Data Acquisition Systems

SQi SpectraQuest, Inc.

SpectraQuest offers a wide range of data acquisition systems: 4 channels to 16 channels, low cost or high accuracy, portable or stationary. Combined with our VibraQuest data acquisition and analysis software, you can have a DAQ complete turnkey solution from one location.

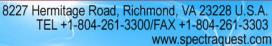## 4 Channel Portable USB (VQ-USB4/LF)

- ❖ 4 analog input simultaneous sampling channels, 1 tach channel
- ❖ 24 bits ADC, 102 dB dynamic range
- ❖ 51.2K samples/sec with 20KHz freq. range
- ❖ Portable and ragged design
- ❖ USB 2.0-compliant connectivity to PC.
- ❖ IEPE sensor power
- ❖ Built-in anti-aliasing filter
- ❖ AC/DC coupling
- ❖ ± 10 volts input range
- ❖ VibraQuest Pro data acquisition and analysis software.

8 or 16 Channel Portable SpectraPad (VQ-USB8/VQ-USB16)

- ❖ 8 or 16 analog input simultaneous sampling channels
- ❖ 2 or 4 Tach channels
- ❖ 24 bits ADC, 110 dB dynamic range
- ❖ 102.4Ksamples/sec, 40KHz frequency range
- ❖ All channels synchronized
- ❖ Portable and rugged design for easy handling and field application where more channel count is needed
- ❖ Connects to computer through USB port
- ❖ IEPE sensor power
- ❖ Built-in anti-aliasing filter
- ❖ AC/DC coupling
- ❖ ± 10Volts input range
- ❖ VibraQuest Pro data acquisition and analysis software.

VibraQuest is an integrated solutions package for rotating/reciprocating machinery fault diagnosis, structural dynamics analysis and design, and acoustical analysis. It provides tools to solve noise and vibration problems, from experimental design to solution strategy development. A complete brochure for VibraQuest is available.

VibraQuest Software

❖ Multi-channel data acquisition and analysis system.
❖ Powerful signal processing and data presentations of time waveform, FFT spectrum, and frequency response function.
❖ Hanning, flat top and Kaiser-Bessel window functions
❖ Linear, log or dB scale.
❖ Magnitude, phase, real, or imaginary FRF.
❖ Two active cursors with delta values.
❖ Data statistics (mean, median, RMS, deviation, variance, correlation, covariance, etc)
❖ Two graphs can be used to compare between different files or channels.
❖ Simple project management, including experimental design with over thirty built-in templates to organize and document testing.
❖ User defined project and test templates for repetitive experiments.
❖ Capability to incorporate user-defined non-linear sensor behavior.
❖ Impulse and hammer test data acquisition.
❖ Polar, Bode, Nyquist, orbit and waterfall plots.
❖ Cross power spectrum, coherence, and impulse response signal analysis.
❖ Additional window functions (Hamming, Blackman-Harris, exact Blackman, Blackman, 4 term Blackman, 7 term Blackman, force, and exponential).
❖ Octave analysis, 1 to 1/24 octave, linear, A, B, C weighting.
❖ Harmonics and sideband cursors.
❖ Up to eight graphs can be used to compare between different files or channels.
❖ Digital filtering.
❖ Multiple user management and Data Reporting
❖ Data import and export, including ME'scope for modeling and modal analysis.