

VMAX[®] A1 G4[™]

Universal HD over Coax[®] DVRs

4-Channel	8-Channel	16-Channel
DW-VA1G44	DW-VA1G48	DW-VA1G416
DW-VA1G442T	DW-VA1G482T	DW-VA1G4162T
DW-VA1G444T	DW-VA1G484T	DW-VA1G4164T
DW-VA1G446T	DW-VA1G486T	DW-VA1G4166T
DW-VA1G448T	DW-VA1G488T	DW-VA1G4168T
DW-VA1G4410T	DW-VA1G4810T	DW-VA1G41610T
DW-VA1G4412T	DW-VA1G4812T	DW-VA1G41612T
DW-VA1G4416T	DW-VA1G4816T	DW-VA1G41616T
	DW-VA1G4820T	DW-VA1G41620T
	DW-VA1G4832T	DW-VA1G41632T



NOTE: Download All Your Support Materials and Tools in One Place

1. Go to: <http://www.digital-watchdog.com/support-download/>
2. Search for your product by entering the part number in the “**Search by Product**” search bar. Results for applicable part numbers will populate automatically based on the part number you enter.
3. Click “**Search**”. All supported materials, including manuals, Quick Start Guides (QSG), software and firmware will appear in the results.

※ The picture might differ according to the specification and model.
 ※ Contents of this user manual are protected under copyrights and computer program laws. Before using the system, please read this User Manual and keep it for future reference.

WARNING

TO REDUCE FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

The installation should be made by a qualified service
person and conform to all local codes.

Cautions

Read Before System Operation

Follow these details to prevent material damage or personal injury.

Signs of Caution and Warning

-  Warning: This sign indicates that the user could die or seriously get wounded if not used or installed properly.
-  Caution: This sign indicates that the user could be wounded or could expect property damage if not used or installed properly.
-  Warning: Do not expose the product to fog, rain, or too much humidity to decrease the danger from electric shock or fire.

General Warning

-  Warning
- 1. Use the power cord, which is supplied or recommended by the supplier, or it may cause a fire.
- 2. Do not disassemble or reassemble the product. It may cause malfunction or fire.
- 3. Enquire about your vendor for repair. It may cause electric shock or fire if the repair is not done properly.
- 4. Do not touch the product with wet hands. It may cause malfunction or electric shock.
- 5. Product installation must be ensured by a professional for product installation, or it may cause malfunction, electric shock, or fire.
- 6. Ground applies to video products equipped with a 3-wire grounding type plug having a third (grounding) pin. This plug only fits into a grounding-type power outlet. If grounding is not done, it may cause malfunction or electric shock.
- 7. Ground connection must not touch gas pipe, water pipe, or telephone line. If grounding is not done properly, it may cause an electric shock.
- 8. Prevent metallic foreign substances from going inside the product. It may cause malfunction or electric shock.
- 9. Do not spray insecticide or flammable spray while driving. It may cause a fire.
- 10. Place the system in an open place where air ventilation is guaranteed, or it may cause overheating and seriously damage the system to be fired.
- 11. Prevent water from instilling inside electrical parts. Clean with a dry towel or malfunction or electric shock could result.

-  Caution
- 1. Use the power cord, which is supplied or recommended by the supplier. The internal fan rotates at high speed and may cause an accident.
- 2. Do not drop, give strong vibration or shock to the product. It may cause malfunction.
- 3. The air inhaler of the front panel and air outlet of the back panel must not be blocked during installation. The internal temperature of the product would be greater than allowable and could cause malfunction or fire.
- 4. Do not touch the product or the power cord when there is thunder. It may cause electric shock.
- 5. Do not install the product near or on top of the heating source. The internal temperature of the product would be greater than allowable and could cause malfunction or fire.
- 6. Do not install the product in an inclined or unstable location or where vibration could be committed. It may cause malfunction.

Cautions about the Power

-  Warning
- 1. Must use the outlet of the grounding to connect the power cord, or it may cause a fire.
- 2. Do not connect on the middle of the power cord or use an extension cord. It may generate heat or cause a fire.
- 3. Do not touch the power cord with wet hands. It may cause electric shock.
- 4. Keep the power cord dry and protect it from humidity. It may generate heat or cause a fire. The power cord is not waterproof.
- 5. Hold the body of the plug while removing the power plug. Do not pull the power cord. Damage to the power cord may generate heat or cause a fire.
- 6. Check the power plug regularly. Humidity and moderation in smoking may cause a fire.
- 7. Remove the power cord from the outlet when the product is not used for a long time. It may cause short-circuit or electric shock.

-  Caution
- 1. Do not turn off the power by removal of the power plug. To turn off the power, click the power button from the front panel. When the system stops abnormally, the power button might not work. Click the power button for 5 full seconds to turn the power off.
- 2. Do not cut off the power artificially or give shock or vibration to the unit while the hard disk is activating. It may cause hard disk failure or loss of data.

-  Remarks
- ※ Pictures and buttons are subject to be changed or modified up to different models.
- ※ Function or configuration is subject to be changed or modified without prior notice for improvement of the product.

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1. Getting Started

1.1 Checking Supplied Items

Make sure that you have the following items supplied with your DVR. If any of these items are missing or damaged, notify your vendor at once. Keep the packing utilities for moving or storage purposes.

Items	Photo	Quantity
Quick Start Guide and download instruction card		1
DC 12V adapter and power cable (*4-channel models do not come with power cable)		1 set
Rubber mount*	 *Included contents may differ depending on the DVR model	1 set (4 Pieces)
USB mouse		1

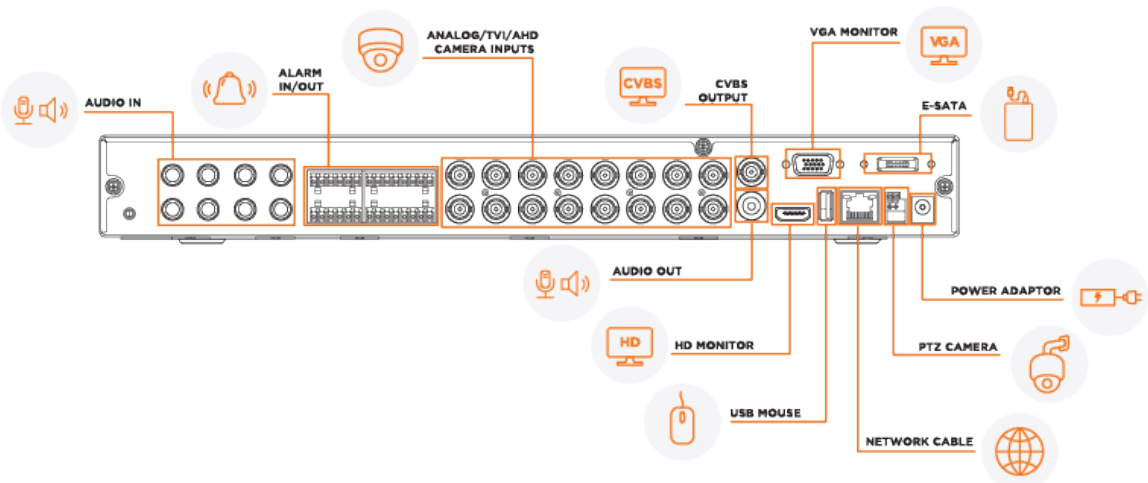
Note

USB keyboard input is not supported. Connect a USB mouse to use the virtual keyboard and interact with the DVR interface.

1.2 System Setup

1.2.1. Connect External Devices

Follow the diagram below to connect all necessary external devices to your DVR. Please note that the number of ports available may differ based on the model. See the product's specifications at the end of this manual for more information.

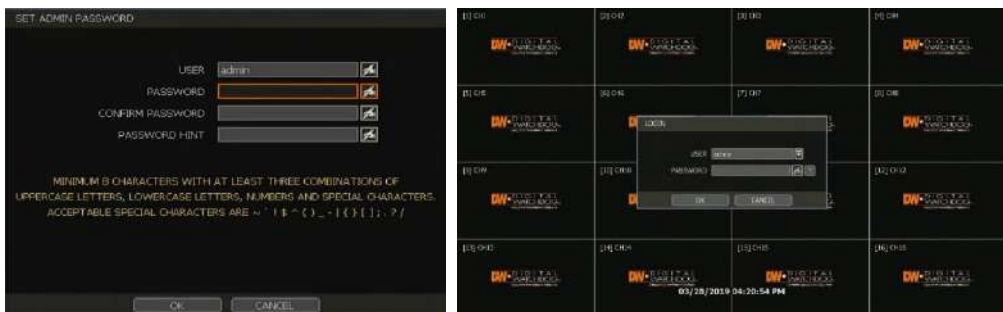


To prevent the DVR from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 104°F (40°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings.



1.2.2. System Startup

After connecting all external devices to the DVR, power up the DVR by connecting the provided 12V power adapter to the rear panel or the recorder. The boot logo will display. Please wait until the boot process completes.



When the system is starting, the Set Admin Password window is displayed. When you log in to your unit for the first time, you will be asked to set up a new password. The password must be between 8 and 12 characters long, with a combination of at least one (1) uppercase letter, lowercase letter, a number, and a special character. Acceptable special characters are 『 ~ ! \$ ^ () _ - | { } [] ; . ? / 』.

To login, right-click anywhere on the screen and enter the username and password in the popup screen. There is only one Administrator Account configurable in the DVR. It is assigned with an unchangeable User ID marked as 'admin'. The administrator account has full access to the DVR and its configurable parameters and can also create new users and assign rights to the new user accounts.



If the DVR is set to AUTO LOGIN, you will not need to enter the login every time you start the unit.

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- | | |
|----------------|--|
| Caution | <ol style="list-style-type: none">1) It may take a few minutes to start up the system after turning on the power in cases where the user sets the network configuration as DHCP mode but under the situation that there is no DHCP server in the network or the network is not connected.2) The mouse is included. In cases where you need to replace it, it is highly recommended to choose well-known major brands such as DELL, MICROSOFT, LOGITECH, or SAMSUNG. |
|----------------|--|
-

-
- | | |
|-------------|---|
| Note | <ol style="list-style-type: none">1) Do not forget the administrator's password that was set for the first time. In cases where you have forgotten your password, contact your local dealer for help.2) Refer to "Section 4.1.2 User" for AUTO LOGIN and AUTO LOGOFF settings. |
|-------------|---|
-

1.3 System Shutdown

To shut down the DVR, click the exit button  on the Toolbar at the bottom of the screen then click [SHUTDOWN] in the pop-up screen as shown below. To avoid potential electrical damage, do not disconnect power to the DVR by disconnecting the power plug from the DVR while in operation.



When prompting a SHUTDOWN, input the administrator password and click [OK] to shut down the system. Click [YES] to confirm shutdown.



NOTE Users can input passwords using the virtual keyboard.

1.4 System Explanation

1.4.1. Front Panel



** Front panel may differ according to the model.

Power (On the back panel)

1. LED indicator: indicates system status for power, record and network status.
2. USB port: for backup and upgrade.

1.4.2. Toolbar In Live Mode

In Live view, move the mouse cursor to the bottom of the screen to show the menu bar.



Menu

Click on the menu button to access the DVR's main menu screen. See Section 4 – Setting.

Display Mode

Select the display split mode from the available options. Select 1CH, 4CH, 9CH, or 16CH mode. Available options may differ based on the model.

Sequence

Start and stop Sequence mode while viewing live video. Camera channels will sequence

through the selected Display mode. The sequence is disabled if all channels are displayed.

Channel Number

Switch to a single-channel view of a specific channel by pressing the corresponding number.

Emergency Recording

The system records all channels with the full-frame rate at the maximum resolution regardless of the recording setting. To stop the emergency recording, click the same icon again.

Export

Backup recorded video to an external device. See Section 4.6 Export.

Playback

Switch to playback mode. See Section 3.3 Playback Recorded Image.

Search

Open the search options screen. See Section 3.4 Search Recorded Image.

Exit

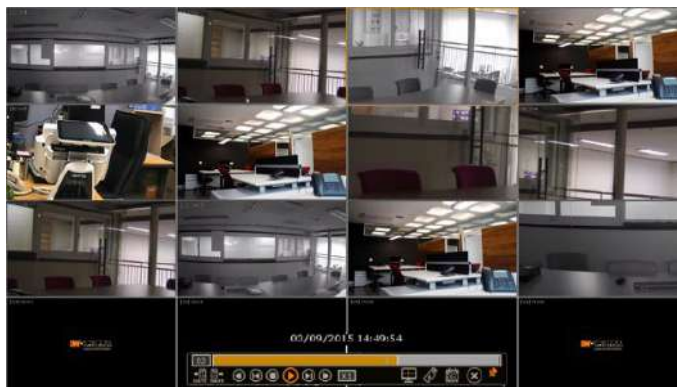
Exit the DVR with three different options: log off, reboot and shutdown.

Pin

When selected, the DVR's menu bar will be displayed on the screen permanently, regardless of the mouse's position.

1.4.3. Toolbar In Playback Mode

In the Playback view, move the mouse cursor to the bottom of the screen to show the menu bar.



Channel

Indicates the currently selected channel.

Intelligent Search Bar

Shows recording status for the selected channel from 00:00 to 24:00 hours. A white, vertical line indicates the time currently displayed. Moving the white, vertical line will update the video shown.

Previous/Next Date Search

Move to a previous date or the next date to search.

Playback Controls



: Playback speed control. (X32 / x16 / x8 / x4 / x2).



: Move backward one second



: Stop button



: Play button



: Move forward one frame



: Playback speed control. (X2 / x4 / x8 / x16 / x32)



: Current playback speed

Screen Display Mode

Select the display split mode from the available options. Select 1CH, 4CH, 6CH, 9CH, 10CH, 13CH or 16CH mode. Available options may differ based on the model.

Export

Backup recorded video to an external device. See Section 4.6 Export.

Search

Open the search options screen. See 3.4 Search Recorded Image.

Exit

Close playback mode and move to Live mode.

Pin

When selected, the DVR's menu bar will remain pinned on the viewing screen, regardless of the mouse's position. Deactivate the Pin to undo this setting.

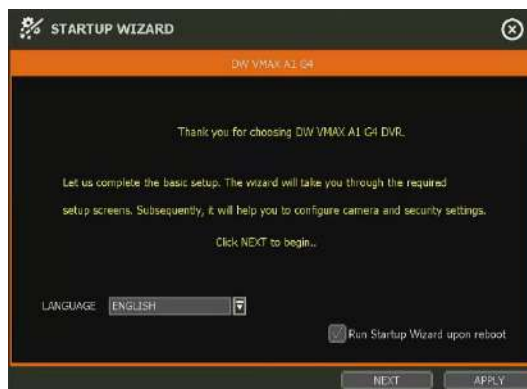
2.Startup Wizard

When the DVR is launched for the first time, the STARTUP WIZARD will appear. This wizard helps you setup the DVR's most basic settings for proper functioning. You can access the Startup Wizard at any time by clicking the [START] button for the Startup Wizard in MENU > SYSTEM > SETTINGS. (See Section 4.1.5 Settings).

