

# CV-5005Z-G

HDMI 2.0a Retimer/Repeater with EDID Management

User Manual



rev: 200504  
Made in Taiwan

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## INTRODUCTION

The **CV-5005Z-G HDMI 2.0a Retimer/Repeater with EDID Management** boosts up your HDMI extension transmission over long cable and makes multiple layers cascading of HDMI products possible. The CV-5005Z-G amplifies and equalizes the HDMI signal to provide high quality audio and video. The power can be provided by HDMI source which follows HDMI spec to provide 5V. If the source cannot provide enough power, the external power can be added to extend HDMI2.0a signal.

## FEATURES

- HDMI2.0a compliant
- Supports 4K2K@60 4:4:4 8bits
- Supports HDR<sup>1</sup>, which is 4K2K@60 4:2:0 10bits<sup>2</sup>
- HDCP 2.2 compliant
- Supports CEC bypass
- Supports default EDID and EDID learning from display
- Supports LPCM 7.1 audio, Dolby TrueHD, Dolby Digital



1. HDR = High Dynamic Range.

2. The video bandwidth of 4K2K@60 4:2:0 10bits (HDR) is 384 MHz, and the 4K2K@60 4:4:4 8bits is 594MHz.

## PACKAGE CONTENTS

- 1x CV-5005Z-G
- 1x DC 5V 1A power supply
- 1x User Manual

## SPECIFICATIONS

Model Name		CV-5005Z-G
<b>Technical</b>		
Role of usage		HDMI to HDMI Retimer/Repeater
HDMI compliance		HDMI 2.0a
HDCP compliance		Yes
Input Video bandwidth		Single-link 594MHz [18Gbps]
Video support		Up to HDR 4K2K@60 (4:2:0 10bits) / 4K2K@60 (4:4:4 8bits)
Audio support		Bypass
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]
CEC Channel		Bypass
Input		1x HDMI
Output		1x HDMI
HDMI connector		Type A [19-pin female]
<b>Mechanical</b>		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	56 x 52 x 19mm[2.2" x 2" x 0.8"]
	Package	165 x 111 x 42mm [6.4" x 4.4" x 1.7"]
	Carton	490 x 426 x 352mm [1'6" x 1'4" x 13.8"]
Weight	Model	103g [3.6 oz]
	Package	309g[10.9 oz]
Power supply		5V 1A DC
Power consumption		3 Watt [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

## PANEL DESCRIPTIONS



1. **Micro USB:** Connect to a 5V DC power supply / FW update
2. **LED:** Power indicator
3. **HDMI OUT:** Connect to an HDMI display with an HDMI male-male cable here
4. **HDMI IN:** Connect to an HDMI source with an HDMI male-male cable here
5. **EDID MODE:** See more detail in the DIP SWITCH SETTING section

