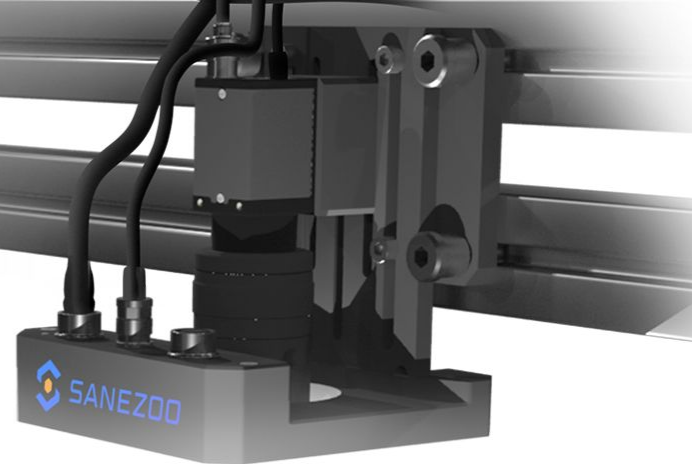




GRASP
Bin Picking



SANEZOO



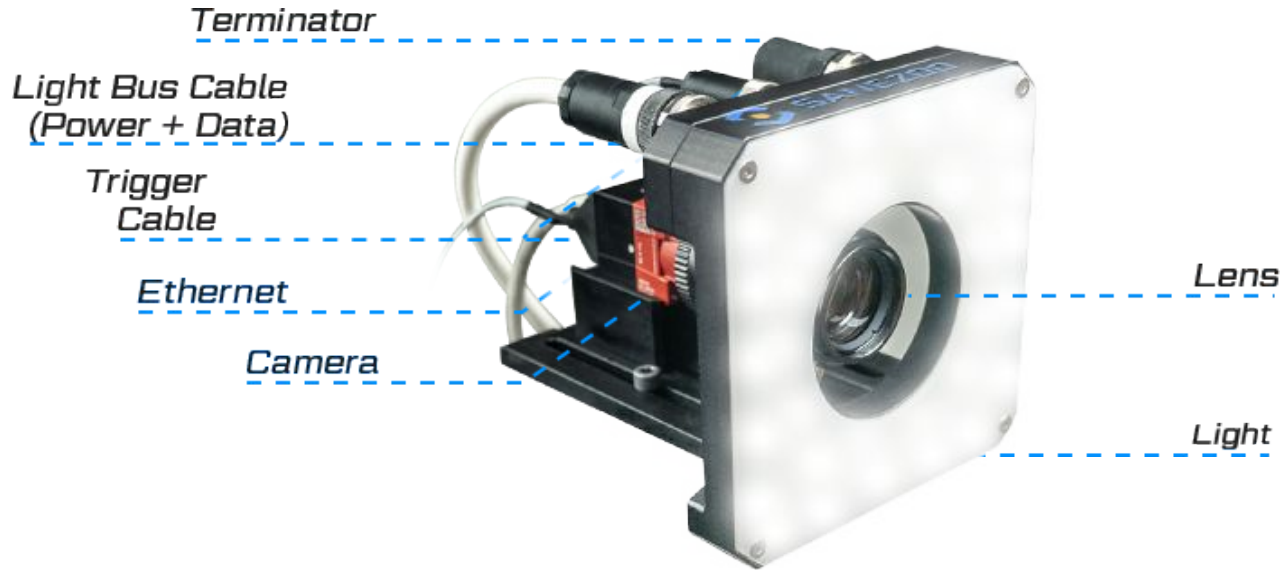
UNITY
Quality Control

OUR PARTNERS AND CLIENTS:



SANEZOO UNITY

Universal Quality Control



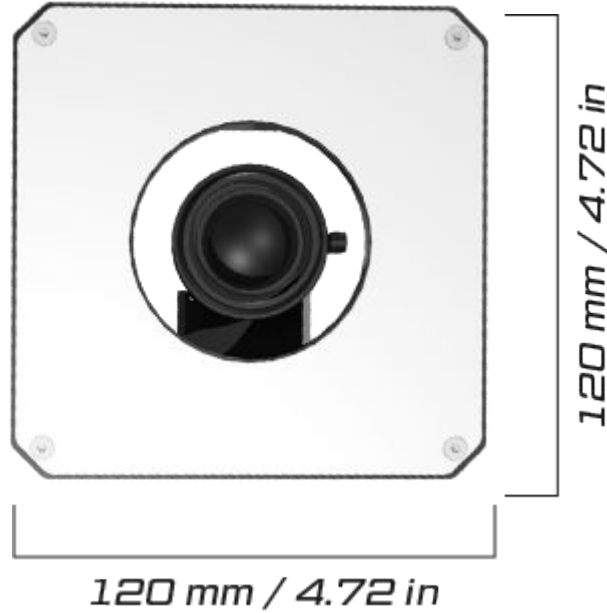
Detects even the **smallest surface defects** on **large areas**.



