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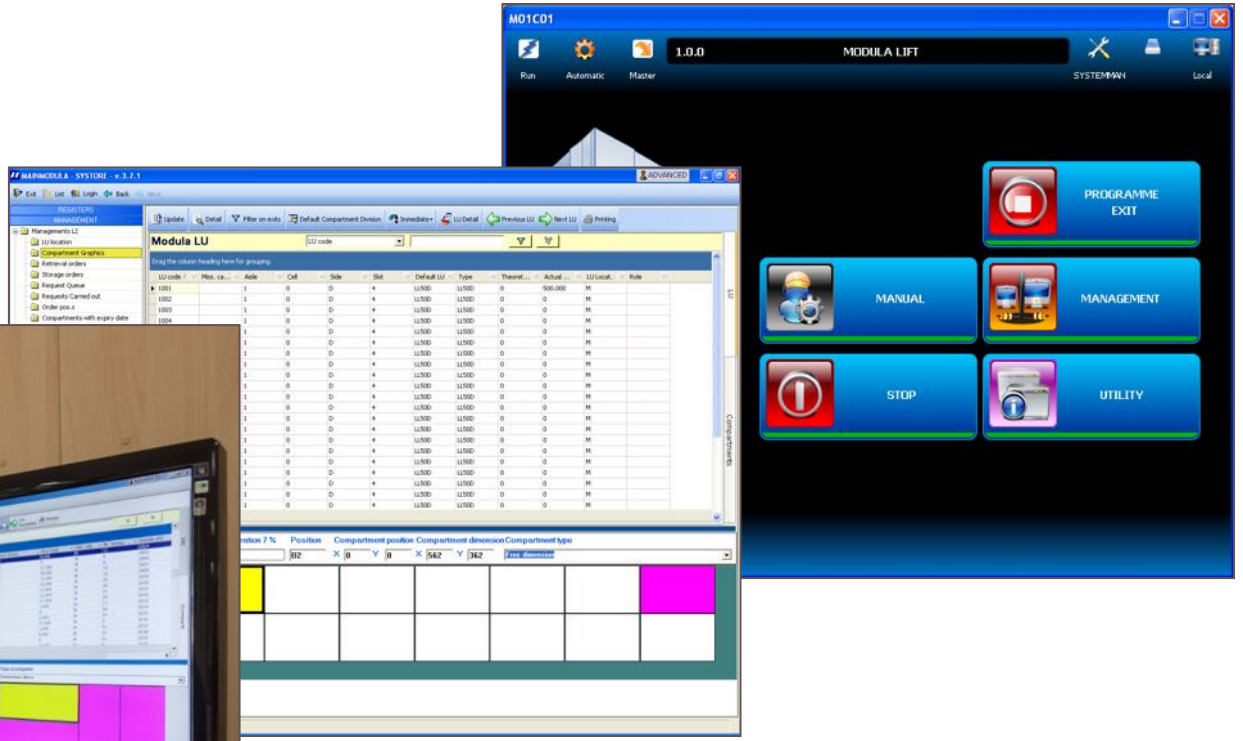
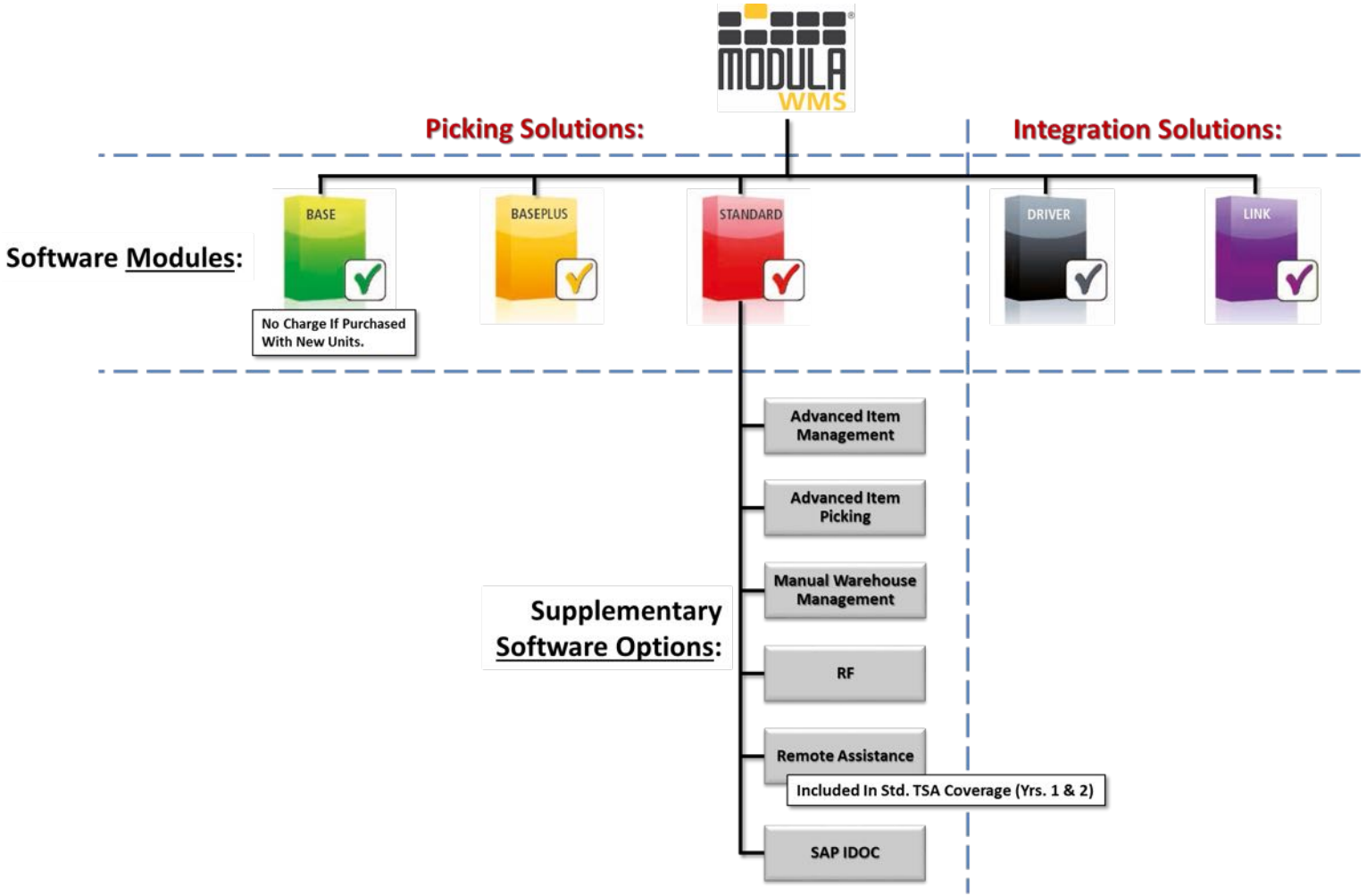
MODULA® WMS Software Solutions

MODULA®
WMS



WMS Software Hierarchy



MODULA® WMS Software Features

- The standard use of a modern relational database on all software modules.
- **Easy and fast data backup** as well as data restoration in the event of a software malfunction.
- A **customizable grid / screen layout** to meet the needs of individual users.
- **Advanced filtering** options allowing for customizable searches and orders.
- **Advanced user / operator rights** management.
- Allows for the use of RF terminals for manual storage area management.
- Hierarchical item list management (Kitting).
- **Graphical location management** for both the VLM unit(s) as well as manual areas (*shelving, rack, etc.*).

MODULA® WMS Software Features

- **Configurable integration** with enterprise management systems via an ASCII file exchange. Data exchange on shared tables is also accessible via ODBC driver, XML files, and Excel spreadsheets.
- Packing list management.
- Material transit management.
- The ability to batch pick items picked from different locations, as well as the ability to utilize pick-to-light / put-to-light displays.
- Internal material movement management between different areas based on minimum stock values defined for each area.
- The ability to create **custom reports** with an easy to use, intuitive report tool.
- Automatic database maintenance to optimize the software's performance.

WMS BASE Software Features

The WMS – BASE software package, is the Free package provided with MODULA® VLM units.

It provides some basic tools for vertical warehouse management, such as own register management, graphic warehouse location management, handling by means of orders or direct requests, execution of physical warehouse inventories, and integration with the management system by means of manual text file exchange with predefined trace.

