

SDIXtreme^{3G}

3G SDI Fiber Optic Extension

- Multi-standard operation from 270 mbit/s to 3Gbit/s
- SMPTE 424M, 292M, 259M, and 297M compliant
- Supports HD/SD-SDI inputs with embedded audio and ancillary data
- Distribute uncompressed broadcast quality signals over single mode fiber up to 40 km. (24 miles) and up to 1000 meters over multi-mode fiber



The Logical Solution - Serial Digital Interface Extension

The SDI Xtreme 3G product series is a compact, broadcast quality, SDI over fiber extension system. The system is designed to transmit SD, HD, and 3G SDI signals with or without embedded audio and data, as well as DVB/ASI at 270 mbit/s. In addition, this fiber based transport system gives users the assurances that each signal is immune to video pathological signals over the entire length of the fiber interconnect. The system also supports either single or multi-mode fiber, and is SMPTE 424M, 292M, 259M, and 297M compliant.

The SDI Xtreme 3G provides industry leading performance and reliable media conversion for a wide variety of applications. Therefore, it is an ideal solution for Pro A/V, broadcast, and corporate studio applications, including video production and editing, (ENG) sports tele-production, field production, cross-town fiber links, cross on-campus production, pre-fibered venues, courtesy feeds and many more.

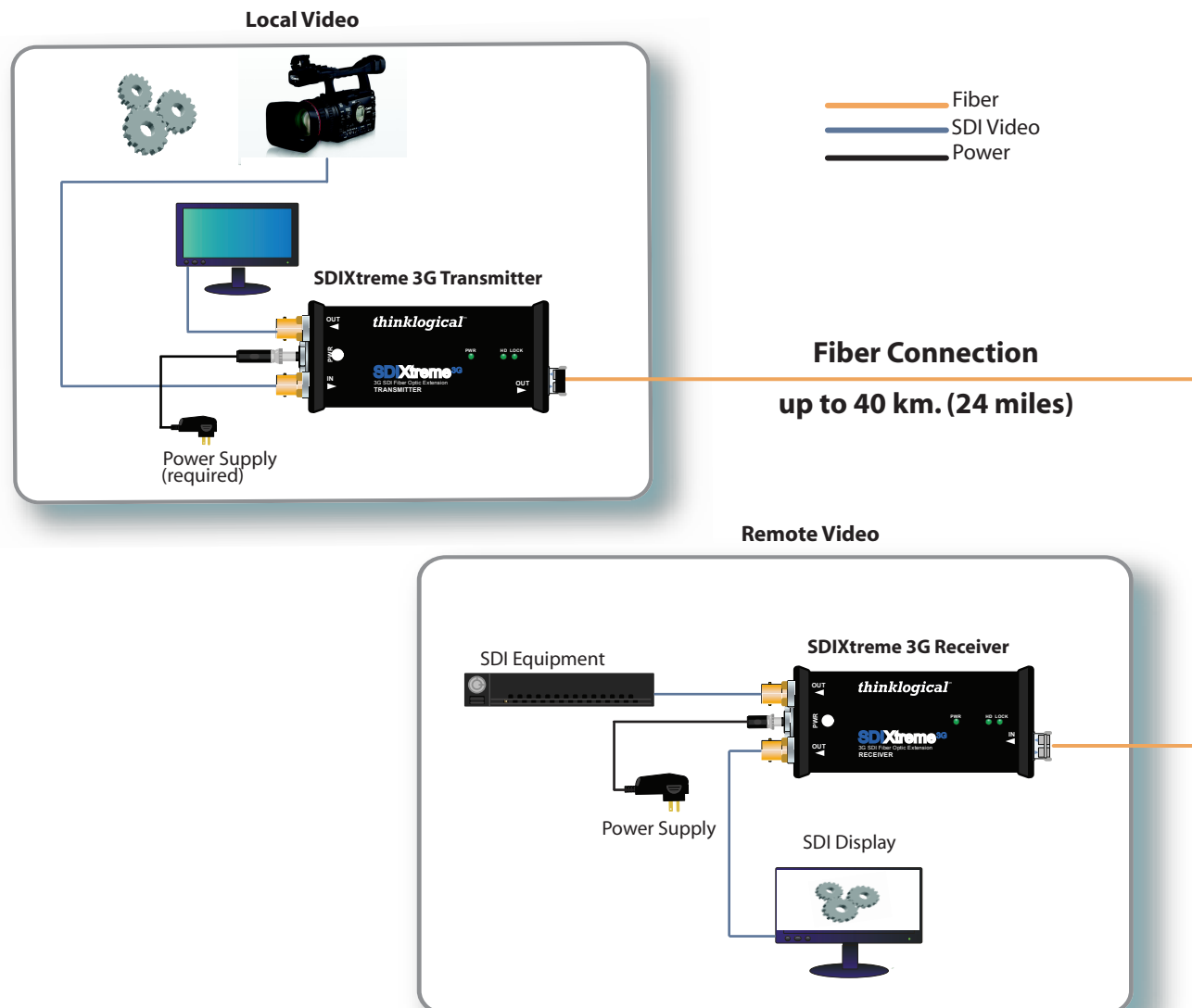
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The System

The reliability of the SDI Xtreme 3G stems from the quality of its design and construction, with advanced integrated re-clocking circuitry designed into the transmitter and receiver. Equalized and re-driven SDI loop-through is also provided on the transmitter and re-clocked SDI outputs are provided on the receiver. These key features provide assurance that the signal is equalized and re-clocked prior to fiber transmission; therefore it retains all of the signals' initial parameters allowing for pristine output. In addition, front panel status LEDs indicate system activity and link activity.

