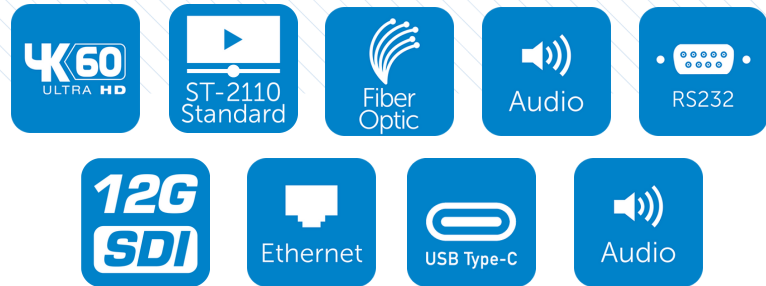


# 12G-SDI/ST2110 over IP Gateway Transceiver

500775-2110



## Overview

The transceiver unit allows 12G-SDI equipment to be extended up-to many miles over an IP network. This Gateway Converter supports the ST-2110 AV over IP protocol standard for Broadcast applications. It supports audiovisual data up to **uncompressed 4K@60Hz** resolution video and 16 audio channels (12Gbps bandwidth).

This unit is a transceiver and can be configured as a Transmitter or Receiver for added flexibility and convenience.

The unit converts AV data from 12G-SDI to be utilized in a broadcast environment over a network, while extending end point source and sink devices at up to 6.2mi (10km) via duplex single mode fiber, and up to 320ft(100m) for the multimode model. Point-to-point configuration is supported as well as point-to-multipoint and multipoint-to-multipoint configurations by connecting several units to a 25G Ethernet network. This device is versatile and can also be used over 10G network. In this case, maximum video resolution is uncompressed 4K@30Hz (6Gbps bandwidth).

The device supports ST-2022-7 (Class D) Redundancy for critical fail-safe applications allowing the audio/video signal to run over two independent 25G/10G Ethernet Networks. The unit provides a 1G Ethernet Network port for control via Web interface or 3rd party management platforms supporting a RestAPI, or NMOS (IS-04 for discovery and IS-05 for connectivity management).

