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MMIO EMB-HDSDI 3G/HD/SD Signal & Analog Audio Embedder

User manual V1.0

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Revision Status

Rev Date	Description
Dec. 10, 2013	Initial release of the MMIO EMB-HDSDI User Manual Firmware V1.0

MMIO EMB-HDSDI

Ⅰ Description

MMIO EMB-HDSDI is a kind of embedder based on Mini-Box chassis. It can embed one analog audio stereo signal into a single serial digital signal, and output 1 serial digital signals with embedded audio. It supports SD-SDI, 1.5 Gbps HD-SDI and 3.0 Gbps HD-SDI for inputs and outputs. It can also be applied to digital signal with embedded audio for input signal.

MMIO EMB-HDSDI supplies real-time input signal status indicator and power indicator which make it convenient to monitor. The embedded audio channel can be selected though DIP Switch.

MMIO EMB-HDSDI is easy to install, and can be widely used in broadcasting system, studios and other professional audio fields.

Ⅱ Features

- ✧ 2 analog audio stereo signal embedded into a single serial digital signal

- ✧ Inputs and outputs for SD-SDI, 1.5Gb/s HD-SDI and 3.0Gb/s HD-SDI

- ✧ Support self-definition embedded audio channel via DIP Switch

- ✧ All audio interfaces adopt 3-PIN connector, balanced input

- ✧ Supply real-time input signal status indicator and power indicator

- ✧ Support bypass function with power on

Ⅲ MMIO EMB-HDSDI interface display

3.1 Overview

3.2 Right panel
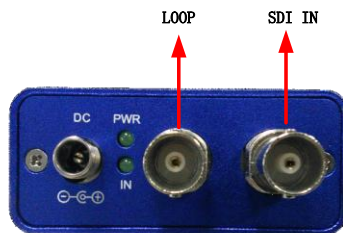
DC IN：　12V 1A

PWR：　Power indicator, when the power works normally, the indicator shows green.

IN：　Input signal indicator, when the input signal is correct, the indicator shows green.

SDI IN：　BNC interface, digital signal input with embedded or non-embedded audio, support the SD-SDI, HD-SDI, and 3G-SDI.
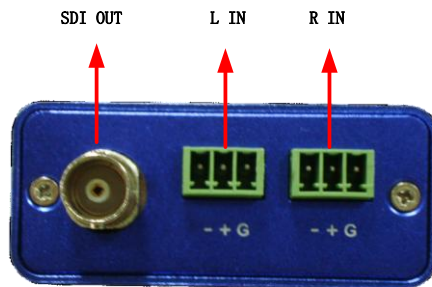
SD: 525i 60, 625i 50

HD: 720p 50Hz/59.94Hz/60Hz

1080i 50Hz/59.94Hz/60Hz

1080p 23.97Hz/24Hz/25Hz/29.97Hz/30Hz

1080p 50 Hz/59.94Hz/60 Hz

SDI LOOP：BNC interface, support bypass SDI input with power on.

3.3 Left panel

SDI OUT：BNC interface, 1 serial digital signal outputs with embedded audio.

L-IN & R-IN：3pin interface, 1 analog audio stereo signal input.

3.4 Front panel

MODE SET: DIP switch, users can set DIP position to achieve more functions, the DIP specific

meaning as following:

DIP Switch		1	2	3	4	5	6	7	8	9	10
	Silence	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	G1 CH1&CH2	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Select embedded audio channel	G1 CH3&CH4	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	G2 CH1&CH2	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	G2 CH3&CH4	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
	G3 CH1&CH2	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
	G3 CH3&CH4	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF

| G4 CH1&CH2 | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | OFF | OFF |
| G4 CH3&CH4 | OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | OFF |
| Auto | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON |

Note: Power switch UP=OFF   DOWN=ON

When the analog audio stereo are embedded to certain channels of SDI input, then other audio channels will have no audio any more. For instance, embed analog audio stereo to G1 CH1&2, so G1 CH3&4 and other audio groups have no audio.
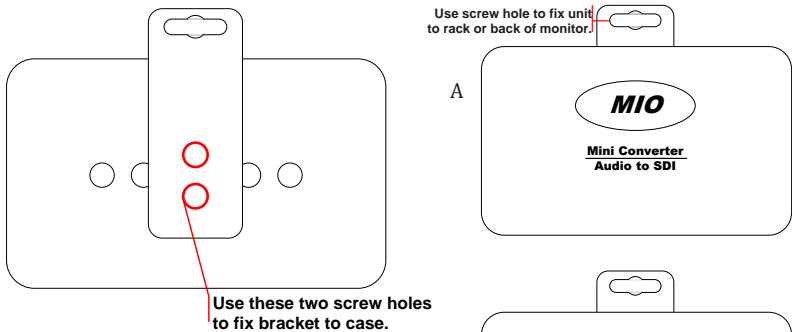
Ⅳ Installation Guide

The unit is equipped with mini mounting bracket. And there are several screw holes on the bottom of unit for installing the mini bracket. Please see the pictures below.

