RGBlink®
Video {processing} for any scale

M mini M mini+

Quick Start

- USB3.0 streaming output
- 4CH HDMI inputs
- 2''TFT display on board to Live preview four inputs
- Auto cut and manual switch (T-Bar)
- 14 transition effects on T-Bar
- Support PIP (Picture-In-Picture)
- Audio offers embedded or external source to select
- Support switch between 6-Picture PVW and PGM to HDMI Out
- Advanced features on mini+

  ◎ Logo

  ◎ Chroma Key

  ◎ PTZ control

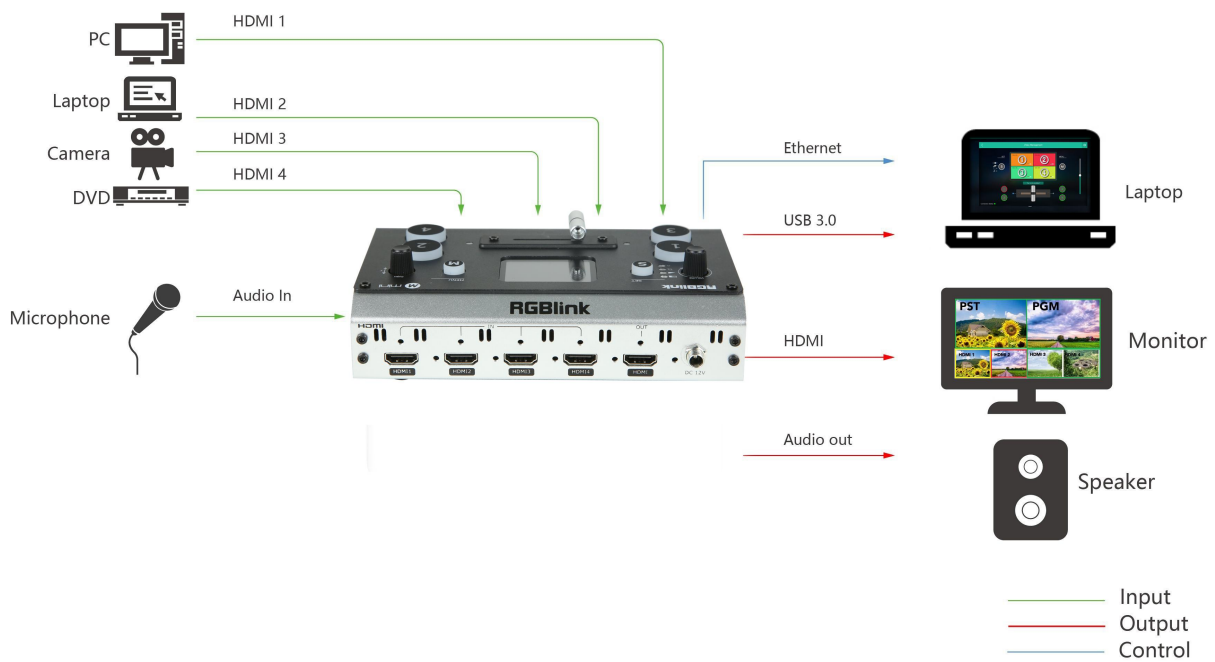- Control by PC or mobile phone (via APP)
- Compact design

CONTENTS

Product Introduction

mini/mini+ is a "mini" signal switcher and mixer which is able to stream 6-picture PVW or PGM from any one out of the 4 HDMI inputs to any live broadcasting platform via third party live streaming software such as OBS. It adopts compact design, equipped with a 2 inch TFT screen to preview the 4 inputs in real time. 14 transition effects on board work with T-Bar to do transition switching. Along with seamless switching, there are other outstanding features such as audio embedding, de-embedding, and automatically identifying color depth of RGB4:4:4, YUV4:4:4, YUV4:2:2,YUV4:2:0. mini+ adds advanced features including Chroma Key, Logo, PTZ camera control. mini devices are easy to operate either on board or remotely from mobile devices or laptops with XPOSE mini.

System Connection Diagram

mini /mini+ System Connection Diagram
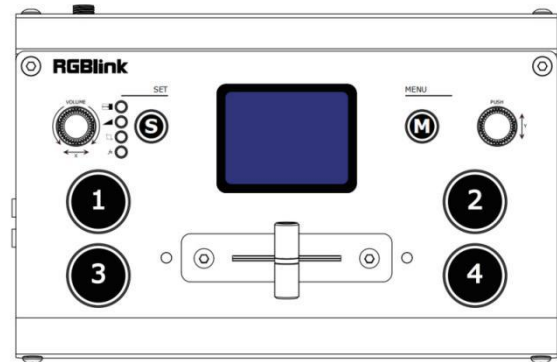
Packing Configuration

Power Adapter	USB3.0 Cable

Note:
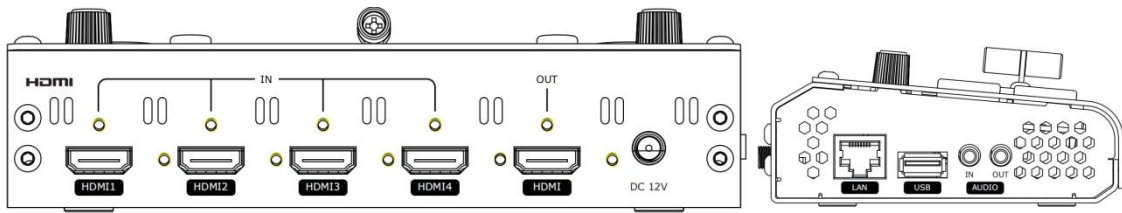
Power adapter of US/EU standard supplied as standard accessory.

Front Panel

TFT display	To display 4 inputs and menu
PUSH/Y	1. Knob, turn to select menu item, push to confirm 2. Work as a quick button to switch HDMI Out between 6-Picture PVW and PGM when TFT is under the state of previewing 4 inputs. 3. On mini+, control camera lens position, moving up and down under PTZ control menu-Pos. 4. On mini+, control camera lens zoom in and out under PTZ control menu-Zoom.
M(menu)	Menu and Back Button
S	Function Select button, to select Transition effect, Switch Mode (Fast or T-Bar), PIP and FX (reserved licensed feature for future)
VOLUME/X	1. Turn to adjust volume of PGM 2. On mini+, control camera lens move left and right under PTZ control menu.
1,2,3,4	4 inputs, red is on air (PGM), static green is signal standing by to switch, flash green is the ready to be switched
T-Bar	Manual switch, push to left end or right end to switch signal to PGM.

Interface Panel

HDMI OUT	1 HDMI Output port, connect to display to show Preview (6 pictures) or PGM.
HDMI IN	4 HDMI Inputs, connect to input source from HD camera or PC
DC 12V	1 DC Jack for power input, connect to 12V/4A power adapter.
LAN	Communication port to link dedicated software for control
USB	USB3.0 output, capture signal via third party streaming software and push to live broadcasting websites
AUDIO IN/OUT	AUDIO In, analog audio input port, connect to microphone AUDIO OUT, analog audio output port, connect to loudspeaker.

MENU

When mini is power on, the native TFT display show starting up page.

Main Menu

Input

Push MENU and select the first menu item <Input>

Push knob to enter <Input> menu

HDMI

Push MENU and select the second menu item <HDMI>

Push knob to enter <HDMI> menu

HDMI means HDMI output, select Preview output and PGM output for HDMI.

Output：Preview or PGM

Format：1920×1080@60

USB3.0

Push MENU and select the third menu item<USB3.0>

USB3.0 means USB3.0 output， push knob to enter <USB3.0>menu，select Preview output and PGM output for HDMI.

Output：Choose PGM or Preview

Format：1920×1080@60

Audio

Choose <AUDIO>

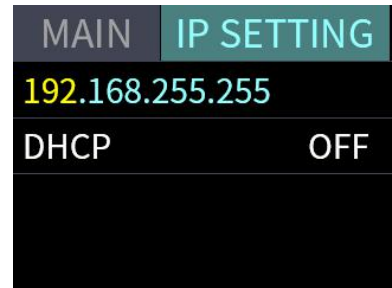**SOURCE**：AFV or Line in choose one of HDMI1,2,3,4

AUDIO BAR：ON/OFF

IP Setting

SET IP Address Manually

Select each segment with the adjustment knob, then press to enter then set the value of each segment by pressing the knob again.
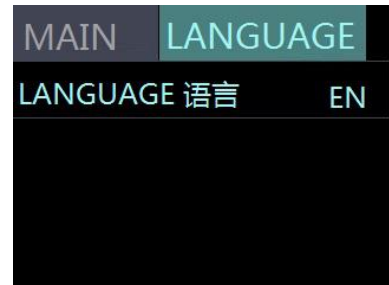
Set IP Address Automatically

Use this setting if you network/router has a DHCP server
Select DHCP and set to ON
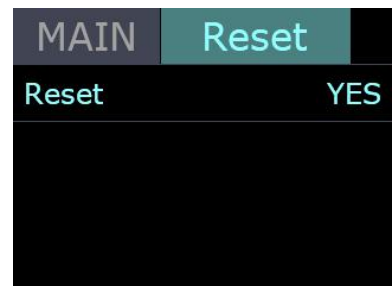Manual setting is disabled, and the IP Address for mini is set from the network.

