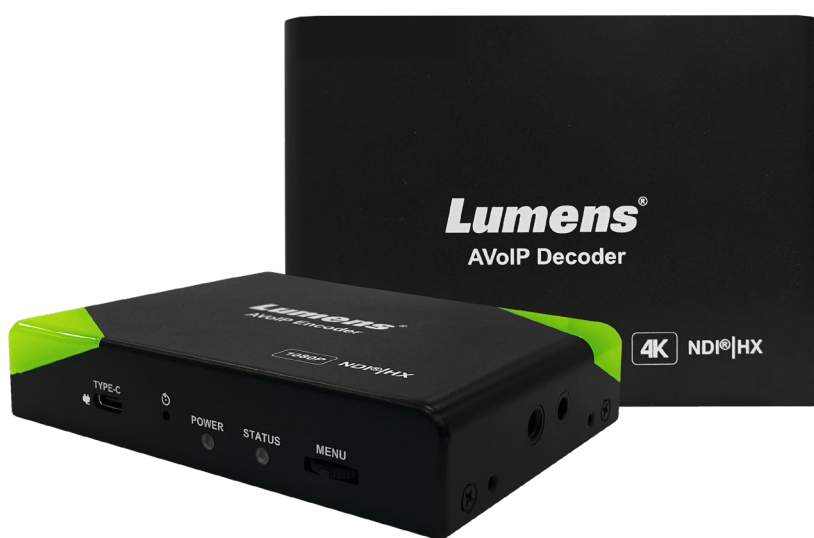


OIP-N40E /OIP-N60D/ OIP-N60D, Dante AV-H Bridge

User Manual - English



[Important]

To download the latest version of Quick Start Guide, multilingual user manual, software, or driver, etc., please visit Lumens
<https://www.MyLumens.com/support>

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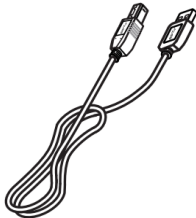
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Chapter 1 Package Contents

OIP Bridge



USB 2.0 cable (1.8 M)
(Type A Type C)



Locking metal plate (x2)



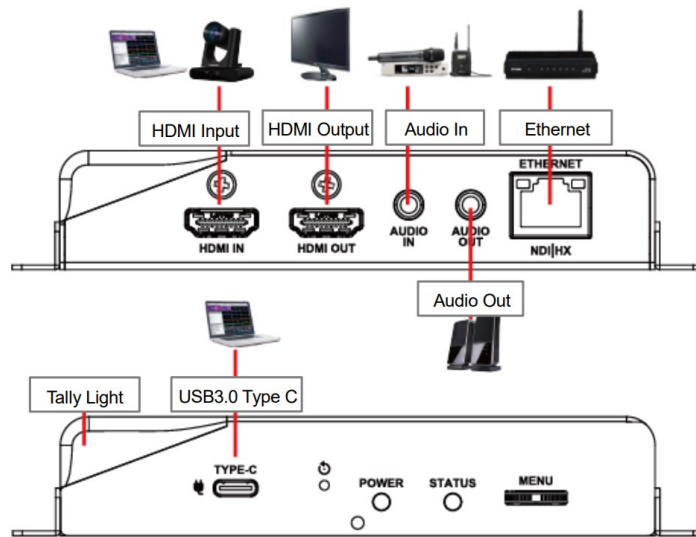
M3 metal plate screw (4x4)



Chapter 2 Product Installation

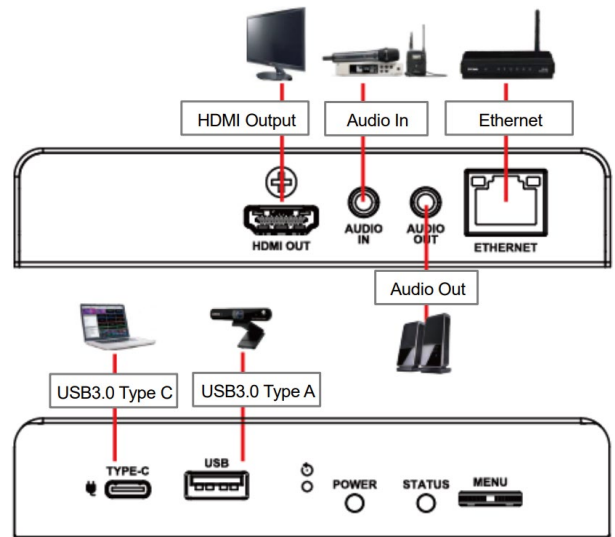
2.1 I/O Interface

OIP-N40E



Note We recommended using high-performance USB-C cables (10Gbps or higher)

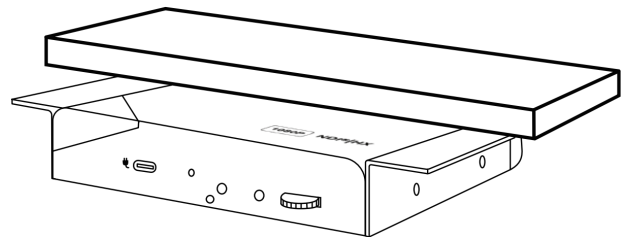
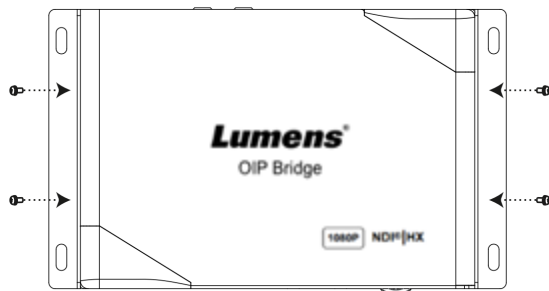
OIP-N60D



