Model UH-1C

HDMI™ Re-clocking Extender

Extends HDMI™ Audio Video to 200ft on 1 Cat6 Cable or farther by Daisy Chaining Units Together!

Pixel Re-clocking for Perfect Digital Video

UMA1163 Rev. C

SUPPORT & ORDERING INFORMATION

For technical support, Call **714-641-6607** or fax **714-641-6698**
Order by phone: **toll-free** in the U.S. **800-959-6439**
Web site: **www.hallresearch.com**
Hall Research, 1163 Warner Ave. Tustin, CA 92780

1. Introduction

1.1 General

Hall Research's Model UH-1C is the latest member of the Hall Research's popular and powerful **Mini-CAT®** video extension and distribution product line. The UH-1C is used to extend HDMI™ audio/video signal to 200ft @ 1080i/720P or 150ft @ 1080p on 1 Cat6 cable. Quality Cat5e cables can also be used, however when Cat5e is used the maximum distances are reduced by about 33%. Cables that are of lower quality and construction will also reduce the maximum distance.

The UH-1C supports HDMI™ version 1.2a and is compatible with version 1.3. Two power supplies are needed for each Sender/Receiver pair. The remote receiver re-aligns the pixel clock and generates a clean pixel clock for the display, thereby taking out any skew that may have been induced in the cable.

The Re-clocking feature of the UH-1C allows the units to be daisy-chained together to extend the video and audio even farther!
This means that you can achieve extremely long distances (for example, with 2 units you can extend 1080i/720P to 400 ft and farther by adding more units!).

The unit is housed in a compact sturdy metal enclosure measuring 4.625 x 2.75 x 1.25 inch with mounting flanges and includes a power supply.

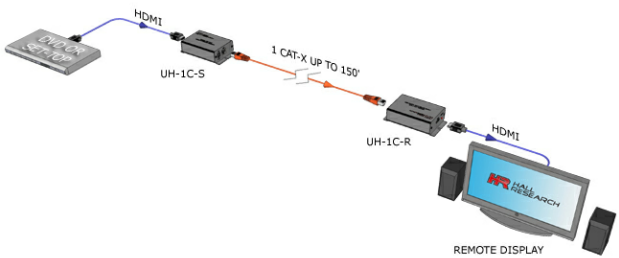

Figure 1 – Block Diagram

1.2 Features

† For HDMI™ compliance, if the input has HDCP content protection, the display must also be HDCP compliant (such as a display with HDMI™ input) otherwise no image will be shown on the display.

- ❑ Use Cat5e or Cat6 cables to extend pure digital high definition HDMI™ audio video signals
- ❑ Can drive cables to 200ft @ 1080i/720P or 150ft @ 1080p on 1 Cat6 cable
- ❑ Supports DVI-D single link extension with optional adapter cables
- ❑ Two power supplies needed for the setup
- ❑ Re-aligns the pixel clock and generates a clean pixel clock for the display
- ❑ HDCP compliant
- ❑ Daisy-chainable to achieve longer distances
- ❑ Compact metal enclosure measuring 4.625 x 2.75 x 1.25 inch with mounting flanges
- ❑ Includes universal power supplies

2. Installation

Refer to figure 1 above. Place the sender by the video source. Use a quality HDMI™ cable to connect the source to the sender (the cable is not included and must be purchased separately). Use 1 Cat6 cable to connect the sender to the receiver observing the length limitations. Connect the cable to the receivers RJ45 output and finally using a quality HDMI™ cable; connect the receiver to the output display device.

Turn on the display and the video source and plug in the power supplies (included) into both the sender and receiver.

Note about Twisted-Pair Cables

The UH-1C is designed for operation with standard Cat6 cables (TIA/EIA 568B wiring). You can use Quality Cat5e cables also if the distance between sender and receiver is 70 ft or less. Shielded Cat6 can also be used; in fact, shielded Cat6 offers the best performance and provides immunity to external noise if the installation is in an electrically noisy environment. Avoid using Zero-skew or low skew cables. The low skew cables work well for analog video extension over twisted pair, but since the UH-1C is a pure digital system, the cross-talk of the low skew cables will actually shorten the maximum achievable cable length.

3. Troubleshooting

There are no field serviceable parts or circuits in the device. If you think that the device is malfunctioning, please first try the following steps:

- ❑ Check the video connections
- ❑ Unplug the power supplies and re-attach them
- ❑ The POWER LED at the Receiver is ONLY LIT during an active video connection.
  - o **It <u>DOES NOT</u> indicate the unit is powered**
- ❑ Connect the display directly to the source and make sure you can get a picture without the extender. If so then using the menus of the video source try to set the output resolution to a low one (such as 480p) to start with. Insert the extender and verify that you get an image, if so; then set the resolution to the next higher value (such as 720p). Continue this process until you get the highest possible resolution without loss of image or audio.
- ❑ **The quality of the cable and the connections** will determine the maximum length and resolution achievable. Certain types of cable may be able to show the video, but the audio will not be heard.

3.1 Contacting Hall Research

If you determine that your extender is malfunctioning, do not attempt to repair the unit. The unit contains no user serviceable equipment. Opening the unit will void the warranty. Contact the Hall Research Technical Support Department at 714-641-6607 to obtain a RMA (Return Authorization) number.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description.

3.2 Shipping and Packaging

If you need to transport or ship your extender:

- Package it carefully. We recommend that you use the original container.
- Before you ship the units back to Hall Research for repair or return, contact us to get a Return Authorization (RMA) number.

4. Specifications

Supported video formats:

Resolution	DVI / HDMI™
480i/576i	☑
480p/576p	☑
720p@(60/50)	☑
1080i@(60/50)	☑
1080p@(60/50)	☑
VGA@(60/72/75/85)	☑
SVGA@(56/60/72/75/85)	☑
XGA@(60/70/75/85)	☑
SXGA@(60/75/85)	☑
UXGA@60	☑
WXGA@60(1280X800)	☑
WSXGA@60(1680X1050)	☑
WUXGA@60(1920X1200)	☑

Dimensions: 4.625 x 2.75 x 1.25 inch

Weight: 0.77 Pounds (350 g)

Input Power: 5v DC at 2A max. (Nominal operation current = 1A)

Operating Temperature: 0 to 70 degrees C

Storage Temperature: -10 degree C to 80 degrees C

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