

# **IFQ332 Media Platform User's Manual**

**V1.1**

## About This Manual

This manual describes the installation, setup and operation of this equipment in details. Please read it carefully to make sure you can operate this device correctly.

## Important

- Avoid personal injury and product damage! Do not proceed beyond any symbol until you fully understand the indicated conditions. You may find this symbol in the document that accompanies this product. This symbol indicates important operating or maintenance instructions.
- Please use the cable of good quality and make sure the connector is in good condition.
- Please do not use the power supply that doesn't match the requirement.
- Please do not open the machine cover.
- Specifications and functions may be changed for improvement without notice in advance.

## Notices

### •Trademark Acknowledgments

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## Safety Instructions

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

## Electric Shock Hazard

This equipment meets applicable safety standards. Refer to this equipment's Identification label or contact factory for details about regulatory compliance approvals.



### **WARNING:**

**To reduce risk of electric shock, perform only the instructions that are included in the operating instructions. Refer all servicing and installation to qualified service personnel only.**

Electric shock can cause personal injury or even death. Avoid direct contact with dangerous voltages at all times. The protective ground connection, where provided, is essential to safe operation and must be verified before connecting the power supply.

Know the following safety warnings and guidelines:

- Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
- Only qualified service personnel are allowed to remove chassis covers and access any of the components inside the chassis.
- No user-serviceable parts inside. Do not open.

## Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when

moving the cart/apparatus combination to avoid injury from tip-over.

- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



**WARNING:**

**To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.**

## Installation Site

When selecting the installation site, comply with the following:

Protective Ground - The protective ground lead of the building's electrical installation should comply with national and local requirements.

Environmental Condition - The installation site should be dry, clean, and ventilated.

Do not use this equipment where it could be at risk of contact with water.

## Installation Requirements

Installation of the equipment must comply with local and national electrical codes.

## Equipment Placement

- Make sure the mounting surface or rack is stable and can support the size and weight of this equipment.
- The mounting surface or rack should be appropriately anchored according to manufacturer's specifications. Ensure this equipment is securely fastened to the mounting surface or rack where necessary to protect against damage due to any disturbance and subsequent fall.
- To prevent personal injury or damage to the chassis, never attempt to lift or tilt the chassis using the handles on modules (such as power supplies, fans, or cards); these types of handles are not designed to support the weight of the unit.
- Installation of this equipment in a rack should be such that the amount of airflow required for safe operation of this equipment is not compromised.
- Only install this equipment in a humidity- and temperature-controlled environment that meets the requirements given in this equipment's technical specifications.

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# 1. Overview

## 1.1 General

The IFQ332 is a highly integrated and cost-effective IP receiving and multiplexing modulator developed for the hotel TV system. The device supports 512 IP channels receiving and 32 channels modulating output. It is very suitable for IPTV and digital TV system in hotels, clubs, hospitals.

## 1.2 The Chassis

The chassis has a compact 1 RU design containing 1 NMS port, 2 Data ports and a CAS port. A rear RF port is used for outputting modulated signals.



Front Panel

1. 1 NMS port, 1 CAS port and 2 DATA ports
2. Status LED, Power LED and Reset button



Back Panel

1. RF port for output
2. Fan
3. Grounding port
4. Power port
5. Power switch

## 2. Installation

### 2.1 Introduction

This chapter contains the information for technicians installing the equipment.



#### **WARNING:**

**To avoid personal injury or equipment damage, only authorized and qualified service personnel is allowed to install, operate, maintain, and service this product.**

### 2.2 Installation Preparation

#### **Before You Start**

Make sure that the chassis is in good condition and that you have the tools and equipment needed.

#### **Unpacking and Inspecting the Housing**

As you unpack the housing, inspect it for shipping damage. If you find any damage, contact your dealer or your customer service representative.

### 2.3 Operating Temperature

The equipment is designed to operate within a specified operating temperature range. Please install the equipment in an environment that fits for the operation requirements.

We recommend the following activities to moderate the operating temperature:

- Mount ventilation profiles at the bottom and top of the 19-inch equipment rack. This allows the fresh air to enter and the hot air to leave the rack.
- Place the 19-inch equipment rack in a conditioned room with a temperature below 25°C (77°F).

## **2.4 Rack Mounting**

### **2.4.1 Tools and Accessories**

You need the following tools and accessories for mounting the unit:

- Screwdriver.
- Support brackets and rack mounting screws.

### **2.4.2 Mounting Requirements**

Follow the mounting guidelines below:

- Use 19-inch racks with the appropriate depth.
- Mount the unit adequately to secure optimal operation and reliability.
- Use rack-compatible support brackets to support the unit properly.
- Pay attention to the mechanical loading and stability to avoid hazardous situations.

