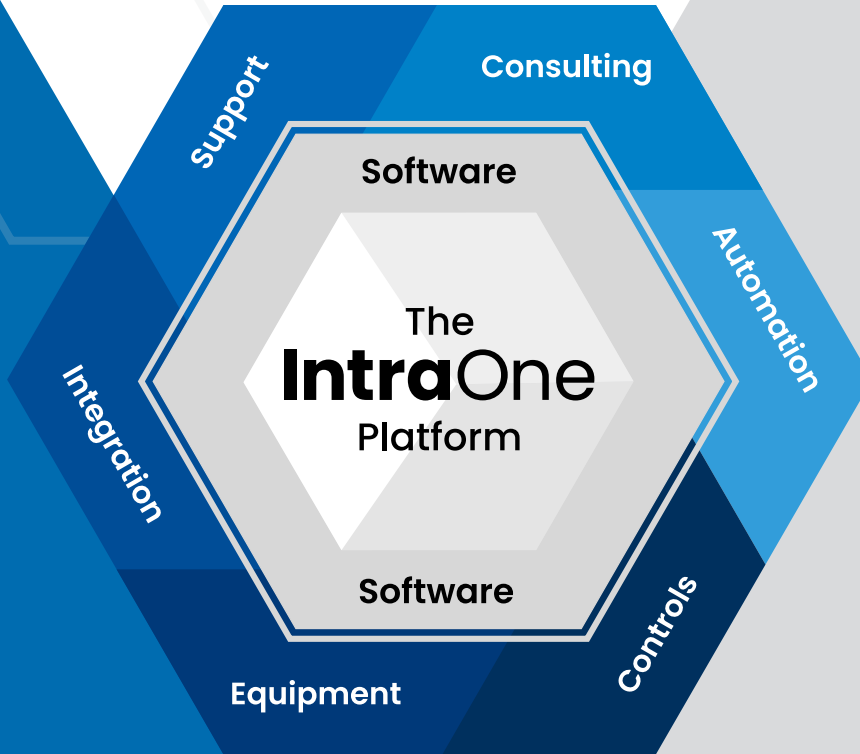
A high-angle photograph of a modern warehouse interior. The space is filled with tall, multi-tiered metal shelving units, each filled with blue plastic bins. A complex network of conveyor belts and automated guided vehicles (AGVs) is visible, moving materials through the facility. The floor is a light-colored concrete, and the overall atmosphere is one of a highly organized and automated industrial environment.

# ROBOTIC SOLUTIONS



RESEARCH & DEVELOPMENT



**Unify advanced  
technology.**

**IntraOne**<sup>TM</sup>  
Enterprise Logistics Platform

Connect your strategy to technology,  
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Partner, One Platform.**







# Research & Development

At Hy-Tek Intralogistics, we understand the industry's challenges with labor retention and the desire to improve working conditions for team members. That's why we work with leading robotic vendors that challenge the status quo to deliver innovative solutions to our customers.

Our Research & Development team continuously explores technologies new to the marketplace and assesses value and risks to both our customers and stakeholders.

We establish business partnerships with companies that complement our product offerings to deliver competitive advantages in the solutioning of material handling processes.

Our 20,000 square foot Innovation Lab in Kentucky hosts several of these technologies offering customers a unique opportunity to see these integrated systems in operation. Not only is this space an incredible training space, but it also provides the capability to conduct application testing with your unique products. This brochure highlights some of our established robotics partnerships.

For more information about product offerings beyond the technologies highlighted here, inquire with a Hy-Tek team member.



**20,000 SQFT  
Innovation Lab**



# Exotec Skypod System

# 450+

Skypod Robots  
Installed Nationwide



## SKYPOD ROBOTS

Skypods travel up to 4 m/s and move three dimensionally. Skypods can operate in both chilled and ambient temperatures.



## SCALABLE STORAGE

When utilized at the maximum height of 39 feet, the racks provide up to 5X more storage than non-automated storage solutions.



## ERGONOMIC WORKSTATIONS

Stations improve working conditions for operators by reducing their need to walk several miles per day.



