Quick Start Guide

Hybrid DVR
DS-9016HFI-ST, DS-9016HWI-ST

NVR
DS-96xxNI-ST/RT

Plug ’n Play NVR
DS-77xxNI-SP

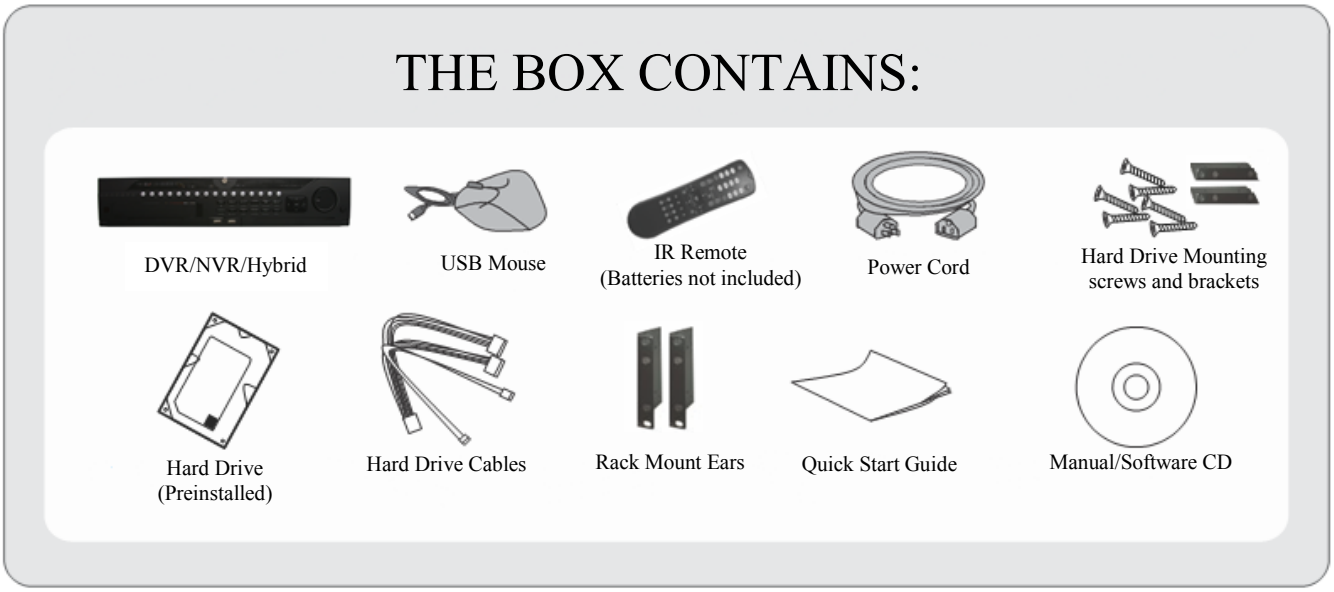
Note: For more information refer to the complete User Manual located on the CD-ROM

OVERVIEW

Please connect a monitor and a USB mouse (supplied) to the DVR/NVR for configuration purposes

1. OVERVIEW

WHAT'S IN THE BOX

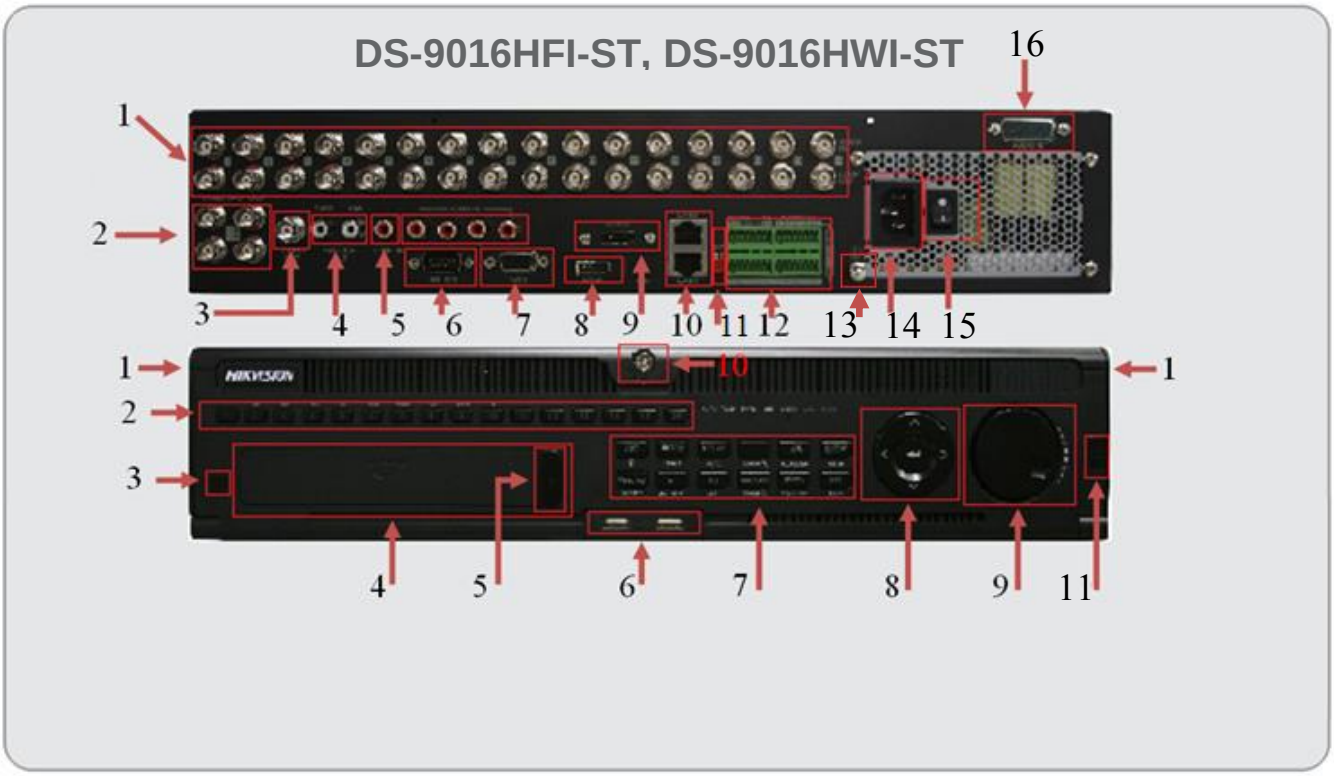


Please note, that the Quick Start Guide is compiled for the latest firmware versions. Please upgrade the firmware of the DVR/NVR to the latest version before proceeding. Also note, that the CD may contain outdated manuals and software.

For latest firmware, manual and software downloads please visit:

www.hikvision.com/en/us/download.asp

FRONT AND REAR VIEW



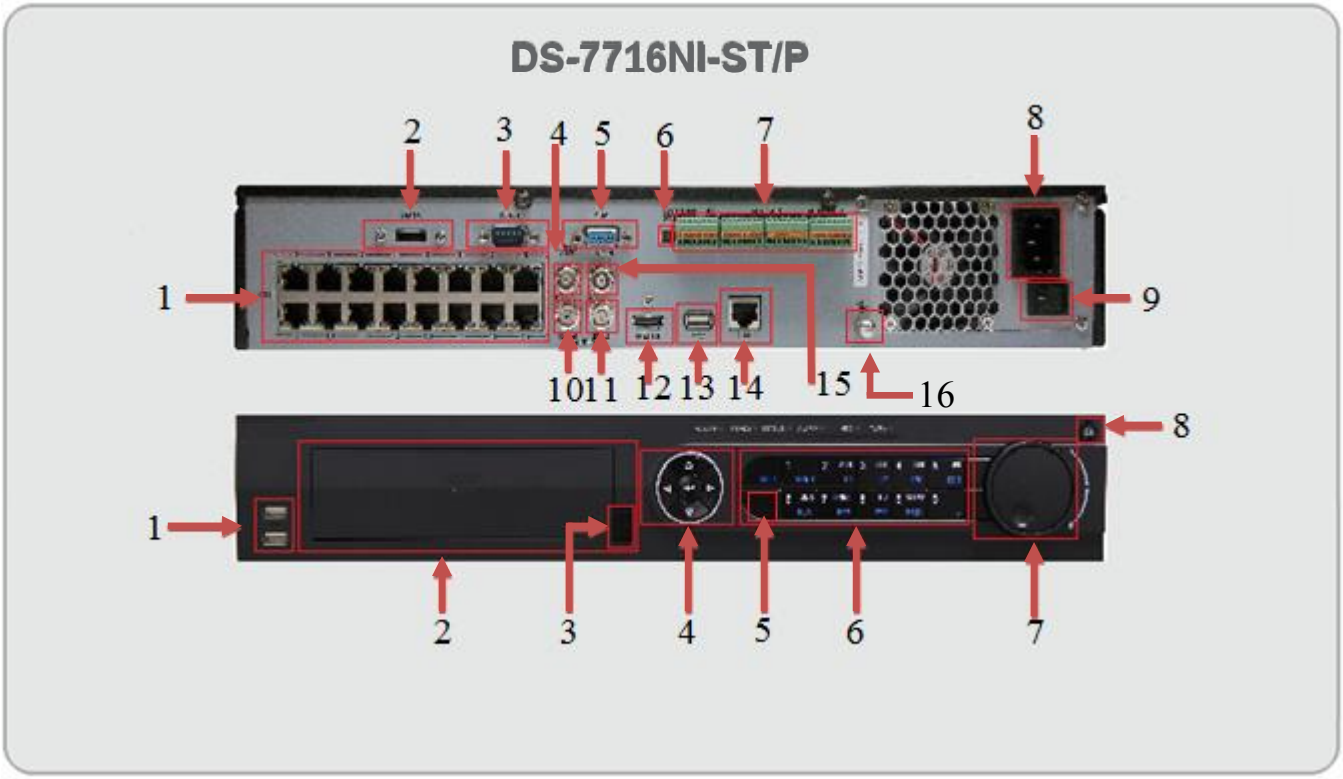
REAR VIEW

1. Analog Camera Inputs
2. Spot Monitor Outputs (x4)
3. BNC Monitor Output (x1)
4. Audio Out for BNC and VGA
5. Line Input (for 2 way audio)
6. RS-232
7. VGA Monitor Output (x1)
8. HDMI Monitor Output (x1)
9. e-SATA Port
10. RJ-45 Network Ports (x2)
11. "RESERVED"
12. Alarm In/Out, RS-485 Pins
13. Grounding Post
14. Power Plug
15. Power Switch
16. Additional Audio Inputs for channels 5-16

FRONT VIEW

1. Front Panel Release (to expose HDDs)
2. Alpha-Numerical Buttons (1-16)
3. IR Receiver
4. DVD-RW Drive (Optional)
5. DVD-RW Eject Button
6. USB Ports (x2)
7. Control Buttons
8. Directional and Enter Buttons
9. Jog Control
10. Front Panel Lock
11. Power Button

