BZB GEAR®
Solutions to Amplify Your World™

BG-UHD-SCVEA

Direktronik art 20124384

1080P/4K UHD Multi-Format HDMI/DP/VGA/CVBS/YPbPr to HDMI Scaler and Converter

User Manual

DIREKTRONIK

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TABLE OF CONTENTS

Statement	**4**
Safety Precaution	**4**
Introduction	**5**
Features	**5**
Packing List	**5**
Technical Specifications	**6**
Operation Controls and Functions	**7**
Menu Introduction	**9**
Remote Control	**10**
Application Example	**13**
Tech Support	**14**
Limited Product Warranty Terms	**14**
Mission Statement	**14**
Copyright	**14**

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.
- Disconnect power cord by connector only. Do not pull on the cable portion.
- Do not place or drop heavy or sharp-edged objects on the power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check power cord for excessive wear or damage to avoid possible fire / electrical hazards.
- Ensure the unit is always properly grounded to prevent electrical shock hazard.
- Do not operate units in hazardous or potentially explosive atmospheres. Doing so could result in fire, explosion, or other dangerous results.
- Handle with care to avoid shocks in transit. Shocks may cause malfunction. When you need to transport the unit, use the original packing materials, or alternate adequate packing.
- Turn off the unit if an abnormality or malfunction occurs. Disconnect everything before moving the unit.

Note: due to constant efforts to improve products and product features, specifications may change without notice.

Introduction

The BG-UHD-SCVEA is a multi-format 4K UHD scaler and converter. This unit is designed to scale and convert multiple analog and digital formats (HDMI/DP/VGA/CVBS/YPbPr) to support HDMI devices. This HDMI 1.4/DP1.1 compliant device supports output resolutions up to 4K2K@30 4:4:4 with video bandwidth speeds up 10.2Gbps.

Embed analog audio to the HDMI output via the 3.5mm stereo input. Operate and adjust advanced settings including resolution outputs via the front panel push buttons, IR remote, or the provided control software.

With its versatile array of inputs, the BG-UHD-SCVEA is the perfect solution for users looking to convert legacy media formats for use in a modern A/V system.

Features

- Input HDMI1.4 /DP1.1/ VGA/CVBS/YPbPr
- IR remote control
- Button control
- Remote control via Micro-USB
- OSD control interface
- Input maximum pixel rate : 165MHz
- Output resolution up to 4K@30 4:4:4
- Multiple VESA resolutions supported
- Deinterlacing and other video enhancement features
- Over & under scanning adjustable
- Video H/V mirror
- Active video area adjustment
- Stable and independent output signal quality
- USB firmware upgradable for expanding compatibility
- Wall-mountable housing designed for easy installation

Packing List

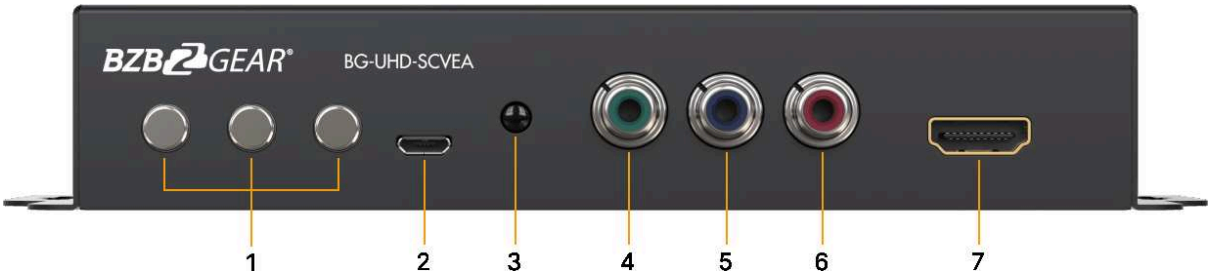
- 1x BG-UHD-SCVEA
- 1x 12V/2A power supply unit
- 1x IR Remote control
- 1x User Manual
- 1x Quick Start Guide
- 1x Installation software CD

