Zivid Two brings human-like vision to pick-and-place robotics.

Second-generation color 3D camera overcomes limitations in image quality, trueness, and speed for better object recognition, accurate parts manipulation and short cycle times in logistics and manufacturing.

OSLO, Norway, November 10, 2020 – Zivid, the pure-play 3D machine vision camera company, has announced its next-generation high-performance 3D color camera suitable for bin-picking, piece picking, and machine-tending applications. Combining advances in 3D precision, artifact suppression, trueness, and capture speed, the ultra-compact Zivid Two camera enables robot cells to handle small, shiny, reflective, and colored objects.

Zivid's CEO, Thomas Embla Bonnerud said, "Limitations like resolution, artifacts, and trueness errors in today's vision systems restrict their potential in pick-and-place applications. With the Zivid Two 3D camera, we've taken a giant leap forward in reducing these constraints. Using Zivid Two combined with deep learning, AI, and object detection algorithms, pick-and-place robots can recognize more objects, plan better grasps, and place parts more reliably. It all comes down to this - if your system can see more, it can do more."

By encompassing several vision inventions like patented 3D HDR imaging and the latest Artifact Reduction Technology, Zivid Two moves the boundaries for capturing challenging target scenes. With high-definition resolution and 60 µm precision at 700 mm, the 3D camera can capture a broad range of objects, including shiny, reflective, and absorptive products like plastic-wrapped materials and metal cylinders, as well as tiny and highly detailed parts. Native color makes it possible to separate colored and similarly shaped SKUs.

To reduce the number of missed picks and increase accuracy when manipulating objects, Zivid Two incorporates thermal- and mechanical stability enhancements plus floating calibration. These enhancements result in dimensional trueness error less than 0.2% and optimal system performance throughout the full operating range.

With a combination of fast 3D image acquisition and capture time, Zivid Two achieves HD color 3D captures of typical bin-picking and piece-picking scenes in less than 0.3 seconds. This is up to four times faster than comparable 3D scanners, and the true and high-quality point cloud output ensures high throughput and short robot cycle times.Zivid Two has a flexible working distance of 300mm to 1500mm, and 57 deg. horizontal by 35 deg. vertical FOV, to support a wide range on-arm and stationary-mounted robot-guided applications. The 3D color camera measures 169 mm x 56 mm x 122 mm and weighs only 880 grams, which minimize the impact on robot maneuverability and payload in on-arm arrangements.

Robert Bevec, Ph.D. and Head of Robotics at Kolektor Digital, said; "Working with Zivid's 3D cameras is a smooth developer experience, so integrating Zivid Two into KoCo – an adaptive robotic worker - was seamless. The point cloud data trueness makes it possible for the robot to perform reliable and highly accurate machine tending operations. The small and lightweight Zivid Two camera helped us advance our platform's capabilities by offering on-arm camera operations with smaller payload robots and applications with tight and limited access."

Designed to tolerate the most demanding industrial environments, Zivid Two 3D color camera comes in a rugged magnesium housing with an IP65 rating. Dust and water-resistant, it is rated for operation over the temperature range 0□C to +45□C and is built to withstand a 15 G impact. An integral 10 GigE data interface provides connectivity.

Availability

Customers can purchase Zivid Two ES developer kits today from zivid.com. Production availability is scheduled for Q1 2021.

About Zivid

Zivid is a market-leading, pure-play provider of 3D color cameras and vision software used in industrial and collaborative robot cell development.
Its Zivid One+ and Zivid Two products are regarded as the world's most accurate real-time 3D color cameras and bring human-like vision to the smart factories and warehouses of Industry 4.0.

With over two decades of in-house R&D and in-depth expertise in optical sensors, 3D machine vision hardware, and software, Zivid enables customers to boost detection, picking, and placing of parts in a range of applications, including random bin picking, pick-and-place, assembly, packaging, and machine tending.

The Zivid One 3D color camera received numerous awards for its technical features, point cloud quality, and design implementation. Awards include "Top Innovation Award" by inVISION Magazine, "Gold Innovators Award" by Vision Systems Design, Red Dot's "Product Design" award, and the Research Council of Norway's prestigious "Innovation Award". To discover how Zivid is shaping the future of 3D machine vision, visit www.zivid.com.