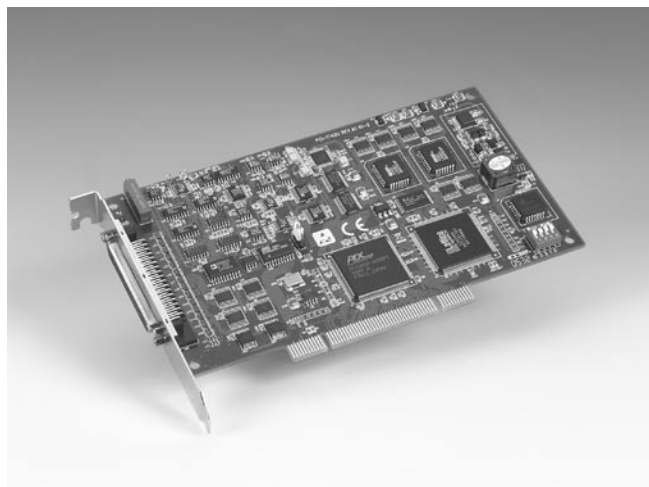


PCI-1742U

1 MS/s, 16-bit, 16-ch Universal PCI Multifunction Card



Features

- 16 single-ended or 8 differential or a combination of analog inputs
- 16-bit A/D converter, with up to 1 MHz sampling rate
- Onboard FIFO memory (1024 samples)
- Auto calibration
- Two 16-bit analog output channels
- 16 digital inputs and 16 digital outputs
- Onboard programmable counter
- Universal PCI Bus (support 3.3 V or 5 V PCI bus signal)
- BoardID™ switch

Introduction

PCI-1742U is a powerful high-resolution multifunction DAS card for the PCI bus. Its sampling rate of up to 1 MS/s and 16-bit resolution, fulfill the needs of most data acquisition applications. PCI-1742U provides 16 single-ended or 8 differential analog input channels, two 16-bit D/A output channels, 16 digital input/output channels, and one 10 MHz 16-bit counter channel.

Specifications

Analog Input

- **Channels** 16 single-ended /8 differential (SW programmable)
- **Resolution** 16 bits
- **Max. Sampling Rate** 1 MS/s single-channel
800 kS/s multi-channel
250 kS/s unipolar bipolar mixed
- **FIFO Size** 1024 samples
- **Overvoltage Protection**
- **Input Impedance** 100 M Ω /10pF (Off); 100 M Ω /100pF (On)
- **Sampling Mode** Software, onboard programmable pacer or external
- **Trigger Mode**
- **Input Range** (V, Software programmable)

Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Bipolar	± 10	± 5	± 2.5	± 1.25	± 0.625

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** Static Update
- **Reference Clock**
- **Output Range** (V, Software programmable)

Internal Reference	Bipolar	-5 ~ +5, -10 ~ +10
	Unipolar	0 ~ +5, 0 ~ +10
External Reference		0 ~ +x V @ +x V (-10 < x < 10) -x ~ +x V @ +x V (-10 < x < 10)

- **Slew Rate** 40 V/ μ s
- **Driving Capability** ± 20 mA
- **Output Impedance** 0.1 Ω max.
- **Operation Mode** Single Output

Digital Input

- **Channels** 16
- **Capability** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
Logic 1: 2.0 V min.

Digital Output

- **Channels** 16
- **Capability** 5 V/TTL
- **Output Voltage** Logic 0: 0.8 V max.
Logic 1: 2.0 V min.
- **Output Capability** Sink: 0.5 V max. @ +24 mA
Source: 2.4 V min. @ -15 mA

Counter/Timer

- **Channels** 1
- **Compatibility** 5V/TTL
- **Resolution** 16 bits
- **Max. Input Frequency** 10 MHz
- **Reference Clock**

General

- **Bus Type** Universal PCI 2.2
- **I/O connector Type** 68-pin SCSI-II female
- **Dimensions** 175 mm \times 100 mm (6.9" \times 3.9")
- **Power Consumption** Typical: +5 V @ 850 mA, +12 V @ 600 mA
Max.: +5 V @ 1 A, +12 V @ 700 mA
- **Operating Temperature** 0 ~ +60° C (32 ~ 158° F) (refer to IEC 68-2-1,2)
- **Storing Temperature** -20 ~ +85° C (-4 ~ 185° F)
- **Storing Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Certificates** CE

Ordering Information

- **PCI-1742U** 16-bit, 1MS/s Multifunction Card
- **PCL-10168-1** SCSI-68 Shielded Cable, 1 m
- **PCL-10168-2** SCSI-68 Shielded Cable, 2 m
- **ADAM-3968** SCSI-68 Wiring Terminal, DIN-rail Mount
- **PCLD-8710** SCSI-68 Wiring Terminal w/CJC, DIN-rail Mount

Pin Assignments

AI0	68	34	AI1
AI2	67	33	AI3
AI4	66	32	AI5
AI6	65	31	AI7
AI8	64	30	AI9
AI10	63	29	AI11
AI12	62	28	AI13
AI14	61	27	AI15
AIGND	60	26	AIGND
AO0_REF	59	25	AO1_REF
AO0_OUT	58	24	AO1_OUT
AOGND	57	23	AOGND
DI0	56	22	DI1
DI2	55	21	DI3
DI4	54	20	DI5
DI6	53	19	DI7
DI8	52	18	DI9
DI10	51	17	DI11
DI12	50	16	DI13
DI14	49	15	DI15
DGND	48	14	DGND
DO0	47	13	DO1
DO2	46	12	DO3
DO4	45	11	DO5
DO6	44	10	DO7
DO8	43	9	DO9
DO10	42	8	DO11
DO12	41	7	DO13
DO14	40	6	DO15
DGND	39	5	DGND
CNT0_CLK	38	4	PACER_OUT
CNT0_OUT	37	3	TRG_GATE
CNT0_GATE	36	2	EXT_TRG
+12V	35	1	+5V