2.2 Product Installation

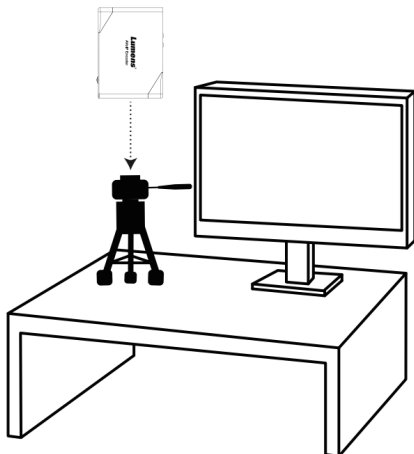
■ Using the accessory metal plates

1. Lock the accessory metal plate with screws (M3 x 4) to the lock holes on both sides of the OIP Bridge
2. Screw the metal plate to the desk or other surface as required.



■ Tripod mounting

The camera can be mounted on a 1/4"-20 UNC PTZ tripod deck by using the lock holes on the side for the tripod of OIP-N40E



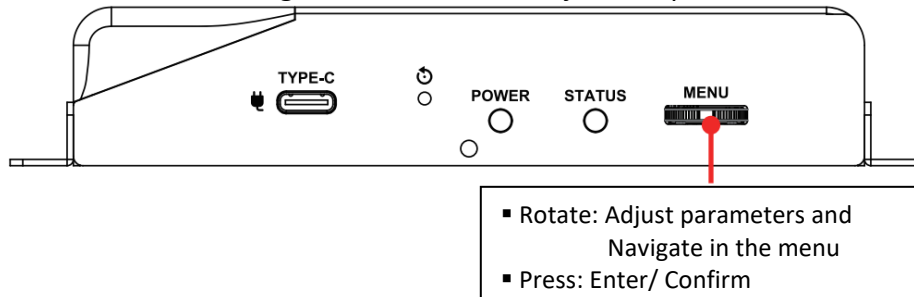
2.3 Description of Indicator Display

Power Status	Tally Status	Power	Standby	Tally
Startup in progress (initialization)	-	Red light	-	Flickering Red/Green light
In use	Signal	Red light	Green light	-
	No Signal			-
	Preview			Green light
	Program			Red light

Chapter 3 Product Operation

3.1 Operating using the rocker switch

Connect the HDMI OUT to the display, press the Menu dial to enter the OSD menu. Move the rocker switch to navigate the menu and adjust the parameters



3.2 Operate via webpages

(1) Confirm the IP address

Refer to 3.1 Using the rocker switch, confirm the IP address in Status (If the OIP-N40E is directly connected to the computer, the default IP is 192.168.100.100. You need to manually set the computer's IP address in the same network segment.)

Encode	Input	Network	Status
IP Address :		192.168.4.147	
Netmask :		255.255.255.0	
Gateway :		192.168.4.254	
MAC ID :		dc:e2:ac:03:50:3	
HDMI Output :			
FW Version :		0IA0.00k	
Exit			

(2) Open the browser and input the IP address, e.g. 192.168.4.147, to access the login interface.



(3) Please enter the account/password to log in

- Account : admin
- Password : 9999

Chapter 4 Product Application and Connection

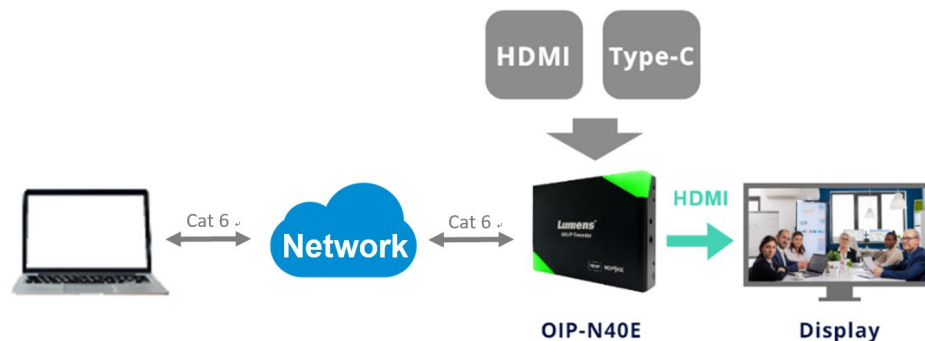
4.1 HDMI Signal Source Transmission Network (For OIP-N40E)

OIP-N40E converts an HDMI source for transmission over IP.

Note: When using a USB connection to the OIP, a USB 3.1 Gen2 (10Gbps) cable is required.

