
NEXX ONE

USER MANUAL



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1. INTRODUCTION

1.1 Overview

This user manual contains important information to ensure the user's safety and to prevent any potential for product or property damage, so please read this manual carefully before using the product to ensure safe and correct use.

1.1.1 Copyright

The copyright of this manual is reserved by LINKFLOW Co., Ltd., the manufacturer of NEXX ONE. No part of this manual may be used or reproduced in whole or in part in any manner without the prior permission of LINKFLOW Co., Ltd.

The contents of this manual are subject to change without notice. If you have any questions, comments or suggestions about this manual, please contact us via one of the following:

- 3F & 4F, 54, Nonhyeon-ro 2-gil, Gangnam-gu, Seoul, Republic of Korea
- Website: linkflow.co.kr
- Product Support: +82 1833 2526

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1.1.2 Revision History

Date	Version	TABLE OF CONTENTS
2020. 10	1.0	Created
2021. 1	1.01	DDNS settings. Added input & input constraints for onvif password Deleted "management server"
2021. 4	1.02	Add the explanation of VOIP features Updated the images of the viewer UI and added the explanation

1.1.3 Signs and Labels

In this manual, particular safety or information features on the product are specified with the following labels:

Label	Description
 CAUTION	A CAUTION indicates either an important safety instruction or restriction.
 NOTE	A NOTE indicates important or supplementary information that helps you make better use of your device.

1.2 Safety Precautions

 CAUTION	<ul style="list-style-type: none">• Please read and follow all safety precautions to ensure your own safety and to protect your device from potential damage. The warranty does not cover damage caused by negligence or misuse, for which we shall not be held liable.• Keep this user manual in a safe place where anyone can access it.
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- This device has been manufactured and certified for industrial use only, not for individual purposes.
- Do not poke eyes, ears or other body parts with the device, nor put it in your mouth. Otherwise, it can cause severe injuries or pose a choking hazard.
- Wear appropriate clothing to avoid skin contact with your neck camera, system body and external battery. Make sure the system body or external battery is kept in the pouch when in use. Otherwise, it can pose a risk of low-temperature burns if exposed to heat or used by someone with poor blood circulation or sensory impairments.
- Do not let the device in use or AC adapter come into contact with the skin. Otherwise, it can cause low-temperature burns from the heat produced by prolonged use of the device.
- If the AC adapter or any optional accessory becomes hot, discontinue use immediately. Otherwise, it can cause low-temperature burns or product damage.
- Do not use the device in areas affected by heavy smoke or steam. Otherwise, it can lead to product failure or damage.
- Always use genuine accessories, batteries and cradles specified or provided by LINKFLOW. Unauthorized components may shorten the product life or cause overheating, a fire or an explosion, possibly resulting in serious injuries and product damage.
- We do not take any responsibility for issues caused by improper operation during an update. They may require paid repair services.
- Always keep a backup of your important data. We will not be held liable for any data loss.
- Make sure the system body is turned off when installing/removing a neck camera or a memory card.
- Memory cards are consumables and need to be replaced periodically (after 3 months is recommended). Check your device specifications for supported memory card types before replacing the memory card. (Up to 64GB, Class 10 memory cards supported)
- In wireless networks, security settings are particularly important. Please note, however, we will not be liable for any security issues resulting from your wireless network environment or security settings.
- Anyone who uses this device must comply with the Personal Data Protection Laws and portrait rights. Unauthorized surveillance, secret recording or invasion of privacy is prohibited and may lead to criminal prosecution.

- It is recommended that the cradle be stuck to a large, flat fixed glass surface.
- The AC adapter supplied with the device is only for use with NEXX_ONE cradles. Do not use any charger other than this adapter. Using any other charger can result in an explosion damaging your device.
- Do not connect the negative and positive of the cradle directly. Doing so can cause a fire or serious injury.
- Keep the cradle connection area free of any substances, including moisture, dust, metal filings and pencil leads. Do not poke with sharp objects or apply excessive weight or pressure. This can cause corrosion on the power terminals or a short circuit, possibly resulting in a fire or explosion.
- Do not bend, pull, heat or place heavy objects on the power cord. A damaged power cord may cause an electric shock or fire.
- Do not use power sources other than AC 100-240V. They may cause an electric shock or fire.
- Only use the AC power cord supplied with the device.
- Unplug the cradle when not in use.
- Do not pull on the cord when removing the plug from the outlet. It may lead to an electric shock or fire. Unplug from the power socket by grasping the AC plug body.
- Do not cover the cradle with clothing, cushions, etc. The cradle can overheat, possibly distorting the device or causing a fire.
- Do not use a frayed or damaged cord, broken plug or loose outlet. Poor connections can pose a risk of electric shock, fire or injury, and the battery may not be charged.
- Do not place your device near heat sources. It may cause a fire or damage to the device.
- Do not attempt to modify or take apart the device. It can pose a risk of electric shock or fire.
- Avoid causing damage to the lens. The lens elements are made of glass and are susceptible to breakage or damage.
- For safety reasons, the battery may stop charging if overheated or charged at a high temperature.

1.2.1 RF Safety Guidelines

This device uses the 2.4GHz/5GHz frequency bands. A radio communication license is not required to use this device, but it is recommended that you read and follow the safety guidelines below.

- Do not use your device in an automobile, in a hospital or near medical equipment that may be affected by radio frequency radiation. If you have a medical device for your own personal use, please contact the manufacturer to make sure the device is not affected by high RF intensities.

- Use of electronic devices on aircraft may interfere with aircraft navigation systems. Follow the instructions of crew and on-board procedures when on board. Remove the wireless dongle even if allowed to use electronic devices in flight.
- Automotive electronic systems may not operate properly while being exposed to high RF energy. Contact the manufacturer to make sure the vehicle is safe from high RF intensities.
- Do not use your device in close proximity to medical devices such as a cardiac pacemaker. The RF energy from your device can interfere with some medical devices such as a cardiac pacemaker.
- Do not use near a microwave. RF interference may occur when the device is used near a microwave, causing a breakdown or slowdown in communicating.
- A wall or partition, made with any metal, steel or concrete, between this device and a wireless device may cause a breakdown or slowdown in communicating. If such a situation occurs, please change the installation location of this product or wireless device or remove the partition.
- Do not use in the vicinity of on-premise or certain low-power radio stations for mobile identification. On-premise stations for mobile identification that are used by factory production lines, along with industrial, scientific and medical devices, operate on the frequency band used by this device.
- Before using this device, make sure that no on-premise, low-power or amateur radio station operates nearby.
- If your device interferes with any such station, discontinue using it immediately and contact the seller or LINKFLOW to enquire about measures to avoid interference, such as by installing a partition.
- Please contact the seller or LINKFLOW regarding any other product interfering with an on-premise, low-power or amateur radio station.

1.2.2 Safety Precautions for Handling Batteries

 CAUTION	<ul style="list-style-type: none"> • These safety precautions apply to the system body and external battery. Neglecting these instructions may result in serious damage or other dangerous situations.
---	---

- Please stop charging or using the device immediately if:
 - there is smoke, a leak or odor coming from the battery;
 - the system body or external battery expands, distorts or discolors;
 - the system body or external battery is too hot.
- If the system body, external battery or cradle malfunctions, immediately remove and place the device on a concrete slab away from buildings and combustible materials. Do not reuse or

recycle the battery. Dispose of it immediately in accordance with applicable waste regulations.

- Keep the battery and cradle out of the reach of children. Call an ambulance, if you suspect a battery has been swallowed.
- Do not use batteries other than those designated. Otherwise, there is a risk of battery explosion, leakage, damage or fire.
- Only use the specified cradle. Using an unspecified charger can result in an explosion or breakdown.
- Do not touch the device, power cord, plug or outlet with wet hands or body. This increases the risk of electric shock.
- Never disassemble, cause a short circuit or expose the battery pack to fire. This poses a risk of battery explosion, leakage or fire.
- If you intend not to use the camera for a long time, please remove the external battery before storing.
- Do not shock or shake the battery. Applying excessive force can lead to a battery explosion, leakage or fire.
- Do not attempt to modify or take apart the battery. This poses a risk of electric shock or fire.
- Using the device in a cold environment may shorten the battery life even though it's fully charged.
- Comply with your local waste regulations when disposing of batteries.
- Do not place or dispose of batteries in a general waste bin.

1.3 Product Information

1.3.1 Certificates

■ Korea

 <p>LFFTSC1-CDL : R-R-161-LFFTSC1-CDL LFFTSC1-SYS : R-R-161-LFFTSC1-SYS</p>	<p>This product has been evaluated as Class A equipment suitable for operation in industrial environments; electronic interference may occur if it is used in a domestic environment.</p>
--	---

■ Japan (Radio Certificate)

 <p>VCCI-A</p>	<p>This device is Class A IT equipment. Using this device in a domestic environment can cause electronic interference. The user is expected to take all necessary measures in handling the case.</p>
---	--

 CAUTION	<ul style="list-style-type: none">• This product is not designed to operate on telecommunications networks, including public wireless LANs, serviced by broadband or mobile providers.
---	--

1.3.2 Trademarks

- NEXX ONE is a registered trademark of LINKFLOW Co., Ltd.
- All product names and brands used in this manual are trademarks of their respective owners.

1.3.3 Software Licenses

This product includes software licensed under different licenses.

This product includes open source software. For more details, please visit the [LINKFLOW website](#).

2. What is NEXX ONE?

NEXX ONE is a wearable neckband CCTV. NEXX ONE comfortably wraps around your neck and makes it easier to record your surroundings and share both video and audio with the control room in real time, which can be very useful in many different settings.

2.1 Components

This product package includes:

 NOTE	<ul style="list-style-type: none">• Figures used in this user manual may look different from the actual product.• A country specific power cord may be provided.• Optional accessories are sold separately. Please contact your seller if you wish to purchase additional items.
--	--

2.1.1 Basic Components



Figure 2-1 Basic Components

2.1.2 Optional Accessories



Figure 2-2 Optional Accessories

2.2 Part Names and Description

2.2.1 Neck camera

Uses built-in cameras to shoot 360-degree videos.



Figure 2-3 Neck Camera Structure

Label	Name	Description
C	Camera Lens	Uses 1 camera lens to capture footage.
1	System Body Connector	Supplies power to the camera and transmits the footage to the system body.
2	Cable	Supplies power to the camera and transmits the footage to the system body.
3	Built-in Microphone	A microphone that is built in the body.

 NOTE	<ul style="list-style-type: none"> If you wish to change the length of the neck camera cable, please contact your seller.
--	--

2.2.2 System Body

The system body compresses the footage captured by the neck camera, and stores and transmits the compressed footage in real time.



Figure 2-4 System Body Structure

Label	Name	Description
1	Call Button (Front left)	Starts or ends a call with the control room. Press and hold to adjust volume.
2	Power Button (Front right)	Press and hold to turn on/off the device. (Recording begins when the power is turned on.) Press to stop or start recording.
3	Memory Card Slot	A memory card is inserted here.
4	Camera Connector	The neck camera cable is inserted here.
5	Dongle Port	Connects with a wireless LAN/dongle.
6	LED Display	Shows the device status.
7	Label	A label with product details.
8	Cradle Connector	Connects with the cradle. Used to charge the system body or transmit data to a PC.

 NOTE	<ul style="list-style-type: none"> It is recommended that only the memory card included in this product be used. Some memory cards of other manufacturers or of different types may not be compatible with this device. Please format your memory card to exFAT before use.
--	---

■ Checking the system body LED display



Figure 2-5 System Body LED Display

Label	Indicator	LED Status	Description
System		On	The system is functioning normally.
		Green: On Red: Flashing	System firmware is being updated.
Battery		On	A percentage of battery life remaining is displayed.
Network		Off	The wireless network (wireless LAN or LTE/5G) is not connected.
		On	The wireless network (wireless LAN or LTE/5G) is connected.
Recording		Flashing	Recording is in progress.
		On	A recording error has occurred.
		Off	Recording is not in progress.
Memory Card Storage		On	The memory card is inserted correctly.
		Flashing	No memory card, or memory card inserted incorrectly.
		On	Memory space remaining is displayed.
		On	The memory card is full, and recording has stopped.
		Flashing	The memory card is full, and recording in overwrite mode.
Camera		On	The camera is working correctly.
		On	A camera error has occurred.
Call		On	Connected with the VoIP server.
		On	An error has occurred with the VoIP server connection.

Label	Indicator	LED Status	Description
		Flashing	A call connected with the viewer.

 NOTE	<ul style="list-style-type: none"> • The camera LED displays the operational status of each camera. • The network and memory card storage may be displayed differently, depending on the dongle attached or the space remaining. • This device does not support GPS dongles.
--	---

2.2.3 Cradle

Charges the system body/external battery or transmits data to a PC.

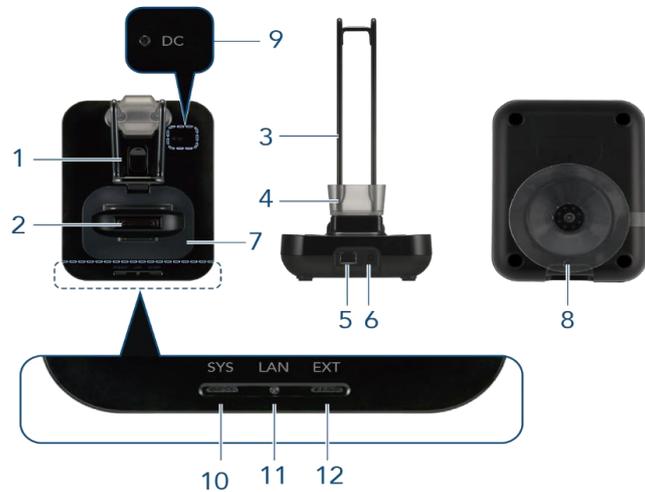


Figure 2-6 Cradle Structure

Label	Name	Description
1	Suction Mount	Provides a sturdy mount for the suction cup. Pushing the switch up creates a vacuum inside the suction cup for sturdy mounting.
2	System Body & External Battery Connector	Charges the system body/external battery or transmits data to a PC.
3	Neck Camera Stand	Holds the neck camera.
4	Rubber Cap Holder	Holds the rubber cap.
5	LAN Connector	Connects with the LAN cable.
6	Power Connector	Connects with the AC adapter.
7	Body Adapter	Helps hold the system body in the cradle. Must be replaced with the battery adapter if the external battery is to be mounted on the system body.
8	Suction Cup	Helps the cradle adhere to a surface.
9	Power LED	Indicates the power status of the cradle.
10	System Body LED	Indicates the connection status of the system body.
11	Comm. LED	Indicates the connection status of the LAN cable.
12	External Battery LED	Indicates the connection status of the external battery.

■ Cradle LED Display



Figure 2-7 Cradle LED Lamps

Item	Indicator	LED Status	Description
Power	● DC	Off	The cradle is not powered on.
	● DC	On	The cradle is powered on.
System Body	SYS 	On	The system body is being charged.
	SYS 	On	The system body is fully charged.
External Battery	EXT 	On	The external battery is being charged.
	EXT 	On	The external battery is fully charged.
Data Transmission	LAN ●	Off	<ul style="list-style-type: none"> No recorded files on the memory card. All data on the memory card has been transmitted.
	LAN 	Green: Flashing Red: On	Data is being transmitted.
	LAN 	Flashing	A data transmission error has occurred.
	LAN 	On	The file transfer has been interrupted while the backup server (FTP) is enabled, or the data remains on the memory card.

2.2.4 External Battery (Optional)

The external battery provides portable power to the system body.



Figure 2-8 External Battery Structure

Label	Name	Description
1	Battery Status Button	Checks the remaining battery power.
2	System Body Connector	Connects with the charging/data transmission connector of the system body.
3	Label	A label with product details.
4	Cradle Connector	Connects with the cradle system/external battery connector. Charges the system body and external battery, or transmits data to a PC.
5	External Battery Adapter	Helps hold the external battery mounted in the cradle.

3. Preparing NEXX ONE

This section explains how to put the parts together and set up the network before you start using this product.

3.1 Connecting Components

3.1.1 Connecting the Power and LAN Cables

Insert the power/LAN cables from the router into the power/LAN ports on the back of the cradle. The DC LED will light up in green (●) to show that the power is being supplied.



Figure 3-1 Connecting Power/LAN Cables

3.1.2 Connecting the Neck Camera

Connect the system body connector of the neck camera with the camera connector of the system body.



Figure 3-2 Connecting Neck Camera

3.1.3 Inserting a Memory Card

Plug the memory card into the memory card slot on the system body, paying attention to the direction of the card.

Note the orientation of the memory card. (See figure below.)



Figure 3-3 Inserting Memory Card

3.1.4 Attaching a Dongle (For wireless models only)

Plug in a wireless LAN dongle into the USB port on the system body.



Figure 3-4 Attaching Dongle

3.1.5 Mounting the External Battery

Insert the system body into the external battery.



Figure 3-5 Mounting External Battery

3.2 Charging the System Body

Mount the system body on the cradle or into the external battery. Charging starts automatically.

The SYS LED on the front of the cradle will light up in red () while the system body is being charged and in green () when it is fully charged.



Figure 3-6 Charging System Body



NOTE

- For how to check the cradle status, see "Cradle LED Display".
- The system body will not be charged if mounted on the cradle while inserted into the external battery, in which case only the external battery gets charged.

3.2.1 Turning On/Off



Figure 3-7 Turning On/Off

- Check if the neck camera cable is connected.
- Check if a memory card is inserted.
- Press the power button on the system body. It will beep twice, and the power indicator will light up.
- Press the power button when the device is on. It will beep twice, and the power will go off.

 CAUTION	<ul style="list-style-type: none">• The system body will not be powered on without a memory card in place.
---	--

 NOTE	<ul style="list-style-type: none">• You can check the system body status on the LED display once it is powered on.• For how to check the system body status, see "Checking the system body LED display".
--	---

4. NEXX ONE Settings

This product can be configured:

- with NEXX Manager installed on your PC,
- or in the web browser.

 NOTE	<ul style="list-style-type: none">• NEXX Manager is a program used by NEXX360/NEXX ONE.• NEXX Manager is a program used to configure device settings and view recorded footage. Connecting to a wireless network allows you to view the footage in real time. NEXX Manager can be downloaded from the LINKFLOW website.• To access the program in a web browser, you must use a PC on the same local network as your device.
--	--

4.1 NEXX Manager Installation

Run NXMvX.XX_Setup.exe to install the program.

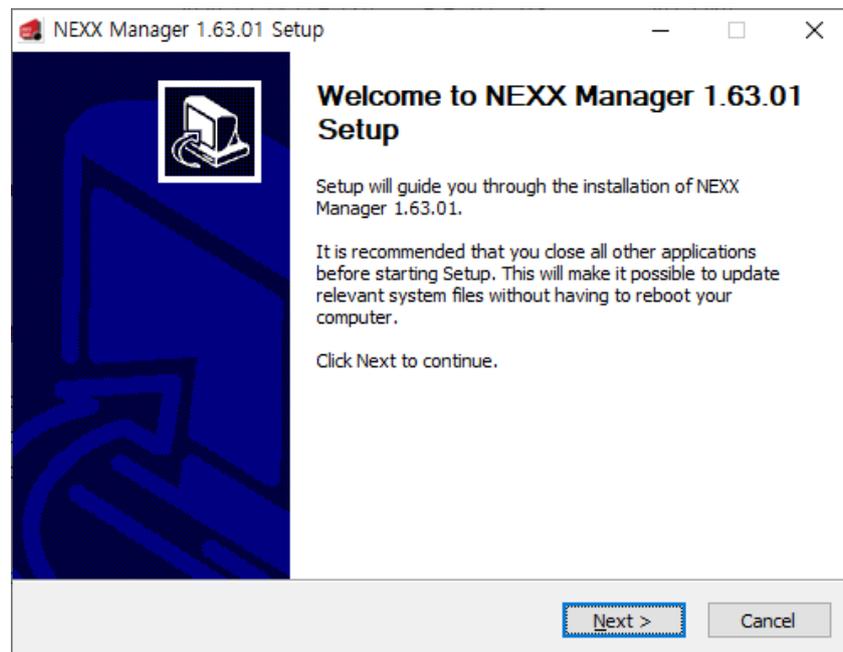


Figure 4-1 Installation Wizard

By default, the installation directory is C:\Program Files\NEXX Manager. Click [Browse...] to change the installation location.

