



SANEZOO Grasp

for 3D picking & feeding



3D system for any components



Adaptive AI & machine vision



Calculates full robot trajectory



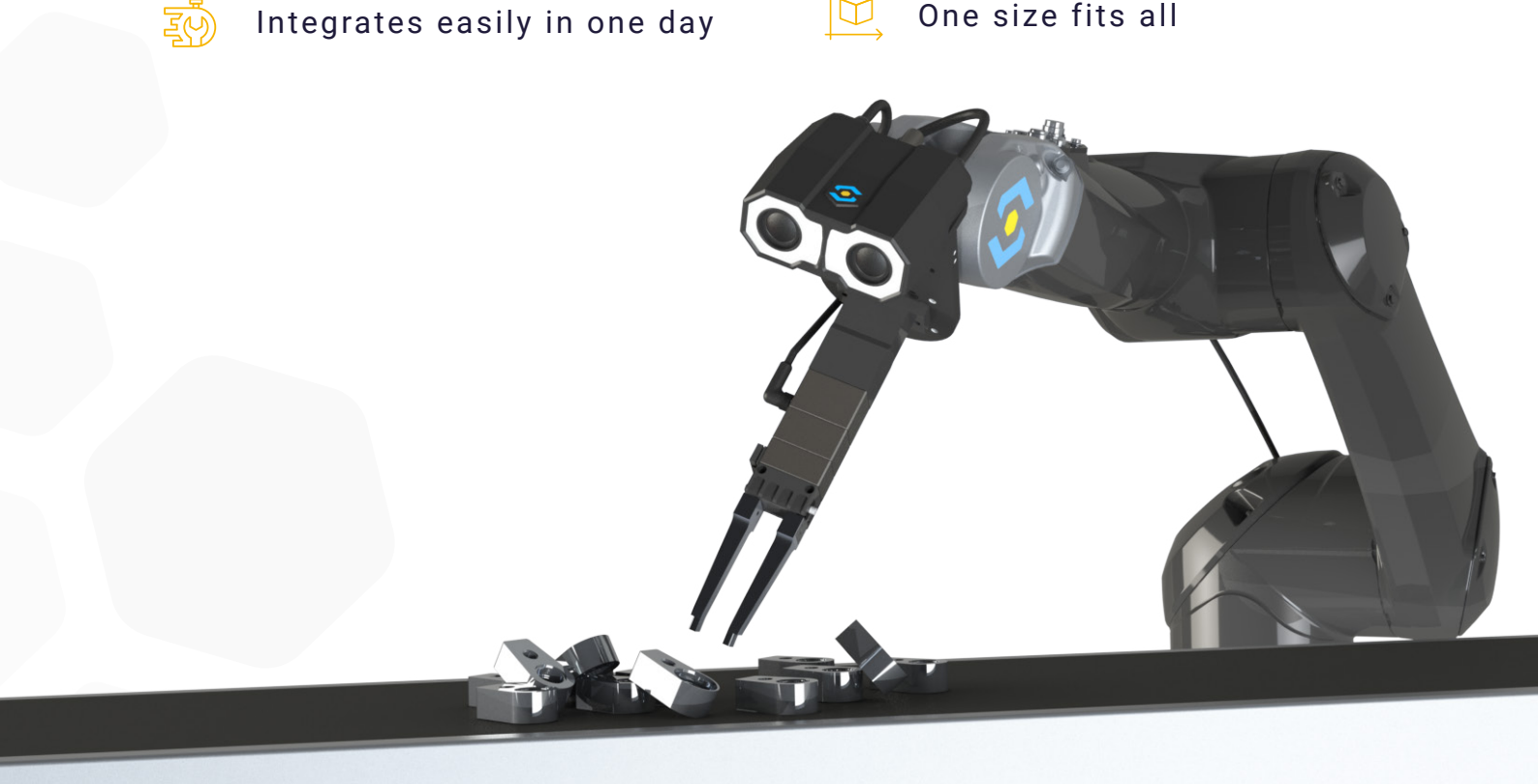
Easily copes with reflective parts



Integrates easily in one day



One size fits all



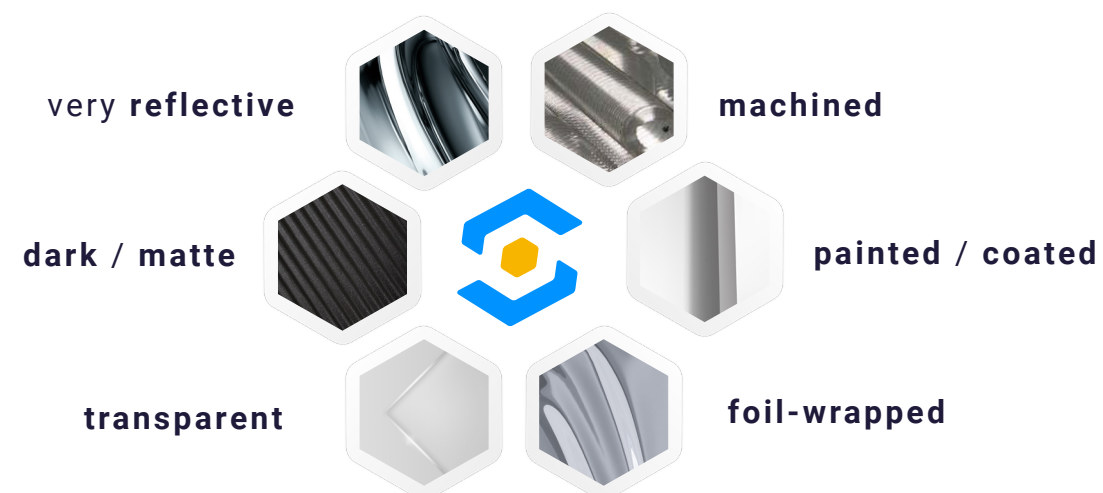


Fits any compoment

Works like a pair of eyes. No need for projectors or lasers. Perfect for metal, machined, glossy or matte parts and scenes with multiple different materials in the field of view.

- ✓ GRASP is universal for all parts
 - of any size from 5mm up,
 - with geometric or complex shapes

- ✓ Can handle a wide range of part surfaces, including:



Plug-and-Play

- enables fast and easy integration
- up and running next business day

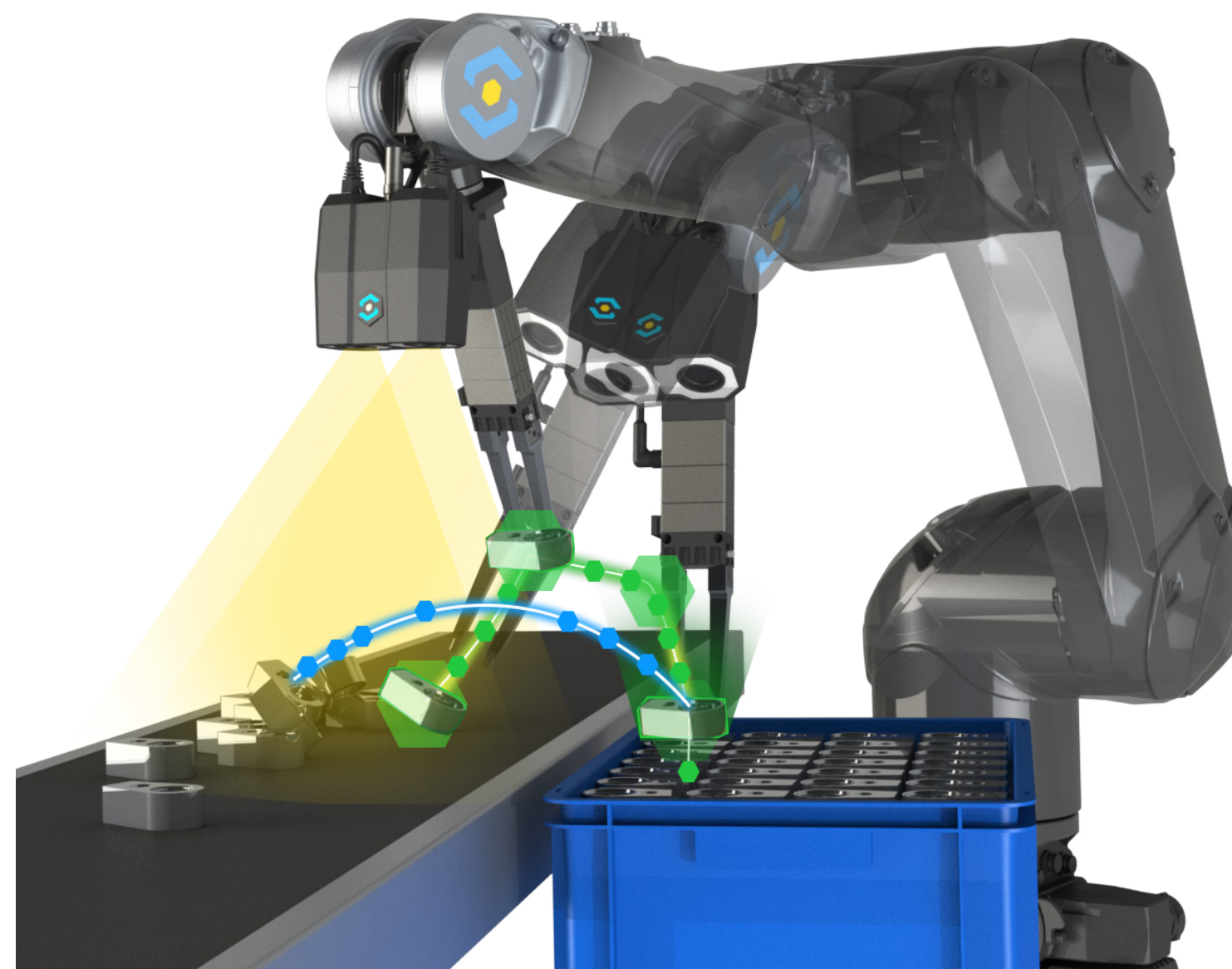


Automatically calculates full trajectories

- creates end-to-end trajectories on-the-fly
- can guide from a final position directly inside the box
- knows the gripping position -> oriented placing

