

WAT-2400 User's Manual

Rev. 2.10

Waterc Co., Ltd.

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Revision Record

Rev.	Date	Changes
1.00	January 26, 2016	Initial Release
2.00	November 11, 2016	<p>Change default settings</p> <ul style="list-style-type: none"> -Network settings -Password for ONVIF® client software <p>3. Checking the image from the camera</p> <ul style="list-style-type: none"> - Add descriptions on MJPEG stream <p>4.1.2 System</p> <ul style="list-style-type: none"> - Add settings on Network page (TELNET, SSH, SNMP) - Add Date & Time page <p>4.1.3 Camera</p> <ul style="list-style-type: none"> - Add descriptions on Video output settings <p>4.1.4 ONVIF</p> <ul style="list-style-type: none"> - Add ONVIF Settings page - Add ONVIF User management page
2.10	May 12, 2017	<p>4.1 Configuration changes from Web browser</p> <ul style="list-style-type: none"> - Revise the wording <p>4.1.1 Overview</p> <ul style="list-style-type: none"> - Add displaying Serial No <p>4.1.2 System</p> <ul style="list-style-type: none"> - Add an upload function from PC on FW page

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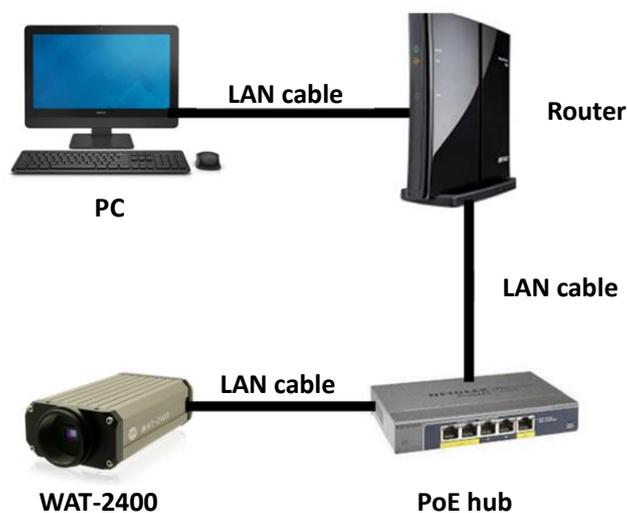
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1. Connection and power activation of the camera

The WAT-2400 has two power supply systems. The one is powered by +12VDC input plug on back panel of the camera, and the other is powered by PoE using a LAN connector.

Please feed by the one or the other of the way above and do not feed the both systems simultaneously.

The below figure is a connection example of the power supply by PoE hub. In addition, you need to have the power individually to the router and the PoE hub.



Connect the LAN cable of camera side to a PoE port of the PoE hub and connect the LAN cable of the router side to a normal LAN port.

If you want to power the camera using the AC power supplies, connect the camera and the router directly with exception of the PoE hub from the above. The router is also not required if it is in a closed network configuration and not using DHCP protocol. In that case, connect the PC and the camera directly in LAN cable.

It takes about 20 seconds to fully boot the WAT-2400 from the power supply start.

2. Network settings

2.1. WAT-2400 network settings

The network default setting of the WAT-2400 is as follows;

IP Address	192.168.0.200 (static)
Netmask	255.255.255.0
Gateway	none
DNS Server	none
Host name	wat-2400-0

Since the used camera has a possibility to have the changed settings. In that case please contact the administrator of the camera as there might need to change the viewed on PC or the camera network in accordance with the situation.

The network settings of the WAT-2400 can be changed in the setting change by the Web browser which will be described later.

If the network setting of the WAT-2400 is unclear, it is possible to initialize all the settings of the camera, including the network settings while using the reset button which will be described later.

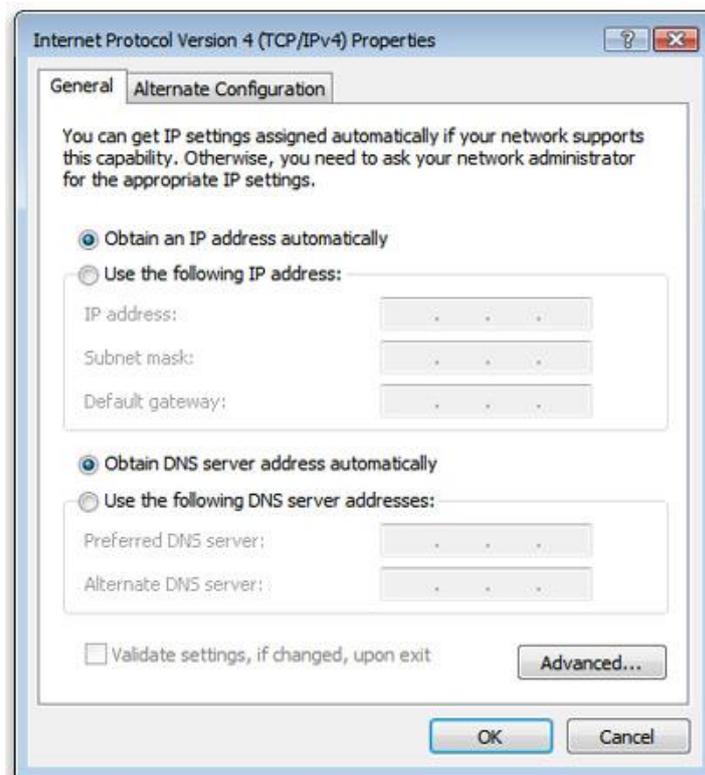
2.2. PC network settings

Set the PC network settings in order to accommodate WAT-2400's requirement.

PC network settings for a local area connection in Windows7 as follows;

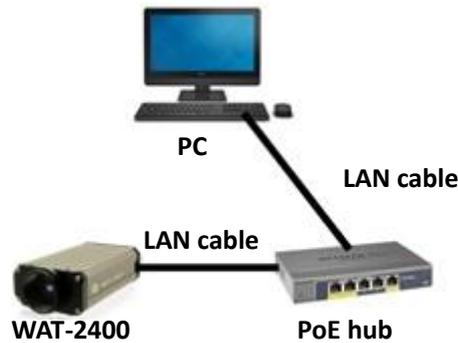
Control Panel>>Network and Internet>>Network and Sharing Center

>>Local Area Connection >>Properties>>Internet Protocol Version 4(TCP/IPv4) Properties

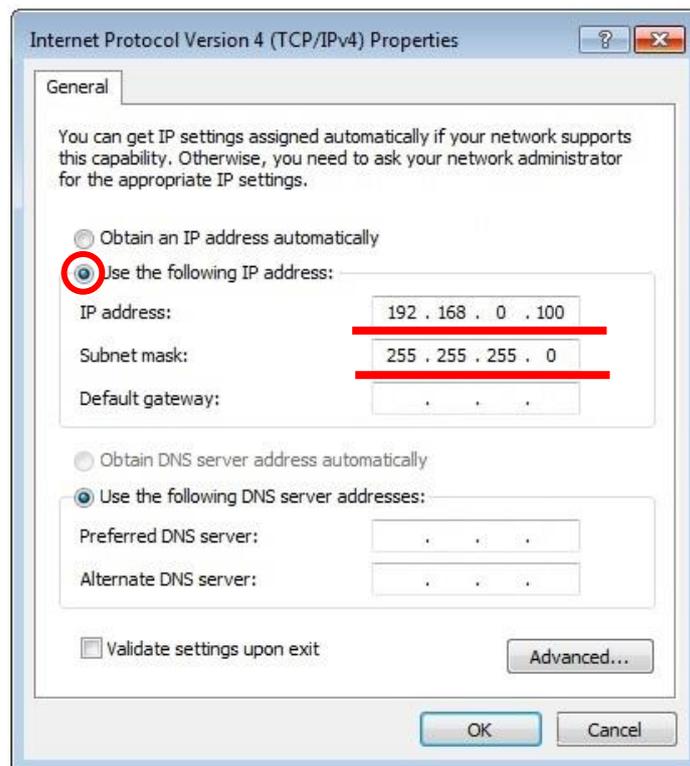


An example of PC network settings

Connect the WAT-2400 and your PC as shown in the below figure. And if the network setting of the camera is in default configuration (IP Address: 192.168.0.200 (static)), go through the following steps to set up the PC network settings.



Control Panel>>Network and Internet>>Network and Sharing Center
>>Local Area Connection >>Properties>>Internet Protocol Version 4(TCP/IPv4) Properties.
Input the values below, press the “OK” and close the property.



3. Checking the Camera Images

It is available to check the camera images after completing the network setting.

This section describes the method in the case of viewing the image from the camera using the VLC media player as a typical way.

WAT-2400 is able to stream by following settings.

