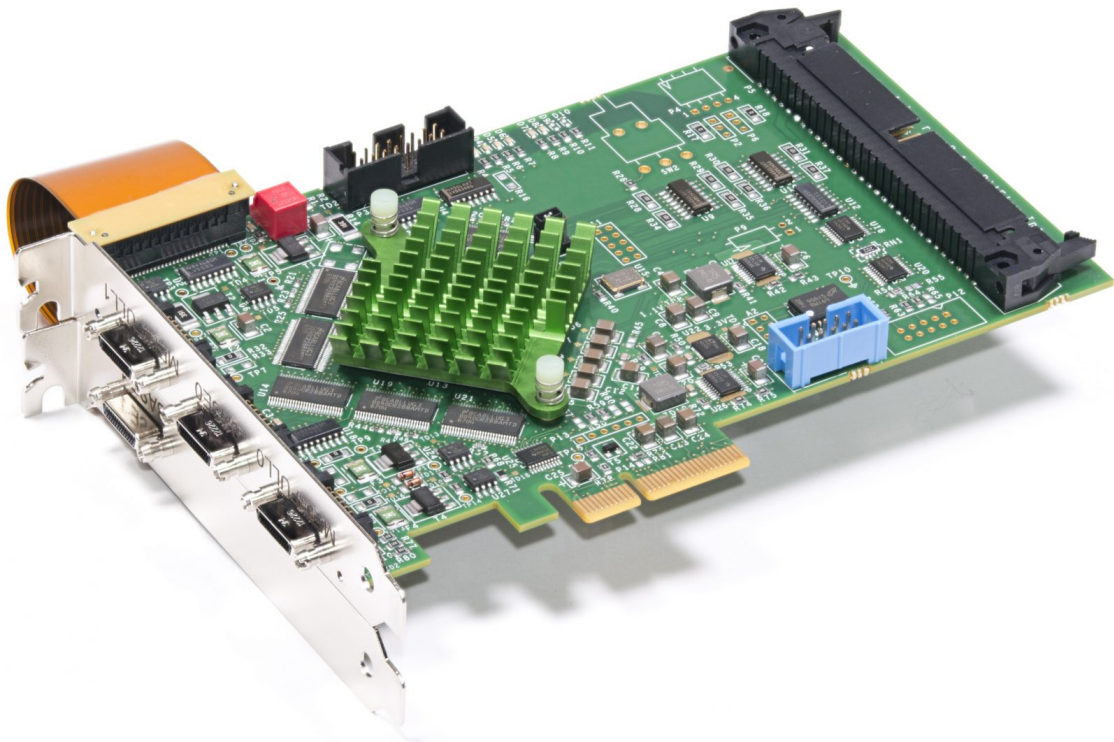


# ADVANTECH

# BitFlow

Frame grabbers for machine vision



**AXION 2XE**

## BitFlow's 6th Generation Camera Link Frame Grabbers

BitFlow has been making Camera Link frame grabbers since 1999. With each successive generation of frame grabbers, BitFlow has improved the quality, flexibility and robustness of their interfaces.

Meanwhile, much has changed on the backend; PCI to PCIe, Gen 1 to Gen 2, etc. Also the Camera Link Specification had been continuously evolving: 80-bit (10-tap) mode was added, Power over Camera Link (PoCL), new connectors, new tap formats. Even though the specification has been around a long time, it is still one of the simplest, efficient and least expensive ways to get camera data into a computer. It also benefits from 100s of thousands of pieces of CL equipment sold worldwide.

BitFlow has been on top of all these changes and has continuously improved and updated their Camera Link frame grabbers. The Axion-CL is the culmination of all of these improvements, the most powerful CL frame grabber BitFlow has ever manufactured.

The Axion-CL also benefits from other products in BitFlow's line up. The Axion-CL uses the Cyton-CXP's backend: the StreamSync DMA engine and buffer manager. A brand new PCIe Gen 2 interface, with DMA optimized for modern (fully loaded, fully busy) computers.

## Specifications

- Camera Link 2.0 Compliant
- Supports two base, medium, full, 80-bit (10-tap) CL cameras
- Supports CL clocks up to 85 MHz
- Industry standard SDR Camera Link connectors
- Supports PoCL and non-PoCL cameras
- Support dual connector PoCL
- Provides Safe Power, full protection from all power line faults
- Cameras can be accurately synchronized, or can be completely

independent

- PCI Express x4 Gen 2.0 interface (also works in x8 and x16 slots)
- Compatible with PCI Express Gen 1.0 slots
- Windows “sees” a separate frame grabber for each camera
- Separate I/O for each camera
- SDR Camera Link connectors
- Highly deterministic, low latency frame grabber to camera trigger
- Supports simultaneous communications to all cameras
- FlowThru technology means no on-board memory is needed
- StreamSync acquisition engine optimizes synchronization between acquisition and DMA
- StreamSync buffer manager maximize DMA channel efficiency
- Acquire variable length frames from line scan cameras
- Acquire image sequences well beyond the 4GB barrier
- No frame rate limit
- Triggers and encoders for external control of acquisition
- Programmable signal generator for camera control (independent for each camera)
- Quadrature encoder support including sophisticated triggering schemes
- Encoder divider/multiplier
- Drivers, utilities and examples for Windows and Linux
- Supported on both 32-bit and 64-bit platforms
- Drivers for most 3rd party processing environments (e.g. HALCON, LabView, VisionPro, MATLAB, etc.)
- Full GenICam support for control and capture
- RoHS compliant