Avoids obstacles and collisions

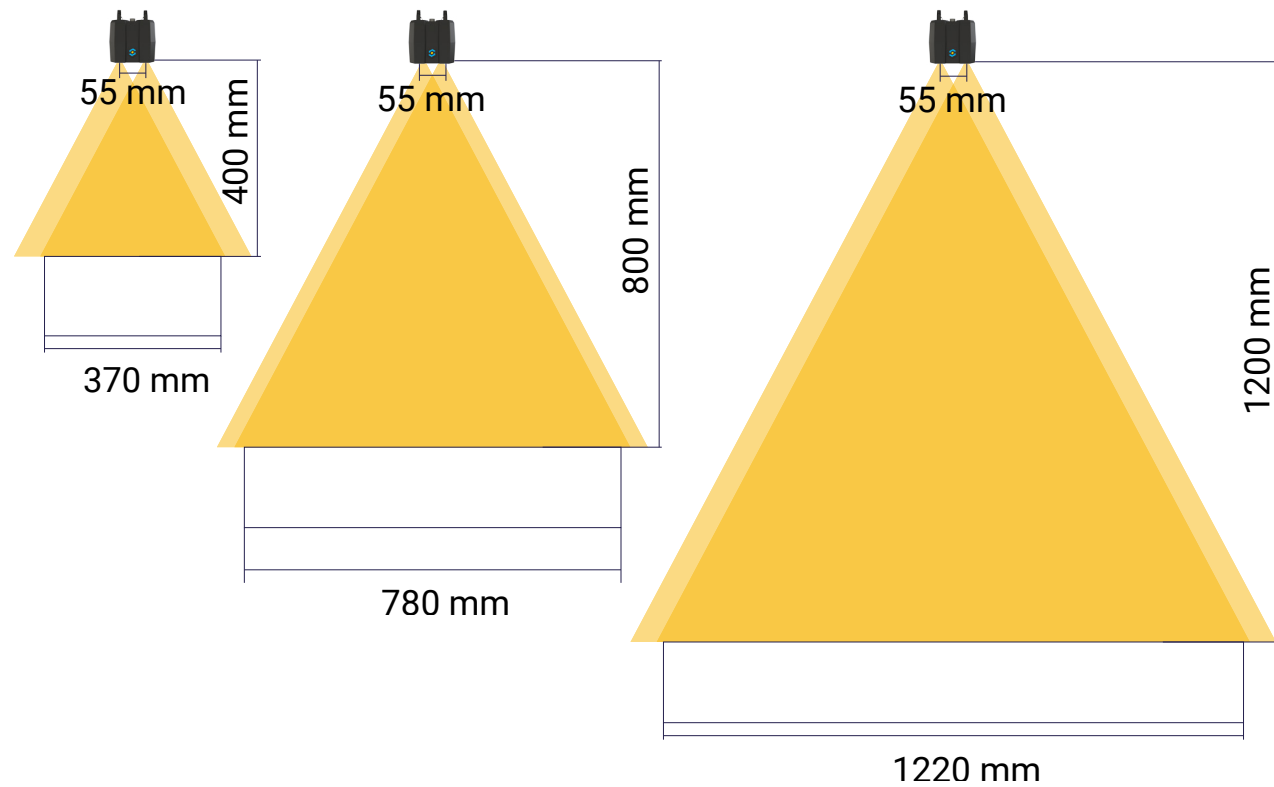
- gripper
- gripped part
- robot arm
- end effector
- holders and cabling
- robot arm
- boxes
- cell frames
- other obstacles



