

VENUS X7 Upgrade Guide

1. Apply to

Upgrade X7 from previous version to V2.80 and above.

2. Upgrade priority

For VENUS X7 firmware version 2.80 and above, 4k input firmware was included in package firmware. And the priority of subprogram update are as follow:

First priority : communication board MCU firmware which named “X7_CONTROL.bin”.

☐ 所有	文件名	类型	ID	新版本
☒	X7_CONTROL.bin	Mcu	0	2.80

Second priority: After“X7_CONTROL.bin” upgraded, restart X7 and upgrade the remain MCU firmware.

C:/Users/Pch/Desktop/VENUS_X7_V2.80_201905151013.bin				
☐ 所有	文件名	类型	ID	新版本
☐	VIDEO_4K.bin	Video	0	2.04
☐	CORE_4K.bin	Fpga	1	1.08
☒	IN_EXT-4.bin	Mcu	21	1.38
☐	IN4K60_VID.xsvf	Video	4	1.25
☒	HDMI2.xsvf	Mcu	31	1.32
☐	IN4K60_FPG.xsvf	Fpga	92	3.08
☐	IN4K60_FPG.xsvf	Fpga	84	2.04

Third priority: After MCU upgraded, restart X7and upgrade video and FPGA firmware.

C:/Users/Pch/Desktop/VENUS_X7_V2.80_201905151013.bin				
☐ 所有	文件名	类型	ID	新版本
☒	CORE_4K.bin	Fpga	1	1.08
☐	IN_EXT-4.bin	Mcu	21	1.38
☒	IN4K60_VID.xsvf	Video	4	1.25
☐	HDMI2.xsvf	Mcu	31	1.32
☒	IN4K60_FPG.xsvf	Fpga	92	3.08
☒	IN4K60_FPG.xsvf	Fpga	84	2.04
☒	SDI HDMI.lzm	Fpga	82	2.00

3. Firmware Package Upgrade

File name: VENUS X7_Package_xx.bin

3.1. Connection

Use USB cable to RS232 serial cable to connect the computer's USB port and VENUS X7 COM. Board “RS232” port to connect;;



Figure1:USB to RS232 cable

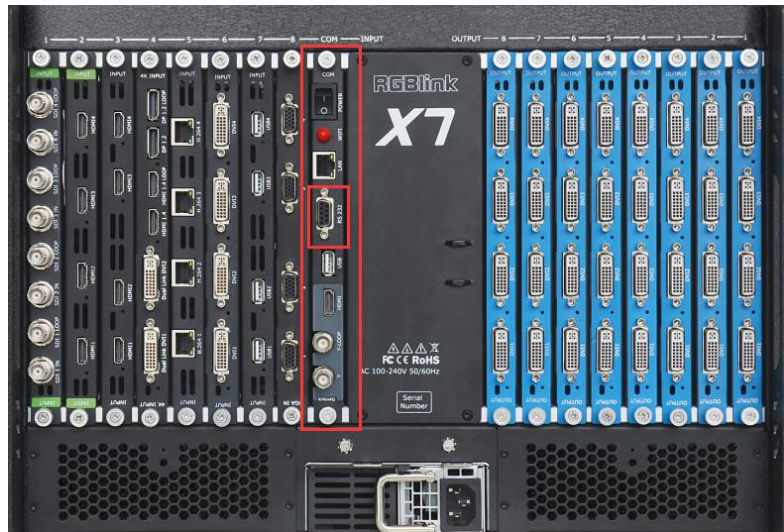


Figure 2:RS232 port on VENUS X7 COM. Board

3.2. Power on the device, please remove all the inputs and outputs before upgrade.

3.3. Install XTOOL

Get XTOOL software from upgrade Tool folder and follow setup wizard to install XTOOL.

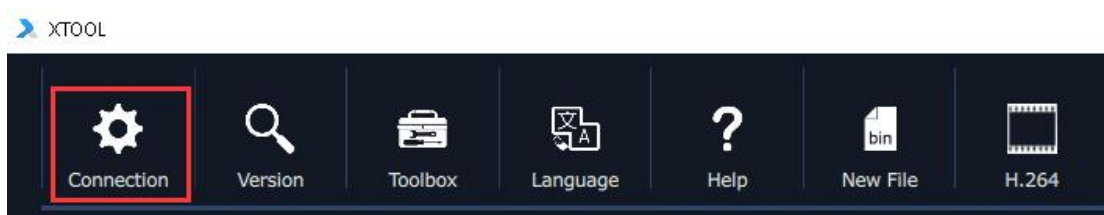


3.4. Open XTOOL

Open the XTOOL, if you need to change the language, click “语言” to switch the language.



3.5. Communication setting.



Serial communication: click “connection”, then the “Connect Set” dialogue appear. Select “Serial Comm”, choose the corresponding COM port ,set the baud rate to 115200 then click “OK”. If you set serial port successfully, it will appear “Set serial port success!” dialogue as below:

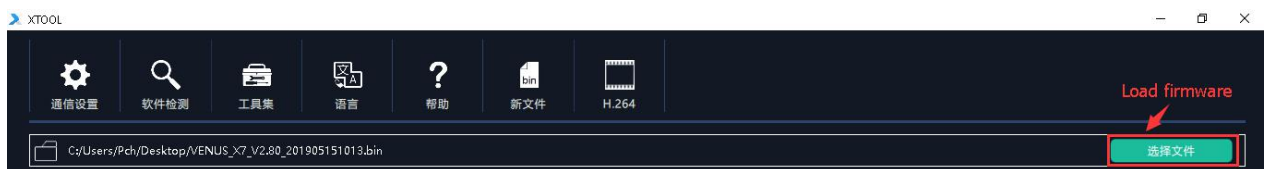


Remark: If it not show the COM port, please install the driver at first.

