

SDI-12G

12G SDI Video to Fiber Converter

1-ch 12G-SDI+1-ch Loop+1-ch RS485 to Fiber Converter



Overview

The 12G-SDI HD audio and video optical converter is developed by AOA Technology, with independent intellectual property rights, combined with the actual demand of the market. through the single core optical fiber can transmit one channel forward 12G-SDI video and one channel reverse RS485 data / tally signal (optional), realizing no delay, uncompressed and high quality signal extension of 20km.

The SDI video converter built-in serial clock recovery, signal equalization and line drive, input automatic detection signal 12G-SDI/6G-SDI/3G-SDI/HD-SDI/SDI/ASI, compatible with SMPTEST2082-1 (12GUHD-SDI), ST2081-1 (6GUHD-SDI), SMPTE424M, SMPTE292M, SMPTE259M, SMPTE297M, SMPTE305M, SMPTE310M standards.

12G SDI to fiber optic converter supports plug-and-play SFP optical module, which can replace the corresponding optical module according to the actual site requirements, the device power consumption is less than 1.5W, the type-C port is used for power supply, supports USB power supply system, which is flexible in use.

The circuit board of 12G HD SDI to fiber converter adopts multi-layer design, stable and reliable, strong anti-interference ability; all components including connector, use products from internationally renowned manufacturers with reliable quality; aluminium shell design, corrosion resistance, excellent thermal and conductive function.

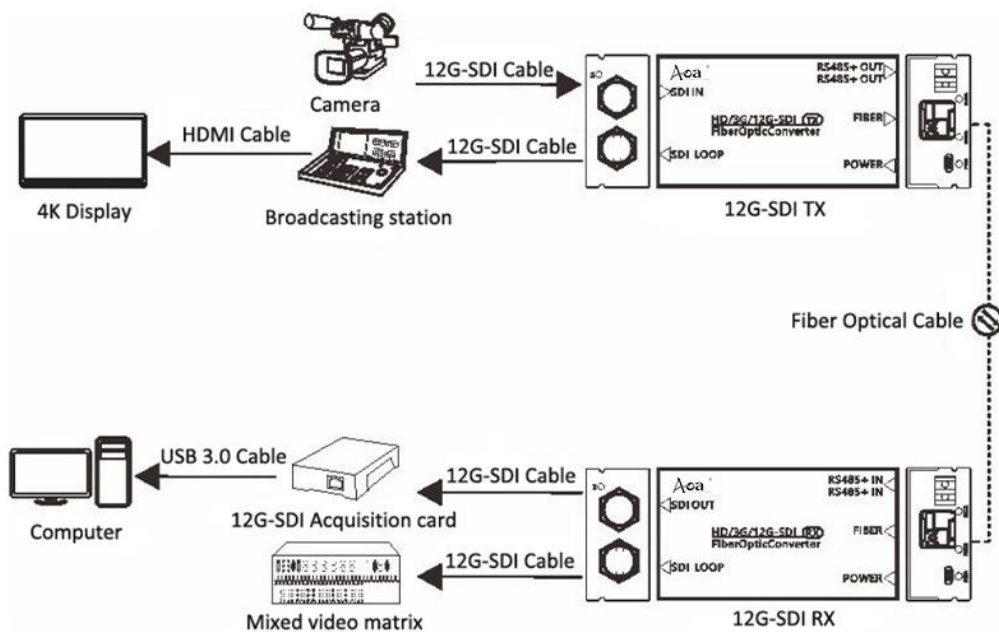
Features

- Support ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD) and ST-259 (SD); compatible with DVB-ASI and AES10 (MADI)
- Both transmitter and receiver have clock recovery function; (clock restorer can reduce high frequency jitter and completely regenerate data with pure low jitter clock)
- The clock restorer is locked to 11.88Gbps, 5.94Gbps, 2.97Gbps, 1.485Gbps or 1.001 frequency division sub rate and SMPTE rate of 270Mbps
- Signal input has automatic cable equalization (EQ) function, output has drive (CD) function

- Support plug and play SFP optical module, which can replace optical module corresponding to different distances or interfaces according to the actual site requirements
- Support single mode single fibre / dual fibre transmission distance 20km (default)
- Support status light display
- Support USB device power supply
- Plug and play, no debugging

Application

- SMPTE compatible with digital serial interface
- UHD TV / 4K / 8K / HDTV / SDTV video
- IP media gateway
- Digital video processing and editing



Technical Specifications

Parameter	Specifications
Fiber Optic	
Wavelength	1310nm(dual -fiber) 1270-1330nm (single fiber)
Fiber type	9/125um single-mode
Rate	12Gbps
Tx power	0~-3dB
Rx sensitivity	-12dB
Fiber connector	LC
Transmission distance	Multimode fiber, 550m; Single-mode fiber, 20km
SDI	
Protocol standard	SMPTE ST-2082
SMPTE rate	270Mbit/s, 1.48Gbit/s, 2.97Gbit/s, 5.94Gbit/s, 11.88Gbit/s
Support standard (digital video format)	SMPIE 259M, SD-SDI, 480i 576i SMPIE 292M, HD-SDI, 720P 1080i SMPIE 424M, 3G-SDI 1080P60Hz SMPIE ST-2081, 6G-SDI, 2160P30Hz SMPIE ST-2082, 12G-SDI, 2160P60Hz
EQ mode cable transmission distance	75m at 11.88Gbps 120m at 5.94 Gbps 200m at 2.97 Gbps 300m at 1.485 Gbps 600m at 270Mbps
Signal amplitude	800mV±10%
Impedance	75Ω
Connector	The BNC meet the IEC169-8 standard
RS485 Data	
Standard	Compliance with the EIA RS-485 standard
Transmission mode	Synchronous transmission
Baud rate	50bps to 520 kbps (support non-standard baud rates)
RS485	2-wire(A,B),half-duplex, point to multi-master-slave communication
Physical interface	Industrial terminal / 3.81mm
RS485 Circuit	
RS-485 pull-up resistance/pull-down resistance	4.7 kΩ, 4.7 kΩ
RS-485 terminal resistance	N / A, 120 Ω, and 120 k Ω
Tally signal index	
Level type	TTL (5V) /LVTTTL(3.3V)
Input level range	3.3V~12V
Output level parameters	0V or 3.3V

Default state	No-voltage output (0V)
Physical interface	Industrial terminal / 3.81mm
Power	
Input current	≅ 300MA
Input voltage	5V
Overload current protection	Support
Power supply physical interface	Type-C
Power consumption	<1.5W
Mechanical	
The shell metal	Aluminum alloy
Product size	100*55*25 (mm)
Net weight of product	0.15kg / unit
Package size	210*160*46mm
Package gross weight	0.5kg / pair
Working environment	
Working temperature	-20°C ~+75°C
Storage temperature	-40°C ~+85°C
Relative humidity	5 to 95% (non-condensing)
MTBF	> 10,0000 hours

Order Information

Model	Description
SDI-12GT	1-ch 12G-SDI+1-ch Loop+1-ch RS485 to Fiber Converter, Uncompress, with SFP module 12G Bidi SM, 10km, LC, Transmitter
SDI-12GR	1-ch 12G-SDI+1-ch Loop+1-ch RS485 to Fiber Converter, Uncompress, with SFP module 12G Bidi SM, 10km, LC, Receiver



For further information, please visit our website <https://www.aoatech.com>

All rights are reserved by AOA Technology Co.,Ltd. AOA reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.