

# Using EasyScope X to retrieve Average Waveform Data

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Waveform averaging can be a useful method to decrease noise in a particular signal.

The SIGLENT SDS series of oscilloscopes can easily collect average waveform data using EasyScope X software.

**NOTE:** At this time, average waveform data is not able to be saved in CSV format via the front panel USB connection to a USB memory stick.

## Initial Setup

- Download NI-VISA Runtime Engine that matches your operating system, if your computer does not already have the VISA library.

It can be downloaded from National Instruments: <http://bit.ly/2pw5gQW>

- VISA library installed. This is the communication library used by EasyScope X software to communicate with the instrumentation

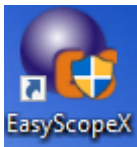
- Download EasySpectrum Software from the SSA3000X Product Page on the SIGLENT America website: <http://bit.ly/2okc8wG>

## Connect and Collect

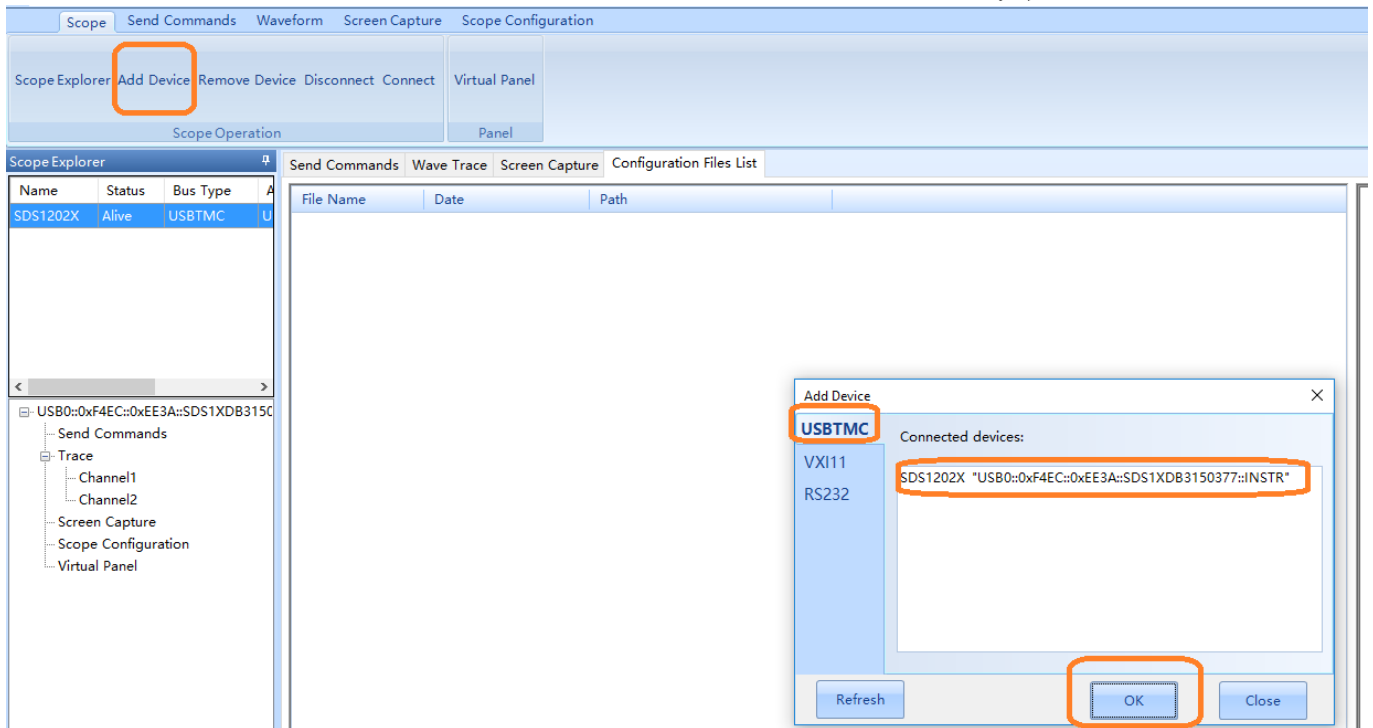
1. Connect the scope to the computer using a USB or LAN connection and power it on.

**NOTE:** This example uses a USB connection for communication between the scope and computer.

2. Open an instance of EasyScopeX by clicking on the desktop icon:



3. Add Device and select the session address for the instrument you wish to connect:



4. Configure the instrument to capture the signal of interest. You can perform this manually on the front panel, or you can use the Virtual Panel control.

Select Virtual Panel > Acquire > and press the button labeled Acquisition until the type = Average:



5. Select Waveform, and use the Play/Pause button to acquire the waveform of interest. Then, select Save > select the channel of interest > select the type of CSV to save > Press Save to open a file dialog box.

The screenshot shows the EasyScopeX software interface. At the top, there is a menu bar with 'Scope', 'Send Commands', 'Waveform', 'Screen Capture', and 'Scope Configuration'. Below this is a toolbar with various icons, including a play button (Auto Refresh) and a save button. The main area is divided into a 'Scope Explorer' on the left and a waveform display on the right. The 'Scope Explorer' shows a tree view with 'Send Commands', 'Trace', 'Screen Capture', 'Scope Configuration', and 'Virtual Panel'. The 'Trace' folder is expanded, showing 'Channel1' and 'Channel2'. The waveform display shows a yellow signal on a black background with a grid. A 'Save waveform' dialog box is open in the foreground, with the following details:

- Channel: CH1
- Total: 2800
- Start: 0
- End: 2799
- Step: 1
- Channels: CH1 (checked), CH2, CH3, CH4
- Options: Show Properties (checked), Show Column Header (checked), Show Time Column (checked)
- File Format: Single CSV File (selected), A CSV File Per Channel
- Buttons: Save, Cancel



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