



User Manual and Specifications

CMX-12GSDI-CTRL

12G-SDI over LC Fiber Converter set with RS-485 Function



DESCRIPTION

The CMX-12GSDI-CTRL is a 12G-SDI UHD audio and video optical converter that offers seamless transmission of 12G-SDI video and RS485 Data signals through a single optical fiber up to 20km. It supports various SDI standards, is energy-efficient (less than 1.5W), and features a robust, aluminum shell. Easily integrated Type-C power supplies and included SFP modules make the CMX-12GSDI-CTRL a reliable choice for your audio and video needs.

FEATURES

- **Format Compatibility:** Supports a wide range of video formats, including HD and SD standards
- **Precise Clock Management:** Advanced clock recovery function ensures stable data regeneration with low jitter
- **Signal Optimization:** Automatic signal equalization for optimal quality and signal integrity
- **Long-Distance Transmission:** Reliable transmission up to 20km using included simplex LC-based SFP modules
- **Intuitive Status Indicators:** Clear status lights provide quick device feedback
- **USB Power Supply:** Conveniently powered via USB for added flexibility
- **Plug-and-Play:** No need for complicated setup or debugging
- **Supports RS-485 transmission compliant with the EIA RS-485 standard**
- **Single Mode Simplex LC fiber-based SFP modules included**