Handles a wide range of surfaces, including **highly reflective** and **machined materials**.

SANEZOO UNITY

Universal Quality Control



Customizable settings based on your **specific requirements**.



Resistant to ambient lighting thanks to our unique lighting system.

SANEZOO UNITY

Universal Quality Control



**Unaffected by stains,
machining marks, or
other anomalies.**



Can be integrated into
a production line for
**real-time rejection of
NOK parts, final
inspection, or external
evaluation.**



**Tolerant to imperfect
positioning.**

Resolution:

Up to 25 MPx

Defect Detection Rate:

> 98 %

False Alarm Rate:

< 1 %



WHY UNITY?

Universal Quality Control



Full Automation
Replaces the Operator



Consistent Evaluation
(R&R)



Speed Up the
Production Line



Real-time Inspection,
Fast Process
Adaptation



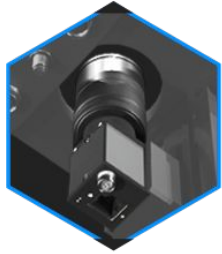
100% Traceability,
User-friendly



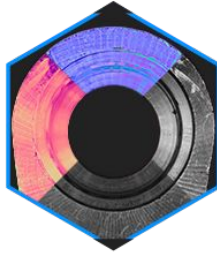
Systematic Defect
Analysis, Collection of
Relevant Data

Inside the UNITY System

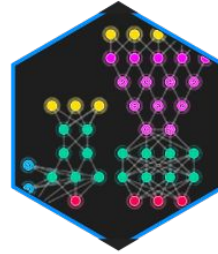
High-performance
Cameras and Optics



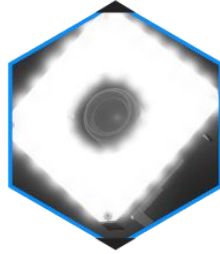
Multi-layer
Industrial Imaging



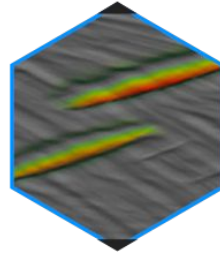
Multi-channel Machine
Learning Models



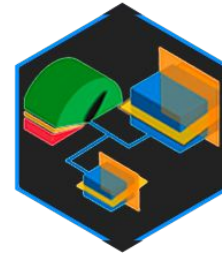
Multi-sectional
Lighting with Dozens
of Sections



Unique Image
Analysis
Algorithms



Multi-dimensional
Decision Engines



IS UNITY FOR YOU?