LANGUAGE

LANGUAGE, select Chinese or English

Factory Reset

Factory Reset: Yes or No

INFO

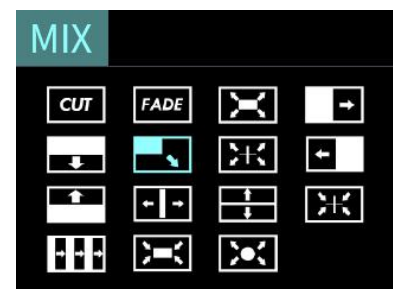Displays the serial number, network
and firmware version information

MAIN	INFO
DEVICE SN:	
2020XXXXXXXXXX	
IP ADDRESS:	
192.168.0.100	

MAIN	INFO
MAC ADDRESS:	
18.20.40.96.0a.20	
MCU VER:	
0.30	

MAIN	INFO
VIDEO VER:	
1.10	

S Button

Press the "S" button to display and SET features for MIX, MODE, PIP and FX (FX available only on mini+)
Use the adjustment knob to the left of the S button to move through the settings of each feature, pressing the
knob down to adjust and then confirm individual settings.

MIX

Select the desired transition effect for mixing by using the
adjustment knob, and press to confirm the selection.

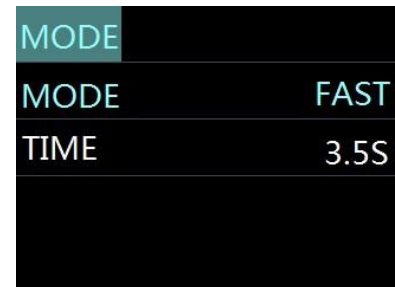| MIX |
| --- |
| CUT FADE [⤢] [→] |
| [↓] [◣] [⤢] [←] |
| [↑] [↔] [↕] [⤢] |
| [⫴] [↔] [◉] |

MODE

Select from FAST or TBAR switching modes.
In FAST mode switching between sources is done immediately
a source (1,2,3,4) key is pressed.
TBAR mode allows a source to be selected for PVW (Preview)
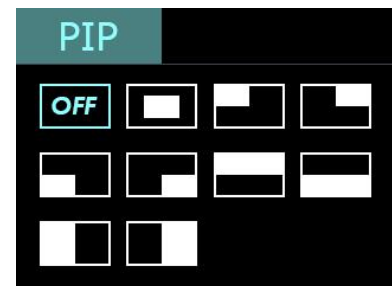with its button, then switched via the TBAR

Set a TIME up to 5sec for transitions, fades or cuts to be used in
 FAST mode.

PIP

Display a source as an overlay window. There are both Picture-in-
Picture (PIP) and Picture-by-Picture (PBP) presets.
PBP presets are suitable for specialist applications with 2:1 output
 ration, or with input media that had been specially prepared.

FX [mini+ only]

CONTROL the attributes of VISCO standard PTZ cameras from mini+
and store position and zoom settings as VIEWs for on demand use.
CAMERA: Select a camera to control
LOAD VIEW: Recall a saved view for the selected camera
SAVE VIEW: Save the control attribute settings for the currently
selected camera
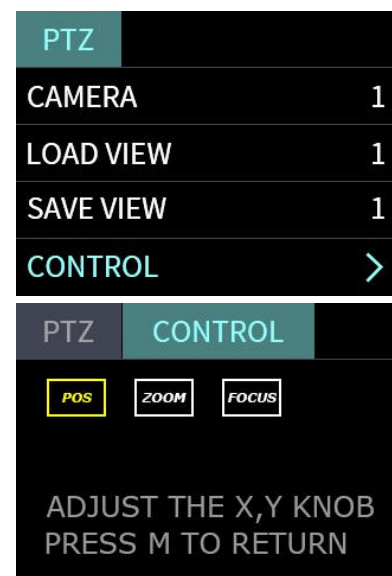**CONTROL:** control and set the attributes of the currently selected
camera
POS: Set the X & Y (Pan & Tilt)
ZOOM: Set the lens zoom factor
Focus: Set the focus via Y knob
ENABLE: Turn on/off PTZ camera LAN control on mini+
IP SETTING: Set the IP addresses for each camera. Note mini+ and
cameras must be on the same network subnet.

How to Switch Between Input Sources

Green source buttons are available for switching to output.

A blinking Green source button is the current PVW (preview) source [TBAR mode only]

The source button that is Red is the video source that is the current PGM (program) output

In FAST Mode:

Press a source button (1, 2, 3, or 4) that is green.

Selected source will be switched to the output with the set fade TIME and using the MIX transition selected, with the pressed source button becoming red.

In TBAR Mode:

Press a green button to set the source as the PVW, the source button will blink green.

Slide the TBAR to switch/mix from the current PGM source to the PVW source.. Any MIX transition effect will be applied as the TBAR is moved. Once the TBAR has been fully transitioned, the indicator lights on sources buttons that are PGM and PVW will be swapped.

 Note: Source selection is locked when TBAR is in transition (not entirely docked at a left or right position)

How to Apply a PIP

1. Decide which source to be the main picture, select and switch it to PGM when PIP is OFF
2. Select the PIP layout mode in PIP menu,switch A/B layer via the knob.
3. Select the input source and switch it to sub-picture on PGM
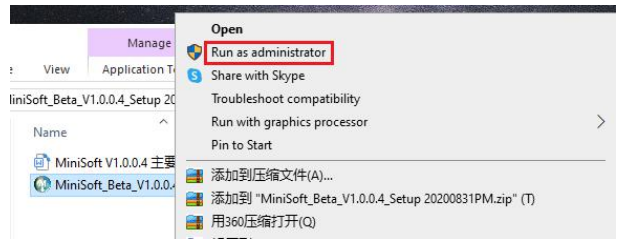4. After switching, the selected green button turns to red.

after PIP mode is selected, the background can not be changed unless turn off the PIP mode and restart the above steps.

Software Operation

Install dedicated software named XPOSE to control mini or mini+.
Right click the setup exe file .
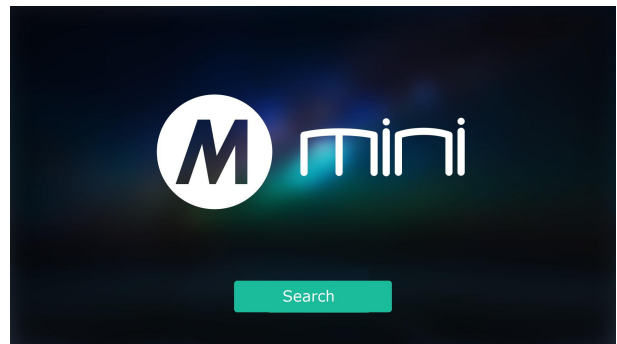Choose Run as administrator to open the exe and install the software.

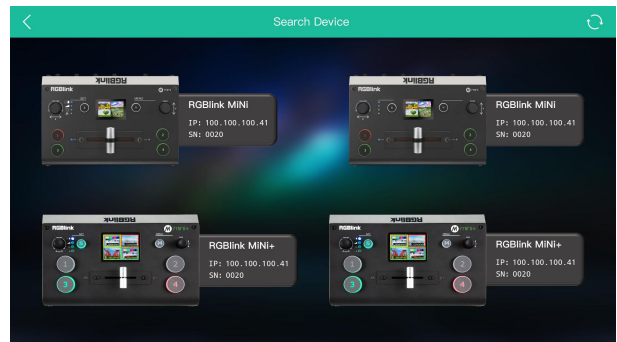After software is installed, click the icon

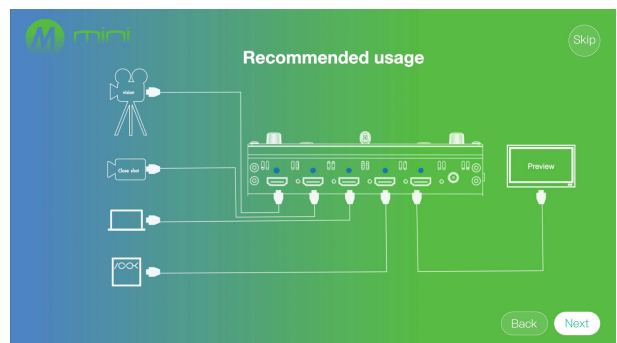**M** XPOSE and login the software.
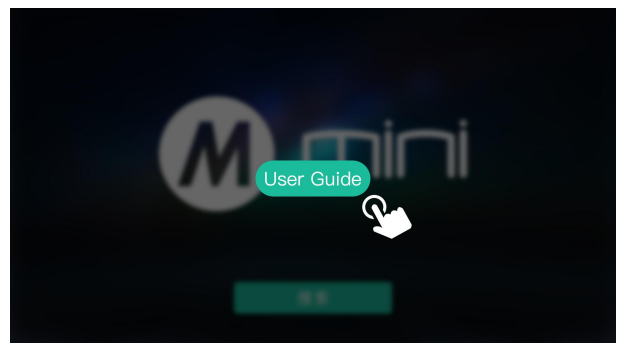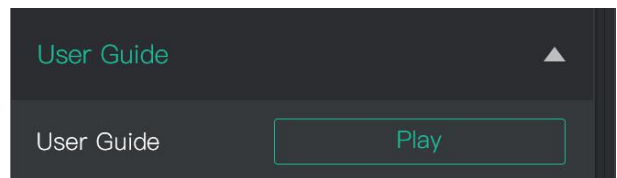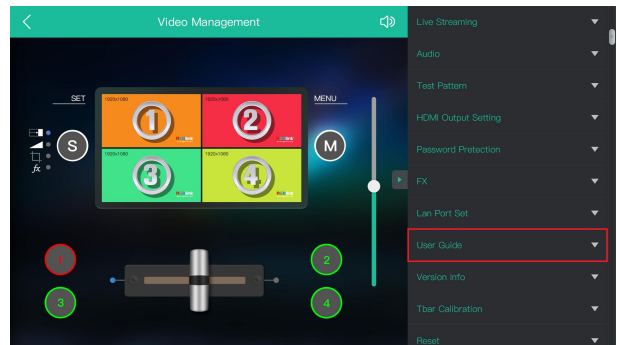
Click Search to search mini device.

