

DW spotTM

MONITORING MODULE

DW-HDSPOTMOD16

DW-HDSPOTMOD



Default login information: admin | no password

When logging into the recorder for the first time, you will be prompted to setup a new password.

Before operating the system, please read this user manual and retain it for future reference.

The picture might differ according to the specification and model.

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 conformed 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 be seriously 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 humid 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 to 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 to 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. A ground connection must not touch the gas pipe, water pipe, or telephone line. If grounding is not done properly, it may cause 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 over-heating 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 an 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 on 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 in the middle of the power cord or use the extension cord. It may generate heat or cause a fire.
3. Do not touch the power cord with wet hands. It may cause an electric shock.
4. Keep the power cord dry and protect 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 module. If any of these items are missing or damaged, notify your vendor immediately. Keep the packing utilities for moving or storage purposes.

| Items | Photo | Quantity |
|---------------------------------|---|----------|
| Quick setup and download guides |  | 1 set |
| 12V D/C power cable |  | 1 set |
| USB mouse |  | 1 |

1.2 System Startup

After connecting peripheral devices such as monitors and a mouse to the module, power up the module by connecting DC12V adaptor/ power cable to the power jack on the rear panel. The boot logo will display. Please wait until the boot process completes.



When the system is up, the password change window is displayed. The user must set the password to a minimum of 8 characters with at least 3 combinations of uppercase letters, lower case letters, numbers and special characters. 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 module. It is assigned with an unchangeable User ID marked as 'admin'. The administrator account has full access to the module and its configurable parameters and can also create new users and assign rights to the new user accounts. If the module is set as AUTO LOGIN, the login process is not necessary.

-
- Caution**
- 1) It may take a few minutes to start up the system after turning on the power, in case 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 case you need to replace it, it is highly recommended to choose well-known major brands such as DELL, MICROSOFT, LOGITECH, or SAMSUNG.
-

- Note**
- 1) Contact DW's technical support to reset your password.
 - 2) Refer to "Section 4.1.2 User" for AUTO LOGIN and AUTO LOGOFF.
-

1.3 System Shutdown

To turn off the power, click the exit button [🔌] the toolbar, then select SHUTDOWN in the Exit screen.



Input the password and click the OK button to shut down the system. Click the YES button to confirm shutdown.



-
- Note** Input passwords using the virtual keyboard.
-

1.4 System Overview

1.4.1. Front Panel

1. USB Port: for USB mouse, import, and export settings and firmware upgrade.
2. LED Indicator: Indicates system status. (Power and Network status)



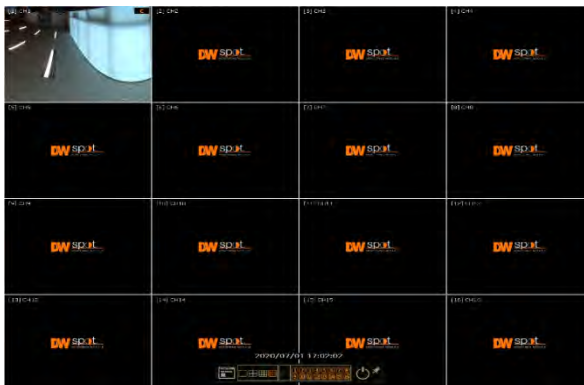
1.4.2. Back Panel



1. HD out: Connect a true HD monitor to the unit (cables not included).
2. VGA out: connect a VGA monitor to the unit (cables not included).
3. LAN: Connect an RJ45 cable to the unit to connect it to the local network (cables not included).
4. Power: Connect the 12V DC power cable to the unit and then to an adequate power supply.

1.4.3. Tool Bar

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 module's main menu screen. See "4. Setting" for details.

Display Mode

Select the display split mode from the available options. Select 1CH, 4CH, 9CH or 16CH mode.

Sequence

Start/stop the sequence mode in live mode. The sequence is disabled if all channels are displayed.

Channel

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

Exit

Exit the module with three different options: Log Off, Reboot and Shutdown.

Pin

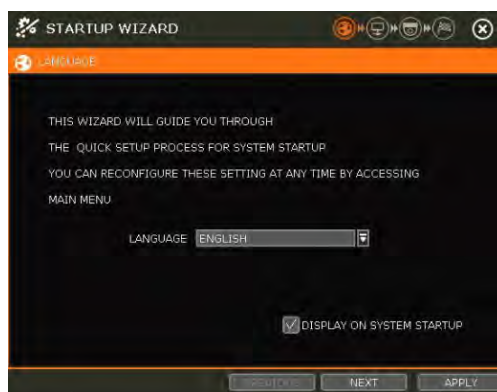
When selected, the menu bar will be fixed on the screen permanently, regardless of the mouse's position.

2. Startup Wizard

When the module is launched for the first time, the STARTUP WIZARD will appear. This wizard helps you setup the module's most basic settings for proper functioning. You can access the Startup Wizard screen at any time by clicking the Startup Wizard button under the MENU>SYSTEM>SETTINGS menu. (See "4.1.5 SETTINGS"). If "DISPLAY ON SYSTEM STARTUP" is selected, Startup Wizard will appear every time the system reboots.

