



HDMI Extender over Single CAT 6 Cable with IR Control

Model 103002



- ◆ EXTEND HDMI AUDIO AND VIDEO CONNECTIONS UP TO 300 FEET
- ◆ UTILIZE EXISTING CAT 6 WIRING FOR AN EASY INSTALLATION
- ◆ ADD UP TO 8 ADDITIONAL RECEIVERS WITH A DEDICATED NETWORK SWITCH
- ◆ PLUG & PLAY WITHOUT ANY SOFTWARE DRIVERS OR SWITCH SETTINGS

User Manual



www.cablematters.com

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1. Introduction

1.1 Introduction

Thank you for your purchase from Cable Matters® Inc., the 'Reliable Connectivity' company. This User Manual provides an overview of the features and installation of your new

HDMI Extender over Single CAT 6 with IR Control

For optimum performance and safety, please read these instructions carefully before connecting, operating or configuring this product. Please keep this manual for future reference.

Please contact **support@cablematters.com** for questions or product support.

1.2 Copyright and Trademarks

Specifications are subject to change without notice. Cable Matters® is a registered trademark or trademark of Cable Matters Inc. All rights reserved.

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to Cable Matters. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by Cable Matters, or an endorsement of the product to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, Cable Matters hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

1.3 FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The device has been evaluated to meet general RF exposure requirement.

2. PRODUCT OVERVIEW

2.1 Package Contents

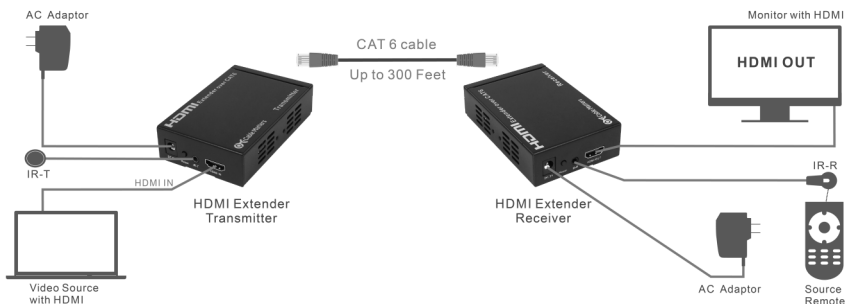
Please check that the following items are contained in the box:

- 1 x HDMI Extender Transmitter
- 1 x HDMI Extender Receiver
- 1 x IR Transmitter Cable – 5 Foot
- 1 x IR Receiver Cable – 5 Foot
- 2 x IR cable adhesive mounting circles
- 2 x AC Power Adapters - 5 Foot
- 2 x High Speed HDMI Cables – 6 Foot
- 4 x L Mounting Brackets
- 16 x Mounting Screws
- 1 x User Manual (PDF available from support@cablematters.com)

Category 6 cabling is recommended (sold separately)

2.2 Product Description

The Cable Matters® HDMI Extender over Single CAT 6 Cable with IR Control is the ideal solution for connecting HD display equipment in remote locations up 300 feet apart. Broadcast HDMI audio and video signals to up to 8 displays with a single Cat 6 cable or through a dedicated (not shared) network switch.



2.3 Product Features

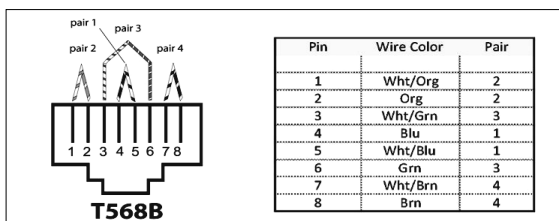
- Extend HDMI audio/video connections up to 300 feet from an HDMI source such as a computer, Blu-ray player, gaming console, or set-top box to an HDMI display such as an HDTV, monitor, or projector over a single Cat 6 UTP/STP cable
- Extender operates up to 125 feet over Cat 5e cabling
- Connect up to 8 additional (sold separately) through a dedicated network switch
- Plug & Play installation automatically discovers HDMI receivers using existing Cat 6 cabling
- Control the video source (player) from the remote display location (monitor) with the included IR cables that use a dedicated DDC channel
- Supports video resolutions of 1080p/1080i/720p/576p/576i/480p/480i at 50/60 Hz and most audio formats
- Compatible with HDCP compliant equipment for transmitting copy protected video
- Compatible with an HDMI switch or HDMI matrix
- Connects equipment with DVI ports for transmitting video only when used with an HDMI to DVI adapter (sold separately)
- HDMI Extenders are AC powered to eliminate voltage drop
- A repeater chipset provides automatic adjustment of signal feedback, equalization, and amplification
- Sturdy metal enclosure provides durability and reduces EMI noise
- Gold-plated connector ports resist corrosion and improve the signal performance
- Surface mountable with included brackets and screws