The XTOOL bottom left show the green circle means connection OK and the red circle means failed. The SN number and the device can be detect on the right bottom.

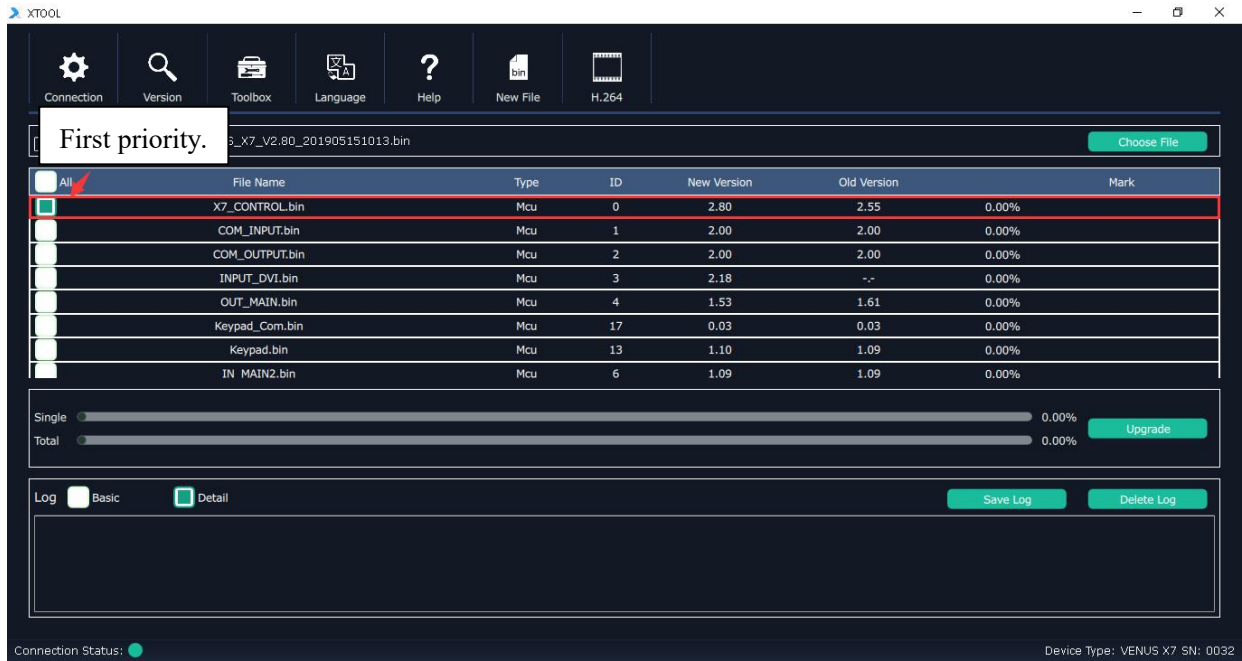


3.6. Click "Choose File" and load the *.bin file from "Upgrade Files" folder which located in firmware package.

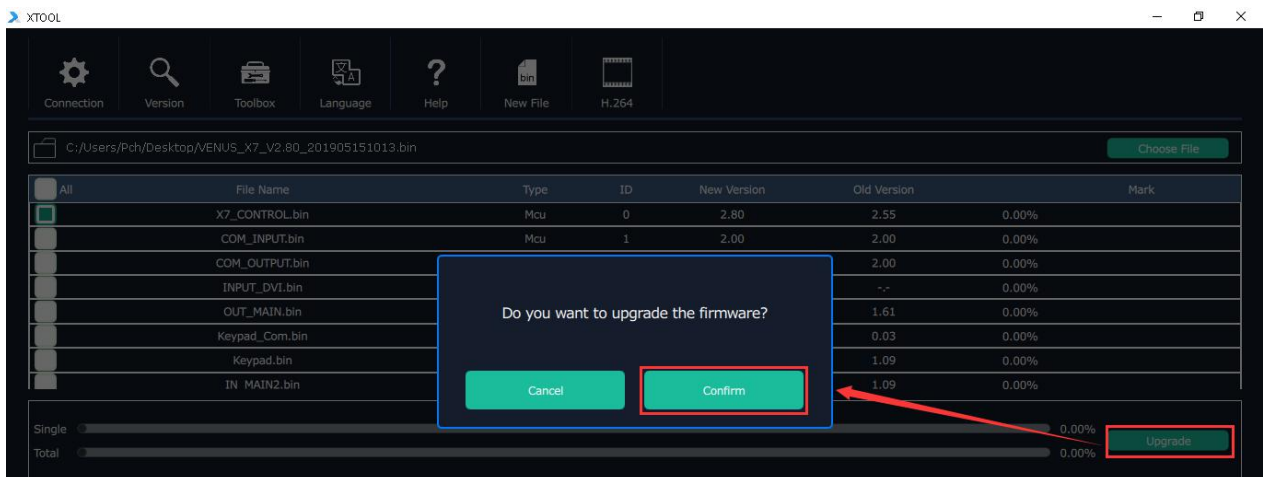


3.7. Firstly, upgrade “X7_CONTROL.bin” firmware.

3.7.1. Only select “X7_CONTROL.bin” firmware at the top.



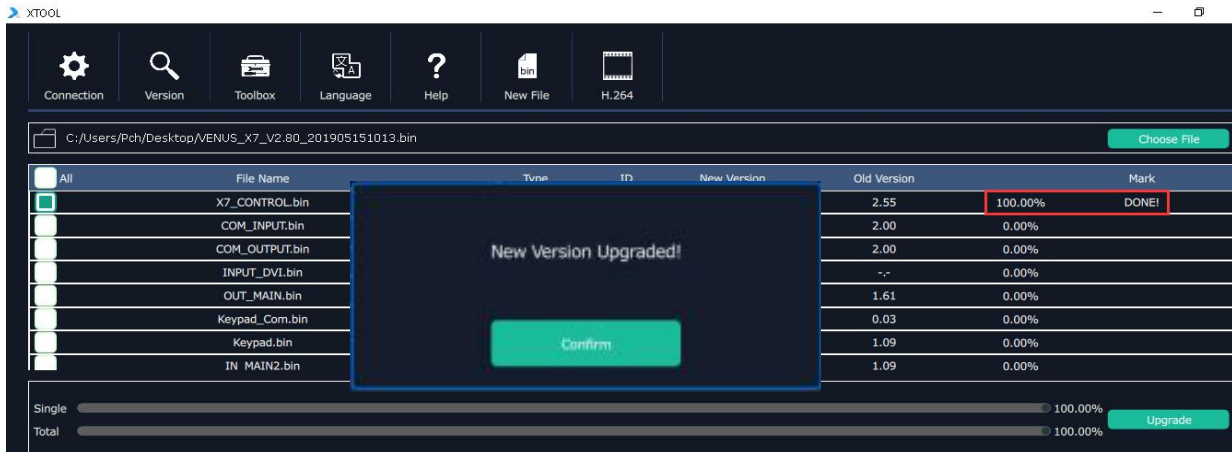
3.7.2. Select “upgrade” and it will pop-up a dialog box to confirm action. Click "confirm" and XTOOL will start to upgrade the firmware which was chosen.



