



USER MANUAL



DV-HXT-1 HDMI to CAT5e /6 EXTENDERS

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LIT1375A

Proprietary Information

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Unpacking

Each HDMI Extender over single Cat package includes the following items:

- DV-HXT-1 Transmitter Unit
- DV-HXT-1 Receiver Unit
- 5V Power Adapter x 2 pcs.
- HDMI Cable x 2 pcs.
- User manual



Cautions:

1. FSR logo is a trademark of FSR Inc.
2. HDMI is a trademark of HDMI licensing, LLC.
3. Specification may be changed without any notice in order to improve the function of the product.
4. The design and specification of the product may be change without any prior notice.

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Description, General Specification

- Sends HDMI signals over long distances using a single Cat cable
- Compact size and low power design
- Uses inexpensive CAT6 and 6e cable
- Simple, low cost installation.

ITEM	DESCRIPTION
Model Name	DV-HXT-1
Input Signal	HDMI
Output Signal	HDMI
Resolution	Cat6e: 164ft (50m) at 1920x 1080p Cat5e: 130ft (40m) at 1920x 1080p
Receptacle	DC Power Jack HDMI 19 Pin Female RJ45
HDCP/EDID Support	Compliant/Save EPROM
Power Consumption	5V Power Adapter(Included) Max 2 W
Dimension	5.1"x 4.13"x 1.18" (130 x 105 x 30 mm)
Weight	TX, RX: 0.79lbs. (0.36Kg) each

Environmental and Reliability Specifications

Recommended environmental conditions for the operation are temperature range of 50°– 104°F (10°C– 40°C), non-condensing humidity levels of 10%– 80%, and altitude ceiling of 9,840 feet (3,000 meters).

Environmental limits for transportation are temperature range of -13°– 122°F (-25°C– 60°C), non-condensing humidity levels of 5%– 95%, and altitude ceiling of 49,200 feet (15,000 meters)

Environmental limits for storage are established at temperature range of -13°– 122°F (-20°C– 45°C), non-condensing humidity levels of 5%– 95%, and altitude ceiling of 9,840 feet (3,000 meters)

The HDMI Cat extender is expected to function for more than 50,000 hours of use at a 90% confidence level. The device is tested according to the identical standards for testing LCD monitors.

Main Features

High Quality Picture - No Signal Loss and Adjustment Free

Our DV-HXT-1 is built to deliver the highest quality picture preserving the native resolutions of the video sources without signal loss. The digital signal level is self-adjusting.

Signal Amplification for signal reliability and long distance transmission.

Cutting edge FSR design transmits high quality video signals over long distances.

Compact and Practical Design

The DV-HXT-1's compact design can be used in tight spaces.

HDCP (High-bandwidth Digital Content Protection)

DV-HXT-1 fully supports HDCP
Currently every digital visual product sends high resolution signal with HDCP contents.

Compliance to DDWG Ver 1.0

DV-HXT-1 plus fully supports the DDWG Ver.1.0

Built in EDID Read and save functions

Built in Extended Display Identification Data (EDID) read function, with Electrically Erase Programmable Read-Only Memory (EEPROM), to save display EDID data while supporting any monitor with maximum resolutions. The unit also supports user set up of non-Video Electronics Standards Association (VESA) resolution, including projectors with unique resolutions.

EDID [Extended Display Identification Data]

EDID is defined by a standard published by the Video Electronics Standards Association (VESA). The EDID includes manufacturer name, product type, phosphor or filter type, timings supported by the display, display size, luminance data and (for digital displays only) pixel mapping data.

Video Connection

- Step 1: Ensure the digital video/audio source and display are turned off.
- Step 2: Manually set the rotary switch to the native resolution of the display if it is different than the default resolution of 1920x1080P 2ch Audio (Default setting of “D” on rotary switch).
- NOTE: If the native resolution of your display is not listed in the Mode table, follow the steps for “EDID data saving (Set Mode 0)” below.
- Step 2: Connect the HDMI cable and CAT cable to DV-HXT-1 transmitter and receiver.
- Step 3: Connect the power adapter to the DV-HXT-1 transmitter and receiver.
- Step 4: Power up the display. Set the display to the correct DVI or HDMI Source input.
- Step 5: Power up the source.

