



HOME  
THEATER

✓1080p

FullHD

3D  
READY

HDMI®  
HIGH-DEFINITION MULTIMEDIA INTERFACE



## HDMI® Extenders over UTP

Vanco Part Numbers

280723 (164ft)

280713 (100ft)

280725 (164ft wall plate)

280715 (100ft wall plate)

### Technical Support

[www.vanco1.com](http://www.vanco1.com) • [info@vanco1.com](mailto:info@vanco1.com) • 800-626-6445

## DEAR CUSTOMER

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

This product is 100% inspected and tested in the United States to verify HDMI performance parameters.

## WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.
2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
3. To prevent risk of electrical shock or fire hazard, due to overheating, do not obstruct unit's ventilation openings.
4. Do not install near any source of heat, including other units that may produce heat.
5. Do not place unit near flames.
6. Only clean unit with a dry cloth.
7. Unplug unit during lightening storms, or when not used for an extended period of time. A surge protector is strongly recommended.
8. Protect the power cord from being walked on or pinched, particularly at the plugs.
9. Use unit only with accessories specified by the manufacturer.
10. Refer all servicing to qualified personnel.

## CAUTION

HDMI is a very complex technology requiring continuous authentication of the signal and the same video resolution and audio settings on all electronic equipment in the system. When there are multiple sources and displays, the video resolution and audio setting on all connected units must be adjusted to correspond with that of the display having the lowest video and audio capability.

## FEATURES

### *Super IR Control*

These active extenders units have the capability of transporting IR signals over the UTP cables. These extenders can control the source from the display. This is accomplished by using an optional IR Receiver pigtail (Part # 280721) attached to the receiver pointing away from the display and the IR Transmitter pigtail (Part # 280720) attached to the sender and pointed at the source.

\*\*\* These products are only compatible with Vanco's Super HDMI IR Accessories.

### *Over-Current Over-Voltage Protection*

The circuit boards are equipped with both over-current and over-voltage protection and automatically power down if these are encountered. The power circuit will restore itself automatically once the excessive current or voltage conditions are rectified.

### *HDMI® Extender over 2 UTP Cables with IR Control (50m/164 ft)*

#### *Part # 280723*

- Allows HDMI Audio/Video Signals to be transmitted over Dual Cat5e/Cat6 Cables
- Transmission Range: Extends 1080p resolutions up to 164 ft over Cat5e Cables; Extends 1080p resolutions up to 180 ft over Cat6 Cables
- High Speed Chip Set that Supports 3D, 4K x 2K
- Full HD1080P
- HDCP Compliant
- Super IR control system, IR transport channel can be forward or backward. IR transmitters and receivers are needed (Part #s 280720, 280721)
- Supports Digital Audio Format, DTS-HD/Dolby-True HD/LPCM7.1/AC3/DTS/DSD
- Unique Circuit Design Allows for Protection against High Voltage and Peak Currents
- Tested for Compatibility with all leading HD Video brands
- Tested with 7.1 Home Theater Systems
- Shelf or Wall Mountable
- 5V DC, UL Listed Power Supply for Receiver
- Dimensions: 1.25"W x .875"H x 3.25"D

## **HDMI® Extender over 2 UTP Cables with IR Control (30m/100 ft)**

### **Part # 280713**

- Allows HDMI Audio/Video Signals to be transmitted over Dual Cat5e/Cat6 Cables
- Transmission Range: Extends 1080p resolutions up to 100 ft over Cat5e Cables; Extends 1080p resolutions up to 110 ft over Cat6 Cables
- High Speed Chip Set that Supports 3D, 4K x 2K
- Full HD1080P
- HDCP Compliant
- Super IR control system, IR transport channel can be forward or backward. IR transmitters and receivers are needed (Part #s 280720, 280721)
- Supports Digital Audio Format, DTS-HD/Dolby-True HD/LPCM7.1/AC3/DTS/DSD
- Unique Circuit Design Allows for Protection against High Voltage and Peak Currents
- Tested for Compatibility with all leading HD Video brands
- Tested with 7.1 Home Theater Systems
- Shelf or Wall Mountable
- No power supply – Requires Source that Provides 5V DC HDMI Signal
- Dimensions: 1.25"W x .875"H x 3.25"D

## **HDMI® Wall Plate Extender over 2 UTP Cables with IR Control (50m/164 ft)**

### **Part # 280725**

- Allows HDMI Audio/Video Signals to be transmitted over Dual Cat5e/Cat6 Cables
- Transmission Range: Extends 1080p resolutions up to 164 ft over Cat5e Cables; Extends 1080p resolutions up to 180 ft over Cat6 Cables
- High Speed Chip Set that Supports 3D, 4K x 2K
- Full HD1080P
- HDCP Compliant
- Super IR control system, IR transport channel can be forward or backward. IR transmitters and receivers are needed (Part #s 280720, 280721)
- Supports Digital Audio Format, DTS-HD/Dolby-True HD/LPCM7.1/AC3/DTS/DSD
- Unique Circuit Design Allows for Protection against High Voltage and Peak Currents
- Tested for Compatibility with all leading HD Video brands
- Tested with 7.1 Home Theater Systems
- 5V DC, UL Listed Power Supply for Receiver
- Dimensions: 2.75"W x 4.5"H x 1.25"D
- Fits single-gang box

