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SRN Configuration Manual



SAMSUNG TECHWIN

WiseNet III
THE WISE CHOICE FOR PROFESSIONALS

WiseNet Lite

Table of Contents




Part I Product Overview	1
1 Comparison	1
Normal Range	1
Plug & Play Range	2
Part II Getting Started	3
1 Making a physical connection	3
Normal Mode	3
Plug & Play Mode	4
Plug & Play NVR in Manual Mode	5
2 Samsung Tools	6
IP Installer	6
IPOLIS Device Manager	8
Part III Configuring Samsung NVR	14
1 Initial Bootup	14
Install Wizard	14
2 Network Setup	18
Interface Setup	19
3 Camera Setup	21
Registering Camera	23
Adjusting a Camera	24
Part IV Record Setup	27
1 Configuring Recording	28
Part V Playbacks	33
1 Search	33
Time Search	35
Event Search	36
2 Backup	37
Backup Viewing	39

1 Product Overview



1.1 Comparison

Some NVR shared similar specifications.

1.1.1 Normal Range

	SRN-1670D	SRN-1000	SRN-4000
			
PERFORMANCE			
Video Compression	H.264, M-JPEG, MPEG-4	H.264, M-JPEG, MPEG-4	H.264, M-JPEG, MPEG-4
Recording Performance	64Mbps	100Mbps	400Mbps
STORAGE / BACKUP			
Max. Number of Internal HDD	5	8	12
Max. Storage Capacity	6TB	4TB	4TB
Internal RAID Support	N/A	RAID 5	RAID 6, RAID 5
External Storage Support	e-SATA	e-SATA	NAS
Built-in DVD Writer (for easy backup)	Yes	N/A	N/A
USB Backup	Yes	N/A	Yes
Backup File Format	BU(NVR player), EXE(include player)	JPEG, AVI	BU/Exe (GUI), JPG, AVI (Network)
INTERFACE			
Supported IP Cameras	Samsung, RTSP compatible cameras	Onvif, Samsung, RTSP compatible cameras	Onvif, Samsung, RTSP compatible cameras
Analog Video Output	VGA, HDMI	No Video out	VGA, HDMI
Audio Support	Yes	Yes	Yes
Audio Compression	G.711/723/726	G.711/726	G.711/726
Alarm I/O	16/4	16/4	8/4
USB port	3	N/A	2
eSATA port	2	2	N/A
OPERATIONAL			
Max. Remote Users	Search 3 / Live unicast 10 / Live multicast 20	Search 3 / Live unicast 10 / Live multicast 20	Search 3 / Live unicast 10 / Live multicast 20
Event Notification via E-mail	Yes	N/A	Yes
Automatic Self Upgrade	Yes	Yes	Yes
USB Mouse Control	Mouse included	No mouse control	Mouse included
IR Remote Control	IR Remote Control support	N/A	N/A
Mobile Viewer Support	Android Support, iPhone Support	Android Support, iPhone Support	Android Support, iPhone Support
ELECTRICAL			
Input voltage / current	100 ~ 240V AC ±10%, 50/60Hz, 4 ~ 1.5A	100 ~ 240V AC ±10%, 50/60Hz, 4 ~ 1.5A	100 ~ 240V AC ±10%, 50/60Hz, 4 ~ 1.5A (Dual SMPS)
Power Consumption	56W(1HDD)	45W(1HDD)/170W(8HDDs)	56W(1HDD)/170W(12HDDs)

1.1.2 Plug & Play Range

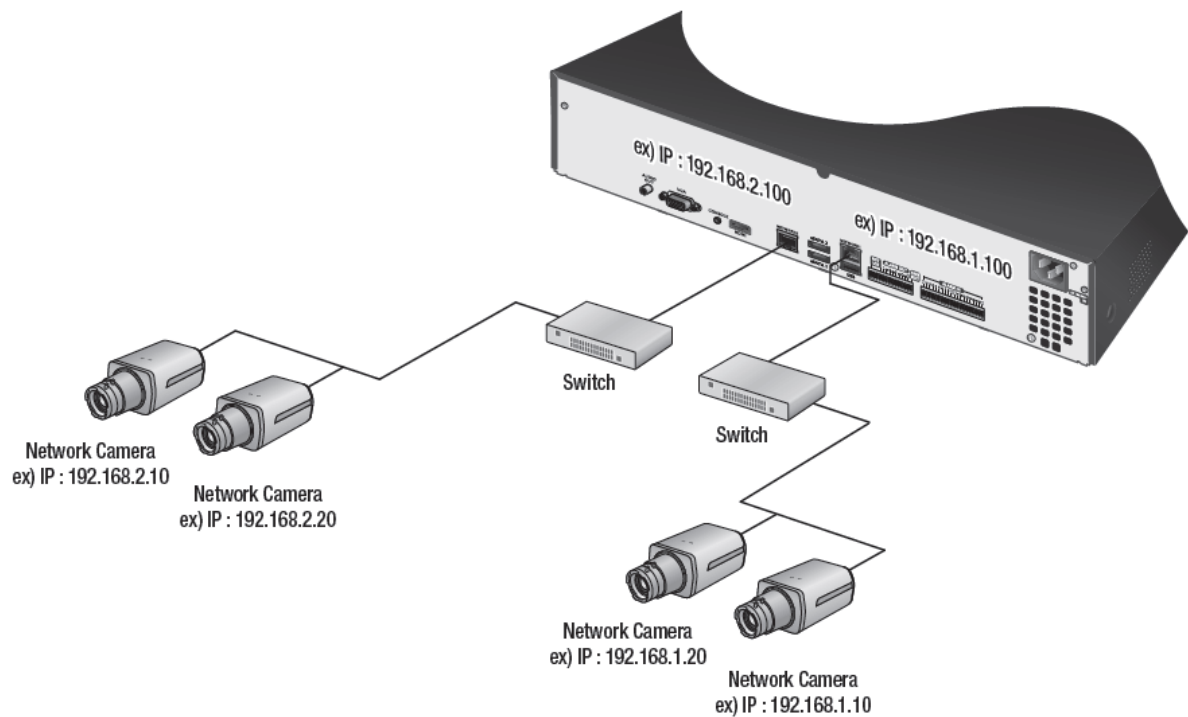
	SRN-472S	SRN-473S
		
PERFORMANCE		
Video Compression	H.264, M-JPEG	H.264, M-JPEG
Recording Performance	32Mbps	32Mbps
STORAGE / BACKUP		
Max. Number of Internal HDD	2	1
Max. Storage Capacity	6TB	6TB
Internal RAID Support	N/A	N/A
External Storage Support	N/A	N/A
Built-in DVD Writer (for easy backup)	N/A	N/A
USB Backup	Yes	Yes
Backup File Format	BU/Exe (USB), JPEG, AVI (Web, CMS)	BU/Exe (USB), JPEG, AVI (Web, CMS)
INTERFACE		
Supported IP Cameras	Samsung, ONVIF	Samsung, ONVIF
Analog Video Output	VGA, HDMI	VGA, HDMI
Audio Support	Yes	Yes
Audio Compression	G.711, G.726	G.711, G.726, AAC (16/48KHz)
Alarm I/O	4/3	2/1
USB port	2	2
eSATA port	N/A	N/A
OPERATIONAL		
Max. Remote Users	Search 3 / Live unicast 10 / Live multicast 20	Search 3 / Live unicast 10 / Live multicast 20
Event Notification via E-mail	Yes	Yes
Automatic Self Upgrade	Yes	Yes
USB Mouse Control	Mouse included	Mouse included
IR Remote Control	IR Remote Control support	IR Remote Control support
Mobile Viewer Support	Android Support, iPhone Support	Android Support, iPhone Support
ELECTRICAL		
Input voltage / current	12V DC 2.0A (NVR), 48V DC 1.4A (PSE)	48V DC / 1.8A
Power Consumption	TBD/12W(Each PoE Port)	77W(1HDD, PoE on)/16W(1HDD, PoE off)

2 Getting Started

2.1 Making a physical connection

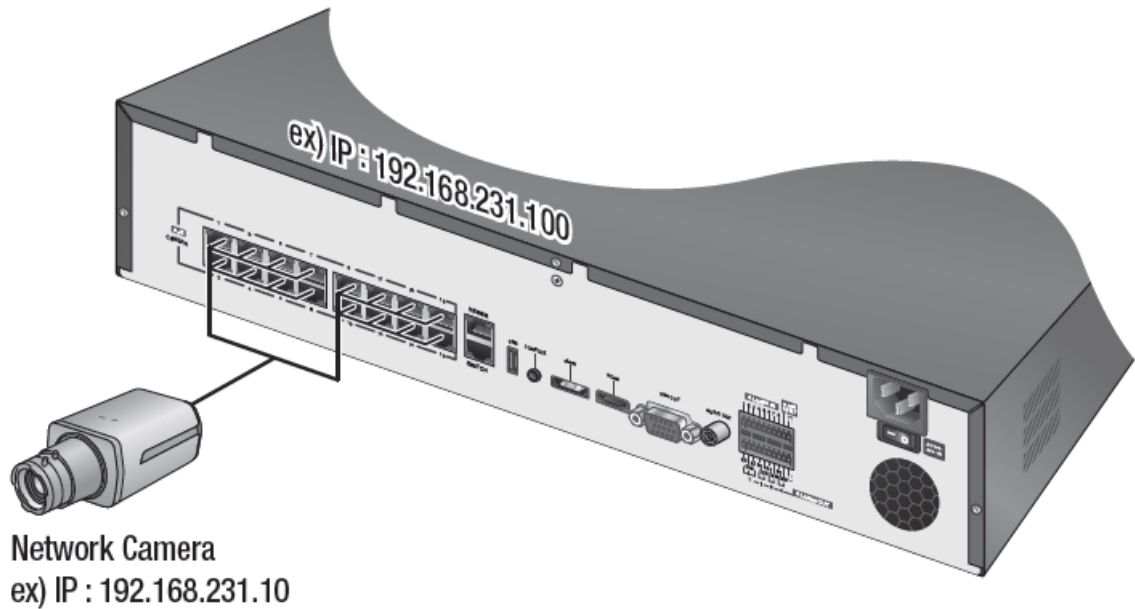
2.1.1 Normal Mode

In normal mode application, you can combine the use of both **Network 1** and **Network 2** for your cameras or you can choose to use **Network 1** for cameras and use **Network 2** for your Internet Connection.



2.1.2 Plug & Play Mode

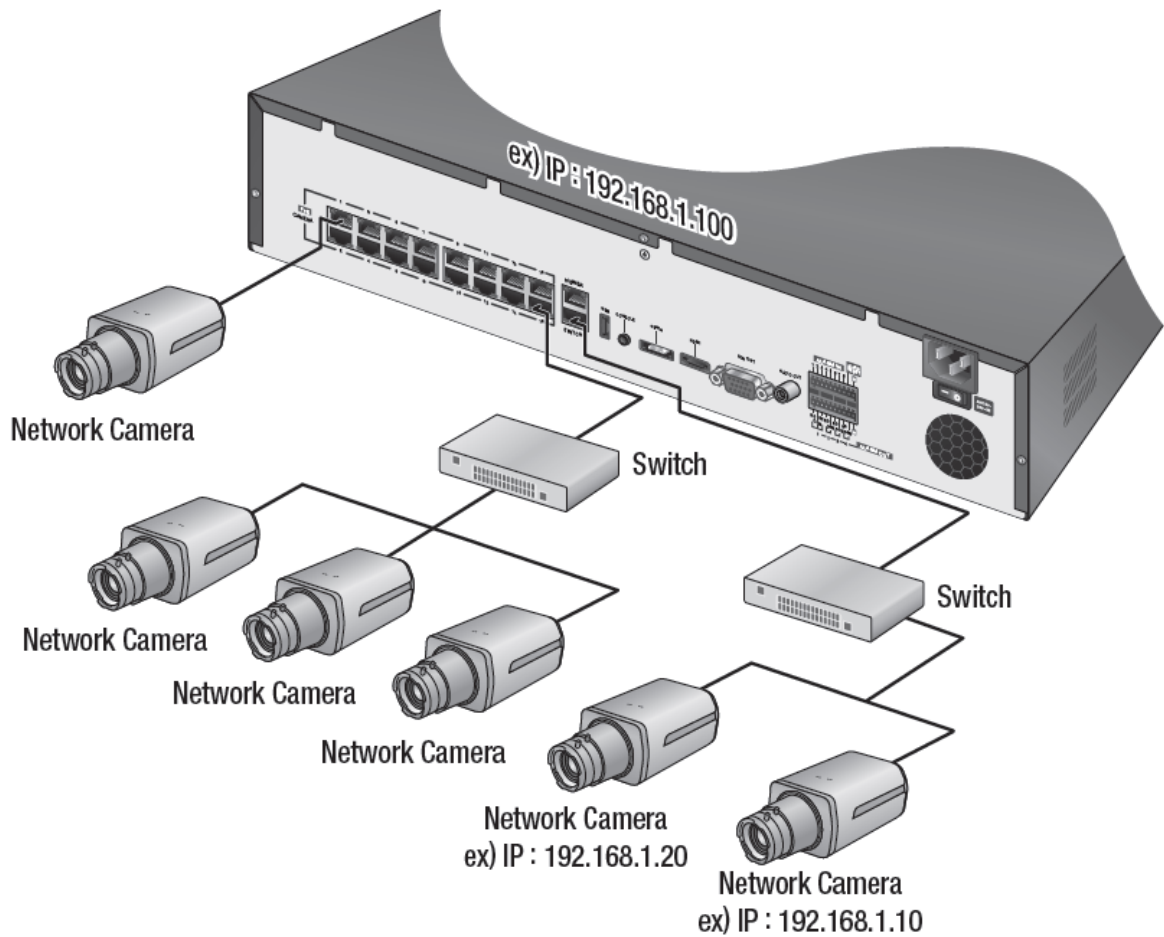
In Plug and Play mode. The **Switch** port is disabled, because the in built switch is overtaking its functionality, and the IP address cannot be changed, so that leaves the **Viewer** port by itself for the Internet Connection.



2.1.3 Plug & Play NVR in Manual Mode

For a Plug and Play unit, you can turn off PnP mode and make the NVR run using standard mode if you want more control over how you want your network to be.

In Manual Mode, you can use either the ports on in built switch, connect a switch to one of the port on the in built switch or use the dedicated **Switch** port for your switch. They will all share and function within the allowed bandwidth from the Samsung NVR.



