

# CLUX-1CAT8H

1 by 8 CAT6 to HDMI  
V1.3 Splitter

Operation Manual



CLUX-1CAT8H



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## • **Safety Precautions**

Please read all instructions before attempting to unpack or 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 module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

## • **Revision History**

| <b><i>Version No</i></b> | <b><i>Date</i></b> | <b><i>Summary of Change</i></b> |
|--------------------------|--------------------|---------------------------------|
| <b>V1</b>                | <b>20091028</b>    | <b>Preliminary Release</b>      |
| <b>V2</b>                | <b>20101116</b>    | <b>IR Connection in Pg. 7</b>   |
| <b>VR3</b>               | <b>20120416</b>    | <b>IR Frequency</b>             |

# ***Table of Contents***

|  |          |
|--|----------|
| <b>1. Introduction .....</b>                     | <b>1</b> |
| <b>2. Applications .....</b>                     | <b>1</b> |
| <b>3. Package Contents .....</b>                 | <b>1</b> |
| <b>4. System Requirements .....</b>              | <b>1</b> |
| <b>5. Features .....</b>                         | <b>2</b> |
| <b>6. Specifications .....</b>                   | <b>3</b> |
| <b>7. Operation Controls and Functions .....</b> | <b>4</b> |
| 7.1 Front Panel .....                            | 4        |
| 7.2 Rear Panel .....                             | 4        |
| <b>8. Pin Definitions .....</b>                  | <b>6</b> |
| 8.1 IR Cable Pin Definitions .....               | 6        |
| 8.2 RJ-45 Pin Definitions .....                  | 6        |
| <b>9. Connection and Installation .....</b>      | <b>7</b> |
| <b>10. Acronyms .....</b>                        | <b>9</b> |

## **1. Introduction**

This 1 by 8 CAT6 to HDMI 1.3 splitter allows users to distribute an HDMI source to seven HDMI displays located up to 40 meters away. Providing a way to send a single source to eight different screens, it can also connect to another CAT6 splitter through the CAT6 output port, allowing you to send your single HDMI signal to more than the original seven displays. This unit allows users to transmit HDMI signals via CAT6 without compression over long distances. The CAT6 to HDMI splitter also incorporates functions like EDID, System Reset, Deep color and IR systems.

## **2. Applications**

- Connect to seven HDMI displays, or plug into another CAT6 splitter to reach several more
- Integrate your home entertainment system
- Showroom Display
- Advertising display control
- System installation control

## **3. Package Contents**

- 1 by 8 CAT6 to HDMI Splitter
- 1 x IR Receiver
- 1 x IR Blaster
- 5V DC power supply adaptor
- Power Cord
- Operation Manual

## **4. System Requirements**

- Input device with an HDMI cable
- Output display device(s) with HDMI cables and or CAT6 to HDMI receiver with HDMI cable to display.

## **5. Features**

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant
- Deep color video up to 12bit, 1080p@60Hz
- Allows users to link up to eight displays
- HDCP keysets allows each output to work independently when connected to an HDMI display
- Supports both DVI source and display by using an HDMI to/from DVI adaptor cable
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio transmission (32-192kHz Fs sample rate)
- Has a wide range of PC and HDTV resolutions from VGA to SXGA and 480i to 1080p.
- Selects EDID from TV mode or STD mode (this splitter)
- Deep color setting of 8 bit or 12 bit
- IR remote control
- System Reset function
- CEC Bypass

