GNR-2000
Standalone NVR
User’s Manual

Version 1.02.13

2012/02/20

ACTi
Connecting Vision

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Overview

Package Contents

This product package includes the following contents:

1. GNR-2000 Standalone NVR x 1
2. Power Cord x 1 (US type / Europe type)
   Note: If your territory does not fall into US or Europe type adapter coverage, please purchase a power plug adapter or a travel adapter to connect your device to power supply.
3. Removable Hard Disk Bay x 5 (stored inside GNR-2000)
4. Installation Accessories
5. Machine Info Card
6. Warranty Card

US Type
Supply End:
NEMA 5-15P
Equipment End:
IEC-60320-C13

Europe Type
Supply End:
European Schuko CEE 7/7
Equipment End:
IEC-60320-C13

Introduction

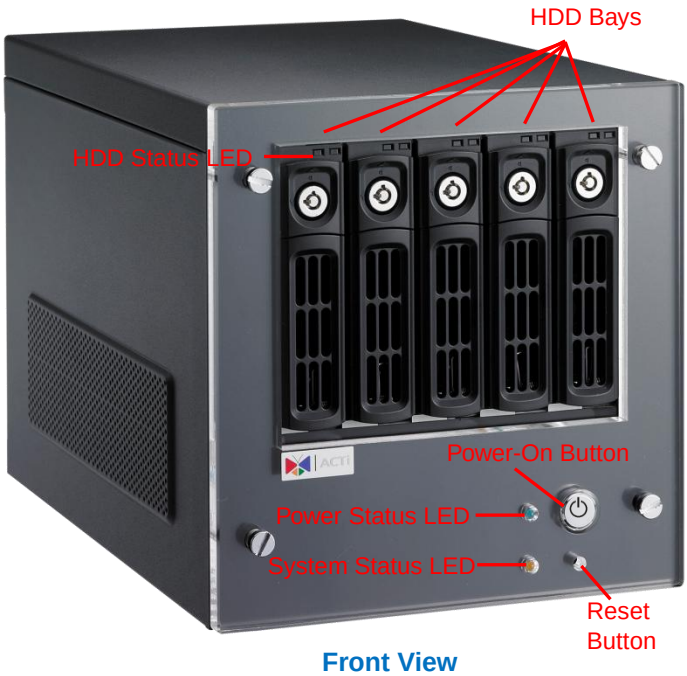
GNR-2000 Standalone NVR is a Linux based Network Video Recorder that is housed in a tower casing. It is easy to setup and operate. You may connect to the GNR-2000 via Cat 5 cable Ethernet networks or through remote internet.

Main Specification

GNR-2000	
General	
Full Name	ACTi Standalone Network Video Recorder GNR-2000
Maximum Number of Clients	Unlimited
Maximum Number of Cameras	16
Compression	H.264, MPEG-4, MJPEG
Live View	
Display Layout Mode	1, 2, 4, 5, 6, 8, 9, 10, 16, 25, 32, 36, 49, 64
Layout Manager	An interface to define display layouts and the pre-set cameras within layouts; full-screen mode available
Layout Tour	Automatic switch between different display layouts
Digital Zoom	Zoom in/out digitally by PiP (Picture-in-Picture)
Camera Tree	Drag and drop video source from camera tree into display layout
Manual Recording	Instant recording upon mouse click
Event Panel	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full
Two-way audio	Audio sound from and to all the audio supported devices
PTZ	
Control	Pan, tilt and zoom controls; speed control; both buttons and overlay controls
Preset Points and Tours	Create preset points; create auto tours between preset points ; activate NVR preset points or auto tours between preset points
Number of Preset Points	32
Joystick	USB based joystick supported
Default Protocol	URL command
Recording	
Scheduled Recording	Record video with user defined schedule
Event Recording	Record video when the alarm event is triggered, including the pre-event buffered video clip
Bufferless Recording	Event recording without pre-event buffered video clip; no streaming in normal mode; saves bandwidth
Manual Recording	Instant recording upon mouse click
Recording Frame Rate	Max 480 fps total; Max 30 fps per camera
Maximum Recording Throughput	96 Mbps
Storage	
Interface	Serial ATA
HDD Bay	Maximum 5 disks (disks not included)
RAID Level	Raid 0, 1, 5, 10
Search & Playback	
Time Based Video Search	Search video recordings by time, channel or bookmark
Event Based Video Search	Search alarm triggered video recordings
Activity and Status Log Search	Search for log of video loss/recovery, network disconnect/reconnect, alarm events, user activity; export of all logs
Playback Control	Forward and backward playback with speeds 1x-500x; pause; stop
Synchronized Playback	4 channels
Manual Snapshot	Create snapshot from playback for export
Digital Zoom	Zoom in/out digitally by PiP (Picture-in-Picture)
Video Cropping	Crop a short video clip from long recording file and save it as an independent file
Video Export	Export video clips in AVI format; text overlay supported
Event Management	
Event Trigger	Video motion detection; External device through digital input; Video loss and recovery; Network loss and recovery
Event Response	Record video; Play alert beep; Activate external device through digital output; Upload snapshot to FTP server; E-mail notification with snapshots; Event logging
Manual Event	Manually activate external devices through digital output via live view monitor
System	
Permission Control	Unlimited number of users, multi-level permission, camera group permission for different users
Data Backup	By external DVD drive (optional)
Operating System	Embedded Linux
System Status Monitor	Real time status reports on remote browser
Language	Multi-language support
Remote Access	
PC Web Browser	Microsoft Internet Explorer 8.0 or 9.0 with live view, PTZ, playback, setup
Mobile Client Program	Mobile device application (MobileGo!) supporting live view, NVR layouts, PTZ control, event or time based search and playback, Supported devices: iPhone, iPad, iPod
Hardware	
Dimensions (W x H x D)	300mm x 200mm x 205mm (11.81" x 7.87" x 8.07")
Weight	3.88Kg (8.55 lb) without HDD
Operating Temperature	0 ℃~ 40 ℃(32 ℉ ~ 104 ℉)
Operating Humidity	10% ~ 85% RGH
Power Source / Consumption	100V~240V AC 50/60Hz / 200W
Approvals	CE, FCC (Part 15B Class A), LVD
USB	USB 2.0, 4 ports
Ethernet Port	2, Ethernet (1000 Base-T), RJ-45 connector
System Requirements*	
Remote Client PC	1-16 channels: Intel Core 2 Quad 2.66 GHz, 32/64-bit, 4GB RAM
Client PC Operating System	32/64 bit: Windows 7 (all versions), Windows Server 2008 (all versions), Windows Vista (all versions), Windows Server 2003 (all versions), Windows XP (all versions)
Browser	Microsoft Internet Explorer 8.0 or 9.0
Integration	
Unified Solution	Fully compatible with ACTi cameras, encoders and CMS v2.0
Camera Integration	Open platform
ISV CMS Integration	Software Development Kit (SDK) available

* These specifications are based on following camera settings
--Scenario 1: 1280x1024, 3Mbps, 18fps, MPEG-4; Scenario 2: 1280x1024, 1.5Mbps, 18fps, H.264.H.264.
In case of high number of channels, you may use "Decode I" mode on live view. For more details about system requirements, please refer to Project Planner on www.acti.com

Physical Description



Front View

1. **Power-On Button:** Press and hold for a few seconds to turn on the system.
2. **Reset Button:** To restore to default settings, please follow the below steps:
   (1) After powering on the device, press and hold this button.
   (2) The System Status LED will flash once and then blink. Keep holding this button during the blinking for 5 seconds, release the button as the LED turns stable.
   (3) The System Status LED will turn stable, then the device will load the default settings and restart.

   If you just want to shutdown or reboot GNR, please use the software interface Shutdown Button or Reboot Button (Setup→Power) instead.
3. **LED Indicators:** The LED indicators show the current device status.

   -**Power Status LED**:

   The Blue light next to Power-On Button indicates that the device is powered.

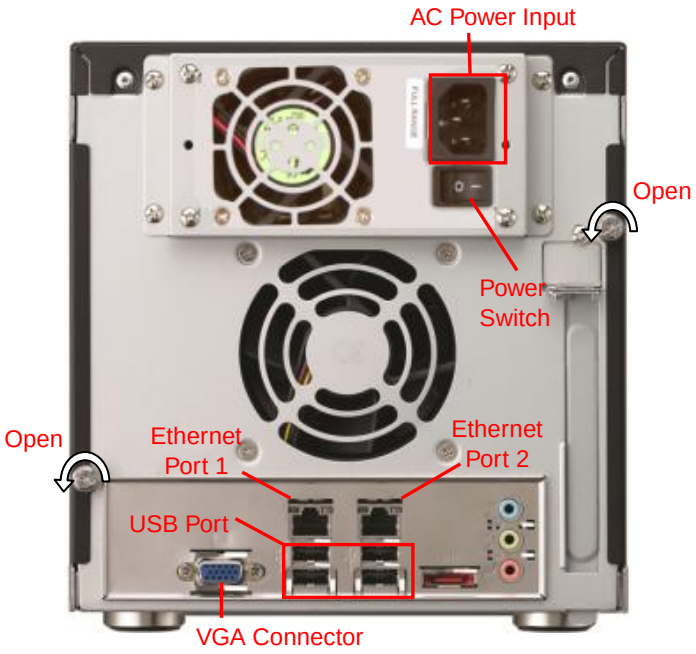
   -**System Status LED**:

   The yellow-green light below indicates the system service status. If it is lit continuously, the system is running and hard drives are operating normally, recording may proceed. If the disks are not ready for recording, then this light will continue flashing.

   -**HDD Status LED**:

   There are two green lights above each HDD Bay. The left one is continuously lit if the HDD is correctly installed. The right one indicates the working status of the disk, if the disk is recording, it will flash continuously; if not, the green light will be inactive.

4. **HDD Bays:** The 5 HDD bays each contains one HDD tray. The tray is removable from the front panel.



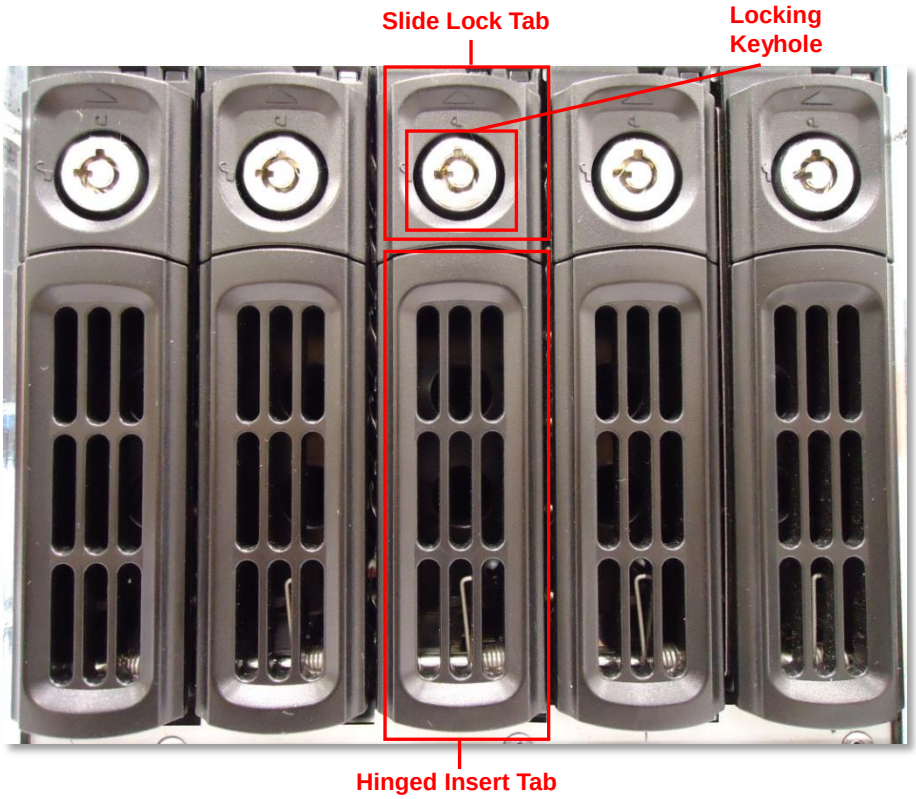
Back View

1. **USB Port:** The two USB ports allow external DVD-ROMs to be connected to GNR. You may backup data through external DVD drives.
2. **Power Switch:** This switch controls power supply for the whole unit. Ensure the Power Switch is in the On position before pressing the Power-On Button on the front panel.

Installing the Hard Disk

Before removing the HDD trays, please make sure the device is turned off. Your hard disks may be damaged if you move the HDD trays while the device is operation.

1. You should first remove the HDD tray. Slide the Slide Lock Tab up, then the Hinged Insert Tab will pop out by itself. Pull the tab to 90 degrees from the front. Pull out the tray to insert or remove hard disks.



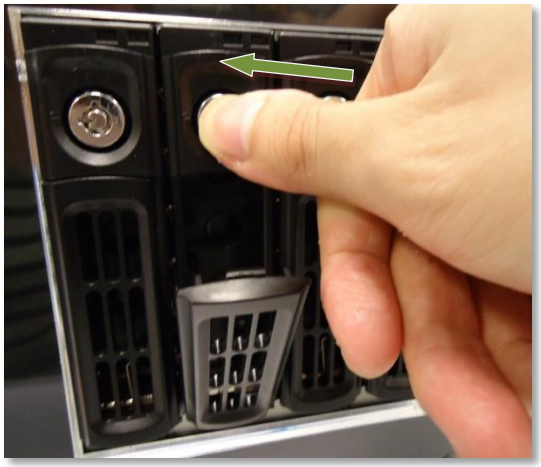
HDD Bay

Step 1:
Pull slide lock tab up. Hinge Tab will pop out.

Step 2:
Pull Hinge Tab all the way out. This will disconnect the Hard disk and move the whole tray out.

Removing HDD Tray

2. To insert HDD tray, slide the tray in until it stops, then close the tab to connect hard disk to system.



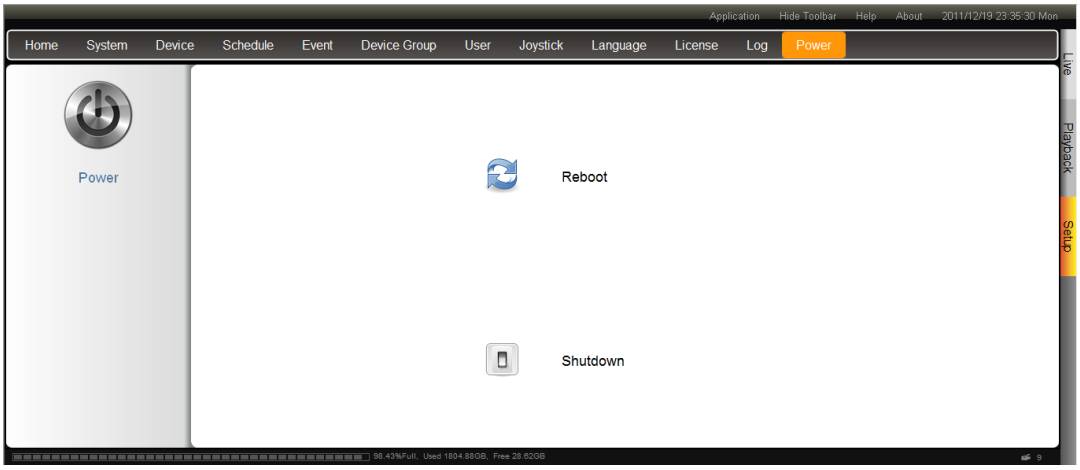
Step 1:
Slide in the tray until it is stopped

Step 2:
Close the tab to connect hard disk to system

Inserting HDD Tray

Turning On / Off or Rebooting the device

1. To turn on your GNR, press down the Power-On Button on the front side.
2. To turn off or reboot, go to Setup→Power, and click "Shutdown" to turn off your GNR or "Reboot" to reboot it.



System Requirements

GNR-2000 itself is a self-contained unit. The system requirement here applies only to the remote Client PC used to view video and access settings.

PC Specifications	Minimum
CPU	Intel Core 2 Quad 2.66 GHz, 32/64-bit
Memory	4GB
Operting System	32/64 bit: Windows 7 (all versions), Windows Server 2008 (all versions), Windows Vista (all versions), Windows Server 2003 (all versions), Windows XP (all versions)
Browser	Microsoft Internet Explorer 8.0 or 9.0

These specifications are based on following camera settings:

Scenario 1: 1280x1024, 3Mbps, 18fps, MPEG-4;

Scenario 2: 1280x1024, 1.5Mbps, 18fps, H.264.

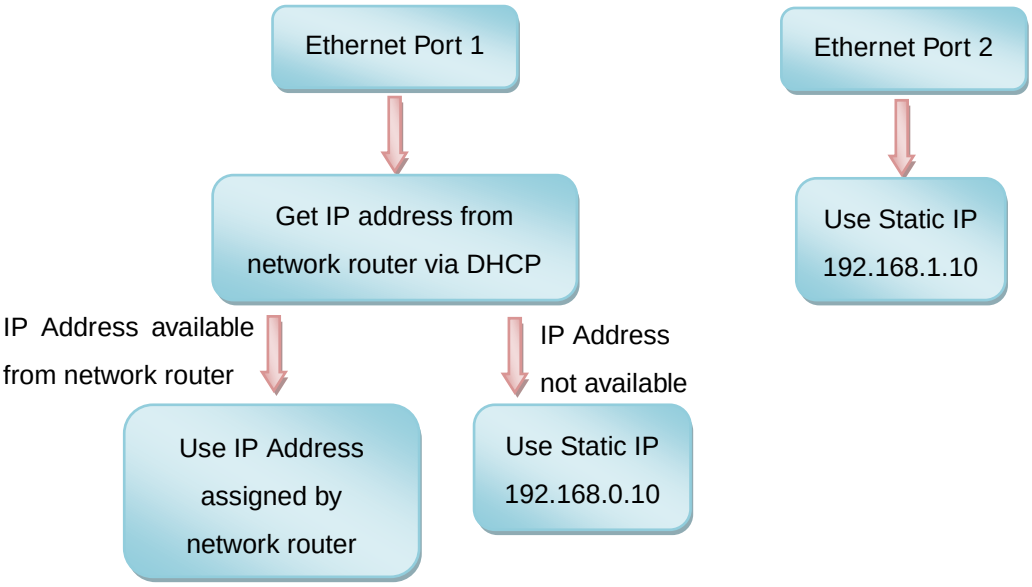
In case of high number of channels, you may use "Decode I" mode on live view. For more details about system requirements, please refer to Project Planner on www.acti.com

Installation

Connecting to Network

Connect GNR-2000 to your network via the two Ethernet Ports as shown in the Physical Descriptions section.

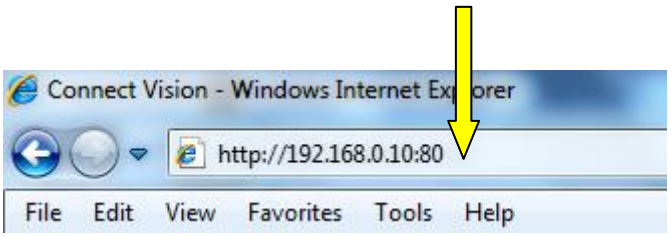
Standalone NVR will first try to get an IP address assigned by your network router / DHCP server. If your network does not assign IP address automatically, then Ethernet Port 1 will assume IP address 192.168.0.10 while Ethernet Port 2 will use IP address 192.168.1.10.



Accessing GNR-2000 by IE

If you know the IP address and port number of the standalone NVR, you may also type in the IP address and port number directly into Internet Explorer. Sample IP will look like this:

http://192.168.0.10:80/

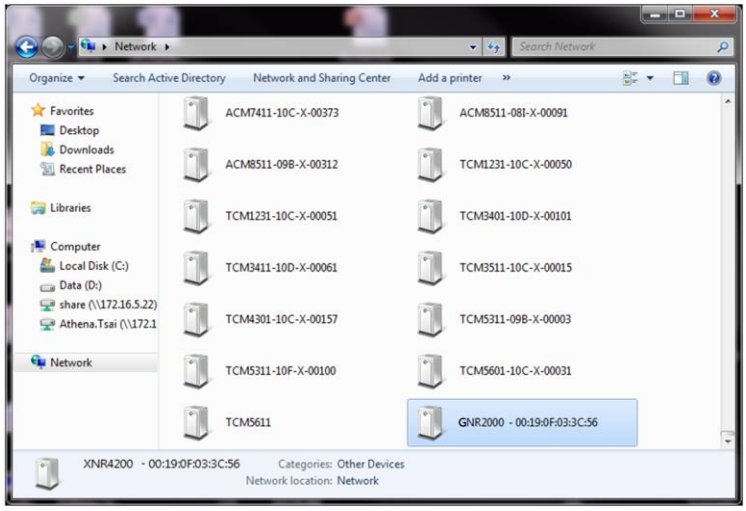


Input the NVR's IP Address and Port Number in IE URL Bar

Accessing GNR-2000 by UPnP

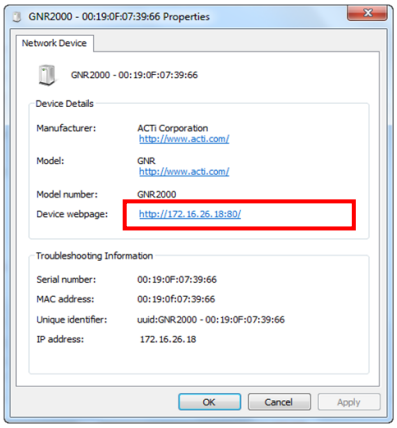
GNR-2000 supports UPnP connection. This means that once the device has an IP address, you will be able to find it in the local network in Windows Explorer → Network. Please note that your PC must be in the same subnet as the Standalone NVR. A sample screen (in windows 7) is shown below. Double-click the icon to log into Standalone NVR.

Next to the GNR-2000 title, the MAC address to this Standalone NVR is shown here. You will need to provide this MAC address to your sales representative if you are registering offline. If you have internet connection and choose to register online, then you don't need to worry about the MAC address.



GNR-2000 Detected over Local Network by UPnP

If your default browser is other than IE8.0 or 9.0, right-click on the icon to bring up the context menu, and select "Properties", find the IP address and port number next to "Device Webpage" and input them in your IE browser.



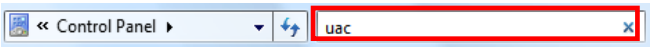
The IP Address and Port Number

Disabling UAC in Windows Vista and Windows 7

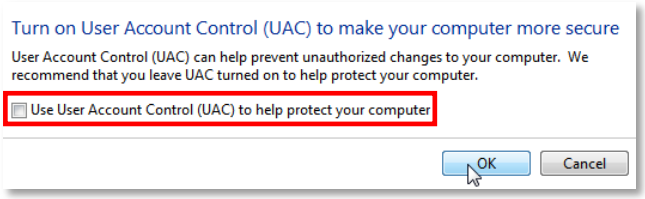
UAC (User Access Control) is a security setting that restricts access in Microsoft Windows Vista and Windows 7. **You must disable UAC before starting using GNR-2000 in these two operation systems.**

Disabling UAC in Windows Vista

1. Go to **Start** , then enter **Control Panel**.
2. In **Search box**, type **"uac"**.



3. Click "**Turn User Account Control (UAC) on or off**".
4. Uncheck the "**Use User Account Control (UAC) to help protect your computer**" to turn off UAC, then click "**OK**".

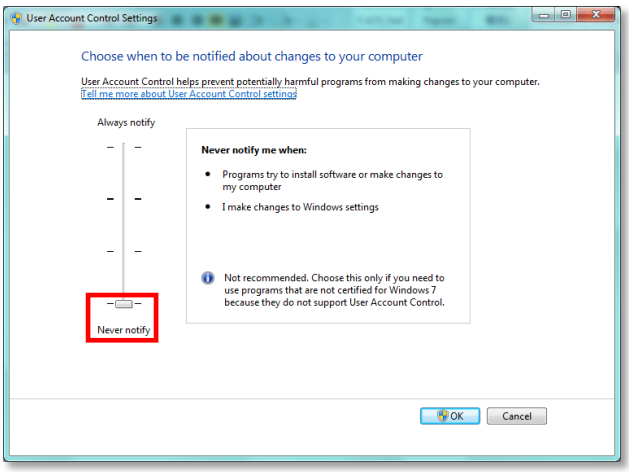


5. Restart your PC to have the change take effect.

Disabling UAC in Windows 7

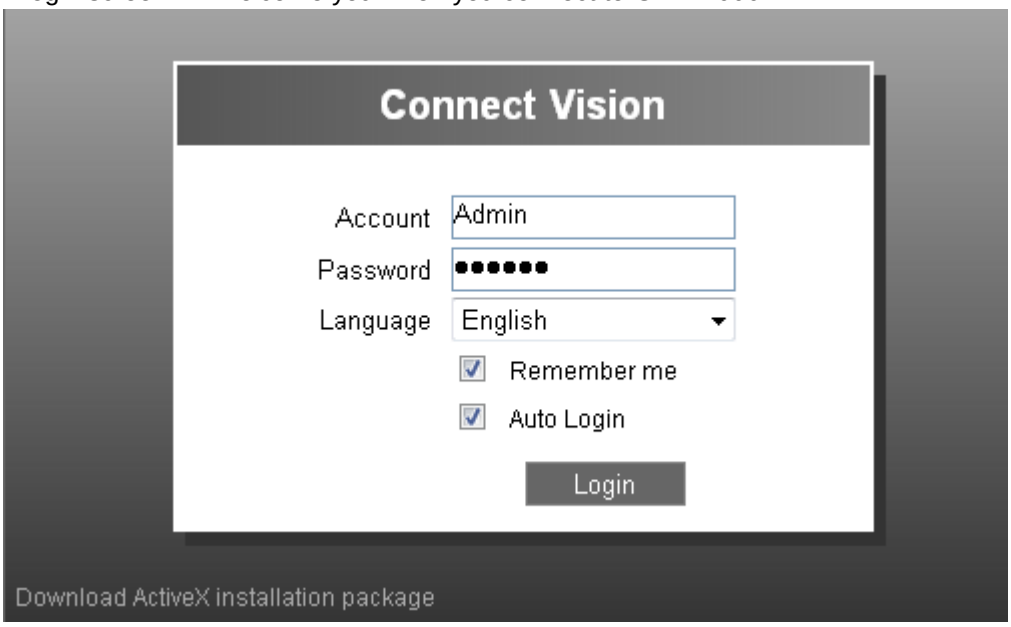
1. Go to **Start** , then enter **Control Panel**.
2. In **Search box**, type **"uac"**.

3. Click "**Change User Account Control settings**".
4. On the pop-up window, drag the slider to "**Never notify**" position, and then click "**OK**".
5. Restart your PC to have the change take effect.



Login

A login screen will welcome you when you connect to GNR-2000.



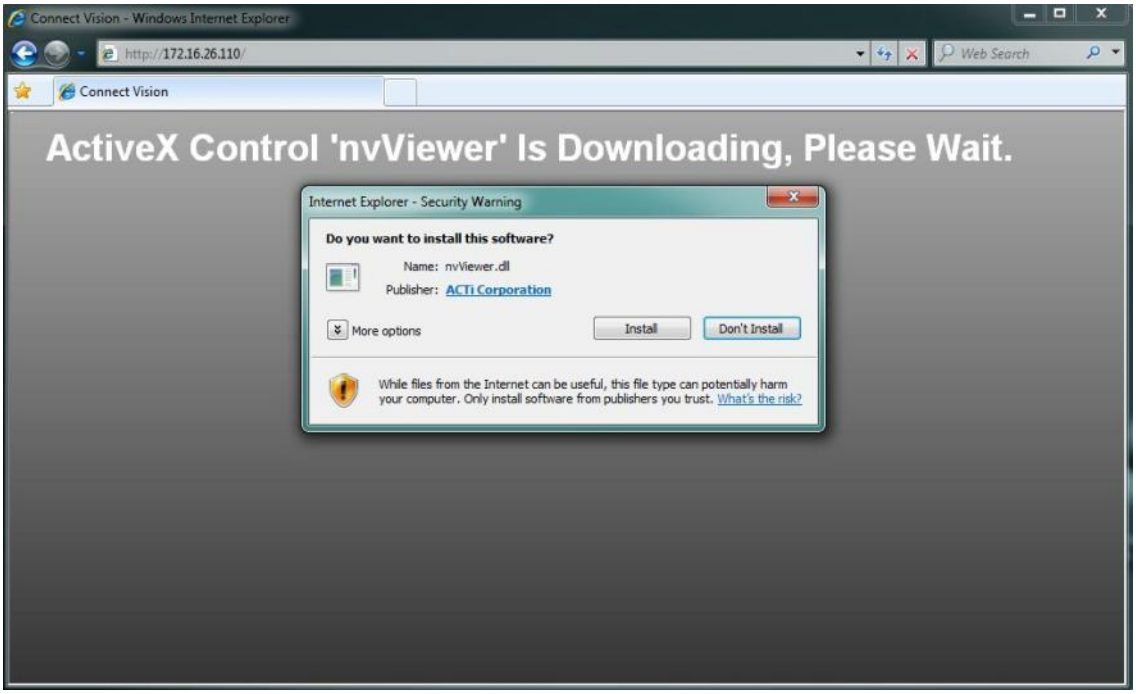
Enter your Account and Password then click the "Login" button to Login.

Default Account: Admin ***Default Password: 123456***

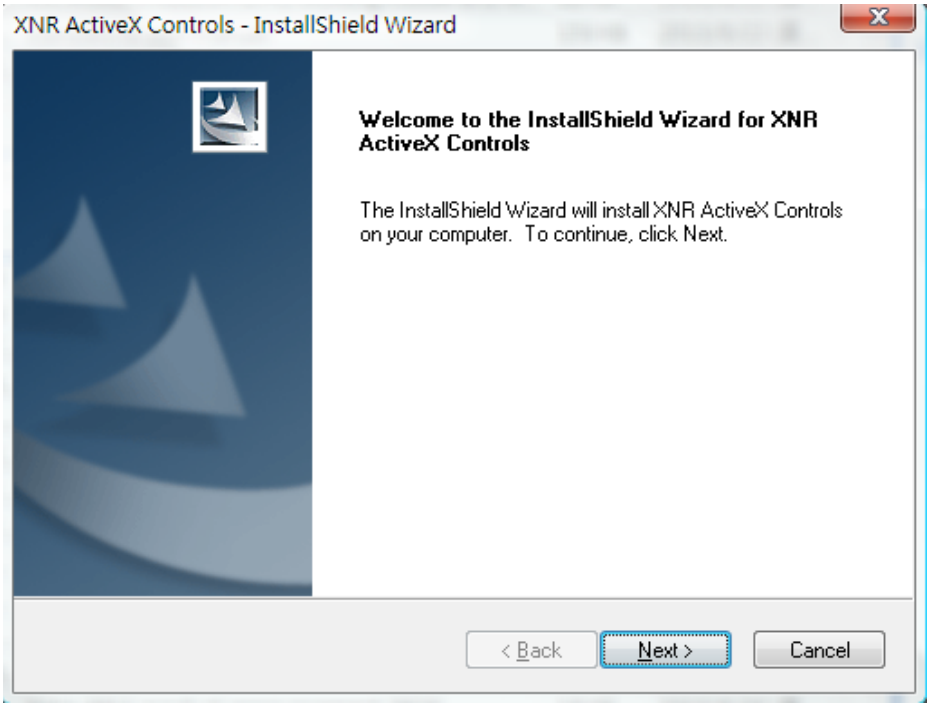
You may change the language settings by selecting from the "Language" dropdown list.
Check "Remember me" for GNR-2000 to remember your last Login name and password.
Check "Auto Login" to skip the Login page and go directly to the main page every time you login from this PC in the future. **If your PC may be accessed by someone without proper authority, please do NOT use either remember me or auto login.**

When you are logging in for the first time, or when you have just upgraded your firmware, you will be prompted to install ActiveX components. You must accept the install to access Standalone NVR properly. You may also click the "Download ActiveX installation package" link at the lower left of login screen. This will download and install file that gives you the required components to access Standalone NVR.

When your browser's pop-up blocker prompts ask if you would like to install ACTi Corporation's control or not, please accept it.



You may also click the "Download ActiveX installation package" link at the lower left of login screen. This will download and install file that gives you the required components to access Standalone NVR.



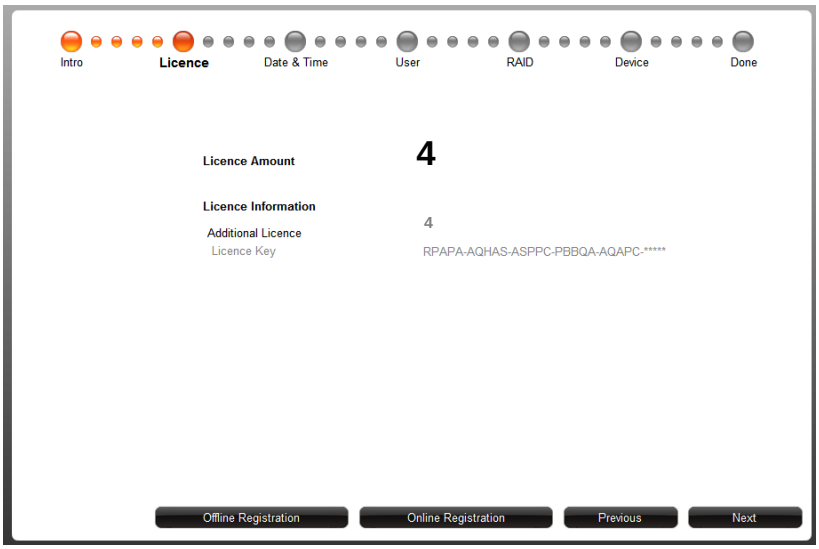
Setup Wizard

Once you connected to Standalone NVR, Setup Wizard will guide you through the initial setup process. The setup wizard will also show up if you delete all devices from device list in the future. You may click "Previous" or "Next" button located to the lower right at any time. This will skip the current step so that you may come back to it later. All the settings in the setup wizard are available in the Setup tab from Standalone NVR web interface.

If you want to exit this wizard, click the "Done" bubble on upper right corner to directly start using GNR-2000.

Licensing

The first step is to setup license. This screen shows number of channels allowed under your current license, and the license keys applied before. Each New device has a license for **4** channels which is already activated. You can click "Next" to next setting if you currently don't want to add new license.



Standalone NVR licensed per number of channels managed. Each additional channel requires one license. License codes are purchased through our sales representatives. Contact your distributor for purchase info.