2.2 Samsung Tools

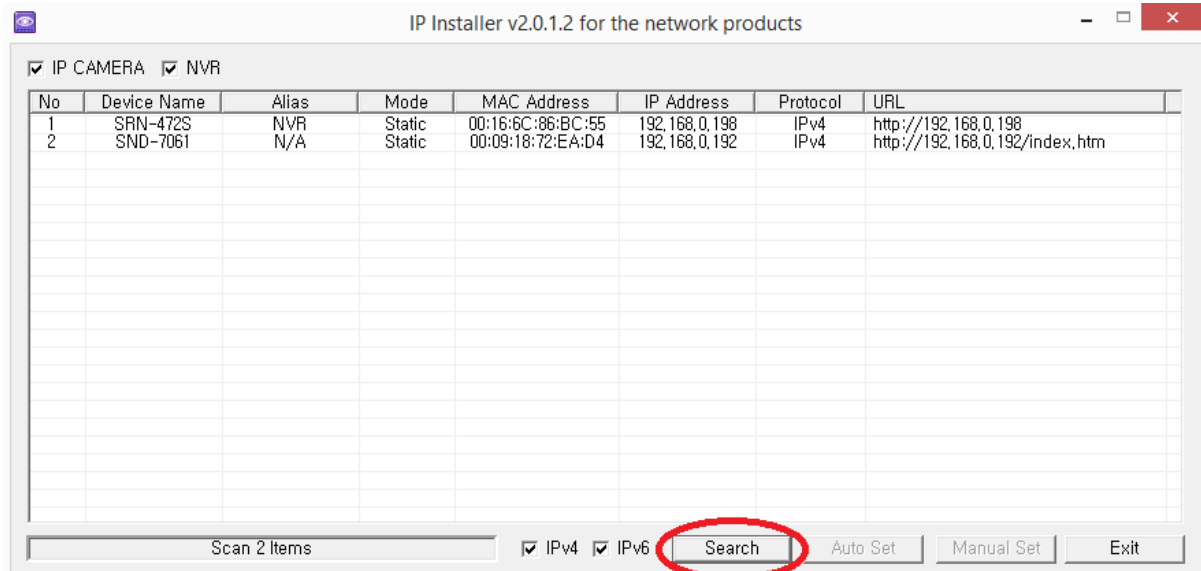
IP Installer vs IPOLiS Device Manager

IP Installer is a simple little application, that helps the user to IP addressing the cameras. IPOLiS Device Manager is a program that helps the user to configure, manage and diagnose multiple network devices.

You can obtain both application from www.samsungsecurity.com

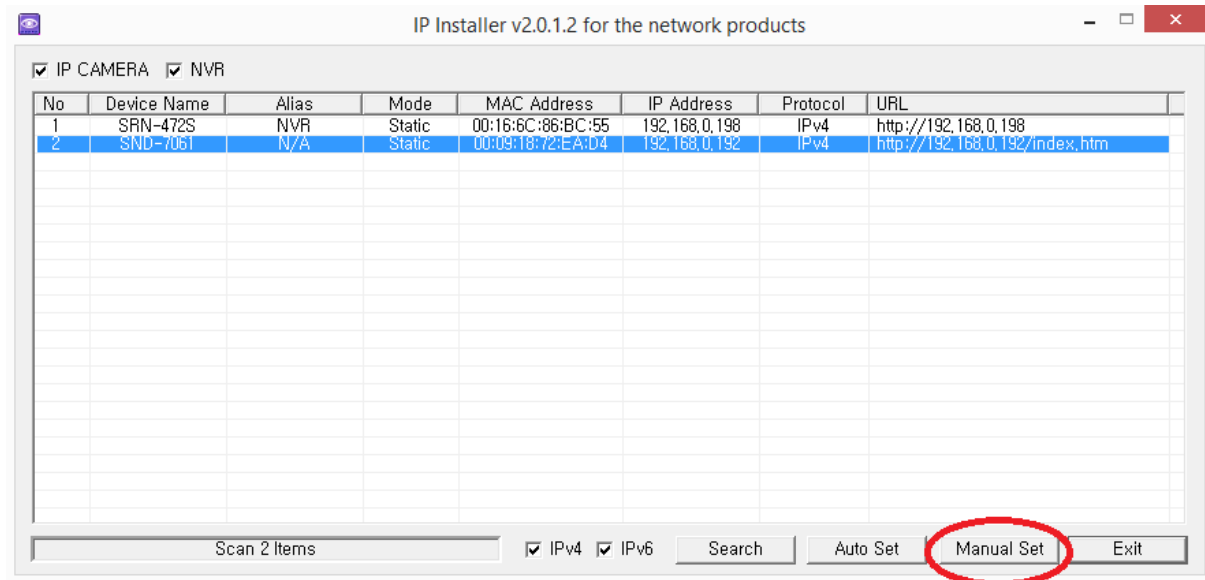
2.2.1 IP Installer

IP Installer requires no installation. Simply double click the IP Installer icon to start the program

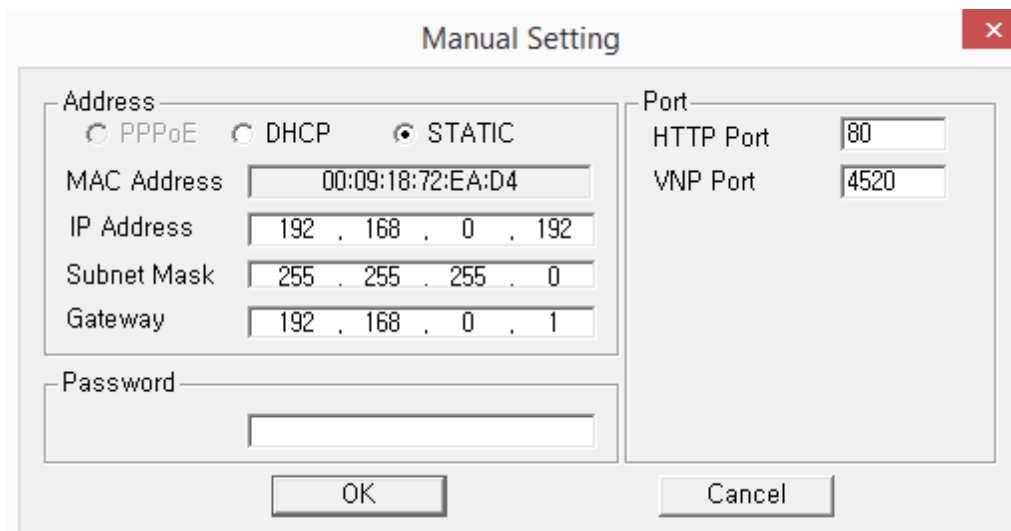


Click **[Search]**.

IP Installer should pickup all the Samsung IP device that are connected on the same network



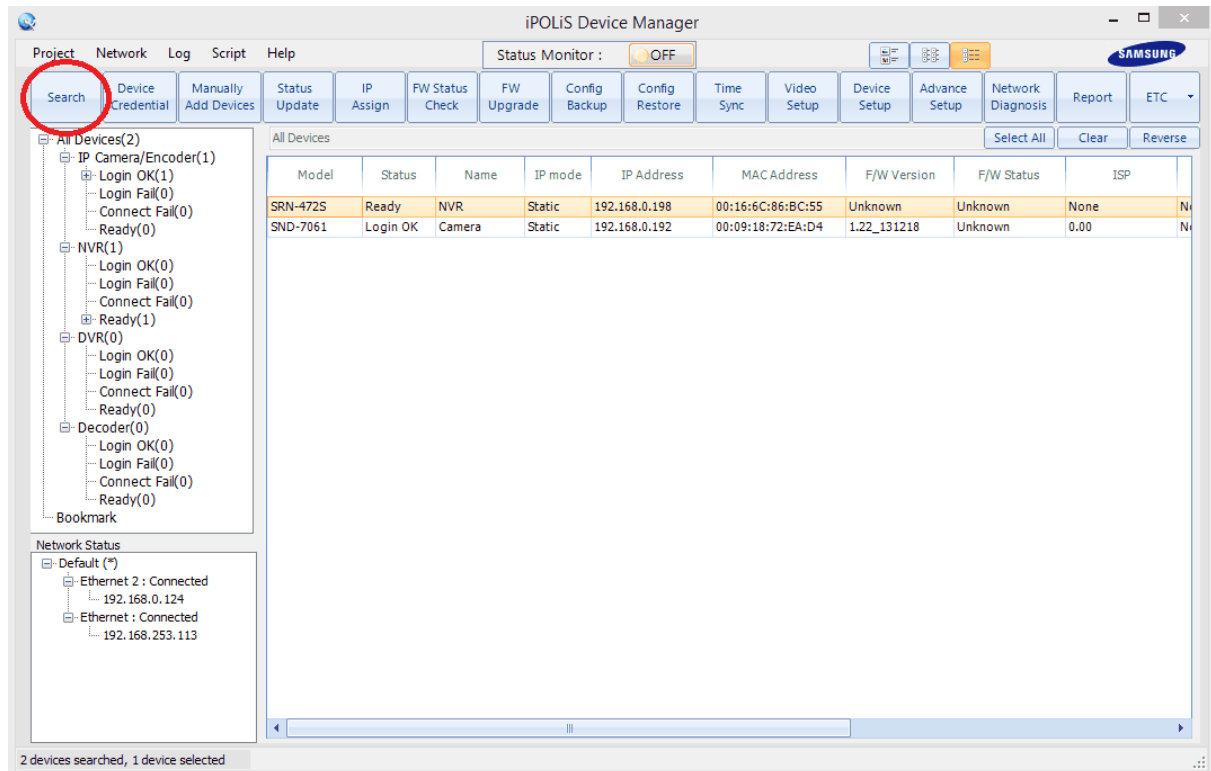
Choose a device and click **[Manual Set]**



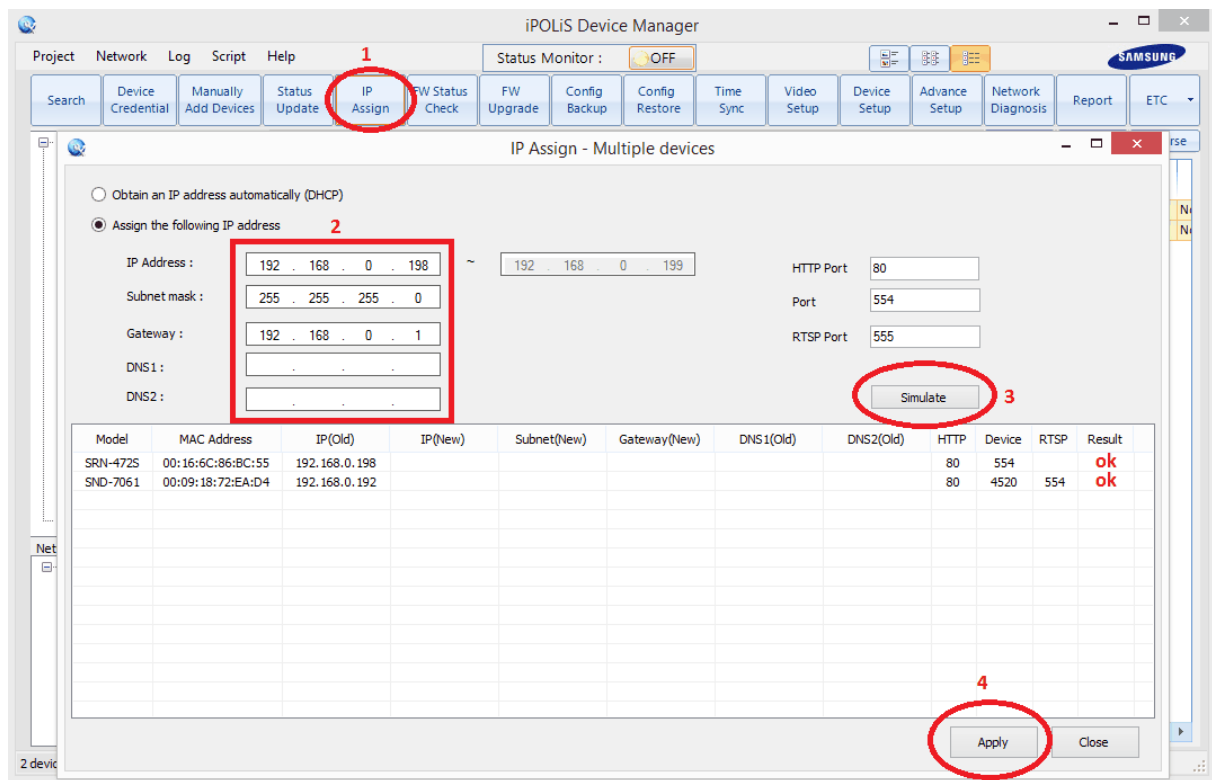
Choose **[Static]** and put the IP address you wish to use
Input the password of the camera and then click **[OK]** to confirm the change

2.2.2 IPOLiS Device Manager

IPOLiS Device Manager requires installation before use. Double click the IPOLiS Device Manager icon after installation

