Two- and four-channel, 16-bit, 20M-sample/sec LXI digitizers offer floating inputs, 128M-sample/channel memory

Dan Strassberg - November 25, 2008

Agilent Technologies has introduced what it calls the first stand-alone high-resolution digitizers with LXI (local-area-network-extensions-for-instrumentation) connectivity. The company says that R&D and manufacturing engineers will choose these instruments when digital multimeters sample too slowly and oscilloscopes provide insufficient resolution for the required waveform analysis.

The two-channel L4532A and four-channel L4534A offer simultaneous sampling to 20M samples/sec with 16-bit resolution. The fully floating transformer-isolated input channels accept peak common-mode voltages as great as ±42.4V with respect to chassis and can measure full-scale signals as small as ±250 mV or as large as ±256V in such applications as electromechanical-device control for product characterization or test. There are 11 input-attenuator ranges in 2-to-1 ratios. Waveform-memory depth is 32M samples/channel with 128M samples/channel optional.

A choice of noise filters reduces the need to add expensive signal conditioning ahead of the digitizer. The units include built-in scopelike-measurement capabilities, such as maximum minimum and peak-to-peak voltage; frequency; and rise/fall time, which you can apply to selected waveform segments or to an entire waveform. The onboard measurements save postprocessing time and minimize the need to transfer and store large amounts of data.

The 1.75-in.-high, full-rack-width units fully comply with the LXI class C specification. They include as standard features USB 2.0 and GbE (gigabit-Ethernet) interfaces, enabling quick and simple connectivity to a PC or a network. In addition, you can operate the units remotely from any browser by accessing the built-in Web page. The US prices of the two-channel L4532A and four-channel L4534Z digitizers are $6500 and $8500, respectively. Extended memory for either unit adds $1500.