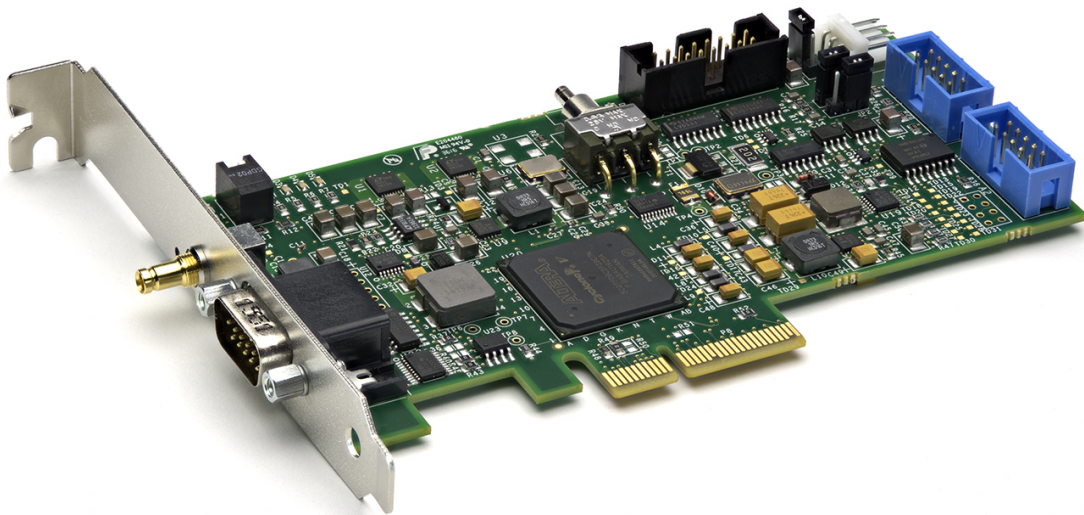


# ADVANTECH

# BitFlow

Frame grabbers for machine vision



## **AON CXP**

# The Aon-CXP

The Aon-CXP is low cost single link CoaXPress frame grabber. While it looks tiny, it has all the power of its big brother, the Cyton. It supports CXP camera speeds up to 6.25 Gb/S. The technology that Machine Vision components are built on are advancing rapidly in performance while size and costs are plummeting. CoaXPress cameras, which traditionally were power hungry, large, and expensive, are now small,

cool, and affordable. Single link cameras are coming out that are 29mm cubes. While this sounds tiny, they can still receive 6.25 Gb/S worth of data over the link, almost twice the real world data rate of the USB3 Vision standard and significantly quicker than the latest GigE Vision data rates. This means you can get 2 MP images at 300 FPS! The Aon CXP has been designed for this low cost/high-performance market.

A small foot print single link CXP camera mated with the Aon-CXP can provide all the convenience of a GigE Vision or USB3 Vision camera system. It can compete on price; can exceed the cable lengths in many cases; and can provide a host of Machine Vision features missing from GigE Vision or USB3 Vision camera systems (triggers, encoders, strobe, waveform generators, quadrature encoder support, etc.). Furthermore, because of the Aon's advanced DMA engine, no CPU resources are used in moving images to host memory.

One of the biggest advantages of buying a frame grabber over a GigE Vision or USB3 Vision camera is that all of the hardware and software components of the capture system are sourced from one manufacturer. It is not a bunch of separate blocks from different manufacturers (including Intel and Microsoft). BitFlow wrote every line of software and firmware and designed all their own hardware, which means if you have a problem we can support you. If the problem is on our side, we can fix it ourselves and get you a solution in a short amount of time.

## Specifications

- Half-Height, Half-Size x2 PCIe Gen 2.0 Board
- Half height bracket available
- CoaXPress 1.1 compliant (supports 1.0 and 1.1. cameras)

- Supports one CXP-6 camera
- Supports CXP speeds from 1.250 to 6.250 Gb/S
- Uses DIN 1.0/2.3 connectors
- Provides power for camera (up to 13 Watts per link)
- Provides Safe Power, full protection from all power line faults
- Cameras are Plug and Play with automatic link speed detection
- Cable lengths of up to 135 meters are supported
- PCI Express x2 Gen 2.0 interface
- Compatible with PCI Express Gen 1.0 slots
- I/O connector on bracket
- Compatible with BitBox external I/O module
- Highly deterministic, low latency frame grabber to camera trigger
- 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
- 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