



FlashBus[®] DX

CL/CL2
PCI Video Frame Grabbers

Industrial strength frame grabbers with Camera Link[™] technology

FlashBus DX-CL and DX-CL2 are high-quality, low-cost, digital interface frame grabbers designed to capture RGB and monochrome images in real-time to system or display memory. Utilizing the Camera Link[™] specification, the FlashBus DX Camera Link[™] family provides a simple, standard interface to digital area scan cameras with the Camera Link[™] interface. FlashBus DX-CL and DX-CL2 are specifically designed for a wide variety of applications requiring high-quality, cost-effective, high-speed image capture including machine vision, medical and scientific visualization, and more.

FlashBus DX Family Key Features



• Real-time Capture

Taking advantage of its high-speed PCI bus-mastering capabilities, the FlashBus DX Camera Link[™] family of products delivers consecutive frames of video in real time into system or display memory without intervention from the host CPU. FlashBus DX Camera Link[™] can sustain PCI bus transfers at 100 MB/sec to system memory.

• Dual Asynchronous Capture

FlashBus DX Camera Link[™] was designed around a flexible FPGA architecture that provides two video DMA channels. Dual asynchronous capture from two monochrome area scan cameras is possible simultaneously at up to 10-bit pixel depth. Single input capture is provided from

8-, 10-, 12-, 14-, 16-, and 24-bit RGB area scan cameras. Pixel clock rates of up to 40 MHz are supported.

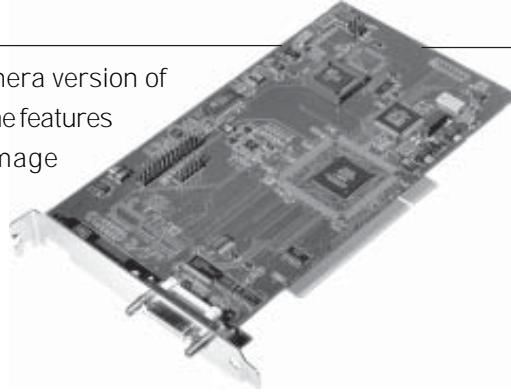
• Programmable Intelligence

FlashBus DX Camera Link[™] incorporates on-board intelligence to ensure robust triggering and accurate timing. Its camera control interface provides support for asynchronous trigger and long-term exposure functions. The FlashBus DX Camera Link[™] also adds serial communications support, a 0V-10V programmable DAC output, and a 12V DC fused output. These on-board features can be used to provide easy integration of specific camera functions.



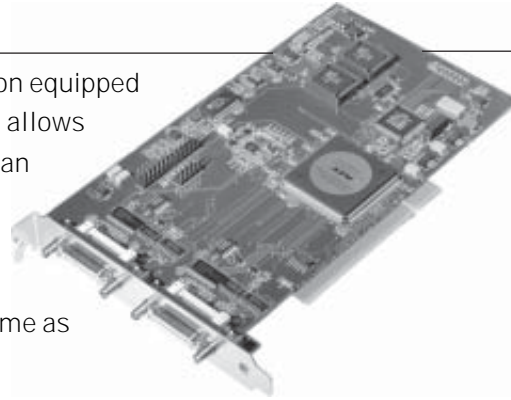
FlashBus DX-CL

FlashBus DX-CL is a low-cost, single-camera version of the FlashBus Camera Link™ family with all the features to make a high-speed, high-quality image acquisition application. FlashBus DX-CL is compatible with 8-, 10-, 12-, 14-, and 16-bit monochrome and 24-bit RGB area scan cameras with the Camera Link™ interface.



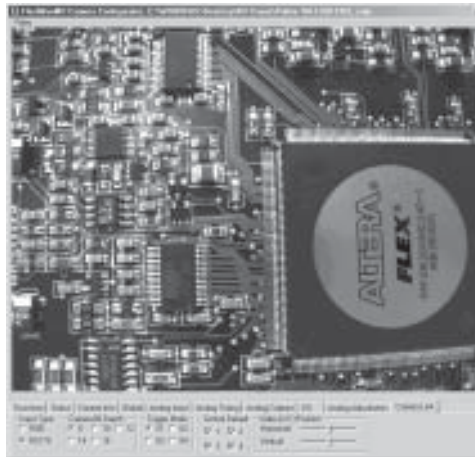
FlashBus DX-CL2

FlashBus DX-CL2 is a dual-camera version equipped with two Camera Link™ connectors. This allows two asynchronous Camera Link™ area scan cameras to be captured simultaneously. Each input can be from either 8- or 10-bit monochrome cameras. Acquisition from a single camera is supported the same as the DX-CL version.



Camera Link and FlashBus Camera Configurator

Developed by a consortium of camera and frame grabber manufacturers, including Integral Technologies, Camera Link™ is a high-speed digital video interface that provides simplified connectivity between digital cameras and frame grabbers. The Camera Link™ convention uses standardized cable connections, thus making it easier and more cost-efficient to integrate cameras and frame grabbers. **The industry-leading technology of frame grabbers from Integral Technologies and the efficient Camera Link™ standard are a perfect combination for high-resolution digital imaging.**



FlashBus Camera Configurator

Specifications

FlashBusDX-CL

- Supports 8/10/12/14/16/24-bit cameras

FlashBus DX-CL2

- Supports 8/10/12/14/16/24-bit cameras in single input mode
- Supports two 8/10-bit cameras in dual asynchronous mode

Acquisition

- High-resolution camera support up to 4K x 4K
- Up to 40 MHz acquisition rates
- Configurable LUT (1024 x 8-bit)
- Programmable digital control of offset and gain
- EEPROM for storing configuration settings

Video Transfer and Display

- PCI 2.1 compliant with bus-mastering support
- 100 MB sustained PCI throughput
- 32/24/16/15/8-bit VGA modes
- YUV 4:2:2 color space conversion
- Non-destructive overlay support

External Camera Control

- Asynchronous trigger support
- Long-term integration support
- 12-volt DC fused output at 750 mA
- Optically isolated output trigger for flash control

External I/O Control

- General purpose I/O control
- 4 on each camera link connector
- 3 via on-board header connector
- Camera Link differential serial support
- On-board DSP
- Programmable DAC output

Software

- Drivers for all major Windows releases and Linux
- Camera configuration software
- FBG video capture application
- DirectDraw support
- Media Cybernetics Image-Pro Plus drivers
- HALCON drivers
- TWAIN drivers
- Video for Windows® drivers
- Available Software Developers Kit (SDK) with sample code

Part Numbers

- # 3146 FlashBus DX-CL
- # 3147 FlashBus DX-CL2
- # 3480 FlashBus DX SDK
- # 3671 CameraLink™ Cable