

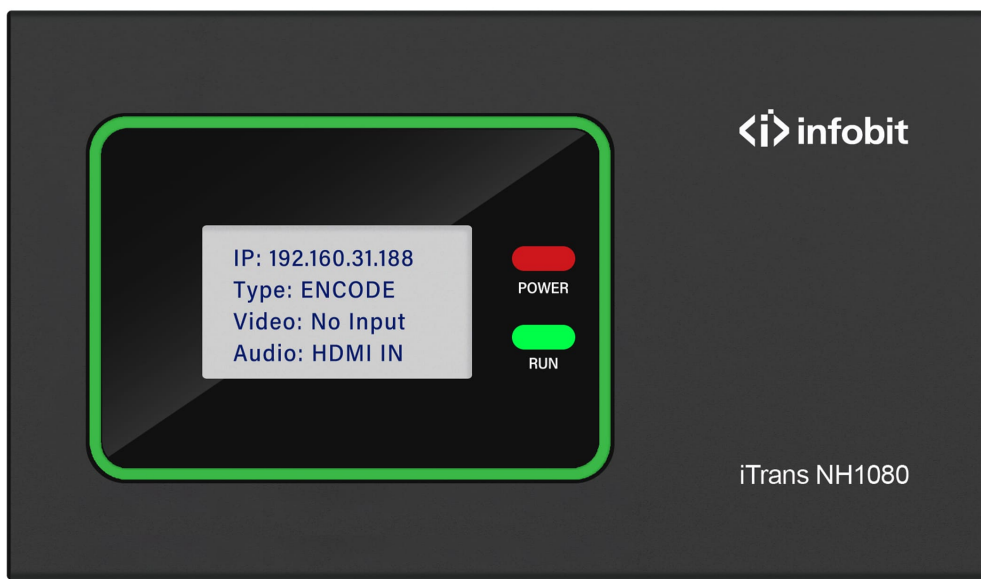
iTrans NH1080

HDMI 1080P Full NDI Encoder/ Decoder

Encoder: HDMI to NDI

Decoder: NDI to HDMI

User Manual V1.1



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1. INTRODUCTION

The **iTrans NH1080** is FULL NDI1080P Encoder / decoder which is integrated with NDI SDK, compatible with all FULL NDI products. It can be used as a HDMI TO FULL NDI encoder or FULL NDI TO HDMI decoder (Selectable through Web GUI interface).

2. FEATURES & SPECS

2.1 FEATURES

- Support FULL NDI, codec
- Encoder and Decoder all-in-one design.
- The encoder supports the HDMI loop out
- The HDMI input resolution is as 1080P/60, 1080P/59.94, 1080P/50, 1080P/30, 1080P/29.97, 1080P/25, 1080P/24, 720P/60, 720P/50
- Support PoE power supply
- Support PTZ camera control
- Support TALLY light display
- Support audio embedding and de-embedding
- Can be configured via the WEB GUI
- Support Multicast

