# Hi Performace Embedded Linux Stand Alone DVR



## ES-series



## E and EX series

Default
Username: admin
Password: 1234

# QUICK GUIDE

# WARNING:

- To Prevent Data corrupt and video data loss it is recommended to install the DVR system on UPS (battery backup). Failing to install the system on a battery backup may VOID Warranty

- Never unplug the AC power from DVR while it's on and operating. To properly restart or power off the DVR please login as admin and click on Setup, select System Shutdown and on the drop menu select either shutdown or restart. Failing to properly restart or shutdown the system may VOID warranty

- Please avoid excessive humidity and dusty/dirty area.

- Allow adequate ventilation for system cooling and avoid blocking the fan for proper air circulation.
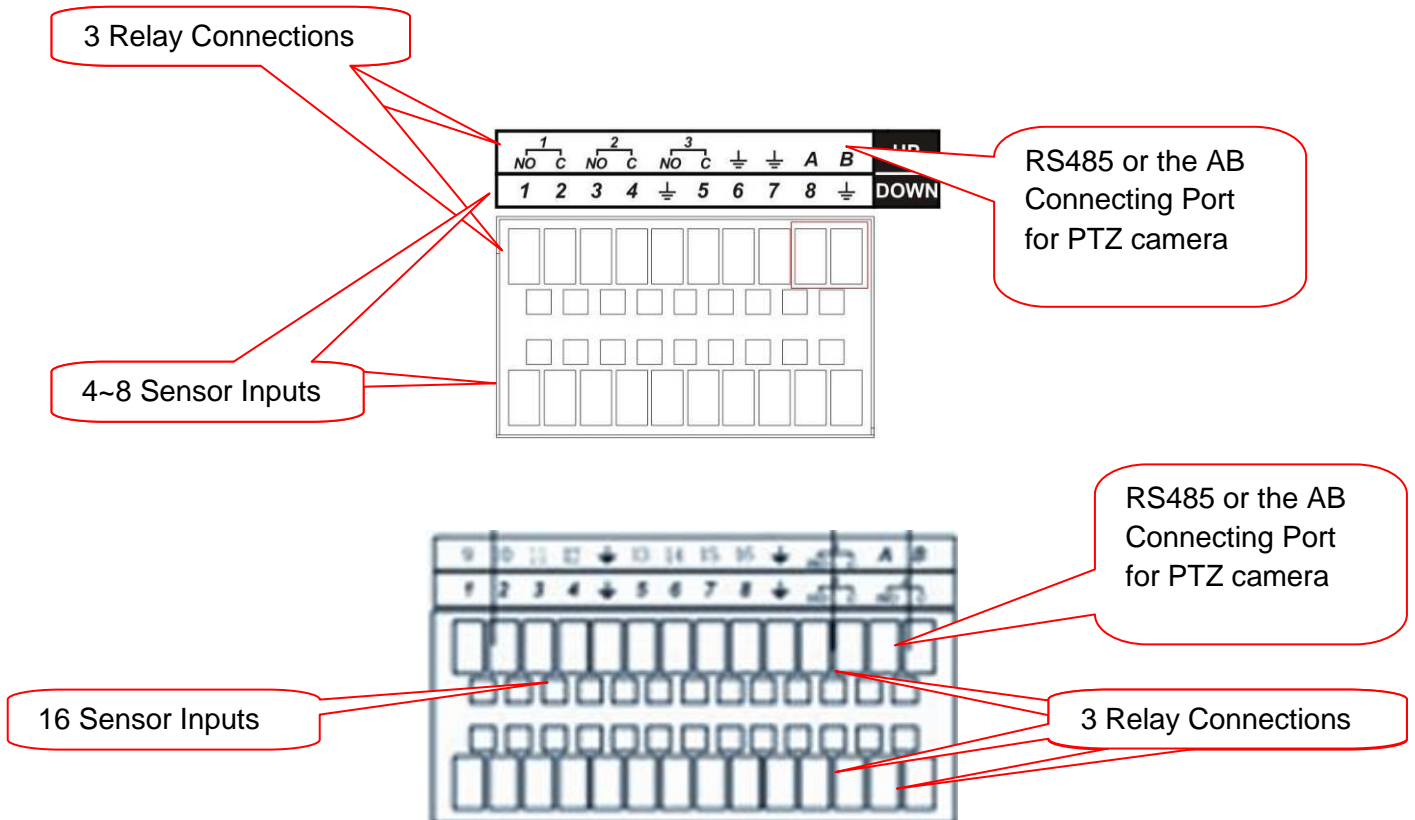
## I. CONNECTING THE DEVICE.