The available features of the WMS – BASE software are:

- Item list management allowing operators to pick by part number.
- The ability to manage one or more MODULA® VLM units.
- VLM location management with the use of an easy to use a graphical tool.
- Item movement management for the picking and replenishment of orders.
- Item movement management with the ability to perform immediate requests (hot-picks).
- User / operator management based on three distinct hierarchical access levels, depending on their role.
- The ability to manually import / export data to and from with the enterprise host system via a fixed – layout ASCII file exchange.

WMS BASE PLUS Software Features

The WMS – BASE PLUS software package, which adds two important software functionalities in addition to the WMS – BASE software package.

The available features of the WMS – BASE PLUS software are:

- Advanced security management, providing for a user's database with personalized operator's passwords, beneficial to users that desire to lock out specific trays for certain operators / users, for example.
- An automatic and configurable import / export data exchange with a client's management system (host), using text files or shared tabled accessible via ODBC, .XML files, ASCII files, or using Excel files.

WMS STANDARD Software Features

The WMS – STANDARD software package includes functionality designed to make the MODULA® VLM units as efficient as possible.

The main features of the WMS – STANDARD software package include:

- Dynamic compartment management (item/compartment matching)
- Dynamic batch and serial number management
- FIFO and due date management.
- Warehouse statistical analysis tools as well as printed report customization.

WMS STANDARD Software Features

The WMS – STANDARD software package adds the following features and functionalities to the WMS – BASE software package:

- Item and location management.
- Advanced user/operator management, it's possible to configure for each operator the enabled procedures required for their role.
- A customizable print & label report management tools.
- Automatically assign an item to a preselected compartment or location.
- Complete data import / export management with customizable layouts.
- Items can be managed with a FIFO sequence, or on a sub code based priority.
- It is possible to retrieve statistical information of the VLM's movements and operations.
- It is possible to manage movement causes for immediate requests.

WMS DRIVER Software Features

WMS – DRIVER provides high level management of MODULA® VLM units, by sending tray movement orders (*picking requests, replenishment requests and inventory cycle counting*) via shared tables or ASCII files. These orders are simply tray lists associated with item picking or replenishment data (*item number, description, quantity, etc.*) grouped by orders.

When the order is complete, WMS – DRIVER sends back the results of the order to the client's ERP or WMS system, which then regains control of the order to proceed with its workflow.

The available features of the WMS – DRIVER software are:

- For clients / users already having a "WMS" type of software in place, the WMS – DRIVER software package allows the existing "WMS" to communicate to and directly drive one or more MODULA® VLM units, with no need to develop direct communication protocols with the machines.
- In addition, users / operators will be able to still utilize the MODULA® unit's CoPilot operator console (HMI) for the required picking and replenishment activities as the information is clearly shown on the screen.
- By purchasing the DRIVER software package, the customer is provided with the communications interface to perform an automatic data exchange.
- The WMS – DRIVER software package is an alternative to MODULA® LINK as well as the WMS – STANDARD and/or WMS – BASE PLUS software packages.

MODULA® LINK Software Features

MODULA® LINK allows control of MODULA® VLM units at a more in-depth level, by directly driving tray request commands &return operations. It is also possible to manage some available unit accessories, such as position indicator items.

MODULA® LINK requires the client's Host system to manage a virtual, direct communication with unit by connecting to local server PC via a socket connection.

With MODULA® LINK the client's ERP or WMS system has the full and precise control of the MODULA® VLM unit; it is possible to manage all the advanced logistic features which the client's ERP or WMS system may be equipped with.

The available features of the MODULA® LINK software are:

- MODULA® LINK software package allows an existing "WMS" to communicate/directly drive one or more MODULA® VLM units, with no need to develop direct communication protocols.
- Using MODULA® LINK operators are only able to control picking and replenishment operations through an external device, such as a PC, hand-held RF terminal, etc.
- By purchasing the MODULA® LINK software package, the customer is provided with the means for a direct communication to VLM units via sockets to drive the units.
- The MODULA® LINK software package is an alternative to the WMS – DRIVER, as well as the WMS – STANDARD and/or WMS – BASE PLUS software packages.

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WMS Module Functionalities

	Main Software Modules:				
Software Functionalities / Features:	**BASE**	**BASE PLUS**	**STANDARD**	**DRIVER**	**MODULA LINK**
Item List Management:	•	•	•		
Graphical Location Management:	•	•	•		
Picking / Replenishment Order Management:	•	•	•		
Immediate Item Request Management:	•	•	•		
VLM Inventory Management:	•	•	•		
Basic User Account / Profile Management:	•	•	•		
Manual Import/Export of Data Via ASCII Files:	•	•	•		
Configurable Automatic Import/Export of Data:		•	•	•	
Automatic Data Back-Up:	•	•	•		
Automatic Database Management:	•	•	•		
Item Movement History Management:	•	•	•		
Item Sub-Code Management:			•		
Table Sub-Code Management:			•		
Material Status Management:			•		
Packaging Management:			•		
Expiration Date Management:			•		
Advanced User Profile Security Management:		•	•		
Customizable Print Reports:			•		
Customizable Label Formatting:			•		
Dynamic (Automatic) Item-To-Compartment Allocation:			•		
Item Management (Volume, FIFO, Priority):			•		
View VLM Activity Statistical Information:			•		
Movement Cause Management For Immediate Item Requests:			•		
Client HOST System Management of Units Via Sockets:					•

Optional Software Modules Available

Available With:

Advanced Item Management Module:

The Advanced Item Management Module allows for added functionality, building upon what is included with the WMS STANDARD Module. It allows for item security management, allows users to associate an image to a particular item, a user can also group items into families and categories to improve search and filtering functionality. Finally it is possible to use additional sub codes to better define items and orders.

Advanced Item Picking Module:

The Advanced Item Picking Module allows for added functionality, building upon what is included with the WMS STANDARD Module. It allows for packing list management, kitting, batch picking and transit materials management (*totes, boxes, etc*.)

Manual Warehouse Management Module:

The Manual Warehouse Management Module allows for the creation and management of manual storage areas, in proximity to the VLM. This module allows for management of the manual areas using a user-friendly graphical tool, management of picking in the manual areas and also the management of material distribution between different manual areas based on accessed quantities. Users can also manage material transfer between areas as well as materials incoming from receiving areas.

Optional Software Modules Available

Available With: STANDARD

RF Module:

The RF Module extends the functionality of the Manual Warehouse Management Module and it is only available in addition to the Manual Warehouse Management Module. This module allows the use RF terminals to manage manual storage areas.

Remote Assistance Module:

The Remote Assistance Module provides the capability for Vidmar TOWER technicians to remotely diagnose faults and assist in troubleshooting immediately, without waiting for a technician to arrive. The customer must allow for a VPN connection to be made for this module to be available.

The Remote Assistance Module / remote support is made available to all clients for no charge during the standard included 5/8 telephone support agreement period for the first two (2) years of ownership.

SAP IDOC Module:

Allows interfacing with the SAP R3 WM module by means of IDOC exchange via FTP.

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Optional Module Functionalities

Available With:

	Optional Supplementary Software Modules:					
Software Functionalities / Features:	**Advanced Item Mgmt.**	**Advanced Item Picking**	**Manual Warehouse Mgmt.**	**RF**	**Remote Assistance**	**SAP IDOC Integration**
Item Based Security Management:	•					
Item Management With Photos of Each Item:	•					
Item Family Management:	•					
Item Category Management:	•					
Supplementary Attribute Management:	•					
Packing List Management:		•				
Kitting Management:		•				
Batch Picking Management:		•				
Pick-To-Light / Put-To-Light Batch Picking:		•				
Material Transit Management:		•				
Manual Storage Areas (Racks, Shelves, Cabinets) Management:			•			
Management of Item Movement Between Areas:			•			
Receiving Area Management:			•			
RF Terminal Management:				•		
Remote Assistance:					•	
IDOC Exchange To SAP® R3 WM Module:						•