After searching, all available mini devices in the sub-net can be found, up to 128 devices can found if there are.
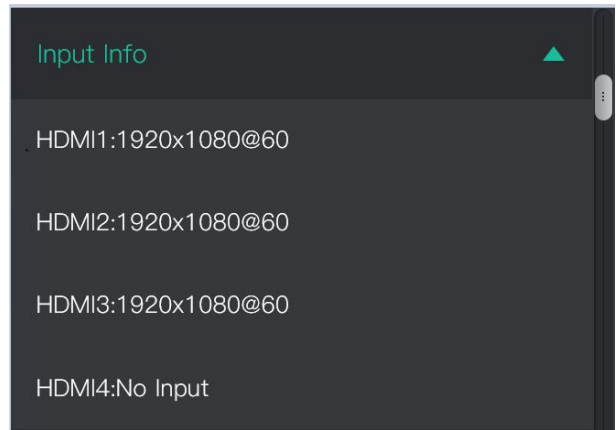
Select the desired device by SN and IP and enter the management interface. The software interface is a simulation of operation panel on real mini device.

For example, clicking Button M can open up menu as on the device. If it is the first time for you to use mini/mini+ we suggest you watch our User Guide video.
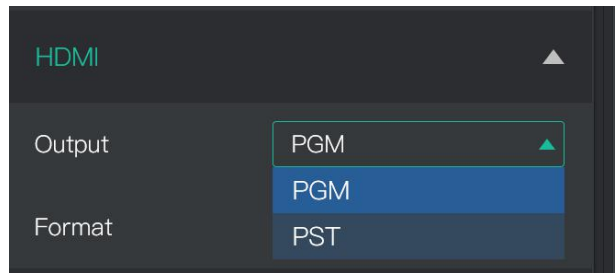
Click the drop down arrow and click to play the user guide video.
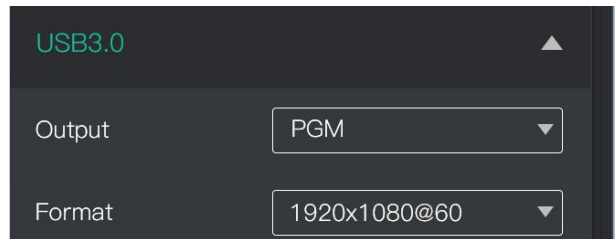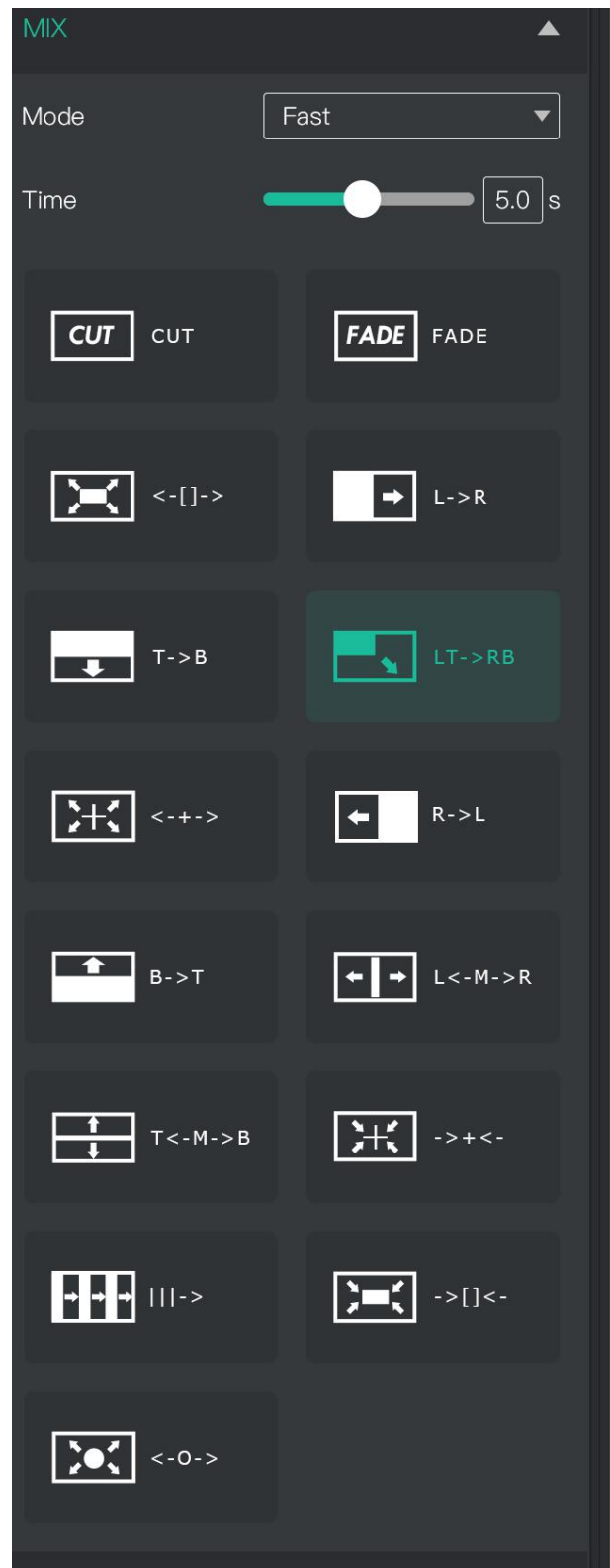
INPUT INFO

HDMI Output

USB3.0 Output

MIX

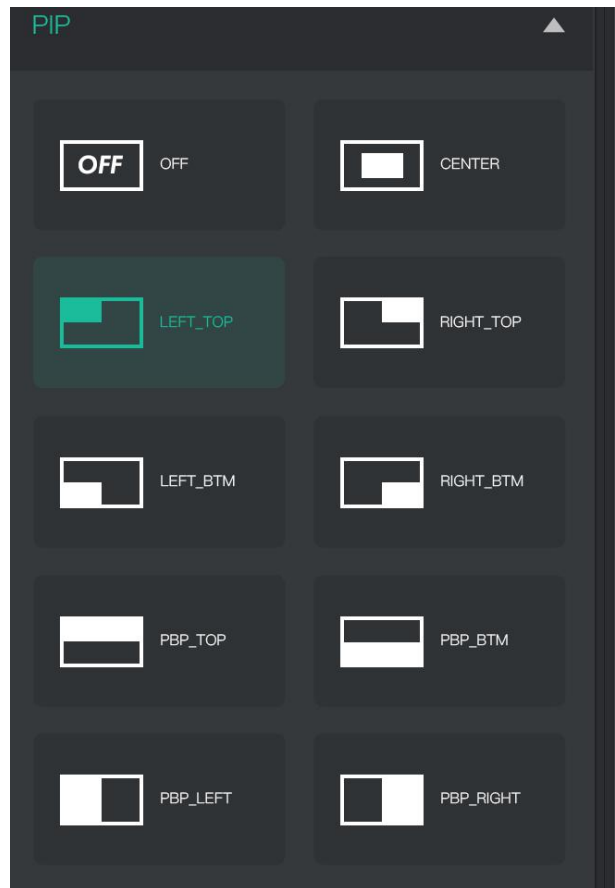Choose switch time and transition
effect.

MIX	▲
Mode	Fast ▼
Time	━━━●━━━ 5.0 s

CUT CUT	FADE FADE
<-[]->	L->R
T->B	LT->RB
<-+->	R->L
B->T	L<-M->R
T<-M->B	->+<-
|||->	->[]<-
<-O->	

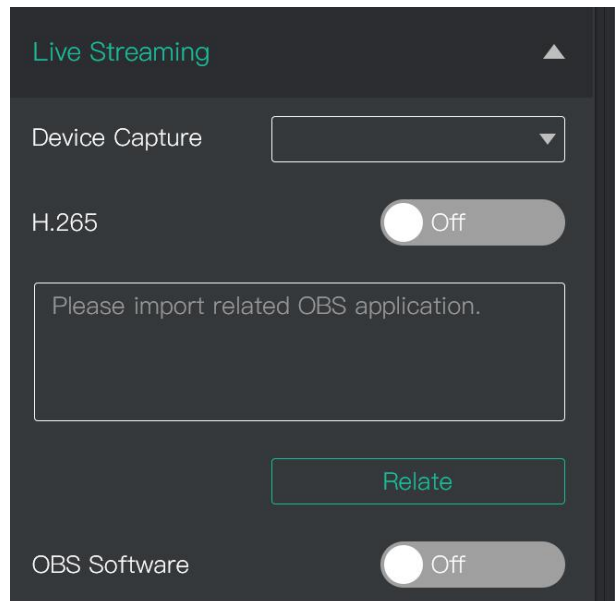**PIP**

Choose layout mode for PIP

Live Streaming

Capture Device:choose RGBlink USB3.0 Capture

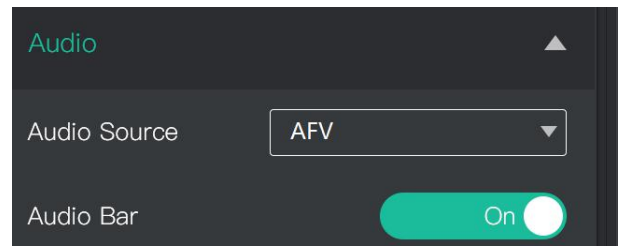H.265: When it is ON, users can watch 4 inputs streaming back on XPOSE software.

