NetUP Streamer 16xC

User manual

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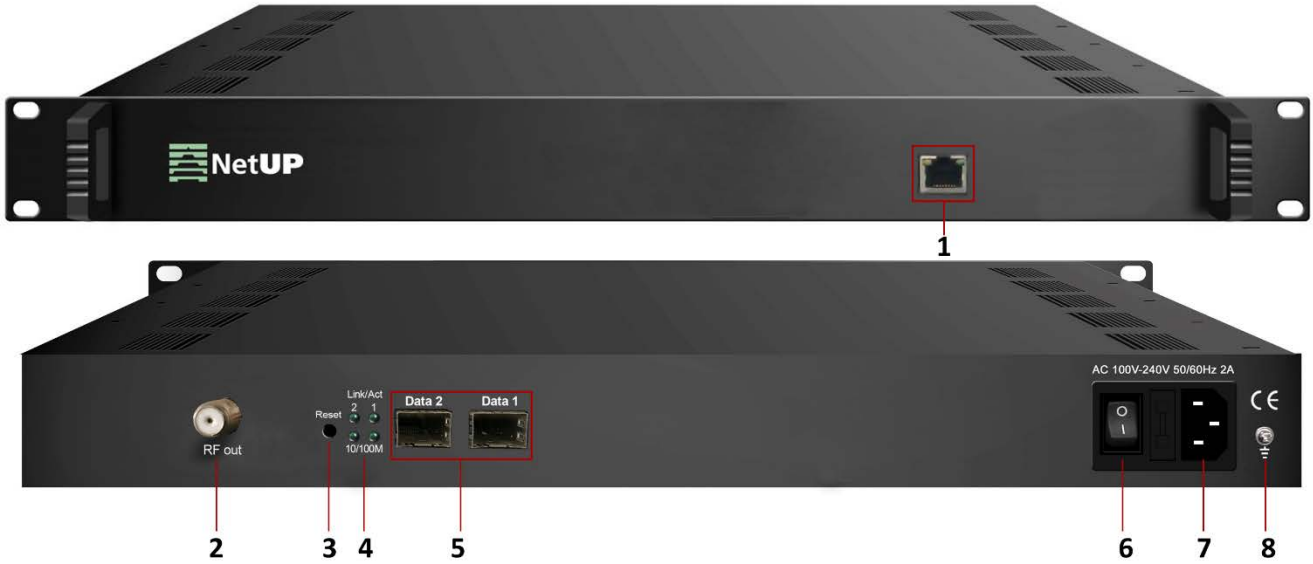
Contents

Chapter 1 Introduction

NetUP Streamer 16xC – is the latest generation Mux-scrambling-modulating all-in-one device developed by NetUP. It has 16 multiplexing channels, 16 scrambling channels and 16 QAM (DVB-C) modulating channels, and supports maximum 1024 IP input through the GE port and 16 non-adjacent carriers (50MHz~960MHz) output through the RF output interface.

Appearance and illustration



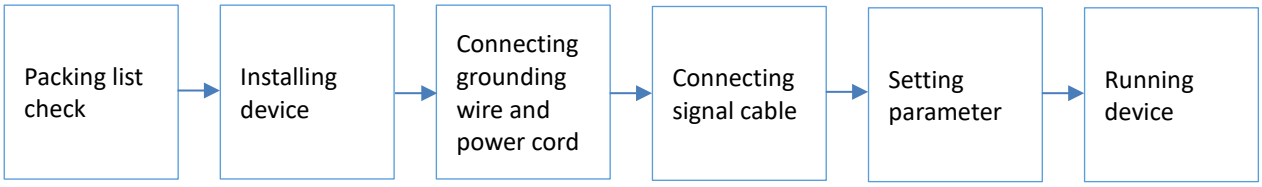
1	NMS/CAS: network management port and CA data port
2	RF output port
3	Reset IP: reset the device's IP address to its default value
4	Link/Act Indicators
5	Data Input / Output 1/2 (SFP)
6	Power switch
7	Power socket
8	Grounding pole

Specifications

Input stream	Input	512×2 IP input, 2 100/1000M Ethernet Port (SFP)
	Transport Protocol	TS over UDP/RTP/RTSP, unicast and multicast, IGMP V2/V3
	Transmission Rate	Max 840Mbps for each GE input
Mux	Input Channels	1024
	Output Channels	16
	Max PIDs	180 per channel
	Functions	PID remapping (auto/manual, optional)
Scrambling	Max simulscrypt CA	4
	Scrambling Standard	ETR289, ETSI 101 197, ETSI 103 197
	Connection	Local/remote connection
Modulation	QAM Channel	16 non-adjacent carrier
	Modulation Standard	EN300 429/ITU-T J.83A/B
	Symbol Rate	5.0~7.0Msps, 1ksps stepping
	Constellation	16, 32, 64, 128, 256QAM
	FEC	RS (204, 188)
RF output	Interface	1 F type output port for 16 carriers, 75Ω impedance
	RF Range	50~960MHz, 1kHz stepping
	Output Level	-20dBm~+10dBm(87~117dbμV), 0.1dB stepping
	MER	≥ 40dB
	ACLR	-60 dBc
TS output	16×IP output over UDP/RTP/RTSP, unicast/multicast, 2 100/1000M Ethernet Ports	
System	Network management software (NMS) support	
Other parameters	Dimension (W×L×H)	420 mm × 440 mm × 44,5 mm
	Approx. weight	3kg
	Temperature	0~45℃(operation), -20~80℃(storage)
	Power requirements	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz
	Power consumption	15.4W

Chapter 2 Installation guide

Device's installation flow chart



Before installing and connecting the device, carefully read the environment and grounding requirements, as well as safety instructions for the sake of your safety and for the safety of the device

Packing list check

Check items according to packing list. Normally it should include the following items:

- NetUP Streamer 16xC
- Power Cord

Safety instructions

- Before installing and connecting the device make sure that the device was damaged during delivery.
- Install the device in an appropriate place. The device is designed to work in a clean and dry room. It must be operated and maintained free of dust.
- Before switching on the device make sure that it is adjusted to the mains voltage you intend to use. Make sure that you keep within the specifications – AC 100V-220V±10%, 50/60Hz.
- Check that all the cables are connected properly. Connect cables only to a device that is turned off.