2.1 Language

Select the language from the available drop-down options. Click APPLY to save the changes and NEXT to move to the next screen.



2.2 Network

Setup the module's network settings for remote connection.



Network Type

DHCP: The module will acquire all the network settings automatically according to the current network requirements. Click the 'IP DETECT' button to automatically fill out all the network settings. Static IP: manually enter all the network settings. For proper configuration, it is recommended to assign the module a DHCP address and let it auto-discover all the proper network settings, and then change the Network Type back to Static IP and save the changes. Contact your Network

Administrator for more information.

IP Address

If DHCP is selected, the IP address will automatically adjust to match the network's requirements. You may manually change the IP address as needed (Network Type must be set to Static).

Subnet Mask

Subnet Mask address classifies the subnet that the system belongs to. Contact your Network Administrator for more information.

Gateway

This is the IP address of the router or gateway server. It is required when connecting to the module through the external router over the internet (from another network). Contact your Network Administrator for more information.

DNS Server

Enter the IP address of the Domain Name Server. You should input the DNS Server information to use DDNS, E-mail notifications and NTP Server. Contact your Network Administrator for more information.

WEB Port

Input the port number to use when connecting from the Web Browser. The default is 80. Contact your Network Administrator for more information.

Auto IP

Displays the system's IP address.

Use UPnP (Universal Plug and Play)

UPnP is a plug-and-play feature that allows the module to be automatically discovered by a PC on the same network. To locate the module, go to "My Network" on your PC. The computer will scan your network for all supported devices. The first five characters of the file name of a detected module represent the model number, followed by the module's IP address



Once the PC discovered the module, double click on the icon to open the module's web client. Enter your User ID and Password to login and click 'Connect' to connect.

2.3 Camera Management

The Camera Management menu allows you to search, register and manage your IP cameras, DVRs and NVRs. See “3.2 Camera Registration” for more information.



Search (DVR/NVR)

The module will scan the network for all supported DVR/NVR. Select the devices you wish to register from the search results and press the ‘GET INFO’ button.

‘DETAIL INFO’ allows you to get more information on the device’s streams.

Enter the user ID and password for the devices you are registering.

You can also select which channels to register.

Click ‘APPLY’ to register the device.



Search (CAM)

The module will scan the network for all supported IP cameras automatically. From the results, you can drag cameras to the viewing channel to assign them to channels.

5. Click the START button to search the camera.

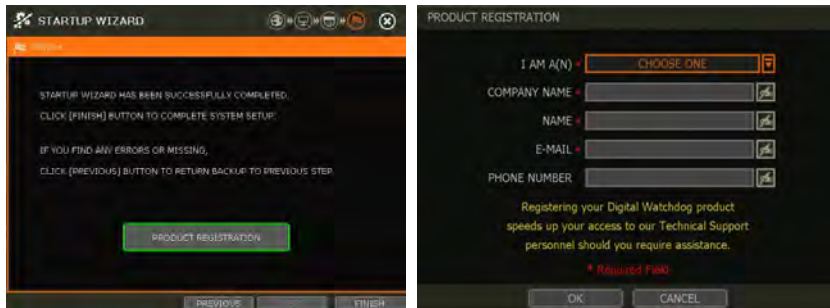


6. Select a camera and while clicking on the camera, drag it to a channel to assign it. If needed, enter the user ID and password for the device you are registering.
7. Click the CLOSE button to finish the process.

2.4 Finish

Complete the setup of your module by registering your product.

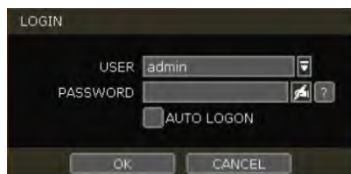
When the setup wizard is completed, click the FINISH button to close the setup wizard.




3. Operation

3.1 User Log-in

Enter the user ID and password. Use the hint button  to check for your password hint if needed.



- Note**
- 1) The login window displays permanently until a user logs in with the right user ID and password.
 - 2) If the module is set as AUTO LOGON, the login process is not necessary. See “4.1.2 User” for more information.

Note The  key in the virtual keyboard includes common words, such as Admin, root, http://, rtsp://, www., .com, .net, .org etc.