3.7.3. Check the upgrade progress by scroll bar, you can press the "stop" to stop the upgrade.

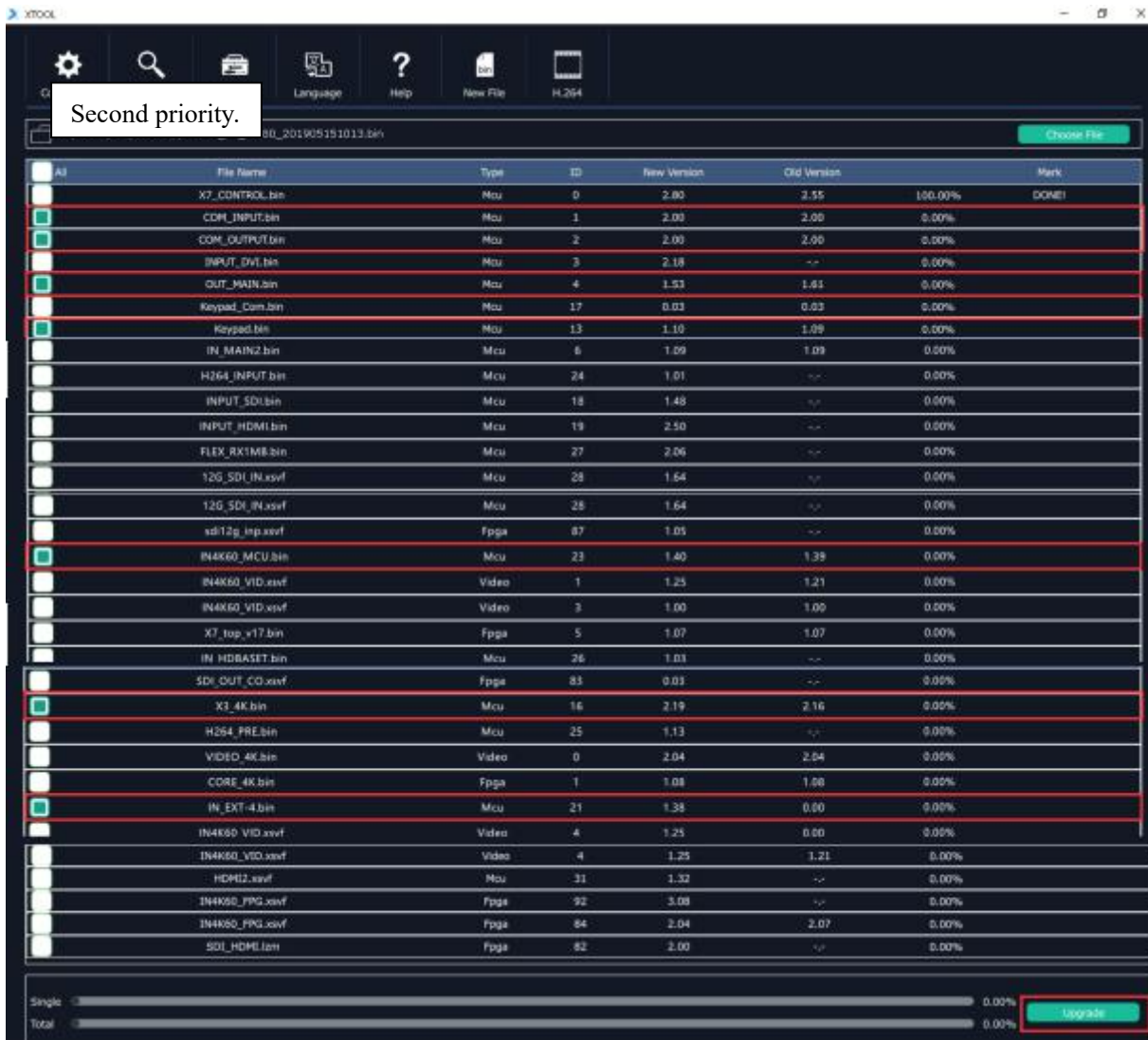


3.7.4. After the upgrade completed, the "New Version Upgraded" prompt window will pop up.

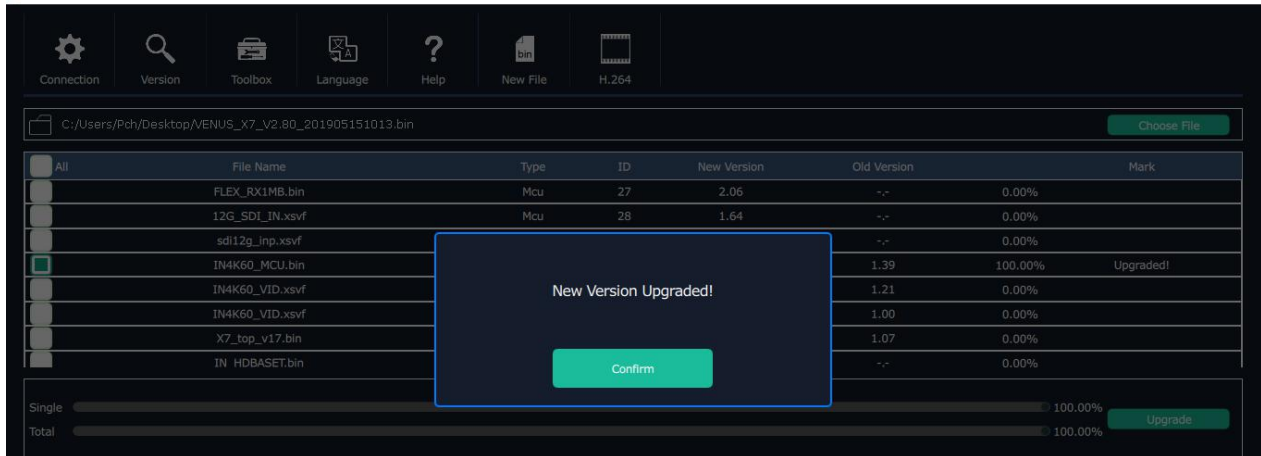


3.8. Secondly, upgrade the remain MCU firmware.

3.8.1.1. Restart X7 and select the remain MCU firmware then do upgrade as before.



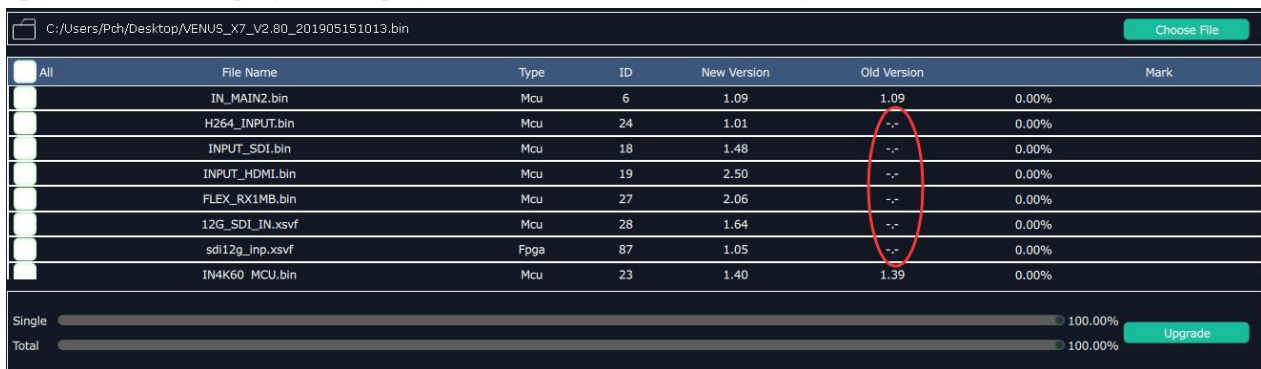
3.8.2. After the upgrade is completed, the "New Version Upgrade Complete" prompt dialog box will pop up. Power off X7 for 30 seconds.



Remark:

No H.264 and 12G SDI input board equipped in the X7, so it show nothing in old version.Usually, there is no need to upgrade firmware with  mark.

If X7 equipped with these board and XT00L still show nothing in old version.Check if communication MCU upgrade is done. Or plug out and plug in the module which fail to recognized.