2.1 Language

Select the language according to the country or user's preference.

If "Run Startup Wizard upon reboot" is selected, the Startup Wizard will appear every time the system is started.



2.2 Network

Setup the DVR's network settings for remote connection. You can select to manually configure the DVR's network settings (Manual Config.). You can also allow the system to setup the network settings automatically by selecting AUTO CONN. (PathFinder™).



If Manual Config. has been selected, setup the information below:

STARTUP WIZARD

Manual Config

NETWORK TYPE: DHCP [IP DETECT]

IP ADDRESS: 192.168.21.131

SUBNET MASK: 255.255.255.0

GATEWAY: 192.168.21.1

DNS SERVER: 8.8.8.8 [PING TEST]

TCP/IP PORT: 9010

WEB PORT: 80 [RTSP PORT: 554]

BANDWIDTH LIMIT: 100 Mbps (bits/sec)

☐ USE UPNP PORT FORWARDING

[APPLY] [CLOSE]

NETWORK TYPE

- Select either STATIC IP or DHCP for dynamic IP. For proper configuration, it is recommended to assign the DVR a DHCP address and let the DVR auto-discover all the proper network settings, and then change the Network Type to Static IP and save the changes.
- **DHCP:** the DVR will automatically configure the network settings according to the current network requirements. If DHCP is selected, click the 'IP DETECT' button to automatically detect all the network settings.
- **STATIC IP:** manually enter all necessary network settings. While set to STATIC, the network settings will not change when prompted by the connected DHCP router or DHCP network device.

IP ADDRESS

Displays the DVR's IP address. If DHCP is selected, the IP address will automatically adjust to match the network's requirements. If STATIC is selected, the IP address can be manually changed as needed.

SUBNET MASK

Subnet Mask classifies the subnetwork that the DVR system belongs to. For more information, please consult your network administrator or your internet provider.

GATEWAY

This is the IP address of the router or gateway server. It is required when connecting to the DVR through the external router over the Internet (from another network). For more information, consult your network administrator or your internet provider.

DNS SERVER

Enter the IP address of the Domain Name Server (DNS). You should input the DNS Server information to use DDNS, Email Notifications and NTP Server. For more information, please consult your network administrator or your internet provider.

TCP/IP PORT

(Default - Port 9010) Input the network port number that is used when connecting to the DVR locally or remotely. If your ISP blocks Port 9010, you may either port forward the

blocked port or change to use a different valid port number (ex, 9020). If there are multiple DVRs connected to the same local network, it should be considered to assign each DVR to different TCP/IP Ports.

WEB PORT

(Default – Port 80) Input the port number to use when connecting with a Web Browser. If your ISP blocks Port 80, you may either port forward the blocked port or change to use a different valid web port number (ex, 8080). If there are multiple DVRs connected to the same local network, it should be considered to assign each DVR to different Web Ports.

RTSP Port

Input the port number that is used for connecting to RTSP. The default is Port 554.

- Main Stream: `rtsp://{IP ADDRESS}:{rtsp port}/main/ch{number}`
- Sub Stream: `rtsp://{IP ADDRESS}:{rtsp port}/sub/ch{number}`

BANDWIDTH LIMIT

(Default – 100 Mbps) Depending on the setting made by the user, the system can control the data volume transmitted over a network ranging from 25 kbps up to 1Gbps. This function is effective when under narrow bandwidth network conditions or when the user wants to limit “network bandwidth occupied by video transmission” to a certain level.

USE UPnP (Universal Plug and Play)

UPnP (Universal Plug and Play) Port Forwarding: If a UPnP supported router is connected, the DVR will forward ports automatically after communicating with the router without the need for complicated port forwarding setup at the router.



Once the PC has discovered the DVR, double-click on the icon to open the DVR's web client. Enter your User ID and Password to log in and click “Connect” to connect. For more information on accessing the DVR web client, see Section 5 Web Surveillance with Web Browser.

NOTE

1. The maximum number of simultaneous remote connections is 10 users.
2. For the other network settings, such as DDNS, Notification, Mobile Push & P2P Cloud, please see Section **4.5 Network**.

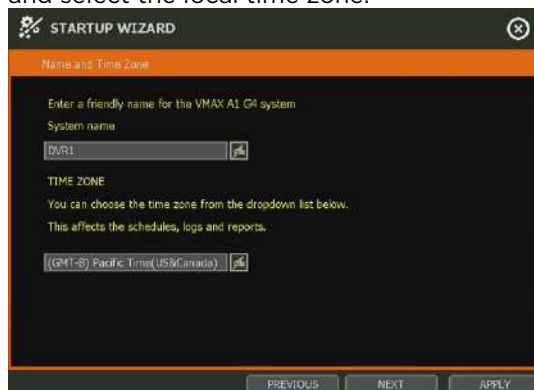
If the Auto connection (PathFinder) has been selected, connect the DVR to the PathFinder system. The DVR can then be reached by mobile device using the QR code.



NOTE For more information, please see Section 4.5.5 PathFinder.

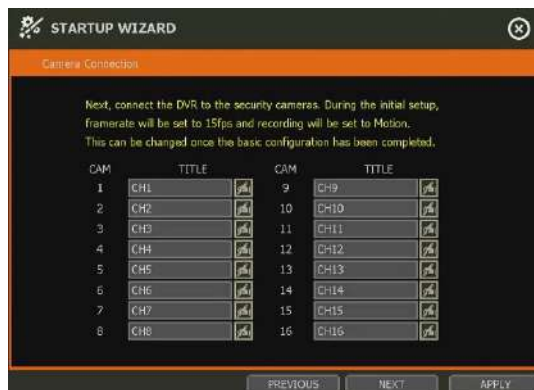
2.3 Name and Time Zone

Set the DVR's name and select the local time zone.



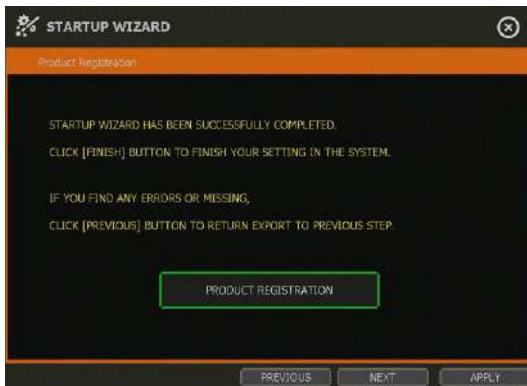
2.4 Camera Connection

Enter a camera name for each camera channel of the DVR.



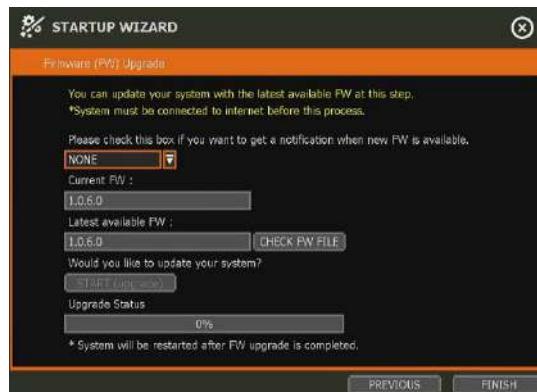
2.5 Production Registration

Provide user information to register the DVR for technical support and maintenance.



2.6 Firmware Upgrade

Upgrade the DVR's firmware by network connection. If an Internet connection is unavailable, the DVR firmware can be upgraded manually later in the *System* menu of the DVR.



2.7 Finish

When the Setup Wizard is completed, click "FINISH" to close the wizard and go to the Live view screen.

3. Operation

3.1 User Log-in

Input the USER and PASSWORD credentials to log in after turning on the system.

If a user forgets their password, they may click the  icon to check the password hint.



NOTE

1. The LOGIN window will be permanently displayed until a user logs in with the right USER and Password.
2. If DVR is set as AUTO LOGIN, the login process is not necessary. See “Section 4.1.2 User” for more information.

NOTE

The  key in the virtual keyboard includes often-used words, such as “Admin, root, http://, rtsp://, www., .com, .net, .org, etc.”.

3.2 Live Display Mode

3.2.1. Channel Selection

Live camera images from your cameras will display after powering ON the DVR. The images can be seen in 1, 4, 6, 9, 10, 13 and 16 split-screen options (some split options may not be available depending on the maximum number of channels of the DVR). Click the display mode button



on the toolbar to change the display to the next layout or sequence. To switch from a multi-channel view to a single camera, double-click on the selected channel. To return to the multi-channel mode, click the left mouse button again.

A “VIDEO LOSS” message will display on the screen when no camera is connected or if a camera is disconnected suddenly. When a camera is disconnected, a warning sound will emit, depending on the system’s event alarm settings.

Admin users can set various levels of authorization for each user, with viewing access to specific channels. If a certain user is not authorized to view a channel, the image will be unavailable within the viewing screen and the DW logo will show instead of Live video as shown in the example below.



3.2.2. Icons

In Live mode, icons will appear on the screen to notify of the system mode or status.

The icon is shown at the right-upper corner of each channel screen		The icon is shown at the right-bottom corner of fullscreen	
	Continuous Recording		No HDD Detected
	Motion Detection Recording		Emergency Recording is in use
	Sensor Activated Recording		PTZ is enabled
	Continuous + Motion Alarm Recording		Warning for exceeding temperature
	Continuous + Sensor Activated Recording		Sequence Mode is enabled
	Motion Detection + Sensor-Activated Recording		Digital Zoom is enabled
	Emergency Recording		
	Sensor Activated		
	Motion Detected		
	Audio Channel		
	PTZ Camera		
	Transaction Verification		

NOTE

If you cannot find any recording icon in the right corner of the screen, the system is not recording. Check the recording schedule or camera in the main setup menu.

3.2.3. Pop-up Menu

Users can click the right button of the mouse to pop up the sub-menu as below. If users want to control a specific channel, put the mouse cursor on that channel and then click the right button.

Display Mode

The user can change the screen display mode from the available split options (1, 4, 6, 9, 10, 13, 16 split option).

Change Next CH

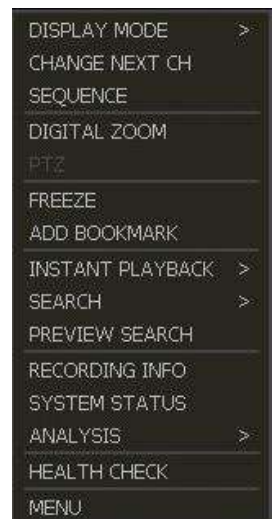
View the next channel or next group of cameras in the current split mode.

Sequence

When SEQUENCE is selected,  icon will appear on the right-bottom corner of the screen. The display screen will be sequentially changed.

Digital Zoom

- Digital Zoom is available in a single-channel view only. When "ZOOM" is selected,  an icon will appear on the right-bottom corner of the screen and digital zoom control is available.
- To zoom in, click-and-drag the mouse over the desired area to



create a zoom area. You can also zoom-in or zoom-out by scrolling the mouse wheel. The user can move the zoom area by clicking on the edge of the square and dragging it.

- To exit from zoom mode, right-click and select “ZOOM EXIT” on the menu.

PTZ

Enable PTZ mode. See Section 3.2.4 PTZ Operation for more information. The available PTZ options depend on the camera's settings. See the camera manual for more information.

Freeze

Freeze the current Live view. The system clock (date/time information) will continue running at the bottom of the screen. Select FREEZE again to resume the Live view.

Add to Bookmark

Add a bookmark with a description of the currently displayed image. When the bookmark menu appears, enter a description and click OK to save.



Instant Playback

Select a specific prior time (10sec. / 15sec. / 30sec. / 60sec. / 2min. / 3min. / 5min.) to instantly switch to playback mode.

Search

Search recorded video using the Calendar, Date/Time, First Data, Last Data, System Log, Event Log, Transaction Verification and Bookmark options. See Section 3.4. Search Recorded Image for more information.

Preview Search

Search recorded video in thumbnail search modes. See Section 3.4.9 Preview Search for more information.

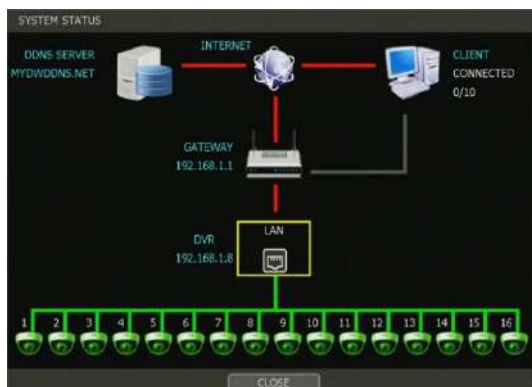
Recording Info

Check the recording status of the DVR, such as Recording Period, Daily Recording Size (Average), Current Recording Days and Remaining Recording Days.



System Status

See the system status, including information on the network condition, the number of clients currently connected to the DVR, etc. A green line means the connection is Live and working.



Analysis

Check the system performance, conditions and network conditions for the entire system.



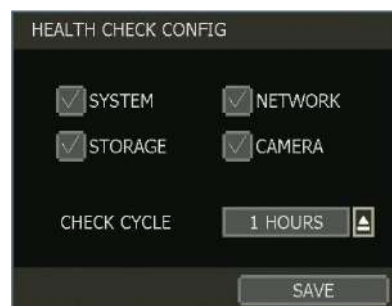
[Performance Monitor]



[Network Monitor]

Health Check

Display the information of the DVR system, network, camera, and HDD as text. Select which information to display and setup checks cycle time. You can also setup an email to receive updates on the system's health.



Menu

Open the main menu setup screen.

3.2.4. PTZ Operation

To use a PTZ camera, the channel which is connected to a PTZ camera should be in full-screen mode. To activate PTZ control, right-click and select PTZ in the pop-up menu. When in PTZ mode, **PTZ** will appear on the bottom-right corner of the screen.



PTZ Control

In PTZ mode, the user can control the PTZ camera using the USB mouse. While pressing the left button, drag the mouse cursor up/down or left/right to move the camera's pan/tilt position. The further away from the center the mouse's cursor moves, the faster the PTZ camera will move.

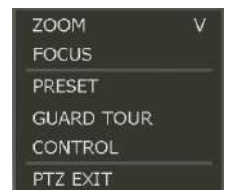
To move the camera to a preset position, click the preset position number at the bottom of the screen to move the camera accordingly. The presets must be set before selection.



NOTE Full PTZ functions are available by using the USB mouse or keyboard controller. The availability of functions depends on the camera. Consult the camera's manual for more information.

Zoom/Focus

Move zoom-in / out by rolling the wheel of the mouse up/down. If the mode is changed to "Focus", the camera's focus can be controlled by rolling the wheel of the mouse.



Preset

When the preset menu pops up, select the preset number and click "Enter" to move to the corresponding preset position. The maximum Preset number supported is 255.

