

Analog output board, 4 channels, isolated, 12-bit



LabWindows/CVI™

Features

Analog outputs

- 4 analog outputs, isolation 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

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

Current outputs

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

Safety features

- Optical isolation 500 V
- Creeping distance IEC 61010-1 (VDE411-1)
- Protection against high-frequency EMI
- Noise neutralization of the PC supply

EMC tested acc. to 89/336/EEC

- IEC 61326: electrical equipment for measurement, control and laboratory use

Applications

- Image processing systems
- Factory automation
- ...

APCI-3504

4 analog outputs, 12-bit

Voltage or current outputs

Optical isolation 500 V

Connection with terminal board PX 9200

Timer, watchdog

Software drivers

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

Standard drivers for:

Windows XP/2000/NT/98

Real-time drivers for Windows XP/2000/NT/98

The board is delivered with the universal software ADDIPACK (see page 5).

Drivers for the following application software:

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

ADDIPACK functions:

Analog output • Interrupt • Timer • Watchdog

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

Analog output board, 4 channels, isolated, 12-bit



APCI-3504

Specifications

Analog outputs

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

Voltage outputs

Output range:	- 10 V to (+ 10 V - 1 LSB)
LSB:	4.8828 mV
Precision:	11-bit
Time to ready:	typ. 4.5 μ s
Setting time:	typ. 15 μ s (in steps of 10 V)
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
Setting time:	typ. 70 μ s (in steps of 20 mA)
Maximum load:	500 Ω
Short-circuit current:	+25 mA
Output current after reset:	0 mA

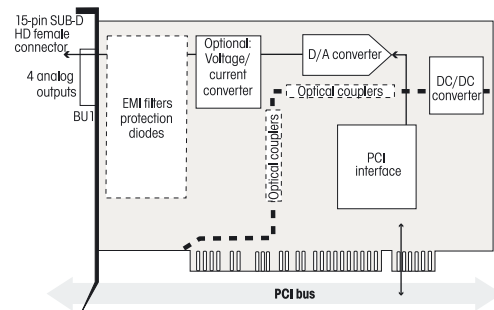
Noise immunity

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)
Place required:	Short board, 1 PCI slot
Operating voltage:	+5 V, \pm 5 % from PC
Current consumption:	-
Front connector:	15-pin SUB-D HD female connector
Temperature range:	0 to 60 °C (with forced cooling)

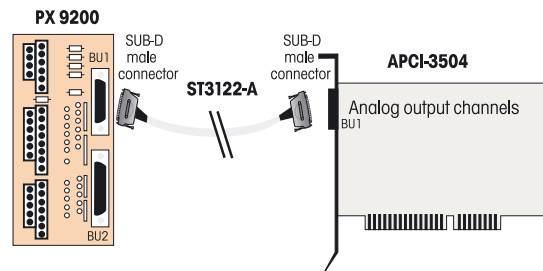
Simplified block diagram



Pin assignment 15-pin SUB-D HD female connector

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

ADDI-DATA connection



ORDERING INFORMATION

ADDIALOG APCI-3504

Analog output board, isolated, 12-bit. Incl. technical description and software drivers.

Versions

APCI-3504:	4 analog voltage outputs
APCI-3504-C:	4 analog current outputs

Connection

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

www.addi-data.com

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