PCL-812PG

30 kS/s, 12-bit, 16-ch ISA Multifunction Card

Features
- 16-ch single-ended analog input
- 12-bit A/D converter, with up to 30 kHz sampling rate
- Programmable gain
- Two 12-bit analog output channels
- 16-ch digital input and 16-ch digital output
- Onboard programmable counter
- A/D with DMA or interrupt

Introduction
PCL-812PG is a multifunction analog and digital I/O card that features the five most desired measurement and control functions for PC/AT and compatible systems: A/D conversion, D/A conversion, digital input, digital output and counter/timer. This half-size card neatly packages 16 12-bit analog input channels, two 12-bit analog output channels, 16 digital input channels, 16 digital output channels and a programmable counter/timer.

In addition to all the features listed above, PCL-812PG offers the convenience of programmable analog input ranges, where the analog input range can be switched by software commands instead of DIP switches. PCL-812PG also delivers convenience and maximum resolution for applications that need different gains for different channels or different gains for different stages of a process. Comprehensive software support, numerous I/O options and a wide range of available daughterboards make the PCL-812PG ideal for industrial applications that require a combination of analog and digital I/O.

Specifications

Analog Input
- Channels: 16 single-ended
- Resolution: 12 bits
- Max. Sampling Rate: 30 kS/s
- FIFO Size: 0
- Overvoltage Protection: 30 Vp-p
- Input Impedance: >10 MΩ
- Sampling Modes: Software, pacer or external trigger
- Input Range: (V, software programmable)
  - ±10, ±5, ±2.5, ±1.25, ±0.625, ±0.3125
- Accuracy: 0.4% of reading ±1 LSB

Analog Output
- Channels: 2 double-buffered
- Resolution: 12 bits
- Output Rate: Software polling
- Output Range: (V, software programmable)
- Internal Reference: Unipolar 0 – 5, 0 – 10
- External Reference: ±10 max.
- Driving Capability: 5 mA

Digital Input
- Channels: 16
- Compatibility: 5 V/TTL
- Input Voltage: Logic 0: 0.8 V
  - Logic 1: 2.0 V

Digital Output
- Channels: 16
- Compatibility: 5 V/TTL
- Output Voltage: Logic 0: 0.5 V max., Logic 1: 2.4 V min.
- Output Capacity: Sink: 8.0 mA, Source: 0.4 mA

Counter/Timer
- Channels: 1
- Resolution: 16 bits
- Compatibility: 5 V/TTL
- Max. Input Frequency: 500 kHz
- Reference Clock: Internal: 2 MHz
  - External Frequency: 10 MHz
  - External Voltage Range: 5V/TTL

General
- Bus Type: ISA
- I/O Connectors: 5 x 20-pin box header
- Dimensions (L x H): 185 x 100 mm (7.3" x 3.9")
- Power Consumption: 5 V @ 500 mA typical, 1.0 A max.
  - 12 V @ 50 mA typical, 100 mA max.
- Operating Temperature: 0 – 50° C (32 – 122° F)
- Storage Temperature: -20 – 65° C (-4 – 149° F)
- Storage Humidity: 5 – 95% RH, non-condensing (refer to IEC 68-2-3)

Ordering Information
- PCL-812PG: 30 kS/s, 12-bit, 16-ch ISA Multifunction Card
- PCL-10120-1: 20-pin Flat Cable, 1 m
- PCL-10120-2: 20-pin Flat Cable, 2 m
- PCLD-780: Screw Terminal Board w/ Two 20-pin Flat Cables