FRONT AND REAR VIEW



REAR VIEW

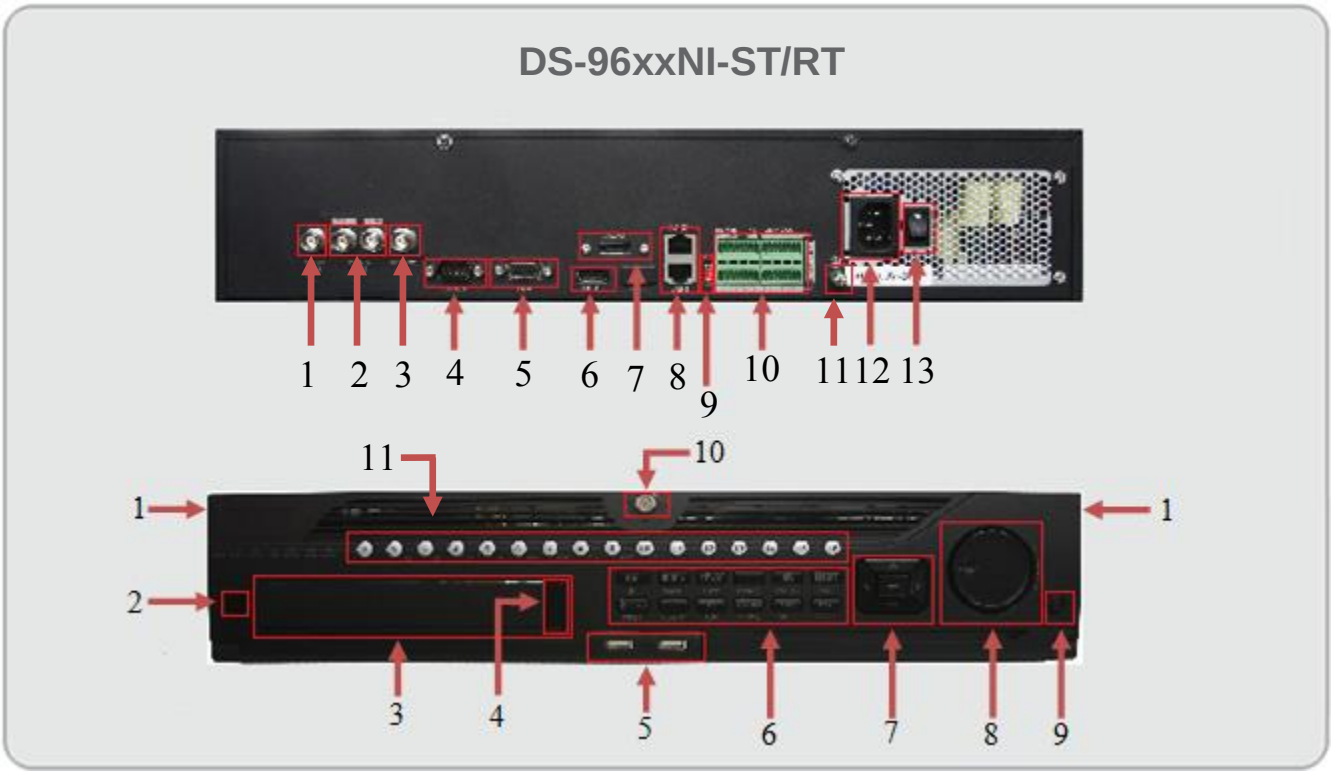
1. Built in POE Ports (x16)
2. e-SATA Port
3. RS-232
4. BNC Monitor Output
5. VGA Monitor Output
6. “RESERVED”
7. Alarm In/Out, RS-485 Pins
8. Power Plug
9. Power Switch
10. Audio Out for BNC
11. Audio Out for VGA
12. HDMI Monitor Output
13. USB Port (x1)
14. RJ-45 Network Port
15. Line Input (for 2 way audio)
16. Grounding Post

FRONT VIEW

1. USB Ports (x2)
2. DVD-RW Drive (Optional)
3. DVD-RW Eject Button
4. Directional and Enter Buttons
5. IR Receiver
6. Control Buttons
7. Jog Control
8. Power Button

FRONT AND REAR VIEW

DS-96xxNI-ST/RT



REAR VIEW

1. BNC Monitor Output (x1)
2. BNC and VGA Audio Output (x2)
3. Line Input (for 2 way audio)
4. RS-232
5. VGA Monitor Output (x1)
6. HDMI Monitor Output (x1)
7. e-SATA Port
8. RJ-45 Network Ports (x2)
9. “RESERVED”
10. Alarm In/Out, RS-485 Pins
11. Grounding Post
12. Power Plug
13. Power Switch

FRONT VIEW

1. Front Panel Release (to expose HDDs)
2. IR Receiver
3. DVD-RW Drive (Optional)
4. DVD-RW Eject Button
5. USB Ports (x2)
6. Control Buttons
7. Directional and Enter Buttons
8. Jog Control
9. Power Button
10. Front Panel Lock
11. Control Buttons

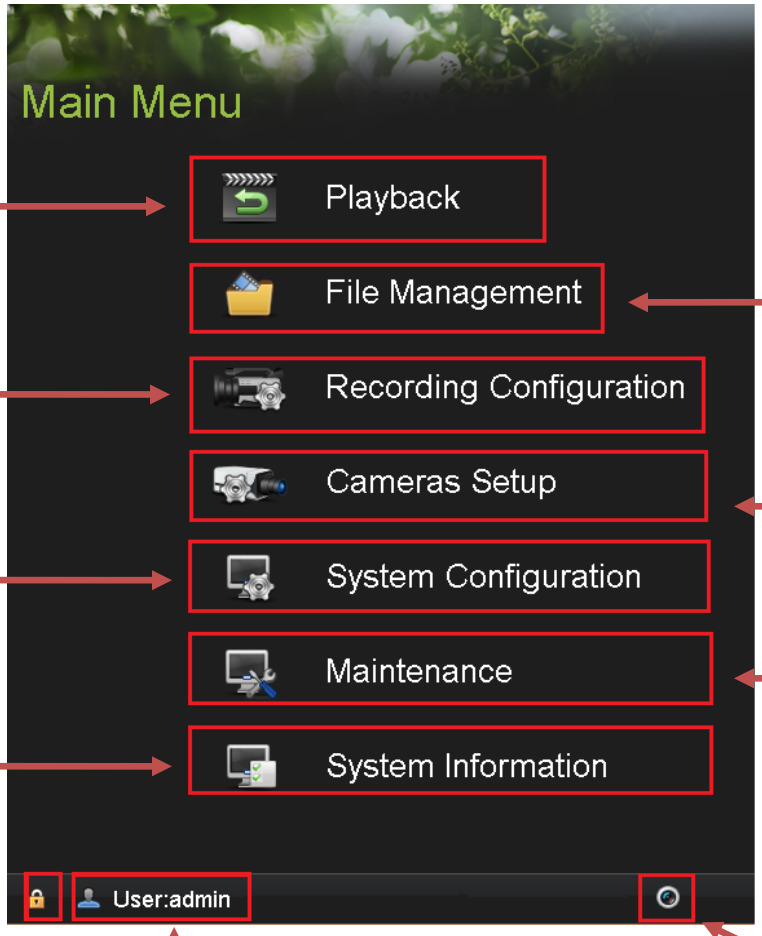
2. MAIN MENU LAYOUT

MAIN MENU LAYOUT

DEFAULT USERNAME: admin DEFAULT PASSWORD: 12345

(Please note, that the username and password are case sensitive)

IT IS STRONGLY RECOMMENDED TO CHANGE THE DEFAULT PASSWORD



View recorded video and make Backup

Setup recording type, motion detection, resolution and frame rate and more

Setup Date/Time, Network, screen settings, user accounts and more

Model number, firmware version, camera status, HDD status and more

Search for snapshots, POS activity, make large backups

Add cameras, Change brightness, contrast… Camera name, PTZ, Privacy mask

Upgrade firmware, factory default, system logs, import/export settings

Log Out and Lock the DVR/NVR

Displays the current logged in user

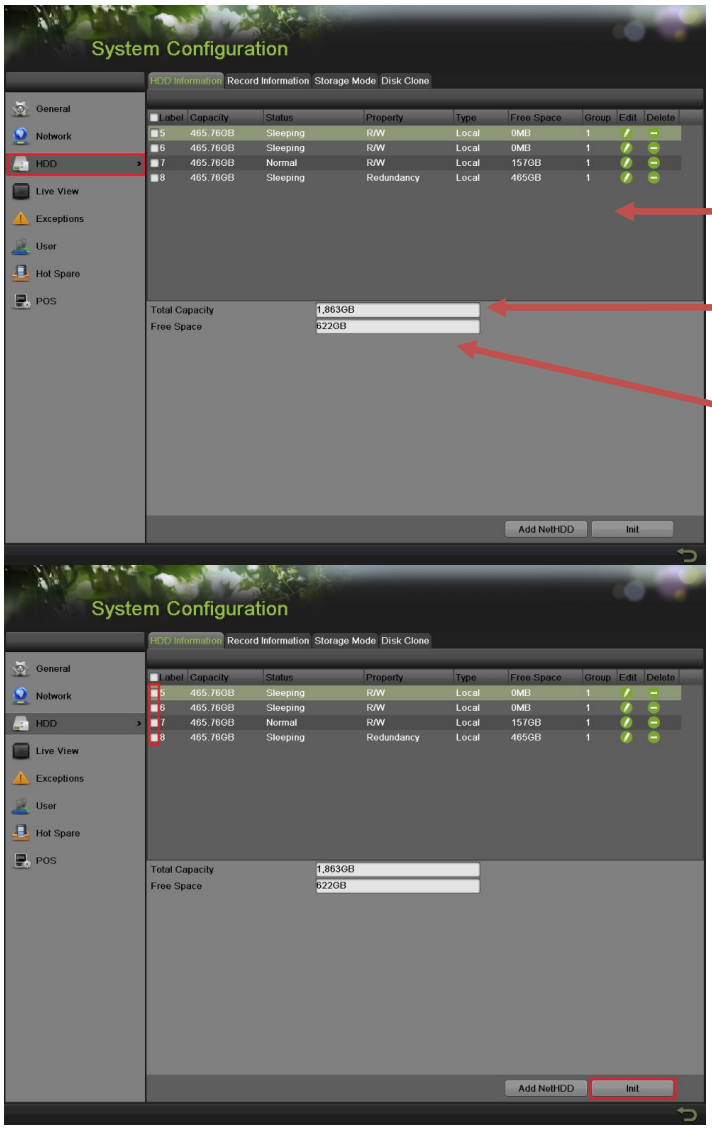
Exit MENU to Live View

3. FORMATTING THE HARD DRIVE

FORMATTING THE HARD DRIVE

If the Hard Drive(s) (HDD) is not formatted (initialized), the DVR/NVR will begin to beep. The beeping will continue until the HDD is formatted. To format the HDD, go to:

"MENU" > "SYSTEM CONFIGURATION" > "HDD"
Select the HDDs that need to be formatted, and press "INIT"



List of HDDs

Total HDD Space

Free Space

Please Note:

