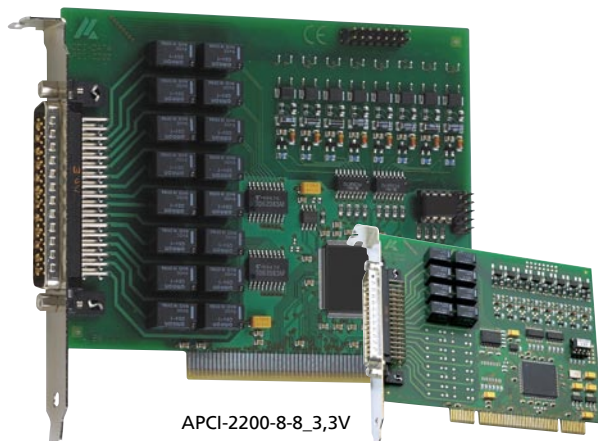


# Relay board, optically isolated, 8/16 relays, 8 digital inputs, 24 V



APCI-2200-8-8\_3,3V



PCI 32-bit

Also for  
PCI EXPRESS



Signed 64-bit drivers  
for Windows 7/XP



LabVIEW™



LabWindows/CVI™



## Features

- PCI 5 V (APCI-2200)
- PCI 3.3 V (APCI-2200-8-8\_3,3V)

### Relays

- 8 or 16 electromechanical relays with change-over contacts
- Max. switching voltage for the relays: 60 VDC, 48 VAC
- Max. switching capacity: 30 W, max. 1 A
- Short response time
- Watchdog: switched on/off through software

### Digital inputs

- 8 inputs, optically isolated
- Input voltage: 12-24 V (DC)

### Safety features

- EMC tested
- Watchdog activity can be read back
- Optical isolation of the relays
- Creeping distance IEC 61010-1

## Applications

- Industrial digital I/O controlling
- Automatic test equipment
- Signal switching
- Interface to electromechanical relays
- ON/OFF monitoring of motors, lights...
- Alarm monitoring
- Machine interfacing
- ...

## APCI-2200 /APCI-2200-8-8\_3,3V

PCI 5 V (APCI-2200)

PCI 3.3 V (APCI-2200-8-8\_3,3V)

8 or 16 relay output channels

Max. switching voltage 60 VDC, 48 VAC

max. switching current 1 A

8 digital inputs 24 V

Optical isolation 1000 V

## Software drivers

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

### Standard drivers for:

- Linux
- 32-bit drivers for Windows 8 / 7 / Vista / XP / 2000
- Signed 64-bit drivers for Windows 8 / 7 / XP
- Real-time use with Linux and Windows on request

### Drivers and samples for the following compilers and software packages:

- .NET
- Microsoft VC++ • Borland C++
- Visual Basic • Delphi
- LabVIEW • LabWindows/CVI • DiAdem

### ADDIPACK functions:

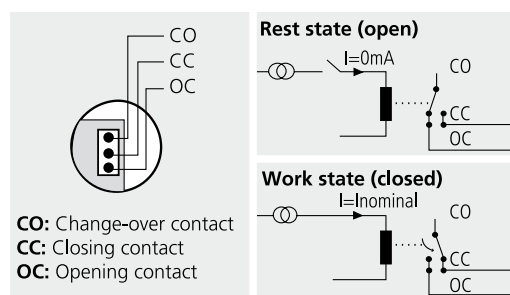
Digital output • Watchdog

### On request:

Further operating systems, compilers and samples.

Driver download: [www.addi-data.com/downloads](http://www.addi-data.com/downloads)

## Function principle of the relays



## Specifications

### Relays

Type of contacts:	8/16 change-over
Max. switching voltage:	60 VDC, 48 VAC
Max. switching current:	1 A
Max. switching capacity:	30 W
Contact resistance:	< 100 mΩ
Contact material:	Ag and Au plated
Response time:	Max. 5 ms, typ. 2.5 ms
Release time:	Max. 5 ms, typ. 0.9 ms
Mechanical life:	5 x 10 <sup>6</sup> operations
Electrical life:	10 <sup>6</sup> operations at rated load

### Digital inputs

Number of inputs:	8
Optical isolation:	Through opto-couplers, 1000 V
Nominal voltage:	12 - 24 V (DC)
Nominal input current at 12 - 24 V (DC):	5 - 8 mA
Signal delay:	70 μs (at 24 V)
Maximal input frequency:	5 kHz (at 24 V)

### Watchdog

Watchdog time:	20 ms to 5 s in steps of 20 ms
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### Safety

Test voltage:	1000 V
Watchdog:	8-bit, programmable, 20 ms to 5 s in steps of 20 ms

