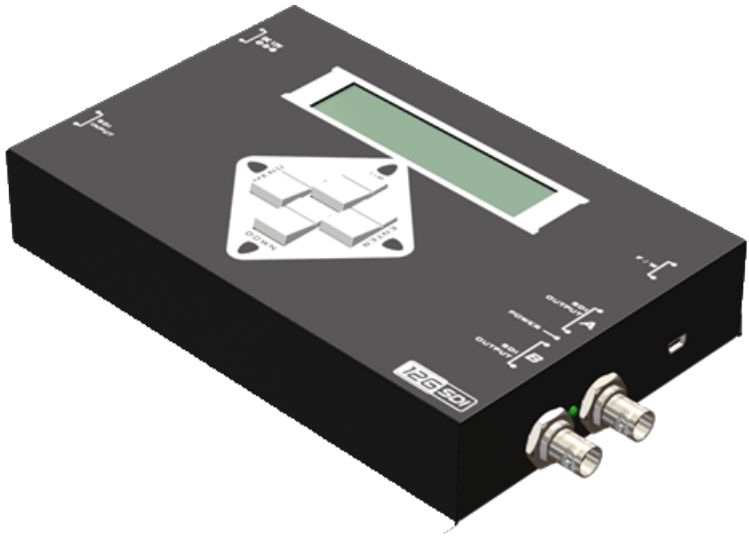
4Kx2K 12G-SDI Pattern Generator

User Manual



THREE YEAR Manufacturer Warranty

04-1200A

P/N: CE-SD0C11-S1

Safety and Notice

The 4Kx2K 12G-SDI Pattern Generator has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the 4Kx2K 12G-SDI Pattern Generator should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning.

Package contents

- 4Kx2K 12G-SDI Pattern Generator
- Power adapter DC 12V / 2A
- User Manual

Thank You
for your purchase!

Features

- **Supported output resolution**
  NTSC 525@60, PAL 625@50, 720p@23.98, 720p@50,720p@59.94, 720p@60, 1080i@50, 1080i@59.94, 1080i@60, 1080p@23.97, 1080p@24, 1080p@25, 1080p@29.97, 1080p@30, 1080p@50, 1080p@59.94, 1080p@60, 4K2K@23.97, 4K2K @24, 4K2K @25, 4K2K @29.97, 4K2K @30, 4K2K @50, 4K2K @59.94, 4K2K @60

- **Bit Rate:**
  2.97 Gbps, 2.967 Gbps, 1.485 Gbps, 1.4835 Gbps, 5.94Gbps, 5.934Gbps, 11.88Gbps, 11.868Gbps,

- **Video Patterns**
  100% Color Bars, Borderline, Random Noise, Check Field, Black, Vertical Lines, Black / White alternate fields, Full Grey / Full White,Black to White Gradient, Random Generator for all still patterns, moving squares White noise, Inverse effect with still pattern, Scrolling Title (see Appendix for illustrations)

- **Save Settings to Memory Option**

- **ANC Data**
  EDH (RP-165), SMPTE 352M, SMPTE291M

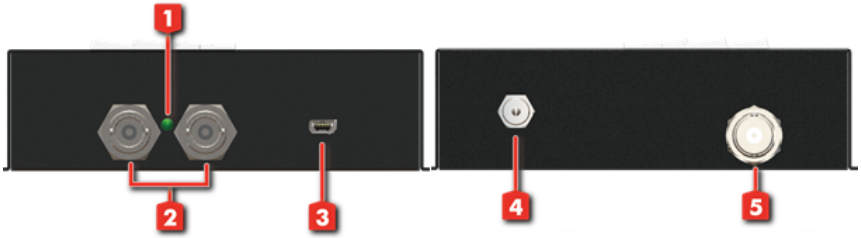
- **Control By panel buttons**

- **Video Output**
  SDI output (SDI, HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI)

SPECIFICATIONS

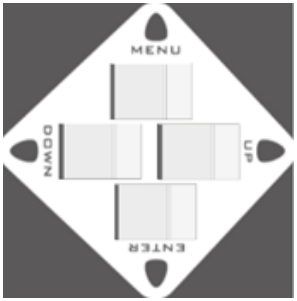
Role of usage		Pattern generator
SDI standards		12G/6G/3G/HD/SD-SDI
Auto SDI rate detection		Yes
Supported protocols		SMPTE 259M (270Mbps / 360Mpbs) SMPTE 292M / HDTV (1.485 & 1.485/1.001Gbps) SMPTE 424/425M (2.97 & 2.97/1.001Gbps) SMPTE ST-2081 (5.94&5.94/1.001Gbps) SMPTE ST-2082 (11.88&11.88/1.001Gbps)
Video bandwidth		11.88Gpbs
Data rates		143 / 270 / 1483 / 1485 / 2967 / 2970 / 5934 / 5940 / 11868 / 11880 Mbps
Video support		[12G] 4K2K@50/59.94/60 [6G] 4K2K@23.97/24, 25, 30 [3G] 1080p@50/59.94/60 (4:2:2) [HD] 720p50/59.94/60, 1080p24/30, 1035i50/59.94/60, 1080i50/59.94/60 [SD] NTSC@59.94Hz, PAL@50Hz
SDI signal type		SMPTE-292M / 259M / 424M / ST-2081 / ST-2082
Output impedance		75Ω
Cable (Belden 1694A) equalization / transmission		[12G-SDI] up to 50m (165ft) / [6G-SDI] up to 100m (330ft) / [3G-SDI] up to 200m (660ft)
Audio support		Yes
PCB Stack-up		6-layer board [impedance control — differential 100Ω; single 75Ω]
Output		2x BNC [SDI]
BNC connector		75Ω interlocking socket
[HD] Eye pattern characteristics		Amplitude: Within 800mV <10%Long time jitter <1.0 UI Rise overshoot: Less than 2% Timing jitter <1.0 UI Fall overshoot: Less than 2% Alignment jitter <0.2 UI
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	150 x 190 x 32mm [5.9" x 7.5" x 1.3"]
	Package	175 x 270 x 100mm [6.9" x 10.6" x 3.9"]
	Carton	450 x 370 x 300mm [1'6" x 1'3" x 1']
Weight	Model	660g [1.5lbs]
	Package	1260g [2.8lbs]
Fixedness		Interlocking power supply
Power supply		12V 2A DC
Power consumption		8 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

