PULSE.exe

Cost-effective software tools with high-level functionality for your warehouse operations.
**PULSE.exe Software**
With a rapidly increasing demand for speed and accuracy, it’s important to choose the right Warehouse Execution System. Managing inventory and order fulfillment is crucial to the success of any automated material handling system. Working in concert with ERP systems the PULSE.exe software is the right solution to challenging ever increasing demands from your customers. Choosing the right solution can be confusing as many systems are not designed to optimize technology, capacity or take advantage of order/picking batch efficiency.

**Fine Tuning the Warehouse**
PULSE.exe is a full set of integration tools that provides operational insight and performance optimization throughout your entire operation. It is a flexible, tightly integrated system that uses advanced management capabilities for inventory control, resource scheduling and order management. It’s modular in nature, easily configurable, and scalable to easily adapt to your current and future needs. The core of our tools is centered around our Warehouse Control System (WCS) and our Warehouse Execution System (WES).

**Warehouse Control System (WCS)**
The WCS acts like a conductor in an orchestra, ensuring that individual pieces of material handling technology performs with harmony, precision and efficiency. This is the real-time layer that controls conveyor, AS/RS, AMRs, AGVS, etc.

**Warehouse Execution System (WES)**
The WES is the middleware between an ERP/WMS and the resources necessary to perform various tasks. These resources include labor as well as the WCS which controls the Material Handling Technologies. The WES communicates with the various resources to manage discrete inventory, collect information, and direct work efforts such as Order Fulfillment, Replenishment, and Shipping.

**Strengthening the Logistics Network**
Supply Chain Optimization
Our customized and automated solutions improve planning, inventory, order fulfillment, and distribution strategies.

Operational Visibility & Control
The customer has greater end-to-end visibility and control using real-time data within a single system.

Analytics
We use powerful data analytics to provide strategic insight into the customer’s supply chain operation.

**Bottom Line Results**
- Greater productivity and accuracy
- Lower operating costs
- Data/system integrity
- Better asset utilization
- Enhance green initiatives
- Less downtime and fast ROI
PULSE.exe
Incorporated into the PULSE.exe WES and WCS is a modular set of software products that encompasses all of the tools necessary to efficiently and economically operate your warehouse or distribution/fulfillment center. PULSE.exe software consists of the following five modules. You can select only the modules needed, and have the flexibility to add modules as your business grows:

- **Inventory Management System (IMS)**™ - A key element of the WES is this state-of-the-art technology to enhance the accuracy and efficiency of warehouse operations and data integrity. IMS™ maintains optimum inventory levels, accurately managing and tracking inventory throughout the warehouse.

- **Order Management System (OMS)**™ - The backbone of Order Fulfillment and the WES, the OMS provides the functionality necessary to properly and efficiently execute the order fulfillment process. This module facilitates the planning, processing, verifying, picking, packing and shipping of orders within the warehouse or distribution center.

- **Shipment Management System (SMS)**™ - A software tool that provides reliable parcel and LTL shipment manifesting. Powered by ConnectShip™, SMS™ streamlines shipping processes based on your business needs.

- **Navigator™** - This module, an integral element of the WCS, is the focal point for managing the operational aspects of the material handling system. It optimizes the routing of orders on the conveyor system. This module coordinates real-time control devices to efficiently manage the workload.

- **Toolkit™** - This is a multi-purpose module which assists operators and managers to work in a proactive rather than reactive environment, ensuring quality throughput and on-time delivery. This application provides diagnostic and reporting tools to monitor system and operational performance.