Before powering up the system make sure to connect the video inputs/outputs, network cable and USB mouse. Refer below for basic connection.
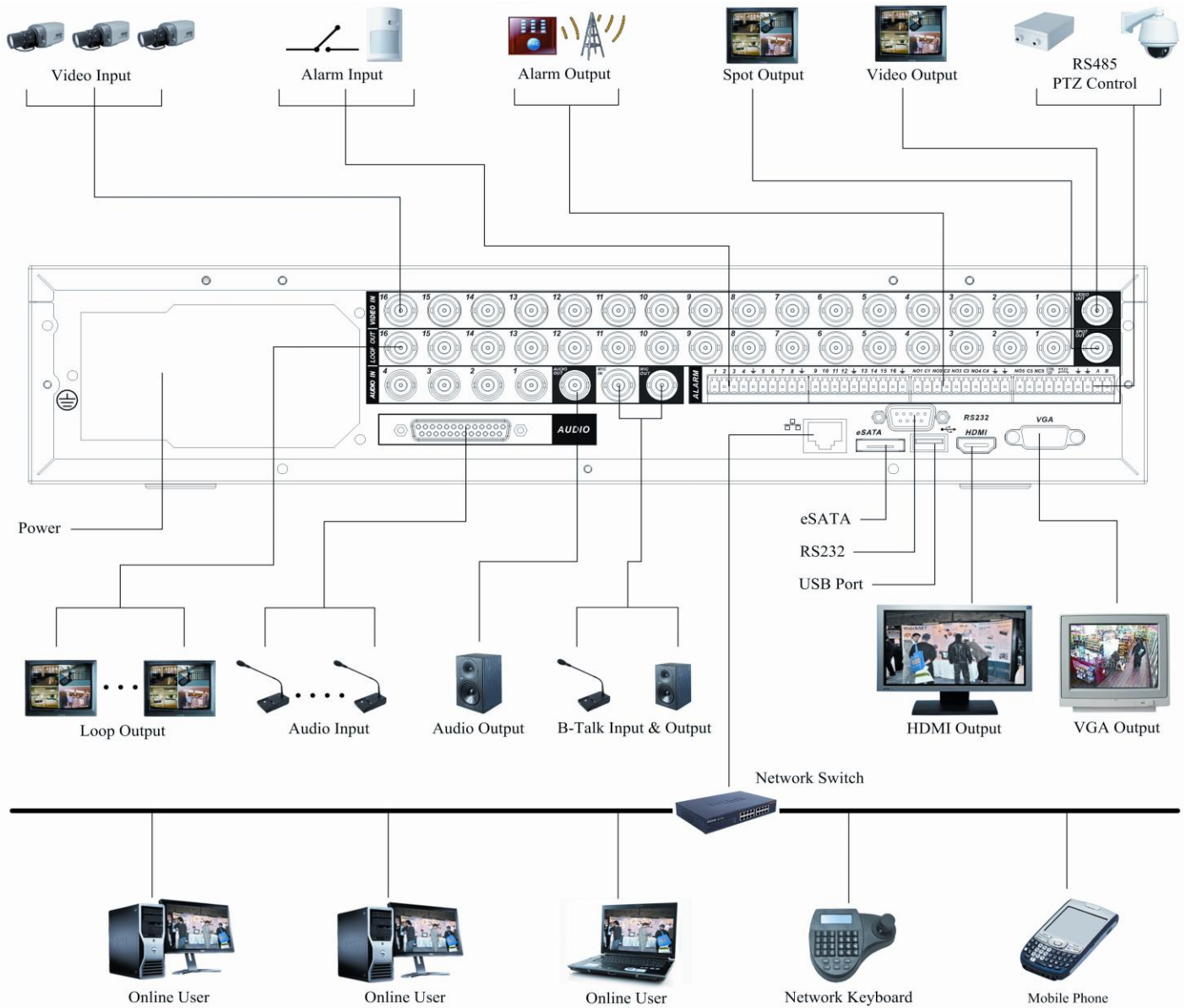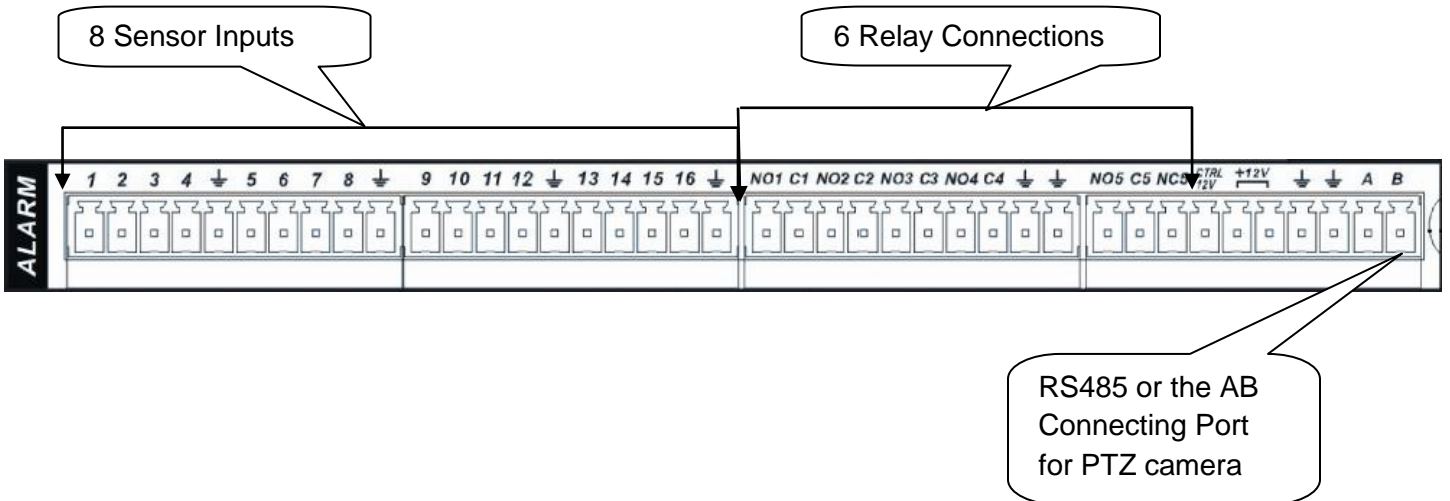
1. **16 channel ES series connection diagram.**
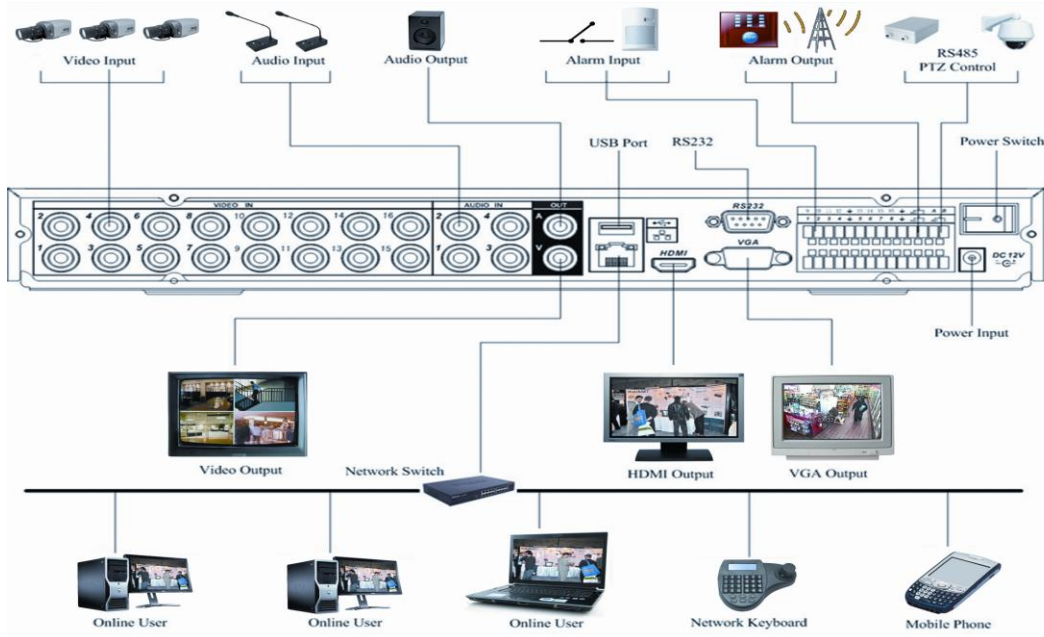


2. **PTZ, sensors and relays connection diagram ES series.**

3. **E and EX series connection diagram.**



Video Input
Alarm Input
Alarm Output
Spot Output
Video Output
RS485 PTZ Control

Power

eSATA
RS232
USB Port

Loop Output
Audio Input
Audio Output
B-Talk Input & Output

HDMI Output
VGA Output

Network Switch

Online User
Online User
Online User
Network Keyboard
Mobile Phone

4. **PTZ, sensors and relays connection diagram for E and EX.**



8 Sensor Inputs

6 Relay Connections

RS485 or the AB Connecting Port for PTZ camera

**5. Controlling the PTZ with the Remote Control.**

Note: User must be login and must have PTZ control privileges.



| OSD  PTZ Control | Function | Remote Control equivalent |
|---|---|---|
| | Move the PTZ Up, Down, Left and Right | |
| | Zoom out ( - ) | |
| | Zoom in ( + ) | |
| | Focus  out ( - ) | |
| | Focus  in ( + ) | |
| | Iris close ( - ) | |
| | Iris open ( + ) | |
| | PTZ speed | 1 to 8 |
| | Page Switch | |
| Close | Close PTZ window | |

II. **HOW TO CONNECT THE DVR TO THE NETWORK AND INTERNET.**

**1. Assigning Network IP Address.**
DVR must be assigned an IP address, subnet mask and gateway. To know what network settings to use, open Windows command prompt on a pc connected to the same network as the DVR and type ipconfig to get the network status of the existing computer.
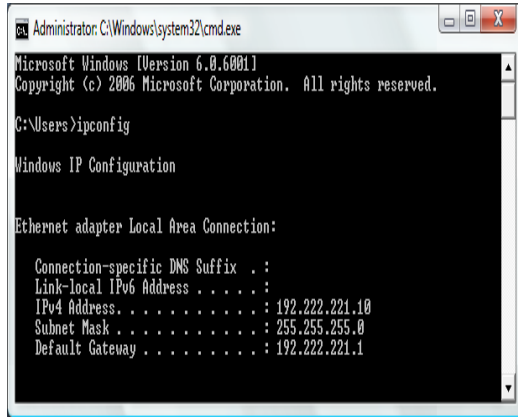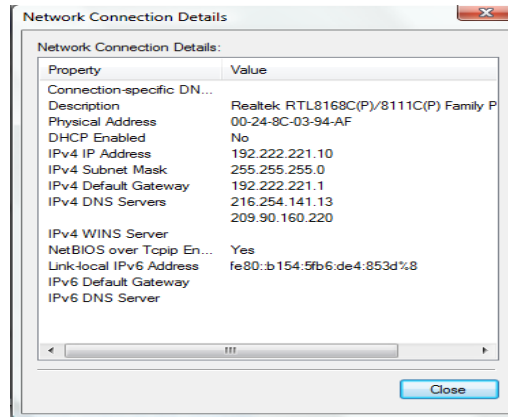


ipconfig result　　　　　　　　　　　　　　　network status

The Subnet Mask and Default Gateway will remain the same on the DVR but the IP address would be different mainly the last octet or number. Each device on the network must have its own unique IP address. On the ipconfig example above the IP address is 192.222.221.10, 10 being the last number. So assign to the DVR any last number between 2-9 and 11-254.

