

All-in-one digital I/O board for PCIe, PCI, PXI/CompactPCI, USB **ME-630 and MEphisto Switch**



This is the multi-channel all-round model among the digital boards. Switch high loads and control digital statuses with a single board or box! Up to 48 relays, digital and opto channels for USB, PCI or PXI/CompactPCI.

- 16 or 8 relays type C (change-over). For current up to 2 A/ 30 V, short time/single relay up to 3.5 A.
- 8 TTL digital inputs (opto-isolated on versions "O"¹⁾). 16 TTL digital I/O channels, expandable with relays or opto-isolation.
- 8 opto-isolated inputs (24 level).
- 2 additional interrupt inputs (except MEphisto Switch).
- Plug'n'Play. Available for bus platforms **StandardPCI** and **PXI/CompactPCI** (PCI Local Bus 2.1 compatible), **PCI-Express** and with ME-Synapse: **Ethernet/LAN, USB**.
- **USB version MEphisto Switch:** USB 1.1 full-speed. **Robust metal housing.** External power supply.

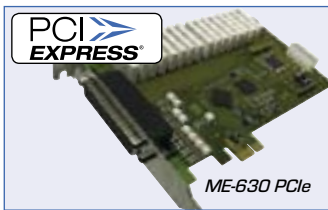


Ready for ME-Synapse, that means: You can use the CompactPCI versions of the ME-630 with the **ME-Synapse LAN in your ethernet** or with the **ME-Synapse USB at the USB!** For more information see the ME-Synapse.



- Software included on CD: ---
- ME-IDS and ME-IDC driver and configuration tool for **Windows XP, 2000, Vista and GNU Linux 2.6¹⁾**.
 - Supports **Visual C/C++, Visual Basic, VEE Pro** (Windows), **LabVIEW** (Windows, Linux), **Python**.
 - Programming examples.
- "Soft manuals" English and German for Acrobat Reader/PDF.

1) Versions "O" with 16 opto inputs and opto IRQ available for PCI-Express only. USB models MEphisto Switch not for Linux!



--- Specifications ---

Relays	ME-630 PCIe	ME-630 PCI	ME-630 cPCI	ME-630 USB (MEphisto Switch)
Number, type	8 or 16, type C (change-over); NAIS APE3005 according to EN 60255, 60335, 60730, 60950, 60065, 50178			
Voltage/current	Continuous load (25°C): 30 VDC/2 A; 30 VAC/2 A; short time load, single relay: 3.5 A			
Contacts	Material: Silver, gold plated. Max. resistance at 6 VDC/1 A: 30 mΩ. Mechanic live time at 180 cpm 5x 10 ⁶			
Status	Read-back function			
Opto Inputs	ME-630 PCIe	ME-630 PCI	ME-630 cPCI	ME-630 USB (MEphisto Switch)
Number	8 or 16; max. 1 kHz transmission rate, effective suppression of fast transients in μs range			
Voltage	24 V level. Low: 0...12 V; high: 13...24 V; input current at 24 V: 7 mA. Isolation voltage 500 VDC			
Digital inputs/outputs	ME-630 PCIe	ME-630 PCI	ME-630 cPCI	ME-630 USB (MEphisto Switch)
Number, type	TTL level. 8 inputs (except "O") and 2x 8 bit port I/O channels, each port programmable as inputs/outputs			
Voltage, 8 inputs	Low: -0.5 V...+0.8 V (I _{Lmax} ± 10 μA); high: +2.0 V...5.5 V (I _{Hmax} ± 10 μA)			
General	ME-630 PCIe	ME-630 PCI	ME-630 cPCI	ME-630 USB (MEphisto Switch)
Interrupt lines	2 (TTL compatible or opto-isolated on versions "O")			-
Bus interface	PCI-Express x2	PCI Local Bus 2.1 compatible. 32 bit/33 MHz	PXI/CompactPCI bus	USB 1.1 full-speed
Size (mm)	~ 111 x 168	~ 174 x 98	160 x 100 (3 U Europacard)	Metal housing, ~ 115 (W) x 180 (D) x 50 (H) without connector/rubber pads
Connectors	78-pin D-sub female (relay channels, opto inputs, 8 digital inputs as well as interrupt inputs of the board versions) 25-pin D-sub female (16 TTL digital I/O channels) on additional slot bracket with flat ribbon cable (ME AK-D25F/S) to on-board IDC			

--- Ordering codes and features **ME-630 and MEphisto Switch** ---

Model	Relays	24 V opto input	TTL digital input	TTL digital I/O	IRQ input	Bus	
ME-630 PCIe	ME-630/8(-O) PCIe	8 type C	8 (16 on "O")	8 (none on "O")	16 (2x 8 bit)	2 ²⁾	PCI-Express
	ME-630/16(-O) PCIe	16 type C	8 (16 on "O")	8 (none on "O")	16 (2x 8 bit)	2 ²⁾	PCI-Express
ME-630 PCI	ME-630/8 PCI	8 type C	8	8	16 (2x 8 bit)	2	PCI
	ME-630/16 PCI	16 type C	8	8	16 (2x 8 bit)	2	PCI
ME-630 cPCI	ME-630/8 cPCI	8 type C	8	8	16 (2x 8 bit)	2	PXI/CompactPCI
	ME-630/16 cPCI	16 type C	8	8	16 (2x 8 bit)	2	PXI/CompactPCI
ME-630 USB (MEphisto Switch)	ME-630/8 USB	8 type C	8	8	16 (2x 8 bit)	-	USB 1.1 full-speed
	ME-630/16 USB	16 type C	8	8	16 (2x 8 bit)	-	USB 1.1 full-speed
Scope of delivery	Board or USB box, ME-Power-CD, 78- and 25-pin mating plug. Boards: ME AK-D25F/S. USB box: USB cable, power supply.						
Attractive bundles: Buy the ME board of your choice bundled with accessory of your choice and save money! Beispiel:							
ME-SK ME-630/___	StartKit with: ME-630/x of your choice + cable of your choice + terminal block of your choice						
ME-PP ME-630/___	PowerPack with: ME-630/x of your choice + cable of your choice + terminal block of your choice + graphic software development environment VEE Pro in current full version.						

