



INOGENI IP2USB

User guide

Version 1.1

February 20, 2026

VERSION HISTORY

Version	Date	Description
1.0	January 31, 2026	Preliminary user guide for device launch.
1.1	February 20, 2026	<ul style="list-style-type: none">• Adding audio configuration.• Adding new web page layout.

CONTENTS

Version history	2
Overview	4
Device interfaces	5
Connection diagram	6
Usage with a DSP over USB	6
Usage with Dante audio	6
LEDs behavior	7
Specifications	8
Serial communication protocol	10
REST API	10
API commands	11
Web interface access	13
STATUS tab	14
SETTINGS tab	15
Camera configuration	15
Audio configuration	15
USB output	16
HDMI output	16
SYSTEM tab	17
Security	17
Web interface configuration	17
Network	18
RS-232	18
Update	19
RESOURCES tab	20
INOGENI Maestro application	21
Audio routing	22
Automatic [default]	22
Dante Audio Mode	22
Network Camera Mode	22
USB DSP Mode	22
Audio Off Mode	22
Dante configuration	23

Mechanical specification	25
Support.....	26
Certifications	26

OVERVIEW

The IP2USB supports **multiple AVoIP standards, including NDI®/NDI® HX and RTSP**, allowing for seamless transmission of video and audio across networks, while ensuring low latency and high quality. This enables users to eliminate DSP systems for simple rooms using Dante devices, reducing costs while maintaining high-performance audio and video integration.

High-performance IP connectivity and USB interface

- Convert IP to USB and HDMI multiple AVoIP standards, including NDI®, NDI® HX, RTSP and Dante devices.
- USB Host: 1x USB 2.0 Type-B for USB host PC connection.
- UVC 1080p30 MJPEG video output.
- UAC audio I/O support: Facilitates bi-directional audio via USB.

Connectivity and USB interface

- USB devices: 2x USB3.0/USB2.0 Type-A for connection to peripherals, such as an audio DSP.
- HDMI: HDMI 2.0 output up to 2160p60 with audio.
- Audio integration: Support for USB audio such as speakerphone/DSP to USB. NDI® and RTSP audio can be also sent over the HDMI output.

Seamless integration and flexible control

- Device can be controlled via IP, RS-232, or USB interfaces.
- Camera control: NDI or VISCA over IP protocols for PTZ and preset controls.
- LED indicators for power and RJ45 connection status.
- Power: +12V power input from an external source.

Versatile and reliable performance

- Supports NDI® HQ (1080p30 in I-frame, low latency), NDI® HX/HX2/HX3 (1080p60 in H.264/H.265), RTSP standards.
- Seamless switching between multiple AVoIP sources with low latency.
- Audio processing: Depending on your setup, you can choose the appropriate audio processing mode using internal configuration or API.

Reliable and efficient

- Direct connection using IP-based communication, reduce the number of hardware devices required by supporting USB to Dante audio.
- Flexible solution for both video and audio integration, with the ability to route audio to HDMI and USB.
- Supports a wide range of peripherals and devices for a complete PRO-AV solution.
- Backed by a 5-year warranty.
- Made in Canada and TAA-compliant.

DEVICE INTERFACES

Here are the devices interfaces.



