

## PCI Express® Bus Extension Solutions

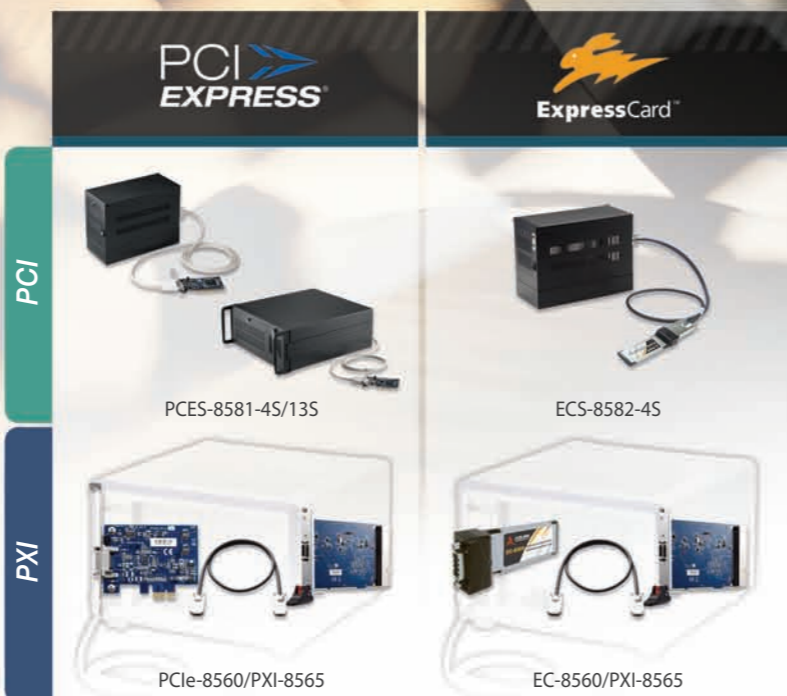
Bus extension, or bus expansion, is a technology that increases the number of bus slots of the same or different bus type for a host computer system.

Bus extension systems also allow for installations in harsh environments where separating the computer and I/O cards is necessary; the computer can be placed in a safe location and the I/O cards are positioned near their sensors or actuators to be measured or controlled.

The ADLINK PCI Express® (PCIe) Extension Series provides a full scope of PCIe extensions, including PCIe-to-PXI and PCIe-to-PCI bus. ADLINK's PCI Express-based solutions provide up to 7 meters of extension and over 100 MB/s of sustained data transfer rates.



EC-8560/PXI-8565



PCES-8581-4S/13S

ECS-8582-4S

PCIe-8560/PXI-8565

EC-8560/PXI-8565

### PCIe-8560/PXI-8565, EC-8560/PXI-8565

PCI Express®-to-PXI/CompactPCI Extension Kit  
ExpressCard®-to-PXI/CompactPCI Extension Kit >>

- High-speed PCI Express® x1 interface
- Extension distance of up to 7 meters (extension cables available in 1 M, 3 M, and 7 M lengths)
- Direct control of PXI/CompactPCI systems
- Supports 32-bit/66 MHz PCI interfaces
- Comprehensive hardware and software transparency

### PCES-8581-4S/13S, ECS-8582-4S

4-slot/13-slot PCI Express®-to-PCI Extension System  
4-slot ExpressCard®-to-PCI Extension System >>

- High-speed PCI Express® x1 interface
- Extension distance of up to 7 meters (extension cables available in 1 M, 3 M, and 7 M lengths)
- Fully compatible with 5 V and 3.3 V PCI bus
- 32-bit/33 MHz PCI interface support
- Comprehensive hardware and software transparency



PCES-8581-13S



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## ADLINK PCI Express® Product Portfolio for Measurement and Automation

### High-Bandwidth, High-Speed

- >> High-performance DAQ Cards
- >> Digital I/O Cards
- >> Frame Grabbers
- >> Interface/Bus Extension