Environment requirement

Item	Requirement
Room space	When installing a rack in the room, make sure the distance between two rows of racks is 1.2~1.5m and the distance to the wall is at least 0.8m.
Room floor	Electric isolation. Dust free. The volume resistivity of ground anti-static material: 1×107~1×1010 Ω. Grounding current limiting resistance: 1M (Floor bearing should be greater than 450Kg/m^2).
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	Install rubber strip for sealing door-gaps and dual level glasses for windows
Walls	Can be covered with wallpaper or dark paint.
Fire protection	Fire alarm system and extinguisher.
Power	The device requires AC 100V-220V±10%, 50/60Hz. Please carefully check before running.

Grounding requirement

- Connect the ground wire to the grounding hardware on the device. Ground resistance should be no more than 1 Ω

Grounding is essential for device's functionality, surge and electronic interference protection

- Keep proper contact with the metal housing of the device
- Grounding wire must be made out of copper and as thick and short as possible
- Make sure the two ends of grounding wire conduct electricity and are not rusty
- It is prohibited to use any other devices as a part of grounding electric circuit
- All racks should be connected with a protective copper strip. Ground loops should be avoided
- Grounding wire's contact area with the rack should be no less than 25mm^2

Chapter 3 WEB NMS Operation

Use the Web interface to control NetUP Streamer 16xC.

Login

Connect a personal computer and the device with net cable, and use ping command to confirm they are on the same network segment.

Make sure that the computer's IP address is different from the device's IP address; otherwise, it would cause an IP conflict

The default IP address of NetUP Streamer 16xC is **192.168.0.136** or **10.0.0.103**. Thus, set the computer's IP address to 192.168.0.X or 10.0.0.X, where X can be from 0 to 255, except 136 or 103. Open a web browser, enter the device's IP address in the browser address bar and press **Enter**. If the network is configured correctly, you will see the login interface (Figure 1).
Enter username and password and click **LOGIN** to enter the web interface. Default username is "admin", default password is "admin".

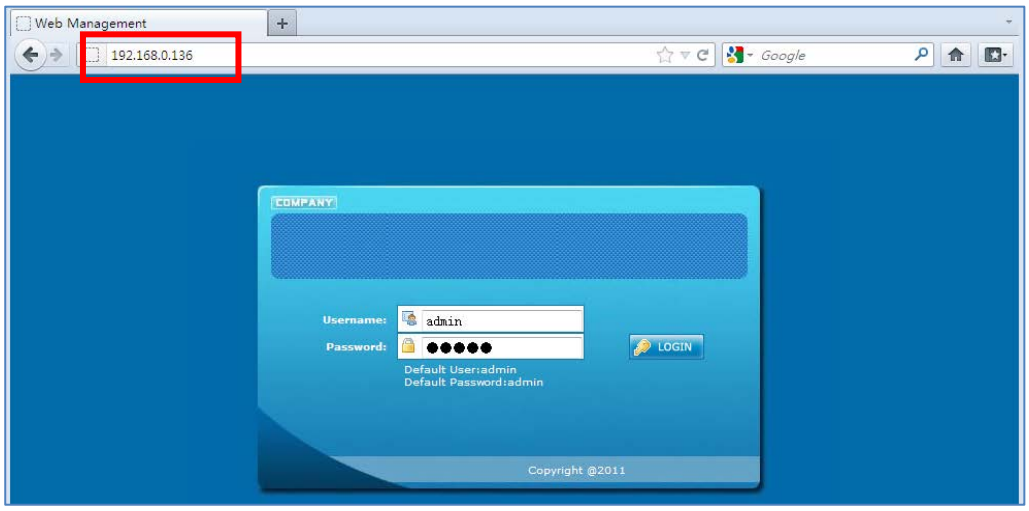


Figure-1

Summary → Status

After login, you will get the **Status** page which displays the current system status (Figure-2).

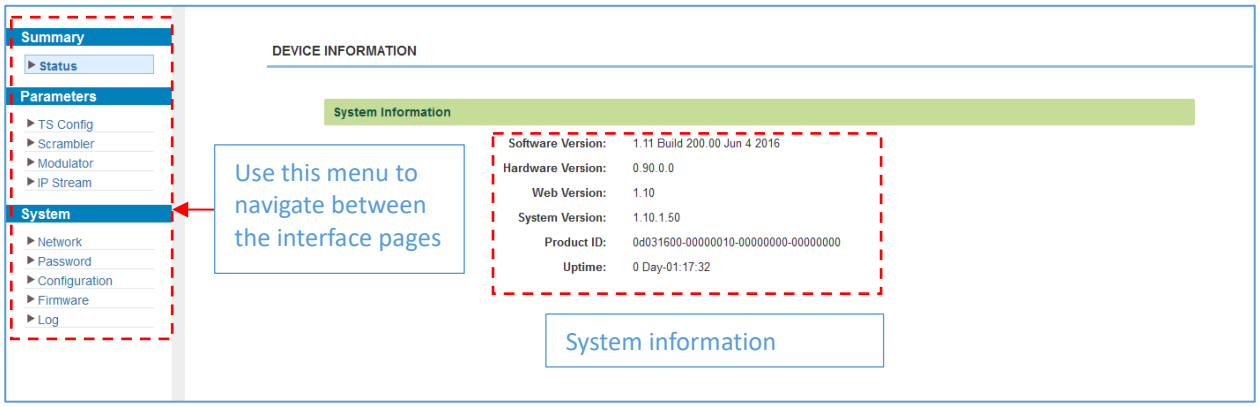


Figure-2

Parameters → TS Config

Use the **TS Config** page to configure the TS output parameters and select one of the following tabs: **Output TS, Stream Select, General, PID Bypass.**

Output TS

Select the **Output TS X** tab, to open the list of available TS channels. Click one of the channels to select it (Figure-3).

