

MT9P015



5-Megapixel
1/3.2-Inch
CMOS Image Sensor Die
Die or iLLC

Design Flexibility for Mobile Applications

1 Excellent Image Quality

Aptina's third-generation 1.75 μ m pixel improves low-light images. Five-megapixel available in 1/3.2-inch format.

2 Two-Lane MIPI Advantage

On-chip PLL and two-lane MIPI enable low EMI solutions by making the data clock adjustable without sacrificing frame rate.

3 HD Video at Fast Frame Rates

Captures stunning 1080p HD video at 30 fps and 720p HD video at 60 fps.

4 Flexible Configuration

Flexible settings and configuration enable optimal system performance metrics.

5 Simple Interface

Easily interfaces with your ISP provider with its 12-bit parallel interface support two-lane MIPI and CCP2-interface.

Applications

- Mobile
- Portable media players
- Security cameras



How to Buy

Visit Aptina.com to find qualified distributors or to request access to NDA data sheets and other technical documents.

Features

- Improved VGA and QVGA sensitivity
- Low dark current
- Simple two-wire serial interface
- Auto black level calibration
- Support for external mechanical shutter
- Support for external LED or xenon flash
- High frame rate preview mode with arbitrary downsize scaling from maximum resolution
- Programmable controls: gain, horizontal and vertical blanking, auto black level offset correction, frame size/rate, exposure, left-right and top-bottom image reversal, window size, and panning
- Data interface: CCP2-compliant, sub-low-voltage differential signalling (sub-LVDS) or single/dual lane serial mobile industry processor interface (MIPI)
- On-die phase-lock-loop (PLL) oscillator
- Bayer pattern down-size scaler
- Integrated color and lens shading correction
- One-time programmable (OTP) memory for storing module information
- Superior low-light performance
- Position and color-based shading correction

Specifications

Imaging Array

- Optical Format: 1/3.2-inch
- Active Array: 2592(H) x 1944(V)
- Imaging Area: 4.5mm(H) x 3.4mm(V)

Speed/Output

- Frame Rate: 15 fps @ full resolution
- Data Rate: 1 or 2 lane MIPI: 768 Mb/s per lane; CCP2: 650 Mb/s; Parallel: 96 Mb/s x 12 bits
- Master Clock: 6–27 MHz
- Data Format: CCP2-compliant, MIPI, or parallel

Sensitivity

- Pixel Size: 1.75 μ m x 1.75 μ m
- Dynamic Range: 67dB
- Responsivity: 0.8 V/lux-sec

Power

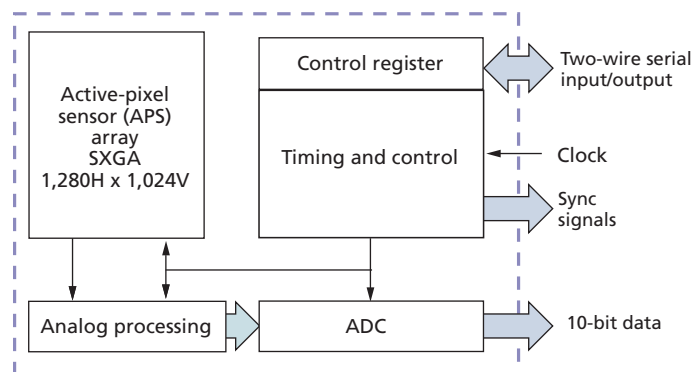
- Supply: Digital: 1.7–1.9V (1.8V nominal)
Analog: 2.6–3.1V (2.8V nominal)
I/O: 1.7–1.9V (1.8V nominal)
- Consumption: 256mW (operating) and 123 μ W (standby)

Temperature Range

- Operating: –30°C to +70°C

Package: Die or iLCC

Block Diagram



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