



HDCP 2.2

4K2K



## QU-12S-4K22

1 to 2 HDMI Distribution Amplifier  
(4K & HDCP2.2 support)

**OPERATION MANUAL**



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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	SUMMARY OF CHANGE
v1.00	17/04/2015	First release

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## **1. INTRODUCTION**

The QU-12S-4K Distribution Amplifier (splitter) accepts one HDMI input and splits this signal to two identical outputs. This device is v1.4 HDMI compliant and supports HDCP (including HDCP 2.2), 3D Video signals, 'Deep Colour', and 4K resolutions, together with High Definition Audio. Each buffered output can run 1080p/8-bit up to 20 metres and can also be cascaded up to 3 layers.

## **2. APPLICATIONS**

- ///** Simultaneously display an HDMI source on 2 TVs/projectors
- ///** Showroom display
- ///** University lecture hall display
- ///** Retail sales displays

## **3. PACKAGE CONTENTS**

- ///** 1×1 by 2 HDMI 4K UHD Splitter
- ///** 1×5V/2.6 A Power Adaptor
- ///** 1×Operation Manual

## **4. SYSTEM REQUIREMENTS**

HDMI source device such as a DVD/Blu-ray player and HDMI equipped display (TVs/monitors) with High Speed HDMI cables.

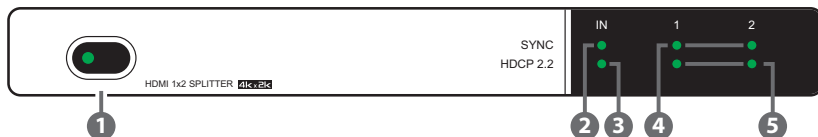
## 5. FEATURES

- /// v1.4 HDMI, HDCP compliant (including HDCP 2.2) and DVI 1.0 compliant
- /// HDMI 1 to 2 Splitter
- /// Supports resolutions VGA~WUXGA, 480i~1080p, 4K UHD@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2), 4K UHD@ 60Hz (YUV 4:2:0), 4K/2K@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2) and 4K/2K@ 60Hz (YUV 4:2:0) dependent upon the output display's EDID settings
- /// High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- /// Auto signal amplification & equalisation improves signal transmission distances
- /// Supports CEC bypass
- /// Supports Deep Colour
- /// Power LED indicator
- /// Supports xvYCC
- /// Supports 3D signals

*Note: For playback of 4K2K HDMI source signals, a 4K2K capable display and High Speed HDMI cables are required.*

## 6. OPERATION CONTROLS AND FUNCTIONS

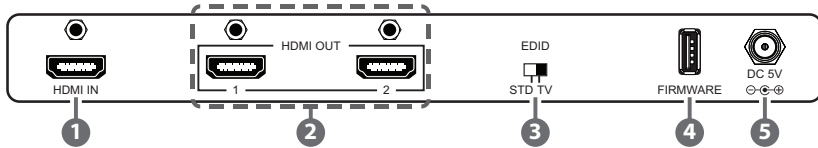
### 6.1 Front Panel



- ① **POWER:** This LED will illuminate when the unit is connected to an active power supply and switched on.
- ② **SYNC IN:** This LED will illuminate when the unit is connected with active signal from the source device.
- ③ **HDCP 2.2 IN:** This LED will illuminate when the source signal is HDCP 2.2 encrypted.
- ④ **SYNC OUT 1~2:** These LEDs will illuminate when the output detects a connected display.
- ⑤ **HDCP 2.2 OUT 1~2:** These LEDs will illuminate when the connected HDMI display are HDCP 2.2 compatible.



## 6.2 Rear Panel



- 1 HDMI IN:** Connect this input to the HDMI or DVI output of your source device such as a DVD player or Set-top Box with an HDMI cable.
- 2 HDMI OUT 1~2:** Connect to an HDMI equipped display (TV/monitor) or HD Amplifier for simultaneous HDMI distribution.
- 3 EDID TV/STD:** Use this switch to set HDMI EDID setting.
 

