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# M121-I Installation Instructions for Tempus Data System

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## M121-I Installation Instructions for Tempus Data System

**Version 1.0**  
**June 15, 2021**

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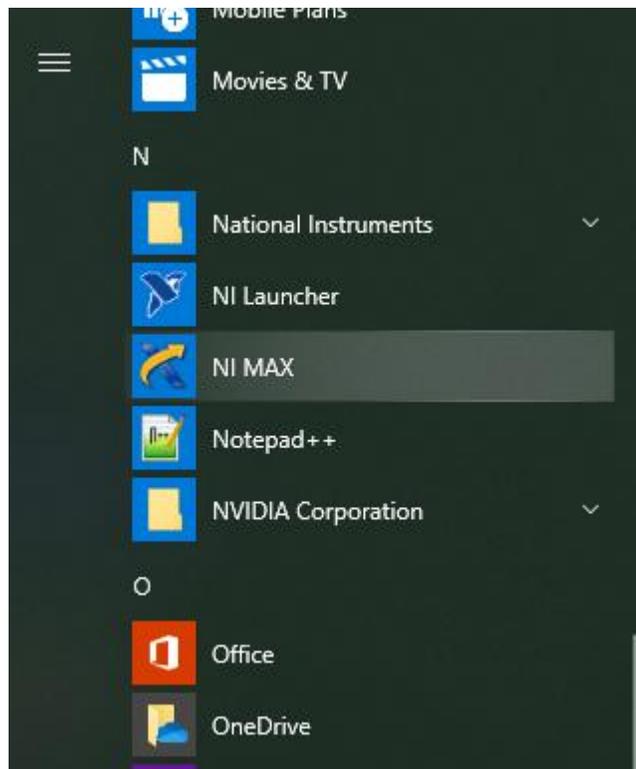
## Installation

1. For a quadrupole Data Acquisition installation of Tempus, you will need to install the National Instruments software, which is provided on the Tempus installation DVD. Tempus version 5.0 uses National Instruments DAQmx version 14.1.xx. This may take a few hours to do so plan accordingly.
2. Once the National Instruments DAQmx software has been installed, it will request that you shut down the computer. At this time, connect the USB cable to the Tempus Data System box, and turn the Tempus Data System box on.
3. Boot up the computer and the USB device should be detected and installed.

For the initial system validation tests, make sure that you do not have the Tempus application running.

Verifying that the National Instruments software is installed correctly:

