Wide angle (110°) – MLX90640 Thermal Camera Breakout

MLX90640 Thermal Camera Breakout
A sophisticated, hackable, 32x24 pixel thermal camera breakout! Use it to monitor the temperature of your CPU or coffee pot, or to build your own heat-seeking night vision camera. Works with Raspberry Pi or Arduino. PIM366
It's perfect for building into projects - industrial, scientific, or just fun - and much more affordable than most thermal cameras. Our breakout makes it easy to use the camera with your Raspberry Pi or Arduino, using I2C and 3-6V supply. And it's available in two different fields of view, 55° (standard) or 110° (wide angle) depending on your preference.

The MLX90640 far-infrared camera is an array of 768 (32x24) thermal sensors that can detect temperatures from -40 to 300°C with approximately 1°C accuracy and up to 64FPS! The applications of this camera are manifold: measure the heat or heat dissipation of devices like CPUs, circuit boards, or electrical appliances; use it to identify thermal inefficiencies in your home; or use it for presence detection to identify bodies in complete darkness.

It's also compatible with our fancy new Breakout Garden, where using breakouts is as easy just popping it into one of the six slots and starting to grow your project, create, and code.

Features

- Melexis MLX90640 far-infrared sensor array (datasheet)
- 32x24 pixels
- Field of view: 55°x35° or 110°x75°
- Up to 64FPS
- -40 to 300°C detection with approximately 1°C accuracy
- I2C interface (address 0x33)
- 3.3V or 5V compatible
- Reverse polarity protection
- Compatible with all models of Raspberry Pi, and with certain Arduino models

Kit includes

- MLX90640 breakout
- 1x5 male header
- 1x5 female right-angle header

We've designed this breakout board so that you can solder on the piece of right-angle female header and pop it straight onto the bottom left 5 pins on your Raspberry Pi's GPIO header (pins 1, 3, 5, 7, 9).

Software

We've written software in C that you can use to generate images and video from the MLX90640 cameras.

SparkFun also provide an example Arduino/Processing sketch for the MLX90640.

Our software does not support Raspbian Wheezy.

Notes

Dimensions: 19x19x2.75mm (LxWxH).