

BG-UHD-MVS42MA

4K60 4x2 Multiviewer Seamless UHD Video Matrix Switcher

User Manual







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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-MVS42MA is a 4x2 multiviewer and seamless UHD video matrix switcher that was developed for the purpose of supporting higher output resolution such as 4K@60 to display multiple sources on two screens. It can accept 4 HDMI inputs and combine the video signals onto two HDMI UHD or HD displays independently.

Users can manage each input and create combinations of the four inputs on two displays as well as adjust the position of the inputs. The BG-UHD-MVS42MA supports 8 display modes and users can freely switch 4-channel HD input signals. This product supports a full range of input video resolutions up to 4K@60 as well as audio de-embedding via RCA or S/PDIF optical for external audio distribution systems.

This Matrix Switcher can be controlled via front panel buttons, IR remote, or RS-232 commands.

Features

- HDMI 2.0b, HDCP 2.2 and HDCP 1.x compliant
- 18Gbps uncompressed Bandwidth
- Input and output resolution up to 4K2K@60 4:4:4
- HDMI audio formats support LPCM, DD+, DTS, Dolby TrueHD, DTS HD-master pass-through
- Seamless switching between input channels
- Combined multiple images or independent layouts to display on two UHD TVs
- Up to 8 display modes: Single, PIP, PBP(1), PBP(2), Triple(1), Triple(2), Quad(1), Quad(2)
- Audio de-embedding via analog and optical fiber audio ports
- Control via front panel buttons, IR remote, RS-232 commands
- Output scaling
- Independent audio selection
- Advanced EDID management
- Compact design for easy and flexible installation

Packing List

- 1x 4K60 4x2 UHD Video Matrix Switcher
- 1x IR Remote
- 1x 3 pin-3.81mm Phoenix Connector (male)
- 1x 38KHz IR Receiver Cable (1.5m)
- 2x Mounting Ears
- 4x Machine Screws (KM3*4)
- 1x 12V/2.5A Power Adapter
- 1x User Manual



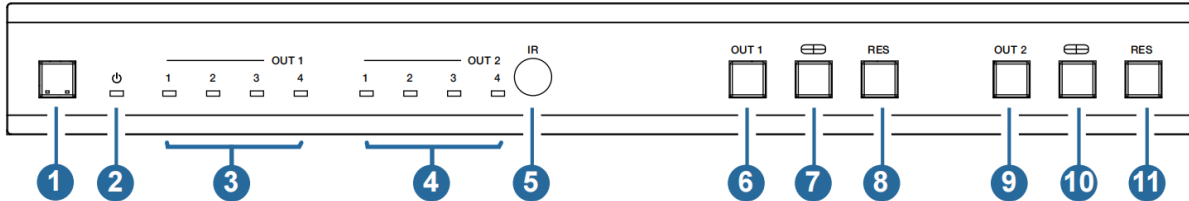
Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 / 1.x
Video Bandwidth	18Gbps
Video Resolution	Up to 4K2K@60 4:4:4
IR Level	5Vp-p
IR Frequency	38KHz
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12-bit
Audio Formats	HDMI audio: PCM2.0/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio Analog audio [3.5mm L/R]: PCM2.0 Optical fiber audio: PCM2.0/5.1/7.1CH, Dolby Digital/plus, DTS 5.1
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input ports	4 x HDMI IN [Type A, 19-pin female]
Output ports	2 x HDMI OUT [Type A, 19-pin female] 2 x L/R OUTPUT [RCA] 2 x OPTICAL OUTPUT [S/PDIF]
Control ports	1 x RS-232 [3 pin-3.81mm phoenix connector] 1 x IR EXT [3.5mm Stereo Mini-jack]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	11"(W) x 5.1"(D) x 1.2"(H) [270mm(W) x 130mm(D) x 30mm(H)]
Weight	2 lbs [906g]
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 12V/2.5A (US/EU standard, CE/FCC/UL certified)
Power Consumption	15.72W (Max)
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no-condensing)