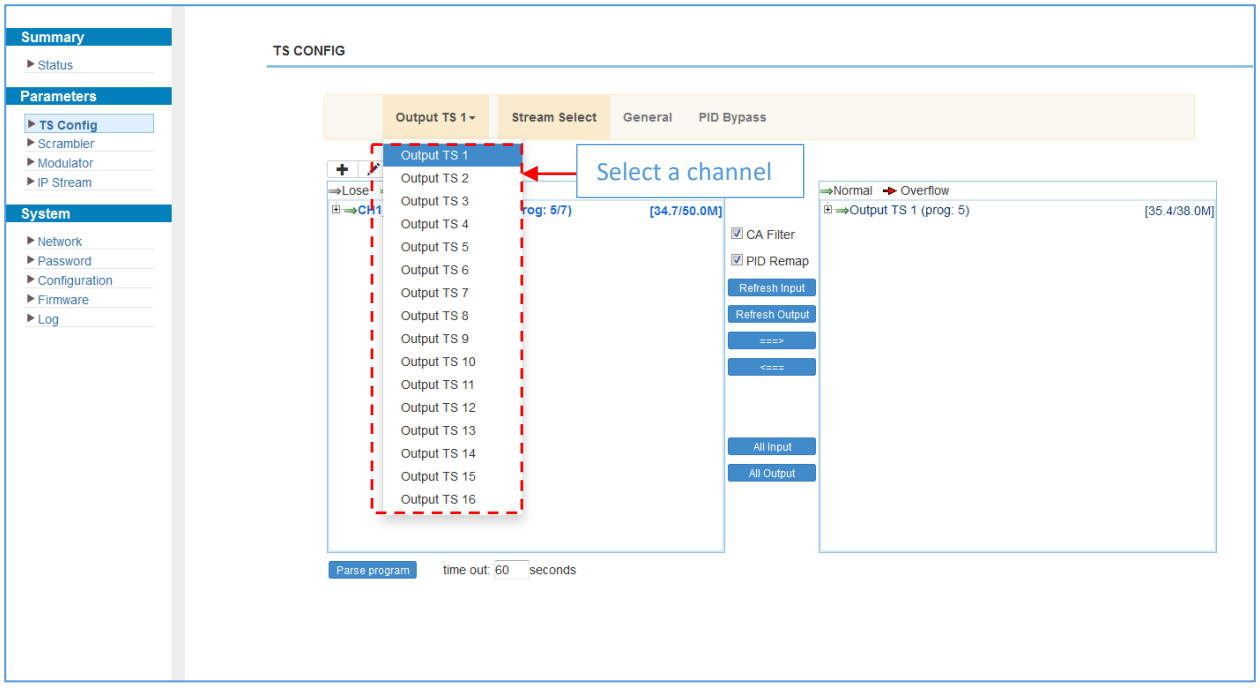


Figure-3

Stream Select

Select the **Stream Select** tab to select streams that should be sent to Mux out (Figure-4).

