NetUP Streamer HD v3 8-24x

User manual

9 November 2022
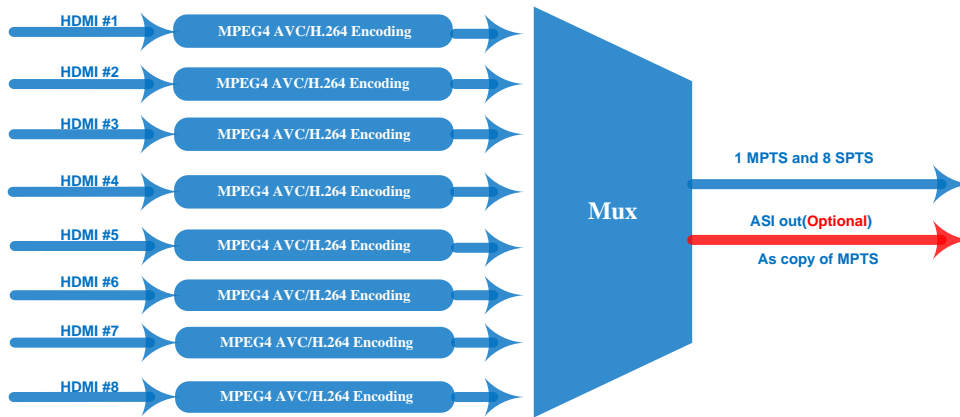
Contents

Chapter 1 Product Introduction

1.1 Outline

NetUP Streamer HD v.3 is a professional HD/SD audio & video encoding device. It has 8/16/24 HDMI inputs for option. Every 8 HDMI ports share one encoder module with each module supporting 1MPTS and 8 SPTS output. Its high integration and cost effective design makes the device widely used in varieties of digital distribution systems such as cable TV digital head-end, digital TV broadcasting etc.

1.2 Main Features

- **8 HDMI inputs with 8 SPTS and 1 MPTS output (each encoder module), max 24 HDMI inputs**
- **MPEG4 AVC/H.264 video encoding format**
- **MPEG1 Layer II, LC-AAC,　HE-AAC audio encoding format and AC3 Pass Through, and audio gain adjustment**
- **IP output over UDP and RTP/RTSP protocol; 1 ASI out as mirror of MPTS (Optional)**
- **Support QR code, LOGO, caption insertion (Language Supported: 中文, English, العربية, ไทย, हिन्दी, русский, اردو for more languages please consult us…)**
- **Support "Null PKT Filter" function**
- **Control via web management, and easy updates via web**

1.3 Principle Chart (Each Encoder Module)


1.4 Technical specification

Input	8/16/24 HDMI inputs		
Video	Resolution	input	1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720 x 576_50i,720 x 480_60i
		Output	1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720 x 576_25P, 720 x 480_30P
	Encoding		MPEG-4 AVC/H.264
	Bit-rate		1~13Mbps each channel
	Rate Control		CBR/VBR
	GOP Structure		IP…P (P Frame adjustment, without B Frame)
Audio	Encoding		MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through
	Sampling rate		48KHz
	Resolution		24-bit
	Audio Gain		0-255 Adjustable
	MPEG-1 Layer 2 Bit-rate		48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	LC-AAC Bit-rate		48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	HE-AAC Bit-rate		48/56/64/80/96/112/128 kbps
Stream output	IP output through DATA (GE) over UDP and RTP/RTSP protocol (8 HDMI inputs with 8 SPTS and 1MPTS output for each encoder board) 1 ASI out as mirror of MPTS (Optional as order)		
	Network management(WEB)		

| System function	Chinese and English language	
	Ethernet software upgrade	
Miscellaneous	Dimension (W×L×H)	482mm×328mm×44mm
	Environment	0~45℃(work)；-20~80℃（Storage）
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz

1.5 Appearance and Illustration

Front Panel Illustration:

1U chassis (three encoder modules) illustration：
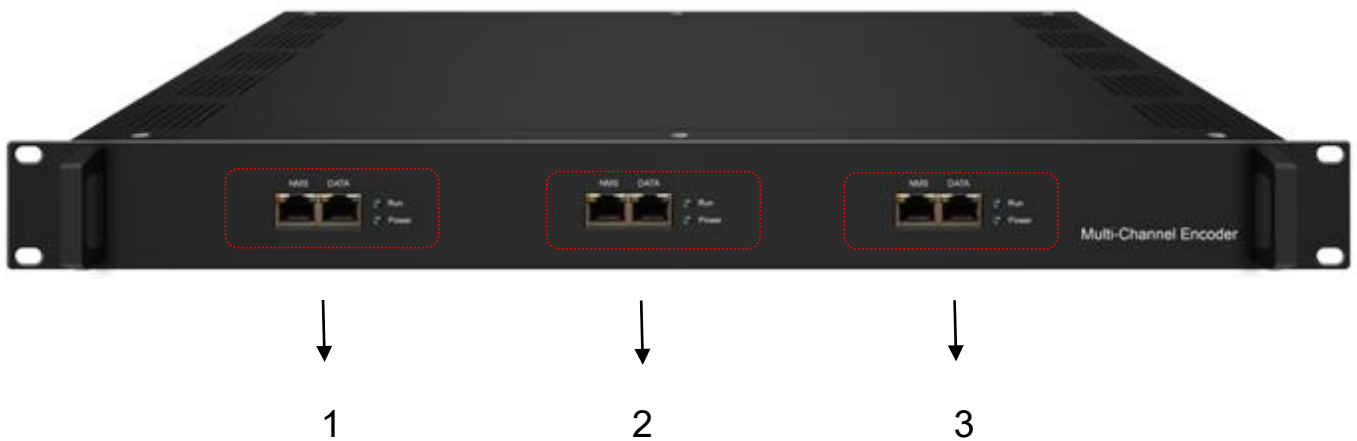
1	Module 3 NMS and Data port and indicators Data Port (for IP Signal Output) NMS (Network Management Port)
2	Module 2 NMS and Data port and indicators
3	Module 1 NMS and Data port and indicators