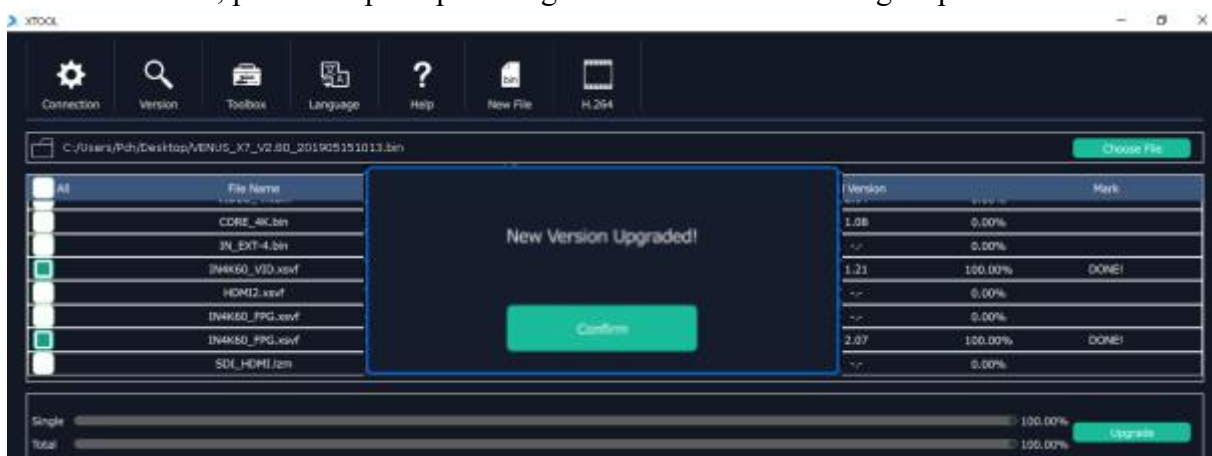
3.9. Thirdly, upgrade video and FPGA firmware.

3.9.1. Restart X7 ,then select all of the Video and FPGA firmware need to update.



3.9.2. Video and FPGA firmware upgrade process will take 15-20minutes.

3.9.3. After upgraded X7 video and FPGA, X7 will emit a "buzz" sound. For X7 upgrading by net cable, please keep X7 powering on until the buzz warning stop.



3.9.3.1. Click "confirm", reboot the device, the upgrade finished.

For VENUS X7 equipped with H.264 input or H.264 output board, there is no need to update H264 core board firmware(up.rar) unless the core board firmware is updated or lost. The way to upgrade H.264 input board and H.264 output board is the same.

4. PVW Output /H.264 Output Firmware upgrade

File name: up.rar

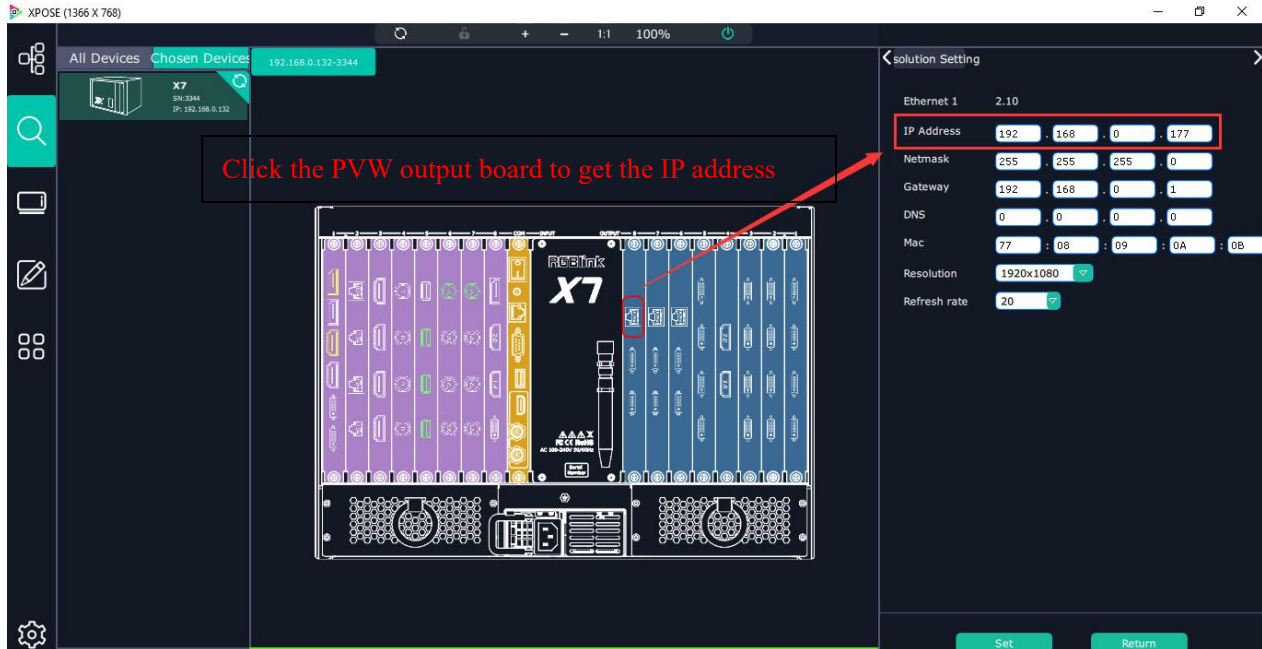
4.1. Ethernet Connections

Use Ethernet cable to connect VENUS X7 Ethernet port on communication board and PC.After

connected X7, check the IP of X7 H.264 output board or PVW output board from XPOSE 2.0.

