

Product Datasheet - Technical Specifications



More information in our Web-Shop at ► www.meilhaus.com and in our download section.

Your contact

**Technical and commercial sales, price information,
quotations, demo/test equipment, consulting:**

Tel.: **+49 - 81 41 - 52 71-0**

FAX: **+49 - 81 41 - 52 71-129**

E-Mail: sales@meilhaus.com

Downloads:
www.meilhaus.com/en/infos/download.htm

Meilhaus Electronic GmbH | Tel. **+49 - 81 41 - 52 71-0**
Am Sonnenlicht 2 | Fax **+49 - 81 41 - 52 71-129**
82239 Alling/Germany | E-Mail sales@meilhaus.com

Mentioned company and product names may be registered trademarks of the respective companies. Prices in Euro plus VAT. Errors and omissions excepted.
© Meilhaus Electronic.

www.meilhaus.de

ME-8100 Opto-Isolated Digital-I/O and Counter Board

- PC plug-in board for digital data acquisition and control, for PCI.
- 16 or 32 opto-inputs and 16 or 32 opto outputs.
- 24 V level. Isolation up to 1 kV.
- Outputs source/sink software-selectable.
- Outputs defined during PC power-on.
- 3x 16 bit counter. All lines opto-isolated and wired to the D-sub.
- Interrupt control: Use to monitor input bit-changes.
Bitpattern comparator, 1x or 2x 16 bit (interrupt on comparison positive).
- Recommended for new designs: ME-5810, fully compatible with ME-8100!

Model	Opto inputs	Opto outputs	Interrupt	Bus platform
ME-8100A PCI	16	16	Bitpattern comparison: Interrupt on comparison positive. Bit-change: Interrupt when input status changes.	StandardPCI
(ME-8100A cPCI*	16	16		3 HE CompactPCI)
ME-8100B PCI	32	32		StandardPCI
(ME-8100B cPCI*	32	32		3 HE CompactPCI)

* Replaced by ME-5810A/B(/S) cPCI:

Model	Opto in	Opto out	Opto isolated counters	Standard firmware functions	Streaming	Bus platform
ME-5810A PCIe	16	16	3	Single digitalI/O, streaming digitalI/O (models /S), frequency measurement (4 of the 16 inputs; 300 kHz), frequency output (4 of the 16 outputs; 3 kHz), bitpattern comparison with with interrupt, bit-change with interrupt	-	PCI-Express
ME-5810A cPCI	16	16	3		-	3 HE CompactPCI/PXI
ME-5810A/S PCIe	16	16	3		yes	PCI-Express
ME-5810A/S cPCI	16	16	3		yes	3 HE CompactPCI/PXI
ME-5810B PCIe	32	32	3	Single digitalI/O, streaming digitalI/O (models /S), frequency measurement (12 of the 32 inputs; 300 kHz), frequency output (12 of the 32 outputs; 3 kHz), bitpattern comparison with interrupt, bit-change with interrupt	-	PCI-Express
ME-5810B cPCI	32	32	3		-	3 HE CompactPCI/PXI
ME-5810B/S PCIe	32	32	3		yes	PCI-Express
ME-5810B/S cPCI	32	32	3		yes	3 HE CompactPCI/PXI

Specification

PCI Interface

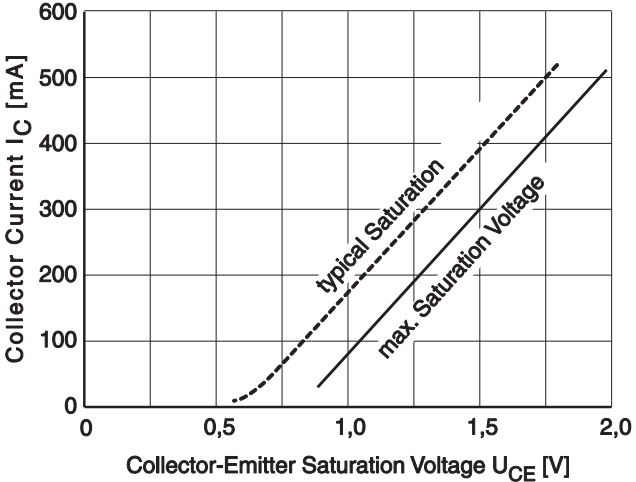
Bus system	Standard PCI (32 bit, 33 MHz, 5 V)
(depends on model)	CompactPCI (32 bit, 33 MHz, 5 V)
Plug&Play	automatic assignment of resources

Digital Input

Number	ME-8100A: 1 x 16-bit port, opto-isolated ME-8100B: 2 x 16-bit ports, opto-isolated
Switching frequency	max. 1 kHz (depends on operation system and application software)
Input level	typ. 24 V \pm 2 V
Input current	10 mA per channel
Operation modes	simple input; bit-pattern match, bit-pattern change
Interrupt events	bit-pattern match or bit-pattern change of a masked bit

Digital Output

Number	ME-8100A: 1 x 16-bit port, opto-isolated ME-8100B: 2 x 16-bit ports, opto-isolated
Switching frequency	max. 1 kHz (depends on operation system and application software)
Output level	typ. 24 V (depends on ext. power supply)
Output driver	ME-8100A/B: sink (ULN2803) or source (UDN2982) driver selectable by software port by port
Output current	The max. current per output (I_C) depends on the saturation voltage U_{CE} and is limited by the power dissipation of the sum of channels to $P_{tot} = 1$ W per chip: $P_{tot} = P_0 + \dots + P_7 \leq 1$ W (at 70 °C)

