

Enhancing End-to-End Workflow for Paper Product Warehouse Management with the EM-I10A



Challenge

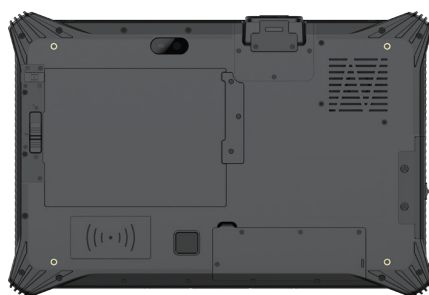
The client is a pulp and paper manufacturer. In recent years, with the rapid rise of various industries, orders for paper products have increased significantly. However, they are also facing complex warehouse management issues. Traditional methods of manually checking and recording inventory quantities, as well as manual accounting, often lead to chaotic inventory data, difficulties in preservation and traceability, and low efficiency. These issues, in turn, affect inventory management and timely supply. To improve management efficiency and warehouse turnover rates, and to reduce operational costs, enterprises need to introduce reliable smart devices and establish comprehensive system processes to reform warehouse management practices.

Solution

The EM-I10A rugged tablet integrates outstanding operational performance and rugged durability, capable of handling the complex environmental conditions of paper product warehouses. Utilizing the vehicle-mounted bracket, the EM-I10A can be installed on warehouse forklifts. Running compatibly with Windows 11 system and warehouse management systems, warehouse personnel and forklift drivers can swiftly access cargo information, inventory status, and task instructions. Guided by the EM-I10A, forklifts can accurately reach storage locations and complete loading and unloading tasks, achieving dynamic inventory updates and precise management.

Benefits

The integration of the EM-I10A with the warehouse management system has significantly boosted the efficiency of client's warehouse operations. It has also improved inventory data accuracy and reduced labor costs, thereby saving operational expenses for the company. This intelligent management approach enables real-time monitoring of warehouse activities, providing decision support for management and driving digital transformation in warehouse management. Consequently, it enhances the enterprise's competitiveness.



EM-I10A
Rugged Tablet PC

Challenge

The client is a world-leading pulp and paper manufacturer, specializing in the production of high-end chemical wood pulp, packaging paperboard, and cultural paper (including office copy paper), with products sold globally. In recent years, the client has experienced significant development and transformation and is now seeking more environmentally friendly and sustainable production and management methods. However, as the sales scale expands, so does the warehousing scale, and the challenges faced by the customer are also increasing.

Firstly, the paper product warehouses faces complex inventory management issues. With a wide variety of paper products in different specifications, a meticulous inventory management system is required to track stock levels, types, and locations, ensuring timely supply and avoiding expiration losses. Traditional manual recording and management methods are prone to data errors, affecting effective inventory management and turnover decisions. Additionally, manually comparing product information and quantities, and bookkeeping is time-consuming and labor-intensive. For warehouse staff, managing an increasing number of orders in a large warehouse area significantly burdens their workload and reduces efficiency. For the client, this undoubtedly increases operational and management costs.

Secondly, the adaptability and stability of equipment present another major challenge. The warehouse environment for paper products is complex, with significant temperature variations. Ordinary terminal devices with poor shock resistance cannot withstand the severe vibrations caused by forklift opera-



tions. Any interruption or downtime can lead to data loss, requiring extensive re-verification. In such a challenging and inconvenient environment, adopting rugged and durable smart devices is of paramount importance.



Solution

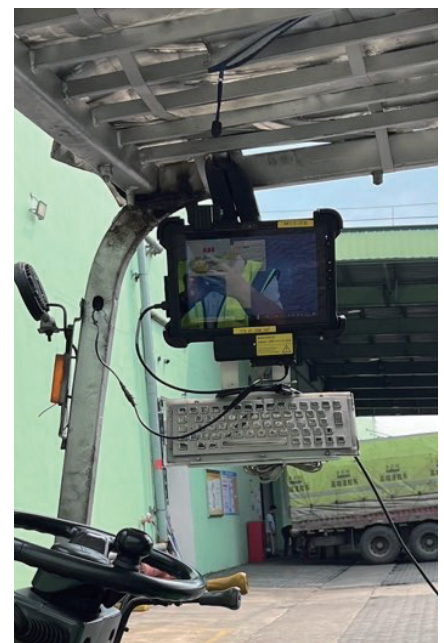
Based on client's specific needs and application scenarios, the client selected and deployed the Emdoor's rugged tablet PC EM-I10A from among many rugged device suppliers. On one hand, Emdoor provides comprehensive technical support and service from pre-sales to after-sales. On the other hand, the EM-I10A is highly compatible with the client's requirements in terms of operational performance, functionality, accessories, and cost performance covering all aspects of paper product warehouse management applications.

Solution of EM-I10A

Leveraging the EM-I10A rugged tablet PC and vehicle mount clip, the client developed an efficient and intelligent warehouse management system and process. The EM-I10A, running on the Windows 11 system, seamlessly integrates with the client's management system, RAM ball joint + linkage, and TCM electric forklifts, achieving warehouse operation automation and intelligence. Additionally, the EM-I10A comes with a stylus for use when warehouse workers are wearing gloves and can connect to a metal keyboard for easy input operations.

Before goods are moved in or out of the warehouse, the EM-I10A is securely mounted on the forklift using the vehicle mount. The forklift driver can quickly access cargo information, inventory status, and operational instructions through the warehouse management system on the EM-I10A. Its 10.1-inch high-definition and high-brightness screen clearly displays all task details, such as cargo name, code, transportation quantity, current location, and the next node for handling or unloading.

During operations, the forklift driver is guided by the EM-I10A, which uses its built-in GPS function to accurately locate the storage position of goods and provide transportation routes, automatically completing the pickup and loading onto the container truck. Warehouse workers can connect a Zebra barcode scanner to the EM-I10A's USB port to scan and read the QR code on the shipping order, obtaining information such as shipping quantity, location, and container details. Once tasks are completed, they can be directly reported on the tablet, forming a closed-loop process from task issuance to execution and completion in the warehouse operations.



Benefits

Seamless Communication Support

The EM-I10A' s built-in dual-band WiFi and 4G communication modules enable fast access to product information and task instructions, with the capability to transmit data online to the backend system. Stable WiFi signals cover every corner of the vast warehouse, connecting to the data server and warehouse management system. Additionally, warehouse workers can use the tablet for real-time communication and inquiries, eliminating unnecessary movement.

End-to-End Intelligent Operations

The EM-I10A, equipped with an Intel Alder Lake processor and Windows 11 operating system, seamlessly integrates with the client's warehouse management system. Through various accessories and interfaces, it is quickly deployed across all application stages of the customer's warehouse. Each link is monitored in real-time, with every piece of data traceable and effectively stored, enabling managers to dynamically oversee and make informed decisions. This achieves full-process digital operations from receiving, inspection, and storage to inventory management, picking, handling, and shipping.

Reliable Cost Reduction and Efficiency Enhancement

The EM-I10A has passed IP65 and MIL-STD-810G certifications, offering industrial-grade protection against water and dust. It operates reliably in extreme temperatures ranging from -20 ° C to 60 ° C and can withstand accidental drops and forklift vibrations without interrupting operations. This prevents data loss and reduces equipment damage, maintenance costs, and labor expenses for the client, while simultaneously enhancing the efficiency and safety of warehouse operations.

