
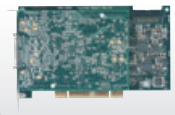


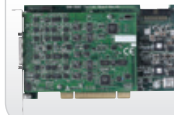









PCI Smart DAQ Solutions

DAQ-2000 Series

	Simultaneous Sampling DAQ Cards				Analog Output Cards	
						
Model Name	DAQ-2010	NEW!! DAQ-2016	DAQ-2005	DAQ-2006	DAQ-2501	DAQ-2502
3.3V or 5V PCI	3.3V/5V	3.3V/5V	3.3V/5V	3.3V/5V	3.3V/5V	3.3V/5V
Bus-mastering DMA	Scatter-gather	Scatter-gather	Scatter-gather	Scatter-gather	Scatter-gather	Scatter-gather
Auto Calibration	●	●	●	●	●	●
Analog Input						
Analog Inputs	4 DI	4 DI	4 DI	4 DI	8 SE	4 SE
Max. Sampling Rates (S/s)	2M	800 kS/s	500k	250k	400k	400k
Simultaneous Sampling	●	●	●	●	-	-
AD Resolution (bits)	14	16	16	16	14	14
FIFO Size (samples)	8k	512	512	512	1k	1k
Channel-gain Queue	-	-	-	-	-	-
Bipolar Input Ranges (V)	-10V, ±5V, ±2.5V, ±1.25V	±10V, ±5V, ±2.5V, ±1.25V	-10V, ±5V, ±2.5V, ±1.25V	±10V, ±5V, ±2.5V, ±1.25V	±10V	±10V
Unipolar Input Ranges (V)	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V	0-10V
Analog Output						
Voltage Outputs	2 + AWG ⁽¹⁾	2 + AWG ⁽¹⁾	2 + AWG ⁽¹⁾	2 + AWG ⁽¹⁾	4 + AWG ⁽¹⁾	8 + AWG ⁽¹⁾
Update Rate (S/s)	1M	1M	1M	1M	1M	1M
Simultaneous Update	●	●	●	●	●	●
DA Resolution (bits)	12	12	12	12	12	12
FIFO Size (samples)	2k	2k	2k	2k	8k	16k
Settling Time	3 μs	3 μs	3 μs	3 μs	3 μs	3 μs
Analog Output Ranges	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF
Digital I/O, Timer/Counter, and External Trigger						
Digital I/O	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO
Timer/Counter	16-bit x2	16-bit x2	16-bit x2	16-bit x2	16-bit x2	16-bit x2
Analog Trigger	●	●	●	●	●	●
Digital Trigger	●	●	●	●	●	●
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	Multi-Function DAQ Cards					
						
Model Name	DAQ-2204	DAQ-2205	DAQ-2206	DAQ-2213	DAQ-2214	DAQ-2208
3.3V or 5V PCI	3.3V/5V	3.3V/5V	3.3V/5V	3.3V/5V	3.3V/5V	3.3V/5V
Bus-mastering DMA	Scatter-gather	Scatter-gather	Scatter-gather	Scatter-gather	Scatter-gather	Scatter-gather
Auto Calibration	●	●	●	●	●	●
Analog Input						
Analog Inputs	64 SE/32 DI	64 SE/32 DI	64 SE/32 DI	16 SE/8 DI	16 SE/8 DI	96 SE/48 DI
Max. Sampling Rates (S/s)	3M	500k	250k	250k	250k	3M
Simultaneous Sampling	-	-	-	-	-	-
AD Resolution (bits)	12	16	16	16	16	12
FIFO Size (samples)	1k	1k	1k	1k	1k	1k
Channel-gain Queue	512	512	512	512	512	1024
Bipolar Input Ranges (V)	±10V, ±5V, ±2.5V, ±2V, ±1.25V, ±1V, ±0.5V, ±0.25V, ±0.2V, ±0.05V	±10V, ±5V, ±2.5V, ±1.25V	±10V, ±5V, ±2.5V, ±1.25V	±10V, ±5V, ±2.5V, ±1.25V	±10V, ±5V, ±2.5V, ±1.25V	±10V, ±5V, ±2.5V, ±2V, ±1.25V, ±1V, ±0.5V, ±0.25V, ±0.2V, ±0.05V
Unipolar Input Ranges (V)	0-10V, 0-5V, 0-4V, 0-2.5V, 0-2V, 0-1V, 0-0.5V, 0-0.4V, 0-0.1V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-2.5V, 0-1.25V	0-10V, 0-5V, 0-4V, 0-2.5V, 0-2V, 0-1V, 0-0.5V, 0-0.4V, 0-0.1V
Analog Output						
Voltage Outputs	2 + AWG ⁽¹⁾	2 + AWG ⁽¹⁾	2 + AWG ⁽¹⁾	-	2 + AWG ⁽¹⁾	-
Update Rate (S/s)	1M	1M	1M	-	1M	-
Simultaneous Update	●	●	●	-	●	-
DA Resolution (bits)	12	12	12	-	12	-
FIFO Size (samples)	1k	1k	1k	-	1k	-
Settling Time	3 μs	3 μs	3 μs	-	3 μs	-
Analog Output Ranges	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF	±10V, ±EXTREF, 0-10V, 0-EXTREF	-	±10V, ±EXTREF, 0-10V, 0-EXTREF	-
Digital I/O, Timer/Counter, and External Trigger						
Digital I/O	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO	24-bit 8255 PIO
Timer/Counter	16-bit x2	16-bit x2	16-bit x2	16-bit x2	16-bit x2	-
Analog Trigger	●	●	●	●	●	●
Digital Trigger	●	●	●	●	●	●
Page Number	5-12	5-12	5-12	5-16	5-16	5-10

