specification

STATIONERY CABINET PRODUCT SPECIFICATION

Smart Weighing Cabinet: ZSC-W04

(Revised 15.6-inch version)

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1. Product Image

II. Product Overview

The ZSC-W04 is a weighing-based smart cabinet (hereinafter referred to as the "smart cabinet"), a new generation of intelligent storage management device developed by Zebra Information. This advanced material management solution integrates cutting-edge technologies such as gravity sensing, biometric identification, IoT, and big data analytics, specifically designed to address key challenges in material requisition, inventory control, and cost accounting across various scenarios. Its core functionality involves using high-precision weighing modules to monitor real-time weight changes, combining identity authentication technology to enable self-service and standardized material usage, while leveraging a management platform for real-time data synchronization, analysis, and reporting.

As a new-generation intelligent material management terminal, the smart weighing cabinet eliminates the cumbersome process of traditional manual registration and distribution, enabling a fully automated closed-loop system for material procurement without human intervention. It significantly enhances procurement efficiency while providing visualized inventory status, traceable usage records, and accurate cost accounting. With its flexible hopper configurations, stable hardware performance, and comprehensive functionality, it has become the

preferred solution for managing office supplies, production materials, medical consumables, and other related items.

Smart weighing cabinets are designed to free users from tedious tasks such as material distribution, registration, and inventory counting, reduce human errors and resource waste, and drive the transformation of material management toward digitalization, intelligence, and efficiency. They are suitable for large-scale material management needs across various industries and scenarios.

III. Application Scenarios

(1) Enterprise Office Scenario: Suitable for administrative office areas in various enterprises and public institutions, designed to manage office supplies such as paper, pens, folders, staplers, and paper clips. It supports setting allocation quotas by department or individual, addressing issues like disorganized supply distribution, inventory overstocking or shortages, and difficulty in cost accounting. Particularly suitable for centralized management of office supplies across multiple locations and regions in large enterprises and chain organizations.

(2) Production Environment: Can be deployed in production workshops, near assembly lines, or in material warehouses to manage auxiliary production materials such as screws, nuts, washers, cutting tools, and small components. It monitors material consumption through

real-time weighing, provides inventory alerts to prevent production halts due to shortages, and accurately tracks material usage for production process optimization.

(3) Healthcare Scenario: Suitable for medical institutions such as hospitals, clinics, and health examination centers, this system is designed for managing medical consumables including syringes, infusion sets, sterilized cotton pads, gauze, and disposable gloves. It strictly adheres to medical supply management standards, supports precise identity verification and full traceability of requisition records, ensures compliant use of medical consumables, mitigates cross-infection risks, and addresses issues such as disorganized inventory management and significant waste.

(4) Campus Environment: Suitable for use in university laboratories, administrative buildings, teaching buildings, and other areas for managing experimental consumables, office supplies, and student materials. It supports the establishment of borrowing permissions and quotas by department, laboratory, or class, facilitating unified control over material usage and cost allocation by the institution, thereby enhancing the standardization of material management.

(5) Logistics and warehousing scenario: Deployed in storage sorting centers, express delivery outlets, and similar locations to manage materials such as packaging supplies and personal protective equipment.

Real-time weighing monitors material consumption rates, automatically triggering replenishment alerts to ensure continuous logistics operations while precisely calculating material costs at each stage, thereby assisting logistics companies in cost reduction and efficiency improvement.

(6) Other scenarios: Including government agencies, research institutes, large supermarkets, and similar venues, where various small-scale supplies can be managed according to actual needs, enabling self-service and transparent management of material requisition, thereby reducing administrative manpower requirements and enhancing management efficiency.

IV. Functional Features

(1) Precise Weaning and Intelligent Accounting: Equipped with a high-precision gravity sensing module, it achieves weighing accuracy up to 1 g, enabling precise measurement of materials across various weight specifications. During material issuance, the device automatically calculates required quantities based on weight variations, eliminating manual counting and preventing measurement errors; integrated with the management platform, it enables real-time tracking of material consumption data and generates accurate consumption reports.

(2) Multi-dimensional authentication: Supports various authentication methods including facial recognition, IC/ID card swiping,

QR code scanning, and username/password verification, catering to diverse usage scenarios.

(3) 7 × 24-hour self-service collection: The system supports round-the-clock operation, enabling employees to collect materials instantly after identity verification without relying on administrative staff or warehouse personnel, eliminating cumbersome approval procedures. Collection records are automatically generated and synchronized to the management platform, achieving full automation of the "collection – recording – statistics" process and significantly enhancing both collection efficiency and management effectiveness.

