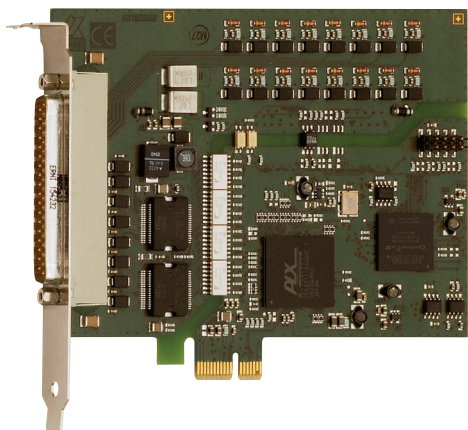


# Digital I/O board, optically isolated, 16 digital inputs, 24 V, for PCI Express

**Preliminary!\***



Also for **PCI**  
See APCI-1016, page 168



on request

## APCIe-1016

PCI-Express interface

16 digital inputs, 24 V

Optical isolation 1000 V

Input filters

Reverse voltage protection

Connection through industry-standard

D-Sub connector

### Features

- Connector and software compatible to the digital I/O board APCI-1016 for the PCI bus.

#### Inputs

- 16 optically isolated digital inputs, 24 V
- Reverse voltage protection
- All inputs are filtered

#### Safety features

- Optical isolation 1000 V
- Creeping distance IEC 61010-1
- Protection against fast transients (burst), overvoltage, electrostatic discharge and high-frequency EMI

### Applications

- Industrial I/O control
- PLC coupling
- Signal switching
- Interface to electromechanical relays
- ON/OFF monitoring of motors, lights...
- Interface to machines

### Software drivers

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

#### Standard drivers for:

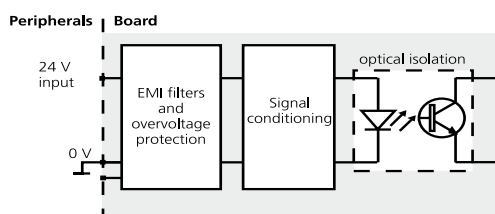
- Linux
- 32-bit drivers for Windows 8 / 7 / Vista / XP / 2000
- Signed 64-bit drivers for Windows 8 / 7 / XP
- Real-time use with Linux and Windows on request

#### On request:

Further operating systems, compilers and samples.

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

### Protective circuit for the input channels



\* Preliminary  
product information

**Specifications\***

**Digital inputs**

Number of inputs: (common ground acc. to IEC 1131-2)	16
Optical isolation:	Through opto-couplers, 1000 V from PC to peripheral
Nominal voltage:	24 V
Input current at 24 V:	2 mA typ.
Maximal input frequency:	5 kHz at 24 V
Logic input levels:	U nominal: 24 V
UH max.:	30 V/current 9 mA typ.
UH min.:	19 V/current 2 mA typ.
UL max.:	14 V/current 0.7 mA typ.
UL min.:	0 V/current 0 mA typ.
Filters/protective circuits	Input filters, transil diodes, RC filters, Z diodes, opto-couplers

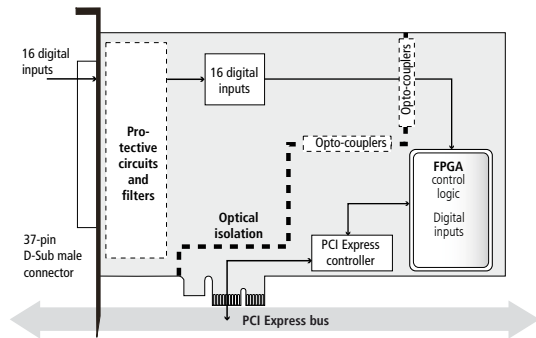
**EMC – Electromagnetic compatibility**

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.

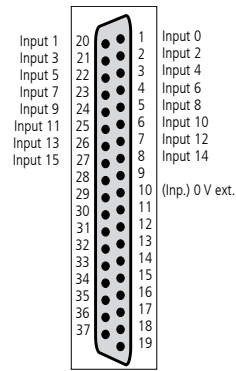
**Physical and environmental conditions**

Dimensions:	149 x 99 mm
System bus:	Acc. to PCI Express base specification, Revision 1.0a (PCI Express 1.0a)
Space required:	1-/4-/8-/16-lane PCI Express slot
Operating voltage:	+ 3.3 V from PC
Current consumption:	Inactive inputs 320 mA ± 10 %, typical 8 active inputs 400 mA ± 10 %, typical
Front connector:	37-pin D-Sub male connector
Temperature range:	0 to 60 °C (with forced cooling)

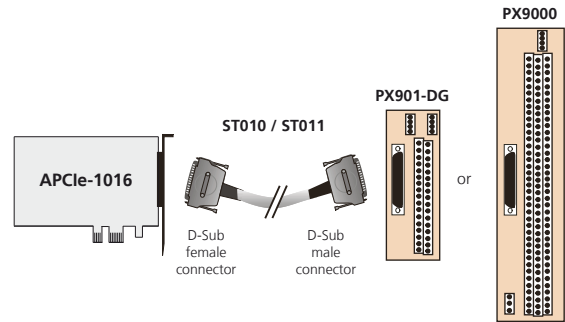
**Simplified block diagram**



**Pin assignment – 37-pin D-Sub male connector**



**ADDI-DATA connection**



**Ordering information**

**APcle-1016**

Digital input board, optically isolated, 16 digital inputs, 24 V, for PCI Express. Incl. technical description and software drivers.

**Accessories**

- PX901-D:** Screw terminal panel, LED status display
- PX901-DG:** Screw terminal panel, LED status display, for DIN rail
- PX9000:** 3-row screw terminal panel for DIN rail, LED status display
- ST010:** Standard round cable, shielded, twisted pairs, 2 m
- ST011:** Standard round cable, shielded, twisted pairs, 5 m
- ST010-S:** Same as ST010, for high currents (separate 24 V supply)

\*Preliminary product information