



HDMI™ EXTENDER

ELE8080

INSTALLATION MANUAL





SAFETY AND NOTICE

The **ELE8080 HDMI™ EXTENDER** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the ELE8080 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- 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.
- Keep objects that might damage the device and assure that the placement of this unit is 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 this unit. Always unplug the power to the device before cleaning.



INTRODUCTION

The **ELE8080 HDMI™ EXTENDER** boosts up your video/audio transmission distance up to 60m (200ft) in HDTV 1080i format. With two low cost Cat-5/5e/6 UTP cables, users can readily extend HDTV sources from DVD players, Blu-ray Disc player, PS3, PC, and any other kinds of sources compliant with TMDS to distant display monitors including HDMI™ or DVI enabled TV sets or LCD PC monitors. This cost effective flexibility makes HDCP compliant DVD players or PS3 transmit high quality video and audio with a greater distance at the minimal cost, when integrating several components apart.

The ELE8080 includes two units: transmitting and receiving units. The transmitting unit is used to transfer the HDMI™ signals input and carry the signals through two low cost Cat-5/5e/6 cables. The receiving unit is responsible for equalizing transferred HDMI™ multimedia data. The transmission distance between the sending and receiving units can be up to 60m (200ft) under HD (720p/1080i) or 40m (130ft) under Full HD (1080p). With an 8-level equalization rotary control switch on the receiving unit, users can adjust the equalization strength to the received HDMI™ signals accordingly, and therefore optimize the transmission distance between HDMI™ source and display.

► Features

- » HDMI 1.3c compliant
- » Extends the transmission distance up to 60m (200ft) from the sources under 1080i or 720p
- » Extends the transmission distance up to 40m (130ft) from the sources under 1080p
- » Provides independent DDC channel, fully HDCP compliant
- » Minimizes the cable skew by adjustable 8-level equalization rotary control switch
- » Pure unaltered uncompressed 7.1ch digital HDMI over UTP cable transmission
- » Allows cascading
- » Wall mounting housing design for easy and robust installation
- » Perfectly integrated with other HDMI over CAT5 series products



The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.

► Package Contents

- » ELE8080 x1 (TX unit & RX unit)
- » Installation manual x1
- » +5V DC power supply unit x1