## 6. Specifications

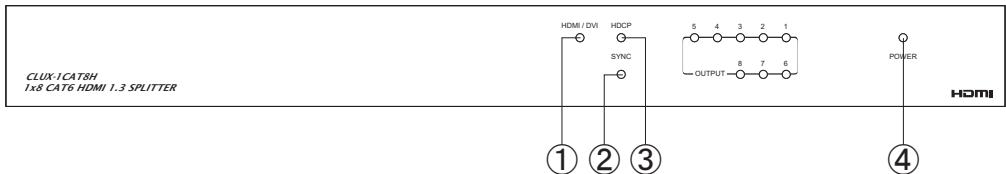
|                       |  |
|-----------------------|--|
| Video Bandwidth       | 2.25MHz/6.75Gbps   |
| Input Ports           | 1 x CAT6 input Video/1 x CAT6 input DDC  |
| Output Ports          | 1 x CAT6 output Video/1 x CAT6 output DDC<br>7 x HDMI female ports (Type A connector)          |
| EDID                  | STD / TV   |
| HDMI Audio Output     | PCM2, 5.1, 7.1, Dolby 5.1, DTS 5.1, DD+, D-TrueHD, DTS-HD                                      |
| HDMI Cable Out        | 1080p 8-bit (15M), 12-bit (6M)   |
| CAT6 Cable In         | 1080p 8-bit (45M), 12-bit (20M)  |
| CAT6 Cable Out        | 1080p 8-bit (45M), 12-bit (20M)  |
| HDMI Resolution       | 480i, ~ 1080p 50/60, 1080p 24, VGA ~ SXGA  |
| IR Frequency          | 30 ~ 50KHz   |
| ESD Protection        | Human body model: $\pm 8\text{kV}$ (air-gap discharge)<br>$\pm 4\text{kV}$ (contact discharge) |
| Power Supply          | 5VDC/5A (US/EU standards, CE/FCC/UL certified)   |
| Dimensions (mm)       | 436(W) x 160(D) x 44(H)  |
| Weight(g)             | 2130   |
| Chassis Material      | Metal  |
| Silkscreen Color      | Black  |
| Power Consumption     | 20W  |
| Operating Temperature | 0°C ~ 40°C / 32°F ~ 104°F  |
| Storage Temperature   | -20°C ~ 60°C / -4°F ~ 140°F  |
| Relative Humidity     | 20~90% RH (non-condensing)   |



## 7. Operation Controls and Functions

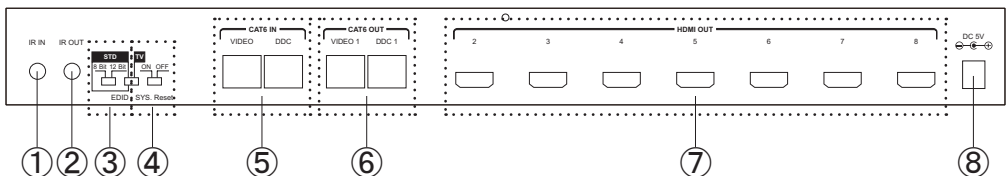
The following sections describe the hardware components of the unit, along with how to install and use the device.

### 7.1 Front Panel



- ① HDMI/DVI indicators: When the LED turns on this means the input source is HDMI and when the input source is DVI the LED will not turn on.
- ② HDCP indicators: When the input source has HDCP protection the HDCP LED will turn on.
- ③ SYNC Indicator: The LED will turn on when the input source's signal is detected by the device.
- ④ Power LED: The LED will turn on when power is on.

### 7.2 Rear Panel



- ① IR IN: This slot is to be connected with the IR receiver cable included in the package and use the source's remote to control source equipment.
- ② OUT: This slot connects with the IR blaster cable included in the package and should be placed it in front of the source for sending and infrared signal.
- ③ EDID Control Switcher: Switch the EDID between STD & TV. Switch to STD to use the built-in EDID or switch to TV to use TV's EDID. Default factory setting is on TV, leave as is when the display is working properly.

#### Note:

1. When EDID is switched to TV, the unit will detect the first HDMI output EDID and record in the unit. If the first detected output source is DVI it will pass on to the next one until the first HDMI source been detected. The detection priority is HDMI v1.3 > HDMI v1.2 > DVI.

2. When EDID is switched to STD the unit will use its built-in EDID which supports:

Video → 1080p 8-bit or 12-bit (max)

Audio → PCM 2CH

3. The EDID selection will only activate when the unit is plugged in and powered on.

- ④ System Reset: When switched "ON", the system will send the internal CEC to the display within 8~10 minutes to force all the displays to switch to HDMI 1 input port. Meanwhile, the source's CEC will not be functioning. When switched "OFF", the system reset function will be stopped. Factory default is "OFF".
- ⑤ Video/DDC input: These slots are for connecting the Video/DDC input to the Video/DDC output of the transmitter unit with CAT6 cables.
- ⑥ Video/DDC output: These slots are for connecting the Video/DDC output to the Video/DDC input of the receiver unit with CAT6 cables.

**Note:**

A. This system was tested with CAT6/23AWG/ cables, so if using cables of another type, the user must be warned that this may result in a lower maximum distance.