Use Cases and Examples

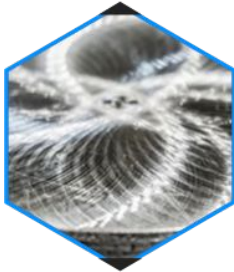
Machined



Pressed



Painted



Grinded



Plastic

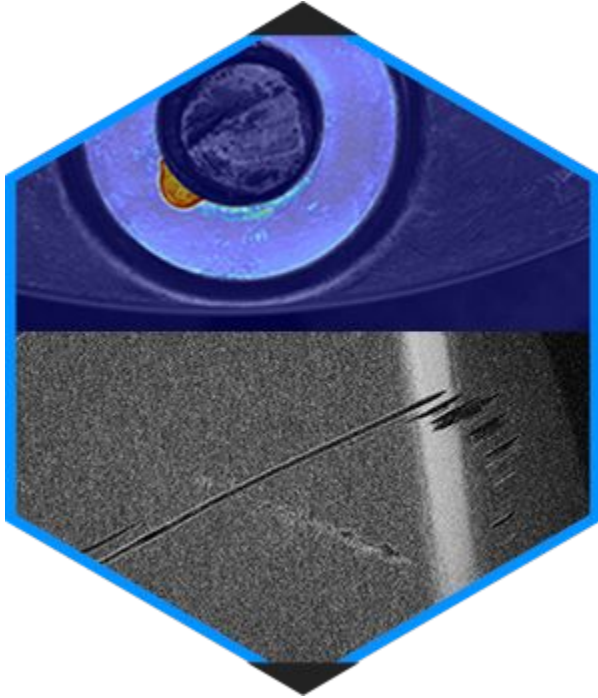


Casted



Applied

Possible Defects



Dents

Bumps

Scratches

Paint Drops

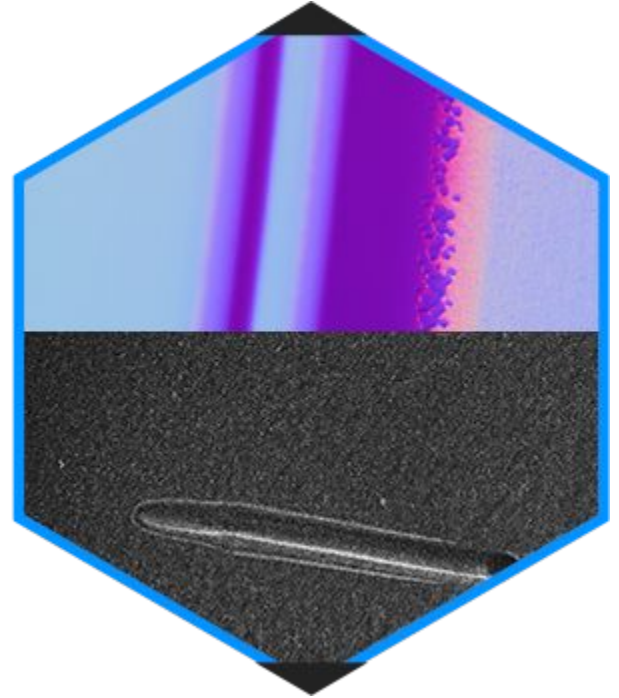
Bubbles

Pores

Uneven Surfaces

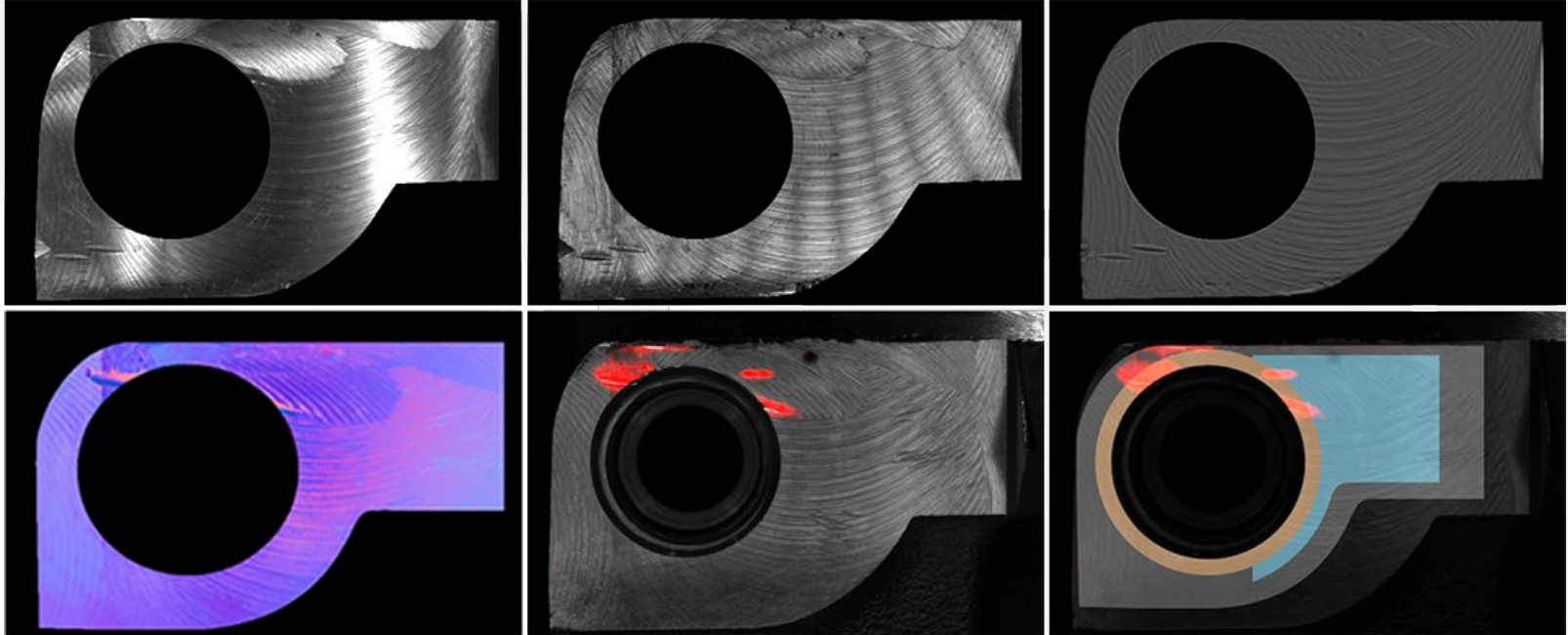
Deformations

and More ...



UNITY CASE STUDY

Machined Surface Inspection



UNITY CASE STUDY

Machined Surface Inspection



Labor Savings

Eliminated three operator positions in a single-shift operation, achieving ROI in under 10 months.



Full Traceability

Each inspected image is linked to the serial number of the part.



