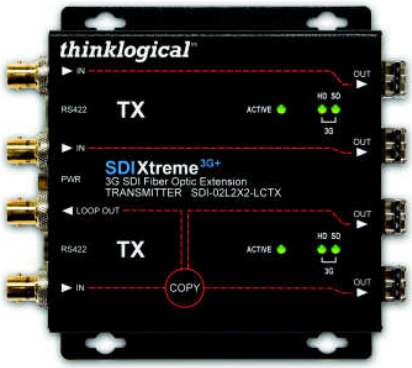
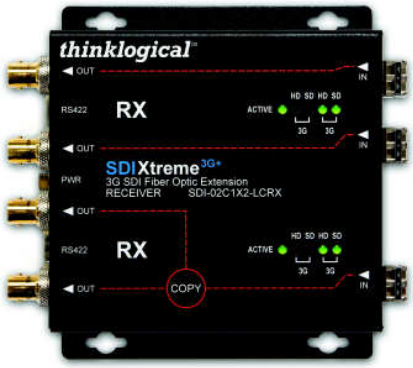
SDIXtreme^{3G+}

3G SDI Fiber Optic Extension - Dual Model





- Extends SDI signals over two fibers - Each fiber supports two SD/HD signals or one 3G signal - Providing a total support of up to four SD/HD or two 3G signals
- RS-422 port for device control - Ideal for remote camera operations requiring pan, tilt and zoom functions
- Multi-standard operation from 270 mbit/s to 3Gbit/s
- SMPTE 424M, 292M, 259M, 372M, 425 level A and B compliant
- Supports 3G/HD/SD SDI inputs with embedded audio and ancillary data
- Additional options for the transmitter component include loop-out, or dual channel, which provides two muliplexed (1.485 Gbps) signals transmitted and received over a single fiber
- Uses standard SFP+ optics with LC connectors - does not require costly SFP+ pathological modules
- Transceiver model available for bi-directional video extension
- Auto detects input video format and displays on LEDs

The Logical Solution - Dual Serial Digital Interface Extension

The SDI Xtreme 3G+ product series is a compact, broadcast quality, SDI over fiber extension system. The dual system is designed to transmit up to four SD/HD or two 3G SDI signals with or without embedded audio and data, and is SMPTE 424M, 292M, 259M, 372M and 425 level A and B compliant. In addition, this fiber based transport system gives users the assurance that each signal is immune to video pathological signals over the entire length of the fiber interconnect, while supporting all pathological patterns at all rates. The system also supports either single or multi-mode fiber, and is fully compatible with Thinklogical's VX and HDX Router line of products.

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, sports tele-production, field production, cross-town fiber links, cross on–campus production, pre-fibered venues, courtesy feeds and many more.