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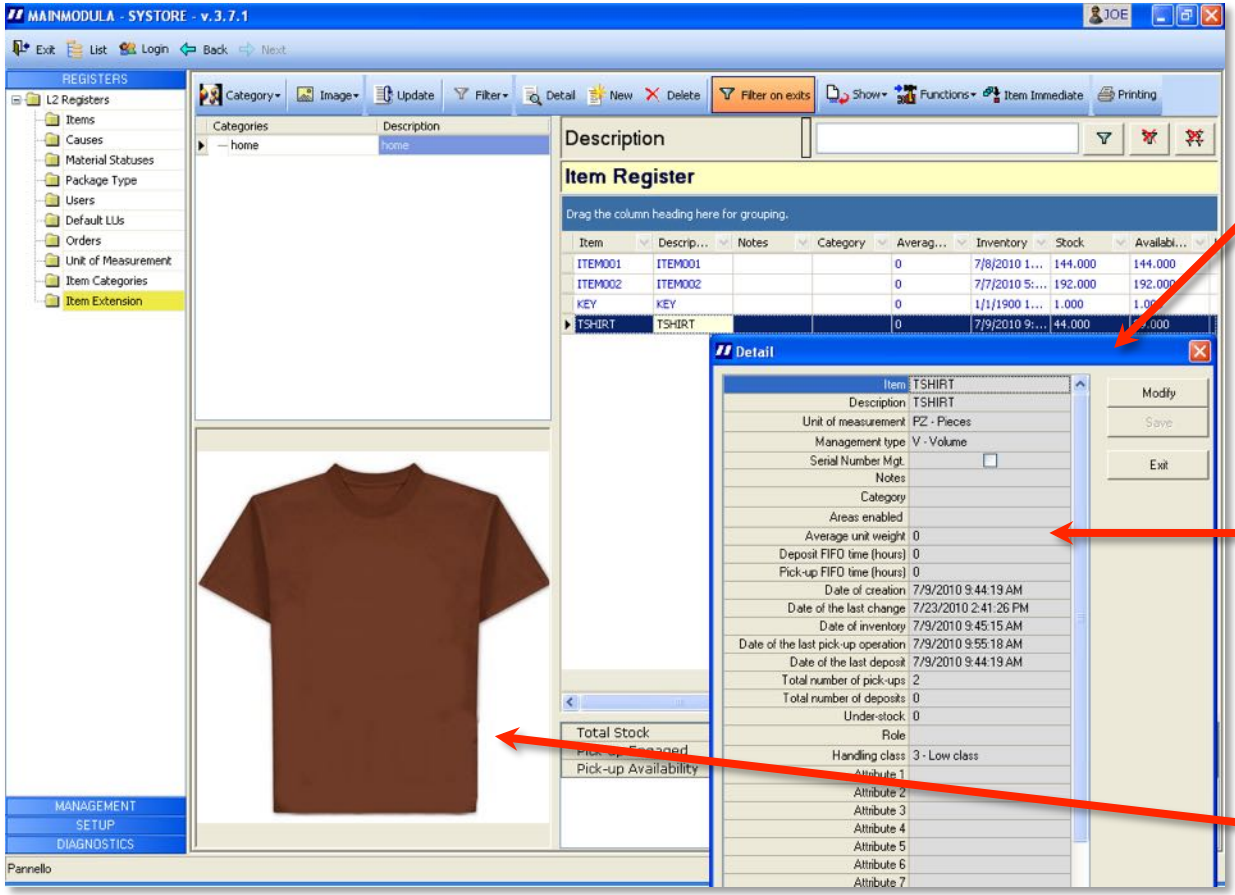
Item Management Capabilities

WMS software manages its own item list…



- It is possible to expand the item list with a series of attributes that extend the item list characteristics to increase the search, filtering, and grouping capabilities.
- It is possible to use the unit weight for each item. This function is useful when you want to use picking accessories, such as a counting scale, etc.
- It is possible to associate an image of each item in the list.

Graphical Tools Capabilities

Using the built-in graphical tools, it is possible to do the following…

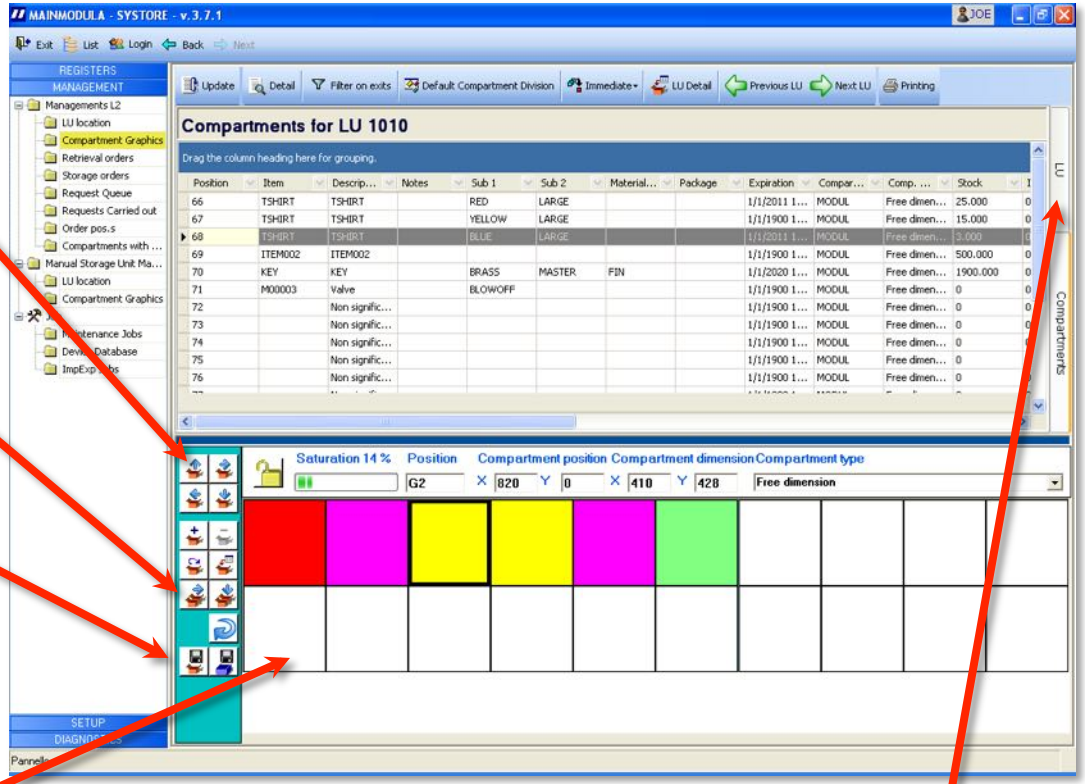
Create compartments within a tray assigning one item from the item list (with an automatic selection of the item code from a list).

Graphically replicate compartments on a tray.

Save compartment types and tray layout templates to allow their replication.

Define stock and maximum capacities for each compartment.

Search for empty compartment locations.

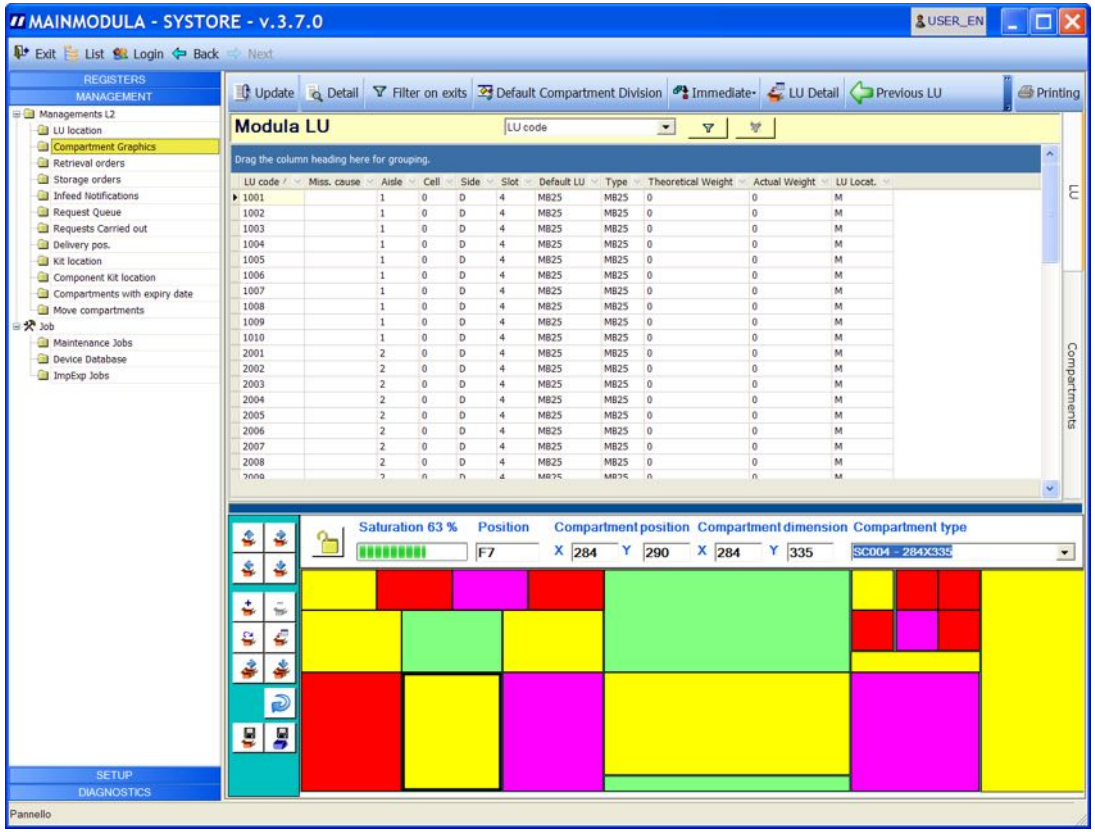


Create inventories of the contents of a tray range.

