

# Seamless AMR & AGV Integration: Optimizing the Hand-off



We select the best technology, build custom lifts & stations,  
and fully validate your system before deployment.



**Connected Automation. Delivered.**  
We bridge mobile robotics and fixed factory hardware.

**Capability List**

- **AMR/AGV Selection:** Right platform, right payload.
- **Topper Lifts:** Precision mobile payload handling.
- **Controls Integration:** Flawless system-wide synchronization.
- **Docking Stations:** Seamless material hand-offs and optimal worker ergonomics.



# Precision Support Equipment for Seamless AMR Integration

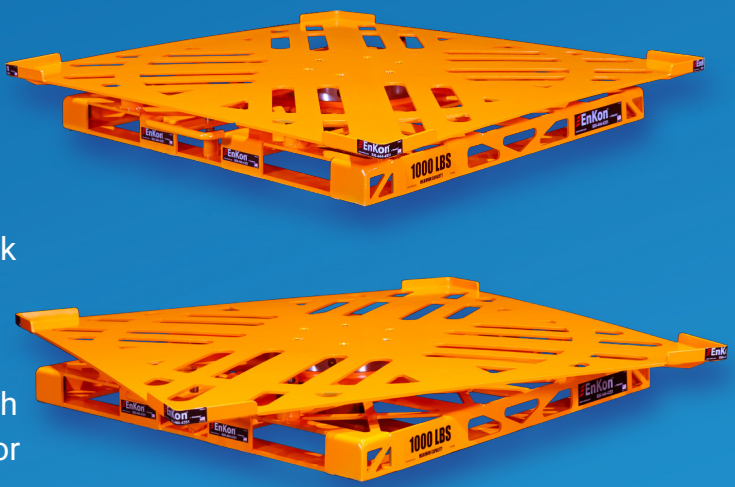
## Closing the gap between autonomous travel and assembly-line execution

Standard autonomous mobile robots (AMRs) excel at moving product from point A to point B, but the final handshake at the assembly line requires a level of precision and functionality that most robots cannot achieve alone. Herkules builds purpose-driven EnKon support hardware that transforms a standard robot into a complete, high-value material delivery solution.

### The EnKon Rallet

The Rallet is a unique fusion of an EnKon custom-rotating base and a specialized carrier plate pallet. Designed with autonomy and ergonomics in mind, it features:

- **Precision Centering:** Undercarriage depressions that lock onto centering cones for 100% repeatable, stable load positioning.
- **Intelligent Rotation:** Optional locking detents and smooth rotation that allow the payload to be oriented precisely for robotic picking or ergonomic operator access.



### Carrier Plates and Pick & Drop Stands



Our P&D Stands act as a vital bridge between your fleet and your production line. These stands are engineered to meet your specific AMRs' positioning requirements, ensuring that every drop-off is stable and perfectly aligned.

- **Modular Flexibility:** Unlike fixed conveyors, our stands can be easily reconfigured or relocated as your manufacturing needs change.
- **Enhanced Safety:** Integrated pallet present switches and infrared handshake protocols provide an extra layer of safety in shared operator-AMR zones.



EnKon AMRs or AGVs are fitted with robust low-rise lifts that are essential for bridging the gap at P&D stations where inconsistent stand heights or uneven floors can disrupt automated transfers.

- EnKon offers complete AMRs or AGVs with controls or can outfit existing fleets of various makes & models as needed.
- Electrically driven belt drive or hydraulic true scissor lifts that do not bind can withstand higher cycle rates than commonly used "jack-screw" style lifts.
- Adjustable lift travel by application.
- The EnKon Rallet positions loads cycle after cycle.
- Complete controls design & build.