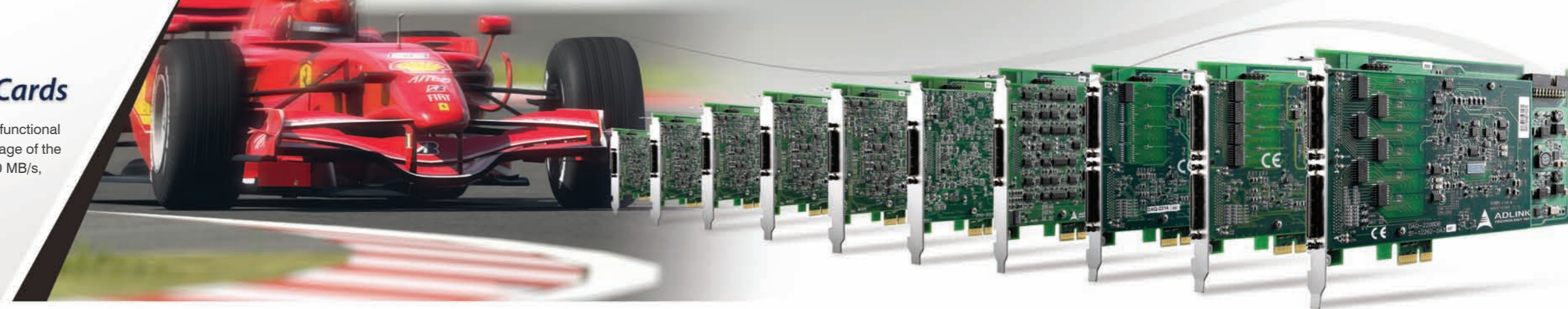


# Comprehensive PCI Express® High-Performance DAQ Cards

ADLINK's DAQe-2000 series consists of a dozen high-performance multi-functional data acquisition cards which fully implements the high-bandwidth advantage of the PCI Express® x1 bus to deliver large-scale data transfer rates of up to 250 MB/s, per direction.

Designed specifically for intensive and large-scale DAQ applications, the DAQe-2000 series covers a wide range of specifications, from 12-bit to 16-bit resolutions, 250 kS/s to 3 MS/s sampling rates, and four simultaneous to 96 multiplexed channel configurations.

The DAQe-2000 series includes:



## DAQe-2000 Series

4-CH 14-Bit/16-Bit Max. 2 MS/s Simultaneous Sampling Multi-Function PCI Express® DAQ Cards >>

- x1 lane PCI Express® interface
- Up to 8 k-sample A/D FIFO
- Bipolar or unipolar analog input ranges
- Programmable gains of x1, x2, x4, x8
- Scatter-gather DMA for both analog inputs and outputs
- 2-CH 12-bit analog outputs with waveform generation
- 24-CH TTL digital input/output

Model Number	Analog Input				Analog Output			DIO	Timer/Counter
	No. of Channels	Resolution	Sampling Rate	Input Range	No. of Channels	Resolution	Update Rate	No. of Channels	No. of Channels
DAQe-2010	4-CH DI	14 bits	2 MS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2016	4-CH DI	16 bits	800 kS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2005	4-CH DI	16 bits	500 kS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2006	4-CH DI	16 bits	250 kS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit



## DAQe-2200 Series

96-CH 12-Bit/16-Bit Max. 3 MS/s Multi-Function PCI Express® DAQ Cards >>

- x1 lane PCI Express® interface
- Bipolar or unipolar analog input ranges
- 1024/512 configuration channel gain queue
- On-board 1 k-sample A/D FIFO
- 2-CH 12-bit analog outputs with waveform generation
- Programmable gains: DAQe-2204 & DAQe-2208: x1, x2, x4, x5, x8, x10, x20, x40, x50, x200; DAQe-2205, DAQe-2206, DAQe-2213, and DAQe-2214: x1, x2, x4, x8

Model Number	Analog Input				Analog Output			DIO	Timer/Counter
	No. of Channels	Resolution	Sampling Rate	Input Range	No. of Channels	Resolution	Update Rate	No. of Channels	No. of Channels
DAQe-2204	32 DI/64 SE	12 bits	3 MS/s	±0.05 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2205	32 DI/64 SE	16 bits	500 kS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2206	32 DI/64 SE	16 bits	250 kS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2208	48 DI/96 SE	12 bits	3 MS/s	±1.25 V to ±10 V	--	--	--	24-CH 8255 PIO	--
DAQe-2213	8 DI/16 SE	16 bits	250 kS/s	±1.25 V to ±10 V	--	--	--	24-CH 8255 PIO	2-CH, 16-bit
DAQe-2214	8 DI/16 SE	16 bits	250 kS/s	±1.25 V to ±10 V	2	12 bits	1 MS/s	24-CH 8255 PIO	2-CH, 16-bit



## DAQe-2500 Series

4-CH/ 8-CH 12-Bit 1 MS/s Analog Output Multi-Function DAQ PCI Express® Cards >>

- x1 lane PCI Express® interface
- On-board 8 k-sample D/A FIFO (DAQe-2501); On-board 16 k-sample D/A FIFO (DAQe-2502)
- 2-CH 16-bit general purpose timer/counter
- 24-CH TTL digital input/output
- Hardware-based arbitrary waveform generation
- Programmable bipolar or unipolar analog output ranges on per channel basis
- Programmable internal or external reference sources on per channel basis
- 8-CH 400 kS/s 14-bit single-ended analog inputs (DAQe-2501); 4-CH 400 kS/s 14-bit single-ended analog inputs (DAQe-2502)