Operation Controls and Functions

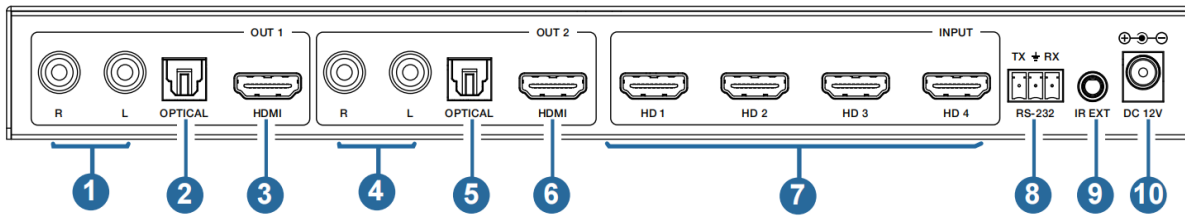
Front Panel



No.	Name	Function Description
1	Power button	<ul style="list-style-type: none"> ▪ Short press this button to power on the device. ▪ Long press this button for 1 second to enter the standby mode.
2	Power LED	The Power LED will illuminate green when the product is powered on and red when the product is in standby.
3	OUT 1 LEDs	<p>Signal source indicator for HDMI OUT 1 port.</p> <p>In single screen display mode when the HDMI OUT 1 port outputs a signal from one of the HD 1/2/3/4 inputs the corresponding green LED will illuminate.</p> <p>In multiview mode all OUT 1 LEDs will illuminate green.</p>
4	OUT 2 LEDs	<p>Signal source indicator for HDMI OUT 2 port.</p> <p>In single screen display mode when the HDMI OUT 2 port outputs a signal from one of the HD 1/2/3/4 inputs the corresponding green LED will illuminate.</p> <p>In multiview mode all OUT 2 LEDs will illuminate green.</p>
5	IR Window	IR signal receiving window.
6	OUT 1 button	Input source switching button for the HDMI OUT 1 port which is only available on single screen display modes.
7	OUT 1 Multiview button	<p>Multiview display mode switching button for the HDMI OUT 1 port.</p> <ul style="list-style-type: none"> ▪ Short press this button to cycle select: Single-PIP-PBP(1)-PBP(2)-Triple(1)-Triple(2)-Quad(1)-Quad(2)-single. ▪ Long press this button for 3 seconds to switch the aspect ratio (16:9/Full) for PBP (1) / PBP (2) / Triple (1) / Triple (2) / Quad (1) / Quad (2).
8	OUT 1 RES button	<p>Output resolution switching button for the HDMI OUT 1 port.</p> <ul style="list-style-type: none"> ▪ Short press the RES button to cycle switch the output resolution of the HDMI OUT 1 port (Please refer to the output resolution list of "Video & Audio"). ▪ Long press the RES button for 3 seconds to switch the output resolution to 720P60.
9	OUT 2 button	Input source switching button for the HDMI OUT 2 port which is only available on single screen display modes.
10	OUT 2 Multiview button	<p>Multiview display mode switching button for the HDMI OUT 2 port.</p> <ul style="list-style-type: none"> ▪ Short press this button to cycle select: Single-PIP-PBP(1)-PBP(2)-Triple(1)-Triple(2)-Quad(1)-Quad(2)-single. ▪ Long press this button for 3 seconds to switch the aspect ratio (16:9/Full) for PBP (1) / PBP (2) / Triple (1) / Triple (2) / Quad (1) / Quad (2).
11	OUT 2 RES button	<p>Output resolution switching button for the HDMI OUT 2 port.</p> <ul style="list-style-type: none"> ▪ Short press the RES button to cycle switch the output resolution of the HDMI OUT 2 port (Please refer to the output resolution list of "8. Video & Audio"). ▪ Long press the RES button for 3 seconds to switch the output resolution to 720P60.



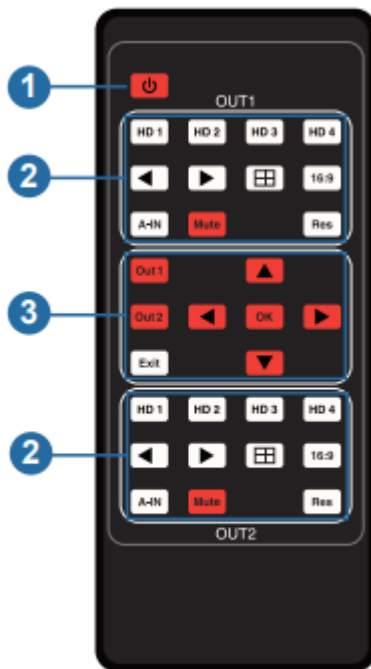
Rear Panel



No.	Name	Function Description
1	L/R OUT 1	PCM 2.0 Analog audio output port.
2	OPTICAL OUT 1	Optical fiber digital audio output port.
3	HDMI OUT 1	Connect to an HDMI display device such as a TV or Monitor with HDMI cables.
4	L/R OUT 2	PCM 2.0 Analog audio output port.
5	OPTICAL OUT 2	Optical fiber digital audio output port.
6	HDMI OUT 2	Connect to an HDMI display device such as a TV or Monitor with HDMI cables.
7	HD 1-4 INPUT ports	Connect to an HDMI source device such as Game Console or Set-top box with HDMI cables.
8	RS-232 port	3-pin phoenix connector, connected to a PC or control system for serial port upgrade or RS-232 command control.
9	IR EXT port	If the IR signal receiving window of the unit is blocked or the unit is installed in a closed area out of infrared line of sight, the IR receiver cable can be inserted to the "IR EXT" port to receive the IR remote signal.
10	DC 12V	DC 12V/2.5A power input port.



IR Remote



1. Power button: Press this button to power on the switcher or set it to standby mode.

2. OUT 1/OUT 2 buttons:

HD 1/2/3/4: Press these buttons to select an input source on single screen display mode, and the corresponding input LED on the front panel will illuminate green.

◀ ▶ : Press these buttons to cycle select the last or next input source on single screen display mode.

