

TACHYON 16K+

& TACHYON 16K CAMERA



High-speed (>4,000 fps) uncooled medium-wave infrared (MWIR) cameras for controlling and monitoring industrial processes.

Enables the implementation of artificial intelligence (AI) and algorithms for developing custom solutions.

Focus on improving quality and increasing productivity in numerous industrial processes at affordable and competitive prices.



Resolution
128 x 128
pixel size



Field of view
10.5° x 10.5°



Spectral range
MWIR
1 - 5 µm



Maximum
frame rate
4000 fps



SMART FACTORY
INDUSTRY 4.0

Industrial
Internet of
Things

Process
monitoring

Quality
inspection

Increase
productivity

SUITABLE APPLICATIONS:



Laser process
monitoring



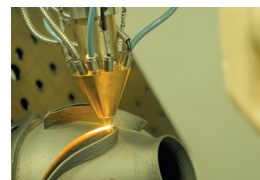
Manufacturing process
control



Spectroscopy/
Gas and flame detection



Glass manufacturing
quality assurance



Additive manufacturing
monitoring



Machine vision

INDUSTRIES

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

Front view



CS-mount optical interface

Standard optics
f=35 mm, F#1.1, FoV 10.5° x 10.5°, MF,
AR coating (1-5 µm)

Rear view



Multipurpose DI/DO connector
(Trigger IN/OUT)

GiGE VISION connector + PoE

GiGE
VISION

CE **RoHS**
GEN*i*CAM

MAIN SPECIFICATIONS



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	ROI windowing function (see table for full description of possible modes)
MECHANICAL SHUTTER	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 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 °C
INDUSTRIAL APPLICATIONS	Machine vision, additive manufacturing, industrial process monitoring, gas detection, spectroscopy, glass manufacturing quality assurance

TACHYON 16K

TACHYON 16K PLUS

MAXIMUM FRAME RATE	2000 frames per second @ 128 x 128	4000 frames per second @ 128 x 128 Allows higher frame rates using embedded ROI windowing functions
ACQUISITION MODE	128 x 128: Interlaced acquisition 64 x 64, 32 x 32, 1 x 128: Global shutter acquisition	All modes: Global shutter acquisition
WINDOWING MODES	128x128 64x64 (center of FPA) 32x32 (center of FPA) 1x128 (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