IP to RF Modulator (DVB-T+DVB-C)

KC201

TECHNICAL SPECIFICATIONS

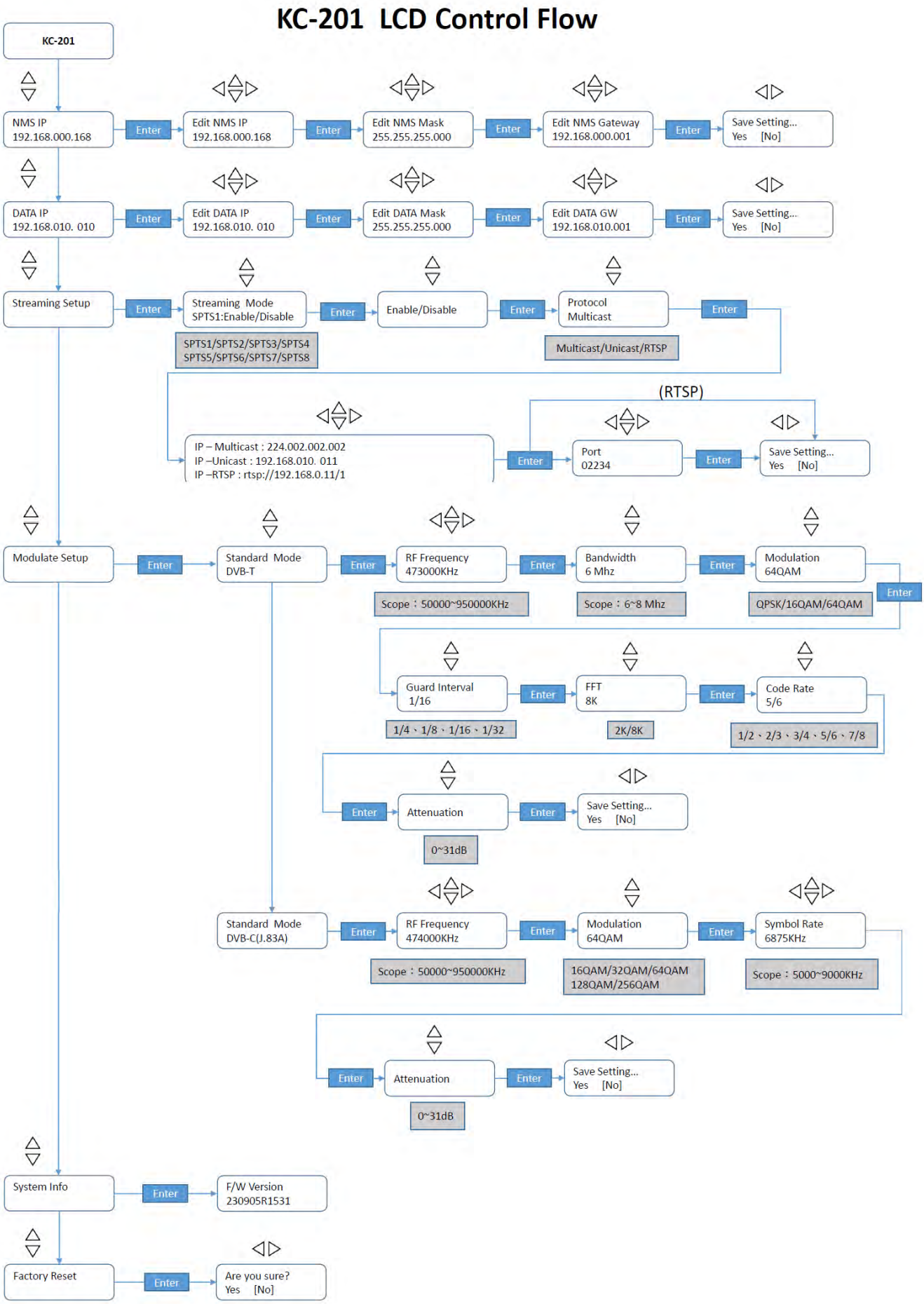
Input			
Interface	GE ports		
Streaming	UDP / RTP, ip input over 8xSPTS or 1xMPTS, 4xRTSP		
Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3		
Packet Length	188 Bytes		
Network Interface			
Management	1x1000Base-T Ethernet(RJ 45)		
Data	1x1000Base-T Ethernet(RJ 45)		
Protocol	IEEE 802.3 Ethernet,RTP,ARP,IPv4,TCP/UDP,HTTP,IGMP v2/v3		
Modulation			
MER	Typ. 35dB		
RF range	50~950MHz, 1KHz step		
RF output level	95dBµV		
Standard	**DVB-T**	**DVB-C**	
Bandwidth	6,7,8M	Constellation	16QAM,32QAM, 64QAM, 128QAM, 256QAM
Constellation	QPSK, 16QAM, 64QAM		
Code Rate	1/2,3/5, 2/3, 3/4, 5/6, 7/8		
Guard interval	1/4, 1/8, 1/16, 1/32	Symbol rate	5.000-8.000Msps ADJ
FFT	2K, 8K		
System			
Management	LCD + Control buttons/Ethernet		
Language	English		
Upgrade	Ethernet		
General			
Power Supply	DC 12V 2A		
Dimension	220 x 206 x 44mm		
Weight	1000g		
Environmental For Operating	Temperature: 5°C- 40°C Relative Humidity: 80% @ 30°C		