3.2 DVR/NVR/CAM Registration

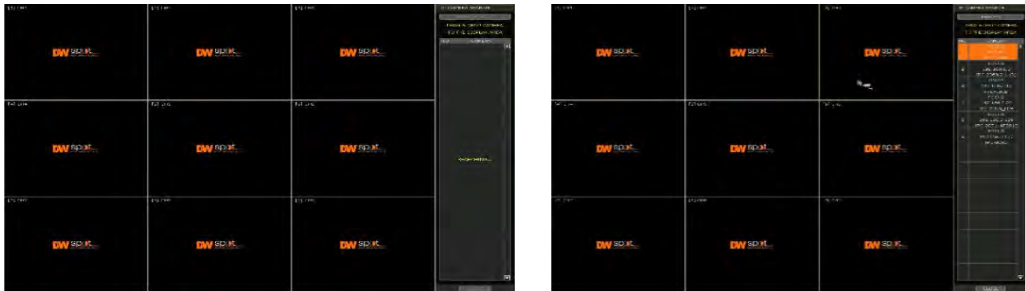
3.2.1. Recorder Connection through the Network




The module will scan the network for all supported DVR/NVR automatically. Select the DVR/NVR you wish to register from the search results and press the 'GET INFO' button to obtain the device's streaming profile. 'DETAIL INFO' allows you to get more information on the device's streams. If necessary, enter the user ID and password for the device you are registering. You can also select which channels from the DVR/NVR you wish to register. Click 'APPLY' to register the device.

3.2.2. Camera Connection through the Network

1. Click the START button to search the camera. The module will search the network for cameras and display all results in the table on the right.




2. Select the camera in the list and drag and drop it to the channel you want to assign to the camera. (While moving, the mouse pointer is changed to ).
3. Click the CLOSE button to save the registration.

3.2.3. Add DVR/NVR Manually

If a user wants to connect to DVR/NVR in a different network, DVR/NVR can be added manually using the ADD DVR/NVR MANUALLY button.

1. Click the SEARCH button to open the camera property window.




2. Select channel number to register.
3. Input necessary information with  button and click the GET INFO button to get streams information.
4. Select the channel to register.
5. Click the APPLY button to register DVR/NVR.

3.2.4. Manually add Cameras

If a user wants to connect to an IP camera in a different network, the cameras can be added manually using the ADD CAMERAS MANUALLY button.

1. Click the ADD CAMERAS MANUALLY button to open the camera property window.



2. Select channel number to register.
3. Select protocol (ONVIF, RTSP, FOCUS and VHT) of the camera. Registration is available with one of the following. - IP Address, RTSP URL or ONVIF URL
4. Input necessary information with  button and click the GET STREAM button to get streams information.
5. Click the APPLY button to register the camera.

3.2.5. Adding a recorder or camera using RTSP

1. Click on the ADD CAMERAS MANUALLY button.
2. Enter the DVR's user ID and password.
3. Select which channel you want to add to the Spot Monitoring Module.
4. Under Protocol, select RTSP instead of ONVIF (default).
5. Enter the DVR's model and brand names (optional).
6. Enter the DVR's RTSP URL in the first RTSP field.
 - a. To add DW's VMAX® A1™ DVR, the RTSP URL should be as follow:
 rtsp://xxx.xxx.xxx.xxx:port/rtsp/unicast/live/profile-x
 For example: rtsp://192.168.1.100:80/rtsp/unicast/live/profile-1
7. Enter the device's IP address: xxx.xxx.xxx.xxx.
8. Port: Use the device's web port (default value is 80).
9. Profile-x: Enter the channel number you want to add.
10. Press the APPLY button to save changes.

3.3 Deleting Devices



1. Click the delete (X) button for deleting each DVR/NVR or camera.
2. Click the DELETE PAGE for deleting devices on the same page and click the DELETE ALL for deleting all devices.

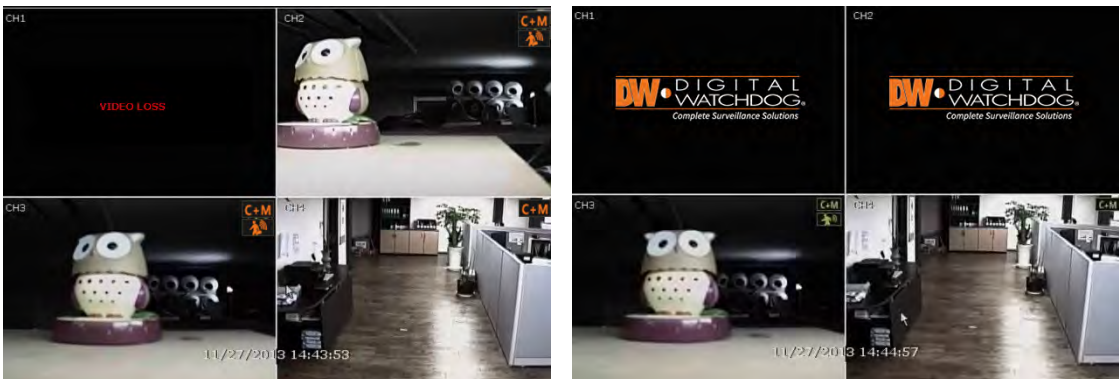
3.4 Live Display Mode

3.4.1 Channel Selection

The live image can be seen by easy button operation after power-up. The images can be seen in 1, 4, 9 and 16 screen splits (some split options may not be available according to the module's number of channels). Whenever the screen display mode button ([Grid Icons]) on the toolbar is clicked, the screen will change to display the next channel or sequence of channels.

















To switch from a multi-channel view to a single camera, click on the selected channel. To return to the previous screen mode, click on the left mouse button again.

