Optimizing Warehouse Operations by Using
Advantech's UTC Series Touch Computers
as Intelligent Warehouse Management Terminals
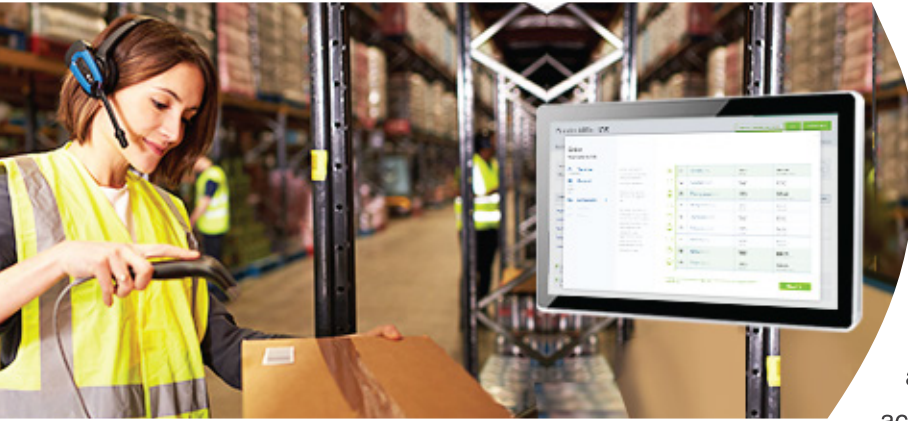
Introduction

When deployed as warehouse management terminals, Advantech's diverse all-in-one touch computers can increase warehouse automation and improve operational efficiency. Moreover, these computers can also be employed as interactive digital signage to support process visualization and enhance warehouse operations. Integrated with the warehouse management system infrastructure and diverse peripherals, warehouse management terminals and interactive digital signage provide intelligent solutions for optimizing warehouse operations by improving efficiency, increasing inventory visibility, and enabling process visualization with application-oriented functionality.

Solutions

Goods Receiving Terminals for Accurate and Rapid Processing

Advantech's all-in-one touch computers can be installed in the receiving area of a warehouse to serve as goods receiving terminals for managing all inbound goods, including conducting goods verification, sorting, and check-in. The terminal display shows goods information in real time for easy product and quantity verification, while the true-flat touchscreen enables staff to conveniently input data into the inventory system and assign an appropriate storage area. Moreover, with the added integration of a barcode scanner and printer, staff can scan product barcodes to easily check-in goods and/or print new product labels if required. Designed to ensure reliable processing of inbound goods, Advantech's goods receiving terminals provide an effective inventory management solution for warehouses and distribution centers.

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Goods Consignment Terminals for Increased Inventory Visibility

In a busy warehouse or distribution center, thousands of items are prepared for shipment or delivery every day. Goods consignment terminals are typically installed in various storage areas of a warehouse for managing goods. Advantech's all-in-one touch computers can serve as consignment terminals for convenient inventory access and management of all goods storage, transfer, and picking requests. By using the terminal touchscreen or an integrated barcode scanner/RFID reader, staff can easily verify the items on storage, transfer, or picking lists without a paper checklist. For business owners, Advantech's goods consignment terminals provide real-time access to warehouse inventories, support rapid request fulfillment, and facilitate increased operational transparency.

Order Picking Terminals with Pick-Assist Technology for Enhanced Productivity

Advantech's all-in-one touch computers can be employed as order-picking station terminals. In any warehouse or distribution center, the most important processes are picking and processing orders. As orders are sent to the warehouse floor, stock keeping units (SKUs) are retrieved from storage areas and delivered to order-picking stations.

Using an order picking terminal equipped with pick-assist technology, such as pick-to-light or voice-based technology, picking station operators then pick the specified items in the appropriate quantity and place them into the correct order bin. Once filled, order bins are transported to the packing and shipping stations located in the delivery area. Advantech's order picking terminals show the SKU information and picking instructions of every order and, when equipped with pick-assist technology, enable operators to manage up to 6 order bins simultaneously.

