



Rotary Machine Condition Monitoring Starter Kit

- Eliminate failure-related downtime
- Prevent hazardous malfunction
- Reduce excess maintenance costs

Highlights

- Easily set up, ready-to-go starter kit for rotary machines
- USB-2405 24-bit 4-CH USB DAQ:
 - USB bus power requires no additional power supply.
 - Built-in IEPE 2mA excitation current eliminates the need for supplementary signal conditioning devices to drive the accelerometer
- Phoenix GM Lite machine condition monitoring application:
 - 4CH simultaneous sampling at pre-defined intervals (min. 60 seconds)
 - Automatic OA (overall) calculation of displacement, velocity, and acceleration
 - Real-time display of acceleration waveform and FFT
- Threshold settings for conditions user-defined or by default with ISO 10816 machinery vibration standards
- Quick attachment of accelerometer to the rotary device with integral magnetic mount means no adapter or additional fastening is required



Highlights

Ready to Go, Worry Free

Integral Accelerometer Mounting Magnet

The Accelerometer included in the ADLINK Starter Kit, provides frequencies from 0.5 to 10kHz and a maximum amplitude of 50G. Perfect for rotating machinery condition monitoring, the accelerometer attaches magnetically, allowing easy adjustment of location to any test point, avoiding costs and effort of non-returnable tapping meters.



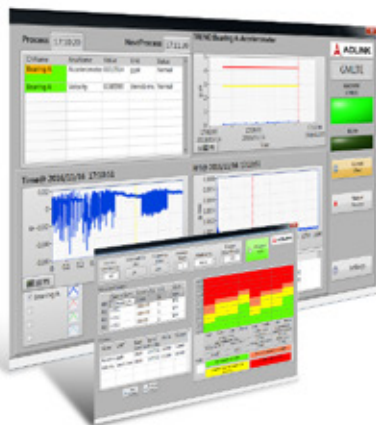
Start Projects Anywhere

ADLINK USB-2405 4-CH 24-Bit DSA Module is intuitive and easy to use for microphone and accelerometer measurement in vibration and acoustic applications with compelling features including built-in IEPE 2mA excitation current source on each channel without additional signal conditioning, and anti-aliasing filters enable cutoff frequency to be automatically adjusted to the sampling rate, suppressing out-of-band noise. In addition, the USB-2405's USB bus power makes it perfect for portable field measurement when used with laptop.



Efficient, Easy, Machine Condition Monitoring Application

Phoenix GM Lite Software monitors and analyzes rotating machinery, calculating different overall (OA) bandwidths and condition data and generating alerts when predefined alarm and condition parameters are exceeded. Threshold settings can be user-defined or by default with ISO 10816 machinery vibration standards.



Software

Phoenix GM Lite Rotary Machine Condition Monitoring Application

- 4CH simultaneous sampling at pre-defined intervals (min. 60 seconds)
- Automatic OA (overall) calculation of displacement, velocity, and acceleration
- Real-time display of acceleration waveform and FFT
- Threshold settings for conditions user-defined or by default with ISO 10816 machinery vibration standards
- Trend display and report generation
- Efficient raw data storage:
 - Below alarm level: recording OA only
 - Exceeding alarm level: recording raw data for further analysis

System Requirements

Microsoft® Windows® 7,
Server 2012® or Windows 8® ,
Windows 8.1® and above

Microsoft® Office® 2010 and above

Intel® Pentium® 4
933 MHz CPU and above

RAM 512MB and above

Mouse

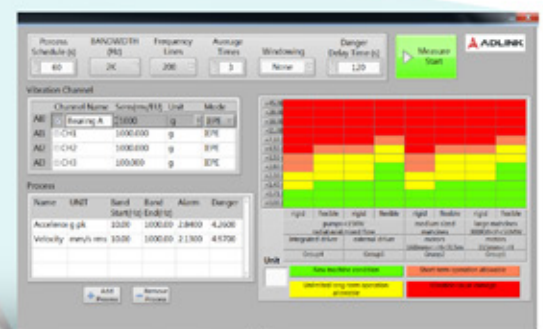
USB port

Calculates different overall (OA) bandwidth and condition data, generating alerts when pre-defined alarm and condition parameters are exceeded.



Real-time display of acceleration waveform and FFT

The red, yellow, and green icons are easy to read and recognize the abnormal state according to the customized alert range



Threshold settings for conditions user-defined or by default with ISO 10816 machinery vibration standards



FAQ

Q1. How can I get Phoenix GM Lite?

The GM Lite can be downloaded from ADLINK's website, by searching for "rotary machine condition monitoring starter kit".

Q2. Can we run GM Lite software alone (without USB-2405)?

No, you have to run it with USB-2405, which acts as the hardware keypro of the GM Lite application.

Q3. How can I activate GM Lite?

Follow the Quick Start Guide included in the package to get the license file of GM Lite and copy the license to the folder.

Q4. How do I mount the accelerometer on the machine to be monitored?

The integral mounting magnet lets you mount the accelerometer directly on the machine.

Q5. Where is a suitable location to mount the accelerometer ?

Close to the rotating shaft.

Q6. What's the accuracy of failure prediction for GM Lite?

While overall vibration measurement is effective, definition of suitable parameters for different machines is critical. To increase the accuracy of failure prediction, collecting data for a complete cycle (from optimum to fail) is required. It is ideal to collect data from the first installation or immediately following annual maintenance to failure to define acceptable alarm and condition parameters. If desired, GM Lite's built-in ISO 10816 machine vibration standards for default settings can be used, with no need for user preset.

Q7. Can GM Lite identify malfunctioning or inoperative parts or components?

Although GM Lite measures overall vibration (OA) as a quantization, for defining health status of machines, it is not designed to identify parts or components which may be causing the unacceptable measurement results. When overall vibration exceeds acceptable limits, the user should contact the vendor for further instructions.

Specification



USB-2405

Channel No.	4
Mode	Diff/P-Diff
Resolution	24
Max. Sampling rate	128 kS/s
Input coupling	AC/DC
AC cut-off Freq.	0.4Hz (-3dB) 2.4Hz (-0.1dB)
Dynamic range	100 dB
THD	-94 dB
THD+N	-91 dB
Input Range	±10V
IEPE excitation current	0 or 2mA
IEPE compliance	24V
Over-Voltage protection	±60V
Trigger source	Analog (any AI), digital
Trigger mode	Post, delay, middle, gated, pre-trigger, re-trigger
Auto-calibration	YES

Accelerometer: PCB 603C01

Performance	
Sensitivity (±10 %)	100 mV/g
Measurement Range	±50 g
Frequency Range (±3 dB)	0.5 to 10,000 Hz
Resonant Frequency	1500 kcpm
Broadband Resolution (1 to 10000 Hz)	350 µg
Non-Linearity	±1 %
Transverse Sensitivity	≤7 %
Environmental	
Overload Limit (Shock)	5000 g pk
Temperature Range	-65 to +250 °F
Enclosure Rating	IP68
Electrical	
Excitation Voltage	18 to 28 VDC
Constant Current Excitation	2 to 20 mA
Output Impedance	<150 Ohm
Output Bias Voltage	8 to 12 VDC
Physical	
Size - Hex	11/16 in
Size - Height	1.65 in
Weight	1.8 oz



Starter Kit Contains:

- USB-2405 (24-bit 4-CH USB DSA)
- Phoenix GM Lite machine condition monitoring utility license (Microsoft® Windows based)
- Accelerometer (PCB 603C01)
- 10 ft cable for accelerometer
- Mounting magnet