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.

### Vendor
MATRIX VISION

### Model
mvBlueCOUGAR-X104bG

### Serial number
GX007943

### Sensor diagonal
15.93 mm

### Lens category
C-Mount

### Resolution
2048 × 2048, 10 bit

### Pixel size
5.50 µm × 5.50 µm

### Sensor type
CMOS

### Shutter type
Global

### Overlap capabilities
Overlapping

### Maximum frame rate
14.2 Hz

### Interface type
GigE Vision

### Type of data presented
Single

### Operation point 1, (page 3)

- **Wavelength centroid**: 534.2 nm
- **Wavelength FWHM**: 30.9 nm
- **Gain, offset**: Gain = 0 dB, Offset = 0.2

### Optional data measured
None
EMVA 1288 Summary Sheet for Operating Point 1

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Single</th>
<th>Gain, offset</th>
<th>Gain = 0dB, Offset = 0.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>6.0 ms</td>
<td>Environmental tem-</td>
<td>26.1°C</td>
</tr>
<tr>
<td>Frame rate</td>
<td>0.0 Hz</td>
<td>perature</td>
<td></td>
</tr>
<tr>
<td>Data transfer mode</td>
<td>Mono10</td>
<td>Camera tempera-</td>
<td>36.8°C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wavelength, centr.,</td>
<td>534 nm, 30.9 nm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FWHM</td>
<td></td>
</tr>
</tbody>
</table>

Photon transfer m0421, 534nm, 06.07.2015

SNR m0421, 534nm, 06.07.2015

- Quantum efficiency
  \[ \eta = 0.544 \]

- Gain
  \[ K (\text{DN/e}) = 0.120 \]
  \[ 1/K (\text{e/DN}) = 8.335 \]

- Dark noise & DSNU
  \[ \sigma_d (\text{DN}) = 1.46 \]
  \[ \sigma_0 (\text{e}) = 11.9 \]
  \[ \text{DSNU}_{1288} (\text{DN}) = 1.65 \]
  \[ \text{DSNU}_{1288} (\text{e}) = 13.74 \]

- Signal-to-noise ratio & PRNU
  \[ \text{SNR}_{\text{max}} = 90 \]
  \[ \text{SNR}_{\text{max}} (\text{dB}) = 39.1 \]
  \[ \text{SNR}_{\text{max}} (\text{bits}) = 6.5 \]
  \[ 1/\text{SNR}_{\text{max}} (%) = 1.11 \]
  \[ \text{PRNU}_{1288} (%) = 1.201 \]

- Nonlinearity
  \[ \text{LE} (%) = 0.38 \]

- Sensitivity & saturation
  \[ \mu_{p,\text{min}} (\text{p}) = 23.3 \]
  \[ \mu_{e,\text{min}} (\text{e}) = 12.7 \]
  \[ \mu_{p,\text{sat}} (\text{p}) = 14801 \]
  \[ \mu_{e,\text{sat}} (\text{e}) = 8057 \]

- Dynamic range
  \[ \text{DR} = 637 \]
  \[ \text{DR (dB)} = 56.1 \]
  \[ \text{DR (bit)} = 9.3 \]

- Dark current
  \[ \mu_{c,\text{mean}} (\text{DN/s}) = -6.81 \]
  \[ \mu_{c,\text{mean}} (\text{e/s}) = -56.79 \]
  \[ \mu_{c,\text{var}} (\text{e/s}) = 265.21 \]