geratech®

EGE-12VS

1×2 HDMI 4K2K Video Scaler

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

• Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.

• To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.

• Never spill liquid of any kind on or into this product.

• Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.

• Do not attach the power supply cabling to building surfaces.

• Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.

• Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.

• To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
RDV1	29/10/13	Preliminary Release
VS1	08/03/17	Updated text/diagrams

CONTENTS

1. INTRODUCTION

This HDMI Scaler is designed to scale 4K (and non-4K) HDMI signals to resolutions of 1080p/WUXGA or lower while also simultaneously bypassing the 4K signal to a 4K native display. With its friendly and simple OSD (On Screen Display) interface design this unit allows the user to easily change output resolutions and related video settings directly from the front panel. This scaler is the ideal product for expanding the capabilities of your 4K UHD media environment.

2. APPLICATIONS

- Home theaters with large (4K) and small (1080p) screen viewing spaces
- Live shows with a 4K public display and local low cost confidence monitor
- Displaying 4K sources on standard HDTVs/monitors

3. PACKAGE CONTENTS

- 1×HDMI to Dual HDMI 4K UHD Scaler
- 1×5V/2.6A DC Power Adaptor
- 1×Operation Manual

4. SYSTEM REQUIREMENTS

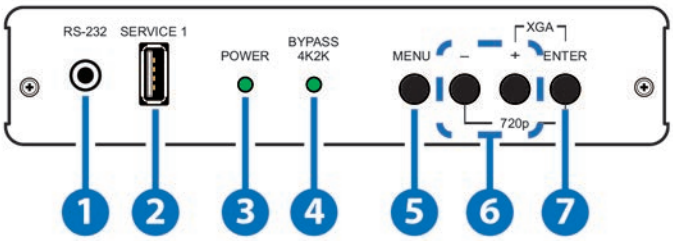
- HDMI source equipment such as media players, video game consoles or set-top boxes.
- HDMI receiving equipment such as HDTVs, monitors or audio amplifiers.
- The use of “Premium High Speed HDMI” cables is highly recommended.

5. FEATURES

- One HDMI input (up to 4K@50/60Hz, YUV 4:2:0) and two HDMI outputs (1×Scaled, 1×Bypassed) with HDCP 1.1 compliance
- Two simultaneous HDMI outputs (Scaled and Bypassed)
- Bypassed HDMI output up to 4K@50/60Hz (YUV 4:2:0)
- Scaled HDMI output up to 1080p@60Hz/WUXGA@60Hz (RB)

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



1. **RS-232:** This port is reserved for factory use only.
2. **SERVICE 1:** This port is reserved for factory use only.
3. **POWER LED:** This LED will illuminate GREEN to indicate the unit is on and receiving power.
4. **BYPASS 4K2K LED:** This LED will illuminate when a supported 4K signal is detected from the input source.
5. **MENU:** Press to enter the OSD menu, or to back out from menu items.
6. **MINUS/PLUS (-/+):** Press to move up and down or adjust selections within menus.

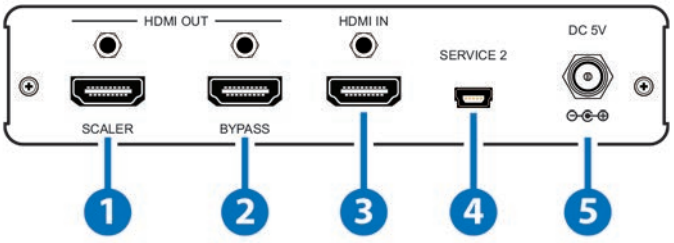
Note: Pressing "-" while outside of the OSD will display a resolution info screen.

Pressing "ENTER" and "+" together will reset the output resolution to XGA (1024×768).

Pressing "ENTER" and "-" together will reset the output resolution to 720p.

7. **ENTER:** Press to confirm a selection or to go deeper into a menu item.

6.2 Rear Panel



1. **HDMI OUT/SCALER:** Connect to an HDMI display (TV/monitor) or amplifier for digital video and audio output. Output resolutions up to 1080p@60Hz/ WUXGA@60Hz (RB) are supported.

