iTrans NH1080

HDMI 1080P Full NDI Encoder/ Decoder

Encoder: HDMI to NDI

Decoder: NDI to HDMI

User Manual V1.1

CONTENTS

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

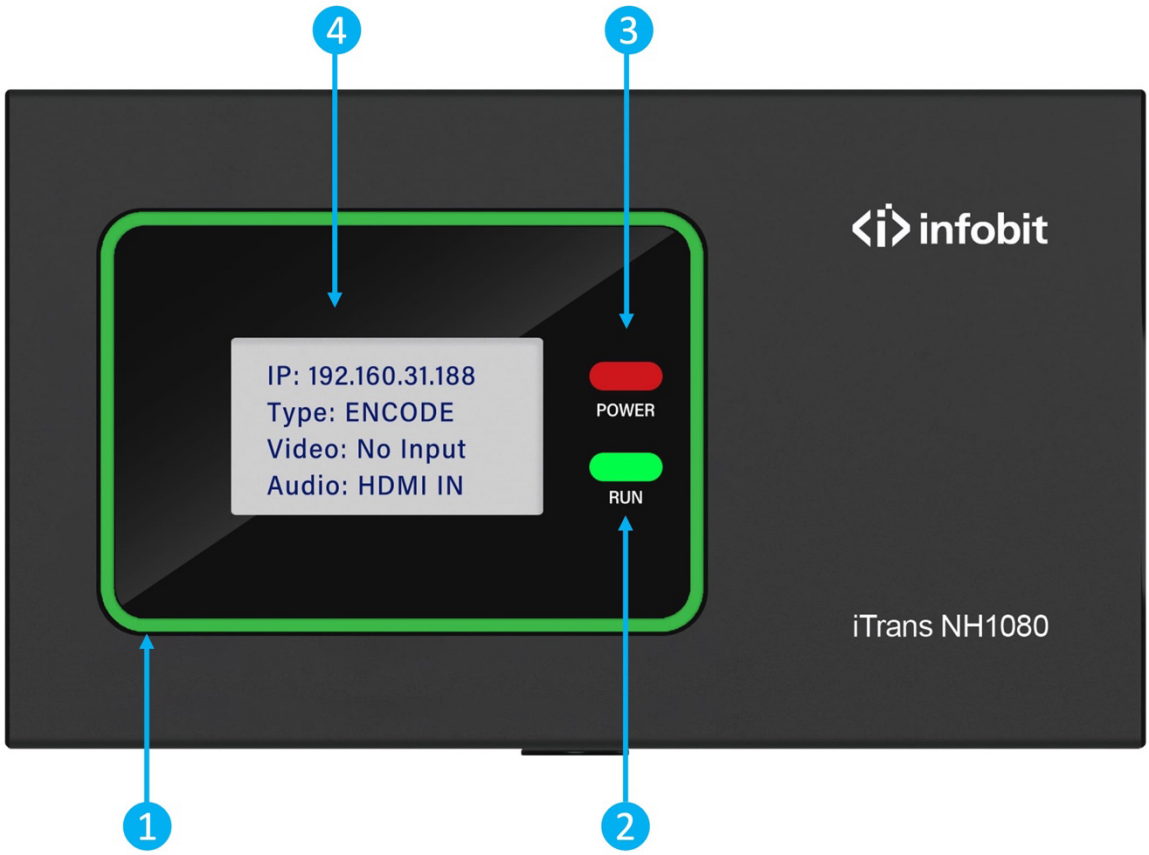
2.2 SPECS

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)

