APPLICATIONS

- Hyperspectral Imaging
- Traffic Surveillance
- Security Monitoring and Control
- Unmanned Systems - High-Resolution Image/Video Capture
- High-Speed Automated Optical Inspection
- Very High-Resolution Line-Scan Image Acquisition
- Military and Defense ISR
- High Frame-Rate Motion Analysis and Recording

FEATURES

- Dual CoaXPress CXP-6 Ports
- Quad Intel Core i7-4700EQ, 8GB DDR3
- Rugged, Small Form Factor PCIe/104 Design (96mm x 115mm)
- 1,250 MB/s Camera Bandwidth
- 2x CXP-6 DIN 1.0/2.3 Female Connectors
- PoCXP Safe Power: 17W from Regulated 24VDC Output Per Port
- Breakout 26-pin D-sub CXP System I/O with 12V Out
- GENICAM Compliant
- Euresys Memento Event Logging Tool
- Expandable to 2x Dual-Port CXP-6 Modules
- LEDs: A/B Status, FPGA Status, Board Status
- C2C Link for Card to Card Link
- -20C to +70C Operation; Optional -40C to +85C
- BOM Includes: CPU, 1x CoaXPress Module, 2x DIN cables

DESCRIPTION

The ADLVIS-1660 Dual CXP-6 is a rugged, small form factor (SFF) CoaXPress solution intended for military and industrial applications. It's a two-board PCIe/104 solution featuring a Quad Intel i7-4700EQ processor with a dual CXP-6 module using the x16 PCIe/104 bus resulting is a stunning 1,250 MB/s effective camera bandwidth.

The ADLVIS-1660 features include small outline coaxial cabling for DIN1.0/2.3 connectors optimized for SFF design. It supports PoCXP, is GENICAM compliant and includes Euresys Memento event logging for efficient application software development. A second CXP-6 module can easily be added to support four 1xCXP-6 cameras or two 2xCXP-6 cameras.

The ADLVIS-1660 targets rugged, Small Form Factor high-performance vision solutions in a host of military and industrial environments. It enables very high-definition applications as well as high-framerate applications in less than ideal environments for security and surveillance, traffic management, science, machine vision and a vast range of next-generation vision products.

*Data subject to change without notice.

TECHNICAL SPECIFICATIONS - ADLVIS-1660

FEATURE	FUNCTION	REMARKS
Interface Features		
Connectors	• 2x CXP-6 DIN 1.0/2.3 female connectors • System I/O: 26p D-sub connector • Camera Power Input: 4p 0.1 in Molex KK 7478 male • C2C Link: 2x3 6p 0.1 in header	
Lamp Indicators	• 'A' 'B' HOST LEDS: 2x bi-color red/green • FPGA Status LED: bi-color red/green • Board Status LED: bi-color red/green	
Interface Standards	• CoaXPress 1.0 and 1.1	
Aggregated Camera Data Transfer Rate	• 12.5 Gbits/s (1250MB/s) Maximum	
Power Over CoaXPress		
PoCXP Safe Power	• 17W of 24VDC regulated power per CoaXPress port • PoCXP device detection and automatic power-on • Overload and short-circuit protections	
24V Power Input	• Connects to Auxiliar Power input on CoaXpress module	
Camera Support		
Types	• Area-Scan Cameras: • Gray-scale and color (RGB and Bayer CFA) • Single-tap (1x-1Y) progressive scan	
Pixel Formats Supported	• Raw, Monochrome, Bayer, RGB, and RGBA (PFNC names): • Raw • Mono8, Mono10, Mono12, Mono14, Mono16 • BayerXX8, BayerXX10, BayerXX12, BayerXX14, BayerXX16 where XX=GR, RG, GB, or BG • RGB8, RGB10, RGB12, RGB14, RGBA16	
Area Scan Camera Control	• External hardware trigger with optional delay and trigger decimation • Accurate control of strobe position with support for early/late strobe pulses	
GPIO (General Purpose Input/Output		
10 I/O Lines	• 2x differential inputs (DIN) • 2x single-ended TTL I/O (TTLIO) • 4x Isolated Inputs (IIN) • 2x Isolated Outputs (IOUT)	
Usage	• Any I/O input line can be used by any LIN tool of the I/O Toolbox • I/O input lines can be used by any QDC tool in I/O toolbox to decode A/B signals of a motion encoder • LIN and QDC tool outputs can be further processed by other tools (DIV, MDV, DEL) to generate trigger events such as: cycle trigger, cycle sequence trigger, start-of-scan trigger and end-of-scan trigger.	

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TECHNICAL SPECIFICATIONS - ADLCXP-1660 (CONTINUED)

FEATURE	FUNCTION	REMARKS
I/O Toolbox		
I/O Toolbox Configuration Tools	• Line Input tool (LIN): Edge detector for rising/falling edges of any selected input line • Quadrature Decoder tool (QDC): Selected transitions, Backward motion compenasator, 32-bit up/down counter • Divider tool: (DIV): Triggeres every Nth input event from any I/O toolbox event source • Multiplier/Divider tool: (MDV): Generates m events every d input event from any I/O toolbox event source • Delay tool (DEL): Delay up to 16 events from one or two I/O toolbox event sources	
On-Board Processing		
On-Board Memory	• 512MB	
Data Stream Statistics	• Measurement of: • Frame rate (area-scan only) • Line Rate • Data Rate • Configurable Averaging interval	
Event Signaling and Counting	• EVENT_NEW_BUFFER event on newly filled buffers • Custom Event Sources: I/O toolbox events, Camera & Illumination control events • CoaXPress data stream events; CoaXPress host interface events • Event-specific data • State of all System I/O lines sampled at the event occurence	

ORDERING INFORMATION

ITEM CODE	PART #	DESCRIPTION
PCIe/104 Board		
ADLCXP-1660	360330	ADLCXP-1600, -20C - +70C
ADLCXP-1660-EX	360331	ADLCXP-1600, -40C -+85C
ADLCXP-1660-2	360332	Additional 2x CXP-6 Module w cables
	360333	Option System I/O Breakout Board
Options and Accessories		
ADLQM87PC-CK	292770	CPU Cable Kit for ADLQM87PC
ADLMES8200 Chassis	CALL	Integration into MIL-STD 810 ADLMES8200 enclosure
Custom SFF Chassis	CALL	Custom design, development and system integration
MES8200 Spreader		Heat Spreader for MES8200 Chassis

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