### **2.4.3 Mounting the equipment**

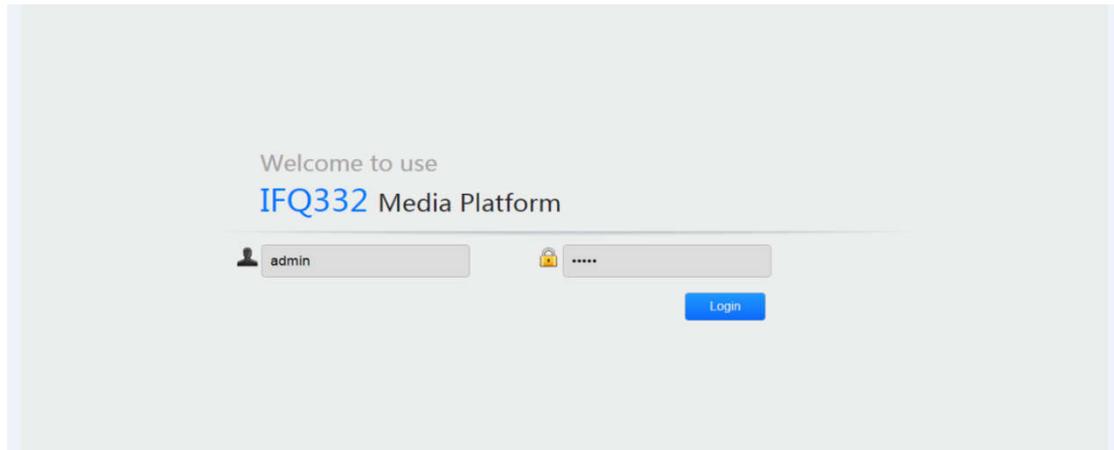
Perform the following procedure to install the equipment.

1. Unpack the device.
2. Select a 1 RU high location in the rack.
3. If the rack holes are not threaded, install a cage nut in the top and bottom holes of the selected 1 RU space.
4. Mount a left and right support bracket in the 19-inch rack.
5. Slide the housing completely in the 19-inch rack with the bottom being supported by the support brackets.
6. Insert the front panel rack mounting screws through the washers into the threaded holes or cage nuts.
7. Tighten the front panel rack mounting screws.

## 3 Operation Guide

### 3.1 Web-based GUI Introduction

This device provides a user-friendly Web-based GUI to configure the device and constantly monitor the device status. Open the browser and input the default IP address of IFQ332 (192.168.1.10), input default username (admin) and password (admin), then click “login” to go to login interface.



You will see the whole interface structure after login.



- 1: LOGO and Model of the device;
- 2: Device Status, Parameter Setting, Service Configuration, Scramble Configuration System Settings;
- 3: Username and current time of device;
- 4: Schematic of the front panel and rear panel, Status of indicator light;
- 5: Device information: Module, Firmware Version, Software Version, Hardware Version, Memory Usage, CPU Usage, Operation Time.

## 3.2 Device Status

### 3.2.1 IP Input

Display the current input bit rate of Date1 port and Date2 port.

The screenshot shows the IFQ332 web interface. The main content area is titled "IP Input" and contains a table with the following data:

Channel	Total Bit Rate(Mbps)	Effective Bit Rate(Mbps)	TS Analysis	Service List
1.1	0.000	0.000	⊗	⊞
1.2	0.000	0.000	⊗	⊞
1.3	0.000	0.000	⊗	⊞
1.4	0.000	0.000	⊗	⊞
1.5	0.000	0.000	⊗	⊞
1.6	0.000	0.000	⊗	⊞
1.7	0.000	0.000	⊗	⊞
1.8	0.000	0.000	⊗	⊞
1.9	0.000	0.000	⊗	⊞
1.10	0.000	0.000	⊗	⊞
1.11	0.000	0.000	⊗	⊞
1.12	0.000	0.000	⊗	⊞
1.13	0.000	0.000	⊗	⊞

### 3.2.2 QAM Output

Display the current output information of modulation module.

The screenshot shows the IFQ332 web interface. The main content area is titled "QAM Output" and contains a table with the following data:

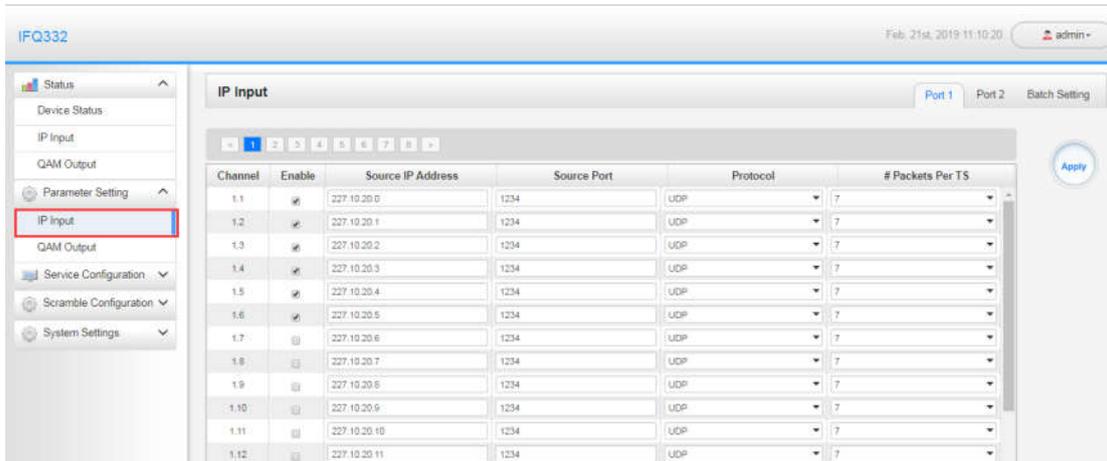
Channel	Total Bit Rate(Mbps)	Effective Bit Rate(Mbps)	Bit Rate	TS Analysis	Service List
1.1	0.000	0.000	Normal	⊗	⊞
1.2	0.000	0.000	Normal	⊗	⊞
1.3	0.000	0.000	Normal	⊗	⊞
1.4	0.000	0.000	Normal	⊗	⊞
1.5	0.000	0.000	Normal	⊗	⊞
1.6	0.000	0.000	Normal	⊗	⊞
1.7	0.000	0.000	Normal	⊗	⊞
1.8	0.000	0.000	Normal	⊗	⊞
1.9	0.000	0.000	Normal	⊗	⊞
1.10	0.000	0.000	Normal	⊗	⊞
1.11	0.000	0.000	Normal	⊗	⊞
1.12	0.000	0.000	Normal	⊗	⊞
1.13	0.000	0.000	Normal	⊗	⊞
1.14	0.000	0.000	Normal	⊗	⊞
1.15	0.000	0.000	Normal	⊗	⊞
1.16	0.000	0.000	Normal	⊗	⊞
1.17	0.000	0.000	Normal	⊗	⊞

## 3.3 Parameter Setting

IFQ332 supports unicasting and multicasting input, supports SPTS and MPTS.

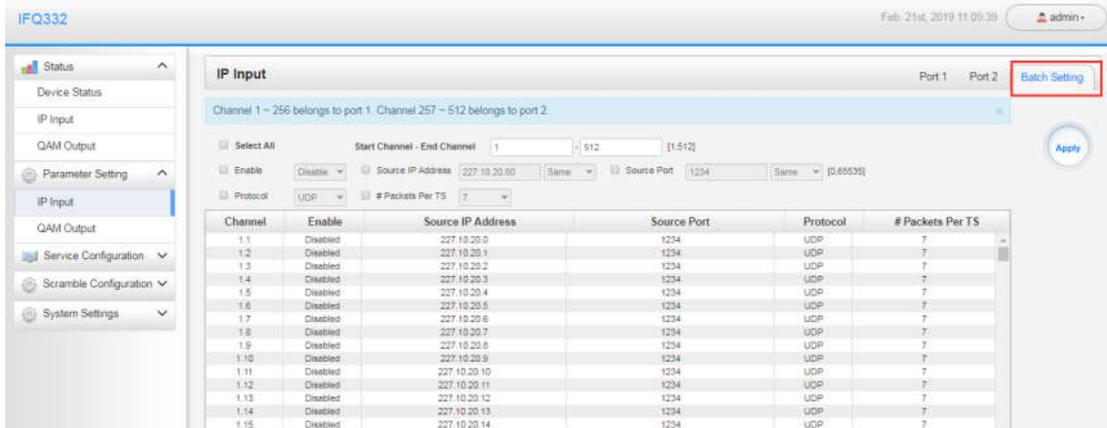
### 3.3.1 Input

Click "Input" to access and configure.



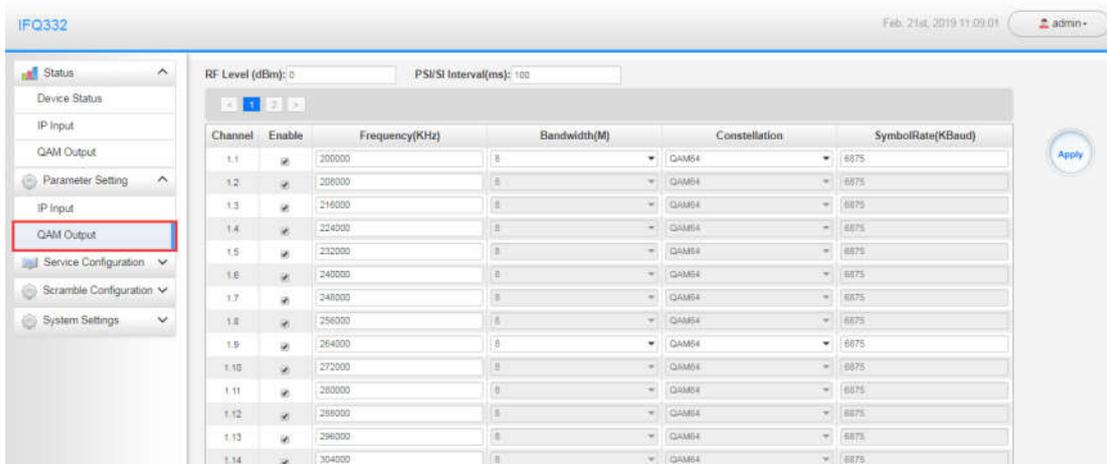
Enable the channel, then input Source IP Address, Source Port and select Protocol, then click Apply to save.

