

WISENET

NETWORK VIDEO RECORDER
User Manual

SNK-B73041BW

CE

Overview of NVR

CONTENTS

OVERVIEW OF NVR	2	Contents
	3	Safety Instruction
	4	Front Panel
	5	Rear Panel
	6	Remote Controller
	7	Install Hard Drive
	8	Connect external equipment
	8	Connect NVR
NVR BOOT UP	9	System Initialization
	9	Login
	9	Startup Wizard
	12	Main Interface
NVR MENU	14	Popup Menu
	15	Main Menu Guide
	16	Setup
	22	Registering with DDNS
	32	Menu Lock
	32	Split Mode
	32	Record Search
	32	Start Sequence
SEARCH	33	Search
WEB APPLICATION MANAGER	37	System Environment Requirements
	40	Web Application Manager Login
	40	Live Interface
MOBILE APP	50	Android Phones/Tablets
	51	iPhone/iPad
APPENDIX	52	Troubleshooting
	54	Specifications
	56	Dimension
	57	Open Source Announcement

SAFETY INSTRUCTION



Please carefully read the following safety instruction so as to avoid personal injuries and prevent the equipment and other connection devices from being damaged.

1. Please use the power supply enclosed or specified by the manufacturer.
Never operate the equipment by using unspecified power supply.
2. Never push objects of any kind through openings of NVR so as to avoid electric shock or other accidents.
3. Do not put the equipment in a dusty location.
4. Do not place the equipment under the rain or humid environment like the basement.
If the equipment is accidentally in contact with water, please unplug the power cable and immediately contact technical support.
5. Keep the surface of the equipment clean and dry.
Use a soft damp cloth to clean the outer case of the NVR. (Do not use liquid aerosol cleaners.)
6. Do not operate if any problems are found.
If there is a strange smell or sound from the NVR, unplug the power cable and contact technical support.
7. Do not try to remove the NVR cover to avoid electrical shock.
8. Handle with care.
If NVR does not work properly, please contact technical support for repair or replacement.
9. Install and place the equipment in a well ventilated area. The NVR system includes a HDD, which produces large amount of heat during operation. As a result, do not block the ventilation vents (on the top, bottom, sides and the back of the NVR).
10. The power adapter should only be connected to the NVR. Do not connect it to additional equipment or else the NVR may restart repeatedly due to insufficient power.
11. Do not install near any heat sources such as radiator, stove, and other machinery or devices (including speakers) that produce large amount of heat.
12. If the provided plug does not fit your outlet, please technical support for assistance.
13. Protect the power cord from being walked on or pinched particularly at the plug level and each ends of the cord.
14. Only use attachments/accessories specified by the manufacturer.
15. Only use the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the system.
When a cart is used, use caution when moving the cart and the device to avoid injury from tip-over.
16. Unplug the device during lightning storms or when unused for long periods of time.
17. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is broken, liquid has been spilled or objects have fallen onto the device, exposed to rain or moisture, does not operate normally, or has been dropped.



Standards Approvals

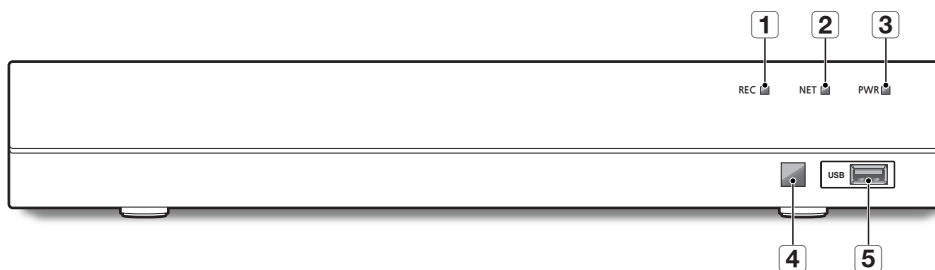


- 
 - Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- 
 - This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
 - This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Overview of NVR

FRONT PANEL

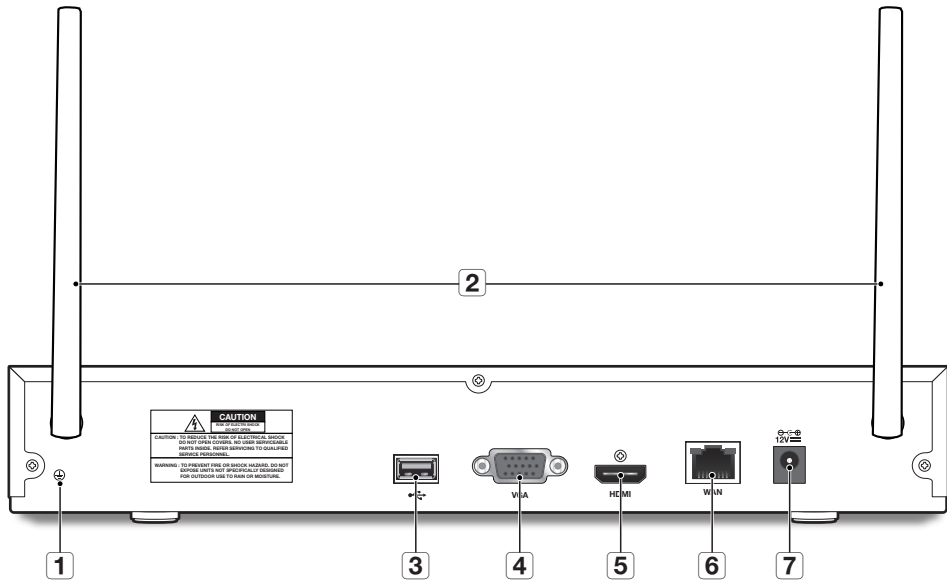
NVR is short for Network Video Recorder.



Type	Key or indicator	Identification	Functions	
1	Status lamp	HDD indicator	REC	If the "Red" indicator flashes, the hard drive is being read or written to. ■ The red light will illuminate when HDD is installed.
2		Network indicator	NET	Display network connection and data transfer status.
3		Power indicator	PWR	If the "Blue" indicator is on, NVR is getting power normally.
4	IR port		□	Receive IR signal from Remote Controller.
5	USB port	USB	USB	USB port

REAR PANEL

SNR-73201W

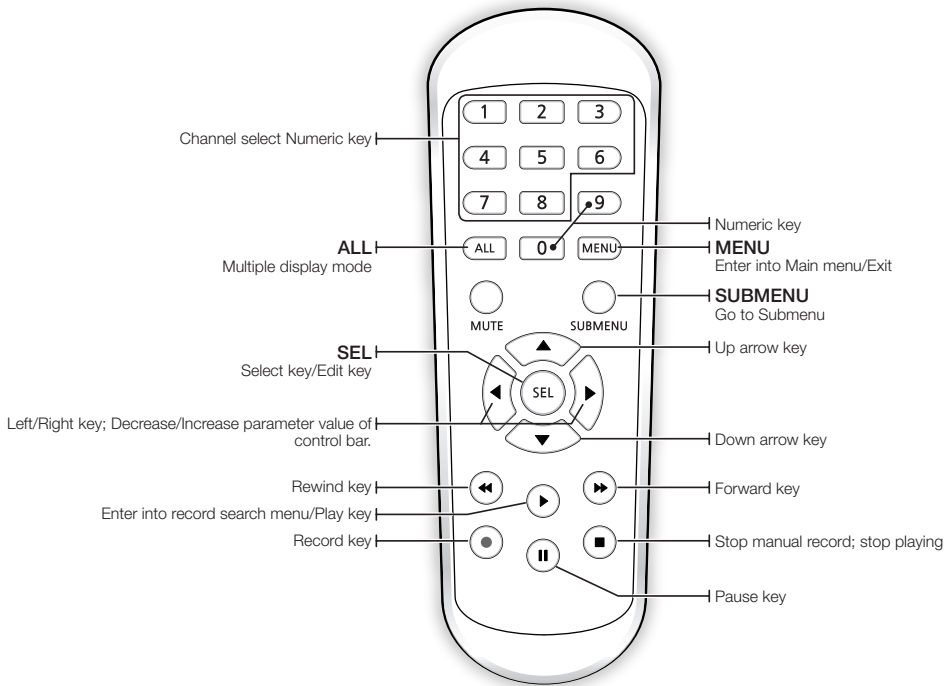


Physical Interface	Connection
1 Ground connection	A terminal to connect a separate ground cable. <ul style="list-style-type: none"> Make sure to add a ground cable in order to use the equipment safely.
2 Antenna	Receive signal from wireless camera.
3 USB port	Connect with USB.
4 VGA port	Connect with VGA display devices, such as PC monitor.
5 HDMI	Connect with HDMI display devices, such as PC monitor.
6 WAN: (RJ45) Network port	Connect with WAN, Ethernet cable.
7 Power port	Connect with the power supply DC12V 2A, included with the device

Overview of NVR

REMOTE CONTROLLER

Operation of remote controller



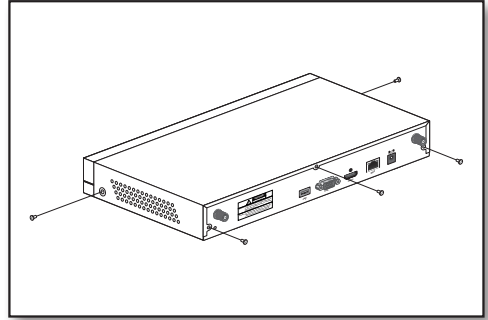
- There is no function of Mute button.
- SNK-B73041BW is a 4 channel NVR. Please press 1 to 4 key to select channel.

INSTALL HARD DRIVE

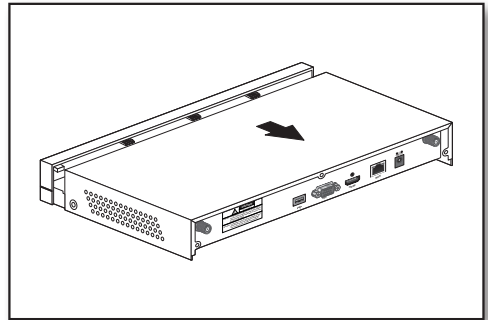
- HDD is pre-installed. If you want to replace hard disk drive, please refer to the following instruction. Please do not remove the hard drive when NVR is operating.

Installation of Hard Drive

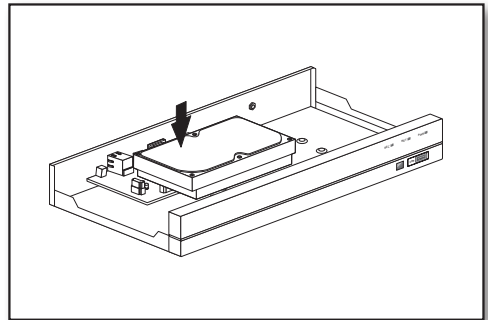
1. Using a screwdriver, remove the screws from the side and back panels.



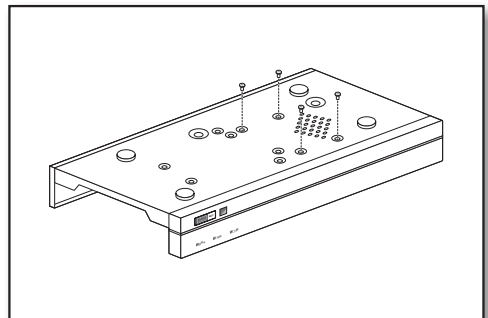
2. Remove the top cover.



3. Connect data and power cables of hard drive to the motherboard. Mount the hard drive by mounting it onto the rack and connecting the power and data cables.



4. Multiple groups of screw mounting holes are provided on the bottom of the NVR. Screw the hard drive in place according to the size of your hard drive.

