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specification

KEY CABINET PRODUCT SPECIFICATION

Smart Vertical Settlement Terminal: ZSW-D05

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1. Product Image



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II. Product Overview

The ZSW-D05 intelligent vertical settlement terminal is a core management solution developed by Zebra Intelligence specifically for automated warehouse operations. It integrates cutting-edge technologies — including artificial intelligence, the Internet of Things, automatic identification, and data synchronization — to enable comprehensive, intelligent management of all warehouse assets, including materials, consumables, and inventory, covering entire processes such as stock control and precise location tracking.

As the core component of the unmanned warehouse management system, this terminal seamlessly integrates with peripheral devices such as smart shelves, handheld terminals, access control systems, and RFID-enabled corridors. It addresses the limitations of traditional warehouses — relying on manual registration, low settlement efficiency, and data delays — by establishing a modern warehousing management ecosystem characterized by automated operations, precise control, and real-time traceability. Through features like multi-mode automated data collection and cross-device collaboration, it significantly reduces manual intervention costs, enhances inventory management efficiency and data accuracy, and provides essential support for developing unmanned warehouses in sectors including manufacturing, logistics, e-commerce

fulfillment, and office supply management.

III. Product Features

(1) Unmanned Intelligent Storage Center: Designed to meet the requirements of fully automated operations throughout the entire process, its terminals serve as the core settlement nodes for material inbound and outbound flows. Integrated with smart aisles and intelligent shelves, it enables automatic material identification, settlement, and release without manual intervention, supporting 24/7 uninterrupted operation and significantly enhancing material handling efficiency.

(2) Raw Material Warehouse for Manufacturing Enterprises: For high-frequency material withdrawal scenarios involving production raw materials and components, employees undergo identity verification via smart access control systems. The terminal then coordinates with smart shelves to locate materials, which automatically identify material types and quantities. Outbound transactions are settled automatically while inventory data is updated in real time, ensuring timely supply of production materials and precise inventory levels to prevent production delays caused by shortages or excess stock.

(3) Medical and Office Consumables Warehouse: Designed to meet the needs of automated management in medical institutions and enterprises, this system enables self-service settlement for the

procurement of medical and office consumables. The terminal automatically records usage information and generates electronic ledgers, supports cross-departmental and cross-regional tracking of material flow, prevents waste of consumables and loss of fixed assets, and simplifies administrative control processes.

IV. Functional Features

(1) Automated inventory entry/exit settlement and data collection: Integrates RFID recognition (optional) and barcode recognition capabilities to automatically collect material label information, eliminating manual entry requirements, reducing operational errors, and enhancing settlement efficiency.

(2) Intelligent Settlement Process: When materials are received or dispatched, the terminal automatically links order information with inventory data, performs quantity verification and document generation, and synchronizes the results in real time to the management backend.

(3) Cross-device collaboration and material tracking: seamlessly integrates with smart shelves, handheld terminals, access control systems, and RFID-enabled corridors.

(4) Warehouse intake, issuance, and settlement: The system automatically triggers smart shelf lighting positioning based on orders or material information, enables self-service material settlement, integrates

with access control systems for compliant release, generates automatic alerts for anomalies, and establishes an integrated unmanned warehouse management system.

(5) **Precise Material Query and Location Tracking:** Enables rapid retrieval of inventory status and storage locations using keywords such as material name, model, or order number. Combined with intelligent shelf lighting guidance, it facilitates quick identification of target materials and reduces outbound procurement time.

(6) **Real-time inventory management and data traceability:** Upon completion of material inbound/outbound settlement, inventory data is automatically updated in real time. The system supports setting inventory threshold limits; when levels fall below the lower limit or exceed the upper limit, it automatically triggers alerts.

(7) **End-to-end data traceability:** Automatically records all operational data, including logs of personnel involved, operation times, material details, settlement results, and more.

V. Specifications and Parameters

Main Specification Parameters	
product model	ZSW-D05
performance parameter	
operating system	Android 11

Industrial Control Configuration	RK3568:4 cores, 2 GB RAM, 16 GB storage
RFID Identification (Optional)	High frequency; Recognition frequency: 13.56 MHz; Reading time \leq 3 seconds
Weighing Module (Optional)	Precision: 1 g; Range: 0–40 kg
Card Recognition (Optional)	Operating frequency: 13.56 MHz; Card reading range: 0–30 mm
UPS Power Supply (Optional)	Provide a UPS power supply
Specification Parameters	
Overall dimensions	330 × 420 × 1460 mm (width × depth × height)
screen	15.6-inch 1080p high-definition touchscreen
QR Code Recognition	Reading accuracy \geq 7 mil
	Effectively identifies codes from various media including mobile phone screens, paper codes, and plastic codes.
Internal speaker	3W×2
Work Environment Requirements	Operating temperature: -10°C to 50°C; Operating humidity: 10% to 90% RH
power requirement	Single-phase AC 220 V, 50–60 Hz
Secondary Development Interface	support
network interface	WIFI, RJ-45,4G (optional)