Baby-LIN-RM

USB-LIN-Bus interface with digital inputs and outputs

The Baby-LIN-RM allows to control LIN-bus equipped devices by use of an off the shelf standard personal computer. The only requirement is an USB-port on the PC. Furthermore LIN devices can be controlled by simple digital i/o signals.

So PLC based test equipment can be easily expanded to support LIN bus devices. This can be an interesting option, when a test bench upgrade is required.

The Baby-LIN-RM is build around a powerful 32 Bit microcontroller, which takes care of all time critical tasks like message scheduling and LIN-bus protocol decoding

The supplied software package **LINWorks** makes usage of the device very easy. Starting with a LDF file (LIN Description File) a working configuration can be realized in minutes. This configuration will specify, which nodes the Baby-LIN-RM is going to simulate, and which signal modifications or macro executions on the LIN bus should be triggered by changes of the digital inputs. Digital inputs can also read frequencies, which can be mapped to LIN signals.

The digital outputs of the module can be used to return status information's from the LIN bus to the PLC. For instance an output can be turned into active state, by the time a signal becomes equal, unequal, smaller or greater than a defined compare value. The device also supports in range and out of range checks of signal values.

The Baby-LIN-LIN-RM owns all properties of the standard Baby-LIN device and thus can be used as USB-LIN interface, too. The same pc software **LINWorks** can be used for all Baby-LIN variants.

Additional the device offers two configurable buttons. An application example would be the configuration of this buttons to work as Start and Stop commands for the LIN bus operation.

After creation of a configuration on the pc, the configuration is downloaded into the device via USB.

The possibility to store the configuration non volatile in the device enables the device for PC independent operation.

If a PC is connected during operation, signals can be displayed and modified in real time.

This can be done with the **LINWorks** component SimpleMenu, or via DLL access from within own applications (e.g. Visual Basic, LabView, etc.).

The device has two CAN-Bus interfaces. CAN data can be mapped to LIN signals.

All communication interfaces (LIN, CAN, USB) and the digital inputs are galvanically isolated from the logical circuit of the device.

The *LINWorks* application software Suite has been proved to operate under WIN98SE, WIN2000, WINXP and Vista. A Linux version is available on demand.

Specifications

- ➢ 60 Mips ARM-7 CPU, 256 KB Flash, 512 KB RAM
- ➢ supports LIN versions V.1.2 to V.2.1
- ➢ 5-Pin-USB-Buchse, Typ B-Mini, isolated
- ➢ 8 digital inputs, 8...32 V DC, isolated
- ➢ 4 digital outputs, open collector, 50 V, 2 A
- ➢ 2 configurable buttons
- ➢ LIN-Bus: Transceiver supports up to 200 Kbaud
- ➢ CAN-Bus: Transceiver SN65HVD251 (ISO11898)
- ➢ Supply 8...33 V DC, 250 mA (at 24 V)
- ➢ 1,5 m USB-Cable included
- ➢ *LINWorks* -PC-Software included
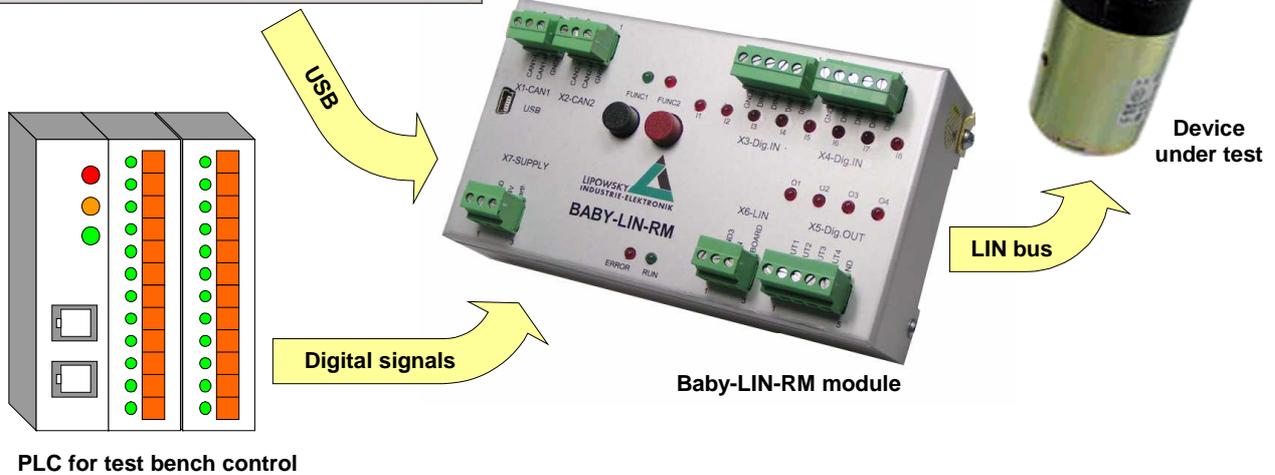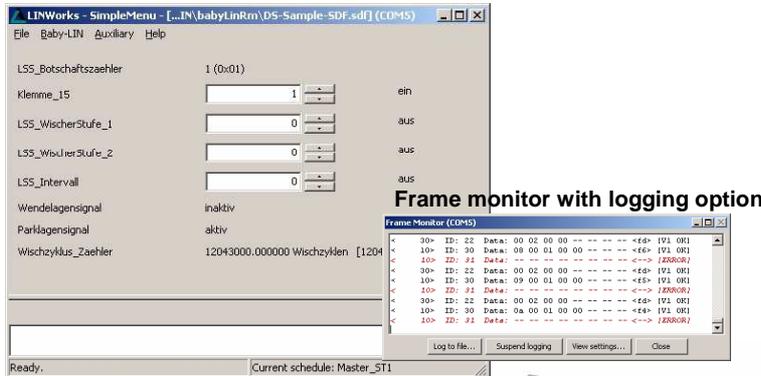- ➢ dimensions: 130 x 75 x 55 mm (l x w x d)

Order information

Baby-LIN-RM   Standard version

Sampe application
Wiper motor test bench

Realtime display of LIN signals on optional PC

Frame monitor with logging option

USB

Digital signals

Baby-LIN-RM module

PLC for test bench control

LIN bus

Device under test

Screenshots LINWorks: