CV-505Q

HDMI 2.1 Audio Extractor & Embedder

User Manual

rev: 231226
Made in Taiwan

INTRODUCTION

The **CV-505Q HDMI 2.1 Audio Extractor & Embedder** is an exceptional device that provides a practical solution for audio compatibility issues with HDMI 2.1 devices. This device can extract high-quality stereo analog and digital S/PDIF (Toslink) audio from incoming HDMI signals without losing any active audio channels. It is particularly useful for audio systems that only support stereo sound, such as TVs and stereo speakers.

Moreover, the CV-505Q can insert external stereo analog audio or digital S/PDIF (Toslink) audio into the outgoing HDMI signal. This capability allows users to incorporate external audio sources into their HDMI signal, which is beneficial for devices that do not have an HDMI output but require audio support.

The CV-505Q's ability to co-work with any HDMI matrix on the market is another unique feature. This allows different audio capacity HDMI-equipped devices to work with multi-channel HDMI audio insertion simultaneously. The CV-505Q is a versatile device that can operate seamlessly with a broad range of HDMI devices. Overall, the CV-505Q is a remarkable device that can significantly enhance the audio experience of HDMI devices, making it a valuable addition to any home theater or audio system.

PACKAGE CONTENTS

- 1x CV-505Q
- 1x 5V power adapter
- 1x User Manual

FEATURES

- HDMI2.1 compliant
- Supports up to 8K60 4:2:0 10bits, 8K30 4:4:4 & 4K2K 120Hz
- Supports HDR[1], which is 4K2K@60 10bits/12bits[2] & Dolby Vision
- Supports VRR(Variable Refresh Rate) & ALLM(Auto Low Latency Mode)*
- HDCP 2.3 and 1.4 compliant
- Wide frequency range: 25MHz~1188MHz
- Video bandwidth: 48G
- Supports resolution downscaling from 8K to 4K & 4K to 1080P.
- Supports resolution upscaling from 4K to 8K & 1080P to 4K.
- Supports audio extraction via stereo & Toslink
- Supports audio insertion via stereo & Toslink
- Supports CEC & ARC bypass
- Supports ARC audio extraction via Toslink
- HDMI Audio Format: PCM2/5.1/7.1, Dolby 5.1/7.1, DTS 5.1/7.1
- Optical Audio Format: PCM2, Dolby 5.1

📖   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.

⚠   * Do NOT recommend using scale in VRR mode.
      ** If the output does not have image, please press "reset button" about 1-2 seconds to reset the device.

SPECIFICATIONS

Model Name	CV-505Q
Technical	
Role of usage	HDMII 2.1 Audio Extractor & Embedder
HDMI compliance	HDMI 2.1
HDCP compliance	HDCP 2.3 / 1.4
Video bandwidth	Up to FRL 5 (48G)
Video support	Up to 8K60 4:2:0 10bits, 8K30 4:4:4 & 4K2K 120Hz
Audio support	HDMI Audio Format: PCM2/5.1/7.1, Dolby 5.1/7.1, DTS 5.1/7.1 Optical Audio Format: PCM2, Dolby 5.1
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 + 1x 3.5mm phone jack + 1x Toslink
Output	1x HDMI + 1x 3.5mm phone jack + 1x Toslink
HDMI connector	Type A [19-pin female]
3.5mm connector	Stereo
Optical audio connector	Toslink
Mechanical	
Housing	Metal enclosure
Dimensions [L x W x H] — Model	122 x 67 x 25mm [4.8" x2.6" x0.9"]
Dimensions [L x W x H] — Package	198 x 137 x 74mm [7.8" x 5.4" x 2.9"]
Dimensions [L x W x H] — Carton	420 x 400 x 300mm [1'4"x 1'3" x 11.8"]
Weight — Model	236g [8.3 oz]
Weight — Package	466 g [16.4 oz]
Fixedness	Wall-mounting case with screws
Power supply	5V DC
Power consumption	2.5 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
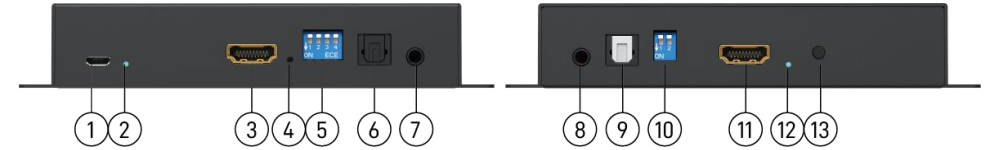
1. **Micro-USB port:** for F/W update / +5V power
2. **Power LED indicator**
3. **HDMI input**
4. **Input Signal LED indicator**
5. **4-Pin Dip Switch** (Please refer to "Notes")
6. **S/PDIF input** (TOSLINK)
7. **Stereo input** (3.5mm)
8. **Stereo output** (3.5mm)
9. **S/PDIF output** (TOSLINK)
10. **2-Pin Dip Switch** (Please refer to "Notes")
11. **HDMI output**
12. **Output Signal LED indicator**
13. **Reset button**

