



# 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](http://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

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

[www.micron.com](http://www.micron.com)

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