BZB GEAR®
Solutions to Amplify Your World™

BG-UHD-QVP-4X2

4K/UHD 4X2 Seamless Multiviewer/Presentation Switcher/Scaler with USB Capture Card

User Manual

TABLE OF CONTENTS

Statement	4
Safety Precaution	4
Introduction	5
Features	5
Packing List	6
Specifications	7
Operation Controls and Functions	9
Method A: IR Remote Control	10
Method B: Software Control through RS-232 / Ethernet port	11
Control interface	11
Connection Status	12
Output Settings	12
Advanced Setting	14
EDID (Extended Display Identification Data)	16
System Setting	17
IP Configure	19
Info	19
Refresh	20
Method C: Cloud Control (Eagleyes) through Ethernet Port	20
Create Account	20
Add Device to Eagleyes	21
USB Pin Definition	22
Hardware Installation	23
Connection Diagram	23
Tech Support	24
Warranty	24
Mission Statement	24
Copyright	24

Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGEAR is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.

Introduction

The BG-UHD-QVP-4x2 is a 4x2 HDMI 2.0a quad-view video processor with 4K2K@60 4:4:4 & USB 3.0 capabilities. FHD video capture functionality provides the most flexible and cost effective solution in the market to route ultra-high definition video from any of the four UHD HDMI sources to two remote displays at the same time.

Using powerful built-in USB 3.0 capture & auto scaling down features, users can broadcast up to 1080p video & 2ch audio through real-time online software, such as skype. This unique function makes this 4K video processor perfect for work as a live switch for either education or commercial applications. The BG-UHD-QVP-4x2 is also well suited for use in digital signage, conference room presentation systems or other similar applications.

With up to 4K2K60 4:4:4 output resolution, users can display mixed video with improved presentation quality. The unit can be controlled through IR, the front panel, and either the serial or Ethernet ports to provide the most flexible types of control to fit into any application.

Features

- 4x HDMI inputs and 2x HDMI outputs
- Input resolutions from 640x480 to 4096x2160@60Hz (4:4:4 8bits), interlaced or progressive
- Output resolutions 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 updatable
- 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 (MJPEG/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

Packing List

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

Specifications

Model Name	BG-UHD-QVP-4X2
Technical	
Usage	Multiplexer / video processor
Background picture updatable	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
Color	Black
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]
Operating Temperature	0~40°C [32~104°F]
Storage Temperature	-20~60°C [-4~140°F]
Relative Humidity	20~90% RH [no condensation]

Operation Controls and Functions

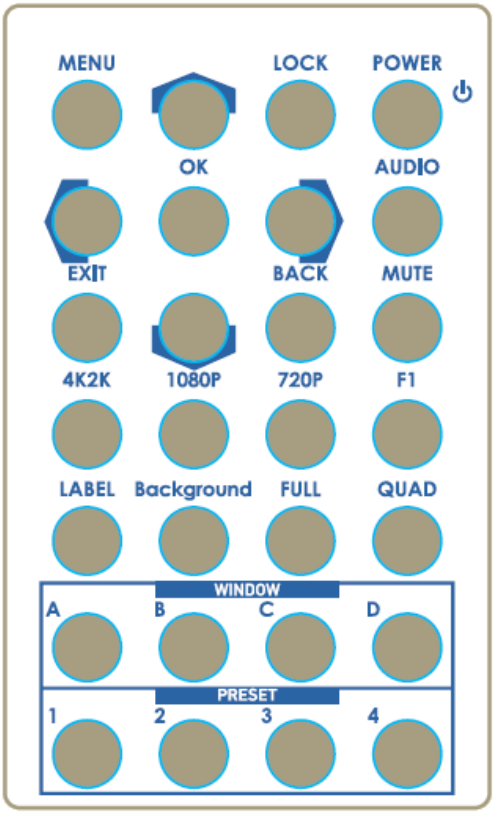
Front Panel

No.	Name	Function Description
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 screen mode
5	IR SENSOR	IR sensor for receiving the IR commands from IR remote
6	OSD Button	On Screen Display (Menu)

Rear Panel

No.	Name	Function Description
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

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

System Requirement

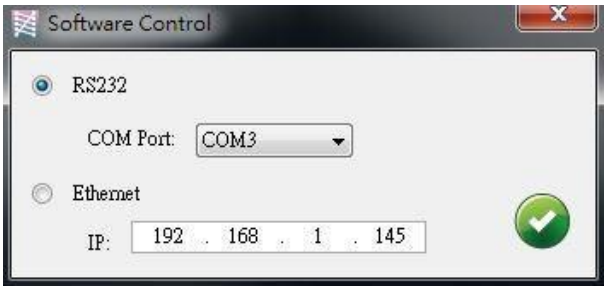
1. OS information: MS Win XP/7/8/10
2. Baud rates: 115200
3. Software size: 10 MB
4. Minimum RAM requirement: 256MB