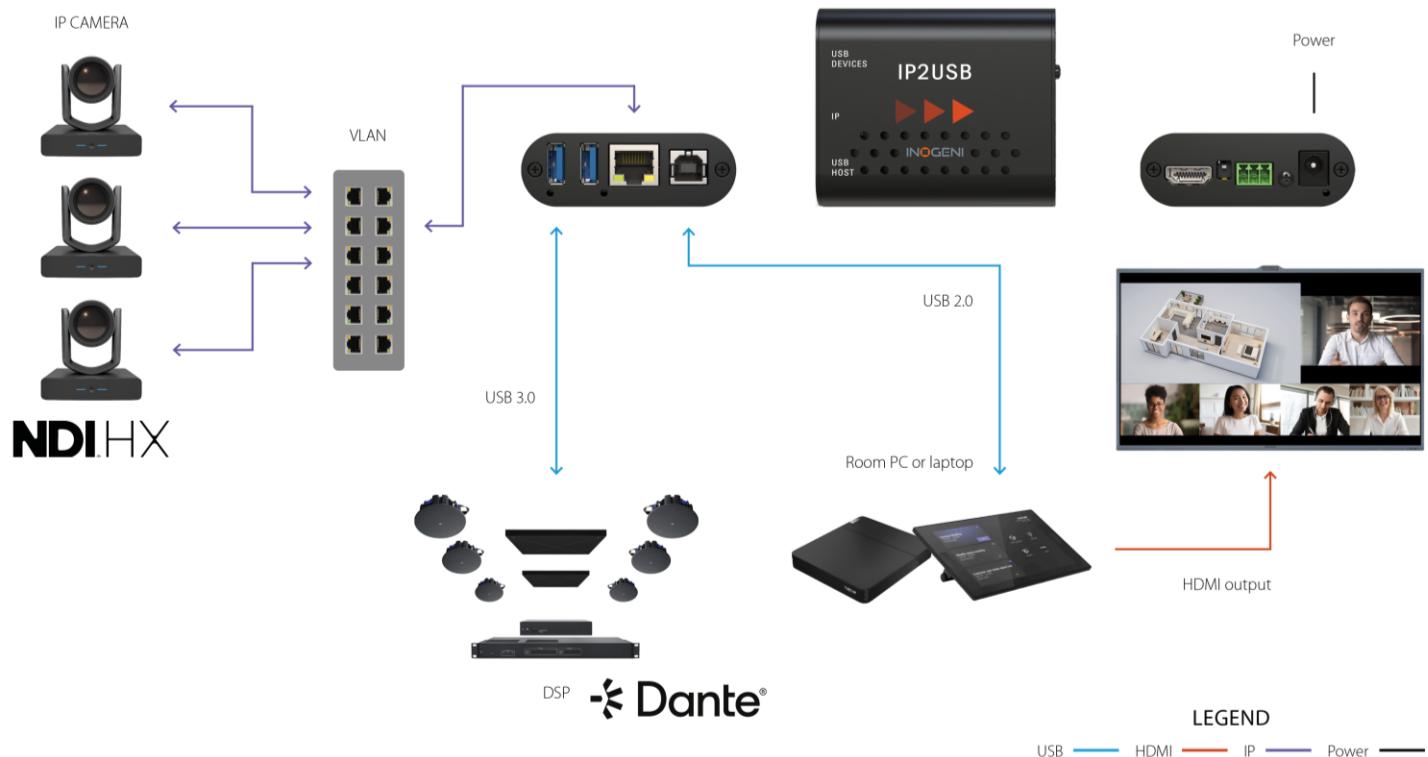
Items

1	USB input #1 – For audio DSP or speakerphone interfaces
2	USB input #2 – For audio DSP or speakerphone interfaces
3	LAN port
4	USB 2.0 output
5	HDMI output
6	RS232 port
7	+12V power input
8	USB device detection leds
9	Reserved – Factory upgrade switch
10	Power led

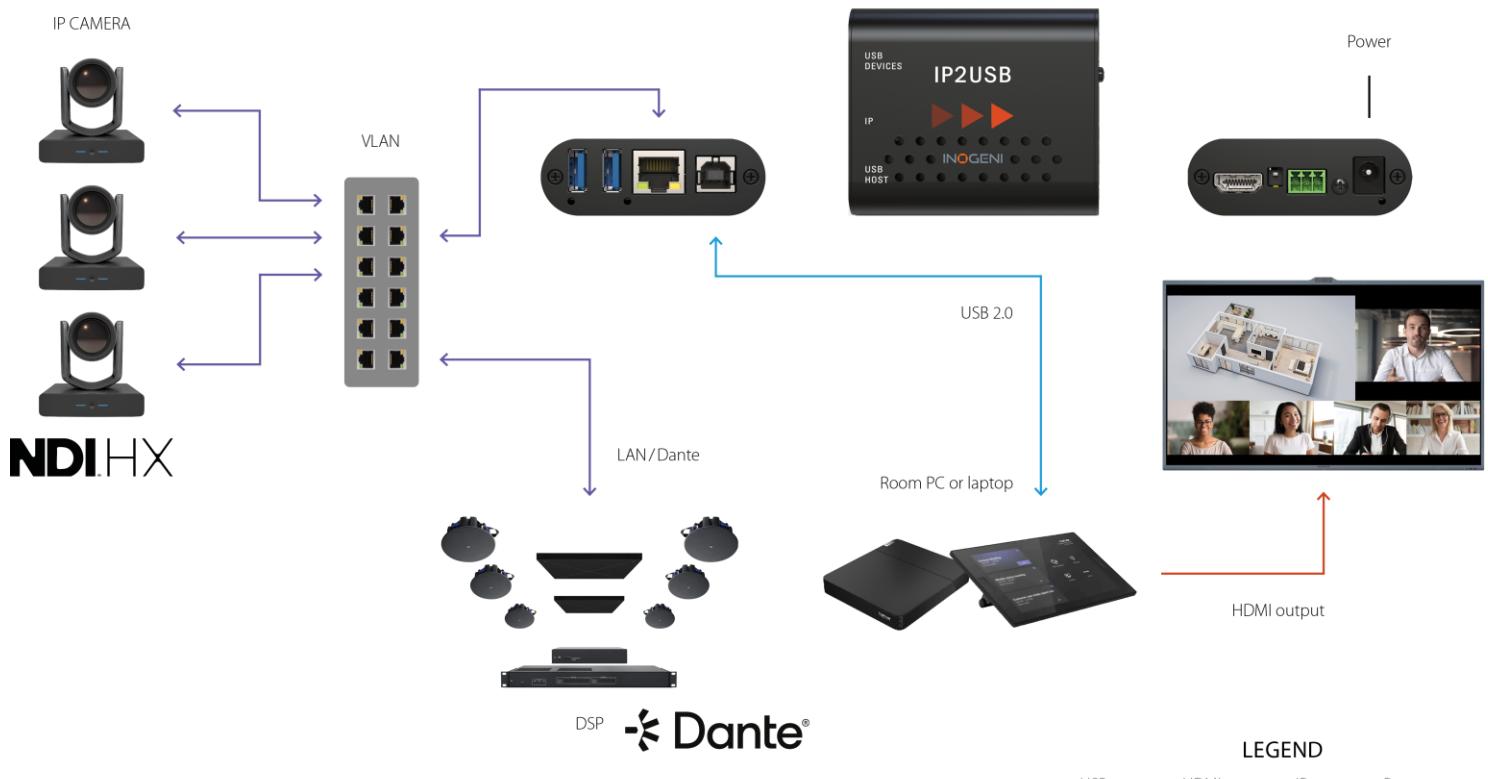
CONNECTION DIAGRAM

Here are common connectivity diagrams with the IP2USB product:

