

HD-IP VHDIP-V2 & VHDIPM-V2 Full HD NVR

USER MANUAL

Copyright

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Limitation of Liability

The main use of this product means it is not designed to prevent fire or theft. We (The Company) will not be liable for any incidents or damage caused by using this product.

Videcon Ltd accepts no responsibility for typographical errors in the production of this leaflet. Product specifications are subject to change without notice.

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on the Product

This product was tested with a UPS to satisfy EN 61000-4-11 test conditions (voltage dips and short interruptions test) under the EN 50130-4: 2011 standard.

The Company shall not have any responsibility for any accident or damage that may occur during the use of this product. For your safety, we have provided instructions about the installation, operation, cleaning and disassembly of the product below, please ensure you – as the installer – read these carefully and comply with the instructions. The warranty will be void if it is found that any of these compliances have been neglected.

Before installation

Comply with the following instructions to prevent a fire, explosion, system failure or electric shock.

- Remove the power supply module before proceeding.
- Check the input voltage (AC100V–AC240V) to the power supply module before connecting it.
- Keep the product away from moisture
- Ensure that all devices connected to the product are properly earth-grounded

In operation mode

Comply with the following instructions to prevent a fire, explosion, system failure or electric shock.

- If you need to open the cover, first contact the supplier of the product
- Avoid connecting multiple devices to a single power source
- Keep the product away from excessive dust and flammable substances (ie: propane gas)
- Do not use with wet hands
- Ensure that the ventilation system is clear and that nothing obstructs the ventilation
- Do not use excessive force when connecting/disconnecting the power cord

Disassembly & Cleaning

- When cleaning the unit, use a dry cloth
- Do not let water, paint thinner or organic solvents come into contact with the product
- Never dismantle, repair or modify the product on your own without contacting the supplier

During installation

To prevent an accident or physical injury and to operate DVR properly, please comply with the followings:

- Secure at least 18 centimetres between the cooling fan and wall for a proper ventilation.
- Install the DVR on a flat surface.
- Keep it away from direct sunlight and unsuitable heat sources.

While in use

- Do not apply force to or shake the unit while operating the product
- Do not move, throw away or apply excessive force to it
- Using unsupported HDD's may cause a system failure. Please contact the supplier if you need further information on compatible hard disk storage drives.

Warranty is void if the any of the above are not followed.

The VHDIP range of NVR's are capable of connecting a selection of up to 16 network cameras, with associated alarms and audio connections. The NVR's are capable of recording at real time on all channels simultaneously. Playback, archive and back-up are all available in real time at up to 5MP resolution. Broadcasting of all the video feeds to remote monitoring devices and Alarm Receiving Centres (ARC's) including Immix and Sentinel, and compatible mobile devices using the Concept Pro viewing application.

- 1080p Full HD GUI
- Display the video from up to 16 CH 1080p network camera in real time (Max 400 fps)
- Record the video from up to 16 CH 5MP network camera in a max of 5.2Mbps (Max 400 fps)
- Play up to 16 CH 1080p video in real time (Max 400 fps)
- H.264 BP/MP/HP network camera supported (BP: Baseline profile, MP: Main profile, HP: High profile)
- Support PoE (for camera) for all channel – Class 2
- 'Plug & Display' camera connection
- Closed CCTV mode to protect the IP camera connected
- Auto notification with self diagnosis (HDD S.M.A.R.T, temperature, network connection status, fan error, etc.)
- Dual streaming supported for a remote display
- Auto resolution & FPS adjustment for a remote service
- External eSATA HDD supported (For Video Recording)
- Various search methods (time, event, bookmark and thumbnail)
- Mass storage backup via USB port or FTP server
- Dedicated smart phone applications that can be used with iPhone and iPad or on Android OS
- Intuitive display setup
- Instant playback and instant archive
- POS/ATM text display
- Live camera network status
- Continuous, Motion, Alarm, panic and auto configuration record modes
- Reserved data management to prevent overwriting of crucial video
- SSC (Smart Storage Compression) to maximise HDD storage
- P2P connectivity

CAUTION

Replacing Batteries in the Remote Control

Risk of explosion if the batteries are replaced by an incorrect type.

Dispose of used batteries according to the instructions.

Warning to Service Personnel

Double pole/neutral fusing

Ethernet Instruction

This equipment is indoor use and all the communication/video wiring are should be secured inside the building.



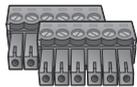
1x Mouse



1x Remote Control & Batteries (AAA x2)



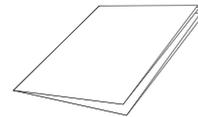
1x User Manual CD



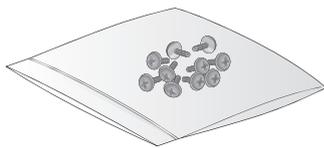
2x Terminal Blocks



1x User Manual



1x Quick Guide



2x Screws (For fixing HDD)



1x Adapter Cable Retainer Clip



1x DC 12V Adaptor
(Expect 8 and 16 channel)



2x Power Cable
(Provides only 1 for 4 and 8 Channel)



1x 8 Channel Extension Hub
(Only for 16 Channel NVR)

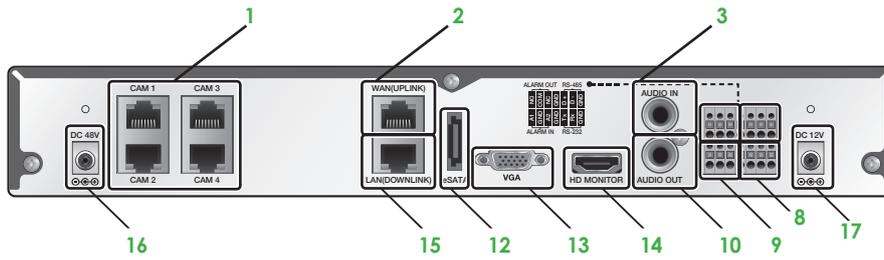


1x DC 48V Adaptor
(Except VHDIP-8)

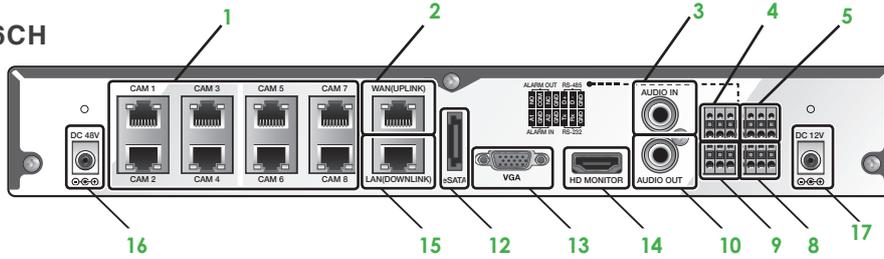


No.	Name		Description
1	IR Remote Control Receiver		Receive the signal from the remote control.
2	USB		For connecting USB devices such as a mouse or memory stick.
3	Status LED		Show the status of power, recording or network connection together with any corresponding alarm.
4	HDD 1~5 / eSata		Indicates connection status of internal/external storage devices

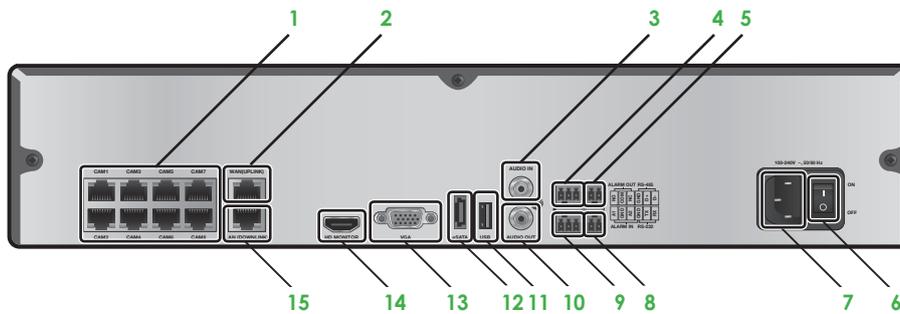
MINI 4CH



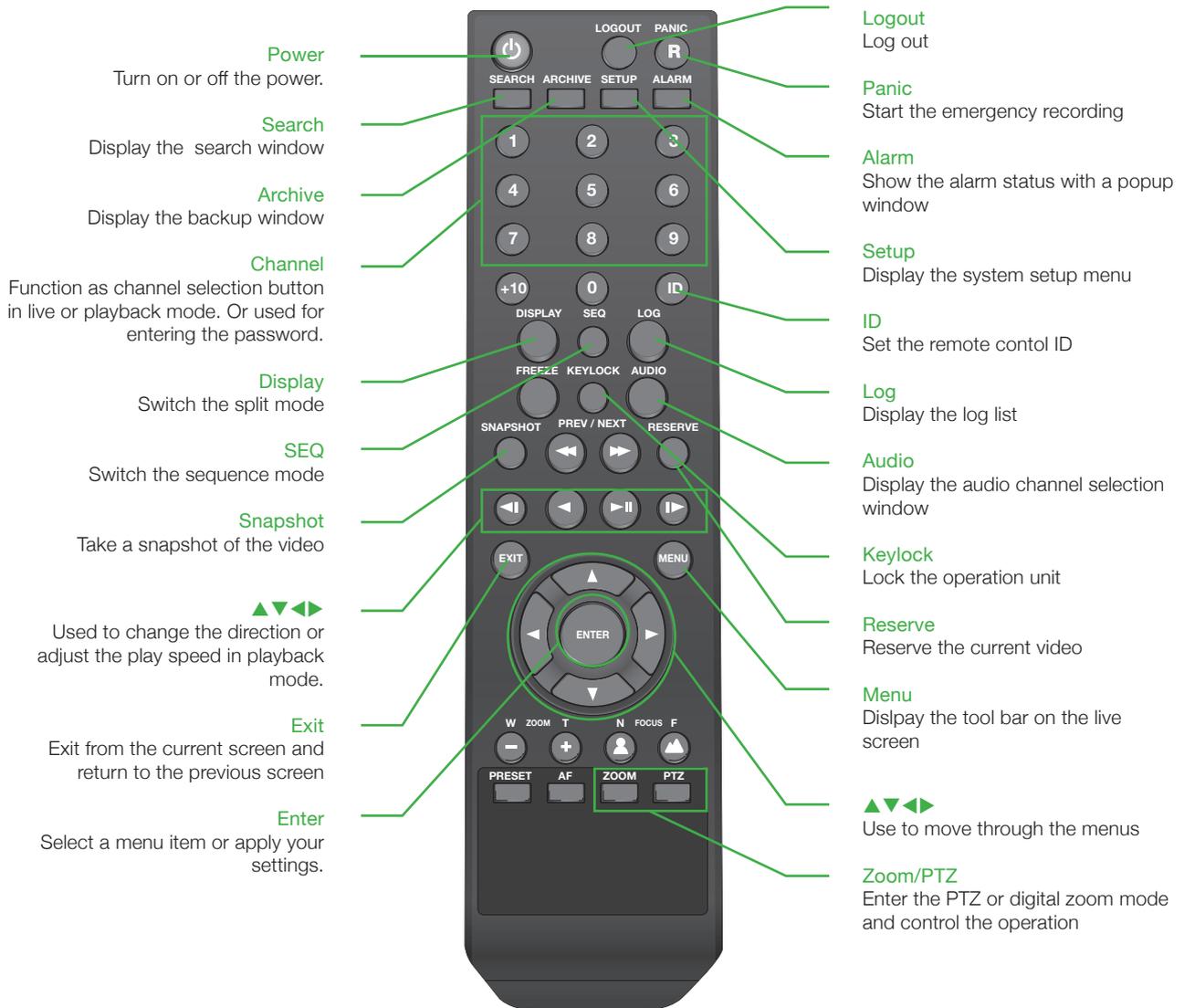
MINI 8CH & 16CH



8CH & 16CH



No.	Name	Description
1	CAM1~CAM4/8]	Ethernet ports used for connecting the network camera video and power. (Can supply power to cameras with PoE function 100W Max.)
2	WAN(UPLINK)	Network port for connection to the Internet, router or hub.
3	AUDIO IN	Audio in connection port.
4	ALARM OUT	Alarm output device connection port.
5	RS-485	Communications port for connecting peripherals such as system keyboard.
6	Power Switch	NVR power switch.
7	100-240V -, 50/60 Hz	NVR power input port.
8	RS-232C	Not used.
9	ALARM IN	Alarm input signal port.
10	AUDIO OUT	Audio out connection.
11	USB	Port for connecting USB devices. (For mouse, backup device)
12	eSATA	Connection port for external eSATA storage.
13	VGA	VGA video output terminal.
14	HD MONITOR	Port for connecting a full HD(1920x1080) supported monitor.
15	LAN(DOWNLINK)	Exclusive Port dedicated to connect the NVR Expansion Hub. (Do not connect any other device.)
16	DC 48V	Power input port for the camera (PoE compliant). Connect to a 48V adaptor.
17	DC 12V	NVR power input port. Connect to a 12V adaptor.



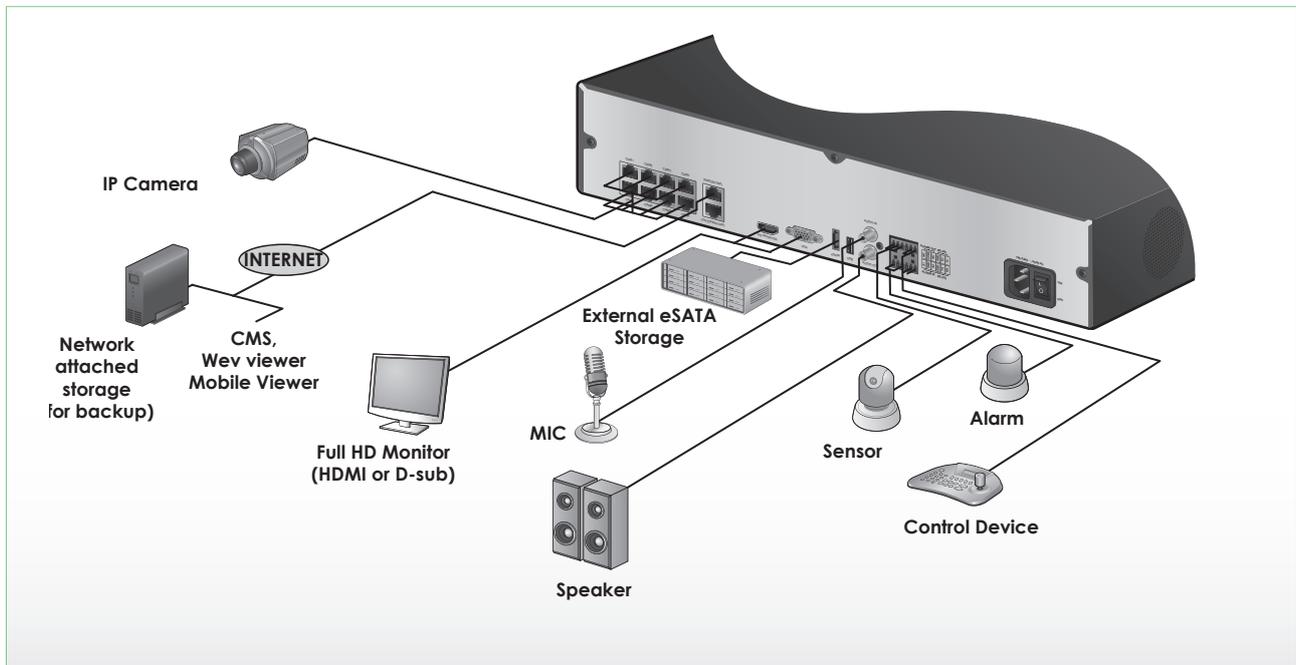
Change the remote control ID

The remote control will only work with the DVR if the remote control ID matches the ID programmed in the DVR.

Multiple DVRs can be controlled from one remote control, this is ideal for when there are more than one Concept Pro recorders installed in the same place. To program the remote control to work only with a specified unit, follow the instructions below:

Press the ID button on the remote control to set the remote control ID.

- 1 Navigate to <MENU> <SYSTEM SETUP> <SYSTEM> <CONTROL DEVICE> under Remote Controller, set the <REMOTE CONTROL LER ID> and press <APPLY> Double click to display the virtual keyboard and between 00 and 99.
- 2 Press the [ID] button on the remote control. The default remote control ID is 00.
- 3 Use the number buttons to provide a two-digit ID. If you want to enter ID 3, for instance, enter the number 0 and 3 in sequence.
- 4 To reset the ID to 00, press and hold the [ID] button. To change the ID of the remote, repeat step 3.



Precautions

To ensure recording stability only direct cable connection between camera and NVR is used.

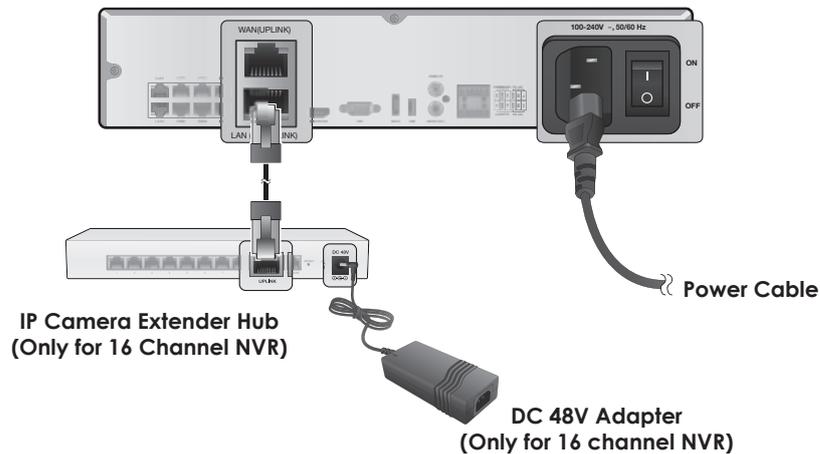
- To extend a single camera above 100m you can use a single POE hub.
- Direct access to the IP cameras from an outside PC is strictly controlled by the NVR.

Connecting to a monitor



It is recommended to use a HDMI cable to display the NVR on a 1080p monitor. This will ensure viewing the live cameras in the best quality available.

Power Connection



Power Connection

Apply power to NVR main unit, and connect the provided DC 48V power supply adaptor to the external PoE switch (Power Over Ethernet, for 16-channel models).

NVR power connection

Connect the provided power cord to the power inlet.

PoE Switching hub power connection

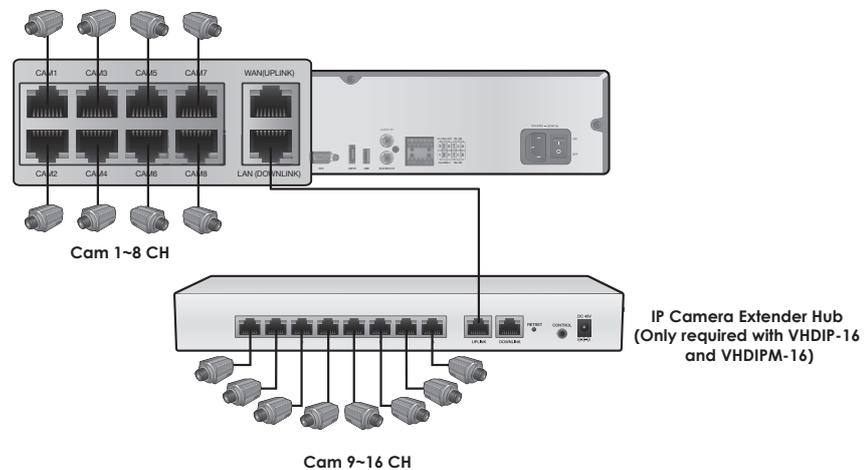
Plug the provided DC 48V adaptor in the rear power port of the Hub.

-  Make connection when the power is not applied yet.
-  Arrange up the cables and be careful not to peel off the cable coating.
-  Do not place the power cord under the carpet or rug. The power cord is usually earth-grounded. However, even if it's not earth-grounded, do never modify it on your own for earth-grounding.
-  Do not insert multiple devices in a single power socket. Otherwise, it may cause a power overload.
-  For stable power supply, this product provides separate adaptors and two corresponding AC cords by factory default.
-  Make sure all cables are connected properly.
-  Make sure the power connector and cable are connected tightly and not loose

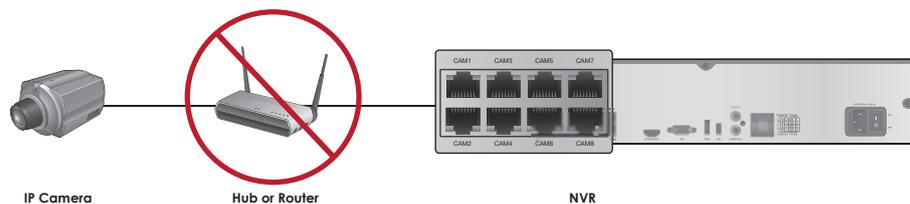
Connecting a camera

Connect a POE compatible IP camera to the rear [CAM1]~[CAM8], RJ45 port using CAT6 10/100Mb Ethernet cable without requiring to use a separate power source - some cameras may require to be powered locally such as the AIR4526-IP, VHDSIR-870EXT-IP, etc.

With the VHDIP-16 and VHDIPM-16, the NVR requires an expansion hub to connect [CAM9 - CAM16], connect the [LAN DOWNLINK] port on the hub to the [UPLINK] of the NVR to invoke handshaking of IP cameras connected to the expansion hub, cameras 9-16.



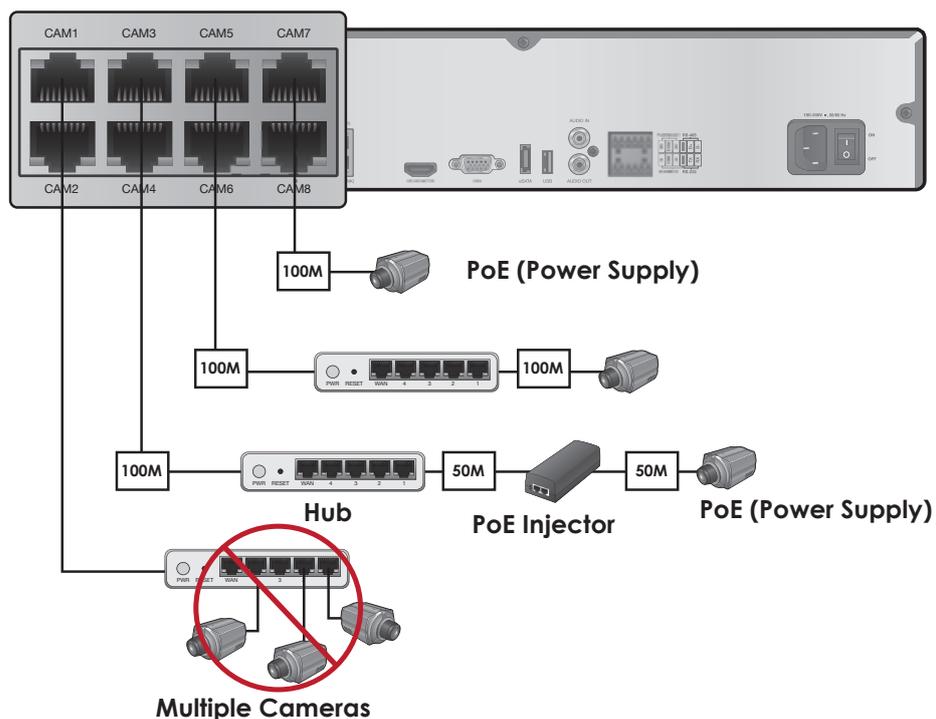
- ✔ If the IP camera provides the alarm I/O port or Audio I/O port, the NVR will be able to process this given that the camera has been integrated. For more details, refer to the user manual of the IP camera.
- ! The maximum distance an ethernet connection is effective within is, 100 meters. Any further distance, problems will be experienced such as loss of connection or slow video image – not real time. If further distance than 100 meters is required to connect the network camera to the NVR use a separate PoE extender, this will allow upto another 100 meters, and so on.
- ! Total power consumption of the cameras cannot exceed the PoE rated capacity (main body: 95 W, external PoE HUB : 72 W). If it exceeds the nominal power capacity, video loss may be experienced or the camera may malfunction. In this case, supply power to the camera locally.
- ! Even if total power requirement meets PoE device's power capacity, a camera of more than 30W power requirement per port cannot be used.
- ! Each camera's power consumption can be checked on the network map screen, and total power consumption should include the camera's maximum possible consumption with optional accessories (such as IR / heater device).



- For stable operation, a dedicated communication line is established between the IP cameras and the NVR. A network router or hub connection can not be used.

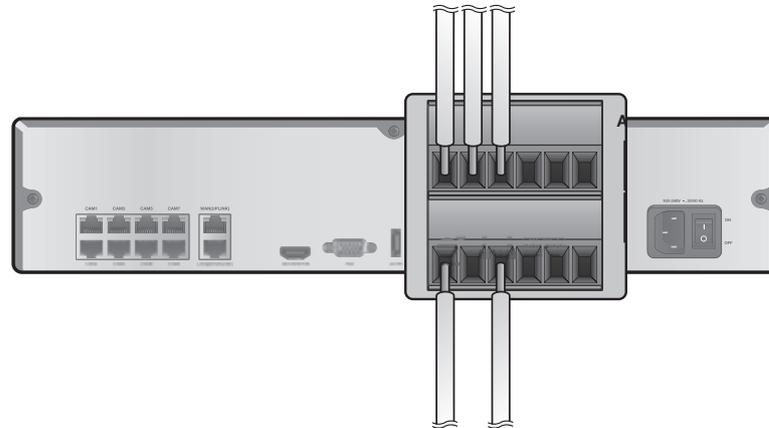
Connecting to IP cameras over 100m away from NVR

Extend the transfer range of the camera by connecting a POE switch or POE extender device between the ethernet port and the IP camera that requires the transfer of data over 100m.



