

BG-UHD-QVP-4X2

***4x2 HDMI 2.0a Quad-View Video Processor
with 4K2K60 4:4:4 & USB 3.0 FHD Video
Capture Function***

User Manual





Safety and Notice

The **BG-UHD-QVP-4X2 4x2 HDMI 2.0a Quad-View Video Processor with 4K2K60 4:4:4 & USB 3.0 FHD Video Capture Function** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the **BG-UHD-QVP-4X2** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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INTRODUCTION

The **BG-UHD-QVP-4X2 4x2 HDMI 2.0a Quad-View Video Processor with 4K2K60 4:4:4 & USB 3.0 FHD Video Capture Function** provides the most flexible and cost effective solution in the market to route ultra-high definition video source from any of the four UHD HDMI sources to the remote display at the same time. Using powerful built-in USB 3.0 capture & auto scale down features, users can broadcast up to 1080p video & 2ch audio thru real-time on line software, such as skype. This unique function makes this 4K video processor perfectly work as a live switch for either educational or multiple commercial applications. This solution is also well suited for use in digital signage, conference room presentation systems or other similar settings or applications.

With up to 4K2K60 4:4:4 output resolution, users can display the mixed video with improved presentation quality. In the meantime, the unit can be controlled thru the popular serial port and Ethernet port to provide the most flexible control way to fit into any applications.

FEATURES

- 4x HDMI inputs and 2x HDMI outputs
- Input resolutions support from 640x480 to 4096x2160@60Hz (4:4:4 8bits), interlaced or progressive
- Output resolutions support up to 4K2K@60Hz (4:4:4 8bits)
- Adjustable size & position through software and Cloud
- Supports PIP, PBP, POP, full screen & quad-view display
- HDCP 1.4/2.2 compliant
- Firmware upgradable to support of new features and technology enhancements
- Titles, borders and colored backgrounds
- Supports Background picture & logo update
- Resize, position, zoom & pan and blend output video
- Supports seamless, fade-in-&-out, wipe and dissolve switching on full screen mode
- Perfect as a video converter and a live video switcher
- Pure unaltered uncompressed 7.1ch digital HDMI
- Software control through RS-232 and Ethernet
- Supports IR remote and front panel control
- Supports Cloud Control*
- Supports USB 3.0 FHD Video Capture
 - HDMI video and audio streams over USB 3.0
 - Supports UVC1.0

- Supports video resolution up to 1080p 60Hz (Video stream over USB 3.0)
- Supports HDMI loopout from 640x480 to 4K2K@60 (YUV 4:4:4), interlaced or progressive
- Supports HDMI audio extraction
- Recording Video Format: H.264 (Software Compression)
- Works on multiple operating system platforms (Windows 7/8.1/10, Mac and Linux OS)
- Compatible with most 3rd party software such as OBS Studio and AMCap
- Supports USB 3.0 (MJPG/YUY2) and USB 2.0 (MJPG)



*Cloud support is thru an encrypted communication to provide the best private protection when using BG-UHD-QVP-4X2

PACKAGE CONTENTS

- 1x BG-UHD-QVP-4X2
- 1x DC 12V 5A
- 1x Installation software CD
- 1x User Manual
- 1x IR Remote control (28 keys)
- 1x IR Receiving cable
- 1x USB 3.0 A to A Cable (host to device)

SPECIFICATIONS

Model Name		BG-UHD-QVP-4X2
Technical		
Role of usage		Multiplexer / video processor
Background picture update		Yes
HDCP compliance		1.4 / 2.2
HDMI compliance		HDMI 2.0a
Video bandwidth		HDMI [600MHz [18Gbps]
Output Video Support		Up to 4K2K@60 (4:4:4 8bits)
Video support(USB)		Up to 1080p60
Input Video Support		Up to 4K2K@60 (4:4:4 8bits)
Video Format Support		HDMI 2.0
Audio support		Bypass
Control		RS-232/ Ethernet/ IR/ Front panel Control/ Cloud
Embedded video mixer		Yes
Input TMDS signal		1.2 Volts [peak to peak]
Recording Mode		Software Compression
Recording Video Format		YUY2 (USB3.0), MJPG (USB2.0/3.0)
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
Input		4x HDMI + 1xRS-232 + 1x RJ-45(Ethernet) + 1x 3.5mm (IR)
Output		3x HDMI + 1x USB + 2x RCA + 1x 3.5mm
HDMI connector		Type A [19-pin female]
USB connector		USB 3.0 Type A (SuperSpeed USB)
RS-232 connector		DE-9 [9-pin D-sub female]
RJ-45 connector		WE/SS 8P8C
Software compatibility (not complete list)(Video Capture Function)		OBS Studio (Windows, Linux), AMCap (Windows), Potplayer (Windows), VLC (OS X, Linux), XSplit Broadcast (Windows), Skype (Windows, OS X), Zoom (Windows), Hangout (Windows), TeamViewer (Windows)
OS Support (Video Capture Function)		Windows 7 /8.1 /10, Mac and Linux OS
Mechanical		
Housing		Metal enclosure
Dimensions (L x W x H)	Model	390 x 248 x 44mm [1'3" x 9.8" x 1.7"]
	Package	526 x 318 x 156mm [1'7" x 12.5" x 6.1"]
	Carton	543 x 335 x 344mm [1'8" x 13.2" x 1'1"]
Weight	Model	2.2 kg [5 lbs]
	Package	3.5 kg [7.8 lbs]
Power supply		12V 5A DC
Power Consumption		22 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