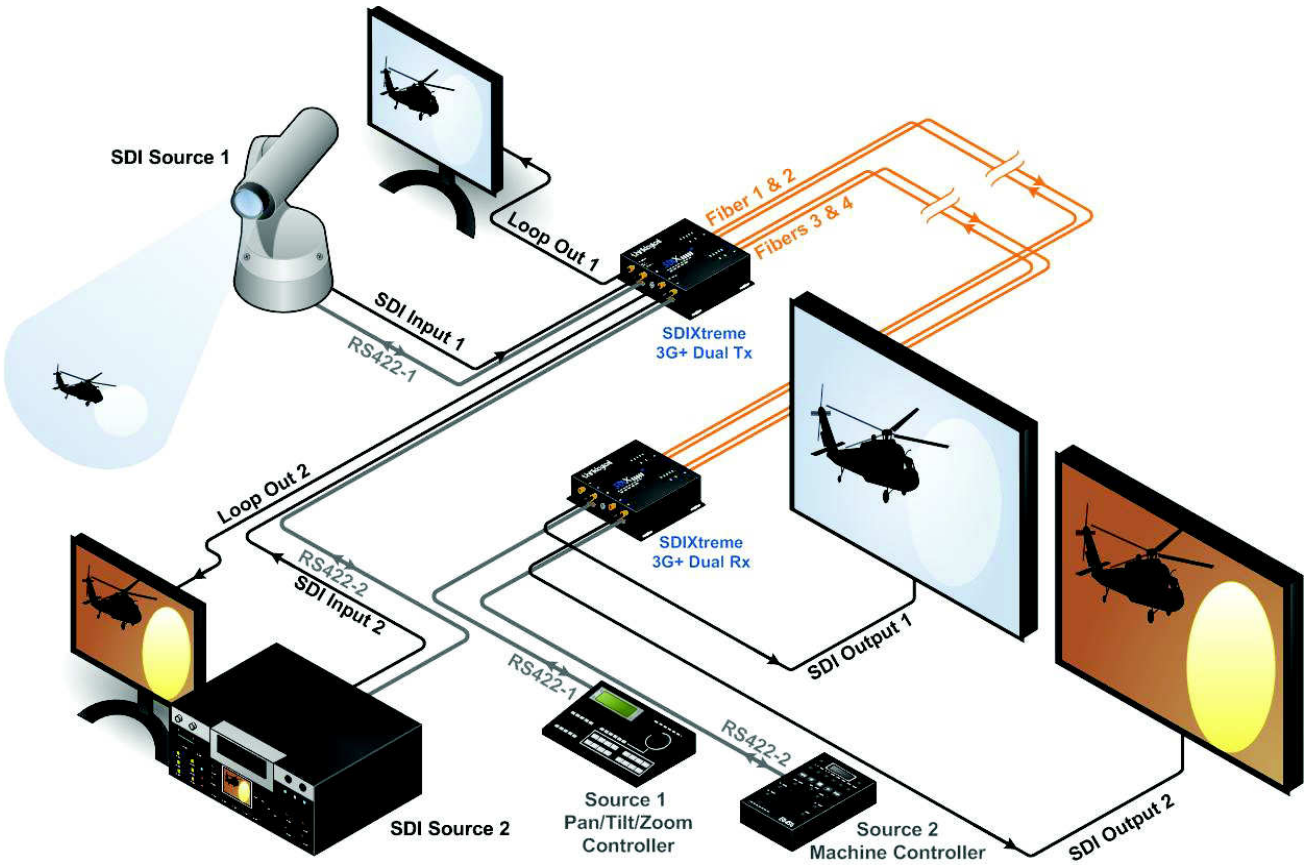
The System

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. 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 re-clocked SDI outputs on the receiver. The dual chassis model houses two separate SDI Xtreme 3G+ units, providing multiple combinations of transmitter and receiver possiblities. 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 standard SFP+ optics are hot swappable/pluggable with LC connectors. An RS-422 connector provides a full duplex channel to send/receive data, making it ideal for remote camera operations (such as pan, tilt and zoom), and access to video and audio players/recorders.

The system provides transmitter and receiver models as well as a transceiver model for bi-directional video extension.

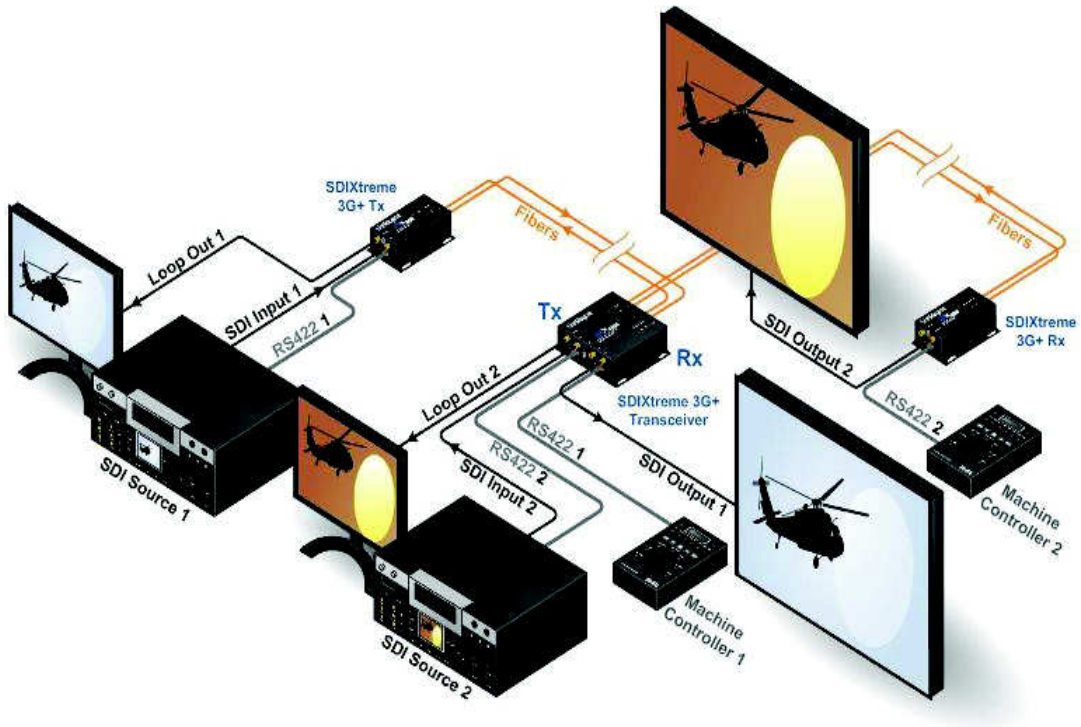
Typical application extending SDI video using SDI Xtreme 3G+ Dual Model (TX/RX System)



