myRobotKits
3D Camera
M Series

myRobotKits

Kits for your Robot

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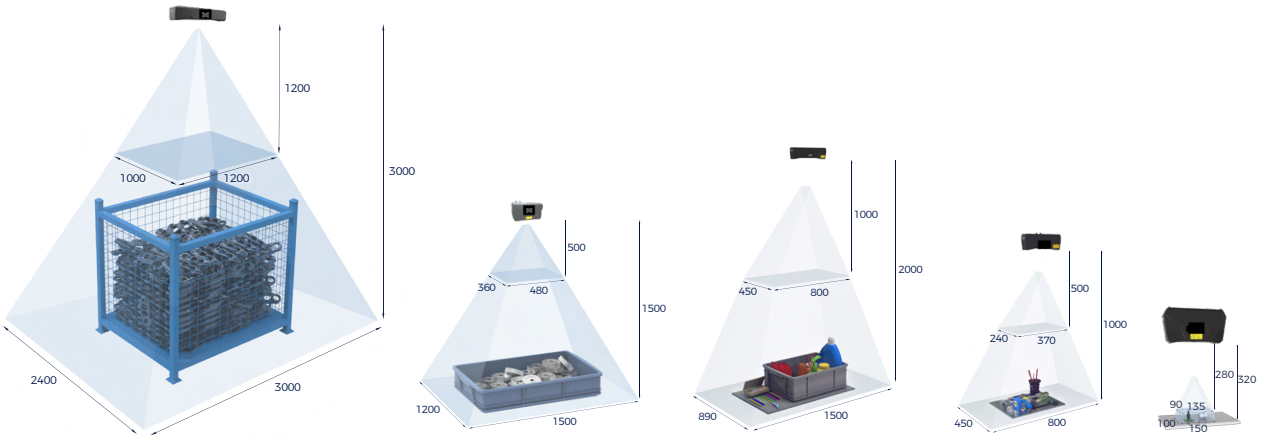
MRK-Eye Industrial 3D Cameras

- Detailed and accurate 3D point clouds
- Ambient light resistance
- Short capture time
- IP65 water and dust resistance
- Rugged aluminum alloy housing
- MTBF (Mean Time Between Failures): ≥ 40,000 hours

Specification	LSR L	LSR S	PRO M	PRO S	UHP-140
					
Recommended working distance	1200–3000 mm	500–1500 mm	1000–2000 mm	500–1000 mm	300 ± 20 mm
Near FOV	1200 × 1000 mm @ 1.2 m	480 × 360 mm @ 0.5 m	800 × 450 mm @ 1.0 m	370 × 240 mm @ 0.5 m	135 × 90 mm @ 0.28 m
Far FOV	3000 × 2400 mm @ 3.0 m	1500 × 1200 mm @ 1.5 m	1500 × 890 mm @ 2.0 m	800 × 450 mm @ 1.0 m	150 × 100 mm @ 0.32 m
Resolution	Depth map: 2048 × 1536 RGB: 4000 × 3000/ 2000 × 1500	Depth map: 2048 × 1536 RGB: 4000 × 3000/ 2000 × 1500	1920 × 1200	1920 × 1200	2048 × 1536
Megapixels	/	/	2.3 MP	2.3 MP	3.0 MP
Point repeatability Z (σ)[1]	0.5 mm @ 3.0 m	0.2 mm @ 1.5 m	0.2 mm @ 2.0 m	0.05 mm @ 1.0 m	2.6 µm @ 0.3 m Region[2]: 0.09 µm @ 0.3 m
VDI/VDE accuracy[3]	1.0 mm @ 3.0 m	1.0 mm @ 1.5 m	0.2 mm @ 2.0 m	0.1 mm @ 1.0 m	0.03 mm @ 0.3 m
Typical capture time	0.5–0.9 s	0.5–0.9 s	0.3–0.6 s	0.3–0.6 s	0.6–0.9 s
Baseline	380 mm	140 mm	270 mm	180 mm	80 mm
Dimensions	459 × 77 × 86 mm	228 × 77 × 126 mm	353 × 57 × 100 mm	265 × 57 × 100 mm	260 × 65 × 142 mm
Weight	2.9 kg	1.9 kg	1.9 kg	1.6 kg	1.9 kg
Light source	Red laser (638 nm, Class 2)		Blue LED (459 nm, RG2)/White LED(RG2)		Blue LED (459 nm, RG2)
Image sensor	Sony CMOS for high-end machine vision				
Operating temperature	-10–45°C			0–45°C	
Communication interface	Gigabit Ethernet				
Input	24V DC, 3.75 A				
Safety and EMC	CE/FCC/VCCI/KC/ISED/NRTL				
IP rating	IP65	IP67		IP65	
Cooling	Passive				

MRK-Eye LSR L | MRK-Eye LSR S | MRK-Eye PRO M | MRK-Eye PRO S | MRK-Eye UHP-140



Field of view (mm)