Application Example - IP to RF Modulator

The solution used the following our products

1.HCFI422 - 4 x HDMI/CVBS to IP Video Encoder
2.KC201 - IP to RF Modulator

LCD Control Flow



LED LAMP

SPTS1 or SPTS5　LED1 (Blue) / SPTS2 or SPTS6 LED2 (Green)

SPTS1 or SPTS5　LED1 (Blue) / SPTS2 or SPTS6 LED2 (Green)

		LED1 (Blue)	LED2 (Green)	LED3 (Blue)	LED4 (Green)
IP source	SPTS1 or SPTS5 TS Input	Blue light	—	—	—
	RJ45 cable unplug or TS Stop Input	X			
	SPTS2 or SPTS6 TS Input	—	Green light	—	—
	RJ45 cable unplug or TS Stop Input		X		
	SPTS3 or SPTS7 TS Input	—	—	Blue light	—
	RJ45 cable unplug or TS Stop Input			X	
	SPTS4 or SPTS8 TS Input	—	—	—	Green light
	RJ45 cable unplug or TS Stop Input				X

RF OUTPUT : Yellow　Light

RF STOP OUTPUT (Data RJ45 cable unplug or All TS Stop input):　X

Exceed actual bit rate Yellow　Light　Blinks

WEB OPERATION INSTRUCTION

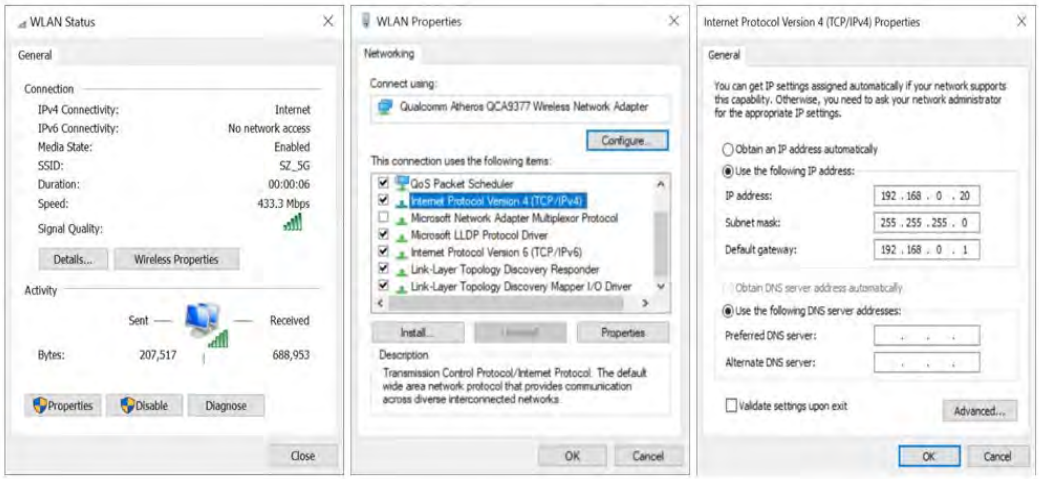
The device is configured using NMS. Access to the NMS is via the network connection

1. IP Address of Computer Setting

We must choose the static IP address according to the default gateway address. The first three numbers must be the same (192.168.0.x in the example).

System Control> Network Connections> LAN Connection> Properties> Internet Protocol Version 4 TCP/IPv4 > Properties> Use the following IP address:

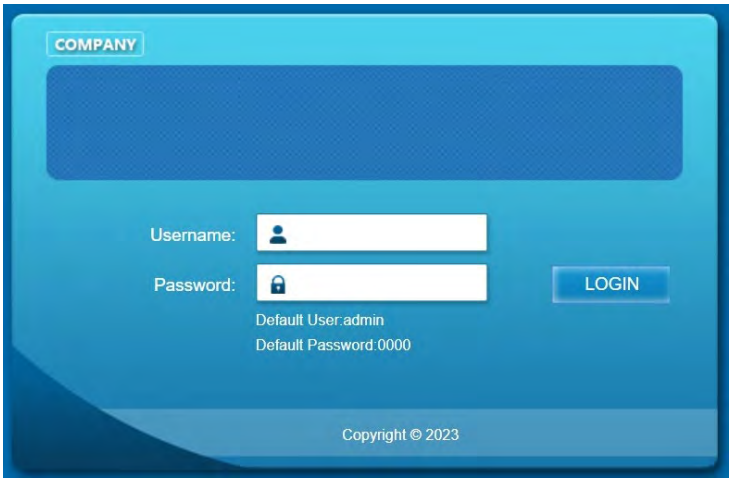
IP address Computer: 192.168.0.20 and Subnet mask: 255.255.255.0.