USAGE WITH A DSP OVER USB



USAGE WITH DANTE AUDIO



LEDS BEHAVIOR

Here are the LEDs behavior:

USB input

OFF	USB device not detected
------------	-------------------------

SOLID	USB device connected.
--------------	-----------------------

System activity led

OFF	No power present on board.
------------	----------------------------

SOLID	Power present on board.
--------------	-------------------------

SPECIFICATIONS

Here is the complete specification.

Main feature	
Description	The IP2USB device can connect to an IP camera (such as NDI®/NDI ® HX and RTSP) and convert it to USB. It also supports Dante to USB conversion with optional AEC interface.
Video input	
Connector	1 x RJ45 (10/100Mbps)
Supported standards	NDI® HQ NDI® HX/HX2/HX3 (H.264/H.265) RTSP
Video resolutions	Up to 1920x1080p60
Audio	
Supported USB devices	DSP & speakerphones
Supported Dante devices	DSP, microphones and speakers Audio Channels: 2 in, 2 out Sample rate: 48kHz
USB host	
Connector	1x USB 2.0 Type-B UVC interface up to 1080p30 MJPEG UAC interface with audio I/O PTZ control supported in next firmware release.
Video scaler	Automatic hardware based
Color space conversion	Automatic hardware based
Sampling conversion	Automatic hardware based
Frame rate conversion	Automatic hardware based
USB devices	
Connectors	2x USB 3.0/2.0 Type-A For external USB peripherals such as DSP & speakerphones
HDMI output	
Connector	1x HDMI
Video resolutions	3840x2160p24/25/30/50/60 fps 1080p50/60 fps 720p50/60 fps
Color space	YUV422 and YUV420 to RGB conversion
Embedded audio	Device will capture embedded audio from IP and will output through HDMI.
Chroma subsampling	YUV/RGB 4:4:4, 4:2:2
Control	
IP interface	10/100 Mbps Supports DHCP or static IP addressing
RS-232 interface	3x positions – Terminal block Baud rate: 9600 (default) Data bits: 8 Stop bits: 1 Parity: None Flow control: None
PTZ and presets	Able to do PTZ and recall camera presets using NDI® or VISCA over IP protocols on supported cameras in next firmware release.
Compatibility	

Operating systems	NO driver installation necessary! Windows 10 and above (32/64-bit) macOS 10.10 and above Linux (kernel v2.6.38)
Consumed USB tiers	1 tier
Supported cameras	Any NDI® / NDI® HX and RTSP camera source that support up to 1080p60 are supported.
Software compatibility	UVC-compliant. Runs with all software compatible to DirectShow, AVFoundation and V4L2 Compatible to: Teams, Zoom, Webex, Google Meet, etc.

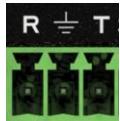
Physical details	
Dimensions (W x L x H)	7.0 cm x 8.3 cm x 2.3 cm 2.76" x 3.76" x 0.9"
Power supply	12V (100-240 VAC 50/60Hz to 12V/1.2A DC)
Weight	140 g (0,31 lb)
Package content	1x IP2USB converter 1x 3ft USB 2.0 cable (Type-A to Type-B) 1x RS-232 terminal block adapter 1x Quick Start Guide 1x power supply 100-240 VAC 50/60Hz to 12V/1.2A DC • International adapters included in the box (AUS, EUR, UK and US)
Operating temperature	0° to 45° C 32° to 113° F
Storage temperature	-40° to 105° C -40° to 221° F
Relative humidity	0% to 90% non-condensing

Information	
UPC code	051497480424
Origin	Canada
Warranty	5 years

Certifications	
Certifications	FCC, CE, RoHS, IEC62368, SoV, RCM, NOM
TAA-Compliant	Yes

SERIAL COMMUNICATION PROTOCOL

Here is the specification of the serial connection. As written on the back of the device, here is the pinout of the terminal block.



Pin 1: Receive
Pin 2: GND
Pin 3: Transmit



NOTE: The user needs to put a **space character between the command name and argument**.

You need to add a carriage return **<LF>** character OR **<CR><LF>** characters at the end of the command string.

Typically, commands will return "ACK<CR><LF>" in case of success and "NACK<CR><LF>" in case of failure.

Baud rate: 9600 [default] // **Data bits:** 8 // **Stop bits:** 1 // **Parity:** None // **Flow control:** None

REST API

You can enable a bearer authentication in the HTTP header (Authorization: Bearer <token>) through our configuration page to increase security on the API.

There will be a return code to each call with the following commands:

200 => success
400 => error
401 => authorization error

The return body will usually be JSON formatted with a "message" field containing a JSON string explaining the cause of the error or "success" in case of success. Note that we are using self-signed certificates.