(1) Connection Method

- Connect the source device to the OIP-N40E HDMI or USB-C input port using a HDMI or USB-C cable
- Connect the OIP-N40E and computer to the network switch using network cables
- Connect the OIP-N40E HDMI OUT to the display using a HDMI cable
- Connect the HDMI source to the OIP-N40E HDMI IN, to capture and synchronize the signal source to the display (Pass-through)



(2) Webpage Settings

[Stream] > [Source] to select the output signal > [Stream Type] > [Apply]

(3) Streaming Output

Open streaming media platforms such as VLC, OBS, NDI Studio Monitor, etc., to receive the streaming output

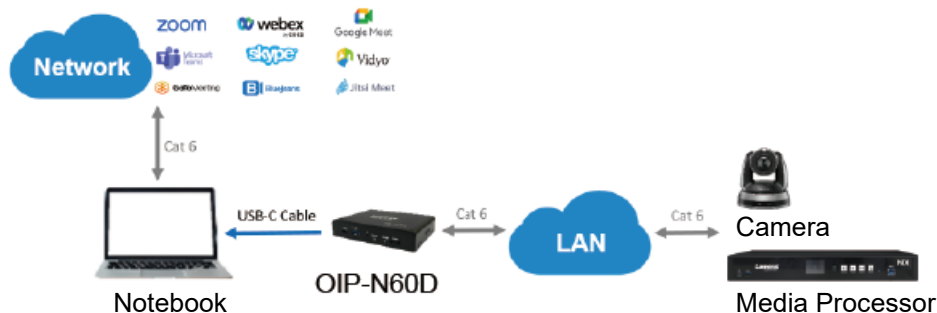
4.2 Virtual USB Network Camera (For OIP-N60D)

OIP-N60D can convert IP signal source to USB (UVC) for seamless integration with video conferencing platforms.

Note: When using a USB connection to the OIP, a USB 3.1 Gen2 (10Gbps) cable is required.

(1) Connection Method

- Connect the OIP-N60D to the LAN
- Connect the computer to the OIP-N60D using a USB-C 3.0 cable



(2) Webpage Settings

- [System] > [Output], open Virtual USB Setting
- [Source] > [Search new Source] > Select the desired output device > Click [Play] to output selected stream

(3) USB Camera Screen Output

- Launch Zoom, Microsoft Teams, or your preferred conferencing application.

- In the application, change the video source to:

Note Source Name: Lumens OIP-N60D

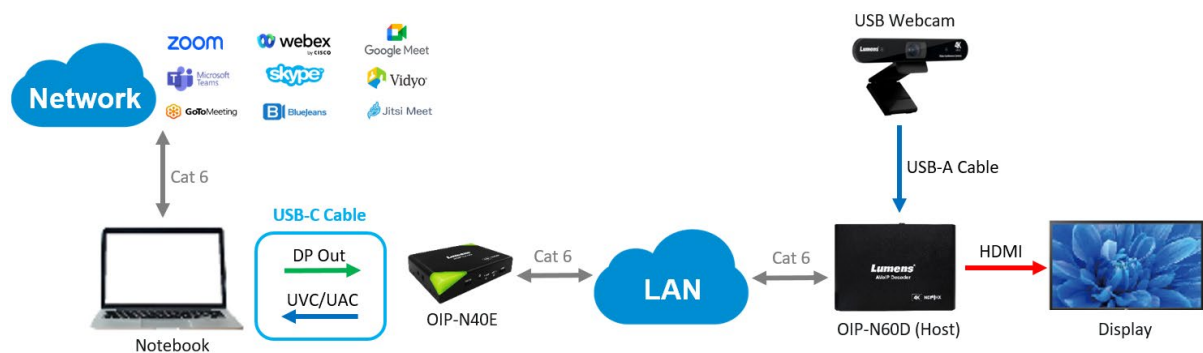
4.3 USB Network Camera Extension (OIP-N40E/OIP-N60D required)

OIP supports network bridging. Use OIP-N40E with OIP-N60D to extend the range of USB cameras over the local area network.

Note: When using a USB connection to the OIP, a USB 3.1 Gen2 (10Gbps) cable is required.

(1) Connection Method

- Connect the OIP Bridge to the local network
- Connect the USB camera to the OIP-N60D using USB-A cable
- Connect a monitor to the OIP-N60D using a HDMI cable
- Connect a computer to the OIP-N40E using a USB-C monitor transmission cable



Note

- Computers can use a USB-C cable to connect to OIP-N40E and use USB network camera
- Computers can transmit images onto a TV through a USB-C connection to OIP-N40E

(2) OIP-N60D Webpage Settings

[System] > [Output], open USB Extender

(3) OIP-N40E Webpage Settings

- [System] > [Output] > Extender Source List
- [Search new Source] > Click [Available] to select the OIP-N60D > Connection displays Connected

(4) USB Camera Screen Output

- Launch Zoom, Microsoft Teams, or your preferred video conferencing app.
- Choose the video source, to output USB camera images

Note Source Name: Select the USB Camera ID

Chapter 5 Setting Menu

Using the rocker switch **[Menu]** enter the setting menu; the **bold underlined** values in the following table are defaults.