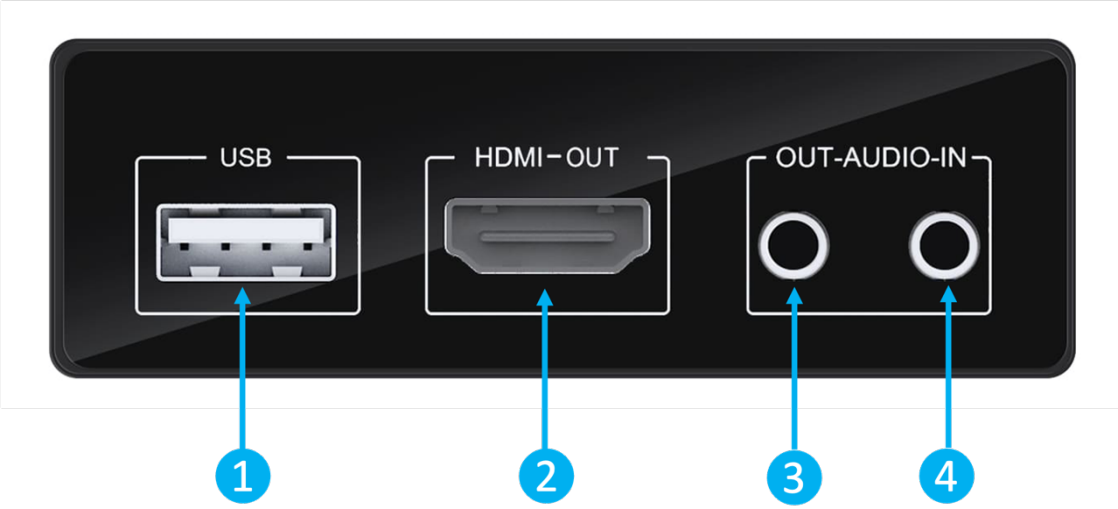
3. INTERFACES

3.1 TOP PANEL



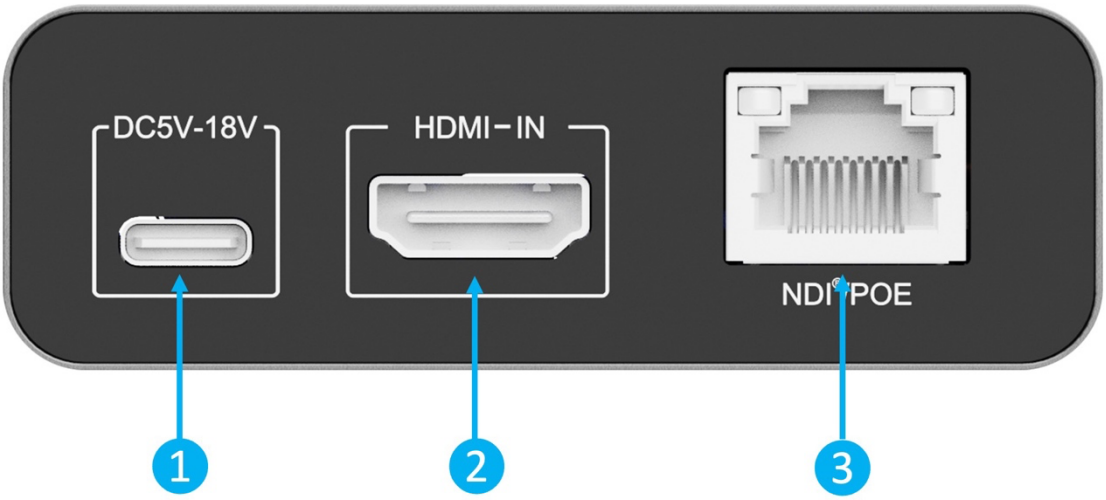
1	**Tally Light**	**Green:** Preview ON **Red:** Programming
2	**RUN**	**Flashing Green:** Working normally
3	**POWER**	**Lighting Red:** Power supply is normal
4	**Screen**	**IP:** Showing device IP address **Type:** ENCODE or DECODE **Video:** Showing video resolution **Audio:** Line IN or HDMI IN

3.2 RIGHT-SIDE PANEL



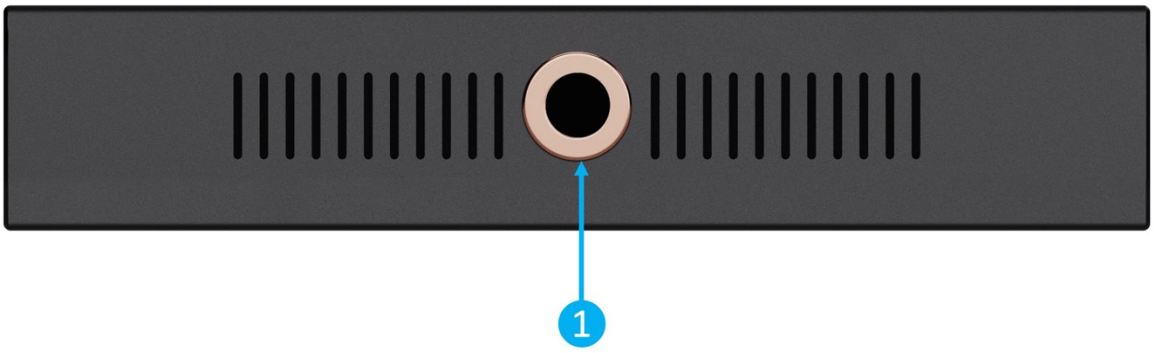
1	USB A	Connects USB to RS232 to **control PTZ camera**
2	HDMI-OUT	**Encoder mode:** HDMI loop-out **Decoder mode:** HDMI output
3	OUT-AUDIO	**Encoder mode:** No function **Decoder mode:** Audio output
4	AUDIO-IN	**Encoder mode:** Analog audio input **Decoder mode:** No function

