

## VGA USB Camera Module USB2.0 OV7725

### KEY PROPERTIES

- OV7725 VGA (640 x 480) Image Sensor
- USB2.0 MJPEG/YUV2 Format
- Frame Rate: 60fps
- S-mount M12 Lens Holder
- Lenses Type:
  - FL3.6mm (Standard) Fixed Focus
  - FL2.1 / FL6.0 / FL8.0
  - Fisheye FOV(D) 120° / 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 OV7725
  - 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: 56° x 44°)
  - Optional: FL2.1 (84° x 68°) / FL6.0 (35° x 26°) / FL8.0 (26° x 20°)
  - Fisheye FOV(D) 120° / FOV(D) 170°
  - The best object image distance range for reference:
- FL2.1 (0.5-2m) / FL3.6 (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

GCM03M60M12Q 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**

<b>Model</b>	GCM03M60M12Q1 / GCM03M60M12Q2
<b>Sensor</b>	OV7725
<b>Image Size</b>	1/4 inch
<b>Pixel Size</b>	6.0 μm
<b>Image Area</b>	3984 μm x 2952 μm
<b>Image Pixels &amp; Resolution</b>	VGA / 640(H) X 480(V)
<b>Image Formats</b>	MJPEG / YUV2 (YUYV)
<b>Image Transfer Rate</b>	640X480 MJPEG@60fps YUY2@30fps 480X480 MJPEG@30fps YUY2@30fps 450X450 MJPEG@30fps YUY2@30fps 320X240 MJPEG@30fps YUY2@30fps 240X240 MJPEG@30fps YUY2@30fps
<b>Max S/N Ratio</b>	50dB
<b>Dynamic Range</b>	60dB
<b>Sensitivity</b>	3.8V/lux-sec@550nm
<b>Mini illumination</b>	0.2 lux
<b>Shutter Type</b>	Electronic rolling shutter / Frame exposure
<b>Connecting Port</b>	USB2.0 High Speed
<b>Plug &amp; Play</b>	UVC (USB Video Class) Compliant support
<b>Auto Exposure Control (AEC)</b>	Support
<b>Auto white balance (AWB)</b>	Support
<b>Adjustable Parameters</b>	Brightness, Contrast, Saturation, Hue, Sharpness, Gamma, White Balance, Backlight Contrast, Exposure, Image Rotation
<b>Lens Parameters</b>	Standard FL3.6mm Optional: FL2.1 / FL6.0 / FL8.0mm Fisheye: FOV(D) 120° / FOV(D) 170°
<b>Lens Holder</b>	Standard M12 lens holder
<b>LED Power Connector</b>	2P-2.0mm Socket
<b>Power Supply</b>	USB BUS POWER 4P-2.0mm Socket
<b>Operating Voltage</b>	DC 5V
<b>Operating Current</b>	100mA ~ 160mA
<b>Operating Temperature</b>	-20 ~ 70°C
<b>Storage Temperature</b>	-20 ~ 80°C
<b>PCBA Dimensions</b>	32X32mm (Compatible 26X26mm )
<b>Weight</b>	~30g



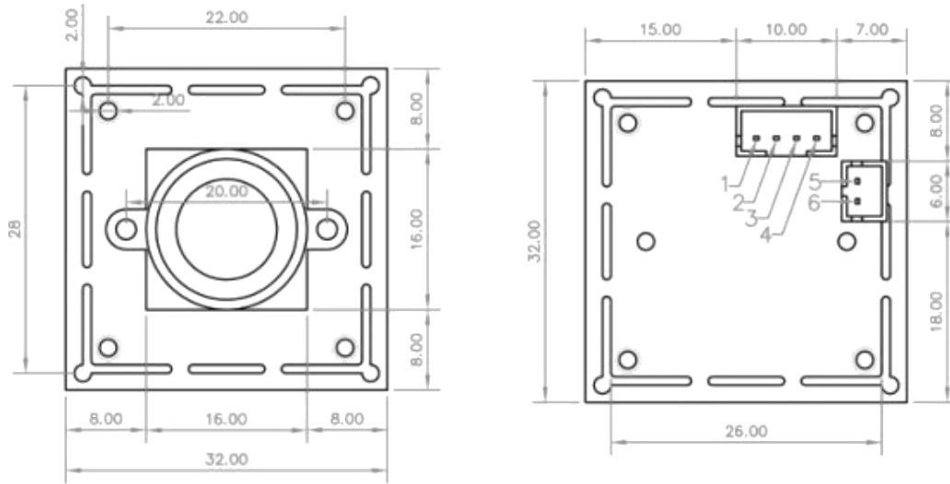
<b>Cable Length</b>	Standard 1m, Optional 2m, 3m, 5m
<b>Operating System Request</b>	WinXP / Vista / Win7 / Win8 Linux with UVC (above linux-2.6.26 ) MAC-OS X 10.4.8 or later Wince with UVC Android 4.0 or above with UVC

Specifications are subject to change without notice.





**Q1 DRAWING**



**Q2 DRAWING**

TOP VIEW

SIDE VIEW

BOTTOM VIEW

