

## Camera Link Range Extender over Fiber

### Overview

KAYA Instruments' Camera Link Range Extender over Fiber resolves distance limitation of Camera Link interface by connecting camera to frame grabber over single fiber cable. This solution provides a high resolution stream interface for distances up to 40km in single-mode and up to 300m in multi-mode. The range extender is capable of supplying power to camera over PoCL. The system is constructed of two converters, one on the camera side and one on the Frame Grabber side. The system uses flexible SFP+ modules for optical connection that can be easily changed. The range extender is able to provide a bidirectional communication at up to 10.3125Gbps equal to Camera Link Full/80 bit (Deca) over single fiber cable.



### Features

- Solves distance limitation of Camera Link
- Camera Link Full/80 bit (Deca) support
- Bidirectional communication over single fiber cable
- Flexible machine I/O:
  - RS232
  - RS422
  - Opto-isolated
  - TTL GPIOs
- Standard MDR26 connectors
- Single Fiber optic cable
- Extension for distances up to 40km in single-mode and up to 300m in multi-mode
- PoCL support
- Flexible SFP+ module for Fiber connection
- Easy configuration
- External power supply (optional)
- -40°C to 85°C operating environment temperature (industrial grade, optional)

## Applications

- ✓ High speed cameras
- ✓ High definition cameras
- ✓ Panoramic cameras
- ✓ Defense remote systems
- ✓ Surveillance
- ✓ Robotic Vision

## Deliverables

- CL over Fiber set of converters
- Power supply
- Hardware user manual
- Fiber cables (optional)
- Camera Link cables (optional)

## System Block Diagram



## About Camera Link



Camera Link® is a robust communications link using a dedicated cable connection and a standardized communications protocol. Camera Link is a hardware specification that standardizes the connection between cameras and frame grabbers. It defines a complete interface which includes provisions for data transfer, camera timing, serial communications, and real time signaling to the camera. Camera Link

was built for real time, high bandwidth (maximum 850 MB/s) parallel communication. It is a well-established and distributed industry standard, and there are many Camera Link products on the market today.

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