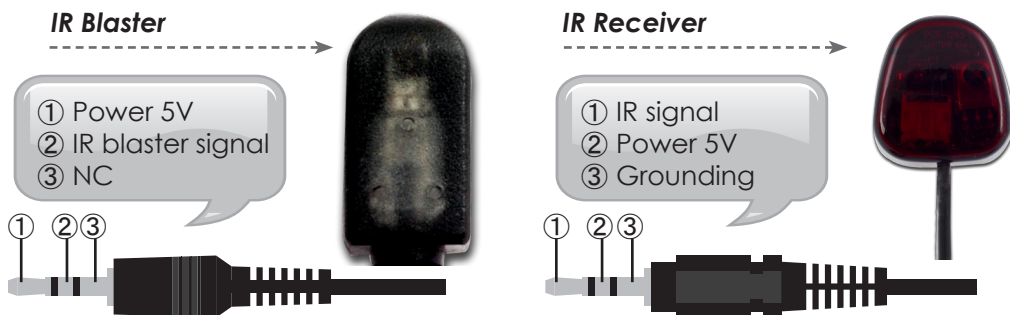
B. Cable distance tested with a PS3 40G, and 37" Samsung 12 bit LCD TV.

C. Figures provided in this manual are reference figures only, actual figures may depend on source and display use with cable specification.

- ⑦ HDMI Outputs 2~8: These slots allow you connect to HDMI displays with HDMI cables. When more than one output is connected, the HDMI outputs will play an identical video signal.
- ⑧ Power: This slot is where you plug in the 5VDC power supply included in the package into the unit and connect the adaptor to an AC outlet.