3.3 LEFT-SIDE PANEL



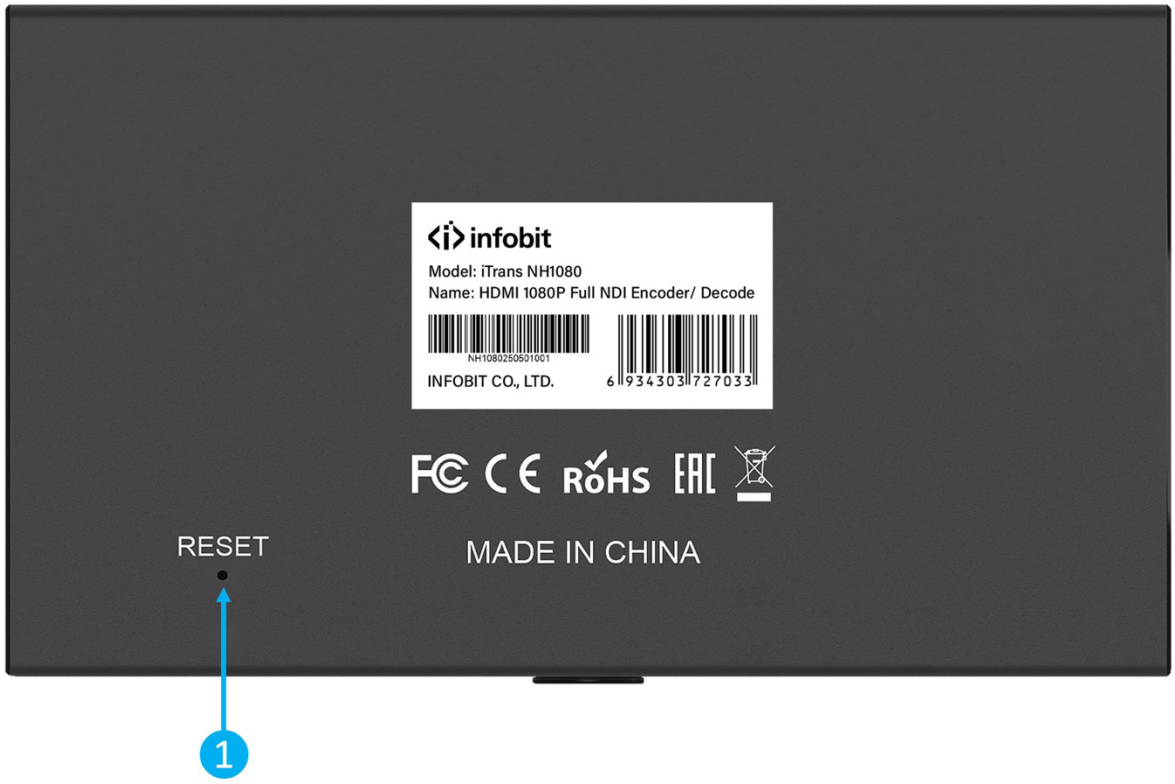
1	DC5V-18V	**USB Type C:** power supply
2	HDMI-IN	**Encoder mode:** HDMI input **Decoder mode:** No function
3	NDI/POE	**Encoder mode:** NDI output, with PoE power supply **Decoder mode:** NDI input, with PoE power supply

3.4 BOTTOM-SIDE PANEL



1	**1/4-20 screw hole**	Used to connect accessories or camera.

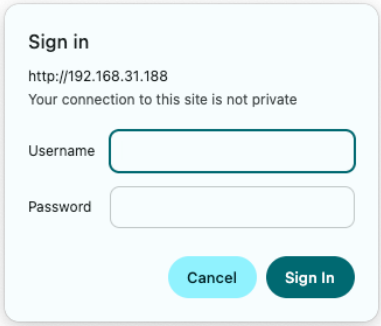
3.5 BACK-SIDE PANEL



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**

4. WEB GUI

4.1 LOGIN

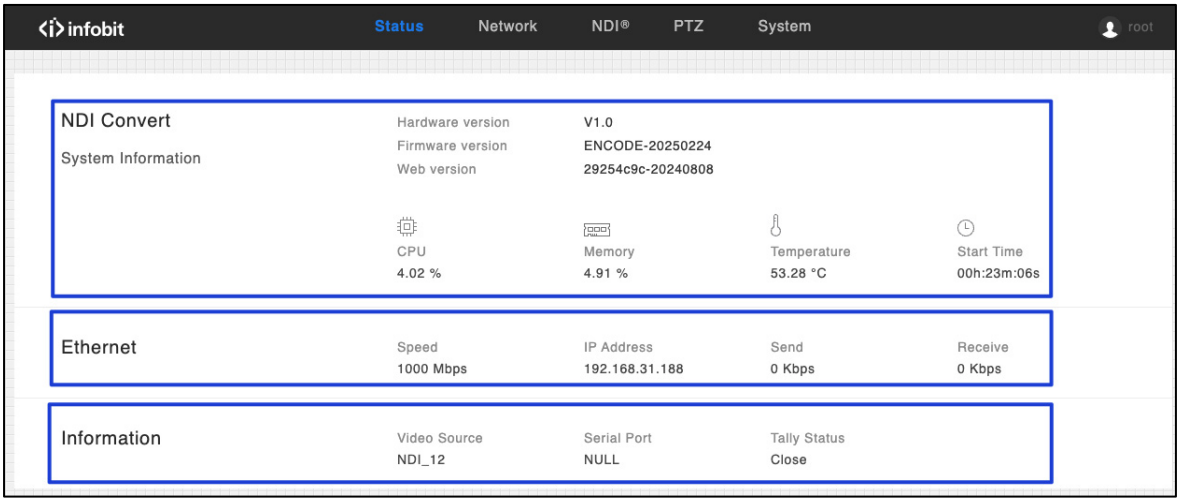


Check the screen display on the top panel, for example if the **iTrans NH1080** IP address is **192.168.31.188**. Change the computer IP to **192.168.31.xxx** (Under the same subnet but not the same IP as the device), connect the device and computer directly through a network cable, or connect the device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