It is also possible to embed arguments to an API call inside the URL to ease configuration with some control systems with the following topology:

GET `https://<IP>/api/v1/<COMMAND>?<ARG1>=value&<ARG2>=value`

where **<COMMAND>**, **<ARG1>** and **<ARG2>** are command and associated arguments.

For example, using the **output** command, you can issue the following request:

GET `https://<IP>/api/v1/output?resolution=1`

This request will set the HDMI output resolution to the option 1, which is 1080p60.

RESTAPI call will return standard JSON format like shown below:

```
{  
  "message": "success"  
}
```

API COMMANDS

Here is the list of the RESTAPI and RS232 commands available for the device.

REST API	RS232	Description
/api/v1/accessToken	N/A	Supports the GET / POST / DELETE commands for the access token.
/api/v1/accessTokenEn?enable=X	N/A	Enable access token. X = 0 => Disable X = 1 => Enable
/api/v1/aecAudio?enable=X	AECAUDIO X	Set the AEC audio state. X = 0 => Disable X = 1 => Enable
/api/v1/baudrate?baudrate=X	BAUDRATE	Set RS232 baudrate X = 0 => 9600 X = 1 => 19200 X = 2 => 38400 X = 3 => 115200
/api/v1/cameraSelect?id=x	CAMERASELECT ID	Select the camera from the list of cameras.
/api/v1/cdcNcm?enable=X	CDCNCM X	Set the CDC-NCM state. X = 0 => Disable X = 1 => Enable
/api/v1/friendlyName?name=X	FRIENDLYNAME X	Set the friendly name of the device reported over the USB output. RS232 example: X = USB device name must be in double quote " ", alphanumeric and "-" characters only. Invalid character will return a NACK. FRIENDLYNAME "IP2USB-name" <CR><LF>
/api/v1/hdmiResolution?resolution=X	HDMIRESOLUTION X	Set the output resolution over HDMI. Resolution: X = 0 => 1080p60 X = 1 => 1080p50 X = 2 => 720p60 X = 3 => 720p50 X = 4 => 2160p24 X = 5 => 2160p25 X = 6 => 2160p30 X = 7 => 2160p50 X = 8 => 2160p60
/api/v1/help	HELP	Return commands list
/api/v1/httpEn?enable=X	N/A	Enable HTTP server. X = 0 => Disable X = 1 => Enable
/api/v1/logs	N/A	Dump system logs.
/api/v1/ndiCameras	N/A	Return all cameras on system.
/api/v1/ndiServer?ip=X	NDISERVER X	Set the NDI server IP address.
/api/v1/network?mode=X&ip=Y&netmask=Z&gateway=W	NETWORK mode ip netmask gateway	Set the network settings. mode: Static = 0 DHCP = 1 ip and netmask are mandatory. gateway is facultative. RS232 example: ip, netmask and gateway must be in double quote " ". NETWORK 0 "192.168.0.81" "255.255.255.0" "192.168.0.1" <CR><LF>
N/A	NETWORKUSB	Get the network USB settings.

/api/v1/reboot	REBOOT	Reboot the unit.
/api/v1/rstr	RSTR	Erase the current configuration onboard and return to default values
/api/v1/standByMode?enable=X	STANDBYMODE X	Set the standby mode of the device. X = 0 => Device always capture video from USB and HDMI sources X = 1 => Device capture video from USB and HDMI sources when USB output interface is requested
/api/v1/status	STATUS	Return the firmware versions and video and status
/api/v1/usbInputAudio?enable=X	USBINPUTAUDIO X	Set the USB input audio state. X = 0 => Disable X = 1 => Enable
/api/v1/usbOutputAudio?enable=X	USBOUTPUTAUDIO X	Set the USB output audio state. X = 0 => Disable X = 1 => Enable
/api/v1/camera?id=a&inputType=b&url=c&protocol=d&transport=e&preset=f	CAMERA id inputType url protocol transport preset	<p>Support GET / POST / DELETE :</p> <p>GET: get the camera info. Only id necessary</p> <p>POST: add new camera entry. Id, protocol and url necessary</p> <p>DELETE: remove a camera entry. Only id</p> <p>id: number</p> <p>inputType: NETWORK = 1</p> <p>url: NDI camera name or URL if RTSP (example: rtsp://192.168.0.167:554)</p> <p>protocol: NDI = 1, RTSP = 2</p> <p>transport: TCP = 1, UDP = 2, AUTO = 3</p> <p>preset: number</p>
/api/v1/audioSwitchMode?mode=X	AUDIOSWITCHMODE X	<p>Set the USB output audio state.</p> <p>X = 0 => Automatic</p> <p>X = 1 => Dante</p> <p>X = 2 => Camera</p> <p>X = 3 => USB DSP</p> <p>X = 4 => OFF</p>

WEB INTERFACE ACCESS

A web interface is available for the device. This one is accessible through your network.