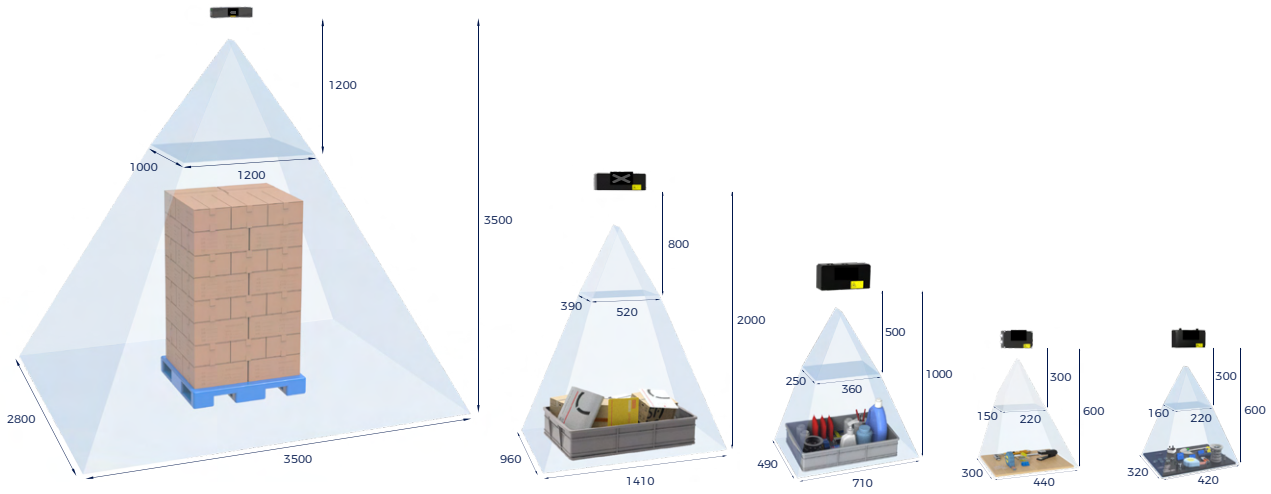
[1] One standard deviation of 100 Z-value measurements of the same point. The measurement target was a ceramic plate.
[2] One standard deviation of 100 measurements of the difference between the Z-value means of two same-sized regions. The measurement target was a ceramic plate.
[3] According to VDI/VDE 2634 Part II.

MRK-Eye Industrial 3D Cameras

- Detailed and accurate 3D point clouds
- Ambient light resistance
- Short capture time
- IP65 water and dust resistance
- Rugged aluminum alloy housing
- MTBF (Mean Time Between Failures): ≥ 40,000 hours

Specification	DEEP	LOG M	LOG S	NANO	PRO XS
					
Recommended working distance	1200–3500 mm	800–2000 mm	500–1000 mm	300–600 mm	300–600 mm
Near FOV	1200 × 1000 mm @ 1.2 m	520 × 390 mm @ 0.8 m	360 × 250 mm @ 0.5 m	220 × 150 mm @ 0.3 m	220 × 160 mm @ 0.3 m
Far FOV	3500 × 2800 mm @ 3.5 m	1410 × 960 mm @ 2.0 m	710 × 490 mm @ 1.0 m	440 × 300 mm @ 0.6 m	430 × 320 mm @ 0.6 m
Resolution	Depth map: 2048 × 1536 RGB: 2000 × 1500	1280 × 1024	1280 × 1024	1280 × 1024	1440 × 1080
Megapixels	/	1.3 MP	1.3 MP	1.3 MP	1.6MP
Point repeatability Z (σ)[1]	1.0 mm @ 3.0 m	0.3 mm @ 2.0 m	0.1 mm @ 1.0 m	0.1 mm @ 0.5 m	0.1 mm @ 0.5 m
VDI/VDE accuracy[2]	3.0 mm @ 3.0 m	0.3 mm @ 2.0 m	0.2 mm @ 1.0 m	0.1 mm @ 0.5 m	0.1 mm @ 0.5 m
Typical capture time	0.5-0.9 s	0.3–0.5 s	0.3–0.5 s	0.6–1.1 s	0.7–1.1 s
Baseline	300 mm	280 mm	150 mm	68 mm	93 mm
Dimensions	366 × 77 × 92 mm	387 × 72 × 130 mm	270 × 72 × 130 mm	145 × 51 × 85 mm	160 × 52 × 87 mm
Weight	2.4 kg	2.4 kg	2.2 kg	0.7 kg	0.8 kg
Light source	Red Laser (638 nm, Class 2)	White LED (RG2)		Blue LED (459 nm, RG2)/ White LED(RG2)	Blue LED (459 nm, RG2)
Image sensor	Sony CMOS for high-end machine vision	Other high-performance CMOS for high-end machine vision		Sony CMOS for high-end machine vision	
Operating temperature	-10–45°C	0–45°C			
Communication interface	Gigabit Ethernet				
Input	24V DC, 3.75 A			24V DC, 1.5 A	
Safety and EMC	CE/FCC/VCCI/KC/ISED/ NRTL	CE/FCC/VCCI		CE/FCC/VCCI/KC/ISED/NRTL	
IP rating	IP65				
Cooling	Passive				

MRK-Eye DEEP	MRK-Eye LOG M	MRK-Eye LOG S	MRK-Eye NANO	MRK-Eye PRO XS



Field of view (mm)

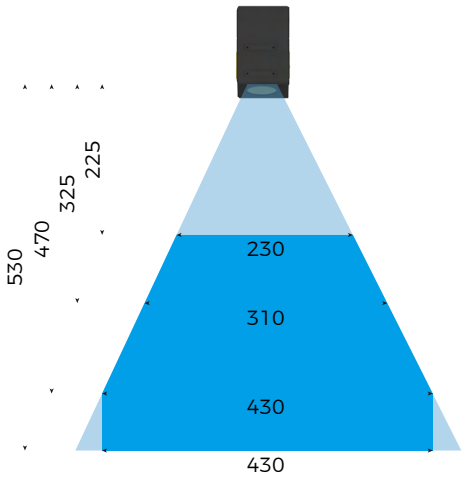
[1] One standard deviation of 100 Z-value measurements of the same point. The measurement target was a ceramic plate.
[2] According to VDI/VDE 2634 Part II.

MRK-Eye 3D Laser Profiler LNX-8000 Series

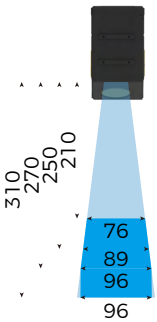
For high-resolution industrial measurement and inspection applications.

Specification	LNX-8300	LNX-8080	LNX-8030
			
Data points/profile		4096	
Reference distance (RD)	325 mm	250 mm	78 mm
Measurement range Z	305 mm	100 mm	30 mm
Measurement range X	230/310/430 mm	76/89/96 mm	33/35/37 mm
Resolution X	105 µm	23.5 µm	9 µm
Repeatability Z	2 µm	0.5 µm	0.2 µm
Linearity Z		± 0.02% of F.S.	
Scan rate		3.3–15 kHz	
Dimensions	195 × 61 × 109 mm	182 × 63 × 112 mm	133 × 61 × 102 mm
Weight	1.2 kg	1.2 kg	0.9 kg
Laser	Blue (405 nm, Class 2M)	Blue (405 nm, Class 2M)	Blue (405 nm, Class 2)
Lens inclination	19°	22°	30°
Input voltage		24V DC	
Max. input power		48W (25W for sensor head)	
Communication interface		Gigabit Ethernet	
Encoder input		Single-ended and differential encoders supported	
Operating temperature		0–45° C	
Safety and EMC		CE/FCC/VCCI/KC/ISED/NRTL	
IP rating		IP67	
Cooling		Passive	

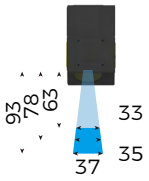
MRK-Eye LNX-8300



MRK-Eye LNX-8080



MRK-Eye LNX-8030



Field of view (mm)

Industrial 3D Camera

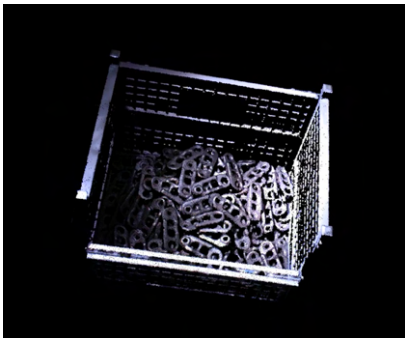
MRK-Eye LSR L

Long-Range Working Distance

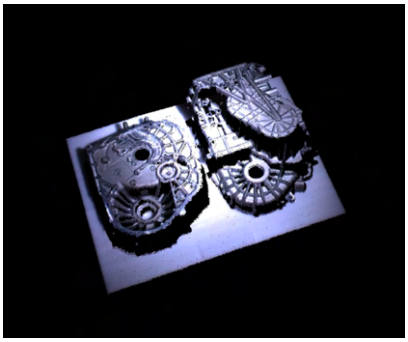
MTBF (Mean Time Between Failures): **≥ 40,000 hours**

High Accuracy | Large FOV | Ambient Light Resistance

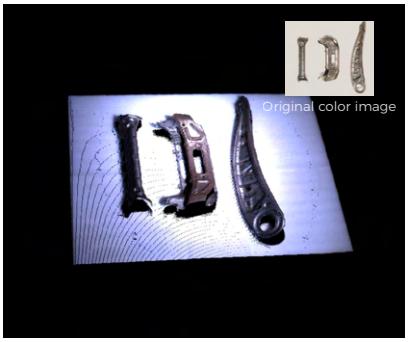
The next-gen MRK-Eye LSR L can generate accurate, complete, and detailed 3D point cloud data of a wide variety of objects under severe ambient light interference (> 30,000 lx).



Track links

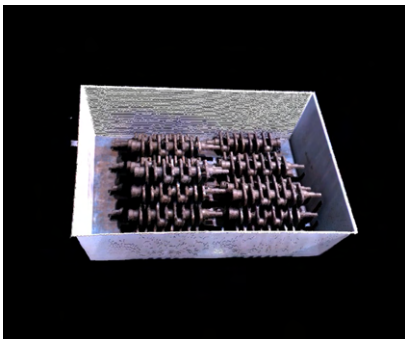


Gearbox housings

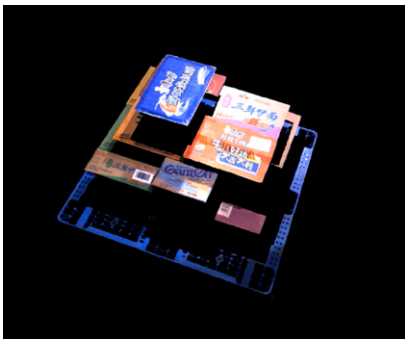


Reflective auto seat side panels

Point clouds captured by MRK-Eye LSR L under challenging light conditions of > 30,000 lx @ 2.0 m



Crankshafts



Colored cartons

Colored sacks

Point clouds captured by MRK-Eye LSR L under challenging light conditions of > 30,000 lx @ 2.0 m