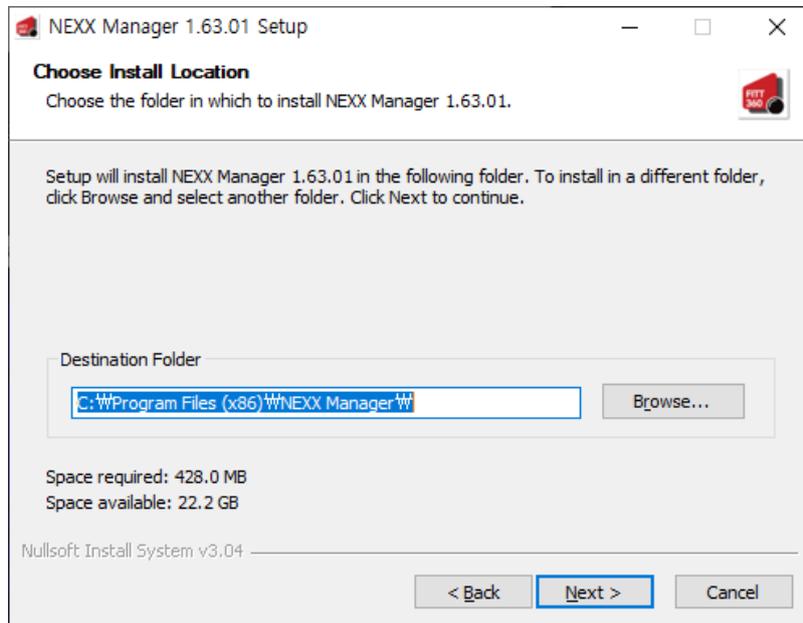


Figure 4-2 Installation Wizard

Specify a name for the start menu folder. The default name is NEXX Manager. Click [Install] to copy the program files to your PC.

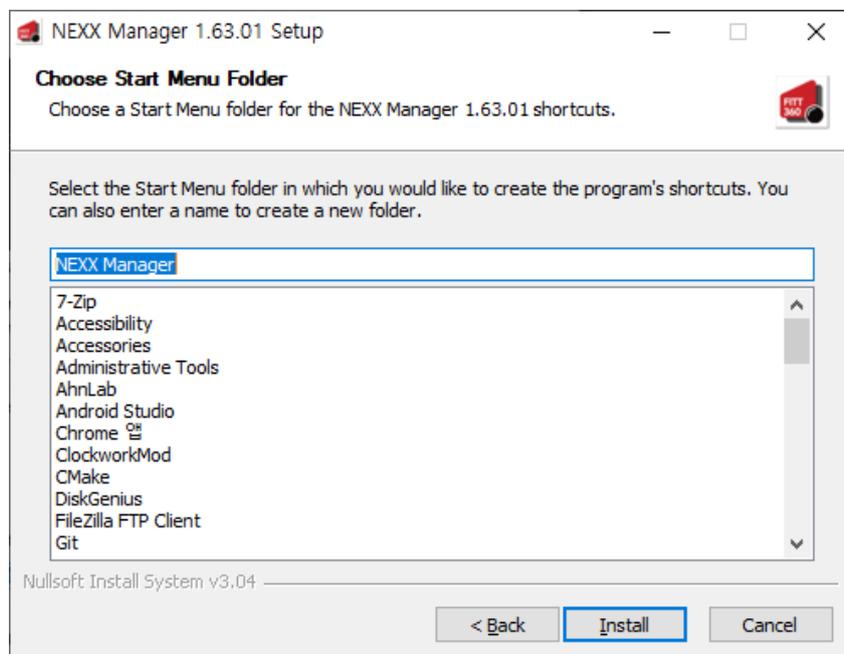


Figure 4-3 Installation Wizard

Once the installation is complete, you can run NEXX Manager.

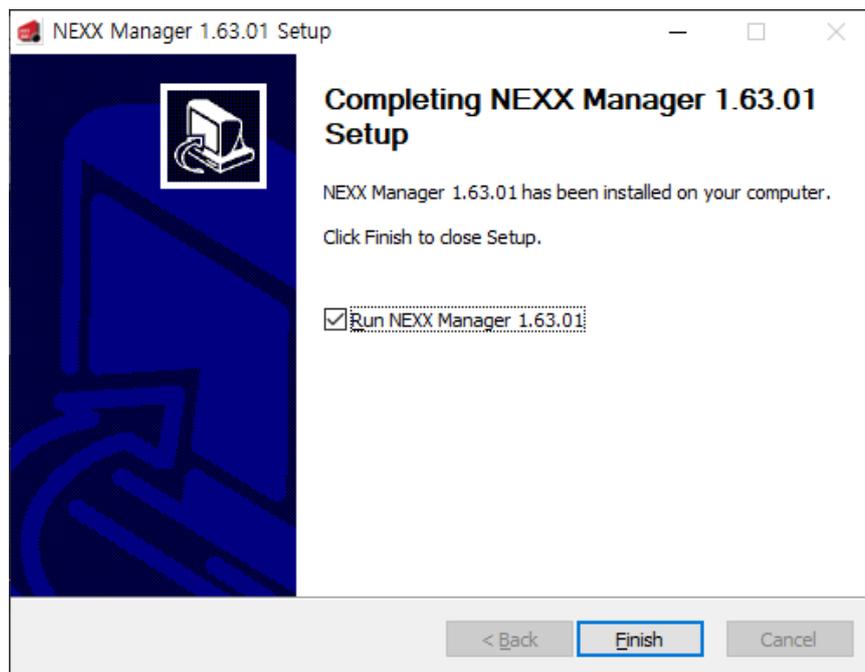


Figure 4-4 Installation Wizard

4.2 NEXX Manager Settings



NOTE

- NEXX Manager must be installed on your PC to configure your device settings.
- Do not run multiple NEXX Managers on the same PC.

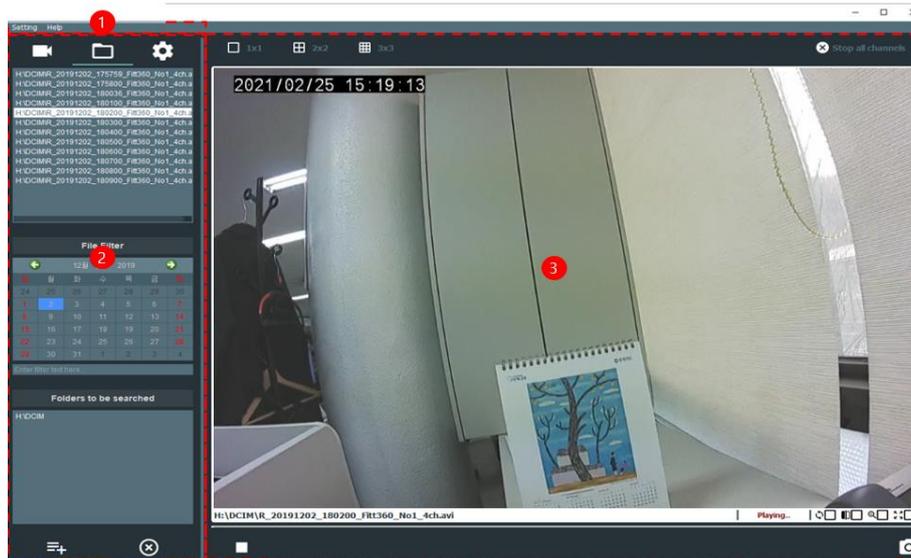


Figure 4-5 Main Interface

Label	Name	Description
1	Menu Bar	Provides access to the main menus.
2	Tool Tabs	Provides a set of tools to configure live streaming, recordings and device settings.
3	Video Screen	Displays live streaming or recorded footage.

4.2.1 Menu Bar

Provides access to the main menus.

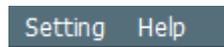


Figure 4-6 Menu Bar

Label	Description
Setting	Allows you to configure the device settings.
Help	Displays the current program version.

■ Setting

Allows you to configure the viewer program settings.

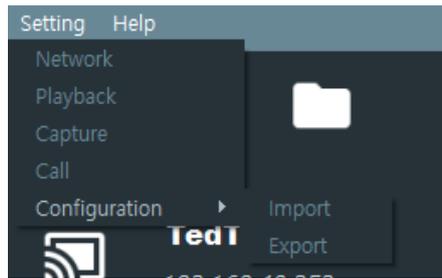


Figure 4-7 Setting Menu

Label	Description
Network	Allows you to configure the network settings.
Playback	Playback settings for recorded footage.
Capture	Settings for the directory where screenshots are saved.
Call	Configure the VoIP of the viewer .
Configuration	Allows you to import previously saved settings or export the current settings. <ul style="list-style-type: none"> • Import: Imports previously saved settings. • Export: Exports the current settings to a file.

■ Network Settings

Allows you to configure the network settings.

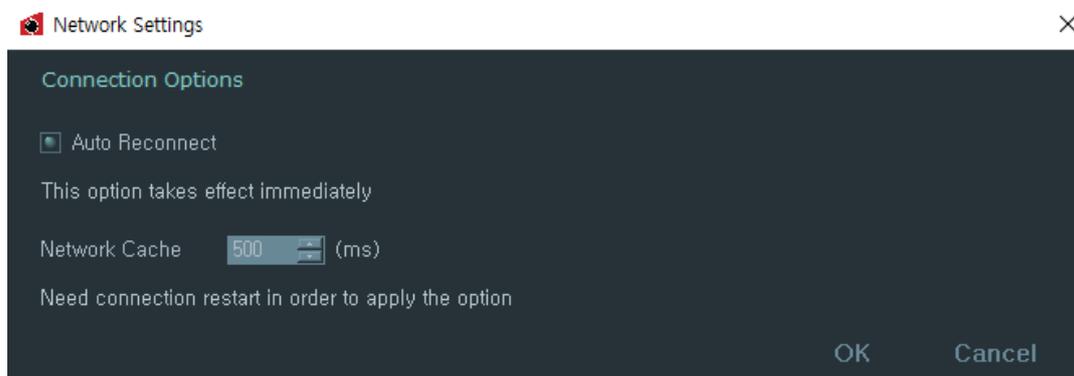


Figure 4-8 Network Settings Menu

Label	Option	Description
Connection Option	Auto Reconnect	Automatically reconnects the device to the network when disconnected.
	Network Cache	It configures the stability of the live streaming and a time delay between the live streaming and the occurrence.

■ Playback Settings

Playback settings for recorded footage.

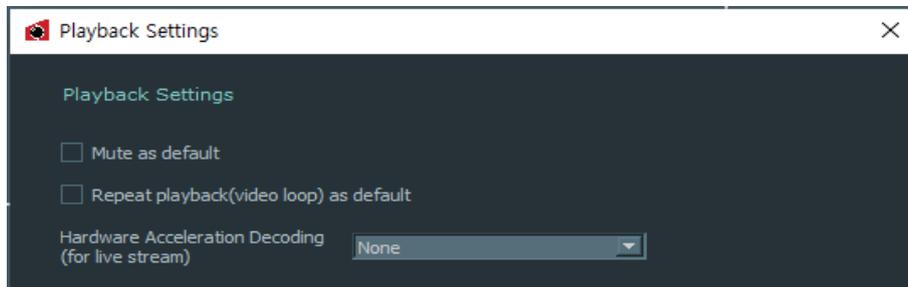


Figure 4-9 Playback Controls

Label	Option	Description
Playback Settings	Mute as default	The sound of recorded footage is not played.
	Repeat playback (video loop) as default	Allows you to repeat videos automatically.
	Hardware Acceleration Decoding (for live stream)	Allows you to accelerate playback of streaming videos. <ul style="list-style-type: none"> • None: Disables hardware acceleration. • Auto: Enables PC-specific acceleration. • DXVA 2.0: Enables DXVA acceleration.

 NOTE	<ul style="list-style-type: none"> • Hardware acceleration is available for live streaming only. • Auto is enabled by default.
--	--

■ Capture Settings

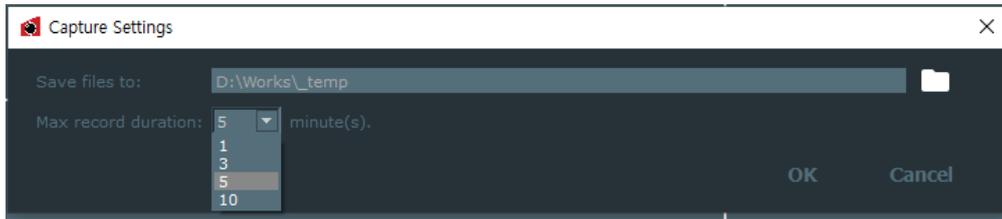


Figure 4-10 Capture Menu

Label	Option	Description
Capture Settings	Save files to	Selects the location where the captured or recorded footage is saved.
	Max record duration	Limits the recording time. Length: 1, 3, 5 or 10 minutes.

 NOTE	<ul style="list-style-type: none"> Depending on the situation, a time difference of ± 1 second may occur.
--	---

■ Call Setting

Register the VoIP number of the viewer to the VoIP server. Refer to [7. VOIP Communication] for details.

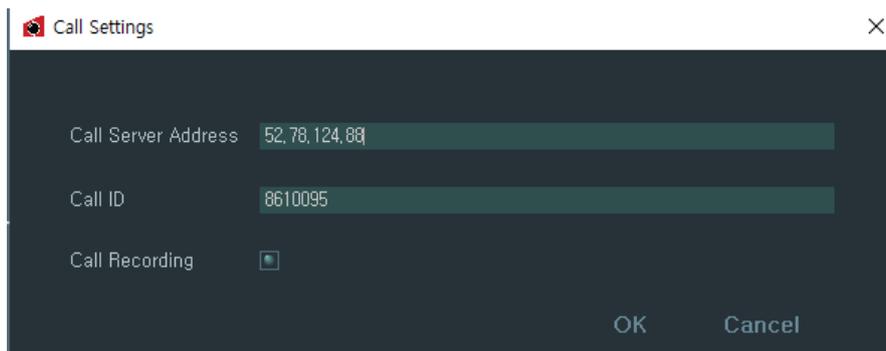


그림 4-11 VOIP Call Setting

Label	Description
Call Server Address	The VOIP server address of the viewer.
Call ID	VOIP call number of the viewer.
Call Recording	Recordings of VOIP communication. (Default: OFF)

■ Configuration - Import/Export

Imports previously saved settings or exports the current settings to a file.

Label	Option	Description
Configuration	Import	Imports previously saved settings.
	Export	Exports the current settings to a file.

■ Help (Program Info)

Displays the program version. Go to Help > About to open a window showing information about the program.



Figure 4-11 Program Info Window (Version Info)

 NOTE	<ul style="list-style-type: none"> The firmware version may change for functional improvement.
---	---

4.2.2 Tool Tabs

Provides a set of tools to configure live streaming, recordings and device settings.



Figure 4-12 Tool Tabs

Label	Name	Description
	Streaming Video	Allows you to view, select, add and delete predefined profiles.
	Recordings	Plays recorded videos loaded from the memory card.
	Device Settings	This menu provides a set of system options.

■ Streaming Video Tab

Allows you to view, select, add and delete predefined profiles.



Figure 4-13 Streaming Video Tab

Label	Name	Description
 LF_BATTERY1 192.168.1.118	Profile	Profile name and IP address of a registered device. Double-click to view live footage of that device.
	Add Profile	Adds a new device profile.
	Delete Profile	Deletes a predefined profile.

Right-click a profile to open a pop-up menu with a set of options.

Name	Description
Connect Video	Attempts to access the selected profile.
Connect Video & Call	Displays camera images and makes a VOIP call at the same time.
Remote Device Configuration	Allows access to the web-based settings page.
Modify Registration	Allows you to change profile settings.
Delete Registration	Deletes the selected profile.
Delete All Registration	Deletes all predefined profiles.
VOIP Call	Shows the VOIP call history. Refer to [7.3.6 Call History] for more details

■ Recordings Tab

Plays recorded videos loaded from the memory card.

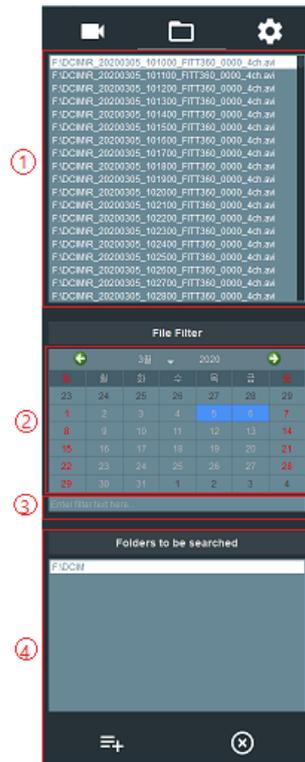


Figure 4-14 Recordings Tab

Label	Name	Description
①	List of Recordings	Lists a set of recorded footages.
②	Recording Date Filter	Choose a date. Footage recorded on the selected date is listed.

③	Keyword Filter	Applies keyword filtering to the list of videos. Videos that contain the text are listed.
④	List of Video Folders	<p>Lists folders where the recorded footage is saved.</p> <ul style="list-style-type: none"> • Add Folder (≡+): Adds a new folder. • Delete Folder (⊗): Removes a folder from the list. <p style="text-align: right;">Video files in the folder are not deleted.</p>

**NOTE**

- Right-click the video list to open a pop-up menu with the option below.
 - Convert to single-channel videos: Converts the selected video recording into separate files for each camera feed (C1 - C4). (Four .avi files are created.)
- Right-click the recording date filter to open a pop-up menu with a set of options.
 - Reset Filter: resets settings for the date filter.
 - Set Today: sets the date to today on your PC.
- Right-click the keyword filter to open a pop-up menu with a set of options.
 - Undo: reverts to the previous text in the filter box.
 - Redo: restores the last undone text.
 - Cut: cuts the selected text from the filter box.
 - Copy: copies the selected text from the filter box.
 - Paste: pastes cut/copied text to the filter box.
 - Delete: deletes the selected text from the filter box.
 - Select All: selects the entire text in the filter box.

Device Settings Tab

This menu provides a set of system options. For more details, see "System Body Settings".

4.2.3 System Body Settings

■ How to Set Up the System Body

1. Turn off the device and remove the memory card from the card slot.
2. Insert the memory card into your PC on which NEXX Manager is installed.
3. Run NEXX Manager.
4. Click the device settings (⚙️) on the tool tabs panel of the main interface.

