COAXLINK™

CoaXPress

Ultimate in performance with superior value CoaXPress frame grabbers

Coaxlink is a series of four CoaXPress frame grabbers. They acquire images from the fastest and highest resolution cameras on the market. The Coaxlink cards uses standard coaxial cables and the latest DIN1.0/2.3 connectors featuring a robust push/pull latching system for reliable industrial application. The Coaxlink Quad G3, Coaxlink Quad, Coaxlink Duo and Coaxlink Mono target applications requiring high data rates, high frame rates, consistent real-time timings but also longer cable length, greater cable reliability and flexibility. Typical examples of applications for the Coaxlink frame grabbers are AOI, SPI and 3D SPI, printing inspection, Flat Panel Display or glass inspection.

COAXLINK Quad G3
Up to 4 CoaXPress cameras: 25 Gbit/s I Four CXP-6 connections I Rich set of 20 digital IO lines I PCIe 3.0 (Gen 3) x4 bus: 3.9 GByte/s*

COAXLINK Quad
Up to 4 CoaXPress cameras: 25 Gbit/s I Four CXP-6 connections I Rich set of 20 digital IO lines I PCIe 2.0 (Gen 2) x4 bus: 2 GByte/s*

COAXLINK Duo
Up to 2 CoaXPress cameras: 12.5 Gbit/s I Two CXP-6 connections I Rich set of 20 digital IO lines I PCIe 2.0 (Gen 2) x4 bus: 2 GByte/s*

COAXLINK Mono
One CoaXPress camera: 6.25 Gbit/s I One CXP-6 connection I Rich set of 10 digital IO lines I PCIe 2.0 (Gen 2) x4 bus: 2 GByte/s*

*Peak transfer rate

Acquire images from the fastest and highest resolution cameras

The Coaxlink cards benefit from the **highest data acquisition rate in the industry**. They are able to sustain up to 6.25 GBit/s over a single Coaxlink cable. This leads to an impressive data transfer rate of 25 Gbit/s with the 4 cable connections of Coaxlink Quad and Quad G3.

The Coaxlink frame grabbers support **multiple-camera applications**. Coaxlink Quad and Coaxlink Quad G3 are designed to acquire images from up to four CoaXPress cameras. Two cameras can be connected to the Coaxlink Duo. Multiple Coaxlink cards can be used simultaneously in a single PC and all the cameras connected can be optionally synchronized.

Use standard coaxial cables

Coaxial cabling allows for **longer distances** between the camera and the frame grabber. Moreover, these cables offer **greater reliability and flexibility**.

At full speed, a cable of up to 35 meters can be used and at half-speed, a distance of **up to 100 meters** can be achieved. This clearly reduces the need for repeaters.

A single cable supports data transfer, camera control, trigger and power supply (up to 13W) simplifying the integration and decreasing the costs and the CoaXPress standard offers the **real time triggering** capabilities required by industrial machine vision applications. Moreover, the Coaxlink cards take advantage of the robust push/pull latching system of DIN 1.0/2.3 connectors **for reliable industrial applications**.

On board pre-processing

LUTs: Monochrome operation with selectable output bit depth (8 bits, 16 bits)
RGB and Bayer color operation with selectable output bit depth: 3 x 8 bits or 4 x 8 bits (Bayer), 3 x 16 bits or 4 x 16 bits (Bayer)

