

SEYEONTECH

User Manual



Seyeon Tech Co., Ltd

www.edgehandler.com

Safety Warnings and Cautions

Before connecting and operating your device, please be advised of the following tips:

- Make sure to unplug the power cord while installing the unit
- Do not connect several devices to one power adaptor as adaptor overload may cause overheating, electric shock or fire hazard.
- Input voltage for operation of the unit shall be within the specified voltage range (100 ~ 240V AC) $\pm 10\%$ Maximum, do not use the outlet for connecting the high power consumption products such as the heater, air conditioning etc.
- Ensure unit is installed in a well-ventilated, dust-free environment and NOT in high-humidity environment.
- A strong shock or vibration may cause damage of unit
- This equipment has been evaluated for its suitability for use in a Commercial environment. If used in a home environment, there is a Risk of radio interference.
- Avoid installation of unit where close to strong magnetic force, radio wave or wireless device such as Radio / TV.
- Do not place heavy objects on the unit and be careful no foreign substances in the unit.
- The interior of the unit is sensitive to static electricity so do not open the top cover, disassemble, repair or modify.
- If a strange sound or smell exists, unplug the unit immediately and contact your dealer or manufacturer
- Do not use the unit while the cover is open and Needs a proper air circulation system in a system operation room. Otherwise the unit might be damaged due to internal and/or elements of unit temperature rise.
- This equipment is for indoor use, and all the communication wiring is limited to inside of the building, or any similar word.
- The default ID and Password is "root" / "root" (case sensitive). To prevent identity theft damage, highly recommend to change your password periodically. User has responsibility for security and other problems caused by careless password management.

Copyright Information

Copyright 2016 Seyeon Tech Co., Ltd. All rights reserved. Use of this product and manual is subject to license. Information in this document is subject to change without notice. EdgeHandler is registered trademark of products of Seyeon Tech Co., Ltd. All other brand and product names mentioned in this document are registered trademarks or trademarks of their respective holders. The Software supplied with these Products is provided under license from Seyeon Tech Co., Ltd.

GNU General Public License Information

This product includes certain open source or other software originated from third parties that is subject to the GNU General Public License (GPL), GNU Library/Lesser General Public License (LGPL), and different and/or additional copyright licenses, disclaimers, and notices.

The exact terms of GPL, LGPL, and some other licenses are provided to you with this product. Please refer to the exact terms of the GPL and LGPL at <http://www.fsf.org> (Free Software Foundation) or <http://www.opensource.org> (Open Source Initiative) regarding your rights under said license. In accordance with the terms of the GPL and LGPL, you may obtain a copy of the relevant source code by sending your request to sales@flexwatch.com. Subject to GPL, you may re-use, re-distribute and modify the GPL source code.

Note that with respect solely to the GPL Software, no warranty is provided. We do not offer direct support for the distribution. This offer is valid for up to three years from the date of original purchase of the Product.

Notification

This equipment has been evaluated for its suitability for use in a Commercial environment.

If used in a home environment, there is a Risk of radio interference.

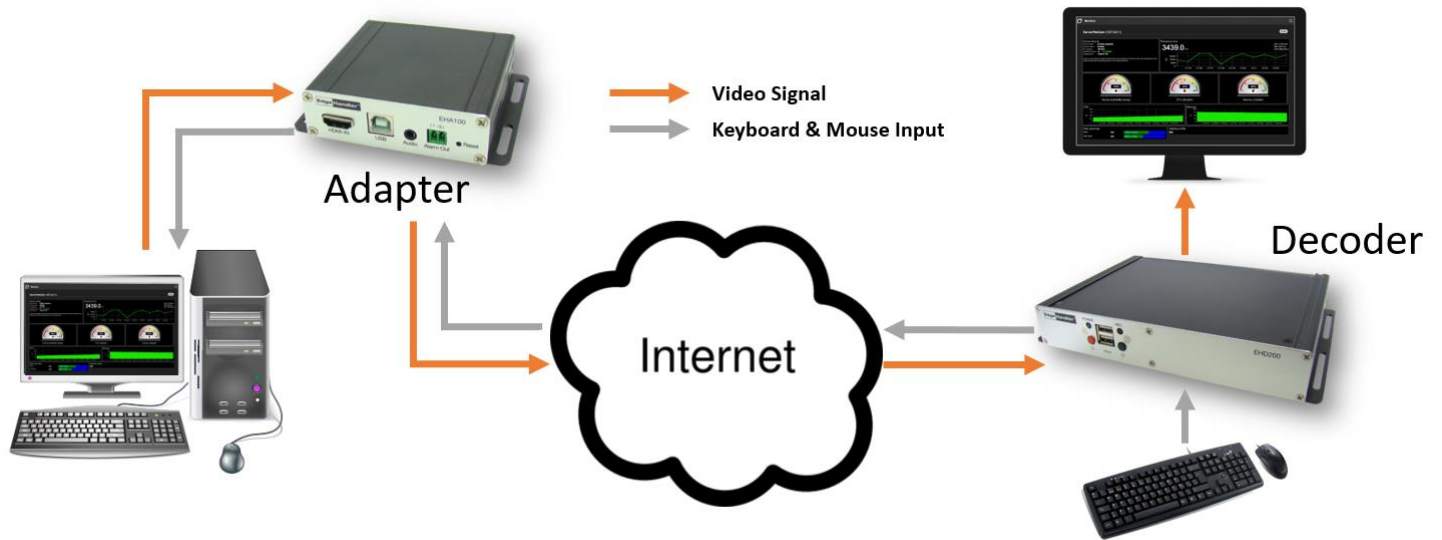
Contents

1.	Product Description	6
1.1	EHA200 (Adapter).....	7
1.1.1	Package Contents	7
1.1.2	Front Panel	8
1.1.3	Rear Panel	8
1.2	EHD200 (Decoder)	9
1.2.1	Package Contents	9
1.2.2	Front Panel	10
1.2.3	Back Panel	10
2.	Installation	12
2.1	Getting Started with EHA200 Adapter.....	12
2.2	Getting Started with EHD200 Decoder	13
3.	Using EHA200 Adapter.....	14
3.1	Accessing the EHA200 Adapter	14
3.2	Live View Page	14
3.3	Admin Page.....	15
3.4	Home	16
4.	Using EHD200 Decoder	17
4.1	Live Mode	17
4.1.1	Live Tool Bar	18
4.1.2	Server Control Bar	19
4.1.3	Group Control Bar	20
4.1.4	Audio Control Window.....	21
4.1.5	Ports (Channel).....	22
4.2	Configuration Mode	24
4.2.1	IP Device Configuration	24
4.2.2	Port Configuration.....	32
4.2.3	Preference Configuration	33
4.2.4	Utility.....	35
4.2.5	Remote Control	38
4.3	Web Access.....	38
4.3.1	Live View Page.....	39
4.3.2	Admin Page	40
4.3.3	Home.....	40
5.	Appendix	41
5.1	Specification	41

5.1.1	EHA200.....	41
5.1.2	EHD200.....	42
5.2	Product Overview.....	43
5.2.1	EHA200.....	43
5.2.2	EHD200.....	43

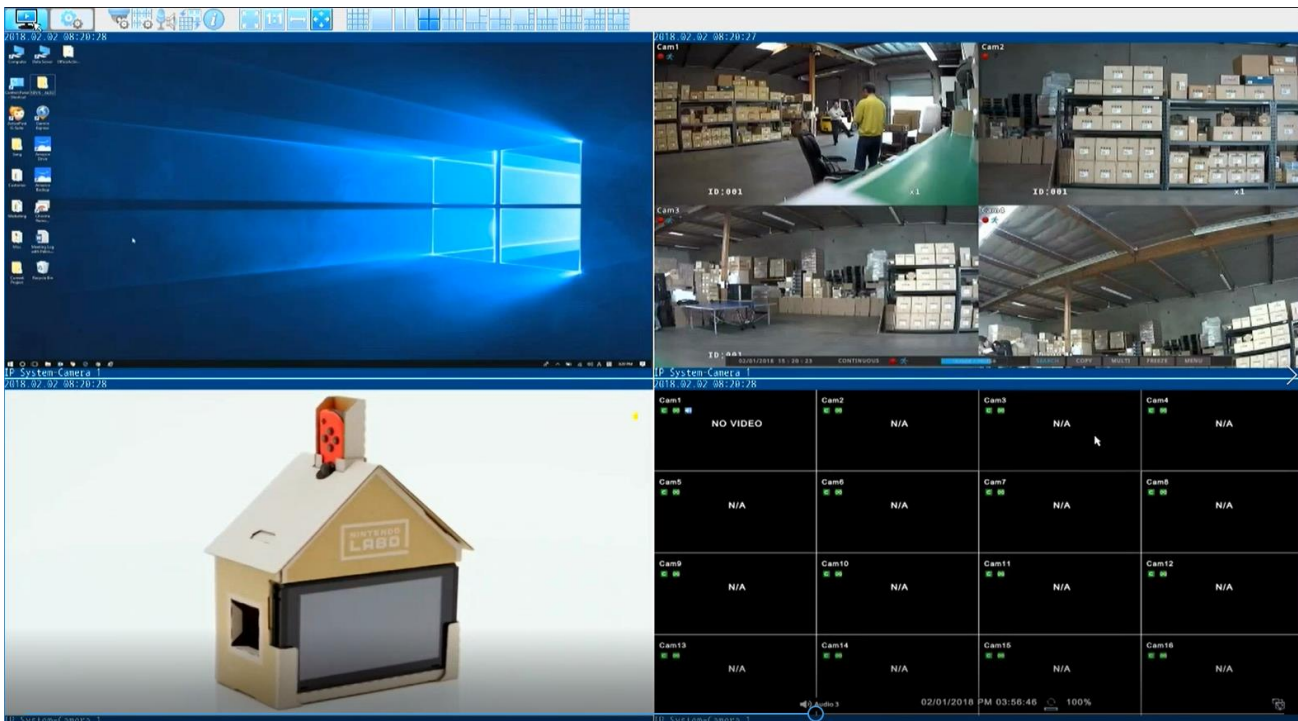
1. Product Description

Edge Handler™ is a hardware based remote control solution consisting of Adapter & Decoder. The Adapter can compress HDMI video signal and send it over the Internet to the Decoder. USB keyboard and mouse inputs can be received at the Decoder and passed to the Adapter over the IP network.



Any System using a video signal that can be converted to HDMI and using a USB type keyboard and mouse can be remotely controlled by installing an Edge Handler™.

In addition, up to 64 adapters can be monitored and managed with a single Decoder as shown below.



The EdgeHandler™ requires that an Adapter and a decoder be configured with at least one pair for remote controlling the connected system.

1.1 EHA200 (Adapter)

EHA200 is an Adapter that can compress/encode and transmit HDMI video signals. It allows to monitor live video on PCs, smartphones and tablet PCs connected to the Internet, and can be used for various applications such as the HDMI Extender.

When used with the EHD200 Decoder, the system connected to the Adapter can be remotely controlled by keyboard and mouse.

1.1.1 Package Contents



EHA200 Adapter x 1ea

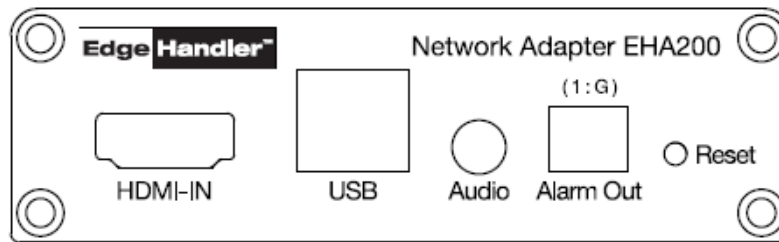


DC 12V Power Adapter 1A x 1ea



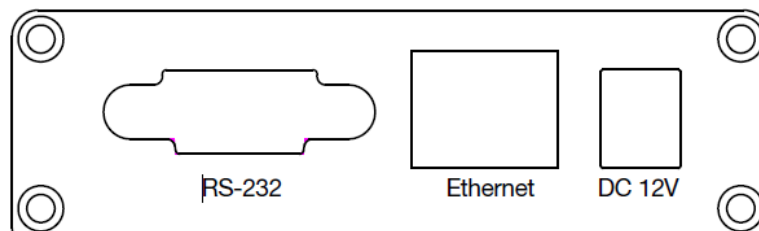
Type-B USB Cable

1.1.2 Front Panel



Name	Description
HDMI-IN	A port to input HDMI video signals to be compressed and encoded and transmitted.
USB	A port for connecting a keyboard or mouse. USB hub may be used for connecting keyboard and mouse simultaneously. The keyboard and mouse connected here can be controlled via the Decoder.
Audio	3.5mm audio input terminal. Input audio can be output through the Decoder.
Alarm Out	A alarm output port can output the alarm signal input through the Decoder.
Reset	Factory reset switch. Press and hold this button for more than 15 seconds to start the Factory Default process. * Be careful, all settings including network settings will be returned to the factory default settings.

