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ROBOTICS SPECIAL

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20 Most Promising Robotics Solution Providers - 2019

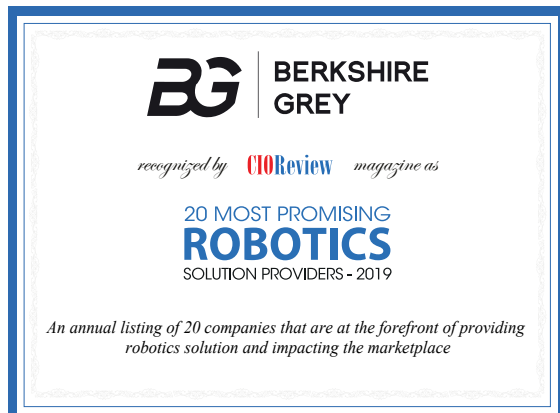
From driverless cars to delivery drones, advancements in the field of robotics are bridging the gap between science fiction and reality. Equipped with sensors and easy-to-use interfaces, robots, today, can perform repetitive or dangerous tasks that were too hard to automate a few years ago. And owing to the ease of automation, the field of robotics is slowly penetrating into several industries, including healthcare, manufacturing, military, and many more.

Alongside, with the rise of industrial internet of things (IIoT), robotics solutions providers are developing robots that incorporate smart sensors to collect previously inaccessible data to manufacturers. In addition, as robotics automation gains widespread adoption, industry leaders are collaborating to produce standards and open documentation—open architecture robotics—that make

robotic integration easier, improving the compatibility of the manufactured product. And with that, the technology companies are bolstering the ability of robots to blur the lines between the physical and virtual worlds, and ensuring the development of collaborative robots that can work safely alongside humans to execute operational tasks at peak efficiency and speed.

To help businesses in selecting promising robotics solutions, a distinguished panel of prominent marketing specialists and analysts, along with CIOReview's editorial board has assessed and shortlisted the companies offering pioneering technology solutions in the robotics industry. This listing gives a comprehensive understanding of solutions that can be implemented to automate and optimize your business process.

We present to you CIOReview's "20 Most Promising Robotics Solution Providers – 2019."



Company:
Berkshire Grey

Description:
Berkshire Grey provides AI-based robotic solutions to automate store replenishment, parcel sorting, eCommerce, and omnichannel fulfillment

Key Person:
Pete Blair
VP of Marketing

Website:
berkshiregrey.com

Berkshire Grey

Advanced Robotics for Omnichannel Fulfillment

Modern consumers increasingly demand the ability to buy anything, anytime from anywhere and get those things quickly. This challenges every retail supply chain. Despite this growing demand, retailers continue to manage their backend operations using legacy approaches that strain product delivery and availability. Manually-driven and traditional automation supported order fulfillment is too slow and inefficient to keep pace with today’s consumer expectations. To get the right product to the right place at the right time, retailers need advanced robotics that can overhaul their distribution operations.

Whether retail distribution centers employ conveyor systems, automated storage and retrieval systems (ASRS), or manual order picking processes, BG’s robotic picking solutions fit in to pick items with high efficiency. There are several solutions in BG’s portfolio. Some are conveyor integrated. Others make use of the company’s flexible mobile robots to convey and sequence both inventory and orders. The mobile robotic solution handles various totes simultaneously, while its integration with the customers’ warehouse management systems (WMS) allows easy prioritization of orders, allowing faster order completion. Besides completing orders for store replenishment and e-commerce, the solution is well suited to support order-online-pickup-in-store needs as well.

How do they work? The picking robots rely on software that uses computer vision, sensors, and machine learning to see the items in front of them and make decisions about the best way to handle them. As the systems work, they learn and store that knowledge in the cloud. When presented with unknown items or changes to the environment, BG’s robots determine the best way to react in real-time. “We understand the real-world challenges of working with product data. We expect item data to be incomplete, inaccurate, or missing. We designed our systems to quickly learn about new products as they see them and adapt to the situation,” says Pete. “Through actual use, our systems constantly learn and get better at handling products, both known and unknown, which makes them especially suited to perform in cluttered and dynamic environments,” adds Blair.

A Berkshire Grey solution is integrated with a customer’s conveyor-based distribution operations. The customer’s automated storage and retrieval system (ASRS) delivers totes of items to BG’s robotic picking solution, and each robot picks 30 orders simultaneously. As orders complete, they automatically move from the BG solution to shipping areas in another part of the facility while new order containers are continuously and automatically added to the pick line. Multiple systems deployed in parallel complete hundreds of orders in a short time. Without any human intervention, orders for store replenishment and e-commerce are picked, sorted, and completed with speed and accuracy.

The company envisions the transition of warehouse operations from ‘person-to-goods’ and ‘goods-to-person’ workflows to scalable, reliable ‘goods-to-robot’ operations. To that end, BG provides continual support to its existing customers and plans to introduce more inventive solutions that make use of its core picking technology in the future. **CR**



Our intelligent robotic solutions pick individual items to automate omnichannel fulfillment in ways never before performed by machines in commercial settings

Based outside Boston, Berkshire Grey (BG) offers diverse, AI-enabled robotic technologies that transform omnichannel fulfillment operations. “Supported by AI and machine learning systems, BG’s robotic picking solutions pick hundreds of thousands of different products to assemble eCommerce and store replenishment orders,” says Pete Blair, VP of Marketing at BG. The solutions combine an array of sensors, computer vision, and novel gripping technologies to autonomously pick an incredible variety of items from apparel to toys to electronics and more. Additionally, these robotic solutions integrate with pre-existing distribution infrastructure and workflows, making them an easy and viable upgrade for most warehouses.