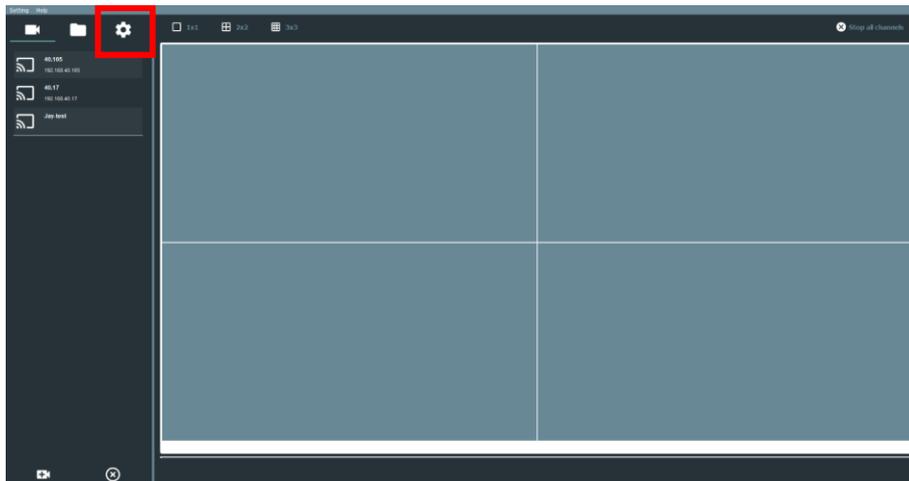


Figure 4-15 System Body Settings

5. Double-click the device ID for the inserted memory card.



Figure 4-16 Memory Card Info

6. On the device settings window, click each tab to configure the system settings.

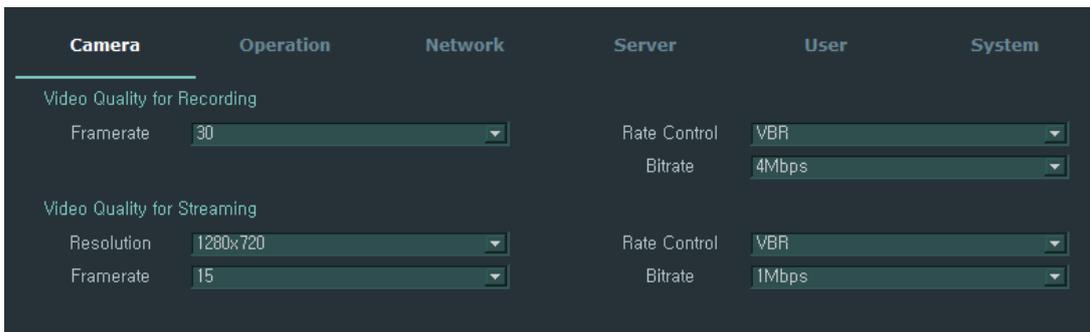


Figure 4-17 Image of Device Settings

Label	Description
Camera	Configures recording/streaming video quality settings
Operation	Configures recording settings
Network	Configures network settings
Server	Configures server settings
User	Manages ONVIF/RTSP streaming user accounts.
System	Displays system details and configures system settings

7. Click **OK** to finish the setup.

8. Remove the memory card from your PC, and then insert it into the system body.
The changes are automatically applied when the power is turned on.

■ Camera Tab

Configures recording/streaming video quality settings.

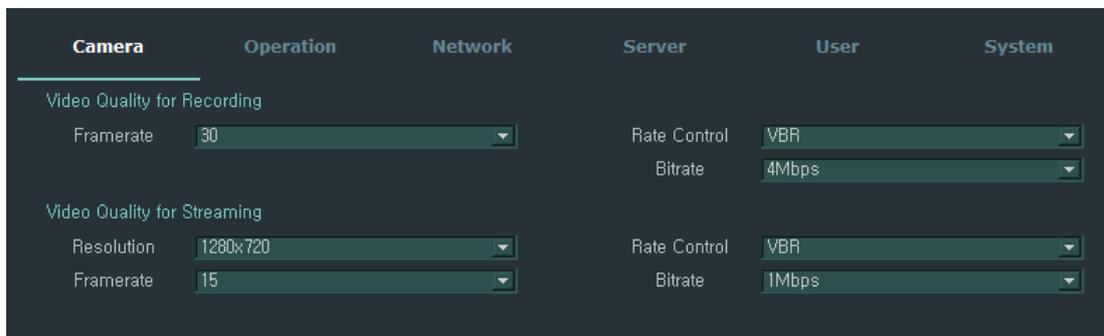


Figure 4-18 Camera Tab

Label	Option	Description	Value (*Factory default settings)
Video Quality	Frame rate	Frame rate settings for recorded footage	1fps - 30fps(*30fps)

Label	Option	Description	Value (*Factory default settings)
for Recording	Bitrate	Bitrate settings for recorded footage	512Kbps - 4Mbps (*4Mbps)
	Rate Control	Variable/Constant bitrate settings	VBR*/CBR
Video Quality for Streaming	Frame rate	Frame rate settings for live streaming	1fps - 30fps(*30fps)
	Bitrate	Bitrate settings for live streaming	512Kbps - 8Mbps (*4Mbps)
	Rate Control	Variable/Constant bitrate settings	VBR*/CBR
	Resolution	FHD/HD/D1 resolution settings	D1/HD*/FHD

■ Operation Tab

You can configure recording settings.

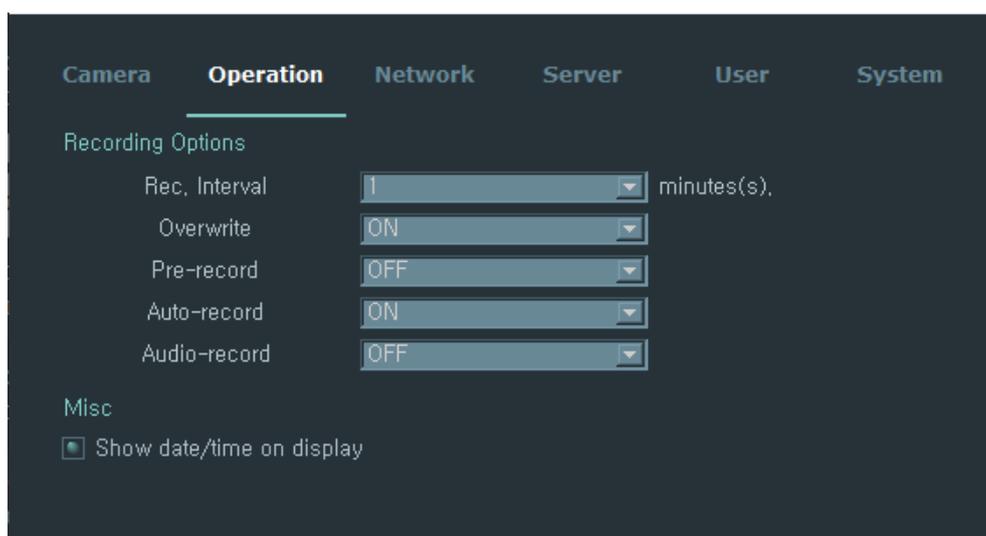


Figure 4-20 Operation Tab

Label	Option	Description	Value (*Factory default settings)
Recording Options	REC. Interval	Limits the time of video files to be saved.	1 min*/5 mins
	Overwrite	Enables/disables overwrite when the storage is full.	ON*/OFF
	Pre-record	Pressing the (REC) button while the system body is running will pre-record 15 seconds before the button is hit.	ON/OFF*
	Auto-record	Sets whether to start recording automatically when the system body is powered on.	ON*/OFF
	Audio-record	Sets whether to record sound along with the	ON/OFF*

		video.	
Misc.	Show date/time on display	Sets whether to show the date and time of recording on the screen.	ON*/OFF

 NOTE	<ul style="list-style-type: none"> Pressing REC about 15 seconds after the system booting will save the video after the button is hit, even if the pre-record option is on.
---	--

■ Network Tab

You can configure network settings.

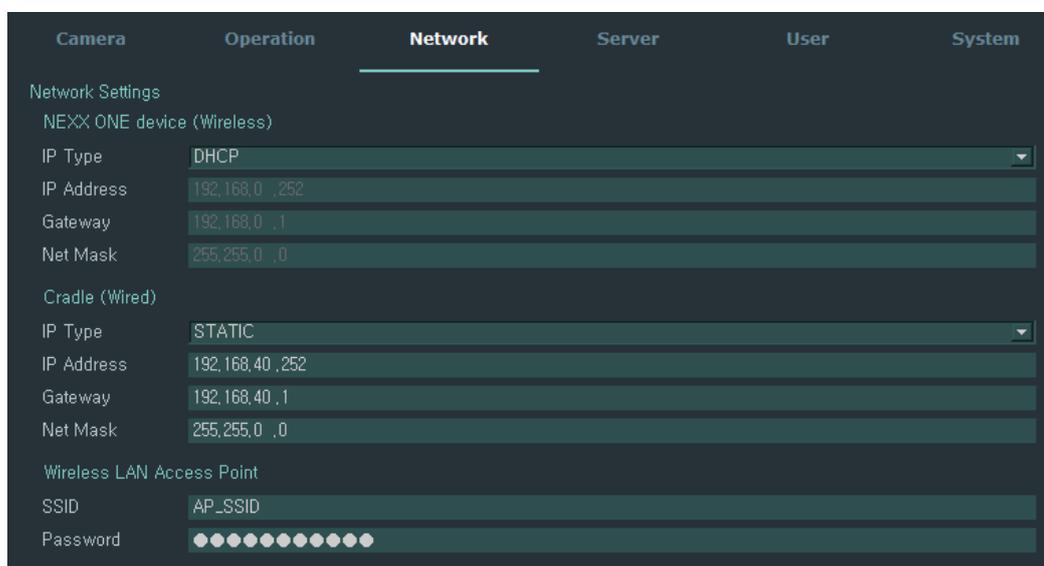


Figure 4-19 Network Tab

Label	Option	Description	Value (*Factory default settings)
NEXX ONE Device (Wireless)	IP Type	Wireless IP settings for wireless LAN connection.	STATIC/DHCP*
	IP Address	Wireless IP settings for wireless LAN connection	0.0.0.0 - 255.255.255.255 (192.168.0.252)*
	Gateway	Gateway address settings for wireless LAN connection	0.0.0.0 - 255.255.255.255 (192.168.0.1)*
	Netmask	Netmask address settings for wireless LAN connection	0.0.0.0 - 255.255.255.255 (255.255.0.0)*

Label	Option	Description	Value (*Factory default settings)
Cradle (Wired)	IP Type	Sets the IP type of the Ethernet connected to the cradle.	STATIC*/DHCP
	IP Address	Sets the IP address of the Ethernet connected to the cradle.	0.0.0.0 - 255.255.255.255 (192.168.1.252)*
	Gateway	Sets the gateway address of the Ethernet connected to the cradle.	0.0.0.0 - 255.255.255.255 (192.168.1.1)*
	Netmask	Sets the netmask address of the Ethernet connected to the cradle.	0.0.0.0 - 255.255.255.255 (255.255.0.0)*
Wireless LAN Access Point	SSID	Sets the SSID for the wireless LAN AP to connect.	(Up to 31 English letters and/or numbers, 31 special characters or 10 Korean letters) AP_SSID*
	Password	Sets the password for the wireless LAN AP to connect.	(Up to 31 English letters and/or numbers, 31 special characters or 10 Korean letters) AP_PASSWORD*

■ Server Tab

You can configure server settings.

Figure 4-20 Server Tab

Label	Option	Description	Value (*Factory default settings)
VoIP Configuration	Server IP	VoIP Server(BPX) IP address	52.78.124.88
	Dev. Caller ID	NEXX ONE device's VoIP caller number	Blank
	Peer Caller ID	Viewer's VoIP number	Blank
	Use The STUN Server	Option to block the VoIP environment from connecting to external networks.	ON*/OFF
Backup Server (FTP)	Backup Server (FTP)	Option to use a backup server.	ON/OFF*
	IP Address	Sets the IP address of the back	0.0.0.0 - 255.255.255.255

Label	Option	Description	Value (*Factory default settings)
		server.	192.168.1.23*
	ID	Sets an ID of the backup server.	Up to 15 English letters, numbers and/or special characters (- _ ! @ # \$ % ^) FTP_ID*
	Password	Sets a password for the backup server.	Up to 15 English letters, numbers and/or special characters (- _ ! @ # \$ % ^) FTP_PASSWORD*
	Port Number	Assigns a port number for the backup server.	0 - 65535 21*
Dynamic DNS (DDNS)	Dynamic DNS (DDNS)	Sets whether to use a dynamic DNS.	ON/OFF*
	Server	Sets a URL for the DDNS server.	Up to 63 characters DDNS Server*
	Hostname	Sets a host name.	Up to 31 English letters, numbers and/or special characters (- _ ! @ # \$ % ^) Host Name*
	User ID	Sets a user ID.	Up to 31 English letters, numbers and/or special characters (- _ ! @ # \$ % ^). ID*
	Password	Sets a password.	Up to 31 English letters, numbers and/or special characters (- _ ! @ # \$ % ^)
DNS Server	Server 1	Sets an IP address for the DNS1 server.	0.0.0.0 - 255.255.255.255 8.8.8.8*
	Server 2	Sets an IP address for the DNS2 server.	0.0.0.0 - 255.255.255.255 168.154.160.4*
Time Zone	Time zone	Time zone settings	UTC -12 ~ +12 UTC+09 JST*
	Daylight Saving	Enables daylight saving time changes.	ON/OFF*

Label	Option	Description	Value (*Factory default settings)
NTP (Network Time Protocol)	NTP (Network Time Protocol)	Synchronizes the time using the NTP.	ON*/OFF
	Time Server	The URL address of the server to synchronize the time with.	Up to 31 English letters, numbers and/or dots (time.google.com)
Enable ONVIF Server		The option to enable the ONVIF server.	ON*/OFF
NEXX Streaming Server(NSS)		The option to enable the NSS server.	ON*/OFF

■ User tab

Manages ONVIF/RTSP streaming user accounts.

Figure 4-21 User Tab

Label	Option	Description	Value (*Factory default settings)
ONVIF Account	ID	The ONVIF administrator user ID	Cannot be changed. admin
	Password	Allows you to change the ONVIF administrator user password. Up to 31 English letters, numbers and/or special characters (- _ ! @ # \$ % ^)	Up to 16 English letters and numbers admin*
RTSP Account	Use Encryption	The option to encrypt your RTSP user ID and password.	NONE*/AES

	ID	Sets a user ID. Up to 31 English letters, numbers and/or special characters (- _ ! @ # \$ % ^)	admin*/NULL
	Password	Sets a password. Up to 31 English letters, numbers and/or special characters (- _ ! @ # \$ % ^)	admin*/NULL

■ System Tab

This tab allows you to view your product information and change the device ID.

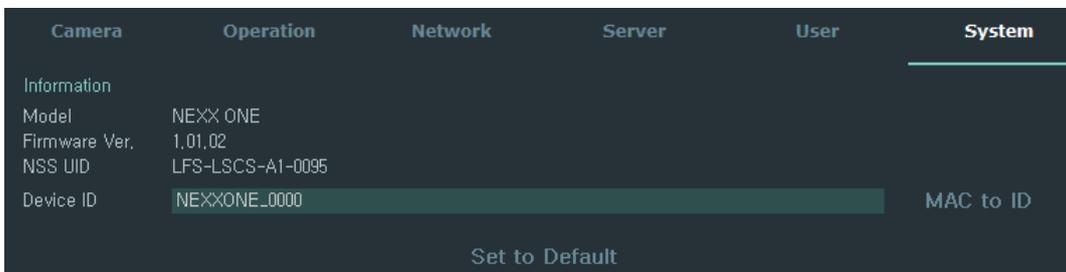


Figure 4-22 System Tab

Label	Option	Description	Value
Information	Model	Product model	-
	Firmware Ver.	Firmware version	-
	NSS UID	Displays UID number of the device	
	Device ID	You can change the device ID. <ul style="list-style-type: none"> Mac to ID: You can change the device ID into the MAC ID format. 	User-defined
Set to Default	-	Clicking this option will reset all settings to their factory defaults.	-

 NOTE	<ul style="list-style-type: none"> The Device ID is useful when multiple cameras are deployed. Clicking MAC to ID will bring up "_MACADDRESS_" in the Device ID field. Then, a device ID in the Mac address format will be created when the memory card is inserted into the system body and powered on.
-----------------	--

4.2.4 Web Settings

You can access and configure product settings in a web browser.



NOTE

- All settings except the User and System Settings can be configured in the same way as NEXX Manager. For more details, see "System Body Settings".
- Web browser configuration is updated when the system is restarted. On the main page, click "APPLY (RESTART) >" to restart the device.

1. Start a web browser and enter the product's IP address in the address field to access the configuration page.

The default IP address is 192.168.1.252, with a subnet mask of 255.255.0.0. Please access from a PC on the same local network. If the IP address of your PC is different, see "Setting an IP Address on Your Computer".



Figure 4-23 Entering IP address on Web

In the login page, enter your ID and password. (By default, they are both admin.)

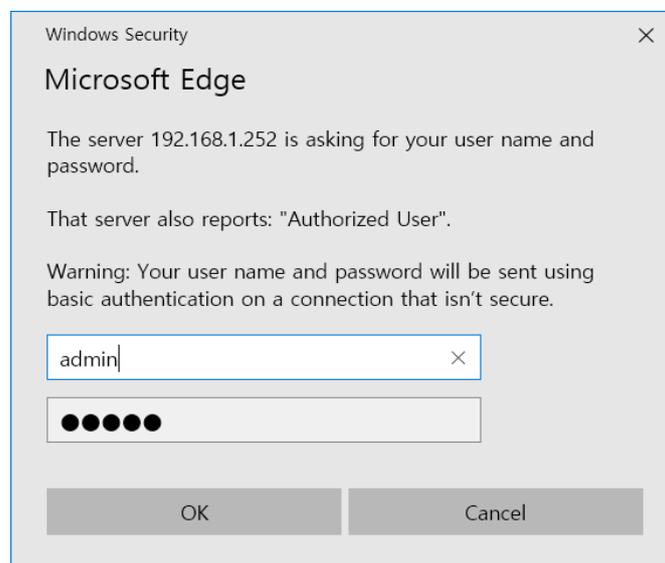


Figure 4-24 Web Page Authentication Window

Incorrect ID/password will prompt you with an error message as shown below.

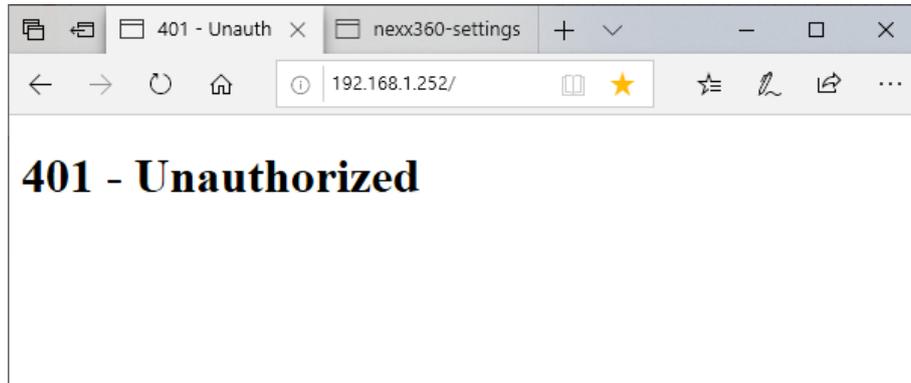


Figure 4-25 Authentication Error Page

When you first log in, you will be directed to change your password and log in again with the new password. (Only the password can be changed.)

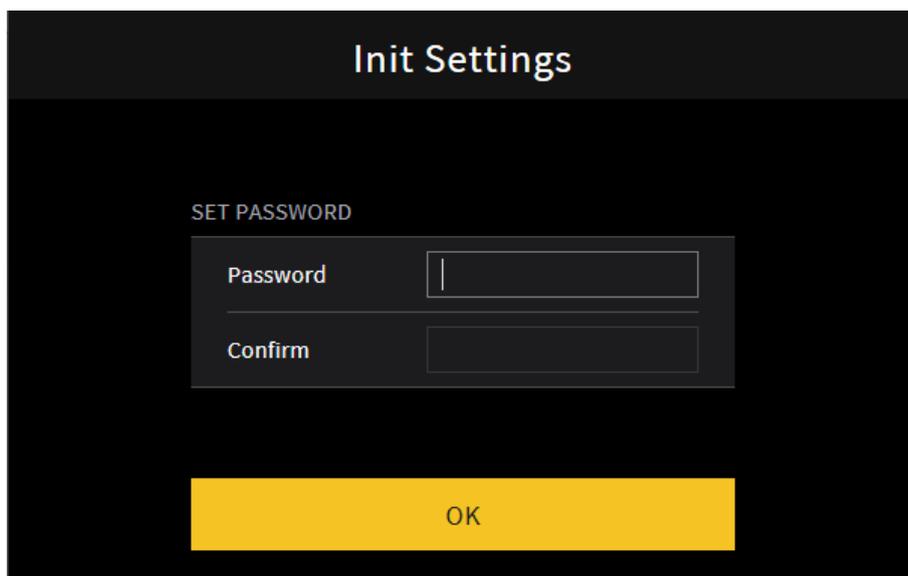


Figure 4-26 Change Password Page

You can access the configuration page after changing your password.