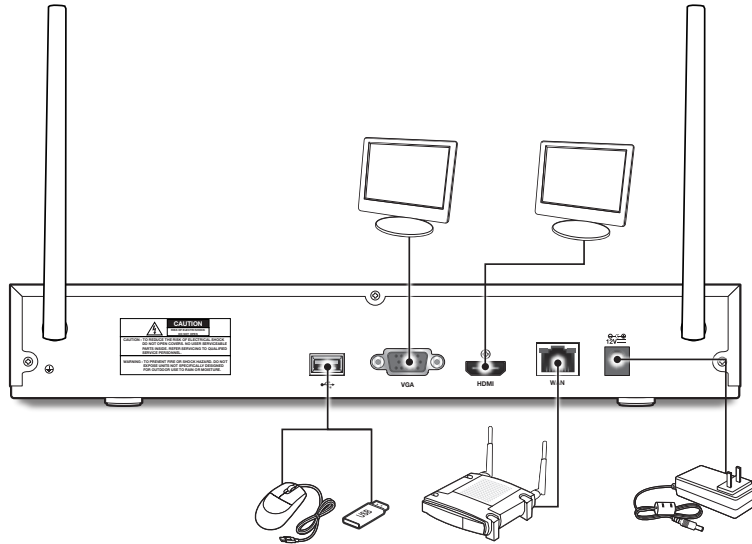


Overview of NVR

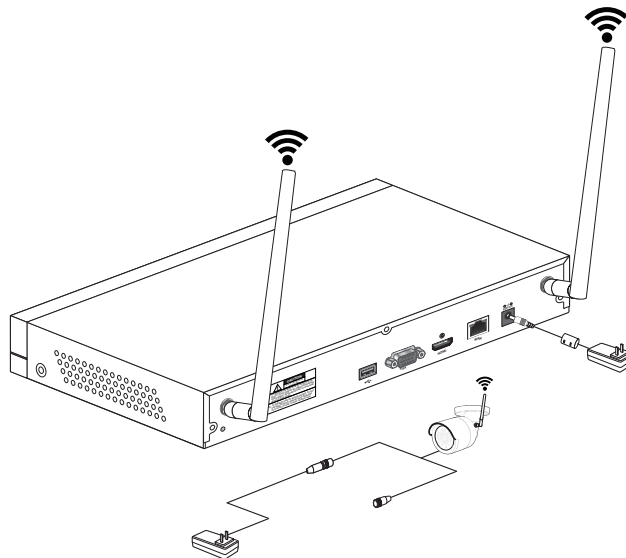
CONNECT EXTERNAL EQUIPMENT

Connect your monitor to the NVR using the VGA or HDMI video cable. Connect NVR to the power supply adapter provided. After all connections are completed, plug the NVR in to perform function checks.

- The appearance of power adaptor differs depending on sales region.



CONNECT NVR



- Images may differ depending on the model.
- Camera's shape can be different depending on AIO Kit you purchased.

NVR Boot up

SYSTEM INITIALIZATION

After connecting the NVR power cable to wall outlet, the NVR system initializing screen will appear.

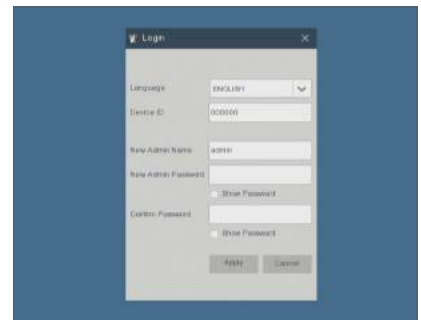
- It may take 40 seconds to start up, and the screen may beep 5~6 times.



LOGIN

1. The login dialog appears.
2. The password setting window appears for the first time. If you have changed your password, enter your new password.
3. Click the [Apply] button.

- Please create a user name and password for your device. Password MUST be 8~13 characters long. When password is 8~9 characters long, it should be with at least a combination of letters, digits and special symbols. If it is 10~13 characters long, it should be with at least a combination of two types of characters. 4 or more contiguous or repeated characters or key arrangement are prohibited, for example 1111, 1234, abcd, qwerty.



STARTUP WIZARD

After the NVR startup is complete, the startup wizard will display.


Wizard setting menu includes: Network, Date/Time, Disk, Resolution, Mobile and System summary.




NVR Boot up

Use Virtual Keyboard

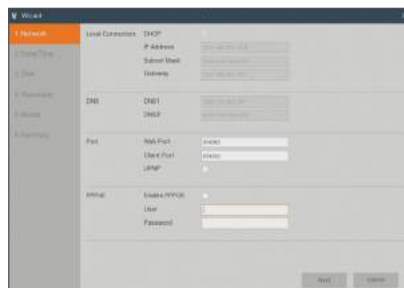


Virtual keyboard window will be displayed for input. Click on the desired characters to apply them. Press <  > to switch to input of upper-case letters.

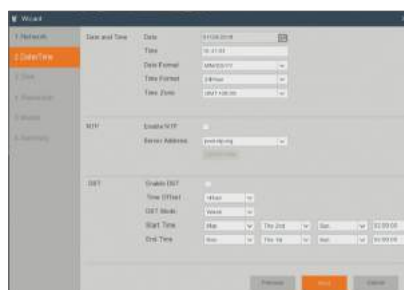
Press <  > again to switch to input of special characters. The virtual keyboard is used in the same way as with physical keyboard.

For input of password, use letters and special characters other than <\> and <">.

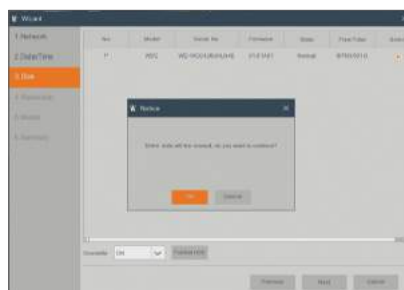
1. Network (DHCP): In DHCP mode the router will automatically assign an IP address to NVR. If the NVR fails to obtain an IP address, refer to the NVR Router Guide. If the problem still cannot be resolved, contact technical support.



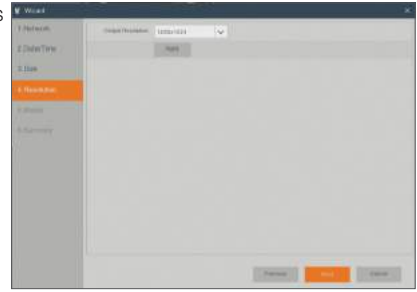
2. Date/Time: Set the date, time, date format, time, NTP, DST.



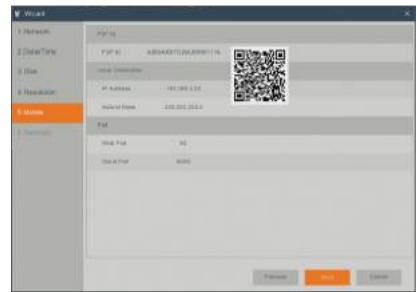
3. Disk: Any new disk connected must be formatted before use. Click on "Select" to highlight the hard drive to be formatted. Click on "Format HDD" and the user login box will appear. Enter the password to log in. Click on "OK" to format the disk when the "Entire Data Will Be Erased. Do You Want To Continue?" dialog box appears. Formatting process is complete when the progress bar is full.



4. Resolution : For VGA output or HDMI output, the optional resolution includes 1024×768, 1280×1024, 1440×900, 1280×720, 1920×1080




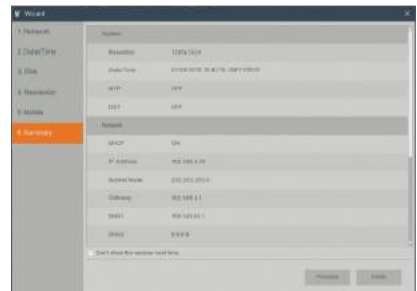
5. Mobile : If you scan a QR code using WiseView, the device ID displayed in the NVR will be automatically reflected in the Mobile Viewer ID, and you can use the Mobile Viewer immediately by entering the ID/password of the NVR.



6. Summary : Shows system and network status of NVR.

7. Click on "**Finish**" to finish setting of startup wizard.

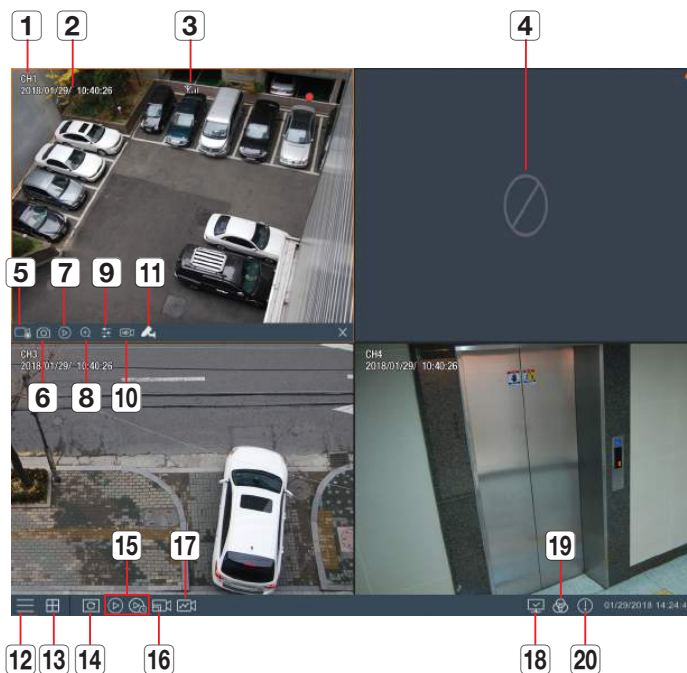
-  You can click on "**Don't show this window next time**" if you do not wish to have the wizard setting to appear next time.



NVR Boot up

MAIN INTERFACE

In real-time preview mode: right click on any area to access the desired menu. Right click on it to open a context menu, whose menu items may vary depending on the specific condition, such as sign-in, sign-out, split screen mode and various operation conditions. Left click on any channel to access shortcut menu, where operations such as image capture, recording and image zoom-in are available.



The video recording marks are as shown below:

- : means common Recording.
- 👤 : means Motion detection recording.

Component Name	Function
1 Channel Name	Display channel name
2 Date & Time	Display current date and time
3 The signal icon	The level of the signal, strong or weak.
4 Video Loss	Wireless Camera is off-line.
5 Manual Recording	Enable or disable manual recording
6 Manual Capture	Make a snapshot of current video
7 Instant Playback	Make playback of the last 5 minutes of the video
8 Zoom	Hold and drag mouse cursor to select a frame of current video to zoom in.
9 Color Setting	Set hue, brightness, contrast and saturation of current channel.

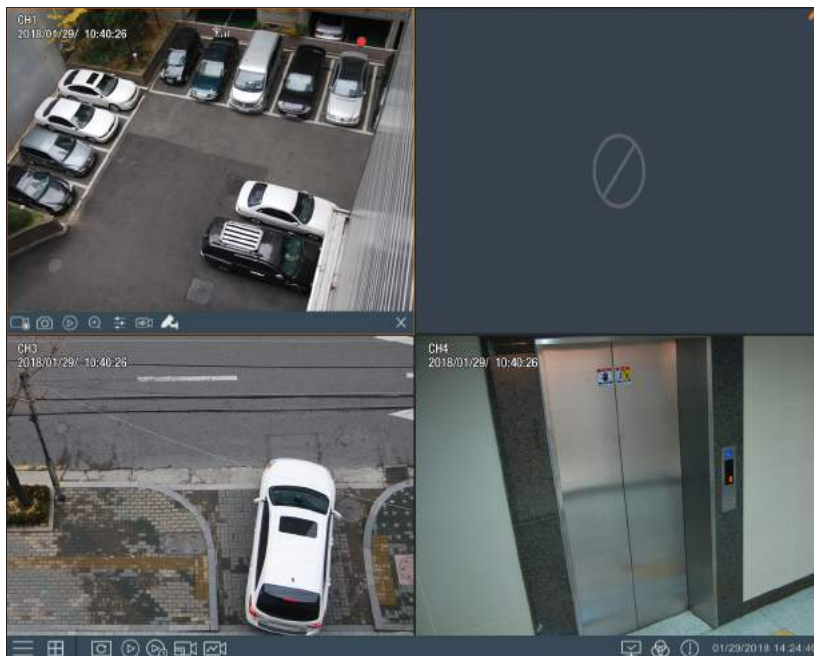
Component Name	Function
10 Stream Switch	Mainstream or Substream optional.
11 Pair	Do the pairing of camera and NVR.
12 Main Menu	Access the main menu
13 4-Channel Layout	Display four channels of video.
14 Auto SEQ	Press this button to switch the screen mode in sequence.
15 Play	Access video retrieval page.
16 Stream Switch	HD or SD optional.
17 Preview Policy	Realtime: There is no delay of video, but it is not that smooth.
	Smooth: There may be some delay of video, but it is smooth.
	Balanced: Take both realtime and smooth into consideration at the same time.
18 Connection state	Displays the network connection status.
19 Manual mode	Sets manual recording mode.
20 System	System Information.