1. Open the Windows Start menu, find the NI MAX application, and launch it.

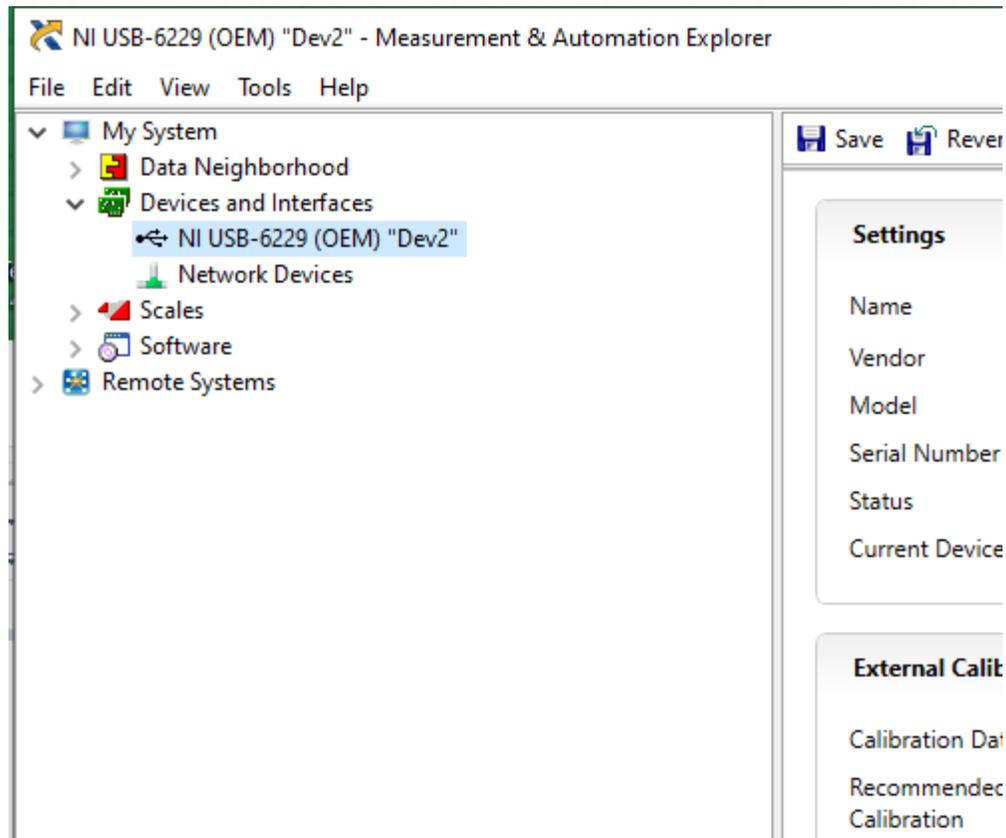


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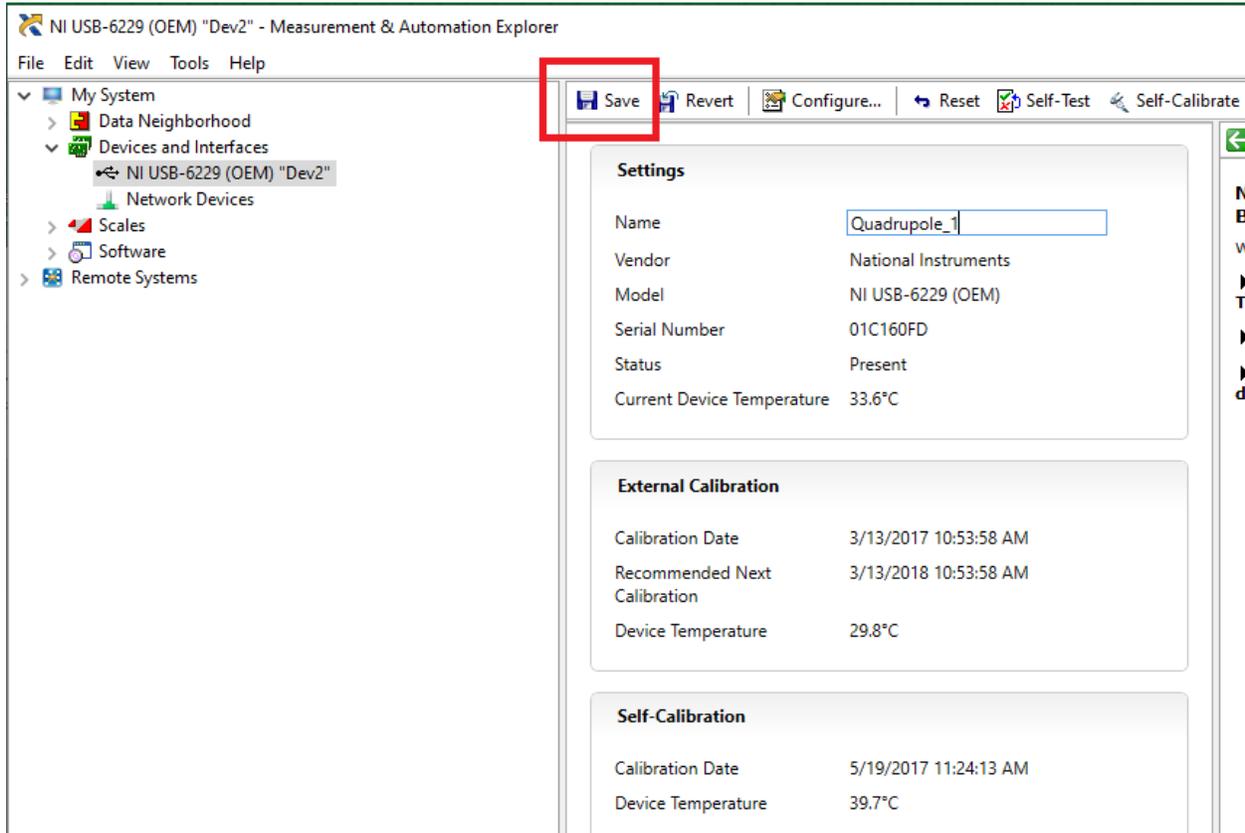
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2. Once NI MAX is open, click the down menu next to “Devices and Interfaces” and locate NI USB-6229 (OEM) "Dev2". The device name is not important at this point in time.