Rear Panel Illustration:
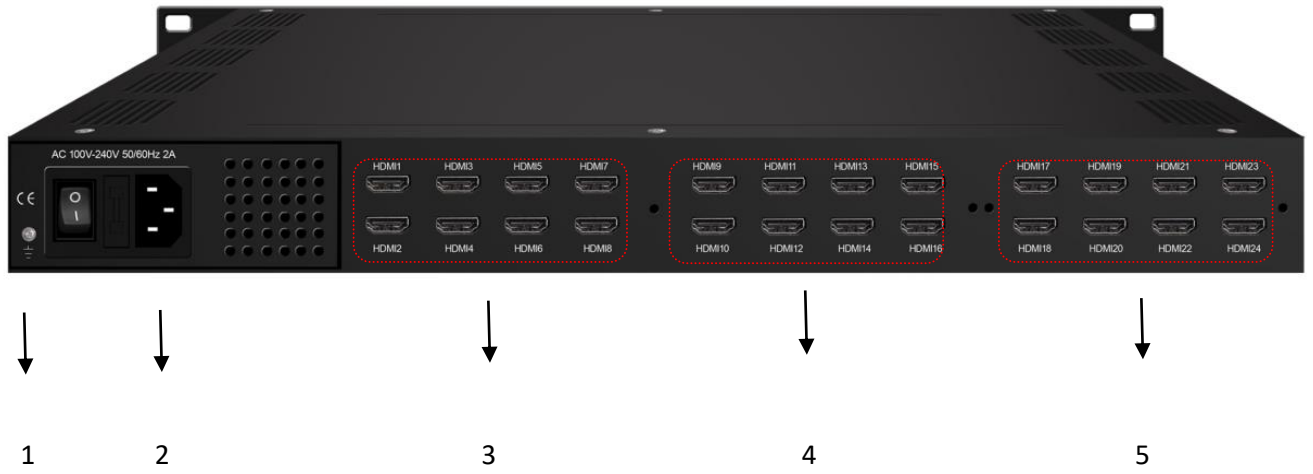
1	Grounding Pole
2	Power Switch and socket
3	Module 1: HDMI 1-8
4	Module 2: HDMI 9-16
5	Module 3: HDMI 17-24

Chapter 2 Installation Guide

2.1 Acquisition Check

When users open the package of the device, it is necessary to check items according to packing list.

Normally it should include the following items:

- NetUP Streamer HD v.3
- Power Cord
- HDMI cables

If any item is missing or mismatching with the list above, please contact local dealer.

2.2 Installation Preparation

When users install device, please follow the below steps. The details of installation will be described at the rest part of this chapter. Users can also refer rear panel chart during the installation.

The main content of this chapter including:

- Checking the possible device missing or damage during the transportation
- Preparing relevant environment for installation
- Installing Encoder
- Connecting signal cables
- Connecting communication port (if it is necessary)

2.2.1 Device's Installation Flow Chart is Illustrated as following：

Acquisition Check → Fixing Device → Connecting Grouding Wire and Power Cord → Connecting Signal Wire → Setting Parameter → Running Device
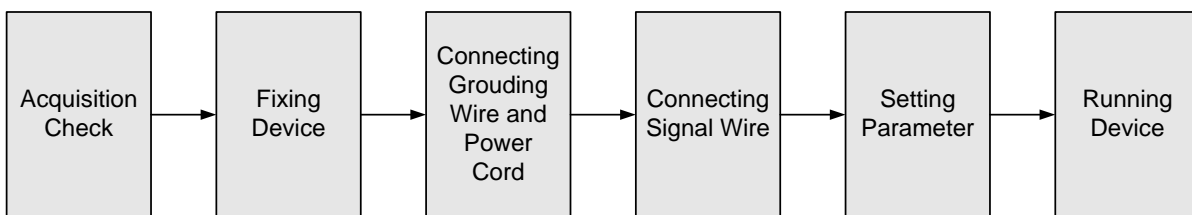
2.2.2 Environment Requirement

Item	Requirement
Machine Hall Space	When user installs machine frame array in one machine hall, the distance between 2 rows of machine frames should be 1.2~1.5m and the distance against wall should be no less than 0.8m.
Machine Hall Floor	Electric Isolation, Dust Free Volume resistivity of ground anti-static material: $1X10^7 \sim 1X10^{10\Omega}$, Grounding current limiting resistance: 1M (Floor bearing should be greater than 450Kg/㎡)

Environment Temperature	5~40℃(sustainable), 0~45℃(short time), installing air-conditioning is recommended
Relative Temperature	20%~80% sustainable 10%~90% short time
Pressure	86~105KPa
Door & Window	Installing rubber strip for sealing door-gaps and dual level glasses for window
Wall	It can be covered with wallpaper, or brightness less paint.
Fire Protection	Fire alarm system and extinguisher
Power	Requiring device power, air-conditioning power and lighting power are independent to each other. Device power requires AC power 220V 50Hz. Please carefully check before running.

