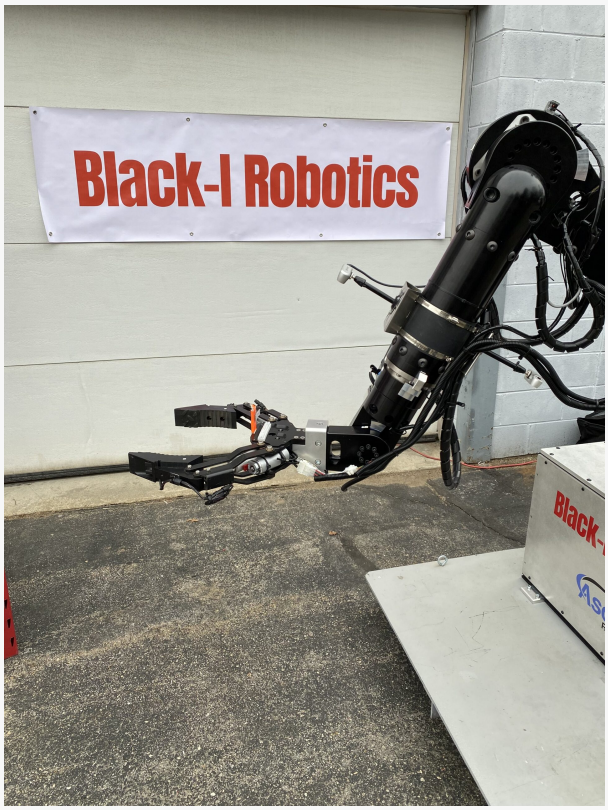
Two Boston-area Robotics Heavyweights Announce Partnership Culminating in Powerful Autonomous Mobile Heavy Lift Arm

Robotic Arm Designed for Logistics, Manufacturing Industries to Help Facility Managers Combat Scarcity of Workers



Black- Robotics' Fullscope Mobile Heavy Lift Arm, which can lift objects of 100 pounds and more, is equipped with an AI-based integrated suite of sensors, cameras and other electronics, enabling it to avoid humans, machines and other objects.

TYNGSBORO, MASSACHUSETTS, USA, March 31, 2022 /EINPresswire.com/ -- Two leading Boston-area robotics companies have announced a technology partnership leading to the development of a breakthrough autonomous mobile heavy lift arm that is more powerful, intelligent, and cost-effective than any arm on the market today. The arm generated considerable interest at the materials handling show, Modex, which concludes today in Atlanta.

The companies are Black-I Robotics, Tyngsboro, MA, led by CEO Brian Hart, and Ascend Robotics, Cambridge, MA, led by CEO David Askey.

The revolutionary heavy lift arm grew out of projects Black-I implemented for the Department of Defense and other Agencies. “Government accounts needed mobile heavy lift arms first to deal with improvised explosive devices,” Hart said, ”Then the needs shifted to work on 3D printing of concrete buildings, again from a mobile base. At each step, the mobile arms Black-I developed had to have heavy lift, mobility around tight spaces and increasing levels of intelligence. A couple of years ago we decided to apply our knowhow toward the exploding commercial sector.”
That’s when Hart and Askey, both with years of experience developing products for the supply chain, decided to team up.

Introducing Mobile Manipulation for Logistics

“Supply chain operators understand the benefits and rapid ROI of autonomous mobile robots, and are now anxiously seeking mobile manipulation capabilities,” Askey says. “Even though AMRs can transport goods across a warehouse floor, people still need to do the heavy lifting, loading and unloading AMRs and pallets. To achieve the goal of mobile manipulation, Brian and I have combined Ascend’s software for vision-guided picking and coordinated system control with Black-I’s expertise designing and building rugged heavy-payload robots.

The Black-I arm can be customized to lift objects of 100 pounds or more and place them precisely where designated.

"Autonomous pick and place is difficult, especially on mobile systems operating in dynamic logistics and manufacturing facilities," Askey emphasizes. "We've designed the system specifically for facilities managers, embedding perception and smarts in the robots to ease equipment management for them. The robot systems also readily integrate with existing WMS or MES systems. We supply the system either turnkey, or integrated with preferred AMRs and autonomous lift vehicles."

> “Facility Managers, AMR manufactures, systems integrators came to see us at Modex understanding that our robot readily integrates with existing WMS or MES systems and systems on the drawing board.”
>
> *Brian Hart, Black-I Robotics CEO*

“David and I also teamed with Solomon 3-D for artificial vision used for object recognition and RELiON Battery for intelligent battery sourcing to develop a solution for rugged heavy-lift manipulation that greatly impressed people at Modex,” Hart says. “We had Facility Managers responsible for warehouses and plant floors come by our booth very excited seeing what we can offer them, a complete robotic solution to their needs. The arm features an AI-based integrated package featuring sensors, multiple cameras outputting 2D and 3D live data streams that handle high bandwidth data to keep the data streams in sync.

“These integrated systems recognize and avoid objects such as humans and machinery as the arm moves, and do it reliably over and over and over.

And, critically, enable operations staff to easily configure and manage the arm as layout and item packaging changes within, for example, a warehouse, speeding deployment and significantly reducing total cost of operation."

A Safer, Faster, More Economical Way to Work
There are literally half a million jobs available in just two sectors of the logistics industry alone, warehousing and transportation. Companies simply can't find the workers they need, workers lifting, pushing, pulling packages, boxes, cartons and other heavy objects. Workers often are injured, meaning they are unavailable, may sue, may cause expensive workers comp claims. Black-I Robotics' Fullscope Mobile Heavy Lift Arm goes a very long way to alleviating all of these issues.

Another important economic advantage of Blacki's Arm is that it protects a company's existing and future investments in a wide range of available AMRs as well as autonomous forklifts and pallet jacks to come. In fact, systems integrators and AMR manufacturers are sure to take advantage of the special capabilities of the arm to develop a range of advanced and special capabilities to change the face of the warehouse, distribution center, and manufacturing plant.

Black-I Robotics has been designing and developing robots and robotic devices since 2008. It has a wide range of customers and partners, including the Department of Defense, the Department of Homeland Security, the Army Corps of Engineers, public sector companies such as Raytheon, and a dozen universities, including MIT, Princeton and Carnegie Mellon. Ascend Robotics, founded in 2016, serves Global 500 manufacturers requiring precise, secure parts-handling, enabling their customers to amplify the mission of their workforce.

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