2. IP Address of Computer Setting

2.1 Each machine can have different username and password settings.

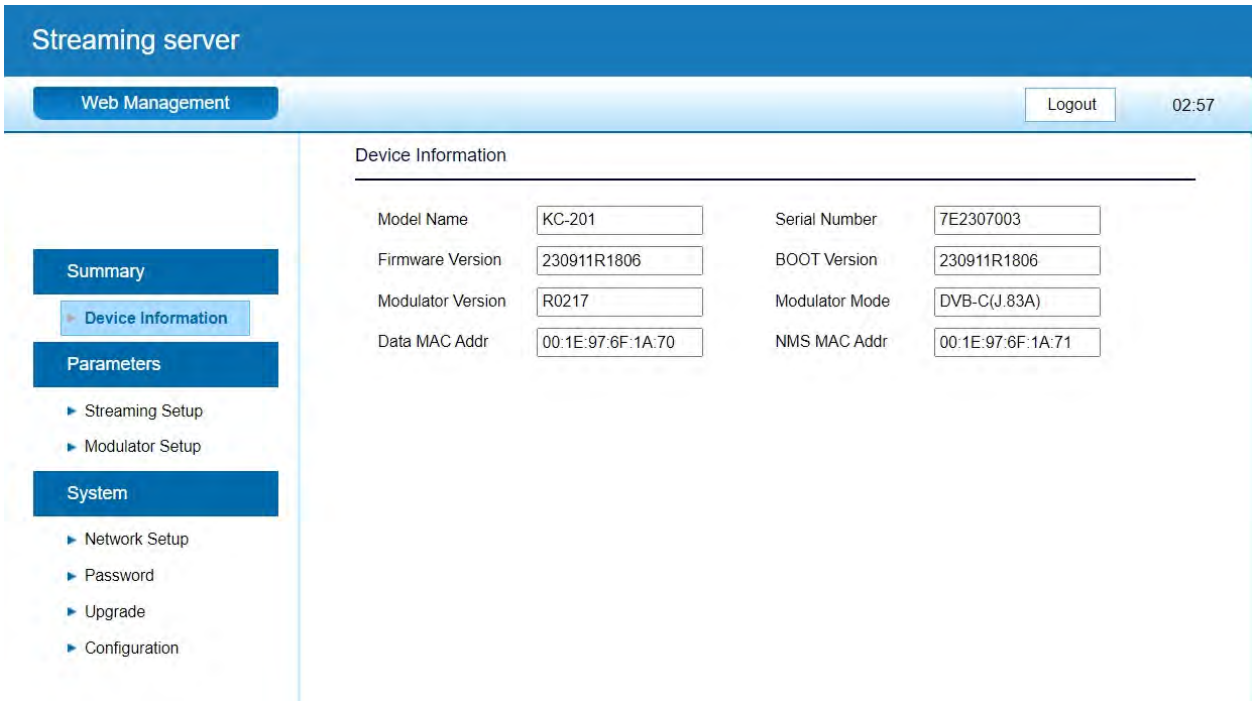
2.2 Please log in before operation. **Default IP is 192.168.0.168; Password: 0000**



3. NMS Home Page & Status

Contents of the home page includes: Device Information/Streaming Setup/Modulator Setup/Network/ Password/Upgrade/Configuration.

And device's Device Information details are also show on this page. Here you can know the Model Name, Serial Number, Firmware version, Boot Version, Modulator Version, Modulator Mode, Data MAC Address, NMS MAC Address.

