



Hanshow N5 Shelf Camera Product Manual

V1.0

STATEMENT

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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

[Document title]

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.
- Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

ABOUT THE MANUAL

This document describes N5 Shelf Cameras, including features, specification, and precautions.

Please read this manual carefully before using the device in first, retain the manual for subsequent use or for the next owner. If the instructions contained in this manual are insufficient to resolve issues that occur during device operation or maintenance, please contact Hanshow Technical Customer Service Center (China: 400-0365-305; Netherlands: 0800-022-5037; Belgium: 0800-71-335; France: 0800-91-7602; Thailand: 1800-011-185) directly, we will provide you with multi-channel technical services.

TARGET USERS

This document provides engineers with necessary data and related guidelines of Stellar Pro multicolor ESLs. Users must master the basic knowledge on communication and network and so on. This manual is applicable for the below engineers:

- Testing Engineer
- Technical Support Engineer
- After Sales Engineer
- Installation Engineer

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1. Safety Precautions

Usage Environment

Avoid using it in an environment with high temperature, humidity, dust, or strong magnetic fields.

For waterproof models, pay attention to the limitations of the waterproof rating (such as IP68).

Battery Safety

Only use the original battery and charger.

Avoid short-circuiting, squeezing, or storing the battery at high temperatures.

Lens Protection

Avoid shooting directly at strong light sources (such as the sun) to prevent damage to the sensor.

2. Product Overview

The N5 Shelf Camera is an IoT-enabled smart camera system designed for automated shelf monitoring in retail store. By combining high-resolution imaging with AI analytics, it provides real-time inventory status (out-of-stock detection) and merchandising compliance verification.



1) . Key Features

- **Automated Shelf monitoring:**
 - Captures shelf images at scheduled intervals
 - Detects product gaps (out-of-stock) with high accuracy
 - Verifies planogram compliance (e.g., misplaced items)
- **Customize Hardware for store:**
 - High resolution for product recognition
 - Motorized pan-tilt camera ($\pm 15^\circ$ adjustment)
 - Integrated Hanshow HiLPC narrowband communication
 - Low-power WiFi/HiLPC dual-mode connectivity
- **Cloud-Edge Synergy:**
 - On-device preprocessing (image compression/encryption)
 - Cloud-based AI analytics platform