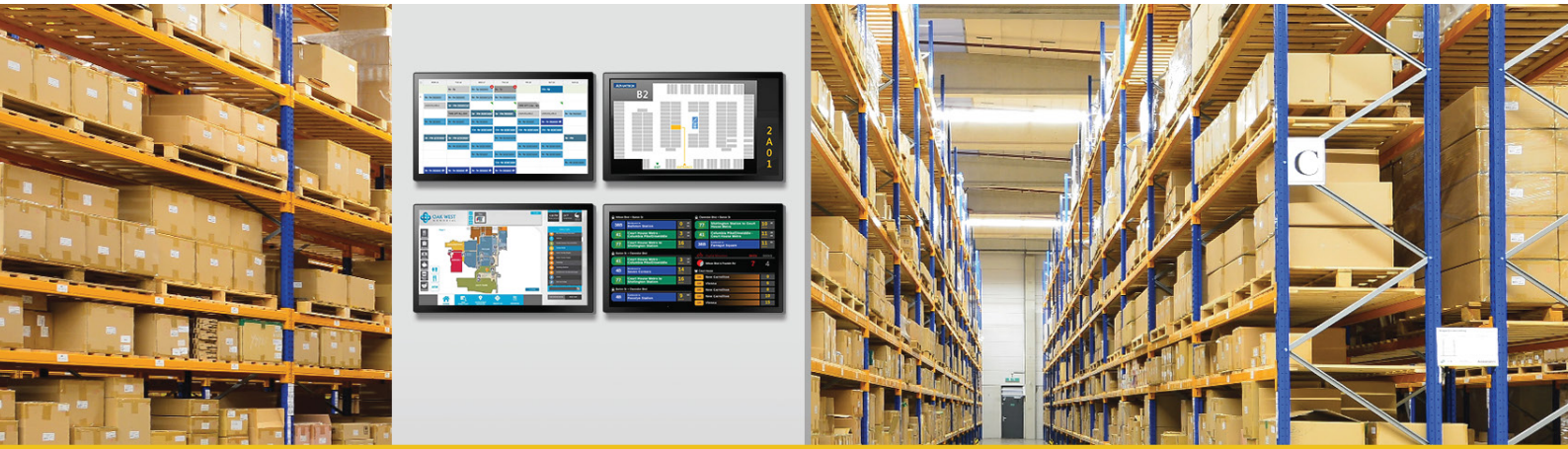## Goods Packing and Shipping Terminals for Accurate Order Fulfillment

Goods packing and shipping are the final steps in the order fulfillment process at a warehouse or distribution center. When an order bin is transported to a packing and shipping station, the order information is shown on the station terminal to enable operators to conduct a final check of all picked SKUs. If the contents of the order bin are correct, the operator transfers the items to a shipping carton, adds packing materials (such as bubble wrap or foam peanuts), inserts an invoice printout, and seals the carton. Advantech's goods packing and shipping station terminals are also integrated with a printer and barcode scanner to allow operators to print and scan shipping labels. Once the order is shipped, customers can use the barcode on the shipping label to track their order.

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Interactive Warehouse Signage for Effective In-House Communication

Advantech's all-in-one touch computers can be employed as interactive digital signage to provide a flexible broadcasting and communication platform for displaying critical operation metrics and information throughout a warehouse. Using graphs and charts for visualization and comparison, digital signage allows employees to easily understand complex statistical data. When installed in storage areas, digital signage can be used to show real-time inventory data and directions. Meanwhile, digital signage installed in shipping docks can be used to display shipping routes and dock preparation information. Furthermore, in addition to operating information, digital signage can be used to conveniently and effectively communicate safety information and company announcements.

Key Benefits

Easy System Integration with Slim and Fanless Industrial-Grade Touch Computers

Advantech's warehouse management terminals provide durable and trusted industrial-grade computing solutions for critical warehouse environment. The fanless design and IP65-rated front panel provide stable operation in heavy-duty and high-demand environments. The slim and compact system design allows easy system integration with various warehouse workstations.

Efficient Paperless Operation and Inventory Management

Advantech's warehouse management terminals located in various areas of a warehouse provide real-time platforms for inventory management. By using the terminal touchscreen or an integrated barcode scanner/RFID reader, staff can easily verify the items on storage, transfer, or picking lists without a paper checklist. These terminals not only eliminate the paper-based checklists and reports, but also improve operational accuracy and efficiency.

Real-Time Information Displays

Advantech's warehouse management terminals also serve as real-time information displays of all warehouse and product details, improving the efficiency of consignment processing. To ensure an optimal and immersive viewing experience, the terminals feature a widescreen 16:9 aspect ratio. Additionally, these terminals are available in a variety of form factors/sizes for easy installation in diverse warehouse environments.

