

CMOS image sensor

8Megapixel 1.4 μ m

TCM9820MD

1/3inch 8M pixels camera module with EDOF technology



The Toshiba TCM9820MD is 8M pixels camera module with EDOF system. The optical format is 1/3 inch, of which small size is suitable for built-in camera module application. The full resolution is 3280 x 2464 pixels, and 1/2 binning mode for view finder is 1640 x 1232 pixels(Maximum size). The maximum frame rate with full resolution is 15fps, and 60fps for view finder is available.

■ Features

Applications

- ▶ Mobile phones and Smart phones

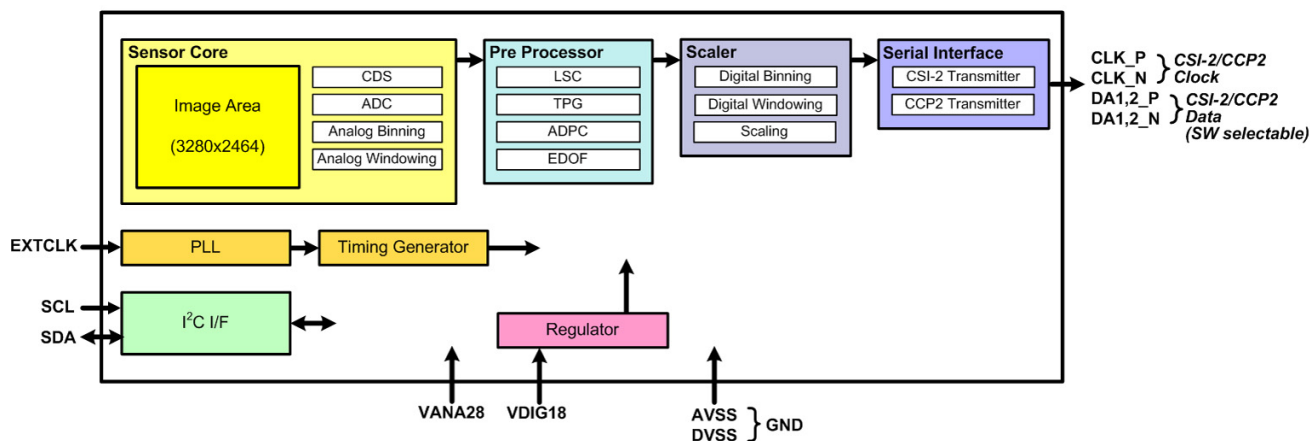
Features

- ▶ 1/3" 8M pixels resolution (1.4 μ m)
- ▶ Progressive scan
- ▶ CSI-2 2lanes or CCP2 serial output
- ▶ I²C interface
- ▶ Binning: Horizontal & Vertical 1/2 (Analog)
- ▶ EDOF (Extended Depth of Field) function
- ▶ Defect pixel correction
- ▶ Lens shading correction
- ▶ Standby mode (Controlled by gated clock)

Specifications

- ▶ Optical format: 1/3"
- ▶ Pixel size: 1.4 μ m \times 1.4 μ m
- ▶ Effective pixels: 3280(H) \times 2464(V)
- ▶ Data formats: RAW-8,10bits, DPCM10-8, DPCM10-6
- ▶ Maximum data rate of CCP2: 650Mbps
Maximum data rate of CSI-2, 2lanes: 1.3Gbps (650Mbps / lane)
- ▶ Frame rate:
15fps @full resolution
60fps @1/2 binning
- ▶ Power supply:
Analog = 2.6 to 2.9V
Digital = 1.7 to 1.9V
- ▶ Current consumption 175mW@full resolution and 15fps (Typ.)
- ▶ Operating temperature: -20 to +60°C
- ▶ Storage temperature: -30 to +85°C
- ▶ Module size: 8.5(W) \times 8.5(D) \times 6.1(H)mm (SMIA85 compatible)
- ▶ Focus type: Fixed focus
- ▶ F number: 2.8
- ▶ FOV: 55.4 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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