RGBlink®

mini-max

Elevating Content Creation to 4K Excellence





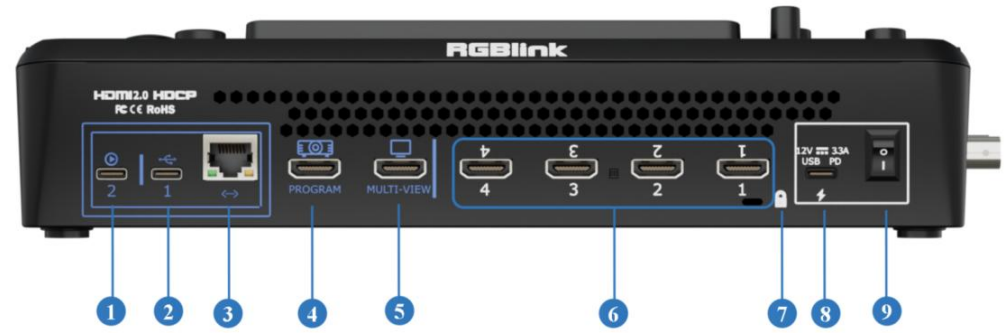
Quick Start

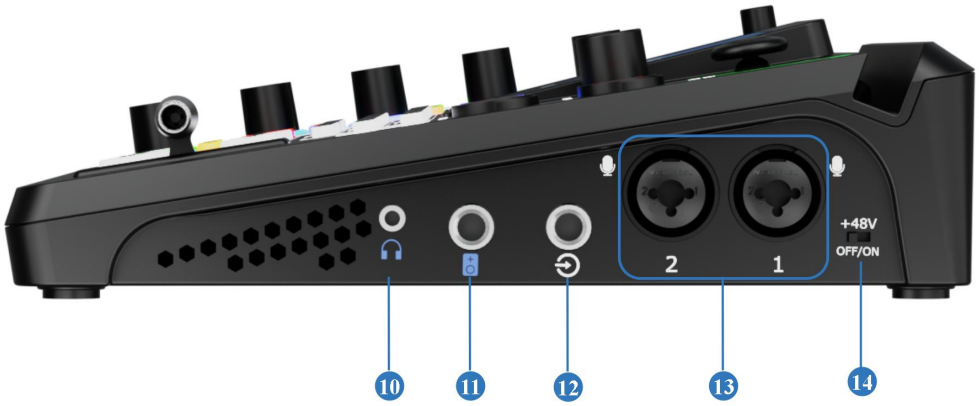
Product Overview

Key Features

- Native 4K processing with lossless quality.
- 9 x 4K inputs with 6-channel seamless switching.
- 8-channel audio mixer supporting both digital and analog sources.
- 4K UHD program output with simultaneous multi-format live streaming for diverse distribution needs.
- Flexible recording options: 1x 4K@60, 2x 4K@30, or 4x 2K@60 (Coming Soon).
- UVC 3.0 4K video capture for easy compatibility with third-party software for production and streaming.

Ports info







No.	Port	Description
1	UVC	Connected to a computer (via USB-C cable) or an Android device (via OTG cable). Recognized as a webcam by a third party software like OBS or zoom to capture and output the program view on air in applications like remote video conference.
2	UVC	● Connect to a USB camera as the fifth input signal (default function). ● Record the Program output view to a USB drive or SSD. ● Import audio, video, and image files from a USB drive.
3	Ethernet Port	● Streaming: Go live over the internet without a computer. ● Remote PTZ control via IP VISCA for IP workflow.
4	PROGRAM Output	By default, it outputs the program feed but can be switched to output test color bars.
5	MULTI-VIEW Output	When connected to a display, it monitors all input and output signals simultaneously in a multi-view layout.
6	HDMI 1~4 IN	● Four HDMI input channels for connecting HDMI sources. ● 4K60 resolution and downward compatible with all resolutions.
7	Locking Hole	Use the T-lock to fix the device.
8	USB-C Power Socket	PD protocol support, 15V 3A.
9	Power Switch	Boat-shaped switch. Press downward to turn on the switch.
10	Headphone Output	3.5mm mini-jack for audio monitoring.
11	6.35mm TRS Jack	Balanced TRS audio output.
12	Line-in	Balanced 6.35mm TRS jack to connect to PC, mobile phone, or audio console.

13	MIC in	● XLR+TS input port to connect to microphone. ● 48V Phantom Power supported.
14	+48V Phantom Power Switch	● Default to OFF for safety. ● Manually enable it when connecting a condenser microphone that requires 48V phantom power.
15	SDI 1~2 Inputs	● Two 12G-SDI input ports can be connected to UHD cameras and other input sources. ● 12G SDI compatible with 6G/3G/HD/SD-SDI.