	<p>ULN2803:</p> 
	<p>UDN2982:</p> <p>Please see the table below for the max. current per output (I_{SOURCE}) The power dissipation of the sum of channels is limited to $P_{tot} = 0.7$ W per chip:</p> $P_{tot} = P_0 + \dots + P_7 \leq 0.7 \text{ W (at } 70^\circ\text{C)}$ <p>with</p> $P_0 = I_{CO} U_{CE0} \text{ and } U_{CE} = \text{typ. } 1.8 \text{ V}$

Number of Channels								
	1	2	3	4	5	6	7	8
I_{Cmax} [mA]	350	175	115	85	70	55	50	40

Counter/Timer

Number	ME-8100A/B: 3 independent
Type	82C54
Resolution	16 bit
Clock signal (Clk)	opto-isolated, input voltage typ. 24 V
Gate signal (Gate)	opto-isolated, low-active, input voltage typ. 24 V
Counter output (Out)	opto-isolated, output voltage typ. 24 V (depends on ext. power supply)
Counter clock	ext. up to max. 1 MHz

General Information

Power consumption at +5 V	typ. 1.3 A (without ext. load)
Physical size (without mounting bracket and connector)	ME-8100 PCI: 174 mm x 98 mm ME-8100 cPCI: 3 HE CompactPCI board
Connectors	78-pin D-Sub female
Operating temperature	0...70 °C
Storage temperature	0...50 °C
Relative humidity	20...55 % (non-condensing)
Certification	CE

Pinout

ME-8100A/B PCI and cPCI

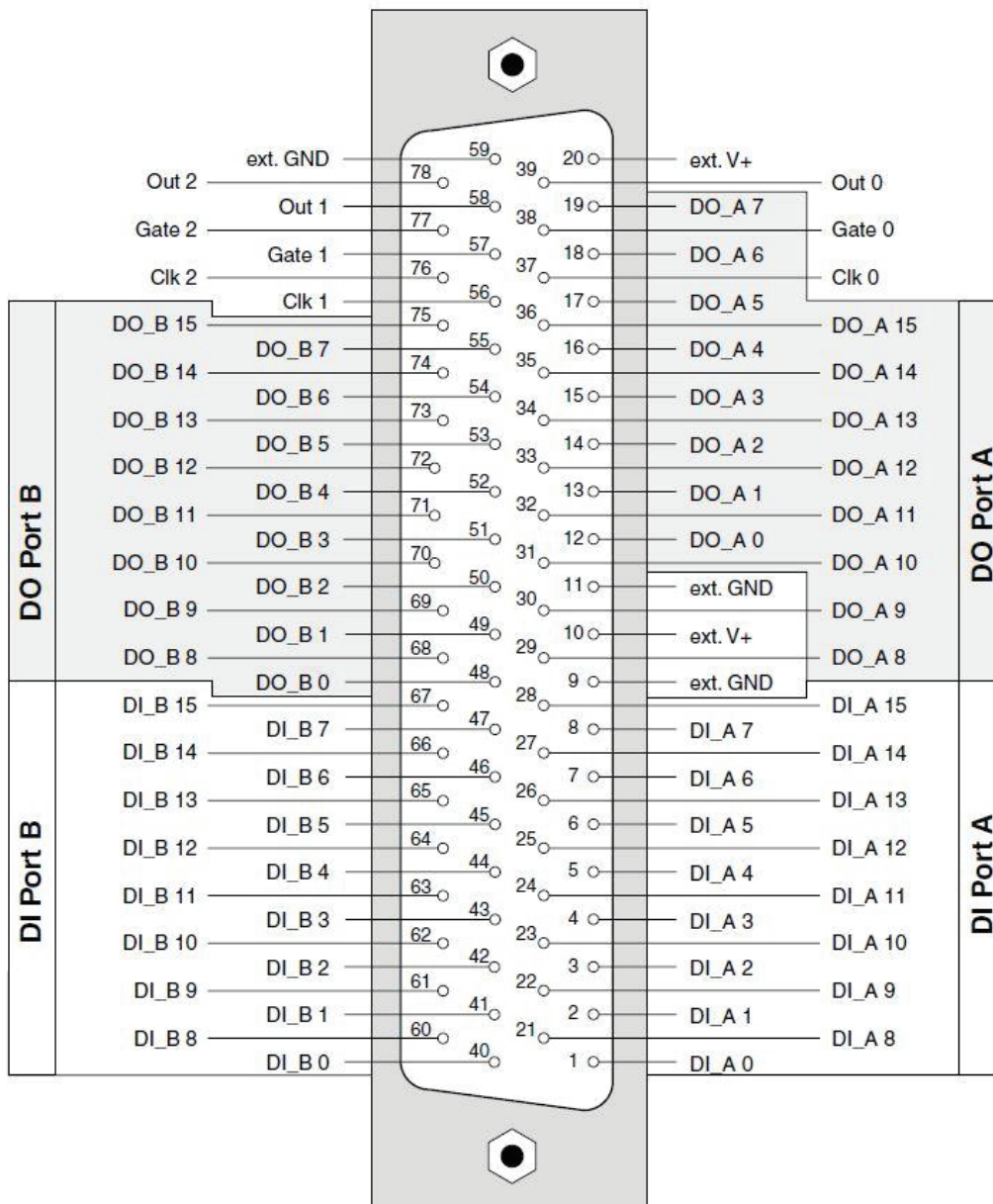


Diagram 12: Pinout of the 78-pin female D-Sub on ME-8100A/B