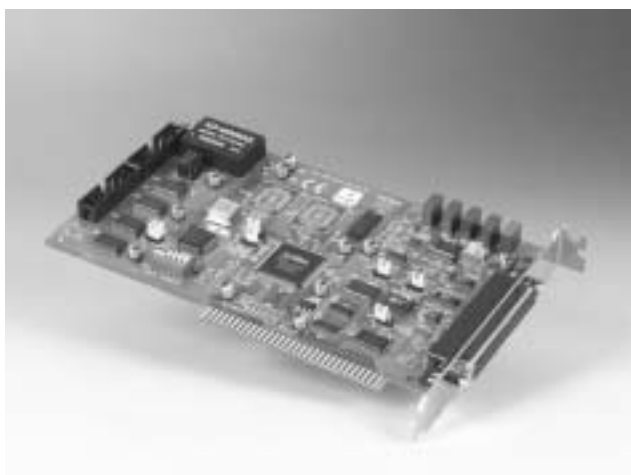


PCL-818L

40 kHz, Low-Cost, Multifunction ISA Cards



CE

Features

- 16 single-ended or 8 differential analog inputs
- 12-bit A/D converter
- Programmable gain for each input channel
- Automatic channel/gain scanning with DMA
- 16 digital inputs and 16 digital outputs
- One 12-bit analog output channel
- Programmable pacer/counter

Introduction

The PCL-818L series was designed for entry-level models to the PCL-818 series. The cards have been designed with the cost-sensitive customer in mind, but still offers the same functions as the rest of the series, except that they have a 40 kHz sampling rate and only accepts bipolar inputs. They are fully software and connector compatible with the PCL-818HD and PCL-818HG. This lets you upgrade your applications to these higher performance cards without hardware or software changes.

The PCL-818LS bundle consists of the PCL-818L card, the PCLD-8115 wiring terminal board and a DB37 cable assembly. The PCLD-8115 accommodates on-board passive signal conditioning components (resistors and capacitors), allowing you to easily implement a low-pass filter, a voltage attenuator or a 4 ~ 20 mA voltage converter.

Specifications

Analog Input

- **Channels** 16 single-ended, or 8 differential
- **Resolution** 12 bits
- **Max. Sampling Rate** 40 kS/s for all input ranges
- **Overvoltage Protection** $\pm 30 V_{DC}$ max.
- **Input Impedance** 10 M Ω
- **Sampling Modes** Software, pacer or external
- **Input Range** (V, software programmable)

Bipolar	± 10	± 5	± 2.5	± 1.25	± 0.625
Accuracy (% of FSR ± 1 LSB)	0.01	0.01	0.02	0.02	0.04

Analog Output

- **Channels** 1
- **Resolution** 12 bits
- **Output Rate** Static update
- **Output Range** (V, software programmable)

Internal Reference	Unipolar	0 ~ 5, 0 ~ 10
External Reference		0 ~ 10, 0 ~ -10

Digital Input

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

Digital Output

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.4 V max.
Logic 1: 2.4 V min.
- **Output Capability** Sink: 8 mA
Source: -0.4 mA

Timer/Counter

- **Channels** 1
- **A/D Pacer** 32-bit with 10 MHz or 1 MHz time base
- **Max. and Min. Rates** 2.5 MHz to 0.00023 Hz
- **Counter** One 16-bit counter with 100 kHz time base

General

- **Power Consumption** +5 V @ 210 mA typical, 500 mA max.
+12 V @ 20 mA typical, 100 mA max.
-12 V @ 20 mA typical, 40 mA max.
- **I/O Connector** DB37-F
- **Dimensions (L x H)** 155 x 100 mm (6.1" x 3.9")
- **Operating Temperature** 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** -20 ~ 65° C (-4 ~ 149° F)
- **Operating Humidity** 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)

Ordering Information

- **PCL-818L** Low-cost high-performance half-size multi-function card, user's manual and driver CD-ROM. (cable not included)
- **PCL-818LS** PCL-818L with PCLD-8115 and DB-37 cable assembly (PCL-10137-1)
- **PCL-10137-1** DB37 cable assembly, 1m
- **PCL-10137-2** DB37 cable assembly, 2m
- **PCL-10137-3** DB37 cable assembly, 3m
- **PCLD-8115** Industrial Wiring Terminal with CJC circuit and DB37 connector
- **PCLD-880** Industrial Wiring Terminal with DB37 connector

Feature Details

Automatic Channel/Gain Scanning

All PCL-818 cards feature an automatic channel/gain scanning circuit. This circuit, instead of your software, controls multiplexer switching during sampling. On-board SRAM stores different gain values for each channel. This combination lets you perform multi-channel high-speed sampling (up to 100 kHz) with different gains for each channel and DMA data transfer.

Unique Technology

PCL-818 cards share a custom-designed 160-pin ASIC chip that has a gate count of over 7,000 and utilizes 1.0 mm CMOS technology. This custom integration gives higher performance and reliability with lower power consumption on a smaller board.

Wide Selection with Migration Path

The PCL-818 series lets you choose the card that exactly matches your application and price range. The PCL-818L is designed for lower budgets, with the best price/performance ratio in the market. If you need more power, you can easily upgrade to any other card in the series.

The PCL-818 cards are connector compatible so all your programs will work with your new card, protecting your investment.

1	Software
2	IPPC
3	TPC
4	FPM
5	ATM & AWS
6	DA&C
7	cPCI
8	ADAM-3000
9	Motion Control
10	ICOM
11	Industrial Networking
12	UNO
13	ADAM-4000
14	ADAM-5000
15	ADAM-6000
16	ADAM-8000
17	BAS