To assign the IP address click on  then  then , network setting interface as shown
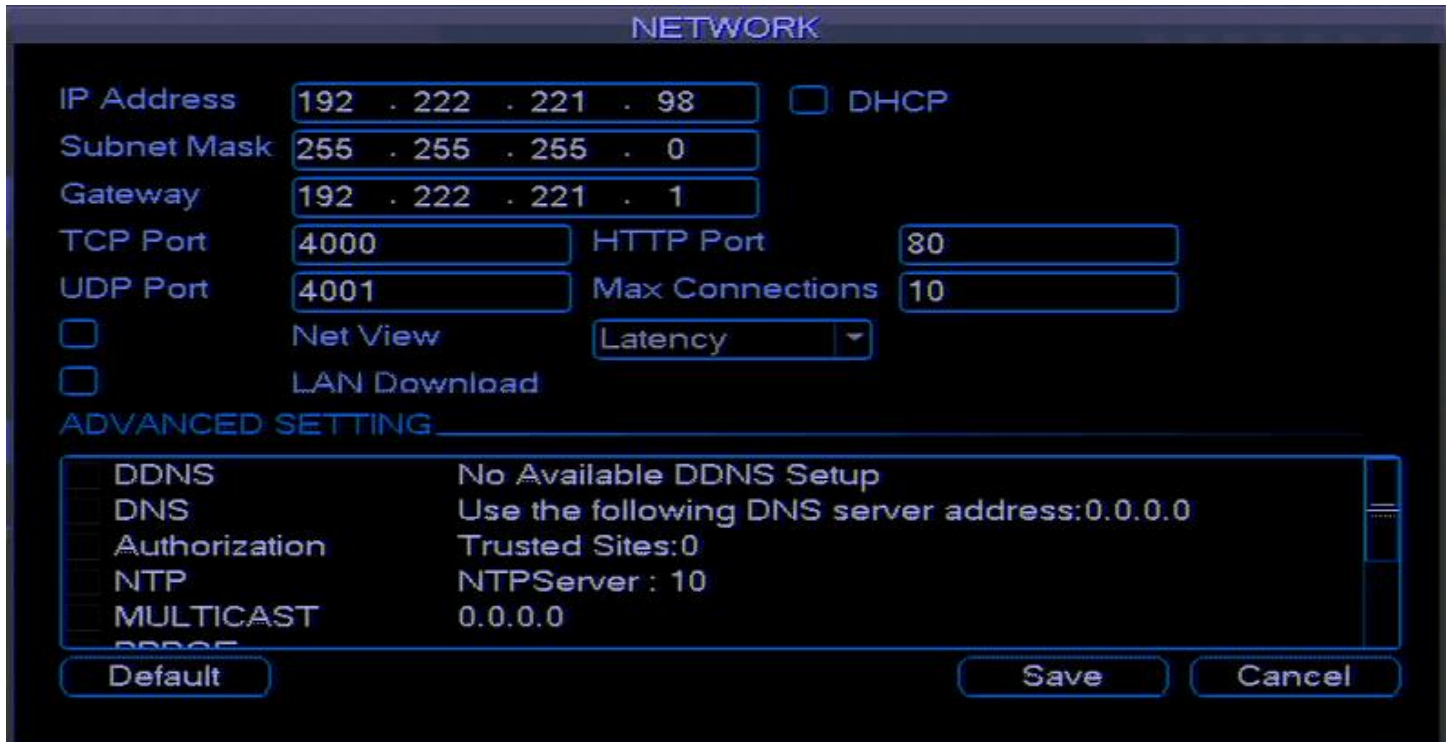


After assigning the IP address save the settings by clicking Save button, then do a menu restart.

**Note:** If router has DHCP enabled, make sure to stay away from the DHCP IP address range to prevent network conflicts.

**2. Port forwarding.**

To access the DVR over the Internet, user must forward the HTTP port and TCP port. Each router has a unique way of port forwarding some routers call it pin holes or virtual server but all of them will always have a common requirement. The default ports needed to be forwarded are **80tcp, 554tcp** and **4000tcp**.

If you do not know how to Port Forward on your model of router please **contact the router manufacturer's technical support number** or refer to http://www.portforward.com to look up examples of port forwarding for your model of router.

Below is an example of how to port forward on a Linksys router

1. Name               - User can use any name               - ex. DVR 80 and DVR 4000

2. Device IP address    - the embedded DVR IP address         - ex. 192.222.221.98

3. Ports to forward      - 80 HTTP port, TCP 4000 and 554 rtsp      - ex. 80, 4000 and 554

   - External/public port   - 80, 4000 and 554

   - Internal/private port   - 80, 4000 and 554

- Port range               - 80 to 80 554 to 554 and 4000 to 4000

4. Source IP address    - if user knows the IP address that will connect to the DVR or use the default, which would be any
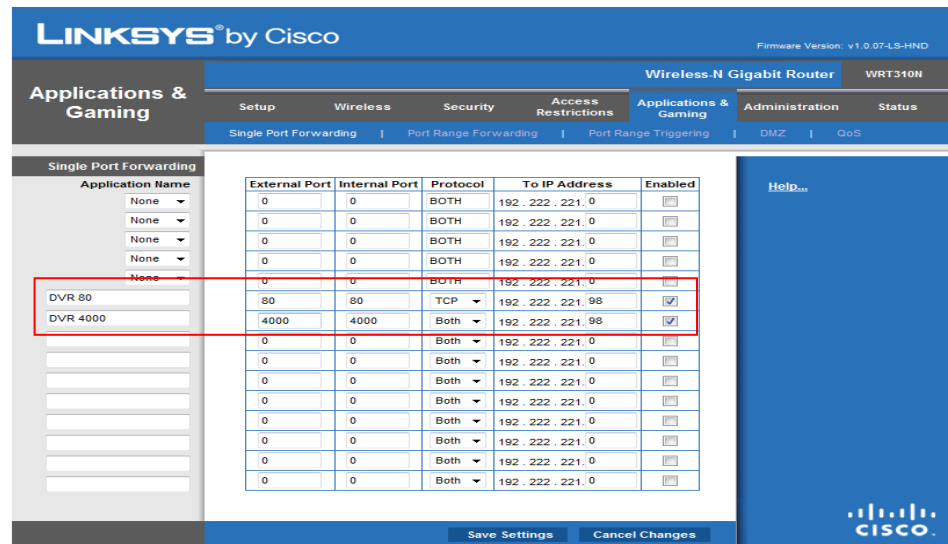


On the status page of the router make sure it contains the public IP address. If the Internet/WAN IP address starts with 192 or 172 or 10, it means the ISP's modem is routing not bridging. Please contact the Internet Service Provider technical support for help on how to bridge the ISP's modem.

Note: Please don't use DMZ.
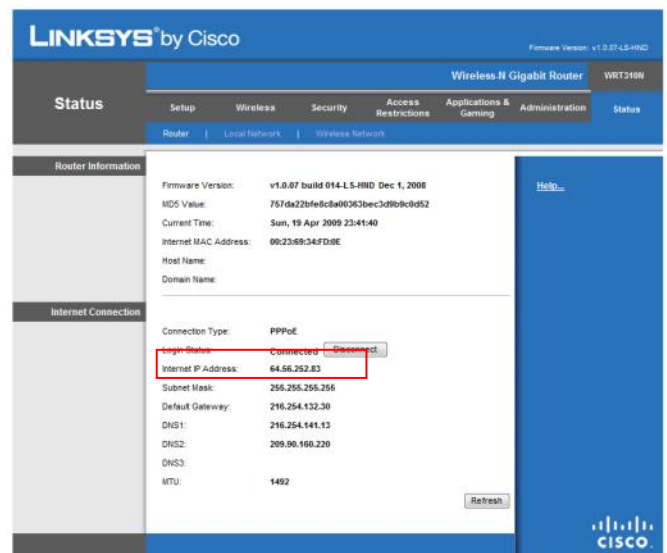
## 3. DDNS

If the public IP address is dynamic meaning it changes from time to time, users would need a dynamic dns service provider, so that the DVR will still be accessible even when the external IP address of the DVR's network changes.