Control interface

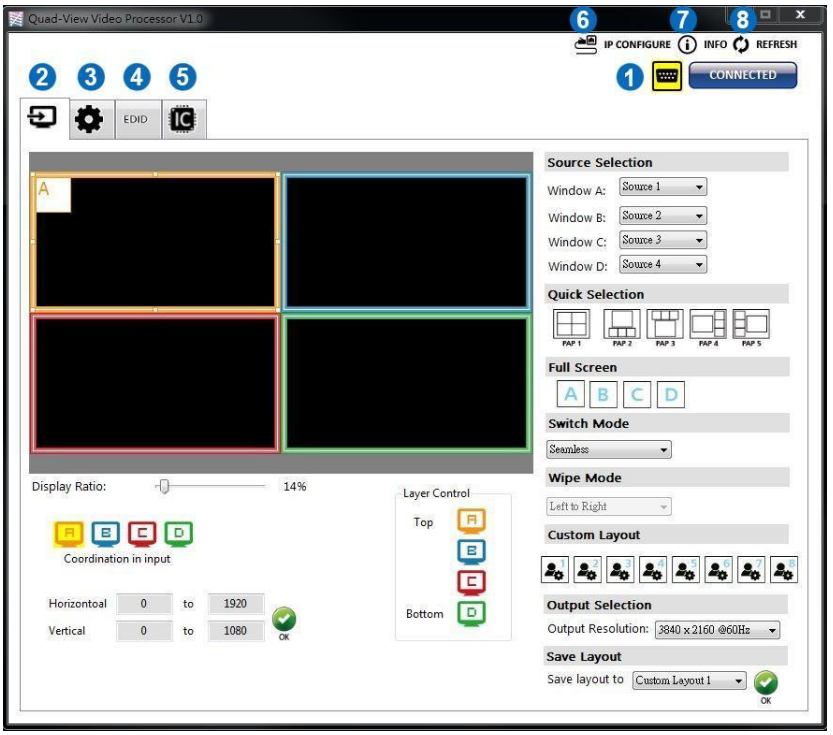
When clicking on the executable file, the following dialog will pop-up (under Microsoft Windows 7, please run as administrator)

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

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



After successfully setting the Software Control connection parameters the program will open the control interface.



1. Connection Status

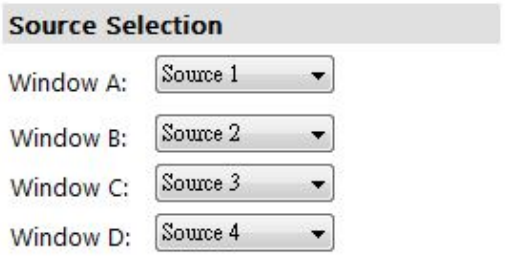
Shows connection information and status. If users use RS-232 serial Mode to connect device, the symbol is . In contrast, if Ethernet is connected then is shown. In addition, if users would like to change the control method, users can click on the symbol.

2. Output Settings

In this section, users can select inputs/sources for windows A~D, output resolution, layout setting (PAP or full screen), and switch mode.

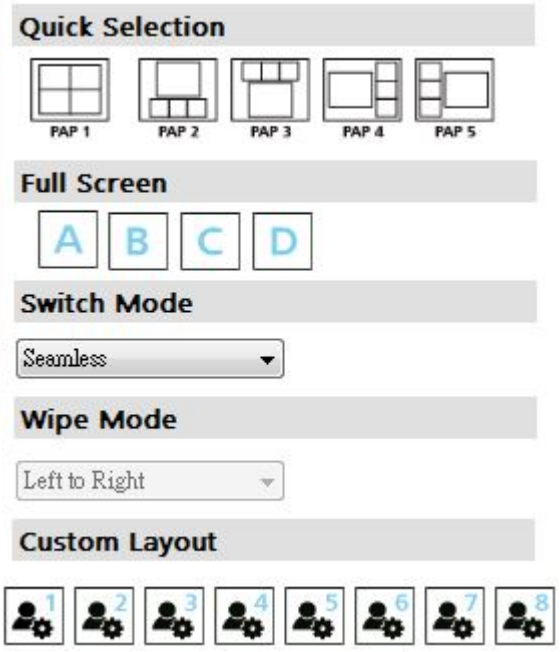
(1) Source Selection

For each display window assign a video source.



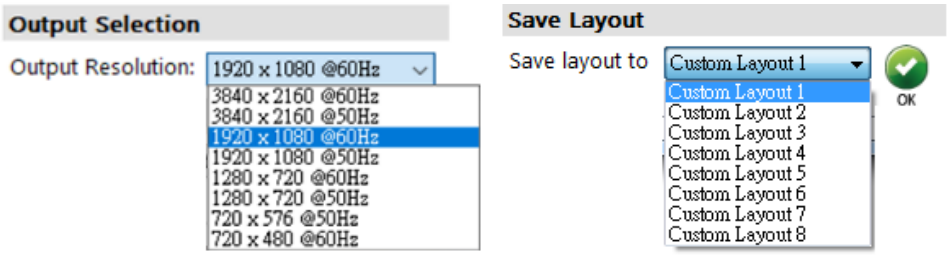
(2) Quick Selection

There are 9 default modes, 8 custom modes, and 4 switching effects (Seamless, Fade in/out, Dissolve, Wipe) for users to select.



(3) Output Resolution

Set the output resolution.



