IMPERX™

HD-SDI EXPRESSCARD/54 VIDEO CAPTURE CARD

HD-SDI Express

Features

- **Supports SD and HD SDI formats for 720p, 1080i and 1080p video**
- **Supports SMPTE 274M and SMPTE 296M framing**
- **Saves 20 bit YCrCb 4:2:2 or 24 bit RGB data**
- **ExpressCard/54 compliant providing 2.5 Gbps of bandwidth**
- **Intelligent scatter/gather DMA for fast, efficient use of ExpressCard bandwidth and system memory**
- **Flow-thru pipelined architecture for low latency**
- **Many advanced features including histograms, RGB gain/offset with auto-white balance, hex pixel dump, lookup tables, Gamma correction, etc.**
- **Plug-n-Play operation with hot insertion/removal**

Applications

- **Industrial**
  - **Silicon wafer and PCB inspection**
  - **Machine vision**
  - **Document scanning**
- **Medical**
  - **Ultrasound**
  - **X-Ray, CT and MRI**
- **Security**
  - **Police in-car surveillance**
  - **Biometric identification**
- **Military**
  - **Aerial mapping/survey**
  - **Battlefield imaging**
  - **UAV, Robotic vision**

The success of the FrameLink and VCE series of PCMCIA frame grabbers has positioned Imperx as the world's leading supplier of frame grabbers for laptops. Using this experience as leverage, we have developed the HD-SDI Express, an HD-SDI frame grabber designed especially for ExpressCard/54 laptops. It provides the functionality, performance and versatility required by today's most demanding vision systems. The HD-SDI Express is a highly versatile frame grabber capable of acquiring images from any SD or HD SDI video source. It features a flow-through pipelined architecture with an intelligent scatter/gather DMA engine providing over 235 MBytes/s of throughput. A full software suite including drivers, application program and SDK is provided with the card.

MOBILITY...CONVENIENCE...PERFORMANCE...
ExpressCard FRAME GRABBERS

Features

SD or HD SDI real time video acquisition
ExpressCard/54 compliant
PCIe x1 lane providing 2.5 Gps of bandwidth
Intelligent scatter/gather DMA
Flow-through pipeline architecture
Dynamic buffer allocation
Plug-and-play with hot insertion and removal
Selectable window sizes
Adjustable RGB brightness level and auto white balance
Programmable RGB lookup tables and Gamma correction
Captures single, multiple frames or AVI clips
Normal or delay capture
Date, time and text overlay
RAW, BMP, TIFF or adjustable JPEG file format
16/20 bit YCrCb 4:2:2 or 24 bit RGB formatting
Advanced features including histograms and hex pixel dump
Image viewer with DVR Controls

Video Source

75 ohm BNC coaxial connector
Analog SMPTE 292M serial interface operating at 1.485 Gbps
SMPTE 274M and SMPTE 296M framing

Software

Application program: Full-featured, intuitive, easy to use GUI
Drivers: Win XP/2000/Vista, DirectX, TWAIN, Labview, Matlab,
SDK: C/C++, COM, .NET, ActiveX - all with sample source code

Environmental

Operating temperature: 0°C to 65°C
Relative humidity: 90% non-condensing

Mechanical

ExpressCard/54 form factor
4.28" x 2.1" x 0.7" (108 x 54 x 18 mm)
Weight 1.91 oz., (53.6 g)

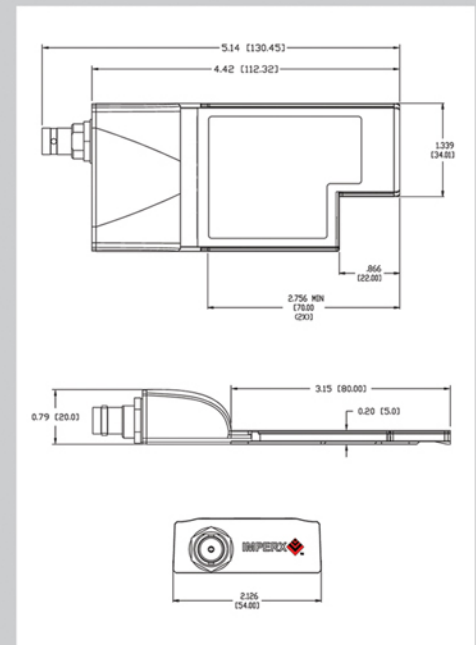**Regulatory**

FCC 15 part B, CE, RoHS

Description

The HD-SDI Express is a professional, state of the art ExpressCard video capture card, allowing users to view and store in real time images from any standard HD-SDI video source on their notebook computers. The HD-SDI Express is capable of capturing single or multiple frames, and standard AVI clips from any SD or HD SDI compliant video source. Each captured frame can be stamped with a user message along with the date and time of capture. The HD-SDI Express offers easy to use camera configuration software, which allows for fast integration of the card into demanding machine vision environments.
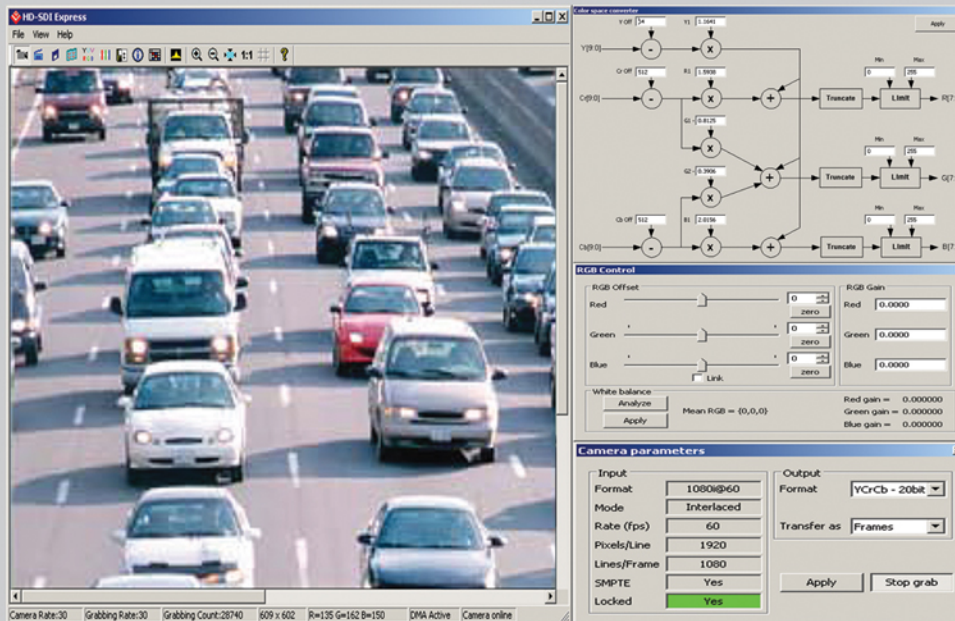
Power Requirements

- 3.3V DC +/- 5%
- 500 mA steady
- 1.65W constant power

Mechanical Dimensions

Software

Ordering Information

Ordering: **VCE-HDEX01**

For specific details and ordering information, contact us at sales@imperx.com.

Rev. 1.0

IMPERX™

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