# identpro®

## JOIN THE DIGITAL INTRALOGISTICS

# DATA SHEET
# WAREHOUSE EXECUTION SYSTEM

## CONTENTS

# 1 Digital twin

## Block storage, rack storage, open space (chaotic storage)

- Image and visualization of the real warehouse situation

- Filterable stock image: Graphical (2D) and table

- Automatic identification of loads (pallets, HU, TE) without scanning through 3D position data, one behind the other and on top of each other (minimum load size 60cm x 60cm)

- Automatic recording of all stock movements with FFZ (Track & Trace)

- One time baptism (announcement) of pallet, HU, TE by terminal, barcode scanner or automatically by RFID, conveyor line etc.

- Stock additions, stock transfers, stock bookings

- History of all load movements

- History of all forklift statuses and movements incl. traveled routes

- Management of storage areas with function assignments (shipping, goods receipt, goods issue)

- Automatic detection of storage conflicts

- Simple configuration and naming (dimensions, identifier, type)

## Load equipment management

- Configurable (dimensions, identifier, image, type)

## Enterprise Server

- Supported operating systems (32/64 bit): Windows Server 2013++, Linux (CentOS, Redhat, Ubuntu)

- Supported SQL databases: MS SQL Server 2012++, Oracle 10i+, MySQL, Postgres

- High availability

- Integrated user administration with access management

- Web-based Management Studio (HTML5 browser), access without additional installation on client PCs

- Alarm interface via eMail

- Admin-console incl. housekeeping

- Stand-alone or operation with higher-level ERP/LVS/host possible

- Plugin interface for customer-specific extensions and customized processes

# 2 3D Forklift Guidance System (SLS)

## Server

- Priority-controlled job distribution to individual forklifts and/or groups
- Order placement and management via web frontend or leading ERP/LVS/host system
- Connection to ERP systems:
  - Web services
  - Database interface
  - SAP RFC via JCo
  - Java messaging
  - XML

- Forklift navigation to the desired goods or destination storage location
- Route optimization
- Multiple loads (orders) per transport
- Visualization of all forklift positions in real time
- Formation of statistical key figures for forklift and warehouse efficiency
- Management of forklift groups
- Monitoring of condition and status of the forklift fleet
- Forklift configurations

## Forklift terminal (client)

- Driver communication with SLS via touch terminal and WLAN
- Driver dialogs for individual search of loads
- Driver dialogs for detailed load display
- Driver dialogs for managed and unmanaged warehouse tasks
- Monitoring of managed storage tasks incl. warning dialogs
- Information about start/destination textual and graphical via Warehouse map
- Guidance to location and load as well as navigation via map
- Panning and zooming of (warehouse) map, configurable orientation

- Guided weighing of the goods, optionally highly accurate with weighing forks
- Permanent monitoring of all forklift sensors and plausibility check of the sensor values
- Guided and graduated diagnostics and commissioning dialogs for maintenance and repairs
- Connection of barcode scanner via USB, Bluetooth
- Preparation for scanning delivery notes/loading lists
- Buffering of movements even in case of WLAN failure
- Multi-languages (forklift client: D,GB, PL, IT, ES)

# 3 Other

## Interfaces

- ERP interface (SAP, Infor, ProAlpha,…)
- SQL interface

- E-mail (alert)
- Microsoft Excel, PDF (lists export)

## Connection of external devices and systems

- RFID
- Barcode reader on conveyor

- Scales, signal system, etc.

# 4 System architecture