It also supports batch setting, on which multiple channels can be configured at a time.



### 3.3.2 Output

Click "Input" to access and configure.



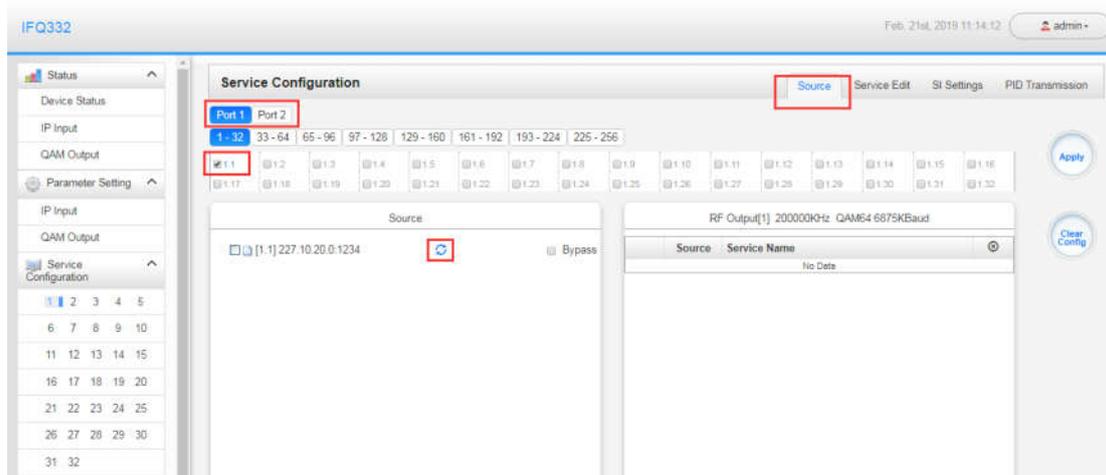
Enable the channel, then input Frequency, Symbol Rate, select Bandwidth, Constellation, then click Apply to save.

### 3.4 Service Configuration

Click Service Configuration, and there are 32 channels for modulation output. Select the channel to configure it.

#### Source

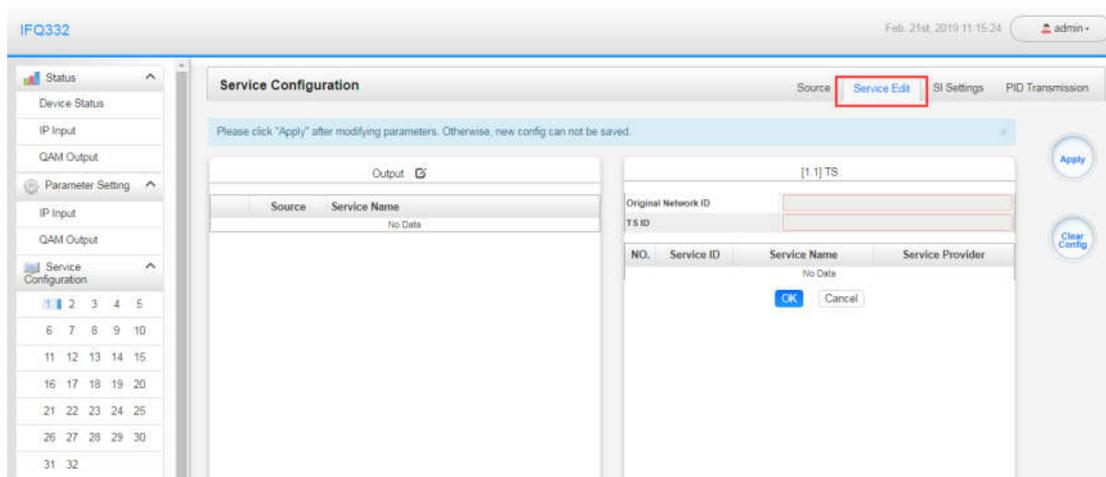
Select Port1 or Port2, there are 256 channels for each port. Enable the channel which has been configured before as input source.



Click  to scan services of the channel, then output services with bypass or multiplex mode. Click Apply to save.