NVR Menu

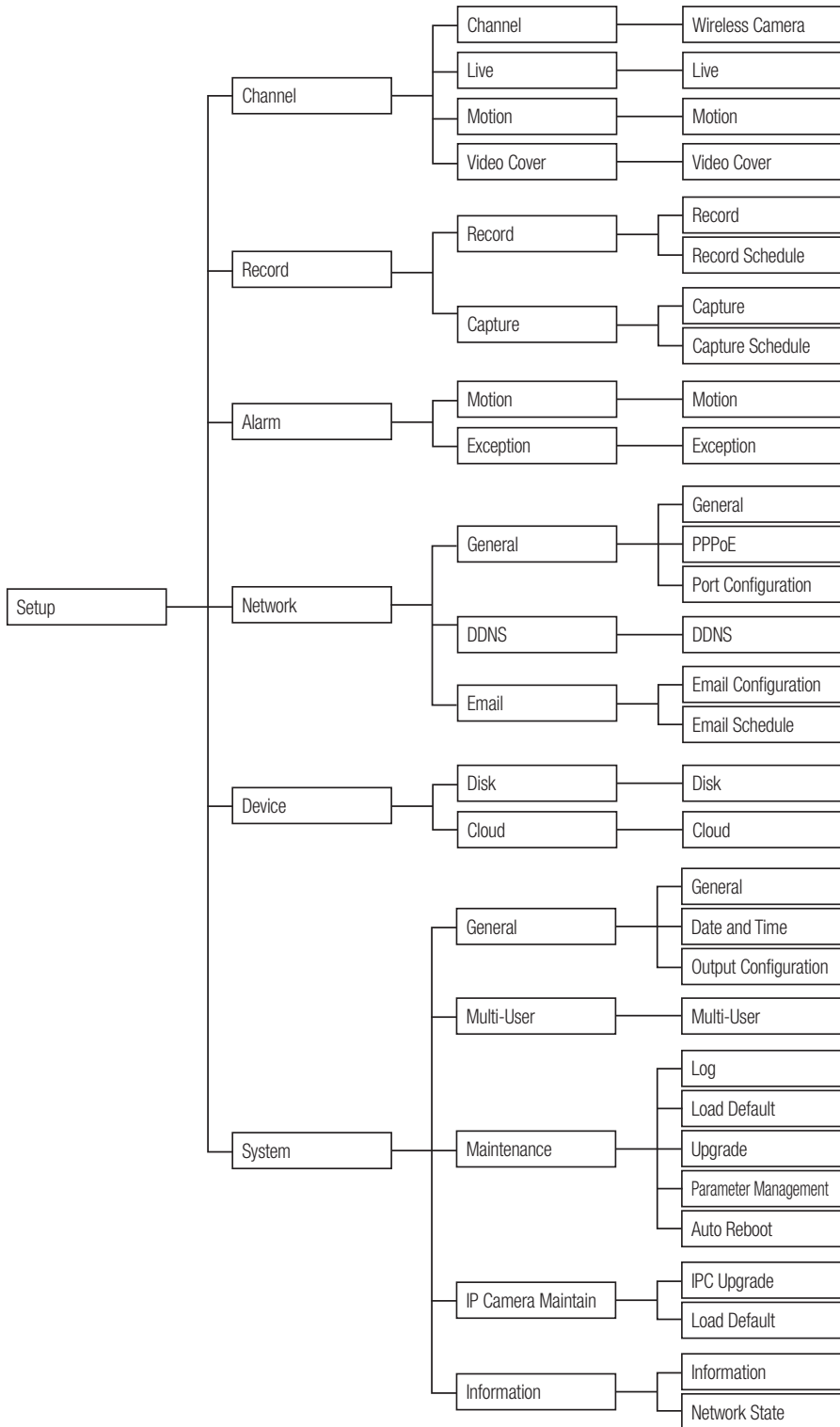
POPUP MENU

After finishing system initialization, right click the mouse on preview interface or slide the mouse to the bottom of screen to enter into Pop-up Menu. Now you could perform parameter setting and operate on Main Menu, Multi-screen, Record Search, Sequence and Brightness settings.

The options in the pop-up menu may vary slightly according to different parameter settings and application environment. The options in the menu will be explained in detail in the following chapters.



MAIN MENU GUIDE



NVR Menu

SETUP

On LIVE mode, click the mouse left button, or [Menu] button on the remote controller, or click [] icon on the toolbar to enter the main menu screen.

If system interface is locked, refer to page 32 to unlock by entering your password.

In Main Menu mode, you can make settings for Parameter, Record Search, Device, System, Advanced and Shutdown.

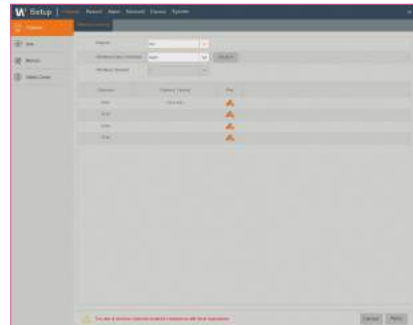
Channel

Wireless Camera

Go to "Setup" → "Channel" → "Channel" → "Wireless Camera" to enter into the following menu.

- **Region** : You can select Region.
 - NA: 미주
 - EU: 유럽
 - MKK: 기타지역
- **Wireless Band Selection** : Auto or Manual optional. Auto is recommended.
- **Wireless Channel** : Channel of wireless camera.
- **Camera Version** : Wireless firmware version.
- **Pair** : Click the channel button to do pairing.

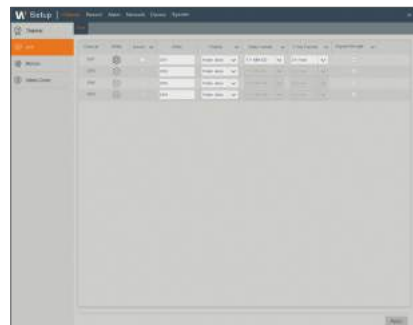
 Only the user admin can see Wireless Camera menu.



Live

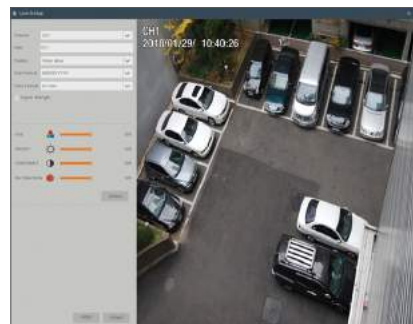
Go to "Setup" → "Channel" → "Live" → "Live" to enter into the interface.

- **Alias** : Set the channel name to be displayed on the live screen.
- **Position** : Select the position of the set channel name.
- **Date Format** : Select the date format to be displayed on the live screen.
- **Time Format** : Select the time format to be displayed on the live screen.
- **Signal Strength** : Select whether to display the network signal strength on the live screen.



- **Hue** : Adjust the chromaticity of video
- **Bright** : Adjust the brightness of video
- **Contrast** : Adjust the contrast of video
- **Saturation** : Adjust the saturation of video

 Click [] to display the detailed setting window.

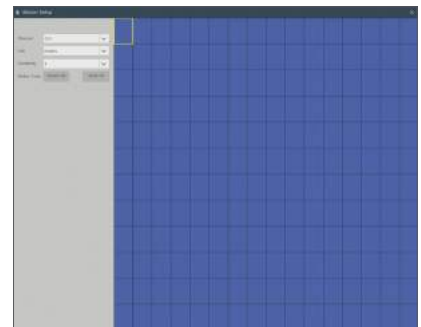
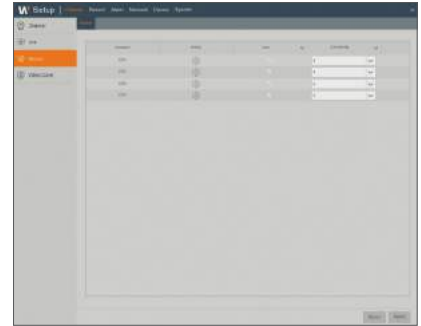


Motion

Go to "Setup" → "Channel" → "Motion" → "Motion" to enter into the interface.

- **Channel** : Select Channel.
- **Use** : You can select whether or not to use the **use**.
- **Sensitivity** : Support 1-8 level, 8 is the highest level.
- **Motion Zone** : Set an area where motion is detected.

 Click [] to display the detailed setting window.

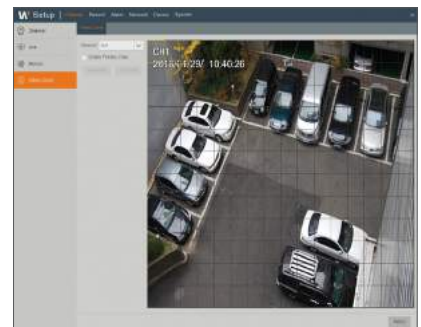


Video Cover

Go to "Setup" → "Channel" → "Video Cover" → "Video Cover".

Privacy Zone is to block certain area(s) in the camera's field of view on live video of selected channel.

1. Select the number of the zone(s) to be blocked.
2. Click "**Enable Privacy Zone**" to adjust the position of the zone.
3. Click "**Apply**" to save the setting.



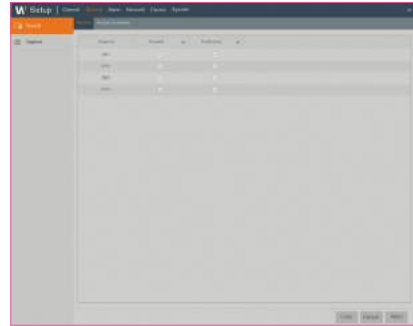
NVR Menu

Record

Record

Go to "Setup" → "Record" → "Record" → "Record" to enter into the interface.

- **Channel** : Set the desired channel in the drop-down menu
- **Record** : Enable/disable record
- **PreRecord** : Enable to pre-record motion detection record.



Record Schedule

Go to "Setup" → "Record" → "Record" → "Record Schedule" to enter recording schedule for the NVR.

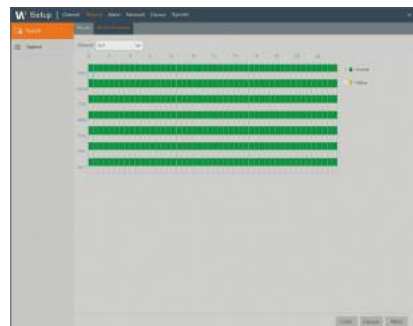
Schedule interface

Select the channel and the date to be set.

One week's schedule can be set.

The record schedule of the current channel can be copied to any other channel or all channels.



- In the Record menu and Record Search menu, when no colors are presented, it means there are no recordings during that time;
- "Green" stands for normal record and "yellow" stands for motion record.

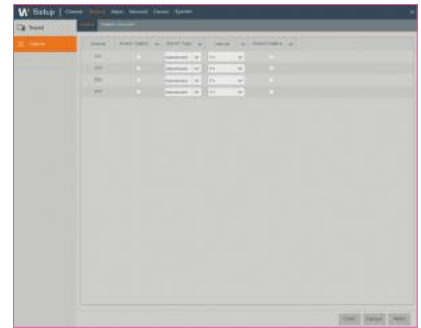


Capture

Go to "Setup" → "Record" → "Capture" → "Capture".

- **Channel** : Select capture channel
- **Enable Capture** : Enable/Disable auto capture.
- **Stream Type** : Select MainStream or SubStream.
- **Interval** : 4s / 8s / 25s / 1Min / 10Min / 30Min / Hour
- **Manual Capture** : Enable/Disable manual capture

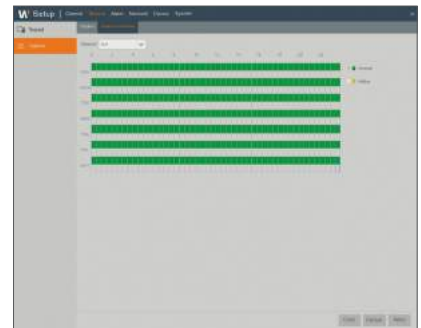
 ■ You can click on the icon [] in the live window to manually capture the image with your mouse.



Capture Schedule

Go to "Setup" → "Record" → "Capture" → "Capture Schedule".

- **Normal** : Conventional capture setting
- **Motion** : Motion detect capture setting



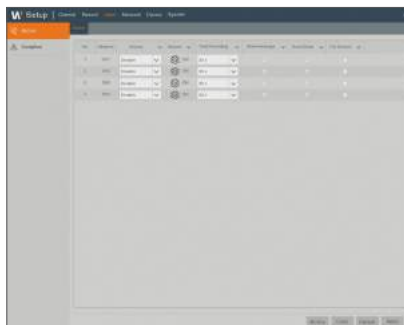
NVR Menu

Alarm

Motion

Go to "Setup" → "Alarm" → "Motion" → "Motion" to enter into the interface.

