Zebra
Robotics Automation™

Autonomous Mobile Robots Portfolio

Automate material movement and increase picking productivity

ZEBRA

Contents

Cloud Robotics Platform

Autonomous Mobile Robots

Optimization Solutions

Note: Product appearance is subject to change

Deploy Automation in Hours

The Zebra Cloud Robotics Platform is the only solution that deploys safe, reliable and versatile autonomous mobile robots (AMRs) in manufacturing, warehouse and distribution environments within hours. Safely transport mixed payloads, enhance existing manual cart-based workflows, automate asset tracking with RFID technology, and more. Easily integrate controls and data from other systems and devices to create fully optimized, integrated facilities.

**C E** — Zebra AMRs carry a CE mark and meet regulatory requirements for product safety.

UK CA — Zebra AMRs are compliant with applicable UKCA requirements.

ANSI/RIA R15.08 — Zebra AMRs conform with R15.08 safety standards published by the RIA (Robotics Industry Association)

WARNING: This product uses components which emit invisible laser radiation. Incorrect use or observing the safety laser scanner through optical instruments (such as magnifying glasses, lenses, telescopes) may be hazardous for the eyes.

ZEBRA TECHNOLOGIES
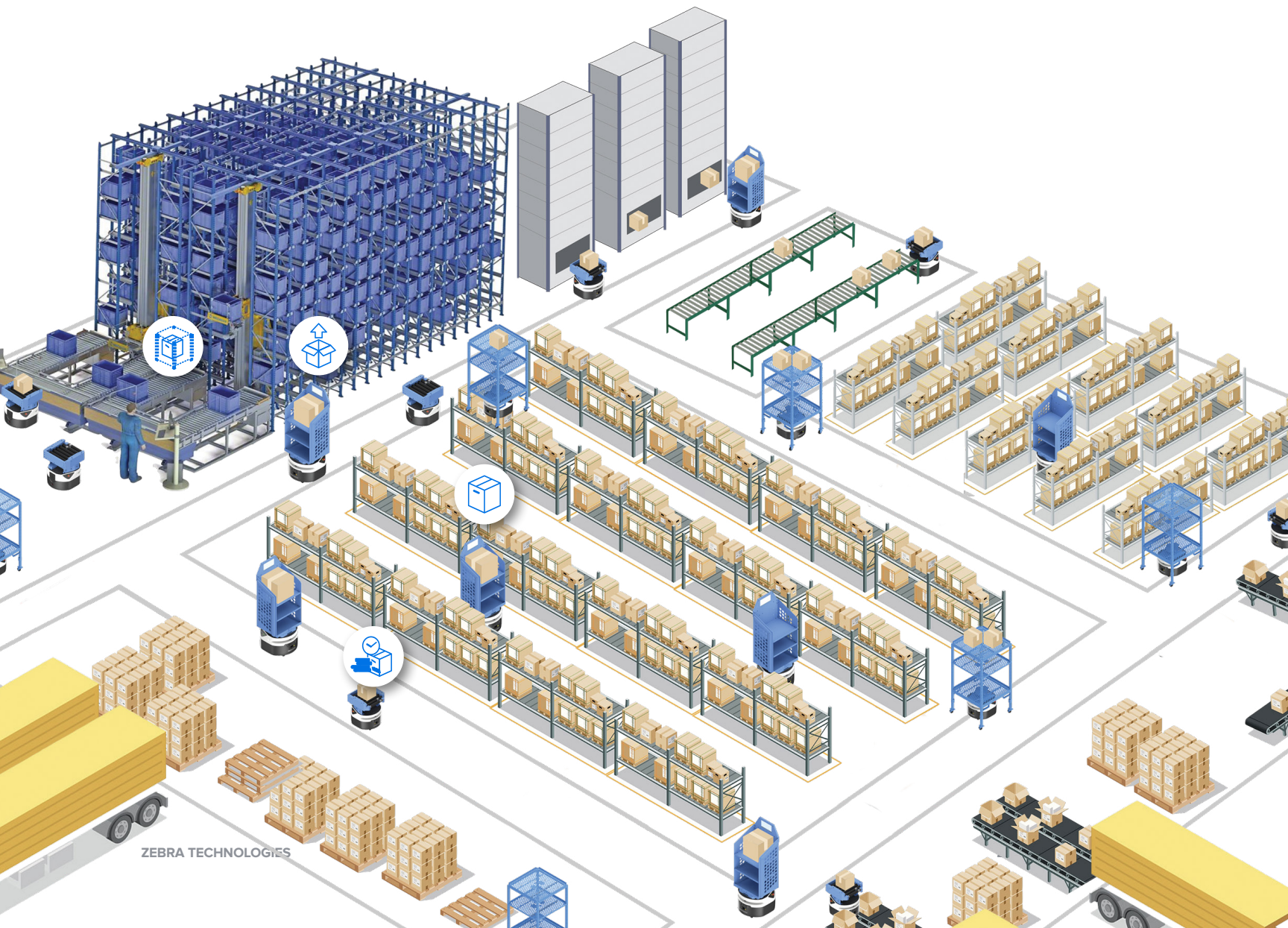
Zebra Cloud Robotics Platform

