PCI-1780
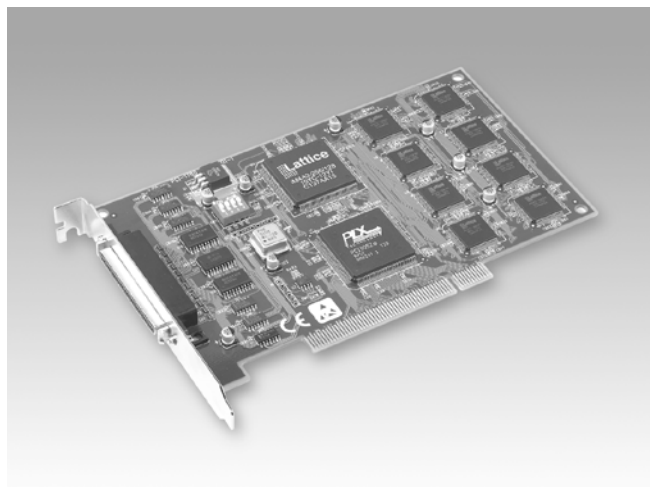
Features

- 8 independent 16-bit counters
- 8 programmable clock source
- 8 digital TTL outputs and 8 digital TTL inputs
- Up to 20 MHz input frequency
- Multiple counter clock source selectable
- Counter output programmable
- Counter gate function
- Flexible interrupt source select
- BoardID™ switch

Introduction

PCI-1780 is a general purpose multi-channel counter/timer card for the PCI bus. It targets the AM9513 to implement the counter/timer function by CPLD. It provides eight 16-bit counter channels, 8 digital outputs and 8 digital inputs. Its powerful counter functions cater to a broad range of industrial and laboratory applications.

The card features 12 programmable counter modes, to provide one shot output, PWM output, periodic interrupt output, time-delay output, and to measure the frequency and the pulse width. The PCL-10168 shielded cable works well with PCI-1780 to reduce noise. Its wires are all twisted pairs, and the input signals and output signals are separately shielded, providing minimal cross talk between signals and the best protection against EMI/EMC problems.

For easier configuration, PCI-1780 supports Plug & Play, and have also been equipped with an Advantech BoardID™ DIP switch that helps define each card's unique identity when multiple identical PCI cards have been installed in the same computer. The BoardID switch is very useful when you build your system with multiple identical PCI cards. With the correct BoardID switch settings, you can easily identify and access each card during hardware configuration and software programming.

Specifications

Digital Input

- **Channels**   8
- **Compatibility**   5 V/TTL
- **Input Voltage**   Logic 0: 0.8 V max.
                         Logic 1: 2.0 V min.
- **Interrupt Capable Ch.** CH0

Digital Output

- **Channels**   8
- **Compatibility**   5 V/TTL
- **Output Voltage**   Logic 0: 0.8 V
                         Logic 1: 2.0 V
- **Output Capability** Sink: 24 mA @ 0.8 V
                         Source: -15 mA @ 2.0 V

Counter/Timer

- **Channels**   8 (independent)
- **Resolution**   16 bits
- **Compatibility**   5 V/TTL
- **Max. Input Frequency** 20 MHz
- **Reference Clock**   Internal: 20 MHz
                         External clock: 20 MHz max.
- **Counter Modes**   12 (programmable)
- **Interrupt Capable Ch.** 8
- **PWM Channels**   8

General

- **Bus Type**   PCI V2.2
- **I/O Connectors**   1 x 68-pin SCSI-II female
- **Dimensions (L x H)** 175 x 100 mm (6.9" x 3.9")
- **Power Consumption** Typical: +5 V @ 900 mA
                         Max.: +5 V @ 1.2 A
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F) (IEC 68-2-1, 2)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Storing Humidity**   5 ~ 95 % RH, non-condensing (IEC 68-2-3)

Ordering Information

- **PCI-1780**   8-channel counter/timer card
- **PCL-10168**   68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- **ADAM-3968**   68-pin SCSI-II Wiring Terminal Board for DIN-rail mounting

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