Key Features

- Extension of up to four SD/HD signals or two 3G SDI signal over a single fiber
- Multi-standard operation from 270 mbit/s to 3Gbit/s
- Supports 3G/HD/SD SDI inputs with embedded audio and ancillary data
- RS-422 port for device control - Ideal for remote camera operations requiring pan, tilt and zoom functions
- Signal transmission via fiber optic cable; no RF interference
- SMPTE 424M, 292M, 259M, 372M and 425 level A and B compliant
- Cable equalization on inputs and cable drivers on outputs to ensure signal integrity
- Supports pathological patterns at all rates
- Transceiver model available for bi-directional video extension
- Equalized and re-clocked SDI loop through on the transmitter
- Additional options for the transmitter component include loop-out, or dual channel, which provides two muliplexed (1.485 Gbps) signals transmitted and received over a single fiber
- Signals are recovered and re-clocked on the receiver
- Low Cost - Hot Swappable/Pluggable standard 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
- Support for standard 2.97 (3G), 1.485 (HD), 270 (SD), and fractional /1.001 rates
- Compatible with all Thinklogical VX and HDX Routers
- Auto detects input video format and displays on LEDs

Typical application extending SDI video using SDI Xtreme 3G+ (Transceiver System)



SPECIFICATIONS

Indicators:	(3) Power, Data Rate SD, HD, 3G – Lock Detect - Active
Dimensions:	Height: 1.087" (2.76 cm) Depth: 5.487" (13.94 cm) Width: 5.609" (14.25 cm)
Weight:	<1lb (0.45kg) each Shipping Weight: 4lb (1.81kg) pair
Power:	5-12 VDC @< 1AMP
Operating Temperature:	-5º C to +50º C

TRANSMITTER Specifications:

Number of SDI Inputs	1 - 4
Data Rate Range	270Mbps to 2.97 Gbps
Supported Standards	SMPTE 424M, 292M, 259M, 372M and 425 level A and B compliant
Re-clocked Data Rates	270 Mbps (SMPTE 259M), 1.485 Gbps (SMPTE 292), 2.97 Gbps (SMPTE 424M)
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 Loop Outs - 1 Number of Optical Outputs - 2

Signal Level	800mV ± 10%	Rise/Fall Time	< 135 ps at 2.97 Gbps per SMPTE 424M;
DC Offset	0V ± 0.5V		< 270 ps at 1.485 Gbps per SMPTE 292;
Overshoot	< 10% of amplitude		0.4 ns to 1.5 ns at 270 Mbps per SMPTE 259M
Timing Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps;	Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 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	
Fiber Type	**Multi-mode**	**Single mode**
Wavelength (nominal)	850nm	1310nm
Emmiter Type	VCSEL	DFB Laser
Output Power (nominal)	-4dBm	-1.5dBm
Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 Gbps	

RECEIVER Specifications:

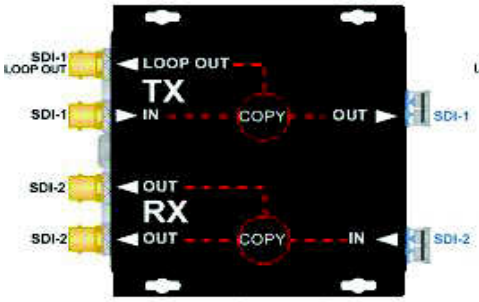
Fiber Input

Connector	LC receptacle	
Fiber Type	**Multi-mode**	**Single mode**
Wavelength	770 – 860nm	1260 - 1360nm
Minimum Input Sensitivity	-12dBm	-15dBm
Maximum Input Power	0 dBm	0.5dBm