- ✓ If you use a none PoE switch, the cameras will require a local power supply.
- ✓ If you are extending the distance between the cameras and NVR using a switch, only one camera can be connected.

Alarm I/O Connection



To connect the alarm input signal

Connect an alarm input device such as sensor to the rear [ALARM IN] port.

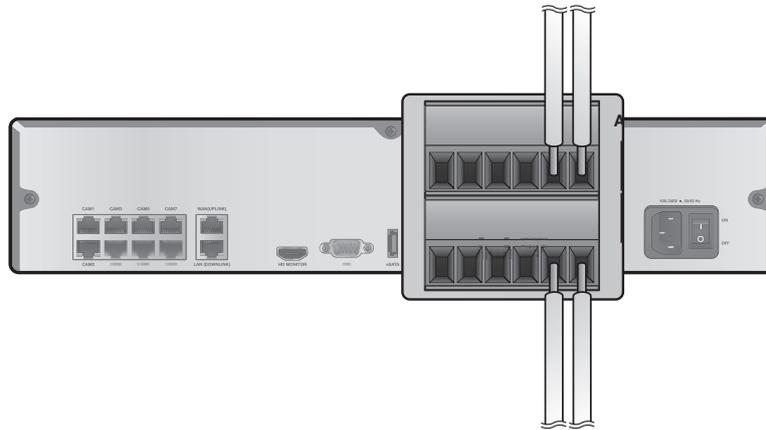
1. Loosen the screws on both the alarm input port and [GND] port of the provided terminal block plug.
2. Insert one end of alarm signal cable through the [A1] or [A2] terminal hole below the screw hole, and then fasten the screw.
3. Insert the ground signal wire into the hole of the [GND] port (shown also below the screw), and tighten the screw.
4. To remove the wire, loosen the screw and pull it out.

To connect the alarm output signal

Connect an alarm output device to the rear [ALARM OUT] port.

1. Loosen the screws on the [NO] and [NC] ports and the [GND] port of the provided terminal block plug.
2. Insert the alarm signal wire into the hole of the [NO] or [NC] input port (shown below the screw), and tighten the screw.
Check the relay output type of Normal Open or Normal Close before selecting a proper type (NO or NC).
 - > NO(Normal Open) : Normally open going closed when an alarm is triggered.
 - > GND : Insert the negative/ground wire.
 - > NC(Normal Close) : Normally closed going open when an alarm is triggered.
3. Insert the ground signal wire into the hole of the [GND] port (shown also below the screw), and tighten the screw.
4. To remove the wire, loosen the screw and pull it out.
5. Install the wire-connected terminal block in the rear port.

Communication Port



RS-485 Connection

Connect devices such as a PTZ Camera or Keyboard Controller. After connecting the control device, be sure to match the protocol settings between DVR and device. Make set the communication protocol settings go to <SYSTEM><CONTROL DEVICE>

1. Use a signal cable to connect the positive RS 485 port of the terminal block plug and the positive RS-485 connection of the keyboard controller or PTZ camera.
2. Connect the negative port of the terminal block plug and the negative RS-485 connection of the keyboard controller or PTZ camera
3. Ensure the cable is secured properly by tightening the screws
 - ☑ For RS-485 communication configuration, refer to the user manual of the PTZ camera and/or keyboard

RS-232 Connection

Connect device a text-in device such as, POS or ATM, these then display a text overlay onto a live video feed of the associated camera. After connecting the text-in device, ensure to match the protocol settings between DVR and device. To set the communication protocol settings go to <SYSTEM> <POS/ATM> For connection to the text-in device, you will need to refer to the user manual of the text-in device to get the required information.

1. Use a signal cable to connect the positive RS-232 port of the terminal block plug and the positive RS-232 connection of the text-in device.
2. Connect the negative port of the terminal block plug and the negative RS-232 connection of the text-in device.
3. Ensure the cable is secured properly by tightening the screws and pulling gently on the cables.

Audio Device Connection

Connect audio devices such as speaker, amplifier or a listening device (microphone). Using audio cable with phono (RCA) connections connected to the audio input channels and/or audio output channel on the rear of the DVR. This allows for the recording of audio on site with the cameras or nearby and also allows communication to the camera in terms of broadcasting audio through horns installed on site.

1. Take the audio cable from the device and using a phono connector input that into the necessary audio input or audio output port on the rear of the VHDIP.

To record the audio, audio will need to be turned on in the record setup.

1. <MENU> <RECORD SETUP> Select the recording type (Continuous / Motion / Alarm).
2. Highlight the time bar at the top of the window, to select the time to apply audio recording.
3. A window will pop up, select to turn on audio recording for the channels associated with audio input.
4. Finally go to <SYSTEM SETUP> <AUDIO>, configure these settings as the system is setup.

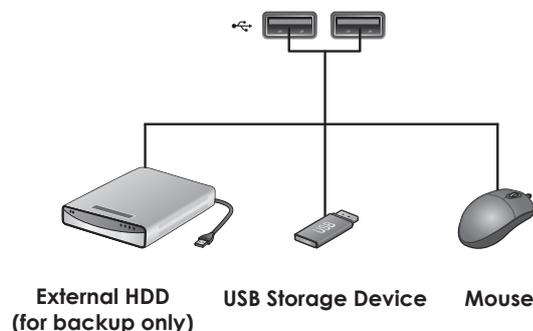
eSATA Storage

If further storage is required with the VHDIP, the total storage can be increased with the use of an external storage device. By adding an eSATA storage device, this connects via the eSATA port on the rear of the NVR.

- ☑ Using devices other than recommend eSATA products may cause a serious problem. Contact your supplier for compatible devices.

USB Device

The use of the USB ports are to connect USB storage devices and USB mouse. The mouse is provided and it used to control the NVR's interface. backup recorded footage from the NVR onto a portable storage device, such as a USB memory stick or a USB external storage device. USB storage devices can also save snapshots, firmware updates and exporting/importing system settings.

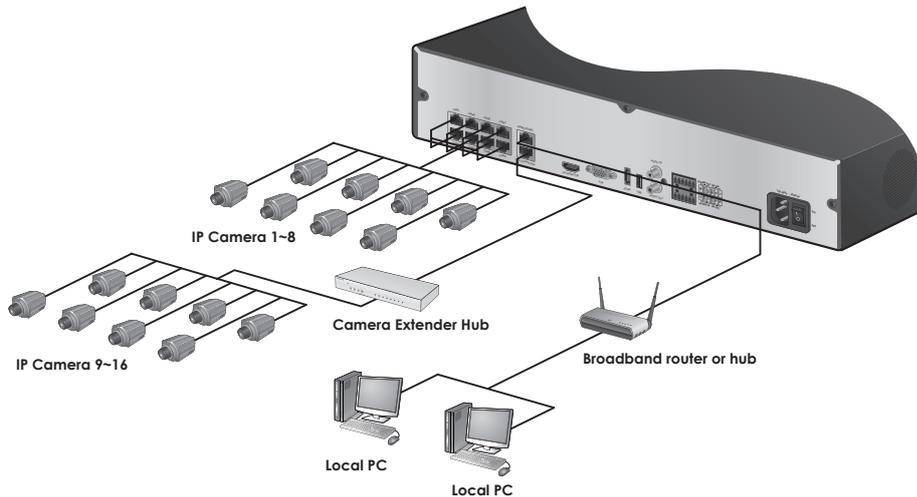


- If you need to connect an external hard drive with a high power consumption, it is recommended to use a separate power source

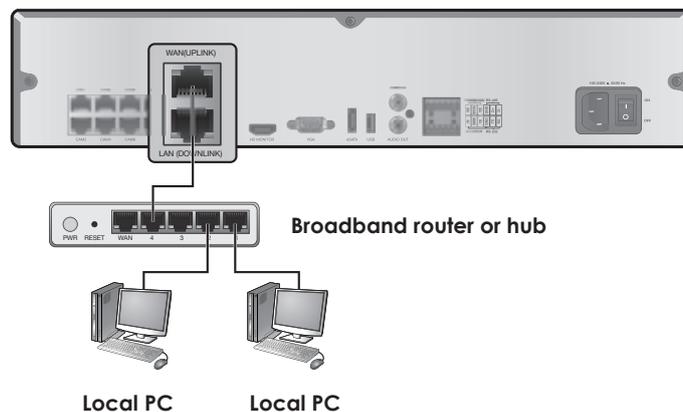
Network Connection

PC connection in the local network (LAN)

To connect a PC/Laptop to the NVR on the same network.



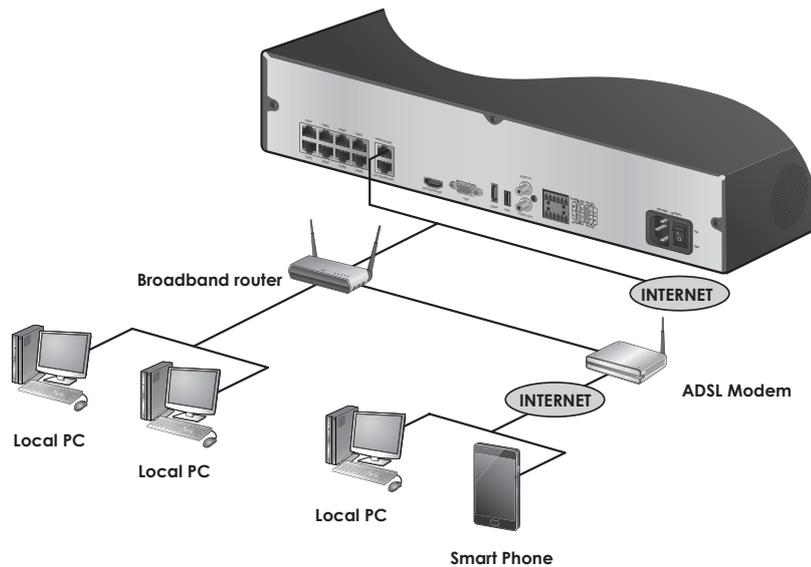
1. Connect the [WAN (UPLINK)] port in the rear panel to the router or hub.
2. Connect the local PC to the router or hub.



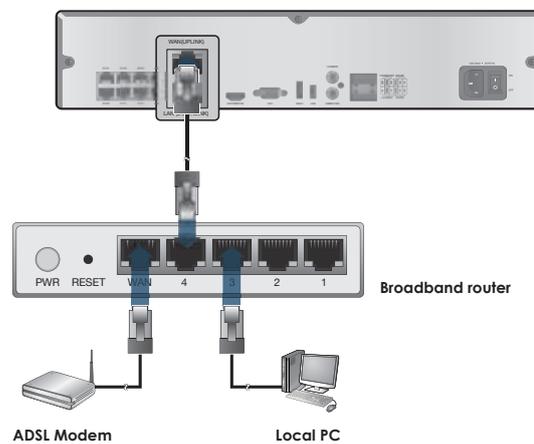
3. Enter the IP address in the address bar (Internet Explorer web browser) of the local PC or on iPIMS. (Ex : <http://192.168.0.23:8080>) The web service port is set to 8080 by default. From the Network Setup screen, the network ports are configurable.
4. Provide the ID and password before logging in. Then, you can view the monitoring screen. Access ID (factory default) : ADMIN, P/W : 1234.
 - For security purposes, change the password after installation of the product for the first time after purchasing it.

PC connection from a remote network

To connect to the NVR from a remote location. This allows the remote monitoring of the live video at CIF resolution. This video stream can be broadcast to a computer or to a mobile device using the Concept Pro application.



1. Connect the [WAN (UPLINK)] port in the rear panel to the router.



2. Connect the [WAN (UPLINK)] port of the router directly to the fixed LAN port, or connect it to the router.
3. If using the router, configure the port forwarding and enter the DDNS address in the address bar (web browser) of the remote PC, or of the dedicated software program or mobile phone. For the IP and DDNS address settings, refer to "Network Setup". (page 39)
4. If the MAC address of the NVR is 00-11-5F-12-34-56 and the web port number is 8080, enter "http://00115f123456.dvlink.net:8080" in the address bar of the web browser. If you have renamed DDNS as "mydvr" for example, you can connect using "http://mydvr.dvlink.net:8080"



Start

1. Connect the power adaptor to the VHDIP recorder
 - Make connection when the power is not switched on.*
2. Turn on the power switch in the rear panel of NVR. The front LED turns on, after a few seconds there is a 'bleep' and the logo screen appears
3. When the booting process is completed, you will be presented with the live screen and prompted log in



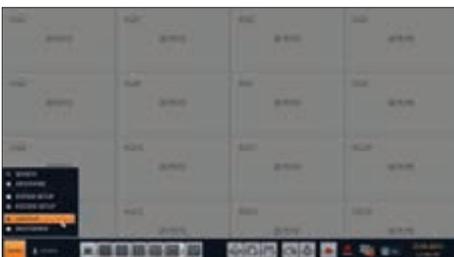
Log In

After start up is complete, the operator must log on to the system.

1. When the system starts, the login screen will appear.
2. Select a user and provide the password.
The default ID is "ADMIN" and the default password is "1234".
3. Click <OK>.

If the login information is correct and valid, you will see the live screen.

- For security purposes, it is recommended that you change the password.*



Log Out

To prevent unauthorized access, it is recommended to log out when you leave the screen.

- Move the cursor near to bottom of the screen to display the menu bar.

1. In the live screen, click <MENU> in the bottom left corner of the screen then select <LOG OUT>, or press the [LOGOUT] button on the remote control.
2. Access to SEARCH / ARCHIVING / SYSTEM SETUP / RECORD SETUP / SHUTDOWN will be restricted

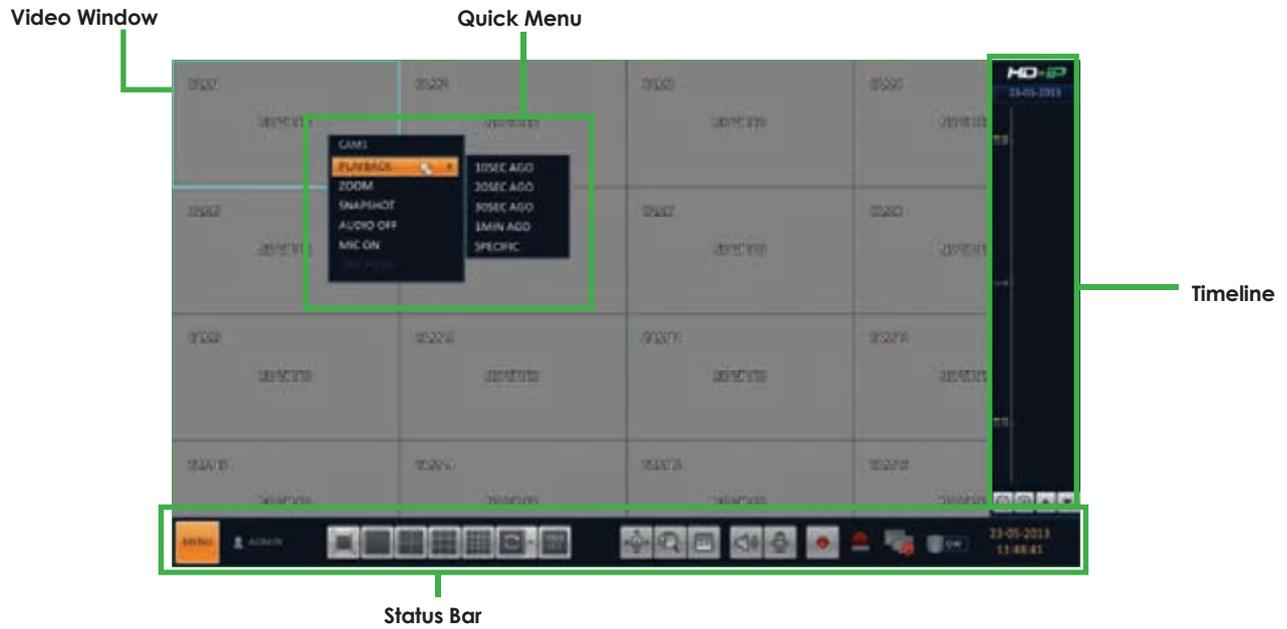


System Shutdown

1. In the monitoring screen, click <Menu> in the bottom left corner of the screen to <SHUTDOWN> the system, or press the [POWER] button on the remote control.
2. Use the virtual keyboard to enter the password.
3. Turn off the power switch in the rear panel.

! Do not turn off the system in any other way such as removing the power cord while the system is in operation. This may cause data loss and shorten the life of the disk.

The live screen consists of four functions: live video window, status bar, timeline zone and quick menu



Video Window

Icons used in the live video windows.

ITEM	Description	
Camera ID	CAM1	Show the camera ID.
Record Mode Icons		Displayed if an event recording is reserved.
		Display if continuous recording is active
		Display if a motion event recording is active.
		Display if an alarm recording is active.
		Display if emergency recording is active.
Audio I/O Icons		Displays if the audio signal of the connected camera is operational.
		Displays if the audio out is operating on the connected cameras via the microphone.
Motion Detection Icon		Displays if motion detection is active.

Status Bar

Press the ▼ button on the remote control, or place the mouse in the lower area of the screen to display the status bar.

ITEM		Description
Menu Button		Select 'System Setup', 'Search' or 'Backup' from this option.
User ID		Shows the 'name' of the user logged in.
Screen Control Buttons		Set the status bar to hide or to fix the status bar on all the time.
		Select a live video split screen mode.
		Set a sequence of the live video displays.
		Display or hide the OSD menu on the screen.
PTZ		Enter the PTZ interface.
Zoom		Enter the digital zoom interface.
Quick Log		Pops up a list of recent system and recording events.
Audio Channel Selection Button		Turns audio listening on (Requires audio input from camera).
Microphone Channel Selection Button		Turn audio send 'on' (Requires audio out on camera) and a microphone.
Panic Record		Start/stop the panic recording.
Alarm Indicator		Flashes when an event is occurring. Click the icon to pop up all the current alarms.
Network Connection Status		Displays the number of remote connections to the VDHIP
Disk Space		Displays the current state of the hard drives
Date & Time	01-01-2012 03:24:48	Displays the current time and date.

Timeline

Press the ► button on the remote control or move the cursor to the right of the screen to display the timeline.
Double-click the timeline to move to the video screen. Drag and drop it to make backup or event search for the specified area.

ITEM		Description
Timeline Date		Display the date of the current timeline. Click this to select a desired date of the timeline.
Navigate Timeline		Zoom in and out of the timeline for a more or less accurate time frame.
Navigation Timeline		Scroll through the displayed time by using the wheel of the mouse or the arrows on screen.
Timeline Bar		Display the recording data. The colour of each bar indicates the following:
		<ul style="list-style-type: none"> ● Green : Continuous Recording
		<ul style="list-style-type: none"> ● Red : Alarm Recording
		<ul style="list-style-type: none"> ● Blue : Motion Recording
		<ul style="list-style-type: none"> ● Yellow: Panic Recording

Quick Menu

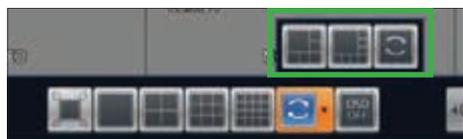
Using a USB mouse right click the desired channel

ITEM	Description
Channel Name	Display the number or the name of the channel selected.
Playback	Play footage from a choice of 10/20/30 seconds.
Zoom	Enter digital zoom interface for selected channel.
Snapshot	Capture a snapshot of the current video with option to save.
Audio ON/OFF	Turn on or off the audio for the selected channel.
Mic ON/OFF	Turn on or off the microphone for the selected channel.
ONE PUSH	Automatically adjusts the focus, of the camera. (Requires a supported camera)
CAM Change	Assign the selected camera to another channel position

Changing video stream position with Cam Change

Channels can be reassigned their position using the CAM Change feature from the status bar. This allows the user to configure the live display of video streams to exactly how they would like the video to be viewed. Right click the mouse on the chosen channel, select [CAM CHANGE] then choose the channel from the drop down list to swap the live video positions. Alternatively, click and drag the live video and drop it where it is required. This will swap the channels such as CAM2 and CAM11. CAM11 will display in CAM2 position.

Using the status bar in the live mode



Selecting a split mode

Click a desired split mode from 1, 4, 9, 16, 6 and 8 split screen. Or press the [DISPLAY] button on the remote control until a desired split mode is displayed.

- ✓ VHDIPM-4 only supports 1 and 4 split screen mode
- ✓ VHDIP-8 and VHDIPM-8 only supports 1, 4, 6, 8 and 9 split screen modes.



Auto sequence

Click the Sequence button in the status bar, or press the [SEQ] button on the remote control to perform the specified sequence mode.

Configure the sequence settings in <SEQUENCE>



Controlling PTZ

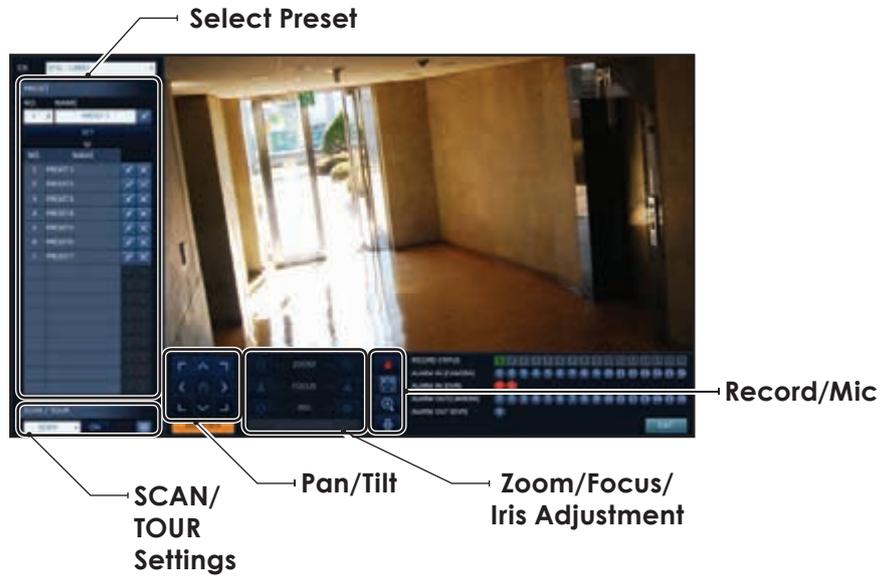
Enter the PTZ interface to control connected PTZ cameras.

Use the mouse to click PTZ button on the status bar, or

press the [PTZ] button of the remote control to open the interface on screen.

In PTZ mode, use buttons on the screen to control PTZ or

use [ZOOM], [FOCUS] and [PRESET] buttons of the remote control.





Pan/Tilt Control

Use the mouse to control the camera in the direction of up/ down/left/right.

Use the [▲▼◀▶] buttons of the remote to pan and tilt.



Zoom / Focus Control

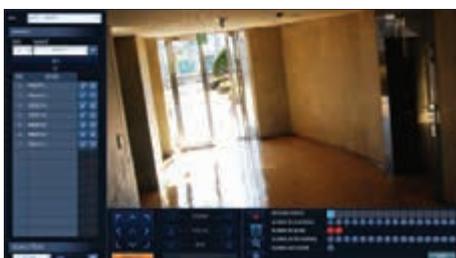
Control the cameras lens for focus, zoom and iris adjustment.

- Click <ONE PUSH FOCUS> button to adjust the camera's focus automatically. (Requires a compatible camera)
- With the remote control use the [ZOOM] and [FOCUS] button



1. To change the individual PTZ setting click <PROPERTY> (for auto focus, auto IRIS, pan/tilt speed, zoom speed, focusing speed, iris speed).

- Depending on the PTZ camera manufacturer and model, some of the PTZ properties may not be supported..



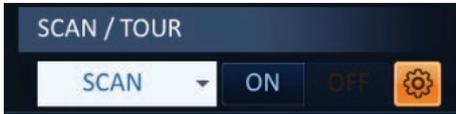
- > CH : Selects the channel of the NVR.
- > PRESET (No. / Name) : Configure the preset number and name.

- Up to 255 presets can be selected for a PTZ camera, while up to 16 presets can be registered to one NVR.

2. Control the Camera's PTZ while watching the video. Press the <SET> button to append the preset.

- > Click the [GO TO] icon to move to the camera to that preset.
- > Click Delete icon to delete the selected preset.

- PRESET: List of remember presets for that channel, use this to invoke presets.



Scan / Tour

1. Select <SCAN> and click the <ON> button.
2. Click the  icon.



3. Select a user-defined preset and register it.
 - > DWELL : Sets the dwell time of 00 seconds before moving to the next preset location.
 - <SCAN> function patrols two preset positions at the specified speed and interval for constant monitoring.
4. Select <TOUR> and click the <ON> button.
5. Click the  icon.



6. Select a user-defined preset and register it.
 - > DWELL: Sets the dwell time of 00 seconds before moving to the next preset location.
 - <TOUR> function patrols multiple presets in order (PRESET 1 ; PRESET 2 ; PRESET 3 ;...) for automated patrolling monitoring.



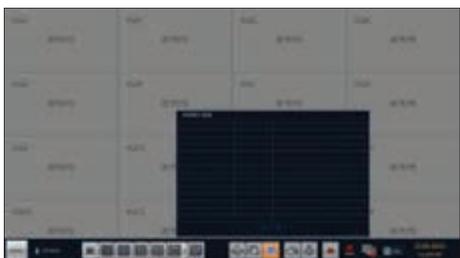
Digital Zooming

Digital zooming allow the users to zoom in on an area of interest to gain a better view. Zooming will enlarge an area of the video that the user controls on the selected channel. Recording is not affected.

