



SDI Converter

User Manual

Model : SDI01-12G

12G-SDI to 4K HDMI Converter



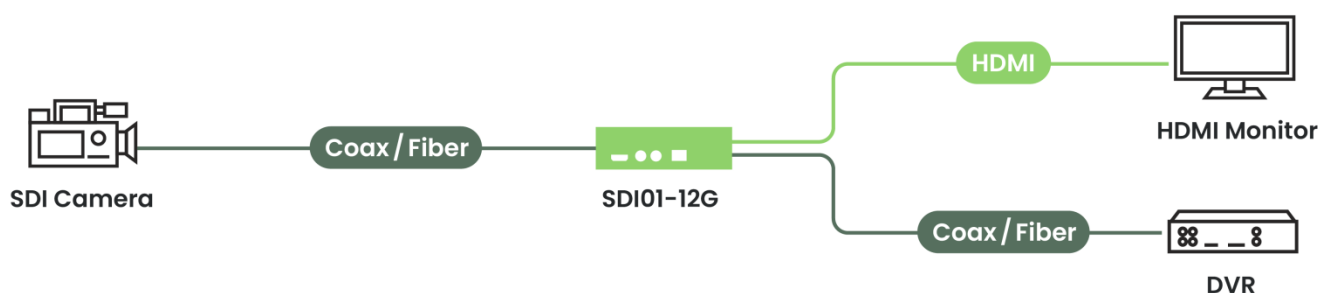
Introduction

SDI01-12G is a 12G-SDI to HDMI 2.0 converter that can allows you to monitor 12G SDI video using a cost-effective HDMI display. The new converter has a built-in SDI loop-out port to send the input SDI signal to an extra SDI device.

Features

- HDMI Resolution up to 4096x2160@60Hz 4:4:4 10Bit or 4096x2160@30Hz 4:4:4 12Bit.
- SDI Resolution up to 12G.
- Built-in fiber module for long distance transmission.
- Built-in SDI loop out for an extra SDI output.
- Supports video up/down scaler for HDMI output.
- Managed via PC software or DIP switch.

Diagram



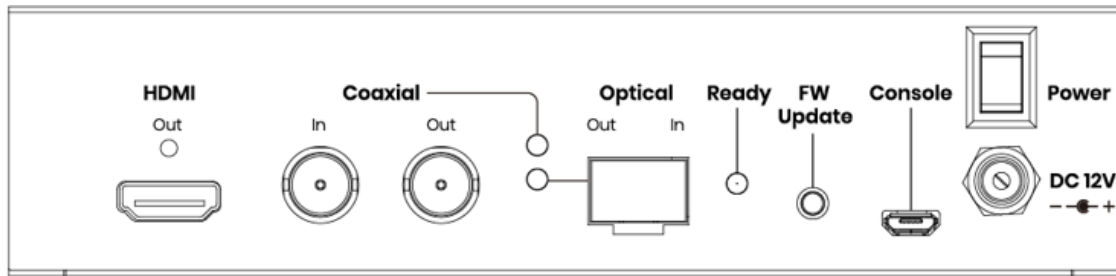
Transmission Distance

Cable	Data Rate	Distance
RG6U Coaxial	11.88Gb/s	80M
RG6U Coaxial	5.94Gb/s	100M
RG6U Coaxial	2.97Gb/s	190M
RG6U Coaxial	1.485Gb/s	260M
RG6U Coaxial	270mB/s	450M
12G Video SFP+	11.88Gb/s	10KM

※ The experiment is conducted by the application of Belden 1694A coaxial cables.



Panel View



NO	Interface	Function
1	HDMI Out	To connect an HDMI device
2	Coaxial In	To connect a SDI source via a coaxial cable
3	Coaxial Out	To connect a SDI device via a coaxial cable
4	Optical In	To connect a SDI source via a fiber cable
5	Optical Out	To connect a SDI device via a fiber cable
6	FW Update	To update firmware
7	Console	To update firmware update or configure the system.
8	Power	To turn on/ off power
9	DC12V	To connect a DC 12V power adapter



NO	Interface	Function
10	Setting	To configure input interface, resolutions, HDCP, modes.

LED Indication

Front LED Indicator	LED Color	Bright	Blink
On	Green On/Off	Power On/ Off	
SDI	Green On/Off	Signal Locked	
HDMI	Green On/Off	HDMI Outputted	Resolution not supported
12G/6G	Blue On/Off	12G-SDI	6G-SDI
3G/1.5G	Blue On/Off	3G-SDI	1.5G-SDI
270M	Blue On/Off	270M-SDI	

Rear LED Indicator	Rear Panel LED	Function
READY	Green On/Off	System Ready
Coaxial	Blue On/Off	Coaxial linked/ unlinked
Optical	Blue On/Off	Optical linked/ unlinked

DIP Switch Settings

NO	Function	↑ OFF	↓ ON
1	Input Interface Select	Coaxial	Optical
2	Reserve		
3	Reserve		
4	Reserve		
5	Scaler Setting	6 ↑ 5 ↑ = Pass-through	6 ↑ 5 ↓ = 1080p@60Hz
6		6 ↓ 5 ↑ = 3840x2160@60Hz	6 ↓ 5 ↓ = 4096x2160p@60Hz)
7	HDCP Setting	HDCP Off	HDCP On
8	Configuration Mode	Software Mode	Hardware Mode

※ Please adjust the DIP switch when power off and turn on to take effect.