Zebra Symmetry™ integrates a comprehensive suite of software and services with the industry's broadest range of AMRs to deliver a powerful combination of on-demand warehouse automation, next-generation data collection, and unified controls and data across your entire intralogistics ecosystem.

Zebra Autonomous Mobile Robots (AMRs)

Zebra has the broadest range of AMRs to find, track and move just about anything. With on-demand automation, Zebra robots can be deployed into almost any facility in just hours, with no additional warehouse or IT infrastructure changes.

Symmetry

Symmetry is the foundational platform for deploying and fully integrating a broad range of automated workflows into warehouse operations. Symmetry support is included to provide 24/7 global coverage.

Fetch100 Flex Series
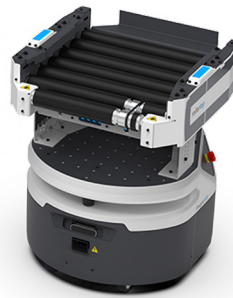Optimize fulfillment operations with intelligent, flexible automation

Fetch100 Connect
Automatically pick up and drop off carts up to 125 lbs. (57 kg)

Fetch100 OEM Base
Build your own customized automated solution on a proven platform

Fetch100 Roller
Integrate with current conveyor infrastructure
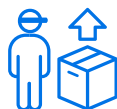
Fetch100 Shelf
Transport packages, totes and bins up to 172 lbs. (78 kg)

NOTE: PRODUCT APPEARANCE IS SUBJECT TO CHANGE

Solutions for Distribution, Fulfillment and Manufacturing

JIT and Line Replenishment

Receiving and Putaway

ASRS/VLM Induction and Delivery

Staging and Consolidation

Cross-Docking and Long Haul

Raw Material and WIP Movements

Returns Disposition

Packaging and Material Recycling

Cycle Counting and Physical Inventory

Increasing Manufacturing Productivity with AMRs

The Manufacturing Industry Is Entering a Time of Sea Change

Chronic labor shortages have plagued the manufacturing industry for years with no real end in sight. Global events exacerbated this problem not only in the short term by reducing the availability of the existing workforce, but also in the long term as manufacturers need to build more resilience and flexibility into their operations by reshoring their manufacturing operations and their corresponding supply chain.

Automation, and specifically AMRs, can assist in the implementation of lean manufacturing, especially by helping remove waste from manufacturing processes. While the introduction of AMRs in isolation can assist with lean manufacturing, the true value comes from introducing AMRs as part of Smart Factory and Industry 4.0 initiatives where sensors, machines, AMRs and manufacturing systems will be connected and can interact with one another using standard Internet-based protocols. This enables production processes to be optimized and leverage fully integrated AMRs, helping to create flow between processes, remove non-value-added activities, and do this through pull-based integration with manufacturing systems. As a result, today's insular manufacturing cells will be replaced by fully automated, integrated production lines, enabling manufacturers to produce higher quality products at reduced costs.