## DIP SWITCH SETTING

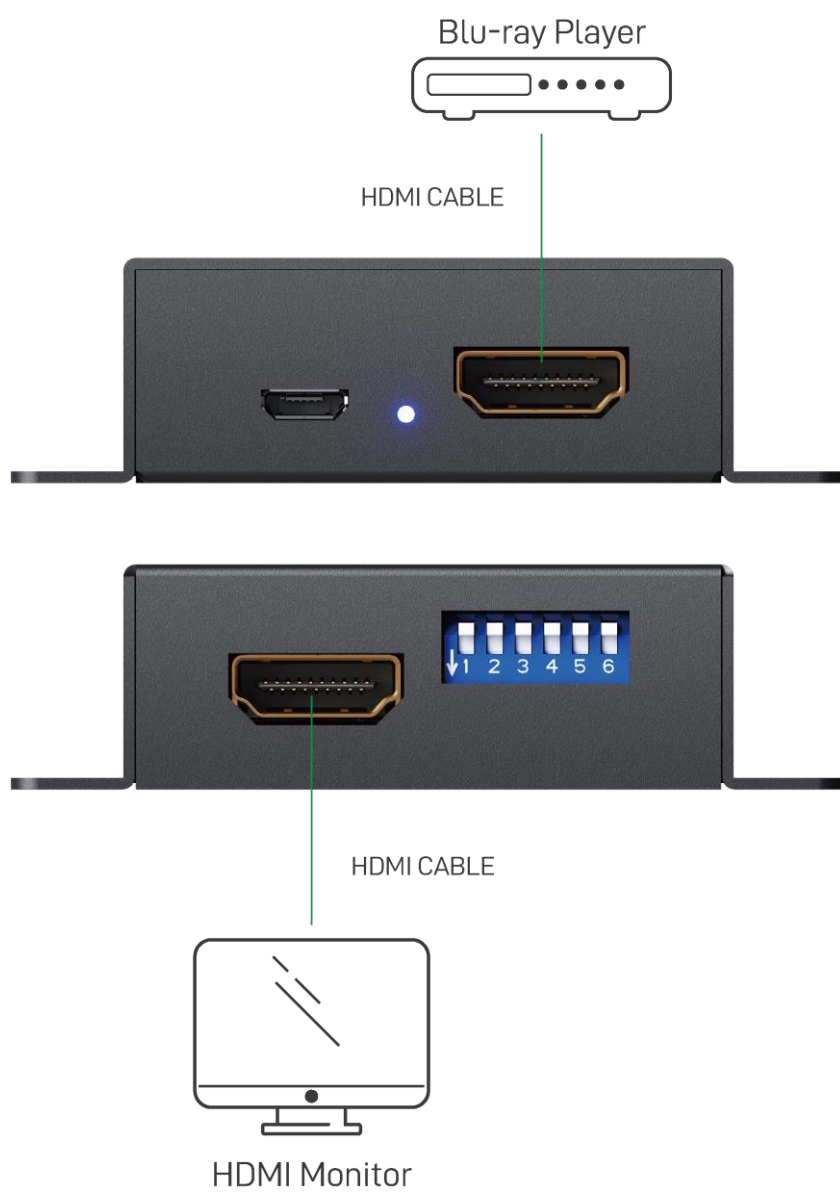
DIP Switch Position						Description
Mode	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	
1	Off [▲]	Off [▲]	Off [▲]	Off [▲]	Off [▲]	EDID Bypass
2	Off [▲]	Off [▲]	Off [▲]	Off [▲]	On [▼]	Use learning EDID
3	Off [▲]	Off [▲]	Off [▲]	On [▼]	On [▼]	Learn EDID
4	Off [▲]	On [▼]	On [▼]	Off [▲]	Off [▲]	Full HD(1080p@60) – 8bit 2D video & 7.1ch audio
5	Off [▲]	On [▼]	Off [▲]	On [▼]	On [▼]	Full HD(1080p@60) – 8bit 3D video & 2ch audio
6	Off [▲]	On [▼]	Off [▲]	On [▼]	Off [▲]	Full HD(1080p@60) – 8bit 3D video & 7.1ch audio
7	Off [▲]	On [▼]	Off [▲]	Off [▲]	On [▼]	HD(1080i@60)(720p@60) – 8bit 2D & 2ch
8	Off [▲]	On [▼]	Off [▲]	Off [▲]	Off [▲]	HD(1080i@60)(720p@60) – 8bit 2D & 7.1ch
9	Off [▲]	Off [▲]	On [▼]	On [▼]	On [▼]	Full-HD(1080p@60) – 12bit 2D video & 2ch audio
10	Off [▲]	Off [▲]	On [▼]	On [▼]	Off [▲]	Full-HD(1080p@60) – 12bit 2D video & 7.1ch audio
11	Off [▲]	Off [▲]	On [▼]	Off [▲]	On [▼]	Full-HD(1080p@60) – 8bit 2D & 2ch & 5.1ch
12	Off [▲]	Off [▲]	On [▼]	Off [▲]	Off [▲]	Ultra HD(4K2K@60 4:2:0) – 8/10/12bit 3D video & 2ch audio
13	Off [▲]	On [▼]	On [▼]	Off [▲]	On [▼]	Ultra HD(4K2K@60 4:2:0) – 8/10/12bit 3D video & 7.1ch audio
14	Off [▲]	Off [▲]	Off [▲]	On [▼]	Off [▲]	Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 2ch audio
15	Off [▲]	On [▼]	On [▼]	On [▼]	Off [▲]	Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 7.1ch audio
16	On [▼]	Off [▲]	Off [▲]	Off [▲]	Off [▲]	Ultra HD(8K4K@30) <sup>1</sup> (4K2K@60) – 8/10/12bit 3D HDR video & 7.1ch audio
17	On [▼]	Off [▲]	Off [▲]	Off [▲]	On [▼]	User define mode(need to use software)

