

EVE MLX90640



Overview

The EVE MLX90640 is a fully calibrated 32x24 pixels thermal IR array.

The MLX90640 contains 768 FIR pixels. An ambient sensor is integrated to measure the ambient temperature of the chip and supply sensor to measure the VDD. The outputs of all sensors IR, Ta and VDD are stored in internal RAM and are accessible through I₂C.

Features and Benefits

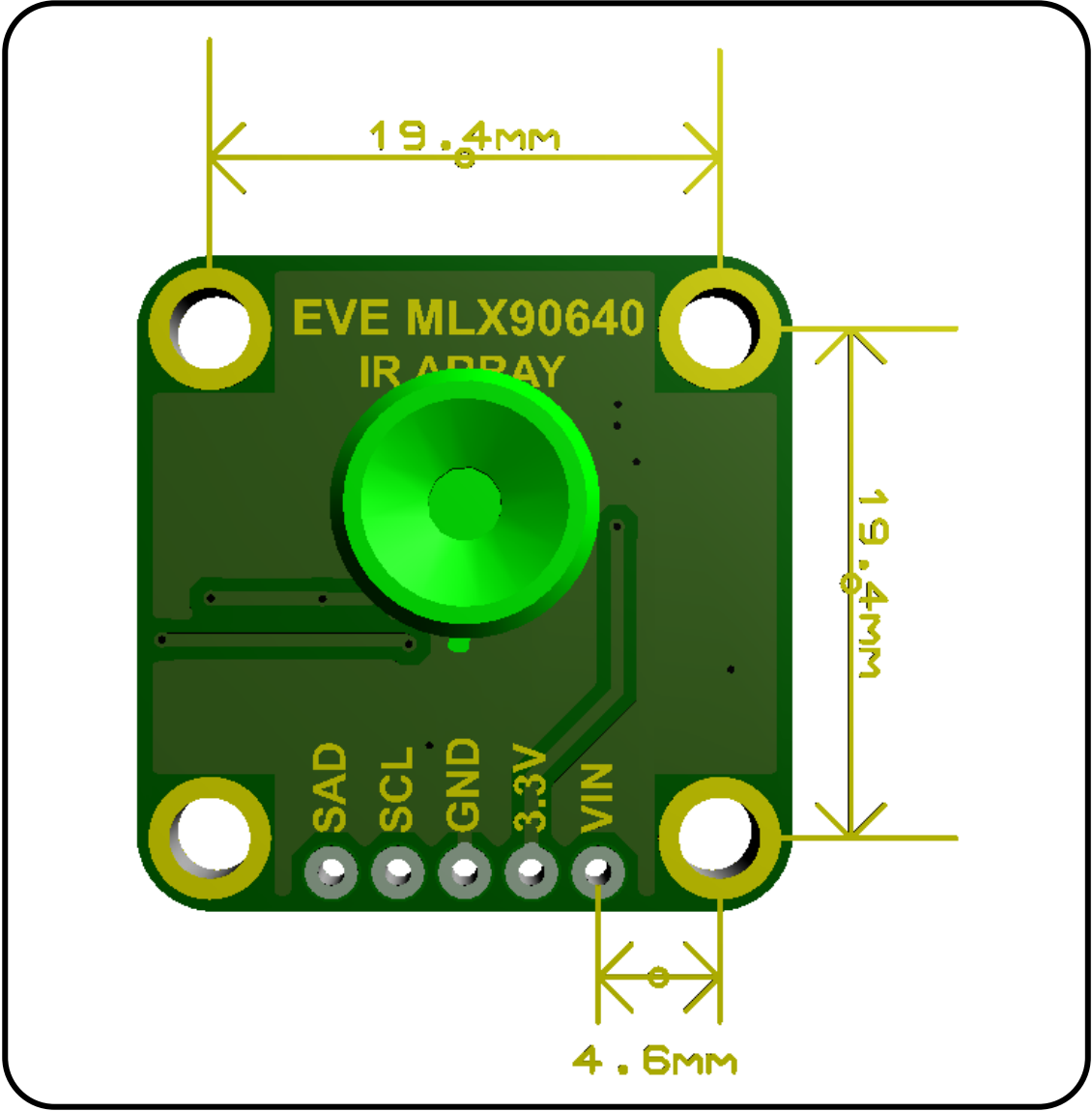
- **Small size**
- **Easy to integrate**
- **Factory calibrated**
- **Noise Equivalent Temperature Difference (NETD) 0.1K RMS 1Hz refresh rate**
- **I2C compatible digital interface**
- **Programmable refresh rate 0.5Hz...64Hz**
- **3.3V/5V supply voltage**
- **Current consumption less than 23mA**
- **FOV -110°x75°**
- **Operating temperature -40°C ÷ 85°C**
- **Target temperature -40°C ÷ 300°C**

SPECIFICATION :