Technical Specifications

Technical		
Role of usage	HDMI/DP/VGA/CVBS/YPbPr to HDMI Converter	
HDMI standards	HDMI 1.4	
Input Video Maximum Pixel Rate	165MHz	
Output Video bandwidth	10.2Gbps	
Output Video support	up to 4K2K@30 4:4:4	
Audio support	PCM 2 (32KHz - 192KHz Fs sample rate)	
ESD protection	[1] Human body model ±19kV [air-gap discharge] & ±12kV [contact discharge) [2] Core chipset ±2kV	
PCB stack-up	4-layer board [impedance control -differential 100Ω; single 50Ω)	
Firmware update	Feasible via USB Port	
CEC Channel	N/A	
Input	1x HDMI 1x VGA 1x DP 1x RCA 1x YPbPr 1x stereo (for VGA)	
Output	1x HDMI	
HOMI connector	Type A [19-pin female)	
USB connector	Micro USB	
Mechanical		
Housing	Metal enclosure	
Dimensions [L x D x H)	Model	144 x 113 x 30mm (5.6" x 4.4" x 1")
	Package	264 x 170 x 77mm (10.3" x 6.7" x 3")
	Carton	430 x 358 x 291mm (1'4" x 1'2" x 11.5")
Weight	Model	264g (9.3 oz)
	Package	724g (1.6 lbs)
Fixedness	Wall-mounting case with screws	
Power supply	12V 2A DC	
Power consumption	6 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)	

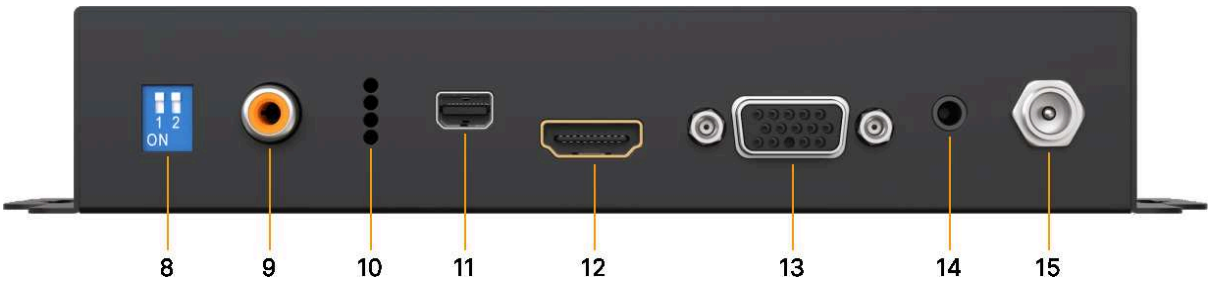
Operation Controls and Functions

Front panel



1. **PUSH BUTTON**:
    - [**LEFT**]: Down Button.
    - [**MID**]: Up Button.
    - [**RIGHT**]: Menu/Enter Button.
2. **Micro USB**: Micro-USB port for control port.
3. **IR SENSOR**: IR sensor for receiving the IR commands from IR remote.
4. **COMPONENT - Y INPUT**
5. **COMPONENT - Pb INPUT**
6. **COMPONENT - Pr INPUT**
7. **HDMI OUTPUT**: Connect to a HDMI display.

Rear panel



8. **DIP SWITCH**: For firmware updates.

9. **CVBS INPUT**: Connect to a RCA source.

10. **LED INDICATOR**: Indicates power and selected input (see below):

Power Indicator LED	Signal Indicator LED				
Power	**DisplayPort**	**VGA**	**HDMI**	**YPbPr**	**CVBS**

11. **DP INPUT**: Connect to a DP source.

12. **HDMI INPUT**: Connect to a HDMI source.

13. **VGA INPUT**: Connect to a VGA source.

14. **STEREO AUDIO INPUT (VGA)**: Connect to analog stereo audio source.

15. **+12V DC**: Interlocking power jack for 12V DC power supply unit.