ONVIF MODE	Encoding Method	Image Size	Frame Rate [fps]
enable	H.264	1280 * 720	20
	MJPEG	1280 * 720	20
disable	H.264	1920 * 1080	30
	H.264	1280 * 720	30

When ONVIF MODE is enabled, both of the streams can be distributed simultaneously.

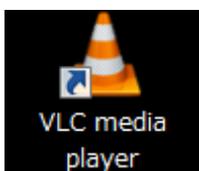
When ONVIF MODE is disabled, only one of them can be distributed by switching settings.

Please refer to 4.1.4 WAT-2400 System Configuration: ONVIF for the ONVIF MODE,

This section describes the method in the case of viewing the image from the camera using the VLC media player as a typical way.

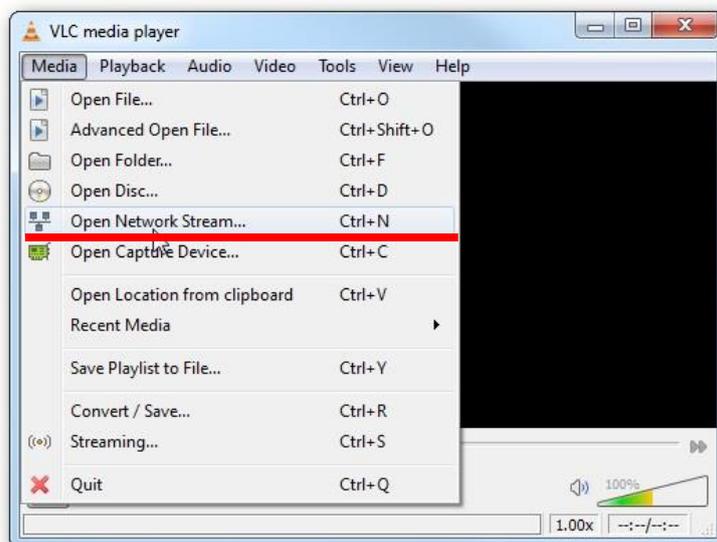
A case of VLC media player

Download the appropriate VLC which meets your PC from VideoLAN official download page (<https://www.videolan.org/vlc/index.ja.html>) and install.



Open the VLC media player when the installation is complete.

Click **Media <Open Network Stream** from the menu.



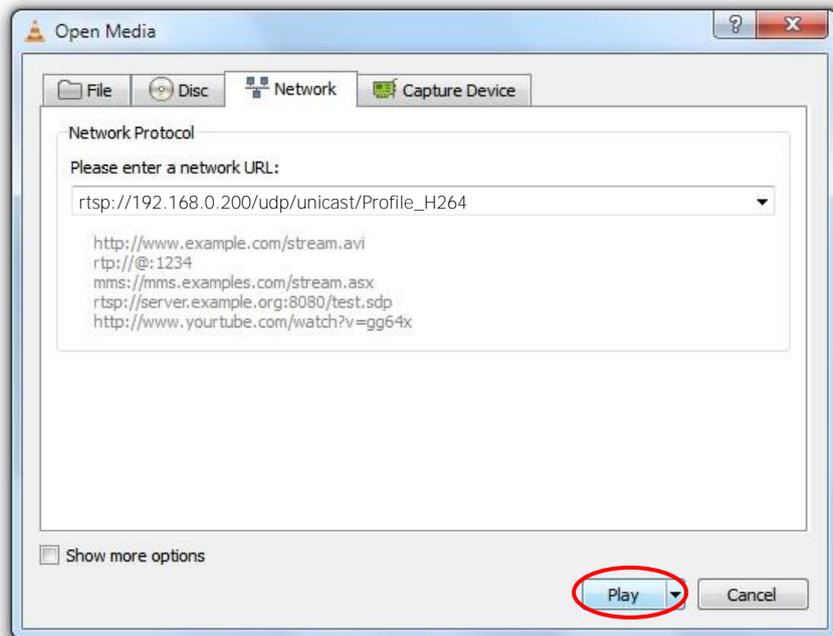
Paste your copied URI in the 'Network Protocol' box and click the play button. Wait till the video start streaming in your VLC.

rtsp://"WAT-2400 IP Address"/udp/unicast/Profile_H264
(Example: `rtsp://192.168.0.200/udp/unicast/Profile_H264`)

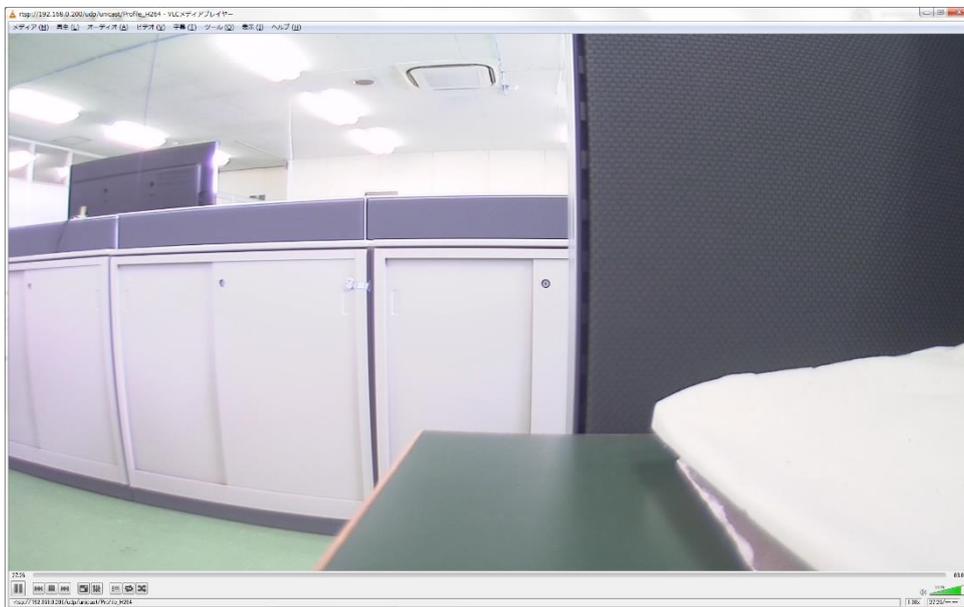
The URI above is to see the stream of H.264 format.

The URI below is to see the stream of MJPEG format when ONVIF MODE is enabled.

rtsp://"WAT-2400 IP Address"/udp/unicast/Profile_JPEG
(Example: `rtsp://192.168.0.200/udp/unicast/Profile_JPEG`)



The network connections and settings work properly, video starts to stream. Please check again the network settings if it does not start.



The screen might become grey during the viewing, in that case, please click the stop button in the lower left and click the play button again.

4. Changing the camera settings

4.1. Configuration changes from the Web browser (WAT-2400 System configuration)

The network settings of the WAT-2400 can be changed in the setting change by the Web browser. The Web browser must correspond to html5 and recommended web browser is Internet Explorer 11.

4.1.1. WAT-2400 System Configuration: Overview (top page)

Open your web browser and go to following address page.

[http://\"WAT-2400 IP Address\"/index.cgi](http://\)

(Example: <http://192.168.0.200/index.cgi>)

Or

[http://\"WAT-2400 Host name\".local/index.cgi](http://\)

(Example: <http://wat-2400-0.local/index.cgi>)

Network settings work properly, "WAT-2400 System Configuration" will be displayed as shown in the below figure. This page is the top page and includes a summary of the system.

WAT-2400 System Configuration



Network Information

IP Address: 192.168.0.200 (static)

MAC Address: C4:7C:8D:3F:F0:07

Host name: wat-2400-0

Device Information

Serial No: 03396

Userland: watec-dist v2.10 (Watec/WAT-2400)

Kernel: 3.4-at16

- **Network Information:**
IP address, MAC address and Host name of the WAT-2400 will be displayed.
- **Device Information:**
Serial number of the camera, and the information about the version of the camera's userland and kernel will be displayed.

There are 4 major menus and 8 submenus apart from the "Overview" in the WAT-2400 System Configurations. A description of each menu follows;

4.1.2. WAT-2400 System Configuration: System

Click on **System** from the menu and go to the page for updating the firmware and changing of network settings. At the first time connection, the authentication window will open such as shown in the below figure.



User name: admin

Password: admin

Enter the above and click the "OK" button. The user name and password can be changed in the password submenu which will be described later.

System has 6 submenus, System Overview, Network, Date & Time, Password, Firmware, Save & Load.

A description of each submenu follows.

System Overview

Overview of the system will be displayed as same as top page.