If no channel is selected, CAM1 is default.

1. Select the zoom button in the status bar or move the cursor to the desire channel then right click to display the quick menu and select <ZOOM> or press [ZOOM] on the remote control.
2. To move the zoom area, click and drag the yellow box and use the buttons to control the zoom level.

- > Select a channel to zoom in/out.
- > Zoom out the current image.
- > Enlarge the current image.
- > Zoom Box Move the yellow box to select the area of interest.
- > Exit the zooming screen and return to the live display.



To check the event log

View the most recent logs recorded by the VHDIP for a quick glance at what the NVR has been recording.

1. Click Log to display the "EVENT LOG" window.
The log list is displayed with the most recent at the top.
2. Double-click a desired log to display the event video.



To select an audio input channel

Select a channel from which the audio signal will be associated with:

- > Click Audio
 - > CHANNEL : Produces the selected channels audio, regardless of the split screen mode.
 - > LINK TO FULL SCREEN : When switching the NVR display mode to view one channel (Single Split), the audio will be played.
- Requires connecting audio output device.



To select an audio output channel

Select the audio output from a connected microphone by clicking 



To check the alarm status

Monitor the state of the NVR alarms using the [ALARM STATUS] 
Click <OK> to close the window.



To check the network status

Monitor the state of the network of the NVR, including connected camera information and IP settings. 

Click <OK> to close the window.

- For more information, refer to “Network Status”.

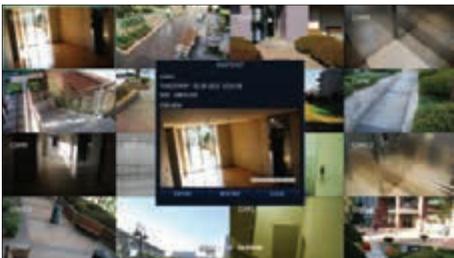


To check the disk status

The user can check the status and information of connected storage devices connected to the system, select 

Click <OK> to close the window.

For more information, refer to "Disk Information".



Saving captured snapshots

The snapshot function allows the user to capture a still image of the current live video footage, then save or export the image.

1. First, select a channel by moving the cursor to it. Right click to access the quick menu, select <SNAPSHOT > or press the [SNAPSHOT] button of the remote control.

Options displayed are 'Export' or 'Reserve' this jpeg.



2. Connect a USB storage device, and click <EXPORT>.

To save the captured image to the internal storage, press the <RESERVE> button.

Saved image can be found in the "Archiving > Reserved data management" and can be backed up at a later date.

3. Enter the <TAG NAME> and <MEMO> and press <BURN> or <ERASE & BURN> button.

> A progress bar appears and indicates the progress of exporting to storage device.

> BURN : Snapshot is stored in the connected USB storage device.

> ERASE & BURN : Deletes all files in the connected USB storage and then saves the snapshot.

 Note that <ERASE & BURN> option erases all data in the USB storage device and will not be restored once deleted.

To enter the System Setup menu

System Setting

How to use the mouse



How to use the remote control - First Method



How to use the remote control - Second Method

SETUP





System Settings

Camera Setting



Configure the display settings of the: camera settings, image setup, covert setup, motion sensor, PTZ settings, privacy mask.



Camera Title

Edit the camera name displayed on the screen.

1. From <SYSTEM SETUP> - <CAMERA>, select <CAMERA TITLE>.
2. Use the [▲▼◀▶ / ENTER] buttons on the remote control or use the mouse to select a channel that you want to rename.
Then double-click the current camera title from the top left of each camera on this page.

Up to 12 alphanumeric letters can be entered.



3. On the virtual keyboard appears, enter the desired name using the characters and then press <OK>.

The [SHIFT] key toggles the case sensitivity.

4. To apply the change, click <APPLY > in the bottom of the screen.
5. When finished, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Camera Setup

Adjust the brightness, contrast, colour and quality for each channel.

1. From <SYSTEM SETUP> - <CAMERA>, select <CAMERA SETUP>.
2. Use the [▲▼◀▶ /ENTER] buttons on the remote control or use the mouse to set each option of the camera setup menu.
 - > IMAGE SETTINGS: Allows configuration of image capturing setup for the camera connected.
 - > EXPOSURE: Controls the camera's exposure levels to ambient lighting conditions.
 - > STREAM SETUP: Set the camera's bit rate, resolution and other properties.
 - > DIRECT CONFIGURE: Connects to the IP camera via web to program directly.
 - > COPY SETTING TO: Apply the settings to the cameras on different channels.
 - > POE POWER OFF: Choose to turn the power off for a camera if it POE is required.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



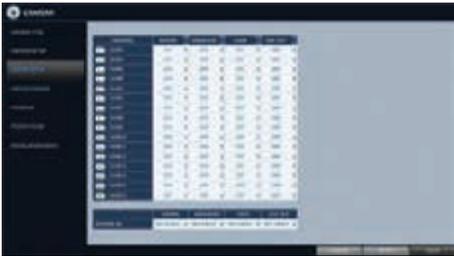
Direct Configuration

This function stops the NVR from recording and becomes an internet pass through to the camera so that it can be configured within its own menu to suit the install location.

For cameras not supporting direct configuration over web, use the computer connected to the camera to configure it.

1. Select <DIRECT CONFIGURE> from the <CAMERA SETUP>.
2. Press the <START> button to display a popup message.

Recording stops for the corresponding channel during configuration of the camera.



Covert Setup

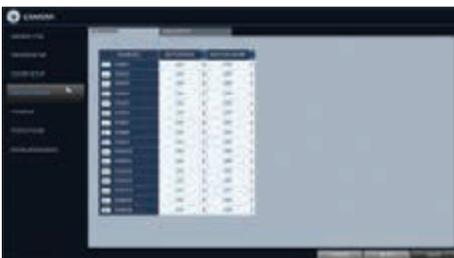
Hide the camera video so that a specific user or user group can not view it.

1. From <SYSTEM SETUP> - <CAMERA>, select <COVERT SETUP>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to select a covert channel(s) from a specific user group.
 - > ADMIN, MANAGER, USER : Set them to <ON>.The selected channel will be covert from the applicable user account.
- > LOG OUT : Set it to <ON>. When the user logs out, the current channel will be set to a covert channel.
- > SHOW AS : Sets how to display video of the <COVERT CHANNEL> channel.

NO VIDEO : Displays as though there is no video on the channel.

COVERT : Displays 'COVERT' on the the Live screen.

3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.
 - To change the covert settings from user group to user, move to the <USER> menu and make necessary changes.



Motion Sensor

Set the motion sensor of the camera so that the VHDIP knows to detect motion events (requires compatible camera).

1. From <SYSTEM SETUP> - <CAMERA>, select <MOTION SENSOR>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to specify the use of each option item.
 - > ACTIVATION : Set whether to activate motion sensor of the camera channel.
 - > MOTION MARK : Set to <ON> to display motion detection indicator on the corresponding channel's video.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Motion Area Setup

Setting the motion area may differ depending on the camera model.

(Requires a compatible camera)

1. Click <AREA SETUP> to move to the motion area setup screen.
2. Select a channel to define a motion detection area.
3. Use the arrow buttons to move to a desired block and press [ENTER]. The area setup will begin.

Then, use the arrow buttons to specify the area.

Alternatively, use the drag-and-drop method to specify or release the area using a mouse.

4. Select the specified area again, it will be released.
5. Set the channel's detection period for day and night, sensitivity, minimum number of blocks and interval.
 - > DAYTIME : specify the time period that will be considered as daytime.
 - > SENSITIVITY : Sets the sensitivity level for detection during the day time or night time. The higher the level, the higher the detection sensitivity.
 - > MIN BLOCK : 1(High) ~ 10(Low) - The lower the number is, the higher the sensitivity level becomes.
 - > INTERVAL : A detected motion may trigger events continuously; set the interval to ignore such unnecessary trailing events.
 - > SELECT ALL : Select all area as motion detect area.
 - > DESELECT ALL : Deselect all selected area.
 - Images recorded in a low contrast scene such as at night cause severe noise, triggering the motion event too often.
 - If this is the case, reduce the nighttime sensitivity to a degree.

- !** The above options such as <SENSITIVITY> and <MINIMUM BLOCKS> and how to set the motion area may be restricted depending on the specification of the connected camera.



PTZ Settings

Set the camera ID, protocol, baud rate and data transmission speed for each channel.

1. From <SYSTEM SETUP> - <CAMERA>, select <PTZ SETUP>.
2. Use [▲▼◀▶/ENTER] buttons of the remote control or mouse to set the address (ID), protocol and data transmission speed for each channel.
 - > RS-485 : Manually configure RS-485 communication connection to the pan/tilt base of IP Box type camera or motorized zoom lens. Tick the RS485 box to enable programming of <ID <PROTOCOL> and <BAUD RATE >.
 - IP cameras are able to transfer PTZ signal over the network.
3. To apply the change, click <APPLY > in the bottom of the screen. Once clicked <APPLY > button after changing settings, a restarting message pops up. Click <Yes> to restart the system automatically.
4. Once the setup is complete, press the [EXIT] button of the remote control or click <CLOSE> button on the bottom to display a confirmation dialogue. Click <CANCEL> to return to the previous menu disregarding all changes.

Enabling Privacy Mask

For privacy purposes, the VHDIP will block an area of the camera image so that it is not recorded.

1. From <SYSTEM SETUP> <CAMERA>, select <PRIVACY MASK>.
2. Use arrows on the remote or the mouse to set channels enabled, mask colour and its area.
 - > ACTIVATION : Turns on or off the ability to set a privacy mask.
 - > MASK COLOR : Select the colour of the masked area, which will be displayed.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous

Setting the Privacy Mask Area

Go to the <AREA SETUP> tab to enter the interface to set the mask.

Using the remote control navigate to the channel selection, press [SELECT] to begin area setup then use the arrow keys to set the masking area.

Using the mouse click and drag over the video stream to set the mask or cancel it. Selecting the masked area again will deselect any of the previously selected boxes.



Installation Mode

From this section of the NVR the user can choose to set the VHDIP in a closed network or to advanced network.

Go to <SYSTEM SETUP> <CAMERA> <INSTALLATION MODE> using the remote control or the mouse to select either CCTV Mode (default and recommended) and Advanced Mode.

- [!]** Setting the NVR to advanced mode allows access to all ports including the cameras connection port from the external network. With that the cameras network video transfer quality will be affected by the relevant network devices on the existing network
- [!]** CCTV Mode is set for camera installation mode by default and both VHDIP and optional hub (For 16ch) support the plug and play function. (It is not possible to use CCTV mode and Advance Mode at once).
- [!]** When VHDIP-16 or VHDIPM-16 is set to Advanced CCTV, only the power is supplied to the 8 cameras connected by the NVR. Apply the changes, click <APPLY> at the bottom of the screen. If the system is changing from CCTV to Advanced or Advanced to CCTV Mode the VHDIP will need to restart.

Configuring Camera in Advanced CCTV Mode

Setting the VHDIP to <OPEN MODE (Advanced)> will restart the NVR if changing from CCTV Mode.

Go to <MENU> <CAMERA> <CAMERA INSTALLATION> this lists all the connected network cameras. To add camera's press [CAMERA ADD/DELETE]. The VHDIP will automatically search for cameras on the local network, or specify a known IP address to configure the camera, do this by selecting <SPECIFIC IP / HOST NAME>. Assign a channel number to cameras from the network search results; use the IP camera configuration button to enter camera information. When finished click <CLOSE> and in the bottom corner of the screen to return to the previous menu.

NOTE: When the VHDIP is set to OPEN Mode (Advanced) this becomes a network device and any issues relating to the NVR, IP cameras and network devices are the responsibility of the network installer/administrator.

- [!]** All the IP cameras will need to be configured and assigned static IP addresses individually by the cctv installer or network administrator. If the IP addresses aren't assigned to the network infrastructure then this can be problematic and it is the responsibility of the installer or network administrator.



System Settings

Display Settings



Configure the on screen display of the camera and record information, POS settings and display behaviours.



OSD

Configure the settings for the time, title, boundary, icon and language that will be displayed on the screen.

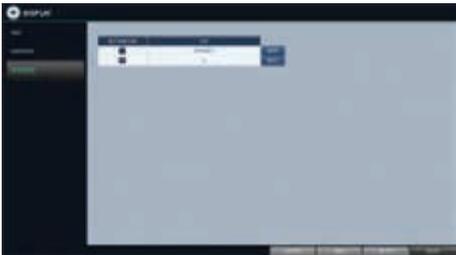
1. From <SYSTEM SETUP> - <DISPLAY >, select <OSD>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set each option of the OSD item.
 - > CAMERA TITLE : Display camera title 'ON/OFF'.
 - > RECORDING MODE ICON : Display 'ON/OFF'.
 - > AUDIO ICON : Display audio icon 'ON/OFF'.
 - > STATUS BAR ON FULL SCREEN MODE : select to show or hide the status bar in full screen mode.
 - AUTO HIDE : Status bar will appear when the cursor is moved to the bottom of the screen.
 - ALWAYS ON : The status bar will be displayed at all times.
 - 5 SEC ~1 MIN : If no cursor movement is detected (from 5 seconds to 1 minute) the status bar will disappear.
 - > TIMELINE ON FULL SCREEN MODE : select to show or hide the timeline in full screen mode.
 - AUTO HIDE : The timeline bar will appear when the cursor is moved to the bottom of the screen.
 - ALWAYS ON : The timeline will be displayed at all times.
 - ALWAYS OFF : The timeline will not be displayed.
 - > BORDER LINE : Border 'ON/OFF'.
 - > BORDER COLOUR : select a colour for the border.
 - > USER NAME : Display current user 'ON/OFF'.
 - > LANGUAGE : select a menu display language.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Monitor

Alter the display settings the VHDIP communicates with the connected monitor, set display resolution and delay between sequences.

1. From <SYSTEM SETUP> - <DISPLAY >, select <MONITOR>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set a sequence interval for auto mode to 1 through 60 seconds.
3. The resolution display is set by controlling the output the NVR
 - > AUTO: Automatically sets the maximum resolution compatible with the monitor.
4. To apply the change, click <APPLY > in the bottom of the screen.
5. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Sequence

Program what the NVR displays when a sequence is initiated. Set the split screen and which channels are cycled through.

1. From <SYSTEM SETUP> - <DISPLAY >, select <SEQUENCE>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to add a sequence or change the settings of the existing sequence.
 - > ACTIVATION : Only one sequence is available at any one time.
 - > ADD : Create a new sequence.
3. To apply the change, click <APPLY >at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



To add a sequence

1. Click <ADD> at the bottom of the screen.
2. When the "ADD" window appears, enter a title using the virtual keyboard.
3. Enter the name of the sequence and click <SAVE >.



To add a sequence continued

4. When the "ADD VIEW TYPE" dialogue box appears, click <ADD VIEW TYPE>.
5. When the "SEQUENCE SETUP" window appears, select a split mode that you want to add from <VIEW TYPE>.
6. If the selected split mode is displayed on "VIEW CONFIGURE", use the arrow buttons to navigate the channels until the desired channels displayed are selected.
7. Click <CONFIRM>.
The set sequence mode is confirmed and will be added to the Add Sequence list in order
8. When done, click <CLOSE> in the bottom of the screen.
After the sequence type is saved, you will return to the previous screen.
9. Right click the sequence split screen to modify or delete it from the "ADD VIEW TYPE" window.



To edit a sequence

1. Click the <EDIT> button on the right side of listed Sequence to be edited.
2. The "EDIT" window appears.
3. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to edit the selected sequence.
 - > SEQUENCE TITLE : a name for the sequence.
 - > ACTIVATION : set which sequence is active.
 - > MODIFY : change the displays of the sequence mode.
 - > DELETE : delete the selected sequence list.
 - > CANCEL : cancel the changes.
4. Pressing the <MODIFY> button will display the Edit Sequence window.
5. To change the existing settings, select a split screen to edit and right-click to display "ADD VIEW TYPE" window.
Then, select <MODIFY>.
6. When finished, click <CLOSE> to close the window.
7. To apply your changes, click <APPLY >.





POS/ATM

Set the display setting for the text-in device connected to the NVR. For connect information, see Menu > System > POS/ATM.

1. Go to <DISPLAY> <POS/ATM>.
2. Use the arrow keys on the remote control or use the mouse to change the POS/ATM display settings.
3. Display Mode: configure where the text overlay will be displayed on screen.
 - > Off – nothing displayed on screen. Not recommended if the text overlay is to be viewed.
 - > Both – text overlay is displayed on both live and archived footage.
 - > Live – text overlay only displayed on live video.
 - > Playback – text overlay only displayed in playback.
4. Position: configure where the text overlay is displayed over a camera feed – left or right side of the screen.
5. Font Size: Select the size of the font for the text overlay – small, medium, large. This only applies to single split screen mode.
6. Font colour: Colour of the text overlay characters.
7. Dwell time: Set how long the text overlay footage will be displayed.
 - > Until Next – leave the text on screen until the next set of data are input.
 - > 1~60 seconds – specify the length of time to display the data.
 - > Scroll Type: Set the type of scrolling for the screen.
 - > Clear - display the screen without scrolling.
 - > Roll up – display the text overlay in a roll up scrolling manner.
 - > Highlight text: Select to colour code certain keywords to make searching playback easier.
8. Exclude text: Select to exclude certain words that should not appear on the screen.
9. Apply the changes by clicking <APPLY> at the bottom of the screen
10. When finished, press [EXIT] on the remote control or click <CLOSE> next to the <APPLY> button.



System Settings

Audio Settings



Configure the audio setting for the VHDIP from setting the audio to be recorded to broadcasting over a network. The noise associated with using the remote control can be set as well.



Audio

Set what the VHDIP does with the audio received from the sources and set the audio channel.

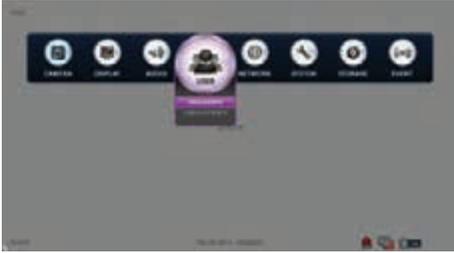
1. From <SYSTEM SETUP> - <AUDIO>, select <AUDIO>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to select an item that you want to edit.
 - > DEFAULT LIVE AUDIO CHANNEL : Select the audio channel that will broadcast as default over any other audio signal.
 - > NETWORK AUDIO TRANSMISSION : Turn on the network transmission to broadcast audio to a remote computer.
 - > RECEIVE NETWORK AUDIO : Turn on to receive audio being transmitted from a remote computer.
3. To apply the change, click <APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



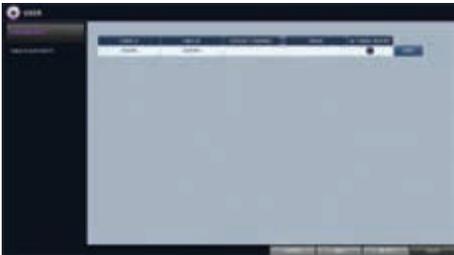
Buzzer Output

Configure the buzzer to sound when the remote control or keypad buttons are pressed.

1. From <SYSTEM SETUP> - <AUDIO>, select <BUZZER>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to select an item that you want to edit.
 - > REMOTE CONTROLLER BEEP : Set the buzzer on or off for when the VHDIP receives signal from the remote control.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



The User Management settings allow control and creation of users for the VHDIP. To access, go to <MENU> <SYSTEM SETUP> <USER>.



Management

Create and maintain user accounts. Set password, covert channels, authority level and associated email address.

1. Go to <USER> <MANAGEMENT>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to add a user account or select an item.
3. To apply the change, click <APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



To add a user account

1. Click <ADD> in the bottom of the screen.
2. Use the [▲▼◀▶] buttons on the remote control and move to a desired item. Then, press [ENTER] to select the item.
 - > USER ID : enter the user ID using the virtual keyboard.
 - > PASSWORD : With the virtual keyboard, enter the password.
 - > GROUP : From <ADMIN>, <MANAGER> and <USER>, select an authority level.
 - > EMAIL : Enter the email address in which you will receive notification of an event if it occurs.
 - > EMAIL NOTIFY : Set email notifications to on or off.
 - > COVERT CHANNEL : Set the covert channels for the user.
3. When done, click <OK>.

The added user account will be listed.



System Settings

User Settings



To edit the user account information

To edit previously created user manuals.

1. From the list of users, select a user account to edit and click <EDIT> next to it.
2. From the Edit window, make necessary changes and click <OK>.
3. To delete the user account, click <DELETE>.

The <ADMIN> account can not be changed or edited.



Group Authority

Assign permission for each user group.

1. From <SYSTEM SETUP> - <USER>, select <GROUP AUTHORITY>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set the permissions for both <MANAGER> and <USER> groups:
 - > SEARCH : Set the permissions for the Search interface.
 - > ARCHIVING : Set the permissions for the archive interface.
 - > SYSTEM SETUP : Set the permissions for the System Setup.
 - > RECORD SETUP : Set the permissions for the Record Setup.
 - > EVENT ACTION CONTROL : Set the permissions of the output if an alarm occurs.
 - > LISTEN TO AUDIO : Set the permissions to listen to the audio.
 - > MICROPHONE : Set the permissions to broadcasting audio.
 - > REMOTE LOG IN : Set the permissions for remote access to the VHDIP.
 - > SHUTDOWN : Set the permissions for shutting down the NVR.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu



To configure the network settings of the VHDIP go to <MENU> <SYSTEM SETUP> <NETWORK>. Within the settings the DVR can be configured for remote viewing and monitoring.



IP Setup

Edit the IP address related properties and remote service port of the NVR.

1. Go to <NETWORK>, select <IP SETUP>.
 2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to specify each item of the network settings.
 - > DHCP: This allows the DVR to automatically receive the network settings from the router.
 - For DHCP to take affect, the NVR should be connected to a network environment such as router that provides a DHCP service.
- [!]** When making changes to the IP Address you will lose connection to the IP camera momentarily. It is recommended to use a fixed IP for stable network connection.
- > RENEW : The network server restarts and is assigned a new IP address from the DHCP server.
 - > IP ADDRESS : If DHCP is not being used the IP address can be manually set.
 - > GATEWAY : provide the gateway address of the network.
 - > SUBNET MASK : provide the subnet mask address of the network.
 - > 1ST DNS SERVER : enter the address of the primary DNS server.
 - > 2ND DNS SERVER : enter the address of the secondary DNS server.
 - > RTSP SERVICE PORT : port number that the remote client receives the video from.
 - > WEB SERVICE PORT : port number used for connecting to the NVR with the web browser.
 - > PORT FORWARDING : For remote access a router must be connected, the router will need to have the WEB and RTSP port forwarded. The VHDIP can automatically set the port forwarding by clicking "AUTO PORT FORWARDING" button. For this function to work the router must support UPNP. If it does not, the port forwarding will have to be done manually.
Contact the network administrator for further information on this.
 - > DELETE PORT : release the port forwarding settings for the router.
 - > MAX TX SPEED : Limit the network transfer rate to a remote client.
The video signal may be transferred at a less rate than specified, which depends on the strength of the network connection.
3. To apply the change, click <APPLY > in the bottom of the screen.
 4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



DDNS

- [!]** Set the DDNS settings so that remote users can connect without the need for an IP address.
1. Go to <NETWORK> select <DDNS>.
 2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to specify the use of DDNS.
 - > DDNS : Turn DDNS on or off.
 - > DDNS SERVER : select the preferred DDNS host server.
 - > NVR NAME : Enter the name of the NVR that you want to use as DDNS.
 - > DDNS REGISTRATION TEST : Check if the <NVR NAME> can be set as DDNS. If there is a duplicate name in the server, the registration will fail. If this is the case, change the <NVR NAME> and re-test to check if the new name is available.
 - > USER NAME : Relating to account information of the DDNS server - not required with 'dvrlink.net'
 - > PASSWORD : Relating to account information of the DDNS server - not required with 'dvrlink.net'
 - > NVR ADDRESS : The DDNS address will be displayed here.
 - > DDNS CONNECTION TEST : Perform a connection test to check if DDNS is correctly registered.
 3. To apply the change, click <APPLY > in the bottom of the screen.
 4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Email

Enter up to two email addresses that will receive email notification when an event is triggered. To configure the events to send email notifications, go to <EVENT> <EVENT NOTIFICATION>.

1. From <SYSTEM SETUP> - <NETWORK>, select <EMAIL>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to specify the use of email and select a server.
 - > SERVER : Set up the SMTP server.
Set the mail server that will be used for notification to the NVR.
Use the virtual keyboard to enter your mail server.
 - > PORT : Enter the email server port.
 - > SECURITY : If it is set to <ON>, the email will be transferred to a server that does not support SSL.
 - > USER : Provide the email account (ID) of the sender.
 - > PASSWORD : Provide the password of the sender.
 - > TEST EMAIL ADDRESS : Enter an email address for the test purpose.
 - > TEST : Enter an email address for the test purpose.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.

NOTE: A user must be entered for the mail function to operate correctly.
The username must not contain spaces.



Network Status

From the network map screen, monitor the internet connection status and IP camera connection status, and the details of the IP cameras.

1. From <SYSTEM SETUP> - <NETWORK>, select <NETWORK STATUS>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to select one between <NETWORK MAP> and <DETAIL STATUS>.