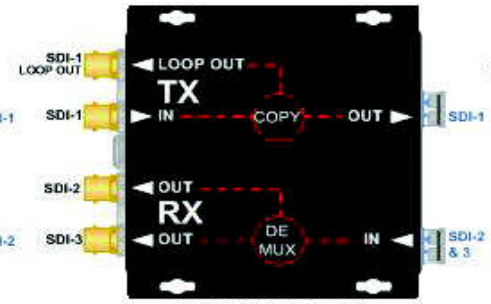
Number of SDI Outputs 2 - 4

Signal Level	800mV ± 10%	Rise/Fall Time	< 135 ps at 2.97 Gbps per SMPTE 424M;
DC Offset	0V ± 0.5V		< 270 ps at 1.485 Gbps per SMPTE 292;
Overshoot	< 10% of amplitude		0.4 ns to 1.5 ns at 270 Mbps per SMPTE 259M
Timing Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps;	Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 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		

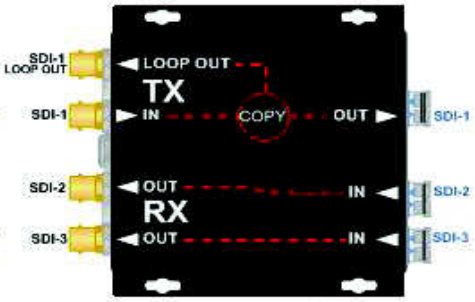
SDIXtreme 3G+Transceivers *Part Numbers and Descriptions*



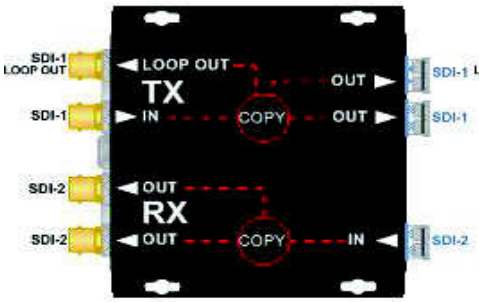
SDI-L1C1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: One Input with Loop Out, One SFP
RX: One SFP, Two SDI Outputs



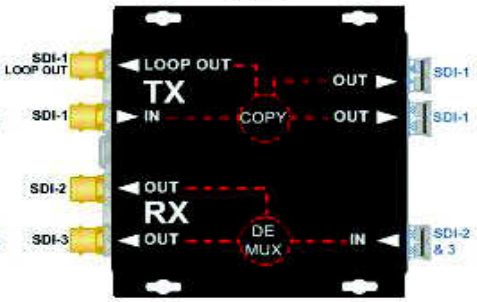
SDI-L1M1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: One Input with Loop Out, One SFP
RX: One SFP, Two Individual De-Multiplexed SDI Outputs



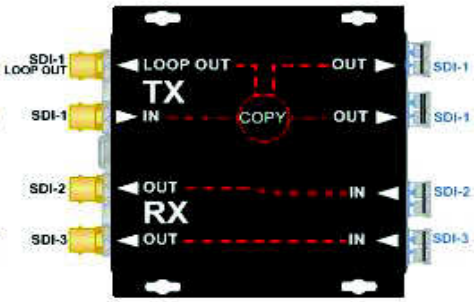
SDI-L102X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: One Input with Loop Out, One SFP
RX: Two SFPs, Two Individual SDI Outputs



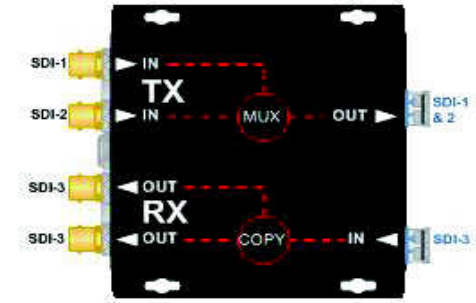
SDI-L2C1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: One Input with Loop Out, Two SFPs
RX: One SFP, Two SDI Outputs



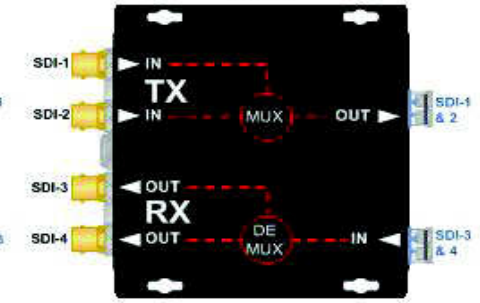
SDI-L2M1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: One Input with Loop Out, Two SFPs
RX: One SFP, Two Individual De-Multiplexed SDI Outputs