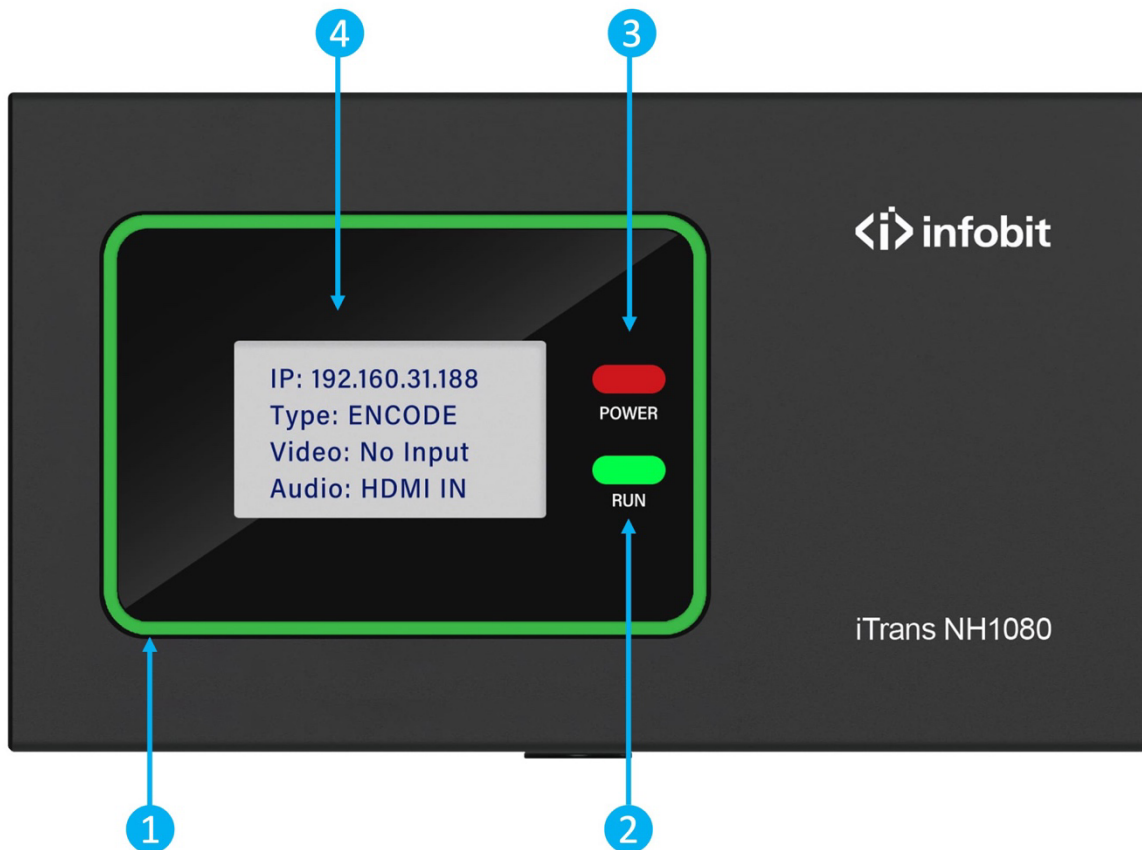
2.2 SPECS

Model	iTrans NH1080
Name	HDMI 1080P Full NDI Encoder/ Decoder
Encoder	HDMI to NDI
Decoder	NDI to HDMI
NDI Type	1080p Full NDI

HDMI IN resolution	1080P/60, 1080P/59.94, 1080P/50, 1080P/30, 1080P/29.97, 1080P/25, 1080P/24, 720P/60, 720P/50
Tally Light	Yes
PTZ Camera Control	Yes
Power Supply	DC 12V 1A or PoE
Web GUI	Yes
Audio embed	Yes
Audio de-embed	Yes
HDMI Loopout	Yes
Bandwidth	1G network switch
Product Dimension	132x76x26mm
Package Dimension	174x118x76x87mm
Net Weight	230g
Gross Weight	660g
Consumption	Max. 4W
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

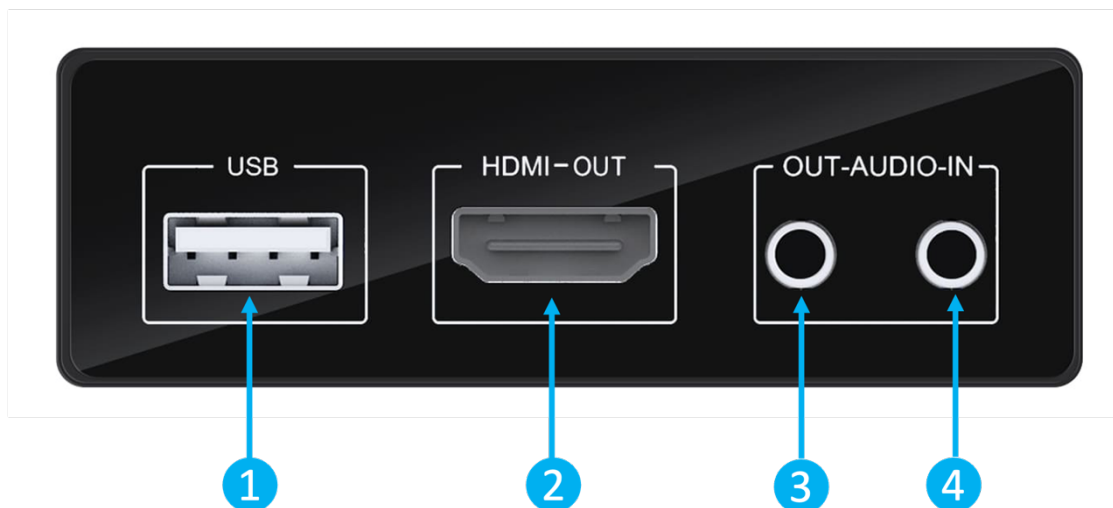
3. INTERFACES

3.1 TOP PANEL



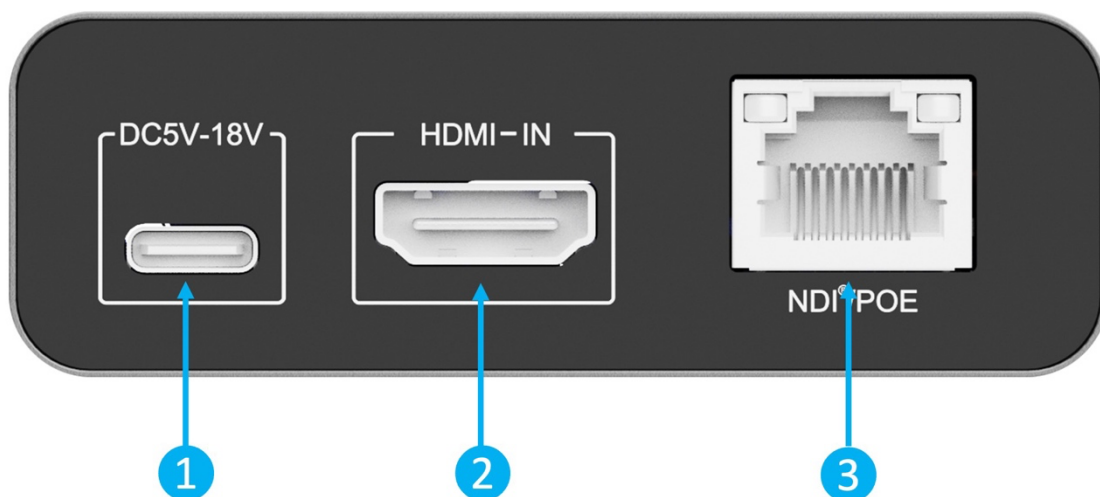
1	Tally Light	Green: Preview ON Red: Programming
2	RUN	Flashing Green: Working normally
3	POWER	Lighting Red: Power supply is normal
4	Screen	IP: Showing device IP address Type: ENCODE or DECODE Video: Showing video resolution Audio: Line IN or HDMI IN