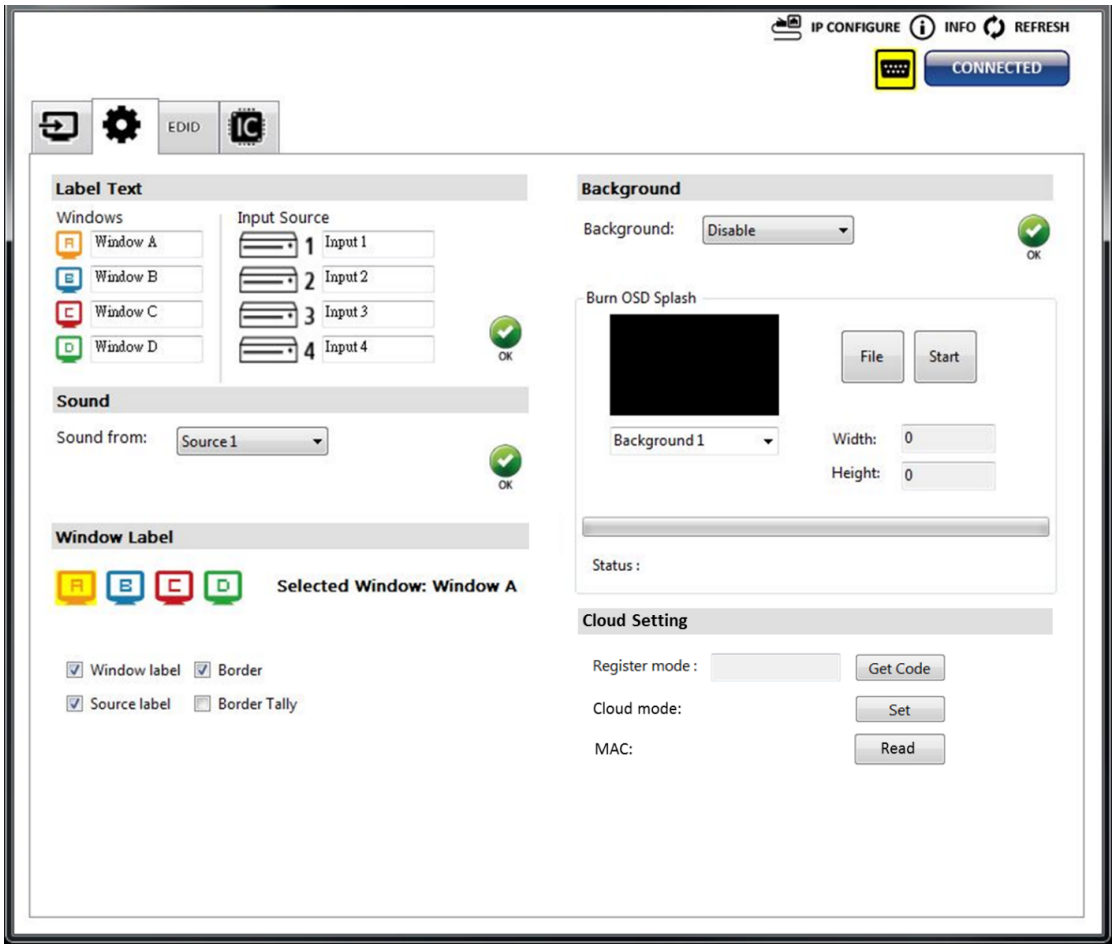
(4) Save Layout

There are 8 custom layout spaces for users to save frequently used configurations.

(5) Display Panel

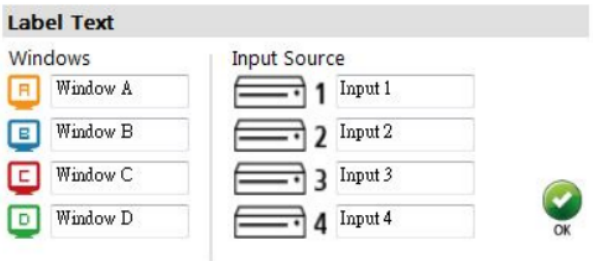
In the left part of the control interface, users can customize the display mode. The different colors of frame represent the different input windows. In addition, users can also set the display ratio for each window. If you want to change the window layer, drag the window icon from the Layer Control section to the desired position.

3. Advanced Setting



(1) Label Text

Users can input the text to be shown with the video.

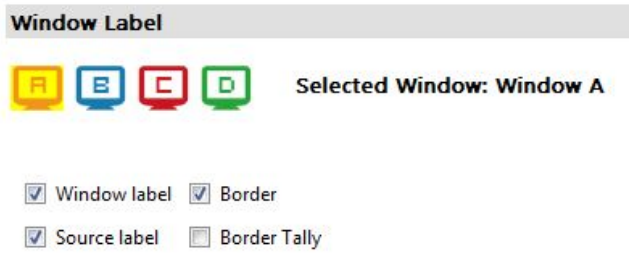


(2) Sound

Select the audio source of the output and R/L channels.

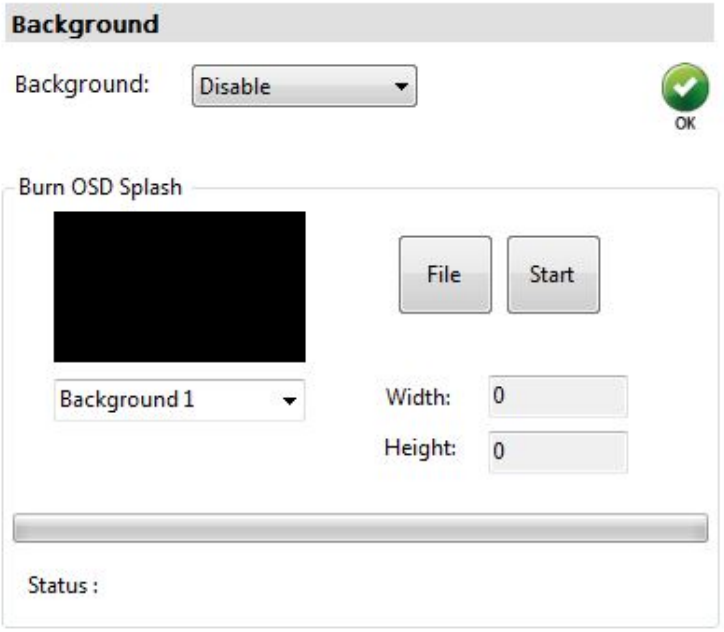
(3) Window Label

On this screen users can turn the window labels/borders on or off.