5.1 OIP-N40E

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment Values	Function Descriptions
Encode	Stream Type	<u>NDI</u> / SRT/ RTMP/ RTMPS/ HLS/ MPEG-TS over UDP/ RTSP	Select the stream type
Input	HDMI-in From	<u>HDMI</u> / USB	Select the HDMI-in source
Network	IP Mode	Static/ <u>DHCP</u> / Auto	Dynamic Host Configuration
	IP Address	<u>192.168.100.100</u>	Configurable when set to Static
	Subnet mask (Netmask)	<u>255.255.255.0</u>	
	Gateway	<u>192.168.100.254</u>	
Status	-	-	Display the current machine status

5.2 OIP-N60D

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment Values	Function Descriptions
Source	Source List	-	Display the signal source list
	Blank Screen	-	Display black screen
	Scan	-	Update the signal source list
Output	HDMI Audio From	<u>Off</u> / AUX/ HDMI	Select the HDMI audio source
	Audio Out From	<u>Off</u> / AUX/ HDMI	Select where audio outputs to
	HDMI Output	By Pass <u>Native EDID</u>	Select the HDMI output resolution
		4K@60/ 59.94/ 50/ 30/ 29.97/ 25 1080p@60/ 59.94/ 50/ 30/ 29.97/ 25 720p@60/ 59.94/ 50/ 30/ 29.97/ 25	
Network	IP Mode	Static/ <u>DHCP</u> / Auto	Dynamic Host Configuration
	IP Address	<u>192.168.100.200</u>	Configurable when set to Static
	Subnet mask (Netmask)	<u>255.255.255.0</u>	
	Gateway	<u>192.168.100.254</u>	
Status			Display the current machine status

Chapter 6 Webpage Interface

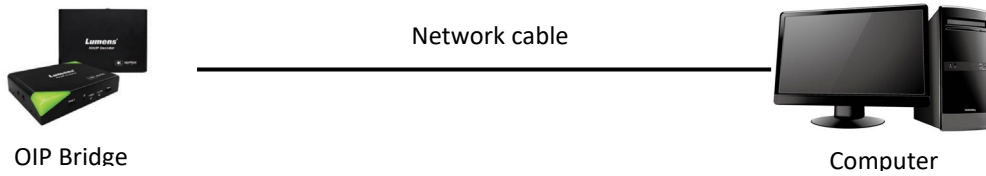
6.1 Connecting to Internet

Two common connection methods are shown below

1. Connecting via switch or router



2. To connect directly using a network cable, the IP address of the keyboard/computer should be changed and set as the same network segment.



6.2 Log into the webpage

1. Open the browser, and enter the URL of OIP-N in the IP address bar

E.g.: <http://192.168.4.147>

2. Enter the administrator's account and password

Note For a first-time login, please refer to [6.1.10 System- User](#) to change the default password

<p>Lumens OIP Bridge</p> <ul style="list-style-type: none">● Account: admin● Password: 9999 (Default)

6.3 Webpage Menu Description

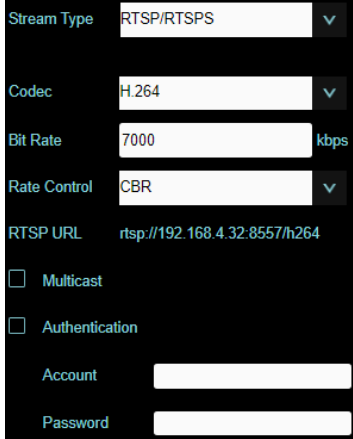
6.3.1 Dashboard

<div>Dashboard</div> <div>Stream</div> <div>Audio</div> <div>System</div> <div>Maintenance</div> <div>About</div>	<div>Input Info:</div> <div>Video Type: HDMI Resolution: 1920x1080p 59.94</div> <div>Encode Info:</div> <div>Stream Format: NDI Codec: H264 Bit Rate: 16384 kbps</div> <div>Resolution: 1080P 60 Audio Format: 48K Hz</div> <div>System Info:</div> <div>Device ID: OIP-N40E Location: Default Firmware Ver: QIA0.01k</div> <div>IP Add: 192.168.4.32 MAC Add: dc:e2:ac:03:50:46</div>
Function Descriptions	
Display output/input, encode/decode, and system-related information	

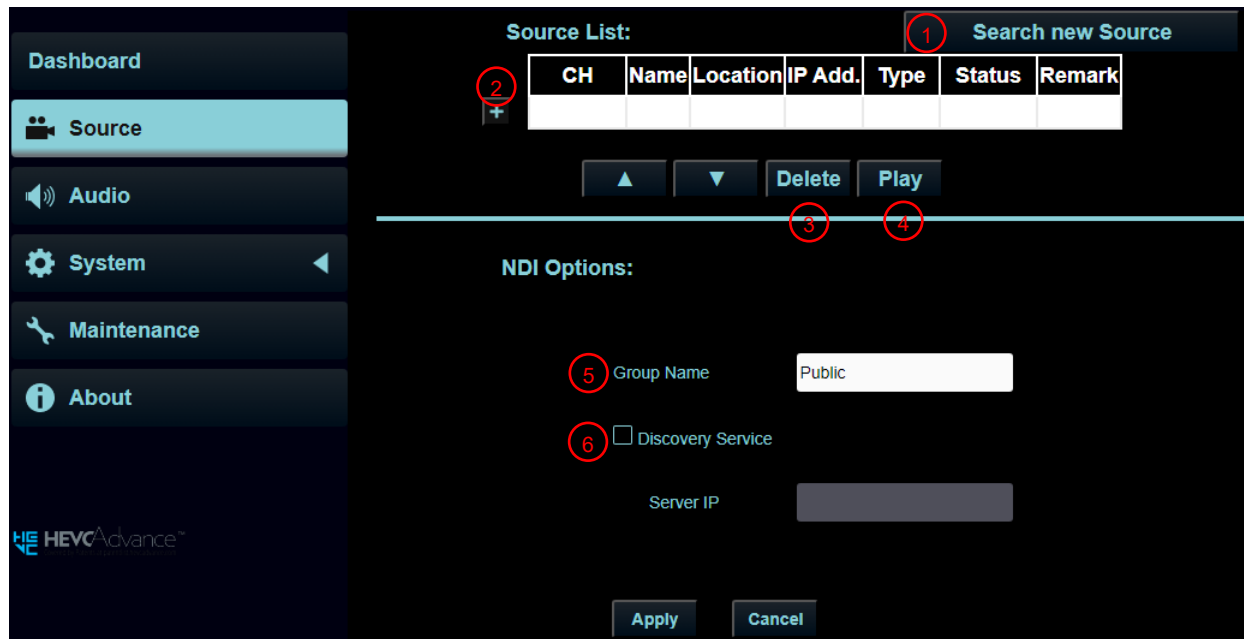
6.3.2 Stream (Applicable to OIP-N40E)

