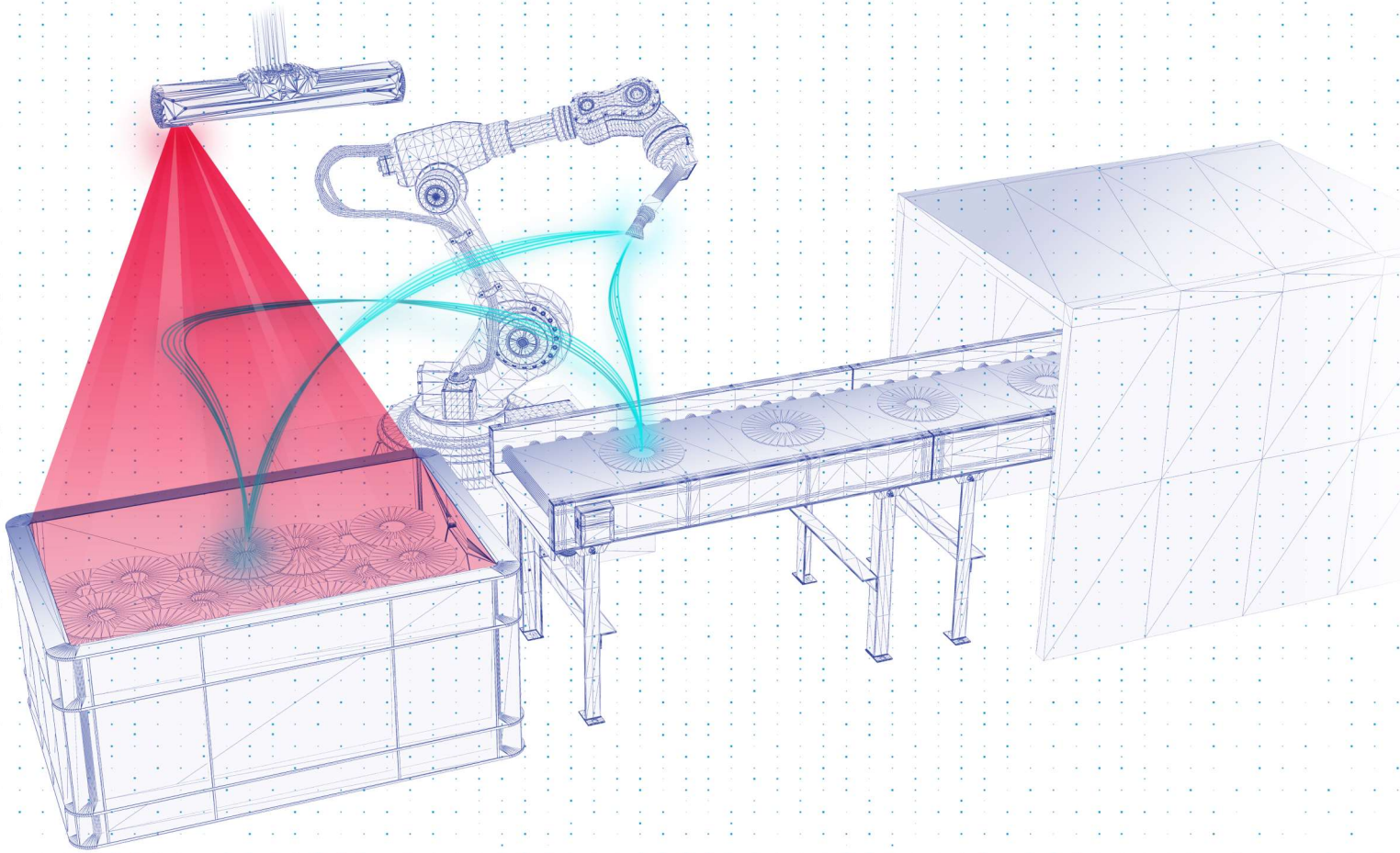




Robotic intelligence software

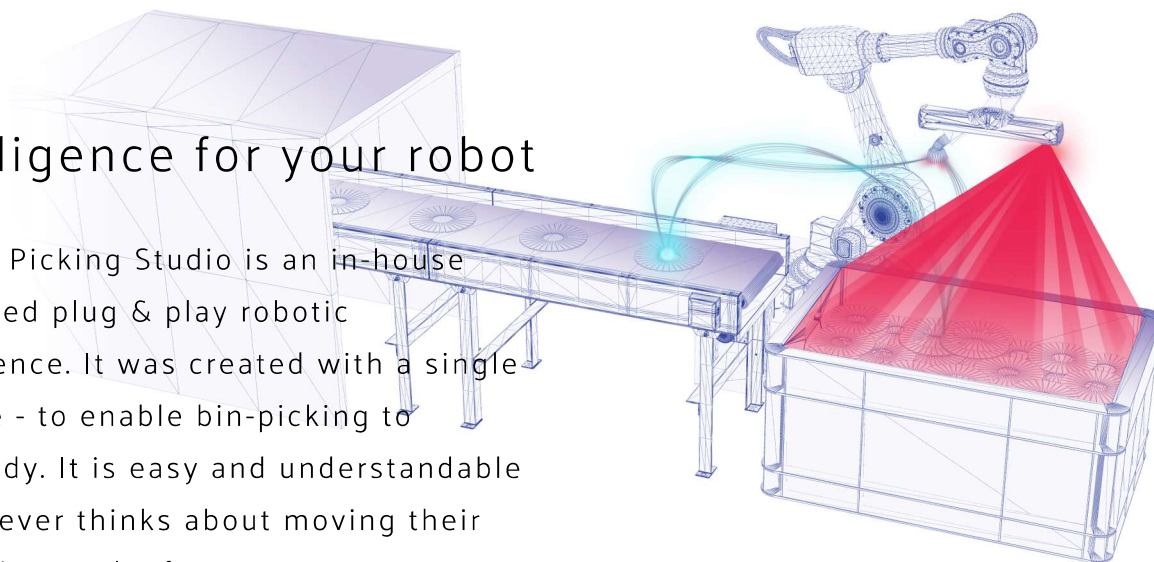
Bin Picking Studio

All-in-one 3D vision set for bin picking



Intelligence for your robot

The Bin Picking Studio is an in-house developed plug & play robotic intelligence. It was created with a single purpose - to enable bin-picking to everybody. It is easy and understandable for whoever thinks about moving their production to the future.



Why is Photoneo Bin Picking Studio different?



Effective and efficient

Reach cycle times ranging from 3 seconds and get your investment back exactly as planned.



Complete stack of technology under one roof

With Photoneo, you no longer need to search for providers of robotic intelligence, 3D vision, localization or path planning because everything is included in one solution from one vendor