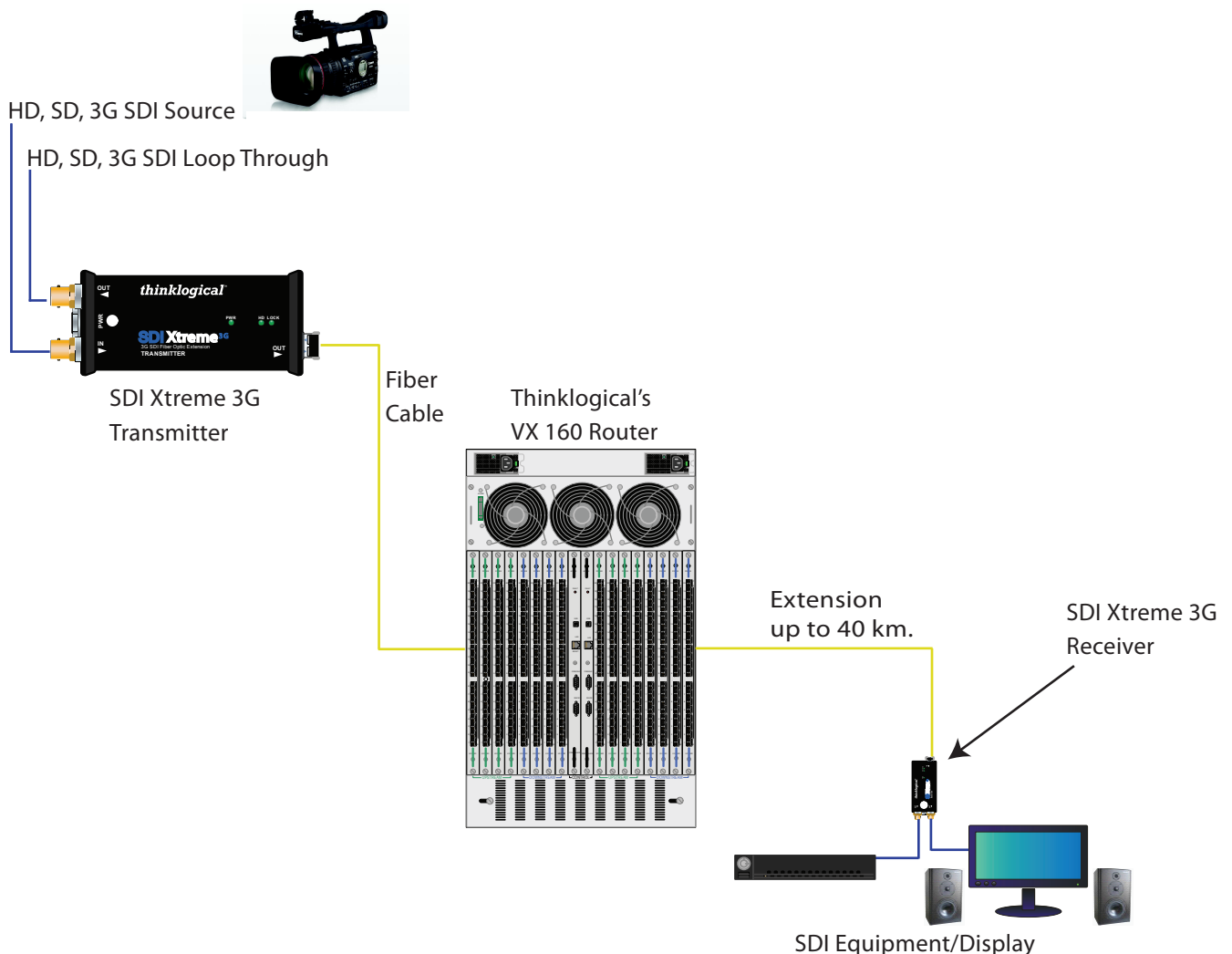
Installation possibilities are expanded with built-in support for either multi-mode or single mode fiber, making this a convenient and cost effective solution to combat the restrictions involved with the distribution of uncompressed broadcast quality video signals over long distances. In addition, the SDI Xtreme 3G is fully compatible with Thinklogical's VX Router line of products.