 CAUTION	<ul style="list-style-type: none">• Your new password will not be known to the manufacturer.• If you have forgotten your password, you will have to factory reset the system via NEXX Manager.
---	---

After changing your password and logging in, you will see the web-based configuration page as shown below.

Select and configure the settings that you want to change.

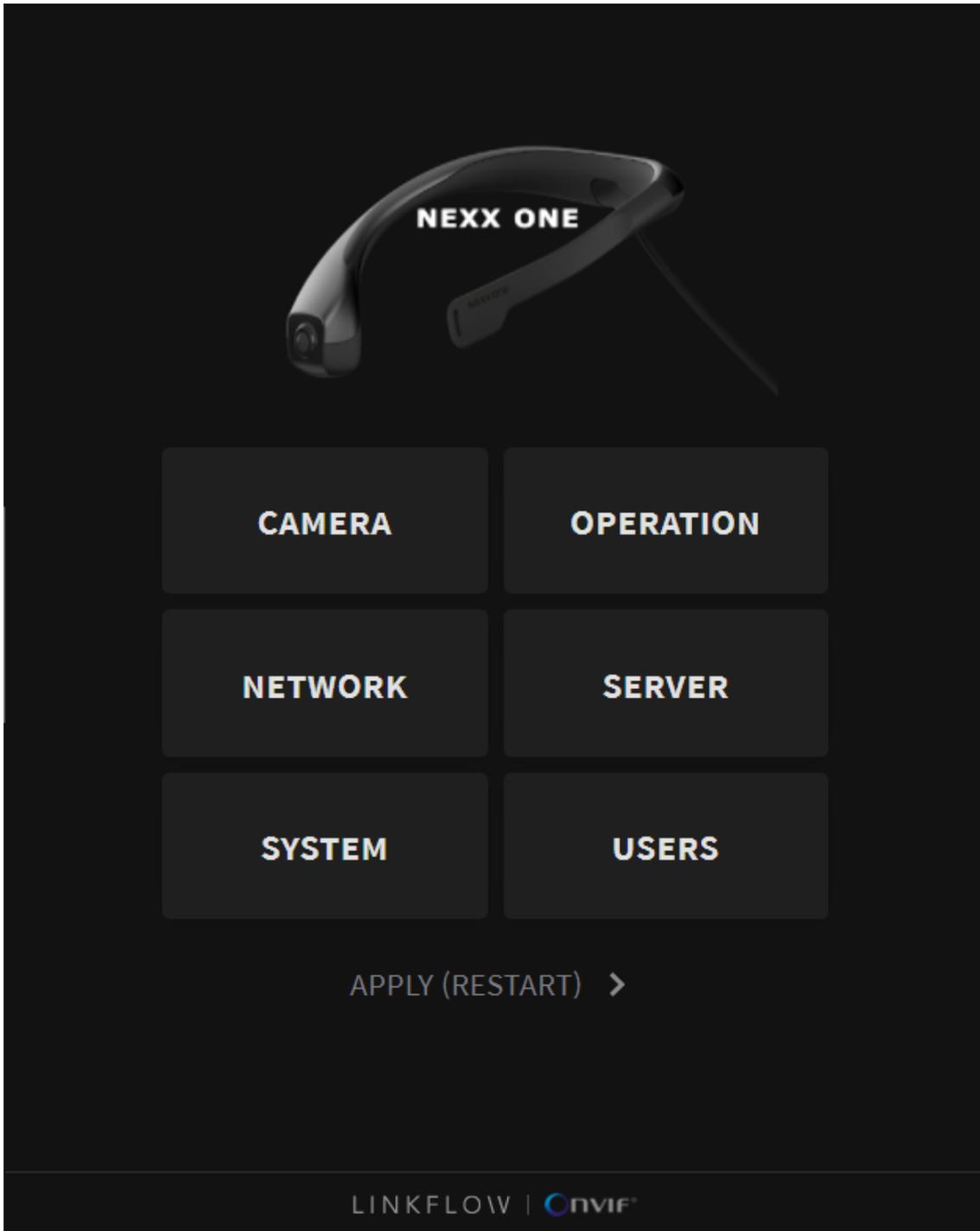
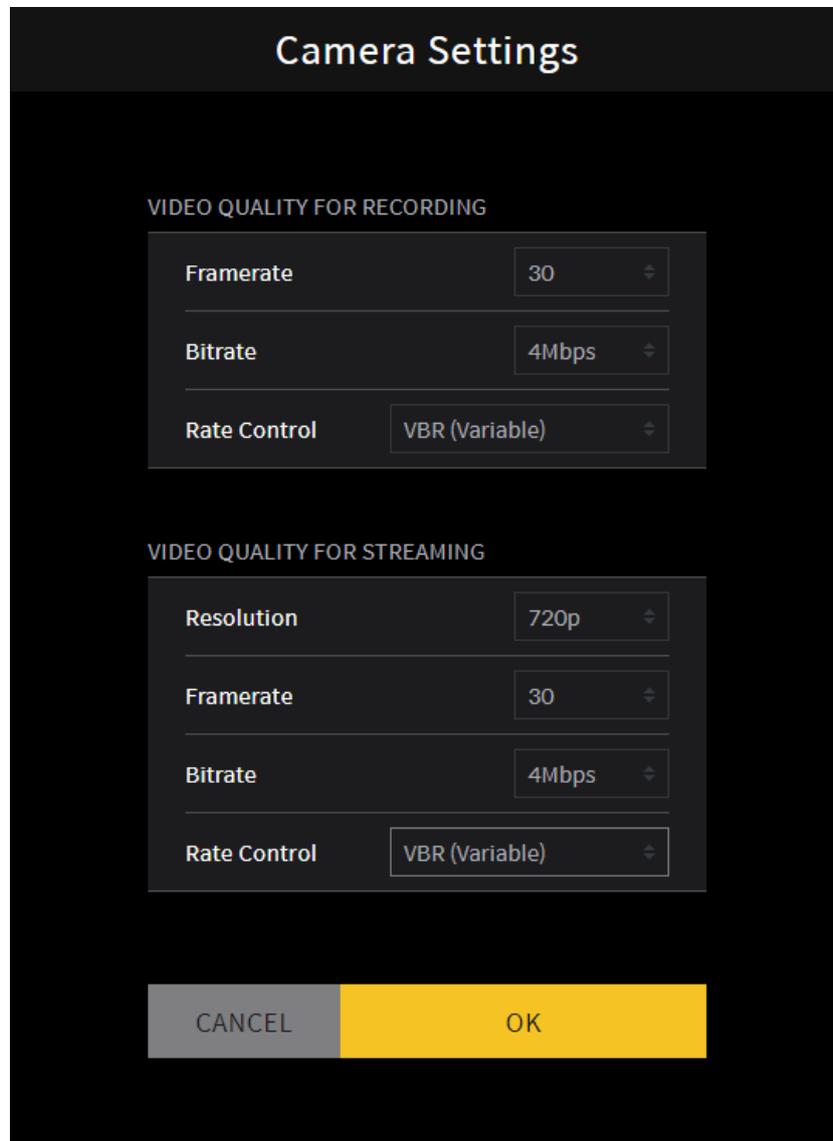


Figure 4-27 Main Web Page

4.2.5 Camera Settings

You can configure the recording and streaming resolution.



The screenshot displays the 'Camera Settings' interface. It features two main sections: 'VIDEO QUALITY FOR RECORDING' and 'VIDEO QUALITY FOR STREAMING'. Each section contains three settings: Framerate, Bitrate, and Rate Control. The 'VIDEO QUALITY FOR RECORDING' section has Framerate set to 30, Bitrate set to 4Mbps, and Rate Control set to VBR (Variable). The 'VIDEO QUALITY FOR STREAMING' section has Resolution set to 720p, Framerate set to 30, Bitrate set to 4Mbps, and Rate Control set to VBR (Variable). At the bottom, there are two buttons: 'CANCEL' and 'OK'.

Section	Setting	Value
VIDEO QUALITY FOR RECORDING	Framerate	30
	Bitrate	4Mbps
	Rate Control	VBR (Variable)
VIDEO QUALITY FOR STREAMING	Resolution	720p
	Framerate	30
	Bitrate	4Mbps
	Rate Control	VBR (Variable)

Figure 4-28 Camera Settings Page

4.2.6 Operation Settings

The screenshot displays the 'Operation Settings' interface. At the top, the title 'Operation Settings' is centered. Below it, the 'RECORDING OPTIONS' section contains several settings: 'Pre-record' (unchecked), 'Auto record' (checked), 'Audio record' (unchecked), 'REC Interval' (set to '1Min' with a dropdown arrow), and 'Overwrite' (checked). The 'MISC' section below contains 'Show date/time on display' (checked). At the bottom, there are two buttons: 'CANCEL' and 'OK'.

Operation Settings

RECORDING OPTIONS

- Pre-record
- Auto record
- Audio record
- REC Interval: 1Min
- Overwrite

MISC

- Show date/time on display

CANCEL OK

Figure 4-29 Operation Settings Page

4.2.7 Network Settings

You can configure the network (Wireless/Wired/AP) settings.

The screenshot displays the 'Network Settings' interface. It is divided into three main sections: 'DEVICE(WIRELESS)', 'CRADLE(WIRED)', and 'WIRELESS ACCESS POINT'. At the bottom, there are 'CANCEL' and 'OK' buttons.

Section	Field	Value
DEVICE(WIRELESS)	IP Type	DHCP
	IP Address	192.168.0.252
	Gateway	192.168.0.1
	Netmask	255.255.0.0
CRADLE(WIRED)	IP Type	Static
	IP Address	192.168.40.8
	Gateway	192.168.40.1
	Netmask	255.255.0.0
WIRELESS ACCESS POINT	SSID	AP_SSID
	Password

Figure 4-30 Network Settings Page

4.2.8 Server Settings

Server Settings

VOIP CONFIGURATION

Use stun

IP Address: 52.78.124.88

Peer Call ID: 8610045

Dev Call ID: 6510045

BACKUP SERVER(FTP)

Backup Server(FTP)

IP Address: 192.168.40.6

ID: test

Password: ****

Port Number: 21

DYNAMIC DNS(DDNS)

Dynamic DNS(DDNS)

Server: DDNS_Server

Hostname: Host_Name

ID: ID

Password:

DNS SERVER

Server1: 8.8.8.8

Server2: 168.154.160.4

TIME ZONE

Time Zone: UTC+09,KST,Korea Sta

Daylight Saving

NTP (NETWORK TIME PROTOCOL)

Enable

Time Server: time.google.com

ONVIF SERVER

Enable

NEXX STREAMING SERVER(NSS)

Enable

CANCEL OK

Figure 4-31 Server Settings Page

4.2.9 System Settings

The screenshot displays the 'System Settings' interface. At the top, the title 'System Settings' is centered. Below it, the 'IDENTIFICATION' section contains three rows: 'Model' with the value 'NEXX ONE', 'Device ID' with 'NEXXONE_0000' and a 'MAC TO ID' button with a right arrow, and 'NSS UID' with 'A1-0045'. The 'MAINTENANCE' section follows, with 'Version' set to '1.01.03', 'Configuration' set to 'FACTORY RESET' with a right arrow, and a 'Firmware update' section. The firmware update section includes a file selection button (three dots) and a text input field containing 'Choose F/W file to upload', with an 'UPDATE' button and right arrow below it. At the bottom, there are two buttons: 'CANCEL' on the left and 'OK' on the right, which is highlighted in yellow.

Figure 4-32 System Settings Page

Refer to 4.5.2 Updating firmware for details

4.2.10 User Settings (Change Password Option)

1. You can change the web administrator's password.

You can change the password for your ONVIF account. (ID (admin) is unchangeable.)

RTSP account settings: If ONVIF is enabled, the ID and password should be the same as the ones for your ONVIF account. For AES encryption, live streaming is only available on NEXX Manager.

All changes are applied when the device is restarted.

The screenshot displays the 'User Settings' interface on a dark background. At the top, the title 'User Settings' is centered. Below it, there is a checkbox labeled 'CHANGE THE WEB ADMINISTRATOR'S PASSWORD'. Underneath this checkbox is a form with three input fields: 'Current', 'New', and 'Confirm'. Below these fields is the 'ONVIF ACCOUNT' section, which includes an 'ID' field with the value 'admin' and a 'Password' field with masked characters. The 'RTSP ACCOUNT' section follows, featuring an 'Encryption' dropdown menu set to 'None', an 'ID' field with 'admin', and a 'Password' field with masked characters. At the bottom of the interface are two buttons: a grey 'CANCEL' button and a yellow 'OK' button.

Figure 4-33 Changing User Password

4.2.11 Restart

On the main page, click APPLY (RESTART) to restart the system.

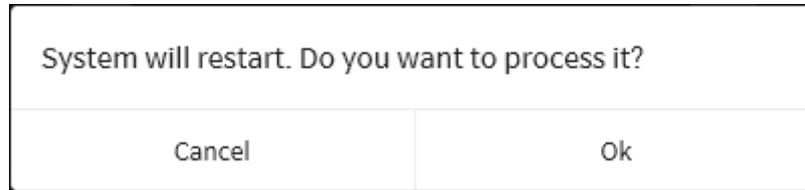


Figure 4-34 Confirmation Dialog Box for Restart

Click OK. Then, a message will appear as shown below.

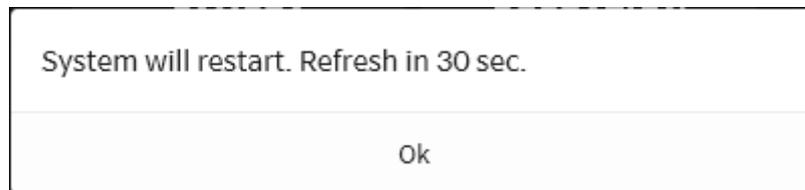


Figure 4-35 Confirmation Dialog Box for Reboot

During restart, messages will appear on your screen, as shown below.

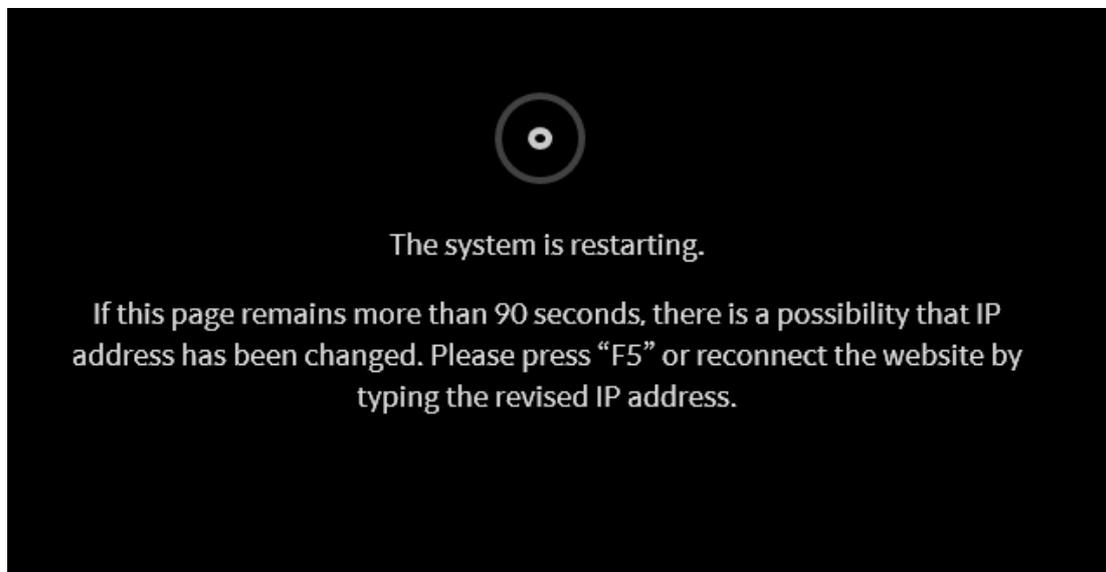


Figure 4-36 Rebooting

Once the reboot is complete, the changes in settings will be applied.

4.3 Network Settings

4.3.1 Defining Mode

Communication modes are divided into the basic mode for transmitting video files as a backup and LAN/LTE mode for watching live streams on a PC.

The basic models support the basic mode only, and the wireless models support all modes.

■ Basic Mode

The basic mode is a communication mode using the wired LAN. Its configuration diagram is presented below.

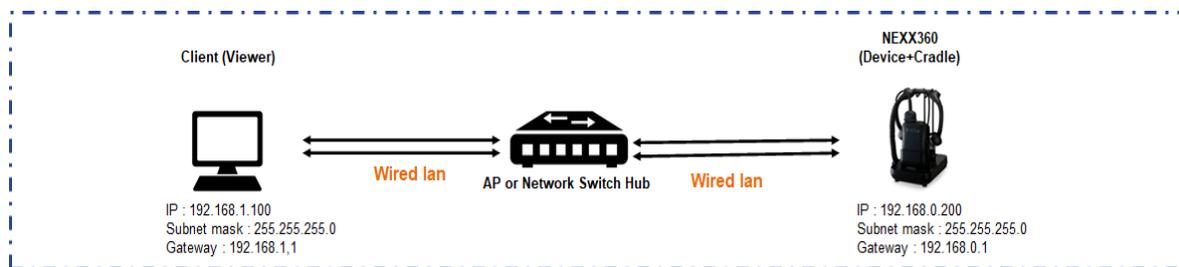


Figure 4-37 Basic Mode Diagram

The (wired) cradle IP address is assigned according to the local IP protocol*.

(* Contact your network administrator.)

You can view live streams via NEXX Manager on your PC connected to the local network.

 CAUTION	<ul style="list-style-type: none">Your PC on which NEXX Manager is installed must be on the same network (AP) as NEXX360.
---	---

■ Wireless LAN Mode

The wireless LAN mode refers to a communication mode using the wireless LAN. Its configuration diagram is presented below.

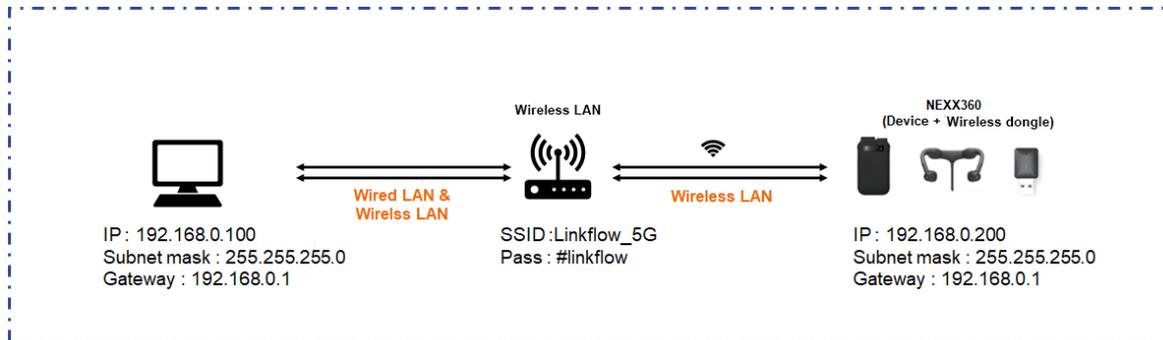


Figure 4-38 Wireless LAN Mode Diagram

The (wireless) IP address is assigned according to the local wireless LAN protocol*. (* Contact your network administrator.)

Watch live streams via NEXX Manager on your PC connected to the local network.

