

# High Precision Isolated Analog Output

ME-6000 and ME-6100 - 16 bit D/A Board, Isolated Channels, no Common GND

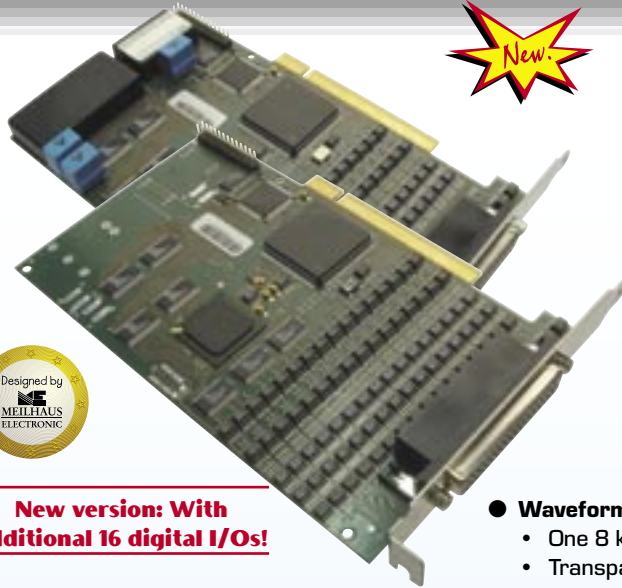
**Model:**  
ME-6000  
ME-6100

**Platform:**  
 PCI  
 PXI/cPCI  
 USB  
 Other

**Functions:**  
 Analog I/O  
 Digital I/O  
 Temp./°C  
 Interfaces  
 Instrument  
 Logger  
 Isolation  
 Accessory  
 Software



**New version: With additional 16 digital I/Os!**



**Software:**

ME-Power-CD included:

- Drivers for **Windows** XP, 2000, 98/Me, NT. Visual C++, Delphi, Visual Basic and Borland C/C Builder supported.
- Drivers for **Agilent VEE, LabVIEW.**
- Drivers for **Linux** (source code under GPL).
- Utilities, examples, demos.
- "Soft manuals" in English and German for Acrobat Reader/PDF.

● **Analog-Outputs:**

- **4, 8 or 16 voltage outputs.**
- All channels opto-isolated, available as:
  - "Island" channels: **Channels with complete opto-isolation, with no common GND.** All channels individually isolated from each other and from PC.
  - **Opto-isolated outputs** with common ground/GND.
- Output range  $\pm 10$  V, output current max.  $\pm 15$  mA per channel.
- **16 bit high precision D/A conversion. Individual D/A converter per channel. High-speed rates up to 500 kHz per channel.**
- Automatic adjustment, no potentiometers.

● **Waveform generator - ME-6100:**

- One 8 kByte FIFO each for channels 1 to 4.
- Transparent output and extended modes for waveform generation on channels 1 to 4:
  - Continuous output.
  - WrapAround: Periodic, timer controlled output of data sets from the FIFOs.

● **MEsslabor (DAQlab) software, virtual waveform generator** as virtul instrument panel included. Output of periodic signals up to 250 kHz (square signal).

- **16 additional TTL digital I/O channels**, can be extended with relays or opto-isolation with the ME-63Xtend or ME-UB series.
- PCI Local Bus 2.1 compatible. Plug'n'Play. StandardPCI.

**Ordering Codes:**

**ME-6000/16 "Island" PCI**

**ME-6000/8 "Island" PCI**

**ME-6000/4 "Island" PCI**

PCI 16 bit analog output board with 4, 8, 16 voltage outputs. Isolated "Island" channels with no common ground.

**ME-6000i/16 PCI**

**ME-6000i/8 PCI**

**ME-6000i/4 PCI**

PCI 16 bit analog output board with 4, 8, 16 voltage outputs. Isolated channels with common ground.

**ME-6100/16 "Island" PCI**

**ME-6100/8 "Island" PCI**

**ME-6100/4 "Island" PCI**

PCI 16 bit analog output board with 4, 8, 16 voltage outputs. Isolated "Island" channels with no common ground. FIFO on channels 1 - 4.

**ME-6100i/16 PCI**

**ME-6100i/8 PCI**

**ME-6100i/4 PCI**

PCI 16 bit analog output board with 4, 8, 16 voltage outputs. Isolated channels with common ground. FIFO on channels 1 - 4.

**Accessories:**

**Cable ME AK-D78/6000**

**1 m**

Shielded special cable 1 m, 78-pin D-sub male and 16 shielded, labeled, open ends. Note: One cable ME AK-D78/6000 is included with the ME-6000/ME-6100. Additional cables can be ordered as spare parts, if needed.