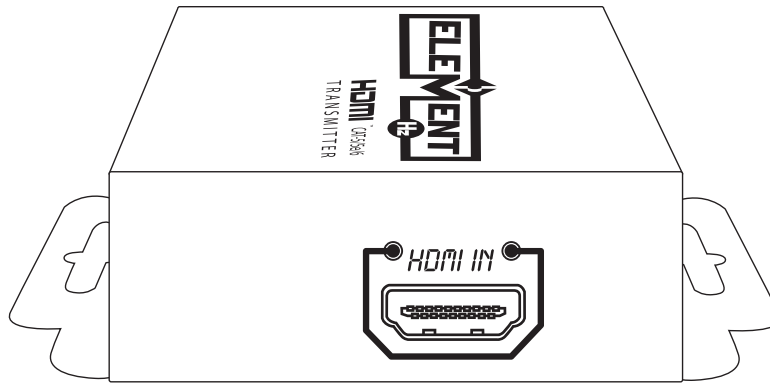
► Specifications

Model Name		ELE8080		ELE8081	
Technical					
Role of usage		Transmitter (TX)	Receiver (RX)	Transmitter (TX)	Receiver (RX)
HDMI compliance		HDMI 1.3c			
HDCP compliance		Yes			
Video bandwidth		Single-link 225MHz (6.75Gbps)			
Video support		480i / 480p / 720p / 1080i / 1080p60 up to 36-bit color			
Transmission (24-bit)		Full HD (1080p)-40m (130ft) [CAT5e] / 50m (165ft) [CAT6] HD (720p/1080i)-50m (165ft) [CAT5e] / 60m (200ft) [CAT6]			
Audio support		Surround sound (up to 7.1ch) or stereo digital audio			
Equalization		8-level digital rotary switch for signal level control at RX			
Input TMDS signal		1.2 Volts (peak-to-peak)			
Input DDC signal		5 Volts (peak-to-peak, TTL)			
ESD protection		[1] Human body — ±19kV (air-gap discharge) & ±12kV (contact discharge) [2] Core chipset — ±8kV			
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]			
Input		1x HDMI	2x RJ-45	1x HDMI	1x RJ-45
Output		2x RJ-45	1x HDMI	1x RJ-45	1x HDMI
HDMI connector		Type A (19-pin female)			
RJ-45 connector		WE/SS 8P8C with 2 LED indicators			
Rotary control switch		None	Signal EQ level	Mode selection	Signal EQ level
Mechanical					
Housing		Metal enclosure			
Dimensions [L x W x H]	Model	3.3" x 2.4" x 1" (85x60x25mm)		3.7" x 2.4" x 1" (93x60x25mm)	
	Package	10.6" x 6.9" x 3.1" (270 x 175 x 80mm)			
Weight	Model	11oz (315g)		14oz (405g)	
	Package	1.5 lbs (685g)		1.8 lbs (815g)	
Fixedness		Wall-mounting case with screws			
Power supply		5V 4A DC		5V 2A DC	
Power consumption		1 Watt (max)			
Operation temperature		32~104°F (0~40°C)			
Storage temperature		-4~140°F (-20~60°C)			
Relative humidity		20~90% RH (no condensation)			

INPUT/OUTPUT PANELS

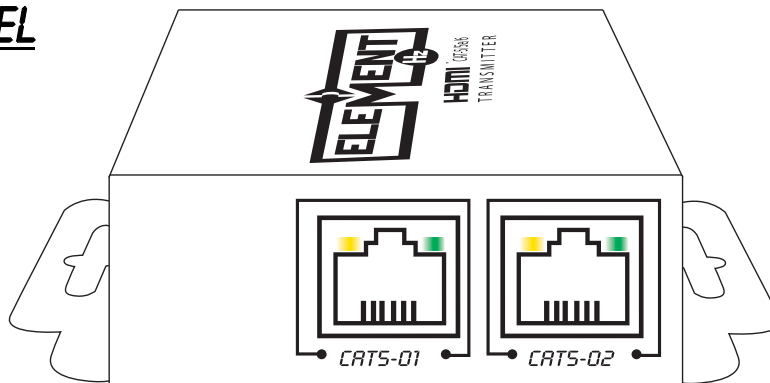
► Transmitting unit (TX)

INPUT PANEL



HDMI IN: Connect to a HDMI source with a HDMI male-male cable.

OUTPUT PANEL

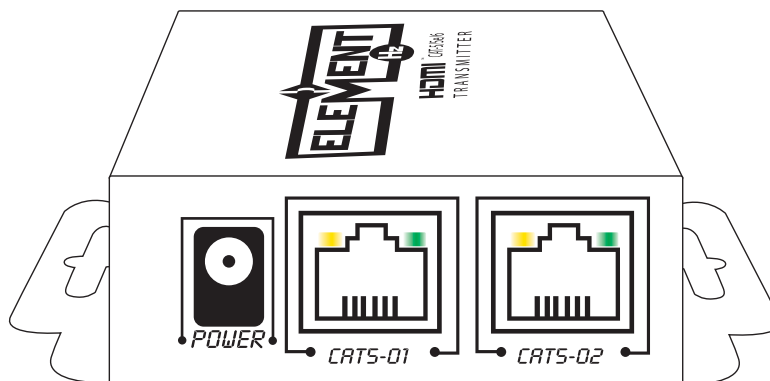


CAT5-01: Connect a Cat-5/5e/6 cable between the CAT5-01 port on TX and RX units.

CAT5-02: Connect a Cat-5/5e/6 cable between the CAT5-01 port on TX and RX units.

