

CMOS image sensor

VGA 3.7μm

Under
development

TCM5113PL

1/6 Inch VGA CMOS Image Sensor with ISP



The TCM5113PL is a color sensor product which includes area color image sensor embedded with image signal processor (ISP). In the sensor area, there are 480 vertical and 640 horizontal signal pixels, and the image size meets with 1/6 inch optical format. Use of the CMOS process enables low power consumption operations. And, it also provides excellent color reproduction through its primary color filter, even under low light environment, and the embedded image signal processor (ISP) without CPU makes your camera system more smaller or simpler.

■ Features

Applications

- ▶ Mobile phones and Smart phones
- ▶ Scenes under low light environment

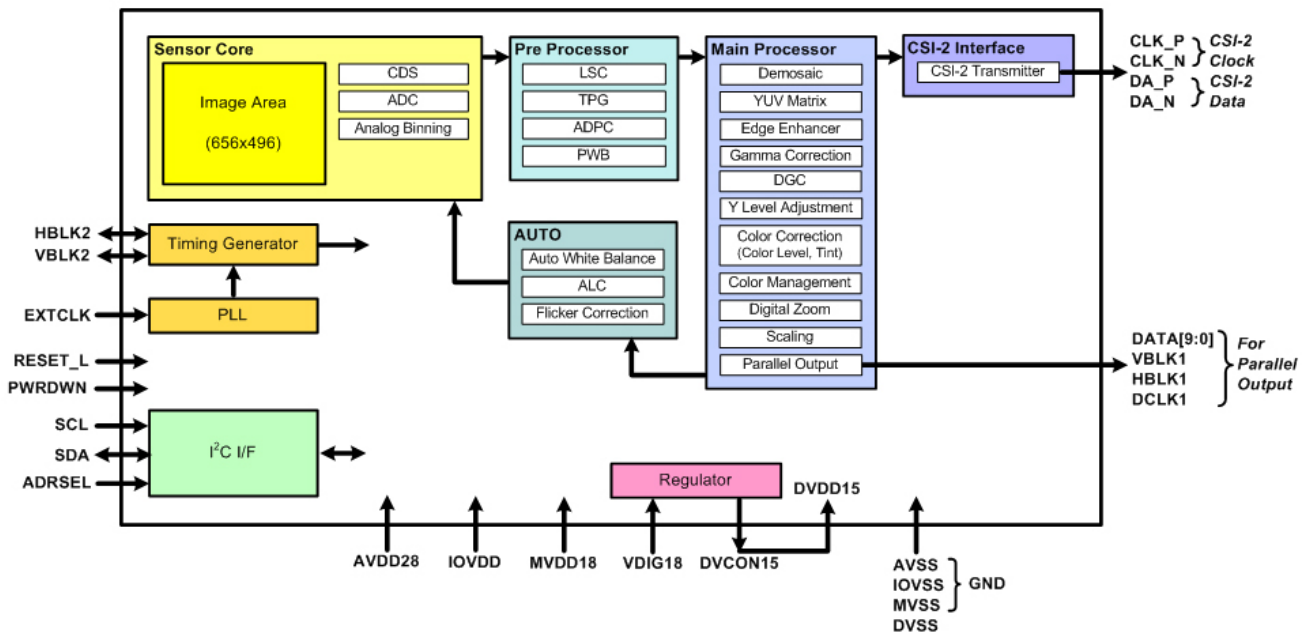
Features

- ▶ 1/6" VGA resolution (3.7μm)
- ▶ Progressive scan
- ▶ I²C interface
- ▶ 10bits parallel output
- ▶ CSI-2 1lane
- ▶ Binning: Vertical 1/2, 1/4
- ▶ Built-in Phase lock loop
- ▶ Digital zoom
- ▶ Picture flip (Horizontal and vertical)
- ▶ Picture effects (Monochrome, Negative, Sepia, Antique, Sketch, Emboss)
- ▶ Lens shading correction
- ▶ Defect pixel correction
- ▶ Gamma correction (programmable gamma table and dynamic gamma correction)
- ▶ Standby mode (Software standby)
- ▶ Power down mode for low power consumption (Hardware standby)

Specifications

- ▶ Optical format: 1/6"
- ▶ Pixel size: 3.7μm × 3.7μm
- ▶ Output pixels: 640(H) × 480(V)
- ▶ Image area size: 2427.2μm(H) × 1835.2μm(V)
- ▶ Data formats: YUV422, RAW-8,10bits
- ▶ Frame rate:
 - 60fps @VGA
 - 120fps @QVGA
 - 240fps @QQVGA
- ▶ Power supply:
 - Analog=2.6 to 3.0V
 - Digital=1.7 to 1.9V
 - I/O=1.7 to 3.0V
- ▶ Operating temperature: 0 to +50°C
- ▶ Storage temperature: -30 to +85°C
- ▶ Package
 - Type: P-FLGA
 - Size: 10.0mm × 10.5mm

■ System Block Diagram



» For further information about Toshiba Sensors, please visit

<http://www.semicon.toshiba.co.jp/eng/product/sensor/index.html>

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