Zero Customer Complaints

Defect-free surface inspection prevents warranty claims.



Reliable Detection

System stability ensures accurate inspection despite line vibrations.

The SANEZOO system has improved quality, reduced costs, and increased customer satisfaction through an innovative machine vision approach.

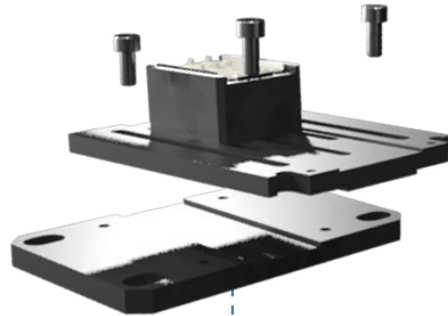
INSIDE UNITY

A Detailed Breakdown of its Core Components

High-Resolution
Camera



Specialized
Lens



Sturdy Base
& Mount



LED Grid
System

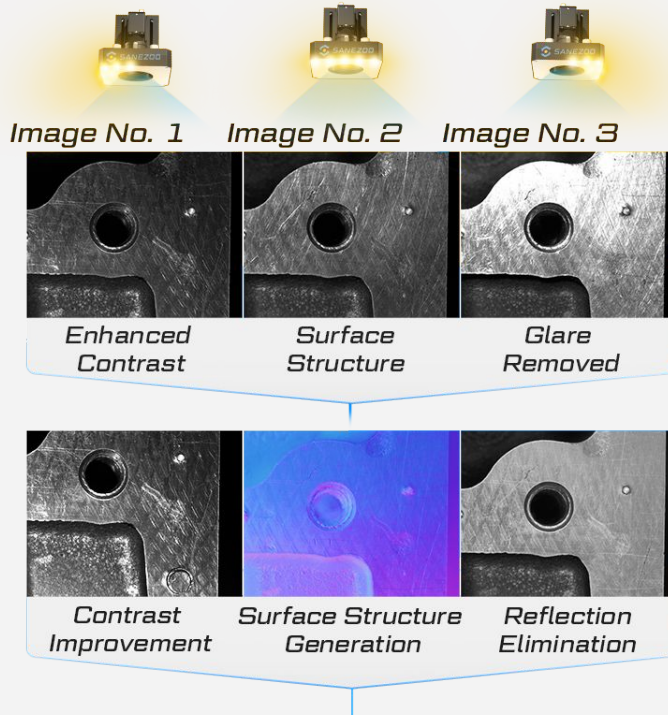
Diffuser



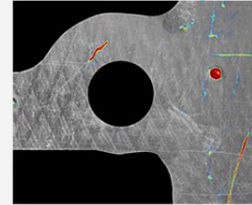
HOW UNITY WORKS

The Step-by-step Inspection Process in Action

*UNITY Captures Multiple Images
Using Varied Led Illumination*

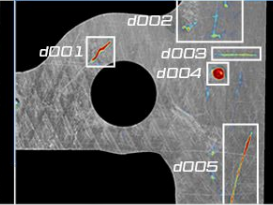


AI Response



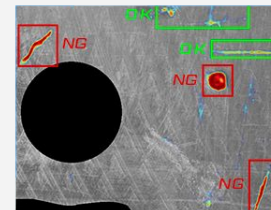
Proprietary AI

Analyzed Image



*Proprietary
Image Analysis*

Final Evaluation



Decision Engine



SANEZOO

SANEZOO UNITY STUDIO

For Fast Product Integration

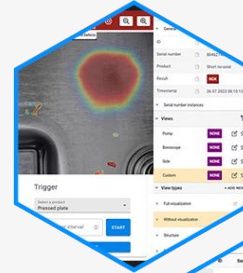
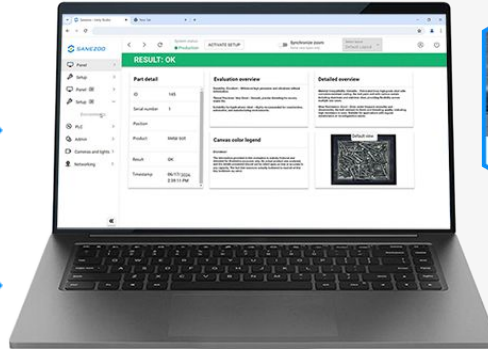
Configure quality criteria and inspection zones



Review inspection history and archive



Visualize analysis results in real time



Detailed **configuration of decision-making criteria**, including individual **control zones**.



Automated **tracking and archiving** of inspected parts.

SANEZOO STUDIO

ensures easy setup for all Sanezoo products, provides user-friendly configuration options, and integrates seamlessly in your specific environment.



SANEZOO UNITY STUDIO

For Fast Product Integration



UNITY STUDIO offers extensive customization, adapting to diverse inspection scenarios.



