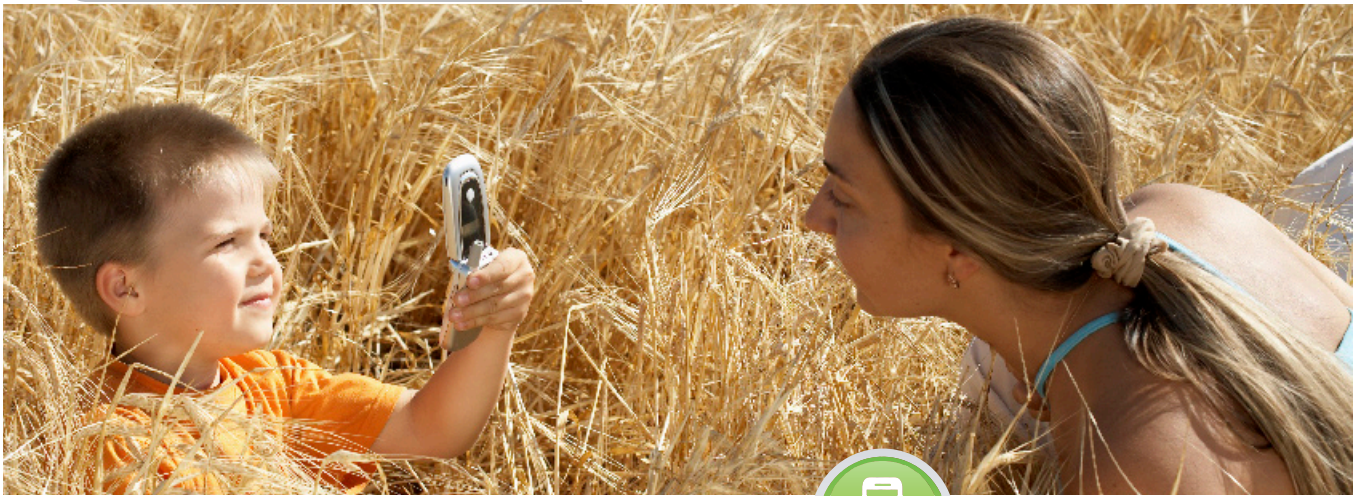


MT9M114



1.3MP/ 720pHD
1/6-Inch
SOC Image Sensor
Die, CSP

Industry First 720p/HD/30fps SOC Camera

- 1 Superior Low Light Sensitivity in both HD and VGA Video Modes**
Aptina technology offers extreme high performance video performance in low light and high light conditions.
- 2 High Speed Video Capabilities**
Operates at 30fps at full resolution and 60fps at VGA mode.
- 3 Small Form Factor**
Enables less than 4mm Z-height camera modules.
- 4 Multi-Camera Support**
Supports up to 7 devices with synchronization.
- 5 Faster Time-to-Market**
Provides multiple functions on a single chip, simplifying designs and speeding time-to-market.

Applications

- Embedded notebook, netbook, and desktop monitor cameras
- Tethered PC cameras
- Game consoles
- Cell phones, mobile devices, and consumer video communications
- Surveillance, medical, and industrial 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.

MT9M114

Features

- Superior low-light performance in both VDA and HD mode
- Ultra-low power
- Industry first 720p HD video 30fps SOC camera
- Integrated image flow processor (IFP) for single-die camera module
- Integrated image flow processor (IFP) for single-die camera module
- Internal master clock generated by on-chip phase locked loop (PLL) oscillator
- Arbitrary image scaling with anti-aliasing
- Automatic image correction and enhancement
- Auto white balance with 3 CCM interpolation supporting A-light, CWF and D65 matrices
- Adaptive weighted average auto exposure
- Independently configurable gamma correction
- Adaptive Polynomial lens shading correction
- On-chip Hue rotation and Perspective correction
- Ease-of-use flicker avoidance control and FW implemented calculation
- Two-wire serial interface providing access to registers and microcontroller memory
- Selectable output data format: YCbCr, 565RGB, 555RGB, 444RGB, processed Bayer, BT656, RAW8- and RAW8+2-bit
- Parallel or MIPI data output
- UVC control host interface
- Multi-camera synchronization

Specifications

Imaging Array

- Optical Format: 1/6-inch
- Active Pixels: 1296 x 976
- Color Filter Array: RGB Bayer
- Shutter Typte: Electronic rolling shutter (ERS)

Input Clock

- 6 - 54 MHz

Speed/Output

MIPI output maximum frame rate

- 30 fps full res
- 36.7 fps 720p
- 75 fps VGA
- 120 fps QVGA

Sensitivity

- Responsivity: 2.24 V/lux-sec
- Pixel Size: 1.9 μ m
- SNRMAX: 37 dB
- Dynamic Range: 70.8 dB

Supply Voltage Digital

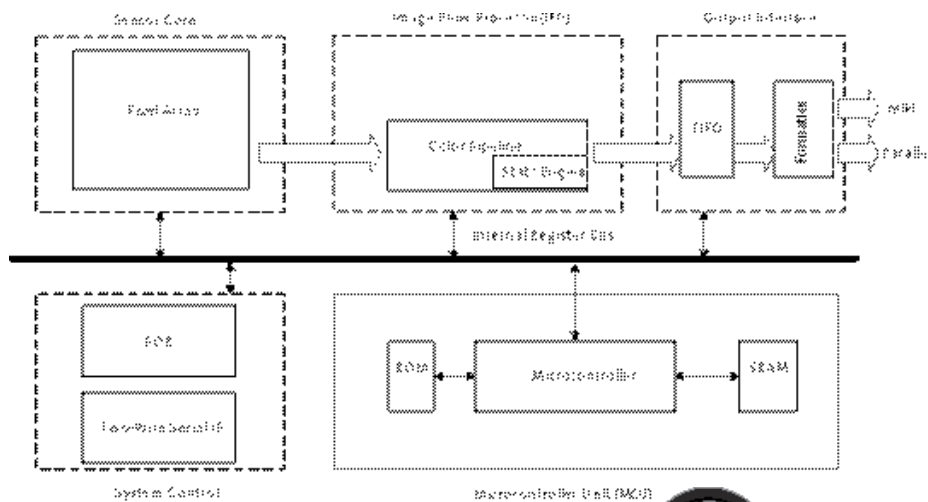
- Digital: 1.7 – 1.95V
- Analog : 2.5 – 3.1V
- I/O : 1.7 – 1.95V or 2.5 – 3.1V
- PLL : 2.5 – 3.1V
- PHY : 1.7 – 1.95V
- Consumption: 135mW at 720p HD 30fps

Temperature Range

- Operating(ambient): -30°C to +70°C
- Chief ray angle: 27.7°

Package: Bare Die, CSP

Block Diagram



aptina.com

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