“VIDEO LOSS” is shown on the display screen when no camera is connected or disconnects suddenly. When a camera is disconnected, a warning sound shall be generated depending on the system setting. Admin users can set different levels of authorization for each user, granting them specific access to specific channels. If a certain user is not authorized to view a channel, no image is shown on the display screen as below.



3.4.2. Icons

The Spot Monitoring Module shows the channel's current status based on the settings in the DVR or NVR.

| Icons at the right-upper corner on each channel screen | | Icons at the right-bottom corner on 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 the set temperature |
|  | Continuous + Sensor Activated Recording |  | Sequence mode is enabled |
|  | Motion Detection + Sensor Activated Recording |  | Digital zoom is enabled |
|  | Sensor Activated | | |
|  | Motion Detected | | |
|  | Audio Channel | | |
|  | PTZ Camera | | |

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

3.4.3. Pop-up Menu

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

Display Mode

Users can change the screen display mode from the available split options.


Change Next CH

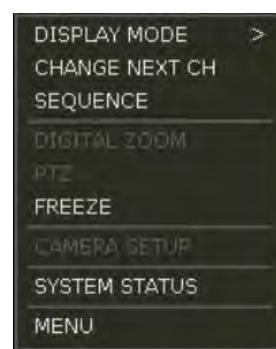
View the next channel or next group of cameras in the current split mode.

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,  icon will appear on the bottom-right corner of the screen and digital zoom control is available.
- To zoom in, drag the mouse's cursor on the desired area to create a zoom box. You can also control zoom-in and zoom-out by mouse scrolling the mouse's wheel up and down. Once the image is zoomed-in, the user can move the zoom area by clicking on the edge of the square and dragging it.
- To exit from the zoom mode, click the right and select "ZOOM EXIT" on the menu.



PTZ

Enable PTZ mode. (Please refer to “3.6 PTZ Operation” for detail.) The available PTZ options depend on the camera’s ONVIF integration. See the camera’s manual for more information.

Freeze

Freeze the current live view. System clock (date/time information) will continue running at the bottom of the screen. Select “FREEZE” again to resume the live view.

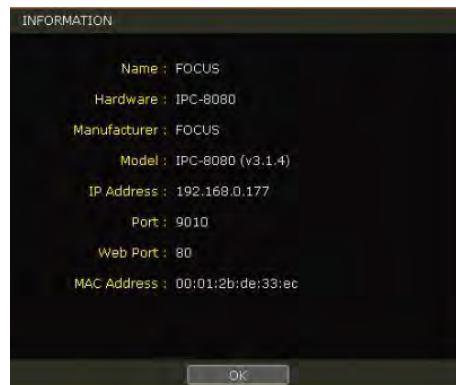
Camera Setup

View the setup camera menu.

Users can setup resolution, frame, etc. The available options depend on the camera’s ONVIF integration. See the camera’s manual for more information.



1. Click the GET STREAM button and get the current camera status.
2. Click the CAMERA INFO button to check the camera’s information such as model name, IP address, port, MAC Address, etc.



3. MAINTENANCE - User can camera reset, reboot, firmware upgrade and setup to use the live buffering function on NVR.

Reset

- Soft Reset: Reset camera settings except for basic network settings like IP address, subnet and gateway or DHCP settings.
- Hard Reset: Reset all camera settings (factory reset).

Reboot- Reboot the camera

Scheduled Reboot: Set the schedule to reboot the camera

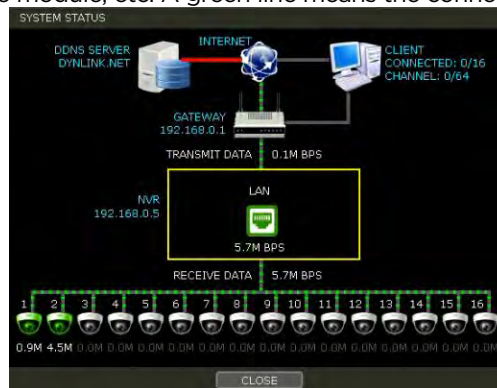
F/W Upgrade: Upgrade the camera firmware

Network: Set the camera network setting.



System Status

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



Menu


Open the main menu setup screen.

4. Setting

The general setting structure consists of “System”, “Monitoring”, and “Network”. Each Setup menu consists of sub-menus and additional categories.



| Main Classification | Sub Classification |
|---------------------|--------------------|
| SYSTEM | INFORMATION |
| | USER |
| | DISPLAY |
| | SETTINGS |
| MONITORING | REGISTRATION |
| NETWORK | NETWORK |
| | DDNS |

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

4.1 System

4.1.1. Information

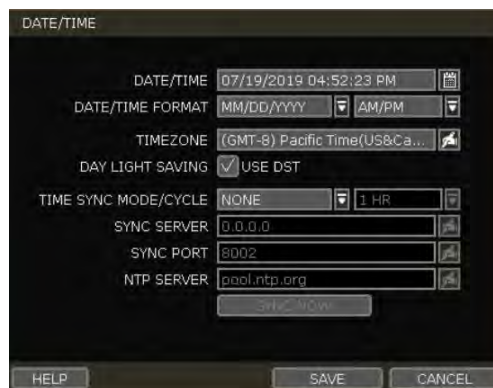


Site Name

Enter a site name to differentiate the module from other sites.

