FRAME GRABBERS

IMPERX™

SPECIFICATIONS

CAMERAS
FRAME GRABBERS
IMAGING SOLUTIONS

Camera Link® PCIe x1 Card for Desktop PCs

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.

Features

PCIe x1 compliant providing 2.5 Gbps of bandwidth
Fully compliant with the Power over Camera Link (PoCL) and Safe Power specifications
Built in comprehensive programmable logic controller (PLC)
Intelligent scatter/gather DMA for fast, efficient use of PCIe bandwidth and system memory
Flow-through pipeline architecture for low latency
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
Dynamic buffer allocation
Selectable window sizes
Adjustable RGB brightness and auto white balance
Unique 'auto-learn' feature automatically recognizes camera parameters and simplifies CAM file creation
Bayer pattern interpolation
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
Many advanced features including look up tables, histograms, RGB gain/offset with auto-white balance, hex pixel dump, etc.

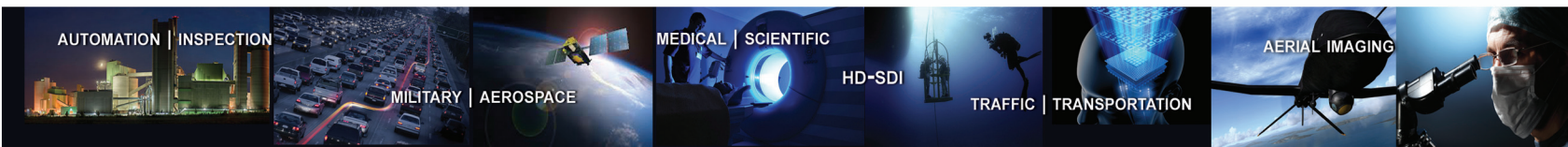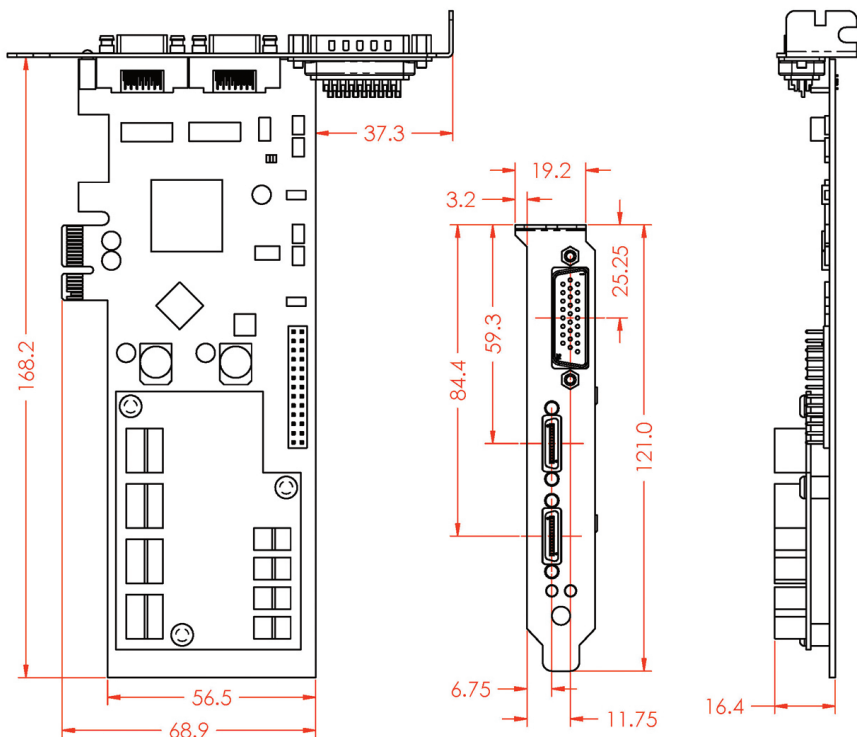|	
Software	Application program: Full featured, intuitive, easy to use GUI
	Drivers: Win XP/2000/Vista/7/8, DirectX, Halcon, LabVIEW, Matlab
	SDK: C/C++,COM, .NET, ActiveX - all with sample source code
Video Source	Uses two mini-CL (SDR/HDR) connectors
	Base: 24 video data bits plus strobes and clock 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: 4x8, 3x10, 4x10, 3x12, 4x12, RGB30 and RGB36
	Monochrome and color: RGB, Bayer and TRUESENSE Sparse CFA
Power	3.3V DC +/-5%, 500 mA steady
	1.65W constant power
Environmental	Operating temperature: -40°C to +85°C
	Relative humidity: 90% non-condensing
MTBF	>390,000 hours @ 50°C (MIL-STD-785B, MIL-HDBK-217F)
Regulatory	FCC part 15, Class B, CE, RoHS
Mechanical	Low profile PCI Express form factor