1.1.3 Rear Panel



Name	Description
RS-232	An RS-232 port used to upload software during product production.
Ethernet	An ethernet port for network connection.
DC 12V	A power connection port.

1.2 EHD200 (Decoder)

EHD200 is a Decoder that must be paired at least one of the EHA200 Adapter. In other words, the Decoder can decode the encoded video transmitted from one or more Adapters and display them on a connected monitor.

In addition, a USB keyboard and mouse can be connected to the Decoder to remotely control the systems connected to the Adapters as well as self-controlling.

1.2.1 Package Contents



EHD200 Decoder x 1 ea



DC 12V Power Adapter 1A x 1 ea



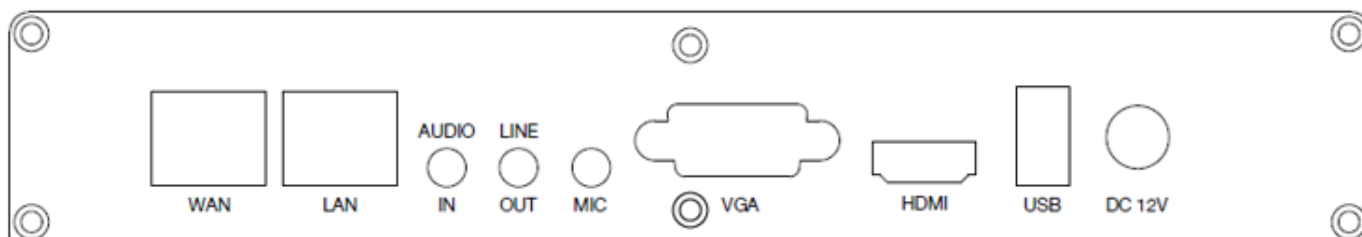
Power Cable

1.2.2 Front Panel



Name	Description
Power LED	The LED lights up when the Decoder is powered up.
USB Ports (x2)	Ports for keyboard and mouse connection, which allows to control the keyboard and mouse of the system connected to the EHA200 Adapter.
Reset Button	Factory reset switch. Press and hold this button for more than 15 seconds to start the Factory Default process. * Be careful, all settings including network settings will be returned to the factory default settings.

1.2.3 Back Panel



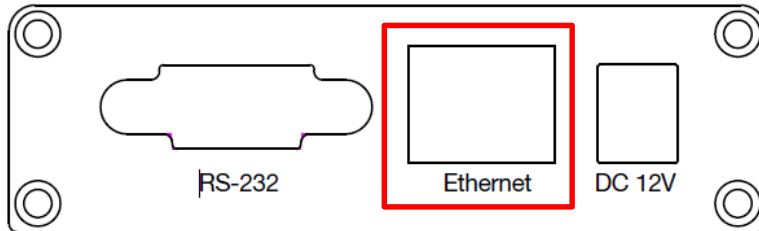
Name	Description
WAN	An ethernet port for network connection.
LAN	An ethernet port for network connection.
AUDIO IN	An audio input port
LINE OUT	An audio Out port
MIC	An microphone port
VGA	D-Sub type VGA Video Out port, which supports 1080P Full-HD resolution output device (monitor, etc.).  If the display device (monitor, etc.) does not support Full-HD because the output resolution of the NVR is fixed to Full HD (1080P), the image will be output but a part of the screen may not be displayed.

HDMI	HDMI Video Out port supports 1080P Full-HD resolution output device (monitor, etc.).  Since the output resolution of the NVR is fixed to Full HD (1080P), if the display device (monitor, etc.) does not support Full-HD, no image is output.
USB	A port for keyboard or mouse connection, which allows to control the keyboard and mouse of the system connected to the EHA200 Adapter.
DC 12V	A power connection port.

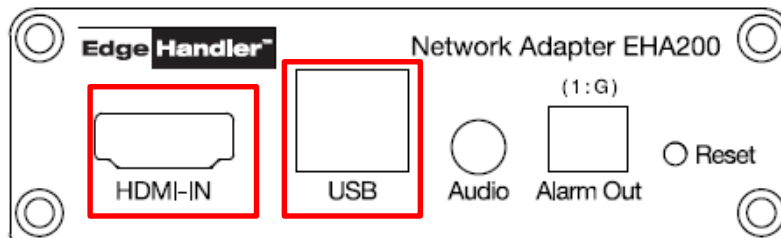
2. Installation

2.1 Getting Started with EHA200 Adapter

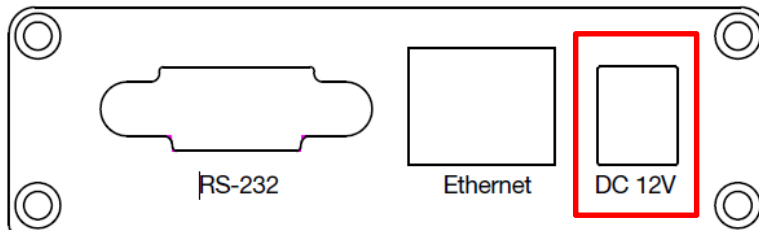
- ① Connect the Network Cable to the Ethernet port.



- ② Connect the HDMI output of the desired devices such as PC, NVR or DVR to the HDMI-IN port of the Adapter.



- ③ Connect the Keyboard/Mouse to the USB port of the Adapter.
By using USB hub, keyboard and mouse can be used simultaneously.
- ④ Input power to the rear power input terminal using the included power adapter to boot.



Whether or not the boot is completed is known by using the IP installer to discover the device.

- ⑤ Assign an IP address to the device using the IP Installer software when booting is completed.

The screenshot shows the IP Installer (v3.8.0) window. It contains a table with the following data:

Model	MAC address	IP address	IP Ty...	Server name	HTTP port	Version	Status
EHA-100	00306FE1E2EA	192.168.225.20	static	IP System	80	4.31-043-rp	Success
EHD-200	00306F005DAA	192.168.225.16	static	IP System	80	4.31-103-rm	Success

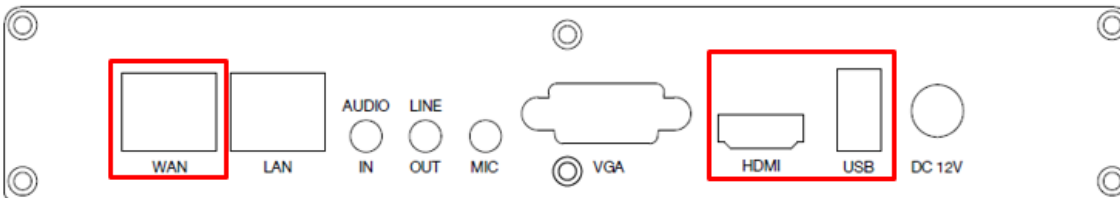
IP Installer software can be downloaded from the link below.

[\[IP Installer Software Download link\]](#)

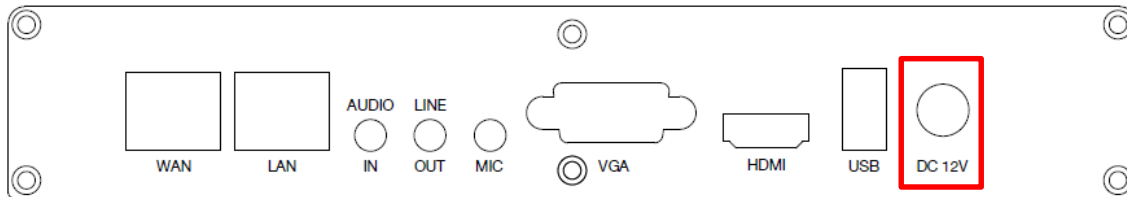
For more information about the IP Installer software, please refer to the manual linked below.

[\[IP Installer Guide – English link\]](#)

2.2 Getting Started with EHD200 Decoder



- ① Connect the network cable (RJ45 standard) to the WAN port.
- ② Connect the desired display device such as monitor or TV to the HDMI port.
- ③ Connect the keyboard and mouse to the USB ports.
(The USB port consists of 2 ports on the front and 1 port on the back.)
- ④ Plug in the power using the included power adapter.



- ⑤ Assign an IP address to the device using the IP Installer software.

Model	MAC address	IP address	IP Ty...	Server name	HTTP port	Version	Status
EHA-100	00306FE1E2EA	192.168.225.20	static	IP System	80	4.31-043-rp	Success
EHD-200	00306F005DAA	192.168.225.16	static	IP System	80	4.31-103-rm	Success

IP Installer software can be downloaded from the link below.

[\[IP Installer Software Download link\]](#)

For more information about the IP Installer software, please refer to the manual linked below.

[\[IP Installer Guide link\]](#)

3. Using EHA200 Adapter

3.1 Accessing the EHA200 Adapter

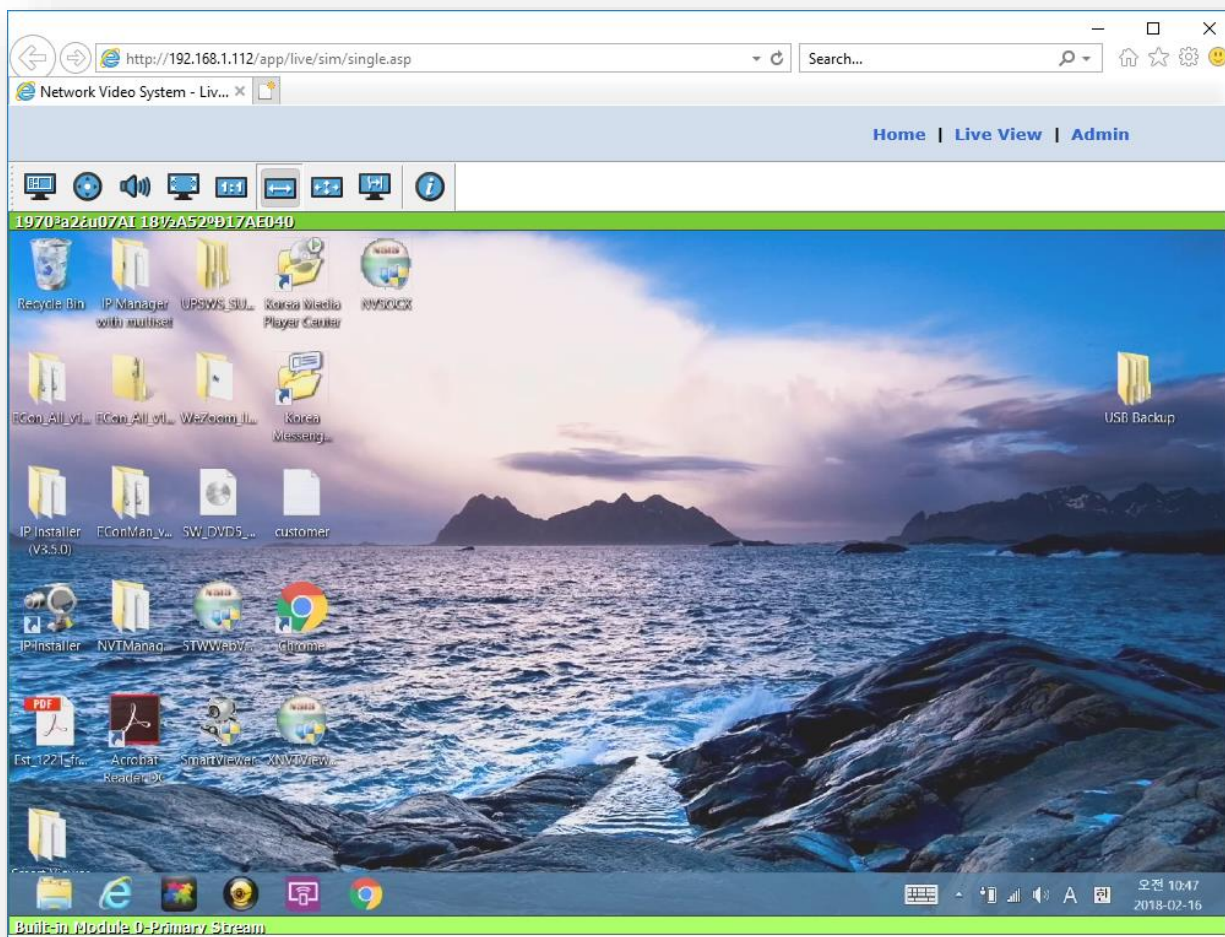
Enter the **IP Address** or **Domain Name** of the Adapter at the address bar on a web browser.