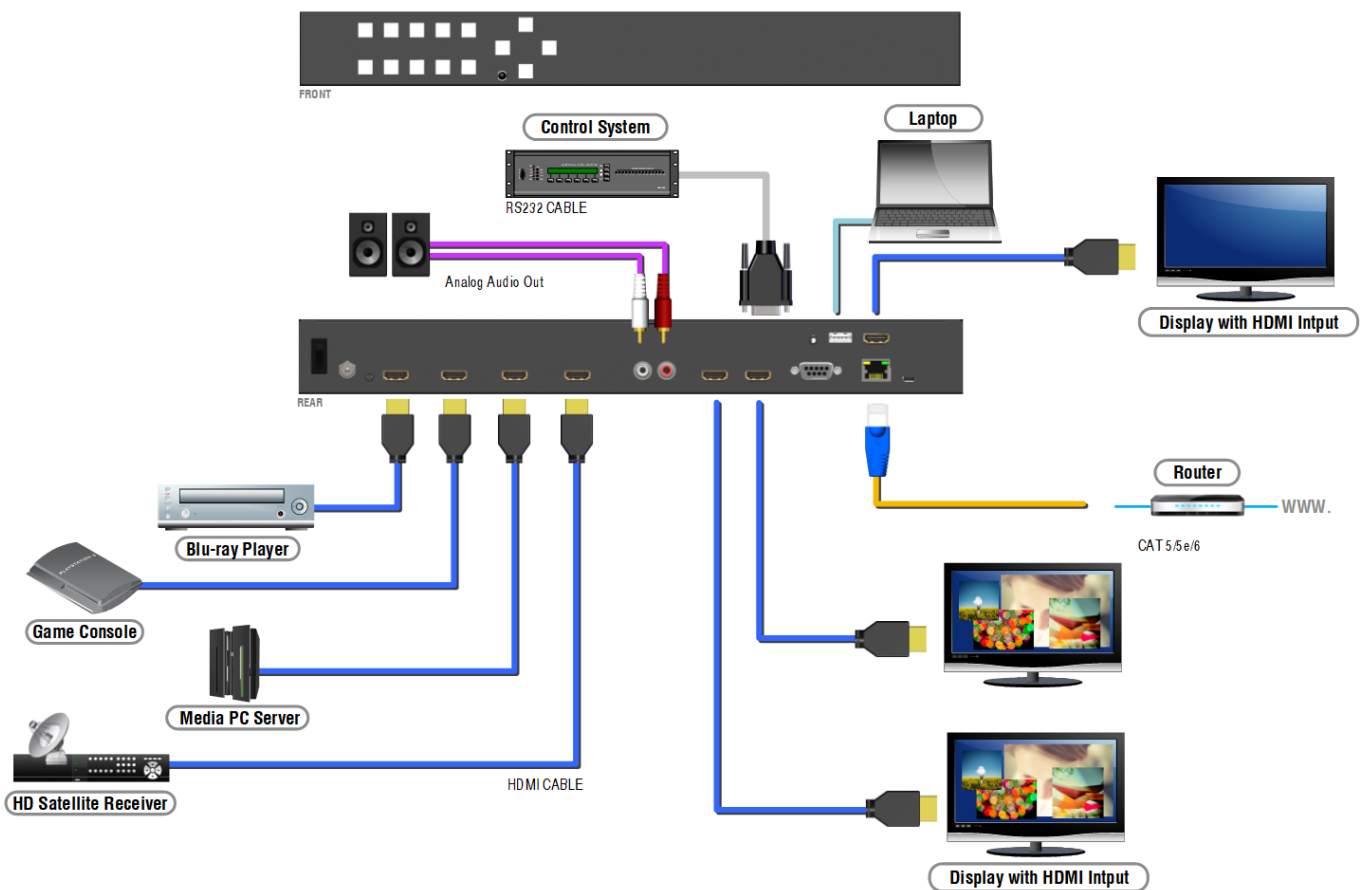
HARDWARE INSTALLATION

BG-UHD-QVP-4X2 as master

1. Connect all sources to HDMI Inputs on the BG-UHD-QVP-4X2.
2. Connect the display to HDMI Output on the BG-UHD-QVP-4X2.
3. Connect the +12V 5A DC power supply to the BG-UHD-QVP-4X2.

CONNECTION DIAGRAM

→ CAT5/5e/6 → HDMI → RS-232 → AUDIO → USB



PANEL DESCRIPTIONS

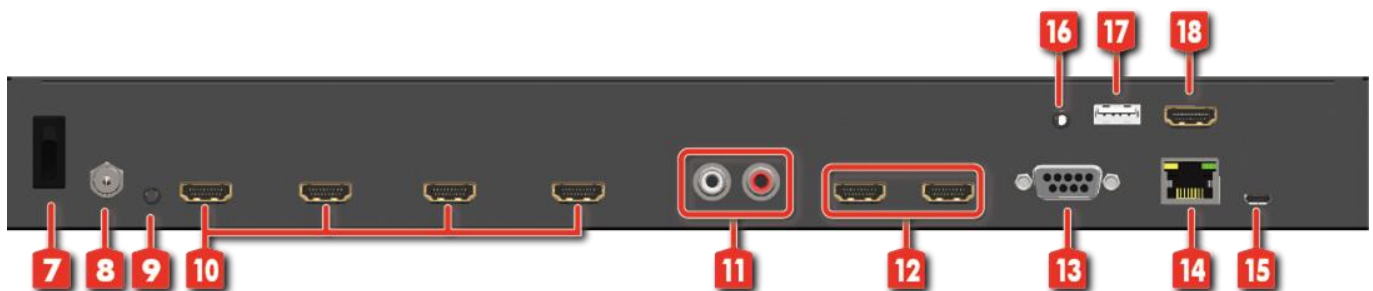
BG-UHD-QVP-4X2

Front Panel



1. **Windows Source Selection A-D:** Window A-D source selection (from the left to the right is D, C, B, A)
2. **Presets:** User preset 2 and user preset 1
3. **Quad:** Fast switch to quad-view mode
4. **Full Screen:** Switch Window in full scree mode
5. **IR SENSOR:** IR sensor for receiving the IR commands from IR remote
6. **OSD Button**

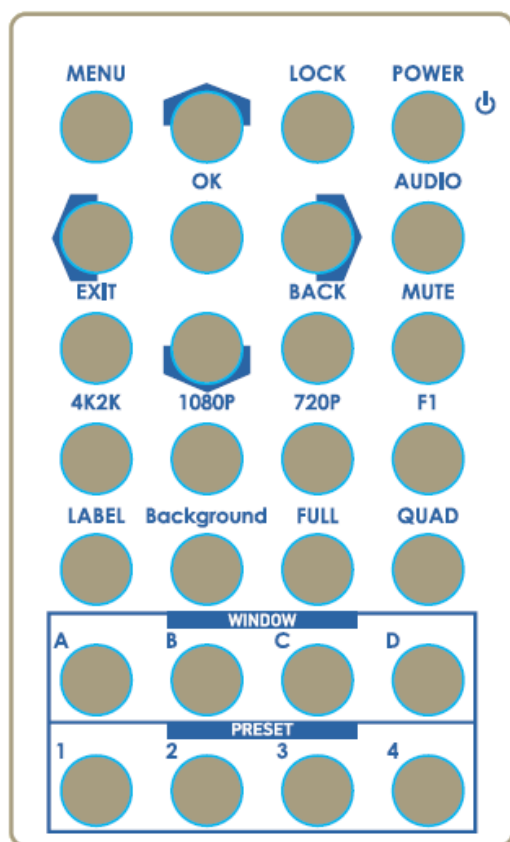
Rear Panel



7. **Power switch:** Power On/Off
8. **+12V DC:** 12V DC power jack
9. **IR Receiver:** 3.5mm socket for plugging in the extension cable of IR receiver
10. **SOURCE 1-4:** HDMI inputs
11. **Stereo audio output – L/R**
12. **OUTPUT 1-2:** HDMI outputs
13. **RS-232:** RS-232 control port
14. **Ethernet:** Ethernet control port
15. **Micro USB:** For F/W update
16. **STEREO AUDIO OUT:** Audio extracts from selected HDMI input
17. **USB OUT:** Connect to a USB host (PC, NB, MAC...)
18. **HDMI LOOPOUT:** Connect to a HDMI display