2.2.3 Grounding Requirement

- All function modules' good grounding designs are the basis of reliability and stability of devices. Also, they are the most important guarantee of lightning arresting and interference rejection. Therefore, the system must follow this rule.

- Coaxial cable's outer conductor and isolation layer should keep proper electric conducting with the metal housing of device.

- Grounding conductor must adopt copper conductor in order to reduce high frequency impedance, and the grounding wire must be as thick and short as possible.

- Users should make sure the 2 ends of grounding wire well electric conducted and be antirust.

- It is prohibited to use any other device as part of grounding electric circuit

- The area of the conduction between grounding wire and device's frame should be no less than 25mm^2.

2.2.4 Frame Grounding

All the machine frames should be connected with protective copper strip. The grounding wire should be as short as possible and avoid circling. The area of the conduction between grounding wire and grounding strip should be no less than 25mm^2.

2.2.5 Device Grounding

Connecting the device's grounding rod to frame's grounding pole with copper wire.

2.3 Wire's Connection

The grounding wire conductive screw is located at the right end of rear panel, and the power switch, fuse, power supply socket is just beside ,whose order goes like this, power switch is on the left ,power supply socket is on the right and the fuse is just between them.

- Connecting Power Cord

    User can insert one end into power supply socket, while insert the other end to AC power.

- Connecting Grounding Wire

    When the device solely connects to protective ground, it should adopt independent way, say, share the same ground with other devices. When the device adopts united way, the grounding resistance should be smaller than 1Ω.

☞**Caution:**

Before connecting power cord to NetUP Streamer HD v.3, user should set the power switch to "OFF".

2.4 Signal Cable Connection

The signal connections include the connection of input signal cable and the connection of output signal cable. The details are as follows:

2.4.1 HDMI input cable illustration:

2.4.2 Network Cable illustration (CAT5):

Chapter 3 WEB NMS Operation

NetUP Streamer HD v.3 does not support front buttons and LCD, users can only control and set the configuration in computer by connecting the device to web NMS Port. User should ensure that the computer's IP address is different from the NetUP Streamer HD v.3 IP address; otherwise, it would cause IP conflict.

3.1 login

The default IP address of this device is 192.168.0.136 for 8x model.

For model 16x the IP addresses are 10.0.0.101, 10.0.0.102.

For model 24x: 10.0.0.101, 10.0.0.102, 10.0.0.103

Connect the PC (Personal Computer) and the device with net cable, and use ping command to confirm they are on the same network segment.

I.G. the PC IP address is 192.168.99.252, we then change the device IP to 192.168.99.xxx (xxx can be 0 to 255 except 252 to avoid IP conflict).

Use web browser to connect the device with PC by inputting the Encoder's IP address in the browser's address bar and press Enter.

It will display the Login interface as Figure-1. Input the Username and Password (Both the default Username and Password are "admin".) and then click "LOGIN" to start the device setting.
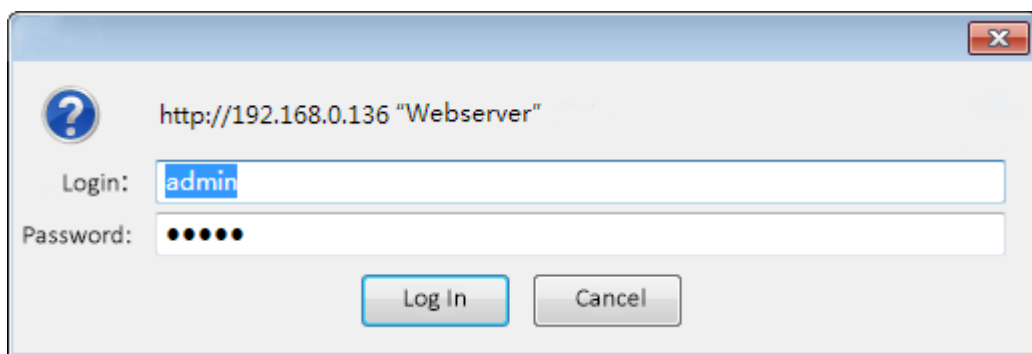
Figure-1

3.2 Operation

When we confirm the login, it will display the WELCOME interface as Figure-2.
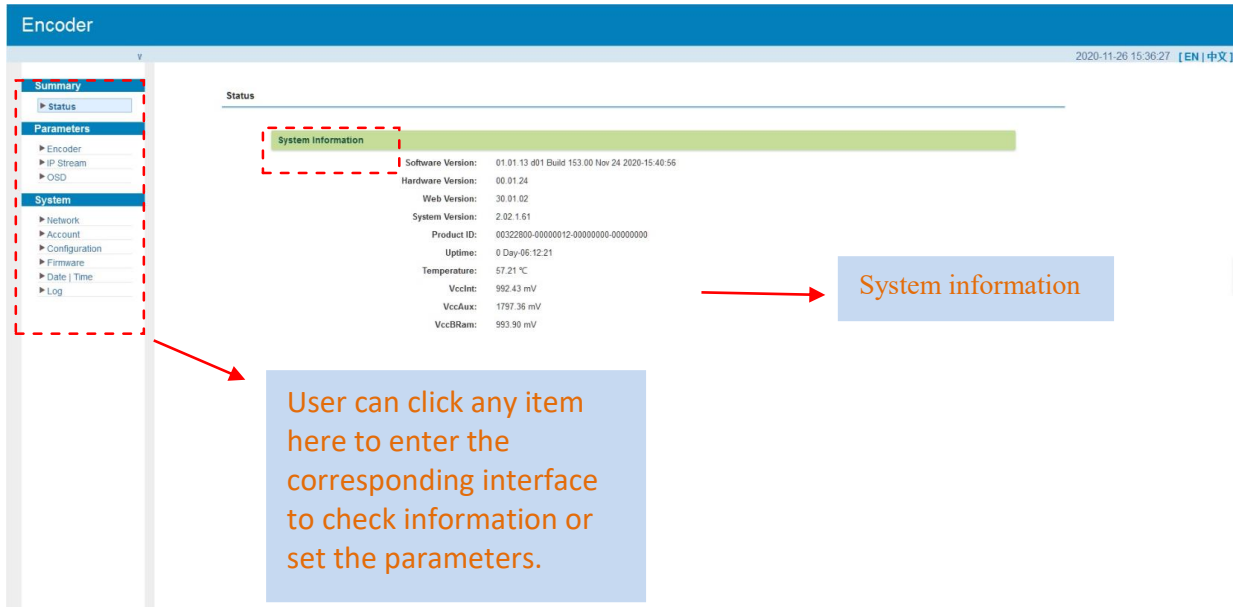
Figure-2