Import the related OBS application if users need to do live streaming, click Relate to confirm.
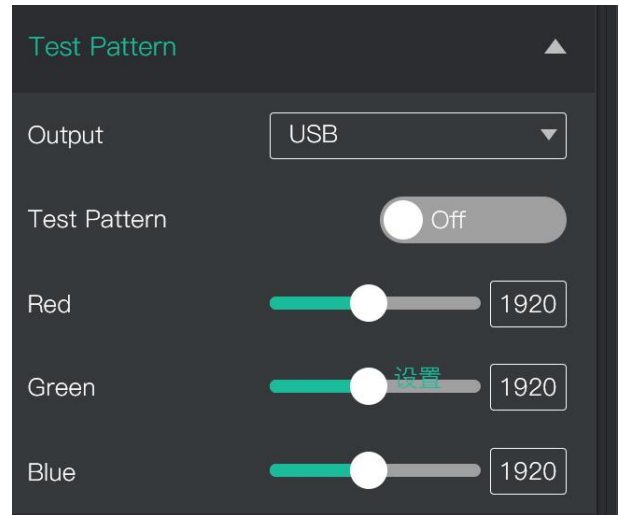
OBS: slide on to start streaming.

Note: H.265 and OBS cannot work at the same time. User choose either H.265 or OBS, not both.

AUDIO

TEST PATTERN

HDMI Output Setting

HDMI Out Setting ▲

DVI/HDMI [HDMI ▼]

Bits [▼]

Color Space [Image ▼]

DE On/Off (● Off)

DE H Pos [ ]

DE V Pos [ ]

DE H Size [ ]

DE V Size [ ]

DE H Polarity (● Off)

DE V Polarity (● Off)
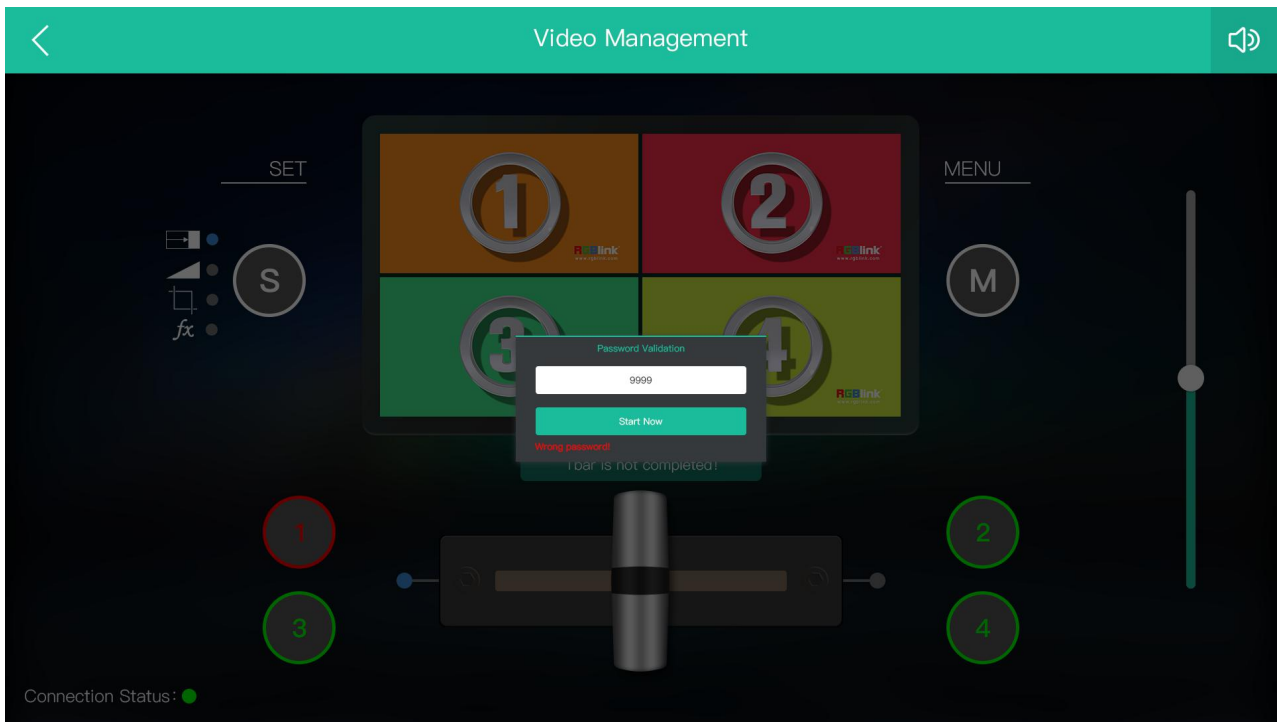
[Set]

Password Protection

Set password for the device. After password is set, password will be required when enter the software operation interface.
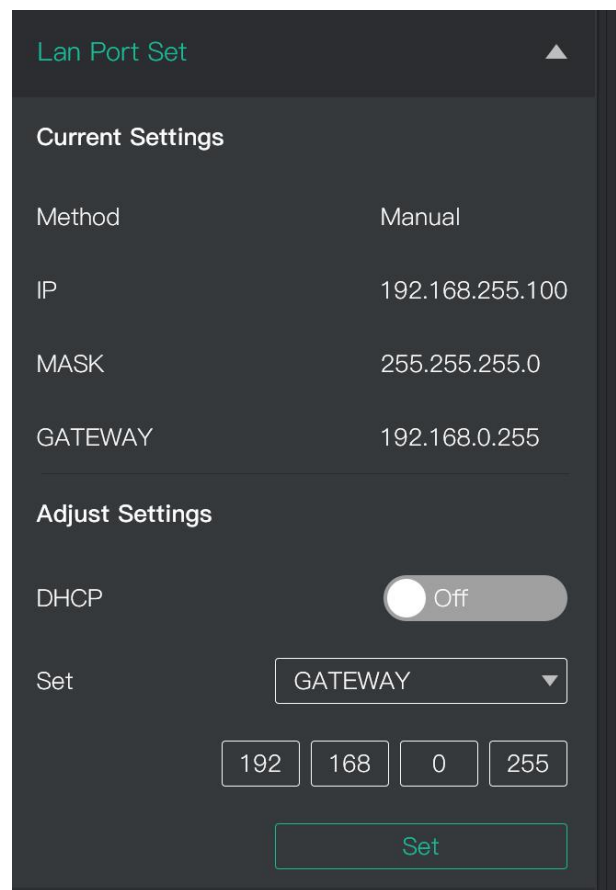
Password Protection ▲

Enable Password (● Off)

Enter Password [ ]
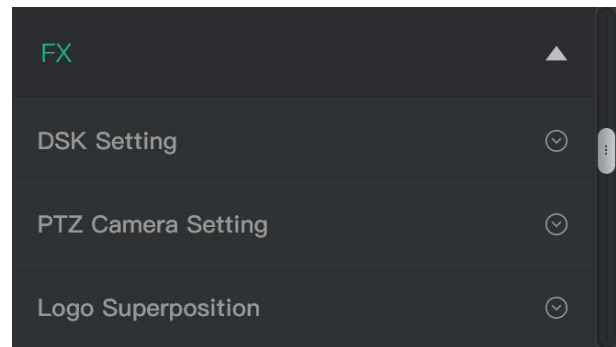
Confirm Password [ ]

[Set]

IP Setting

Manually set Gateway, MASK and IP for the device.

Ph: +86 592 5771197 | support@rgblink.com | www.rgblink.com

FX

On mini+, FX contains 3 features: DSK

Setting, PTZ Camera Control and Logo

Chroma Key

Preset: Customize, black background, red
background, blue background, green background ,
and white background .

Switch: On/Off

Mode: Select Key In or Key Out.

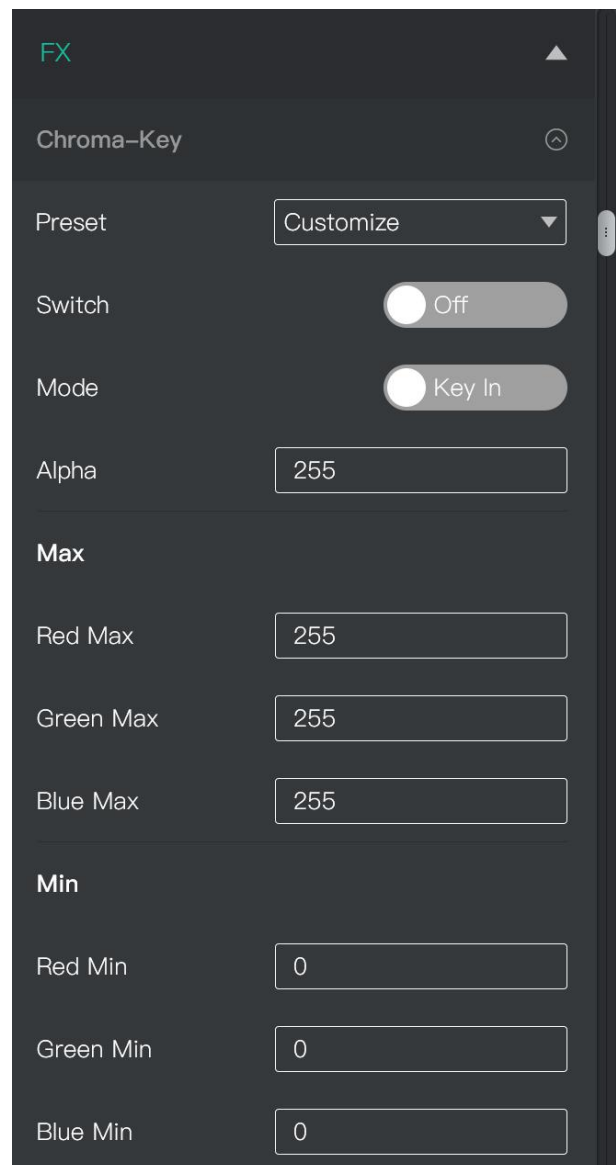**Alpha:** The adjustment range is between 0~255.
The color space is R,G,B by default.
The value range of R,G,B is from 0~255
0 means pure white, 255 means pure black.