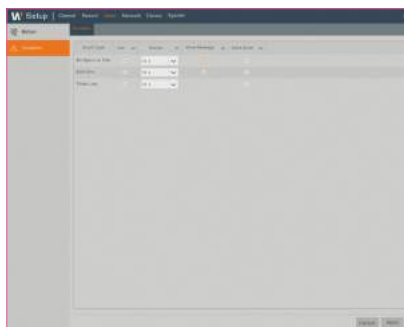
- **Buzzer** : When detecting object moving, buzzer makes alarms (disable, 10 seconds, 20 seconds, 40 seconds and 60 seconds).
- **Record** : When object motion is detected, the record channel setting will be activated.
- **Post Recording** : After the alarm finishes, the duration time of the alarm recording can be set as 30 seconds, 1 minute, 2 minutes and 5 minutes.
- **Show Message** : Messages will be displayed on the screen when moving object is detected and alarms are made.
- **Send Email** : When moving object is detected, send Email to the specified Email address.
- **Full Screen** : When moving object is detected, messages will be displayed in full screen.



Exception

Go to "Setup" → "Alarm" → "Exception" → "Exception" to enter recording schedule for the NVR.

- **Event Type** : Support three abnormal types: No Space on Disk, Disk Error and Video Loss.
 - No Space on Disk : When camera detects object moving, alarm will be activated. Sensitivity is subject to the actual application environment test. Sensitivity is adjusted according to the sensitivity of moving object detection and parameters are modified by combining the area setting.
 - Disk Error : Alarm will appear when the HDD does not work due to damage, power failure, HDD auto-overwrite off and insufficient space.
 - Video Loss : When the NVR fails to receive video signals due to some problems (camera damage, wireless signal is weak, power failure), the alarm will appear.
- **Use** : Active alarms for abnormal situations.
- **Buzzer** : How long the buzzer will sound (10s, 20s, 40s, 60s).
- **Show Message** : You can set show message on the screen when alarm is detected.
- **Send Email** : Select to send Email to specified Email address when abnormal events appear.



Network

General

Go to "Setup" → "Network" → "General" → "General" to enter the interface.

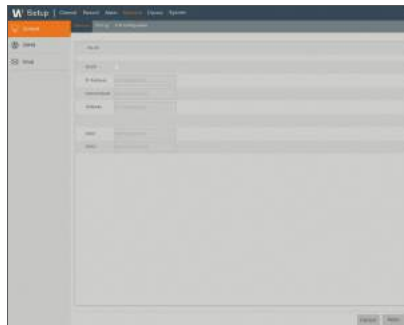
Select the network connection option (PPPoE, DHCP, Static) to set the port. User can view and do the recording, playback or backup of the video remotely.

Take DHCP as an example. In this mode, the router automatically assigns IP address for the NVR. After restarting the NVR or DHCP server, the IP address obtained by the NVR may be different. As a result, you need to check the IP address and port numbers before remote access to the NVR every time. The operation procedure is as follows:

1. Select DHCP, click Save and restart the NVR. Input Client Port and Web Port (the two ports must be different).
2. Remotely visit the NVR by using IP address plus Web port through web browsers.
 http://Public network IP: Web port number (such as 80)
 http:// Intranet IP: Web port number (such as 80) (Only available in the same LAN)

For PPPoE, Static and DHCP, after setting the IP address for the NVR, the extranet port shall be mapped in the router before visiting NVR through public network.

- Save the setting to apply the changes made. If there are multiple NVRs in a LAN, make sure their MAC addresses are different.

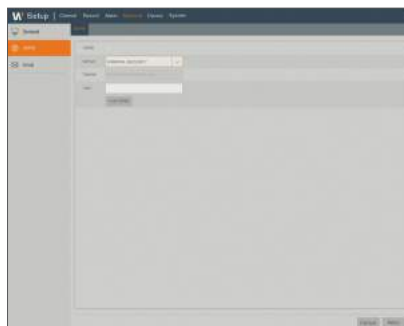


DDNS

Go to "Setup" → "Network" → "DDNS" → "DDNS" to enter into the menu interface.

User may set DDNS in any one of the above 3 network connection types after applying dynamic domain service. User may remotely access the NVR through domain by using browser in the form of http://applied domain: mapped HTTP port number. When using DDNS domain name to access the NVR, user must confirm that the port can be normally connected to current IP on the public network and the settings for server address/host name/user/password/setting should be consistent with the NVR local setting.

- **Server** : Select dynamic domain name server provider. Available domain name servers (HANWHA-SECURITY, DDNS_3322, DYNDNS, NO_IP, CHANGEIP, DNSEXIT)
- **Domain**: dynamic domain name of the host obtained from dynamic domain name service provider upon registration, for example, http://dns.hanwha-security.com/snb5000
- **User** : The user name registered upon application for dynamic domain name.
- **Password**: The password set upon registration.
 Click on "Test DDNS". If connection succeeds, it will be indicated that "DDNS Test is Successful!"
 Perform remote access to the NVR by using dynamic domain name, for example, http://dns.hanwha-security.com/snb5000:HTTP port number (e.g. 19010)



REGISTERING WITH DDNS

To register your product with the Wisenet DDNS

1. Visit the Wisenet DDNS web site (<http://ddns.hanwha-security.com>) and sign in with a registered account.

2. From the top menu bar, select <MY DDNS>.



3. Click the [Register Product] tab.

4. Select DDNS button.

5. Enter the product ID.

6. Select a <Type> and specify the <Model>.

7. Specify the product location with a description if necessary.

8. Click [Product Registration].

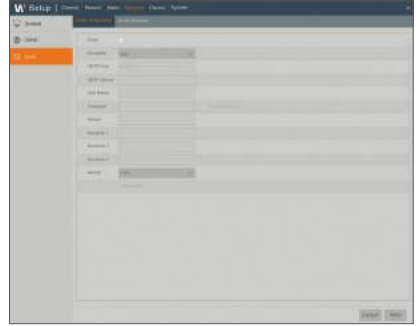
The product will be added to the product list that you can check.

No.	Product ID	Model	Connected Status	Product Management	View	White Listing
1	HW-101		ON	EDIT, DELETE	View	
2	HW-102		OFF	EDIT, DELETE	View	

E-mail

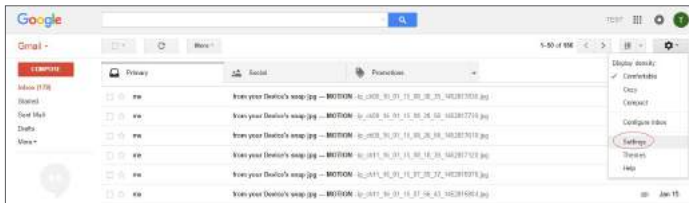
Go to "Setup" → "Network" → "Email" → "Email Configuration" to enter into the menu interface. Receive or Send NVR alarm Email and set parameters like Email address, SSL, Email Enable, and Interval.

- **Encryption:** Disable, SSL, TLS and Auto optional. Auto means it can detect the encryption type automatically. It is recommended to set the encryption type as Auto.
- **SMTP Port:** Mail sending port used by SMTP (Simple Mail Transfer Protocol). Server is generally Port 25 or Port 465 when SSL is used by Gmail.
- **SMTP Server:** Enter the address of the server for the mailbox in use.
- **User Name:** Enter a server to connect to. For example, email "aaa@gmail.com" should correspond to server "smtp.gmail.com"
- **Password:** Enter the password of the SMTP server user.
- **Sender:** Sender's mail address, which must correspond to the server used. For example, mailbox "aaa@gmail.com" should correspond to server "smtp.gmail.com".
- **Receiver 1/2/3:** Recipient's mail address, used to receive alarm image and message from NVR side. If system alarms continually and sends email images frequently, save the images to another location or remove them, so as to avoid excessive space occupation and thereby affect your normal use of mailbox.
- **Interval:** A mail will be sent every three minutes by default. If the time interval for mail notification is set too short, email server may deem mails as junk mails, so they cannot be transferred normally.



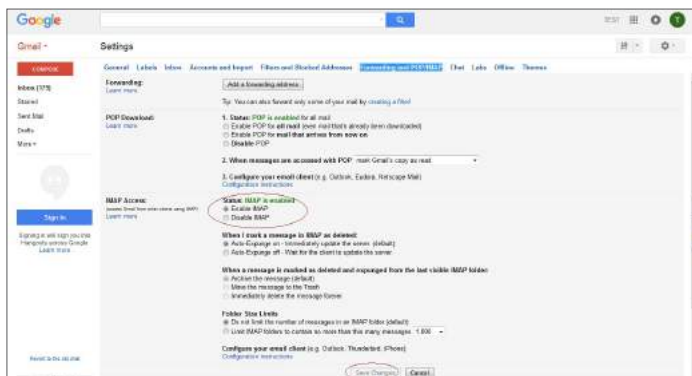
Mailbox Setting:

For example, if you are using Gmail, sign in to the GMAIL mailbox. <https://mail.google.com>



NVR Menu

Click on "settings--Forwarding and POP/IMAP"



Click on "Enable IMAP--Save Changes"



E-mail Schedule

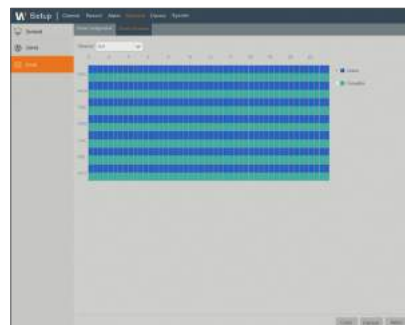
Go to "Setup" → "Network" → "Email" → "Email Schedule" to make Email schedule.

Select the channel and the date to be set.

One week's schedule can be set.

The record schedule of the current channel can be copied to any other channel or all channels.

-  Blue stands for Motion: Email will be sent in case of object motion;
-  Green stands for System: Email will be sent in case of System, e.g. No Space on Disk, Disk Error, Video loss, etc.



Device

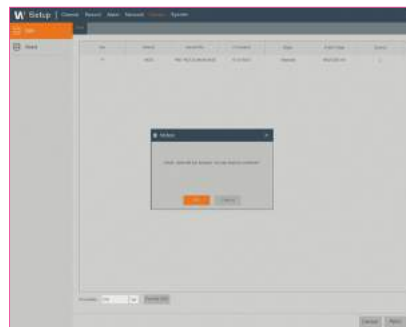
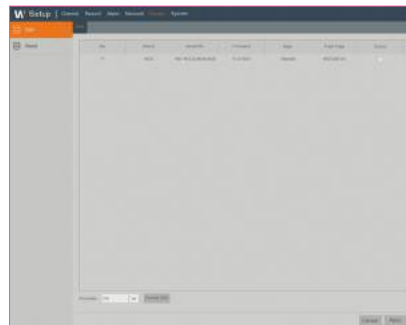
Disk

Go to "Setup" → "Device" → "Disk" to enter into the interface.

When HDD is connected, the system will automatically detect if the HDD is OK or not; if the HDD needs to be formatted, select the HDD and format it. If the system detects the HDD is OK, the HDD status will be shown as "OK".

- **No.** : Number of HDD connected to system.
- **Model** : Displays HDD model name.
- **Serial NO.** : Displays the HDD serial number.
- **Firmware** : Displays the HDD firmware version.
- **State** : It shows the current status of the HDD. It will be available only when the HDD is "OK".
- **Free/Total** : Remaining or total space of the HDD
- **Overwrite** : When set to **ON** and the hard drive is full, the NVR will overwrite the oldest files on the hard drive. When set to OFF and the hard drive is full, the NVR will stop recording.
- **Format HDD** : Format HDD for the first use.

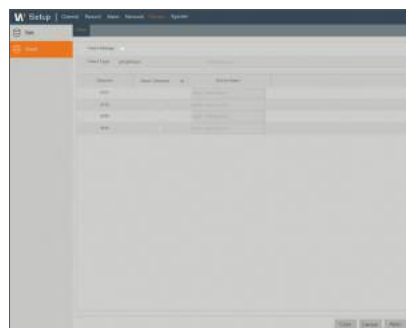
 ■ Recording can only be performed when the HDD is in "Normal" state.