Industrial 3D Camera

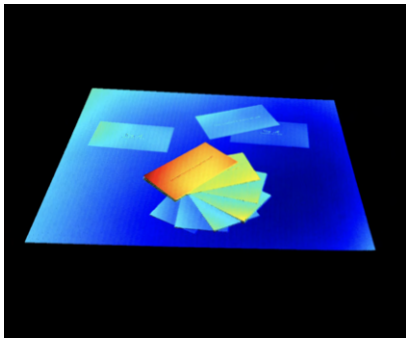
MRK-Eye PRO

Medium-Range Working Distance

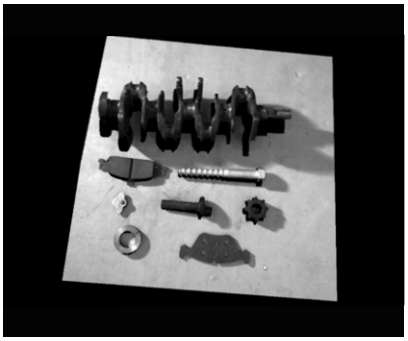
MTBF (Mean Time Between Failures): **≥ 40,000 hours**

High Accuracy | Fast Scanning Speed | Blue and White Light Options

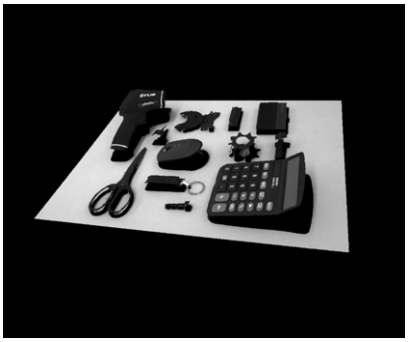
MRK-Eye PRO delivers an extraordinary level of detail with super high accuracy. Capturing point clouds with accurate details takes as low as 0.3 s.



Business cards
MRK-Eye PRO S @ 0.7 m
Color rendered by height

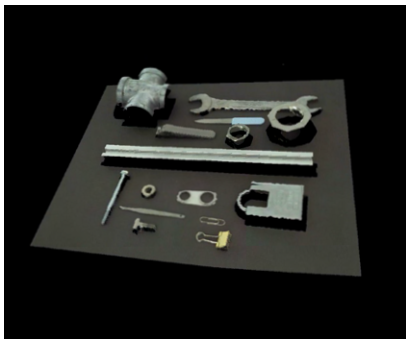


Metal parts
MRK-Eye PRO M @ 2.0 m



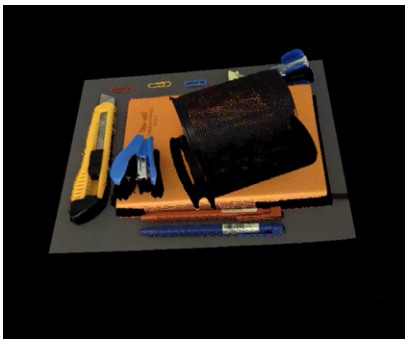
Dark objects
MRK-Eye PRO S @ 0.8 m

Point clouds captured under light conditions of > 20,000 lx*



Reflective objects MRK-Eye PRO S @ 0.6 m

Colored goods
MRK-Eye PRO M @ 2.0 m



Multicolored office supplies
MRK-Eye PRO S @ 0.7 m

Point clouds captured by color version under typical indoor lighting conditions

*Applicable to monochrome version

Industrial 3D Camera

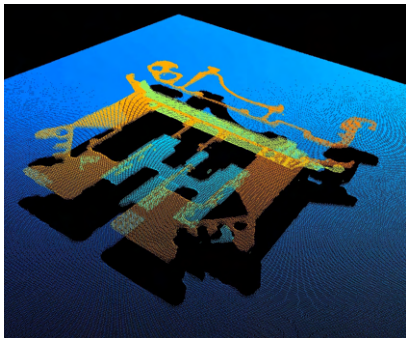
MRK-Eye NANO

Short-Range Working Distance

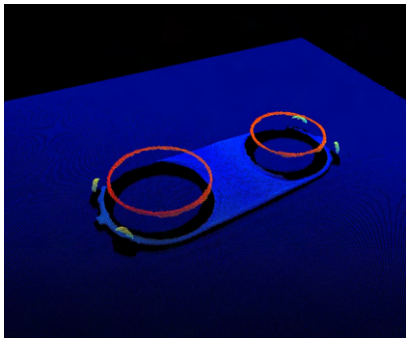
MTBF (Mean Time Between Failures): ***≥ 40,000 hours***

Ultra-Small Size | High Accuracy | Ambient Light Resistance

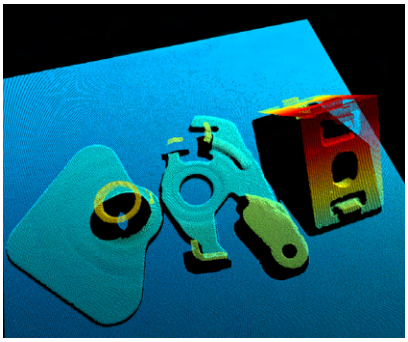
MRK-Eye NANO (accuracy: 0.1 mm @ 0.5 m) can create 3D data of most complex parts with extraordinarily high accuracy. In space-critical applications, MRK-Eye NANO is easy to install and shows outstanding flexibility thanks to its ultra-small size (145 × 85 × 51 mm).