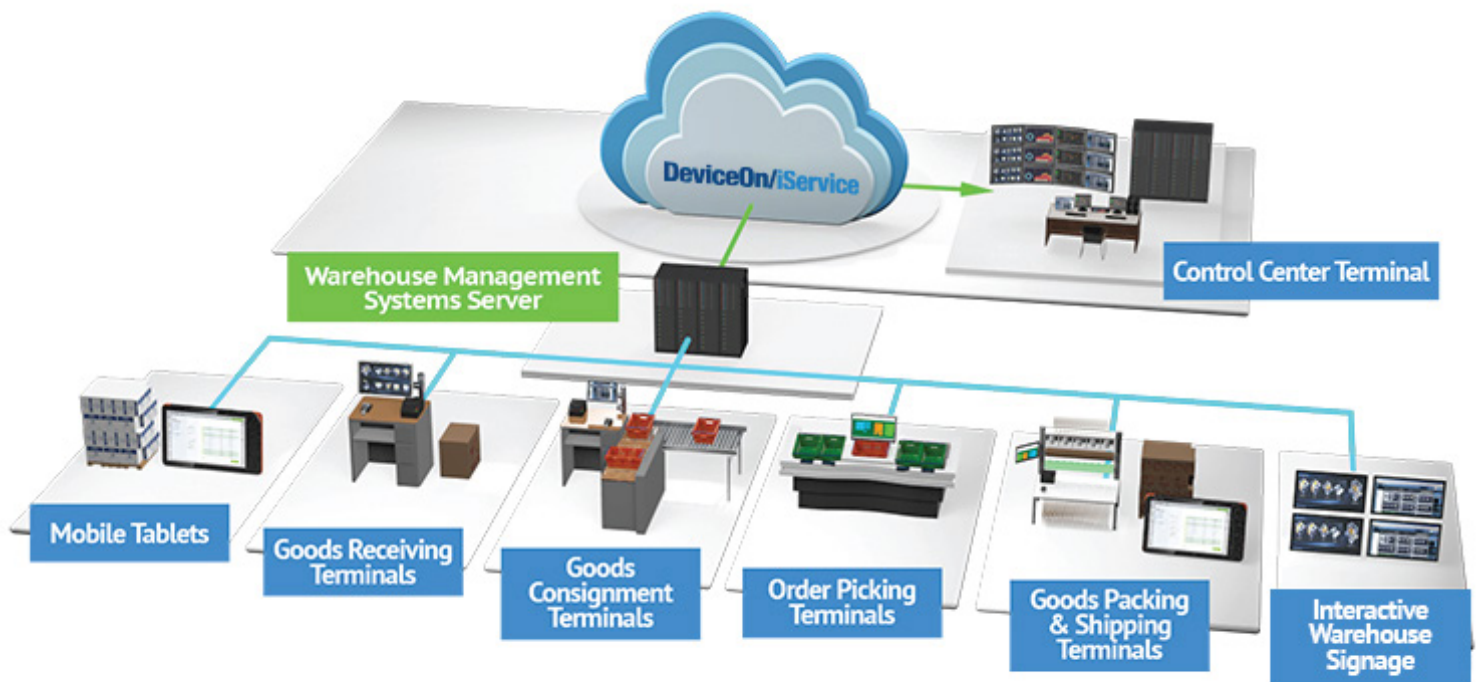### Extended Functionality with Easy Peripheral Integration

Advantech's warehouse management terminals can be easily integrated with multiple peripherals, such as a barcode scanner for label scanning or printer for label printing, to extend the system functionalities according to diverse warehouse application requirements.

Remote Management with DeviceOn/iService

Advantech's warehouse management terminals can also be equipped with Advantech's DeviceOn/iService remote management software to enable remote device monitoring, database backups and recovery, and power on/off scheduling, while also preventing unauthorized system access.

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Solution Diagram

Warehouse Management Systems Server

DeviceOn/iService

Control Center Terminal

Mobile Tablets

Goods Receiving Terminals

Goods Consignment Terminals

Order Picking Terminals

Goods Packing & Shipping Terminals

Interactive Warehouse Signage

Recommended Products

Advantech UTC-500 Series: UTC-510, UTC-515, UTC-520, UTC-532, UTC-542

Advantech UTC-300 Series: UTC-315, UTC-318, UTC-320

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