Cloud

Cloud Storage

- **Cloud** : It can upload the captured pictures to Dropbox at normal time, or when motion detection happens.
 - 1) To use the cloud backup, you need to register your email first. For the detail, please refer to the page 23.
 - 2) Register an account on <https://www.dropbox.com/>.
 - 3) Configure network to ensure NVR is under network.
 - 4) Configure Cloud: Enable Cloud and set the channel. Enable Motion Detection to have it capture pictures when motion detection happens.
 - 5) Driver Name refers to the name created in the folder of Dropbox and the name can be defined by the user, e.g. CloudNVR000. The folder is to store captured pictures from the NVR.
 - 6) Click [Activate Cloud] to activate Cloud and Email for the user verification will be sent. Click the link in the email and then log in to your dropbox account, and click permit. NVR cloud storage function will be activated. If you have logged in your dropbox account before Cloud storage activation, then no need to relogin. Just click Permit to complete the activation. Please finish the activation within 3 minutes. After activation is completed, you can use the Cloud storage function.
 - 7) Click the icon at the upper-left of dropbox account interface to view the folder made in the 5th step.
 - 8) Open the Dropbox folder to view the NVR captured pictures.



NVR Menu

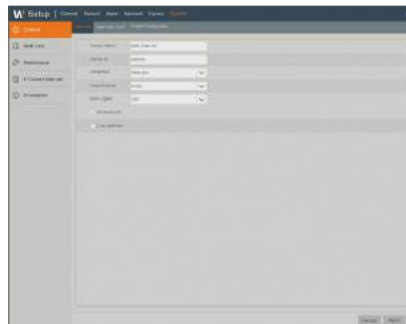
System

General

Go to "Setup" → "System" → "General" → "General" to enter into the interface.

User may set Device Name, Device ID, Language, Video Format, Menu Timeouts and Show Wizard on this page.

- **Live restriction** : 전원을 OFF/ON시 라이브 뷰의 권한 설정을 사용하려면 체크하세요.



Date and Time

Go to "Setup" → "System" → "General" → "Date and Time".

Date and Time

User may set Date, Time, Date Format, Time Format and Time Zone.

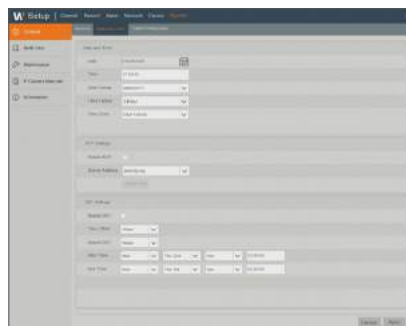
NTP Settings

- **Enable NTP** : Enable/Disable NTP function.
- **Server Address** : Select NTP server (time.windows.com, time.nist.gov, pool.ntp.org).

- ✍ ■ When NTP function is set to "Enable", system will calibrate the system time at every 00:07:50 and every start-up.

DST Settings

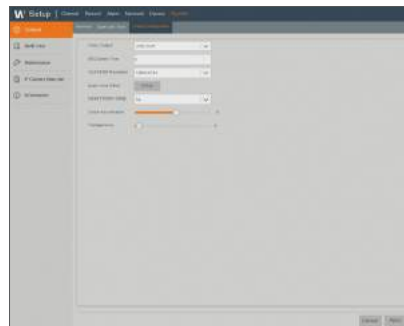
Enter into the interface to set DST, Time Offset, Start Time and End Time.



Output Configuration

Go to "Setup" → "System" → "General" → "Output Configuration" to enter into the interface.

- **Video Output** : Live Output
- **SEQ Dwell Time** : Sequence time is set 5 seconds by default. User may set it as required up to 300 seconds
- **VGA/HDMI Resolution** : For VGA output or HDMI output, the optional resolution includes 1024×768, 1280×1024, 1440×900, 1280×720, 1920×1080
- **Scale and Offset** : Sets the scale and offset.
- **Cursor Hidden Delay** : Sets the Cursor Hidden Delay time.
- **Cursor Acceleration** : Sets the cursor speed.
- **Transparency** : Adjust menu transparency in the range of 0-128.



Multi-User

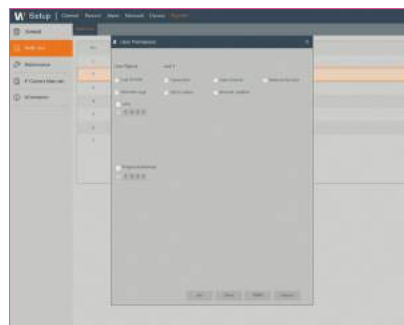
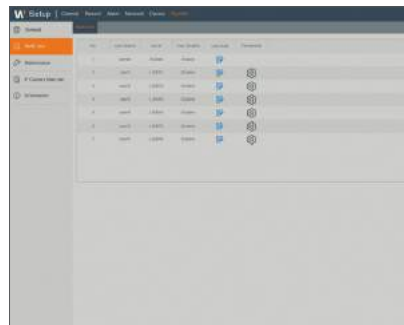
Go to "Setup" → "System" → "Multi-User" to enter into the User interface.

It supports up to seven users, including one administrator and six users. Click [] button to enter into the [User Edit] interface to input user name and password.

User Name consists of 8 characters. Password MUST be 8~13 characters long. When password is 8~9 characters long, it should be with at least a combination of letters, digits and special symbols. If it is 10~13 characters long, it should be with at least a combination of two types of characters. 4 or more contiguous or repeated characters or key arrangement are prohibited, for example 1111, 1234, abcd, qwerty.

Set user password. Administer is authorized to set user common user's authority.

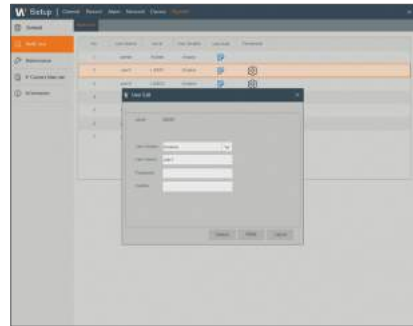
- **Log Search** : Allow you check all the system logs.
- **Parameter** : Allow you set all the parameters.
- **Auto Reboot** : Allow you to update firmware, reboot and shutdown the NVR.
- **Manual Record** : Allow you manually start/stop record.
- **Remote Login** : Allow you remotely login NVR.
- **SEQ Control** : Allow you sequence live screens for all the channels.
- **Manual Capture** : Allow you to manually take a snapshot
- **Live** : Tick-select the ENABLE "√" option and select a channel and the user is allowed to view all the live images in the selected channel.
- **Playback / Backup** : Tick-select the ENABLE "√" option and select channel for playback/backup, the user is allowed to playback/backup the record in the selected channel.



NVR Menu

User Edit

User may enable or disable the function or set password.

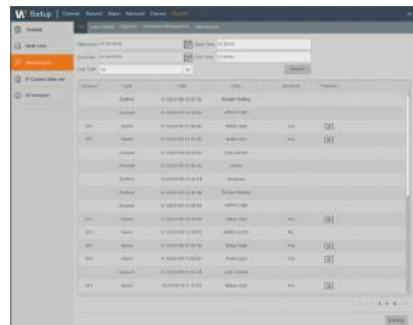


Maintenance

Log

Go to "Setup" → "System" → "Maintenance" → "Log".

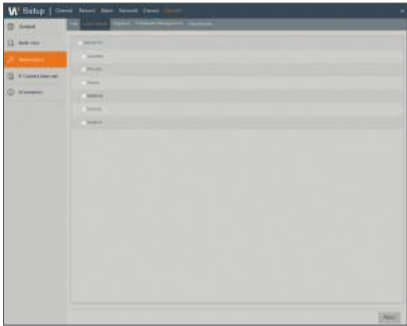
User may search log information in different period of time. Click "Backup" to save all the log information.



Load Default

Go to "Setup" → "System" → "Maintenance" → "Load Default" to enter into the interface.


If [Load Default] is selected, you can initialize the system to the ex-factory default. Click "Load Default" and select items to be restored. You can restore the Channel, Record, Alarm, Network, Device, System of wireless NVR to ex-factory default.



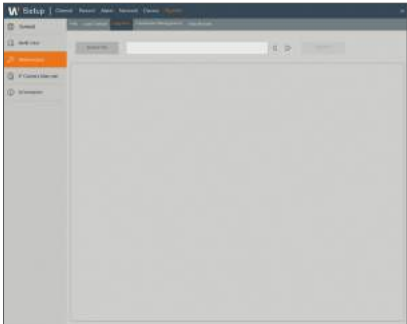
Upgrade

Go to "Setup" → "System" → "Maintenance" → "Upgrade" to enter into the interface.

Click Upgrade to enter the Device interface and select the updating file in USB to execute.

- 

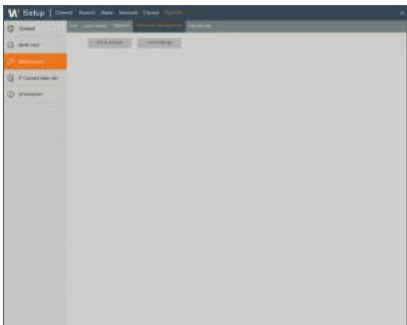
 Do not take out the USB memory or cut off the power during upgrading. When the update is done, system will be automatically restarted. After about 5 minutes, the upgrading will be finished. It is recommended to load ex-factory default after upgrading.



Parameter Management

Go to "Setup" → "System" → "Maintenance" → "Parameter Management" to enter into the interface.

- **Load Settings** : Load parameters in the removable storage device to NVR.
- **Save Settings** : Save the set parameters of user's NVR to the removable storage device.



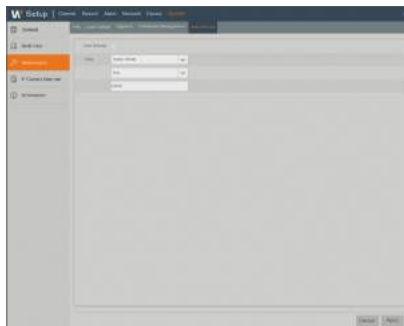
NVR Menu

Auto Reboot

Go to "Setup" → "System" → "Maintenance" → "Auto Reboot" to enter into the interface.

Enable the auto maintenance function to reboot system regularly at every day/week/month. When Auto Reboot is enabled, NVR should be in the main interface and no user operation.

- ✎ The auto maintain function can be effective only when NVR returns back to Preview mode with no any operation within the set auto maintain time.

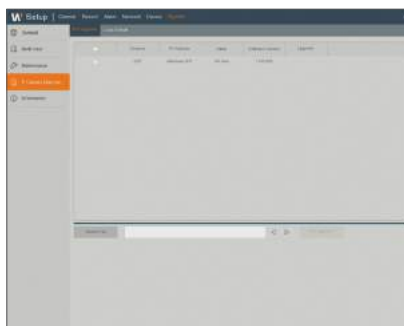


IP Camera Maintain

IPC Upgrade

Go to "Setup" → "System" → "IP Camera Maintain" → "IPC Upgrade" to enter into the interface.

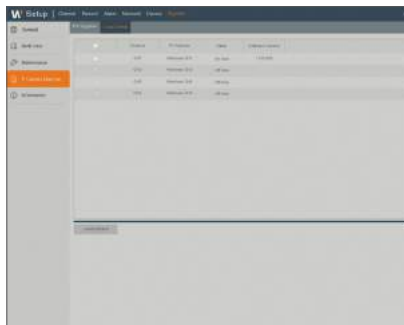
Click to do firmware upgrade of Wireless Camera.



Load Default


You can initialize the system to the ex-factory default. Select channel to be restored and Click "Load Default".

You can restore the color settings, motion detection on/off, motion detection sensitivity and motion detection area of wireless camera to ex-factory default.

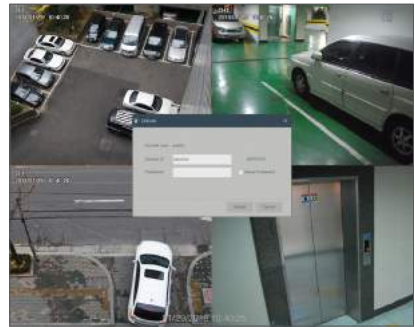


NVR Menu

MENU LOCK

In consideration of system safety, user may click the icon [] on the toolbar when he leaves away from NVR and the system interface will be locked. User has to input Device ID, User Name and Password on the login interface to unlock. In case that the password is forgotten, contact the technical personnel.