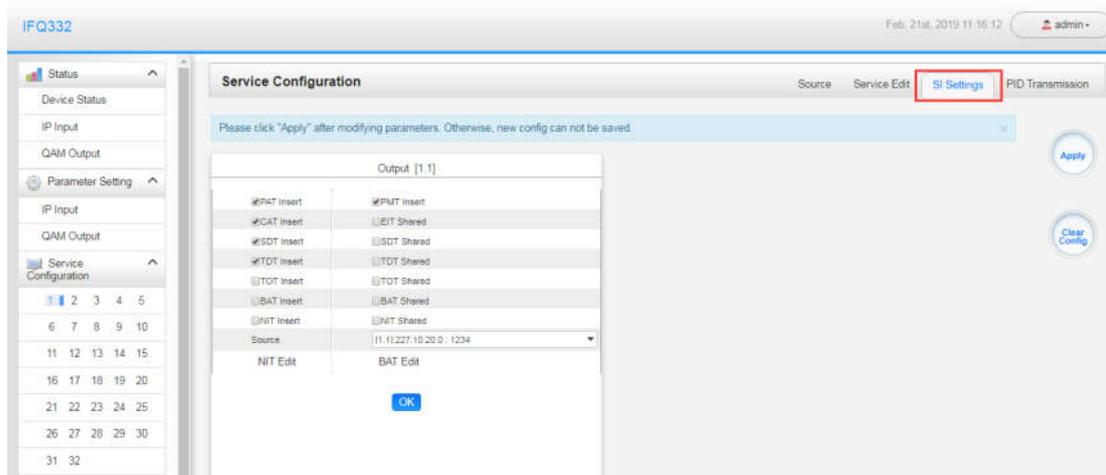
#### Service Edit

Click Service Edit, then information such as Service ID, Service Name, PID of TS or a single service can be configured here.



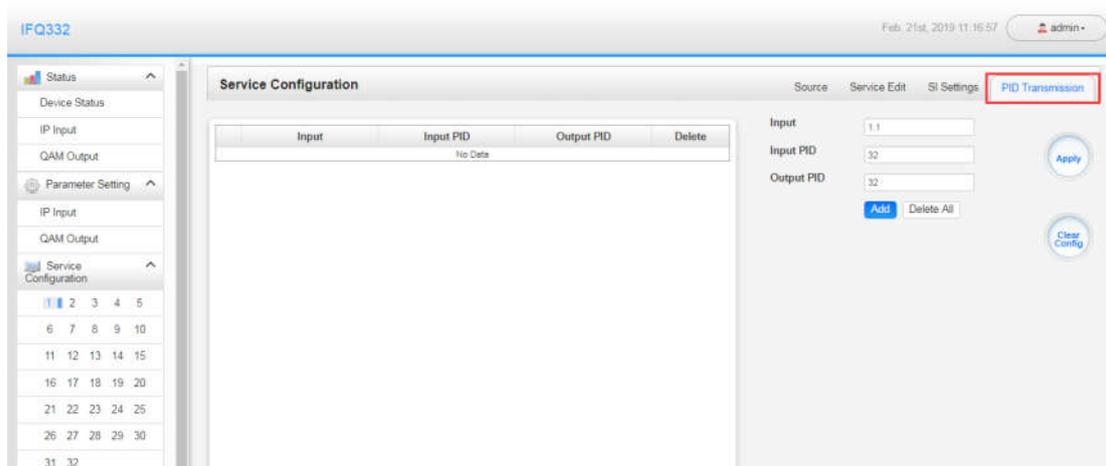
## SI Settings

Click SI Settings, then SI table of services can be inserted or shared. Click Apply to save. If there is no special request, it can be outputted with default settings.



## PID Transmission

Click PID Transmission, then PID which need to be transmitted can be added or deleted. Click Apply to save.



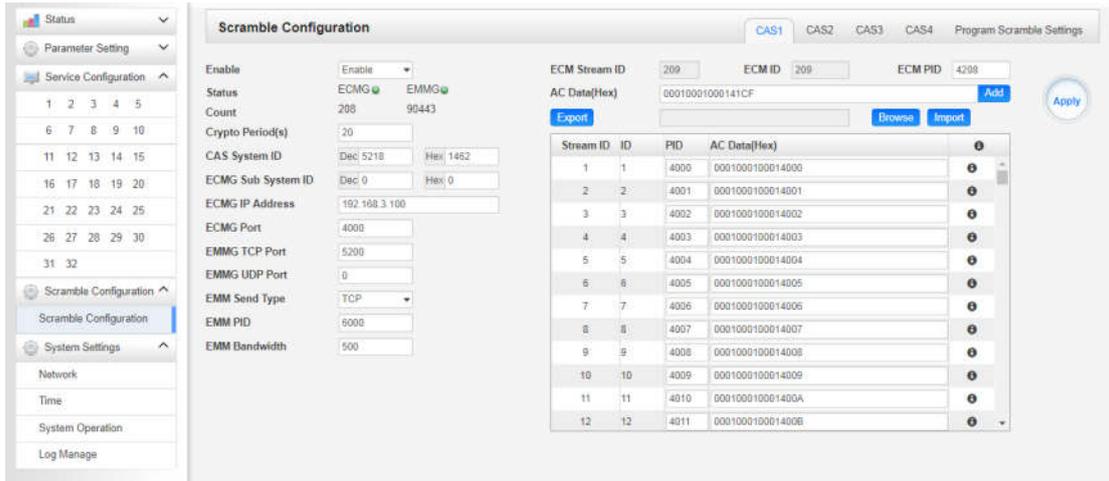
## 3.5 Scramble Configuration

### CAS configuration

IFQ332 can support four CAS system at the same time.

