

E SERIES

SV4E-CSI2-HDMI

MIPI CSI-2 to HDMI Converter



Flexible MIPI CSI-2 to HDMI Streaming Solution

The SV4E-CSI2-HDMI MIPI CSI-2 to HDMI Converter is an innovative visualization tool that displays live MIPI® Alliance camera streams of any rate, resolution, or virtual channel on a single 4K high-resolution HDMI® screen. This tool allows users to monitor the long-term streaming behavior of camera links under stress testing conditions such as thermal cycling or vibration and shock testing. Additionally, it enables the test of complex automotive systems in which a single cable is used to transmit multiple channels of video produced by various image or radar sensors.

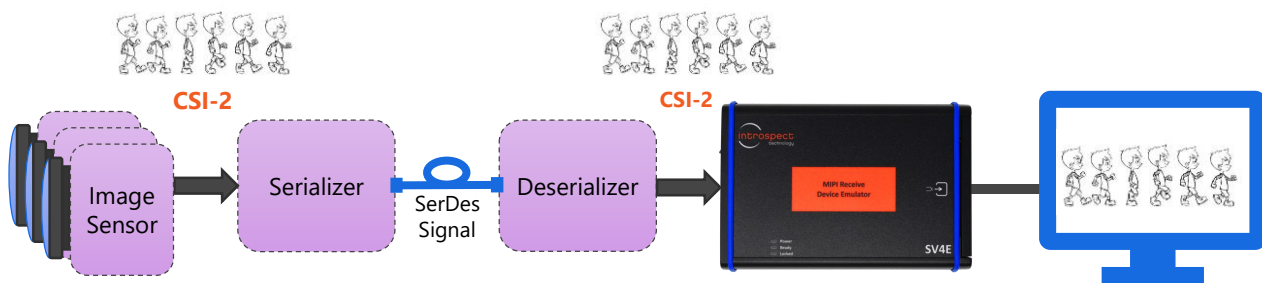
KEY FEATURES:

- **Integrated PHYs:** truly compact design with integrated D-PHY receiver and HDMI TMDS transmitter
- **High bandwidth:** more than 10 Gbps aggregate D-PHY bandwidth
- **Native protocol implementation:** true CSI-2 controller instantiation with support for version 2.1 specifications
- **Easy to use:** Introspect ESP Software enables interactive operation

KEY BENEFITS:

- **Future proof:** protect your investment by adopting a high-performance tool for multiple product applications and across a large span of data rates
- **Self-contained:** an all-in-one system helps create a system-oriented testing methodology with a very portable solution
- **Automated:** a simple Python API provides the ability to dynamically adjust system parameters such as virtual channel selection

Typical Application: 10 Gbps Automotive SerDes Link Testing



SV4E-CSI2-HDMI testing a complete multi-sensor automotive link

Protocol and Signal Parameters

FEATURE	DESCRIPTION	BENEFIT
Application / Protocol Support	D-PHY version 1.1, 1.2, 2.0 (including deskew packet); Burst mode or continuous mode clock; CSI-2 version 1.3, 2.0, 2.1;	Able to stream device transmissions from varied application contexts including ADAS sensors and bridge devices.
Receive Payload Support	All CSI-2 virtual channels; All CSI-2 pixel formats;	Detects a wide spectrum of data conditions for the purposes of debug or color calibration.
HDMI Output Specifications	HDMI version 2.0 (18 Gbps bandwidth); Programmable screen resolution; Selectable Bayer filtering for RAW pixel formats.	Able to sustain aggregate bandwidth of input CSI-2 stream; Interoperable with off-the-shelf HDMI-compatible monitors.

Key Performance Parameters

PARAMETER	VALUE	DESCRIPTION
Lane Count	1 to 4 lanes of D-PHY;	Allows for deployment into multiple generations of products or multiple product families.
Data Rates	600 Mbps to 2.5 Gbps in D-PHY mode;	Allows for supporting high-performance applications.
GPIO	DUT reset control pin; 6 user programmable IO pins.	Provides full control over devices under test.

