Aexeon Quattro

PCI and PCI Express video capture boards

Real-time 4-channel video acquisition and compression board

Aexeon Quattro is a low-cost, real-time video acquisition and compression board for applications where multiple video streams are needed. Available in either PCI or PCI Express formats, Aexeon Quattro incorporates a digital media processor and on-board frame buffer for reliable capture for the most demanding application. Aexeon Quattro contains four independent full-resolution video channels capable of simultaneous streaming of real-time video to system memory or display. Aexeon Quattro also comes equipped with all the necessary I/O control to make application development easy.

Aexeon Quattro Features

- PCI or PCI Express formats
- Bus-mastering video acquisition
- Simultaneous viewing and acquisition of four real-time video streams
- 120 frames/sec viewing and capture
- Simultaneous real-time transfer of video to system memory, overlay, or display memory
- On-board JPEG compression
- TI DM642 Digital Media Processor
- 32 MB SDRAM Frame Buffer
- Smooth video scaling to arbitrarily sized windows
- Real-time multi-picture video output with OSD
- CCIR and square pixel capture resolution
- NTSC and PAL video formats

- Multiple board installation support
- Area of interest transfers to/from system and on-board memory
- On-board microcontroller for robust timing and capture control
- RS-232 serial input and output
- 8 General purpose I/O triggers
- 4 relay output alarms
- On-board watchdog timer
- On-board motion detection
- Real-time image processing
- Windows® XP, Vista, and 7 drivers
- Windows®-based video capture application
- DirectShow and TWAIN support
- Optional SDK with sample applications

Distribution in the UK & Ireland

λ Lambda

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dPict IMAGING, INC.

Aexeon Quattro
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PCI Express Support

Aexeon Quattro can be ordered in either PCI or PCI Express system interfaces allowing for system compatibility well into the future. PCI Express is the high-performance, next-generation interconnect that increases bandwidth, scalability, and reliability.

Bus-Mastering Performance

Aexeon Quattro's high speed bus-mastering capability with scatter gather support delivers real-time video data to system or display memory simultaneously, without intervention from the host CPU. Video data formatting, resolution, and frame rate is independent between streams, allowing for maximum bandwidth flexibility.

Digital Video Processor

By incorporating an on-board video processor, Aexeon Quattro enables maximum flexibility in handling challenging application requirements. Equipped with up to 64 MB of SDRAM frame buffer memory, the video processor provides smooth scaling, real-time JPEG compression, pixel formatting, interrupt support, hardware overlay, real-time video processing, and video output functionality.

High-Quality Video Capture

Aexeon Quattro has four independent video digitizers and simultaneously delivers full-frame, full-resolution video from all channels in real-time in both NTSC and PAL formats. Video can be captured and stored in either square pixel or CCIR-601 resolutions, and can be scaled to any arbitrary size.

Video Output

Aexeon Quattro also supplies a video output with OSD that can be programmed for single camera or multi-camera (2x2) output in NTSC or PAL format. The video output is independent from video input, allowing for different frame rates between the captured video and what is displayed.

Extensive Control

Aexeon Quattro contains extensive camera and I/O control to make application development simple. By utilizing an on-board microcontroller, Aexeon Quattro provides reliable image transfer, RS-232 serial interface to control cameras, motion detection, and watchdog timer functionality. Eight programmable general-purpose triggers and four relay output alarms can be used for event or alarm verification.

dVeloper Foundation Software Developers Kit

dVeloper is a comprehensive software developers kit that supports all dPict Imaging products, allowing for easy porting to new hardware. dVeloper is royalty free and runs under Microsoft Windows XP, Vista, and 7 operating systems. Source code samples and complete documentation are included in Visual C, C#, and Visual Basic .NET to provide insight to various hardware functions. Samples include video-in-a-window, overlay, video buffering, camera control, and more.

Specifications

Form Factor
- PCI or PCI Express form factor
- Scatter gather DMA support
- PCI 2.2 compliant, 5V and 3.3V universal slot
- PCI Express x1 connector

Video Input and Digitization
- 4 composite video inputs
- NTSC (J, M, 4.43), PAL (B, D, G, H, I, M, N, Nc, 60), and SECAM (B, D, G, K, K1, L) support
- Simultaneous color or monochrome support
- Square pixel and ITU-601 resolution support
- Software programmable control of gain, offset, hue, saturation, and sharpness
- EEPROM for storing configuration and calibration settings

Video Acquisition
- 4 real-time, full-resolution video acquisition channels
- 120 frames/sec viewing and capture
- Simultaneous viewing and transfer of 4 video inputs
- Fully independent configuration of frame rate, resolution, and compression parameters per channel
- Smooth video scaling to randomly-sized windows
- Bus-mastering video transfers to system memory, overlay, or display memory simultaneously.
- Hardware overlay of graphics over video
- RGB 32/24/16/15/8 and YUV 4:2:2 pixel formats
- Area of interest transfers to on-board and system memory
- 32 MB SDRAM frame buffer
- Extensive interrupt control for robust capture

Video Output
- Composite video output with OSD
- NTSC or PAL format
- Real-time multi-picture (2x2) video output

I/O Triggers
- 8 programmable general-purpose I/O triggers
- 4 solid-state relay output alarms

I/O Control and Processing
- On-board microcontroller for reliable capture and control
- RS-232 serial interface
- On-board watchdog timer
- On-board motion or activity detection

Physical and Environmental
- 6.00" (length) x 4.20" (height)
- Operating temperature: 0° C to 55° C
- Relative humidity: 5% up to 95% non-condensing
- FCC and CE approved

Available Software Developers Kit
- Compatible with dVeloper SDK
- Windows® XP, Vista, and 7 DLLs
- DirectDraw and DirectShow support
- TWAIN support
- Extensive documentation and sample code
- dPiction Windows-based capture application
- Sample applications with source code

Ordering Information
- Aexeon Quattro PCI: 10021
- Aexeon Quattro PCI Express: 10022
- dVeloper Foundation SDK: 90010

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