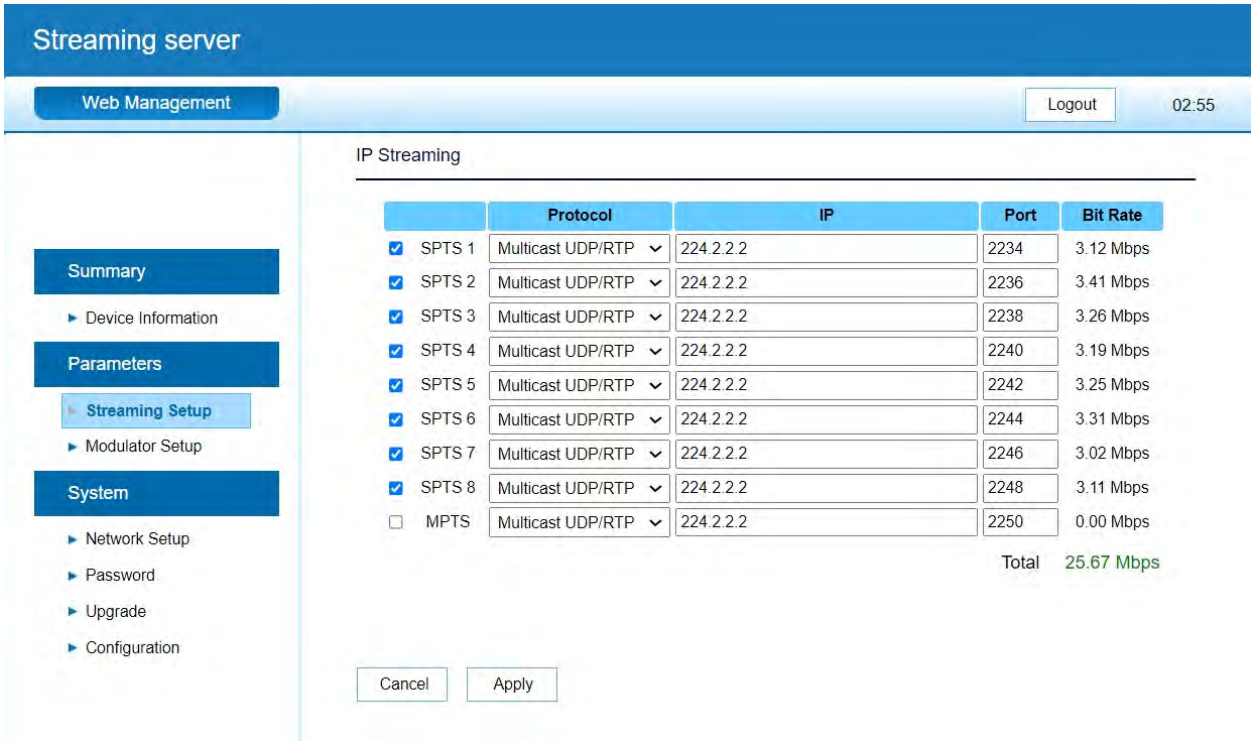


4. Streaming Setup

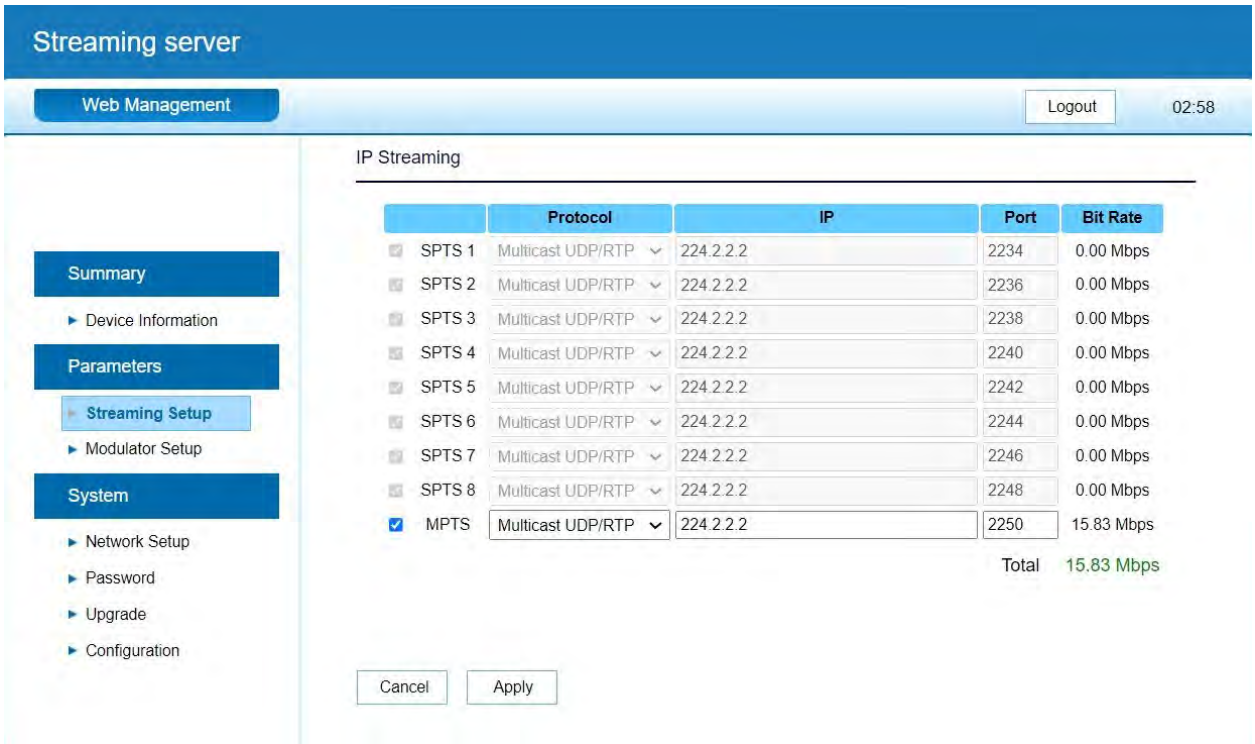
Use the Streaming Setup Page to setup your required streaming method. You can choose up to 8xSPTS or 1xMPTS. You can choose UDP/RTP (unicast and multicast), UDP/RTP is

