

Analog output board, optically isolated, 4 analog outputs, 12-bit



APCI-3504

4 analog outputs, 12-bit

Voltage or current outputs

Optical isolation 500 V

Connection through screw terminal panel

PX 9200

Timer, watchdog

Features

Analog outputs

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

Voltage outputs

- Setup time 15 μ s typ
- Output voltage range: -10 V to +10 V
- Maximum output current: \pm 5 mA
- Short-circuit current: \pm 20 mA

Current outputs

- Maximum output current: 0 to 20 mA
- Setup time 70 μ s typ (at 20 mA step)
- Maximum load: 500 Ω

Safety features

- Optical isolation 500 V
- Creeping distance IEC 61010-1
- Protection against high-frequency EMI
- Noise neutralisation of the PC supply

Applications

- Image processing systems
- Factory automation
- ...

Software drivers

A CD-ROM with the following software and programming samples is supplied with the board:

Standard drivers for:

Windows Vista (32-bit)/XP/2000
Real-time drivers for Windows Vista (32-bit)/XP/2000
The board is supplied with the universal software **ADDIPACK** (see page 11).

Drivers for the following software packages:

LabVIEW 5.01

Samples for the following compilers:

- Microsoft VC++ 5.0
- Borland C++ 5.01
- Visual Basic 5.0
- Delphi 4

On request:

LabWindows/CVI 5.01

Supported ADDIPACK functions:

Analog output • Interrupt • Timer • Watchdog

Free driver download on the web:

www.addi-data.com/download

PCI 32-bit



LabVIEW™



LabWindows/CVI™

Analog output board, optically isolated, 4 analog outputs, 12-bit

Specifications

Analog outputs

Number of outputs:	4
Optical isolation:	500 V through opto-couplers
Resolution:	12-bit
Output type:	Single-ended

Voltage outputs

Output range:	- 10 V to (+ 10 V - 1 LSB)
LSB:	4.8828 mV
Accuracy:	11-bit
Time to Ready:	Typ. 4.5 μ s
Setup time:	Typ. 15 μ s (at 10 V step)
Max. output current:	\pm 5 mA
Short-circuit current:	\pm 20 mA
Output voltage after reset:	0 V

Current outputs

Max. output current:	0 to 20 mA
LSB:	4.883 μ A
Time to Ready:	typ. 4.5 μ s
Setup time:	typ. 70 μ s (in 20 mA steps)
Maximum load:	500 Ω
Short-circuit current:	+25 mA
Output current after reset:	0 mA

EMC - Electromagnetic compatibility

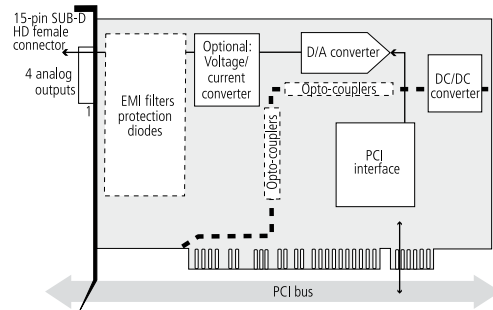
The product complies with the European EMC directive. The tests were carried out by a certified EMC laboratory in accordance with the norm from the EN 61326 series (IEC 61326). The limit values as set out by the European EMC directive for an industrial environment are complied with. The respective EMC test report is available on request.

Physical and environmental conditions

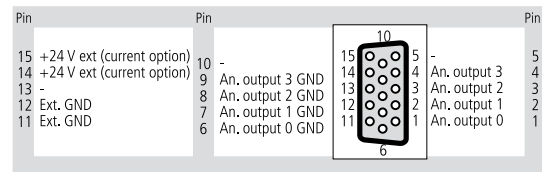
Dimensions:	131x 99 mm
System bus:	PCI 32-bit 5 V acc. to specification 2.2 (PCISIG)
Space required:	Short board, 1 PCI slot
Operating voltage:	+5 V, \pm 5 % from the PC
Current consumption:	560 mA typ. \pm 10 %
Front connector:	15-pin SUB-D HD female connector
Temperature range:	0 to 60 $^{\circ}$ C (with forced cooling)

APCI-3504

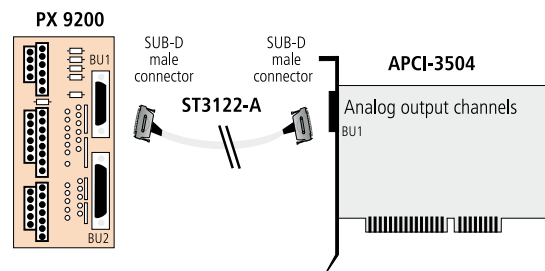
Simplified block diagram



Pin assignment 15-pin SUB-D HD female connector



ADDI-DATA connection



Ordering information

APCI-3504

Analog output board, optically isolated, 4 analog outputs, 12-bit. Incl. technical description and software drivers.

Versions

APCI-3504	Version with 4 analog voltage outputs
APCI-3504-C	Version with 4 analog current outputs

Accessories

PX 9200:	Screw terminal panel
ST3122-A:	High-density round cable, shielded, twisted pairs, 2 m