Precision component



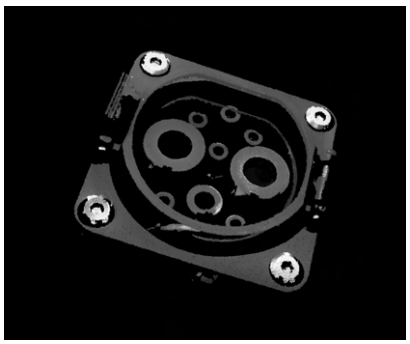
Thin objects
(only 0.6 mm thick)



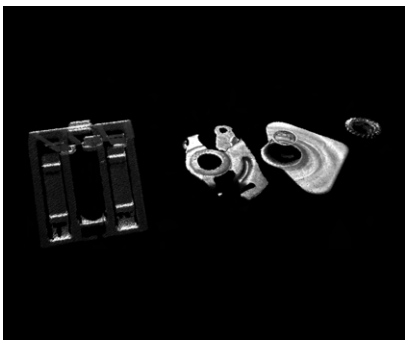
Various small workpieces

Point cloud examples captured by MRK-Eye NANO

Screws and nuts



Car charging port



Small parts

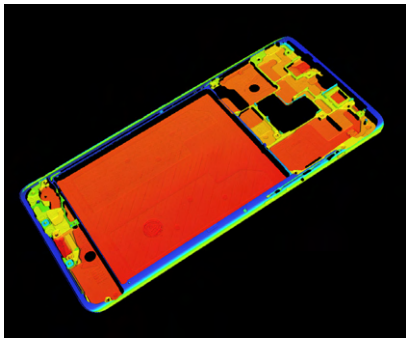
Point cloud examples captured by MRK-Eye NANO

3D Laser Profiler

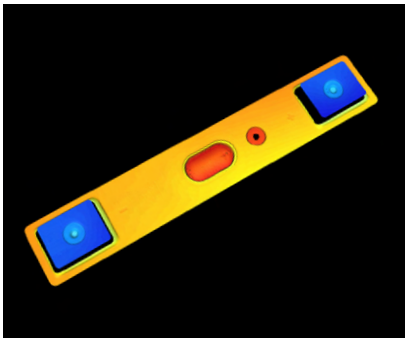
MRK-Eye LNX-8000 Series

- 4K resolution for high-resolution inspection and measurement
- Scan rate up to 15 kHz to deliver accurate 3D data at a faster speed
- Single-shot HDR to scan dark and reflective surfaces in one exposure

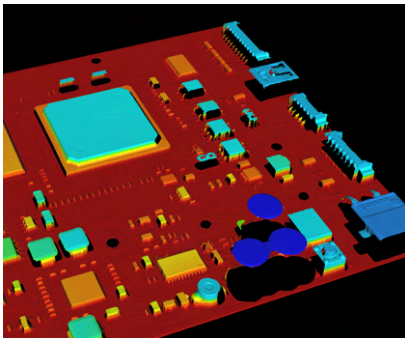
For high-precision measurement and inspection in industries such as consumer electronics, EV battery, and automotive.



Smartphone housing

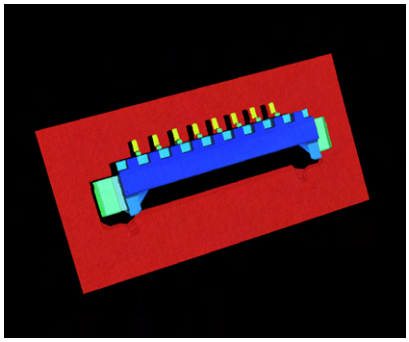


Lithium-ion battery cell

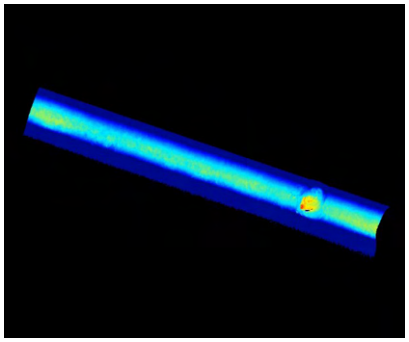


Circuit board

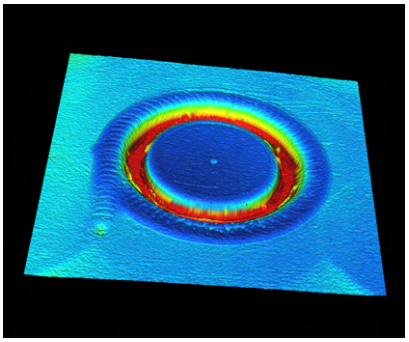
Point clouds obtained by MRK-Eye LNX-8080, color rendered by height



