

## Qwiic Thermocouple Amplifier - MCP9600

SPX-15508 ROHS

The MCP9600 is a high accuracy thermocouple amplifier equipped with an I<sup>2</sup>C interface, accessed over our **Qwiic** system. Inside the chip are two temperature sensors, one for the thermocouple itself (the hot junction) and one for the chip itself (the cold junction). As a result, the MCP9600 can read both the ambient temperature **and** the temperature of whatever you're trying to measure! The MCP9600 can do both with a resolution of 0.0625°C, and an accuracy of ±1.5°C (worst-case). This board comes ready to accept a K-type thermocouple, which gives a temperature range of -200°C to 1350°C! This makes it perfect for a variety of applications, from measuring the temperature of your Crock-Pot to making sure your backyard induction furnace is up to temperature.

In addition, the MCP9600 has four onboard temperature alerts that you can configure! Instead of constantly polling the sensor over I<sup>2</sup>C, you can set a temperature limit to trigger an interrupt when the temperature reaches a certain value. This frees up your microcontroller and your I<sup>2</sup>C bus to do more important things.

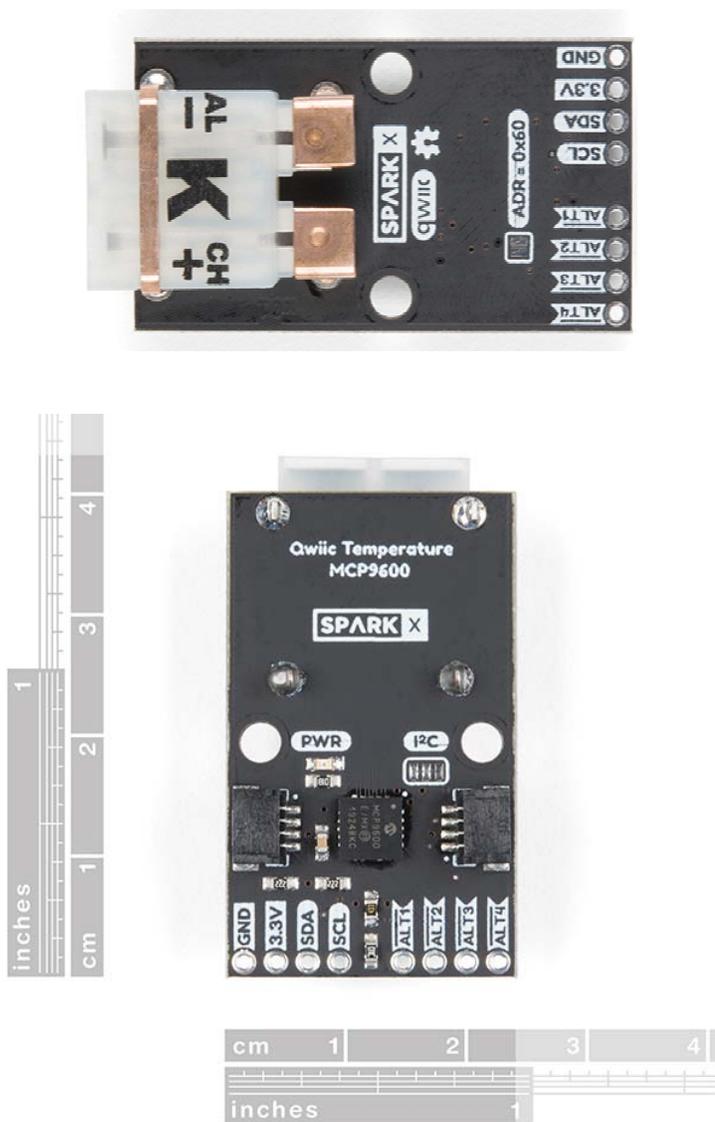
It's also possible to put the MCP9600 into alternate operation modes in order to save power. The sensor supports a burst mode, where it will take a specifiable number of samples, return the results, and then go to sleep. This low-power mode makes the MCP9600 perfect for portable applications!

We've written an [Arduino library](#) to help you get started quickly. You can download the library through the Arduino library manager by searching '**SparkFun MCP9600**' or you can get the GitHub repo as a .zip file and install the library from there.

This board is one of our many [Qwiic](#) compatible boards! Simply plug and go. No soldering, no figuring out which is SDA or SCL, and no voltage regulation or translation required!

We do not plan to regularly produce SparkX products, so get them while they're hot!

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<https://www.sparkfun.com/products/15508/7-30-19>