WAT-2400 System Configuration

Overview

System

Camera

ONVIF®

System Overview

Network

Date & Time

Password

Firmware

Save & Load

Network Information

IP Address 192.168.0.200 (static)
MAC Address C4:7C:8D:3F:F0:07
Host name wat-2400-0
Traffic 1649 packets received
132527 packets sent
Zeroconf Active

Device Information

Serial No 03396
Userland watec-dist v2.10 (Watec/WAT-2400)
Kernel 3.4-at16

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Network

The current network settings of the WAT-2400 are displayed. At this page, you can change the following network settings;

- Switching of AUTO IP (DHCP) and STATIC IP
- Advanced settings for STATIC IP
- Changing the Hostname
- Enabling / Disabling TELNET login
- Enabling / Disabling SSH login
- Enabling / Disabling SNMP agent function

WAT-2400 System Configuration

Overview	System	Camera	ONVIF®
----------	---------------	--------	--------

System Overview	Network	Date & Time	Password	Firmware	Save & Load
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Network Configurations

AUTO IP (DHCP)

STATIC IP

Address

Netmask

Gateway (optional)

DNS Server (optional)

Hostname

TELNET login enable disable

SSH login enable disable

SNMP enable disable

Enter the each item and click the “Update” button then network settings will be changed. Click the “Cancel” prior to clicking the “Update” then the settings will be before correction.

When the change of network settings is made, the below figure will be shown.

If you would like to change the network settings continuously, please access the top page of the WAT-2400 System Configuration again. If you modify the TELNET or SSH settings, please wait for the change completion about 15 seconds to re-access. At this time, the video outputs pause due to change in the network settings.

WAT-2400 System Configuration

Network configurations were changed

There is a possibility that network configurations were changed.
System disconnected the network and reconnect.
Close this web page, and access to the top page of WAT-2400 System Configuration later.

Hostname: wat-2400-0

IP Address: static (192.168.0.55)

TELNET: disable

SSH: disable

When you change TELNET or SSH, please wait for 15 seconds.

SNMP: enable

MAC address: 8A:1F:E5:0F:B4:3A

Back to the top page and the following message will be displayed in upper right in the window.

Configurations were changed, but not saved yet ->
System : Save & Load

As per above message, if you made any configuration changes not only in the network configuration, the changed configuration will not be saved and power-supply disconnection will make the change go back to the original unless you save the configuration to the flash ROM in the Save & Load page which will be described later.

Date & Time

This page is used to set the time on the system of WAT-2400.

WAT-2400 System Configuration

The screenshot shows the 'WAT-2400 System Configuration' web interface. At the top, there is a navigation bar with tabs for 'Overview', 'System', 'Camera', and 'ONVIF®'. Below this, a secondary navigation bar highlights 'Date & Time' among other options like 'System Overview', 'Network', 'Password', 'Firmware', and 'Save & Load'. The main content area is titled 'Date & Time Configurations' and displays the 'Current System Time: 2017/5/8, 11:16:23'. Under 'Time Zone', a dropdown menu is set to '(UTC+09:00) Japan Standard Time'. The 'Synchronize with NTP Server' section has two radio buttons: 'NTP Server' (selected) and 'New Time'. The 'NTP Server' field contains 'ntp.nict.jp', and the 'New Time' field contains '2017-05-08T11:16:18'. At the bottom, there are 'Update' and 'Cancel' buttons.

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- **Current System Time:**
The current system time of WAT-2400 is displayed.
- **Time Zone:**
The current time zone is displayed. It is able to select any one from the drop-down list.
- **Synchronize with NTP Server:**
You can synchronize the system time with any NTP server by entering a valid IP address or domain name of NTP server in the textbox.
- **Set manually:**
You can set the system time manually by entering the “yyyy-MM-ddThh:mm:ss” format in the textbox. (y: year, M: month, d: day, h: hour, m: minute, s: second)

After select and enter the each item, click “Update” to Date & Time settings will be changed. If you click “Cancel” before clicking “Update”, the settings return to the pre-adjusted status.

Please do not change other settings along with the time zone settings. Even if you modify the time zone settings and others simultaneously, only changes in the time zone settings will be reflected but others will not be made.

When the change in the time zone settings is performed, the figure below is displayed.

WAT-2400 System Configuration

Timezone was changed

**The system changes the time zone now.
About 10 seconds later, please push the "Back button".**

Back

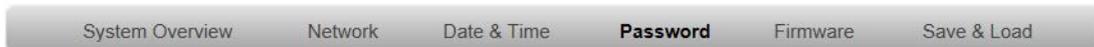
WAT-2400 System Configuration version 2.10
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If you want to return to the previous page from this page, please click not the browser's back function but the "Back" button displayed in this page. In addition, please wait for about 10 seconds due to the change completion.

Password

On this page, you can change the Username and Password to use for authentication when entering the System page of the WAT-2400 System Configuration.

WAT-2400 System Configuration



User and Password Details

Username	<input type="text" value="admin"/>
Current password	<input type="password"/>
New password	<input type="password"/>
Confirm new password	<input type="password"/>

- **Username:**
Enter the new user name
- **Current password:**
Enter the current password
- **New password:**
Enter the new password
- **Confirm new password:**
To confirm, enter the new password again.

Click the "Update" button and the change will be made with the information entered in.

When you change the settings, the confirmation page will be displayed in the same way of changing the network settings. If you would like to change the settings continuously, please access the top page of the WAT-2400 System Configuration again.

Please note that when you made any configuration changes, the changed configuration will not be saved and power-supply disconnection will make the change go back to the original unless you save the configuration to the flash ROM in the Save & Load page

In addition to that, please be aware not to forget the new username and password, when you access the page and will be required authentication after you change the username and password.

Firmware

You can update the userland and kernel of the Linux which configure the systems of the WAT-2400 at this page. These updates are made by two ways that will be described below.

• Firmware updates from Internet

In this case, updates will be made by downloading each image file to the WAT-2400 from our website via the internet. Therefore, the WAT-2400 must be connected to the internet when you update the firmware.

WAT-2400 System Configuration



Firmware updates from Internet

After finishing download of the image file of firmware, it would take a few minutes to complete update of the firmware.
Don't power off WAT-2400 until firmware update finishes.
If the power is turned off, there is a possibility that WAT-2400 can't be started.
System reboot is needed to reflect firmware update.

Applications (Userland)



Edit

Kernel



Edit

Current firmware download location: http://www.watec.co.jp/WAT-2400_FW/change

Click the “Get firmware options” button once the WAT-2400 has been connected to the internet. The list of available firmware will be displayed in the drop-down list if there is not a problem with the connection.

Select the image file you would like to update from the list.

Click the “Update userland” button when you update the userland.

And click the “Update kernel” button when you update the kernel.

After you updated the firmware, the confirmation dialog will be displayed and click the OK button. And the update will begin. During the update the below page will be displayed.

WAT-2400 System Configuration

Updating Firmware

Don't power off WAT-2400 until firmware update finishes.
If the power is turned off, there is a possibility that WAT-2400 can't be started.

Please do not disconnect the network or turn off the camera until the display of the page is finished. And the camera might not be able to reboot.

The update might takes about 10 minutes depending on the states network.

If an error message is displayed, please access the page from the top and see if the URL and the network are not problems. Then, please try to update again.

When the update is completed successfully and back to the original page, you can see the following message in upper right of window.

Firmware was updated, but not rebooted yet -> **System :**
Save & Load

As per the message, please be aware that the updated F/W will not be adapted to the camera unless you reboot the camera from the “Save & Load” page which will be described later.

• **Firmware updates from this computer**

Updating the firmware by uploading each image file which is saved on the computer which displays WAT-2400 System Configuration.

Firmware updates from this computer

After finishing upload of the image file of firmware from this computer, it would take a few minutes to complete update of the firmware.

Don't power off WAT-2400 until firmware update finishes.

If the power is turned off, there is a possibility that WAT-2400 can't be started.

System reboot is needed to reflect firmware update.

Applications (Userland)

参照...

Kernel

参照...

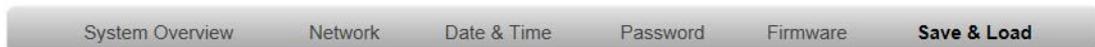
Click "Browse..." to display the file selection dialog box. Select arbitrary image file and click "open". After confirming the path of the selected image file which is displayed on the textbox, click either "Update userland" or "Update kernel".

The following procedures are same as the case of Firmware updates from Internet.

Save & Load

You can save and readout of the system configuration, initialize the setting and reboot the camera at this page.

WAT-2400 System Configuration



Save and Load System Configurations

Save current system configurations into Flash ROM

Cancel temporary changes of system configurations and load configurations saved in Flash ROM

Discard all overwritten system configurations (need system reboot)

System Reboot

Reboot WAT-2400

- **Save:**
Save the current settings to flash ROM
- **Reload:**
Discard current system configuration and change the settings back to the default stored in the flash ROM.
- **Restore Defaults:**
Discard current system configuration and change the settings back to the default of F/W write. Reboot the camera in order to reflect the change.
- **Reboot:**
Reboot the system.