3.2 RIGHT-SIDE PANEL



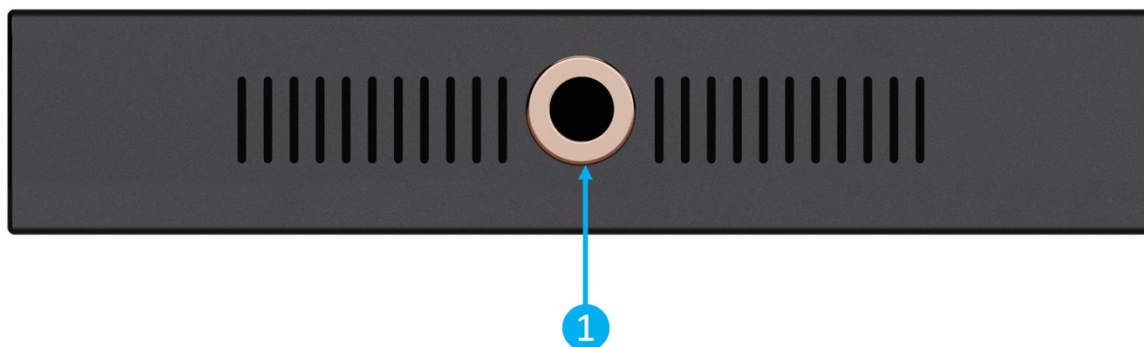
1	USB A	Connects USB to RS232 to control PTZ camera
2	HDMI-OUT	Encoder mode: HDMI loop-out Decoder mode: HDMI output
3	OUT-AUDIO	Encoder mode: No function Decoder mode: Audio output
4	AUDIO-IN	Encoder mode: Analog audio input Decoder mode: No function

3.3 LEFT-SIDE PANEL



1	DC5V-18V	USB Type C: power supply
2	HDMI-IN	Encoder mode: HDMI input Decoder mode: No function
3	NDI/POE	Encoder mode: NDI output, with PoE power supply Decoder mode: NDI input, with PoE power supply

3.4 BOTTOM-SIDE PANEL



1	1/4-20 screw hole	Used to connect accessories or camera.
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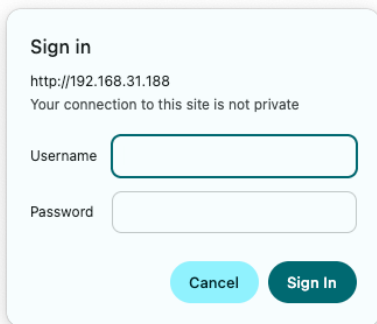
3.5 BACK-SIDE PANEL



1	RESET	How to reset if forget the username or password? Press the Reset Button in the bottom side of the iTrans NH1080 for 8 seconds and the device will reset to the factory with default account and password: Default Username: root Default Password: admin
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4. WEB GUI

4.1 LOGIN



Sign in

http://192.168.31.188

Your connection to this site is not private

Username

Password

Check the screen display on the top panel, for example if the **iTrans NH1080** IP address is **192.168.31.188**. Change the computer IP to **192.168.31.xxx** (Under the same subnet but not the same IP as the device), connect the device and computer directly through a network cable, or connect the device computer to a Gigabit switch.

Default Username: **root**

Default Password: **admin**

4.2 STATUS

StatusNetworkNDI®PTZSystem

root

NDI Convert

System Information

Hardware version

Firmware version

Web version

V1.0

ENCODE-20250224

29254c9c-20240808

CPU

4.02 %

Memory

4.91 %

Temperature

53.28 °C

Start Time

00h:23m:06s

Ethernet

Speed

1000 Mbps

IP Address

192.168.31.188

Send

0 Kbps

Receive

0 Kbps

Information

Video Source

NDI_12

Serial Port

NULL

Tally Status

Close

Here it is showing the status information including NDI Convert System Information, Ethernet Status and other Information.

4.2.1 SYSTEM INFORMATION

NDI Convert	Hardware version	V1.0		
System Information	Firmware version	ENCODE-20250224		
	Web version	29254c9c-20240808		
				
	CPU	Memory	Temperature	Start Time
	9.43 %	5.00 %	55.12 °C	00h:35m:11s

Hardware version: Device hardware version number.