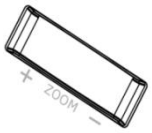
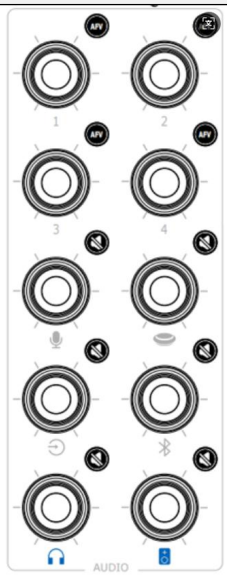
Front Panel

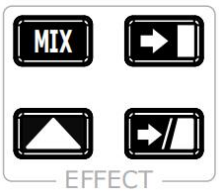
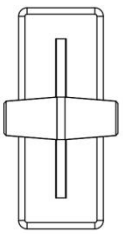


Function Settings	Transition
● 5.5" HD Touch Screen ● SHORTCUTS Custom Function Rows ● MENU/EXIT Button ● Menu Browsing/Confirm Button (ENTER) ● RECORD Button ● ON AIR Button	● Transition Effect Selection Button (EFFECTS) ● Transition Duration Selection Button (DURATION) ● T-Bar (manual switching between PGM and PVW) ● Fast Switch Button (CUT) ● Transition Effects Switch Button (AUTO)
	Layer Settings
Camera Control	● PICTURE IN PICTURE: Layout Selection/AB

● FOCUS knob with indicator ● ZOOM Toggle ● 5-Direction Joystick	Layers/Chroma Key Buttons ● Views: View Saving and Recalling Buttons ● Program/B: Program Signal Selection and Layer Setting Buttons ● PREVIEW/A: Preview Signal Selection and Layer Setting Buttons
Volume Control	
● Volume Control Knob ● AFV (Audio Follow Video) Button ● Mute Button	

Function Settings	
Area	**Description**
	■ 5.5" HD Touch Screen For showing input, output, recording and live streaming status, and displaying the menu content.
	■ SHORTCUTS Button ● Button Definition ○ Shortcuts Button, distributed via web App (coming soon) ● Button Color Description ○ Button Unlit: no shortcuts saved. ○ Button Lit White: shortcuts saved. ● Button Operation ○ Short Press: to enable a shortcut function.
	■ MENU/EXIT Button ● Button Definition ○ MENU Button ○ EXIT Button ○ LOCK Button
	■ MENU Browsing/Confirm Knob ● Knob Definition ○ MENU Browsing Button ○ Confirm Button
	■ RECORD Button ● Press to Enable/Disable Recording ○ Press to start the recording. Button lit red to indicate normal recording process. ○ Recording cannot be initiated if there is insufficient space (less than 300MB). ○ Press button again to stop the recording. The Button blinks red to indicate the video-saving process.

	■ ON AIR Button ● Network Status Display ○ Button blinks red to show failed streaming but normal communication. ○ Button illuminated red to show successful streaming and communication. ● Press to Enable/Disable Streaming ○ Press once again to stop streaming. ○ Button goes dark if streaming is completed.
Camera Control	
Area	**Description**
	■ FOCUS Knob with Indicator ● Focus Status Display ○ Manual Focus: indicator unlit. ○ Auto Focus: indicator lit blue. ● FOCUS Knob ○ Rotate for manual focus. ○ Press for auto focus and enter the PTZ interface.
	■ ZOOM Toggle ● Size adjustment for Layer A and Layer B. ● Zoom in/out for PTZ control. ● Value adjustments.
	■ 5-Direction Joystick ● Move the joystick up, down, left and right ○ to adjuzt position for layer. ○ to set pan, tilt and zoom for a PTZ camera. ● Short Press ○ to enter PTZ Control Interface.
Volume Control	
Area	**Description**
	■ Volume Control Knobs ● Knob Number 1~4: volume control of HDMI/SDI embedded audio. ● Other Six Knobs: volume control of MIC1, MIC2, XLR Inputs, Headphone Out and Program Out.

	■ AFV Button ● Button Color Description ○ Button Unlit: AFV off. ○ Button Lit White: AFV on. ● Button Operation ○ Short Press: enable/disable AFV. ○ Long Press: to enter AUDIO.
	■ Mute Button ● Button Color Description ○ Button Unlit: MUTE off. ○ Button Lit Red: MUTE on. ● Button Operation ○ Short Press: enable/disable MUTE . ○ Long Press: to enter AUDIO.
Transition	
Area	**Description**
	■ Transition Effect Selection Button ● Default: MIX (crossfade). For more transition effects, tap the “EFFECTS” on the MENU to select. ● Button Lit White: a transition effect selected.
	■ Transition Duration Selection Button ● Default: 1.0 second. ● Button Lit White: a transition duration selected.
	■ T-Bar PVW and PGM views can be transitioned by pushing T-bar.
	■ CUT Button Press to fast switch between PVW and PGM views with no transition effect.
	■ AUTO Button ● Button Operation ○ Press to automatically transition PVW and PGM views according to the selected duration and transition effect. ● Button Color Description ○ Button Blinks Red: transition is being applied. ○ Button Goes Dark: transition completed.
Layer Settings	
Area	**Description**