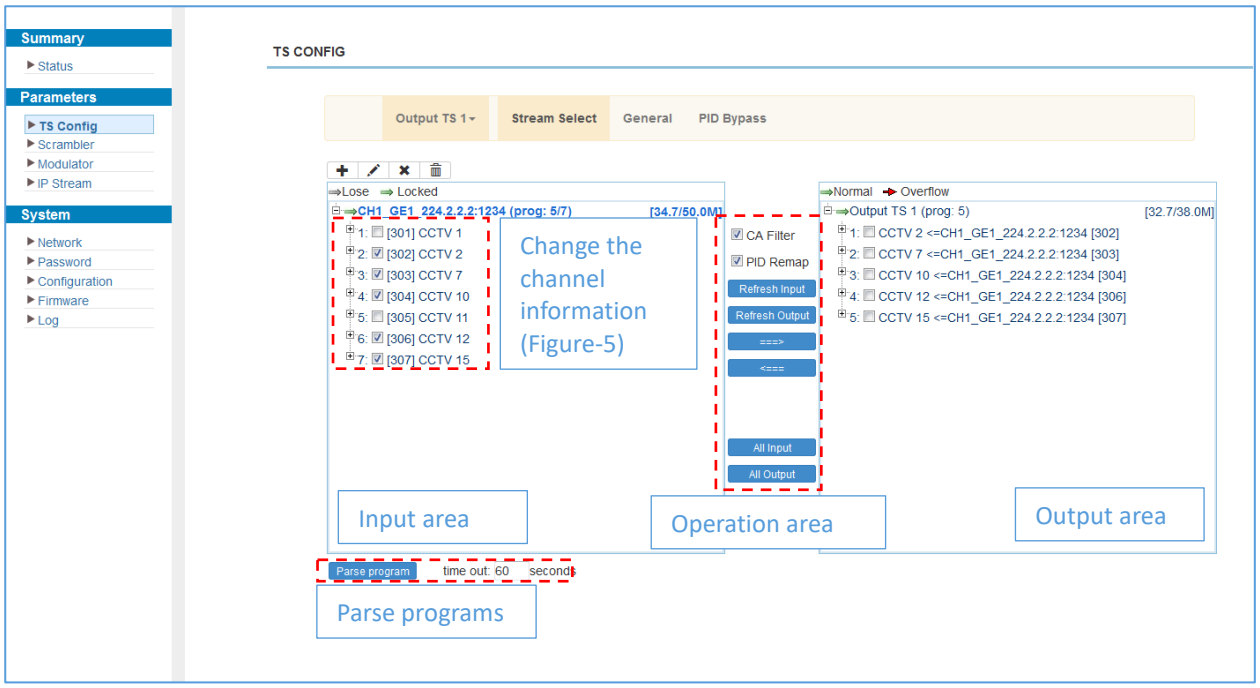


Figure-4

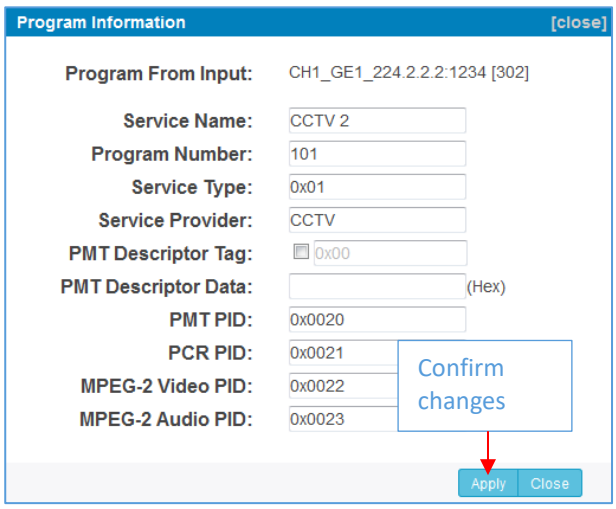


Figure-5

Operation area:

CA Filter	filter or not filter the source CA information
PID Remap	enable or disable PID remapping
Refresh input / output	refresh an input or an output
===> / <===	move programs between the input and the output areas
All input / output	select all input or output programs

General

Select the **General** tab to edit common parameter for output streams (Figure-6).

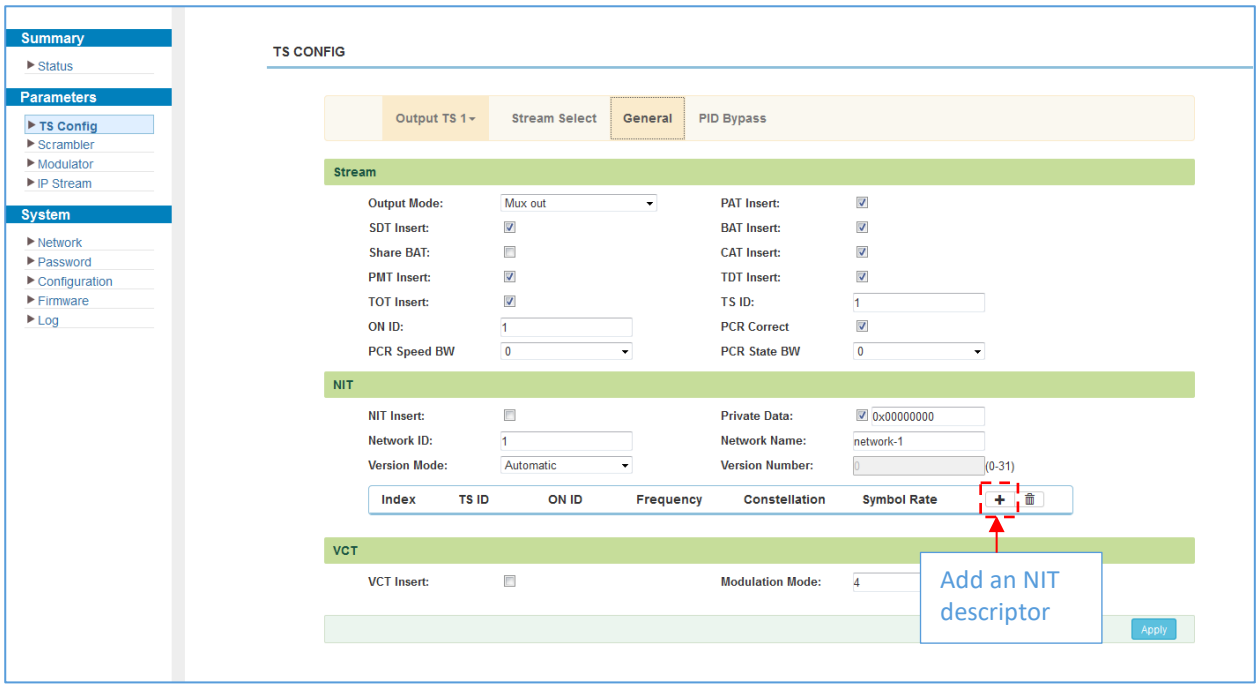


Figure-6

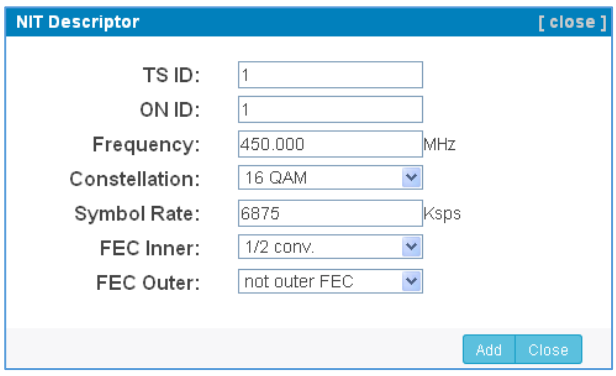


Figure-7

PID Bypass

Select the **PID Bypass** tab to edit the list of PIDs that should pass through (Figure-8).

