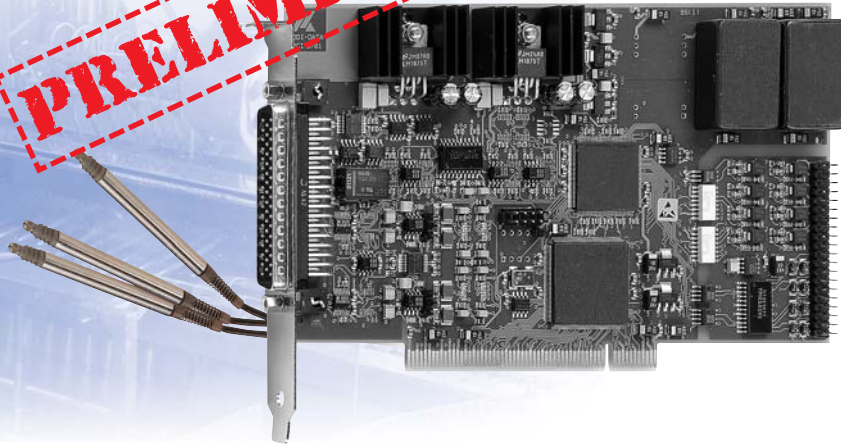


# Acquisition of 8 or 16 displacement transducers

**PRELIMINARY!**



## **ADDIALOG APCI-3701**

**Acquisition of 8 or 16 inductive displacement transducers**

**Half Bridge, LVDT**

**16-bit resolution**

**16 isolated digital I/O**

### **Features**

- PCI interface to the 32-bit data bus
- Acquisition of 16 or 8 inductive displacement transducers (Half Bridge, LVDT)
- 8 or 16 input channels  $\pm 10$  V
- 16-bit resolution
- Measuring frequency up to 50 kHz
- Conversion can be triggered through software
- End of conversion can be inquired through software
- Possibility of interrupt through digital input channels (when a data or a time value is exceeded)
- PCI-DMA access
- Onboard FIFO buffers
- Sequence RAM
- 16 isolated digital I/O, 24 V
- Software operation
- Connection to a broad selection of industry transducer types (Solarton, Mahr, Marposs, Teas, Penny & Giles)

### **Safety**

- Input filters
- Short-circuit diagnostic with LED

### **EMC tested acc. to 89/336/EEC (CE certification)**

- EN 61000-6-2, EN 55011, EN 55022

### **Applications**

- Gear wheel control
- Gauge block
- Acquisition of sensor data
- Quality assurance
- Industrial process control
- Automatic parts control
- R&D instrumentation

### **Software drivers (in preparation)**

Drivers for Windows 2000/NT/98  
Current list on the web: [www.addi-data.com](http://www.addi-data.com)

# Acquisition of 8 or 16 displacement transducers

## ADDIALOG APCI-3701

### Specifications

#### Analog input channels

Number of input channels:	for 16 or 8 inductive displacement transducers
Resolution:	16-bit
Interrupt:	At End of Conversion, timer overflow, End of Sequence
DMA:	1- or 2-channel access
Programmable modes:	- Trigger (external, through digital input) - Interrupt - Polling
Start of Conversion:	Triggered through software (API function), timer or digital input
End of Conversion:	Inquired through software or interruptible
Timer:	2 x 16-bit
Diagnostic:	Short-circuit of the transducer voltage supply, transducer signal line break

#### Digital I/O

Number of I/O channels:	8 dig. inputs, 8 dig. outputs, 24 V
Isolation:	1000 V through optical couplers
Input current at 24 V:	3 mA typ.
Max. input frequency:	5 kHz
Max. switching current:	5 mA typ.
Input range:	0-30 V
Output range:	5-30 V

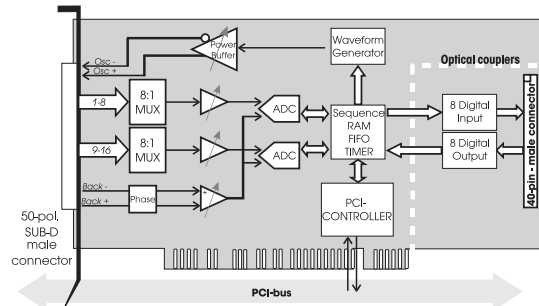
#### Noise immunity

Test level:	- ESD: 4 kV - Fields: 10 V/m - Burst: 2 kV/4 kV Netz - Conducted radio interferences: 10 V
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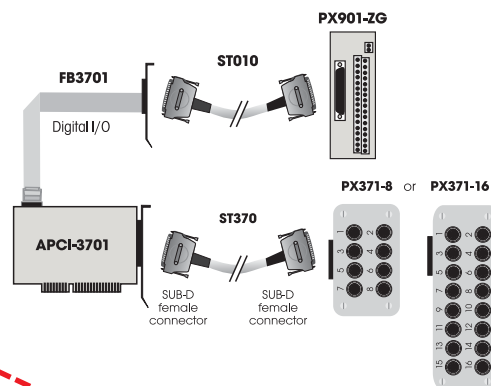
#### Physical and environmental conditions

Dimensions:	175 x 99 mm
System bus:	PCI 32-bit 5 V acc. to specification 2.1 (PCISIG)
Space required:	1 PCI slot for analog input channels, 1 slot opening for digital I/O with FB3701
Operating voltage:	+5 V, $\pm 5\%$ from the PC 24 V external
Current consumption:	
Front connector:	50-pin SUB-D male connector
Additional connector:	16-pin male connector for connecting the digital I/O with ribbon cable FB3701
Temperature range:	0 to 60°C (with forced cooling)

### Simplified block diagram



### Connection



**PRELIMINARY!**

## ORDERING INFORMATION

### ADDIALOG APCI-3701

Acquisition of 8 or 16 inductive displacement transducers. Incl. technical description and software drivers.

#### Versions

<b>APCI-3701-8:</b>	for 8 displacement transducers
<b>APCI-3701-16</b>	for 16 displacement transducers

#### Connection

<b>PX371HB-8:</b>	Connection box for the APCI-3701-8 for 8 Half Bridge transducers
<b>PX371LVDT-8:</b>	Connection box for the APCI-3701-8 for 8 LVDT transducers
<b>ST370-8:</b>	Between APCI-3701-8 and PX371-8

<b>PX371HB-16:</b>	Connection box for the APCI-3701-16 for 16 Half Bridge transducers
<b>PX371LVDT-16:</b>	Connection box for the APCI-3701-16 for 16 LVDT transducers
<b>ST370-16:</b>	Between APCI-3701-16 and PX371-16
<b>PX901-ZG:</b>	Terminal board with screw terminals for DIN rail for connecting the digital I/O
<b>FB3701:</b>	Ribbon cable for connecting the digital I/O