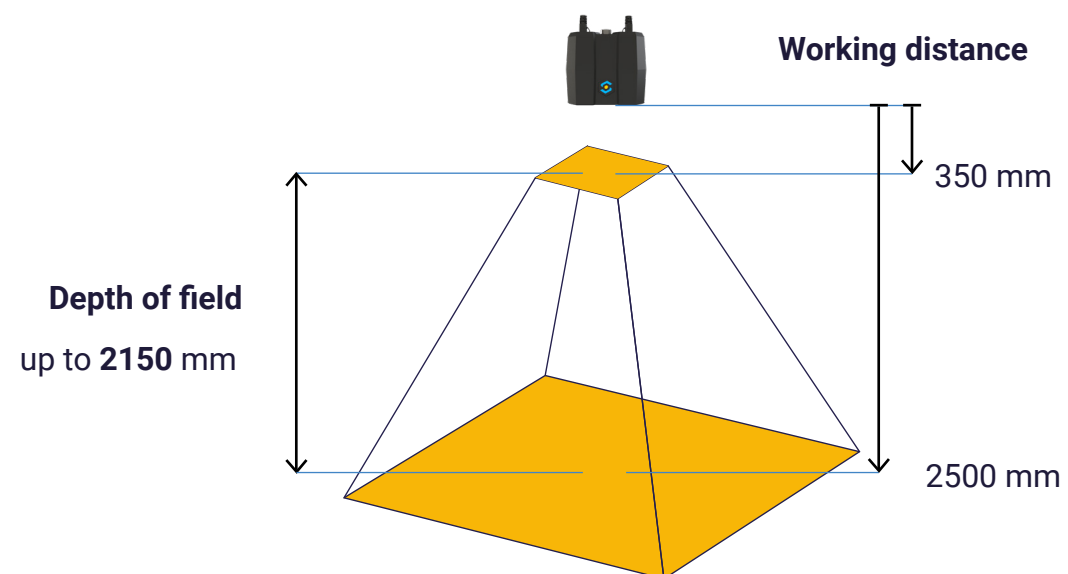


One size fits all

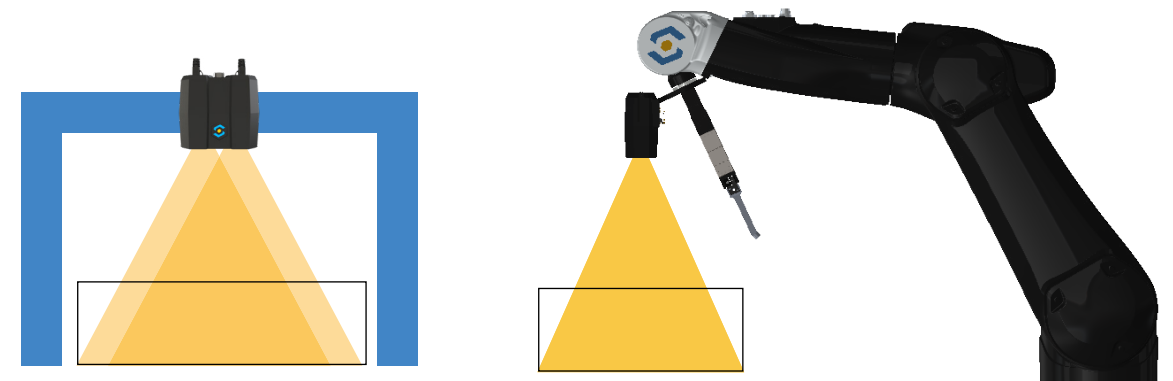
Universal for containers of any size.
From small totes to mesh box pallets
Can handle also very small parts in large containers



Large depth of field



Can be static or robot mounted

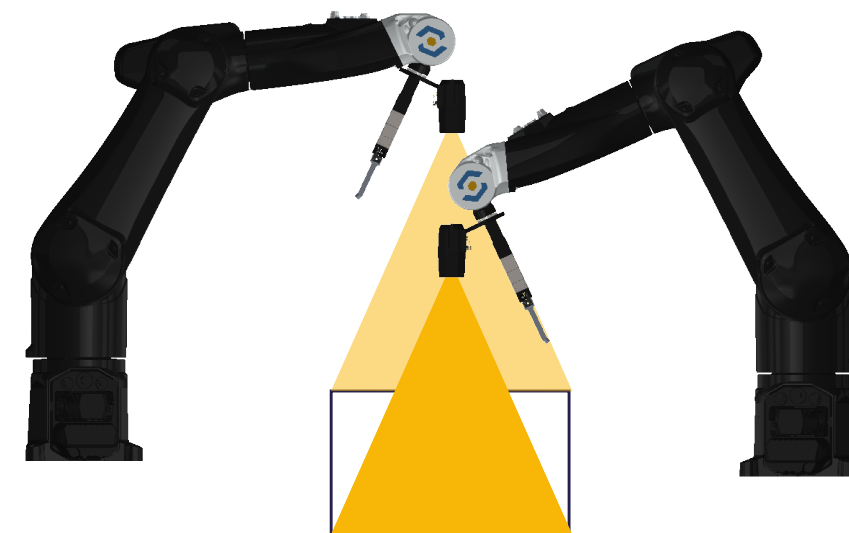


Advantages when mounted on a robot

- less fewer obstructions and occlusions
- more accurate acquisition and picking
- no need for vibration-free frames and holders
- can pick from large or multiple containers
- unlimited depth of field, handles deep boxes

ALWAYS in focus

The SANEZOO system can also pick accurately from the top as well as the bottom of very deep containers. The images stay in perfect focus thanks to the constant working distance.



