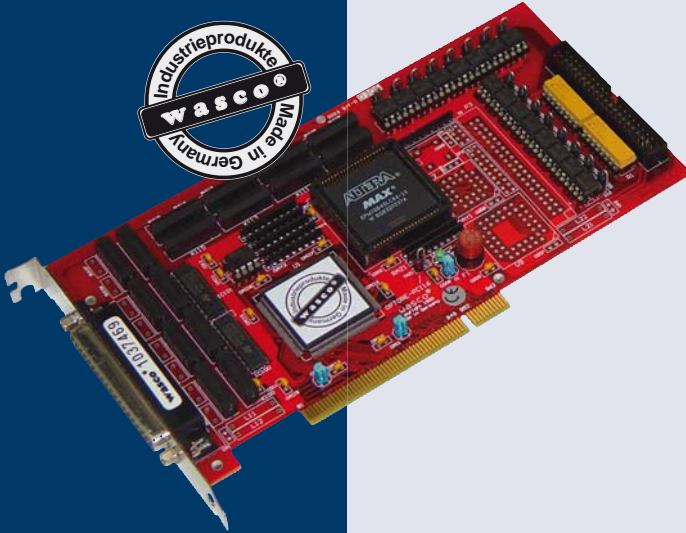


# OPTORE-PCI16<sup>STANDARD</sup>

Digital PCI I/O Interface Card with 16 Optocoupler Inputs and 16 Reed Relay Outputs



16 Optocoupler Isolated Digital Inputs

16 Reed Relay Outputs

## SPECIFICATIONS

The **wasco®** interface card OPTORE-PCI16<sup>STANDARD</sup> provides 16 digital input channels and 16 output channels, each of which is galvanically isolated. Inputs are electrically isolated by 16 high power optocouplers with integrated schmitt trigger funktion, outputs by 16 reed relays. Additionally the inputs are equipped with protection diodes against harmful voltage peaks.

You can adjust two different input voltage ranges by easily changing resistor arrays. Output reed relays manage a maximum switching current of 500 mA.

The output relays are connected to a 37-pin Sub-D female connector, which is mounted to a slot bracket. The optocoupler inputs are led to a 40pin male connector on the board. A flat ribbon cable is available to relocate to a 37pin female connector with slot bracket, if required.

Pin assignment and input voltage ranges are identical with ISA card OPTORE-16<sup>STANDARD</sup>, so you easily can switch to PCI.

### Optocoupler inputs

Optocoupler: 16 \* PC900V  
16 channels, galvanically isolated  
Galvanic isolation also between every single channel with each two discrete connections for each of the channels  
Overvoltage protection by protection diodes  
Two different input voltage ranges, selectable by enclosed resistor arrays:

R = 4,7 kΩ: high = 8..30 Volt  
low = 0..4 Volt  
R = 1,0 kΩ: high = 2,2..15 Volt  
low = 0..1,5 Volt

Input frequency: max. 10 KHz

### Reed Relay outputs

16 channels, galvanically isolated  
Galvanic isolation also between every single channel with each two separate connections for each of the channels

Switching current: 500mA max.  
Switching voltage: 50 volt DC max.  
Switching capacity: 10 watt  
Circuit time (typ): 0,5 ms  
Fall time: 0,2 ms  
Coil voltage: 5 V  
Coil resistance: 500 Ω  
Coil current: 10 mA

### Connectors

1 \* 37-pin Sub-D female connector  
1 \* 40-pin box header

### Bus system

32-Bit PCI-Bus (internal data bus 8 Bit)

### Power consumption

+ 5 volt typ. 510mA

### Dimensions

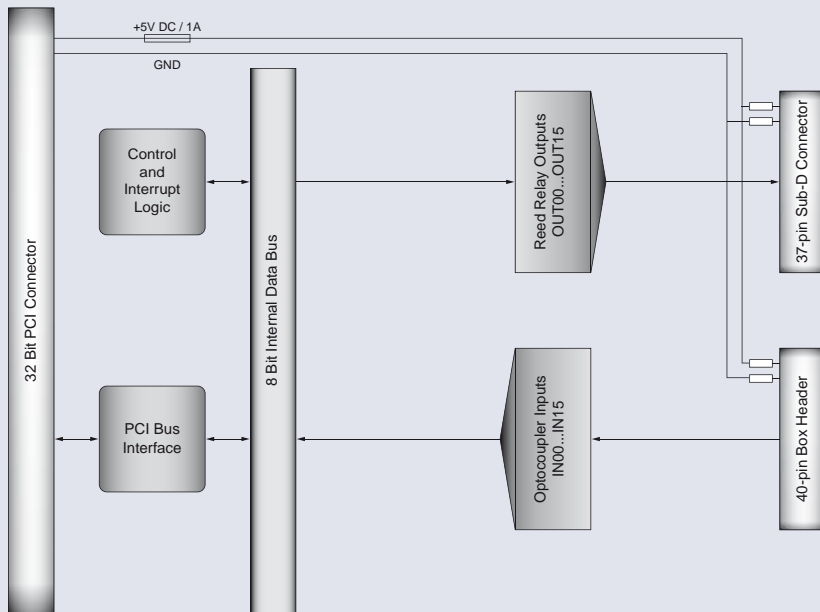
203 mm x 106,7 mm (l x h)  
4layer Multilayer Board

### Other

Protection and control LED for power supply of timer and I/O components as well as of logic control.