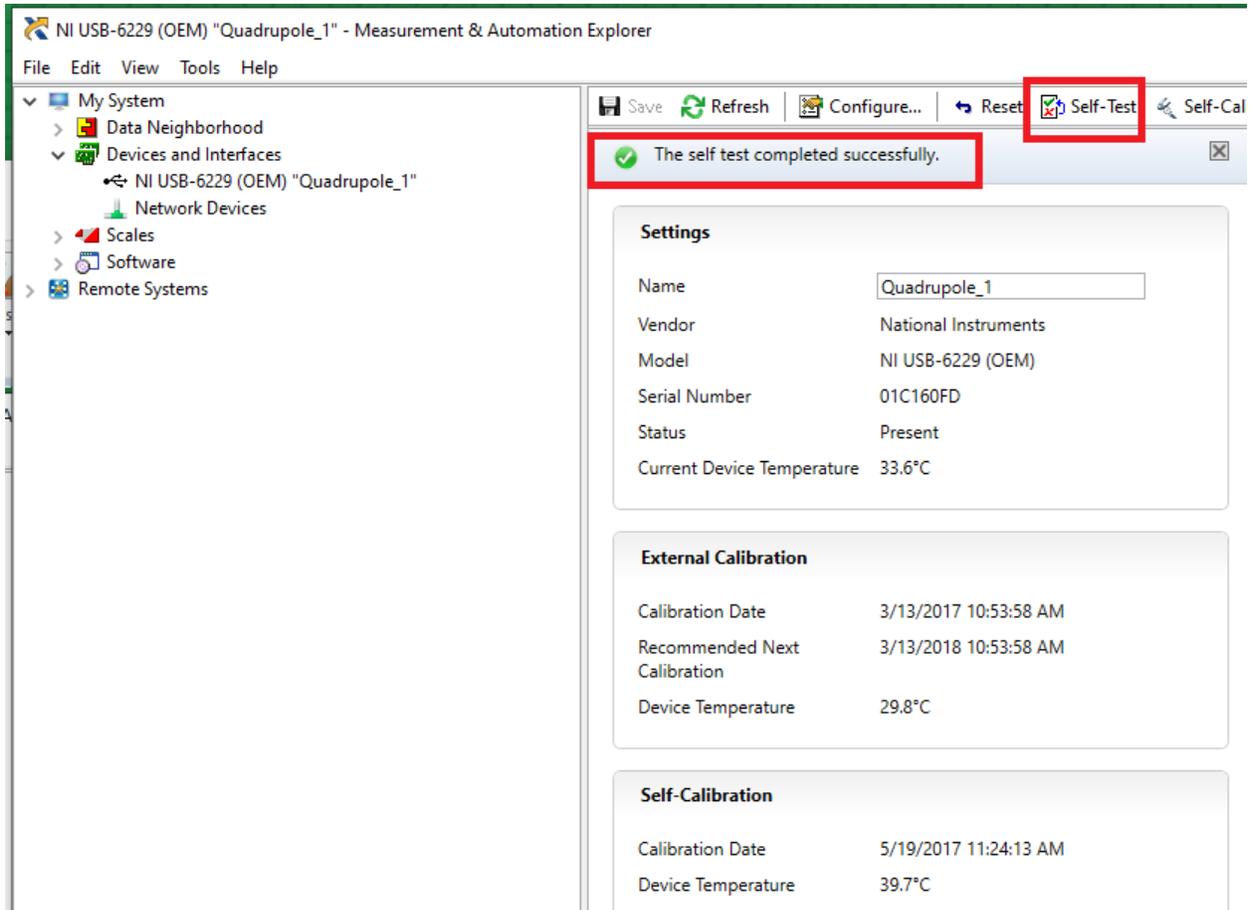
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3. Double click on the device labeled NI USB-6229 (OEM), and rename the device as "Quadrupole\_1", then hit the Save icon.



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4. Run the Self-Test, and verify that the Self Test completes successfully.



NI USB-6229 (OEM) "Quadrupole\_1" - Measurement & Automation Explorer

File Edit View Tools Help

Save Refresh Configure... Reset Self-Test Self-Cal

✓ The self test completed successfully.