Parameters →Encoder

Encode Channel 1-8:

From the menu on upper side of the web page, clicking "Enc CH 1-8", it will display the each encode channel information of the program from the HDMI input port as Figure-3.
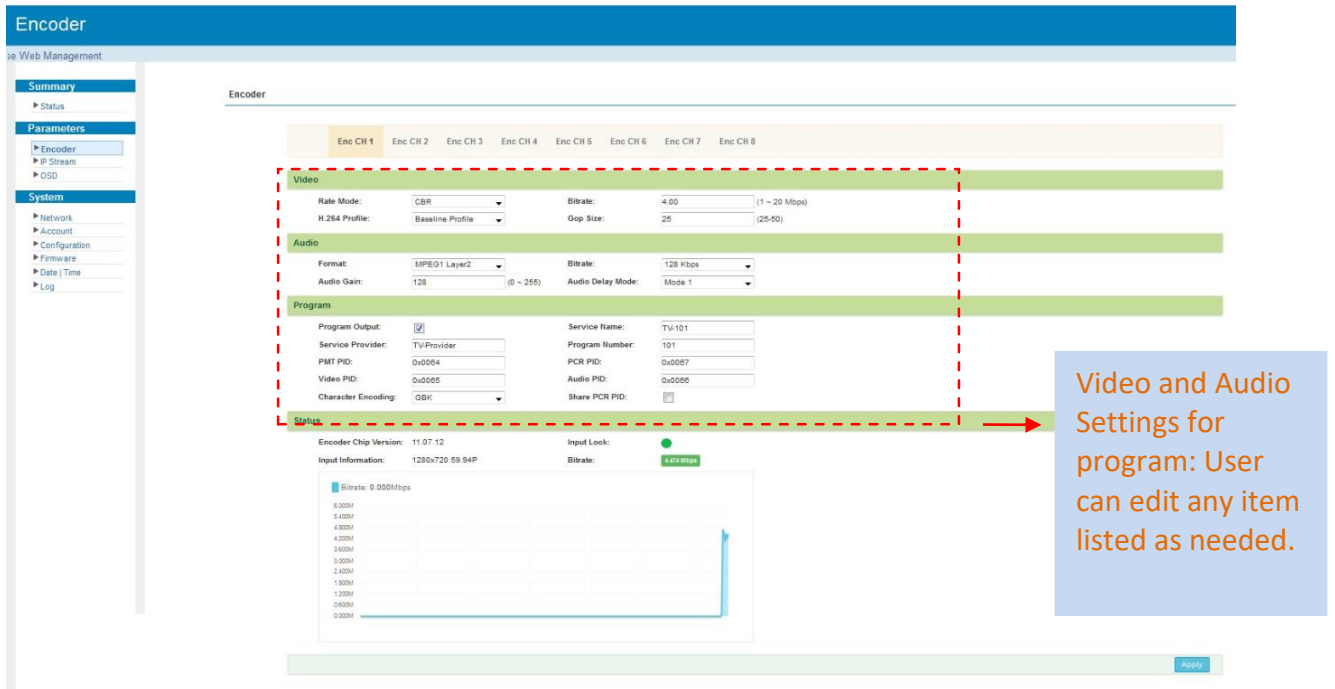
Figure-3

Apply   Click this button to apply the modified parameters.

Parameters →IP Stream

NetUP Streamer HD v.3 supports TS to output in IP (8 SPTS) format through the DATA port.

When users click "IP Stream", it will display the interface as Figure-4 where to set IP out parameters.

(For Data 1000M GE port)

