

Hi5-Fiber

HD-SDI/SDI over Fiber to HDMI Video and Audio Converter



Published: 5/2/2011

Installation and Operation Guide

Because it matters.



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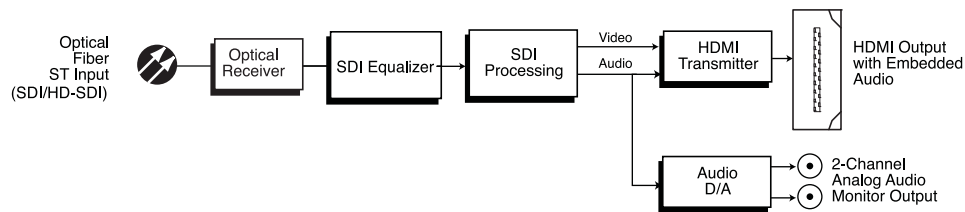
Introduction

The Hi5-Fiber converts SDI or HD-SDI over single mode 1310 nm fiber optic cable (ST-style connection) to HDMI for driving HDMI monitors. Embedded 8 channel SDI/HD-SDI audio is supported in the HDMI output allowing a convenient single cable audio/video connection. The Hi5-Fiber provides 2 Channel RCA style audio outputs for separate audio monitoring if needed.

Features

- SDI/HD-SDI over Fiber to HDMI
- Full HDMI support including 10-bit video and 8 channels of embedded audio
- Supports single mode 1310 nm fiber optic cable with ST receiver
- Additional 2 Channel RCA jack audio output (channels 1 and 2)
- HDMI cable supplied
- Uses +5 to 20VDC power (supply sold separately)
- No configuration necessary
- 5 year warranty

Block Diagram



Hi5-Fiber Converter, Simplified Block Diagram

I/O Connections



Hi5-Fiber Converter

Installation

Typically, Hi5-Fiber installation consists of the following steps:

1. Ensure the Hi5-Fiber is disconnected from power.
2. Connect video equipment to the Fiber ST connector and HDMI connector.



Caution!

Hi5_Fiber requires the use of "single mode 1310nm compatible" fiber optic cable.

3. Connect audio equipment to RCA connectors (optional)
4. Apply +5-20 VDC power to the converter (AJA power supply model DWP or DWP-U).
5. The Hi5-Fiber will now run using the default factory settings. If you wish to alter the factory settings, you'll need to reset the factory internal jumper. This process is detailed on the following pages.



Warning!

Active fiber-optic cables emit radiation invisible to the human eye. Do not look directly at the end of an active fiber-optic cable; the Hi5-Fiber is a Class 1 Laser Product.



CLASS 1
LASER
PRODUCT

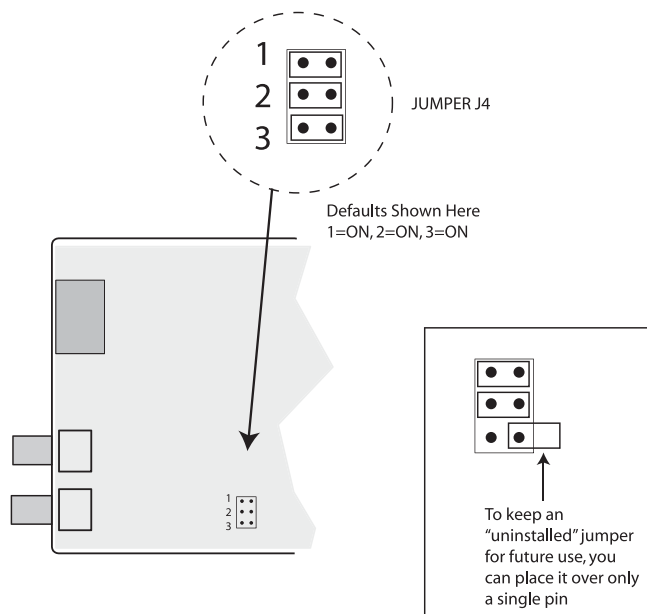
User Controls

An internal Jumper block with 3 jumpers (J4) provides controls for HDMI audio, output mode, and 8- or 10-bit video 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> = 8-bit RGB 4:4:4 HDMI Video</p> <p><i>Removed</i> = 10-bit YCbCr 4:2:2 HDMI Video</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

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-259/274/292/296 over Fiber ST connection
Outputs	HDMI with embedded audio, 24-bit (selectable by internal jumper: 2 or 8 channels) Analog Audio—2 channel RCA-style outputs at -10dBV (nominal), Channel 1 and 2
HDMI	Standard Type A connector Video: 8-bit RGB 4:4:4 or 10-bit YCbCr 4:2:2 (selectable by internal jumper) Audio: 24-bit, with 2 or 8 embedded channels (selectable by internal jumper)
HDCP	The Hi5-Fiber does not encode the HDMI output with HDCP encryption. By definition, SDI/HD-SDI inputs to the Hi5-Fiber are unencrypted. The HDMI specification requires HDMI monitors to support unencrypted inputs.
Size	4.6" x 2.4" x 1" (117mm x 61mm x 25mm.)
Power	+5 to 20 VDC regulated, 3 watts (AJA power supply required: model DWP or DWP-U)