xantech®

HDMIEXTEND
Point-to-Point HDMI/CAT-5 Extender
User Manual

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INTRODUCTION

The HDMIEXTEND extends your HDTV display up to 200 feet away from your HDTV source using two CAT-5 cables. It is equipped with HDMI™ (high definition multimedia interface) connectors and is capable of supporting DVI (digital visual interface) equipment when used with a HDMI to DVI Adapter, providing greater flexibility and options when integrating several home theater components.

HOW IT WORKS

The HDMIEXTEND transmitter unit sits next to your computer, set-top box or DVD player source. Cables supplied with the HDMIEXTEND connect your DVI or HDMI™ source to the transmitter unit. The HDMIEXTEND receiver unit sits next to your HDTV display - up to 200 feet away. The display plugs into the back of the HDMIEXTEND.
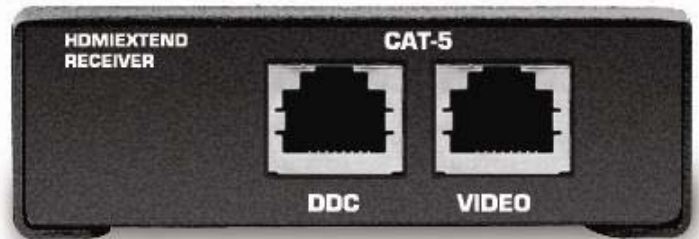
The HDMIEXTEND system consists of:
(1) HDMIEXTEND transmitter
(1) HDMIEXTEND receiver
(1) 6 ft HDMI to HDMI Cable M-M
(2) HDMIEXTEND wall-mount adaptor plates
(2) 5VDC power supply
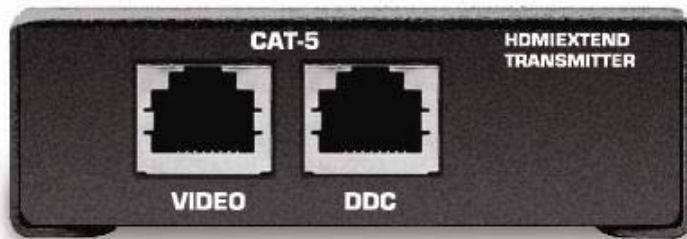
CAT-5 carries   Cat-5 carries
TMDS signals   DDC/HDCP signals

CAT-5 carries   Cat-5 carries
TMDS signals   DDC/HDCP signals

Connects to 5 volt   HDMI input connects to
power supply   HDMI source

Power Indicator

HDMI input connects to   Connects to 5 volt
HDMI source   power supply

Power Indicator

INSTRUCTIONS

1) Connect your display to the HDMIEXTEND receiver unit
2) Connect your source to the HDMIEXTEND transmitter unit
3) Connect your CAT-5 cables between the transmitter and the receiver
4) Plug the 5V power supply into the HDMIEXTEND transmitter and receiver unit

You should now have picture. If you do not see a picture, try unplugging and replugging the HDMI input on the HDMI sender unit. Make sure your CAT-5 cables are not crossover type and have been properly crimped and tested. Cycle the power on the unit.

* If problems persist try adjusting the Dip Switches by following the Dip Switch Usage Guide.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE HDMIEXTEND
- The HDMIEXTEND transmitter and receiver is housed in a metal box for better RF shielding.
- The CAT-5 cable should not exceed 200 feet.
- If you do not need DDC or HDCP data you can use a single CAT-5 cable for the video only. The DDC will not be connected. (For further information, see our Technology Terminology section) If HDCP is required, both CAT-5 cables must be used between the transmitter and receiver units.
- CAT6 cable is suitable for high resolutions at 50 meters.

SERVICE SWITCH USAGE GUIDE

The transmitter and receiver of the HDMIEXTEND products both contain a set of service switches (also called dip switches) located underneath each unit. Peeling back the silver sticker will reveal the service switch bay. These service switches are used to boost and equalize the signal to best match the conditions in your setup.

(*Note: Adjustments should be done with sources and display on. Switches 3 and 4 are not used.)

Transmitter Dip Switch Settings		
Setting	**Switch 1**	**Switch 2**
No Boost	OFF	ON
Normal Boost (Default)	OFF	OFF
Strong Boost	ON	OFF
Undefined	ON	ON

Receiver Dip Switch Settings		
Setting	**Switch 1**	**Switch 2**
No EQ (Default)	OFF	OFF
EQ Setting 2	ON	OFF
EQ Setting 3	OFF	ON
Maximum EQ	ON	ON

Adjustment Guidelines:

1) Strong boost should not be used on stranded cables. Strong boosting will cause pixels or no picture on these cables.

2) Using the wrong settings will not damage the units; it will either produce no image or a noisy image.

3) To eliminate the possibility of cross talk and interference, cables must be terminated with 568B scheduling.