Units purchased with HDDs, already come with formatted HDDs

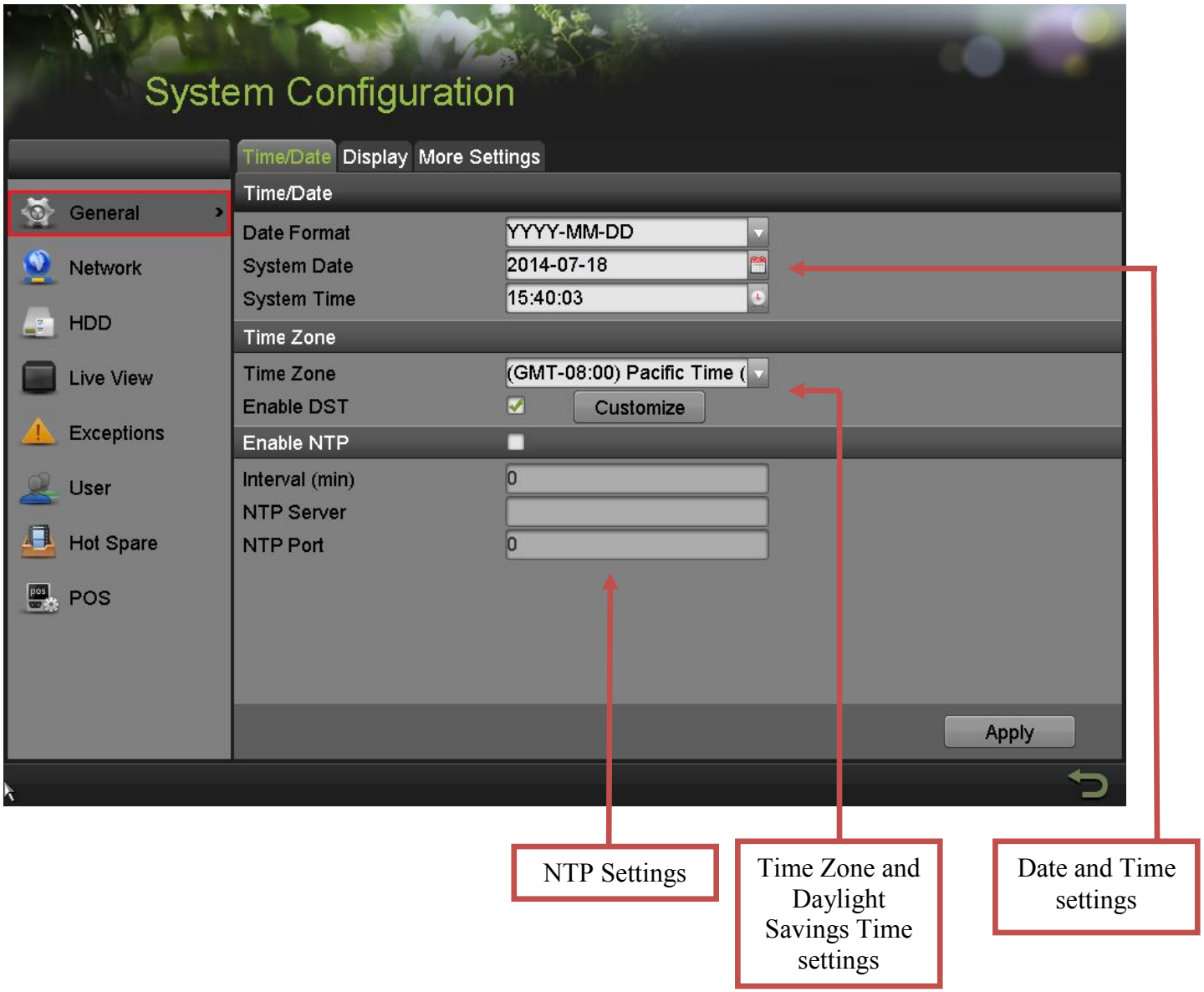
Formatting the HDDs also erases the recorded video from the HDDs (this does not affect the settings).

4. SETING UP DATE/TIME

DATE AND TIME SETUP

To setup the Time and Date on a DVR/NVR, please go to:

"MENU" > "SYSTEM CONFIGURATION" > "GENERAL"



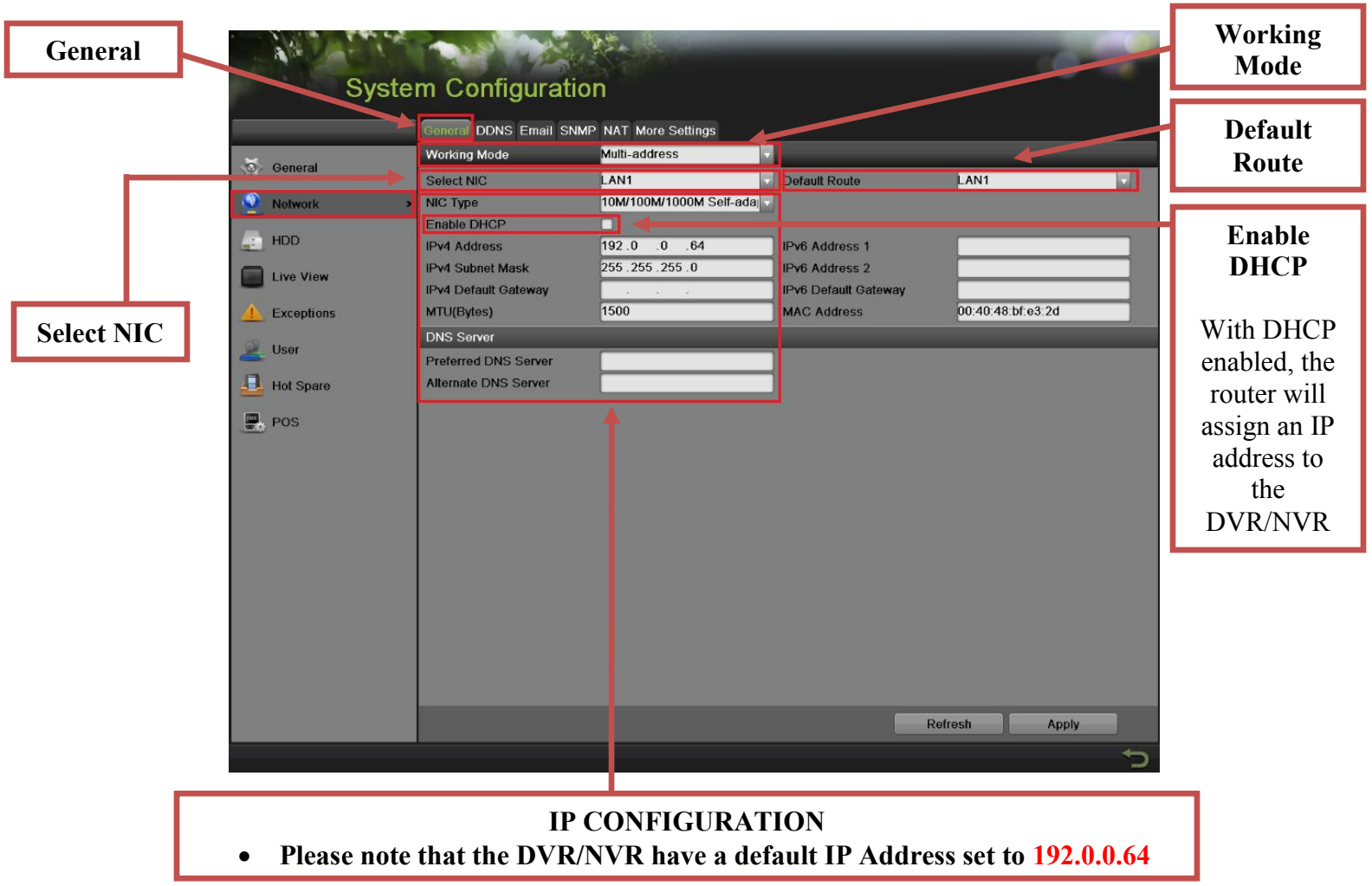
5. SETTING UP THE NETWORK

SETTING UP NETWORK ACCESS

Networking a DVR/NVR requires 3 steps:

1. Assign an **IP address, Default Gateway, Subnet Mask, and a DNS server (Please note: DNS, not DDNS)** to the DVR/NVR
2. Forward the appropriate ports on the router **(Port Forwarding)**.
3. Register **DDNS** (DDNS registration is required only if the public IP address is Dynamic).

To assign an **IP ADDRESS**, go to **"MENU">"SYSTEM CONFIGURATION">"NETWORK"**



SETTING UP NETWORK ACCESS

Working Mode, Select NIC and **Default Route** do not exist in the **DS-7716NI-SP/16** Plug-n-Play NVR

Working Mode sets the binding method between the 2 network cards.

Working Mode has 3 modes:

- **Net Fault-tolerance** (Both LAN ports need to be connected to the camera network. In case one LAN port fails, the other one will take over the connection. This is a Network Redundancy Mode)
- **Load Balance** (Both LAN ports need to be connected to the camera network. The LAN cards split the network load. This is recommended for DS-9664NI-ST/RT)
- **Multi-Address** (In this mode the LAN cards operate independently from each other. One LAN port will connect to the camera network, the other LAN will connect to the Router for remote access).

Default Route determines which LAN port is used for accessing the DVR/NVR and not used to connect to IP cameras

For DVRs/NVRs with 32 channels or less, set the **Working Mode** to **MULTI-ADDRESS** (For this to take effect, please **restart** the DVR/NVR).

On the back of the DVR/NVR there are 2 LAN ports. The **bottom port is LAN1**, the **top port is LAN2** Connect **LAN1** to the Router for remote access and connect **LAN2** to the POE switch with the cameras.

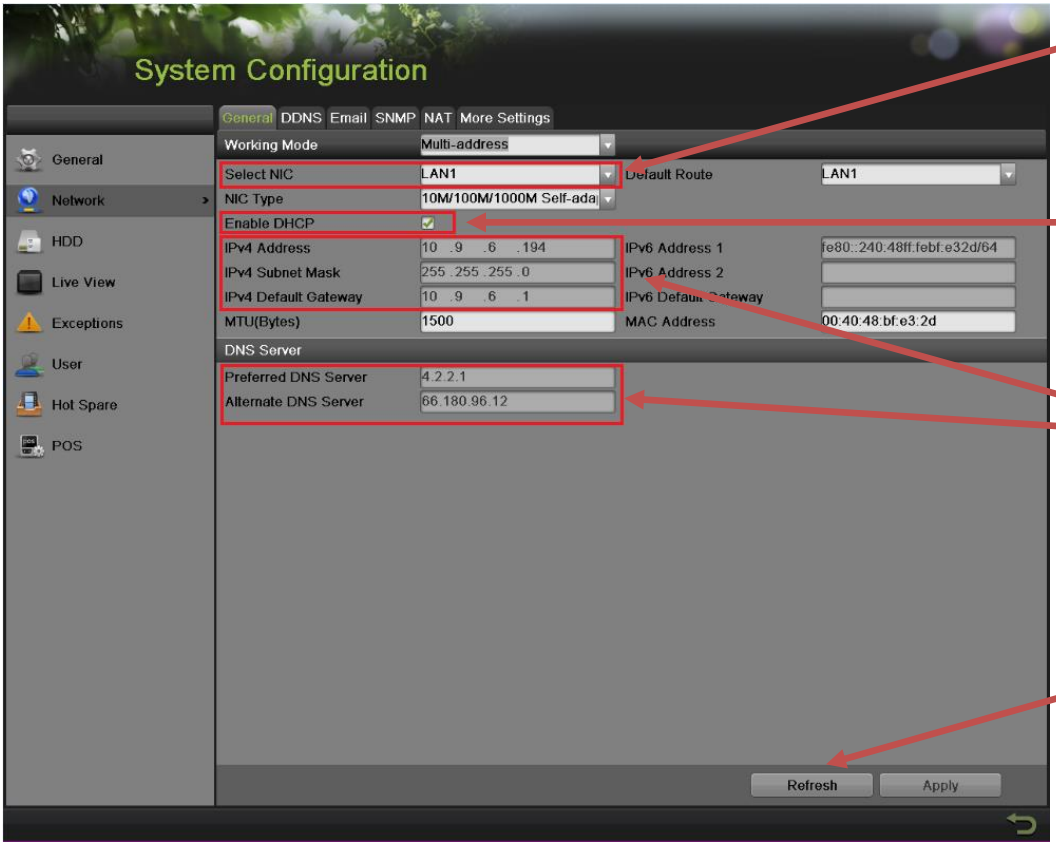
Step 1.
Set the **Default Route** to **LAN1**.

