



## INSTALLATION MANUAL

### CT-HDMI-EXT HDMI Extender Over CAT-5/5e, CAT-6 Cable

---

#### ***IMPORTANT INFORMATION***

---



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING :** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DO NOT OPEN THE CABINET, REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

## PACKAGE CONTENTS

This package contains:

- One CT-HDMI-EXT Transmitting Unit
- One CT-HDMI-EXT Receiving Unit
- One 5 V 1A Power Adapter
- One CT-HDMI-EXT Installation Manual

## PRODUCT DESCRIPTION

The HDMI 1.3 compliant CT-HDMI-EXT boosts the HDMI video/audio transmission distance up to 196 feet. With two low-cost CAT-5/5e or CAT-6 cables users can easily extend HDMI sources from digital set top boxes, DVD players, PS3, PC and other sources compliant with Transition Minimized Differential Signaling (TMDS) to distant HDMI-enabled televisions.

The CT-HDMI-EXT includes two units: (a) the Transmitter, and (b) the Receiver. The Transmitter is used to capture the input HDMI signals and carries them through two RJ-45 connectors into two low cost CAT-5/5e or CAT-6 cables. The Receiver is responsible for equalizing the sent TMDS multimedia data. The transmission distances between the Transmitter and Receiver can be up to 196 feet at 1080i and 131 feet at 1080p. All transmission distances are measured using Belden CAT-5e cable. With an equalization control switch on the Receiver, users can adjust the equalization strength to the received TMDS signals thereby optimizing the transmission distance between source and destination.

## SPECIFICATIONS

### CT-HDMI-EXT

Specifications (Typical)

<b>PERFORMANCE</b>	
1. Video Bandwidth	2.25 Gbps (HDMI 1.3)
2. Input TMDS Signal	1.2 volts peak-to-peak
3. Input DDC Signal	5 volts peak-to-peak
4. HDMI Connector	19 pin type female connector
5. RJ-45 Connector	2 indication LEDs
<b>MECHANICAL</b>	
1. Dimensions	2.75"(W)" x 2.6" (L) x 1" (H)
2. Weight	0.18 lbs.
3. Power	5V 1A with included power supply

# INSTALLATION AND OPERATION

## NOTE TO SYSTEM INSTALLER

System installer must adhere to Article 820-40 of the NEC that provides guidelines for proper grounding and specifies that the cable ground shall be connected to *the grounding system of the building*, as close to the point of cable entry as practical.

### 1. UNPACKING and HANDLING

Each unit is shipped assembled and factory tested.

Ensure that all accessories are removed from the container before discarding packing material

### 2. MECHANICAL INSPECTION

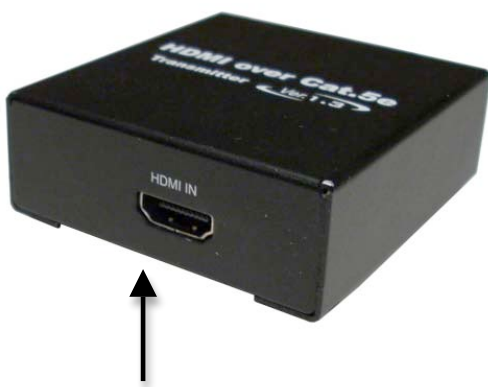
Inspect the front and rear of the equipment for shipping damage. Make sure the equipment is clean, and no connectors are broken, damaged, or loose. If equipment appears to be damaged or defective please contact your distributor or Cabletronix at 1-610-429-1511 for assistance.

### 3. SAFETY

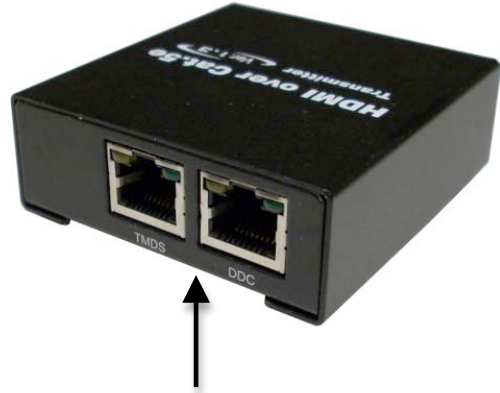
The CT-HDMI-EXT has been tested for conformance to safety regulations and requirements. However, like all electronic equipment the CT-HDMI-EXT should be used with care. Please read and follow the instructions below to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on the units.
- Do not attempt to service this unit yourself except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Place away from objects that might damage the device.
- Place the units on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean the units. Always unplug the power to the devices before cleaning.

**4. PRODUCT DIAGRAM**



**HDMI IN Port**

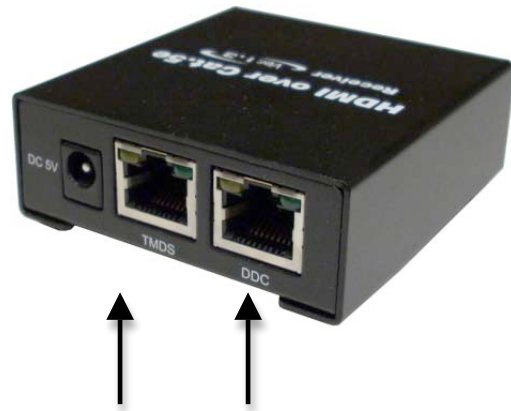


**TMDS and DDC Ports**

**Transmitter Front and Back**



**EQUALIZER HDMI OUT Port**



**POWER Port TMDS and DDC Ports**

**Receiver Front and Back**

## 5. HARDWARE CONNECTIONS and ADJUSTMENT

- a. Connect the audio/video source (e.g., DVD player) to the **Transmitter's HDMI-IN Port** using an HDMI male-to-male cable.
- b. Connect a CAT-5/5e or CAT-6 cable to the **Transmitter's TMDS Port** then connect that same cable to the **Receiver's TMDS Port**.
- c. Connect a CAT-5/5e or CAT-6 cable to the **Transmitter's DDC Port** then connect that same cable to the **Receiver's DDC Port**.
- d. Connect an HDMI display (e.g., television or monitor) to the **Receiver's HDMI-IN Port** using an HDMI male-to-male cable.
- e. Connect the included 5V DC power supply to the **Receiver's Power Port**.
- f. Make adjustments using the **Equalizer Rotary Switch** on the **Receiver** to adjust the equalization strength of the received TMDS signals. If a flickering or blinking image is seen adjustment using the Equalizer is needed.

## 6. TROUBLESHOOTING

- a. Make sure all HDMI and CAT cable connections are tight and not loose.
- b. For transmitting non-HDCP compliant video/audio you can only use one CAT-5/5e or CAT-6 cable for TMDS.
- c. To reduce the interference among the unshielded twisted pairs of wires in the CAT cable you can use shielded CAT-5/5e or shielded CAT-6 cables to improve EMI problems that worsen in long transmission lines.
- d. The quality of CAT cables has a major effect on the usable distance of transmission lines and the quality of the displayed signal. Therefore, the actual transmission length is subject to the quality of the CAT cables being used. Further, for resolutions greater than 1080i or 1280x1024 CAT-6 cable is recommended. Professional grade transmission lines such as Cabletronix CAT-5e and CAT-6 cables should be used.
- e. Further troubleshooting assistance can be found on-line at [www.cabletronix.com](http://www.cabletronix.com) in addition to support from Cabletronix sales engineers at 1-610-429-1511.

This is a notice to inform you that content passing through this device may contain strong language or depictions of violence, sex, or substance abuse. This unit contains no parental control features. Parental discretion is advised.