automatic analysis. In addition, it can receive 4 channels of RTSP

4.1 Multicast UDP/RTP(SPTS)



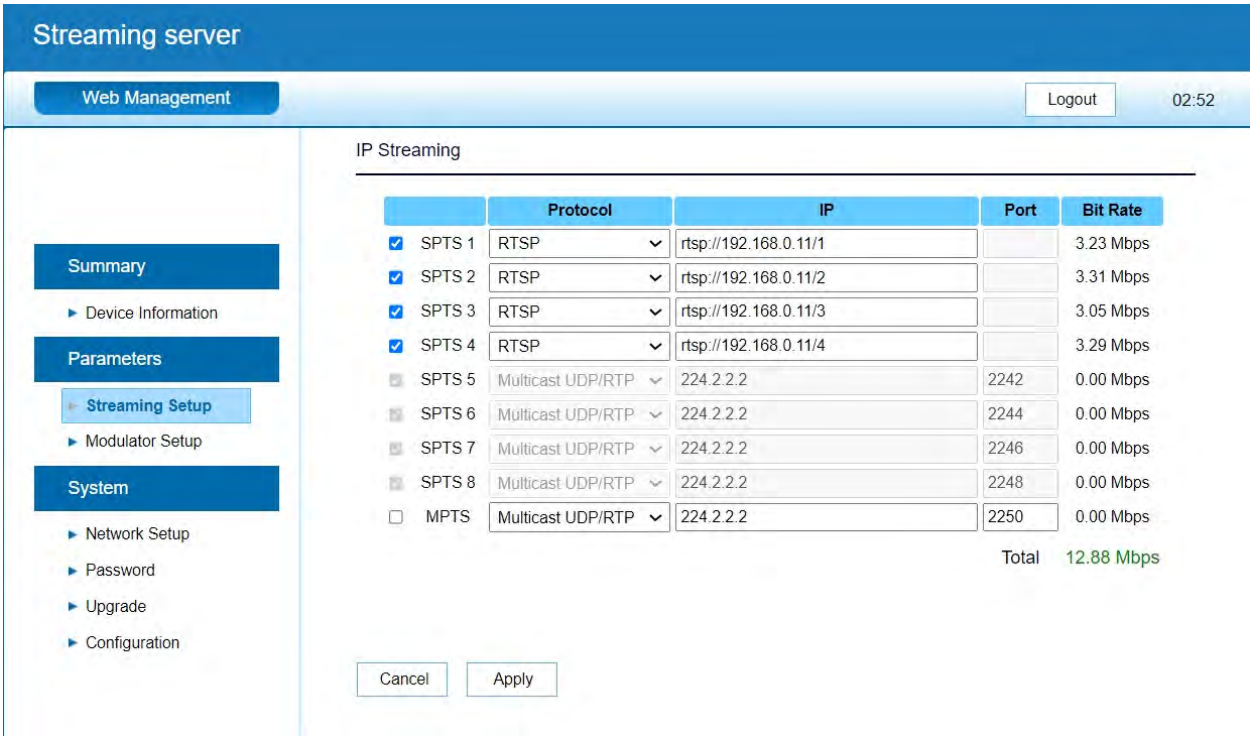
4.2 Multicast UDP/RTP(MPTS)



To use multicast servers and clients, the following conditions typically need to be met:

1. The sender and receiver are on the same Local Area Network (LAN).
2. The sender and receiver join the same multicast group address.
3. The network administrator configures routers and firewalls to allow multicast traffic to be transmitted between LANs (if the sender and receiver are on different LANs).

