H.264 120m HDMI Wallplate Extender over IP

User Manual

Introduction

The VIP-101-E-WP incorporates the advanced H.264 codec as the compression type, which makes it occupy lower bandwidth and transmit over the LAN more smoothly. It supports 120m over single cat5e/6 cable at point to point, as well as point to many and many to many over Ethernet switch. The VIP-101-E-WP works with the VIP-100 II encoders and decoders.

1. Features

1) Support Dynamic Host Configuration Protocol (DHCP)

2) Support one to one, one to many, many to one, many to many modes, with large cascade

3) Following North American Wall plate standard

4) Transmit up to 120m over single Cat5e/6 cable

5) Using H.264 compression encoding, support resolution up to 1080p@60hz

6) Comply with TCP/IP protocol, streaming bit rate is 15Mbps

7) Support Analog 2.0 Audio Extraction at Receiver

8) Support LPCM audio format

9) Support PC tool control

10) Compatible with Video Player such as VLC etc

11) 802.3 of compliant POE (No need power supply when connecting with POE Switch)

12) HDCP Compliant

13) DC 5V 1A power supply

2. 1 Specifications

Performance	
Protocol	H.264 encoder over TCP/IP
Support Video format	480i/480p/576i/576p/720p/1080i/1080p@60HZ
Support Audio format	LPCM, Audio sampling rate 48KHZ
Streaming Bit Rate	15Mbps/1080P
HDCP	Compliant
IP setting &Group ID setting	
Default IP	TX: 192.168.1.11 ; RX: 192.168.1.12
Request for Switch/Router	Support IGMP, support DHCP
Connectors on Transmitter	
Input	1xHDMI Female port input
Output	1x RJ45 output
Connectors on Receiver	
Input	1xRJ45 input
Output	1x HDMI Female port output, 1x Audio output
Environmental & Power Requirements	
Operating temperature	-10 to +40 ℃ （+14 to +104℉）
Operating Humidity Range	20 to 90%RH (No Condensation)
Power supply	DC 5V 1A
Power consumption	TX: 4W RX: 3W
Physical	
Dimension	TX: 70x115x40mm ; RX: 70x115x40mm
Net Weight	TX: 0.12KG ; RX:0.13KG

2. 1 Supported input resolution

Frequency	Resolution
50Hz	576i
	576P
	720P
	1080P
	1080i
60Hz/59.94Hz	480i
	480P
	720P
	1080P
30Hz/29.97Hz	1080P
24Hz	1080P
25Hz	1080P

VESA Resolution

Frequency	Resolution
50Hz	576i
	576P
	720P
	1080P
	1080i
60Hz/59.94Hz	480i
	480P
	720P
	1080P
30Hz/29.97Hz	1080P
24Hz	1080P
25Hz	1080P

3. Packing content

1). 1x Transmitter
2). 1x Receiver
3). 1x Manual
4). 2x 6#-32x7/32" screws
5). 4x 4#-32x5/8" screws
6). 2x Phoenix plugs for power supply
7). 2x Power supply

4. Panel description

Transmitter
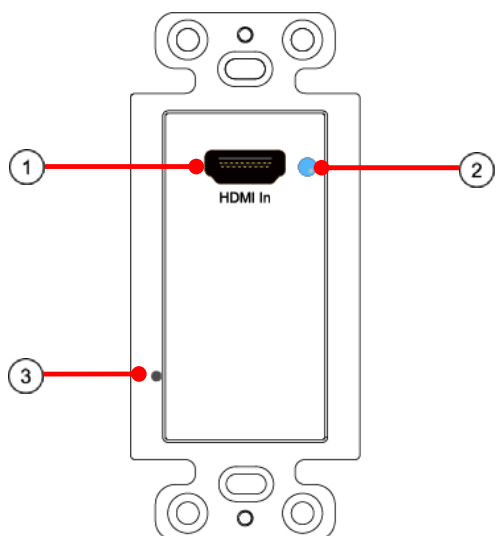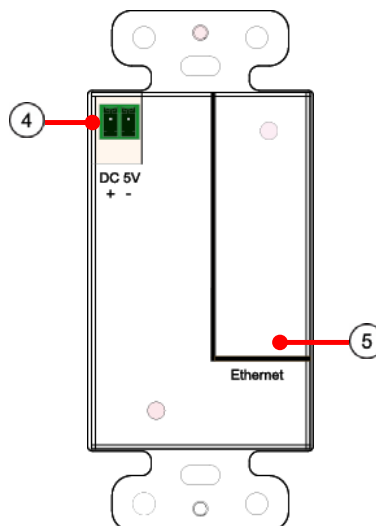
1) HDMI input
2) Blue indicator of HDMI input
3) Reset port **1**
4) DC 5V
5) CAT5e/6 output

5. Installation and Configuration

5.1 Setup
When connecting point to point, no configuration is needed.
When connecting point to many, many to point and many to many, please make sure every TX and RX has unique IP and MAC address, every TX has unique group ID.
Our this over IP Extender has been assigned unique default MAC address for every TX and RX, so you don't have to set the MAC for the units.
You just need to set the IP address and Group ID following bellowing steps.

5.1.1 Setting the IP address
A). DHCP (Dynamic host configuration protocol)
If you are using a Switch that supports DHCP, please enable DHCP so that the Switch will assign an unique IP for TX and RX, and you don't need to change the IP for the units manually.

Ethernet:
☑ Use DHCP
Default IP address: 192 . 168 . 1 . 11
Default Netmask: 255 . 255 . 255 . 0
Default Gateway: 192 . 168 . 1 . 1
[Submit]

Uart Setting:

Baud Rate: 115200 ▾

[Submit]

File to Upgrade Encoder Firmware: [   ] [浏览...] [Upgrade!]

[Encoder Reset]   [Reboot]   [LogOut]

☑ Use DHCP
Default IP address: 192 . 168 . 1 . 12
Default Netmask: 255 . 255 . 255 . 0
Default Gateway: 192 . 168 . 1 . 1
[Update DHCP]

Multicast Group: Group 01(239.255.42.43) ▾ Port: 5004
[Update]

Uart Baud Rate: 115200 ▾
[Update]

[Reboot]

B). Set the IP via web browser
If you are using a Switch that doesn't support DHCP, please change the default IP for TX (192.168.1.11) and RX (192.168.1.12) manually.
A HTTP server is embedded in each TX and RX. You can set up IP address for HDMI Extender via web browser
The default IP address of the **TX is 192.168.1.11, user** name: admin, password: admin
The default IP address of the **RX is 192.168.1.12**

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Step 1: Make sure the Transmitter and PC are in the same domain.
Access the Network Setting Control Panel in Windows and locate your Lan connection. Under Windows 7, this can be done by clicking Start > Control Panel >Network Sharing center>Change adapter settings > Properties >Internet Protocol Version4 (TCP/IPv4). Change the IP address field to 192.168.1.1
(0-255). After that press "OK" to save the configuration.

