

Analog I/O & Multifunction Cards

Category			AI			AO								
Bus			PCI		ISA	PCI					ISA		PC-/104	
Model Name			PCI-1715U	PCI-1747U	PCL-813B	PCI-1720U	PCI-1721	PCI-1723	PCI-1724	PCI-1727U	PCL-726	PCL-727	PCL-728	PCM-3712
Analog Input	General Spec.	Resolution	12bits	16 bits	12 bits	-	-	-	-	-	-	-	-	-
		Channels	32 SE/16 Diff.	64 SE/32 Diff.	32 SE	-	-	-	-	-	-	-	-	-
		Onboard FIFO	1024 samples	1024 samples	-	-	-	-	-	-	-	-	-	-
		Smampling Rate	500 kS/s	250 kS/s	25 kS/s	-	-	-	-	-	-	-	-	-
		Auto Channel Scanning	✓	✓	-	-	-	-	-	-	-	-	-	-
	Input Ranges	Unipolar Inputs (V)	0 ~10, 0 ~ 5, 0 ~ 2.5, 0 ~ 0.125	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	-	-	-	-	-	-	-	-	-
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	-	-	-	-	-	-	-	-	-
		Configurable Per-Channel	✓	✓	✓	-	-	-	-	-	-	-	-	-
	Trigger Mode	Pacer/Software/ External Pulse	✓	Pacer/ Software	Software only	-	-	-	-	-	-	-	-	-
		Analog Slope	-	-	-	-	-	-	-	-	-	-	-	-
		Pre-trigger	-	-	-	-	-	-	-	-	-	-	-	-
		Post-trigger	-	-	-	-	-	-	-	-	-	-	-	-
	Data Transfer Mode	About-trigger	-	-	-	-	-	-	-	-	-	-	-	-
		Software	✓	✓	Software only	-	-	-	-	-	-	-	-	-
		DMA	Bus-mastering	Bus-mastering	-	-	-	-	-	-	-	-	-	-
Analog Output	Resolution	-	-	-	12 bits	12 bits	16 bits	14 bits	14 bits	12 bits	12 bits	12 bits	12 bits	
	Number of Channels	-	-	-	4 (Isolation)	4 (Waveform Output)	8	32	12	6	12	2 (Isolation)	2	
	Onboard FIFO	-	-	-	-	1K samples	-	-	-	-	-	-	-	
	Output Range (V)	-	-	-	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	-10 ~ 10 0 ~ 20 mA, 4 ~ 20 mA	±10, 0 ~ 20 mA	0 ~ 5, 0 ~ 10 ±5, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	-0 ~ 5, 0 ~ 10, ±5, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	
	Throughput	-	-	-	Static update	10M	Static update	Static update	Static update	Static update	Static update	Static update	Static update	
	DMA Transfer	-	-	-	-	Bus-mastering	-	-	-	-	-	-	-	
Digital I/O	Input Channels	-	-	-	-	16	16	-	16	16	16	-	-	
Output Channels	-	-	-	-	16				16	16	-	-		
Timer/Counter	Channels	-	-	-	-	1	-	-	-	-	-	-	-	
	Resolution	-	-	-	-	16-bit	-	-	-	-	-	-	-	
	Time Base	-	-	-	-	10 MHz	-	-	-	-	-	-	-	
Isolation Voltage			2,500 Vdc	-	500 Vdc	2,500 Vdc	-	-	-	-	-	500 Vdc	-	
Auto Calibration			-	✓	-	-	✓	-	-	-	-	-	-	
BoardID Switch			✓	✓	-	✓	✓	✓	✓	✓	-	-	-	
Dimensions (mm)			175 x 100	175 x 100	219 x 100	175 x 100	175 x 100	175 x 100	175 x 100	337 x 112	337 x 112	185 x 120	96 x 90	
Connector			DB-37	68-pin SCSI-II	DB-37	DB-37	68-pin SCSI-II	68-pin SCSI-II	DB-62	2 x 20-pin, DB-37	4 x 20-pin	2 x 20-pin, DB-37	2 x DB-9	1 x 10-pin box header
Windows 98/2000/XP DLL Driver			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windows 98/2000/XP Test Utility			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
VC++, VB & delphi Examples			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Advantech ActiveDAQ/ActiveDAQ Pro			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Labview I/O Drivers (Ver. 6i and 7.1)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mathworks MATLAB Data Acquisiton Tool Box 2.5.1			-	-	✓	✓	-	-	-	✓	✓	✓	-	
KW Win33 Driver			-	-	-	-	-	-	-	-	-	-	-	