**ME-63Xtend series**

**ME-UB series**

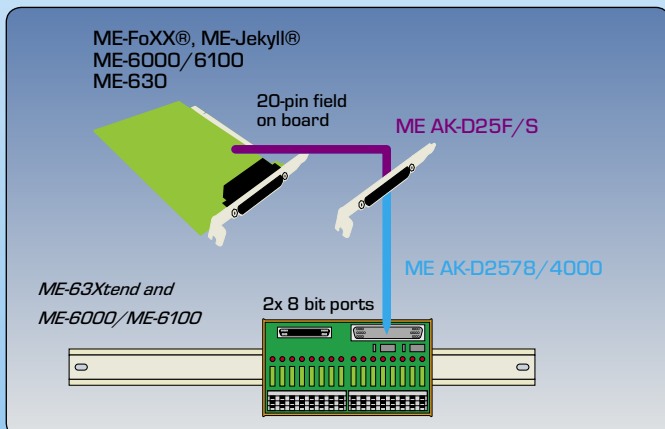
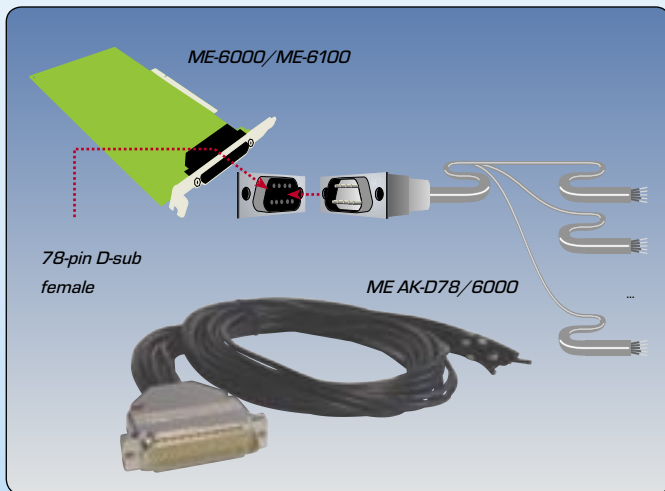
External boards for DIN rail (ME-63Xtend) or desktop boxes (ME-UB), for the 16 TTL digital I/O channels. Used to add relays or opto-isolation

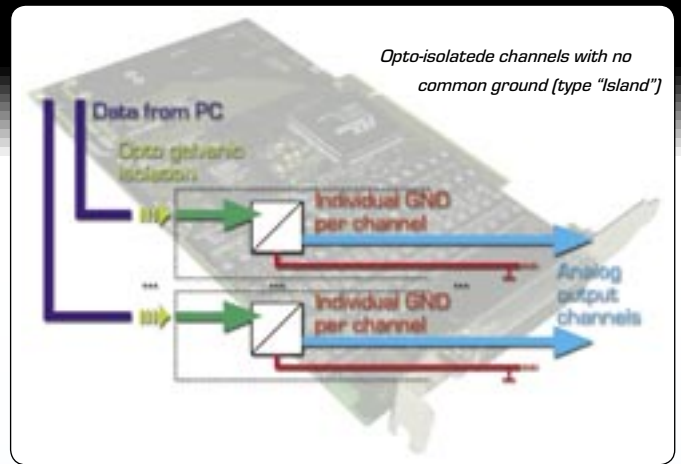
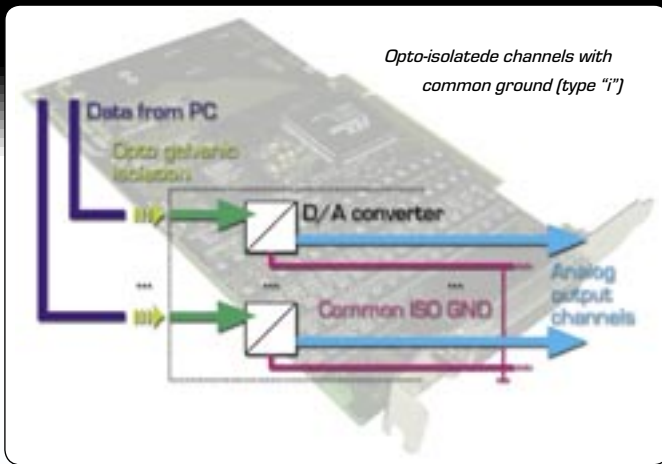
**ME AK-D2578/4000**