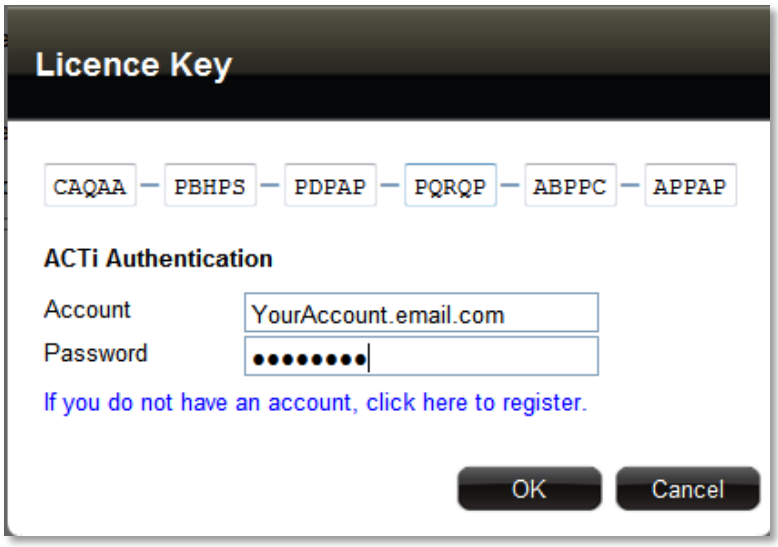
How does Activation Work

During license activation, your license key is matched against the MAC address on the Network Interface Card (NIC) on your computer. This MAC address is used as the Machine Key. This matching record will be stored on the ACTi web server. Your standalone NVR has two MAC Addresses, please use **MAC Address 1** (with smaller MAC address) to register.

Online Activation

Requires Internet access from standalone NVR.

If you have Internet connection available from your Standalone NVR, you should register online. After obtaining the license for more channels, log in standalone NVR from local or via web client, click Setup→License→ "Online Registration" button to enter license key directly into system. You need to have an account on ACTi.com for authentication. If you do not have an account yet, please click the blue link below and register your account, once you click "OK", GNR-2000 will connect to the server to register the license key, and allow more cameras in the system.



ACTi Website

Membership ID in ACTi Member Center is required for activation. Register one for free at http://member.acti.com/

↓

SNVR Setup

Setup → License. Select "Online Registration". Enter your license key, member ID and password, click "Apply".

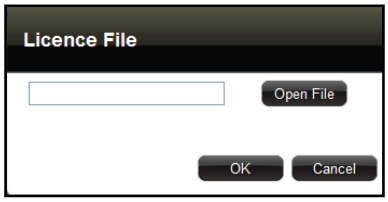
↓

Done!

Offline Activation

Does not require Internet access from standalone NVR. It is used when standalone NVR is located in network not connected to public Internet.

If you do not have Internet connection available from your Standalone NVR (e.g. in a restricted military base), you will need to get a license file from another computer and transfer it to standalone NVR. This is called Offline Registration. Click Setup→License→ "Offline Registration" button to load the activation code file.



ACTi Website

Membership ID in ACTi Member Center is required for activation. Register one for free at http://member.acti.com/

SNVR Setup

Log in standalone NVR, go to Setup→System→Information. Record the **MAC address 1**.

ACTi Website

Connect to www.acti.com. Go to Support → Customer Services: License Registration. Select your product to register.

ACTi Website

Enter your License Key and the **MAC address 1**. Click "Submit" to generate activation file.

Mailbox

An email with activation code file (.lic) will be sent to your registered email. Transfer this license file to standalone NVR or web client PC.

SNVR Setup

Log in standalone NVR from local or via web client. Go to Setup → License → Offline Registration → click "Open File" and select the license file. Click "OK" to activate this license.

Done!

Date and Time

You can setup the date and time setting on this stage. ACTI Standalone NVR provides three methods to synchronize the time setting; you can use NTP server, local time setting or you can setup it manually. The methods are as follows:

Setup by using NTP server:

STEP 1: Fill in the NTP server IP or domain name.

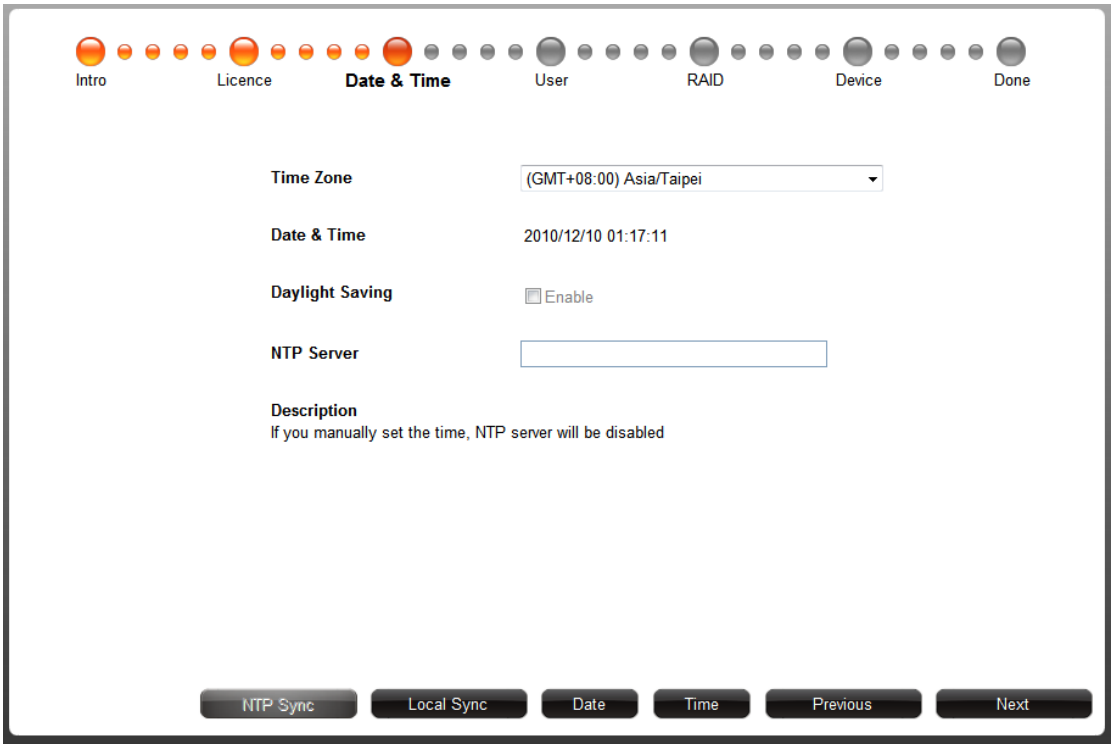
STEP 2: Press the "NTP Sync" button to synchronize your time setting with NTP server.

Setup by local time:

Just press the "Local Sync" button to synchronize your time setting with your computer's local time.

Setup manually:

Pressing "Date" or "Time" button to setup your date or time manually.



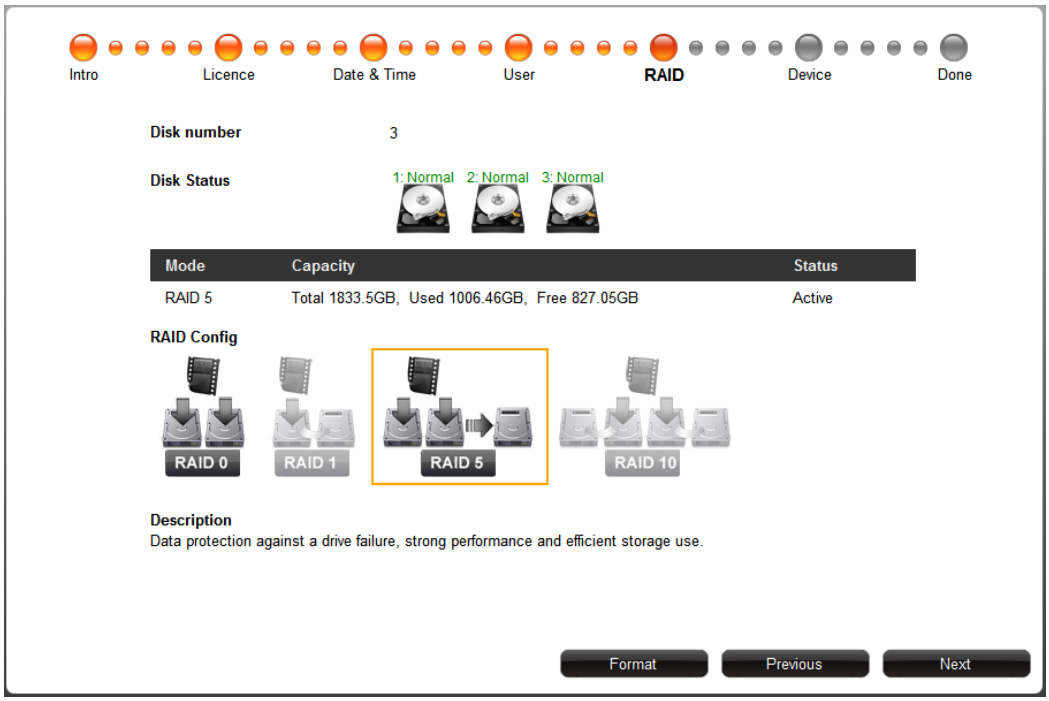
User

You can setup the user account and access right in this stage. Press "Add User" button below to add a new user. In the Add New User window you can setup the name, password and the group of a new user. Please notice that you cannot add new group in the installation wizard; you can only add a new group in the setup menu inside the standalone NVR setting page.

After adding a user you can edit the user profile by pressing "edit" button or delete the user by pressing "delete" button.

RAID

Your video is recorded on the hard disks managed by GNR-2000 built-in RAID (Redundant Array of Independent Disks) system. **Before staring video recording, it is important that you have installed the number of hard disks you need**.



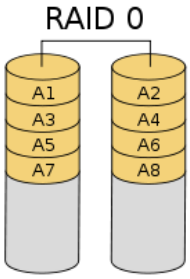
RAID Introduction

There are configurations by which the video recordings on disks can be recovered even in case of physical failure of several hard disks; however, while using such secure configurations, the total available storage space will be smaller compared to less secure configurations.

ACTi Standalone NVR servers support 4 different RAID types (0, 1, 5, 10). Depending on the number of inserted disks, there will be different RAID options available.

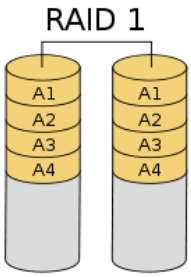
RAID 0

RAID 0 combines multiple hard drives into one larger volume. The data is split between these disks. Under this configuration every inserted disk will be used for storing data. No disks are used for data backup purposes. Should one of the disks be damaged, the recordings on all disks will be lost and are not recoverable, and the use of all remaining disks will be suspended until the broken disk has been replaced and the whole RAID configuration has been reset.



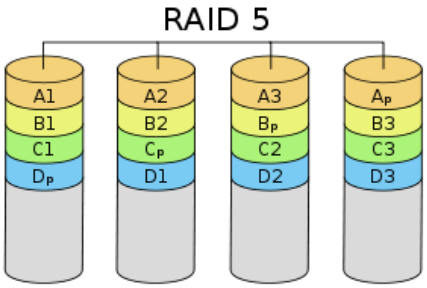
RAID 1

RAID 1 is a solution designed to make mirror copy of from one disk onto one or more disks for recovery purposes. In case of ACTi Standalone NVR servers, you need to have exactly 2 disks to configure RAID 1. Since the 2nd disk is used as a mirror of the first disk, the total available storage will be twice smaller compared to RAID 0. On the other hand, if one of the two disks fails then the system will still keep running on another disk without any problems. Once you replace the damaged hard disk, all the information will be copied from a healthy disk into the newly added disk, to recover a healthy RAID 1 condition.



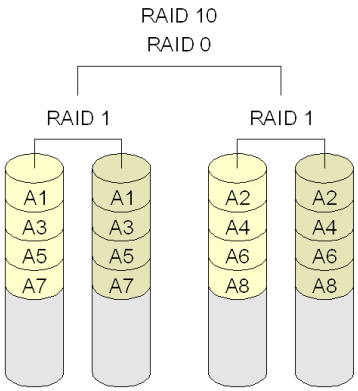
RAID 5

RAID 5 is probably the most popular configuration of all because it provides both disk recovery options and quite efficient use of storage space. Furthermore, the more hard disks you add into RAID 5 configuration, the faster will be the writing and reading speed, for the similar reason as in case of RAID 0. In RAID 5 configuration, the data blocks are considered the same data group or a stripe. Certain special portion of data that is created based on the values of other data blocks for recovery purposes. Such value is called parity. The parity information is distributed and stored across each hard drive. If any of the hard drive fails, the array enters downgrade mode, all that you need to do is replace the failed disk with a new one.



RAID 10

RAID 10 (also called 1+0) combines RAID 1 and RAID 0 configurations – think of it as a group of mirrored disks. From that it is possible to conclude that there has to be even number of disks and at least two pairs, which means that you can use 4 disks for GNR-2000.



RAID Types Usage Comparison

Different RAID type configuration will have advantages and disadvantages in terms of data protection against disk failure, more storage space or affordability. It is up to you to decide whether to have more available storage space or more security according to the conditions of your site.

RAID Type	Advantages	Disadvantages	Suitable Applications
RAID 0	Biggest possible usable storage space and faster speed of reading and writing.	No protection against possible hard disk failure. If one disk fails, the whole RAID system will stop working.	Projects with lower security risk where the potential risk of lost video records is acceptable while the usable storage space should be as big as possible in order to serve more cameras with one standalone NVR server. **Example**: schools, hospitals, bus stops, etc.
RAID1	Excellent protection against failure of hard disk and twice faster speed of reading.	Available storage space is twice smaller compared to RAID 0.	Projects with high security risk and with small number of cameras due to the limited storage space. **Example**: Currency exchange booths, etc.
RAID5	Basic protection against failure of hard disks and excellent speed of reading and writing (only a bit slower than RAID 0).	Available storage space is one disk less than the maximum.	Nearly all types of projects that are somewhat demanding about data recovery options and yet need to work with quite many cameras and therefore would like to use as much storage space as possible. **Example**: Retail, city surveillance, commercial buildings, etc.
RAID10	Excellent protection against failure of hard disks and excellent writing and reading speeds.	Only 50% of the total storage is available for writing data.	Projects with high security risk and with medium number of cameras. **Example**: Branches of banks, etc

RAID Types and Number of Disks

Each RAID type has its requirement of minimum hard disk number. Here's a table of available RAID levels with different numbers of disks.

n = the number of hard disks used

RAID Type	Number of disks (n)	Tolerates the failure of disks	Max Available Capacity (2TB for each hard drive)	Usable Storage Space	Read Speed	Write Speed
RAID 0	1-5	0	10TB	n	nX	nX
RAID 1	2	1	4TB	n/2	2X	1X
RAID 5	3-5	1	8TB	n - 1	(n-1)X	(n-1)X
RAID 10	4	1 of each pair	4TB	n/2	nX	nX

Storage Calculation

If you have already decided the RAID type that fits best with your project requirements then you can take good use of our MS Excel based storage calculator that helps you with calculating the total storage space available in given RAID configuration

Download the Storage Calculator from ACTi website:
http://www.acti.com/download_file/KnowledgeBase_UploadFile/ACTi_standalone_NVR_RAID_storage_calculator_v_1_0_20110504_001.xlsx

Compatible Hard Disks

ACTi has tested and announced the full compatibility with following hard disks:

Brand	Class	Model	Capacity	Interface	Cache	Spin Speed
Seagate	Enterprise	ST2000NM0011	2TB	SATA 6 Gb/s	64MB	7200
	Desktop	ST3250318AS	250GB	SATA 3 Gb/s	8MB	7200
		ST32000641AS	2TB	SATA 6 Gb/s	64MB	7200
Western Digital	Enterprise	WD1002FBYS	1TB	SATA 3 Gb/s	32MB	7200
		WD2002FYPS	2TB	SATA 3 Gb/s	64MB	IntelliPower
		WD2003FYYS	2TB	SATA 3 Gb/s	64MB	7200
		WD1003FBYX	1TB	SATA 3 Gb/s	64MB	7200
	Desktop	WD2002FAEX	2TB	SATA 6 Gb/s	64MB	7200
		WD1002FAEX	1TB	SATA 6 Gb/s	64MB	7200

Desktop and **Enterprise** are two common product classes most hard drive manufacturers use to differentiate drive models of two different usages. The differences between these classes

may vary in degree or designs depending on the manufacturer. In general, manufacturers do not recommend installing desktop class hard drives for RAID environment.

Desktop class hard drives are designed for balanced performance and reliability for everyday use (8 hours/day, 5 days/week), while **Enterprise** class hard drives are designed especially for RAID system environment which requires higher performance for 24 hours/day, 7 days/week mission critical applications.

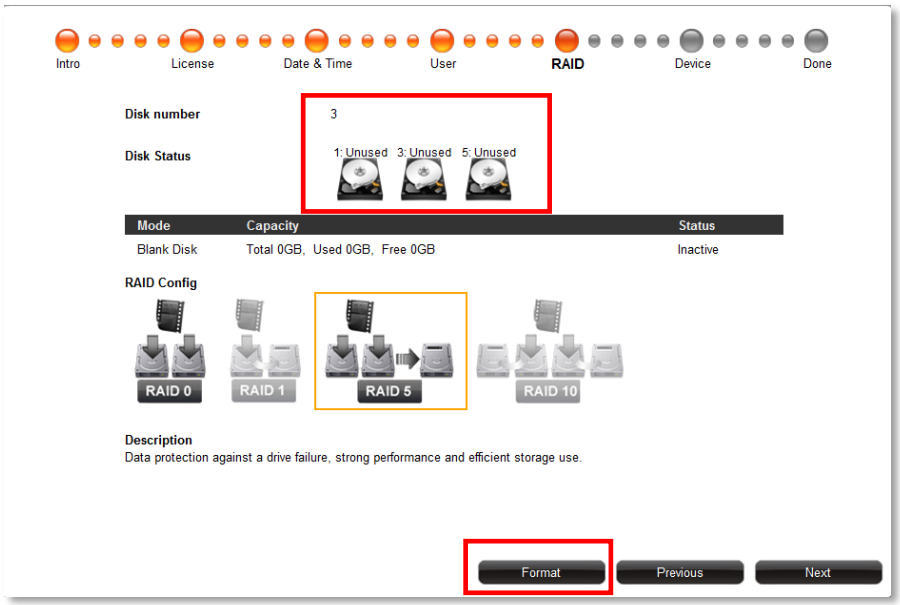
Note: Any other hard disk that is not bigger than 2TB will theoretically also work, however, in such cases ACTi does not guarantee the performance of those uncertified hard drives.

Note: Hard disks with capacity bigger than 2TB are not supported!

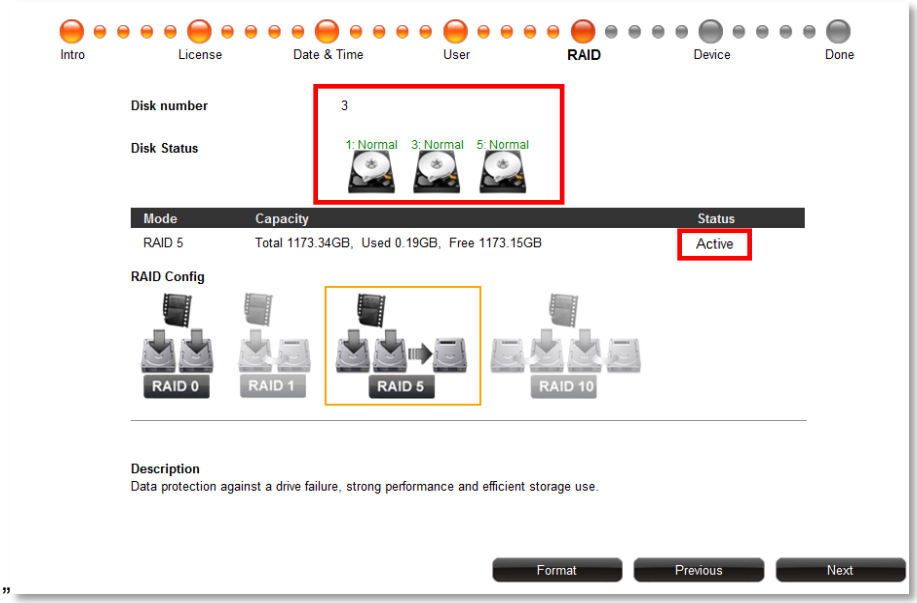
First-time Hard Disk Installation

Once you have the hard disks ready, do the following to install them to your GNR-2000.

1. Shut down the device.
2. Remove the HDD trays, lock the disks on them.
3. Insert those HDD trays back into the device
4. Start the device.
5. As the Setup Wizard runs to RAID setting stage, you will see the number of disks appear as "Unused" status. Choose the RAID type and click "Format", this will erase the disks to get ready for building the RAID.



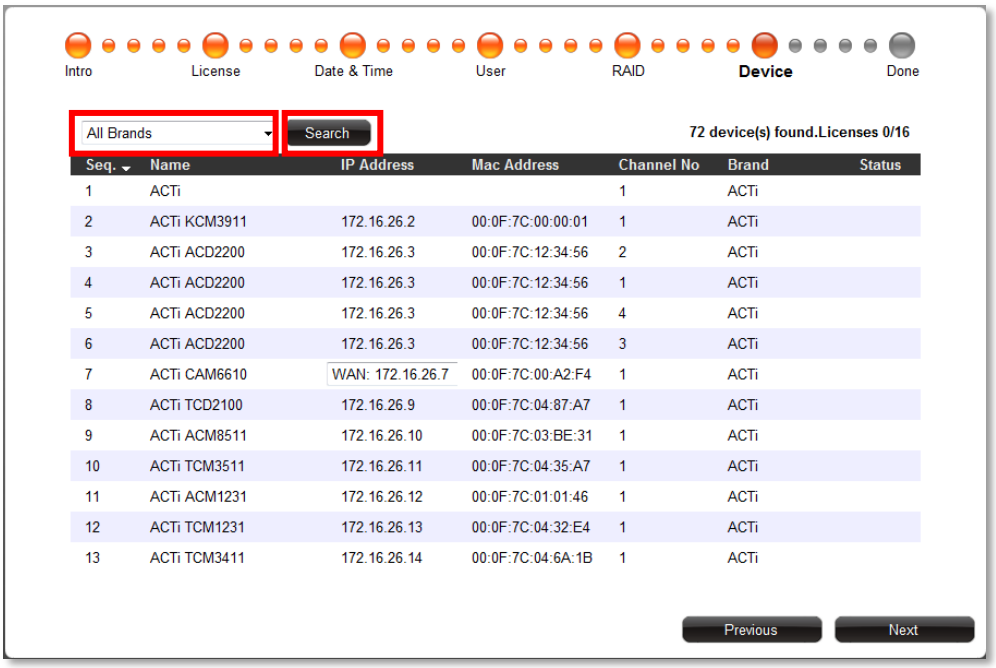
6. Once formatting completes, the disks status turns to "Normal", and the device continues to ReSync to build the RAID file system until the Mode Statues displays "Active". Your RAID system is ready for recording.



Device

You can add devices into standalone NVR system in this stage with the following steps:

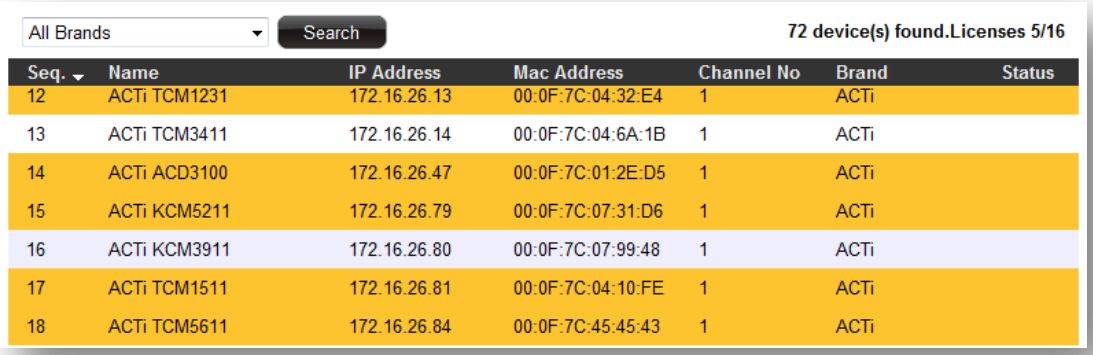
STEP 1: Search current available devices by using the drop-down menu on the top of the page.



Seq.	Name	IP Address	Mac Address	Channel No	Brand	Status
1	ACTi			1	ACTi	
2	ACTi KCM3911	172.16.26.2	00:0F:7C:00:00:01	1	ACTi	
3	ACTi ACD2200	172.16.26.3	00:0F:7C:12:34:56	2	ACTi	
4	ACTi ACD2200	172.16.26.3	00:0F:7C:12:34:56	1	ACTi	
5	ACTi ACD2200	172.16.26.3	00:0F:7C:12:34:56	4	ACTi	
6	ACTi ACD2200	172.16.26.3	00:0F:7C:12:34:56	3	ACTi	
7	ACTi CAM6610	WAN: 172.16.26.7	00:0F:7C:00:A2:F4	1	ACTi	
8	ACTi TCD2100	172.16.26.9	00:0F:7C:04:87:A7	1	ACTi	
9	ACTi ACM8511	172.16.26.10	00:0F:7C:03:BE:31	1	ACTi	
10	ACTi TCM3511	172.16.26.11	00:0F:7C:04:35:A7	1	ACTi	
11	ACTi ACM1231	172.16.26.12	00:0F:7C:01:01:46	1	ACTi	
12	ACTi TCM1231	172.16.26.13	00:0F:7C:04:32:E4	1	ACTi	
13	ACTi TCM3411	172.16.26.14	00:0F:7C:04:6A:1B	1	ACTi	

You can choose your searching target then press "search" button, and the system will search all related device for you.

STEP 2: Choose the device you want in the device list under search bar; selected device will be highlighted in yellow.

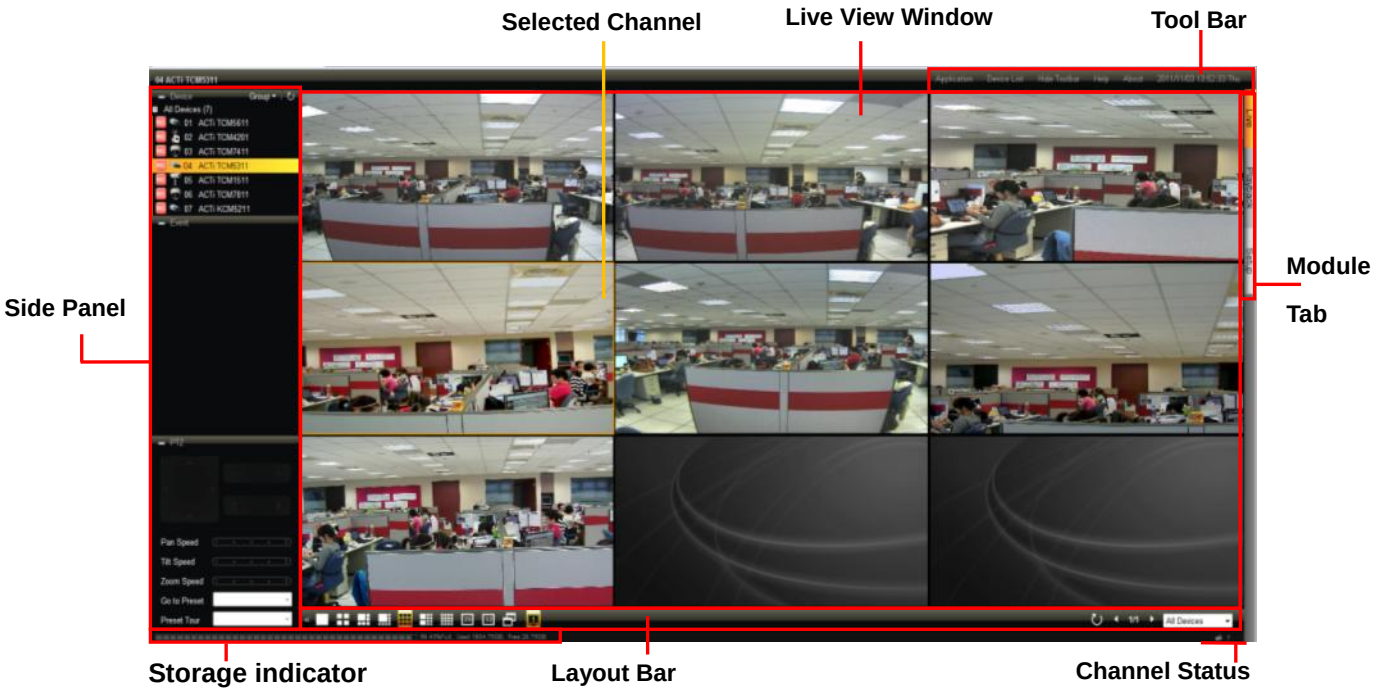


Seq.	Name	IP Address	Mac Address	Channel No	Brand	Status
12	ACTi TCM1231	172.16.26.13	00:0F:7C:04:32:E4	1	ACTi	
13	ACTi TCM3411	172.16.26.14	00:0F:7C:04:6A:1B	1	ACTi	
14	ACTi ACD3100	172.16.26.47	00:0F:7C:01:2E:D5	1	ACTi	
15	ACTi KCM5211	172.16.26.79	00:0F:7C:07:31:D6	1	ACTi	
16	ACTi KCM3911	172.16.26.80	00:0F:7C:07:99:48	1	ACTi	
17	ACTi TCM1511	172.16.26.81	00:0F:7C:04:10:FE	1	ACTi	
18	ACTi TCM5611	172.16.26.84	00:0F:7C:45:45:43	1	ACTi	

STEP 3: Press "Next" button to add these device into device list and start to use ACTI standalone NVR.

Live

Live View Main Screen



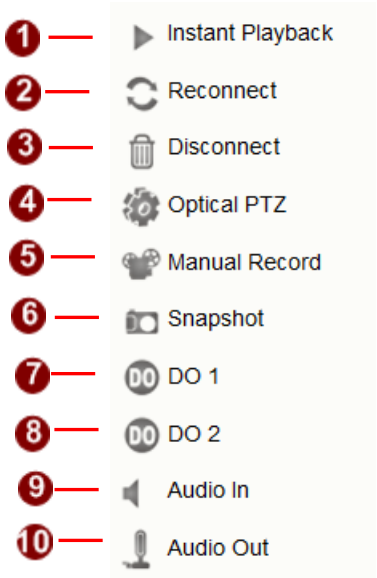
Once you login to the system, you will see this default "Live View" page/layout.

1. **Selected Channel:** When you selected a channel from the live view windows, the channel will will be surrounded by an orange frame, its ID and the device name will be highlighted in the Device List.
2. **Side Panel:** This area contains several collapsible information panels. Including "Device", "Event", and "PTZ".
3. **Tool Bar:** This bar provides access to functions including "Application", "Device List", "Help", "About", and Date/Time information.
4. **Module Tab:** Switch between 3 main modules of the Standalone NVR, namely: "Live", "Playback", and "Setup".
5. **Layout Bar:** Allows you to switch between different view layouts, turn on/off "Patrol", select different "Pages", "Group" selection and choose the streaming compression format of the selected camera(if it supports Dual Streaming).
6. **Channel Status:** Numbers of cameras currently being viewed and recorded are shown here.

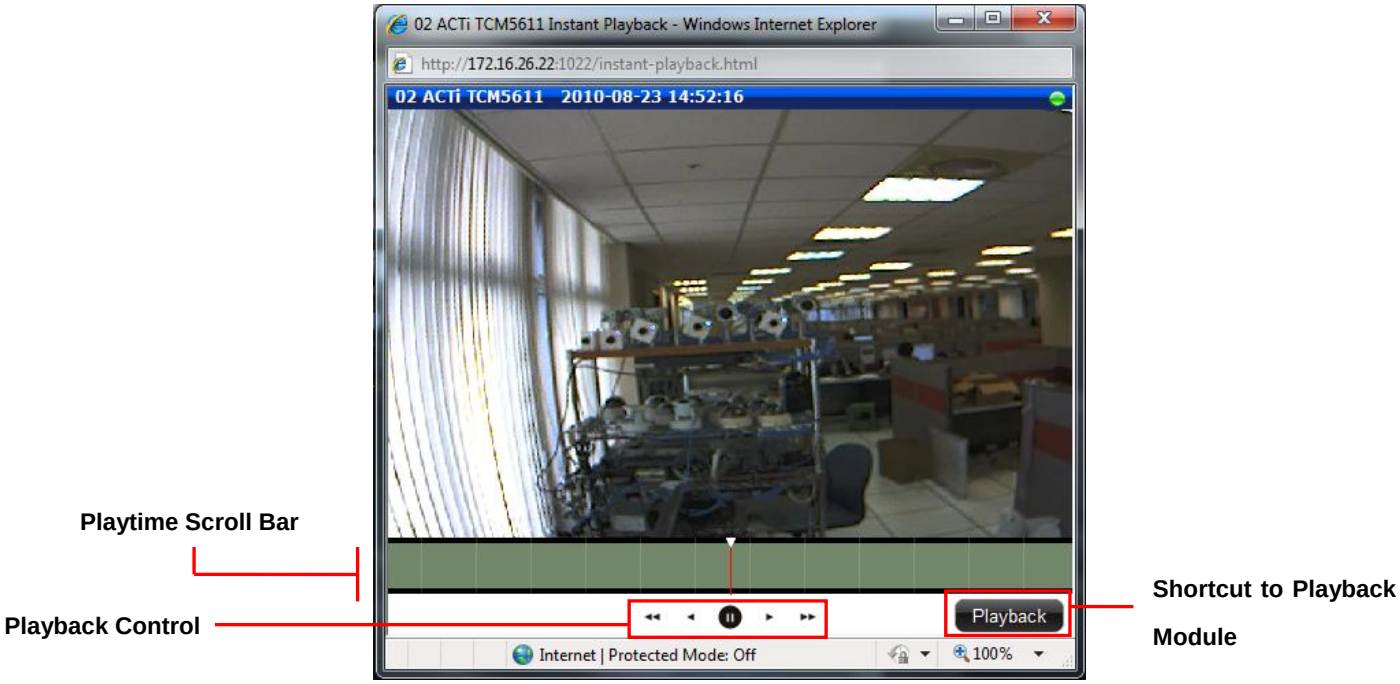
Live View Window

Live View Window: This shows the "Live View" of your selected camera. Double-clicking in the areas of this camera allows you to view the "Live View" in full-screen. Press "ESC" in full-screen mode allows you to escape from full-screen mode.

