

IMX378-79 12.3MP Camera Module for Raspberry Pi (4056x3040 Resolution, FOV 79°)

\$29.90

SKU: SEN0632


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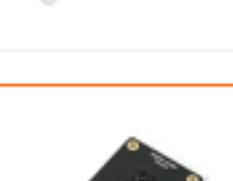
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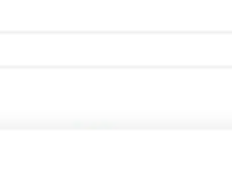
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Introduction

The IMX378-79 Camera Module is a cutting-edge imaging solution designed to deliver exceptional performance in industrial applications. Built with the Sony IMX378 photosensitive chip, it offers ultra-high 12.3MP resolution (4056x3040) and a precise 79° field of view, ensuring crystal-clear imaging. The module is fully compatible with [Raspberry Pi](#) single board computers ([Raspberry Pi 5](#) / [Raspberry Pi 4](#) / [Raspberry Pi Zero](#)) and comes with two FPC cables for seamless connectivity, eliminating the need for additional accessories.

Seamless Raspberry Pi Integration

The camera's MIPI-CSI-2Lane interface ensures efficient data transmission, while its plug-and-play compatibility with Raspberry Pi series boards simplifies deployment. Included FPC cables further enhance usability, streamlining the setup process for projects of all sizes.