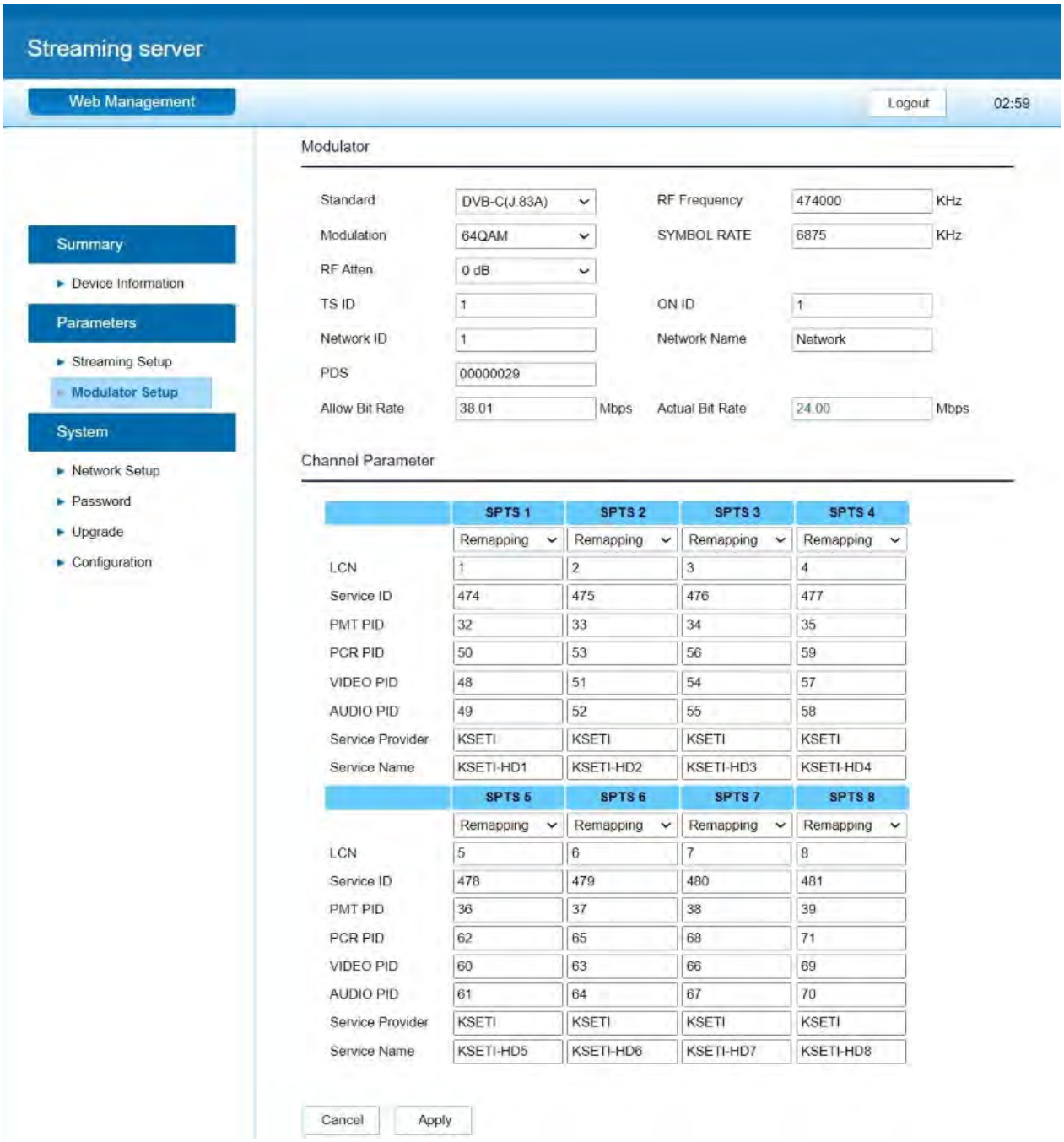
4.3 RTSP


Streaming server
Web Management
Logout
02:52
Summary
Device Information
Parameters
Streaming Setup
Modulator Setup
System
Network Setup
Password
Upgrade
Configuration
IP Streaming
Protocol
IP
Port
Bit Rate
SPTS 1 RTSP rtsp://192.168.0.11/1 3.23 Mbps
SPTS 2 RTSP rtsp://192.168.0.11/2 3.31 Mbps
SPTS 3 RTSP rtsp://192.168.0.11/3 3.05 Mbps
SPTS 4 RTSP rtsp://192.168.0.11/4 3.29 Mbps
SPTS 5 Multicast UDP/RTP 224.2.2.2 2242 0.00 Mbps
SPTS 6 Multicast UDP/RTP 224.2.2.2 2244 0.00 Mbps
SPTS 7 Multicast UDP/RTP 224.2.2.2 2246 0.00 Mbps
SPTS 8 Multicast UDP/RTP 224.2.2.2 2248 0.00 Mbps
MPTS Multicast UDP/RTP 224.2.2.2 2250 0.00 Mbps
Total 12.88 Mbps
Cancel
Apply

5. Modulator Setup

Use the Modulator Setup Page to setup your required modulator information**.** If the input is SPTS, the PID and other parameters of the Transport Stream can be pass thought or remapping. If the input is MPTS, the PID and other parameters of the Transport Stream only pass thought.