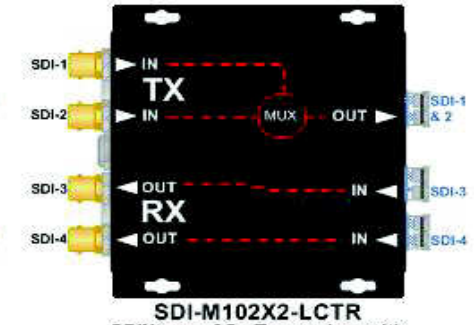
SDI-L202X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: One Input with Loop Out, Two SFPs
RX: Two SFPs, Two Individual SDI Outputs



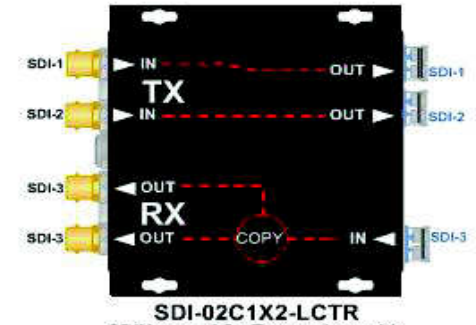
SDI-M1C1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: Two Input Multiplexer, One SFP
RX: One SFP, Two SDI Outputs



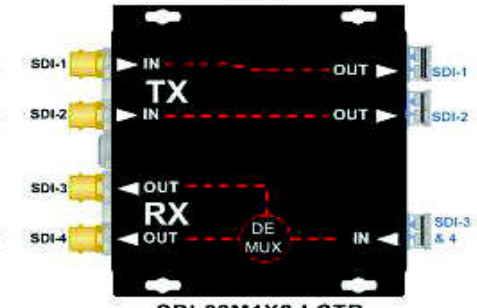
SDI-M1M1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: Two Input Multiplexer, One SFP
RX: One SFP, Two Individual De-Multiplexed SDI Outputs



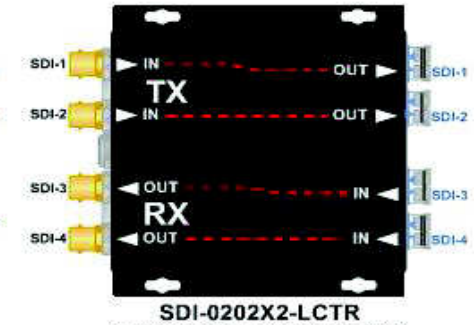
SDI-M102X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: Two Input Multiplexer, One SFP
RX: Two SFPs, Two Individual SDI Outputs



SDI-02C1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: Two Inputs, Two SFPs
RX: One SFP, Two SDI Outputs

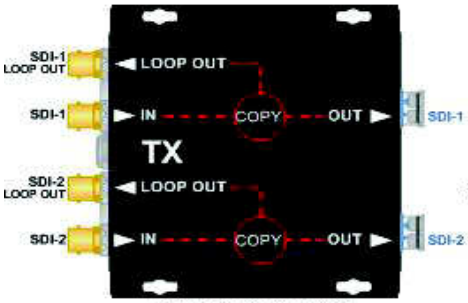


SDI-02M1X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: Two Inputs, Two SFPs
RX: One SFP, Two Individual De-Multiplexed SDI Outputs

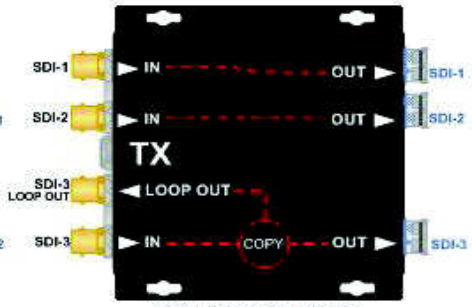


SDI-0202X2-LCTR
SDIXtreme 3G+ Transceiver with
TX: Two Inputs, Two SFPs
RX: Two SFPs, Two Individual SDI Outputs

