

# Data Acquisition (DSA)

## Getting Started

Setting up your Spider unit for the first time? Go [here](#) to receive help on connecting your unit. Also check out the [EDM Overview Guide](#) to learn important information regarding the EDM Software.

## Training

Check out our guides to set up some of the most frequently used tests and learn some of the features and capabilities that the DSA software has to offer.

### FFT Analysis

FFT analysis test focuses on using applications of digital signal processing theory such as calculations of auto-power spectrum, cross power spectrum, Fourier transform etc. for input channel signals.

### Acoustic Analysis

Acoustics Analysis provides 1/Nth octave analysis using true real-time digital filters in accordance with ANSI std. S1.11:2004, Order 3 Type 1-D and IEC 61260-1995 specifications. A, B, and C weighting filters can be applied to the input data. Output results are weighted or unweighted RMS values.

### Order Tracking

Order Tracking is a general term describing a collection of measurement functions used for analyzing the dynamic behavior of rotating or reciprocating machinery for which the rotational speed can change over time. Unlike the power spectrum and other frequency-domain analysis functions where the independent variable is frequency, Order Tracking functions present the data against multiples (Orders) of the variable shaft running speed.

### Strain Measurement

The Spider-80SG is a high precision, general purpose data acquisition device featuring IEPE, strain gage and MEMS functionality. The Spider-80SG can acquire data from IEPE and MEMS accelerometers, Bridge-based sensors like load cells, strain measurements from strain gauges and many other physical quantities and general-purpose sensors.

### Temperature Measurement

The Spider-80Ti is one of the front-ends on the Spider-80Xi hardware platform that enables Temperature measurement. Spider-80Ti supports temperature measurements from Thermocouples and RTD (Resistance Temperature Detector) sensors.

## Common Issues

Take a look at some of our helpful guides to help fix some of the most common issues. Don't see what you're looking for below? Send us an email at [support@go-ci.com](mailto:support@go-ci.com).

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