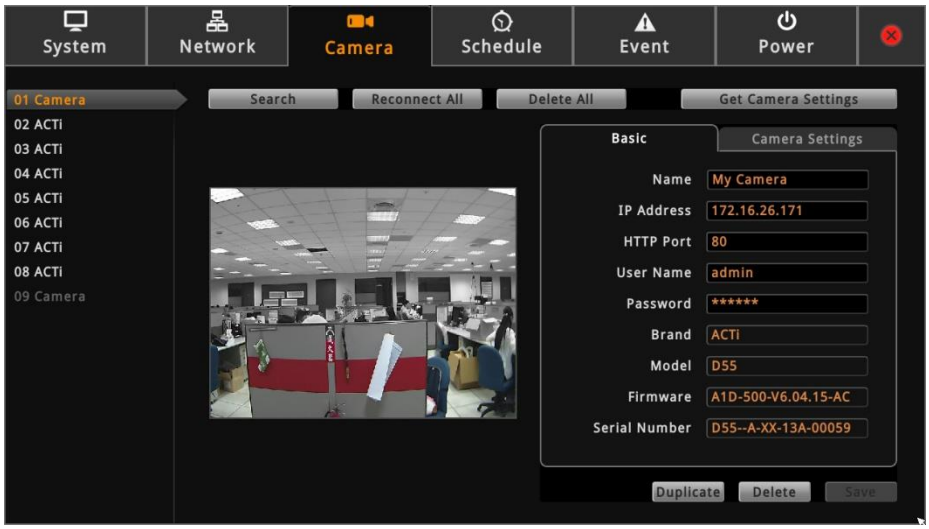
NOTE: DSS-1000 supports third-party cameras. To validate specific camera models that can be integrated, visit our website.

5. Click one or more cameras to select. 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 DSS-1000 for live viewing.

6. Click **Add** to add the selected cameras to DSS-1000 for live viewing. The cameras are then displayed on the **Camera List** panel.

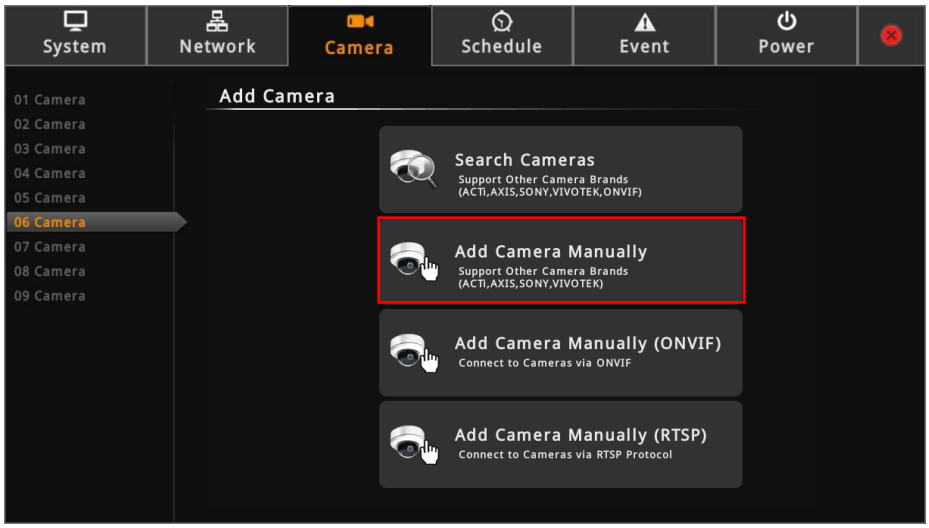


7. Click to close the **Setup** screen. The **Live View** screen displays the live view of the selected cameras.

Adding Cameras Manually

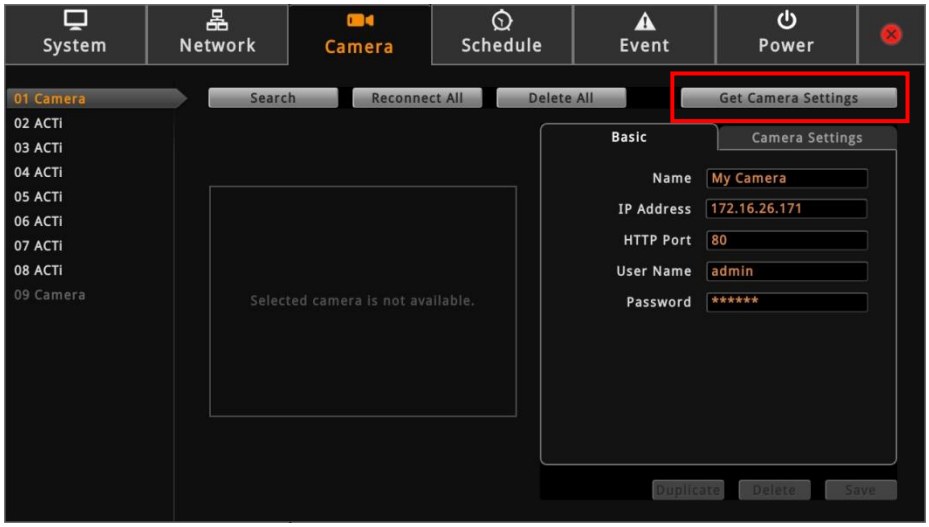
In case of adding a camera from outside the local area network or over WAN, use the add camera manually function. You need to know the IP address, HTTP port, User Name and Password of the camera you want to connect to.

1. On the **Setup** screen, click **Camera**.
2. Click on an empty channel number from the left panel, and click **Add Camera Manually**.



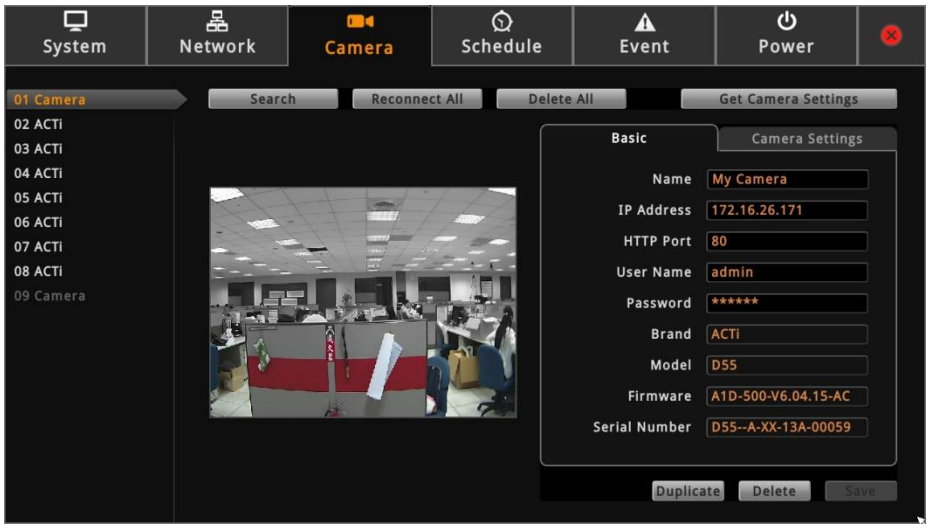
3. On **Name**, type a name you want to use to identify the camera (maximum of 32 alphanumeric characters, no spaces nor symbols). This name is saved only on DSS-1000 and does not affect the settings on the camera side.
4. Enter the **IP Address**, **HTTP Port**, **User Name** and **Password** of the camera you want to connect to.

5. Click **Get Camera Settings**. DSS-1000 connects and retrieves the camera settings. At this point, nothing is shown on the Display window yet.



6. Click **Save**.

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

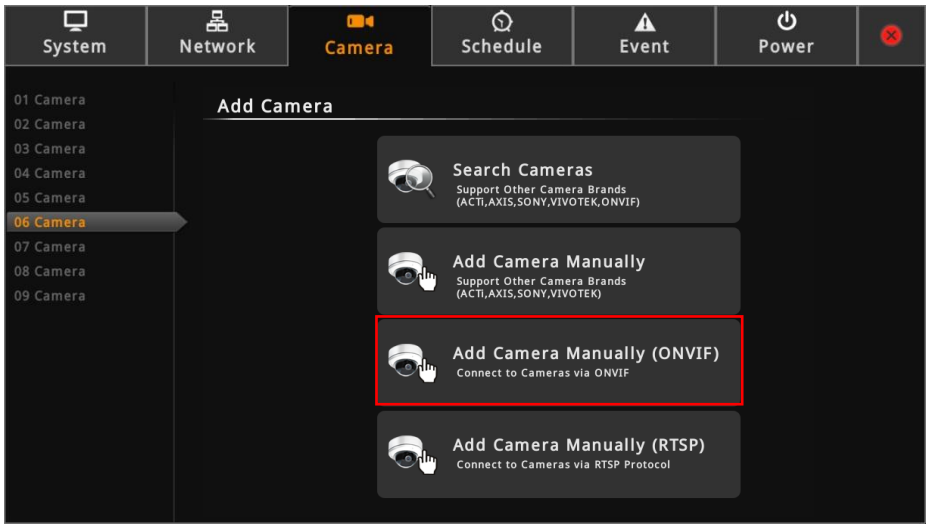


TIP: Use the **Duplicate** button to add another camera with almost similar camera settings to another channel, see ***Duplicating Cameras*** on page 59.

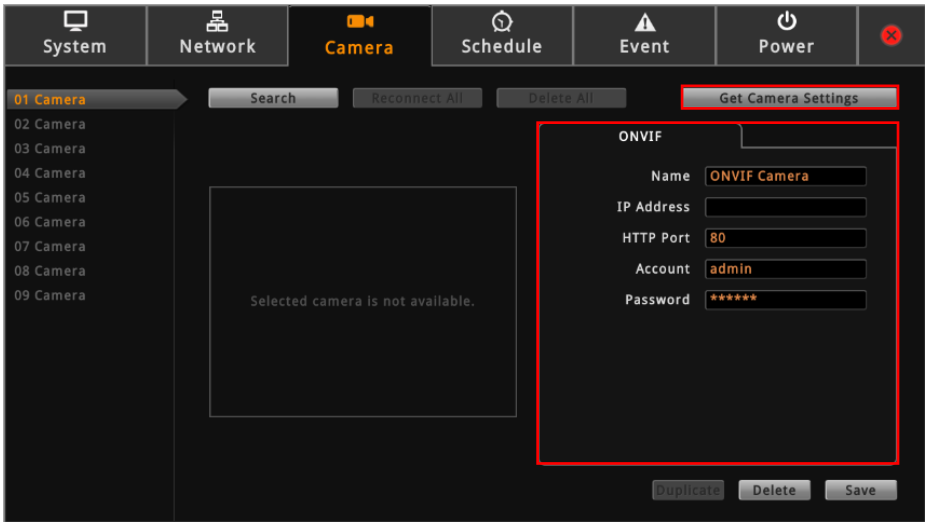
Adding ONVIF-Compliant Cameras Manually

With **Add Camera Manually (ONVIF)** function, you can add any camera regardless of its brand as long as it is ONVIF-Compliant.

1. On the **Setup** screen, click **Camera**.
2. Click on an empty channel number from the left panel, and click **Add Camera Manually (ONVIF)**.

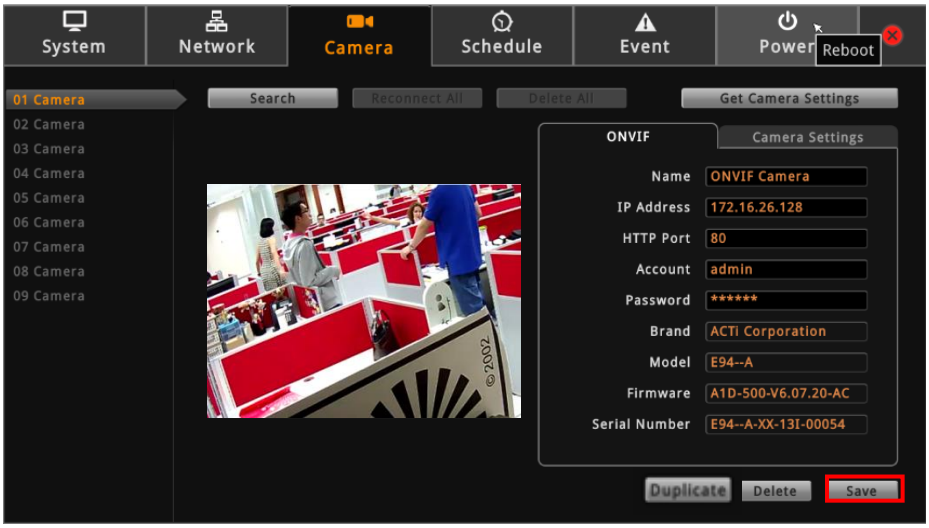


3. On **Name**, type a name you want to use to identify the camera (maximum of 32 alphanumeric characters, no spaces nor symbols). This name is saved only on DSS-1000 and does not affect the settings on the camera side.
4. Enter the **IP Address**, **HTTP Port** (by default 80), **Account** and **Password** of the camera you want to connect to.



5. Click **Get Camera Settings**. DSS-1000 connects and retrieves the camera settings. At this point, nothing is shown on the Display window yet.
6. Click **Save**.

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

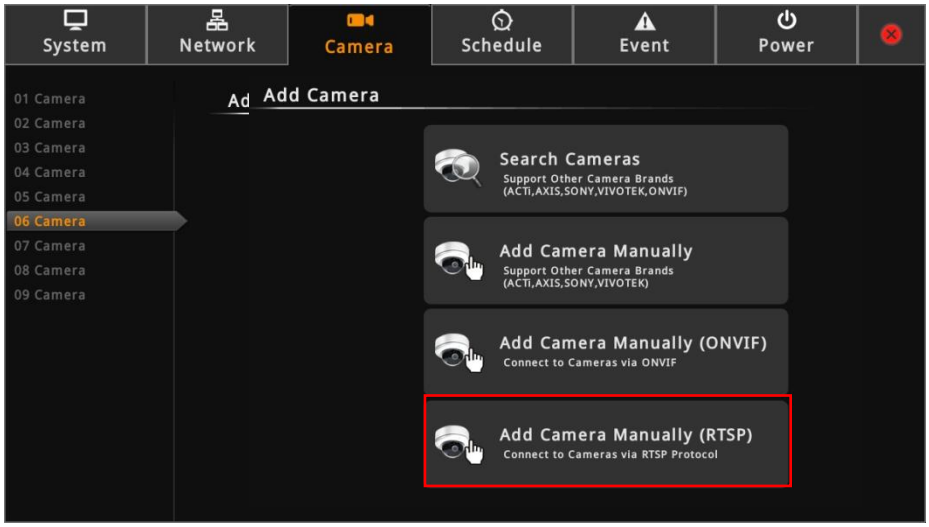


TIP: Use the **Duplicate** button to add another camera with almost similar camera settings to another channel, see ***Duplicating Cameras*** on page 59.

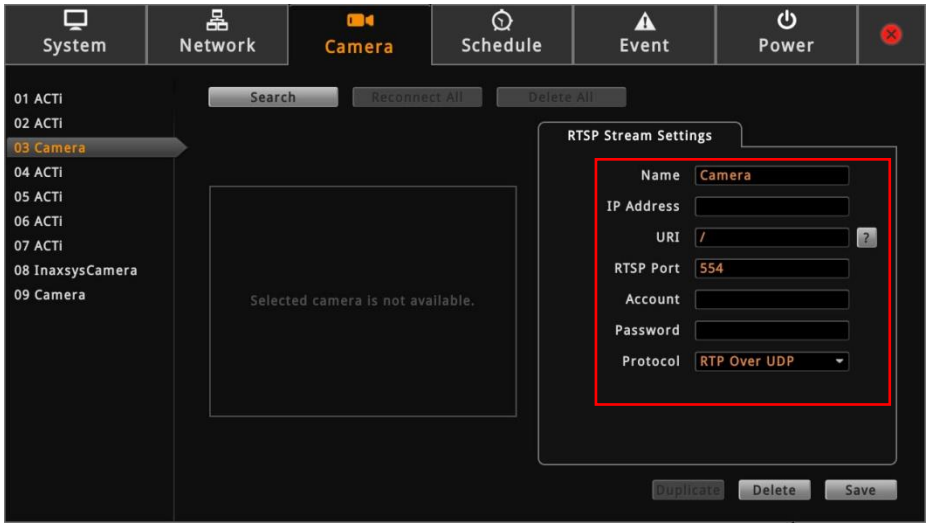
Adding Cameras Manually via RTSP

In case you want to add cameras via Real Time Streaming Protocol (RTSP), use the **Add Camera Manually (RTSP)** function. This feature is useful when adding third party cameras which support the standard RTSP.

1. On the **Setup** screen, click **Camera**.
2. Click on an empty channel number from the left panel, and click **Add Camera Manually (RTSP)**.

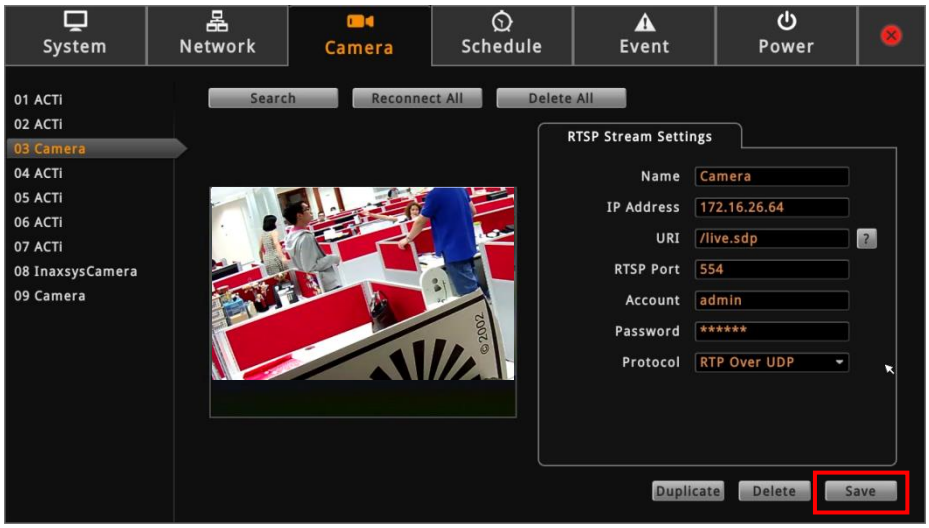


3. On **Name**, type a name you want to use to identify the camera (maximum of 32 alphanumeric characters, no spaces nor symbols). This name is saved only on DSS-1000 and does not affect the settings on the camera side.
4. Enter the **IP Address**, **URI** (Uniform Resource Identifier), **RTSP Port** (by default 554), **Account** and **Password** of the camera you want to connect to and select the streaming protocol.



TIP: If you do not know the URI of the camera, click to select from the most common manufacturers on the list. Once a manufacturer is selected, its URI is filled up on the field. If the predefined URI does not work, check the camera specifications for details.

5. Click **Save**.



TIP: Use the **Duplicate** button to add another camera with almost similar camera settings to another channel, see ***Duplicating Cameras*** on page 59.

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.

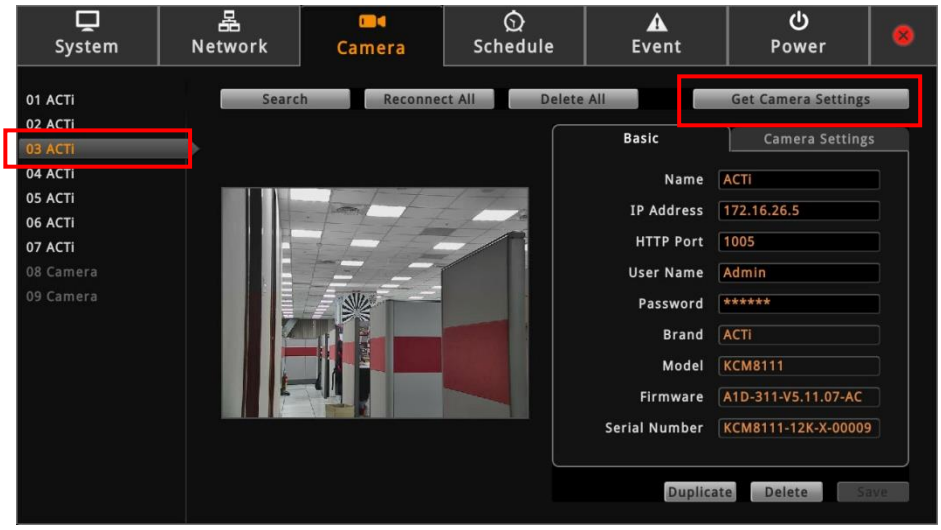
1. On the **Camera** page, select the camera you want to duplicate on the **Camera List** panel, and then click **Duplicate**.