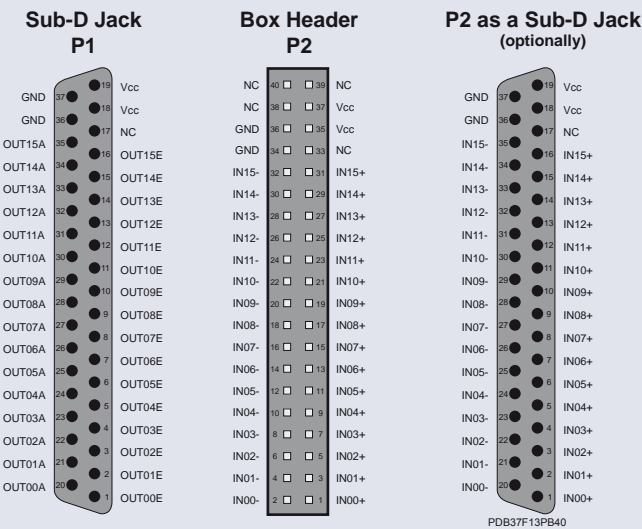
All IC sockets with gold plated contacts

## BLOCK DIAGRAM

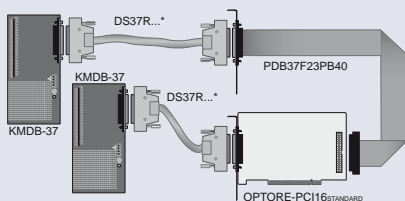


## PIN ASSIGNMENT

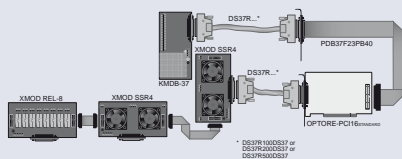
The positive and negative connections of the relays are led to the 37-pin Sub-D female jack P1 for each channel individually. Anode and cathode of the optocouplers are fed to the 40-pin box header P2 for each channel individually. P1 is located on the slot bracket of the board, P2 is placed directly on the board and accessible inside the computer only. Optimal connections with strain relief to periphery is to obtain by an optional available flat ribbon cable (see „Suitable Accessories“)



## CONNECTION TECHNIQUE (APPLICATION EXAMPLES)



\* DS37R100DS37 or DS37R200DS37 or DS37R500DS37



\* DS37R100DS37 or DS37R200DS37 or DS37R500DS37

## PROGRAMMING

The accompanying CD provides drivers for Windows (please visit [www.wasco.de](http://www.wasco.de) to monitor available s/w versions) and sample programs for Turbo-C®, Delphi, Borland C++, C++ Builder, Microsoft Visual Basic, VB.NET, C++ and C#.NET

## SCOPE OF DELIVERY

Interface Card OPTORE-PCI16<sup>STANDARD</sup>  
German Manual  
Driver and program examples on CD

## ORDER INFORMATION

OPTORE-PCI16<sup>STANDARD</sup> EDP No. A-422200  
I/O Card

## SUITABLE ACCESSORIES

PDB37F23PB40 EDP No. A-497500

Flat ribbon cable (approx. 23 cm) to relocate signals from P2 (40-pin box header) to a 37pin Sub-D jack with slot bracket (please order 1 pc per plug)



DS37R500DS37 EDP No. A-202800

Shielded connection line (approx. 5 m) to connect KMDB-37 to a 37pin Sub-D jack



DS37R200DS37 EDP No. A-202400

Shielded connection line (approx. 2 m) to connect KMDB-37 to a 37pin Sub-D jack



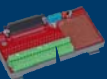
DS37R100DS37 EDP-No. A-202200

Shielded connection line (approx. 1 m) to connect KMDB-37 to a 37pin Sub-D jack



KMDB-37 EDP No. A-2046

Terminal module with a 37pin screw terminal block with prototype area for soldering, to connect to a 37pin Sub-D jack



XMOD REL-8 EDP No. A-3268

Relay module with eight isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)



XMOD REL-4 EDP No. A-3264

Relay module with four isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)



XMOD SSR-4 EDP No. A-3284

Solid-State Relay Module with four isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)



XMOD SSR-2 EDP No. A-3282

Solid-State Relay Module with two isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)



For more detailed information about the here listed and other accessories we refer to the corresponding data sheets