We recommend Internet Explorer as a web browser for using Edge Handler™ devices.
The initial IP setting for the Edge Handler™ device can be done through IP Installer software which can be found in the enclosed CD or software download page at FlexWATCH® Web Site
<http://www.flexwatch.com/support/download/software.asp>

3.2 Live View Page

When connected to the Adapter via the web browser successfully, Live View Page will be displayed as shown below.



Icon	Menu	Description
	Channel Control Bar	Show/Hide Channel Control Bar.
	PTZ Control Bar	Show/Hide PTZ Control Bar
	Audio Control Bar	Show/Hide Audio Control Bar
	Full Screen	View in Full Screen. In full screen mode, Main Menu and Control Bars are hidden. To return to the default view, press ESC on your keyboard or select Exit Full Screen Mode after clicking the right mouse button.
	Original Size	Displays the images to its actual size.
	Maintaining aspect ratio	Display NVR System information such as model number, firmware, and license.
	Filling the Screen	Ignoring the ratio of the image and displays the image to the entire display area of the screen.
	Buffering/Drawing Mode	Use image buffer. / Smooth out the outline of the image.
	Maintaining aspect ratio	Display Smart Viewer information such as CPU, Memory, Bandwidth usage and Version and Build Date of the software.

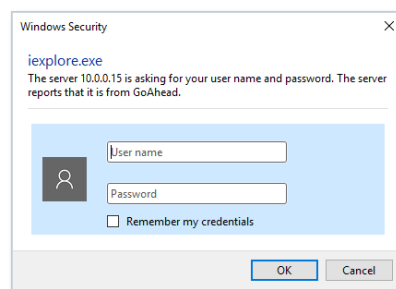
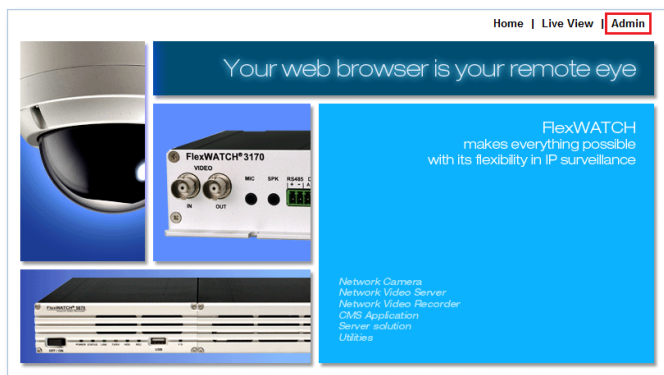
3.3 Admin Page

All settings of the Adapter can be done via the (Web) Admin Page.



Change setting through the Admin Page is not necessary unless it is a significantly slower network.

(Web) Admin Page can be opened by clicking **Admin** in the upper right of the screen, and entering the IP and password in the authentication window that appears.





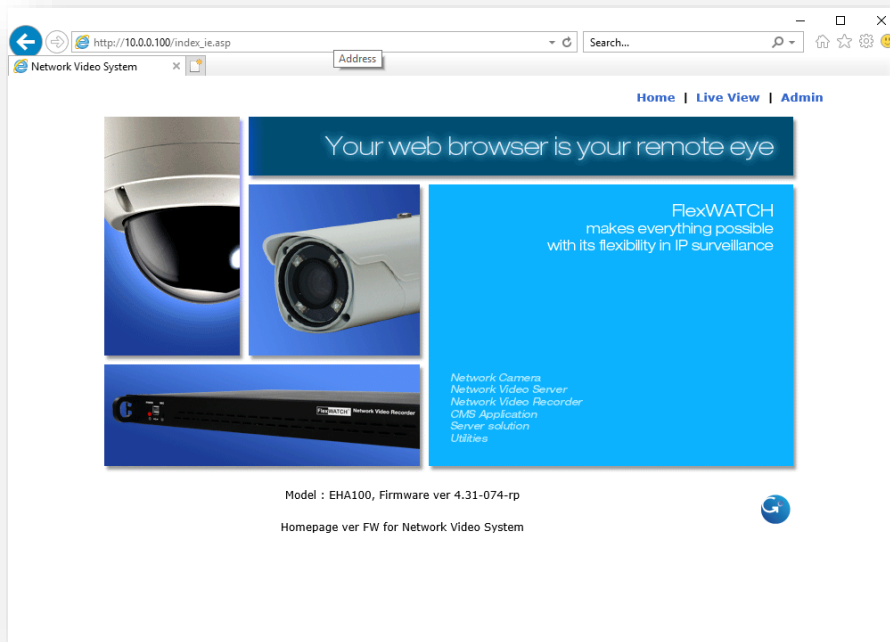
The default user name and password is “root”.

For more information on the Web Admin Page, refer to the Web Admin Page User's Manual.

[\[Web Admin Page User Manual link\]](#)

3.4 Home

On the home page that appears by clicking Home in the top right corner of the screen, model number and firmware version of the device are displayed as shown below.

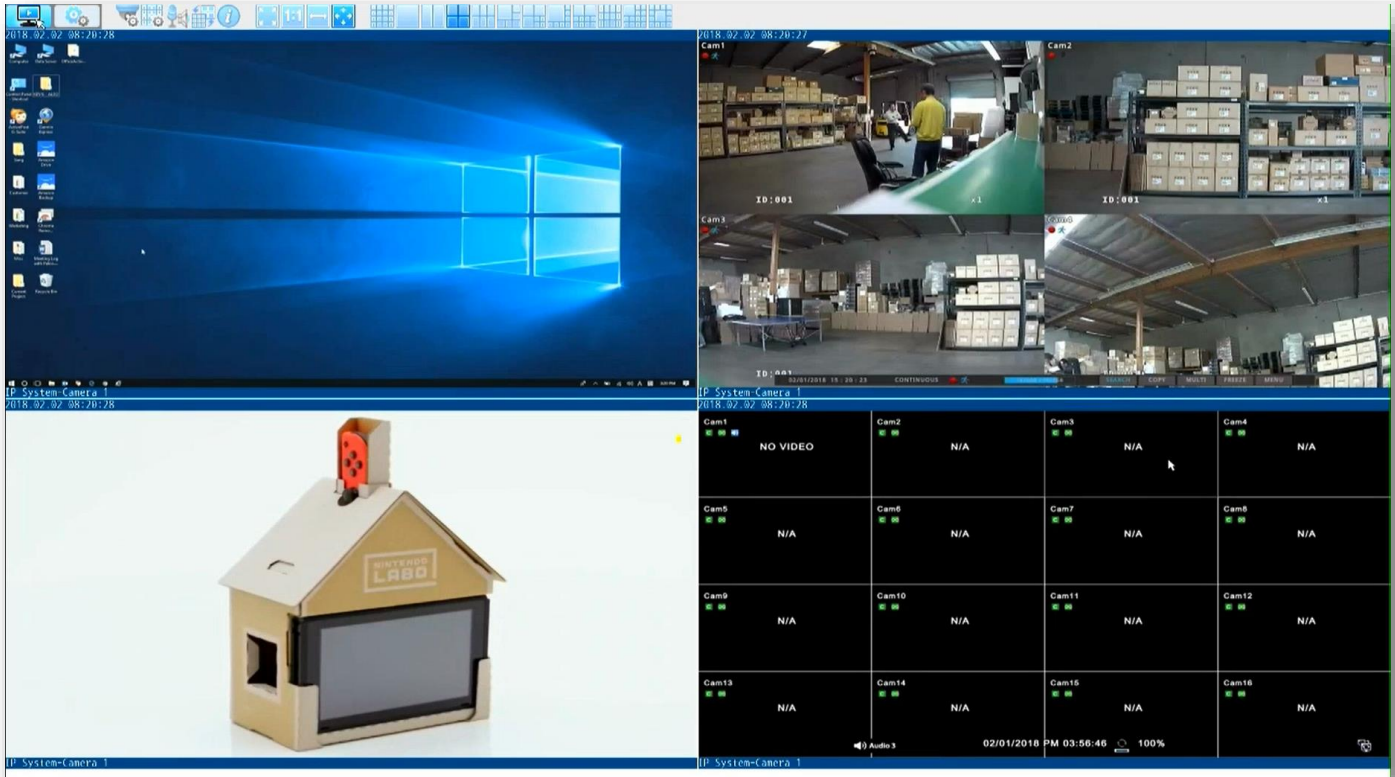


4. Using EHD200 Decoder



To use the Decoder, at least one Adapter must be connected to the network.
Up to 64 Adapters can be connected to a Decoder.

When the Decoder is booted up, live initial screen is displayed on the monitor connected to the Decoder.



4.1 Live Mode

Live mode is automatically activated after the Decoder is booted, and it can be activated at any time by clicking the Live Viewer icon



() on the top left corner on the screen.

Live mode supports monitoring and remote control of the systems connected to the Adapters registered with the Decoder.

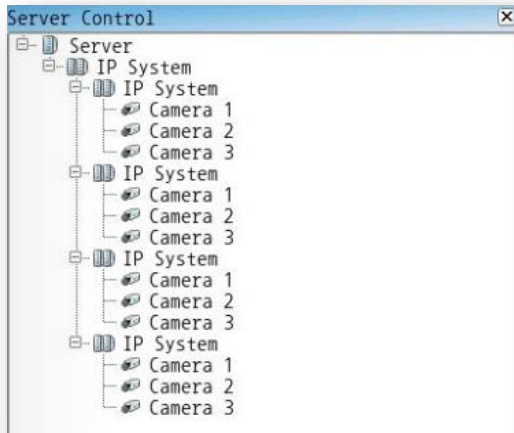
4.1.1 Live Tool Bar



Live Tool Bar is located at the top of the Live Mode screen and it provides the following features.

Icon	Menu	Description
	Server Control Bar	Show/Hide Server Control Bar.
	Group Control Bar	Show/Hide Group Control Bar
	PTZ Control Bar	Show/Hide PTZ Control Bar
	Audio Control Bar	Show/Hide Audio Control Bar.
	Group Circulation	Start/Stop Group Circulation. Group circulation time can be modified in editing menu of each group in the Group Control Bar. (Right Click on desired group)
	Information	Display Decoder information such as model number, firmware, and license.
	Full Screen	View in Full Screen. In full screen mode, Main Menu and Control Bars are hidden. To return to the default view, press ESC on your keyboard or select Exit Full Screen Mode after clicking the right mouse button.
	Original Size	Displays the image to its actual size.
	Maintaining aspect ratio	Displays the image to maximum size possible while maintaining the ratio of the image.
	Filling the screen	Ignoring the ratio of the image and displays the image to the entire display area of the screen.
	Split Mode	Select a split mode of Live Viewer. <i>Note: Channels or ports position can be changed by Drag and drop with wheel button of the mouse.</i>

4.1.2 Server Control Bar



All Adapters registered in the Decoder are listed on the server control bar as shown on the left.

Server Control Bar is located on the top left side of Live Mode screen and

it can be displayed or hidden by clicking Show/Hide Group Control



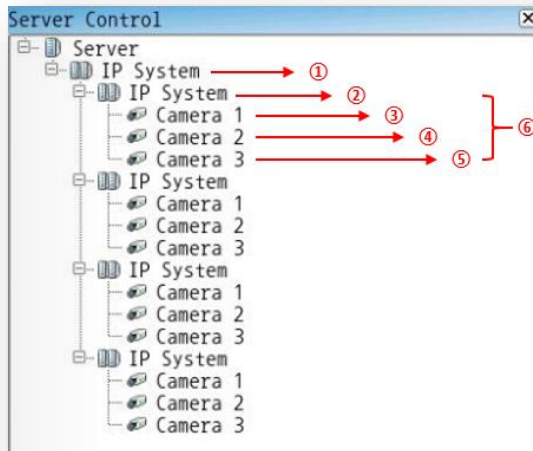
Bar Icon ().



If the registered Adapters do not appear on the server control bar, please check the registration process again and do not forget to click the Apply icon on the configuration toolbar after registration to confirm that the changed registration information is applied to the Decoder.