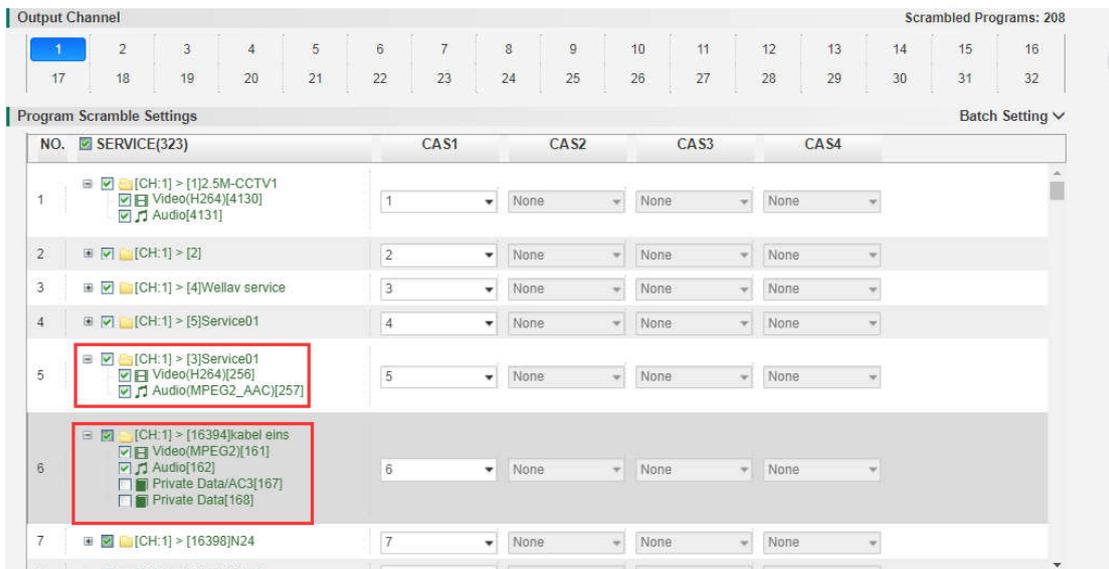
You need to match the following parameters to your CAS system. Crypto Period(s)、CAS System ID、ECMG IP Address、ECMG Port、EMMG TCP Port、EMMG UDP Port、EMM Send Type、EMM PID、EMM Bandwidth、ECM Stream ID、ECM ID、AC Data(Hex).

When you finished, the Status indicator(ECMG/EMMG) will turn red to green.

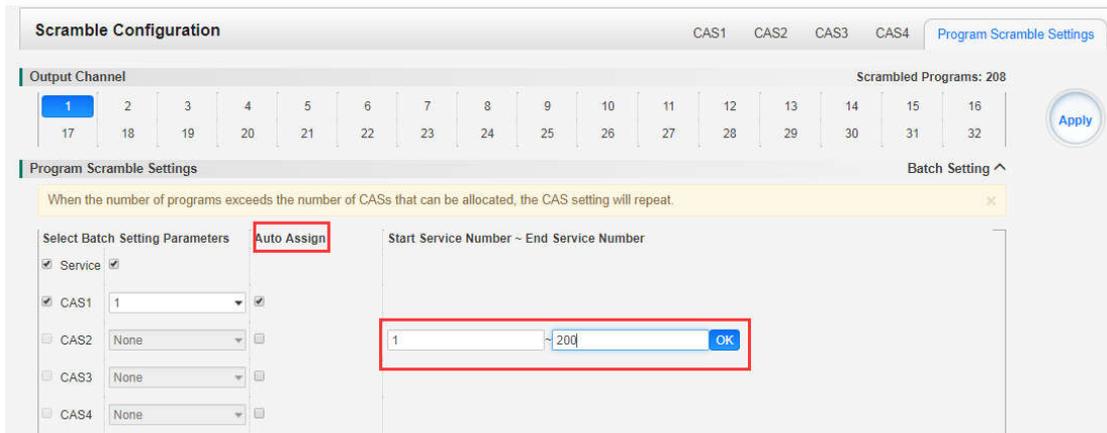


## Program Scramble Settings

When you choose to Scramble the Service in channel 1, you only need to Click on 1 in output Channel interface. The default setting is scrambling Video and Audio PID, you should click  icon if you want to scramble more PID in the Service. When you have many services to scramble, Batch Settings is a really important function.



