

MT9T112



3-Megapixel
1/4-Inch
SOC Digital Image Sensor
Die

Brighter, More Colorful Images

1 Industry-Leading Performance

Third-generation 1.75 μ m pixel technology results in industry-leading sensitivity and color balance.

2 Enhanced Image Management

Scalado[®] SpeedTags[™]—combined with integrated real-time JPEG encoder, JFIF nodes—provide robust image management.

3 Image Stabilization Support

The motion-adaptive exposure feature eliminates the blurry effects of jittery hands or camera shake.

4 Sophisticated On-Board Image Processing

The on-chip image flow processor (IFP) performs a host of image correcting and enhancing functions, without the need for additional parts.

5 Super-Sensitive, Low-Noise Images

The SOC's flat-field adaptive noise reduction improves clarity in all lighting conditions, clearly delivering excellent images.

Applications

- Cell phones
- PC cameras
- PDAs



How to Buy

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

Features

- Third-generation 1.75µm pixel technology
- Motion-adaptive exposure mode
- 3Mp resolution, 2048H x 1536V array format
- Integrated real-time JPEG encoder, JFIF nodes
- On-chip automatic features (such as AWB, AE, and flicker)
- Scalado SpeedTags in JPEG format
- 15 fps at full resolution
- Flexible support for external auto focus, optical zoom, and mechanical shutter
- On-chip phase-lock loop (PLL)
- On-chip, 10-bit analog-to-digital converter (ADC)
- Two-wire serial interface providing access to registers and microcontroller memory
- 10-bit parallel and serial MIPI interfaces
- One-time programmable (OTP) memory

Specifications

Imaging Array

- Optical Format: 1/4-inch (4:3)
- Active Array: 2048(H) x 1536(V) (QXGA)
- Imaging Area: 3.62mm(H) x 2.73mm(V):
4.52mm diagonal (4:3 aspect ratio)

Speed/Output

- Frame Rate: 15 fps @ full resolution (JPEG),
30 fps in preview mode

- Data Rate: 96 MHz

- Master Clock: 6–54 MHz

- Data Format: 10-bit parallel and serial MIPI

Sensitivity

- Pixel Size: 1.75µm
- Dynamic Range: >66dB (preliminary)
- Responsivity: 0.55 V/lux-sec (preliminary)

Power

- Supply: Digital: 1.7–1.95V
I/O: 1.7–3.1V
Analog: 2.5–3.1V
- Consumption: 355mW (@ 30 fps preview mode)

Temperature Range

- Operating: –30°C to +70°C (at junction)

Package: Bare die (in wafer form)

SOC Block Diagram

