MT9P001

5-Megapixel
1/2.5-Inch
CMOS Image Sensor
Die or 48-Pin iLCC

High-Powered Video Capability in a Small, Low-Power Sensor

1. **Excellent Image Quality**
   2.2µm pixel enables the capture of clear and brilliant still images.
2. **Fast Response Times and Short Focus Times**
   15 fps image capture at full resolution provides specialized high-speed DSC performance that can't be matched by CCDs.
3. **Small Footprint, Simple Design**
   The 12-bit ADC for high-resolution image capture and HDTV video formats is a one-chip solution that enables a small footprint and easy design.
4. **HD Video Capable**
   HD video capability—1,080p at 30 fps—is a design differentiator.
5. **Low Power Consumption**
   Low power advantages of CMOS technology extend the life of a DSC/DVC battery.

Applications

- Digital still cameras
- HD hybrid cameras
- Digital video cameras

How to Buy

Production and sample quantities of Micron products may be ordered through qualified distributors. See our Web site for details. You may also request access to NDA data sheets and other technical documentation by visiting our Web site.

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Features

- High frame rate for HD video
- High-quality 2.2µm pixel with DigitalClarity® CMOS imaging technology
- Low-power, progressive scan CMOS image sensor
- 5-megapixel resolution (2,592H x 1,944V)
- On-chip, 12-bit analog-to-digital converter (ADC)
- Excellent low-light sensitivity
- Viewfinder, bulb, and snapshot modes
- Programmable gain and exposure control
- Two-wire serial interface
- Global reset
- Binning for enhanced viewing experience
- Phase-lock loop (PLL) for versatile clock in scheme

Specifications

Imaging Array
- Optical Format: 1/2.5-inch
- Active Array: 2,592(H) x 1,944(V)

Speed/Output
- Imaging Area: 5.70mm(H) x 4.28mm(V)
- Frame Rate: 15 fps @ full resolution (5Mp)
  30 fps @ 720p
  30 fps @ 1,080p
- Data Rate: 96 Mp/s
- Master Clock: 96 MHz
- Data Format: 12-bit progressive scan

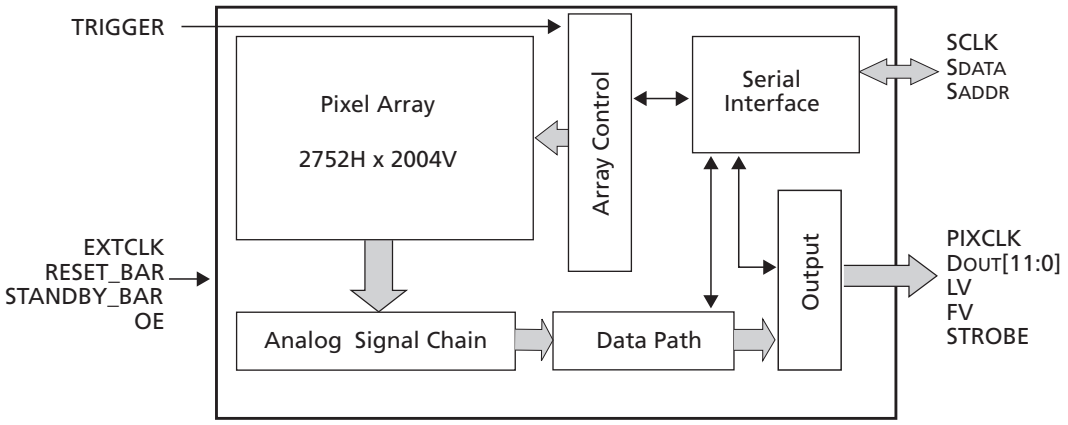
Sensitivity
- Pixel Size: 2.2µm x 2.2µm
- Dynamic Range: 70dB
- Responsivity: 1.4 V/lux-sec (550nm)

Power
- Supply: Analog: 2.6–3.1V (2.8V nominal)
  Digital: 1.7–1.9V (1.8V nominal)
  I/O: 1.7–3.1V
- Consumption: 381mW @ full resolution

Temperature Range
- Operating: –30°C to +70°C

Package: Die, 48-pin iLCC

Block Diagram



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