Guard Tour

When enabled, the camera will automatically switch positions according to the sequence of presets set in the GUARD TOUR settings. See Section 4.2.3 PTZ for more information.

CAUTION Users can set an interval for each preset position. Some presets might be skipped in case the camera cannot mechanically move or control focus within the interval time.



Control

Go to the PTZ control menu. See Section 4.2.3. PTZ.

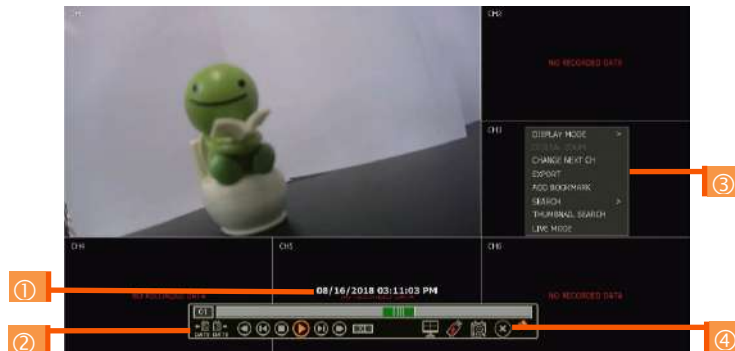
PTZ Exit

Close PTZ control mode.



3.3 Playback Recorded Images

To playback the recorded image, click the playback icon (📺) in the menu bar. When the DVR transitions to playback mode, it will automatically playback the latest recording image.



Date/Time (1)

This shows the date & time of the image that is being displayed.

Toolbar (2)

Contains playback control, recorded data check, screen mode, etc. See Section “1.4.4. Toolbar on Playback Mode” for more information.

Pop-up Menu (3)

- **Display Mode:** Change display mode (1, 4, 6, 9, 10, 13, 16 screen mode)
- **Change Next CH:** Change to next playback channel
- **Digital Zoom:** Select to enable digital zoom (available in single-channel view).
- **Export:** Open the backup window.
- **Add Bookmark:** Add a bookmark to the current image.
- **Search:** Search recorded data by various conditions. See Section 3.4 Search Recorded Image.
- **Preview Search:** Search recorded data with thumbnail search. See Section “3.4.9 Preview Search”.
- **Live Mode:** Go to Live mode.

Exit Playback Mode (4)

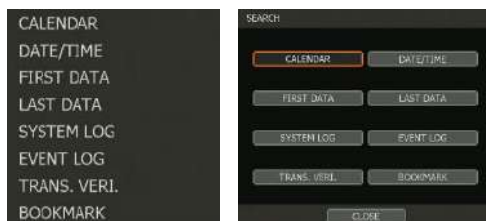
Clicking the Exit icon (⌂) in the menu bar will return you to the Live view.

3.4 Search Recorded Image

Search recorded images by date and time, first and last data, events, bookmarks, etc.

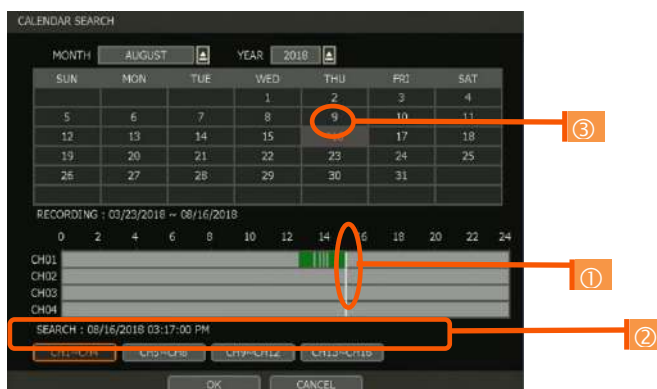
To enter the search options menu:

- In playback mode, right-click to open the popup menu and select the search menu.
- In Live mode, click the search button  in the toolbar at the bottom of the screen or right-click and select the Search menu.



3.4.1. Calendar Search

To search data for a specific date and time, use Calendar Search to select the date and time of the footage.



1. Use the mouse to slide the white, vertical line to the time you want to search.
2. The colors of the time bar represent the different recording modes. The time bar displays four channels at a time. To check the next 4 channels, change the channel group at the bottom of the window.
3. The asterisk "*" mark on dates indicates days with recorded video available.

3.4.2. Search Date/Time

Enter the desired date and time in the calendar screen.

Use the drop-down button or mouse to select the date and time of the recorded playback.

Days with recorded data will be highlighted in red and "*" next to them.

DATE/TIME SEARCH

MONTH **AUGUST** YEAR **2018**

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

TIME (HOUR/MIN/SEC) **15** : **21** : **18**

OK CANCEL

3.4.3. First Data

Go to the first screen of the recorded image. This is the oldest image recorded.

3.4.4. Last Data

Go to the last screen of the recorded image. This is the latest image recorded.

3.4.5. System Log

Find system log information such as System, Setup, or network.

SYSTEM LOG

① 08/16/2018 ~ 08/16/2018 ② SEARCH ③

☒ ALL ☒ SYSTEM ☒ SETUP ☒ NETWORK

1/1 DATE 08/16/2018

NO	TIME	USER	EVENT
1	02:49:55 PM	admin	End system setup
2	02:49:50 PM	admin	Start system setup
3	02:49:06 PM	admin	End system setup
4	01:17:49 PM	admin	Start system setup
5	01:17:47 PM	admin	End system setup
6	01:13:53 PM	admin	Start system setup
7	01:05:19 PM	admin	User login
8	12:13:09 PM	admin	System start
9	12:10:58 PM	admin	System shutdown
10	10:48:18 AM	admin	End system setup

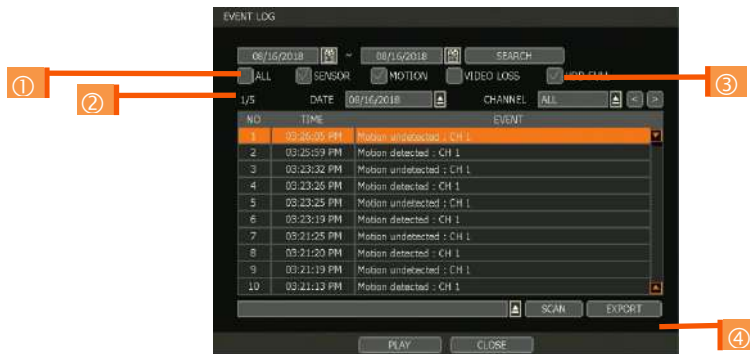
④ SCAN EXPORT

CLOSE

1. Select a start and end date to search.
2. Select the type of log to search (All, System, etc.). Users can search individual events or all logged events.
3. Click [SEARCH] to show the search results in the list.
4. Click [EXPORT] to copy the list to an external device such as a USB flash drive as a ".txt" file.
If Export is used, a file will be created and labeled as "system_date.log" on the USB flash drive.

3.4.6. Event Log

Find events such as sensor activation, motion detection, video loss, or HDD full.

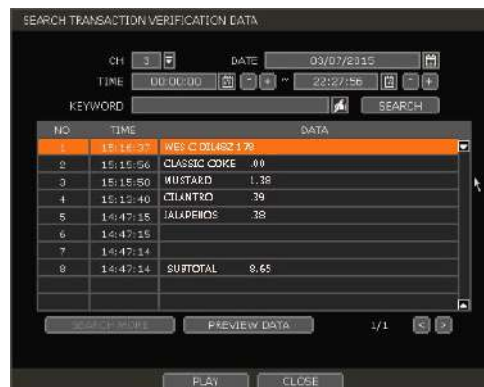


1. Select a date to search.
2. Select log type to search. Users can search individual events or all at once.
3. Click [SEARCH] to show the search results in the list.
4. Click [EXPORT] to copy the list to an external device such as a USB flash drive as a ".txt" file.

NOTE 50 records will be shown on one page. Click the arrow buttons (◀ ▶) to search the log records on another page.

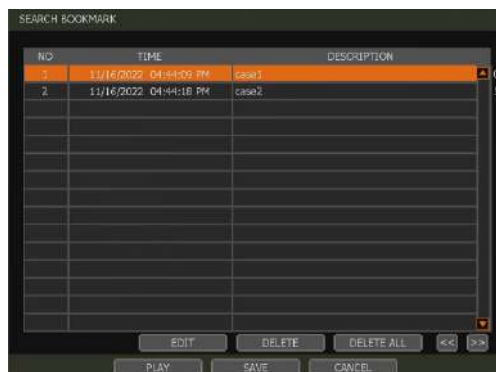
3.4.7. Transaction Verification

Search text from a Transaction Verification™ integration such as a POS device. Input the search information (channel #, date, time & keyword) and then click [SEARCH] to view search results. Enter a keyword to filter the results. Click [PLAY] to go to playback video and transaction data.



3.4.8. Bookmark

Bookmark search allows you to can check, modify and delete bookmarks. Select a bookmark from the search results list and PLAY to display the corresponding video image.



3.4.9. Preview Search

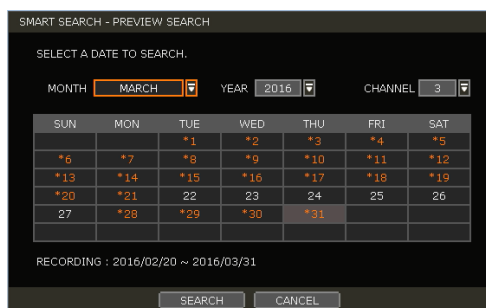
Users can search recorded video in split-screen mode by the hour or minute units. The Thumbnail search breaks down a day's worth of recorded video for a camera into 12 still images, one for each hour. You can then “zoom” into the hour to display images for every minute of that hour. To use Preview Search:

1. Right-click on the selected channel and go to Preview Search.
2. Select the date you wish to search. Days with recorded video will appear in orange.
3. Click SEARCH. The DVR will display 24 screen images (1-hour unit) of the channel on that day.
4. Select a preview thumbnail and click the Minute button to display 60 screen images (1-minute unit) on that hour.

Users can easily and instantly search large amounts of video for specific events with this preview search, allowing you to playback the recorded image of that moment.

The number of thumbnail images and size of each image can be increased/decreased up to a maximum 60 thumbnail images on a single screen.

In the preview search mode, the user can change the search date, the display unit (time/minute) and go to playback mode directly.

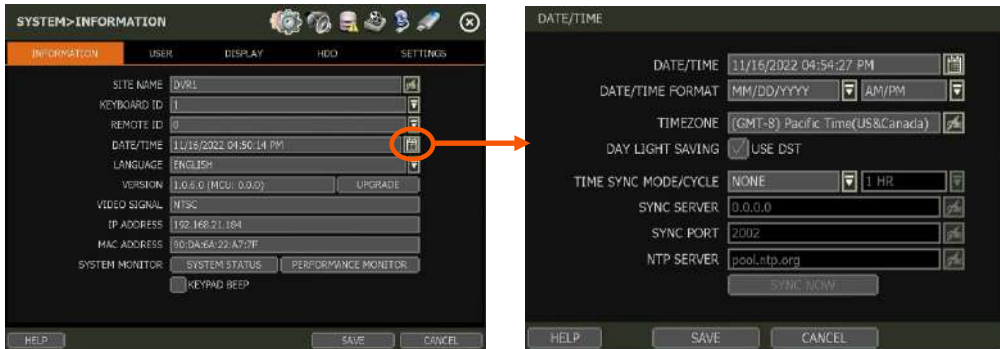


3.5 DST Setting and Image Playback

Daylight Saving Time (DST) starts at 2:00 AM local time on the 2nd Sunday of March and ends at 2:00 AM DST on the 1st Sunday of November. During DST, the DVR's clock will be adjusted according to the regional time zone. The DVR's time will shift one hour after DST starts and restore the time clock to normal after DST ends.

3.5.1. DST Setting

To enable DST on the DVR, go to SYSTEM > INFORMATION and click DATE / TIME . Select “USE DST” to apply the DST time change. (Select the proper Time Zone to activate DST).



3.5.2. DST Image Playback

When there is overlapped data due to DST, the overlapping hour will appear blue in the search bar during playback.



To playback data from the overlapped hour, select a time in the Intelli-search bar. A “Data Selection” message will appear. Select whether to play DST data or non-DST data.

4. DVR Settings Menu

General settings consist of “System”, “Device”, “Event”, “Record”, “Network” and “Export”. Each Setup menu consists of sub-menus and more categories.

To access the setup menu, click the  button in the menu bar or right-click anywhere on the screen and select MENU.



Main Classification	Sub Classification
SYSTEM	INFORMATION
	USER
	DISPLAY
	HDD
	SETTINGS
DEVICE	CAMERA
	AUDIO
	PTZ
	TRANS. VERI.
	KEYBOARD
ALARM	SENSOR
	MOTION ALARM
	EXTRA ALARM
RECORD	CAMERA
	SECOND STREAM
	RECORDING SCHEDULE
	QUICK SETUP
NETWORK	NETWORK
	DDNS
	NOTIFICATION
	MOBILE PUSH
	PATHFINDER
EXPORT	EXPORT

4.1 System

4.1.1. Information

Site Name

Enter a site name to differentiate the DVR from other sites/recorders.

Keyboard ID

Setup KEYBOARD ID to match the ID settings of a keyboard controller. The keyboard model and BAUD RATE must be setup in MENU > DEVICE > KEYBOARD (See Section 4.2.6 Keyboard).

Date/Time

Using the available options, manually adjust the date and time, select the display mode for the time and the date, and select the appropriate time zone. If applicable, check the “USE DST” box.

There are three types of time sync modes:

- **Server Mode:** The operating DVR is set as a time sync server, which can synchronize the time other DVR(s) are connected over the same network.
- **Client Mode:** Input the IP address of a designated DVR or PC running remote software as a time sync server in “SYNC SERVER”. The DVR’s time clock will be synchronized with the server by interval time set in the “TIME SYNC CYCLE”.
- **NTP Client Mode:** “pool.ntp.org” is the recommended NTP server. To activate, set the TIME ZONE of your local area and then click [SYNC NOW].

Language

Select the display language from the available options.

Version

View the DVR's current firmware version and update to a newer version via a USB memory stick or an FTP server connection.



CAUTION

Do not click CANCEL during firmware upgrade. It may cause severe damage to the system.

Settings may be changed to factory default. It is recommended to check the settings and operating condition of the DVR after the firmware upgrade.

Upgrading system using USB memory stick:

1. Insert a USB drive with the firmware file formatted by FAT/FAT32 in any USB port of the DVR (compatible with USB 2.0).
2. Select "USB" from the Method drop-down options and press the "Scan" button.
3. Once the system detects the USB drive, it will display the firmware file under "CURRENT VER" and the "NEW VER".
4. Click START to begin the upgrade process.

Upgrading system using DW's Automatic Firmware Upgrade via FTP server:

1. Select FTP in the drop-down options under "Method".
2. Enter the FTP's address: <ftp.dwcc.tv> and enter the username and password (these should be filled out automatically). Username: vmaxahd / password: vmaxahd.