PULSE.exe/AutoStore
We understand that not all systems require custom configured solutions, so we have developed a standard product called PULSE.exe/AutoStore. This product draws upon various components our vast set of modular products and is configured into a product designed for fast, cost-effective implementation. The PULSE.exe/AutoStore software includes all the functionality needed, including standard interfaces to ERP and WMS, inventory management, put-away, order fulfilment, and shipment.
### PULSE.exe Modules

#### Inventory Management (IMS)™
- **Plan**: Slotting, Location Control, Cross Docking
- **Execute**: Receiving, Put-Away, Product Transfer, Replenishments
- **Verify**: Cycle Counting, Physical Inventory, Quantity Adjustments
- **Report**: Pallet Building, Physical Inventory, Advanced Ship Notice

#### Shipping Management (SMS)™
- **Plan**: Rate Shopping, Multi-Carrier Shipping
- **Execute**: Multi-Carrier Shipping, Domestic/International
- **Verify**: Email Ship Notification, Business Notification
- **Report**: Carrier Compliant Docs, End of Day Process

#### Order Management (OMS)™
- **Plan**: Wave Planning, SKU Allocation, Cartonizing, Workload Balancing
- **Execute**: Paper Picking, RF Picking, Pick-To-Light, Voice Directed
- **Verify**: Contents List, Manual Pack Verify, Weight Check, Verification Scan/Pack
- **Report**: Invoices/Pack Slips, Fill Counts, Pick Productivity, SKU Metrics

#### Navigator™
- **Plan**: Route Planning, Flexible Mapping
- **Execute**: Real-Time Sortation, Host/WCS Directed Routing, Zone Skipping, Round-Robin
- **Verify**: In-Line Scale, Divert Confirmation, Carton Tracking, Scanner Logs

#### Toolkit™
- **Plan**: Automated Picking Systems
- **Execute**: Automated Print & Apply
- **Verify**: Automated Picking Systems
- **Report**: Automated Picking Systems

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**Cost Effective**
Since our software is equipment agnostic, the modules can be implemented quickly into your current operating system. This is a very efficient and cost-effective way to automate your operations and improve your ROI without the expense of purchasing new equipment.

**Scalability**
The modules can be added to an existing installation as a first automation step. As your warehouse or distribution needs change and/or expand, other PULSE.exe management tools can be seamlessly added.

**Configurability**
Our software is modular and user friendly. You can easily configure the modules to accommodate your company’s unique business requirements, changing warehouse needs, and increased demand as your company grows and prospers.

**Outstanding Support**
PULSE.exe provides service and support that are second to none. Through extensive planning, our experienced project engineers work closely with you to provide you with the best solution and a seamless installation. We do not outsource our support to a third party, so you can be confident that you are getting support from experts who are familiar with your business environment.
Inventory Management (IMS™)

IMS™ provides the necessary tools to improve inventory tracking, planning and management.

IMS™ enhances customer service and profitability by reducing back orders and improving on-time delivery.

IMS™ maintains optimum inventory levels and accurately tracks inventory throughout the warehouse.

IMS™ provides real-time statistics and customized reports.

**Key Benefits**
- Eliminates excess inventory
- Improves inventory accuracy
- Optimizes space utilization
- Reduces inventory loss and spoilage
- Increases productivity

**Key Features**

**Receiving**
Allows you to efficiently receive product into the warehouse and stage it for put-away utilizing RF and other devices. IMS™ is adaptable to handle both planned and blind receiving.

**Slotting/Put-Away**
Easily configurable to accommodate an organization's unique business needs. One of the many configurations allows you to store inventory by product, type, class, or SKU.
Inventory Management (IMS™)

**Key Features Continued**

**Replenishment**
Continuously monitors inventory levels of active pick locations and automatically generates replenishment tasks based on a minimum quantity for each item. Replenishment tasks may also be generated manually in anticipation of increased activity for an item.

**Inventory Transfer**
Provides an activity log of all inventory transfers in the warehouse. IMS™ tracks the movement of product in real-time, thereby providing an accurate account of inventory levels in all locations.

**Cycle Counting**
Designed to accommodate multiple methods of counting to ensure inventory accuracy. IMS™ provides full reconciliation and discrepancy reports, as well as the capability to track all cycle count history.

**Physical Inventory**
When you perform a physical inventory, IMS™ creates and manages physical inventory tasks for the entire warehouse. This auditing ensures inventory data accuracy.

**Inventory Maintenance**
Designed to manage your warehouse according to your specific business rules. Hand-held data collection devices are utilized to control inventory activities. It also allows you to manually change the inventory count to reflect the actual SKU count.