2 **HDMI OUT/BYPASS:** Connect to an HDMI display (TV/monitor) or amplifier to view the original, un-scaled, digital video and audio output from the connected source (up to 4K@60Hz, YUV 4:2:0)

HDMI Input	Scaled Output	Bypass Output
1080p@60Hz	Up to 1080p/WUXGA	1080p@60Hz
4K@30Hz	Up to 1080p/WUXGA	4K@30Hz

Note: The use of "Premium High Speed HDMI" cables is highly recommended.

3 **HDMI IN:** Connect to HDMI source equipment such as a media player, game console or set-top box.

4 **SERVICE 2:** This port is reserved for factory use only.

5 **DC 5V:** Plug the 5V DC power adapter into the unit and connect it to an AC wall outlet for power.

6.3 OSD Menu

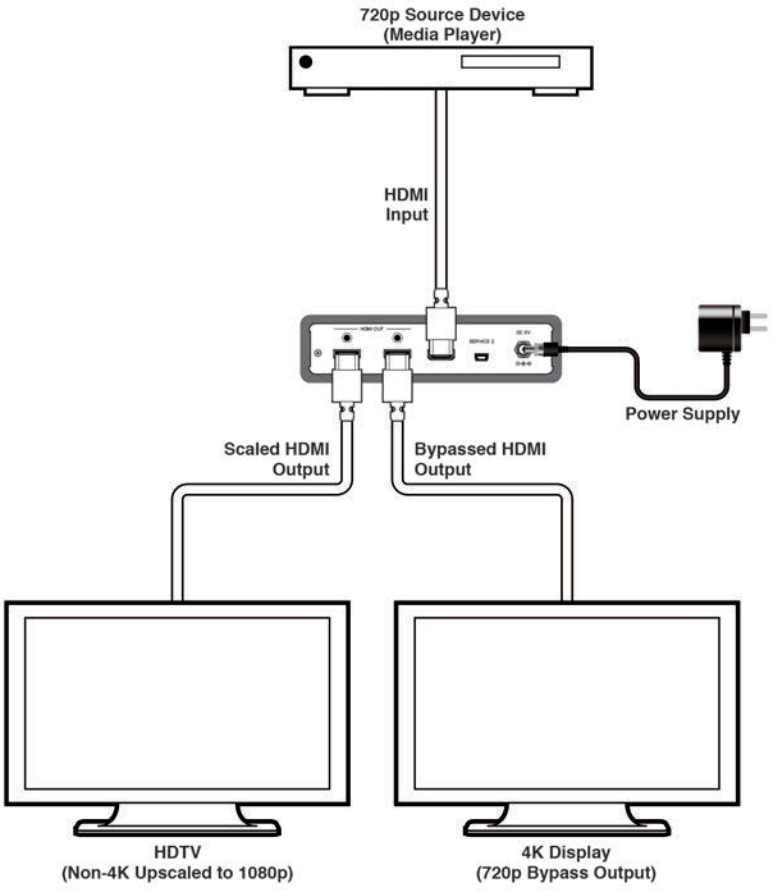
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Picture Setting	Contrast	0~100	
	Brightness	0~100	
	FineTune	Hue	0~100
		Saturation	0~100
		Sharpness	0~100
		NR	Off
			High
			Middle
			Low
		Exit	
	Color	Red	0~100
		Green	0~100
		Blue	0~100
		Exit	

Output Setting	Size	Full	
		Over Scan	
		Under Scan	
		Letter Box	
		Pan Scan	
		Best Fit	
	Resolution	480i@60	
		576i@50	
		480p@60	
		576p@50	
		720p@50	
		720p@60	
		1080i@50	
		1080i@60	
		1080p@50	
		1080p@60	
		640×480@60	
		800×600@60	
		1024×768@60	
		1280×1024@60	
		1600×1200@60	
		1366×768@60	
		1680×1050@60	
		1920×1200@60	
		1280×800@60	
		1440×900@60	
		1400×1050@60	
		1600×900@60	
		Native	
	Exit		

