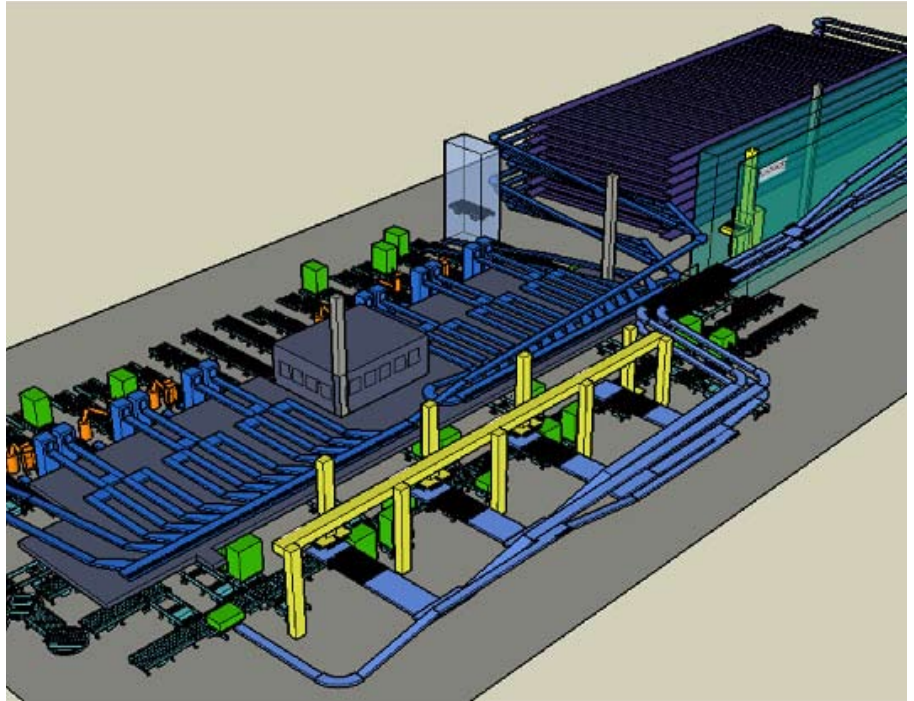


# SWISSLOG INDUSTRY SOLUTION

## LaneRunner



The LaneRunner is an automated full case order picking system for high volume products, typically found in food and beverage or retail distribution.

Swisslog's LaneRunner solution is based on 3 modules:

1. A semi- or fully automated depalletizing module
2. An automated case pick buffer module (ORM - Order Release Module)
3. A semi- or fully automated palletizing module

In the first module of the LaneRunner pallets are automatically depalletized layerwise and individual cases are singled-out and stored automatically into the ORM (Order Release Module).

The second module, the ORM, consists of motorized case conveyor lanes placed in a multi-deck racking system. Per customer order, the ORM releases the cases in any required sequence at high velocity. Regular replenishment to the ORM guarantees continuous order fulfillment.

Finally dispensed cases are transported to the palletizing area.

## Benefits

The LaneRunner has the following benefits towards more manual solutions:

- > High pick accuracy
- > Reduction of picking cost
- > Exact case sequencing to optimized customer loads (family grouping)
- > Fast response time for order fulfillment
- > Reduced product damage
- > Full traceability from depalletizing to packing

### LaneRunner Facts

	Typical Data	Unit
SKU Range	50-1000	SKU
Pallet shipped per day	750 - 1500	pallet
Case volume	30 000 - 60 000	cases/day
Number of depalletizing modules	2-4	station
ORM storage lanes	200-500	lane/module
Number of palletizing stations per LaneRunner module	2-6	station



## MODULE 1 DELayerING MODULE

Pallets are depalletized layer-by-layer to fill up the ORM. Depending on throughput and total number of SKUs, the depalletizing is done manually at ergonomic stations, fork-lift mounted grippers, or fully automatically.

### AUTOMATED DEPALLETIZING

	Typical data	Unit
Equipment type	Robot with flexible gripper technology	
Delayering capacity	150-200	layers/h
Case types	cases, crates, totes	
Max layer weight	ca. 150	kg
Layer size	800x1200 mm up to 1300x13000	mm



## MODULE 2 ORM

The ORM is the core unit of the Lane-Runner solution. It consists of an infeed conveyor, powered accumulating buffer lanes with lane end dispensers and an output conveyor.

Cases from the delayering station are

introduced to the ORM input conveyor at controlled intervals. The ORM storage lanes are standardized and flexible and can handle a wide spectrum of packages. A high velocity acceleration belt after the dispenser creates a gap between the dispensed case and next case in the storage lane allowing rapid single case ejection.

### ORDER RELEASE MODULE (ORM)

	Typical data	Unit
Standard storage lane length	10.4	m
Max storage lane width	420	mm
Max parallel lanes / deck	100	lanes
Number of decks	4-8	levels
Typical buffer time	1-4	hours
Max infeed capacity / deck	600	c/h/levels
Max outfeed capacity / deck	500	c/h/levels
Throughput	2500-3000	c/h/module
Min case sizes	150x150x100	mm
Max case size	600x420x400	mm



## MODULE 3 PALLETIZING

The level of mechanization of palletizing can vary from ergonomically optimized semi-automotive packing to fully automated palletizing stations for highly flexible, family grouped, load patterns.

Depending on the characteristics and load carrier types (CHEP-Pallets, EUR-pallets, Roll Cages etc) there are various options of fully automated palletizing requiring case-by-case sequencing. Cases from the ORM are merged from the ORM levels in a desired sequence and accumulated in-front of the palletizing stations before palletization.

	PALLETIZING	MANUAL	SEMI-AUTO	AUTO	Unit
Pack capacity		350-450	400-600	450-500	cases/h