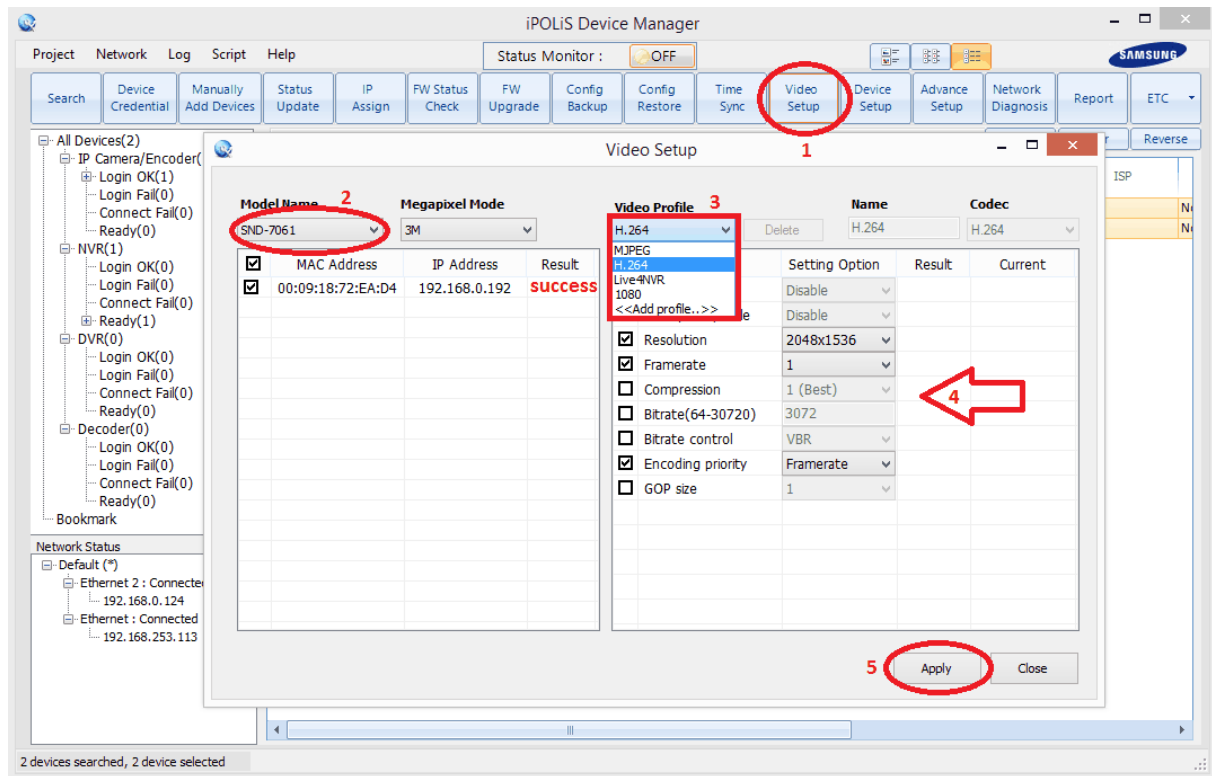


Click the **[Search]** button. Give 30 seconds for the search to complete



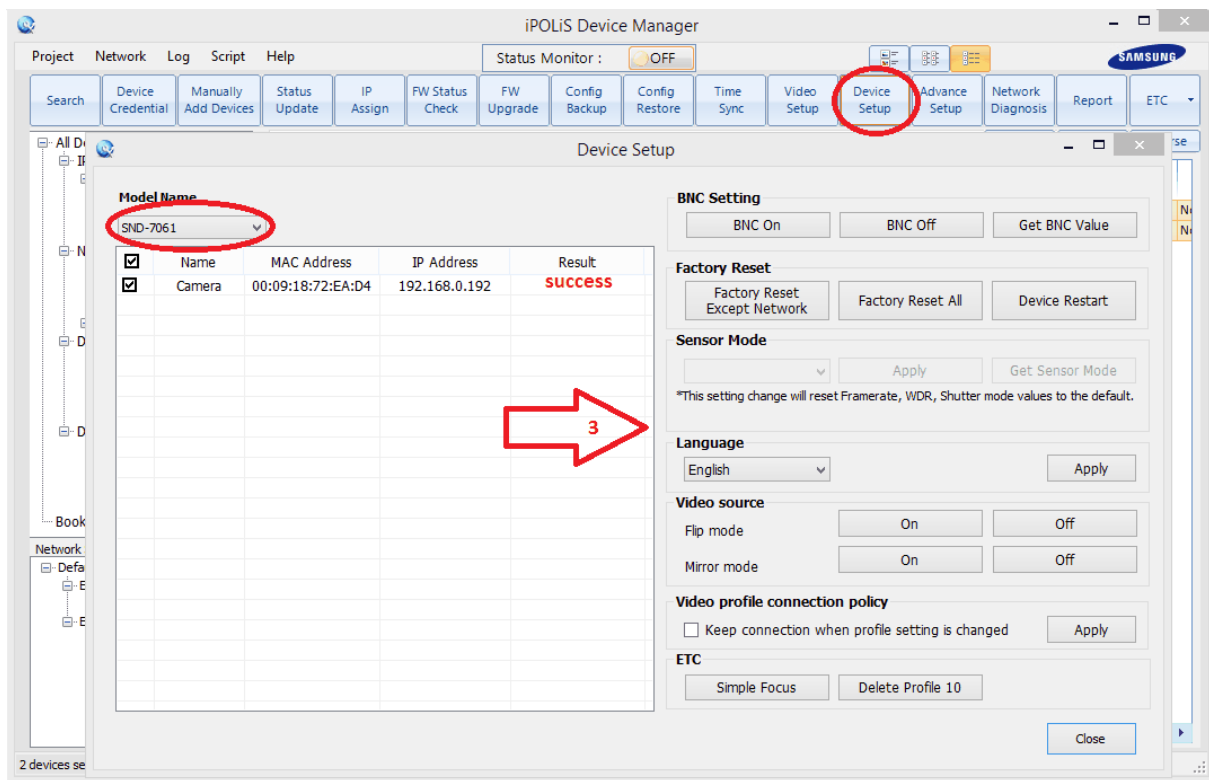
Assign IP Address

1. Click **[IP Assign]** button after selecting 1 or more cameras from the list
2. Put the IP address you want to assign to the camera
3. Click **[Simulate]** to assign the IP
4. Click **[Apply]** to confirm the change. Now you should be able to see OK in the result section



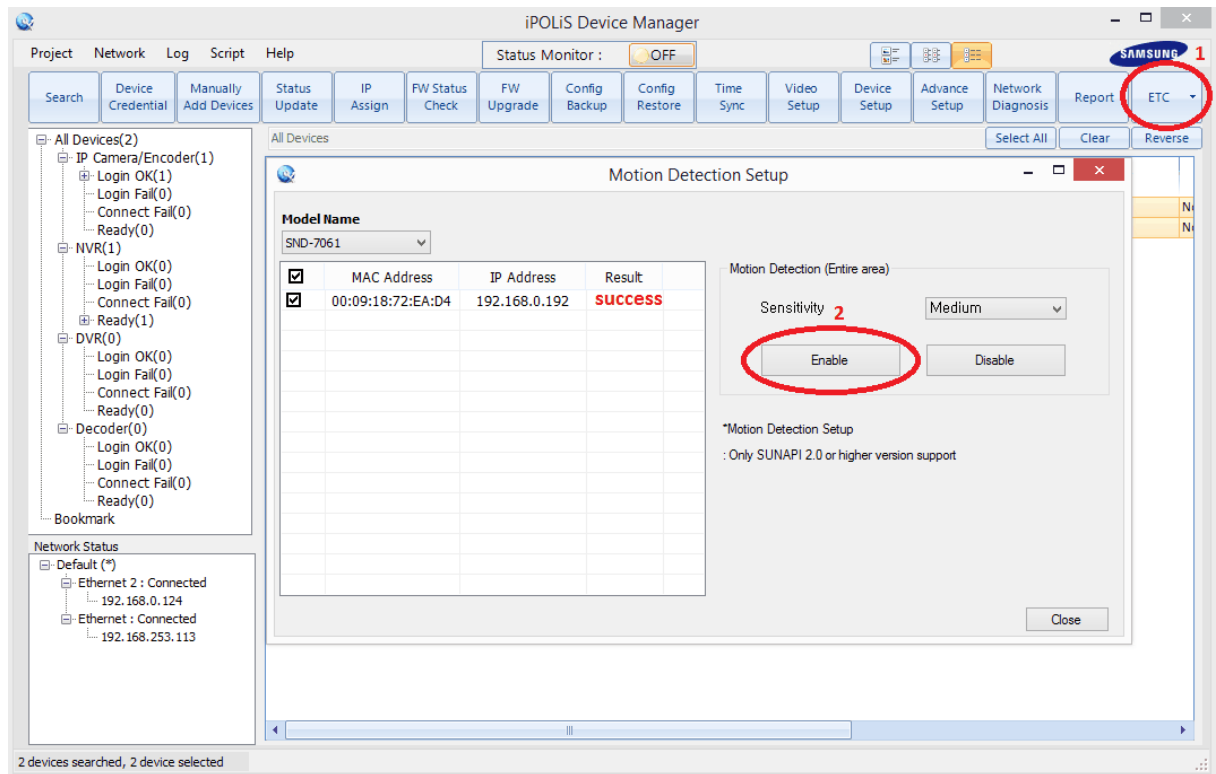
Create or Edit Camera Profiles

1. Click **[Video Setup]**
2. Choose the camera model (You will be able to configure multiple camera at ones as long as the model is the same)
3. You can edit or create profile in the camera
4. Set resolution, framerate or birate etc, for the profile selected in step 3
5. Hit **[Apply]** to save and wait until you see success for each camera



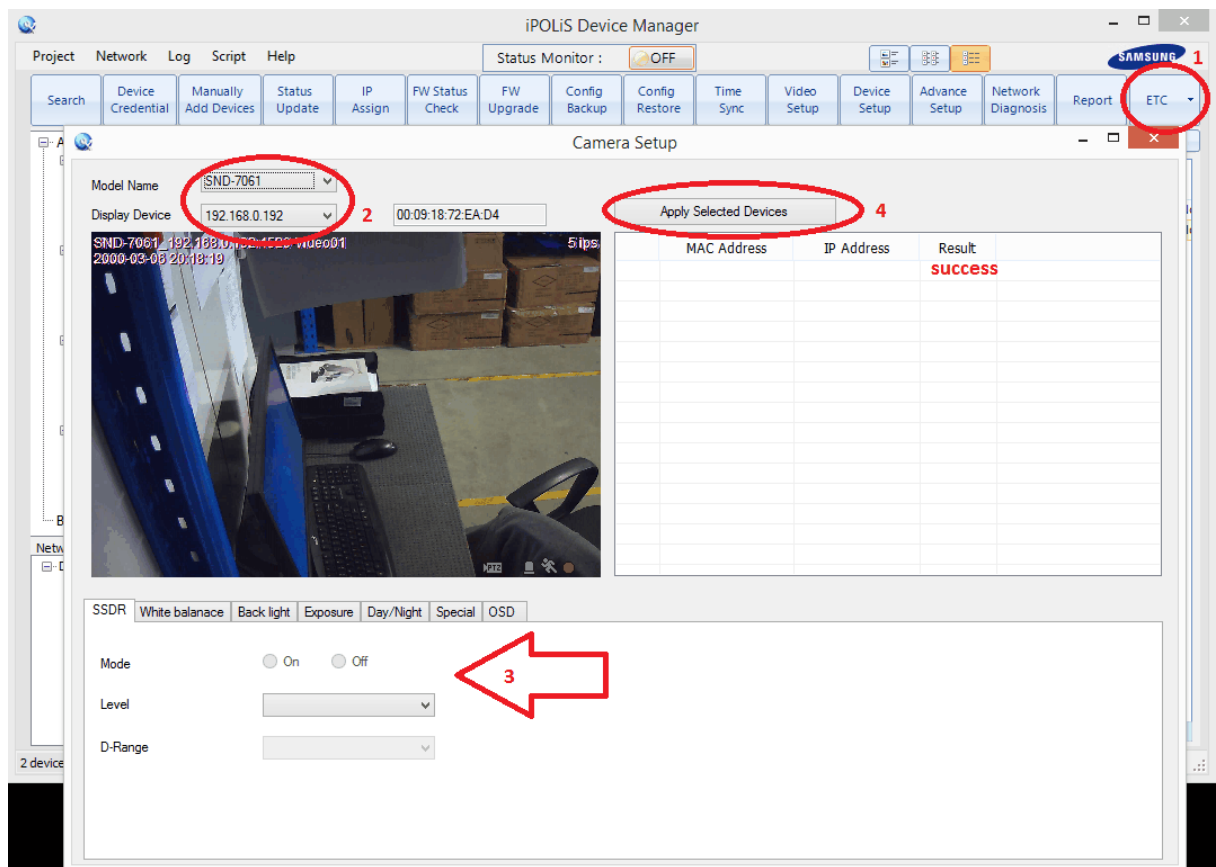
Camera Quick Functions

1. Click **[Device Setup]**
2. Choose the camera model (**You will be able to configure multiple camera at ones as long as the model is the same**)
3. You can factory default, flip/flop camera image and simple focus from this page
4. You should see success in result section if done correctly



Enable Motion Detection

1. Click **[ETC]** and choose **[Motion Detection]**
2. Click **[Enable]** and you should see success if camera you are using support this function



Camera Setup

1. Click **[ETC]** and choose **[Camera Setup]**
2. Choose the camera model you want to configure
3. Choose what you like to configure
4. Hit **[Apply Selected Devices]** and you should see success once completed

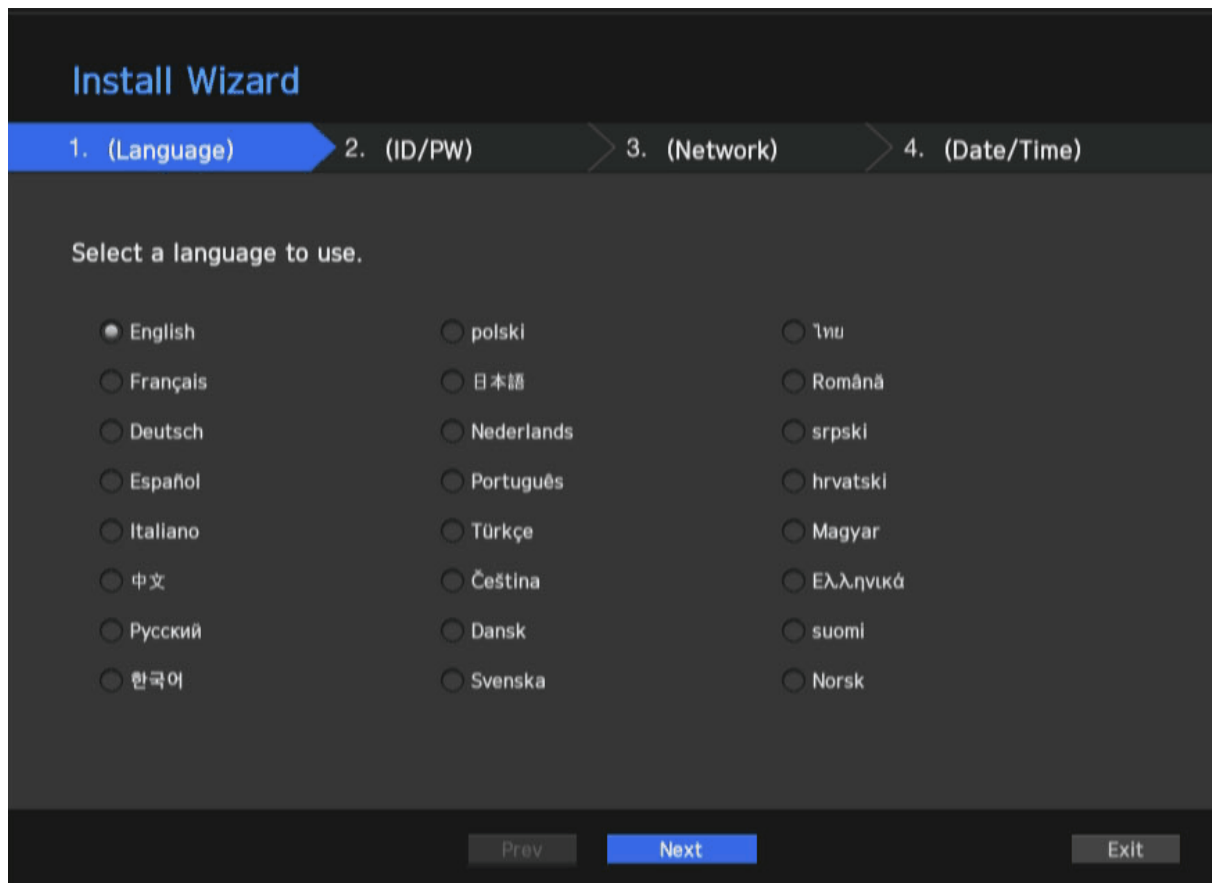
3 Configuring Samsung NVR

3.1 Initial Bootup

When you boot up the NVR for the first time the unit will go through Install Wizard (**This is the only time you can ever do it, unless factory defaulting the unit**).

You can cancel this whole process and configure each individual setting via the main menu.