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

Modifying Camera Settings

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

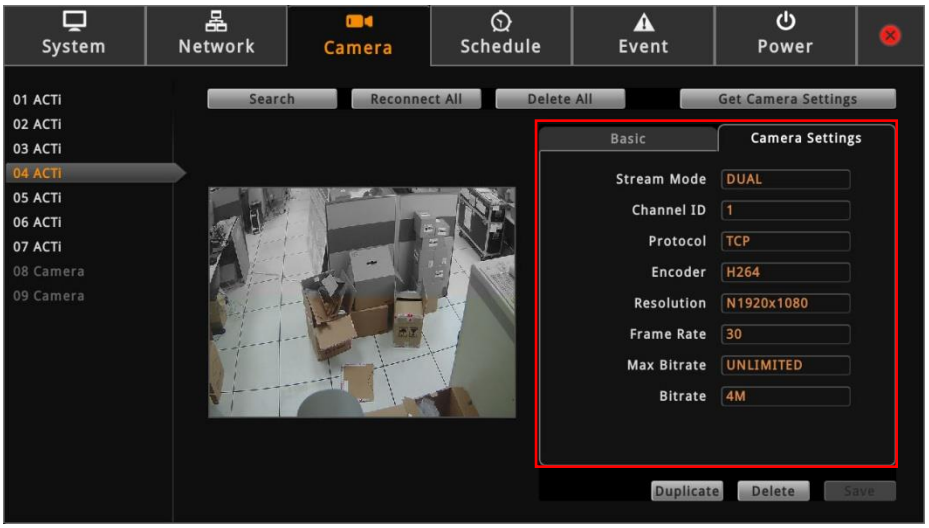
1. On the **Setup** screen, click **Camera**.
2. Select the camera from the **Camera List** panel.
3. Click **Get Camera Settings**.



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 DSS-1000. This name is not saved or shown on the camera side. The maximum length is 32 alphanumeric characters, symbols are not allowed. In case of a space in between the characters, DSS-1000 automatically removes that space.

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



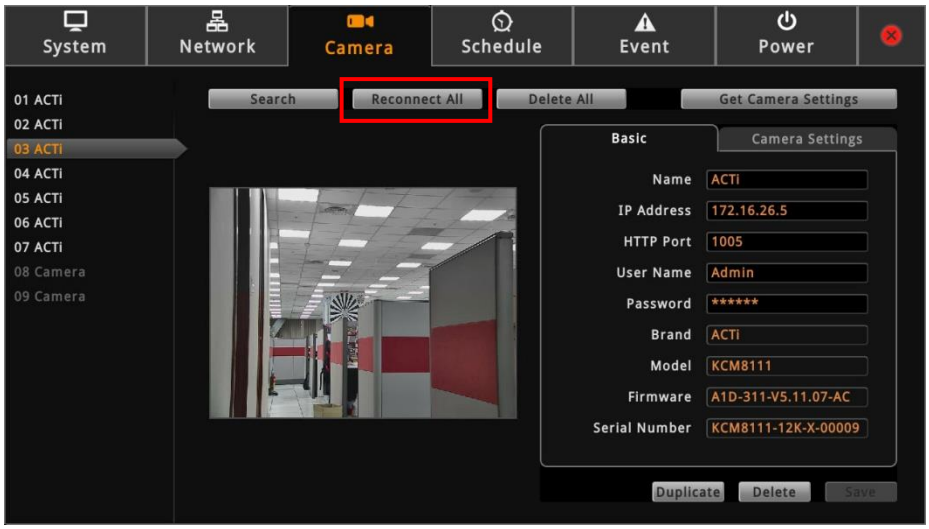
Item	Description
Stream Mode	Displays whether the camera has Single or Dual stream mode. This field is not editable.
Channel ID	For dual stream cameras, select the stream to view. Usually, stream 1 or **Channel ID** 1 is configured to be the best quality stream for Network Video Recorder (NVR) recording purposes and stream 2 or **Channel ID** 2 with basic quality for live viewing on the NVR and DSS-1000. 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 megapixels (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.
Bitrate Mode	Under "**Constant Bit Rate**" mode (CBR), the camera keeps the stable bitrate regardless of the complexity of the scene. Under this mode, the video quality may vary if the bit rate value is set too low. It is easier to do storage and network bandwidth consumption estimations under this mode compared to Variable Bit Rate mode. Under "**Variable Bit Rate**" mode (VBR), the camera will keep the video quality stable while the bit rate may occasionally go up or down, depending on the complexity of the scene.
Max Bitrate (only for H.264)	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

Item	Description
	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.
Quality (only for H.264)	Under VBR mode, the bit rate will be floating while the video quality will be stable and follows the quality standard set by the user. The user can choose either “High”, “Medium” or “Low” quality. The higher is the quality level, the more bit rate the camera will use to achieve the target quality.
GOP 1 I-Frame	Under VBR mode it is possible to adjust the GOP length - that is the occurrence rate of I-frames. By default, there is one I-frame per second. For example, in case of 30fps, there will be 1 I-frame and 29 P-frames every second by default. When the GOP is changed to “1 I-frame per 5 seconds”, then there will be one I-frame, followed by 149 P-frames. In case of the static scenes, long GOP can further minimize the bandwidth and storage consumption.

6. When done, click **Save**. The camera properties are saved and DSS-1000 restarts the connection.

Reconnecting Cameras

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

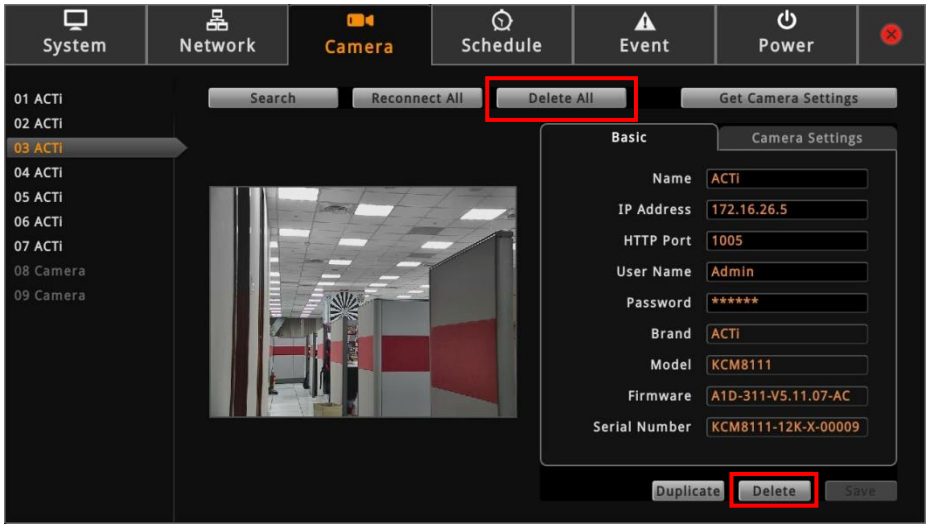


NOTE: All video streams will be lost for a few seconds until the reconnection is finished.

Deleting Cameras

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

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



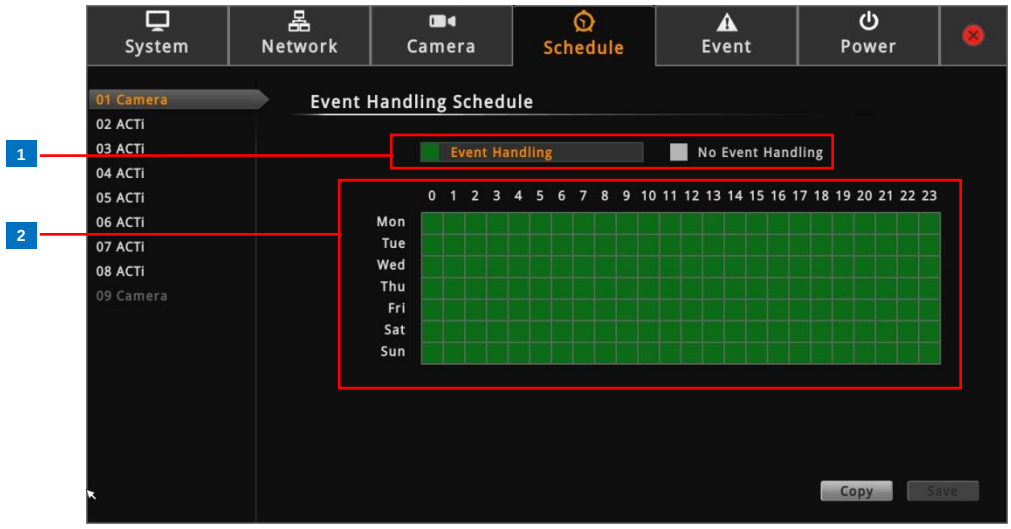
- To remove a camera, click the camera from the **Camera List** panel, and then click **Delete**.
- To remove all the cameras at the same time, click **Delete All**.

2.9 Managing Network Loss Event

When a camera or a DSS-1000 suddenly disconnects from the network, DSS-1000 will trigger a network or video loss notification icon on the **Live View** channel 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 / Video Loss Trigger

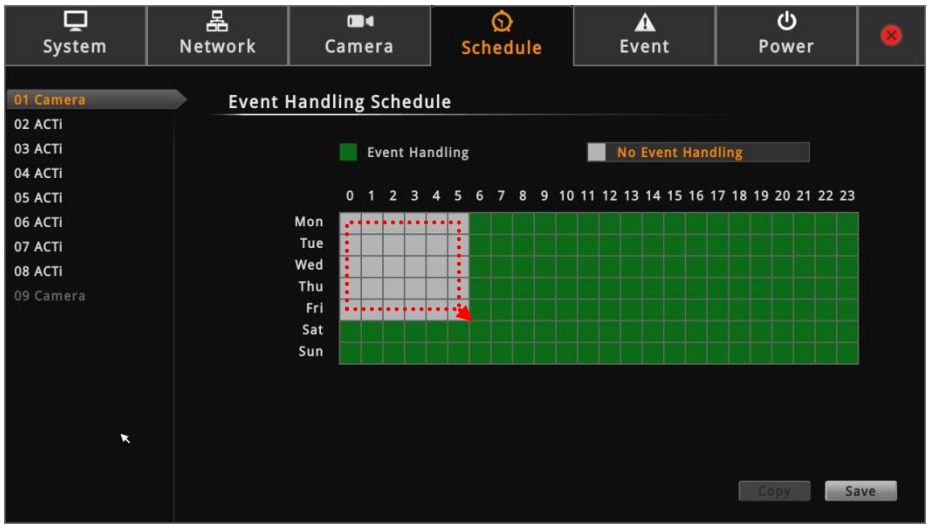
1. On the **Setup** screen, click **Schedule**.
2. Select the camera from the camera list panel.



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.



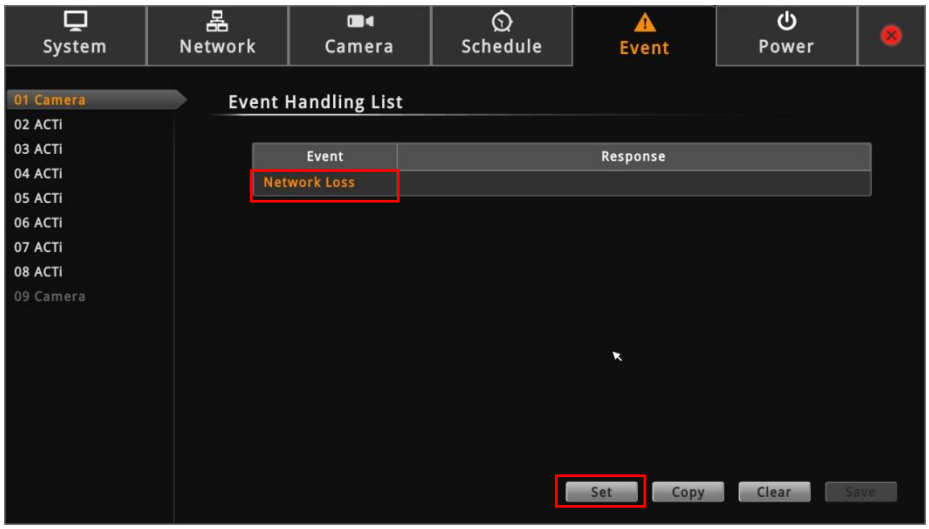
5. When done, click **Save**.

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 68.

Enabling Beep Sound Trigger

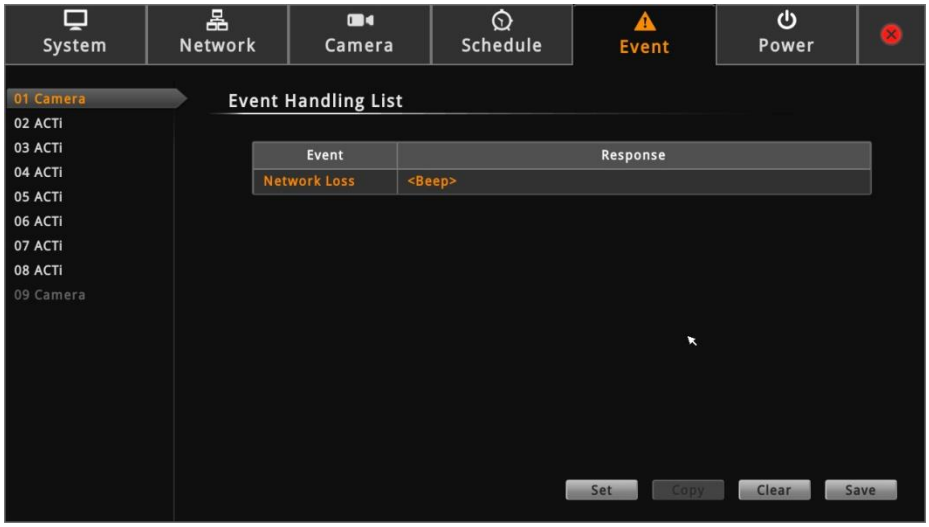
To enable the beep sound when a camera is disconnected from the network or when an encoder loses its video source, do the following:

1. On the **Setup** screen, click **Event**.
2. Click **Network Loss** or **Video 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**.

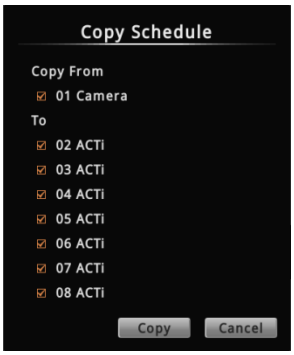


6. Click **Save** to save the configurations. DSS-1000 will demonstrate and emit the beep sound as configured.

Copying Event Schedule Settings

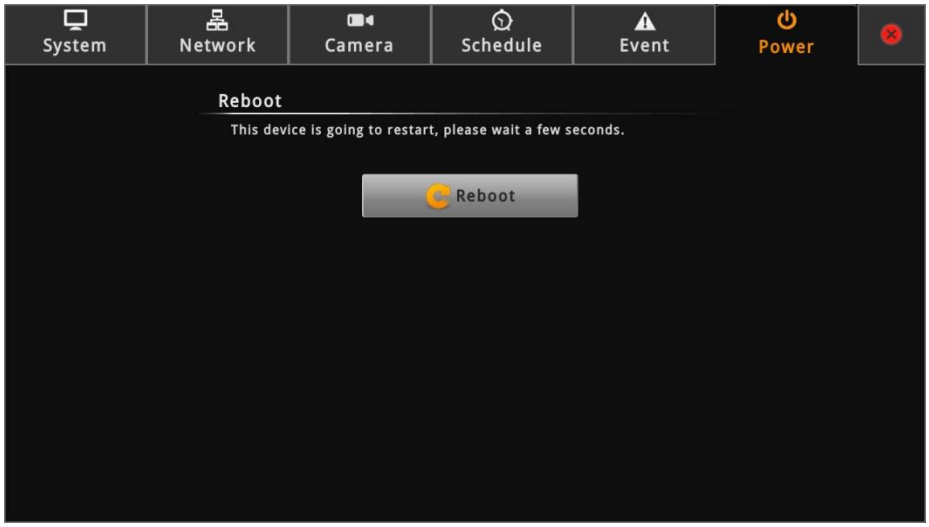
Instead of manually modifying the event schedule and beep settings on all cameras one by one, users can copy the settings to other channels.

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.

2.10 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 DSS-1000 completes the reboot process.

Chapter 3:
Remote Management

This chapter describes DSS-1000 operation and management on a Remote Client side. It contains the following topics:

- **Accessing the Device**: Describes the setup procedures involve when accessing DSS-1000 for the first time through a computer on the network. This includes changing DSS-1000 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** page.
- **Rebooting the Device**: Describes how to do a system reboot.

3.1 Accessing DSS-1000 Remotely

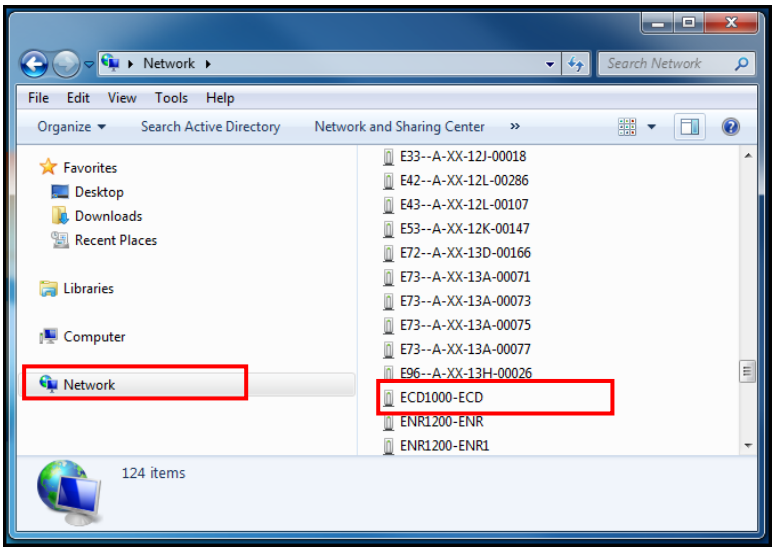
In most cases, it is recommended to perform the initial configurations, before DSS-1000 is even mounted to its location, using local access. This is because of the limitation of DSS-1000 to decode some video resolution and compression. If monitoring will be mainly done on a local display, it is recommended 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 DSS-1000?

Accessing From a Network with DHCP Server

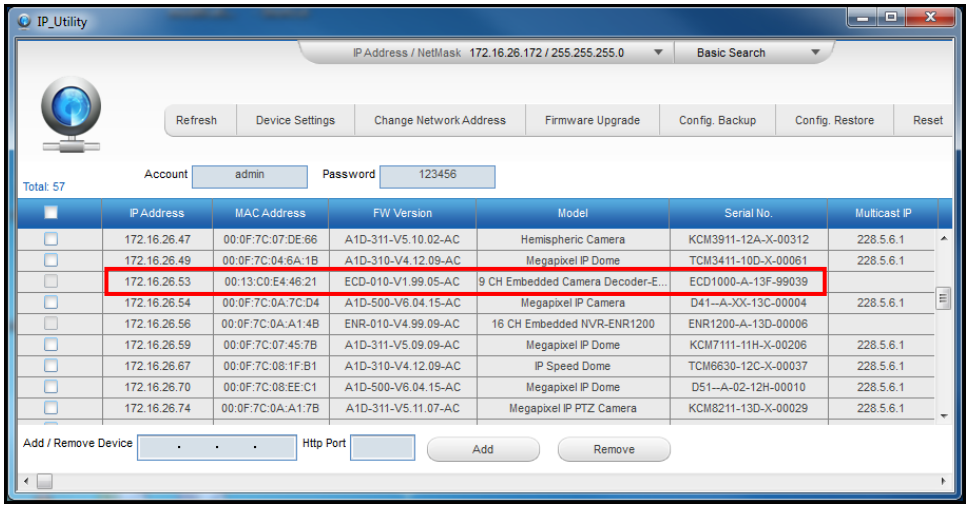
If the network has a DHCP server, the DHCP server automatically assigns the IP address to DSS-1000. There are several ways to access DSS-1000, options are:

- From Windows, click **Start** > **Computer** > **Network**. Double-click on DSS-1000 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), click the IP address of DSS-1000 to open the user interface on the web browser.