Search for trays containing a certain item.

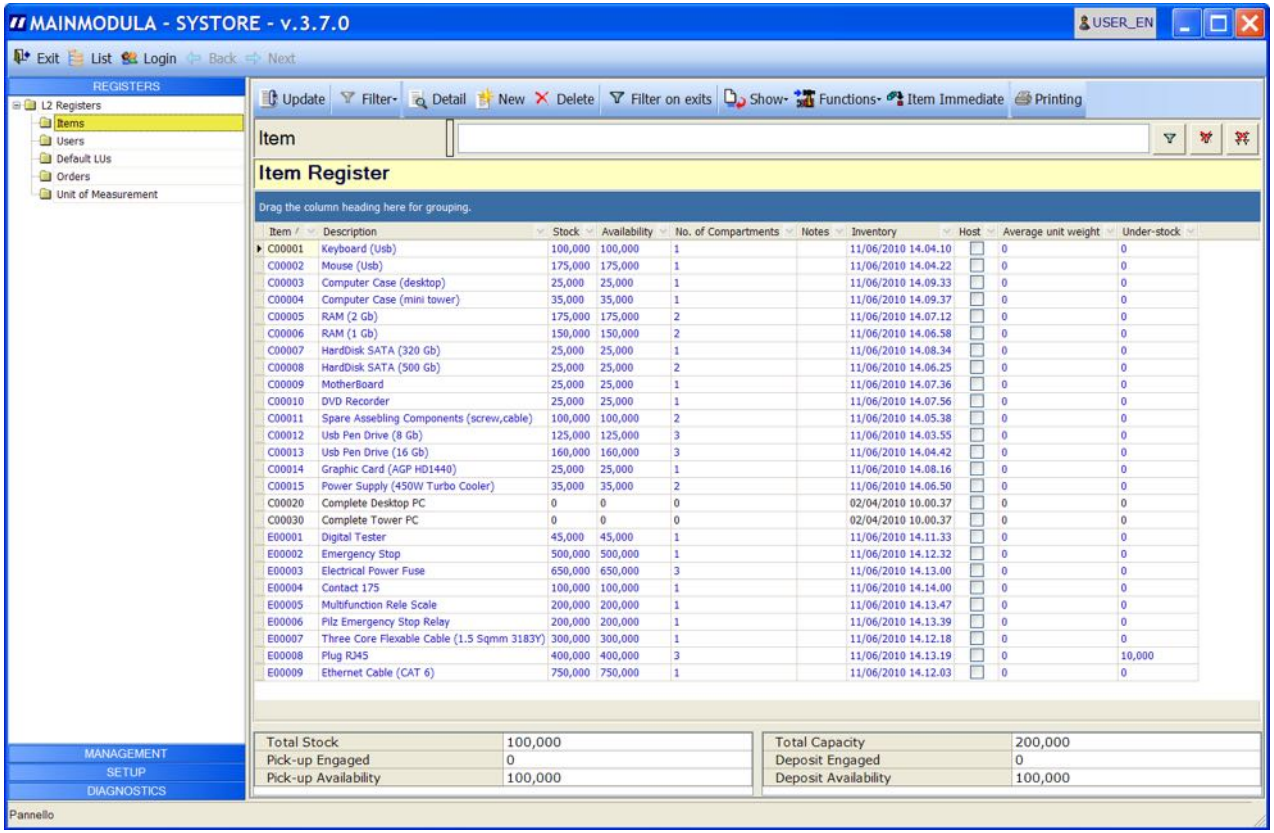
Graphical Tools Capabilities

It is possible to view tray cell layouts for each tray graphically to analyze cell sizes and utilization…



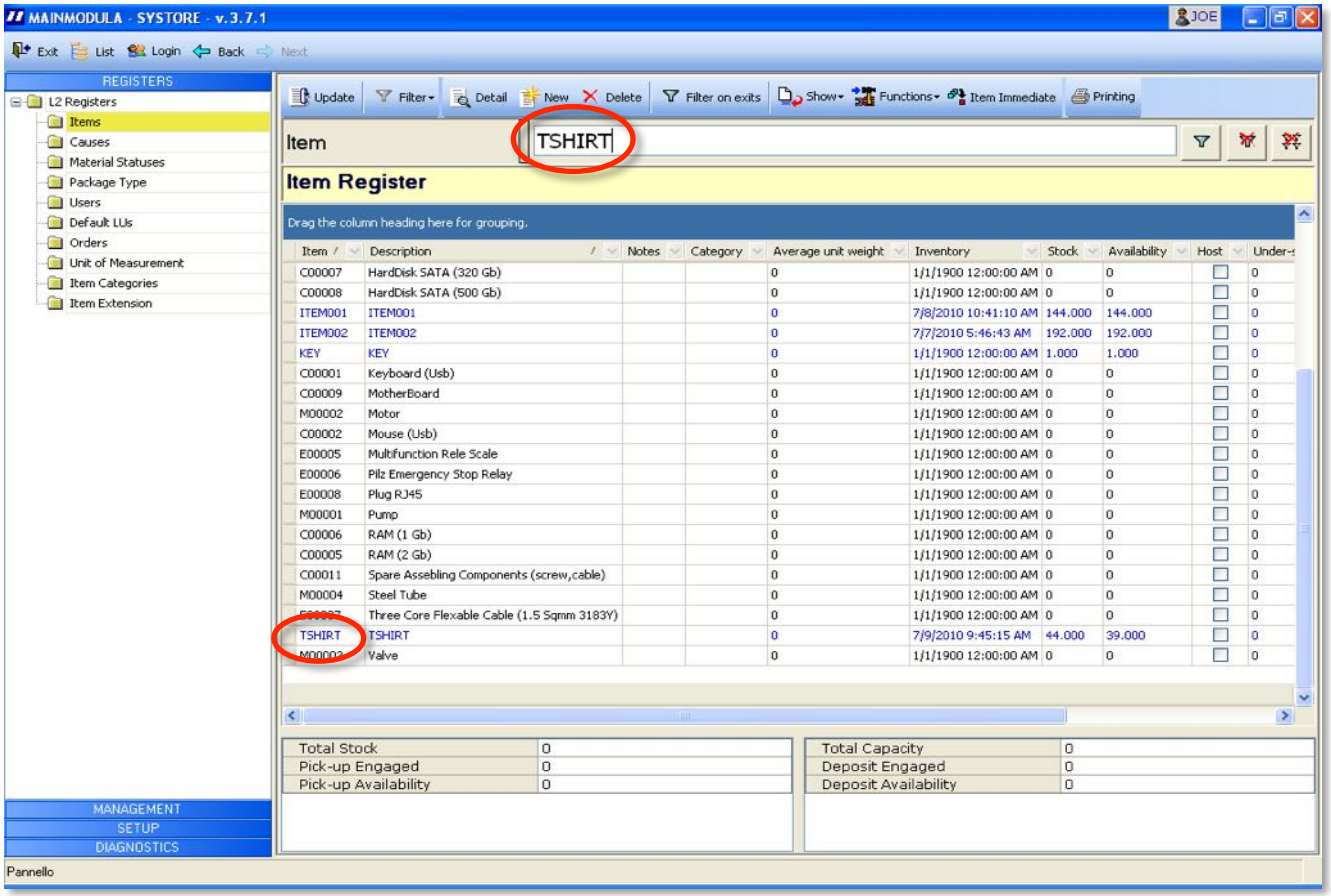
Item Search Capabilities

It is possible to use advanced grids to allow to filtering of item data, such as description, min. /max. levels, weight, etc...