3.1.1 Install Wizard



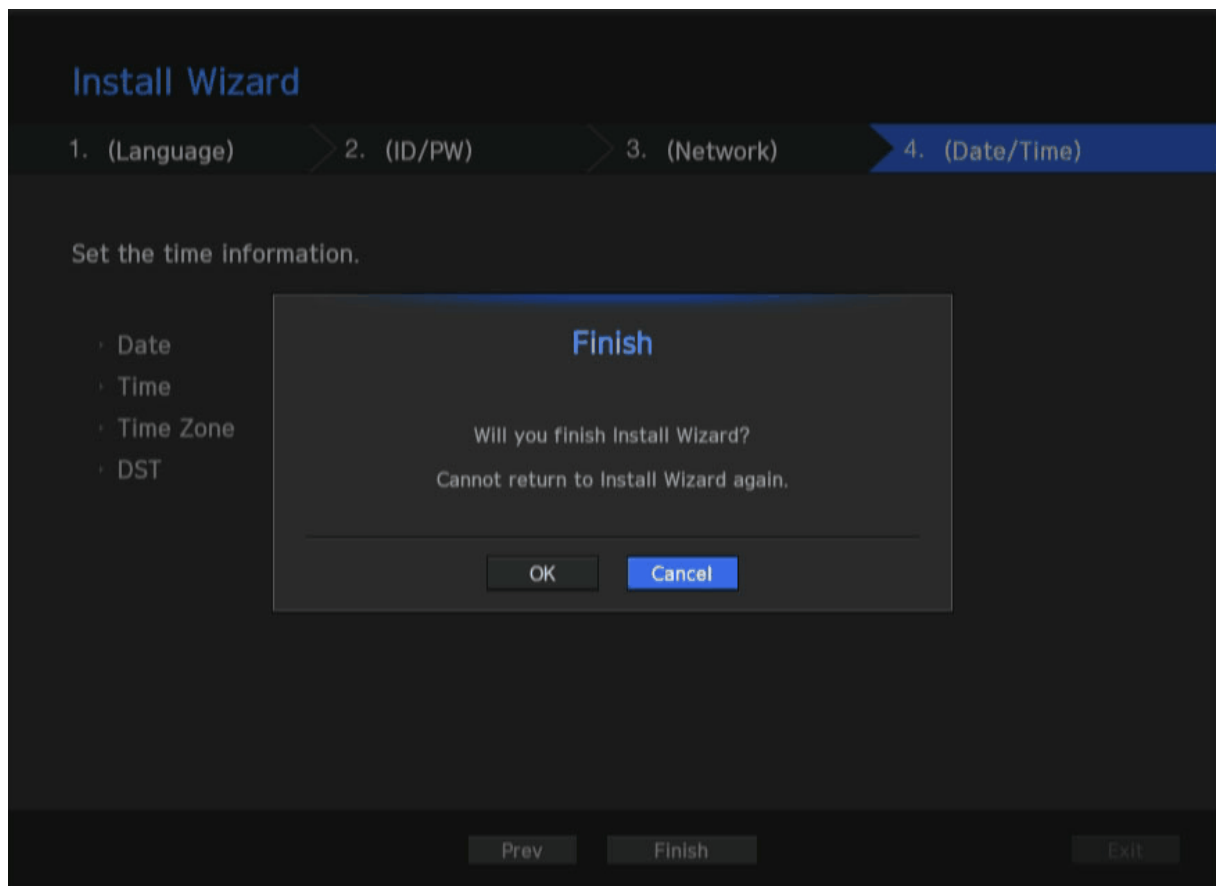
Install Wizard

1. (Language) 2. (ID/PW) 3. (Network) 4. (Date/Time)

Select a language to use.

<input checked="" type="radio"/> English	<input type="radio"/> polski	<input type="radio"/> ไทย
<input type="radio"/> Français	<input type="radio"/> 日本語	<input type="radio"/> Română
<input type="radio"/> Deutsch	<input type="radio"/> Nederlands	<input type="radio"/> srpski
<input type="radio"/> Español	<input type="radio"/> Português	<input type="radio"/> hrvatski
<input type="radio"/> Italiano	<input type="radio"/> Türkçe	<input type="radio"/> Magyar
<input type="radio"/> 中文	<input type="radio"/> Čeština	<input type="radio"/> Ελληνικά
<input type="radio"/> Русский	<input type="radio"/> Dansk	<input type="radio"/> suomi
<input type="radio"/> 한국어	<input type="radio"/> Svenska	<input type="radio"/> Norsk

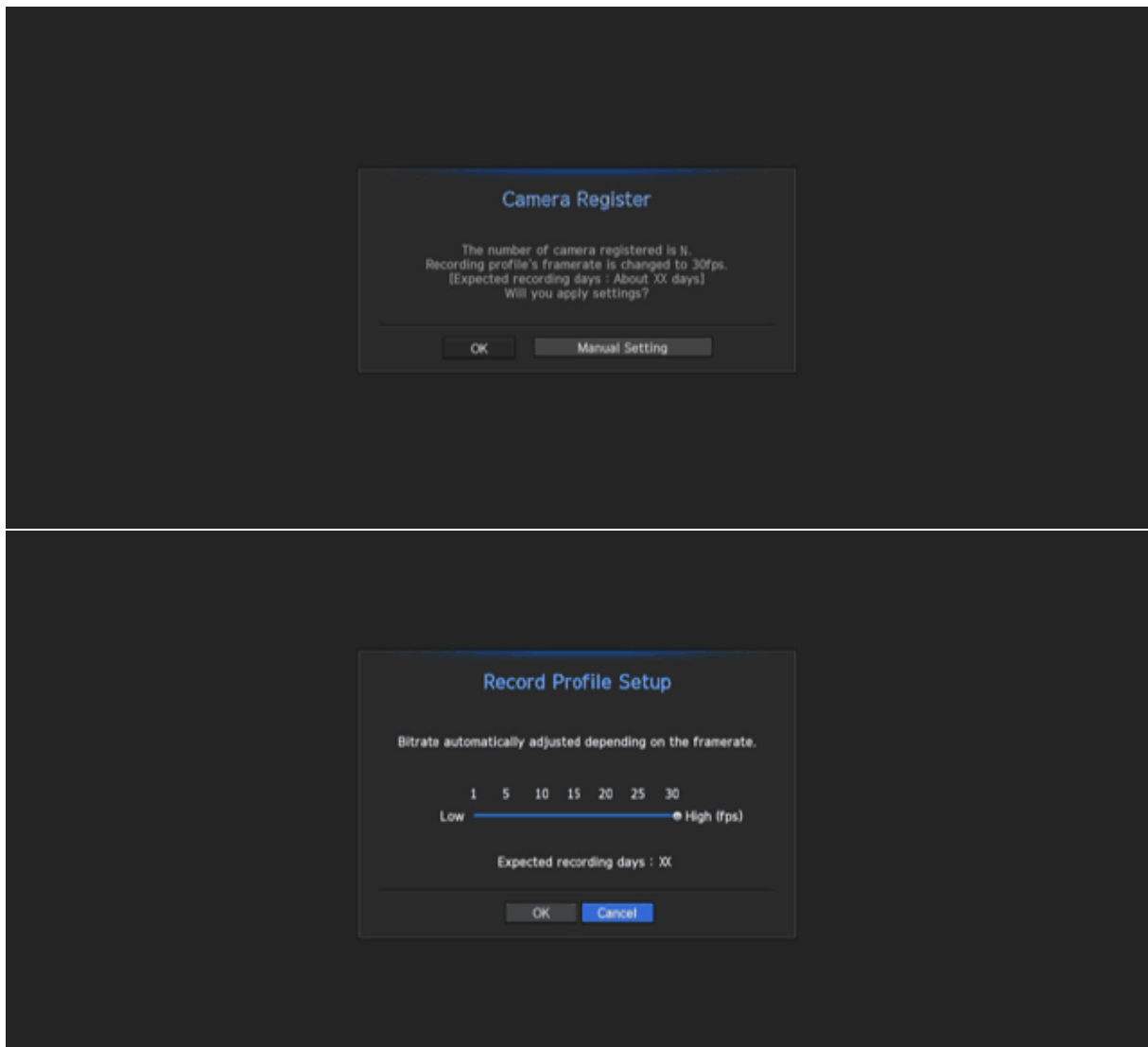
Prev Next Exit



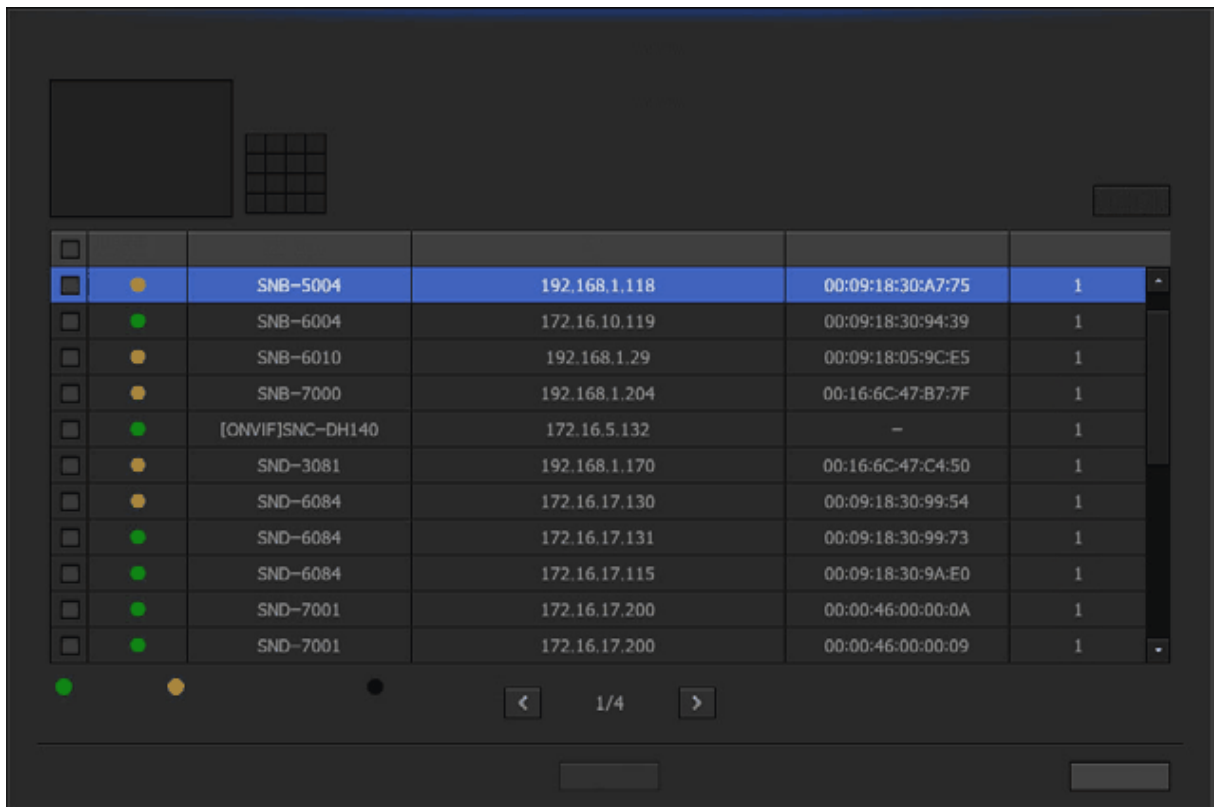
1. In the **[Language]** tab, select the language and press **[Next]** button
2. In the **[IP/PW]** tab, set the password you want to use and press **[Next]**
3. In the **[Network]** tab, setup the network range you want to use for the camera and the Internet

NOTE: Depends on the model of the unit, you may have 2 or more networks available in the NVR. Always dedicate **Network 1 (Camera)** for cameras and **Network 2 (Viewer)** for the Internet connection. If you have a Plug & Play unit, then Network 1 will be automatically assigned to 192.168.231.100. If it's an SRN-4000, then you can use **Network 1 (Camera)** and **Network 2 (Camera)** for the cameras, and use **Network 3 (Viewer)** for the Internet Connection.

4. Setup up **[Date/Time]** and click next to proceed

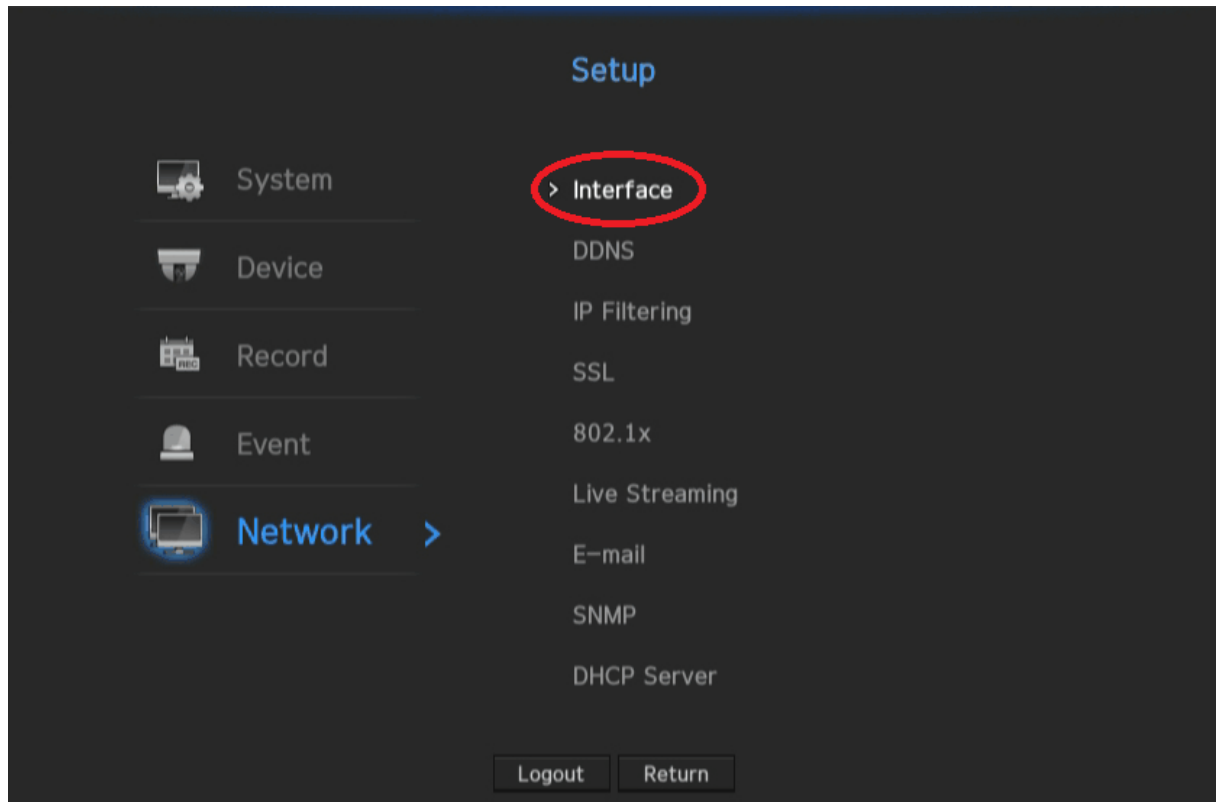


If there are 16 or less cameras searched, it will attempt to automatically register the device



But if there are more 16 cameras searched, then you have to first choose which camera to connect before proceeding to the next stage

3.2 Network Setup



From main menu select **[Network]** and click **[Interface]**

3.2.1 Interface Setup

Interface

Network Port

Network 1 (Camera) Setup 192.168.1.200

Network 2 (Viewer) Setup 192.168.2.200

Transfer bandwidth 160 Mbps Range(0 ~ 160)

Default Gateway ☐ Network1 ☒ Network2

OK Cancel

1. Click **[Setup]** to change the IP address for **Network 1** or **Network 2**
2. Change the **[Transfer Bandwidth]** for your **[Default Gateway]** which controls how much upload is allowed for remote viewing
3. Pick which network you want to use for Internet connection

NOTE: If this is PnP unit then Network 1 will always be in the 192.168.231.0 range and cannot be changed. For SRN-4000 you will have 4 separate networks instead of 2