Firmware version: Device firmware version number.

WEB version: Web GUI version number.

CPU: CPU running ratio.

Memory: The memory running ratio

Temperature: The chipset temperature

Start time: The running time of the device

4.2.2 ETHERNET

Ethernet	Speed	IP Address	Send	Receive
	1000 Mbps	192.168.31.188	9 Kbps	2 Kbps

Speed: The bandwidth of the connected network switch is 1,000M

IP address: The IP of iTrans NH1080

Send: Current size of sending data as encoder.

Receive: Current size of received data as decoder.

4.2.3 INFORMATION

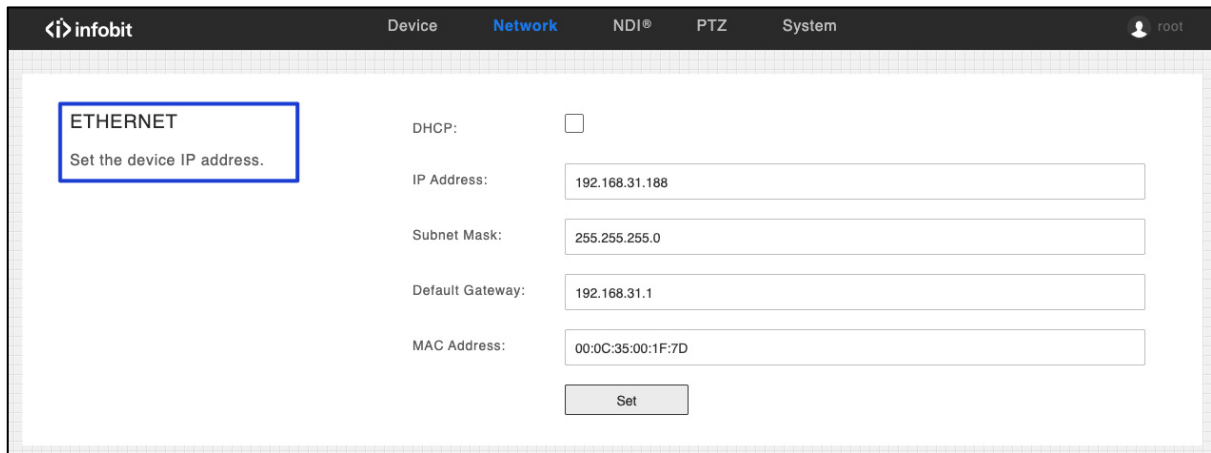
Information	Video Source	Serial Port	Tally Status
	NDI_12	NULL	Close

Video source: Name of the current device.

Serial port: USB port connection status when controlling PTZ camera.

Tally status: The status of the Tally light.

4.3 NETWORK



The screenshot shows the 'Network' configuration page in the infobit web interface. The page has a dark header with the infobit logo and navigation tabs: Device, Network (selected), NDI®, PTZ, and System. A user profile icon labeled 'root' is in the top right. On the left, a sidebar contains a blue-bordered box labeled 'ETHERNET' with the text 'Set the device IP address.' below it. The main content area contains the following fields:

- DHCP:** A checkbox that is currently unchecked.
- IP Address:** A text input field containing '192.168.31.188'.
- Subnet Mask:** A text input field containing '255.255.255.0'.
- Default Gateway:** A text input field containing '192.168.31.1'.
- MAC Address:** A text input field containing '00:0C:35:00:1F:7D'.

At the bottom of the form is a 'Set' button.

DHCP: To enable or disable DHCP mode.

IP address: Modify the iTrans NH1080 IP address.