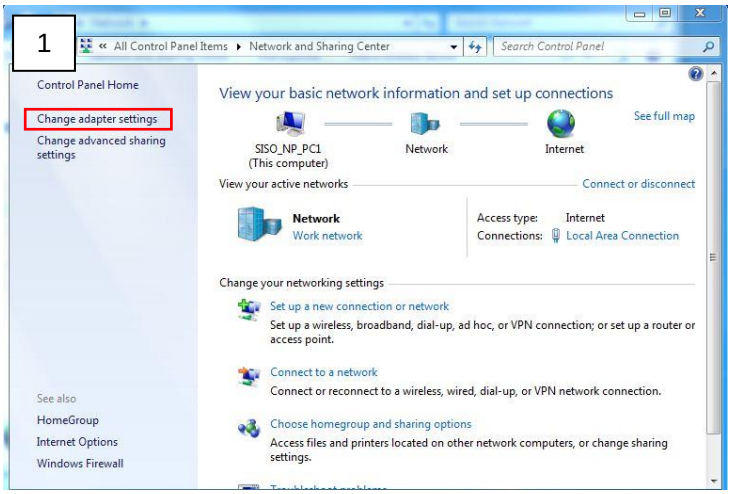
- If you already know the IP address of DSS-1000, open the web browser and directly type the IP address on the address bar.

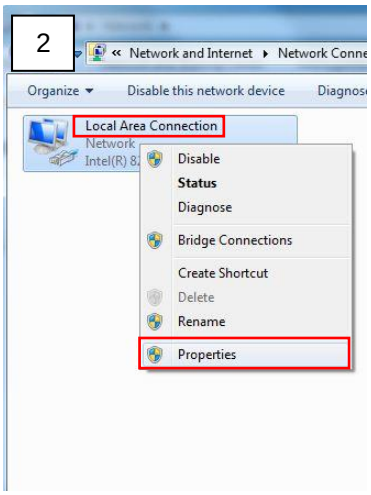
TIP: The quickest way to know the IP address of DSS-1000 is to check the local display. The IP address is shown on the bottom of the **Live View** screen.

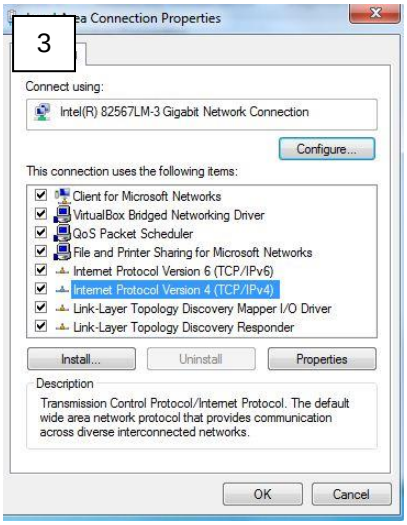
Accessing From a Network without DHCP Server

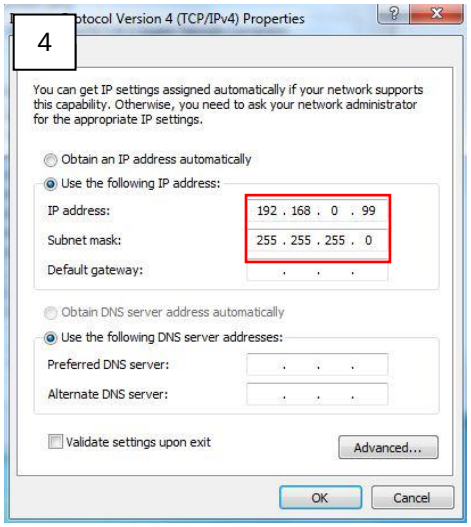
The default IP address of DSS-1000 is **192.168.0.200**. If the network does not have a DHCP server, then this is the IP address of DSS-1000, whereas the default port number is **80**. Take note that the computer must be within the same network segment. For example, the computer must have an IP address 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 DSS-1000, open the web browser and type the default IP address on the address bar:

192.168.0.200

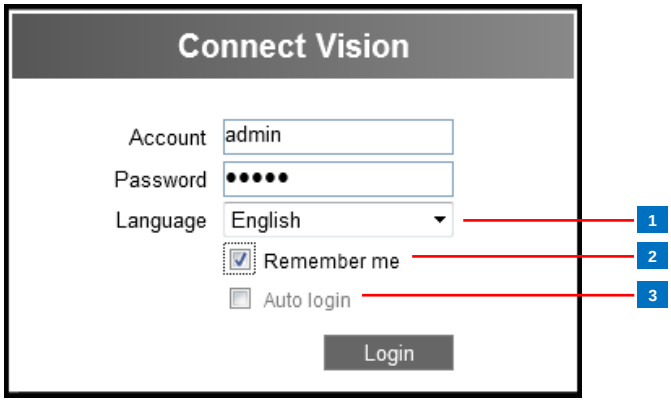
The Login Screen

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 *3.7 Configuring User Access* on page 115.

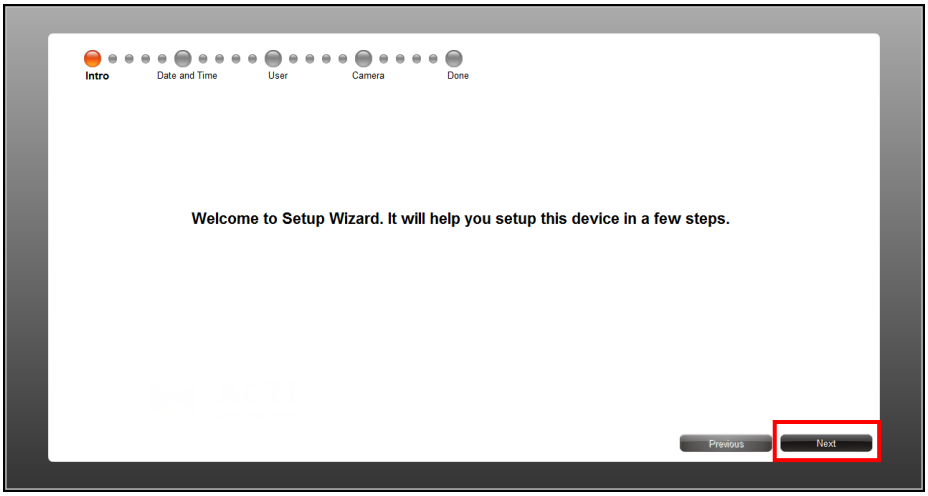


Item		
1	**Language**	The default user interface language is English. To change the language, select the preferred language from the box.
2	**Remember Me**	Check to allow the system to remember the account name. Users just need to enter the password to login.
3	**Auto Login**	Check to skip the login page and go directly to the **Live View** screen 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 DSS-1000.

The Setup Wizard

When accessing DSS-1000 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** screen.

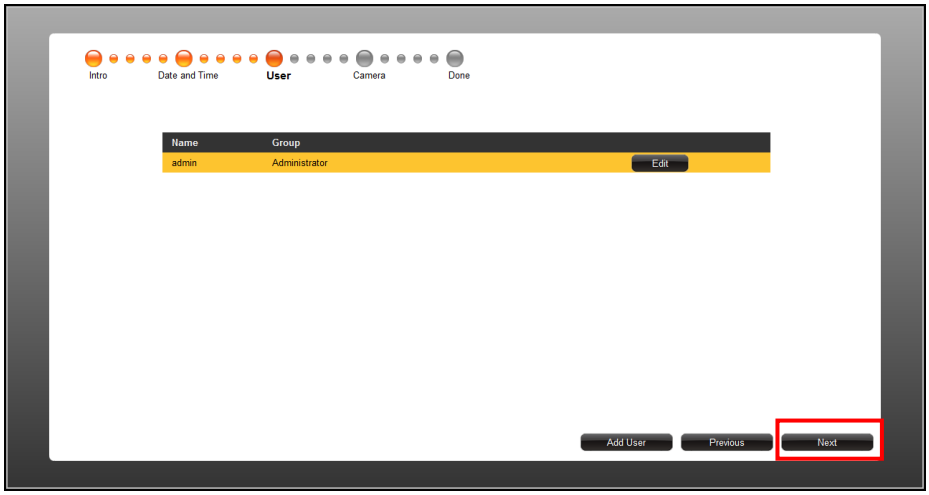
1. Click **Next**.



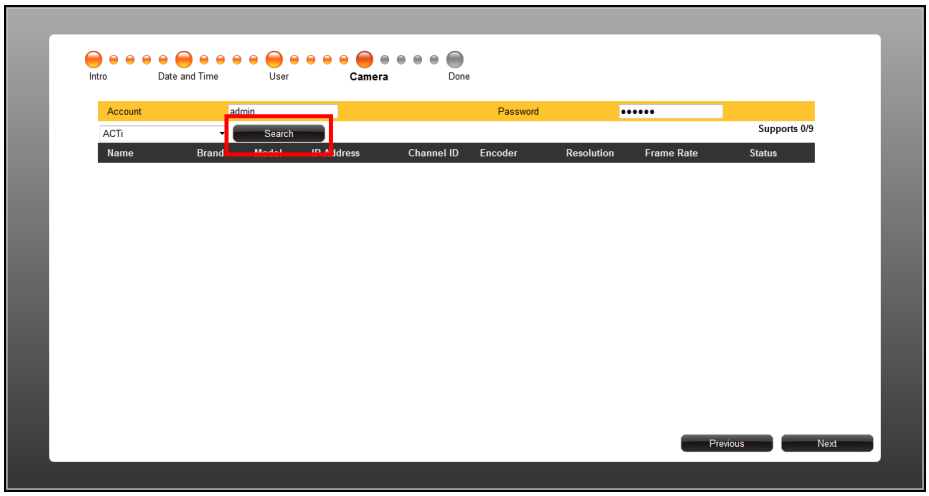
2. Set the date and time by one of the following options:
   - Select the **Time Zone**.
   - Sync with an **NTP Server**.
   - Click the **Local Sync** button to sync with the client computer date and time.
   - Click the **Date and Time** button to set the date and time manually.

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.

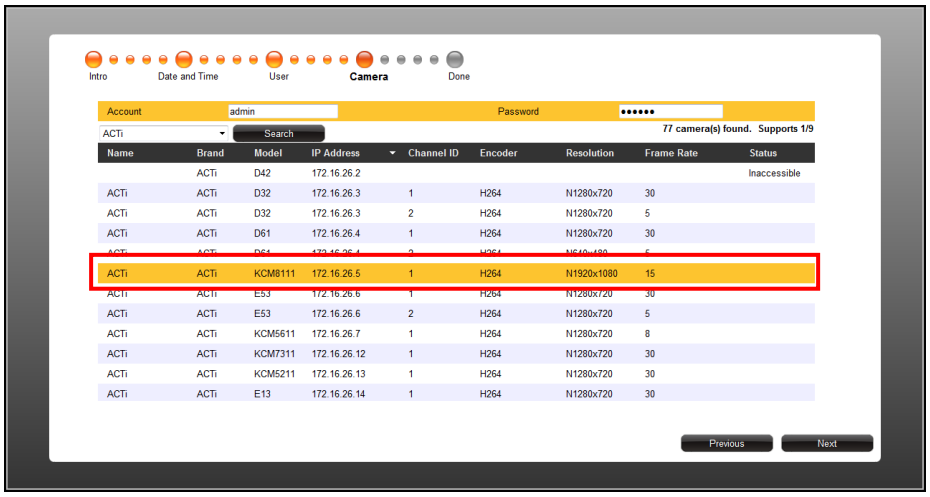


5. By default, the camera manufacturer, user account name and password for access are already filed with default values. If you want to add camera from other manufacturers or the camera has different account and password, modify these values as needed. Then, click **Search** to search for cameras.

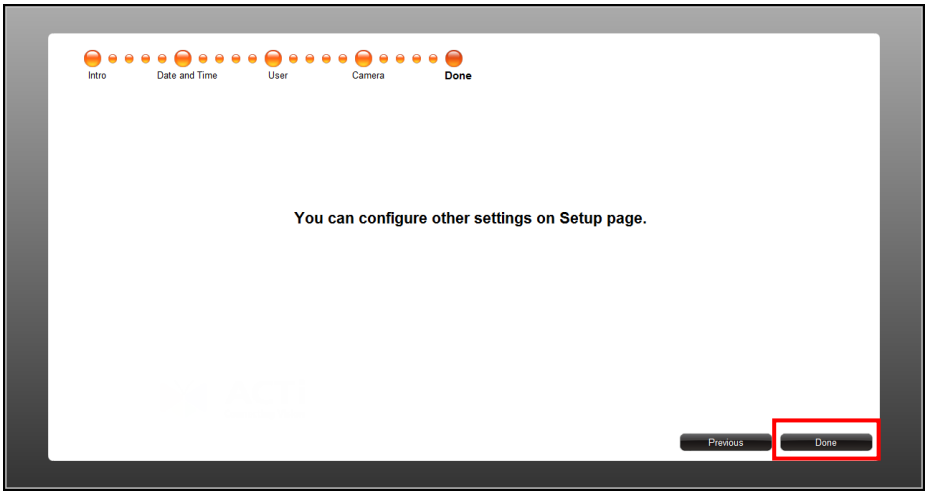


NOTE: DSS-1000 supports third-party cameras. To validate specific camera models that can be integrated, visit our website.

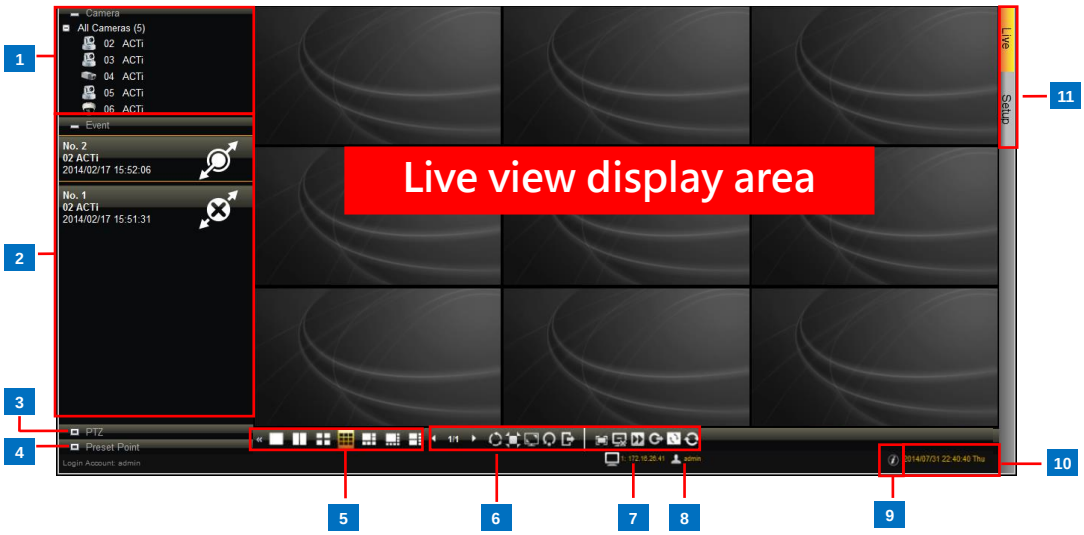
6. The list of cameras connected on the network appears. Click on a camera to select it. By default, you can select up to 9 cameras to add. Selected cameras are highlighted in orange.



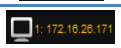
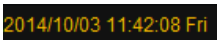
7. Click **Next** to continue.
8. Click **Done** to close the wizard.



3.2 The Live View Page



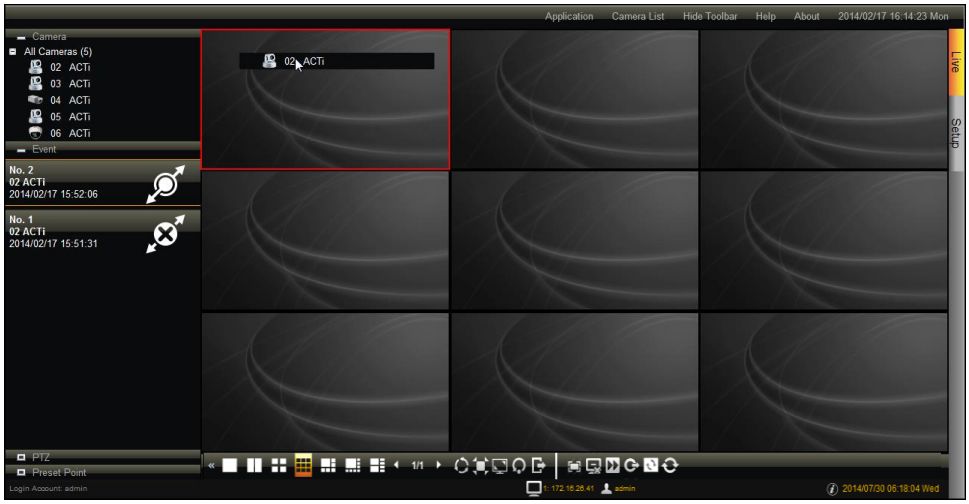
Item		Description
1	**Camera List**	Displays the channel number and camera name of the cameras connected to DSS-1000. Drag a channel to a window on the **Live View** display area to view the video stream. Or, double-click **All Cameras** to automatically view all cameras on the list to the **Live View** display area. See ***Viewing the Cameras*** on page 80.
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. Motion detection settings are done on the camera side.
3	**PTZ Control**	Displays the PTZ control panel and allows users to pan, tilt, and zoom on the channel using the PTZ control buttons, as well as adjust the PTZ settings and adjust the focus. See ***2.4 Using the PTZ Control Panel*** on page 35.
4	**Preset Point**	Allows users to define preset points and set the tour of PTZ camera models. See ***Setting Preset Points*** on page 37.

Item		Description
5	**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 82.
6	**Viewing Icons**	Use for managing the display settings or the sequence patrol. See ***Patrolling Channels*** on page 83.
		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.
		Click to start / stop sequence patrol.
		Click to stretch/ un-stretch the video
		Click to enter / exit full screen.
		Click to reset the channel position
		Click to hide / reveal the blue title bar of each channel
		Click to disconnect all channels
		Click to switch between **Decode I-frame** / **Auto Drop Frame** modes. By default the live view uses **Auto Drop Frame** mode, which will set random channels to decode I frame only so as to lower the client computer's CPU loading. By switching to **Decode I-frame** mode, all channels will display at 1 FPS.
		Close the current browser
		Logout and enter the Login window
		Click to sync the remote display according to the local client display.
		Click to sync the local display according to the remote client display.
7		Your user account
8		The IP address of DSS-1000
9		Click to view the firmware version.
10		The system date and time. Click the date and time to access the Date and Time menu.
11	**Screen Switch**	Click to switch between **Live** and **Setup** screens.