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 four types of time sync modes:

- Server Mode: The operating module is set as a Time Sync Server, which can synchronize the time to another module (s) connected over the same network.
- Client Mode: Input the IP address of a designated module or PC running Remote Software as a Time Sync Server in "SYNC SERVER". The module's time clock will be synchronized with the server by interval time set in "TIME SYNC CYCLE".
- NTP Mode: "pool.ntp.org" is the recommended NTP Server. To activate, set the TIME ZONE of your local area and then click the SYNC NOW button.
- GPS Mode: Connect USB type GPS device and click the SYNC NOW button.

Language

Select the display language from the available options.

Version

View the module's current firmware version and update it to a newer version via DVD/CD/USB Memory Stick/FTP server.



Caution Do not click **CANCEL** during firmware upgrade. It may cause serious damage.

Settings may be changed to factory default. It is recommended to check the settings and operating conditions of the module 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 module (compatible with USB 2.0). The firmware file must be placed into the USB's root directory. If the firmware file is placed in a folder, it may not be recognized by the system.
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 Digital Watchdog'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: vmaxipplus, password: vmaxipplus.

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

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

To setup the module to check for new firmware automatically:

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

**IP Address**

Shows the module's current IP Address. It can be set at the MENU> NETWORK> NETWORK.

Auto IP

Shows AUTO IP Address of the module.

MAC Address

Shows the unique identity number for the module.

System Monitor

Monitor the system performance and condition.

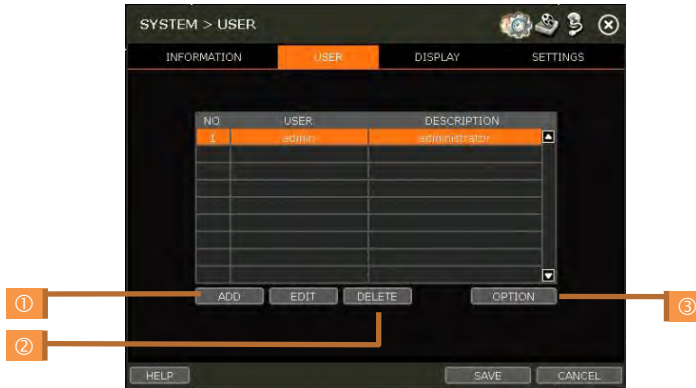
4.1.2. User

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

Note The maximum number of users including administrator is 16.

User Management

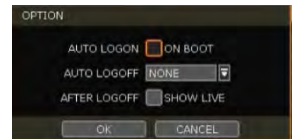
Admin users can control authorization for each function. This authorization is applied when the user connects to the module from a remote software as well.



1. Add User
 - a. Click the ADD button.
 - b. In the new setup window, set a new user's ID, description, password, and password hint.
 - c. Select which functions and menu options the user will have access to by checking the box next to the corresponding functions.
 - d. In Live and Playback mode, only the selected channels are visible to the user.
 - e. To change the setting, select the user and click the Edit button.



2. Delete User
 - a. Select the user in the list by highlighting their name and click the Delete button.
3. Option
 - a. If Auto Logon "On Boot" is enabled, the module will not request ID and password after power-up.
 - b. If "Auto Logoff" is enabled, the module will log off the current user after the set time of inactivity.
 - c. If "show live" is checked, the live image will be shown after log off.



4.1.3. Display



Sequence

Set the dwell time for the sequence channel display.

Display Resolution

The system supports the following resolutions: 1024x768, 1280x720, 1280x1024, 1920x1080, 2560x1600 (true HD output only) and 3840x2160 (true HD output only).

OSD

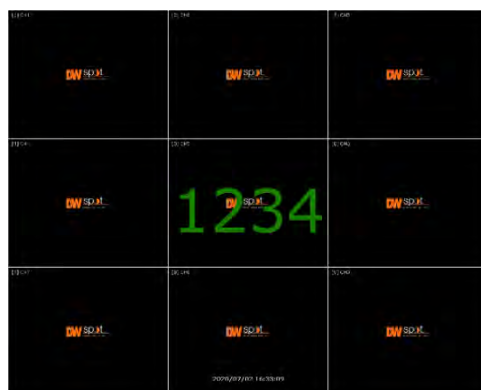
Select what information will appear over the display by checking the corresponding boxes.

Screen Saver

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

Banner

Create the banner and display it on the screen. You can set font size, position, interval and font color.



4.1.4. Settings



Product Registration

Register your product with DW to enhance your technical support experience, if needed, and stay informed of the latest updates and product information.

Startup Wizard

Manually start the startup wizard.

Factory Default

Reset the system to its factory default settings. All settings will be deleted, including the network settings. If you wish to keep the system's network settings from resetting, check the box next to the Factory Default button to exclude the current network settings from being reset.