Network Map

- > IP ADDRESS : Indicates the internal IP address of the VHDIP.
- > MAC ADDRESS : Indicates the MAC address.
- > DDNS ADDRESS : Indicates the DDNS address.
- > RTSP SERVICE PORT : Indicates the network port of the video service.
- > WEB SERVICE PORT : Indicates the web service network port. For remote monitoring, port forwarding must be correctly set on the router.
- > DDNS UPDATE STATUS : Shows when the DDNS address was last updated. Press <F5> to refresh.
- > EXTERNAL IP ADDRESS : Shows the public IP address of the network. The VHDIP can be accessed with the web browser: "http://<External IP Address>:<Web Service Port>". The IP address can vary in a dynamic IP environment.
- > CONNECTED CLIENTS : Shows the list of remote users that are currently connected.
Press <■> to terminate the connection of an unwanted client manually.
 - Termination is limited to only users in a lower group than the current user.

! The current PoE power consumption is updated sequentially in the order of channel.

! Alarm is generated if power consumption reaches 90% of maximum supply capacity, for both VHDIP main unit and external PoE Hub. This alarm threshold setting can be edited in "EVENT > SYSTEM EVENT > POE FAIL EVENT".

! POE is disabled when the VHDIP is in OPEN Mode.



Detail Status

View the details of the cameras that are connected to the VHDIP.

Click  on the right of the list to show the details.

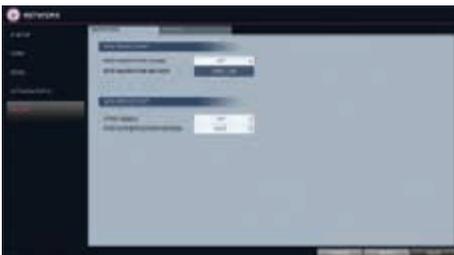
Click <RESET> in the "IP CAMERA CONFIGURATION" window to reset the IP camera.

When the IP camera settings are complete, click <OK>.

Security

For security purpose, enable whether to use encryption and its method, and configure IP filtering.

1. From <SYSTEM SETUP> - <NETWORK>, select <SECURITY>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to select one between <ENCRYPTION> and <IP FILTER>.
3. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous



ENCRYPTION

- > RTSP ENCRYPTION ENABLE : Turn the encryption 'On' or 'Off'.
- > RTSP ENCRYPTION METHOD : Select how to encrypt the port.
- > HTTPS ENABLE : Set HTTPS security to 'on' or 'off'.
- > HTTP AUTHENTICATION METHOD : Select the authentication method for encrypted communication.



IP FILTER

- > IP FILTER ENABLE : Turn IP filtering 'On' or 'Off'.
- > IP FILTER RULE : Set whether the list is to block or allow IP addresses.
- > ADD : Click the <ADD> button to enter an IP address to the list.



System Settings

System Setup



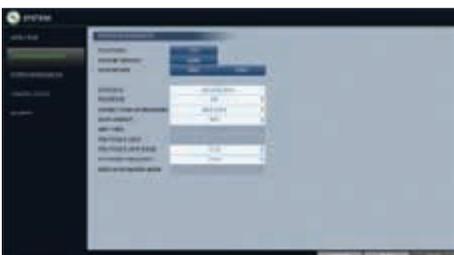
Configure the system time and date settings, system management, connected device and the systems security.



Date/Time

Configure the system time and date settings.

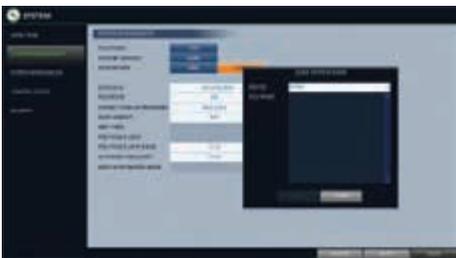
1. From <SYSTEM SETUP> - <SYSTEM>, select <DATE / TIME>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to change the time or set the options as necessary.
 - > DATE/TIME : Allows the user to set or modify the current date and time.
Click < [] > to adjust the time manually.
 - > DATE FORMAT : Set the date format.
 - > TIME FORMAT : Set the time format.
 - > TIME SERVER : obtain the current time from the time server. Click < [] > to get the current time.
 - > AUTO TIME SYNC : automatically synchronize the time with the time server at a set time.
 - > SYNC AT : Set the time to sync with the time server.
 - > TIMEZONE : specify the GMT standard time for your local area.
 - > DST : Set the DVR to DST (Daylight Saving Time).
 - <TIME SEVER> and <DST> will only be effective if their is a stable internet connection.
3. To apply the change, click <APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



System Management

To check, update or reset the system information.

1. From <SYSTEM SETUP> - <SYSTEM>, select <SYSTEM MANAGEMENT>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set each option of the system management.



System Management Continued

- > FW UPDATE: From time to time new firmware becomes available.

Use this interface to update the VHDIP.

- > FACTORY DEFAULT : Return the VHDIP settings to the factory default.



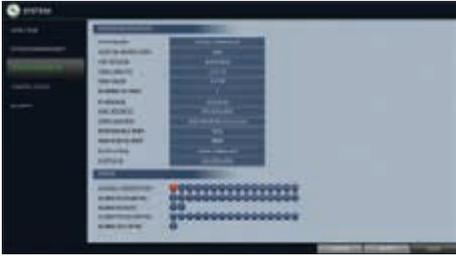
If a firmware change or factory default is performed on the NVR this will delete all current settings. The VHDIP will have to be reconfigured.

- > SYSTEM DATA : Save the system settings or get the system information from another device.
 - SAVE : Store the DVR settings to a storage device. Connect the storage device to the USB port of the DVR.
 - LOAD : Upload the stored settings on the storage device on to the NVR.
- > NVR SELF-DIAGNOSIS: NVR will check that the system is running normally. CCTV Mode Only.
- > NETWORK SETUP WIZARD: Run the NETWORK SETUP by selecting run. The wizard initiates the setup up to configure settings such as IP address and port forwarding.
- > SYSTEM ID: Assign the NVR with a unique ID to identify each NVR when there are multiple installed.
- > PASSWORD : Choose whether the password protection is 'on' or 'off'.



If the password is <OFF>, note that the ADMIN user will be the only account and access to functions will be unrestricted.

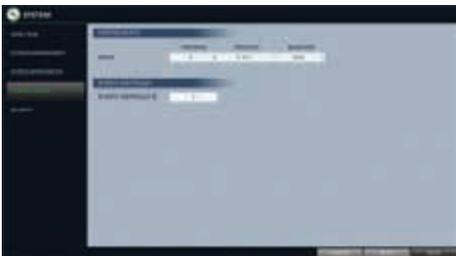
- > EXPIRED TERM OF PASSWORD : Enable the prompt to change the password after a set period of time.
- > AUTO LOGOUT : System logs user out after a period of inactivity.
- > WAIT TIME : Set time for Auto Logout.
- > PoE POWER LIMIT : Set the rated input power for the NVR POE adaptor.
- > POE POWER LIMIT (HUB): Set the rated input power for POE extender.
- > AC POWER FREQUENCY : Set to the actual AC power's frequency (50Hz / 60Hz) applied to VHDIP to avoid flickering.
- 3. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous



System Information

The section lists all the system information for the VHDIP.

1. From <SYSTEM SETUP> - <SYSTEM>, select <SYSTEM INFORMATION >.
2. Check the status of the current system.
3. When done, press the [EXIT] button on the remote control or click <CLOSE>



Control Device

Configure the settings of the remote control and control device.

1. From <SYSTEM SETUP> - <SYSTEM>, select <CONTROL DEVICE>.
2. Use the ▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set the connection options for the control device.
 - > SYSTEM ID : Set the ID of the VHDIP so that the keyboard controller can control the NVR.
 - > PROTOCOL : Set up the protocol to match the keyboard controller.
 - > BAUD RATE : Set the RS485 communication speed.
 - > REMOTE CONTROLLER ID : Set the ID of the of the NVR to match the control device.
3. To apply the change, click < APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.

POS/ATM

Set up the DVR to receive text overlay from a point of sale (POS) system when data is entered into the system.

1. Go to <SYSTEM> <POS/ATM>.
2. Use the arrow keys on the remote control or use the cursor to navigate and configure the settings.
 - > Action: Set whether the DVR will receive data on the channel.
 - > Type: The display type for each channel.
 - > Port: The port configured for each channel.
3. Make all the required changes to the settings then click <OK> (For guidance on setting the information see 'To set the POS').
4. Apply the changes by clicking <APPLY> and then <CLOSE> to return to the Menu.



To set the POS

1. Press <EDIT> on the corresponding channel
 - > PORT: Configure the port to receive the data from by clicking <EDIT>.
 - > PROTOCOL: 'General' is set as the protocol as default
 - > BAUDRATE: Set the baudrate to match the POS system. Between 2400 ~ 115200.
 - > DATA BIT: Select between 5-8, check the text-in device for this exact information.
 - > Character Set: ASCII is the default character set, check the text-in device for this information.
 - > PARITY: Refer to the text-in device for this exact information. Set at NONE, ODD or EVEN.
 - > STOP BIT: Select 1 or 2, refer to the text-in device for this exact information.
 - > TRANSACTION START: Data start code; Input as hexadecimal number. Example: If POS device uses 0x20, 0x20 as start transaction code, input 0x20, 0x20 in the NVR/DVR setup menu.
 - > TRANSACTION END: Data end code; input as hexadecimal number.
 - > LINE DELIMITER: Line changing code; input as hexadecimal number.
 - > IGNORE STRING: Line ignoring code; input as hexadecimal number. If the designated text is included in the line the NVR/DVR will not save the line.
 - > COPY SETTINGS TO: Duplicate the settings to another channel
 - > TEST: Opens test interface. Send data to VXH-AHD from POS to check what is received.
2. Once finished editing click <OK> to close the window
3. Press <APPLY> to save the information entered and <CLOSE> to return to the Menu

NOTE: All this information is dependent on the POS/ATM device. Refer to the user manual/supplier information to get this exact information then enter this into the POS/ATM interface.



Security

Additional security can be applied to the NVR by requesting the password when accessing a few functions within the VHDIP.

1. From <SYSTEM SETUP> - <SYSTEM>, select <SECURITY>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set each option of security.
 - > AUDIO SUPPORT : Setting this option to 'off' will disable any audio recording and disable access to the listening to audio in live or playback.

! Note that changing the setting from <OFF> to <ON> initializes audio related settings. Hence, reconfiguration is required after enabling.

- > SNAPSHOT SUPPORT : Allows snapshot function. If set to <OFF>, all capturing functions are disabled. User cannot take a snapshot on the Live, playback, or backup player screen. Event notification with e-mail will not include snapshot.

! Note that changing the setting from <OFF> to <ON> initializes snapshot related settings. Hence, reconfiguration is required after enabling.

- > ENHANCED PASSWORD RULE : Sets whether to apply strong password policy, which prevents using a simple password.
- > PASSWORD CHECK WHEN SEARCH/BACKUP : Set NVR to prompt for password when Search or Archive functions are accessed. Set to <ON> to ask password when accessing backup menu. Using <EXPORT> on the timeline will ask password, too.

3. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



An overview of the storage settings, check the status of the connected storage devices, both internal and external, and conduct S.M.A.R.T test. Go to <MENU> <SYSTEM SETUP> <STORAGE>.



Disk Information

Show information about the connected hard drives.

1. From <SYSTEM SETUP> - <STORAGE>, select <DISK INFORMATION >.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to select either <INTERNAL DISKS> or <EXTERNAL STORAGE>.

Please check the status for each connected device.

- > START / END TIME : show the start time and end time of data stored in each hard drive.
- > STATUS : Check if the connected hard drive is being used by the VHDIP.

If you encounter a problem with the hard drive, the VHDIP will terminate the connection to the hard drive and mark it as 'Not In Use'.

- > CAPACITY : Displays the capacity of the hard drive.
 - > MODEL : Displays the serial number of the hard drive.
 - > S.M.A.R.T STATUS : RDisplays the information relating to the S.M.A.R.T status.
 - NORMAL : The hard drive state is normal.
 - CHECK : An error has occurred with the hard drive, contact the supplier for help with this. If the problem remains unresolved, it may stop recording.
 - ERROR : The hard drive is unable to be written to due to an error. Contact your supplier for further assistance.
3. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.





Disk Operations

Within the disk operations menu, the system can be configured to automatically overwrite the old recorded data and perform hard drive formatting if required.

1. From <SYSTEM SETUP> - <STORAGE>, select <DISK OPERATIONS>.
 2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to set the operation conditions of the disk.
 - > DISK WRITE MODE:
 - If it is set to <OVERWRITE>, the oldest data will be overwritten by the new recording data, once the hard drive becomes full.
 - If the option is set to <ONCE> . When the hard drive is full, the DVR will stop recording to it and an alarm can be configured to notify the user this has occurred. This is done in <EVENT>.
 - > RECORDING TIME LIMIT :cThe recording data will be deleted after a maximum specific time. If it is set to <OFF>, this function will be disabled.
 - Record Time Limit: For example: If the recording limit is set too 1 day, even if there is sufficient free space in the hard drive, all data older than 1 day will be deleted.
 - > DISK FORMAT : format the hard disk.
- !** Note that formatting the HDD will delete all data.
- > ERASE VIDEO : Delete all or part of stored video.
Click <ERASE> to move to “ERASE VIDEO” menu.
Set the beginning and ending time and click <ERASE> button to delete video of selected time range.
3. To apply the change, click <APPLY >at the bottom of the screen.
 4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Disk Configuration

Configure the internal hard drives into a RAID configuration

What is RAID?

RAID is a storage technology which allows you to use multiple independent hard drives as if there was just one.

RAID 1: This duplicates the data recorded into a different hard drive; this means that all data is recorded twice on separate drives.

RAID 5: This is the most common RAID storage array. This distributes and stores the same piece of data and parity over at least 3 hard drives.

1. Go to <STORAGE> <DISK CONFIGURATION>
2. Use the arrow keys on the remote control or use the mouse to navigation the settings.
 - > MODEL: Displays the model number of the hard drive.
 - > CAPACITY: Displays the total capacity of the disk.
 - > STATUS: This displays the status of the disk in the RAID.
 - > Rebuild: If the RAID needs to be reconfigured, the progress will be displayed here.
 - > <CREATE RAID>: Press this button to open the RAID configuration interface.
3. Apply the settings by clicking <APPLY> and click <CLOSE> to exit to the menu

To Configure a RAID Array

1. Press the <CREATE RAID> button in the <DISK CONFIGURATION> of the <STORAGE> menu.
 - > To configure RAID 1, at least 2 disks are required.
 - > To configure RAID 5, at least 3 disks are required.
2. Check the model and the capacity of each disk, choose the RAID type to configure and then press <OK>.
 - > To modify the RAID configuration, all the disks will need to be formatted.
 - > To apply the RAID configuration, reboot the system.



S.M.A.R.T settings

You can check the S.M.A.R.T information of the disk and specify the check frequency.

- ☑ What is S.M.A.R.T information?

S.M.A.R.T (Self-Monitoring, Analysis and Report Technology) is to detect a HDD that is likely to cause a problem in the future with a warning message.

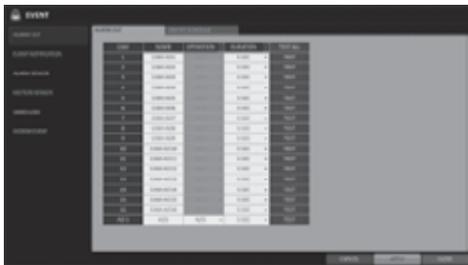
1. From <SYSTEM SETUP> - <STORAGE>, select <S.M.A.R.T. SETUP>.
2. Use the [▲▼◀▶ENTER] buttons on the remote control or use the mouse to check the S.M.A.R.T operation and specify the check interval.
 - > S.M.A.R.T STATUS : Read the S.M.A.R.T information of the disk and check to display if the current disk is in normal operation. Click <DETAIL INFO> to view the details.
 - NORMAL : The disk is in a normal state.
 - CHECK : An error has occurred with the disk. Contact your supplier.
 - ERROR : The NVR is unable to write to the disk. Contact your supplier.
 - > S.M.A.R.T CHECK INTERVAL : Specify the S.M.A.R.T check interval. Click <CHECK NOW> to start checking.
3. To apply the change, click <APPLY >at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



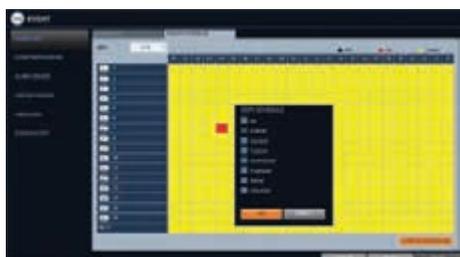
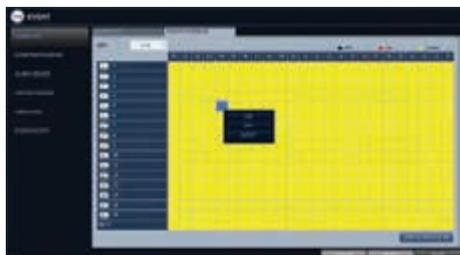
The VHDIP is capable of notifying the user of many events that have occurred. Using the configured alarms to monitor the DVR to ensure it is fully operational at all times. Go to <MENU> <SYSTEM SETUP> <EVENT>.

Alarm Out

Specify the alarm output conditions with the work schedule. (A supported camera may be required to obtain all alarm out functions)



1. From <SYSTEM SETUP> - <EVENT>, select <ALARM OUT>.
2. Use the [▲▼◀▶/ENTER] buttons on the remote control or use the mouse to configure the related settings.
 - > NAME : Rename the alarm.
 - > OPERATION : Set the alarm output mode.
 - N/O (Normal Open) : Open going Closed.
 - N/C (Normal Close) : Closed going open.
 - > DURATION : Set the duration of the alarm output.
 - TRANSPARENT : Alarm is active for as long as the alarm is triggered.
 - UNTIL KEY : Keep the alarm out until a mouse or remote control button is pressed.
 - 5 ~ 300 SEC : Keep the alarming for as long as specified.
 - > TEST : Manually output the alarm for the test purpose.
3. To apply the change, click < APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



ON/OFF Schedule

Apply the schedule of when the alarm out can be triggered.

1. Use the [▲▼◀▶]/ENTER] buttons on the remote control or use the mouse to select a <DATE > for the schedule.
2. Drag the mouse to resize the cell or use the on the [▲▼◀▶/] buttons to move to the cell, then press [ENTER].
3. Select a desired alarm output mode.
 - > ON : The alarm output is always turned on.
 - > OFF : The alarm output is always turned off.
 - > EVENT : Trigger the alarm output in sync with the event.
4. Click <COPY SCHEDULE TO> to check the checkbox of the date that you want to copy the schedule at.
5. When done, click <OK> to apply the settings.
6. To apply the change, click <APPLY > at the bottom of the screen.
7. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.

Event Notification

Specify the methods of notification such as buzzer, video popup, email or FTP if an event occurs.

1. From <SYSTEM SETUP> - <EVENT>, select <EVENT NOTIFICATION >.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to select one from <BUZZER>, <DISPLAY >, <EMAIL> and <FTP>.
3. Use the [▲▼◀▶]/ENTER] buttons on the remote control or use the mouse to set the output method and duration.
4. To apply the change, click <APPLY > at the bottom of the screen.
5. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu



Buzzer output

Configure the buzzer notification

- > DURATION
 - TRANSPARENT : Alarm is active for as long as the alarm is triggered.
 - UNTIL KEY : Keep the buzzer on until a mouse or remote control button is pressed.
 - 5 ~ 300 SEC : Keep the buzzer on for as long as specified.



Display

If an event occurs, the NVR can be configured to change the display.

- > VIDEO POPUP : Display the video channel that is synchronized with the event on a single split screen.
Set the DURATION of the single split screen.
 - UNTIL KEY : The video stays on until the user uses the mouse or remote control.
 - 5 ~ 300 SEC : Keep the video popup displayed for as long as specified.
- If multiple events occur at the same time, or if multiple event related video channels exist, the video popup will be displayed in the maximum split screen mode rather than the single split screen mode.
- > OSD POPUP : This will notify the user of the event with a popup message.
You can adjust the duration of the popup message.
 - UNTIL KEY : Keep the OSD popup displayed until a mouse or remote control button is pressed.
 - 5 ~ 300 SEC : Keep the OSD popup displayed for as long as specified.



Email

If an event occurs, this will notify registered users of the event by email. If emails no longer need to be received, uncheck the <EMAIL NOTIFY> option in <USER MANAGEMENT>.

- > ADD NEW EMAIL: To add a new mail recipient in addition to the existing ones, click <EDIT> to add the recipient.
- > MINIMUM EMAIL FREQUENCY: Adjust the minimum frequency of sending the email.

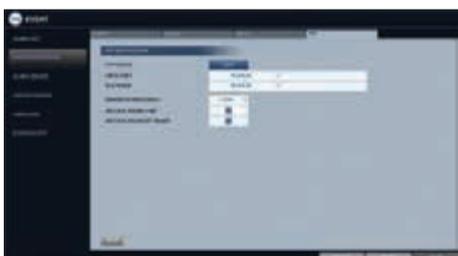
For example, if the minimum frequency is set to one minute, an event occurs and then other within a minute of the first.

The VHDIP will not send the second event notification until 1 minute has lapsed.

- Some email servers can block the email sending if the email delivery cycle is too short, and classify it as spam.

Contact your email service provider to adjust the minimum delivery cycle so that the server does not classify the email as spam.

- > INCLUDE SNAPSHOT IMAGE : Set whether to include snapshot image of the event with the email notification.



FTP

When an event occurs the notification is upload to a FTP server.

- > FTP SERVER : Enter the FTP server address for event transfer.
- > DIRECTORY : Select or manually enter the destination folder of the FTP for event transfer.
- > FILE NAME : Select the uploading event file's format or manually set the file name.
- > MINIMUM FREQUENCY : Sets the minimum recurrence delay for uploading event notification onto the FTP server.

For example, when the minimum recurrence is set to 1 minute, the next FTP event notification will be uploaded after 1 minute from the last event, even if another event is detected within 1 minute from the last one.

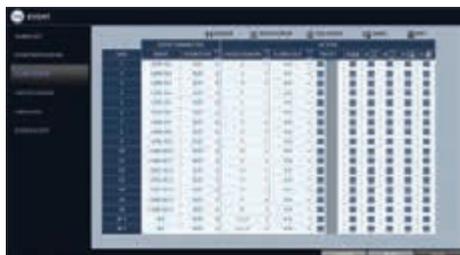
- > INCLUDE WEBRA LINK : Select whether to include web RA link address of the NVR, which can be accessed with web browser (Internet Explorer).
- > INCLUDE SNAPSHOT IMAGE : Set whether to include snapshot (still image) or not with the email.



Alarm Sensor

Configure the settings of the alarm sensor and set the operation of the sensor if an event occurs.

1. From <SYSTEM SETUP > <EVENT>, select <ALARM SENSOR >
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to specify the sensor input method and operation.
 - > NAME : Set the name of the alarm sensor.
 - > OPERATION : Set the type of the alarm sensor.
 - N/O (Normal Open) : Normally the sensor is Open.
If the sensor switches to Close, an event will be triggered.
 - N/C (Normal Close) : Normally the sensor is Closed.
If the sensor switches to Open, an event will be triggered.
 - > LINKED CAMERA : Set the camera to sync with the alarm sensor if it is triggered.
If you have set the alarm recording and the sensor detects the recording, all synchronized cameras will start alarm recording.
 - > ALARM OUTPUT : Specify the alarm output channel if it is detected by the alarm sensor. The alarm will be output to the specified channel.
 - > PRESET : Set a preset that connected PTZ camera moves to on alarm.
 - > BUZZER : Specify the output of the buzzer if an alarm is detected by the alarm sensor.
 - > VIDEO POPUP : Select to display the video popup if an alarm is detected by the alarm sensor.
If there exist multiple <LINKED CAMERA>, the video popup will be displayed in the maximum split mode.
 - > OSD POPUP : Select to display the OSD popup message if it is detected by the alarm sensor.
 - > EMAIL : Select to send an email if detected by the alarm input sensor.
 - > FTP : Select whether to upload event notification onto the FTP upon detected alarm event.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Motion Sensor

Set what alarm output type happens when a motion event occurs. To configure the <MOTION SENSOR> go to <CAMERA SETUP>.

(A supported camera may be required to obtain all motion sensor functions)

For the settings of the motion sensor, move to <CAMERA SETUP>.

1. From <SYSTEM SETUP> - <EVENT>, select <MOTION SENSOR>.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to specify the ignorance interval and operation.
 - > IGNORING INTERVAL : Specify the minimum interval of the motion event occurrence.
For example, even if you have set the minimum frequency to 5 seconds and another motion event occurs in less than 5 seconds after the last motion event occurred, the new event will be ignored. If too many motion events occur, adjust to shorten the interval.
 - Motion recording will be triggered immediately after the motion occurred regardless of the above settings.
 - > ALARM OUTPUT : Specify the alarm output channel if a motion is detected by the motion sensor.
 - > PRESET : On motion sensor's detections, the camera moves as defined by the selected preset.
 - > BUZZER : Specify the output of the buzzer if a motion is detected by the motion sensor.
 - > VIDEO POPUP : Select to display the video popup if a motion is detected by the motion sensor.
 - > EMAIL : Select to send an email if a motion is detected by the motion sensor.
 - > FTP : Select whether to upload event notification onto the FTP upon detected motion event.
3. To apply the change, click <APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Video Loss

Set what alarm output type happens when video loss is detected.