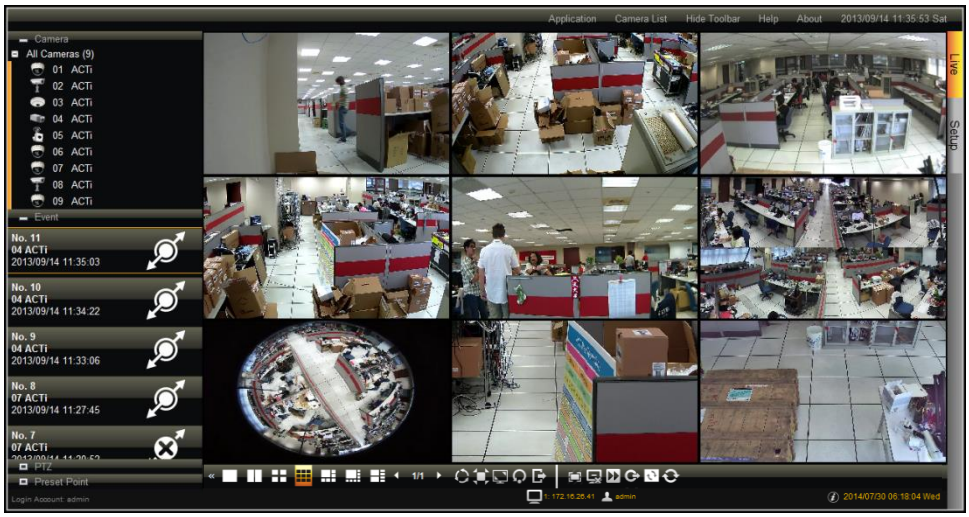
Viewing the Cameras

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

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



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

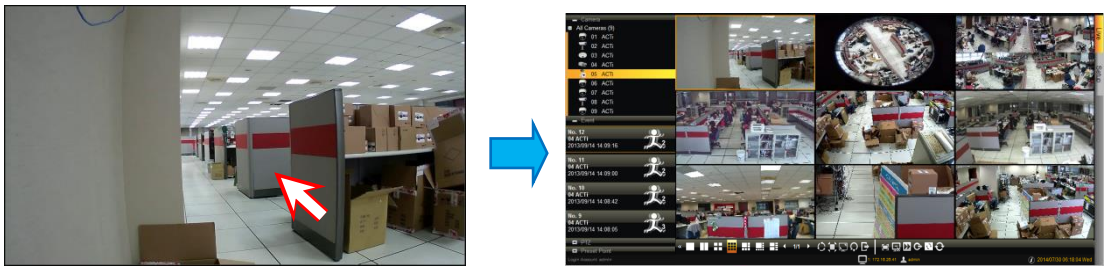


NOTE: DSS-1000 does not save the displayed channel settings; so every time users access DSS-1000, the **Live View** display area is empty and cameras must be added to the **Live View** display area again.

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

With the mouse icon over the channel window, scroll the mouse wheel up or down to zoom in or zoom out the image.

Or, 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.

See also, ***Using Optical / Digital PTZ*** on page 85.

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 2 channels at a time.	Click to display 4 channels at a time.
Layout 9	**Layout 12**	**Layout 16**
Click to display 9 channels at a time.	Click to display 12 channels at a time.	Click to display 16 channels at a time.
Layout 1+5	**Layout 1+7**	**Layout 1+12**
Click to display 6 channels at a time on a 1+5 layout.	Click to display 8 channels at a time on a 1+7 layout.	Click to display 13 channels at a time on a 1+12 layout.

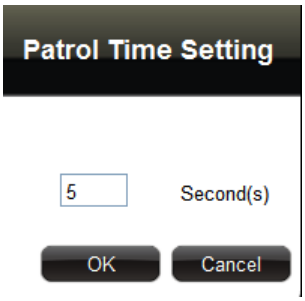
Layout 2+4	Layout 2+8	
Click to display 6 channels at a time on a 2+4 layout.	Click to display 10 channels at a time on a 2+8 layout.	

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 enter Patrol Time Setting window to set the patrol interval and click "**OK**" to start **Sequence Patrol**. By default, 3 seconds is the interval between changing one screen to another. If necessary, type a different number to modify the interval time.



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

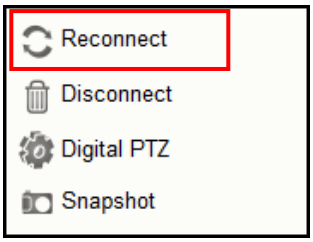
Syncing Remote and Local Live View Display

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 channel window on the **Live View** display area every time the user access DSS-1000, 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

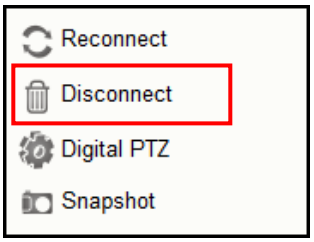
If there is a need to refresh the camera connection, right-click on the channel window of the camera, and click **Reconnect**.



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

Removing Video Stream from Live View

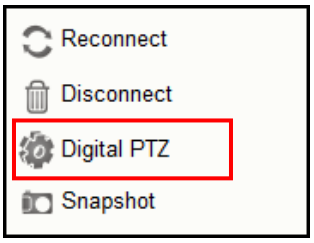
To remove the video stream from showing on the **Live View** screen, right-click on the channel window of the camera, and click **Disconnect**.



Using Optical / Digital PTZ

PTZ and zoom cameras have the option to toggle between optical and digital PTZ. Non-PTZ and non-zoom cameras can still have digital PTZ functions when viewed on remote clients.

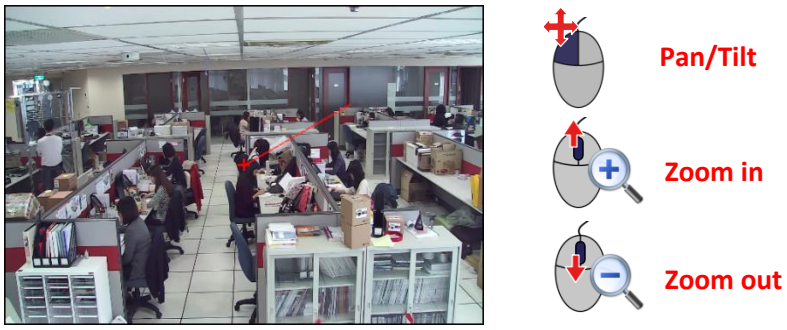
For PTZ and zoom cameras, right-click on the channel window and click **Digital PTZ** or **Optical PTZ** to toggle between optical and digital PTZ.



NOTE: This function is disabled for non-PTZ and non-zoom cameras.

How to Use Optical PTZ

By default, PTZ and zoom cameras are on optical PTZ. A red cross-hair appears in the middle of the channel window when the camera is selected. Use the mouse or the PTZ Control Panel to do PTZ functions (see ***Using the PTZ Control Panel*** on page 87).



- ***To pan or tilt PTZ cameras***, click the mouse anywhere on the Live View screen to move in that direction. The length of the direction indicator (red line) is proportional to the Pan and Tilt speed. The farther you place the cursor from the center, the faster the Pan/Tilt movement.
- ***To zoom in or zoom out***, scroll the mouse wheel up to zoom in; scroll the mouse wheel down to zoom out the image.

When the channel is viewed on full-screen, the red cross-hair does not appear but pan, tilt and zoom functions can still be done the same way.

How to Use Digital PTZ

Digital PTZ can be done on the channel window and on full-screen view. For PTZ and zoom cameras, right-click the mouse button and toggle to **Digital PTZ** first.

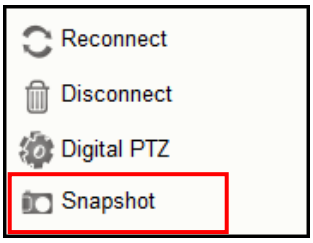
1. On the Live View, select the camera to highlight the channel window.
2. Scroll the mouse wheel up or click and drag the mouse on an area to zoom in the image.
3. The whole camera view is shown on the lower right corner and the zoomed area is indicated by a red box.

The red box indicates the area that is zoomed in.

4. Drag the red box over the image to pan and tilt the view in that direction.

Taking Snapshots

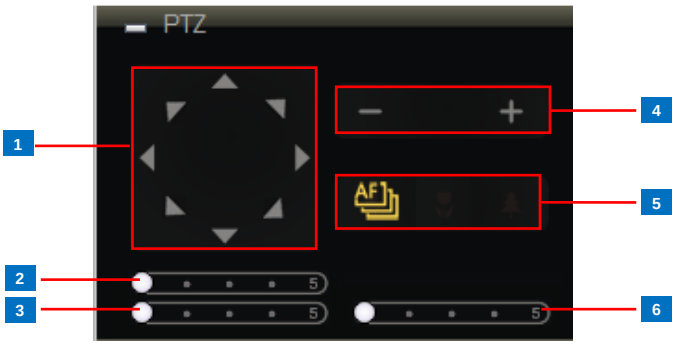
To take snapshots from the live video stream, perform the following:



1. Right-click on the channel 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 PTZ Control Panel

Use the PTZ Control Panel to pan, tilt, and zoom the camera. To display the **PTZ Control Panel**, click **PTZ** from the left panel menu.



TIP: Move the mouse over the icon to display the function name.

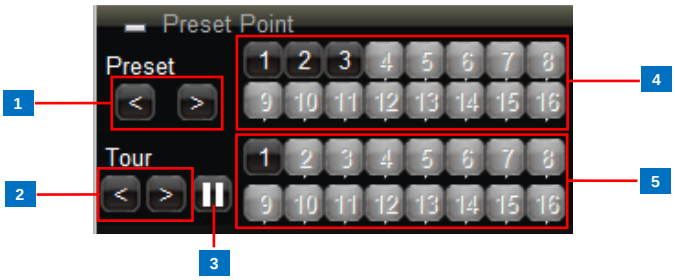
NOTE: For non-PTZ/zoom cameras, PTZ functions are done using digital PTZ.

Item		Description
1	**Pan / Tilt Controls**	Click the arrows to pan / tilt the camera according to the configured speed on the sliders.
2	**Pan Speed**	Drag the slider to adjust the pan speed; 1 (slowest) to 5 (fastest).
3	**Tilt Speed**	Drag the slider to adjust the tilt speed; 1 (slowest) to 5 (fastest).
4	**Zoom Control**	Click the icons to zoom in or zoom out the camera view.
5	**Focus Mode**	Click the icon to toggle between modes: • **Auto Focus** • **Manual Focus**: When **Manual Focus** is selected, the **Near Focus** and **Far Focus** icons become enabled. Click one of the focus icons to adjust the focus manually; you may also need to adjust zoom (6) to achieve the best focus and viewing angle.
6	**Zoom Speed**	Drag the slider to adjust the zoom speed; 1 (slowest) to 5 (fastest).

Viewing by Preset Point and Tour

NOTE: The Preset Point Panel is available only when PTZ and zoom cameras are selected. For other cameras, the Preset Point Panel appears blank.

PTZ and zoom cameras can have up to 32 preset points and 32 tours configured on DSS-1000. A preset point is a user-defined area on the image where the camera is directed at or zoomed in. A tour is a group of preset points that the camera cycles through at specific interval time. The **Preset Point Panel** on the Live View screen allows users to view preset points and start or stop tours. Preset points and tours must be configured first in the **Camera Setup** screen (see ***3.6 Configuring the Cameras*** on page 99).



Item		Description
1	**Preset Point Back / Next**	Click **<** to view preset point 1 ~ 16 buttons or **>** to view preset point 17 ~ 32 buttons.
2	**Tour Back / Next**	Click **<** to view tour 1 ~ 16 buttons or **>** to view tour 17 ~ 32 buttons.
3	**Stop Tour**	When the camera is on tour, click this icon to stop the tour.
4	**Preset Point Number**	The numbers indicate the preset point number. If the button has a: • Black background: The preset point is configured. • Gray background: The preset point is not configured. Click a number button to display that preset point on the Live View screen.
5	**Tour ID Number**	The numbers indicate the tour ID. If the button has a: • Black background: The tour is configured. • Gray background: The tour is not configured. Click a tour ID number to start the tour.

Using the Toolbar

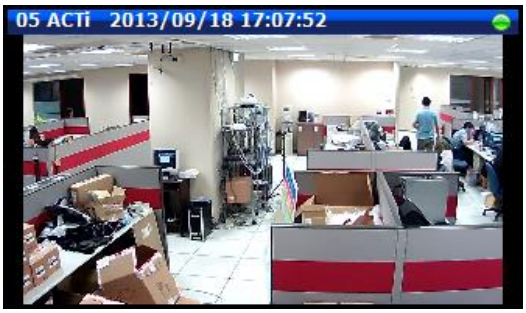
Click a menu and submenu option to use its function. The function is applied to all the cameras in the **Live View**.

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 area. When disconnected, the **Live View** display area 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, DSS-1000 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.

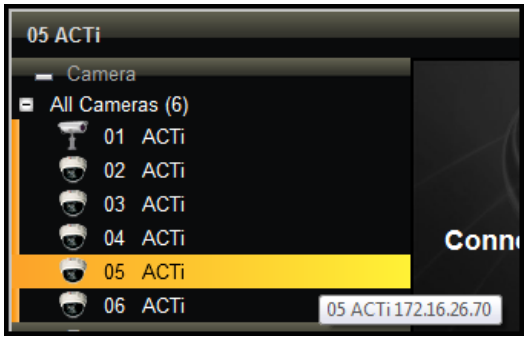
  When **Decode I-frame** is selected, the selection toggles to **Auto Drop Frame**.
  By default, DSS-1000 is set to **Auto Drop Frame**. With this setting, DSS-1000 displays as many video frames as possible to achieve smooth video performance. However, this function uses more computing power. When the 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 DSS-1000 but continue using Internet Explorer.
- **Quit**: Click to quit the entire session and close Internet Explorer.

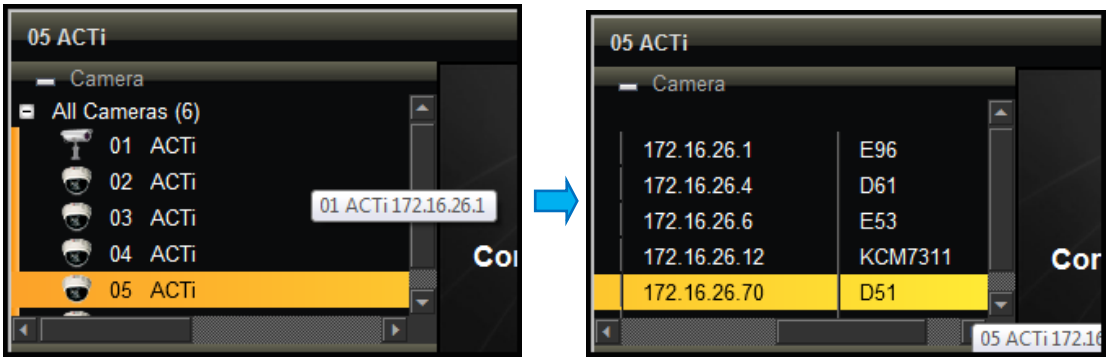
Camera List Menu

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 93.

3.3 The Setup Screen

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

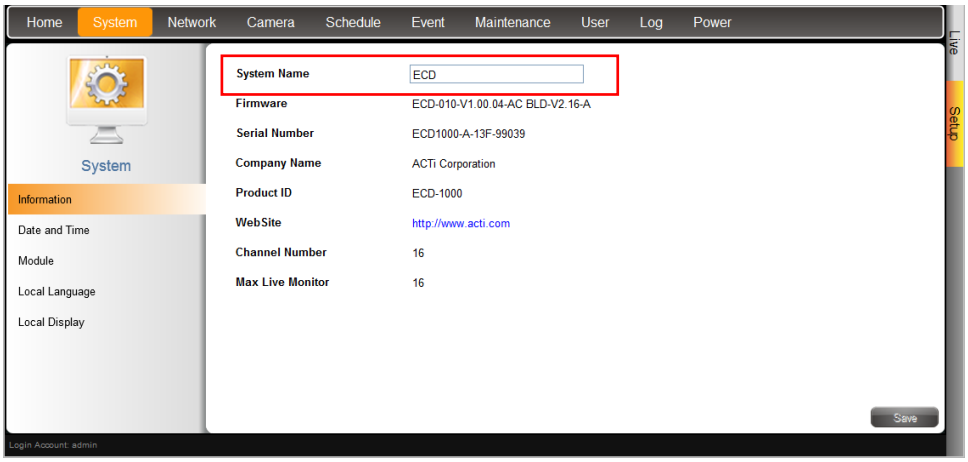
Click an icon from the **Home** menu or a page tab to access the menu page:

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

3.4 Configuring the System Settings

System Information

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



The system information is displayed.

- **System Name**: Name assigned to DSS-1000; 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

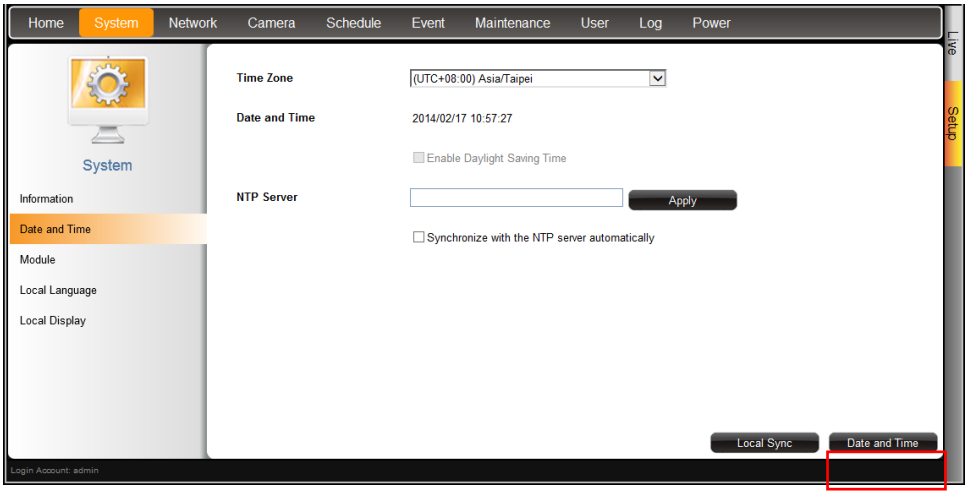
Select the time zone to automatically set the date and time.

1. On the **Setup** 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 **Daylight Saving** box. Note that this box becomes enabled only if the Daylight saving time can be applied to the selected time zone.

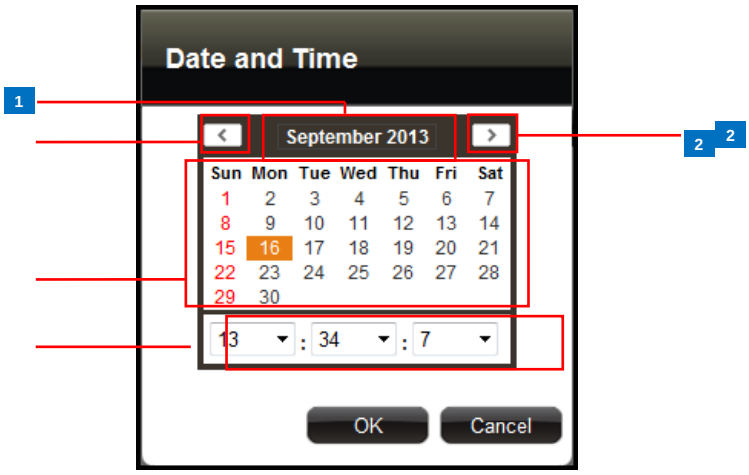
Manually Change the Date and Time

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



2. Click the system date and time button.

3. Modify the date and time.

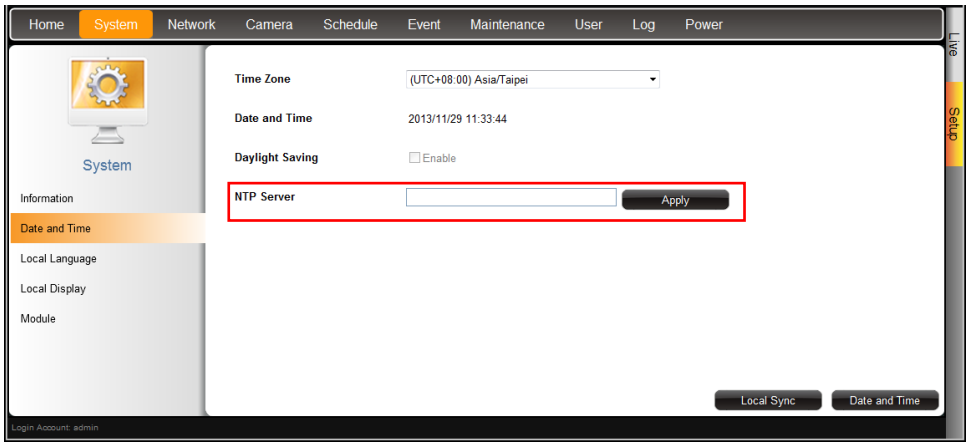


Item		Description
1	**Month and Year**	Select the month and year from the box.
2	**Scroll Icons**	Click to view the calendar of the previous or the next month.
3	**Date**	Click a date to set the date. Selected date is highlighted in orange, while the current date is in yellow.
4	**Time**	Select the hour,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

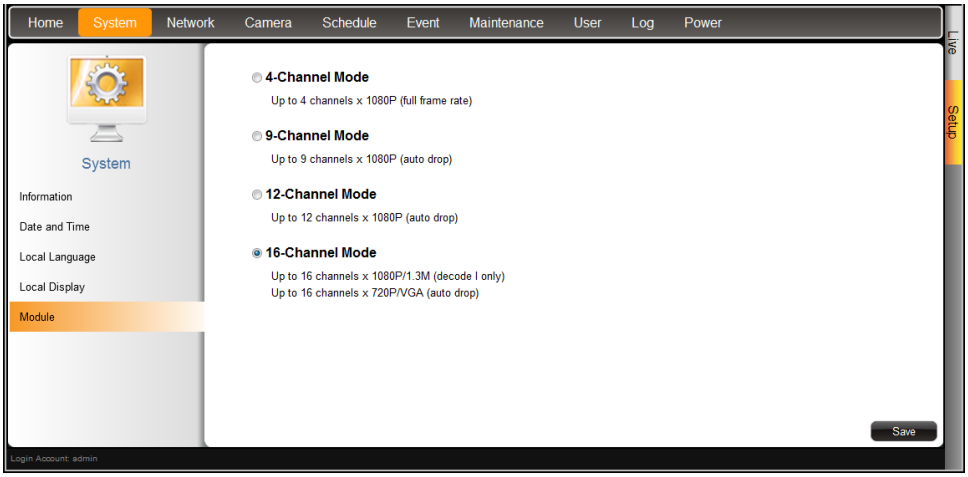
NOTE: If the NTP Server is a domain name, make sure the IP setting and DNS setting of the system gateway are correct.