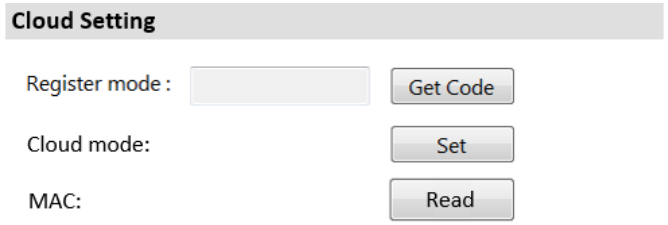


(4) Background

This screen is used to set the background of a window. Users can upload up to 4 background pictures. Click the File button to load the picture which you want to use and then click the Start button to write this picture to the device.

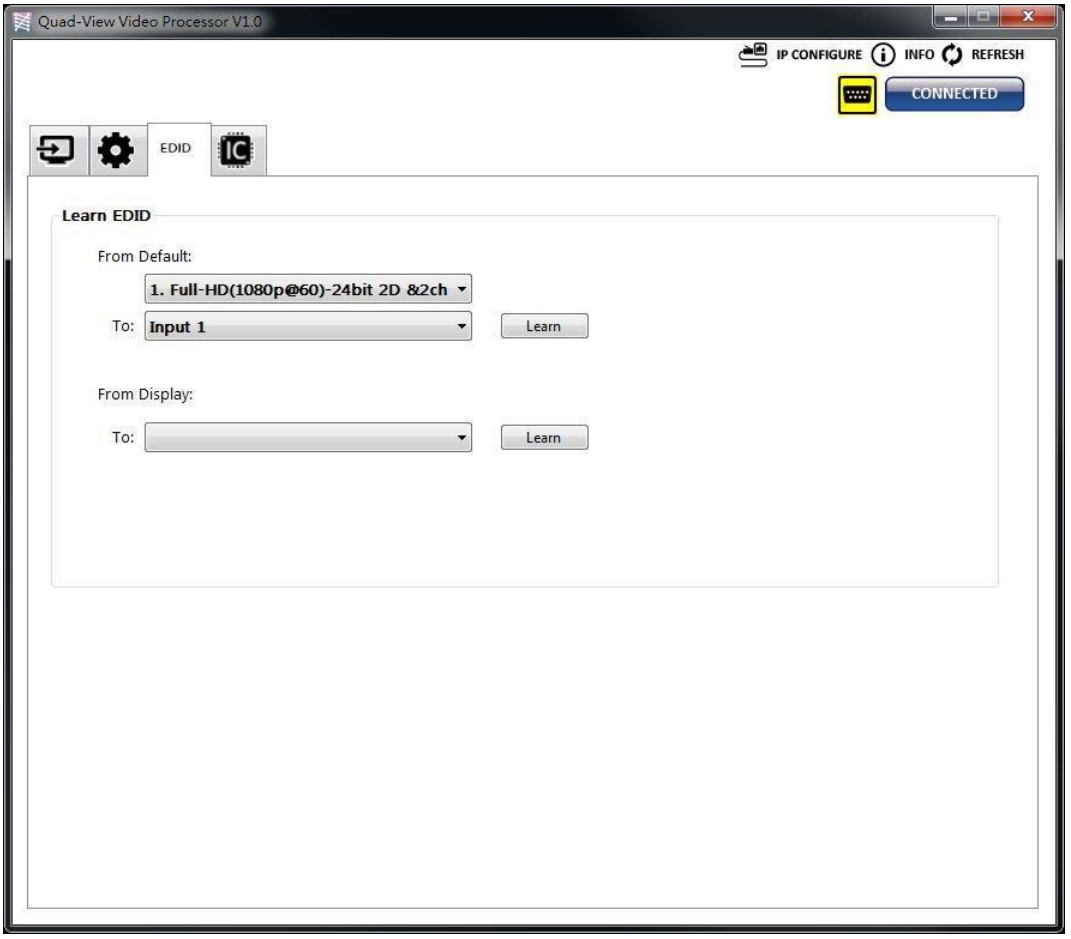


(5) Cloud Setting



- ➔ **Register mode:** To get an “association code”. The device can uses this code to pair with a cloud server.
- ➔ **Cloud mode:** To reset cloud after a successful pairing
- ➔ **MAC:** Read the device’s MAC address information.

