Neon-CL

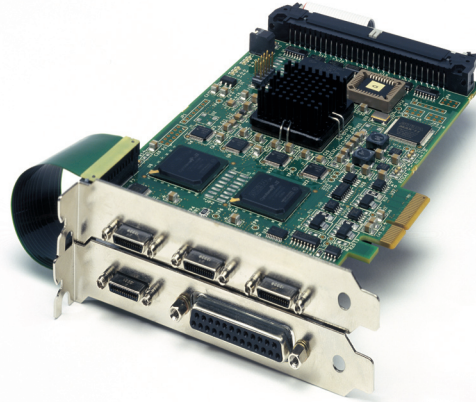*The Neon-CL Family is priced to make you forget the competition, without sacrificing any of the quality you expect from BitFlow.*

BitFlow > Frame Grabbers > Neon-CL

The Neon-CL Family

The Neon-CL family of frame grabbers have been designed to handle a wide range Base CL/PoCL machine vision applications. The first model is the Neon-CLB, the world's first PoCL frame grabber that provided Base CL acquisition on an OEM priced platform. Next is the Neon-CLD which supports two cameras on the same low cost x4 PCIe platform. The newest member, the Neon-CLQ, supports capture from four cameras simultaneously. The Neon-CL models are incredibly flexible and powerful, yet can substantially lower your system cost.

Multiple Cameras

On the Neon-CLD and Neon-CLQ models, multiple cameras can be connected to a single board that only takes a single PCIe slot. All cameras can be run independently with different resolutions, frame rates, triggering modes, etc. Or all cameras can be perfectly synchronized. These boards provide the highest density of cameras-per-slot of any frame grabber on the market, while bringing the cost per camera down to unprecedented lows. **At this price per camera, the Neon family can compete with main stream network cameras, while still providing all the robust industrial features expected when using a frame grabber.**

Application Support

Adding the Neon to your application is simple with our SDK, which supports both 32-bit and 64-bit operating systems. Develop your C/C++/.NET application using our sophisticated buffer management APIs, or download our free drivers, available for most 3rd party machine vision packages. The Neon models are software compatible with each other (as well as their big brother, the Karbon), thus making the number/type of cameras in a system a manufacturing time decision.

Power over Camera Link

Power over Camera Link (PoCL) is an extension of the Camera Link specification that allows for frame grabbers to provide power to small cameras over the Camera Link cable. PoCL provides many advantages to the OEM. First, the cabling is vastly simplified as only one cable is required for data, power and control to the camera. This provides all the convenience of Firewire or USB with the addition of industrial cabling and much higher data rates. Another advantage is that, because only a single cable is required, the camera footprint can be greatly reduced. For the first time, the so called "dice camera" format factor is supported by an industrial, digital interconnect.
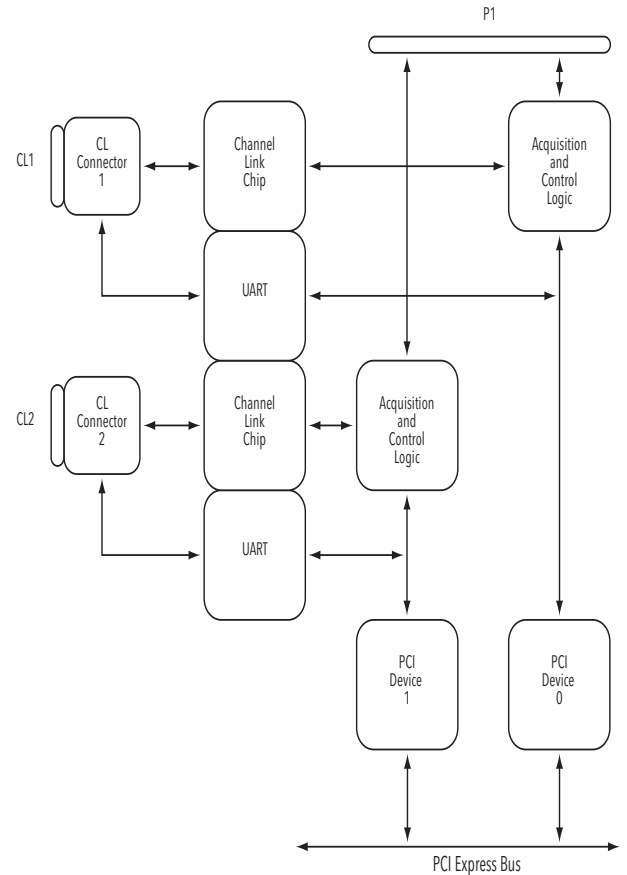
Frame Grabbers

Machine Visions Software Support

Application Development Software

BitFlow™

Neon-CL

The Neon-CL Features

- Supports one to four Base CL cameras
- Provides Power over Camera Link (PoCL) for all cameras
- Supports both PoCL and non-PoCL cameras
- Provides Safe Power, full protection from all CL power line faults
- Fully backwards compatible with non-PoCL cameras and cables
- All cameras can be independently synchronized
- Separate I/O for each camera
- Support simultaneous serial communications to all cameras
- Each camera appears to Windows as a separate frame grabber
- Acquires up to 24 bits at 85 MHz
- FlowThru technology means that no on-board memory is needed
- Supports images up to 256K x 128K
- 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 XP/Vista/Windows 7
- Supports on both 32-bit and 64-bit platforms
- Drivers for most 3rd party processing environments (e.g. HALCON, LabView, VisionPro, MATLAB, etc.)
- All models are "half size" PCIe cards
- RoHS compliant

The Neon-CLD Block diagram

The Neon-CL Models

Feature	NEO-PCE-CLB	NEO-PCE-CLD	NEO-PCE-CLQ
Number of cameras	1	2	4
Number of trigger inputs	1	2	4
Number of encoder inputs	1	2	4
Number of Windows devices	1	2	4
Number of PCIe x4 connectors	1	1	1
Camera connectors	MDR26	2 x MDR26	4 x SDR26