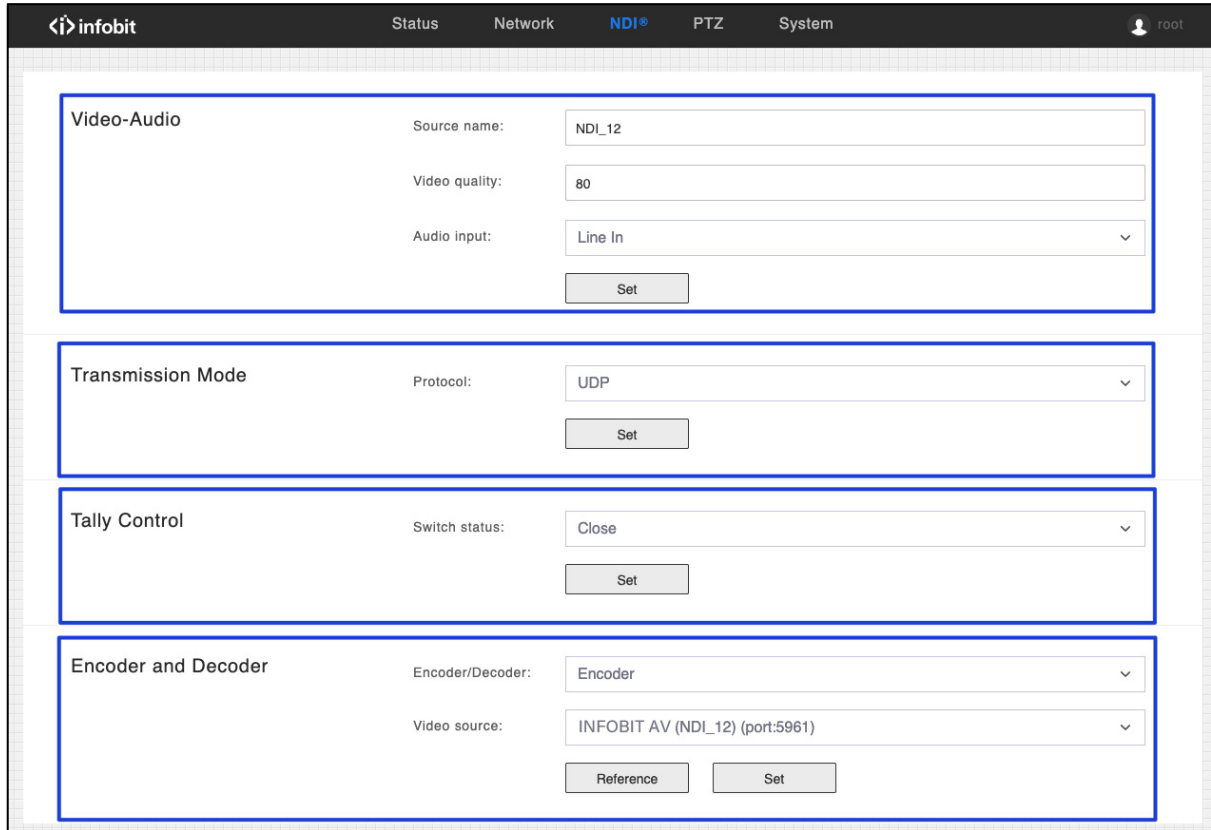
Subnet mask: Modify iTrans NH1080 subnet mask.

Default gateway: Modify iTrans NH1080 gateway.

Mac Address: The Mac address of iTrans NH1080 is not changeable.

Set: Click to save all modifications.

4.4 NDI

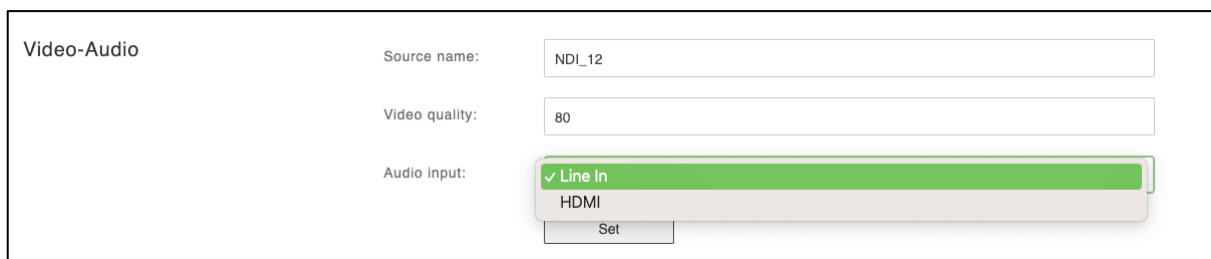


The screenshot shows the infobit NDI configuration page. The top navigation bar includes 'infobit', 'Status', 'Network', 'NDI®', 'PTZ', and 'System'. The user 'root' is logged in. The main content area is divided into four sections, each with a blue border:

- Video-Audio:** Source name: NDI_12, Video quality: 80, Audio input: Line In (dropdown), Set button.
- Transmission Mode:** Protocol: UDP (dropdown), Set button.
- Tally Control:** Switch status: Close (dropdown), Set button.
- Encoder and Decoder:** Encoder/Decoder: Encoder (dropdown), Video source: INFOBIT AV (NDI_12) (port:5961) (dropdown), Reference and Set buttons.

Here includes the Video-Audio settings, Transmission Mode, Tally Control and Encoder/Decoder selection.

4.4.1 VIDEO-AUDIO



This close-up shows the Video-Audio settings section. The 'Audio input' dropdown menu is open, showing 'Line In' (selected with a green checkmark) and 'HDMI'. The 'Set' button is visible below the dropdown.

Source name: Modify iTrans NH1080 name

Video quality: Modify the NDI coding bandwidth from arrange **50 to 200**. The greater number means greater bandwidth, more delay, but more clearer picture

quality. The smaller number means less bandwidth, less delay, but more lower picture quality. It is recommended to use **100**.

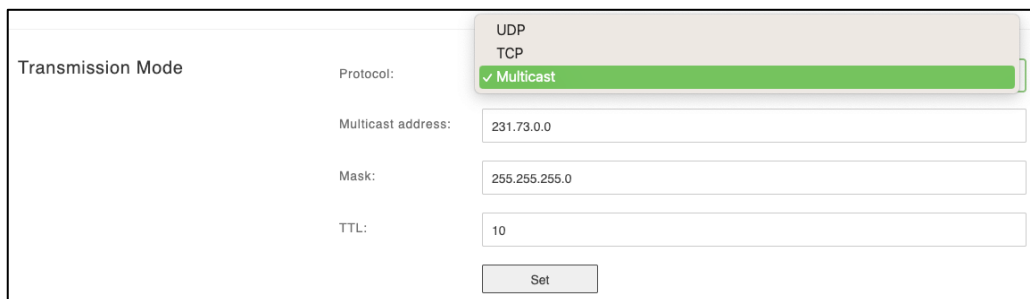
Audio input: Under the encoder mode

Select the **Line in** as the analog audio input.