Since the device supports the mDNS networking protocol, you can access the web interface of the device using a networking URL. This URL looks like the following example and includes the last 3 bytes of the MAC address and will end with the **.local** suffix:



38:76:05:20:00:12

ip2usb-200012.local

You can access the device using any browser and enter the URL with the **.local** suffix or the IP address of the unit if you have this information. You will be prompted with a login dialog. At first connection, the device will ask you to configure a new password. **You must enter at least 8 characters with one uppercase and one special characters.**

The screenshot shows the INOGENI IP2USB web interface. On the left, a login dialog box is visible with fields for 'Login' and 'Password'. The main page is titled 'INOGENI' and shows the device name 'IP2USB-200012'. It includes a device image, two NDI® source buttons (1 - NDI® and 2 - NDI®), and a summary table with firmware version 1.3.1, MAC address 38:76:05:20:00:12, and various network and video output settings. Below this are sections for 'GENERAL' (firmware, MAC, IP, etc.) and 'DEVICE CONFIGURATION' (standby mode, CDC-NCM, etc.). At the bottom, there is a 'VIDEO SOURCES' section with two source entries: 'SOURCE ID 1' (IP2USB-RUNNER) and 'SOURCE ID 2' (HC20X-SIMPLTRACK3).

When you enter the web interface, you will get access to the general information of the device. This information is always available when you navigate through the tabs.

The screenshot shows the INOGENI IP2USB web interface. The main page is titled 'INOGENI' and shows the device name 'IP2USB-200012'. It includes a device image, two NDI® source buttons (1 - NDI® and 2 - NDI®), and a summary table with firmware version 1.3.1, MAC address 38:76:05:20:00:12, and various network and video output settings. The table also includes 'IP MODE' (DHCP), 'USB OUTPUT' (1920x1080p30.00Hz MJPEG), 'CDC NCM IP ADDRESS' (169.254.77.249), and 'CDC NCM' (Enabled).

- General section with firmware version, MAC address, IP address and serial number of the unit.
- Status of the USB and HDMI outputs.
- Link to reboot the unit and the logout action.
- Easy buttons to select configured cameras.

STATUS TAB

This section contains all the firmware information, video sources information along with the actual configuration of the unit.

i **GENERAL**

Firmware version	1.3.1
MAC address	38:76:05:20:00:12
IP Mode	DHCP
IP address	192.168.2.250
Subnet Mask	255.255.255.0
Gateway	192.168.2.1
Audio Switch Mode	Automatic

cog **DEVICE CONFIGURATION**

Standby mode	Enabled
CDC-NCM interface	Enabled
IP address	169.254.77.249
USB Audio input	Enabled
USB Audio output	Enabled
USB Audio AEC	Enabled
NDI® Discovery Server	Disabled

camera **VIDEO SOURCES**

SOURCE ID 1

URL	IP2USB-RUNNER (Intel UHD Graphics 1)
Protocol	NDI®
Transport	TCP

SOURCE ID 2

URL	HC20X-SIMPLTRACK3 (PTZ,192.168.0.167)
Protocol	NDI®
Transport	TCP

SETTINGS TAB

CAMERA CONFIGURATION

CAMERA CONFIGURATION

NDI® Discovery Server

Camera Edit

Actions	Source ID	Input Type	Name / URL	Protocol	Transport	Preset
<input type="button" value="SELECT"/> <input type="button" value="X"/> <input type="button" value="Edit"/>	1	NETWORK	IP2USB-RUNNER (Intel UHD Graphics 1)	NDI®	TCP	1
<input type="button" value="SELECT"/> <input type="button" value="X"/> <input type="button" value="Edit"/>	2	NETWORK	HC20X-SIMPLTRACK3 (PTZ, 192.168.0.167)	NDI®	TCP	1

In this section, you can:

- Connect to an NDI server if needed.
- Add, edit and delete your different video sources (NDI and RTSP) along with their configuration.
- Select the camera to be active on the USB and HDMI outputs.
- Discover NDI cameras on the connected network so you can add them to the list.

Available cameras on network

<input type="checkbox"/> LPT-JBOLDUC (Intel Iris Xe Graphics 1)	<input type="button" value="CANCEL"/> <input type="button" value="ADD"/>
192.168.2.74:5963	
GROUPS: PUBLIC	

AUDIO CONFIGURATION

AUDIO CONFIGURATION

Audio Switch Mode

Automatic

In this section, you can set the appropriate audio routing to be used for the UAC interface and HDMI output. See the “Audio routing” section of this user guide for more details.

USB OUTPUT



USB OUTPUT

- Allow standby mode ⓘ
- Enable USB audio input ⓘ
- Enable USB audio output ⓘ
- Enable AEC interface ⓘ
- Enable CDC-NCM interface ⓘ

Here are the features of the USB output:

Allow standby mode: This will stop the video capture from the connected cameras only when they are requested from USB or HDMI.

