VGA USB Camera Module USB2.0 OV7725

Key Properties
OV7725 Color Sensor
USB2.0 MJPEG/YUV2 Format
Frame Rate: 60fps
S-mount M12 Lens Holder
Lenses Type: FL3.6mm (Standard) Fixed Focus
  - FL2.1/FL2.5/FL2.8/FL6.0/FOV(D)170° (optional)

Application
Video Camera / Face Detection / Image Processing / Image Sensor
Video Recorder / DIY Camera / Android, Linux USB Camera

Feature
- 0.3M VGA high sensitivity image sensor OV7255
  - High sensitivity for low-light operation and can operate in a wide temperature range, from -20°C to +70°C.
- Fixed focus M12 lenses optional
  - Standard: FL3.6mm(HxV: 58° x 45°)
  - Optional: FL2.1(87° x 70°)/FL2.5(77° x 61°)/FL2.8(70° x 56°)/FL6.0(36° x 28°)/FOV(D)170°
  - The best object image distance range for reference:
    FL2.1(0.5-2m)/FL2.5(0.7-2.5m)/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
- Support open source code for SDK of Windows and Linux system, suitable for embedded system
development.

Introduction
CM03M60M12C is a 0.3 MP VGA USB camera board with good lowlight performance. It has an ability to stream seamlessly at wide temperature range (-20°C to 70°C). This USB2.0 camera is based on 1/4" OV7725 CMOS digital image sensor with a pixel size of 6.0 μm x 6.0 μm. It has S-mount (M12) lens holder which allows customers to choose and use the lens according to their requirement. It is a Plug-and-Play camera (UVC compliant) for Windows, Linux. This camera is also backward compatible with USB 1.1 host ports.
### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>CM03M60M12C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>OV7725</td>
</tr>
<tr>
<td>Image Size</td>
<td>1/4 inch</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>6.0 µm</td>
</tr>
<tr>
<td>Image Area</td>
<td>3984 µm x 2952 µm</td>
</tr>
<tr>
<td>Image Pixels &amp; Resolution</td>
<td>VGA / 640(H) X 480(V)</td>
</tr>
<tr>
<td>Image Formats</td>
<td>MJPEG / YUV2 (YUYV)</td>
</tr>
<tr>
<td>Image Transfer Rate</td>
<td>640X480 MJPEG@60fps YUY2@30fps</td>
</tr>
<tr>
<td></td>
<td>480X480 MJPEG@30fps YUY2@30fps</td>
</tr>
<tr>
<td></td>
<td>450X450 MJPEG@30fps YUY2@30fps</td>
</tr>
<tr>
<td></td>
<td>352X288 MJPEG@30fps YUY2@30fps</td>
</tr>
<tr>
<td></td>
<td>320X240 MJPEG@30fps YUY2@30fps</td>
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<tr>
<td></td>
<td>240X240 MJPEG@30fps YUY2@30fps</td>
</tr>
<tr>
<td>Max S/N Ratio</td>
<td>50dB</td>
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<tr>
<td>Dynamic Range</td>
<td>60dB</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>3.8V/lux-sec@550nm</td>
</tr>
<tr>
<td>Mini illumination</td>
<td>0.2 lux</td>
</tr>
<tr>
<td>Shutter Type</td>
<td>Electronic rolling shutter / Frame exposure</td>
</tr>
<tr>
<td>Connecting Port</td>
<td>USB2.0 High Speed</td>
</tr>
<tr>
<td>Plug &amp; Play</td>
<td>UVC(USB Video Class) Compliant support</td>
</tr>
<tr>
<td>Auto Exposure Control (AEC)</td>
<td>Support</td>
</tr>
<tr>
<td>Auto Exposure Bracketing (AEB)</td>
<td>Support</td>
</tr>
<tr>
<td>Auto Gain Control (AGC)</td>
<td>Support</td>
</tr>
<tr>
<td>Adjustable Parameters</td>
<td>Brightness, Contrast, Saturation, Hue, Sharpness, Gamma, Gain, White Balance, Backlight Contrast, Exposure, Image Rotation</td>
</tr>
<tr>
<td>Lens Parameters</td>
<td>Standard FL3.6mm</td>
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<tr>
<td></td>
<td>Optional: FL2.1/FL2.5/FL2.8/FL6.0mm/FOV(D)170°</td>
</tr>
<tr>
<td>Lens Holder</td>
<td>Standard M12 lens holder</td>
</tr>
<tr>
<td>LED Power Connector</td>
<td>2P-2.0mm Socket</td>
</tr>
<tr>
<td>Power Supply</td>
<td>USB BUS POWER 4P-2.0mm Socket</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>DC 5V</td>
</tr>
<tr>
<td>Operating Current</td>
<td>100mA ~ 160mA</td>
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<tr>
<td>Operating Temperature</td>
<td>-20 ~ 70°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20 ~ 80°C</td>
</tr>
<tr>
<td>PCBA Dimensions</td>
<td>32X32mm (Compatible 26X26mm)</td>
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<tr>
<td>Weight</td>
<td>~30g</td>
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<tr>
<td>Cable Length</td>
<td>Standard 1m, Optional 2m, 3m, 5m</td>
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<tr>
<td>Operating System Request</td>
<td>WinXP/Vista/Win7/Win8</td>
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<tr>
<td></td>
<td>Linux with UVC (above linux-2.6.26)</td>
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<td>MAC-OS X 10.4.8 or later</td>
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<td>Wince with UVC</td>
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<td>Android 4.0 or above with UVC</td>
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Specifications are subject to change without notice.