	■ Layer A/B Button ● Layer A serves as the main picture signal, and Layer B serves as the picture-in-picture (PIP) signal. These two layers can be combined to create a PIP layout. ● Button Unlit: layer OFF or not be placed on PVW. ● Short Press ○ Press the Button Unlit: the button turns blue to indicate an enabled and selected state, which allows the user to use the toggle and joystick for size and position adjustment. ○ Press the Button Lit Blue: to disable the selected layer and the button turns dark. ○ Press another layer button except the Layer A/B button: the button pressed turns blue and the Layer A/B button changes from blue to green. ● Long Press: to enter LAYOUT.
	■ Layout Selection Button ● Short Press: to set the layout for the selected layer, and the button turns green. ● Long Press: to enter CROP/SCALE.
	■ Chroma Key ● Short Press: to enable or disable Chroma Key (layer B is set by default). ● Long Press: to enter the Chroma Key interface.
	■ Preset Loading Button ● Button Color Description ○ Button Unlit: no view contained. ○ Button Lit Green: view contained. ○ Button Lit Red: view being loaded. ● Button Operation ○ Long Press: to save the current view or not. ○ Short Press the Button Lit Green: to place the view on Preview, after which this button turns red. ○ If you switch to another view, the button of the loaded view changes from red to green.
	■ PROGRAM Source Row ● Button Definition ○ Signal Assignment: Configure via [MENU] > [Input]. ○ Buttons 1-4: Assign HDMI 1-4 or SDI 1-2 sources. Correspond to IN1~IN4 views. ○ Button 5: Cycles between UVC, NDI, and MEDIA sources for the IN5 view.
	■ PROGRAM Layer Button ● Icon Description ○  indicates BACKGROUND. ○  indicates LOGO. ○  indicates OVERLAY. ● Button Color Description ○ Button Unlit: no layer contained. ○ Button Lit White: layer contained. ○ Button Lit Red: Program out layer. ● Button Operation ○ Button Lit White: to place layer on PGM out, and the button turns red. ○ Button Lit Red: to remove the layer from the PGM out, and the button turns white.
	■ PROGRAM FTB Button ● Button Operation ○ Press Button Unlit: to fade the current source to black,

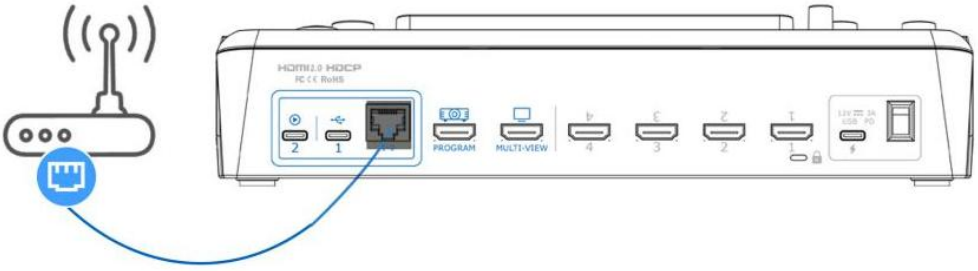
	and the button turns red. ○ Press Button Lit Red: to act in reverse from black to the currently selected source, and the button goes dark.
	■ PREVIEW Source Row ● Button Definition ○ Button 1~4: HDMI/SDI inputs. If you use a PTZ as an input, the TALLY light will turn green. ○ Button 5: UVC/NDI/MEDIA Source.
	■ PREVIEW Layer Button ● Icon Definition ○ indicates BACKGROUND. ○ indicates LOGO. ○ indicates OVERLAY. ● Button Color Description ○ Button Unlit: no layer. ○ Button Lit White: layer contained. ○ Button Lit Blue: Layer enabled on PVW and selected. ○ Button Lit Green: Layer on PVW but not selected. ● Button Operation ○ Long Press: to enter Media Interface. ○ Short Press: 1) to enter Media Interface or not if no layer is contained; 2) to remove the layer from PVW, after which the button turns white. The button turns blue during the layer-adding process.
	■ PREVIEW Clear Button ● Button Color Description ○ Button Lit Green: no layer on PVW. The button goes dark after a layer is added. ● Button Operation ○ Short Press Button Unlit: to clear layer on PVW. The cleared layer will be saved as a view and the button turns green. ○ Press the Button with a View Saved: to load view to PVW.

Use Your Product

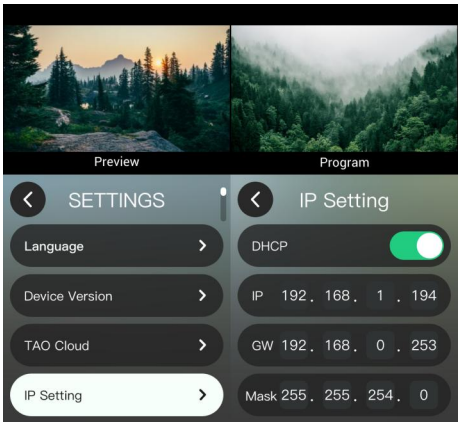
Version Check & Update

To ensure your system is up-to-date and you have access to all features, we recommend connecting the device to the network before use.

1. Connect the mini-max network port to a LAN port on your router (that already has an active Internet connection) using an Ethernet cable.



2. Navigate to "Settings" > "IP Settings" and enable DHCP to get an IP address assigned by the router.



3. Go to "Settings" > "Device Version" to check the firmware version and update to the latest firmware version if needed.

Control Ends

Controls & Touchscreen

his guide primarily explains how to quickly operate the core functions of the mini-max device.

Online Operation (Coming Soon)

Once the device is connected to the network, you can enable DHCP in "Settings" > "IP Settings" to obtain a network-assigned IP address.