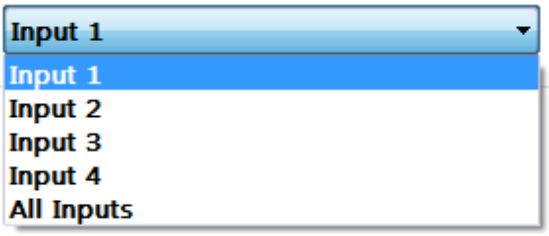
4. EDID (Extended Display Identification Data)

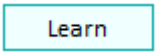


(1) Learn EDID from Default

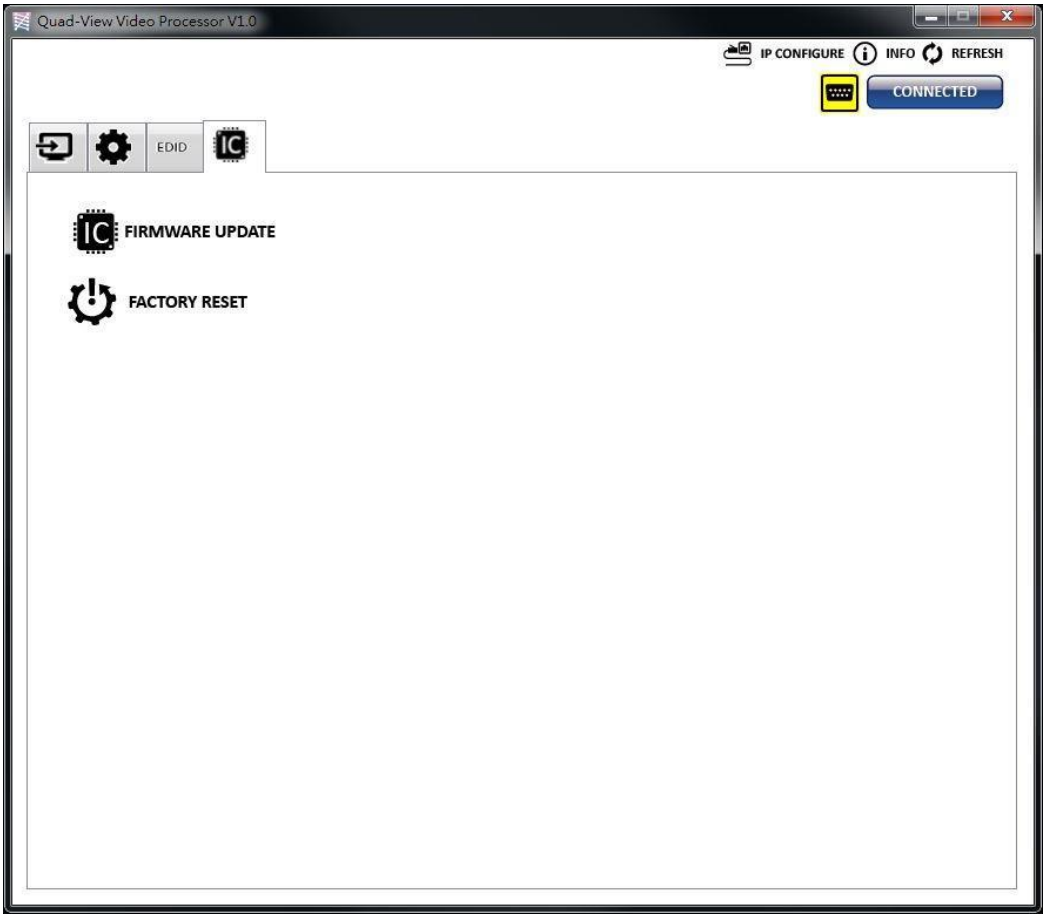
➔ Select Default EDID

➔ 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:

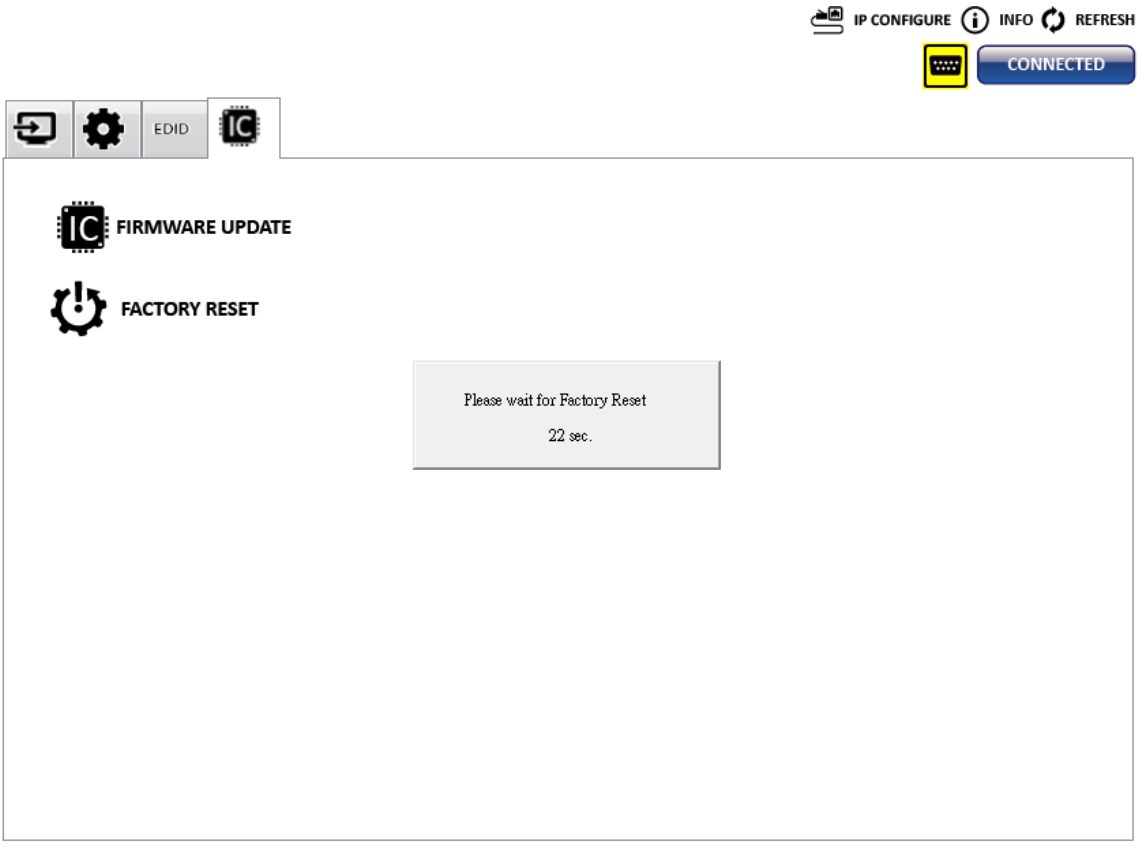
➔ Select the correct COM port or click the “Scan” button to connect a device.