3. CONNECTION INSTRUCTIONS

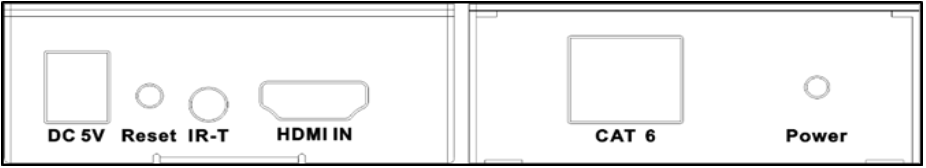
3.1 Installation Checklist

Please review the installation checklist before installing the HDMI adapters. Test an active configuration with the included HDMI cables before installing permanently. Sections 3.2 and 3.3 provide a description of the external connections to the Extenders. Section 3.5 provides Troubleshooting notes.

- Power off the connected HDMI source and destination equipment before connecting the HDMI extenders or any cabling.
- The HDMI Extender boxes can be surface mounted with the included hardware.
- Locate the Extenders within 5 feet of an electrical outlet for power.
- The included HDMI cables are recommended for the best performance. When using other HDMI cables, they should be high quality with bare copper conductors in the shortest length necessary.
- Cat 6 cabling with 24 AWG wire is recommended for the best performance. All cabling or network components connected to the HDMI Extenders should be rated for Cat 6 performance (Operates up to 125 feet over Cat 5e).
- The Extenders are wired with a TIA/EIA 568-B straight-through configuration. The Cat 6 cabling should be wired for 568-B. (see below)
- Cat 6 unshielded twisted pair (UTP) cable is appropriate for short to medium lengths in a low RFI/EMI noise environment. Cat 6 shielded cable (STP) is appropriate for medium to long lengths with potential RF/EM interference.
- The optional IR Transmitter cable (IR-T) must be within 5 feet of the HDMI source. It must be mounted with line of sight of the IR sensor of the video source so it can be controlled remotely. Adhesive mounting circles are included for both cables.
- The IR Receiver (IR-R) cable face must be positioned to have line of sight for a hand-held remote.
- Use an HDMI to DVI adapter (sold separately) to connect to equipment with a DVI port. DVI does not support audio transmission, it must be transmitted separately.



3.2 Transmitter Panel Connections



1. Power off the source equipment and destination display before connecting any cabling.
2. Connect the power adapter to the Transmitter and to an electrical outlet. Check that the green LED is lit.
3. Connect an HDMI cable from the 'HDMI IN' female port on the Transmitter box to the video source female port .
4. Connect the Cat 6 cable to the CAT 6 port on the Transmitter.

Optional: Connect the IR Transmitter cable (IR-T) to the female port of the Extender. It must have line-of-sight with the infrared eye of the video source

3.3 Receiver Panel Connections

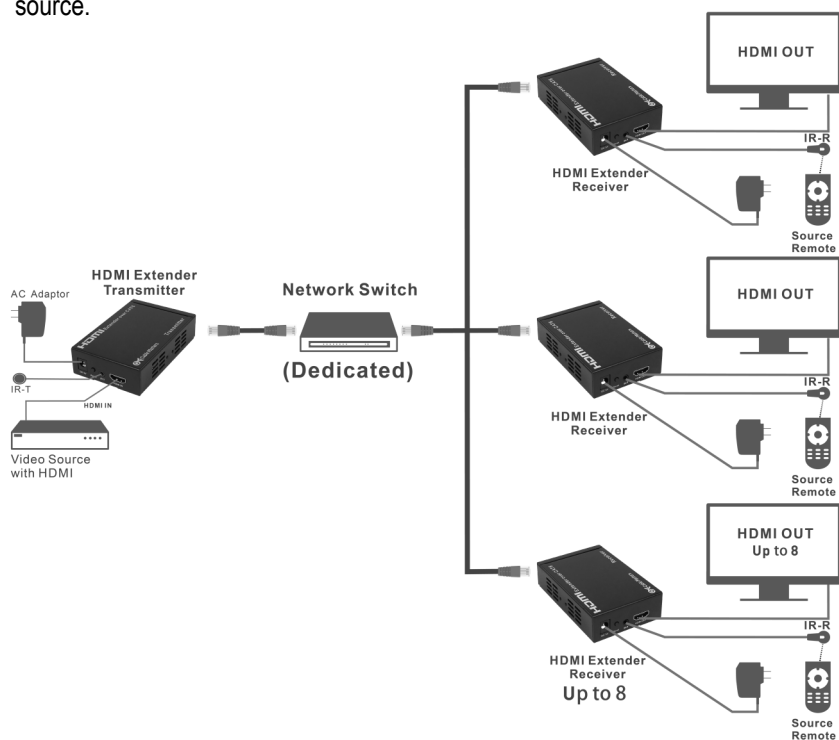


1. Connect the power adapter to the Receiver and to an electrical outlet. Check that the green LED is lit.
2. Connect an HDMI cable from the 'HDMI OUT' female port on the Receiver box to the HDMI destination display female port.
3. Connect the Cat 6 cable to the CAT 6 port on the Receiver.
4. Turn on the power to the source equipment and connected display and wait a few seconds for the signal to synchronize.

