

geratech®



EGE-2HDKVM-CAT

Dual-Head HDMI CAT.6 Extender
with USB/IR/RS-232/Audio



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1. PACKAGE CONTENTS

- Dual-Head HDMI CAT.6 Extender with USB/IR/RS-232/Audio <Transmitter> x1
- Dual-Head HDMI CAT.6 Extender with USB/IR/RS-232/Audio <Receiver> x1
- USB (A-to-B) cable x1
- DC 5V 4A Power Adapter x2
- RS-232 cable x2
- IR emitter cable x1 ; IR receiver cable x1

2. INTRODUCTION

The EGE-2HDKVM-CAT is a high performance KVM (Keyboard, Video and Mouse) extender that allows a customer to have full console control at 170 meters (1080p resolution) remote. The flexibility of CAT.5e/6 cables makes this easily routable and is an inexpensive method for extending a full KVM console. It can transmit two HDMI digital video streams, USB Keyboard/Mouse, IR, RS-232 and stereo audio via two CAT.5e/6 cables. In operation, EGE-2HDKVM-CAT is truly plug and play, capturing full EDID data from the display ensuring your hardware is always setup to deliver optimal display performance.

It is optimized for applications at industrial control, security, KVM extension.

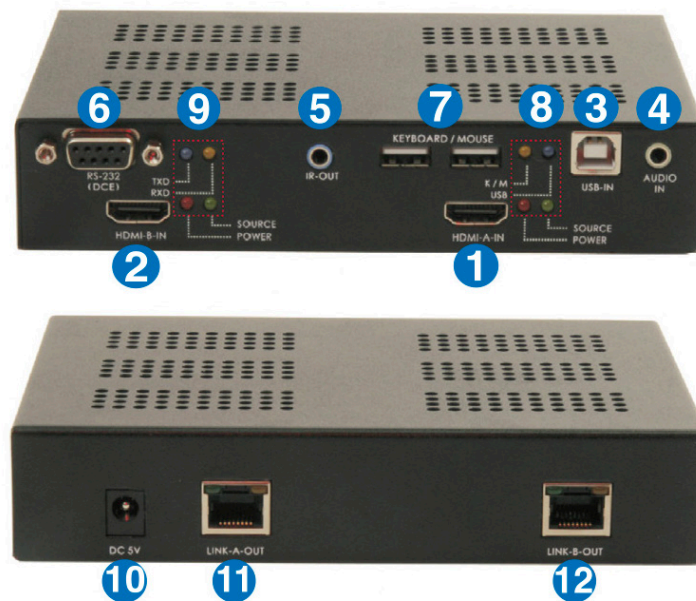
3. FEATURES

- Extends Dual-Head Video/Keyboard/Mouse/Audio/IR/RS-232 signals of PC via two CAT.5e/6 cables.
- Supports up to 2 HDMI (DVI-D via adapter) sources.
- Supports USB keyboard / mouse.
- Supports 3.5mm audio function (speaker).
- Compatible with all major operating systems.
- The bandwidth of video and keyboard/mouse is separated so keyboard/ mouse can full speed without any delay.
- Supports resolution up to 1920x1080 (HDMI) / 1920X1200 (DVI).
- Supports transmission distance up to 140m (CAT.5e) / 170m (CAT.6).
- EDID Copy function makes the optimal high resolution for your displays
- Supports RS-232 (Full Duplex).

- Supports IR (Simplex) (Frequency: 20~60 KHz).
- Supports surge protection.
- Simple LED indication for easy status monitoring.
- HDMI 1.3 / HDCP compliant.
- Supports Plug & Play; Software not required.
- Perfect for control remote machines and security monitoring systems.
- Provide a magnetic pad and attachable metal plate to simplify installation.