RJ-45 Jack

1	White/Orange
2	Orange
3	White/Green
4	Blue
5	White/Blue
6	Green
7	White/Brown
8	Brown

RJ-45 Jack

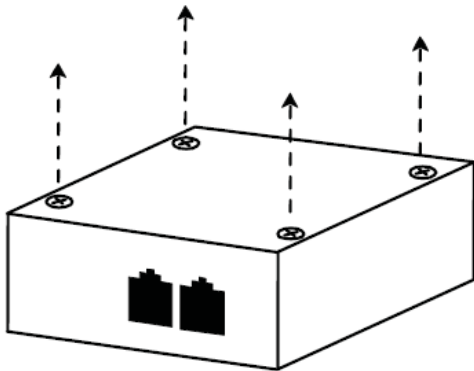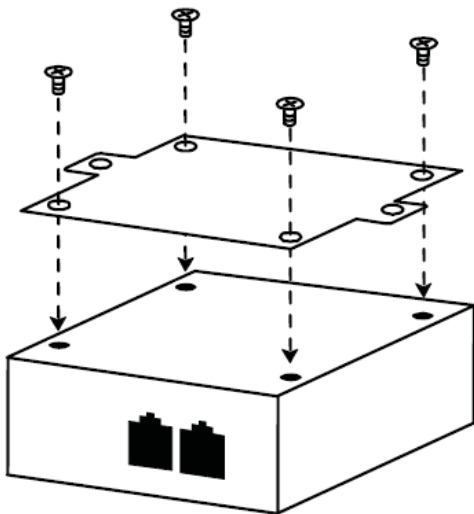| 1 |
| 2 |
| 3 |
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Mounting Plate Installation
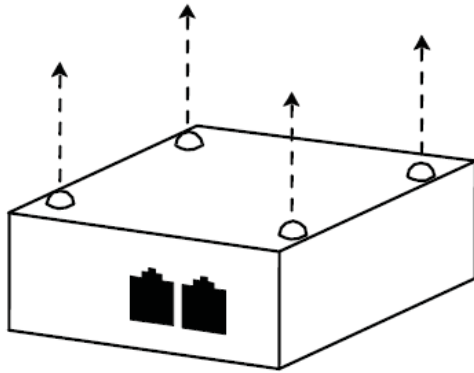
1

Remove the rubber feet covering the screws off the bottom of the unit.

2

Remove the screws.

3

Line up the mounting plates and screw it on to the unit.

FREQUENTLY ASKED QUESTIONS

What kind of CAT-5e cable should I be using?
Solid core CAT-5e cable rated at 350 MHz and terminated in 568a or 568b is the minimum requirement. For resolutions greater than 1280x1024 or 1080i, Xantech Corporation recommends solid CAT-6 cables.

I'm getting no video on the screens, what can I check?
First thing to check is make sure that the video CAT5 is linked to the other video CAT5 port and the same with the DDC ports. Try removing the power supply from the receiver side, if the power-light turns off then you have your CAT-5 cables crossed. In some setups with grounding issues you will not get a picture with the receiver powered. Test to make sure the units are working with short CAT-5e cables 15-20 feet. You can also make sure you have the correct boost setting configured (refer to page 5).

Occasionally the picture blanks out, how do I fix this?
Flickering or a blinking image is the result of a loss of sync between the display and the source. Try lowering the resolution to see if that helps, if it does, the CAT-5 cables you are using are unable to handle the bandwidth of the higher resolution and thus you are losing sync. Try a shielded CAT-6 cable on the video line to reduce interference.
You can also try adjusting the service switches. Usually this is caused by EMI and a shielded CAT-6 with metal RJ-45 connectors with the drain wire soldered to the connectors will resolve the issue. Please refer to the service switch guide on page 5 for the different combinations.

Why is there a green or pink tint to my picture?
A tint of green or pink in the picture is a result of incorrect colorspace being transmitted. This can be resolved by recycling power on your devices including the extender. If this does not help, the DDC data containing the colorspace is not being transmitted correctly due to loss in the CAT5 cable, try replacing the DDC cable.

TECHNOLOGY TERMINIATION

CAT-5
Category 5 cable, commonly known as Cat 5, is an unshielded twisted pair type cable designed for high signal integrity. The actual standard defines specific electrical properties of the wire, but it is most commonly known as being rated for its Ethernet capability of 100 Mbit/s. Its specific standard designation is EIA/TIA-568. Cat 5 cable typically has three twists per inch of each twisted pair of 24 gauge copper wires within the cable.

CAT-5e
Similar to Cat 5 cable, but is enhanced to support speeds of up to 1000 megabits per second.

DDC
Short form for Display Data Channel. It is a VESA standard for communication between a monitor and a video adapter. Using DDC, a monitor can inform the video card about its properties, such as maximum resolution and color depth. The video card can then use this information to ensure that the user is presented with valid options for configuring the display.

DDWG
Digital Display Working Group DDWG are the creators of the HDMI specification.

HDMI
The High-Definition Multi-media Interface (HDMI) is an industry-supported, uncompressed, all-digital audio/video interface. HDMI provides an interface between any compatible digital audio/video source, such as a set-top box, DVD player, and A/V receiver and a compatible digital audio and/or video monitor, such as a digital television (DTV).

HDCP
High-Bandwidth Digital Content Protection. Created by Intel, HDCP is used with HDTV signals over HDMI and HDMI connections and on D-Theater D-VHS recordings to prevent unauthorized duplication of copy written material.

HDTV
High-Definition Television. The high-resolution subset of our DTV system. The ATSC defines HDTV as a 16:9 image with twice the horizontal and vertical resolution of our existing system, accompanied by 5.1 channels of Dolby Digital audio. The CEA defines HDTV as an image with 720 progressive or 1080 interlaced active (top to bottom) scan lines. 1280:720p and 1920:1080i are typically accepted as high-definition scan rates.

VESA
Video Electronic Standards Association, a consortium of manufacturers formed to establish and maintain industry wide standards for video cards and monitors. VESA was instrumental in the introduction of the Super VGA and Extended VGA video graphics standards with a refresh rate of 70 Hz, minimizing flicker and helping to reduce user eyestrain and fatigue.

SPECIFICATIONS

Video Amplifier Bandwidth	1.65 Gbps
Input Video Signal	1.2 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Single Link Range	1080p / 1920 x 1200
HDMI Connector Type	Type A 19 pin female
Link Connector	RJ-45
Power Consumption	20 watts (max)
Power Supply	5VDC
Dimensions	3.4" W x 1.25" H x 3.25" D
Shipping Weight	3 lbs.

Technical Support

Hours: 7AM-5PM Pacific
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   press 2 for Tech Support
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