EDID data saving (Set Mode 0)

For Displays with unique resolutions not listed in the table below or if the “Video Connection” steps above do not produce a usable image follow this procedure:

NOTE: The HDMI input connector on the DV-HXT-1 Transmitter has a dual function. It is normally used as a source input but is also used to save EDID information from the Display by following the steps below.

- Step 1: Set rotary switch to mode 0.
- Step 2: Connect HDMI **Input** port on DV-HXT-1 **Transmitter (TX)** unit to the display.
- Step 3: Power up the display and DV-HXT-1 **Transmitter** unit.
- Step 4: Push the EDID Switch for 2-4 seconds at DV-HXT-1 **Transmitter** unit.
- Step 5: The EDID green LED will illuminate for about 2-3 seconds if the EDID was saved correctly.

If the EDID was not saved correctly, the EDID LED will blink 6 times. The default EDID when it is shipped is 1080p (1920x1080 @60Hz, 2ch audio). Saving EDID will display the best resolution between the video source and the display.

MODE NUMBER	EDID DATA
0	EXTERNAL(EDID data save mode)
1	800x600
2	1024x768
3	1280x768
4	1280x1024
5	1360x768
6	1366x768
7	1400x1050
8	1600x900
9	1600x1200
A	1680x1050
B	1920x1200
C	1280x720P/1920x1080i 2ch audio
D	1920x1080P 2ch Audio (Default set)
E	1920x1080P 5ch audio
F	RESERVED

When changing EDID mode, unplug the power cable at the Transmitter.

UTP Cat Cable terminations

TIA/EIA-568-B,

<Digital RGB>

TX (A): 1----- -> RX: 1(Orange/White)

TX (A): 2----- -> RX: 2(Orange)

TX (B): 3 -----> RX: 3(Green/White)

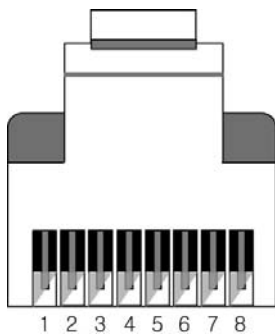
TX (B): 4 -----> RX: 4(Blue)

TX (C): 5 -----> RX: 5(Blue/White)

TX (C): 6 -----> RX: 6(Green)

TX (D): 7----- -> RX: 7(Brown/White)

TX (D): 8----- -> RX: 8(Brown)



Pin	TIA/EIA-568B	Signal	
	Wire color	Digital RGB	DDC
1	Orange/ White	TMDS Data2+	+5V
2	Orange	TMDS Data2-	HPD
3	Green/ White	TMDS Data1+	Ground
4	Blue	TMDS Data0+	CEC
5	Blue/ White	TMDS Data0-	Ground
6	Green	TMDS Data1-	DDC data
7	Brown/ White	TMDS Clock+	Ground
8	Brown	TMDS Clock-	DDC Clk

- We do not recommend punch down terminations.
- We do not recommend using STP (shielded twisted pair) cable. For high resolution (above 1080p or WUXGA), using CAT6E 550MHz unshielded solid core by Liberty Wire & Cable is recommended.

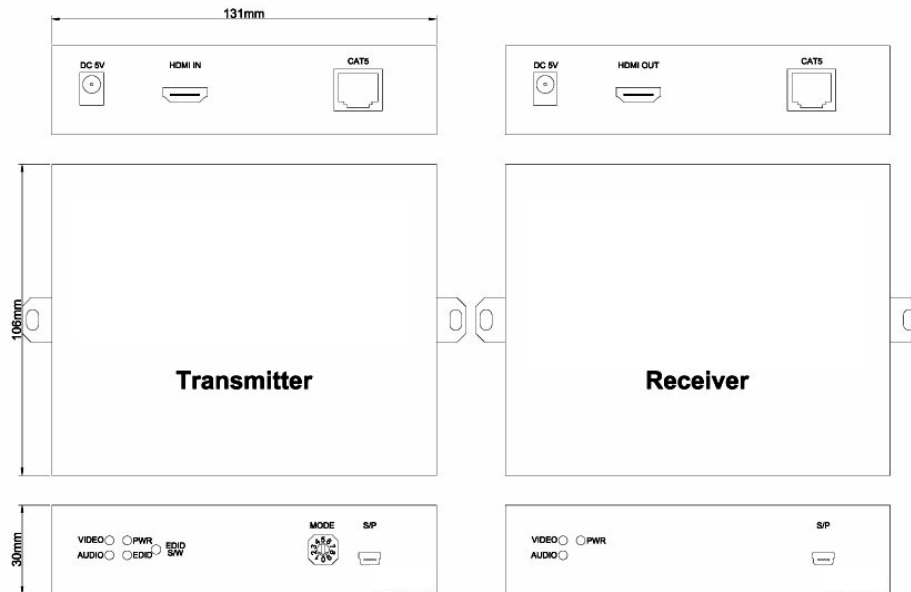
Troubleshooting

The HDMI single Cat Extender is designed for years of trouble free service. Please reference the troubleshooting chart below if experiencing issues with the device.