SPECIFICATIONS

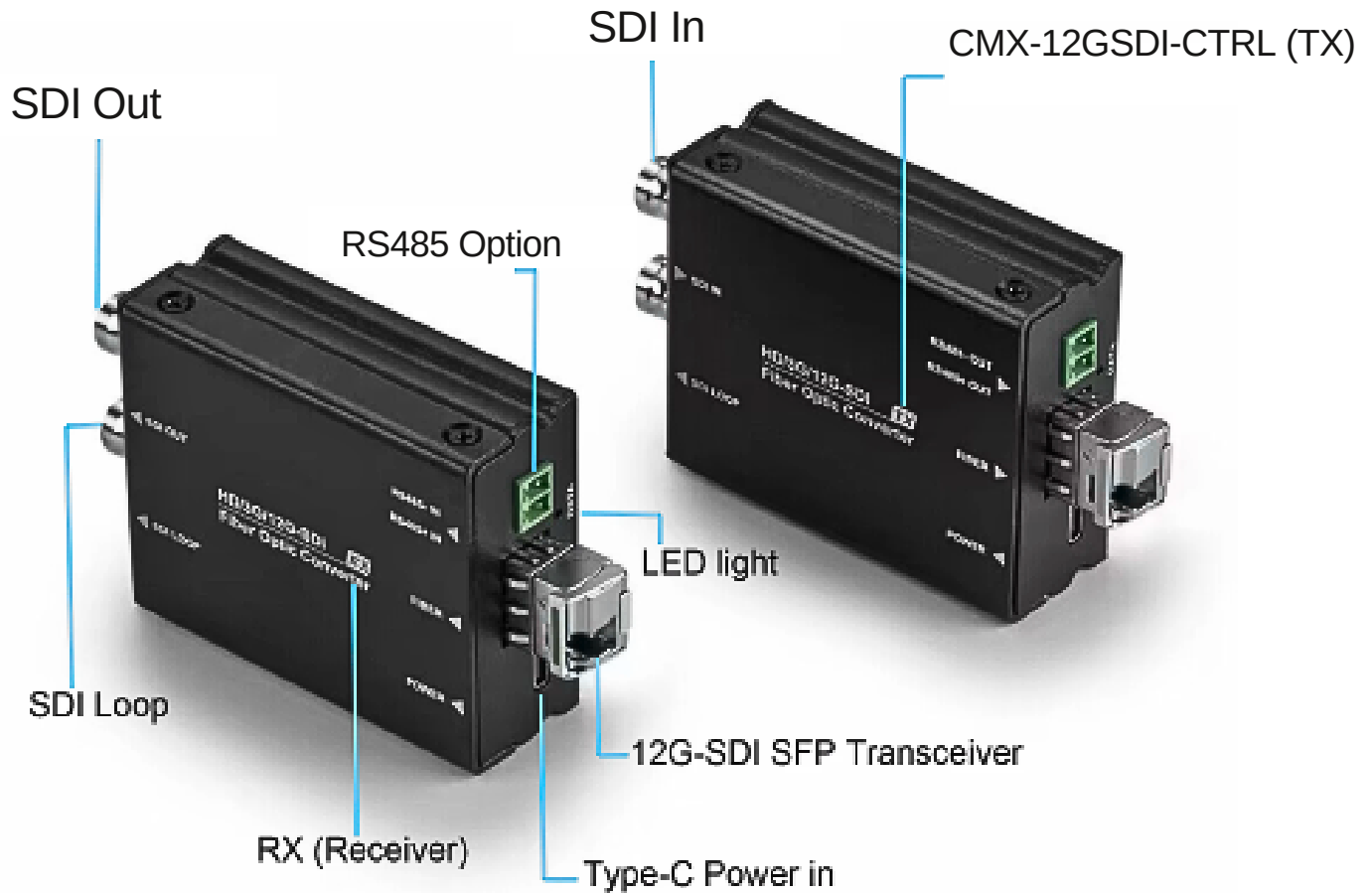
- **Fiber Type: 9/125um Single Mode**
 - **Rate:** 12Gbps
 - **Tx Power:** 0~-3dB
 - **Rx Sensitivity:** -12dB
 - **Fiber Connector:** LC
 - **Transmission Distance:** *Single Mode:* 20km / *Multimode:* 550m
 - **Impedance:** 75Ω
 - **Input Level Range:** 3.3V - 12V
 - **Output Level Parameters:** 0V or 3.3V
 - **Input Current:** ≤ 300MA
 - **Input Voltage:** 5V
 - **Power Supply Physical Interface:** Type C
 - **Power Consumption:** < 1.5W
 - **Operating Temperature:** -4°F - 167°F (-20°C - 75°C)
 - **Storage Temperature:** -40°F - 185°F (-40°C - 85°C)
 - **Dimensions (LxWxH):** 2.74 x 2.16 x 1.04 in (both units)
 - **Weight:** 6 oz (both units)
- **Supported Standards (Digital Video Formats):**
 - SMPTE 424M, 3G-SDI, 1080p@60Hz
 - SMPTE ST-2081, 6G-SDI, 2160p@30Hz
 - SMPTE ST-2082, 12G-SDI, 2160p@60Hz
- **Cable Equalization:**
 - 75m at 11.88Gbps
 - 120m at 5.94Gbps
 - 200m at 2.97Gbps
- **RS-485 Data Index:**
 - Compliant with the EIA RS-485 Standard
 - Baud Rate: 50bps to 420kbps (supports non-standard baud rates)
 - RS485: 2 wire (A, B), half-duplex, point-to-multipoint communication
 - Interface: Industrial terminal/3.81mm Phoenix Connector
- **Protocol Standard: SMPTE ST-2082**
- **SMPTE Rate:**
 - 270Mbit/s, 1.48Gbit/s, 2.97Gbit/s, 5.94Gbit/s, 11.88Gbit/s
 - SMPTE 259M, SD-SDI 480i, 576i
 - SMPTE 344M, ED-SDI 480P, 576P
 - SMPTE 292M, HD-SDI 720P, 1080i

PACKAGE CONTENTS

- 1 x CMX-12GSDI-CTRL Converter Set
- 2 x Power Supplies
- 2 x USB to Type-C Power Cables
- 2 x Single Mode Simplex LC Fiber-based SFP Modules

