A/D converter board, 16 differential inputs
200 kHz, isolated, 16-bit

APCI-3002

16, 8 or 4 differential inputs

Fast A/D converter board,
200 kHz total data transfer rate

16-bit resolution

Optical isolation

Automatic analog acquisition

8 isolated digital I/O, 24 V

Features

- PCI interface to the 32-bit data bus

Analog inputs
- 16 differential inputs or
  8 differential inputs or
  4 differential inputs
- 16-bit resolution
- Total data transfer rate: 200 kHz
- Input voltage: 0-10 V, ±10 V, 0-5 V, ±5 V, 0-2 V, ±2 V, 0-1 V, ±1 V, 0-20 mA (Option)
  freely programmable through software for each channel
- Gain PGA x1, x2, x5, x10 freely programmable through software for each channel
- PCI-DMA for analog data acquisition

Analog acquisition
- Acquisition triggered through software, timer, external event
- Trigger function:
  - Software trigger or
  - external trigger: analog acquisition (single or scan) is started through a signal switching from 0 to 24 V at the digital input 0.

Digital
- 4 digital inputs, 24 V, isolated
- 4 digital outputs, 24 V, isolated

Timer
- 12-bit

Safety features
- Optical isolation 500 V min.
- Creeping distance IEC 61010-1 (VDE411-1)
- Overvoltage protection ± 40 V
- Protection against high-frequency EMI
- Input filter
- Noise neutralization of the PC supply

EMC tested acc. to 89/336/EEC
- In preparation

Applications

- Industrial process control
- Industrial measurement and monitoring
- Multichannel data acquisition
- Control of chemical processes
- Factory automation
- Acquisition of sensor data
- Labor equipment
- Current measurement
- Instrumentation

Software drivers

In preparation

Current driver list on the web: www.addi-data.com

www.addi-data.com
Sales: +49(0)7223/9493-120
Fax: +49(0)7223/9493-92

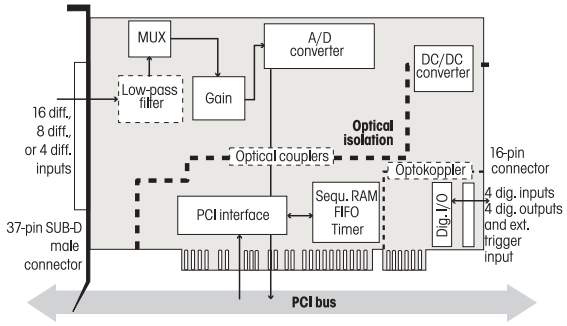
A/D converter board, 16 differential inputs
200 kHz, isolated, 16-bit

APCI-3002

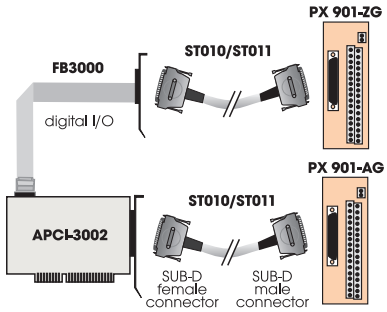
Specifications

Analog inputs	
Number of inputs:	16 differential inputs or 8 differential inputs or 4 differential inputs
Resolution:	16-bit
Optical isolation:	500 V through optical couplers from the PC to the peripheral
Input ranges:	Software programmable for each channel 0-10 V, ±10 V, 0-5 V, ± 5 V, 0-2 V, ± 2 V, 0-1 V, ± 1 V 0-20 mA optional
Gain:	Software programmable (x1, x2, x5, x10)
Data transfer rate:	200 kHz
Trigger:	through software, timer, external event (24 V input)
Data transfer:	Data to the PC through FIFO memory, Interrupt at EOC (End Of Conversion), DMA transfer at EOC
Interrupts:	End of conversion, at timer overrun, End of scan
Digital I/O	
Number of the I/O channels:	4 digital inputs, 24 V, 4 digital outputs, 24 V, 125 mA typ., open collector
Logical "0" level:	0-13 V
Logical "1" level:	16-30 V
Optical isolation:	1000 V through optical couplers from the PC to the peripheral
Noise immunity	
Test level:	- ESD: 4 kV - Fields: 10 V/m - Burst: 4 kV - Conducted radio interferences: 10 V
Physical and environmental conditions	
Dimensions:	175 x 99 mm
System bus:	PCI 32-bit 3.3/5V acc.to specification 2.2 (PCISiG)
Place required:	1 PCI slot for analog inputs, 1 slot opening for digital I/O
Operating voltage:	+5 V and +3.3 V, ±5 % from PC
Current consumption:	-
Front connector:	37-pin SUB-D male connector
additional Connector:	16-pin male connector for ribbon cable for connecting the digital inputs/outputs
Temperature range:	0 to 60 °C (with forced cooling)

Simplified block diagram



ADDI-DATA connection



ORDERING INFORMATION

ADDIALOG APCI-3002
Analog input board, isolated, 16-bit. Incl. technical description and software drivers

Versions

APCI-3002-16: 16 differential inputs, 8 dig. I/O
APCI-3002-8: 8 differential inputs, 8 dig. I/O
APCI-3002-4: 4 differential inputs, 8 dig. I/O

Option: Please specify the number of channels to be supplied with the option.
Option PC-diff: Current input for 1 differential channel 0(4)-20 mA

Connection

PX 901-AG: Screw terminal board with transorb diodes with housing for DIN rail for the analog inputs
PX 901-ZG: Screw terminal board for connecting the digital I/O for DIN rail
ST010: Standard round cable, shielded, twisted pairs, 2 m
ST011: Standard round cable, shielded, twisted pairs, 5 m
FB3000: Ribbon cable for digital I/O

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