



2M Full HD Camera Module USB2.0 OV2710

Key Properties

OV2710 Image Sensor

USB2.0 MJPEG/YUV2 Format

Frame Rate: 30fps for FHD(1920(H)x1080(V))

Max Frame Rate: 120fps for VGA(640(H)x480(V))

S-mount M12 Lens Holder

Lenses Type -Standard: FL3.6mm Fixed Focus

- Fixed Focus Optional: FL2.1/FL2.5/FL2.8/FL3.6/FL4.2/FL6.0/FL8.0/FL12/FL16 /FOV(D)180°
- Autofocus Optional: FOV(H)45°



Application

Full HD Video Camera / Camcorder / Security / Portable Media

High Frame rate / Low Light Applications

Feature

- ♦ 2M(1920x1080) full HD (High Definition) image sensor OV2710
 - True full HD, high frame rate and low illumination image sensor integrated autofocus filter is good for low-light, HD video, good image quality like conference or telepresence applications.
- ♦ M12 lenses of 1/2.7" 2M image optional
 - Fixed Focus reference:

Focal Length	1.05mm	2.1mm	3.6mm	4.2mm	6.0mm	8.0mm	12.0mm	16.0mm	25.0mm
FOV(D)	180°	150°	105°	98°	72°	62°	36°	26°	16°

- Autofocus: FOV(D)45°
- The best object image distance range for reference:
FL2.1(0.5-2m)/FL2.8(1-3m)/FL3.6FL(2-4m)/FL6.0(5-10m)
- ♦ MJPEG compressed format output support
- ♦ UVC support, plug and play for Windows and Linux

Introduction

CM2M120M12Q is a 2MP(1920x1080) FHD USB camera board using 1/2.7" OV2710 with high frame rate (120fps for VGA) and low illumination (0.051 lux) performance. It has S-mount (M12) lens holder for enabling the users to choose the lens and any spectral filter as per their requirements.

CM2M120M12Q delivers low light sensitivity of 3300mV/lux-sec, S/N ratio of 39dB, and a peak dynamic range of 69dB, enabling cameras to operate in virtually every lighting condition from bright daylight to nearly complete darkness below 15 lux. CM2M120M12Q is an ideal solution for security, camcorder, video conference, and portable media video applications.



Specifications

Model	CM2M120M12Q
Sensor	OV2710
Image Size	1/2.7 inch
Pixel Size	3 μm x 3 μm
Image Area	5856 μm x 3276 μm
Image Pixels & Resolution	FULL HD 1920(H) X 1080(V)
Image Formats	MJPEG / YUV2 (YUYV)
Image Transfer Rate	1920X1080 FHD MJPEG@30fps 1280X1024 SXGA MJPEG@30fps 1280X720 HD MJPEG@60fps 1024X768 XGA MJPEG@30fps 800X600 SVGA MJPEG@60fps 640X480 VGA MJPEG@120fps 320x240 QVGA MJPEG@120fps
Max S/N Ratio	39dB
Dynamic Range	69dB @ 8x gain
Sensitivity	3.3V/lux-sec @ 550nm
Mini illumination	0.051 lux
Special Function	Lens correction/ Defective pixel correction/ Black sun cancellation
Shutter Type	Electronic rolling shutter / Frame exposure
Connecting Port	USB2.0 High Speed
USB Protocol	USB2.0 FS/HS
OTG Protocol	USB2.0 OTG
Plug & Play	UVC(USB Video Class) Compliant support
Auto Exposure Control (AEC)	Support
Auto White Balance (AWB)	Support
Adjustable Parameters	Brightness, Contrast, Hue, Saturation, Sharpness, Gamma, Gain, White Balance, Backlight Contrast, Exposure
Lens Parameters	Standard: FL3.6mm Optional: FL2.1/FL2.5/FL2.8/FL3.6/FL4.2/FL6.0/FL8.0/FL12/FL16/FL25 /FOV(D)180°/ AF FOV(H)45°
Lens Holder	Standard M12 lens holder
LED Power Connector	2P-2.0mm Socket
Power Supply	USB BUS POWER 4P-2.0mm Socket
Operating Voltage	DC 5V
Operating Current	120mA ~ 220mA

Specifications are subject to change without notice.



Operating Temperature	0 ~ 60°C
Storage Temperature	-20 ~ 75°C
PCBA Dimensions	38X38mm (Compatible 32X32mm)
Weight	~30g
Cable Length	Standard 1m, Optional 2m, 3m, 5m
Operating System Request	WinXP/Vista/Win7/Win8/Win10/Win11 Linux with UVC (above linux-2.6.26) MAC-OS X 10.4.8 or later Wince with UVC Android 4.0 or above with UVC

Dimension

Unit (mm)		
4P 2.0 Plug : - DC 5V Input - Video output	1	DC5V IN
	2	DM
	3	DP
	4	GND
2P 2.0 Plug : - DC 5V Output for LED	5	GND
	6	DC5V OUT

