



# QU-10-4K22

1 to 10 HDMI Distribution Amplifier  
(4K, HDCP2.2, HDMI2.0)

**OPERATION MANUAL**



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Version 1.1

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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
v2.00	19/07/2019	Updated format/diagrams

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## 1. INTRODUCTION

The 1 by 10 HDMI Splitter with HDCP 2.2 is an advanced solution for splitting a single HDMI input to 10 HDMI outputs. It provides high performance audio and video output up to 4K2K@60Hz (YUV444) resolution and is capable of providing high level of audio and video performance.

This unit also supports HDR (High Dynamic Range) and high resolution digital audio formats such as LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus, Dolby Atmos and DTS-HD Master Audio, audio sampling rate up to 192kHz as well as a system reset function (CEC active source command) that allows the unit to reset the TV to its default HDMI input.

## 2. APPLICATIONS

- /// Entertainment Room / Home Theater
- /// Lecture Room/Hall Presentation
- /// Show Room/Demo Room
- /// Public Commercial Display

## 3. PACKAGE CONTENTS

- /// 1×1 by 10 HDMI splitter
- /// 1×5V/4A DC Power Adaptor
- /// 1×Operation Manual

## 4. SYSTEM REQUIREMENTS

Input source devices such as Blu-ray player or Set-Top-Box or any 6G with HDCP2.2 source and output to 6G HDMI TV/Display and/or audio amplifier with connection cables.

**Note:** To achieve 6G performance it is recommended to use High Speed HDMI cables.

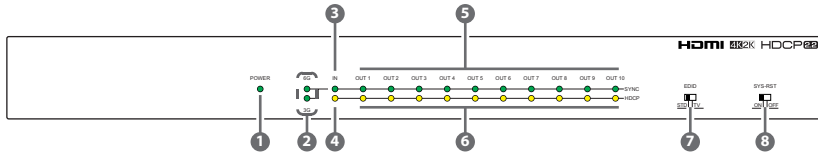
## 5. FEATURES

- /// 4K2K 6G supported, HDCP 2.2, HDMI2.0 and DVI compliant.
- /// 1 HDMI input to 10 HDMI outputs
- /// System Reset function supported (CEC active source command)
- /// Simultaneous display of an Ultra High-Definition source on up to 10 UHD TV displays
- /// 3D pass-Through
- /// Supports UHDTV resolutions up to 4K2K (3840x2160@24/25/30/50/60 & 4096x2160 @24/25/30/60)
- /// Supports LPCM 2/5.1/7.1CH, Dolby Digital 2~5.1CH, DTS 2~5.1CH, Dolby TrueHD, Dolby Atmos and DTS-HD Master Audio
- /// HDCP 2.2 and HDCP 1.4 compliant
- /// Input port EDID support Standard (1080p and PCM 2 channel) and TV mode
- /// HDR Pass Through supported.

**Note:** For playback of 4K UHD HDR content, a compatible source device, 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 device is connected to an active power supply.
- 2 **6G/3G:** When the input source bandwidth is 6G, the 6G LED will illuminate, when input source detect as 3G, the 3G LED will illuminate.
- 3 **IN SYNC:** When an input signal is detected, the LED will illuminate. The LED will flash when a problem with the signal is detected, for example, when the source signal is not stable. When an input is not connected, the LED light will remain off.
- 4 **IN HDCP:** When an input signal with HDCP has been detected, the LED will illuminate. The LED will flash when there is a problem with the HDCP signal, for example when the HDCP version is not supported. When no HDCP detected, the LED will remain off.
- 5 **OUT 1~10 SYNC:** When output signal is detected, the LED will illuminate, the LED will flash when detected abnormal, for example, when an output device is connected but the output sense is off. When an output is not connected, the LED will remain off.
- 6 **OUT1~10 HDCP:** When an input signal with HDCP has been detected, the LED will illuminate. The LED will flash when there is a problem with the HDCP signal, for example when the HDCP version is not supported. When no HDCP is detected, the LED will remain off.
- 7 **EDID:** Use this switch to set the HDMI EDID setting.

**TV:** When in 'TV' mode, the unit will read the EDID settings of the display device connected to HDMI OUT 1. If it detects a 4Kx2K capable EDID setting it will transmit the signal in that format to all outputs. If no 4Kx2K capable EDID is detected then the unit will output the best resolution that all displays can support.

*NOTE: When Output 1 is connected to a 4Kx2K display and Outputs 2–10 are connected to non-4K displays no picture may be displayed. To ensure*



*proper display all screens must all be capable of displaying the same resolution.*

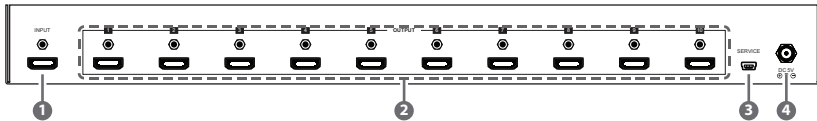
**STD:** When in 'STD' mode, the unit will use its own built-in EDID settings. In this mode, the video output will be set to 1080p@60Hz and the audio output at LPCM 2CH Stereo. Use this mode if there are display problems in TV Mode.

- 8 SYS-RST:** Set this switch to the ON position will allow the device to reset the output to show the source every 8–10 minutes.

It will force the connected TV/display to switch to the HDMI port that the device is connected to ensure the correct input is always displayed. The reset will be performed sequentially from 1~10 with 1 minute interval between ports. The default setting is OFF, leave as it is to disable the reset function.