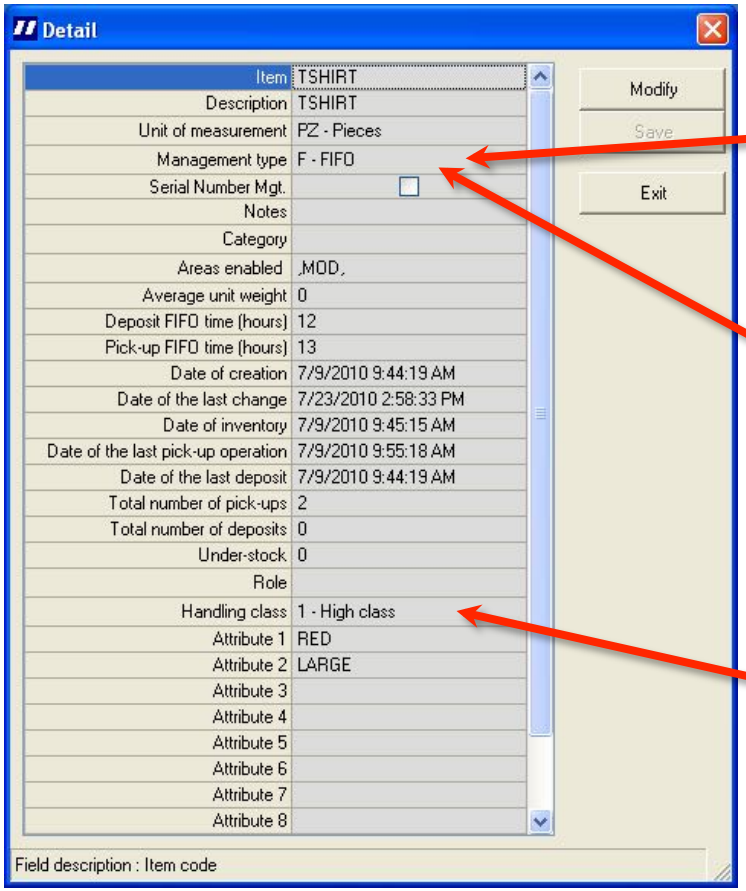
Data Search Capabilities

It is possible to use advanced grids to allow to filtering of order and group data...



Management Types Available

It is possible to manage items with different movement priority types…



FIFO: The item's movement priority is based on the material loading date.

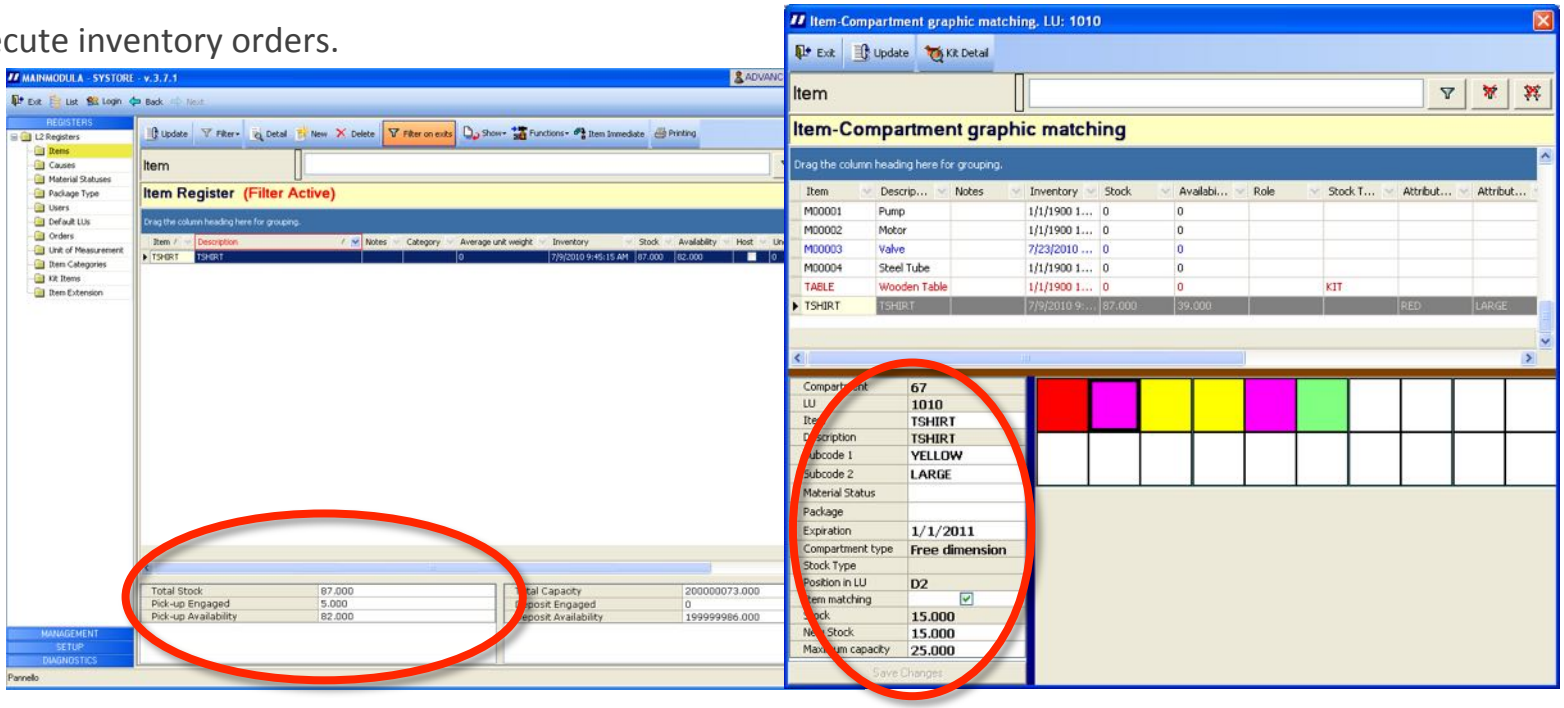
VOLUME: The item's movement priority is based on space occupied in the VLM.

PRIORITY: The item's movement priority orders the sequence based on the sub code of the order.

Inventory Management Capabilities

WMS's Inventory Management capabilities allow users to do the following…

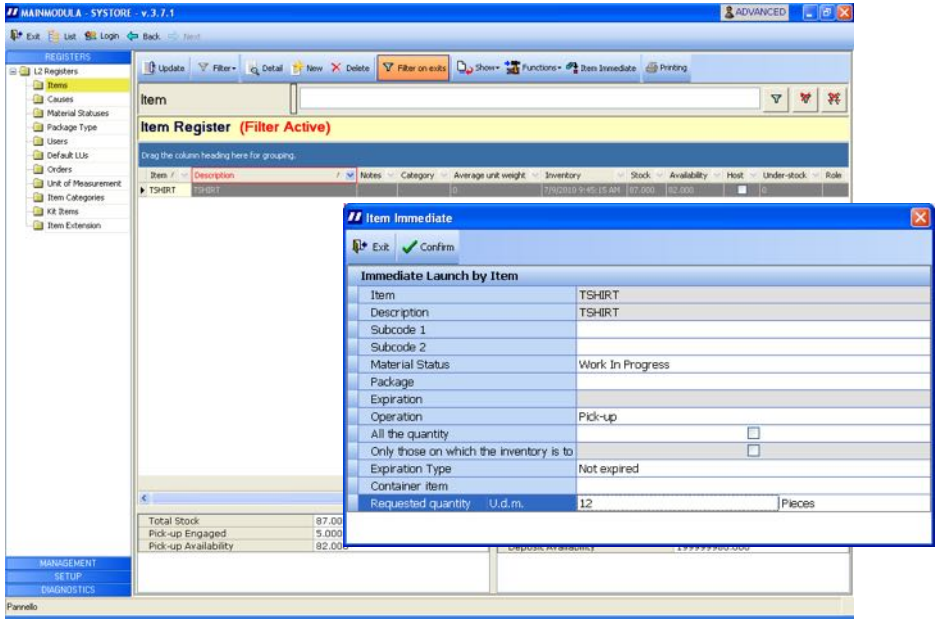
- Execute an inventory for each compartment or location on the trays located within the VLM.
- Execute an inventory for a defined tray range.
- Execute an inventory for each individual item.
- Execute inventory orders.



Basic Management For Picking & Replenishment

Basic Management allows users to do the following…

- Pick and replenish items with immediate requests.
- Pick and replenish items with orders created locally or imported from the host system.
- Simulate orders to verify their outcome.
- Tell the VLM to move immediately upon the execution of an order, or it is possible to wait for a local activation.