Optional: Connect the IR Receiver cable (IR-R) to the female port of the Receiver. Place it in a location that has line-of-sight with a hand-held remote for the video source.

3.4 Connecting Additional Receivers

- HDMI Extender Receivers boxes (Model 103006-R) are sold separately.
- Each receiver box (up to 8) can be connected over existing wiring with a dedicated (not shared) network switch.
- Test each new Receiver box directly with the original Transmitter box before connecting with a network switch and installing permanently.
- Each Receiver box must be located within 5 feet of an electrical outlet
- The Receiver box is surface mountable with included brackets and screws.
- An optional IR Receiver cable is included for controlling the video source. Place it in a location that has line-of-sight with the hand-held remote for the video source.



NOTE: Refer to the user manual of your monitor, TV, or projector for changing the resolution and sound input settings and verifying that audio is supported.

3.5 Troubleshooting Notes

Please review the following notes if you have any problems connecting the Extenders, HDMI equipment, or cabling.

- Check that both Extenders and the connected equipment have power. The green LED power indicators should be lit on both Extender boxes.
- Check that the correct video input is selected on the output display HDMI devices.
- Check the video resolution settings of the video source and output displays to verify that they are compatible.
- Check the audio settings from the HDTV display menu or from the system settings of the computer to verify the audio output destination.
- Test each HDMI cable by connecting it directly to any equipment with HDMI. When using HDMI cables longer than 10 feet, they should be high quality cables.
- If using a dedicated network switch, verify that the switch has power and is able to successfully connect other devices.
- Test the Cat 6 cable connections with a cable tester. Verify that the Cat 6 cable is terminated using the TIA/EIA 568-B wire termination.
- Sharp bending of the CAT 6 cable near the connector may reduce the bandwidth and cause video signal problems.
- The IR Transmitter and Receiver cables must have line of sight with the source IR sensor and the hand-held remote for the video source.
- If the HDMI image is flickering, it may be due to a harsh environment with EMI or RFI interference. Shielded Cat 6 cabling may be required.
- Press the reset button for 10 seconds after making any changes to the connected equipment.

Contact support@cablematters.com with a description of your configuration including the model names of the connected equipment.

4. Technical Specifications Model 103002**Extender Connections (Transmitter and Receiver)**

Audio Video	HDMI 19 pin female
Transmission	RJ45 female
IR Control	3.5mm female
Power	5V DC power input

Protocol Support

I/O Audio/Video Signals	HDMI 1.3b, DVI 1.1, DDC
Category 6 UTP/STP	TCP/IP 568-B
HDCP Compatibility	HDCP 1.1 (w/ compatible equipment)

Audio/Video Resolution Support

Interlace (50&60 Hz)	480i, 576i, 1080i
Progressive (50&60 Hz)	480p, 576p, 720p, 1080p
VESA Displays	Up to 1080p
Audio Support	LCPM, DTS Digital, Dolby Digital

Transmission Characteristics

Category 6 UTP/STP	100m maximum for 1080p @ 60 Hz
Video Amplifier Bandwidth	225 MHz / 6.75 Gbps
IR Interface	Wideband 30 to 60 kHz

Mechanical (Transmitter and Receiver)

Size (L x W x H)	3.9 x 2.6 x 0.98 Inches
Weight	7.4 Ounces

Environmental

Operating Temperature	32°F to 104°F
Relative Humidity	20-90% (non-condensing)

AC Power Supply

US Standard 5V DC@1A, 5 Feet

Regulatory Approvals

Extender Units	FCC, C E, RoHS
Power Supply	UL, cUL, C E, FCC

Warranty

Limited One-Year

User Manual

English Version

NOTE: Specifications are subject to change without notice.

5. Warranty and Support

5.1 Customer Support and Contact Information

Cable Matters offers lifetime technical support as an integral part of our commitment to provide industry leading solutions.

Email us with any questions at [**support@cablematters.com**](mailto:support@cablematters.com).

5.2 Warranty Information

This product is backed by a limited one-year warranty. In addition, Cable Matters warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replaced with equivalent products at our discretion. The warranty covers parts and labor costs only. Cable Matters does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

5.3 Limitation of Liability

In no event shall Cable Matters Inc. (including their officers, directors, employees or agents) be liable for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of, or related to the use of this product exceeding the actual price paid for the product. Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

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