Layout



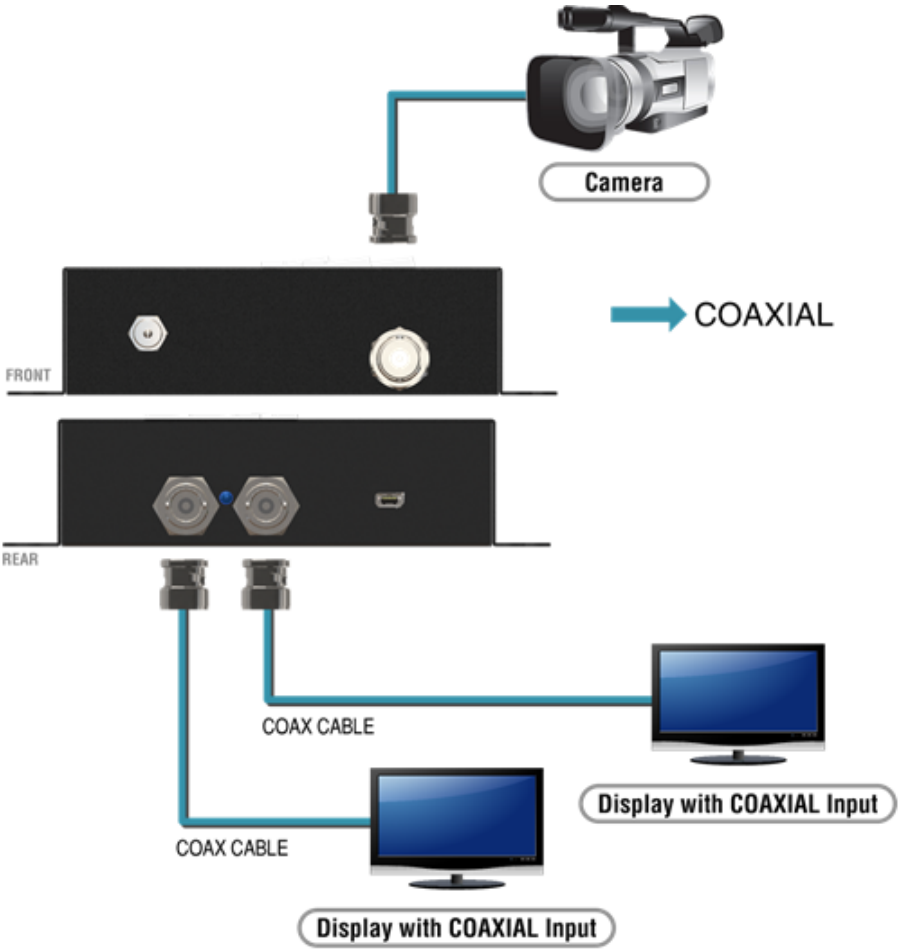
1. **Power LED**
2. **SDI Output:**
   Connect to a SDI device for SDI signal output either from the chosen pattern or the SDI source signal
3. **Mini USB port:** For F/W update
4. **Power Input:** Connect to a DC 12V power supply unit
5. **SDI Input:** Connect to a SDI source

PUSH Button



Button	Function
Menu	Trigger the menu operation
Enter	Enter the menu item
Up	Choose the last menu item
Down	Choose the next menu item

Application



NOTICE

1. In HDMI bypass mode, users must be aware of that the jitters coming from HDMI sources, such as DVD players, may be much higher than typical requirement according to SMPTE request on HD-SDI signals. This will result in SDI output with high jitters or even no SDI outputs!

2. Due to the high frequency bandwidth and low jitter requirement of 3G-SDI signals, it is strongly recommended to use just one SDI OUTPUT with one 75 ohm.

3. The features including new timings and patterns may increase without notice after the firmware is updated! This may affect the menu items, but will keep the same framework for users!

APPENDIX

- Data Identification Word of Ancillary Data Packet
  * Data Type 1(SMPTE-291M)

ANC Data	DID	SDID/DBN
352M	0x41	0x01
RP-165-EDH*	0xF4	0x00

Support

For more info or tech support

http://www.siig.com/support