1. From <SYSTEM SETUP> - <EVENT>, select <VIDEO LOSS>.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to specify the reaction to a video loss
 - > ALARM OUTPUT : Select the alarm output channel when video loss is detected.
 - > PRESET : On video loss's detections, move the connected PTZ camera to a defined position.
 - > BUZZER : Select the buzzer to sound when video loss is detected.
 - > EMAIL : Select to send an email if a video loss occurs.
 - > FTP : Select to send a notification to an FTP site if video loss occurs.
3. To apply the change, click <APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



System Event

When a system event occurs such as an event related to the hard drive, recording, network or system. Like with other events it is possible to configure notifications when something occurs.

1. From <SYSTEM SETUP> - <EVENT>, select <SYSTEM EVENT>.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to specify the reaction to each event.
3. To apply the change, click <APPLY > in the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Disk

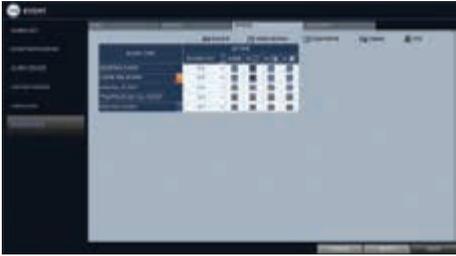
- > OVERWRITE START EVENT : When the hard drive is full and the overwriting of the oldest data starts.
- > DISK FULL EVENT : If the hard drive is set to <ONCE>, this event occurs when the disk is full (100%).
- > DISK SPACE EXHAUSTED EVENT : a notification is sent when the hard drive uses over a certain amount.
Click to specify the threshold percentage of usage to trigger the event.
- > S.M.A.R.T EVENT : Notification is triggered when the S.M.A.R.T discovers an error.
- > NO DISK EVENT : Notification is triggered when there is no recognised hard drive connected when the NVR boots up.

! To detect the disk error, it is recommended not to change the settings of the S.M.A.R.T event, no disk event and buzzer output



Record

- > PANIC RECORD START EVENT : Select an alarm output to perform when the panic recording begins.



System

BOOTING EVENT: Will alarm if any of the following fail during NVR start up.

- > LOGIN FAIL EVENT: Notification is triggered when a log in attempt fails.
Set the times of clicking < > to trigger the event.
- > FAN FAIL EVENT : Notification is triggered if the CPU cooling fan or unit's cooling fan does not work at all.

! If the fan fails, recording will stop. Please contact your supplier.

- > TEMPERATURE FAIL EVENT : The internal temperature of the NVR has exceeded the normal range. The NVR can no longer operate normally. If this has happened check the following steps and take action:
 - Check the vents of the VHDIP to ensure nothing is blocking the circulation of cool air.
 - Move the VHDIP away from heat sources such as a server or radiator. Install on flat surface, low to the ground with good ventilation and allow NVR to cool.
 - If the problem persists, contact your supplier.
- > POE FAIL EVENT : Occurs when power consumption reaches specified level of power supply capacity of VHDIP and /or external PoE Hub.

! To monitor the normal operation of the NVR, it is recommended not to change the buzzer output settings of the system event.



Network

- > TROUBLE IN INTERNET CONNECTION : If the VHDIP loses connection to the network, when it regains a stable connection a notification will be triggered.
- > FAIL IN REMOTE LOGIN : This event occurs if a remote client fails to log in due to an invalid ID or password.
Specify the name of attempting by clicking < > to trigger the event.
- > FAIL IN DDNS UPDATE : Notification will be triggered when the DVR tried to update the DDNS address but failed.

! If the DDNS address fails to be updated, a remote connection may not be possible. The user will be able to connect to the DVR by using the IP address. For the IP address, find the <EXTERNAL IP ADDRESS> from <NETWORK> <NETWORK STATUS>. Note that the <EXTERNAL IP ADDRESS> is subject to change if ISP has not set a static IP address.

! Note that the <EXTERNAL IP ADDRESS> can change at any time in a dynamic IP environment.



Record Settings

Record Setup

Using the mouse



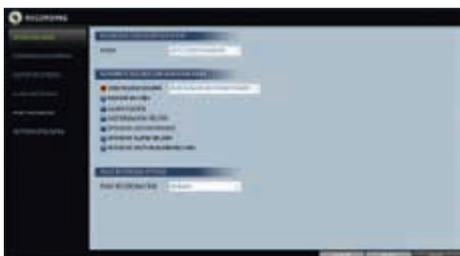
Using the remote control



Operation Mode

The recording options can be set to manual or automatic configuration. Automatic configuration is the default setting.

1. Go to <MENU> <RECORD SETUP> <OPERATION MODE>.
2. Use the [▲▼◀▶] buttons or use the mouse to set <RECORDING CONFIGURATION MODE> to <AUTO CONFIGURATION > or <MANUAL CONFIGURATION >.
3. Set the recording options for each selected Record mode.
4. To apply the change, click <APPLY > at the bottom of the screen.
5. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Auto Configuration

With the automatic configuration the VHDIP can set the optimized setting for the preferred recording settings.

- > CONTINUOUS RECORD : Records always regardless of events.
 - LONG DURATION BUT LOW QUALITY : Recording will proceed in the low quality at all times. As this option will always make recording in the low quality, the recording period is the longest compared to the other record modes.
 - HIGH QUALITY BUT SHORT DURATION : Recording will proceed in the best quality at all times. As this option will always make recording in the best quality, the recording period is the shortest compared to the other record modes.
- > MOTION RECORD : Recording will only happen when motion is detected.
- > ALARM RECORD :Recording will only happen when an alarm is triggered.
- > MOTION/ALARM RECORD : Recording will only happen is motion is detected or when an alarm is triggered.
- > INTENSIVE MOTION RECORD : Continuous recording recorded at a medium quality, switching to high quality when motion is detected.
- > INTENSIVE ALARM RECORD : Continuous recording recorded at a medium quality, switching to high quality when an alarm is triggered.
- > INTENSIVE MOTION/ALARM RECORD : Continuous recording recorded at a medium quality, switching to high quality when motion is detected or when an alarm is triggered.



Manual Configuration

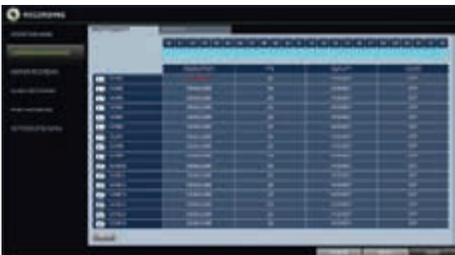
Setting the record mode to 'Manual Configuration' allows for the complete customisation of recording types.

- > **MANUAL CONFIGURATION OPTIONS** : Configure the recording settings by the time, date, and channel.
 - **SCHEDULE MODE** : Schedule your recording with time range or combining time with selected week days.
 - **PRE RECORDING TIME** : Set the pre-recording time.
 - **POST RECORDING TIME** : Set the post-recording time.
- > **PANIC RECORDING OPTIONS** : Set the panic recording duration. If it is set to <MANUAL>, recording will continue until you turn it off manually.

Continuous Recording

The settings for the continuous recording are configured to the preferred schedule, resolution, frame rate per second and quality of video, recording size, frame rate per second and quality.

1. From the <RECORD SETUP> menu, select <CONTINUOUS RECORDING>.
 - From <OPERATION MODE>, the 'Recording Configuration Mode' must be set to <MANUAL CONFIGURATION> before you can select <CONTINUOUS RECORDING>.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to select either <SIZE/FPS/QUALITY> or <SCHEDULE>.



Size/FPS/Quality Setting

1. If the "Schedule Mode" is set to weekly, each day will have to individually be set. From <OPERATION MODE>, go to <SCHEDULE MODE> of the <MANUAL CONFIGURATION OPTIONS> to <WEEKLY> before you can specify the <DAY> Reserve this process to set each day the same.
2. Select a range of cells from the timeline at the top of the window to edit the SIZE/FPS/Quality. Or use the [▲▼◀▶] buttons on the remote control to move to the cell and press [ENTER]. Then, use the [▲▼◀▶] buttons to move to a desired cell and press [ENTER] again.



Record Settings

Record Setup



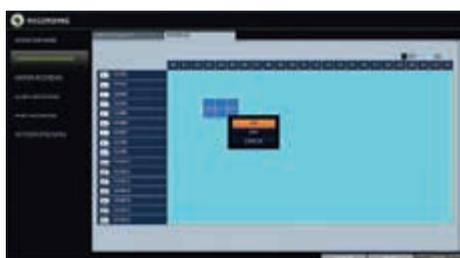
Size/FPS/Quality Setting continued

3. When the cell selection is complete, the “SIZE/FPS/ QUALITY” table appears.

- ❗ Specify the <RESOLUTION>, <FPS>, <QUALITY> and use of the <AUDIO> recording for each channel.
 - > RESOLUTION : set the size of the video recording.
 - > FPS : set the frame rate per second available from the camera
 - > QUALITY : set the recording quality.
 - > AUDIO : specify the use of the audio recording.
 - > HELP : Displays help text regarding the recording configuration.

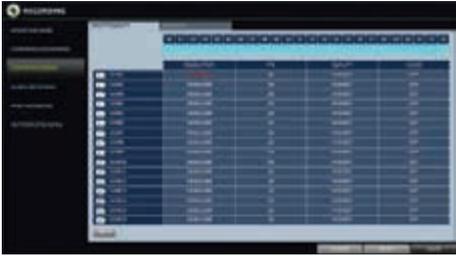
4. When done, click <OK>.

- ❗ The video size, FPS, quality and audio recording options may differ depending on the specification of the IP camera.
For some IP cameras, the video transfer may be interrupted if some of the options are changed.



Schedule Setting

1. Select a start day of the week on the schedule.
2. Click a time cell from which you want start to make the schedule and drag it to the finish time cell. Or use the [▲▼◀▶] buttons on the remote control to move to the cell and press [ENTER]. Then, use the [▲▼◀▶] buttons to move to a desired cell and press [ENTER] again.
3. When the time selection is complete, you will be prompted to specify the use of recording in the Record Setup window.
4. Click <COPY SCHEDULE TO> to select the checkbox for the days you want to copy the schedule for.
5. To apply the change, click <APPLY > in the bottom of the screen.
6. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Motion Recording

Specify the recording size of the motion event if it occurs and make schedule for that recording.

1. From the <RECORD SETUP> menu, select <MOTION RECORDING>.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to select either <SIZE/FPS/QUALITY> or <SCHEDULE>.
3. Set each item of <RESOLUTION>, <FPS>, <QUALITY> and use of the <AUDIO> for the motion recording.
4. To apply the change, click <APPLY > at the bottom of the screen.
5. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Alarm Recording

Set the settings for the alarm recording schedule.

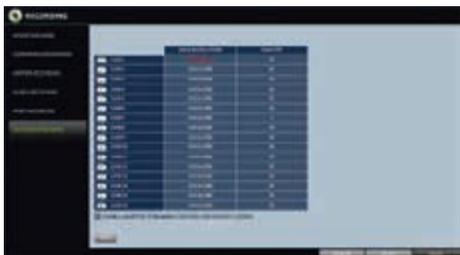
1. From the <RECORD SETUP> menu, select <ALARM RECORDING>.
2. Use the [▲▼◀▶] buttons on the remote control or use the mouse to select either <SIZE/FPS/QUALITY> or <SCHEDULE>.
3. Set each item of <RESOLUTION>, <FPS>, <QUALITY> and use of the <AUDIO> for the alarm recording.
4. To apply the change, click <APPLY > in the bottom of the screen.
5. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Panic Recording

Set the record settings for Panic recording. This cannot be set as a schedule.

1. From the <RECORD SETUP> menu, select <PANIC RECORDING>.
2. Set each item of <RESOLUTION>, <FPS>, <QUALITY> and use of the <AUDIO> for the panic recording.
3. To apply the change, click <APPLY > at the bottom of the screen.
4. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Network Streaming

Configure the channels resolution and FPS that will get broadcast to remote users.

- The lower the resolution and FPS are set too will mean the video viewed remotely is smoother. But even when the resolution and FPS is set to high for the network streaming, the DVR will reduce the size or FPS according to the network status (speed) before transferring the live video.
1. From the <RECORD SETUP> menu, select <NETWORK STREAMING>.
 2. Use the [▲▼◀▶ENTER] buttons on the remote control or use the mouse to select an item that you want to edit.
 3. Set the <MAX RESOLUTION> and <MAX FPS> for each channel.
 - > ENABLE ADAPTIVE STREAMING CONTROL FOR REMOTE CLIENTS : This optimises the transfer of data for remotes users. If there isnt enough bandwidth available the NVR will reduce the bit rate and resolution to provided a smooth image to the remote viewer.
- Frame rate of recorded video playback may drop to 15 fps for recordings of 5 or more split screens.
4. When done, click <OK>.
 5. To apply the change, click <APPLY > at the bottom of the screen.
 6. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.



Storage Calculator

The VHDIP is capable of roughly estimating the available recording time based on the size of the installed hard drives and chosen recording method.

1. From the <RECORD SETUP> menu, select <STORAGE CALCULATOR>.
2. Current Recording Mode is displayed according to the settings in <OPERATION MODE>.
 - > AVERAGE MOTION EVENT RATIO PER HOUR: Set a value for average motion event ratio per hour between 0~100%.
 - > AVERAGE ALARM EVENT RATIO PER HOUR: Set a value for average alarm event ratio per hour between 0~100%.
3. Select <CALCULATE > to calculate the estimated time period that you can record based on current settings.

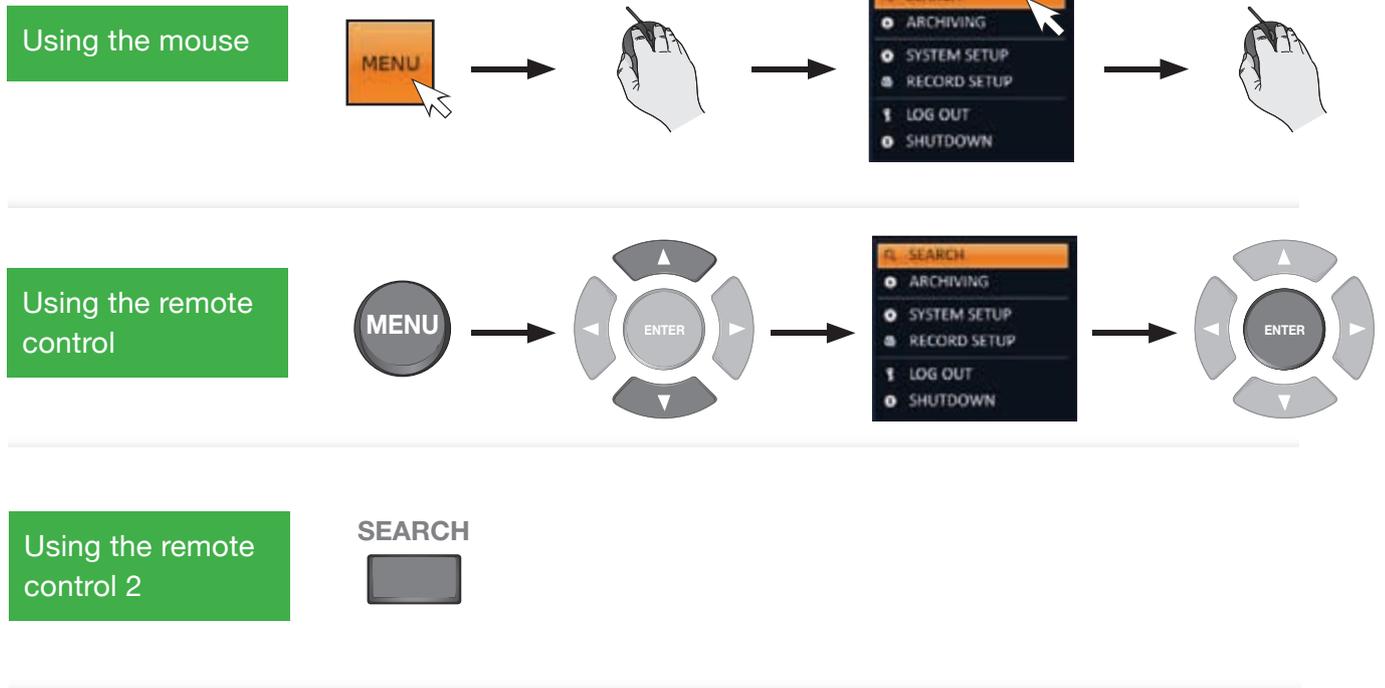
All of the cameras should be connected. This test result may have a different actual recording period from installation environment or connected camera model.



Search

Search Settings

Use the search interface to locate and play recorded footage. The user can do this in a variety of methods.



To move to the Search menu while in playback mode





Time Search

Using the calendar to select the dates in yellow that have footage recorded on those days.

1. Go to <MENU> <SEARCH> <TIME SEARCH>.
2. Use the [▲▼◀▶] buttons or use the mouse to select the date and time from the calendar on the left side of the screen to search.
 - > FIRST : The first date of recording is automatically selected.
 - > LAST : The last date of recording is automatically selected.
 - >  Press to display the time selection menu.
3. You can identify the type of the recording data by the colour in the bar.
 - > Bright Green (Pre recording) : The pre-recording is performed on the recording data after you set the <PRE RECORDING TIME> from <OPERATION MODE>.
 - > Green (Continuous) : The continuous recording data.
 - > Red (Alarm) : The alarm event recording data.
 - > Blue (Motion) : The motion event recording data.
 - > Yellow (Panic) : The panic manual recording data.
4. Use the time bar to select a specific time or use the buttons at the bottom of the status bar to search.
 - >  Refresh the recording data to include the time not yet displayed. As this page is not live.
 - >  Zoom out the timebar out to see a longer length of time.
 - >  Zoom in on the timebar out to see a more detailed length of time.
 - >  Scroll the timebar to the left.
 - >  Scroll the timebar to the right.
5. Click a thumbnail channel or use the [▲▼◀▶] buttons on the remote control to move to a desired channel and press [ENTER]. Once selected the video will play in the preview window to the bottom left.
6. Click <PLAYBACK>, or simply double click a desired time in the time bar to play the video from that time to play the recorded footage.
7. To stop playing and return to the search screen, press [EXIT] on the remote control or click <MENU> in the lower left corner and select <SEARCH>.





Thumbnail Search

Search by previewing a snapshot from the start of each hour the channel has recorded. Select Day, Hour or Minute to narrow down the search results.

1. Go to <SEARCH> <THUMBNAIL SEARCH>.
2. Use the [▲▼◀▶] buttons or use the mouse to specify the search date and time from the calendar in the left corner of the thumbnail search screen.
 - > FIRST : The first date of recording is automatically selected.
 - > LAST : The last date of recording is automatically selected.
 - > CHANNEL : Select a channel to search for.
 - > DATE/TIME : Specify the search date and time.
 - The menus available differ depending on the selected interval mode.
 - > INTERVAL: Select a time interval of the thumbnail view.
3. Double-click a time in the recorded data bar, or double-click a desired time image from the thumbnail list. This will play the recorded footage.
4. To stop playing and return to the search screen, press [EXIT] or [SEARCH] on the remote control. Or <MENU> in the lower left corner and select <SEARCH>.



Event Search

Search for events that occurred at the specified time and select an event to play from the list.

1. From the <SEARCH> menu, select <EVENT SEARCH>.
2. Use the [▲▼◀▶] buttons or use the mouse to specify the <START> and <END> times in the left of the event search list.
3. Select a channel to search.
4. Mark the checkbox of the event to search from the <EVENT> list.
5. Press the <SEARCH> button.

The search results will be listed as shown.

 - > TYPE : displays the event type.
 - > TIME : displays the recording start time.
 - > CONTENTS : shows the details of the event found.
 - > ORDER BY : If you select <OLDEST>, the list will be sorted with the earliest one on top.
6. Double-click a desired event or click <PLAYBACK > in the lower right corner to play the footage.
7. If you want to stop playing and return to the search screen, press [EXIT] or [SEARCH] on the remote control. Or click <MENU> and then select <SEARCH> to go back to the search menu.



Text-in-Search

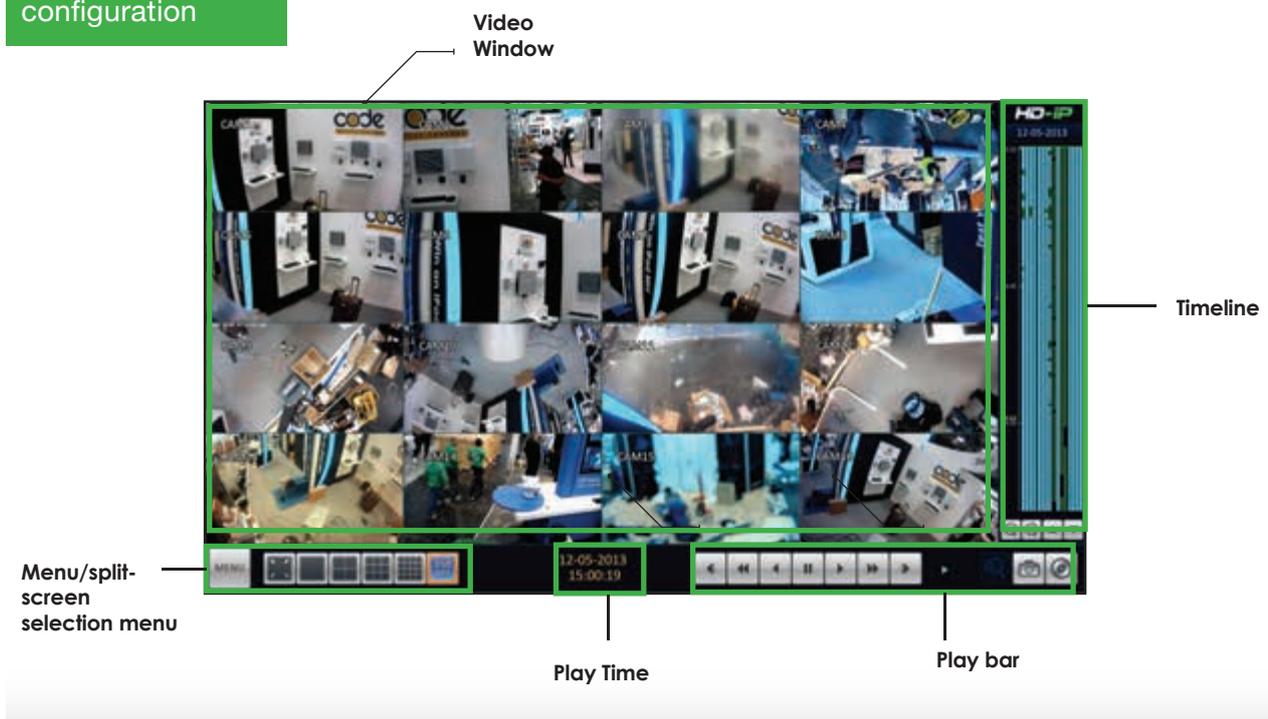
Search for text that has been received from a POS device using a keyword search.

1. Go to <SEARCH> <TEXT-IN SEARCH>
2. Use the arrow keys on the remote control or use the mouse to select a period of time to search.
3. Select the channels to search
 - > Only the channels with a POS/ATM connected to will have memory of the text-in input.
4. Enter the keyword to search for in the "ITEM KEYWORD"
 - > MATCH CASE: Selecting this option makes the search case sensitive.
 - > MATCH WHOLE WORD ONLY: Search for the exact word or phrase.
5. Press the <SEARCH> button – This produces the search results
 - > TIME: The time the event occurred.
 - > CHANNEL: The channel the text-in was displayed on.
 - > ITEM: The keywords or search terms are shown in this column.
 - > ORDER BY: Select the order in which to display the keywords.
6. Double click an event or select the event and then press <PLAYBACK> at the bottom of the screen.
7. To stop playing and return to the search menu, press [EXIT] or [SEARCH] on the remote control or go to <MENU> and then select <SEARCH>.

This part of the manual is to describe the playback interface and what is available to the user. Go to <MENU> <SEARCH> search footage to view or <MENU> <ARCHIVE> and search footage to view. Play this footage to enter the <PLAYBACK> interface.

- > To play the searched data
- > Play, pause, rewind, fast forward, jump 5 seconds forward or backwards and play backwards.
- > To play with live viewer
- ☑ If you move the cursor to the right, the “Timeline” bar will be displayed. Select a desired channel on the live screen and right-click to select <PLAYBACK> in the quick menu. Then, select a time to play.

Playback screen configuration



Video Window

Display the current video

Timeline

Displays the type of recording data.

The horizontal bar in the timeline indicates the current point of playback. Double-click a desired point in the timeline to start playing the video. Click and drag over a section of the timeline, this will enable a back up of the selected footage.

Menu/split-screen selection menu

For more information about how to use each button, refer to “Using the status bar in the live mode”.

Play Bar

Allows for the video to be manipulated and scrutinized.

Playback channel selection menu

ITEM	Description
CAM1	Display the title of the selected channel.
ZOOM	Zoom the video of the selected channel. (The zooming function is active only in single camera screen view.)
START BOOKMARKING	The "BOOKMARK SETUP" popup appears, and apply a bookmark to save the video for a later date.
SNAPSHOT	Takes a picture of the live video and opens the SNAPSHOT interface where the image can be saved or exported.

ITEM		Description
Jump		Jumps the video 5 seconds both forwards and backwards.
Fast Rewind		The video is rewound at the speed of x2 x4 x8 x16 x32 x64 of normal speed.
Reverse Play		Plays the video backwards at normal speed.
Pause		Temporarily freeze the video footage for observation.
Play		Plays the video at normal speed.
Fast Forward		The video is played at the speed of x2 x4 x8 x16 x32 x64 of normal speed.
Zoom		Zoom in or out of the footage to see more detail or more of the video.
Snapshot		Takes a picture of the live video and opens the SNAPSHOT interface where the image can be saved or exported.
Start/end bookmark		Opens the BOOKMARK SETUP to enable the user to highlight a part of the footage. See the following page for instructions.