4.1.3. WAT-2400 System Configuration: Camera

You can adjust the settings of the WAT-2400 such like the exposure, the brightness of the output image, the contrast and changing the output size in the page.

Exposure settings

You can change the settings for the exposure of the camera.

- **Auto exposure mode**

You can set the control mode of exposure. There are 4 modes as follows;

0	normal AE	Normal automatic exposure control
1	longtime AE	Take a longer exposure time to the normal AE which extending the frame.
2	AE hold	Hold the current exposure setting
3	manual	Manual exposure control

The default setting is "0".

- **Exposure**

Change the exposure mode to "3" (manual) and you can set the exposure time of the camera manually.

The exposure time will be approximately as follows;

"Input value" / 10,000 [s] (The range of values: 1 ~ 2,000)

The default setting is "100".

- **Gain**

Change the exposure mode to "3" (manual) and you can set the gain value of the camera manually.

In the range of 0 ~ 66 [dB], you can set in 3dB steps.

The default setting is "0".

- **Flickerless mode**

Change the exposure mode to “1” or “2” and you can change the Flickerless mode of the camera. There are 6 modes of FL control as follows;

0	auto FL	Automatic Flickerless mode
1	50Hz to auto FL	Change to auto FL mode after starting with 50Hz FL mode.
2	60Hz to auto FL	Change to auto FL mode after starting with 60Hz FL mode.
3	50Hz fixed FL	50HzFL fixed mode
4	60Hz fixed FL	60HzFL fixed mode
5	FL off	Off the FL function

The default setting is "5".

- **DC Iris control level**

You can adjust the convergence point of the auto iris when you use the DC iris lens. The convergence point changes by increasing the value to the opening side and by decreasing the value to the closing side. Even though the fine adjustment is required depending on the AE setting and DC iris lens used, basically the default setting (128) is recommended.

If you want to intentionally make the lens fully open, set the value “255”, on the other hand, in case of making it fully closed, set the value “0”.

In the range of [0 ~ 255], you switch the set value. The default setting is "128".

- **DC Iris control speed**

You can adjust the convergence point of the auto iris when you use the DC iris lens. By increasing the value, the convergence speed becomes faster. By decreasing the value, the convergence speed becomes slower. Please note that increasing the value excessively causes hunting and overshoot, and it is possible that the diaphragm control is stopped if the value is too small.

Please find the relevant convergence speed by shooting bright and dark subjects alternately because the optimum value differs depending on the DC iris lens.

In the range of [0 ~ 255], you switch the set value. The default setting is "31".

White Balance settings

Switch the white balance mode.

- **White Balance mode**

Switch the white balance control mode. There are 4 modes as follows;

0	ATW	Follow the change of color temperature of the object and adjust the white balance
1	full open	Draw the wider range of colors to white.
2	AWB hold	Stop the AWB operation and hold the white balance gain value
3	MWB	Set the target value of the white balance to a specific color temperature along the black body emission curve.

The default setting is "0".

- **White Balance color temperature**

Change the white balance mode to “3” and you can set target value of the white balance manually.

In the range of [0 (1500K) ~ 60 (10500K)], you switch the set value. Correspondence between the setting value and the color temperature is shown in the table below.

Set value	Color temperature [K]	Set value	Color temperature [K]	Set value	Color temperature [K]
0	1500	21	2143	42	3750
1	1522	22	2188	43	3889
2	1544	23	2234	44	4038
3	1567	24	2283	45	4200
4	1691	25	2333	46	4375
5	1615	26	2386	47	4565
6	1641	27	2442	48	4773
7	1667	28	2500	49	5000
8	1694	29	2561	50	5250
9	1721	30	2625	51	5526
10	1750	31	2692	52	5833
11	1780	32	2763	53	6176
12	1810	33	2838	54	6562
13	1842	34	2917	55	7000
14	1875	35	3000	56	7500
15	1909	36	3088	57	8077
16	1944	37	3182	58	8750
17	1981	38	3281	59	9545
18	2019	39	3387	60	10500
19	2059	40	3500		
20	2100	41	3621		

The default setting is "41".

Image settings

Changing the settings for the adjustment of the image

- **Brightness**

You can set the brightness of the image. The brightness will increase following the increased set value.

In the range of [0 ~ 255], you switch the set value. The default setting is "0".

- **Contrast**

You can set the contrast of the image. The contrast will increase following the increased set value.

In the range of [0 ~ 255], you switch the set value. The default setting is "128".

- **Saturation**

You can set the saturation of the image. The saturation will increase following the increased set value.

In the range of [0 ~ 255], you switch the set value. The default setting is "128".

- **Hue**

You can set the hue of the image

In the range of [-128 ~ 127], you switch the set value. The default setting is "0".

- **Aperture**

You can set the enhancement of the outline(edge) of the image. The enhancement will increase following the increased set value.

In the range of [0 ~ 255], you switch the set value. The default setting is "64".

Video output settings

Changing the settings for the adjustment of video output.

- **Video output mode**

This item is displayed only when ONVIF MODE is "disabled", and it is configurable.

You can set the video output size from following 2 output sizes.

0	FHD1080p	1920 * 1080 30p
1	HD720p	1280 * 720 30p

The default setting is "0"

When you change the items, the output of video will pause and the camera will restart after a few seconds.

- **Bit rate**

This item is displayed only when ONVIF MODE is “disabled”, and it is configurable.

You can set the bitrate of the video output.

In the range of 2000 ~ 8000 [kbps], you switch the set value. The default setting is "8000".

If you change this item, the video output pauses, and the camera restarts few seconds later.

- **Test pattern**

Output the test pattern (color bar signal)

0	off	Normal Image
1	on	Output the test pattern

The default setting is "0".

After changing configuration values of each item described above with the slider or text box, by clicking the “Update” button, the change will be reflected.

Once the “Default” button is clicked, the entire camera settings to this page will return to the default configuration. At the same time, the output size of the image also will be changed, therefore the output of video will pause.

Please make sure to save to the flash ROM in the Save & Load page if you have changed any settings, otherwise the changed settings will not be saved and be back to the original settings when there is power-supply disconnection.

4.1.4. WAT-2400 System Configuration: ONVIF

WAT-2400 complies with ONVIF Profile S requirements. On this page, you can switch the ONVIF conformance mode of WAT-2400, add and/or change user accounts for the camera connection from the ONVIF client software.



ONVIF is a standard for compatibility with network video products which are decided by ONVIF (Open Network Video Interface Forum) such as IP surveillance cameras regardless of manufacturer.

ONVIF Settings

You can switch the ONVIF MODE by this page.

• ONVIF MODE

You can enable or disable ONVIF MODE. If this mode is enabled, WAT-2400 runs well with the ONVIF profile S. There are differences between available video outputs depending on the mode.

WAT-2400 System Configuration



ONVIF Settings

ONVIF MODE enable disable



ONVIF User management

On this page, you can add, modify or delete the user account which is necessary to get images from WAT-2400 through the ONVIF client software such as ONVIF Device Manager, Xprotect, etc.

To access to this page, the authentication is required as in the case of the System page.

WAT-2400 System Configuration



ONVIF User management

<input type="radio"/> USER 0
Name: root
Role: administrator
<input checked="" type="radio"/> USER 1
Name: watec
Role: operator
<input type="button" value="Create"/> <input type="button" value="Modify"/> <input type="button" value="Delete"/>

Initial user name and password for ONVIF client software are as described below.

Name: root

Password: root

- **Create:**
Create new user account. You can create up to 10 accounts.
- **Modify:**
Modify password and role of the existing account.
- **Delete:**
Delete account. This item will be displayed when there are two or more accounts.

When you modify or delete account, check the target account and click each button.
If you click “Create” or “Modify” button, the page below will be shown.

WAT-2400 System Configuration

OverviewSystemCameraONVIF®

ONVIF SettingsONVIF User management

ONVIF User and Password Details

Username	<input type="text" value="root"/>
Current password	<input type="password"/>
New password	<input type="password"/>
Confirm new password	<input type="password"/>
Role	<input style="border: none; border-bottom: 1px solid #ccc;" type="text" value="administrator"/> ▼

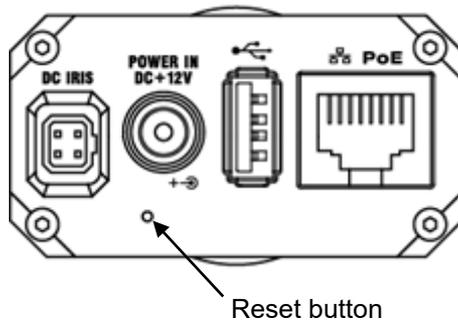
- **Username:**
Enter the new user name. In case of “Modify”, name of target account will be displayed.
- **Current password:**
Enter the current password. In case of “Create”, this item will not be displayed.
- **New password:**
Enter the new password.
- **Confirm new password:**
To confirm, enter the new password again.
- **Role:**
Select the role which is applied when the camera operator checks or changes configurations of the camera with the ONVIF client software. Select from these 3 roles.
 - administrator: All of the available settings will be displayed and can be changed.
 - operator: Settings except for User management will be displayed and can be changed.
 - user: Only some parts of the settings like network settings will be displayed. And cannot change any settings.