Model Number	Analog Input				Analog Output			DIO	Timer/Counter
	No. of Channels	Resolution	Sampling Rate	Input Range	No. of Channels	Resolution	Update Rate	Output Range	No. of Channels
DAQe-2501	8	14 bits	400 kS/s	±10 V or 0 to 10 V	4	12 bits	1 MS/s	±10 V or 0 to 10 V	24-CH 8255 PIO
DAQe-2502	4	14 bits	400 kS/s	±10 V or 0 to 10 V	8	12 bits	1 MS/s	±10 V or 0 to 10 V	24-CH 8255 PIO

## PCI Express® Digital I/O Cards



Coming Soon!

### PCIe-7350

50 MHz High-Speed 32-CH Digital I/O PCI Express® Card >>

- 50 MHz maximum clock rate from internal timer or external clock
- 200 MB/s maximum throughput
- Software selectable voltage level of 1.8 V, 2.5 V, and 3.3 V
- Per group (8-bit) input/output direction selectable
- Supports I<sup>2</sup>C and SPI programmable serial interface for external device configuration
- Scatter-gather DMA support
- Flexible handshaking and external digital trigger modes
- 6-channel auxiliary programmable I/O



### PCIe-7300A

20 MHz High-Speed 32-CH Digital I/O PCI Express® Card >>

- x1 lane PCI Express® interface
- Multiple I/O port configurations: 16-CH DI & 16-CH DO, 32-CH DI, or 32-CH DO
- Data transfer rate up to 80 MB/s
- Bus-mastering DMA with scatter-gather technology
- On-board internal timer pacer for clocked DIO
- On-board 32 k-words FIFO
- ACK and REQ signals for handshaking data transfer



### LPCIe-7230

32-CH Isolated DIO Card >>

- x1 lane PCI Express® interface
- 16-CH isolated digital input and 16 isolated digital output
- 2500 V<sub>rms</sub> optical isolation
- Sink current up to 110 mA on each isolated output
- Two external interrupt sources
- Low-profile PCI Express® size

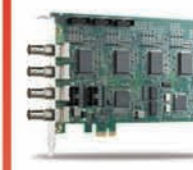


### LPCIe-7250

8-CH Relay Outputs & 8-CH Isolated DI Card >>

- x1 lane PCI Express® interface
- 8-CH SPDT
- 8-CH isolated digital inputs
- Non-latching relays
- On-board LED indicators for relay status
- On-board relay driver circuits
- Relay output status read back
- Low-profile PCI Express® size

## PCI Express® Frame Grabbers



### PCIe-RTV24

4-CH PCI Express® x1 Frame Grabber >>

- Four color video digitizers operating in parallel
- PCI Express® x1 lane, up to 120 fps
- Color (PAL/NTSC) and monochrome (CCIR/EIA) cameras supported
- Up to 16 channels extension
- On-board TTL I/O lines
- Built-in watchdog timer
- User friendly ViewCreator utility
- Software trigger supported



### PCIe-FIW64

4-CH PCI Express® x4 IEEE 1394.b Frame Grabber >>

- 4-CH IEEE 1394.b (FireWire 800) ports
- PCI Express® x4 compliant
- High-speed image transfer rates up to 800 Mb/s
- Industrial screw lock connector
- Channel status LEDs
- Power supplied to the IEEE 1394.b connectors
- Four isolated digital inputs/outputs
- Four isolated TTL level programmable trigger output pulses
- Supports Windows XP, XP Embedded, and Vista



### PCIe-CML64

1-CH PCI Express® x4 Camera Link Full Configuration Frame Grabber >>

- One channel Camera Link Full configuration
- PCI Express® x4 interface
- High-speed image transfer rates up to 680 MB/s per channel
- Acquisition pixel clock rates up to 85 MHz
- 128 MB DDR SDRAM on-board memory



### PCIe-GIE62

2-CH PCI Express® x4 Gigabit Ethernet Vision Interface Card with Triggers, and I/O >>

- Supports two independent GbE ports
- Supports jumbo frames (9 KB)
- PCI Express® x4 compliant
- Provides industrial screw lock connector
- 2 isolated digital inputs/outputs
- 2 isolated TTL level programmable trigger output pulses
- Supports Windows XP, XP Embedded, and Vista