

MT9V131



VGA  
1/4-inch  
SOC Image Sensor  
48-pin CLCC or Die

## Professional Image Quality for Networked Home Security

### 1 Cost-Effective VGA SOC

With all the necessary functionality built in, this all-in-one solution reduces the bill of materials.

### 2 Built-In Color Processing

The on-chip image flow processor performs a host of image correcting and enhancing functions you'd normally need another part for.

### 3 High-Quality Progressive Scan

High-quality digital video output minimizes image tearing. (Or progressive scan images are ideal for porting to compression and network interface chips.)

### 4 Low Power Consumption

The inherent low-power advantages of active-pixel architecture enable design flexibility.

### 5 Crystal Clear Image Quality

DigitalClarity technology enables video output that's on par with professional grade surveillance cameras.

## Applications

- Home monitoring
- 802.11 wireless network cameras
- Power line modem cameras
- IP cameras
- uPNP AV
- WiFi, UWB cameras
- Small office monitoring



## 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.



# MT9V131

## Features

- DigitalClarity® CMOS imaging technology, together with our advanced pixel
- System-on-a-chip (SOC)—a completely integrated camera system
- Ultra low-power, low-cost progressive scan
- Built-in scaler to perform pan, tilt, zoom functions
- On-chip image flow processor performs sophisticated processing: color recovery and correction, sharpening, gamma, lens shading correction, and on-the-fly defect correction
- Programmable controls: gain, horizontal and vertical blanking, auto black level offset correction, frame size/rate, exposure, left-right and top-bottom image reversal, window size, and panning
- Programmable gain and exposure control
- On-chip oscillator
- 2-wire serial programming interface

## Specifications

### Imaging Array

- Optical Format: 1/4-inch
- Active Array: 640(H) x 480(V)
- Imaging Area: 3.584mm x 2.688mm

### Speed/Output

- Frame Rate: 30 fps at full resolution
- Data Rate: 12–13.5 Mp/s
- Master Clock: 24–27 MHz
- Data Format: Parallel

### Sensitivity

- Pixel Size: 5.6µm x 5.6µm
- Dynamic Range: 60dB
- Responsivity: 1.9 V/lux-sec (550nm)

### Power

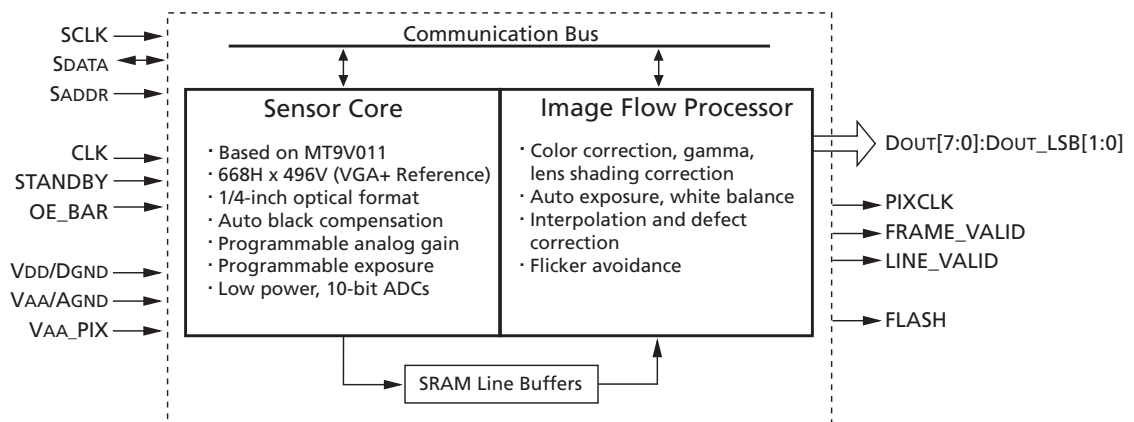
- Supply: 2.8V ±0.25V
- Consumption: <80mW

### Temperature Range

- Operating: –20°C to +60°C
- Storage: –40°C to +125°C

**Package:** 48-pin CLCC or Die

## Block Diagram



[aptina.com](http://aptina.com)

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