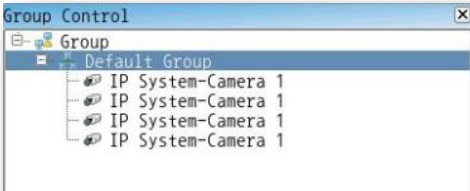
4.1.2.1 Server Tree

All Adapters registered in the Decoder are listed in the server tree of the server control bar. The server tree provides the following information:



- ① System (Decoder) name is displayed, which can be changed on the configuration mode.
- ② Server (Adapter) name is displayed, which can be changed on the configuration mode. It facilitates the identification of each Adapter when managing multiple Adapters.
- ③ The name of the primary stream (port) of the Adapter is displayed, which can be changed on the setting page.
- ④ The name of the secondary stream (port) is displayed, which can be changed on the setting page.
- ⑤ The name of the tertiary stream (port) is displayed, which can be changed on the setting page.
- ⑥ The number of streams (ports) under the Adapter name indicates the number of multi-streams (ports) supported by the Adapter.

4.1.3 Group Control Bar



A group is a collection of multiple channels or video streams (ports) of the Adapters for live monitoring in one screen.

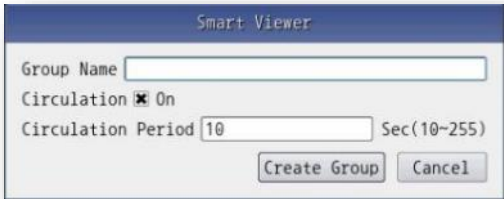
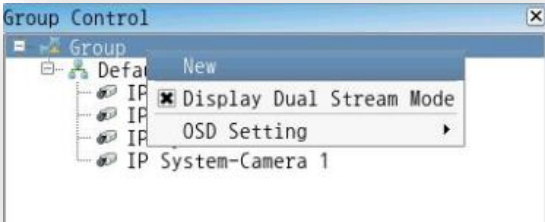
Up to 16 channels or ports can be registered in a single monitoring group and it can be generated as much as need.

When registration process is completed, primary streams (ports) for all registered Adapters are registered to Default Group automatically for convenience.

Group Control Bar is located on the middle left side of Live Viewer Page and it can be displayed or hidden by clicking Show/Hide Group Control Bar Icon ().

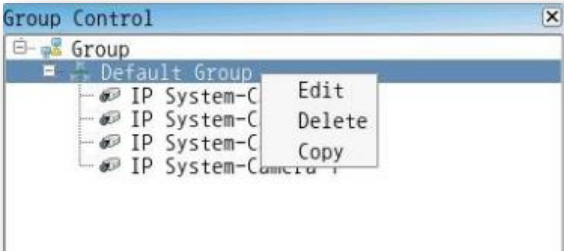
4.1.3.1 Creaing / Modifing / Deleting Group

Group can be created as much as need through the Creating Group Window as shown below, and that can be opened by clicking **New** on the popup menu appears after right-click on the group root as shown on the right.



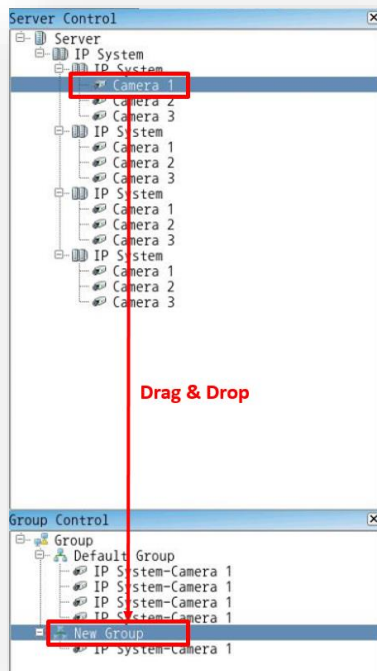
Item	Description
Group Name	Name for the viewing group.
Circulation	As known as auto sequence, the Decoder automatically switches between groups in sequence.
Circulation Period	Set the time interval for auto sequence.

Default Group or Existing Group can be edited, deleted or copied. These functions are available via the popup menu that appears after right-click the desired group as shown on the right.



4.1.3.2 Adding an Adapter in a Group

There are two ways to adding IP devices to the desired group.



After selecting the desired channel or stream (port) of the IP device in the server control window, **Drag & Drop** to the desired group as shown on the left.

Or **double click** the desired channel or stream(port) in the server control window after selecting the desired group.

4.1.4 Audio Control Window



Speaker volume level could be controlled by moving cursor of Speaker Volume control bar on the top of Audio control window.

Once the audio connection by clicking the Connect button is completed, microphone volume level is also adjustable by moving cursor of Microphone Volum Control Bar below the speaker volum control bar if the Adapter supports two-way audio.

Audio Control Window can be displayed or hidden by clicking *Show/Hide PTZ Control Bar* Icon ().

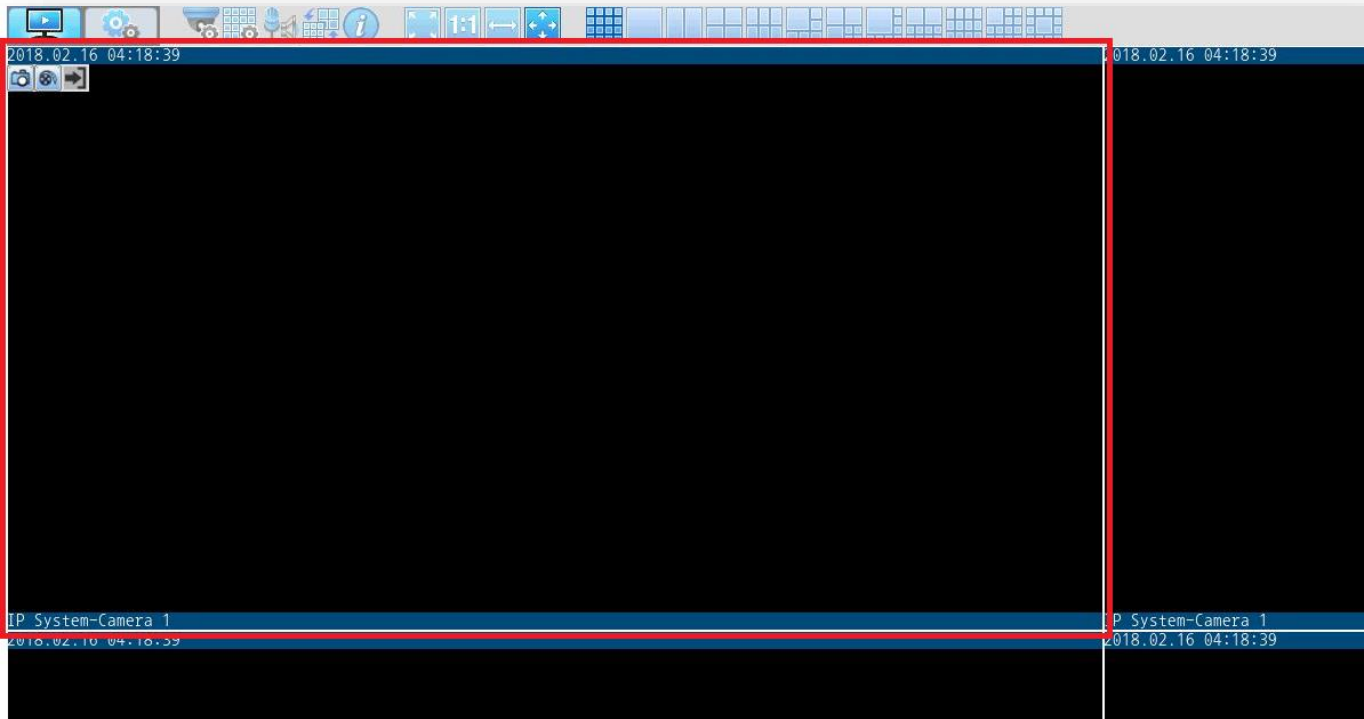


The audio option of an Adapters must be enabled in advance to use audio. If the Audio is not Enabled, the following pop-up message will be appeared.

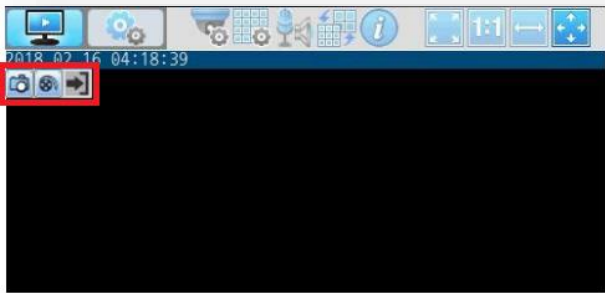


4.1.5 Ports (Channel)

Each port or channel in which the images of the registered adapter is displayed as below is called a port.



4.1.5.1 Port Tool Bar

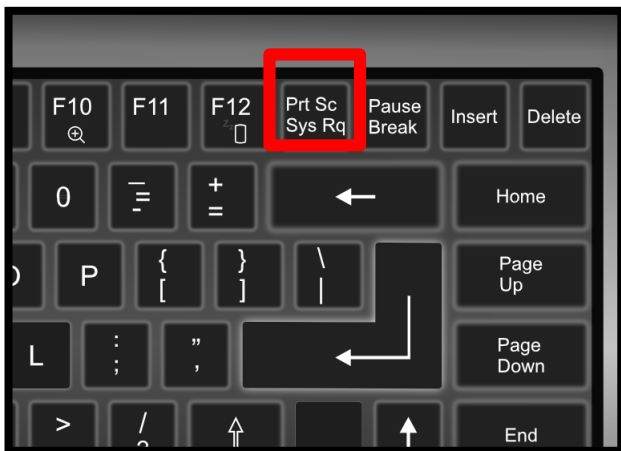


When mouse over each port or channel, the port toolbar appears as shown on the left.

Icon	Menu	Description
	Snapshot	Captures the screen of the selected port.
	Local Recording	Saves the video of the selected port.
	Remote Control	Remotely control the system connected to the selected port.

To exit remote control mode choosing one of two methods.

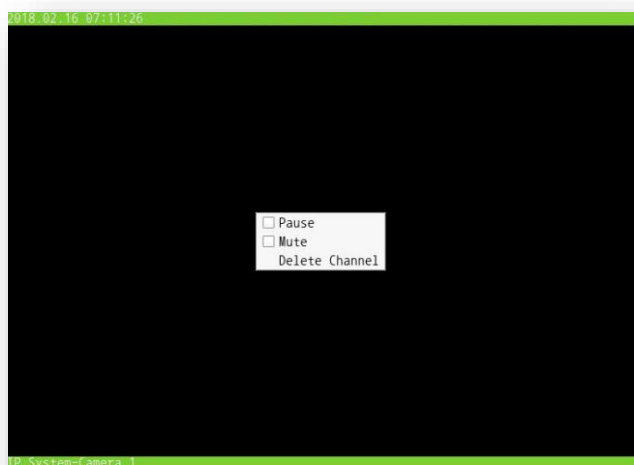
1. Press the double tab Print Screen key on the Key Board.



