# 5M Camera Module USB2.0 OV5640

## Key Properties

OV5640 Image Sensor

USB2.0 MJPEG/YUV2 Format

Frame Rate: 15fps for 5M(2592(H)x1944(V))

Max Frame Rate: 30fps for 720p(1280(H)x720(V))

S-mount M12 Lens Holder

Lenses Type -Standard: FL2.5mm Fixed Focus

-Optional: FL1.8/FL2.2/FL3.0/FL3.2/FL3.6/FL3.9/FL4.7
/FL6.2/FL7.2/FL8.0

Autofocus Lens: FOV(H)30°, FOV(H)45°, FOV(H)60°

## Application

Mobile Camera / Portable Media / Entertainment

Digital Still Cameras / PC multimedia

## Feature

- ◆ 5M(2592x1944) SOC image sensor OV5640
  - The OV5640 features an internal anti-shake engine for image stabilization is good for HD video, good image quality like conference or telepresence applications.
- ◆ M12 lenses of 1/4" 5M image optional
  - Standard: FL2.5mm(HxV: 72° x 57°)
  - Optional: FL2.1(82° x 66°)/FL3.6(54° x 41.5°)/FL6.0(34° x 25°)/FL8.0(25° x 19°)
  - Autofocus: FOV(H)30°, FOV(H)45°, FOV(H)60°
- ◆ MJPEG compressed format output support
- ◆ UVC support, plug and play for Windows and Linux

## Introduction

CM5M30M12Q is a 5MP(2592x1944) USB camera board using 1/4" OV5640 with anti-shake engine and support autofocus is good for the mobile device and still camera applications. As the high resolution 5M and full function support, the CM5M30M12Q is an idea cost effective solution of high performance video camera and digital still camera. It has S-mount (M12) lens holder for enabling the users to choose the lens and any spectral filter as per their requirements.

## Specifications

| | |
|---|---|
| Model | CM5M30M12Q |
| Sensor | OV5640 |
| Image Size | 1/4 inch |
| Pixel Size | 1.4 µm |
| Image Area | 3673 µm x 2738 µm |
| Image Pixels & Resolution | 5M / 2592(H) x 1944(V) |
| Image Formats | MJPEG / YUV2 (YUYV) |
| Image Transfer Rate | 640x480 MJPEG@30fps / 800x600 MJPEG@30fps<br>1024x768 MJPEG@30fps / 1280x720 MJPEG@30fps<br>1280x1024 MJPEG@15fps / 1600x1200 MJPEG@15fps<br>1920x1080 MJPEG@15fps / 2048x1536 MJPEG@15fps<br>2592x1944 MJPEG@15fps / |
| Max S/N Ratio | 36dB |
| Dynamic Range | 68dB @ 8x gain |
| Sensitivity | 600mV/lux-sec@550nm |
| Mini illumination | 0.5 lux |
| Shutter Type | Electronic rolling shutter / Frame exposure |
| Connecting Port | USB2.0 High Speed |
| Plug & Play | UVC(USB Video Class) Compliant support |
| Auto Exposure Control (AEC) | Support |
| Auto White Balance   (AWB) | Support |
| Adjustable Parameters | Brightness, Contrast, Saturation, Hue, Sharpness, Gamma, Gain, White Balance, Backlight Contrast, Exposure |
| Lens Parameters | Standard: FL2.5mm<br>Optional:  FL1.8/FL2.2/FL3.0/FL3.2/FL3.6/FL3.9/FL4.7/FL6.2/FL7.2/FL8.0<br>Auto Focus : AF FOV(H)30°/ FOV(H)45°/ FOV(H)60° |
| 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 | 150mA ~ 200mA |
| Operating Temperature | -20 ~ 70°C |
| Storage Temperature | -20 ~ 85°C |
| PCBA Dimensions | 38x38mm (Compatible 32x32mm ） |
| Weight | ~30g |

| Cable Length | Standard 1m, Optional 2m, 3m, 5m |
|---|---|
| Operating System Request | WinXP/Vista/Win7/Win8 |
| | Linux with UVC (above linux-2.6.26） |
| | MAC-OS X 10.4.8 or later |
| | Android 4.0 or above with UVC |

Specifications are subject to change without notice.

## Sensor Board Drawings