Zivid Two

human-like vision for pick and place robotics

See more. Do more.

zivid.com

Zivid Two

Industrial
3D color camera

Zivid Two gives you exceptional 3D image quality lightning fast in an ultra-compact form-factor.

You can design fast, reliable pick and place robots cells that are capable of handling a wide variety of challenging objects and scenes.

Detection

See with confidence.

High quality, native color 3D point clouds for better object recognition.

Picking and placing

Pick with confidence

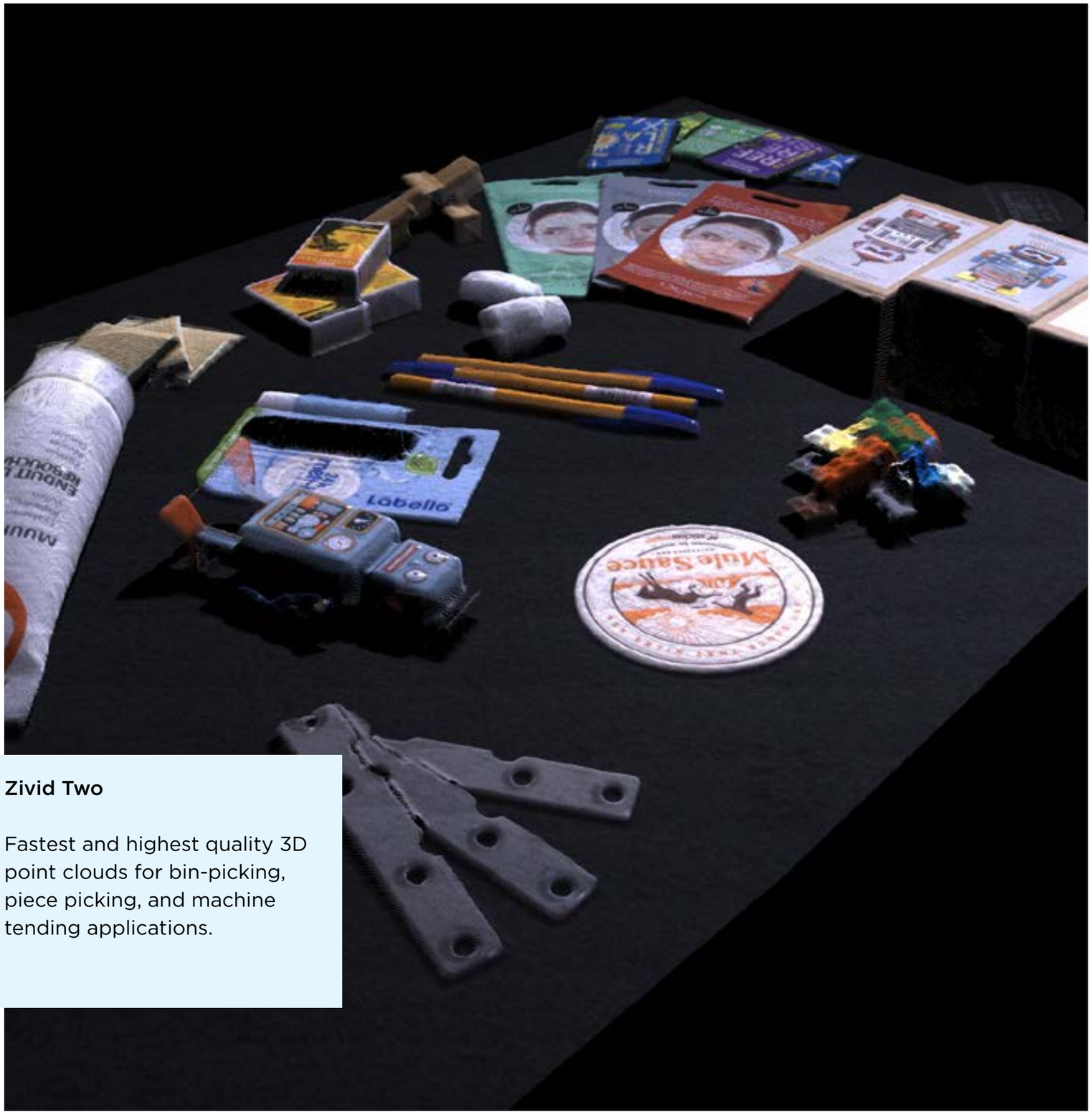
True to reality 3D point clouds for more accurate and reliable grasping and manipulation.

