

Product Datasheet - Technical Specifications



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ME-5310 Multi-Channel TTL Digital-I/O Board

- Digital data acquisition and control.
- 64 (2x 32 bit ports) or 128 (4x 32 bit ports with ME-1001) TTL digital-I/O channels.
- Each port programmable as input or output.
- Output ports with readback.
- All lines with standard TTL level. Expandable with external, DIN rail mountable board series ME-63Xtend with relays or opto-isolation: Control up to 128 relay. Up to 128 opto-inputs or opto-outputs.
- The ME-5310 with 64 channels occupies one slot space.
- The ME-5310 with 128 channels occupies 2 slot spaces (1 slot for ME-1001), but only uses the bus/PC resources of only one slot.
- PC DAQ board for PCI-Express or PXI-Express.
- Versions with various pull-up/pull-down configurations available.

Model	Digital-I/O	Level	Pull-up	Pull-down	Bus platform
ME-5310 PCIe	64 (2x 32 bit ports, independently configurable as input or output port, output with read-back)	TTL	-	-	x1 PCI-Express
ME-5310-1 PCIe			DIOA, DIOB	-	
ME-5310-2 PCIe			-	DIOA, DIOB	
ME-5310-3 PCIe			DIOB	DIOA	
ME-1001 PCIe	additional 64 (2x 32 bit ports, independently configurable as input or output port, output with read-back)	TTL	on base board only	on base board only	for PCI-Express platform, no bus connector: Occupies one slot, but doesn't use bus resources
ME-5310 PXIe	64 (2x 32 bit ports, independently configurable as input or output port, output with read-back)	TTL	-	-	3 HE PXI-Express (Version 2.0, PICMG 2.0 R3)
ME-5310-1 PXIe			DIOA, DIOB	-	
ME-5310-2 PXIe			-	DIOA, DIOB	
ME-5310-3 PXIe			DIOB	DIOA	
ME-1001 PXIe	additional 64 (2x 32 bit ports, independently configurable as input or output port, output with read-back)	TTL	on base board only	on base board only	for PXI-Express platform, no bus connector: Occupies one slot, but doesn't use bus resources

Specifications

PC Interface

PCI-Express Bus	PCI-Express x1, Version 2.0
PXI-Express Bus	PCI-Express x1, Version 2.0, PICMG 2.0 R3
Plug&Play	is fully supported

Digital Input/Output

Number	ME-5310: 2 x 32-bit I/O ports (output ports can be read back) ME-5310 + ME-1001: 4 x 32-bit I/O ports (output ports can be read back)
Input level	low: 0 V...+0,8 V ($I_{L \max.} = \pm 10 \mu\text{A}$) high: + 2,0 V...+5,5 V ($I_{H \max.} = \pm 10 \mu\text{A}$)
Output level	low: 0 V...+0,8 V ($I_{OL \max.} = +20 \text{ mA}$) high: min.+ 2,4 V ($I_{OH} = -4 \text{ mA}$)
Output current per channel	$I_{OL \max.} = 20 \text{ mA}$; $I_{OH \max.} = 4 \text{ mA}$
Attention	Total power consumption must not be exceeded (see calculation on page 10).

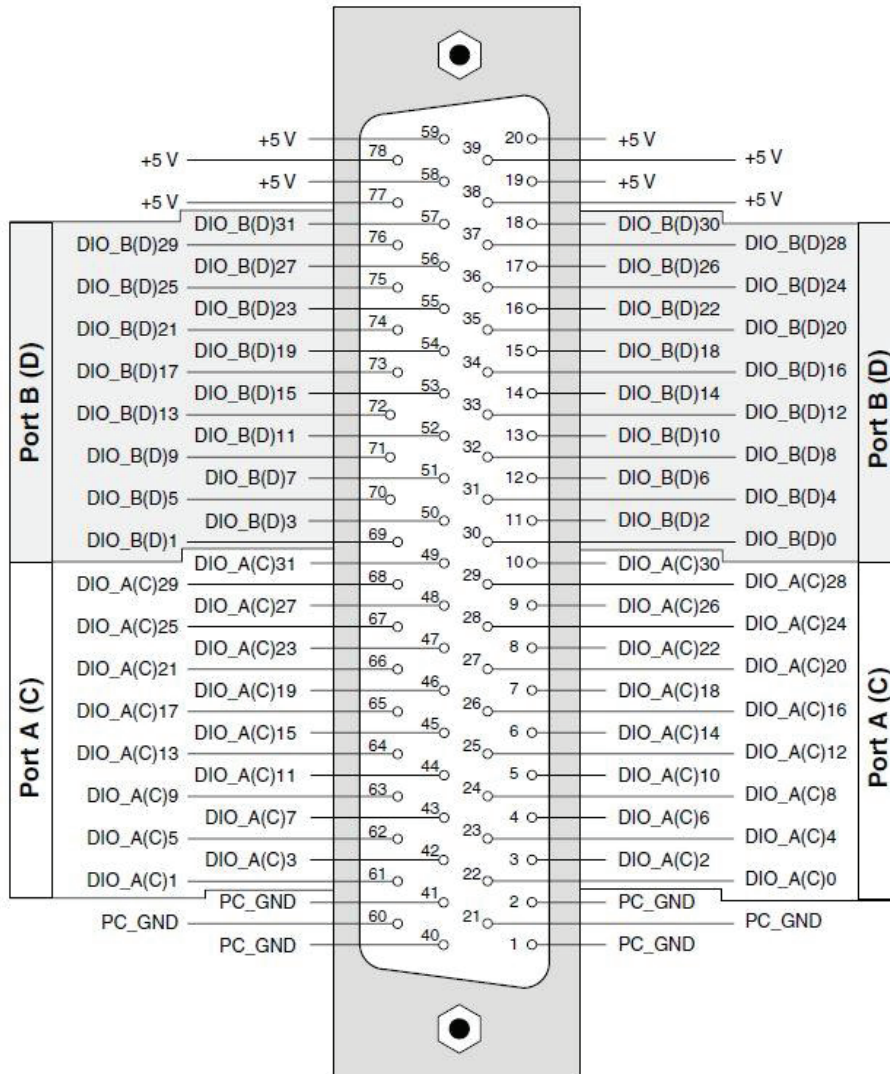
General Information

Max. load of the +5 V pins (19, 20, 38, 39, 58, 59,77, 78): max. 500 mA at +5 V	
Power consumption at +5 V	typ. 1.2 A (without ext. load)
Physical size (without mounting bracket and connector)	ME-5310 PCIe: 165 mm x 107 mm ME-5310 PXIe: 3U CompactPCI board ME-1001 : 55 x 100 mm (LxH)
Connectors	all models: 78-pin D-Sub female connector; additional for ME-5310 + ME-1001: further 78-pin D-Sub female connector on ME-1001 extender board
Operating temperature	0...70 °C
Storage temperature	-40...100 °C
Relative humidity	20...55 % (non-condensing)
Certification	CE

B Pinout

B1 ME-5310 and ME-1001

The pin configuration of the ME-5310 is identical to the pin configuration of the ME-1001 extension board. On the diagram shown below, ports A and B on the ME-5310 correspond to ports C and D on the ME-1001:



Picture 3: Pinout of the 78-pin female D-Sub connector on the ME-5310 and ME-1001