Max (Red,Green,Blue):if users choose any preset
mode except customize, the **Max** value of R,G,B is
automatically set by system. If users choose
customize as Preset, then R,G,B maximum value
shall be adjusted manually.

Min (Red,Green,Blue):if users choose any preset
mode except customize, the **Min** value of R,G,B is
automatically set by system. If users choose
customize as Preset, then R,G,B minimum value
shall be adjusted manually.

PTZ Camera Setting

Camera：choose camera 1~8
Enable：choose On to enable the LAN
communication of the chosen camera.
Zoom：Click + - to Zoom in and out
Focus：Slide Auto to On usually
Brightness：Click + - to adjust
Preset：Load position and zoom setting of camera
lens from View 1~20
Save: Save position and zoom setting of camera
lens to View 1~20
Pan/Tilt Speed：Adjust the lens moving speed.
Positioner：to adjust the lens left right up down
position
OLD IP：the current IP address of the camera
New IP：the new IP address just typed in.
Port: Set port number for PTZ camera. PTZ control
support Visca protocol, port number is 1259 by
default. mini+ support control PTZ cameras in
same IP address with different port number.
Note: Not all cameras can be set IP and port
number on XPOSE, for those cameras, IP and port
number set can be done on web.

Logo

Path：choose logo bin from local computer or U disk.
Color：Adjust Red Green Blue value
Transparent Switch：On/Off
X，Y：adjust logo position

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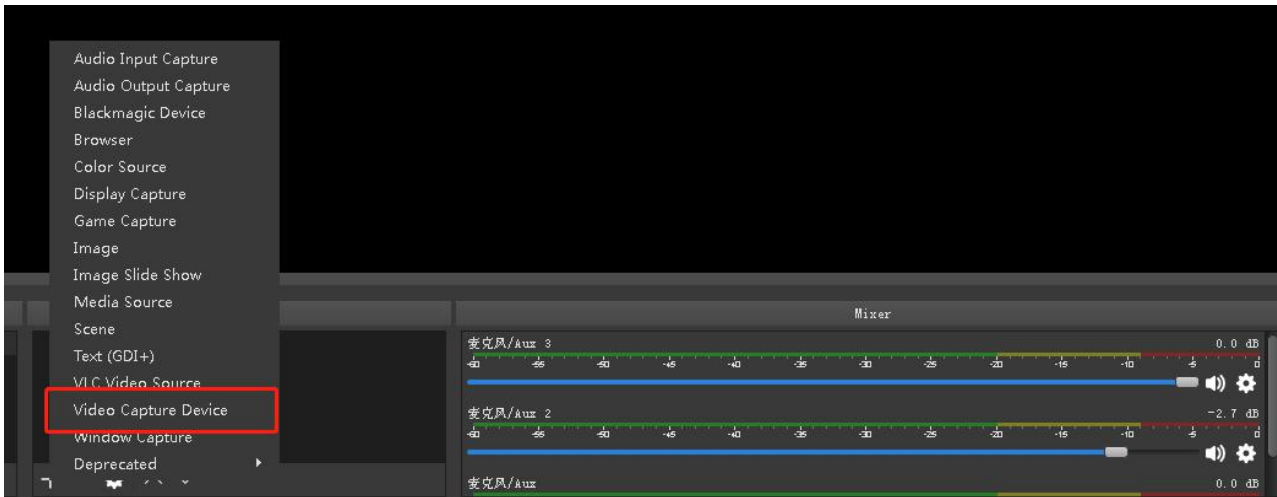**Version Info**

T-Bar Calibration

Factory Reset

OBS Streaming

OBS Setting

mini is compatible with many third party steaming software, we recommend OBS, which is available to download on https://obsproject.com/download. Download the software and update to the latest version.

1.Click"+"icon

2.choose video capture device

3.Click video capture device to open up setting page

4.Choose :RGBlink USB 3.0 Capture

5.Choose Video Format YUY2

💡 If there is no video format YUY 2 after setting above, check the USB 3.0 port connection. Make sure it is linked to USB 3.0port on PC by USB 3.0 cable. (USB 3.0 cable or port is standard in blue while USB 2.0 is in black)
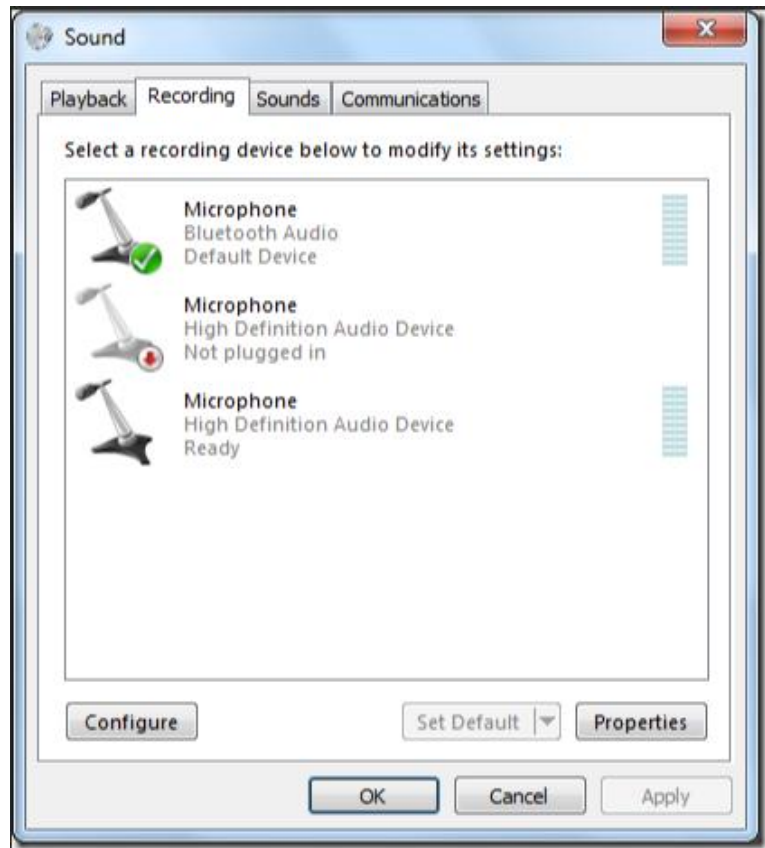
💡 If the captured video is showing mosaic, change the video format to YUY2.
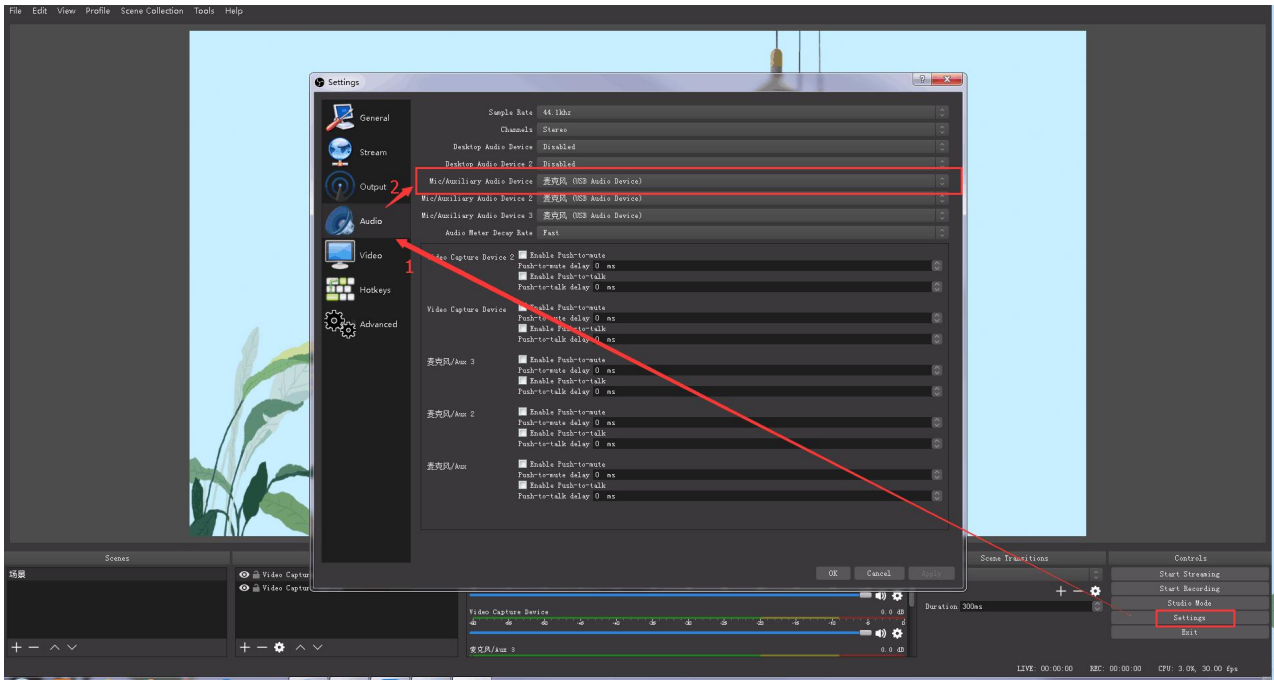
Audio Setting