**Reporting**
Provides powerful and dynamic reporting solutions to easily create customizable printed documents and reports. It reduces the time needed to develop professional looking documents such as pack-out documents, production reports, inventory reports and shipping documents.

IMS™ offers a rich feature set that includes directed put-away, slotting tools, cycle counting, replenishment, multiple SKU pick locations, SKU allocation against 4 wall inventory, and more.
Shipment Management (SMS™)

SMS™ provides all the tools you need to efficiently ship your product throughout the world.

SMS™ provides a carrier-compliant parcel and LTL shipping manifest system. Our software supports all major carriers and provides you with carrier-compliant labels and documentation.

Powered by ConnectShip™, SMS™ offers customized shipping solutions to streamline order fulfillment and shipping processes according to your best practices.

Key Benefits

- Reduces shipping costs
- Enhances customer service with e-mail notification
- Supports all major carriers
- Prints carrier-compliant labels
- Prevents double shipment of orders
- Verifies that shipment is being sent to correct location
- Allows for rate shopping to select the most cost-effective shipping method
- Eliminates common shipping errors, such as shipping a package to a PO Box via UPS

Key Features

Enhanced customer support through end-to-end visibility and e-mail shipment notification.

Customized shipping solutions are seamlessly integrated to enhance your distribution and warehousing needs.

Multi-carrier functionality is efficiently managed via one interface screen.

API-based integration tools allow you to easily and successfully execute your shipping functionality.

Check and balance system improves the accuracy and efficiency of the shipping process, while minimizing returns and charge backs.

Print & apply streamlines your shipping operations by automating the labeling process and providing faster, more precise labeling.

Rate shopping provides an efficient way to get the best shipping rate for every package you ship.

Electronic manifesting allows you to easily perform end-of-day procedures including changing the order status, transmitting shipping information to carriers, and printing and transmitting manifest reports.

Shipping rules can be easily configured to accommodate both standard and custom requirements as needed.
Order Management (OMS™)

OMS™ provides the functionality to properly and efficiently execute the order fulfillment process.

OMS™ facilitates the planning, processing, verification, and shipping of orders within the warehouse or distribution center.

OMS™ streamlines the ordering process, accelerates order turnaround, and increases order accuracy with reduced labor costs, resulting in improved customer satisfaction.

Key Benefits

- Improves throughput
- Decreases labor costs
- Optimizes wave techniques for increased picking efficiency
- Improves customer satisfaction by reducing errors and ensuring order accuracy
- Boosts order turnaround times
- Reduces freight charges with optimized carton size
- Reduces pack-out processing time by allowing orders to be packed directly into the shipping carton
Order Management (OMS™)

Key Features

Wave Planning
Planning orders for optimized picking is the most important part of the order fulfillment process. OMS™ is a configurable tool that organizes and streamlines orders for picking efficiency.
• Improves throughput
• Minimizes packing errors
• Reduces labor costs

Scheduling
Utilizing the Wave Planner and Scheduling functions, the most efficient picking technique will be determined whether you are processing single line/single quantity orders, multiple line orders, or ship alone orders. OMS™ releases the proper number of Pick Tasks to maintain a fluid work load.

Picking
QC OMS™ is designed to handle manual and/or automated picking solutions such as pick tickets, carousels, RF devices, and Pick-To-Light (PTL).
• Works well with any automated picking system
• Accommodates multiple picking methods including Batch Picks, Cluster Picks and Single-Item Order Picks

Packing
OMS™ takes the guesswork out of the packing process. OMS™ uses a cartonization process to analyze the makeup of each order and select the proper sized shipping container. Our software allocates items to various containers based on weight, volume, and dimension to minimize the number of containers needed.
• Provides carton optimization
• Reduces shipping costs
• Reduces material costs

Verification
Utilizing pick request messages from the various picking sub-system controllers (such as Pick-to-Light / A-Frame), OMS™ verifies the status of each order and ensures order integrity.
• Analyzes pick requests in real-time
• Verifies the status of an individual order
• Ensures the integrity of each order

Status Tracking
OMS™ tracks the status of the order throughout the process and provides real-time management statistics.
• Provides greater visibility throughout the order fulfillment process
• Built-in alerts notify you of potential problems
• Quickly provides data-driven reports
NAVIGATOR™

NAVIGATOR™ is the focal point for managing the operational aspects of the material handling system.

