This datasheet describes the specification according to the standard 1288 for Characterization and Presentation of Specification Data for Image Sensors and Cameras of the European Machine Vision Association (EMVA) (see [www.standard1288.org](http://www.standard1288.org)). The measurements were performed with an AEON ACC3 RGB Release 3, 20.01.2104, SN 0005(). The performance parameters and estimated accuracy of the measurements are described in the technical report for the instrument, its calibration in the corresponding calibration report.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>MATRIX VISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>mvBlueCOUGAR-X102bG</td>
</tr>
<tr>
<td>Serial number</td>
<td>GX007984</td>
</tr>
<tr>
<td>Sensor diagonal</td>
<td>6.00 mm</td>
</tr>
<tr>
<td>Lens category</td>
<td>C-Mount</td>
</tr>
<tr>
<td>Resolution</td>
<td>1280 × 960, 10 bit</td>
</tr>
<tr>
<td>Pixel size</td>
<td>3.75 µm × 3.75 µm</td>
</tr>
<tr>
<td>Sensor type</td>
<td>CMOS</td>
</tr>
<tr>
<td>Shutter type</td>
<td>Global Shutter Mode</td>
</tr>
<tr>
<td>Overlap capabilities</td>
<td>Pipelined</td>
</tr>
<tr>
<td>Maximum frame rate</td>
<td>24.6 Hz</td>
</tr>
<tr>
<td>Interface type</td>
<td>GigE Vision</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of data presented</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operation point 1, (page 3)</strong></td>
<td></td>
</tr>
<tr>
<td>Wavelength centroid</td>
<td>534.2 nm</td>
</tr>
<tr>
<td>Wavelength FWHM</td>
<td>30.9 nm</td>
</tr>
<tr>
<td>Gain, offset</td>
<td>Gain = 0dB, Offset = 1.1</td>
</tr>
</tbody>
</table>

**Optional data measured**

None

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Spectral sensitivity m0207, 23.01.2015

![Spectral sensitivity graph](image)
EMVA 1288 Summary Sheet for Operating Point 1

Type of data: Single
Exposure time: 10.0 ms
Frame rate: 0.0 Hz
Data transfer mode: Mono10

Gain, offset
Gain = 0 dB, Offset = 1.1

Environmental temperature
26.4°C

Camera temperature
38.5°C

Wavelength, centr., FWHM
534 nm, 30.9 nm

Quantum efficiency
\( \eta = 0.699 \)

Gain
\( K (\text{DN}/\text{e}) = 0.180 \)
\( 1/K (\text{e}/\text{DN}) = 5.567 \)

Dark noise & DSNU
\( \sigma_d (\text{DN}) = 1.54 \)
\( \sigma_0 (\text{e}) = 8.4 \)
DSNU\(_{1288} (\text{DN}) = 5.94 \)
DSNU\(_{1288} (\text{e}) = 33.08 \)

Signal-to-noise ratio & PRNU
\( \text{SNR}_{\text{max}} = 73 \)
\( \text{SNR}_{\text{max}} (\text{dB}) = 37.3 \)
\( \text{SNR}_{\text{max}} (\text{bits}) = 6.2 \)
\( 1/\text{SNR}_{\text{max}} (%) = 1.37 \)
PRNU\(_{1288} (%) = 1.007 \)

Nonlinearity
\( \text{LE} (%) = 0.57 \)

Sensitivity & saturation
\( \mu_{p,\text{min}} (\text{p}) = 13.0 \)
\( \mu_{e,\text{min}} (\text{e}) = 9.1 \)
\( \mu_{p,\text{sat}} (\text{p}) = 7617 \)
\( \mu_{e,\text{sat}} (\text{e}) = 5326 \)

Dynamic range
\( \text{DR} = 587 \)
\( \text{DR (dB)} = 55.4 \)
\( \text{DR (bit)} = 9.2 \)

Dark current
\( \mu_{c,\text{mean}} (\text{DN/s}) = 1.86 \)
\( \mu_{c,\text{mean}} (\text{e/s}) = 10.38 \)
\( \mu_{c,\text{var}} (\text{e/s}) = 56.13 \)