X7 PVW output board

Take this X7 for example, the IP of H264 PVW board is :192.168.0.177

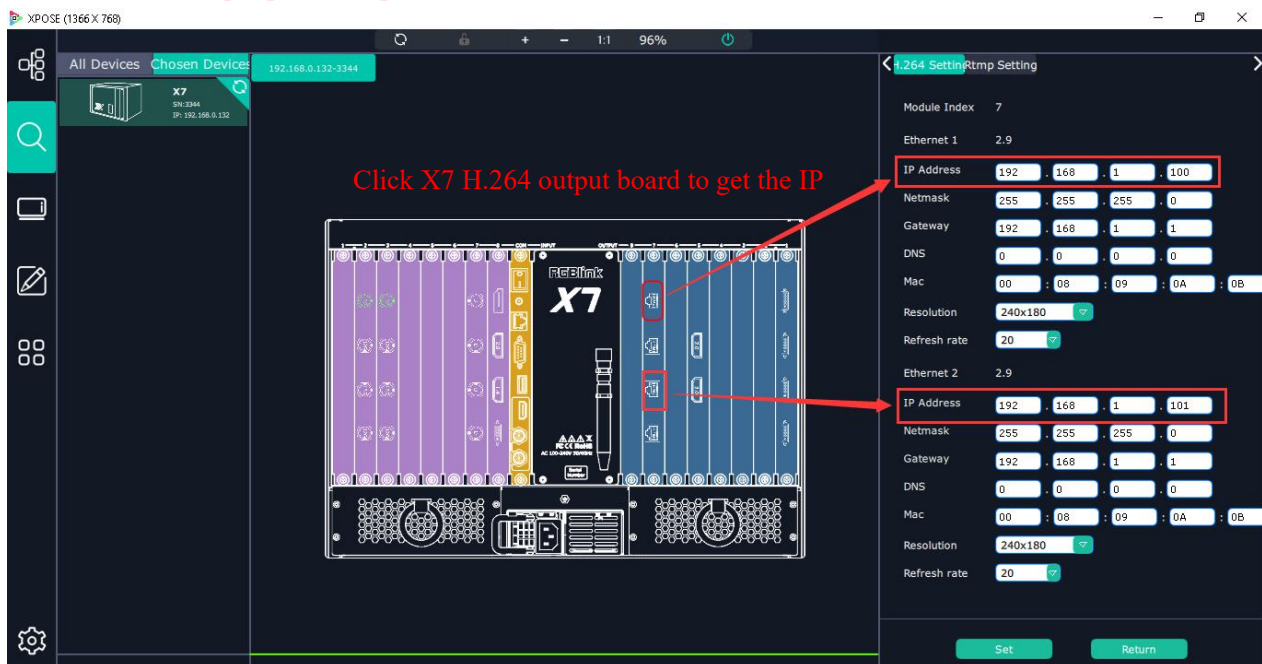


X7 H.264 output board

Take this X7 for example:

The IP of H264 output port1 and port2 is :192.168.1.100

The IP of H264 output port1 and port2 is :192.168.1.101



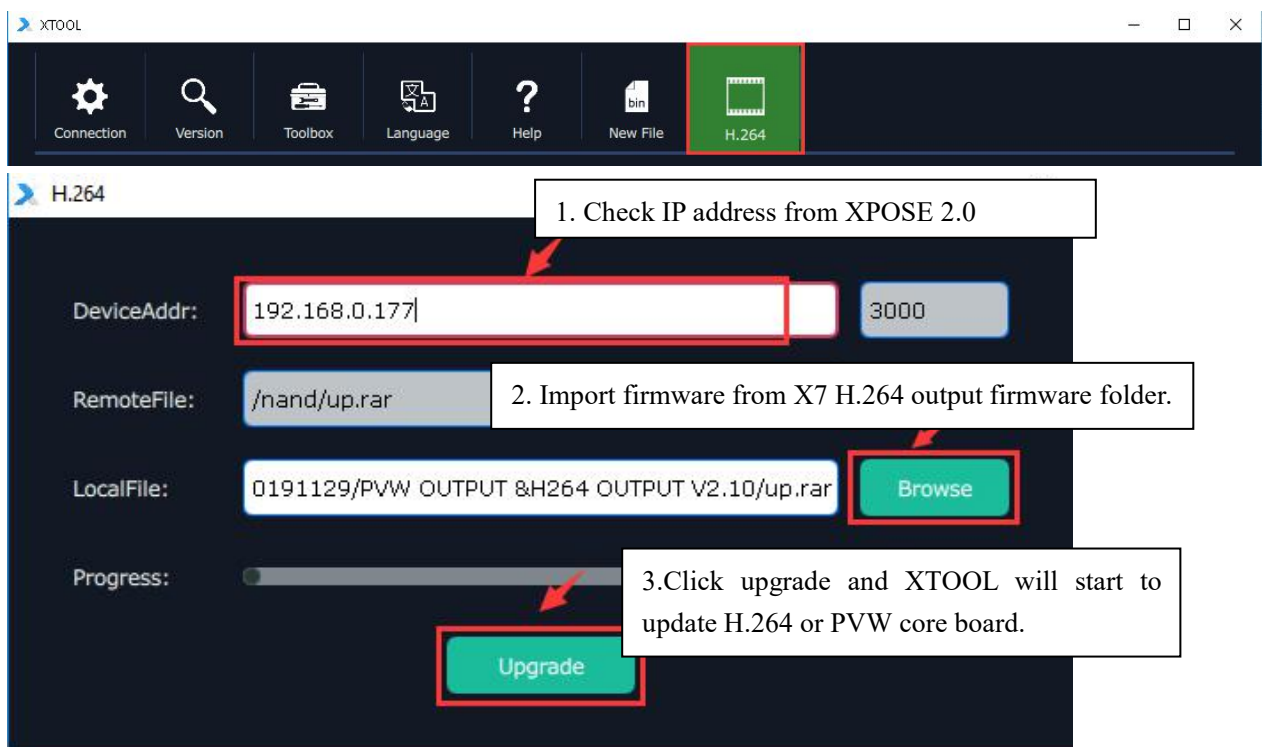
4.2. Connect PC with H.264 output or PVW output board Ethernet port.