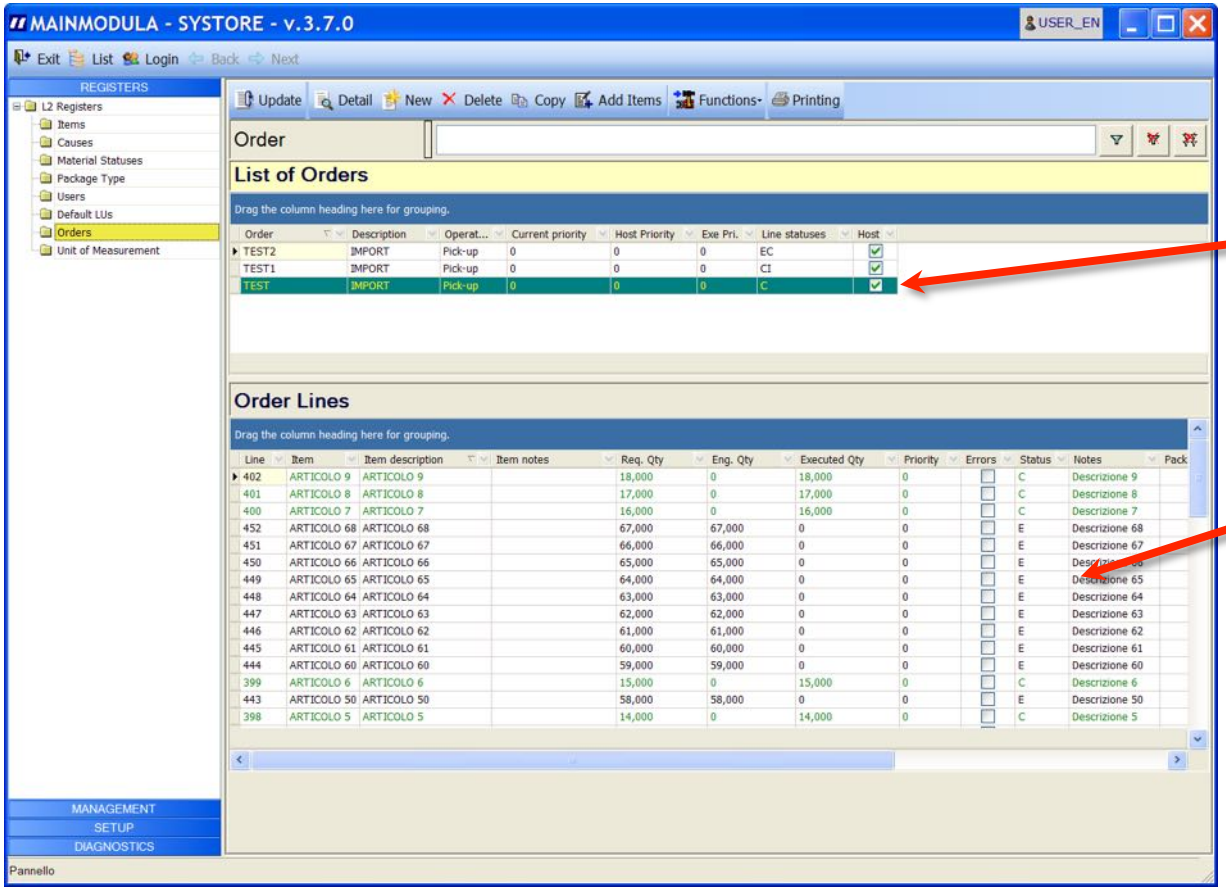


The following features and functionality are also available for picking and replenishment operations using WMS software:

- Automatic Combinations
- Material Engagement Management
- Loading With Transit Area
- Packing List Management
- Batch Picking Management

Order Execution Capabilities

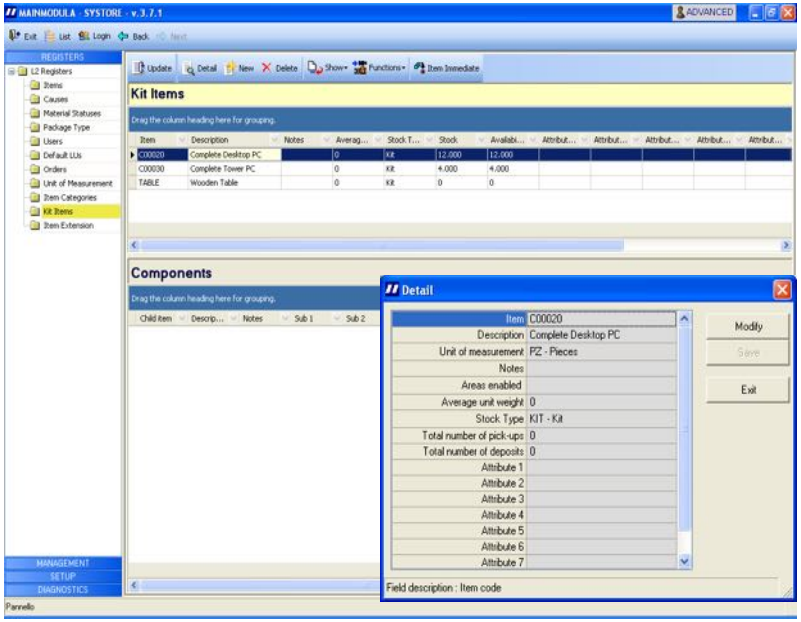
It is possible to select orders to execute or to view their contents, status and priority...

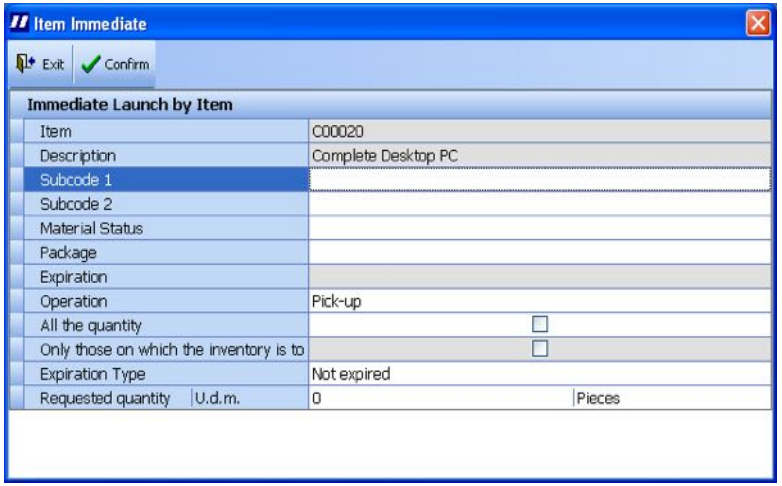


Kit Management Capabilities

Kit management is useful to arrange items during the replenishment process to assist the ease of the picking process…