Figure-4

Parameters →OSD

Clicking "OSD", it will display the interface where to configuration the OSD parameters as Figure-5/6/7.
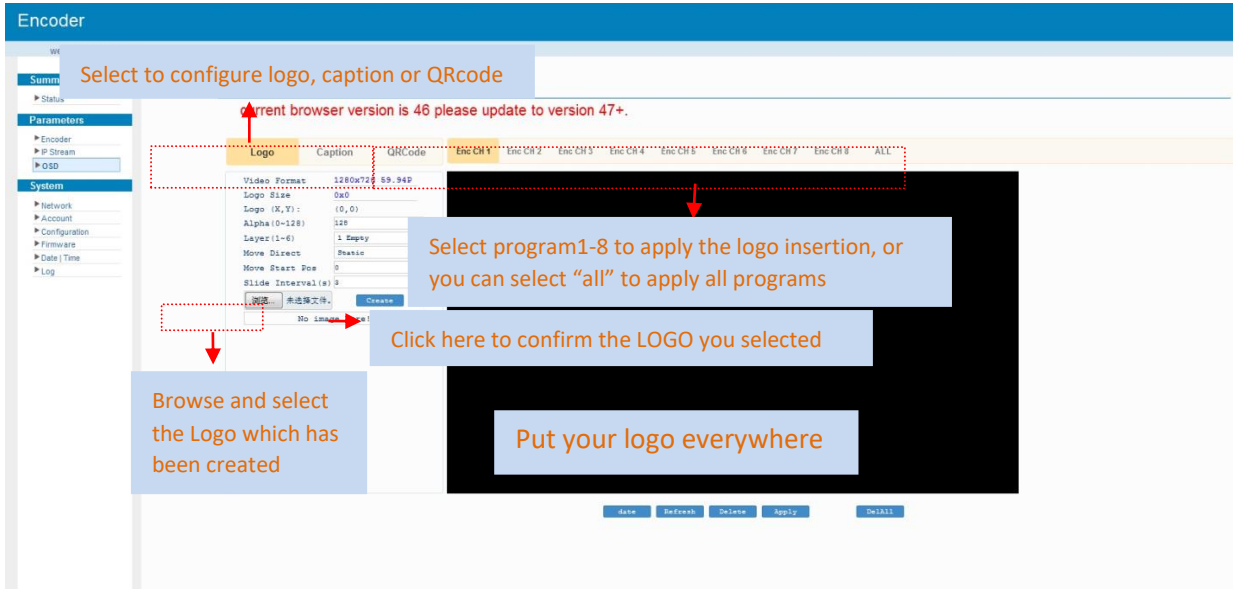
Figure-5
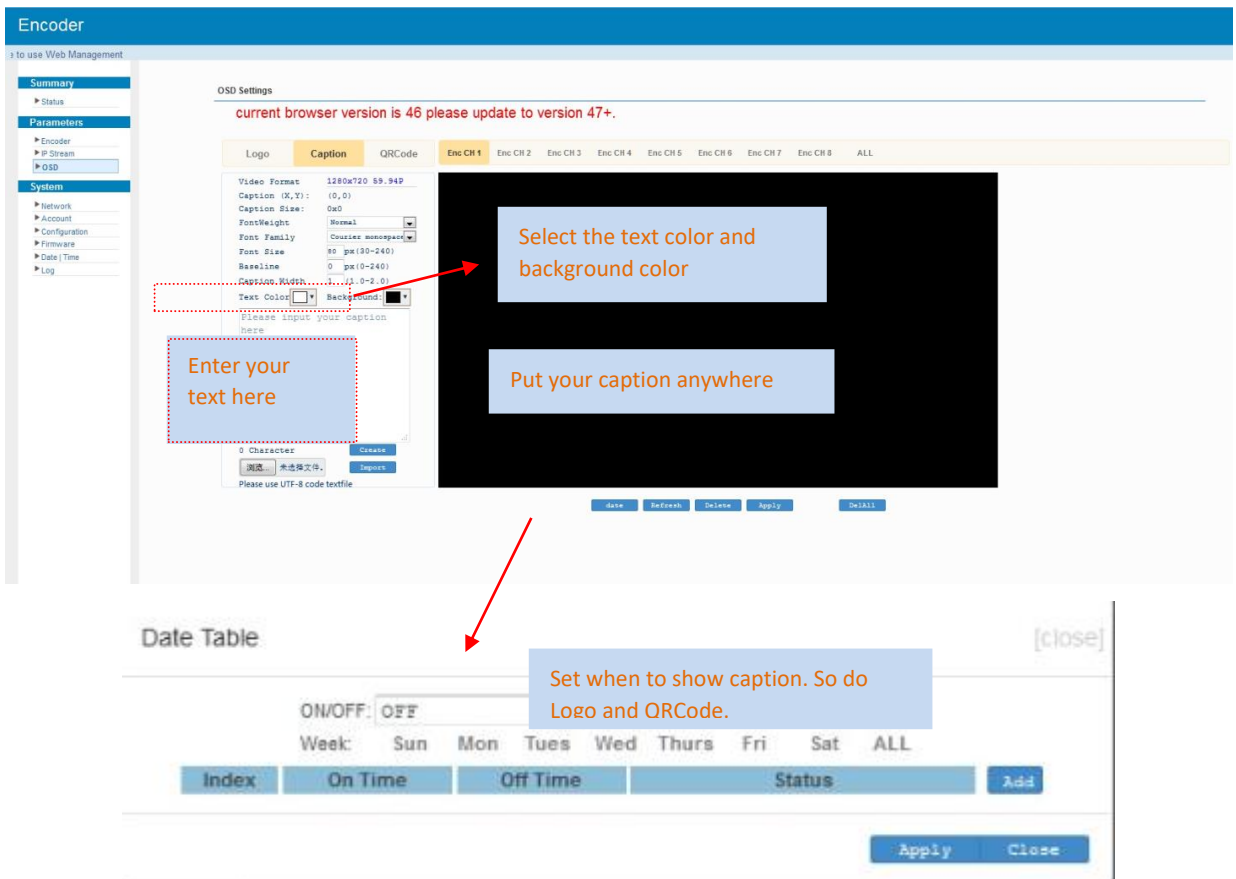
Figure-6
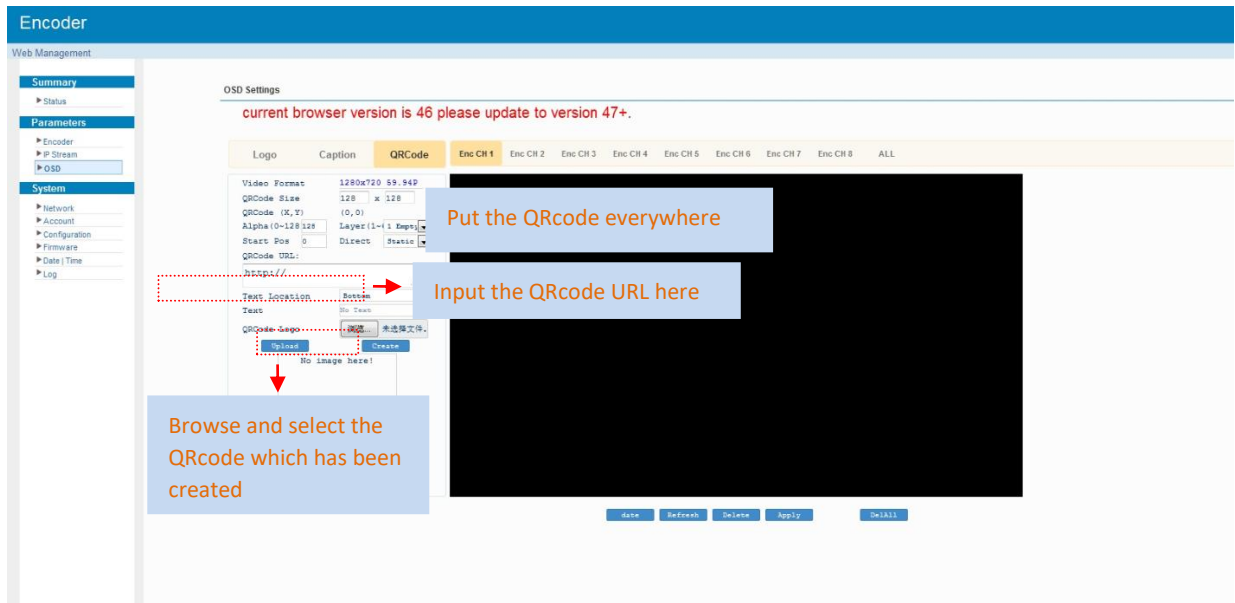
Figure-7