### 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.

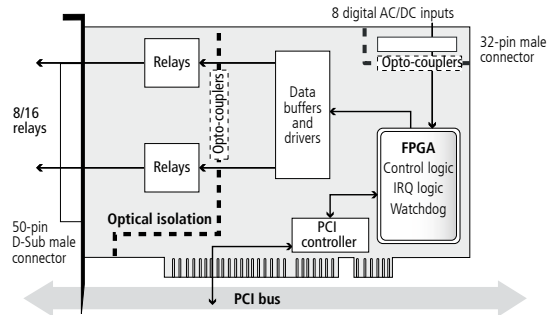
### Physical and environmental conditions

Dimensions:	131 x 99 mm
System bus:	PCI 32-bit 5 V acc. to specification 2.1 (PCISIG) or 3.3 V
Space required:	1 PCI slot
Operating voltage:	+5 V, ± 5 % from the PC
Current consumption:	550 mA ± 10 % typ. (APCI-2200-16-8)
Front connector:	50-pin D-Sub male connector
Additional connector:	16-pin male connector. APCI-2200-16-8: Connection with delivered ribbon cable FB2200-3. Connects the board to a bracket with a 37-pin D-Sub male connector. For connecting the PX 901-ZG.
Temperature range:	0 up to 60 °C (with forced cooling)

Screw terminal panel PX8001 with cable ST370-16



### Simplified block diagram



### Pin assignment – 50-pin D-Sub connector APCI-2200-16-8

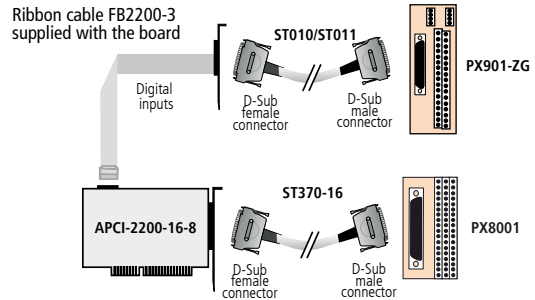
Pin	Pin	Pin	Pin
34	OC of relay 0	18	CC of relay 0
35	OC of relay 1	19	CC of relay 1
36	OC of relay 2	20	CC of relay 2
37	OC of relay 3	21	CC of relay 3
38	OC of relay 4	22	CC of relay 4
39	OC of relay 5	23	CC of relay 5
40	OC of relay 6	24	CC of relay 6
41	OC of relay 7	25	CC of relay 7
42	OC of relay 8	26	CC of relay 8
43	OC of relay 9	27	CC of relay 9
44	OC of relay 10	28	CC of relay 10
45	OC of relay 11	29	CC of relay 11
46	OC of relay 12	30	CC of relay 12
47	OC of relay 13	31	CC of relay 13
48	OC of relay 14	32	CC of relay 14
49	OC of relay 15	33	CC of relay 15
50	-	-	-

OC: Opening contact CC: Closing contact CO: Change-over contact

### ADDI-DATA connection

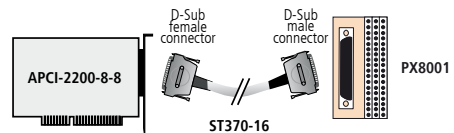
#### Example 1: APCI-2200-16-8

- Connection of the relay outputs through screw terminal panel PX8001
- Connection of the digital inputs through ribbon cable to the screw terminal panel PX901-ZG



#### Example 2: APCI-2200-8-8, APCI-2200-8, APCI-2200-16

- Connection of the relay outputs and the digital inputs through the front connector to the screw terminal panel



## Ordering information

### APCI-2200 /APCI-2200-8-8\_3,3V

Relay board, optically isolated, 8/16 relays output channels, 8 digital inputs, 24 V. Incl. technical description and software drivers.

<b>APCI-2200-16-8:</b>	16 relays, 8 dig. inputs, with ribbon cable for the connection of the dig. inputs, PCI 5 V
<b>APCI-2200-8-8:</b>	8 relays, 8 digital inputs, 24 V, PCI 5 V
<b>APCI-2200-8-8_3,3V:</b>	8 relays, 8 digital inputs, 24 V, PCI 3.3 V
<b>APCI-2200-16:</b>	16 relays, PCI 5 V
<b>APCI-2200-8:</b>	8 relays, PCI 5 V

### Accessories

- PX8001:** 3-row screw terminal panel, 50-pin, for DIN-rail mounting
- ST370-16:** Shielded round cable, 2 m
- PX 901-ZG:** Screw terminal panel for DIN rail