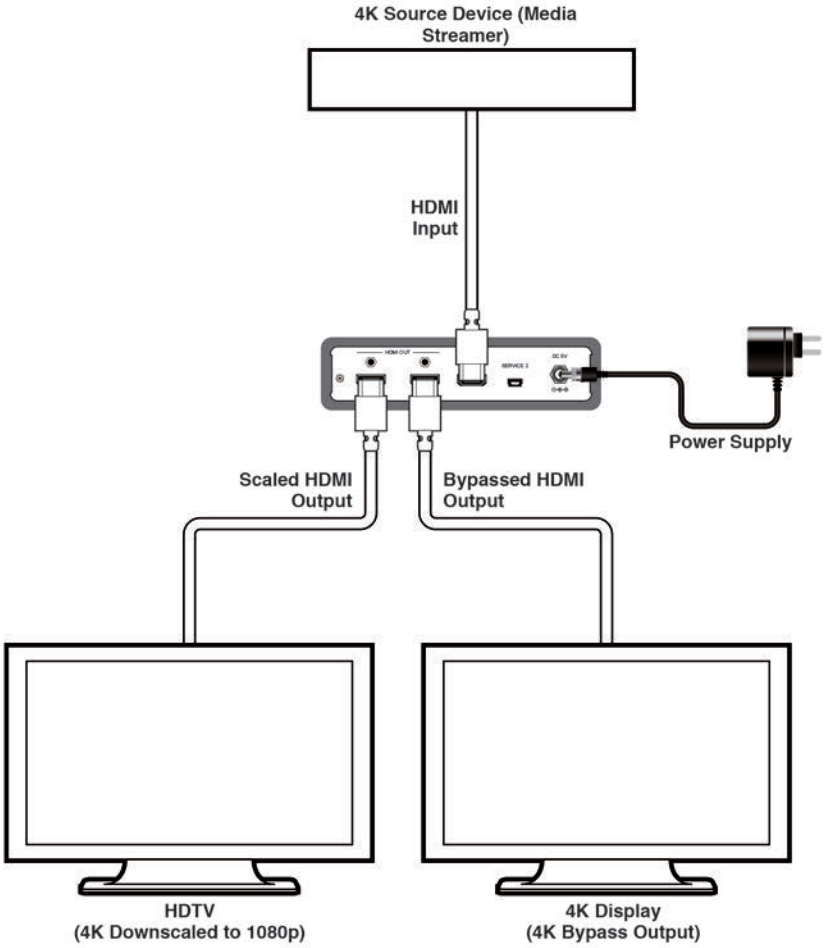
OSD Setting	H-Position	0~100	
	V-Position	0~100	
	Timer	5~100	
	Background	0~100	
	Display	Info	
		On	
		Off	
	Exit		
Factory Setting	Reset	No	
		Yes	
	Exit		
Information	Input		
	Output		
	Version		
Exit			

7. CONNECTION DIAGRAM

7.1 Option 1: Upscale to 1080p



7.2 Option 2: Downscale to 1080p



8. SPECIFICATIONS

8.1 Technical Specifications

Video Bandwidth	340MHz/10.2Gbps
Input Ports	1×HDMI
Output Ports	2×HDMI
Control Interface	1×RS-232 (3.5mm)
HDMI Cable Length	10m (1080p@60Hz, 12-bit) 5m (4K@60Hz, 4:4:4, 8-bit)
Power Supply	5V/2.6A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human Body Model: ±12kV (Air Discharge) ±8kV (Contact Discharge)
Dimensions	145mm×30mm×160.5mm (W×H×D) [Case Only] 145mm×30mm×167mm (W×H×D) [All Inclusive]
Weight	488g
Chassis Material	Aluminum
Color	Black
Operating Temperature	0˚C - 40˚C/32˚F - 104˚F
Storage Temperature	–20˚C - 60˚C/–4˚F - 140˚F
Relative Humidity	20 - 90% RH (Non-condensing)
Power Consumption	7.7W

8.2 Video Specifications

Supported Resolution (Hz)	Scaled Output
640×480@60	✓
800×600@60	✓
1024×768@60	✓
1280×800@60	✓
1280×1024@60	✓
1366×768@60	✓
1400×1050@60	✓
1440×900@60	✓
1600×900@60	✓
1600×1200@60	✓
1680×1050@60	✓
1920×1200@60 (RB)	✓
720×480i@60	✓
720×480p@60	✓
720×576i@50	✓
720×576p@50	✓
1280×720p@50/60	✓
1920×1080i@50/60	✓
1920×1080p@50/60	✓

9. ACRONYMS

ACRONYM	COMPLETE TERM
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
OSD	On-Screen Display
UHD	Ultra-High-Definition
USB	Universal Serial Bus
VGA	Video Graphics Array (640×480@60Hz)
WUXGA	Wide Ultra Extended Graphics Array (1920×1200@60Hz)

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