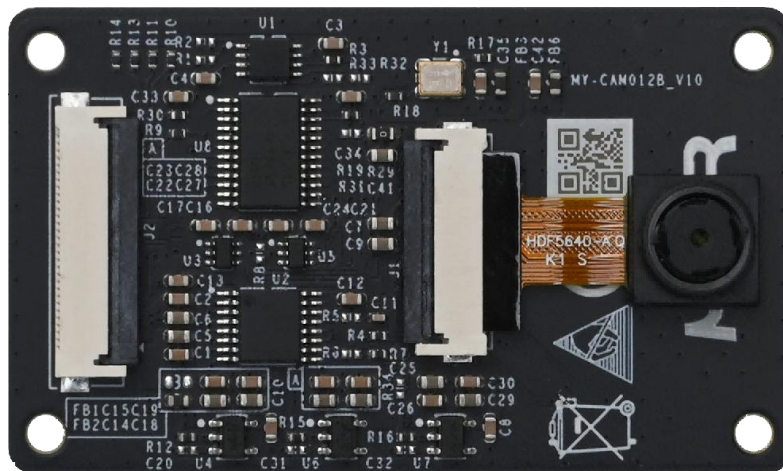


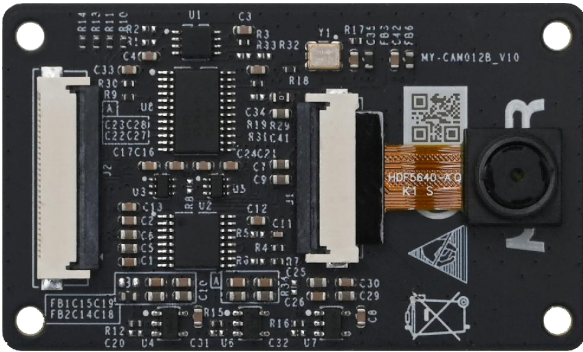


MY-CAM012B Camera Module Overview





The MY-CAM012B camera module, newly designed by MYIR for image or video capture, is specifically intended for use with NXP’s FRDM-IMX91S development board. This module boasts a resolution of up to 5 megapixels and utilizes the OV5640 chip. Characterized by its compact size, low power consumption, high performance, and ease of use, it is easy to integrate into various products. Incorporating this module into a product can effectively shorten the development cycle and reduce development costs.

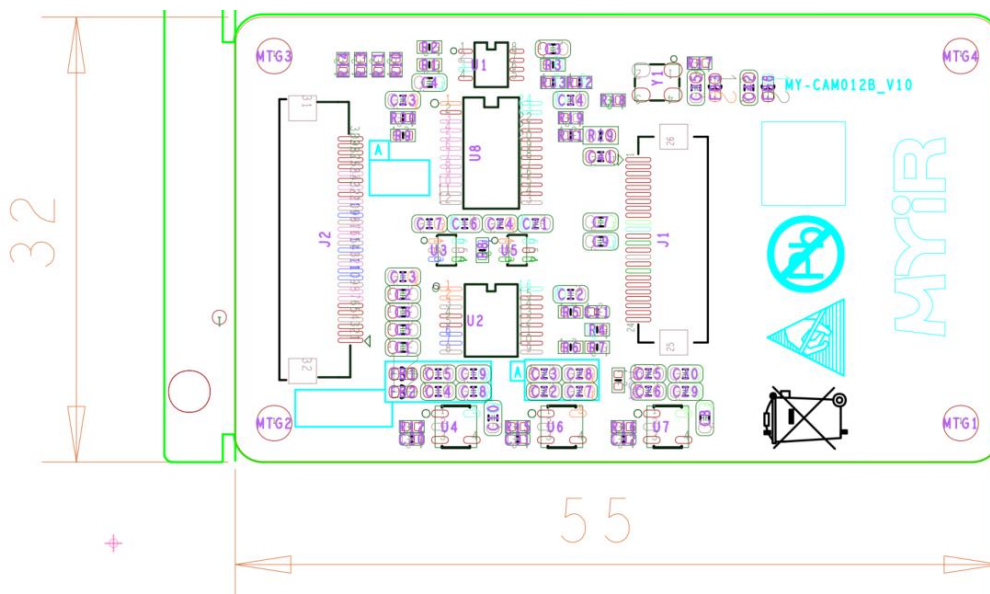


MY-CAM012B Camera Module (Top view)



MY-CAM012B Camera Module (Bottom view)

The MY-CAM012B Camera Module, offered by MYIR, enables users to effortlessly evaluate the camera functionality and performance of the FRDM-IMX91S board. It interfaces with the board through a 0.5mm 30-pin FPC connector. The MY-CAM012B camera module boasts multi-resolution acquisition and multi-format output capabilities. It utilizes an OV5640 image sensor, which supports up to a 2592 x 1944 resolution for still image capture and can record 1080p@30fps or 720p@60fps high-definition video. It also provides intelligent image processing functions such as automatic exposure (AE), automatic white balance (AWB), and HDR (high dynamic range) to ensure excellent image quality. Remarkably, the OV5640 chip operates efficiently with minimal power consumption of just 210mW, demonstrating its outstanding performance and energy efficiency. With its compact size of 55mm x 32mm, low power consumption, and high-performance specifications, this module is suitable for integration into a wide range of products.