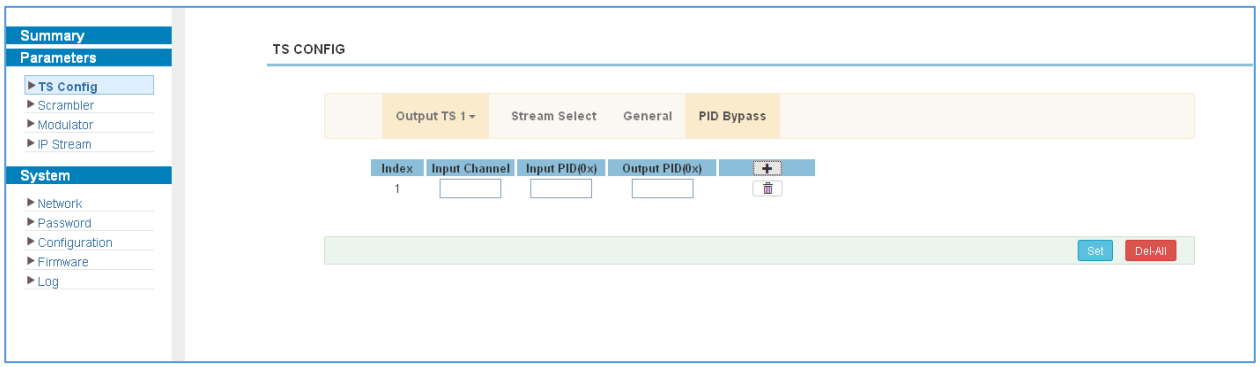


Figure-8

Parameters → Scrambler

Use the **Scrambler** page to manage scrambling options and select programs to scramble (Figure-9).

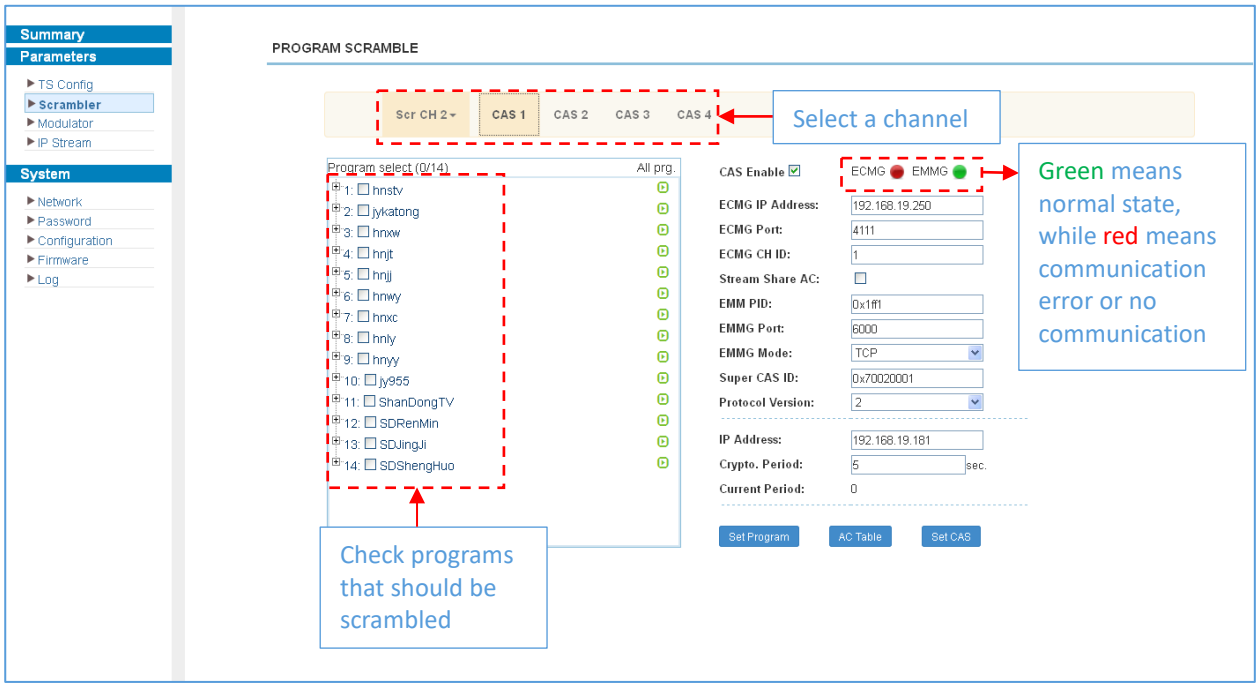


Figure-9

Parameters → Modulator

Use the **Modulator** page to edit RF output parameters (Figure-10).

