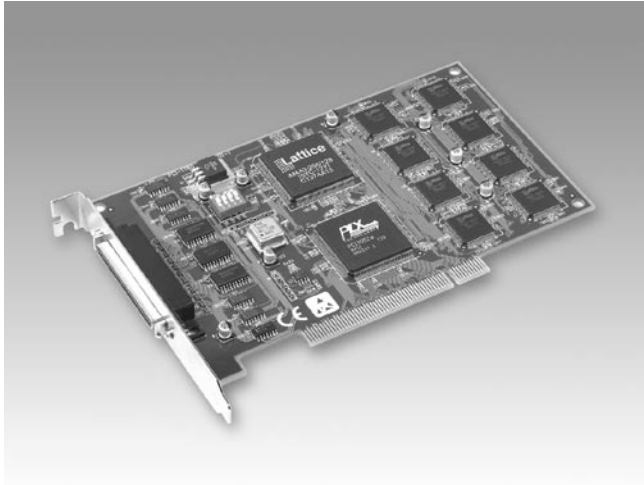


# PCI-1780

## 8-ch Counter/Timer Card



CE

### 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 multiple channel counter/timer card for the PCI bus. It targets the AM9513 to implement the counter/timer function by CPLD. Plus, it provides eight 16-bit counter channels and 8 digital outputs and 8 digital inputs. Advantech has designed powerful counter functions to for a broad range of industrial and laboratory applications.

#### Flexible Counter Modes

The PCI-1780 features up to 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 PCI-1780 is an ideal solution for various counter/timer applications.

#### Special Shielded Cable for Noise Reduction

The PCL-10168 shielded cable is specially designed for the PCI-1780 for reducing 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.

#### BoardID™ Switch

PCI-1780 has a built-in 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.

#### Plug & Play Function

PCI-1780 is a Plug & Play device which fully complies with PCI Specification Rev 2.2. During card installation, there is no need to set jumpers or DIP switches. Instead, all

### Specifications

#### Programmable Counter

- **Channels** 8 (independent)
- **Resolution** 16-bit
- **Programmable Clock Source** 8 independent
- **Programmable Counter Modes** 12
- **Max. Frequency** 20 MHz
- **Interrupt Source** 8 counter outputs

#### Digital Input/Output

- **Input Channels** 8
- **Input Voltage** Low: 0.8 V max.  
High: 2.4 V min.
- **Interrupt Source** Channel 0
- **Output Channels** 8
- **Output Voltage** Low 0.5 V max. @ 24 mA (sink)  
High 2.4 V min. @ -15 mA (source)

#### General

- **I/O Connector Type** 68-pin SCSI-II female
- **Dimensions** 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)
- **Storage Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Relative Humidity** 5 ~ 95 % RH non-condensing (IEC 68-2-3)
- **Certifications** CE certified
- **PWM Range** 0.0005 ~ 60 Sec.

### 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