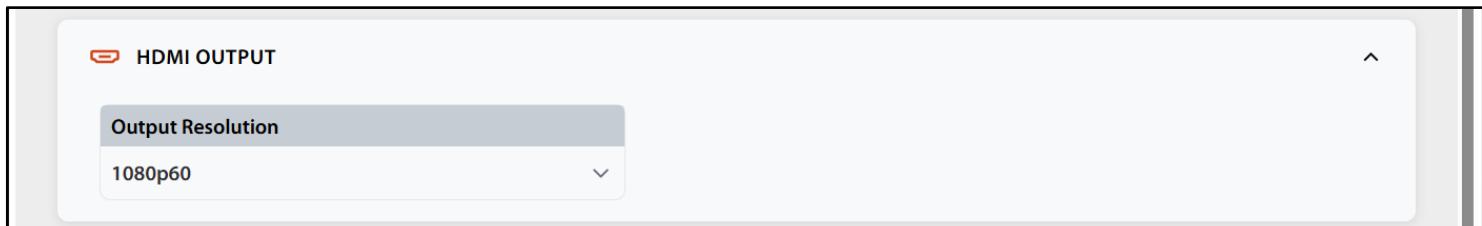
Enable USB audio input: This will enable microphone interface on your computer.

Enable USB audio output: This will enable speaker interface on your computer.

Enable AEC interface: This will report an AEC interface on your computer. Especially useful if you have connected a USB or analog device which is already dealing with AEC.

Enable CDC-NCM interface: This will enable the USB network interface of the device. If you disable it, you cannot configure and access web interface of the device through USB. You will need to connect through the IP network to monitor and configure your device.

HDMI OUTPUT



HDMI OUTPUT

Output Resolution

1080p60

You can set the resolution of the HDMI output.

SECURITY

 SECURITY

Login info

Change the login info

Old password: *

New password: *

Confirm new password: *

* mandatory fields

SAVE

- Login info
 - o Ability to change the current password of the device.

WEB INTERFACE CONFIGURATION

 WEB INTERFACE CONFIGURATION

HTTP Server **OFF** **ON**

Authentication **NO TOKEN** **USE TOKEN**

API access token

GET ACCESS TOKEN **GENERATE ACCESS TOKEN** **DELETE ACCESS TOKEN**

- Ability to turn on or off the HTTP server.
- Allow the authentication token.
- API access token can be accessed, generated or deleted using those buttons.

NETWORK

IP Mode

STATIC **DHCP**

IP address	192.168.2.250
Subnet mask	255.255.255.0
Gateway	192.168.2.1

- IP mode
 - o Device can be configured using DHCP or static IP address.
 - o If static IP addressing is selected, you can set IP address, subnet mask and gateway.

RS-232

RS-232

Baud Rate

9600

Here you can set the baud rate of the RS232 port.

The screenshot shows the 'UPDATE' section of the INOGENI IP2USB User Guide. It includes the following components:

- Manual firmware update:** A section with a 'BROWSE' button to choose a firmware package and an 'UPLOAD' button to upload it.
- Factory default:** A section with a 'RESET' button.
- Logs:** A section with a 'DOWNLOAD LOGS' button.

- You can force a specific firmware package (ZIP file) after clicking on the Browse button. Click on “Upload” button to proceed to the update.
- If you need to do a factory reset of the product, you can click on the “Reset” button.
- You can click on the “Download logs” button to share troubleshooting information with our technical support team.

GUIDES

- IP2USB - User Guide
- IP2USB - Data Sheet
- IP2USB - Brochure

DEVICE CERTIFICATIONS

- FCC-CE-RoHS-IEC62368 - Declaration of Conformity
- SoV - Declaration of Volatility
- TAA - Declaration of TAA Compliance

In this section, you will have access to the latest documentation.

- User guide
- Datasheet
- Brochure
- Device certifications

You can use our [INOGENI Maestro](#) application to monitor firmware information and upgrade your unit. All settings explained in the web interface section apply to the Maestro application.



NOTE: Maestro application is not available now. Please use the USB CDC-NCM interface to connect to the local webpage for configuration and monitoring.



NOTE: You need to use the USB-B to USB-A cable provided with the box for the Maestro application to detect the unit.

AUDIO ROUTING

AUTOMATIC [DEFAULT]

If a DSP or speakerphone is connected to any of the USB ports, the device will automatically select it as an audio source. Otherwise, the default mode uses Dante audio.

DANTE AUDIO MODE

INPUTS	OUTPUTS			
	HDMI out	Dante	DSP	UAC to PC
Network Camera				
Dante				✓
DSP				
UAC from PC		✓		

NETWORK CAMERA MODE

INPUTS	OUTPUTS			
	HDMI out	Dante	DSP	UAC to PC
Network Camera	✓			✓
Dante				
DSP				
UAC from PC				

USB DSP MODE

INPUTS	OUTPUTS			
	HDMI out	Dante	DSP	UAC to PC
Network Camera				
Dante				
DSP			✓	
UAC from PC			✓	

AUDIO OFF MODE

Audio functions are not activated.