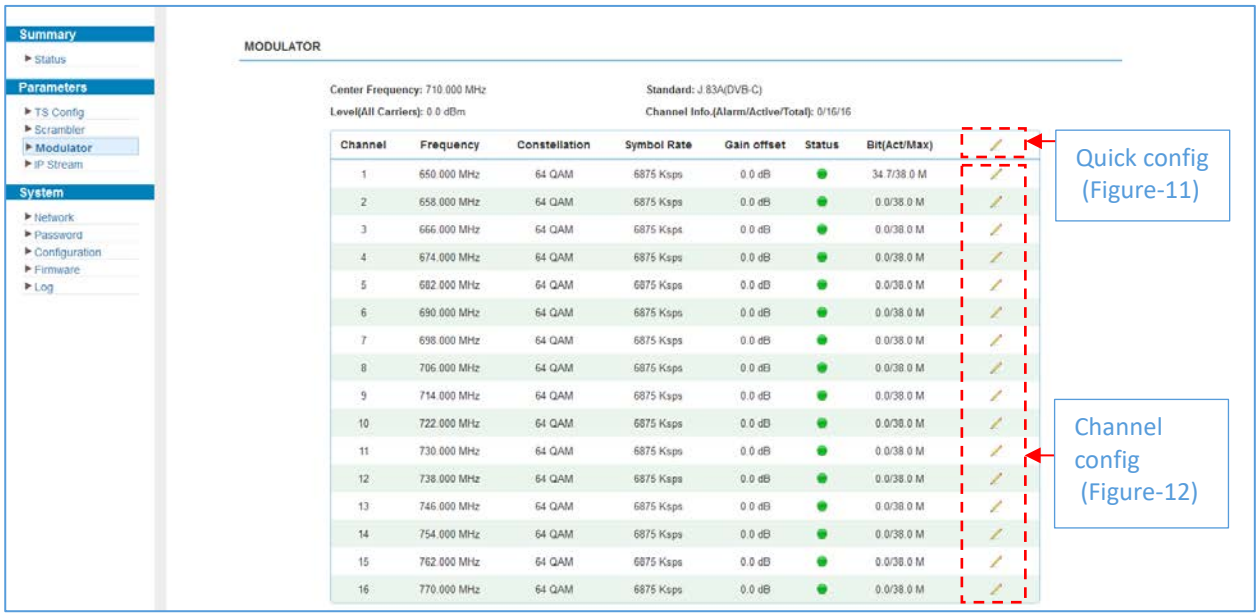


Figure-10

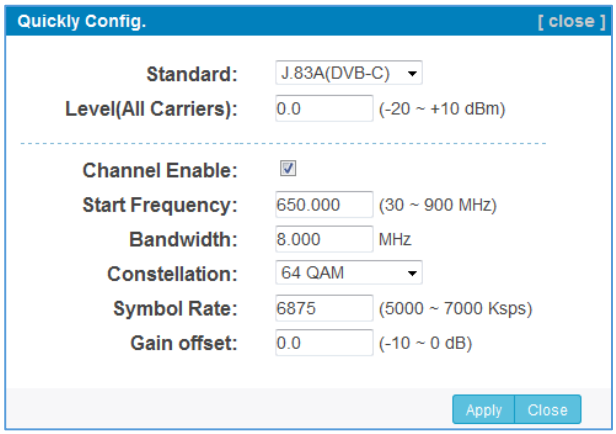


Figure-11

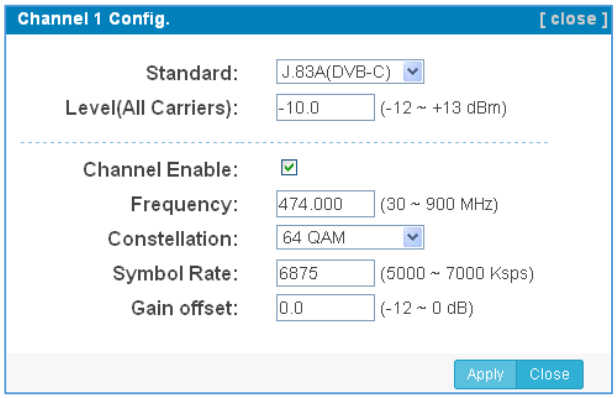


Figure-12

Parameters → IP Stream

NetUP Streamer 16xC supports TS IP output (16×MPTS) via the DATA port. Use the **IP Stream** page to set IP output parameters (Figure-13).