Note ※ The PC and TX/RX should be in the same domain.
※ The IP address of PC should be different from the IP address of TX and RX.

Step 2: Use an Ethernet Cable to connect the PC (or laptop) and the extender. the power LED for the extender is red and the green status is blinking.

Step 3: Login in IE: 192.168.1.11 (default IP for TX) or 192.168.1.12(default IP for RX), You can setup IP address for the TX and RX. TX requires user name: admin and password: admin
Please set IP address for each TX and each RX, IP: 192.168.1.XX (XX:1-255. all IP address for TX and RX must be different and can't be same as the PC's address.)

Step 4: After selecting "Use DHCP" or reset the IP Address, click "Submit" (transmitter) or "update DHCP" (Receiver).

Step 5: Click "Reboot".

Step 6: Restart the extender after resting the IP Address.

5.1.2 Set the group ID for TX and RX via web browser
Step 1: Make sure the Transmitter and PC are in the same domain.
(Refer to 5.1.1)

Step 2: Use an Ethernet Cable to connect the PC (or laptop) and the Extender. the power LED for the extender is red and the green status LED is blinking.

Step 3: Power on the TX or RX with 5V 1A power supply.

Step 4: Login in IE: 192.168.1.11 (default IP for TX) or 192.168.1.12(default IP for RX), TX requires user name: admin and pass word: admin.

Step5: Change the group ID at "Stream setting".

Step 6: Click "Submit" (transmitter) or update (receiver).

Stream Setting:

Transfer: ☑ Multicast
Multicast IP: [00(239.255.42.42) ▼] Port: 5004

Multicast Group: [Group 00(239.255.42.42) ▼] Port: 5004
[Update]

Note ※ Make sure the Group ID is different for each Transmitter under one to many and many to many mode.

5.2 Preparing the switch

When doing point to many and many to many, it requires a switch to distribute the sources. We suggest you use the Switch that supports IGMP and DHCP. IGMP feature help to manage the group ID which is related to switch the sources; DHCP allow the switch to assign an IP for TX and RX automatically, please enable DHCP of the switch.

5.3 Connection

Note ※ Please don't insert into or pull out HDMI cable when power on. Please connect cable only when power is off.

5.3.1 Point to point

1. Connect the source device and the Transmitter unit with HDMI Cable.

2. Connect HDMI display and the HDMI Receiver unit with HDMI Cable.

3. Connect the Transmitter and Receiver with Cat5e/6 cable

4. Power on Transmitter and Receiver with adapter 5V 1A.

NOTE: Insert/Extract cables gently.

5.3.3 Point to many

1. Setting the IP address for Transmitter & Receiver and preparing the switch following the steps as instructed above (5.1.1&5.2)

2. Connect the source device and the Transmitter unit with HDMI Cable.

4. Connect the transmitter and the switch/router with cat5e or cat6 cable.

5. Connect all the Receivers and the switch/ router with Cat5e/6 cable.

6. Connect the HDMI displays and the HDMI Receiver units with HDMI Cable.

7. Power on Transmitter and Receiver with adapter 5V1A, power on the switch with its adapter.

Note ※ Daisy chain the switch if its RJ45 port is not enough.
　　　※ The quantity of Receiver is up to 255pcs.
　　　※ Make sure the Group ID is different for each Transmitter under one to many and many to many mode.

5.3.4 Many to many

1. Setting the IP address for Transmitter & Receiver and preparing the switch following the steps as instructed above (5.1.1&5.2)

2. Connect the source device and the Transmitter unit with HDMI Cable.

3. Connect the transmitters and the switch/router with cat5e or cat6 cable

4. Connect the Receivers and the switch/ router with Cat5e/6 cable

5. Connect the HDMI displays and the HDMI Receiver units with HDMI Cable.

6. Power on Transmitter and Receiver with adapter 5V1A, power on the switch with its adapter.

7. Choose the source Web browser as instructed above (5.1.2)

Note   ※ Daisy chain the switch if its RJ45 port is not enough.

   ※ The total quantity of Transmitter and Receiver is less than 256 pcs.

   ※ Make sure the Group ID is different for each Transmitter under one to many and many to many mode.
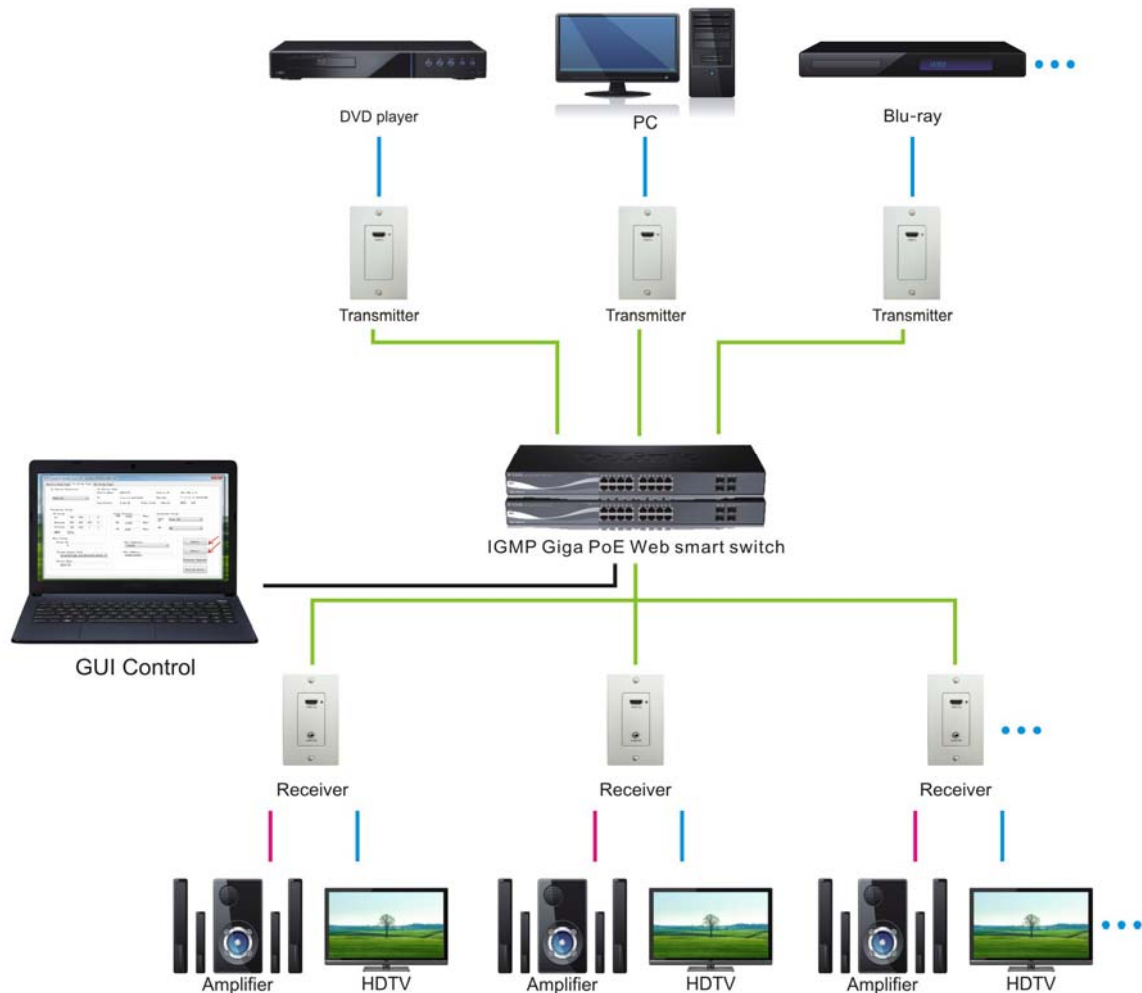
Note ※The total qty of TX, RX, Switch is less than 256pcs.

