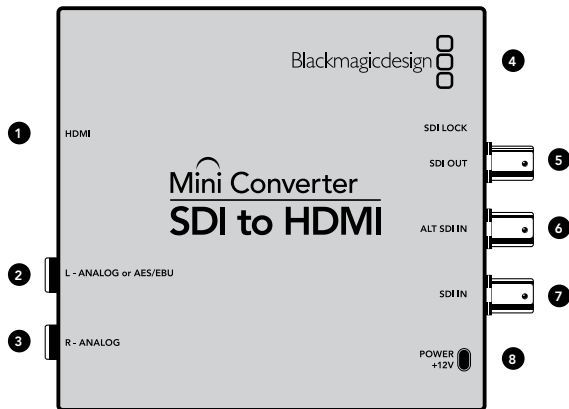


14 Mini Converter SDI to HDMI



Blackmagic Mini Converter SDI to HDMI

Connect a huge range of HDMI displays and video projectors to SDI based equipment. Your Mini Converter SDI to HDMI automatically detects between SD/HD/3G-SDI and converts to HDMI with embedded audio, plus balanced AES/EBU or analog audio out.

Connectors

1. HDMI

HDMI type A video output.

2. L - ANALOG or AES/EBU

Balanced left channel analog audio, or AES/EBU digital audio output on a 1/4" TRS connector.

3. R - ANALOG

Balanced right channel analog audio output 1/4" TRS connector.

4. MINI-B USB PORT

Connects to the Converter Utility software via your Mac OS X or Windows computer. The Mini Converter's internal software is also updated using the USB port.

5. SDI OUT

SDI video output on a BNC connector.

6. ALT SDI IN

Redundant SDI input is provided as an optional back up.

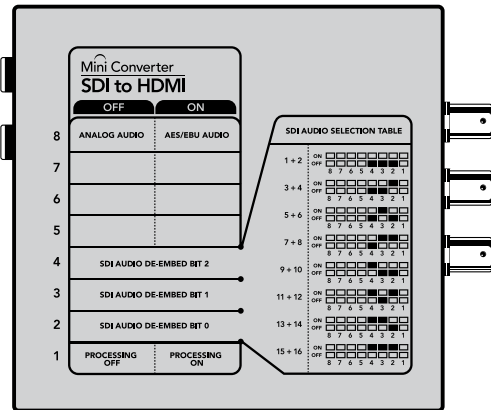
7. SDI IN

Primary SDI input.

8. POWER +12V

12 volt power supply input.

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Change your converter's internal settings by adjusting the mini switches using the tip of a pen.

Mini Switches

Mini Converter SDI to HDMI's mini switches provide the following settings:

Switch 8 - Analog Audio, AES/EBU Audio

Set switch 8 to OFF to select balanced analog audio, or to ON for digital AES/EBU audio output.

Switch 4 - SDI Audio De-Embed Bit 2

Switches 4, 3 and 2 are grouped together to provide 8 ON/OFF combinations. Having eight different combinations allows eight independent pairs of audio channels to be de-embedded from your SDI input and output to HDMI, analog or AES/EBU audio.

Switch 3 - SDI Audio De-Embed Bit 1

See switch 4 description.

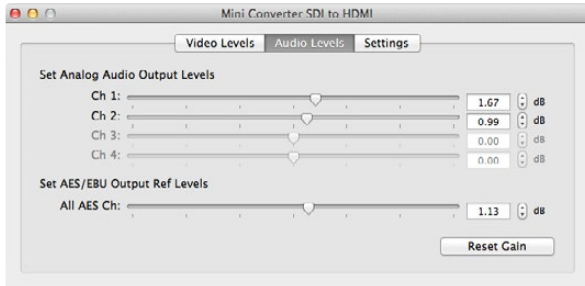
Switch 2 - SDI Audio De-Embed Bit 0

See switch 4 description.

SDI Audio Selection Table

Audio Channels	Switch 4	Switch 3	Switch 2	Switch Diagram
1 and 2	OFF	OFF	OFF	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
3 and 4	OFF	OFF	ON	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
5 and 6	OFF	ON	OFF	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
7 and 8	OFF	ON	ON	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
9 and 10	ON	OFF	OFF	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
11 and 12	ON	OFF	ON	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
13 and 14	ON	ON	OFF	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1
15 and 16	ON	ON	ON	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 7 6 5 4 3 2 1

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Adjust audio levels using Blackmagic Converter Utility.



The Clamp Video output to legal levels setting is checked by default. This setting ensures your analog output is a true representation of the SDI input. Adjusting video levels may result in illegal colors.

SDI Audio Selection Table

Switch 1 - Processing Off - Processing On

This switch is not used.