Click “Update” to change setting with the information you entered.

Click “Cancel” before clicking the “Update” to return to the previous page.

4.2. Setting initialization by the reset button

WAT-2400 has the reset button on the back of the camera. When the button is pressed continuously for about 10 seconds while using a thin rod into the camera on operation, all of the settings such as network settings and camera settings can be returned to the default configuration while WAT-2400 will automatically restart when the setting initialization is completed.



Reference

- ONVIF Device Manager setup steps

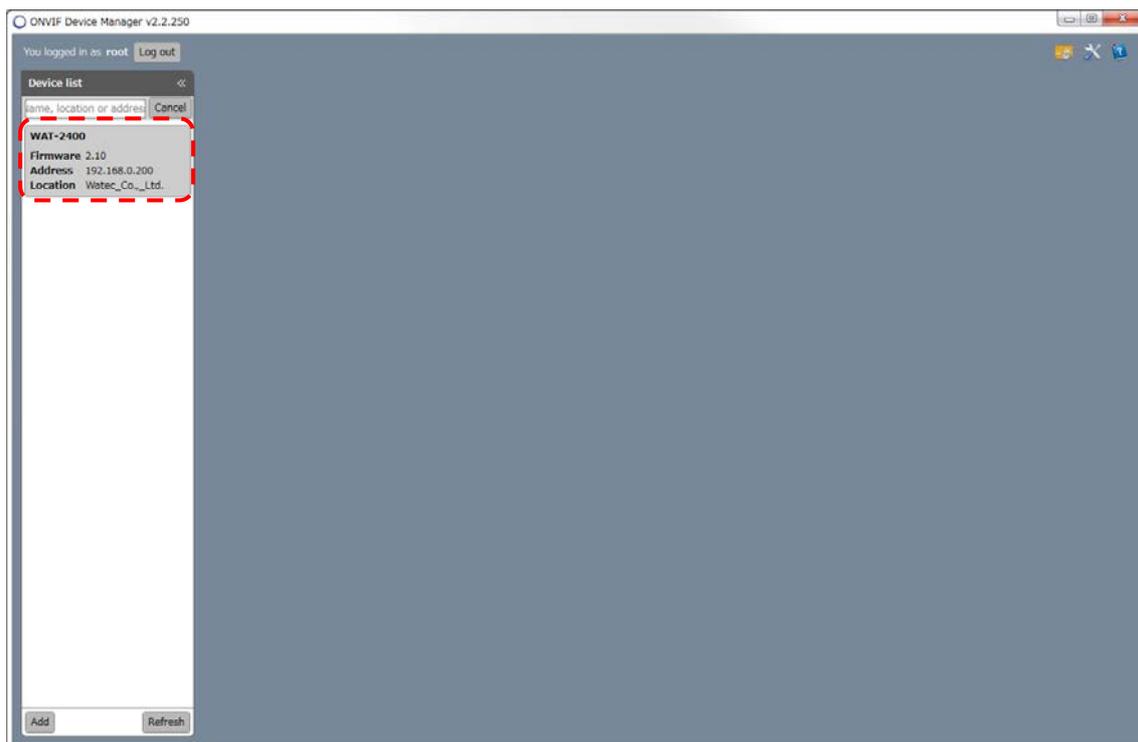
Download the ONVIF Device Manager (ODM) from the following link;

<http://sourceforge.net/projects/onvifdm/>

Then install the ODM to your PC and initiate the ODM.

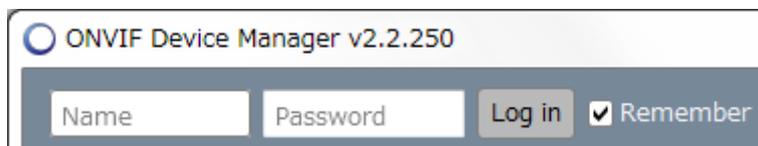


ODM starts as follows;

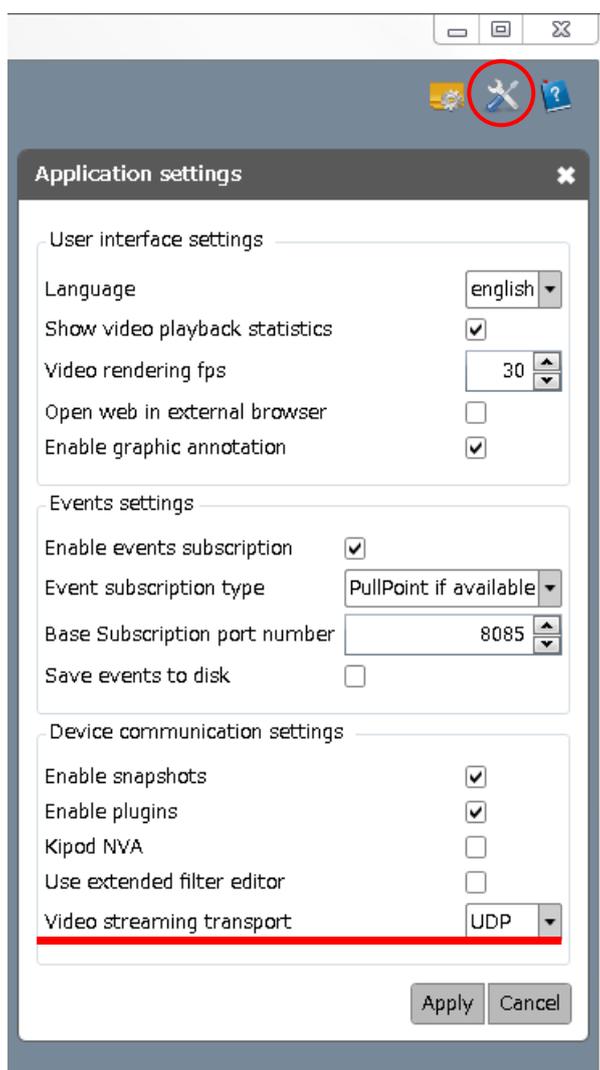


If the network configuration has been successfully connected without error, the WAT-2400 will show up in the Device list. Please make sure there is no error in the network settings if you do not see.

Enter Name: root, Password: root to the text box in the top of the screen and log in by clicking the “Log in” button.

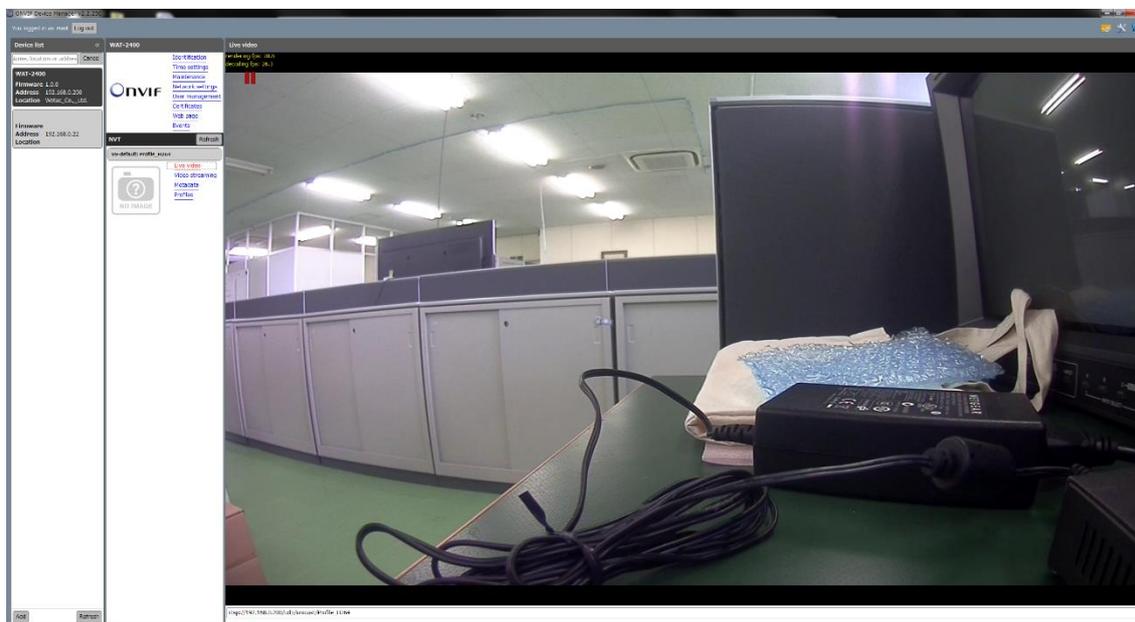


When you click the icon which is indicated by a red circle in the upper right in the window as below figure, then the settings window will open.