6. Firmware update

We provide the firmware to upgrade the units when it is necessary. Please follow up bellowing steps to update the firmware.

Step1: Connect TX / RX to the PC with a short Cat5e cable

Step2: Power on TX/ RX with power adapter 5V1A.

Step3: Login TX or RX with their default IP (TX: 192.168.1.11; RX:192.168.1.12) on web browser, TX requires user name: admin and password: admin

Step4: Click "choose File" on the interface and find out the latest version firmware.

Step5: Click "Upgrade", the process will takes seconds, please DO NOT interrupt or power off the units during the time.

File to Upgrade Firmware:

| Choose File | No file chosen | | Upgrade! |
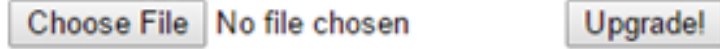
7. PC Tool Instructions

Step 1: Make sure the Transmitter and PC are in the same domain. (Refer to 5.1.1)

Step 2: Open the PC Tool.

IPTV_Control_C
enter

Step 3: Click "Start Scan".
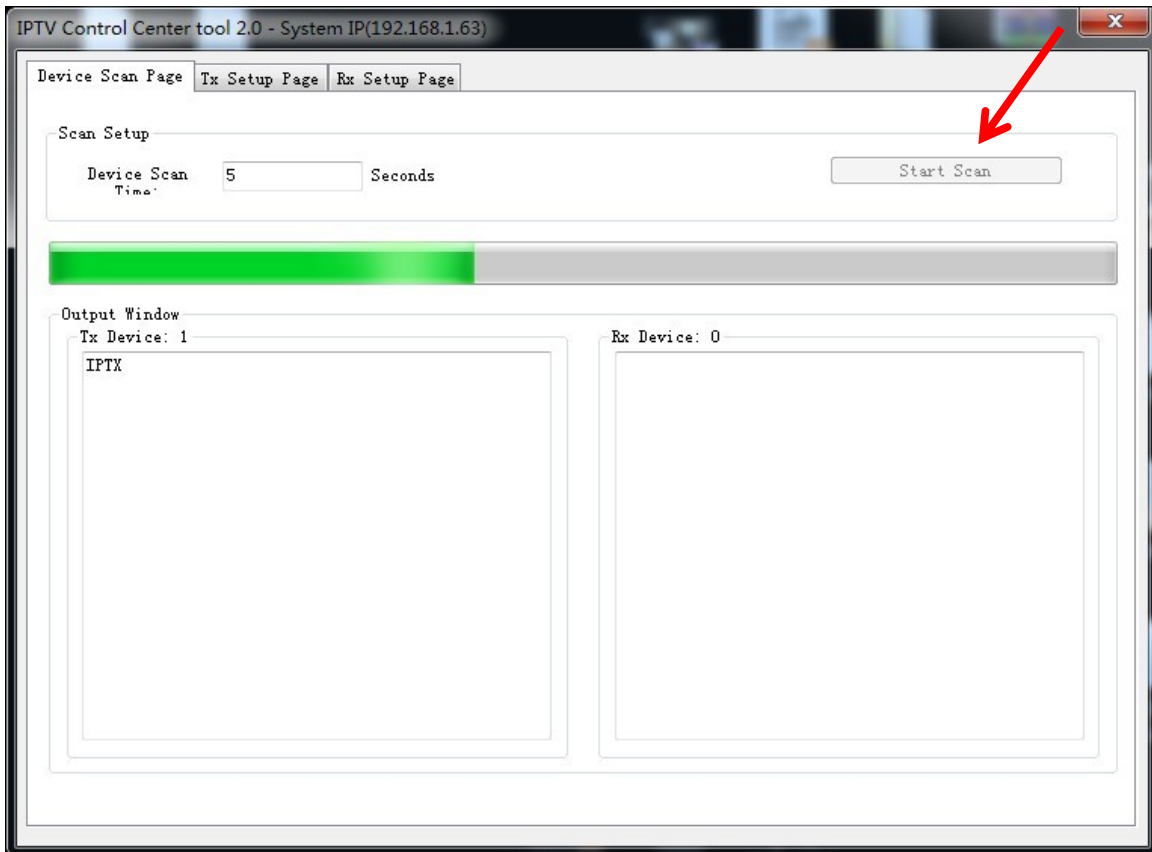
Step 4: Choose the TX or RX Name.
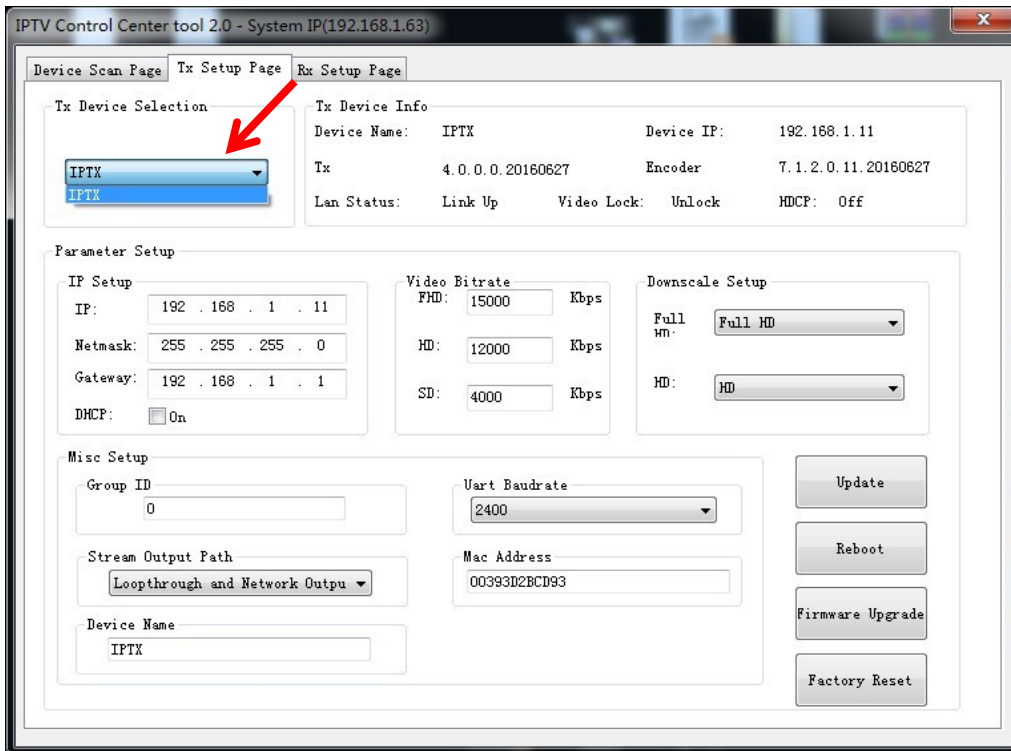
7.1 Firmware Upgrade
Upgrade for TX