2) TTL level on the standard models, opto-isolated with same specifications as opto inputs on the models "O" (ME-630/8-O PCIe and ME-630/16-O PCIe).

All-in-one digital I/O board for PCI, PXI/CompactPCI, USB

ME-630 and MEphisto Switch

ME-630 connectors

- 2 TTL interrupt inputs
- 8 or 16 relays
- 8 TTL inputs
- 8 opto coupler inputs
- 16 TTL channels: 2x 8 bit ports, each port programmable as input/output. Flat ribbon cable to 25-pin D-sub female with slotbracket incl. (ME AK-D25F/S)

MEphisto Switch connectors

- 16 TTL channels: 2x 8 bit ports, each port programmable as input/output
- 8 or 16 relays
- 8 TTL inputs
- 8 opto coupler inputs
- Power, power LED

ME-630 + cable/terminal blocks

- D-sub mating (included)
- ME AK-D78/x
- ME AK-D25...
- ME AK-D78/HQ/x
- ME AB-D78M
- ME AB-D78M/S(-H)
- ME AK-D25F/S (included with board)
- ME AK-D25... ME AB-D25M

MEphisto Switch + cable/terminal blocks

- ME AK-D25... ME AB-D25M
- ME AK-D78/x
- ME AB-D78M
- ME AB-D78M/S(-H)
- D-sub mating plug (included)

ME-630 + ME-UB or ME-63Xtend

- ME AK-D25F/S (included with board)
- ME AK-D2578/4000 for 1x ME-63Xtend
- ME AK-D2515/4000 for 2x ME-UB
- 1x ME-63Xtend series
- 2x ME-UB series or ME AB-D15F

MEphisto Switch + ME-UB or ME-63Xtend

- 1x ME-63Xtend series
- ME AK-D2578/4000 for 1x ME-63Xtend
- ME AK-D2515/4000 for 2x ME-UB
- 2x ME-UB series or ME AB-D15F

--- Recommended accessory for the ME-630 and MEphisto Switch... ---

For higher currents over 0.35 A per line:	
ME AK-D78/HQ/x	x = 0.5 m, 1 m, 2 m high quality cable . 78-pin D-sub male to female, 1:1 contacted. Metal housing and 2 lines of cable. Line diameter 40x 0.25 mm ² . Current load max. 1.4 A per wire; for load on 20 wir: 2 A.
ME AK-D25/HQ/1	1 m high quality cable . 25-pin D-sub male to female, 1:1 contacted. Metal housing.
ME AK-D25/2	2 m standard cable . 25-pin D-sub male to female, 1:1 contacted. Standard cable.
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 AB-D78M/S-H	
Alternative:	
ME AK-D78/HQ-OE/1	In cases you don't want to use a terminal block: 1 m high quality cable . 78-pin D-sub male and open ends.
For small signals up to 0.35 A per line:	
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 AK-D25/HQ/1	1 m high quality cable . 25-pin D-sub male to female, 1:1 contacted. Metal housing.
ME AK-D25/2	2 m standard cable . 25-pin D-sub male to female, 1:1 contacted. Standard cable.
ME AB-D78M	Standard terminal block . 78-pin D-sub male to spring terminals. In a DIN rail mountable card carrier.
ME AB-D25M	Standard terminal block . 25-pin D-sub male to spring terminals. For on-Board-Digital-Ports.
Expanding the on-board digital ports:	
ME AK-D2578/4000	1 m special cable . 25-pin D-sub male to 78-pin D-sub female, use to connect 1x ME-63Xtend.
ME-63Xtend series	External expansion boards , DIN rail mountable, with relays or opto-isolation. 16 channels.
Alternative:	
ME AK-D2515/4000	1 m cable . 25-pin D-sub male to 2x 15-pin D-sub male, use to connect 2x ME-UB.
ME-UB series	External expansion boxes , with relays or opto-isolation. 8 channels. Use any combination of: ME-UB15, ME-UBRE, ME-UBOI, ME-UBOO. Alternative to ME-UB15: Terminal block ME AB-D15F.
ME AB-D15F	Standard terminal block . 15-pin D-sub female to spring terminals. Can be used as alternative to ME-UB15.
Further accessory:	
ME AB-D78M/P-H	Deluxe terminal block . 78-pin D-sub male to IDC and prototyping array. In a DIN rail mountable card carrier (-H).
ME-Synapse LAN u. USB	Adaptor from 3 U ME CompactPCI to USB or Ethernet/LAN.
ME-Neuron	Pre-configured, 3 U CompactPCI-based complete DAQ and control system.