

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).