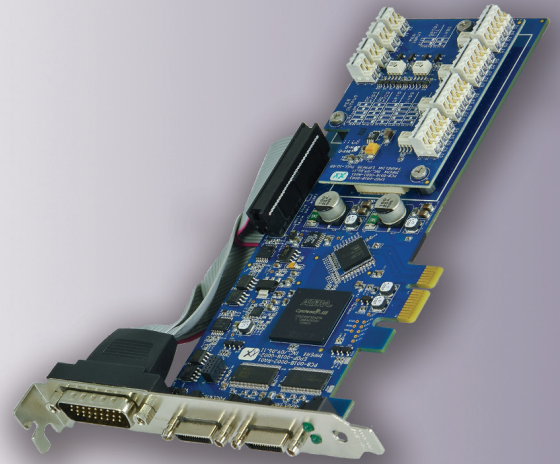# PCIe x1 Camera Link with PoCL and I/O
Video Capture Card

Framelink PCIe x1 Card (VCE-CLPCIe02)

Simultaneous acquisition from two base Camera Link cameras or one medium Camera Link camera. Fully PoCL with SafePower compliant. Includes a comprehensive Programmable Logic Controller and 8 I/O signals.

IMPERX Framelink PCIe x1 is a professional level PCI Express video capture card that enables users to view and store in real time mega pixel images from any Camera Link® source onto desktop computers. The Framelink PCIe x1 is capable of capturing single or multiple frames and standard AVI clips from any base or medium Camera Link compliant video source. Each captured frame can be stamped with a user message along with the date and time of capture. The Framelink VCE-CLPCIe02 comes with easy to use camera configuration software for fast integration of the card into demanding machine vision environments.

Supports two independent base or one medium Camera Link interfaces
PCIe x1 compliant providing 2.5 Gbps of bandwidth
Intelligent scatter/gather DMA for fast, efficient use of PCIe bandwidth and system memory
Flow-through pipeline architecture for low latency
Many advanced features including look up tables, histograms, RGB gain/offset with auto-white balance, hex pixel dump, etc.
Bayer pattern interpolation
Unique 'auto-learn' feature automatically recognizes camera parameters and simplifies CAM file creation
Fully compliant with the Power over Camera Link (PoCL) and Safe Power specifications
Built in comprehensive programmable logic controller (PLC)
Includes 4 external inputs each configurable as TTL, LVDS or Opto-coupled
Includes 4 general outputs each configurable as TTL, LVDS, Opto-coupled or Open Collector

APPLICATIONS				
Aerial Mapping	Automation	Electronics	Medical Devices	Particle Image Velocimetry (PIV)
Aerial Robots: Military, Police	Automotive	Energy/Solar/Wind Power	Metrology	Robotics
Aerospace	Biometrics	Homeland Security	Microscopy	Scientific Imaging
Agriculture	Broadcasting	Law Enforcement	Military/Defense	Surveillance
	Printed Circuit Board (PCB)	Intelligent Traffic Systems (ITS)	Pharmaceuticals	Semiconductors

IMPERX

Framelink PCIe x1 Express Card   VCE-CLPCIe02   Specifications

Features

Simultaneous acquisition from two base Camera Link cameras or one medium Camera Link camera

PCIe x1 lane providing 2.5 Gbps of bandwidth

Intelligent scatter/gather DMA

Flow-through pipelined architecture

Dynamic buffer allocation

PoCL with Safe Power compliance

Selectable window sizes

Adjustable RGB brightness and auto white balance

Bayer pattern interpolation

Built in programmable logic controller (PLC)

Supports 4 general purpose inputs and 4 outputs

Captures single, multiple frames or AVI clips

Normal or delay capture

Date, time and text overlay

BMP, TIFF or adjustable JPEG file format

Image viewer with DVR controls

Software

Application program: Full featured, intuitive, easy to use GUI

Drivers: Win XP/2000/Vista/7 in 32 and 64 bit versions, DirectX, Labview, Matlab, Halcon, MIL, Linux

SDK: C/C++, COM, .NET, ActiveX–all with sample source code

Video Source

Two CameraLink inputs configured as dual base or single medium:
- Uses two mini-CL (SDR/HDR) connectors
- Base: 24 video data bits plus strobes and clock per channel
- Medium: 48 video data bits plus strobes and clock per channel
- 4 camera control bits (CC1 to CC4) per channel
- Bi-directional serial interface per channel

