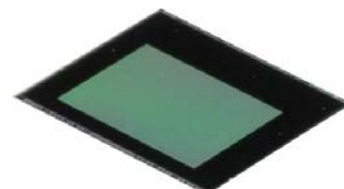


CMOS image sensor

8Megapixel 1.4μm

**T4K04**

## 1/3.2 inch 8M pixel 1.4μm BSI CMOS image sensor



The Toshiba T4K04 is small BSI image sensor.

In the sensor area 3296 horizontal and 2480 vertical signal pixels, and the image size meets with 1/3.2 inch optical format. Use of the CMOS process enables low power consumption operations.

It has high resolution: 8M. Its pixel size is 1.4μm × 1.4μm, sensor. Its speed rate is high: 30 fps @ full resolution and 1080p.

## ■ Features

### Applications

- ▶ Mobile phones and Smart phones

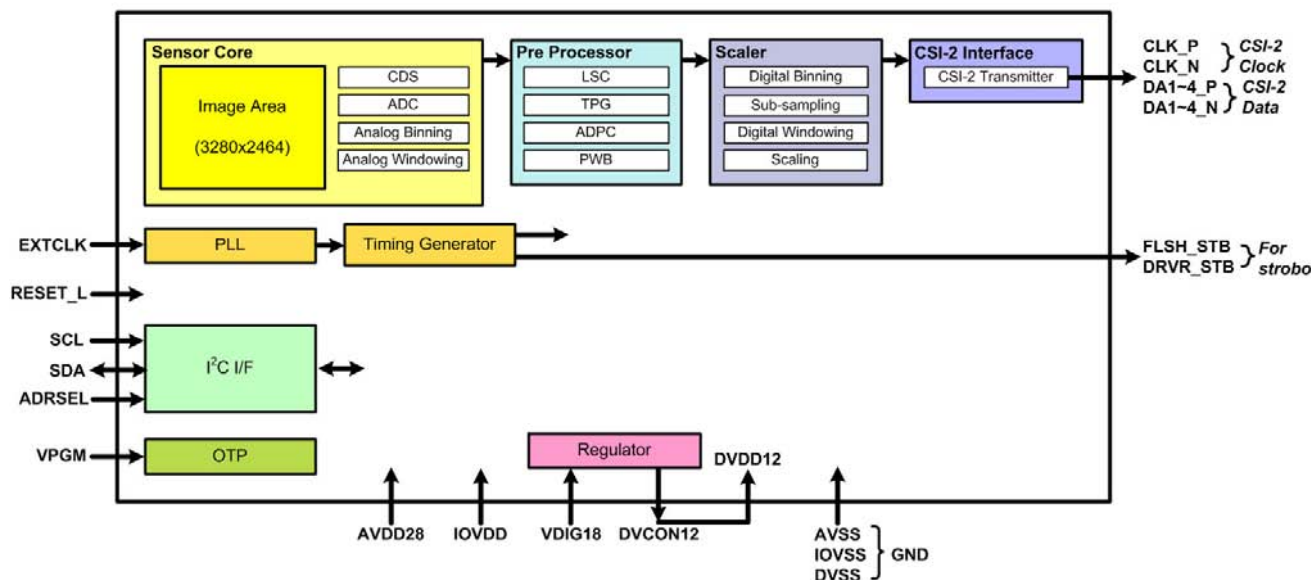
### Features

- ▶ 1/3.2" 8M pixel (1.4μm)
- ▶ BSI
- ▶ Progressive scan
- ▶ I<sup>2</sup>C interface
- ▶ CSI-2 4lanes
- ▶ Binning:
  - Horizontal 1/2
  - Vertical 1/2, 1/4, 1/8
- ▶ Built-in phase lock loop
- ▶ Lens shading correction
- ▶ Defect pixel correction
- ▶ Picture flip (horizontal and vertical)
- ▶ Global reset for mechanical shutter
- ▶ Strobe timing pulse
- ▶ Standby mode, Power down mode
- ▶ OTP (One Time Programmable) memory: 8kbits
- ▶ Built-in regulator (1.8V to 1.2V)

### Specifications

- ▶ Optical format: 1/3.2"
- ▶ Pixel size: 1.4μm × 1.4μm
- ▶ Effective pixels: 3280(H) × 2464(V)
- ▶ Data formats: RAW8, RAW10
- ▶ Frame rate:
  - 30fps @full resolution
  - 30fps @1080p
  - 60fps @720p
  - 120fps @VGA
- ▶ Power supply:
  - Analog=2.6 to 3.0V
  - Digital=1.7 to 1.9V
  - I/O=1.7 to 1.9V
- ▶ 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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