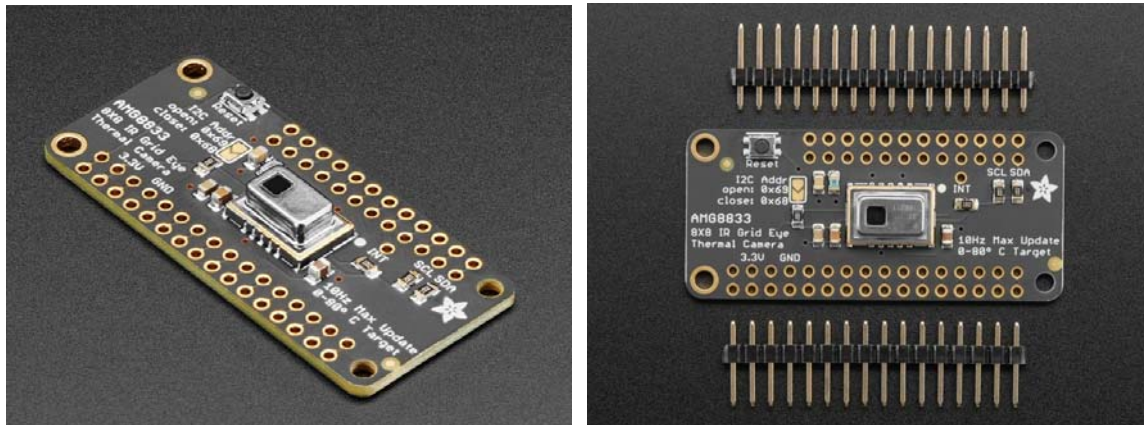# Adafruit AMG8833 IR Thermal Camera FeatherWing

PRODUCT ID: 3622

Description

A Feather board without ambition is a Feather board without FeatherWings! This is the Thermal Camera FeatherWing: thanks to the Panasonic AMG8833 8x8 GridEYE sensor, it adds heat-vision to *any* Feather main board. Using our Feather Stacking Headers or Feather Female Headers you can connect a FeatherWing on top of your Feather board and let the board take flight!

This sensor from Panasonic is an 8x8 array of IR thermal sensors. When connected to your Feather it will return an array of 64 individual infrared temperature readings over I2C. It's like those fancy thermal cameras, but compact and simple enough for easy integration.

This part will measure temperatures ranging from 0°C to 80°C (32°F to 176°F) with an accuracy of +-2.5°C (4.5°F). It can detect a human from a distance of up to 7 meters (23) feet. With a maximum frame rate of 10Hz, It's perfect for creating your own human detector or mini thermal camera. We have an easy-to use Arduino and CircuitPython code so you can get started fast. The sensor communicates over I2C. If you have a fast Feather like the ESP8266, ESP32 or Teensy, you can interpolate the 8x8 grid and get some pretty nice results! (The video above shows a peace-sign finger demo using a Teensy Feather and 24x24 interpolation)

The AMG8833 is the next generation of 8x8 thermal IR sensors from Panasonic, and offers higher performance than it's predecessor the AMG8831. The sensor only supports I2C, and has a configurable interrupt pin that can fire when any individual pixel goes above or below a threshold that you set.

Pair this up with our TFT FeatherWing and some stackin' headers to make the snazzy Thermal Camera demo shown above - Feather and TFT Wing not included.

Technical Details

Check our our detailed guide for wiring diagrams, datasheets, schematics, libraries, code, Fritzing objects, etc! https://cdn-learn.adafruit.com/downloads/pdf/adafruit-amg8833-8x8-thermal-camera-sensor.pdf

Product Dimensions: 50.0mm x 23.0mm x 6.1mm / 2.0" x 0.9" x 0.2"

Product Weight: 4.7g / 0.2oz