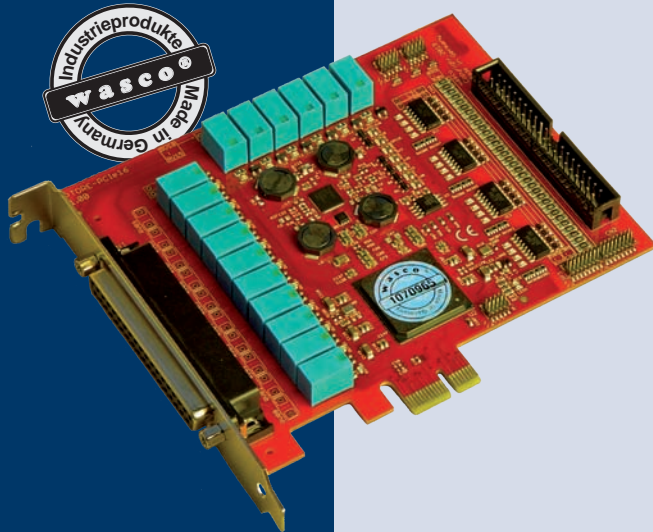


OPTORE-PCIe16ULTRA

Digital PCIe I/O Interface Card with 16 Optocoupler Inputs, 16 Relay Outputs, Timer, IC Units and Board Identification



16 optocoupler inputs

16 relay outputs

2* timer

2* IC units (time period and pulse measurements)

quartz crystal controlled

interrupt capable

board identification

The **wasco**[®] interface board OPTORE-PCIe16ULTRA features 16 digital input channels and 16 digital output channels, each of which are galvanically isolated individually. Inputs are electrically isolated by high-quality optocouplers, the outputs by 16 relays. The input optocouplers are bipolar. Additionally, the inputs are protected against harmful voltage peaks by protection diodes. You easily can adjust two different input voltage ranges by setting jumpers. The output relays cope with a switching current of max. 1 A.

In addition to the galvanically isolated inputs and outputs several counters are available as well as Input Capture Units (e.g. for period measurement). Interrupt triggers are possible via all optocoupler inputs, counters, IC units and time-dependent by two 32-bit timers

The connections of the output relays are connected to a 37-pin Sub-D female socket on the slot bracket of the board. The optocoupler inputs are connected to a 40-pin box header on the board. An optionally available connection cable (set of female connector, ribbon cable and 37pin female sub-D-connector with slot bracket) can relocate the connection to a slot of your PC casing. The pin assignments are identical to PCI bus card OPTORE-PCI16STANDARD and ISA bus card OPTORE-16STANDARD, a switch to PCIe is therefore easy to implement. Furthermore, the card comes with a jumper block for card identification in order to distinguish several identical cards in the computer.

SPECIFICATIONS

Optocoupler Inputs

Optocouplers LTV-244 or compatible
16 channels, optically isolated
Galvanic isolation also between every single channel with each two separate connections for each of the channels
Overvoltage protection by protection diodes
Two different jumper selectable input voltage ranges

Range 1	high = 14..30 Volt
	low = 0..2 Volt
Range 2:	high = 5..15 Volt
	low = 0..1 Volt

Input frequency: max. 10 kHz

Relay Outputs

16 channels, galvanically isolated
Galvanic isolation also between every single channel with each two discrete connections for each of the channels
Switching current: 1 A max.
Switching voltage: 50 V
Switching capacity: 60 V
Switching time: max. 5 ms
Release time: max. 2 ms

Connectors

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

Bus system

32-bit PCIe-Bus
(data access internal 8 bit or 32 bit)

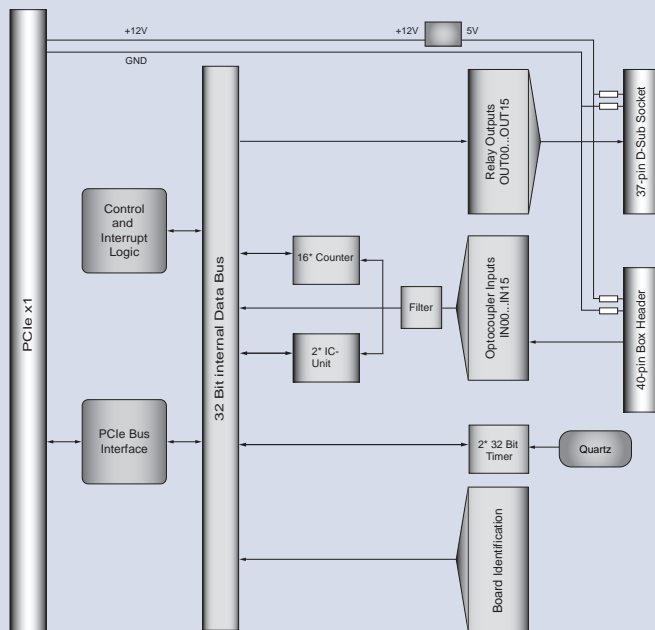
Dimensions

129 mm x 111 mm (l x b)
6-layer PCB

Other

Control LED for power supply

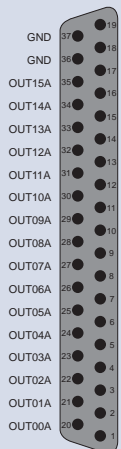
BLOCK DIAGRAM



PIN ASSIGNMENT

The positive and negative connections of the relays are led to the 37-pin D-Sub socket CN1 individually. Anode and cathode of each input optocoupler is led to a 40-pin box header CN2 for each channel individually. CN1 is mounted to the board's bracket, CN2 is accessible inside the computer only. To obtain optimal connections to peripherals with strain relief optionally a flat ribbon cable is available (see „Suitable Accessories“).

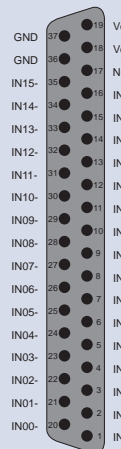
**D-Sub-Socket
CN1**



**Box Header
CN2**

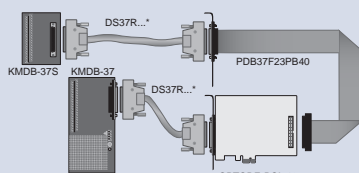


CN2 as D-Sub-Socket (optional)



PDB37F13PB40

CONNECTION TECHNIQUE (APPLICATION EXAMPLES)



* DS37R100DS37 or DS37R200DS37 or DS37R500DS37

OPTORE-PCIe16ULTRA

PROGRAMMING

Windows®:

Driver and program examples for VB.NET, C++.NET, C#.NET

Linux®:

Driver and program examples for C and C++ (see manual)

on enclosed CD or download at:

www.messcomp.com, Section Support - Software

SCOPE OF DELIVERY

Interface Card OPTORE-PCIe16ULTRA

Manual German (English on request)

Driver and program examples on CD

ORDER INFORMATION

OPTORE-PCIe16ULTRA

EDP No A-822410

I/O Card

SUITABLE ACCESSORIES

PDB37F23PB40

EDP No A-497500

Flat ribbon cable (approx. 23 cm) to relocate signals from CN2 (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 cable (approx. 5 m) to connect KMDB-37 to a 37pin Sub-D jack



DS37R200DS37

EDP No A-202400

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



DS37R100DS37

EDP No A-202200

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



KMDB-37

EDP No. A-2046

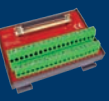
Terminal module with a 37-pin screw terminal block with prototype area for soldering, to connect to a 37-pin Sub-D jack



KMDB-37S

EDP No A-204910

Terminal module with a 38-pin screw terminal block to connect to a 37pin Sub-D jack



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

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