⊞ : Multiview display mode switching button.

▪ Short press this button to circularly select: SINGLE - PIP - PBP(1) - PBP (2) - Triple (1) - Triple (2) - Quad (1) - Quad (2).

16:9 : Press this button to switch the aspect ratio (16:9/Full) for PBP (1) / PBP (2) / Triple (1) / Triple (2) / Quad (1) / Quad (2) display mode.

A-IN: Press this button to pop up the audio channel selection OSD, then press the UP / DOWN button to select the audio output channel. (The output audio follows the video source by default.)

Mute: Press this button to mute / unmute the audio.

RES: Output resolution switching button.

- Short press the RES button to cycle switch the output resolution of the HDMI OUT 1 or 2 ports (Please refer to the output resolution list of “Video & Audio”).
- Long press the RES button for 3 seconds to switch the output resolution to 720P60.

3. Out 1: Press this button to enter the OSD menu of the HDMI OUT 1 port and set the corresponding function by pressing **UP/DOWN/LEFT/RIGHT OK** button.

Out 2: Press this button to enter the OSD menu of the HDMI OUT 2 port and set the corresponding function by pressing **UP/DOWN/LEFT/RIGHT OK** button.

Exit: Press this button to exit the OSD settings layer by layer.



EDID Settings

Users can select following EDID modes via RS-232 commands or OSD menu navigation.

No.	EDID Mode	No.	EDID Mode
1	4K2K60_444, Stereo Audio 2.0	11	1680x1050, Stereo Audio 2.0
2	4K2K60_444, Dolby/DTS 5.1	12	1600x1200, Stereo Audio 2.0
3	4K2K60_444, HD Audio 7.1	13	1440x900, Stereo Audio 2.0
4	4K2K30_444, Stereo Audio 2.0	14	1360x768, Stereo Audio 2.0
5	4K2K30_444, Dolby/DTS 5.1	15	1280x1024, Stereo Audio 2.0
6	4K2K30_444, HD Audio 7.1	16	1024x768, Stereo Audio 2.0
7	1080P, Stereo Audio 2.0	17	720p, Stereo Audio 2.0
8	1080P, Dolby/DTS 5.1	18	AUTO
9	1080P, HD Audio 7.1	19	USER1
10	1920x1200, Stereo Audio 2.0		

Video & Audio

The BG-UHD-MVS42MA supports multiple video input resolutions up to 3840x2160@60 and supports multiple audio formats (PCM2.0/5.1/7.1CH, Dolby Digital/Plus/ EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio) pass-through functionality via HDMI cables.

The unit supports following video output resolutions:

No.	Output Resolution	No.	Output Resolution
1	4096x2160p 60Hz	8	1920x1080p 60Hz
2	4096x2160p 50Hz	9	1920x1080p 50Hz
3	3840x2160p 60Hz	10	1360x768p 60Hz
4	3840x2160p 50Hz	11	1280x800p 60Hz
5	3840x2160p 30Hz	12	1280x720p 60Hz
6	3840x2160p 25Hz	13	1280x720p 50Hz
7	1920x1200p 60Hz RB	14	1024x768 60Hz



Multiview

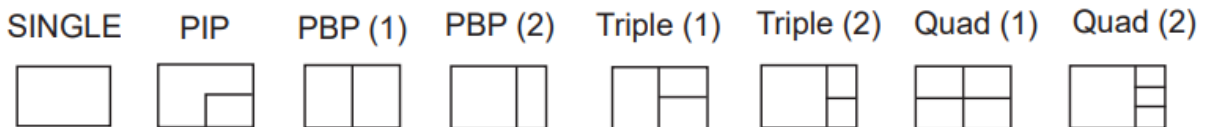
The switcher supports 8 multiview display modes: SINGLE, PIP, PBP (1), PBP (2), Triple (1), Triple (2), Quad (1), Quad (2)

Users can select different operations for different Multiview modes as follows:

SINGLE: Inputs selection
 PIP: Inputs selection, Sub window size and position selection

PBP (1), PBP (2), Triple (1), Triple (2), Quad (1), Quad (2): Inputs selection, Display mode selection, Display aspect selection

Multiview window distributions are as follows:



User can select Multiview modes via RS-232 commands or OSD menu navigation.

OSD Menu Navigation

1. A total of seven buttons on the IR Remote are used for OSD menu navigation, including MENU, EXIT, UP, DOWN, LEFT, RIGHT, OK.

