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**Notice**
Linear LLC reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.
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The Linear 2x2 Switcher for HDMI routes high definition video in multiple resolutions up to 1080p plus multichannel digital audio from either one of two sources to the two displays. Two outputs gives you the choice of sending high definition audio and video signals to two displays simultaneously. A digital audio output port is available if you need to disconnect and reconnect sources to a display equipped with one input. It works with Blu-ray and HD-DVD players, TiVo systems and satellite set top boxes that connect to an HDMI display. By using the IR remote, either source is accessible at all times.

How It Works

You simply connect all your sources to the switcher’s HDMI inputs. Then connect up to two displays on the switcher’s HDMI outputs. Once the sources, the Switcher and the display(s) are powered and connected, you simply select which source you want to view using the IR remote.

**READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 2X2 SWITCHER FOR HDMI**

- Display information (EDID) is sent from the display connected to HDMI Output Port 1 to both of the sources connected to the 2X2 Switcher for HDMI. If there is no display connected to HDMI Output Port 1, the EDID from the display connected to HDMI Output Port 2 will be used. (See note on page 4 for additional information)

- The 2X2 Switcher for HDMI can only mirror one input video signal at a time to both display outputs. The user can choose which of the two HDMI inputs will be displayed on both HDMI outputs

- HDMI/HDCP compliant

- Compatible with all HDMI and DVI* displays

**NOTE:** When used with a HDMI to DVI adapter.
Features

- Switch easily between any two HDMI/DVI* sources
- Outputs are mirrored to two HDMI/DVI* displays simultaneously
- Supports resolutions up to 1080p, 2K and 1920 x 1200
- Additional digital optical audio output is extracted from the HDMI input for easy connection to multichannel A/V receivers
- Inputs are switched with either the provided IR remote control or RS-232 serial control interface
- Extends the range of HDMI compliant devices by equalizing and re-clocking the HDMI signal
- HDMI/HDCP compliant

Includes:

(1) 2X2 Switcher for HDMI
(2) 6 ft HDMI cables (M-M)
(1) 5V DC Power Supply
(1) RMT2-IR remote
(1) User’s Manual

NOTE: *When used with a HDMI to DVI Adapter
**Front Panel**

![2x2 Switcher for HDMI](image)

- Input LED Indicator
- Power LED Indicator
- IR Eye Extension Port

**Back Panel**

![2x2 Switcher for HDMI](image)

- HDMI Input 1
- HDMI Input 2
- Digital Optical Output
- 5V DC Power Input
- RS-232 Serial Control Interface
- HDMI Output 1*
- HDMI Output 2

*See note on page 4
How to Connect the 2X2 Switcher For HDMI

1. Connect the supplied cable from the HDTV HDMI source into the HDMI input port 1 of the 2X2 Switcher for HDMI.

2. Connect the second HDTV HDMI source to HDMI input port 2 on the 2X2 Switcher for HDMI using a user supplied HDMI cable.

3. Connect the display(s) to the HDMI output port(s)* of the 2X2 Switcher for HDMI using user supplied cable(s).

4. Optionally, connect an external audio processor to the 2X2 Switcher for HDMI using a user supplied digital optical cable.

5. Plug the 5V DC power supply into the 2X2 Switcher for HDMI.

NOTE: *Display information (EDID) is sent from the display connected to HDMI Output Port 1 to both of the sources connected to the 2X2 Switcher for HDMI. If there is no display connected to HDMI Output Port 1, the EDID from the display connected to HDMI Output Port 2 will be used. The source will output resolutions and timings according the EDID that is being fed by the 2X2 Switcher for HDMI. Therefore, all of the connected displays must be capable of accepting the timings and resolution output by the source. It is recommended that the display with the lowest native resolution be connected to HDMI output port 1. This is to ensure that a compatible video signal will be able to be displayed on all connected monitors.

OPERATING THE 2X2 SWITCHER FOR HDMI

Switching between the inputs on the 2X2 Switcher for HDMI is done using either the supplied RMT2-IR remote or through the RS-232 serial control interface.

IR Remote Control
Pressing button one on the remote will select the HDMI source that is connected to HDMI input port one. Pressing two on the remote will select the HDMI source that is connected to HDMI input port two.

RS-232 Serial Control Interface
Please see page 7 for more information on the RS-232 serial control interface.
1. Remove battery cover from the back of the RMT2-IR remote.

2. Verify that dip switches 1 & 2 are in the down (OFF) position. (See page 6)

3. Insert the battery, hold the battery so that you can see the positive side facing up. The side that is not marked must be facing down.

4. Test the RMT2-IR remote by pressing ONLY one button at a time. The indicator light on the remote will flash once each time you press a button.

**WARNING:** Do not press multiple buttons simultaneously and do NOT press buttons rapidly. These actions will cause the remote to reset and steps 1-4 will have to be repeated.

Note: The RMT2-IR ships with two batteries. One battery is required for operation, the second battery is complimentary.