DIP Switch Position	Description
Pin 1	
Off [⬆]	Reserved
On [⬇]	Reserved



1. Only Supports 8K4K@30 4:2:0 8bits

## CONNECTION DIAGRAM



## OPERATION APPROACH

**Noted: Only the user define mode(mode 17) requires this software.**

### Getting Started:

#### Your Computer's System Requirements:

The software supports Windows XP consistently. Both Windows7 and Windows 8 are supported after manually configuring the compatibility properties.

Windows7 and Windows 8: Please configure the compatibility properties manually.

**Step1.** Right-click the link for the software that you want to configure, and then click Contents.

**Step2.** On the Compatibility tab, click Run this program in compatibility mode.

### Start Software:

The screenshot displays the EDID software interface. At the top, there is a tab labeled "EDID" and a "Reconnect" button. The main area is divided into two columns: "Step 1 - EDID Source" and "Step 2 - Edit EDID".

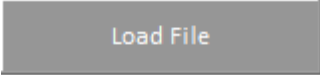
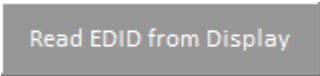


**Step 1 - EDID Source** contains four buttons: "Load File", "Read EDID from Display", "Create HDMI EDID", and "Create DVI EDID".

**Step 2 - Edit EDID** contains three buttons: "Save as", "Write EDID into Device", and "Analyze".

Below these steps is a "Firmware update" section. It includes a "Firmware version:" label followed by a text input field. Below this is a large empty rectangular box. To the right of this box are three buttons: "...", "Burn", and "Abort". At the very bottom, there is another empty rectangular box.

## EDID

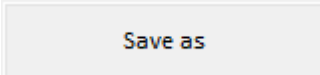
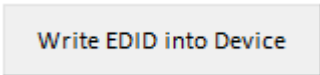
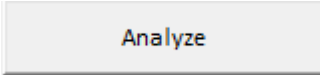
### a) Step 1: Select EDID Source

	: To select EDID source by loading the file you saved.
	: To read EDID info from the connected display.
	: To create EDID source which users are capable of monitoring or modifying.
	





The selected EDID source will be highlighted in red.

### b) Step 2: Edit EDID

	: To save the EDID information to computer for future use.
	: To write EDID information into the CV-5005Z-G device
	: To make a quick analysis of EDID information you process, which users are capable of monitoring or modifying.

### c) Firmware update

Update FW to the device

- Click  to load the FW and update it to CV-5005Z-G device
- Click , then re-cycle power to start the FW update process

## Create HDMI EDID

Create HDMI EDID

1. Click to pop-up the HDMI EDID edition page, which users are capable of monitoring or modifying HDMI EDID here.

2. Click "Add" button after specifying your options.

3. Finally please click "Confirm" button to generate EDID and then you will see the success message.

## Create DVI EDID

Create DVI EDID

1. Click to pop-up the DVI EDID edition page, which users are capable of monitoring or modifying DVI EDID here.

2. Click "Add" button after specifying your options.

3. Finally please click "Confirm" button to generate EDID and then you will see the success message.

## Analyze

Analyze

Click to make a quick analysis on the EDID information you process.

**View Detail:** To make a quick analysis on the EDID information.

**Edit:** users are capable of monitoring or modifying EDID information.

## WARRANTY

The SELLER warrants the **CV-5005Z-G HDMI 2.0a Retimer/Repeater with EDID Management** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the CV-5005Z-G features and specifications is subject to change without further notice.**