MT9V136

VGA
1/4-Inch
SOC Image Sensor
48-Pin CLCC or Die

High Performance, All-In-One Image Sensor Solution

1. **Very Low BOM Cost**
   Integrates sophisticated image processing and encoding functions on-chip, including NTSC- and PAL-formatted outputs.
2. **Versatile Usage**
   With analog and digital output formats , video can be simultaneously viewed on a standard TV screen as well as streaming 60 fps progressive scan digital output.
3. **Manufacturing Friendly**
   Extra pixels compensate for lens alignment tolerances.
4. **Best-In-Class, Low-Light Performance**
   Adaptive light gain design significantly improves sensitivity for superb low-light performance.
5. **On-Screen Display (OSD) Support**
   Built-in OSD function eliminates the need for an external overlay generator chip.

Applications

- Analog security cameras
- Network cameras
- CCTV cameras
- SOHO monitoring
- Consumer video applications

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.

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IMAGING

MT9V136

Features

- Embedded NTSC/PAL encoder
- Best-in-class, low-light performance
- System on a chip (SOC)—completely integrated camera system
- Ultralow power, low-cost progressive scan
- On-chip image flow processor performs processing such as color recovery/correction, sharpening, gamma, lens shading correction, on-the-fly defect correction, auto white balance, and auto exposure
- Programmable functions: 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
- Progressive scan or interlace, parallel data formats
- Two-wire serial programming interface
- SPI interface

Specifications

Imaging Array
- Optical Format: 1/4-inch
- Active Array: 680(H) x 512(V)
- Imaging Area: 3.54mm(H) x 2.69mm(V)

Speed/Output
- Frame Rate: 30 fps NTSC/25 fps PAL; 60 fps digital at full resolution
- Data Rate: 27 Mb/s
- Master Clock: 27 MHz
- Data Format: NTSC/PAL/digital progressive scan

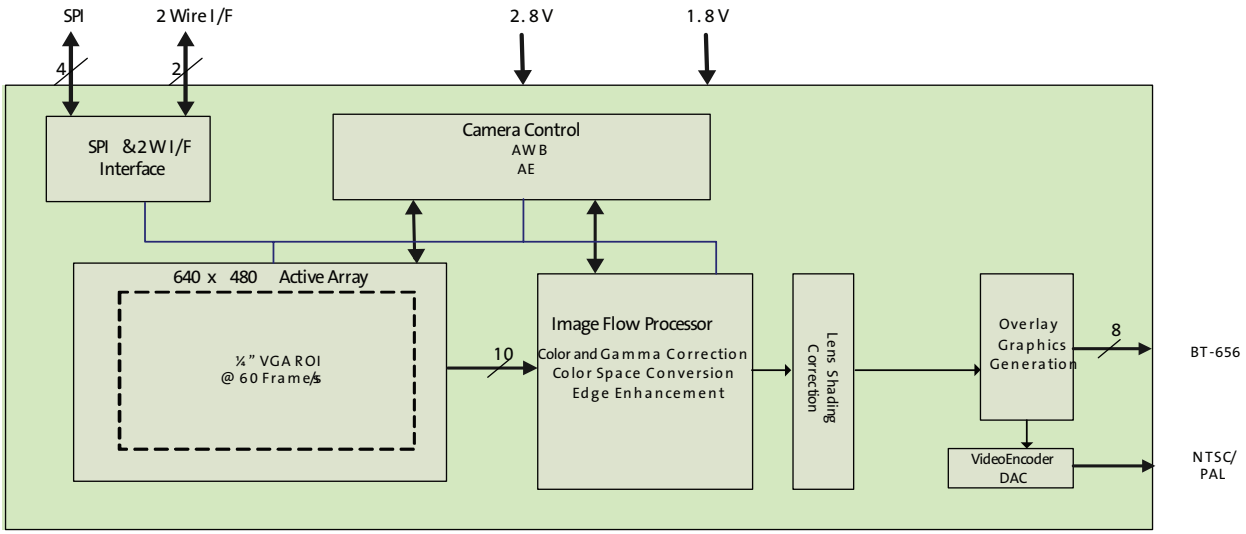
Sensitivity
- Pixel Size: 5.6µm x 5.6µm
- Pixel Dynamic Range: 82dB
- Responsivity: 11.5 V/lux-sec (550nm)

Power
- Supply: I/O digital 2.8V ±5%
  Core: 1.8V ±5%
  Analog: 2.8V ±5%
- Consumption: 300mW

Temperature Range
- Operating: –30°C to +85°C
- Storage: –40°C to +125°C

Package: 48-pin CLCC or die

Block Diagram



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