

MT9M021/MT9M031



1.2 Megapixel  
1/3-Inch Digital Image Sensor

## Next Generation Megapixel Global Shutter Image Sensor

- 1 720p/60 FPS Video Performance**  
High performance and high clarity true HD video streaming
- 2 Night Vision Support**  
Provides excellent day/night camera operation
- 3 Global Shutter Image Capture**  
High speed CMOS with global shutter technology free of rolling shutter artifacts
- 4 1/3" Optical Form Factor**  
Mainstream, cost-effective lens format
- 5 Very Low Noise Design**  
Lower compression burden and reduce storage space

## Applications

- High-speed dome camera
- HD surveillance camera
- Scanning and machine vision
- Video Conferencing



## How to Buy

Production and sample quantities of Aptina 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.

# MT9M021/MY9M031

## Features

- Superior low-light performance
- Flexible row skipping mode
- HD video (720p60)
- High speed video capture
- Video/snapshot modes
- 2x binning and windowing
- On-chip AE and statistics engine
- Parallel and HiSPi output
- Support for external LED or flash
- Auto black level calibration
- Context switching

## Specifications

**Input clock range:** 6-50 MHz

**Output clock maximum:** 74.25 MHz

**Output:** Parallel 12-bit

**Max. Frame Rates:**

- 1.2MP (full FOV) 45 fps
- 720pHD (reduced FOV) 60 fps
- VGA (full FOV) 45 fps
- VGA (reduced FOV) 60 fps

**Dynamic Range:** 83.5dB

**Responsivity:** 550 nm 8.5 V/lux-sec

**Supply Voltage:**

- I/O 1.8 or 2.8V
- Digital 1.8 V
- Analog 2.8 V

**Power Consumption:**

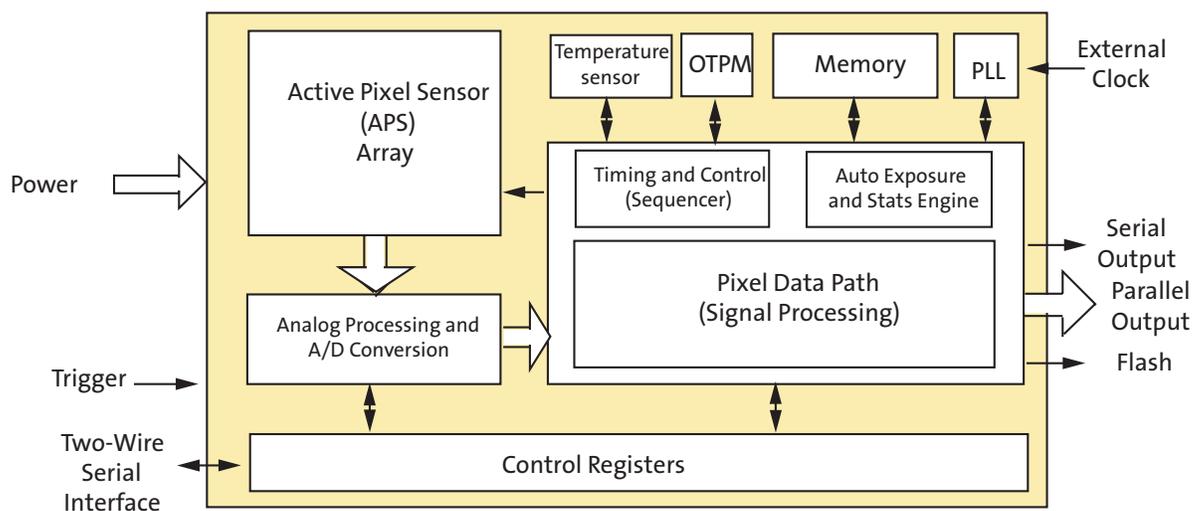
- 270mW (1280x720 60fps Parallel output)

**Operating Temperature (at junction)**

- -30°C to +70°C

**Package Options:** Bare die, iLCC, iBGA

## Block Diagram



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