Overview

SDI is a SMPTE protocol for sending uncompressed 4:2:2 CCIR 601 digital video over a single coaxial cable from a source to a destination. Now it is used everywhere as an I/O for uncompressed digital video.

DVB-ASI is a physical interconnect standard created by the international standardization group known as the DVB Project (www.dvb.org). It is designed to carry MPEG-2 or MPEG-4 compressed transport streams between devices such as satellites and cable TV equipment.

The Multi Master A/S PCIe comes with an SDK and was developed for those who wish to use this hardware along with their own software. It is a platform that can be used for reception from satellite uplinks or for redistribution throughout a cable system. It can receive DVB-ASI video streams at a rate of 213 Mbps and can transmit SMPTE 259M-C compliant video streams at a rate of 270 Mbps.

Choose between MPEG-2 or MPEG-4 (H.264) transport streams...all on one half-size PCIe card.

The SDI output portion can transmit continuous serial streams at eight or ten bits of precision. Our product embraces open system solutions through seamless integration into the Windows 7, Server 2003/2008, XP, Vista, and Linux environments and supports the DirectShow® framework. All video input/output is performed to and from standard files within the standard file system. To use this product with a hard drive one must consider the throughput requirement for SDI. Thus a disk array is needed for concurrent reads and writes.

Features

- DVB-ASI input and SDI output on one PCI Express (PCIe) card
- Supports all NTSC and PAL standard component and composite serial video data rates (525/625 lines)
- Supports 8 or 10 bit 4:2:2 SMPTE 259M digital video signals without adjustment
- ANSI/SMPTE 259M-1997 Level C, D serial digital video standard compliant
- ASI input rate: 213 Mbps
- SDI output rate: 270 Mbps, optional 360 Mbps
- 75 ECL-compatible, differential, serial cable-driver receivers/outputs
- Hardware based PID Filtering
- Clock Reference Input Connector (TTL)
- Accurate 25 PPM clock
- Jitter minimization in hardware
- Windows® XP/Server 2003/Server 2008/Linux® API
- DirectShow® filter
- Sample Windows® and Linux® applications for reading or writing to disk
- Optional High Stability Oscillator (2 ppm)

Applications

- Decoding ASI satellite and cable footage to SDI
- Electronic News Gathering
- Video servers
- Remote broadcasts
- Reality TV
### Capabilities

- Compliant with PCIe Bus
- Transports all primary and auxiliary data present in SDI signal including embedded audio without change
- Automatic cable equalization for input permits distances as great as 350 meters (1,100 feet) from switchers, cameras, or servers
- Audio support: Assumed to be embedded in SDI signal per SMPTE 272M
- Scatter Gather DMA
- Packet Arrival Timestamping to help with PCR jitter measurement or management

**NOTE:** This product needs a high performance Disk System. RAID 5 SCSI is suggested.

### Specifications

| **Dimensions** | Width: 4.20 in (10.67 cm) |
|               | Length: 6.875 in (17.46 cm) |
|               | Thickness: 0.58 in (1.47 cm) |
| **Typical Weight** | 5.2 oz (147 g) |
| **Input/Output Connectors** | 75 Ohm BNC |
| **External Clock Input** | 75 Ohm DC Blocked ECL |
| **Data Input/Output** | SDI Coaxial Cable |
| **Input Form** | 8 Bits, 10 Bits |
| **Typical Power** | 5 V @390mA |
| **Operating Temperature** | 0 to 55º C |
| **Operating Humidity** | To 90%, Non-condensing |
| **Status LED Indicators** | Tx, Rx, Sync, Carrier |
| **Receive/Transmit FIFO Size** | 1.5 Kbytes |
| **Bus Electrical Interface** | Single Lane (x1) PCIe 1.0a |
| **Bus** | 32 bit wide, 33 MHz |

### Connector Diagram

- **Input**
  - Receiver Active
  - Carrier Detect
- **Output**
  - SDI Transmit
  - Sync Detect
  - External Clock Input
- **Ref. In**
- **Rx C.D.**

### Ordering Information

- **Multi Master A/S PCIe**
- **Multi Master A/S PCIe with Optional High Stability Oscillator**

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