5M DVP Sensor Module OV5640

Key Properties

OV5640 Image Sensor

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

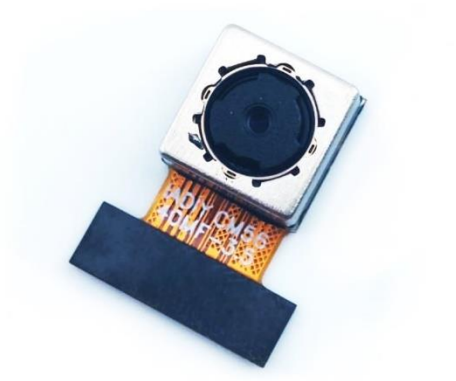
Frame Rate: 15fps for 2592(H)x1944(V)

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 M7 Lens Holder

Lenses Type: Auto Focus / Fixed FL lenses

FOV(D) optional: 68° /90° /120° /160°

Application

STM32 DCMI interface / ESP32 DVP interface / toys / PC multimedia

Digital still camera

Feature

- 5M(2592x1944) image sensor OV5640
  - Low illumination and high dynamic range sensor
- Megapixel M7 lenses optional
- RGB RAW/RGB565,555,444/CCIR656/YUV422,420/YCbCr422 Formats
- 8-/10-bit RGB RAW and compressed format output support

Introduction

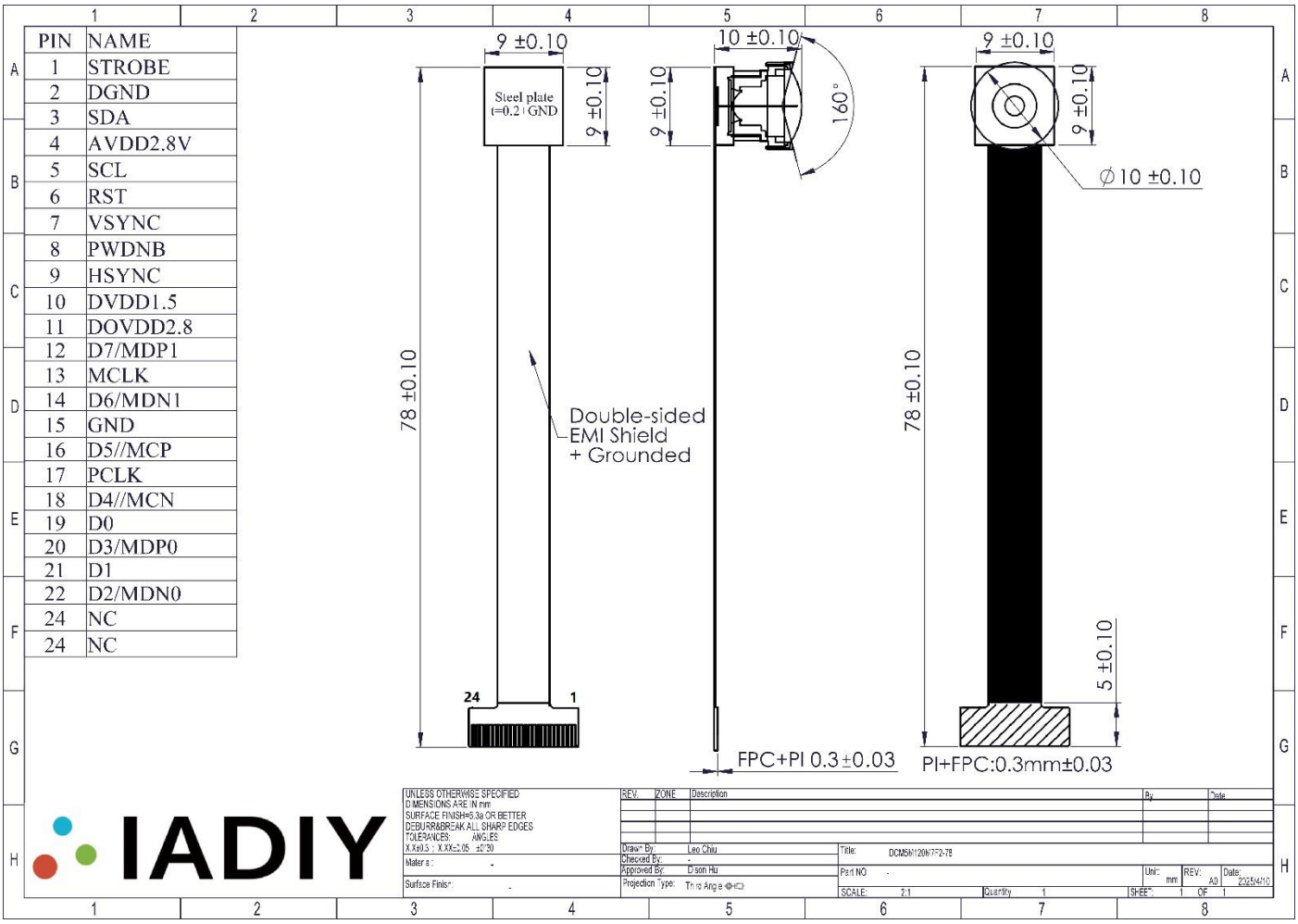
DCM5M120M7F2 is a 5MP (2592x1944) Digital Video Port, DVP, sensor module using 1/4” OV5640 designed for high resolution and high dynamic range scene performance. DCM5M120M7F2 is an ideal solution of small DVP camera module for low light and high dynamic range applications like backlighting image and face recognition. It has S-mount (M7) lens holder for enabling the users to choose the lens and any spectral filter as per their requirements.

Specifications

Model	DCM5M120M7F2
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(D)90°, Focus Fixed
Lens Holder	Standard M7 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
Total length includes FPC	78mm
FFC Pin Numbers	24
FFC Pin Pitch	0.5mm

Specifications are subject to change without notice.

Sensor Board Drawings

Lens dimension will vary for different FOVs, FPC length may vary based on requirements

PIN	NAME
1	STROBE
2	DGND
3	SDA
4	AVDD2.8V
5	SCL
6	RST
7	VSYNC
8	PWDNB
9	HSYNC
10	DVDD1.5
11	DOVDD2.8
12	D7/MDP1
13	MCLK
14	D6/MDN1
15	GND
16	D5//MCP
17	PCLK
18	D4//MCN
19	D0
20	D3/MDP0
21	D1
22	D2/MDN0
24	NC
24	NC