Right-Click Context Menu: Right-Clicking in "Live-View" (Live playing camera) brings out an options list which contains the following choices:

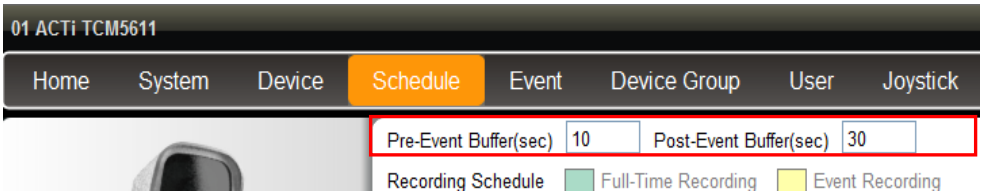


1. **Instant Playback:** Clicking the Instant playback will bring out the instant playback pop-up window.

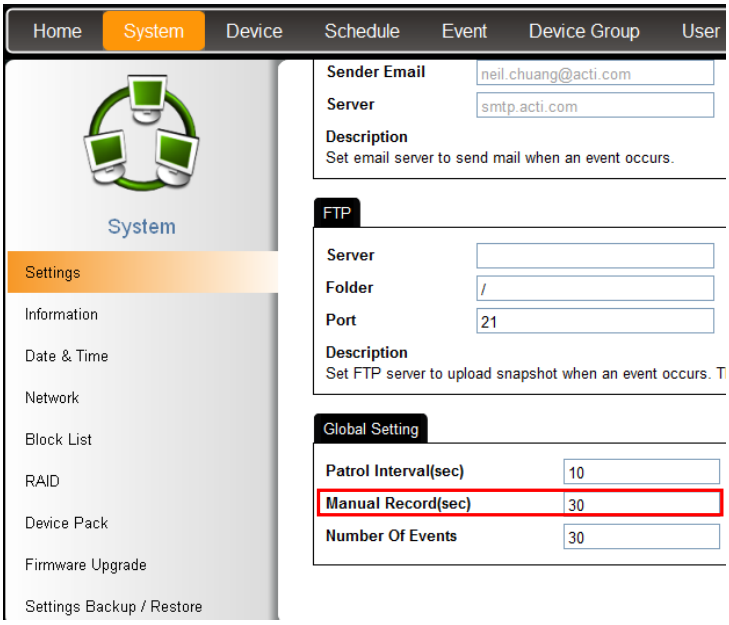


2. **Reconnect:** Disconnect and reconnect the camera connection.
3. **Disconnect:** Disconnect the camera connection.
4. **Optical PTZ:** Please refer to the PTZ control section.
5. **Manual Record:** In default, clicking Manual Record will automatically record a 5-minute stretch from this camera. This is useful if you find something you wish to take note of. You may do following changes to customize its length according to your needs:

   (1) Setup → Schedule: Set the Pre-Event and Post-Event Buffer.



   (2) Setup →System →Settings: In "Global Settings", set Manual Record duration, the min length is 30, max is 3600.



6. **Snapshot:** You may copy a snapshot of the "Live View" to your clipboard.
7. **Digital Output 1:** Manually start and end digital output 1 from this device.
8. **Digital Output 2:** Manually start and end digital output 2 from this device.
9. **Audio In:** Enable and disable your audio input.
10. **Audio Out:** Enable and diable your audio output.

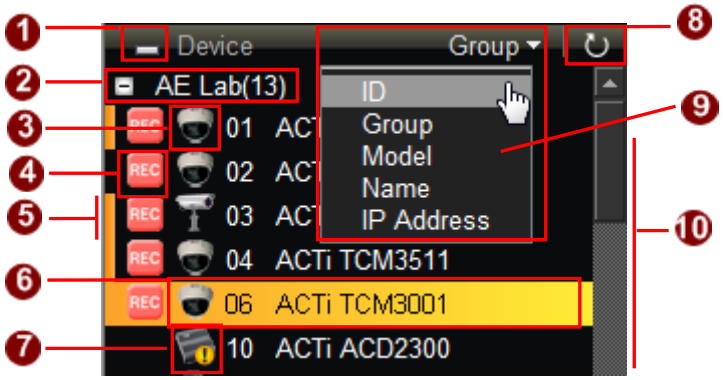
Note: All functions from the "Right-Click Context Menu" work only on the single channel you have chosen.

Side Panel

The "Side Panel" is divided into four panels as shown below.

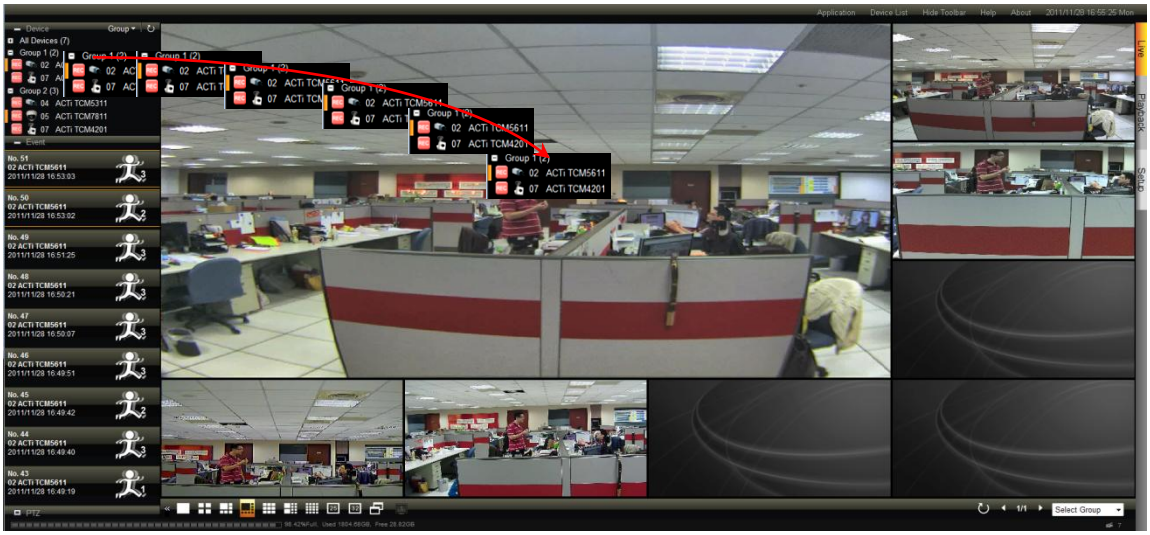
Device List

The Device List shows the devices in your system and their status. You may organize the view in many ways.



1. **Minimize:** Minimizes the device panel.
2. **Group name:** If Device List is organized by group, this shows the name of this group. Click the minimize button before to collapse the cameras listed in this group. One camera may belong to multiple groups, so the same camera may be shown multiple times in the device panel when organized by group.
3. **Camera Icon (Normal):** The camera icon shows the camera device type.
4. **Recording Icon:** This icon indicates that this camera is currently being recorded.
5. **Live View indicator:** Cameras with this orange bar before its icon is currently shown in the live view window.
6. **Camera Info:** This area describes the camera name and ID. If this camera is currently selected, this whole area will be a highlighted bar.
7. **Camera Icon (error):** The exclamation mark (!) icon over camera icon means that this camera is currently not connected and not being recorded.
8. **Group Patrol**: Click this icon to enable cycling your view by group, which is called group patrol. Please note that you need to have more than one group of camera to switch views to. If not, this function will only repeat displaying the same cameras in the same group.
9. **Sort**: You may sort the display of cameras according to ID, Group, Model, Name and IP address.
10. **Scroll Bar**: Scroll up or down to browse the device list.

Note: By double clicking on groups (not individual cameras), this will allow you to add your entire group of cameras to the "Live View". You may click and drag a single channel onto the window you wish to view it in to see video from that camera. You may also drag an entire group into the live view window to view the cameras.

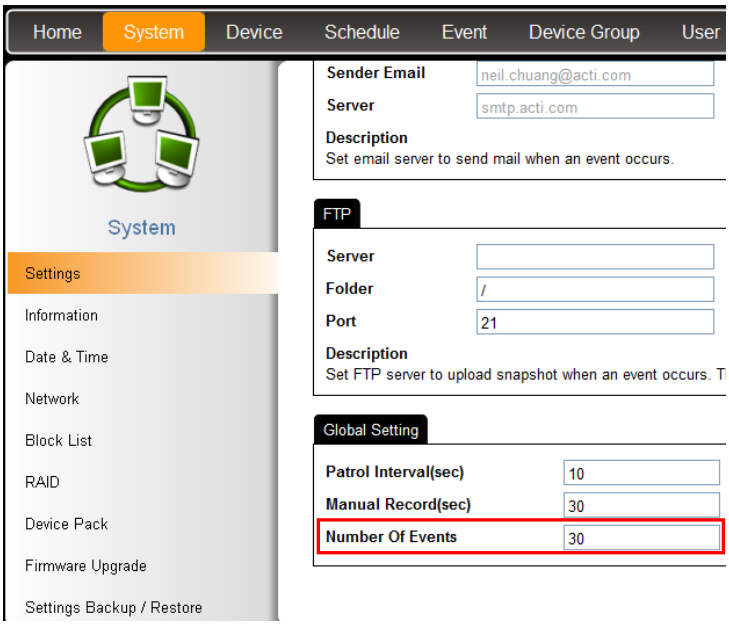


Event List

Event List displays events as they happen. The latest event is shown on top.

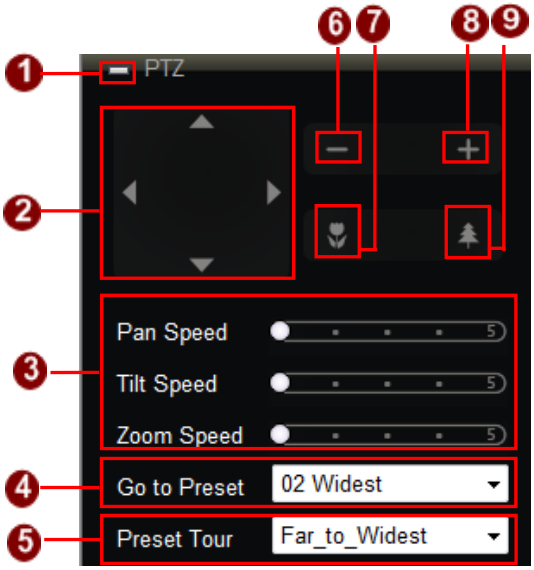
1. **Minimize:** Minimizes the event list panel.
2. **Event information:** This shows the type of event by an icon, camera ID, IP address and time of event. You can also double click on the event to playback the event video in a pop-up instant playback window.
3. **Scroll Bar**: Scroll up or down to browse the event list.

To set up the **number of events shown on this list,** go to Setup→System→Settings, in the Global Setting section, input the number, the maximum is 100.



PTZ Panel

The PTZ Panel allows you to control camera motion for Pan / Tilt / Zoom enabled cameras. This is called the optical PTZ mode, in contrast with the digital PTZ available to all cameras via Standalone NVR.



1. **Minimize:** Minimizes the PTZ window.
2. **Pan-Tilt Control:** Click on the arrows to point camera at a given direction. Click and hold until you arrive at the position you desire.
3. **Pan Speed:** Adjust Pan Speed from 1 to 5, higher the number, faster the speed.
   Caution: Speed varies from protocol to protocol.
   Tilt Speed: Adjust Tilt Speed from 1 to 5, higher the number, faster the speed.
   Caution: Speed varies from protocol to protocol.
   Zoom Speed: Adjust Zoom Speed from 1 to 5, higher the number, faster the speed. Caution: Speed varies from protocol to protocol.
4. **Go to Preset:** Make PTZ camera go to preset points. (Only available when you have done PTZ and Preset Points settings for a PTZ or speed dome camera).
5. **Preset Tour:** Make PTZ camera cycle through grouped multiple preset points. (Only available when you have done PTZ and Preset Points settings for a PTZ or speed dome camera).
6. **Zoom Out:** Zoom out.
7. **Focus In:** Focus near.
8. **Zoom In:** Zoom in.
9. **Focus Out:** Focus far.

PTZ via Live View Window

Optical PTZ operation can also be performed from within the live view window itself.

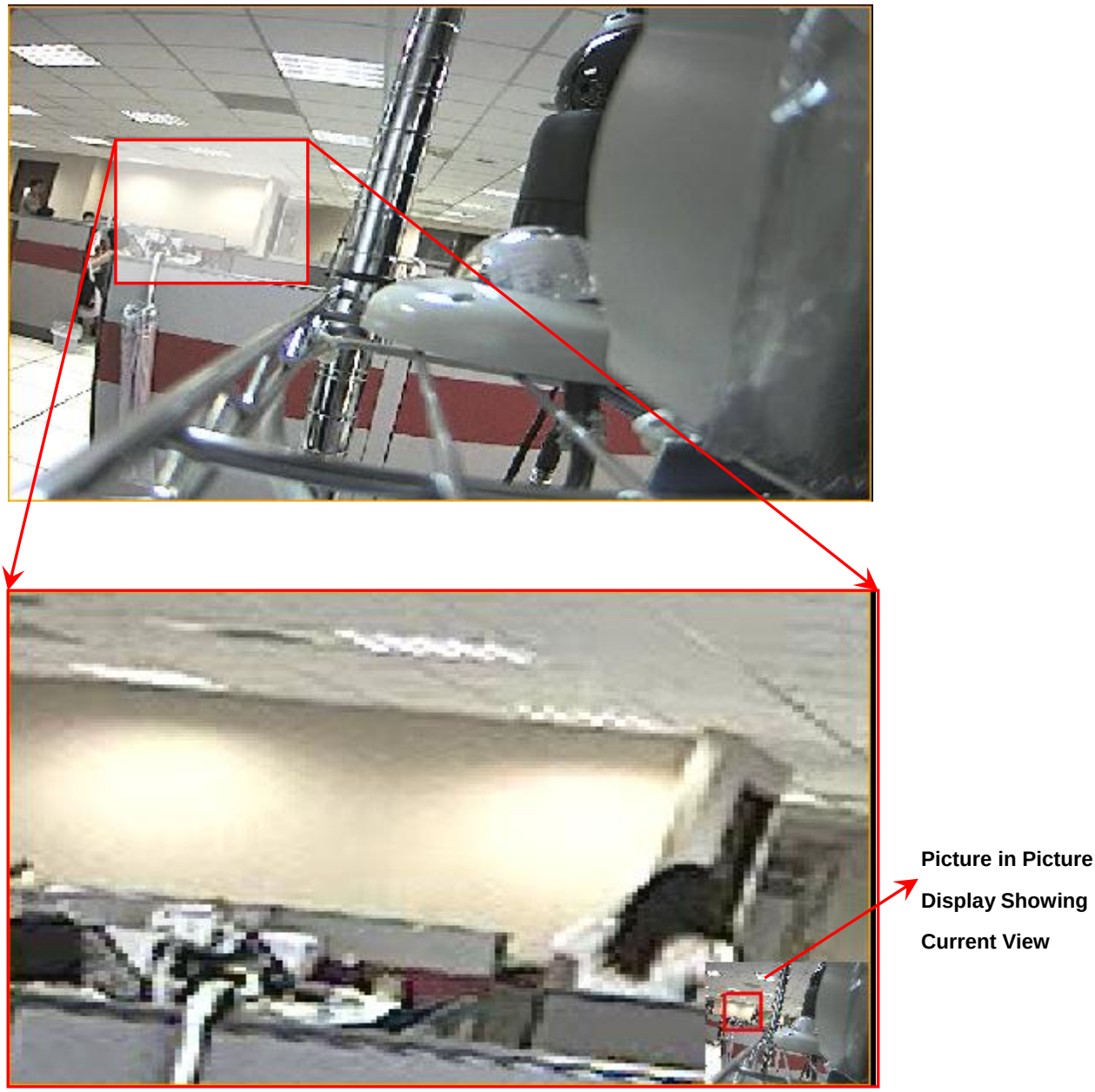
Select the PTZ camera you wish to operate. Make sure the PTZ mode is Optical PTZ. If not, change via right click context menu. There will be a red crosshair right in the middle of screen. Clicking anywhere on the screen will allow the camera to move in that direction.

The length of the direction indicator is proportional to the Pan and Tilt speed. The farther you place the cursor from the center, the faster the Pan/Tilt movement.

Operating Digital PTZ

Digital PTZ allows you to zoom into part of the video and enlarge it to display on screen. Just click and drag a highlight rectangle over any channel, and the area highlighted will be displayed in the full live video window. In this mode, a picture-in-picture view will show in the lower right of live view window.

A red rectangle will mark the currently enlarged view area within the full size video. Just click and drag the red rectangle to see another area. Right clicking on the minimize Picture in Picture view will take you back to the original full video view.

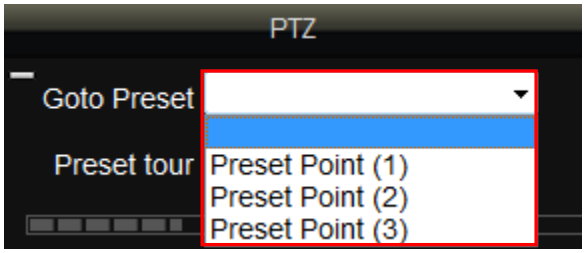


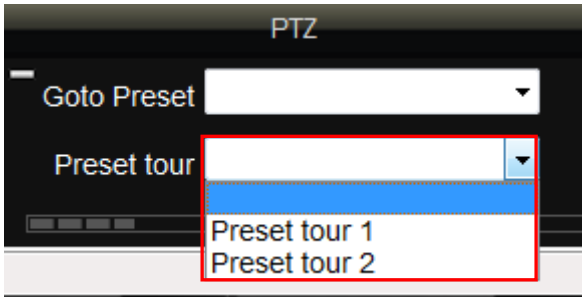
Preset Point Panel

PTZ Preset points allow you to easily move the camera to pre-defined points of view. This is enabled only for cameras with PTZ function support.

You need to setup these points in Setup Device PTZ. Be sure to save your settings before you leave the setup section to commit the changes.

Once you have defined these points you will find the preset points in the drop down list.

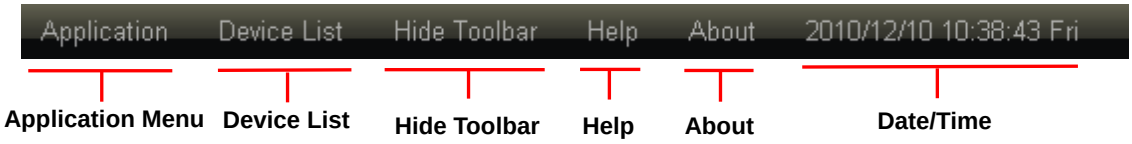




After you have more than one preset points defined, you may configure the Preset Tour in the Setup Device section.

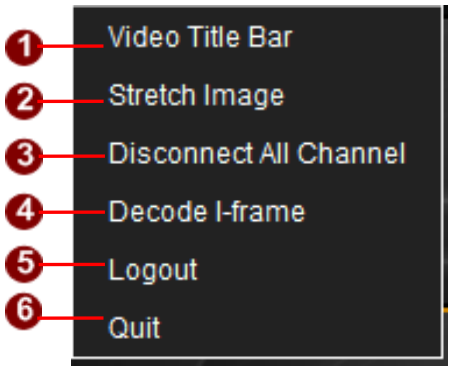
Tool Bar

Tool Bar gives you additional control and info over the entire "Live View" experience.



- **Application Menu:**

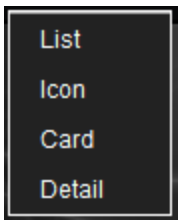
  This shows all the special functions within the application menu.



1. **Video Title Bar:** Enable/Disable video title bar.

2. **Stretch Image:** Enable/Disable stretch image.
3. **Disconnect All Channels:** Disconnect all channels.
4. **Decode I-Frame:** Change all channels to 1 FPS. This saves CPU on the remote client PC.
5. **Logout:** Logout of the Stand Alone NVR but stay in IE.
6. **Quit:** Quit entire session and close IE.

- **Device List Menu:**

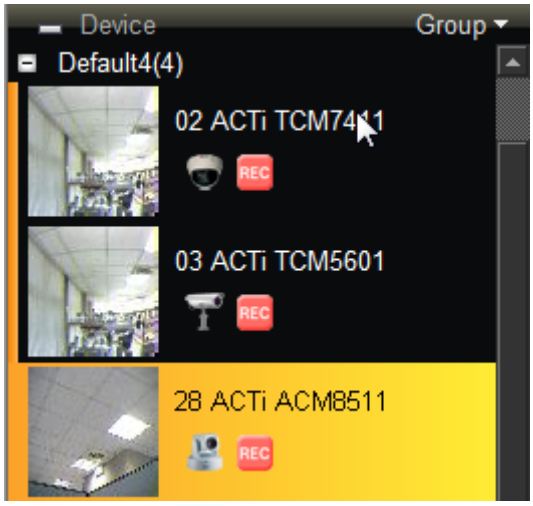


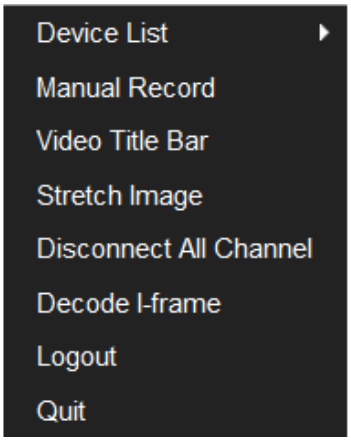
➢ **Icon:** Change the "Device Panel" display into Icon style

Each Channel is identified with a snapshot. Channels currently in live view will be shown with Orange borders. Currently selected channel will be shown in yellow border.

- **Card:** Change the "Device Panel" display into Card style.

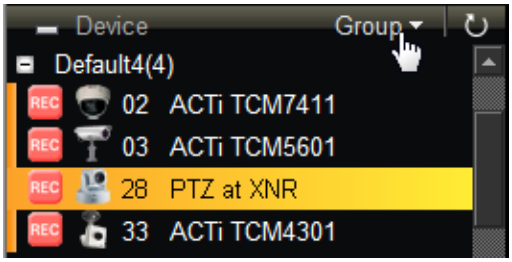
  Each device will be shown with Channel ID, one thumbnail snapshot, device info and image. Channels currently in view will show an orange border to the left. The currently selected channel will be highlighted.





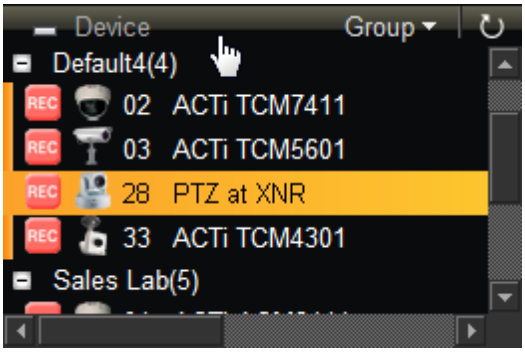
- **List:** Change the "Device Panel" display into List style.

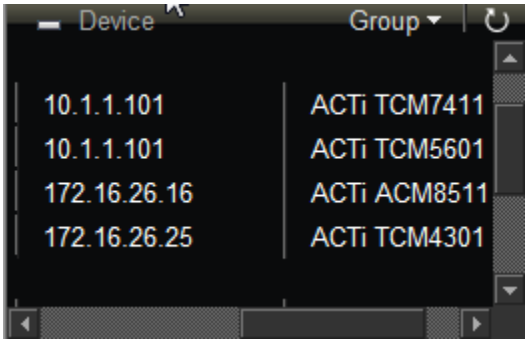
  This is the default method. Each device will be shown in one line, with Rec icons indicating currently recording channels, and orange highlights to the left for the ones currently in view.



➢ Detail: Change the "Device Panel" display into Detail style

This looks very similar to the List style, but the info listed now extends to the right and include device IP and camera model.





- **Hide Toolbar:**

  You may choose to hide the toolbar with this button. Press the "Esc" key to restore toolbar.

- **Help:**

  Help will take you to our website for more detailed info

- **About:**

  Clicking "About" will display current Standalone NVR versions.

Layout Bar

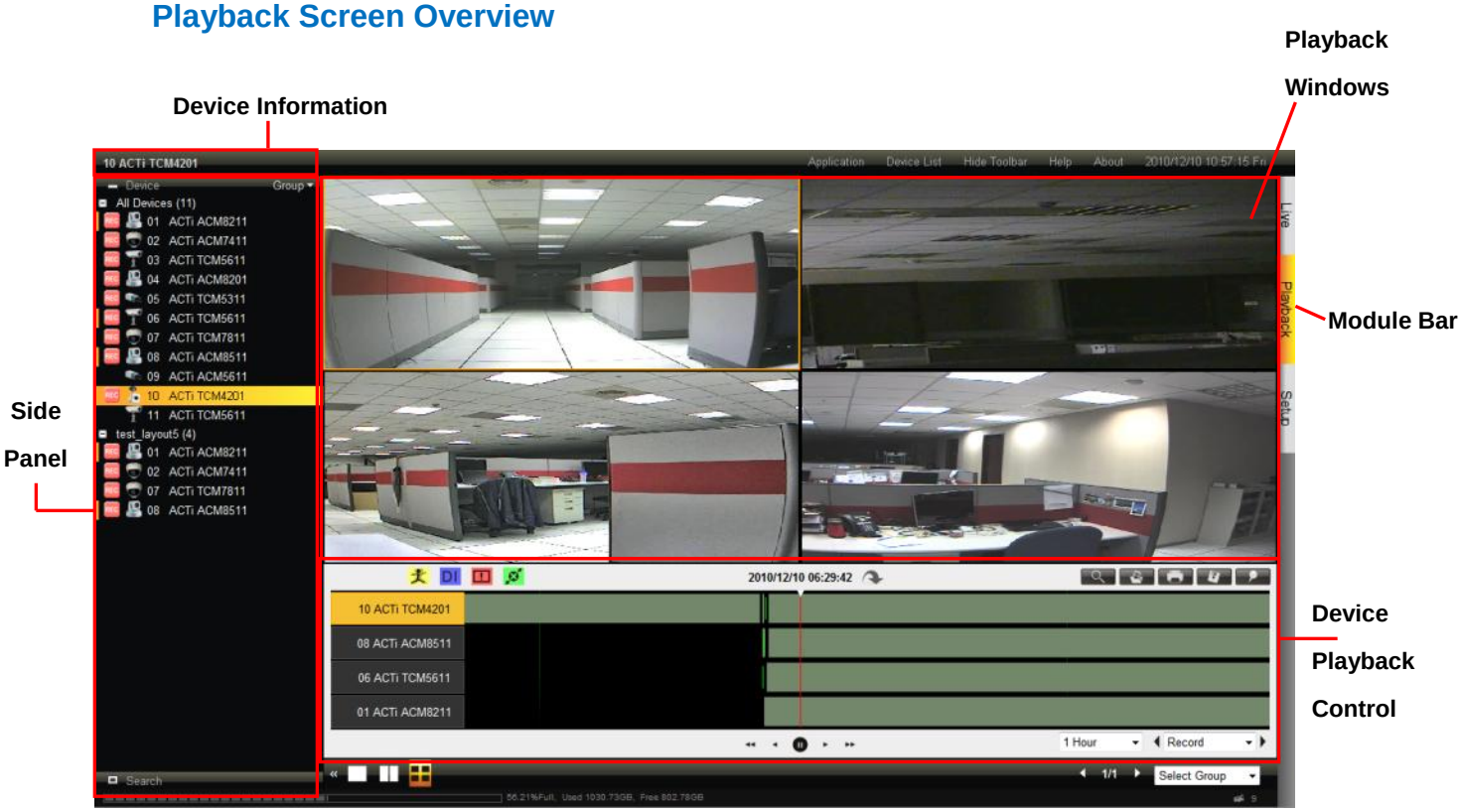
The Layout Bar gives you the freedom to select your own View Window style. Enable/Disable "Sequence Patrol", change pages, and select group.

1. **Hide Side Tool Panel**: Hide the Side Tool Panel to increase viewing area.
2. **Channel Layouts**: Different channel Layouts for your viewing.
3. **More Layouts**: Some layouts are not shown in the default Layout Bar. Click this to show more layouts.

4. **Dual Stream Switch**: Switch the current video stream for live view to stream 1 or stream 2(if you have set the Stream Mode as DUAL on Device page).
5. **Sequence Patrol**: Patrol your cameras in the Side Tool List, starting from the top of list.
6. **Page Selection**: If you have more channels than one page can show, the system will automatically add cameras to different pages. You may view other cameras in different page.
7. **Select Group**: Cameras can be categorized into different groups for better management. By selecting from this list you can find all groupings of your camera for viewing.

Playback

Playback Screen Overview

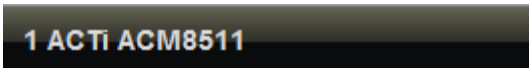


Quick Tips

1. Drag cameras or groups from the device list to the playback windows to view.
2. You can see a maximum of four cameras at once in synchronized playback.
3. Click and drag the time bar to move to your target time. Change the scale from the dropdown list at bottom right.
4. Click the date / time in the center of device playback control to jump to target day / time.
5. Click the play/reverse/pause buttons below the playback control to play.
6. Click and drag the black circle left or right to fast forward / rewind at up to 500x speed.
7. Filter events by clicking on the four icons on top left of Device Playback Control.
8. Search, print, bookmark or export video by clicking the buttons on top right of device playback control.
9. Right click on each channel for more detailed context menus.

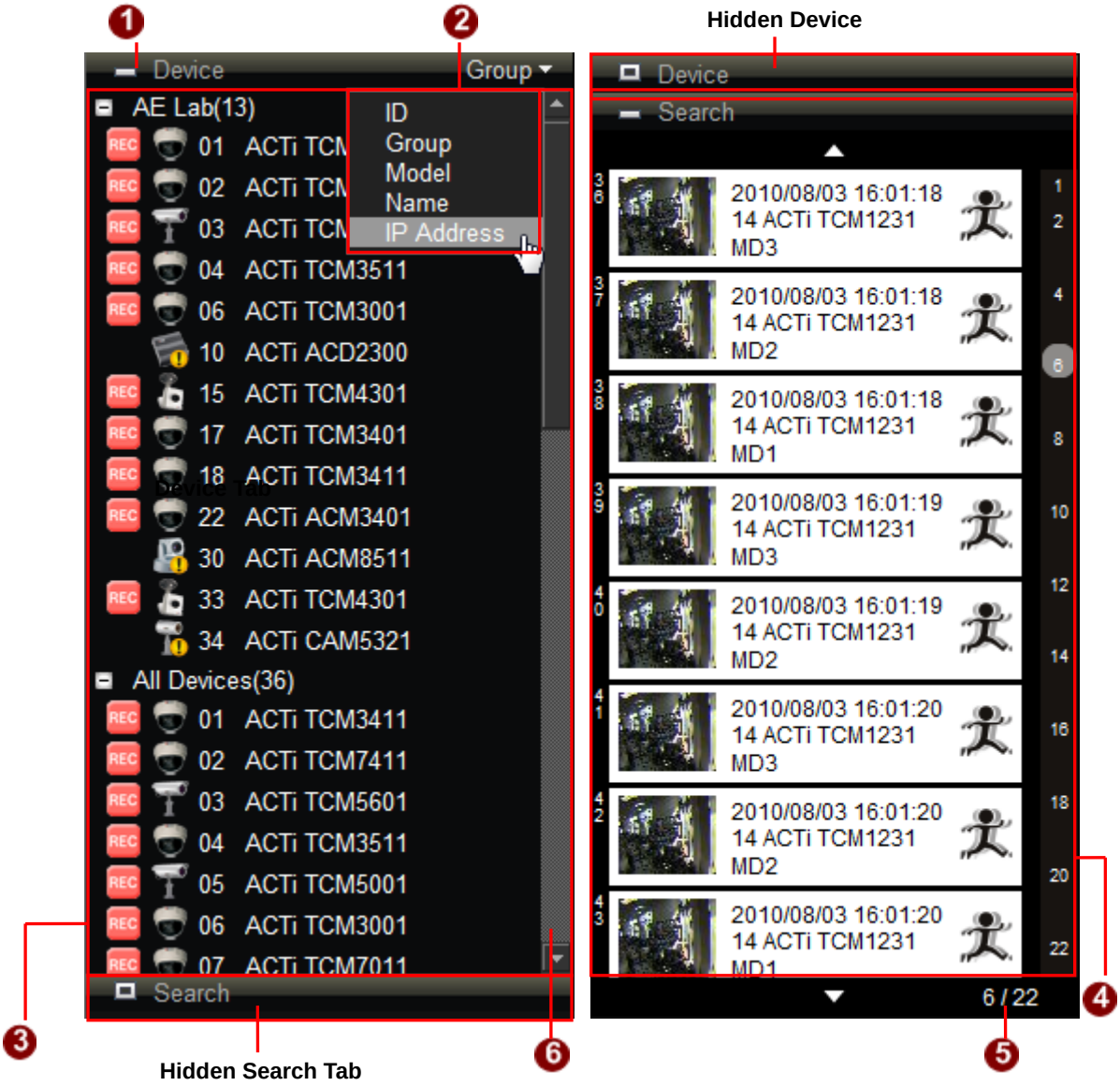
Device Information

Device Information displays the selected device number, brand and model number.



Side Panel

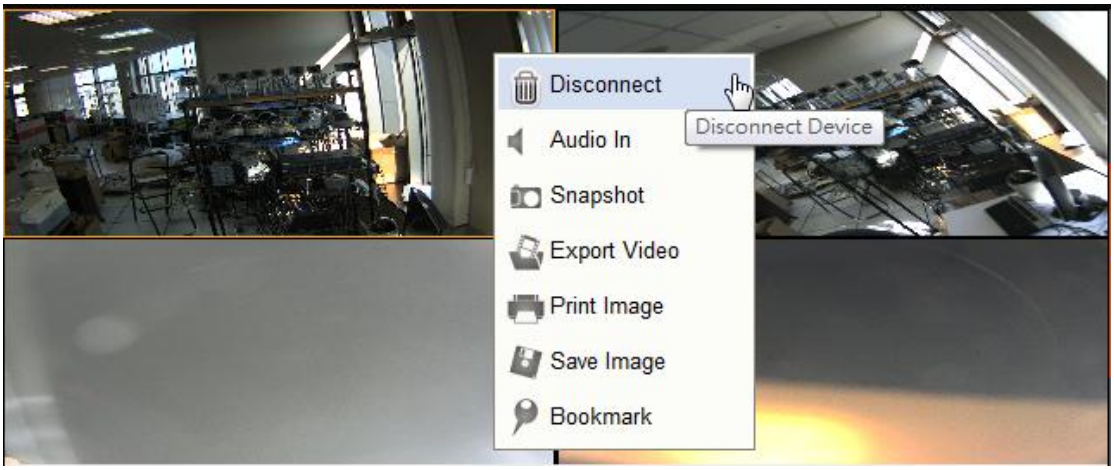
On Playback Module, the Side Panel contains Device Tab and Search Tab. On Device Tab, you may group all the added devices by ID, by Group, by Model, by Name, and by IP Address. On Search Tab, you may click on the search result thumbnails and the time bar will be shifted to the beginning of the video.