To delete NTP Server

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

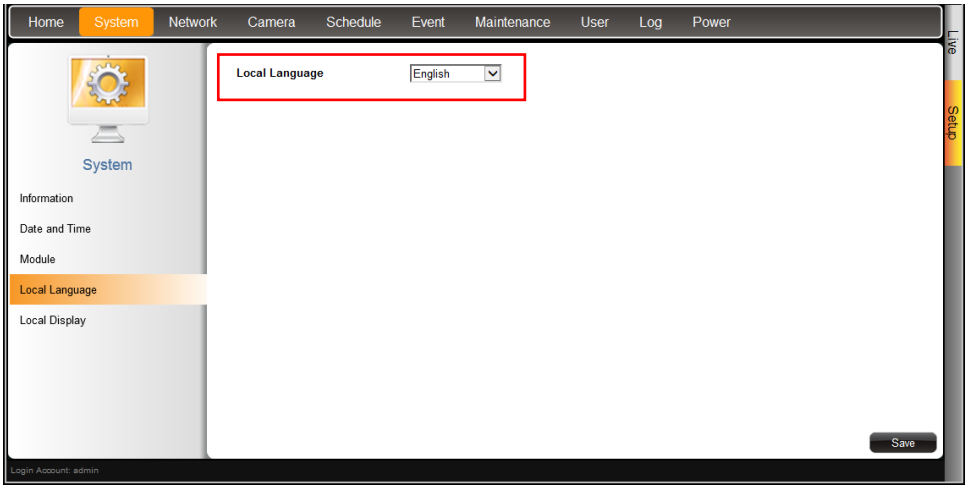
Module

The **Module** page allows users to select the maximum number of cameras that can be connected to DSS-1000. Options are: 4-channel, 9-channel, 12-channel, and 16-channel mode.



Language

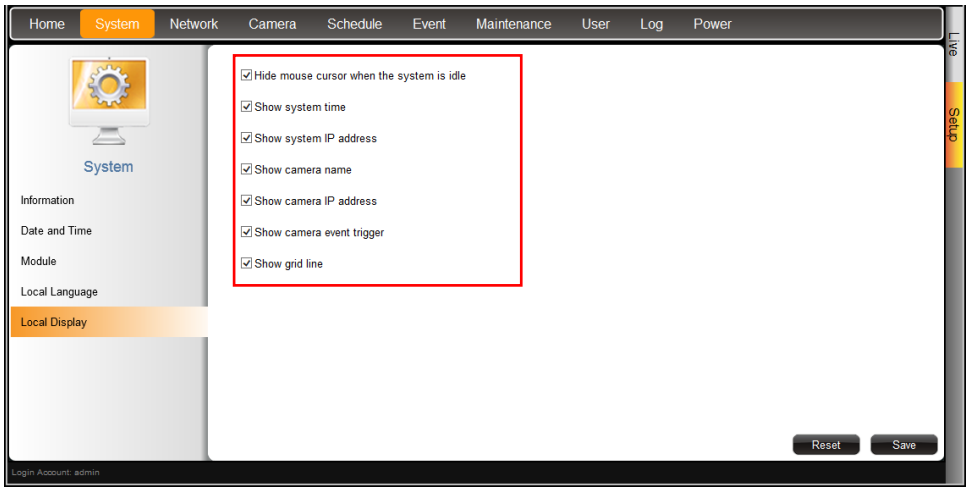
To change the language of the local display interface, click **System** > **Local Language** on the **Setup** screen. Then, select the desired language from the box.



Local Display

The **Local Display** page 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.

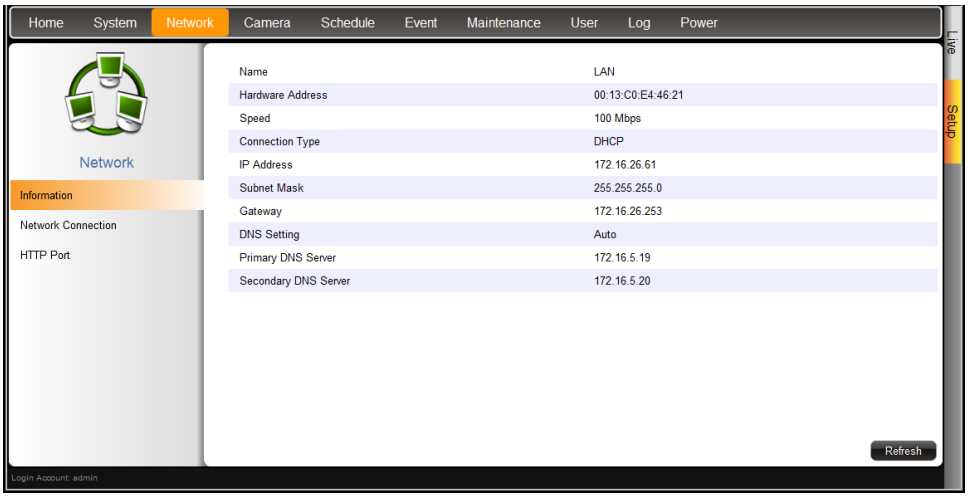
   - **Hide mouse cursor when the system is idle**: If checked, the mouse cursor is hidden from the Local display if there is no mouse movement within 5 seconds.
   - **Show system time**: If checked, the system date and time is displayed on the bottom of the **Live View** screen.
   - **Show system IP 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.

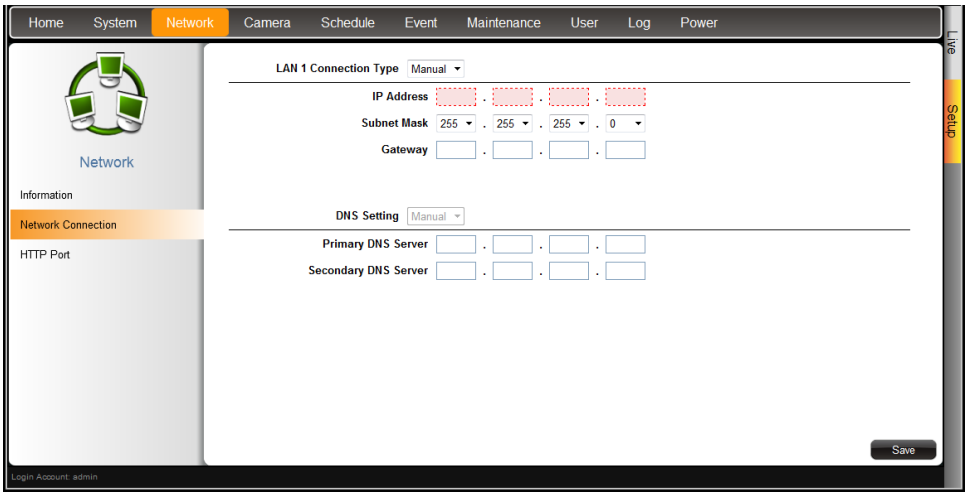
To refresh the page, click **Refresh**.

Configuring the Network Connection

Use the **Network Connection** to configure the network settings of DSS-1000, 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, DSS-1000 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 DSS-1000 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, DSS-1000 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 98.



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.

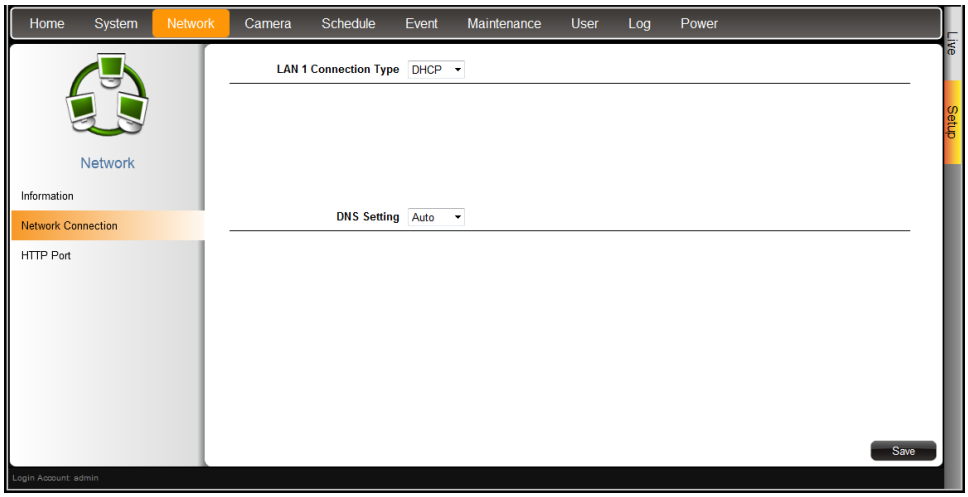
   NOTE: The IP Address and Subnet Mask must be filled in. Other settings may be left blank if not required by the network service.
4. When done, click **Save**.

Obtaining the IP Address Automatically

If your network has a DHCP server, DSS-1000 will automatically be assigned an IP address.

However, in case DSS-1000 does not detect the DHCP connection, perform the following procedures to obtain the IP address:

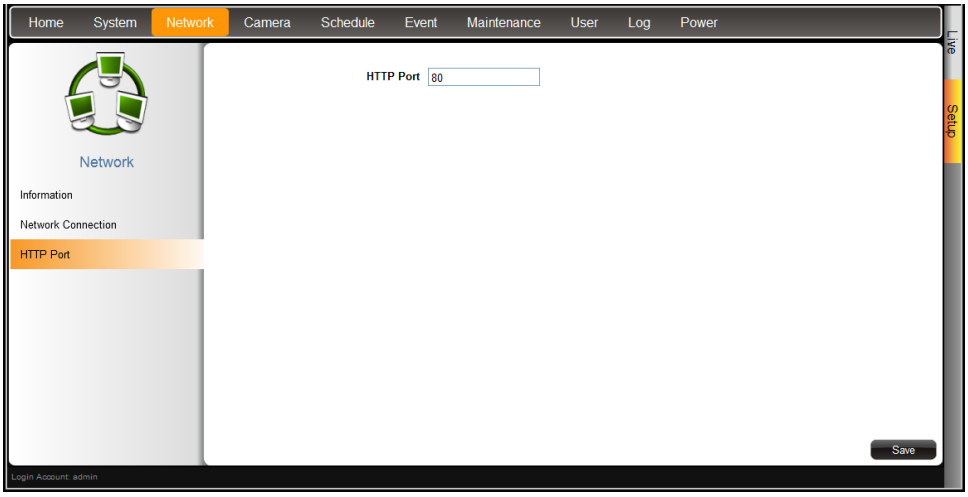
1. On the **Setup** screen, click **Network** > **Network Connection**.
2. On **Connection Type**, select **DHCP**.



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

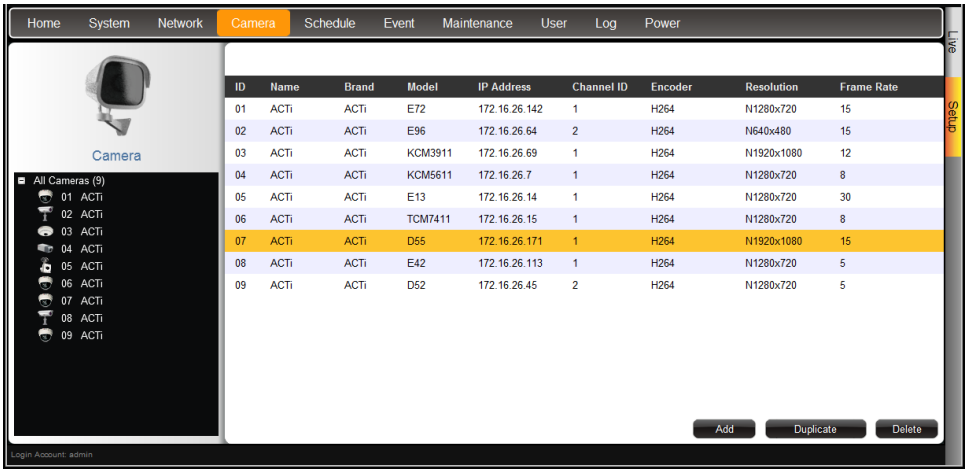
Configuring Port Mapping

By default, DSS-1000 port number is 80. To change this value, click **Network** > **Port Mapping** on the **Setup** screen. Click **Save** to apply and save the changes.



3.6 Configuring the Cameras

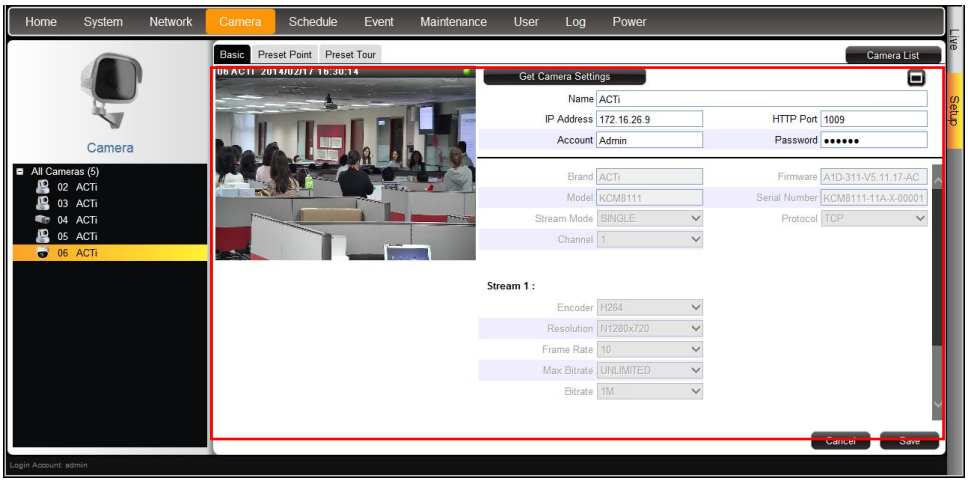
On the **Setup** screen, click **Camera**. The camera list table is displayed.



- To add cameras, click **Add**. See ***Adding Cameras*** on page 101.
- To add cameras with almost the same setting as an existing channel, see
- ***Duplicating*** Cameras on page 106.
- To delete cameras, see

- ***Deleting*** Cameras on page 111.

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 .
- To view the camera list table, click **Camera List**.
- To view other cameras, click the camera from the camera list panel on the left.
- To configure preset points and tours of the camera, click the **Preset Point** or **Preset Tour** tab. These tabs appear only in PTZ and zoom cameras only. See ***Setting Preset Points on the Remote Client*** on page 112.

Adding Cameras

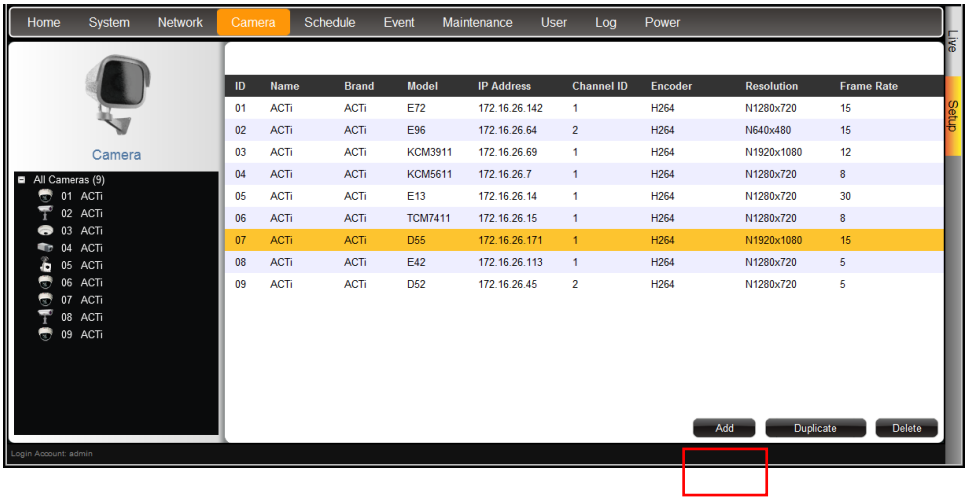
There are two ways to add cameras for viewing: by manually entering the IP address of the camera or by searching the cameras on the network.

NOTE: DSS-1000 supports third-party cameras. To validate specific camera models that can be integrated, visit our website.

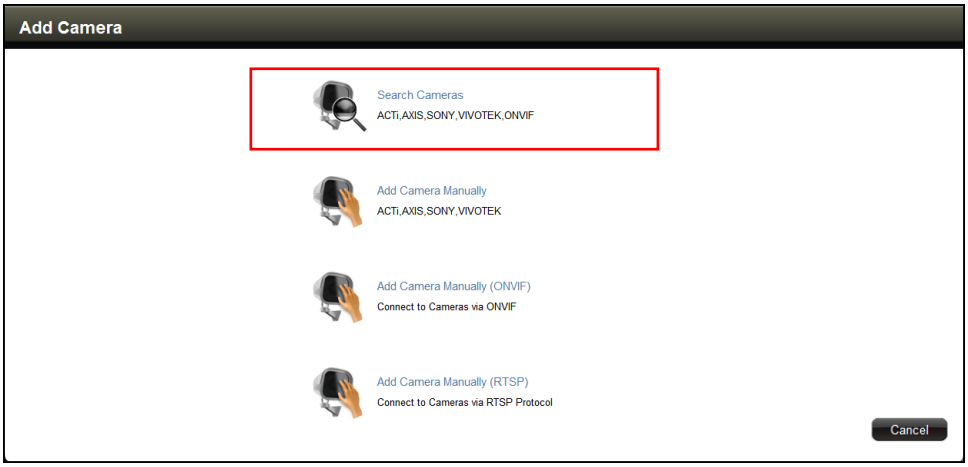
Searching Cameras to Add

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 DSS-1000.