When there is no audio playing first check the video source see if the it is set in default value and then check the audio setting on OBS.
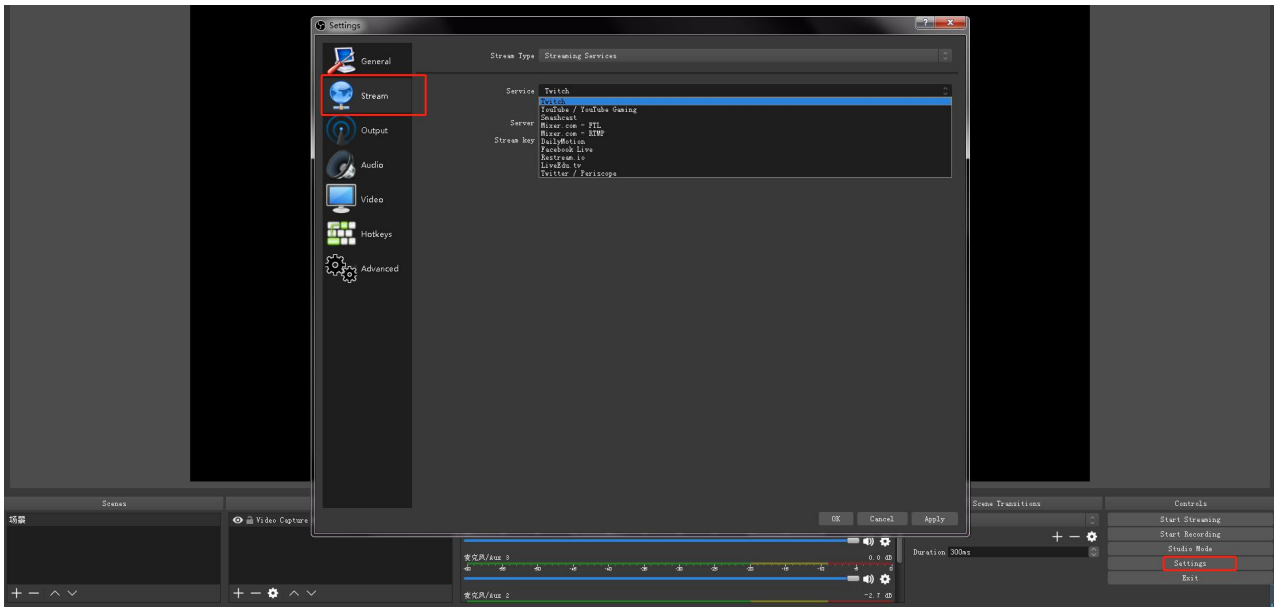
1.Set Default for the audio source.

2. Audio setting on OBS.

Choose Audio, click Setting and choose audio device (Mic/Auxiliary Audio Device)
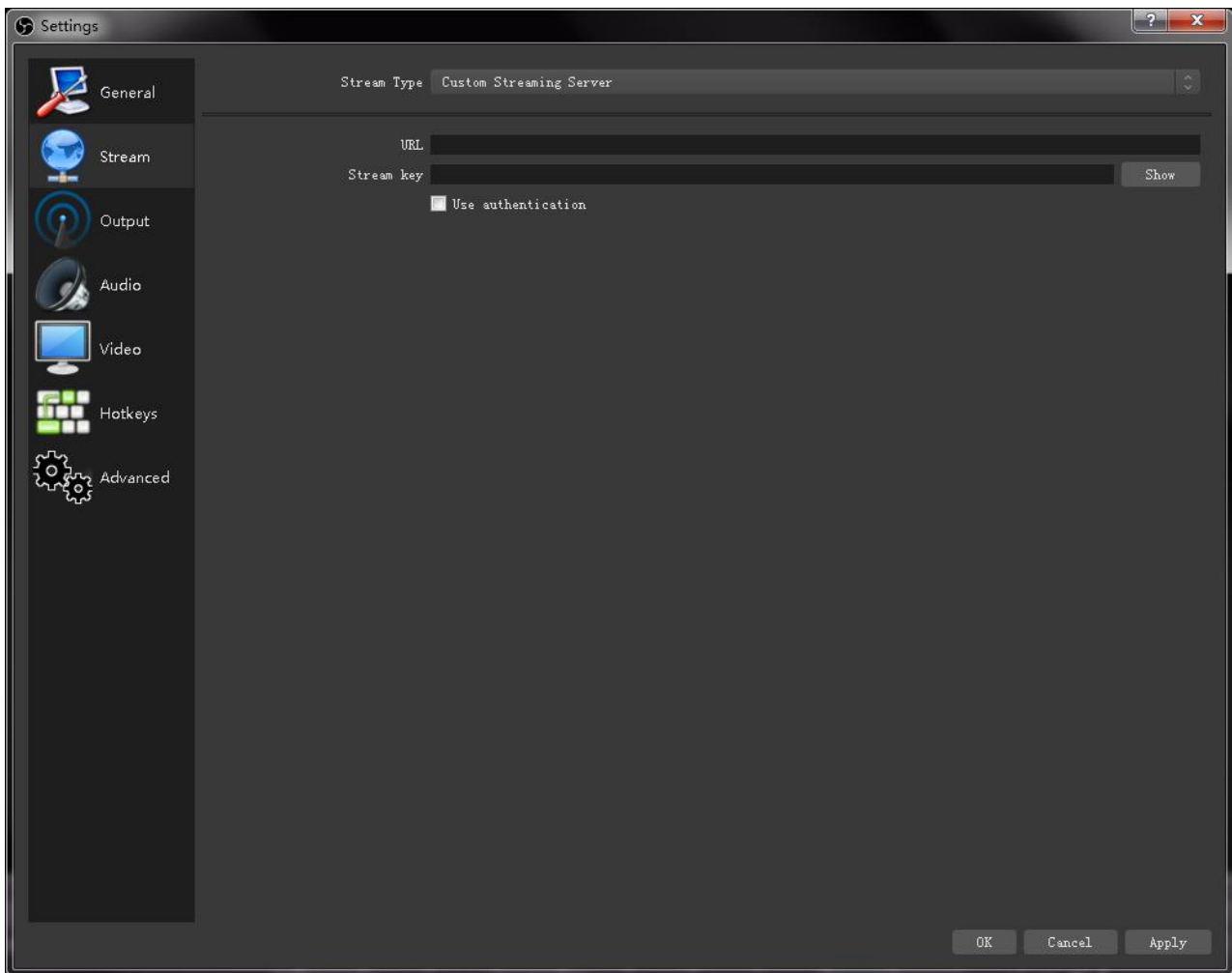
Streaming Setting

1. Find the RTMP URL and Stream Key provided by streaming broadcast website.

2. Copy URL and Stream Key

3. Back to OBS, click Setting in the lower right corner and click "Stream". Choose Stream Type as "Streaming Service" or "Custom Streaming Server" . If choose "Streaming Service", there is a list of streaming service name available in the drop down list of Service. If the streaming service is in the list, choose it from the list.

If choose Custom Service, just fill in URL and Stream Key.

4. Paste the RMTP URL to Server or URL and Stream Key to Stream Key.
5. Click "Start Streaming".
6. Go back to live broadcast website and check the broadcasting.

Upgrade

1.Tools：

- Firmware ZIP upgrade package
- XTOOL (V1.0.1.10 or higher) -packaged in the ZIP
- Computer with network connection
  - Windows (minimum Win 7, Win 10 recommended)
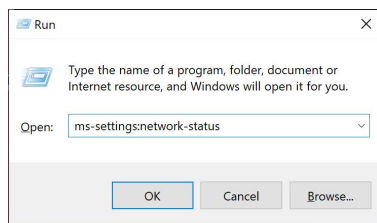 - macOS (minimum 10.13 High Sierra)

2.Upgrade

2.1 Power on the device connect LAN ports between PC and device by Cat6 cable;

2.2 Ensure that your computer is on the same network as the mini. The default IP address of mini is 192.168.0.99, in which case your computers IP address should be in the range 192.168.0.xxx (xxx cannot be the same as mini or other device on the network) to enable connection between the mini and your computer.
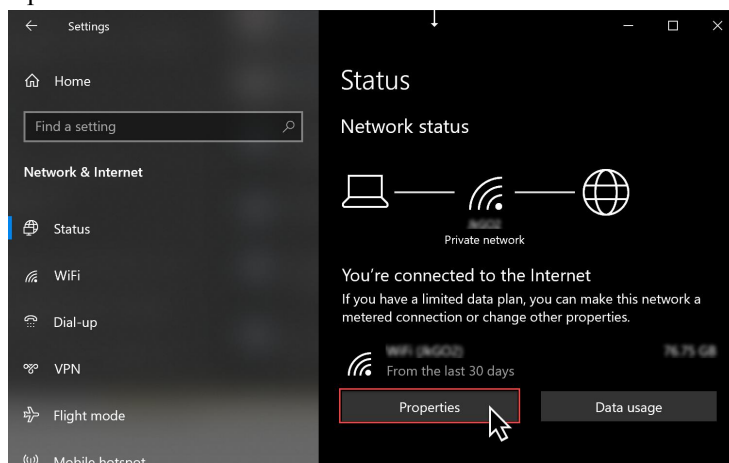
Check IP of PC：