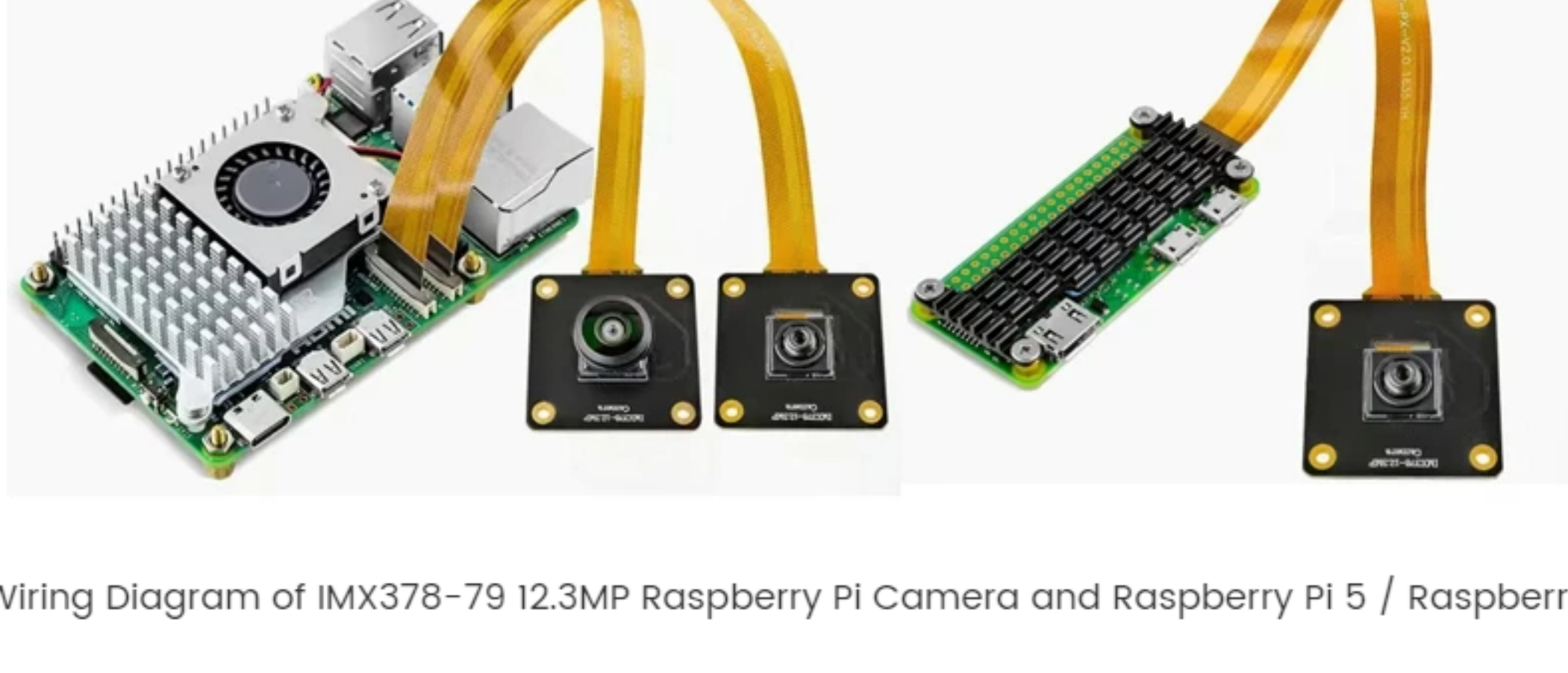


Figure: Wiring Diagram of IMX378-79 12.3MP Raspberry Pi Camera and Raspberry Pi 5 / Raspberry Pi Zero

Sony IMX378 Sensor for Superior Image Quality

Powered by the Sony IMX378 sensor, this module achieves outstanding clarity and detail with its 1.55µm pixel size. The integrated infrared filter ensures vibrant and accurate color reproduction, making it suitable for applications requiring high-fidelity imaging.

High-Resolution Imaging with a 79° Field of View

With a resolution of 4056x3040 and a 79° FOV, this camera captures detailed visuals with minimal distortion (< 1.5%). The focused field of view enhances accuracy, making it ideal for close-range inspections, object recognition, and industrial automation.