2. Press the double click of WHEEL BUTTON on the Mouse.



4.1.5.2 Port Pop-up Menu

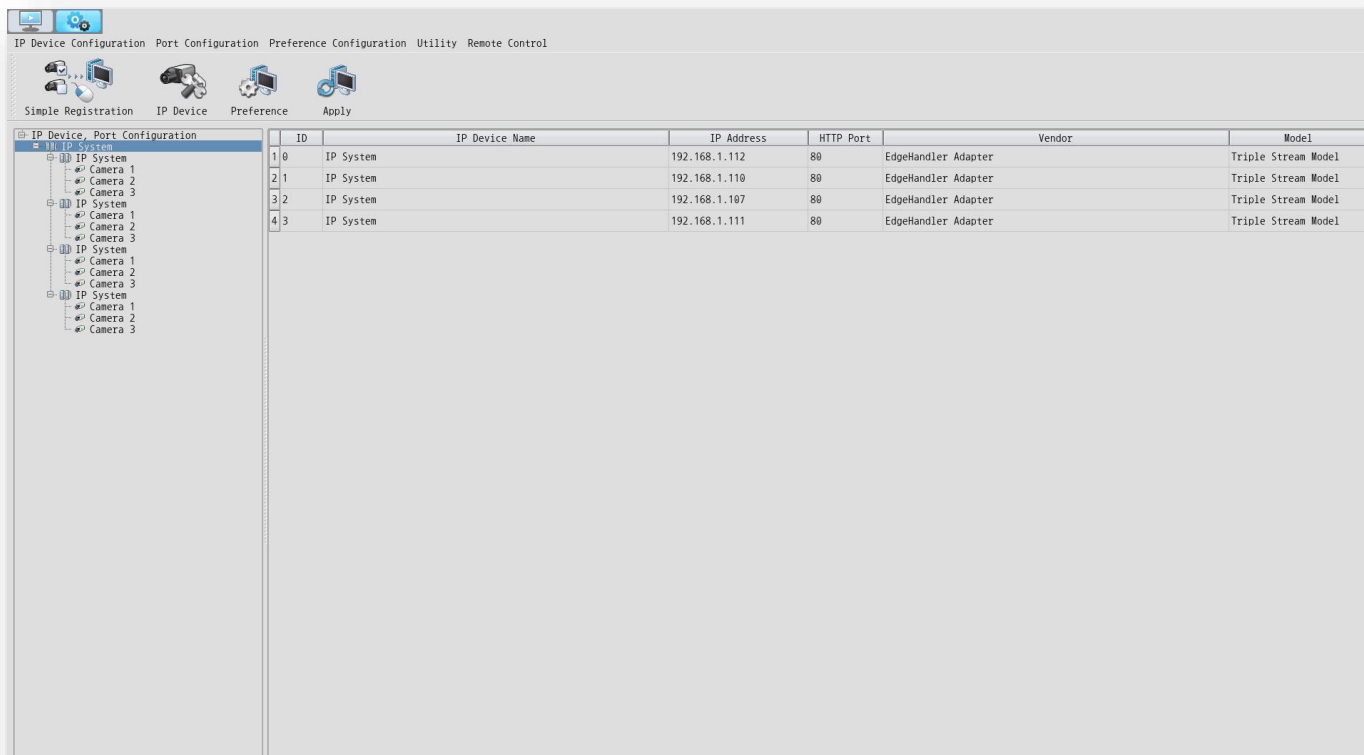


Right-clicking on each port or channel will bring up a pop-up menu as shown on the left.

Menu	Description
Pause	Pauses the screen on the selected channel.
Mute	Mutes the audio of the selected channel.
Delete Channel	Delete the selected channel. (The channel will be deleted from the group control bar.)

4.2 Configuration Mode

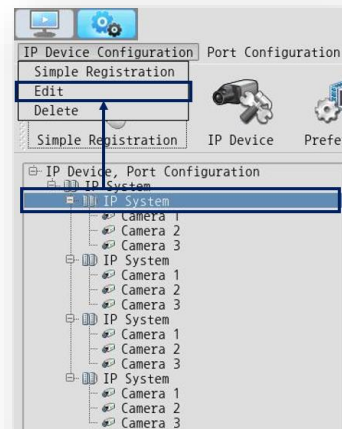
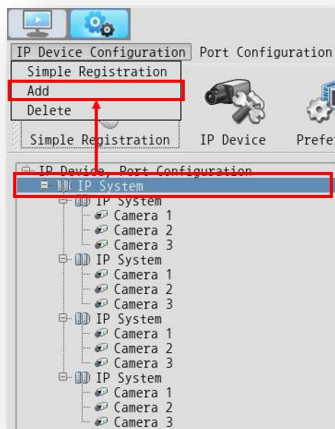
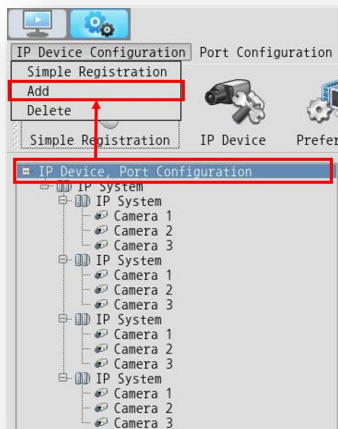
All settings of the Decoder are provided through the **Configuration Mode**.



4.2.1 IP Device Configuration

Provides settings related to Adapter registration.

Configurations of the sub-menu or pull-down menu depend on the selection of the server control window in Configuration Mode as shown below.

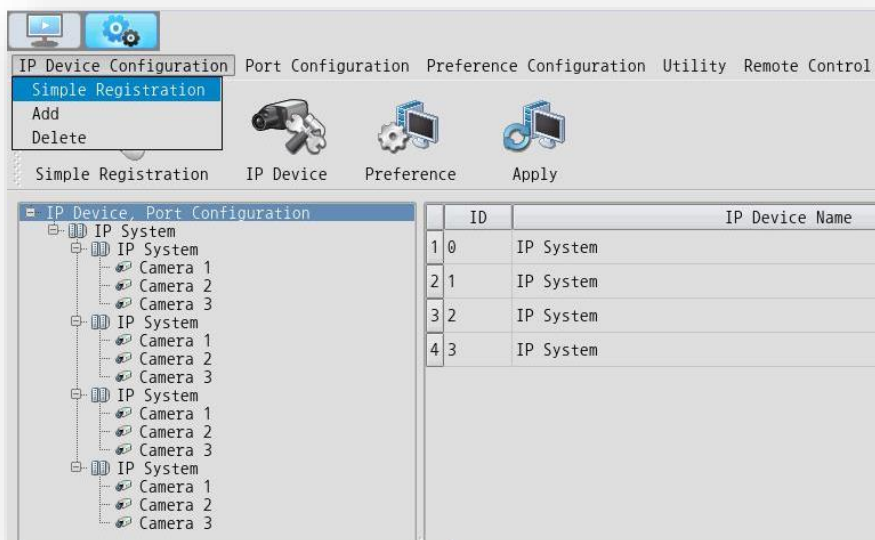


4.2.1.1 Simple Registration

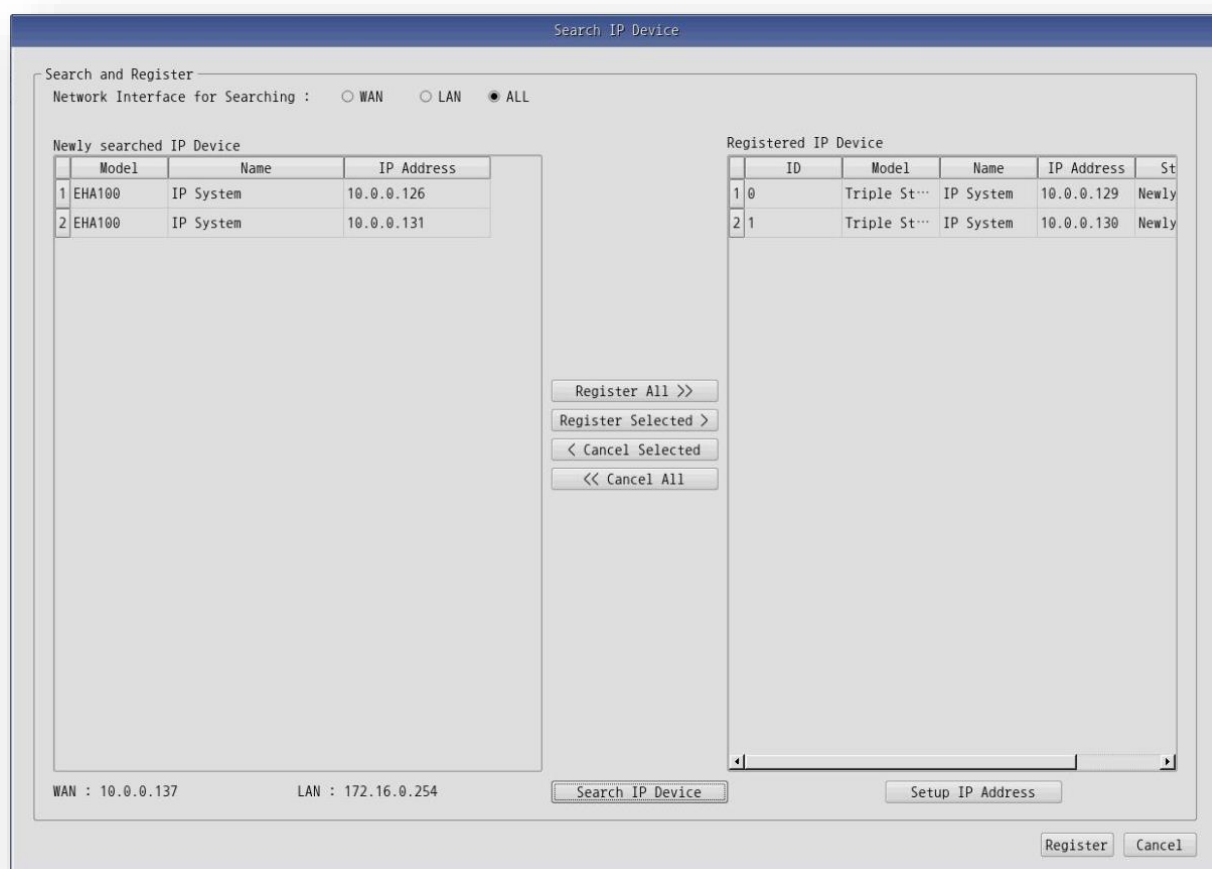
If Adapters are in the same network as the Decoder, registration is available through the **Search IP-device** window which can be open by clicking **Simple Registration** icon or go through the menu bar.

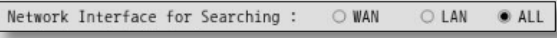
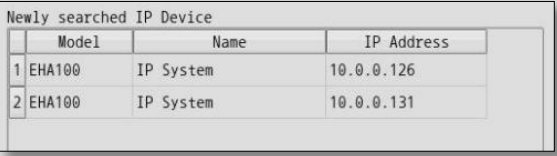
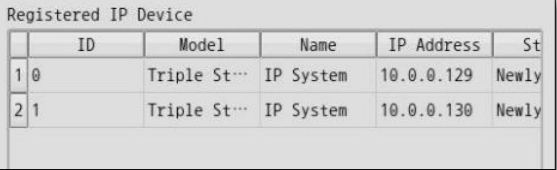
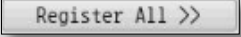
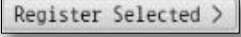
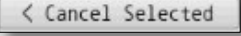
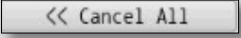
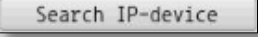
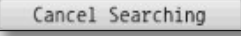
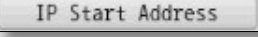
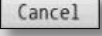


or



- Search IP Device Window -

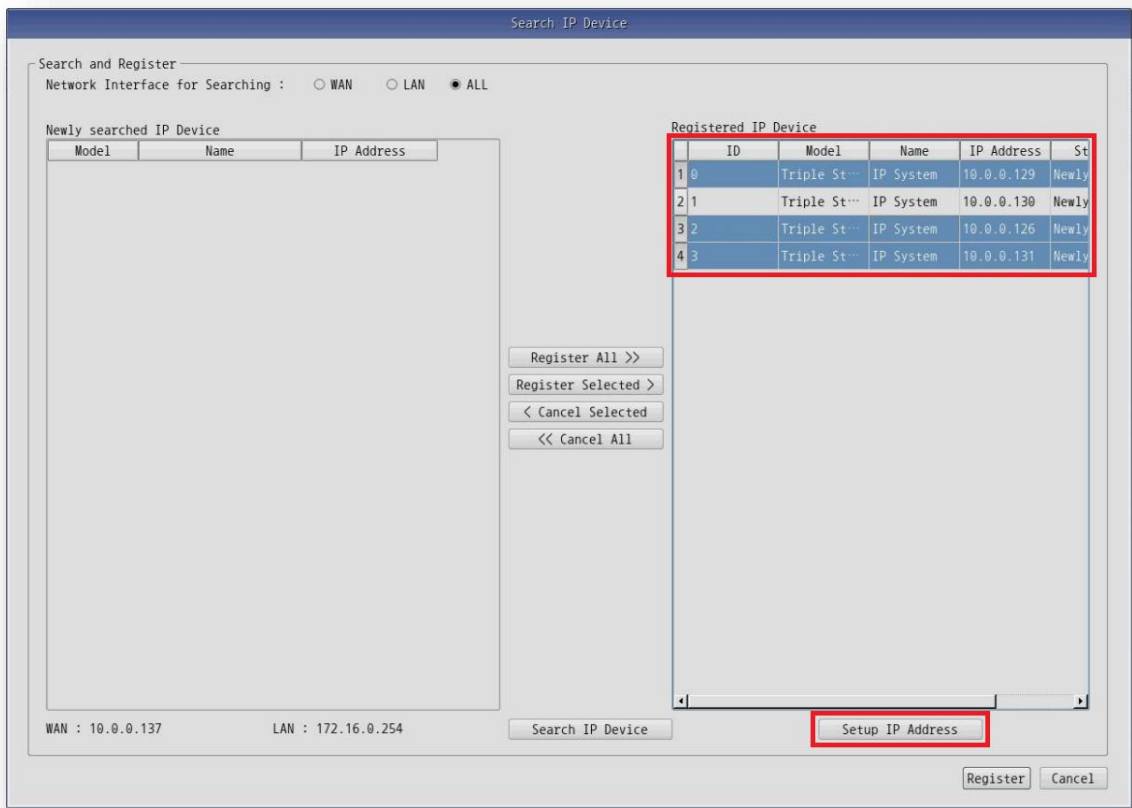


Item	Description
	Selects network interface WAN, LAN or both to search Adapters.
	Newly Searched IP-Device section on the left of Simple Registration window lists the searched Adapters that are not registered in the connected network.
	Registered IP-Device section on the right of Simple Registration window lists the Adapters that are already registered and moved by user from Newly Searched (left) section for registration.
	Moves all Adapters found from the Newly Searched IP-Device (Left) to the Registered IP-Device section (Right).
	Moves selected Adapters to the right section or list.
	Moves selected Adapters back to the Newly Searched IP-Device list from the Registered IP- Device list.
	Moves all Adapters back to the Newly Searched IP-Device list from the Registered IP- Device list.
	Displays current WAN and LAN IP Addresses of the Decoder.
	Searchs for available Adapters on the network connected to the Decoder.
	Cancel the search.
	IP addresses can be assigned to the selected cameras in the Registered IP-Device list.  <i>For more information about the feature, Please refer to next page 4.2.1.1.1 Setup IP Address</i>
	Save right list of the registered Adpaters.
	Close the search window without saving.