## NO SINGLE POINT OF FAILURE

System will dynamically reassign robot fleet to seamlessly complete order fulfillment.



## SKYPICKER

The Skypicker is a robotic picking arm that picks goods carried by the Skypod robots and places them into fulfillment containers.



## SKU ACCESSIBILITY

The Exotec Skypod System provides easy access to all items, retrieving an item within 2 minutes.







### **CASE STUDY: ARIAT**

Ariat is a footwear, apparel, and accessories brand, distributing products to more than 6,500 retail locations worldwide.

### **BACKGROUND**

Like many businesses, the COVID-19 pandemic exposed the lack of flexibility in its fulfillment operation. The Pandemic drastically changed the company's order profiles and thus its fulfillment technology needs.

Originally set up to process retail store fulfillment with batch picking into totes, Ariat needed a more dynamic order fulfillment system that satisfied its omni-channel distribution needs.

### **SOLUTION & RESULTS**

Hy-Tek implemented the Exotec Skypod System to bring inventory totes to workstations.

Retail batches consisting of 20+ units per batch as well as eCommerce order consisting of 2 to 3 units per order can be fulfilled at any of the workstations.



# Geek+

The P Series AMR picking robots are used in a goods-to-person application where the robots move the inventory shelves and pallets to the picking station.



## High Box-Picking Efficiency

Up to 300 boxes per hour per pick station

	Maximum Lifting Load	Maximum Full-Load Speed	Dimensions (LxWxH)
<b>P500</b>	600 kg	1.6 m/s	950 x 702 x 275 mm
<b>P800</b>	1000 kg	1.6 m/s	1090 x 830 x 275 mm
<b>P1200</b>	1200 kg	1.2 m/s	1325 x 1020 x 275 mm

P Series is Geek+'s Shelf-Level Goods-to-Person solution that consists of P500, P800, and P1200 configurations, each with different specifications.

These vehicles mainly use QR codes to navigate in a grid like environment.







# HAI

**Autonomous Case-handling Robot (ACR)** systems are highly efficient Goods-to-Person solutions designed for storage and retrieval of totes and cartons for order fulfillment processes.

## HaiPick A42

- » Multi-layer ACR
- » Intelligent picking, storage, and handling multiple cases up to a height of 17.1 feet high

## HaiPick A42T

- » Telescopic ACR
- » Pick and store plastic totes and carton boxes up to a height of 32.8 feet

## HaiPick A3

- » Fork-lifting picking technology
- » Picks and handles multi-form and multi-size goods up to a height of 18 feet

## HaiStation

- » The HaiStation is comprised of HaiPort workstation, conveyor, put wall, buffer wall, workstation, robotic arm, etc.
- » Enables robots to drop off items for multiple orders at a time station so that it can go onto its next picking tasks.



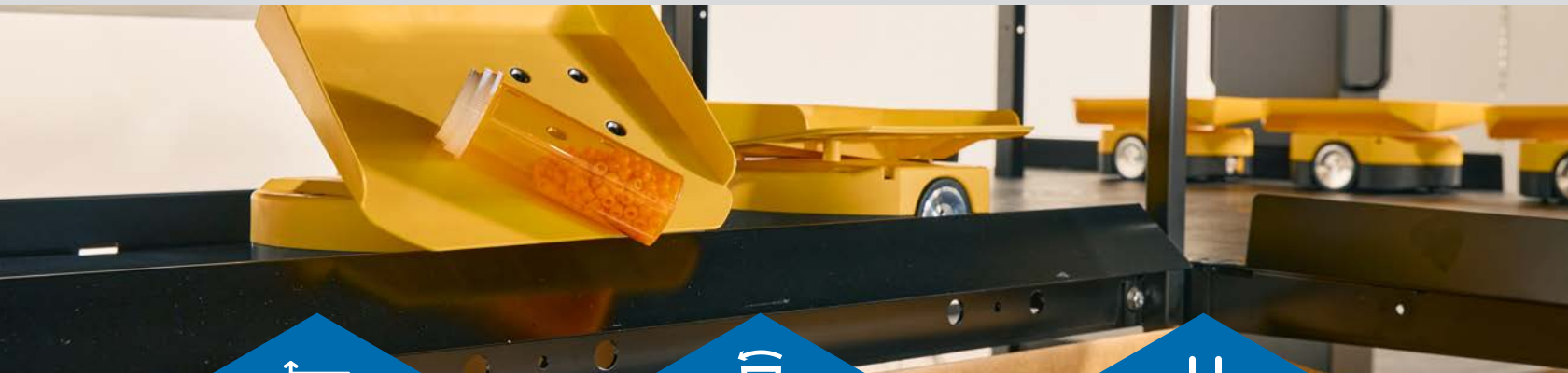
## Multi-Case "Backpacking"