Multi-Product Support

Configure **unique settings for different products** and seamlessly switch between them.



Flexible Setup

Choose between **robot-mounted or stationary** configurations to match production requirements.



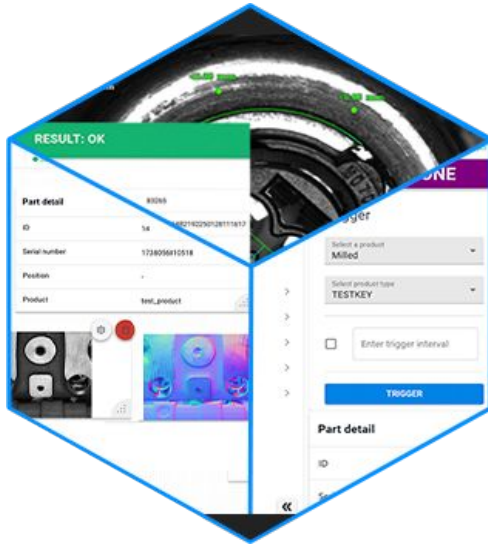
Custom Evaluation Rules

Define **inspection criteria for products and specific zones**.

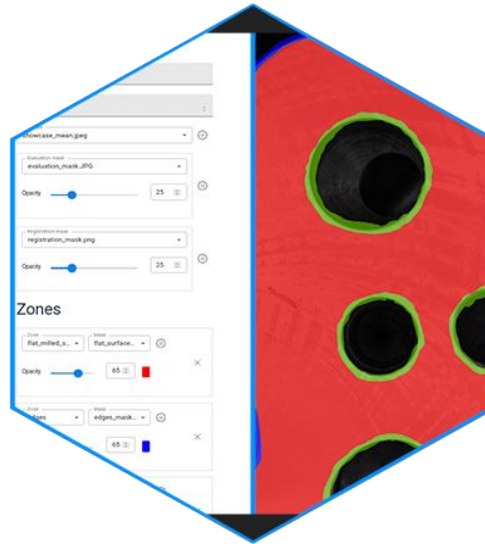
UNIQUE FEATURES OF UNITY

Seamlessly Integrated into SANEZOO UNITY Studio

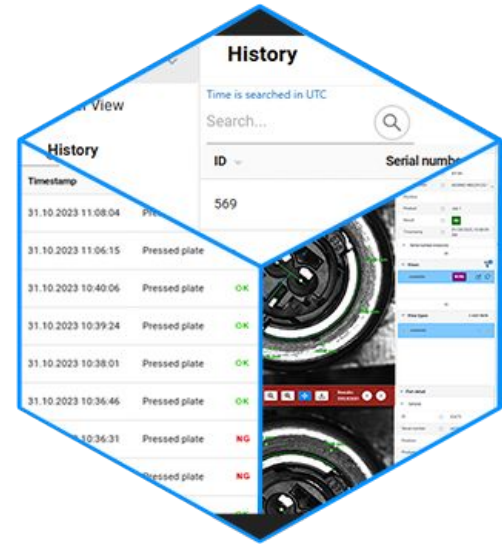
Live & Clear Inspection Results



AI-Powered Defect Detection & Smart Zoning



Full Traceability & Quality Control



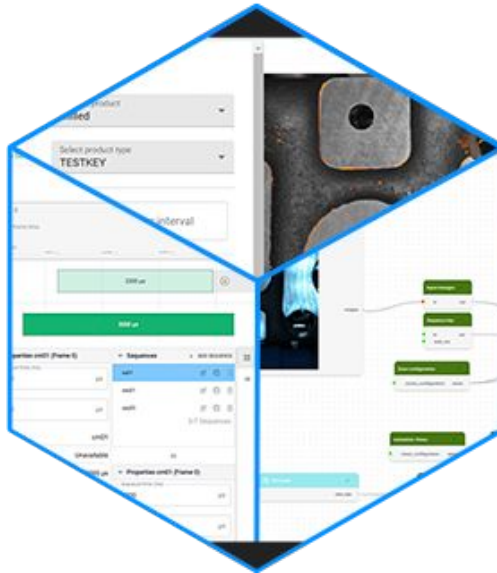
UNIQUE FEATURES OF UNITY

Seamlessly Integrated into SANEZOO UNITY Studio

Seamless System
Integration &
Connectivity



Flexible Production
Setup & Adaptability



User Profiles & Access
Management



ADAPTIVE ZONE SEGMENTATION

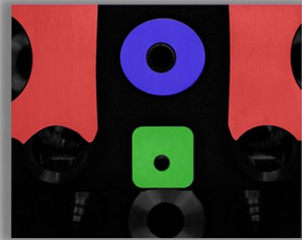
Create Different Zones with Distinct Evaluation Parameters

Custom Evaluation Rules

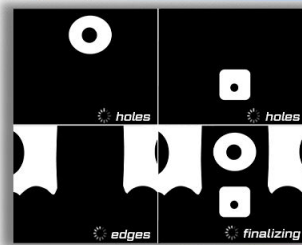
Set individual defect detection criteria for each zone.