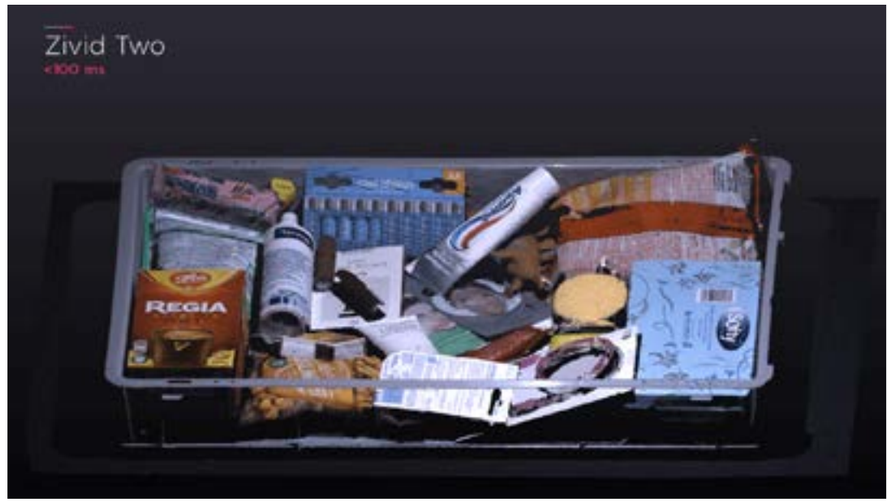
Efficiency

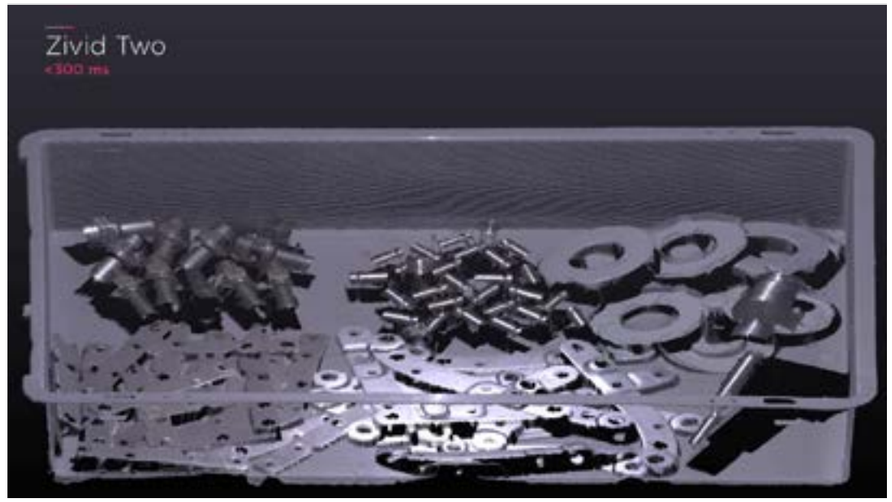
Work faster.

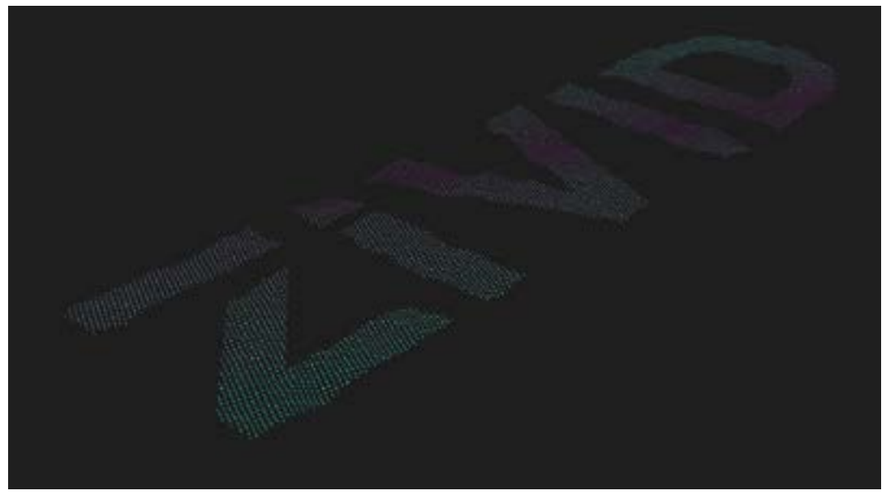
Improve cycle time with blazing fast 3D point cloud captures.