Step 1: Click "Firmware Upgrade".
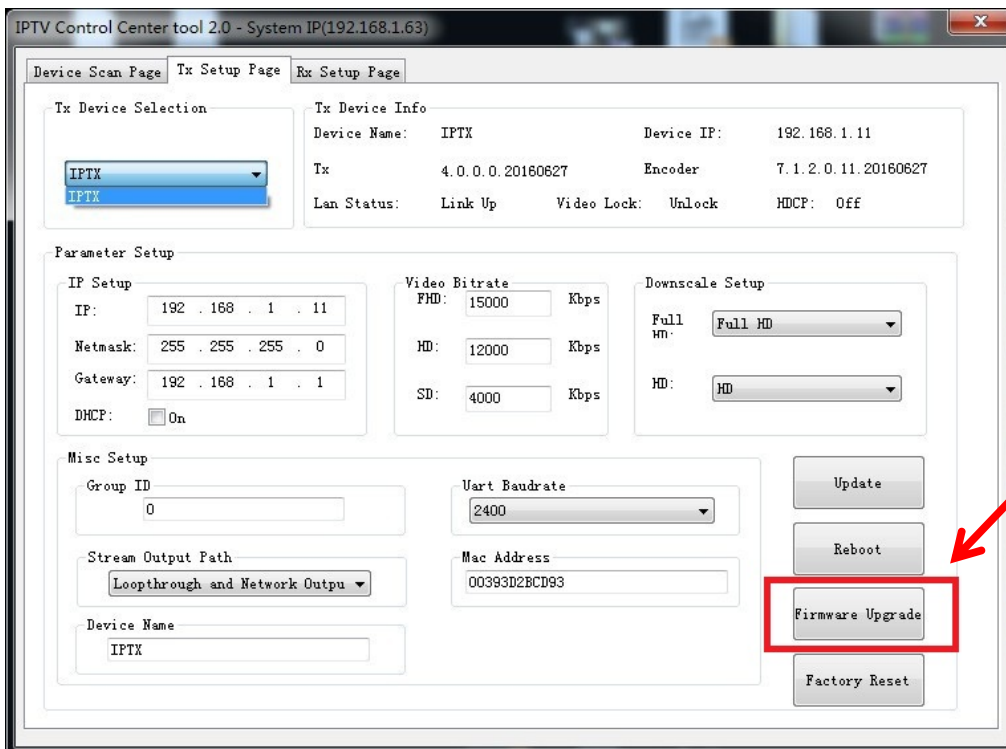
Step 2: Click "Upgrade Encoder FW" first.
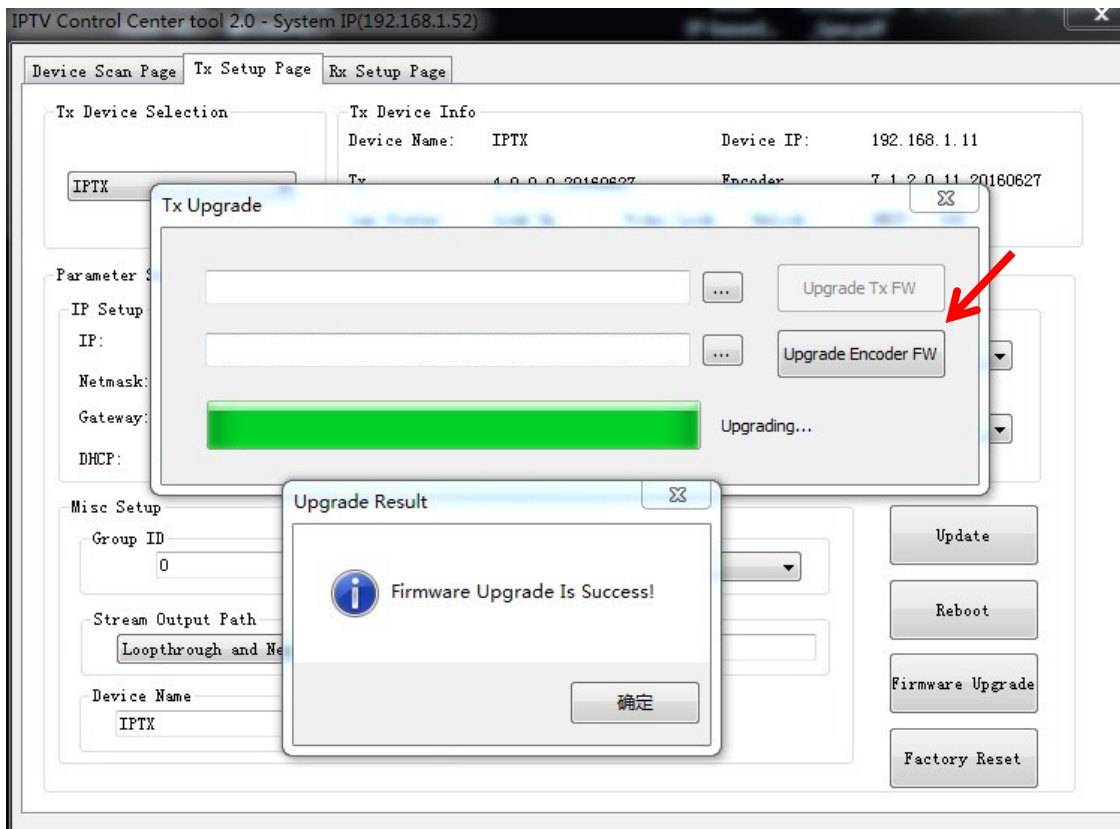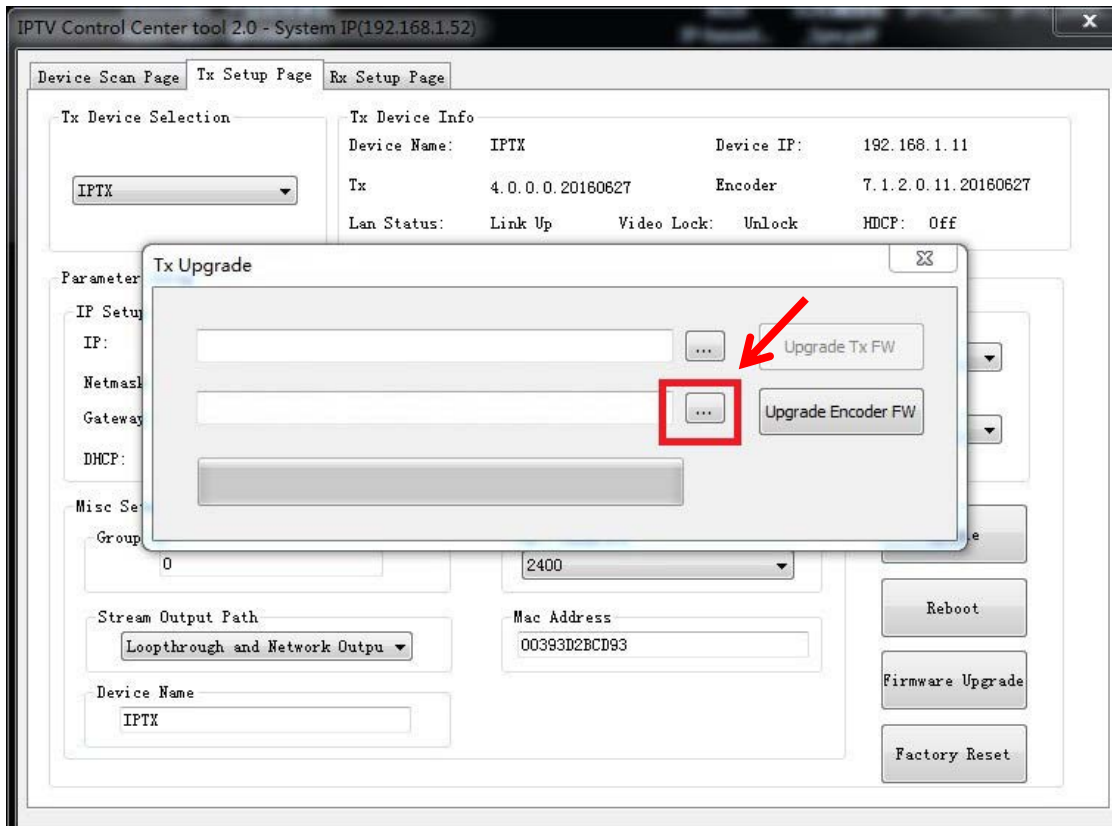