1. **Close Button:** You may switch between devices or search tab by clicking the close button.
2. **Group Drop-Down List Menu:** Allows you to group all the added devices by ID, by Group, by Model, by Name, and by IP Address.
3. **Device:** Displays the device current status and information. The current status can be in idle or in recording mode. The device information is displayed by the camera type thumbnail, by device ID, by brand, and by model number.
4. **Thumbnail List:** You may see the thumbnail images of the video from the search results. In each thumbnail, the type of event is listed at the right. Once you clicked on a thumbnail, the time bar will be shifted to the beginning of the video. Then, you may proceed to play the archive video.
5. **Page Index Number:** You may click on the page index number to go to the next page or to the previous page.
6. **Page Up-Down Arrows:** You may click on the page index arrow to go to the next page or to the previous page.

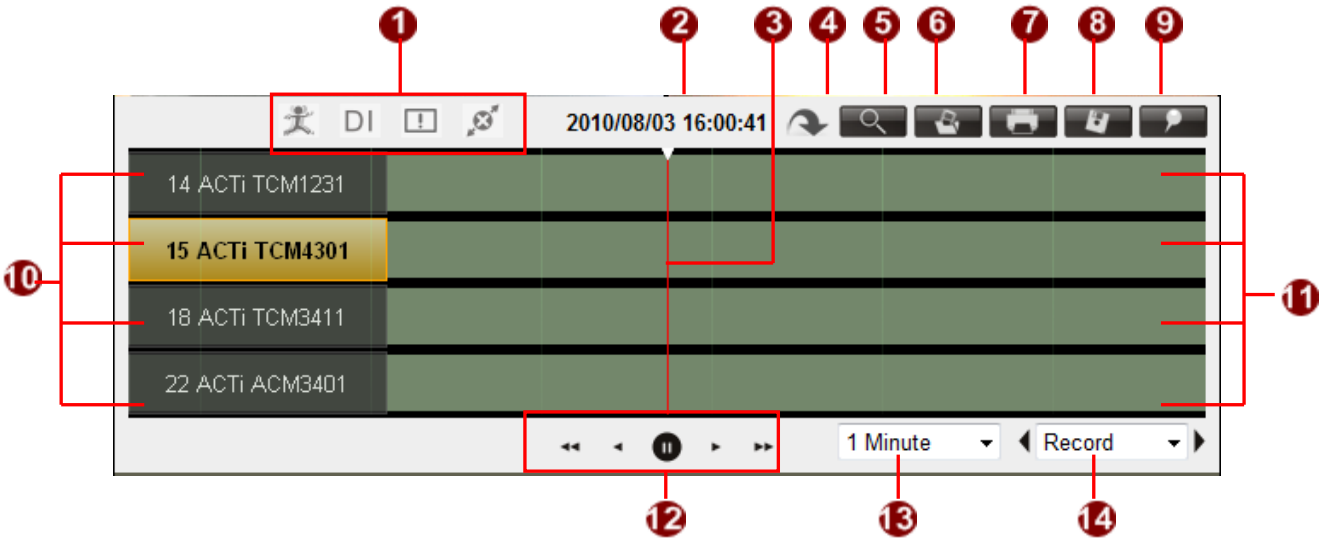
Playback Windows

On the Playback module, you may have 1, 2 and 4 channel window layouts for Playback. You may only disconnect, export video, take snapshot, print image, save image and add bookmark to a channel with a video clip through right click.

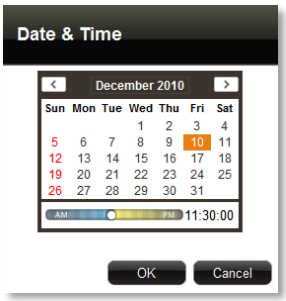


1. **Disconnect:** Select to disconnect the channel
2. **Audio In:** Click to enable or disable audio of the selected channel
3. **Snapshot:** Click to take a snapshot of the channel and save it on the clipboard
4. **Export Video:** Click to export selected video *channel*
5. **Print Image:** Click to print the image snapshot.
6. **Save Image**: Click to save the image(s) to your desktop or to a destination path.
7. **Bookmark**: Click to add a bookmark to the selected channel.

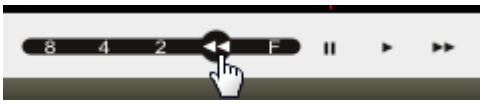
Device Playback Control



1. **Event Icons:** Toggle Motion, Digital Input, Recording and Lost signal on the Time Bars.
2. **Displayed Time:** Display the time of video currently viewed.
   Click here to go jump directly to target time / date.



3. **Displayed Time Bar:** Marks time of video currently viewed.
4. **Return to Present:** Instantly moves Displayed time to now.
5. **Search:** Click this button to perform search.
6. **Export Video:** Export video clips to other locations.
7. **Print Image:** Click this button to export images to a printer.
8. **Save Image:** Click this button to export images to a file.
9. **Bookmark:** Click this button to set bookmarks on all synchronized videos.
10. **Time Bars:** Click and drag to change current video displayed time.
11. **Devices:** The playback cameras are displayed here
12. **Playback Control:** Click these buttons to play, pause or rewind. You may go faster by clicking and dragging the black circle. For even faster speed up to 500 times, click and drag the pause button to the left or right limit.



13. **Time Bars Scale:** Time Bars Scales are changed here.
14. **Event Buttons**: You may jump to then previous or to the next Record, Motion, Digital Input, Video Loss, Network Loss, and Bookmark. **Previous** / **Next Record** is very useful when navigating long stretches of video.

Layout Bar

1. **Hide Side Tool List:** Click to hide or unhide the side tool list
2. **Layout 1:** Shows a single channel
3. **Layout 2:** Shows a maximum of 2 video channels at one time
4. **Layout 4:** Shows a maximum of 2x2 video channels at one time.

Select Device for Playback

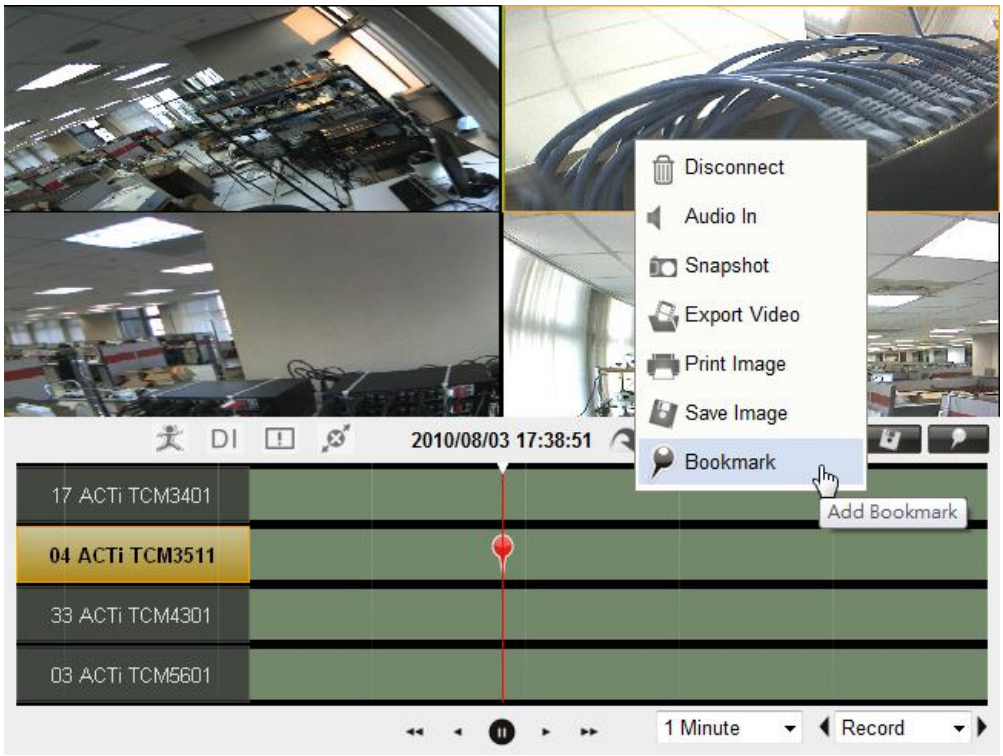
They are two ways to insert a device for playback window:

1. **Drag:** You may drag a device into one of the windows or into the device playback control
2. **Click:** You may double-click the device name to add the device into one of the windows

Note: You may add up to 4 devices for synchronous playback.

Bookmarks

You may add bookmarks to different video archives for suspicious event marking. Bookmarks may be exported and imported for future security analysis. You may also do search query by Bookmark.

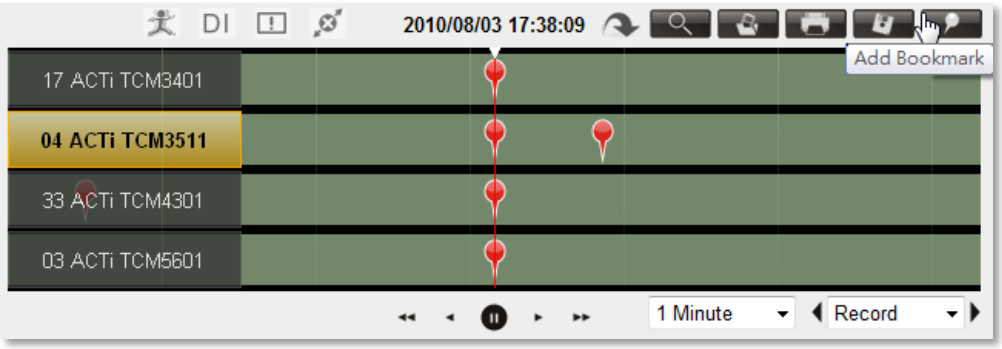


Add a single Bookmark to a device

To add bookmarks

Here are the steps to insert a single Bookmark on the Playback Window.

1. Browse to a specific video segment through time bar.
2. Choose a specific Video Screen
3. Right click on the Video Screen and Click on Bookmark.



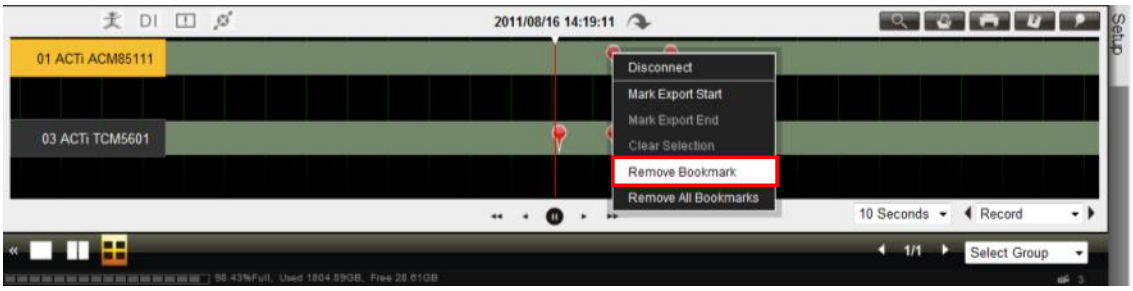
Add Bookmarks to all displayed devices

Here are the steps to add Bookmarks to all the devices

1. Browse to a specific video segment through time bar.
2. Click on

To delete a bookmark

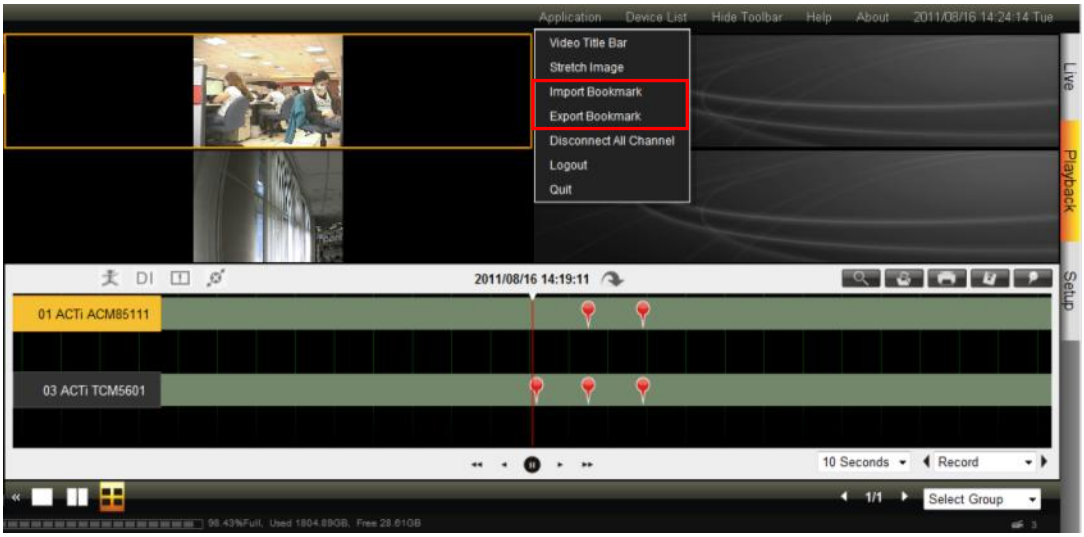
On the playback time bar, right-click o bring up the menu, then select "Remove Bookmark" or "Remove All Bookmarks"



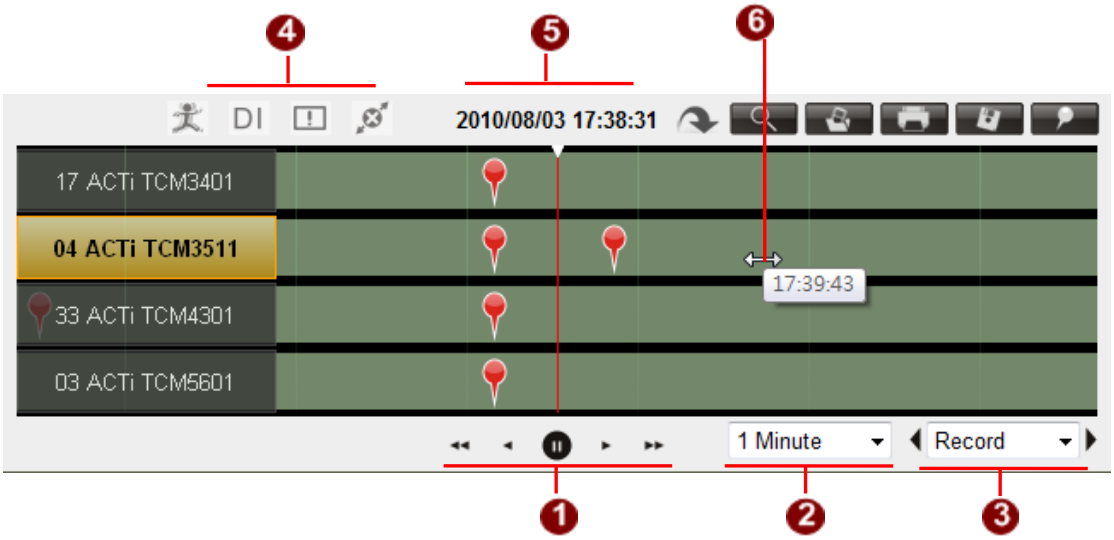
To save the bookmarks

You can save the important bookmarks made on certain channels. On Playback screen, click the "Application" on title bar, then select "Export Bookmark". The bookmarks which contain time and channel ID information will be saved as an xml file. Later on, when you restart this standalone NVR, you can import the saved xml file to recover the bookmarks.

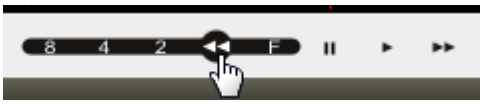
Note: After you import the xml file, pull the original channel (should remain the same channel ID and the same camera) to live view and drag the time bar to the approximate time section to show the bookmarks.



Scrolling and Playing Video



1. **Playback control buttons:** Click these buttons to play, pause or rewind. You may go faster by clicking and dragging the black circle. For even faster speed up to 500 times, click and drag the pause button to the left or right limit.

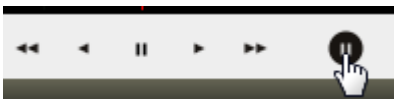


Fast Play Backward

Extreme Play Backward

2. **Play Backward:** Click this button to play backward.
3. **Pause:** Click this button to pause playback
4. **Play: Click this button to play forward**
5. **Fast Play:** Click this button to play at 2x speed. You may go faster by click and drag. For even faster speed, up to 500x, click and drag the pause button to the right.

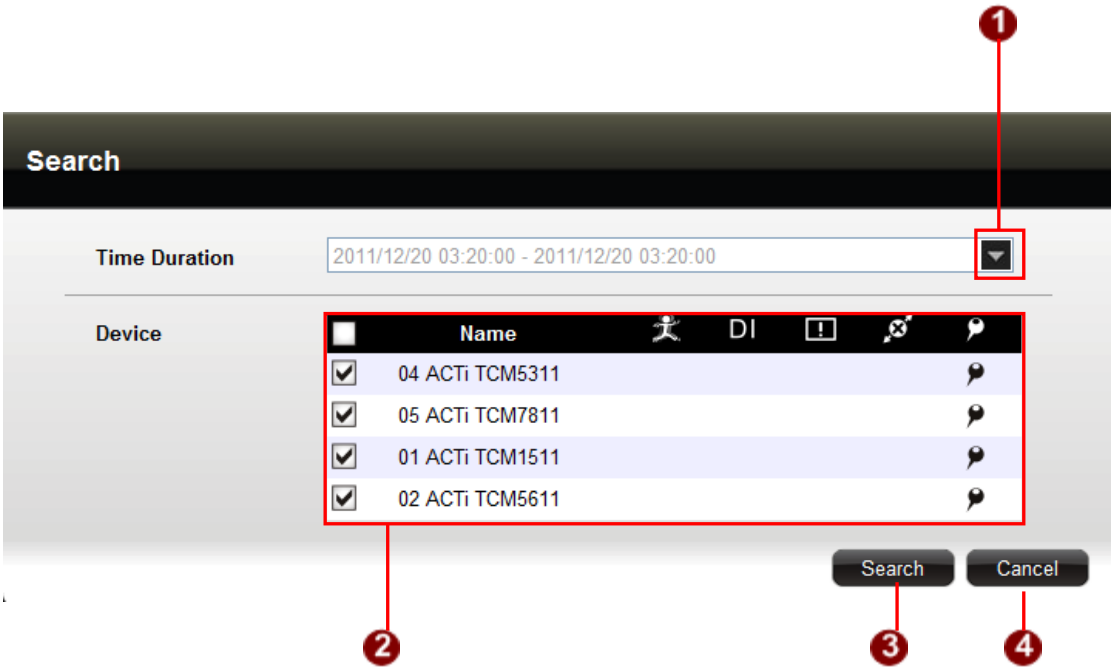
Fast Play



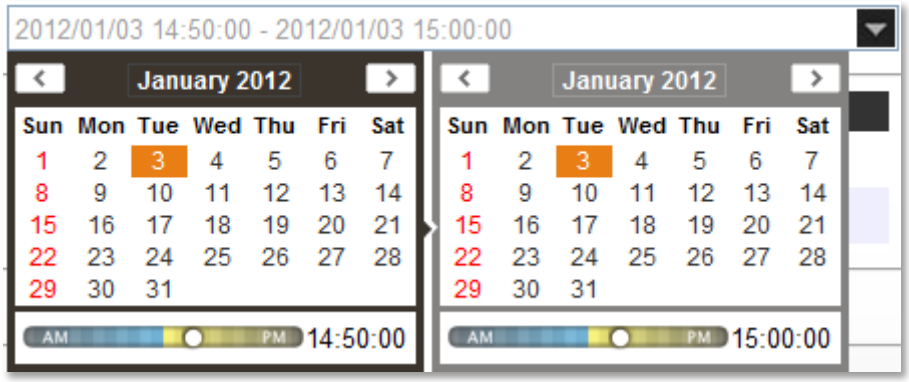
Extreme Play Forward

6. **Scrolling Cursor:** When you put your mouse cursor on the time bar, you may see a bidirectional arrow. Then, click and drag to change current displayed time.

Video Search

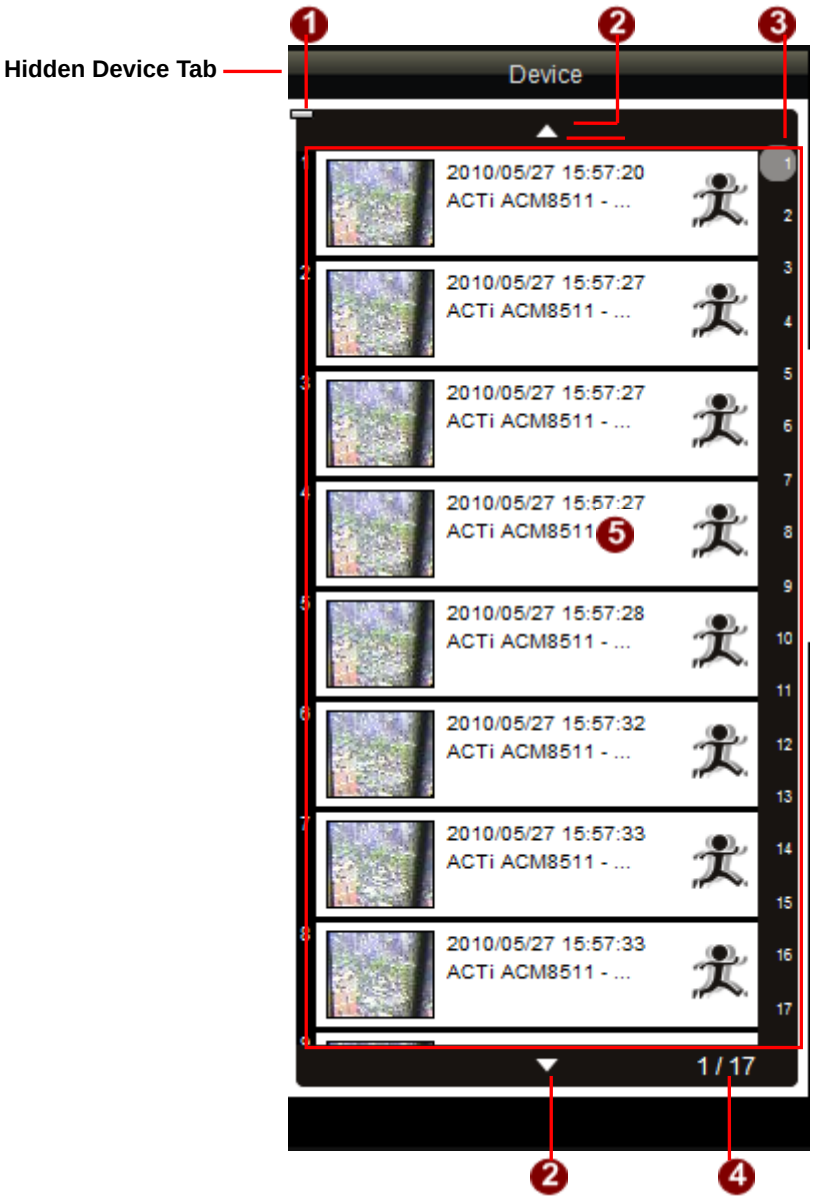


1. **Time Duration:** Click on the down arrow to select date/time range from the calendar as shown below.



2. **Device:** Select the devices to include in search. You may toggle the search conditions.
3. **Cancel Button:** Click to return to main page.
4. **Search Button:** Click to search video archives according to the toggled filters.

Video Search Result

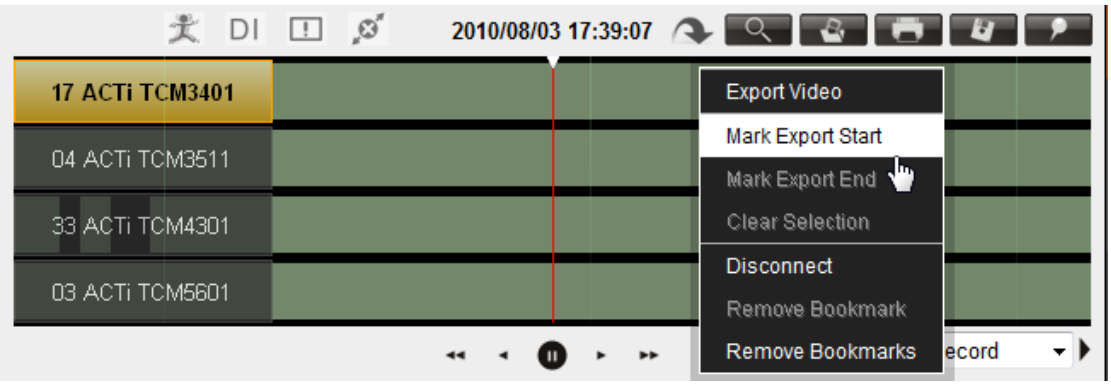


1. **Close Button:** You may switch between devices or search tab by clicking the close button.
2. **Page Up-Down Arrows:** You may click on the page index arrow to go to the next page or to the previous page
3. **Page Index Number:** You may click on the page index number to go to the next page or to the previous page
4. **Current Page Number:** Display the current page number.
5. **Thumbnail List:** Display thumbnail images that matches the search criteria

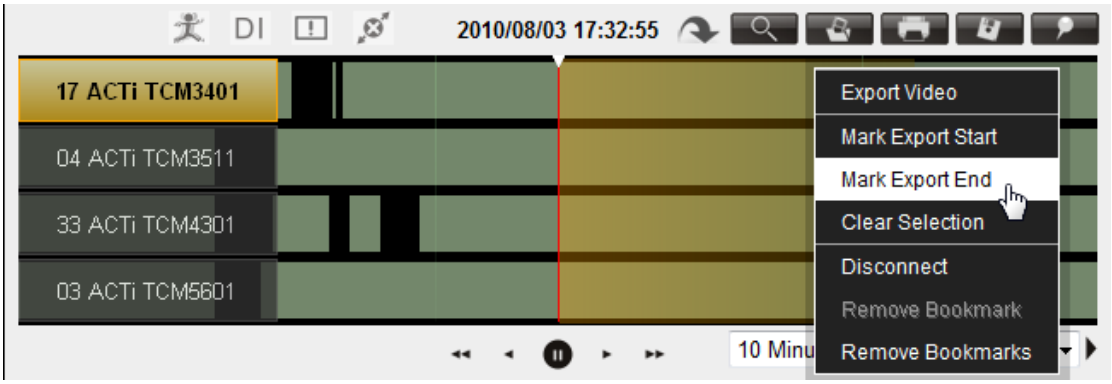
Export Video

There are two ways to export Videos:

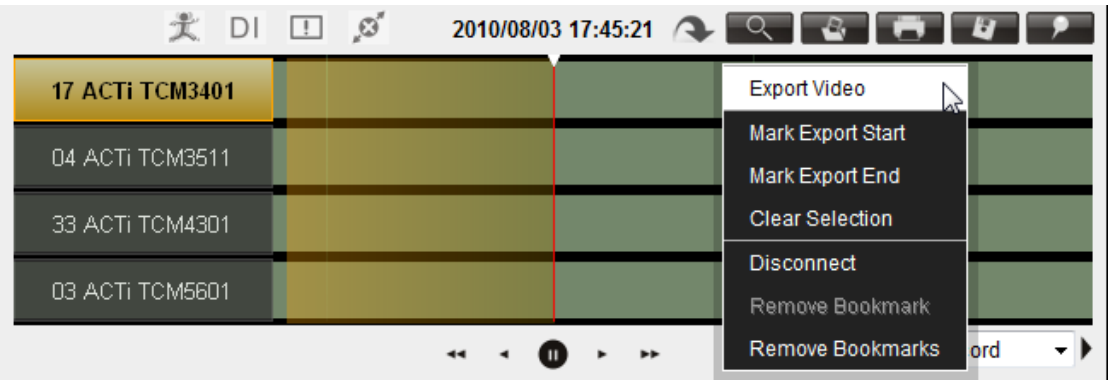
1. **From Device Playback Control:** You may mark start and end point on the time bar and then export the video.



Mark Export Start

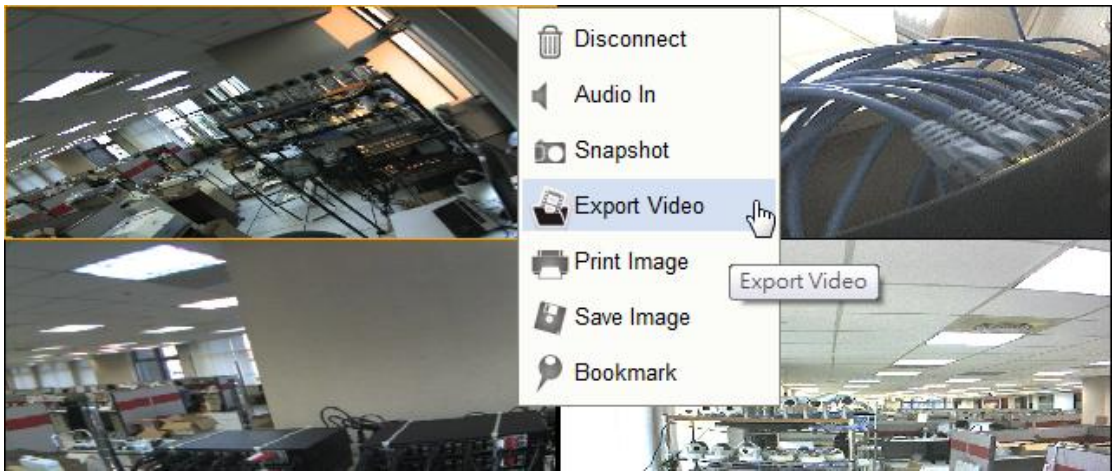


Mark Export End



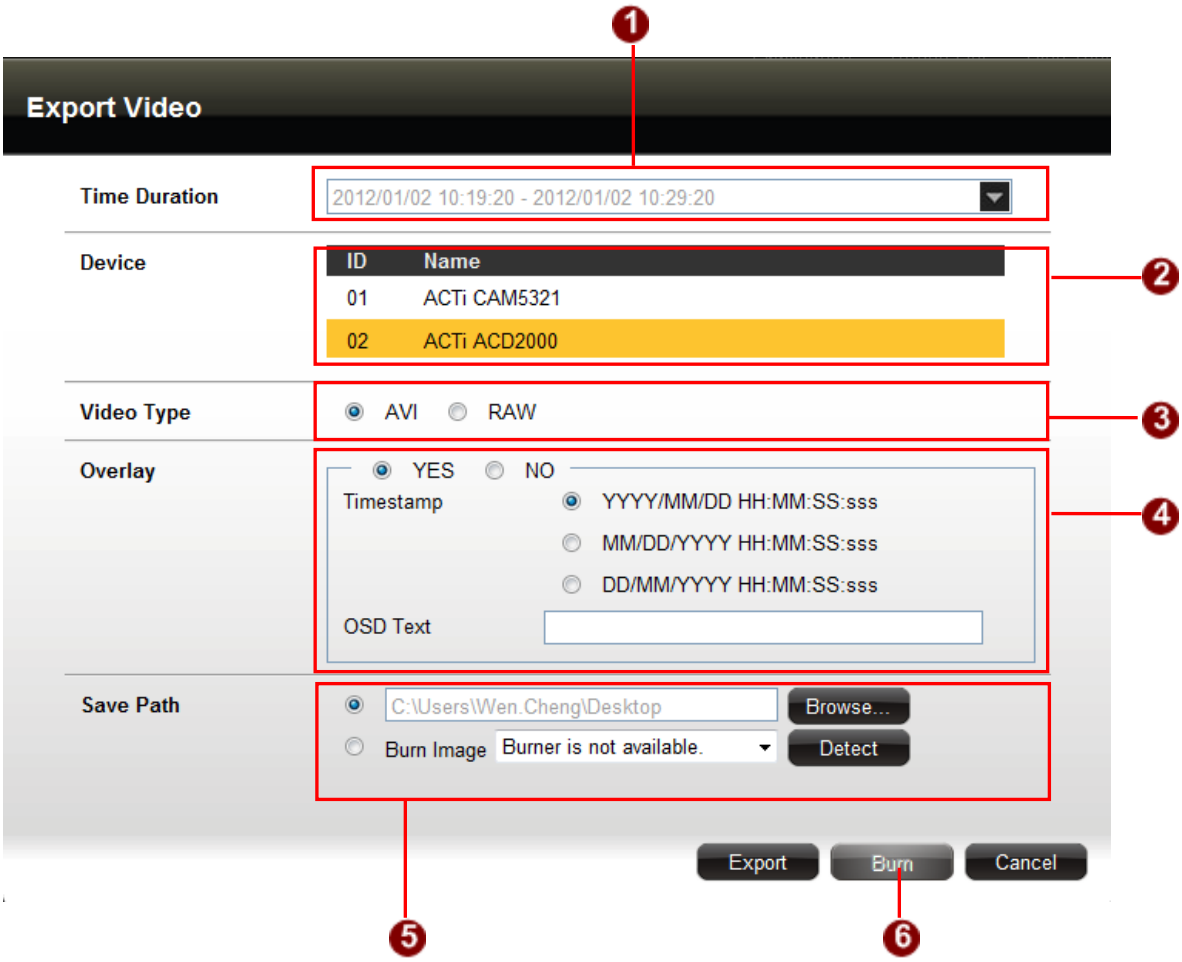
Playback – Export Video

2. **From Playback Windows:**



Playback – Playback Windows

Once you clicked Export Video, you may reschedule the time duration, include or exclude devices, add overlay and export the videos to desktop or to a specific path or store them on a DVD media through a burner.

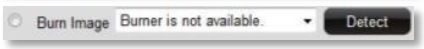


1. **Time Duration:** Click on the down arrow to select date/time range from the calendar as shown below.

