

ROBiN

Introducing **ROBiN**, AMT's solution for de-layering pallets of cases to totes for induction into an automated storage and retrieval system (ASRS). The **ROBiN** robotic induction system uses machine vision and AI to optimize tote fill density.

ROBiN OUTPERFORMS SINGLE-PICK HANDLING SYSTEMS WITH INCREASED FLEXIBILITY

With increased flexibility and performance, **ROBiN** outperforms single-pick handling systems. It utilizes vision sensors and advanced vision algorithms to complete real-time state evaluation to make informed decisions to maximize tote-fill density.

- ✓ AI balances cycle time and tote fill density efficiency resulting in increased flexibility and performance over single pick induction systems.
- ✓ Performs de-layering of incoming single SKU pallets to a layer table.
- ✓ Highly-intelligent robotic transfer of product cases into totes.
- ✓ Robotic handling and advanced vision algorithms optimize the tote fill percentage making the best use of ASRS space and efficiency.

FEATURES

Utilizes advanced vision technology to select the optimal group of cases, ensuring maximum utilization of tote space.

Employs sophisticated algorithms for efficient group selection, aimed at maximizing tote fill.

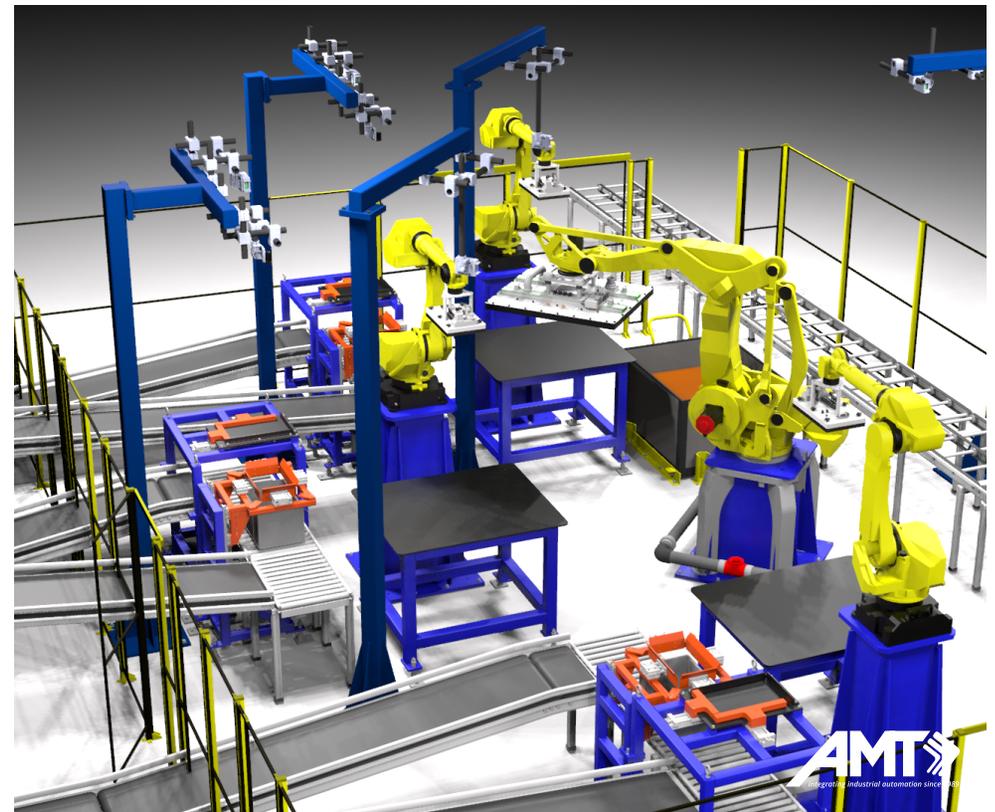
Operates effectively without the necessity for cases to adhere to a pre-arranged stacking order.

Versatile in managing a broad range of case sizes.