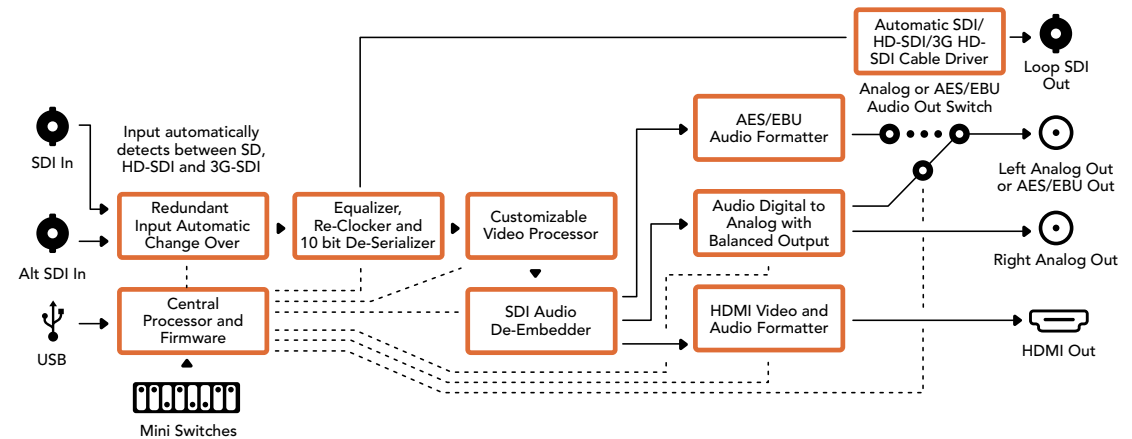
Mini Switch Settings Example: Experiment with the mini switches by setting your Blackmagic Mini Converter to de-embed SDI audio channels 1 and 2 and output to analog by setting switches 8, 4, 3 and 2 to the OFF position.

Blackmagic Converter Utility Settings

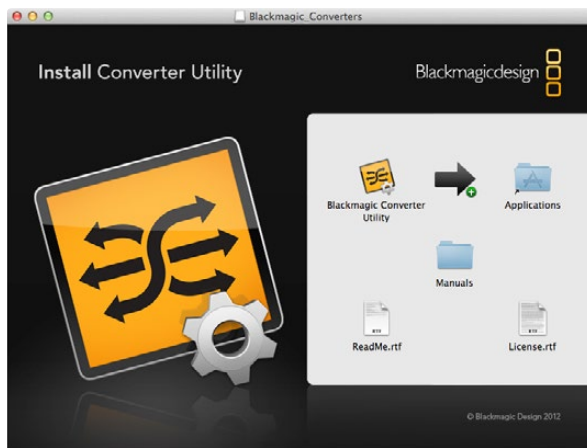
The Converter Utility software complements your mini switch settings by providing supplementary adjustment options.

The Audio Levels pane lets you adjust audio levels for the selected analog channels or AES/EBU reference levels.

Mini Converter SDI to HDMI Block Diagram



59 Using Blackmagic Converter Utility



Installing the Blackmagic Converter Utility Software

Converter Utility software can be used to update your converter to new video standards, add compatibility with new hardware or adjust video and audio levels.

Installation on Mac OS X

After downloading the Converter Utility software from www.blackmagicdesign.com and unzipping the downloaded file, open the resulting disk image to reveal its contents.

Drag the Blackmagic Converter Utility icon and drop it on to the Applications icon. Blackmagic Converter Utility is now installed.

Installation on Windows

After downloading the Converter Utility software and unzipping the downloaded file, you should see a Converter Utility folder containing this PDF manual and the Converter Utility installer.

Double-click the installer and follow the prompts to complete the installation. When the installation has finished, it will prompt you to restart the computer. The restart will load a USB driver for Converter Utility so that it can communicate with the converter's internal settings. Click "restart" to complete the installation. Once the computer has restarted, Blackmagic Converter Utility will be ready to use.

Updating the Internal Software

It is important to ensure that power is connected to the Blackmagic Converter before connecting a USB cable between the computer and converter.

Step 1. Power your converter.

Step 2. Attach a USB cable from the computer to the converter and launch the Blackmagic Converter Utility.

If the converter is missing or not detected, Converter Utility will report, "No converter connected" in the title bar. Otherwise, it will report the model name of your Blackmagic Converter.

If Converter Utility contains newer internal software than that currently installed in your Blackmagic Converter, it will prompt you to update. Just follow the on screen instructions to complete the update. Once the internal software update is complete, you will be able to make adjustments to your Blackmagic Converter using the Converter Utility.