➔ Click the “update” button perform a firmware update.

(2) Factory Reset

➔ Click FACTORY RESET button to do factory default reset.

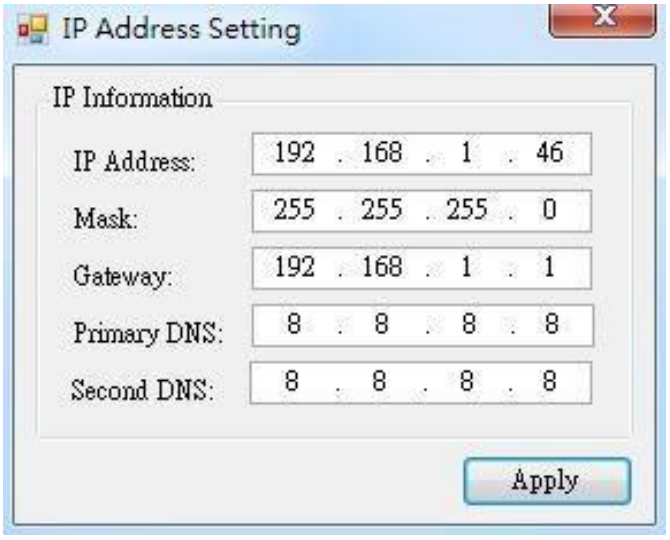
➔ The process of default reset will take about 25 seconds.



6. IP Configure

Users also can use the WEB to control the mixer. First, users should click on the IP CONFIGURE button to set network settings. Next, users can set the Ethernet settings for the unit as shown below. After completing IP configuration, click the Apply

The default IP address of the device is: **192.168.1.46**



7. Info

Displays the software and firmware versions.

8. Refresh

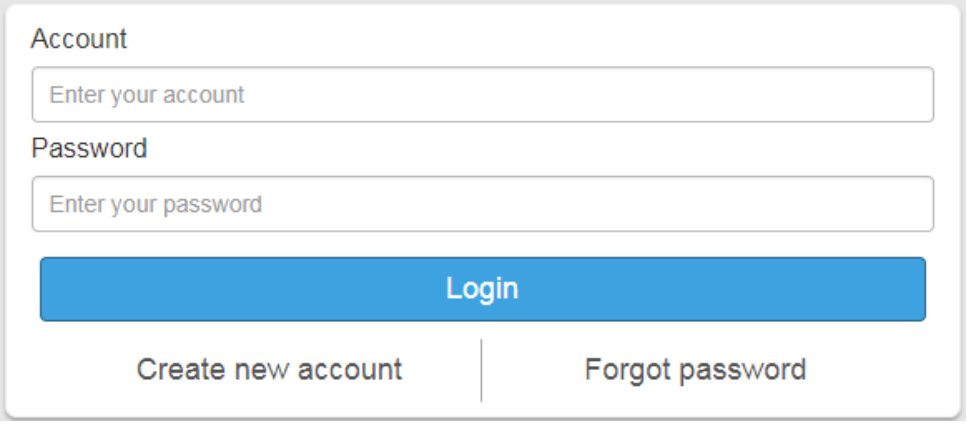
Refreshes the device and updates the software state.

