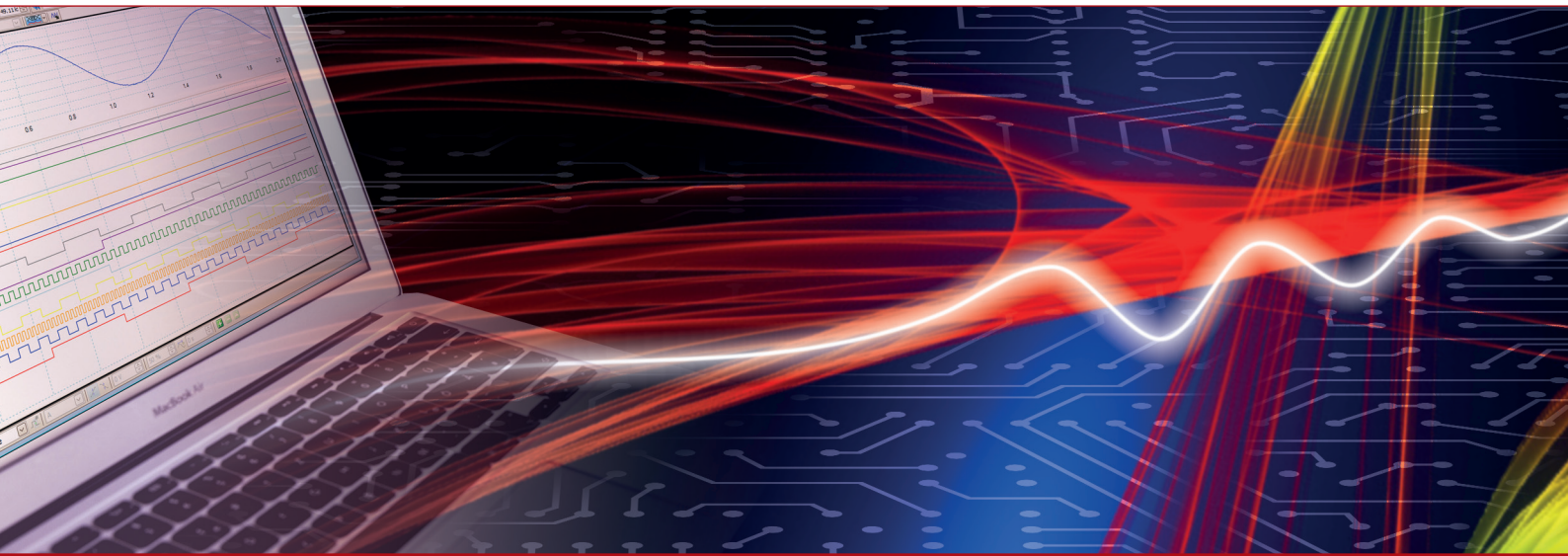


Product Datasheet - Technical Specifications



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ME-1600 Analog Output Board

- High quality for industrial applications. PC control board with analog outputs
- ME-1600 models „U“: 4, 8 or 16 voltage outputs.
- ME-1600 models „UI“: 8 or 16 voltage outputs with 8 of them also as current outputs. Control analog positioning elements with current and voltage from one board.
- Output ranges software selectable:
 - * Voltage 0...10 V, ± 10 V;
 - * Current 0...20 mA or 4...20 mA. Current outputs short circuit proof and readjusting.
- 12 bit D/A converter. Transparent or simultaneous per quad converter. Settling time max. 10 μ s.
- PC DAQ board for PCI or 3 U CompactPCI/PXI.

Model	Analog voltage outputs	Analog current outputs	D/A conversion	Bus platform
ME-1600/4U PCI	4, range 0...10 V, ± 10 V	-	12 bit, max. 10 μ s	StandardPCI
ME-1600/4U cPCI	4, range 0...10 V, ± 10 V	-	12 bit, max. 10 μ s	3 HE CompactPCI
ME-1600/8U PCI	8, range 0...10 V, ± 10 V	-	12 bit, max. 10 μ s	StandardPCI
ME-1600/8U cPCI	8, range 0...10 V, ± 10 V	-	12 bit, max. 10 μ s	3 HE CompactPCI
ME-1600/16U PCI	16, range 0...10 V, ± 10 V	-	12 bit, max. 10 μ s	StandardPCI
ME-1600/16U cPCI	16, range 0...10 V, ± 10 V	-	12 bit, max. 10 μ s	3 HE CompactPCI
ME-1600/8UI PCI	8, range 0...10 V, ± 10 V	8 of the outputs*, range 0...20 mA, 4...20 mA	12 bit, max. 10 μ s	StandardPCI
ME-1600/8UI cPCI	8, range 0...10 V, ± 10 V	8 of the outputs*, range 0...20 mA, 4...20 mA	12 bit, max. 10 μ s	3 HE CompactPCI
ME-1600/16UI PCI	16, range 0...10 V, ± 10 V	8 of the outputs*, range 0...20 mA, 4...20 mA	12 bit, max. 10 μ s	StandardPCI
ME-1600/16UI cPCI	16, range 0...10 V, ± 10 V	8 of the outputs*, range 0...20 mA, 4...20 mA	12 bit, max. 10 μ s	3 HE CompactPCI

* Current outputs parallel to voltage outputs 1 - 8. Can be activated together with the voltage outputs. Short circuit proof and readjusting.

