

## LAN DAQ station - the intelligent DAQ interface

## ME-Synapse LAN (ME-1-LAN)



**ME-Synapse**



### --- 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**.

**Full CPU in the ME-Synapse LAN:** Can be used for stand-alone/realtime applications as an option!



**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).
- Below: **ME-Synapse LAN XL (ME-1-LAN XL)** - the model with **6 active slots** and ethernet module.

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.



If you wanted to use **DAQ** and control boards decentrally in an ethernet system, you had to set up an additional complete **PC** until now. The **ME-Synapse LAN** offers an interesting new solution for this problem: It helps you to use all supported **ME** series boards easily at the ethernet. The robust **ME-Synapse LAN** has slots for 2 **CompactPCI** boards. With the intelligent driver system **ME-iDS** you will see no difference whether you are working locally with a **PCI board-Karte** or remotely with a **CompactPCI** board in the **ME-Synapse**!

- **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 **TCP/IP Ethernet/LAN**.
- Control all supported ME series (cPCI) boards remotely and decentrally via ethernet/LAN.
- **Robust industrial housing**. 19" rack mountable with optional rack mount kit.
- 2 active slots for ME board(s).
- 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**" ethernet/LAN - USB - PCI - PCI-Express - CompactPCI/PXI.

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!



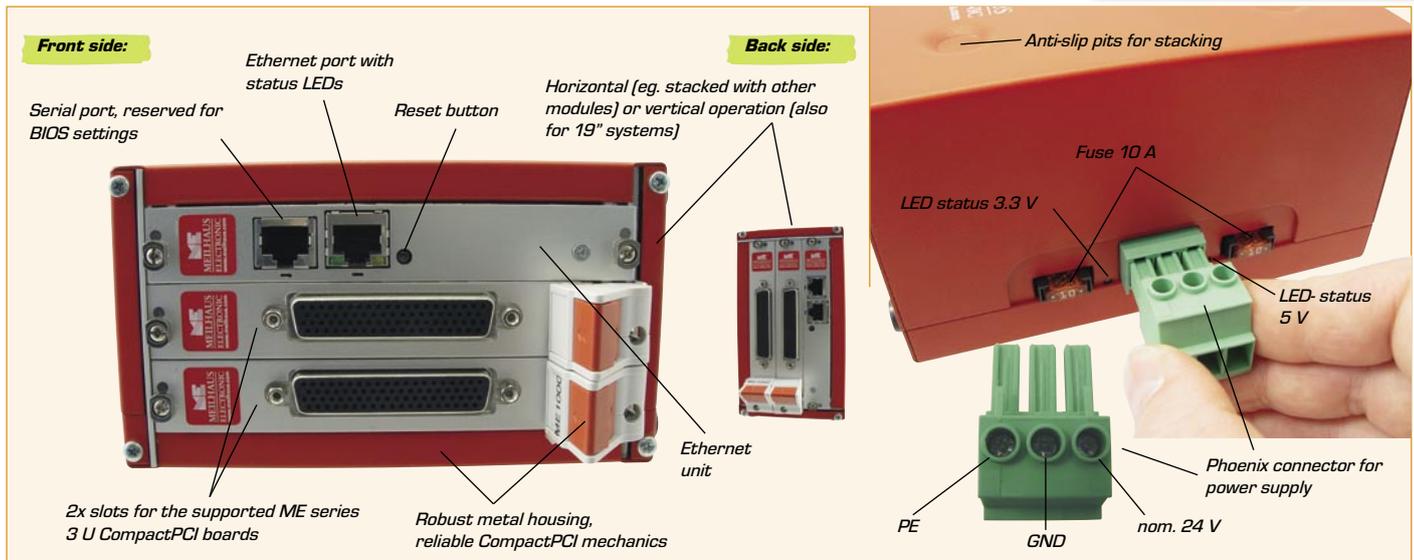
« **Inserting the ME board into the ME-Neuron or ME-Synapse**

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 USB in section**  
2. "USB and mobile data acquisition"!

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## --- Ordering codes and functions

## ME-Synapse LAN (ME-1-LAN) ---

## ME-Synapse bundles:

ME-Synapse LAN 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. Power supply not included (optional accessory)!
ME-Synapse LAN XL xxxx	See above, but with 6 (instead of 2) free slots for ME series DAQ/control boards

## Example configurations:

ME-Synapse LAN 4660	<b>Remote DAQ station:</b> ME-Synapse LAN and 16 bit/500 kHz all-round DAQ board ME-RedFoXX ME-4660. <b>Tip:</b> Order extended bundle with terminal block ME AB-D78M/4000 and cable. <b>Attractive bundle prices!</b>
ME-Synapse USB 6100i/4	<b>Remote signal generator station:</b> ME-Synapse LAN and 16 bit/500 kHz isolated 4 channel analog output board with FIFO ME-6100i/4. <b>Tip:</b> Order bundle with terminal block ME AB-D78M/6000 and cable. <b>Attractive bundle prices!</b>
ME-Synapse USB 8200A	<b>Opto-isolated ethernet digital station:</b> ME-Synapse LAN and opto digital I/O board ME-8200A.

**Scope of delivery:** ME-Synapse metal housing with LAN unit. Installation instruction. Ethernet cable. The required driver software is included with the ME board. Licence key (RPC licence) for ethernet network operation with Windows is included with the ME-Synapse LAN version. 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 already, that you want to use in an ME-Synapse, please call/e-mail our technical sales team: [sales@meilhaus.com](mailto:sales@meilhaus.com).

ME-Synapse LAN PWR	Power supply for the ME-Neuron and ME-Synapse LAN, with Phoenix connectors, DIN rail mountable
-. DT	See above, but desktop power supply
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

Function	"Docking-station"/adaptor for ME CompactPCI boards at ethernet/LAN
Bridge	CompactPCI-to-TCP/IP ethernet/LAN
Number of docking bays	2 or 6 (XL) active peripheral bus slots for 2 or 6 cPCI board or cPCI board(s) plus extender, as for example ME-1000/64 plus ME-1001 (= ME-1000/128) or ME-FoXX digital channels. 1 system slot with ethernet unit
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 doubt, call our sales team!

## General

Interrupt	Supported on the CompactPCI boards with interrupt functionality
Interface	TCP/IP ethernet/LAN
Housing	Robust metal housing with anti-slip pits for stacking. Optional rack mount kit for 19" systems. ME terminal blocks can be mounted on top
Size	(mm, HxWxD) ~ 85 x 147 (XL ~ 247) x 262 (without connectors and rubber pads)
Connectors	Ethernet RJ45. Phoenix connector for external power supply (optional) 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	Optional external power supply. 9...35 V, nominal 24 V. No-load current ~ 200 mA at 24 V
Fuse	2x 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-Synapse (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)