AUTOMATION | INSPECTION
MILITARY | AEROSPACE
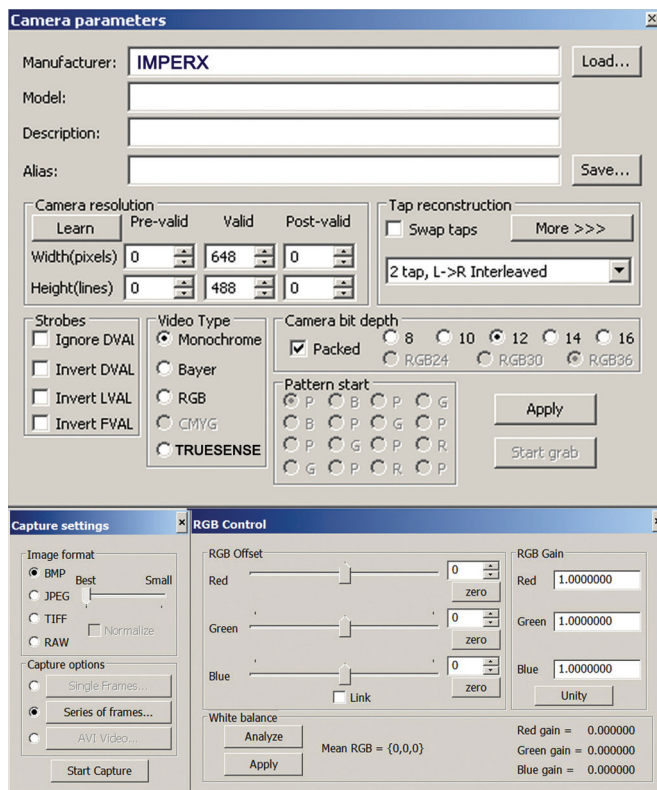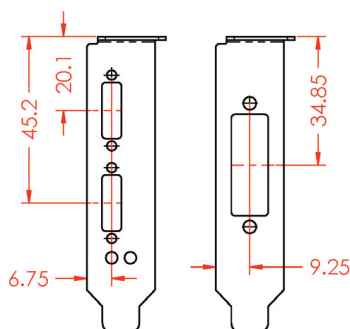MEDICAL | SCIENTIFIC
HD-SDI
TRAFFIC | TRANSPORTATION
AERIAL IMAGING

IMPERX™

Order: VCE-CLPCIe02

For specific details and ordering information, consult the FrameLink Express user's manual

Camera parameters

Manufacturer:	IMPERX
Model:	
Description:	
Alias:	

Load...   Save...

Camera resolution
Learn   Pre-valid   Valid   Post-valid
Width(pixels) 0   648   0
Height(lines) 0   488   0

Tap reconstruction
☐ Swap taps   More >>>
2 tap, L->R Interleaved

Strobes
☐ Ignore DVAL
☐ Invert DVAL
☐ Invert LVAL
☐ Invert FVAL

Video Type
◉ Monochrome
○ Bayer
○ RGB
○ CMYG
○ TRUESENSE

Camera bit depth
☑ Packed
○ 8 ○ 10 ◉ 12 ○ 14 ○ 16
○ RGB24 ○ RGB30 ◉ RGB36

Pattern start
◉ P ○ B ○ P ○ G
○ B ○ P ○ G ○ P
○ P ○ G ○ P ○ R
○ G ○ P ○ R ○ P

Apply
Start grab

Capture settings

Image format
◉ BMP   Best   Small
○ JPEG
○ TIFF   ☐ Normalize
○ RAW

Capture options
○ Single Frames...
◉ Series of frames...
○ AVI Video...

Start Capture

RGB Control

RGB Offset
Red   0   zero
Green 0   zero
Blue   0   zero
☐ Link

RGB Gain
Red   1.0000000
Green 1.0000000
Blue   1.0000000
Unity

White balance
Analyze   Mean RGB = {0,0,0}
Apply

Red gain = 0.000000
Green gain = 0.000000
Blue gain = 0.000000

37.3
19.2
3.2
25.25
59.3
84.4
121.0
168.2
56.5
68.9
6.75
11.75
16.4

ALSO SUPPLIED WITH LOW PROFILE BRACKETS

45.2
20.1
34.85
6.75
9.25

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PoCL®

CAMERA Link®