Step 2.
From the **"SELECT NIC"** dropdown select **LAN1**.

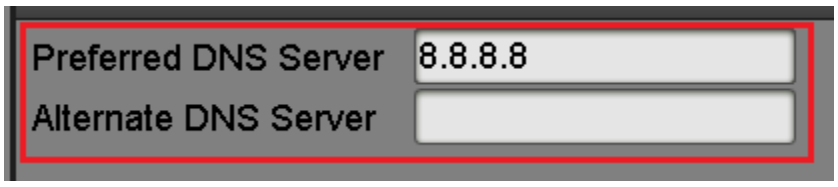
Step 3.
Enable DHCP (check the checkbox)**.** Press **"APPLY"** and then press **"REFRESH"**

Step 4.
After pressing refresh, the **IPv4 Address**, **IPv4 Subnet Mask** and **IPv4 Default Gateway** will have new values.

Step 5.
Disable DHCP (uncheck the checkbox)



Step 6.
Change the value of **"PREFFERED DNS SERVER"** to **8.8.8.8** ("ALTERNATE DNS SERVER" can be left blank).

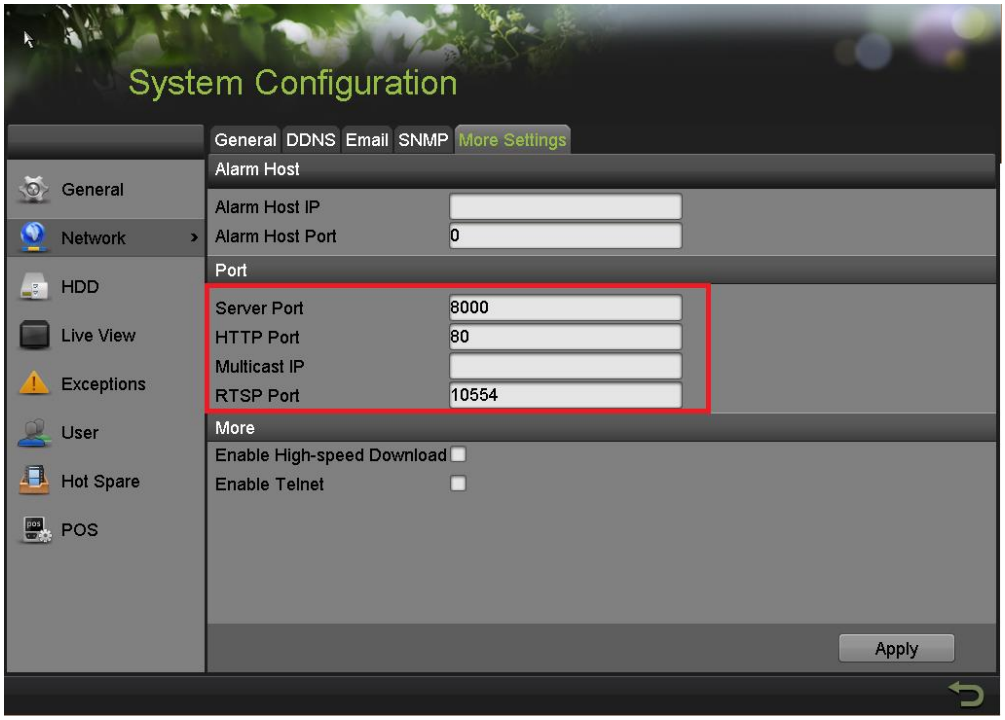


Step 7.
From the **"SELECT NIC"** dropdown select **LAN2**.

Step 8.
Manually assign an IP address to **LAN2** (please note, that **LAN2** cannot be in the same range as **LAN1**). The Subnet mask for **LAN2** should be **255.255.255.0**

After assigning the IP information, click on the **"MORE SETTINGS"** tab

The **"MORE SETTINGS"** tab contains the ports that need to be forwarded for remote access



The **SERVER PORT** is responsible for the **MOBILE APP** and **CLIENT SOFTWARE** log-in.
The **HTTP PORT** is responsible for **WEB BROWSER** log-in.
The **RTSP PORT** is responsible for **VIDEO/AUDIO STREAMING**.

Units with older firmware have the **RTSP PORT** set to **554**. A lot of cell phone carriers block incoming data through port **554**, which is why HikVision recommends changing that port to **10554**

The **HTTP PORT** and the **SERVER PORT** can be changed if desired, in order to avoid conflicts with the **ISP** or the existing network configuration.

PORT FORWARDING

After assigning the IP information to the DVR/NVR, connect a computer to the same router that the DVR/NVR is connected to (wired connection is recommended, to avoid complications). Log into the **ROUTER**, and proceed with **PORT FORWARDING**.

For **PORT FORWARDING** assistance contact the Internet Service Provider **(ISP)**, or the router manufacturer. Also refer to www.portforward.com for port forwarding step by step instructions. *Please be aware, that HikVision USA is not associated with www.portforward.com, and is not responsible for any activity between the user and www.portforward.com*. Please refrain from downloading any software from the abovementioned website.

Proceed to the **"ROUTERS"** section on the website for step by step instructions.

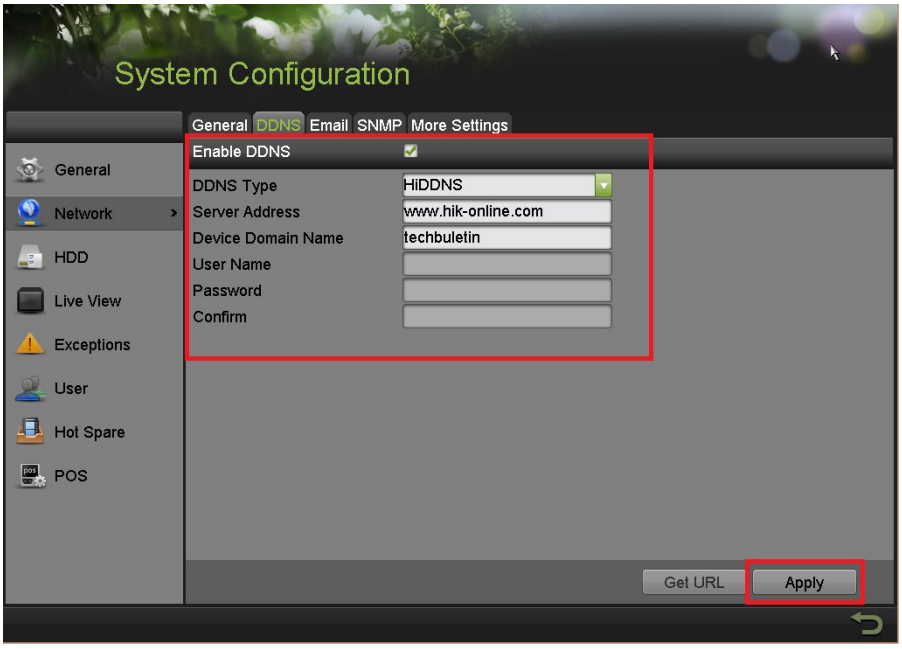
DDNS SETUP

DDNS registration has been made more user friendly, and takes only a few seconds to complete. The legacy units require user registration on www.hik-online.com. This step is no longer needed.

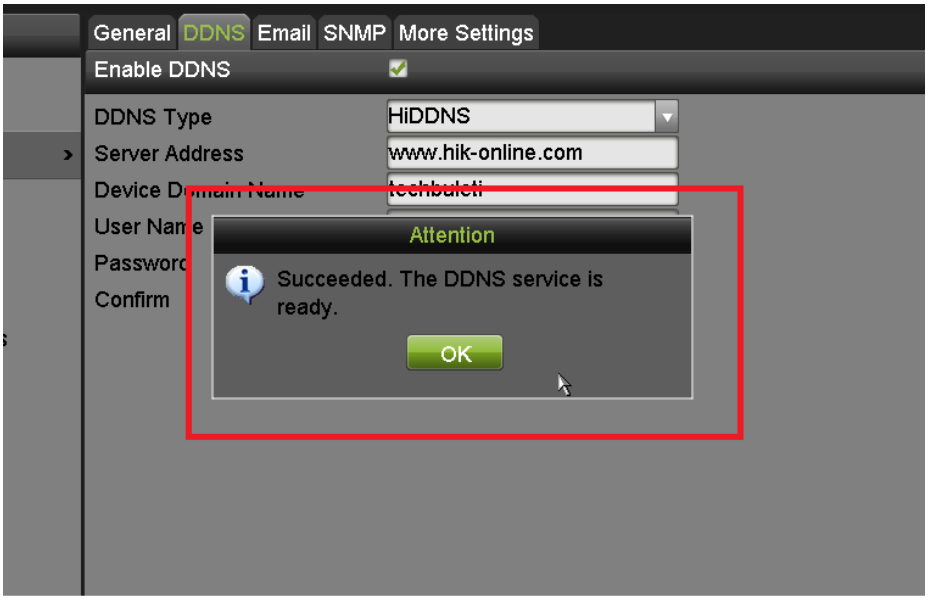
Click on the DDNS tab

In the **DDNS** tab:

a. Enable DDNS
b. Change the **DDNS TYPE** to **HiDDNS** (in some cases **HkDDNS**)
c. Make sure that the **SERVER ADDRESS** is set to www.hik-online.com
d. Create a **DEVICE DOMAIN NAME** (the domain name CANNOT contain **spaces, special characters and/or upper case letters, as well as it cannot begin with a number**)



After the changes have been made, presses **"APPLY".** A **"SUCCESS"** message will pop up