Bookmarking

During playback sections of video footage can be reserved, by using the bookmark tool to highlight a part of the footage. The bookmarked footage can be viewed from the <ARCHIVE> menu, this can then be exported or saved.

1. Enter a name in the <TAG> field to identify the file at a later date.
2. Enter any necessary data in to the <MEMO> text input field.
3. Click <START>.

You will return to the play screen with the back  progress.

4. To stop the bookmarking, click <BOOKMARK()>.
5. To quit the bookmarking, click <STOP>.

To continue with bookmarking, just click <CONTINUE>.

6. Click <RESERVE>.

You can export the reserved data to a connected storage device using the <ARCHIVING> menu.

- What is the <RESERVE> function?

The reserve function allows the user to save footage to the hard drive, this is particularly useful if the user doesn't have an USB external storage device available.

When data is reserved, this uses space on the hard drive and will thus reduce the amount of space the NVR has able to store footage too. Until the reserved data is cleared.



Using the Bookmarking option during playback

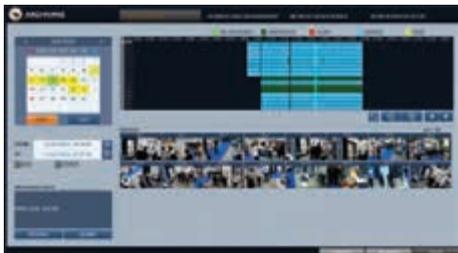
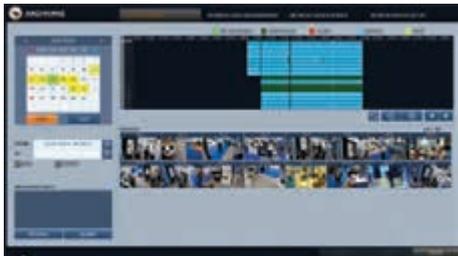
1. During the playback, click <NEW BOOKMARK> .

The "BOOKMARKING SETUP" window appears where you can reserve the data.

2. Click <MENU> <  > in the lower left corner and select the <ARCHIVING> menu.
3. Press the [ARCHIVE] button on the remote control.

Using the Archive menu when on live view

1. Click <MENU> <  > in the lower left corner and select the <ARCHIVING> menu.
2. Press the [ARCHIVE] button on the remote control.



Archive

Export the searched data or reserved data.

1. From the <ARCHIVING> menu, select <NEW ARCHIVING>.
2. Select a date for the archive from the calendar in the left.
 - The date containing recording data will be marked in a coloured box.
 - > FIRST BUTTON : Select the first date of recording.
 - > LAST BUTTON : Selects the last day of recording.
3. Check the <FROM> and <TO> times.
 - Drag the timeline to specify the start and end time.
4. Mark the <LOG> and <CODEC> checkboxes and select to include the archiving.
5. Click <QUERY>. The results will be listed in <ARCHIVING INFO>.
 - The maximum backup capacity for one time is 20GB.
 - If the archiving request exceeds 20GB, the end time will be adjusted to within 20GB.
6. If you want to export to a storage device, connect this to the VHDIP and click <EXPORT>.
7. If you just want to reserve the data, click <RESERVE>.

If the <TAG NAME> dialogue appears, enter the name and click <OK>. Click <OK>.

 - When data is reserved, this uses space on the hard drive and will reduce the amount of space the DVR is able to store footage too. When the reserved data is cleared, the space is available for general storage again.
8. To exit the Archive menu, click <CLOSE>.



Archiving Reserved data management



Reserved data management

Search the reserved data then export or delete the information.

1. Go to <ARCHIVE> <RESERVED DATA MANAGEMENT>.
The reserved data will be listed.
2. Select a data type from <AVI > and <SNAPSHOT>. (Bottom left of screen)
 - > AVI : Searches AVI video files stored in the VHDIP.
 - > SNAPSHOT : Searches captured snapshots stored.
3. To play the data, double-click a desired data item or click it and select <PLAYBACK >.
4. To export to a storage device, connect it to the VHDIP and click <EXPORT>.
5. If you want to delete the reserved data, click < X > next to the list. Click <RELEASE ALL> to cancel reserving the whole page at once.
6. To exit the Archive menu, click <CLOSE>.



Playing the archived data

Search the reserved data stored on external storage device and check the details or play it.

1. Connect the storage device containing the archived data.
2. When the storage device is recognized, click <SEARCH>.
3. To view the details, click < [i] > next to the list.
 - Click <VERIFY INTEGRITY> to check if the data is complete or not.
4. Select an item to play from the list and click <PLAYBACK >.
5. To exit the Archive menu, click <CLOSE>.





Archive Devices Setup

Set the FTP server information into the Archiving Menu for when data is exported to the FTP server.

1. Go to <ARCHIVING> <ARCHIVE DEVICES SETUP>.
2. Move to the FTP information box.
3. Fill in each item using a virtual keyboard.
 - > HOST NAME : Enter the IP address of the FTP server.
 - > PORT : Enter the port number of the server.
 - > USER NAME : Enter the user ID for the FTP Server.
 - > PASSWORD : Enter the connection password.
 - > DIRECTORY : Specify the archiving file path.
4. When all information is filled, click <CONNECTION TEST> to check the connection status.
5. To apply the change, click <APPLY > in the bottom of the screen.
6. When done, press the [EXIT] button on the remote control or click <CLOSE> in the lower screen to return to the previous menu.

Web RA is a user-friendly software application that enables the user to control the video data and system information via a remote connection to the VHDIP. Web RA is run in Internet Explorer.

System Requirements

The following is the minimum hardware and operating system requirements to run Web RA.

ITEM	Description
Operating System	Windows XP Professional , Windows Vista Home Basic / Premium, Window 7
Web browsers:	Internet Explorer 7.0 or later/Mozilla Firefox 3.6/Google Chrome 4.1/Opera 10 Some web browsers other than Internet Explorer may not fully function.
CPU	Intel Pentium 2.0 GHz
Memory	512 MB
Display	16-bit 1024 x 768 High Color
Hard Disk Drive	50MB (space required for installing the web viewer)
	* Additional HDD space is required for saving your recordings. The file size of your recording may differ depending on the specified quality.



Connection

Open a browser and enter the IP address of VHDIP, or type the URL in the address bar.

To connect to the VHDIP from an internal network

- > Check the "Network Status" and verify the <IP ADDRESS> and <WEB SERVICE PORT> of the VHDIP.
- > Enter the IP address and web service port in the address bar of the browser. Ex) http://192.168.1.200:8080

To connect to the VHDIP from an External Network.

Using the IP address

- > Check the "Network Status" and verify the <EXTERNAL IP ADDRESS> and <WEB SERVICE PORT> of the NVR.
- > If using a fixed (external) IP, enter the external IP that is specified in the VHDIP in the address bar of the web browser. Ex) http://123.456.798:8080

Using the DDNS

- > Check the "Network Status" and verify the <DDNS ADDRESS> and <WEB SERVICE PORT> of the VHDIP.
- > Enter the DDNS address and web service port in the address bar of the browser. Ex) http://00115f123456.dvrlink.net:8080

In the router network, the "Port Forwarding" needs to be set to allow external access.

For the necessary settings of the router, refer to the user manual of the router or contact the supplier of the router

Live Screen at a glance



No.	Name	Description
1	View selection tab	Choose between the live, search, setup and information tab.
2	Live	Display the live split screen of the VHDIP.
3	Split Mode	Select and switch to a desired split-screen mode.
4	Sequence	Set the sequence mode, switch to the next camera, zoom the screen or select the full screen mode.
5	Status	Show the connection status of each channel.
	Log	Show the log.
	PTZ	Open the PTZ control to pan tilt and zoom the selected camera.
	Refresh Time	Set the interval at which the NVR status is refreshed.
	Refresh	Refresh the NVR status immediately.
6	Voice transmission	Enables the broadcasting of sound to the NVR.
7	Channel	Select a channel listed in the screen.
8	Save	Save the live video on the screen.
	Print	Print out the current screen.
	Capture	Capture the selected image.
	ActiveX Settings	Configure the ActiveX settings or set the file path of the captured image.

Switching the split mode

Click the Switch button to switch the mode as follows



<1-split Mode>



<4-split Mode>



<8-split Mode>



<9-split Mode>



<16-split Mode>

To save the video

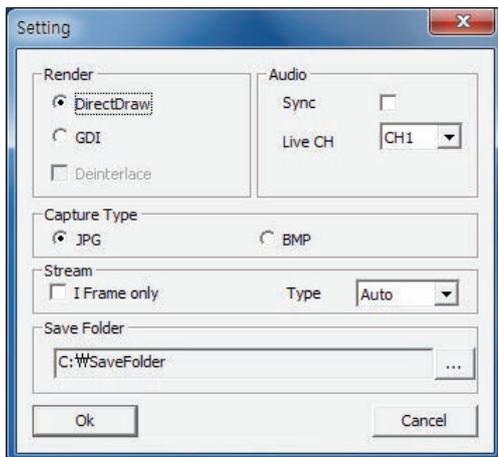
1. Click <  > to start recording.
2. The video from the selected channel will be saved to the PC in the AVI format. (Default path: C:\SaveFolder)
Click <  > again to stop saving. Click < > to display the context menu where you can change the saving path.

Print

1. Click <  >.
2. The current screen will be printed with the printer connected to the PC

Screen capture

1. Click <  >.
2. The current screen of the selected channel will be saved to the path specified in the PC. (Default path: C:\SaveFolder) Click <  > to display the context menu where you can change the saving path.

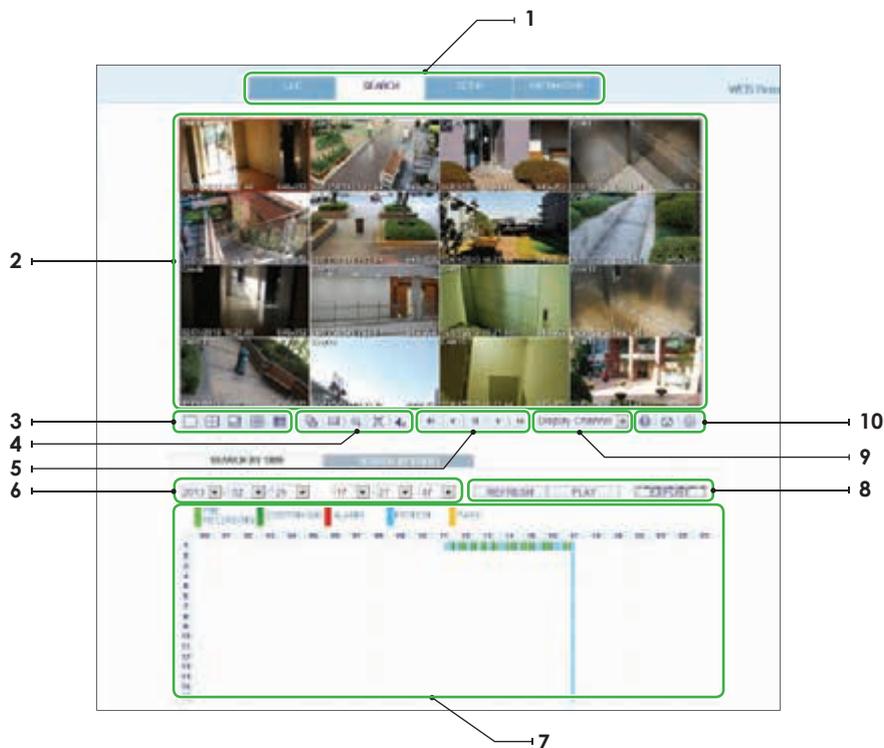


ActiveX Settings

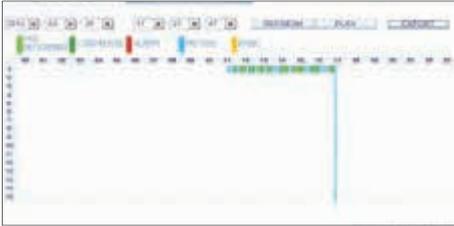
1. Click <  >.
2. When the setup screen appears, you can change the settings of the render type, audio, capture and saving path as well as the video streaming.
 - > Render : DirectDraw is recommended in order to enable the hardware acceleration.
3. If you want to change the saving path, click <  > (Save Folder) and specify a new path.
Windows Vista users cannot change the saving path.
4. Change the streaming settings according to the PC specification and network environment. Auto mode is recommended.
 - > Sync : If this option is set, the audio signal will be synchronized with the video signal. However, you may encounter a delay due to buffering for the synchronization.
 - > Live CH : Set the audio signal to use in live monitoring mode.
 - > I Frame Only : Only the I frames (key frames) will be transferred.
 - > Type
 - Auto : The VHDIP will optimize the quality and FPS to the network status and specification of the connected PC before transferring the data.
 - Main : The video will be transferred in high definition (HD).
 - Second : The video will be transferred in a medium definition(SD).
5. When done, click <OK> to save your settings.

Search viewer at a glance

Click <SEARCH> to display the remote control screen for the VHDIP Recorder.



No.	Name	Description
1	View selection tab	You can switch to the live, playback and setup screen and check the provided information.
2	Playback Screen	Play the recording data.
3	Split Mode	Select and switch to a desired split-screen mode.
4	Sequence	Set the sequence mode, switch to the next camera, zoom the screen or select the full screen mode.
	Voice Transfer	Enable and disable sound transmission.
5	Play button bar	Control the speed and direction of the playback.
6	Time Selection	Select the start time of playback.
7	Time Line	Indicates the status of the recorded data.
8	REFRESH	Reload the time line.
	PLAY	Play the selected video.
	Export	Archive the selected video.
9	Channel Selection	Select a channel.
10	Screen	Print out the current screen.
	Image Capture	Capture the selected image.
	ActiveX Settings	Configure the settings.



Search by time

Use the timeline to search for the data recorded in the VHDIP.

1. Select a date that you want to search.
2. Click <REFRESH>.
3. Check the recording data in the bottom time line and specify the time range for your search. You can specify the start time by moving the time bar.
4. Click <PLAY >.
 - > REFRESH : If your changes are not applied to the current screen, reload the changes.
 - > PLAY : Play the searched video.
 - > Export : Archive the recorded video



Search by event

You can sort the recording data items by event to help your search.

1. Mark the checkbox of the event that you want to search for.
2. Specify the start and end dates and times for your log search.
3. Set the display order of the items found.
 - > LATEST : The most recent event will be listed on top.
 - > OLDEST : The earliest event will be listed on top.
4. Click <SEARCH>.

You can check the log for your search at the bottom of the screen.
5. Select a log to play the recording data.



Text In Search

Search the text-in data from the POS/ATM device attached.

1. Enter the keyword to search in the (ITEM KEYWORD) field, then click the check boxes for (MATCH CASE) and (MATCH WHOLE WORD ONLY).
2. Select the channels to search for the text on.
3. Select the start and end time of the data to search.
4. Choose to have the latest or the oldest data displayed at the top.
5. Press <SEARCH> to display the list of text inputs.
6. Select the event to play to observe the footage.

Setup Viewer at a Glance

Click <SETUP> to display the remote control screen for the VHDIP.

When done, click <APPLY > to apply the changes to the remotely connected VHDIP

- ☑ If the user in the menu of the NVR locally then, the remote control setup will be disabled.

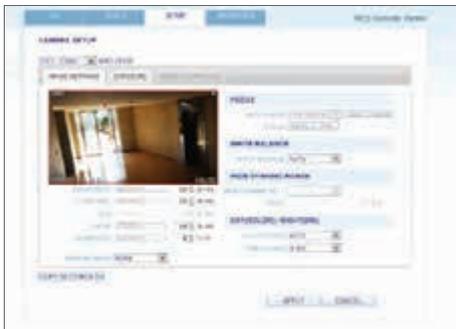


To name the camera title

Change the name of the camera title that is displayed on each channel screen. Select a channel to name and enter a new title.

Then, click <APPLY > to save it.

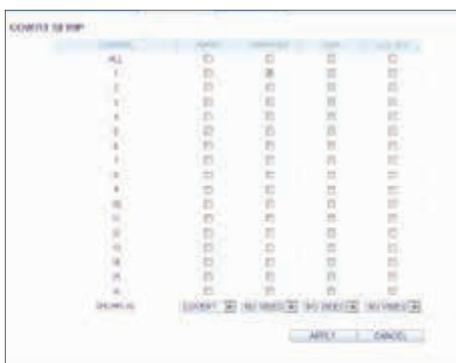
- ☑ Maximum of 9 alphanumeric characters for the camera title.



Camera Setup

Adjust the image settings, exposure and focus controls.

- ☑ The default colour values are <50>. (Brightness, Contrast, Tint, Colour)
- ☑ If the default settings are altered, the video from the VHDIP or the video colour may not be displayed properly.
- ☑ To apply the same settings to another channel's camera, click <COPY SETTINGS TO> button and select the cameras.

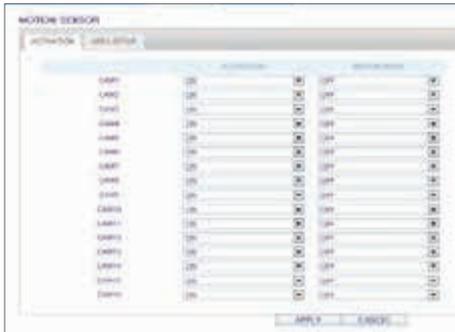


Covert Setting

To to hide the video of a specific camera from a specific user group tick the check box against the channel in the correct user group column. When done, click <APPLY> to save the changes.

When done, click <APPLY > to apply the changes.

- > SHOW AS : Sets how to display video of the <COVERT CHANNEL> channel.
 - NO VIDEO : Appears to have no video for the channel.
 - COVERT : Shows nothing for the Live screen only.

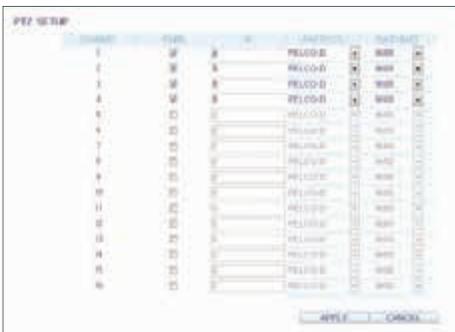


Motion Setting

To set each camera's motion detection, day and night time. Select a channel. Set the mask area, activation and set the period of time range.

When done, click <APPLY > to save the changes.

- ✓ For information about how to set the motion area, refer to "Motion Area Setup".



PTZ Setting

Set the camera ID, protocol, baud rate and data transmission speed for each channel.

- ✓ For information about how to set the PTZ, refer to "PTZ Settings".

Privacy Mask

Activation Tab

Enable the masked area for the NVR to hide and set the colour of the mask.

Area Setup tab

Select the area of the video to set the privacy mask on.

Installation Mode

Set whether the VHDIP searches for network cameras off the local network or cameras directly connected to the device.

NOTE: Changing from CCTV MODE to ADVANCED MODE will cause the NVR to reboot to make the changes effective.



DISPLAY OSD Setting

Configure the settings for the time, title, boundary, icon and language that will be displayed on the screen. Make changes to each item of the OSD menu and click <APPLY > to apply the changes.

- ☑ For details about each displayed item, refer to “OSD”.



AUDIO Audio/Buzzer

Configure what the NVR does with audio received over a network and which channel to record the audio on. Also set if the buzzer is sounded when the remote control is used.

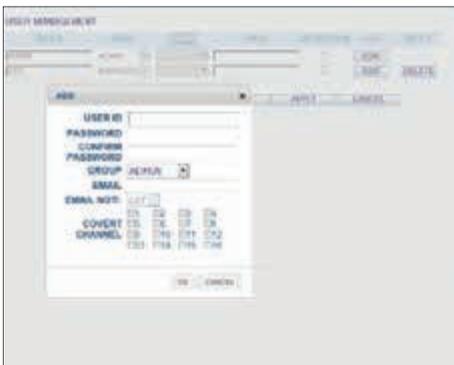
- ☑ For details about each displayed item, refer to “Audio Setup”.



USER User Management

To add a user account and change the password.

- ☑ For details about each displayed item, refer to “User Setting”.



To add a user, click <ADD> and enter the user information.

To delete the user click <DELETE> next to it.

When done, click <APPLY> to save the change.



Group Permission Setting

To grant different user groups different permissions to a specific menu. Select the check boxes of the menu items accessible by that user group. When done, click <APPLY > to apply the changes.

- ☑ For more information about the accessible menu items, refer to “Group Authority”.



NETWORK

IP Setting

To check the network connection status and to change the IP address settings. When done, click <APPLY> to apply the change. Change the maximum transfer rate and click <APPLY > to apply it.

- ☑ For more information about each network entry, refer to “IP Setup”.



DDNS Setting

Configure the DDNS settings so that remote users who are connected to the network can access it remotely. Change the DDNS settings and click <APPLY> to apply the changes.



Email Setting

Register and test an email address so that an email notification is delivered if an event occurs. Enter the necessary information and click <APPLY> to save the changes.

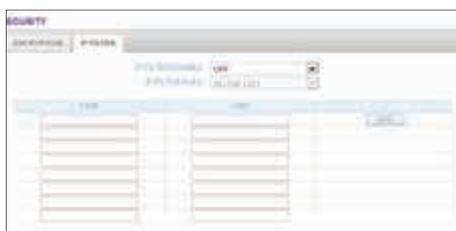
- ☑ For more information, refer to “Email”.



Security Setting

For security purpose, choose whether to use encryption and its method, and configure IP filtering. Change the system network settings and click <APPLY > to apply the changes.

- ☑ For more information, refer to “Security”.





SYSTEM

Date/Time Setting

Set the current date and time.

When done, click <APPLY > to apply the changes.

- ☑ For more information about each of the time and datesettings, refer to “Date/Time”.

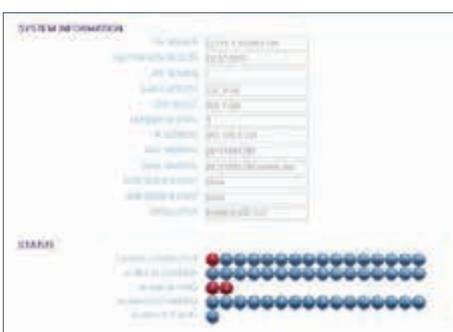
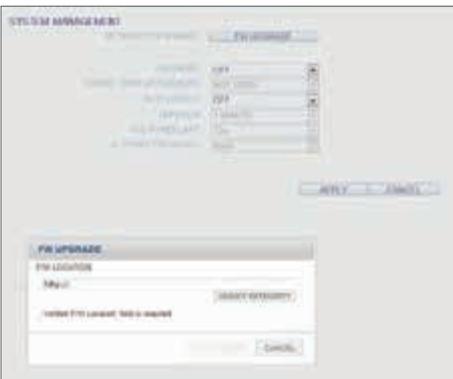


System Management

Configure the System ID, the access settings of: log in, log out, and auto logout.

- > Network F/W upgrade : Upload the latest firmware available via the network with the given URL.
- To apply a new firmware, click <FW UPGRADE> and provide the firmware URL.
- > FACTORY DEFAULT : Return the NVR settings to the factory default.
- > SYSTEM DATA : Save the system settings or get the system information from other device.
- > REBOOT SYSTEM : Restart the NVR main body remotely.

- ☑ This function is available only when the NVR main body is displayed in LIVE screen.



System Information

Check the information of system firmware version, disk space, and network settings, as well as the status information of network connection and alarm I/O.



Control Device Setting

Set the connection of both the remote control and the keyboard control.

Change the communication settings and click <APPLY > to apply the changes.

- ☑ For more information about each communication item, refer to “Control Device”.



Security Setting

Use additional security on the system by enabling audio and snapshot ability, and further password rules.

Change the system security settings and click <APPLY > to apply the changes.

- ✔ For more information, refer to "Security".



STORAGE

Device Information

Check the connected storage devices connected to the VHDIP as well as the recording time information of each device.

Disk Operations

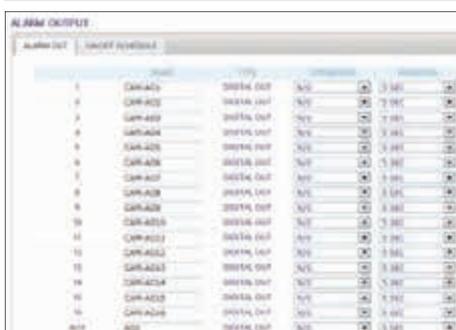
Set how the NVR handles hard drives, the recording period or perform a format on the hard drives.



S.M.A.R.T Status

You can check the S.M.A.R.T status for each of the internal and external devices.

- ✔ What is S.M.A.R.T?
S.M.A.R.T. (Self Monitoring, Analysis, and Report Technology) is to detect a HDD that is likely to cause problems in the future with a warning message.

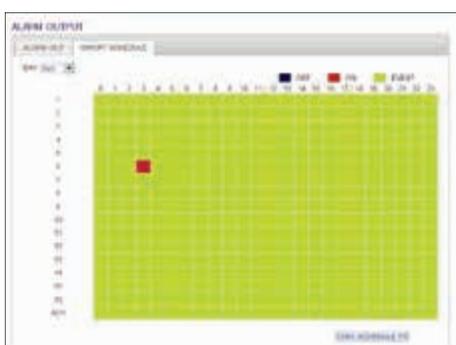


EVENT

Alarm Out

Set the alarm output conditions with the work schedule. When done, click <APPLY > to apply the changes.

- ✔ For more information about the alarm output and ON/OFF schedule, refer to "Alarm Out".