► Receiving unit (RX)

INPUT PANEL

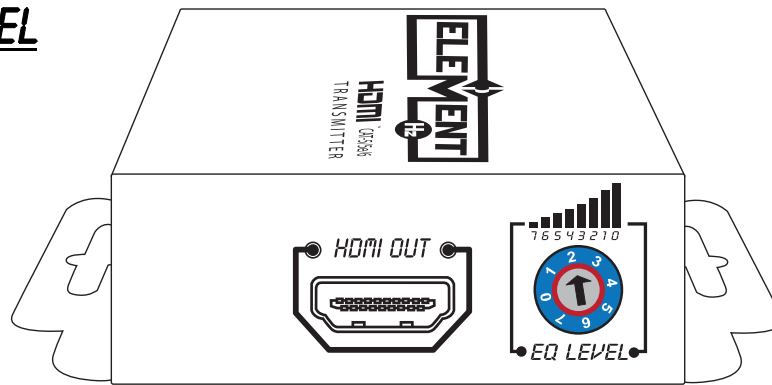


CAT5-01: Connect a Cat-5/5e/6 cable between the CAT5-01 port on TX and RX units.

CAT5-02: Connect a Cat-5/5e/6 cable between the CAT5-01 port on TX and RX units.

POWER: Connect to a +5V DC power supply unit.

OUTPUT PANEL



HDMI OUT: Connect to a HDMI display with a HDMI male-male cable.

EQ LEVEL: Adjust the 8-level equalization control to the received HDMI signals. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance. It is recommended to switch from 7 to 0 to find the optimal visual experience.

INSTALLATION

1. Connect a HDMI source such as a Blu-ray Disc player to the transmitting unit.
2. Connect a HDMI display such as a LCD HDTV to the receiving unit.
3. Connect two Cat-5/5e/6 cables between the transmitting and receiving units via *CAT5-D1* and *CAT5-D2* ports respectively.
4. Make sure the Cat-5/5e/6 cables are tightly connected and not loose.
5. Plug in a +5V DC power supply unit to the power jack of the receiving unit.
6. If flickering or blinking image is seen on the display, try to adjust the rotary control switch to improve the cable skew. 0 stands for the strongest HDMI signal equalizing level for longest possible transmission range while 7 stands for the weakest HDMI signal level for short transmission distance.
7. When adjusting the signal level on the receiving unit, dial the rotary control switch from 7 to 0 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate EQ level setting may cause overpowering issue that would shorten the product life significantly!

NOTICE

1. When adjusting the signal EQ level on the receiving unit, dial the rotary control switch from 7 to 0 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate signal level setting may cause overpowering issues that would shorten the product's life significantly!
2. All HDMI over CAT5 transmission distances are measured using Belden CAT5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C.
3. The transmission length is largely affected by the type of category cables, the type of HDMI sources, and the type of HDMI displays. The testing result shows solid UTP cables (usually in the form of 300m or 1,000ft bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). A solid UTP Cat-5e cable shows longer transmission range than a stranded STP Cat-6 cable. For long extension applications, solid UTP/STP cables are the only viable choice.
4. EIA/TIA-568-B termination (T568B) for category cables is recommended for better performance.
5. To reduce the interference among the unshielded twisted pairs of wires in a category cable, double shielded STP cables are better suited than unshielded UTP cables to improve EMI problems, which is worse in long transmission.
6. Because the quality of the category cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of Cat-5/5e/6 cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.
7. If the HDMI display has multiple HDMI inputs, it is found that the first HDMI input (HDMI input 1) generally can produce better transmission performance among all HDMI inputs.



► Performance Rating Guide


		Type of CAT5/6 cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination	Please use EIA/TIA-568-B termination (T568B) at any time			




Designed & Manufactured by




Headquarters: 9390 Veterans Memorial Parkway, O'Fallon, MO 63366


 (800) 844 – 9555 / (636) 272 – 8025

 (636) 272 – 8214


 retailsupport@skywalker.com


Branch Office: 5701 Fortune Circle S., Suite F, Indianapolis, IN 46241

 (888) 230 – 5341 / (317) 227 – 0084


 (317) 227 – 0091


Branch Office: 2445 South 179th St, New Berlin, WI 53146

 (800) 444 – 9320 / (262) 786 – 5887

 (262) 786 – 9031

Branch Office: 2875 N Lamb, Suite 4, Las Vegas, NV 89115

 (888) 319 – 3554 / (702) 632 – 3413

 (702) 643 – 2379

www.skywalker.com