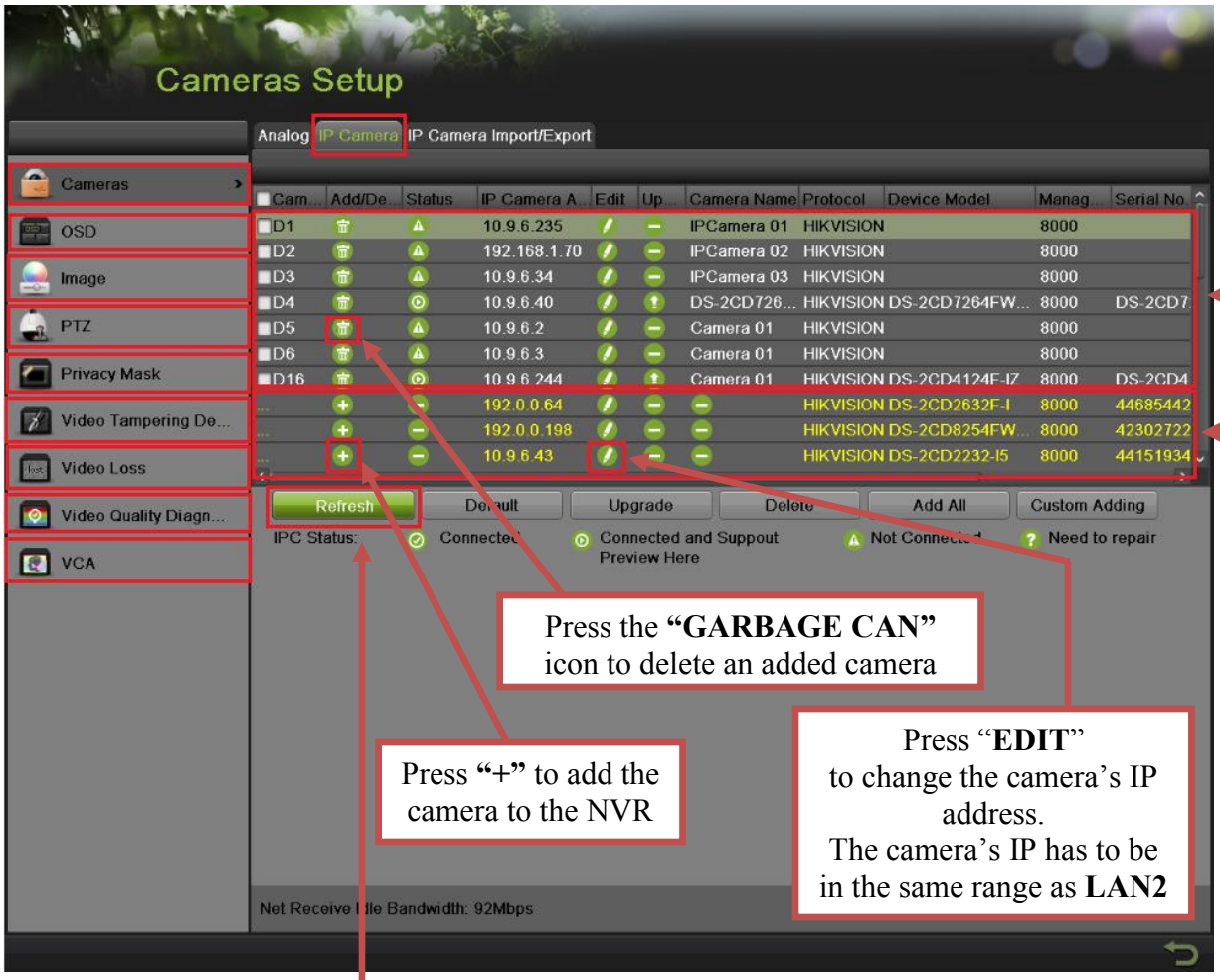
If the Domain Name does not meet the acceptable criteria, and/or is already registered, an error message will appear

6. ADDING IP CAMERAS

ADDING IP CAMERAS

<u>If you have a DS-7716NI-SP/16, please skip to "7. RECORDING SETUP"</u>

Go to:
"MENU">"CAMERAS SETUP"



Press the **"GARBAGE CAN"** icon to delete an added camera

Press **"+"** to add the camera to the NVR

Press "**EDIT**" to change the camera's IP address.
The camera's IP has to be in the same range as **LAN2**

Please refer to the manual for detailed information

"REFRESH" to find cameras connected to the network

List of detected cameras **(YELLOW)**

List of added cameras **(WHITE)**

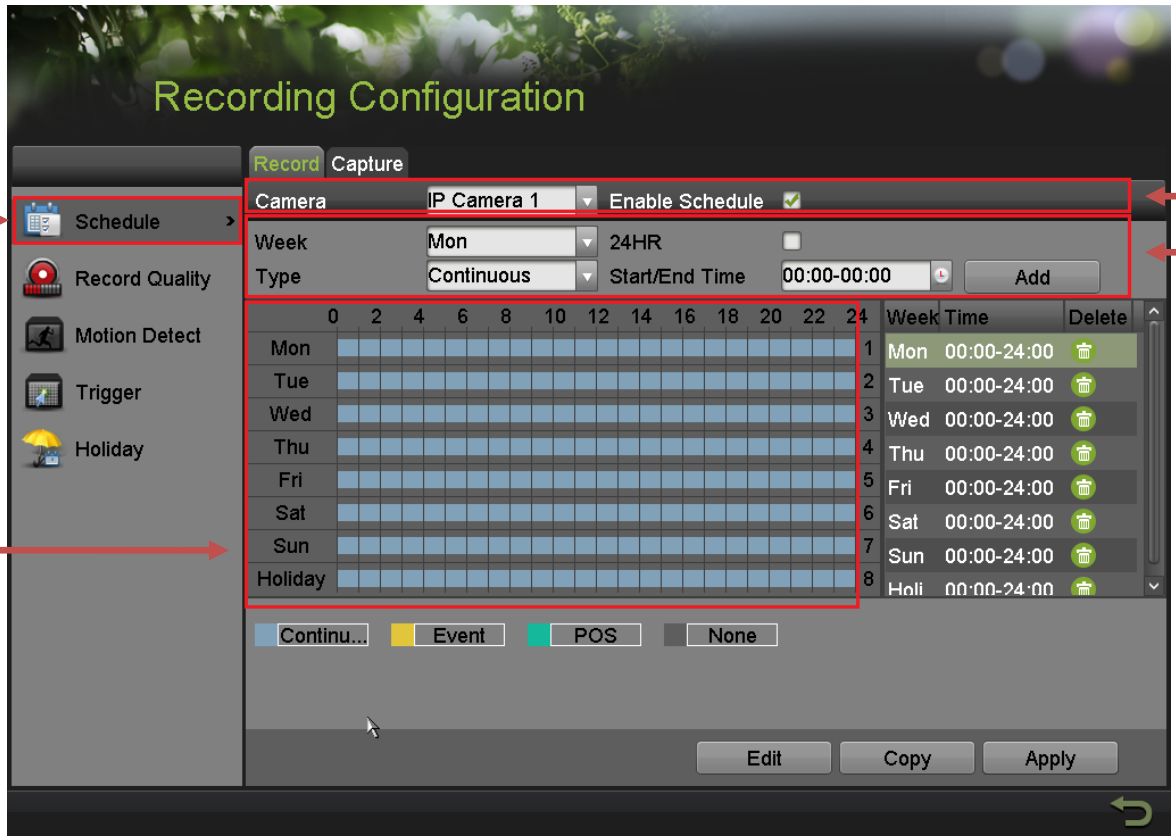
- Please note: To change the CAMERA NAME go to **OSD**

7. SETTING UP RECORDING

SETTING UP RECORDING

HikVision DVRs/NVRs are defaulted to **CONTINUOUS RECORDING**.

Please go to: **"MENU">"RECORDING CONFIGURATION"**



Setup Recording Schedule (Continuous/Motion)

The color of the calendar is what constitutes the recording schedule:

1. **Blue=Continuous**
2. **Yellow=Event (Motion/Alarm)**
3. **Green= POS (Point of sales)**
4. **Grey= No Recording**

This field is used to customize a part of the existing schedule **This can be ignored if setting up motion only recording**

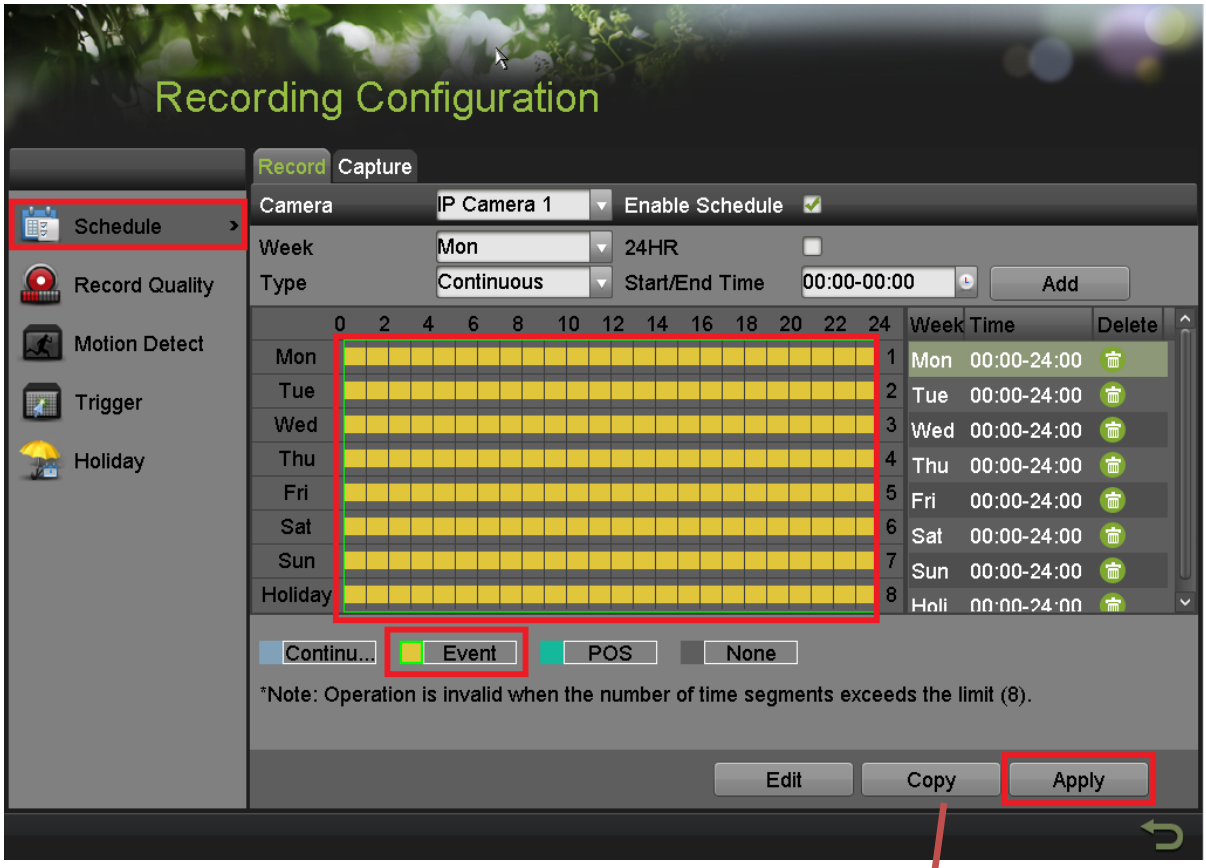
Select the camera. Enable/Disable the schedule

- **Please note:** If **ENABLE SCHEDULE** is not checked, then that camera would not be recording

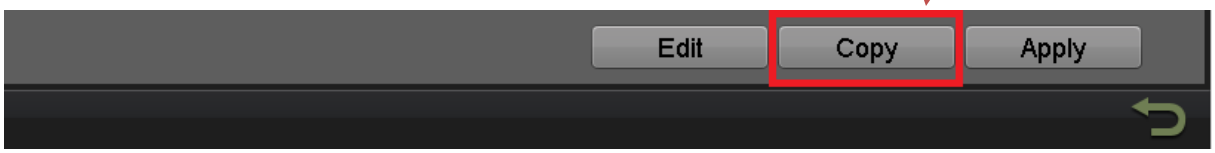
SETTING UP RECORDING

To set the DVR/NVR to **MOTION RECORDING**, go to:

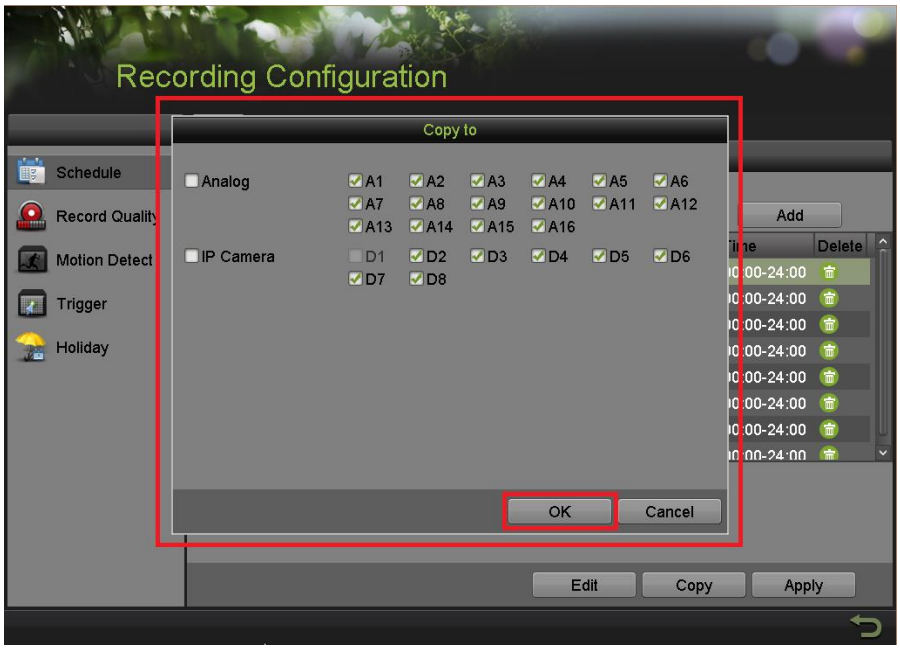
1. "MENU">"RECORDING CONFIGURATION"
2. Click on the **"EVENT"** under the calendar (yellow). After this the mouse cursor will change to a **WAND**.
3. Select the calendar, and it will turn **YELLOW** (just like on a computer, click on the top-left corner of the calendar and drag to the bottom-right corner).
4. Press **APPLY.**



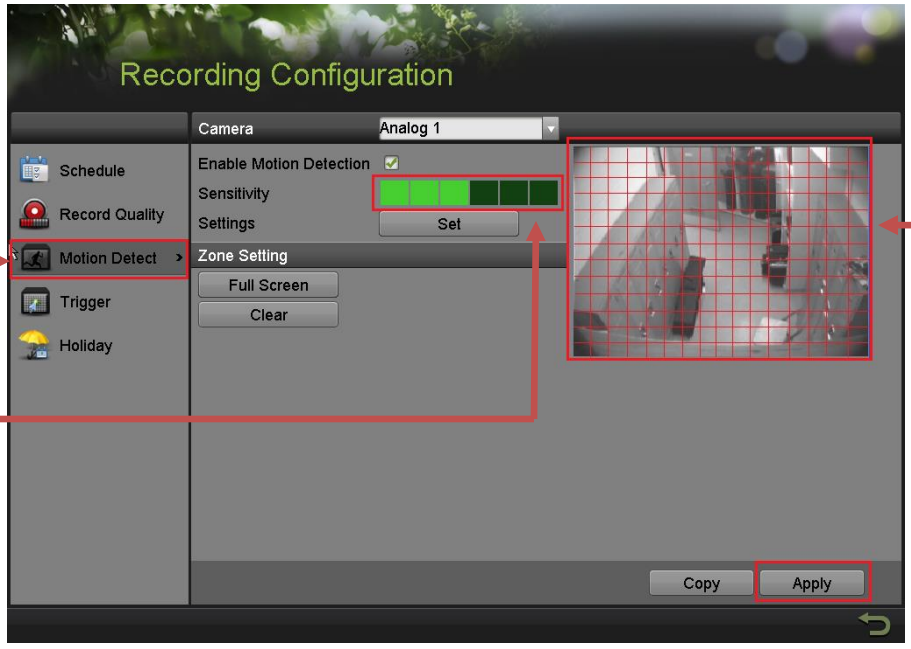
5. Press **COPY** to copy the new schedule to the remaining cameras.



SETTING UP RECORDING



After the recording has been set to **"EVENT RECORDING"** go to **"MOTION DETECT"** to set the motion detection for every camera. In this step, the **"COPY"** option is available only for analog cameras, the IP cameras need to be configured individually.



Motion Detection Setup

Motion Sensitivity
The amount of bright green squares indicates the sensitivity level. (in this picture the sensitivity is set to 3)

Motion Area
The grid indicates the area, where motion will be detected

SETTING UP RECORDING

To set the recording **RESOLUTION/FRAMERATE/BITRATE** settings, please go to:

”RECORD QUALITY” in the **“RECORDING CONFIGURATION”** submenu

SETTING UP RECORDING

Stream Type allows enable/disable the audio streaming from the cameras (if the camera does not have audio capabilities, then the **Stream Type** will only have **Video** option)

Resolution allows setting of the recording resolution

Bitrate Type allows the NVR to save HDD space when set to **Variable** (Available choices: **Variable** and **Constant**)

Video Quality adjusts picture clarity (**medium setting (3 green squares)** is recommended. Medium setting is the balance between good picture and saving HDD space).

Frame Rate allows setting of the recording frame rate (**12-15 fps** is recommended to save HDD space and not to have a "choppy" image)

Max Bitrate Mode allows choosing between preset bitrate values and customizing the values (**General** setting is recommended)

Max Bitrate (KBPS) is the chosen bitrate for streaming the video

Max Bitrate Recommended is the NVR/DVR's recommended bitrate according to the parameters set above.

Record Audio allows turning the audio recording on or off (this option is only available if the camera has a microphone connected to it, or only the analog channels 1-4 on the hybrid NVR).

Video Stream allows changing the recording stream between **Main Stream** and **Sub Stream** (this step requires a restart).

Please refer to the table below for recommended recording parameters

Resolution	Video Quality	Frame Rate (FPS)	Bitrate (KBPS)
320x240 (QVGA)	Medium (3 squares)	12-15	207
352x240 (CIF)	Medium (3 squares)	12-15	384
640x480 (VGA)	Medium (3 squares)	12-15	768
704x480 (4CIF)	Medium (3 squares)	12-15	1024
1280x720 (720P)	Medium (3 squares)	12-15	2048
1280x960 (960P)	Medium (3 squares)	12-15	2048
1600x1200 (2MP)	Medium (3 squares)	12-15	2560
1920x1080 (1080P)	Medium (3 squares)	12-15	3072
2048x1536 (3MP)	Medium (3 squares)	12-15	3072
2560x1920 (5MP)	Medium (3 squares)	8	4096

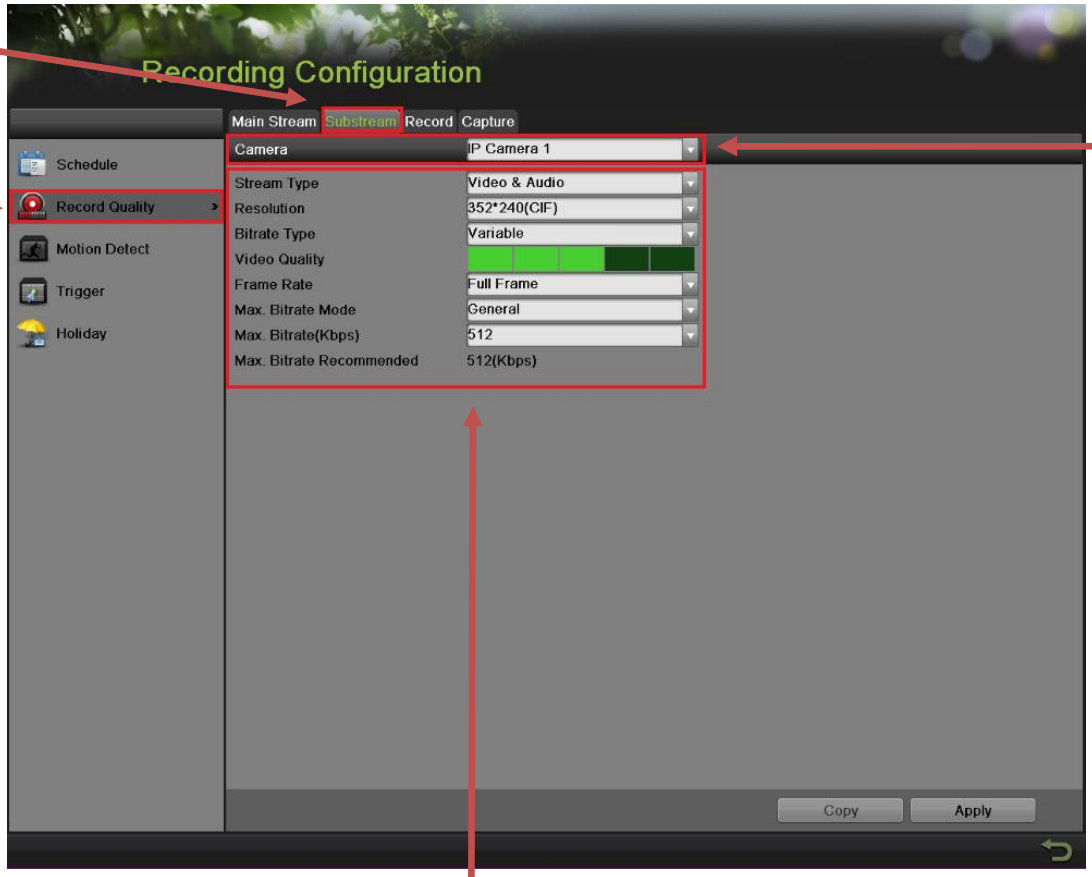
SETTING UP RECORDING

Last step in the recording setup is setting up the **Sub Stream**.