 CAUTION	<ul style="list-style-type: none"> Your PC on which NEXX Manager is installed must be on the same network (Wireless AP) as NEXX360.
 NOTE	<ul style="list-style-type: none"> What can be configured for the wireless LAN Access Point are the router name (SSID) and password on the network. Please contact your network administrator for more details.

■ LTE Mode

The LTE mode is a communication mode using the external network. A wireless dongle can be used to connect NEXX360 with your PC. Its configuration diagram is presented below.

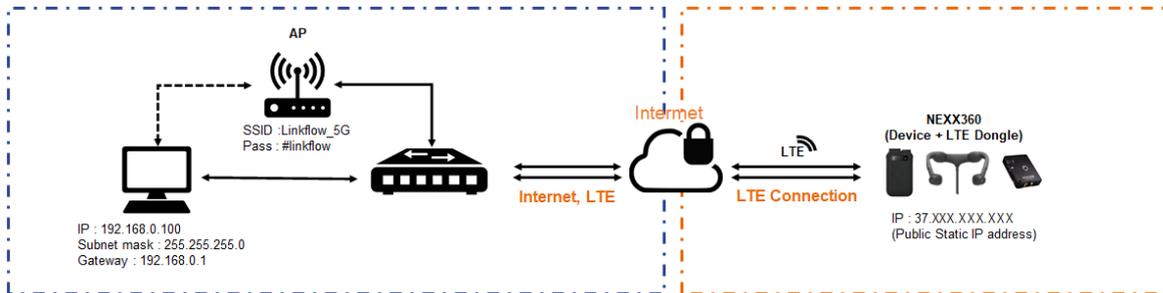


Figure 4-39 LTE Mode Diagram

 NOTE	<ul style="list-style-type: none"> • A static IP is recommended for the LTE mode. In this case, you need an LTE sim card issued by a public static IP service provider. • Compatible LTE dongles are as follows: • Insert an LTE sim card, purchased from a telecommunications company, into an LTE dongle and then insert the dongle into the system body. • You need to configure a DDNS if not using a static IP. This requires other DDNS services such as NO-IP, Freemyip.com and Duckdns. • Pixela PIX MT-100 For compatibility with other LTE dongles, contact your local store.
--	--

 CAUTION	<ul style="list-style-type: none"> • To connect or tether your LTE dongle, you need to set port forwarding and DMZ, which allows remote connection (live, setting).
---	--

■ NEXX Streaming Mode

If your NEXX360 and PC in the wireless LAN/LTE mode are on different networks (public, private), they can be connected without setting port forwarding and DMZ. Its configuration diagram is presented below.

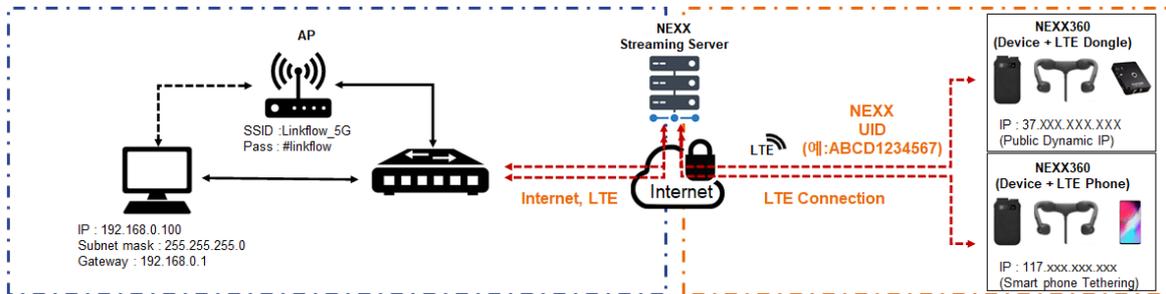


Figure 4-40 NEXX Streaming Mode Diagram

4.3.2 Setting Options

- IP addresses can be configured in the Network tab of NEXX Manager. You need to configure the (wired) cradle in the basic mode for transmitting video files to the backup server or the (wireless) NEXX360 device to watch live streams on your PC.
- For how to configure the settings, see "System Body Settings".
- Refer to the Network tab for more details on each option.
- The setting options required for each mode are described below.

Label	Setting Options	Basic Mode	Wireless LAN Mode	LTE Mode*
NEXX ONE Device (Wireless)	IP Type	–	✓	–
	IP Address	–	✓	–
	Gateway	–	✓	–
	Netmask	–	✓	–
Cradle (Wired)	IP Type	✓	✓	✓
	IP Address	✓	✓	✓
	Gateway	✓	✓	✓
	Netmask	✓	✓	✓
Wireless LAN Access Point	SSID	–	✓	–
	Password	–	✓	–

✓: Required -: Not required

4.4 Backup Server Settings

A backup server (FTP server) allows you to transmit and save the videos files from the memory card to the backup server.

4.4.1 Backup Server Network Settings



NOTE

- The AP LAN cable must be connected to the cradle.
- The backup server and cradle need to be on the same network.
- Different user environments may affect the actual operation. Please contact your seller for more information.

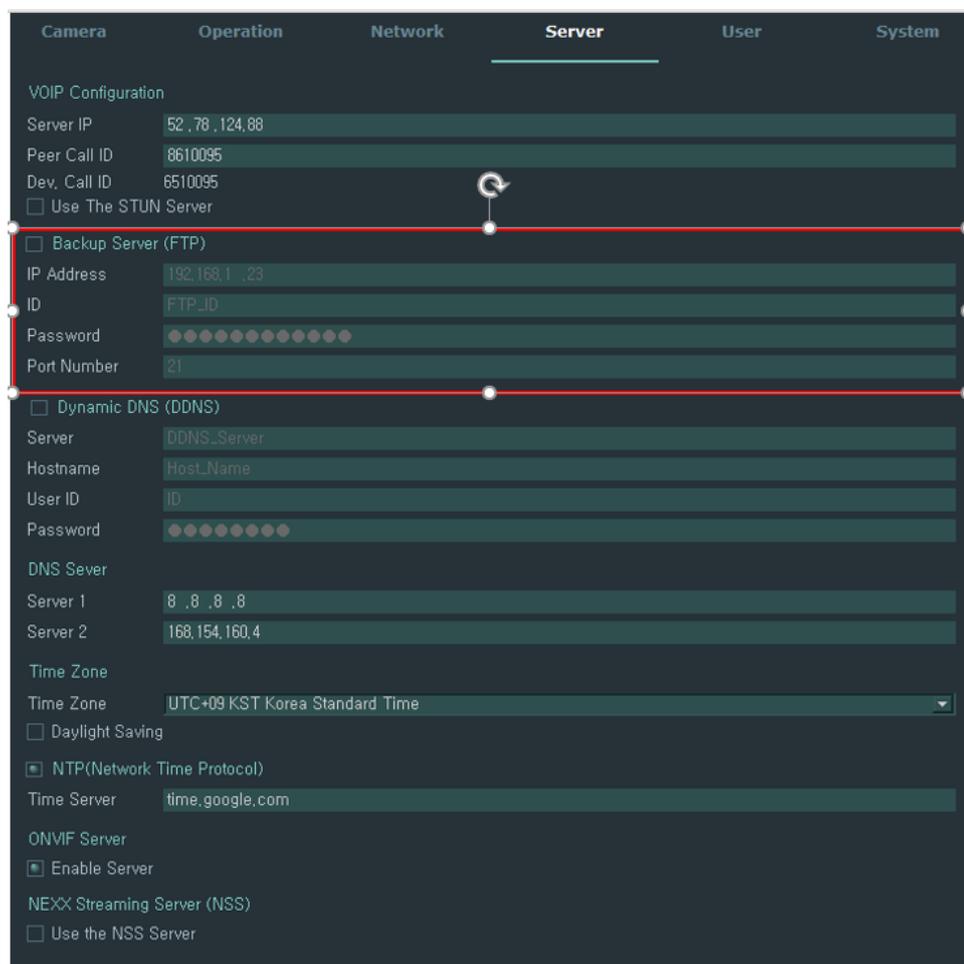


Figure 4-41 Backup Server (FTP) Options

Label	Option	Description	Default Value
Backup Server (FTP)	IP Address	Sets the IP address of the back server.	192.168.1.23
	ID	Sets an ID of the backup server.	FTP_ID
	Password	Sets a password for the ID.	FTP_PASSWORD

	Port Number	Assigns a port number for the backup server.	21 (recommended)
--	-------------	--	------------------

 CAUTION	<ul style="list-style-type: none"> The backup server and cradle need to be on the same network.
---	--

 NOTE	<ul style="list-style-type: none"> For how to set up the network, see "NEXX ONE Settings".
--	---

4.4.2 FTP Server Program Settings

To back up video recordings, you need to install an FTP server and client program before the network setup.

 NOTE	<ul style="list-style-type: none"> This product does not come with server software. Therefore, please use software to suit your purposes (ex. FileZila, etc.)
--	--

4.4.3 Video Backups to FTP

You can set up a backup server in the server settings.

- Connecting the system body which is powered on with the cradle and external battery will automatically transmits video recordings from the memory card to the backup server. Note that the cradle needs to be on the same wired network as the backup server.

Once the file transfer starts, the LAN LED on the cradle lights up in red with the green light flashing on and off (●).

When the transfer is complete, the LAN LED turns off automatically.

 NOTE	<ul style="list-style-type: none"> A backup server must be set up in order to auto-transfer the files. For how to set up a backup server, see "Backup Server Settings". For LED lighting during the transfer, see "Cradle LED Display". Once started, the data transmission cannot be stopped until it is completed. While transmitting data, do not: <ul style="list-style-type: none"> remove the system body from the cradle, turn off the power of the system body, disconnect the network cable, or remove the memory card from the system body. Removing the system body from the cradle during recording will stop the recording and start transmitting data. Recording will not be resumed after the data transmission is completed. However, if Auto-record is ON, removing the system body from the cradle will lead to a resumption of recording after data transmission. During the file transfer, the REC and power buttons do not work.
--	--

4.5 Installing Firmware

4.5.1 Checking the Current Version

1. Turn off the power of the device.

Remove the memory card from the NEXX ONE body.

Insert the memory card into the PC on which NEXX Manager is installed.

Run NEXX Manager.

Click the device settings (⚙️) tab in the tool tabs.

You can check the firmware version of NEXX ONE if the memory card is successfully read.

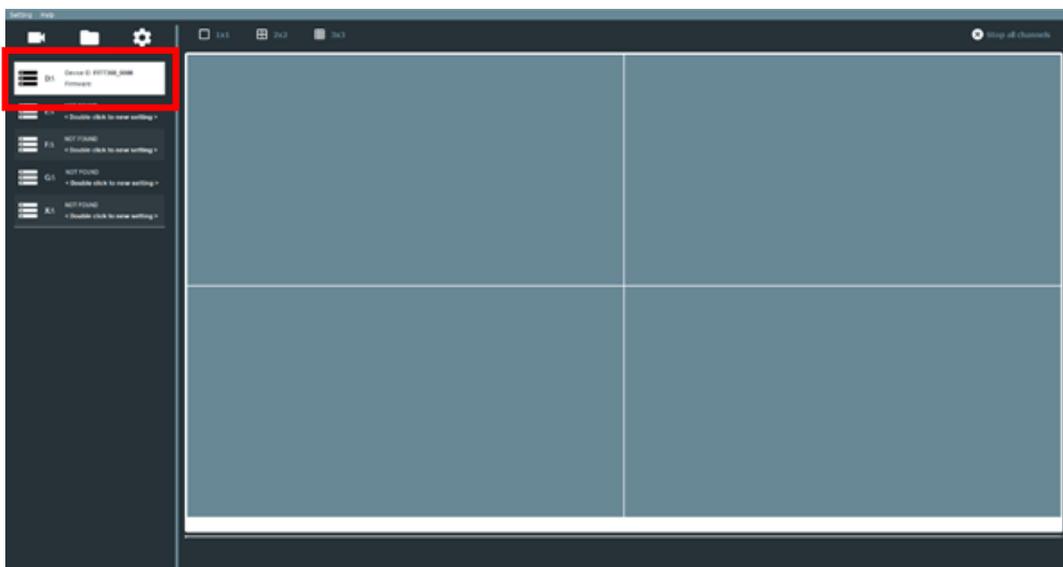


Figure 4-42 Checking Firmware Version

Or, you can check the version in Settings > System by double-clicking Device ID.

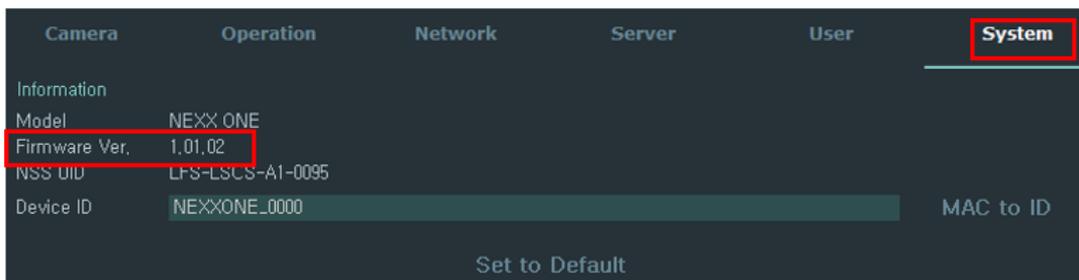


Figure 4-43 Checking Firmware Version

 NOTE	<ul style="list-style-type: none">• You can check the version of NEXX Manager in Help -> About.• The firmware version is also displayed in the System Settings on the web-based configuration page.
--	---

4.5.2 Updating Firmware

 NOTE	<ul style="list-style-type: none">• The firmware version may be changed for functional improvement. Contact your seller for firmware files.• Installation and updates take about 30 seconds to 1 minute.• The system supports local updates using a SD card and web-based remote updates.
---	---

 CAUTION	<ul style="list-style-type: none">• Do not operate or shut down the system during a firmware update. This may result in system failure.• Disable the backup server before updating the firmware.• Make sure there is enough battery life in the device for installation and updating. Low battery power may cause a system error.
---	---

■ Local Update

1. Turn off the system body.
2. Remove the memory card from the system body.
3. Insert the memory card into your PC.
4. Save new firmware files on the memory card.

File name: NEXXONE_0.09.10_full.dat

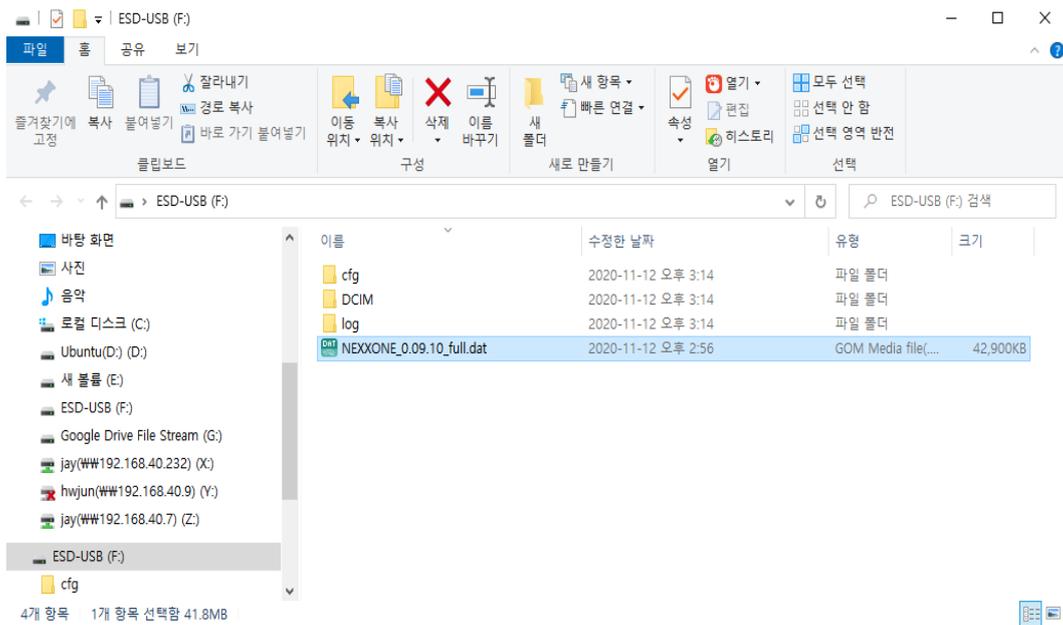


Figure 4-44 NEXX ONE Firmware File

5. Remove the memory card from your PC and insert back into the NEXX ONE body.
6. Press the power button to turn on the device. The update starts automatically.
7. Once the update starts, the device beeps three times and the LED display flashes.
Then, it will reboot automatically when the update is successfully completed.

■ Remote Update

Go to Web Page settings and find Settings > Maintenance > Firmware Update.

From this page, Firmware update can be completed remotely.

1. Maintenance -> Firmware Update -> and click [...] button

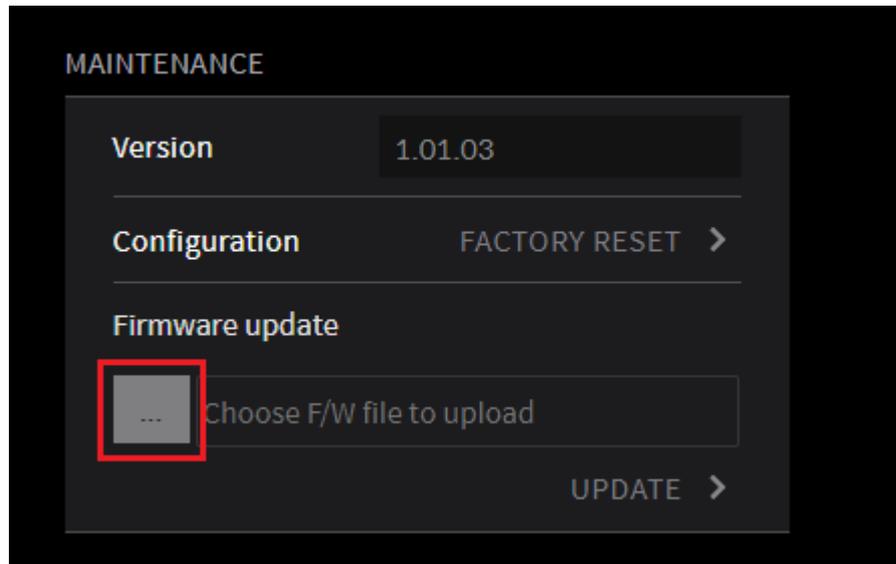


Figure 4-45 Click Firmware update from the website

2. Find and click the file of firmware update (For example, NEXXONE_1.01.03_full.dat)

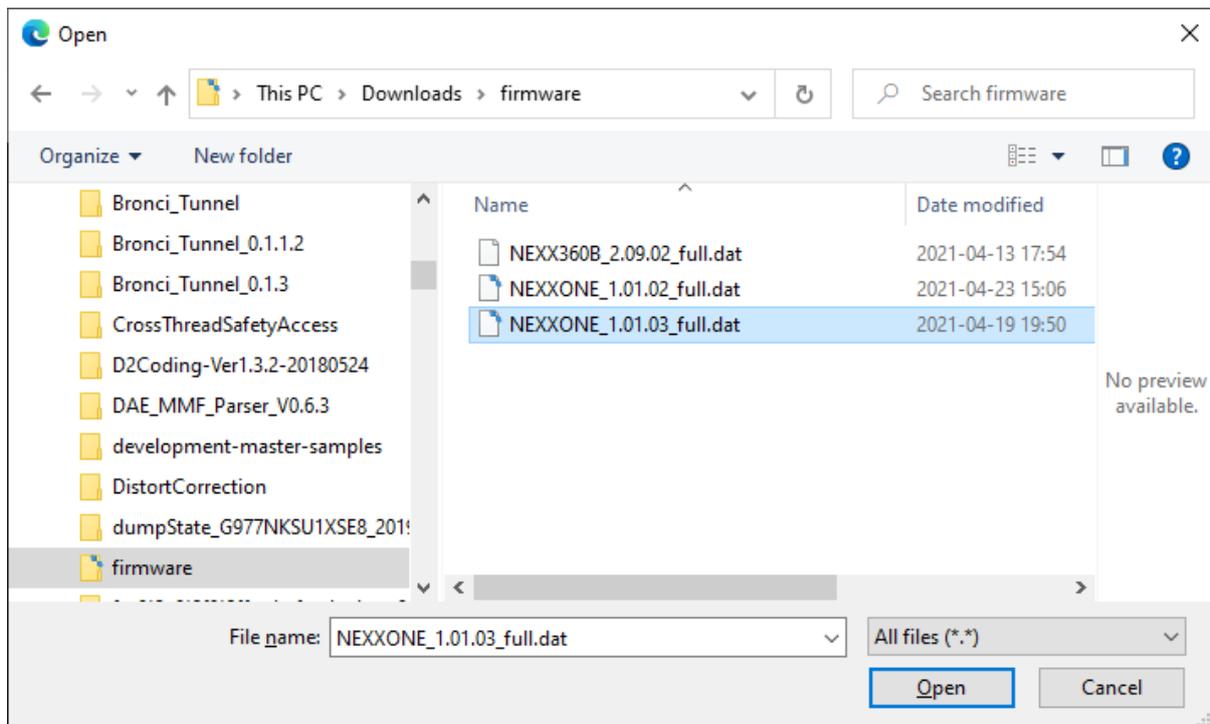


Figure 4-46 Selecting NEXX ONE Firmware File

3. Click Update > button and press OK button to start the update.



Figure 4-47 Firmware update message

4. It will show the process of firmware update. Depends on the network speed, the time of updating firmware will vary. Stay on this page until uploading is completed. Otherwise, the update will not be completed.

