Analog output board, 4 channels, with optical isolation, 12-bit
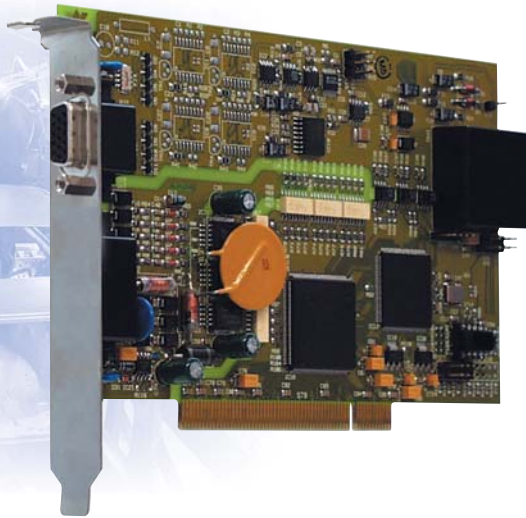

ADDIALOG APCI-3504

4 analog output channels, 12-bit

Optical isolation 500 V

Voltage or current output channels

Connection with terminal board PX9200

Features

- PCI interface to the 32-bit data bus

Analog output channels
- 4 analog output channels, isolation 500 V
- 12-bit resolution
- Output voltage/current after reset: 0 V/0 mA
- Each output channel has its own ground line (without optical isolation)

Voltage output channels
- Settling time 15 µs typ.
- Output voltage: -10 V bis + 10 V
- Maximum output current: ± 5 mA
- Short-circuit current: ± 20 mA

Current output channels
- Maximal output current: 0 to 20 mA
- Settling time 70 µs typ. (at 20 mA step)
- Maximum resistance: 500 Ω

Safety features
- Optical isolation 500 V
- Creeping distance: 3.2 mm acc. to DIN VDE 0411-100
- Protection against high-frequency EMI
- Noise neutralization of the PC supply

EMC tested acc. to 89/336/EEC (CE certification)
- EN 50082-2, EN 55011, EN 55022

Applications

- Image processing systems
- Industrial process control
- Industrial measurement and monitoring
- Factory automation
- ...

Software drivers

A CD-ROM with the following software and programming examples is supplied with the board.

Standard drivers for:
Real-time driver for Windows 2000/NT/98.
The board is supplied with the universal software ADDIPACK (see page 6).

Samples for the following compilers:
Microsoft VC++ 5.0 • Borland C++ 5.01
Visual Basic 5.0 • Delphi 4.0

On request:
LabWindows/CVI 5.01

ADDIPACK functions supported:
Interrupt • Analog output

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

Analog output board, 4 channels, with optical isolation, 12-bit

ADDI-DATA®

ADDIALOG APCI-3504

Specifications

Analog output channels

Number of output channels:	4
Optical isolation:	500 V through optical couplers
Resolution:	12-bit
Output type:	Single ended

Voltage output channels

Output range:	- 10 V to (+ 10 V - 1 LSB)
LSB:	4.8828 mV
Accuracy:	11-bit
Time to Ready:	typ. 4.5 µs
Settling time:	typ 15 µs (at 10 V step)
Max. output current:	± 5 mA
Short-circuit current:	± 20 mA
Output voltage after reset:	0 V

Current output channels

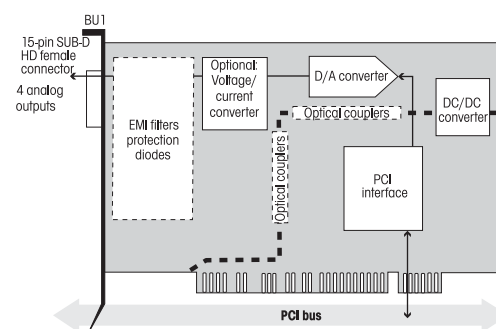|	
Max. output current:	0 to 20 mA
LSB:	4.883 µA
Time to Ready:	typ. 4.5 µs
Settling time:	typ 70 µs (at 20 mA step)
Maximum load:	500 Ω
Short-circuit current:	+ 25 mA
Output current after reset:	0 mA

Noise immunity

Test level:	- ESD: 4 kV	- Fields: 10 V/m
	- Burst: 4 kV	- Cond. radio interferences: 10 V

Physical and environmental conditions

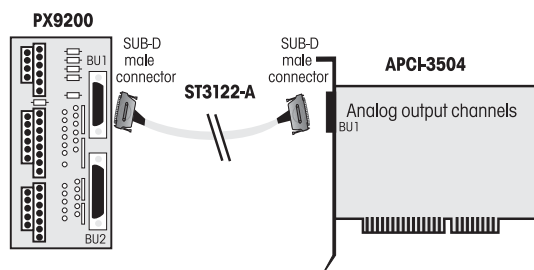|	
Dimensions:	131x 99 mm
System bus:	PCI 32-bit 5 V acc. to specification 2.2 (PCISIG)
Space required:	1 PCI slot
Operating voltage:	+5 V, ± 5 % from PC
Current consumption:	-
Front connector:	15-pin SUB-D HD female connector
Temperature range:	0 to 60°C (with forced cooling)

Simplified block diagram

Pin assignment – 15-pin SUB-D HD female connector

Pin		Pin			Pin	
15	+24 V ext (current option)	10	-		5	An. output 3
14	+24 V ext (current option)	9	An. output 3 GND		4	An. output 2
13	-	8	An. output 2 GND		3	An. output 1
12	Ext. GND	7	An. output 1 GND		2	An. output 0
11	Ext. GND	6	An. output 0 GND		1	

Connection