Method C: Cloud Control (Eagleyes) through Ethernet Port

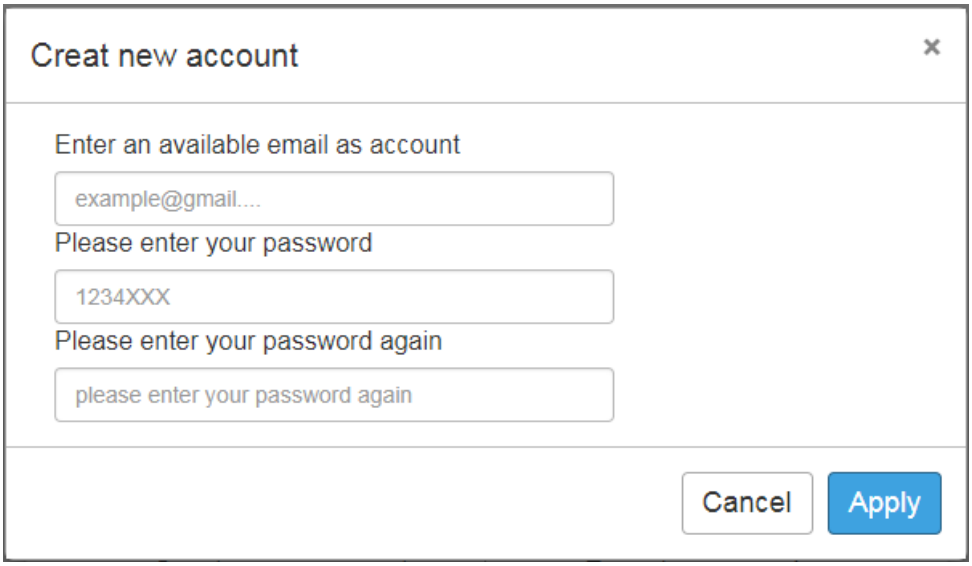
Create Account

The first time using the Eagleyes service you will need to create a new account.

1. Access Eagleyes at (http://www.eagleyes.io) and click “Create new account”.

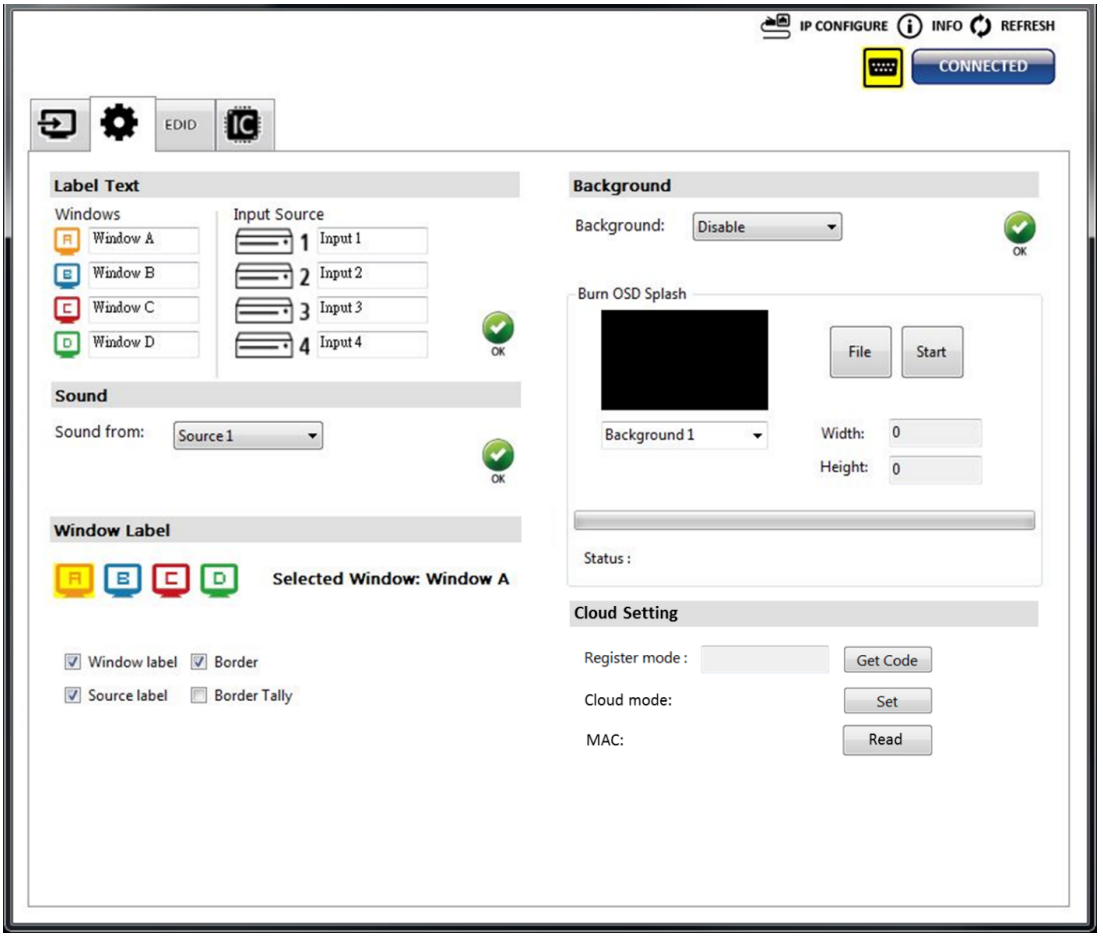


2. The Registration page will pop up and you will need to fill in your email and password information to create your private account.

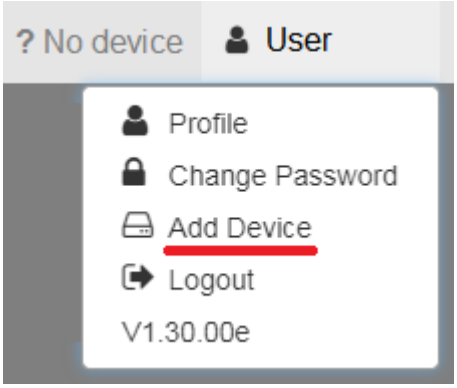


Add Device to Eagleyes

1. First, please make sure the device is connected via Ethernet. Then use the software to generate the register code (see Section 3 Step 5: 'Cloud Settings' above).

