

WAREHOUSE SOLUTIONS



Warehouse Management Solutions

Infor's logistics products are focused on supporting emerging technologies in the Warehouse Management (WMS) arena of supply chain management. These solutions give Distribution Essentials users a best-of-breed methodology for effectively managing and controlling the inventory in their warehouses.

Our products provide a departmental solution to warehouse productivity and accuracy and are designed to address issues of warehouse workflow including receiving, product movement, shipping, picking, and counting. These warehouse tasks are managed centrally in a real-time environment, supported through Radio Frequency (RF) data collection devices carried by warehouse workers. This approach to managing the warehouse allows productivity gains while inventory and order fulfillment accuracy goals are achieved to an extent considered impossible just a few years ago.

*It's your warehouse...
Infor Distribution Essentials helps you control it.*

Total Warehouse Logistics

Total Warehouse Logistics (TWL) improves warehouse productivity and accuracy. The system addresses warehouse workflow, including product movements, receiving, shipping, picking, and counting. These warehouse tasks are managed in a real-time environment supported through Radio Frequency (RF) Data Collection devices that are carried by workers in the warehouse. The TWL approach to warehouse management is an integrated solution that works with the various files and functions of the system while maintaining warehouse-specific tasks and data.

"We eliminated our Annual Physical count saving the company thousands of dollars per year."

Dick Stenger, Central States Industrial Supply

TWL frees warehouse operators to manage resources without concerns about system impact. Each warehouse can function with its own parameters, data, and rules. While a warehouse maintains warehouse-level data, the Infor enterprise-level system provides a complete picture of total operations, including the ability to see product levels by warehouse location and status of orders throughout the system. Within the warehouse, the locator functions as the heart of the system, tracking all products to the location level. The locator works with other parts of the system to not only track item location, but also to determine where an item should be stored and from where it should be picked.

Receiving

The receiving function allows warehouse technicians to receive product against a purchase order, multiple purchase orders, or an Advanced Shipping Notice (ASN) that has been received via Electronic Data Interchange (EDI). Product cross-references can be used to utilize manufacturers' barcodes or labels can be printed if no labeling is available. Update of information to the warehouse system is immediate. Backorders and purchase order updates are handled by the system, increasing efficiency and accuracy.

Features Include:

- Counter sales
- PO, Multiple PO, EDI/ASN receiving
- Top off primary bin locations
- Multiple receivers per PO/Shipment
- Vendor cross-reference maintenance from handheld data collection device
- Barcode labeling and data capture
- Real-time reconciliation of actual receipt to purchase order
- Automatic back order fulfillment
- Cross dock routing
- Damaged goods routing
- Quality control quarantine
- Pallet/carton/piece control
- Lot/batch control
- Product serialization
- Directed and non-directed bin assignment
- Daily receiving summaries

Inquiries Include:

- Open bins by user-established priority assignments
- Inventory currently on loading dock
- Inventory by shipping/receiving document number

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Material Handling

Material handling includes the function of put-away, inventory moves, bin or slot consolidation, and replenishment of primary bins. These functions are directed and controlled by the system, based upon a zone approach.

Warehouse technicians are directed to correct locations for all movement activities by the system through RF terminals. Location confirmation is prompted in each step of the process to ensure accuracy. An audit trail is maintained to aid in product tracking and accountability.

Features Include:

- Directed and/or non-directed control increases employee efficiency
- Cube and weight-based slotting optimizes space/rack utilization
- Temporary location management continually tracks inventory
- Inventory cross edits for accuracy
- Real-time location/movement updates operator
- Min-Max and demand primary replenishment keep fast items in quick pick areas
- Velocity tracking based on bin hits
- Override capabilities
- Operator productivity reporting
- Bin replenishment

Inquiries Include:

- Inventory movements and adjustment by SKU, document
- Open replenishments and consolidation opportunities
- Item velocity re-classification recommendations
- Transaction history by SKU with daily, weekly, monthly, and quarterly period totals

Order Picking

TWL brings improved efficiency and accuracy to the picking operation, improving customer satisfaction while reducing costs. Orders initiated in SX.enterprise Order Entry are released to the warehouse for fulfillment. TWL organizes orders by user-established criteria that can include order number, customer, order type, zone, aisle, and carrier. Once selected, the orders are grouped based on the pick logic selected including pick to pack, pick to tote, wave picking, zone picking, and order consolidation.

Features Include:

- Optimized picking algorithms increase productivity
- Cross dock routing reduces material handling
- User-defined order picking process provides warehouse flexibility
- Location and product barcode scan verification increases shipping accuracy
- Bulk storage location management
- Primary pick location management increases picking efficiency
- Piece and carton picking management
- Operator productivity measurement and reporting

Inquiries Include:

- Pick list by order number, customer, order type, zone, and carrier
- Released/unreleased order browse with order totals and order summary

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"We doubled the number of POs a receiver could process the first month with TWL."

Robert Bernier,
Tenaquip, LTD

Order Packing and Shipping Feedback

TWL makes packing an order more accurate and efficient. If you are using a pick-n-pack process for order fulfillment, the order can be packed as it is picked, eliminating the packing step altogether. If you need to consolidate by order or customer, the system tracks the locations of the order totes and assists in order assembly. Using RF devices assists in verifying that the correct items/totes are consolidated. Information is tracked at the carton, pallet, container, and/or trailer level allowing this information to be included in ASN transmissions. Packing list, shipping labels, bills of lading, dispatch notes, and carrier manifests are provided.

