



HDMI™ Over RGB

EXT-HDMI-5BNC

User Manual



www.gefen.com

1080P
PROGRESSIVE

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

HDTV

Blu-ray Disc™

ASKING FOR ASSISTANCE

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INTRODUCTION

Congratulations on your purchase of the HDMI Over RGB. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen HDMI Over RGB

The Gefen HDMI over RGB Extender is a handy extension solution which takes an HDMI signal and extends it far away over legacy 4- or 5-connector coaxial cabling. The HDMI over RGB Extender employs Gennum's ActiveConnect technology and is capable of delivering 1080p HDMI at distances up to 330 feet (100 meters).

This is the ideal system for existing installations that are using RGBHV wiring and would like to step up to a digital signal but not rip into the walls to rewire the installation.

How It Works

Simply connect one end of the supplied HDMI cable to your HDMI video source. Connect the other end of the supplied HDMI cable to the input side of the HDMI over RGB Sender unit. Connect the HDMI over RGB Sender to the sending end of your 4- or 5-plug coaxial cable run. If you are using a 5 cable configuration, power will be supplied to the receiving unit. If you have a 4-cable configuration, a second 5V power supply (sold separately) needs to be connected to the receiver unit. At the receiving end of your coaxial cable extension, plug your HDMI over RGB Receiver unit into your coaxial cable endpoints, then plug the HDMI over RGB Receiver into your HDMI display. You will now see HDMI audio/video at the remote location with perfect clarity and sound. You can connect and place an optional Gefen IR Emitter/Blaster on the IR receiver of equipment you wish to control from the remote location.

Note: This HDMI product supports BOTH Audio and Video signals.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE HDMI OVER RGB

- The HDMI Over RGB is designed for either 4 or 5 BNC cable type setups. When 5 BNC cables are present and used, a power supply on the HDMI Over RGB Receiver will not need to be used. Power will be transmitted over the cables. When a 4 BNC cable setup is used, a second power supply (part# EXT-PS52AU) for the receiving unit will need to be purchased and connected.
- HDMI 1.3 compliant. Please see page 3 for a listing of supported HDMI 1.3 features.
- HDCP compliant.
- The HDMI Over RGB has an IR repeater feature that will send standard IR remote control commands from the receiver back to the sender. This is useful for controlling equipment from a remote location. IR commands cannot be relayed from the sender to the receiver. Please see page 8 for more details.
- Resolutions of up to 1080p Full HD are supported for HDTV use.
- Resolutions of up to 1920 x 1200 are supported for computer use.
- The HDMI Over RGB was designed for use with 75Ω coaxial cable.

FEATURES

Features

- Connects HDMI sources to remote HDMI displays over legacy RGBHV cabling
- Supports extension distances of up to 330 feet
- Supports resolutions up to 1080p, 2K, and 1920 x 1200
- HDMI and HDCP compliant
- Extends any IR device

HDMI 1.3 Features

- Lip-Sync Pass Through
- 340 MHz (up to 16 bit YUV 444 supported @ 1080p)
- Deep Color Supported (XV Color Supported)
- Dolby TrueHD & DTS Master Supported
- CEC Protocol Pass Through

Package Includes

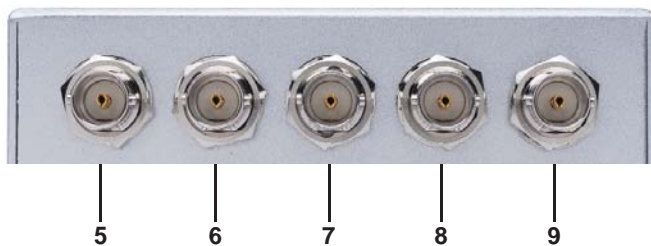
- (1) HDMI Over RGB Sender
- (1) HDMI Over RGB Receiver
- (1) 6 Foot HDMI Cable (M-M)
- (1) 5V DC Power Supply
- (1) User's Manual

SENDER PANEL LAYOUT

Front Panel



Back Panel



SENDER PANEL DESCRIPTIONS

1 Locking 5V DC Power Supply Input

Connect the included 5V DC power supply to this input port.

2 HDMI Input Port

Connect the HDMI source device to this input port. A secure connection to this HDMI port can be made using Gefen Mono•LOK cables.

3 IR Out Port

An IR emitter/blaster (sold separately, part# EXT-2IREMIT) must be connected to this port to use the IR Repeater feature. Connect the emitter to this output port and then connect the emitter “eye” on or near the IR receiver of the equipment that is intended for control.

4 Link LED Indicator

This LED indicator will become active once a valid link has been established between the sending and receiving units. If this LED does not activate there is a possible mis-connection between the two units.

5 Red BNC Connector

This connector will transmit the RED signal data to the receiving unit. The cable used for this connection cannot be omitted.

6 Green BNC Connector

This connector will transmit the GREEN signal data to the receiving unit. The cable used for this connection cannot be omitted.

7 Blue BNC Connector

This connector will transmit the Blue signal data to the receiving unit. The cable used for this connection cannot be omitted.

8 Clock BNC Connector

This connector will transmit the CLOCK signal data to the receiving unit. The cable used for this connection cannot be omitted.

9 Receiver Power BNC Connector

This connector will transmit the power needed to operate the receiving unit. The cable used for this connection can be omitted when using a 4 BNC type of cable setup. If this cable is omitted power must separately be supplied to the receiver by one of the included 5V DC power adapters.

RECEIVER PANEL LAYOUT

Front Panel



Back Panel



RECEIVER PANEL DESCRIPTIONS

1 Locking 5V DC Power Supply Input

When using a 5 BNC cable system this connector will not need to be used. When using a 4 BNC cable system a second 5V DC power supply (part# EXT-PS52AU) must be purchased and connected to this input port.