Menu contents are as follows:

Output	Resolution	3840x2160p60	4096x2160p 60Hz/ 4096x2160p 50Hz/ 3840x2160p 60Hz/ 3840x2160p 50Hz/ 3840x2160p 30Hz/ 3840x2160p 25Hz/ 1920x1200p60Hz RB/ 1920x1080p 60Hz/ 1920x1080p 50Hz/ 1360x768p 60Hz/ 1280x800p 60Hz/ 1280x720p 60Hz/ 1280x720p 50Hz/ 1024x768 60Hz
	VKA	BLACKSCREEN	BLACKSCREEN, BLUESCREEN
	ITC	OFF	ON,OFF
Multiview	Single	Input select	HDMI1,HDMI2,HDMI3,HDMI4
	PIP	Win1 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win2 Select	HDMI1,HDMI2,HDMI3,HDMI4
		PIP Position	Right Bottom,Right Top, Left Bottom,Left Top
		PIP Size	Small,Middle,Large
	PBP	Win1 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win2 Select	HDMI1,HDMI2,HDMI3,HDMI4
MODE		1, 2	
	Aspect	Full, 16:9	



Multiview	3xWIN	Win1 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win2 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win3 Select	HDMI1,HDMI2,HDMI3,HDMI4
		MODE	1, 2
		Aspect	Full, 16:9
	4xWIN	Win1 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win2 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win3 Select	HDMI1,HDMI2,HDMI3,HDMI4
		Win4 Select	HDMI1,HDMI2,HDMI3,HDMI4
		MODE	1, 2
AUDIO	Audio Select	WIN1	WIN1,HDMI1,HDMI2,HDMI3, HDMI4
	AUDIO-MUTE	OFF	ON, OFF
System	Language/语言	中文	English, 中文
	EDID	4K60-2.0	4K60-2.0,4K60-5.1CH, 4K60-7.1CH,4K30-2.0CH, 4K30-5.1CH,4K30-7.1CH, 1080P-2.0CH,1080P-5.1CH, 1080P-7.1CH,1920x1200- 2.0CH,1680x1050-2.0CH, 1600x1200-2.0CH,1440x900 -2.0CH, 1360x768-2.0CH, 1280x1024-2.0CH, 1024x 768-2.0CH,720P-2.0CH, AUTO
	Baud rate	115200	115200,57600,38400, 19200,9600
	Reset	Reset	Reset
	FW Version		Read only

2. A total of two buttons on the IR Remote are used for audio setting on OSD menu navigation, including A-IN, Mute.

Menu contents are as follows:

A-IN	Audio Input	WIN1	WIN1,HDMI1,HDMI2,HDMI3, HDMI4
Mute	Audio Mute	OFF	ON, OFF



RS-232 Command

The BG-UHD-MVS42MA supports RS-232 control commands. Connect the RS-232 port of the product to a PC with a 3-pin phoenix connector cable. Then open a Serial Command tool on PC to send ASCII commands to control the product.

The ASCII command list about the product is shown as below.

ASCII Commands
Serial port protocol: baud rate: 115200 (default) Data bits: 8 Stop bits: 1 Check bit: 0
x - Parameter 1; y - Parameter 2; ! - Delimiter

Command Code	Function Description	Example	Feedback
System Setting			
help!	List all commands	help!	
r type!	Get device model	r type!	4x2 HDMI Multiviewer
r fw version!	Get Firmware version	r fw version!	MCU FW version x.xx.xx SCALER FW version x.xx.xx
power z!	Power on/off the device, z=0~1 (z=0 power off, z=1 power on)	power 1!	power on System Initializing... Initialization Finished! MCU FW version x.xx.xx SCALER FW version x.xx.xx
r power!	Get current power state	r power!	power on/power off
reboot!	Reboot the device	reboot!	Reboot... System Initializing... Initialization Finished! MCU FW version x.xx.xx SCALER FW version x.xx.xx
reset!	Reset to factory defaults	reset!	Reset to factory defaults System Initializing... Initialization Finished! MCU FW version x.xx.xx SCALER FW version x.xx.xx



Command Code	Function Description	Example	Feedback
Output Setting			
s output y res x!	Set Output y Resolution (y=1~2, x=1~14) y=1. output 1 y=2. output 2 1. 4096x2160p60, 2. 4096x2160p50, 3. 3840x2160p60, 4. 3840x2160p50, 5. 3840x2160p30, 6. 3840x2160p25, 7. 1920x1200p60RB, 8. 1920x1080p60, 9. 1920x1080p50, 10.1360x768p60, 11.1280x800p60, 12.1280x720p60, 13.1280x720p50, 14. 1024x768p60,	s output 1 res 3!	output 1 resolution: 3840x2160p60
r output y res!	Get output y resolution(y=1~2) 1. output 1 2. output 2	r output res!	output 1 resolution: 3840x2160p60
s output hdcp x!	set output hdcp(y=1~2, x=1~3) y=1. output 1 y=2. output 2 x=1. HDCP 1.4 x=2. HDCP 2.2 x=3. HDCP OFF	s output 1 hdcp 2!	output 1 HDCP: HDCP 1.4
r output y hdcp!	Get output y hdcp status.(y=1~2) 1. output 1 2. output 2	r output 1 hdcp!	output 1 HDCP: HDCP 1.4
s output y vka x!	Set output video keep active pattern.(y=1~2, x=1~2) y=1. output 1 y=2. output 2 x=1. black screen x=2. blue screen	s output 1 vka 1!	output 1 VKA pattern: black screen
r output y vka!	Get output y video keep active pattern.(y=1~2) 1. output 1 2. output 2	r output 1 vka!	output 1 VKA pattern: black screen
s output y itc x!	Set output video mode (y=1~2, x=1~2) y=1. output 1 y=2. output 2 x=1: video mode x=2: pc mode	s output 1 itc 1!	output 1 ITC: video mode
r output y itc!	Get output video mode(y=1~2) 1. output 1 2. output 2	r output 1 itc!	output 1 ITC: video mode