RGBlink Science & Technology Co Ltd <http://www.rgblink.com/>

Add : S601-607 Weiye Building, Torch Park Hi-Tech Industrial Development Zone Xiamen, Fujian, China

Ph : +86-592-5771197 Fx : +86-592-5788216

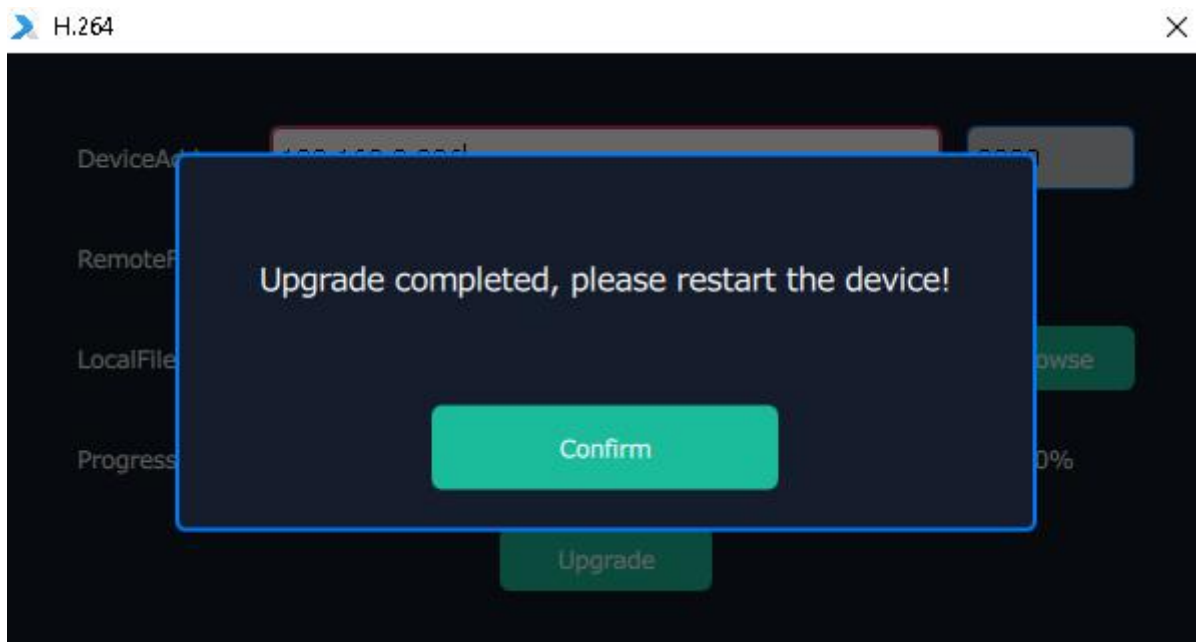
4.3. Open XTOOL and update H.264 output core board firmware.



4.4. Copy the IP of H264 output to "Device Addr", which can check from XPOSE 2.0.

4.5. Press "Browse" and select H264 output core board firmware. (File name: up.rar)

4.6. Press "Upgrade", waiting for progress bar to the end.



4.7. Press "Reboot", (need to wait for 10 seconds) or unplug and plug VENUS X7 power supply.

Remark:

If XTOOL fail to connect the IP of 192.168.0.177, please check H.264 port and PC Ethernet was connected. If yes ,double check the IP address from XPOSE2.0.

The way to upgrade H.264 input core board firmware is the same with H.264 output core board firmware.

