CMOS Astrium Mini™

Ultra Compact 1.3 Megapixel CMOS USB 2.0 Industrial Camera

**Features**

- 1.3 megapixel resolution (1280 x 1024 pixels)
- 1/2 inch CMOS sensor
- Maximum frame rates:
  - 12 fps @ 1280 × 1024 (Color)
  - 15 fps @ 1280 × 1024 (Monochrome)
  - 30 fps @ 1280 × 1024 SKIP2 (Color and Monochrome)
- High-speed USB 2.0 interface, up to 480 Mbit/s
- Progressive scan
- Electronic rolling shutter
- Windows® XP/+ application
- Multiple mounting angles, suitable for all kinds of installation requirements
- User can choose AOI area (Area of Interest)
- Separate image capture and preview, supports high-speed preview, high-quality acquisition
- Supports SKIP2/SKIP4/SKIP8 3 extraction modes
- Brightness of all modes and resolution switch is the same
- Gamma correction, extended RGB gain
- Support for still image capture (JPG, BMP)
- Color camera supports 8-bit, 24-bit, 32-bit bitmap preview and capture
- Monochrome camera supports 8-bit bitmap
- Supports uncompressed or compressed video
- Includes API and Demo Source Code
- Hardware automatic gain control (AGC) and Exposure Control (AEC)
- Auto or manual white balance and exposure control
- No external power supply required
- Supports VC, Visual Basic, Delphi®, LabVIEW® and other development languages
- Supports Twain
- Support for standard C-mount lenses and all kinds of customized lenses
- Durable aluminum alloy shell
- Firmware can be upgraded online

**Overview**

CMOS technology has advanced very rapidly in the last three years. Today it is preferred over CCD in most cases, except where low light conditions impact the lower sensitivity of CMOS sensors. With their compact design and low power use, CMOS cameras take over segments of the imaging market where cost is an issue. CMOS is particularly competitive wherever lighting is good and a compact low power use camera is desirable.

The tiny CMOS Astrium Mini™ 1.3 megapixel industrial digital camera is 1.14 inches wide by 1.81 inches high, and weighs just over two ounces. It features high sensitivity, high dynamic range, a rolling shutter, and many other useful features. This cost effective camera is widely used in machine vision and a variety of image acquisition areas.

With the included Application Program Interface (API), you can easily integrate the CMOS Astrium Mini into your applications.

**Applications**

- Microscopy
- High resolution graphics capture
- Medical imaging
- Non-contact measurements
- Motion capture
- Photo ID systems
- Other industrial and scientific applications

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### Specifications

#### General Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Sensor</td>
<td>1/2 inch CMOS</td>
</tr>
<tr>
<td>Picture Size</td>
<td>1280 x 1024</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>5.2 μm × 5.2 μm</td>
</tr>
<tr>
<td>Maximum Resolution</td>
<td>1280 × 1024</td>
</tr>
<tr>
<td>Maximum Frame Rate</td>
<td>12 fps @ 1280 × 1024 (Color)</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>30 fps @ 1280 × 1024 SKIP2 (Color and Monochrome)</td>
</tr>
<tr>
<td>Spectral Response</td>
<td>400 nm ~ 1000 nm</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.8V/lux-sec@550nm</td>
</tr>
<tr>
<td>Scan Mode</td>
<td>Progressive Scan</td>
</tr>
<tr>
<td>Exposure Mode</td>
<td>Electronic rolling shutter</td>
</tr>
<tr>
<td>White Balance</td>
<td>Auto / Manual</td>
</tr>
<tr>
<td>Exposure Control</td>
<td>Auto / Manual, Software/Hardware</td>
</tr>
<tr>
<td>Image Output</td>
<td>USB 2.0, 480 Mb/s</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>62 dB</td>
</tr>
<tr>
<td>Signal to Noise</td>
<td>45 dB</td>
</tr>
<tr>
<td>Programmable control</td>
<td>Image size, contrast, brightness, gain, exposure time</td>
</tr>
<tr>
<td>Software Function</td>
<td>Image display, image processing, video</td>
</tr>
</tbody>
</table>

#### Physical and Power

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>USB 2.0 power supply, 500 mW</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C~60°C (32° to 140° F)</td>
</tr>
<tr>
<td>Net weight</td>
<td>600g (2.1 ounces)</td>
</tr>
<tr>
<td>Camera Dimensions</td>
<td>29 mm × 29 mm × 46 mm (LxWxH)</td>
</tr>
<tr>
<td></td>
<td>1.14 x 1.14 x 1.81 inches (LxWxH)</td>
</tr>
</tbody>
</table>

### Ordering Information

**CMOS Astrium Mini/C – Color Camera**

**CMOS Astrium Mini/BW – Monochrome Camera**

**Accessories Included:**

- Standard infrared filter (color camera only)
- C/CS mount connecting ring
- Two meter USB cable
- CD with software and SDK

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