Step 3: After the step 2 is finished, click "Firmware Upgrade" again, then click "Upgrade TX FW".
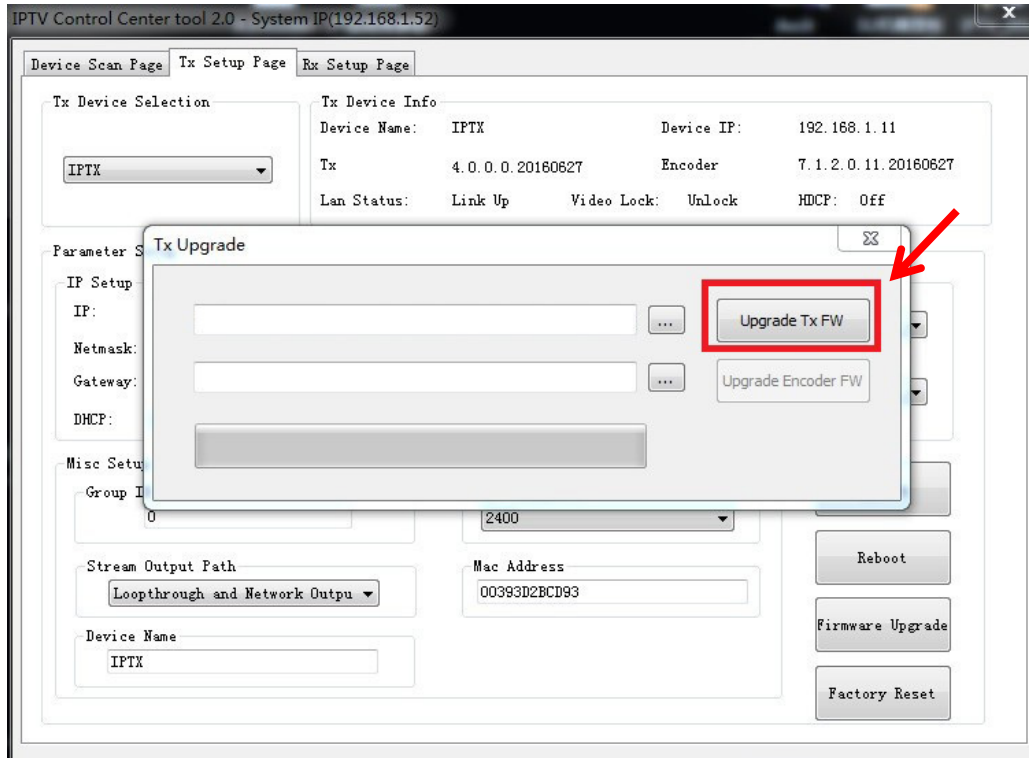
Upgrade for RX