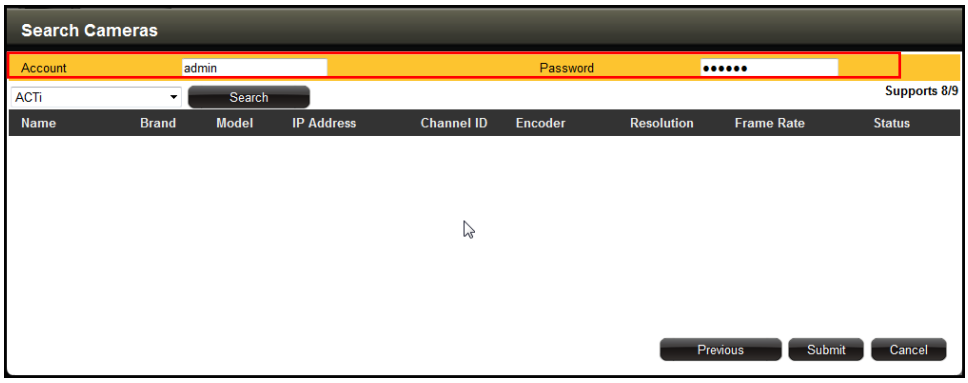
1. On the **Setup** screen, click **Camera**.
2. On the camera list table, click **Add**.



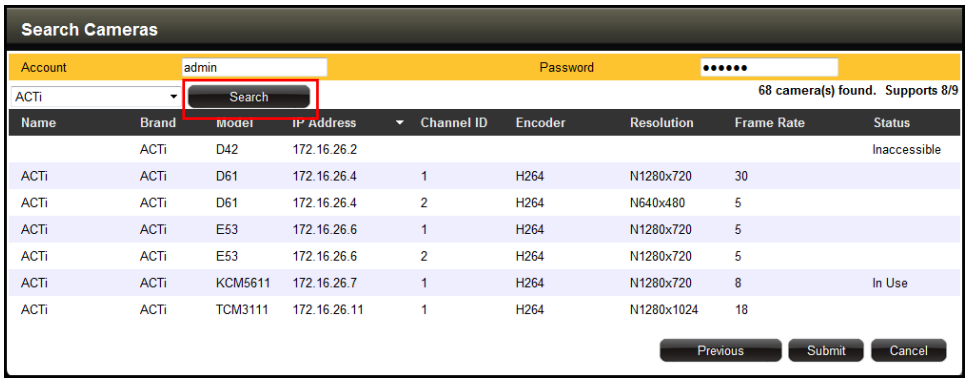
3. Click **Search Cameras**.



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 one or more cameras to select it. The number of cameras that you can select depends on the channel mode selected in **Module** (see ***Module*** on page 95). Selected cameras are highlighted in orange.

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

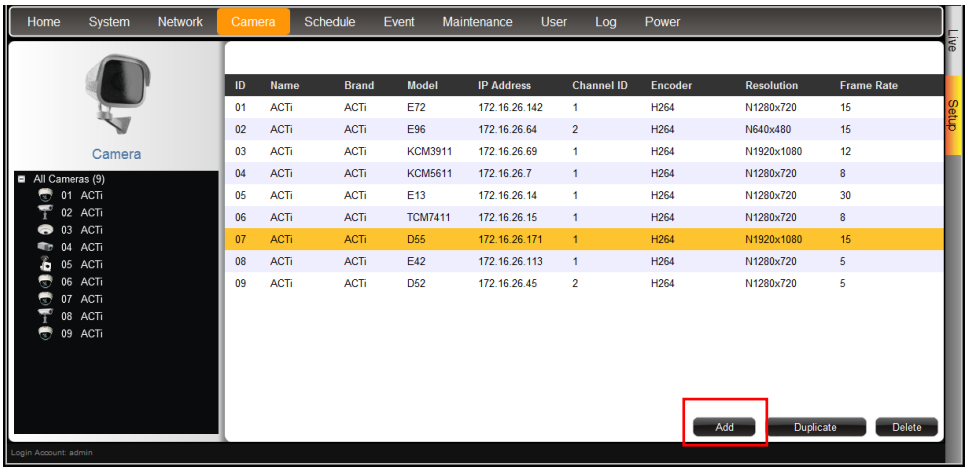
   - **Inaccessible**: The camera account or password may be different from what you have entered on **Account** and **Password** fields. So that camera cannot be accessed.
   - **In Use**: The camera is already added to DSS-1000 for live viewing.

7. Click **Submit** to add the selected cameras to DSS-1000 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** screen, 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**.

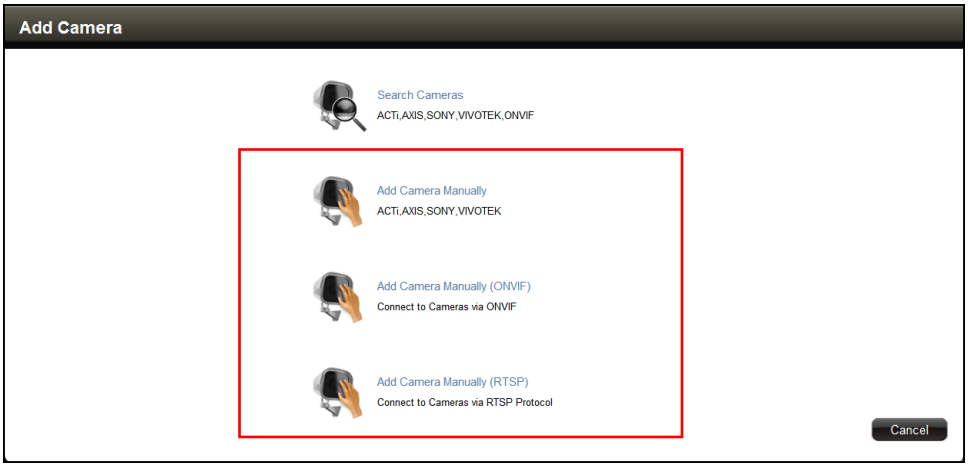


4. Click **Add Camera Manually** or **Add Camera Manually (ONVIF)**.
   - **Add Camera Manually**

     If your network does not have a DHCP server, perform this step to connect a camera.
   - **Add Camera Manually (ONVIF)**

     If the camera is a 3rd-party camera which is ONVIF-compliant, you can manually add it with this method.
   - **Add Camera Manually (RTSP)**

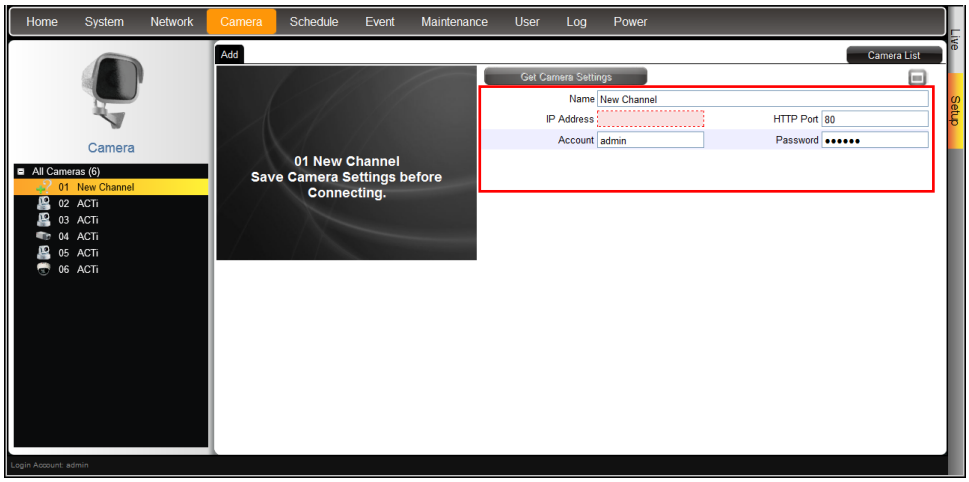
     In case you want to add cameras via Real Time Streaming Protocol (RTSP), use this function. This feature is useful when adding third party cameras which support the standard RTSP.



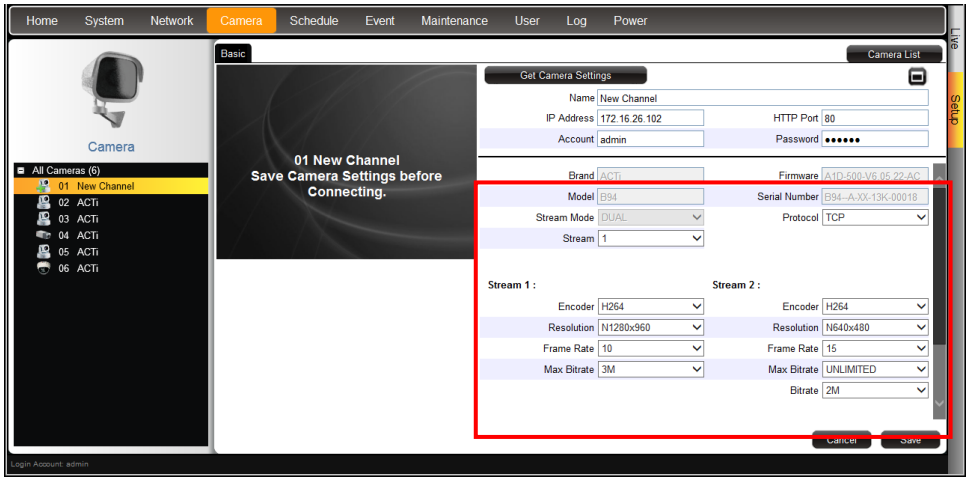
5. Type a name you want to use to identify the camera (maximum of 32 alphanumeric

characters, no spaces nor symbols). This name is saved only on DSS-1000 and does not affect the settings on the camera side.

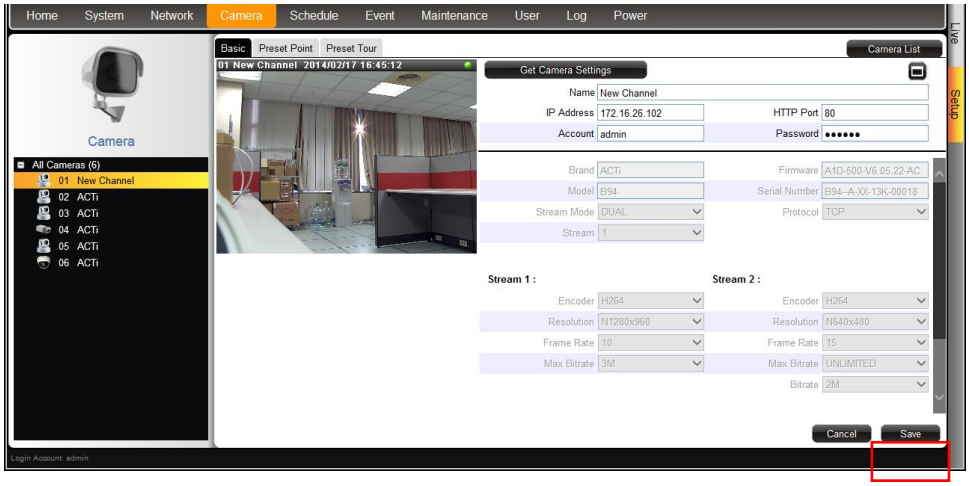
6. Enter the **IP Address**, **HTTP Port**, **User Name** and **Password** of the camera you want to connect to. For adding cameras via RTSP protocol, you need to give the **URI** (Uniform Resource Identifier)A and **RTSP Port** (by default 554), If you do not know the URI of the camera, click to select from the most common manufacturers on the list. Once a manufacturer is selected, its URI is filled up on the field. If the predefined URI does not work, check the camera specifications for details.



7. Click **Get Camera Settings**. DSS-1000 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.



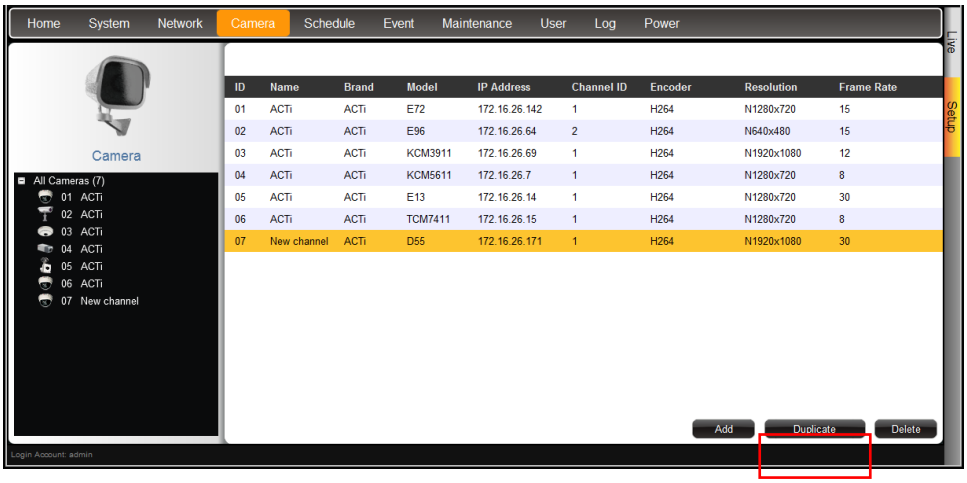
8. Click **Save**. The live video appears on the display window.



Duplicating Cameras

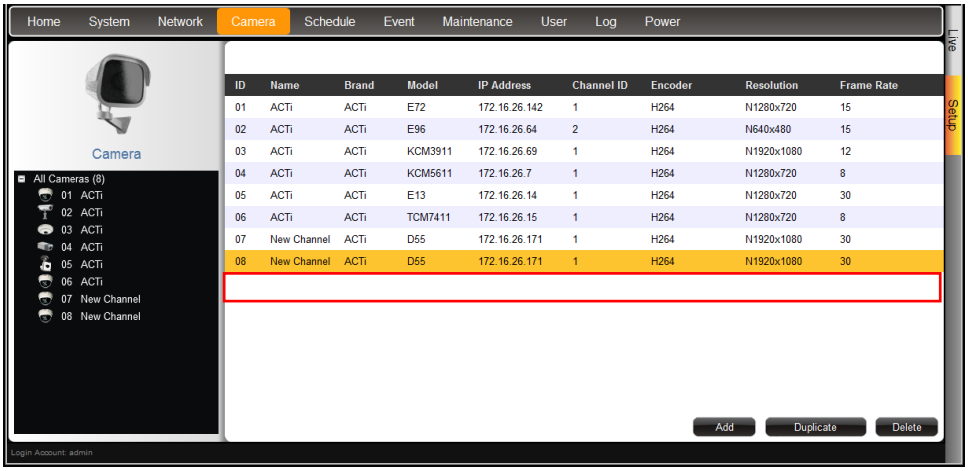
Use this function to add another camera with almost the same camera settings as the selected camera. So instead of entering all the information one by one, duplicate the camera settings first and then modify afterwards. However, to use this function, there must be at least one available channel without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

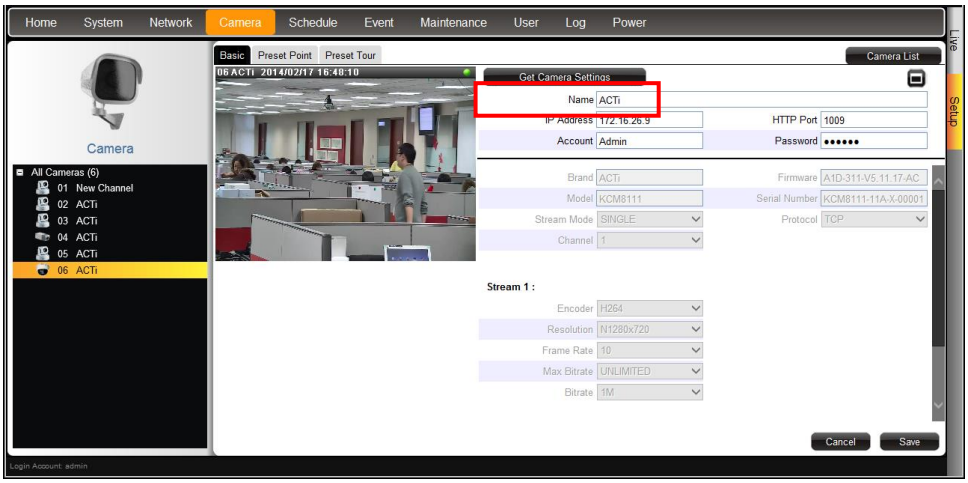
3. The copied camera is automatically added to the next available channel. Double-click the camera from the table to access the camera properties and modify the settings.


Home
System
Network
Camera
Schedule
Event
Maintenance
User
Log
Power
Live
Setup
Camera
All Cameras (8)
01 ACTi
02 ACTi
03 ACTi
04 ACTi
05 ACTi
06 ACTi
07 New Channel
08 New Channel
ID Name Brand Model IP Address Channel ID Encoder Resolution Frame Rate
01 ACTi ACTi E72 172.16.26.142 1 H264 N1280x720 15
02 ACTi ACTi E96 172.16.26.64 2 H264 N640x480 15
03 ACTi ACTi KCM3911 172.16.26.69 1 H264 N1920x1080 12
04 ACTi ACTi KCM5611 172.16.26.7 1 H264 N1280x720 8
05 ACTi ACTi E13 172.16.26.14 1 H264 N1280x720 30
06 ACTi ACTi TCM7411 172.16.26.15 1 H264 N1280x720 8
07 New Channel ACTi D55 172.16.26.171 1 H264 N1920x1080 30
08 New Channel ACTi D55 172.16.26.171 1 H264 N1920x1080 30
Add
Duplicate
Delete
Login Account: admin

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

Item	Description
Name	Enter a descriptive name to assign to DSS-1000, e.g. location of camera, etc. This name is not saved or shown on the camera side. The maximum length is 32 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 manufacturer 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.

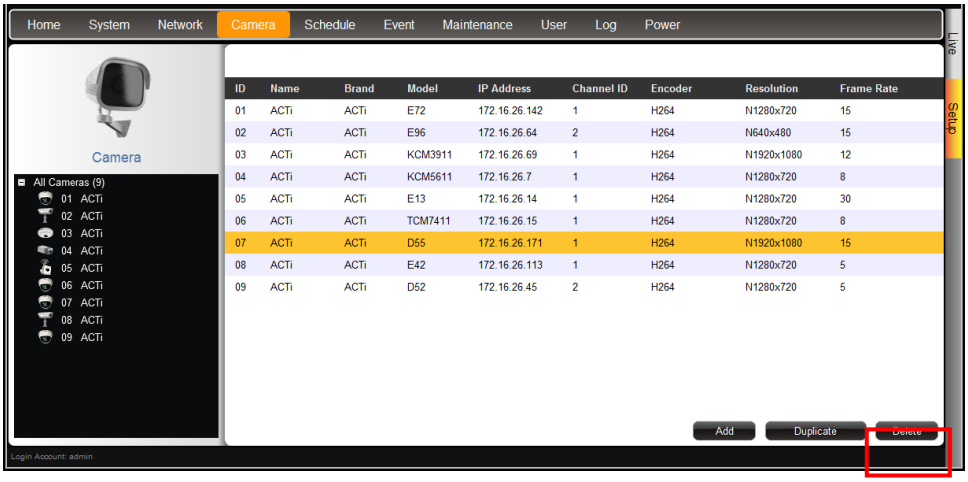
Item	Description
	This field cannot be modified.
Protocol	Displays the video stream protocol. You can modify the video stream protocol, as needed.
Channel ID	For dual stream cameras, select the stream to view. Usually, stream 1 or **Channel ID** 1 is configured to be the best quality stream for recording purposes and stream 2 or **Channel ID** 2 with basic quality for live viewing, like viewing through DSS-1000. 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.
Bitrate Mode	Under "**Constant Bit Rate**" mode (CBR), the camera keeps the stable bitrate regardless of the complexity of the scene. Under this mode, the video quality may vary if the bit rate value is set too low. It is easier to do storage and network bandwidth consumption estimations under this mode compared to Variable Bit Rate mode. Under "**Variable Bit Rate**" mode (VBR), the camera will keep the video quality stable while the bit rate may occasionally go up or down, depending on the complexity of the scene.
Max Bitrate (only for H.264)	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,

Item	Description
	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.
Quality (only for H.264)	Under VBR mode, the bit rate will be floating while the video quality will be stable and follows the quality standard set by the user. The user can choose either “High”, “Medium” or “Low” quality. The higher is the quality level, the more bit rate the camera will use to achieve the target quality.
GOP 1 I-Frame	Under VBR mode it is possible to adjust the GOP length - that is the occurrence rate of I-frames. By default, there is one I-frame per second. For example, in case of 30fps, there will be 1 I-frame and 29 P-frames every second by default. When the GOP is changed to “1 I-frame per 5 seconds”, then there will be one I-frame, followed by 149 P-frames. In case of the static scenes, long GOP can further minimize the bandwidth and storage consumption.
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.
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.