The optional IR extender allows you to relocate your HDMI Switcher and still retain IR control. Linear part# IR-EXTENDER
How to Resolve IR Code Conflicts

In the event that IR commands from other remote controls conflict with the supplied RMT-2IR remote control, changing the remote channel will alleviate this issue. The RMT-2IR remote control and the 2X2 Switcher for HDMI have DIP SWITCHES for configuring the remote channel that both units use to communicate. These settings must match each other for proper operation. The 2 DIP SWITCH bank on the RMT-2IR is located underneath the battery cover. The 8 DIP SWITCH bank for the 2X2 Switcher for HDMI is located inside of the unit. *DIP SWITCH 1 and 2 on the RMT-2IR correspond to DIP SWITCH 3 and 4 on the 2X2 Switcher for HDMI.

NOTE: *DIP SWITCHES 1, 2, and 5 through 8 are not used on the 2X2 Switcher for HDMI.

Because the procedure for changing channels requires the main unit to be disassembled, this procedure should only be done if there are IR conflicts present in your setup.

Disconnect power from unit before starting. Remove all cabling from unit.
To open the 2X2 Switcher for HDMI Unit, remove all screws from the sides and underside of the unit. Remove the hex nuts above each HDMI connector and on the RS-232 serial connector. Slide the unit apart carefully to expose the internal PCB and the 8 DIP SWITCH bank.

When DIP SWITCH adjustments are complete, carefully slide the unit back together. Being careful not to over tighten the hex nuts, screw them back in above each HDMI connector and on the RS-232 serial connector. Screw all of the screws from the sides and underside of the unit back into the unit, again being careful not to over tighten the screws. Plug all cabling back into its proper location on the unit. Reconnect power to the unit and test for IR conflicts.
RS-232 SERIAL CONTROL INTERFACE

Binary Table

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<thead>
<tr>
<th>ASCII</th>
<th>Input</th>
<th>Binary</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0011 0001</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>0011 0010</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>0011 0011</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>0011 0100</td>
</tr>
</tbody>
</table>

Terminal Settings

Bits per second ............................................................................................................................. 19200
Data bits ......................................................................................................................................... 8
Parity .............................................................................................................................................. None
Stop bits .......................................................................................................................................... 1
Flow Control ..................................................................................................................................... None

Only Pins 2 (RX), 3 (TX), and 5 (Ground) are needed to operate RS-232 Interface
Maximum HDMI cable length is 15 ft at 1080P resolution without the use of an HDMI-SB or HDMI-CAT5-EXT
SPECIFICATIONS

Video Amplifier Bandwidth .............................................................. 165 MHz
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 A 19 pin female
Digital Audio Output ................................................................. Optical
Remote Control Port ................................................................. RS232 female, mini-stereo
Power Consumption .................................................................... 20 Watts (max)
Dimensions .............................................................................. 10.25”W x 1.125”H x 4.25”D
Shipping Weight .......................................................................... 4 lbs.
WARRANTY

Note: These products are designed to be installed and serviced by trained professional installation companies.

Linear LLC warrants this product to be free from defects in material and workmanship. For the term of the warranty, see the list of products below. The Warranty Expiration Date is reflected by a date code that is affixed to all of Linear’s products. This warranty extends only to wholesale customers who buy direct from Linear or through Linear’s normal distribution channels. Linear does not warrant this product to consumers. Consumers should inquire from their selling dealer as to the nature of the dealer’s warranty. There are no obligations or liabilities on the part of Linear LLC for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation or reinstallation. All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until warranty expiration date as labeled on the product. This Linear LLC Warranty is in lieu of all other warranties express or implied. Some states and countries do not allow limitations or how long an implied warranty lasts or the exclusion or limitation or incidental or consequential damages, so the above exclusions may not apply. The Linear LLC warranty gives specific legal rights in addition to other rights, which may exist and vary from state to state and country to country.

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.

Consumers: If you have trouble locating your installing company, please contact Linear LLC at 1-800-421-1587 and we will assist you with locating a service and Installation Company.

The following warranty period applies to this set of Linear branded products.

1. Linear High Definition Video products — Two (2) years. There is no warranty offered on the batteries supplied with the IR remote Control.

The warranty is limited to repair or replacement of products returned, freight prepaid, to Linear LLC. There is NO PROVISION FOR LABOR COST OR OTHER REIMBURSEMENTS OF ANY KIND.

1. Failures due to product abuse, negligence, improper installation, improper use, and electrical surge including damage from lightning, water damage or other damage due to natural disasters are not covered by the warranty.

2. The warranty shall also be voided by any tampering with the date code, labels or other markings on the product.

3. Products that are damaged in transit to Linear LLC due to improper packaging or by the carrier (shipping company) will not be covered under the warranty. If the product was damaged or lost by the carrier, it is the sender’s responsibility to create a claim against the carrier.

4. The user is responsible for all labor costs associated with removing, reinstalling and returning the product to Linear LLC.

5. Linear LLC, at its option, will repair or replace the defective product.

6. Replacements will be made from B-Stock. If an exact replacement is not available Linear LLC, at its option will select the nearest equivalent product. The user is responsible for freight charges to Linear LLC.

7. Linear LLC will return warranted repaired or replacements by UPS Ground or an equivalent service. A customer may pay the additional costs for second day or next-day service.