<div>Dashboard</div> <div>Stream</div> <div>Audio</div> <div>System</div> <div>Maintenance</div> <div>About</div>	<div>1 Source HDMI</div> <div>2 Resolution 1080P</div> <div>3 Frame Rate 60</div> <div>4 IP Ratio 30</div> <div>Stream Setting:</div> <div>5 Stream Type NDI</div> <div>Camera ID: OIP-N40E</div> <div>Location: Default</div> <div>Group Name: Public</div> <div>NDI HX: HX2</div> <div>Encode Format: 16384 kbps</div> <div><input type="checkbox"/> Multicast</div> <div>IP Setting: 239.255.0.0</div> <div>Netmask: 255.255.0.0</div> <div><input type="checkbox"/> Discovery Server</div> <div>Server IP:</div> <div>Apply Cancel</div>
-------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

No	Item	Description
1	Source	Choose the signal source
2	Resolution	Set output resolution
3	Frame Rate	Set frame rate
4	IP Ratio	Set IP Ratio
5	Stream Type	Select the stream type and make relevant settings based on the stream type
6	NDI	<ul style="list-style-type: none"> Camera ID/Location: Name/Location display according to System Output settings

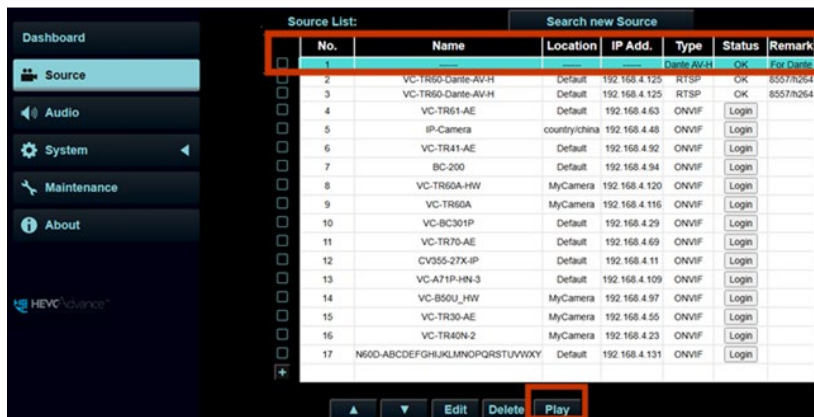
		<ul style="list-style-type: none"> ▪ Group Name: The group name can be modified here and set with Access Manager - Receive in NDI Tool ▪ NDI HX: HX2/HX3 is supported ▪ Multicast: Enable/Disable Multicast <p>Note It is suggested to enable Multicast when the number of users online watching the live image simultaneously is more than 4</p> <ul style="list-style-type: none"> ▪ Discovery Server: Discovery service. Check to enter the Server IP address
6.1	RTSP/ RTSPS	 <ul style="list-style-type: none"> ▪ Code (Encode Format): H.264/HEVC ▪ Bit Rate: Setting range 2,000 ~ 20,000 kbps ▪ Rate Control: CBR/VBR ▪ Multicast: Enable/Disable Multicast <p>Note When the number of users online watching the live image simultaneously is more than 4.</p> <ul style="list-style-type: none"> ▪ Authentication: Enable/Disable Username/Password Authentication <p>The username/password is the same as the webpage login password, please refer to 6.1.10 System- User to add/modify account information</p>

6.3.3 Stream (Applicable to OIP-N60D)



No	Item	Description
1	Search New Source	Click to search for devices in the same network segment and display them in a list
2	+Add	Manually add a device
3	Delete	Select a device, click to delete
4	Play	Select a device, click to play
5	Group Name	The group name can be modified here and set with Access Manager - Receive in NDI Tool
6	Server IP	Discovery service. Select to enter the Server IP address

Dante controller



To ensure the unit (OIP-N60D / OIP-N40E) can be recognized by the Dante Controller after enabling the Dante function, please follow the steps below:

1. Access the OIP-N60D web page
2. Navigate to the [Source] section
3. Select [Dante AV-H] as the source
4. Click [Play] to activate the stream

Remark: If the play button is not activated, the device will not be detected properly by the Dante Controller.