Uncompromising Safety

An AMR Solution Provider That Conforms to CE, ANSI/RIA R15.08, and UKCA

After over four years of hard work and input from hundreds of industry experts, the Robotics Industry Association (RIA) has published the new American National Standard for safety requirements for industrial mobile robots, R15.08, an important step toward common guidelines in the growing sector of mobile robotics.

To ensure a facility is using the safest equipment, you should choose AMRs that meet all aspects of the new R15.08 safety standard, meaning that all hardware (bases and modular tops) and software comply. **While many AMR manufacturers today comply with the safety standard for the base robot, most have yet to conform the entire system, ensuring modular tops meet the standard as well. Both need to conform to the standard to truly address safety with the facility and allow full collaboration with humans.**

Zebra Robotics Automation has worked diligently to ensure our entire commercial AMR product line not only conforms with the new R15.08 standard, but with all the requirements for CE marking in accordance with the EU Machinery Directive, 2006/42/EC_EU_Machinery_Directive_2006 as well, so that you can confidently deploy on-demand automation knowing your workforce and facility will be safe and in compliance with the latest regulations.

Fetch100 Flex Series

Fulfillment Will Never Be the Same

Key Benefits

- Adjustable shelves accommodate a variety of totes, bins and boxes
- Dynamic LED lighting improves pick accuracy with put-to-light guidance
- Can be loaded and unloaded from either side
- Supports item, batch, case and pallet picking
- Integrates with existing WES and WMS installations
- Highly configurable picker interface

| Specifications	FlexShelf Guide	FlexShelf Guide Dual
Weight (with 2 shelves installed)	200.7 lb (91.1 kg)	206.2 lb (93.5 kg)
Height	Standard: 59.1 in. (150 cm) Tall: 64.4 in. (163.5 cm)	Standard: 59.1 in. (150 cm) Tall: 64.4 in. (163.5 cm)
Base Footprint	20.8 in. (52.8 cm) width; 24.1 in. (61.1 cm) length	20.8 in. (52.8 cm) width; 24.1 in. (61.1 cm) length
Max Payload Weight	165 lb (75 kg)	165 lb (75 kg)
Max Payload Width	16.6 in. (42.2 cm)	16.6 in. (42.2 cm)
Max Payload Length	23.8 in. (60.5 cm)	23.8 in. (60.5 cm)
Max Payload Height	Up to 34.6 in. (88 cm)	Up to 34.6 in. (88 cm)
Max Speed	3.9 mph (1.75 m/s)	3.9 mph (1.75 m/s)
Turning Radius	Turn in place	Turn in place
Continuous Runtime	~9 hrs	~9 hrs
Environment	Indoors	Indoors
Charging	Autonomous docking	Autonomous docking
Charge Time	3 hrs to 90%	3 hrs to 90%
2D Laser Sensor	SICK, 82 ft. (25 m), 220°	SICK, 82 ft. (25 m), 220°
3D Camera	Yes (2x)	Yes (2x)

Key Workflows

Order
Picking

Batch
Picking
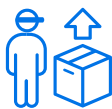
Receiving and
Putaway

Fetch100 Roller

Flexible Automation Addition
to Fixed Conveyors

Key Benefits

- Automate loading and unloading of totes
  and bins from conveyors or Automated Storage
  and Retrieval Systems

- Flexibly extend existing conveyor workflows

- Automatically trigger induction or deduction
  via Symmetry software

- Integrate existing conveyor controls with
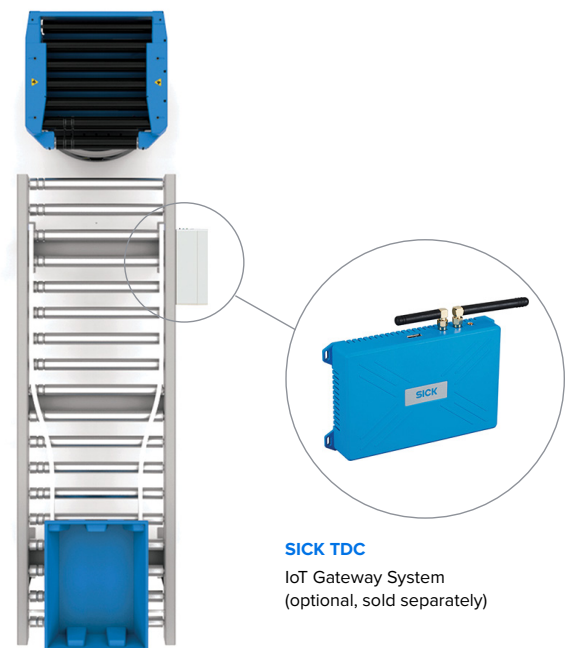 Symmetry using optional IIoT smart gateway