Connector



Weld crater



Battery sealing pin

Point clouds obtained by MRK-Eye LNX-8030, color rendered by height

Industrial 3D Camera

MRK-Eye UHP-140

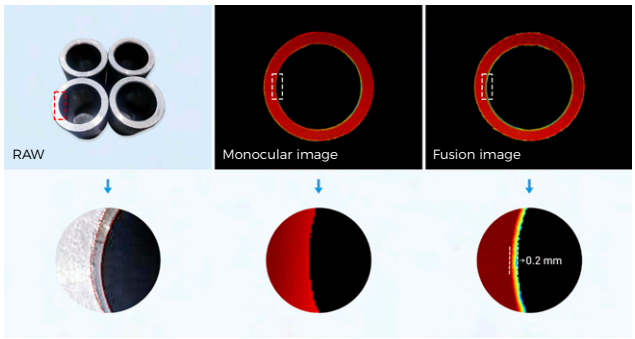
Short-Range Working Distance

MTBF (Mean Time Between Failures): ***≥ 40,000 hours***

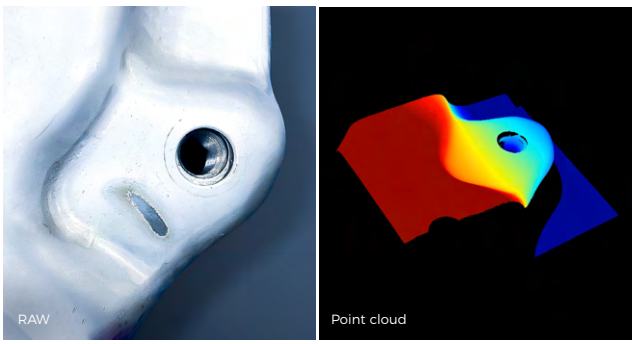
Micron-Level Accuracy | Robust Anti-Reflection Performance | Advanced Image Stitching Algorithms

MRK-Eye UHP-140 is designed to inspect or measure the subtlest features and defects (accuracy: 0.03 mm @ 0.3 m; standard: VDI/VDE 2634 part II of Germany).

Coupled with advanced image fusion and anti-reflection 3D reconstruction algorithms, MRK-Eye UHP-140 can effectively reduce blind spots and generate high-quality point clouds of reflective and complex-shaped parts.

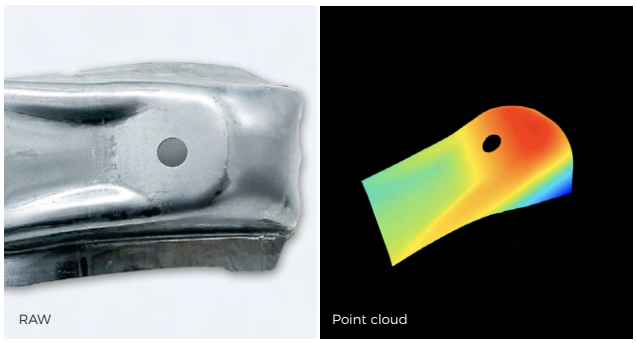


Round positioning hole with chamfered edges

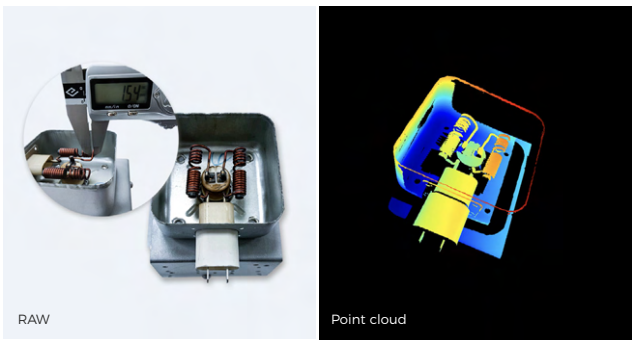


Threaded hole

MRK-Eye UHP-140 @ 0.3 m, color rendered by height



Reflective curved sheet metal part



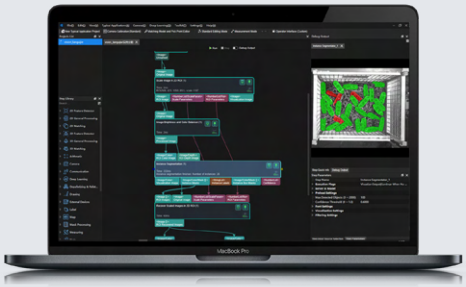
Reflective enameled copper wire with a diameter of about 1.5 mm

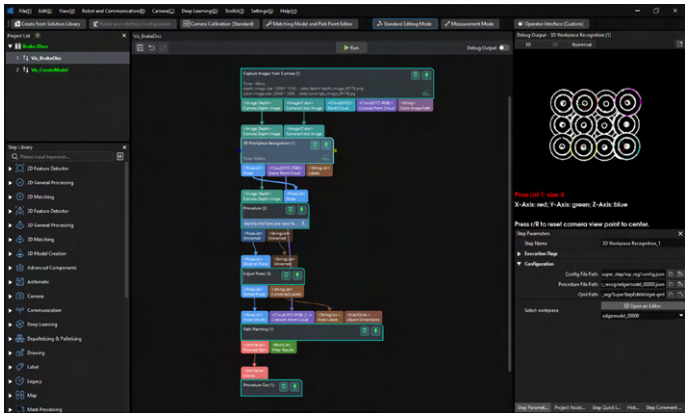
MRK-Eye UHP-140 @ 0.3 m, color rendered by height

MRK-Vision

Machine Vision Software

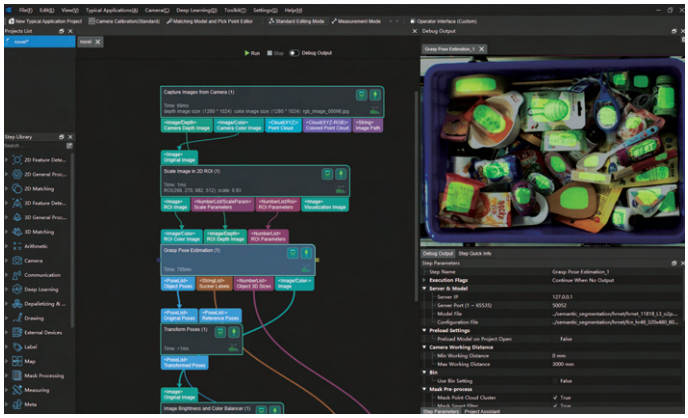
MRK-Vision is an industry-leading machine vision software. It is designed to quickly build vision applications, whether simple or complex. With MRK-Vision, users can manage a wide range of vision tasks, including identification, localization, inspection & measurement, etc.