Default Username: **root**

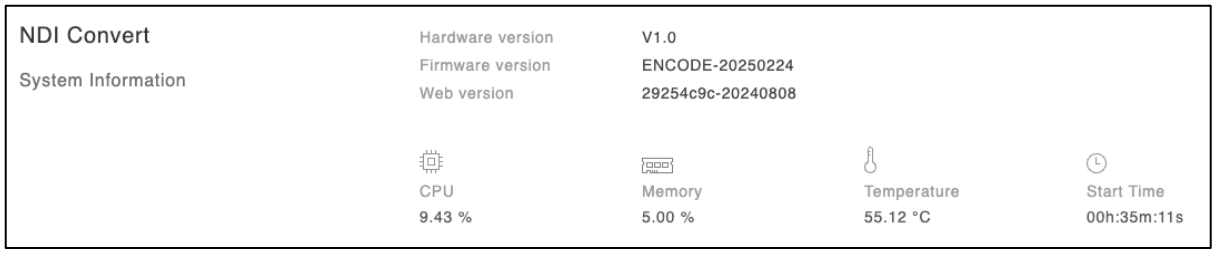
Default Password: **admin**

4.2 STATUS



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

4.2.1 SYSTEM INFORMATION



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 runing time of the device

4.2.2 ETHERNET

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.

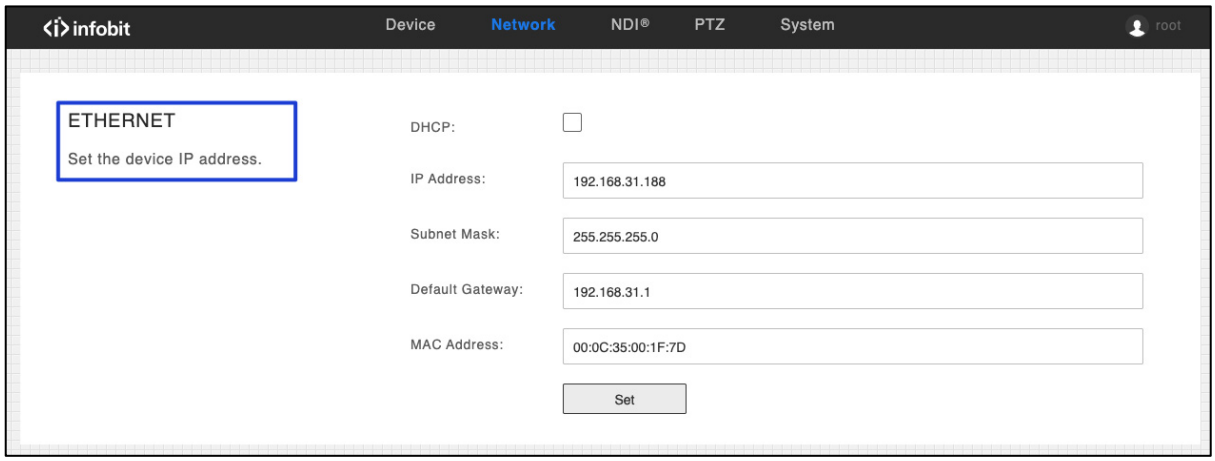
4.2.3 INFORMATION

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



DHCP: To enable or disable DHCP mode.

IP address: Modify the **iTrans NH1080** IP address.

