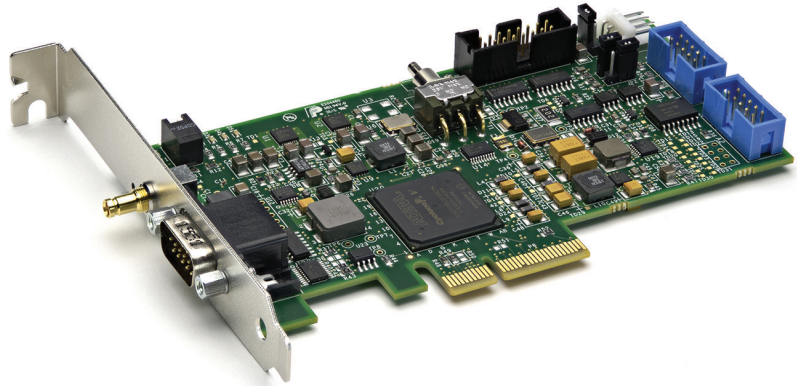


The Aon-CXP is the simplest and most affordable CoaXPress frame grabber that can be manufactured, yet it is still incredibly powerful and flexible.



[BitFlow](#) > [Frame Grabbers](#) > [Aon-CXP](#)

Introducing 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-CXP. 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. The Aon CXP has been designed for this low cost/high performance market.

Aon-CXP vs. Other Standards

A small footprint 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 and can at least double the data rate. Further it 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.). Also, because of the Aon's advanced DMA engine, no CPU resources are used in moving images to host memory.

Application Support

Adding the Aon-CXP to your application is simple with our SDK, which supports both 32-bit and 64-bit operating systems. Applications can be developed using C/C++/.NET and our sophisticated buffer management APIs. In addition, free drivers can be downloaded from our website for most 3rd party machine vision packages, such as Cognex's VisionPro and MVTec's HALCON. The Aon-CXP is software compatible with all the other BitFlow frame grabbers. This makes migrating applications to/from Camera Link, Analog, Differential and CoaXPress simple and quick.

And of course...

The Aon-CXP has all the encoders, triggers and generic I/O that you have come to expect from BitFlow. It uses the highly optimized StreamSync acquisition and buffer management engine. It supports the BitBox, BitFlow's solution for high density I/O applications.

Get It

The Aon-CXP has been designed from the ground for situations that are extremely cost sensitive, yet still demand industrial strength reliability and flexibility. Contact BitFlow today to find out more about the Aon-CXP.

Frame Grabbers

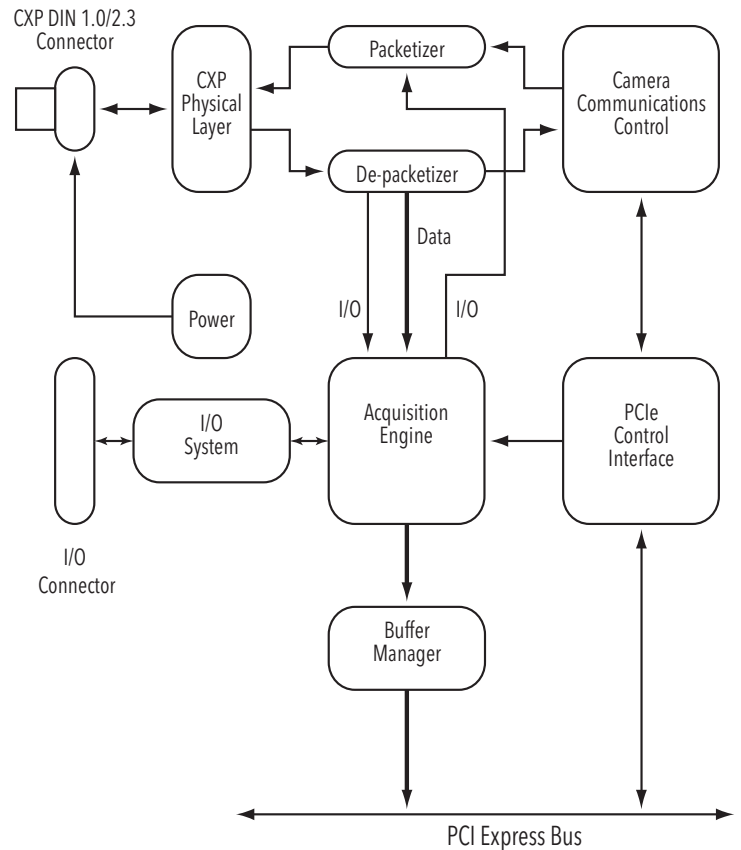
Machine Vision Software Support

Application Development Software

The Aon-CXP Features

- Half-Height, Half-Size x2 PCI Gen 2.0 Express 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
- StreamSync acquisition engine optimizes synchronization between acquisition and DMA
- StreamSync buffer manager maximizes 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
- Model number: AON-PC2-CXP1

The Aon-CXP Block diagram



About CoaXPress

CoaXPress (CXP) is a simple, yet powerful, standard for moving high speed serial data from a camera to a frame grabber. Video is captured at speeds of up to 6.25 Gigabits/Second (Gb/S). Simultaneously, control commands and triggers can be sent to the camera at 20 Mb/S (with a trigger accuracy of +/- 2 nanoseconds). Up to 13 W of power can also be supplied to the camera. All this happens over a single piece of industry standard 75 Ohm coaxial cable.

Multiple CXP links can be aggregated to support higher data rates (e.g. four links provide 25 Gb/S of data).

The CXP standard opens the door to applications where cable cost, routing requirements and long distances have prevented the move to high resolution, high speed digital cameras. In many cases, existing coaxial infrastructure can be repurposed for CXP with very low installation costs.

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