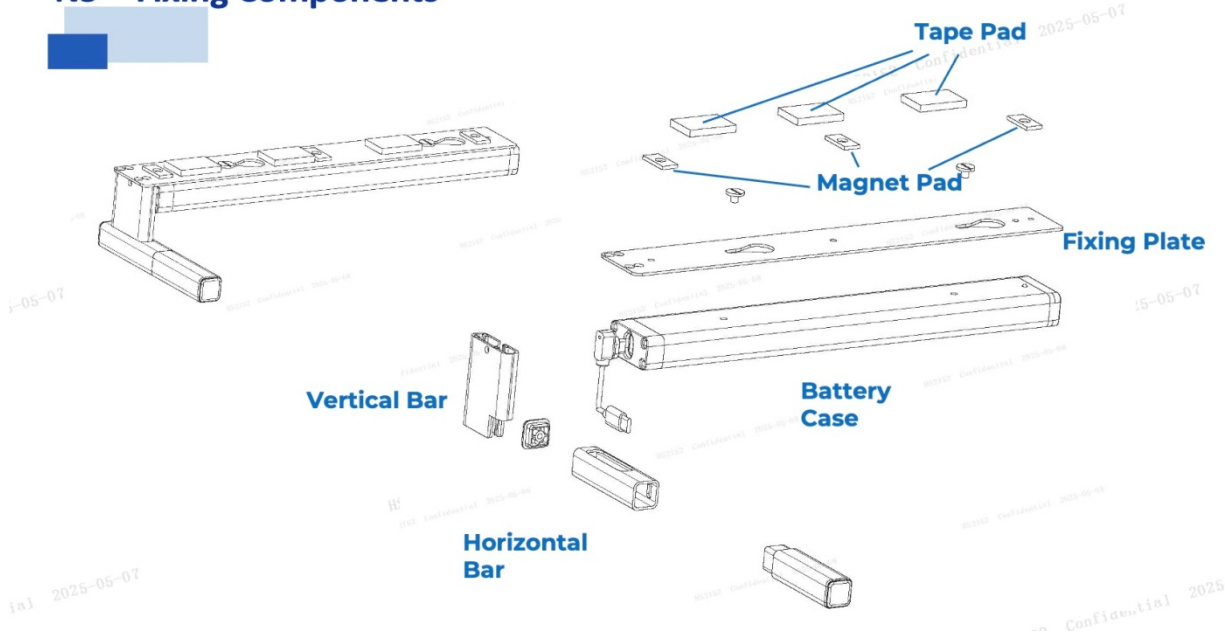
2) . Hardware Specifications

Component	Description
-----------	-------------

Component	Description
Imaging Module	12MP CMOS
SOC	ARM base SoC
Motor	Stepper motor (1° positioning accuracy)
Connectivity	WiFi6 + HiLPC
Power	3.8 – 7.5V/1A USB-C with battery Box
Environmental	IP68 rated, operates at -10°C~60°C

