Detector type: VPD PbSe FPA with digital interface, uncooled operation
Array format: 128x128 (16384 pixels)
Pixel size: 50 μm x 50 μm (square format)
Spectral range: MWIR, 1.0 μm to 5.0 μm
Peak wavelength of detection: 3.7 microns
Integration time: 10 - 1000 μs, selectable
Raw data communication, 14 bit
Interfaces:
- GigE VISION 2.0 (GenICam compatible) with PoE
- Multipurpose DI/DO connector (trigger IN/OUT) (cable sold separately)
- Maximum frame rate: 4000 fps (TACHYON 16k CAMERA PLUS) (see table)
- ROI windowing function (see table for full description of possible modes)
- Mechanical shutter for 1-pt offset correction
- Start-up time: < 10 seconds
Power supply: PoE, 8 W (non-PoE operation requires 12 VDC)
Metal housing with rear connectors and tripod screw holes (M3 and M4)
Dimensions and weight (w/o optics): 66 (L) x 62 (W) x 62 (H) (mm), 400 grams
Optics (standard option): f=35 mm, F#1.1, FoV 10.5º x 10.5º, AR coating (3 - 5 μm), manual focus with CS-mount interface
Software included:
- NIT SOFTWARE SUITE (Acquisition and visualization SW)
- SDK available for custom software programming
- Minimum temperature of detection: 100 ºC
Industrial applications: machine vision, additive manufacturing, industrial process monitoring, gas detection, spectroscopy, glass manufacturing quality assurance
**TACHYON 16k CAMERA & TACHYON 16k CAMERA PLUS**

**Main specifications**

<table>
<thead>
<tr>
<th></th>
<th>TACHYON 16k CAMERA</th>
<th>TACHYON 16k CAMERA PLUS</th>
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<tbody>
<tr>
<td><strong>MAXIMUM FRAME RATE</strong></td>
<td>2000 frames per second @ 128×128</td>
<td>4000 frames per second @ 128×128</td>
</tr>
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<td></td>
<td>Allows higher frame rates using embedded ROI windowing functions</td>
<td></td>
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<tr>
<td><strong>ACQUISITION MODE</strong></td>
<td>128×128: Interfaced acquisition</td>
<td>All modes: Global shutter acquisition</td>
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<td></td>
<td>64×64, 32×32, 1×128: Global shutter acquisition</td>
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</tr>
<tr>
<td><strong>WINDOWING MODES</strong></td>
<td>128×128</td>
<td>Window position and dimensions: configurable via SW</td>
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<tr>
<td></td>
<td>64×64 (center of FPA)</td>
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<tr>
<td></td>
<td>32×32 (center of FPA)</td>
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</tr>
<tr>
<td></td>
<td>1×128 (center of FPA)</td>
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<tr>
<td><strong>NUC CORRECTION TABLES</strong></td>
<td>Software correction</td>
<td>Selectable:</td>
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<td>Hardware correction (4 preconfigured tables)</td>
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<tr>
<td><strong>DATA TRANSMISSION MODES</strong></td>
<td>RAW data, 14 bit</td>
<td>– RAW data, 14 bit</td>
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<td></td>
<td></td>
<td>– NUC corrected, 16 bit</td>
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<tr>
<td></td>
<td></td>
<td>– High-speed mode RAW/NUC: 12 bit</td>
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</table>

**Main facts**

- Maximum added value and affordability
- Miniaturized compact size to ensure a full integration in the Industry 4.0 applications and Factories of the Future production lines

**Typical applications**

- Additive manufacturing
- Industrial process monitoring
- Machine vision
- Gas and flame detection
- Spectroscopy
- Glass manufacturing quality assurance
- R+D

**Industries of use**

- Automotive industry
- Home appliance manufacturing
- Metallurgy and steel industry
- Petrochemical industry
- Glass manufacturing industry

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Front view

- CS-mount optical interface
- Standard optics
  - f=35mm, F#1.1, FoV 10.5°x10.5°, MF, AR coating (3-5 um)
- 62 mm
- 66 mm (without optics)

Rear view

- Multipurpose DI/DO connector (trigger IN/OUT)
- 62 mm
- GigE VISION connector + PoE

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