Menu Introduction

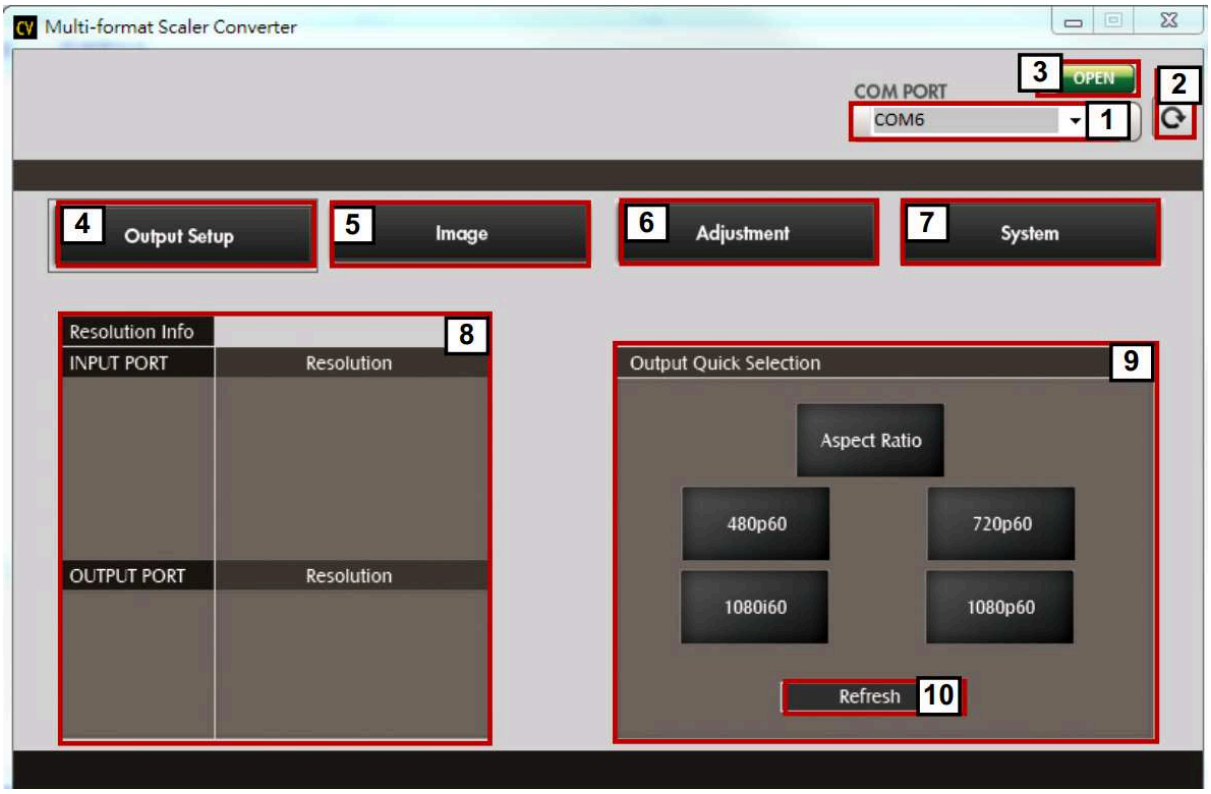
1.Output Setup	**Output Format**	
	Test Pattern	Disable, White, Cross, Hatch, Color, Gray, Windows, H-Ramp, W-HRamp, W-VRamp, Diagonal
	Audio Mute	Off, On
	Input Type	HDMI, VGA, DP, YPbPr, CVBS
	Return	
2.Image	**Contrast**	0-255 of Contrast Level
	Brightness	0-255 of Brightness Level
	Saturation	0-255 of Saturation Level
	Hue	0-255 of Hue Level
	Gamma Adjust	Off, 1.1, 1.3, 0.7, 0.9
	Color Tone	Off, Green, Skin
	Edge Enhance	Off, Max, Mid, Min
	Sharpness	0-64 of Sharpness Level
	Return	
3.Adjustment	**Under/Over Scan**	-50%~50% of Scan Level
	Aspect Ratio	Stretch, 16:9, 4:3
	H-Mirror	Off, On
	V-Mirror	Off, On
	H-Shift	-100-100 of H-Shift Level
	V-Shift	-50-50 of V-Shift Level
	Return	
4. System	**Input Format**	
	F/W Version	
	Factory Reset	
	Return	
5. Exit		

Remote Control

Description of keys IR Remote Control

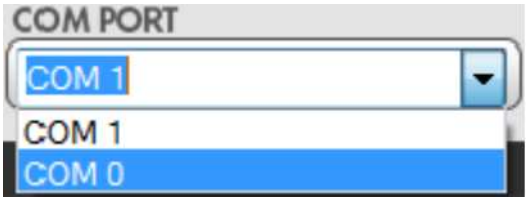
Button	Function
FREEZE	Freeze video
ASPECT RATIO	Aspect ratio change
BLANK	Blank video
EXIT	Exit OSD
ENTER	Enter key
UP	Up key
LEFT	Left key
RIGHT	Right key
DOWN	Down key
MENU	Menu on
INPUT INFO	Source resolution information
1080p60	Select 1080p60 output resolution
1080i60	Select 1080i60 output resolution
720p60	Select 720p60 output resolution
480p60	Select 480p60 output resolution