(4) Flexible Quotas and Usage Control: Supports customized usage rules, enabling the setting of usage quotas by personnel, department, or material type to achieve measured control over material consumption and reduce waste and misuse at the source; also supports hierarchical usage permission management, where users at different levels have access to distinct types and quantities of materials, ensuring standardized administration.

(5) Intelligent Inventory Management: Features real-time inventory monitoring and early warning capabilities. The system updates inventory status in real time based on weighing data, automatically sending replenishment alerts to the management backend and relevant personnel

when stock levels fall below preset thresholds, eliminating the need for manual periodic counting and preventing both shortages and overstocking. It supports inventory counting functionality, allowing inventory tasks to be initiated via the management platform with automatic generation of reports, significantly reducing manual counting workload.

(6) Comprehensive Data Statistics and Analysis: Leveraging the management platform, it enables comprehensive statistics and visual presentation of data including detailed material requisitions, inventory status, consumption trends, and replenishment records. The system supports generating statistical reports across multiple dimensions such as time, department, personnel, and material type, with data available for export and backup, enabling managers to accurately monitor material usage and cost expenditures and providing data-driven support for procurement decisions.

(7) Flexible Expansion and Stable Operation: The equipment features versatile cargo bin configurations that support combinations of large, medium, and small sizes, with adjustable number of tiers to accommodate various types and dimensions of stored materials; the cabinet is constructed from high-strength materials for robust structure and excellent protective performance; it supports multiple communication protocols including WIFI, RJ-45, and 4G (optional), ensuring stable connectivity

with the management platform; it exhibits strong environmental adaptability and operates reliably across temperatures ranging from-20°C to 60°C.

(8) User-friendly operation and design: Equipped with a 15.6-inch capacitive touchscreen featuring a resolution of 1920 × 1080 and a 16:9 aspect ratio; the interface is intuitive and easy to use. The independent electronic lock offers rapid response time (<1 second), with a service life exceeding 1 million cycles, ensuring long-term stable operation. An optional light-box advertising module is available, allowing flexible content replacement for both practical and promotional purposes. The device features Fuma casters at the bottom, supporting both fixed and mobile positioning for convenient relocation.

V. Product Parameters

Main Specification Parameters	
product model	ZSC-W04
operating system	Android 11
CPU	A quad-core 64-bit Cortex-A55 processor with a maximum clock speed of 2.0 GHz
Industrial Control Configuration	RK3568
internal storage	2G
capacity	16G

Overall dimensions	1970 × 1000 × 550 mm ± 5 mm (height × width × depth), excluding the light box
Case Material	1.2 mm cold-rolled steel plate
screen	15.6-inch capacitive touchscreen, resolution 1920 × 1080, aspect ratio 16:9
capacity	Standard configuration: large cargo bin *3, medium cargo bin *20, small cargo bin *10; adjustable
Number of Layers	Default: 6 layers; adjust the number based on actual needs
Material Box Dimensions	(Size): 280×370×400 mm (width×depth×height); Maximum weight capacity: 40 kg; Measurement accuracy: 1 g (China) Dimensions: 180×370×200 mm (width×depth×height); Maximum load capacity: 10 kg; Measurement accuracy: 1 g (Small) 85×370×200 mm (width × depth × height); Maximum weight capacity: 10 kg; Measurement accuracy: 1 g
Electric Lock	Independent electronic lock with unlocking time <1 second and a service life exceeding 1 million cycles.
Light Box (Optional)	Supports light boxes; light box advertisements are interchangeable
Video Surveillance (Optional)	2 megapixel, infrared fill light
communication interface	WIFI, RJ-45,4G (optional)
Work Environment	temperature -20℃ ~ 60℃

Requirements	
Fix/Move Method	Foma Universal Wheel
Card Reader (Optional)	IC card/ID card, reading distance 0–30 mm
Face Camera (Optional)	Bilateral live monitoring, supporting RGB + IR
QR Code Reader	Reading accuracy ≥ 7 mils, effectively identifying codes on various media including mobile phone screens, paper, and plastic.
power requirement	Single-phase AC 220 V, 50–60 Hz

VI. Precautions

The device must be installed in a flat, dry, and well-ventilated indoor environment, avoiding direct sunlight, humid conditions, or areas with severe dust exposure.

Power supply must strictly adhere to the rated parameters to prevent equipment failure caused by voltage instability or overload.

Perform regular cleaning and maintenance of the cabinet, inspect components such as locks, sensors, screens, and communication interfaces to ensure proper equipment operation.

Administrators must regularly back up data and update system versions promptly to ensure device functionality stability and data security.

Prohibit violent lock-breaking or cabinet impact; such actions will

shorten equipment lifespan and result in losses that must be borne by the user.