

# Specifications

<b>Environment</b>	HDMI 2.0
<b>Devices</b>	DVD/Blu-Ray, plasma, projectors, monitors, TV, PC, laptops
<b>Transmission</b>	Transparent to the user
<b>Frequency</b>	25 to 594 MHz
<b>Video Signal</b>	HDMI 2.0 protocol and HDCP 2.2
<b>Connectors</b>	Five (5) HDMI connectors for 4x video-in, 1x video-out Two (2) RCA connectors for 2CH audio-out One (1) TosLink optical connector for multichannel audio-out One (1) 2.1 mm locking jack for power
<b>LEDs</b>	One (1) LED for Power Four (4) LEDs for HDMI select Five (5) LEDs for Audio mode and ARC select
<b>Manual Control</b>	Push button at the front of the unit for video input and audio mode select
<b>IR Remote Control</b>	Included
<b>Resolution</b>	480i to 1080p @ 50/60 Hz 1080p @ 24/50/60 Hz 3840 X 2160 @ 24/25/30/60 Hz
<b>Color</b>	8, 10 & 12 bit
<b>Audio Extraction</b>	Uncompressed (LPCM) or compressed (Dolby, DTS)
<b>Cable</b>	HDMI Video Cable Optical TosLink Analog 2CH Audio cable
<b>Temperature</b>	Operating: 0° to 40°C    Storage: -20° to 60°C Humidity: up to 90% non-condensing
<b>Enclosure</b>	Metal enclosure
<b>Dimensions</b>	10.63" x 4.33" x 1.18" (270 mm x 110 mm x 30 mm)
<b>Weight</b>	3.2 lbs (1.45 Kg)
<b>Power Supply</b>	5VDC, 2A with interchangeable blade for US, UK and Euro
<b>Compliance</b>	Regulatory: FCC, CE, RoHS
<b>Warranty</b>	2 years
<b>Order Information</b>	500437 HDMI 4X1 Switcher with Audio Extraction, 4K60



2321 Cohen St. Saint-Laurent, QC Canada. H4R 2N7  
 Tel: (514) 905-0588 Fax: (514) 905-0589  
 Toll Free (North America): (877) 689-5228  
 E-mail: [info@muxlab.com](mailto:info@muxlab.com) URL: [www.muxlab.com](http://www.muxlab.com)



## HDMI 4X1 Switcher with Audio Extraction, 4K/60 (500437) Quick Installation Guide

### Overview

The HDMI 4x1 Switcher with Audio Extraction, 4K/60 allows one of four HDMI sources to be switched to one HDMI display. The switcher supports resolutions up to 4K (3840 x 2160) @ 60Hz, 8-bit color and HD audio. Extracted digital audio is available on an Optical Toslink port, and analog 2CH audio is available on two (2) RCA jacks. Audio Return Channel (ARC) is supported, allowing audio from content streamed to a Smart TV to be returned to an audio system. Three audio modes are supported which set the source audio. The modes are pass-through (audio is unaltered at the source), 2CH (audio is set to 2CH at the source) and 5.1CH (audio is set to 5.1 at the source). The HDMI input port switching and audio mode selections may be controlled locally via two (2) push buttons and remotely via IR. Applications include; commercial and residential AV systems, classroom projector systems, digital signage, boardroom systems, collaborative PC systems, medical information systems.

### Pre-Installation Check

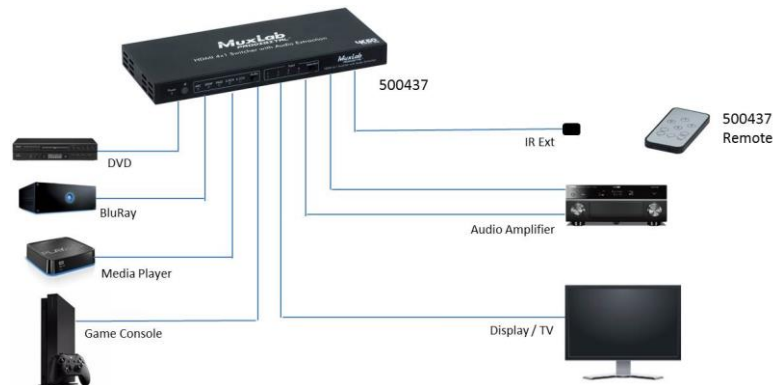
Identify the connectors as indicated on the product



## Installation

In order to install the HDMI 4X1 Switcher with Audio Extraction, please follow the steps below:

1. Connect the HDMI video source(s) to the input connector(s) of the switcher.
2. Connect the HDMI display equipment to output connector of the switcher.
3. Connect the audio receiver to the appropriate audio output connectors of the switcher (Audio L/R output and/or Optical output).
4. Connect the 5 VDC power supply to the switcher first, and then plug the power supply into an AC power outlet.
5. Power on the HDMI equipment and verify the image quality.
6. If using ARC, press the “ARC” button and ensure the ARC LED is ON (solid blue). This allows a Smart TV receiving streamed content to return audio over the HDMI cable back to the 500437 HDMI output port and on to an audio system via the 500437 Optical output port.
7. There are four HDMI inputs to select from. Press the “Selection” button to select which input to send to the display. The HDMI Input LEDs will indicate which HDMI input is currently selected.
8. To extract audio from the selected HDMI input, press the “SPDIF/ARC” button to light the LED. Extracted audio will be available on the Optical port.  
**NOTE: Enabling SPDIF/ARC (SPDIF/ARC LED ON) overwrites the ARC functionality and sends extracted audio of the currently selected HDMI input to the audio system. This will be noticeable if streaming to a Smart TV. For ARC to function correctly, the SPDIF/ARC LED must be OFF.**
9. Press the Audio button to select the audio mode to be extracted. Three audio modes are supported which set the source audio. The modes are pass-through (audio is unaltered at the source), 2CH (audio is set to 2CH at the source) and 5.1CH (audio is set to 5.1 at the source).
10. The following diagram shows the final configuration.



## Troubleshooting

The following tables describe some of the symptoms, probable causes and possible solutions in respect to the installation of the HDMI 4X1 Switcher with Audio Extraction.

Picture/Sound	Probable Cause	Possible Solution
No Image	Wiring	Check continuity Check correct wiring
No Image	Synchronization	Power off the source and the display. Power on the devices.
Flickering Image	Synchronization	Check HDMI cable length and quality
Choppy Sound	Synchronization	Check HDMI cable length and quality
Noise in image	Weak signal	Check HDMI cable length and quality
Green or pink hue	Cable	Check HDMI cables and replace as required.
Noisy Sound	Compressed bitstream	When compressed bitstream is selected the analog output (3.5 mm Jack) cannot be used. Set the source to send a LPCM signal.
No audio extraction	Cable or misconfiguration	Check cabling Ensure SPDIF LED is on
Multi-Channel not working	Sink equipment not supporting Multi-Channel configuration	Verify that the sink device connected to the HDMI output is supporting Multi-Channel sound configuration.
ARC not working	Misconfiguration or TV does not support it	Check that the ARC LED is ON and SPDIF/ARC LED is OFF. Validate that the TV supports ARC and the feature is enabled, plus ensure you are connected to a HDMI port on the TV with ARC capability.

If you still cannot diagnose the problem, please call MuxLab Customer Technical Support at 877-689-5228 (toll-free in North America) or (+1) 514-905-0588 (International).