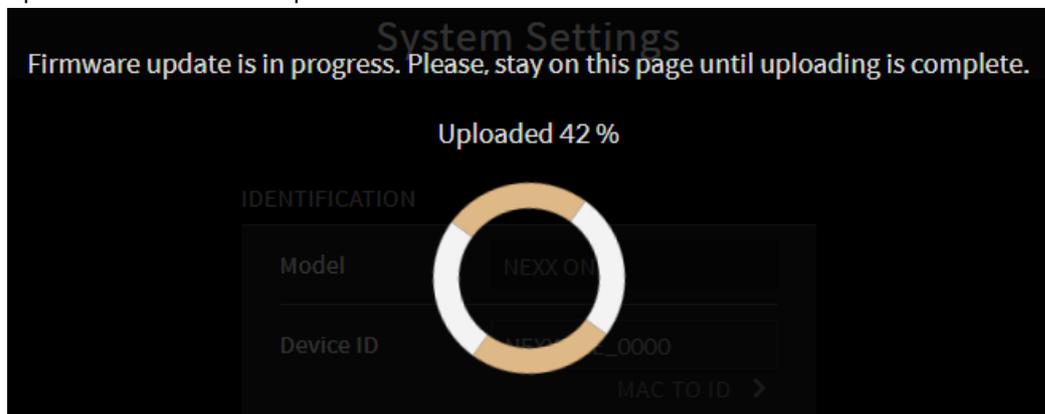


Figure 4-48 Process of Firmware update

Once the update is completed, it will show the pop-up message and the device will be rebooted

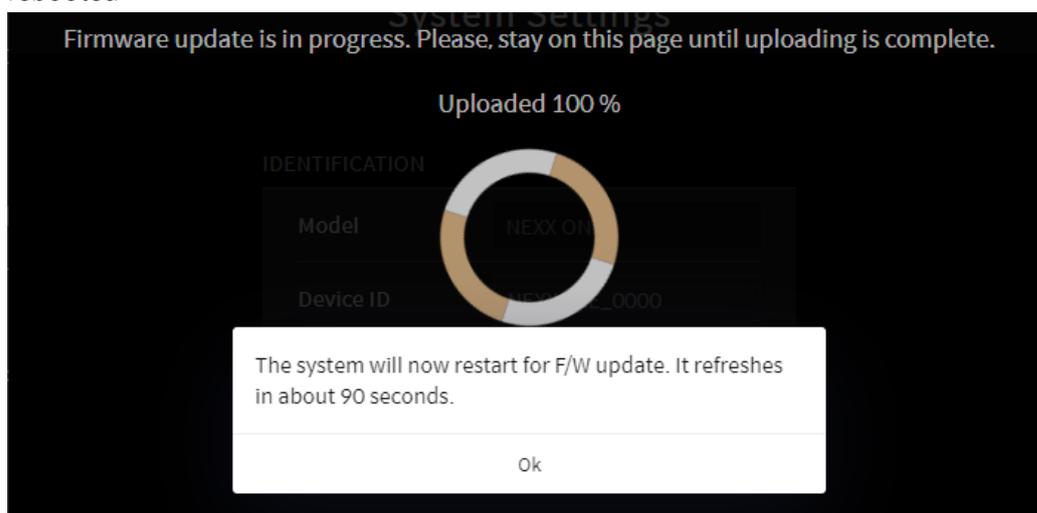


Figure 4-49 Process of Firmware update

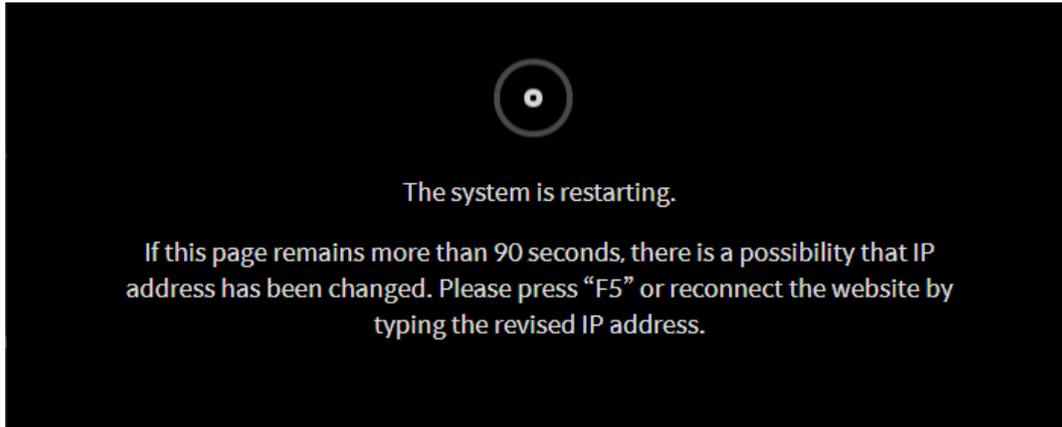


Figure 4-50 Completion of Firmware update

5. If the firmware has an error, it will display the following messages.

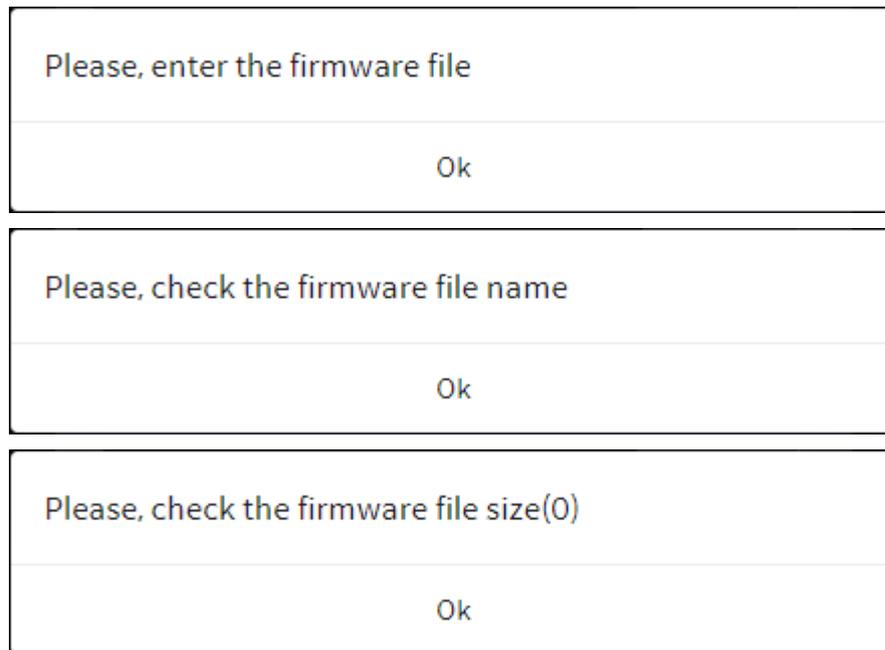


Figure 4-51 Error messages of Firmware Update

8. Turn off the system body, remove the memory card, and format it on the PC.

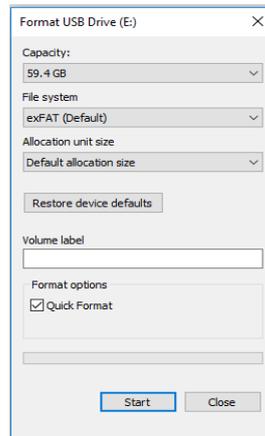


Figure 4-52 Formatting Memory Card

 CAUTION	<ul style="list-style-type: none">• Back up the data on the memory card before formatting as the data will be lost otherwise.• Set the file system to exFAT when formatting. (For 64GB memory cards)
---	---

5. Video Recording and Streaming

5.1 Wearing the Device

This section explains how to wear the device.

 CAUTION	<ul style="list-style-type: none">• Wear appropriate clothing to avoid skin contact with your neck camera, system body and external battery.• Make sure the system body or external battery is kept in the pouch when in use. Otherwise, it can pose a risk of low-temperature burns if exposed to heat or used by someone with poor blood circulation or sensory impairments.
---	---

1. Put the system body in the body pouch.

Wear the neck camera behind your neck and tie it up with a Velcro strap.

Place the body pouch on your belt or trousers.



Figure 5-1 Wearing the Device

5.2 Recording



Figure 5-2 Recording

1. Wear the device.

Press the power button to turn on the device.

Turning on the power will automatically start recording.

- Once recording starts, the REC (REC) lamp on the LED display of the body system will flash in red.
- Press the power button to stop recording. Once recording stops, it will beep twice and the REC (REC) lamp turns off.

 NOTE	<ul style="list-style-type: none">• The recorded footage is saved in the DCIM folder on the memory card.• For how to configure the recording setting, see "NEXX Manager > Tool Tabs > Recording Settings".
--	---

 CAUTION	<ul style="list-style-type: none">• If the "Operation Tab" setting is enabled, old video recordings will be overwritten by new ones when the memory card is full.
---	---

5.3 Streaming

5.3.1 Adding a Profile

With a wireless model, you can watch live streams by connecting your PC with the system body wirelessly.

1. To watch live streams on your PC, connect your PC with NEXX Manager installed to the (wired/wireless) AP set on the network.

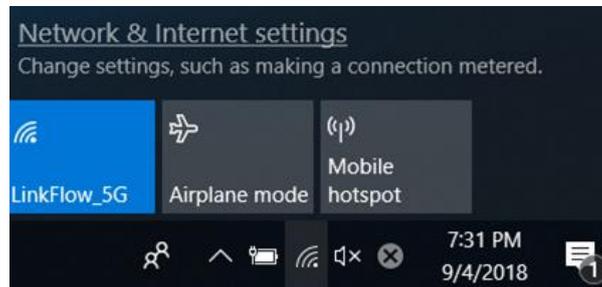


Figure 5-3 PC Network Settings

 NOTE	<ul style="list-style-type: none"> • You can see the AP settings on the network in [NETWORK SETTING] - [Wireless LAN ACCESS POINT]. • Up to three PCs can simultaneously access a single NEXX ONE to watch live streams.
---	--

Run NEXX Manager on your PC.

Go to Streaming Video tab (📺) - Add Profile (+).

In the Add Profile window, enter the name and IP address of the device to add.

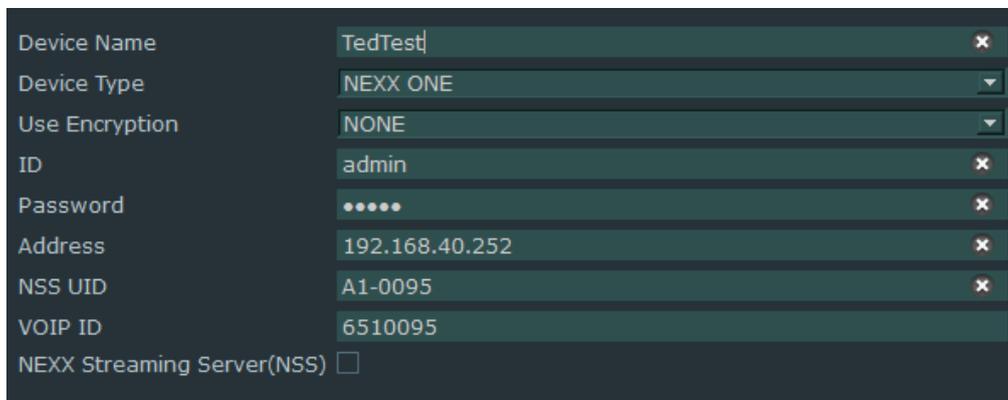


Figure 5-4 Adding Profile

Label	Description
Device Name	A name for the video streaming device (used to identify the profile).
Device Type	Select to the NEXX ONE.
Use Encryption	The option to encrypt the account ID and password
ID	An ID for your Live Stream Account
Password	A password for your Live Stream Account
Address	IP address assigned to the device*2
NSS UID	UID number of the device in order to access to P2P server

VOIP ID	VOIP call number of the device. VOIP call number is allocated based on UID number.
NEXX Streaming Server(NSS)	The device's UID is used to determine whether to use a P2P connection. Use NSS in a case when the network environment has a firewall.

Click OK. A profile of the device is created.

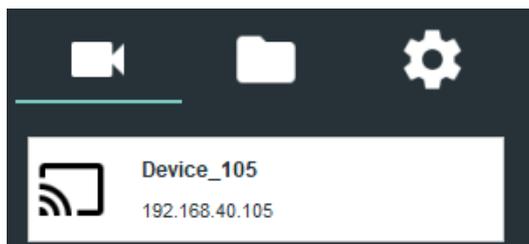


Figure 5-5 Adding Profile

5.3.2 Watching Live Streams

Double-click a profile in the Streaming Video (📺) tab or drag in the video input screen to view the selected video.

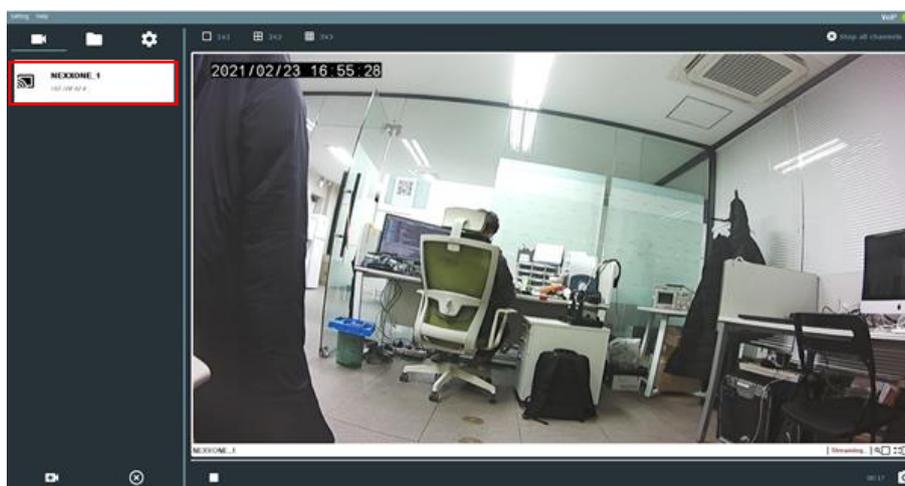


Figure 5-6 Adding Profile

<p> NOTE</p>	<ul style="list-style-type: none"> • There is no sound on live streams. • Check if the time at the top left of the video screen is correct. The time may not be correct without an external Internet connection. • The network bandwidth and user environment may cause noise and buffering issues. In this case, a lower resolution, bitrate and/or frame rate may help resolve them. • Right-click the video screen to configure the following settings:
--	--

	<ul style="list-style-type: none">- VideoInfo (about resolution, frame rate and bitrate)- Reset Screen (restored to its original size from the enlarged/reduced size)- Zoom (Fit To Screen < or 100% size> 50% · 100% · 150% · 200% enlarged/reduced)- Stop Video• When using the Zoom options in the right-click menu, you can change the display position by clicking the image of each camera and pressing the keyboard arrow keys (→ · ↓ · ← · ↑).
--	--

5.3.3 Recording Live Streams

Right-click on the video screen and select Start Recording to record live streams. You can set the save location in the "Capture Settings". Right-click on the video screen again to Stop Recording.

6. Playing Recorded Footage

6.1 Playing Recorded Footage

1. Turn off the device and remove the memory card.

Insert the memory card into the PC on which NEXX Manager is installed.

Run NEXX Manager.

Go to Tool tabs - Recordings (📹) tab.



Figure 6-1 Playing Recorded Footage

Click Add Folder (☰+).



Figure 6-2 Playing Recorded Footage

Select the DCIM folder on the memory card and click Select Folder.

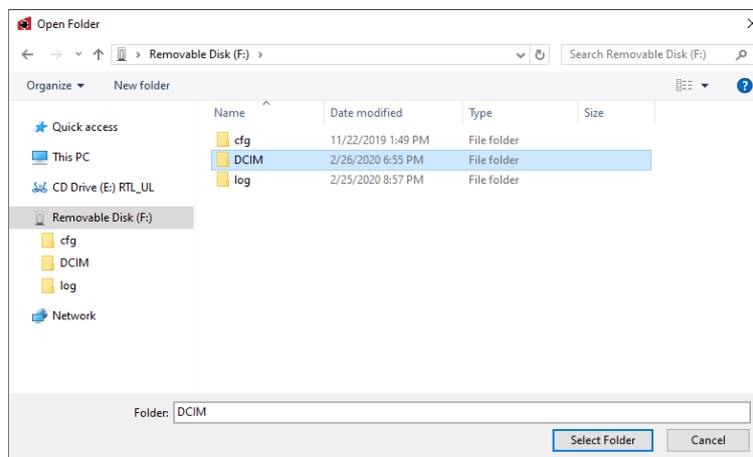


Figure 6-3 Selecting Video Folder

The recorded footage saved in the added folder is listed.

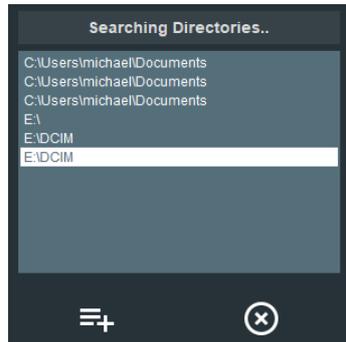


Figure 6-4 Selecting Video Folder



NOTE

- When there are just too many recordings, the easier way to find a video is to use the recording date/keyword filters.
- For more details on filtering, see "Recordings Tab".

In the listing, double-click or drag the video onto the screen to play it.

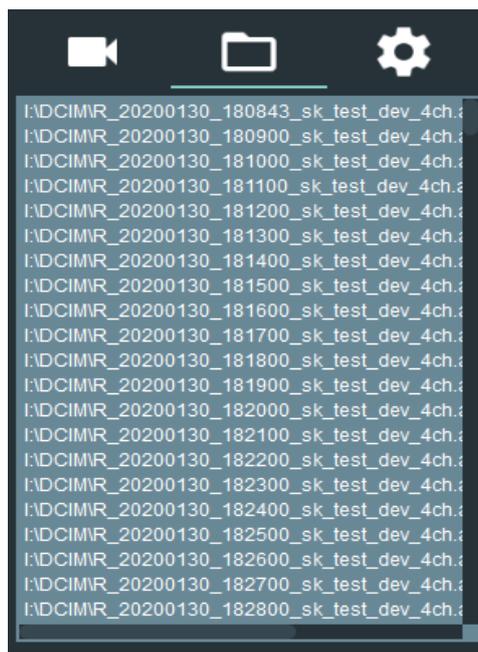


Figure 6-5 Selecting Video Folder



NOTE

- Recorded video files are named as R_YYYYMMDD_HHMMSS_Device ID_4ch.
 - e.g., The file name of a video recording taken at 18:20 on Jan 30, 2020 by Test_Device is:
R_20200130_1820000_TEST_Device_4ch

6.2 Playing Recorded Live Streams

You can set the save path for recording and playing live streams.