Interface

Network Port 1

Protocol Type TCP 2

Device Port 554 ~ 558

UDP Port 8000 ~ 8159

Multicast IP Address 224 126 63 1

Multicast TTL 5

HTTP Port 80 3

Send SSL ☐ ON ☒ OFF

Backup Bandwidth ☒ Low ☐ Medium ☐ High

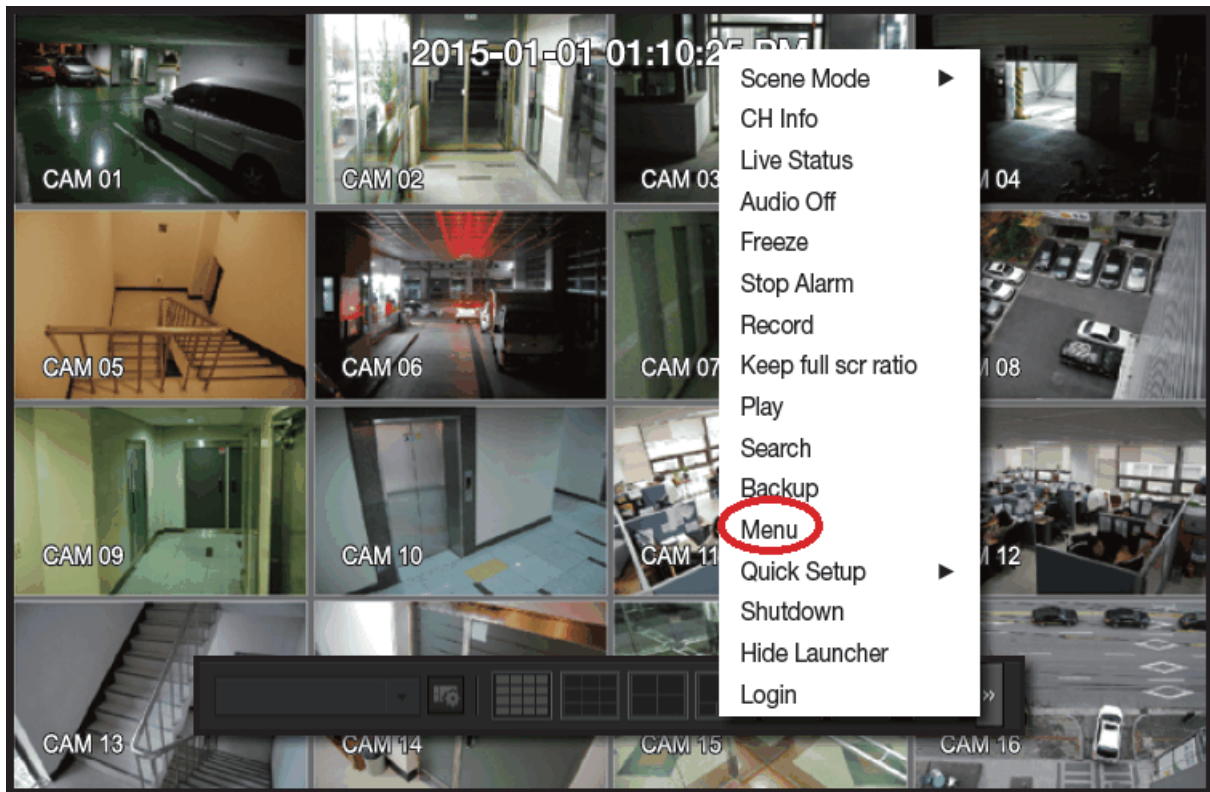
OK Cancel

1. Scroll over to the **[Port]** section
2. You can change the port number to whichever range you wish
3. Same to **TCP** ports you can change **HTTP** port to any number

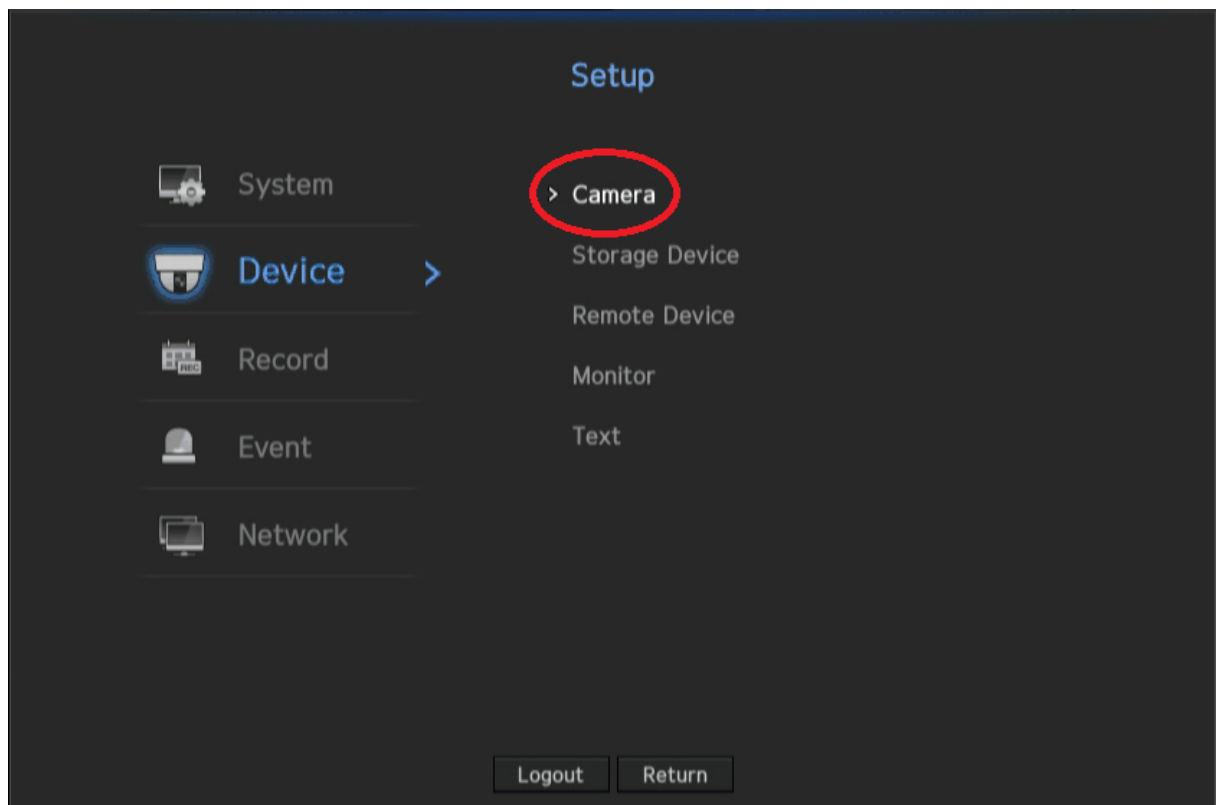
NOTE: If you want to establish remote connection from anywhere in the world, then you must port forward these ports in your router.

Visit www.portforward.com for more information

3.3 Camera Setup

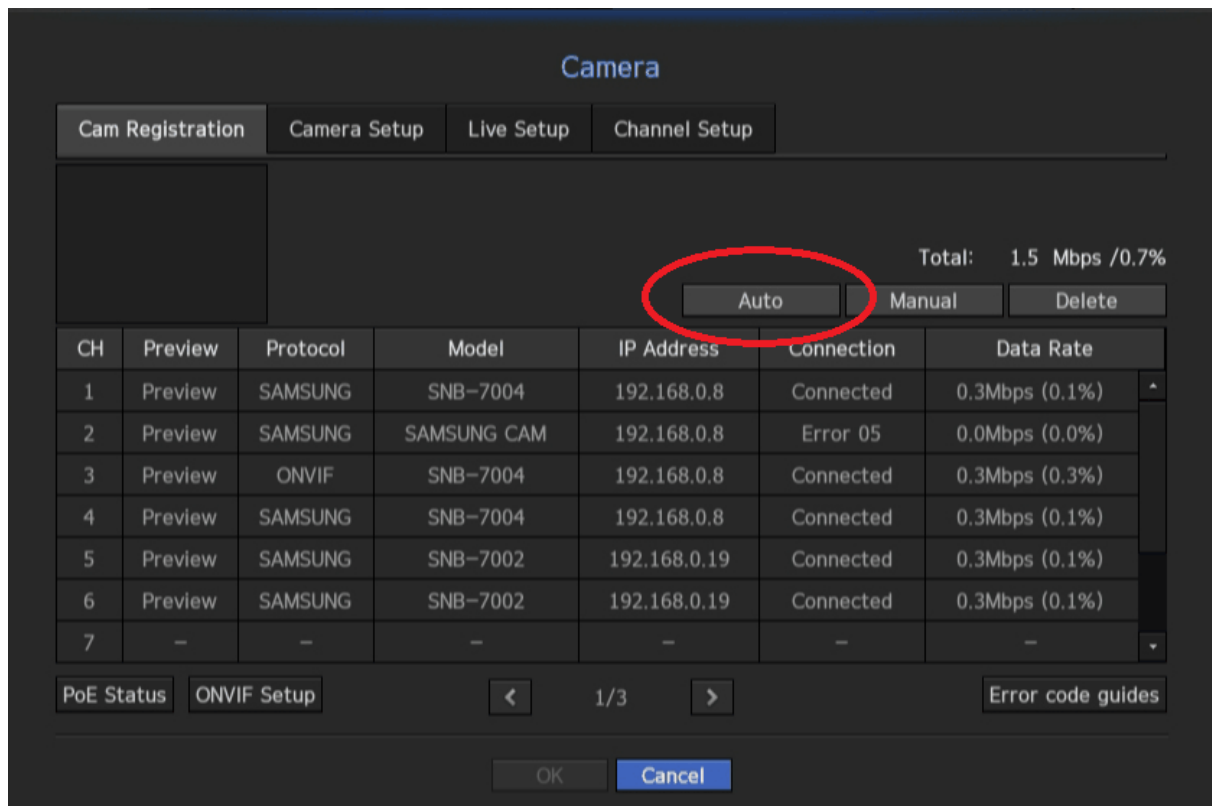


Right click on the mouse button and go to **[Menu]**



Go to **[Device]** and click **[Camera]**

3.3.1 Registering Camera



Camera

Cam Registration | Camera Setup | Live Setup | Channel Setup

Total: 1.5 Mbps / 0.7%

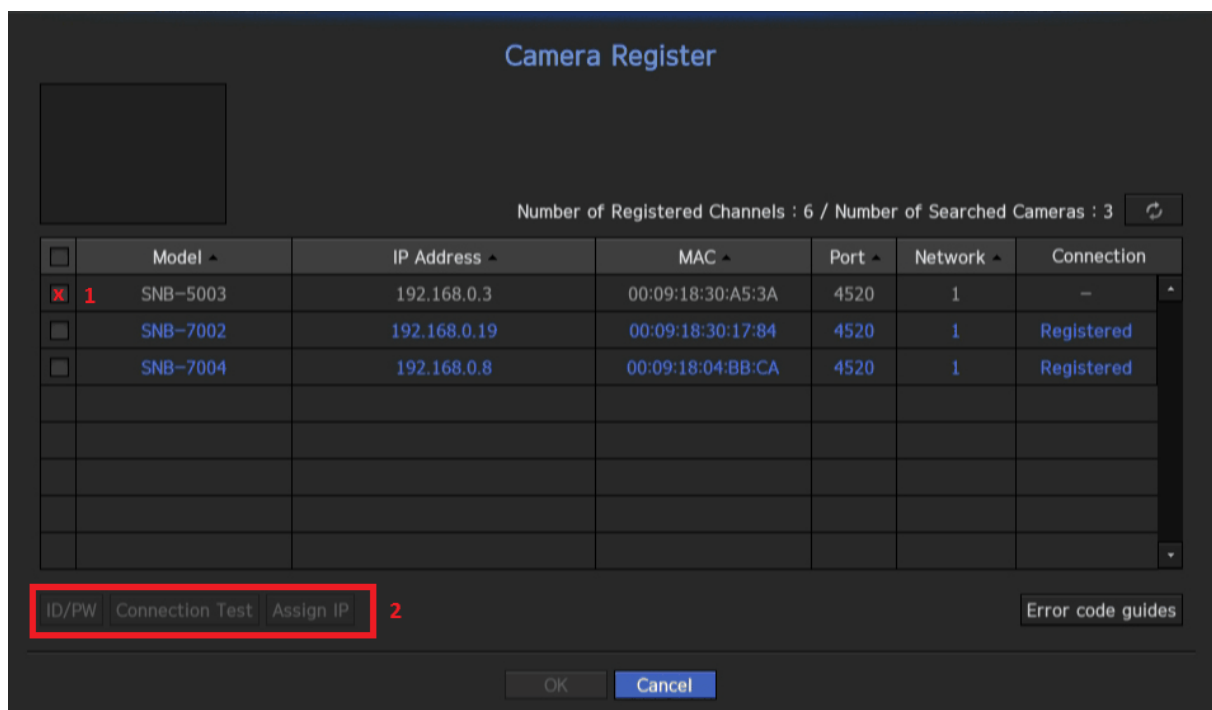
Auto | Manual | Delete

CH	Preview	Protocol	Model	IP Address	Connection	Data Rate
1	Preview	SAMSUNG	SNB-7004	192.168.0.8	Connected	0.3Mbps (0.1%)
2	Preview	SAMSUNG	SAMSUNG CAM	192.168.0.8	Error 05	0.0Mbps (0.0%)
3	Preview	ONVIF	SNB-7004	192.168.0.8	Connected	0.3Mbps (0.3%)
4	Preview	SAMSUNG	SNB-7004	192.168.0.8	Connected	0.3Mbps (0.1%)
5	Preview	SAMSUNG	SNB-7002	192.168.0.19	Connected	0.3Mbps (0.1%)
6	Preview	SAMSUNG	SNB-7002	192.168.0.19	Connected	0.3Mbps (0.1%)
7	-	-	-	-	-	-

PoE Status | ONVIF Setup | < 1/3 > | Error code guides

OK | Cancel

If the NVR is Plug & Play then it should automatically registered the cameras, otherwise hit **[Auto]** to start searching for the cameras



Camera Register

Number of Registered Channels : 6 / Number of Searched Cameras : 3

	Model	IP Address	MAC	Port	Network	Connection
<input checked="" type="checkbox"/>	SNB-5003	192.168.0.3	00:09:18:30:A5:3A	4520	1	-
<input type="checkbox"/>	SNB-7002	192.168.0.19	00:09:18:30:17:84	4520	1	Registered
<input type="checkbox"/>	SNB-7004	192.168.0.8	00:09:18:04:BB:CA	4520	1	Registered
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						