**ME AK-D2515/4000**

Cable for ME-63Xtend or ME-UB connectivity to ME-6000/ME-6100

**Web Link: [www.meilhaus.com/e\\_me](http://www.meilhaus.com/e_me)**

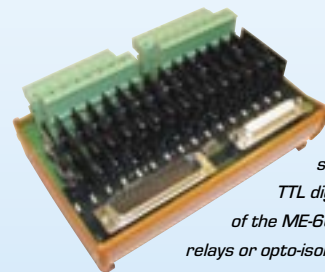
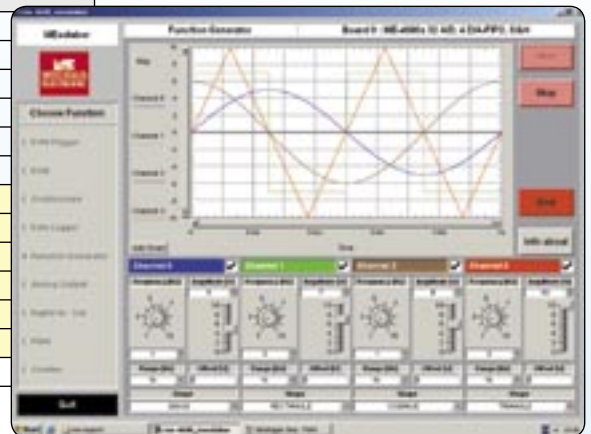




**Model Overview: ME-6000, ME-6100**

Channels	Type <sup>1)</sup>	Isolation <sup>2)</sup>	FIFO	Model	Bus
16	U	√ CGND	-	ME-6000/16 "Island" PCI	PCI
8	U	√ CGND	-	ME-6000/8 "Island" PCI	PCI
4	U	√ CGND	-	ME-6000/4 "Island" PCI	PCI
16	U	√ CGND	-	ME-6000i/16 PCI	PCI
8	U	√ CGND	-	ME-6000i/8 PCI	PCI
4	U	√ CGND	-	ME-6000i/4 PCI	PCI
16	U	√ PF	√ <sup>3)</sup>	ME-6100/16 "Island" PCI	PCI
8	U	√ PF	√ <sup>3)</sup>	ME-6100/8 "Island" PCI	PCI
4	U	√ PF	√ <sup>3)</sup>	ME-6100/4 "Island" PCI	PCI
16	U	√ PF	√ <sup>3)</sup>	ME-6100i/16 PCI	PCI
8	U	√ PF	√ <sup>3)</sup>	ME-6100i/8 PCI	PCI
4	U	√ PF	√ <sup>3)</sup>	ME-6100i/4 PCI	PCI
4, 8, 12, 16	U	-	-	ME-1600/xU PCI <sup>4)</sup>	PCI
16	16 U, 8 of which also I	-	-	ME-1600/16U8I PCI	PCI
4, 8, 12, 16	U	-	-	ME-1600/xU cPCI	PXI/CompactPCI
16	16 U, 8 of which also I	-	-	ME-1600/16U8I cPCI	PXI/CompactPCI
4, 8, 12, 16	U	-	-	ME-160/x ISA	ISA <sup>4)</sup>

ME-6100 software for virtual waveform generator (Agilent VEE runtime):



ME-63Xtend series expands 16 TTL digital I/O channels of the ME-6000/ME-6100 with relays or opto-isolation

- 1) Opto-isolation with common ground/CGND or complete opto-isolation/potential free (PF) with no common GND.
- 2) U = voltage outputs, I = current outputs
- 3) FIFO for channels 1 - 4.
- 4) "Classic" ISA models available while supplies last. After that, boards can be ordered in larger quantities only for support of running applications.

**Specifications:**

**Analog Outputs**

Number	4, 8 or 16 voltage outputs.
Output current	Without external power supply depending on the number of channels: $I_{max}$ per channel $\pm 3...15$ mA. "Island" channels, with external power supply ( $\pm 15$ V): $\pm 15$ mA (external power supply always required)
Output range	$\pm 10$ V
Accuracy	(Full scale) "i"/isolated max. $\sim 0.191\%$ , min. $\sim 0.095\%$ . "Island" max. $\sim 0.129\%$ , min. $\sim 0.03\%$
Isolation	Versions "i": Opto-isolated from PC, channels with common GND. Versions "Island": Completely opto-isolated channels, no common GND. Max. 500 V isolation from PC; max. 250 V between "Islands"
D/A converter	1 serial high precision D/A converter per channel. 16 bit/500 kHz.
Settling time	2 $\mu$ s (-10 V to +10 V).
Operating modes	Single value output (transparent). ME-6100, for channels 1 to 4: Continuous mode (continuous output under timer control) and WrapAround mode (periodic output under timer control).
FIFOs	ME-6100, channels 1...4: 8k value D/A FIFOs per channel
External trigger	ME-6100, channels 1...4: TTL level, for start of conversion (WrapAround, Continuous)

**Digital I/O (TTL)**

Number, type: 2x 8 bit ports of I/O channels, each port programmable as input or output

**General Data**

Bus interface	32 bit StandardPCI bus. PCI Local Bus 2.1 compatible
Size (mm)	174 x 98
Connectors	78-pin D-sub female; 25-pin D-sub female (16 TTL digital I/O channels on additional slot bracket with flat ribbon cable to on-board IDC)