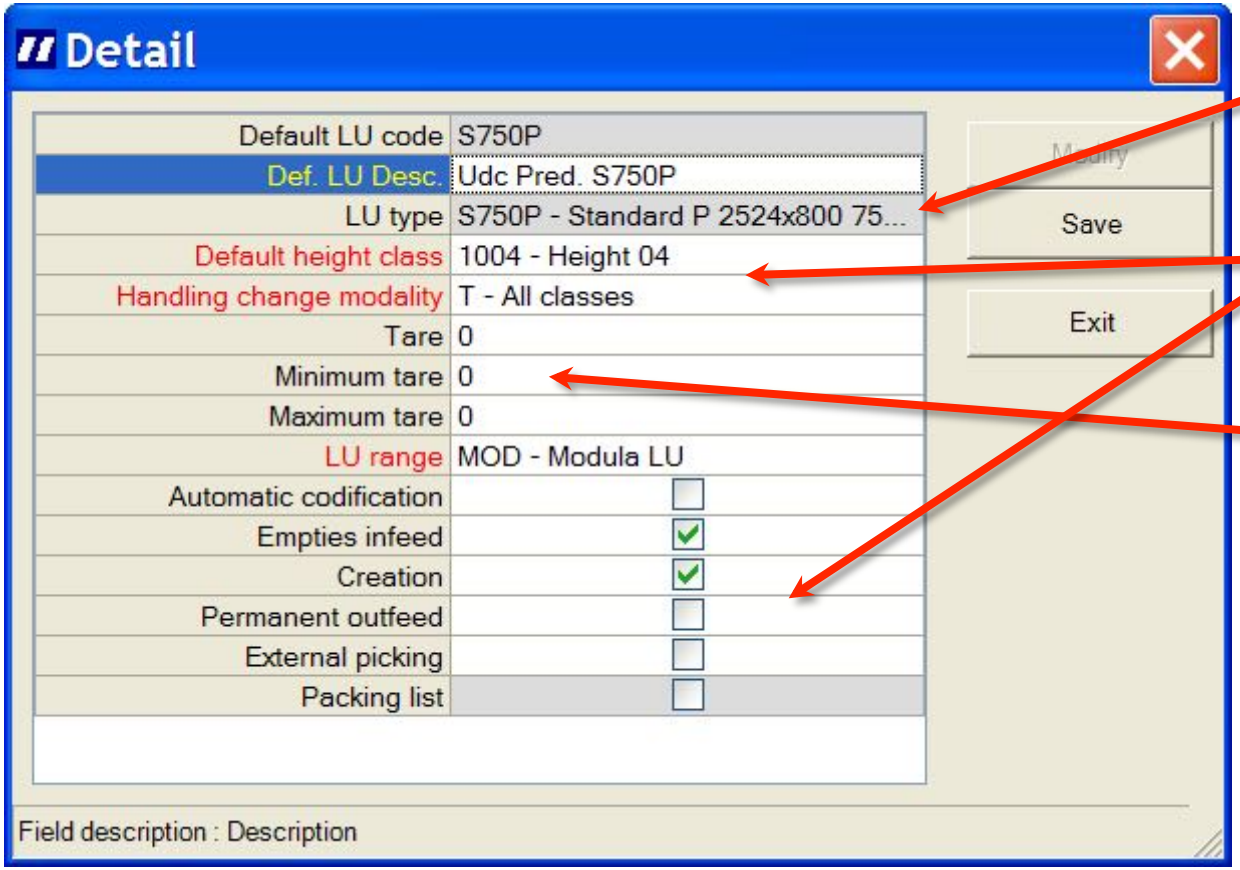
- During the replenishment process, items are loaded into assigned compartments until the required quantity has been reached.
- When a compartment contains all the elements needed to complete the kit, it's possible to pick the entire kit with a single operation.





Tray (LU) Detail Information

It is possible to view the specific details and information for a given tray…



Tray Type

Tray Variables

Tray Weights / Loads

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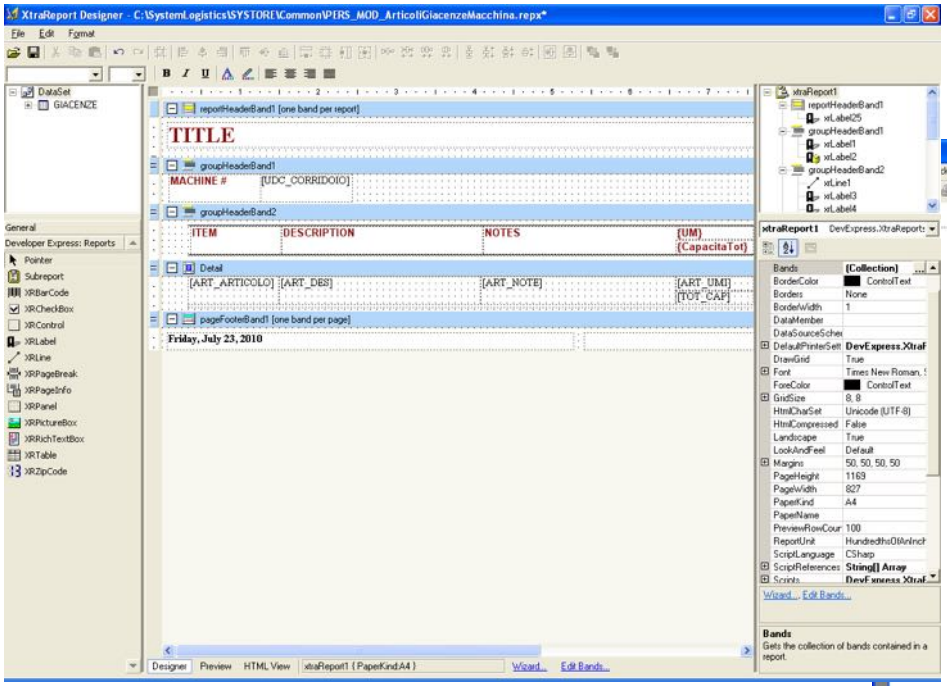
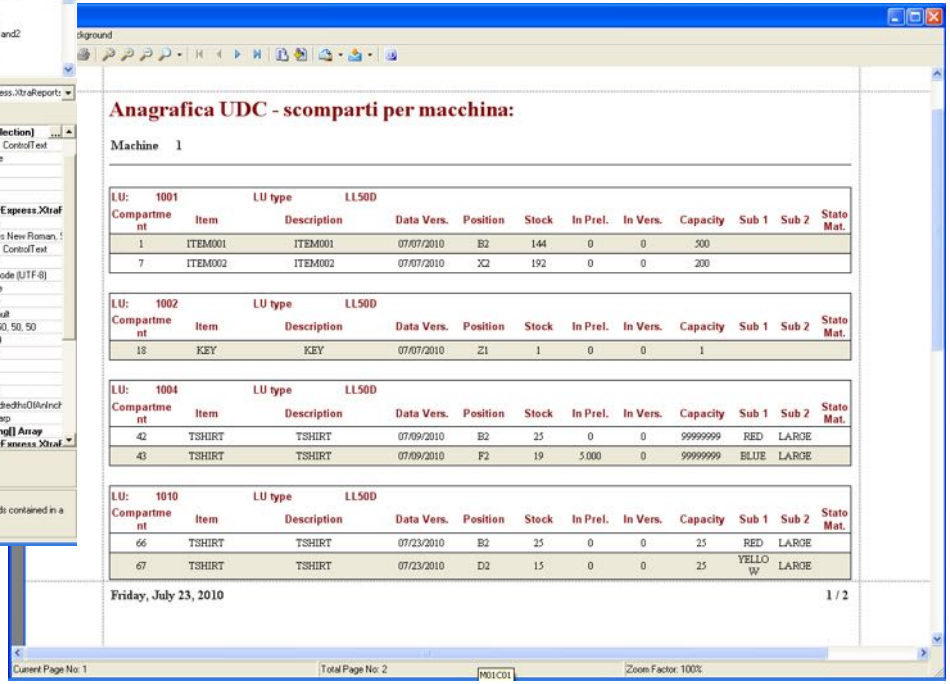
Print Report Capabilities

The software has several preconfigured built-in reports available.
It is also possible to create custom reports with an easy to use, intuitive report tool…





Manual Areas Management

Basic Management:

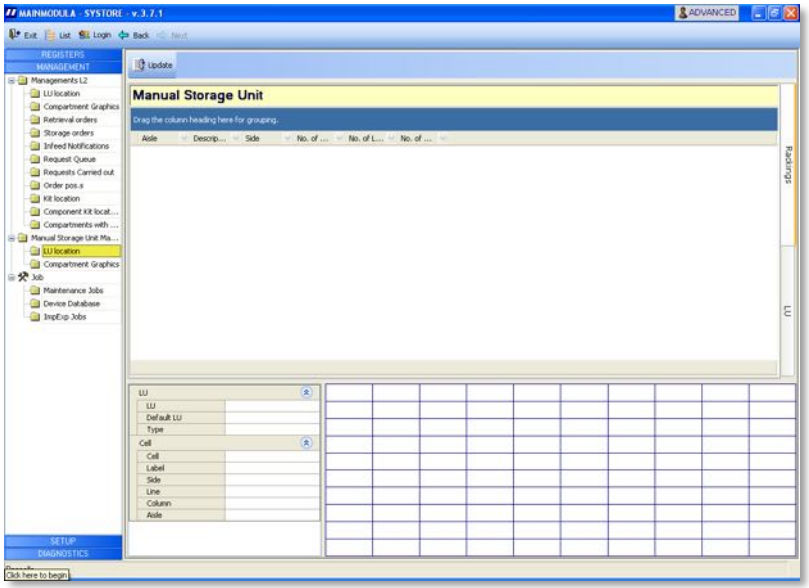
With Basic Management functionality, it is possible to do the following:

- Manage an item's location within the manual storage area(s).
- Print a report with a comprehensive list of the loading, picking, and inventory operations that have taken place.
- Confirm the movements of items within the manual storage area(s).

Area Management:

With Area Management functionality, it is possible to do the following:

- Manage a minimum stock for each area.
- Create internal movements to replenish items from different areas.



