

Komodo FXCL - CameraLink™ over Fiber acquisition system

Overview

Komodo FXCL system is the industry most advanced Camera Link image acquisition system without range limitations. The system uses fiber optic cables to provide high resolution image acquisition interface for distances up to 80km in single-mode and up to 300m in multi-mode, while each Camera Link Full interface translated to single fiber cable. The Komodo FXCL system is capable of receiving video streams from Camera Link Full camera while such interface supports standard Camera Link bitrates up to 100MHz. This system is ideally suited for industrial, defense and aerospace Machine Vision Systems and applications. The system consists of Komodo Fiber frame grabber and CameraLink to Fiber device. The remote unit converts CameraLink interface to fiber optic interface. The Komodo Fiber FXP system uses a high performance flow through DMA to transmit video streams to computer memory through PCIe interface with minimal latency. This product also provides GPIO for machine control signals, such as triggers, shaft encoders, exposure control and general I/O, which can be control aside video stream acquisition.

The Frame Grabber utilizes PCIe Gen3 x8 links for communication with Host PC for video uploading and configuration.



Applications

- ✓ AOI
- ✓ Printing inspection
- ✓ 3D
- ✓ Broadcasting and sports analytics
- ✓ High-speed DVRs
- ✓ Defense remote systems
- ✓ Surveillance

Features

- Solves distance limitation of Camera Link
 - Extension for distances up to 80km in single-mode and up to 300m in multi-mode
 - Plug and Play , no need to configure
 - Camera Link Full (Decca) support
 - Link redundancy feature over separate fiber cable
 - Up to 8 CL Full cameras with single Komodo Fiber Frame Grabber
 - Camera Link Full (Decca) over single fiber cable
 - PCIe Gen3 x8 Half-length card
 - Up to 144 Gb image buffer
 - Camera controls and triggers
 - Per-link LED indication on card bracket
 - Flexible machine I/O:
 - 4 TTL configurable I/Os
 - 4 LVCMOS configurable I/Os
 - 2 LVDS inputs
 - 2 LVDS outputs
 - 4 opto-isolated outputs
 - 4 opto-isolated inputs
 - 8 quadrature rotary encoders
 - Integrated strobe controller
 - 2 RS232
 - 1 RS485/RS422
 - Camera Link 2.0 compliant
 - Power over Camera Link support
 - Multiple Camera synchronization
 - Multiple Frame Grabbers synchronization
 - MDR connectors for camera interface
 - GUI interface
- Supporting Windows and Linux OS
 - API for developing custom applications
 - Plug-ins modules for Matlab, HALCON and Labview
 - GenTL support
 - Data rates up to 10 Gbps per link
 - Transfer Rate of up to 60 Gbps
 - 0°C to 50°C operating environment temperature
 - -40°C to 70°C operating environment temperature (industrial grade, optional for extender device)

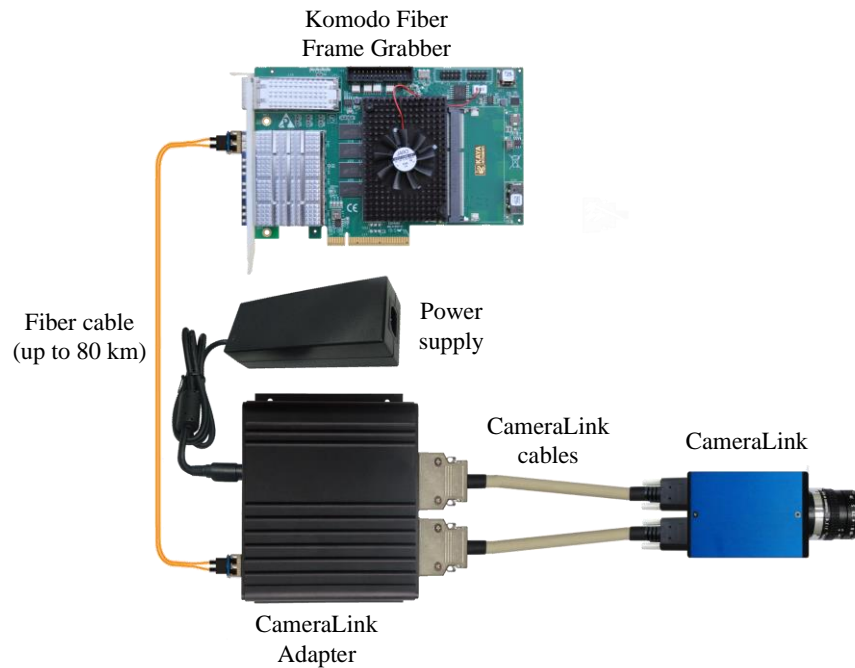
On board processing

- LUT operators with selectable bit depth
- RGB and Bayer with selectable bit depth
- Tap re-ordering
- H/V flipping
- Custom processing engines

Deliverables

- Komodo Fiber Frame Grabber
- CameraLink to Fiber Device
- SFP+ modules
- Power supply
- Hardware user manual
- Software installation CD
- CL cables (optional)
- Fiber Cables (optional)
- GPIO Extension Panel (optional)

Komodo FXCL system connection diagram



Komodo Frame Grabber HW Block Diagram