System→ Network:

Clicking "Network", it will display the interface as Figure-8 where to set NMS and DATA parameters.
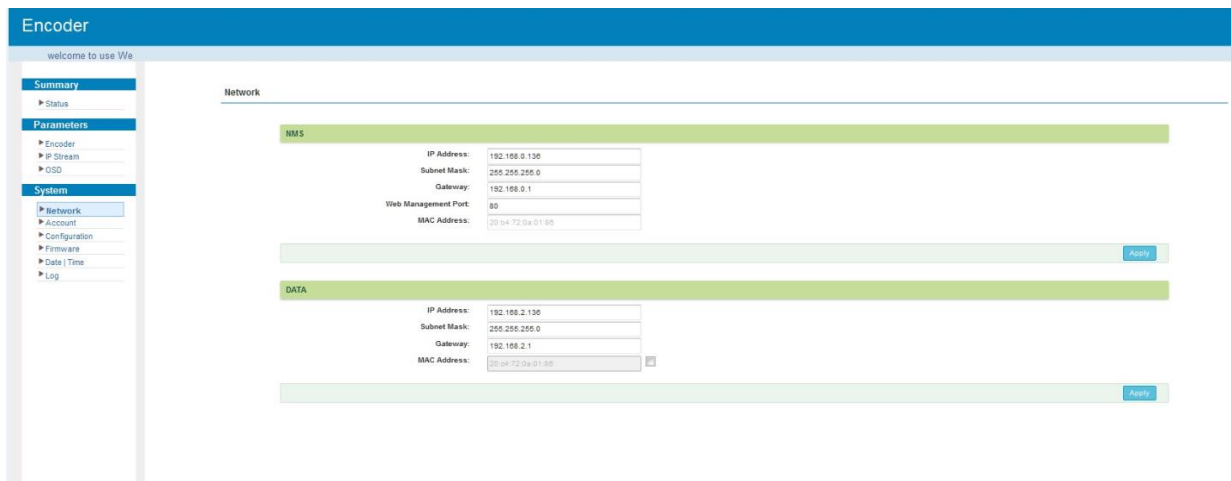
Figure-8

System → Account:

Clicking "Account", it will display the screen as Figure-9 where to set the login account and password for the web NMS. Both the current username and password are "admin".
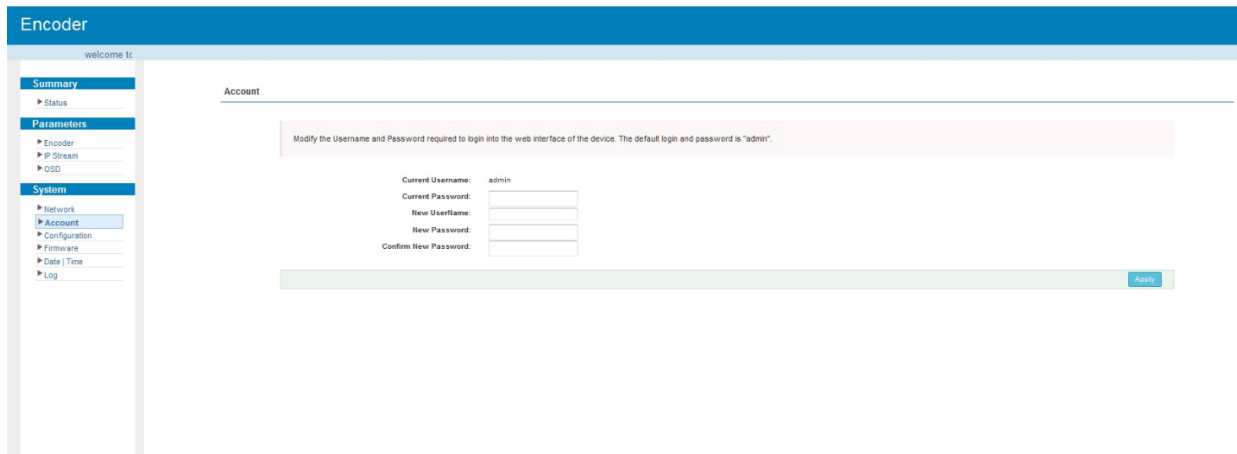
Figure-9

System → Configuration:

Clicking "Configuration", it will display the screen as Figure-10 where to save/ restore/factory set/ backup/ load your configurations.
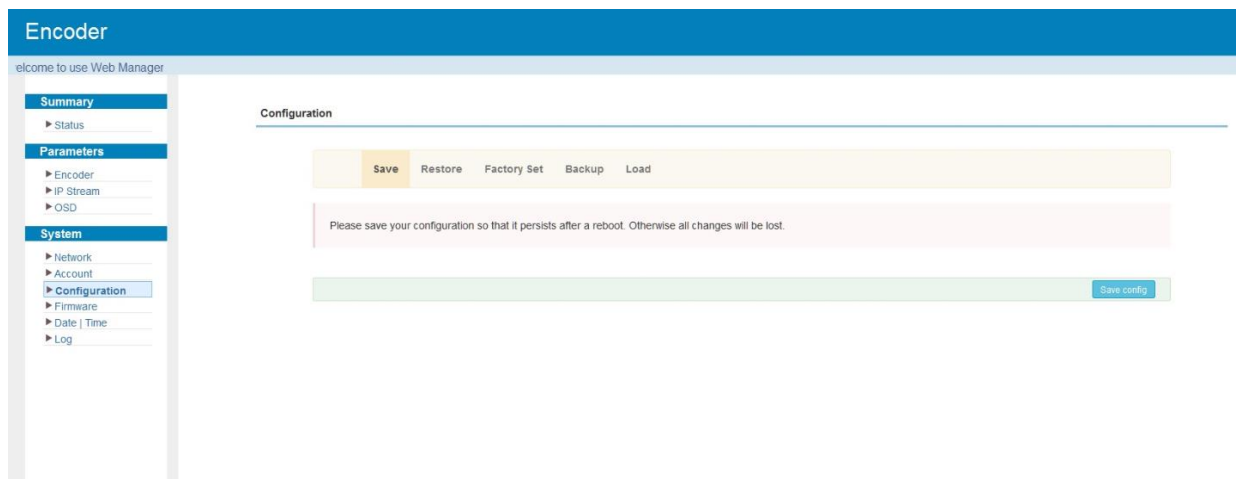
Figure-10

System → Firmware:

Clicking "Firmware", it will display the screen as Figure-11 where to update firmware for the encoder.
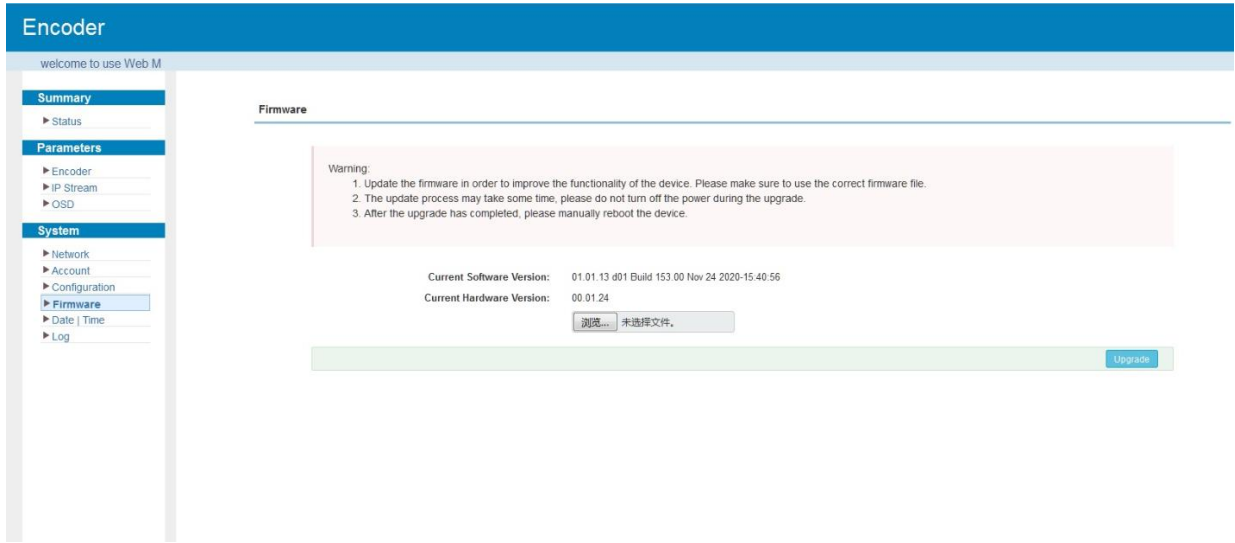
Figure-11

