

# MSDV

Multi-rate serial digital video interface for DVB-ASI/SMPTE



## Description

The MSDV is a mezzanine board that pairs with an EDT main board (for PCI or PCI Express) for high-speed data transfer. It has four BNC connectors to support up to four serial digital video signals in DVB-ASI/SMPTE format.

The MSDV includes a programmable Xilinx Virtex 5 FPGA and a time code input, which receives a signal in 1 pps or IRIG-B format. This feature provides precise timestamp data for a variety of purposes.

EDT provides FPGA configuration files that perform multi-rate decoding and framing, making it possible to acquire raw, decoded, or framed transport stream data. Custom configuration files can be requested.

The main board supplies high-speed DMA, plus additional memory and programmable FPGA resources.

## Features

Mezzanine board – pairs with an EDT main board (in a PCI, PCI-X, or PCIe slot), which adds high-speed DMA, programmable FPGA resources, and memory

Channels 0, 1, 2, 3: Four bidirectional BNCs, each supporting serial digital video (DVB-ASI/SMPTE)

Encoding: Raw, 8b/10b, or framed data collect

Time code: 1 pps, IRIG-B, or other input, with user-configurable output

FPGA: One programmable Xilinx Virtex 5 XC5VLX30T

## Applications

Acquisition of multiple DVB-ASI/SMPTE signals

Interface between computer and television satellite receivers

Serial digital video signal testing

## Specifications

<b>Product Type</b>	MSDV is a multi-rate serial digital video mezzanine board for DVB-ASI/SMPTE; it requires a main board.		
<b>FPGA Resources</b>	One programmable FPGA (Xilinx Virtex 5 XC5VLX30T), plus FPGA on main board		
<b>Memory</b>	SRAM	0	
	DRAM	0	
	Block RAM (FIFO)	Four channels of 16 KB each (64 KB total)	
<b>Clocks</b>	One, with jitter attenuation, set for DVB-ASI/SMPTE (also programmable to other frequencies)		
<b>Data Rates</b>	Data rates are dependent on data format and main board.		
<b>Data Format (I/O)</b>	Time code (from external receiver)	1 pps, IRIG-B, or other input, with user-configurable output	
	Other	DVB-ASI/SMPTE	
<b>Connectors</b>	One 7-pin Lemo for time code input Four 75-Ω BNCs for DVB-ASI/SMPTE		
<b>Cabling</b>	Consult EDT for purchase options: To 7-pin Lemo on board, from time code source		Via one DB9 (for 1 pps or IRIG-B) or BNC (for IRIG-B only)
<b>Physical</b>	Weight	5.0 oz. typical	
	Dimensions	6.6 x 4.2 x 0.5 in. (with a main board)	
<b>Environmental</b>	Temperature	Operating 0° to 40° C Non-operating -40° to 70° C	
	Humidity	Operating 1% to 90%, non-condensing at 40° C Non-operating 95%, non-condensing at 45° C	
<b>System and Software</b>	For details on system requirements and EDT-provided software driver packages, see specifications for your EDT main board.		

## Support

EDT offers engineer-to-engineer customer support, from phone consultation to custom design of hardware, firmware, and software. Contact us for options and details.

## Contact

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## Ordering Options

- Main board: PCI SS / PCI GS / PCIe8 LX
- Cabling (for time code input): DB9 / BNC

For more options, see main board datasheet.