*Note: SS=Single DMA channel, Single A/D channel scan
SM=Single DMA channel, Multiple A/D channel scan

Digital I/O & Counter Cards

Category			Non-Isolated DI/O								
Bus			PCI							ISA	
Model Name			PCI-1735U	PCI-1737U	PCI-1739U	PCI-1751	PCI-1753/1753E	PCI-1755	PCI-1757UP	PCL-720+	PCL-722
TTL DI/O	Input Channels		32	24	48	48	96	32	24	32	144
	Output Channels		32							32	
	Output Channel	Sink Current	0.5 V @ 24 mA	0.5 V @ 24 mA	0.5V @ 24 mA	24 mA @ 0.4 V	24 mA @ 0.44 V	48 mA @ 0.5 V	0.5 V @ 24 mA	24 mA @ 0.5 V	24 mA @ 0.5 V
		Source Current	2.0 V @ 15 mA	2.0 V @ 15mA	2.0 V @ 15 mA	15 mA @ 2.4 V	24 mA @ 3.76 V	15 mA @ 2.4 V	2.0 V @15 mA	3 mA @ 2.4 V	15 mA @ 2.4 V
Isolated DI/O	Input	Channels	-	-	-	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-	-	-	-
		Input Range	-	-	-	-	-	-	-	-	-
	Output	Channels	-	-	-	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-	-	-	-
		Output Range	-	-	-	-	-	-	-	-	-
		Max. Sink Current	-	-	-	-	-	-	-	-	-
	Timer/ Counter	Channels	3	-	-	3	-	3	-	3	-
Resolution		16 bits	-	-	16-bit	-	16-bit	-	16-bit	-	
Time Base		10 MHz	-	-	10 MHz	-	10 MHz	-	1 MHz	-	
Advanced Function	Pattern Match		-	-	-	-	✓	✓	-	-	-
	Change of State		-	-	-	-	✓	✓	-	-	-
	BoardID Switch		✓	✓	✓	✓	✓	✓	✓	-	-
	Channel-Freeze Function		-	-	-	-	-	✓	-	-	-
	Output Status Read Back		✓	✓	✓	✓	✓	-	✓	-	-
	Dry/Wet Contact		-	-	-	✓	✓	-	✓	-	-
Dimensions (mm)			175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	120 x 65	185 x 100	334 x 100
Connectors			5 x 20-pin	1 x 50-pin	2 x 50-pin	68-pin SCSI-II	100-pin SCSI-II	100-pin SCSI-II	1 x DB-25	5 X 20-pin	6 x 50-pin
Windows 98/2000/XP DLL Driver			✓	✓	✓	✓	✓	✓	✓	✓	✓
Windows 98/2000/XP Test Utility			✓	✓	✓	✓	✓	✓	✓	✓	✓
VC++, VB & delphi Examples			✓	✓	✓	✓	✓	✓	✓	✓	✓
Advantech ActiveDAQ/ ActiveDAQ Pro			✓	✓	✓	✓	✓	-	✓	✓	✓
Labview I/O Drivers (Ver. 6i and 7.0)			✓	✓	✓	✓	✓	✓	✓	✓	✓
Mathworks MATLAB & Simulink Data Acquisiton Tool Box 2.5.1			-	-	-	✓	✓	-	-	✓	✓
KW Win33 Driver			-	-	-	-	-	-	-	-	-

* Dry/wet contact can be mixed at the same time within one group.

