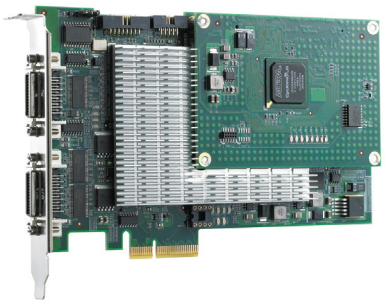
CML64

Single Channel PCI Express® Camera Link® Frame Grabber



Introduction

The CML64 is a PCI Express® x4 compliant Camera Link® frame grabber that supports one channel base/medium/full configuration, multi-tap area, and line scan color and monochrome Camera Link cameras.

The CML64 series utilizes an FPGA design for greater image acquisition flexibility, higher performance, and improved pre-processing functionality (such as pixel gain/offset correction).

The CML64 provides a 128 MB frame buffer to buffer and rearrange pixel data from the camera, before passing it to the PCI Express® bus DMA, a feature ideal for industrial machine vision applications, such as high speed inspection and high resolution acquisition.

Scanning modes supported by the CML64 include using a linescan camera in the following modes:
· Page trigger – triggered events trigger the acquisition of a given number of lines (an area acquisition system)
· Line trigger – the system continuously acquires and transfers lines from the camera based on the line trigger signal (no lines are skipped)
· Free-run – image acquisition is controlled by software, without any trigger input

Features

- **PCI Express® x4 compliant**
- **Supports one channel Camera Link® in base/medium/full configuration**
- **High-speed image transfer rates up to 680 MB/sec**
- **Acquisition pixel clock rates up to 85 MHz**
- **128 MB DDR SDRAM on-board memory**
- **2 TTL I/O, differential/TTL trigger input**
- **Serial communication via Camera Link®**

Applications

- PCB/FPD surface inspections
- Medical research instrumentations

Software Support

Windows® Platform

- Available for Windows® Vista (64/32-bit)/XP
- Recommended programming environments: C#/.NET/ VC++ 6.0/VB 6.0/BCB 6.0

CamCreator™

- CamCreator assists developers in quickly evaluating initial tests and functions.

Ordering Information

CML64
PCI Express® x4 Camera Link® frame grabber

Accessories

Cabling

Camera Link Cable
5 M, robot type

Specifications

Form Factor	Half length PCI Express® x4 compliant
Video Input	Camera Link® LVDS deferential signals
	Base configuration: via a Data1 MDR26 26-pin connector
	Medium and full configuration: via Data1 and Data2 MDR26 26-pin connectors
	Maximum Camera Link® data rate: 85 MHz
Camera Control	RS-422 signal: CC1-CC4 control signals in the Data1MDR26 26-pin connector
External Signal Input	RS-422 signal: external A, B, Z phase deferential signal inputs, maximum frequency: 1 MHz
	External page trigger
	One channel digital input; one channel digital output
Camera Support	Base cameras: 3 x 8-bit/tap, 1 x 16-bit/tap, 2 x 12-bit/tap
	Medium cameras: 4 x 8-bit/tap, 4 x 12-bit/tap
	Full cameras: 8-bit/tap
Power Consumption	0.6 A @ +12 V, 2 A @ +3.3 V
Dimensions	174.62 x 111.15 mm (W x L)