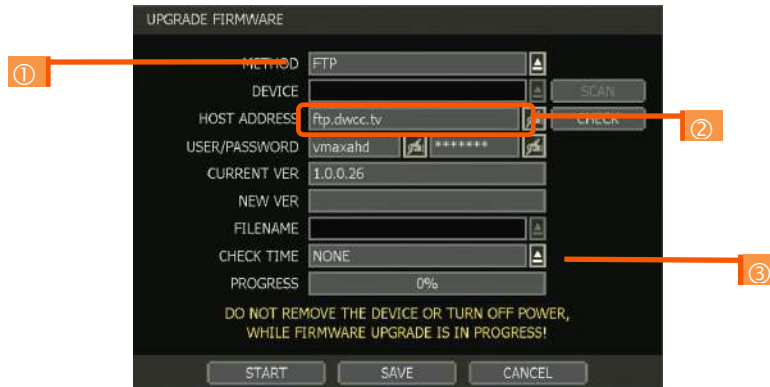
NOTE The FTP server address is subject to change without prior notice.

3. Enter the CHECK TIME. The system will automatically check the FTP server for newer firmware every day at a set hour.
4. Click OK to proceed with the automatic firmware upgrade. Once the firmware update is completed, the system will reboot.
5. Click CHECK to allow the DVR to connect to the FTP server and check the latest Firmware version. If new firmware is available, the DVR will ask you whether you want to upgrade it or not.
6. Click OK to confirm and click START to start upgrading.



To setup the DVR to check for new firmware automatically:

1. Select FTP from the METHOD drop-down options.
2. Make sure the FTP information is entered correctly (see section above).
3. Enter your convenient time at CHECK TIME and then click SAVE.

**Video Signal**

Check the right video signal (NTSC or PAL). Video images might heavily shake and blink if NTSC/PAL is not properly set.

IP Address

This shows the DVR's current IP address. It can be set at MENU > NETWORK > NETWORK.

MAC Address

This shows the unique identity number for the DVR.

System Monitor

Monitor the system performance and condition.

Keypad Beep

The user can turn on or off the beeping sound of the keypad.

4.1.2. User

The ADMIN user has full authority over the system setting and can change the system password or add/remove users and assign a different permission level to them.

NOTE The maximum number of users, including the administrator, is 16.

User Management

Admin users can control authorization for each function. This authorization is applied when the user connects to the DVR from remote software as well.



To add a user:

1. Click ADD.
2. In the new setup window, set the new user's ID, description, password and hint.
3. Select which functions and menu options the user will have access to by checking the box next to the corresponding functions.
4. In Live and Playback modes, only the selected channels are visible to the user.
5. To change the setting, select user and click EDIT.



To remove a user:

Select a user in the list by highlighting their name and click DELETE.

Login options:

1. If Auto Logon ON BOOT is enabled, the DVR will not request ID and password after power-up.
2. If AUTO LOGOFF is enabled, the DVR will log off the current user after the set time of inactivity.
3. If AFTER the LOGOFF option is enabled, the DVR will show Live screen or last screen mode.
4. LAST SCREENMODE - when enabled, the DVR will show the last screen that was showing if AUTO LOGOFF occurred
5. Setting authorized level at the remote software (C3 CMS). The level of authority for the user is linked between the DVR and remote software. If a user has been restricted in the DVR, those restrictions will also be applied when using the remote software.

4.1.3. Display

Set the sequence dwell time, display output resolution, mouse cursor size and OSD display options of the DVR.



Sequence

Set how long each channel will display when using the Sequence feature.

Display Resolution

The system supports the following kinds of resolutions:

- True HD: 2560x1440, 3840x2160 (4K), 1024x768, 1280x1024, 1920x1080
- VGA: Set the proper display output resolution for the display monitor; 1920x1080, 1024x768, 1280x1024

OSD

Select what information will appear over the display by checking the corresponding boxes.

Screen Saver

The screen saver feature protects the screen and data of the DVR by turning off the display after a set time of inactivity. Set the screen saver's waiting time for when the display output will automatically turn off. Set in between 1 minute and 180minutes. If applicable, select to log off the current user when the screen saver is on.

Channel Swap

Enable to allow swapping the camera channel positions in the viewing area with drag-and-drop.

4.1.4. HDD



HDD Full

When an HDD is full, select whether to “Overwrite” or “Stop recording”.

- Overwrite: DVR deletes the oldest data and record new data.
- Stop recording: DVR stops recording when storage is full.



HDD Check

Click CHECK next to each HDD to open the health check window. See full information for each HDD such as model name, serial no, capacity, bad sector ratio, lifetime (used time) and temperature.

WARNING

To achieve high-level system stability, a warning message of elevated temperature will pop up when the temperature inside the system exceeds the best range. This problem may be driven by the malfunction of ventilation fans. In such an event, inspect if the DVR cooling fan is properly working or if the environmental temperature around the DVR system is managed.

HDD Format

When the new HDD is installed or there seems to be a problem with the HDD, formatting the storage drive is recommended.

If system resources are occupied such as during a network connection while the HDD format is in process, the formatting may fail. Reboot the system to release system resources and then try to format again.

Select the HDD to format by checking the check box next to the HDD name and pressing the format button. To format an HDD, enter the username and password.

NOTE

1. It may take a few minutes to format an HDD.
2. When the format is done, all data in the HDD will be deleted.
3. The system always reserves some space in each built-in HDD to effectively utilize archiving memory.

NOTE

1. There is an e-SATA port on the rear panel of the DVR.
2. It is for applying additional HDD for recording only(not for backup).
3. It doesn't support Hot Plug, so it order to be recognized normally, DVR must be rebooted after connection.
4. If the external device supports RAID, it is required to check if it is recognized as a normal HDD when the RAID is released.

4.1.5. Settings**Product Registration**

The administrator can register contact information to expedite DW technical support for the DW server.

Startup Wizard

Manually launch the DVR Startup Wizard.

Factory Default

Reset the system back to its factory default configuration. Once the factory default is done, all the configurations will be deleted and the system setting will return to its original factory default. The recorded video will not be deleted.

Export/Import

Copy the system configuration values from this DVR to save for your records or copy them to another DVR.

- Export: Copy the settings of this system to a USB memory device.
- Import: apply settings from another DVR via a USB memory device.

NOTE

During the Import process, make sure that the F/W version of the sourced DVR is the same as the target DVR's

4.2 Device

4.2.1. Camera

Set each camera's title, covert channel settings, privacy masks and general camera adjustments.



LITE

In cases where a camera with 2560x1440 resolution or higher is in use, adjust the resolution to increase the frame rate. (*This function is only activated when the resolution is 2560x1440 or higher.)

Group REC.

You can assign each camera to a group (A, B, C, or D). Cameras in the same group will have the same recording settings when an event occurs. For example, if CAM 1-4 are assigned to Group A, and an event is detected on CAM 1, all cameras under Group A will record as if they detected the event as well.

Title

Enter a name to distinguish each channel on your recorder.

Covert

Also known as a hidden camera, covert status hides the camera's display in Live and playback as if no camera was connected to the channel. Covert settings apply to both Live and Playback views in both the DVR and remote software.

Adjust

Set the camera's brightness, contrast, color, etc. Settings available under ADJUST depend on the camera's model and features. Click SET in the ADJUST section to get into the setup screen.

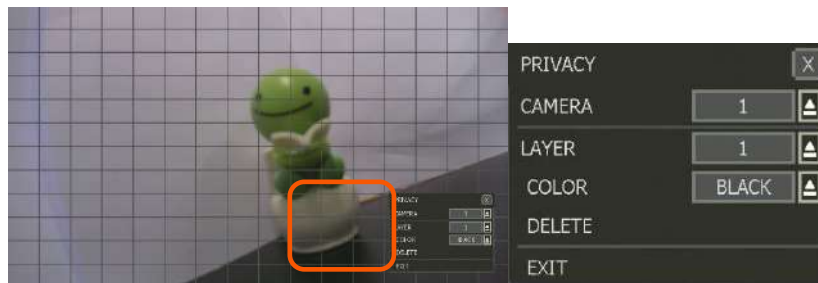
- Adjust the applicable options using the drop-down menu options.
 - Click DEFAULT to set the camera's option as a default value.
 - Click SET A or SET B to change the camera setup value quickly.
 - APPLY ALL makes all channels have the same value.
 - Click SAVE to save the changes.
 - Click EXIT to exit the menu.



Privacy Mask

Hide specific areas in the camera's Field of View (FoV) in Live and playback mode. Please check that your camera supports this feature.

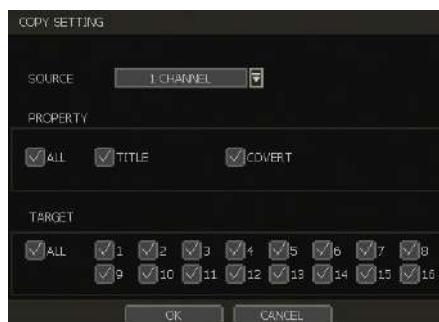
1. Click SET to configure a privacy mask.
2. Using the popup menu on the bottom right, select where to place the privacy mask, select a color and index number to assign to it. Click SAVE to save the changes and EXIT to return to the main setup page.



Copy Setting

To apply the settings to all cameras connected to the DVR, click on the Copy Settings button:

1. Select the channel to get the setting.
2. Select the property (title or covert) to copy.
3. Select the target channel(s) to apply the settings. Click OK to apply the setting to all the other selected channel(s).



4.2.2. AUDIO

Select an audio input and output during Live display and match it to a specific channel. The number of audio channels may differ depending on the DVR model. Users can hear audio sound under both Live display and playback mode depending on the system setting.

- **AUDIO:** Activate and designate camera channels for audio input capture. To hear audio, an audio output device must be connected to the DVR or be viewed using the Web Viewer.
- **LIVE:** Activate for live audio output when listening through a connected speaker. An audio output device must be connected to hear audio from the DVR. Full screen the channel to hear video while viewing in Live Mode.
- **USE 2-WAY AUDIO:** Enable to allow two-way audio for connected devices.



4.2.3. PTZ

Full control of the PTZ camera is available on this menu. Please refer to Section 3.2.4 PTZ Operation for more information on running a PTZ camera.



Protocol

Select the proper protocol of the connected PTZ camera. If the PTZ camera is connected by UTC-type protocol, the baud rate and address setup are disabled.

Baud Rate

Select the baud rate level from 2,400bps up to 57,600bps. (Not supported in UTC type protocol).

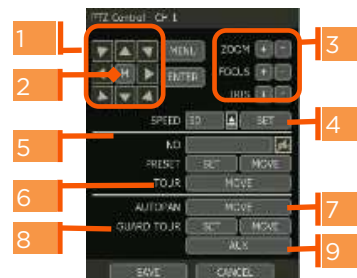
Address

Set the PTZ driver address of the connected camera. It should be the same as that of the PTZ. (Not supported in UTC type protocol).

Control (The functions depend on the camera's model and supported features)

When the PROGRAM button is selected, the OSD menu of the camera will appear on the monitor. Set the PTZ's speed, preset, tour, auto-pan, etc.

- **Direction buttons:** move the camera up, down, left, and right.
- **M (depends on PTZ model):** Show/ hide the camera's OSD menu on the DVR monitor. Use the directional arrows to navigate the menu options.
- **Zoom, focus and iris:** Control IN (+) and OUT (-) for each function. (Depending on the camera's model and supported features).
- **Speed:** Change the PTZ speed (0-100). This sets the speed at which the camera will move when controlled from the DVR using the virtual joystick. Save the changes by clicking SET.
- **Preset:** Select the PTZ preset position that was created for the PTZ camera.
 - Add: Move the camera's position and zoom to the desired position. Select the preset number using the  button. Press ADD to save the new preset. (The system supports preset the number of presets from 1 to 255.)
 - Delete: remove the preset currently selected.
 - Move: Enter a present number and press Move to move the camera to the preset position of that number.
 - Tour: Set the camera to move between preset positions in order. The camera will keep running the tour until it manually is disabled.
 - Auto-pan: Set the camera to move 360° in one direction. The camera will keep running the auto-pan until it manually is disabled.
 - Guard-tour: Set the camera to move between selected presets in a set order and interval. The camera will keep running the guard tour until it is manually disabled.
 - Set: Set the time interval (in seconds) and select the preset position. Add to sequence by clicking  button. The preset will appear in the sequence column showing the preset number and the set interval time.
 - Delete: To remove a preset position from the sequence, select the preset in the Sequence column and click the  button.
 - Move: Start the guard tour.
 - Home: Set the camera to move to an original position memorized by the camera.



In case the PTZ is directly connected to the rear panel of the DVR, the user can control additional settings such as power, light, wiper and pump, etc. through the AUX control button ().

4.2.4. PTZ (UTC Connection)

The DVR supports connection and control of cameras up the coax (UTC). This means you can control a camera's OSD settings and movement (on PTZ cameras) with no need for more cables.



Protocol

If the PTZ camera is connected via UTC, select the UTC protocol of the connected PTZ camera. Please check the camera protocol type before connecting.

HD-A(C) TYPE

Some HDA cameras which not detected on the HD-A / HD-TVI, apply this protocol HD-A/HD-TVI TYPE: In case of menu-enter is worked preset 95 or IRIS, the connection is auto-detected.

HD-TVI(C)

Some TVI cameras which non-detected on the HD-A / HD-TVI, apply this protocol Control (The functions depends on the camera's model and supported features): When the PROGRAM button is clicked, the control menu of the camera will appear on the monitor. Show the camera's OSD menu on the screen and setup the camera's configuration.



: Show the camera's OSD menu for setup and adjustment.



: Move to menu options.

: Adjust the camera settings.

 **ENTER**: Select the camera settings or enter to submenu.

To use UTC in the Live mode:

1. Select the single channel which adjusts the camera setup and changes the PTZ control mode.
2. Click the right button of the mouse on the Live screen and select PTZ for activating UTC.
3. Click the CONTROL button and open the control menu and then activate the OSD menu and setup the camera.



4.2.5. Transaction Verification Settings

TRANSACTION VERIFICATION equipment can be connected to the DVR through an RS-232 port or LAN.



No.

Port Number of the Serial connection. For example: NO1 = COM1, NO4 = COM4.

Cam

Assign a camera to the transaction verification device.

Type

Connection type between DVR and transaction verification device.

Protocol

Communication protocol between DVR and transaction verification device.

Save

Enable or disable the DVR to save the transaction data.

Show

Enable or disable the DVR to display the transaction data.