Event Notification

Set the notification method used when to alert when a <BUZZER OUT>, <DISPLAY>, <EMAIL> and <FTP> event occurs. Configure the buzzer output time, video pop-up time, email notification and FTP notification. Click <APPLY> to save the changes.

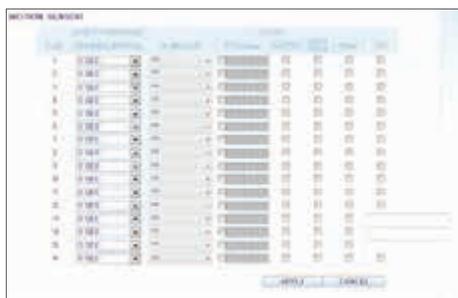
- ✓ For more information about the event notification, refer to “Event Notification”.



Alarm Sensor

Configure the settings of the alarm sensor and specify the operation of the sensor if an event occurs. When done, click <APPLY > to apply the changes.

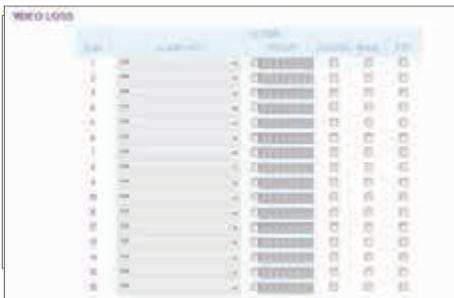
- ✓ For more information about each of the alarm sensor actions, refer to “Alarm Sensor”.



Motion Sensor

Set an action to execute when a motion is detected. When done, click <APPLY > to apply the changes.

- ✓ For more information about how to set the motion sensor, refer to “Motion Sensor”.



Video Loss

Select an action for <BUZZER>, <EMAIL> and <FTP> and determine what to do on the alarm output port if no video is received from a camera. When done, click <APPLY> to save the changes.

- For more information about how to set the video loss, refer to “Video Loss”.



System Event

Set which action to perform if an event related to the disk, recording, system or network happens. To notify the user of the event using the alarm output, buzzer, OSD pop-up, email and FTP.

When done, click <APPLY > to apply the changes.

For more information about how to set the system event, refer to “System Event”.





RECORD SETUP

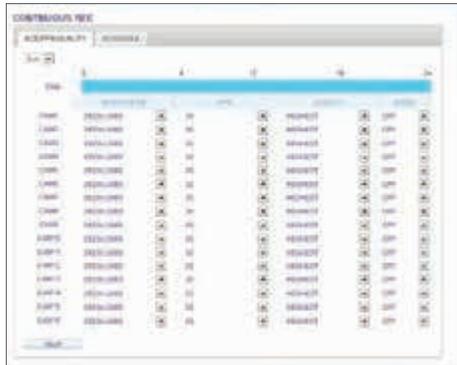
Record Setting

You can set the recording options for Automatic or Manual mode.



When done, click <APPLY > to apply the changes.

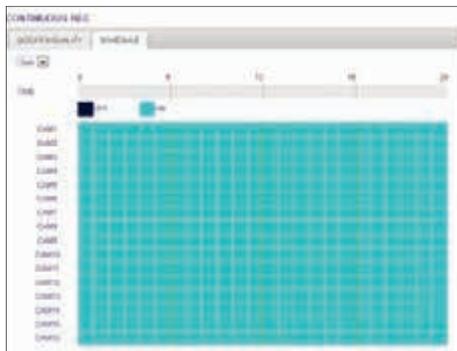
- ✓ For more information about how to set each mode, refer to “Operation Mode”.



Continuous Recording

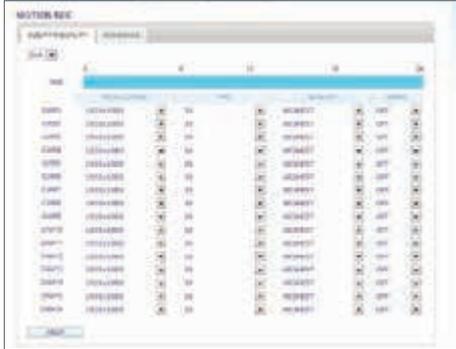
Configure the settings of: continuous recording time, recording size, frame rate per second and quality.

Click < ▾ > next to each item to display the list of values available.



Use the Activation tab select the hours for each channel to record on. Click and drag the boxes. Click <APPLY > to apply your settings.

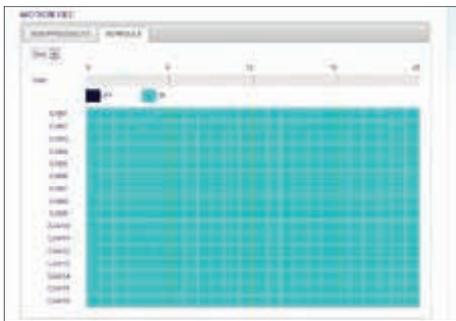
- ✓ For more information about the continuous recording size and schedule, refer to “Continuous Recording”.



Motion Recording

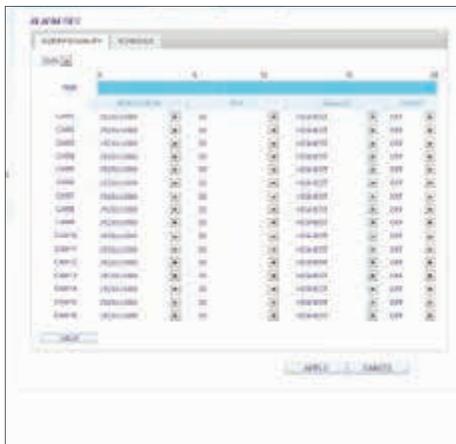
Set the <SIZE/FPS/QUALITY/AUDIO> and the <SCHEDULE> to apply if a motion event occurs.

Click next to each item to display the list of values available.



Use the Activation tab select the hours for each channel to record on. Click and drag the boxes.

- For more information about the motion recording size and schedule, refer to "Motion Recording".

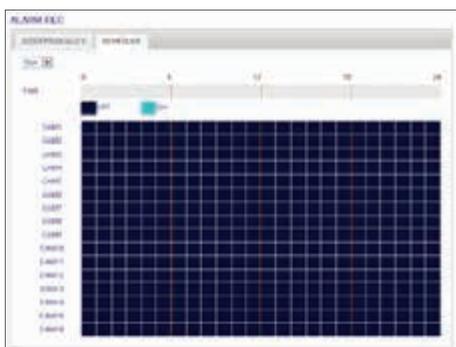


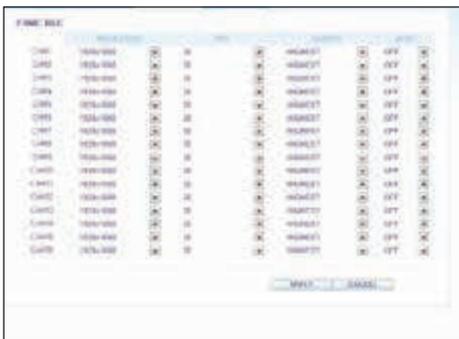
Alarm Recording

Set the <SIZE/FPS/QUALITY/AUDIO> and the <SCHEDULE> to apply if an alarm is received. Click next to each item to display the list of values available.

Use the Activation tab select the hours for each channel to record on. Click and drag the boxes, and click <APPLY > to apply the changes.

- For more information about the alarm recording size and schedule, refer to "Alarm Recording".





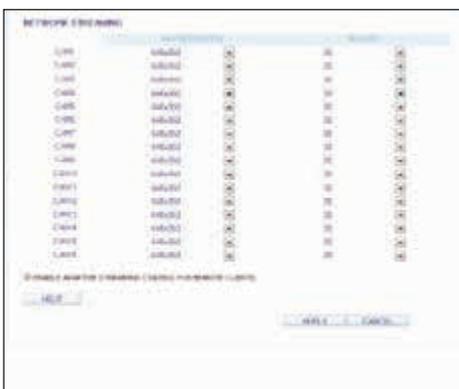
Panic Recording

From the <PANIC RECORD> menu, set the resolution, FPS, quality and audio settings to your preference.

Click <▾> next to each item to display the list of values available.

When you have completed the manual record settings, click <APPLY > to apply the changes.

- ✔ For more information about the manual record settings, refer to "Panic Recording".



Network Streaming

Select the maximum size of network streaming and video resolution for remote users and change the FPS.

Click <▾> next to each item to display the list of values available.

When done, click <APPLY > to apply the settings.



Information

Click the <INFORMATION > tab to check the model name of the VHDIP as well as the web viewer version.

Concept Pro Viewer Specification

You can use the Concept Pro Viewer App to monitor the network on a remote site and play the monitoring video anytime anywhere

Minimum/ recommended specification

OS	Minimum specification	Recommended specification
Android Phone	Processor :800 MHz or higher	Processor : 1 GHz or higher
	Flash : 512 MB or higher	Flash : 512 MB
	RAM : 512 MB or higher	RAM : 512 MB
	SD Card : 4 GB or higher	SD Card : 16 GB or higher
	OS : 2.0 or higher	OS : 2.1 or higher
iPhone	iPhone 3G,	iPhone 3GS or higher
	iPod touch 3rd Generation	iPhone OS 3.2 or higher
	iPhone OS 3.1.3 or higher	

USING THE CONCEPT PRO VIEWER PRO ON IPHONE

How to download the iPhone-dedicated application

From your iPhone, access the App Store.

Enter "Concept Pro Viewer" in the search bar to find it before downloading. Install the application on your iPhone.



To connect to VHDIP with Concept Pro Viewer

1. Select and run the Concept Pro Viewer app.
2. Press <+> in the top right corner of the NVR List to select and add a site to the list



3. Enter the server name and press <Save>.



4. Provide the IP address, HTTP port number (Web service port on the VHDIP <NETWORK> <IP SETUP> and RTSP port number, and press <Save>.



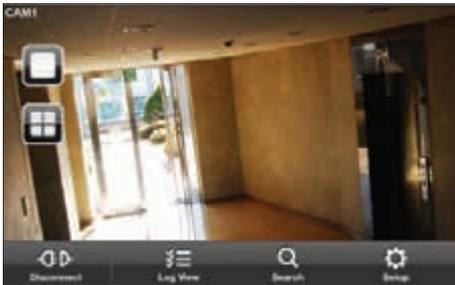
5. Provide the access ID of the VHDIP as well as the password.
6. Specify the use of the Auto Login.
7. PRESS <Save>.



8. Select the site that you added in the server List

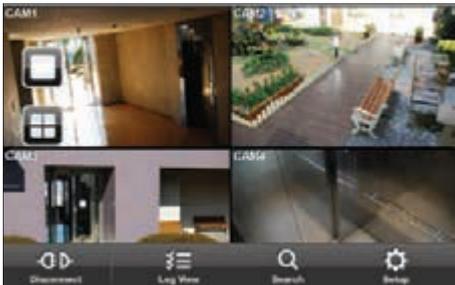


9. Try to access the VHDIP.
If connected successfully, you will see the screen as shown.



Split Mode

1. Press any area on the screen.
The main menu appears at the bottom of the screen.
2. Press  in the top left corner to switch to 1-split mode; click  to switch to 4-split mode.
 - swipe screen left or right to change the camera channel.



Using the Log View

1. From the main menu, press  >.
You can check the log of the data stored.
2. Select one from Alarm, Motion, Record, Etc. and press  >.
You will view the log of related items.





Using the Search function

1. From the main menu, Press <  >.
You can view the history of the data stored.
2. Select a desired time and date.
You can use the vertical time bar to specify the start time.



3. Press <  > to play the video recorded at the specified time.



4. Press any area to display the play bar with which you can control the playing direction and speed of the video.



Using the Setup function

From From the main menu, press <  >.
You will be connected to the web viewer site.

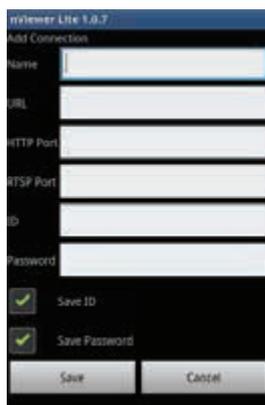
- For details about each displayed item, refer to "Setup".

USING THE CONCEPT PRO VIEWER WITH ANDROID

How to download the iPhone-dedicated application

From your smart phone, access the Play Store.

Enter "Concept Pro Viewer" in the search bar to find it before downloading. Install the application on your Smart Phone.



To connect to VHDIP with Concept Pro Viewer

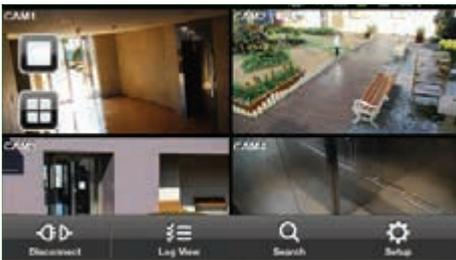
1. Select and run the VXH264 Pro.
2. Use the Add button to select and add a site to the list.
3. Please enter a Name.
4. Provide the IP address, HTTP port number (Web service port on the VHDIP <NETWORK> <IP SETUP> and RTSP port number, and press<Save>.
5. Provide the access ID of the NVR as well as the password.
6. Select whether or not to save the ID and PW.
7. Press <Save>
8. Select the site that you added in the server List.
Press and hold the connection button to display the pop-up window.
9. Select <Connect> and try to access.
If connected successfully, you will see the screen as shown.



Split Mode

1. Press any area on the screen.

The main menu appears at the bottom of the screen.



2. Press  in the top left corner to switch to 1-split mode; click  to switch to 4-split mode.

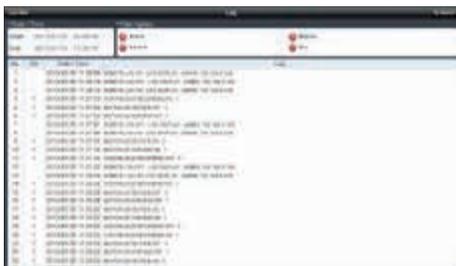
Swipe the screen left or right to change camera channel.



Using the Log View

1. From the main menu, press  >.

You can check the log of the data stored.



2. Select one from Alarm, Motion, Record, Etc. and press  >.

You will view the log of related items.

Viewing archived footage from a PC/Laptop

1. After footage has been archived from a VHDIP, it can be viewed on a PC/laptop.

Insert the USB stick containing the archive in the PC and view the contents using windows explorer.

The following files are included in the backup folder:

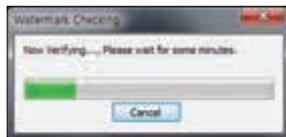
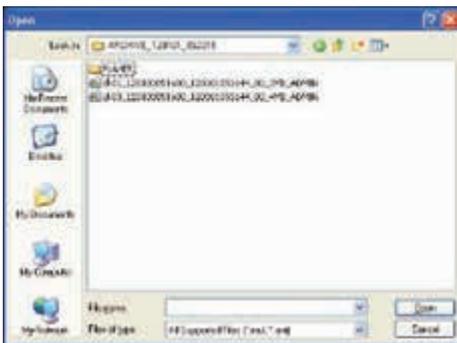
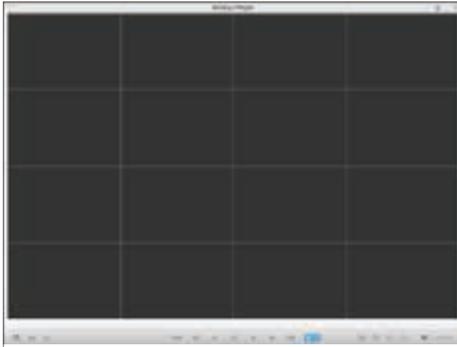
- > Arch_info: This file contains detailed information about the archive set. Double click to view it.
- > ch01: An AVI video file containing the archive footage for a single channel. Depending in the archive, there will be upto 16 AVI files listed.
- > Player: This folder contains the playback software necessary to view the archive files correctly.
- > Setup: Installs the Imm4 codec. This is required if the user chooses to playback archived files using windows media player.

2. Run the Backup Player.

3. Click <  > in the bottom left corner to display the file browser. Select the archived file to play.

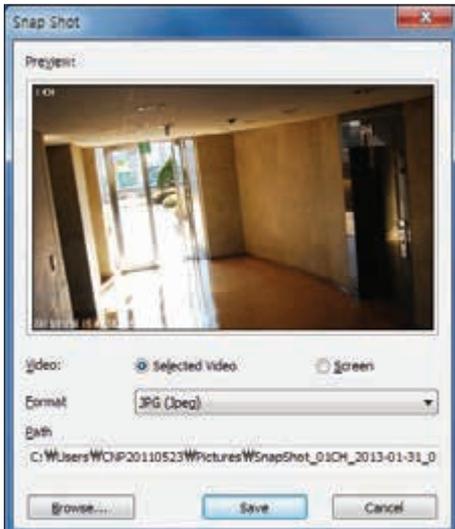
4. Check the integrity of the archived file.

5. When done, the archived file will be played on the screen.



Backup Player At
a Glance

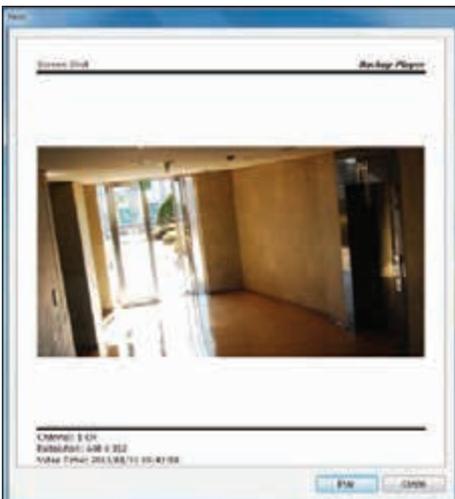
No.	Name	Description
1	Setup	Configure the settings.
	Minimize, Full Screen	Minimize the Backup Player or expand window it to the full screen.
	Close	Close the Backup Player.
2	Channel Information	Show the channel information and the video resolution.
3	Video Time	Display the time of the current video image.
4	Play Time	Display the current playback time.
5	File Search	Open the file that you backed up.
	Capture	Capture the current screen.
	Print	Print out the current screen.
6	Playback Control	Control the playback direction and speed of the current video.
		For more information about how to use the playback control buttons, refer to "Using the play bar".
7	Split Mode	Switch to 1-/4-/8-/16-split screen mode.
8	Audio Setting	Show the sound signal status and volume level.
9	Play Bar	Display the current playback position in the video.



Snapshot

Click <  > to capture the current video image.

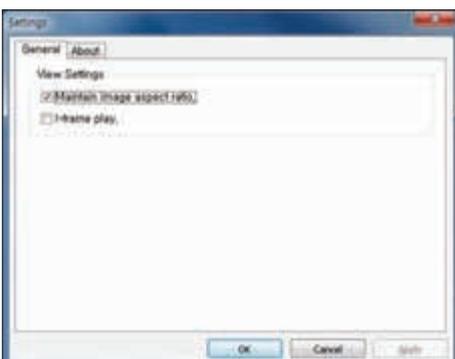
- > Selected Video : Capture the current viewing frame.
- > Screen : Captures the correct aspect ratio.
- > Format : Select a saving format. (BMP, JPG, PNG)
- > Path : Set the root folder to be saved on PC.



Print Out

Click <  > Button to print out the image.

When the "Print" window appears, check the preview and click <Print>.



Settings

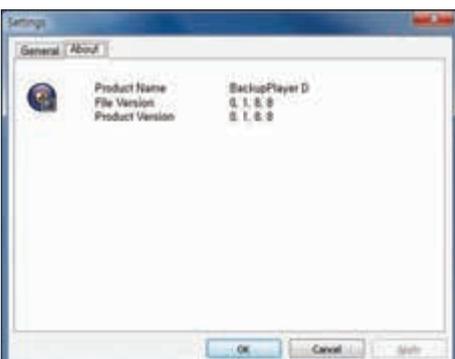
Click <  > to configure the Backup Player settings.

Check the version of the Backup Player.

- > Maintain image aspect ratio : Preserve the aspect ratio of the image.

If this is not selected, the image will be adjusted to fit the screen.

- > I-frame play. : Plays i-frames (key frames) of the video.



- > About : See information including the version.

ITEM	VHDIPM-4	VHDIPM-8	VHDIPM-16
CHANNELS	4ch	8ch	16ch (with 8CH HUB)
VIDEO			
INPUT SIGNAL	4x IP Camera (Max HD 1080p)	8x IP Camera (Max HD 1080p)	16x IP Camera (Max HD 1080p)
MAIN MONITOR	VGA or HD Display	VGA or HD Display	VGA or HD Display
MAIN MONITOR RESOLUTION	1080p / 720p / SXGA	1080p / 720p / SXGA	1080p / 720p / SXGA
MOTION DETECTION	Yes (From IP Camera)	Yes (From IP Camera)	Yes (From IP Camera)
AUDIO			
INPUT SIGNAL	4CH (From IP Camera)	8CH (From IP Camera)	16CH (From IP Camera)
OUTPUT SIGNAL	1CH	1CH	1CH
MICROPHONE	1CH	1CH	1CH
CODEC	G.711	G.711	G.711
RECORDING			
CODEC	H.264(BP,MP,HP)	H.264(BP,MP,HP)	H.264(BP,MP,HP)
REC. RATE	MAX. 25, FPS@1080p/ CH(Depend on IP Camera)	MAX. 25, FPS@1080p/ CH(Depend on IP Camera)	MAX. 25, FPS@1080p/ CH(Depend on IP Camera)
REC. RESOLUTION	HD 1080p or HD 720p, 640x360 (Depend on IP Camera)	HD 1080p or HD 720p, 640x360 (Depend on IP Camera)	HD 1080p or HD 720p, 640x360 (Depend on IP Camera)
ALARM I/O			
ALARM INPUT	4 CH (IP) + 2 CH (Internal) (Depend on IP Camera)	8 CH (IP) + 2 CH (Internal) (Depend on IP Camera)	16 CH (IP) + 2 CH (Internal) (Depend on IP Camera)
ALARM OUT	4 CH (IP) + 1 RELAY(Internal) (Depend on IP Camera)	8 CH (IP) + 1 RELAY(Internal) (Depend on IP Camera)	16 CH (IP) + 1 RELAY(Internal) (Depend on IP Camera)
STORAGE			
INTERNAL HDD	2EA(SATA)	2EA(SATA)	2EA(SATA)
EXTERNAL STORAGE	YES (eSATA, NAS (for Backup))	YES (eSATA, NAS (for Backup))	YES (eSATA, NAS (for Backup))
INTERFACES			
USB	2ports	2ports	2ports
RS-485	1	1	1
RS-232	1	1	1
RJ45	4 (IP Camera, POE) + 1 (LAN) + 1 (WAN)	8 (IP Camera, POE) + 1 (LAN) + 1 (WAN)	16 (IP Camera, POE) + 1 (LAN) + 1 (WAN)
REMOTE CONTROL	YES	YES	YES
HUB			
NETWORK	-	-	2GE + 8FE (PoE)
TOTAL PoE POWER	-	-	72W
MANAGEABLE by IPX	-	-	ARM9 INTERIOR
ADAPTOR	-	-	48V, 96W
ETC			
WATCHDOG	YES	YES	YES
COOLING FAN	1EA	1EA	1EA
POWER			
POWER SUPPLY	12V adaptor + 48V adaptor	12V adaptor + 48V adaptor	12V adaptor + 48V adaptor
POWER CONSUMPTION	6W(12V, w/o HDD), 3W (48V, w/o camera)	6W(12V, w/o HDD), 5W (48V, w/o camera)	6W(12V, w/o HDD), 5W (48V, w/o camera)
OPERATING			
TEMPERATURE	0°C ~ 40°C(32°F~104°F)	0°C ~ 40°C(32°F~104°F)	0°C ~ 40°C(32°F~104°F)