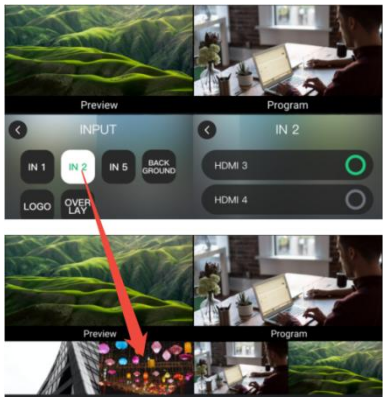
At this point:

1. You can directly enter this IP address into a web browser to access the Web App for remote control of the device.
2. You can also bind the device to RGBlink's unified platform for device management and streaming, the TAO Cloud platform. Obtain the TAO Cloud binding verification code in "Settings" > "TAO Cloud", then log into TAO Cloud to complete the binding (www.tao1live.com).

Input Settings

Select Input Signal

Press the MENU button to expand the menu. Under the input menu, assign signal sources to IN1 through IN5.
IN1: HDMI 1 or HDMI 2
IN2: HDMI 2 or HDMI 3
IN3: SDI 1 (Fixed)
IN4: SDI 2 (Fixed)
IN5: UVC, NDI or Media



IN2 view corresponds to HDMI port 3



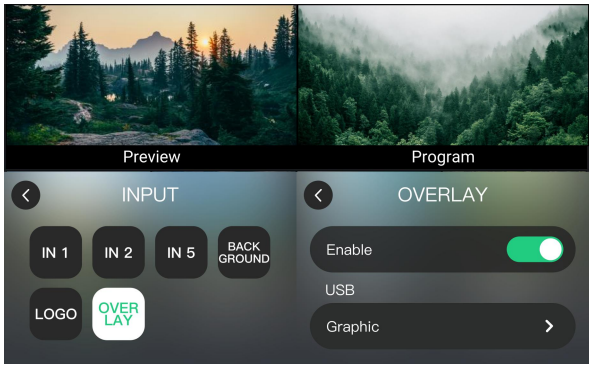
Signal Views

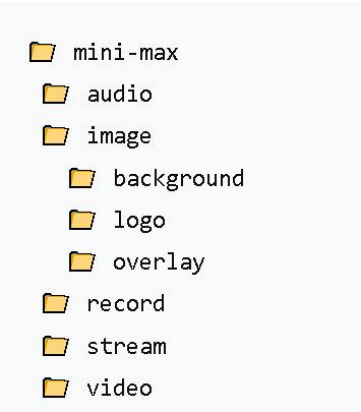
IN1~IN5 correspond to the first 5 preview views and the number keys 1~5 in the "Program" and "Preview" rows on the front panel. A PVW row button routes the signal to the preview monitor. A PGM row button puts it on air as the main program output. You can then begin your content creation.

Import Materials

Import Static Media

- Background: Base-layer images (e.g., wallpapers)
- Logo: For brand logos
- Overlay: Decorative elements (e.g., frames)





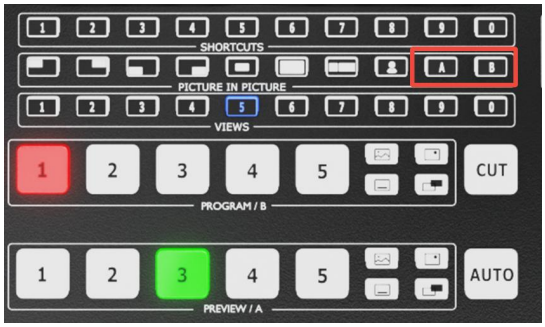
Import via USB

1. Create the folder structure on your USB drive (see diagram).
2. Add your files to the correct folders and plug into USB 1.
3. Go to “Input” to select and enable your images.

Signal Layout

A/B Buttons

The A/B layers are the two signals shown simultaneously in the preview and program windows. Use the dedicated A/B buttons on the front panel to control them.





A/B Layer Selection

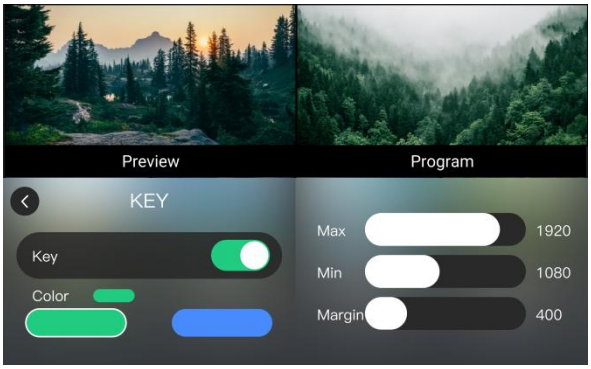
To select a signal for the B layer:

Press the B button. When it illuminates solid blue, press a signal key in the PREVIEW row to assign it to the B layer. The assigned signal key will also light up blue as confirmation.

B Layer Keying

Keying is applied to the B layer by default.

With B selected, press the PIP key  for one-touch chroma keying, or enter the "Keying" menu for detailed adjustments.