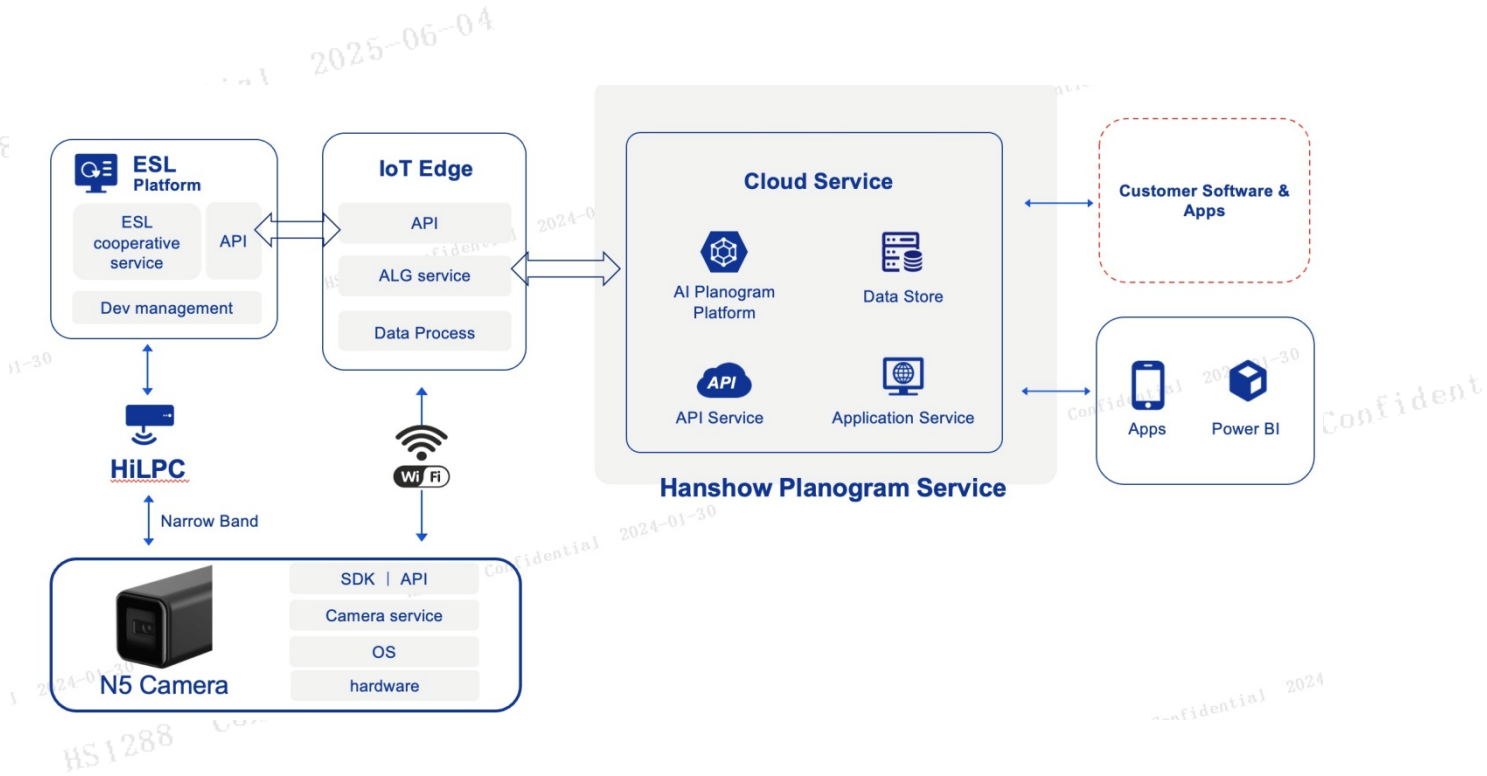
3) .Battery Box and Accessory

N5 – Fixing Components



The N5 shelf camera requires an external power source. The BE10 battery case supplies power to the N5 camera. It contains 10pcs AA batteries connected in a 5-series 2-parallel configuration. The battery case connects to the camera via a cable. Mounting accessories are used to secure the N5 camera to the battery case.

4).System architecture



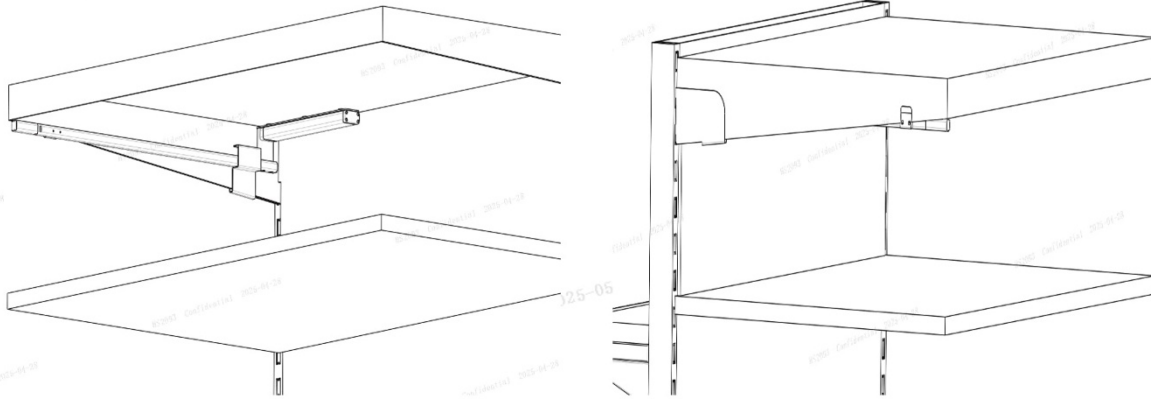
3.Operation Guide

3.1.Camera Installation

Install the camera in a suitable location.

N5 – Accessory and installation 1

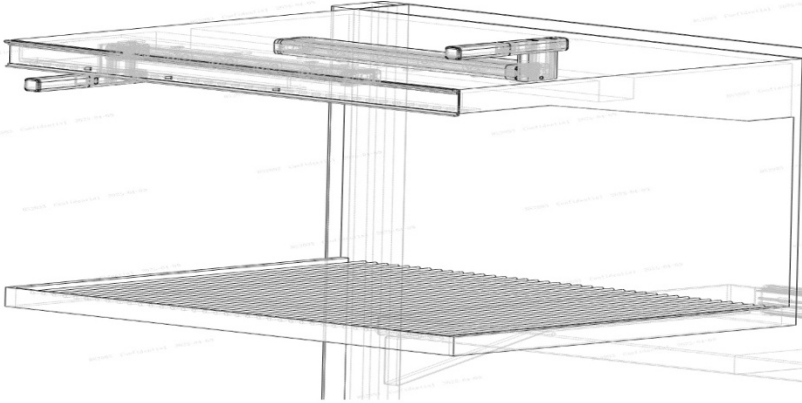
Item	Parameter
Dimension	70cm*7m*28cm
Components Weight	320g