4.2.1.1.1 Setup IP Address

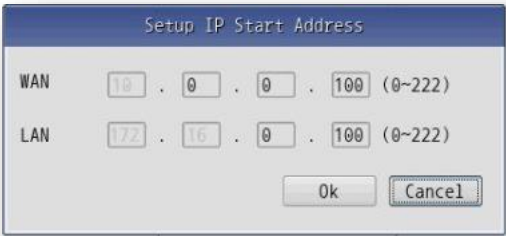
IP address can be assigned to the Adapters without any software or tools.

To assign IP addresses, **select** desired Adapters in the right list, and then click **Setup IP Address** at bottom of the list as shown below.



If a keyboard is connected, multiple Adapters can be selected by clicking mouse while holding down the ctrl or shift key.

When *Setup IP Start Address* window appears, Enter desired **Starting IP address** in the field of WAN/LAN.



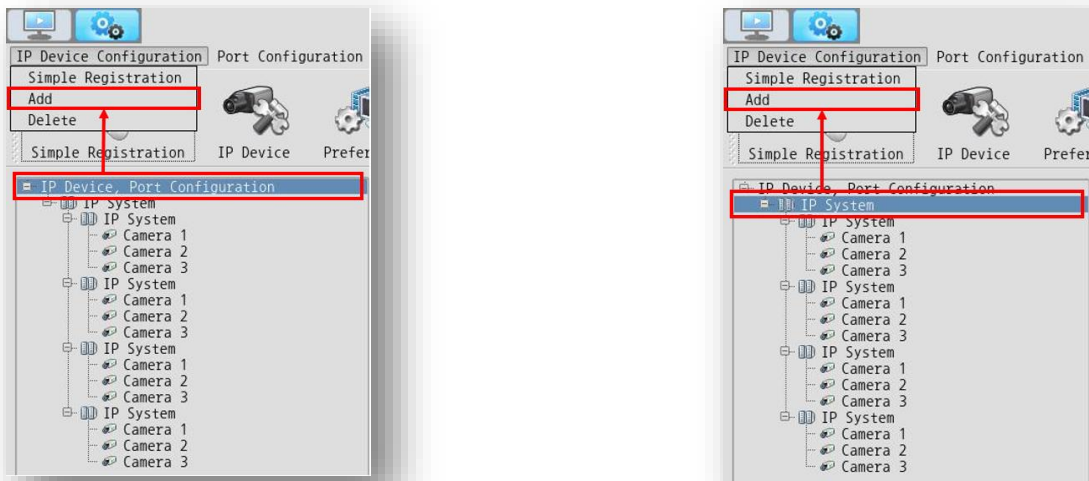
Item	Description
WAN 10 . 0 . 0 . 100 (0~222)	Enter starting IP address for the selected Adapters which found in WAN port.
LAN 172 . 16 . 0 . 100 (0~222)	Enter starting IP address for the selected Adapters which found in LAN port.

Start with the IP address entered is the number of the last octet increases by 1 and is assigned to each camera.

Ex) If starting IP is “192.168.1.100” ,
Camera 1 = 192.168.1.100
Camera 2 = 192.168.1.101
Camera 3 = 192.168.1.102

4.2.1.2 Add (Manual IP Device Registration)

Manual IP device registration (Add IP-Device) window for entering IP device information manually can be opened by clicking "Add" on IP-device Configuration pull down menu as shown below.



- Add IP Device Window -

Add IP Device

Input IP Device Info

ID:

Vendor:

Model:

IP Address:

HTTP Port:

Login ID:

Login Password:

Confirm Password:

VS Module ID:

Collect IP Device Info:

Name:

Low Bandwidth: ☐

Select Resolution supported by IP Device

☐	QCIF (QQVGA)	176 x 144 ~ 160 x 112
☐	CIF (QVGA)	352 x 288 ~ 320 x 240
☐	Half D1 (Half VGA)	704 x 288 ~ 640 x 240
☐	D1 (VGA)	704 x 576 ~ 640 x 480
☐	SVGA	800 x 600 ~ 720 x 480
☐	XGA	1024 x 768 ~ 960 x 720
☐	HD720p (720P)	1280 x 720

Check PTZ Port

☐ Port1 ☐ Port2 ☐ Port3 ☐ Port4

☐ Auto NAT Service

HTTP Port:

HTTPS Port:

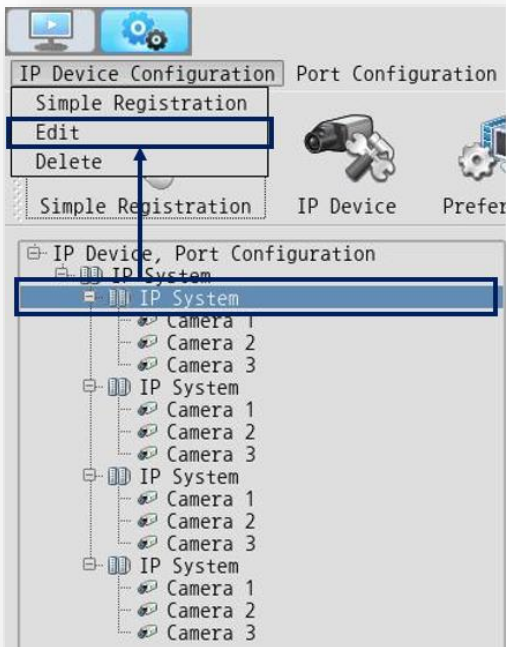
Telnet Port:

FTP Port:

RTSP Port:

Item	Description
ID	Device ID is registration number of the Decoder for an Adapters. According to the order of registration of Adapters, the ID number is assigned in the order from 0. If selecting ID that already registered and assigned, registration information will be displayed. In this case, modification of registration information is available.
Vender	Select EdgeHandler Adapter option.
Model	Select Model based on the number of streams (ports) or channels supported by Adapter.
IP Address	Enter IP Address or domain name of the Adapter.
HTTP Port	Enter HTTP port number of the Adapter.
Login ID	Enter login ID of the Adapter.
Login Password	Enter login Password of the Adapter.
Confirm Password	Enter the password again to confirm.
VS Module ID	Select 0 for VS Module ID option.
Collect IP-Device Information	Download the Adapter information.
Name	Enter the Adapter name for identification.
Low Bandwidth	Select if network speed is slow.
Select the Resolution Supported by IP-Device	Select resolutions supported by the Adapter.
Check PTZ Camera	If the Adapter supports Pan, Tilt, or zoom, select channel or stream (port) for controlling.
Auto NAT Service	Select whether to use NAT function. NAT function allows direct connection to registered Adapter via the Decoder. The ports used for direct Adapter connection are automatically mapped by the Decoder when NAT is enabled.
Register	Save entered registration information and close the window.
Cancel	Close the window without saving.

4.2.1.3 Edit (Editing Adapter Information)



To modify the IP information of registered Adapter, select desired Adapter in Server Control Window and click edit on IP-Device Configuration pull down menu.

- Edit IP Device Window -

Input IP Device Info

ID	0
Vendor	EdgeHandler Adapter
Model	Triple Stream Model
IP Address	10.0.0.101
HTTP Port	80
Login ID	root
Login Password	●●●●
Confirm Password	●●●●
VS Module ID	0
Collect IP Device Info	Collect
Name	IP System
Low Bandwidth	☐

Select Resolution supported by IP Device

☒	QCIF (QQVGA)	176 x 144 ~ 160 x 112
☒	CIF (QVGA)	352 x 288 ~ 320 x 240
☐	Half D1 (Half VGA)	704 x 288 ~ 640 x 240
☒	D1 (VGA)	704 x 576 ~ 640 x 480
☐	SVGA	800 x 600 ~ 720 x 480
☐	XGA	1024 x 768 ~ 960 x 720
☐	HD720 (720P)	1280 x 720

Check PTZ Port

☐ Port1 ☐ Port2 ☐ Port3 ☐ Port4

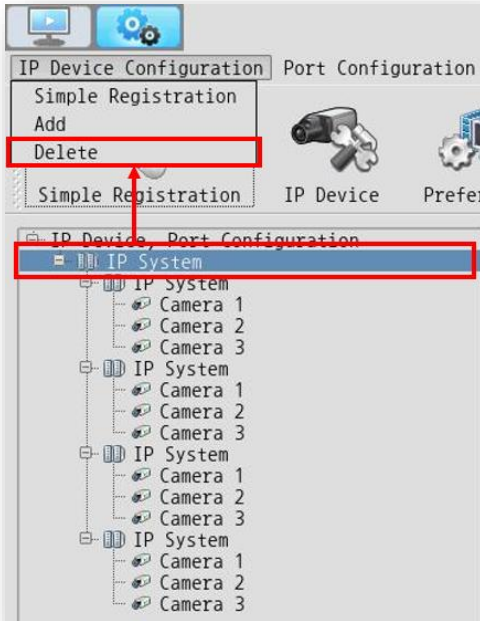
☒ Auto NAT Service

HTTP Port	10080
HTTPS Port	10443
Telnet Port	10023
FTP Port	10021
RTSP Port	10554

Register Cancel

Item	Description
ID	Device ID is registration number of the Decoder for an Adapters. According to the order of registration of Adapters, the ID number is assigned in the order from 0. If selecting ID that already registered and assigned, registration information will be displayed. In this case, modification of registration information is available.
Vender	Select EdgeHandler Adapter opriton.
Model	Select Model based on the number of streams (ports) or channels supported by Adapter.
IP Address	Enter IP Address or domain name of the Adapter.
HTTP Port	Enter HTTP port number of the Adapter.
Login ID	Enter login ID of the Adapter.
Login Password	Enter login Password of the Adapter.
Confirm Password	Enter the password again to confirm.
VS Module ID	Select 0 for VS Module ID option.
Collect IP-Device Information	Download Adapter information.
Name	Enter Adapter name for the identification.
Low Bandwidth	Select if network speed is slow.
Select the Resolution Supported by IP-Device	Select resolutions supported by Adapter.
Check PTZ Camera	If the Adapter supports Pan, Tilt, or zoom, select channel or steam (port) for controlling.
Auto NAT Service	Select whether to use NAT function. NAT function allows direct connection to registered Adapter via the Decoder. The ports used for direct Adapter connection are automatically mapped by the Decoder when NAT is enabled.
Register	Save entered registration information and close the window.
Cancel	Close the window without saving.