Setup

Click to open the Transaction Verification Settings menu which includes:

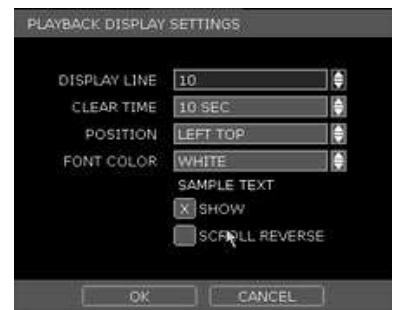
- **NO:** ID# of transaction verification device.
- **Camera:** Select the camera to assign to the transaction verification device.
- **Type:** Select COM (RS-232) or TCP/IP (LAN)
- **Device IP:** Input the IP address of the transaction verification device when it is connected through the network.
- **Protocol:** Communication protocol between DVR and the transaction verification device.
 1. Text-in: Receive ASCII characters.
 2. SDVR-POS: Manufacturer's protocol.
- ❖ Contact your transaction verification dealer for information.
- **Start character:** Input the assigned character to start display and save. If there is no input, the system will display and save all data without classification per transaction.
- **End character:** Input the assigned character to terminate the display and save. It must have a start character to work correctly.
- **Line break:** Set the line change character. (It should be 16 digits HEX Value.)
 1. CRLF, CR, LF: The character that is generally used in ASCII-type transaction verification. (Please contact the transaction verification manufacturer for the detail.)
 2. Custom: It can be used except for the above general character. Only numbers (0~9) and the alphabet (A ~ F) can be used and even numbers should be input. For example Hexadecimal: 0x0D 0x0A → 0DOA
- **Save:** Save the transaction verification data.



Live Display Settings

- **Display line:** Set the number of lines to display on the screen.

- **Clear time:** Set the time to display text on the screen. Data will be deleted from the screen if no new data is entered after the set time. If it is set as "0", the data will not be deleted (If there is a start character and the character is input, current data will be deleted regardless of the clear time setting).
- **Position:** Designate the display position of transaction data.
- **Font color:** Select the font color which will be displayed on the screen. It will be displayed with the color that is shown on the SAMPLE TEXT.
- **Show:** Select to display transaction data in Live mode.
- **Scroll reverse:** Select to change the direction of scrolling. If it is selected, you can scroll from the bottom to the top, the latest data is displayed on the top.



Playback Display Settings

- **Display line:** Set the number of lines to display on the screen.
- **Clear time:** Set the time to display text on the screen. Data will be deleted from the screen if no new data is entered after the set time. If it is set as "0", the data will not be deleted (If there is Start Character and the character is input, current data will be deleted regardless of the Clear Time setting).
- **Position:** Designate the display position of transaction data.
- **Font color:** Select the font color which will be displayed on the screen. It will be displayed with the color that is shown on the SAMPLE TEXT.
- **Show:** Select to display transaction data in the playback mode.
- **Scroll reverse:** Select to change the direction of scrolling. If it is selected, you can scroll from the bottom to the top, the latest data is displayed on the top.

Port Setup

Open the setup screen for the communication port

- **Type:** Setup the type of communication port.
 - **Serial:** It is for a 1-to-1 connection between the DVR and transaction verification device without serial mux.
 - **Mux:** It is for a 1-to-Multi connection between the DVR and transaction verification device.
- **Baud rate:** Set the baud rate according to the transaction verification device.
- **Parity:** Set parity according to the transaction verification device.
- **Data bit:** Set the data bit according to the connected transaction verification device.
- **Stop bit:** Set the stop bit according to the connected transaction verification device.
- **TCP/IP PORT:** Set the TCP/IP port number.



4.2.6. Keyboard

When an external keyboard is used, select the model and corresponding baud rate from the drop-down options. The baud rate must match the one set in the keyboard itself. Make sure the Keyboard ID in the SYSTEM> INFORMATION setup page matched the one set on the keyboard.

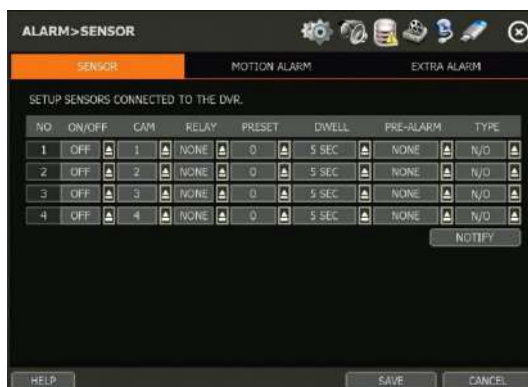
- **KEYBOARD CONTROLLER:** Select the keyboard model.
- **BAUDRATE:** Select the corresponding baud rate used to communicate with the keyboard. The baud rate must match the one set in the keyboard itself.



4.3 Alarm

4.3.1. Sensor

Users can install multiple sensors on the system to get the pre and post-alarm recording and intensive recording function as well.



On/Off

Turn on or turn off the sensor.

Cam

Select the associated camera.

Relay

Select the associated alarm output.

CAUTION

Relay contacts can stand up to 24V/1A. In case it is connected to the external circuit which is over 24V/1A, it can cause a problem in the system.

Preset

Set a PTZ camera to move to a preset position when the sensor is triggered.

Dwell (post-alarm)

Set the recording period from when the sensor is activated. During this period, the selected camera will record according to the record-setting. The recording stops and the alarm output is turned off when the set period is completed.

Pre-Alarm

Set the recording period in seconds just before a sensor is activated. Input up to 5 seconds. The pre-alarm recording mode is always continuous at the recording speed set in the RECORD menu.

Type

Select the sensor type as N/O (Normal Open) or N/C (Normal Close). The circuit of a N/O sensor type is usually open, and the activation of the sensor occurs at the time of close, and the N/C type works the reverse way.

NOTE

Check the setting of the sensor type (N/O or N/C). It is recommended to use the "dry contact type" while the "wet contact type" may cause damage to the system.

Notify

Enable sensor notification via a buzzer sound and/or a pop-up warning.

NOTE

When “camera pop-up” is enabled, in a multi-screen mode, the system will switch to single-channel mode automatically when the alarm is triggered.

4.3.2. Motion Alarm

Setup the DVR to start recording when motion is detected. The system can also trigger an alarm signal via the selected sensor-out channel.

**On/Off**

Turn on or turn off the motion.

Relay

Select related output.

CAUTION

- Relay contacts can bear up to 24V 1A other devices. If it is connected to a power of more than 24V 1A, the system may have a problem with it.

Dwell

Set sensor operation time between 1 second and 15 minutes.

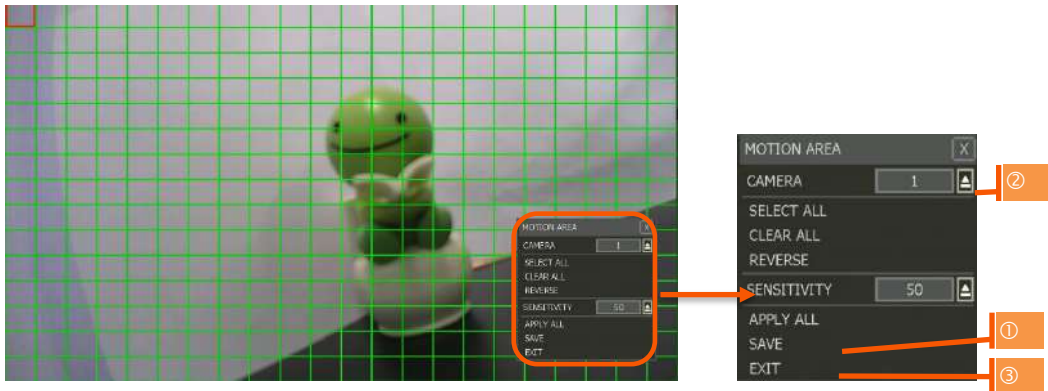
Pre-Alarm

Set the recording period in seconds just before motion is detected. Input up to 5 seconds. The pre-alarm recording mode is always “continuous” at the recording speed that the user sets in the “Record” menu.

Motion Area

Set the camera’s motion area and sensitivity. The area can be selected by clicking on a specific block or dragging the mouse’s cursor across the screen to select multiple blocks. Areas where motion detection is activated, will appear with a green borderline. Unselected areas will be shown with a grey border.

- Click SET in the MOTION AREA section to set the area.
- Select the motion detection area and click SAVE and then EXIT to save the changes.
- Clicking on SELECT ALL will enable motion detection in the entire camera’s FoV.



NOTE Motion detection area and sensitivity should be set, properly, in consideration of the actual motion that happened at the site.

Notify

Enable motion notification via a buzzer sound and/or a pop-up warning.

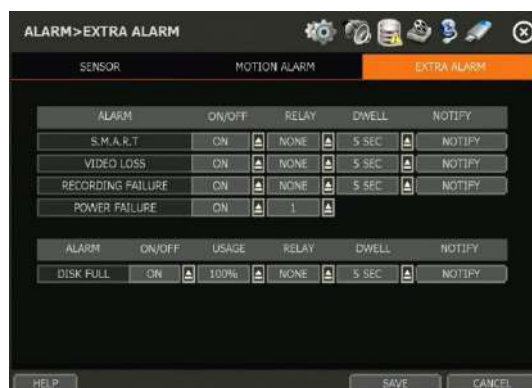
Copy Setting

To apply the settings to all cameras connected to the DVR, click on the Copy Settings button:

1. Select the original channel that the setting is being copied from.
2. Select the property(s) to copy.
3. Select the target channel(s) to apply the setting.
4. Click OK to apply the setting to all the other selected channel(s).

4.3.3. Extra Alarm

Setup alarms for more DVR abnormalities such as smart HDD check, video loss, recording failure, power failure and disk full.



S.M.A.R.T.

Trigger an alarm signal when HDD is about to be out of operation. Please refer to “4.1.4 HDD” to check the HDD status.

Video Loss

Trigger an alarm signal when a camera signal is disconnected.

Recording Failure

Trigger an alarm signal when the system does not record images due to an error in HDD or system.

Power Failure

Trigger an alarm signal when the power does not work normally. When the power failure menu is activated, relays from other menus will be disabled.

Disk Full

Trigger an alarm signal when the HDD is occupied with a certain percentage of its capacity. If the user sets HDD FULL as STOP RECORDING and the HDD is occupied with the certain percentage set here, DVR stops recording and the alarm trigger.

NOTE An extra alarm will appear in the event log only when it is set as “ON”.

4.4 Record

4.4.1. Camera

Users can make recording settings for each channel separately.



On/Off

Set recording on and off in each channel. If the recording is not required on the selected channels, even when the camera signal is input, set the recording of the corresponding channel as OFF. Then, the recording of the channel stops without pulling the camera BNC cable off. ON or OFF can be selected. The default is ON.

Resolution

Image resolution for recording can be set. Select one setting from 352×240, 720×240, 720×480, 960×480, 1280×720 & 1920×1080. As the resolution number increases, the picture quality becomes higher. For example, 352×240 is VHS level and when a high-quality camera is used, 960×480/576 shows DVD-level picture quality. When the picture quality gets higher, the recording file size becomes bigger and the recording period will be shorter. Thus, selecting an appropriate resolution according to the situation is important.

LITE

In cases where a camera with 2560x1440 resolution or higher is in use, adjust the resolution to increase the frame rate. (*This function is only activated when the resolution is 2560x1440 or higher.)

FPS

Set frame for each channel. The system automatically calculates the remaining FPS.

Quality

Set recording quality from 512K ~ 4M.

Audio

Select the associated audio channel.

CODEC

Set the recording codec. (H264 or H265)

Copy Setting

To apply the settings to all cameras connected to the DVR, click on the Copy Settings button:

1. Select the channel to get the setting.
2. Select the property (On/off, FPS, Quality) to copy.
3. Select the target channels(s) to apply the settings. Click OK to apply the setting to all the other selected channels(s).

**4.4.2. Second Stream**

Set the frame rate and resolution for the second stream to effectively manage recording image quality and network traffic. For example, the user can make the recording setup as “30fps at 1080P resolution” while the network setup is “7fps at CIF resolution”.



Resolution

Select the resolution to be transmitted. The higher resolution requires a bigger network bandwidth due to its data size.

FPS

Select the frame rate to be transmitted. It is not related to the recording settings.

Quality

Select the image quality to be transmitted. It is not related to the recording settings. The higher quality requires a bigger network bandwidth due to its data size.

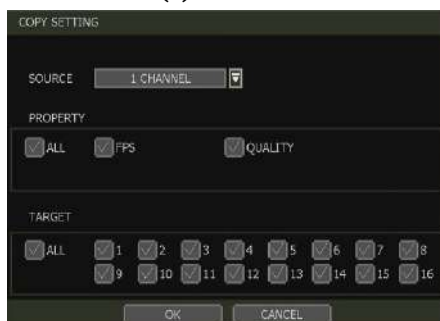
Audio

Select On or off to transmit audio or not.

Copy Setting

To apply the settings to all cameras connected to the DVR, click on the Copy Settings button:

1. Select the channel to get the setting.
2. Select the property (FPS or Quality) to copy.
3. Select the target channels(s) to apply the settings. Click OK to apply the setting to all the other selected channels(s).



4.4.3. Recording Schedule

Set a recording schedule for each camera. Select the camera to set a schedule or ALL. Recording can be set by each hour from 00 through 23 a day, for all days of the week. You can also setup a special recording mode for holidays.



No Color (Off)

No recording. Even though recording frames are set in the CAMERA setup menu, the system will not record anything if OFF is set in the schedule table.

Yellow (Continuous Recording)

Record all the time as set in the CAMERA settings.

Green (Motion-Detection Recording)

The system records only when motion is detected.

If EVENT > MOTION ALARM is disabled, the system will record when motion is detected but the motion alarm will not be activated.

Orange (Sensor-Activated Recording)

The system records only when a sensor is triggered as set in the EVNET > SENSOR menu.

If EVENT > SENSOR is disabled, the system will record when a sensor is triggered but the sensor alarm will not be activated.

Sky blue (Continuous + Motion Detection Recording)

The system records continuously as set by the RECORD > CAMERA menu.

When motion is detected according to the settings in EVENT > MOTION ALARM, the DVR will switch recording mode to motion configuration.

If EVENT > MOTION ALARM is disabled, the system will record when motion is detected but the motion alarm will not be activated.

Brown (Continuous + Sensor-Activated Recording)

The system records continuously as set by the RECORD > CAMERA menu.

When a sensor is triggered according to the settings in EVNET > SENSOR, the DVR will switch recording mode to motion configuration.

If EVENT > SENSOR is disabled, then the system will record when a sensor is triggered but the sensor alarm will not be activated.

Pink (Motion Detection + Sensor-Activated Recording)

The system records only when motion is detected AND when a sensor is triggered at the same time. If both EVNET > SENSOR and EVENT > MOTION ALARM are disabled, the

system will record when a sensor is triggered and motion is detected but neither sensor nor motion detection alarms will be activated.

NOTE

- In case the recording schedule is set to “CONT + MOT” or “MOT + SENS”, the system records by continuous or motion detection mode in normal operation. When motion occurs in the motion area or the alarm is activated, recording mode will switch to recording as set by MOTION ALARM or SENSOR in the EVENT menu.
- Dark Blue Color: The data recorded during DST (Daylight Saving Time) will be indicated in dark blue color in the Intelli-search bar on playback mode.

