Multi-channel Digital interface - up to 128 channels

This board is a good choice, if you need a multitude of channels for industrial switching and/or the acquisition of digital statuses: It has up to 64 or 128 digital I/O lines, grouped in 32 ports. Each port can be programmed as input or output. You can add opto-isolation or relays for all channels, using optional external DIN rail modules:

- **64** (2x 32 bit ports) or **128** (4x 32 bit ports) TTL digital input or output channels.
- Each port programmable as inputs or outputs. Ports configured as outputs with read-back.
- ME-1000/128 = ME-1000/64 + extender ME-1001 (with PCI or PXI/CompactPCI slot bracket, second D-sub female, flat ribbon cable).
- All lines with standard TTL level. Expandable with external board series ME-63Xtend with relays or opto-isolation: Control up to 128 relays. Or make use of up to 128 opto inputs/outputs.
- Plug’n’Play. Available for the bus platforms StandardPCI and PXI/CompactPCI (PCI Local Bus 2.1 compatible) and with ME-Synapse: Ethernet/LAN, USB.

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**Software included on CD:**
- ME-iDS and ME-iDC driver and configuration tool for Windows XP, 2000, Vista and GNU Linux 2.6.
- Supports Visual C/C++, Visual Basic, VEE Pro (Windows), LabVIEW (Windows, Linux), Python.
- Programming examples.
- “Soft manuals” English and German for Acrobat Reader/PDF.

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**Ordering codes and features ME-1000**

<table>
<thead>
<tr>
<th>Model</th>
<th>TTL digital inputs/outputs</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME-1000/64 PCI</td>
<td>64 (2x 32 bit ports)</td>
<td>PCI</td>
</tr>
<tr>
<td>ME-1000/128 PCI</td>
<td>128 (4x 32 bit ports)</td>
<td>PCI</td>
</tr>
<tr>
<td>ME-1000/64 cPCI</td>
<td>64 (2x 32 bit ports)</td>
<td>PXI/CompactPCI</td>
</tr>
<tr>
<td>ME-1000/128 cPCI</td>
<td>128 (4x 32 bit ports)</td>
<td>PXI/CompactPCI</td>
</tr>
</tbody>
</table>

**Scope of delivery**
Board, ME-Power-CD, 1x (ME-1000/64) or 2x (ME-1000/128) 78-pin mating plug.
Note: The ME-1000/128 PCI or cPCI is a ME-1000/64 PCI or cPCI with special firmware + an expansion board ME-1001 PCI or cPCI, see picture

**Attractive bundles:**
Buy the ME board of your choice bundled with accessory of your choice and save money! For example:
- **ME-SK ME-1000/x...**
  StartKit with: ME-1000/x of your choice + cable of your choice + terminal block of your choice
- **ME-PP ME-1000/x...**
  PowerPack with: ME-1000/x of your choice + cable of your choice + terminal block of your choice + graphic software development environment VEE Pro in current full version.

**Example - bundle with ME-1000 and ME-Neuron**
ME-Neuron 1000/64 Complete ethernet or stand alone digital station: ME-Neuron and 64 channels TTL digital I/O board ME-1000/64

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**Specifications**

<table>
<thead>
<tr>
<th>Digital I/O</th>
<th>ME-1000/64</th>
<th>ME-1000/128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number, type</td>
<td>64 TTL I/O channels (2x 32 bit ports)</td>
<td>128 TTL I/O channels (4x 32 bit ports)</td>
</tr>
<tr>
<td>Voltage</td>
<td>Input low: 0 V…+0.8 V (IILmax=±10 µA); output low: 0…+0.8 V (IOL=20 mA);</td>
<td>input high: +2.0 V…+5.5 V (IIHmax=±10 µA); output high: Min. 2.4 V (IOH=-4 mA)</td>
</tr>
<tr>
<td>General</td>
<td>ME-1000/64</td>
<td>ME-1000/128</td>
</tr>
<tr>
<td>Bus interface</td>
<td>32 bit StandardPCI bus or PXI/CompactPCI bus, PCI Local Bus 2.1 compatible</td>
<td></td>
</tr>
<tr>
<td>Connectors</td>
<td>PCI: 136 x 107; PXI/CompactPCI: 160 x 100 [3 U Europacard format]</td>
<td>78-pin D-sub female</td>
</tr>
<tr>
<td>Expandability</td>
<td>78-pin D-sub female</td>
<td>Additional 2x 40-pin IDC on-board connector; expansion board ME-1001 with PCI slot bracket, second 78-pin D-sub female and 2x flat ribbon cable</td>
</tr>
</tbody>
</table>