Comparison of 3D Input Technologies

	SANEZOO	ToF	Structured Light	Laser	Stereo
Resolution & FoV	Scalable	Limited	Limited	Scalable	Scalable
Mirror-like surfaces	✓	⊗	⊗	⊗	✓
Machined surfaces	✓	?	⊗	?	⊗
Painted surfaces	✓	⊗	?	?	⊗
Dark & matte surfaces	✓	?	⊗	⊗	✓
Textureless surfaces	✓	✓	✓	✓	⊗

Consistently reliable across all lighting environments

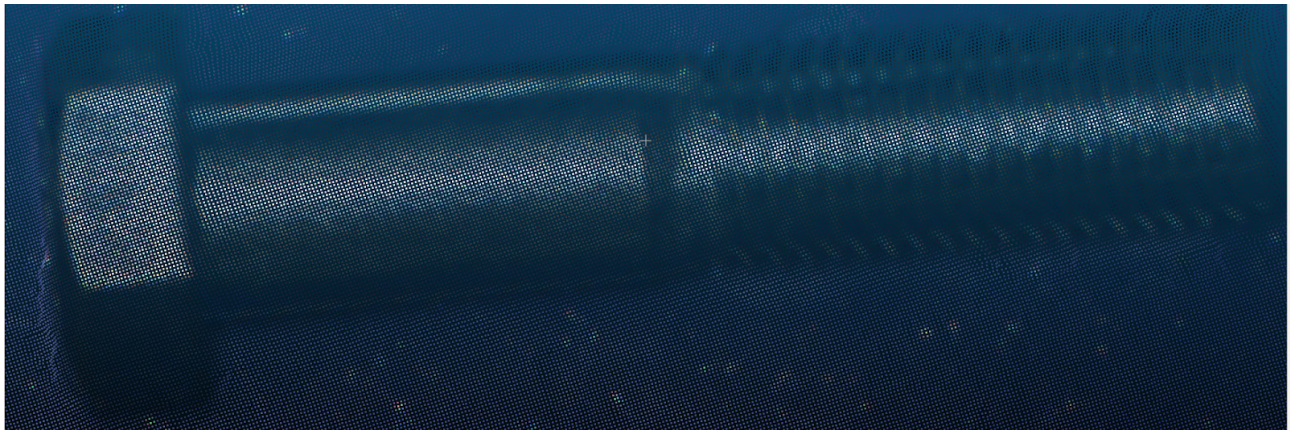


from complete darkness to direct sunlight
Unaffected by the variability of lighting conditions, ensuring stability day and night, even in extreme brightness or darkness.