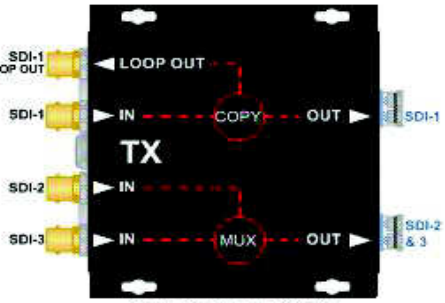
SDIXtreme 3G+ Dual Transmitters *Part Numbers and Descriptions*



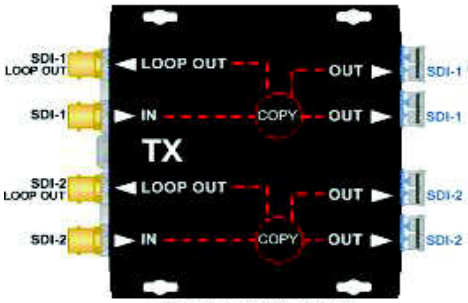
SDI-L1L1X2-LCTX
SDIXtreme 3G+ Transmitter with
Two Inputs with Loop Outs, Two SFPs



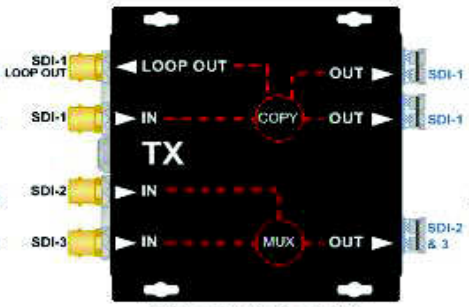
SDI-02L1X2-LCTX
SDIXtreme 3G+ Transmitter with
Two Inputs plus One Input with Loop Out,
Three SFPs



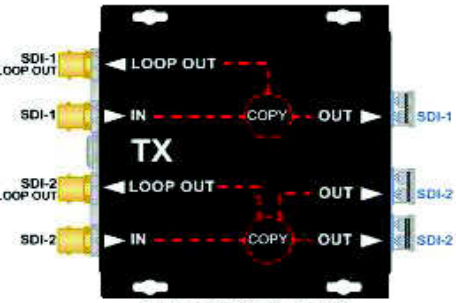
SDI-L1M1X2-LCTX
SDIXtreme 3G+ Transmitter with
One Input with Loop Out and Two Input
Multiplexer, Two SFPs



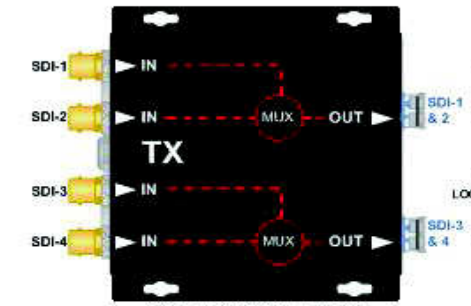
SDI-L2L2X2-LCTX
SDIXtreme 3G+ Transmitter with
Two Inputs with Loop Outs, Four SFPs



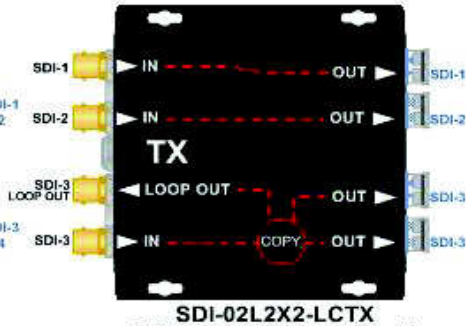
SDI-L2M1X2-LCTX
SDIXtreme 3G+ Transmitter with
One Input with Loop Out and Two Input Multiplexer,
Three SFPs



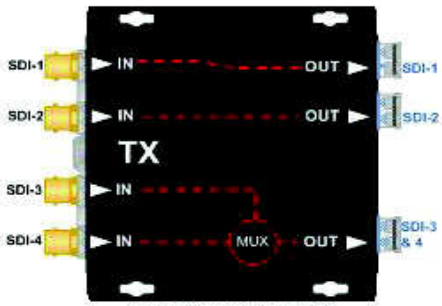
SDI-L1L2X2-LCTX
SDIXtreme 3G+ Transmitter with
Two Inputs with Loop Outs, Three SFPs