Coexist with Current Conveyor Infrastructure

Conveyor systems have dramatically increased industrial efficiency for many years. However, these fixed assets are hard to adapt to today's ever-changing material transport requirements. Our Fetch100 Roller solution brings adaptability and increased levels of automation in these conveyor environments.

SICK TDC Smart Gateway

The SICK Telematic Data Collector (optional, sold separately) is a networked industrial I/O device that serves as a bridge between Symmetry and other industrial equipment such as conveyors, doors and air showers. Automate hand-offs between Fetch100 Roller robots and active powered conveyors by connecting a SICK TDC to any conveyor controller.
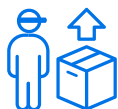
Specifications	Fetch100 Roller
Weight	186.2 lb (84.5 kg) Add'l weight with riser installed: Riser 1: 5.5 lb (2.5 kg) Riser 2: 6.7 lb (3.0 kg)
Supported Conveyor Heights	18 in. (45.7 cm) or 22.75 in.–30 in. (57.8 cm–27.2 cm) in. 0.25 in (6.35 mm) increments
Maximum Payload	Up to 176 lb (80 kg) (depends on configuration)
Base Footprint	23.6 in. (59.9 cm) length, 21.7 in. (55.1 cm) width
Cargo Dimensions	20.6 in.–32.7 in. (52.3 cm–83.0 cm) (depends on riser height)
Maximum Speed	3.9 mph (1.75 m/s)
Turning Radius	Turn in place
Nominal Continuous Runtime	~9 hrs
Environment	Indoors
Charging	Autonomous docking
Charge Time	3 hrs to 90%
2D Laser Sensor	SICK, 82 ft. (25 m), 220°
3D Camera	Yes (x2)

SICK TDC
IoT Gateway System
(optional, sold separately)

Key Workflows

Order
Picking

Assembly
and QA

End of Line
Handling

ASRS
Induction

Rush
Orders

Fetch100 Connect

The Industry's First Rolling Cart
Autonomous Mobile Robot Solution

Key Benefits

- True collaborative (AMR) solution that integrates into existing manual cart workflows

- Flexible cart options support a wide range of workflows

- Maximum robot utilization by decoupling robots from carts

- Simple setup and control for associates through handheld devices or automation through fully configured schedules