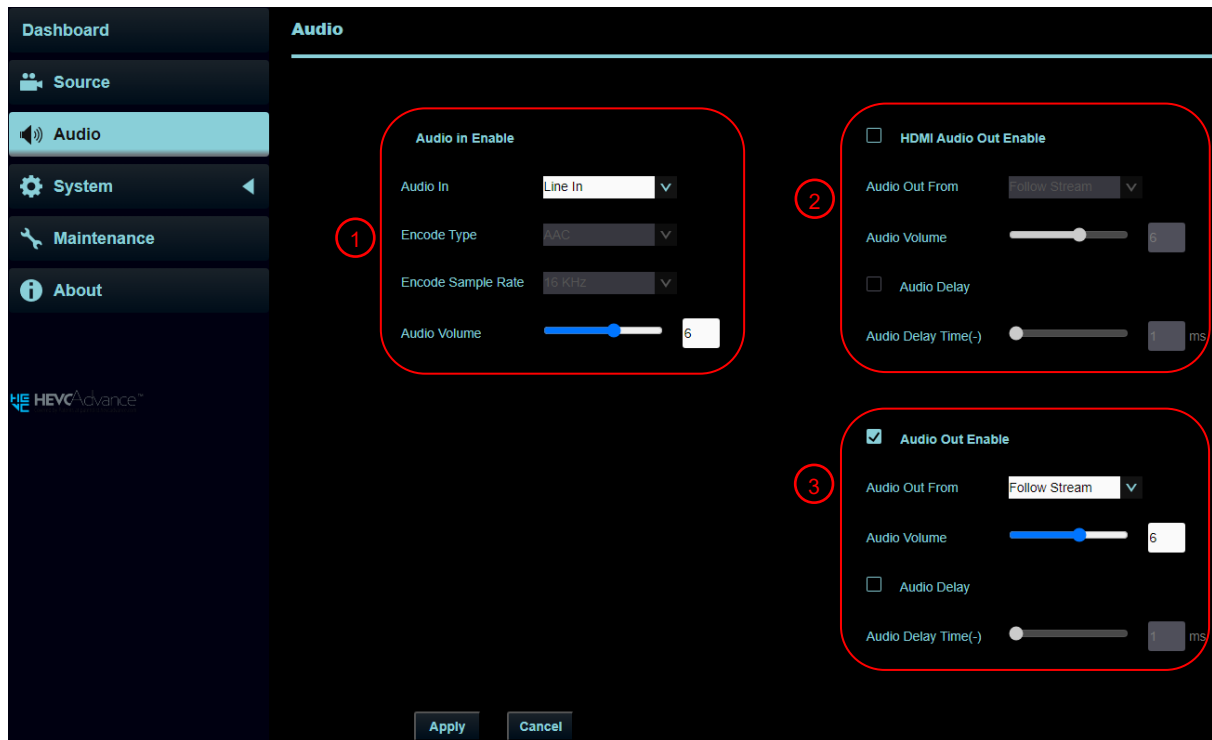
6.3.4 Audio (Applicable to OIP-N40E)

No	Item	Description
1	Audio In Enable	<ul style="list-style-type: none"> Audio In: Enable/disable audio Encode Type: Encode Type AAC Encode Sample Rate: Set Encode sample rate Audio Volume: Volume adjustment
2	Stream Audio Enable	<ul style="list-style-type: none"> Audio In: Enable/disable audio Encode Sample Rate: Set Encode sample rate Audio Volume: Volume adjustment
3	Audio Out Enable	<ul style="list-style-type: none"> Audio Out From Audio Volume: Volume adjustment Audio Delay: Enable/disable Audio Delay, set the audio delay time (-1 ~ -500 ms) after enabling

Remark:

Please note that you cannot convert analog audio from the 3.5mm jack to USB UAC output.

