1/4-Inch VGA, Ultra Low-Power, CMOS Digital Image Sensor Camera System-on-a-Chip

Micron's DigitalClarity® Image Sensor for Networked Security Cameras

Built for home and commercial security systems, Micron's MT9V131 comes loaded with DigitalClarity technology, composite video output, and high functionality. Our unique low-noise, stable-temperature design enables it to capture extraordinarily clear images. Requiring less light than a single candle produces, the MT9V131 creates crisp images for networked security applications that are just as effective on the darkest nights as on the brightest days.

MT9V131 Applications

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

Professional Quality for Home Systems

Until the introduction of Micron's MT9V131 device for security applications, designers were forced to sacrifice performance for cost. Micron's 1/4-inch VGA camera system-on-a-chip (SOC) changes that. It offers best-in-class performance while producing full-color video, making scenes and stills clear enough to enable e-mail or remote viewing. This versatile imager meets the strong demand for low cost, excellent color fidelity, and low-light sensitivity in video sensors for home security.

All-Inclusive Camera System Reduces Parts and Costs

The MT9V131 is a complete camera SOC solution. Its programmable on-chip processor performs extensive camera functions including color recovery and correction; gamma correction; sharpening; auto black level offset correction; auto exposure; lens shading; flicker detection and avoidance; white balance; and on-the-fly defect identification and correction. With all the necessary functionality built in, this all-in-one solution reduces the bill of materials and the cost of a home security camera system.

Contact a Dedicated Digital Video Expert

We realize that security subsystem suppliers and manufacturers are looking for a dedicated source for image sensors. One who manufactures parts based on yet-to-be-realized home security customer demands. One who knows how to make fully integrated, high-performance digital video sensors. One who can assist with a design from inception to implementation.

For world-class products and support, call Micron at 208-368-3900, or visit us on the Web at ***www.micron.com***. Let our dedicated experts tell you more about the technical details of the MT9V131 and how it can enhance your digital security systems.

Specifications

- **Pixel Size:** 5.6µm x 5.6µm
- **Array Format (Active):** 640H x 480V
- **Imaging Area:** 3.584mm x 2.688mm
- **Color Filter Array:** RGB Bayer color filters
- **Optical Format:** 1/4-inch (4:3)
- **Frame Rates:** 30 fps @ 640H x 480V
- **Scan Mode:** Progressive
- **Shutter:** Electronic rolling shutter (ERS)
- **Window Size:** Programmable to VGA, QVGA, CIF, and QCIF
- **Automatic Functions:** Exposure, white balance, black level offset correction, flicker avoidance, color saturation, defect identification and correction, frame rate, and back light compensation
- **Programmable Controls:** Gain, frame rate, ADC reference, left-right and top-bottom image reversal
- **ADC:** 10-bit, on-chip
- **Data Rate:** 12–13.5 megapixels per second (master clock, 24–27 MHz)
- **Responsivity:** 1.9 V/lux-sec (550nm)
- **Data Output Formats:** Progressive ITU_R BT.656 (YCbCr), YUV 4:2:2 (progressive), 656RGB, 555RGB, and 444RGB
- **Dynamic Range:** 60dB
- **Maximum Analog Gain:** 16
- **Supply Voltage:** 2.8V ±0.25V
- **Power Consumption:** <80mW
- **Operating Temp. Range:** –20°C to +60°C
- **Storage Temp. Range:** –40°C to +125°C
- **Package:** 48-pin CLCC, die in reconstructed wafer form