Select the UDP in Video streaming transport (red underline) and click the “Apply” button.

Once you have finished the settings and click the WAT-2400 of the Device list. Since the menu is open, click the "Live video" in it. If there is not any problem with the configuration, the moving image will be displayed as shown in the figure below.

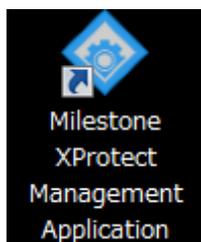


Once your WAT-2400 is configured, the further settings are unnecessary. In case of such as "Loading" is displayed and the image does not appear, please restart the ODM.

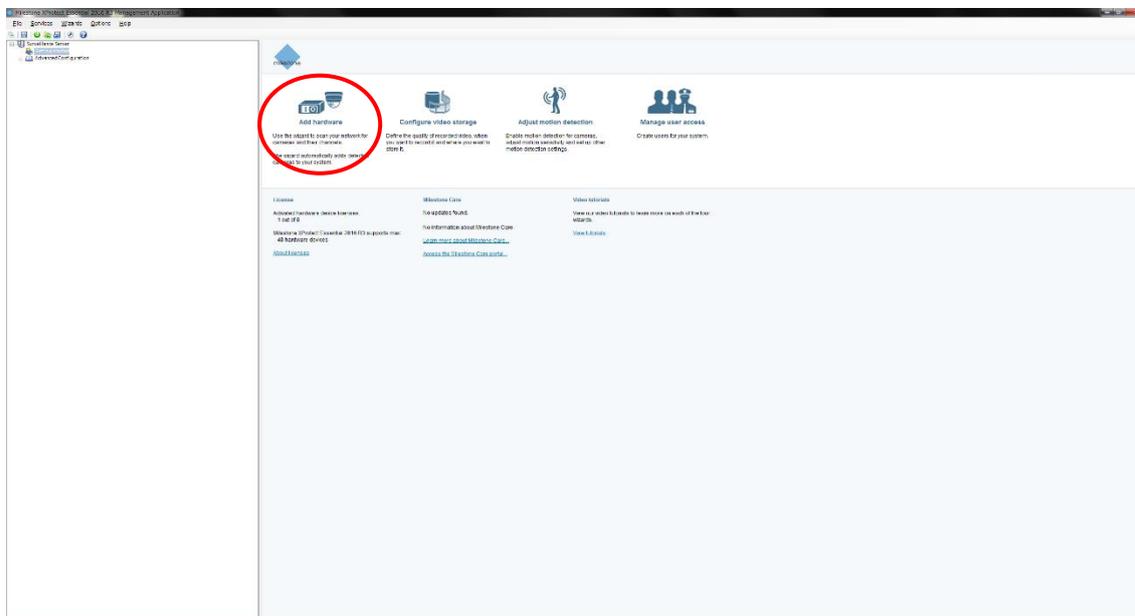
- XProtect Essential setup steps

Xprotect Essential is a free evaluation version of the VMS (Video Management Software) provided by Milestone Corporation. You can download the software at the Milestone's site (<https://www.milestonesys.com/>).

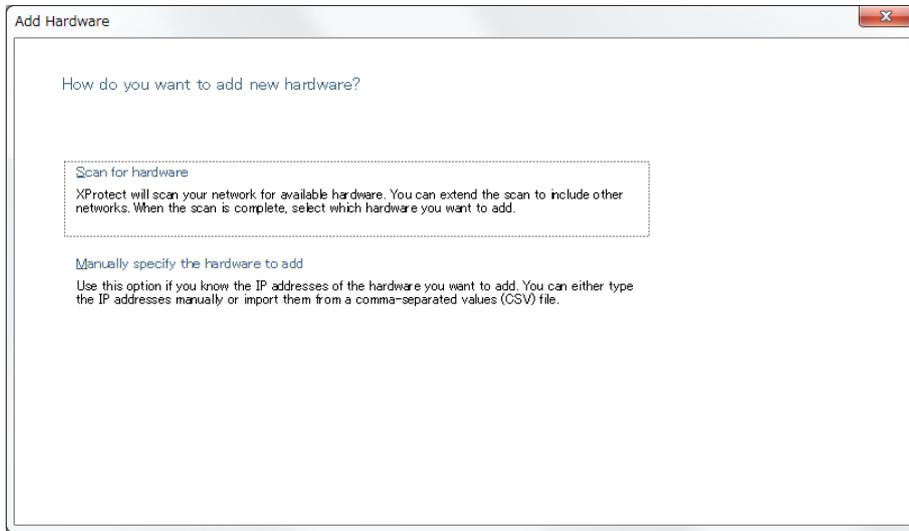
Download and install are complete, start the XProtect Management Application from icon below;



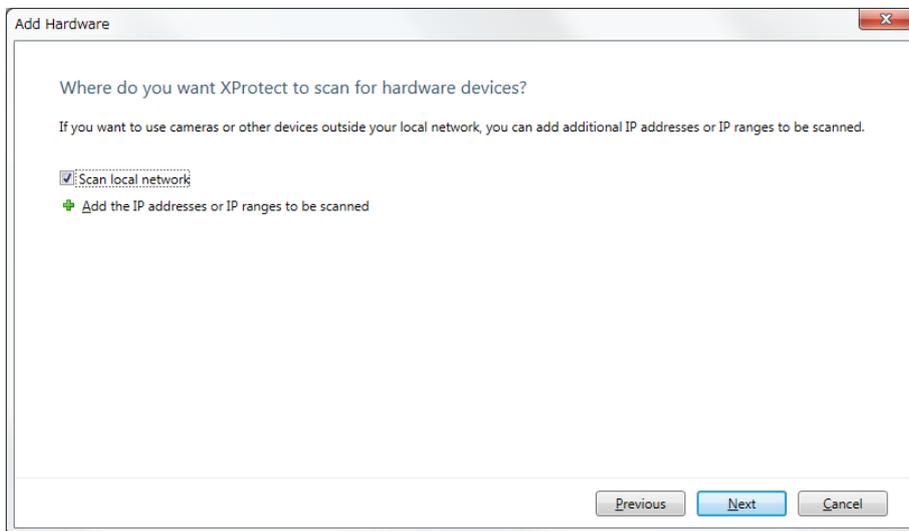
The software will start as shown in the figure below and then click “Add hardware” which is enclosed by red circle.



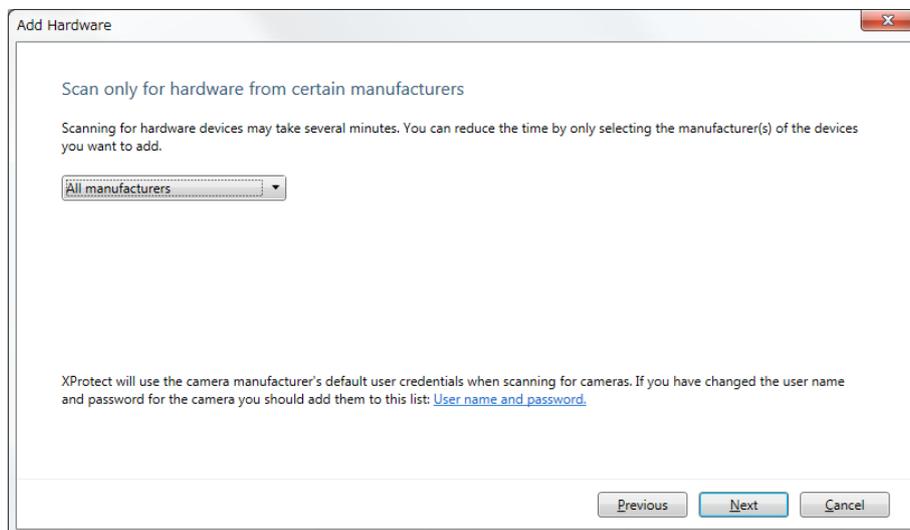
Then the window opens as below and then click the "Scan for hardware"



Check the "Local Network Scan" and then click "Next". If there is any scan location where you want to add hardware, add from "+" button.

