



48MP 4-lanes MIPI Camera Module

Key Properties

IMX586 Image Sensor
10/8-bit RAW format
Frame Rate: 30fps ~ 240fps
Max Resolution: 8000 x 6000
S-Mount : M12
Lenses Type: Fixed Focus

Application

Robotics & drones / Smart traffic & surveillance / Machine learning / AI version / AI inspection / video conference

Feature

- ◆ 48M(8000x6000) image sensor IMX586
 - Low illumination and high dynamic range sensor
- ◆ Megapixel with M12 lenses holder
- ◆ 8/10-bit RAW data



Introduction

The MCM48M240M12 MIPI Camera Module is built around Sony's advanced 48-megapixel CMOS sensor, delivering ultra-high-resolution imaging with exceptional clarity and detail. Using a 1/2-inch stacked sensor design and Quad Bayer color filter technology, it achieves excellent performance in both bright and low-light conditions. The module supports the MIPI CSI-2 interface for high-speed data transmission and can output 48MP still images as well as smooth high-frame-rate video, including 4K and Full HD modes.

Equipped with a standard M12 lens mount, the camera module allows flexible lens replacement, enabling customers to customize the field of view (FoV) according to their application needs. With its wide dynamic range, strong low-light sensitivity, and customizable optics, this camera module is well suited for industrial inspection, robotics, drones, smart security, and AI vision systems. Compact in design and adaptable to different requirements, the IMX586 MIPI Camera Module provides a versatile imaging solution for developers and system integrators who require professional-quality visuals in embedded platforms.



Specifications

Model	MCM48M240M12
Sensor	IMX586
Image Size	1/2 inch
Pixel Size	0.8 μm x 0.8 μm
Image Area	7504 μm x 5659 μm
Image Pixels & Resolution	48MP / 8000(H) x 6000(V)
Image Formats	10/8-bit RAW Format
Image Transfer Rate	8000x6000 @30fps 6000x4000 @30fps 4000x3000 @60fps 3840x2160 @90fps 1920x1080 @240fps
Max S/N Ratio	TBD
Dynamic Range	~ 70dB
Sensitivity	TBD
Mini illumination	TBD
Shutter Type	Electronic rolling shutter
Lens Parameters	Standard: 78° , Fixed
Lens Holder	Standard M12 lens holder
Power Supply	3 External Powers
Operating Voltages	DC 1.2 / 1.8 / 2.8 Volts
Operating Current	< 420mA
Operating Temperature	-20 ~ 60°C
Storage Temperature	0 ~ 50°C
Operating System Request	Driver is required
Total Length	100mm
FPC Pin Numbers	24
FPC Pin Pitch	0.5mm

Specifications are subject to change without notice.



Mechanical Drawing