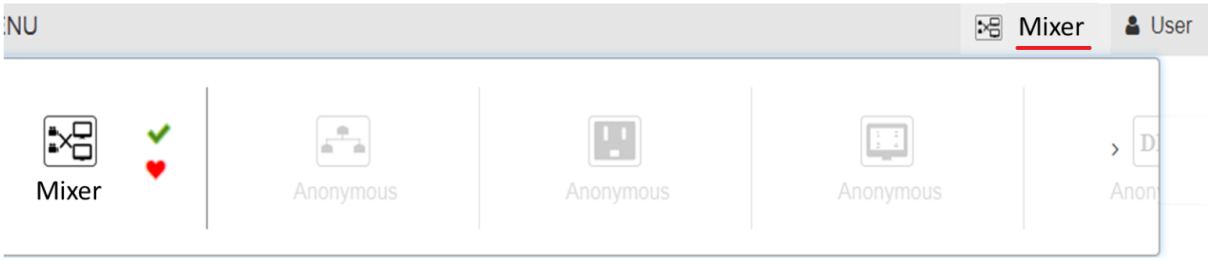


2. Access Eagleyes (http://www.eagleyes.io), and then log in your account in the top right corner. Click Add device to add the device for which you just got its association code.



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

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



USB Pin Definition

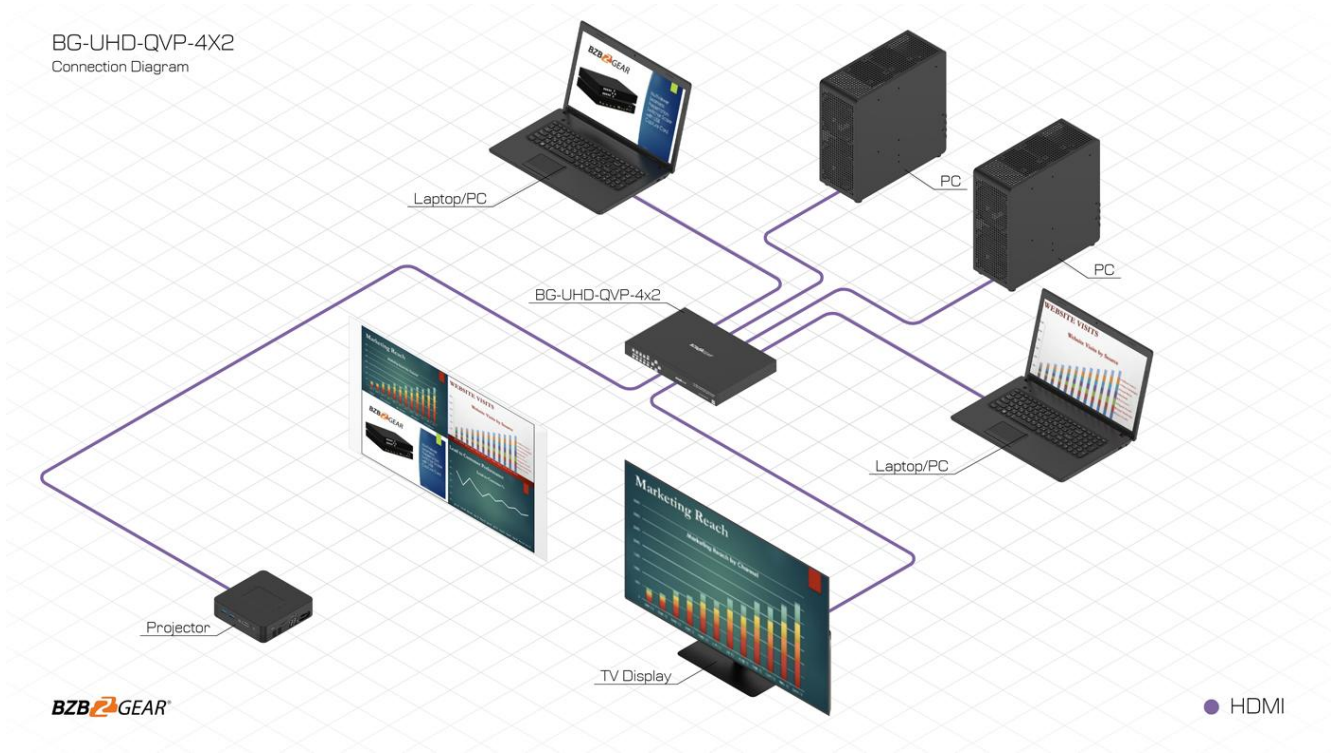
	P1		P2
VBUS	1	⟷	1
D-	2	⟷	2
D+	3	⟷	3
GND	4	⟷	4
SSRX-	5	⟷	5
SSRX+	6	⟷	6
GND	7	⟷	7
SSTX-	8	⟷	8
SSRX+	9	⟷	9
Shield	SHELL	⟷	SHELL

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



Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGEAR's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

Phone	**Email**	**Live Chat**
1.888.499.9906	support@bzbgear.com	bzbgear.com

Warranty

BZBGEAR Pro AV products and cameras come with a three-year warranty. An extended two-year warranty is available for our cameras upon registration for a total of five years.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.

Mission Statement

BZBGEAR is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGEAR delivers quality products designed with users in mind.

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