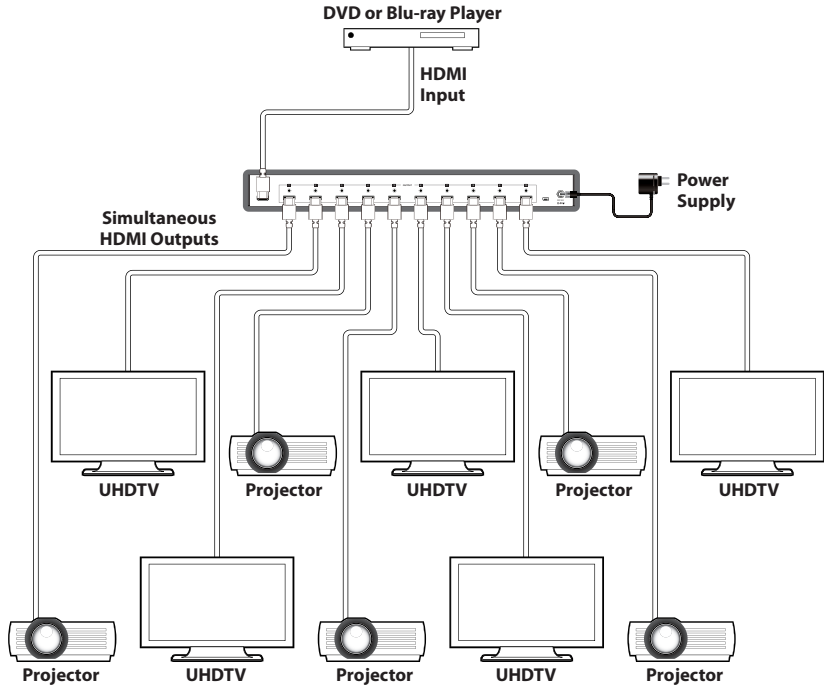
*Note: TV/monitor must be CEC compatible for this feature to function properly.*

## 6.2 Rear Panel



- 1 INPUT:** Connect this input to the HDMI or DVI output of the source device such as a Blu-ray player or PC/Laptop with an HDMI cable.
- 2 OUTPUT 1~10:** Connect to HDMI TVs, monitors or amplifiers for digital video and audio output.
- 3 SERVICE:** This is reserved for firmware update use only.
- 4 DC 5V:** Connect the adapter which included in the package and connect to AC wall outlet for power supply.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### 8.1 Technical Specifications

<b>Video Bandwidth</b>	600 MHz/18 Gbps
<b>Input Ports</b>	1×HDMI, 1×USB (Service only)
<b>Output Ports</b>	10×HDMI
<b>HDMI Resolutions</b>	VGA~WUXGA (RB), 480i~1080p@24/50/60, 4K@24/25/30, 4K@50/60 (YUV444)
<b>HDMI Cable I/O Distance</b>	15 m@1080p/8-bit, 10 m@1080p/12-bit, 3 m@4K2K/60_YUV444, 5m@4K2K/30
<b>Power Supply</b>	5V/6 A DC (US/EU standards, CE/FCC/UL certified)
<b>ESD Protection</b>	Human body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
<b>Dimensions</b>	436 mm (W)×160 mm (D)×44 mm (H)/ Jack Excluded 436 mm (W)×165.5 mm (D)×48 mm (H)/ Jack Included
<b>Weight</b>	1964 g
<b>Chassis Material</b>	Metal
<b>Color</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 (non-condensing)
<b>Power Consumption</b>	11.38 W

## 8.2 Supported Resolutions

Resolution	Input	Output
<b>640×480@60/72/75/85</b>	✓	✓
<b>720×400@85</b>	✓	✓
<b>800×600@56/60/72/75/85</b>	✓	✓
<b>1024×768@60/70/75/85</b>	✓	✓
<b>1152×864@75</b>	✓	✓
<b>1280×720@60</b>	✓	✓
<b>1280×768@60/75/85</b>	✓	✓
<b>1280×800@60</b>	✓	✓
<b>1280×960@60</b>	✓	✓
<b>1280×1024@60</b>	✓	✓
<b>1360×768@60</b>	✓	✓
<b>1366×768@60</b>	✓	✓
<b>1400×1050@60</b>	✓	✓
<b>1440×900@60</b>	✓	✓
<b>1600×900@60</b>	✓	✓
<b>1600×1200@60</b>	✓	✓
<b>1680×1050@60</b>	✓	✓
<b>1920×1080@60</b>	✓	✓
<b>1920×1200@60</b>	✓	✓
<b>1920×1440@60</b>	✓	✓
<b>2560×1600@60</b>	✓	✓
<b>1440×576i@50</b>	✓	✓
<b>1440×480i@59.94/60</b>	✓	✓
<b>720×480p@59.94/60</b>	✓	✓
<b>720×576p@50</b>	✓	✓

Resolution	Input	Output
<b>1280×720p@50/59.94/60</b>	✓	✓
<b>1920×1080i@50/59.94/60</b>	✓	✓
<b>1920×1080p@23.97/24/25/29.97/30/50/59.94/60</b>	✓	✓
<b>3840×2160@24/25/30/50/60</b>	✓	✓
<b>4096×2160@24/25/30/50/60</b>	✓	✓

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
<b>CEC</b>	Consumer Electronics Control
<b>DTS</b>	Digital Theater System
<b>DVI</b>	Digital Visual Interface
<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
<b>IR</b>	Infrared
<b>USB</b>	Universal Serial Bus
<b>VGA</b>	Video Graphics Array
<b>WUXGA (RB)</b>	Widescreen Ultra Extended Graphics Array (Reduce Blanking)







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