Digital I/O & Counter Cards

Category			Non-Isolated DI/O			Isolated DI/O									
Bus			ISA		PC/104	PCI									
Model Name			PCL-724	PCL-731	PCM-3724	PCI-1730	PCI-1733	PCI-1734	PCI-1750	PCI-1752U	PCI-1754	PCI-1756	PCI-1758UDI	PCI-1758UDO	
TTL DI/O	Input Channels		24	48	48	16	-	-	-	-	-	-	-	-	
	Output Channels					16	-	-	-	-	-	-	-	-	-
	Output Channel	Sink Current	24 mA @ 0.4 V	24 mA @ 0.4 V	0.5 V @ 24 mA	8 mA @ 0.5 V	-	-	-	-	-	-	-	-	
		Source Current	15 mA @ 2.4 V	15 mA @ 2.4 V	2.0 V @ 15 mA	0.4 mA @ 2.4 V	-	-	-	-	-	-	-	-	
Isolated DI/O	Input	Channels	-	-	-	16 (Sink)	32 (Sink)	-	16 (Sink)	-	64 (Sink)	32 (Sink)	128	-	
		Isolation Voltage	-	-	-	2,500 V _{DC}	2,500 V _{DC}	-	2,500 V _{DC}	-	2,500 V _{DC}	2,500 V _{DC}	2500 VRMS	-	
		Input Range	-	-	-	5 ~ 30 V _{DC}	5 ~ 30 V _{DC}	-	5 ~ 50 V _{DC}	-	10 ~ 50 V _{DC}	10 ~ 50 V _{DC}	5 ~ 25 V _{DC}	-	
	Output	Channels	-	-	-	16 (Sink)	-	32 (Sink)	16 (Sink)	64 (Sink)	-	32 (Sink)	-	128	
		Isolation Voltage	-	-	-	2,500 V _{DC}	-	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	-	2,500 V _{DC}	-	2500 VRMS	
		Output Range	-	-	-	5 ~ 40 V _{DC}	-	5 ~ 40 V _{DC}	5 ~ 40 V _{DC}	5 ~ 40 V _{DC}	-	5 ~ 40 V _{DC}	-	5 ~ 40 V _{DC}	
		Max. Sink Current	-	-	-	200 mA	-	200 mA	200 mA	200 mA	-	200 mA	-	90 mA	
	Timer/Counter	Channels		-	-	-	-	-	-	1	-	-	-	-	-
		Resolution		-	-	-	-	-	-	16-bit	-	-	-	-	-
Time Base		-	-	-	-	-	-	1 MHz	-	-	-	-	-		
Advanced Function	Pattern Match		-	-	-	-	-	-	-	-	-	-	-	-	
	Change of State		-	-	-	-	-	-	-	-	-	-	-	-	
	BoardID Switch		-	-	-	✓	✓	✓	-	✓	✓	✓	✓	✓	
	Channel-Freeze Function		-	-	-	✓	-	-	-	✓	-	✓	-	-	
	Output Status Read Back		-	-	-	✓	-	✓	-	✓	-	✓	-	✓	
	Dry/Wet Contact		-	-	-	✓	✓	-	✓	-	-	-	-	-	
Dimensions (mm)			125 x 100	185 x 100	96 x 90	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	
Connectors			1 x 50-pin	2 x 50-pin	2 x 50-pin	1 x DB-37 4 x 20-pin	1 x DB-37	1 x DB-37	1 X DB-37	100-pin SCSI-II	100-pin SCSI-II	100-pin SCSI-II	dual 100-pin mini-SCSI	dual 100-pin mini-SCSI	
Windows 98/2000/XP DLL Driver			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windows 98/2000/XP Test Utility			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
VC++, VB & delphi Examples			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Advantech ActiveDAQ/ActiveDAQ Pro			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Labview I/O Drivers (Ver. 6i and 7.0)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mathworks MATLAB & Simulink Data Acquisiton Tool Box 2.5.1			✓	✓	-	✓	✓	✓	✓	✓	✓	✓	-	✓	
KW Win33 Driver			-	-	-	✓	✓	✓	-	✓	✓	✓	✓	✓	