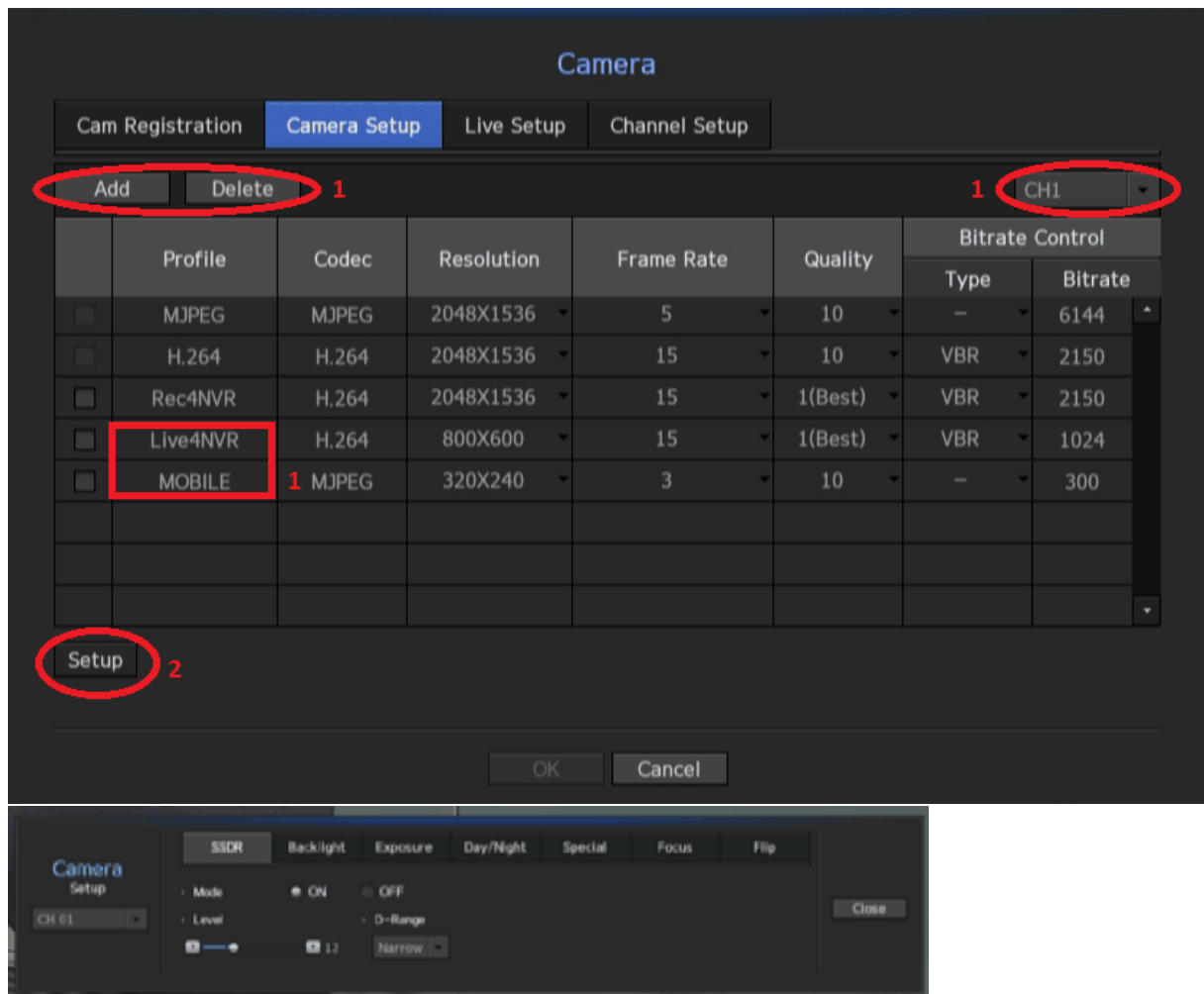
ID/PW | Connection Test | Assign IP | 2 | Error code guides

OK | Cancel

1. Select the cameras you want to register to the NVR
2. You can assign IP address to all selected cameras by click the **[Assign IP]** button, change the login password of the cameras if they aren't using default login, from **[ID/PW]** or skip all these process and click **[Connection Test]** to check make sure the cameras are connected correctly

NOTE: NVR sometime will detect the same cameras with same IP address, this is due to the NVR picking up Samsung protocol as well as ONVIF protocol.
Do not tick the ONVIF box unless it isn't a Samsung camera

3.3.2 Adjusting a Camera



From the main camera setting page go to **[Camera Setup]** tab

1. You can add, delete and modify the configuration for each camera's profile to fine tune the resolution, frame rate and bitrate to suit the environment.
It is recommended to always create an additional profile for each individual camera at a lower resolution than normal, so it can stream live video more efficient
2. You can also click **[Setup]** to enter the camera's main menu to adjust some basic settings

Camera

Cam Registration Camera Setup **Live Setup** Channel Setup

CH	Live Replacement ▼	Profile	Codec	Resolution	Frame Rate	Quality
1	Auto ▼	—	—	—	—	—
2	—	—	—	—	—	—
3	Manual ▼	Live4NVR ▼	H.264	800X600	15 Fps	20
4	Recording ▼	H.264	H.264	2048X1536	15 Fps	10
5	Auto ▼	—	—	—	—	—
6	Auto ▼	—	—	—	—	—
7	—	—	—	—	—	—
8	—	—	—	—	—	—
9	—	—	—	—	—	—
10	—	—	—	—	—	—

< 1/2 >

OK Cancel

Next click **[Live Setup]** from the tab


This section is where you have to choose a profile to send it to the main monitor. Usually it is recommended to leave on **[Auto]** so the NVR can adjust resolution accordingly on the live viewing, but in some case you can change it so it uses a specific profile for live viewing on the monitor, but please be mindful it will sometime cause extreme latency if the resolution chose for the profile is too high in resolution.

Camera

Cam RegistrationCamera SetupLive SetupChannel Setup

Apply to CH

CH	Video ▾	Audio ▾	Camera Name
1	ON ▾	OFF ▾	CAM 01 ▴
2	ON ▾	OFF ▾	CAM 02
3	ON ▾	OFF ▾	CAM 03
4	ON ▾	OFF ▾	CAM 04
5	ON ▾	OFF ▾	CAM 05
6	ON ▾	OFF ▾	CAM 06
7	ON ▾	OFF ▾	CAM 07
8	ON ▾	OFF ▾	CAM 08 ▾

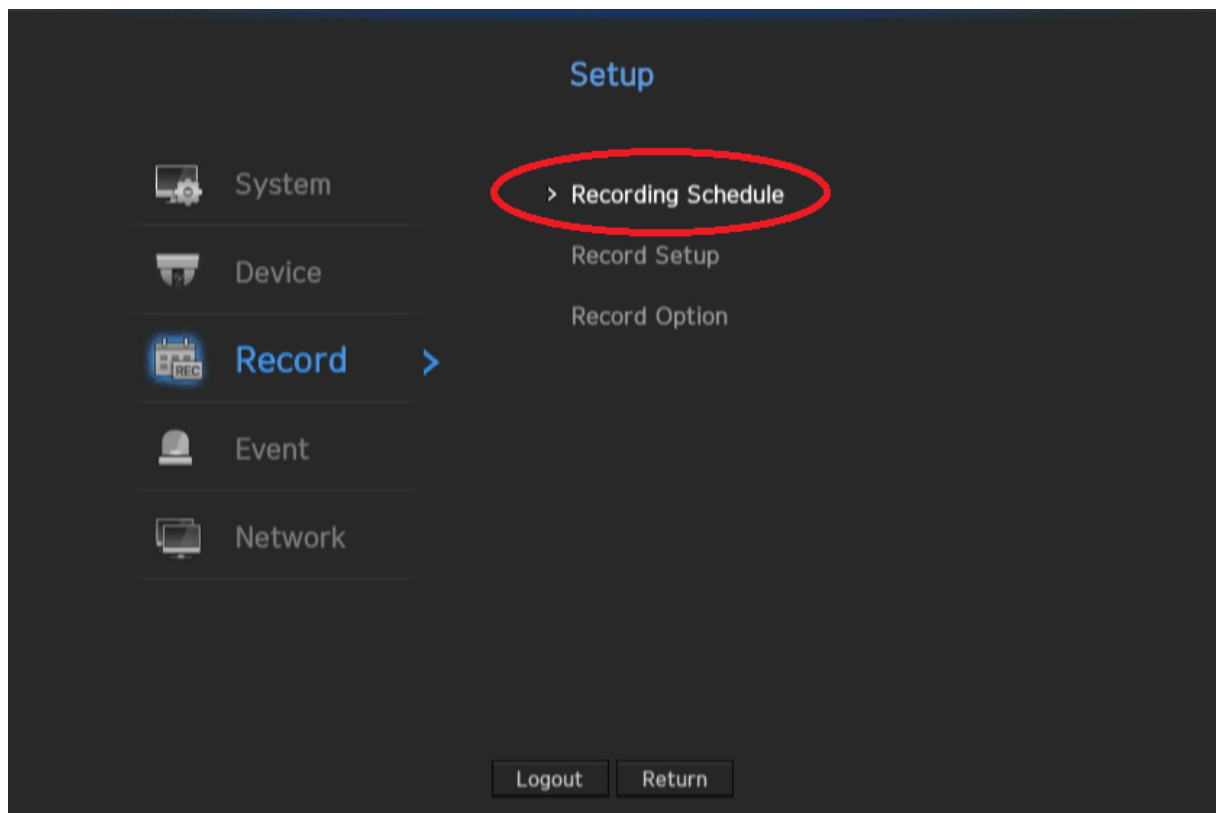
 If you cannot receive events from NVR, please check the network camera settings.

<1/2>

OKCancel

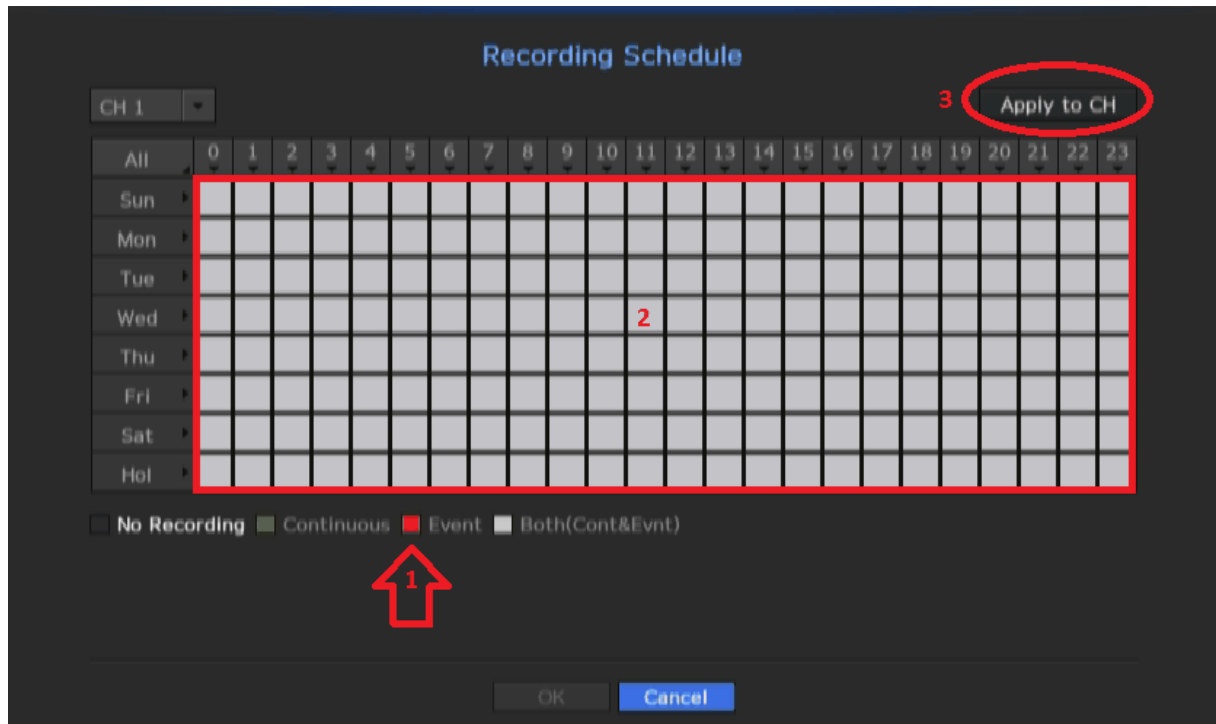
Lastly Channel Setup allow you to enable, disable Video and Audio as well as renaming each individual channel.

4 Record Setup

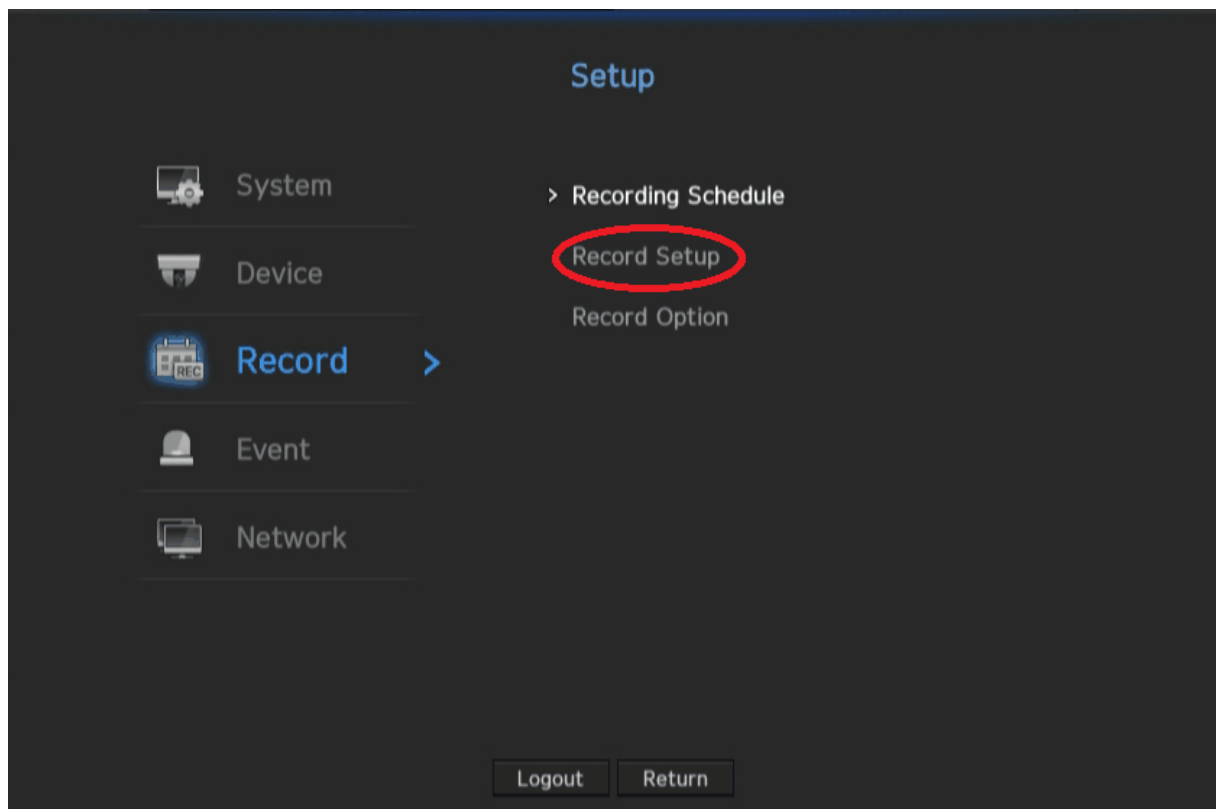


First go to **[Record]** from main menu then choose **[Recording Schedule]**

4.1 Configuring Recording



1. Choose a type of recording you want the NVR to perform
2. Drag grid in the table to change the recording mode
3. Click **[Apply to CH]** to apply the same setting to all cameras