Optimized Detection

Focuses on critical areas, reducing false positives.



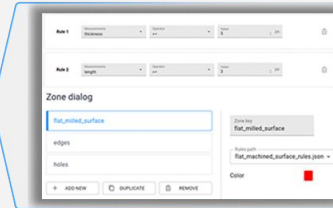
Configure granular rules for each zone with a defect catalog.



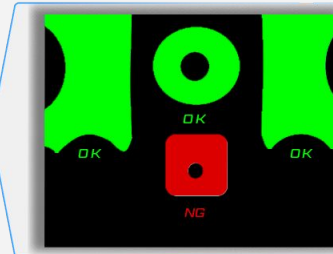
Perform the final evaluation.

UNITY identifies non-compliant zones and **allows** for the **adjustment** of subsequent production steps.

Specify and define multiple zones of interest.



Inspect individual zones and defects sequentially.



Defining Zones of Interest

Adaptive segmentation ensures accurate detection in different areas.

SANEZOO GRASP

Bin Picking



Simple scene setup allows **picking from multiple boxes.**



Suitable for a wide range of parts, including **glossy, machined, matte, and painted.**

SANEZOO GRASP

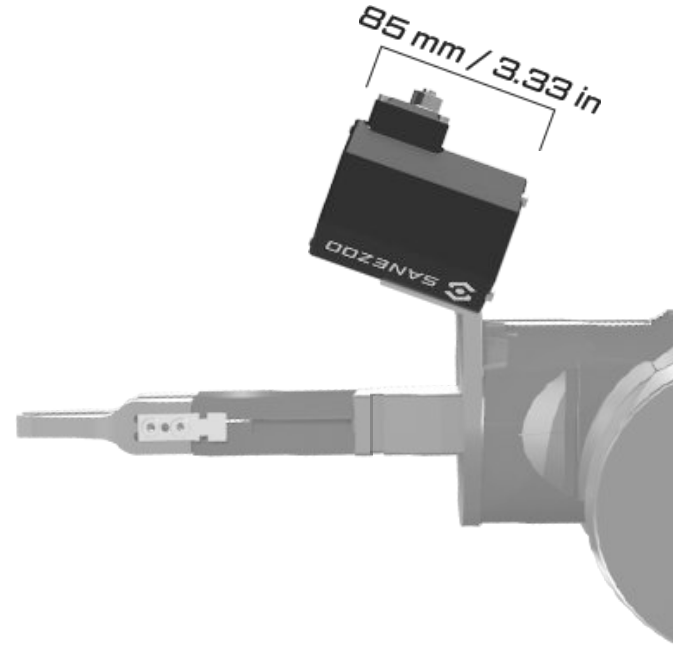
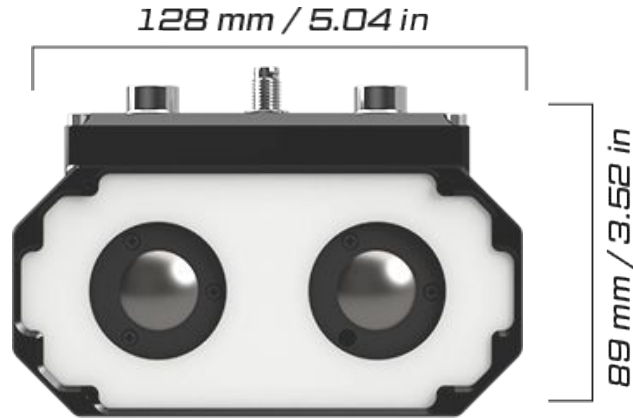
Bin Picking



Always **in focus** thanks to a **camera mounted on the robot**.



Calculates the complete robot trajectory in real-time, **avoiding unexpected collisions**.



SANEZOO GRASP

Bin Picking



Recognizes the gripping position for **oriented part placement**.



Suitable for **various shapes, surfaces, part sizes, and box sizes**.

Minimum Part Size:

125 mm / 4.92 in

Trajectory Calculation Time:

2 – 3 s

False Alarm Rate:

< 1 %



Custom TCP/IP protocol for seamless communication with many robotic systems ...