Typical application extending SDI video using SDI Xtreme 3G



Key Features

- Multi-standard operation from 270 mbit/s to 3Gbit/s
- Supports HD/SD-SDI inputs with embedded audio and ancillary data
- Signals are equalized and re-clocked on the receiver
- Equalized and re-clocked SDI loop through on the transmitter
- Signal transmission via fiber optic cable; no RF interference
- Supports both single mode and multi-mode fiber types
- SMPTE 424M, 292M, 259M, and 297M compliant
- Cable equalization on inputs and cable drivers on outputs to ensure signal integrity
- 15 dB Optical Link Budget @ 2.97 Gbps
- Hot Swappable/Pluggable SFP optics with LC connectors
- Distribute uncompressed broadcast quality signals over single mode fiber up to 40 km. (24 miles) and up to 1000 meters over multi-mode fiber
- Supports pathological patterns at all rates



SPECIFICATIONS

Indicators:	(3) Power, Data Rate HD, SD – Lock Detect
Dimensions:	4.96 x 2.25 x 1.03 (in) – 125.98 x 57.12 x 26.14 (mm)
Weight:	≈ 1 lb. (≈ 0.45 kg.)
Power:	5-12 VDC @ < 1AMP
Operating Temperature:	-5° C to +50° C

TRANSMITTER Specifications: ALL FIBER SPECS REFLECT SINGLE-MODE FIBER

Number of Inputs	1		
Data Rate Range	270Mbps to 2.97 Gbps		
Supported Standards	SMPTE 259M, 292, 297, 424M DVB-ASI		
Re-clocked Data Rates	270 Mbps (SMPTE 259M, DVB-ASI-270), 1.485 Gbps (SMPTE 292), 2.97 Gbps (SMPTE 494M)		
Equalization	Automatic up to 140m of Belden 1694A at 3.0 Gbps, 230m at 1.485 Gbps and 350m at 270 Mbps		
Return Loss	>10dB up to 2.97 Gbps		
Number of Outputs	1	Rise/Fall Time	< 135 ps at 2.97 Gbps per SMPTE 424M;
Signal Level	800mV ± 10%		< 270 ps at 1.485 Gbps per SMPTE 292;
DC Offset	0V ± 0.5V		0.4 ns to 1.5 ns at 270 Mbps per SMPTE 259M
Overshoot	< 10% of amplitude	Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 Gbps
Timing Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps; < 0.2 UI at 2.97 Gbps with color bar signal		
Alignment Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps; < 0.3 UI at 2.97 Gbps with color bar signal		

Optical Output

Connector	LC receptacle
Wavelength	1310nm (nominal)
Emmitter Type	FP Laser
Output Power (nominal)	-3.0 dBm at 270 Mbps; -3.0 dBm at 1.485 Gbps; -3.0 dBm at 2.97 Gbps
Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 Gbps

RECEIVER Specifications: ALL FIBER SPECS REFLECT SINGLE-MODE FIBER

Fiber Input

Connector	LC receptacle		
Wavelength	1270 - 1610 nm		
Minimum Input Sensitivity	-18 dBm at 2.97 Gbps; -19 dBm at 1.485 Gbps		
Maximum Input Power	0 dBm		
Number of Outputs	2	Rise/Fall Time	< 135 ps at 2.97 Gbps per SMPTE 424M;
Signal Level	800mV ± 10%		< 270 ps at 1.485 Gbps per SMPTE 292;
DC Offset	0V ± 0.5V		0.4 ns to 1.5 ns at 270 Mbps per SMPTE 259M
Overshoot	< 10% of amplitude	Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 Gbps
Timing Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps; < 0.2 UI at 2.97 Gbps with color bar signal		
Alignment Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps; < 0.3 UI at 2.97 Gbps with color bar signal		

SDI Xtreme 3G - Ordering Information

SDI XTREME 3G: SINGLE MODE Part Number and Description

SDI-000S01-LCRX SDI Xtreme 3G Fiber Optic Extender Receiver, Single Mode, LC
SDI-000S01-LCTX SDI Xtreme 3G Fiber Optic Extender Transmitter, Single Mode, LC

SDI FIBER OPTIC EXTENDER OPTICS OPTIONS for SINGLE MODE
VOP-S29 SDI Xtreme 3G Optics Option for Receiver, Single Mode, Single Fiber, LC
VOP-S30 SDI Xtreme 3G Optics Option for Transmitter, Single Mode, Single Fiber, LC

SDI XTREME 3G: MULTI-MODE Part Number and Description

SDI-000M01-LCRX SDI Xtreme 3G Fiber Optic Extender Receiver, Multi-Mode, LC
SDI-000M01-LCTX SDI Xtreme 3G Fiber Optic Extender Transmitter, Multi-Mode, LC

SDI FIBER OPTIC EXTENDER OPTICS OPTIONS for MULTI-MODE
VOP-M18 SDI Xtreme 3G Optics Option for Receiver, Multi-Mode, Single Fiber, LC
VOP-M19 SDI Xtreme 3G Optics Option for Transmitter, Multi-Mode, Single Fiber, LC

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