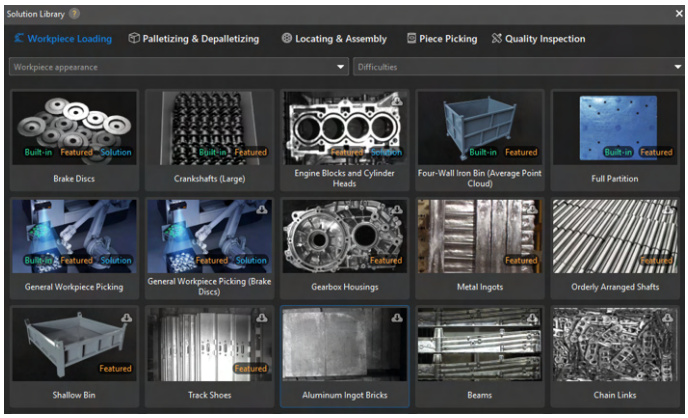
Build your vision applications efficiently

- Intuitive solution-oriented graphical user interface
- Drag-and-drop programming simplifies setup without writing a line of code
- Visualized configuration



Manage complex vision applications with extensive tools

- Powerful algorithms: 2D/3D matching, 2D/3D deep learning, 2D/2.5D measurement, etc.
- Integrated machine vision tools: matching model, pick point editor, automatic calibration, caliper, etc.
- The **3D Workpiece Recognition** tool delivers recognition results in 1 sec, enabling easier and faster deployment of various loading and handling applications



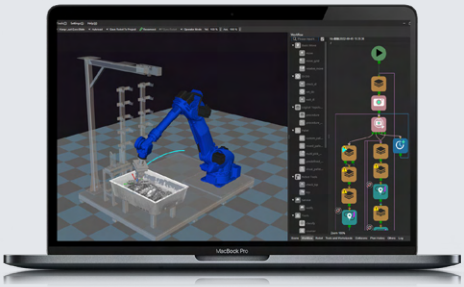
Develop vision applications easily and flexibly

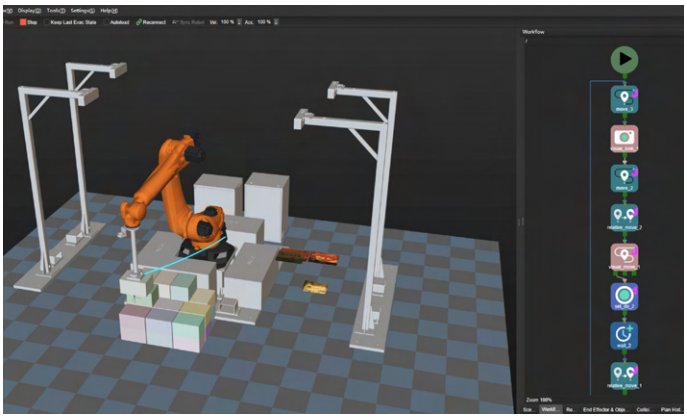
- **Robust Solution Library:** get faster application deployment by adapting an existing project after simple modifications
- **Production Interface** for easy production status monitoring and data reporting
- Multiple languages: English, Japanese, Chinese, and Korean

MRK-Viz

Robot Programming Software

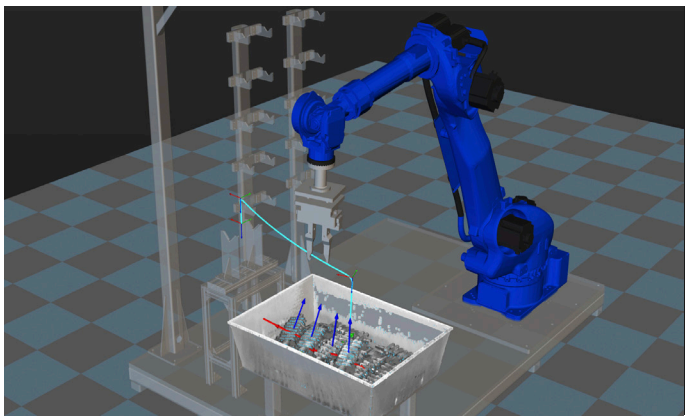
MRK-Viz is a software product for efficiently implementing robotic applications without writing a line of code. MRK-Viz enables robots to manage demanding automation tasks with excellent stability, extraordinary flexibility, and outstanding consistency.





Intuitive Robot Programming

- Intuitive graphical user interface
- Code-free programming environment
- One-click simulation of robot path



Powerful Algorithms for Reliable Robotic Operation

- Motion planning and collision detection
- Multi-pick depalletizing algorithms
- Picking strategies: multiple pick points, rotational symmetry, etc.