Holiday Setup

Setup specific days as holidays to assign a special recording schedule for those days. The system supports up to 32 holidays.

Press the DATE button (📅) write a description, and press ADD to save the data as a holiday.

**NOTE**

Instant recording (emergency recording)

In the case of an emergency, the user enables instant recording by pressing the panic recording button in the menu bar. The system will instantly start recording all the channels with a full-frame rate at the maximum resolution regardless of the recording mode setting. **E-REC** will appear in Live mode and a red-colored bar is shown in the time search bar for video recorded by instant recording.

Emergency recording can only be toggled ON/OFF from the Tool Bar in Live view locally on the system.

Record 1fps Continuous with “CONT+” Mode

Check the box to set continuous recording to 1FPS when selecting “continuous + xx” modes.

Limit Emergency Recording Time

Set a limit to how long the system will record in emergency recording mode. Select from 30sec/60sec/90sec/2min/5min/10min.

4.4.4. Quick Setup

Users can setup the whole channel's recording setting and second stream at once.



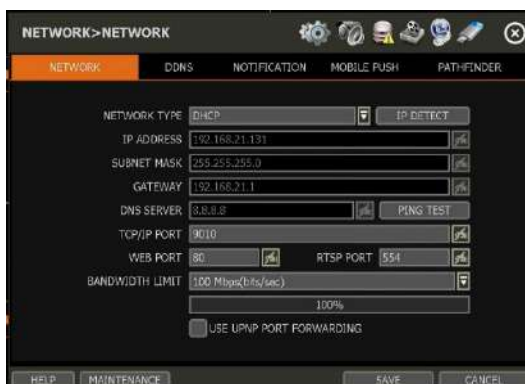
- Users can setup recording resolution, FPS, quality and mode on recording settings.
- And user can also setup network resolution and FPS. Quality and audio on the second stream setting.

NOTE If LITE is ON under **DEVICE > CAMERA**, QUICK SETUP cannot be used.

4.5 Network

DVR can be connected to the network or Internet through either fixed IP or dynamic IP by proper setting of the DVR and router.

4.5.1. Network



Network Type

Select either STATIC IP (to manually set IP address) or DHCP (for dynamic IP address).

- DHCP is initially selected by default. The DVR will be prompted to retrieve an IP address through the network if the recorder is connected to the network router. You may manually request an IP address from the router by clicking the “IP Detect” button.
- If Static IP is selected, manually enter all necessary network settings. It is recommended to use the DHCP Network Type for the DVR to be assigned an IP address and Gateway address from its local network router. Change the Network Type to STATIC to manually apply additional network settings.” – additional network settings include the DNS Server, TCP/IP Port, and Web Port settings that may need to be altered from the default settings.

IP Address

Displays the DVR’s IP address. If DHCP is selected, you can use the “IP Detect” function to automatically adjust the IP address to match the network’s requirements. You can manually change the IP address as needed, but only when using the STATIC Network Type.

Subnet Mask

Subnet mask address classifies the subnet that the system belongs to. For more information, please consult your network administrator or your internet provider.

Gateway

This is the IP address of the router or gateway server. It is required when connecting to the DVR through the external router over the internet (from another network). For more information, consult your network administrator or your internet provider.

DNS Server

Enter the IP address of the Domain Name Server. You should input the DNS server information to use DDNS, Email notifications and the NTP server. For more information, please consult your network administrator or your internet provider.



TCP/IP Port

Input the port number that is used for connecting mobile devices to the DVR (Default – 9010). If your ISP is blocking port 9010, please use a different, available port value (ex. 9020). Port forwarding with your ISP may be required for direct connections over the Internet.

Web Port

Input the port number that is used for connecting with the DVR from a web browser (Default – 80). If your ISP is blocking port 80, please use a different, available port value (ex. 8080). Port forwarding with your ISP may be required for direct connections over the Internet.

RTSP Port

Input the port number that is used for connecting to RTSP. (Default – 554)

- Main Stream : rtsp://{IP ADDRESS}:{rtsp port}/main/ch{number}
- Sub Stream : rtsp://{IP ADDRESS}:{rtsp port}/sub/ch{number}

Bandwidth Limit

Depending on the setting made by the user, the system can control the data volume transmitted over the network ranging from 25 kbps up to 1Gbps. This function is effective, especially under narrow bandwidth network conditions or when the user wants to limit “network bandwidth occupied by video transmission” to a certain level. The default is 100 Mbps.

UPnP (Universal Plug and Play) Port Forwarding

If in case of UPnP supported router, the DVR will port forward automatically after communicating with the router without the need for complicated port forwarding setup at router.

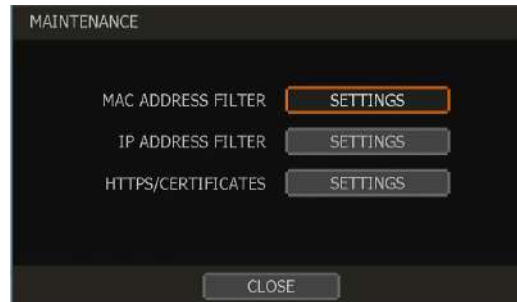


Once the PC discovered the DVR, double-click on the icon to open the DVR's web client. Enter your User ID and Password to log in and click “Connect” to connect.

NOTE The maximum number of simultaneous connections is 10 users.

MAINTENANCE

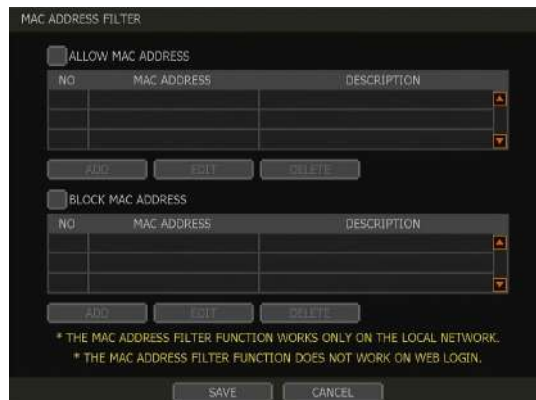
Setup the Mac address filter, IP address filter and HTTPS certificate.



MAC ADDRESS FILTER

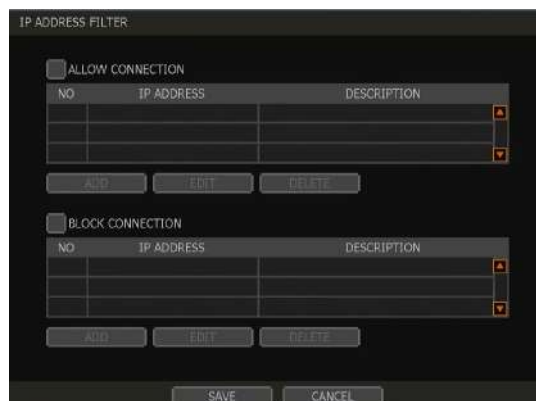
Blocks or allow specific Mac addresses from a C3 client or mobile app from accessing the DVR.

NOTE This function works only on the local network and will not work in the web interface.



IP ADDRESS FILTER

This function allows or blocks a specific IP address. When the user registers a specific IP address to allow, only that address can access the module. Or when the user registers a specific IP address to block, that address can't access the module. This function is not working on web Login.



HTTPS/CERTIFICATES

An HTTPS connection is recommended when accessing the DVR remotely, from another network. An HTTPS connection offers secure access through encrypted communication. The user must register a certificate for an HTTPS connection. The DVR supplies two registration methods:

- Self-signed certificate: generate a certificate at the DVR.
- External certificate: register a certificate issued through an accredited authority.

To register a self-signed certificate, navigate to:

NETWORK>NETWORK>MAINTENANCE>HTTPS/CERTIFICATES

Click 'Generate' and fill out the information needed. Fields marked with an '*' are mandatory.

The image shows two screenshots of the 'HTTPS/CERTIFICATES' configuration screen. The left screenshot shows the 'Generate' button and the 'Import' button. The right screenshot shows the 'Generate' button and the 'Import' button.

Left Screenshot: HTTPS/CERTIFICATES

- HTTP ☒ USE HTTP
- HTTPS ☒ USE HTTPS
- HTTPS PORT: 443
- SELECT CERTIFICATE: ---
- CERTIFICATE: GENERATE, IMPORT
- Buttons: SAVE, CANCEL

Right Screenshot: HTTPS/CERTIFICATES

- CERTIFICATE NAME: *
- VALIDITY(DAYS): 365
- COUNTRY: US
- STATE OR PROVINCE: *
- LOCALITY: *
- ORGANIZATION: *
- ORGANIZATION UNIT: *
- COMMON NAME: 192.168.0.4
- RSA: 4096
- SHA: 256
- ALTERNATIVE HOSTNAME 1: *
- ALTERNATIVE HOSTNAME 2: *
- ALTERNATIVE IP: 192.168.0.4
- Buttons: SAVE, CLOSE

Note The DVR's time zone must be set BEFORE generating the certificate. The time on the DVR and network must match. Skipping this step may impact the validity of the generated certificate and the application time may vary.

When generating a self-signed certificate, a warning may appear when using an HTTPS connection because this certificate is not authenticated through an official authority. There is no problem with encrypted communication whether you register the certificate to the PC or continue with the warning ignored. To access the DVR via an HTTPS connection without the warning, you can import and use the certificate issued through an accredited certification authority.

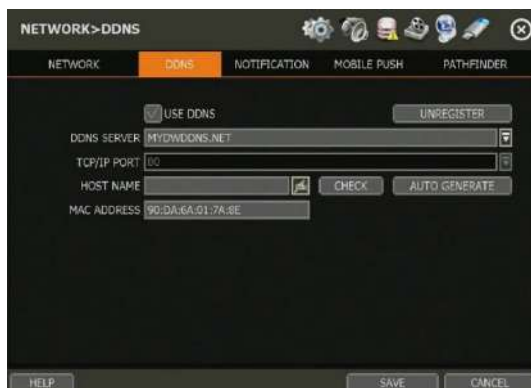
To register an external certificate, click 'Import'. Locate and upload the certificate from a USB stick.

4.5.2. DDNS

User can use the DDNS server provided by Digital Watchdog (MYDWDDNS.NET) to connect with the DVR remotely.

DDNS Server

Digital Watchdog offers free and dependable DDNS service support. This allows you to assign the DVR a URL address rather than a long-complicated IP Address. This simplified the connection process to the DVR. The DDNS service is supported by DW® and is free of charge for our customers.



To set up DDNS, configure the following information then click the [SAVE] button.

- **Use DDNS:** Check this box to enable the use of DDNS address for remote communication with the DVR.
- **DDNS Server:** Select “MYDWDDNS.NET”
- **TCP/IP Port:** The default is 80. You do not need to change this setting if you are using the DDNS service provided by Digital Watchdog. Use the port information from the *Network* menu.
- **Host Name:** Assign a domain name for your DVR (Ex. DVROFFICE). If the domain name is unavailable, a message will pop up when you click [CHECK]. A random hostname can be automatically assigned by clicking [AUTO GENERATE].

IP Mapping and External IP

If you are using IP Mapping and Port Forwarding (e.g., using a router for Internet connection), enable both [Use Device IP Mapping] and [Use External IP] for proper connection.

Setting at the remote software (C3™ CMS)

In the menu of Site List Add/Edit, input DDNS Address and Port number.

- The address of the DDNS server is “mydwddns.net” and the Port is “80”.
- Setting at a web browser: The user can type the DVR's mac address + MYDWDDNS.NET. If you are using a subdomain name, type the domain name + MYDWDDNS.NET.
 - Example 1 - If Mac address is “00:1C:84:01:00:02” → input as “http://001c84010002.mydwddns.net”
 - Example 2 - If the domain name is “DVROFFICE” → input as “http://DVROFFICE.mydwddns.net”

4.5.3. Notification



Remote Notify

The system can send an alarm message to a remote viewing software by using the IP address of the hosting PC.

Select REMOTE NOTIFY to use this function and set the IP address & events.

- **IP Address:** Input the IP address of the PC hosting the remote viewing software that will be receiving the event notifications.
- **Port:** (Default is 8003) Input Port number which is set at the remote PC.
- **Event:** Select which events to be notified about. If "ALL" is selected, all events will trigger a remote notification.



Email Notify

The system can send a notification to an email address.

Select EMAIL NOTIFY to use this function and set your email address and events

- **Email:** Input the email address which will receive the event notifications.
- **Event:** Select which events will trigger notifications. If "ALL" is selected, all of the events will trigger a notification.
- **SNAPSHOT NOTIFY SETUP:** Select camera channels to include live snapshot images of selected channels to the email address. Set the dwell time between camera image captures.
- **VIDEO CLIP ATTACHMENT:** Select to include a short video clip with the email notification when either a sensor or motion detection (CAMERA ALARM) has triggered the notification. The event type must also be selected.



Notification Settings

- **OUTGOING MAIL SMTP SERVER:** Input the SMTP server that is being used to send the

notifications. Check with your email service provider for SMTP server information.

- **YOUR EMAIL ACCOUNT USER NAME:** Input the username or email address from which the notifications will be sent.
- **YOUR EMAIL ADDRESS:** Input the email address of the account that will be used to send the email notifications.
- **OPTION:** Set the authentication method supported by the server. There are 'None/Use Plain Auth/No Auth' options.
- **Use SSL AUTHENTICATION.** Enable this setting if the SMTP server requires SSL authentication (e.g. Gmail, Yahoo, etc.). Check with your email service provider for more information about authentication requirements.
- **PORT:** Input the port number that will be used for email sending. Check with your email service provider for more information on the port that is used for SMTP.
- **PASSWORD:** Input the email password to the account that is being used to send the notification emails.
- **INTERVAL:** For email notification, select how frequently the system will be allowed to send out an update email.
- **EMAIL TEST:** Click to check if the settings were entered correctly. The DVR will send a test email and inform you of the result. Depending on the email service, the SMTP server may not send an email confirmation if the email was received.
- Check the box next to each channel you want to receive Snapshot Notify alerts for. Check the ALL box to get alerts for all channels.
- Select the time interval for alerts from the drop-down menu.
- Please note that email notifications must be setup to receive Snapshot Notify alerts.

NOTE RECORD > SCHEDULE should always be configured before notification settings. The system will not email alarm messages if these recording settings are not setup first in the DVR's recording schedule. To receive motion and sensor email notifications, set the SCHEDULE > RECORD, EVENT > MOTION ALARM and EVENT > SENSOR accordingly.

4.5.4. Mobile Push

The system can send an event notification to the mobile device registered with the DVR. The mobile app VMAX Plus™ must be installed on your smartphone device and the DVR site must be added to the mobile application before registration for mobile push notifications can occur. The “USE PUSH CHECK” setting must be enabled in the VMAX Plus application for the DVR site.

When the mobile device is registered to the DVR correctly, it will appear in the Mobile Notify list, alongside a unique Device ID for the registered mobile device.

