

microUniDAQ – Palm-Sized USB Data Acquisition

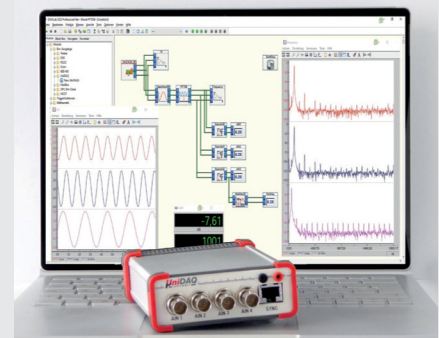
The microUniDAQ device series are compact, easy-to-use and cost-efficient USB data acquisition devices, which have been specially developed for mobile use. The microUniDAQ devices support all common sensor types with high accuracy measurement in 24-bit quality.

In combination with the DASyLab software, rapidly changing measurement tasks can be implemented quickly and with ease. Just connect the microUniDAQ device to a suitable computer or laptop via USB and start the measurement.

Various Applications

These include: Measurement, process and control systems, drive engineering, operational safety, condition monitoring, structural dynamics, material fatigue, road load data, comfort measurements, modal analysis, vibration monitoring and analysis, acoustic measurements, NVH (Noise Vibration Harshness), HUMS (Health and Usage Monitoring Systems), HALT (Highly Accelerated Life Testing) and HASS (Highly Accelerated Stress Screen testing), just to mention a few.

Perfect complement



DASyLab[®]
Data Acquisition System Laboratory

- Easy-to-use measurement software
- Monitor, control, analyze
- Over 120 ready modules

Your Advantages

Portable format: microUniDAQ devices fit in the palm of your hand.

Quick implementation: Easy connection via USB. Additional power supply is not required.

Universally applicable: For all common strain gauge and IEPE sensors as well as all sensors with voltage and current output (depending on device version).

Parallel and synchronized: Up to four microUniDAQ devices can be coupled.

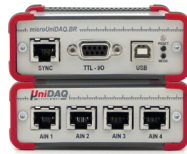
High measurement quality: Thanks to high-quality isolation, the devices work absolutely interference-free and with low noise.

Software included: Each microUniDAQ contains drivers for DASyLab and an API for Python, C/C++ Library, Qt GUI example.

Integrated data storage: Convenient data-logging on an integrated micro-SD card.

Cost-effective: High-quality measurement technology at a very reasonable price.

Technical Data



microUniDAQ.BR
for DMS with bridge output



microUniDAQ.IEPE
for IEPE sensors

| | | |
|---------------------------------|---|---|
| Analog Inputs | 3 x full bridge strain or force, differential 1 x voltage or current, single-ended | 4 x voltage or IEPE, single-ended |
| Sampling | Simultaneous, 24-bit resolution, 500 S/s to 128 kS/s Synchronization up to four microUniDAQ devices | Simultaneous, 24-bit resolution, 500 S/s to 128 kS/s Synchronization up to four microUniDAQ devices |
| Measurement Range | Voltage ± 12 V to ± 47 mV in power of two steps Current 0 to 24 mA, int. 250 Ω Shunt (AIN4 only) | ± 12 V AC, ± 12 V DC, +24 V DC |
| Bandwidth | DC to 0.43 x Sampling Frequency (-3 dB) | DC to 0.43 x Sampling Frequency (-3 dB) 0.5 Hz to 0.43 x Sampling Frequency (-3 dB) with AC-coupling |
| SNR | | 106 dB in 12 V range, 100 dB in 24 V range |
| IEPE Supply | | 2 or 4 mA, 24 V compliance |
| Accuracy | including offset, gain and noise errors 0.1% of full-scale in 12 V to 375 mV range 0.15% of full-scale in 188 mV to 47 mV range | |
| Bridge Excitation | Internal low noise regulated 2.5 V or 5 VDC, 25 mA per channel External 0 to 10 VDC Excitation Sense Lines | |
| Auxiliary Sensor Supply | 12 V, 25 mA per channel | 12 V, 50 mA |
| Analog Input Connectors | RJ45-8pin (Binder 711 8pin optional) | BNC |
| Digital Inputs | 3 x TTL (GPIO, Trigger, Tacho, Quadratur Encoder) | 3 x TTL (GPIO, Trigger, Tacho, Quadratur Encoder) |
| Digital Outputs | 2 x TTL (GPIO, Trigger, PWM) | 2 x TTL (GPIO, Trigger, PWM) |
| Auxiliary Digital Supply | 5 V, 50 mA | 5 V, 50 mA |
| Digital I/O Connector | 9-pin D-sub | 9-pin D-sub |
| Isolation | 400 Vpk functional isolation between analog inputs, USB, and Digital I/O | 400 Vpk functional isolation between analog inputs, USB, and Digital I/O |
| Overvoltage Protection | Analog Signal Inputs ± 42 V Analog Sense Inputs ± 24 V Digital Inputs -0.5 to 5.5 V | Analog Inputs ± 42 V Digital Inputs -0.5 to 5.5 V |
| Data Interface | USB2.0, DASyLab driver, Python API, C/C++ Library | USB2.0, B and C-type connector, DASyLab driver, Python API, C/C++ Library |
| Operation Modes | Data Acquisition Frontend with Hardware (Pre-)Trigger Data Logger with up to 32 GBytes storage on internal micro-SD card | Data Acquisition Frontend with Hardware (Pre-)Trigger Data Logger with up to 32 GBytes storage on internal micro-SD card |
| Power Supply | USB bus-powered, max. 500 mA | USB bus-powered, max. 500 mA on USB-B, max. 800 mA on USB-C |
| Dimensions | 114 x 108 x 40 mm | 128 x 108 x 40 mm |