Select the **HDMI** as the HDMI embedded audio.

Set: Click to save all changes.

4.4.2 TRANSMISSION MODE



The image shows a web interface for configuring the Transmission Mode. It includes a dropdown menu for Protocol with options UDP, TCP, and Multicast (selected). Below are input fields for Multicast address (231.73.0.0), Mask (255.255.255.0), and TTL (10). A Set button is at the bottom.

Transmission mode:

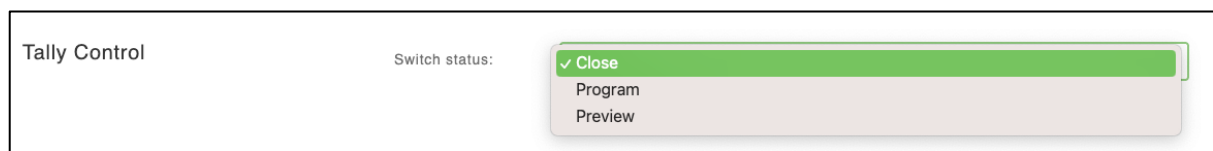
UDP: Transmits NDI with **UDP** protocol, and the lost package data will not be resending.

TCP: Transmits NDI with **TCP** protocol, and the lost package data will be sent again.

Multicast: It supports multicast, modify the **Multicast address**, **Mask** and **TTL**.

Set: Click to save all changes.

4.4.3 TALLY CONTROL



The image shows a web interface for Tally Control. It includes a Switch status dropdown menu with options Close (selected), Program, and Preview.

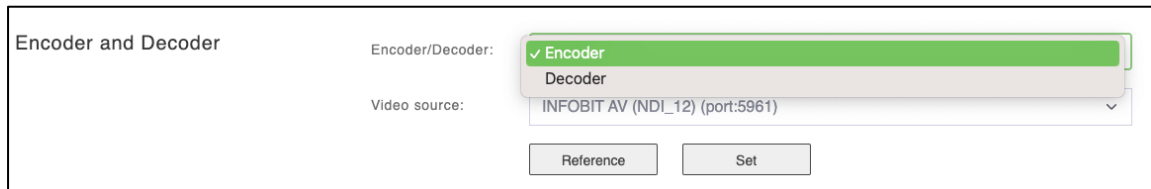
Close: Turn off the tally function

Program: monitoring mode, the tally light is in red.

Preview: Preview mode, the tally light is in green

Set: Click to save all changes.

4.4.4 ENCODER AND DECODER

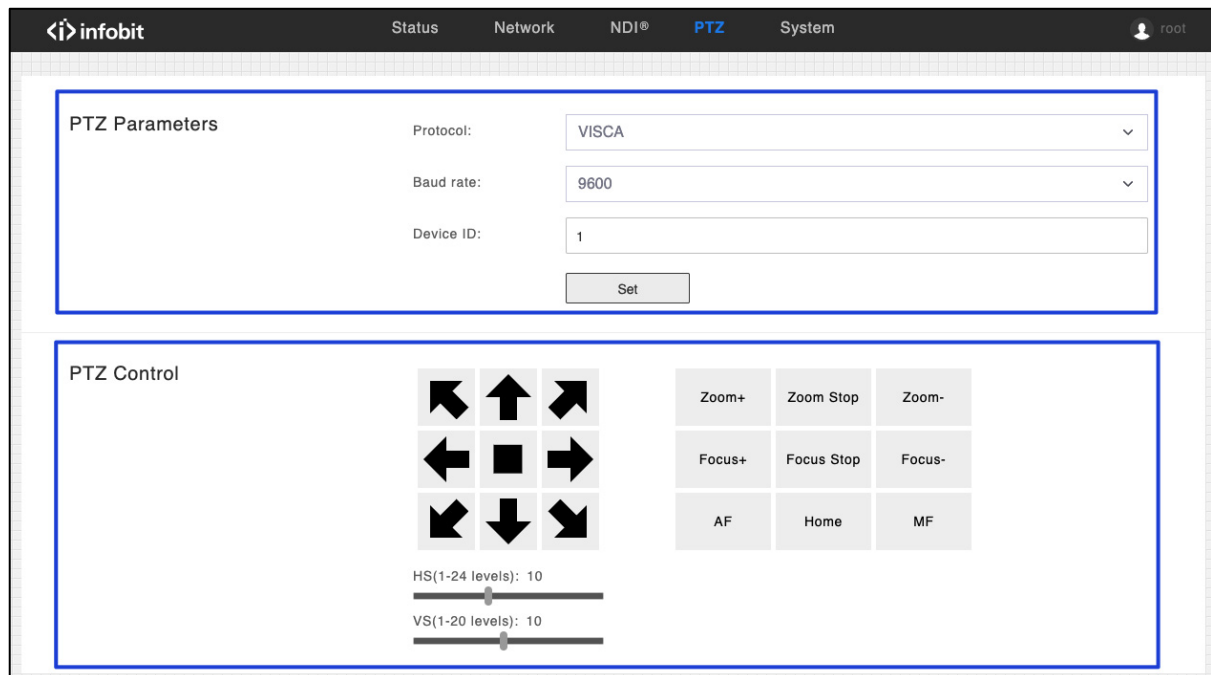


Encoder/Decoder: Select the **iTrans NH1080** as an encoder (HDMI to NDI) or decoder (NDI to HDMI).