## Applications

- Commercial broadcast AV systems
- News/sports/TV stations
- Movie networks

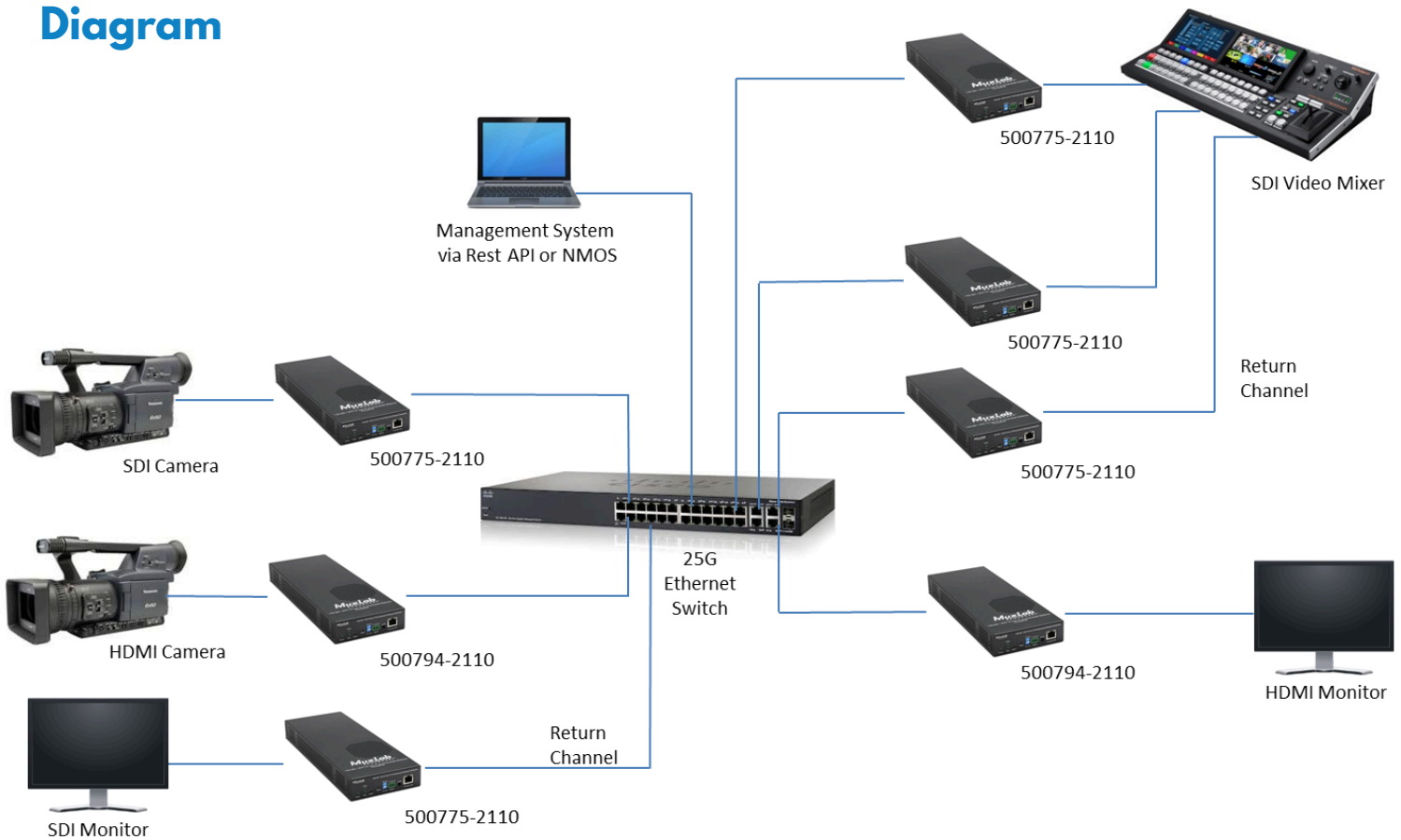
## Specification

<b>Environment</b>	Up to 12G-SDI
<b>Devices</b>	Cameras, mixers, media players, monitors, TVs, PCs, laptops, servers supporting up to 12G-SDI
<b>Signals</b>	<ul style="list-style-type: none"> <li>· Up to 12G-SDI (4K @ 60Hz), supporting ST-2110, in 25G network environment</li> <li>· Up to 6G-SDI (4K @ 30Hz), supporting ST-2110, in 10G network environment</li> </ul>
<b>Connectors</b>	<ul style="list-style-type: none"> <li>(2) BNC connectors for SDI</li> <li>(2) SFP Cages for 25G/10G Ethernet ports for redundant AV transmission</li> <li>(1) RJ45S Connector for 1G Ethernet port for control</li> <li>(1) 2.1mm locking power connector</li> <li>(1) Dip Switch for choosing device functionality Tx or Rx</li> <li>(1) Dip Switch for choosing Media Network 25G or 10G</li> <li>(1) USB-C Connector (for future use)</li> <li>(1) 3-position Phoenix Connector for RS232 (for future use)</li> <li>(1) 3.5mm audio connector (for future use)</li> </ul>
<b>Cable (not included)</b>	<ul style="list-style-type: none"> <li>(2) Dual MM fiber cables (when using Multimode SFPs)</li> <li>Or (2) Dual SM fiber cables (when using Single mode SFPs)</li> </ul>
<b>SFP (not included)</b>	<ul style="list-style-type: none"> <li>(2) MuxLab SFPs 25Gbps</li> <li>Or (2) MuxLab SFPs 10Gbps (max 4K@30Hz)</li> </ul>
<b>Max Distance</b>	<ul style="list-style-type: none"> <li>330ft (100m), when using MM SFP</li> <li>6.2mi (10km), when using SM10 SFP</li> <li>25mi (40km), when using SM40 SFP</li> </ul>
<b>Latency</b>	Zero latency
<b>Compression</b>	None (uncompressed)
<b>Network bandwidth</b>	<ul style="list-style-type: none"> <li>Up to 12 Gbps over 25G network</li> <li>Up to 6 Gbps over 10G network</li> </ul>
<b>Network requirement</b>	<ul style="list-style-type: none"> <li>25G or 10G Ethernet LAN for AV transmission</li> <li>1G LAN for User Web Interface and 3rd party management platforms</li> </ul>
<b>3rd Party Control</b>	Via RestAPI and NMOS (IS-04 for discovery & IS-05 for connectivity management)
<b>Power Supply</b>	12V/3A
<b>Power Consumption</b>	30 Watt
<b>Temperature</b>	<ul style="list-style-type: none"> <li>Operating: 0° to 40°C</li> <li>Storage: -20° to 85°C</li> <li>Humidity: Up to 95% non-condensing</li> </ul>
<b>Enclosure</b>	Aluminum
<b>Dimensions</b>	4.4" x 12" x 1.3" (11.1 x 30.5 x 3.3 cm)