- Administrator has all authorization of menu operation and users have limitations for authorization and have to get authorization from administrator.



SPLIT MODE

There are many display modes in video channel, including single channel display, SEQ display and split mode.

RECORD SEARCH

Click [] icon on the toolbar to enter into the Record Search interface to search and playback. Refer to former section for specific operating method.

START SEQUENCE

After set channel sequence time, click Start Sequence icon [] on the toolbar to start sequence.

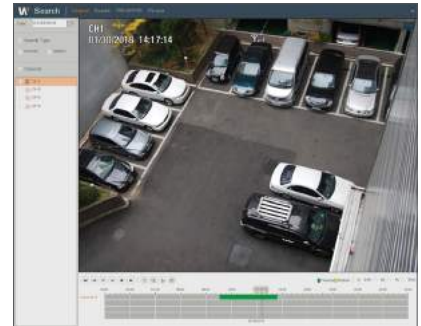
SEARCH

Record Search

General

Go to "Search" → "General" to enter into the interface.

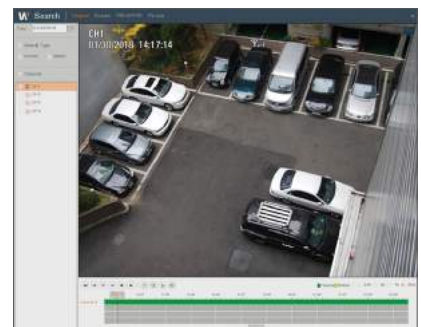
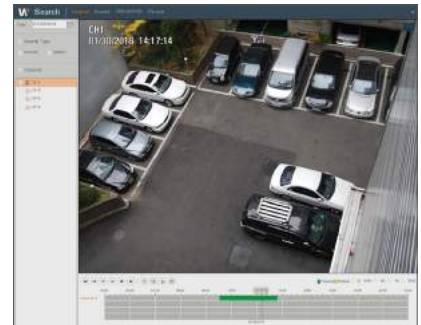
- **Channel:** Select the channel you want to search.
- **Search Type:** Select the type the playback record. There are three options: All, Normal and Motion.
- **Playback Channel:** Click a date and select corresponding channel in Playback Channel. The selected channels must not be more than 4.
- **Playback interface:** You can use the Playback Control bar to operate the Fast Forward (X2, X4, X8 and X16), Rewind (X2, X4, X8 and X16), Slow play (1/2, 1/4, 1/8 and 1/16 speed), Play, Pause/Frame. When playback ends, NVR will remain in the playback interface.



Time Axis setup, file clip and zoom in/out

The NVR supports the processing control bar function when playing back record files.

- **Time Axis zoom:** Default value is 24hours. Allow user to select 2 hours, 1 hour, 30 minutes or user-defined.



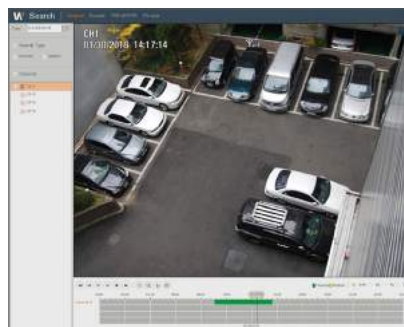
Search

• Detailed Operation

Fixed time axis: If you select [2h] option, that means the processing control bar covers two hour of video content. The time range refers to 1 hour before and after the middle point.

• **Clip and backup:** When it is playback, the [] icon will appear in the Play Control bar. Click the icon to start video clip function, click the icon again to end the function and pop up the dialog. Now, you may save the clipped video file.

• **Zoom out:** When it is under single channel playback, the [] icon will appear in the Play Control bar. Click the icon to zoom in certain area of the playback screen and right click mouse to return the Playback page.



Events

Go to "Search" → "Events" to enter into the interface.

In this page, user may search details by date, time, channel and record type. The relevant operations are as follows:

◀ Previous page : Click the button to go to previous page when viewing events (except the first page). When viewing the first page, click this button to display the event list in the first page.

▶ Next page : Click the button to go to next page when viewing events (except the last page). When viewing the last page, click this button to display the event list in the last page.

1 2 Jump : If you click on a number, you will move to that number's page.

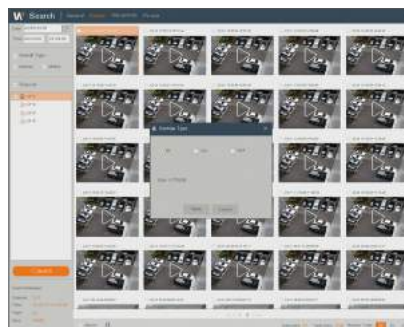
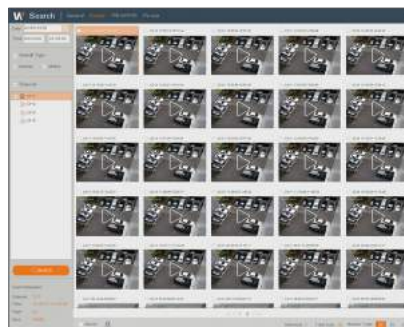
Two types of backup: Quick Backup and Backup

If you want to back up a record in the detailed file list, you may check the checkbox at the left of the record ("√" means it has been selected) and click "Backup" to enter into "Select backup type" (Make sure USB flash drive or other portable storage device are connected).

If you want to back up with USB, select USB and click OK to start processing and you will see the backup progress.

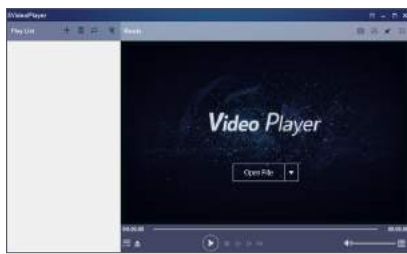
After backup finishes, message Backup Finishes will appear at down-right corner.

- ✍ Before backup, connect devices for backup (USB flash drive or other mobile storage devices with USB interface)

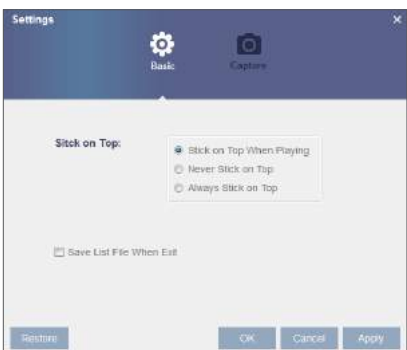


Play Backup Files

1. Copy backup files to the computer.
2. Open SVideo player and click [+] or [Open File -].
For example, if you want to choose *.264, *.avi, *.mp4, add backup file and select a file to play.
 - Play: Click to play file
 - Pause: Click to pause.
 - Stop: Click to stop playback.
 - Frame Forward: step forward by frame
 - Slow Play: Click to play at 1/2, 1/4, 1/8, 1/16 speed.
 - Fast forward: Click to play at 16x, 8x, 4x, 2x speed.
 - Open file/Open Directory
 - Expand/pack up the list.
 - Screenshot: Save path: C:\Users\Administrator\SVideoPlayer\picture
 - Cut: Save path: C:\Users\Administrator\SVideoPlayer\video
 - Full screen display
 - Never on top
 - Always on top
 - On top during playing
 - Window Division
 - 1/4/9/16 channels optional.
 - Add folder or file.
 - Playback mode, Single, Order, Repeat one, Repeat ALL are optional
 - Delete all files in the list.
 - Search File
 - Language/Settings

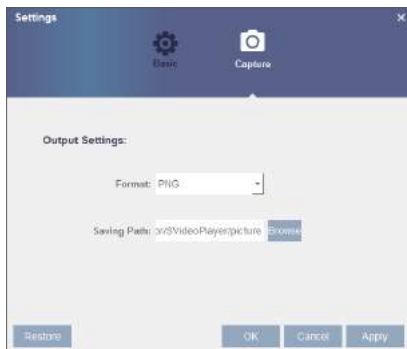


Basic Settings: Set on-top mode



Search

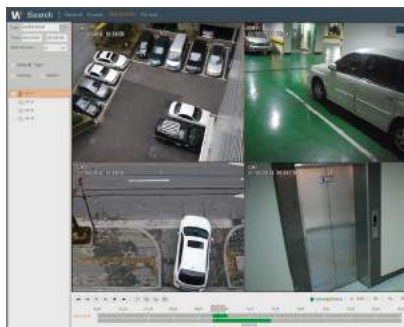
Capture Settings: Set the path to save image



- It is recommended to use SVideo Player contained in compact disk for playback. Use of any other player may cause compatibility problem.

Sub-periods

Go to "Search" → "Sub-periods" to enter into the interface.



Picture

Go to "Search" → "Picture"

Support search picture for 5000pcs each time. If the picture number greater than this value, please adjust the date (time) of the current search and search again.

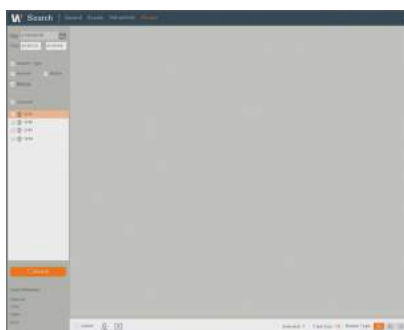
In this page, user may search details by date, time, channel and record type. The relevant operations are as follows:

◀ Previous page: Click the button to go to previous page when viewing events (except the first page). When viewing the first page, click this button to display the event list in the first page.

▶ Next page: Click the button to go to next page when viewing events (except the last page). When viewing the last page, click this button to display the event list in the last page.

1 2 Jump: If you click on a number, you will move to that number's page.

Two types of backup: Quick Backup and Backup



Web Application Manager

SYSTEM ENVIRONMENT REQUIREMENTS

The minimum requirements for hardware and OS required to run Web Application are given below.

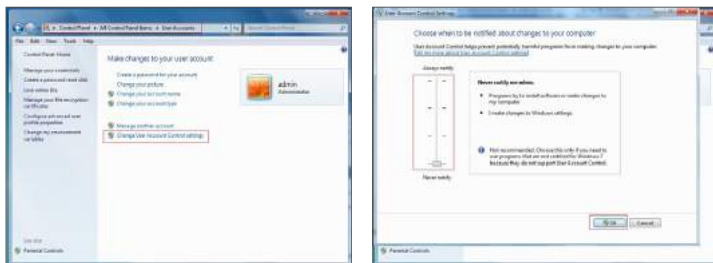
	Minimum	Recommended
CPU	Intel i3	Intel i7 or higher
RAM	4GB or more	8GB or more
Hard Drive	500GB or more	1000GB or more
Display RAM	2GB or more	4GB or more
Display Resolution	1280*1024	1920*1080
OS	<ul style="list-style-type: none"> - PC : Windows® Vista, Windows® 7, Windows® 10 Mac OS X® 10.12.2 or above - Mobile : Android Ver4.4 or above iOS 8.0 or above - Supported Browser : Microsoft Internet Explorer (Ver. 11, 10, 9, 8), Mozilla Firefox Ver 51.x or lower, Google Chrome Ver 44.x or lower Safari®10.10 or above 	
DirectX	DirectX 11	
Direct3D	Acceleration Function	
Ethernet Adapter	10/100M Ethernet Adapter	
IE	Microsoft Internet Explorer (Ver. 11, 10, 9, 8)	

WirelessPlugin Download and Installation

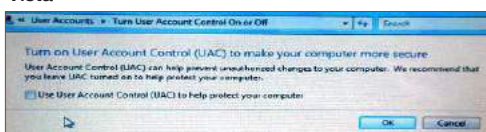
If your computer system is Windows 7, you may need to setup the user authority for remote control, or you may be unable to backup or record.

Vista System: Start → Setup → Control Panel. Set user authority in control panel as the following picture. Remove the Tick "√" in front of the option "Use UAC to help protect your computer" and confirm OK.

WIN7



Vista



Web Application Manager

- ✎ If the plugins is not downloaded successfully, please check if your browser's safety level or firewall setting is set too high. Please open IE browser → [Menu Bar] Tools → Internet options → Security → Internet → Custom level → Enable the options.



Download and installation of plugin for IE

Enter IP address of NVR in address bar of IE, for example, <http://192.168.2.173:80>



Click on "Download", and then click on "Run" in being Downloaded File - Security Warning box"



Click on "Install" in the dialog box "Setup-WISENETPlugin".



Shut down IE browser and restart it, and then enter IP address of NVR in address bar to access login page.