2. **Device:** Select the devices to include or exclude in the export.
3. **Video Type**: You can choose to save the video as AVI or RAW format in the computer. To create a video CD/DVD-ROM, please connect the USB CD/DVD burner to GNR-2000, then select "Burn Image" and click "Detect" to detect the burner. This video CD/DVD-ROM will contain a player for you to directly execute and watch the video playback on a Windows-based computer.
4. **Overlay:** Click on "Yes" to add overlay or "No" to exclude overlay. You may include timestamp and an OSD Text.
5. **Save Path:** You may export the videos to your desktop or to a specific path or even store them on a DVD media through a burner. Click this button and choose the export method:

   (1)

   – Save AVI files to client PC or other location.

   (2) 

   –Create CD/DVD containing the video file and player. Please first connect a USB DVD burner to standalone NVR, then select "Burn Image" on this window, click "Detect" to find the burner and click "Burn" to start creating the CD/DVD.

6. **Burn Button:** Click to export select video archives according to the date/time, with or without overlay into your desktop or a specific path or store them on DVD media through an external burner.

Note: To play the exported .AVI file, you must have FFDShow or DivX codec installed in your computer. They can be found over the internet at the following sites:

http://sourceforge.net/projects/ffdshow/

http://www.divx.com/en/software/divx-plus/codec-pack

Snapshot

You can only take snap shot from the Playback Window.

Once you click Snapshot, a message of "Saving Of snapshot to clipboard is completed" will display as below.

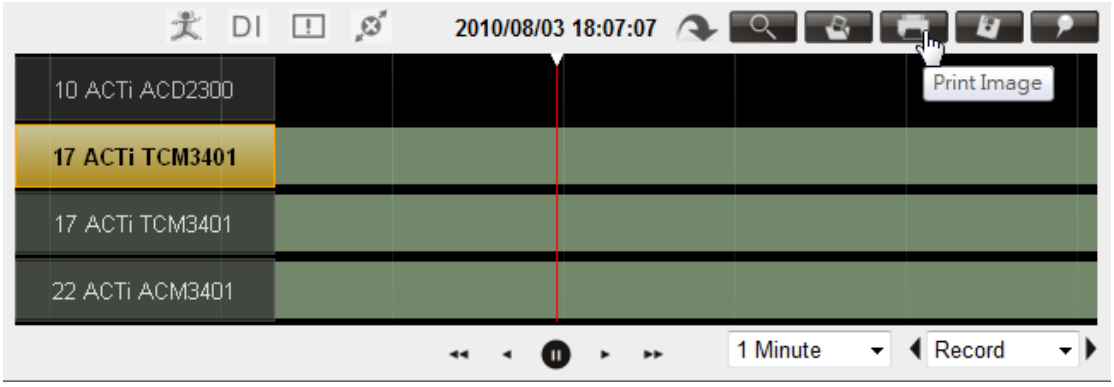
Saving Of snapshot to clipboard is completed.

You may then paste the image into software using Ctrl + V

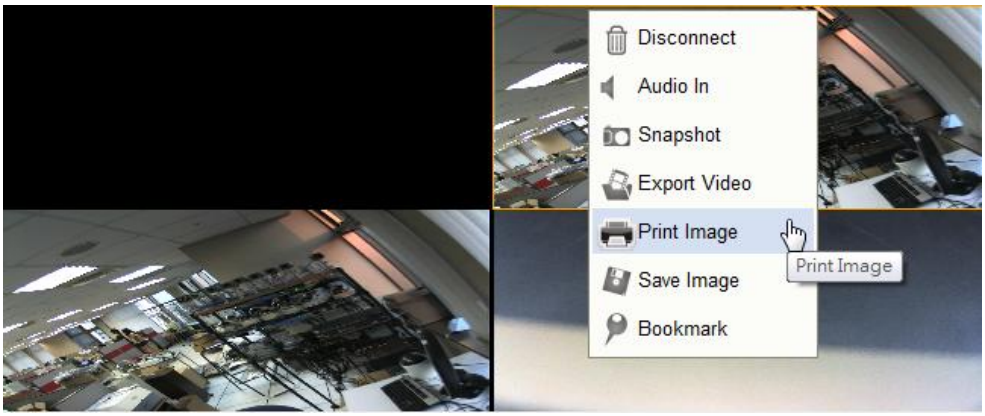
Print Image

There are two ways to export Videos:

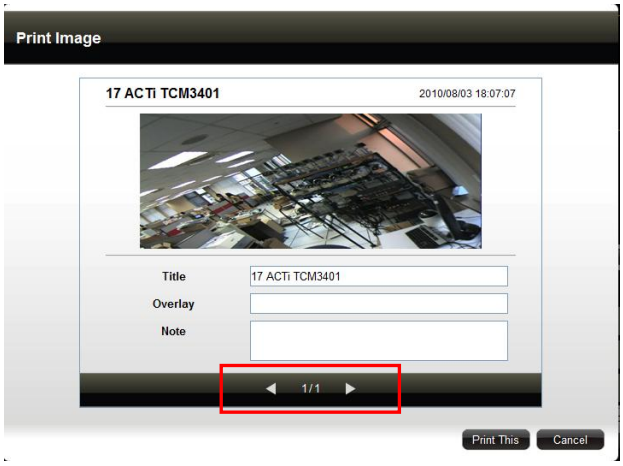
1. **From Device Playback Control:** You may click the print image icon and then print the image.



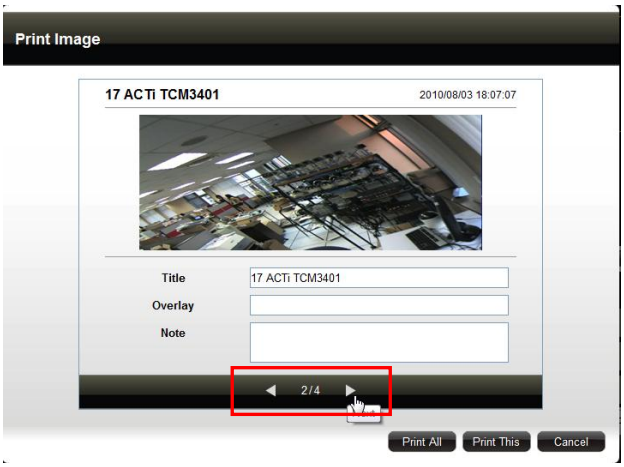
2. From Playback Windows:



Once you clicked Print Image from the Playback Windows, you may print the selected channel. If you click the Print Image from Device Playback Control, you will be able to print back one channel or all added channels. You may add overlay and note to the each channel.



Print Single Image



Print Multiple Image

Setup

In the Setup → Home, there is the shortcut of all the setting items with short explanations of them. You can go to that page by clicking the corresponding button, or on the tabs above.

Setup - Home

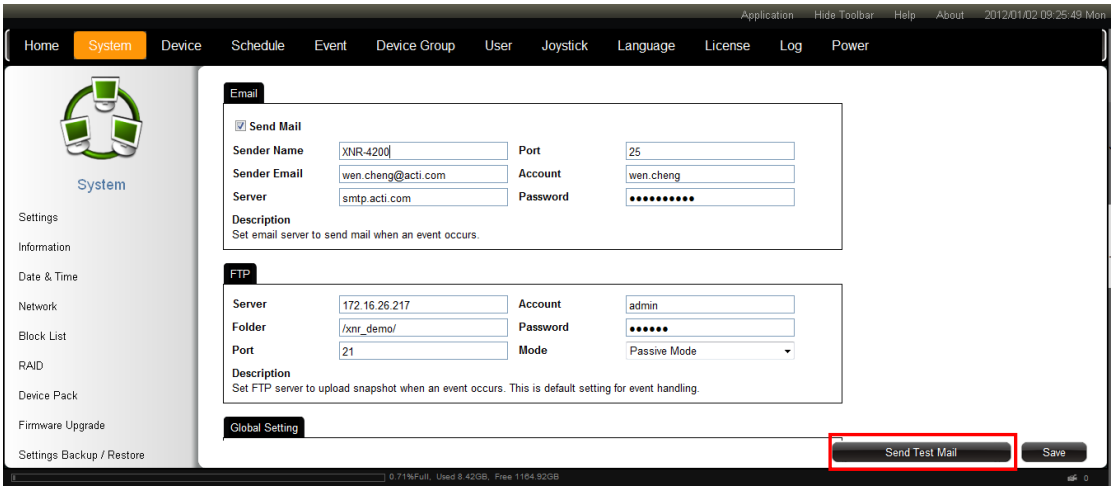
System

Settings-Email

Please fill up the information about the mail server you wish to connect to. After configuring, please click 'Save' to save setting the device. Please take below sample as a reference. GNR-2000 supports email notification for Event Handling. The emails are sent through an SMTP server, the settings of which are configured in this section. Please first enable the "Send email" checkbox:

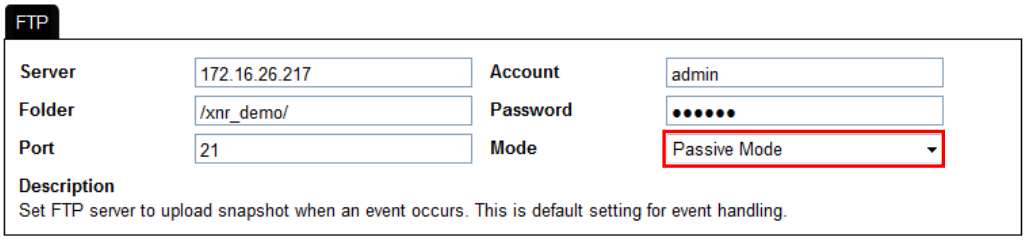
1. **Sender Name**: Input the sender's information
2. **Sender Email**: Input the email address
3. **Port**: Set the port number for the SMTP server. The default port number is 25.
4. **Account & Password**: Input the login information of the SMTP server

As all necessary information is filled in, click "Send Test Mail" to try sending an email according to your settings, and then login your SMTP server to check incoming emails. If the test mail is sent successfully, GNR-2000 is ready to send emails to the receiver's email address when triggered by events.



Settings-FTP

Please fill up the information about the FTP server you wish to connect to. After configuring, please click 'Save' to save setting the device. Please take below sample as a reference.



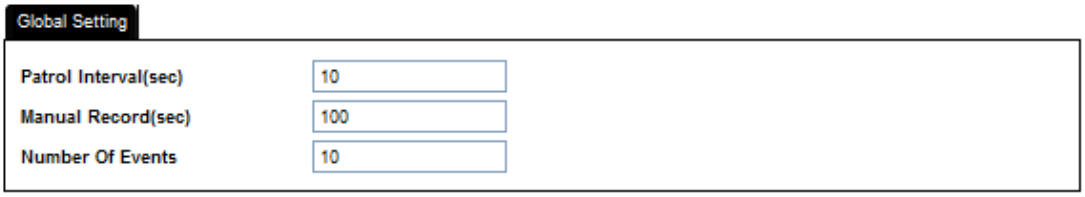
1. **Server:** Please enter the IP address of FTP server
2. **Folder:** Please enter the upload path of the file
3. **Port:** Please enter the FTP port number
4. **Account:** Please enter the user name of the account.
5. **Password:** Please enter the password of the account.
6. The FTP works in two very different manners, **Active** mode and **Passive** mode.

   If your FTP server is behind the firewall or a NAT router, you have to use "Passive" mode.

Settings-Global Settings

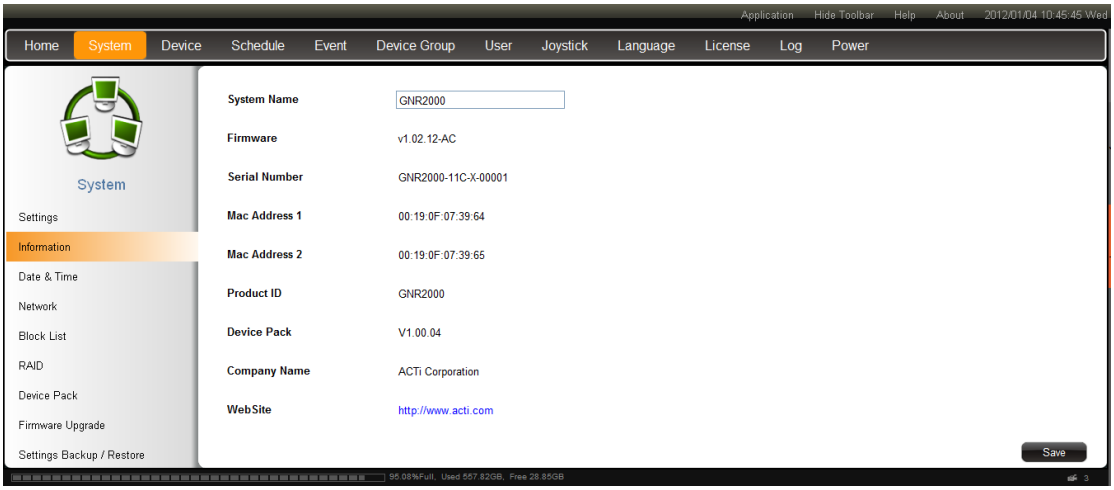
A few of the parameters that cannot be easily categorized are listed here for editing.

1. **Patrol Interval (sec):** The interval of live view patrol, default is 10 sec.
2. **Manual Record (sec):** Manual recording duration Default is 300 sec.
3. **Number of Events:** The max number events that can be displayed in event panel. Default is 30.



Information

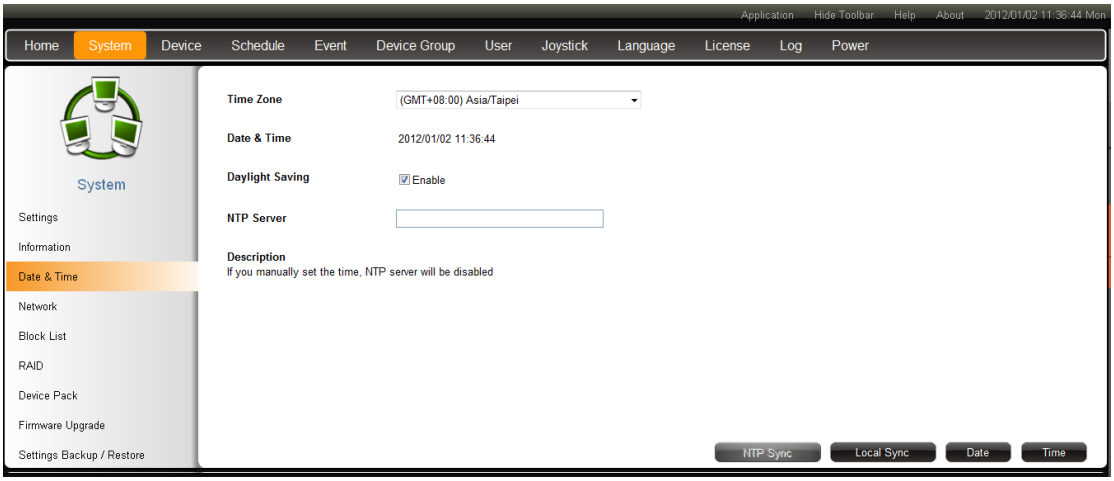
Basic information for standalone NVR is shown here.



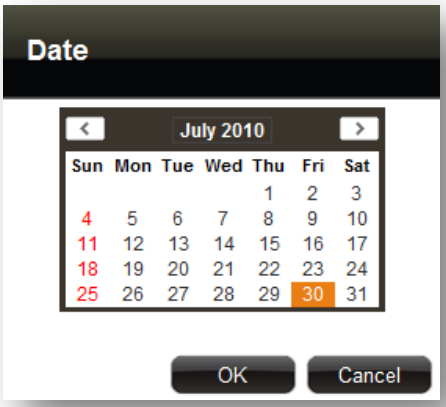
1. **System Name:** the name of the device. You can enter any name for it as he wants.
2. **Firmware:** It shows the firmware version of the device
3. **Mac Address 1:** It shows the Mac address 1 of the device
4. **Mac Address 2:** It shows the Mac Address 2 of the device
5. **Product ID:** It shows the Product ID of the device
6. **Company Name:** It shows the Company Name that produces the device
7. **Website:** It shows the website of the Standalone NVR company.

Date & Time

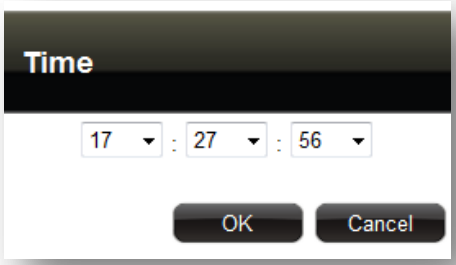
You can configure date and time of the device in this section.



1. **Time Zone**: Select the Time Zone where the device belongs to. After selecting the time zone, it will change to the corresponding date and time.
2. **Date & Time:** It shows the current date and time on the device.
3. **Daylight Saving:** If the device is located in an area where daylight saving time is used, click the check box to enable daylight saving. The time will be automatically adjusted. When the daylight saving time has finished, uncheck the box to return to original setting.
4. **NTP Server:** Please enter a NTP server address if you wish to synchronize time with the NTP server.
5. **'NTP Sync' Button:** It is for synchronizing the clocks of computers over network. After you enter any NTP server, please click this button to start synchronizing.
6. **'Local Sync' Button:** If you wish to sync the device time with the time on the PC you are using now, please click this button.
7. **'Date' Button:** If you don't have any NTP server and want to manually modify the date, please click this button and then a calendar as below will pop up. You have to select the date you wish to set.



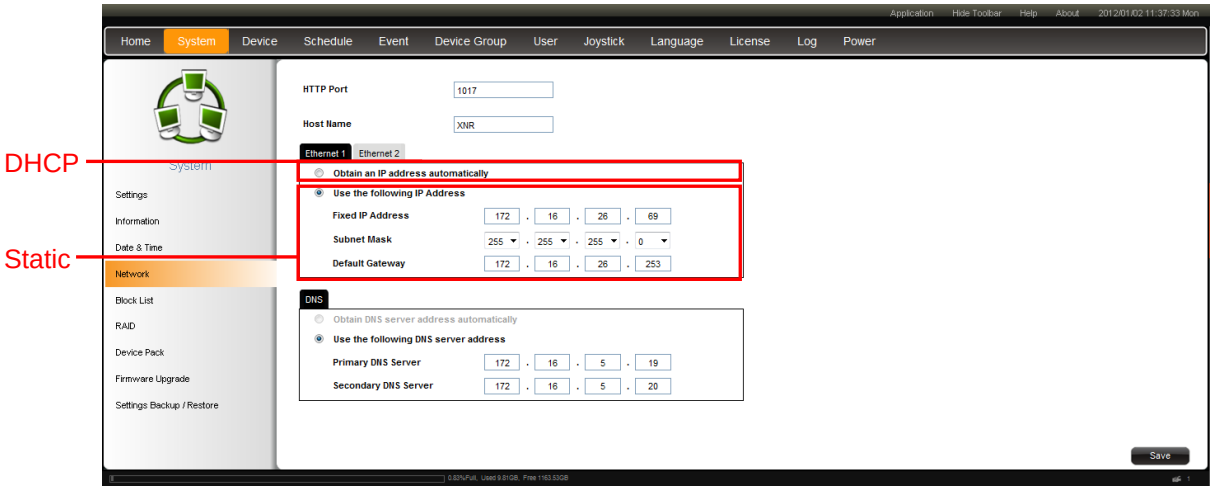
8. **'Time' Button:** If you don't have any NTP server and want to manually modify the time, please click this button. Then a clock as below will pop up. You have to select the time you wish to set.



Network

Every GNR has two network interface cards. Please click the tag 'Ethernet 1' or 'Ethernet 2' to select the interface card that you wish to set up. The selected card will be highlighted in orange.

We suggest user connect one to LAN and connect the other to WAN. After setting up, please click 'Save' button on the bottom right side to save the settings.



- DHCP

  If you would like to use DHCP to assign IP, please click the check box to enable DHCP.

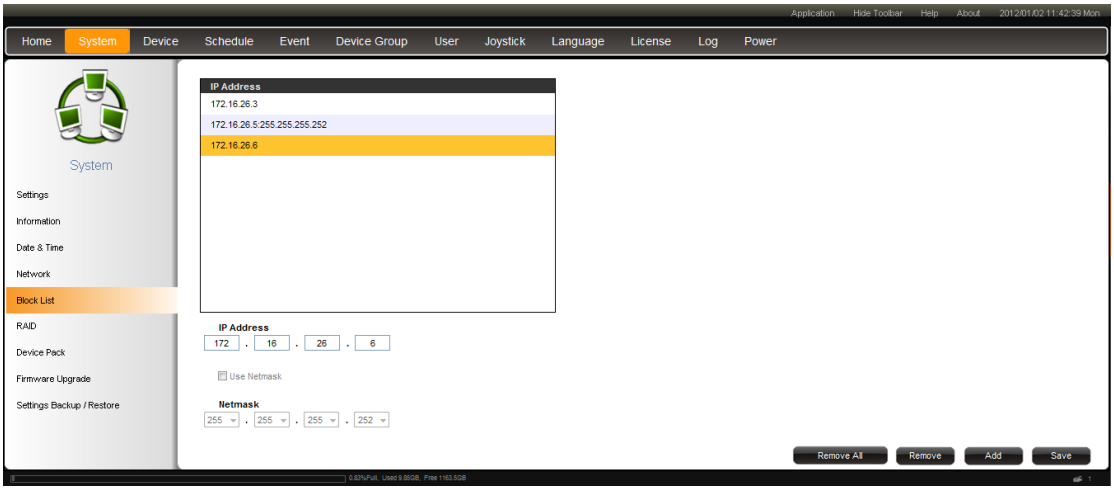
- Static IP

  If you wish to assign one specific IP, please fill up all the fields.

  1. Fixed IP Address: Enter the IP address you wish to set on the device
  2. Subnet Mask: Enter the subnet mask you wish to set
  3. Default Gateway: Enter the default gateway you wish to set
  4. HTTP Port: Enter the HTTP port you wish to set.
  5. Primary DNS Server: Enter the primary DNS server you wish to set
  6. Secondary DNS Server: Enter the secondary DNS server you wish to set. This field may be left empty.

Block List

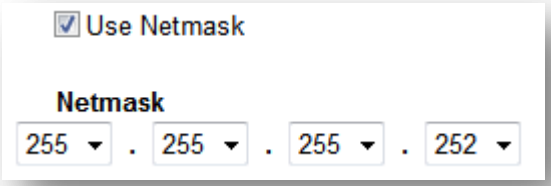
If user wants to block/unblock certain IP to allow/forbid it to access the device, enter the information here or remove it from IP Address list. After setting up, please click 'Save' button on the bottom right side to save the settings.



- **Block a IP address**

When you wish to block any IP, please enter IP address as below.

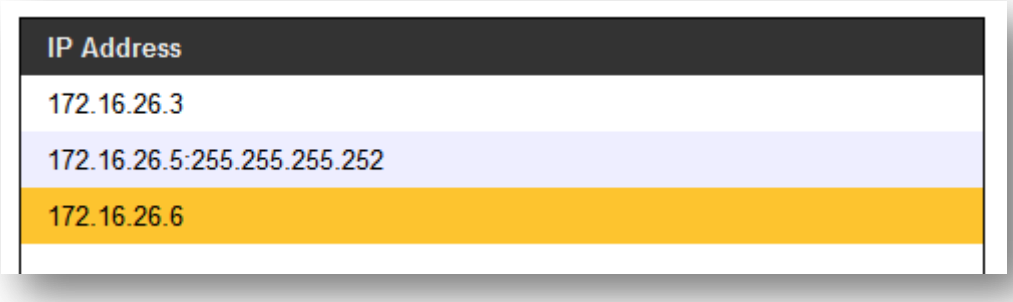
If you wish to use Netmask, please click the check box to enable this function and enter the Netmask as below.



After finishing the settings, please click 'Add' button to add into list.

- **Unblock a IP address**

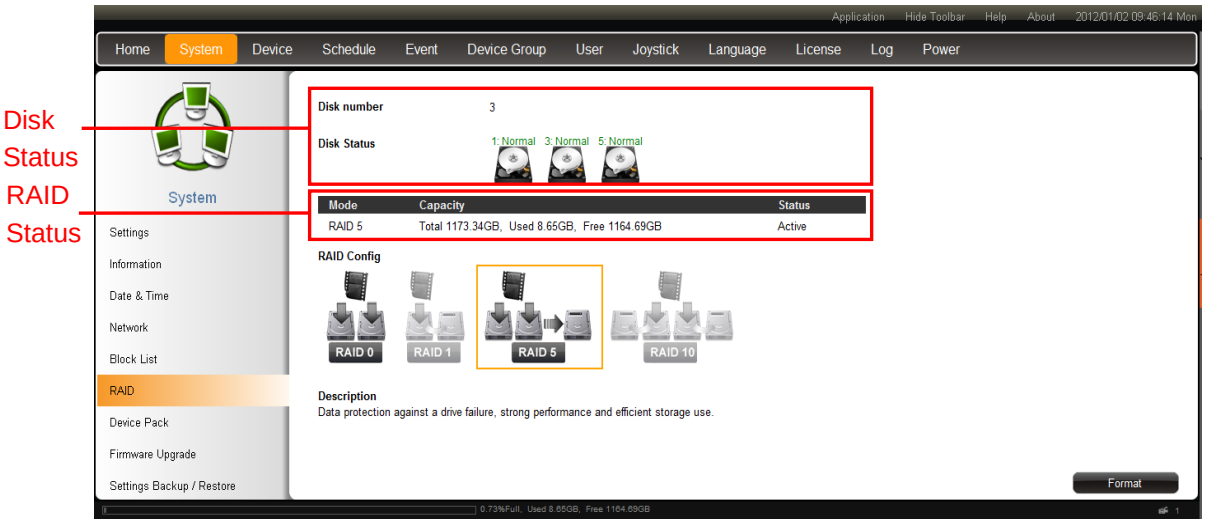
When you wish to unblock any IP, please select the IP from IP address list (ex. the IP address 172.16.26.6 is what user wants to remove. After clicking on the address, the address will highlight in orange as below,) and click 'Remove' button to remove it from IP address list.



- **Unblock all the IP address in the list**

  When you wish to unblock all the IP, please click 'Remove All' button to remove all of them from the list.

RAID Management



During normal operation, it is important that **you cannot remove any disk from the device, or it might cause damage to the disk**. However, there are certain conditions that you need to switch the disks.

You can observe the disk and RAID status on RAID setting page.

Disk Status

The disk status displays the disks conditions as follows:

1. **Unused**: needs formatting before being used.
2. **Normal**: formatted and ready to use(before Resync) / in use (after Resync)
3. **Error**: detected but cannot be read or written

RAID Status

1. **Format**: Formatting all the disks, all the data will be erased. Recording is stopped.
2. **Active**: The RAID system is recording normally.
3. **Inactive**: The RAID system is not working. Recording is stopped.
4. **Downgrade**: The RAID system is recording normally with certain one disk failed.
5. **Recovery**: The RAID system is recovering its data with enough disks. Recording may proceed.
6. **ReSync**: All the disks have been formatted, now performing ReSync to re-build the RAID system. Recording may proceed.

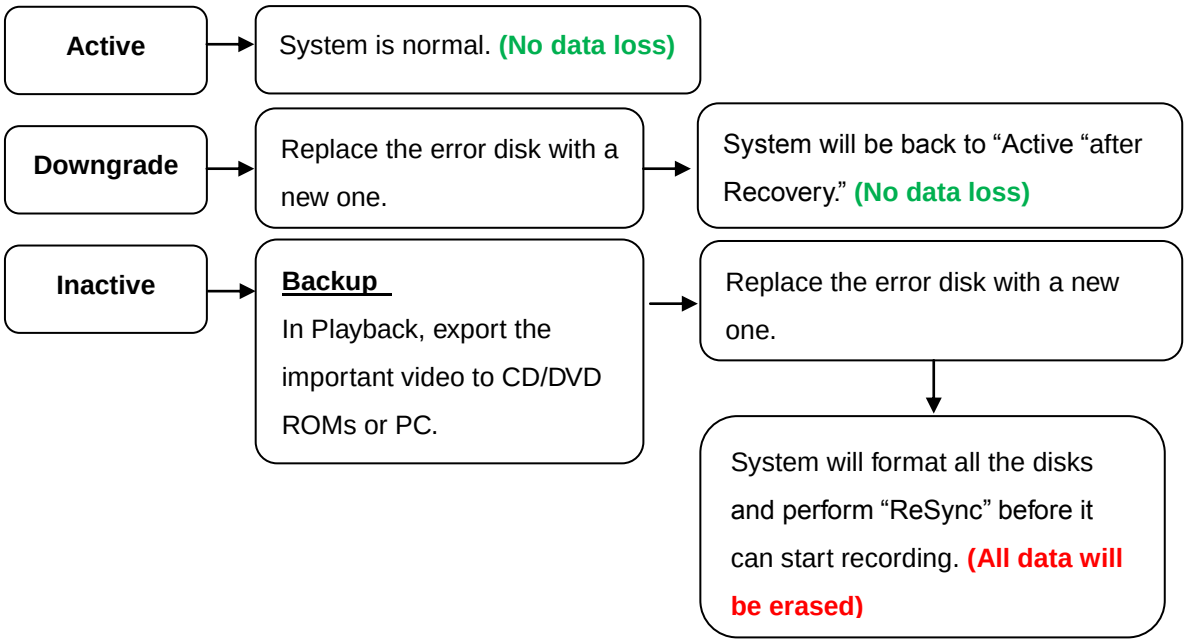
How to Manage Disk Error (Changing Disks)

Whenever any of the disks goes into abnormal (e.g. disconnected from the HDD tray) or error status, you can observe it from (1) Event List on Live view (2) RAID setting page.

The failure of disks might or might not result in recording disruption because different RAID type has different tolerance level toward disk failures. In GNR-2000 RAID system tolerates no disk failure in RAID 0; one disk failure in RAID 1, 5 and 10.

Please do the following when the any of the disks appears error:

1. Shut down the device, remove and insert the error disk(s) again, then start the device, and go to RAID settings page to check the disk and RAID status.
2. If the disk remains "Error" status, please do the following according to RAID status:

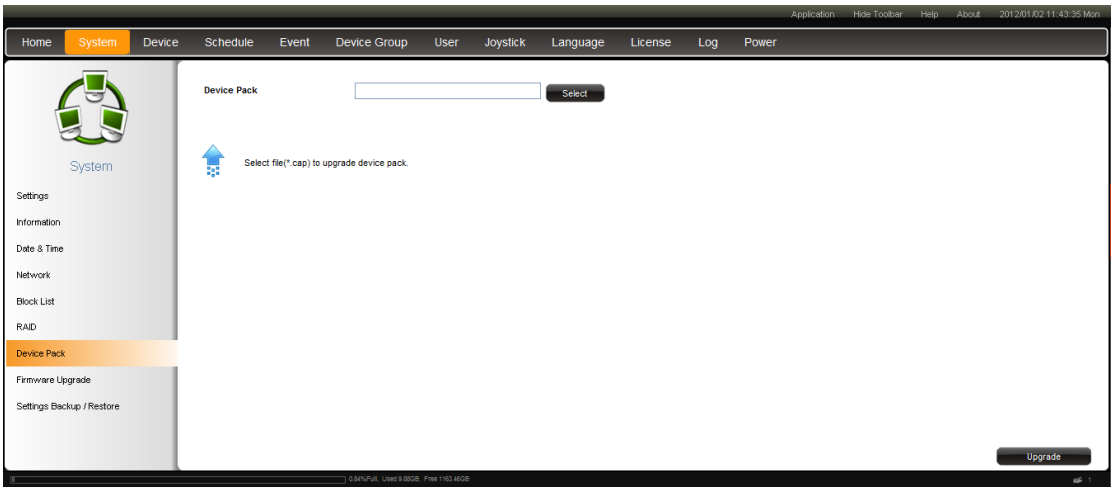


Note1: When doing the replacing of disks, please make sure the device has been shut down

Note2: Please use a new disk with at least the same capacity of other drives.

Device Pack

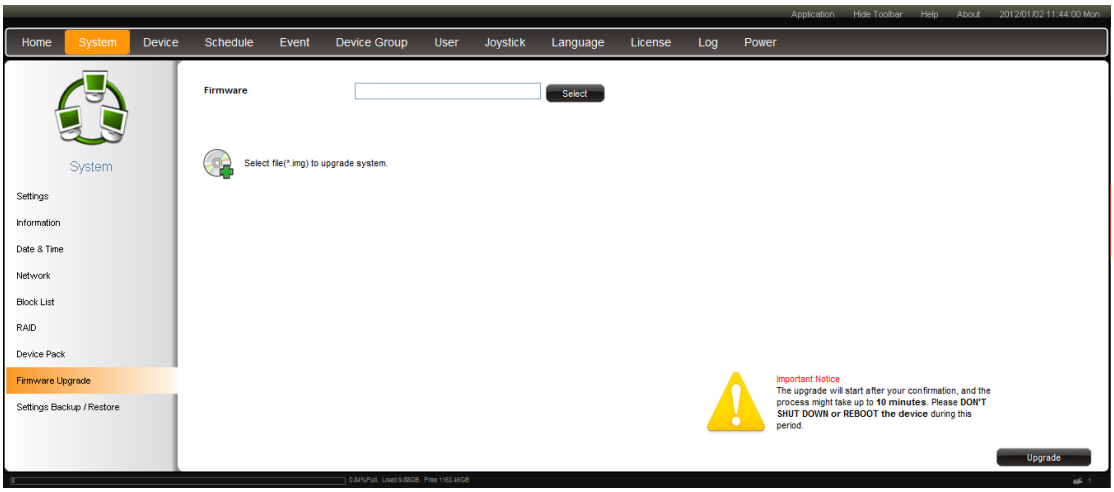
The supported device list is continuously updated. You may periodically download the latest Device Pack and upload to SNVR via web interface. This will refresh the support list to the latest version.



Firmware Upgrade

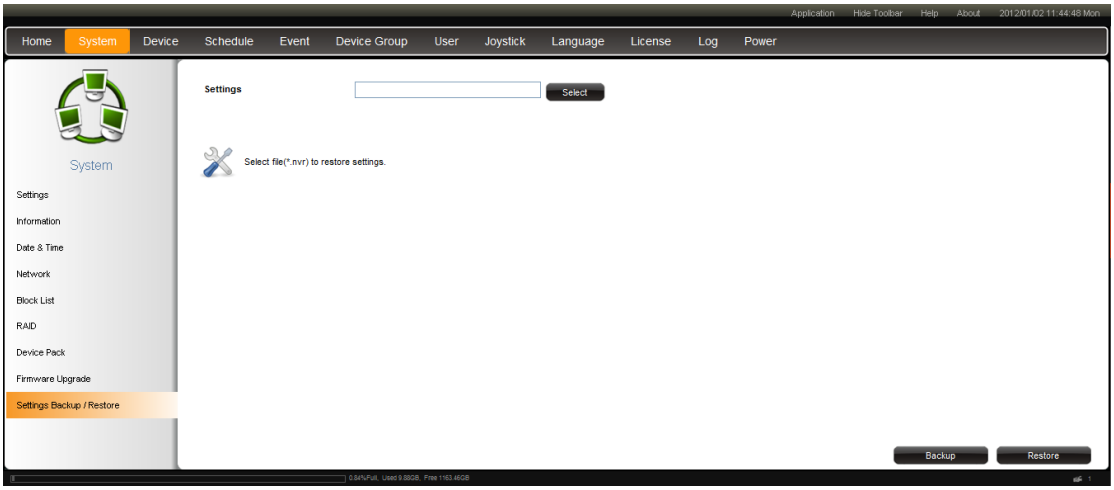
If you need to upgrade the firmware, please come to this page to upgrade.