**Settings**

Name	Quadrupole_1
Vendor	National Instruments
Model	NI USB-6229 (OEM)
Serial Number	01C160FD
Status	Present
Current Device Temperature	33.6°C

**External Calibration**

Calibration Date	3/13/2017 10:53:58 AM
Recommended Next Calibration	3/13/2018 10:53:58 AM
Device Temperature	29.8°C

**Self-Calibration**

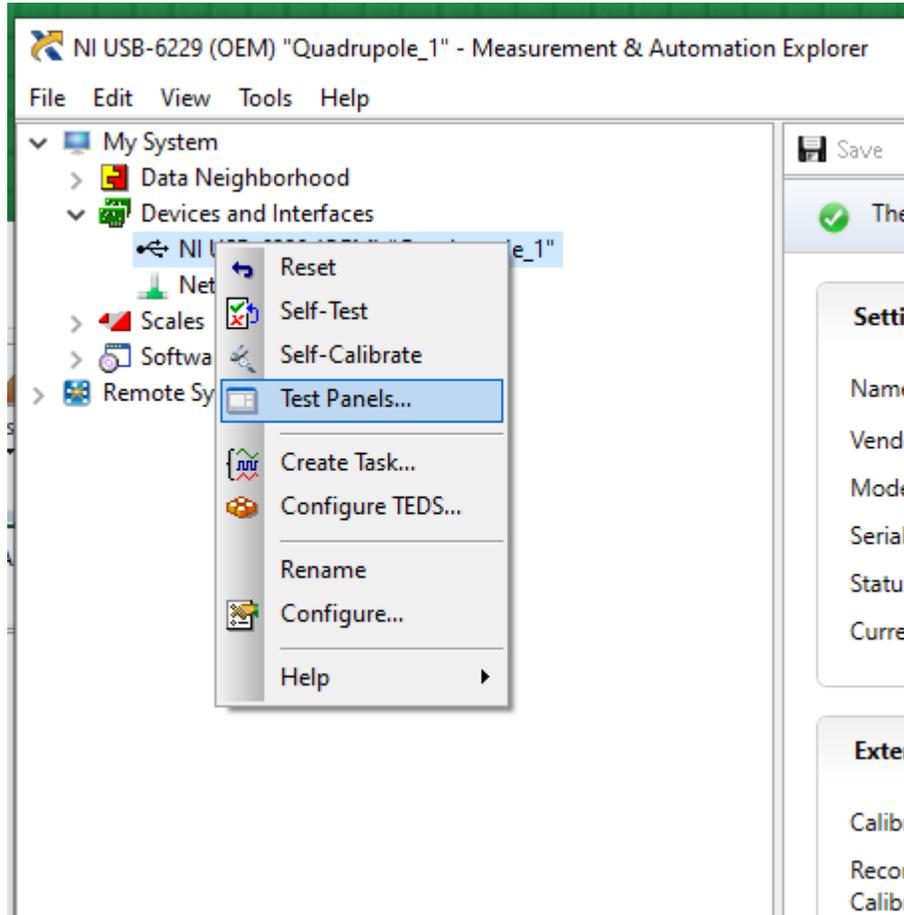
Calibration Date	5/19/2017 11:24:13 AM
Device Temperature	39.7°C