Command Code	Function Description	Example	Feedback
EDID Setting			
s input EDID x!	Set HDMI input EDID mode (x=1~19) 1. 4K2K60_444,Stereo Audio 2.0 2. 4K2K60_444,Dolby/DTS 5.1 3. 4K2K60_444,HD Audio 7.1 4. 4K2K30_444,Stereo Audio 2.0 5. 4K2K30_444,Dolby/DTS 5.1 6. 4K2K30_444,HD Audio 7.1 7. 1080P,Stereo Audio 2.0 8. 1080P,Dolby/DTS 5.1 9. 1080P,HD Audio 7.1 10.1920x1200,Stereo Audio 2.0 11.1680x1050,Stereo Audio 2.0 12.1600x1200,Stereo Audio 2.0 13.1440x900,Stereo Audio 2.0 14.1360x768, Stereo Audio 2.0 15.1280x1024,Stereo Audio 2.0 16.1024x768, Stereo Audio 2.0 17.720p,Stereo Audio 2.0 18.AUTO 19. USER1	s input EDID !!	input EDID:4K2K60_444, Stereo Audio 2.0
r input EDID!	Get input EDID mode	r input EDID!	input EDID:4K2K60_444, Stereo Audio 2.0
s edid user1 00 FF FF ...!	Set user1 EDID data	s edid user1 00 FF FF FF FF ...!	user1 EDID data: 00 FF FF
r edid user1!	Get user1 EDID data	r edid user1!	user1 EDID data: 00 FF FF FF FF FF FF 00
Audio Setting			
s output y audio x!	Set output y udio source (y=1~2, x=0~4) y=1. output 1 y=2. output 2 x=0. follow window 1 selected source x=1. HDMI 1 input audio x=2. HDMI 2 input audio x=3. HDMI 3 input audio x=4. HDMI 4 input audio	s output 1 audio 0!	output 1 audio follow window 1 video source
r output y audio!	Get output y audio source(y=1~2) 1. output 1 2. output 2	r output 1 audio!	output 1 audio follow window 1 video source
s output y audio mute x!	Set output audio mute on/off (x=0~1, y=1~2) y=1. output 1 y=2. output 2 x=0. mute off x=1. mute on	s output 1 audio mute 0!	output 1 audio mute off



Command Code	Function Description	Example	Feedback
r output y audio mute!	Get output y audio mute on/off (y=1~2) 1. output 1 2. output 2	r output 1 audio mute!	output 1 audio mute off
Single Screen Mode Setting			
s output y auto switch x!	Enable/disable auto switch feature(y=1~2,x=0~1) y=1. output 1 y=2. output 2 0. Disable auto switch 1. Enable auto switch	s auto switch 0!	auto switch off
r output y auto switch!	Get output y auto switch feature (y=1~2) 1. output 1 2. output 2	r auto switch!	auto switch off
s output y in source x!	Route input source to output y (y=1~2, x=1~4) y=1. output 1 y=2. output 2 x=1. HDMI 1 x=2. HDMI 2 x=3. HDMI 3 x=4. HDMI 4	s in source 1!	HDMI 1
r output y in source!	Get output y selected input source(y=1~2) 1. output 1 2. output 2	r in source!	HDMI 1
Multi-viewer Mode Setting			
s output y multiview x!	Set output y multi-viewer display mode(y=1~2, x=1~5) y=1. output 1 y=2. output 2 x=1. single screen x=2. PIP x=3. PBP x=4. triple screen x=5. quad screen	s output 1 multiview 1!	output 1 multiview: single screen
r output y multiview!	Get output y multi-viewer display mode(y=1~2) 1. output 1 2. output 2	r output 1 multiview!	output 1 multiview: single screen



Command Code	Function Description	Example	Feedback
s output z window x in y!	Select output z one input for one display window for the current Multiview mode. (z=1~2) 1. output 1 2. output 2 (x=1~4) 1. window 1 2. window 2 3. window 3 4. window 4 (y=1~4) 1. HDMI 1 2. HDMI 2 3. HDMI 3 4. HDMI 4	s output 1 window 1 in 1!	output 1: window 1 select HDMI 1
r output y window x in!	Get output y windows selected input source (y=1~2) 1. output 1 2. output 2 (x=0~4) 0. ALL 1. window 1 2. window 2 3. window 3 4. window 4	r output 1 window 1 in!	output 1 window 1 select HDMI 1
s output y PIP position x!	Set output y PIP window position (y=1~2) 1. output 1 2. output 2 (x=1~4) 1. Left Top 2. Left Bottom 3. Right Top 4. Right Bottom	s output 1 PIP position 3!	output 1 PIP on right top
r output y PIP position!	Get output y PIP window position (y=1~2) 1. output 1 2. output 2	r output 1 PIP position!	output 1 PIP on right top
s output y PIP size x!	Get output y PIP window size (y=1~2) 1. output 1 2. output 2 (x=1~3) 1. small 2. middle 3. large	s output 1 PIP size 3!	output 1 PIP size large