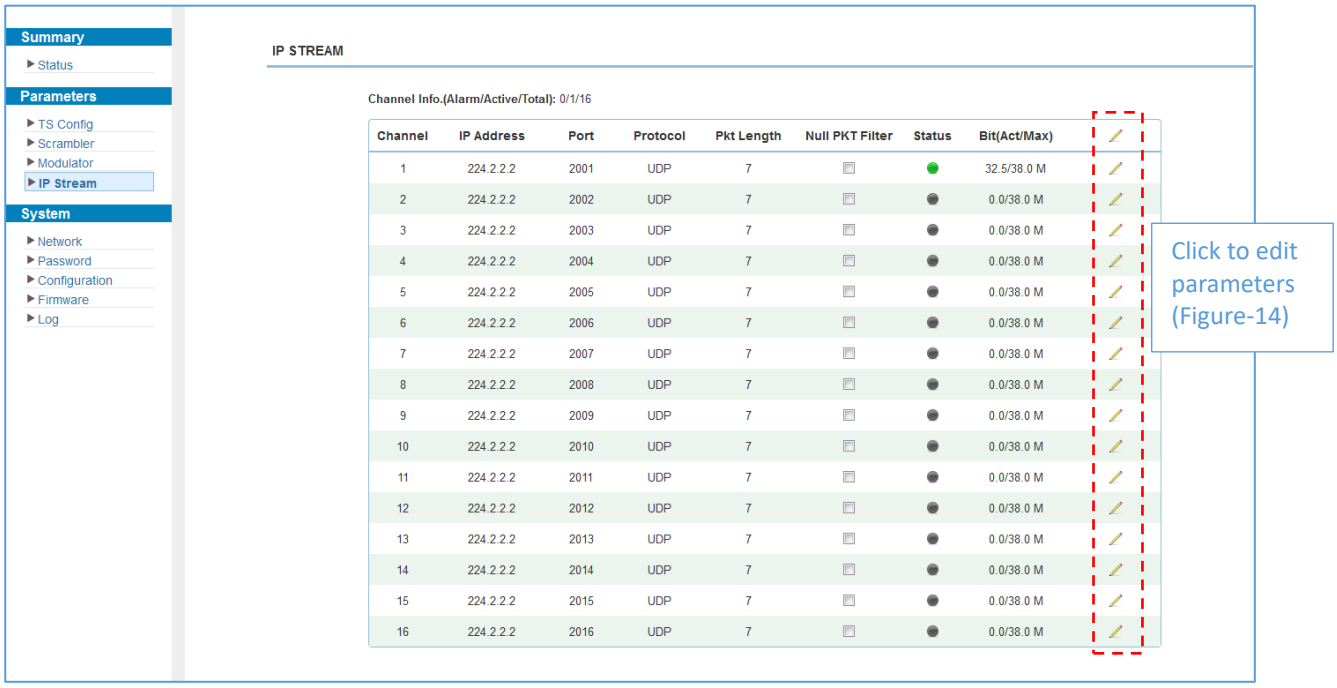


Figure-13

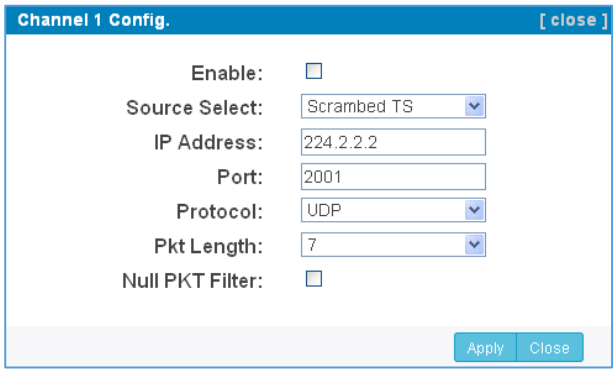


Figure-14

System → Network

Use the **Network** page to edit networking parameters (Figure-15).

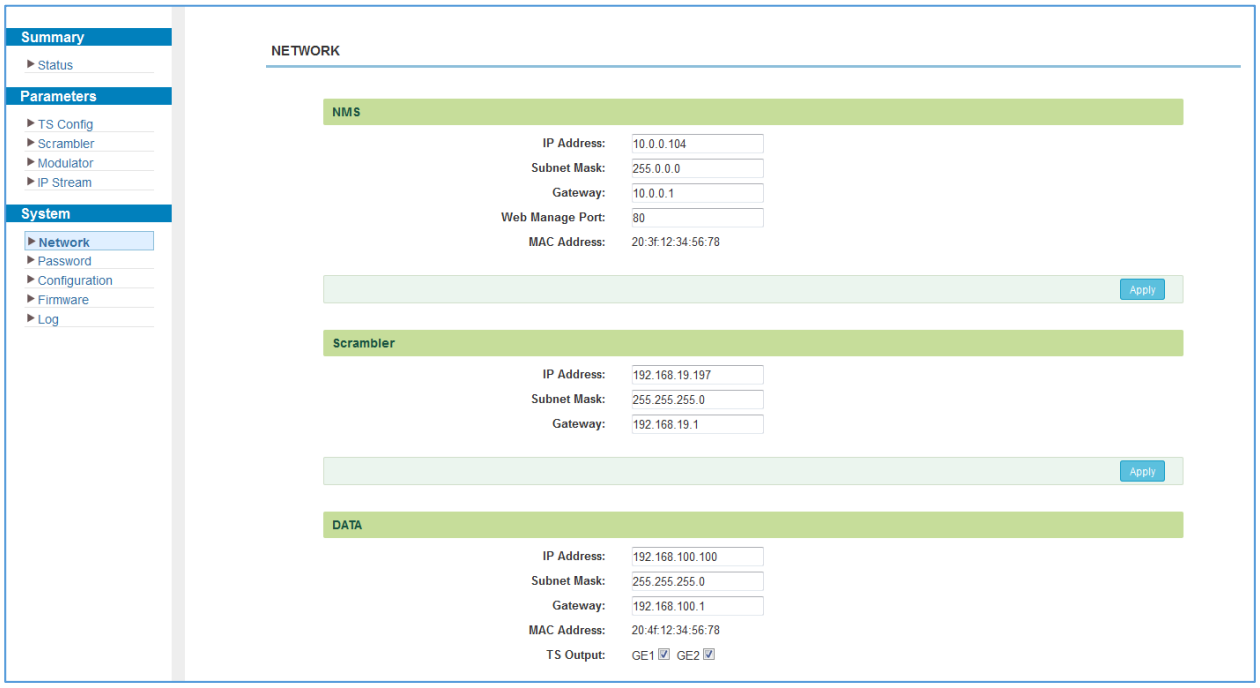


Figure-15

System → Password

Use the **Password** page to change current password and username (Figure-16).

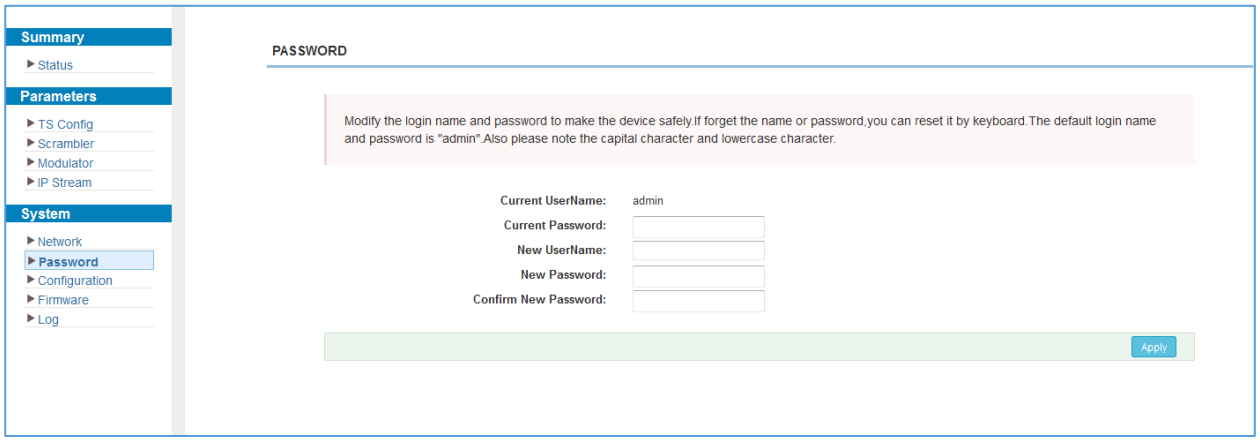


Figure-16

System → Configuration

Use the **Configuration** page to save or restore system configuration, to revert to factory settings, to work with backups or to load configurations (Figure-17).