# HDMI® Wall Plate Extender over 2 UTP Cables with IR Control (30m/100 ft)

Part # 280715

- Allows HDMI Audio/Video Signals to be transmitted over Dual Cat5e/Cat6 Cables
- Transmission Range: Extends 1080p resolutions up to 100 ft over Cat5e Cables; Extends 1080p resolutions up to 110 ft over Cat6 Cables
- High Speed Chip Set that Supports 3D, 4K x 2K
- Full HD1080P
- HDCP Compliant
- Super IR control system, IR transport channel can be forward or backward. IR transmitters and receivers are needed (Part #s 280720, 280721)
- Supports Digital Audio Format, DTS-HD/Dolby-True HD/LPCM7.1/AC3/DTS/DSD
- Unique Circuit Design Allows for Protection against High Voltage and Peak Currents
- Tested for Compatibility with all leading HD Video brands
- Tested with 7.1 Home Theater Systems
- No power supply – Requires Source that Provides 5V DC HDMI Signal
- Dimensions: 2.75"W x 4.5"H x 1.25"D
- Fits single-gang box

## SPECIFICATIONS

HDMI version .....	HDMI v1.4 with 3D
HDCP version .....	HDCP1.2
Support HDMI resolution .....	1080P/1080i/720P/576i/480P/480i
Support video color bit .....	deep color 24bit/36bit
Support Audio Format .....	LPCM/Dolby-AC3/DTS7.1/DSD
Input Video signal .....	5.0Volts/P-P
Output cable distance.....	16 ft 24AWG Cable
Input cable distance .....	16 ft 24AWG Cable
Data transfer speed.....	6.75Gbps
Operating Humidity range .....	5 to 90%RH (No Condensation)
Operating Temperature range.....	-15 to +55 degrees C; 5 to 131 Degrees F
Power adapter format .....	Input AC (50Hz.60Hz)100-240V
Power Supply .....	DC 5V for 280723 and 280725

## PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- One HDMI Transmitter (Sender)
- One HDMI Receiver
- Power Supply (not required for the 30 meter wall-plate extender)
- Product Manual

## CONNECT AND OPERATE

Connect the signal source such as Blu-Ray Player, Play Station 3, audio/video receiver, cable or satellite receivers and computers equipped with HDMI output interfaces with a short high-speed HDMI cable to the HDMI Transmitter input. HDMI cable length should not exceed 16 ft.

Connect the HDMI Transmitter output RJ-45 ports using dual-runs of Cat 5e or Cat 6 UTP cables to included Receiver, which does not require a power supply. It is strongly recommended that factory terminated cable assemblies be used and their length shall not exceed 100 ft of Cat 5e and 110 ft of Cat 6 for the 30 m extenders and 164 ft and 180 ft respectively for the 50 m extenders..

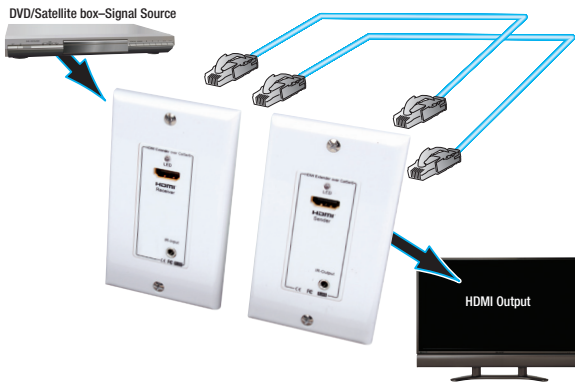
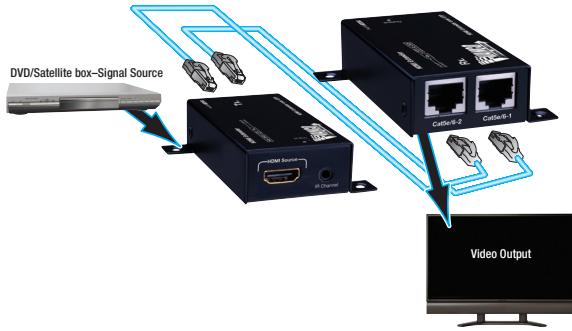
Connect the HDMI output from the Receiver to high-definition display devices such as HD-LCD, HD-DLP and HD projectors with HDMI input interfaces. Use high-speed HDMI cables that are recommended for the distances that are required for each connection. HDMI cable length should not exceed 16 ft.