Wide range of possibilities thanks to the 3D vision

With the Photoneo PhoXi 3D Scanner family, you can choose between 5 models with scanning volumes ranging from 161 - 4000 mm.



World-class support

We provide free of charge feasibility and consultancy to kick off the projects as smoothly as possible. Then we stand by you throughout the entire integration.

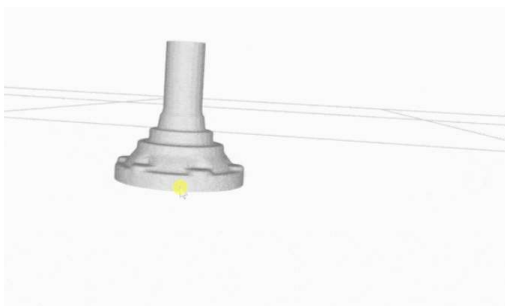


How does it work?



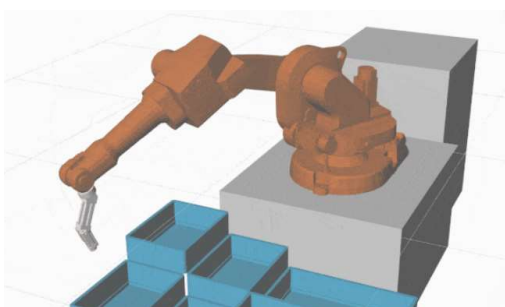
Upload the model of gripper

Drag & drop the CAD model of your gripper into the studio. It is used for tool point configuration in the virtual environment.



Setup the gripping points

The setup of bin picking begins with the selection of points where and how will the gripper grasp the object. Bin Picking Studio offers you full support also in this task. Thanks to the simple visual process you no longer need to involve heavy math.