SDI Resolution and Frame Rate

SDI Resolution	SDI Frame Rate	SDI Sampling	SDI Audio
4096x2160	60p, 59.94p, 50p, 48p, 47.95p, 30p, 29.97p, 25p, 24p, 23.98p	4:4:4/4:2:2	32-CH 48KHz 24-Bit
3840x2160	60p, 59.94p, 50p, 48p, 47.95p, 30p, 29.97p, 25p, 24p, 23.98p		
2048x1080	60p, 60i, 59.94p, 59.94i, 50p, 50i, 48p, 48i, 47.95p, 47.95i, 30p, 30psf, 29.97p, 29.97psf, 25p, 25psf, 24p, 24psf, 23.98p, 23.98psf		
1920x1080	60p, 60i, 59.94p, 59.94i, 50p, 50i, 48p, 48i, 47.95p, 47.95i, 30p, 30psf, 29.97p, 29.97psf, 25p, 25psf, 24p, 24psf, 23.98p, 23.98psf		
1280x720	60p, 59.94p, 50p, 48p, 47.95p, 30p, 29.97p, 25p, 24p, 23.98p		

HDMI Resolution and Frame Rate

HDMI Resolution	HDMI Frame Rate	HDMI Sampling	HDMI Audio
4096x2160	60p, 59.94p, 50p, 48p, 47.95p, 30p, 29.97p, 25p, 24p, 23.98p	4:4:4/4:2:2	8-CH 48KHz 24-Bit
3840x2160	60p, 59.94p, 50p, 48p, 47.95p, 30p, 29.97p, 25p, 24p, 23.98p		
2048x1080	60p, 60i, 59.94p, 59.94i, 50p, 50i, 48p, 48i, 47.95p, 47.95i, 30p, 29.97p, 25p, 24p, 23.98p		
1920x1080	60p, 60i, 59.94p, 59.94i, 50p, 50i, 48p, 48i, 47.95p, 47.95i, 30p, 29.97p, 25p, 24p, 23.98p		
1280x720	60p, 59.94p, 50p, 48p, 47.95p, 30p, 29.97p, 25p, 24p, 23.98p		

Scaler Resolution and Frame Rate

HDMI Resolutions	HDMI Frame Rates
4096x2160	59.94/ 60/ 50Hz
3840x2160	59.94/ 60/ 50Hz
1920x1080	59.94/ 60/ 50Hz
1280x720	59.94/ 60/ 50Hz
720x576p	50Hz
640x480p	59.94/ 60Hz

※ The scaler doesn't process the format of interlace and progressive segmented frame, it will directly pass-through original format from the input source.

Trouble Shooting

1. We strongly recommend using high quality 75Ω coaxial cables; bad quality cable may affect the connection stability and transmission distance.
2. SD-SDI (480i & 576i) in the SMPTE 292 standard 270M is not supported.
3. If the frame rate for video input sets as 59.94Hz and the scaler selects 60Hz, the output frame rate will stay on 59.94Hz.

Package Includes

No.	Item	Amount
1	SDI01-12G	x 1
2	DC12V 1.5A Power Adapter	x 1
3	Screw Set	x 1
4	Rubber Pad	x 1



Specification

ITEM NO.	SDI01-12G
Support	
Compliance	SMPTE 2082-10 Mode 1 SMPTE 2081-10 Mode 2 SMPTE 425-1 3GA & 3GB SMPTE 425-1 3GB-DS SMPTE 292 HDMI 2.0 HDCP 2.2
SDI Resolution	12G-SDI, 6G-SDI, 3G-SDI, 1.5G-SDI
HDMI Resolution	4096x2160@60Hz 4:2:2 10Bit, 4096x2160@30Hz 4:4:4 12Bit
Transmission Distance	10KM over Single-mode Fiber Optic Cable, 100M over Coaxial Cable
Ports & Interfaces	
Video Input	1 x 75Ω BNC, 1 x Video SMPTE SFP+
Video Output	1 x HDMI Type A
Video Loop-out	1 x 75Ω BNC, 1 x Video SMPTE SFP+
Power Interface	1 x (5.5 x 2.1mm) DC Jack
Console	1 x Micro USB
Power	
Power Supply	DC 12V 1.5A Regulated
Power Consumption	1.0A (Typical), 1.2A (Maximum)
Ambient Temperature	
Operation	0 to 50°C
Storage	-20 to 85°C
Humidity	Up to 95%
Physical Characteristics	
Dimensions	167 x 154 x 40mm
Weight	640g