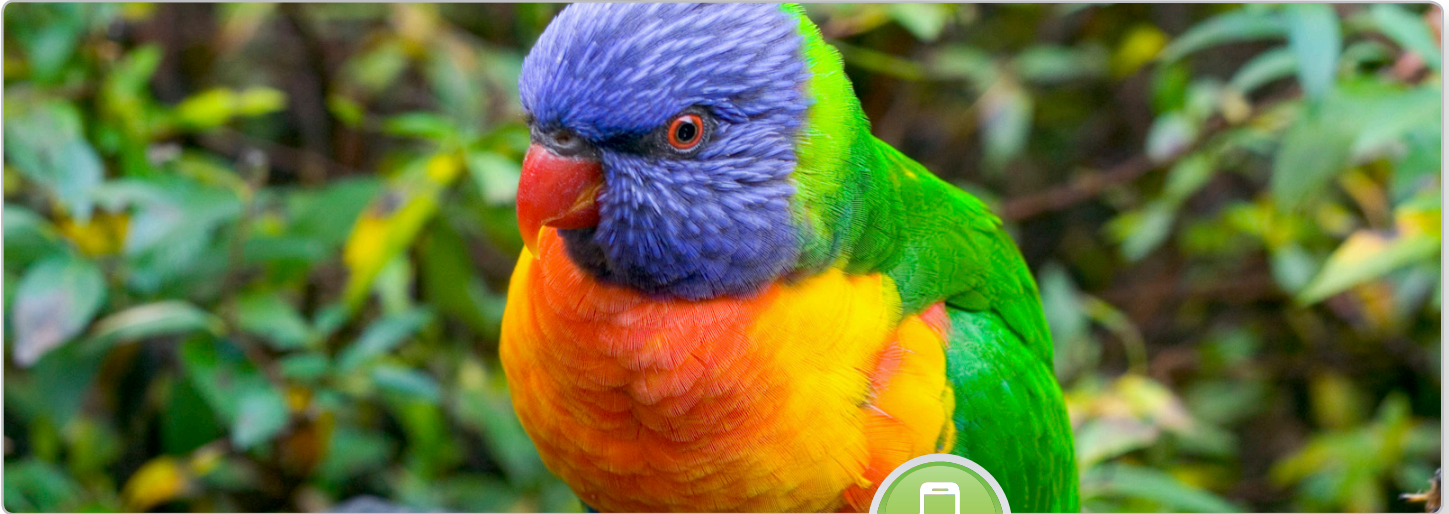


MT9P111



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

Excellent Images From a Single Part

1 Best-In-Class CMOS Technology

Produced on Aptina's most advanced 1.4 μ m pixel technology, this 5-Mp sensor is perfect for cell phones and PC cameras.

2 Flexible, Easy-to-Access Images

With its SOC and on-chip IFP, this sensor integrates JPEG compression, as well as thumbnail, header, and Scalado™ SpeedTags™ support.

3 Automatic Image Processing

Superior low-light sensitivity and automatic image correction and enhancement provides clear images.

4 Excellent Image Quality

Advanced auto focus support and configurable gamma correction based on scene brightness ensures your images are perfect every time.

5 Slow Motion Video

With 120 fps QVGA., this SOC is one of the first of its kind to support slow motion video.

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.

MT9P111

Features

- Slow motion 120 fps QVGA
- 720p HD video at 30 fps
- Advanced 1.4 μ m pixel technology
- Anti-shake support
- Superior low-light performance
- Integrated real-time JPEG encoder
- One-time programmable memory (OTPM) for automatic positional gain adjustments and other uses
- 8- to 10-bit parallel data output and serial MIPI data output
- Flexible support for external auto focus
- Internal master clock generated by on-chip phase-locked loop (PLL) oscillator with dithering
- Electronic rolling shutter (ERS), progressive scan
- Integrated image flow processor (IFP) for single-die camera module
- Automatic image correction and enhancement
- Output FIFO for data rate equalization
- Xenon and LED flash support with fast exposure adaptation
- Configurable gamma correction based on scene brightness
- Two-wire serial interface providing access to registers and microcontroller memory

Specifications

Imaging Array

- Optical Format: 1/4-inch
- Active Array: 2592(H) x 1944(V)
- Imaging Area: 3.62mm(H) x 2.72mm(V)

Speed/Output

- Frame Rate: 15 fps at full resolution (JPEG), 30 fps in preview mode
- Data Rate: 768 Mp/s (MIPI)
96 Mb/s (parallel)
- Master Clock: 96 MHz
- Data Format: YCbCr, 565RGB, 555RGB, 444RGB, JPEG 4:2:2, processed Bayer, RAW8- and RAW10-bit

Sensitivity

- Pixel Size: 1.4 μ m x 1.4 μ m
- Dynamic Range: 60dB
- Responsivity: 0.5 V/lux-sec (550nm)

Power

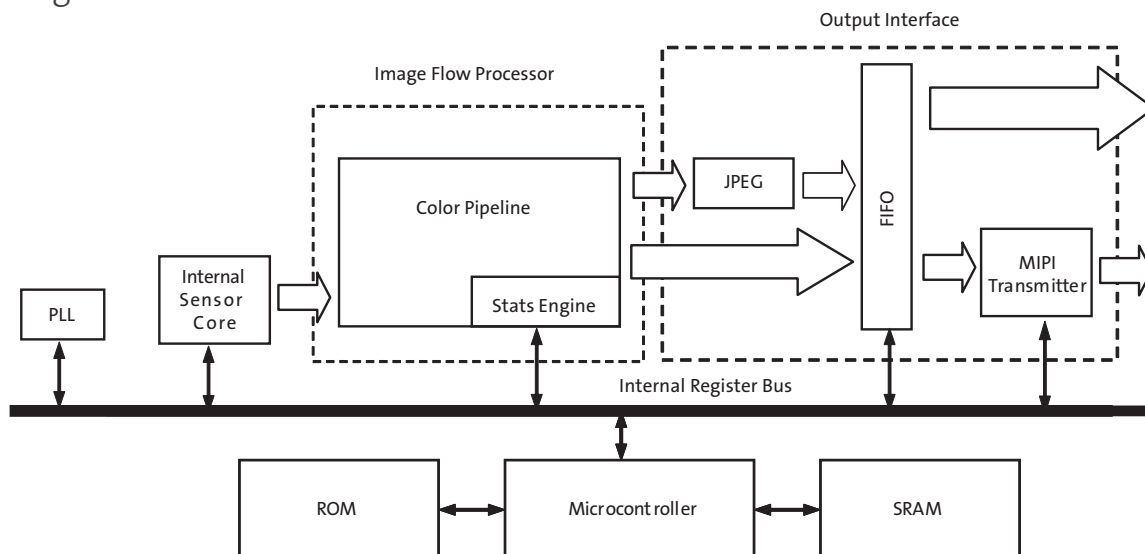
- Supply: Digital: 1.7–1.95V
I/O: 1.7–3.1V
Analog: 2.5–3.1V
- Consumption: 300mW (typical preview mode)

Temperature Range

- Operating: -30°C to +70°C

Package: Die

Block Diagram



aptina.com

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