5. H.264 Input Firmware upgrade

File name: up.rar

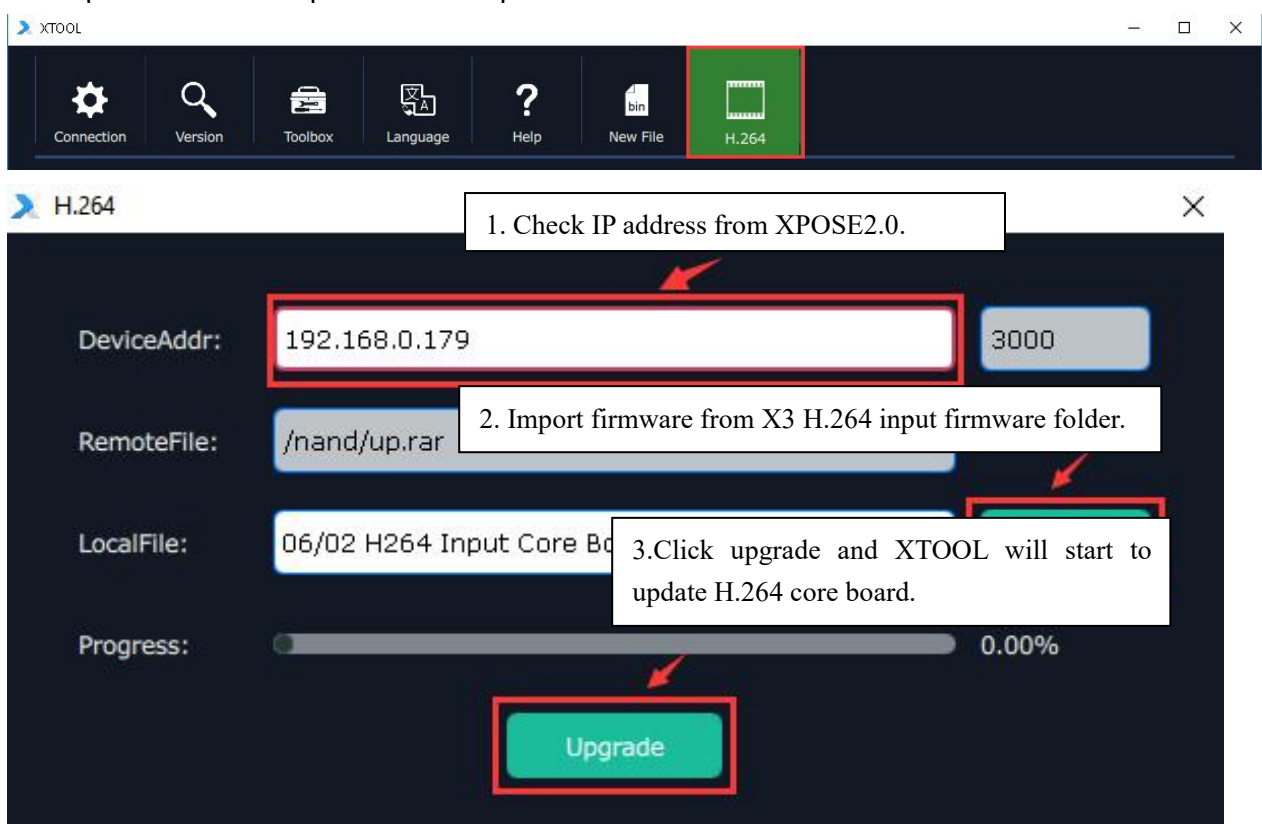
5.1. Check the IP of X7 H.264 input board

Connect X7 with XPOSE 2.0 and click the H.264 input board to get the IP address.

5.2. Ethernet Connection

Connect X7 H.264 input board Ethernet port1 with PC.

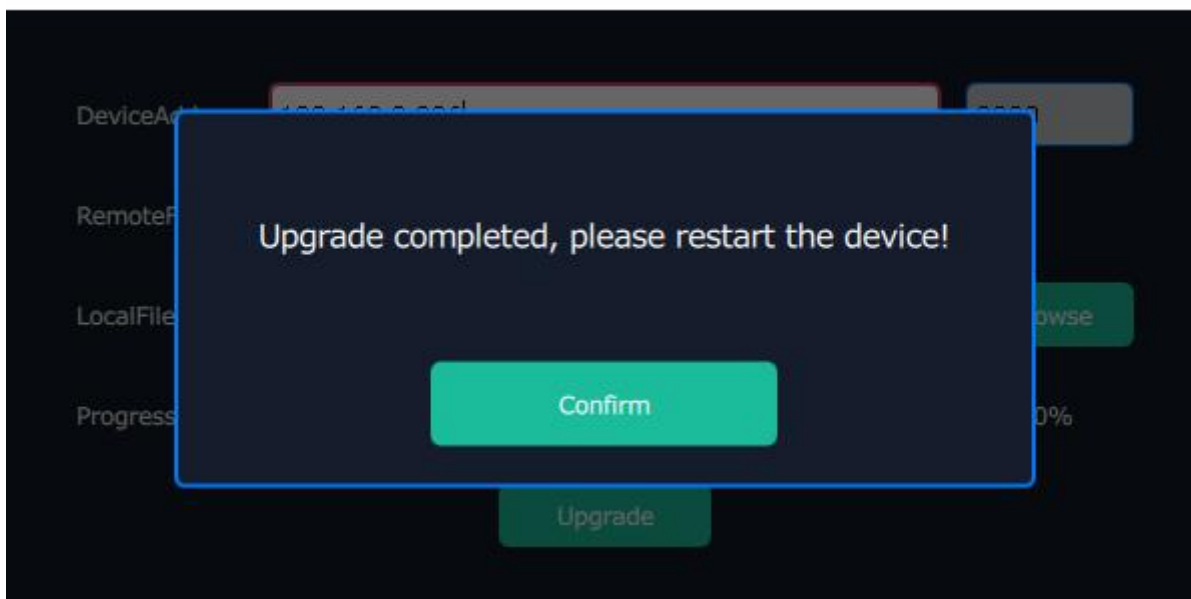
5.3. Open XTOOL and update H.264 input core board firmware.



5.4. Copy the IP of H264 input to "Device Addr", which can check from XPOSE2.0.

5.5. Press "Browse" and select H264 input core board firmware. (File name: up.rar)

5.6. Press "Upgrade", waiting for progress bar to the end.



- 5.7. After updating H264 input port 1 ,pull the network cable out port 1 and connect PC with H.264 input port3.Then upgrade H264 input port 3 in the same way.
- 5.8. Press “Reboot”,(need to wait for 10 seconds) or unplug and plug VENUS X7 power supply.

Revision History

Revision	Time	Description	Author
Rev.1	2/11/2018	Release	Rainbow
Rev.2	10/11/2018	X7 H.264 output Upgrade is added.	Rainbow
Rev.3	05/30/2019	The priority of sub-program upgrade when update X7 from previous version to V2.80 and above.	Rainbow
Rev.4	12/12/2019	X7 H.264 input upgrade guide is added.	Rainbow