- **USE MOBILE NOTIFY:** Enable this setting to use mobile push notifications.
- **EVENT:** Select the event to notify.
- **DELETE:** To delete a listed mobile device, select the device then click the ‘Delete’ button. The USE PUSH CHECK setting in the VMAX Plus mobile application will then also be disabled.



-
- NOTE**
1. The Mobile Push Notification function is available for iPhone, iPad & Android devices using the VMAX Plus mobile application. Otherwise, the mobile application “DW Mobile Plus” can be used for general remote viewing with the DVR.
 2. The maximum number of mobile devices is 50.
-

- NOTE**
- Push Notification will only work when both the DVR and mobile devices have a direct connection using the local network (LAN) or over a remote Internet connection. Direct connection (IP address) is needed as PathFinder connections may not support push notifications.
-

4.5.5. PathFinder™

PathFinder uses STUN communication to assist with the encryption and stream security between the viewer and the DVR when connected using DW's connection service. This connection method offers an alternative means to view video from the DVR over a remote connection without the need for port forwarding.

- **USE PATHFINDER:** Enable this setting to activate the PathFinder service for the DVR. Click SAVE to apply the changes.
- **PATHFINDER ID:** A unique 21-character alphanumeric identification number will be generated for the DVR. This ID can be either used to connect with a web browser (www.ezpathfinder.com/p2p) or by being manually entered into the DW Mobile Plus mobile viewing application.
- **QR CODE:** Users can scan the QR code using the DW Mobile Plus or VMAX Plus mobile viewing applications to automatically enter the PathFinder ID into the site settings while registering the DVR within the mobile application.
- **STATUS:** Users can check the DVR's PathFinder status at the bottom of the screen.



QR code menu (PATHFINDER service is not in use)



QR code menu (PATHFINDER service is in use)

Check the PathFinder status at the bottom of the screen to complete the setup. STATUS will display "PATHFINDER SERVICE IS STOPPED" or "PATHFINDER SERVICE ACTIVATED" according to the system's status.

Users can scan the QR code while using the DW Mobile Plus™ mobile application to easily add the PathFinder ID to the site settings of the mobile application.

Note Please refer to "Section 6. PathFinder Connection Through the Web" for the details.

4.6 Export

4.6.1. Manual Export

Users can easily archive video while viewing the video playback.

- 1) In Live mode, click the EXPORT icon in the menu bar to open the export menu.
- 2) In playback mode, press the QUICK export icon in the menu bar. Pressing it once will indicate the start time for the backup file. Click the icon again to indicate the end time for the backup clip. The backup menu screen will appear.



- 3) Connect an appropriate USB memory drive and press SCAN to recognize it before starting the backup process.
- 4) Adjust the following options as needed:
 - **CAMERA:** Select the camera channels to be included in the exported file. Select 'ALL' to include all camera channels.
 - **FROM:** Set the start time of the exported video.
 - **TO:** Set the end time of the exported video.
 - **DEVICE:** Click [SCAN] to detect the connected USB memory stick. The USB device must be using FAT32 format.
 - **FILE FORMAT:** The exported video clip will be saved in .SSF file type and can only be viewed using the DW Backup Viewer tool or with a media player that supports SSF format.
 - **FILE SIZE:** Click the [ESTIMATE] button to calculate the estimated file size. If the file is too large, reduce the number of camera channels or the length of the video footage to reduce the size.
 - **ADD VIEWER:** Enable this setting include the Backup Viewer with the archived file, which can be used to view the exported SSF video file on a PC.
 - **PASSWORD:** Add a password to protect the file if needed. The password will need to be entered to view the file on a PC.
- 5) Click [START] to start the backup process. A progress bar will appear on the screen. Click the [CANCEL] button to abort the export process. DO NOT remove the USB until the file export has been completed.

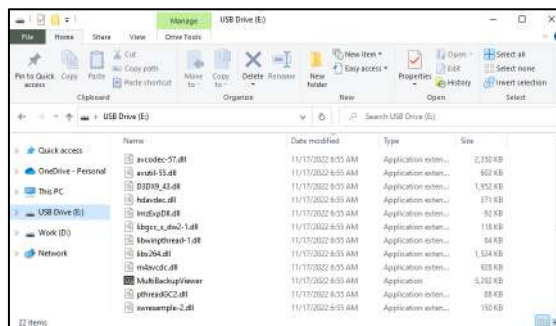
NOTE

A user, who is not an ADMIN user, can access the Export menu only if their user account has both the Export function and menu access authorization enabled by the system administrator.

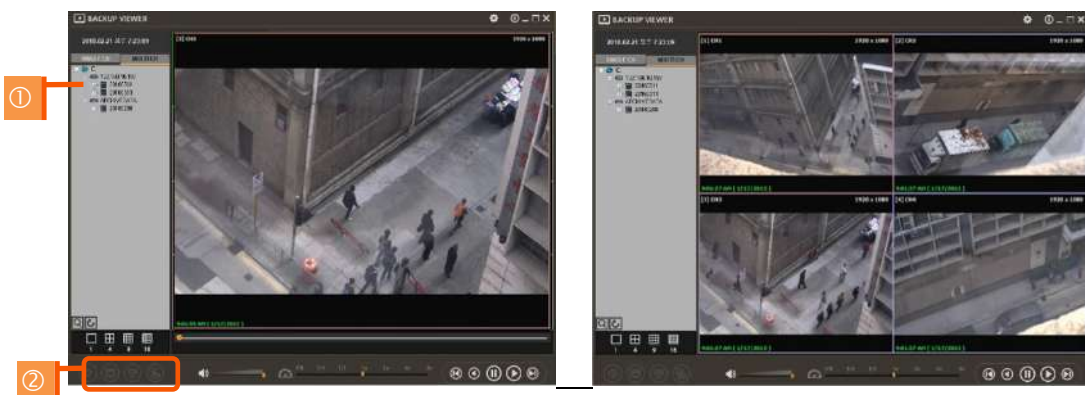
4.6.2. Backup Video Playback

If [ADD VIEWER] is selected, the backup image can be reviewed on a PC with no need to install additional software. Once the backup device (USB) is connected to a PC, the files will appear in the exported folder.

1. To play recorded data, open the exported folder and double-click the “MultiBackupViewer” file. In the backup player, open the video data file (SSF format) that you wish to playback.



2. To playback, a single channel, click the [SINGLE CH] tab (①) and select an SSF file then drag it into the viewing area.
3. To playback, multiple channels, click the [MULTI CH] tab and “Search” to open the folder that keeps all SSF files.

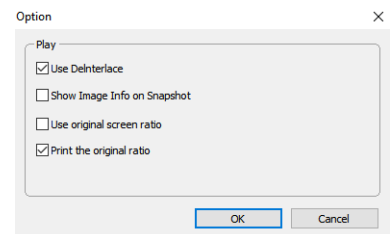


You can print or export an image and digital zoom by using the icons (②) at the bottom-left of the player window.

Option MENU

Various settings are available in the OPTIONS window of the backup player software.

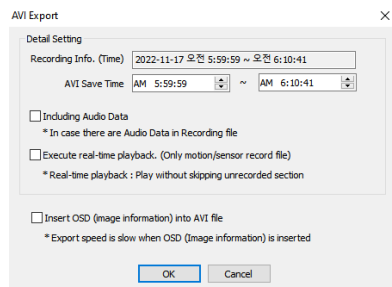
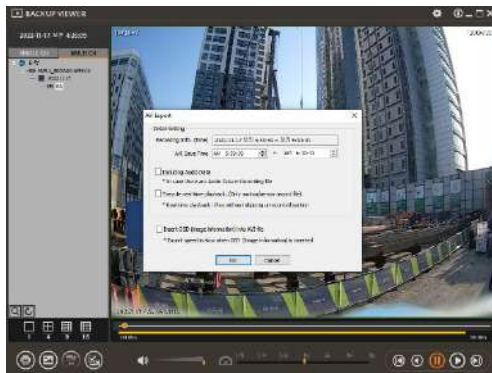
- **Use DeInterlace:** Some PCs do not support “DeInterlace”. In this case, the user can uncheck the De-Interlace checkbox in the “Option” menu.
- **Show Image Info on Snapshot:** Image information will be added as text overlay when exporting an image.
- **Show POS Data on the video channel:** POS data that has been backed up can be displayed during playback.



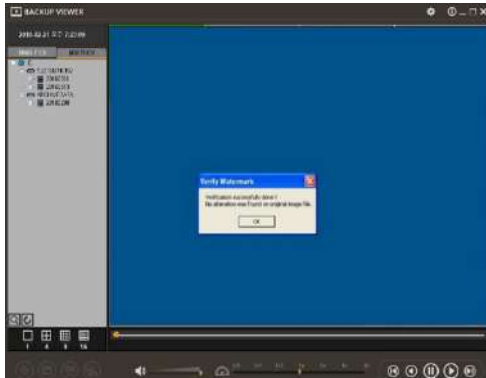
WATERMARK Verification on AVI File

Convert the backup file to an AVI file to play the file in ordinary media players. The third-party media player must support AVI files.

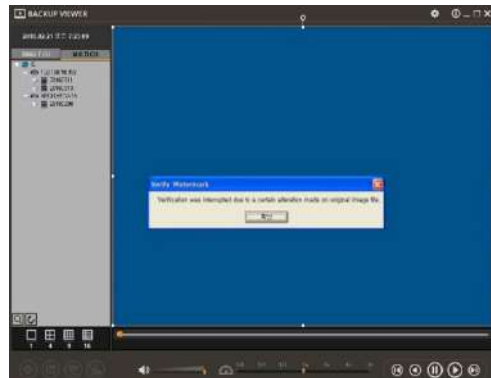
1. Playback the SSF file in Single CH mode and click [PAUSE].
2. Click [AVI Convert].
3. Define the start and end times.



When the AVI file is played back in the Backup Viewer, verify whether the file has been altered by pressing the [Watermark] button (). If the file has been altered, a popup message will appear.



No alteration was found



AVI video clip has been altered

5. Web Surveillance with Web Browser

The VMAX® A1 Plus™ has a built-in web server by itself. This allows you to access the system by an ordinary web browser via a network for Live monitoring, playback, or remote configuration without installing any additional software.

5.1 Web Login

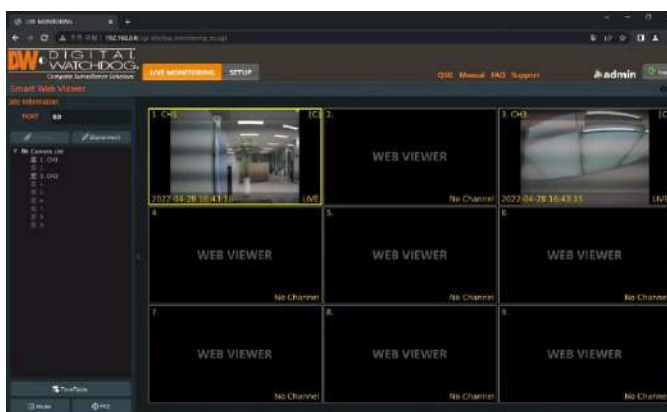
Using a web browser (Google Chrome is recommended), type the DVR's IP Address or DDNS address in the address bar. If the Web Port is set to the default (Port 80), the URL would be "192.168.1.80", which is the equivalent of "192.168.1.80:80". However, if the Web Port was changed to "85", the URL would look like "192.168.1.80:85".

When the login page appears, enter the user ID and password. The default user ID is "admin" and the password is set by the administrator when the DVR is booted-up for the first time.



5.2 Web Monitoring

After login, the Live view from the DVR will appear on the web page automatically. Users can also select Playback, Setup, QSG, Manual, FAQ, Support, or Logout.



LIVE

Users can connect or disconnect all channels and select a specific channel to view in Live or playback mode.

TIME TABLE

Users can open the timetable and select footage for video playback.

MODE

Users can change screen mode.

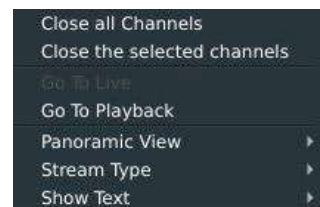
PTZ

Users can control Pan/Tilt, Zoom In/Out, Focus In/Out and Preset buttons to control PTZ cameras connected to the DVR.

POP-UP MENU

Right-click to open additional options:

- **Close all Channels:** Close all channels
- **Close the selected channels:** Close the selected channels.
- **Go To Live / Playback:** Change to Live or Playback mode.
- **Panoramic View:** Change to screen mode to horizontal, vertical, or quad-screen mode.
- **Stream Type:** Set the stream type. (Auto / 1st/ 2nd)
- **Show Text:** Set the information to display. (Channel title / Mode [Live/Playback] / Date / Time / Resolution)



5.3 Web Playback

To remotely playback video from the DVR, click Timetable or [Go to Playback] from the pop-up menu.

PLAYBACK TIME

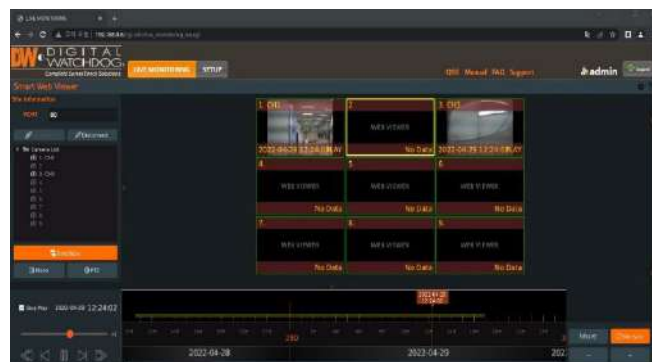
Select the date and time from the timetable.

Intelli-search bar

Move the red-vertical line to the time that the user wants to search. The colors of the time bar indicate the different recording modes. Refer to “4.3.2” for more information.

Playback controls

Use the Fast Forward, Rewind and Play/ Pause buttons to control the playback video.



5.4 DVR's Setup Menus from the Web Viewer

Main Classification	Sub Classification
SYSTEM	INFORMATION
	USER
	DISPLAY
	HDD
	UPGRADE
	CONFIGURATION
DEVICE	CAMERA
	AUDIO
	PTZ
	KEYBOARD
EVENT	SENSOR
	MOTION ALARM
	EXTRA ALARM
RECORD	CAMERA
	SCHEDULE
	QUICK SETUP
NETWORK	NETWORK
	DDNS
	NOTIFICATION
	PATHFINDER
	HTTPS/CERTIFICATES
	CERTIFICATE GENERATION
	CERTIFICATE IMPORT
LOG	SYSTEM LOG
	EVENT LOG

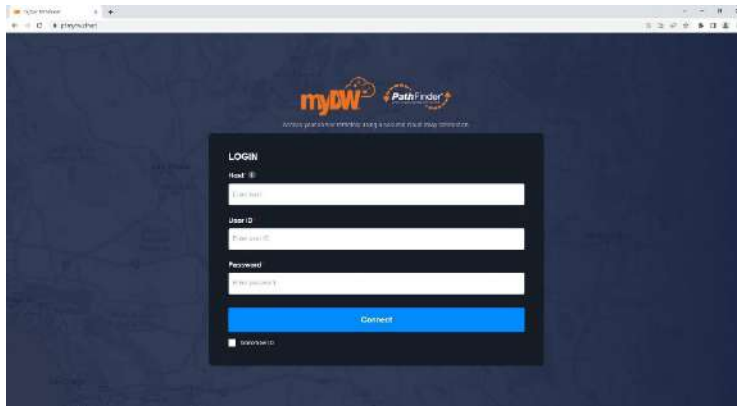
NOTE This DVR system has a built-in web server. Therefore, this web CGI screen is directly supported by the built-in web server of DVR regardless of the Internet connection.