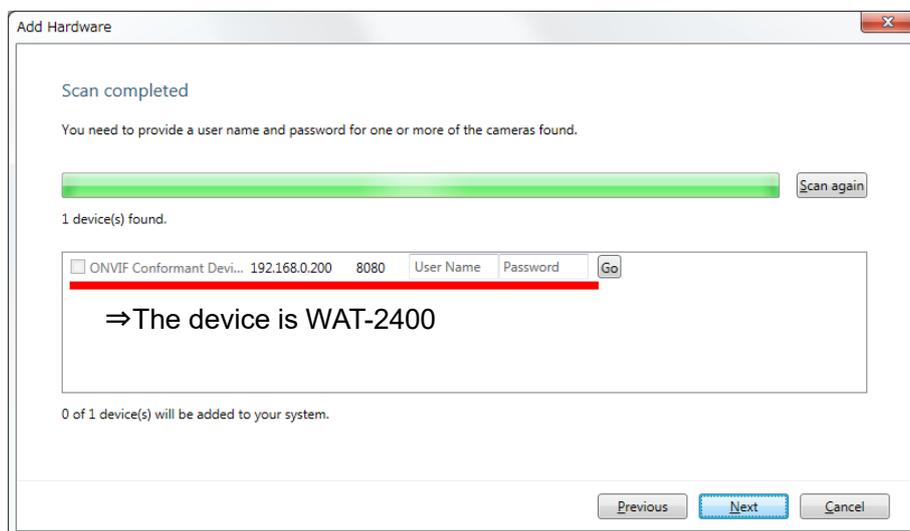


Select "All manufacturers" and then click "Next"



Please be patient until the hardware scan is complete.

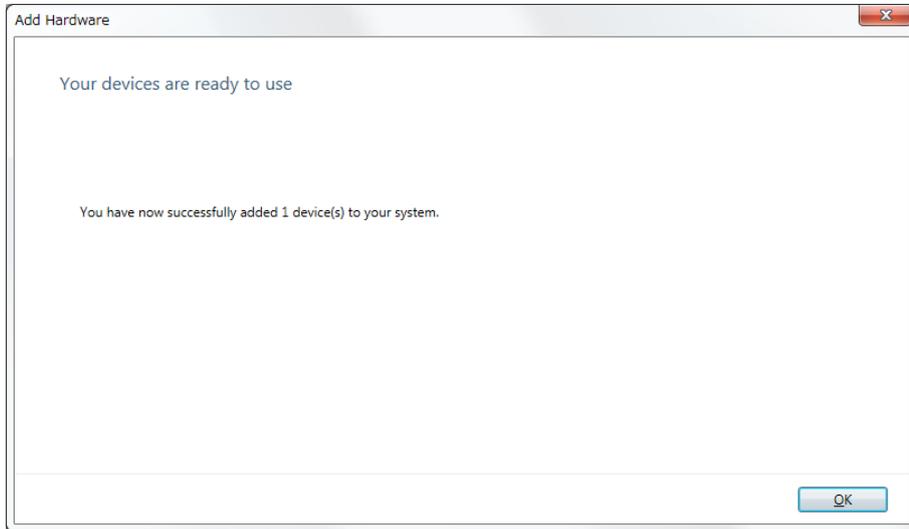
When the scan is complete, the network connection, settings have been done properly, the device is displayed as the IP address that was set up as shown in the figure below. (At this time, the camera is not displayed as WAT-2400)



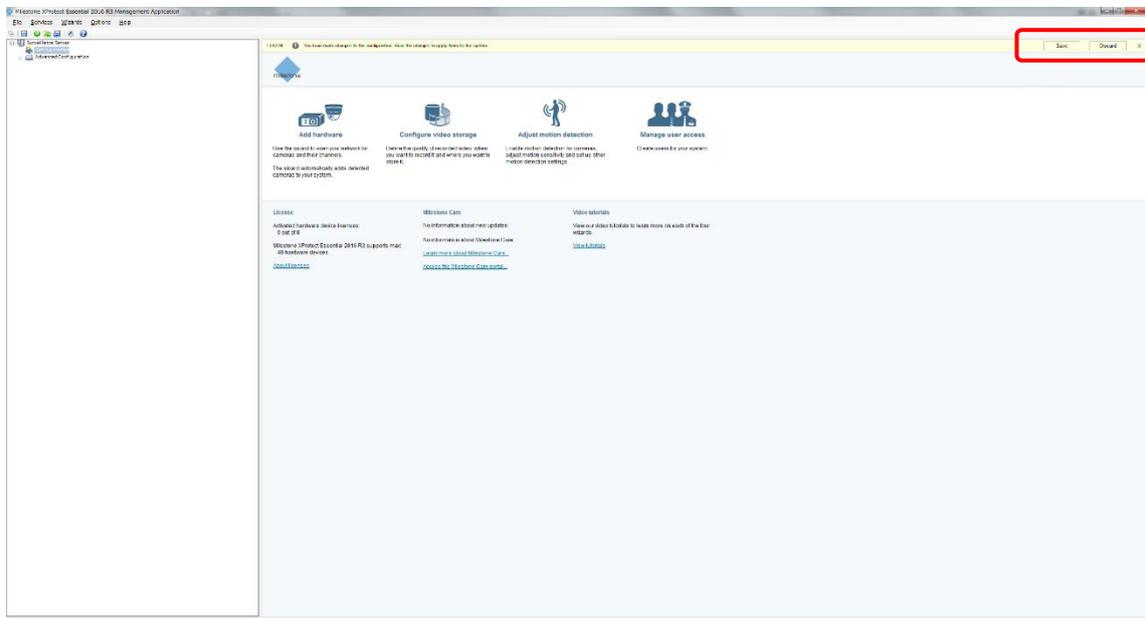
Enter User name and Password (default root, root), then click the "Go" button

If there is the device that you do not like to add as shown above, remove the check. When the login is done successfully and then click "Next".

When the following screen appears and the camera is added successfully, click the "OK" button and close the window.



After that the message in the top of the window is shown in the figure below and click "Save" button. The adding camera will be saved.

