

# CameraLink to CoaXPRESS® Converter

## Applications:

- Quality inspection and sorting systems
- Medical and scientific imaging systems
- Military sensing systems features
- Transmits imaging data from CameraLink® Base cameras at 2lane CXP3
- Ultra-low latency and jitter
- CoaXPRESS® and Genicam™ compliant



CoaXPRESS  
by GENICAM

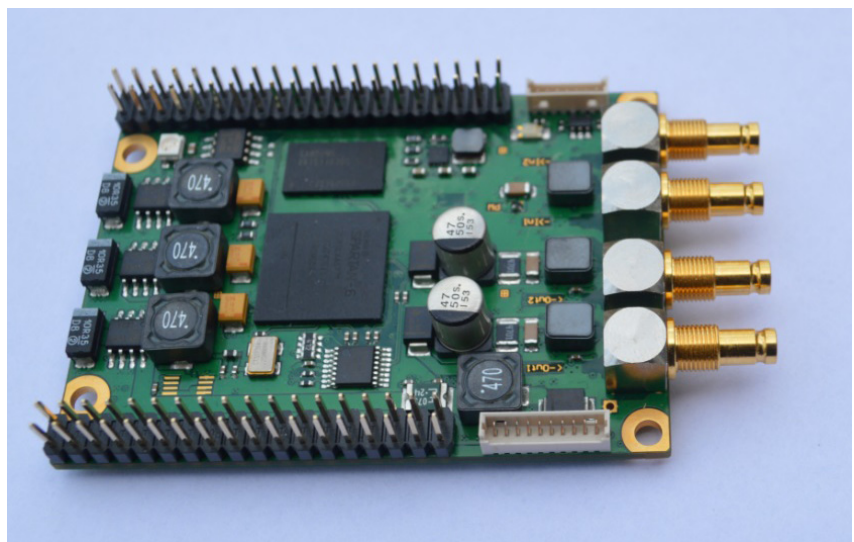
Sensor to Image CANCamCXP boards stream video and imaging data in real time over standard CXP connections between Base-configuration CameraLink® cameras and PCs using the industry-standard CoaXPRESS® protocol.

By leveraging the inherent capabilities of CXP, the CameraLink to CXP converter overcome the limitations of traditional Camera Link-based systems: Short distances between cameras and PCs and no flexibility for inter-connecting multiple cameras or centralizing control and maintenance based on standard protocols. The CameraLink to CXP boards grabs data from CameraLink cameras, converts it to CoaXPRESS® quickly and efficiently, and send it to PCs over CXP links using RG59 coaxial cables. These operations are performed by Sensor to Image field-proven, purpose-built hardware with very low latency and jitter, at the full, 5 Gbit per second net data rate. At the PC, the RG59 Coaxial cables plug into any CXP frame grabber. Point-to-point connections go up to 200 m.

CameraLink to CXP module

Sensor to Image CANCamCXP boards use a sophisticated design in an industrial grade FPGA to manage control signals from host PCs and other system elements. This powerful capability allows users to precisely measure, trigger, and control the operation of system components.

The Sensor to Image CameraLink to CXP converter is fully compliant with the CoaXPRESS® and Genicam standards. Together with GenTL compliant CXP frame grabber and PC software, it gives users a solid basis for camera control and operation.



CANCamCXP module



### CoaXPress® Features

Fully compliant CoaXPress® firmware load
Compatible with all 3rd party CoaXPress®/GenICam™ compliant vision software libraries (MIL, LabView, Halcon, Sapera, CVB, VisionPro, StreamPix, TroublePix,...)
Low-cost, easy-to-use equipment
Long reach: 200 m point-to-point

### Characteristics enclosed Version

Interface	CameraLink BASE
Temperature Range	0°C to +70°C, optional -40°C to +85°C
Power Supply	8–15 V, 3 Watt
Dimensions Housing in mm	105×105×60

### Characteristics OEM Version

FPGA / CPU	Xilinx Spartan-6 SLX45T / µBlaze
Memory CPU / Framebuffer / Flash / EEPROM	32 MByte / 32 MByte / 8 MByte / 8 kByte
Module Interface (without AddOn)	55 LVTTTL/LVCMOS lines, e.g. for data/address bus, chip select
RS232 / CAN Interface / TTL-IO	1 / Yes / 2 in + 2 out
Temperature Range	0°C to +70°C, optional -40°C to +85°C
Power Supply	8–15V, optional up to 30V, 2.5 Watt
Dimensions PCB in mm	70×50×10

### Data Acquisition Features

Accepts LVCMOS / LVTTTL controls and LVDS camera signals
Compatible with all base-configuration Camera Link cameras
Can acquire images from a wide variety of sources, with pixel depth up to 24 bits, color or B/W, and multi-tap free running or externally triggered
Flexible acquisition modes

### AddOn Modules

CameraLink BASE Interface	max. pixel clock 85 MHz
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### Connectors

Power / IO / RS232	Power, IO: MOLEX PicoBlade connector, RS232: USB-Mini B
CXP	2× Din 1.0/2.3
CameraLink version	1 Mini DSUB26 connector (3M MDR Connector 102 Series)

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