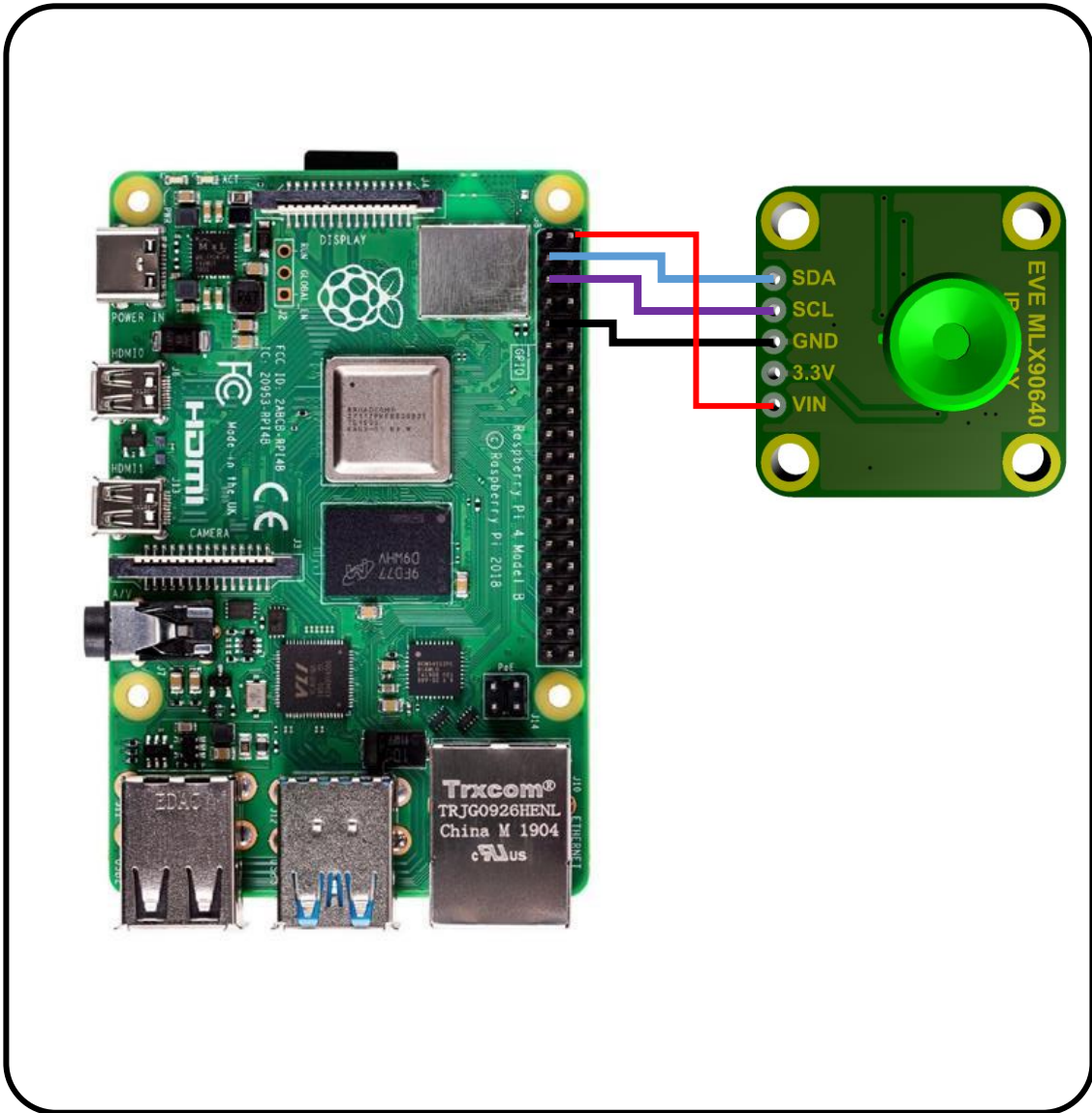
Dimensions : 25 x 25 mm

Power : Operates through External supply 3.3 /5V

Dimensions



Connection with Raspberry Pi



Raspberry Pi pinouts

	3.3V	1	2	5V
I2C1	GPIO2 (SDA1)	3	4	5V
	GPIO3 (SCL1)	5	6	GND
GPIO4 (GPIO_GCLK)	7	8	GPIO14 (UART_TXD0)	
GND	9	10	GPIO15 (UART_RXD0)	
GPIO17 (GPIO_GEN0)	11	12	GPIO18 (GPIO_GEN1)	
GPIO27 (GPIO_GEN2)	13	14	GND	
GPIO22 (GPIO_GEN3)	15	16	GPIO23 (GPIO_GEN4)	
	3.3V	17	18	GPIO24 (GPIO_GEN\$)
GPIO10 (SPI0_MOSI)	19	20	GND	
GPIO9 (SPI0_MISO)	21	22	GPIO25 (GPIO_GEN6)	
GPIO11 (SPI0_CLK)	23	24	GPIO8 (SPI_CE0_N)	
GND	25	26	GPIO7 (SPI_CE1_N)	
ID_SD (I2C EEPROM)	27	28	ID_SC (I2C EEPROM)	
GPIO5	29	30	GND	
GPIO6	31	32	GPIO12	
GPIO13	33	34	GND	
GPIO19	35	36	GPIO16	
GPIO26	37	38	GPIO20	
GND	39	40	GPIO21	