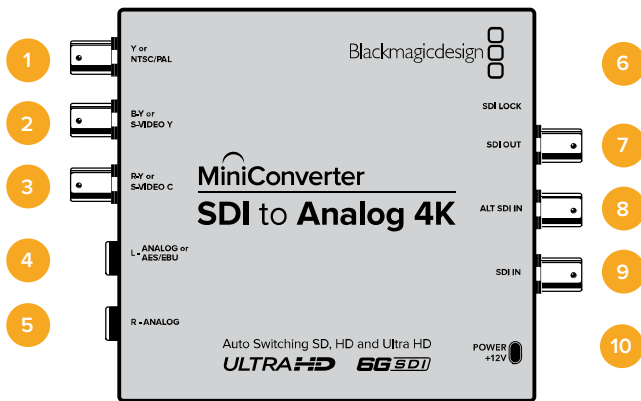


Mini Converter SDI to Analog 4K

Your Mini Converter SDI to Analog 4K can convert from SD/HD/3G/6G-SDI to analog component, NTSC and PAL video out, plus balanced AES/EBU and analog audio out. This down converter lets you connect up to 6G-SDI video to SD or HD analog equipment and easily connects to video monitors and decks such as Betacam SP and VHS. You can even output pairs of analog audio from 16 de-embedded SDI audio channels.



Connectors

- 1 Y or NTSC/PAL**
Analog component Y or composite NTSC/PAL output BNC connector.
- 2 B-Y or S-VIDEO Y**
Analog component B-Y, or S-Video Y output BNC connector.
- 3 R-Y or S-VIDEO C**
Analog component R-Y, or S-Video C output BNC connector.
- 4 L - ANALOG or AES/EBU**
Balanced left channel analog audio, or AES/EBU digital audio output 1/4" jack connector.
- 5 R - ANALOG**
Balanced right channel analog audio output 1/4" jack connector.
- 6 Mini-B USB Port**
Connects to the Converters Setup software via your Mac OS or Windows computer. The Mini Converter's internal software is also updated using the USB port.
- 7 SDI OUT**
SDI video output BNC connector.
- 8 ALT SDI IN**
Redundant SDI input is provided as an optional back up.
- 9 SDI IN**
Primary SDI input.
- 10 POWER +12V**
12 volt power supply input.

Switches

Mini Converter SDI to Analog 4K's 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 7 - 7.5 IRE - 0.0 IRE

The USA and countries using NTSC with 7.5 setup should set switch 7 to OFF. If you're working in countries not using 7.5 setup, set switch 7 to ON. This setting only affects composite or S-Video outputs.

Switch 6 - SMPTE Levels - Betacam Levels

Set switch 6 to OFF for SMPTE levels, or ON for Betacam levels. SMPTE levels are more common and even Betacam SP decks can use SMPTE levels, so only switch this to Betacam if you are sure that Betacam levels are being used.

Switch 5 - Component, Composite or S-Video

Set switch 5 to OFF to select analog component video output, or ON for composite and S-Video outputs.

To display the HD video input as SD on the S-Video and composite outputs, down conversion must be set to ON. Component analog video supports both HD and SD video.

Switch 4, 3 and 2 - SDI Audio De-Embed

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.

Switch 1 - Processing Off - Processing On

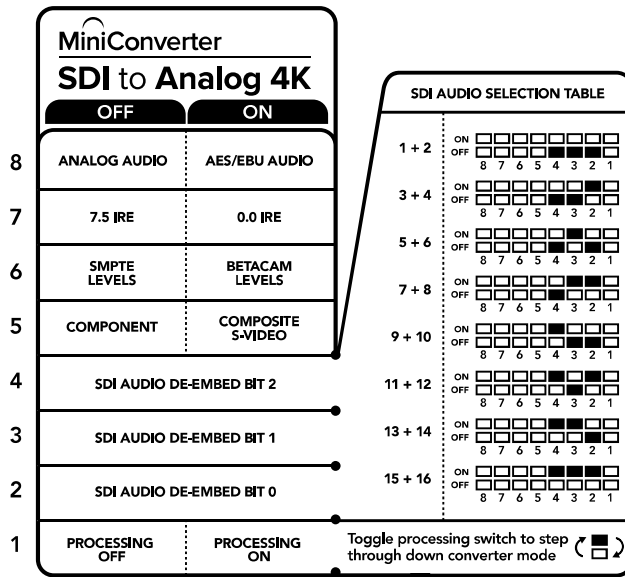
Down conversion with 3 types of aspect ratios by cycling through switch 1. Each time you cycle between Off and On you apply anamorphic, center cut or letterbox aspect ratios.

For both HD and Ultra HD input, set switch to OFF to output HD analog via the component outputs.

Set switch to ON and Ultra HD input downconverts to either analog PAL/NTSC or HD component depending on the other switch settings. 4K DCI will be cropped on the component HD output.

An ON setting with HD input will be downconverted to analog PAL/NTSC or component depending on the other switch settings.

