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HIGH SPEED INFRARED CAMERAS (1 - 5 MICRONS)

TACHYON 16K+

& TACHYON 16K CAMERA

NIT New Infrared Technologies

High speed (>4,000 fps) uncooled Medium Wave Infrared (MWIR) Cameras for controlling and monitoring industrial processes.

Allows to implement artificial inteligence (AI) and algorithms to develop custom solutions.

Focus to improve quality and increase productivity in many industrial processes at affordable and competitive prices.

Resolution	Field of view	Spectral range	Maximum
128 x 128 pixel size	10.5° x 10.5°	MWIR 1 - 5 µm	Frame rate 4000 fps

SMART FACTORY INDUSTRY 4.0

Industrial Internet of things

Process monitoring

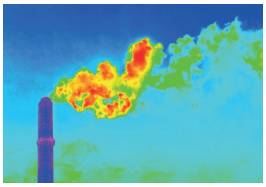
Quality Inspection

Increase productivity

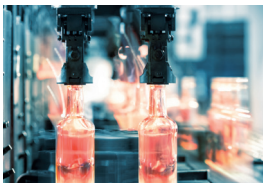
SUITABLE APPLICATIONS:

Laser Process Monitoring

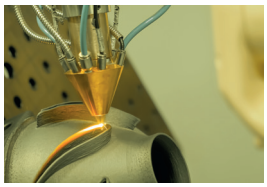
Manufacturing process control



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 GENICAM

MAIN SPECIFICATIONS

DETECTOR TYPE	VPD PbSe FPA with digital interface, uncooled operation
ARRAY FORMAT	128x128 (16384 pixels)
PIXEL SIZE	50 um x 50 um (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
RECOGNITION RANGE	83 m / 190 m

	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: Interlaces acquisition 64 x 64, 32 x 32, 1 x 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

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What is not measured cannot be controlled, and what is not controlled, cannot be improved.