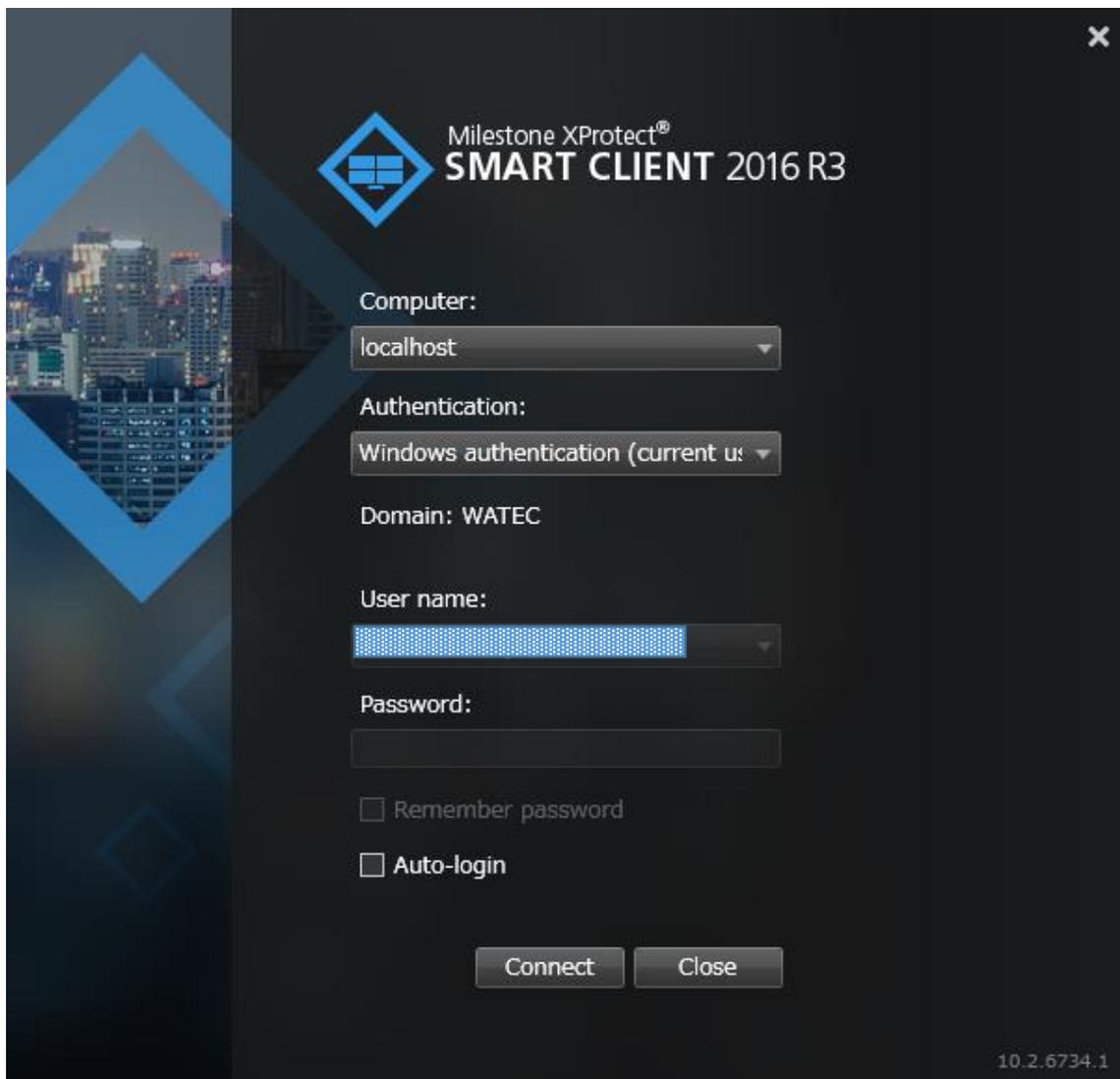


Once you have completed the "Save", exit the XProtect Management Application

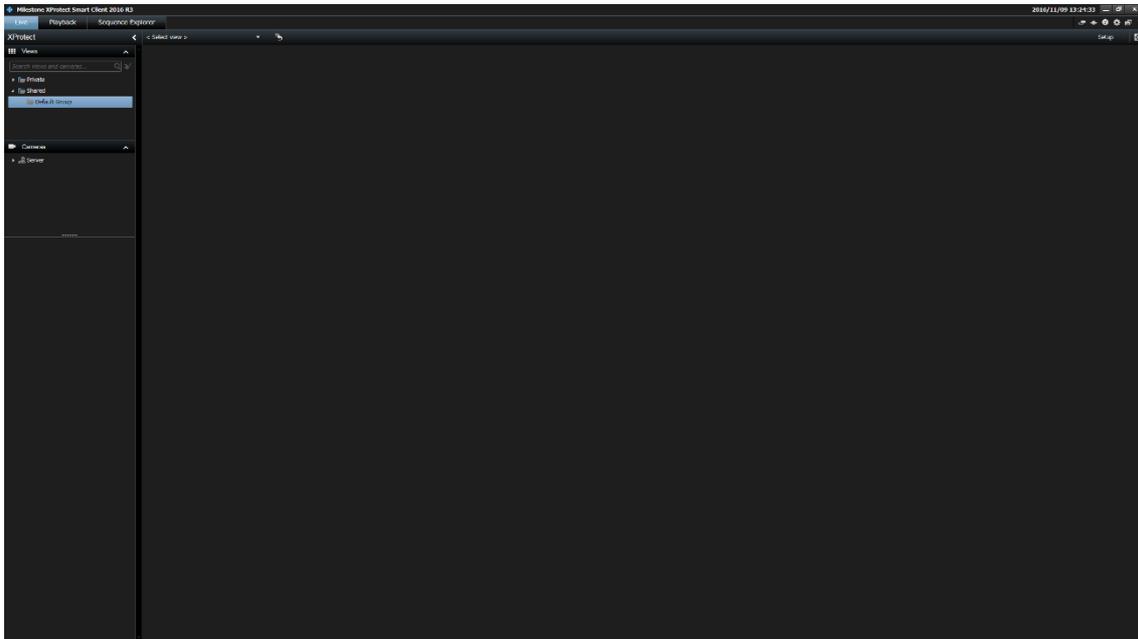
Start the XProtect Smart Client start from an icon below;



Then the authentication screens are displayed and click the “Connect” button.



Then the XProtect Smart Client starts up as described below;

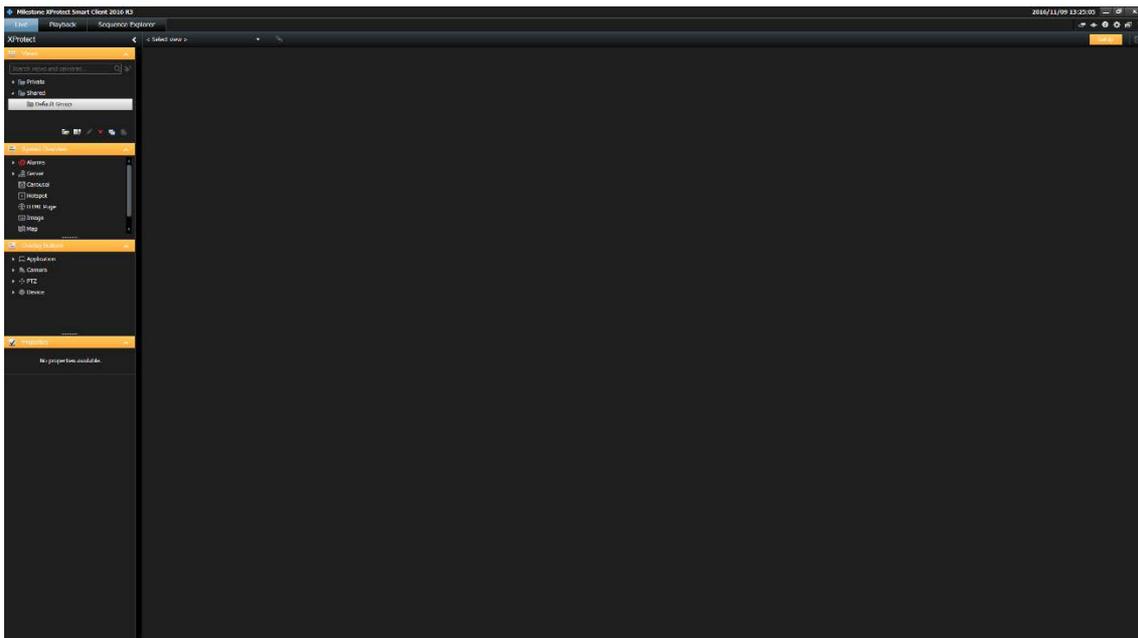


Click the “Setup” button on the top right corner of the window and go on to the setting mode.

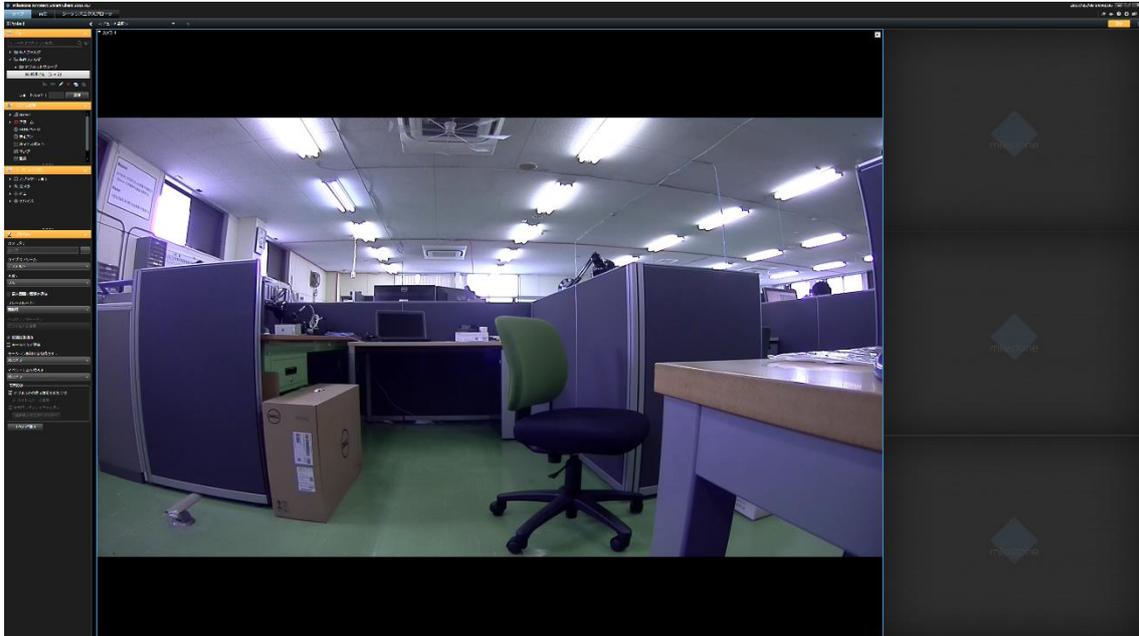
Please select the menu in the left side of the menu below;

View → Shared folder → Default Group and add the view in the form of reference to the screen while clicking the “Create a new view” button

If you already have a default view, above process is not necessary.



Once the view has been added, open the System Overview → Server → camera from the left side of the screen menu tree. The camera that you added in the XProtect Management Application previously is displayed and select the camera, then drag and drop to any position on the view.



If there is not any problem in settings, the images from the camera will be displayed on the view. When you finished the settings, click the “Settings” button in the upper right window again and exit the setting mode.