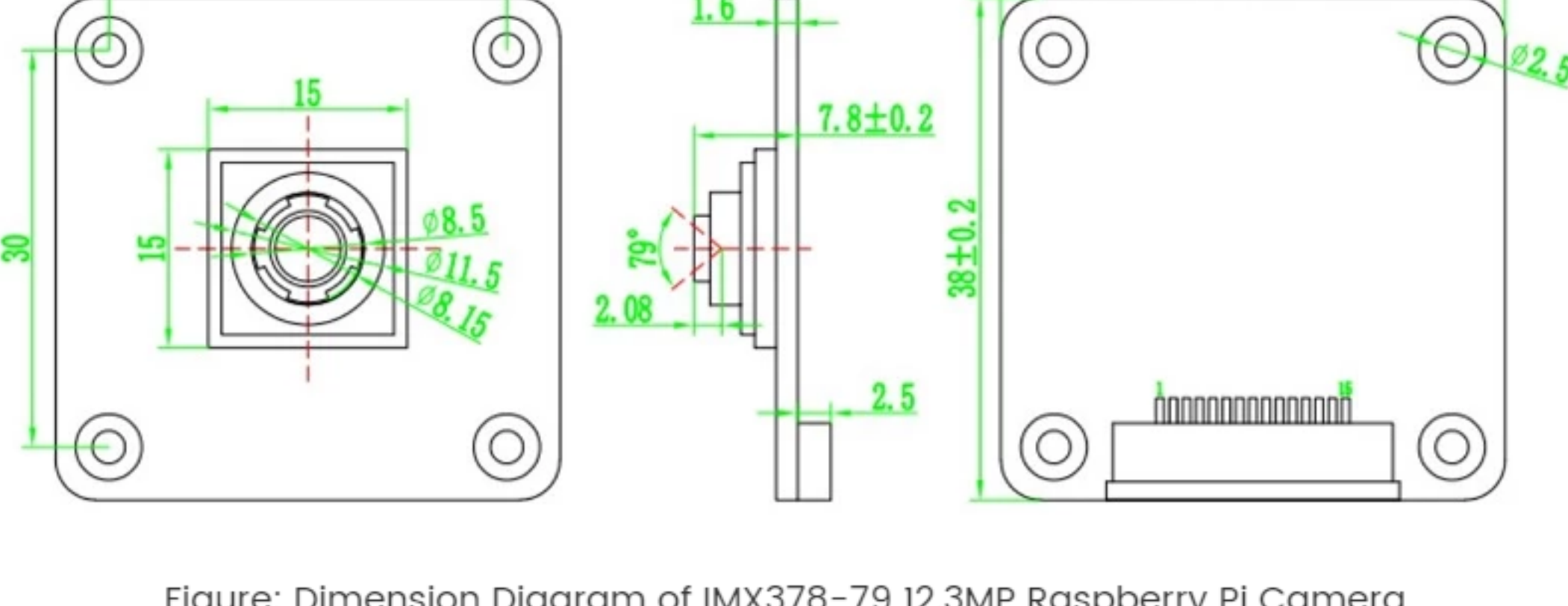


Figure: Dimension Diagram of IMX378-79 12.3MP Raspberry Pi Camera

How to Choose IMX378 12.3MP Camera Module

The IMX378 camera module is available in two versions: 79° field of view (FOV) and 190° FOV (this one). The 79° FOV version offers a narrower, more focused field of view, making it ideal for applications requiring precision and detail, such as industrial automation, object recognition, and close-range inspections. The 190° FOV wide-angle version, designed for broader area capture, is perfect for security surveillance, smart home monitoring, autonomous robots, and large-scale visual inspections. Its wider field of view allows for fewer cameras to cover larger spaces, reducing blind spots in monitoring systems.

Raspberry Pi CSI Camera Selection Table					
Name	IMX219-77-4Lane 8MP Camera	IMX219-120-4Lane 8MP Camera	IMX378-79 12.3MP Camera	IMX378-190 12.3MP Camera	OV9281-79 1MP Global Shutter Camera
SKU	SEN0630	SEN0631	SEN0632	SEN0633	SEN0634
Photosensitive Chip	IMX219	IMX219	IMX378	IMX378	OV9281
Pixels	800W	800W	1230W	1230W	100W
Resolution	3280x2464	3280x2464	4056x3040	4056x3040	1280x800
Channels	CSI-4	CSI-4	CSI-2	CSI-2	CSI-2
Interface	CSI 22Pin	CSI 22Pin	CSI 15Pin	CSI 15Pin	CSI 15Pin
FOV	79.3°	120°	79°	190° Fisheye lens	79.3°
Shutter Mode	Rolling Shutter	Rolling Shutter	Rolling Shutter	Rolling Shutter	Global Shutter
Imaging Type	Color	Color	Color	Color	Black and White
Distortion	< 1%	< 1%	< 1.5%	< 58%	< 1%
Compatible	Raspberry Pi 5	Raspberry Pi 5	Raspberry Pi 4B & Raspberry Pi 5	Raspberry Pi 4B & Raspberry Pi 5	Raspberry Pi 4B & Raspberry Pi 5

Figure: Raspberry Pi CSI Camera Selection Table

Applications

- Close-range inspections
- Object recognition
- Industrial automation

Specification

- Photosensitive chip: Sony IMX378
- Pixels: 12.3 million
- Chip pixel size: 1.55umx1.55um
- Resolution: 4056x3040
- Camera type: color
- Shutter mode: rolling shutter
- Focus mode: fixed focus
- CMOS size: 1/2.3 inches
- Infrared filter: integrated
- Aperture: 1.79
- Focal length: 4.74mm
- Field of view: 79°
- Distortion: < 1.5%
- Interface: MIPI-CSI-2Lane
- Lens size: M8.5
- PCB size: 38*38mm

Documents

- [Tutorial](#)
- [IMX378 DataSheet](#)
- [Interface Schematic](#)
- [Module Specifications](#)

Shipping List

- IMX378-79 12.3MP Raspberry Pi Camera x1
- 15Pin to 15Pin FPC cable x1
- 15Pin to 22Pin FPC cable x1

Raspberry Pi Projects