6.3.5 Audio (Applicable to OIP-N60D)

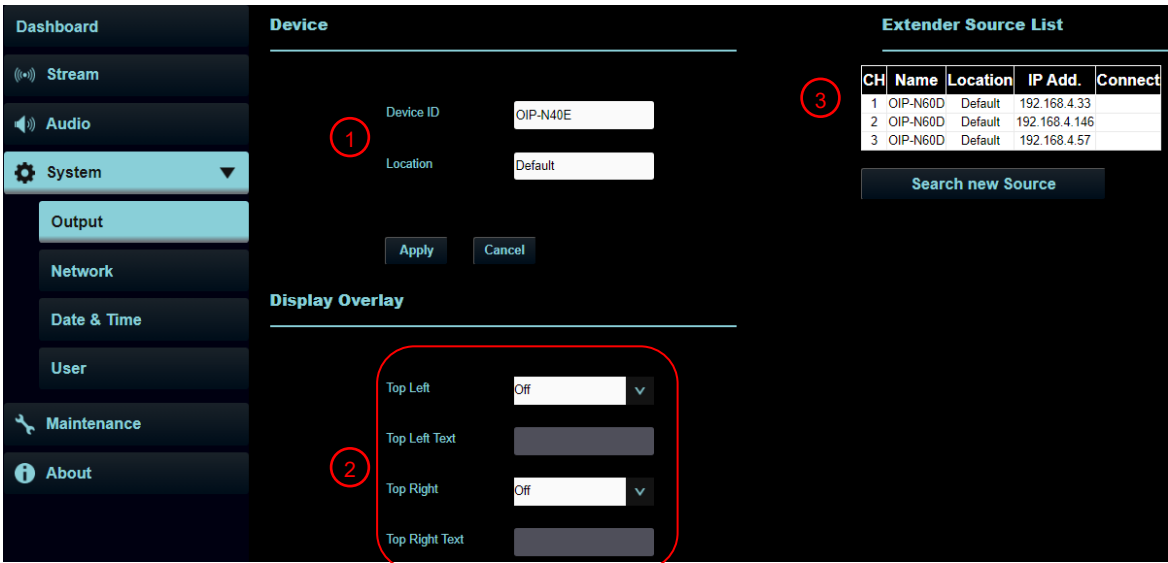


No	Item	Description
1	Audio In Enable	<ul style="list-style-type: none"> Audio In: Enable/disable audio Encode Type: Encode Type AAC Encode Sample Rate: Set Encode sample rate Audio Volume: Volume adjustment
2	HDMI Audio Out Enable	<ul style="list-style-type: none"> Audio Out From: Audio output source Audio Volume: Volume adjustment Audio Delay: Enable/disable Audio Delay, set the audio delay time (-1 ~ -500 ms) after enabling
3	Audio Out Enable	<ul style="list-style-type: none"> Audio Out From: Audio output source Audio Volume: Volume adjustment Audio Delay: Enable/disable Audio Delay, set the audio delay time (-1 ~ -500 ms) after enabling

Remark:

Please note that you cannot convert analog audio from the 3.5mm jack to USB UAC output.

6.3.6 System- Output (Applicable to OIP-N40E)



CH	Name	Location	IP Add.	Connect
1	OIP-N60D	Default	192.168.4.33	
2	OIP-N60D	Default	192.168.4.146	
3	OIP-N60D	Default	192.168.4.57	

No	Item	Description
1	Device ID/ Location	<p>Device Name/Location</p> <ul style="list-style-type: none"> The name is limited to 1 - 12 characters The location is limited to 1 - 11 characters Please use uppercase and lowercase letters or numbers for characters. Special symbols such as “/” and “space” cannot be used <p>Note Modifying this field will modify the Onvif device name/location.</p>
2	Display Overlay	Set the stream to display “date and time” or “custom content” and to display location
3	Extender Source List	Display the available extendable source device.

6.3.7 System- Output (Applicable to OIP-N60D)

No	Item	Description
1	Device ID/ Location	<p>Device Name/Location</p> <ul style="list-style-type: none"> The name is limited to 1 - 12 characters The location is limited to 1 - 11 characters Please use uppercase and lowercase letters or numbers for characters. Special symbols such as “/” and “space” cannot be used <p>Note Modifying this field will modify the Onvif device name/location.</p>
2	Resolution	Set output resolution
3	HDMI Format	Set HDMI format to YUV422/YUV420/RGB
4	USB Extender	Turn on/off USB network camera extension
5	Virtual USB output	Turn on/off virtual USB network camera output

6.3.8 System- Network

No	Item	Description
1	DHCP	Ethernet setting for OIP Bridge. Change of setting is available when DHCP function is disabled.

2	HTTP Port	Set HTTP port. The default Port value is 80
---	-----------	---------------------------------------------

6.3.9 System- Date & Time

Function Descriptions

Display the current device/computer date and time, and set the display format and synchronization method
When Manually Set is selected for [Time Settings], Date & Time can be customized

6.3.10 System- User

Function Descriptions

Add/Modify/Delete user account

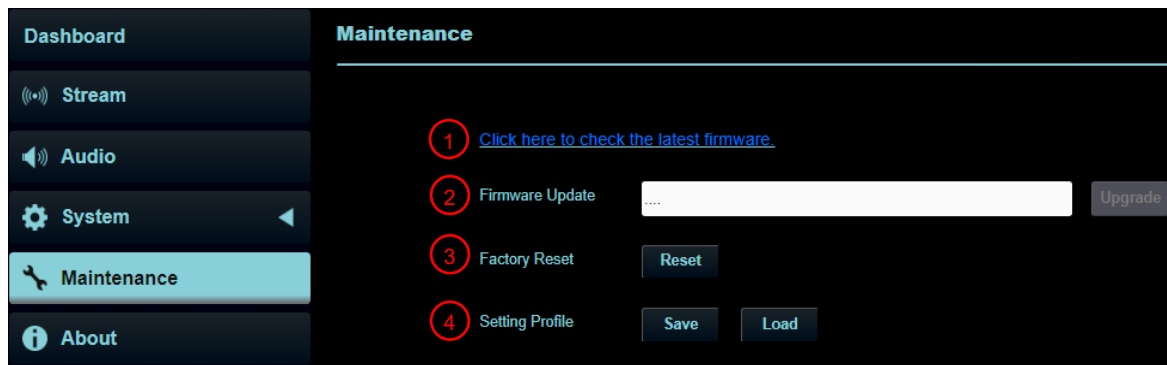
- Supporting 4 - 32 characters for user name and password
- Please use uppercase and lowercase letters or numbers for characters. Special symbols or the underlined cannot be used
- Authentication Mode: Set the new account management permissions