Legend:
● Supported – Not available

Note:
(1) Analog outputs with hardware-based arbitrary waveform generation.

PCI Multi-Function DAQ Cards

	Multi-Function DAQ Cards						USB DAQ
Model Name	PCI-9118DG/L, HR/L	PCI-9118HG/L	PCI-9114(A)-DG	PCI-9114(A)-HG	PCI-9112/LPCI-9112	PCI-9111DG/HR	USBDAQ-9100MS
3.3V or 5V PCI	5 V	5 V	5 V	5 V	3.3V/5V ⁽²⁾	5 V	USB 1.1
Bus-mastering DMA	●	●	–	–	●	–	–
Auto Calibration	–	–	–	–	–	–	●
Analog Input							
Analog Inputs	16 SE/8 DI	16 SE/8 DI	32 SE/16 DI	32 SE/16 DI	16 SE/8 DI	16 SE	8 DI
Max. Sampling Rates (S/s)	333 k (PCI-9118DG/L) 100 k (PCI-9118HR/L)	333 k	250 k (PCI-9114A-DG) 100 k (PCI-9114DG)	250 k (PCI-9114A-HG) 100 k (PCI-9114HG)	110 k	100 k	500 k
Simultaneous Sampling	–	–	–	–	–	–	● (4-CH)
AD Resolution (bits)	12 (PCI-9118DG/L) 16 (PCI-9118HR/L)	12	16	16	12	12 (PCI-9111DG) 16 (PCI-9111HR)	12
FIFO Size (samples)	1 k	1 k	1 k	1 k	8	1 k	4 k
Channel-gain Queue	256	256	–	–	–	–	–
Bipolar Input Ranges (V)	±5 V, ±2.5 V, ±1.25 V, ±0.625 V	±5 V, ±0.5 V, ±0.05 V	±10 V, ±5 V, ±2.5 V, ±1.25 V	±10 V, ±1 V, ±0.1 V	±10 V, ±5 V, ±2.5 V, ±1.25 V, ±0.625 V	±10 V, ±5 V, ±2.5 V, ±1.25 V, ±0.625 V	±10 V, ±5 V, ±2.5 V, ±1.25 V
Unipolar Input Ranges (V)	0-10 V, 0-5 V, 0-2.5 V, 0-1.25 V	0-10 V, 0-1 V, 0-0.1 V	–	–	0-10 V, 0-5 V, 0-2.5 V, 0-1.25 V	–	0-10 V, 0-5 V, 0-2.5 V, 0-1.25 V
Analog Output							
Voltage Outputs	–	–	–	–	2	1	2 + AWG
Update Rate (S/s)	–	–	–	–	33 k ⁽¹⁾	33 k ⁽¹⁾	500 k
Simultaneous Update	–	–	–	–	–	–	●
DA Resolution (bits)	–	–	–	–	12	12	12
FIFO Size (samples)	–	–	–	–	–	–	511
Settling Time	–	–	–	–	30 μs	30 μs	2 μs
Analog Output Ranges	–	–	–	–	0-5 V, 0-10 V, 0-EXTREF	±10 V, 0-10 V	±10 V
Digital I/O, Timer/Counter, and External Trigger							
Digital I/O	4 DI, 4 DO	4 DI, 4 DO	16 DI, 16 DO (Isolated)	16 DI, 16 DO (Isolated)	16 DI, 16 DO	16 DI, 16 DO	8 DI, 8 DO (Isolated)
Timer/Counter	–	–	16-bit	16-bit	16-bit	–	16-bit x 2
Analog Trigger	–	–	–	–	–	–	–
Digital Trigger	●	●	●	●	●	●	●
Page Number	5-18	5-18	5-19	5-19	5-21	5-22	5-26