## AMR Lifts



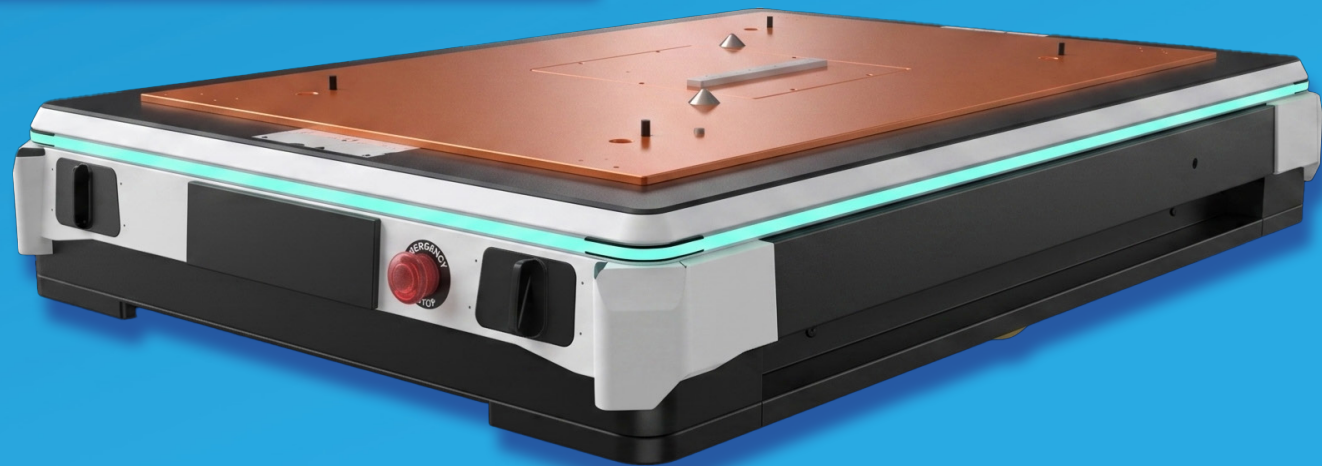
Small



Medium



Large



# Integrated AMR Solutions in Action

# Why Choose EnKon?

## Application 1: Line-side delivery



**The Challenge:** Eliminate inconsistent assembly line parts flow and ergonomic risks from operators manually lifting parts bins.

**The EnKon Solution:** AMRs deliver parts bins at precise intervals on an EnKon Rallet to a docking station lift. The lift raises the Rallet to an ergonomic height, enabling effortless 360° rotation of the bins.

**The Result:** Properly positioned product at the line, maximizing assembly productivity while eliminating manual lifting and resetting.

**Key Benefit:** Prevents operator fatigue and on-the-job injury by automating part height and positioning. Operators never have to lift heavy bins manually.

We specialize in optimizing the hand-off. By shifting high-travel requirements from the mobile robot to a dedicated docking station lift, we help you maintain a leaner, more stable AMR fleet with longer battery life.

- **Integrated Docking Lifts:** When your process requires high-vertical travel or precise indexing for an operator, our stationary lift stands provide the power and stability that a mobile robot can't. The robot handles the floor travel; our lifts handle the elevation.
- **Controls Integration:** We don't just build hardware. EnKon systems can be equipped with sensors and control modules that "talk" to your AMR or AGV fleet, ensuring the lift only moves when the robot is safely docked and the load is secured.



## Application 2: Automated conveyor transfer



**The Challenge:** Bridging the gap between static conveyor lines and mobile robotic fleets requiring material transfer.

**The EnKon Solution:** Heavy-duty, roller-top conveyor scissor lift modules integrated directly onto the AMR fleet to adjust for varying heights.

**The Result:** The AMR aligns perfectly with existing conveyor systems to automatically receive or discharge heavy payloads via powered rollers.

**Key Benefit:** Zero-touch material handling that eliminates manual labor, improves workplace safety, and keeps automated loops running at maximum efficiency.

## U-Cell Lifts

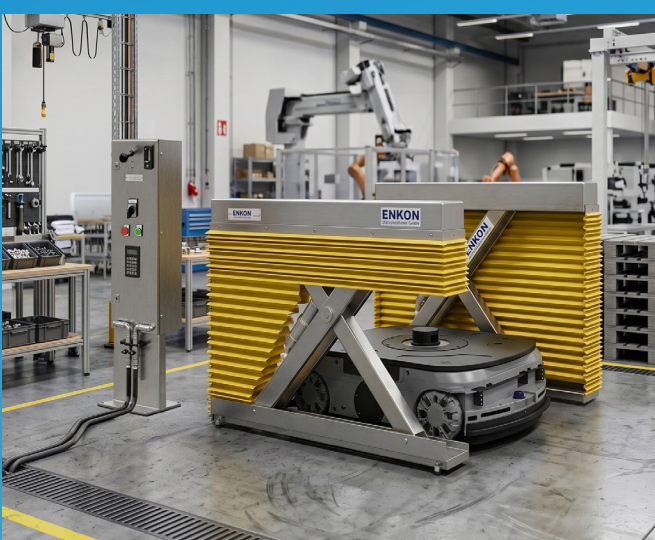


## U-Cell Tilts



## Your end-to-end automation partner

We do more than manufacture premium support hardware. As a comprehensive integrator, Herkules acts as your single point of contact. We analyze your material workflow, select or build the optimal AMR/AGV platform, and deliver the turnkey docking stations, carrier plates, and scissor lifts needed to complete the loop.