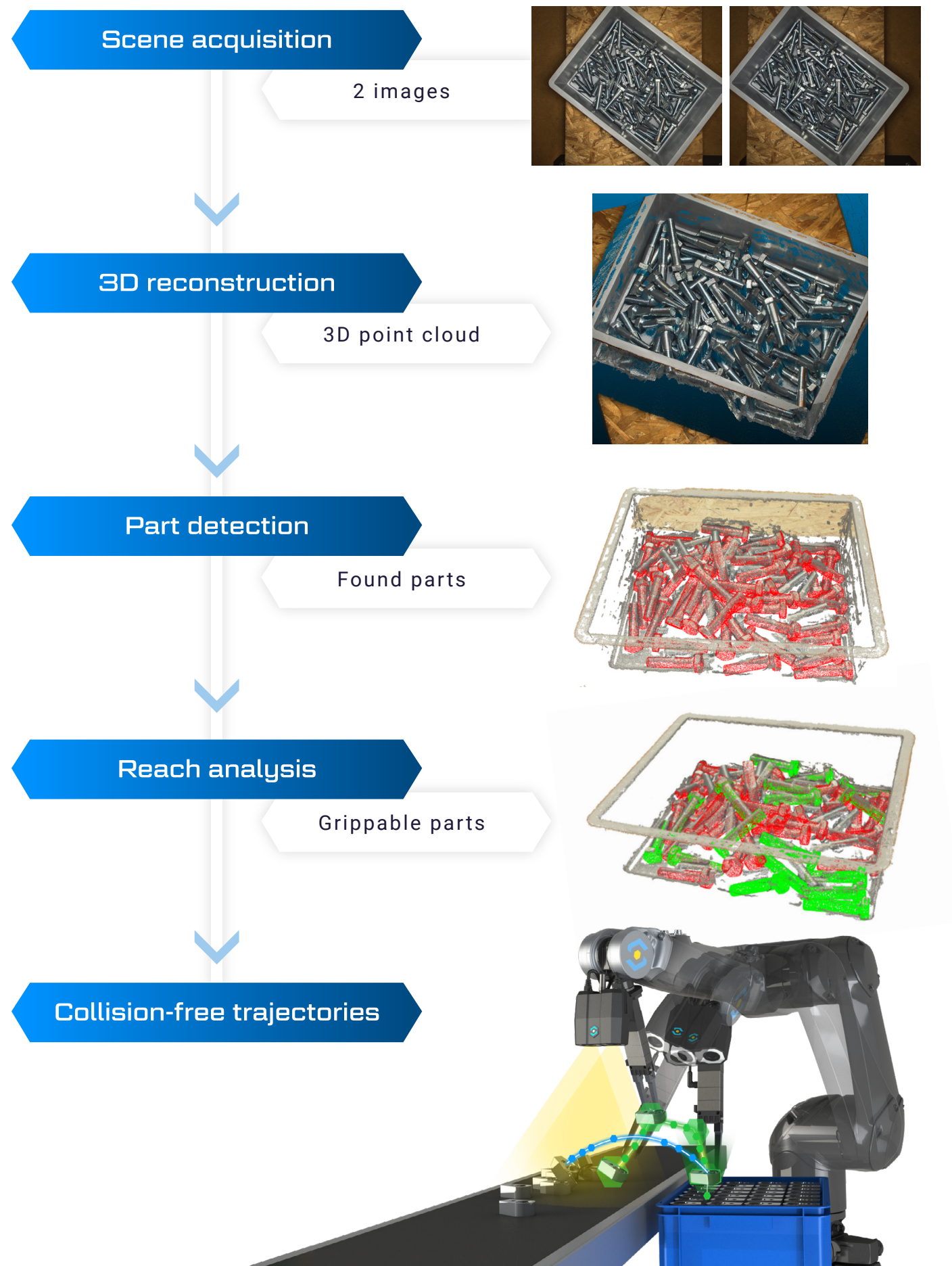
Detailed and accurate 3D reconstruction

Even on very reflective parts



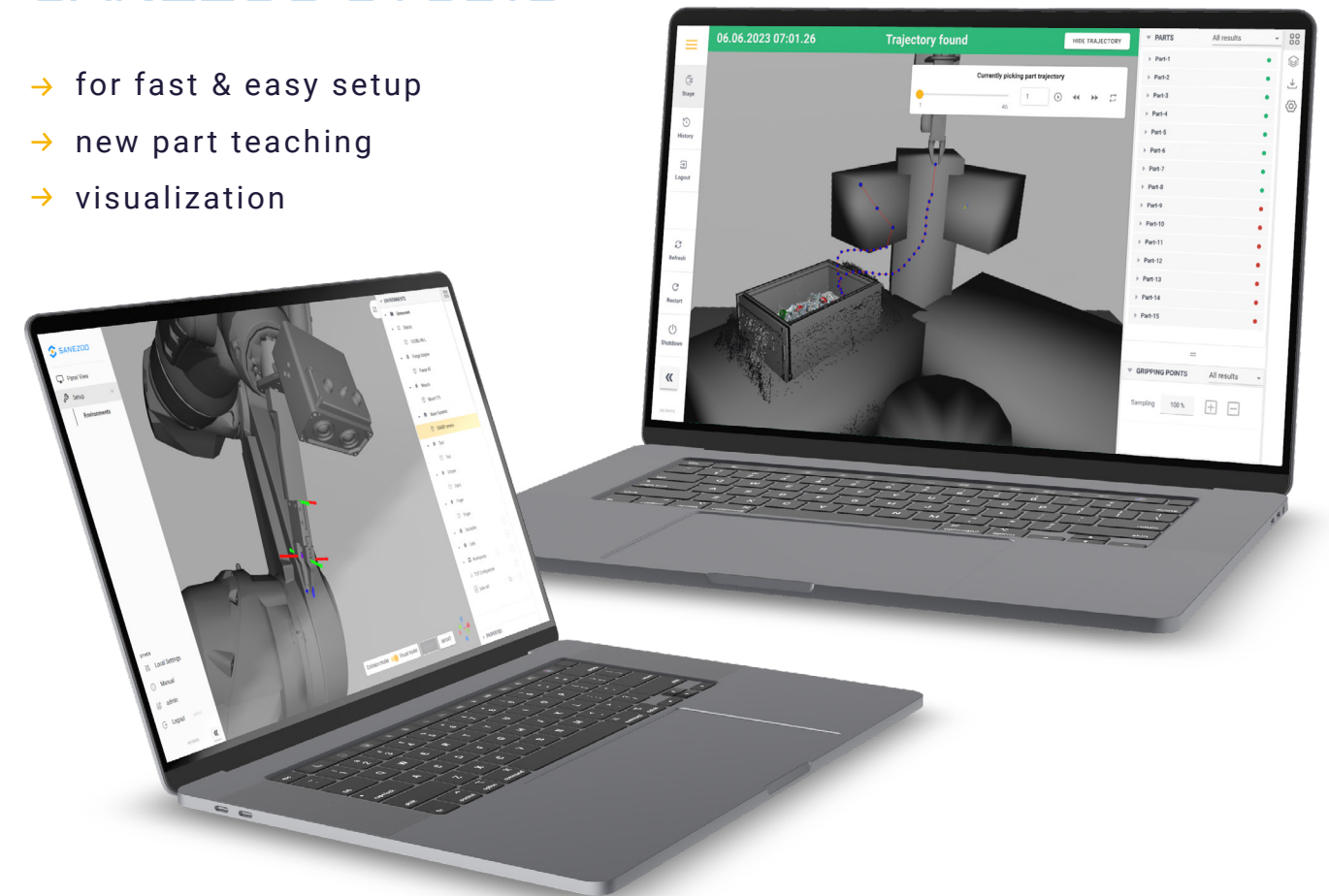
A 3D point cloud is a collection of points in three-dimensional space that represents the whole scene. Each marked point is assigned three coordinates (x, y, and z) based on its position in the 3D space. These points collectively form a cloud-like representation of the object or scene, where each point in the cloud corresponds to a specific location

Calculation pipeline



SANEZOO STUDIO

- for fast & easy setup
- new part teaching
- visualization



Fast integration

- The length of integration (including unboxing, installation and application setup): 1-4 hours.
- The integration includes the following steps:
 - A Installation of the 3D camera and flange adapter
 - B Calibration of the 3D camera
 - C Uploading SANEZOO library to a robotic controller
 - D Integration setup steps:
 - I. CAD model or simplified CAD model upload of a part and a box
 - II. Selection of a robot (or definition of a new robot)
 - III. Selection of a gripper
 - IV. Upload of a model of fingers
 - V. Scene definition or upload of the robotic cell
 - VI. Definition of gripping points on the part
 - VII. Definition of placement points
 - VIII. Definition of signals for PLC integration

Typical use cases

- picking parts for production lines and conveyors
- machine loading and unloading
- part inspection and sorting
- laser marking
- kitting and assembly
- custom packaging

Industries



Supports any robot manufacturer

SANEZOO offers universal interface for integration with any robot controller.
New robot controller can be added in less than two weeks.
Open and documented API for third-party, adaptation can be performed by anyone.



AND MANY MORE





TEACH
CAMERAS
TO THINK



SANEZOO

www.sanezoo.com