Please click 'Select' button to browse and find your .img file, then click 'Upgrade' button to upload the file. You can check the current firmware version in the System→Information.

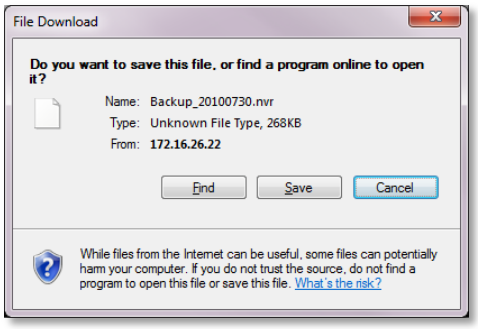


Setting Backup / Restore

After you finish all the settings, you may want to backup all the settings into your disk or copy the settings to other devices. Or you may need to load previous NVR settings. At that time, please come to this page and setup.



1. **'Backup' Button:** If you need to backup, please click this button. A window will popup to ask you to select a folder for saving the setting file.



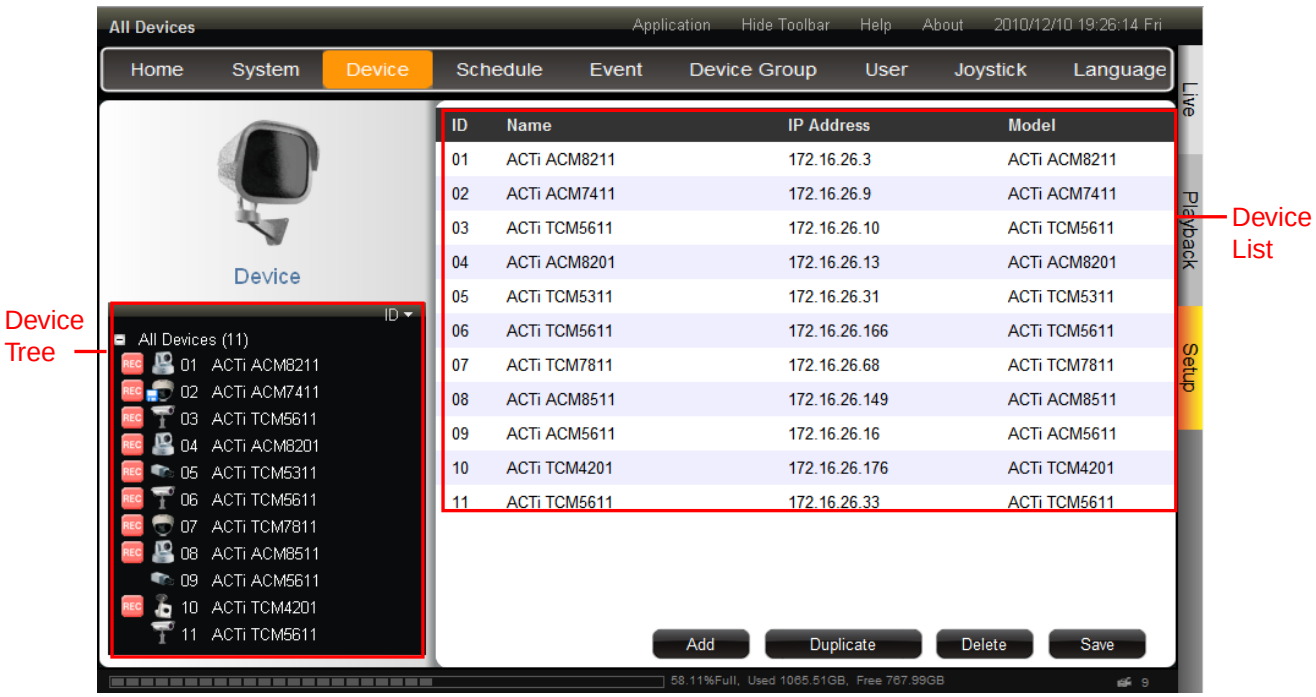
2. **'Restore' Button:** If you need to restore, please click the 'Select' button to find the path to the setting file that you wish to restore from.

After selecting, please click 'Restore' button to restore the NVR settings.

Adding and Removing Device

This section is for device management. You will know how to add/delete devices and configure them. You also will know how to manage them with groups and its layout. Please do not forget to click 'Save' button to save all the setting after you finish configuration.

This section works in two modes. You can add and remove devices in the Al Device View. Just double click on the "All Devices" row in the Devices tree to go to All Device View. If you click on any one camera, this will go into single device view with more detailed settings.

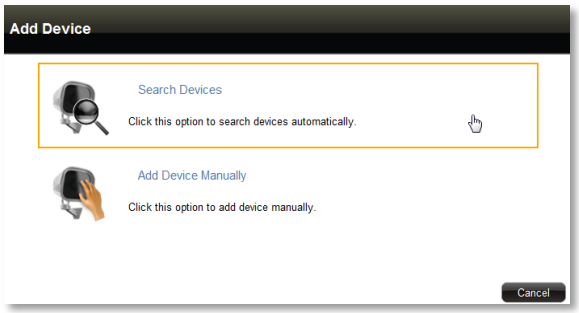


All Device View

This part will include three parts which are to add device, delete device and device configuration.

Add Device

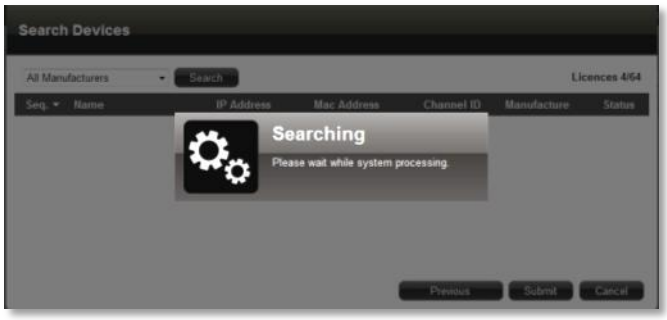
Please click 'Ad' button on the lower right to add device(s) to the list.



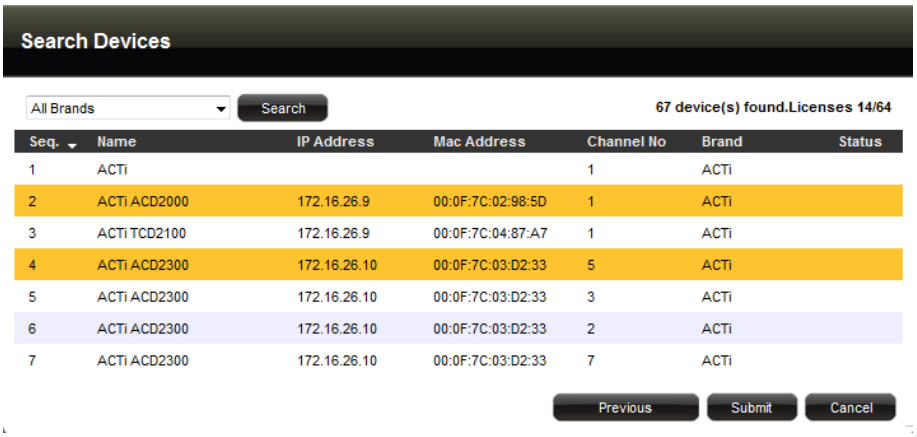
You may either let standalone NVR search for devices automatically, or you may direct the search with more detail via manual add. We recommend Auto Search for devices located in the same LAN, and you should only manually add device when they are located over the internet.

Search Devices

Selecting Search Devices will bring you to the page where you decide which supplier's camera to search. Click from the drop down menu and select the brand of devices to search. Then click 'Search' button to start searching.



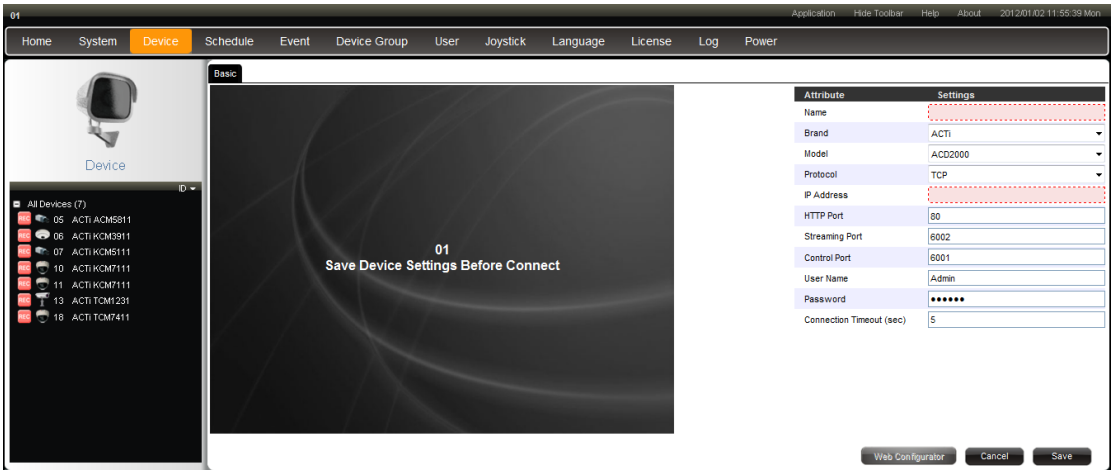
After searching is done, you will see all the devices that can be found in the network. Please click on the devices that you wish to add and the selected devices will be highlighted in yellow. After you have selected all required devices, please click 'Submit' button to add the device. Then you will see it/them shown in the 'All Device' group.



Seq.	Name	IP Address	Mac Address	Channel No	Brand	Status
1	ACTi			1	ACTi	
2	ACTi ACD2000	172.16.26.9	00:0F:7C:02:98:5D	1	ACTi	
3	ACTi TCD2100	172.16.26.9	00:0F:7C:04:87:A7	1	ACTi	
4	ACTi ACD2300	172.16.26.10	00:0F:7C:03:D2:33	5	ACTi	
5	ACTi ACD2300	172.16.26.10	00:0F:7C:03:D2:33	3	ACTi	
6	ACTi ACD2300	172.16.26.10	00:0F:7C:03:D2:33	2	ACTi	
7	ACTi ACD2300	172.16.26.10	00:0F:7C:03:D2:33	7	ACTi	

Add Device Manually

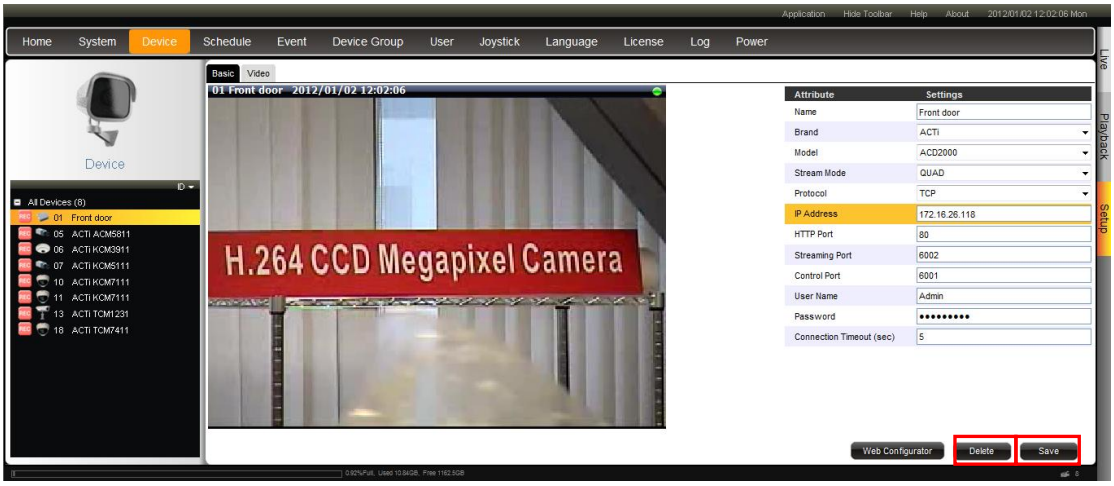
Once you click 'Add Device Manually', you will go to the basic page of a new camera as below. Please fill up the fields, such as 'Brand, 'Model', and 'IP Address'. System will automatically assign a default value for other fields. If there is any field you need to change, please modify it now. After clicking "Save", GNR-2000 will get connect this device.



After the device is connected, you can get the live view.

The "Cancel" button turns to "Delete", and you can click it to delete this device.

Note: On a single device setting page, please remember to click "Save" to save the settings after you have done all the configurations.



Adding Video Streams from a Multi-channel Device

There are devices that output more than one video streams to GNR-2000. For example, a video encoder converts a number of analog video signals into the same amount of IP video streams; certain high megapixel cameras such as ACTi KCM-5111, supports outputting multiple VGA streams cropped from a single high resolution video source. These multiple streams come from a single device are managed as different cameras by SNVR server.

To add these streams as multiple channels for you to view and record, please:

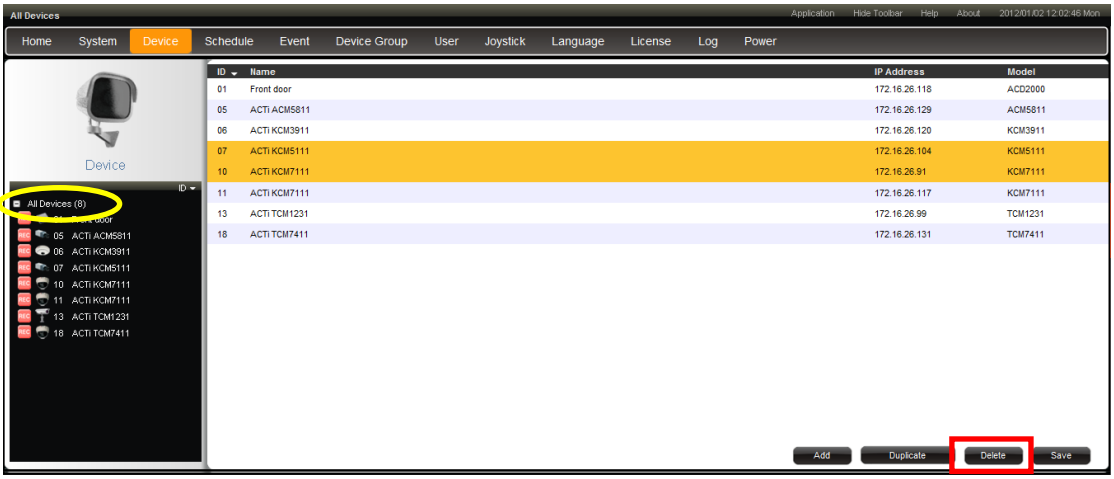
1. Select the desired stream mode in "Stream Mode" on Device Basic Setting page.
2. The "Channel No" column will display for you to input the stream ID (the same with your setting on Device)
3. After configuration, click "Save".

Attribute	Settings
Name	ACTi KCM7111
Brand	ACTi
Model	KCM7111
Stream Mode	4VGA
Channel No	1
Protocol	TCP
IP Address	172.16.26.117
HTTP Port	80
Streaming Port	6002
Control Port	6001
User Name	Admin
Password	••••••
Connection Timeout (sec)	5

4. Go to All Device page, duplicate this device to number of new channels you want, and individually modify their Channel No value.

Delete Multiple Devices:

You can delete multiple devices on All Devices View. Go to All Devices View by double clicking on the All Devices row. Select the cameras you wish to remove, and they will be highlighted in yellow. Click Delete to assign them for deletion.

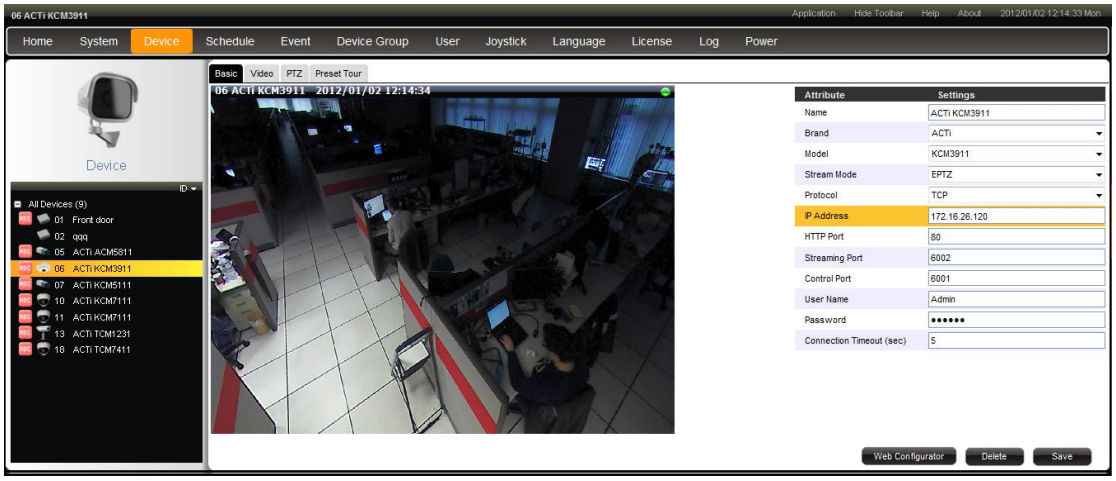


Device Configuration

The first thing is you have to find the device you wish to configure. There are several ways to go to the setup page.

(1) From the "All Devices View" in Setup →Device. Double click on the device to view.

(2) From the Device list in Setup →Device Group.



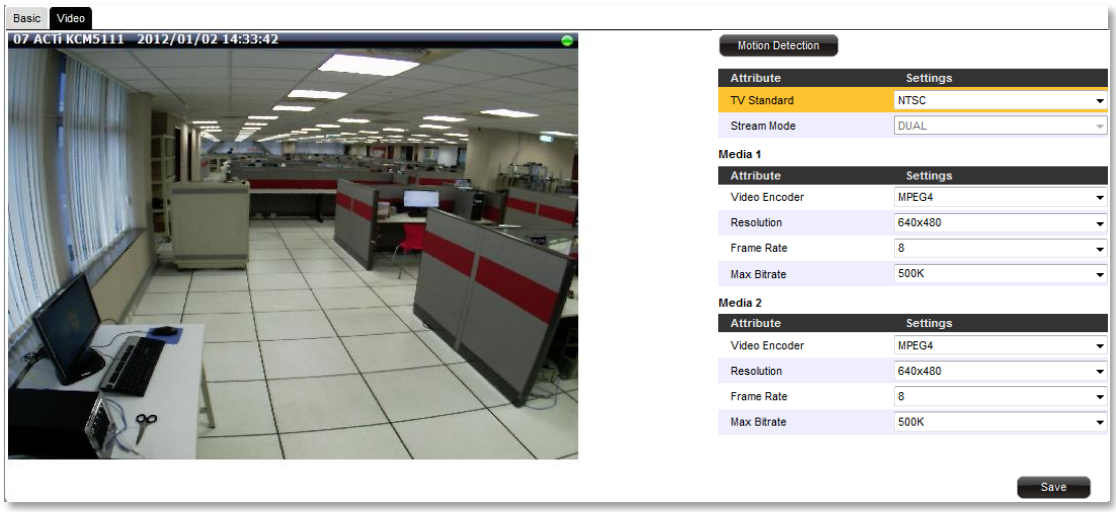
The following images are the configuration page. You can read the description below to understand the meaning of every field.

Basic

Attribute	Settings
Name	ACTi KCM5111
Brand	ACTi
Model	KCM5111
Stream Mode	DUAL
Default Live View Stream	1
Recording Stream	2
Protocol	TCP
IP Address	172.16.26.104
HTTP Port	80
Streaming Port	6002
Control Port	6001
User Name	Admin
Password	••••••
Connection Timeout (sec)	5

- **Name:** The displayed name of the device. You can enter any name you want.
- **Brand:** The manufacturer of the device.
- **Model:** The model number of the device.
- **Stream Mode:** For devices that support multi-streaming, you can change the modes here.
- **Default Live View Stream (displayed after you selected Dual Stream in the previous column):** Choose Stream1 or Stream 2 for live view, usually Stream 1 with lower video format.
- **Recording Stream (displayed after you selected Dual Stream in the previous column):** Choose Stream1 or Stream 2 for recording, usually Stream 2 with better video format.
- **Protocol:** Please select the streaming method of the device
- **IP Address:** The IP address assigned to the device
- **HTTP Port:** Please enter the port number that is set for the device to use HTTP protocol.
- **Streaming Port:** Please enter the port number that is set to stream video from device. The default value is 6002.
- **Control Port:** Please enter the port number that is used to control the device. The default value is 6001.
- **User Name:** The user name used to log in the device
- **Password:** The password used to log in the device
- **Channel ID:** The Channel ID is the ID of video server's channel. If the device is camera, its channel ID would be 1.
- Web Configurator Open the camera firmware page.

Video Quality

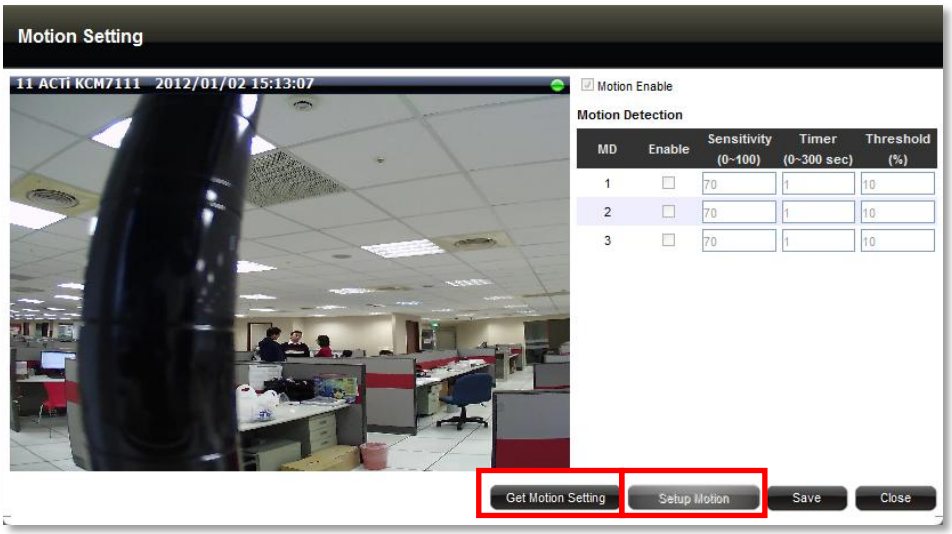


If you selected "Single" stream mode on Device Basic Setting page, only one set of video profile is configurable here; if you selected "Dual" stream mode, you get to set both stream and stream 2 video configurations.

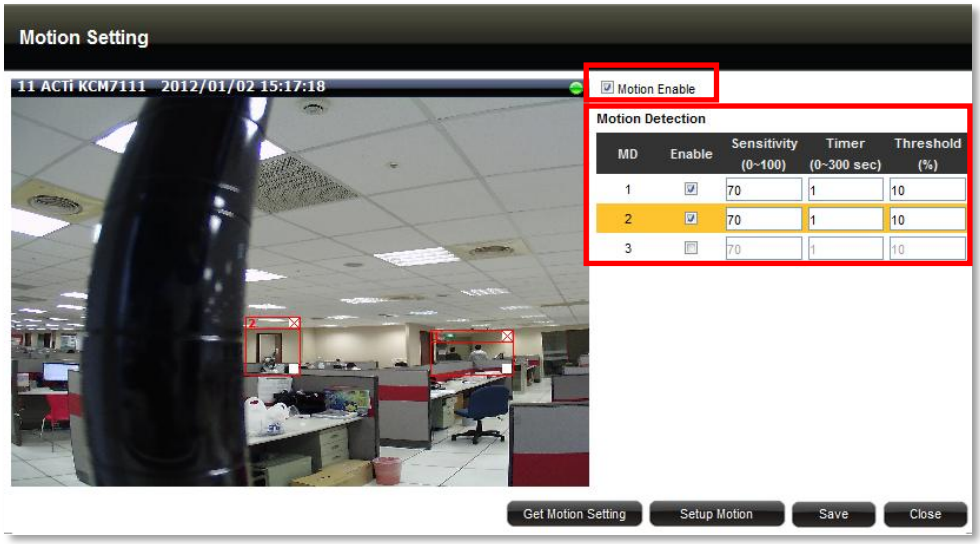
- **TV Standard:** You can choose NTSC or PAL format f here, the default will use device setting.
- **Stream Mode**: This column is not configurable, for it only displays the mode you selected on Basic Device setting page.
- **Video Encoder:** Choose different encoders here, the default will use device setting. If you choose "MJPG", the "**Video Quality**" column will display for you to set video quality from 1~100.
- **Resolution:** The video resolution of the IP device
- **Frame Rate:** The frame rate of the video streaming
- **Max Bitrate:** If you choose "Unlimited", the "**Bitrate**" column will display for you to set the target bitrate that the camera will attempt to provide when using constant bitrate mode

Motion Detection

On Device Video Setting page, click Motion Detection to enter Motion Setting page.



1. Please click "Get Motion Setting" to get device's current motion settings.
2. The button "Setup Motion" will turn enabled, click it to start modifying.



3. Check the "Motion Enable" box, and enable any region to defining the region's size and position on the view by dragging the red frames.
4. Set the other three configurations:

   Sensitivity – Determines how sensitive the camera reacts to the shift of object. The higher is the sensitivity level, the smaller motion will trigger the alarm.

   Timer - The time period from the beginning of the triggered event during which the all motion activities are ignored by the camera.

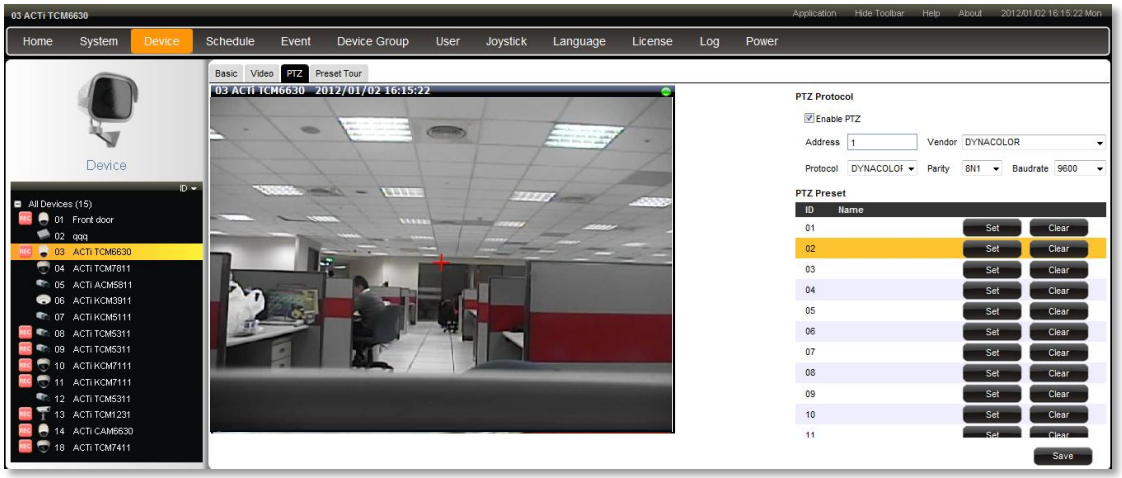
   Threshold – Determines at what point the motion detection feature is triggered.
5. Click "Save" then "Close".

Note: The live view will display the Stream 1 if your device sends multiple streams.

PTZ

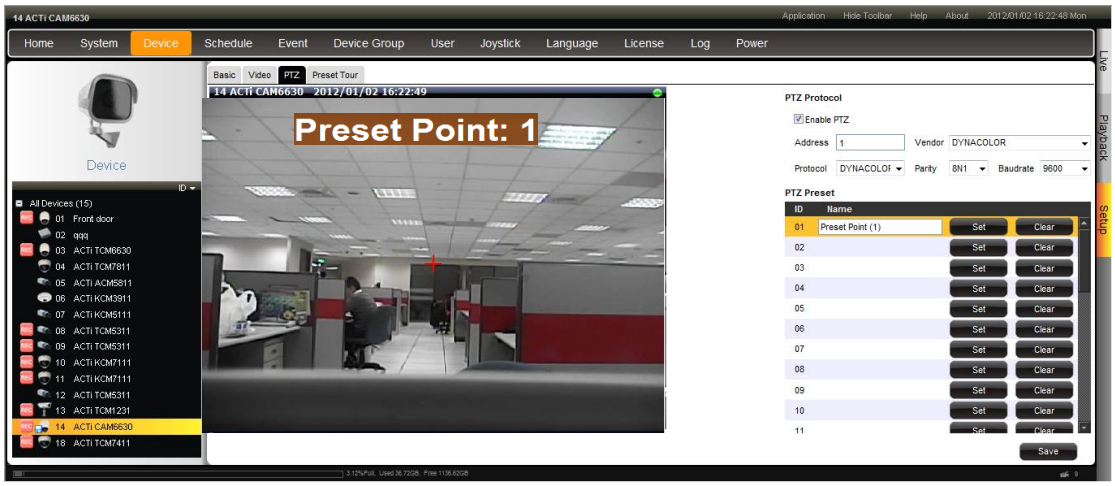
The PTZ setting page will only display for a PTZ / Speed dome model.

On this page, you can configure all the PTZ related settings and use-on screen PTZ control.



1. **Enable/Disable PTZ:** Click this to enable or disable the PTZ function of this device.
2. **Address ID:** Enter the address ID of the PTZ device / speed dome.
3. **Vendor:** Select the vendor of the PTZ device/ speed dome you wish to control. You may select the device type directly if it is listed here.
4. **Protocol:** Select the protocol of the PTZ device/ speed dome.
5. **Parity:** Enter the parity of the PTZ device / speed dome.
6. **Baud Rate:** Enter the baud rate of the PTZ device/ speed dome. This option appears only for certain models.

Preset Points



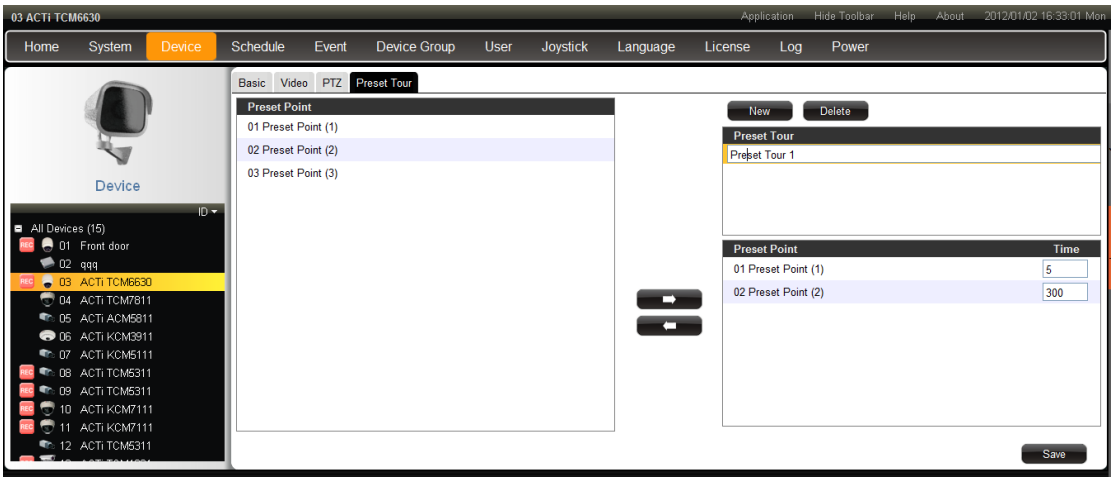
On the Preset Points Setup section, you may perform setups and operations about PTZ preset points.

1. **Set Button**: To setup a PTZ Preset point, move the camera to your desired view angle (including pan, tilt and zoom) on the live view. After you're satisfied with the view, please click this button to enter a name for the Preset point and.
2. **Clear Button**: Click this button to delete this Preset point from both Standalone NVR and Device

Note: After you finish setting or deleting preset points, please click "Save" to ensure the changes are properly saved.

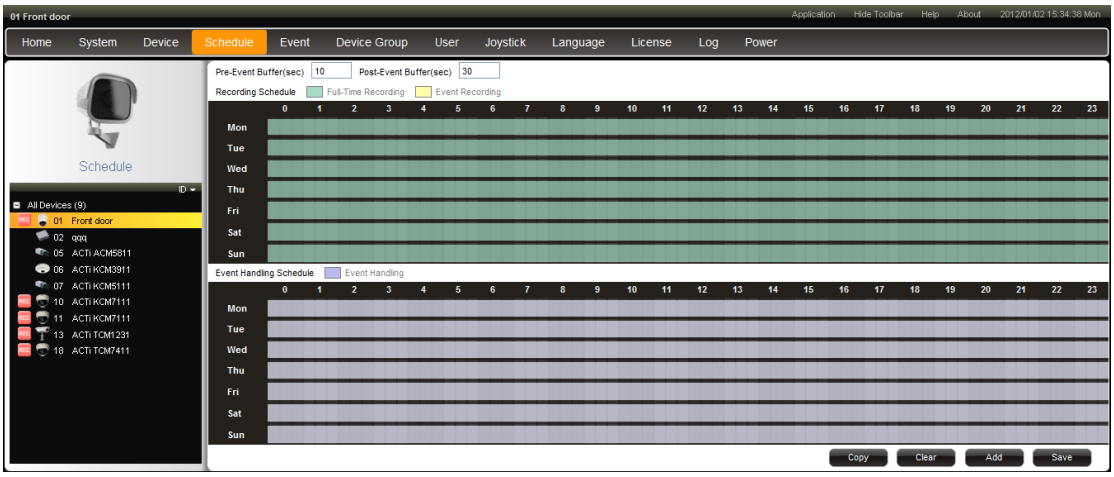
Preset Tour

Preset Tour is a preconfigured PTZ sequence that directs the camera to cycle through multiple preset PTZ views, including where to look and how long to look at each location. You may configure the preset points to go to in the previous Preset Points section. Make sure you configure PTZ and Preset Points sections correctly before setting up Preset Tours.



