

# ISM-MT9P031

## Image Sensor Module

The ISM-MT9P031-Color integrates Aptinas MT9P031 image sensor, oscillator, voltage control and a M12 or CS-mount lens-holder to support numerous M12 or CS-mount lenses at a size of 30 x 40mm.

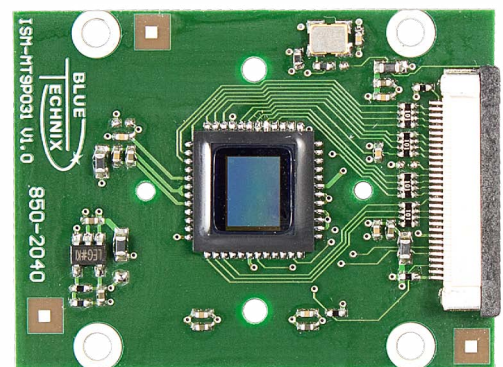
The MT9P031 CMOS digital image sensor from Aptina has an active-pixel-array of 2592H x 1944V (5MP). It offers a global reset which triggers the exposure of all rows simultaneously, has superior low-light performance, an automatic black level calibration and an on-chip phased-locked-loop (PLL). The sensor supports Aptina DigitalClarity® imaging technology and very high frame rates. The sensor can be programmed via a simple I<sup>2</sup>C interface and offers some sophisticated camera functions such as

- » Bulb exposure mode, for arbitrary exposure times,
- » Column and row binning modes to improve image quality when resizing,
- » Column and row skip modes to reduce image size without reducing field-of-view (FOV),
- » Snapshot mode to take frames on demand and
- » Horizontal and vertical mirror image.

### Features

<b>OPTICAL FORMAT</b>	1/2.5-inch (4:3)
<b>ACTIVE ARRAY</b>	2592H x 1944V (5MP)
<b>IMAGING AREA</b>	5.70mm(H) x 4.28mm(V)
<b>PIXEL SIZE</b>	2.2µm x 2.2µm
<b>RESPONSIVITY</b>	1.4 V/lux-sec (550nm)
<b>SNR MAX</b>	38.1dB (max res.), 44dB (2 x 2 binning)
<b>MAX DYNAMIC RANGE</b>	70.1dB (max res.), 76dB (2 x 2 binning)
<b>FRAME RATE</b>	14 fps (2592 x 1944) 53fps (VGA with binning 640 x 480) 60fps (720p skipping mode)
<b>CHROMA *</b>	RGB Bayer pattern, Monochrome
<b>SHUTTER TYPE</b>	ERS - Electronic Rolling Shutter GRR - Global reset release Snapshot only
<b>DATA RATE</b>	96 Mp/s at 96 MHz (2.8V I/O) 48 Mp/s at 48MHz (1.8V I/O)
<b>INPUT CLOCK RANGE</b>	50MHz
<b>MASTER CLOCK</b>	48/96MHz
<b>ADC RESOLUTION</b>	12-bit, on-chip
<b>DATA FORMAT</b>	12-bit parallel
<b>SUPPLY VOLTAGE</b>	Power supply 2.6V – 3.1V I/O digital reference 1.7V – 3.1V
<b>POWER CONSUMPTION</b>	381mW at 14 fps full resolution
<b>OPERATING TEMPERATURE</b>	–30°C to +70°C
<b>RoHS COMPLIANT</b>	Yes
<b>BLT-ISM-CONNECTOR</b>	Yes
<b>CS &amp; M12-MOUNT COMPATIBLE</b>	Yes
<b>SIZE</b>	30 x 40mm

\*depends on version - see ordering information



ISM-MT9P031-Color

### Applications

- » High-resolution network cameras
- » Wide field of view cameras
- » High-definition surveillance cameras
- » Dome cameras with electronic pan, tilt, and zoom
- » Hybrid video cameras with high resolution stills
- » Detailed feature extraction for smart cameras
- » Small office monitoring
- » Home monitoring

### Ordering Information

Order No.	Info
100-3204-1	ISM-MT9P031-Color
100-3210-1	ISM-MT9P031-Mono

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