Overview
A full bridge attenuator with 100:1 divider ratio must be connected to the input and a 100-200mV peak to peak sine wave signal applied. Frequency is varied from 1 Hz to the Nyquist frequency at ½ the sample rate and A/D counts recorded and plotted at a number of frequency points. The highest output in the result is determined and the frequency at which the output drops to 70.7% of that highest output is the -3 dB point.

An example diagram of the test setup is shown below in Figure 1.

This particular test was accomplished with a LORD MicroStrain® SG-Link®-LXRS® wireless 2 channel analog input sensor node. Using the above input (as shown in the circuit diagram) and a signal generator creating a sinusoidal input, amplitudes were measured with the SG-Link®-LXRS® in pure analog to digital counts. The peak to peak amplitudes were associated with signal generator input frequency to produce a BODE plot as shown in Figure 2.
A BODE plot is typically used in this manner to show frequency response of a system of measurement with an input filter. In a case where the user is concerned with aliased data, appropriate filter settings are important to understand. Improper filter settings can introduce aliasing and may invalidate test data.

**Figure 2:** BODE plot for SG-Link with 250Hz differential input filter

Support
Lord MicroStrain® support engineers are always available to expand on this subject and support you in any way we can.