

Thermocouple Reader Getting Started Guide

NOTE: This guide is applicable to Thermocouple Reader rev X3 or later.

Hardware Setup

To get started with the thermocouple reader:

1. Plug in the Ethernet cable and either the power barrel jack or USB power on the rear of the device.
2. Wait for 10 seconds while the device boots.
3. A green light should be visible on the front panel on the right side, which indicates the thermocouple reader has booted.
4. Ensure there are visible lights on the Ethernet connection jack, indicating connection to the network.
 - a. If no lights appear, check the network connection.
5. The device is now ready to measure temperature.
6. Follow the instructions below to graph the temperature
 - a. Alternately, install the [Subinital Python Library](#) and see the STCR's example.py to start writing your own script.

NOTE: At this time, the screw terminal blocks on the rear of the device are reserved for future functionality and should not be connected.

Software Setup

A temperature graphing example is provided as a quick way to get started gathering data from the thermocouple reader. Below are the steps to gather & graph data.

1. Install the Subinital Python Library, instructions available [here](#).
2. If your current Python install does not have the "numpy" package, in a command prompt / terminal, type **pip3 install numpy** to install numpy.
3. Install KST2 from [here](#) (Windows package available [here](#))
4. Power up the Thermocouple Reader with the above procedure and plug in some thermocouples.
5. Test connection to Thermocouple Reader:
 - a. Windows:
 - i. Install the [LXI Discovery Tool](#), including the additional [Bonjour service](#) noted on the LXI Discovery Tool website.
 - ii. Run the LXI Discovery Tool, and click "Search"
 - iii. Find the thermocouple reader by serial number.
 - iv. Click on the thermocouple reader and "Open Web Page"
 - v. If the web page displays, then you have verified connectivity to the Thermocouple Reader.

- vi. If the thermocouple reader is visible in the LXI Discovery Tool but the thermocouple reader website doesn't display, this indicates your network configuration is preventing your computer from accessing the thermocouple reader. Please contact your network administrator to resolve this. [For Network Admin: LXI Discovery Tool uses mDNS for device discovery]
- b. Alternately:
- i. Identify the serial number of the Thermocouple Reader, located on a sticker on the rear of the device.
 - ii. On Windows devices, ensure mDNS support is installed, such as [Apple Bonjour service for Windows](#).
 - iii. In a terminal window / command prompt, type **ping stcr<SN>.local** where <SN> is the numerical part of the serial number of the device, for example if the serial number label reads "SN000123" the command to enter to command prompt would be **ping stcr000123.local**
 - iv. If a ping is successful, proceed to the next step, otherwise check your network and/or hostname resolution.
6. Download and extract *SD00801_Thermocouple_Reader_Graphing_Example.zip*, which contains the example script, data, and graph files.
 7. Open "thermo_graph_plot.kst" with KST2 to see an example of data graphing.
 - a. If KST2 indicates it cannot find "thermo_graph.csv", locate and select the "thermo_graph.csv" that was extracted from the .zip file
 8. Run "thermo_graph.py" python script to start taking temperature data. Note: temperature data should be displayed in the console window.
 9. Return to KST2, and click  *File* → *Reload All Data Sources*
 10. Observe the graph, updating with realtime temperature data.

