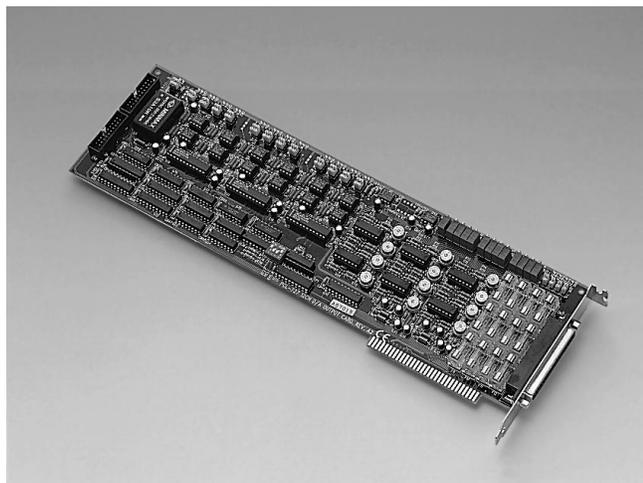


# PCL-727

## 12-ch Analog Output Card



CE

### Features

- 12 independent analog output channels
- 12-bit resolution double-buffered D/A converter
- Multiple output ranges:  $\pm 5$  V, 0 ~ +5 V, 0 ~ +10 V and 4 ~ 20 mA current loop (sink)
- 16 digital input and 16 digital output channels
- Easily replaceable fuse on each analog output channel for surge protection
- Female DB-37 connector

### Introduction

The PCL-727 provides twelve 12-bit D/A channels on a full-size add-on card. You can configure each channel individually to any of the following ranges: 0 to +5 V, 0 to +10 V,  $\pm 5$  V or 4 to 20 mA current loop (sink). The card's on-board DC/DC converter ensures that full 10 V D/A output is always available.

ideal, economical solution for applications which require multiple PID control loops.

of daughterboards for industrial On/Off control and sensing applications.

### Specifications

#### Analog Output (D/A Converter)

- **Channels** 12
- **Resolution** 12 bits, double buffered
- **Output Ranges** Unipolar: 0 ~ +5 V, 0 ~ +10 V  
Bipolar:  $\pm 5$  V  
Current loop (sink): 4 ~ 20 mA
- **Throughput** 15 KHz
- **Settling Time**  $\leq 70$   $\mu$ sec.
- **Accuracy**  $\pm 0.012\%$  full scale range
- **Offset Error** 0 ~ 5 V:  $\pm 1$  LSB  
 $\pm 5$  V, 0 ~ 10 V:  $\pm 2$  LSB
- **Temperature Drift** 5 PPM/ $^{\circ}$  C (0 $^{\circ}$  ~ 50 $^{\circ}$  C)
- **Fuse on Each Channel** 0.1 A
- **Output Current**  $\pm 5$  mA max.
- **Current Loop Excitation Voltage** minimum +8 V, maximum +36 V for 4 ~ 20 mA current loop
- **Reset (Power-on) Status** all D/A channels will be at 0 V output after reset or power-on (both bipolar and unipolar modes)

#### Digital Input

- **Channels** 16-ch TTL compatible DI
- **Logic Level 0** 0.8 V max.
- **Logic Level 1** 2.0 V min.
- **Input Loading** 0.5 V @ 0.4 mA max. (low), 2.7 V @ 50 mA max. (high)

#### Digital Output

- **Channels** 16-ch TTL compatible DO
- **Logic Level 0** 0.5 V @ 8.0 mA (sink)
- **Logic Level 1** 2.4 V @ 0.4 mA (source)

#### General

- **Power Consumption** +5 V @ 250 mA typical, 500 mA max.  
+12 V @ 150 mA typical, 300 mA max.  
-12 V @ 100 mA typical, 130 mA max.
- **Operating Temperature** 0 $^{\circ}$  ~ 50 $^{\circ}$  C (32 $^{\circ}$  ~ 122 $^{\circ}$  F)
- **Storage Temperature** 0 $^{\circ}$  ~ 65 $^{\circ}$  C (32 $^{\circ}$  ~ 149 $^{\circ}$  F)
- **Operating Humidity** 5% ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Connectors** one 37-pin D-type female connector  
two 20-pin male ribbon-cable connectors
- **Dimensions** 340 mm (L) x 100 mm (H) (13.4" x 3.9")

### Ordering Information

- **PCL-727** 12-ch. analog output and DIO card, user's manual and driver CD-ROM (cable not included)
- **PCLS-OCX** ActiveX control for data acquisition and control
- **PCL-10120-1** 20-pin flat cable, 1 m
- **PCL-10120-2** 20-pin flat cable, 2 m
- **PCL-10137-1** DB-37 cable assembly, 1 m
- **PCL-10137-2** DB-37 cable assembly, 2 m
- **PCL-10137-3** DB-37 cable assembly, 3 m
- **PCLD-780** Screw terminal board
- **ADAM-3937** DB-37 wiring terminal for DIN-rail mounting
- **PCLD-880** Universal screw terminal board
- **PCLD-782** Opto-isolated D/I board (16 ch.)
- **PCLD-785** Relay output board (16 ch.)

### Applications

- Multiple loop PID control
- Process control
- Programmable voltage source
- Servo control