OPERATION APPROACH

Method A: IR Remote Control



Button	Function
POWER	Power on/off the device
LOCK	Lock/unlock the device
▲	Arrow button (up)
MENU	OSD menu
AUDIO	Select audio sources
▶	Arrow button (right)
OK	Trigger the setting
◀	Arrow button (left)
MUTE	Turn off the audio
BACK	Back to previous page of OSD menu
▼	Arrow button (down)
EXIT	Exit from the menus
F1	Reserved
720P	Switch output resolution to 720p 60Hz
1080P	Switch output resolution to 1080p 60Hz
4K2K	Switch output resolution to 4K2K 60Hz
QUAD	Fast switch to quad-view mode
FULL	Fast switch to full screen mode
Background	To set up the background picture of window
LABEL	Window label ON/OFF
D	Select source D to be the input source
C	Select source C to be the input source
B	Select source B to be the input source
A	Select source A to be the input source
P4	User preset 4
P3	User preset 3
P2	User preset 2
P1	User preset 1

Method B: Software Control through RS-232 / Ethernet port

1. System Requirement

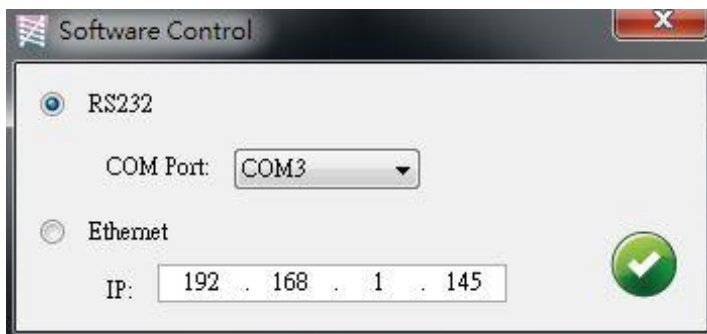
- (1) OS information: MS Win XP/7/8/10
- (2) Baud rates: 115200
- (3) Software size: 10 MB
- (4) Minimum RAM requirement: 256MB

2. Control interface

When clicking on the executable file, the following dialog will pop-up (under Microsoft Windows 7, please run as administrator)

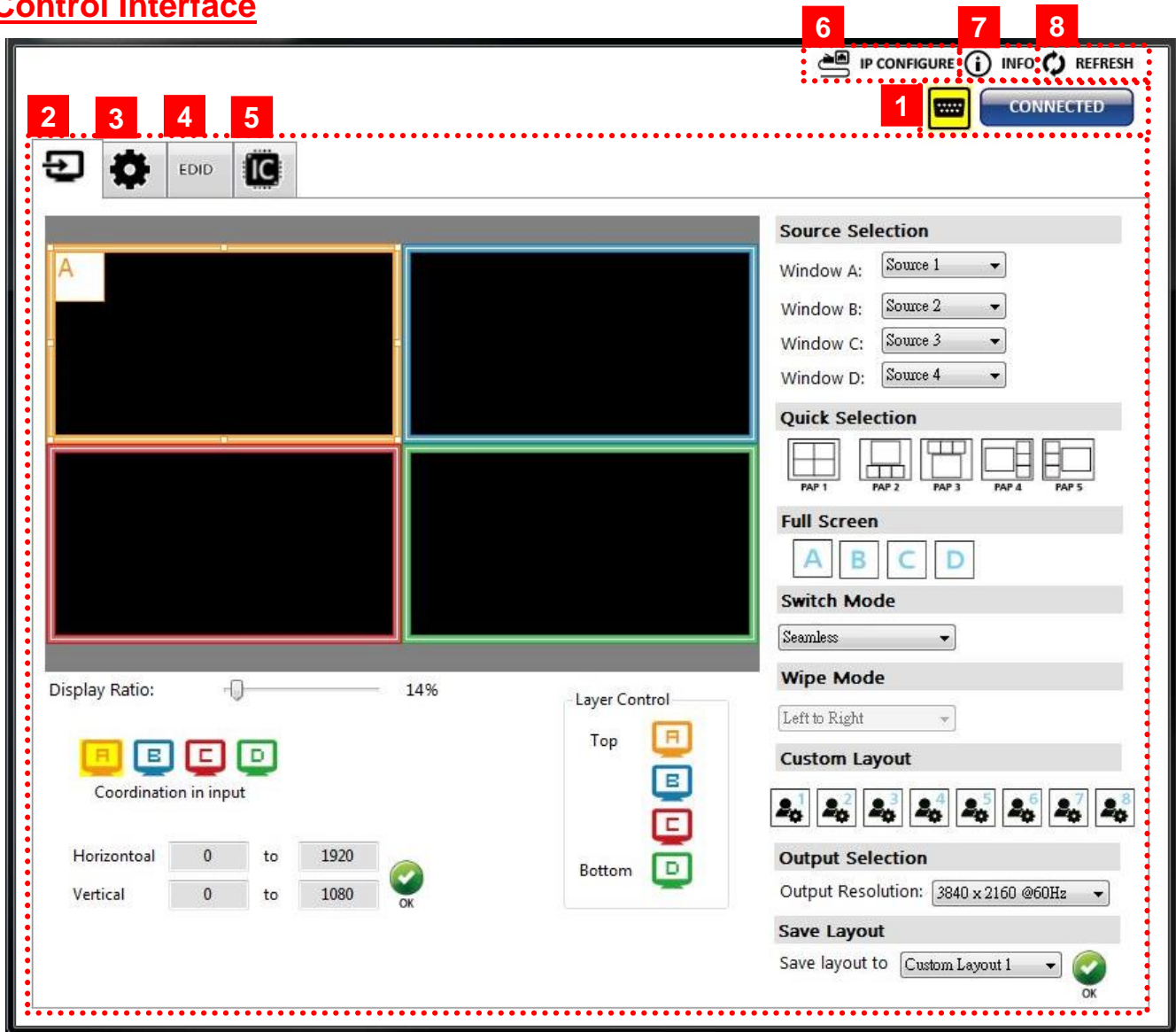
RS-232 serial Mode: Use RS-232 to connect the port on device and computer. Select correct COM port and click the OK button.

Ethernet Mode: Enter the IP address of the device and click the OK button.






After the software control setting is accomplished, it will enter directly to control interface.

Control Interface



1. Connection Status:

Show the connect information and status. If users use RS-232 serial Mode to connect device, the graph is . In contrast, the graph of Ethernet is . In addition, if users would link to change the control method, uses can click on the  button to change.

2. Output Settings

In this section, users can set up the coordinate for inputs, the source of window A~D, output resolution, layout setting (PAP or full screen) and switch mode.

(1) Source Selection

For each display window, you can assign arbitrary video source here.