Video source: When the **iTrans NH1080** is set as a decoder, select the input NDI device name. (**Note:** When the **iTrans NH1080** is set as an encoder, there is no function.)

Set: Click to save all changes.

4.5 PTZ



Here includes PTZ parameters settings and PTZ control.

4.5.1 PTZ PARAMETERS

PTZ Parameters

Protocol:

VISCA

Baud rate:

9600

Device ID:

1

Set

Protocol: VISCA protocol

Baud rate: Select communication baud rate, it supports 2400, 4800, 9600, 19200 or 38400.

Device ID: ID of the PTZ camera

Set: Click to save all changes.

4.5.2 PTZ CONTROL

PTZ Control

1

↖

↑

↗

←

■

→

↙

↓

↘

HS(1-24 levels): 10

VS(1-20 levels): 10

2

Zoom+

Zoom Stop

Zoom-

Focus+

Focus Stop

Focus-

AF

Home

MF

1: Pan Tile: Control the direction of the camera.

2: Zoom: Control the camera zoom and focusing.

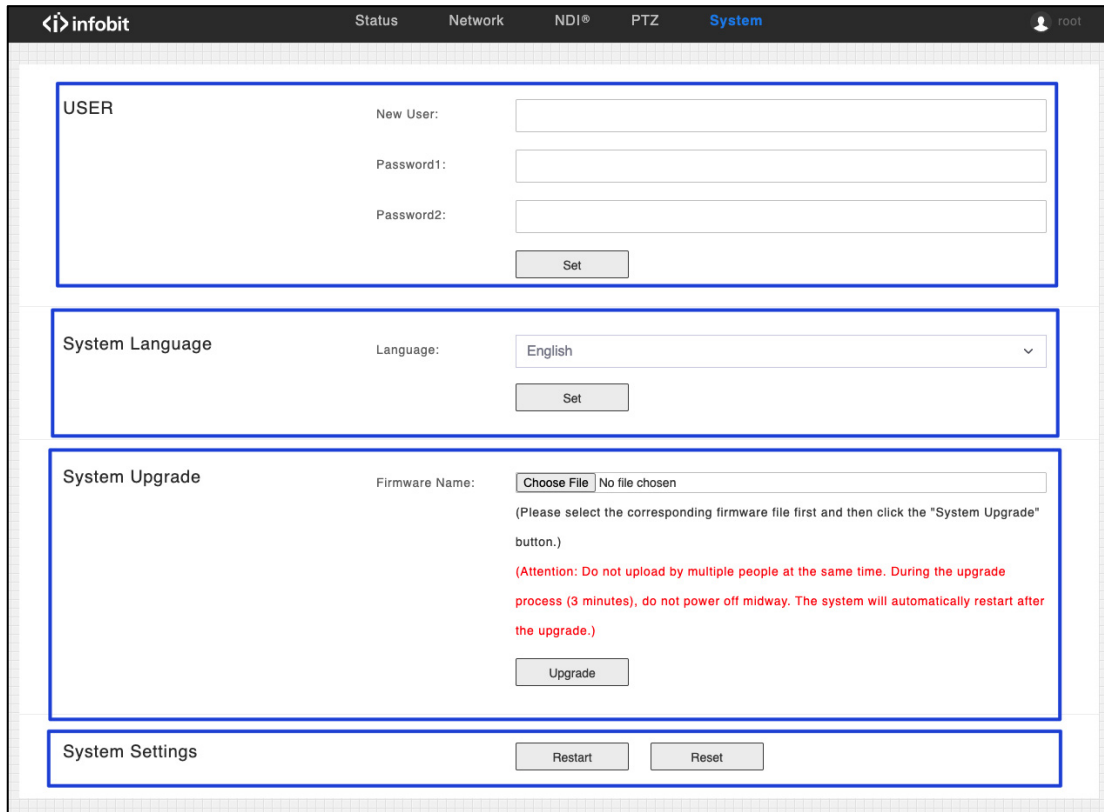
3: Horizontal/ Vertical Speed: Control the horizontal and the vertical motion speed of the camera.