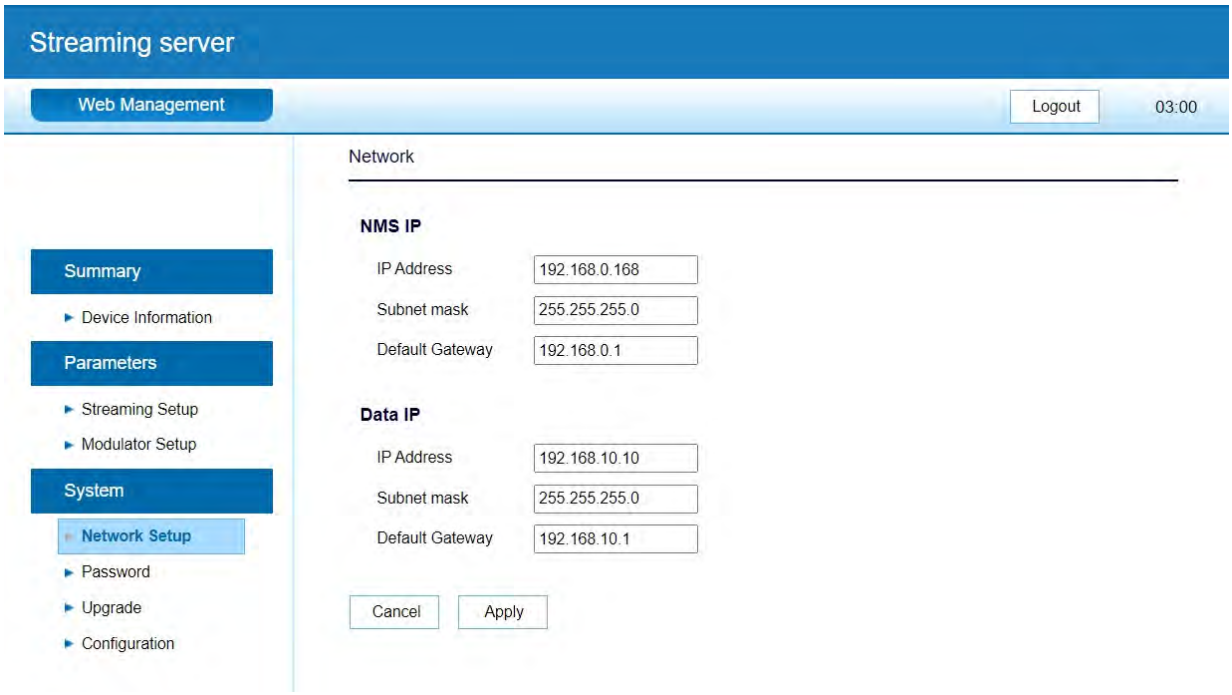
5.1 Modulator-DVB-C



5.2 Modulator-DVB-T

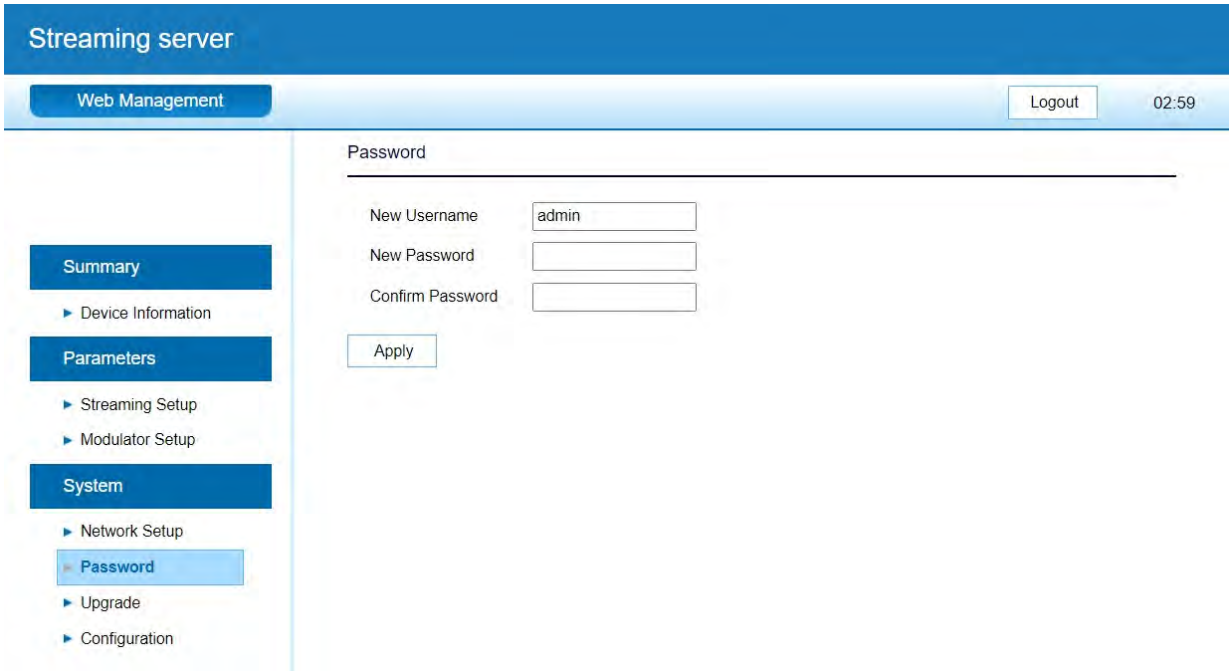
6. Network Setup

The IP Out default setting is 192.168.10.10 The Web Management default setting is 192.168.0.168. You can modify the IP of NMS and DATA by yourself, please note that the IP addresses of NMS and DATA cannot be set in the same LAN.



7. Password

You can modify the user name and password. In the New password field, enter the new password you want to change, also the same password as the new password to confirm.