Source Selection

Window A:

Window B:






Window C:

Window D:

(2) Quick Selection





We provide 9 default modes, 8 custom modes and 4 switching effects (Seamless, Fade in/out, Dissolve, Wipe) for user to select.

Quick Selection

PAP 1 PAP 2 PAP 3 PAP 4 PAP 5









Full Screen

Switch Mode

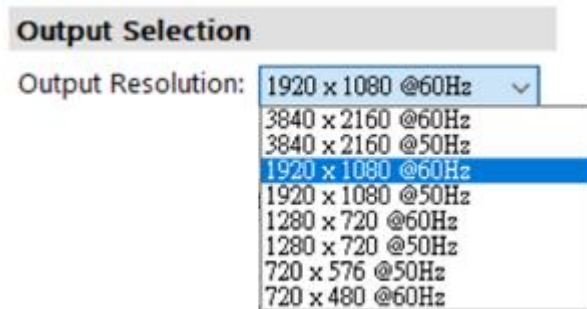
Wipe Mode

Custom Layout

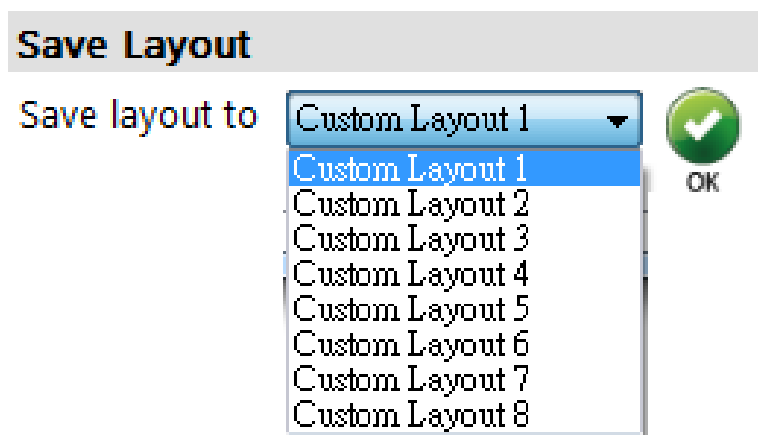
(3) Output Resolution

Set the output resolution.



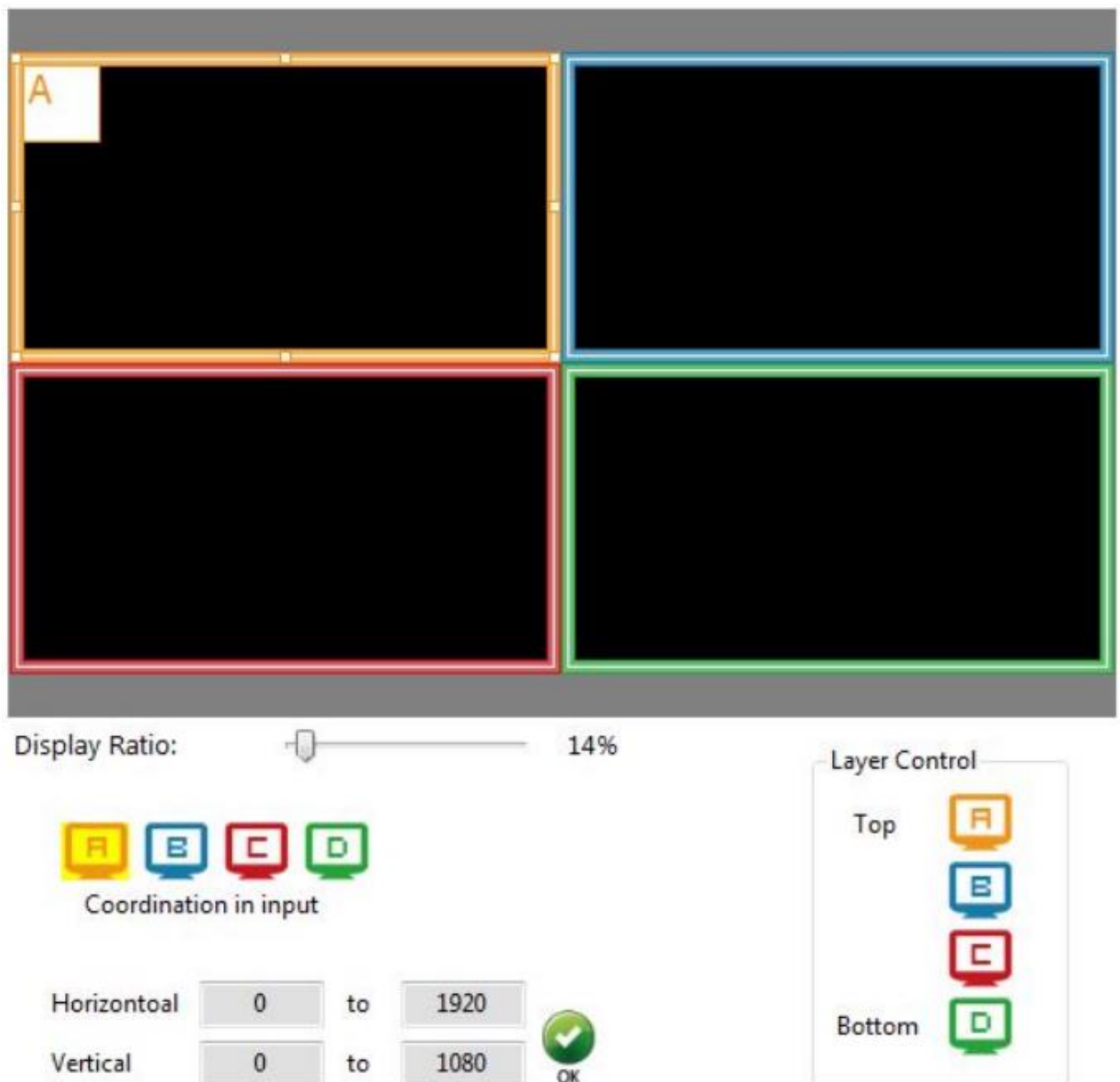
(4) Save Layout

We provide 8 custom layout space for users to save the frequently used scenarios into the flash memory.



(5) Display Panel

In the left part of control interface, user can customize the display mode thru control. The different colors of frame represent the different input windows. The information of coordinate shows the position of input source screen. In addition, we provide display ratio for users to set the display panel sizes. If you want to change window layer, please drag window icon in Layer Control section.



3. Advanced Setting

IP CONFIGURE

INFO

REFRESH

CONNECTED

EDID

IC

Label Text

Windows

Window A

Window B

Window C

Window D

Input Source

1 Input 1

2 Input 2

3 Input 3

4 Input 4

OK

Sound

Sound from:

Source 1

OK

Window Label

Window A

Window B

Window C

Window D

Selected Window: Window A

☒ Window label

☒ Border

☒ Source label

☐ Border Tally

Background

Background:

Disable

OK

Burn OSD Splash

Background 1

File

Start

Width: 0

Height: 0

Status :

Cloud Setting

Register mode:

Get Code

Cloud mode:

Set

MAC:

Read

(1) Label Text

In here, users can input the texts to be shown with the video.