A.   Register with www.viewdvr.com and remember the site name, which is needed on the Embedded system.
Please note register a site name maximum 10 characters in length and no spaces should in the site name.
The site name is also case sensitive.

B. Input these settings on the DVR system DDNS found under DVR SETUP-NETWORK-ADVANCED SETTING
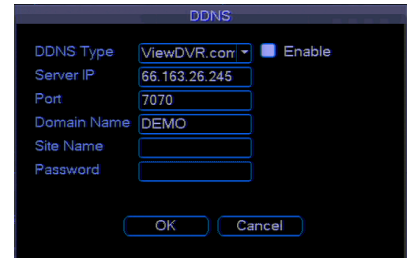
DDNS type-Videon DDNS

Server IP  - 66.163.26.245

Port - 7070

Site Name - the site name that was registered in www.viewdvr.com

Username - leave blank if using Videon DDNS

Password - leave blank if using Videon DDNS
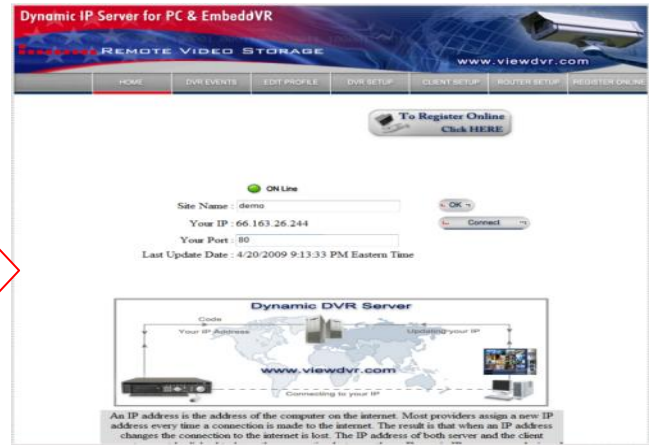
Note:  Always register a new Site Name when installing a new system.

## 4. Remote Connection
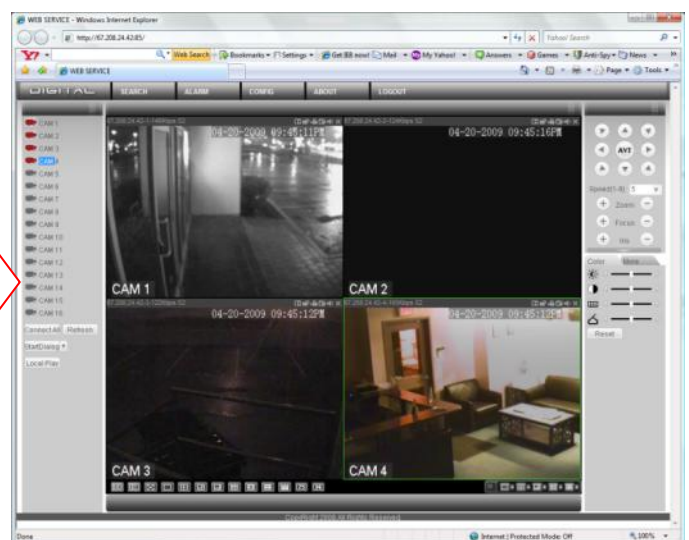
There are two ways to connect to the Embedded DVR.

4.1 Using Internet Explorer, go to www.viewdvr.com type in the site name and click ok

Click OK

Click Connect to open the Web View. Input user name and password and click login
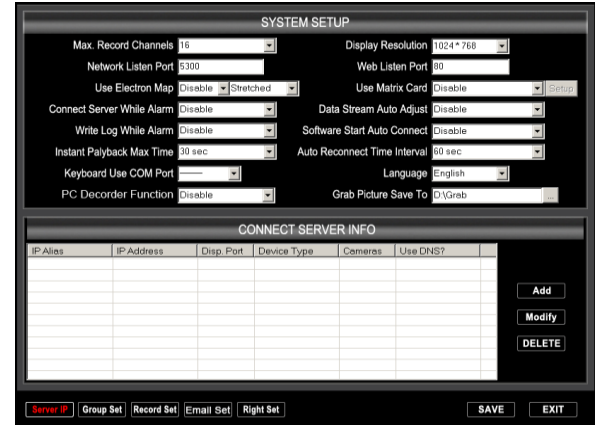
default username: admin          default password: 1234
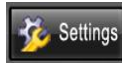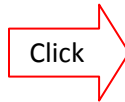
Login

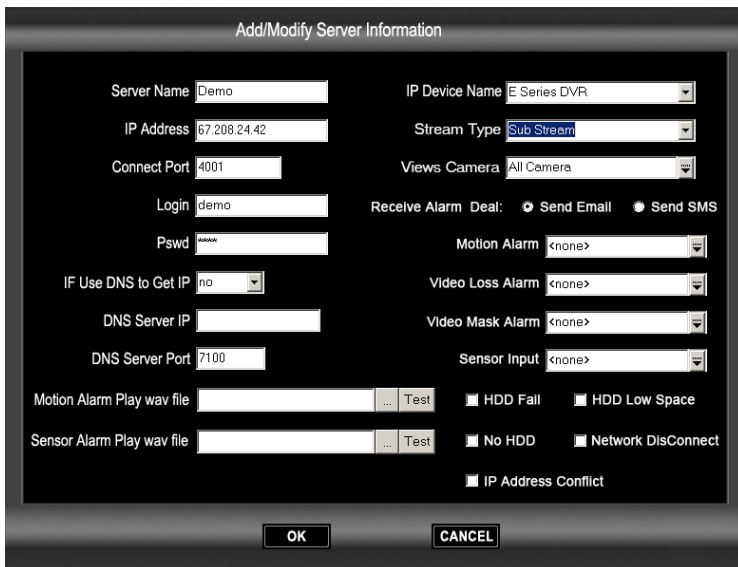**Note: Please see the guide on the CD on "How to enable active X?"**

### 5.2 64 Channel NVR Client

Install the NVR Client Software and add the sites



Click

**Example 1: By Direct IP address**



Server Name: Any Name
IP Address: the direct IP address of the system
Port: Service/TCP Port or default on system would be 4000
User Name: Use to login on DVR
Password: Use to login on DVR
Total Channel: number of cameras
IP Device Name: use E series DVR
Stream Type: Main Stream – for best image quality
            but uses a lot of bandwidth
            Sub Stream - for better frequency view
Leave the other settings as default, if not needed.

**Example 2. By DDNS**



Server Name: Any Name
IP Address: 66.163.26.245
Port: Service/TCP Port or default on system would be 4000
User Name: Use to login on DVR
Password: Use to login on DVR
Total Channel: number of cameras
IP Device Name: use E series DVR
Stream Type: Main Stream – for best image quality
            but uses a lot of bandwidth
            Sub Stream - for better frequency view
Leave the other settings as default, if not needed.