When connected to Blackmagic Converters Setup via USB, your down conversion settings are controlled by the software. If you want the converter to remember your software settings, disconnect from the computer, power cycle your converter and set your down conversion using switch 1.



The switch legend on the base of your converter gives you all the information you need to change conversion settings.

Mini Switch Settings Example:

Experiment with the switches by setting your Blackmagic Mini Converter to output high definition component video and analog audio channels 1 and 2 by setting switches 8, 5, 4, 3 and 2 to the OFF position.

Audio Selection Table

Audio Channels	Switch 4	Switch 3	Switch 2	Switch Diagram
1 and 2	OFF	OFF	OFF	ON OFF 8 7 6 5 4 3 2 1
3 and 4	OFF	OFF	ON	ON OFF 8 7 6 5 4 3 2 1
5 and 6	OFF	ON	OFF	ON OFF 8 7 6 5 4 3 2 1
7 and 8	OFF	ON	ON	ON OFF 8 7 6 5 4 3 2 1
9 and 10	ON	OFF	OFF	ON OFF 8 7 6 5 4 3 2 1
11 and 12	ON	OFF	ON	ON OFF 8 7 6 5 4 3 2 1
13 and 14	ON	ON	OFF	ON OFF 8 7 6 5 4 3 2 1
15 and 16	ON	ON	ON	ON OFF 8 7 6 5 4 3 2 1

Blackmagic Converters Setup Settings

The Converters Setup utility can be used to change settings and update your Mini Converter's software. You can access these settings by moving between the 'video,' 'audio,' and 'about' tabs.

The 'about' tab is detailed in the 'changing settings' section in this manual.

The 'video' tab for Mini Converter SDI to Analog 4K contains the following settings.

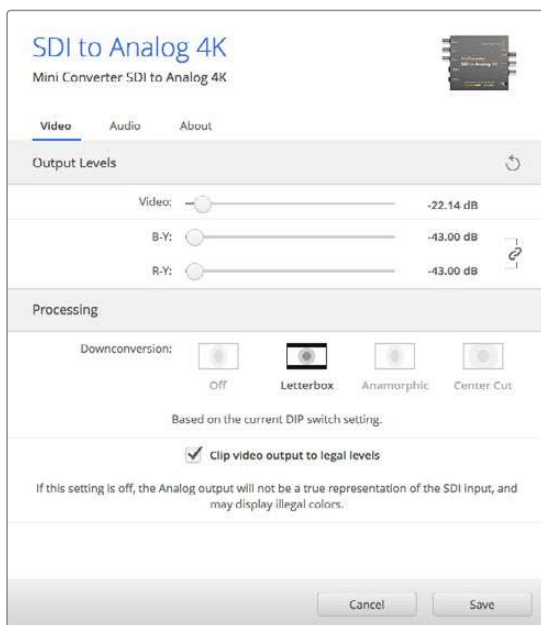
Output Levels menu

This lets you set the luminance and chroma levels, and the B-Y and R-Y component levels independently.

Processing menu

This menu allows you to set the aspect ratio of down converted video. The options are letterbox, anamorphic, center cut or no processing.

The 'clip video output to legal levels' checkbox controls clipping of your SDI input to ensure that it stays within HDMI legal levels and should be kept on by default.

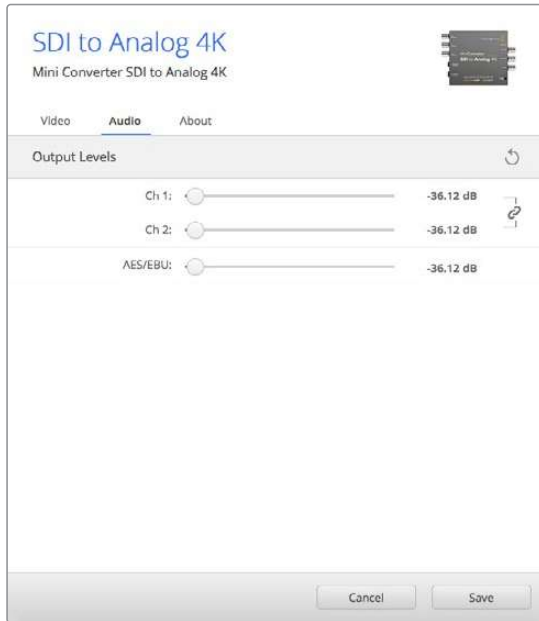


Use the 'video' tab in Converters Setup to adjust analog video levels and processing settings.

The 'audio' tab for Mini Converter SDI to Analog 4K contains the following settings.

Output Levels menu

This menu allows you to adjust the gain on the audio input. You can adjust audio levels independently per channel, or together by clicking the 'link' icon next to their sliders. To reset all audio levels back to 0 dB click the 'reset' button at the top of the 'output levels' menu.



Use the 'audio' tab in Converters Setup to adjust analog audio levels.

Mini Converter SDI to Analog 4K Block Diagram