4. DETAIL PICTURE

Transmitter



HDMI-A Input

HDMI-B Input

USB Input

Audio Input

IR Output

RS-232 (DCE)

USB Keyboard/Mouse

Status Indicator LED

- a. K/M – (Yellow) K/M signal active
- b. USB – (Blue) USB signal active

- c. POWER – (Red) Power
- d. SOURCE – (Green) HDMI signal inactive *Slow Flashing* / HDMI signal active *Fast Flashing*

Status Indicator LED

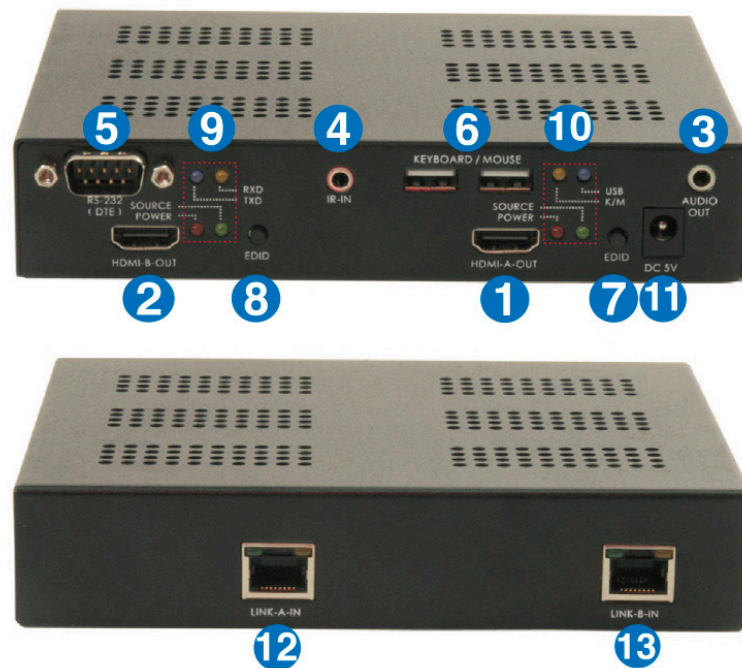
- a. TXD – (Blue) RS-232 TxD
- b. RXD – (Yellow) RS-232 RxD
- c. POWER – (Red) Power
- d. SOURCE – (Green) HDMI signal inactive *Slow Flashing* / HDMI signal active *Fast Flashing*

Power Jack (DC 5V)

RJ-45 System LINK-A Output

RJ-45 System LINK-B Output

Receiver



- 1 HDMI-A Output
- 2 HDMI-B Output
- 3 Audio Output
- 4 IR Input
- 5 RS-232 (DTE)

- 6 USB Keyboard/Mouse
- 7 EDID Copy Button (HDMI-A Output)
- 8 EDID Copy Button (HDMI-B Output)
- 9 Status Indicator LED
 - a. K/M – (Yellow) K/M signal active
 - b. USB – (Blue) USB signal active
 - c. POWER – (Red) Power
 - d. SOURCE – (Green) HDMI signal inactive *Slow Flashing* / HDMI signal active *Fast Flashing*
- 10 Status Indicator LED
 - a. TXD – (Blue) RS-232 TxD
 - b. RXD – (Yellow) RS-232 RxD
 - c. POWER – (Red) Power
 - d. SOURCE – (Green) HDMI signal inactive *Slow Flashing* / HDMI signal active *Fast Flashing*
- 11 Power Jack (DC 5V)
- 12 RJ-45 System LINK-A Input
- 13 RJ-45 System LINK-B Input

5. SYSTEM CONFIGURATION



6. INSTALLATION AND OPERATION

Transmitter unit Installation.

- First Time Set-up, Please turn off all computers and plug the user console – keyboard and mouse - into corresponding user port and then plug the power adapter into the Transmitter. Keyboard and mouse must be USB type.
- One side of HDMI cable insert in Transmitter “HDMI-A-IN” port and the other side insert in the HDMI port of PC.
- One side of HDMI cable insert in Transmitter “HDMI-B-IN” port and the other side insert in the HDMI port of PC.
- One side (B type) of USB cable insert Transmitter “USB-IN” port and the other side (A type) insert in USB port of PC.
- One side of audio cable insert in Transmitter “AUDIO-IN” port and the other side insert in the audio port of PC.
- Insert IR emitter into "IR-OUT" port of Transmitter.
- One side (male) of RS-232 cable insert in Transmitter “RS-232 (DCE)” port and the other side (female) insert in the RS-232 port of PC.
- *if the pin assignment of RS-232 cable is correct, the Tx&Rx Status Indicator LED on the Transmitter will be flash together one time*
- Please turn on the computer and let Transmitter power supply.