## 8. Pin Definitions

### 8.1 IR Cable Pin Definitions

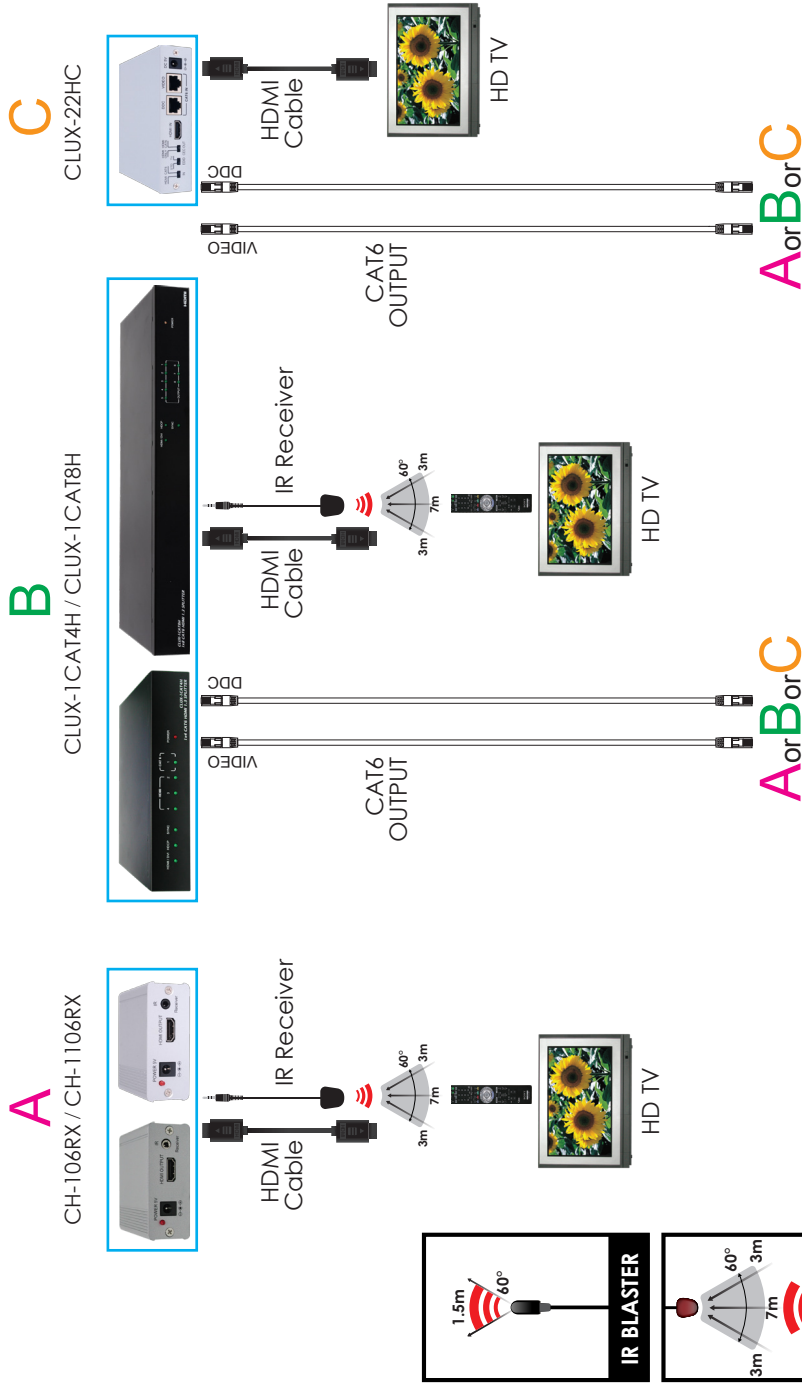


**Note:** The frequency on both IR Receiver & Blaster can support 20~60KHz.

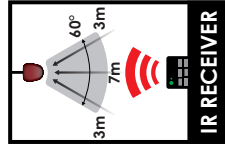
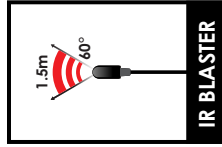
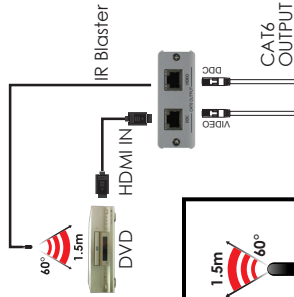
### 8.2 RJ-45 Pin Definitions

| Pin | Video | DDC           |
|-----|-------|---------------|
| 1   | TX2+  | DDC Bus Clock |
| 2   | TX2-  | NC            |
| 3   | TX1+  | DDC Bus Data  |
| 4   | TX0+  | Power 5V      |
| 5   | TX0-  | GND           |
| 6   | TX1-  | IR IN         |
| 7   | TXC+  | HPD           |
| 8   | TXC-  | NC            |

## 9. Connection and Installation

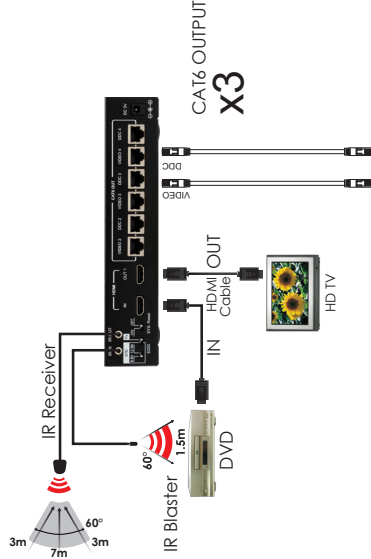


CH-106TX  
CH-1106TX



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CLUX-1H4CAT  
CLUX-1H8CAT

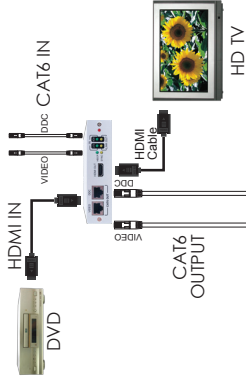


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CLUX-22HC



CH-106TX  
CH-1106TX  
CLUX-1H4CAT  
CLUX-1H8CAT  
CMLUX-4H4CAT  
CLUX-22HC



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# Acronyms

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| <b>Acronym</b> | <b>Complete Term</b>                      |
|----------------|---|
| CAT6           | Category 6 cable                          |
| DVI            | Digital Visual Interface                  |
| EDID           | Extended Display Identification Data      |
| HDCP           | High-Bandwidth Digital Content Protection |
| HDMI           | High-Definition Multimedia Interface      |
| HDTV           | High-Definition Television                |
| IR             | Infrared                                  |
| LPCM           | Linear Pulse Code Modulation              |
| STD            | Standard                                  |
| SYNC           | Synchronize                               |
| UXGA           | Ultra Extended Graphics Array             |
| VGA            | Video Graphics Array                      |





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