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.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>MATRIX VISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>mvBlueFOX3-1012dG</td>
</tr>
<tr>
<td>Serial number</td>
<td>F0600056</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>rolling</td>
</tr>
<tr>
<td>Overlap capabilities</td>
<td></td>
</tr>
<tr>
<td>Maximum frame rate</td>
<td>40.6 Hz</td>
</tr>
<tr>
<td>Interface type</td>
<td>USB3 Vision</td>
</tr>
</tbody>
</table>

| Type of data presented | Single                               |
| Operation point 1, (page 3) |
| Wavelength centroid   | 534.2 nm                             |
| Wavelength FWHM       | 30.9 nm                              |
| Gain, offset          | Gain = 0dB, Offset = 0.3             |

Optional data measured
None
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 = 0dB, Offset = 0.3

Environmental temperature:
25.4°C

Camera temperature:
32.1°C

Wavelength, centr., FWHM:
534 nm, 30.9 nm

Quantum efficiency:
\( \eta = 0.743 \)

Gain:
\( K \) (DN/e) = 0.168
\( 1/K \) (e/DN) = 5.962

Dark noise & DSNU:
\( \sigma_d \) (DN) = 0.57
\( \sigma_0 \) (e) = 2.9
DSNU_{1288} (DN) = 0.53
DSNU_{1288} (e) = 3.19

Signal-to-noise ratio & PRNU:
SNR_{max} = 76
SNR_{max} (dB) = 37.7
SNR_{max} (bits) = 6.3
1/SNR_{max} (%) = 1.31
PRNU_{1288} (%) = 0.935

Nonlinearity:
LE (%) = 0.34

Sensitivity & saturation:
\( \mu_{p,\text{min}} \) (p) = 5.3
\( \mu_{e,\text{min}} \) (e) = 3.9
\( \mu_{p,\text{sat}} \) (p) = 7849
\( \mu_{e,\text{sat}} \) (e) = 5832

Dynamic range:
DR = 1483
DR (dB) = 63.4
DR (bit) = 10.5

Dark current:
\( \mu_{c,\text{mean}} \) (DN/s) = 1.75
\( \mu_{c,\text{mean}} \) (e/s) = 10.44
\( \mu_{c,\text{var}} \) (e/s) = 100.38