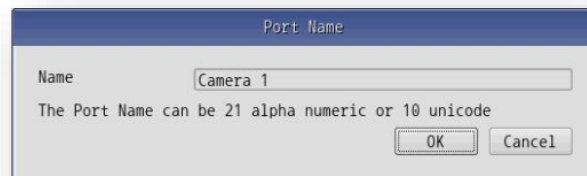
4.2.1.4 Delete (Deleting registered Adapter)



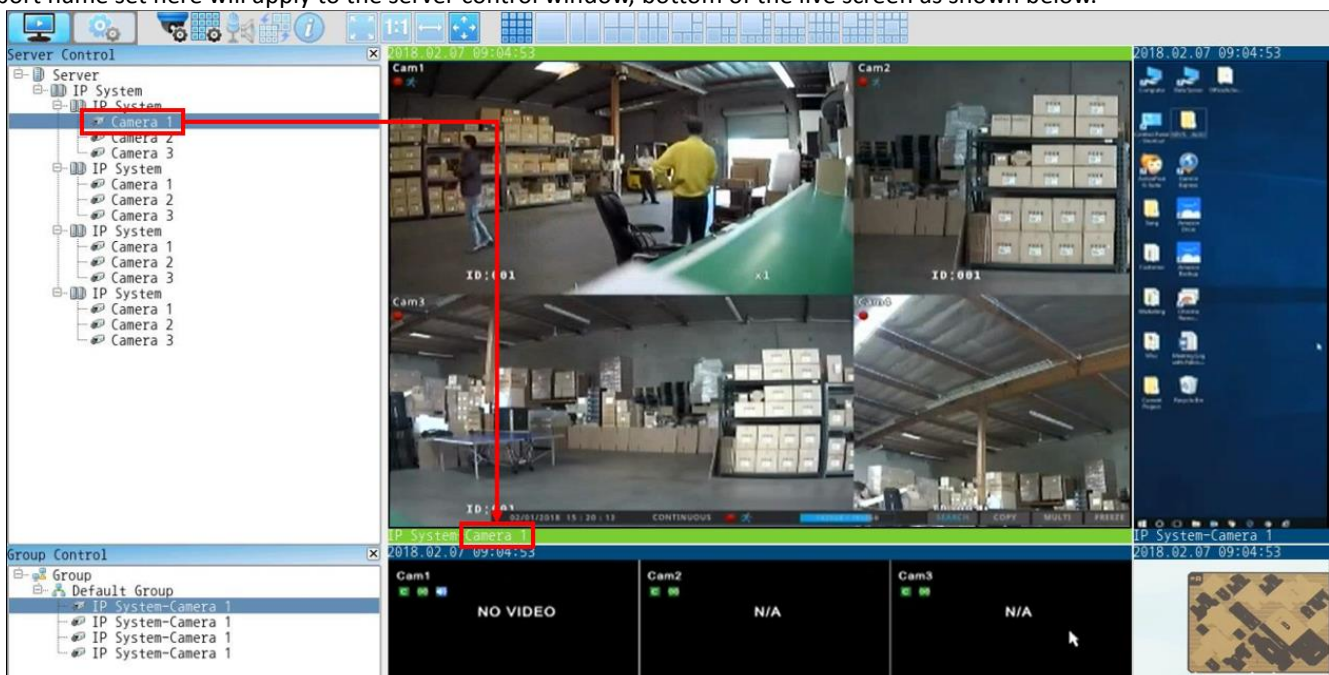
To delete registered Adapter from the Decoder, select desired Adapter in Server Control Window and click delete on IP-Device Configuration pull-down menu.

4.2.2 Port Configuration

Set port name for the identification of each Adapter port (stream) or channel within the alphanumeric 21 characters or 10 unicode characters.



The port name set here will apply to the server control window, bottom of the live screen as shown below.



4.2.3 Preference Configuration

4.2.3.1 System Time

Set the time of the Decoder.



Applying the correct date and time is strongly recommended to avoid any confusion or errors caused by time difference.

Item	Description
Date	Enter today's date.
Time	Enter the current time.
Time Zone	As needed, time zone can be changed after check mark on Change Time Zone .
Service	Select whether to use NTP service.  NTP (Network Time Protocol) is a protocol for synchronizing the clocks of the Network devices. With NTP service, the Decoder can be synchronized to an internet time server.
NTP Server Address	Enter IP address or domain of NTP server.
Period	Enter the NTP synchronization cycle of the server in units of seconds. Default value is 86400 seconds = 24 hours.
NTP Server Time	Sync the time of Decoder with NTP server.

4.2.3.2 Admin Password

Set administrator's password of the Decoder.

The administrator password must be 4-23 alphanumeric characters.



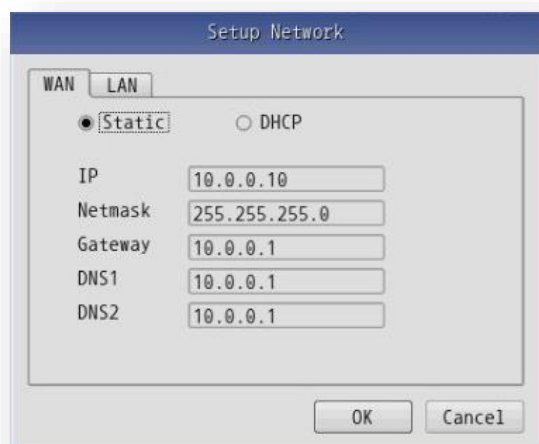
Administrator's password should be changed occasionally to secure the Decoder.

4.2.3.3 Access Level

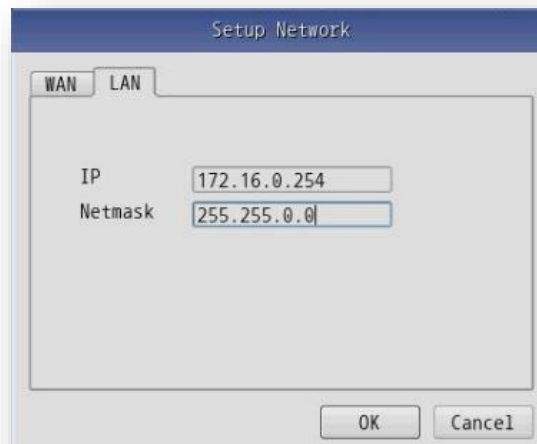
Select whether or not to use password authentication when accessing Live View through a web browser (Smart Viewer).



4.2.3.4 IP Address



WAN port is used to Internet or remote access connection. Select IP assigning type, then enter IP information if static is selected.



LAN port is used to configure private network for Adapters. Enter an IP for the Decoder and Netmask for subnetting.

4.2.3.5 Web Port

Set Web Port for remote acces.

Web port number can be used in 80~65535.



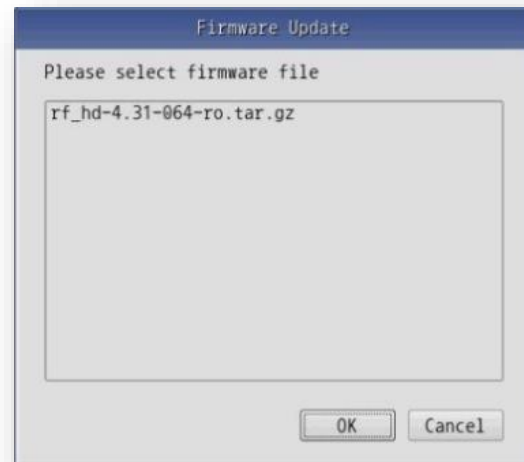
4.2.4 Utility

4.2.4.1 Update

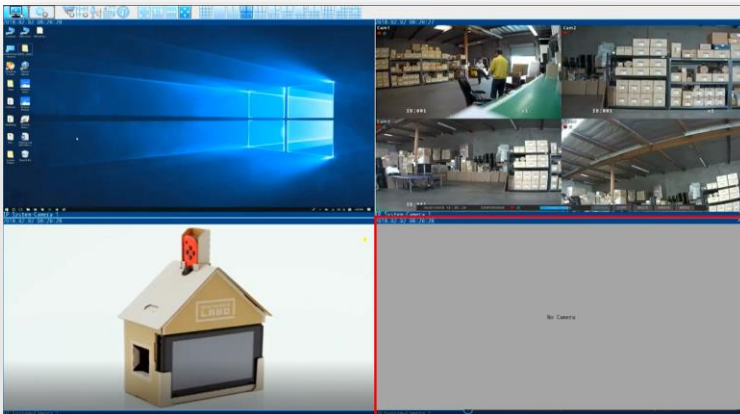
Updates Decoder firmware through USB Flash Drive.

Be sure to check the following before updating the firmware.

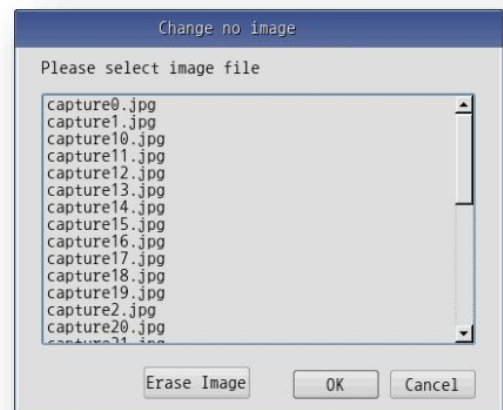
- Copy the firmware file to the root of USB
- USB Flash Drive should be connected before opening the Firmware Update Window.



4.2.4.2 No Port Image



<"No Image" Update Window>



<"No Image" Update Window>

No camera image is displayed on the blank channel or port as above on the live mode, which can be changed by updating the image file via USB drive.



The image file must be copied to the root directory of the USB drive, and the USB drive must be connected to the Decoder before opening the Image Update window.

4.2.4.3 Factory Default

Restore all the settings to default except the network setting.



4.2.4.4 Reboot

Reboots the Decoder.



4.2.4.5 Log Out

Log out of the Decoder.



4.2.4.6 System Information

Display Decoder information such as Model Number, Firmware Version, Support Vender.



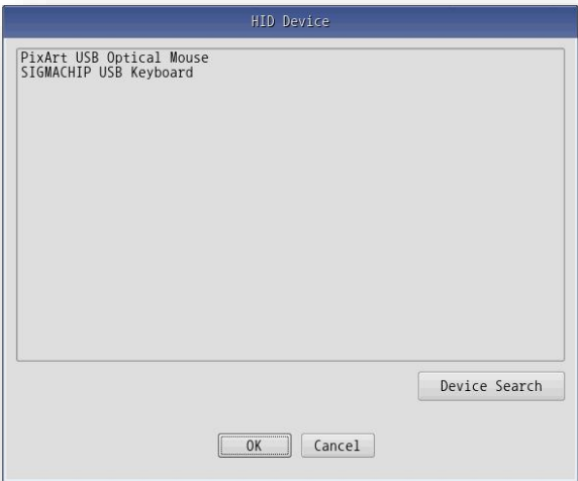
4.2.4.7 Language



Item	Description
Language	User Interface language of the NVR System can be changed.
Region	Date and time formats can be changed by regional setting.

4.2.4.8 UsbHidDevice

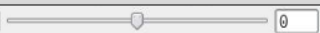
Displays the USB type HID devices connected to the Decoder.



4.2.5 Remote Control

4.2.5.1 Motion Detection

Remote Motion detection setting of the Adapter is available.

Item	Description
☒ Enable ☐ Disable	Select whether to use motion detection feature in Adapter.
	Select or deselect motion detection area using mouse. Green – indicates motion detection area. Pink – indicates non-motion detection area.
Check All Uncheck All	Set the whole area as motion detection area or non-motion detection area.
Motion Sensitivity 	Set motion sensitivity level between -100 and 100. The higher the number, the more sensitive to changes in the image.
OK	Apply changes.
Cancel	Close window without saving.
Restore	Restore to the previous setting.

4.3 Web Access

Enter the **IP Address** or **Domain Name** of the Decoder at the address bar on a web browser.



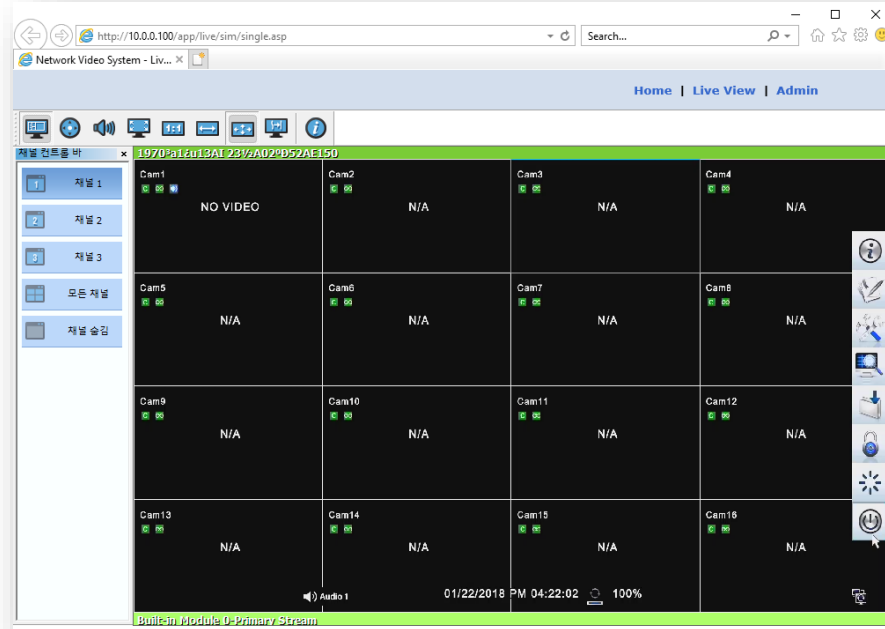
We recommend Internet Explorer as a web browser for using Edge Handler™ devices.