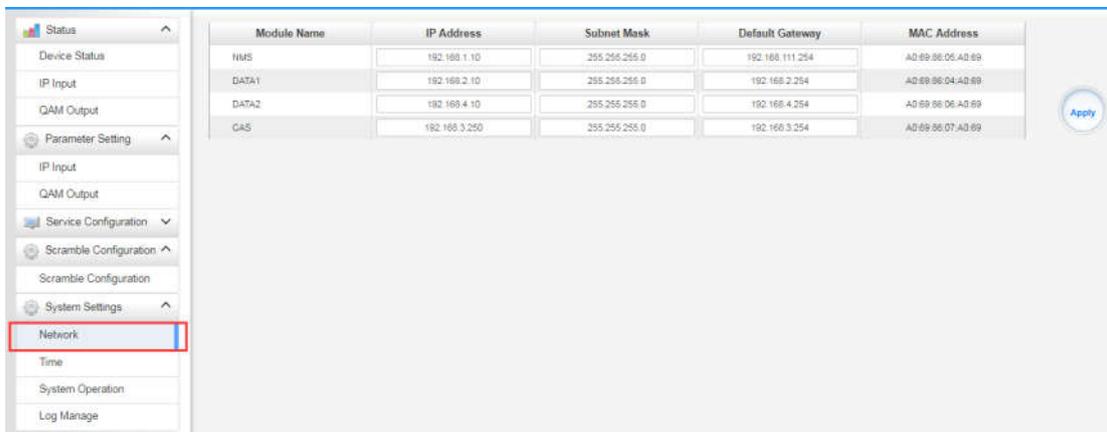
Try to Enter two number as Start Service number and End Service number, if you click on Auto Assign option, the service will be scrambled in 1,2,3,4,5....like above picture. If you don't click, the service will be scrambled in the same settings parameters.



## 3.6 System Settings

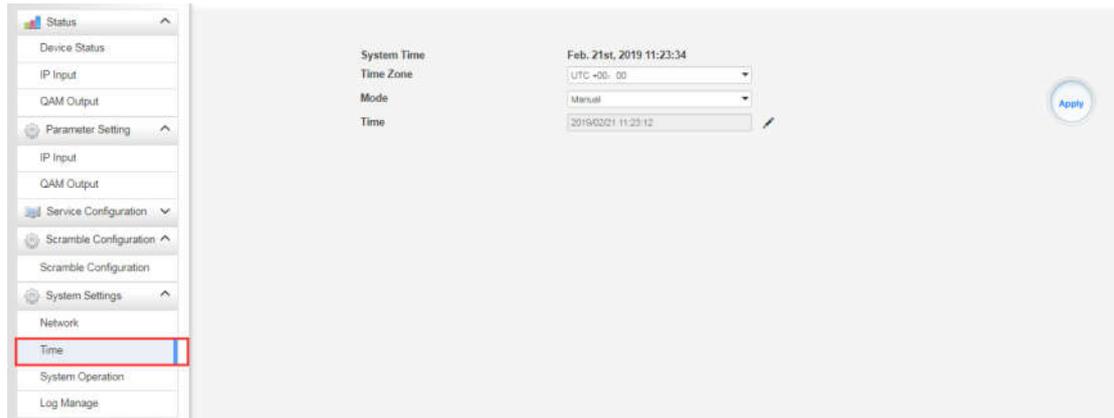
### 3.6.1 Network

On this page, IP Address, Subnet Mask, Gateway of IP port can be configured independently. Click Apply to save.



### 3.6.2 Time

On this page, system time can be modified by selecting Time Zone, Mode and configuring current time. Click Apply to save.



### 3.6.3 System Operation

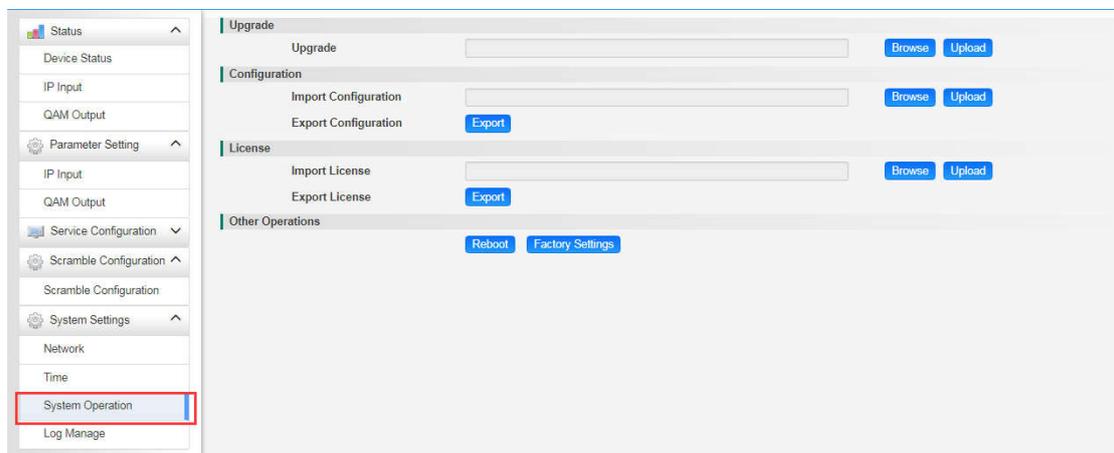
There are 4 items on this page, Upgrade, Configuration, License, Other Operations.

