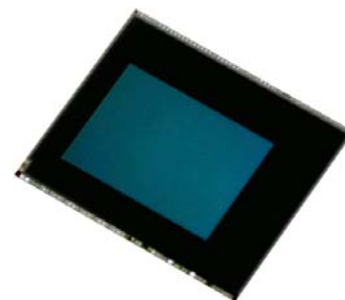


CMOS image sensor

8Megapixel 1.4μm

T4K05

1/4 inch 8M pixel 1.12μm BSI CMOS image sensor



The Toshiba T4K05 is small BSI image sensor.

In the sensor area 3296 horizontal and 2480 vertical signal pixels, and the image size meets with 1/4 inch optical format. Use of the CMOS process enables low power consumption operations.

It has high resolution: 8M. Its pixel size is 1.12μm × 1.12μm, so small module size (ex. 7.5mm × 7.5mm) can be achieved with this sensor. Its speed rate is high: 30 fps @ full resolution and 1080p.

It also has HDR (High Dynamic Range) function which can make images or movie with high dynamic range.

■ Features

Applications

- ▶ Mobile phones and Smart phones

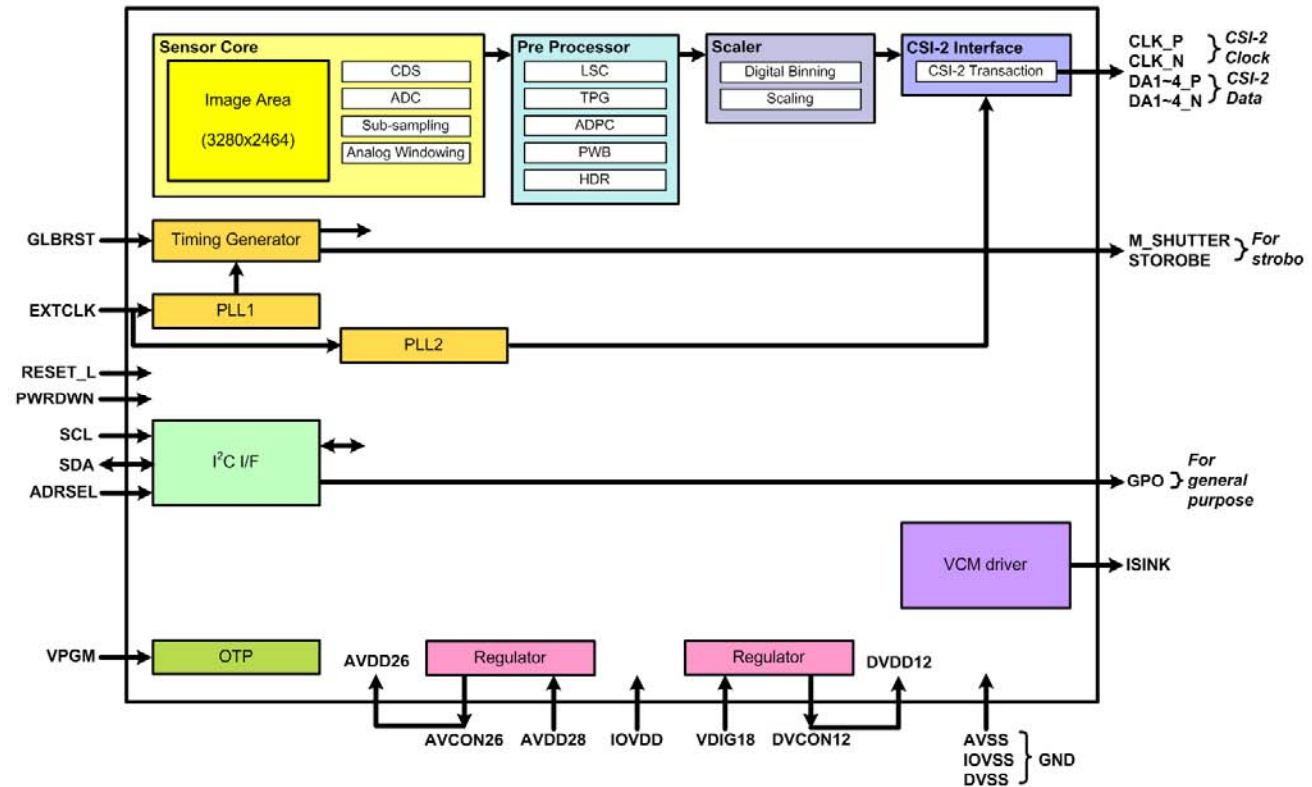
Features

- ▶ 1/4" 8M pixel (1.12μm)
- ▶ BSI
- ▶ Progressive scan
- ▶ I²C interface
- ▶ CSI-2 4lanes
- ▶ Sub sampling: Horizontal & Vertical 1/2, 1/4
- ▶ Built-in phase lock loop
(dual PLL (2nd PLL for MIPI output))
- ▶ HDR (High Dynamic Range)
- ▶ Lens shading correction
- ▶ Defect pixel correction
- ▶ Picture flip (horizontal and vertical)
- ▶ Context switch
- ▶ Built-in VCM driver
- ▶ Built-in temperature sensor
- ▶ Standby mode, Power down mode
- ▶ OTP (One Time Programmable) memory: 8kbits
- ▶ Built-in regulator (1.8V to 1.2V)

Specifications

- ▶ Optical format: 1/4"
- ▶ Pixel size: 1.12μm × 1.12μm
- ▶ Effective pixels: 3280(H) × 2464(V)
- ▶ Data formats: RAW8, RAW10
RAW12, RAW14 for HDR
- ▶ Frame rate:
30fps @full resolution
30fps @1080p (Full-FOV)
60fps @720p (Full-FOV with sampling)
180fps @VGA (Full-FOV with sampling)
- ▶ Power supply:
Analog=2.6 to 3.0V
Digital=1.7 to 1.9V
I/O=1.7 to 3.0V
- ▶ Operating temperature: -20 to +60°C
- ▶ Storage temperature: -40 to +85°C

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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