

# TACHYON 16K+

## & TACHYON 16K CAMERA



산업 공정 제어 및 모니터링을 위한  
고속(>4,000fps) 비냉각식 Medium Wave  
Infrared(MWIR) 카메라.

인공 지능(AI) 및 알고리즘을 구현하여 맞춤형  
솔루션을 개발할 수 있습니다.

저렴하고 경쟁력 있는 가격으로  
다양한 산업 공정에서 품질을  
개선하고 생산성을 높이는 데 중점을 둡니다.



Resolution  
128 x 128  
pixel size



Field of view  
56° x 42° (4 mm)  
24° x 18° (9 mm)



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

### INDUSTRIES

- 자동차산업
- 가전제품 제조업
- 야금 및 철강산업
- 석유화학산업
- 유리제조업

### SUITABLE APPLICATIONS:



Laser Process  
Monitoring



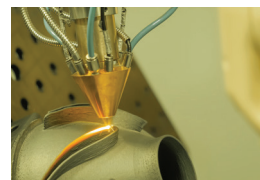
Manufacturing process  
control



Spectroscopy/  
Gas and flame detection



Glass manufacturing  
quality assurance



Additive manufacturing  
monitoring



Machine vision

#### 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)

GiGEVISIONconnector+PoE

**GiGE**  
VISION

CE **GEN*i*CAM**

## 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<br>- Multipurpose DI/DO connector (trigger IN/OUT) (cable sold separately)                |
| MAXIMUM FRAME RATE               | 4000fps(TACHYON16kCAMERAP                                                                                                                 |
| 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)                                                                     |
| DIMENSIONSANDWEIGHT(W/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 (3 - 5 μm)<br>Manual focus with CS-mount interface                                          |
| SOFTWARE INCLUDED                | - NIT SOFTWARE SUITE (Acquisition and visualization SW)<br>- 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                | 83m/190m                                                                                                                                  |

### TACHYON 16K

### TACHYON 16K PLUS

|                         |                                                                                               |                                                                                                        |
|-------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| MAXIMUM FRAME RATE      | 2000 frames per second<br>@ 128 x 128                                                         | 4000 frames per second @ 128 x 128<br>Allows higher frame rates using embedded ROI windowing functions |
| ACQUISITION MODE        | 128 x 128: Interlaces acquisition<br>64 x 64, 32 x 32, 1 x 128:<br>Global shutter acquisition | All modes: Global shutter acquisition                                                                  |
| WINDOWING MODES         | 128x128<br>64x64 (center of FPA)<br>32x32 (center of FPA)<br>1x128 (center of FPA)            | Window position and dimensions:<br>configurable via SW                                                 |
| NUC CORRECTION TABLES   | Software correction                                                                           | Hardware correction<br>(4 preconfigured tables)                                                        |
| DATA TRANSMISSION MODES | RAW data, 14 bit                                                                              | Selectable:<br>- RAW data, 14 bit<br>- NUC corrected, 16 bit<br>- High-speed mode RAW/NUC: 12 bit      |