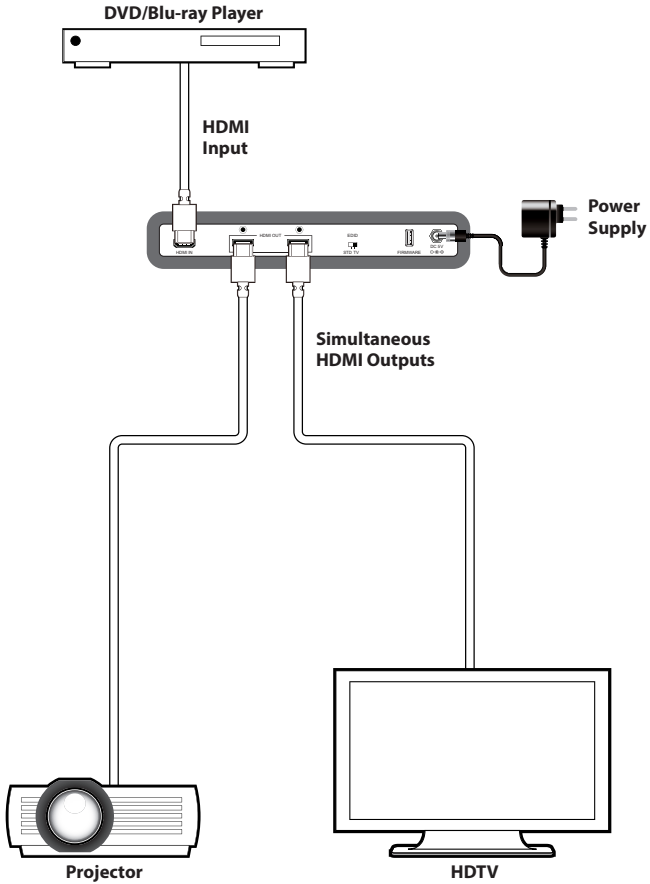
**TV:** When in 'TV' mode, the unit will read the EDID settings of the display connected to HDMI OUT 1. If it detects a 4K2K capable EDID setting it will transmit the signal in that format to all outputs. If no 4K2K capable EDID setting is detected then the unit will output the best resolution that all displays can support.

*Note: When Output 1 is connected to a 4K2K display and Output 2 is connected to non-4K2K display no picture may be displayed. To ensure proper display all screens must all be capable of displaying the same resolution.*

**STD:** When in 'STD' mode, the unit will use its own built-in EDID settings. In this mode, the video output will be set to 1080p@60Hz and the audio output at LPCM 2CH Stereo. Use this mode if there are display problems in 'TV' Mode.

*Note: The unit will retain and use the EDID settings of the last display connected to the HDMI OUT 1 output if no display is connected to this output even after switching EDID modes or a power cycle.*
- 4 FIRMWARE:** Manufacturer use only.
- 5 DC 5V:** Plug the supplied power supply into the unit and connect the adaptor to an AC outlet.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### 8.1 Technical Specifications

<b>Video Bandwidth</b>	300 MHz/9 Gbps
<b>Input Ports</b>	1×HDMI
<b>Output Ports</b>	2×HDMI
<b>HDMI Cable Distance</b>	1080p@8/12-bit - 10 m 4K (3840×2160p@24) - 5 m
<b>Power Supply</b>	5V/2.6 A DC (US/EU standards, CE/FCC/UL certified)
<b>ESD Protection</b>	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
<b>Dimensions</b>	220 mm (W)×121 mm (D)×27 mm (H)/Jacks Excluded 220 mm (W)×127.25 mm (D)×28.3 mm (H)/Jacks Included
<b>Weight</b>	368 g
<b>Chassis Material</b>	Metal
<b>Colour</b>	Black
<b>Operating Temperature</b>	0°C~40°C/32°F~104°F
<b>Storage Temperature</b>	-20°C~60°C/-4°F~140°F
<b>Relative Humidity</b>	20~90% RH (no condensation)
<b>Power Consumption</b>	5.83 W

## 8.2 Supported Resolutions

RESOLUTION	INPUT	OUTPUT
<b>640×480@60/72/75</b>	√	√
<b>720×480@60</b>	√	√
<b>720×576p@50</b>	√	√
<b>800×600@60/72/75</b>	√	√
<b>1024×768@60/70/75</b>	√	√
<b>1280×720@50/60</b>	√	√
<b>1280×720p@60</b>	√	√
<b>1280×768@60</b>	√	√
<b>1280×800@60</b>	√	√
<b>1280×1024@60</b>	√	√
<b>1360×768@60</b>	√	√
<b>1600×1200@60</b>	√	√
<b>1920×1080i@50/60</b>	√	√
<b>1920×1080p@24/25/30/50/60</b>	√	√
<b>1920×1200@60 (RB)</b>	√	√
<b>3840×2160@24/25/30</b>	√	√
<b>3840×2160@50/60 (YUV420)</b>	√	√
<b>4096×2160@24/25/30</b>	√	√
<b>4096×2160@50/60 (YUV420)</b>	√	√

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
<b>DTS</b>	Digital Theater System
<b>EDID</b>	Extended Display Identification Data
<b>HDCP</b>	High-bandwidth Digital Content Protection
<b>HDMI</b>	High-Definition Multimedia Interface
<b>HDTV</b>	High Definition Television







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