Go to back to the **[Record]** menu and select **[Record Setup]**



1. **[Standard]** is the setting for continuous recording mode and **[Event]** is for motion recording and recording based on basic analytic from the camera

FULL records all frame streamed from the camera

KEY limits the recording to i-frames only and will record at 1 - 2 fps at all times

OFF simply turn off the recording all together

2. **[Limit]** is bandwidth setting which set the amount of data allowed for each camera. If the camera bandwidth exceeds **[Limit]** of the NVR, then it will forced the camera to record at **KEY** regardless of the camera setting

3. Event basically set the **[Pre]** and **[Post]** recording timer for **[Event]** recording

4. Enable **[Audio]** to record live audio is a microphone is setup

Record Setup

NVR
Camera

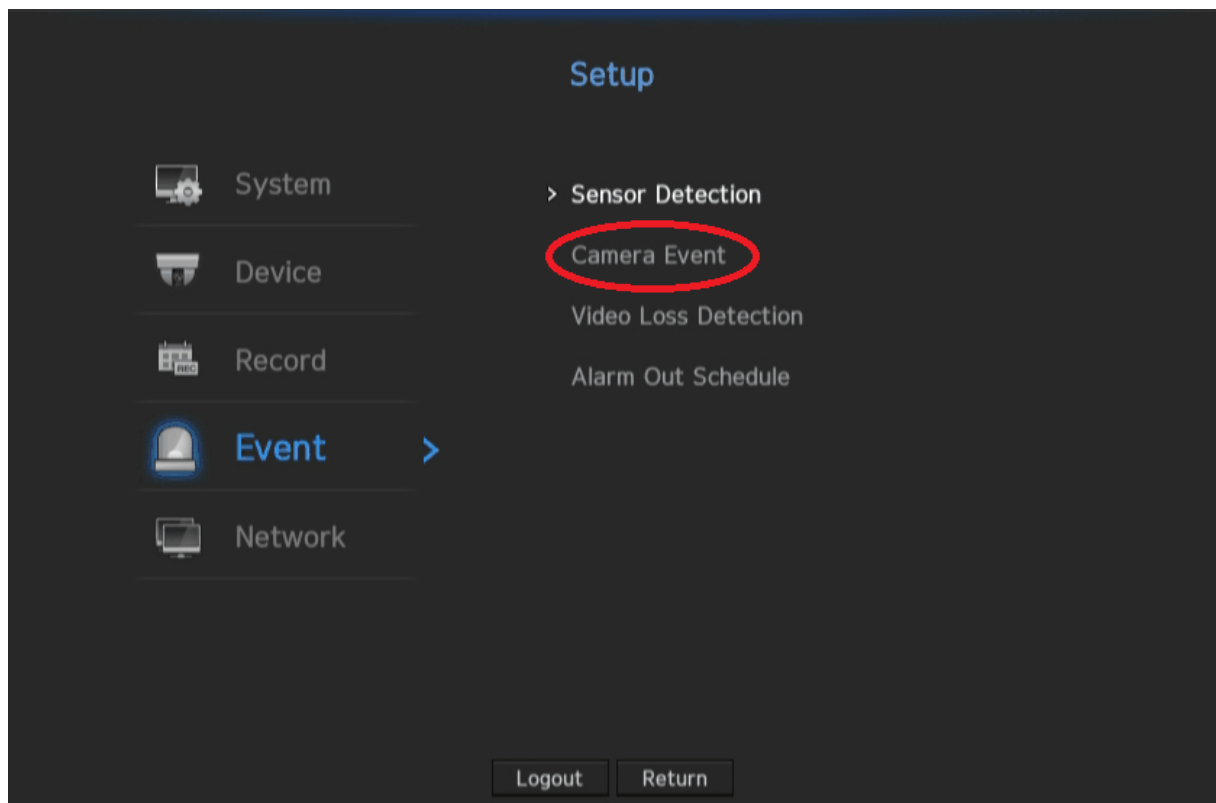
CH	Profile	Codec	Resolution	Frame Rate	Quality
1	H.264	H.264	2048X1536	15Fps	10
2	—	—	—	—	—
3	H.264	H.264	2048X1536	15Fps	11
4	H.264	H.264	2048X1536	15Fps	10
5	H.264	H.264	2048X1536	20Fps	1(Best)
6	H.264	H.264	2048X1536	20Fps	1(Best)
7	—	—	—	—	—
8	—	—	—	—	—

When profile is changed, re-measure frame data in NVR tab.

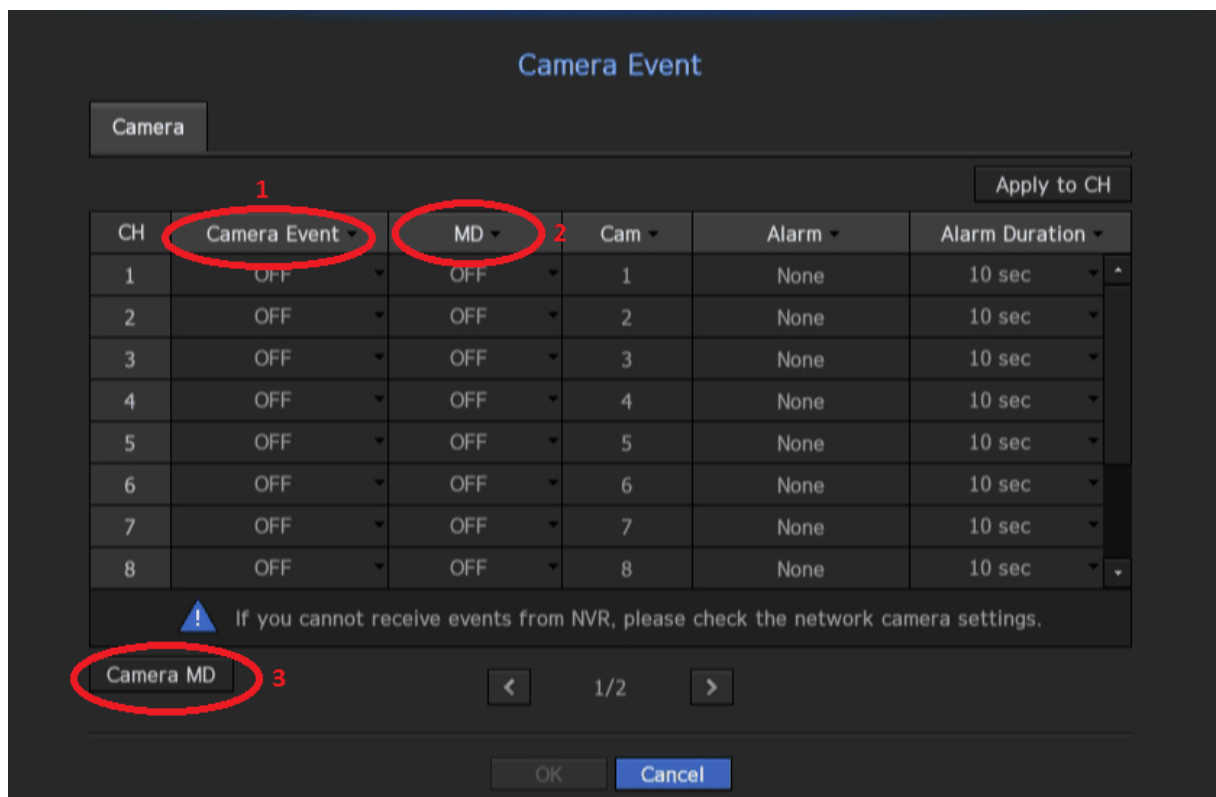
<
1/2
>

OK
Cancel


If you scroll over to the **[Camera]** tab, it will allow you to configure the profile you want the NVR to record at




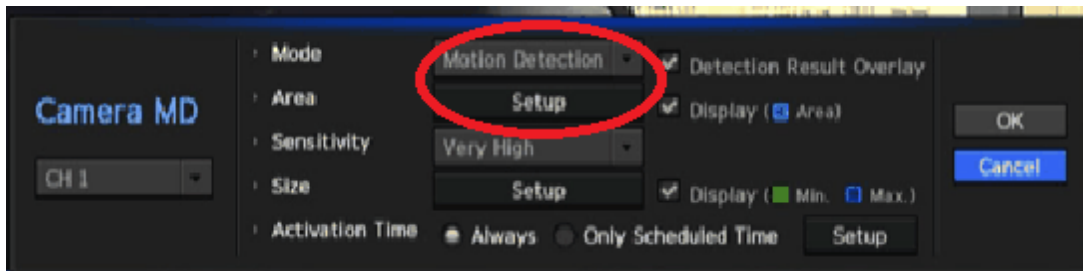
Return to the main menu and go to **[Event]** and click **[Camera Event]**



1. **[Camera Event]** choose whether or not to use a camera event
2. **[MD]** choose whether or not to use motion detection

[Camera Event] or **[MD]** is represented by  on the bottom left corner of each camera when motion or event is detected

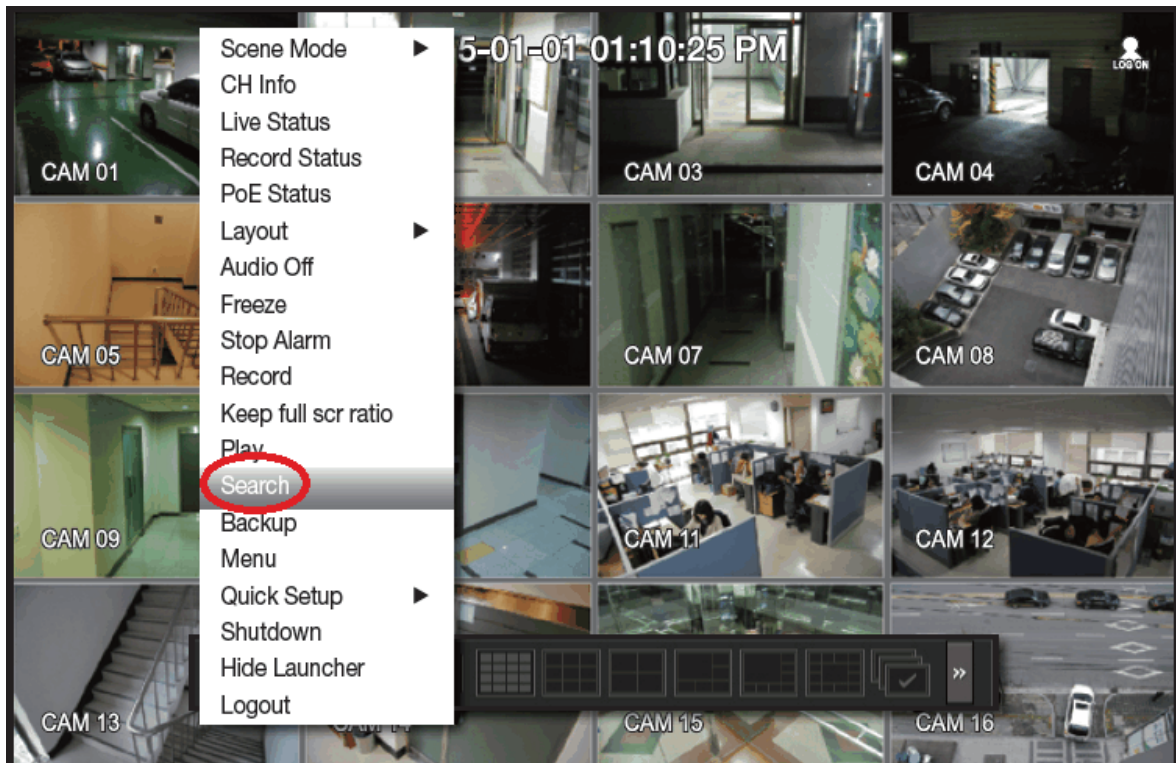
3. If **[MD]** is turned on but you don't see  on each camera then you must go manually setup the motion by click the **[Camera MD]** button

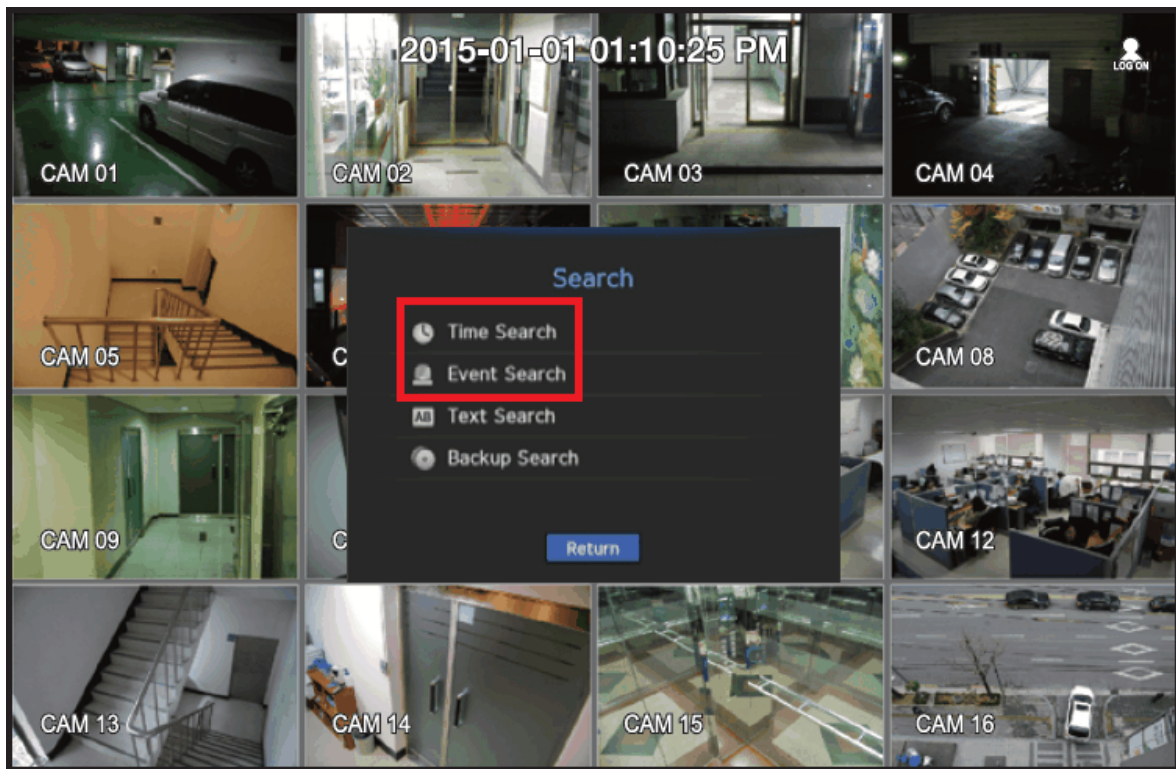


Make sure **[Motion Detection]** is enabled and the **[Detection Area]** is setup

