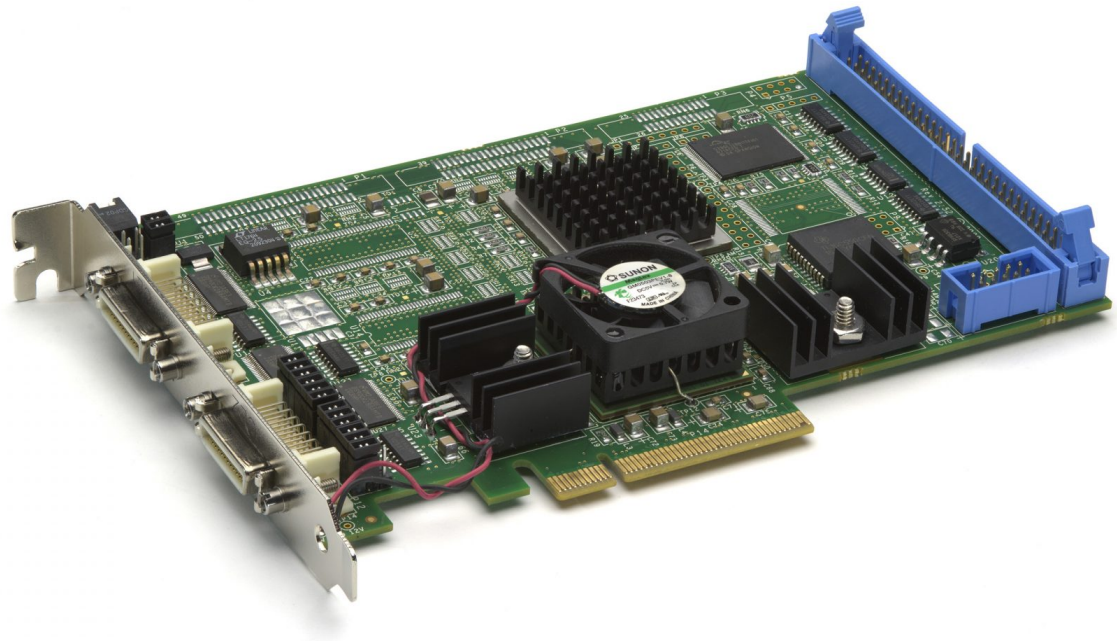
ADVANTECH BitFlow

Frame grabbers for machine vision



KARBON CL2-D

Karbon-CL is the world's first four-camera PCI Express frame grabber. It can simultaneously acquire from up to four Base CL cameras or two Full CL cameras. It is built on top of BitFlow's FlowThru technology which provides zero latency access to data, super low CPU usage, and unlimited DMA destination size. The Karbon-CL is the first member of BitFlow's Karbon family, a platform that will host a wide variety of virtual frame grabbers. These virtual frame grabbers can be customized to meet your specific needs.

The Karbon-CL has been designed with two main applications in mind. First, in situations where more than one camera is needed, the Karbon-CL can reduce both the system cost and the hardware footprint by its ability to acquire from up to four

cameras. Second, in situations where extremely high data rates and/or frame rates are required, the Karbon-CL has been designed to acquire up to 128 bits at 85 MHz pixel clock rate and DMA at data rates up to 2.0 GB/S.

The Karbon CL2-D supports one or two independent base CL cameras.

Specifications

- Half-Size x8 PCI Express Board
- Up to 128 bits input at 85 MHz
- Acquire from four independent Base CL cameras
- Acquire from two independent Medium/Full CL cameras
- Acquire from two 10-tap CL cameras
- FlowThru technology eliminates the need for on-board frame buffers, even with the fastest cameras
- Hardware Bayer matrix decoding (optional)
- Multi-tap cameras rasterized on the fly
- Highly configurable acquisition engine
- DMA at burst rates up to 2.0 GB/S
- Supports images up to 256K x 128K
- No frame rate limit
- Quadrature encoder support including sophisticated triggering schemes
- Encoder divider/multiplier
- On board timing generator supports high-resolution exposure control
- Independent trigger and encoder inputs for each camera
- Independent CCs outputs for each camera
- General purpose I/O
- MDR Camera Link connectors
- Appears to software as four independently programmable frame grabbers
- Supported by the BitFlow SDK on 32 and 64-bit Windows
- Acquire image sequences well beyond the 4 GB barrier
- Drivers, utilities and examples for Windows XP/2003/Vista/Windows 7
- RoHS Complaint