Upgrade: software can be upgrade to a different version here.

Configuration: configuration can be imported or exported, which will make it more convenient to configure the device.

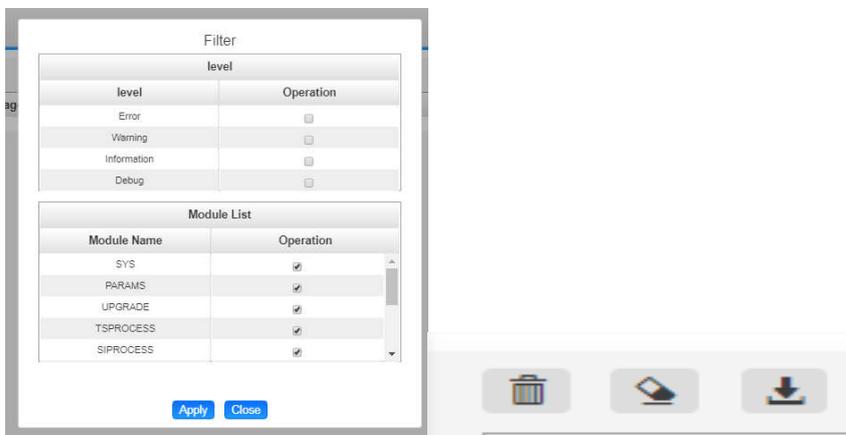
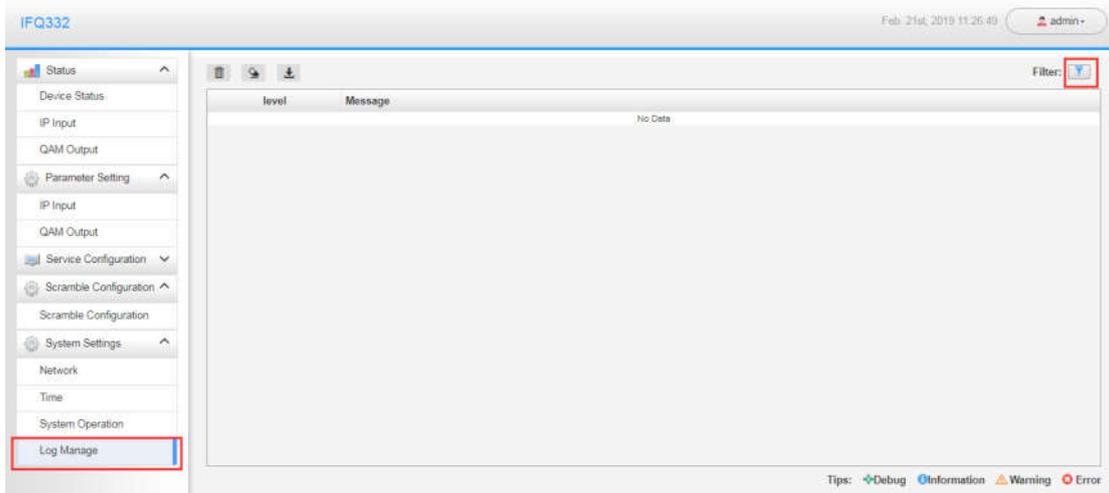
License: import or export license here.

Other Operations: reboot the device, restore to factory settings, export log, clear log.



### 3.6.4 Log Manage

On Log Manage page, the software will log some abnormal operations. The R&D department can judge the problems of the equipment during use according to the log.



Log clean/Clear screen/ log export

## **Appendix Terminologies**

BAT : Bouquet Association Table

CAT : Condition Access Table

DVB: Digital Video Broadcasting

EIT: Event Information Table

ISO : International Organization for Standardization

QAM : Quadrature Amplitude Modulation

LED : Light-emitting diode

MPEG : Moving Picture Experts Group

MPTS : Multiple Programs Transport Stream

NIT : Net work Information Table

PAT : Program Association Table

PID : Packet Identifier

PMT : Program Map Table

PSI : Program Specific Information

PSU : Power Supply Unit

SD : Standard Definition

SDT : Service Description Table

SI : Service Information

SPTS : Single Program Transport Stream

TDT: Time and Date Table