Install in shelves

N5 – Accessory and installation 2

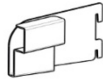
Item	Parameter
Dimension	12cm*7cm*28cm
Components Weight	180g



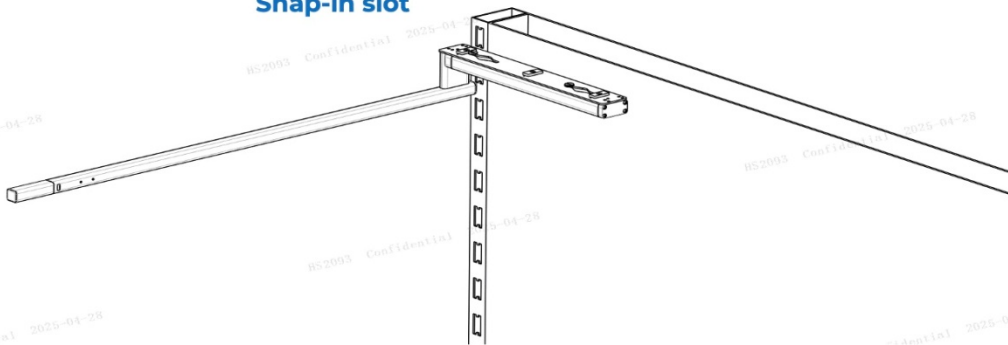
Install on top or bottom of platform

N5 – Fixing Components

Fixing Components



Snap-in slot



3.2.Camera Shelf Binding

3.2.1. Digital Map Creation

Log in to the map server address and create a new store map.

H

1.4.4-RC1

室内导航

产品版本: 2025-12-31

global

简体中文

admin

退出

地图管理

用户管理

区域划分管理

商品执行列表

地图管理

请输入地图名称:

搜索

新建地图

导入地图

模板下载

地图名称	地图宽度	地图高度	楼层	门店编号	prismart 地址	定位服务器地址	操作
customer000.store000	1800cm	1200cm	F1	customer000.store000	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
labcamera.labcamera	4000cm	2500cm	F1	labcamera.labcamera	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
jiaxing.jtest.1	4000cm	2500cm	F1	jiaxing.1	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
Shanghai.Pudong.9	4000cm	2500cm	F1	Showroom.Pudong	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
HanshowDemo	1500cm	2000cm	F1	HanshowDemo.HanshowDemo	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
AAsthes2	1300cm	2000cm	F1	sthes2.sthes2	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
labcamera.1	4000cm	2500cm	F1	labcamera.1	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
hanshow.1001	4000cm	2500cm	F1	hanshow.1001	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
jiaxing	4000cm	2500cm	F1	jiaxing.jiaxing	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置
N3_Showroom	3000cm	3000cm	F1	ShanghaiShowroom.ShanghaiShowroom	http://40.73.103.107:8080/prismart	http://127.0.0.1:1111	编辑地图 修改 删除 楼层管理 类型管理 样式管理 配置

地图管理

编辑地图

位置信息

区域信息

楼层: F1

类型: ☒ 矩形 ☒ 圆形 ☒ 线 ☒ 面 ☒ 其它

添加元素

请输入元素名称

1 line-Wall1-000@420000@420023...