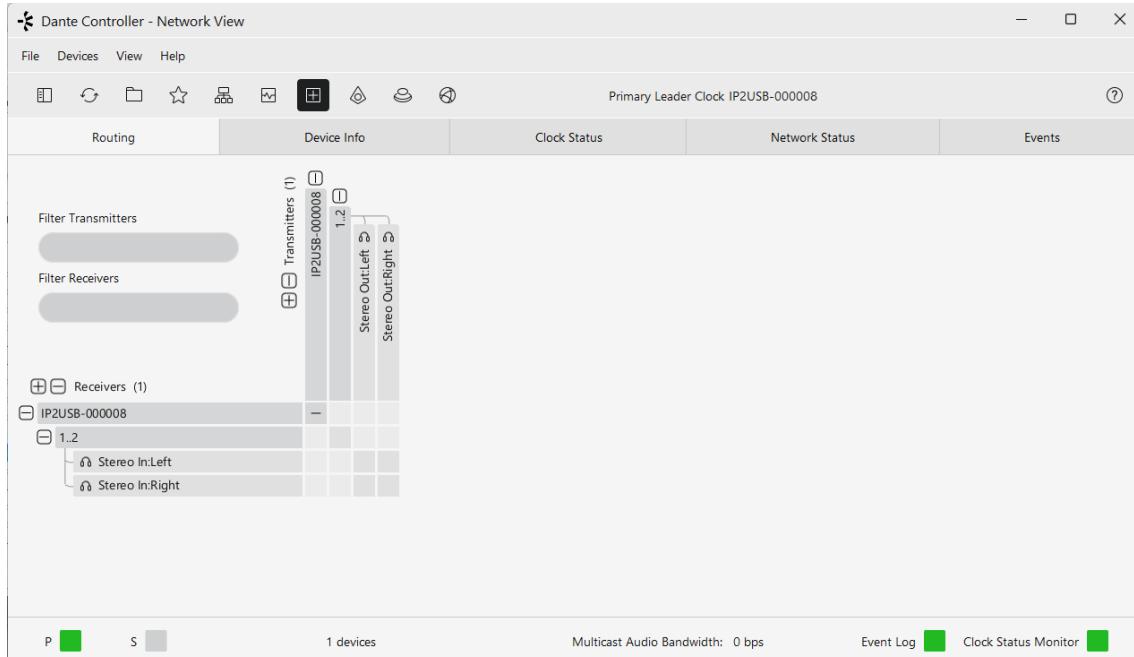
DANTE CONFIGURATION

Here are some insights into configuring your installation with Dante devices.

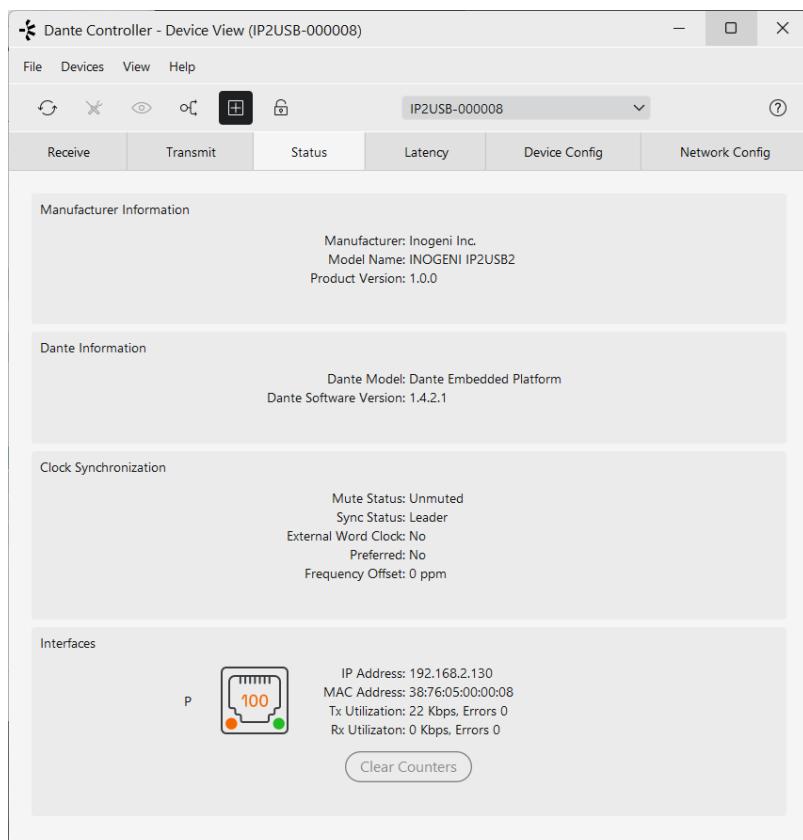


We highly recommend you to follow the [Dante Controller user guide](#).