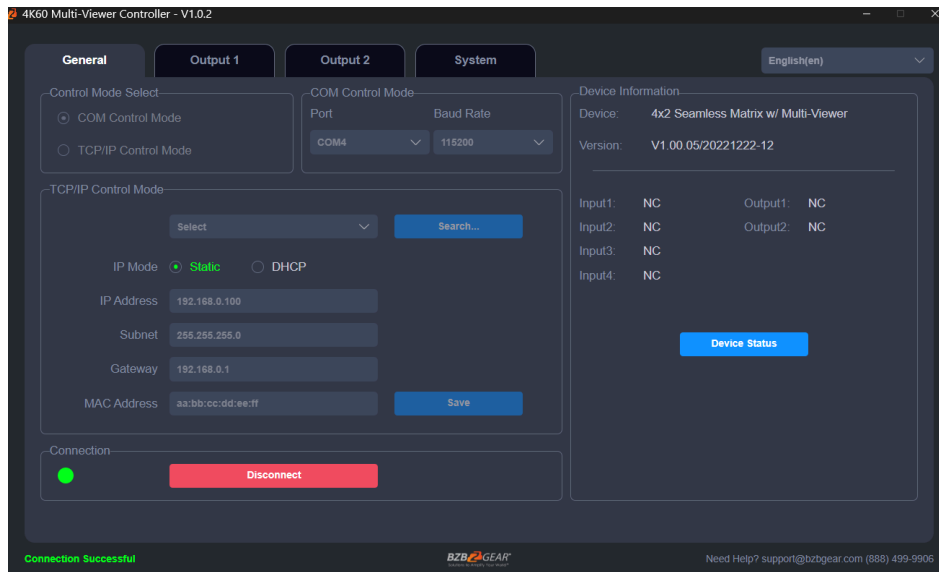
Command Code	Function Description	Example	Feedback
r output y PIP size!	Get output y PIP window size (y=1~2) 1. output 1 2. output 2	r output 1 PIP size!	output 1 PIP size large
s output y PBP mode x!	Set output y PBP windows display mode (y=1~2) 1. output 1 2. output 2 (x=1~2) 1. PBP mode 1 2. PBP mode 2	s output 1 PBP mode 1!	output 1 PBP mode 1
r output y PBP mode!	Get output y PBP windows display mode (y=1~2) 1. output 1 2. output 2	r output 1 PBP mode!	output 1 PBP mode 1
s output y PBP aspect x!	Set output y PBP windows display aspect ratio (y=1~2) 1. output 1 2. output 2 (x=1~2) 1. Full screen 2. 16:9	s output 1 PBP aspect 1!	output 1 PBP aspect full screen
r output y PBP aspect!	Get output y PBP windows display aspect ratio (y=1~2) 1. output 1 2. output 2	r output 1 PBP aspect!	output 1 PBP aspect full screen
s output y triple mode x!	Set output y triple windows display mode (y=1~2) 1. output 1 2. output 2 (x=1~2) 1. triple mode 1 2. triple mode 2	s output 1 triple mode 1!	output 1 triple mode 1



Command Code	Function Description	Example	Feedback
r output y triple mode!	Get output y triple windows display mode (y=1~2) 1. output 1 2. output 2	r output 1 triple mode!	output 1 triple mode 1
s output y triple aspect x!	Set output y triple windows display aspect ratio (y=1~2) 1. output 1 2. output 2 (x=1~2) 1. Full screen 2. 16:9	s output 1 triple aspect 1!	output 1 triple aspect full screen
r output y triple aspect!	Get output y triple windows display aspect ratio (y=1~2) 1. output 1 2. output 2	r output 1 triple aspect!	output 1 triple aspect full screen
s output y quad mode x!	Set output y quad windows display mode (y=1~2) 1. output 1 2. output 2 (x=1~2) 1. quad mode 1 2. quad mode 2	s output 1 quad mode 1!	output1 quad mode 1
r output y quad mode!	Get output y quad windows display mode (y=1~2) 1. output 1 2. output 2	r output 1 quad mode!	output1 quad mode 1
s output y quad aspect x!	Set output y quad windows display aspect ratio (y=1~2) 1. output 1 2. output 2 (x=1~2) 1. Full screen 2. 16:9	s output 1 quad aspect 1!	output 1 quad aspect full screen
r output y quad aspect!	Get output y quad windows display aspect ratio (y=1~2) 1. output 1 2. output 2	r output 1 quad aspect!	output 1 quad aspect full screen