*Notes: DIP Switch Position

| DIP Switch Position (2-Pin)		Description
PIN#1	PIN#2	
OFF [↑]	OFF [↑]	HDMI audio bypass; S/PDIF out – HDMI input audio
OFF [↑]	ON [↓]	HDMI audio bypass; S/PDIF out – ARC audio
ON [↓]	OFF [↑]	HDMI audio from S/PDIF input; S/PDIF out – HDMI input audio
ON [↓]	ON [↓]	HDMI audio from Stereo input; S/PDIF out – HDMI input audio

DIP Switch Position(4-Pin)				Description
PIN#1	PIN#2	PIN#3	PIN#4	
OFF [↑]	OFF [↑]	-	-	8K Ultra HD(8K@60/4K@120) – 8bit video & 2ch audio
OFF [↑]	ON [↓]	-	-	4K Ultra HD(4K@60) – 8bit video & 2ch audio
ON [↓]	OFF [↑]	-	-	Learning EDID from output
ON [↓]	ON [↓]	-	-	User defined EDID
-	-	OFF [↑]	OFF [↑]	Normal Mode
-	-	OFF [↑]	ON [↓]	Reserved
-	-	ON [↓]	OFF [↑]	Scale Up
-	-	ON [↓]	ON [↓]	Scale Down

** ARC audio extraction is always via Toslink output

Audio Insertion
Supports audio Insertion via stereo or Toslink

Audio Insertion

HDMI Monitor

Blu-ray Player

Audio In | OR

Audio Source
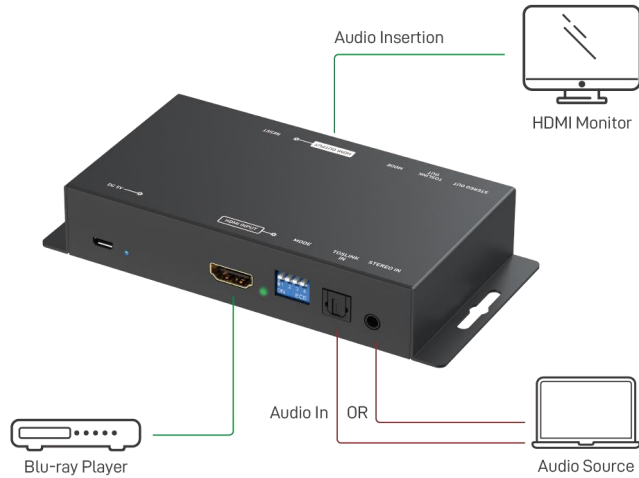
Audio Extraction
Extracts audio from an HDMI signal

Audio Out | OR

Speakers

Audio Extraction

Blu-ray Player
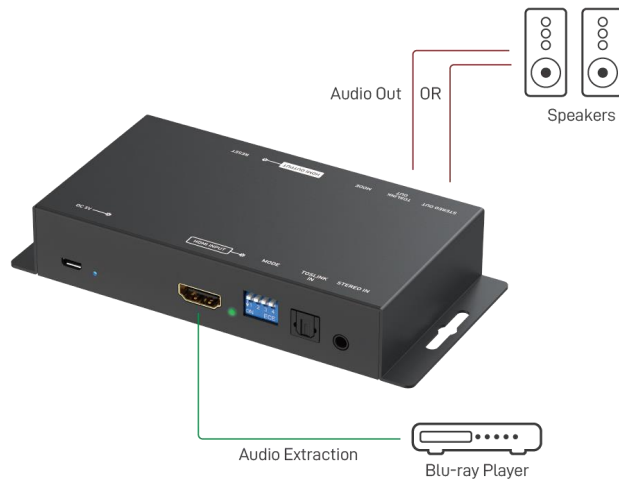
The SELLER warrants the **CV-505Q HDMI 2.1 Audio Extractor & Embedder** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, 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 are limited to a 30 day warranty and cable 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-505Q features and specifications is subject to change without further notice.**