Video Format

Base:1x8, 2x8, 3x8, 1x10, 2x10, 1x12, 2x12, 1x14, 1x16 and 3x8 (RGB24)

Medium: All base modes + 4x8, 3x10, 4x10, 3x12, 4x12, RGB30 and RGB36

Monochrome and color (RGB, Bayer and TRUESENSE)

Power

3.3V DC +/-5%, 500 mA steady

1.65W constant power

Environmental

Operating temperature: 0°C to 65°C

Relative humidity: 90% non-condensing
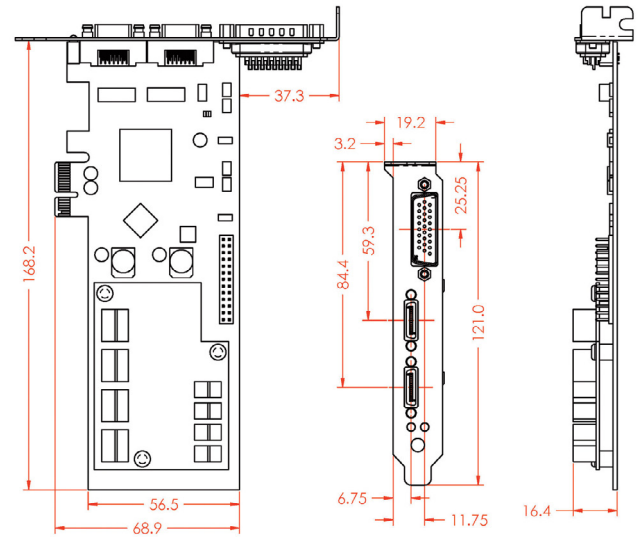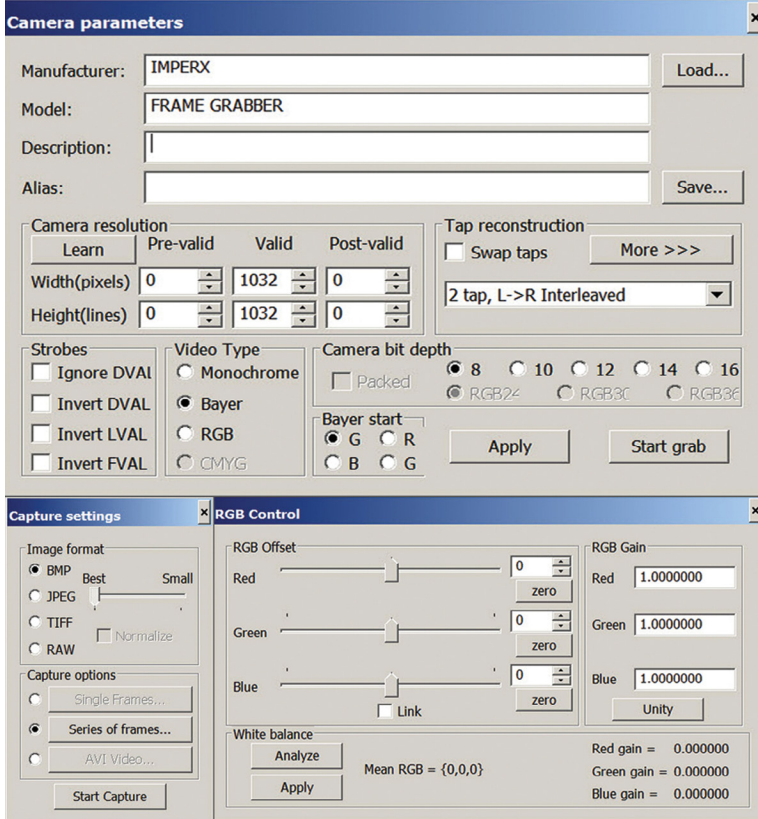
Regulatory

FCC 15 part B, CE, RoHS

Mechanical

Low profile PCI Express form factor

Weight 3.88 oz., 110g
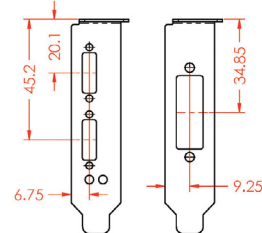

Order: VCE-CLPCIe02

For specific details and ordering information, consult the FrameLink user's manual or contact IMPERX at sales@imperx.com.

Software

Mechanical Dimensions

ALSO SUPPLIED WITH LOW PROFILE BRACKETS