

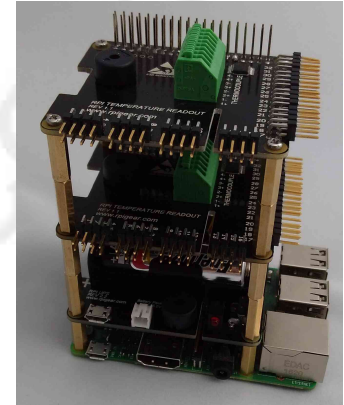
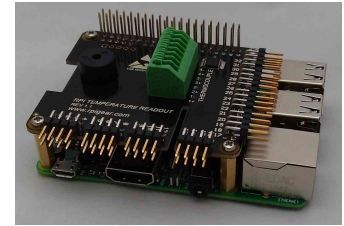
Raspberry Pi Temperature Readout

Overview

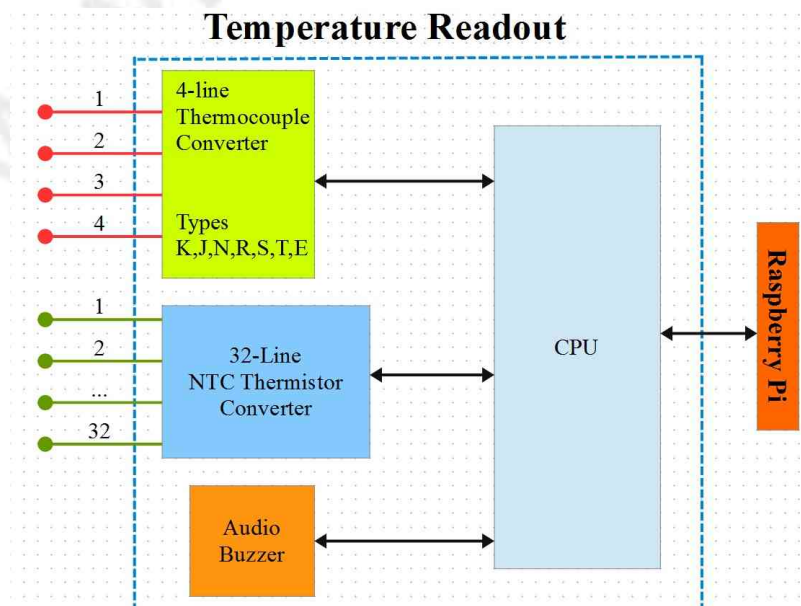
A temperature sensor interface board for the Raspberry Pi with 4 thermocouple inputs and 32 NTC thermistor inputs, for a total of 36 temperature sensors. Simple to use software also allows logging to a text file for later import to a spreadsheet and graphing.

Main Features

- Four Thermocouple inputs, individually configurable for one of {K,J,N,R,S,T,E}.
- Thirty-two NTC Thermistor inputs, 25C resistance and Beta are individually configurable allowing mixing different types of NTCs.
- Easy to use software displays temperature of each sensor on screen and can save samples to a text file for later export into spreadsheets and graphing.
- Audio buzzer can be enabled to beep when any of the sensors are outside of the specified temperature ranges.
- Automatic open circuit fault detection recognizes broken wires or bad connections.
- Stackable architecture and configurable I2C address allow the unit to coexist with other daughter cards/hats.



Block Diagram



Specifications

Power Consumption	50mA @ 5V
Thermocouple Types	K,J,N,R,S,T,E Individually configurable
NTC Thermistor Types	1K to 100K recommended 25C Resistance and Beta individually configurable
Raspberry Pi Interface	I2C 400Khz max, configurable address
Mechanical	73mm x 64mm outline Weight of 28.4g Note 1
Raspberry Pi Connector	2x20 2.54mm pitch stackable header
NTC Connectors	2.54mm/0.1inch pitch headers
Thermocouple Connector	8 Pin Quick Connect

Note 1: Doesn't include mounting hardware(standoffs,screws) or any sensors