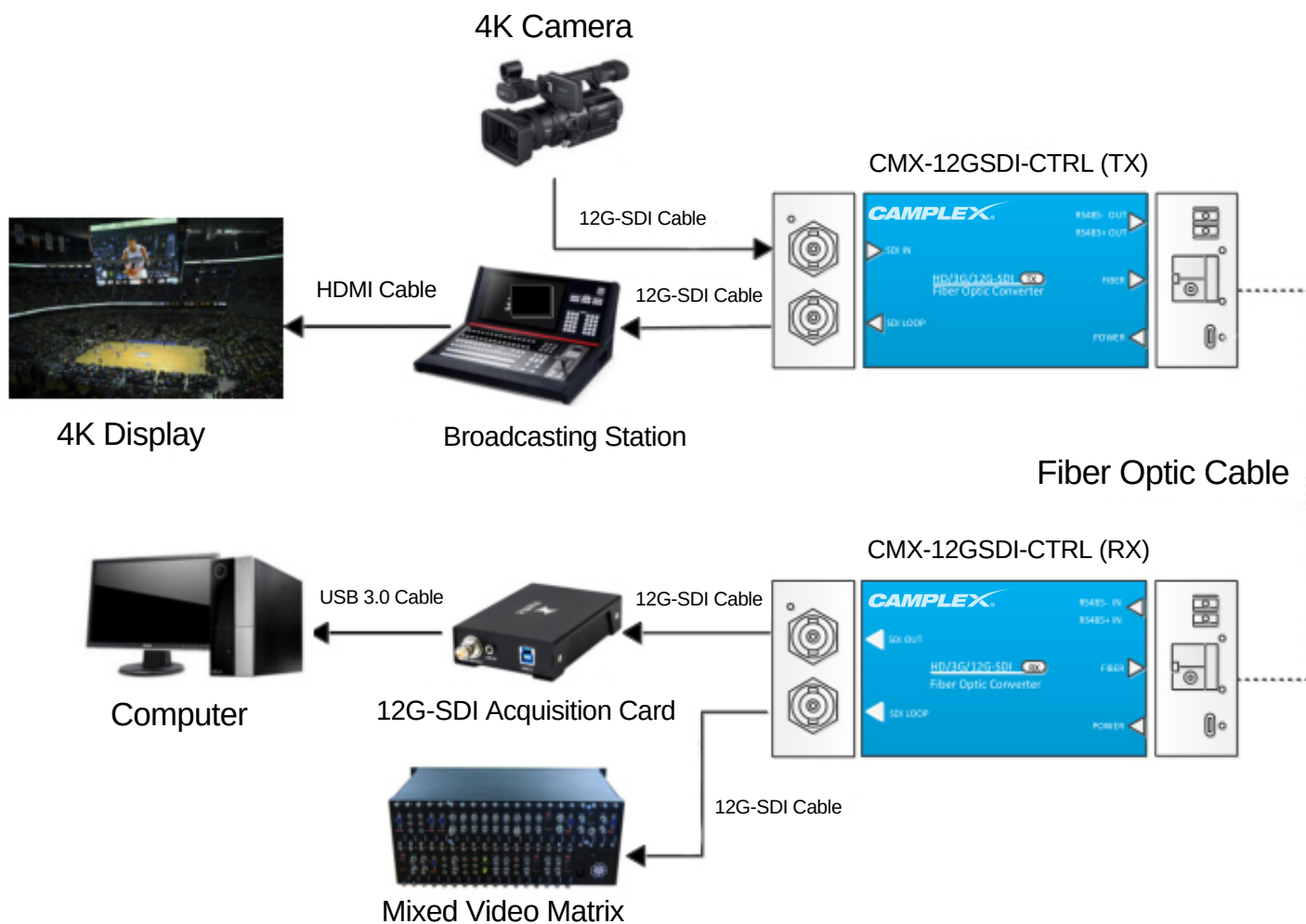


PRODUCT LAYOUT



CMX-12GSDI-CTRL

CONNECTION DIAGRAM:





▶ CMX-12GSDI-CTRL

PRODUCT SERVICE

DAMAGE REQUIRING SERVICE:

- The unit should be serviced by qualified service personnel if:
 - (a) The DC power supply cord or AC adaptor has been damaged
 - (b) Objects or liquids have gotten into the unit
 - (c) The unit has been exposed to rain
 - (d) The unit does not operate normally or exhibits a marked change in performance; The unit has been dropped or the cabinet is damaged.
- **Service Personnel:** Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
- **Replacement parts:** When parts need replacing ensure the servicer uses parts specified by the manufacturer. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- **Safety check:** After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.
- *If your product needs service please contact us at sales@complex.com or call us at 1.800.445.7568*

SAFETY PRECAUTIONS

- Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.
- Please keep the following in mind as you unpack and install the unit:
 - Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
 - To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
 - Never spill liquid of any kind on or into this product.
 - Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
 - Do not attach the power supply cabling to building surfaces.
 - Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
 - Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
 - To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit

WARRANTY

- 1 Year