Click Ok then, click Save to save the sites.
After adding the Site Click on ALL button to view the cameras.
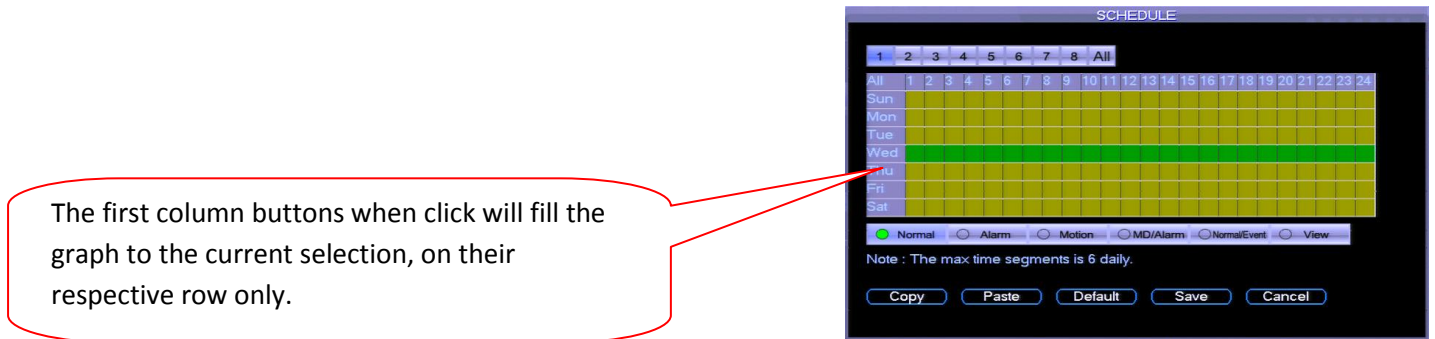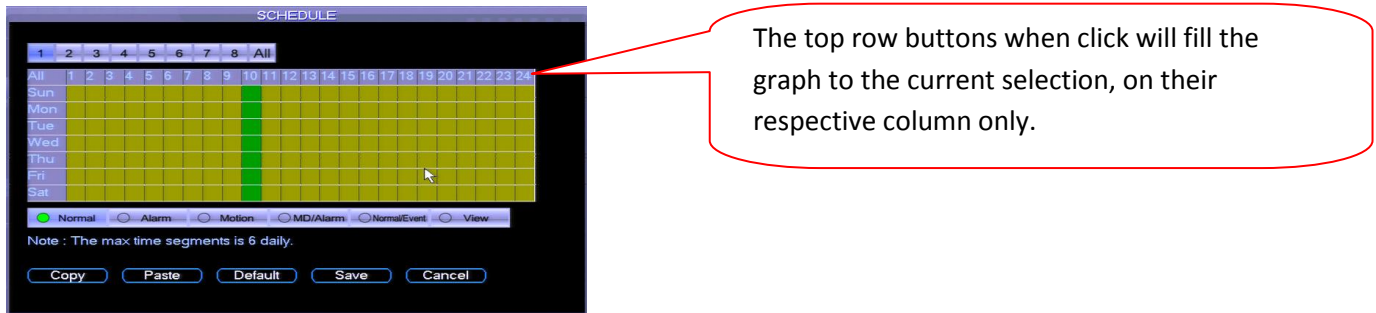
## III. Setting the DVR Schedule

### 1. Manual Record.

To open the Manual Record menu and enable Scheduled Recording, on the Main Menu select Advance Setup and then click on Manual Record or on the front panel of the DVR press the REC button. On the Manual Record window Highlight "All" on Schedule. Click OK

Scheduled Recoding

MANUAL RECORD

Record Mode   All   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Schedule
Manual
Stop

OK      Cancel

Stop

Always Record

### 2. Setting the Schedule:

By default the DVR is set to 24hrs motion recording. Note:    The "All" button on the top left corner, when click, will fill the whole graph to the current selection.

This will change all the colors of the graph to current selection

Camera

Recording Time by the hour

Recording Days

SCHEDULE

Recording section

Note : The max time segments is 6 daily.

Copy      Paste      Default      Save      Cancel

The top row buttons when click will fill the graph to the current selection, on their respective column only.

The first column buttons when click will fill the graph to the current selection, on their respective row only.

Example 1. Schedule the DVR for weekday Normal recording (always record) from 9:00am to 5:00pm and motion recording for the rest of the day. And for weekends Motion Recording for 24hrs.
Open the Recording Schedule in the DVR Setup Menu and:

1. Set the Schedule for all cameras. By selecting the all button
2. Select the Motion button.
3. Select row "Mon" for Monday and click the grid for 9 to 17
4. Do the same thing for Tue, Wed, Thu and Fri
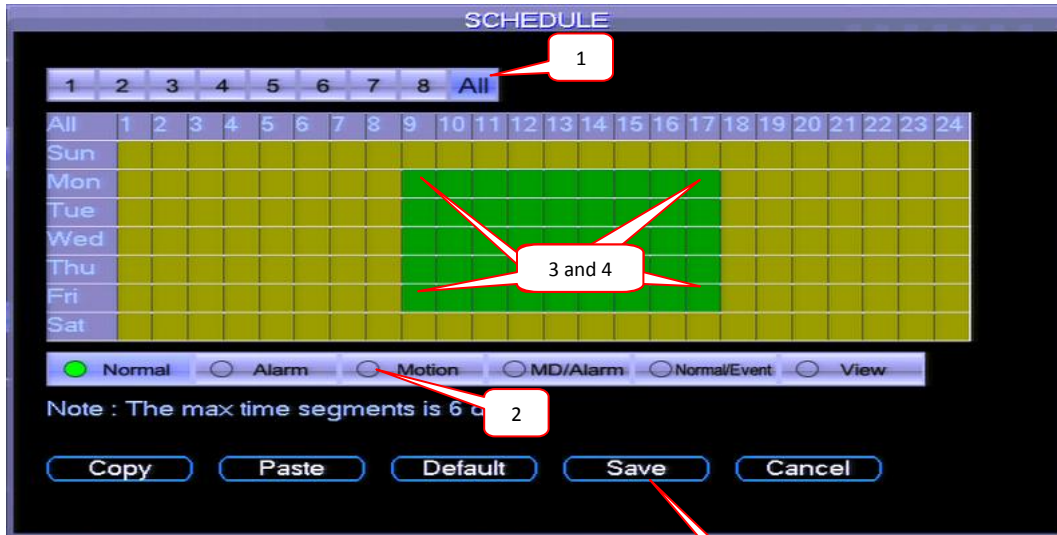


5. Click Save to exit

**IV. DVR Search & Backup Procedures**

Before beginning any backup procedures, make sure to use blank media or a USB drive that is supported by the DVR. The DVR's drive tray will show what type of media it supports, if it shows only CD it mean will only support CD's but if it shows DVD and CD it can support both media. Make sure to insert the CD, DVD or USB drive before starting the backup procedure, inserting it while in the backup window may cause it not to be detected.  For USB drives make sure that the drives are in FAT32 format.

There are two ways to start a backup, highlighted below, they are:
- Searching for the video you wish to backup in the "Search" window
- Searching by time and date in the Video Backup menu

The following steps will guide you through backing up the files from the
1. Login to the DVR. Pressing the login button
2. Enter the Username/Password. (Default: admin / 1234)
3. Select "Search" this will open the Search Window
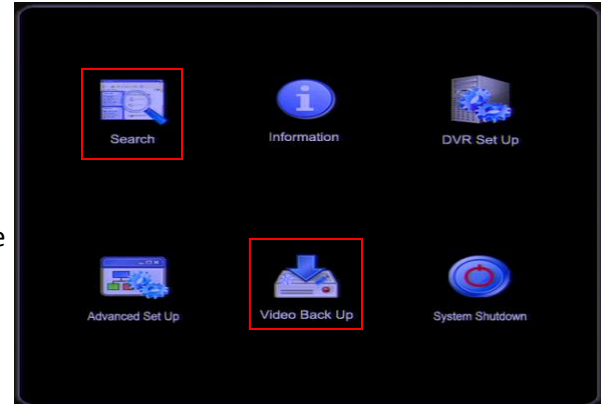


3.1 Enter the time/date at the top-left corner and the channel numbers you want to view on the top-right.
3.2 Double click on the file to start playing the video. To make a backup, place a check mark next to the videos you want to save using the file list on the right or double click on the file to start playing.
3.3 Select the "Back Up" button on the top   right; this will open the backup window as seen below
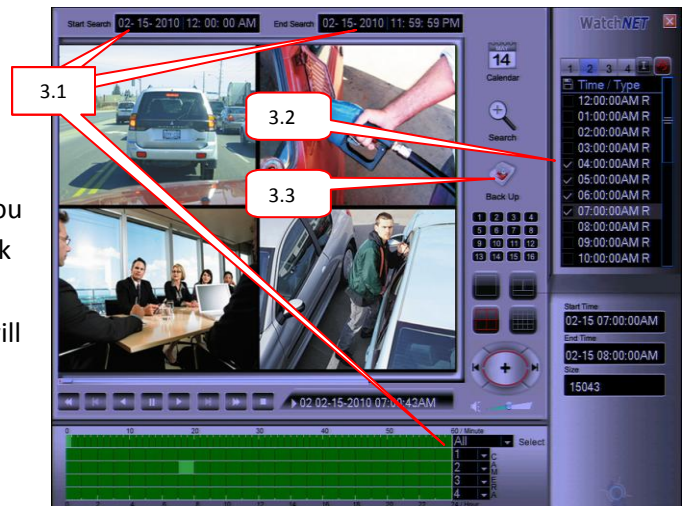




Select here for USB Drive or CDRW/DVDRW

Click to start backup

**V. Mobile Phone Setup and Software Installation.**

**1. DVR Setup.**

Set the Embedded DVR Transmission Stream to make the device suitable for the mobile phone monitoring. It is located in Setup, DVR Setup and Compression.

