

4K HDMI® Extender over Single Cat5e/6

MVE-AH1E1-42NQ

Installation Manual



The ENFORCER 4K HDMI® Extender over Single Cat5e/6 extends the range of traditional HDMI® cabling methods by using an active transmitter and receiver to send video and audio over a single Cat5e/6. HDMI formats as large as 4K can be transmitted up to 197ft (60m) between the two units with zero signal loss by using integrated circuits in the receiver and transmitter.

- Signal Strength – Active operation ensures that the signal strength will remain strong over the length of the cable.
- Distance – The 4K HDMI® Extender over Single Cat5e/6 can provide a clear HDMI signal up to 197ft (60m) at 4K resolution or 230ft (70m) at 1080p resolution.
- Formats Supported – The 4K HDMI® Extender over Single Cat5e/6 supports both progressive and interlaced formats: 4K@60Hz/4K@30Hz/1080p/1080i/720p/576p/480p/480i.
- Plug and Play – The 4K HDMI® Extender over Single Cat5e/6 comes as a complete set consisting of a transmitter and receiver, power supply, and IR dongles.
- Zero Signal Loss – Integrated circuits in the transmitter and receiver clean, buffer, and amplify the HDMI signal to prevent signal loss and ensure a clear signal regardless of the length of the cable.
- IR – Send IR signals from the monitor to the source for discrete operation of devices.
- Loop out – Supports a local monitor.

Parts List

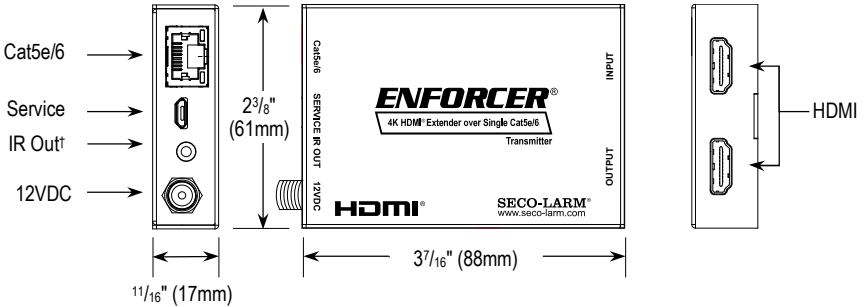
1x Transmitter	1x IR Transmitter (w/ double sided tape)	1x 12VDC power adapter
1x Receiver	1x IR Receiver (w/ double sided tape)	1x Manual

Specifications

Operating voltage	12VDC
Input video signal	3.3V
Input DDC signal	5Vp-p (TTL)
Maximum single link range	4K@60Hz
Deep color	8bit
Video formats supported	High-speed HDMI®, HDCP 2.2
Audio formats supported	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Output video	4K@60Hz
Resolutions supported	4K@60Hz/4K@30Hz/1080p/1080i/720p/576p/576i/480p/480i
Range	4K@60Hz Cat6: Up to 197' (60m); Cat5e: Up to 164' (50m)
	1080p Cat6: Up to 230' (70m); Cat5e: Up to 164' (50m)
Video amplifier connector	18Gbps
Video input connector	HDMI Type A 19-pin female
Video output connector	HDMI Type A 19-pin female
Cat5e/6 wiring standard	T-568B
IR Pass-through frequency	30~60 kHz
Power supply	1A@12VDC (1 Adapter) (2.1mm plug)
ESD protection (human body model)	±8kV (air-gap discharge), ±4kV (contact discharge)
Current draw	Transmitter 85mA@12VDC
	Receiver 125mA@12VDC
Operating humidity	20~90% RH (no condensation)
Operating temperature	32°~104° F (0°~40° C)
Dimensions	3 ⁷ / ₁₆ "x2 ³ / ₈ "x1 ¹ / ₁₆ " (88x61x17 mm)
Weight	5.08-oz (144g) (each)

Overview

Transmitter



*Transmitter and Receiver unit have the same dimensions

†Input/Output are reversed on receiver

Installation

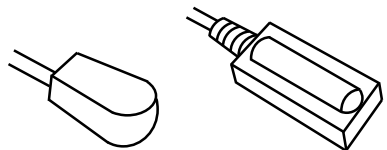
1. Determine the location where the MVE-AH1E1-42NQ units will be wired as well as how much Cat5e/6 cable will be necessary.
2. Connect the transmitter to the HDMI output of the source device.
3. Connect the Cat5e/6 cable to both the receiver and transmitter units.

NOTE: For maximum range use a Cat6 cable.

4. Connect the receiver to the HDMI input of the display device.
5. Connect the 12VDC adapter to either the transmitter or receiver depending on where you want to place it.
6. Determine which device, if any, will be controlled by the remote control. Install the IR transmitter to the IR Tx port, pointing the IR transmitter at the device to be controlled. Install the IR receiver to the IR Rx port of the other device, pointing the IR receiver to where the remote control will be. Point the remote control at the IR receiver when in use.
7. Switch on the HDMI source and display to verify that the system is functioning properly.

IR

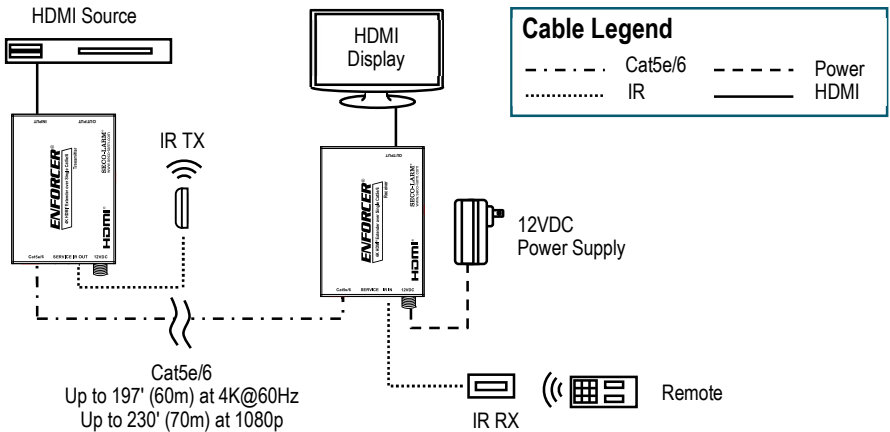
The MVE-AH1E1-42NQ supports IR pass-through signals. This allows for remote operation of the source device from the display location. The MVE-AH1E1-42NQ IR Transmitter unit and IR Receiver unit support signals from 30–60 kHz.



IR Transmitter

IR Receiver

Sample Application



Troubleshooting

HDMI device does not function correctly

- Use T-568B wiring standard
- Make sure the extender is powered
- Make sure the source and the display are powered
- Test the Cat5e/6 cable between the receiver and transmitter and make sure it is functional
- Make sure that there are no problems with the HDMI source, HDMI cables, or HDMI display by plugging the source directly into the display using an HDMI cable

Screen flickering or brief image loss

- Use a higher grade of twisted pair category cable (Cat6 is recommended)
- Switch the source device to a lower HDMI output (i.e., 4K@60Hz to 1080p)
- Restart the handshake process by powering everything down then powering up and connecting each device in succession starting with the HDMI source

FCC COMPLIANCE STATEMENT

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 UNDESIRE OPERATION.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

IMPORTANT: Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or statutes.

IMPORTANT: Users and installers of this product are responsible for ensuring that the installation and configuration of this product complies with all national, state, and local laws and codes. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or codes.

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WARRANTY: This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for one (1) year from the date of sale to the original customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM and the purchaser's exclusive remedy, shall be limited to the replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damage of any kind to the purchaser or anyone else.

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