Manual Areas Management

RF Terminal Management:

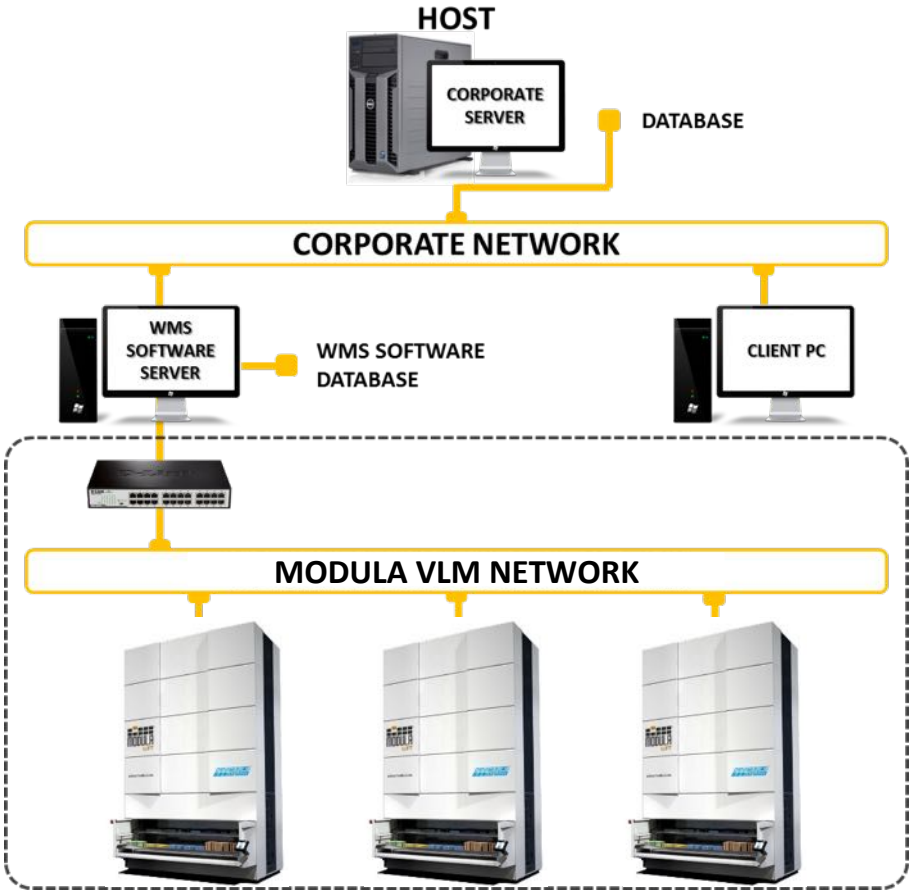
With RF Terminal Management functionality, it is possible to do the following:

- Manage in real time the activities in the manual storage area(s).
- Track the users / operators.
- Split operations between operators depending on the area's assignment.
- Execute and confirm immediate requests.
- Confirm the loading movements indicating directly the destination tray.
- Execute inventory movements.
- Create locations "on the fly" (item mapping).

Input Areas:

- It's possible to manage input type orders that contain items immediately available for picking on a virtual loading unit called "input area".
- The items present in these areas have a higher priority for the picking movements.
- A tool is available to create transfer orders from the input area to the VLM unit(s).

WMS Software; Options For Integration



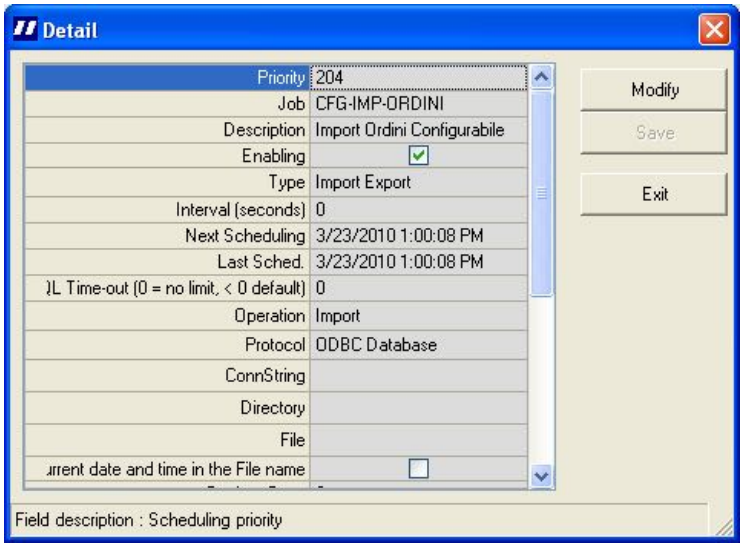
Options For WMS Software Integration:

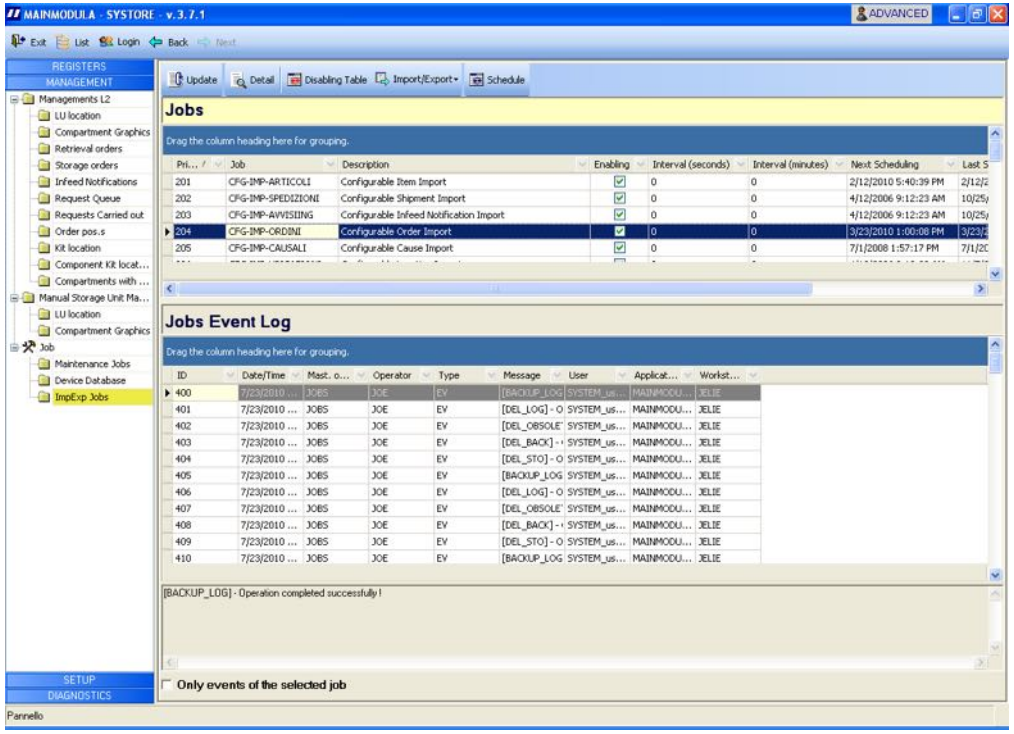
1	**Database With ODBC Support**	Uses an ODBC connection to the Host database t read data being imported and/or write export data. This is the most flexible solution, it enables users to enter, modify and delete data using the SQL statements supported by the selected ODBC driver.
2	**ASCII Data Files**	Enables the user to import one or more ASCII files. There is a table for every file.
3	**XML Data Files**	Enables the user to import one or more XML files, whereas the export function creates a single file. It is necessary to specify the reading scheme for the XML file in order to import data.
4	**Excel Files**	Particular implementation of the ODBC database. Uses the ODBC driver for Excel. Every job will have its own associated Excel file, containing the necessary tables. The user can read and enter data, but cannot delete or modify them.
5	**IDOC For WM**	Integration to SAP using the WM module. Other modules such as the MM module are to be available shortly.
6	**Full Process Integration**	SAP ORACLE

Integration To A Host System

It is possible to import / export data to and from a Host WMS/ERP…

- Available for both automatic and manual operations.
- With the automatic feature it's possible to define when to execute the operations and the time interval between two executions.
- The data exchange can be performed via ASCII files, XML files, Excel Spreadsheets, and data exchange on shared tables accessible via an ODBC driver.





Thank You For Your Attention

MODULA®
90 Alfred A. Plourde Parkway
Lewiston, ME 04240; U.S.A.
Tel.: (207) 440-5100
Fax.: (207) 786-0271
info@modula.us
www.modula.us