IR Remote Control through Micro-USB port



1. COM Port Selection

   Select the COM PORT the unit is connected to on the computer



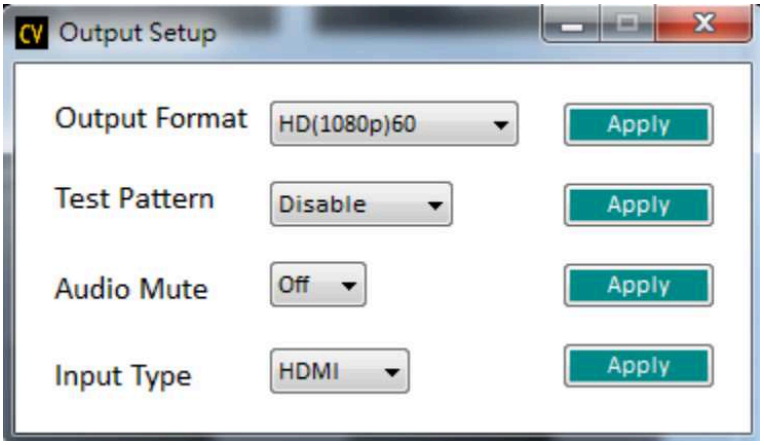
2. COM Port Detection Button

   Click this button to auto detect the COM PORT

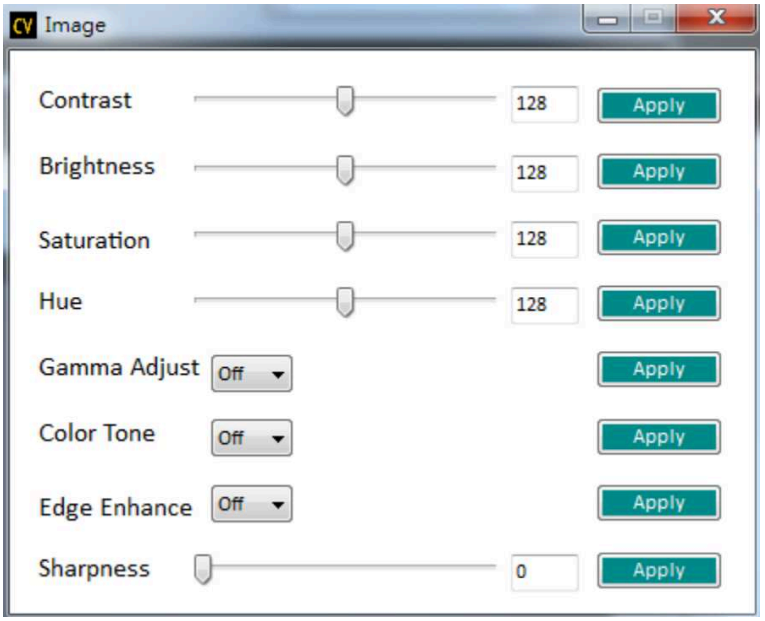
3. Connect/Disconnect Button

   - Click this button to connect
   - Click this button to disconnect

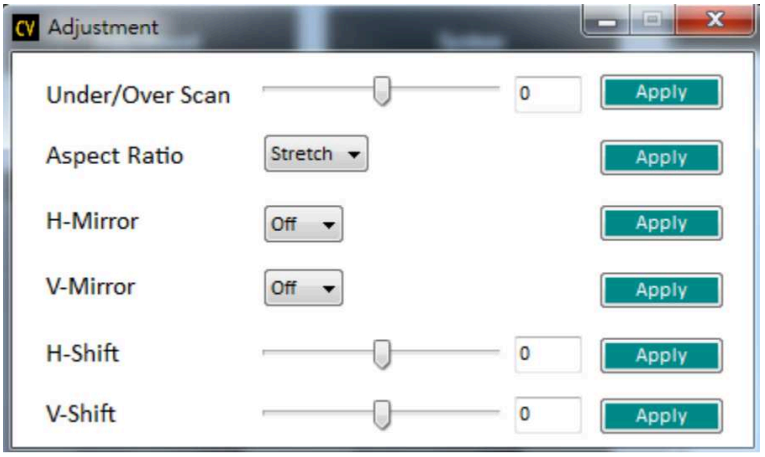
4. Output Setup Button



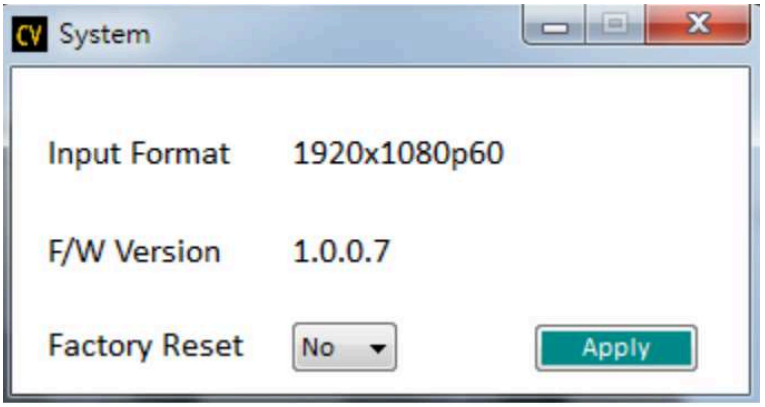
5. Image Button



6. Adjustment Button



7. System Button



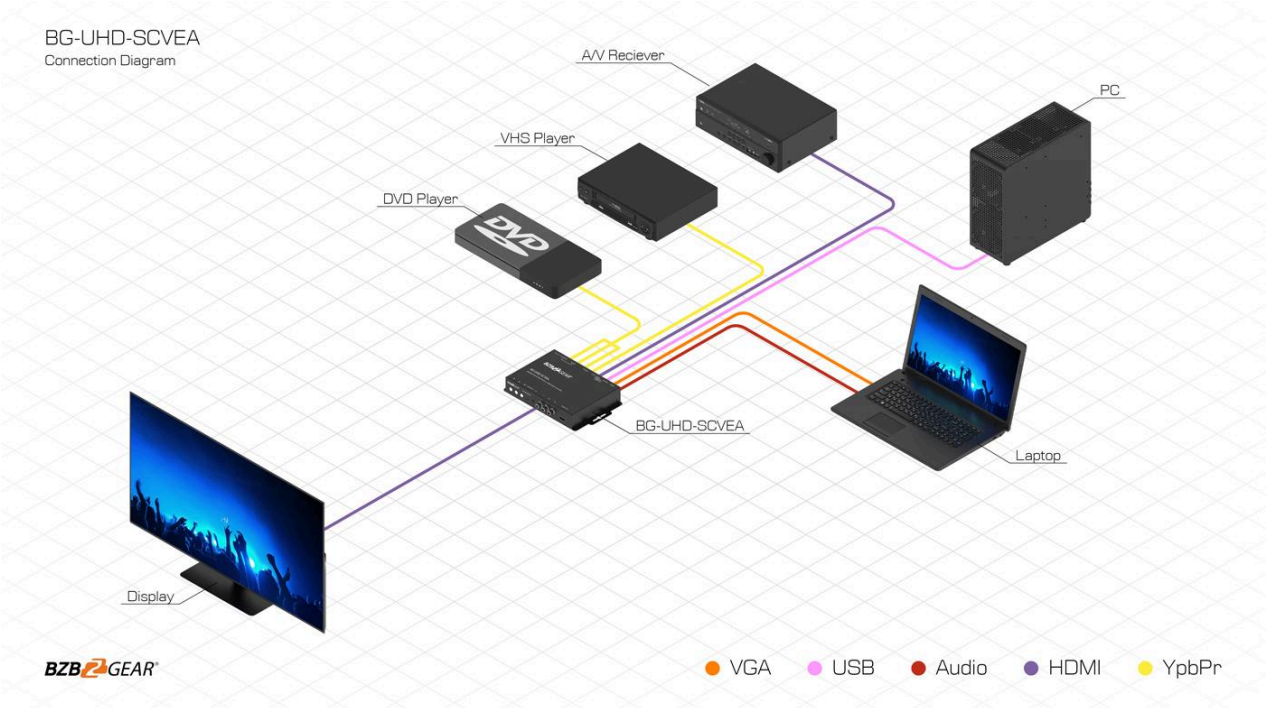
- Input Format: To view the current input resolution
- F/W Version Information
- Factory Reset Button

8. Input / Output Port and Resolution Info
   To display the information about the I/O Port and the applied Resolution

9. Output Quick Selection Button
   Common functions for quick setting

10. Refresh Input / Output Resolution Info Button
    To refresh the status of the converter

Application Example

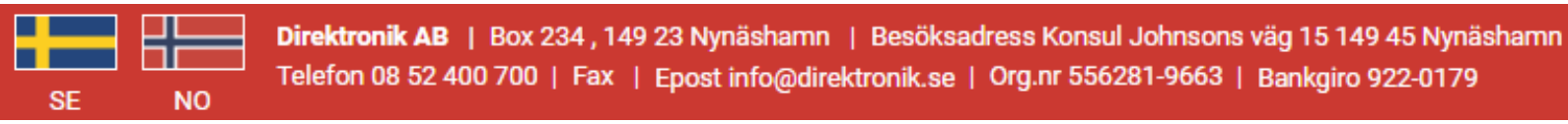


Tech Support

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:



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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