Isolated DI/O											Counter		
PCI				ISA					PC/104		PCI	ISA	PC/104
PCI-1758UDIO	PCI-1760U	PCI-1761	PCI-1762	PCL-725	PCL-730	PCL-733	PCL-734	PCL-735	PCM-3725	PCM-3730	PCI-1780U	PCL-836	PCM-3780
-	-	-	-	-	16	-	-	-	8	16	8	16	24
-	-	-	-	-	16	-	-	-	8	16	8	16	
-	-	-	-	-	8 mA @ 0.5 V	-	-	-		0.5 V @ 8 mA	24 mA @ 0.5 V	8 mA @ 0.5 V	24 mA @ 0.5 V
-	-	-	-	-	0.4 mA @ 2.4 V	-	-	-		-0.4 mA @ 2.4 V	15 mA @ 2.4 V	0.4 mA @ 2.4 V	15 mA @ 2.0 V
64	8 (Sink)	8 (Sink)	8 (Sink)	8 (Sink)	16 (Sink)	32 (Sink)	-	-	8	8	-	-	-
2,500 V _b c	2,500 V _b c	2,500 V _b c	2,500 V _b c	1,500 V _b c	2,500 V _b c	2,500 V _b c	-	-	2,500 V _b c	2,500 V _b c	-	-	-
5 ~ 25 V _b c	5 ~ 12 V _b c	10 ~ 50 V _b c	10 ~ 50 V _b c	5 ~ 24 V _b c	5 ~ 24 V _b c	5 ~ 24 V _b c	-	-	10 ~ 50 V _b c	5 ~ 24 V _b c	-	-	-
64	8 x Form C	4 x Form A 4 x Form C	16 x Form C	4 x Form A 4 x Form C	16 (Sink)	-	32 (Sink)	12 x Form C	8 x Form C	8	-	-	-
2,500 V _b c	2,500 V _b c	2,500 V _b c	2,500 V _b c	1,000 V _b c	1,000 V _b c	-	1,000 V _b c	1,000 V _b c	2,000 V _b c	2,500 V _b c	-	-	-
5 ~ 40 V _b c	120 V _{AC} @ 0.5 A 30 VDC @ 1 A	250 V _{AC} @ 3 A 24 VDC @ 3 A	120 V _{AC} @ 0.5 A 30 VDC @ 1 A	120 V _{AC} @ 0.5 A 30 VDC @ 1 A	5 ~ 40 V _b c	-	5 ~ 40 V _b c	0.6 A @ 100 V _b c 0.6 A @ 125 V _b c	240 V _{AC} @ 0.25 A 30 VDC @ 1 A	5 ~ 40 V _b c	-	-	-
90 mA					200 mA	-	200 mA			200 mA		-	-
-	Up CTR for DI 2 X PWM	-	-	-	-	-	-	-	-	-	8 x CTR	6 x CTR 3 x PWM	2
-	16-bit (2,500 Isolation)	-	-	-	-	-	-	-	-	-	16-bit	16-bit	16 bits
-	500 Hz for Up CTR	-	-	-	-	-	-	-	-	-	20 MHz	10 MHz	20 MHz
-	✓	-	-	-	-	-	-	-	-	-	-	-	-
-	✓	-	-	-	-	-	-	-	-	-	-	-	-
✓	✓	✓	✓	-	-	-	-	-	-	-	✓	-	-
-	-	-	✓	-	-	-	-	-	-	-	-	-	-
✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
175 x 100	175 x 100	175 x 100	175 x 100	147 x 95	185 x 100	185 x 100	185 x 100	155 x 100	96 x 90	96 x 90	175 x 100	185 x 100	96 x 90
dual 100-pin mini-SCSI	1 X DB-37	1 X DB-37	1 x DB-62	1 x DB-37	1 x DB-37 4 x 20-pin	1 x DB-37	1 x DB-37	1 x DB-37	1 x 20-pin 1 x 50-pin	3 x 20-pin	68-pin SCSI-II	1 x DB-37 2 x 20-pin	1 x 50-pin 1 x 20-pin
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-