

# MI1602 Product Brief

## Overview:

Meridian Innovation's MI1602 is a long-wave infrared (LWIR) thermal imaging camera module, powered by SenXorTM technology and featuring 19,200 pixels arranged in an 160 x 120 pixels focal point array (FPA).

The MI48EX Thermal Image Processor (TIP) plays the role of a low-level thermal imaging processor, and handles the per-pixel calibration, performs bad pixel correction (BPC), and converts the raw camera data to temperature. The SDK will provide the complex filters and image processing on host for temperature information as well as image.



## Applications:

### Monitor beyond visual spectrum

- Baby & elderly care
- Fever detection
- Manufacturing & construction
- Power distribution
- Mobile phone attachments

### IoT with smart/AI sensing

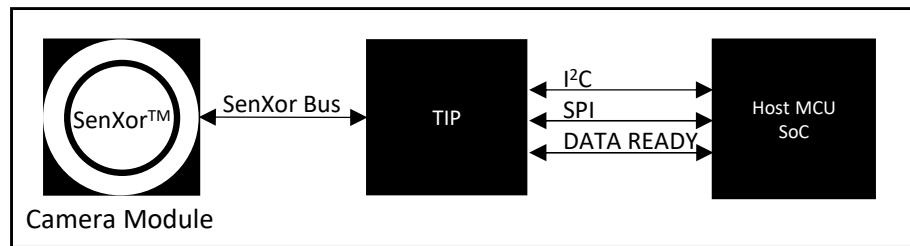
- Home appliances
- HVAC systems
- Surveillance
- Office and Home Lighting
- Street Lighting

Part no.	MI1602M6C	MI1602M5S
Image for illustration purpose only		
Resolution	160 x 120	160 x 120
FOV (D/H/V)	116/85/62	56/45/34
Module Dimension	13 x 13 x 12.65 mm	13 x 13 x 11.89 mm
IR Wavelength	8 - 14μm	
Operating Temperature	-20 to 85°C(TBC)	
Max scene temperature range	-20 to 400°C	
Interface	SPI	
Power supply	3.3V	
Power consumption	< 78 mW	

# Companion Parts

## Thermal Image Processor (TIP)

MI48EX Thermal Image Processor Core Board acts as a processor for raw sensor data from the thermal imaging array. With standard communication interfaces such as I2C and SPI, as well as per-pixel calibration and bad pixel correction, the MI48EX Thermal Image Processor Core Board greatly simplifies the development of applications using the MI1602. Additionally, a dedicated voltage regulator is recommended to ensure optimal temperature readout accuracy and stability.

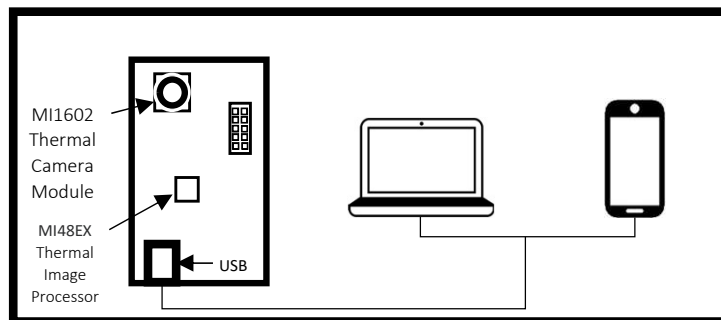


Part Number	Description
MI48E4	TIP Chip for MI1602 modules

## Evaluation Kit (EVK)

The MI1602 Camera Module EVK contains

- MI1602 Camera Module
- Thermal Image Processor Core Board
- Graphical User Interface (GUI) software



Part Number	Description
MI48E0PM	TIP Core Board for MI1602 modules * Camera module is order separately depends on FOV required

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