Each robot can store multiple cases on its backside

# Tompkins Robotics

Tompkins Robotics' tSort product line utilizes autonomous robots running on multi-level shelves to route items from an induction station to a divert location. The robots perform similar functions as tilt tray or cross-belt sorters but without a fixed track.

	<b>tSort</b> Tray & Crossbelt			<b>tSort+</b> Tray & Crossbelt			<b>tSort<sup>mini</sup></b> Tray
<b>Maximum Speed</b>	2.5 m/s			2.0 m/s			2.5 m/s
<b>Sort Mechanism</b>	Tray	XL Tray	X-Belt	Tray	XL Tray	X-Belt	Tray
<b>Maximum Product Size</b>	15"x13"	26"x18"	19"x14"	19"x16"	30"x19"	39"x19"	10"x7"
<b>Maximum Weight</b>	11 lbs	8 lbs	33 lbs	40 lbs	30 lbs	66 lbs	5 lbs
<b>Sort Types / Control</b>	Single, split, dual tilt trays, or single belt			Single, dual tilt trays, and belts			Single tilt trays



## SCALABLE

A system can be relocated easily without permits, electrical, or sprinkler constraints.



## FLEXIBLE

Flexible for any flow, process, SKU set, volume, and any changes that may arise.



## SPACE-SAVING

The system typically takes up less than 25% of traditional sortation equipment space.





# Berkshire Grey

## Robotic Put Wall

- » Automated eCommerce order consolidation or returns sorting.
- » Accommodate items 9.9" tall.
- » Manual or robotic induction can accommodate larger items than any other provider.

## Robotic Pick & Place

- » Pick and place individual items from homogeneous, divided, and mixed totes.
- » High flow vacuum gripper technology allows sorting of porous objects (cloth) weighing up to 5 kg.

## Robotic Induction

- » Induct items from totes into traditional unit sorters using automated robotic stations.

## Robotic Pick & Sort

- » Fulfill orders by robotically picking and sorting items, eaches, inner packs, or less-than-case quantities from totes.
- » Sort directly into designated order containers, order cubbies, or bags for small and large profile orders.



# MiR

 Maximum Speed	 Run Time	 Payload	 Dimensions
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<b>MiR100</b>	1.5 m/s	10 hours	100kg (220 lbs)	890 x 580 mm
<b>MiR250</b>	2.0 m/s	13 hours	250kg (551 lbs)	800 x 580 mm
<b>MiR600</b>	2.0 m/s	10.45 hours	600kg (1,322 lbs)	890 x 580 mm
<b>MiR1350</b>	1.2 m/s	9.5 hours	1350kg (2,976 lbs)	1350 x 910 mm



## PROGRAMMABLE

The robots' missions can be easily adapted using a smartphone, tablet, or computer connected to a network.



## TOP MODULES

Deploy customized top modules such as bins, racks, lifts, or conveyors.



## NAVIGATION

MiR safely and efficiently maneuvers around people and obstacles autonomously.







# TGW



## ASRS

### Mustang

- » Automatic, highly dynamic mini-load systems
- » Heights range from 13 to 82 feet
- » Payload of up to 220 lbs

### Stingray

- » Shuttle system with multi-deep storage
- » Powerful system for totes, cartons, and hanging goods
- » Up to 98 feet high
- » Can be used in extreme temperatures as low as -22 degrees Fahrenheit



**High  
Output**



**Space  
Saving**



**Energy  
Efficient**



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