ISA Multi-Function Board

A-812PG

16-channel 12-bit 62.5KS/s Multi-Function board



Features

- 12-bit A/D converter
- 62.5KS/s sampling rate(Max.)
- 16 single-ended analog inputs
- Software programmable gain: 1,2,4,8,16
- Bipolar analog input
- A/D Trigger modes : Software trigger, Pacer trigger, external trigger
- A/D data transfer modes : polling, interrupt DMA
- 16 digital inputs & 16 digital outputs
- Bipolar analog input
- Two 12-bit D/A voltage output
- One general purpose programmable timer/ counter

Functional Description

The A-812PG is a 12-bit multifunction analog and digital I/O board for the PC/AT compatible computer. The A-812PG offers 16-channel single-ended analog input and plus 2-channel analog output with 12-bit resolution. In addition, the A-812PG has 16-channel digital input, 16-channel digital output, and one timer/counter channel. The max. sampling rate of A-812PG is 62.5K samples/s. It is completely compatible to PCL-812PG.

Applications

- Laboratory automation
- Sensor interface

Specifications

Analog Input

- Number of channels: 16 single-ended
- Resolution: 12-bit
- ADC conversion rate: 62.5KS/s max
- Input impedance: 10,000MΩ // 6pF
- Over voltage protection: ±35V
- Accuracy: 0.01% of reading, ±1 bit
- Linearity: ±1 bit
- On chip sample & hold
- Zero drift : ±25ppm/°C of FS max
- Input Range :
  ±10V, ±5V, ±2.5V, ±1.25V, ±0.625V, ±0.3125V

Analog Output

- Number of channels: 2 independent
- Type: 12-bit double-buffered (AD-7541)
- Linearity: ±1/2 bit
- Output range: 0~5V，0~10V，0~Ext Ref
- External reference: +10V or -10V max
- Output driving: ±5 mA
- Settling time: 0.6μs to 0.01% for full scale step

Digital I/O

- 16 TTL-level input
- Input low V_{IL} = 0.8 Vmax ; I_{IL} =-0.4 mA max
- Input high V_{IH} = 2.0 Vmin ; I_{IH} = 20μA max
- 16 TTL-level output
- Output low V_{OL} = 0.5 Vmax; @I_{OL} = 8 mA max
- Output high V_{OH} = 2.7 Vmin; @I_{OH}= 0.4 mA max

Timer/Counter

- Number of channels: 1
- Resolution: 16-bit
- Compatibility: 5V/TTL
- Internal clock: 2MHz
- External clock: up to 10 MHz
- A/D pacer: cascaded 32-bit counter
- Programmable internal timer: 0.0047Hz~0.5MNz

General Specifications

- I/O connector: five 20-pin ribbon male
- Power requirements: +5V @ 500 mA typical
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 70°C
- Dimensions: 163 mm x 124 mm

Ordering Information

Standard

A-812PG: 16-channel 12-bit 62.5 KS/s multi-function board

Optional

DB-8025: General screw terminal board
DB-8125: General screw terminal board
DB-16P: 16-channel isolated digital input board
DB-16R: 16-channel SPDT relay board
DN-20: DIN-rail mounting terminal board
ADP-20: 20-pin extender

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