

# TACHYON 16k CAMERA & TACHYON 16k CAMERA PLUS

Uncooled MWIR 128x128 pixels infrared camera with high-speed frame rates up to 4000 frames per second

Maximum added value and affordability to ensure a full integration in the INDUSTRY 4.0 applications



- ▶ Detector type: VPD PbSe FPA with digital interface, uncooled operation
- ▶ Array format: 128x128 (16384 pixels)
- ▶ Pixel size: 50  $\mu\text{m}$  x 50  $\mu\text{m}$  (square format)
- ▶ Spectral range: MWIR, 1.0  $\mu\text{m}$  to 5.0  $\mu\text{m}$
- ▶ Peak wavelength of detection: 3.7 microns
- ▶ Integration time: 10 - 1000  $\mu\text{s}$ , 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 10.5° x 10.5°, AR coating (1 - 5  $\mu\text{m}$ ), 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 °C
- ▶ Industrial applications: machine vision, additive manufacturing, industrial process monitoring, gas detection, spectroscopy, glass manufacturing quality assurance

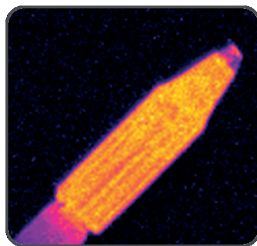
**GIG** VISION GEN<i>CAM



*Additive manufacturing monitoring*



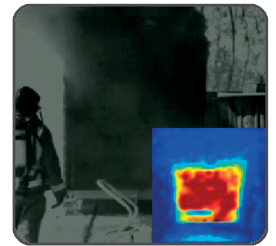
*Manufacturing process control*



*Machine vision applications*



*Gas and spectroscopy*



*Fire detection*

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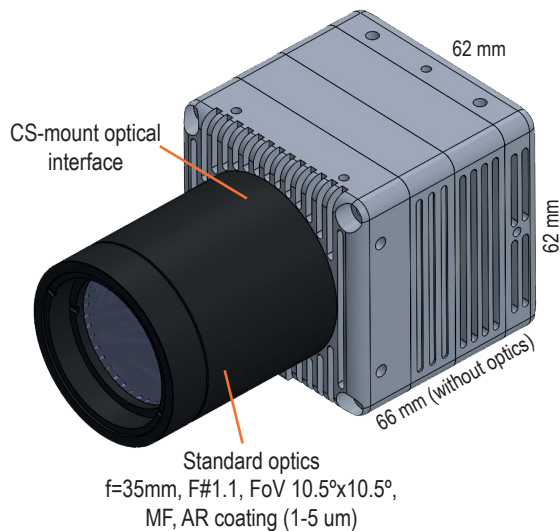
**NIT**  
New Infrared  
Technologies

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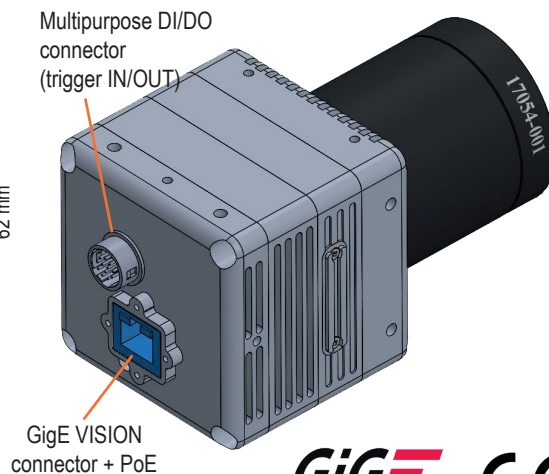
## Main specifications

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

### Front view



### Rear view



### Main facts

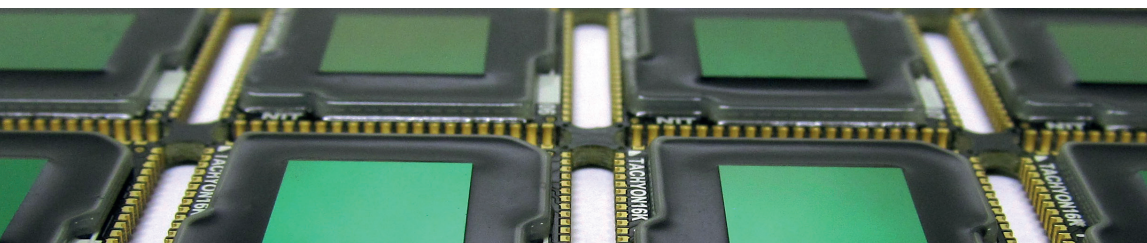
- ▶ Maximum added value and affordability
- ▶ Miniaturized compact size to ensure a full integration in the Industry 4.0 applications and Factories of the Future production lines

### 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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