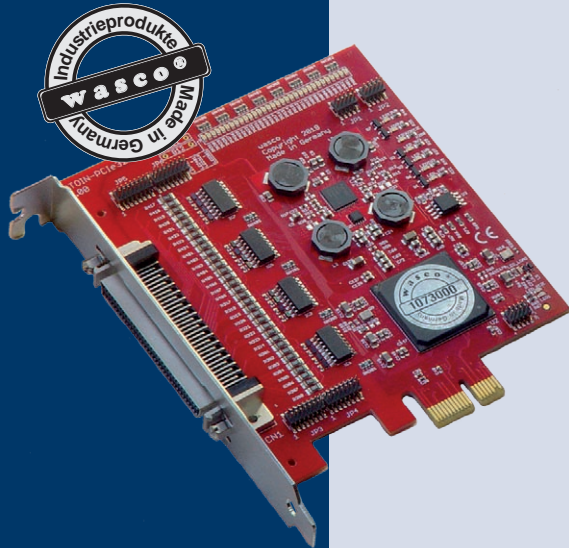


OPTOIN-PCIe32^{ULTRA}

Digital PCIe I/O Interface Card with 32 Optocoupler Inputs, Timer, IC Units and Board Identification



32 optocoupler inputs
(with configurable digital filters)

32* 32-bit counter

2* Timers

2* IC units (time period and pulse measurements)

quartz crystal controlled

interrupt capable

board identification

OPTOIN-PCIe32^{ULTRA} (board name: WASCO-PCIe8132) provides 32 digital inputs, every single channel is galvanically isolated by bipolar optocouplers of high quality. Each input is protected from harmful voltage peaks and pulses by additional protection diodes. You easily can adjust two different input voltage ranges by setting jumpers. A programmable filter can be assigned to each input channel to hide input pulses below an adjustable pulse duration.

In addition to the galvanically isolated inputs 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 optocoupler inputs are connected to a 68-pin onboard SCSI-II plug.

The pin assignment of the inputs is identical to the PCI bus card OPTOIN-PCI32. Therefore a changeover to PCIe32^{ULTRA} is easy to realize. Furthermore, the card provides a jumper block for card identification in order to distinguish several identical cards on the computer.

SPECIFICATIONS

Optocoupler Inputs

Optocouplers LTV-244 (or compatible)
32 channels, usable as edge triggered interrupt inputs, galvanically 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

Status indication 32 LED

Timer

2* 32-bit increment counters
Counting frequency 1 MHz
Time dependent interrupt triggering
Clocked by quartz crystal oscillator

Counter

32* 32-bit increment counters with overflow bit
Interrupt capable at overflow

Input Capture Unit

2* 32-bit IC units
Resolution 1µs
Measurement of period and pulse duration

Quartz crystal oscillator

4 MHz

Board Identification

Jumper block with five pairs of contact pins

Connection plug

1* 68-pin SCSI-II socket

Bus system

32-bit PCIe Bus (16 and 32 bit data access)