**Note:** Mobile phone monitoring only supports the embedded DVRs with dual stream function.

The encode interface is shown as. Refer to the  following setup:
- Resolution: CIF/QCIF.
- Frame Rate: The value ranges from 5 to 10.
- Bit rate type: CBR
- Bit Rate: 64-256Kb/S
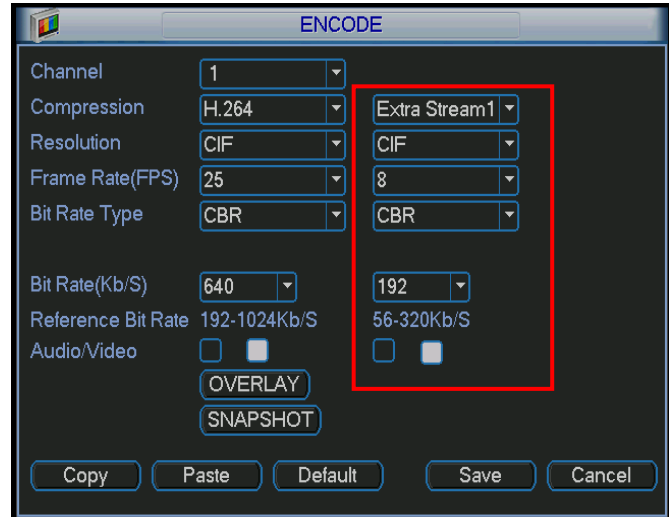
Adjust the setup according to the mobile phone performance and network environment. Lower the Frame Rate or Bit Rate to adjust for video fluency.

**2. Account**

For mobile phone account, please make sure it is reusable (support multiple users login using the same account name) and has PTZ control right.
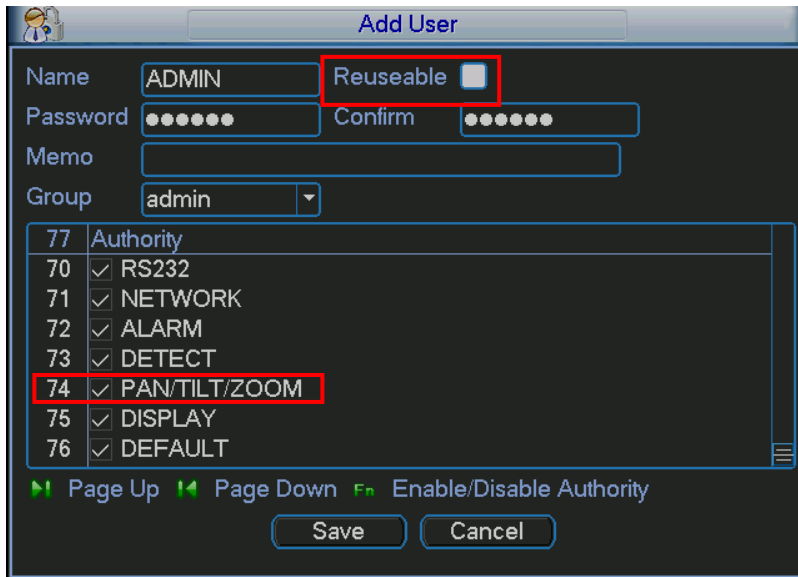
**3. BlackBerry Phones.**

The software will only support Blackberry 9000 series and higher (Version 4.6.0) and has RTSP support. Please refer to the Blackberry software installation manual to install monitoring software. The monitoring software for the Blackberry's should be located on the CDs that goes with the system.

**3.1 Software.**

After the installation of the software, the software shortcut menu will display

on the download section of the Blackberry.  Click the  button.

```
Device IP: 67.208.24.42
Device port:4000
User name:admin
Password:*****
Network:                                    Other




          Login                                Exit
```
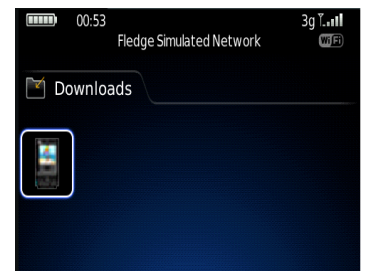
Device IP: Device IP or domain name.
● Device port: Device login port.
● User name: Please input the user name here.
● Password: Please input the corresponding password.
● Network: Please select the network here. It includes two options: WiFi/Other.

For convenience in login the mobile phone monitoring software can remember the recent login device information.
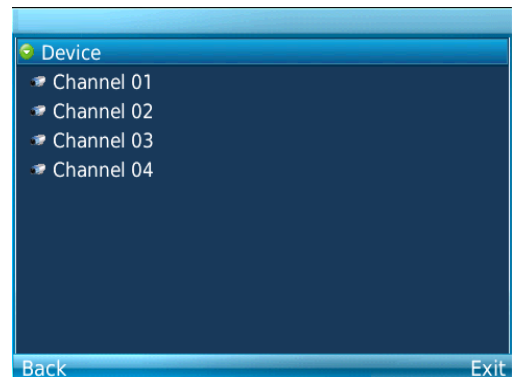
If login fails, please check:
● Input information is valid.
● Server is running properly.
● Network connection is OK (please access a site via web browser and make sure to the Internet.)

**3.2 Main Interface**
      After logging in, the interface is shown.
● Channel: Select a channel to view the camera
● Back: Click it to exit current interface.
● Exit: Exit the monitor software.

```
◉ Device
  ✐ Channel 01
  ✐ Channel 02
  ✐ Channel 03
  ✐ Channel 04




 Back                                   Exit
```

● Camera: Go to channel setup interface.
● PTZ: Display/Hide PTZ.
● Full: Click it to go to the full-screen display mode. Click the rolling ball to exit the full-screen mode. The "space" button is the full-screen short cut button.
● Set: Go to video monitor setup interface.
● Exit: Exit current monitor software.



```
Camera PTZ Full Set Exit
```

### 3.3 PTZ Control

Please select the PTZ button to go to the PTZ operation interface. Use the rolling ball to select the corresponding button.  In the full-screen mode, can use the rolling ball directly to control the PTZ direction. In video monitor mode, use E/S/X/F to correspond to the up/down/left/right PTZ operation.
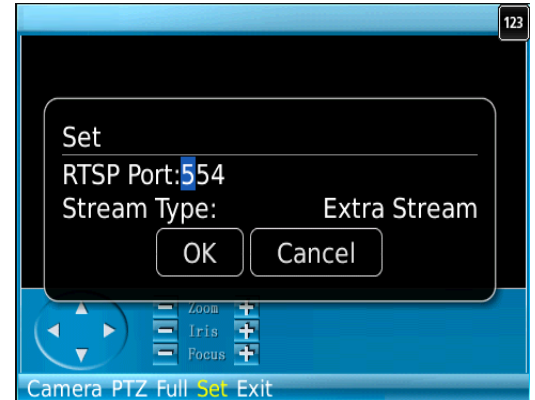
### 3.4 RTSP

Click set button and see the following interface.
● RTSP port: Set device listening port. Default value is 554.
● Stream type: Select the stream type. It includes two options: main stream/extra stream.

### 3.5 Exit

Select exit button, select the Yes button, to exit the mobile phone monitor  software.

## 4.  IPhones

The Software support for has the following features, IPhone support for real-time video view and support PTZ control operation for IPhone 3G.