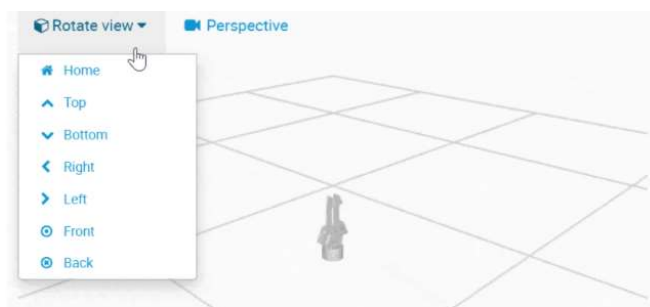
Setup your localization

Bin Picking Studio implements a built-in engine for setting up an object localization algorithm. The algorithm based on the CAD matching approach was developed by Photoneo to suit the use for bin-picking with a focus on speed and robustness.

1

Select a robot from the database

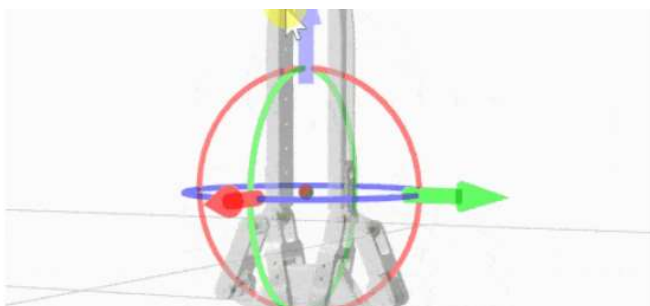
We are supporting more than 150 robot models from various brands. And if you have a robot that is not in our list - get in touch and we will gladly provide assistance.



2

Select & upload parts for picking

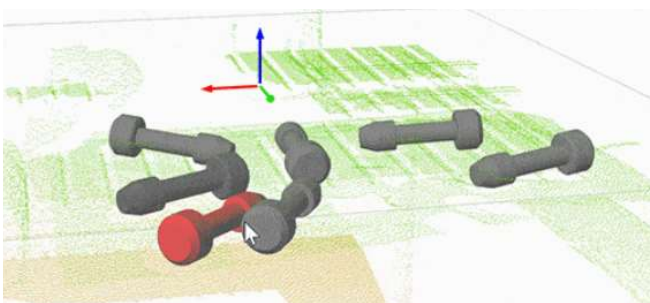
All you need to start planning your bin-picking gripping points is a CAD model of the product you want to pick. Upload it into the Bin Picking Studio and immediately start working with it in a virtual environment.