Download and installation of plugin for Mac SAFARI

Enter IP address of NVR in address bar of Mac SAFARI, for example, <http://192.168.2.173:80>, and click on "download" to download the plugin.



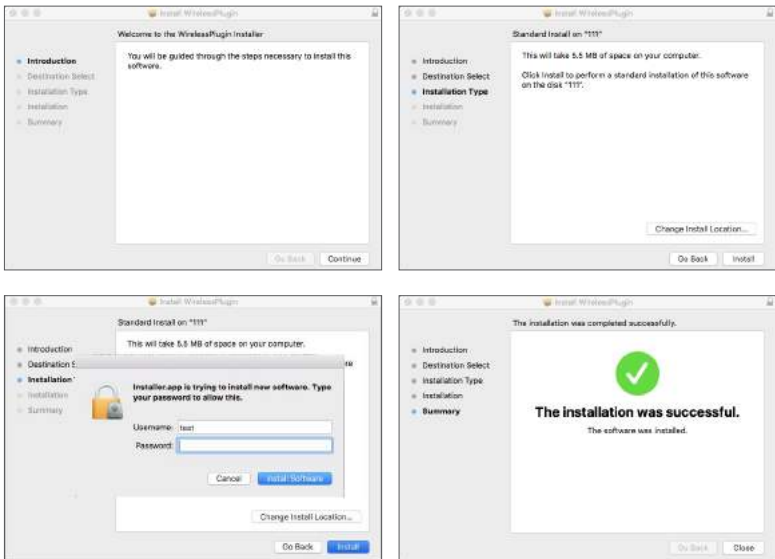
Locate the downloaded plugin "WirelessPlugin.dmg" and double click on it



Install the plugin by double clicking on "WirelessPlugin.pkg".



Click on "Continue" > "Install". Enter user name and password for login to Apple computer. Click on "Install" > "Shut down" to finish installation.



Web Application Manager

Shut down Mac SAFARI browser and restart it, and then enter IP address of NVR in address bar to access login page.

- ✎ The above instruction is to install the initial plug in. You can use the same plugin for IE and Firefox. If plugin for windows OS was installed on IE, Firefox once, you can use IE which needs to be run as administrator, Firefox to log in to NVR.

When you download and install plugin on Firefox, please close Firefox when it is prompted to. After installation is finished, you can restart Firefox to log in to the NVR.

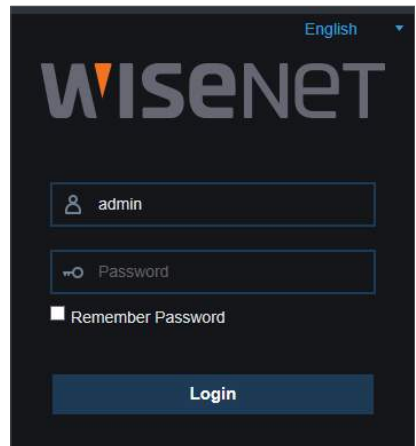
When you do a firmware upgrade, please close the browsers in order to have the new plug in replace the old one. Depending on your situation, the plugin may not be work on your browser. In this case, please install the plugin unavailable on the CD provided. (WirelessPlugin_Windows_YYYY_MM_DD.exe for Windows system, and WirelessPlugin_Mac_YYYY_MM_DD.dmg for Mac).



WEB APPLICATION MANAGER LOGIN

After plugins installation, please input user name and password, select Main Stream or Sub Stream (In general, select main stream for intranet and sub stream for extranet), and input HTTP port number. There is an option for opening all channel preview, select it to open all live pictures. Press Login to log in client and remotely visit NVR. The default password is blank and administrator is authorized to modify the password. Set password as per introductions of user management in system setting.

After successfully log in, it will enter the real-time monitoring interface and connect video automatically.



LIVE INTERFACE

Log in and enter into the live interface.














Menu Bar

Menu Bar: Live, Playback, Remote Setting, Local Setting and Logout.

Live Display Video Control

Log in the Web Application Manager, system will be defaulted to enter into <Live> interface. You can click [Play] button to Open/close live images, on-spot record, capture, and many live display modes.

Buttons on a single live interface

-  : Open or close the images on Live window.
-  : Stream: Mainstream or Substream optional.
-  : Display mode: Single channel or quad view optional.
-  : Open the video on Live window.
-  : Close all the Live channels
-  : Original proportions.
-  : Stretch.
-  : Click to maximize the current window to full screen. Right click to popup menu option and select Exit Full Screen.
-  : Record switch: the remote record switch of client. Record will be automatically saved to a specified position on PC after the function is enabled.
-  : Snapshot: Capture the selected live image and save it to a specified position on PC. The image is saved as *.bmp format.
-  : Digital ZOOM.

Video Control



Hue: Adjust the chromaticity of video

Bright: Adjust the brightness of video

Contrast: Adjust the contrast of video

Saturation: Adjust the saturation of video

Web Application Manager

Playback

Click [**Playback**] to enter into Playback interface to remotely view the records in NVR HDD.

It supports 1 to 4 channel record playback.



Record Search

Record playback procedure

Firstly, select the date you want to check and tick 1 to 4 channels. Any record files in current channel at current date will be displayed in the status bar of the interface.

Secondly, select record type (Normal record, Motion and All) and channels, and then click [**Search**], and time axis panel will display specific time quantum. On the time axis, red part stands for Motion, yellow stands for normal record and original part stands for no record during this period.

Before playback, choose to enable playback 4 channels synchronously.

If you tick-select [Synchronous playback], that means the selected channel will playback synchronously; otherwise, you could separately control the channels playback.

Thirdly, start playback

Click [**▶**] to start record playback. When mouse cursor is moving on the time axis, the time point of current position will be displayed on the time axis screen. Click to locate the record.

Click the icon [**🔍**] or [**📏**] to zoom in/out the time bar display ratio.



Playback Control

Playback control bar



Detailed brief description is shown as below:

Key	Description	Key	Description
	Play		Slow playing x1/2, 1/4, 1/8, Fast Forward x1/2/4/8
	Pause		Open all the playback channels
	Stop		Stop playing all the playback
	Frame by frame		Digital ZOOM
	Record Clip		Original proportions
	Image Snapshot		Stretch
	Download		Full Screen

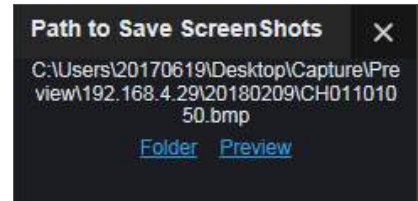
Record file clip

After opening playback, click [] icon to clip the selected file; and click again to stop the clip function. Then playback clip is successfully done. Record clip file can be saved as H.264, AVI or MP4. H.264 is set as default.

Snapshot function

Move the mouse cursor to the channel you want to capture, and click [] icon to capture the live images remotely. After capturing the images successfully, a path prompt box will be popped up.

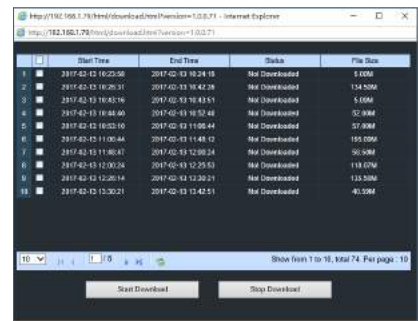
The captured file will be saved as .bmp format.



Record file download

Click download icon [] on the control bar to display all the matched record file according to the search conditions of channels.

Tick-select the record file you want to download and click [Start download]. System will download the record file in sequence and save to local PC. The downloading file will be displayed in percentage form. After downloading finishes, "Complete" will be displayed on the status bar.



Web Application Manager

Remote Setting

Click Remote Setting to enter into the interface shown, including Display, Record, Alarm, Network, Device and System.

Display

When you click the <Display> option, sub-options of Display Settings and Schedule are displayed.

Live

Displays the currently playing live screen.



Motion

You can set the Motion area.



Privacy Zone

You can set the Privacy Zone.



Record

Click <Record> option to unfold its sub-options: Record parameter and Schedule.

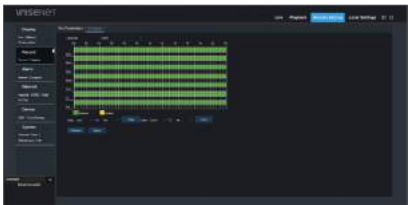
Record Parameters

The parameters should be consistent with NVR local setting.



Record Schedule

The parameters should be consistent with NVR local setting. Green stands for Normal record; Yellow stands for Motion detection.



Capture

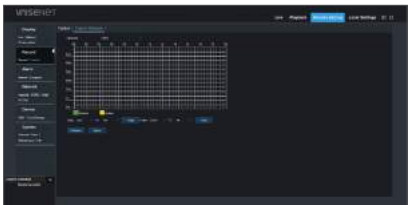
Capture

- **Channel:** Select channel.
- **Stream Type :** Select MainStream or SubStream.
- **Interval :** 4s / 8s / 25s / 1Min / 10Min / 30Min / 1Hour
- **Auto Capture:** Enable/Disable auto capture.
- **Manual Capture:** Enable/Disable manual capture.



Capture Schedule

- **Channel:** Select channel.
- **Normal:** Conventional capture setting.
- **Motion:** Motion detect capture setting.



Web Application Manager

Alarm

Alarm setting includes Motion Detection Parameters.

Motion

Configure Sensitivity, Alarm out, Alarm Record and Alarm Capture, etc. Detailed setting should be consistent with NVR local setting.



Exception

User may configure Event Type, Buzzer, Send Email, Show Message and other parameters. Detailed setting should be consistent with NVR local setting.

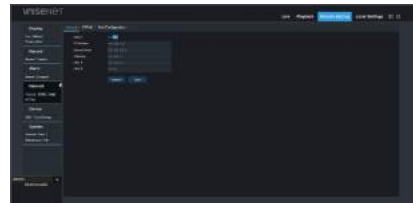


Network

Unfold <Network> to show its sub-options: Network, DDNS, and Email configuration.

General

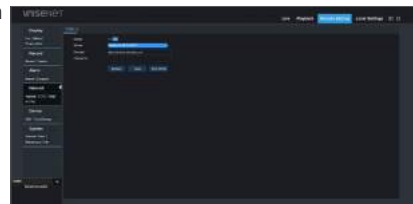
NVR supports Static/DHCP/PPPoE modes. System default network type is <DHCP>. User can set parameters as required. If you change Network type to PPPoE, NVR will automatically restart to make the setting effective.



DDNS

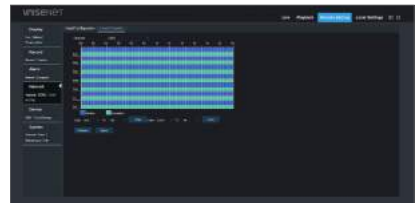
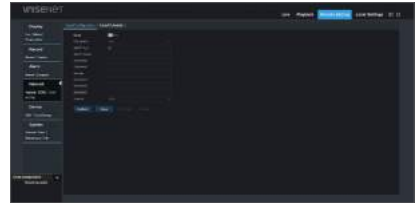
DDNS: After user applies for DDNS service, you could enable <DDNS> function under any one network type mode (Static, DHCP and PPPoE). And you may remotely visit the NVR through domain name (http://domain name: HTTP port No.). When visiting NVR by using DDNS, user should make sure port and current IP can be normally connected in public network. Details settings, including server address, host, user, and password, should be consistent with NVR local setting.

Click on "Test DDNS". If connection succeeds, it will be indicated that "DDNS Test is Successful!"



Email

Email: Set NVR alarm Email configuration parameters, including Email address, Encryption, Email Enable, and Interval etc. Detailed parameters should be consistent with NVR local setting.



HTTPS

- Enable : Enable/Disable
- Certificate Type : Default/Custom



Device

Click <Device> to unfold its sub-options: HDD

HDD

User may check HDD status of NVR and overwritten time. Detail setting should be consistent with NVR local setting.



Cloud Storage

User may set the relevant parameters of Cloud Storage. Detail setting should be consistent with NVR local setting.



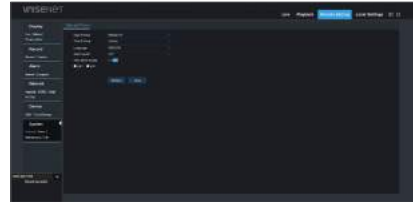
Web Application Manager

System

Click <System> option to unfold its sub-options: General, Users and Info.

