

Hi5 HD-SDI/SDI To HDMI Video and Audio Converter User Manual



HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

AJA
AJA VIDEO SYSTEMS INC

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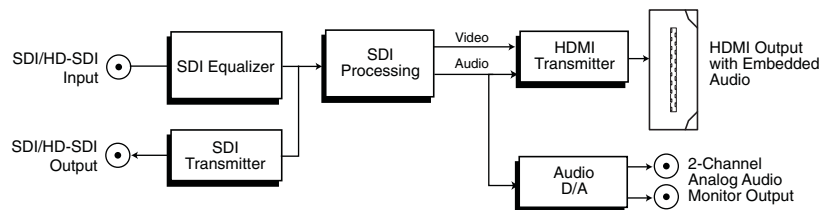
Introduction

The Hi5 converts SDI or HD-SDI to HDMI for driving HDMI monitors. Embedded SDI/HD-SDI audio is supported in the HDMI output allowing a convenient single cable audio/video connection. The Hi5 provides 2 Channel RCA style audio outputs for separate audio monitoring if needed. The Hi5 also provides a looping SDI/HD-SDI output useful for connecting additional equipment, or for “daisy chaining” multiple monitors to the same SDI-HD-SDI source.

Features

- SDI/HD-SDI to HDMI
- Full HDMI support including 8 channels of embedded audio
- Additional 2 Channel RCA jack audio output (channels 1 and 2)
- Equalized Looping SDI/HD-SDI output
- HDMI cable supplied
- Uses 5V power (supply sold separately)
- No configuration necessary

Block Diagram



Hi5 Converter, Simplified Block Diagram

I/O Connections



Hi5 Converter

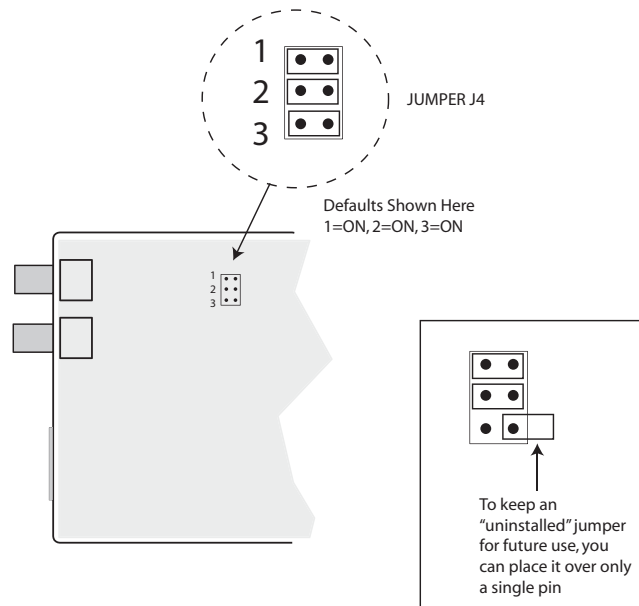
User Controls

An internal Jumper block with 3 jumpers (J4) provides controls for HDMI audio, output mode, and 480i/480p selection. Each of these settings are described below.

Internal Jumper

Jumper #1 (default = installed)	Jumper #2 (default = installed)	Jumper #3 (default = installed)
<p><i>Installed (default)</i> = SD output is interlaced (480i/576i)</p> <p><i>Removed</i> = SD output is progressive (480p/576p)</p> <p>Some HDMI monitors do not support 480i/576i. The Hi5 can line-double SD inputs to 480p/576p (support for 480p/576p is required by HDMI). 480i/576i is recommended for monitors which do support it</p>	<p><i>Installed (default)</i> = HDMI output mode</p> <p><i>Removed</i> = DVI output mode</p> <p>DVI mode should be used only with DVI-only monitors. Note that most DVI monitors do not work with video rates. Embedded audio is not supported in DVI mode.</p>	<p><i>Installed (default)</i> = 2-channel HDMI audio</p> <p><i>Removed</i> = 8-channel HDMI audio</p> <p>The jumper selects whether 2 or 8 channels of audio will be embedded onto the HDMI output stream. Channels 1 and 2 will always appear on the RCA connectors, regardless of the jumper setting.</p> <p>When the jumper is set for 2-channel HDMI embedded audio, channels 1 and 2 are disembedded from SDI.</p> <p>When the jumper is set for 8-channel HDMI embedded audio, channels 1 through 8 are disembedded from SDI.</p>

To access this jumper, remove the four phillips screws securing the back side of the Hi5 case. Once the case cover is removed, locate the jumper block. Jumper positions 1 through 3 are clearly marked on the circuit board next to the jumper J4.



[Note: “Removed” jumpers can be stored inside the unit by installing them on only 1 pin

Installation

Typically, Hi5 installation consists of the following steps:

1. Ensure the Hi5 is disconnected from power.
2. Connect video equipment to the convertor BNCs and HDMI connector.
3. Connect audio equipment to RCA connectors (optional)
4. Apply +5VDC power to the converter (AJA power supply model DWP or DWP-U).

Specifications

Item	Specification
Input Formats	525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, and 1080p30
Video Input	HD-SDI/SDI, SMPTE-259/292/296
Outputs	HDMI with embedded audio, 24-bit (selectable by internal jumper: 2 or 8 channels) Audio—2 channel RCA-style outputs at -10dBV (nominal), Channel 1 and 2 1 Looping SDI/HD-SDI output of the SDI input (75 ohm, unterminated)
HDCP	The Hi5 does not encode the HDMI output with HDCP encryption. By definition, SDI/HD-SDI inputs to the Hi5 are unencrypted. The HDMI specification requires HDMI monitors to support unencrypted inputs.

Item	Specification
Size	4.6" x 2.4" x 1" (117 x 61 x 25 MM.)
Power	+5 VDC regulated, 3 watts (AJA power supply model DWP or DWP-U)