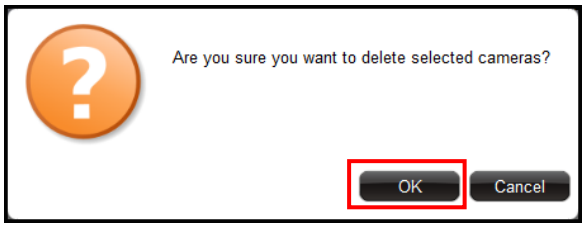
5. When done, click **Save**. The camera properties are saved and DSS-1000 restarts the connection.

Deleting Cameras

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

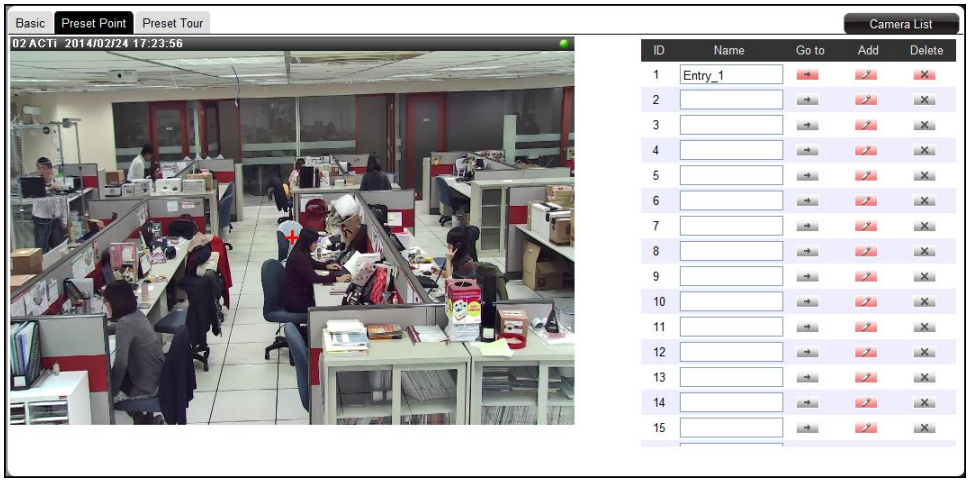


Setting Preset Points on the Remote Client

A preset point is a user-defined area where the camera is directed at or zoomed in. Up to 32 preset points can be configured on DSS-1000. When preset points are created on DSS-1000, they are automatically synced on the camera side, and vice versa.

How to Create / Modify Preset Points

1. On the **Setup** screen, click **Camera**.
2. Select the camera from the left panel menu, then click the **Preset Point** tab. A red cross-hair appears on the display window.



3. Pan, tilt and zoom the camera to the desired area:
   - To pan and tilt, click the mouse on the display window to move the direction of the camera (available on PTZ cameras only).
   - To zoom in or zoom out the image, scroll the mouse wheel up or down.
4. Click the **Add** icon of a preset point. A default name is given to the preset point; retain or modify the name, as preferred.

   TIP: Click the corresponding **Go to** icon to go to a preset point

How to Delete Preset Points

On the **Preset Point** page tab of the selected camera, click the corresponding **Delete** icon of the preset point to delete. The name becomes blank to indicate the preset point has been deleted

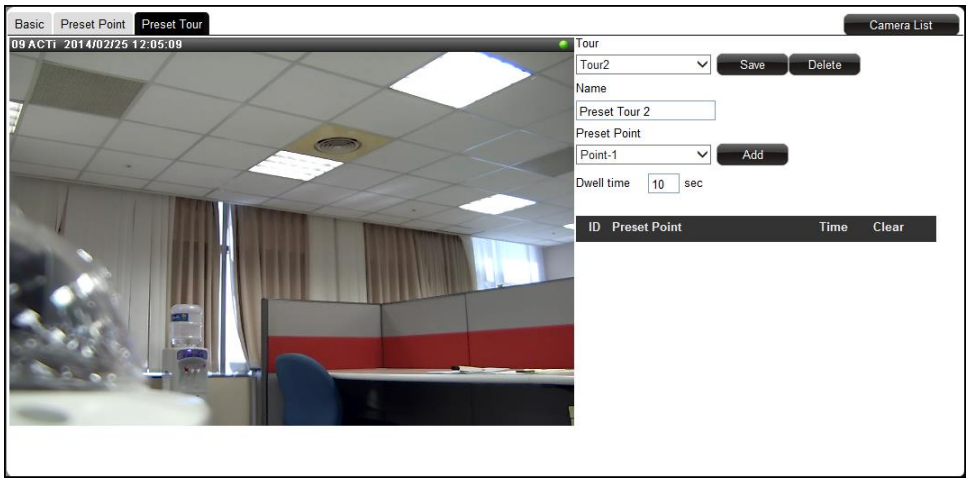
Setting Preset Tours on the Remote Client

Several preset points can be grouped into a “Tour” which directs the camera to cycle through the series of preset points at specific interval time. Up to 32 tours can be set on DSS-1000. The tour configuration is saved only on DSS-1000, not on the camera side.

How to Create / Modify Tours

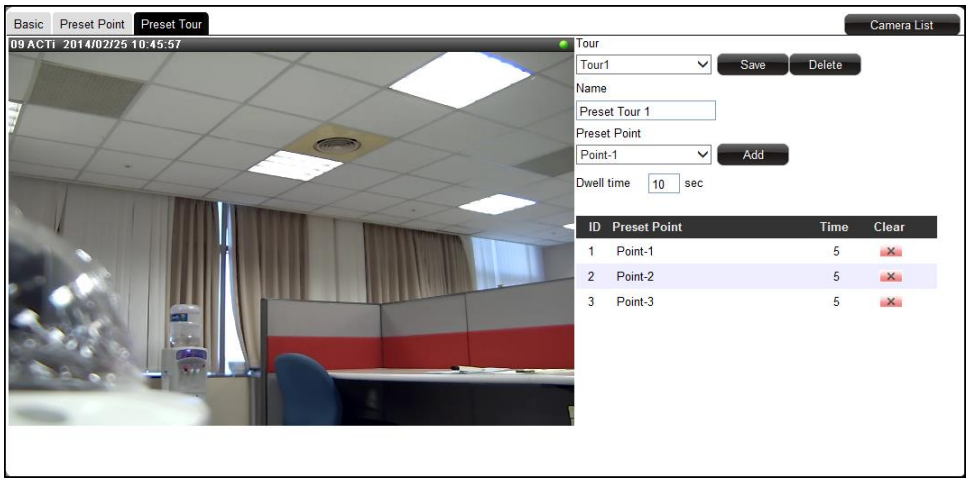
To create tours, make sure one or more preset points have already been created. The tour configuration on DSS-1000 is not synced with the tour configuration on the camera side.

1. On the **Setup** screen, click **Camera**.
2. Before creating a tour, the preset points must be created first (see ***Setting Preset Points on the Remote Client*** on page 112).
3. Click the **Preset Tour** tab.



4. On **Tour**, select the tour ID from the list. A default name is give to the tour; retain or modify **Name**, as preferred.
5. On **Preset Point**, select the preset point to include on the tour and specify the **Dwell time** (in seconds). Dwell time is the amount of time that the camera will remain in the preset point.
6. Click **Add**. The preset point is added to the list.

7. Repeat steps 5 ~ 6 to add more preset points.



TIP: To change the order of preset point sequence, drag a preset point up or down the list.

8. When done, click **Save**.

How to Delete Tours

On the **Preset Tour** page tab of the selected camera, click the corresponding **Delete** icon of the preset point to delete. The name becomes blank to indicate the preset point has been deleted

3.7 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**.

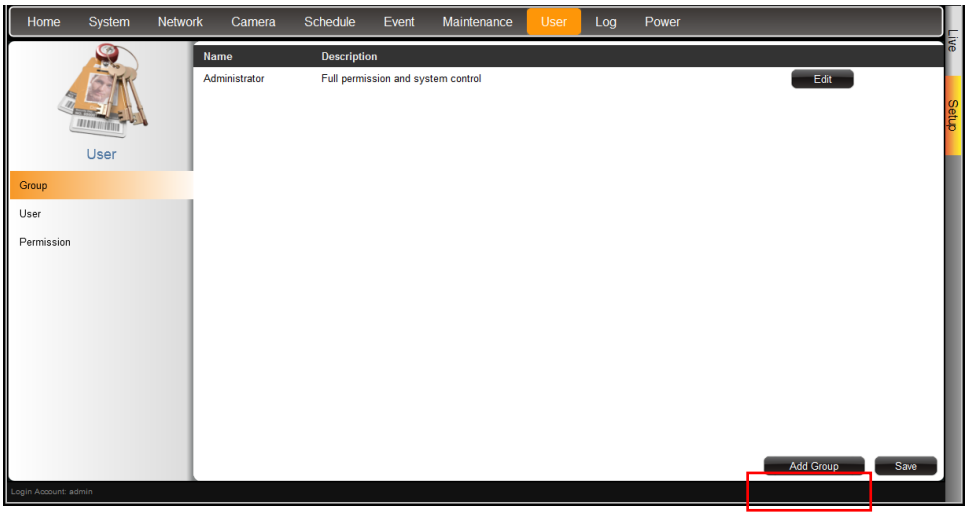
To setup access permissions, perform the following:

1. Create a group. See below.
2. Add users to the group. See ***Adding Users*** on page 117.
3. Set the access rights. See ***Granting Access Permission*** on page 118.

Creating Groups

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

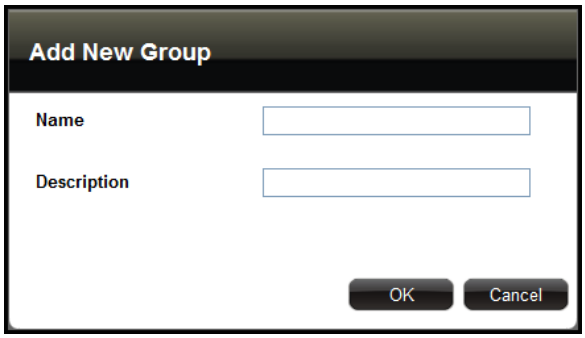
1. On the **Setup** screen, click **User** > **Group**.



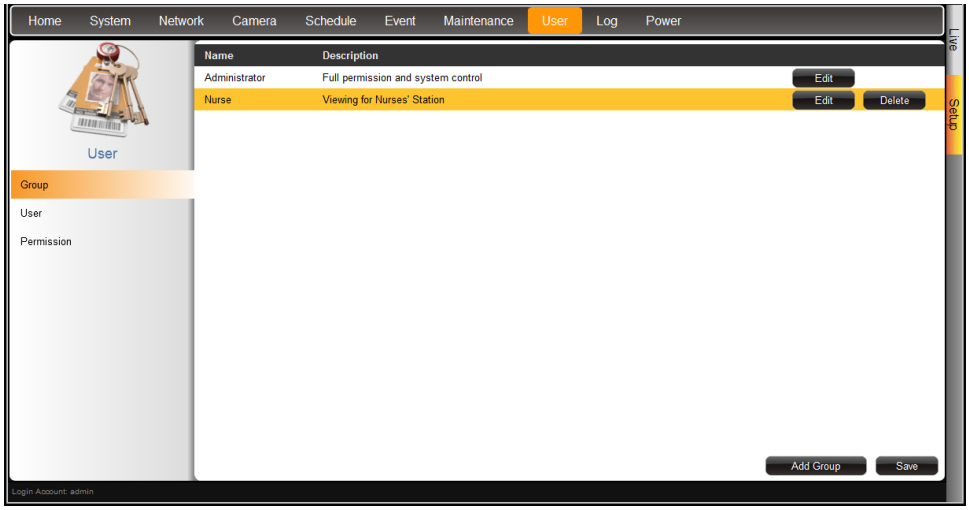
2. Click **Add Group**.

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.

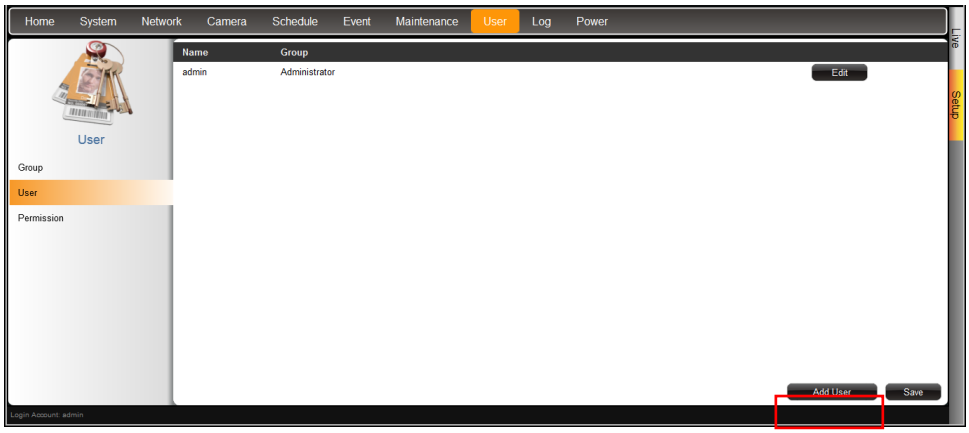


4. Click **OK**. The new group appears on the group table.

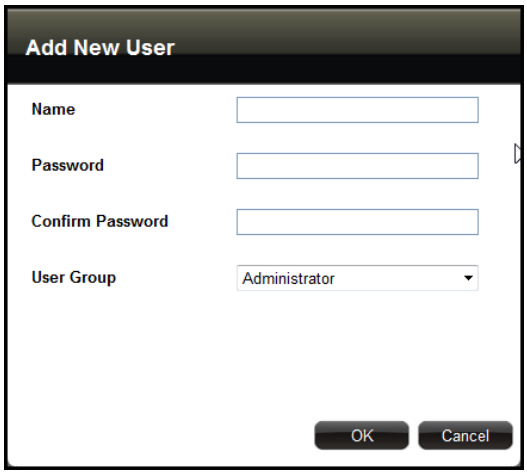


Adding Users

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



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

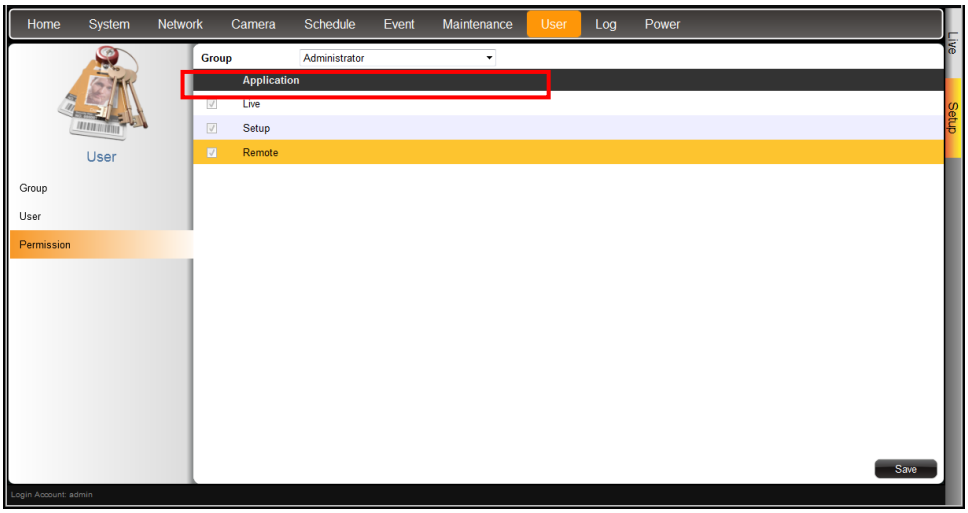


Item	Description
Name	Enter a user name. The name can be up to 63 alphanumeric characters; symbols are not allowed.
Password	Enter the password that will be used by the user to log into DSS-1000.
Confirm Password	Re-type the password here. The two passwords must match.
User Group	Select the group to where the user belongs. This group defines the access rights granted for the user.

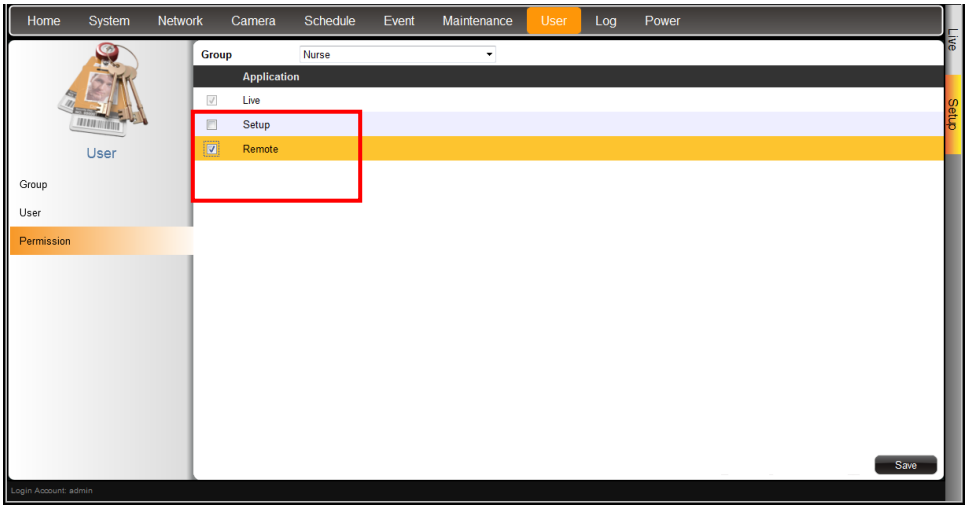
4. Click **OK**. The new user is added to the user table.

Granting Access Permission

1. On the **Setup** screen, 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** screen from both the local and remote client. Granting this access enables the user to modify the camera and system settings.
   - **Remote**: Permission to access DSS-1000 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.

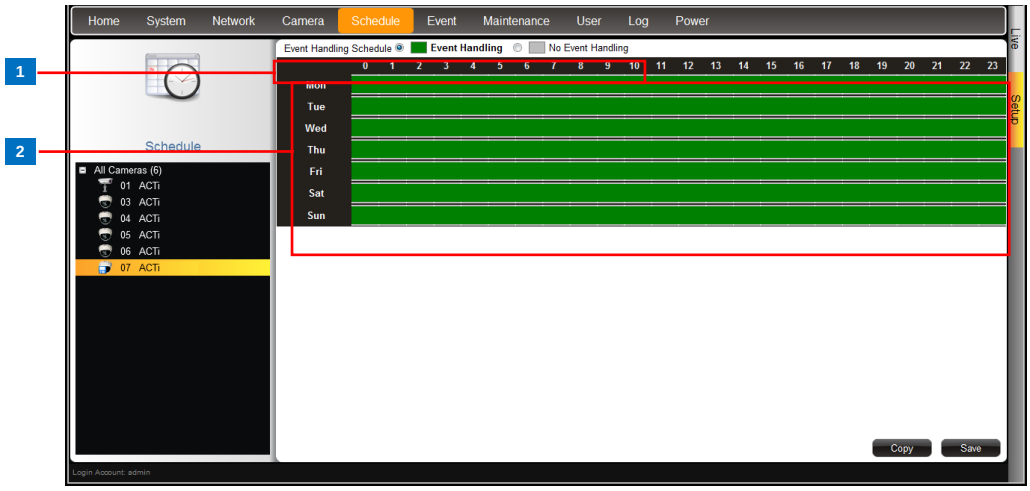
3.8 Managing Network Loss

When a camera suddenly disconnects from the network, DSS-1000 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

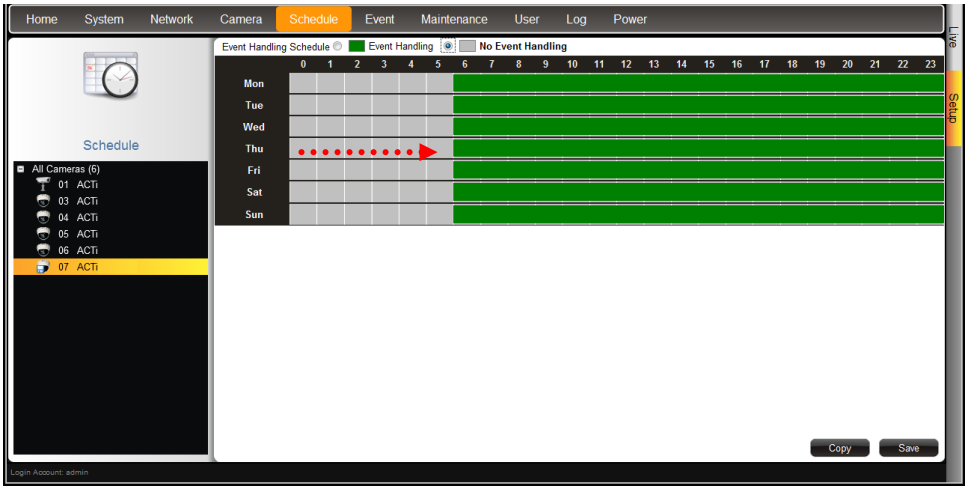
1. On the **Setup** screen, click **Schedule**.
2. Select the camera from the camera list panel.