Digital I/O ports
Relays or opto-isolation with ME-63Xtend [except ME-634]. Note: ME-63Xtend boards **cannot be directly connected** to an ME-1000 using 1:1 cable ME AK-D78! A special cable ME AK-D78/1000 is required. When selecting the ME-63Xtend boards, please consider the 32 bit wide ports of the ME-1000. One complete 32 bit port is input or output.

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ME-1000
Ready for ME-Synapse, that means: You can use the CompactPCI versions of the ME-1000 with the ME-Synapse LAN in your ethernet or with the ME-Synapse USB at the USB! For more information see the ME-Synapse.
Multi-channel Digital interface - up to 128 channels

### ME-1000 + connectivity

- 1x (ME-1000/64) or 2x (ME-1000/128) D-sub mating plug (included)
- 1x or 2x ME AK-D78/x
- ME AB-D78M or ME AB-D78M/S(H)

### ME-63Xtend

- ME-631: 16 relays type C
- ME-632: 16 opto inputs
- ME-633: 16 opto outputs
- ME-635: 16 solid state relays

### Terminal block with pluggable spring terminals:

- ME AK-D78/x
  - x = 0.6 m, 1 m or 2 m
  - Standard cable: 78-pin D-sub male to female, 1:1 contacted.
- ME AB-D78M/S
  - Deluxe terminal block: 78-pin D-sub male to pluggable spring terminals as well as 25-pin D-sub male to spring terminals. In a robust metal box or in a DIN rail mountable card carrier (+H).
- ME AK-D78/HQ-E/1
  - In cases you don’t want to use a terminal block: 1m high quality cable. 78-pin D-sub male and open ends.

### Alternative with non-pluggable spring terminals:

- ME AB-D78M
  - Standard terminal block. 78-pin D-sub male to spring terminals. In a DIN rail mountable card carrier.

### Expanding the digital ports:

- ME AK-D78/1000
  - 1 m cable. 78-pin D-sub male to 2x 78-pin D-sub female. Connects ME-1000 or ME-1001 with 2x ME-63Xtend
- ME AKD2578/1000
  - 0.5 m cable. 25-pin D-sub male to 78-pin D-sub female. Connects an ME-63Xtend at an ME-1000 or ME-1001 with one further ME-63Xtend

### ME-63Xtend Serie

- External expansion boards. DIN rail mountable, with relays or opto-isolation. 16 channels. With the ME-1000 you can use ME-631, ME-632, ME-633, ME-635 in an appropriate combination (note the ME-1000’s 32 bit wide ports!)

### Further accessory:

- ME AB-D78M/PH
  - Deluxe terminal block. 78-pin D-sub male to IDC and prototyping array. In a DIN rail mountable card carrier (+H).
- ME-Synapse LAN and USB
  - Adaptor from 3 U CompactPCI to USB or Ethernet/LAN.
- ME-Neuron
  - Pre-configured, 3 U CompactPCI-based complete DAQ and control system.

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**How to connect ME-63Xtend to ME-1000:**

- ME-1000/64
- ME-1001
- ME-1000/128

**Please note** the 32 bit wide ports of the ME-1000: The ME-63Xtend boards in series at one port [purple connections] have to be either both input types [ME-632: 16 opto inputs] or both output types [ME-631: 16 relays or ME-633: 16 opto outputs or ME-635: 16 solid state relays]. The ME-634 (8 opto inputs and 8 opto outputs) cannot be used with the ME-1000.

Of course, smaller systems with fewer ME-63Xtend boards are possible at any time. As an example, see picture on the right: ME-1000/64 with 4x ME-631.