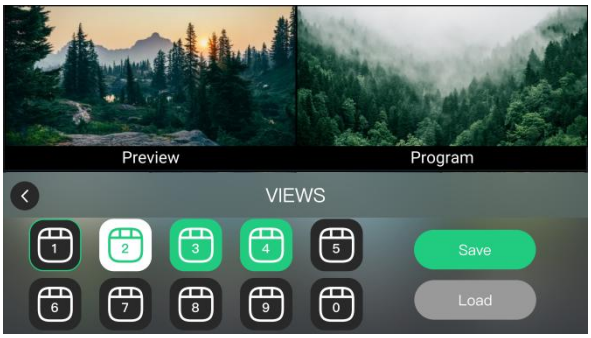
PIP Layout

The mini-max supports 6 different Picture-in-Picture layouts. After selecting a layout, press the A/B buttons to enter the blue-lit editing state for picture adjustments:

1. ZOOM Toggle: Zoom the picture in or out.
2. 5-Way Joystick: Adjust the picture position.

View Save & Recall

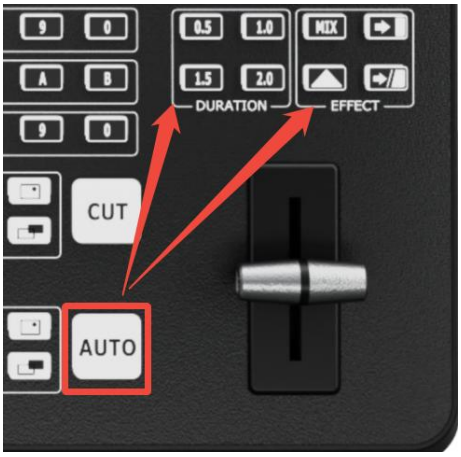
After completing PIP settings, you can long press a view button on the front panel or go to the "View" page to save the current PVW as a view. All layout, layer, and media usage settings will be saved, allowing you to one-touch load this preset layout to the preview monitor later.



Signal Switching

A effect is the visual effect when switching between two video sources. It controls how the output changes from preview view to the live program.

Switch Mode



The mini-max defaults to a quick 1.0s Mix (fade) transition.
It supports adjusting the switch mode:

1. CUT: Immediate switch with no transition effect.
2. AUTO Transition: Switches between signals using the preset transition effect and duration.

You can also use the T-bar fader for manual operation.

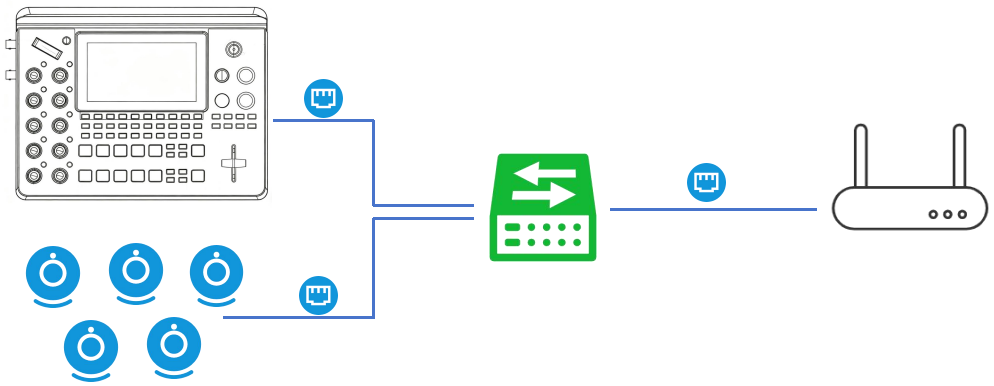


Effects

The front panel offers quick-access transition buttons. For more options, navigate to the "Effects" menu.

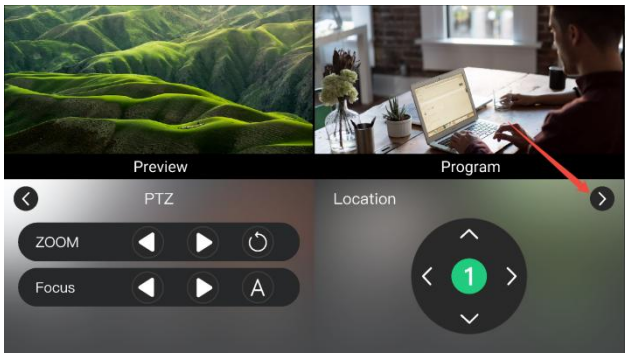
PTZ Control

The mini-max supports controlling up to 5 PTZ cameras simultaneously via the IP VISCA protocol. For multiple cameras, use a network switch.

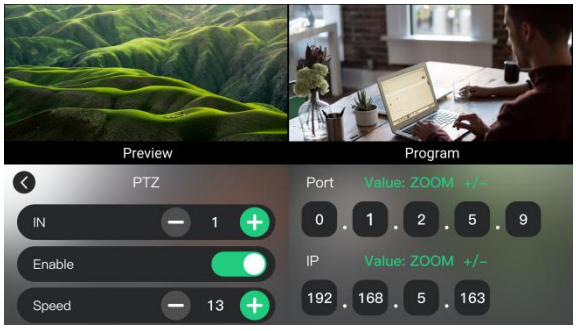


mini-max multicam setup

To receive the camera's live feed, ensure the mini-max and the PTZ camera are on the same LAN (e.g., 192.168.5.x, where the first three segments must match, and 'x' can be any number from 2 to 254). Navigate to the “PTZ” menu. Configure the IP address and port on the second page.