KUKA

STÄUBLI

FANUC

Shibaura Machine

 **Kawasaki**

ABB



YASKAWA



NACHI

HOW GRASP WORKS

The Step-by-step Picking Process in Action

Left camera Right camera



SCENE ACQUISITION

3D point cloud



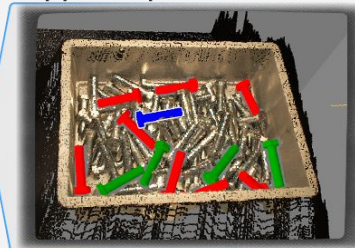
3D RECONSTRUCTION

Found parts



PARTS DETECTION

Grippable parts



REACH ANALYSIS

COLLISION-FREE TRAJECTORIES

SANEZOO GRASP STUDIO

For Fast Product Integration

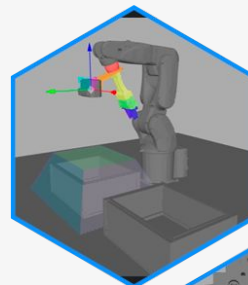
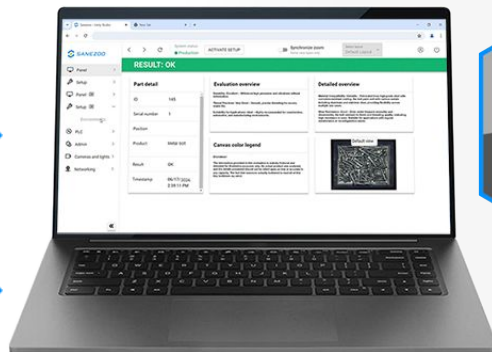
Simple 3D scene setup



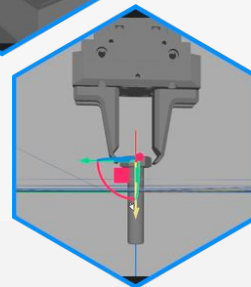
Custom grip point definition



Process visualization



Support for **multiple picking boxes** and automatic **obstacle avoidance** for robots.