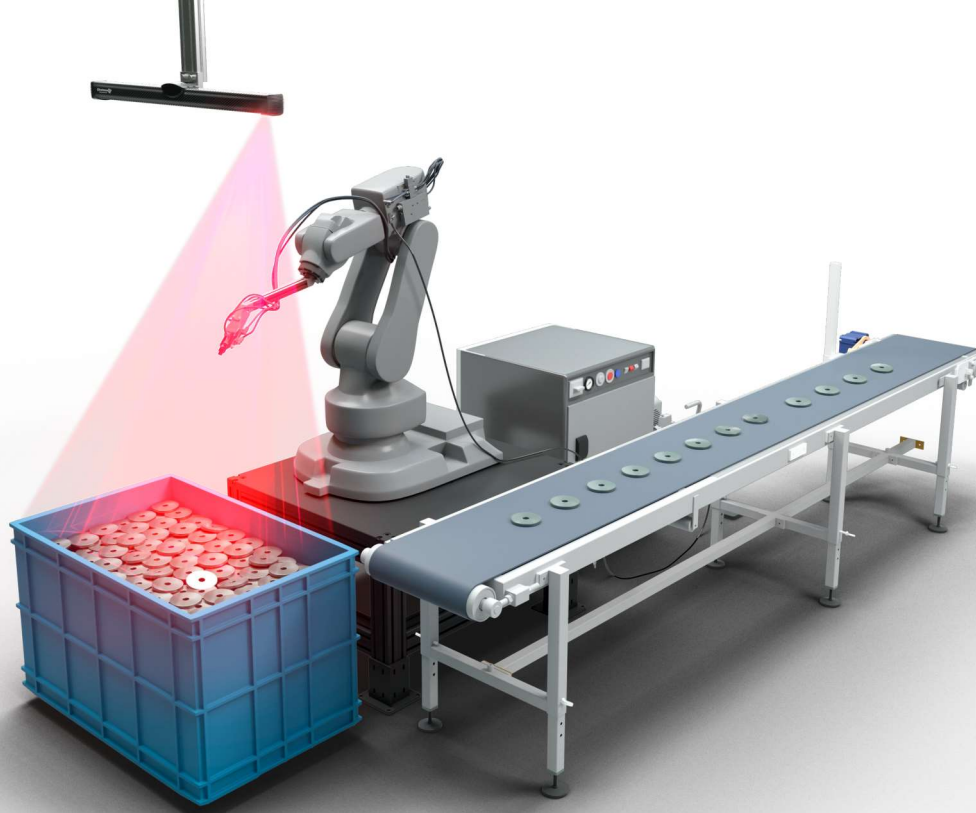
4

Build your own environment

In this step, we will let the Bin Picking Studio know where will the picking take place. It is done again in the easiest fashion possible - by loading a CAD model of **your picking cell or create it by yourself**. Immediately after the upload, the Studio offers you a 3D visualization available for work.



6



Bin Picking Studio highlights

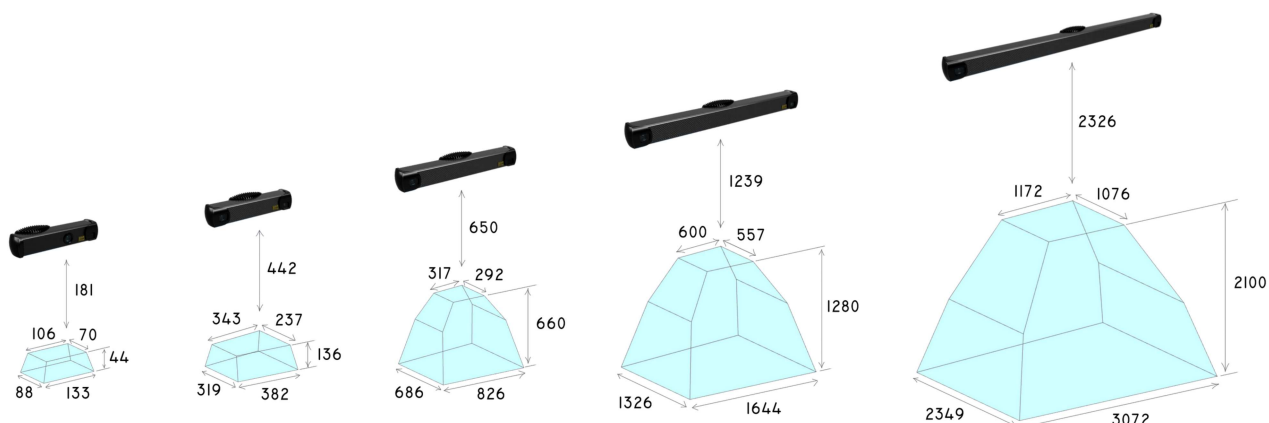
Feature	Description
Path planning	Secures a collision-free movement in complex environments thus protecting your robot
Number of vision systems	Attach up to four 3D scanners, allowing you to pick four different parts from four bins with one robot
Robot database	Bin Picking Studio offers a database of more than 150 robotic models for your projects and convenience
Supports flexible production	Unlimited storage capacity for any number of bin picking solutions stored in one system
Support and feasibility	Enjoy a free feasibility study of every part plus 16 free of charge support hours during integration
3D vision	Select from 5 sizes of best-in-class 3D vision PhoXi 3D Scanner with scanning range from 161 - 4000 mm
Solutions & vision systems	1 Bin Picking Studio license supports unlimited amount of solutions & connected scanners