Export/Import

Copy the system settings between modules. Users can export the current module's settings and apply it to other modules, or apply settings from a previous module to the current one.

- Export: copy the settings of this system to a USB memory device.
- Import: apply settings from another module via CD/DVD/USB memory device.

During the import process, make sure that the F/W version of the sourced module is the same as the target module.

4.2 Monitoring

4.2.1. Registration

Users can register/delete devices by letting the module scan and register devices automatically or manually search and add devices.

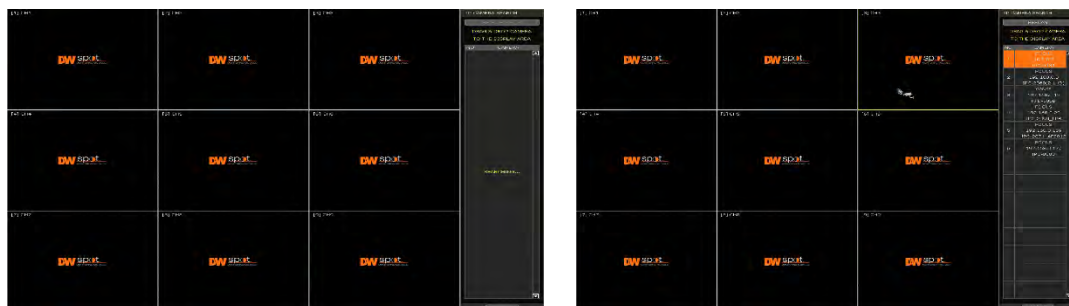


The module will scan the network for all supported DVR/NVR automatically. Select the DVR/NVR you wish to register from the search results and press the 'GET INFO' button to obtain the device's streaming profile. 'DETAIL INFO' allows you to get more information on the device's streams. If necessary, enter the user ID and password for the device you are registering. You can also select which channels from the DVR/NVR you wish to register. Click 'APPLY' to register the device.

Camera registration

Users can register the camera by drag & drop way. (Please refer to "3.2.2. Camera connection through the network").

Select the camera in the list and drag and drop it to the channel you want to assign to the camera. (While moving, the mouse pointer is changed to.) And Click the CLOSE button to complete the camera registration.



Deleting Devices

Click delete (X) button for deleting each DVR/NVR or camera. And click the DELETE PAGE button for deleting devices on the same page and click the DELETE ALL button for deleting all devices.

4.3 Network

The module can be connected to the network or internet through either fixed IP or dynamic IP by proper setting of the module and router.

4.3.1. Network



Network Type

DHCP: The module will acquire all the network settings automatically according to the current network requirements. Click the 'IP DETECT' button to automatically fill out all the network settings. **Static IP:** manually enter all the network settings. For proper configuration, it is recommended to assign the module a DHCP address and let it auto-discover all the proper network settings, and then change the Network Type back to Static IP and save the changes. Contact your Network Administrator for more information.

IP Address

If DHCP is selected, the IP address will automatically adjust to match the network's requirements. You can also manually change the IP address as needed.

Subnet Mask

Subnet Mask address classifies the subnet that the system belongs to. Contact your Network Administrator for more information.

Gateway

This is the IP address of the router or gateway server. It is required when connecting to the module through the external router over the internet (from another network). Contact your Network Administrator for more information.

DNS Server

Enter the IP address of the Domain Name Server. You should input the DNS Server information to use DDNS, E-mail notifications and NTP Server. Contact your Network Administrator for more information.

WEB Port

Input the port number to use when connecting from the Web Browser. The default is 80. Contact your Network Administrator for more information.

Auto IP

Displays the system's IP address.

Use UPnP (Universal Plug and Play)

UPnP is a plug-and-play feature that allows the module to be automatically discovered by a PC on the same network. To locate the module, go to "My Network" on your PC. The computer will scan

your network for all supported devices. The first five characters of the file name of a detected module represent the model number, followed by the module's IP address

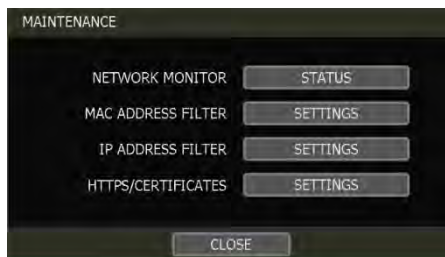


Once the PC discovered the module, double click on the icon to open the module's web client. Enter your User ID and Password to login and click 'Connect' to connect.

Note The maximum number of simultaneous connections is 15 users.

Maintenance

Check network status and setup Mac address filter, IP address filter and HTTPS certificate.



Network Monitor

Check the network status of each camera and data flow information for the module and cameras.

MAC Address Filter

This function allows or blocks a specific Mac address from a client such as 3C™ CMS or mobile. When the user registers a specific Mac address to allow, only that address can access the module by the client. Or when a user registers a specific Mac address to block, that address can't access the module by the client. This function works only on the local network and not work on web Login.

