SIQUAD Measurement Amplifiers:
Cost-effective Compact Modules and Miniature Systems

The open-ended computer controlled SIQUAD system has been down-sized to extremely cost-effective small compact module and miniature system versions.

There are modules and systems with 2 and/or 3 amplifier units especially for applications with a few channels and stand-alone operation. The compact modules have non-removable amplifiers, with the miniature systems they are exchangeable. Besides the proven modular 4-channel amplifiers for strain gauge, temperature, ICP® sensors, voltage, current, frequency signals (2 channels), and Digital-IO there is now a 2-channel universal amplifier available. It can handle up to 14 sensors with high precision like the big brother from the DASIM system.

All modules and systems are designed for DC supply (9 - 36 V) or AC supply (110 - 230 V), and have a CAN interface. Parameters can be set via a serial (RS 232 / RS 485) interface on the back or a CAN adapter. Signal input is from the front side. The miniature systems also offer an Ethernet interface for data acquisition and parameter setting.

There are 2 versions of the compact modules: 8 channels (optional 16 for TC) with CAN interface on the back, or 8 (16) channels with CAN interface on the front and RS 232 / RS 485 on the back. The amplifier types have to be specified when ordering, as they are built-in fixed. Housing types are flange, DIN-Rail, or box.

The miniature systems have box housings for 2 or 3 plug-in amplifier units with CAN and Ethernet interface on the front. The amplifiers in 19" technology can be swapped easily when measurement tasks change.

Sample rates are up to 20 kS/s per channel. AD conversion is with 24 bit resolution, digital data output with 16 bit. Calibration data and the complete parameter settings are stored in a flash EPROM. All channels are isolated and work synchronous.
An external access point allows data acquisition by WLAN via the Ethernet interface.

Imtron Software for parameter setting is DaSoft, for data acquisition it is DAQSoft. Drivers for DASYLab, DIAdem, and LabVIEW are also available. Functional libraries can be provided to incorporate parameter setting and data acquisition into a customer-specific software environment.