<b>Weight</b>	1.4 lbs (0.65 kg)
<b>Compliance</b>	Regulatory: FCC, CE, RoHS      Flammability: 94V0
<b>Warranty</b>	2 years
<b>Order information</b>	500775-2110      12G-SDI/ST2110 over IP Uncompressed Gateway Converter (UPC: 627699007754)
<b>Accessories (Sold separately)</b>	<ul style="list-style-type: none"> <li>· 500920      16-Port Rackmount Transceiver Chassis</li> <li>· 500917      Wall Mount Transceiver Bracket Kit</li> </ul> <p>For Media/Data Ports:</p> <ul style="list-style-type: none"> <li>· 500971-25G-MM      SFP Module, 25G and 10G, Multimode, 100m</li> <li>· 500971-25G-SM10      SFP Module, 25G and 10G, Single mode, 10Km</li> <li>· 500970-MM      SFP Module, 10G, Multimode, 300m</li> <li>· 500970-UTP      SFP Module, 10G, UTP, 30m</li> <li>· 500970-SM10      SFP Module, 10G, Single mode, 10Km</li> <li>· 500970-SM40 SFP Module, 10G, Single mode, 40Km</li> <li>· 500970-SM80 SFP Module, 10G, Single mode, 80Km</li> </ul>

## Key Features

- Supports SMPTE ST-2110 uncompressed 12G-SDI video up to 4K@ 60Hz
- Supports SMPTE ST-2022-7 (Class D, supporting up to 150usec delay with no frame lose) AV signal Redundancy (Seamless Protection Switching)
- Extend SDI audio/video over an IP network up to 6.2 miles (10km).
- This device is a Transceiver and can be configured as a Transmitter (Encoder), or Receiver (Decoder)
- This device can be used over 25Gbps Network or 10Gbps Network.
- Supports many Transmitters and Receivers depending on network bandwidth
- Supports point-to-point, point-to-multipoint and multipoint-to-multipoint applications
- Supports two (2) 25G/10G Ethernet ports (labelled as: Media 1 & Media 2) for AV Media/Data transmission, and a 1G Ethernet port (labelled as: Console LAN) for device management & control
- RS232 port is included for future use, to manage end devices
- USB-C port is included for future use, to implement KVM management
- Audio 3.5mm port is included for future use, for audio insert/extract
- May be managed via a Web interface and third-party control software platforms supporting a RestAPI or NMOS based management platform

## Diagram



12G-SDI/ST2110 over IP Gateway Transceiver  
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2321 Cohen | St-Laurent , H4R 2N7 | Québec, Canada Tel: 514-905-0588 | Fax:  
514-905-0589 | Toll free: 1-877-689-5228 info@muxlab.com |  
salesteam@muxlab.com | www.muxlab.com

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