The initial IP setting for the Edge Handler™ device can be done through IP Installer software which can be found in the enclosed CD or software download page at FlexWATCH® Web Site

<http://www.flexwatch.com/support/download/software.asp>

4.3.1 Live View Page

When connected to the Decoder via the web browser successfully, Live View Page will be displayed as shown below.

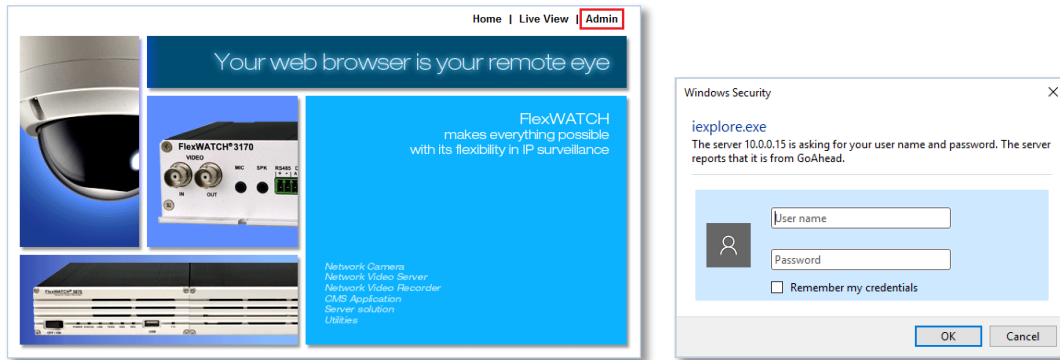


Icon	Menu	Description
	Channel Control Bar	Show/Hide Channel Control Bar.
	PTZ Control Bar	Show/Hide PTZ Control Bar
	Audio Control Bar	Show/Hide Audio Control Bar
	Full Screen	View in Full Screen. In full screen mode, Main Menu and Control Bars are hidden. To return to the default view, press ESC on your keyboard or select Exit Full Screen Mode after clicking the right mouse button.
	Original Size	Displays the images to its actual size.
	Maintaining aspect ratio	Display NVR System information such as model number, firmware, and license.
	Filling the Screen	Ignoring the ratio of the image and displays the image to the entire display area of the screen.
	Buffering/Drawing Mode	Use image buffer. / Smooth out the outline of the image.
	Maintaining aspect ratio	Display Smart Viewer information such as CPU, Memory, Bandwidth usage and Version and Build Date of the software.

4.3.2 Admin Page

All settings of the Decoder can be done via the (Web) Admin Page.

(Web) Admin Page can be opened by clicking **Admin** in the upper right of the screen, and entering the IP and password in the authentication window that appears.



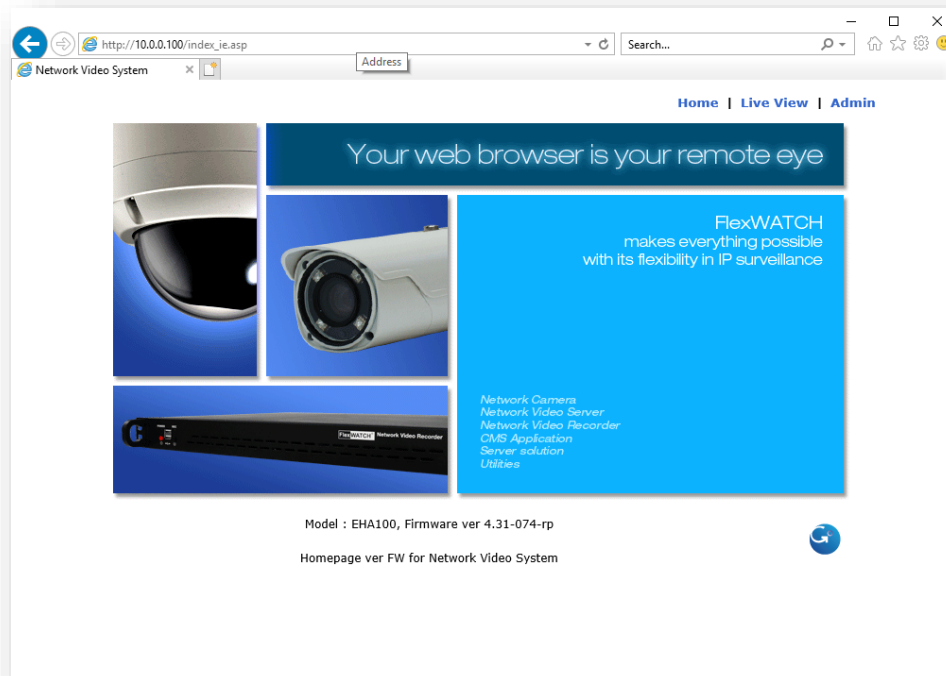
The default user name and password is “root”.

For more information on the Web Admin Page, refer to the Web Admin Page User's Manual.

[\[Web Admin Page User Manual\]](#)

4.3.3 Home

On the home page that appears by clicking Home in the top right corner of the screen, model number and firmware version of the device are displayed as shown below.



5. Appendix

5.1 Specification

5.1.1 EHA200

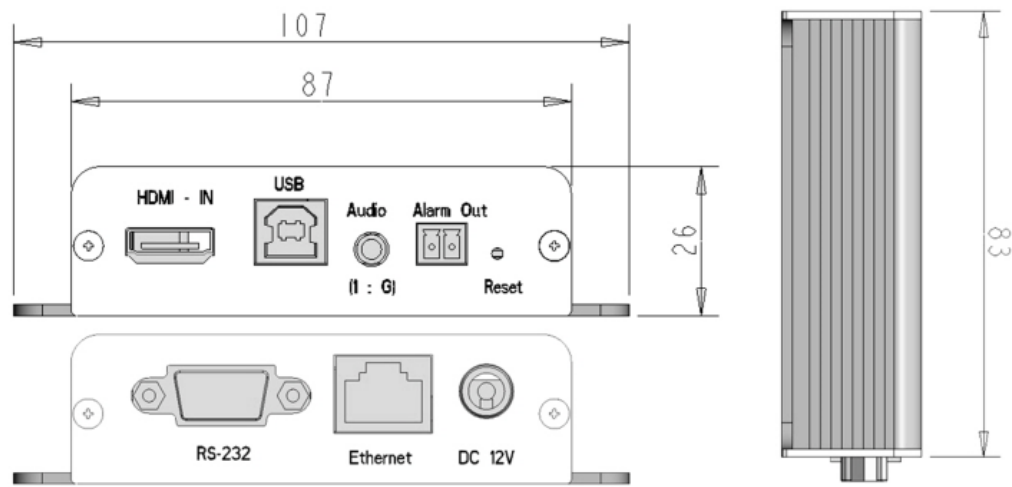
Video	
Max. Streaming Rate	Up to 60fps @ FULL-HD Triple streaming
Supported Codec	H.264 / H.265(Optional) video compression
Connections	Up to Four concurrent connections from EHD200
Interface	
Video Input	1 HDMI – 1080p60p only
Audio In/Out	1 Speaker, 1 Microphone
Alarm	1 Alarm output
Serial Port	1 Serial Port (reserved for future use)
Peripherals	1 USB Port
Network	
Ethernet	10/100/1000-base-T Ethernet (auto sensing)
Dynamic IP	DDNS support
Security	ID/Password protection DRM based proprietary secure key distribution protocol (to be released)
Miscellaneous	Web interface 4 connections from EHD
Hardware	
Approvals	KC, FCC, CE, RoHS
Working Condition	0°C ~ +50°C (32°F ~ 122°F), 10% ~ 80% RH
Power	12VDC @ 1A, Max. 12W
Dimension	107(W) x 83(D) x 26(H) mm
Weight	165g

5.1.2 EHD200

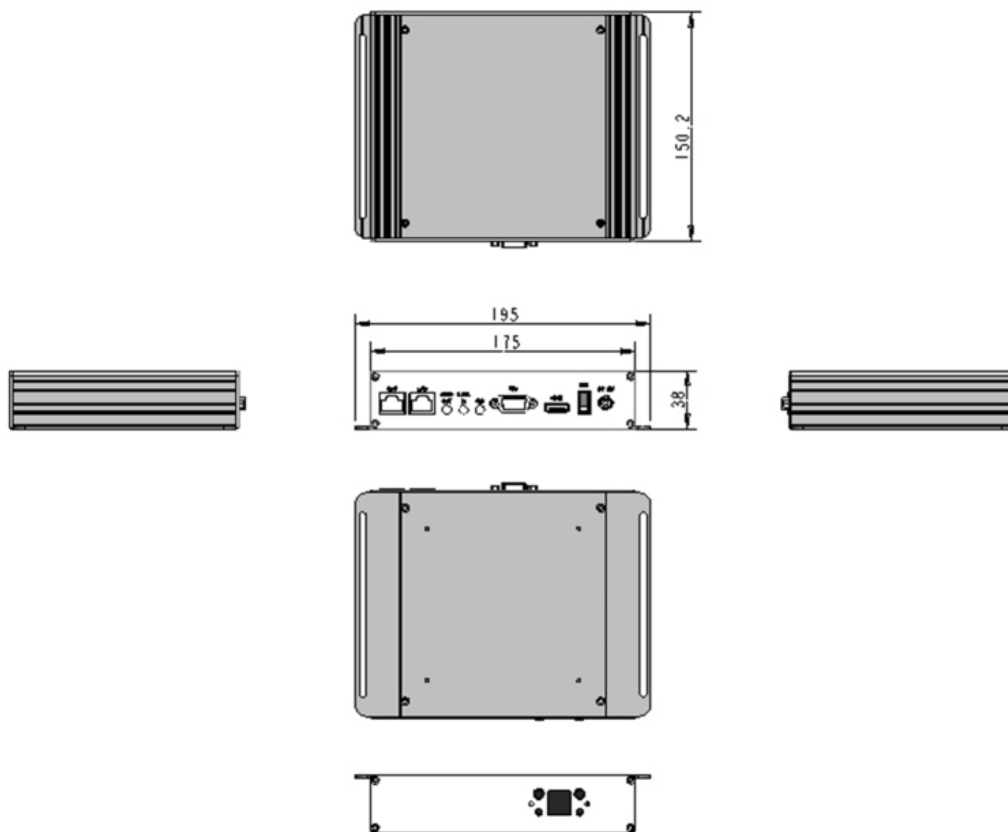
Video	
Decoding	Max 30fps x 16 channels @ 1080p
Supported Codec	H.264 / H.265(Optional) video decompression
Display Mode	Max 4 x 4 display mode Group display mode
Re-streaming	Supports Video Re-streaming
Interface	
Video Out	1 HDMI
Audio In/Out	1 Speaker, 1 Microphone (LINE IN port : Reserved)
Peripherals	2 USB Port for Mouse, Keyboard etc
Network	
Ethernet	2 x 10/100/1000-base-T Ethernet
Security	DRM based proprietary secure key distribution protocol (option)
Miscellaneous	Web interface Max 16 connections
Hardware	
Approvals	KC, FCC, CE, RoHS
Working Condition	0°C ~ +50°C (32°F ~ 122°F), 10% ~ 80% RH
Power Consumption	MAX DC 600mA
Power Supply	12VDC @ 1A, Max 12 Watt
Dimension	195(W) x 150.2(D) x 38(H) mm
Weight	725g

5.2 Product Overview

5.2.1 EHA200



5.2.2 EHD200





Seyeon Tech Co., Ltd.

HEAD OFFICE

- Address #404, Gayang Techno Town, 217, Heojun-ro, Gangseo-gu, Seoul, 157-193, South KOREA
- PHONE +82-2-2192-6800
- FAX +82-2-2659-0831
- Email sales@flexwatch.com

US Office

- Address 4050 N. Palm St. #501, Fullerton CA 92835, USA
- PHONE +1-323-262-3682
- FAX +1-714-994-1593
- Email support@flexwatch.com

www.FlexWATCH.co.kr
www.FlexWATCH.com