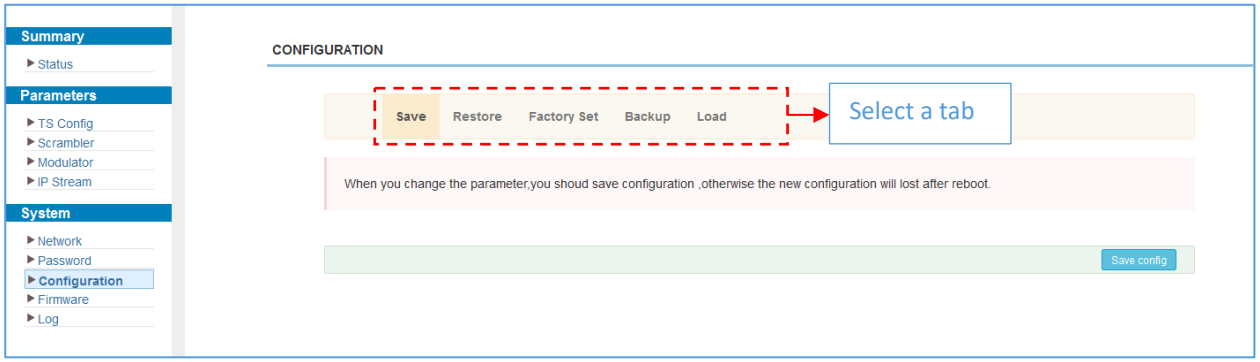


Figure-17

System → Firmware

Use the **Firmware** page to update firmware for the device (Figure-18).

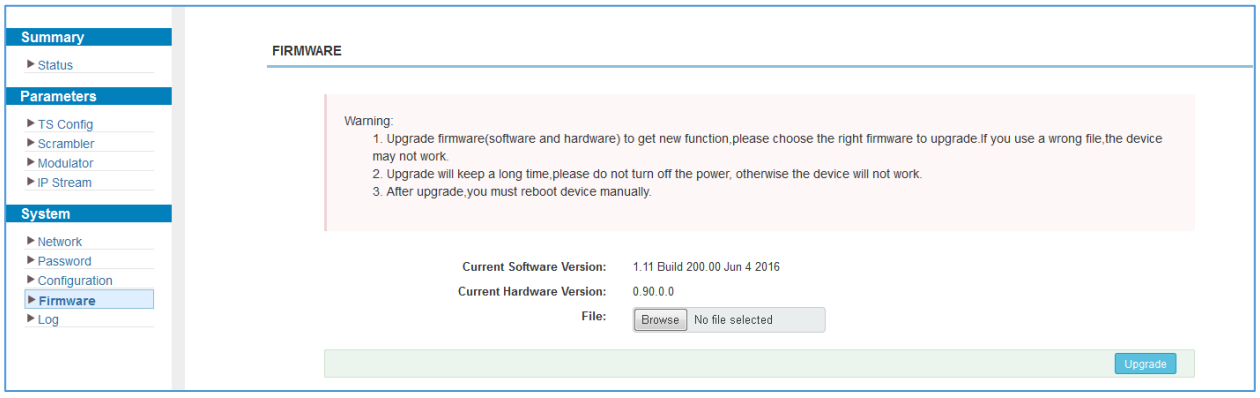


Figure-18

System → Log

Use the **Log** page to see system logs (Figure-19).

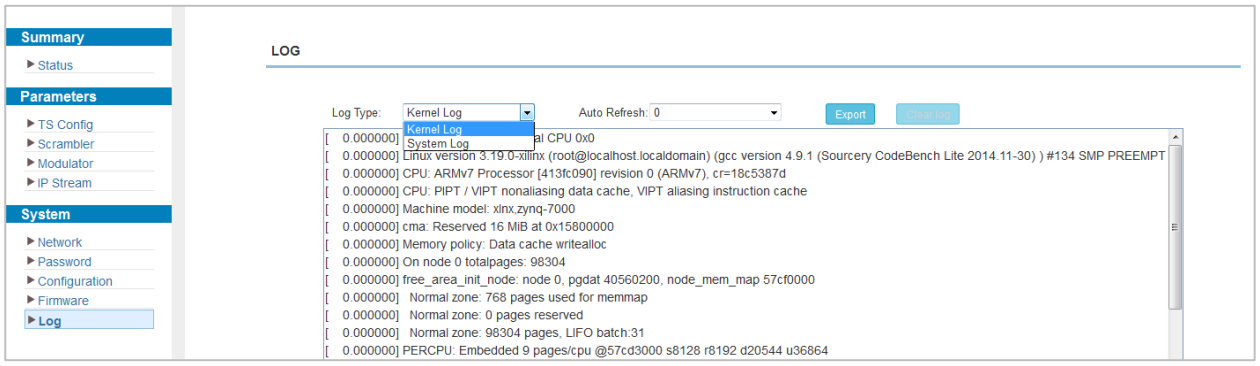


Figure-19

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?
- Is the RF output level vary within the tolerant range?
- 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