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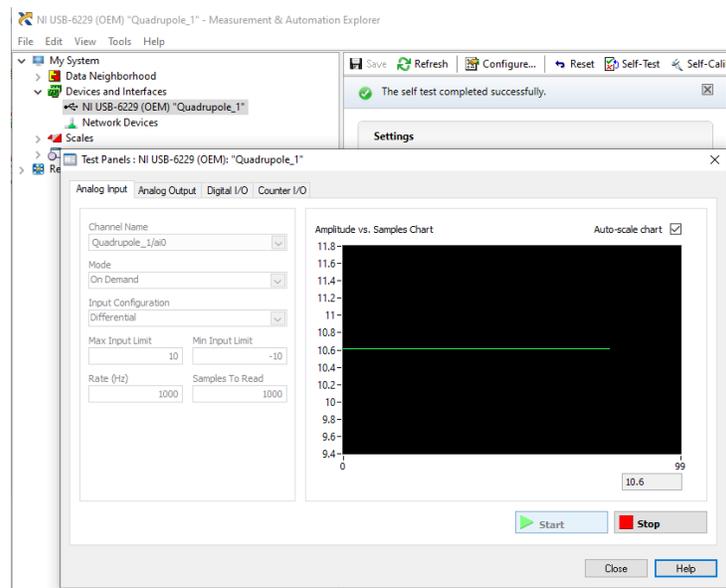
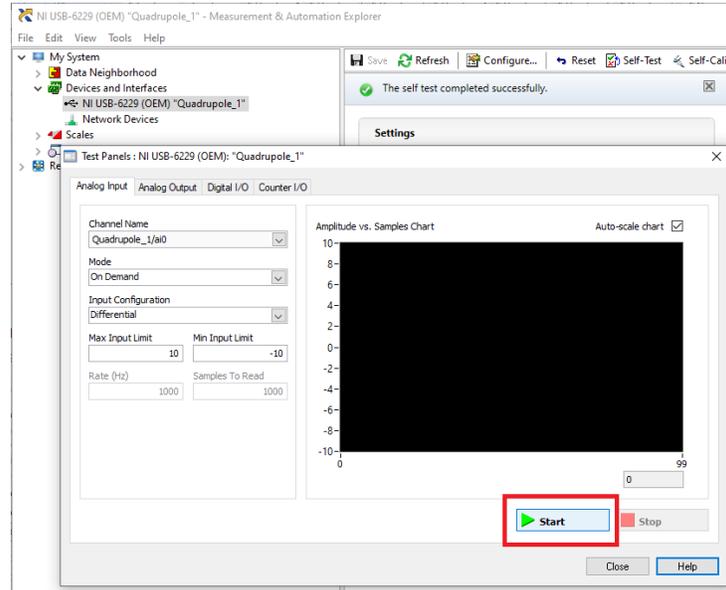
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5. Right click on the NI USB-6229 device, and select the 'Test Panels...' menu item.



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- Click on the 'Start' button and verify that the voltage on the chart updates in real time.



This completes the NI MAX testing. Exit the NI MAX software.

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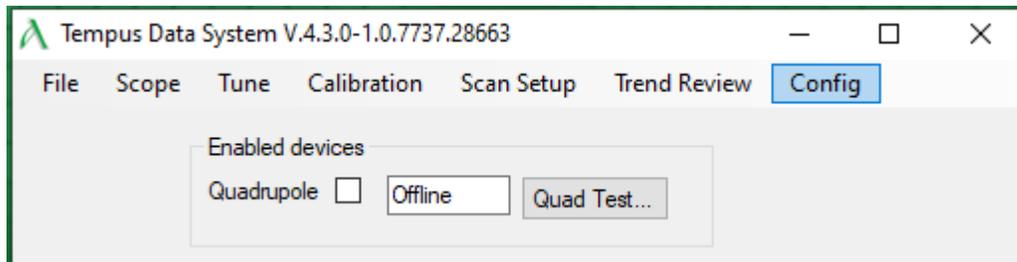
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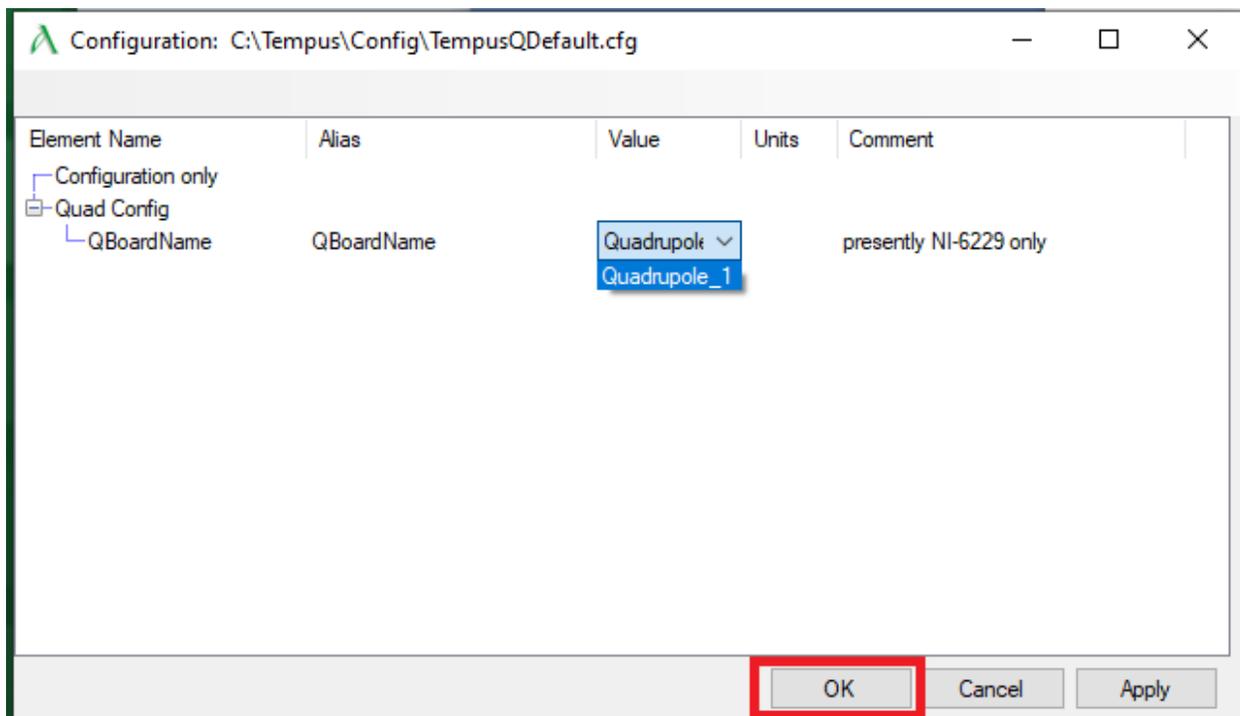
## Software Setup and Use

