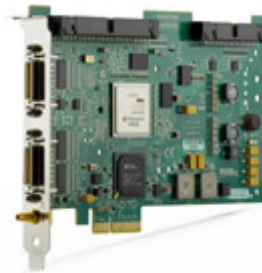


NI PCIe-1433

High-Performance Camera Link Frame Grabber

- Frame grabber for Extended-, Full-, Medium-, and Base-configuration Camera Link cameras
- Supports up to 10-tap, 80-bit images at 20 to 85 MHz pixel clock frequency
- 850 MB/s of available bandwidth over 2 Camera Link cables
- Power over Camera Link (PoCL) compatible, can be used with PoCL cables to power devices
- Onboard 512MB FIFO enhances performance for highest-bandwidth use cases
- Optional digital I/O expansion card for extra triggering and isolation



Overview

The NI PCIe-1433 is an image acquisition board for Base-, Medium-, and Full-configuration Camera Link cameras and is ideal for machine vision and scientific imaging applications that require high data throughput.

As the highest-bandwidth accepted imaging standard, Camera Link is ideal for use with high-resolution cameras and line-scan cameras. The NI PCIe-1433 also supports Power over Camera Link (PoCL) and can be used to power cameras through PoCL-enabled cables. You can access additional digital I/O lines using optional PCI and PCI Express I/O extension boards, which expose the following digital lines: 8 TTL, 3 optically isolated inputs, 3 optically isolated outputs and 1 quadrature encoder.

The NI PCIe-1433 image acquisition board is ideal for many industrial, life science, and biomedical imaging applications. Example industrial applications include web inspection, surface inspection, and performing fault analysis by setting up a stop trigger to record images before and after an event on the factory floor. Example scientific applications include analyzing intricacies in movement and recording the stimulus responses in everything from heart valves to eye corneas.

Like all NI vision hardware, you can program the NI PCIe-1433 using the NI Vision Development Module, or configure it using NI Vision Builder for Automated Inspection (AI) for faster development and simplified maintenance.

Specifications

Specifications Documents

- Detailed Specifications (2)

Specifications Summary

Specifications Summary

General

| | |
|----------------|----------------|
| Product Name | NI PCIe-1433 |
| Product Family | Frame Grabbers |

| | |
|--|-----------------------------|
| Operating System/Target | Real-Time , Windows |
| Included Vision Software | Vision Acquisition Software |
| Product Certifications | RoHS |
| FPGA Target | No |
| Camera Connectivity | |
| Camera Interface | Camera Link |
| Number of Camera Input Ports | 2 |
| Camera Link Configuration | Medium , Base , Full |
| Frame Grabber | |
| Compatibility w/ CameraLink I/O extension board | Compatible |
| Digital I/O | |
| Number of Isolated Input Channels | 3 |
| Number of Isolated Output Channels | 3 |
| Number of Bidirectional TTL Channels | 9 |
| Timing | |
| RTSI | Yes |
| Maximum Trigger Rate | 2 MHz |
| Physical Specifications | |
| Length | 17.5 cm |
| Width | 10.7 cm |
| Minimum Operating Temperature | 0 °C |
| Maximum Operating Temperature | 50 °C |