

# VisionLink F1

## Camera Link 1-lane framegrabber for PCI Express



## Description

The VisionLink F1 is a Camera Link PCI Express x1 framegrabber with one or two SDR26 connectors for up to two base mode cameras (up to 400 MB/s total in a PCIe Gen2 slot).

The compact board has a half- or full-height backpanel and fits in a 1-, 4-, 8-, or 16-lane PCIe slot.

Image capture and display is in real time via DMA to the host computer, with onboard region-of-interest (ROI) control. For additional FIFO / data buffering, optional DDR3 memory (128 MB) is available.

Line and frame triggering are supported internally via standard camera control (CC) lines, or externally (opto-coupled) via the included Berg or optional Lemo connector. Similarly, an optional IRIG-B timecode input is available via the Berg or Lemo connector. Standard Camera Link serial communication also is supported.

Provided with the board are drivers for supported operating systems and a software development kit that includes C language libraries, examples, utilities, image capture and display GUI, camera configuration files, and Camera Link standard DLL for camera control.

## Features

- Camera Link PCIe x1 interface fits in a 1-, 4-, 8-, or 16-lane PCIe slot
- Comes with half- or full-height backpanel
- Provides one or two SDR26 connectors for one or two base mode cameras
- Supports data rates up to 400 MB/s total in a PCIe Gen2 slot
- Offers optional 128 MB DDR3 for FIFO / data buffering
- Captures and displays images in real time, via DMA to host computer
- Provides onboard region-of-interest control
- Supports line and frame triggering over camera control lines
- Supports external trigger inputs via included Berg or optional Lemo connector
- Offers optional IRIG-B input via included Berg or optional Lemo connector

## Applications

- Astronomy / biology / microscopy
- Aerial mapping / traffic systems
- Commercial film / multimedia
- Medical and nuclear imaging
- Remote scientific monitoring
- Manufacturing / inspection
- Machine vision / robotics
- Security / surveillance
- Scanning / archiving

# Specifications

<b>Product Type</b>	VisionLink F1 is a Camera Link 1-lane framegrabber for PCI Express.	
<b>Memory</b>	DDR3 (for additional FIFO / data buffering)	0 or 128 MB (see ordering options)
<b>Data Rates</b>	Peak / typical	400 MB/s in a PCIe Gen2 slot
<b>Data Format (I/O)</b>	Camera Link input; optional timecode input (IRIG-B)	
<b>Camera Link Compliance</b>	Version Modes Pixel clock rate Serial Control Connectors	2.0 Base 20-85 MHz Via API or serial DLL (9600 to 115,200 baud) C1-CC4, discretely programmable for steady-state, trigger, and timed pulse SDR26 for data and control
<b>EU Compliance</b>	CE RoHS WEEE	Contact EDT Contact EDT Contact EDT
<b>PCI Express Compliance</b>	PCIe version Direct memory access (DMA) Number of lanes Backpanel	PCIe 2 Yes 1 Half or full height
<b>Noise</b>	0 dB	
<b>MTBF</b>	TBD	
<b>Triggering</b>	Via CC lines, or external (opto-coupled) via Berg mated to SamTec MTMM 132-03-F-S-126 or Lemo mated to FGG.0B.307.CLAD.56.	
<b>Connectors</b>	<b>Type</b> One or two SDR26 Camera Link Berg Optional 7-pin Lemo	<b>Purpose</b> Data and control External trigger inputs and optional IRIG-B timecode input External trigger inputs and optional IRIG-B timecode input
<b>Cabling</b>	SDR26 standard Camera Link, purchased separately; consult EDT for options.	
<b>Physical</b>	Weight Dimensions	1.4 oz. typical 2.6 x 2.75 in. (with backpanel, 2.6 x 4.75 x 0.75 in.)
<b>Environmental</b>	Temperature (operating / non-operating) Humidity (operating / non-operating)	10° to 40° C / -20° to 60° C 1% to 90%, non-condensing at 40° C / 95%, non-condensing at 45° C
<b>System and Software</b>	System: Requires a PCIe 1-, 4-, 8-, or 16-lane slot that is not dedicated to display use only. Software: Drivers for Windows, Linux, MacOS, with included software development kit, examples, and utilities. See EDT website for detailed system requirements and supported OS versions.	

## Ordering Options

Part number	Description
019-14836	Full height backpanel, 1 SDR
019-14852	Full height backpanel, 2 SDRs, 128 MB DDR3, timecode, Lemo
019-14853	Half height backpanel, 1 SDR
019-14854	Half height backpanel, 2 SDRs, 128 MB DDR3, timecode

## Contact



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