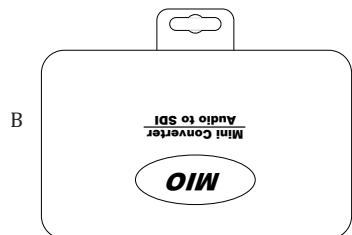Mini bracket: Bottom of unit:
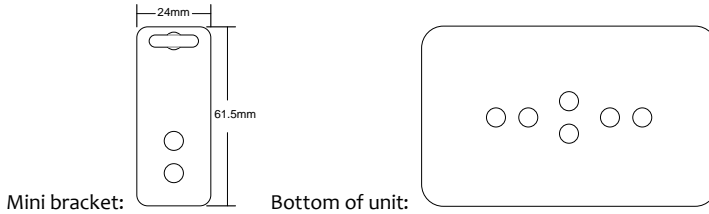
There are several ways to fix this bracket to case. According the direction of connection, you can choose one appropriate way to fix it.

Fix the bracket vertically like this:
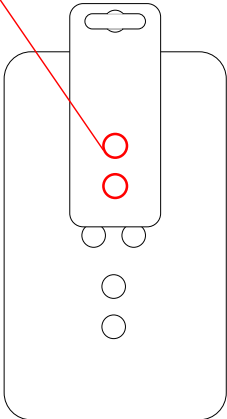
Use screw hole to fix unit
to rack or back of monitor.

A

MIO

Mini Converter
Audio to SDI

Use these two screw holes
to fix bracket to case.

Fix the bracket horizontally like thiSs:

B

Mini Converter
Audio to SDI

MIO

Use these two screw holes to fix bracket to case.

A

B

Use screw hole to fix unit to rack or back of monitor.

Mini Converter
Audio to SDI

MIO

MIO

Mini Converter
Audio to SDI
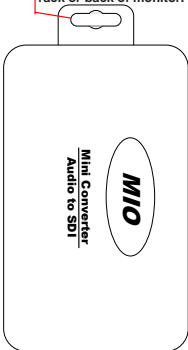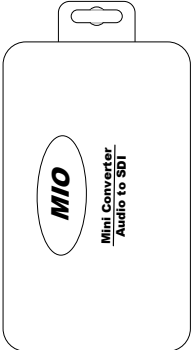
Ⅴ Technical specification

Digital video input:

Input interface: 1*HD/SD-SDI, BNC connection

Impedance: 75Ω

Format: SMPTE-259M-C；270Mb/s

                      SMPTE-292M；1.485Gps

                      SMPTE-425；2.970Gps

Analog audio Input:

Input interface: 2*3pin

Impedance: 600Ω

Digital video output:

Output interface: 1*HD/SD-SDI, BNC connection

                      1*HD/SD-SDI LOOP, BNC connection

Impedance: 75Ω

Format: SD: 525i 60, 625i 50

                      HD: 720p 50Hz/59.94Hz/60Hz

                         1080i 50Hz/59.94Hz/60Hz

                         1080p 23.97Hz/24Hz/25Hz/29.97Hz/30Hz

                         1080p 50 Hz/59.94Hz/60 Hz

                      SMPTE 259M-C；270Mb/s

                      SMPTE-292M；1.485Gps

                      SMPTE-425；2.970Gps

Level: 800mV±10%

Rise time/Fall time:　≤270PS（20%-80%）(HD)

　　　　　　　　　　　750~1500PS（20%-80%）(SD)

Jitter:　　　　　　　<0.2UI (100 kHz)

Status indicator:

Input signal status indicator

Power indicator

(Indicate by shining or extinguishing of the green LED)

Power consumption:

Power:　　　　　12VDC 1A

Dimension:　　　　123mm*92mm*29mm

Ⅴ Contact

Technical support

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