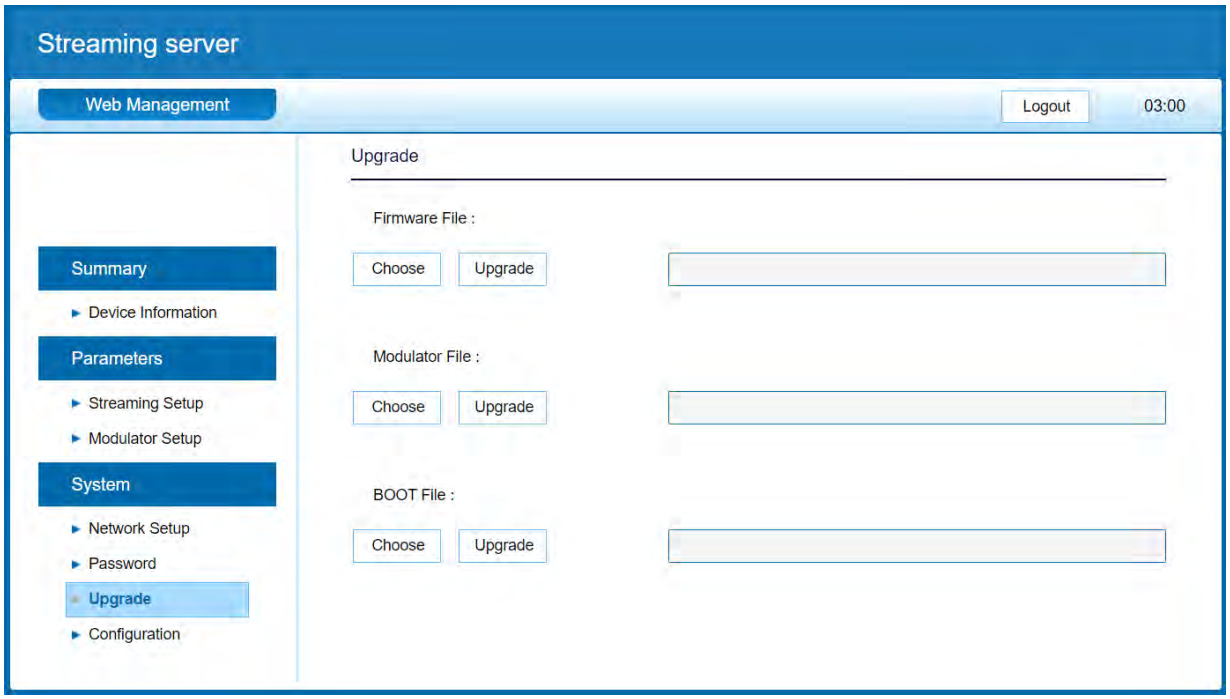
8. Upgrade

Use the Upgrade page to update system firmware, Modulator Firmware Boot code.

Step1. Download the firmware zip file and unzip the firmware file. The file is image.ub

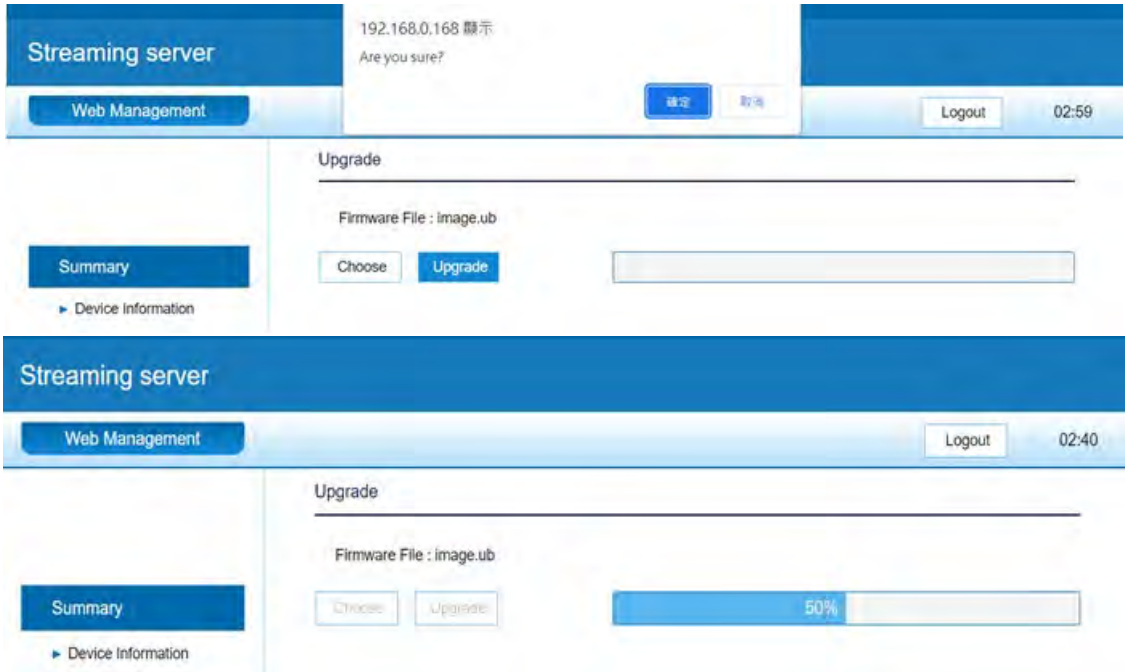
Step2. Login to NMS.

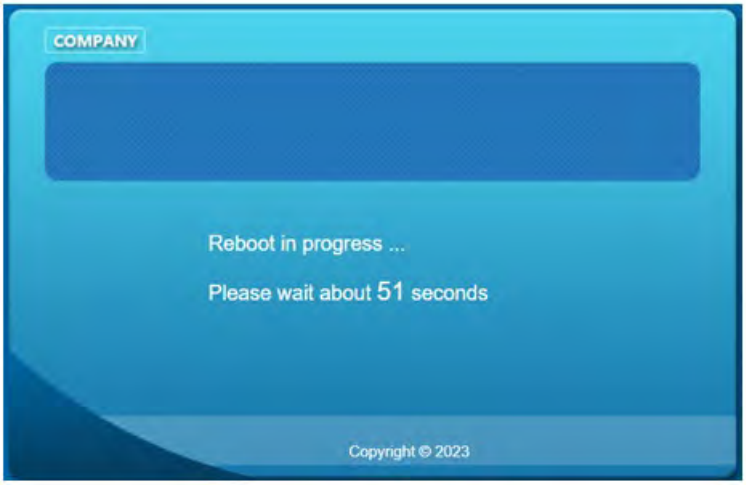
Step3. Select to upgrade page. Select the “Choose” button of Firmware File



Step4. Select the firmware to update

Step5. Select the “Upgrade” button to update Firmware. Please wait about 1 minute for the system to reboot





9. Configuration

Use the “Factory Reset” to reset configuration to factory default.
Use the “Download Config” to saved device setting configuration setting to PC.
Use the “Upload Config” to upload the file with pre-saved configuration settings to device.