Specifications

PCI-Interface

Bus system	Standard PCI (32 bit, 33 MHz, 5 V);
(depends on model)	CompactPCI (32 bit, 33 MHz, 5 V)
Plug&Play-operation	resources are assigned automatically

Voltage Outputs

Number	4, 8, 12 or 16 (depends on version)	
D/A converter	Quad type, Burr-Brown DAC7624U	
Resolution	12 bit	
Output ranges	0...10 V, ± 10 V	
Total output current	max. ± 32 mA (all channels)	
Output current per channel	max. ± 20 mA	
Operation modes	synchronous or transparent	
Gain error	typ. ± 3 LSB	
Zero error (bipolar)	max. ± 3 LSB	
Linearity error (DAC	max. ± 2 LSB	
Settling time (DAC)	max. $10 \mu\text{s}$ ($-10 \text{ V} \rightarrow +10 \text{ V}$)	

Current Outputs (only ME-1600/16U8I)

Number	8	
D/A converter	Burr-Brown INA132	
Output ranges	0...20 mA, 4...20 mA	
Output power per channel	max. 0.65 V (for $U_{\text{ext}} = 36 \text{ V}$ and $R_L = 1.5 \text{ k}\Omega$) short circuit: 0.7 W	
Accuracy (0...20 mA)	max. 0.45 %	
Accuracy (4...20 mA)	max. 0.375 %	
Settling time (DAC)	max. $0.5 \mu\text{s}$ (full scale)	

General Information

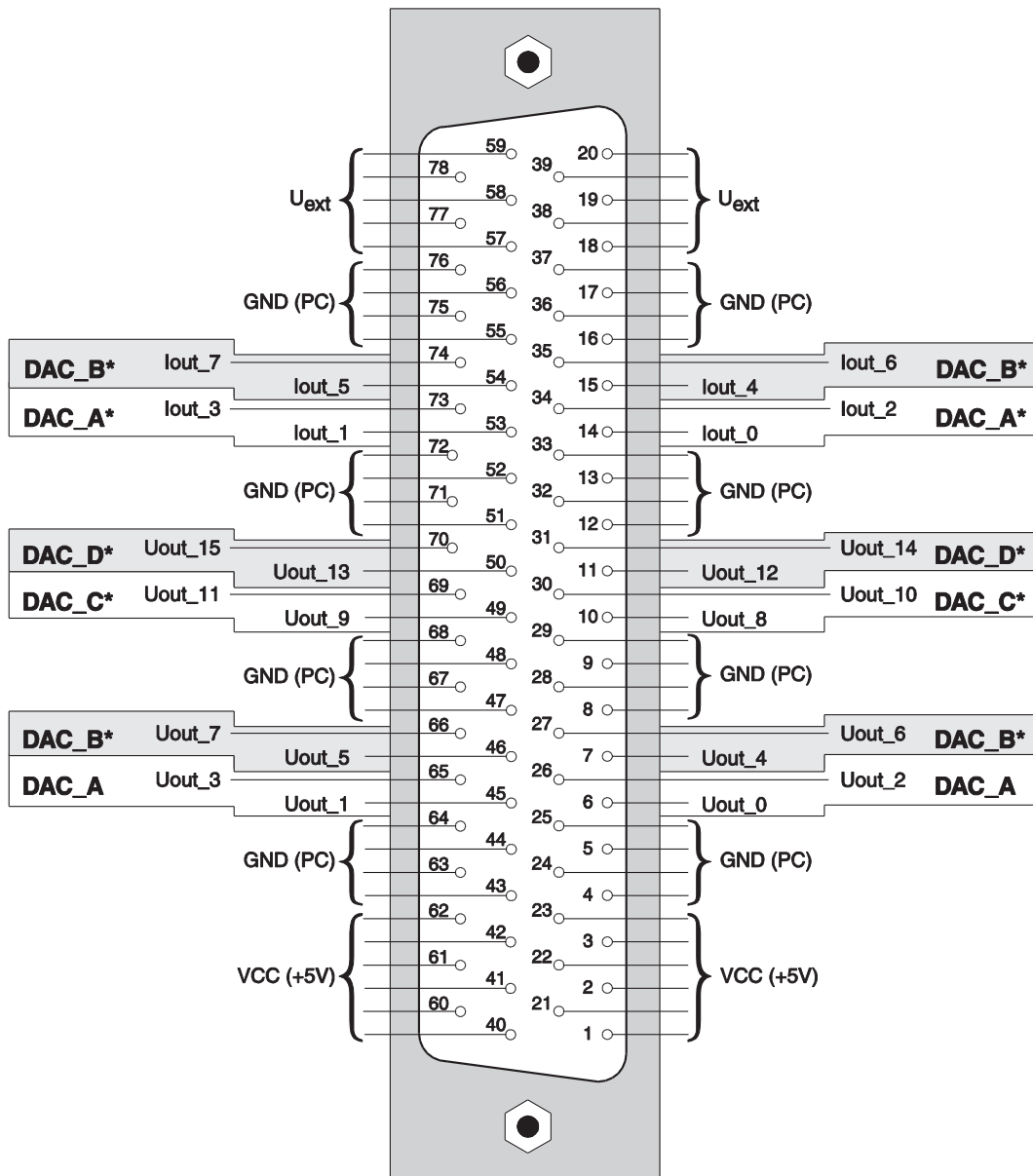
Power consumption at +5 V	ME-1600/16U: typ. 1.5 A
VCC-loading at the D-Sub connector	approx. 2 A (depends on PC power supply)
Physical size	ME-1600 PCI: 174 mm x 98 mm (without mounting bracket and connector) ME-1600 cPCI: 3-U-CompactPCI board
Connectors	78-pin D-Sub female connector
Operating temperature	0...70 °C
Storage temperature	-40...100 °C
Relative humidity	20...55 % (non-condensing)

CE-Certification

EMC Directive	89/336/EMC
Emission	EN55022
Noise immunity	EN50082-2

Pinout

Pinout D-Sub Connector



Picture 4: Pinout of the 78-pin D-Sub female connector

*Depending on the version not all pins of the 78-pin D-Sub connector are available.