On-arm versatility & industrial grade.









Zivid Two

Fastest and highest quality 3D point clouds for bin-picking, piece picking, and machine tending applications.

See
with confidence

See tiny objects and the fine details.
High resolution and precision point clouds of even very small, densely packed or highly detailed objects. Distinguish features smaller than 5 mm.

2.3 Mpix HD resolution
60 um point precision
Minimal occlusion with 112 mm baseline

See reflective and shiny objects.
Take images of traditionally challenging parts such as sheet metal, machined and polished parts, glossy packaging, semi-transparent and plastic wrapped objects. Excellent suppression of artifacts from reflections, interreflections, specular highlights and high contrast transitions.

ART - Artifact Reduction Technology
3D HDR - High Dynamic Range

See a wide variety of objects.
The unique combination of native color and high dynamic range enables imaging of a broad range of objects. Plastic, ceramic, metal, cardboard, wood, colored, textured, light, dark and absorptive. Single or mixed SKU bin scenarios, densely stacked or randomly arranged.

3D RGB - Native colors output
White light source - Broad material coverage

Pick
with confidence

Accurate picks and fine manipulation

.

Point clouds with true to reality representation of object size, rotation, and absolute position. Enables demanding pick and place operations and gives flexibility in choice of gripper.

< 0.2% mean / < 0.1% standard deviation
Dimension trueness error

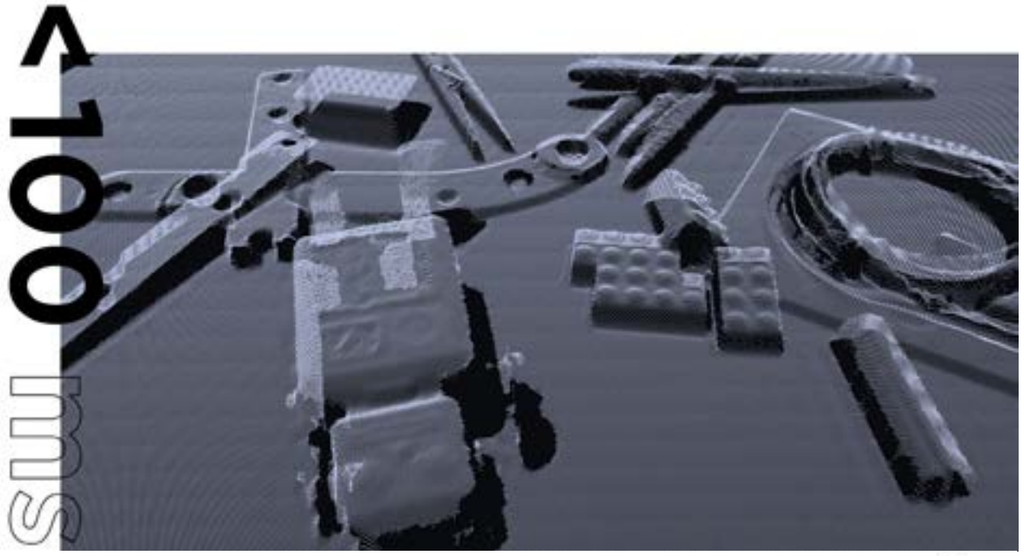
3D hand-eye calibration that is 10x more accurate