ITEM	VHDIPM-4	VHDIPM-8	VHDIPM-16
HUMIDITY	10 ~ 90% NC	10 ~ 90% NC	10 ~ 90% NC
CHASSIS			
DIMENSION	1U(305 x 298 x 44)	1U(305 x 298 x 44)	1U(305 x 298 x 44)
WEIGHT	-	-	-
CERTIFICATION			
UL, CUL, FCC, CE	FCC, CE, C-Tick	FCC, CE, C-Tick	FCC, CE, C-Tick
MONITORING			
DISPLAY RATE	HD1080p 100fps(Realtime)	HD1080p 100fps or 640x360 200fps	HD1080p 100fps or 640x360 400fps (Realtime)
DISPLAY RESOLUTION	1080p / 720p / SXGA	1080p / 720p / SXGA	1080p / 720p / SXGA
DISPLAY MODE	1,4	1,4,6,8,9	1,4,6,8,9,16
SEQUENCE	Programmable Sequence	Programmable Sequence	Programmable Sequence
DIGITAL ZOOM	YES	YES	YES
COVERT	YES	YES	YES
CAMERA COLOR CONTROL	YES (CONTRAST, HUE, TINY, BRIGHTNESS) (With Compatible IP Camera)	YES (CONTRAST, HUE, TINY, BRIGHTNESS) (With Compatible IP Camera)	YES (CONTRAST, HUE, TINY, BRIGHTNESS) (With Compatible IP Camera)
CAMERA IMAGE CONTROL	YES (WHITE BALANCE, EXPOSURE, FLICKERLESS) (With Compatible IP Camera)	YES (WHITE BALANCE, EXPOSURE, FLICKERLESS) (With Compatible IP Camera)	YES (WHITE BALANCE, EXPOSURE, FLICKERLESS) (With Compatible IP Camera)
AUDIO MONITORING	YES (From IP Camera)	YES (From IP Camera)	YES (From IP Camera)
MICROPHONE	YES (MIC to IP Camera)	YES (MIC to IP Camera)	YES (MIC to IP Camera)
PTZ CAMERA SUPPORT	YES (IP, RS485)	YES (IP, RS485)	YES (IP, RS485)
RECORD			
VIDEO COMPRESSION	H.264(BP,MP,HP)	H.264(BP,MP,HP)	H.264(BP,MP,HP)
AUDIO COMPRESSION	G.711	G.711	G.711
RECORDING RESOLUTION	HD 1080p or HD720p, 640x360 (Depend on IP Camera)	HD 1080p or HD720p, 640x360 (Depend on IP Camera)	HD 1080p or HD720p, 640x360 (Depend on IP Camera)
RECORDING RATE	MAX. 25 FPS@1080p/CH	MAX. 25 FPS@1080p/CH	MAX. 25 FPS@1080p/CH
SCHEDULE METHOD	DAILY/WEEKLY EACH HOUR	DAILY/WEEKLY EACH HOUR	DAILY/WEEKLY EACH HOUR
PROGRAMMABLE FOR CH	YES	YES	YES
RECORD TIME LIMIT	YES	YES	YES
POST-EVENT RECORDING	5/10/15/20/30/60/180 SEC	5/10/15/20/30/60/180 SEC	5/10/15/20/30/60/180 SEC
EVENT RECORDING	YES	YES	YES
INTENSIVE RECORDING	YES (MOTION / ALARM)	YES (MOTION / ALARM)	YES (MOTION / ALARM)
PRE-EVENT RECORDING	0/1/2/3/4/5/10/15 SEC	0/1/2/3/4/5/10/15 SEC	0/1/2/3/4/5/10/15 SEC
PANIC RECORDING	YES	YES	YES
EVENT LOGGING	YES (MOTION,ALARM, PANIC, VLOSS)	YES (MOTION,ALARM, PANIC, VLOSS)	YES (MOTION,ALARM, PANIC, VLOSS)
SYSTEM LOGGING	YES (SYSTEM ON/OFF, TIME CHANGED, HDD/EMAIL OPERATIONS, SYSYEM OPERATIONS)	YES (SYSTEM ON/OFF, TIME CHANGED, HDD/EMAIL OPERATIONS, SYSYEM OPERATIONS)	YES (SYSTEM ON/OFF, TIME CHANGED, HDD/EMAIL OPERATIONS, SYSYEM OPERATIONS)
SETUP LOGGING	YES (SETUP CHANGED)	YES (SETUP CHANGED)	YES (SETUP CHANGED)
REMOTE LOGGING	YES(WHO, IP ADDRESS, REMOTE OPERATIONS)	YES(WHO, IP ADDRESS, REMOTE OPERATIONS)	YES(WHO, IP ADDRESS, REMOTE OPERATIONS)

ITEM	VHDIPM-4	VHDIPM-8	VHDIPM-16
SEARCH & PLAYBACK			
DISPLAY MODE	1/4	1,4,9	1,4,9,16
PLAYBACK RATE	Up to 100FPS	Up to 200FPS	Up to 400FPS
PLAYBACK SPEED	x1, x2, x4, x16, x32, x64	x1, x2, x4, x16, x32, x64	x1, x2, x4, x16, x32, x64
CALENDAR SEARCH	YES(2008/1/1 – 2035/12/31)	YES(2008/1/1 – 2035/12/31)	YES(2008/1/1 – 2035/12/31)
EVENT SEARCH	YES	YES	YES
THUMBNAIL SEARCH	YES	YES	YES
BOOKMARK SEARCH	YES	YES	YES
INSTANT PLAYBACK	YES	YES	YES
PLAYBACK ZOOM	YES	YES	YES
SNAPSHOT	YES (JPEG)	YES (JPEG)	YES (JPEG)
ARCHIVING			
ARCHIVING DEVICES	USB Memory, FTP	USB Memory, FTP	USB Memory, FTP
REMOTE ARCHIVING	YES(WEB RA, VMS, FTP)	YES(WEB RA, VMS, FTP)	YES(WEB RA, VMS, FTP)
SNAPSHOT ARCHIVING	YES	YES	YES
DATA RESERVING	YES	YES	YES
RESERVED DATA	YES	YES	YES
LIST MANAGEMENT			
BACKUP DATA FORMAT	AVI, RAW	AVI, RAW	AVI, RAW
WATERMARK	MD5	MD5	MD5
WATERMARK VERIFICATION	YES	YES	YES
ARCHIVED DATA PLAYBACK	YES	YES	YES
NETWORK			
MAX. CONNECTIONS	10 USERS	10 USERS	10 USERS
DHCP	YES	YES	YES
HTTPS	YES	YES	YES
SSL	YES	YES	YES
DDNS	YES	YES	YES
TRANSMISSION RATE	MAX 100 fps (Depend on IP Camera)	MAX 200 fps (Depend on IP Camera)	MAX 400 fps (Depend on IP Camera)
BANDWIDTH CONTROL	YES	YES	YES
WEB BROWER ACCESS	YES	YES	YES
REMOTE MONITORING	YES	YES	YES
REMOTE PLAYBACK	YES	YES	YES
REMOTE ARCHIVING	YES	YES	YES
REMOTE HEALTH CHECK	YES	YES	YES
VMS SUPPORT	YES	YES	YES
ONVIF CAMERA SUPPORT	YES (Profile-S)	YES (Profile-S)	YES (Profile-S)
VIDEO SERVER SUPPORT	YES	YES	YES
TWO-WAY AUDIO	YES	YES	YES
PC BASED REMOTE AGENT	YES (Windows, Mac)	YES (Windows, Mac)	YES (Windows, Mac)
SMART PHONE APPLICATION	YES (iOS, Android)	YES (iOS, Android)	YES (iOS, Android)
WEB BASED REMOTE AGENT	YES (WINDOWS®)	YES (WINDOWS®)	YES (WINDOWS®)
SDK	YES (HTTP, RTSP Protocol Base)	YES (HTTP, RTSP Protocol Base)	YES (HTTP, RTSP Protocol Base)
IP FILTERING	YES	YES	YES

ITEM	VHDIPM-4	VHDIPM-8	VHDIPM-16
AUTO ROUTER PORT FORWARDING	YES	YES	YES
DUAL STREAMING	YES	YES	YES
FTP CLIENT	YES (For ARCHIVING)	YES (For ARCHIVING)	YES (For ARCHIVING)
E-MAIL	YES(SMTP CLIENT)	YES(SMTP CLIENT)	YES(SMTP CLIENT)
AUTHORITY CONTROL	ADMIN/MANAGER/USER	ADMIN/MANAGER/USER	ADMIN/MANAGER/USER
AUTO IP CAM INSTALLATION (PLUG AND DISPLAY)	YES	YES	YES
PROTOCOLS	WS-Discovery, RTP, RTSP, RTCP, S MTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL	WS-Discovery, RTP, RTSP, RTCP, S MTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL	WS-Discovery, RTP, RTSP, RTCP, S MTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL
WIFI	-	-	-
EVENT & ACTIONS			
ALARM OUT	YES	YES	YES
EVENT NOTIFICATION	YES	YES	YES
VIDEO POPUP	YES	YES	YES
ALARM SENSOR EVENT	YES	YES	YES
VIDEO LOSS EVENT	YES	YES	YES
MOTION DETECTION EVENT	YES	YES	YES
MOTION SENSOR AREA	DEPEND ON IP CAMERA	DEPEND ON IP CAMERA	DEPEND ON IP CAMERA
DISK EVENT	YES	YES	YES
SYSTEM EVENT	YES	YES	YES
NETWORK EVENT	YES	YES	YES
STORAGE			
DISK S.M.A.R.T CHECK	YES (DEPEND ON HDD SPEC)	YES (DEPEND ON HDD SPEC)	YES (DEPEND ON HDD SPEC)
EXTERNAL STORAGE	YES (eSATA, NAS (for Backup)	YES (eSATA, NAS (for Backup)	YES (eSATA, NAS (for Backup)
AUTO DISK RECOVERY	YES	YES	YES
DELETING PARTIAL DATA	YES	YES	YES
USER			
GROUP AUTHORITY	YES (ADMIN/MANAGER/USER)	YES (ADMIN/MANAGER/USER)	YES (ADMIN/MANAGER/USER)
SYSTEM			
NETWORK TIME SYNC	YES	YES	YES
AUTO TIME SYNC	YES	YES	YES
DST	YES	YES	YES
F/W UPGRADE	YES (USB / NETWORK)	YES (USB / NETWORK)	YES (USB / NETWORK)
SETUP IMPORT/EXPORT	YES	YES	YES
AUTO LOGOUT	YES	YES	YES
INTERFACE DEVICE			
IR REMOTE CONTROLLER	YES	YES	YES
KEYBOARD CONTROLLER	YES	YES	YES
MOUSE	YES	YES	YES
ETC			
BACKUP VIEWER	YES(MultiChannel Playback Support)	YES(MultiChannel Playback Support)	YES(MultiChannel Playback Support)
LANGUAGE	MULTI-LANGUAGE	MULTI-LANGUAGE	MULTI-LANGUAGE

ITEM	VHDIP-8	VHDIP-16
CHANNELS	8ch	16ch
VIDEO		
INPUT SIGNAL	8x IP Camera (Max HD 1080p)	16x IP Camera (Max HD 1080p)
MAIN MONITOR	VGA or HD Display	VGA or HD Display
MAIN MONITOR RESOLUTION	1080p / 720p / SXGA	1080p / 720p / SXGA
MOTION DETECTION	Yes (From IP Camera)	Yes (From IP Camera)
AUDIO		
INPUT SIGNAL	8CH (From IP Camera)	16CH (From IP Camera)
OUTPUT SIGNAL	1CH	1CH
MICROPHONE	1CH	1CH
CODEC	G.711	G.711
RECORDING		
CODEC	H.264(BP,MP,HP)	H.264(BP,MP,HP)
REC. RATE	MAX. 25, FPS@1080p/CH(Depend on IP Camera)	MAX. 25, FPS@1080p/CH(Depend on IP Camera)
REC. RESOLUTION	HD 1080p or HD 720p, 640x360 (Depend on IP Camera)	HD 1080p or HD 720p, 640x360 (Depend on IP Camera)
ALARM I/O		
ALARM INPUT	8 CH (IP) + 2 CH (Internal) (Depend on IP Camera)	16 CH (IP) + 2 CH (Internal) (Depend on IP Camera)
ALARM OUT	8 CH (IP) + 1 RELAY(Internal) (Depend on IP Camera)	16 CH (IP) + 1 RELAY(Internal) (Depend on IP Camera)
STORAGE		
INTERNAL HDD	5EA	5EA
EXTERNAL STORAGE	YES (eSATA, NAS (for Backup)	YES (eSATA, NAS (for Backup)
INTERFACES		
USB	3ports	3ports
RS-485	1	1
RS-232	1	1
RJ45	8 (IP Camera, POE(802.3at)) + 1 (LAN) + 1 (WAN)	16 (IP Camera, POE(802.3at)) + 1 (LAN) + 1 (WAN)
REMOTE CONTROL	YES	YES
HUB		
NETWORK	-	2GE + 8FE (PoE)
TOTAL PoE POWER	-	72W
MANAGEABLE by IPX	-	ARM9 INTERIOR
ADAPTOR	-	48V, 96W
ETC		
WATCHDOG	YES	YES
COOLING FAN	1EA	1EA
POWER		
POWER SUPPLY	SMPS 12V 100W +SMPS 52V 100W	SMPS 12V 100W +SMPS 52V 100W
POWER CONSUMPTION	15W max. without HDD	15W max. without HDD
OPERATING		
TEMPERATURE	0°C ~ 40°C(32°F~104°F)	0°C ~ 40°C(32°F~104°F)

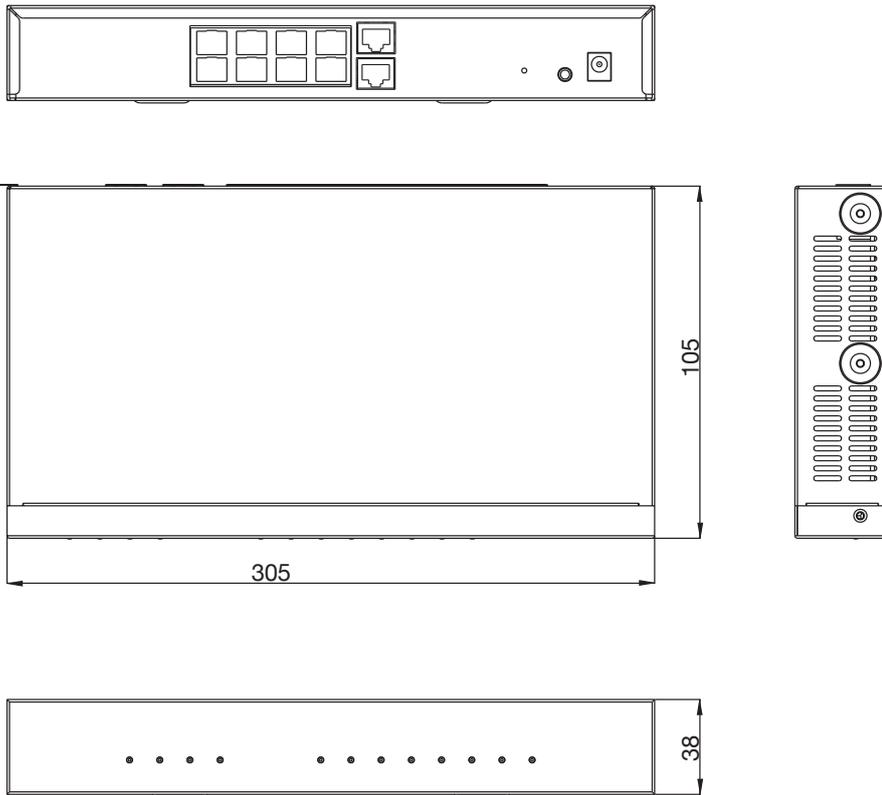
ITEM	VHDIP-8	VHDIP-16
HUMIDITY	10 ~ 90% NC	10 ~ 90% NC
CHASSIS		
DIMENSION	2U(430 x 367 x 88.4)	2U(430 x 367 x 88.4)
WEIGHT	-	-
CERTIFICATION		
UL, CUL, FCC, CE	UL,cUL, FCC, CE, KC, C-Tick	UL,cUL, FCC, CE, KC, C-Tick
MONITORING		
DISPLAY RATE	HD1080p 200fps (Realtime)	HD1080p 400fps (Realtime)
DISPLAY RESOLUTION	1080p / 720p / SXGA	1080p / 720p / SXGA
DISPLAY MODE	1,4,6,8,9	1,4,6,8,9,16
SEQUENCE	Programmable Sequence	Programmable Sequence
DIGITAL ZOOM	YES	YES
COVERT	YES	YES
CAMERA COLOR CONTROL	YES (CONTRAST, HUE, TINY, BRIGHTNESS) (With Compatible IP Camera)	YES (CONTRAST, HUE, TINY, BRIGHTNESS) (With Compatible IP Camera)
CAMERA IMAGE CONTROL	YES (WHITE BALANCE, EXPOSURE, FLICKERLESS) (With Compatible IP Camera)	YES (WHITE BALANCE, EXPOSURE, FLICKERLESS) (With Compatible IP Camera)
AUDIO MONITORING	YES (From IP Camera)	YES (From IP Camera)
MICROPHONE	YES (MIC to IP Camera)	YES (MIC to IP Camera)
PTZ CAMERA SUPPORT	YES (IP, RS485)	YES (IP, RS485)
RECORD		
VIDEO COMPRESSION	H.264(BP,MP,HP)	H.264(BP,MP,HP)
AUDIO COMPRESSION	G.711	G.711
RECORDING RESOLUTION	HD 1080p or HD720p, 640x360 (Depend on IP Camera)	HD 1080p or HD720p, 640x360 (Depend on IP Camera)
RECORDING RATE	MAX. 25 FPS@1080p/CH	MAX. 25 FPS@1080p/CH
SCHEDULE METHOD	DAILY/WEEKLY EACH HOUR	DAILY/WEEKLY EACH HOUR
PROGRAMMABLE FOR CH	YES	YES
RECORD TIME LIMIT	YES	YES
POST-EVENT RECORDING	5/10/15/20/30/60/180 SEC	5/10/15/20/30/60/180 SEC
EVENT RECORDING	YES	YES
INTENSIVE RECORDING	YES (MOTION / ALARM)	YES (MOTION / ALARM)
PRE-EVENT RECORDING	0/1/2/3/4/5/10/15 SEC	0/1/2/3/4/5/10/15 SEC
PANIC RECORDING	YES	YES
EVENT LOGGING	YES (MOTION,ALARM, PANIC, VLOSS)	YES (MOTION,ALARM, PANIC, VLOSS)
SYSTEM LOGGING	YES (SYSTEM ON/OFF, TIME CHANGED, HDD/EMAIL OPERATIONS, SYSYEM OPERATIONS)	YES (SYSTEM ON/OFF, TIME CHANGED, HDD/EMAIL OPERATIONS, SYSYEM OPERATIONS)
SETUP LOGGING	YES (SETUP CHANGED)	YES (SETUP CHANGED)
REMOTE LOGGING	YES(WHO, IP ADDRESS, REMOTE OPERATIONS)	YES(WHO, IP ADDRESS, REMOTE OPERATIONS)

ITEM	VHDIP-8	VHDIP-16
SEARCH & PLAYBACK		
DISPLAY MODE	1,4,9	1,4,9,16
PLAYBACK RATE	Up to 200FPS	Up to 400FPS
PLAYBACK SPEED	x1, x2, x4, x16, x32, x64	x1, x2, x4, x16, x32, x64
CALENDAR SEARCH	YES(2008/1/1 – 2035/12/31)	YES(2008/1/1 – 2035/12/31)
EVENT SEARCH	YES	YES
THUMBNAIL SEARCH	YES	YES
BOOKMARK SEARCH	YES	YES
INSTANT PLAYBACK	YES	YES
PLAYBACK ZOOM	YES	YES
SNAPSHOT	YES (JPEG)	YES (JPEG)
ARCHIVING		
ARCHIVING DEVICES	USB Memory, FTP	USB Memory, FTP
REMOTE ARCHIVING	YES(WEB RA, VMS, FTP)	YES(WEB RA, VMS, FTP)
SNAPSHOT ARCHIVING	YES	YES
DATA RESERVING	YES	YES
RESERVED DATA	YES	YES
LIST MANAGEMENT		
BACKUP DATA FORMAT	AVI, RAW	AVI, RAW
WATERMARK	MD5	MD5
WATERMARK VERIFICATION	YES	YES
ARCHIVED DATA PLAYBACK	YES	YES
NETWORK		
MAX. CONNECTIONS	10 USERS	10 USERS
DHCP	YES	YES
HTTPS	YES	YES
SSL	YES	YES
DDNS	YES	YES
TRANSMISSION RATE	MAX 200 fps (Depend on IP Camera)	MAX 400 fps (Depend on IP Camera)
BANDWIDTH CONTROL	YES	YES
WEB BROWER ACCESS	YES	YES
REMOTE MONITORING	YES	YES
REMOTE PLAYBACK	YES	YES
REMOTE ARCHIVING	YES	YES
REMOTE HEALTH CHECK	YES	YES
VMS SUPPORT	YES	YES
ONVIF CAMERA SUPPORT	YES (Profile-S)	YES (Profile-S)
VIDEO SERVER SUPPORT	YES	YES
TWO-WAY AUDIO	YES	YES
PC BASED REMOTE AGENT	YES (Windows, Mac)	YES (Windows, Mac)
SMART PHONE APPLICATION	YES (iOS, Android)	YES (iOS, Android)
WEB BASED REMOTE AGENT	YES (WINDOWS®)	YES (WINDOWS®)
SDK	YES (HTTP, RTSP Protocol Base)	YES (HTTP, RTSP Protocol Base)
IP FILTERING	YES	YES

ITEM	VHDIP-8	VHDIP-16
AUTO ROUTER PORT FORWARDING	YES	YES
DUAL STREAMING	YES	YES
FTP CLIENT	YES (For ARCHIVING)	YES (For ARCHIVING)
E-MAIL	YES(SMTP CLIENT)	YES(SMTP CLIENT)
AUTHORITY CONTROL	ADMIN/MANAGER/USER	ADMIN/MANAGER/USER
AUTO IP CAM INSTALLATION (PLUG AND DISPLAY)	YES	YES
PROTOCOLS	WS-Discovery, RTP, RTSP, RTCP, S MTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL	WS-Discovery, RTP, RTSP, RTCP, S MTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL
WIFI	-	-
EVENT & ACTIONS		
ALARM OUT	YES	YES
EVENT NOTIFICATION	YES	YES
VIDEO POPUP	YES	YES
ALARM SENSOR EVENT	YES	YES
VIDEO LOSS EVENT	YES	YES
MOTION DETECTION EVENT	YES	YES
MOTION SENSOR AREA	DEPEND ON IP CAMERA	DEPEND ON IP CAMERA
DISK EVENT	YES	YES
SYSTEM EVENT	YES	YES
NETWORK EVENT	YES	YES
STORAGE		
DISK S.M.A.R.T CHECK	YES (DEPEND ON HDD SPEC)	YES (DEPEND ON HDD SPEC)
EXTERNAL STORAGE	YES (eSATA, NAS (for Backup)	YES (eSATA, NAS (for Backup)
AUTO DISK RECOVERY	YES	YES
DELETING PARTIAL DATA	YES	YES
USER		
GROUP AUTHORITY	YES (ADMIN/MANAGER/USER)	YES (ADMIN/MANAGER/USER)
SYSTEM		
NETWORK TIME SYNC	YES	YES
AUTO TIME SYNC	YES	YES
DST	YES	YES
F/W UPGRADE	YES (USB / NETWORK)	YES (USB / NETWORK)
SETUP IMPORT/EXPORT	YES	YES
AUTO LOGOUT	YES	YES
INTERFACE DEVICE		
IR REMOTE CONTROLLER	YES	YES
KEYBOARD CONTROLLER	YES	YES
MOUSE	YES	YES
ETC		
BACKUP VIEWER	YES(MultiChannel Playback Support)	YES(MultiChannel Playback Support)
LANGUAGE	MULTI-LANGUAGE	MULTI-LANGUAGE

Expander Hub

For use with the 16 channel NVR's. Adds the additional 8 ports for camera.



Problem	Action
The system does not power on and there are no LED's on.	<ul style="list-style-type: none"> ● Make sure that the rear switch is turned on ● Make sure that the system gets supplied with power properly. ● Check the input voltage.
The unit continuously reboots.	<ul style="list-style-type: none"> ● Check if the system fan is working correctly <MENU> <SYSTEM SETUP> <EVENT> <SYSTEM EVENT > <SYSTEM(TAB)> <FAN FAIL EVENT> <p>If it fails, contact your supplier.</p>
The front LED is lit, but nothing is displayed on the screen.	<ul style="list-style-type: none"> ● Check if your monitor supports the 1080p HDMI input. ● Make sure that the monitor input source is set to HDMI. ● If using the HDMI-to-DVI cable for the connection, ensure that the input source is set to DVI. ● Make sure that the system gets supplied with power properly. ● Check the input voltage.
The sides of the video image are displayed incomplete.	<ul style="list-style-type: none"> ● If the monitor is over-scanning the video, the sides may be hidden. <p>If this is the case, check the menu setting within the OSD of the monitor.</p>
The camera is connected but no image is displayed.	<ul style="list-style-type: none"> ● Make sure that the IP camera is compatible with the VHDIP. ● Check if the camera supports PoE. If your camera is not compatible with the PoE protocols, use a local power source for the camera. ● Check if the total power consumption of the cameras exceeds the rated capacity of the VHDIP recorder. If the total exceeds the rated capacity, the unit may not play the video or it may fail to operate. <p>If this is the case, use a separate power source for the camera.</p>
It fails to connect to the web or mobile application.	<ul style="list-style-type: none"> ● Check if the network cable is properly connected to the WAN(UP Link) port of the VHDIP recorder. ● Check the port forwarding of the router. ● If you cannot get access with the DDNS address, use the IP address of the VHDIP instead. <p>If the VHDIP is connected to the router, use the IP address of the VHDIP. You can check the IP address of the router in <NETWORK STATUS> - <EXTERNAL IP ADDRESS>.</p>
I can access the web or mobile application but still no video image is displayed.	<ul style="list-style-type: none"> ● Check that the RTSP service port is correctly port forwarded. ● This may happen when the communications provider or network administrator has blocked RTSP port of the VHDIP. <p>Change the RTSP port and HTTP port numbers to different ones and set the port forwarding again.</p> <ul style="list-style-type: none"> ● Try to access the web or mobile application using the new port numbers

To connect to the VHDIP Locally

Press <NETWORK STATUS> on the menu bar from the Live Display screen.

The table at the bottom of this screen will display the local and external IP address.

Enter the local IP address into iPIMS or Internet Explorer.

To connect to the VHDIP from an external network

The router will need to be configured via port forwarding the RTSP and web service port the VHDIP is transmitting on. Default: 5554 and 8080.

If you are unfamiliar with this process please contact the router provider or go to www.portforward.com, this website is a directory of all the routers in the market place and provides step by step instructions to port forward the router.

Auto Port Forwarding

Alternatively, if the router supports UPnP the DVR is able to conduct the port forwarding on your behalf and will keep it updated.

To use this service confirm that the router supports UPnP and then go to <NETWORK> <IP SETUP>. From here press the Auto Port Forwarding button next to the port that require port forwarding.

NOTE: Both RTSP and Web Service (HTTP) ports need to be forwarded to gain access from an external network.

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Version 2.1, February 1999

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