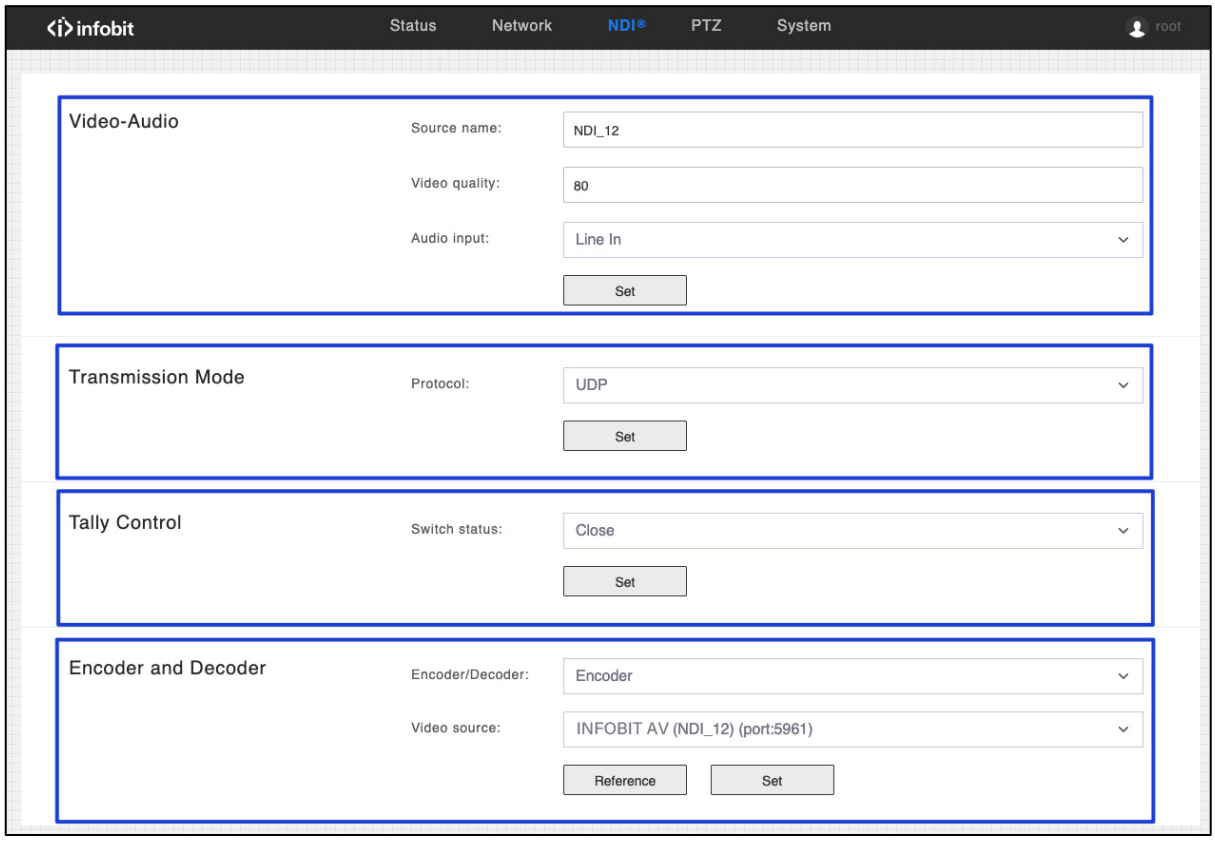
Subnet mask: Modify **iTrans NH1080** subnet mask.

Default gateway: Modify **iTrans NH1080** gateway.

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

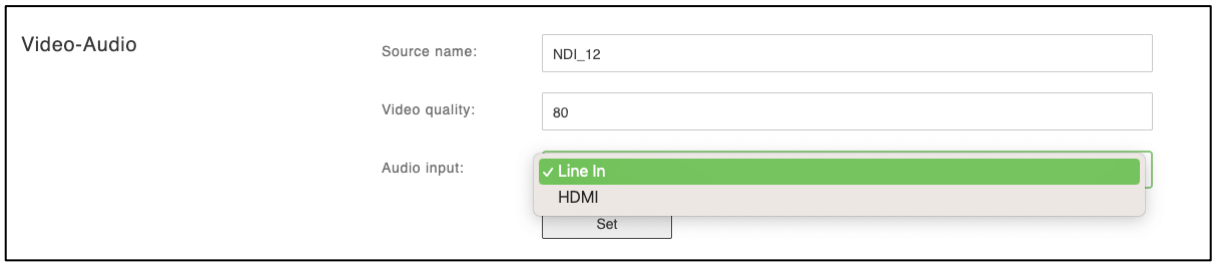
Set: Click to save all modifications.

4.4 NDI



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

4.4.1 VIDEO-AUDIO



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**.

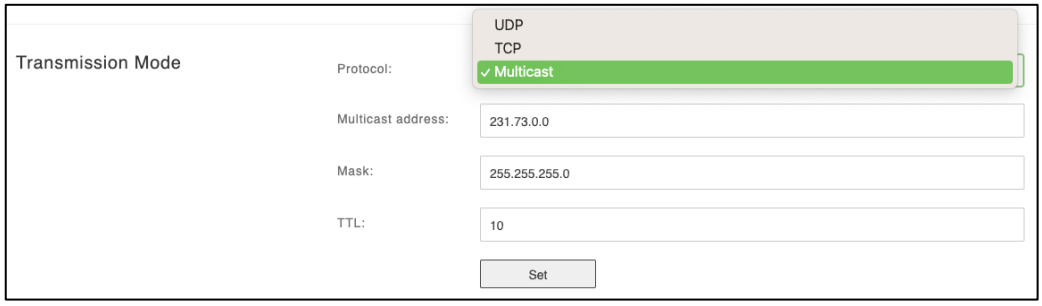
Audio input: Under the encoder mode

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



Transmission mode:

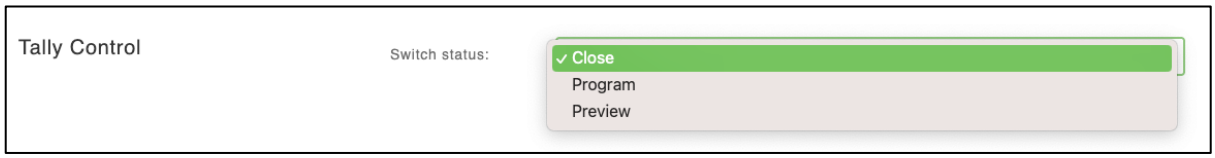
UDP: Transmits NDI with **UDP** protocol, and the lost package data will not be resending.

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



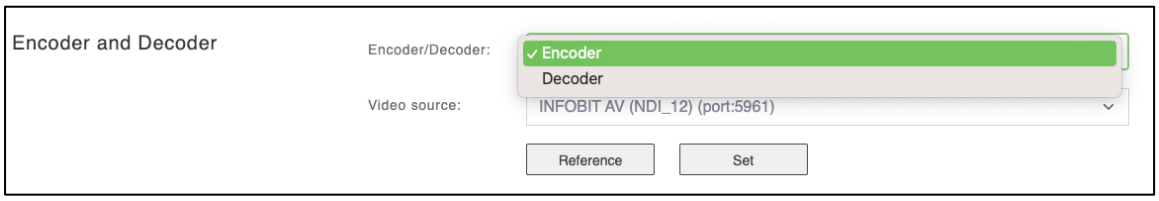
Close: Turn off the tally function

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

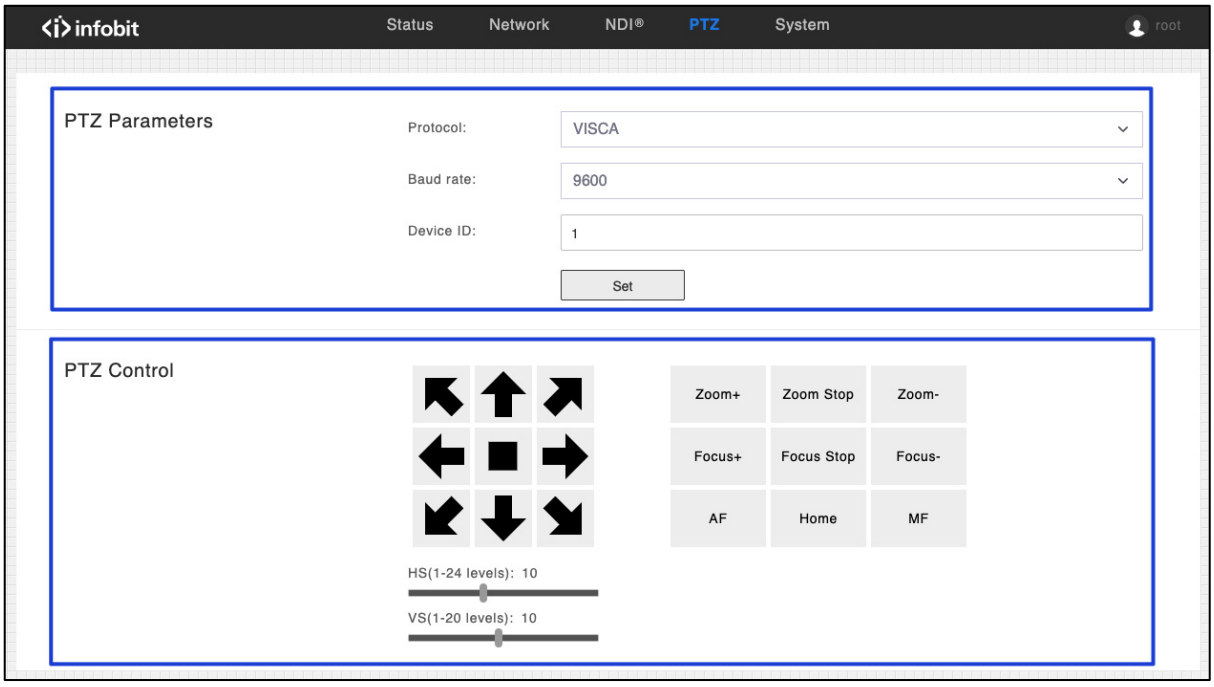


Encoder/Decoder: Select the **iTrans NH1080** as an encoder (HDMI to NDI) or decoder (NDI to HDMI).