General

User may check NVR language and video system and date format, menu display time, DST and NTP parameters. Detailed setting should be consistent with NVR local setting.



Users

User may configure user name and password and detailed setting should be consistent with NVR local setting.



Maintenance

Load Default

User may remotely restore default parameters of NVR, with same setting method as that of NVR.



Firmware Update

User may remotely update NVR system.



Maintain

Allow you remotely set auto maintain time for NVR. Detailed setting should be consistent with NVR local setting.



Info

User may search device name, device number, device type, MAC address, software version, IE version and hardware version of NVR.




Local Setting

User may set Record Path (save Live record and Playback clip file), Download Path for remote file, Snapshot Path for captured pictures, Interval for switching record files (Packaging time), and File type (h.264, AVI and MP4).



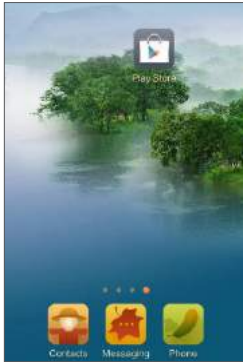
Logout

Click [] to log out and return to the login interface.

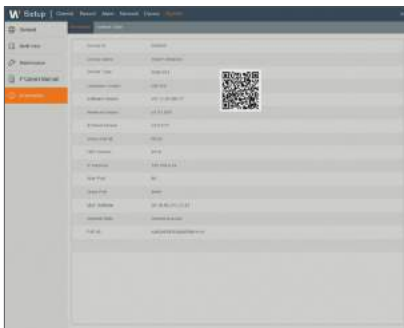
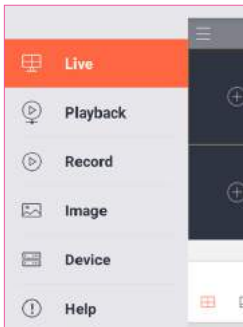
Mobile App

ANDROID PHONES/TABLETS

1. Open Play Store to search WiseView and click "INSTALL" to install.

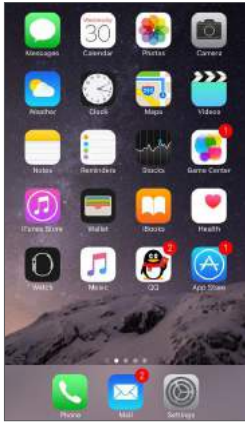



2. After installation, open WiseView and select "Device". Then click [+] to add new device. Scan QR code under Information page of system on local NVR. Then input client port, user name and password, and then click Save to log in to the device.

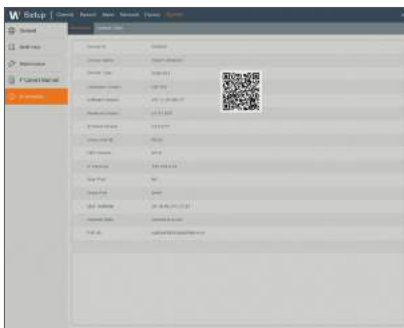
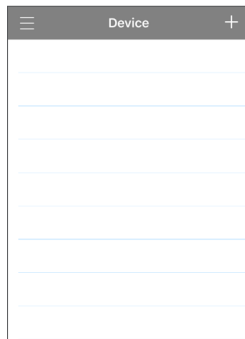
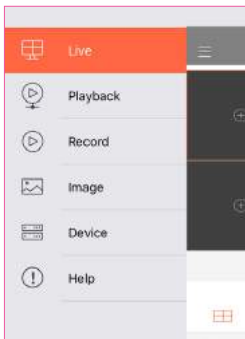


IPHONE/IPAD

1. Open App Store to search WiseView, and click icon [] to install.



2. Open WiseView, and go to Device. Click [] to add new device. Scan QR code under Information page of system on local NVR. Then input client port, user name and password, and then click Save to log in to the device.



Appendix

TROUBLESHOOTING

Symptom	Countermeasures
What can I do if the system does not detect the HDD?	<ul style="list-style-type: none">• Check if the power supply system is properly connected and data cord and power cables are securely connected, and if something wrong with the HDD interface. Or you may check if your HDD is supported by referring to the specifications or descriptions.
I have changed the password but forget the new password, how can I access the system?	<ul style="list-style-type: none">• If you forget system password, please consult with our technical personnel. We strongly suggest user to set password easily to be remembered and relatively safe.
We see abnormal video signal or even no video signal by connecting the NVR and camera together. Power supply for both devices is OK. What is wrong?	<ul style="list-style-type: none">• Check network cable on NVR side to see if the cable is firmly connected and if it is worn out and needs to be replaced, or to check if NTSC or PAL is selected consistently.
How to prevent NVR from being influenced by heat?	<ul style="list-style-type: none">• The NVR needs to dissipate heat while it is running. Please place the NVR in a place with good air circulation and away from heat sources to ensure stability and life of the NVR.
The remote controller of NVR doesn't work while the monitor screen is OK and panel keys are functional. Why?	<ul style="list-style-type: none">• Operate again by aiming the remote controller at the IR receiver on front panel. If it still doesn't work, please check if the batteries in the remote controller are dying. If not, check if the remote controller is broken.
I want to take out HDD from my PC and install it in NVR. Can it work?	<ul style="list-style-type: none">• All HDDs supported by the system can be used. But remember, once NVR runs, the data on your HDD will be lost.
Can I playback while recording?	<ul style="list-style-type: none">• Yes. The system supports the function of playing while recording.
Can I clear some records on HDD of NVR?	<ul style="list-style-type: none">• In consideration of the file security, you may not clear part of records. If you want to remove all the records, you can format HDD.
Why can't I log in NVR client?	<ul style="list-style-type: none">• Please check if the network connection settings are correct and check if your account and password are correctly input.
Why can't I find any records during playback?	<ul style="list-style-type: none">• Please check if the data line connection for HDD is OK and system time is properly adjusted. Try a few times and restart. If it still doesn't work, check if the HDD is broken.
Why doesn't dynamic detection work?	<ul style="list-style-type: none">• Please check if the motion detection sensitivity level set is too low and motion detection area setting is correct.
Why does buzzer keep alarming?	<ul style="list-style-type: none">• Please check the alarm setting, check if motion detection function is enabled and object motion is detected all the time. Besides, refer to corresponding HDD alarm setting.

Usage Maintenance

1. To shut down NVR, please firstly shut down the system and then turn off the power. Do not turn off the power directly or HDD data will be lost or damaged.
2. Please keep NVR away from heat sources or places.
3. Clean the internal dust regularly. Make sure the good ventilation of NVR so as to ensure the good heat dissipation.
4. Please do not hot plugging video cable, otherwise the ports will be damaged.
5. Please check the HDD cable and data cable regularly to see if they are ageing.
6. Please prevent video signals of NVR from being intervened by other electronic devices, and prevent the HDD from being damaged by static electricity and induced voltage.
If the network cable is frequently plugged, it is suggested to replace connecting line regularly, or the input signal may be unstable.
7. This is A class product. it maybe bring wireless interference in life. Under this situation, it need user to make measures.

Appendix

SPECIFICATIONS

SNR-73201W

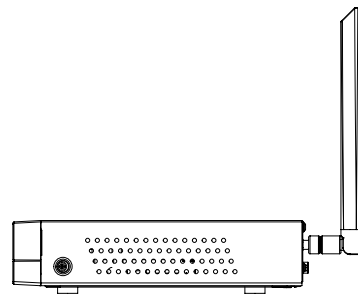
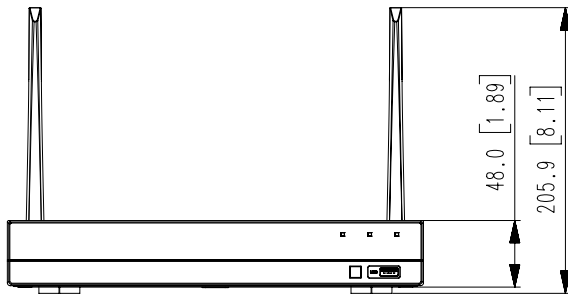
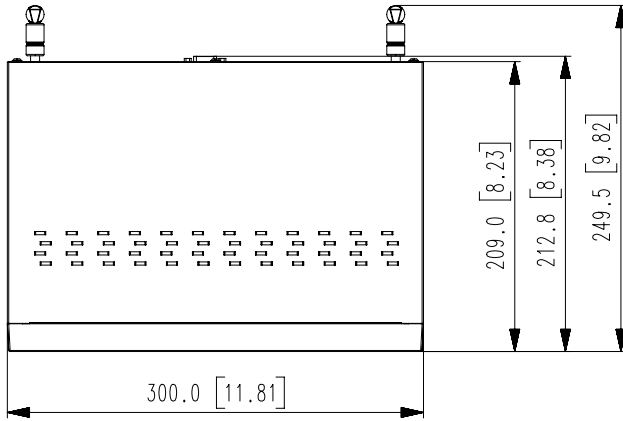
Item		Details
Description		
Video	Inputs	4CH Wireless
	Resolution	1,920x1,080 (Full HD)
Live	Frame rate	Max 60fps@1080p - Main stream : 1~15fps@1080p per channel - Sub stream : 1~15fps @640x360 per channel
	Resolution	1080p
	Multi Screen display	1 / 4 / SEQ
Performance		
Operating System	Embedded	Linux
	Installation wizard	Support
Recording	Compression	H.264
	Recording bandwidth	Up to 8Mbps (4ch simultaneously, Max 2Mbps per channel)
	Record Rate (NTSC)	Up to 60fps@1080p Main stream : Max. 15fps@1080p per channel
	Mode	Manual, Schedule (Continuous/Event), Event(Pre/Post)
	Event	Video Loss, Motion(Sensitivity Level 1~8)
	Overwrite modes	Off/On
	Pre-alarm	Min. 1sec
Post-alarm	Up to 5min (30 sec, 1/2/5min)	
Search & Playback	Playback bandwidth	Up to 8Mbps (4ch simultaneously, Max 2Mbps per channel)
	Search mode	Date/time, Event, Motion
	Playback function	Fast forward / backward (2x, 4x, 8x, 16x) Slow forward (1/2x, 1/4x, 1/8x, 1/16x) Step Forward
Network (IPv4)	Transmission speed	Max 60fps@1080p, Max60fps@640x360
	Bandwidth	Up to 32Mbps
	Live stream	Max. 60fps@1080p
	Protocol support	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, DHCP(Server, Client), PPPoE, SMTP, DNS, DDNS, uPnP
	Monitoring	Webviewer, Wiseview, Wisenet client for PC

Item		Details
Remote Monitoring	Web / App viewer	Supported OS - PC : Windows® Vista, Windows® 7, Windows® 10 Mac OS X® 10.12.2 or above - Mobile : Android Ver4.4 or above iOS® 8.0 or above Supported Browser - Microsoft Internet Explorer (Ver. 11, 10, 9, 8), Mozilla Firefox Ver 51.x or lower, Google Chrome Ver 44.x or lower, Safari®10.10 or above
	Protocol support	TCP/IP, UDP/IP, UDP, P2P
	Transmission speed	60fps@1080p
	Max. remote users	7 Admin + Users (Max. bandwidth 32M)
Storage	Internal HDD	1 SATA HDD (1TB) - 1 Bay
	USB (Back-up)	2 USB Ports (Front/Rear)
	File Format (Back-up)	H.264, AVI, MP4
Security	Password Protection	7 Admin + Users
Interface		
Monitors	VGA	1 VGA (1,024x768, 1,280x1,024, 1,280x720, 1,440x900, 1,920x1,080)
	HDMI	1 HDMI (1,024x768, 1,280x1,024, 1,280x720, 1,440x900, 1,920x1,080)
	Simultaneous Output	VGA and HDMI
Alarm	Remote notification	Notification via e-mail
Connections	Ethernet	1 RJ45 10/100 Base-T
	USB	2 USB Ports (Front/Rear)
	Application Support	Mouse, Remote control
General		
Color / Material		Black / Metal
Electrical	Input Voltage/Current	DC 12V / 2A
	Power consumption	10W
Environmental	Operating Temperature/ Humidity	0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH
Mechanical	Dimension (WxHxD)	300 x 48 x 209 (11.81" x 1.89" x 8.23")
	Weight (With hard disks)	1.43Kg prox.- 1TB hard drive pre-installed
OSD Language		English, French, Spanish, Portuguese, German

Appendix

DIMENSION

Unit: mm (inch)



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Version 2, June 1991

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Version 2.1, February 1999

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