1. **New:** Click this button to create a new tour. Enter the Tour Name
2. **Delete:** Click this button to delete the currently selected tour from the tour list.
3. **Right Arrow Button:** Click this button to add preset point to the current tour. After you click this button, you can define the duration time each point will stay, from 5~300 seconds.
4. **Left Arrow Button:** Click this button to delete preset points from a tour.
5. **Save:** Click this button to save all current settings.

Schedule

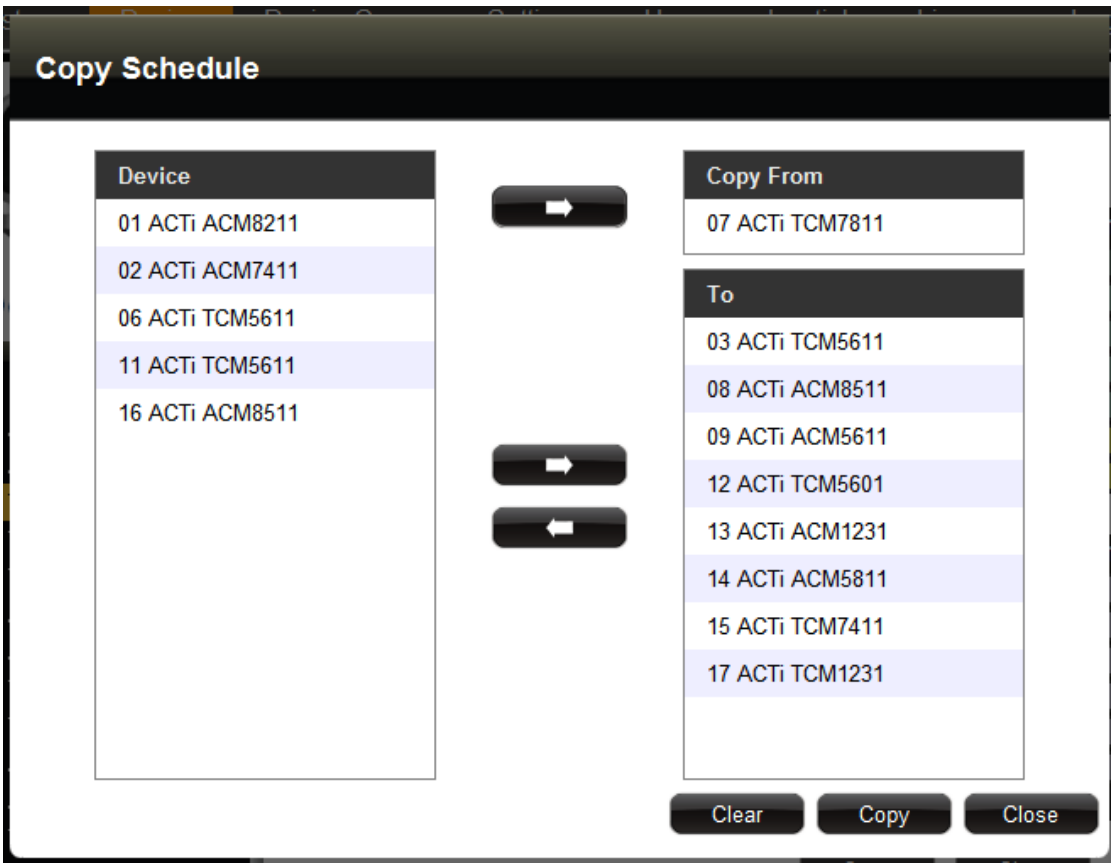


You may control the recording and event handling schedule here. The one on top is the recording schedule. The one below is the Event Handling Schedule. Recording can be either full-time, or event only. Event responsive schedule al o need to be scheduled separately. There are some event responses that do not involve recording like access control to email.

You may:

1. Edit Recording Schedule: Click and drag over the schedule to set time period. You need to select Full Time or Event for that time period. Shift-Click will set it to Full time, while Ctrl-Click will set to Event. Right click to either select all or clear all.

2. Edit Event Handling Schedule by clicking and dragging. Right click to either select all or clear all.
3. Clicking the day of the week will lock/unlock that day from schedule setting. You can shield schedule on a certain day from being changed by changes in other weekdays. You may easily set just the week days or the same time over the same week this way.
4. Pre-event and Post-event buffers determine how long will Standalone NVR record video when an event triggers recording.
5. Copy schedule from one camera to another. Select one camera as the source of schedule, and add other cameras to the "Copy To" field. Click Copy to commit changes.

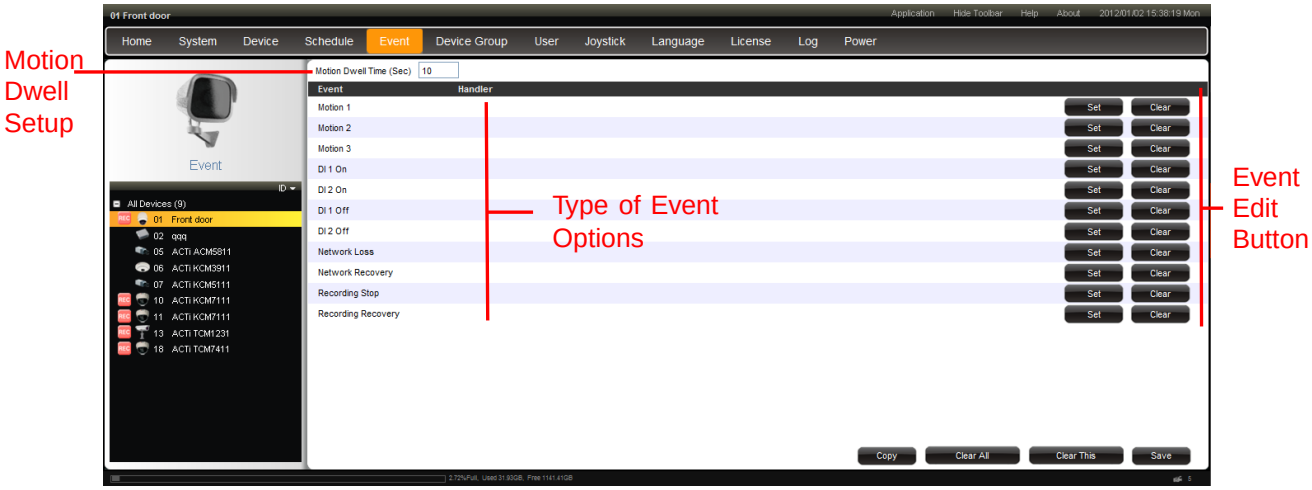


6. You may click the "Clear" and "Add" button beneath to change current cursor type. When cursor is in clear mode, areas under click and drag will be removed from recording or event process.

Event Handling

In default, the event schedule is set as full-time working, you can go to Schedule to adjust the Event Handling Schedule according to your needs.

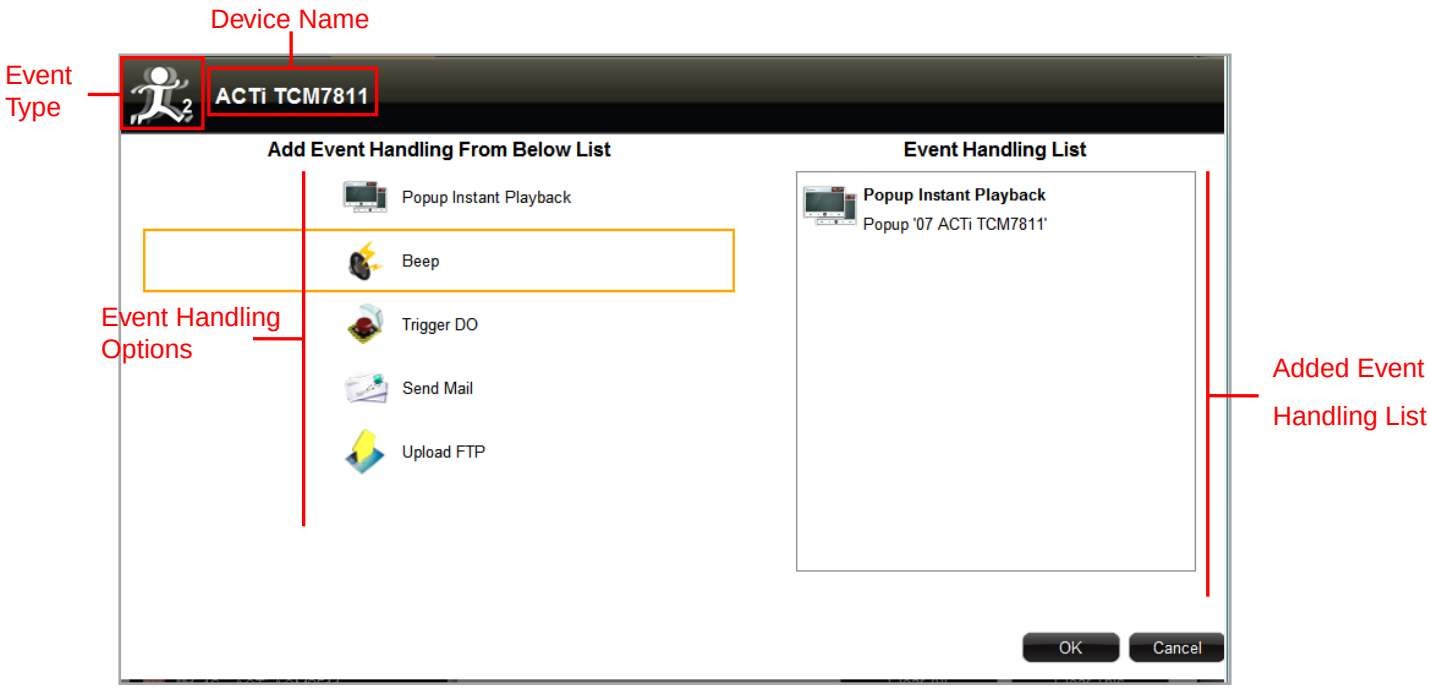
Note: Before starting using event handler functions, please make sure you have installed HDD in your standalone NVR.



1. **Motion Dwell Setup:** Dwell time determines the duration of motion event. Multiple motion triggering
2. **Type of Events:** There are 5 event types, which are Motion (3 or 4 regions), DI (Digital Input), DO (Digital Output), Network (Loss/Recovery), Video (Loss/Recovery) and Record (Fail/Recovery).
3. **Event Edit Button:** Click to setup and clear details about the event type.
4. **Copy Button:** Copy a device's whole event settings to other devices.
5. **Clear All Button:** Clear event settings for all cameras.
6. **Clear This Button:** Clear event setting for this selected camera.

Event Responses

ACTi standalone NVR provide wide flexibilities on handling events, which are Popup, Goto Preset, Beep, Trigger DO, Send Mail and Upload FTP. Multiple and duplicate handling options can be assigned for an event type; moreover, sequence of the actions is editable. Following paragraphs will introduce features in Event Handling.



1. Event Type Icon – Indicate the event type.
2. Device Name – Shows the device you are currently setting up.
3. Event Handling Options – List of options of event handler.
4. Added Event Handling List – List for added event handlers.
5. **Ok Button** – Click to confirm settings and return to Event page.
6. **Cancel Button –** Click to cancel settings and return to Event page.

Event Trigger Type Icon

Event Trigger types present with Icons, each of them indicates an event type.

Motion – There are 4 motion regions available, number shows in the icon indicate its region. (1 ~ 4)

Digital Input On – There are 2 DI available, number shows in the icon indicate its input. (1 or 2)

Digital Input Off – There are 2 DI available, number shows in the icon indicate its input. (1 or 2)

Network Loss

Network Recovery

Video Loss

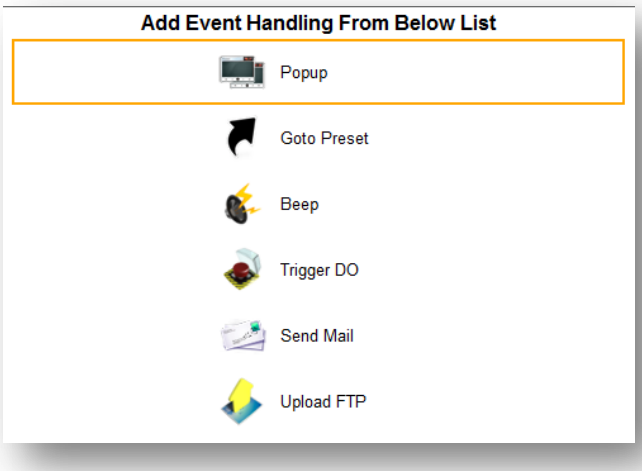
Video Recovery

Record Fail

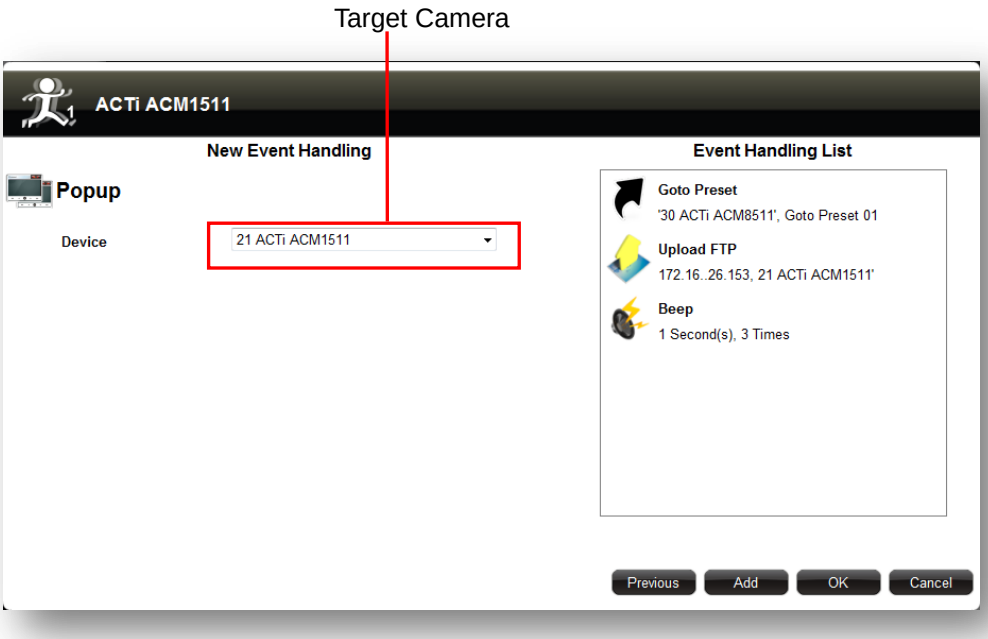
Record Recovery

Event Response Options

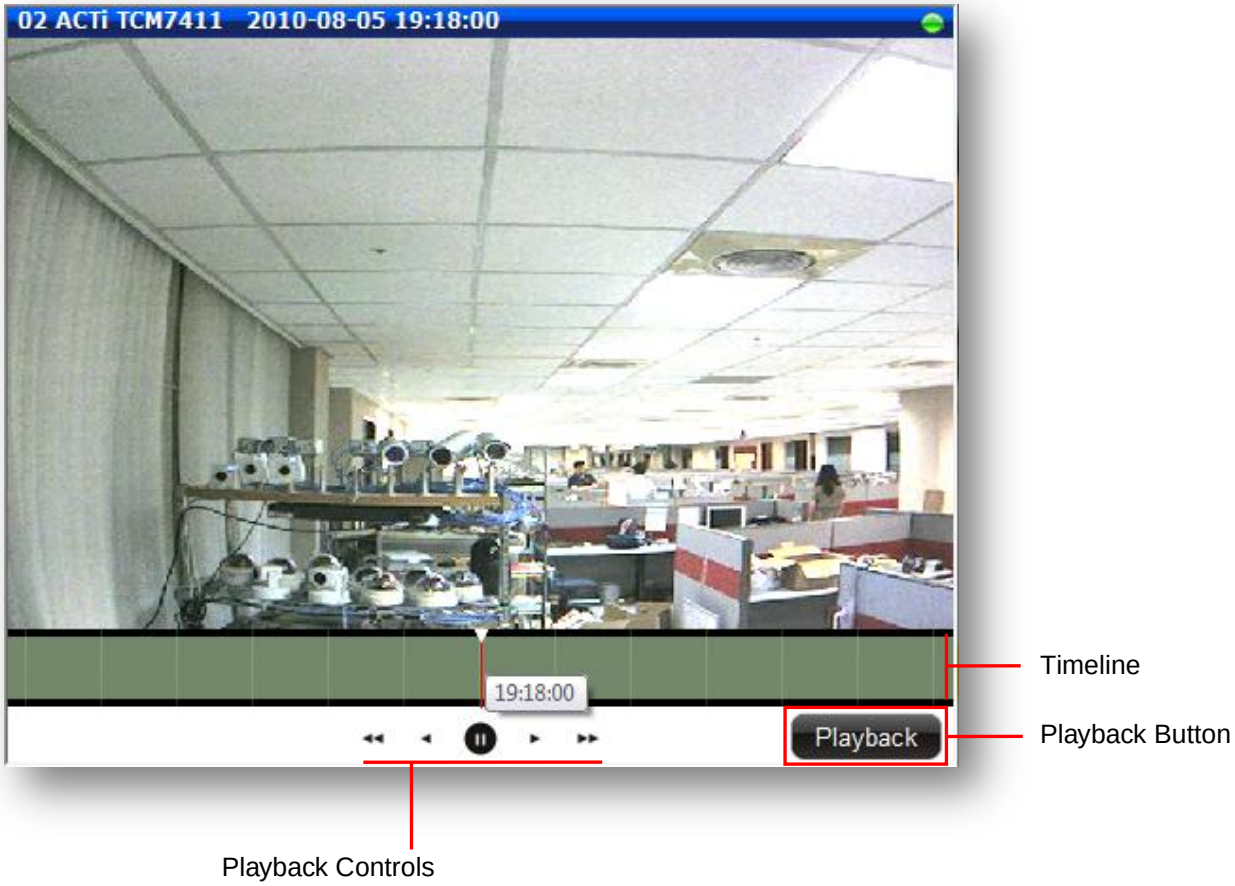
There are a number or responses possible for each given trigger. You may select from the list below and add to actual response.



Popup



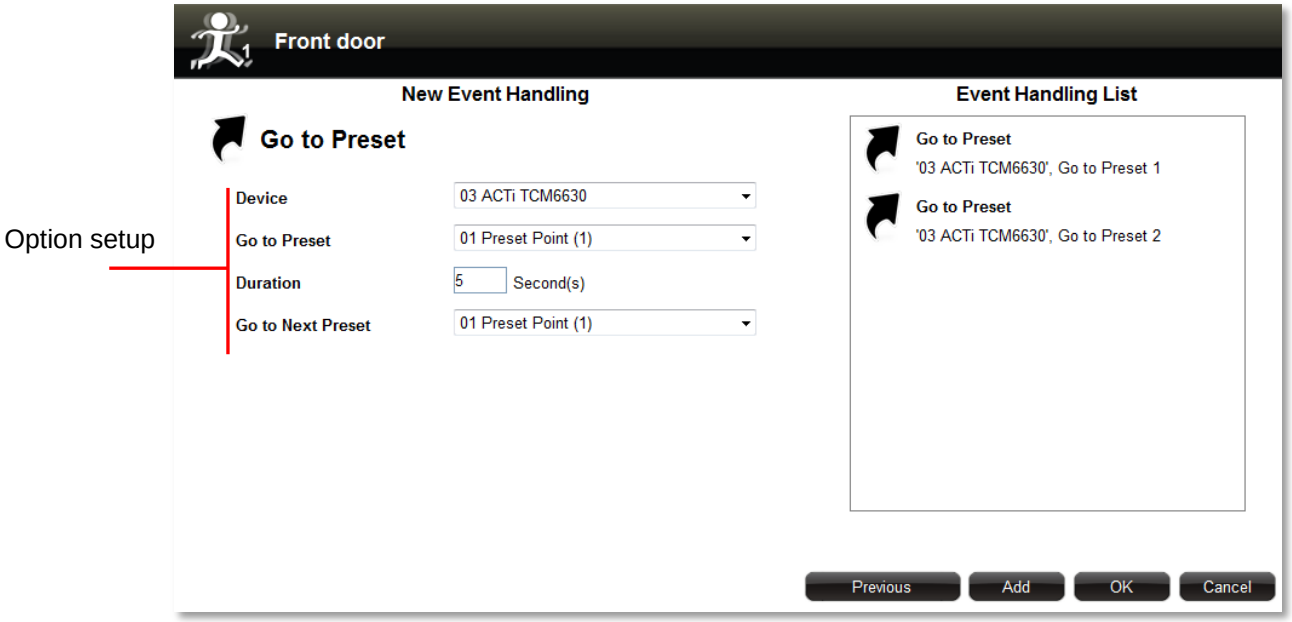
1. **Target Camera** – Select a camera stream for popup display; click the arrow for the dropdown menu of camera list.
2. **Previous Button** – Return to Event Handling page
3. **Add Button** – Click to add the selected camera into list.
4. **OK Button** – Click to confirm settings and return to Event page
5. **Cancel Button** – Click to cancel settings and return to Event page



This figure shows the popup Instant Playback window upon the trigger of an event. Users may do instant playback or search by dragging timeline; the popup window will close after 30 seconds.

1. **Timeline** – Timeline with records will be indicated with color green, black indicates no recording records. Red line and the white pointer indicate the current playback time. Cursor position will display as a white arrow with timestamp.
2. **Playback Controls** – Allow users to play back, fast forward, pause, rewinds and fast rewind. Filled black circle indicate the current playback mode; if it is in pause mode, user may mouse right click, hold and drag it to the right for faster fast forward or to the left for faster rewind.
3. **Playback Button** – Click to close the popup window and playback the instance in main playback interface. Please refer to chapter Playback for more details.

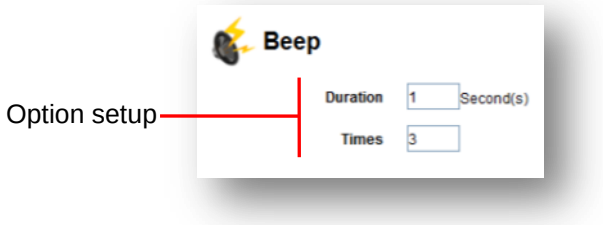
Goto Preset



Option setup

1. **Device:** Select a PTZ camera to Goto preset control.
   Only devices that already have preset points configured will be available.
2. **Goto Preset**: Select a preset point (1 ~ 32) from the dropdown menu.
3. **Duration**: How long the camera will stay at this point.
4. **Go to Next Preset**: Select next preset point after the previous point is finished with its time duration.

Beep



Option Setup

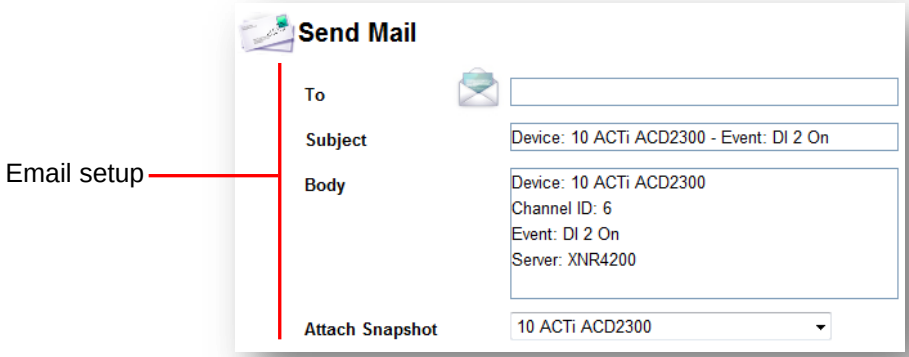
1. **Duration**: Duration in second(s) for alert beeping.
2. **Times:** Number of alert beep times.

Trigger DO

Option Setup

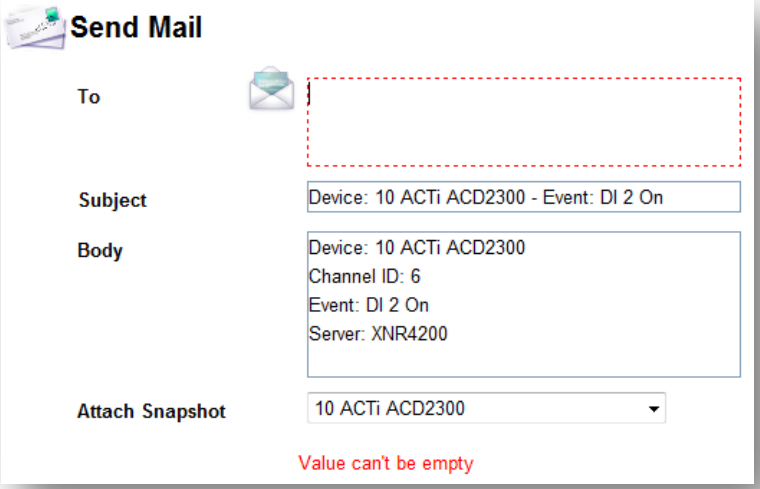
1. **Target:** Select a device for DO (Digital Output) triggering.
2. **DO:** Select DO number (1 ~ 2).
3. **Duration:** Insert the duration of triggering.

Send Email

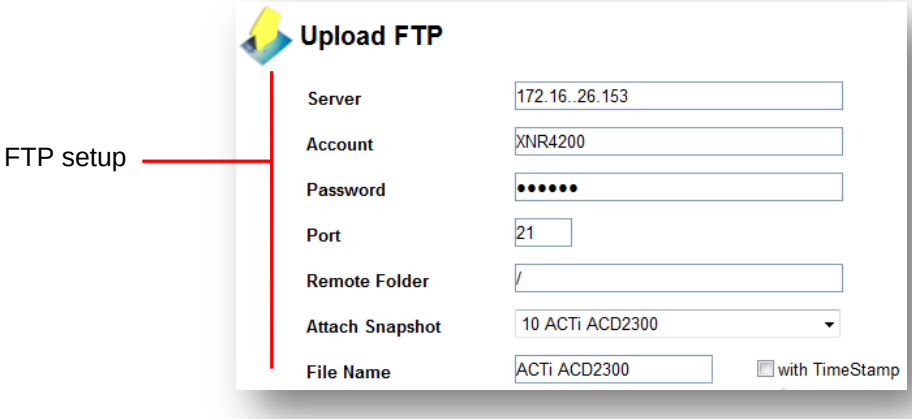


Email Setup

1. **To**: Receiver's email address
2. **Subject:** Subject of the email
3. **Body:** Content of the email
4. **Attach Snapshot:** Attached snapshot from a selected camera in the email.

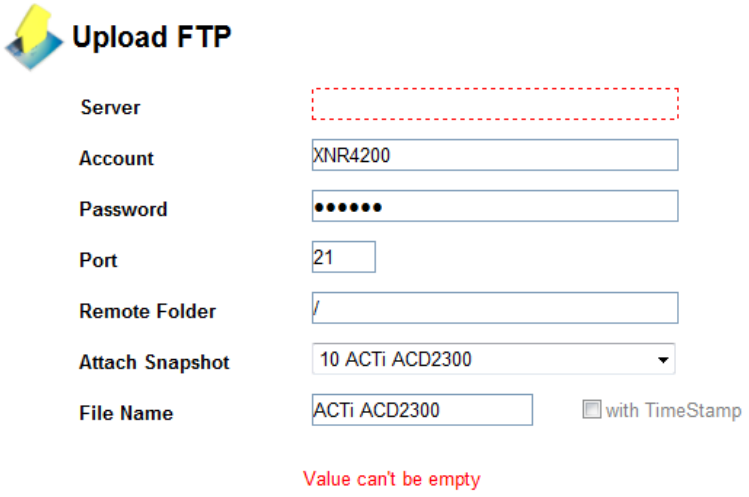


Upload FTP



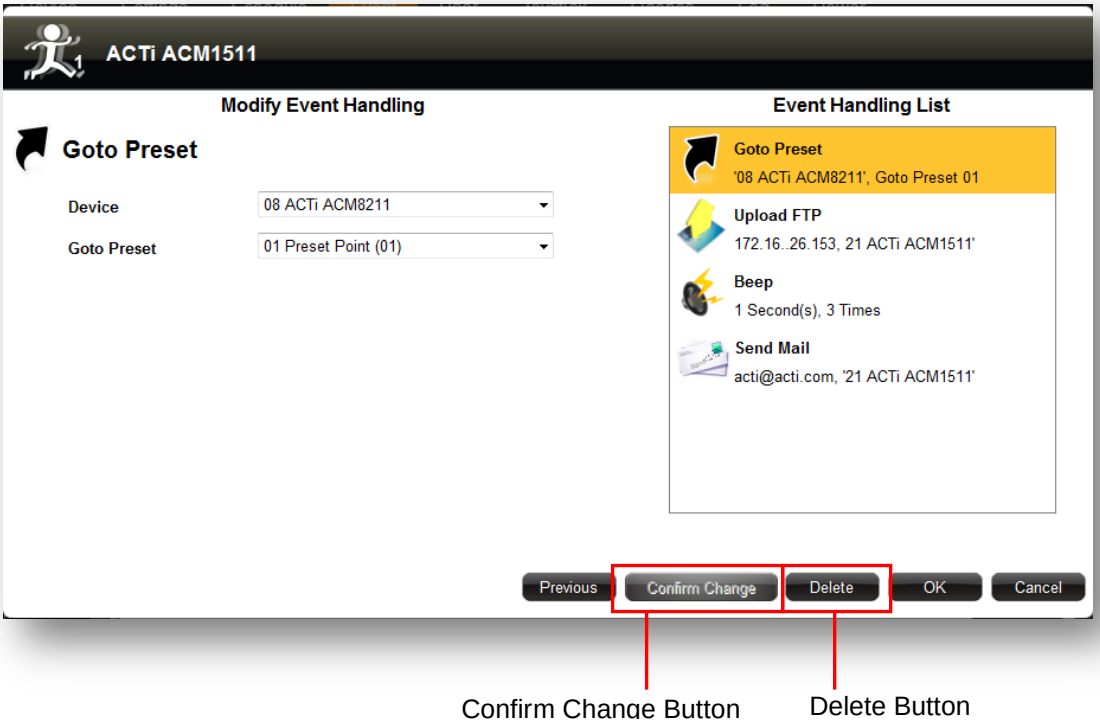
Upload FTP

1. **Server:** Address of the server (URL or IP address)
2. **Account:** Username of the account
3. **Password**: Password of the account
4. **Port:** Port number of the FTP server.
5. **Remote Folder:** Folder path at the FTP server.
6. **Attach Snapshot:** Attached snapshot from a selected camera in the email.
7. **File Name:** Denote file name for upload files.
8. **With Timestamp:** Attach Timestamp for upload files.



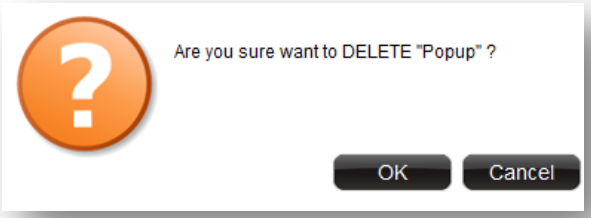
Event Handling List

Once an event response is configured, clicking on the event handling list will show you this screen.



Added Event Handling Options will list in the Event Handling List. Double click event in Event Handling List will bring up option setup for event editing.

1. **Delete Button:** Deletion of the event. Notification messages will popup to confirm the deleting.
2. **Confirm Change Button:** Confirm change button will remain grayed out without any edit of the event content.

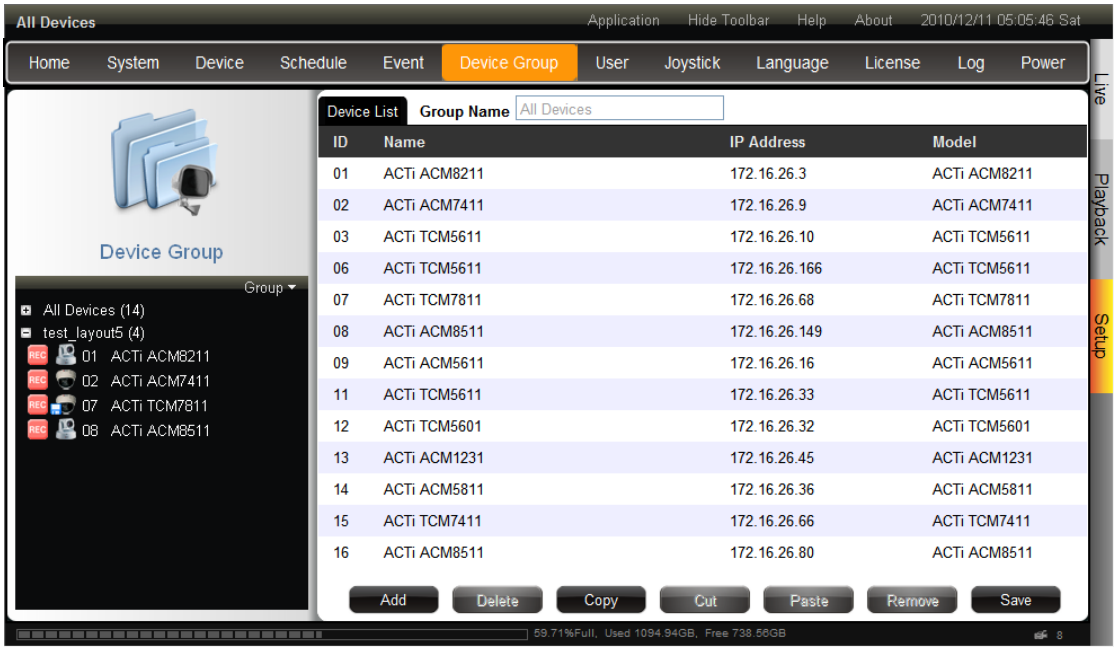


Event Response Overview

Event	Handler		
Motion 1	Goto Preset, Upload FTP, Beep, Send Mail	Edit	Clear

Added Event Response will show in the event page for quick overview.

Device Group

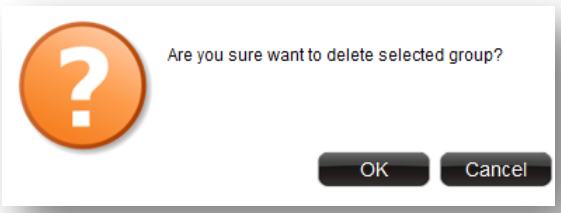


➢ **Add Group**

Please click 'Add' button on the setup panel to add a new group. You will see the new group you created in the device tree. You also can enter the name in the field 'Group Name' that you wish to set to change it.