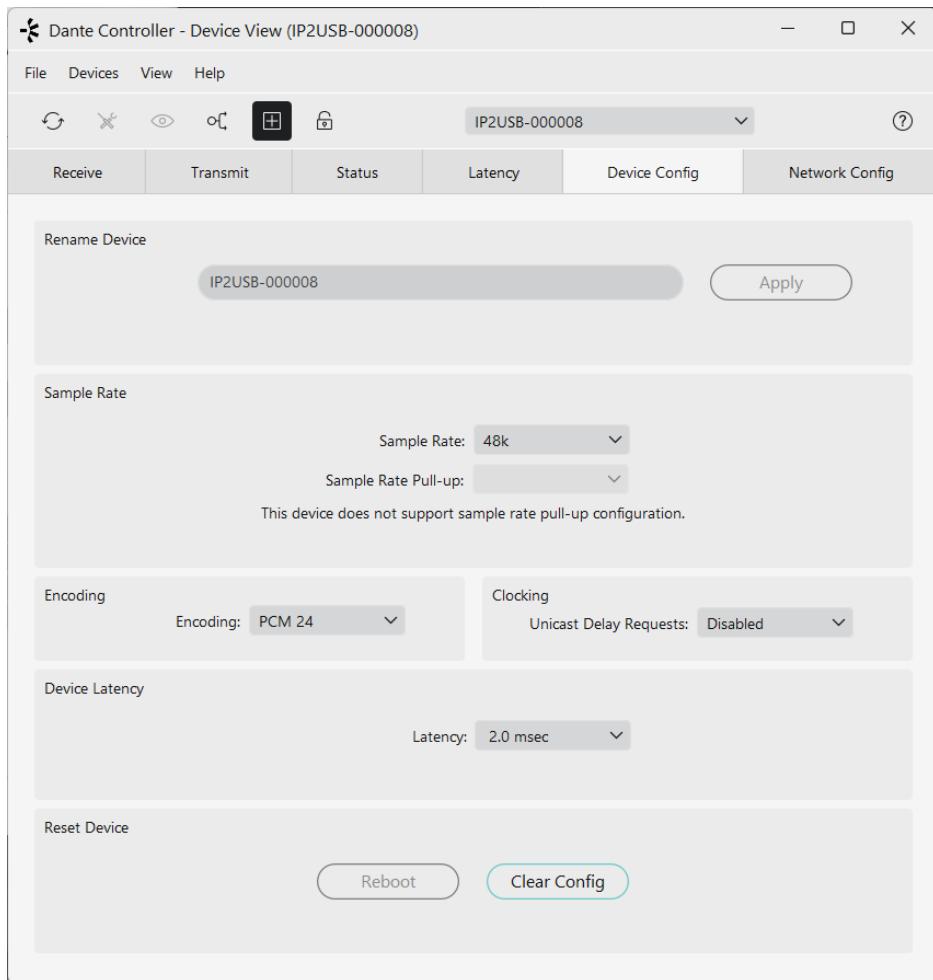
The device will be detected inside Dante Controller by its hostname. You can configure the routing of the Dante streams like any other Dante device.



You can monitor the status of the device using the “Status” tab.

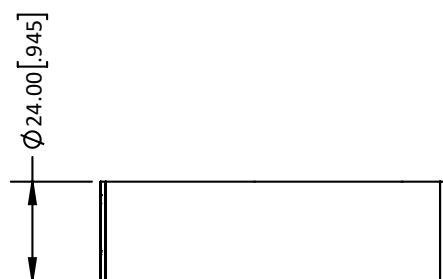
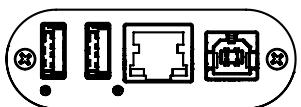
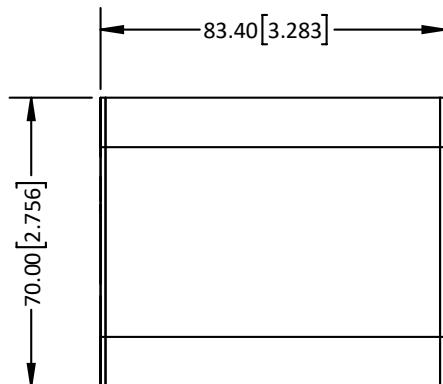
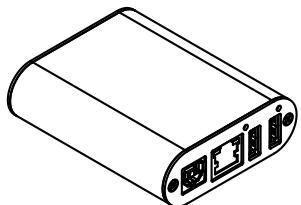
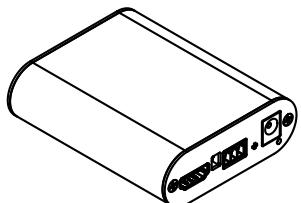


Under the “Device Config” tab, you can also see device capabilities.



MECHANICAL SPECIFICATION

You can find the mechanical specification of the device. All dimensions are in **mm [in]**.



SUPPORT

Engineered by video professionals, for video professionals, it is your most compatible USB device. INOGENI expertise at your fingertips:

- **Expert Technical Support** team at support@inogeni.com for immediate help or if you have any technical question about our products.
- Extensive **Knowledge Base** to learn from other customers' experiences.

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CERTIFICATIONS



FCC Radio Frequency Interference Statement Warning

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received including interference that may cause undesired operation.

IC Statement

This Class A digital apparatus complies with Canadian CAN ICES-3(A)/NMB-3(A).



CE Statement

We, INOGENI Inc., declare under our sole responsibility that this product, to which this declaration relates, is in conformity with European Standards EN 55032, EN 55035, and RoHS Directive 2011/65/EU + 2015/863/EU.



UKCA Statement

This device is compliant with the Electromagnetic Compatibility Regulations 2016 No. 1091 as part of the requirements leading to the UKCA marking.



WEEE Statement

The European Union has established regulations for the collection and recycling of all waste electrical and electronic equipment (WEEE). Implementation of WEEE regulations may vary slightly by individual EU member states. Please check with your local and state government guidelines for safe disposal and recycling or contact your national WEEE recycling agency for more information.



RCM Statement

This device is compliant with Regulator Compliance Mark (RCM) certification.



NOM Statement

This device is compliant with the NOM-019 standard.



Product specifications can change without notice, we suggest to use the latest user guide version on [product website](#).