Multiviewer Control Software - General Settings



General Interface Functions

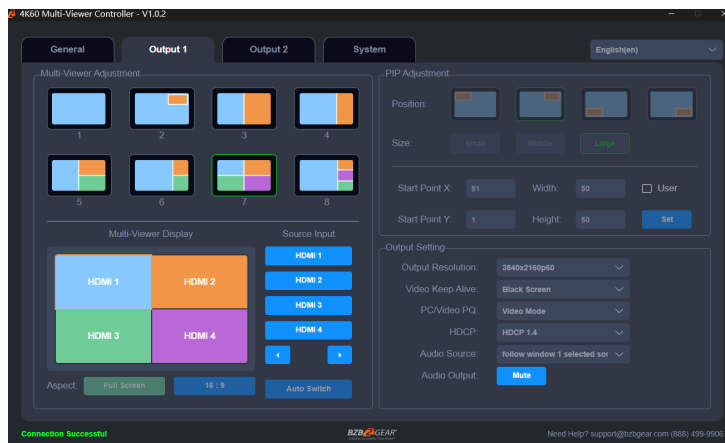
The following operations can be performed from the **General** interface:

1. **Control Mode Selection**
Choose the desired control method. Currently, only **COM Control Mode** is available, as **TCP/IP Control Mode** is temporarily disabled.
2. **COM Control Settings**
Configure the communication settings by selecting the appropriate **Port Number** and **Baud Rate** for the connected device.
3. **Device Information**
View details such as the device name, firmware version, and input/output connection status. Click **Device Status** to refresh and update this information.
4. **Connection**
Use this option to manually establish or modify the connection status.
5. **Connection Status**
Displays the current connection status of the device.

To manually refresh the data on the interface, click the **Refresh** icon located in the upper-right corner.



Multiviewer Control Software - Output Settings



Multi-View Display Modes

Easily select your preferred screen layout by clicking the corresponding display mode. The following eight options are available:

- **Single**
- **PIP (Picture-in-Picture)**
- **PBP (1) – Picture-by-Picture**
- **PBP (2)**
- **Triple (1)**
- **Triple (2)**
- **Quad (1)**
- **Quad (2)**

PIP Customization

When using **PIP mode**, you can fine-tune the display by adjusting the **position** and **size** of the PIP window. The system also supports **user-defined PIP configurations**, as detailed in the table below.

Size	Relative Position (Starting Position)	Height and Width of the Inner Frame
Small	Start Point X: 71 Start Point Y: 71	Width: 30 Height: 30
Middle	Start Point X: 61 Start Point Y: 61	Width: 40 Height: 40
Large	Start Point X: 51 Start Point Y: 51	Width: 50 Height: 50
User	Start Point X: 1-100 Start Point Y: 1-100	Width: 1-100 Height: 1-100



3. Multi-Viewer Display:

Displays both input and output windows. Use this view to select the desired window before assigning a signal source.

4. Source Input:

Select the input signal source. First, choose a window in the **Multi-Viewer Display**, then select the signal by clicking **HDMI 1/2/3/4** under **Source Input**, or use the ← / → buttons to cycle through the available sources.

5. Aspect Ratio:

Choose between **Full Screen** and **16:9** display formats. Available viewing modes include: **PBP(1)**, **PBP(2)**, **Triple(1)**, **Triple(2)**, and **Quad(2)**.

6. Auto Switch:

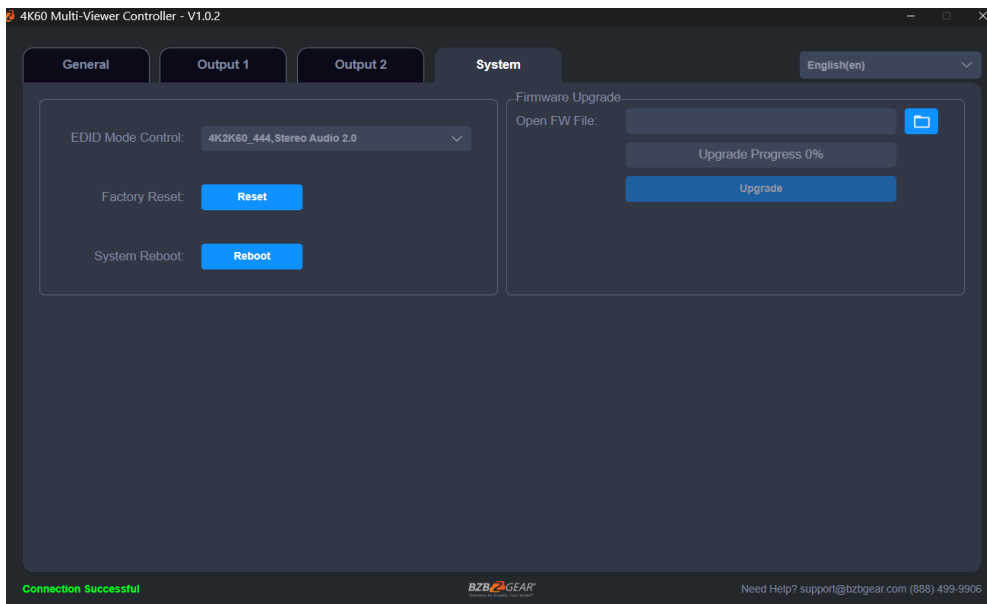
Enable or disable automatic input source switching. This function is only available in **SINGLE** display mode.