➢ **Delete Group**

Please double click the group that you wish to delete on the device tree. Then the setup panel and device list will show its information. Please click 'Delete' button to delete the group. It will pop up a confirmation window to make sure.

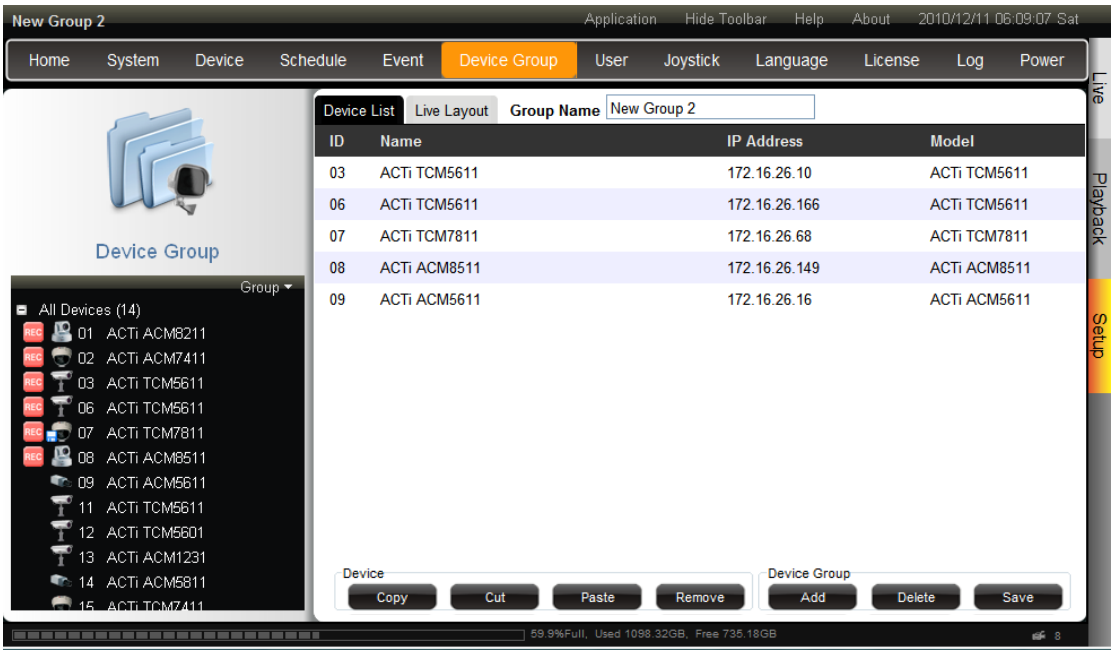


➢ **Group Management**

When you need to manage the group and the devices belong to it, please double click the group on the device tree on the left bottom side. You can access settings through either the Device List tab or the Live Layout tab.

Device List

Under this page, you can see the devices within this group. You can change the group name from the edit box on top.



(1) **Add Devices to Group**

Step1: Please go to the group you wish to edit on the device tree by double clicking on the group name.

Step2: The device list for this group will be shown in the large area to the right. Click and drag from the "All Devices" group to the right side device list area to add.

(2) **Copy Devices from one group to another**

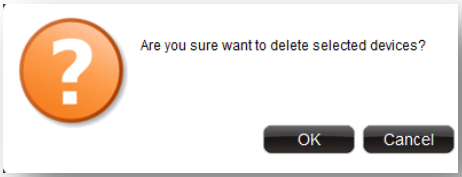
Step1: Go to your group of origin

Step2: Select the devices on the group device list on the right. They will be highlighted. Click "Copy" button to remember.

Step3: Double click on the target group. Click the "Paste" button to add these cameras to the second group. Cut and paste is done in the same way.

(3) **Delete devices from one group**

Double click the group you want to delete some devices. The device list will be shown. Please select the device(s) that you wish to remove from the group by clicking them. Then click 'Delete' button to delete them from the group. There will be a popup window as below to make sure you really want to delete a device from the group



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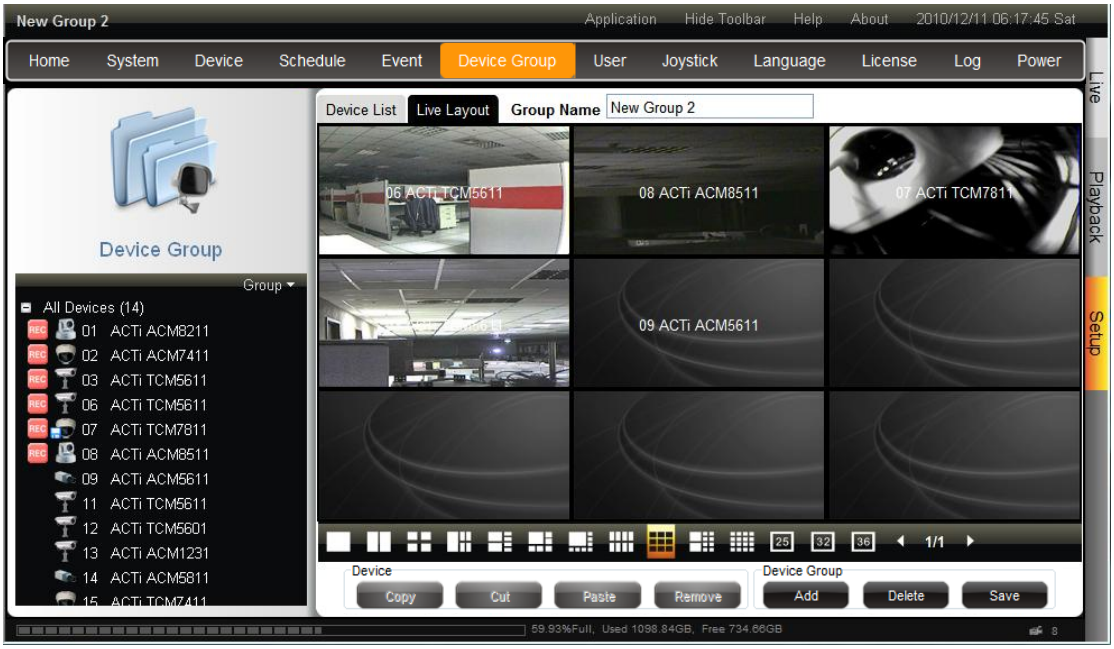
Live Layout

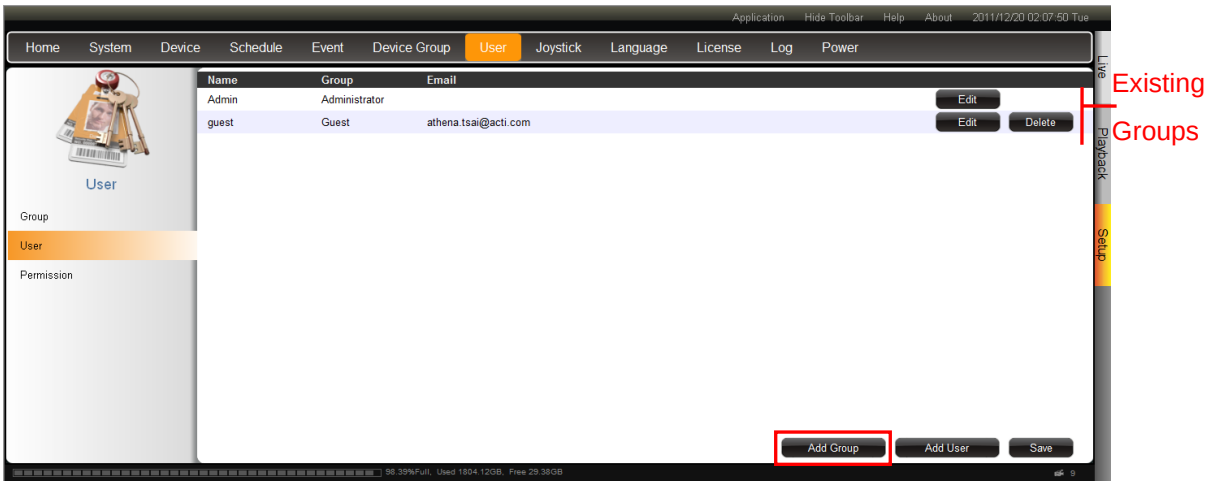
Please click the "Live Layout" tab to setup layout for the group.



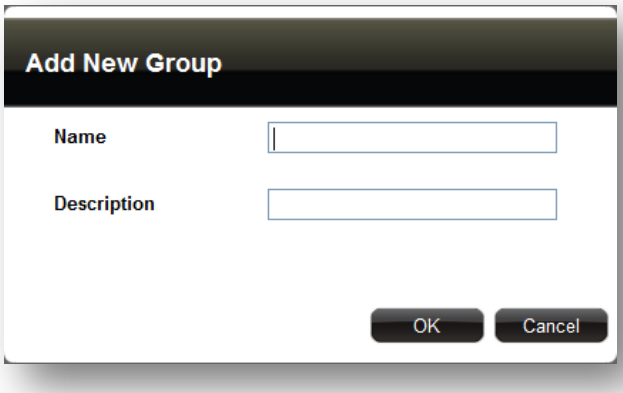
Select the channel style from the layout style list below the view windows. Click and drag cameras from the group you're editing to arrange layout. If you have more cameras than can be shown in a single page, you may click the left / right arrow button to the lower right of screen to scroll through next page.

User

Group

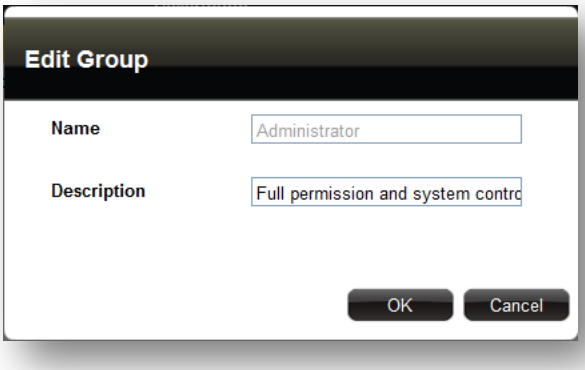


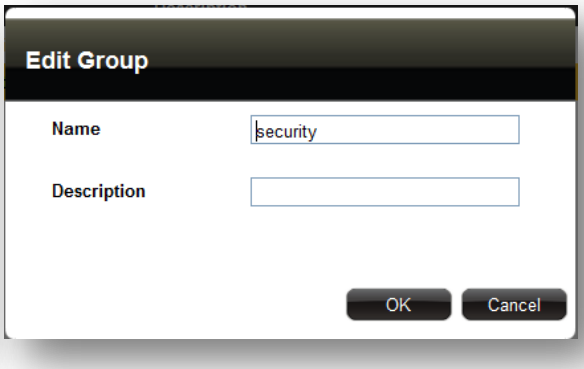
Add Group Button: Click to add an user defined group. A window will popup for group name and Description entering; Group name will be in the list once successfully added.



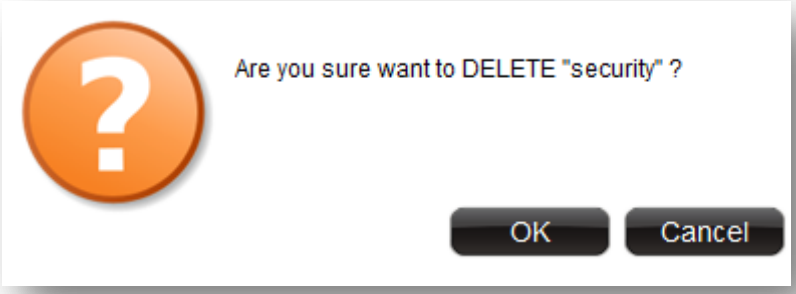
Existing Groups: List of existing groups. Groups other then Administrator are deletable and editable on both Name and Descrption slots. Administrator user group is not deletable, can only edit description slot. Images in the following page show the Edit Group window for Administrator and User define group, Administrator was grayed out and not editable.

Edit Group



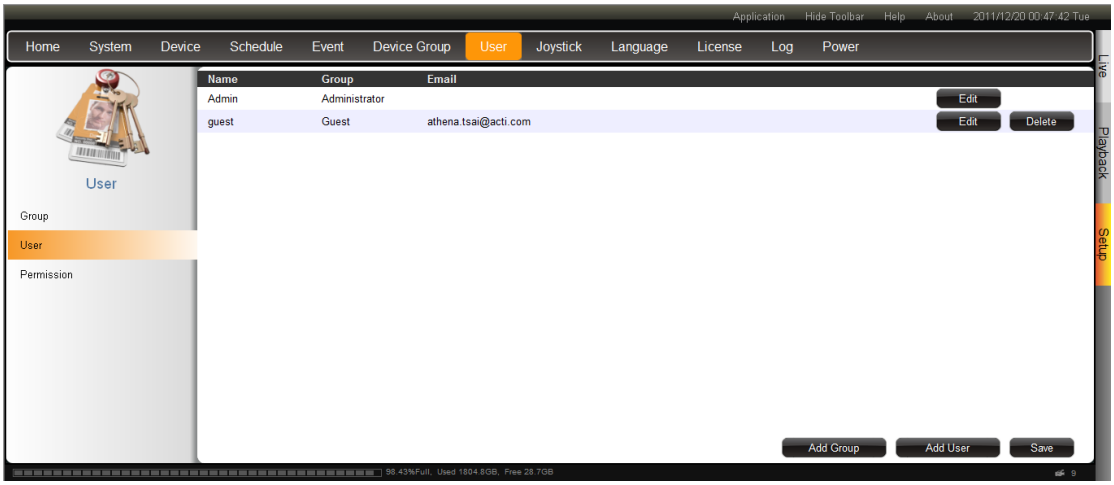


Notification message will popup for Group Delete confirmation

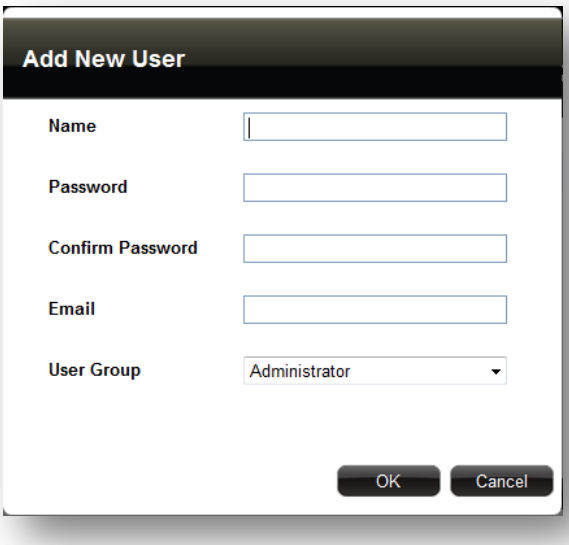


Note: You must click "Save" button to commit changes; otherwise edits you made will be lost once you leave.

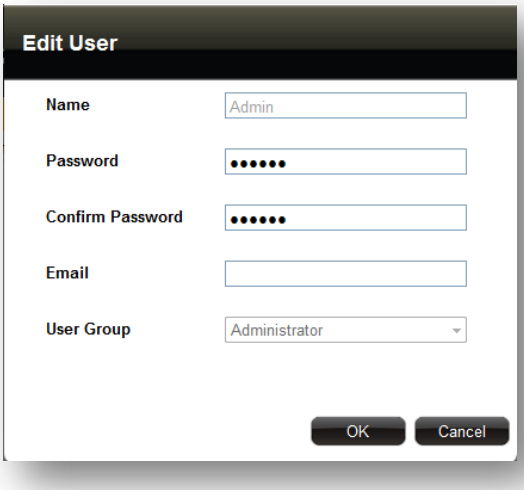
User

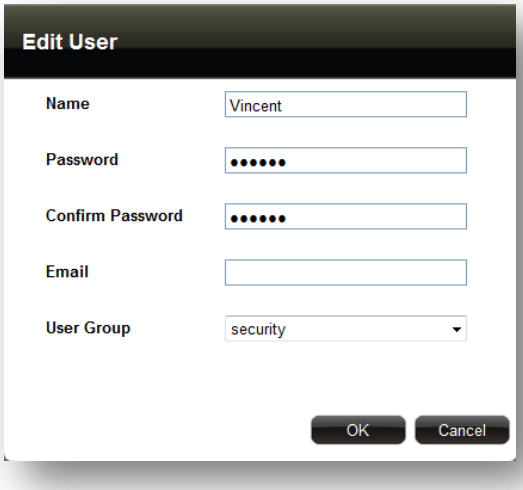


Add User Button: Click to add an user. A window will popup with slots for required information on creating an user (User name, password, Email). Created user groups will be available in the dropdown menu at the bottom of popup window, newly created user can then assigned to a group.

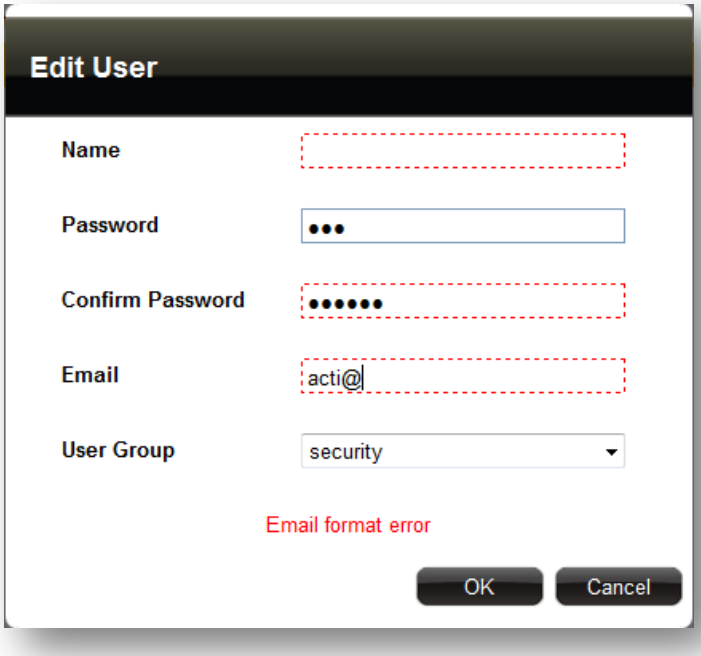


Existing User: List of existing users. For all fields, users other then Administrator are deletable and editable. For Administrator, Name and Group slots will be gray out and restricted. A window will popup while trying to edit an user, The next image demonstrates by using administrator and general user.

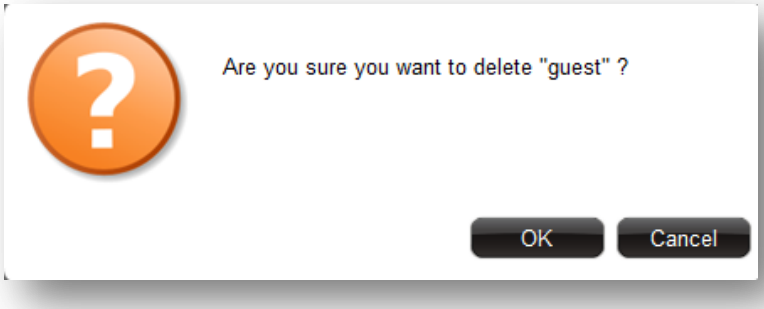




In the process of creating or editing users, system will continuously validate the input information and notify you for invalid inputs. Slots with invalid inputs will point out with red dotted lines



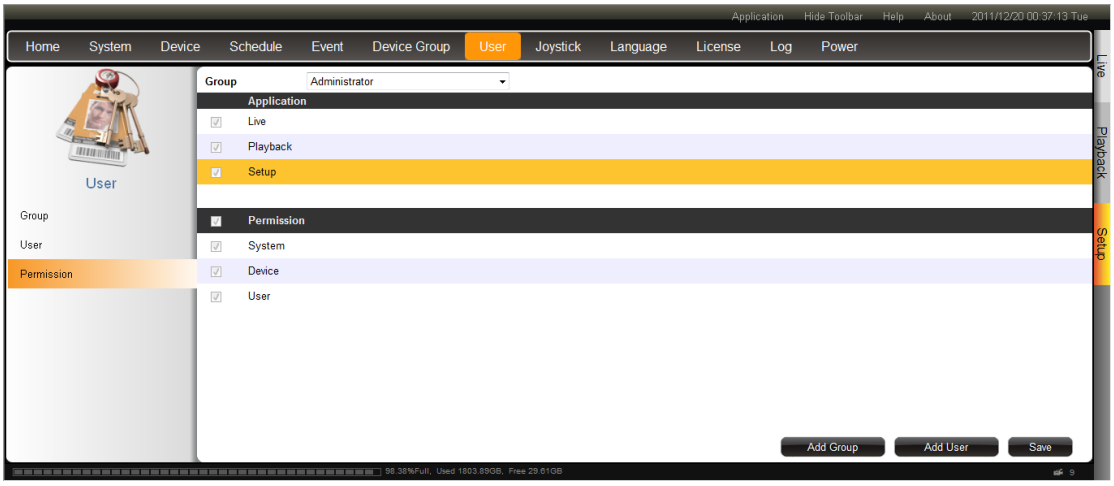
Notification message will popup for User Delete confirmation.

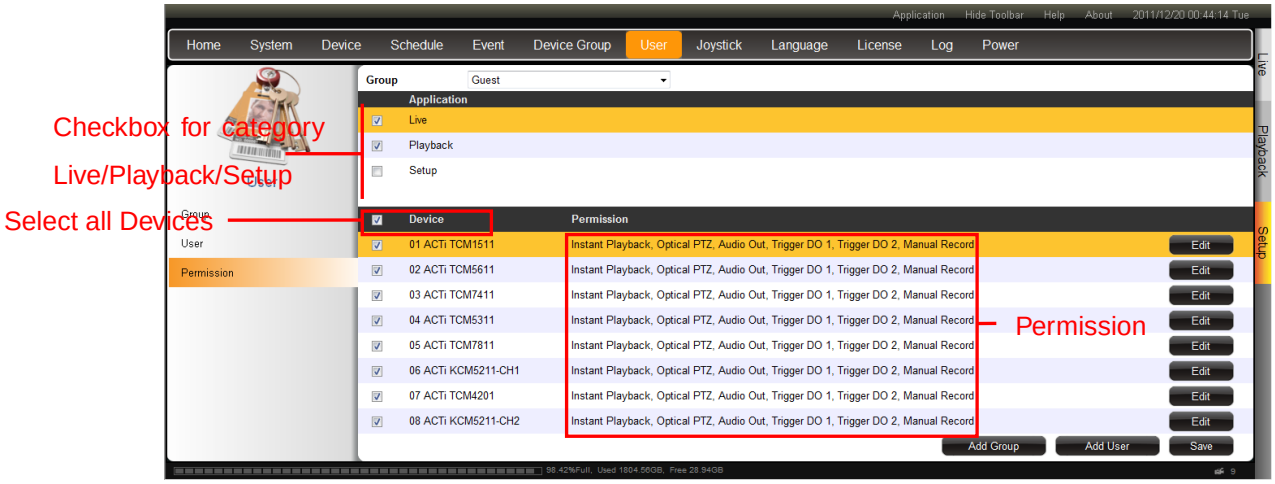


Save Button – Click to save the settings.

Permission

Permission setup allows you to modify permissions for each individual user groups in three main categories; Live, Playback and Setup, each of them contain sub-options for detail setups on each individual group or simply enable/disable the categories by check/uncheck the checkbox. Following paragraphs will explain in detail on each individual category. The screenshot below shows the general look of permission page, since administrator was pre-defined with all permissions, you can see all the checkbox were checked and grayed out. Those checkbox are available for user defined groups.

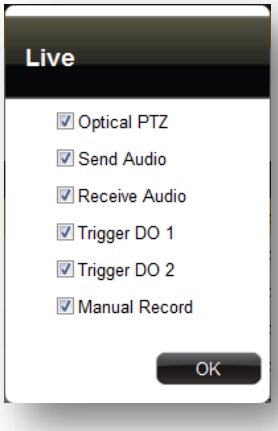




Save Button – Click to save the settings.

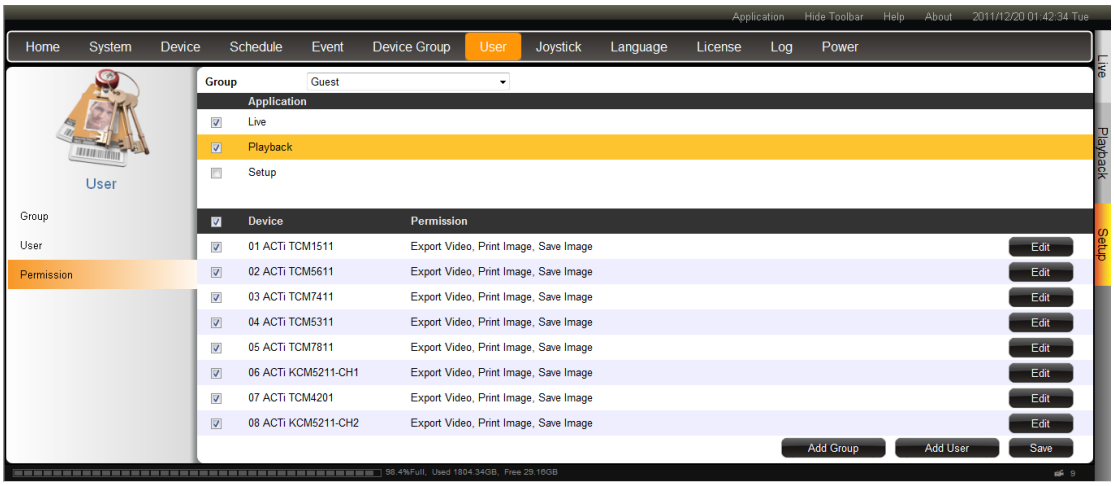
Live

Click the Live section to configure live permissions. A list of device shows up with checkbox for each. Check/uncheck to select the device. In addition, an "Edit" button is available for each device, clicking it will pop another window with more control options for the device. Next image shows the popup window and options.



Playback

Click the Playback section to configure playback permissions. A list of device shows up with checkbox for each. Check/uncheck to select the device. In addition, an edit button is available for each device, clicking it will pop another window with more control options for the device.



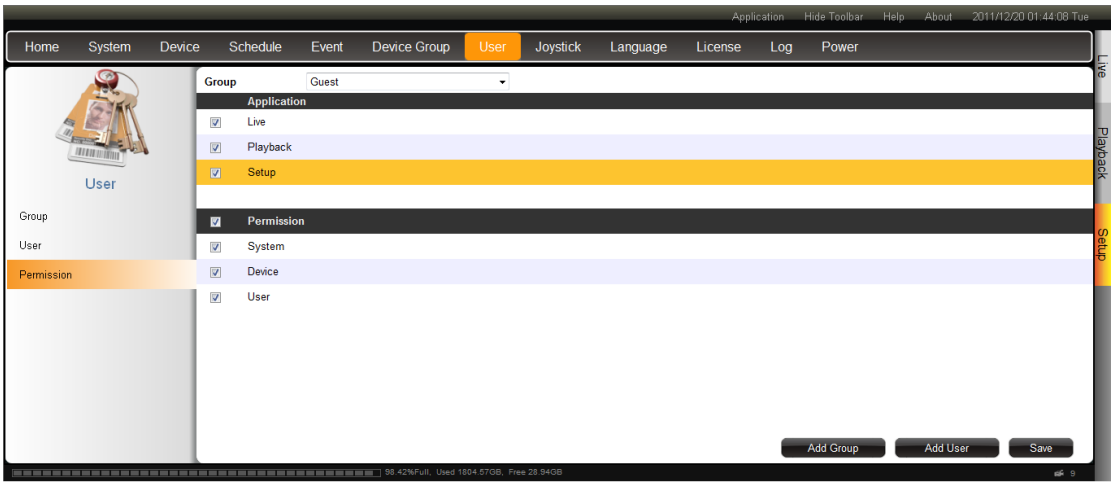
Select All Devices: Use the check box to check/uncheck all checkboxes for devices in list of device at once.

Permission: List out selected permissions for the device.

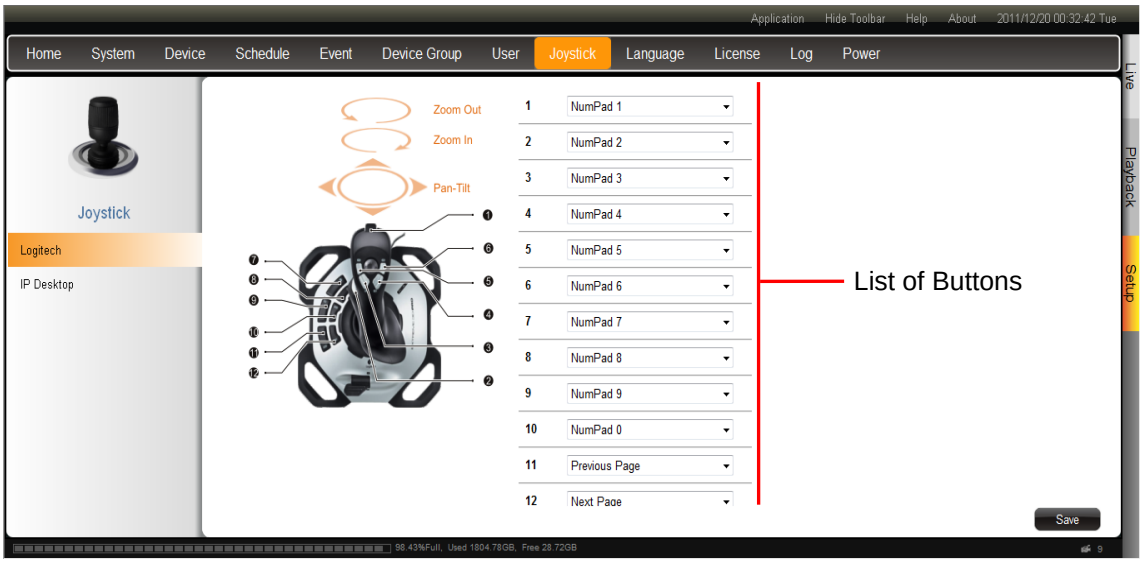
List of Device: List of available devices.

Setup

Click to select Setup, where a list of setup option will display. You may check/uncheck to select the option.



Joystick



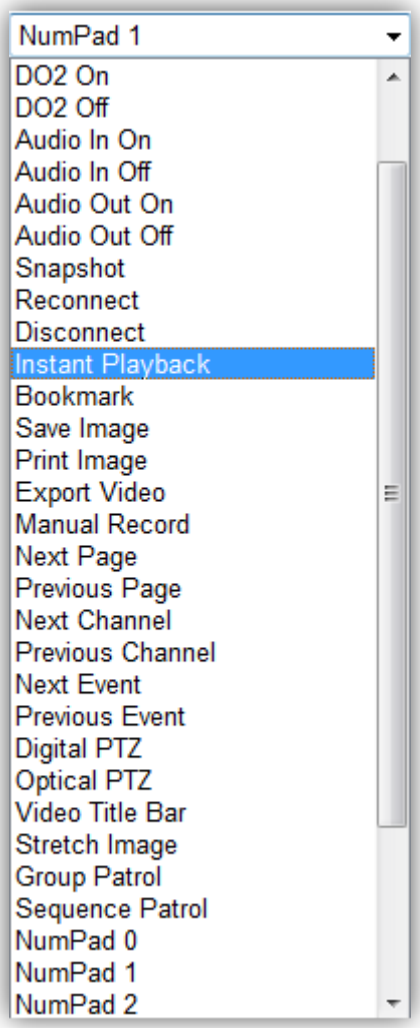
GNR-2000 supports two types of controller:

1. Model: **IP Desktop**, Manufacturer: CH Products
2. Model**: Extreme™ 3D Pro**, Manufacturer: Logitech

There are 12 buttons available on each controller and its function can be assign/modified with the drop down list as shown.

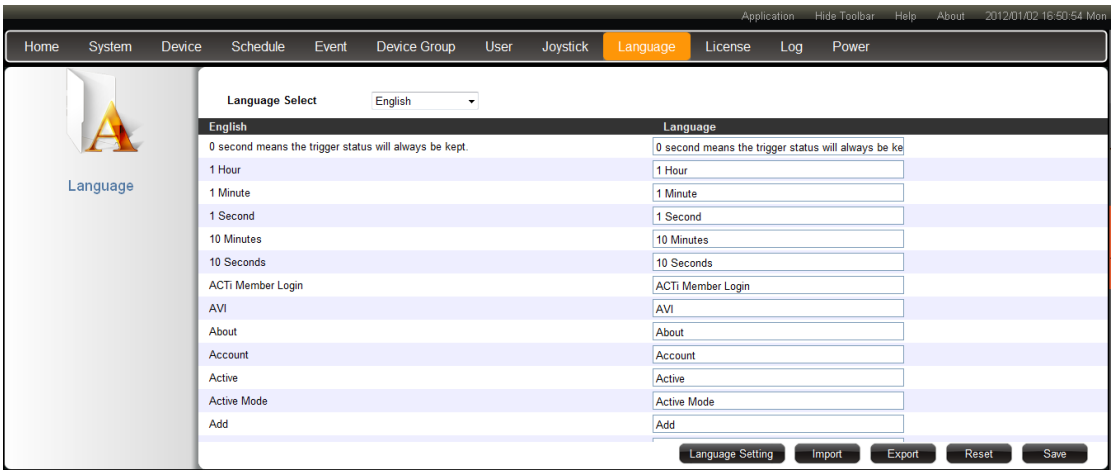
Note: Every time you change the settings on this page, please

1. Click "Save"
2. Close all the windows
3. Log in GNR again, then the new settings will be applied.


NumPad 1
DO2 On
DO2 Off
Audio In On
Audio In Off
Audio Out On
Audio Out Off
Snapshot
Reconnect
Disconnect
Instant Playback
Bookmark
Save Image
Print Image
Export Video
Manual Record
Next Page
Previous Page
Next Channel
Previous Channel
Next Event
Previous Event
Digital PTZ
Optical PTZ
Video Title Bar
Stretch Image
Group Patrol
Sequence Patrol
NumPad 0
NumPad 1
NumPad 2

Language

On Language Setting" page, you can view the all the wordings of settings in certain languages, Import or export the language file to customize for your own usage.



To view all the supported languages, click "Language Setting" button.

Then you can select the language items to be enabled (appears in orange). Once enabled, they are selectable on the login screen.

Note: The language file should be xml format.