NAVIGATOR™ coordinates the various real-time control devices to effectively and efficiently manage your daily workload.

NAVIGATOR™ optimizes the picking, sorting and routing of orders for accurate and efficient order processing.

NAVIGATOR™ provides seamless integration to most of the leading ERP and WMS systems, as well as custom programs.

**Key Benefits**

- Provides a comprehensive view of floor-level operations through a single interface to all material handling devices
- Eliminates the inefficiencies of the pick-and-pass picking method with zone skipping
- Ensures that orders are processed in the right sequence with priority-based routing
- Simplifies equipment controllers by centralizing decision logic in the WCS
- Optimizes the picking operation
- Accommodates both simple and complex routing

**Key Features**

**Operations Manager**

NAVIGATOR™ provides the critical link between the non-real time host and the real-time Programmable Logic Controller (PLC) based material handling system. NAVIGATOR™ coordinates real-time control devices, including sorters, pick-to-light controllers, and scales, to optimize your workload.

- Determines the most efficient routing and transmits directives to the equipment controllers.
- Maximizes throughput.
Key Features Continued

Route Manager
The Route Manager interfaces with all types of conveyor sorting devices. Where more complex environments exist and multiple scanners are required, the route manager provides priority-based route sequencing.
- Easily configurable to handle unique business rules
- Allows for complex routing and zone skipping

Print & Apply
NAVIGATOR™ manages Print & Apply, which is an automated labeling process to streamline your warehouse operations. Our software leverages this technology in many ways, from labeling cartons at printing induction to applying labels as cartons are shipped.
- Eliminates the expense of preprinted labels
- Provides faster, more precise labeling
- Reduces labor costs

Weight Verification
NAVIGATOR™ manages in-line or tabletop scales to verify carton weight. Weight verification takes into account the scales’ weight tolerances to compensate for variations. The user can uniquely configure the weight verification mode and tolerance for each scale.
- Improves customer service by ensuring order accuracy
- Increases picking accuracy
- Allows for improved efficiency when auditing cartons
- Highly configurable to your business rules
- Reduces labor costs by eliminating the need to audit every carton
Toolkit™

Toolkit™ is a powerful, multi-purpose tool that provides the technology needed for fast and accurate communication with the host Enterprise Resource Planning (ERP) System, Warehouse Management System (WMS) and the lower-level Material Handling System. It has dynamic diagnostic capabilities for monitoring and troubleshooting.

**Key Benefits**

- Provides interface links to industry standard ERP / WMS systems such as Manhattan, SAP, Oracle, J.D. Edwards, etc.
- Reduces system downtime with real-time diagnostic tools.
- Makes better decisions using extensive management information.
- Improves efficiency by empowering users to create their own screens and reports.

**Key Features**

**FLEX Reports™**

FLEX Reports™ is a comprehensive reporting solution. All the necessary reports for managing orders, inventory, shipments, and transactions are integrated into the user’s customized system. This application provides data on demand for greater visibility over floor operations.

**Diagnostics, Statistics and Notification**

Toolkit™ provides diagnostic and statistical analysis tools to monitor and troubleshoot system performance. The Notification Manager contacts key personnel via email or mobile phone when a system problem is detected.

**FLEX Screens™**

This module provides a user friendly, highly customizable, and flexible interface for accessing, displaying, and editing database information.
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Headquarters
Pittston, Pennsylvania

Office Locations
Colorado North Carolina
Florida Ohio
Indiana Pennsylvania*
Massachusetts South Carolina
Michigan* Utah
New Jersey Vermont
New York

Contact
570.655.5951 MAIN
PULSE-si.com WEB

@PULSE_si
PULSE Integration
PULSE Integration
PULSE Integration