Features Include:

- Order verification
- "Pick to Pack" or "Pick to Tote" available
- Shipping feedback to order
- Shipping manifest, bill of lading, packing list
- Shipping container markings
- Order tracking
- Pallet build
- Sorting by carrier
- EDI ASN document

Inquiries Include:

- Packing list details
- Shipments by customer by line item
- Detailed ASN and shipping log
- Orders not shipped

Inventory Adjustments

The Inventory Adjustment function allows for directed physical and cycle counts on the warehouse floor through use of an RF terminal. Data from the count process is immediately updated to the warehouse system and then communicated to SX.enterprise for any necessary adjustments to inventory and the general ledger.

Features Include:

- Physical and cycle counts during normal operations
- Real-time inventory updating
- System generated counts based on ABC classification
- Discrepancy counts generated by system
- Zero pick verification
- Random item or bin counts
- Physical counts
- Extensive operational and managerial reporting

Inquiries Include:

- Inventory summary
- Inventory by bin, lot reference, serial number

"We went from 60 to 110 picking lines per hour with TWL."

Carl Vaughn,
Refrigeration Supply
Distributor



SX2GO

Three applications are used with cradled handheld computing devices, (Palm™) which facilitate the counting and delivery processes. Export and import of data for the applications is ftp'd by a single connection module in SX.enterprise to the Hot Sync Handler on the PC.

Manage consign- ment and Tool Crib Inventory for Customers

Features Include:

- The **Inventory Count** application allows segmentation of a count run into smaller work units. The work unit data is loaded onto a handheld device and then the data is updated using the handheld device. It can be counted manually or through a scan process, and then re-imported into SX.enterprise through ICEPH for normal reconciliation and update processing. Use of a Symbol Palm™ will allow scanning of the product number, barcode, and UPC to reduce errors and expedite the count process.
- The **Delivery** application accepts sales order information based on route, customer, order number range, or ship via. It displays the customer ship-to, purchasing agent, phone, order number, line number, invoice/COD amount, order date, product code, quantity ordered and shipped, product description, UOM, and line item detail. When delivery takes place, the receiver's signature is captured and the delivery disposition is entered. Through OEEHD, signatures that have been collected by delivery personnel and disposition are updated into the order in SX.enterprise to maintain an electronic record.
- The **Tool Crib** application allows the creation of OE orders, and the management of consignment and Tool Crib inventory for customers (available with release 3.2).

Integrated Bar Code

The Integrated Bar Code (IBC) module is an entry-level solution to warehouse productivity and accuracy. The IBC add-on module provides user-defined bar code label printing and Radio Frequency (RF) assisted receiving, shipping feedback, and physical/cycle count. If you require bar code print or simplified RF to capture and update warehouse data without the requirement for a warehouse product locator, IBC is for you. Essentially, IBC lets you benefit from the advantages of Automatic Data Collection (ADC) technologies without overextending bar code capabilities.

Integrating Bar Codes into the Warehouse Environment

Labeling warehouse inventory provides a first step toward ADC. Infor IBC lets you label products, locations, and warehouses with bar coded labels.

However, labeling, in and of itself, is of limited value internally until it can be integrated with other warehouse functions. That's where the Infor IBC application significantly adds to productivity improvements in warehouse logistics. IBC integrates three major warehouse functions with RF capability, allowing an RF terminal or a bar code scanning device tethered to the warehouse terminal or to a PC to accurately gather data from bar coded labels.

Integrated Warehouse/RF Functions Yield Productivity Improvements

IBC integrated functions are executed within the framework of SX.enterprise business logic. The warehouse functions that integrates IBC with RF are:

- **Inbound product receiving:** Product

coming into a warehouse location either from a vendor source (Purchase Order) or another company location (Warehouse Transfer) can be received using the RF terminal.

- eliminate manual data entry and improve accuracy through scanning bar coded labels and provides a link for
- immediate validation of the related Purchase Order or Warehouse Transfer line items.
- improved efficiency through consolidation of the receiving process as a one-step operation.
- Once received, the SX.enterprise Purchase Order or Warehouse Transfer files are updated for immediate accurate access.

- **Outbound product shipping/picking feedback:** Product moving out of the warehouse can be verified through the use of the RF terminal. Picking documents are generated using the SX.enterprise picking logic. The picker/packer then uses the RF terminal to confirm the accuracy of the orders being shipped. Results of this activity are immediately posted to SX.enterprise data files.
- accuracy is improved through the use of bar coded labels in lieu of manual data entry.

- efficiency is improved via immediate feedback to the SX.enterprise system that initiates invoicing for the orders shipped.
- lag time in the picking process is shortened, improving efficiency of the physical/cycle count process.
- **Physical/Cycle Count:** Performing a regular cycle count of inventory items improves inventory accuracy. Use RF terminals with the cycle count function in SX.enterprise to execute physical/cycle counts.
 - isolate the selected items within the warehouse for counting. Once isolated, the RF terminal will work online against this group of items, systematically performing the cycle count.
 - accuracy is improved through the use of bar code labels.
 - efficiency is improved through immediate posting of the finished counts online through the RF terminal, automatically making necessary inventory adjustments to SX.enterprise.

IBC System Advantages

- Intermediate ADC technology requires a minimum investment in implementation and training
- Support for generating different label formats for different customers
- Custom design of labels and forms that utilize data from SX.enterprise databases
- Label design independence
- Timely, accurate data collection reduces the opportunity for data entry error
- Real time RF terminal interaction with SX.enterprise databases
- Function independence allows for Receiving, Shipping Feedback, or Counting to be individually implemented

IBC System Requirements

- SX.logistics IBC software
- SX.enterprise ERP software
- Teklogix Radio Frequency hardware
- Zebra or Datamax Bar Code label printer
- SX Compliance Labeling software