Label Text

Windows

Window A

Window B

Window C

Window D

Input Source

1 Input 1

2 Input 2

3 Input 3

4 Input 4

OK

(2) Sound

To set up the audio source of the output and R/L channels.

Sound

Sound from:

Source 1

OK

(3) Window Label

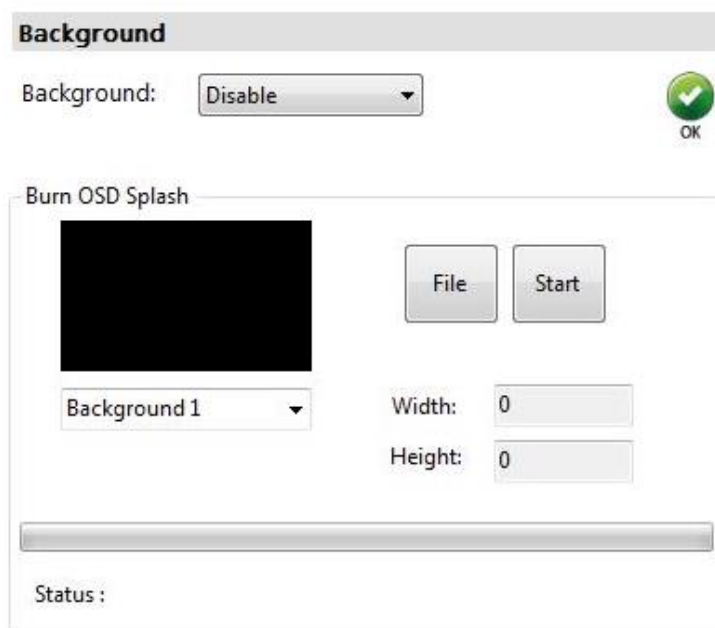
In this function, users can determine if the window's label/border is turned on or off.



The screenshot shows a settings window titled "Window Label". At the top, there are four colored icons labeled A, B, C, and D. To the right of these icons, it says "Selected Window: Window A". Below the icons, there are four checkboxes: "Window label" (checked), "Border" (checked), "Source label" (checked), and "Border Tally" (unchecked).

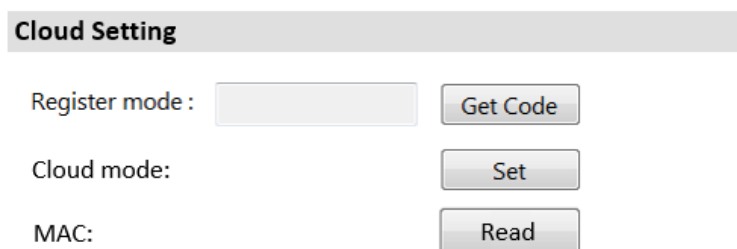
(4) Background

To set up the background of window. We provide 4 empty space for user to upload background pictures. User can click **File** button to load the picture which you want to use and click **Start** button to write this picture into the device.



The screenshot shows a settings window titled "Background". At the top, there is a "Background:" label followed by a dropdown menu set to "Disable". To the right of the dropdown is a green "OK" button with a checkmark. Below this, there is a section titled "Burn OSD Splash". Inside this section, there is a black square representing the background, a "File" button, and a "Start" button. Below the black square is a dropdown menu labeled "Background 1". To the right of the dropdown are two input fields: "Width: 0" and "Height: 0". At the bottom of the section is a progress bar and a "Status:" label.

(5) Cloud Setting



The screenshot shows a settings window titled "Cloud Setting". It contains three rows of controls: "Register mode:" with an empty text box and a "Get Code" button; "Cloud mode:" with an empty text box and a "Set" button; and "MAC:" with an empty text box and a "Read" button.

- Register mode
To get an "association code". The device can use this code to pair with cloud server.
- Cloud mode
To reset cloud after a successful pairing
- MAC
Read the device's MAC address information.

4. EDID (Extended display identification data)

IP CONFIGURE INFO REFRESH

CONNECTED

EDID

Learn EDID

From Default:

1. Full-HD(1080p@60)-24bit 2D &2ch ▼

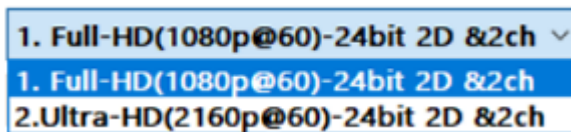
To: Input 1 ▼ Learn

From Display:

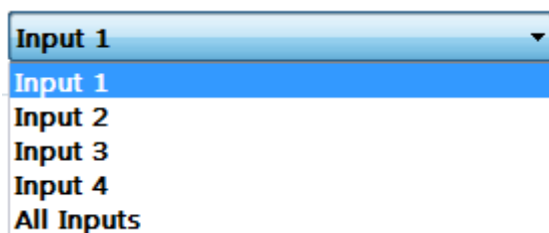
To: ▼ Learn

(1) Learn EDID from Default

- Select Default EDID

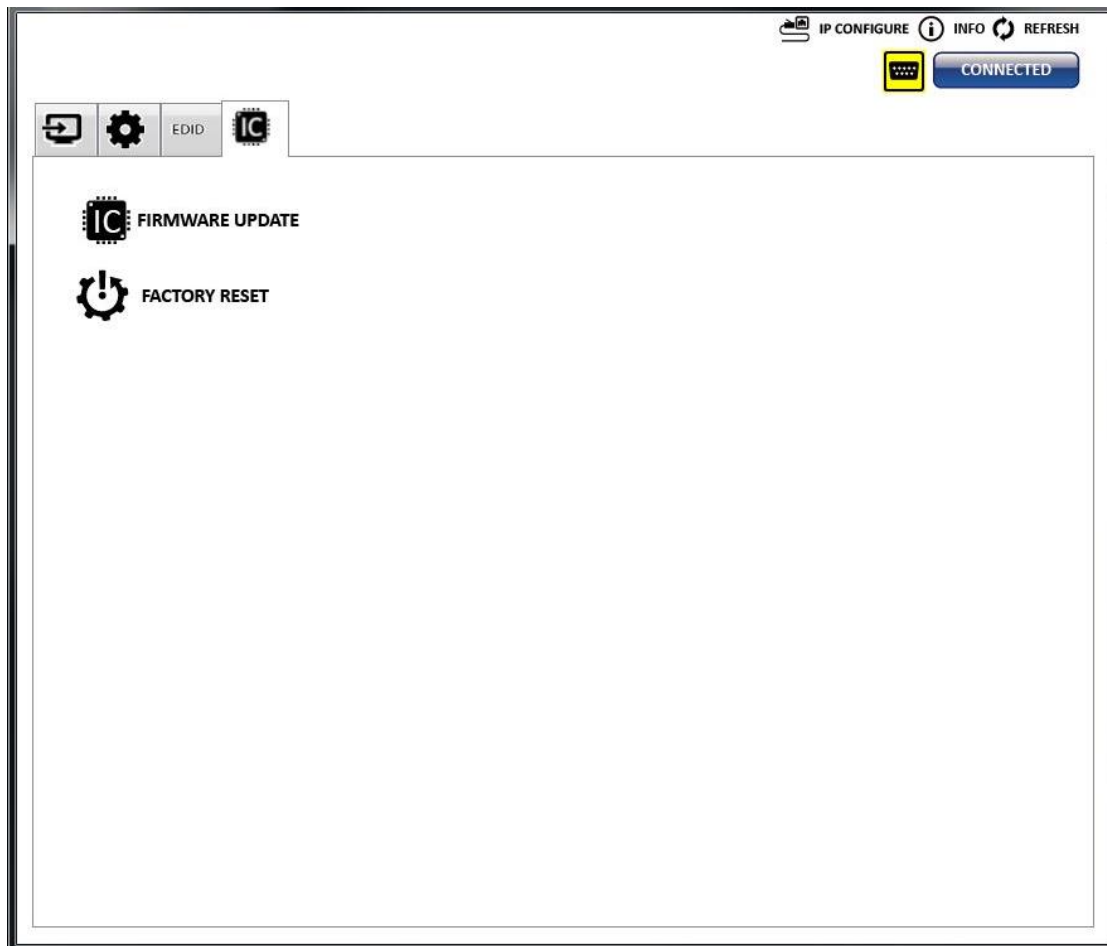


- Select Input




- Click  button to learn default EDID.

5. System Setting



(1) Firmware Update

- Click  FIRMWARE UPDATE button to do firmware update.
- The “Firmware update” window shows up as below.




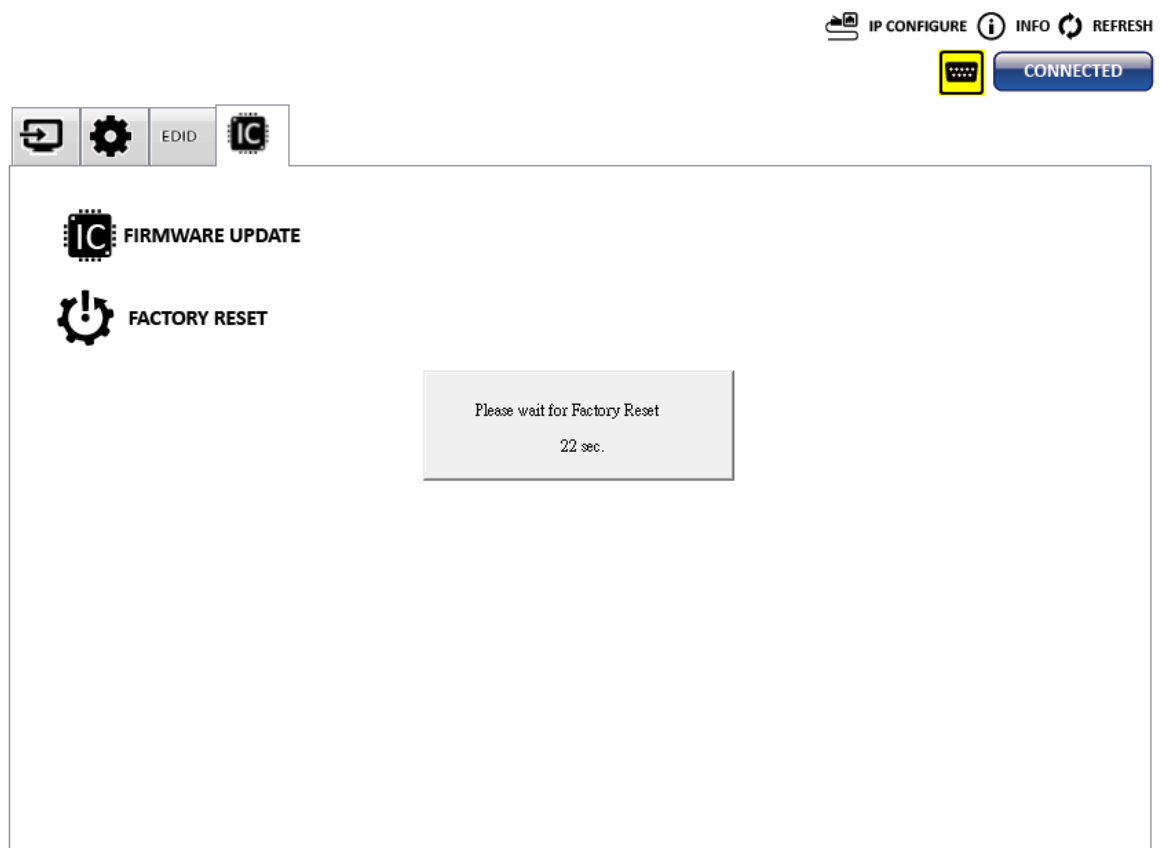
- Please select the correct COM port or click “Scan” button to connect device.

- Click “update” button to do firmware update.


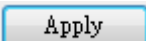


(2) Factory Reset

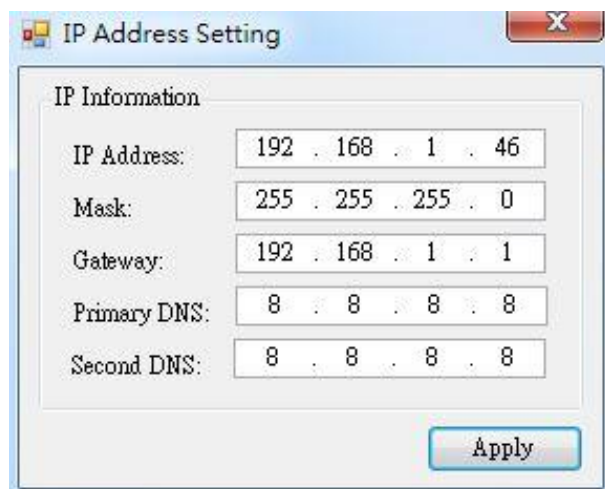
- Click  **FACTORY RESET** button to do factory default reset.
- The process of default reset will take about 25 seconds.



6. IP Configure

User also can use the WEB to control the mixer. Firstly, user should click on the  **IP CONFIGURE** to setup network set. Next, users can setup the Ethernet for the unit as below example shows. After the step of IP configuration, please click the 

The default IP: **192.168.1.46**



The image shows a 'IP Address Setting' dialog box with a title bar containing a close button (X). Inside the dialog, there is a section titled 'IP Information'. Below this title, there are five rows of input fields, each with a label on the left and a text box on the right. The labels are 'IP Address:', 'Mask:', 'Gateway:', 'Primary DNS:', and 'Second DNS:'. The text boxes contain the following values: '192 . 168 . 1 . 46', '255 . 255 . 255 . 0', '192 . 168 . 1 . 1', '8 . 8 . 8 . 8', and '8 . 8 . 8 . 8'. At the bottom right of the dialog, there is an 'Apply' button.