NOTE SYSTEM REBOOT enables users to reboot the system without any change to the setup. Users can use this function when the network is disconnected due to abnormal operation of the system and try to reconnect. IP number assigned to the system may be changed in the case of DHCP mode.

6.PathFinder Connection Through the Web

6.1 myDW™ PathFinder Login

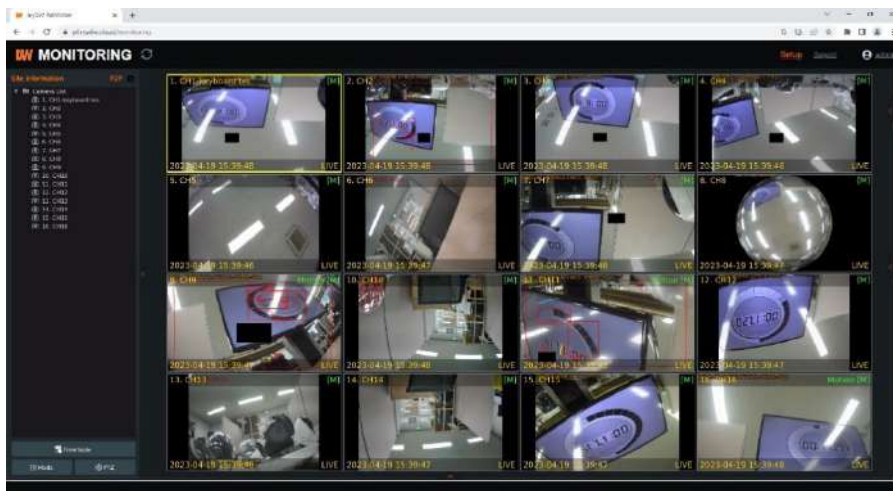
To connect to the DVR through PathFinder from the web, input the address of 'https://pf.mydw.cloud' in the web and open the following login screen.



- **Host:** Enter the IP address, URL, or PathFinder ID for the DVR to connect.
- **User ID:** Enter the user ID of the DVR to connect.
- **Password:** Enter the password of the DVR to connect.

6.2 Live

After logging in, the live view from the DVR will appear on the web page automatically.



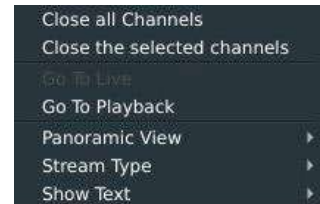
Users can connect or disconnect all channels, select a specific channel to view in live mode or view recorded footage with Playback Mode.

- **LIVE:** Users can connect or disconnect all channels and select a specific channel to view



in Live or playback mode.

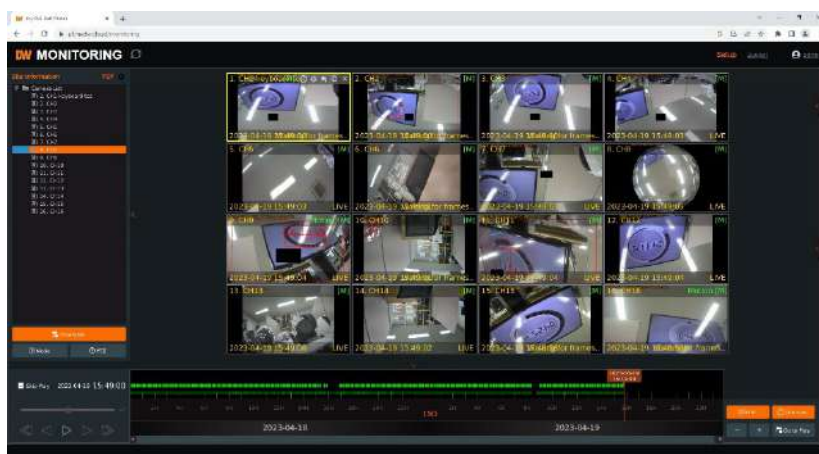
- **TIME TABLE:** Users can open the timetable and select footage for video playback.
- **MODE:** Users can change splitscreen display mode.
- **PTZ:** Users can control Pan/Tilt, Zoom In/Out, Focus In/Out and Preset buttons to control PTZ cameras connected to the DVR.
- **POP-UP MENU:** Right-click to open additional options:
 - **Close all Channels:** Close all viewing channels
 - **Close the selected channels:** Close the selected viewing channels.
 - **Go To Live / Playback:** Change to Live or Playback mode.
 - **Panoramic View:** Change to screen mode to horizontal, vertical, or quad-screen mode.
 - **Stream Type:** Set the stream type. (Auto / 1st / 2nd)
 - **Show Text:** Set the information to display. (Channel title / Mode [Live/Playback] / Date / Time / Resolution)



6.3 Playback

To remotely playback video from the DVR, click Timetable or [Go to Playback] from the pop-up menu.

- **PLAYBACK TIME:** Select the date and time from the timetable.
- **Intelli-search bar:** Move the red-vertical line to the time that the user wants to search. The colors of the time bar indicate the different recording modes. Refer to “4.3.2” for more information.
- **Playback controls:** Use the Fast Forward, Rewind and Play/ Pause buttons to control the playback video.



6.4 Setup

Users can open new screen for web setup by clicking 'Setup' in the upper-right corner of the screen. Recorder settings can be configured by the administrator with these menus.



7. Q & A

1. NVR does not record images in sensor mode and/or motion mode.

- 1) It records images only when there is an event for the corresponding mode.
- 2) Check that the settings are correct in the menus: [Event > Sensor], [Event > Camera Alarm], and [Record > Schedule].

2. There is an HDD installed but the “No HDD” icon () is still shown on the screen.

- 1) Check the cable connection of the HDD again.
- 2) If you can see the HDD list at [System > HDD] but the capacity indicates “0”, the HDD requires format.

3. There is nothing displayed on the True HD/VGA monitor though electric power is supplied to the NVR.

- 1) Check if the power is supplied properly. You should be able to hear the noise from the fan and HDD operation.
- 2) Check the True HD/VGA cable connection with the NVR. Remove all the cable connections, except for the monitor cable, and then apply power to the NVR again.
- 3) In cases where the display screen is stopped at the logo screen, please contact Digital Watchdog's technical support for additional information.

4. Is it necessary to open the port when using DDNS?

Yes, it is. DDNS is the function that lets remote connections acknowledge the changed address of the NVR (dynamic IP provided by ISP) or allow connection to the NVR by the domain without memorizing IP.

5. The remote software connection to the NVR works fine but the WEB connection doesn't work.

- 1) Some ISP blocks port number 80. Please try again after changing the WEB port. (8080 is the recommended alternative)
- 2) Check whether port 80 is opened or not.

6. Image is not shown after login at WEB monitoring.

TCP Base port should be opened. The default of the TCP base port is 9010.

7. The image on the remote software has suddenly disappeared after displaying it for a brief time.

- 1) Some ISPs restrict upload data/traffic volume. Please contact your ISP.
- 2) Upload traffic restrictions can be easily checked with the following steps.
 - > Turn off the power of your Modem & Router.
 - > After 60seconds, turn on the power of your Modem first and then Router.
 - > After reconnection, if it is disconnected again after a brief time (in a similar period later), it means that the ISP restricts upload traffic.

8. A backup or firmware upgrade through a USB memory stick cannot be made



though it is detected by the NVR.

- 1) USB memory stick should be formatted by FAT or FAT 32.
- 2) It is not allowed to use a partitioned or password-encoded USB memory.

9. Time sync through the NTP server does not work.

The NTP server requires a DNS server address. Check if the DNS server address is correct at the [Network] setup page.

10. Email transmission does not work in using the Email to notify function.

- 1) The Email notification function works based on the SMTP service.
- 2) Check if the sending mail address is correct and if the mail server supports the SMTP service.
- 3) If you are using an SMTP service that is based on TLS authentication (including SSL) such as Gmail and yahoo mail, enable [Use SSL Authentication] at the [Notification] setup page.
- 4) SMTP service is provided based on DNS. Check if the DNS server address is correct at the [Network] setup page.

8.Specifications

		DW-VA1G44xT	DW-VA1G48xT	DW-VA1G416xT
VIDEO				
Operating system		Embedded Linux®	Embedded Linux®	Embedded Linux®
System	Channel	4 channels	8 channels	16 channels
	Signals Supported	Standard analog signal up to 960H, HD-Analog and HD-TVl up to 5MP		
Video-out	Monitor	True HD, VGA and CVBS outputs		
	Framerate	120fps	240fps	480fps
	Resolution	True HD: 3840×2160 (4K), 2560x1440, 1920x1080, 1280x1024, 1024x768, 800x600 VGA: 1920x1080, 1280x1024, 1024x768, 800x600 CVBS: D1 (720x480)		
	Screen mode	1 and 4	1, 4, 6 and 9	1, 4, 6, 9, 10 and 16
Audio	Input/output	4 inputs/1 output	8 inputs/1 output	8 inputs/1 output
	Codec	ADPCM		
Alarm input/output		4 inputs/1 output	8 inputs/2 outputs	16 inputs/4 outputs
Serial		1x RS485		
User interface		Graphical user interface (GUI), USB mouse		
PERFORMANCE				
Recording	Compression	H.265, H.264		
	Recording mode	Continuous, scheduled, sensor-activated, motion detection, pre- and post-alarm, emergency, quick backup		
		Dual recording for Live and playback		
	Recording resolutions	2560x1944, 2560x1440, 1920x1536, 1920x1080, 1280x720, 720x480, 960x480	3840x2160, 2560x1944, 2560x1440, 1920x1536, 1920x1080, 1280x720, 720x480, 960x480	3840x2160, 2560x1944, 2560x1440, 1920x1536, 1920x1080, 1280x720, 720x480, 960x480
	Recording and playback rate	Full HD-D1 (1920x1080, 1280x720, 720x480, 960x480): 120fps (30fps per channel)	Full HD-D1 (1920x1080, 1280x720, 720x480, 960x480): 240fps (30fps per channel)	Full HD-D1 (1920x1080, 1280x720, 720x480, 960x480): 480fps (30fps per channel)
		3MP (1920x1536): 72fps (18fps per channel)	3MP (1920x1536): 144fps (18fps per channel)	3MP (1920x1536): 288fps (18fps per channel)
		4MP/2K (2560x1440): 60fps (15fps per channel)	4MP/2K (2560x1440): 120fps (15fps per channel)	4MP/2K (2560x1440): 240fps (15fps per channel)
		5MP (2560x1944): 48fps (12fps per channel)	5MP (2560x1944): 96fps (12fps per channel)	5MP (2560x1944): 192fps (12fps per channel)
		---	4K (3840x2160): 56fps (7fps per channel)	4K (3840x2160): 112fps (7fps per channel)
Playback	Playback speed	x1, x2, x4, x8, x16, x32		
	Playback functions	Intelli-search by time bar, calendar (date and time), event search and thumbnail search		
Storage	HDD interface	1x SATA HDD, 1x e-SATA	2x SATA HDD, 1x e-SATA	2x SATA HDD, 1x e-SATA
	Max. internal storage	Up to 16TB internal storage	Up to 32TB internal storage	Up to 32TB internal storage
	HDD health check	Real-time temp alert, S.M.A.R.T. with email notifications		



Features	Camera OSD control	Via UTC		
	Digital zoom	Live and playback		
	Software upgrade	USB flash drive, network upgrade, FTP remote upgrade		
	Mobile client	Mobile app for Apple and Android devices		
	Covert channel	Yes		
Transaction verification		Text-in-based (USB to serial support, TCP/IP network), displays POS data on Live and playback		
NETWORK				
LAN		100Mbps (RJ45)		
Protocol		Fixed IP, DHCP, UPnP, DDNS		
Access	Web viewer	Live, playback and configuration of up to 10 multiple connections		
	Video streaming functions	Dual stream for local recording and network transmission		
		PathFinder P2P service		
	Client monitoring software	C3 CMS, DW Mobile Plus mobile app and myDW web portal		
Network functions		Live monitoring, remote playback and file backup		
Remote system control		Remote system reboot, system management and PTZ control		
Other function	Firmware upgrade	FTP, USB and CMS over Network		
	Special features	Snapshot Notify: Programmable interval camera image verification Event notifications via email, text and C3 CMS Push notifications to mobile devices via DW Mobile Plus Time synchronization to an NTP server (pool.ntp.org)		
		Real-time system and network status monitoring		
	Health check			
Backup device		Local backup by USB, network backup by CMS, watermark, AVI file		
System recovery after power failure		Auto-Reboot and Journaling File System		
GENERAL				
Operating temperature and humidity		32-113 °F (0-45 °C) / 10-90% RH		
Certification		CE , FCC, KC, NDAA, TAA		
Power requirements		DC12V		
Power consumption		24W, 2A	48W, 4A	48W, 4A
Dimension (W x D x H)		11.81" x 9.8" x 1.77" (300 x 249 x 45 mm)	14.96" x 10.58" x 1.77" (380 x 268.8 x 45 mm)	14.96" x 10.58" x 1.77" (380 x 268.8 x 45 mm)
Warranty		5 year limited	5 year limited	5 year limited

* Specifications are subject to change without notice.



Warranty Information

Go to <https://digital-watchdog.com/page/rma-landing-page/> to learn more about Digital Watchdog's warranty and RMA.

To obtain warranty or out-of-warranty service, please contact a technical support representative at: 1+ (866) 446-3595, Monday through Friday from 9:00 AM to 8:00 PM EST.

A purchase receipt or other proof of the date of the original purchase is needed before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damages that occur in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, setup adjustments, improper antenna, inadequate signal pickup, maladjustments of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.



Limits and Exclusions

There are no express warranties except as listed above. The Warrantor will not be liable for incidental or consequential damages (including without limitation, damage to recording media) resulting from the use of these products, or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for a particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights from vary from state to state.

If the problem is not handled to your satisfaction, then write to the following address:

Digital Watchdog, Inc.
ATTN: RMA Department
16220 Bloomfield Ave
Cerritos, CA 90703

Service calls that do not involve defective materials or workmanship as decided by the Warrantor, in its sole discretion, are not covered. The cost of such service calls is the responsibility of the purchaser.