Problem	Solution
No picture(or signal)	<ol style="list-style-type: none">1. Ensure the power LED is illuminated.2. Ensure the Video LED is illuminated.3. Check if the TX or RX module is properly connected to sources or displays.4. Check if the CAT cable connector is properly terminated using the TIA/EIA-568B Standard5. Set the EDID mode correctly6. Power cycle the source device after the connection of CAT cables.7. Turn off 3D and 1080p@24p output at Blue-ray Player
Poor picture or noise	<ol style="list-style-type: none">1. Restart the system2. Disconnect DC power adapter, disconnect HDMI cable, reconnect the cables and power on.3. Check for proper grounding of HDMI Devices4. Make sure that selected EDID mode is the same as the display
No Sound	<ol style="list-style-type: none">1. Make sure that saved EDID data is the same as that of display or AV receiver2. Ensure the audio LED is illuminated.

Mechanical Specification

Dimension: 5.1" x 4.13" x 1.18" (130 x 105 x 30 mm)



Connectors:

HDMI In:	HDMI digital Input port
HDMI Out:	HDMI digital Output port
RJ-45	RJ-45 connection port
DC-5V:	Power supply input port

Indicators and Controls:

POWER LED:	Power on/off state
EDID LED:	Displays the status of EDID appropriate operation.
EDID S/W:	EDID mode select switch
VIDEO LED:	Displays the status of video signals. Video is present when the LED is lit.
AUDIO LED:	Displays the status of audio signals. Audio is present when the LED is lit.

Technical Specification

Data transmission speed:	2.25 Gbps (Single Link)
Digital Video Bandwidth:	25–165 MHz
Resolution:	Up to WUXGA (1920x1200 @60Hz)
HDMI Version	1.3a Compliance with 36bit deep color
Input/output signal standard:	TMDS, Digital RGB, Stereo audio
Maximum length:1920x1080p	Cat6e UTP 550MHz 164ft (50m) Cat5e: 130ft (40m)
Transmitter connector:	HDMI Female 19P / RJ45
Receiver connector:	HDMI Female19P / RJ45
Power consumption:	TX: 2 Watts (Max), RX: 2.5 Watts (Max)
Power supply:	DC 5V, 2A (X2)

Note: Power adapters must connect to both TX and RX units

Caution: Do not connect with Internet or network devices

Limited Warranty

The DV-HXT-1 is warranted against failures due to defective parts or faulty workmanship for a period of three years after delivery to the original owner. During this period, FSR will make any necessary repairs or replace the unit without charge for parts or labor. Shipping charges to the factory or repair station must be prepaid by the owner, return-shipping charges (via UPS Ground) will be paid by FSR.

This warranty applies only to the original owner and is not transferable. In addition, it does not apply to repairs done by other than the FSR factory or Authorized Repair Stations.

This warranty shall be cancelable by FSR at its sole discretion if the unit has been subjected to physical abuse or has been modified in any way without written authorization from FSR. FSR's liability under this warranty is limited to repair or replacement of the defective unit.

FSR will not be responsible for incidental or consequential damages resulting from the use or misuse of its products. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warranty claims should be accompanied by a copy of the original purchase invoice showing the purchase date (if a Warranty Registration Card was mailed in at the time of purchase, this is not necessary). Before returning any equipment for repair, please read the important information on service below.

SERVICE

Before returning any equipment for repair, please be sure that it is adequately packed and cushioned against damage in shipment, and that it is insured. We suggest that you save the original packaging and use it to ship the product for servicing. Also, please enclose a note giving your name, address, phone number and a description of the problem.

NOTE: all equipment being returned for repair must have a Return authorization (RMA) Number. To get a RMA Number, please call the FSR Service Department (1-800-332-FSR1). Please display your RMA Number prominently on the front of all packages.

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