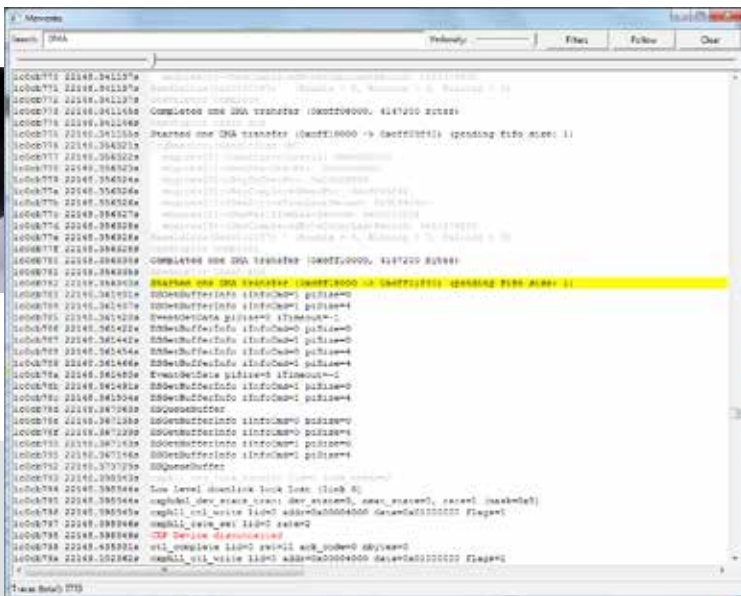Pixel formatting and image reconstruction: tap re-ordering, H/V flipping

Rich set of up to 20 digital IO lines compatible with a wide range of sensors and motion encoders

High-performance DMA transfer into user allocated memory with 64-bit addressing capability

APIs: Genicam and Multicam drivers

EURESYS
Excellence in vision

	COAXLINH Quad G3	COAXLINH Quad	COAXLINH Duo	COAXLINH Mono
Product Code	1633	1632	1631	1630
Form factor				
PCI bus	PCIe 3.0 x4	PCIe 2.0 x4	PCIe 2.0 x4	PCIe 2.0 x4
Dimensions	-	-	-	-
Format	Full height, half length	Full height, half length	Full height, half length	Full height, half length
Image acquisition standard	**CoaXPress**	**CoaXPress**	**CoaXPress**	**CoaXPress**
Number of cameras	Up to 4	Up to 4	Up to 2	1
Max. data transfer rate	25 Gbit/s	25 Gbit/s	12.5 Gbit/s	6.25 Gbit/s
Connectors	4 x CXP-6 connections	4 x CXP-6 connections	2 x CXP-6 connections	1 x CXP-6 connections
Camera support				
Gray scale cameras		✔		
Color cameras		RGB and Bayer		
Area scan cameras		✔		
Line scan cameras		✔		
Effective delivery bandwidth	**3,350 MB/s**	**1,700 MB/s**	**1,700 MB/s**	**1,700 MB/s**
-sustained bandwidth-				
On-board memory	**1 GByte**	**1 GByte**	**1 GByte**	**512 MBytes**
On-board pre-processing				
LUT operators - monochrome		with selectable output bit depth (8 bits, 16 bits)		
- RGB		RGB and Bayer color operation with selectable output bit depth: 3 x 8 bits or 4 x 8 bits (Bayer), 3 x 16 bits or 4 x 16 bits (Bayer)		
Pixel formatting		✔		
Image reconstruction		✔		
IO lines		20		10
Connectors		2 internal connectors as well as on 2 on-bracket connectors		1 internal and on the on-bracket connectors
Isolated current-sense inputs for a wide voltage input range up to 30V -trigger and general purpose-		8		4
Isolated contact output -strobe and general purpose-		4		2
High-speed differential inputs -quadrature encoder and general purpose-		4		2
High-speed -5V-compliant TTL inputs/ LVTTL outputs-		4		2
Power output		Non-isolated +12V		Non-isolated +12V
APIs		**Genicam and MultiCam drivers**		

NEW: Memento Event Logging Tool

Memento is an advanced development and debugging tool available with the Coaxlink driver. During operation, Memento records an accurate log of all the events related to the camera, the frame grabber and its driver as well as the application. It provides the developer with a precise timeline of time-stamped events, along with context information.

Memento provides valuable assistance during application development and debugging, as well as during machine operation.

Memento is non-intrusive and works with all Coaxlink cards in the PC.