

MT9M001



1.3-Megapixel
1/2-Inch
Monochrome Image Sensor
48-Pin CLCC

All-Purpose Imaging Solutions From a Single Part

1 Superior Image Quality

Achieves sharp CCD image quality with all the inherent advantages, such as lower power consumption and higher performance, that CMOS is famous for.

2 Powerful Design

Uses a 5.2 μm -x-5.2 μm pixel size in an RGB Bayer pattern, resulting in a 1/2-inch optical format.

3 Sophisticated On-Chip Functions

Integrates camera functions, such as programmable gain, exposure control, and auto black level calibration, directly onto the chip.

4 Flexible Operations

Provides ability to operate variable functions, including the frame rate and exposure, in the default mode or programming through the simple two-wire serial host interface.

5 Faster Time-to-Market

Enables designers to create smaller, higher-performance applications with shorter development periods.

Applications

- General purpose
- Scanning



How to Buy

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

Features

- Low-power CMOS image sensor
- 1.3-megapixel resolution (1,280H x 1,024V)
- 1/2-inch optical format
- Up to 30 frames per second (fps) progressive scan for high-quality video
- Programmable gain and exposure control
- Auto black level calibration
- Viewfinder and snapshot modes
- On-chip, 10-bit analog-to-digital converter (ADC)
- Two-wire serial host interface
- 10-bit parallel data output

Specifications

Imaging Array

- Optical Format: 1/2-inch
- Active Array: 1280(H) x 1024(V)
- Imaging Area: 6.66mm(H) x 5.32mm(V)

Speed/Output

- Frame Rate: 30 fps
- Data Rate: 48 Mp/s at 48 MHz
- Master Clock: 48 MHz
- Data Format: Serial and parallel

Sensitivity

- Pixel Size: 5.2 μ x 5.2 μ
- Dynamic Range: 68.2dB
- Responsivity: 2.1 V/lux-sec

Power

- Supply: Digital: 3.3V
Analog: 3.3V
- Consumption: 363mW (operating) and 294 μ W (standby)

Temperature Range

- Operating: 0°C to 70°C

Power: 48-pin CLCC

Block Diagram