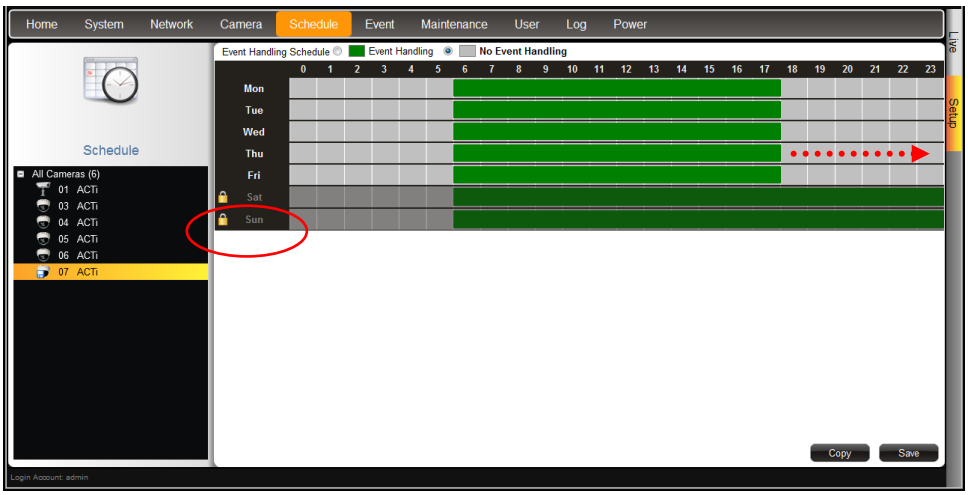
Item		Description
1	**Event Handling Schedule**	• **Event Handling**: Enables event trigger. • **No Event Handling**: Disables event trigger.
2	**Time Table**	Shows green cell if event trigger is enabled and gray cell if event trigger is disabled.

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

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



5. 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.



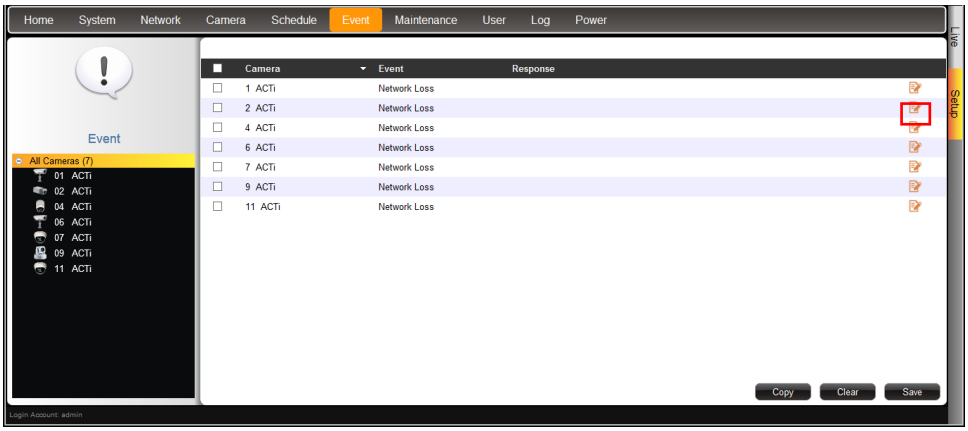
6. When done, click **Save**.

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 123.

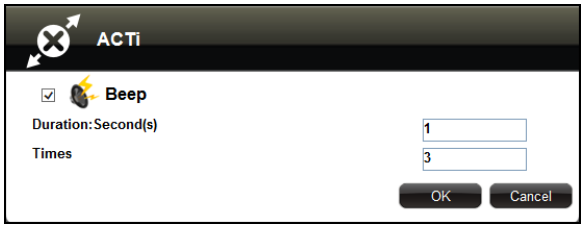
Enabling Beep Sound Trigger

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

1. On the **Setup** screen, click **Event**.
2. Click on **Network Loss** or **Video Loss**.



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.

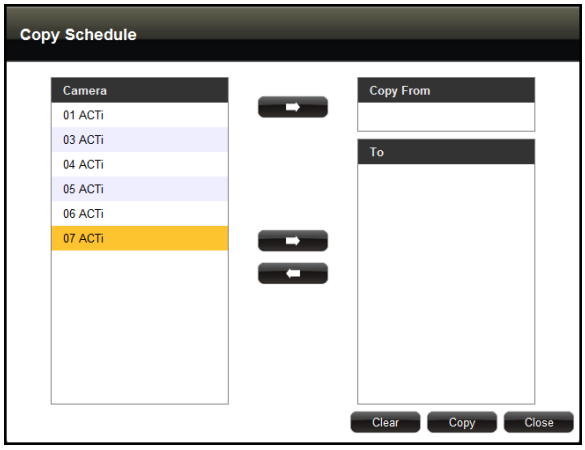
Deleting Beep Trigger

Check the box of the camera and then click **Clear** to delete the event trigger. More than one camera can be selected at one time.

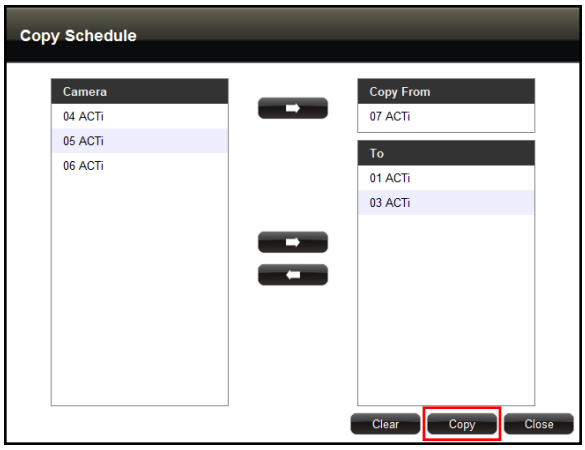
Copying Event Schedule Settings

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. The current camera is highlighted in orange. Click the **Copy From** button. This sets the current camera as the source.



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



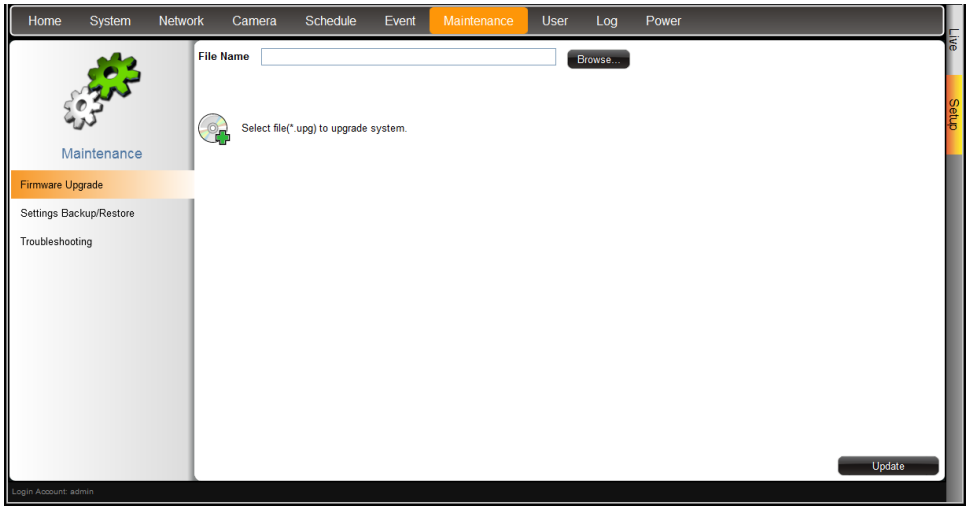
5. A message appears when copy is complete. Click **OK** to close the window.

3.9 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.
2. On the **Setup** screen, click **Maintenance** > **Firmware Upgrade**.



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

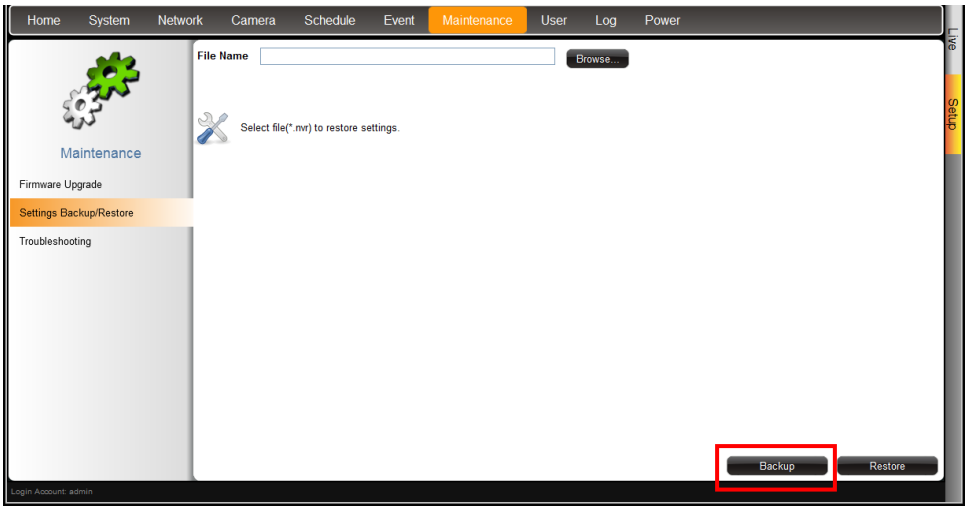
   WARNING: Do not restart or turn off the remote computer while the system is upgrading the firmware!
5. A message appears when upgrade is complete, click **OK** to reboot DSS-1000.

   NOTE: All video streams will be lost for a few seconds until DSS-1000 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** screen, click **Maintenance** > **Settings Backup/Restore**.
2. Click **Backup**.

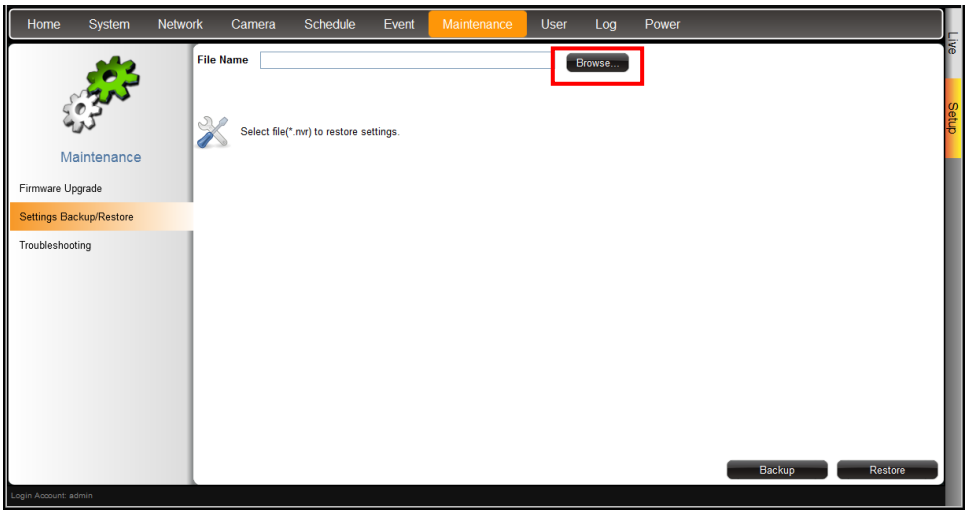


3. A pop up message appears. DSS-1000 creates a backup file of the whole system settings as ***Backup_[yyyymmdd]*.nvr** file. Save the file to the hard disk or to a USB disk connected to the remote computer.

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

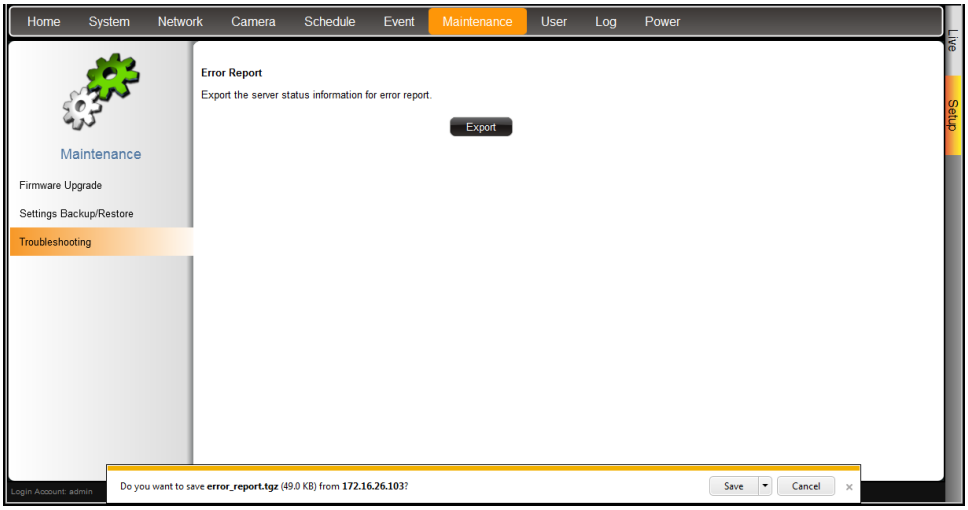


3. Click **Restore**.
4. A confirmation message appears, click **OK** to continue.
5. When done, click **OK** to restart the system for the changes to take effect.

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** screen, click **Maintenance** > **Troubleshooting**.
2. Click **Export**.

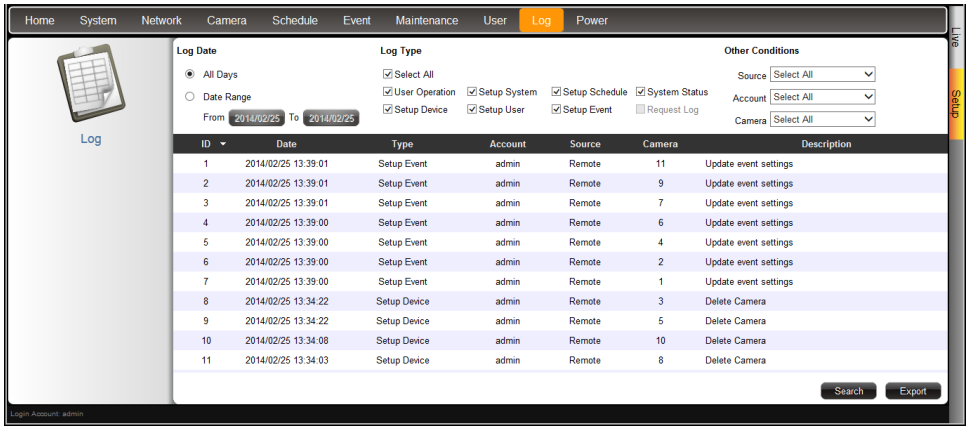


An error report (**error_report.tgz**) is generated. Save the file and send it to the CHD for troubleshooting.

3.10 Managing the System Log

The **Log** page allows users to view DSS-1000 activity log and save a log report as an XML file. DSS-1000 saves the latest 3000 logs. Logs can be filtered according to date and the source of activity.

1. On the **Setup** screen, click **Log**.
2. To filter according to date, select **All Days** to display all the logs or select **Date Range** and click the date to change the date.
3. To filter by source of activity, check or uncheck the filter under **Log Type**. Or, select the options under **Other Conditions** for more filtering options.
4. Click **Search** to start the search.



5. To save the log report, click **Export**.
6. Browse for the target location and save the log report file (*.xml).
7. When log export is complete, click **OK**.
8. To refresh the list, click **Refresh**.

3.11 Rebooting the Device

1. On the **Setup** screen, 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 DSS-1000 completes the reboot process.

Chapter 4:
Installation and Maintenance

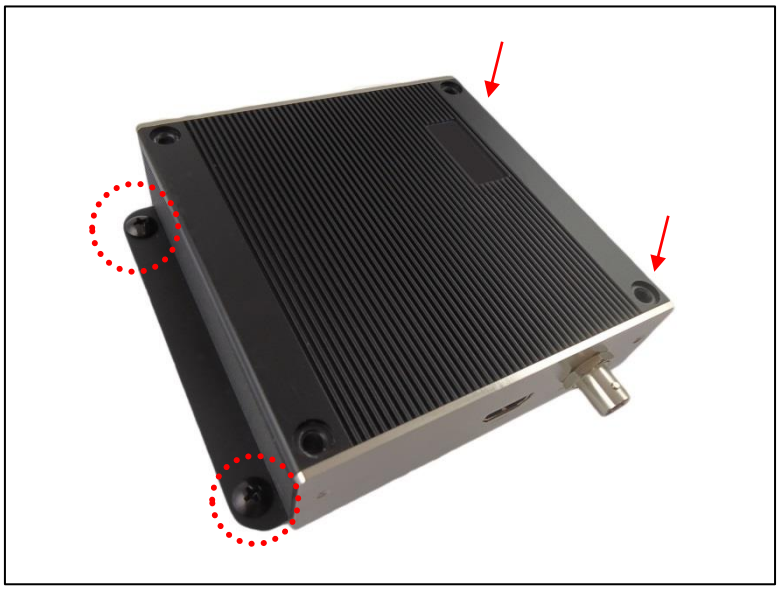
This chapter describes the different ways to install DSS-1000:

- Surface Mount
- VESA Mount
- Pole Mount

4.1 How to Surface Mount?

DSS-1000 can be mounted on a straight wall or on a table or pedestal. For wall installation, it is recommended to install DSS-1000 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?

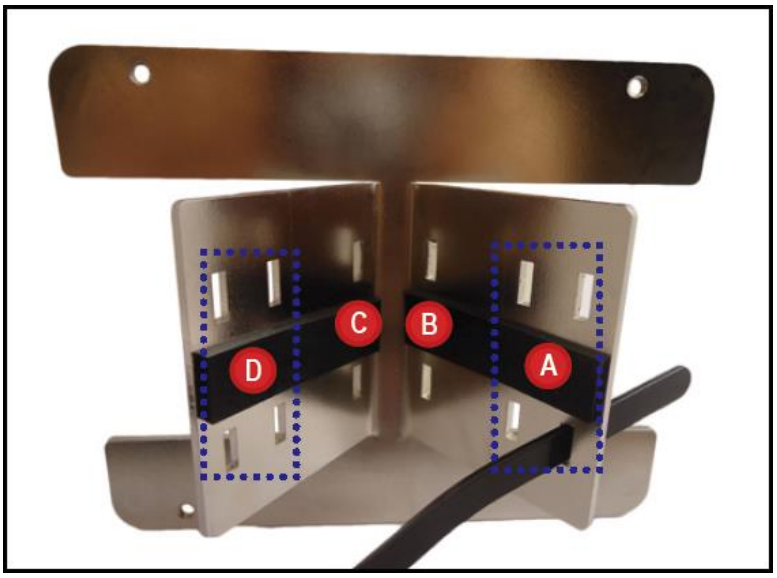
DSS-1000 is designed to be directly installed between a VESA mount and a monitor.

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 DSS-1000.

4.3 How to Use the Pole Mount?

DSS-1000 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 DSS-1000 to the mount with the Ethernet port side up and HDMI port side down.
5. Attach the 4 supplied long screws to secure DSS-1000 to the mount.