



specification

KEY CABINET PRODUCT SPECIFICATION

RFID Smart Cabinet: ZSC-R01

Product Image



Product Overview

ZSC-R01The Smart Cabinet is an intelligent storage management device based on RFID automatic recognition technology, integrating IoT, big data analysis, biometric recognition and other advanced technologies. Its core follows the ISO 18000-6C (EPC C1 G2) standard protocol, achieving automatic item recognition, information collection and data synchronization through non-contact radio frequency signals, completely revolutionizing the traditional manual registration and distribution management model.

This product can efficiently solve the pain points of low efficiency, high error rates, opaque inventory status, serious item loss, and difficult cost control in traditional management. It achieves full-process automation and refined management of item collection, return, inventory counting, and tracking. Users only need simple operations to complete item access or borrowing. Managers can master inventory dynamics, collection details in real-time through the backend management platform, receive out-of-stock alerts and generate data reports, significantly reducing labor costs, improving management efficiency and accuracy, and providing scientific and reliable solutions for enterprise asset control.

Application Scenarios

RFID Smart Cabinets, with their efficient, secure, and convenient management characteristics, are widely applicable to multiple industries and scenarios.

(I) Industrial Manufacturing: Power plants, automotive manufacturing plants, mechanical processing plants, etc., for storage and management of tools, parts, and spare parts, ensuring precise allocation of production materials and avoiding production delays caused by tool shortages.

(II) Transportation: Subway, high-speed rail, aviation, ports and other units, for storing maintenance tools, testing equipment, emergency supplies, etc., meeting the needs for rapid access and traceability of materials in mobile scenarios.

(III) Enterprise Office: Various enterprises, institutions, and office buildings, for borrowing and management of office equipment, simplifying the collection process and achieving real-time tracking of office equipment.

(IV) Healthcare: Hospitals, clinics, and research institutions, for storing medical equipment, high-value consumables, medicines, etc., strictly controlling item circulation and collection statistics, ensuring the traceability and safety of medical supplies.

(V) Public Services: Government agencies, schools, libraries, etc., for managing official supplies, teaching equipment, and library materials, improving the utilization efficiency and management standardization of public resources.

(VI) Security and Emergency: Public security, firefighting, emergency rescue and other departments, for storing security equipment, emergency tools, rescue supplies, etc., ensuring rapid deployment of materials in emergencies and improving emergency response capabilities.

Functional Features

(I) Full-Process Intelligent Management

1. Full Lifecycle Item Tracking: Supports multi-scenario operations such as item collection and borrowing/returning. Every transfer is recorded in real-time, forming a complete traceability chain, eliminating the risk of item loss or misappropriation.

2. Automated Inventory Management: Automatically updates inventory quantities during item access, synchronizes data in real-time on the backend, supports inventory warning functions, and automatically sends out-of-stock alerts when items fall below the set threshold, avoiding inventory overstocking or shortages.

(II) Convenient Operation Experience

1. Multi-Method Authentication: Integrates face recognition, card swiping, QR code scanning, account password and other authentication methods to meet different user habits.

2. Simple Shelving and Binding: When new items are shelved, only information entry and RFID tag binding are required. The operation process is simple and can be mastered without professional skill training.

3. User-Friendly Interaction Design: Equipped with a large capacitive touch screen with clear display and sensitive operation. The human-machine interface is simple and intuitive with strong interactivity, lowering the operation threshold.

(III) Flexible Expansion and Adaptation

1. Customizable Space Adjustment: The interior adopts a multi-layer board design with freely adjustable layer heights, greatly improving space utilization and adapting to storage of different sized items.

2. Cabinet Combination Expansion: Adopts a "one main + N sub-cabinets" combination mode, allowing flexible increase of sub-cabinet numbers according to storage capacity needs, expanding storage capabilities to meet management needs after enterprise scale expansion.

3. Optional Function Modules: Supports optional functions such as light box advertising, 1080P HD video monitoring, 4G communication modules, etc. Users can flexibly match according to actual needs to enhance product practicality.

(IV) Safe and Reliable Operation

1. High-Strength Cabinet Design: Made of high-quality cold-rolled steel plate, the cabinet structure is solid and durable with good anti-theft performance, effectively protecting the safety of stored items.

2. High-Performance Electronic Control Lock: Equipped with independent electronic control locks with unlocking response speed <1 second and service life exceeding 1 million times. The locks are stable and reliable, ensuring item storage safety.

3. All-Weather Stable Operation: Supports 24-hour unattended operation with strong environmental adaptability, stable operation within -20°C to 60°C temperature range, meeting the needs of different scenarios.

4. Multiple Data Protection: Achieves real-time data transmission through WIFI, RJ-45 and other communication interfaces.

(V) Data-Driven Analysis and Decision Making

1. Precise Data Statistics: Automatically records all operation data such as item collection, return, and inventory changes, generating detailed collection details, borrowing/returning reports, inventory reports, etc. The data is accurate and reliable, providing a basis for cost accounting.

2. Scientific Data Analysis: The backend management platform has big data analysis capabilities, enabling in-depth analysis of item circulation efficiency and consumption trends, providing data support for enterprises to optimize procurement plans and

reasonably allocate resources, helping managers to be freed from tedious inventory counting and statistical work.

Product Parameters

Main Specifications	
Product Model	ZSC-R01
Operating System	Android 11
CPU	Quad-core 64-bit Cortex-A55, Max Frequency 2.0GHz
Industrial Control Config	RK3568
Memory	2G
Capacity	16G
Overall Dimensions (H×W×D)	Main Cabinet: 1970×1000×550mm±5mm; Sub-cabinet: 1970×1000×550mm±5mm;
Cabinet Material	1.2mm Cold-rolled Steel Plate
Screen	15.6-inch Capacitive Touch Screen, Resolution 1920×1080
RFID	840MHz-960MHz, ISO 18000-6C (EPC C1 G2)
Capacity	5 Layers (Freely Adjustable Layer Height)
Electronic Control Lock	Independent electronic control lock, unlocking <1 second, service life over 1 million times.
Communication Interface	WIFI, RJ-45, 4G (Optional)
Working Environment Requirements	Temperature -20° C ~ 60° C
Fixed/Mobile Mode	Fuma Universal Wheels
Light Box (Optional)	Supports light box, replaceable light box advertising
Video Monitoring (Optional)	1080P 24-hour motion detection, Ultra HD CMOS6, 2.5K, 4MP; Infrared fill light, 850nm infrared wavelength, enhanced night recognition
Card Reader	Working Frequency: 13.56MHz, Reading Distance 0-30mm

(Optional)	
Face Camera (Optional)	Binocular Liveness Detection, Supports RGB+IR
QR Code Reader	Reading Accuracy $\geq 7\text{mil}$, Effectively recognizes screen codes, paper codes, and plastic codes on various media
Power Requirements	Single-phase AC 220V, 50~60Hz