Label	Value
IP Address:	192 . 168 . 1 . 46
Mask:	255 . 255 . 255 . 0
Gateway:	192 . 168 . 1 . 1
Primary DNS:	8 . 8 . 8 . 8
Second DNS:	8 . 8 . 8 . 8

7. Info

Read the Software and firmware version.



The image shows a 'Software/Firmware Version' dialog box with a title bar containing a close button (X). Inside the dialog, there are two sections. The first section is titled 'Version' and contains two rows of text: 'Software Version: Ver 1.0' and 'Firmware Correct Version - 1: Ver 1.06'. The second section is titled 'Status' and contains one row of text: 'Firmware Device Version - 1: Ver 1.06'.

Section	Label	Value
Version	Software Version:	Ver 1.0
	Firmware Correct Version - 1:	Ver 1.06
Status	Firmware Device Version - 1:	Ver 1.06

***Software/firmware information subject to change without notification.**

8. Refresh

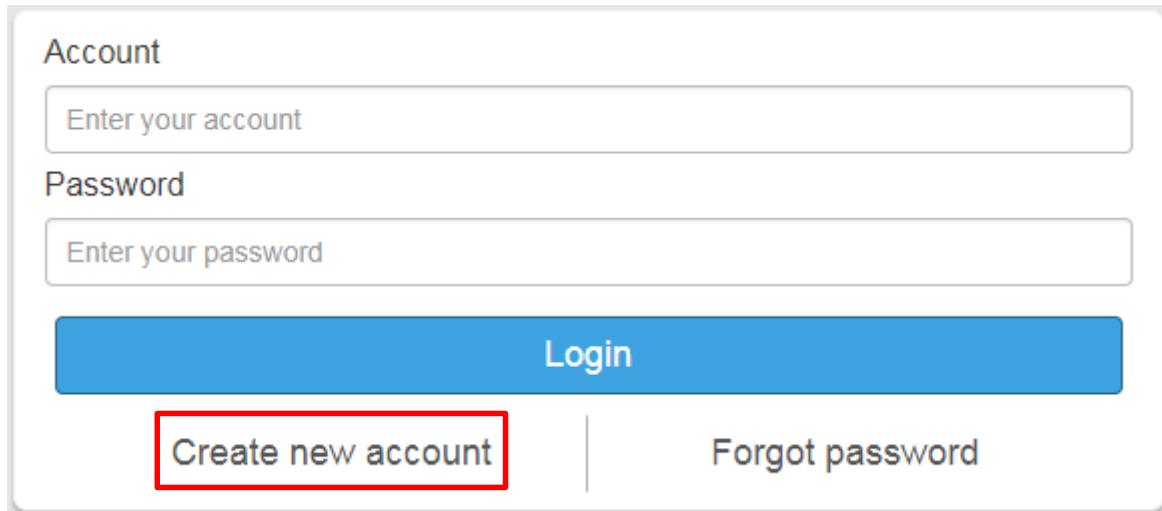
This function can get all information of the device and update this software state.

Method C: Cloud Control (Eagleyes) through Ethernet Port

Create Account

The first time to use the Eagleyes service, please create a new account.

1. Access Eagleyes (<http://www.eagleyes.io>) and click "Create new account".



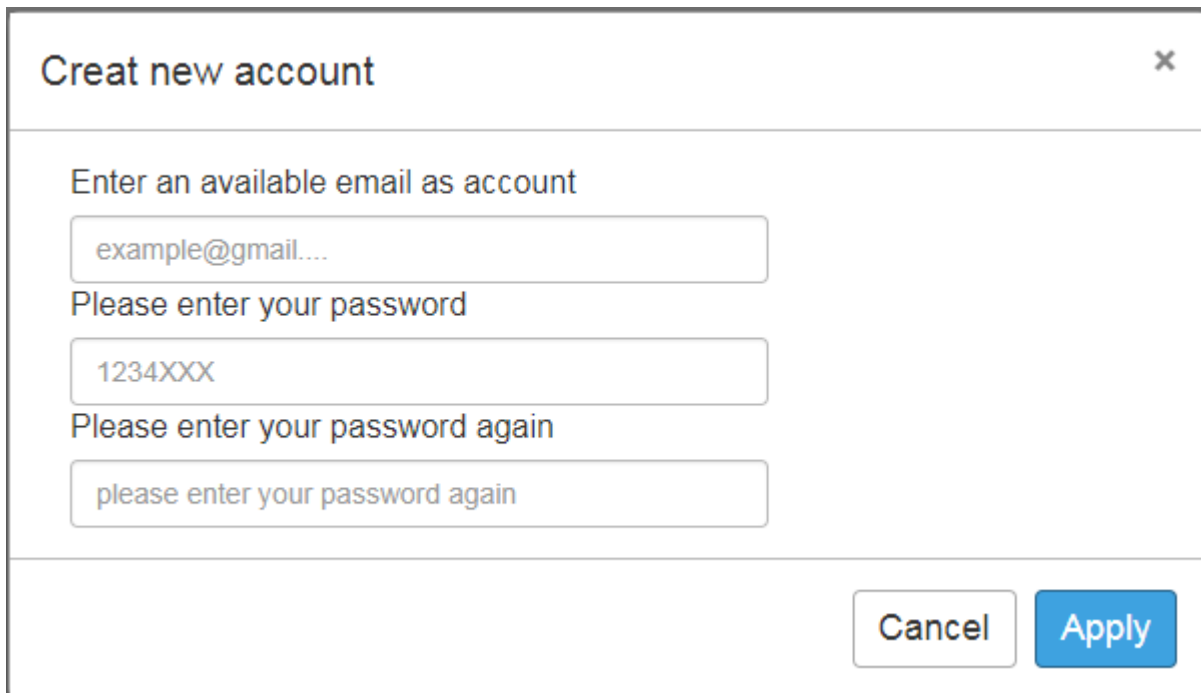
Account

Password

Login

Create new account | Forgot password

2. The Registration page will pop up and please fill in your email and password information to create your private account.



