EXHD-RG6
HDMI-over-Coax Extender

Extends HDMI video on a single RG-6U Coaxial Cable

Includes Sender with two Coax outputs and cascadable Receiver

UMA1241, Rev. n/c

SUPPORT &
ORDERING
INFORMATION

For technical support, Call **714-641-6607**
www.hallresearch.com
Hall Research, 1163 Warner Ave. Tustin, CA 92780

TRADEMARKS USED IN THIS MANUAL

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FCC RADIO FREQUENCY INTERFERENCE STATEMENT

This device complies with part 15 Class A of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Contents

1. Specifications

HDMI Bandwidth	225MHz/link
Resolutions Supported	480i, 576i, 720p@50/60 1080i@50/60 1080p@24/25/30/50/60
TMDS Signal Level	3.3 volts
DDC Signal Level	5.0 volts
ESD Protection	±8kV (air-gap discharge) ±4kV (contact discharge)
Max Coaxial Cable Length (with quality RG-6U)	Full HD up to 70 m (230 ft) HD up to 122 m (400 ft) SD up to 153 m (500 ft)
Dimensions (each side)	1.18" H x 2.75" W x 3.85" D (30mm H x 70mm W x 98mm D)
Weight (each side)	Product - 0.75 lb (0.35 kg) Shipping - 1.5 lbs (0.70 kg)
Power Supply (each side)	external Input: 100 ~240 Vac, 50/60 Hz ; Output 5 Vdc, 1 A
Power consumption	2.3 watts per side
Operation temperature:	+32 to +122 °F (0 to +50 °C)
Storage temperature:	-40 to +158 °F (-40 to +70 °C)
Relative humidity:	20~90% (non-condensing)

2. Overview

2.1 Introduction

The EXHD-RG6 is an HDMI-over-Coax extender that can extend HDMI signal to 230 ft or longer. Maximum cable length depends on signal resolution and quality of RG-6U cable used. It extends video with no compression for a perfect reproduction at the receiver.

The kit includes a Sender (EXHD-RG6-S) and a corresponding Receiver (EXHD-RG6-R). The Sender has an HDMI input connector and provides two BNC outputs for connection to one or two RG-6U coaxial cables. The kit also includes one Receiver (EXHD-RG6-R). The Receiver has a BNC input for connection to the Sender, and provides an HDMI output. Additionally a buffered Coax output is also provided that can be used to daisy chain to another Receiver if required.

The extender supports HDCP and provides HDCP content protected output. Standard TV and HDTV resolutions are supported including 486i/576i, 720p, 1080i, and 1080p.
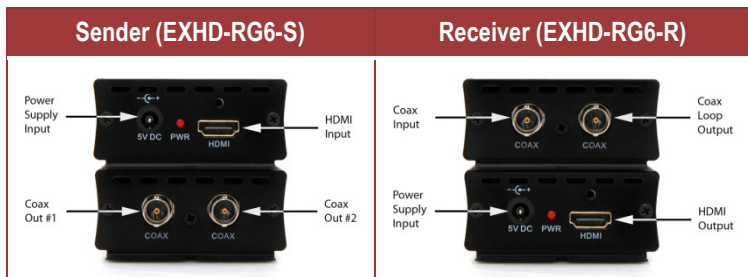
2.2 Features

- Extends HDMI to 70 meters or longer
- Supports resolutions up to 1080p 1920x1080 at 60 Hz
- No user settings, plug-n-play
- Includes Sender with two coax outputs and Receiver with daisy-chain Coax output
- Uses Locking HDMI connectors

2.3 What's Included

- Sender (EXHD-RG6-S) with its power supply
- Receiver (EXHD-RG6-S) with its power supply
- This user's manual

2.4 Hardware Description

The following figures show all connectors and indicators on the unit.

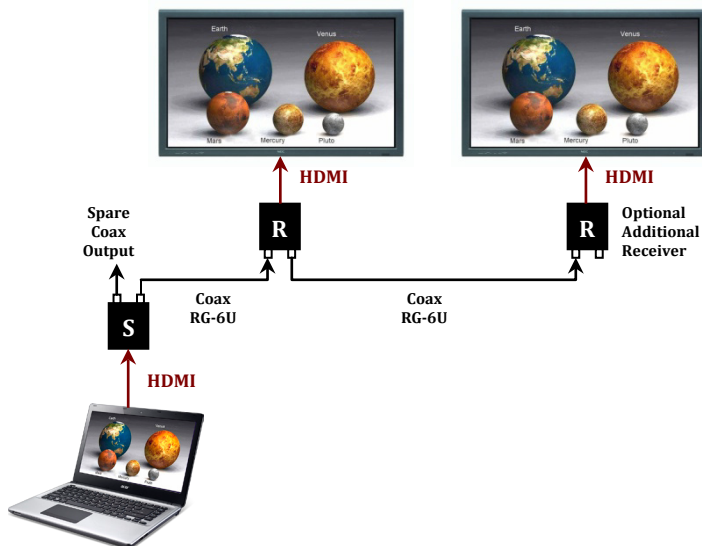| Sender (EXHD-RG6-S)	Receiver (EXHD-RG6-R)

The sender provides one HDMI input and two coaxial BNC output connectors for connection to up to two receivers.

The receiver provides one coaxial BNC input connector along with a buffered loop output BNC (for daisy-chaining), as well as an HDMI output for connection to a display.

3. Installation

You can setup simple or complex a HDMI extension topologies as you desire. The kit includes one sender and one receiver for a simple one-to-one extension. If you desire more complex topologies, more receivers will be required and should be purchased separately.

The block diagram below shows the various topologies possible.

4. Troubleshooting

There is no adjustments or settings. If there is no output, check the length and quality of the RG-6U cables (use short cables for test). Make sure the resolution of signal is set to one supported by the converter. Try reducing the output resolution to see if an image is produced. Reducing the resolution, reduces the data rate in the coax cable allowing it to travel farther.

4.1 Contacting Hall Research

If you determine that your extender is malfunctioning, do not attempt to repair the unit. Contact 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.