USB DAQ station - the intelligent DAQ interface

ME-Synapse USB (ME-1-USB)

Are you looking for a robust, professional industrial solution for DAQ and control with USB? With a well-structured driver software? Easy to install, just like you are used to from your Plug'n'Play USB devices, but with the durability and flexibility of a PCI DAQ board from Meilhaus Electronic? We proudly present: The "docking station" for the ME series CompactPCI boards - the ME-Synapse. Just install your ME DAQ board, connect to USB or Ethernet, install driver and start measurement! The ME-Synapse has a very robust, solid metal housing. And it gives you the full flexibility of the ME series DAQ and control boards.

- **High grade of flexibility** through large selection of ME boards.
- Make use of the **full functionality and expandability** of the ME boards.
- **Full compatibility** of PCI, PCI-Express, CompactPCI/PXI, LAN, USB in software and hardware.
- DAQ board can be exchanged - ideal solution for system integrators and/or **"cross platform projects"**.
- "Docking-station"/converter from 3 U CompactPCI to **USB 2.0 full-speed**.
- Control all supported ME series (cPCI) boards remotely and decentrally via USB.
- **Robust industrial housing**. 19" rack mountable with optional rack mount kit.
- 1 active and 1 passive slot for ME board.
- Robust, standardised CompactPCI/PXI technology holds the boards securely.
- ME DAQ hardware programmed with the intelligent software driver system ME-iDS - **no difference whether locally or remotely**.
- Ideal solution for **"cross platform projects"** USB - LAN - PCI -PCI-Express - CompactPCI/PXI.

- - - Software: - - -

As support software only the driver system ME-iDS (included with the ME boards) is required as well as your favourite software development environment. The ME-iDS supports: **Windows XP, 2000, Vista and GNU Linux 2.6**. **Visual C/C++**, **Visual Basic**, **VEE Pro** (Windows), **LabVIEW** (Windows, Linux), **Python**.

In the ME-Synapse you can use all ME series CompactPCI boards that are supported by the driver system ME-iDS. Pay attention to the icon **"Ready for ME-Synapse"** in this catalog!

Same form factor, hence stackable (from left to right):

- **ME-Synapse USB (ME-1-USB)** with an active and a passive slot.
- **ME-Synapse LAN (ME-1-LAN)** with two slots and the ethernet module (upper slot).
- **ME-Neuron** - full stand-alone DAQ station with CPU module (upper slots) and 2 active slots (the picture shows the empty slots without dummy plate).

When stacked, the boxes can be screwed together securely. The metal **terminal blocks** of the ME AB-D78M series can be mounted on top of the stack and also be screwed together.

« Inserting the ME board into the ME-Neuron or ME-Synapse
Thanks to the robust, reliable and standardized CompactPCI mechanics, it is very easy to mount the DAQ boards. By default, the desired boards are already implemented in the system when ordered as a bundle. System integrators, however, can exchange the board at any time, if necessary.

ME-Synapse LAN in chapter 3. "Data Communication"!

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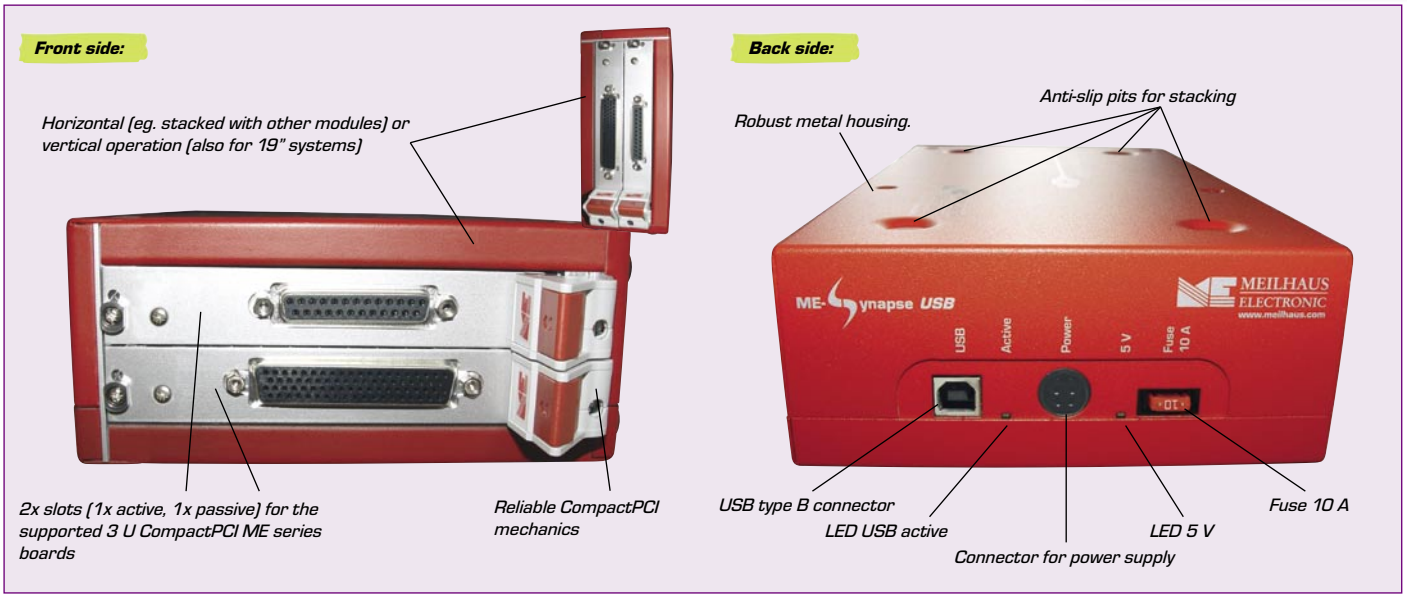