The **Sub Stream** is used for streaming on mobile devices, as well as displaying multiple cameras on the local output

Select Sub Stream

Record Quality



Unlike Main Stream, **Sub Stream** can only go up to **4CIF**

Select Camera

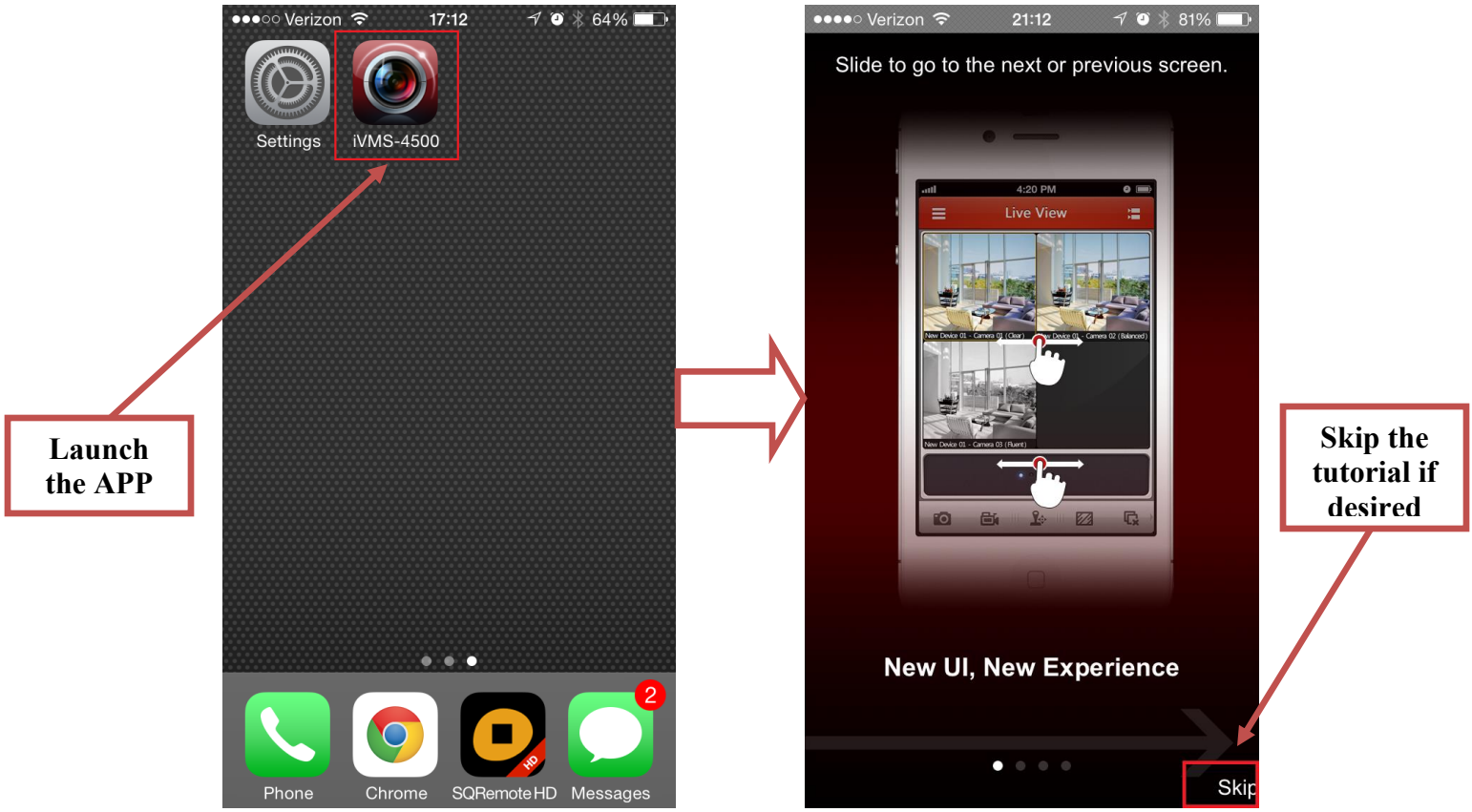
- **Please note:** If the upload speed is not sufficient, consider lowering the frame rate/bitrate/resolution for more fluent mobile app viewing.

8. CONFIGURING THE MOBILE APP

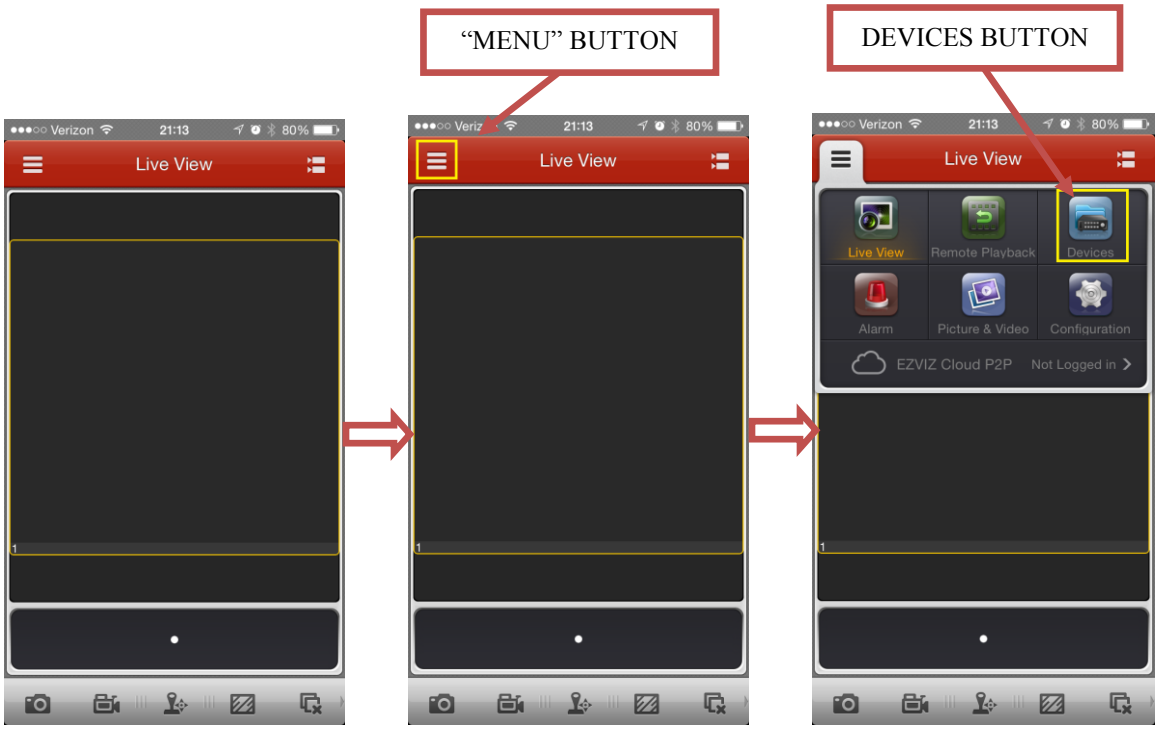
CONFIGURING THE MOBILE APP

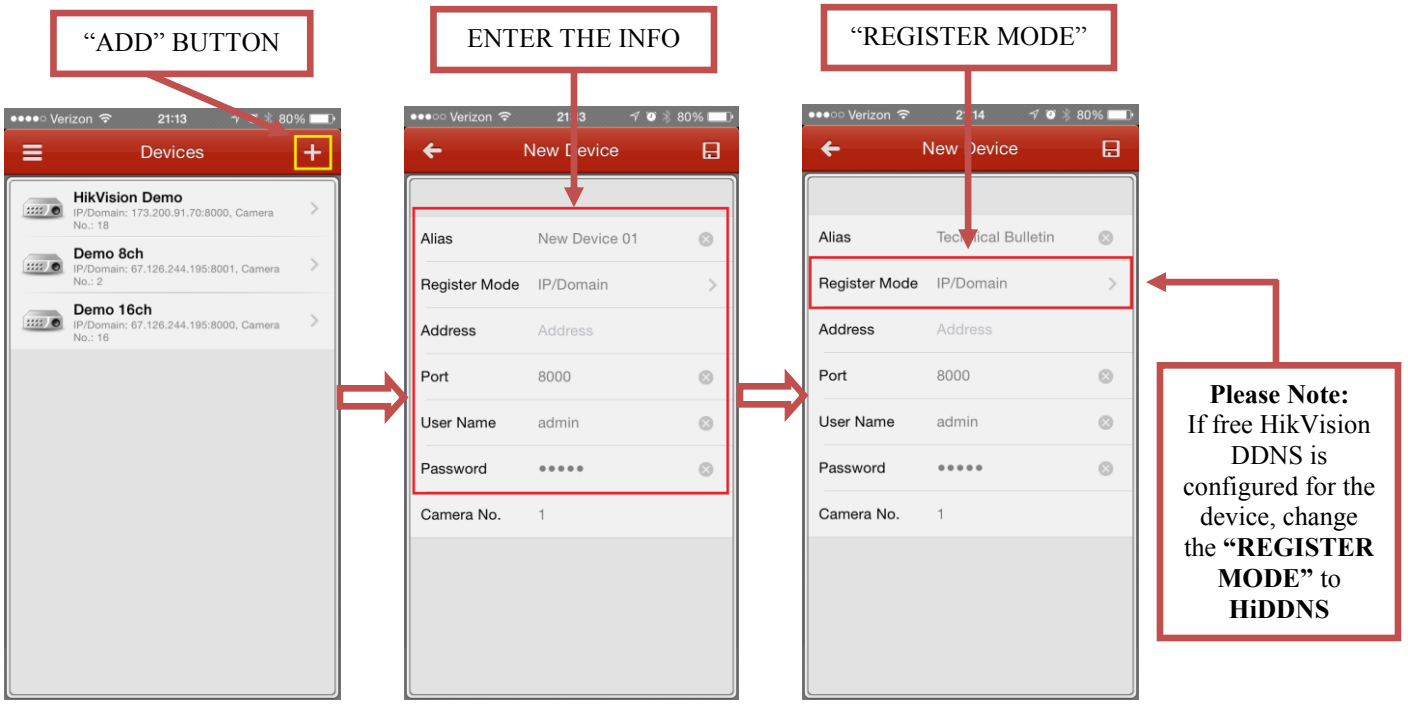
All HikVision DVRs, NVRs and IP Cameras can be accessed with **iVMS-4500 application.** The APP can be downloaded from the **APP STORE (iPhone/iPad), PLAYSTORE (Android)**. The app is also available for **WINDOWS MOBILE** devices (Nokia Phones and tablets).

Download the app from the appropriate place and launch it. When the APP is launched for the first time, a tutorial screen will be displayed, and it can be easily skipped.