System → Date/Time:

Clicking "Date/Time", it will display the screen as Figure-12 where to set date and time for the device.
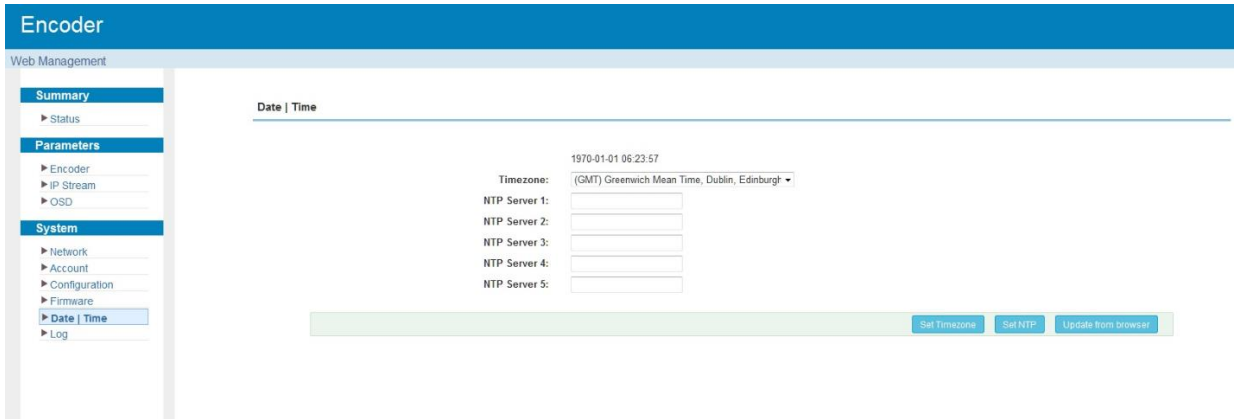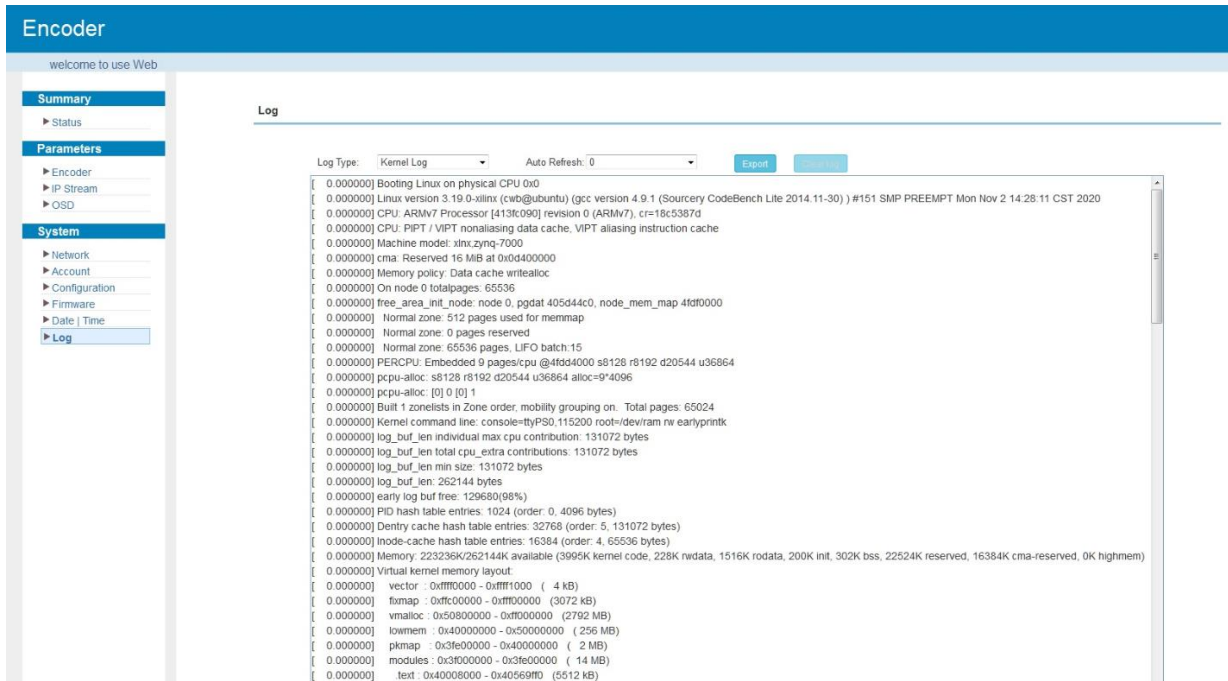
Figure-12

System → Log:

Clicking "Log", it will display the log interface as Figure-13 where to check or export the Kernel/System log.

Figure-13

Chapter 4 Troubleshooting

Check the following before troubleshooting:

- Whether the server room is well ventilated and hot air from the back panel of the device is effectively removed?
- Does the supply voltage meet the power requirements of the device?
- Are all cables connected correctly?

Turn off the device and unplug the power cord in the following cases:

- The power cord or socket is damaged.

- A liquid is splashed on the device.

- A short circuit has occurred.

- The device is in damp environment.

- The device suffered from physical damage.

- Longtime idle.

- After switching on and restoring to factory setting, device still cannot work properly.

- Maintenance needed.

Frequent on and off switching is prohibited; the interval between switching the device on and off must be more than 10 seconds