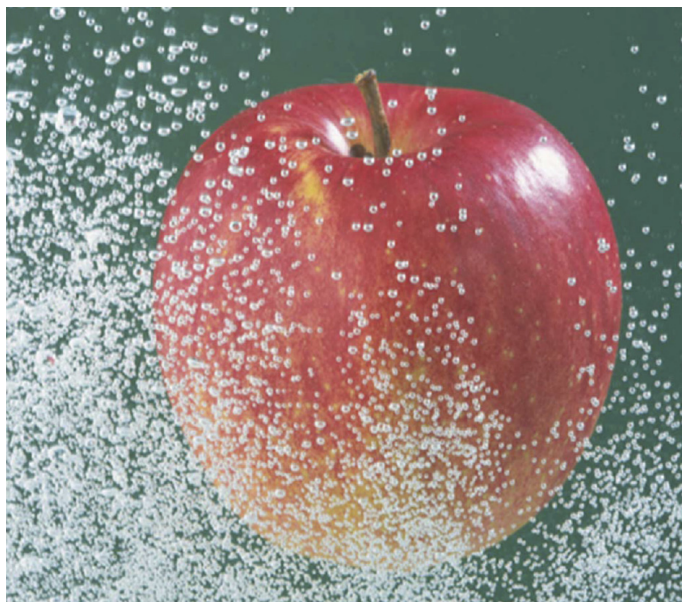


CMOS image sensor

3.2Megapixel 1.75μm

TCM9315MD

1/4inch 3.2M pixels camera module with EDOF technology



The Toshiba TCM9315MD is 3.2M pixels camera module with EDOF system. The optical format is 1/4 inch, of which small size is suitable for built-in camera module application. The full resolution is 2056 × 1544 pixels, and 1/2 binning mode for view finder is 1028 × 772 pixels. The maximum frame rate with full resolution is 15fps, and 30fps for view finder is available.

■ Features

Applications

- ▶ Mobile phones and Smart phones

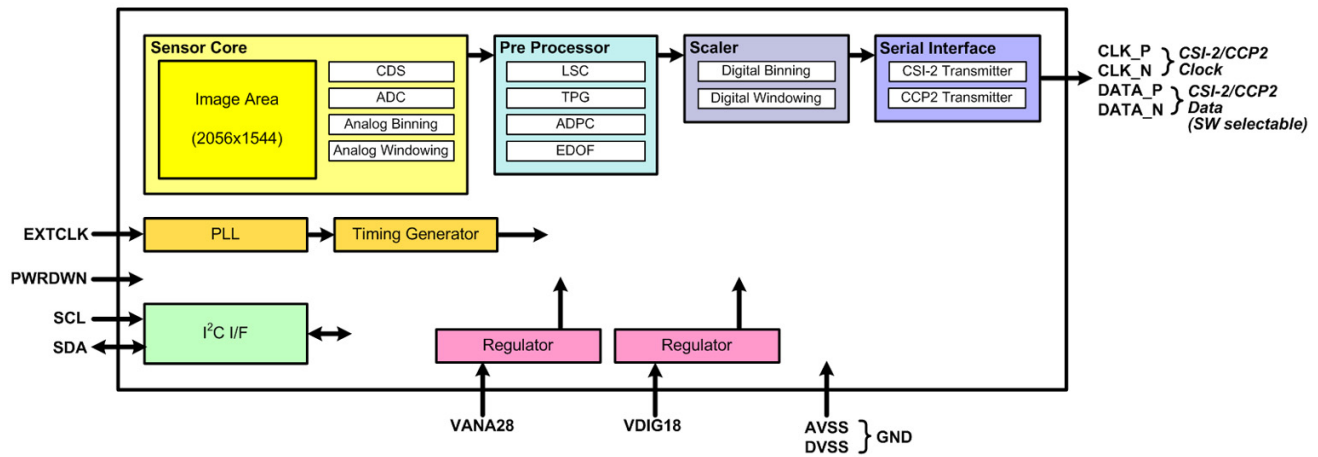
Features

- ▶ 1/4" 3.2M pixels resolution (1.75μm)
- ▶ SMIA65 compatible camera module
- ▶ Progressive scan
- ▶ CSI-2 1lane or CCP2 serial output
- ▶ I²C interface
- ▶ Binning: Horizontal 1/2 (Analog) Vertical 1/2 (Digital)
- ▶ Built-in phase lock loop (PLL)
- ▶ EDOF (Extended Depth of Field) function
- ▶ Defect pixel correction
- ▶ Lens shading correction
- ▶ Standby mode (Controlled by PWRDWN)

Specifications

- ▶ Optical format: 1/4"
- ▶ Pixel size: 1.75μm × 1.75μm
- ▶ Effective pixels: 2056(H) × 1544(V)
- ▶ Data formats: RAW-8,10bits and DPCM10-8
- ▶ Maximum data rate of CCP2: 650Mbps
- ▶ Maximum data rate of CSI-2: 650Mbps
- ▶ Frame rate: 15fps @full resolution 30fps @1/2 binning
- ▶ Power supply: Analog=2.6 to 2.9V Digital=1.7 to 1.9V
- ▶ Current consumption @full resolution and 15fps: IVANA: 35mA (Typ.) IVDIG: 90mA (Typ.)
- ▶ Operating temperature: -20 to +60°C
- ▶ Storage temperature: -30 to +85°C
- ▶ Module size: 6.5(W) × 6.5(D) × 4.6(H)mm (SMIA65 compatible)
- ▶ Focus type: Fixed focus
- ▶ F number: 2.8
- ▶ FOV: 57.8 degree (horizontal)
- ▶ TV distortion: Max. 1%
- ▶ Configuration: 4 elements of lens

■ 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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