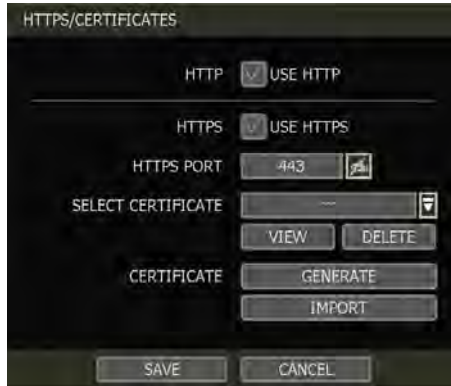
IP Address Filter

This function allows or blocks a specific IP address. When a user registers a specific IP address to allow, only that address can access the module. Or when a 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

Register self-signed certification for the HTTPS connection. Register a new certificate by clicking 'Generate' or register an external certificate by clicking 'Import'.



To register a new certificate:

- Enter the certificate's basic information. Enter all fields marked with (*).
- Before generating the certificate, the module and network time zones must match. Otherwise, the validity period of the generated certificate may be different, and the timing of the certificate application may vary.
- Once the certificate generation is complete, the validity will be displayed.



4.3.2. DDNS

Use can use either a public DDNS server or the DDNS server operated by module maker (dynlink.net) to connect through dynamic IP.

DDNS Server

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



Input necessary information based on your network environment. And then click the SAVE button.

- Enable Use DDNS box
- DDNS SERVER: Select DYNLINK.NET or MYDWDNS.NET
- TCP/IP PORT: Default is 80.
- HOSTNAME: Assign a domain name for your module (ex, module office). If the same domain name is assigned, the message still pops up when you click the CHECK button. The hostname can be automatically assigned by clicking the AUTO GENERATE button.

IP Mapping and External IP

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

Setting at the Remote Software (CMS)

In the menu Option > Setting, input DDNS Address and Port number.
The address of the DDNS SERVER is “dynlink.net” and Port is “80”.

Setting at the Web Browser

Users can type the module’s mac address + dynlink.net.

In case you are using a subdomain name, type the domain name + dynlink.net

Ex) 1. If Mac address is “00:1C:84:01:00:02” → input as “http://001c84010002.dynlink.net”

2. If the domain name is “DVROFFICE” → input as “HTTP:// DVROFFICE.dynlink.net”

5. Web Surveillance through Internet Explorer

The Spot Monitoring Module has a built-in web server by itself. This allows you to access the system by ordinary web-browser via a network for live monitoring, playback, or remote configuration without installing any additional software.

5.1 Web Login

In an Internet Explorer page (Windows OS only), type the module's IP Address or DDNS address in the address bar. When the login page appears, enter the user ID and password. Once you are connected to the module, you will be prompted to download and install the Active-X file.



Active-X Installation

1. If the PC doesn't have Active-X installed, the installation guide message will appear automatically.
2. Click 'install' and follow the installation wizard to complete the ActiveX installation.

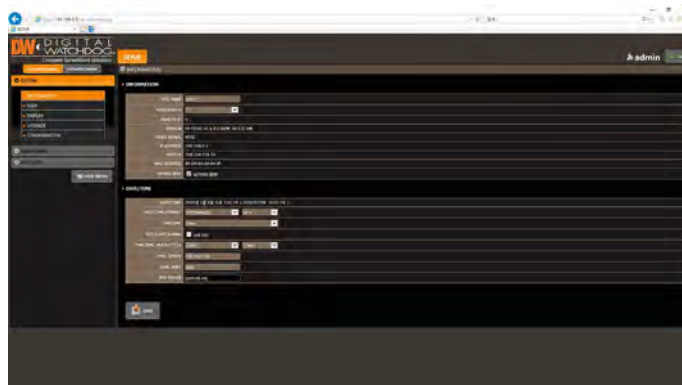


3. To avoid download restrictions for the Active X file, make sure that Active X controls are enabled in the web browser's security settings. Go to "Tools > Internet Options > Security > Internet > Custom Level" and enable all Active-X controls and plug-in.
4. Failing to install the Active X files properly may result in no video showing from the module.

5.2 Web Setup

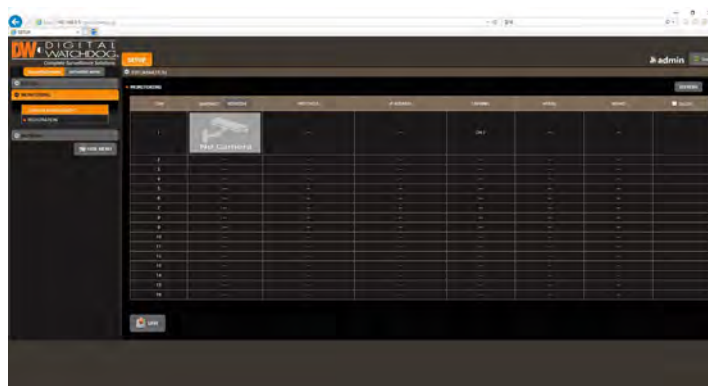
Setup Menu

| Main Classification | Sub Classification |
|---------------------|--------------------|
| SYSTEM | INFORMATION |
| | USER |
| | DISPLAY |
| | UPGRADE |
| | CONFIGURATION |
| MONITORING | CAMERA MANAGEMENT |
| | REGISTRATION |
| NETWORK | NETWORK |
| | DDNS |