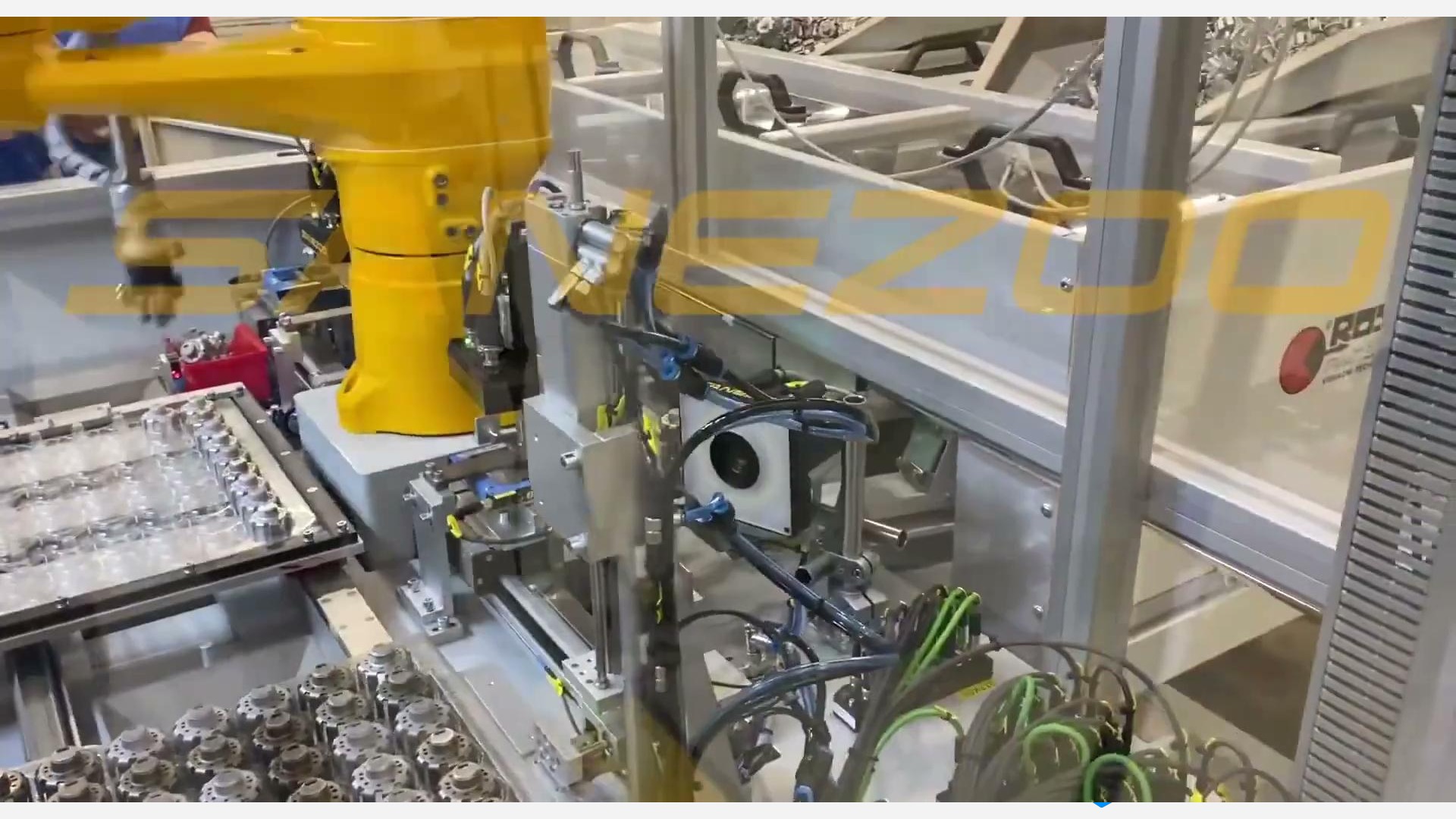


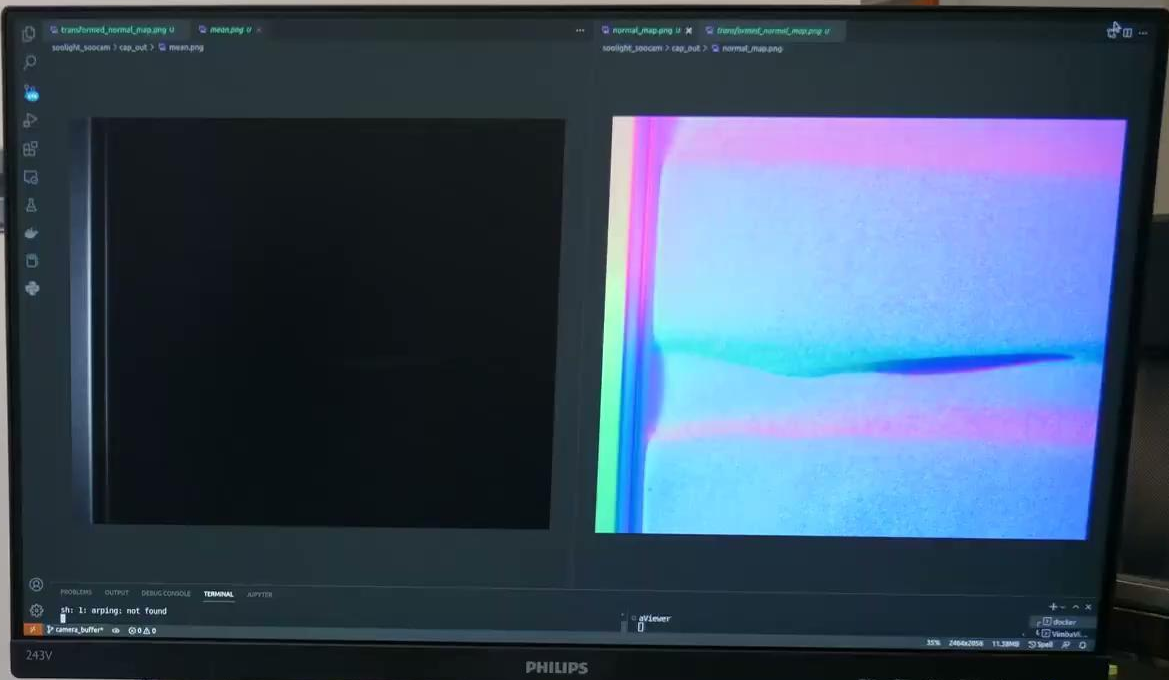
Custom grip point settings for precise **oriented part placement**.

SANEZOO STUDIO

ensures easy setup for all Sanezoo products, provides user-friendly configuration options, and integrates seamlessly in your specific environment.











 SANEZOO





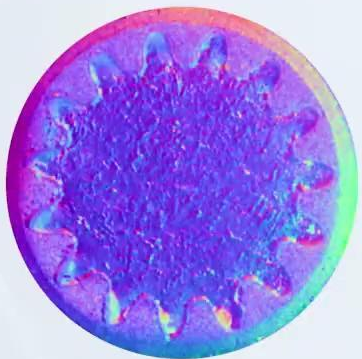
Stäubli

Stäubli
K2 60

112

0.00

Defect Detection



OK



Next GRASP

ARE OUR PRODUCTS FOR YOU?



Suitable for different
shapes



Adaptable to All Sizes



Capable of Finding Any
Defects

Not sure about your case?

Contact us at sales@sanezoo.com

SANEZOO USA Inc.
USA

OH 

sales@sanezoo.com 



SANEZOO SE
Czech Republic

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602 00 Brno

 +420 604 276 216

 sales@sanezoo.com