Legend:
● Supported – Not available

Notes:
(1) Actual maximum update rate is dependent on system performance. (2) The PCI-9112 supports a 5V PCI bus, and the LPCI-9112 supports a 3.3V or 5V PCI bus.

PCI AI/AO Cards

	Analog Input Cards			Analog Output Cards					
Model Name	PCI-9820	PCI-9812(A) PCI-9810	PCI-9113A	Model Name	PCI-6216V	PCI-6208V	PCI-6208A	PCI-6308V	PCI-6308A
3.3 V or 5 V PCI	3.3V/5V	3.3V/5V	5 V	3.3 V or 5 V PCI	5 V	5 V	5 V	3.3V/5V	3.3V/5V
Bus-mastering DMA	Scatter-gather	●	–	Bus-mastering DMA	–	–	–	–	–
Auto Calibration	●	–	–	Auto Calibration	–	–	–	–	–
Analog Input									
Analog Inputs	2 SE	4	32 SE/ 16 DI	Analog Output					
Max. Sampling Rate (S/s)	130 M	20 M	100 k (Isolated)	Voltage Outputs	16	8	8	8	8
Simultaneous Sampling	●	●	–	Current Outputs	–	–	8	–	8
AD Resolution (bits)	14	12 (PCI-9812), 10 (PCI-9810)	12	Update Rate (S/s)	454 k ⁽²⁾	454 k ⁽²⁾	454 k ⁽²⁾	250 k (Isolated) ⁽²⁾	250 k (Isolated) ⁽²⁾
FIFO Size (samples)	256 M (SDRAM) ⁽¹⁾	32 k (PCI-9810/ 9812) 128 k (PCI-9812A)	1 k	Simultaneous Update	–	–	–	●	●
Channel-gain Queue	–	–	–	DA Resolution (bits)	16	16	16	12	12
Bipolar Input Ranges	±5 V, ±1 V	±5 V, ±1 V	±10 V, ±5 V, ±1 V, ±0.5 V, ±0.1V, ±0.05 V	FIFO Size (samples)	–	–	–	–	–
Unipolar Input Ranges	–	–	0-10 V, 0-1 V, 0-0.1 V	Settling Time	2 μs	2 μs	17 μs	16 μs	17 μs
Digital I/O, Timer/Counter, and External Trigger									
Digital I/O	–	3 DI	–	Voltage Output Ranges	±10 V	±10 V	±10 V	±10 V, 0-10 V, 0-EXTREF0	±10 V, 0-10 V, 0-EXTREF
Timer/Counter	–	–	–	Current Output Ranges	–	–	0-20 mA, 4-20 mA, 5-25 mA	–	0-20 mA, 4-20 mA, 5-25 mA
Analog Trigger	●	●	–	Digital I/O, Timer/Counter, and External Trigger					
Digital Trigger	●	●	–	Digital I/O	4 DI, 4 DO	4 DI, 4 DO	4 DI, 4 DO	4 DI, 4 DO (Isolated)	4 DI, 4 DO (Isolated)
Page Number	5-2	5-4	5-20	Timer/Counter	–	–	–	–	–
				Analog Trigger	–	–	–	–	–
				Digital Trigger	–	–	–	–	–
				Page Number	5-24	5-24	5-24	5-23	5-23

Legend:
● Supported – Not available

Notes: (1) Supports 144-pin SODIMM SDRAM modules, up to 256M-sample storage size (2) Actual maximum update rate is dependent on system performance.

- 1 Software Solutions
- 2 PXI/ CompactPCI Platforms
- 3 PXI-Based Instruments
- 4 PXI/ CompactPCI Modules
- 5 PCI DAQ Cards
- 6 PCI DIO Cards
- 7 PCI/104-Plus Products
- 8 ISA DAS/ DIO Cards
- 9 Wiring Termination Boards
- 10 Motion Vision & COM
- 11 Remote I/O Modules
- 12 Industrial Computers