Receiver unit Installation.

- Plug the user console - keyboard, video monitor, mouse and speaker - into corresponding user port and then plug the power adapter into the Receiver. Keyboard and mouse must be USB type.
- Insert IR receiver into "IR-IN" port of Receiver.
- One side (female) of RS-232 cable insert in Receiver "RS-232 (DTE)" port and the other side (male) insert in the RS-232 port of device.
- *If the pin assignment of RS-232 cable is correct, the TxD&RxD Status Indicator LED on the Receiver will be flash together one time*
- Plug two ends of CAT.5e/6 cable to Transmitter and Receiver's RJ-45 System Link ports.
- (Please make sure that these two ends should be made by 568B / 568B type.)
- Let Receiver power supply.
- Press EDID Copy Button in 2-3 seconds to download your display EDID data and copy it to Transmitter.
- (The display will show "EDID has been updated OK")
- After above installation you will be able to operate from the Receiver – complete control of keyboard, video monitor, mouse, speaker, IR and RS-232.

RS-232 Command Setting

Connect RS-232 cables between PC and Transmitter, display(s) and Receiver(s).

First time to use, set RS-232 baud rate at 115,200bps and flow control off on PC COM port and assign RS-232 at Broadcast or Unicast mode. Set RS-232 baud rate at 115,200bps on PC and open RS-232 communication with Transmitter.

1)RS-232 Broadcast to all monitors

Commands:

```
socat5 b [Host baud rate] [Client baud rate]
```

```
le. socat5 b 115200 9600
```

Transmitter can send RS-232 command to multiple Receivers at same time.

Only one Receiver can feedback to Transmitter at one time. The Receiver can be occupying RS-232 return channel 5 seconds.

After last transmission, then other Receiver can take over RS-232 return channel.

2)Reset transmitter baud rate when forget previous setting

Unplug network cable in the transmitter, then reboot by unplug and plugging DC power.

Waiting for 4~5 seconds, set PC baud rate at 115,200bps and open COM port. Then press ctrl+c, ctrl+x, ctrl+z (the network cable unplug). Currently, Transmitter is back to command mode temporarily.

Now you can plugging network cable and reconfigure the baud rate you want.

7. SPECIFICATION

Dual-Head HDMI CAT.6 Extender with USB/IR/RS-232/Audio			
Model		EGE-2HDKVM-CAT-TX	EGE-2HDKVM-CAT-RX
Model Name		Transmitter	Receiver
Console Port	Video-1	N/A	HDMI (Female)
	Video-2	N/A	HDMI (Female)
	Keyboard	USB Type-A (Female)	USB Type-A (Female)
	Mouse	USB Type-A (Female)	USB Type-A (Female)
	Speaker	N/A	3.5mm Jack
PC Port	Video-1	HDMI (Female)	N/A
	Video-2	HDMI (Female)	
	Keyboard	USB Type-B (Female)	
	Mouse		
	Audio	3.5mm Jack	
System Link Port	Input	N/A	RJ-45 x2
	Output	RJ-45 x2	N/A
RS-232 Connector		DB-9 (Female)	DB-9 (Male)
RS-232 Baud Rate		up to 115,200 bps / Full Duplex	
IR Connector		1 x 3.5 mm phone Jack (Blue)	1 x 3.5 mm phone Jack (Red)
IR Frequency		20-60KHz	
EDID Copy		N/A	Button x2
Video Resolution (Max.)		1920x1080@60Hz /1920x1200@60Hz	
Interconnect Cable		Standard CAT.5e/6 network cable	
Maximum Cable Length		140m (CAT.5e) /170m (CAT.6)	
Power Consumption		2.2A	1.8A
Power Supply		DC 5V, 4A	DC 5V, 4A
Housing/ Color		Metal / Black	

Weight	600g	700g
Dimension (WxDxH)	162.7x133.7x32.5 mm	162.7x127.6x32.5 mm



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