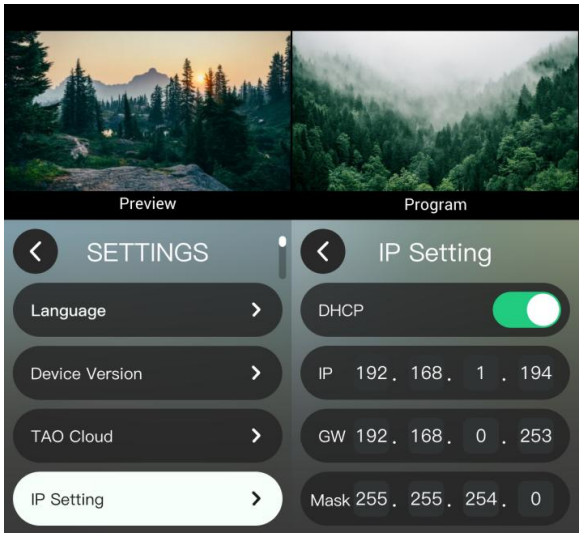


PTZ IP Setup



1. Connect the PTZ camera to mini-max.
2. On the PTZ panel, use "+" or "-" to select the corresponding camera input (IN 1 - IN 5).
3. Use the ZOOM toggle to set the IP and port.
4. Click "Enable" to start the PTZ video stream.

If the camera's port number is not 1259, please enter the corresponding port number for that camera.



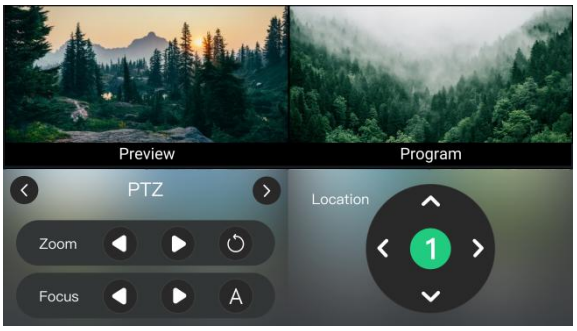
mini-max IP Setup

Navigate to "Settings" > "IP Settings" and enable DHCP. The mini-max will then obtain an IP address assigned by the router.

After this, you can disable DHCP and use the ENTER knob to assign a static IP address.

PTZ Control

You can use the front panel ZOOM buttons and FOCUS knob to adjust the camera's zoom and focus. You can also enter the PTZ page to adjust zoom, focus, rotation speed, and camera position.





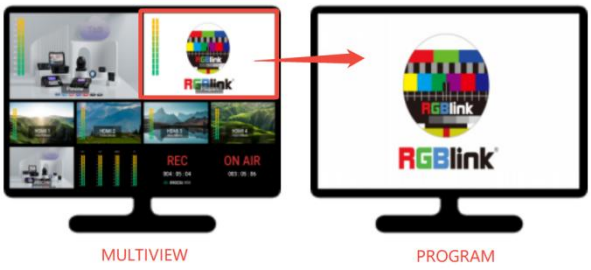
PTZ Presets

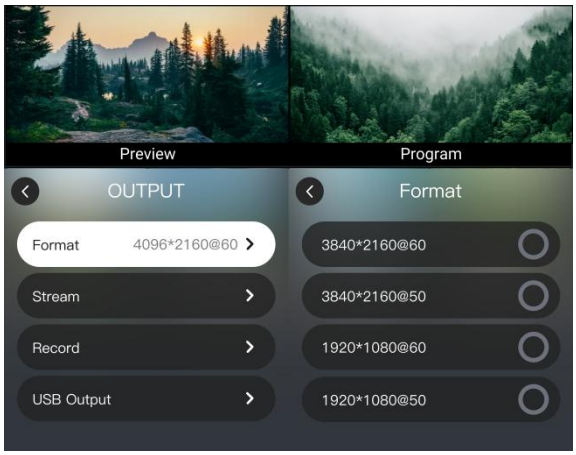
After assigning any PTZ picture to the preview and completing adjustments, you can save its settings as a view. When a view is recalled, the corresponding PTZ camera will automatically apply all parameters preset in the view, including pan/tilt position, zoom, etc.

Output Settings

Multi-View Preview & Program Output

Multi-View Preview: Output a 2K multi-view preview.
Program Output: Output the 4K PGM view or the view of any selected input signal.





Program Output Resolution

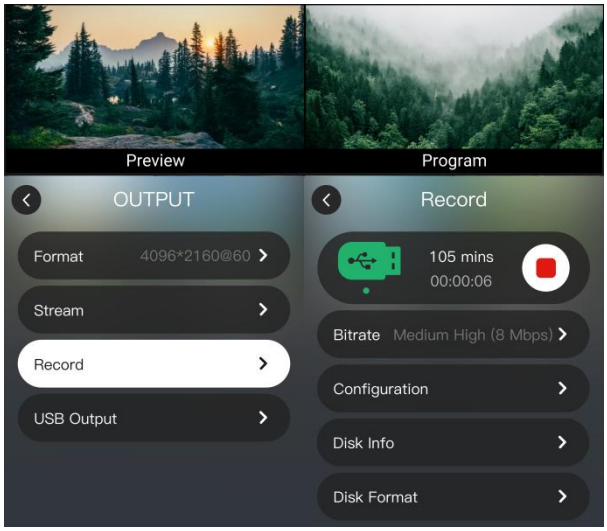
In the home menu, press  to enter Output Settings. Open the "Format" page to adjust the main output resolution, supporting up to 4K@60Hz.