- - - Ordering codes and features — ME-Synapse USB (ME-1-USB) - - -

ME-Synapse bundles:	
ME-Synapse USB xxxx	For "xxxx" insert the desired DAQ/control boards ME-xxxx. You can leave out the "ME-". However, please quote the complete model name, eg. 4680is.
Example configurations:	
ME-Synapse USB 4660	**USB DAQ station:** ME-Synapse USB and 16 bit/500 kHz all-round DAQ board ME-RedFoXX ME-4660. **Tip:** Order extended bundle with terminal block ME AB-D78M/4000 and cable. **Attractive bundle prices!**
ME-Synapse USB 6100i/4	**USB signal generator station:** ME-Synapse USB and 16 bit/500 kHz isolated 4-channel analog output board with FIFO ME-6100i/4. **Tip:** Order bundle with terminal block ME AB-D78M/6000 and cable. **Attractive bundle prices!**
ME-Synapse USB 8200A	**Opto-isolated USB digital station:** ME-Synapse USB and opto digital I/O board ME-8200A
Scope of delivery: ME-Synapse metal housing with USB bridge. Installation instruction. USB cable, power supply. The required driver software is included with the ME board. You can bundle the ME-Synapse with all current ME series CompactPCI boards supported by the driver system ME-iDS. ME-Synapse can only be used with the supported ME boards and is therefore only sold as a bundle with these ME boards. If you have an ME board alread, that you want to use in an ME-Synapse, please call/e-mail our technical sales team: **sales@meilhaus.com**.	
ME-Synapse RM-Kit (optional accessory)	19" rack mount kit for the ME-Neuron or ME-Synapse. Includes: 2 angular guidance plates and a front panel. Screw the angular guidance plates to the housing (top side) of ME-Neuron/ME-Synapse, screw the front panel to the housing (front). Now the device can be inserted into 19" systems with standard rails.

- - - Specifications - - -

Docking station	
Functions	"Docking-station"/adaptor for ME CompactPCI boards at USB 2.0 full-speed
Bridge	CompactPCI-to-USB 2.0 full-speed
Number of docking bays	1 active peripheral bus slots for 1 cPCI board and 1 passive slot for 1 extender, as for example ME-1000/64 plus ME-1001 (= ME-1000/128) or ME-FoXX digital channels
Supported boards	All CompactPCI versions of the boards supported by the ME-iDS: ME-8200, ME-8100, ME-6300, ME-6200, ME-6100, ME-6000, ME-FoXX ME-46xx, ME-1600, ME-1400 (except C/D), ME-1000, ME-630, ME-96, ME-95, ME-94. Max. rates of the boards may be reduced depending on the system. In case of doublt, call our sales team!
General	
Interrupt	Supported on the CompactPCI boards with interrupt functionality
Interface	USB 2.0 full-speed
Chassis	Robust metal housing with anti-slip pits for stacking. Optional rck mount kit for 19" systems. ME terminal blocks can be mounted on top
Size (mm, HxWxD)	~65 x 147 x 262 (without connectors and rubber pads)
Connectors	USB type B (cable USB B-A included). 4-pin mini DIN power connector for external power supply (incl.)
	The I/O and communication channel connectors are depending on the ME series CompactPCI board in use (ME-8100, ME-6x00, ME-FoXX ME-46xx, ME-1600, ME-1400, ME-1000, ME-630: 78-pin D-sub female, ME-96: 2x 15-pin D-sub male, ME-95, ME-94: 25-pin D-sub male, ME-8200: 37-pin D-sub female)
Power supply	External, included, 24 V/2.7 A. 24 V/1.3 A at 5 V/5 A current load. 24 V/3 A at 5 V/10 A current load
Fuse	1x 10 A, type car mini fuse
Environmental	Don't operate in direct sunlight. Operating temperature 0...60°C. 20...55% rel. humidity, non-condensing
Emission	EN 55022
Noise immunity	EN 50082-2
Expandability	
Connectivity	Use the same connectivity options as for the CompactPCI/PXI versions of the boards without ME-Synpase (eg. cables ME AK, terminal blocks ME AB)
Expansions	Use the same expansion options as for the CompactPCI/PXI versions of the boards without ME-Synapse (eg. analog multiplexer ME-MUX32, external relay or opto boards ME-631 to ME-635)