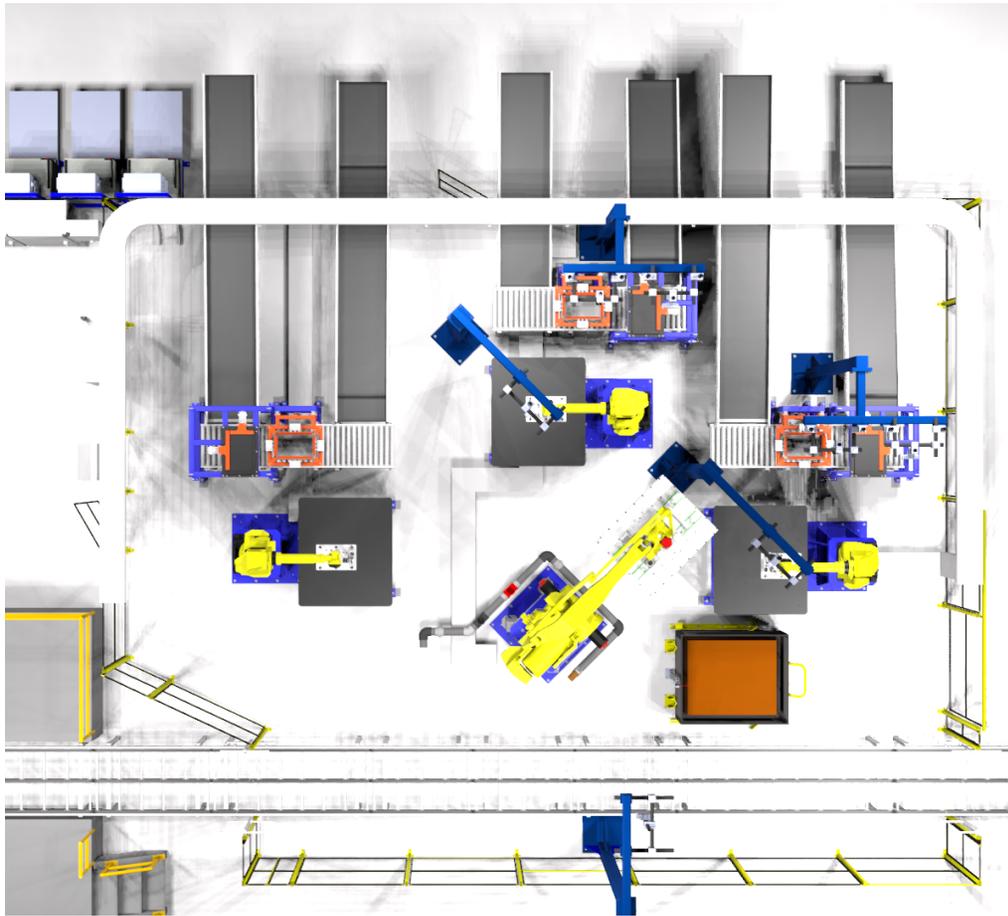
Simplified operation with no extensive training requirements and minimal management of SKU-specific parameters.

Functions efficiently without any prior knowledge of the number of cases in each pallet layer.

Designed to be compatible with a diverse range of case sizes, gripper types, and tote dimensions.



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ROBiN provides the flexibility to handle edge cases where other systems traditionally struggle:

- The cases do not need to be stacked in a predetermined pattern
- The system does not need to know how many boxes are on the pallet layer
- A wide range of flexibility in the shapes of boxes can be accommodated
- Any size gripper and tote can be used
- No special lighting is required as the vision uses light outside of the visible spectrum

BASE CONFIGURATION

- Pallet conveyor for incoming pallets of product
- Layer/depalletizing robot - The depalletizing robot removes layers as specified by the operator from an incoming assembled pallet and places the product on a layer table
- Two Tote fill robots – Use vision and AI to strategically pick cases from the layer table for direct placement into totes, maximizing the available space
- Two framing tables - When direct placement cannot achieve the best utilization of tote space, the tote-filling robots place the product on a framing table for tote-fill arrangement.

When the optimal configuration is reached, pushers mounted to the framing table actuate to compress the cases and remove any gaps that may have formed during handling. Tote utilization is consistently maximized regardless of incoming pallet configurations.

- Two tote locators
- Outgoing tote conveyor(s)

