

Press Release

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ISO-Channel technology ensures noise-free data acquisition!

Ethernet/LXI Instrument Module with Four IEPE/ICP Inputs for Sound and Vibration Measurement

Data Translation is pleased to announce the release of a new highly accurate instrument with Ethernet interface. The DT 8837 model features four IEPE/ICP sensor inputs and is specially designed for applications that require sound, vibration or sonar measurements. Each channel provides a 24-bit A/D resolution, achieving a sampling rate of up to 52.7 kHz. With an analog output for stimulation and four digital outputs for switching, the instrument also has an additional tachometer input for measurements from rotating components. All I/O subsystems can be synchronized and simultaneously sampled. The ISO-Channel technology reliably eliminates external influences such as common mode noise or ground loops that can affect measurement accuracy.

A key feature of this technology is that each input channel is galvanically isolated from the other channels by its own custom DC/DC converter and digital opto-couplers. This ensures complete channel-to-channel isolation of up to 1000V.

The Ethernet (LXI) instrument includes a 24-bit Delta-Sigma A/D converter for each of the four analog inputs. The DT 8837 has a programmable sampling rate and data triggers. The 4mA current source for the IEPE sensor, AC or DC coupling and gains of 1 and 10 are all individually programmable per channel.

The DT 8837 supports simultaneous and synchronous analog input, tachometer input (31 bit) and analog output operations. The tachometer input can measure rotational speeds and also be used for phase measurements between the tachometer input and the A/D samples, achieving a resolution of 37 ns (0.002 degrees) at up to 10,000 rpm. The 24-bit analog output channel allows continuous smooth waveform output. A virtual output readback channel guarantees perfect correlation of all signals in the I/O data streams. Up to 16 instruments can be connected together and synchronized using an additional sync port.

The new instrument module comes with a ready-to-use software package, including the DT8837 application software, an IVI-COM driver and SCPI support. The built-in web interface allows module configuration and data acquisition and storage using any standard web browser.

Fig.:

DT 8837 Ethernet (LXI) instrument module with four IEPE inputs
for sound and vibration measurement

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