The save path is set in "Capture Settings".

6.3 Playback Controls

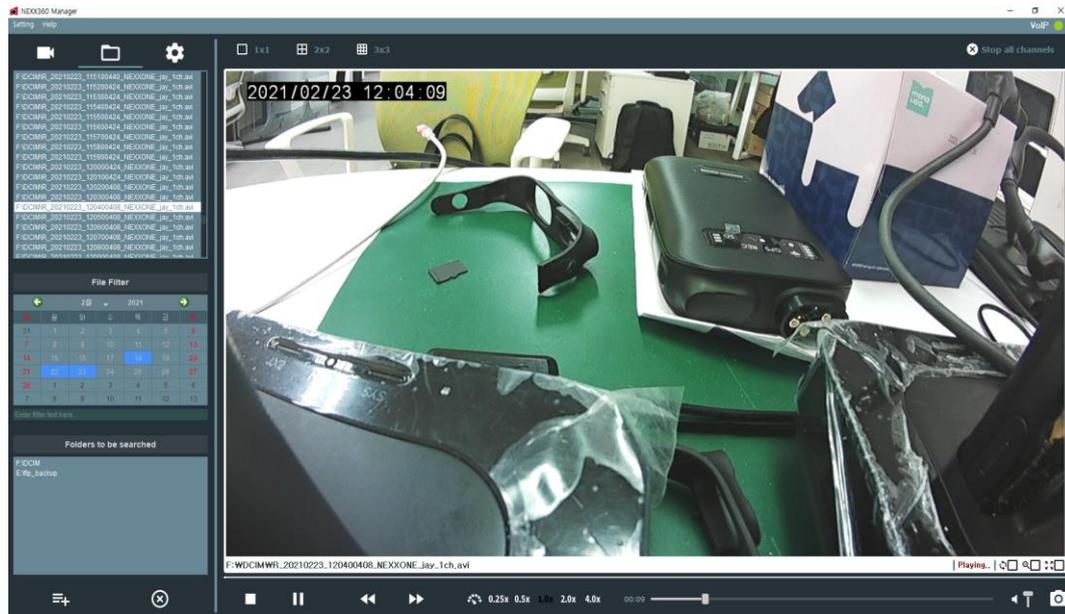


Figure 6-6 Video Playback Screen

Label	Name	Description
	Play/Pause	Starts or pauses playback.
	Stop	Stops playback.
	Forward	Moves forward through a recording.
	Backward	Rewinds through a recording.
	Playback Speed	Changes playback speed. <ul style="list-style-type: none"> -2: Plays the video at 1/4 speed. -1: Plays the video at 1/2 speed. 0: Plays the video at normal speed. +1: Plays the video at 2x speed. +2: Plays the video at 4x speed.
	Slider Control for Position	Allows you to keep track of the current location and navigate to different parts.

Label	Name	Description
	Volume Slider	Controls the volume of the video.
	Screenshot	Captures an image of the video from its current frame.

 NOTE	<ul style="list-style-type: none"> • By default, captured images are saved in the "Documents" folder. The save path can be changed in "Capture Settings". • Right-click the video screen to configure the following settings: <ul style="list-style-type: none"> - Reset Screen: Restores the screen to its original size from the enlarged/reduced size. - Screen: Chooses which video to display (All · Front-Left · Front-Right · Rear-Left · Rear-Right) - Zoom: Enlarges/reduces the screen < or 100% size> to 50% · 100% · 150% · 200%. - Stop Video: Stops playback. - Video Info: Displays the resolution, frame rate and bitrate of the video being played. • When using the Zoom options in the right-click menu, you can change the display position by clicking the image of each camera and pressing the keyboard arrow keys (→ · ↓ · ← · ↑). • For more information about filtering, see "Recordings Tab". • Set the playback speed at 1.0x when rewinding or forwarding playback while paused. The video will not be played properly at playback speeds other than 1.0x.
---	--

6.4 Video Screen

This is where you can watch recorded footage or live streams.

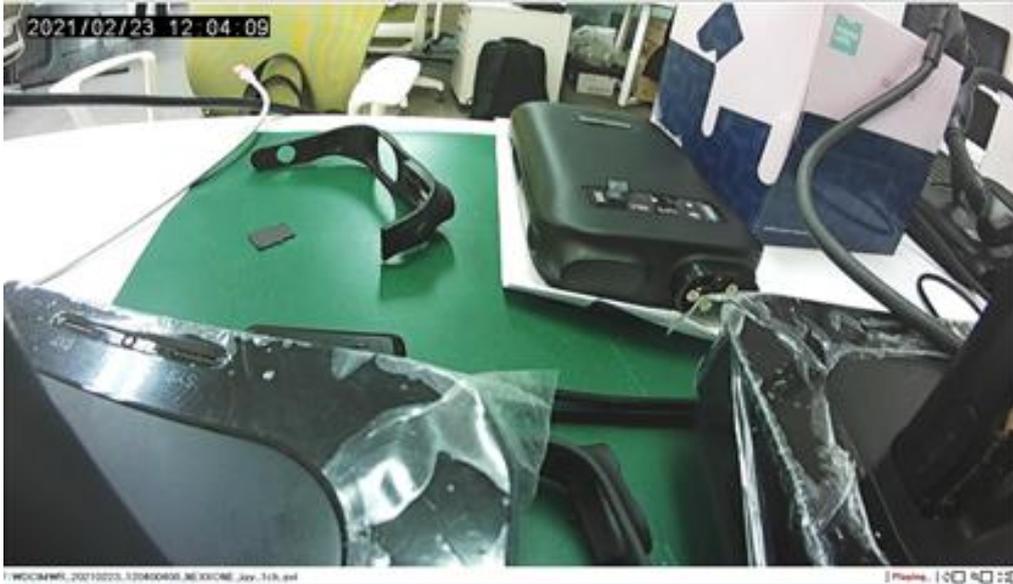


Figure 6-7 Video Input Screen

6.4.1 Screen View



Figure 6-8 Screen View

Label	Name	Description
 1x1	Default	Displays a single footage transmitted from 1 neck camera.
 2x2	2x2 Grid	Displays 4 footages simultaneously transmitted from 4 neck cameras.
 3x3	3x3 Grid	Displays footages transmitted from 9 neck cameras simultaneously.

 NOTE	<ul style="list-style-type: none"> The 3x3 screen is available for live streaming only.
---	--

6.4.2 Screen View Controls



Figure 6-9 Screen View Controls for Live Streaming

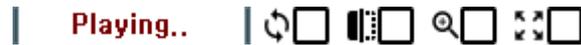


Figure 6-10 Screen View Controls for Video Playback

Label	Name	Description
	Screen Mirroring for Rear Cameras	Flips the screens of the rear cameras (No. 2 and No. 3).
	Wide View	Blends the left and right video inputs to create panoramic images.
	Zoom In/Out	Zoom In/Out the video input.
	Full screen	Switches the current video input to full screen. Press the ESC key to exit full screen mode.
	Working	Indicates it is working properly.
	Not working	Zooming in/out shows [-], and it is not convertible.

 NOTE	<ul style="list-style-type: none"> • After playing multiple recordings, it takes time to return to the start of the video loop, in which case some videos may not be played. • Full screen mode disables the controls below. <ul style="list-style-type: none"> - Pause - Forward/Backward - Playback Speed - Slider Control for Position - Volume Slider <p>The arrow keys (→ · ↓ · ← · ↑) on the keyboard will not work on the video.</p>
--	---

7. VoIP Communication

7.1 VoIP Exchange Server (PBX) Registration

In VoIP communication, a VoIP Exchange (PBX) plays the role of a transmitter between the two devices. For the devices to communicate using VoIP, a call ID for each device must be registered to the VoIP Exchange.

7.2 PC View Registration

In the top left corner of the viewer, click [Setting] -> [Call].

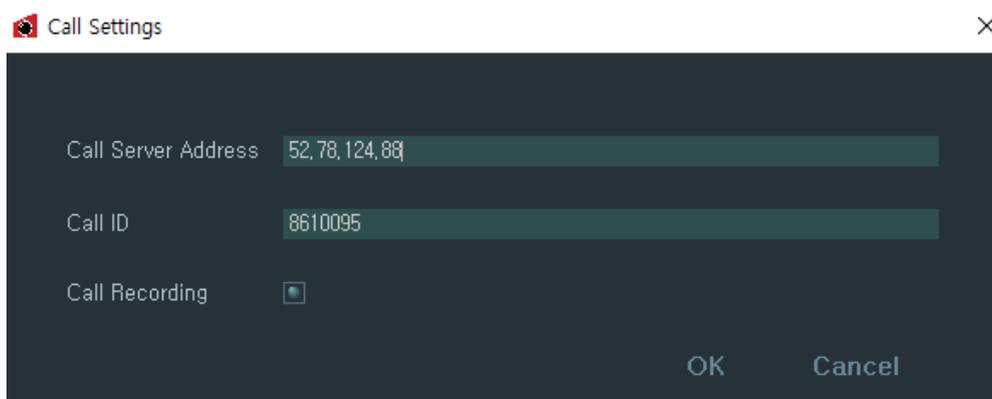


Figure 7-1 VoIP Data Entry Dialog

Item	Description
Call Server Address	IP Address for the VoIP Exchange
Caller ID	Viewer ID for calls
Call Recording	Function to record VOIP calls (Default OFF) Refer to [7.3.6 Call History] to playback calls.

 NOTE	<ul style="list-style-type: none">The user is not allowed to change the caller ID as it is issued by the VoIP Exchange (PBX) administrator.
--	---

You will get a warning message if you try to call the device without registering its caller ID to the PBX.

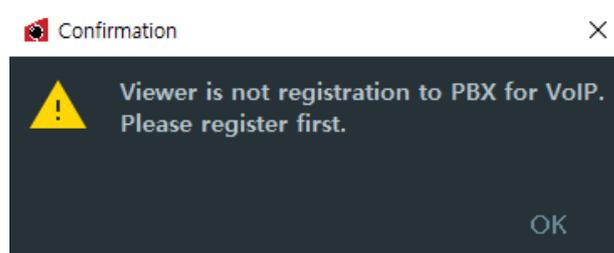


Figure 7-2 PBX Registration Warning Message

7.2.1 NEXX ONE Device Registration

The VoIP details can be registered on the web-based device configuration page. For more details, see "Using VoIP on NEXX ONE Device".

7.3 Using VoIP on PC Viewer

7.3.1 Registering NEXX ONE to Viewer

VoIP calls can only be made from the NEXX ONE device. To register your device to the Viewer, opt for NEXXONE as **[Device Type]** and enter your device's VoIP ID in the **[NSS UID]** field as shown in Fig. 7-3.

Device Name	TedTest	✕
Device Type	NEXX ONE	▾
Use Encryption	NONE	▾
ID	admin	✕
Password	•••••	✕
Address	192.168.40.252	✕
NSS UID	A1-0095	✕
VOIP ID	6510095	
NEXX Streaming Server(NSS)	<input type="checkbox"/>	

Figure 7-3 Registering a NEXX ONE Device

NSS UID is composed of Ax-xxxx format, and VOIP calling number is automatically registered when UID is correctly entered.

Once your device is registered, you will see a list of devices, each with a call button, on the left-hand side of the Viewer.



Figure 7-4 Registering a NEXX ONE Device

7.3.2 Outbound VoIP Calls

■ Making a Call from the Device List

You can make outbound VoIP calls from the device list on the left-hand side of the Viewer. Click the green call icon () of your NEXX ONE. Then, the device list will change as shown on the left in Fig. 7-5 and an outgoing call screen will appear as shown on the right in Fig. 7-5.

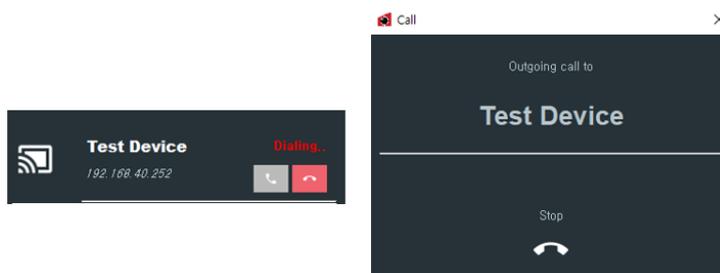


Figure 7-5 Making Outbound VoIP Call from the Device List

 NOTE	<ul style="list-style-type: none"> • Outbound calls from the device list are available without video streaming.
--	--

■ Making a Call during Streaming

During RTSP streaming, you can make calls on the VoIP call controller at the top right of the screen.

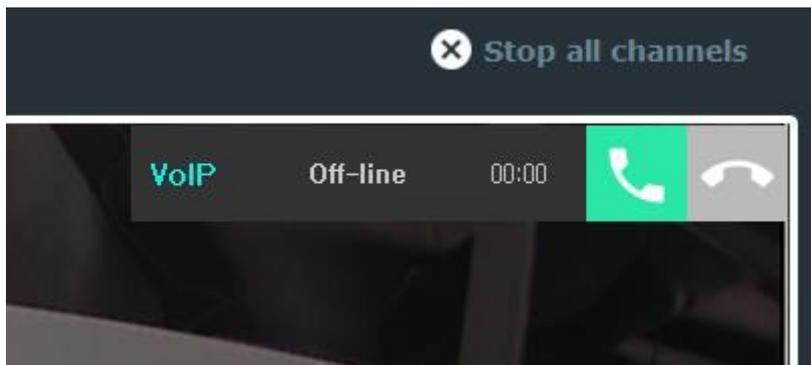


Figure 7-6 VoIP Call Controller on Streaming Screen

7.3.3 Inbound VoIP Calls

When an inbound VoIP call arrives, you will see “Incoming...” with the device which has made the call as shown on the left of Fig. 7-7 and the incoming call screen as shown on the right of Fig. 7-7.

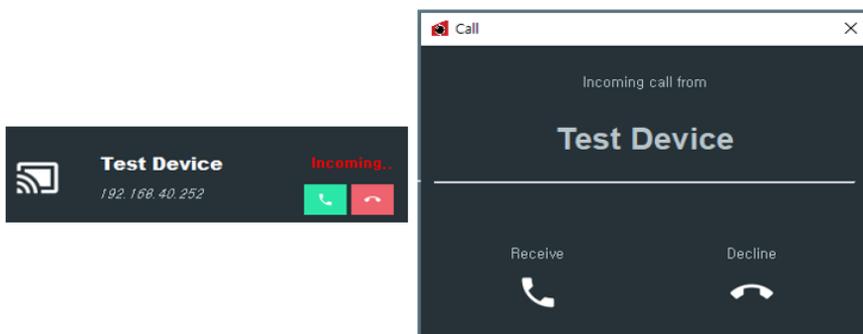


Figure 7-7 Receiving VoIP Call

Options available on the call window are as follows:

Item	Description
Receive	Accepts the incoming call. If streaming is not in progress, RTSP streaming will start automatically.
Decline	Rejects the incoming call.

If a call arrives during RTSP streaming, a receiver icon appears on the video screen.



Figure 7-8 Incoming Call during RTSP Streaming

 NOTE	<ul style="list-style-type: none"> • Inbound calls from devices unregistered to the Viewer are ignored.
--	--

7.3.4 Missed Call Notifications

Any missed call from devices will appear in the device list on the left side of the Viewer as shown in Fig. 7-9.



Figure 7-9 Missed Call

7.3.5 Call Waiting

Call waiting lets you receive incoming calls from other devices when you're already on a call. Accepting an incoming call from another device puts the first call on hold, and you will see a call-on-hold box on the screen as shown in Fig. 7-10.

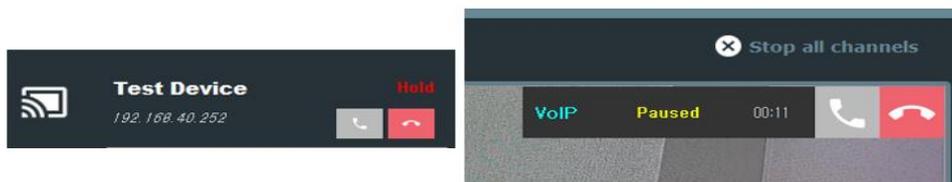


Figure 7-10 Call-on-Hold Screen

7.3.6 Call History

Right-click on the device in the list you wish to view the call logs of, and click [VOIP Call Log].

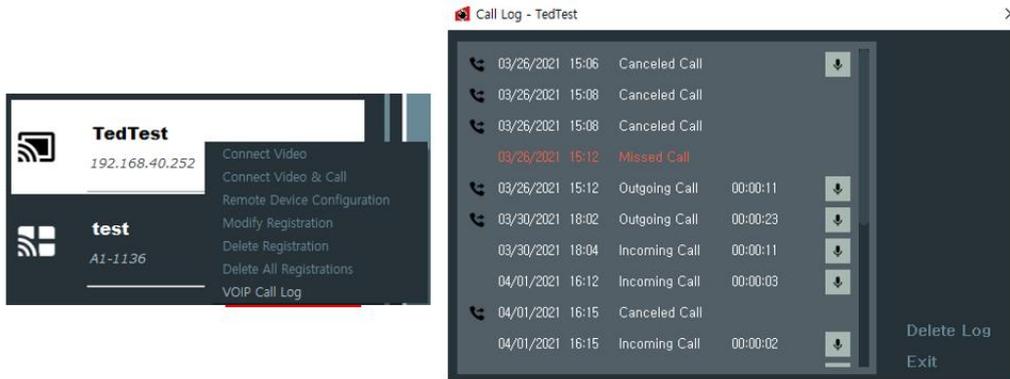


Figure 7-11 Call History

It shows the records of incoming, outgoing, and missed calls of the device. Also, click the microphone icon on the right to playback recorded calls.

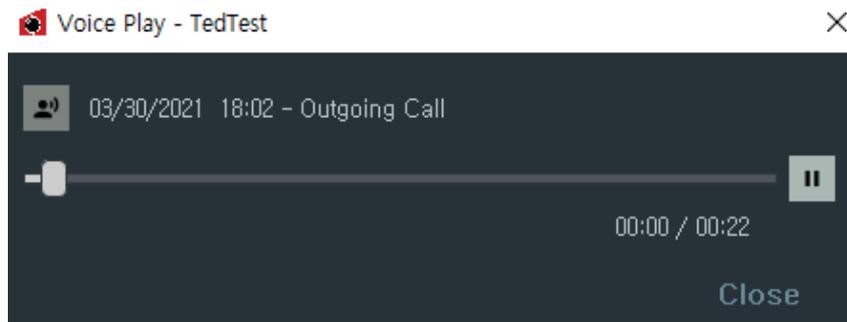


그림 7-122 Play recorded voice file

7.4 Using VoIP on NEXX ONE Device

7.4.1 Web-based Configuration for VoIP

Go to Server Settings on the main configuration page in a web browser. Enter the details in the VOIP CONFIGURATION at the top of the Server Settings page. Restart the device to apply the changes.