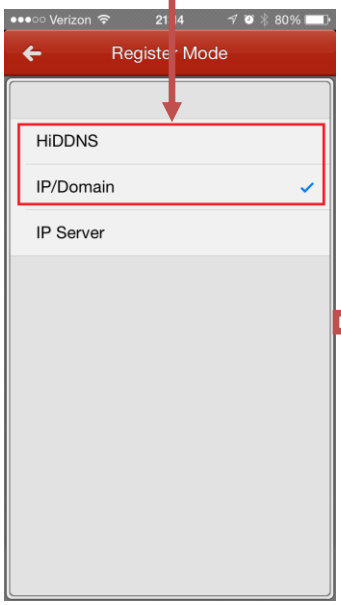
CONFIGURING THE MOBILE APP



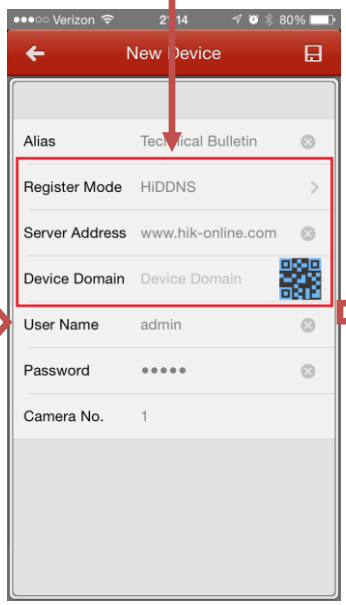


CONFIGURING THE MOBILE APP

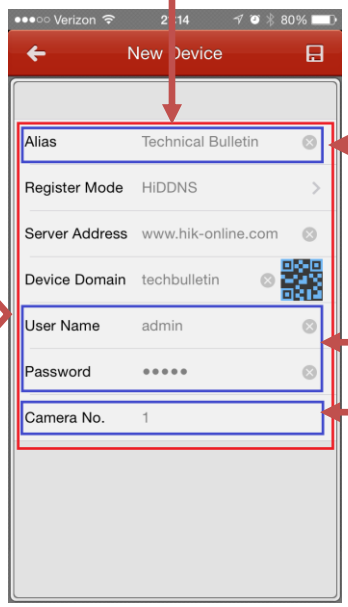
CHANGE THE MODE



ENTER "DEVICE DOMAIN"



COMPLETE THE PAGE

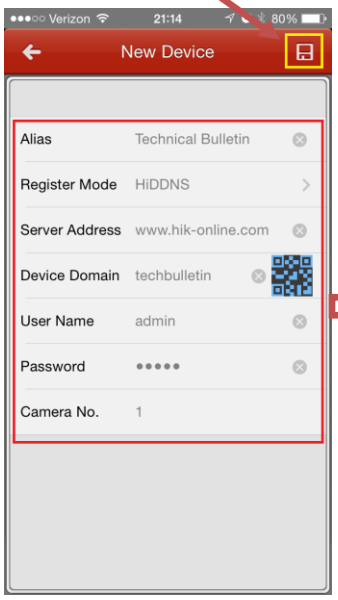


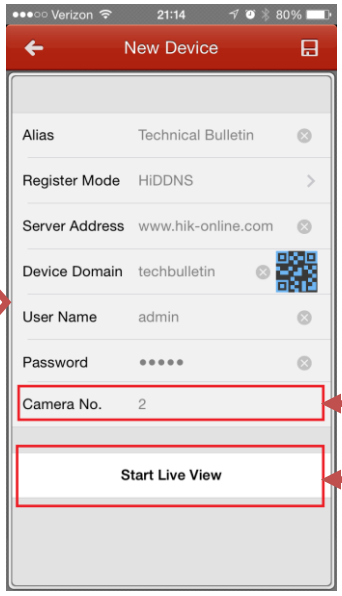
Please Note: Alias is just a friendly name for the address book (i.e. Home/Office)

User Name and **Password** are the DVR's/NVR's username and password

Please note: The "CAMERA NUMBER" is set to **1**. After saving the changes, the number will resemble the correct amount of cameras

"SAVE" BUTTON





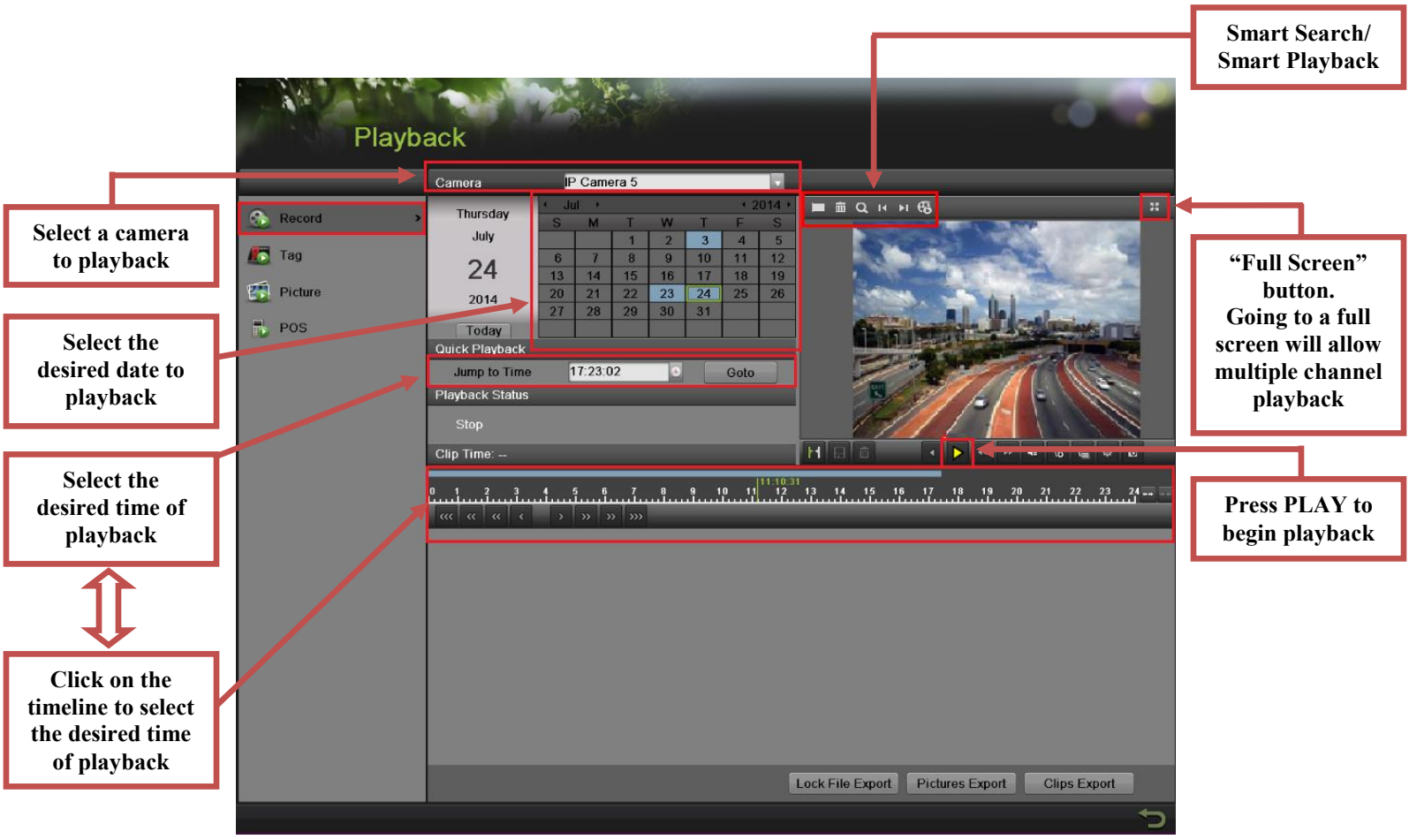
Please note: The "CAMERA NUMBER" has changed to the correct number of cameras connected to the DVR/NVR

Please note: "START LIVE VIEW" button will begin live camera stream

9. PLAYING BACK RECORDED VIDEO

PLAYING BACK RECORDED VIDEO

To initiate a **PLAYBACK**, go to **"MENU">"PLAYBACK"**.



Steps to initiate **PLAYBACK**

1. Select the desired camera
2. Select the desired date. The days that contain recording will be highlighted on the calendar
3. Select the desired time using the Timeline or "Jump to Time" feature.
4. Press "PLAY"

10. MAKING A BACKUP

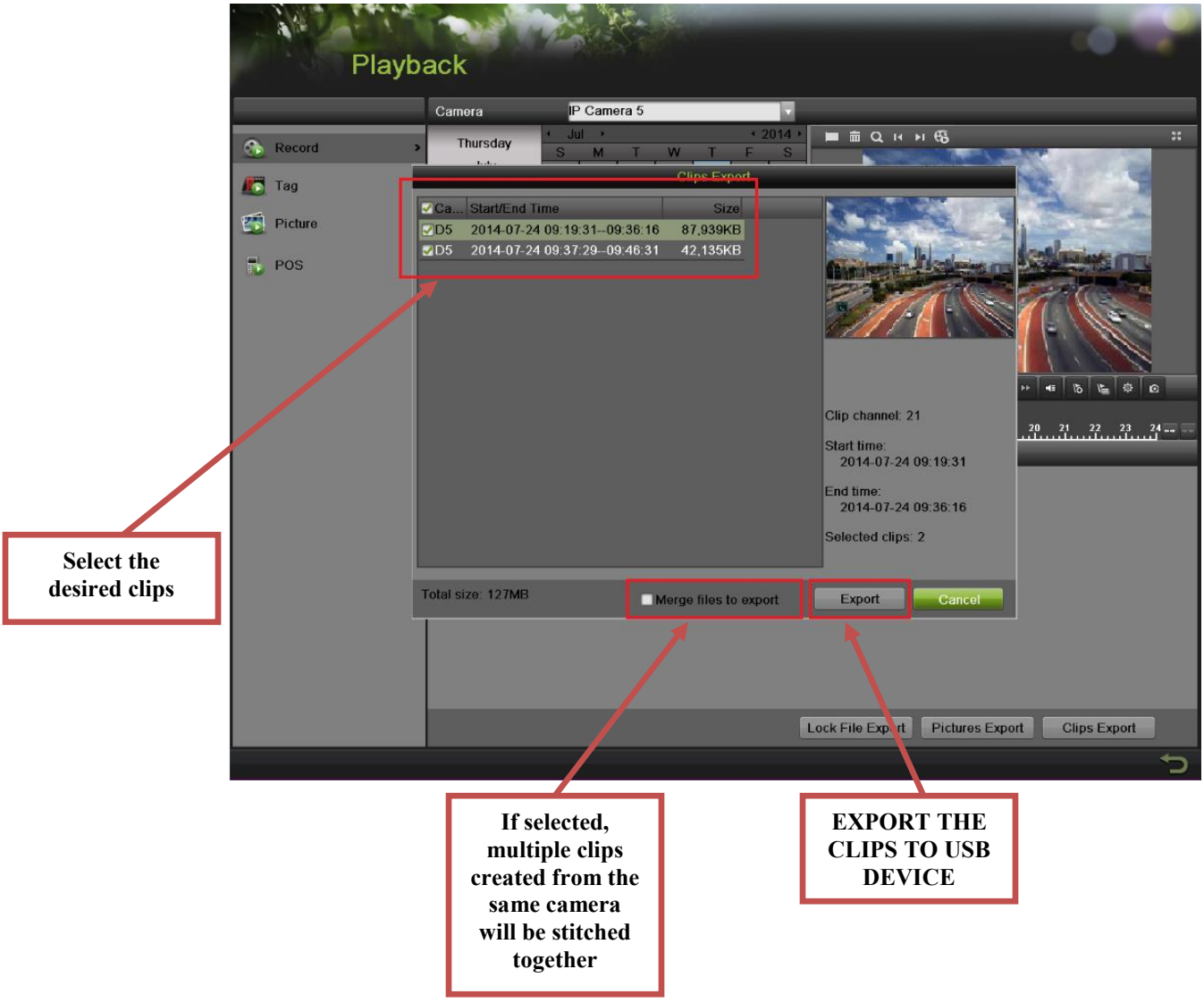
MAKING A BACKUP

Steps to make a **BACKUP** of recorded video

1. Insert a USB FLASH Drive or a USB HDD into an available USB Port
2. Go to **"MENU">"PLAYBACK"**
3. Select the DATE and beginning time of the incident
4. Click **"START CLIPPING"**
5. Select the ending time of the incident
6. Click **"END CLIPPING"** (Same button as "Start Clipping")
7. Click **"SAVE CLIP"**
8. Repeat steps 1-7 as many times as required
9. Click **"CLIPS EXPORT"**

MAKING A BACKUP

After pressing **"CLIPS EXPORT"** a new window opens up containing all saved clips.



10. Select the desired clips
11. Press "EXPORT"
12. After the backup is complete, simply remove the USB FLASH Drive or the USB HDD.