ABB KUKA YASKAWA FANUC Kawasaki
NACHI DENSO UNIVERSAL ROBOTS STÄUBLI EFORT
GREE ROKAE ELITE ROBOTS PEITIAN ROBOTICS TM ROBOT
ESTUN ROBOTICS TURIN AUBO DOBOT QJAR
HAN'S ROBOT HYUNDAI JAKA SIASUN DELTA

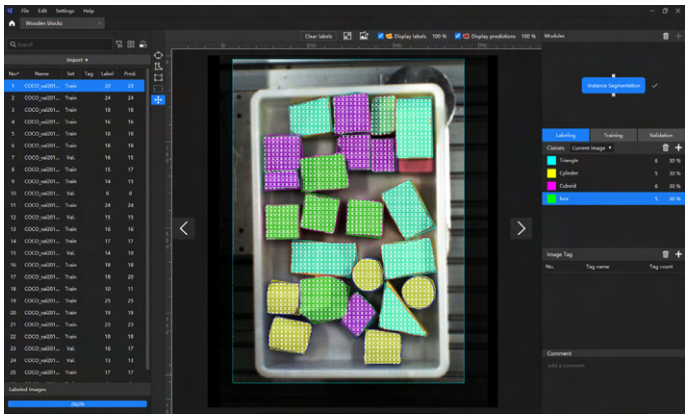
Flexible and Easy Implementation

- Support for almost all major-brand robots
- Streamlines configuration and redeployment with robot path reporting and tracking capabilities
- Multiple languages: English, Japanese, Chinese, and Korean

MRK-DLK

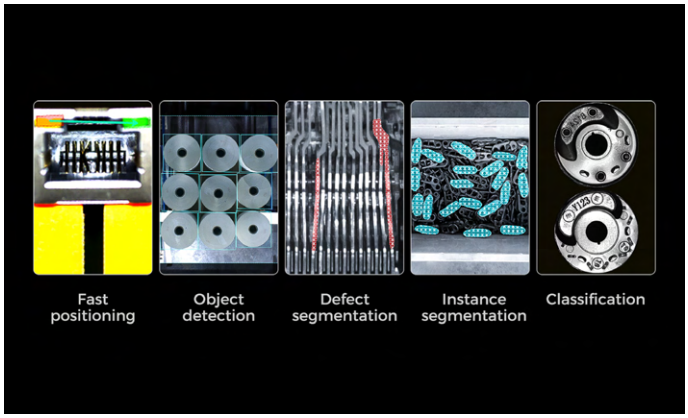
Deep Learning Software

MRK-DLK is a versatile deep learning software solving complex machine vision tasks. It enables users to rapidly train models and easily solve demanding vision applications, including overlapping object recognition and classification, complex defect detection, character reading, etc.



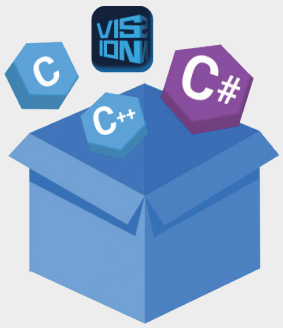
Train models efficiently without writing a line of code

- Intuitive code-free user interface
- Visualized model validation
- Advanced data augmentation: train models with smaller image sets
- **Finetune** function: leverage pre-trained models to expedite training, rather than train a model from scratch



Manage complex machine vision tasks with speed and accuracy

- Manages complex vision applications with powerful algorithms such as fast positioning, defect segmentation, and instance segmentation
- **Smart Labeling Tool** and **Template Tool** simplify the labeling process, saving time and effort

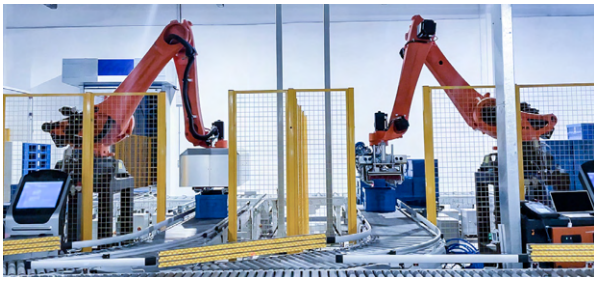


Integrate your vision tasks into your production environment easily

- Multi-language SDKs: C, C++, C#, and Python
- Easy integration with MRK-Vision for quick deployment

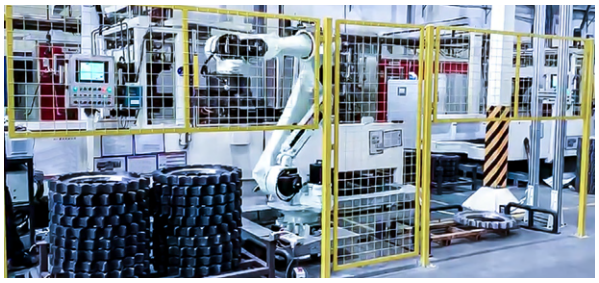
Example Cases

Vision-Guided
Case Depalletizing



Vision-Guided
Case and Tote Depalletizing

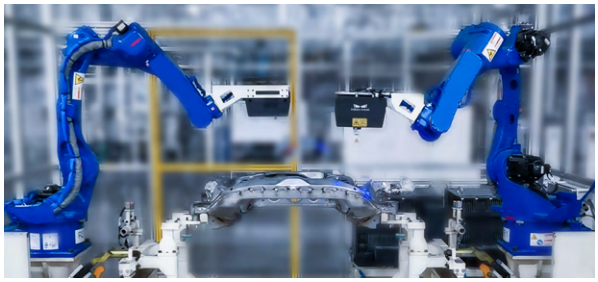
Vision-Guided
Sack Depalletizing



Vision-Guided
Machine Tending of Drive Gears

Vision-Guided
EV Charging

Vision-Guided
Bin Picking of CV Joints



Subframe Inline
Measurement

Vision-Guided
Car Door Inner Panel Picking