



Grove - Thermal Imaging Camera - MLX90621 BAA 16x4 IR Array with 25° FOV

SKU 101020893



The infrared thermal imaging module has a 16x4 resolution array temperature sensor (MLX90621), which can detect the temperature of the object with an accuracy of $\pm 1^{\circ}\text{C} \pm 3\% * |T_o - T_a|$, Where T_o is the measured surface temperature of the object, and T_a is the temperature of the sensor itself. The module can use the I2C protocol to obtain low-resolution images from the camera. The field of view (FOV) of this camera is $120^{\circ} \times 25^{\circ}$, the temperature measurement range is $-20^{\circ}\text{C} \sim 300^{\circ}\text{C}$, and the working temperature is that the sensor's T_a value is between $-40^{\circ} \sim 85^{\circ}$.

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PRODUCT DETAILS

Features

- Compact size 16x4 pixel IR thermal sensor array (MLX90621)
- Wide temperature measurement range ($-20^{\circ}\text{C} \sim 300^{\circ}\text{C}$)
- I2C Grove interface for easy communication with an MCU
- Fully calibrated IR array for convenient setup

Description

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How Does Thermal Imaging Work?

All objects emit some amount of infrared radiation. This IR thermal imaging camera has a sensitive heat sensor that can detect tiny differences in temperature from the objects in the surrounding. Then it collects this radiation information from the objects and creates an electronic image that is based on the temperature difference information. The hotter an object is, the more infrared radiation it produces. However, this Infrared light is invisible to the naked eye and if the intensity is too high, it can be felt as heat.

This module can be connected to an MCU using the I2C interface. However, it needs an MCU that has over 20000 bytes of RAM to drive the camera. As a matter of fact, Dev boards like Arduino UNO cannot be used with this Sensor camera due to its lower ability of calculation. We

AMG8833-8X8 MLX90641-16X12-110°

MLX90640-32X24-110°

MLX90640-32X24-55° MLX90614-5°

MLX90621-16x4-25° MLX90614-35°

Tags: Thermal Camera

Infrared Camera MLX90621 Grove

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recommend you choose [Arch Mix](#) as an MCU to control the camera because it really has an excellent performance to process the complex data from the IR sensor camera.

This Thermal Imaging Camera can be used to capture as follows:

Specifications

Specification	Details
Resolution	16x4
FOV	120°x25°
Measuring range	-20°C~300°C
Refresh Rate	0.5Hz ~ 64Hz
Interface	I2C
Voltage	3.3V-5V
Current	~18mA

Part List

1 x Grove - Thermal Imaging Camera - MLX90621 BAA 16x4 IR Array with 25° FOV

ECCN/HTS

HSCODE	9031900090
UPC	

LEARN AND DOCUMENTS

Documentations

[\[Attachment\] MLX90621 Datasheet](#)

[\[Attachment\] MLX90621 Library](#)

[\[Attachment\] MLX90621 Driver](#)

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