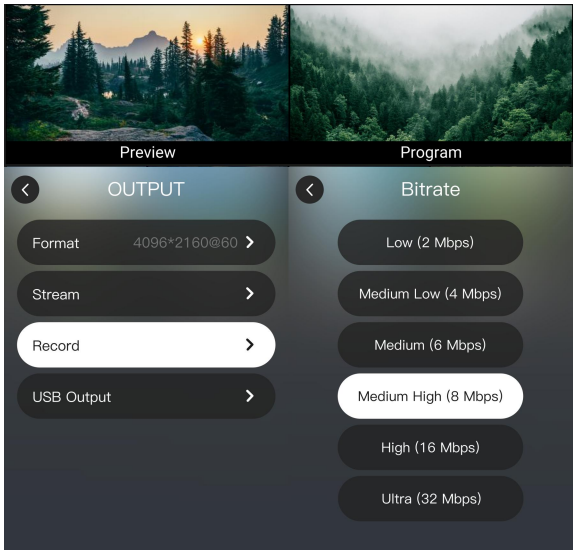
Recording

USB Drive & Recording Setup

1. Connect your USB drive/hard drive to the USB 1 port.
2. Available recording time will show once recognized.
3. Set bitrate (higher for better quality) and audio recording in "Configuration".
4. Press RECORD on the screen or front panel to start/stop.

Supported storage: USB drives (128GB max) or SSDs (2TB max), formatted as exFAT. If recording fails, try to reformat the drive.





Recording Modes

Main 4K Output: Records the 4K@60 program feed.

ISO Recording (Coming Soon): Simultaneously record multiple live feeds – 2 x 4K@30 or 4 x 2K.

Recording Files

1. Safe Ejection: Always remove the USB drive only after the saving process is done.
2. Timestamp Accuracy: Ensure the device is online or the system time is set correctly in “Settings”. Otherwise, filenames may have inaccurate timestamps.

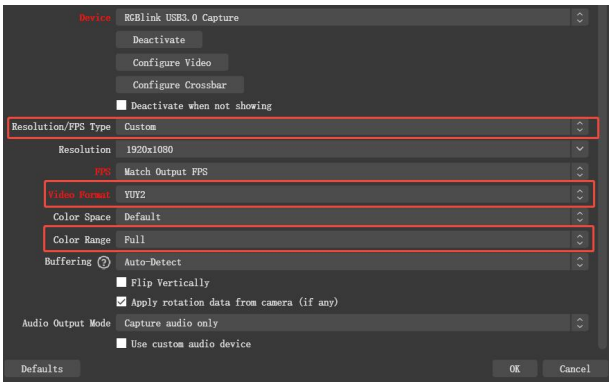


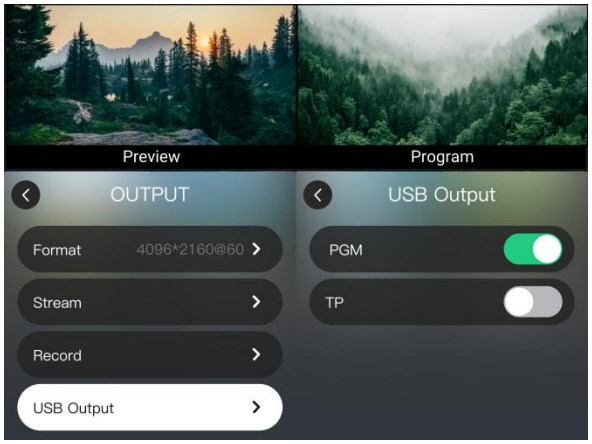
Live Streaming

Prerequisites for using on-device streaming and NDI encoding: The mini-max must be connected to the network and bound to the TAO Cloud platform.

OBS Capture & Streaming

Use a USB video capture cable to connect the mini-max's USB 2 port to a computer. In OBS, add a Video Capture Device named "RGBlink USB3.0 Capture".





USB Capture

This page sets up what outputs from the PROGRAM port and USB 2 port, which can be see as a webcam by live streaming and conferencing software.

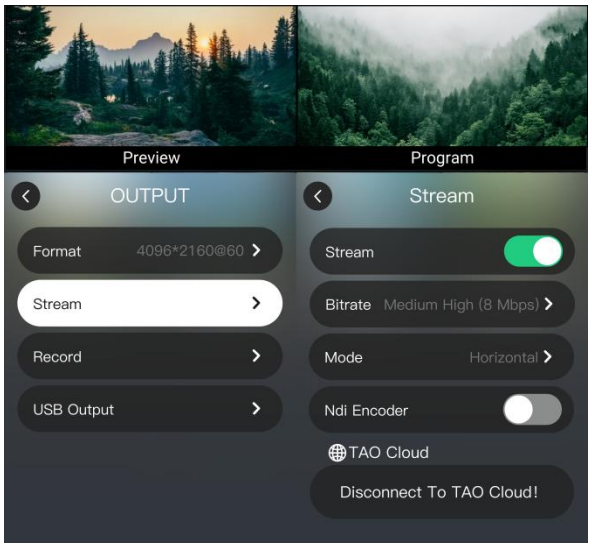
PGM: Outputs the Program view.
TP: Outputs Test Pattern (color bars).