Step 1. Press [⊞] + [R] keys together to open the Command Prompt
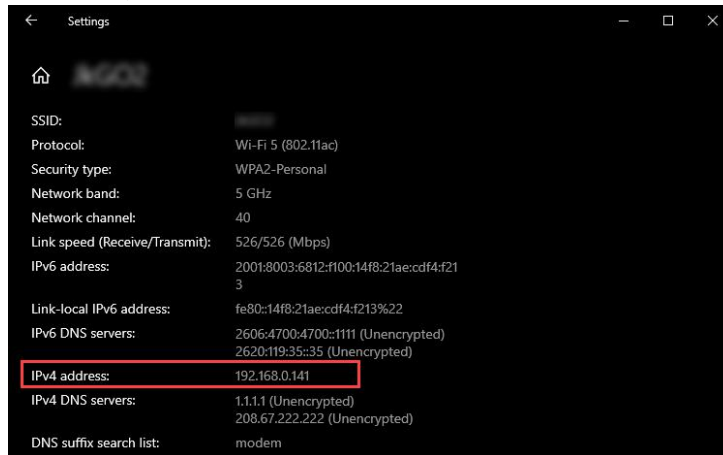
Step 2. In the dialog type: ms-settings:network-status

Step 3. Click on the Properties button

Step 4. Scroll down to find your IP address

If the IP address is not in the same section, manual change of IP address is required. Here are the steps:

- Step 1. Click Start menu, click "Setting"
- Step 2. Open **Network and Internet** > **Network and Sharing Center**.
- Step 3. On the left pane of the new window, click **Change adapter settings**.
- Step 4. You will be displayed with **Network Connections** of the PC.
  Important note: Right click on "Ethernet" or "Local Area Connection" if you want to change IP of any physical connection. And right click on "WLAN" in case you wish to change IP of any wireless connections.
- Step 5. Choose **Properties** after right clicking on the network name.
- Step 6. Select the **Internet Protocol Version 4 (TCP/IPv4)**, then click **Properties**.
- Step 7. **Obtain an IP Address automatically** should be selected by default, but please choose the **Use the Following IP Address**.
  Step 8. Now put your desired IP Address according to your wish its correct format. Change **Subnet mask and default gateway** if you want to.

Install XTOOL App
   Step 1. Extract the Firmware ZIP package into a folder
   Step 2. Navigate to the **/Upgrade Tool/XTOOL** folder
   Step 3. Right mouse-click the XTOOL Soft Setup and *Run as Administrator* [Windows]
   Step 3. Follow the Setup Wizard to install all the components. There will be multiple Dialog windows pop-up
          for installing the necessary components (*refer XTOOL Installation Guide*)
     If the XTOOL app has been installed previously, use the **Modify** option to complete the setup.
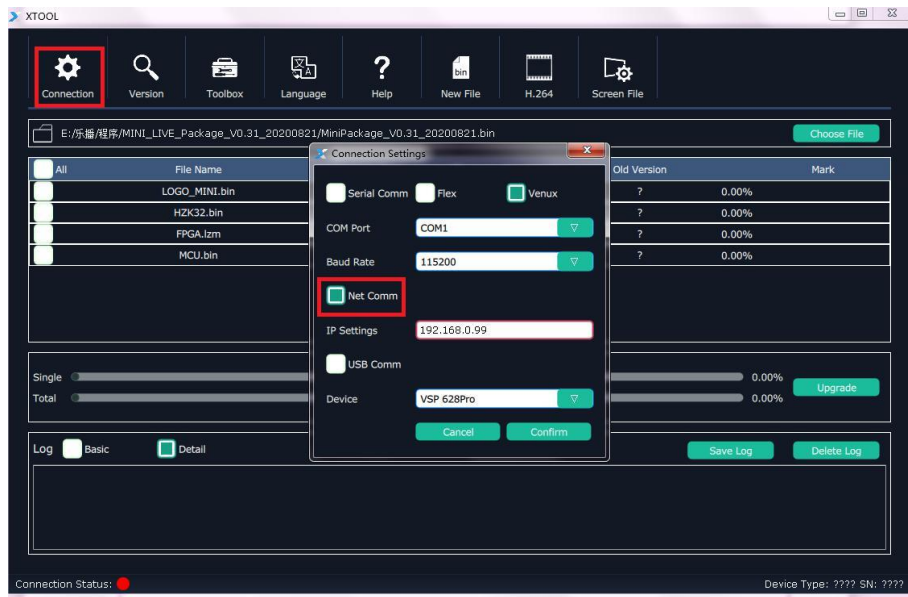   XTOOL is a universal updater application for RGBlink products, as such has a number of features in support of the full range of RGBlink devices that are not utilised for mini updates in this guide
1.   Upgrade
     Open the XTOOL app with *Run as Administrator* [Windows]

Connect to mini

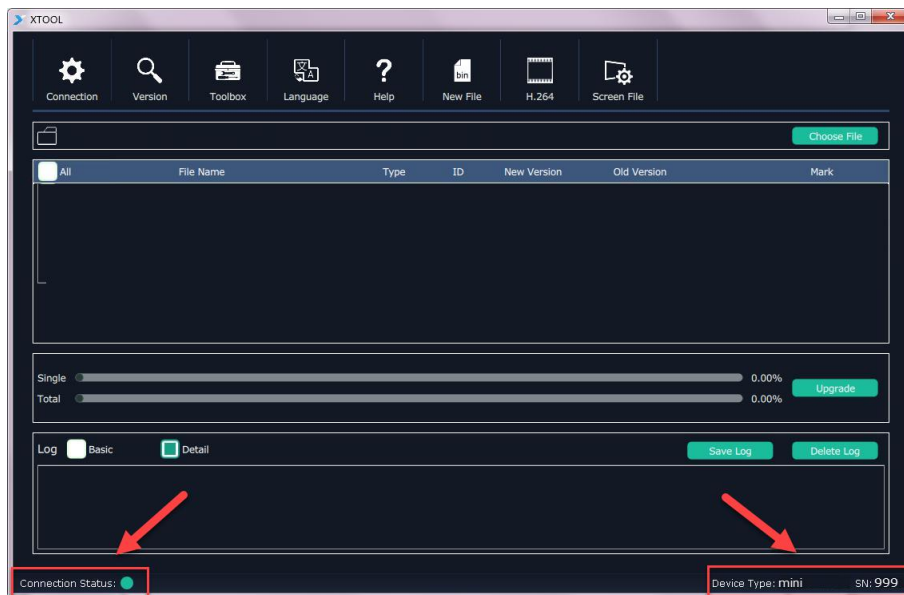Step 1. Click on **Connection**

Step 2. check the **Net Comm** option box

Step 3. enter the IP Address of the mini (as example above, default mini IP is 192.168.0.99)
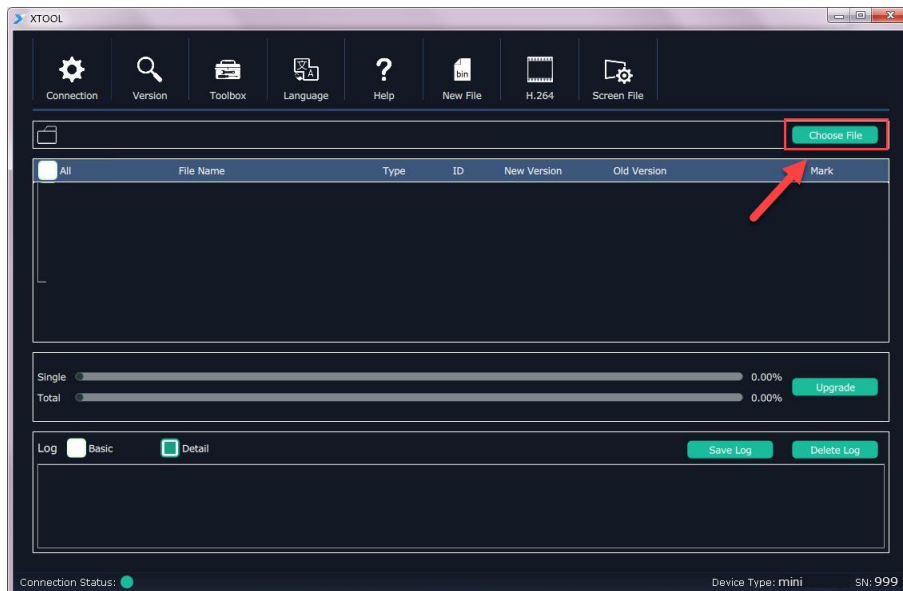
remember computer and mini MUST be on the same subnet

Step 4. click **Confirm**

Step 5.Review Connection Status at bottom left, to confirm indicator light is green and there is device information showing at bottom right

