H-SDI-PG

SD HD 3G-SDI SIGNAL GENERATOR

USER MANUAL

1. Overview

H-SDI-PG is a SD/HD 3G SDI signal generator that sends standard color bar and moving ring test patterns in SD/HD/3G-SDI format at the 2970Mb/s, 1485Mb/s or 270Mb/s speed rate, also, the sine wave audio signal is embedded. H-SDI-PGis designed as packet, portable instrument, and can be widely used for field TV broadcast, high definition video conference and high definition video surveillance applications.

2. Features

- Supports 2970Mb/s, 1485Mb/s and 270Mb/s bit rate, complying with SMPTE-424 3G-SDI, SMPTE-292 HD-SDI and SMPTE-259 SD-SDI.
- PAL and NTSC switching available on the panel.
- Various video formats can be selected by setting the bit switch on the panel.
- Supports 1080P@59.94/29.97, 1080I@59.94, 720P@59.94, 525I@59.94 for NTSC.
- Supports 1080P@60/30, 1080I@60,720P@60, 625I@50 for PAL.
- Integrates sine wave of 1KHz generator for test.
- Supports SDI output format indication.
- 12V DC power supply, 1.5W±10% consumption.
- Dimension: 93.2mm×46.2mm×29.6mm

3. Application

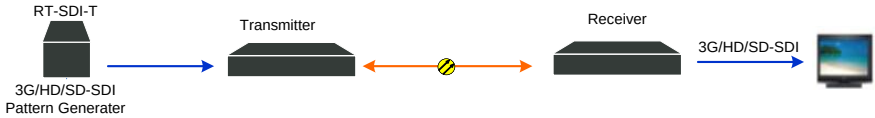

Fig: Typical Application

4. Panel Description

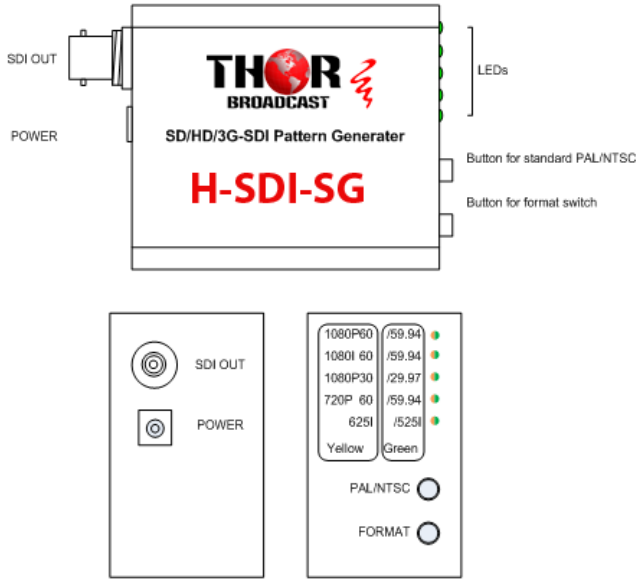

图 4-1 View of Panel

Table 4-1 Description on Interfaces and Indicators

Term	Description
SDI OUT	SD/HD/3G-SDIvideo output
POWER	12V DC input
PAL/NTSC Button	System will be changed between PAL and NTSC by pressing the button.
Format Button	Pressing the button step by step, the video formats will be changed in sequence as bellow: For NTSC, 1080P@59.94 → 1080I@59.94 → 1080P@29.97 → 720P@59.94 → 525I@59.94, then, go to 1080P@59.94 again. For PAL: 1080P@60 → 1080I@60 → 1080P@30 → 720P@60 → 625I@50, then, go to 1080P@60 again.
LED	SDI format indication. Green for NTSC and yellow for PAL.

5. Technical Specification

Term		Typical Value
Video interface	Physical Connector	BNC
	Bit rate	2097Mb/s、1485Mb/s 和 270Mb/s
	Standard	SMPTE 424M 3G-SDI, SMPTE-292M HD-SDI, SMPTE-259M SD-SDI
	Impedance	75Ω
	Output level	800mVp-p±10%
	Return loss	≤ -15dB
	Rising and falling time (3G-SDI)	≤135ps
	Rising and falling time (HD-SDI)	≤270ps
	Rising and falling time (SD-SDI)	≤1.50ns
	SD-SDI alignment jitter (1KHz)	≤0.2UI
	SD-SDI timing jitter (10Hz)	≤0.2UI
	HD-SDI alignment jitter (100KHz)	≤0.2UI
	HD-SDI timing jitter (10Hz)	≤1.0UI
	3G-SDI alignment jitter (100KHz)	≤0.3UI
	3G-SDI timing jitter (10Hz)	≤2.0UI
Embedded audio	Audio	1KHz Sine wave
	Sample rate	48KHz
	Coding bits	24bit
Mechanical dimension		93.2mm×46.2mm×29.6mm

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