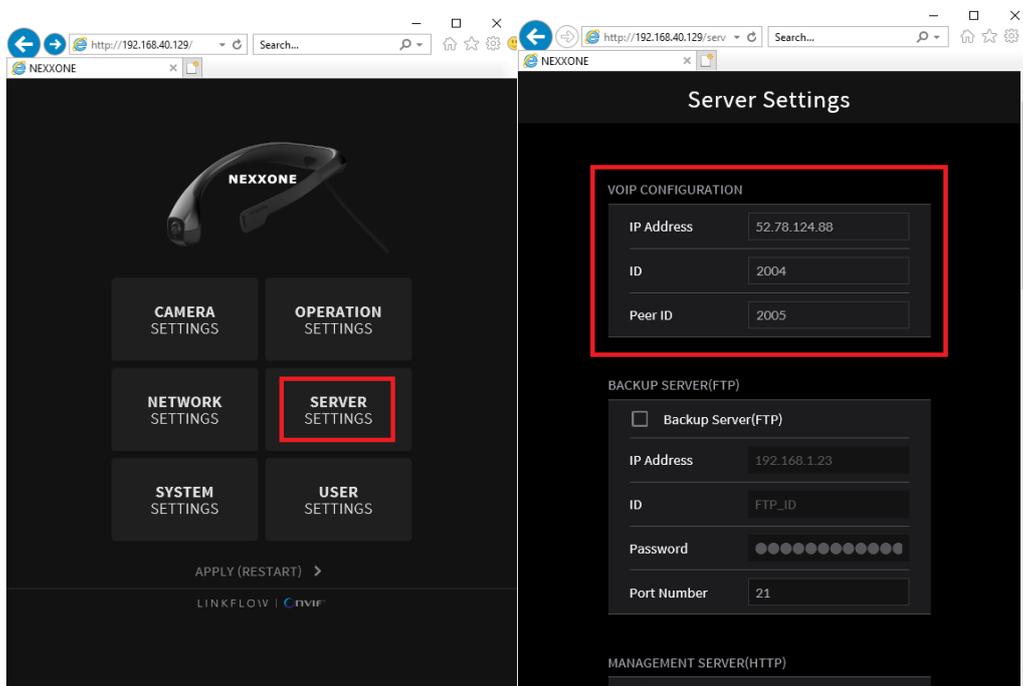


Figure 7-13 Web-based Configuration for VoIP

VoIP Settings	Description
IP Address	IP Address for the VoIP Exchange
ID	Device caller ID for VoIP
Peer ID	(PC Viewer) Caller ID

7.4.2 Microphone and Earphones

■ Connecting Earphones

Open the rubber cap on the neck camera and plug in your earphones.



Figure 7-14 Neck Camera Earphones

■ Microphone

The microphone is circled in red in the figure of the neck camera below.



Figure 7-15 Neck Camera Microphone

7.4.3 Making a Call



Figure 7-16 Making a Call

- Connect to a wireless LAN or LTE (dongle/tethering) to set up an external network connection.
- Press the VoIP button to make a call. You will hear the calling sound through your earphones.

7.4.4 Answering a Call



Figure 7-17 Answering a Call

- An incoming call beeps at one-second intervals, which you can hear through your earphones.
- Press the button to accept the call.

 CAUTION	<ul style="list-style-type: none">• You cannot make VoIP calls if only the (wired) cradle is connected.
---	---

7.4.5 Earphone Volume Controls

- Press and hold the call button to change the volume. In standby mode, you will hear an alarm sound through your earphones.
- The volume changes from/to high -> low -> medium.

You cannot make VoIP calls if only the (wired) cradle is connected.

8. Appendix

8.1 Troubleshooting

8.1.1 Checking Your Computer's IP Address

1. Click the search icon (🔍) on the taskbar.

Or press the Windows logo key + R.

Type cmd and press Enter.

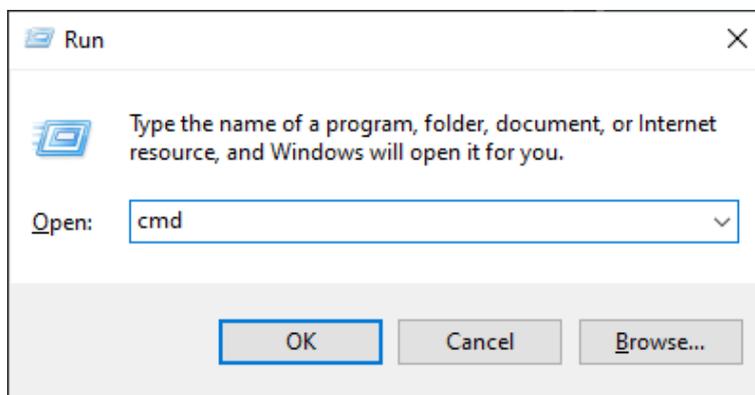


Figure 8-1 Checking the IP Address of Your PC

On the Command Prompt, type ipconfig and press Enter.

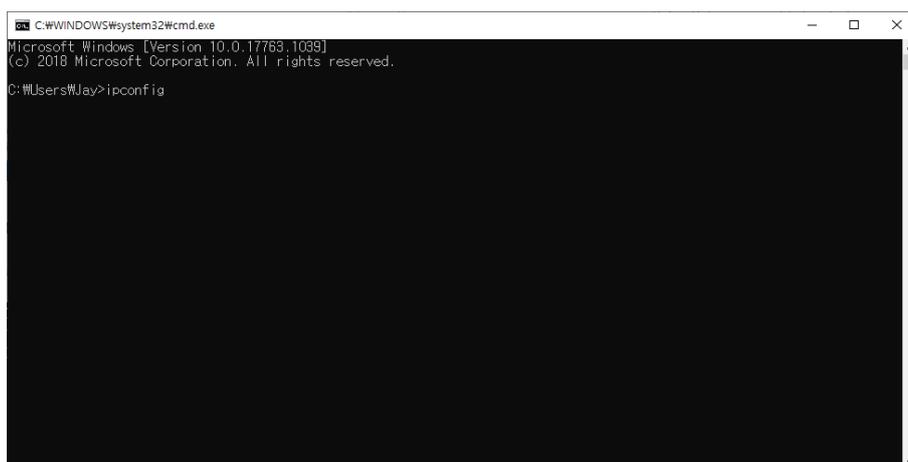


Figure 8-2 Checking the IP Address of Your PC

In the given network information, check the Ethernet adapters (in use).

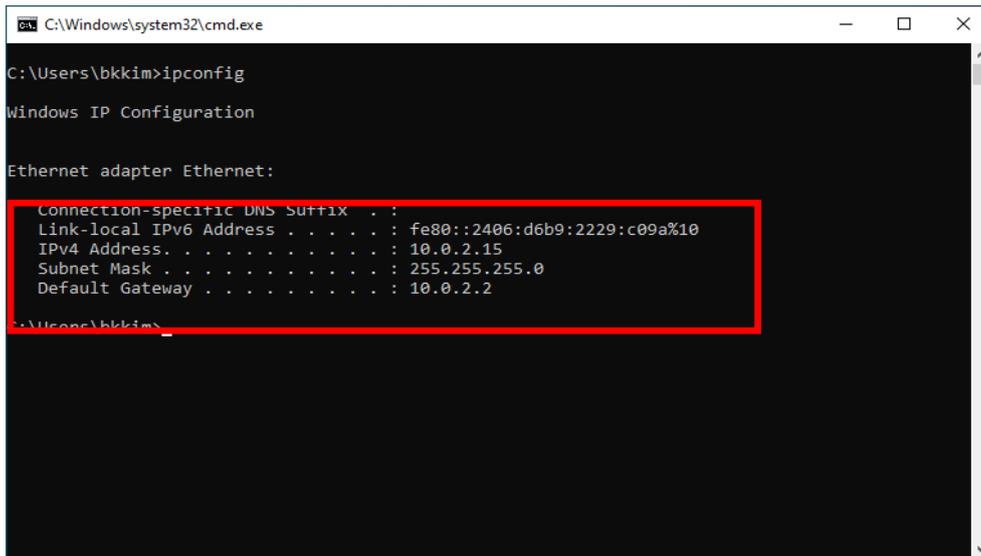


Figure 8-3 Checking the IP Address of Your PC

8.1.2 Setting an IP Address on Your Computer

1. Click the Windows icon (Windows logo) on the taskbar.
Click the Settings icon (gear icon).
In the Windows Settings, click Networks & Internet.

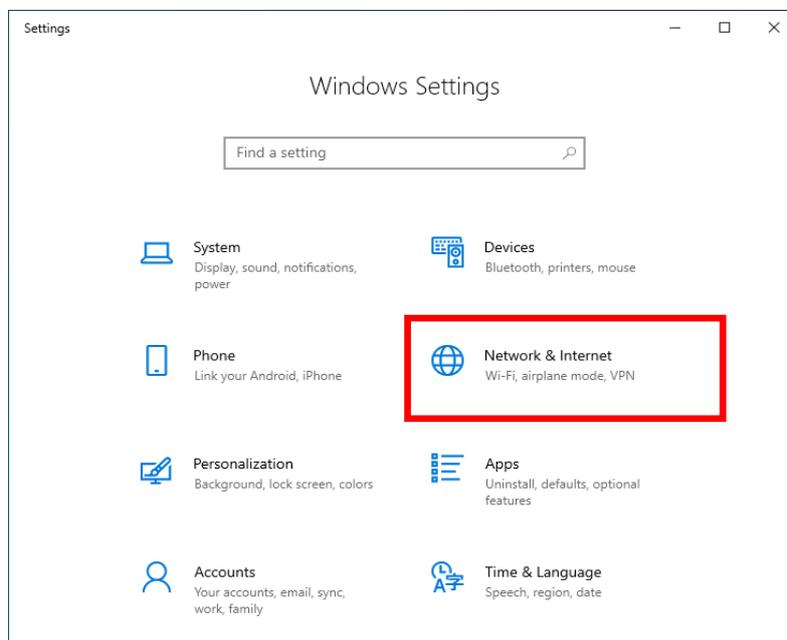


Figure 8-4 Windows Settings

Select the network currently in use (Ethernet or wireless LAN).

Click 1 and then 2 as shown in the figure below.

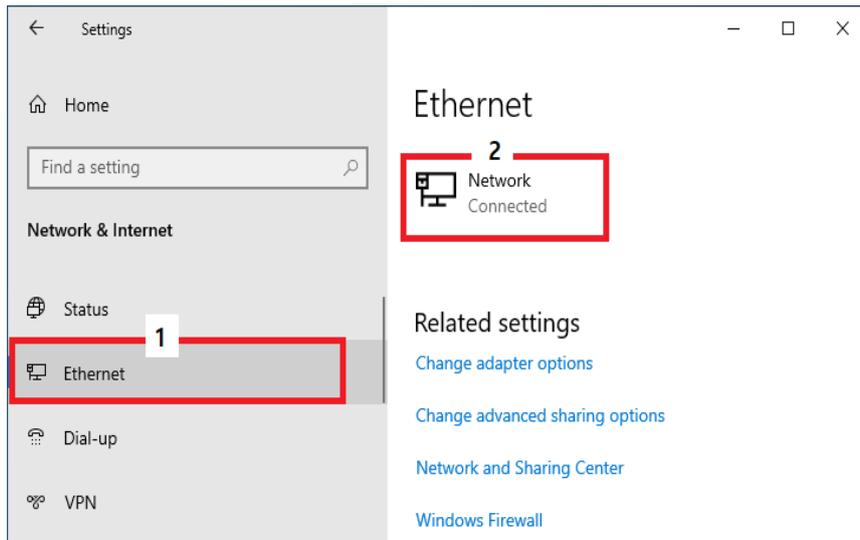


Figure 8-5 Network

Scroll down the details of the selected Ethernet until you find the saved IP settings. Click Edit.

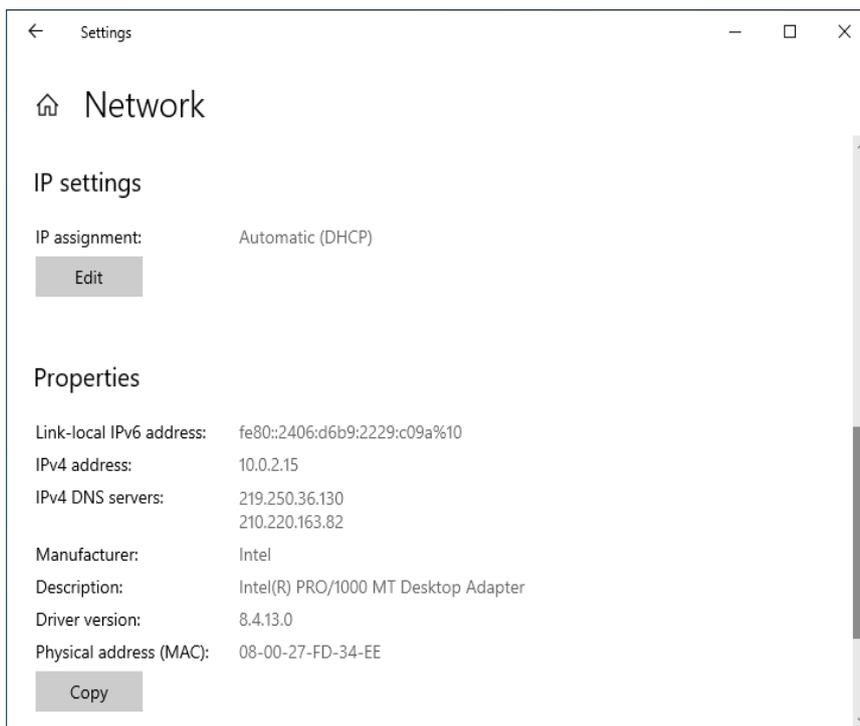


Figure 8-6 Network Information

Enter a new IP address and save the change.

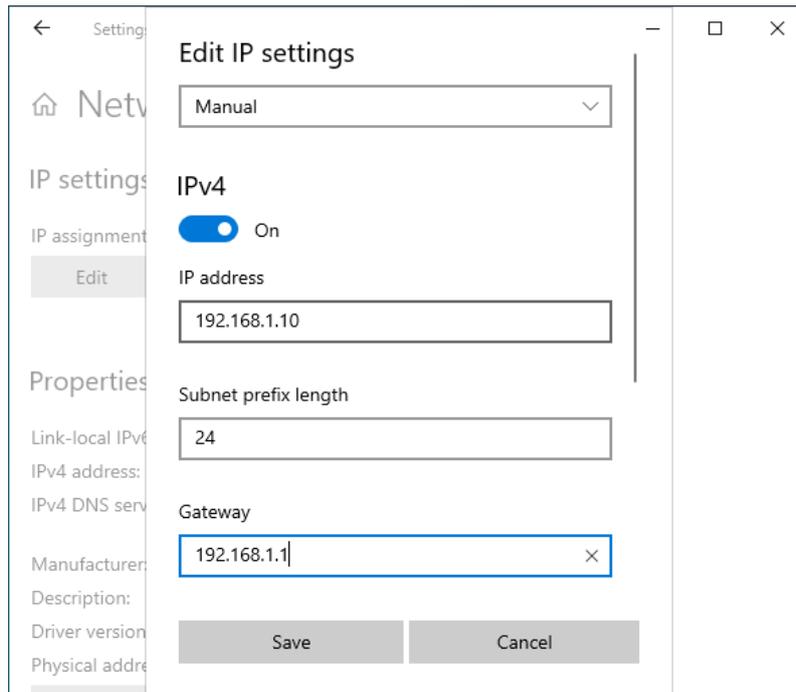


Figure 8-7 Changing Network Information

8.1.3 What If the Time Stamp on Video is Incorrect?

Mount the system body on the cradle and external battery while the external Internet (via a LAN cable) is connected. The time will be automatically set to the time zone of the system body.

The Time Zone can be set in the "Server Tab".



Figure 8-8 Time Settings

8.2 Product Specifications

8.2.1 Product Specifications

Label	Item	Specifications
Neck Camera	Dimensions	170mm(W) x 208.6mm(H) x 99.5mm(D)
	Weight	300g

Label	Item	Specifications		
Cradle	Dimensions	133.7mm (W) x 175.7mm (H) x 63.1mm (D)		
	Weight	375g		
	Power Supply	DC 19V/3.42A (65W)		
System Body	Dimensions	81.5mm (W) x 142.8mm (H) x 26.5mm (D)		
	Weight	330g		
	External Storage	Type: Memory Card (Class 10 or higher)		
		Capacity: Up to 64GB		
	Power	Battery Life	Built-in Battery: About 3 and a half hours	
			External Battery: About 10 hours	
	Charging Time	Built-in Battery: About 3 hours		
External Battery: About 3 hours				
Operating Temperature	-20° - 60°			
External Battery	Dimensions	87.4mm (W) x 149.9mm (H) x 56.6mm (D)		
	Weight	379g		
Camera	Image Sensor	1/2.9" Sony Exmor CMOS		
	Pixels	1 million pixels		
	Focal Length	3.0mm		
	Lens Type	Fixed-focus Lens		
	Max. aperture value	F2.0		
	Angle of View	133° Diagonal		
	Min. Illumination	1.0 Lux, F2.0		
Video	Compression Codec	H.264		
	Memory Card Video Format	AVI		
	Bandwidth	512Kbps - 8Mbps		
	Frame Rate	Live Streams	Up to 30fps @ 1280 x 720	
		Videos Saved on Memory Card	Up to 30fps @ 1280 x 720 LensX1	
	Resolution	Live Streams	720 x 480, 1280 x 720	
		Videos Saved on Memory Card	1280 x 720 Lens x 1	
Audio	Compression	G.711		
	Sampling	8KHz		
	Bandwidth	64Kbps		
External	Peripherals	External Battery, Wireless LAN Dongle, LTE Dongle and Cradle		

Label	Item	Specifications	
Interface	USB	USB 2.0 Type A	
	Microphone	Built-in Microphone	
	Speaker	Beep Speaker	
	Wireless	IEEE802.11 b/g/n Available (with a wireless version)	
	LTE	Available (with a wireless version)	
	5G	Available (with a wireless version)	
Authentication	Certificates	Flammability Rating	Main Parts of Neck Camera, System Body (V0) and Neck Camera Rubber (HB)
		IP Rating	Neck Camera = IP67 System Body = IPx5 (General)
		System Body	CE, FCC, KC, VCCI
		External Battery	CB, PSE, KC, UN38.3
		Cradle	CE, CEC, DOE, FCC, KC, VCCI
		Wireless Dongle	CE, FCC, KC, TELEC

8.2.2 Power Supply (AC Adapter) Specifications

Label	Specifications
Model	A12-065N2A
Manufacturer	Chicony
Rated Power Input	AC 100-240V 1.7A 50-60Hz Class I
Rated Power Output	DC 19V 3.42A 65W
CONNECT ONLY TO GROUNDED OUTLET	

8.2.3 System Requirements

■ PC Requirements

These requirements must be fulfilled for live streaming.

Label	Specifications
HW	A desktop or laptop with a USB port.
CPU	Intel i5 or higher
OS	Windows 8.1 or later
RAM	8 GB RAM or more
HDD	At least 10 GB of disk space.

■ Server Requirements

These requirements must be met for file transfer to the server.

Label	Specifications
H/W	FTP server or server storage
S/W	FTP server and client program

8.3 Warranty

8.3.1 Terms and Conditions

This product has been manufactured and tested to meet our strict quality standards. This warranty against product defects is in effect for 1 year from the date of delivery.

However, this warranty shall not apply when product defects or property damage are caused by negligent misuse.

- For technical support, contact us at +82 1833 2526

LINKFLOW Co., Ltd. will not be liable for any loss or damage caused to the product when:

- an unapproved part or accessory is used with the product,
- the user or any third party disjoins, converts or repairs the product,
- product damage or data loss is caused by a natural disaster,
- product damage or data loss is caused by negligent misuse,
- product damage or data loss is caused by incorrect use during an update, or
- damage is caused by a network security breach.

8.3.2 Warranty Card

If the product you bought is faulty, please complete this warranty card and return it to your seller.

Label	Item	TABLE OF CONTENTS	
Product Info	Product	NEXX ONE	
	Model	LFFTSC1	
Purchase Info	Name		
	Address		
	Contact	Phone:	Email:

	Purchase Date	Year	Month	Day
	Seller			