User Type	Admin	Viewer
View	V	V
Setting/Account	V	X

management

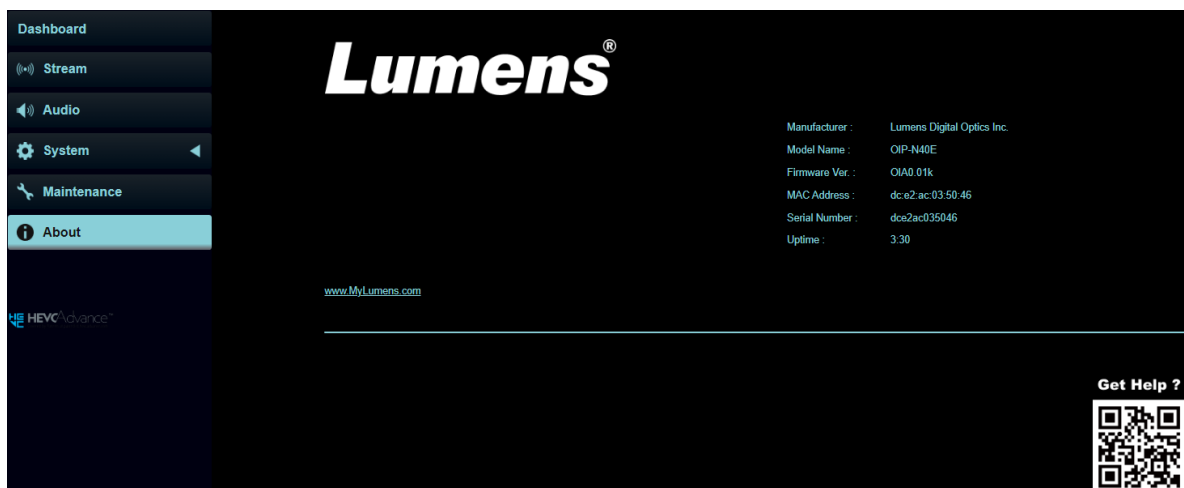
※When Factory Reset is executed, it will clear the user's data

6.3.11 Maintenance



No	Item	Description
1	Firmware link	Click on the link to the Lumens website and enter the model to obtain the latest firmware version information
2	Firmware Update	Select the firmware file, and click [Upgrade] to update the firmware <div>Note Update takes about 2 - 3 minutes</div> <div>Note Please do not operate or turn off the power of the device during the update to avoid firmware update failure</div>
3	Factory Reset	Reset all configurations to factory default settings
4	Setting Profile	Save setup parameters. Users can download and upload device setup parameters

6.3.12 About



Function Descriptions

Display the firmware version, serial number, and other related information of the OIP Bridge

For technical support, please scan the QR Code at the bottom right for assistance

Chapter 7 Troubleshooting

This chapter describes problems you may encounter while using OIP Bridge. If you have questions, please refer to related chapters and follow all the suggested solutions. If the problem still occurs, please contact your distributor or the service center.

No.	Problems	Solutions
1.	OIP-N40E cannot display the signal source screen	<ol style="list-style-type: none"> 1. Confirm that the cables are fully connected. Please refer to Chapter 4, Product Application and Connection 2. Confirm that the input signal source resolution is 1080p or 720p 3. Confirm that USB-C cables are recommended to use specifications with a transmission rate of 10Gbps or higher
2.	OIP-N40E webpage USB extender cannot find OIP-N60D on the same network segment	<ol style="list-style-type: none"> 1. Confirm that the OIP-N60D has enabled the USB extender function 2. Confirm that the management switch in the network has disabled the blocking of multicast packets
3.	Recommended specifications for USB-C cables	Transfer rate of 10 Gbps or higher
4.	Recommended Switch Configuration	<p>When using OIP-N products with a network switch, it is recommended to configure the following settings:</p> <ol style="list-style-type: none"> 1. Select a switch where every port supports 1Gbps transmission 2. Use a switch that supports QoS (Quality of Service) with 4 queues and strict priority; QoS should be enabled when both 100Mbps and 1Gbps devices exist in the same local network 3. Enable IGMP Snooping 4. Enable IGMP Snooping 5. It is recommended to choose a managed switch (Layer 2 or above) 6. It is advisable to disable EEE (Energy Efficient Ethernet) or similar power-saving features

Chapter 8 Safety Instructions

Always follow these safety instructions when setting up and using the product:

1 Operation

- 1.1 Please use the product in the recommended operating environment, away from water or source of heat.
- 1.2 Do not place the product on a tilted or unstable trolley, stand or table.
- 1.3 Please clean the dust on the power plug prior to usage. Do not insert the product's power plug into a multiplug to prevent sparks or a fire.
- 1.4 Do not block the slots and openings in the case of the product. They provide ventilation and prevent the product from overheating.
- 1.5 Do not open or remove covers, otherwise it may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.
- 1.6 Unplug the product from the wall outlet and refer servicing to licensed service personnel when the following situations happen:
 - If the power cords are damaged or frayed.
 - If liquid is spilled into the product or the product has been exposed to rain or water.

2 Installation

- 2.1 For security considerations, please make sure the standard mount you use is in line with UL or CE safety approbations and installed by technician personnel approved by agents.

3 Storage

- 3.1 Do not place the product where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
- 3.2 Unplug this product during thunderstorms or if it is not going to be used for an extended period.
- 3.3 Do not place this product or accessories on top of vibrating equipment or heated objects.



4 Cleaning

- 4.1 Disconnect all the cables prior to cleaning and wipe the surface with a dry cloth. Do not use alcohol or volatile solvents for cleaning.

5 Batteries (for products or accessories with batteries)

- 5.1 When replacing batteries, please only use similar or the same type of batteries
- 5.2 When disposing of batteries or products, please adhere to the relevant instructions in your country or region for disposing of batteries or products

■ Precautions

	This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock. Do not remove the cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.		This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------

■ FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice :

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are to provide reasonable protection from harmful interference in residential installations.

■ **IC Warning**

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.

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