The Receivers are powered by an external power supply which is included. Connect power first to the source, then to the Receiver and then to each HD TV or projector.

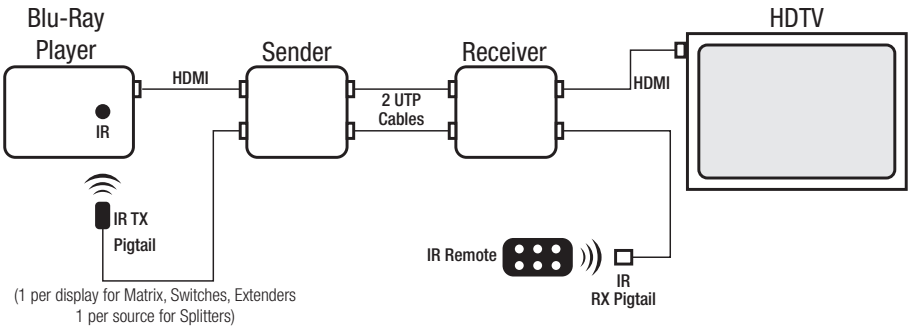
The source can be controlled from the display. This is accomplished by using an optional IR Receiver pigtail pointing away from the display, which can be connected to the receiver portion of the extender. The IR Transmitter pigtail is then connected to the sender of the extender and pointed at the source.

While playing HD audio and video content, turn on the HD TV set and use the "Information" button on the remote to check for a 1080p/60 or 24 Hz resolution. If you have difficulty getting a picture, go to the TV's "set-up menu" and adjust the resolution. A 24 Hz vertical refresh rate may work better than a 60 Hz vertical refresh rate, since a longer time period is provided for the HDMI signal to be authenticated every couple of seconds.

# CONNECTION DIAGRAMS



## Super IR Control System Over UTP Cable



## 280723 PRODUCT IMAGES



## 280713 PRODUCT IMAGES





## 280725 PRODUCT IMAGES



## 280715 PRODUCT IMAGES



## TROUBLE-SHOOTING

1. Best results are usually achieved when the source and display resolutions are the same. If resolutions differ, the splitters will try to adjust the signal to match the resolution of the HD TV with the lowest resolution. This will result in a picture with a lower resolution on the other HD TV sets.
2. If you do not get audio and video see if you can use the "set-up" menu on the TV to adjust the audio settings and the video settings. If the HDMI control circuit can't establish a hand-shake, then there usually will be no audio or video and a blue or black screen with a statement like "this protocol not supported" or "weak signal".
3. If you get the above messages, re-set the Receiver by disconnecting the power supply. Alternately, you can disconnect all of the HDMI and power cables, wait 10 or 15 minutes for any voltages to decay and then connect all of the cables from the source, to the Receiver and to the display.
4. If you still have trouble, then try the "hot-plug concept. Turn-on the source and plug the HDMI cable to it and then power-up the Transmitter and plug the cable into it, then plug the output cable into the Receiver and finally turn-on the display and plug the HDMI cable from the Receiver into it. This activates all of the devices in order and results into a signal being plugged-in to a device that is on and will try to connect to the signal.
5. Most of the major player and display manufacturers employ a proprietary control channel to communicate between devices from the same manufacturer. Sometimes this can interfere with the HDMI control circuit or the authentication of the signal. Call the manufacturer if you experience this problem. Sometimes a player, an audio/video receiver, or a cable/satellite box may not have the latest software update and needs to have this downloaded from the manufacturer's web site.
6. If the above actions do not result in a satisfactory result, focus attention on the Cat 5e or Cat 6 cables used. The HDMI signals run at digital data rates, which are at least ten times faster than for conventional Ethernet. If 8-position modular plugs are attached in the field, the connection may not be able to support the HDMI signal. This is why factory terminated assemblies are strongly recommended. To determine if the field-assembled cables are at fault, move the source close to the display and connect with a 3 ft or 6 ft computer cable assembly.
7. If you have problems with the IR control circuit, make sure that the IR RX pigtail is plugged into extender receiver and pointed at the display and the IR TX pigtail is attached to the extender sender and pointed at the source.

## LIABILITY STATEMENT

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

## LIMITED WARRANTY

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of one year from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or a uninterruptible power supply must be installed in the electrical circuit to protect against power surges.

If repairs are needed during the warranty period the purchaser will be required to provide a sales receipt or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

## TECHNICAL SUPPORT

In case of problems, please contact Vanco Technical Support by e-mail at [support@Vanco1.com](mailto:support@Vanco1.com) or call 1-800-626-6445 between the hours of 8am and 5pm central US time zone on Monday through Friday.

When calling, please have the Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call.

Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation.

All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theater applications.

For additional information, such as helpful installation videos, glossary of terms, etc. please visit [www.vanco1.com](http://www.vanco1.com)

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