### 4.1 Software Installation

Please follow the steps to install the software.
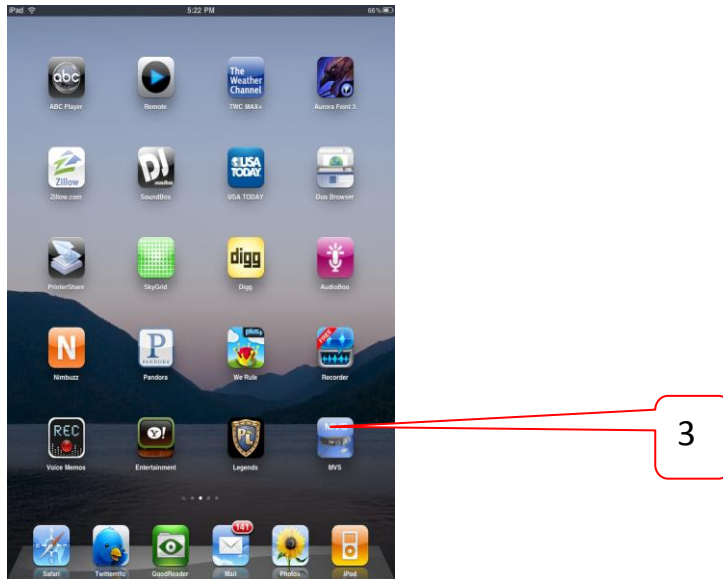1) Please go to the App Store to install the software.  Or click on the link provided:
http://itunes.apple.com/app/mvs/id366176719?mt=8
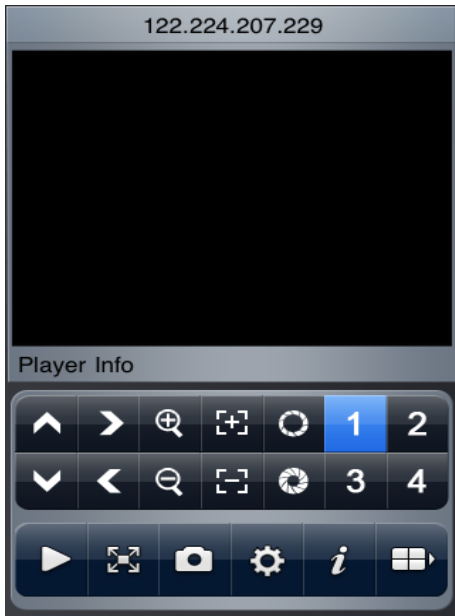2) Search for MVS to find the software.
3) Click the MVS software to begin the installation. The interface is shown as below after the installation

3

**4.2 MVS software's initial interface.**



Please refer to the following sheet for detailed information.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ∧ | PTZ up | › | PTZ right | ⊕ | Zoom in | | |
| [+] | Focus + | ○ | Aperture + | 1 | Channel 1 | | |
| 2 | Channel 2 | ∨ | PTZ down | ‹ | PTZ left | | |
| ⊖ | Zoom out | [-] | Focus - | ◉ | Aperture - | | |
| 3 | Channel 3 | 4 | Channel 4 | ▶ | Play/Pause | | |
| ⤢ | Full-screen/ normal screen | ◯ | Snapshot | ⚙ | Setting | | |
| i | About | ⊞ | Next channel group | | | | |

**Important**

The snapshot image is saved in default iPhone image folder.

**5.3 IPhone setup**

Adjust the setting of the IPhone software to match DVRs network

setup. Please click ⚙ button to modify the setup.

● Address: DVR IP in WAN or dynamic domain.
● Port: DVR port value.
● User ID: The user name to login the dvr.
● Password: The password to login the dvr.

When holding the IPhone horizontally, the system goes to the full-screen automatically.
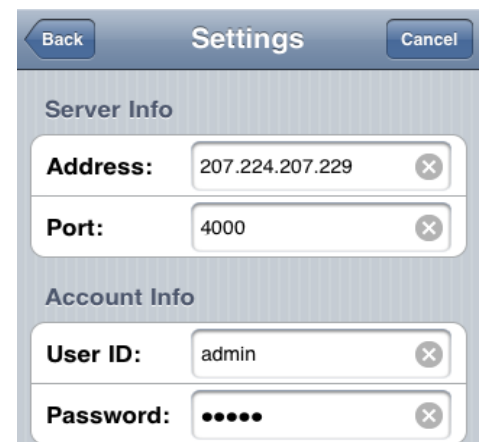
### 4.4 Display

Select the corresponding channel number, so that the system can open the specified channel and then play the video. System default setup is to display the channel 1 to channel 4.

Please click  to display the next four channels (the channel 5 to channel 8). Click this button again to go back to previous four channels (channel 1 to channel 4.).



122.224.207.229

Playing

### 5. Symbian Phones

The Symbian software can support all Symbian S60 3$^{rd}$ OS mobile phones. The software supports mobile phone to view real-time video and PTZ control operation. Copy the mobile phone monitor software to the phone (Use PC synchronization software or network download function). Click the software and then follow the steps to install the software to the mobile phone.

**Note:**
● For Nokia Symbian S60_3$^{rd}$ base version and Nokia Symbian S60_3rd FP1 version, please download the s60plugins.rar file and install all three Nokia official plug-ins (glib.SIS /pips_nokia_1_3_SS.sis /stdcpp.SIS)
● If the monitor software doesn't work after installation, please connect the mobile phone to the Nokia PC Suite 7.1.26 (or higher), click the help menu. Then select to install the PC Suite again. Please follow the instruction to install MMSSync suite program, and Contacts Group DS Plugin.

### 5.1 Symbian Phones Software

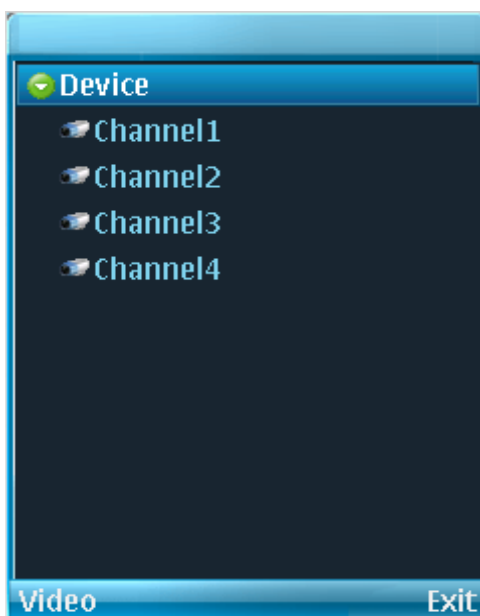In the mobile phone, Select the MVS Program.                    Click MVS button, interface is as shown.

IP: DVR IP in WAN or dynamic domain.
Port: DVR port value.
User: user name on the DVR
Password: Password on the DVR

After the login interface

For convenience the mobile phone monitoring software can remember the last login device information.

If login fails, please check:
● Input information is valid.
● Server is running properly.
● Network connection is OK (please access a site via web browser and make sure to the Internet.)

pg. 19

**5.2 Phone Navigation**

Please refer to the following figure for mobile phone information.
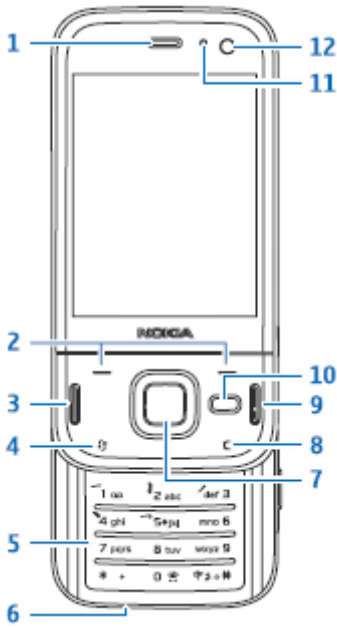


| SN | Name |
|---|---|
| 1 | Headphones |
| 2 | Selection button |
| 3 | Dial a phone |
| 4 | Function menu |
| 5 | Number |
| 6 | Microphone |
| 7 | Navi$^{TM}$ button. (In the following chapter, we call it navigation button.) |
| 8 | Clear data button |
| 9 | End an active call. |
| 10 | Multiple media button |
| 11 | Light sensor |
| 12 | Snapshot/Camera |

If switching to another channel, please use the navigation button to select the camera button, select the desired channel.