Supported robotic brands



For more information please contact sales@photoneo.com

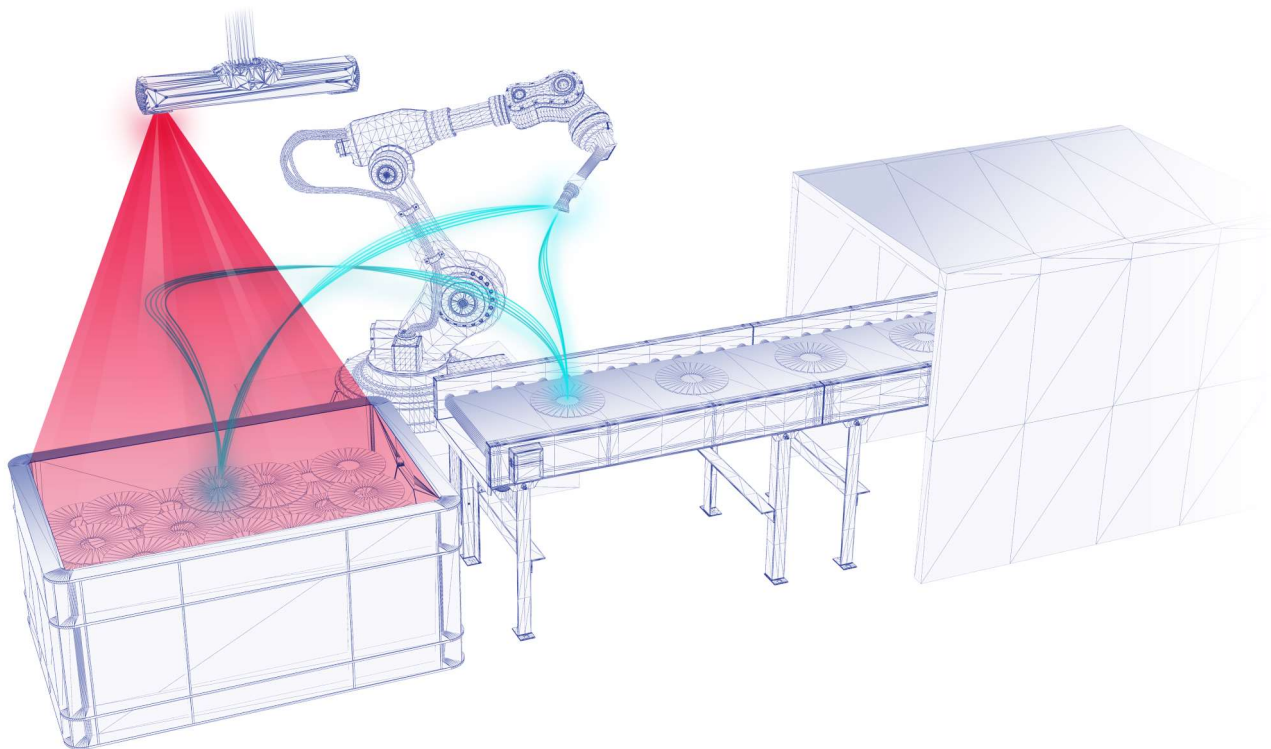
Technical parameters of PhoXi 3D Scanners



	XS	S	M	L	XL
Resolution (3D points)	Up to 3.2 millions of points				
Scanning range	161 - 205 mm	384 - 520 mm	458 - 1118 mm	870 - 2150 mm	1680 - 3780 mm
Optimal scanning distance	181 mm	442 mm	650 mm	1239 mm	2326 mm
Scanning area at sweet spot	118 x 78 mm	360 x 272 mm	590 x 404 mm	1082 x 772 mm	1954 x 1459 mm
Point to point distance	0.055 mm	0.174 mm	0.286 mm	0.524 mm	0.947 mm
Calibration accuracy (1 σ)	0.035 mm	0.050 mm	0.100 mm	0.200 mm	0.500 mm
Temporal noise (1 σ)	0.030 mm	0.050 mm	0.100 mm	0.190 mm	0.400 mm
Scanning time	250 - 2000 ms	250 - 2250 ms	250 - 2500 ms	250 - 2750 ms	250 - 3000 ms
Dimensions	77 x 68 x 296 mm	77 x 68 x 296 mm	77 x 68 x 416 mm	77 x 68 x 616 mm	77 x 68 x 941 mm
Baseline	85 mm	230 mm	350 mm	550 mm	850 mm
Weight	900 g	900 g	950 g	1100 g	1200 g
3D points throughput	16 millions of points/sec				
GPU	NVIDIA Pascal™ Architecture GPU with 256 CUDA cores				

Supported software





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