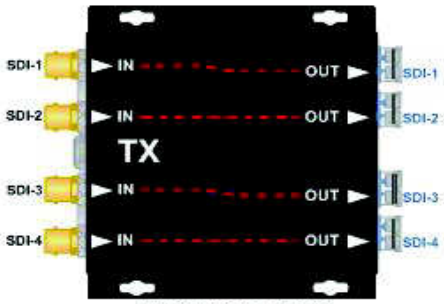
SDI-M1M1X2-LCTX
SDIXtreme 3G+ Transmitter with
Pair of Two Input Multiplexers, Two SFPs



SDI-02L2X2-LCTX
SDIXtreme 3G+ Transmitter with
Two Inputs plus One Input with Loop Out,
Four SFPs

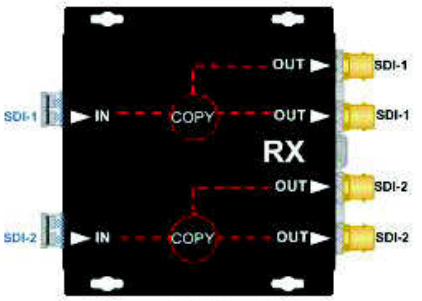


SDI-02M1X2-LCTX
SDIXtreme 3G+ Transmitter with
Two Inputs plus Two Input Multiplexer,
Three SFPs

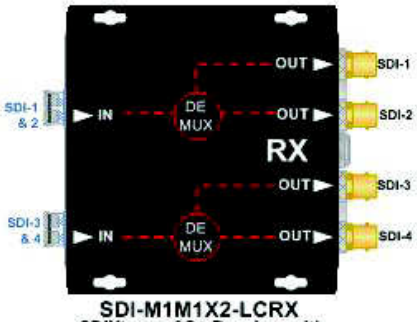


SDI-0202X2-LCTX
SDIXtreme 3G+ Transmitter with
Four Inputs, Four SFPs

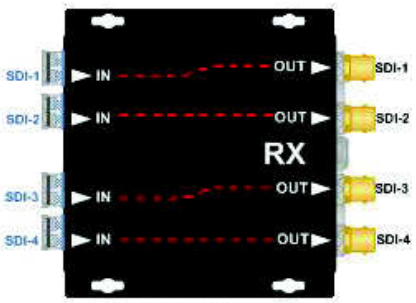
SDIXtreme 3G+ Dual Receivers *Part Numbers and Descriptions*



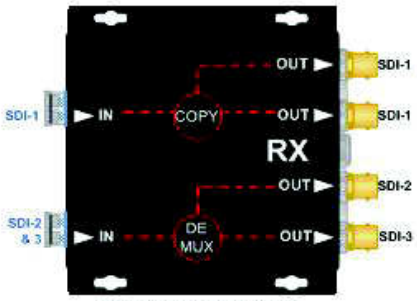
SDI-C1C1X2-LCRX
SDIXtreme 3G+ Receiver with Two SFPs, Two pairs of SDI Outputs



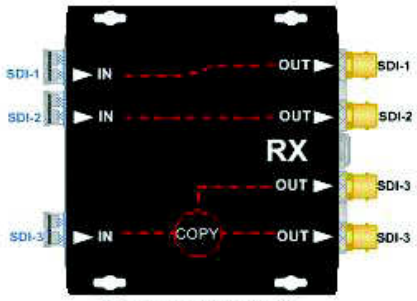
SDI-M1M1X2-LCRX
SDIXtreme 3G+ Receiver with Two SFPs, Two Pairs of Individual De-Multiplexed SDI Outputs



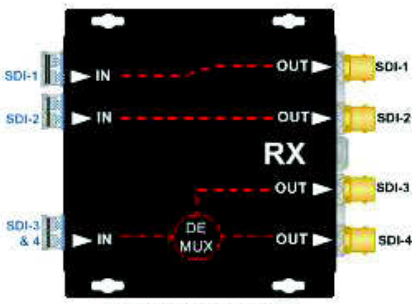
SDI-0202X2-LCRX
SDIXtreme 3G+ Receiver with Four SFPs, Four Individual SDI Outputs



SDI-C1M1X2-LCRX
SDIXtreme 3G+ Receiver with Two SFPs, Two SDI Outputs plus Two Individual De-Multiplexed SDI Outputs



SDI-02C1X2-LCRX
SDIXtreme 3G+ Receiver with Three SFPs, Two Individual SDI Outputs plus Two SDI Outputs



SDI-02M1X2-LCRX
SDIXtreme 3G+ Receiver with Three SFPs, Two Individual SDI Outputs plus Two Individual De-Multiplexed SDI Outputs

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