5 Playbacks

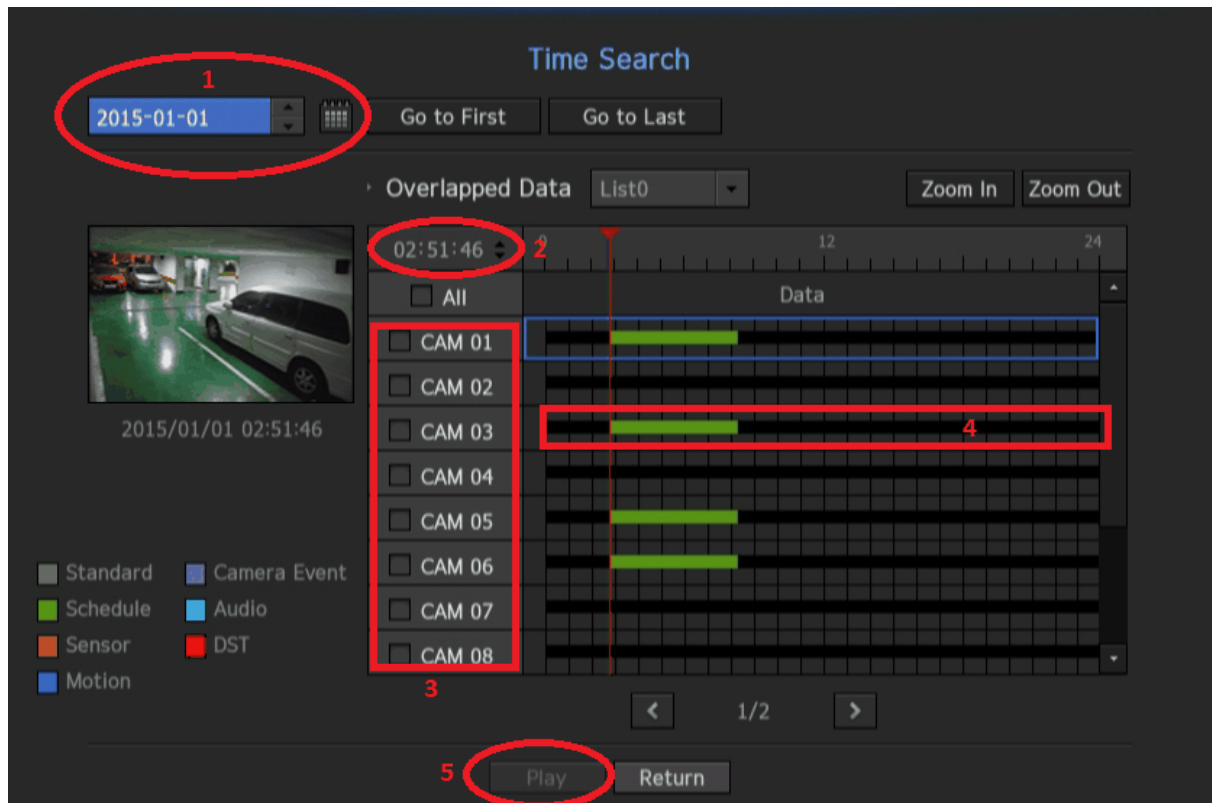
5.1 Search





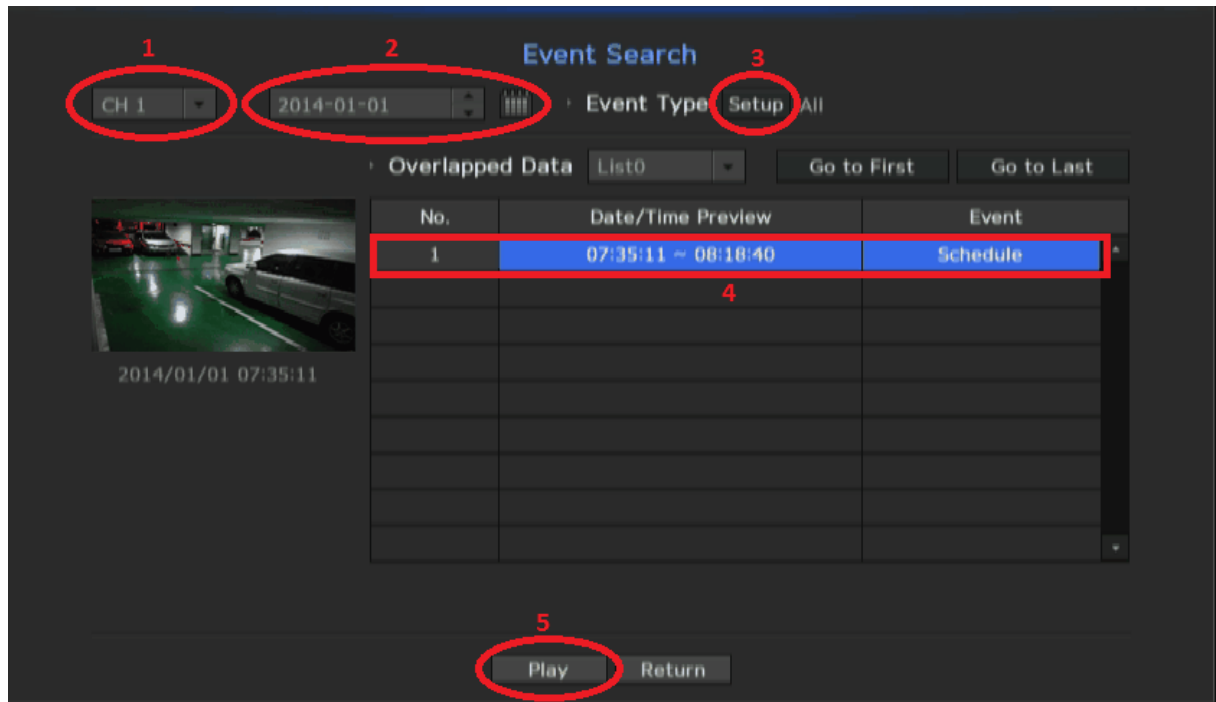
From the main screen right click on the mouse and go to **[Search]** and select **[Time Search]** or **[Event Search]**

5.1.1 Time Search



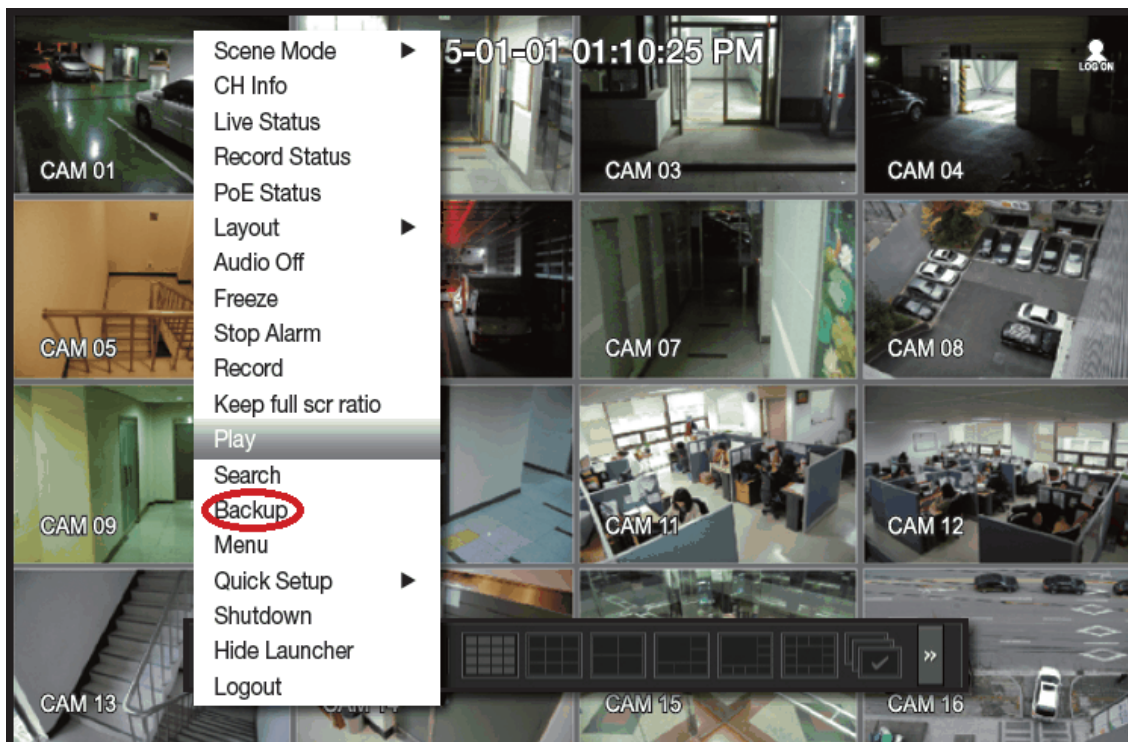
1. Choose a date from the calendar
2. Select the time
3. Pick the camera you want to look at
4. If there are footage present, you will see a colored bar as indicator. Depends on the type of record the color may varied
5. Click **[Play]** when ready

5.1.2 Event Search

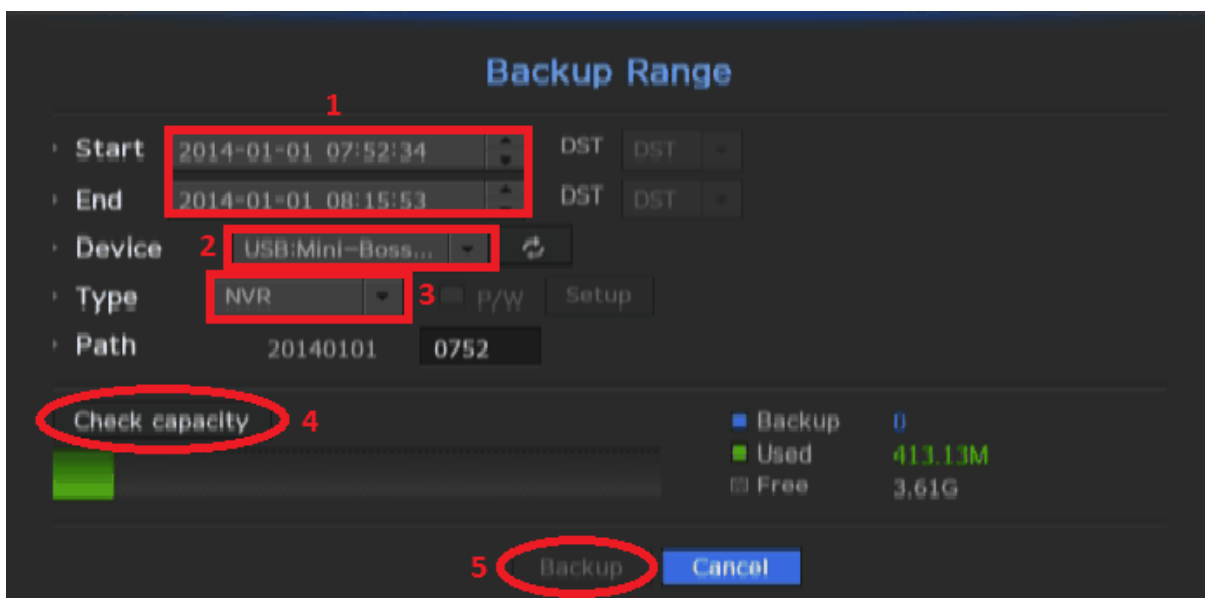


1. Select the channel you want to look at
2. Select the date from the calendar
3. Choose a event type you want to search from the list
4. The table will automatically update itself depends on the event type, choose a particular event you want to see
5. Click **[Play]** when ready

5.2 Backup



From the main screen right click on the mouse and go to **[Backup]**



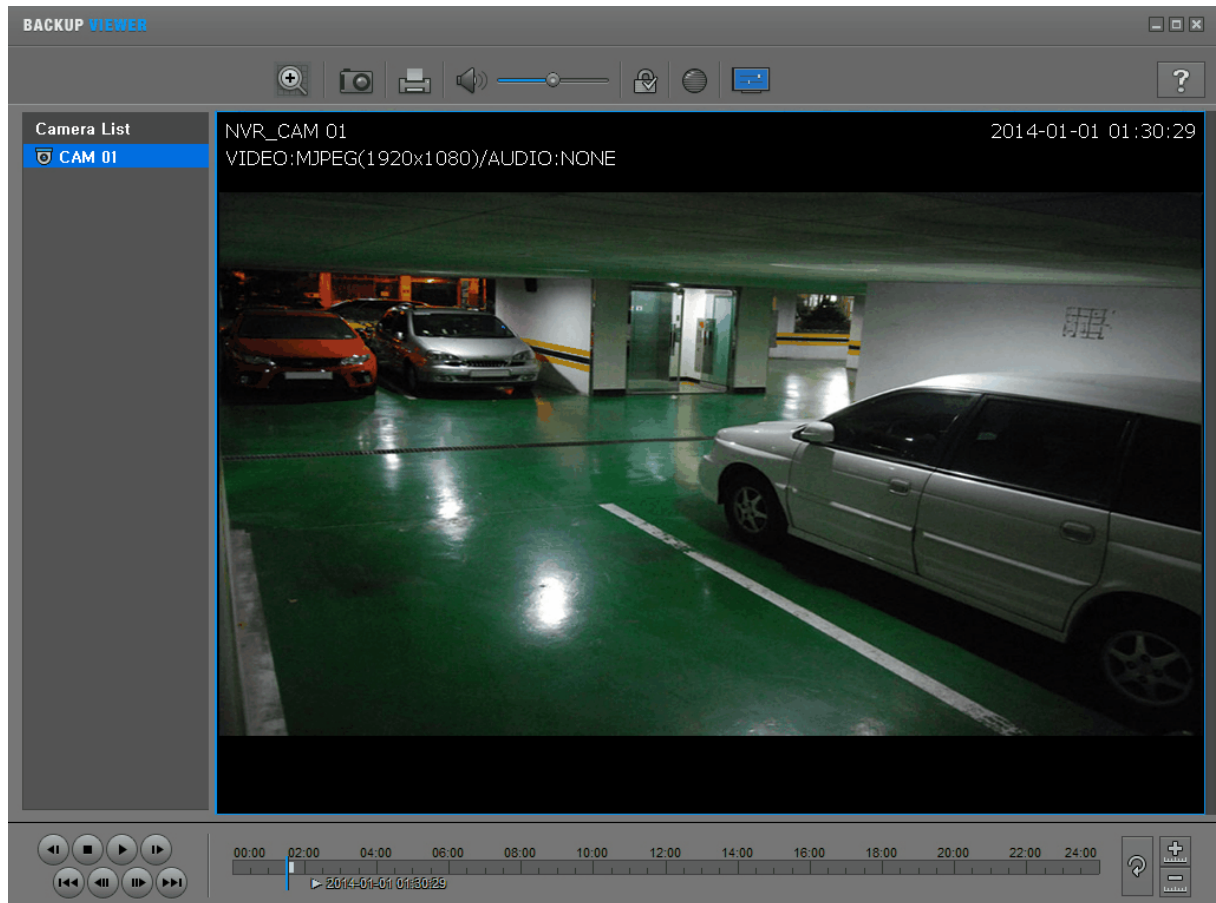
1. Select the start and end time
2. Make sure the NVR pickup the USB that was inserted into the USB port
3. Choose the backup file type that you want to save as

NVR Can only be played back using the NVR itself

AVI Standard video format, can be played on almost any computer as long as the codec is installed (**Not all model supports AVI**)

SEC Samsung propitiatory format, can only be played on **Windows** OS, it comes with its own player, with full speed control, multiple camera playback, snapshot as well as printing and watermarks

5.2.1 Backup Viewing



Simply click the **[Play]** icon to start playing the footage