2 IR Receiver

This receiver is used for the IR Repeater feature. This receiver will accept standard IR remote commands for transmission back to the sending unit and then to the connected IR emitter/blaster.

3 HDMI Output Port

Connect the HDMI capable display device to this output port. A secure connection to this HDMI port can be made using Gefen Mono•LOK cables.

4 IR Extension Port

An IR receiver extension (sold separately, part# EXT-RMT-EXTIR) can be connected to this port to relocate the IR receiver. This option is available so that the receiving unit can be placed out-of-sight while still retaining the usability of the IR Repeating feature.

5 Link LED Indicator

This LED indicator will become active once a valid link has been established between the sending and receiving units. If this LED does not activate there is a possible mis-connection between the two units.

6 Red BNC Connector

This connector will transmit the RED signal data to the receiving unit. The cable used for this connection cannot be omitted.

7 Green BNC Connector

This connector will transmit the GREEN signal data to the receiving unit. The cable used for this connection cannot be omitted.

8 Blue BNC Connector

This connector will transmit the Blue signal data to the receiving unit. The cable used for this connection cannot be omitted.

9 Clock BNC Connector

This connector will transmit the CLOCK signal data to the receiving unit. The cable used for this connection cannot be omitted.

10 Receiver Power BNC Connector

This connector will transmit the power needed to operate the receiving unit. The cable used for this connection can be omitted when using a 4 BNC type of cable setup. If this cable is omitted power must separately be supplied to the receiver by one of the included 5V DC power adapters.

CONNECTING AND OPERATING THE HDMI OVER RGB

How to Connect the HDMI Over RGB

1. Connect the HDMI source device to the HDMI Over RGB sender unit using the supplied HDMI cable.
2. The HDMI Over RGB sender and receiver can be used with either a user supplied 4 or 5 BNC cable system.

5 BNC Cables

Connect all 5 BNC cables to the R, G, B, C, and RP BNC connectors between the HDMI Over RGB sender and receiver units.

4 BNC Cables

Connect the 4 BNC cables to the R, G, B, and C BNC connectors between the HDMI Over RGB sender and receiver units. The RP BNC connector will not be used and a second power supply (part# EXT-PS52AU) will need to be purchased and connected to the receiver unit.

3. Connect the HDMI capable display device to the HDMI Over RGB receiver unit using a user supplied HDMI cable.
4. Connect the included 5V DC power adapter to the HDMI Over RGB sender unit.

NOTE: If using a 4 BNC cable system, a second power supply must be purchased and connected to the HDMI Over RGB receiver unit.

5. Power on the display first and then the source.

How to Operate the HDMI Over RGB

The HDMI Over RGB does not require any configuration for standard operation.

IR Repeater Feature

An IR emitter/blaster (sold separately, part# EXT-2IREMIT) is required to send relayed IR commands to equipment at the sender's location. Connect the IR emitter jack to the HDMI Over RGB sender unit and connect the IR "eye" on or near the IR receiver of the equipment that is intended for control. Point the equipment's IR remote at the IR receiver on the HDMI Over RGB receiver unit and press buttons to relay commands back to the equipment device.

TROUBLESHOOTING THE HDMI OVER RGB

Troubleshooting the HDMI Over RGB

Adjustments can be made to the HDMI Over RGB in the event that video fails to appear on the output device. On each unit, sender and receiver, a bank of DIP switches are present. These DIP switches help boost functions in each unit. The sender unit contains a boost for the +5V that is being sent over the BNC cable to power the receiver, and the receiver contains a boost for Hot Plug Detection (HPD). These DIP switches may need to be enabled when the signal between both units are weak. Use the instructions below to enable these functions.

When there is no video on the output device, first try to boost HPD by enabling DIP switch 1 on the receiver unit. The DIP switch bank is located on the underside of the receiver unit and is covered with a piece of a metallic colored tape.

1. Locate the DIP switch bank on the receiver unit.
2. Using a small pointed tool, change the position of DIP switch 1 to the ON position.
3. View the output device to see if the issue is resolved.

Operational power can be supplied by either an additional power supply or by using 5 BNC cables (power is sent through the BNC port marked "RP"). When the distance between the sending and receiving units are too great, the operational power may be degraded enough to the point that the receiver unit will fail to operate. The sender unit features a DIP switch that will apply a +5V boost and ensure that enough power is being sent to the receiver unit. To enable this feature DIP switch 2 on the sending unit must be in the ON position. The DIP switch bank is located on the underside of the sender unit and is covered with a piece of a metallic colored tape.

1. Locate the DIP switch bank on the sender unit.
2. Using a small pointed tool, change the position of DIP switch 2 to the ON position.
3. View the output device to see if the issue is resolved.

SPECIFICATIONS

HDMI 1.3 Features Supported:

Video Amp. Bandwidth.....	340 MHz (up to 16 bit YUV 444 @ 1080p)
Digital Audio	Dolby TrueHD & DTS Master
Protocols (Pass-Through):	CEC, Lip-Sync
Video Resolutions (max)	2K, 1080P, 1920x1200
Input Video Signal	1.2V p-p
Input DDC Signal	5V p-p
Coaxial Connectors	5 x BNC male
IR back channel	IR blaster
HDMI™ Connector	Type A (19 Pin) Female
Power Supply	5V DC
Power Consumption	10 Watts per unit (max)
Dimensions	4.25"W x 1.25"H x 3.9"D
Shipping Weight	3 lbs.
HDCP Compliant	