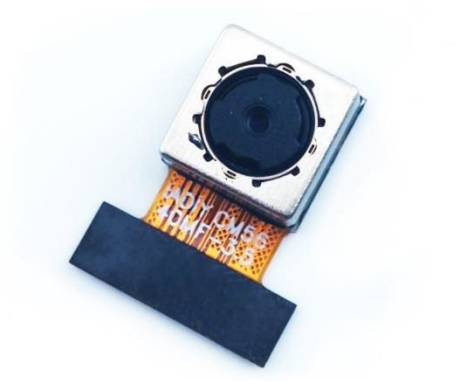
5M MIPI Sensor Module OV5640

Key Properties



OV5640 Image Sensor

RGB RAW/RGB565,555,444/CCIR656/YUV422,420/YCbCr422 Formats

Frame Rate: 15fps for 2592(H)x1944(V)

30fps for 1920(H)x1080(V)

45fps for 1280(H)x960(V)

90fps for 640(H)x480(V)

120fps for 320(H)x240(V)

S-mount M6 Lens Holder

Lenses Type -Standard: FOV(H)59° Auto Focus

FL2.77mm(68°)

Application

Cellular phones / toys / PC multimedia

Digital still camera

Feature

- 5M(2592x1944) image sensor OV5640
  - Low illumination and high dynamic range sensor
- Megapixel M6 lenses optional
- 8-/10-bit RGB RAW and compressed format output support

Introduction

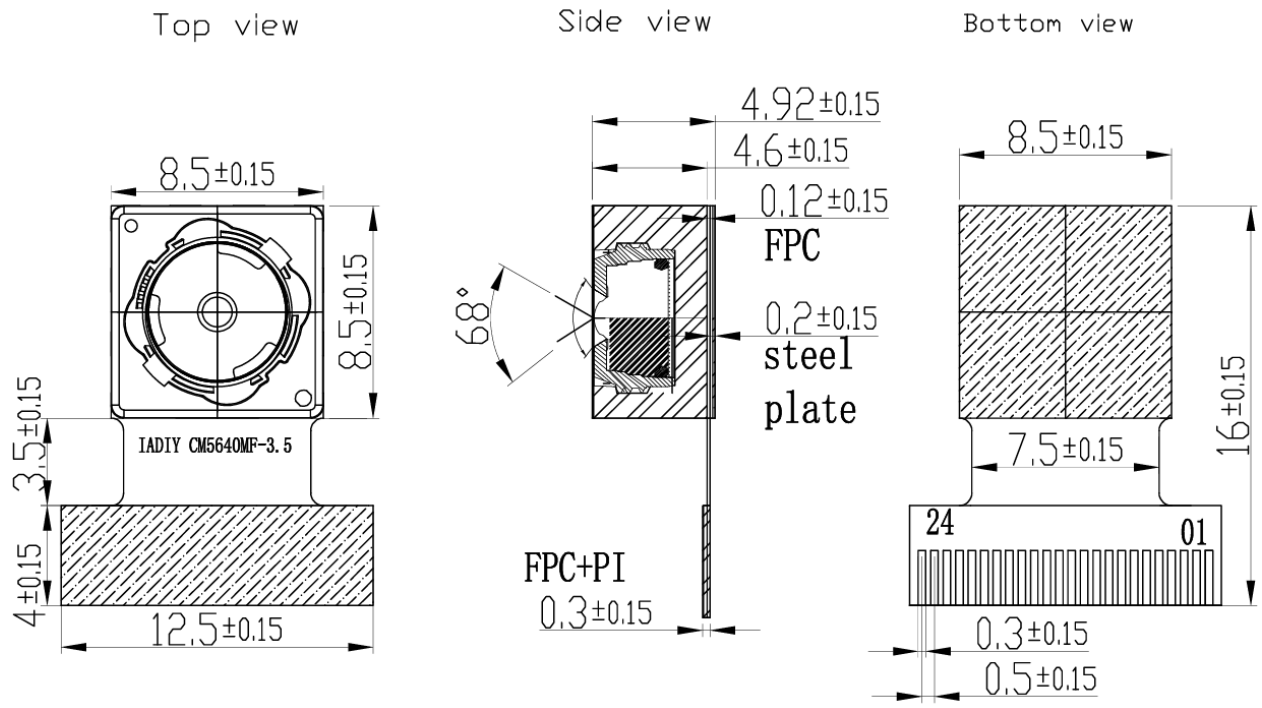
MCM5M120M6F2 is a 5MP (2592x1944) MIPI sensor module using 1/4” OV5640 designed for high resolution and high dynamic range scene performance. MCM5M120M6F2 is an ideal solution of small MIPI camera module for low light and high dynamic range applications like backlighting image and face recognition. It has S-mount (M6) lens holder for enabling the users to choose the lens and any spectral filter as per their requirements.

Specifications

Model	MCM5M120M6F2
Sensor	OV5640
Image Size	1/4 inch
Pixel Size	1.4 µm
Image Area	3674 µm x 2738 µm
Image Pixels & Resolution	2592(H) x 1944(V)
Output Formats	8/10-bit RGB RAW/RGB565,555,444/CCIR656/YUV422,420/YCbCr422 and compression
Image Transfer Rate	QSXGA (2592x1944): 15 fps 1080p: 30 fps 1280x960: 45 fps 720p: 60 fps VGA (640x480): 90 fps QVGA (320x240): 120 fps
Max S/N Ratio	36dB
Dynamic Range	68dB
Sensitivity	600mV/lux-sec@550nm
Mini illumination	0.1 lux
Shutter Type	Electronic rolling shutter
Lens Parameters	Standard: FOV(H)59°, Focus Fixed
Lens Holder	Standard M6 lens holder
Power Supply	External Input
Operating Voltage	DC 1.5V / 1.8V / 2.8V
Operating Current	140mA
Operating Temperature	-30 ~ 70°C
Stable Image Temperature	0 ~ 50°C
Operating System Request	Linux Driver that supports OV5640
Flexible Flat cable length	5mm
FFC Pin Numbers	24
FFC Pin Pitch	0.5mm

Specifications are subject to change without notice.

Sensor Board Drawings



Connector 24 Pin description

No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Signal	NC	AGND	I2C_D	AVDD 2.6V~3.0V	I2C_C	RESET	NC	PWDN	NC	DVDD 1.5V	DOVDD 1.8V/2.8V	MDP1	MCLK	MDN1	DGND	MCP	NC	MCN	NC	MDP0	NC	MDN0	AF-VDD	AF-GND