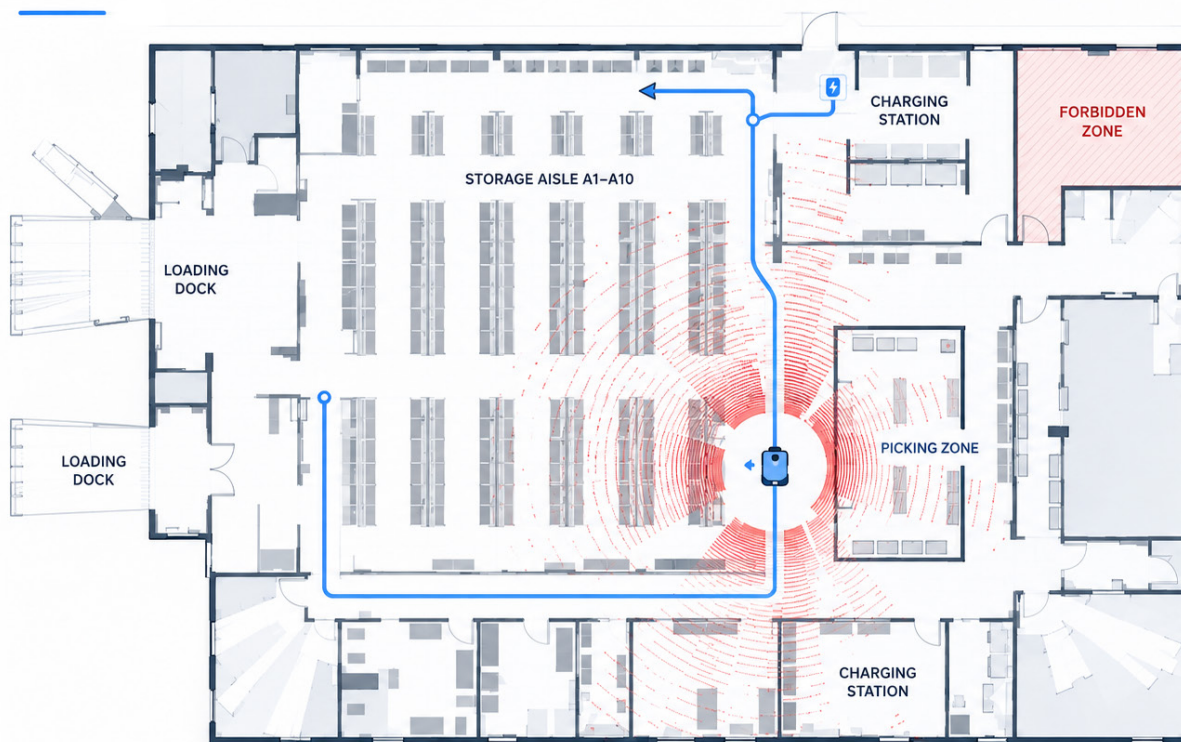


# In-House Validation Before Commissioning



## AMR FACILITY SENSOR MAP & NAVIGATION GUIDE

LiDar Sensor



**STATUS**  
Navigating

**POSE**  
(42.5, 18.2, 90°)  
Heading: 90°

**MAP**  
FACILITY\_V3\_SLAM

**ACTIVE SENSORS**  
2D LiDAR  
Depth Camera  
Encoders

— Planned Path

• LiDAR Scan

⚡ Charging Station

▨ Forbidden Zone

## Planning Your Mobile Automation Journey?

Rely on EnKon to specify, build, and validate a best-fit solution and accessories for your AMR or AGV application.

- Mitigate start-up risks: Avoid frequent integration pitfalls.
- In-house Validation: Validate system interoperability prior to commissioning.
  - In-house runoff / simulation.
  - Catch and correct issues prior to commissioning.
- Control Integration: Unify fleet accessories and sensor feedback.
  - Topper lift hardware & software.
  - Docking vision requirements.
  - System handshake protocols.
  - Pallet-present switches.
  - Height position controls.

**Don't navigate the shift alone. Partner with EnKon.**