Creat new account

Enter an available email as account

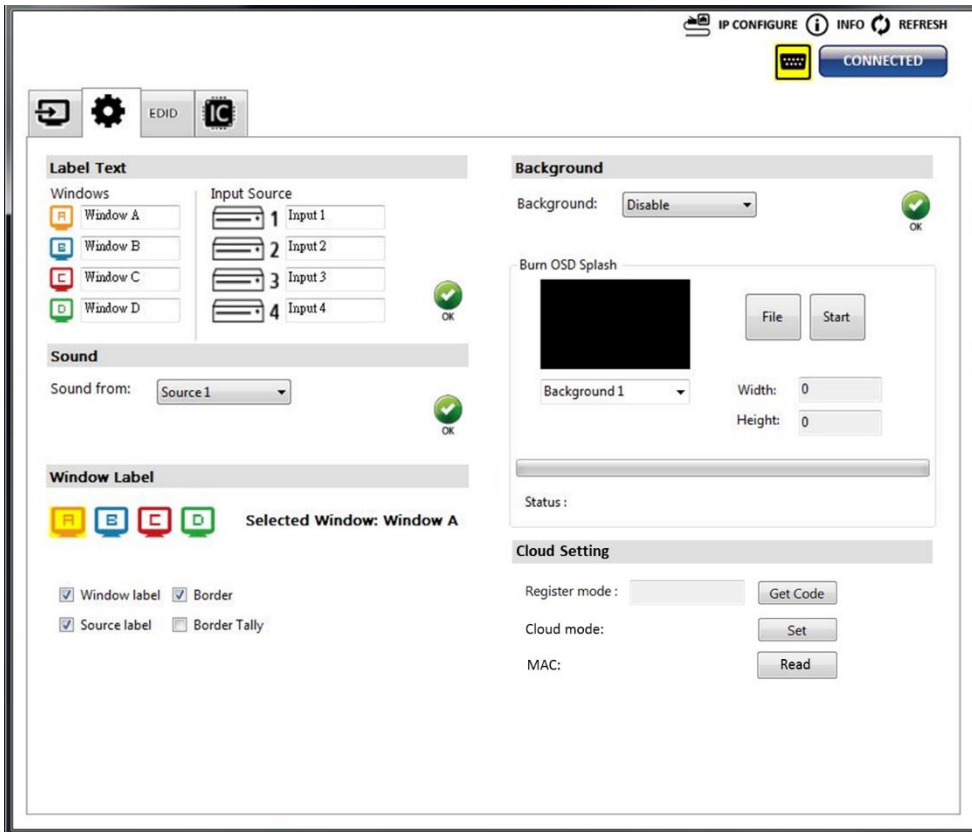
Please enter your password

Please enter your password again

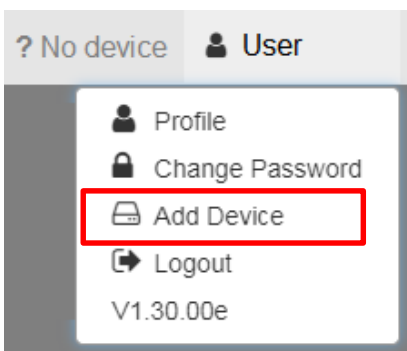
Cancel Apply

Add Device to Eagleyes

1. Firstly, please make sure the device is connected to the Ethernet. Then please executing the software with device to get the register code (Note: the status of software is connected).



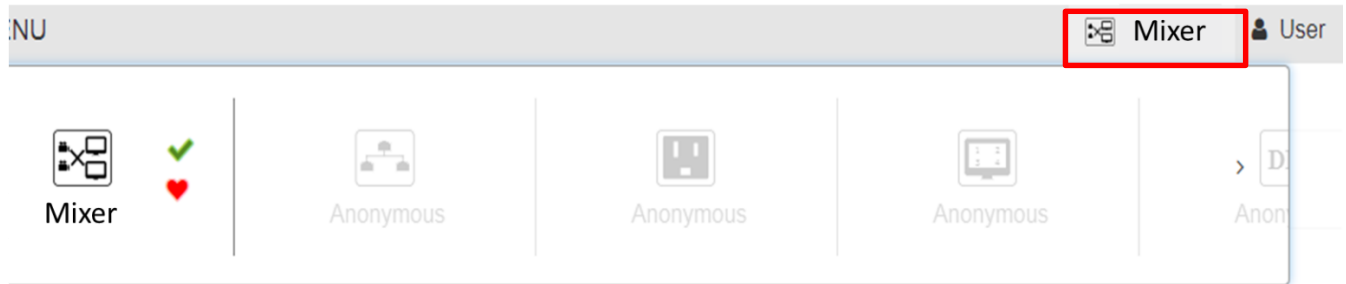
2. Access Eagleyes (<http://www.eagleyes.io>), and then log in your account on the right top corner. Click **Add device** to add the device which you just got its association code.



3. Enter the Installer Email for online support in the future, and the Association Code for pairing with your device.

A screenshot of the 'Add new device' dialog box. It has a title bar with a close button (X). The dialog contains two input fields: 'Installer Email' with the text 'installer@gmail.com' and 'Association Code'. At the bottom right, there are two buttons: 'Close' and 'Apply'.

4. After adding the device, the list of device related to your account will show on the right top corner. You can click the button to switch device for control.



USB PIN DEFINITION



	P1		P2
VBUS	1	↔	1
D-	2	↔	2
D+	3	↔	3
GND	4	↔	4
SSRX-	5	↔	5
SSRX+	6	↔	6
GND	7	↔	7
SSTX-	8	↔	8
SSRX+	9	↔	9
Shield	SHELL	↔	SHELL

WARRANTY

The SELLER warrants the **BG-UHD-QVP-4X2 4x2 HDMI 2.0a Quad-View Video Processor with 4K2K60 4:4:4 & USB 3.0 FHD Video Capture Function** free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1-year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the BG-UHD-QVP-4X2 features and specifications is subject to change without further notice.**

SECOND YEAR ASSURANCE

BZB Gear wants to assure you peace of mind. We're so confident in the quality of our products that along with the manufacturer's one-year limited warranty, we are offering free second-year warranty coverage upon registration*.

Taking advantage of this program is simple, just follow the steps below:

1. Register your product within 90 days of purchase by visiting BZBGear.com/warranty.
2. Complete the registration form. Provide all necessary proof of purchase details, including serial number and a copy of your sales receipt.

For questions, please call 1.888.660.2962 or email support@bzbgear.com.

For complete warranty information, please visit BZBGear.com/warranty or scan the QR code below.



*Terms and conditions apply. Registration is required.

MISSION STATEMENT

BZB Gear manifests from the competitive nature of the audiovisual industry to innovate while keeping the customer in mind. AV solutions can cost a pretty penny, and new technology only adds to it. We believe everyone deserves to see, hear, and feel the advancements made in today's AV world without having to break the bank. BZB Gear is the solution for small to medium-sized applications requiring the latest professional products in AV.

We live in a DIY era where resources are abundant on the internet. With that in mind, our team offers system design consultation and expert tech support seven days a week for the products in our BZB Gear catalog. You'll notice comparably lower prices with BZB Gear solutions, but the quality of the products is on par with the top brands in the industry. The unparalleled support from our team is our way of showing we care for every one of our customers. Whether you're an integrator, home theater enthusiast, or a do-it-yourselfer, BZB Gear offers the solutions to allow you to focus on your project and not your budget.