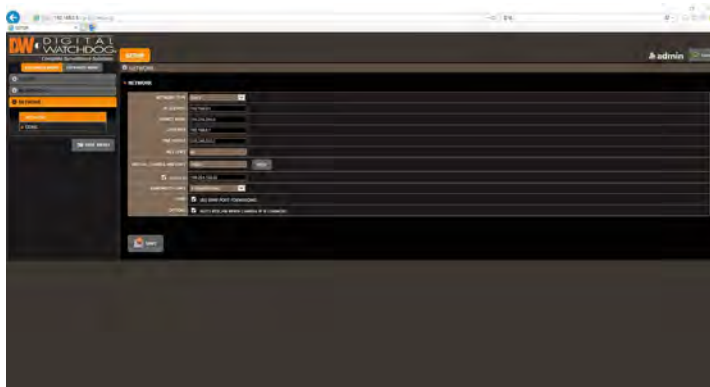
System Setup

Users can setup the module's system settings through the web browser.



Monitoring

Users can check the information and snapshot of the currently connected device and register a new device.



Network

Users can setup network settings and DDNS settings.

Note This module system has its built-in web server. Therefore, this web CGI screen is directly supported by the built-in web server of modules regardless of Internet connection.

Note <System Reboot> enables the user to reboot the system without any change of 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. Q & A

1. There is nothing displayed on the monitor though power is supplied to the module.

- 1) Check if the power is supplied properly.
- 2) Check the true HD / VGA cable connection with the module. Remove all the cable connections, except for the monitor cable, and then apply power to the module again.
- 3) In case that the display screen is stopped at the logo screen, please contact Digital Watchdog's technical support for additional information.

2. 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 module (dynamic IP provided by ISP) or to allow connection to the module by the domain (domain.dynlink.net) without memorizing IP.

3. Remote software connection to the module works fine but WEB connection doesn't work.

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

4. Image is not shown after login at WEB monitoring

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

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

- 1) Some ISP restricts upload data/traffic volume. Please contact your ISP.
- 2) Upload traffic restriction 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 short time (in a similar period later), it means that the ISP restricts upload traffic.

6. Backup or firmware upgrade through USB memory stick cannot be made though it is detected by the module.

- 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.

7. Time sync through the NTP server doesn't work.

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

8. E-mail transmission doesn't work in using E-mail to notify function.

- 1) E-mail notify function works based on SMTP service.
- 2) Check if the sending mail address is correct and if the mail server supports 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 the 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.

7. Product Specifications

| | | DW-HDSPOTMOD | DW-HDSPOTMOD16 |
|--|---------------------------|--|-----------------------|
| OPERATIONAL | | | |
| Operating system | | Embedded Linux® | |
| Video in | Input | 4 channels | 16 channels |
| | Protocol | ONVIF | |
| | Input resolution | IP cameras (up to 4K, 3840 x 2160 resolution), Universal HD over Coax® VMAX® A1™ DVRs or VMAX® IP Plus™ NVRs | |
| Video output display | Speed | Up to 120fps | Up to 480fps |
| | Maximum throughput | 80 Mbps | |
| | Monitor | True HD or VGA | |
| | Resolution | True HD: 3840x2160, 1920x1080, 1280x720, 1024x768 / VGA: 1920x1080, 1280x720, 1024x768 | |
| | Screen mode | 1, 4, sequence | 1, 4, 9, 16, sequence |
| LAN | | 10/100/1000Mbps gigabit ethernet (RJ45) | |
| Protocols | | TCP/IP (STATIC, DHCP), DDNS and UPNP | |
| Streaming | | Dual-streaming | |
| Network function | | Time synchronization by NTP server | |
| Remote management via web (IE) | | System settings | |
| System recovery after power failure | | Auto-reboot and log file system | |
| Advanced functions | | Firmware upgrade by USB and CMS | |
| | | Import and export settings | |
| | | Digital zoom | |
| System operation | | USB mouse | |
| ENVIRONMENTAL | | | |
| Surge protect | ESD | Air ±15KV / Contact ±10KV | |
| | Surge | Video IN ±4KV (Line to Line 1.2us/50us) | |
| Power | | DC12V, 1A | |
| Operating temperature | | 41°F - 104°F (5°C - 40°C) | |
| Operating humidity | | 20-90% RH (non-condensing) | |
| Dimensions | | 5.47" x 4.84" x 1.25" Inch (139 x 123 x 32 mm) | |
| Warranty | | 3 year warranty | |

* Specifications are subject to change without notice.

Warranty - Australia only

Cameras, Recorders, Servers: 3 Years from date of purchase
Servers with a Dell service tag - check the Dell website