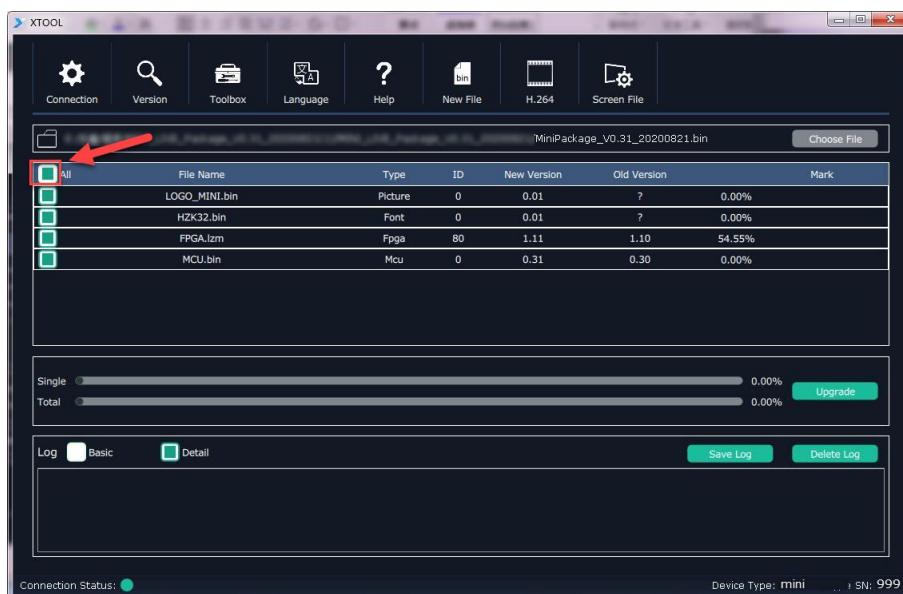**Load the Firmware Update File**

Step 1. Click Choose File

Step 2. Navigate to the package folder and select the MiniPackage .bin file

Set Components to Update

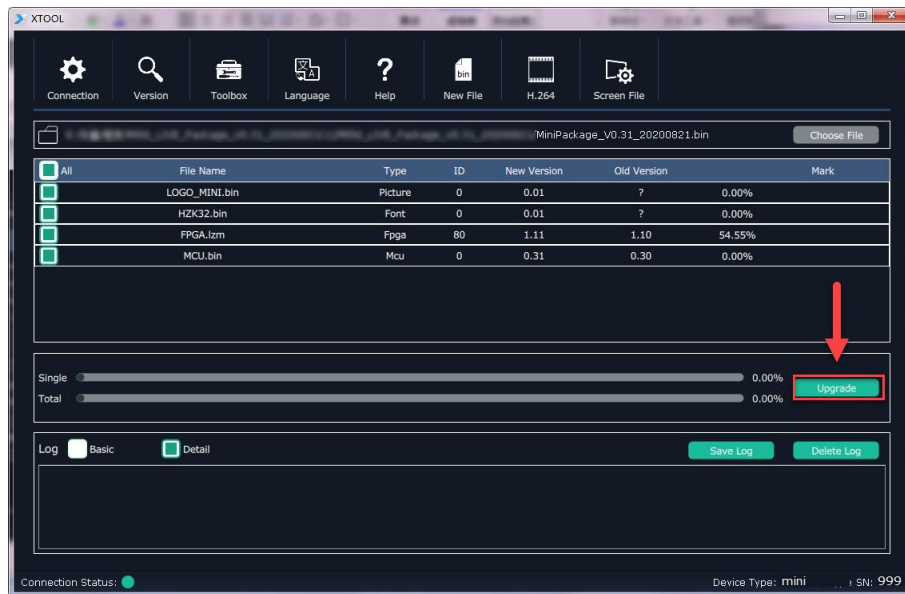Click the Select All check box which will enable all components to be updated to the latest versions

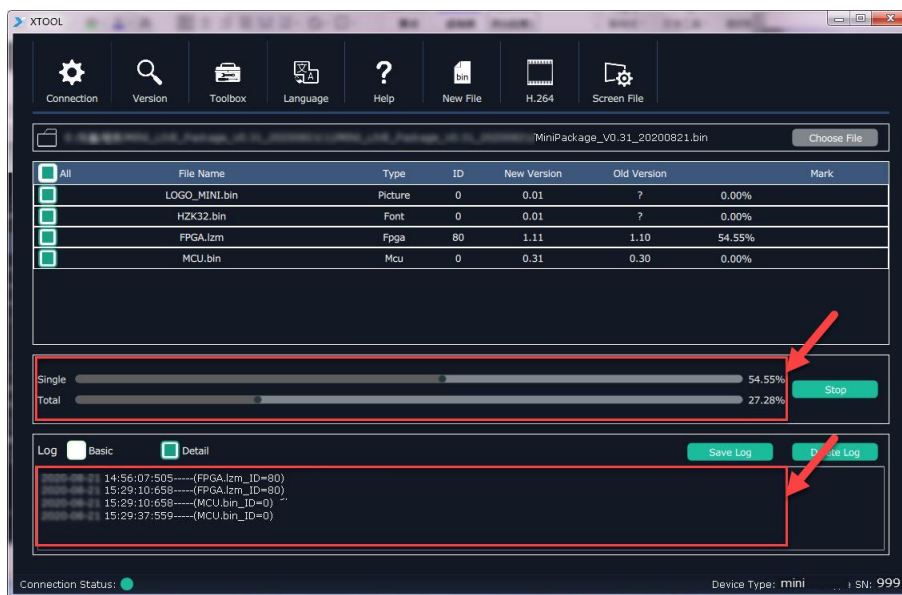Advanced updating allows single component upgrading

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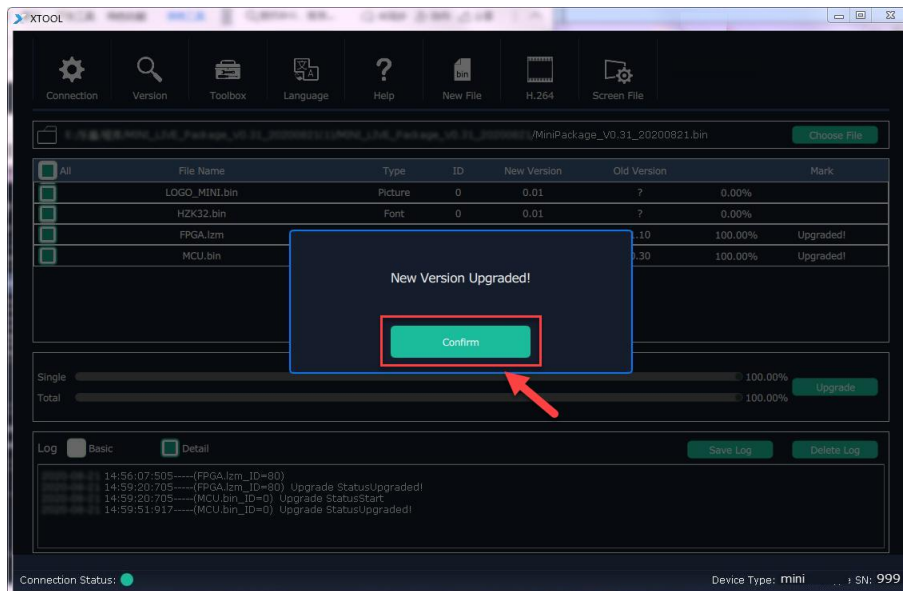
Upgrade

Step 1. Click **Upgrade**
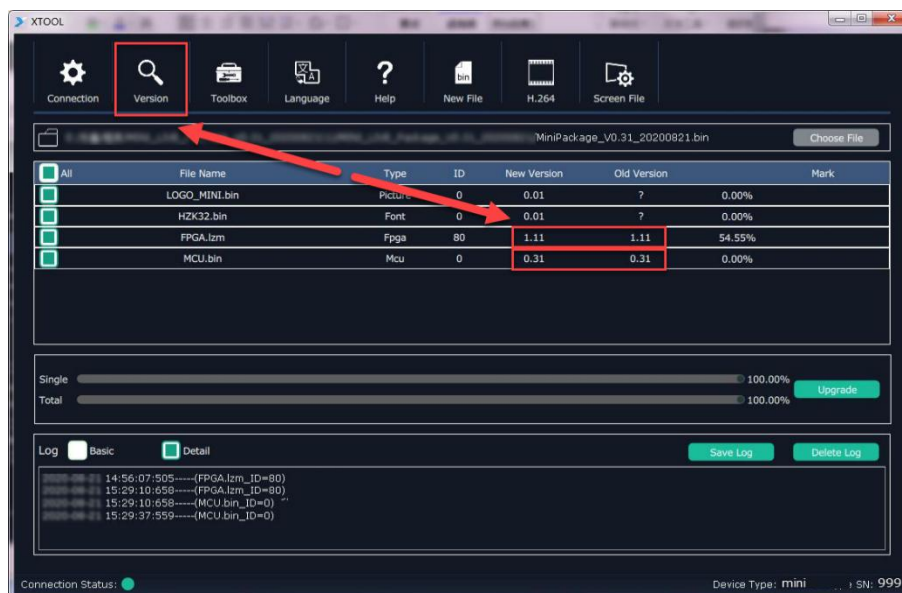

Step 2. Monitor the progress

DO NOT DISCONNECT OR POWER DOWN while updating

Step 2. Following update click **Confirm** in the pop-up window

Step 3. Click Version to refresh, then review the main window to confirm upgrade versions now match

<u>Finish</u>

Step 1. Close XTOOL

Step 2. Disconnect mini

Step 3. mini is now upgraded and ready to use

Warranty:

All video products are designed and tested to the highest quality standard and backed by full 1 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.
The customer shall pay shipping charges when unit is returned for repair.

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