INFOBIT AV

www.infobitav.com

info@infobitav.com

4.6 SYSTEM



The screenshot shows the 'System' settings page in the infobit web interface. The page has a dark header with the infobit logo and navigation tabs: Status, Network, NDI®, PTZ, and System (which is active). A user profile icon labeled 'root' is in the top right. The main content area is divided into four sections, each with a blue border:

- USER:** Contains fields for 'New User:', 'Password1:', and 'Password2:', followed by a 'Set' button.
- System Language:** Contains a 'Language:' dropdown menu set to 'English' and a 'Set' button.
- System Upgrade:** Contains a 'Firmware Name:' field with a 'Choose File' button and 'No file chosen' text. Below this is a warning message in red: '(Please select the corresponding firmware file first and then click the "System Upgrade" button.)' and '(Attention: Do not upload by multiple people at the same time. During the upgrade process (3 minutes), do not power off midway. The system will automatically restart after the upgrade.)'. An 'Upgrade' button is at the bottom.
- System Settings:** Contains 'Restart' and 'Reset' buttons.

Here includes settings of user, language, restart or reset.

4.6.1 USER



This block shows a close-up of the 'USER' settings section from the screenshot. It includes the following elements:

- USER:** The section title.
- New User:** A text input field.
- Password1:** A text input field.
- Password2:** A text input field.
- Set:** A button to save the new user information.

USER: Set the new username and password.

4.6.2 SYSTEM LANGUAGE

System Language	Language:	English
		Set

System Language: To switch language for the Web GUI.

4.6.3 SYSTEM UPGRADE

System Upgrade	Firmware Name:	Choose File No file chosen
(Please select the corresponding firmware file first and then click the "System Upgrade" button.)		
(Attention: Do not upload by multiple people at the same time. During the upgrade process (3 minutes), do not power off midway. The system will automatically restart after the upgrade.)		
		Upgrade

Select file: Select the upgraded file from your PC.

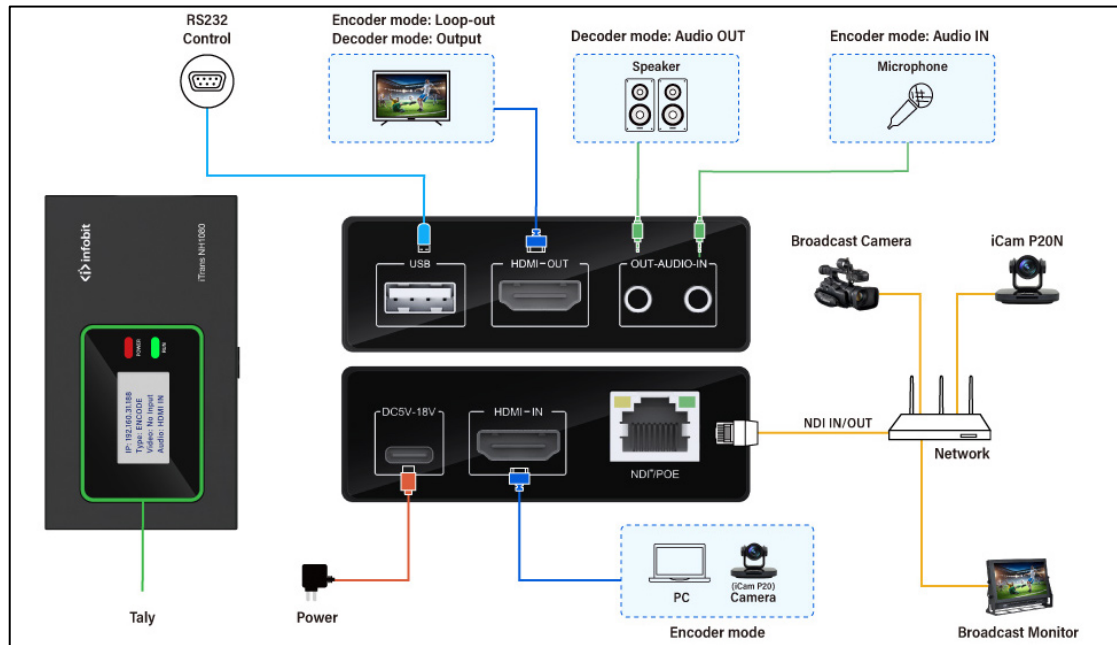
Upgrade: After selecting the file, click the button. After the upgrade, the system will automatically restart, DO NOT power off during upgrading.

4.6.4 SYSTEM SETTINGS

System Settings	Restart	Reset
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System Settings: To **Restart** or **Reset** the iTrans NH1080.

5. DIAGRAM



6. FAQ

1. How to power the iTrans NH1080?

Use Gigabit PoE power supply or use the **iTrans NH1080** power supply.

2. Can not connect the iTrans NH1080 Web GUI?

To Log in the UI interface, your PC must be in the same local area network with the **iTrans NH1080**. Modify your PC IP address to **192.168.31.X** (Not the same IP address as the device). You can change the iTrans NH1080 IP address in the Web GUI after login.

3. Can I use less than 1G network switch?

No, you must use **1G** network switch, otherwise there will be video and sound delay.

4. How to reset if forget the username or password?



Press the **Reset Button** in the bottom side of the **iTrans NH1080** for **8 seconds** and the device will reset to the factory with default account and password:

Default Username: **root**

Default Password: **admin**