- Recognized for safety (CE mark)
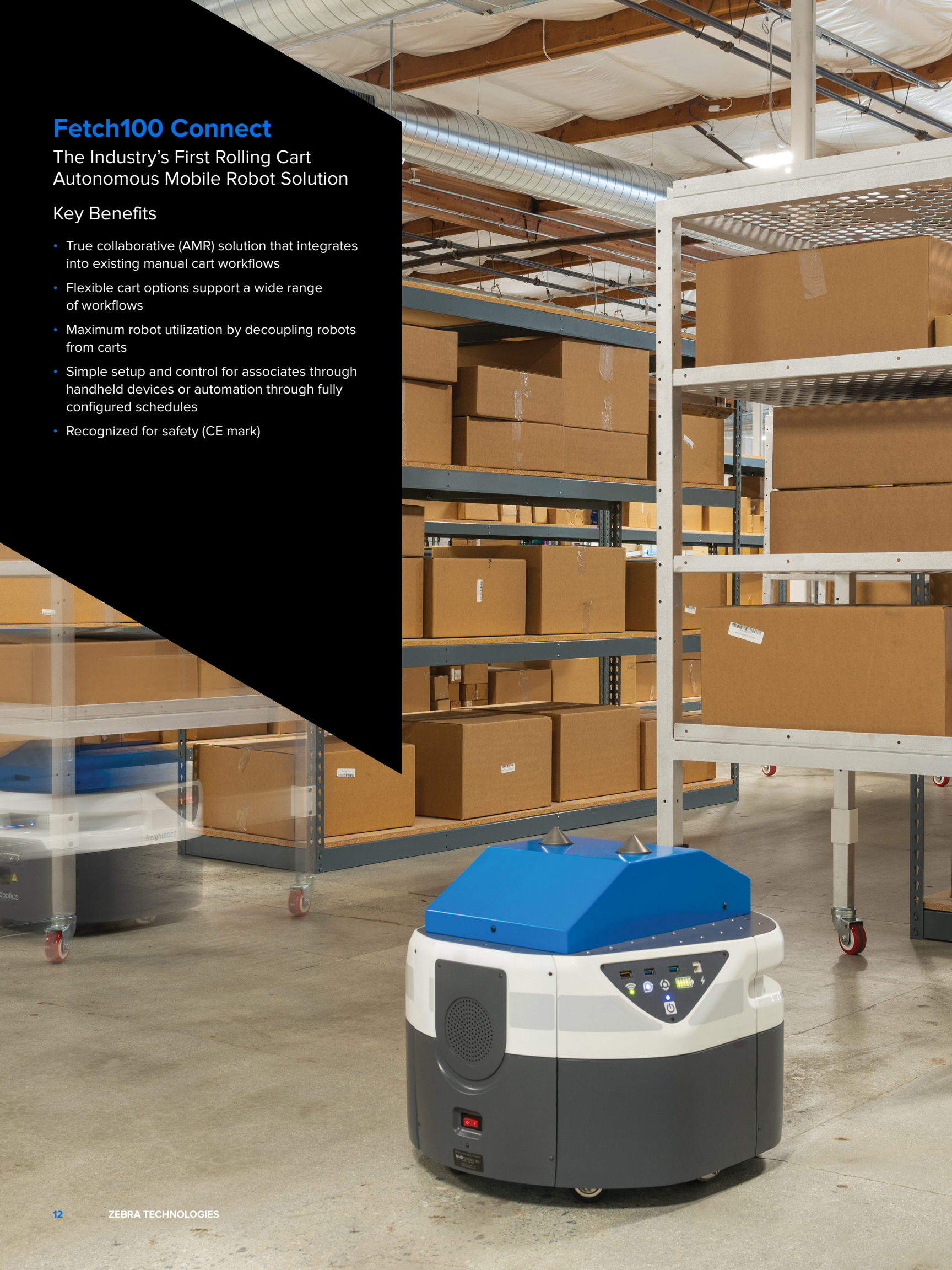
Warehouse Carts 2.0

The Fetch100 Connect AMR system features an advanced mobile robot that can autonomously pick up and drop off carts to any location within your facility. Carts are available in three sizes—Standard, Tall and a flexible cart Base option that allows you to customize the cart to suit your specific payload.

Specifications	Fetch100 Connect	FetchCart Base	FetchCart	FetchCart Tall*
Weight	163 lb (74 kg)	44 lb (20 kg)	75 lb (34 kg)	85 lb (38.5 kg)
Height	19.5 in. (49.6 cm)	24.5 in. (62.3 cm)	55.1 in. (140 cm)	65 in. (165 cm)
Base Footprint	20.7 in. (52.7 cm) wide, 22.6 in. (57.3 cm) diameter	32.7 in. (83 cm) width, 32.7 in. (83 cm) length	32.7 in. (83 cm) width, 32.7 in. (83 cm) length	32.7 in. (83 cm) width, 32.7 in. (83 cm) length
Shelf Width	—	32.7 in. (83 cm)	32.7 in. (83 cm)	32.7 in. (83 cm)
Shelf Depth	—	32.7 in. (83 cm)	32.7 in. (83 cm)	32.7 in. (83 cm)
Max Payload Weight	—	Up to 180 lb (81.6 kg)	Up to 150 lb (68 kg)	Up to 140 lb (63.5 kg)
Max Speed	3.4 mph (1.5 m/s)	—	—	—
Turning Radius	Turn in place	Turn in place	Turn in place	Turn in place
Continuous Runtime	~9 hrs	—	—	—
Environment	Indoor	Indoor	Indoor	Indoor
Charging	Autonomous docking	—	—	—
Charge Time	3 hrs to 90%	—	—	—
2D Laser Sensor	82 ft. (25 m), 220° (x1)	—	—	—
3D Camera	Yes (x2)	—	—	—