Install the Tempus software from the installation disk, but running the Setup.EXE file, and following the default instructions, then launch the Tempus Data system.

1. Launch the Tempus Data System, and click on the Config menu item to launch the Config editor.



1. Click on the 'Value' field for the QBoardName element, and select the newly named Quadrupole\_1 device, then click the Okay button, which will ask you to save the file.

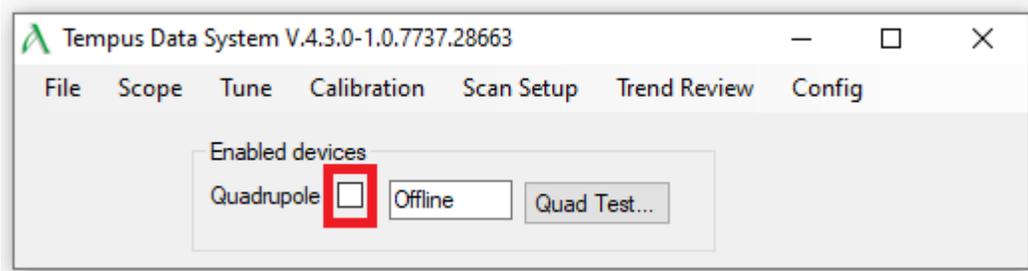


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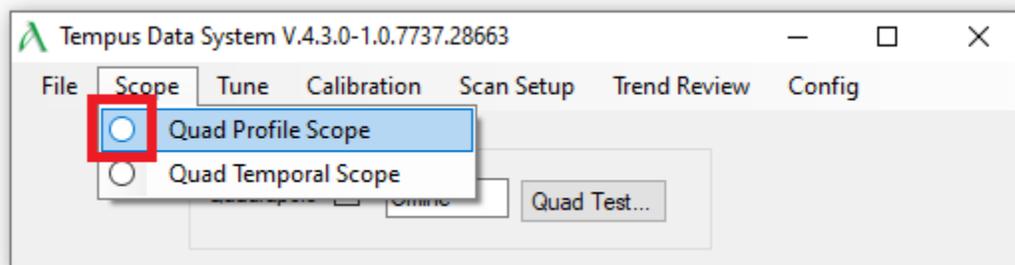
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1. Check the checkbox to enable the Quadrupole device. This will change its state to Running.



1. Under the Scope menu item, select the radio button for Quad Profile Scope. This will launch the Quad Profile Scope dialog box, which should show a red line of data, which updates in real time. Verify that the Scan Number (SN) is incrementing.



If the Scan number is incrementing, you have successfully installed the software.