



MicroLabBox

Compact Power in the Lab

Preliminary information.
Product availability planned for the end of 2014.

Embedded Success

dSPACE

MicroLabBox¹⁾

Compact prototyping unit for the laboratory

Highlights

- Compact all-in-one laboratory system
- High computation power
- Comprehensive high-performance I/O
- User-programmable FPGA
- AC motor control
- Ethernet and CAN bus interface



Application Areas

MicroLabBox is a new system class for the laboratory that offers high performance at a compact size and at low system costs. MicroLabBox enables you to set up your control, test or measurement applications quickly and simple, and helps you turn your new control concepts into reality. About 100 channels of different types of I/O interfaces (see list on the right) make MicroLabBox a versatile system that can be used in research and development for many mechatronic applications such as motion control, robotics, medical engineering or renewable energy.

Key Benefits

High computation power combined with very low I/O latencies provide great real-time performance. A programmable FPGA gives you a high degree of flexibility and enables you to run even extremely fast control loops, as required in applications such as electric motor control or active noise and vibration cancellation.

MicroLabBox is supported by a comprehensive dSPACE software package, including Real-Time Interface (RTI) for Simulink® for model-based I/O integration and the experiment software ControlDesk® Next Generation to provide access to the real-time application by means of graphical instruments during run time.

- PowerPC DualCore 2 GHz
- Kintex®-7 I/O FPGA
- Gigabit Ethernet host interface
- Digital I/O: 48 x 3.3/5 V, I/O functionality: bit-I/O, PWM, PWM2D, SPI
- Analog In: 8 x 10 MSPS, 14-bit (measurement ADCs), 24 x 1 MSPS, 16-bit (single, burst, external trigger), each +/- 10 V
- Analog Out: 16 x, 1 MSPS, 16-bit, +/- 10 V
- Electric motor control I/O functionality²⁾ (for up to two electric motors): 2 differential encoder interfaces, 2 x 3 Hall sensor inputs, 2 resolver interfaces, 2 x SSI/Endat, PWM multi-channel, PWMBLDC
- 2 x RS232/485 for general purpose
- Dual CAN interface
- Ethernet I/O interface
- Sensor supply: 1 x 12 V fixed, 1 x 2 ... 20 V adjustable
- USB mass storage
- Programmable buzzer and state LEDs
- Compact size: Approx. 310 x 250 x 115 mm (12.2 x 9.8 x 4.5 in)
- Kensington® lock

¹⁾ Preliminary information. The product is planned to be available at the end of 2014. All information given in this document is subject to change without notice.

²⁾ Planned for a later release.