Dimensions of the Board

94 mm x 111 mm (l x b)
standard height, full length card
multilayer PCB

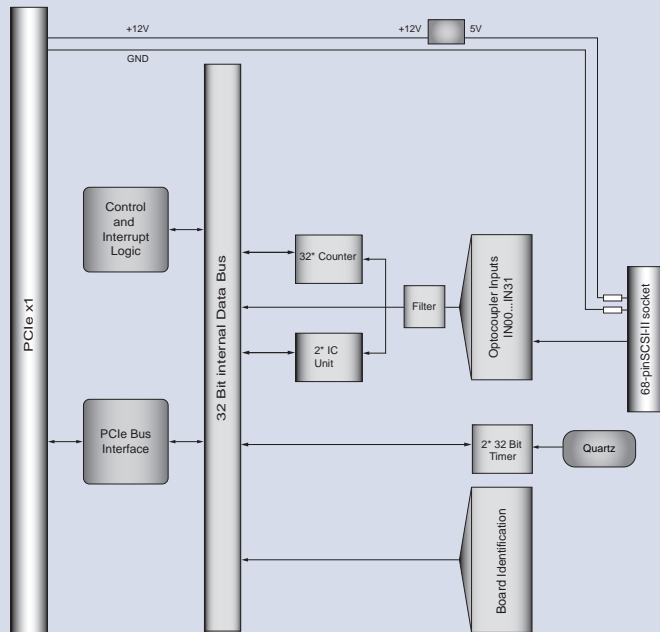
Other

Control LEDs indicating power supply and inputs and outputs

APPLICATIONS

On/off events
Binary data acquisition
Process control
Data acquisition of BCD coded instruments

BLOCK DIAGRAM



PIN ASSIGNMENT

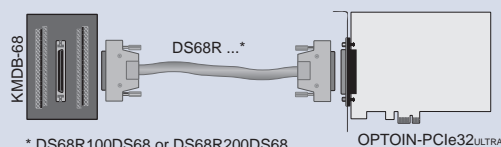
Anode and cathode of each input optocoupler is connected to a SCSI-II socket CN1 for each of the channels individually. CN1 is mounted to the board's edge bracket.

SCSI-II Socket CN1

GND	68	34	Vcc
GND	67	33	Vcc
IN31-	66	32	IN31+
IN30-	65	31	IN30+
IN29-	64	30	IN29+
IN28-	63	29	IN28+
IN27-	62	28	IN27+
IN26-	61	27	IN26+
IN25-	60	26	IN25+
IN24-	59	25	IN24+
IN23-	58	24	IN23+
IN22-	57	23	IN22+
IN21-	56	22	IN21+
IN20-	55	21	IN20+
IN19-	54	20	IN19+
IN18-	53	19	IN18+
IN17-	52	18	IN17+
IN16-	51	17	IN16+
IN15-	50	16	IN15+
IN14-	49	15	IN14+
IN13-	48	14	IN13+
IN12-	47	13	IN12+
IN11-	46	12	IN11+
IN10-	45	11	IN10+
IN09-	44	10	IN09+
IN08-	43	9	IN08+
IN07-	42	8	IN07+
IN06-	41	7	IN06+
IN05-	40	6	IN05+
IN04-	39	5	IN04+
IN03-	38	4	IN03+
IN02-	37	3	IN02+
IN01-	36	2	IN01+
IN00-	35	1	IN00+

PDB37F23PB40

CONNECTION TECHNIQUE (APPLICATION EXAMPLES)



* DS68R100DS68 or DS68R200DS68 or DS68R500DS68

PROGRAMMING

The accompanying CD provides drivers for Windows (please visit www.wasco.de to check available s/w versions) and sample programs for Delphi, VB.NET, C++ and C#.NET

SCOPE OF DELIVERY

Interface card OPTOIN-PCIe32ULTRA
German Manual (English on request)
Drivers and program examples

ORDER INFORMATION

OPTOIN-PCIe32ULTRA
EDP No A-844810
Input Card

SUITABLE ACCESSORIES

PDB68F33DS68 EDP No A-498600
Flat ribbon cable (approx. 33 cm) to relocate signals from CN2 to a 68-pin SCSI-II socket with slot bracket



DS68R500DS68 EDP No A-492800
Special twisted and shielded connection cable (approx. 5 m) to connect KMDB-68 or any other KM modules to a 68-pin SCSI-II socket



DS68R200DS68 EDP No A-492400
Special twisted and shielded connection cable (approx. 2 m) to connect KMDB-68 or any other KM modules to a 68-pin SCSI-II socket



DS68R100DS68 EDP No A-492200
Special twisted and shielded connection cable (approx. 1 m) to connect KMDB-68 or any other KM modules to a 68-pin SCSI-II socket



KMDB-68 EDP No A-494800
Terminal module with a 68-pin screw terminal block to connect to a 68-pin SCSI-II socket



DSS68HLK EDP No A-555340
68-pin SCSI-II socket with hood for customized solder connection of round cables. The casing is made of die-cast zinc and provides an 180° output with strain relief for the cable routings.



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