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, here is no funtion.)*

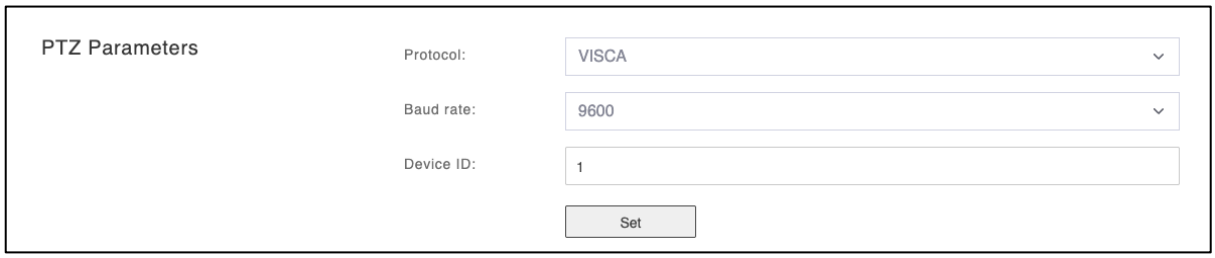
Set: Click to save all changes.

4.5 PTZ



Here includes PTZ parameters settings and PTZ control.

4.5.1 PTZ PARAMETERS



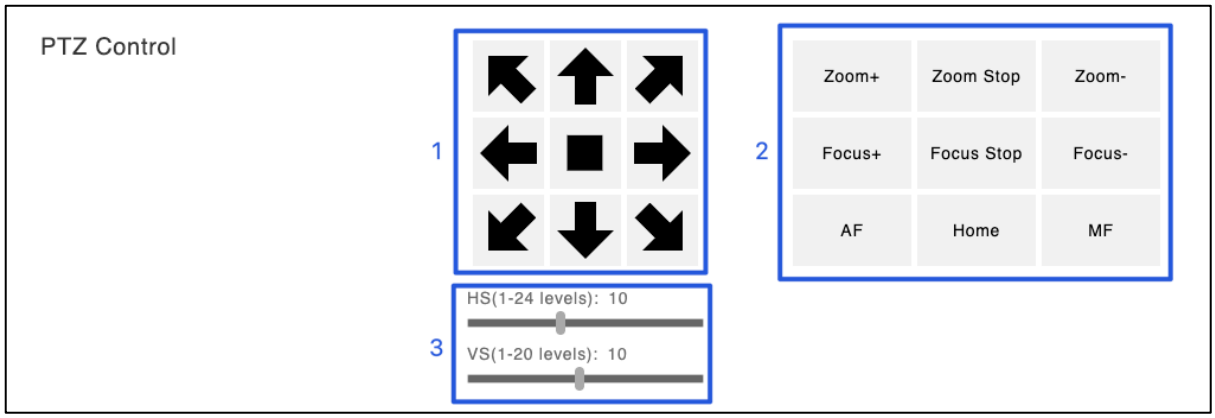
Protocol: VISCA protocol

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

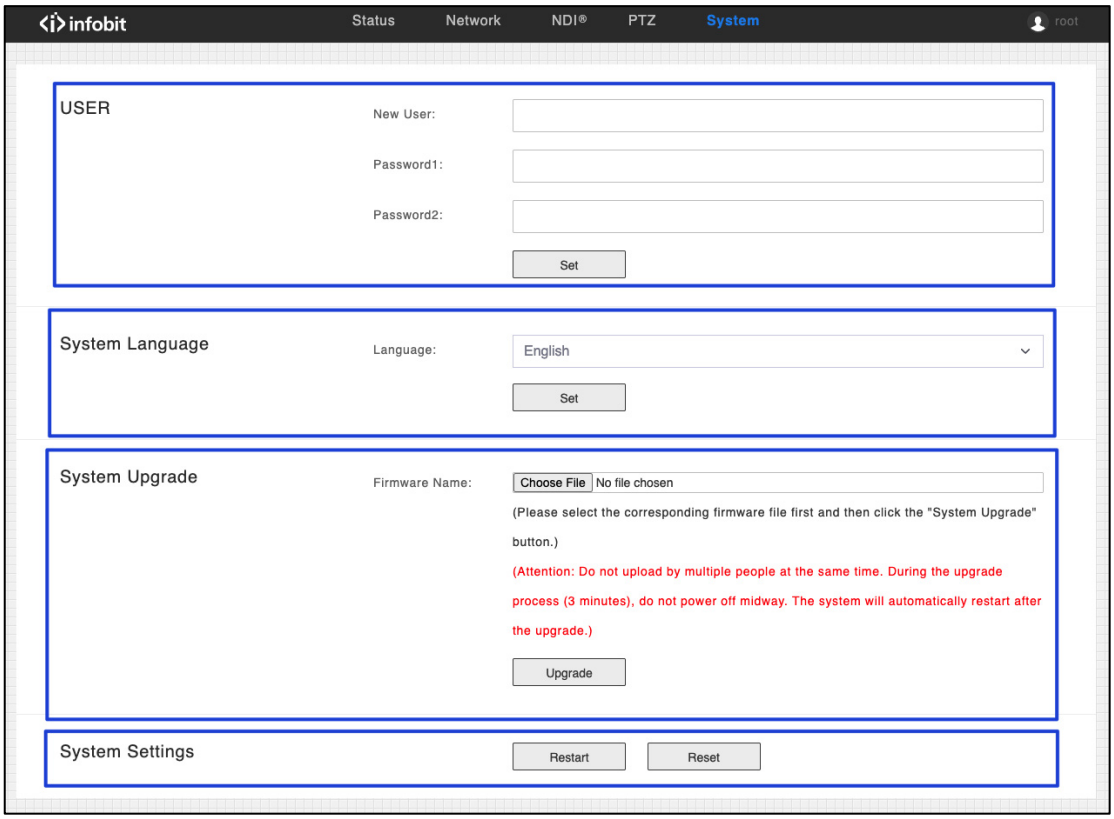


1: Pan Tile: Control the direction of the camera.

2: Zoom: Control the camera zoom and focusing.