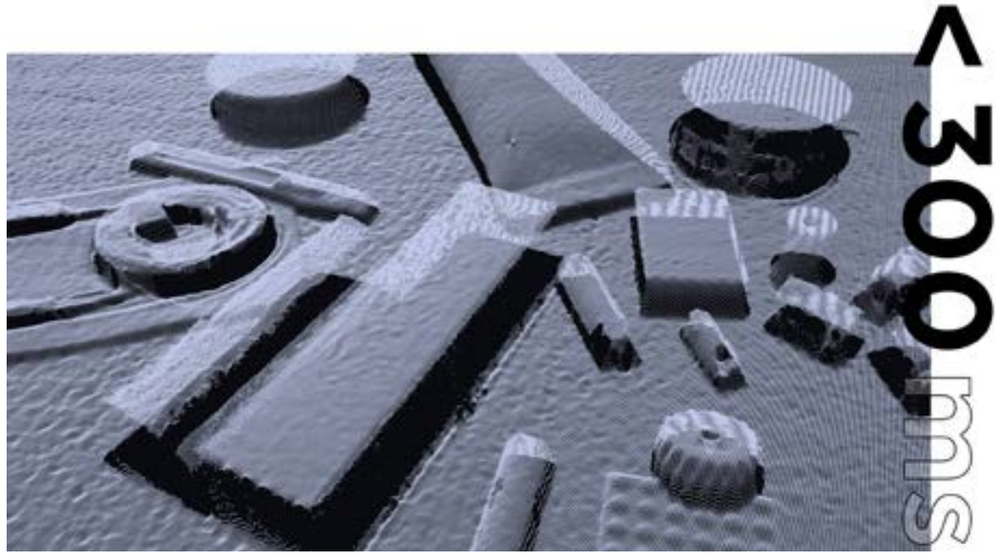
Less mispicks and crashes.

Minimal trueness drift and variation across the full operating temperature range and under mechanical stress from handling and use.

Floating thermal calibration
Mechanical and thermal stability

True to reality 3D point clouds for more accurate and reliable grasping and manipulation.





Work **faster**

<100 ms capture time.

Low to medium dynamic range scenes. Wide variety of objects in all shades, except the darkest black and absorptive.

Point cloud examples captured with Zivid Two 3D camera at < 100 ms.

<300 ms capture time.

High dynamic range scenes. Highly shiny and reflective, white and dark absorptive objects in the same scene.

Point cloud examples captured with Zivid Two 3D camera at < 300 ms.

<1s capture time.

Extreme dynamic range scenes or longer working distances. Highly specular, chrome plated and mirror like. Objects positioned with steep angles away from the camera and super absorptive absolute black objects.

Point cloud examples captured with Zivid Two 3D camera at < 1000 ms.

On-arm versatility

Unrestricted movement.

Compact, lightweight and fast 3D camera for on-arm mounting for even smaller collaborative robots. Minimum impact on maneuverability, usable payload and cycle time.

Palm sized
169 x 56 x 122 mm

Maximize robot maneuverability
880 grams

Minimize acquisition time
60 ms

Extended field of view.

Leverage on-arm camera to cover larger bins, pallets and flow racks. Use a single on-arm camera for multiple bins or pallets.

Multi-view imaging.

Capture images from multiple or different viewpoints to improve object recognition and reliably empty the bin.

Industrial
grade 3D vision

High performance 3D camera designed, manufactured and tested for demanding

Reliable operation.

Rugged design ensuring reliable operation in harsh industrial environments.

- *Lightweight magnesium housing*
- *Ruggedized all-glass optics*
- *15G shock & 5G random*
- *IP65 rating*
- *0° to 45°C operating temperature range*

Consistent performance.

Engineered and calibrated to deliver consistent high performance over the full operating temperature, camera settings and system configurations.

- *Floating calibration*
- *Active cooling*
- *10 GigE Data connection*

Random bin-picking

Random bin picking is typically at the input stage of a manufacturing process. Instead of traditional static fixtures or pre-filled stacking patterns, a robot is instead emptying a bin bulk-filled with parts for placing on, for example, a feeder, conveyor, or sorter for further processing in the plant. The choice of the vision system and, in particular, the 3D camera impacts the robot's ability to successfully detect, pick, and place all types of parts.

zivid.com/applications/bin-picking

Piece-picking robotics

Robotic piece picking is the process of automated order fulfillment, picking various individual items (SKUs) from an inventory bin and place them in an order container for shipping to customers. The choice of the vision system and, in particular, the 3D camera impacts the robot's ability to successfully detect, pick, and place all types of pieces.

zivid.com/applications/piece-picking

Zivid Two

industrial 3D camera.

See more.
Do more.

Zivid is a market-leading, pure play provider of industrial 3D machine vision cameras and vision software for pick and place robotics.

www.zivid.com