Network Streaming (via Ethernet)

1. Log in to TAO Cloud, navigate to the mini-max device management page > "Stream".
2. Obtain the Stream URL and Stream Key from your live streaming platform, copy them to the TAO Cloud platform, and click "Distribute".



Double-click to zoom in



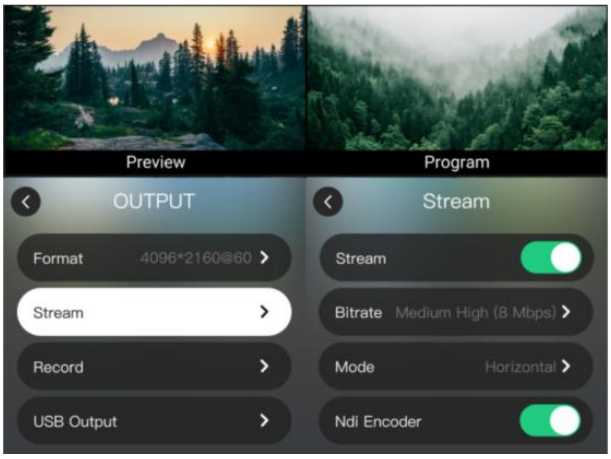
Streaming

The mini-max will then receive the platforms to push streaming distributed from TAO Cloud.

You can either click “ON Air” on the TAO Cloud or enable the "Stream" switch or directly press the "ON AIR" button on the front panel.

NDI Encoding

Once enabled, the mini-max can encode the live stream into an NDI signal, which can be transmitted through the network.

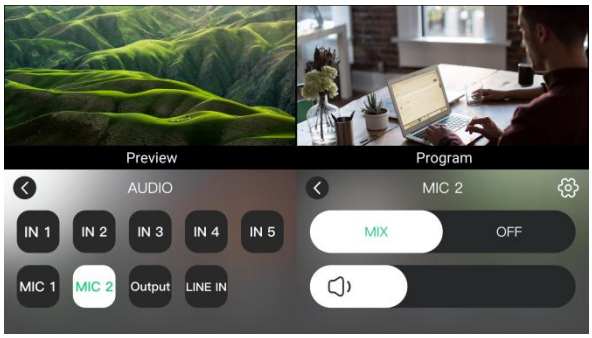


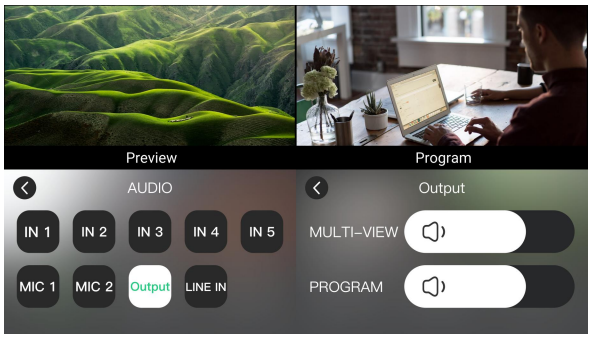
Audio Settings

The mini-max features 8-channel audio mixing for both embedded and external sources. Use the front panel for quick adjustments, and open the "Audio" menu for advanced settings.

Embedded Audio

1. MIX: Be heard on the main output.
2. AFV: Syncs audio to video switching.
3. OFF: Disable the audio.



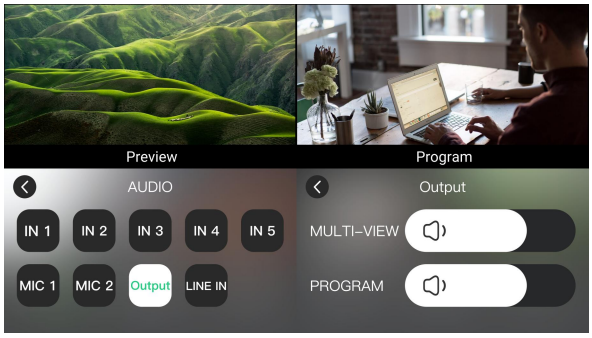


Microphone Mixing

Connect mics or instruments to MIC1/MIC2. Enable "Mix" to include them in the main output. Access the settings to adjust EQ, reverb, echo, and voice effects.

Output Volume

Adjust the volume for the Multi-View monitor and the main Program output.



Xiamen RGBlink Science & Technology Co Ltd.

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5788216
- **Customer Hotline:** 4008-592-315
- **Web:** http://www.rgblink.com
- **E-mail:** support@rgblink.com
- **Headquarter:** The 6th floor, Building 3, Xinke Plaza, Torch Hi-Tech Industrial Development Zone, Xiamen, China

©2025 RGBlink All rights reserved.