**5.3 Phone Navigation**

While in the live video display, use the navigation button to select the PTZ button and use the navigation button to select the desired operation button and then click the navigation button again to enter. In the full-screen mode, use the navigation button directly to control the PTZ direction.
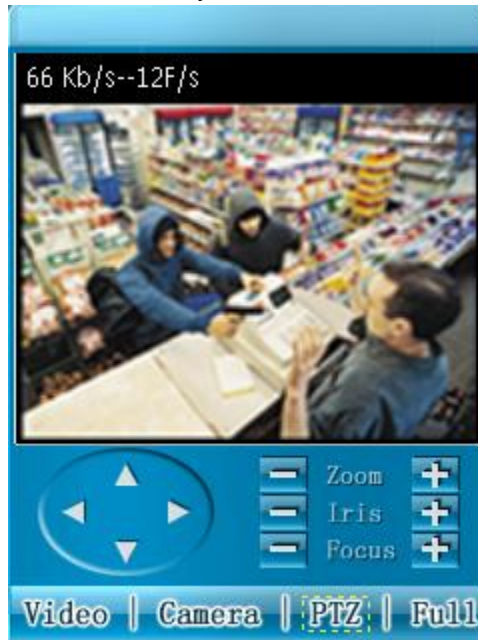


**5.3 Exit**

Click Right button and the following interface will display. Use the navigation button to select and then exit the mobile phone monitor software.

**6. Windows Mobile Phones**

This software supports Windows Mobile OS (5.0 or higher); Please refer to the following supported brand list:

- Dopod: C730，HTC Touch，HKC Pearl，HTC6800, HTC6900，HTC6850，P3450，P4550，S1，S420，S730，Touch；，LG KC1，KS20，830，838，900，Athena，C800(C858)，CHT 9000，CHT 9100，D600，D802，D810，E806c，M700，MUSE，P800W，U1000；
- Mio: A501；OKWAP K868 Plus，K869，A700；
- ASUS: P526，P535，P735；
- Holley: H8800
- Gigabyte: GSmart t600，i350，g-Smart，g-Smart i，i300；
- Samsung: SGH-i718；
- Lenovo: ET980，ET600，ET980T；
- Amoi: E850，E860，E870；
- Gionee: S600；
- Sharp: EM ONE；
- CoolPAD: 728，728B，768，838G2；
- HP: 6925，hw6828，iPAQ rw6818，rw6965；
- UTStarcom: P903，XV6700；
- Toshiba:G500；O2 Flame，Argon，Atom，Atom Life，Exec，mini S，XDA Neo，Orbi，Stealth；i-mate JAMA，JAO3，JAQ，JAQ3，JAQ4，JASJAR，PDAL and etc.

**6.1 Software Installation**

Installation of mobile software is done using Microsoft Activesync installed on your pc. The .cab file can be found on the software cd that came with your dvr. For more information on installing and using Microsoft Active sync please refer to your smartphone manual or contact your mobile phone provider.

After synching between pc and windows mobile click the Install button to install the software.
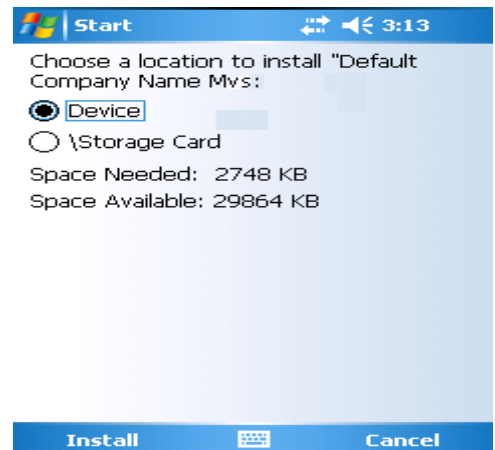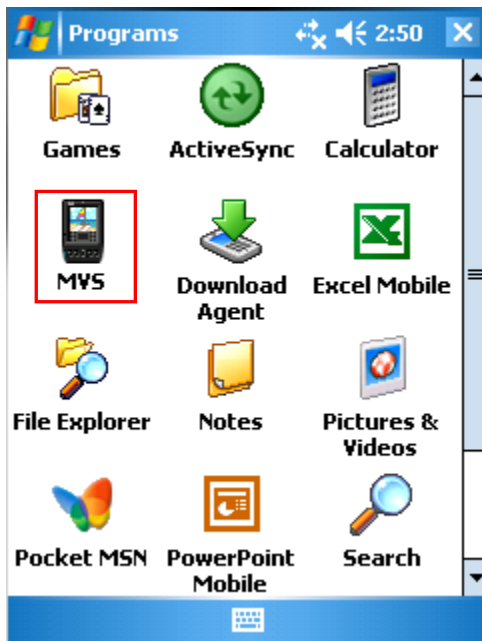
After the installation on the software exit the browser.
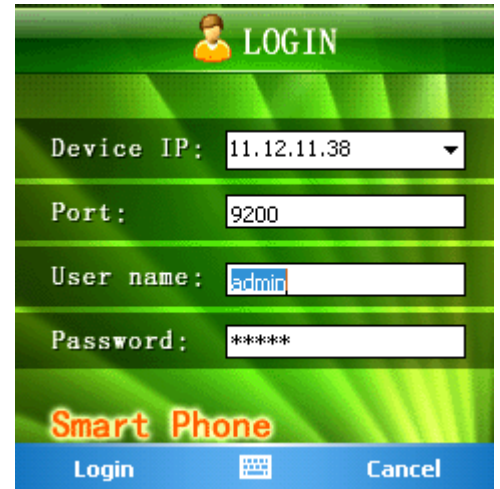
### 6.1 Software Interface

In the mobile phones, Start Menu the software
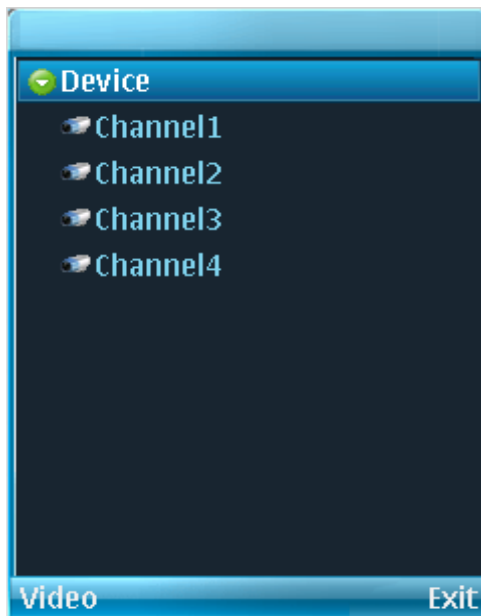
shortcut icon is  MVS.



After Clicking the
MVS icon

IP: DVR IP in WAN or dynamic
domain.
Port: DVR port value.
User:  user name on the DVR
Password: Password on the DVR

### 6.2 Software Controls



For convenience the mobile phone monitoring software can remember
the last login device information.

If login fails, please check:
- Input information is valid.
- Server is running properly.
- Network connection is OK (please access a site via web
browser and make sure to the Internet.)

### 6.3 Software Controls

After logging in, click Camera button first, and then double click the device name in the device tree. Double click the channel name or select the channel name and then click Video button to see the video.

During the real-time monitor process, there are three ways to go to full-screen mode.

● Click the video window once;
● Click the full button;
● Click the icon ▣ on the top right corner.

### 6.4 PTZ Controls

There are two ways to control PTZ.

● In the full-screen mode (open the PTZ control interface), use the direction buttons in the mobile phone to control the PTZ direction.

● In non-real-time monitor mode, click the PTZ button to go to the PTZ control interface. Use the direction buttons in the interface to move the PTZ corresponding function.

### 6.5 Exit

Click the icon [ X ] on the top right corner, to exit the surveillance software.

For the full manuals and utilities of the system; please refer to the CD that was provided with the system.

Not printing full manuals means

6,234,500 more liters of water

2,376 more trees

292 tons less greenhouse gas

208 tons less solid waste



Manuel