* Requires a risk assessment

Key Workflows

Case Picking
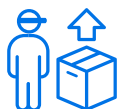
Replenishment/ Putaway

Raw Material Delivery

ASRS Induction

E-Commerce Fulfillment

Staging/Consolidation

Product Spotlight

FetchCart Base
Maximize Every Payload with Custom Carts

Move More Material Types

FetchCart Base serves as the starting point for designing your own customized material transport system and applying automation creatively and efficiently throughout your facility. You can accommodate a wide variety of payloads and maximize capacity per your application requirements. FetchCart Base uses the same reliable docking mechanism as our standard FetchCarts, so Fetch100 Connect AMRs interface seamlessly.

Some unique applications include: detrash and dunnage removal, parts and tools delivery, replenishment of packing materials, gravity feed racks for manufacturing work cells, and many more.

Fetch100 Shelf

All-in-One Transport and Operator Interface

Key Benefits

- Quickest deployment solution
- Set up and use in hours, redeploy easily
- Ideal for small and medium payloads
- Configurable shelving for various bin, tote and package sizes
- Reduce associate travel time and increase productivity in low dwell time and high volume environments
- Simple operation with built-in, easily configured touchscreen

Transport for Packages, Totes and Bins

Fetch100 Shelf robots set the standard for commercial-ready AMRs transporting material in busy warehouse and manufacturing environments. The most advanced collaborative AMRs, like the Fetch100 Shelf robots, have the ability to plan optimal point-to-point travel while navigating around obstacles. Fetch100 Shelf robots have numerous additional enhancements to safely avoid moving obstacles such as forklifts and carts. Integrated touchscreens and adjustable shelving make Fetch100 Shelf robots an easy and flexible way to offload material transport tasks.

Specifications	Fetch100 Shelf
Weight	198.5 lb (90 kg)
Height	59.7 in. (151.6 cm)
Base Footprint	22.6 in. (57.3 cm) diameter
Shelf Width	20.5 in. (52.2 cm)
Shelf Depth	16.5 in. (42.1 cm)
Maximum Payload Weight	172 lb (78 kg)
Maximum Payload Height	30.0 in. (76.3 cm)
Maximum Speed	3.4 mph (1.5 m/s)
Turning Radius	Turn in place
Nominal Continuous Runtime	~9 hrs
Environment	Indoor
Charging	Autonomous docking
Charge Time	3 hrs to 90%
2D Laser Sensor	82 ft. (25 m), 220° (x1)
3D Camera	Yes (x2)

Key Workflows

Order Picking
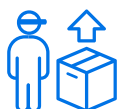
Assembly and QA

ASRS Induction

Rush Orders

Returns Processing

Optimize Material Handling with Cloud Robotics

The new on-demand economy is placing pressure on warehouses all around the world—translating into more orders to fulfill, faster than ever.

Symmetry is a completely new and smart approach to warehousing that wraps around and modernizes your current WMS—without upgrades, backend changes or disrupting your current operations. The combined power of AMRs and Symmetry software optimizes picking across multiple orders while dynamically orchestrating workers and robots.

This allows your existing workforce to pick up to 24% more orders, along with a 90% reduction in onboarding and training time. By integrating with Zebra AMRs, you can achieve up to 78% improvement in productivity by automating long-haul material transport, including piece, case and pallet picking workflows.

Get the most out of every step that every worker takes to maximize productivity and throughput in your warehouse with Symmetry and Zebra Robotics Automation.

Robotics Automation for warehouses, 3PLs, distribution and manufacturing

Pick faster and more efficiently through optimized pick paths across multiple orders.

Discover how Zebra Robotics Automation can work for you—
scan or click the QR code for more information

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