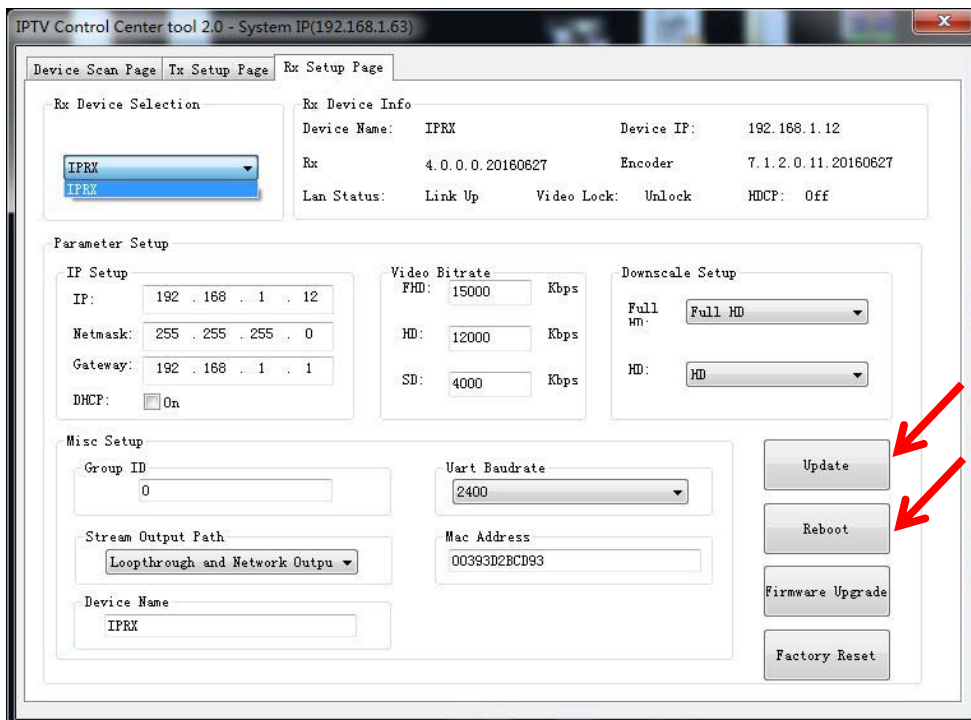Step 1: Click "Firmware Upgrade".
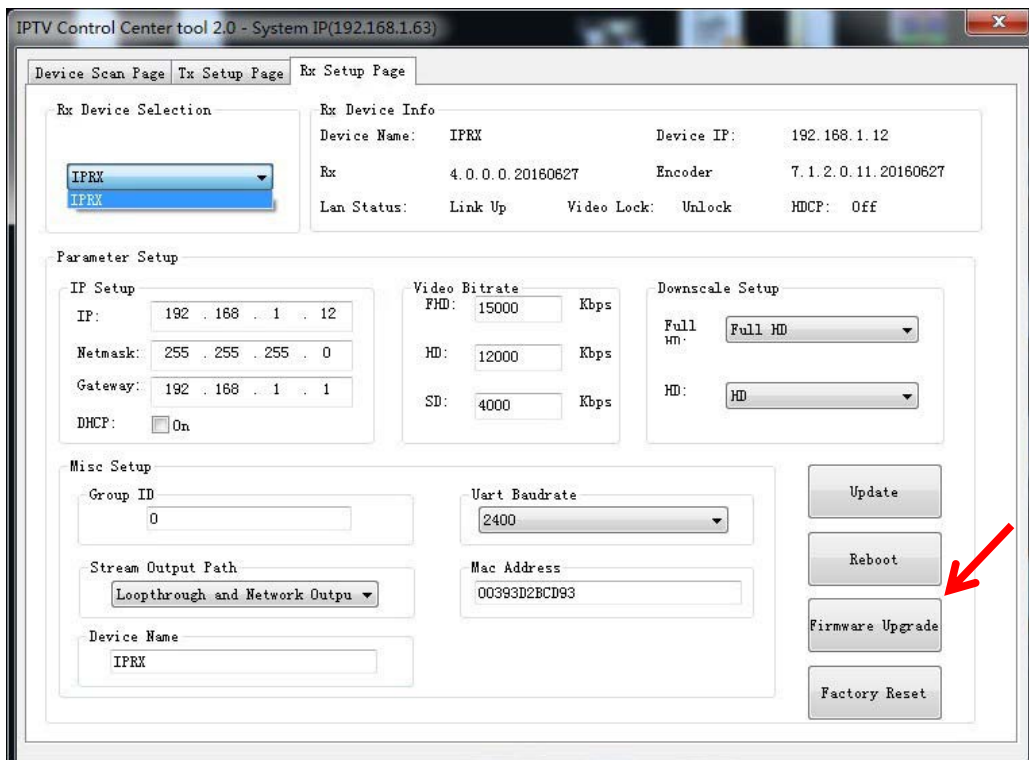
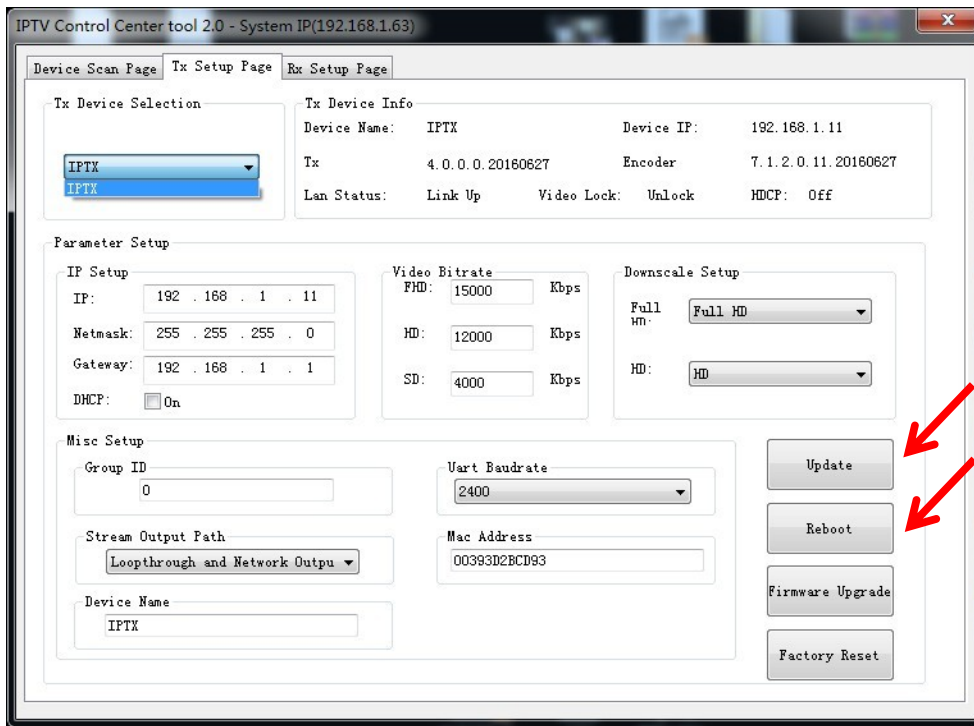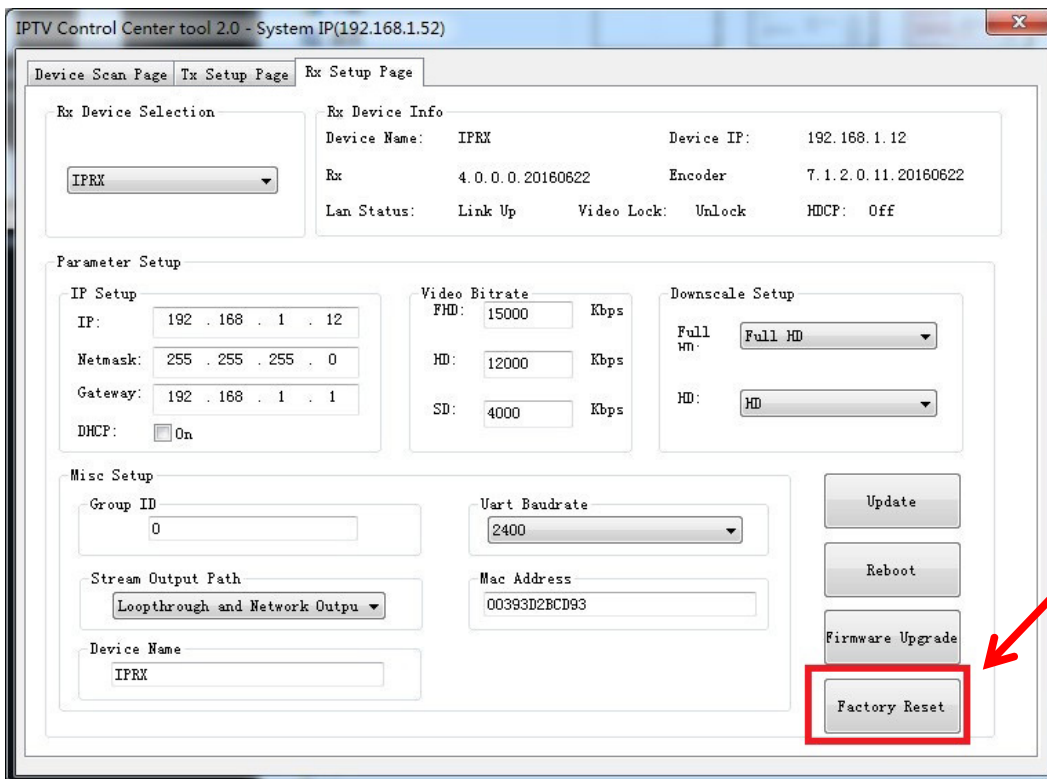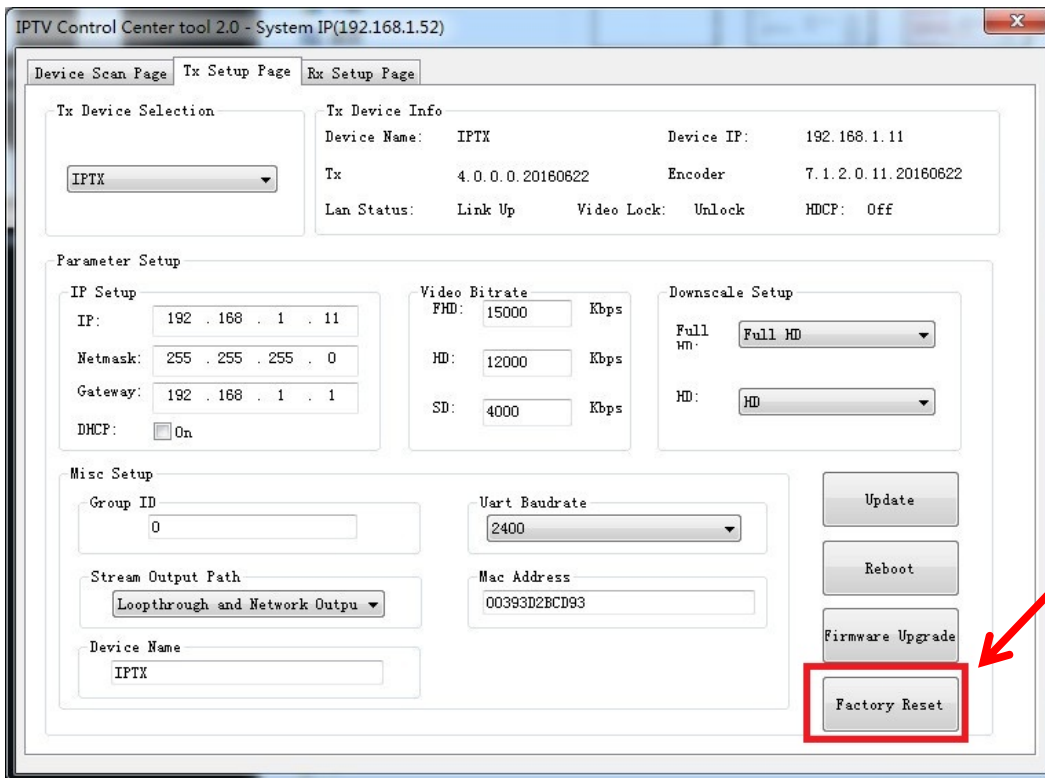Step 2: Click "Upgrade Rx FW".
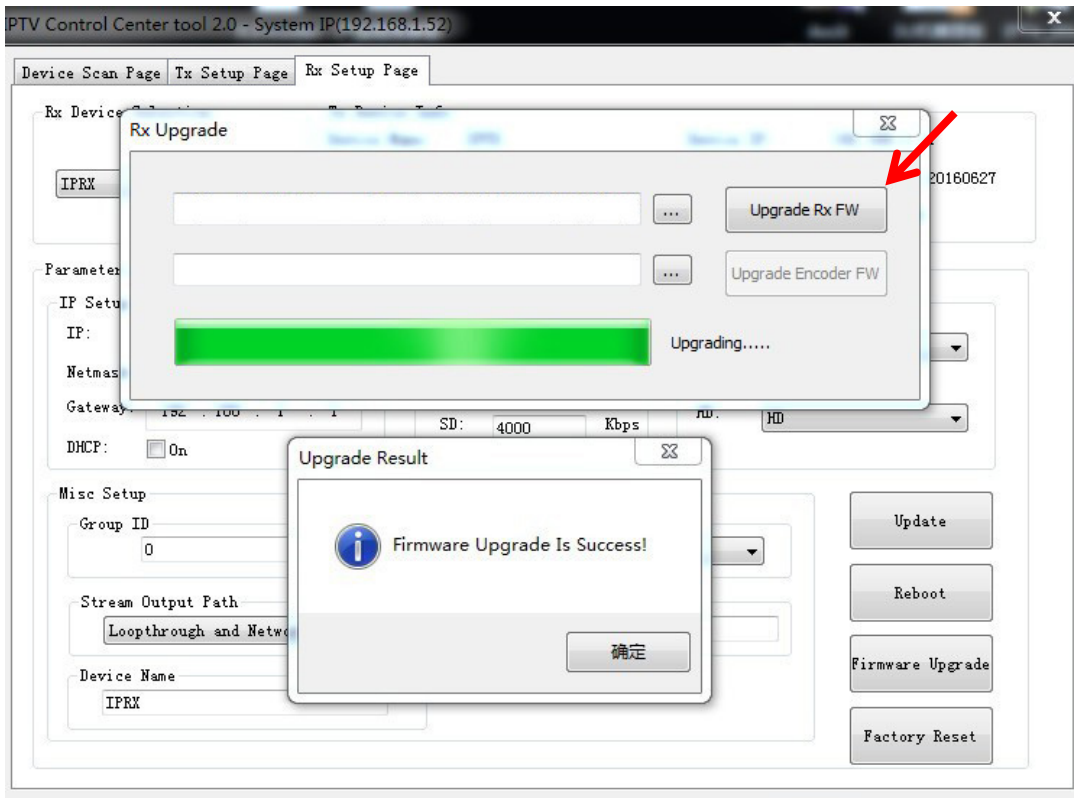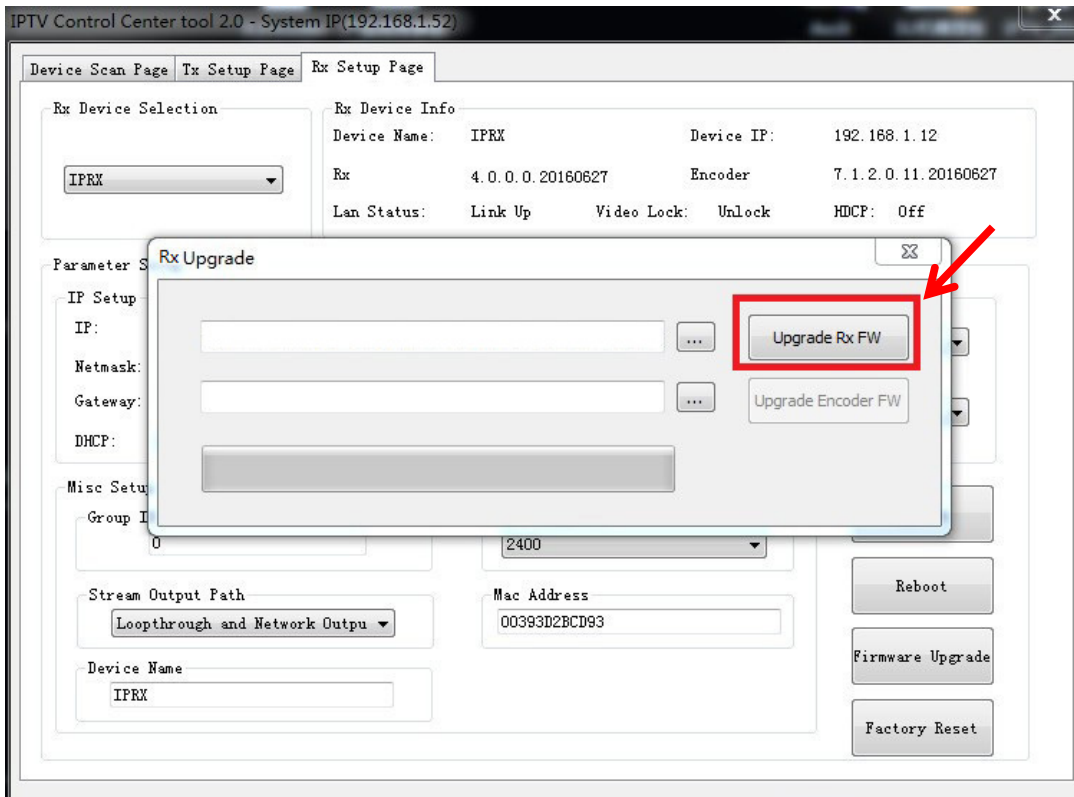
7.2 Other settings

Step 1: Change the IP/Net mask/Gateway/DHCP/Group ID/Mac Address/ Device name on the PC tool interface.

Step 2: Click "Update", after "Update" is finished, click "Reboot".

7.3 Click "Factory Reset" on TX or RX.

8. After sale Service and Warranty.

9. How to use VLC

Step1: Make sure the Transmitter and PC are in the same domain. (Refer to 5.1.1)

Step2: Connect the HDMI Source without HDCP with the transmitter and power on the device.

Step3: Connect the transmitter to the PC.

Step4: Check the Multicast Group on the web (refer to 5.1.3).

Step5: Click "Open Network Stream", click "Stream"> "Network", Input "UDP: //@ 239.255.42.42 :5004", then you can click "Play" to view the video.

Note ※ 239.255.42.42 (Multicast Group)   5004 (Port)