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

4.6 SYSTEM



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

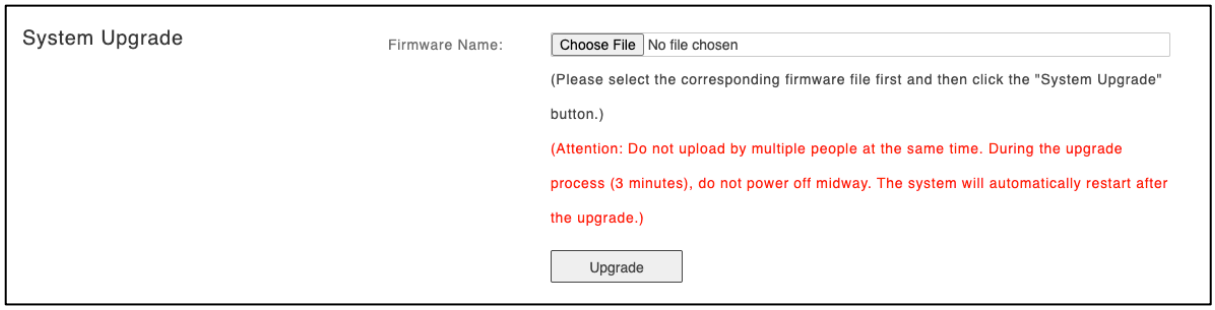
4.6.1 USER

USER: Set the new username and password.

4.6.2 SYSTEM LANGUAGE

System Language: To switch language for the Web GUI.

4.6.3 SYSTEM UPGRADE



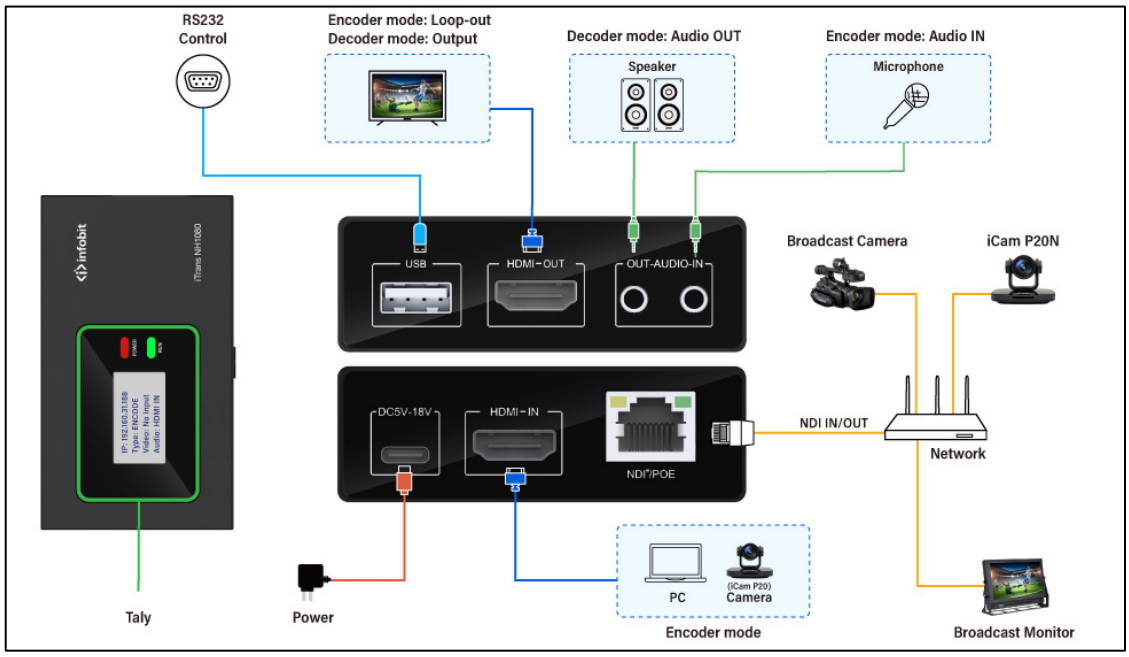
Select file: Select the upgraded file from your PC.

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: 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**