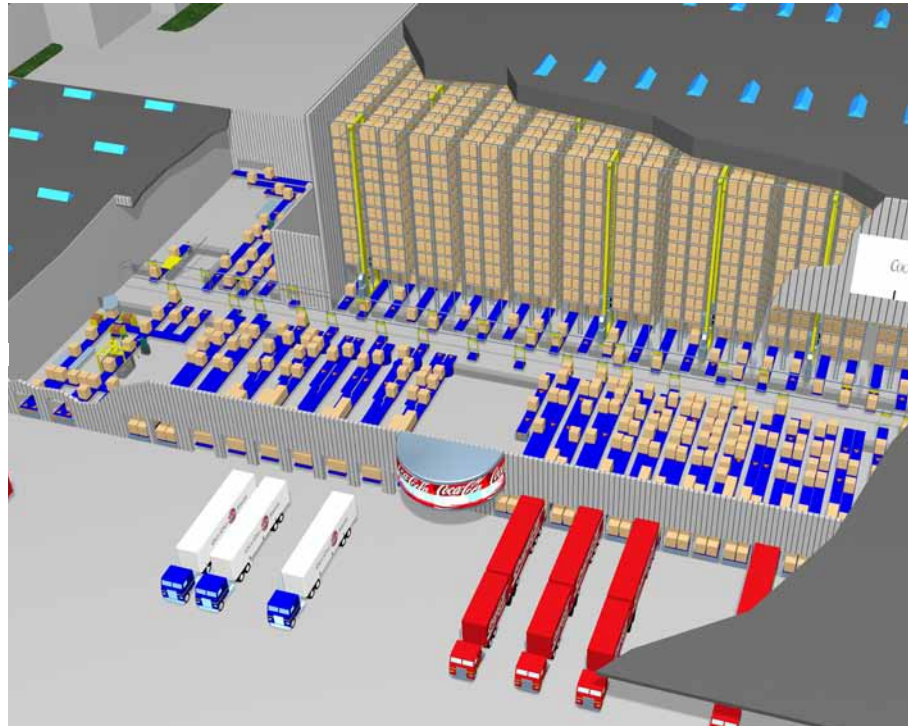


# SWISSLOG INDUSTRY SOLUTION

## WarehouseRunner



The WarehouseRunner is an industry solution for efficient receiving, high-speed internal transports, high-density stock keeping and rapid shipping.

Swisslog's WarehouseRunner consists of three modules:

1. Receiving module
2. Storage and internal transport module
3. Shipping module

The core module of the WarehouseRunner solution is the high-density automated warehouse with direct links or shuttle service to production.

Efficient automated truck unloading for fast receiving and putaway of palletized goods is the other part of the WarehouseRunner solution.

A conveyor or monorail system ensures efficient transports within the facility. The final module manages the sequencing and truck loading of outgoing order pallets.

The Swisslog WarehouseManager system optimizes the operational processes of the WarehouseRunner: inbound scheduling, and unloading, stock location management, outbound scheduling and truck loading.

## Benefits

The WarehouseRunner has the following benefits compared to more manual solutions:

- > Optimal space utilization through high storage density automated warehouse
- > Reduced lead-time to fulfill customer demand
- > Improved accuracy in picking
- > Reduced stock damage
- > Pallet load sequencing to optimized outbound transport routes

### WarehouseRunner Facts

	Typical Data	Unit
SKU Range	200 – 5 500	SKU
Pallets received /shipped	1 500 – 6 000	pallets/day
Pallet storage locations	20 000 – 100 000	location
Number of stacker cranes	4 – 16	crane
Conveyor pallets transported	100 – 250	pallets/h
Monorail pallets transported	250 – 500	pallets/h

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## MODULE 1 RECEIVING

Automated truck unloading allows for a highly efficient inbound receiving process to the warehouse.



## MODULE 2 STORAGE AND INTERNAL TRANSPORT

High-density storage is achieved by optimizing the storage lane depths (single-, double-, or multi-deep). Pallet-based transport systems connect the storage area with receiving, production and shipping.

Monorail transport systems are used for high pallet throughputs where up to 500 pallet movements per hour are required. Pallet conveyor systems are used for pallet flows below 250 pallets per hour. A further option is the use of automated guided vehicles (AGV) that enable an efficient pallet transport over long distances.

### Transport system comparison

	Conveyor	Monorail	Unit
Typical maximum system throughput	250	450	pal/h
Short distances between sources and destinations	Favorable	Favorable	
Long distances between sources and destinations	Unfavorable	Favorable	
Free floor space	Unfavorable	Average	
Ability to buffer during transport	Favorable	Average	



## MODULE 3 SHIPPING

The WarehouseRunner includes manual and automated truck loading as well as the buffering, and sequencing of customer order pallets. The WarehouseRunner can handle different types of load carriers like pallets, trolleys and roll cages.

Swisslog customers such as Coca-Cola Amatil Australia, Coca-Cola Amatil New Zealand, AG Barr United Kingdom, Thurella Switzerland and Grolsch Netherlands have all chosen the Swisslog WarehouseRunner as their preferred solution.