EMVA 1288 Summary Sheet

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). 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-X120dG
Serial number: GX000557
Sensor diagonal: 8.04 mm
Lens category: C-Mount
Resolution: 776 × 580, 14 bit
Pixel size: 8.30 µm × 8.30 µm
Sensor type: CCD
Readout type: Progressive
Transfer type: Interline
Maximum frame rate: 53.4 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 = -5dB, Offset = 0.28
Optional data measured: None

Spectral sensitivity m0278, 28.04.2015

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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 = -5dB, Offset = 0.28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>10.0 ms</td>
<td>Environmental</td>
<td>26.6°C</td>
</tr>
<tr>
<td>Frame rate</td>
<td>0.0 Hz</td>
<td>Camera temperature</td>
<td>40.3°C</td>
</tr>
<tr>
<td>Data transfer mode</td>
<td>Mono14</td>
<td>Wavelength, centr., FWHM</td>
<td>534 nm, 30.9 nm</td>
</tr>
</tbody>
</table>

**Quantum efficiency**

\[ \eta = 0.439 \]

**Gain**

\[ K (DN/e) = 0.671 \]

\[ 1/K (e/DN) = 1.490 \]

**Dark noise & DSNU**

\[ \sigma_d (DN) = 12.98 \]

\[ \sigma_0 (e) = 19.3 \]

\[ DSNU_{1288} (DN) = - \]

\[ DSNU_{1288} (e) = - \]

**Signal-to-noise ratio & PRNU**

\[ SNR_{max} = 149 \]

\[ SNR_{max} (dB) = 43.5 \]

\[ SNR_{max} (bits) = 7.2 \]

\[ 1/SNR_{max} (%) = 0.67 \]

\[ PRNU_{1288} (%) = - \]

**Nonlinearity**

\[ LE (%) = 0.66 \]

**Sensitivity & saturation**

\[ \mu_{p, \text{min}} (p) = 45.2 \]

\[ \mu_{e, \text{min}} (e) = 19.9 \]

\[ \mu_{p, \text{sat}} (p) = 50686 \]

\[ \mu_{e, \text{sat}} (e) = 22262 \]

**Dynamic range**

\[ DR = 1121 \]

\[ DR (dB) = 61.0 \]

\[ DR (bit) = 10.1 \]

**Dark current**

\[ \mu_{c, \text{mean}} (DN/s) = - \]

\[ \mu_{c, \text{mean}} (e/s) = - \]

\[ \mu_{c, \text{var}} (e/s) = - \]