7. Output Settings:

Configure the output resolution, video keep-alive settings, PC/Video picture quality (PQ), HDCP settings, audio source, and audio output.



Multiviewer Control Software - System Settings



System Page Operations

On the System page, you can perform the following operations:

1. EDID Mode Control

Use the drop-down menu on the right to select the desired EDID mode.

2. Firmware Upgrade

Click the folder icon on the right to import the firmware upgrade file. Then click Upgrade to begin the process. A progress bar will appear to indicate the upgrade status. Once the progress reaches 100%, the upgrade is complete and the device will restart automatically.

3. Factory Reset

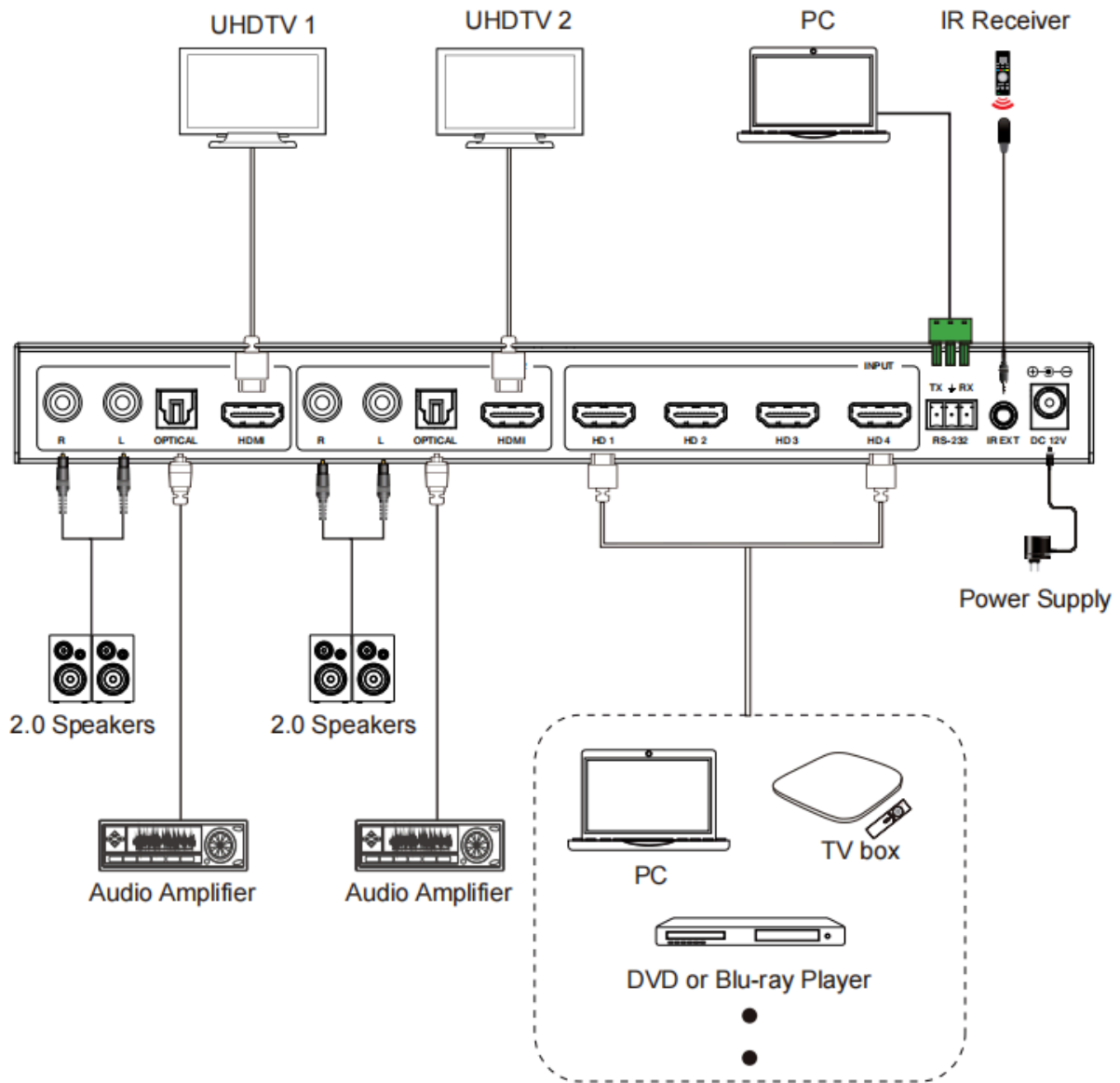
Click Reset to restore the device to its factory default settings.

4. System Reboot

Click Reboot to restart the device.



Application 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

1.888.499.9906

Email

support@bzbgear.com

Live Chat

bzbgear.com

Limited Product Warranty Terms

Pro Line: 5-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Essential Line: 3-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Cables: Lifetime Limited Product Warranty.

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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