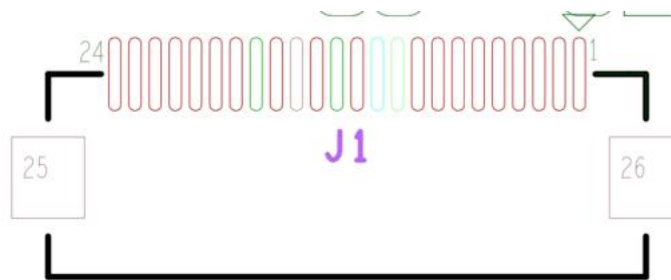
MY-CAM012B Mechanical Dimensions (Unit: MM)



Item		Parameter
Image Resolution		2592x 1944
Power Supply		Core: 1.5V
		Analog: 2.6-3V
		I/O: 1.8V/2.8V
Power consumption	Working condition	210mW
Temperature range	Working temperature	-30°C to +70°C
	Image stabilization	0°C to +50°C
Output interface		8/10-bit RGB output
Lens size		1/4"
Principal ray angle of the lens		24°
Maximum image transmission rate	QSXGA(2592x1944)	15fps
	1080p	30 fps
	1280x960	45fps
	720p	60fps
	VGA(640x480)	90fps
Sensitivity		600mV/Lux-sec
Signal-to-Noise Ratio		36dB (maximum)
Dynamic Range		68 dB @ 8x gain
Maximum Exposure Interval		1964 x tROW
Pixel Size		1.4 μm x 1.4 μm
Mold size		5985 μm x 5835 μm
Image [video] area		3673.60 μm x 2738.4 μm

MY-CAM012B Specification

The MY-CAM012B camera module connects to the OV5640 sensor using its J1 connector via a 24-pin flexible printed circuit (FPC) connector. The J2 connector enables parallel DVP CSI interface connectivity through a 30-pin FPC connector.



J1 Pin Sequence



Pin	Function	Signal Name	Description
1	NC	NC	
2	AGND	AGND	
3	Bus data	I2C_SDA	
4	Simulated interface voltage	VDDA_2V8	
5	Bus clock	I2C_SCLK	
6	CSI Reset signal	CAM_RST	
7	CSI Vertical Signal	CAM_VSYNC	
8	CSI Enable control	CAM_PD	
9	CSI Horizontal signal	CAM_HSYNC	
10	interface voltage	VDDA_1V5	
11	interface voltage	VDD_2V8	
12	CSI Data bit 9	CAM_DATA9	
13	CSI Main clock	CAM_SCLK	
14	CSI Data bit 8	CAM_DATA8	
15	GND	GND	
16	CSI Data bit 7	CAM_DATA7	
17	CSI Pixel clock	CAM_PCLK	
18	CSI Data bit 6	CAM_DATA6	
19	CSI Data bit 2	CAM_DATA2	
20	CSI Data bit 5	CAM_DATA5	
21	CSI Data bit 3	CAM_DATA3	
22	CSI Data bit 4	CAM_DATA4	
23	NC	NC	
24	NC	NC	

J1 Pin Definition



J2 Pin Sequence



Pin	Function	Signal Name	Description
1	Power 5V	VDD_5V	
2	Power 3.3V	VDD_3V3	
3	Power 3.3V	VDD_3V3	
4	GND	GND	
5	Bus data	I2C_SDA	
6	Bus clock	I2C_SCL	
7	CSI Data bit 9	CAM_DATA9	
8	CSI Data bit 8	CAM_DATA8	
9	GND	GND	
10	CSI Vertical Signal	CAM_VSYNC	
11	CSI Horizontal signal	CAM_HSYNC	
12	CSI Data bit 7	CAM_DATA7	
13	GND	GND	
14	CSI Main clock	CAM_SCLK	24Mhz
15	GND	GND	
16	CSI Data bit 6	CAM_DATA6	
17	CSI Data bit 5	CAM_DATA5	
18	GND	GND	
19	CSI Pixel clock	CAM_PCLK	
20	GND	GND	
21	CSI Data bit 4	CAM_DATA4	
22	CSI GPIO Enable control	CAM_PD	
23	CSI Data bit 3	CAM_DATA3	
24	CSI GPIO Reset signal	CAM_RST	
25	CSI Data bit 2	CAM_DATA2	
26	GPIO	GPIO	
27	GPIO	GPIO	
28	GPIO	GPIO	
29	GPIO	GPIO	
30	GPIO	GPIO	

J2 Pin Definition



MYIR Electronics Limited

Headquarter Address: Room 04, 6th Floor, Building No.2, Fada Road, Yunli Smart Park, Bantian, Longgang District, Shenzhen, Guangdong, China 518129

Factory Address: Room 201, Block C, Shengjianli Industrial Park, Dafu Industrial Zone, Guanlan, Longhua District, Shenzhen, 518110, China

Website: <https://en.myir.cn/>

Email: sales@myir.cn

Tel: +86-755-22984836