2 table-W1-07341912-70-80

3 table-W2-08041912-70-80

4 table-W3-07341992-70-80

5 table-W4-08041992-70-80

6 block-丹仔路4号-02700147-90-98

7 block-丹仔路3号-02800147-90-98

8 block-丹仔路2号-01800147-90-98

9 block-丹仔路1号-02950147-90-98

10 block-E7-4-3-038001066-95-39

11 block-D8-4-2-027391968-90-36

12 block-E3-2-02995817-78-41

13 block-C11-4-9-02805741-90-36

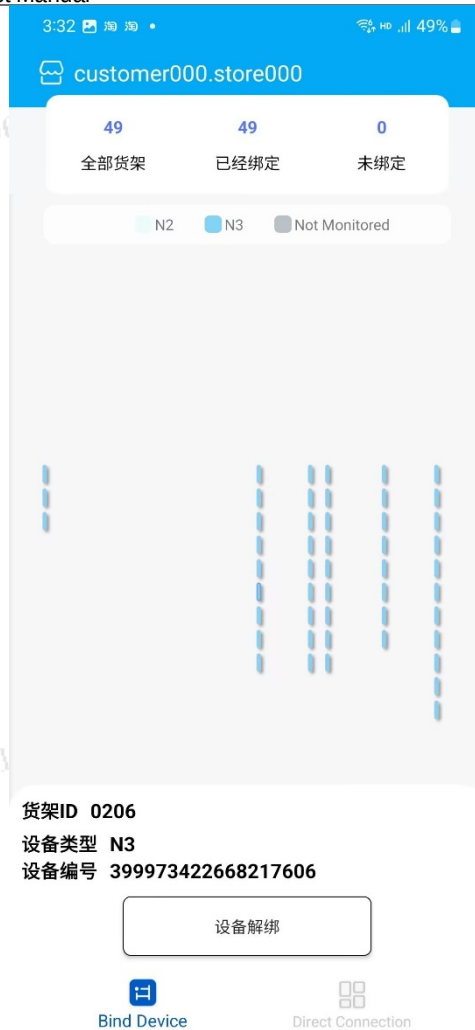
14 block-C3-4-4-07861191-90-36

15 block-C5-4-6-012331011-90-36

16 block-E3-3-03034858-83-39

3.2.2. Camera and Shelf Binding

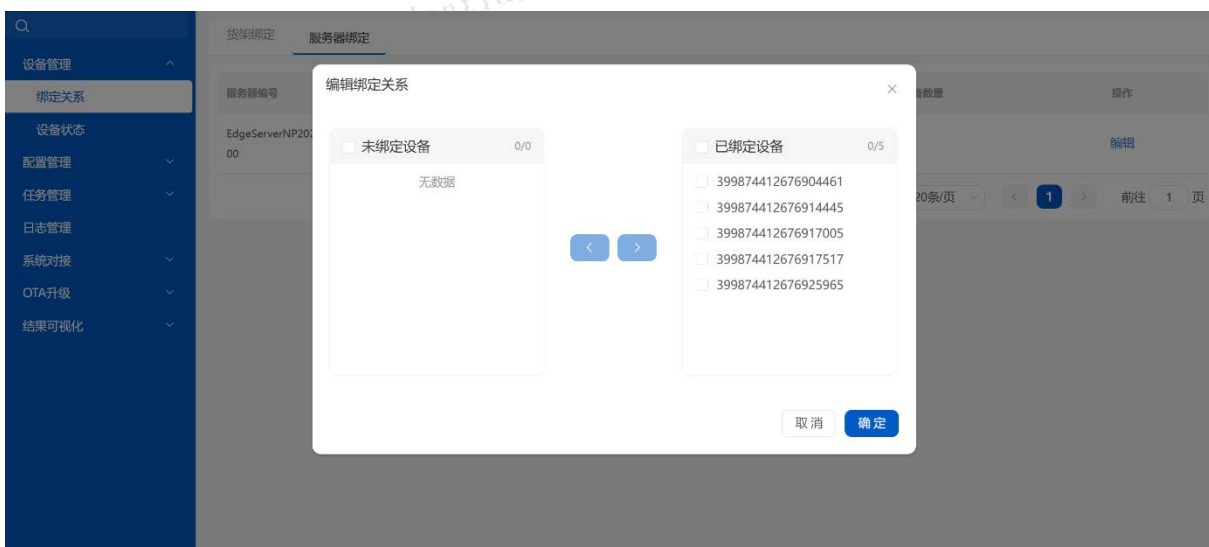
Log in to the Gongkan app, click on the shelf, and scan the camera number that monitors the shelf to complete the binding.



3.3.OMS System Configuration

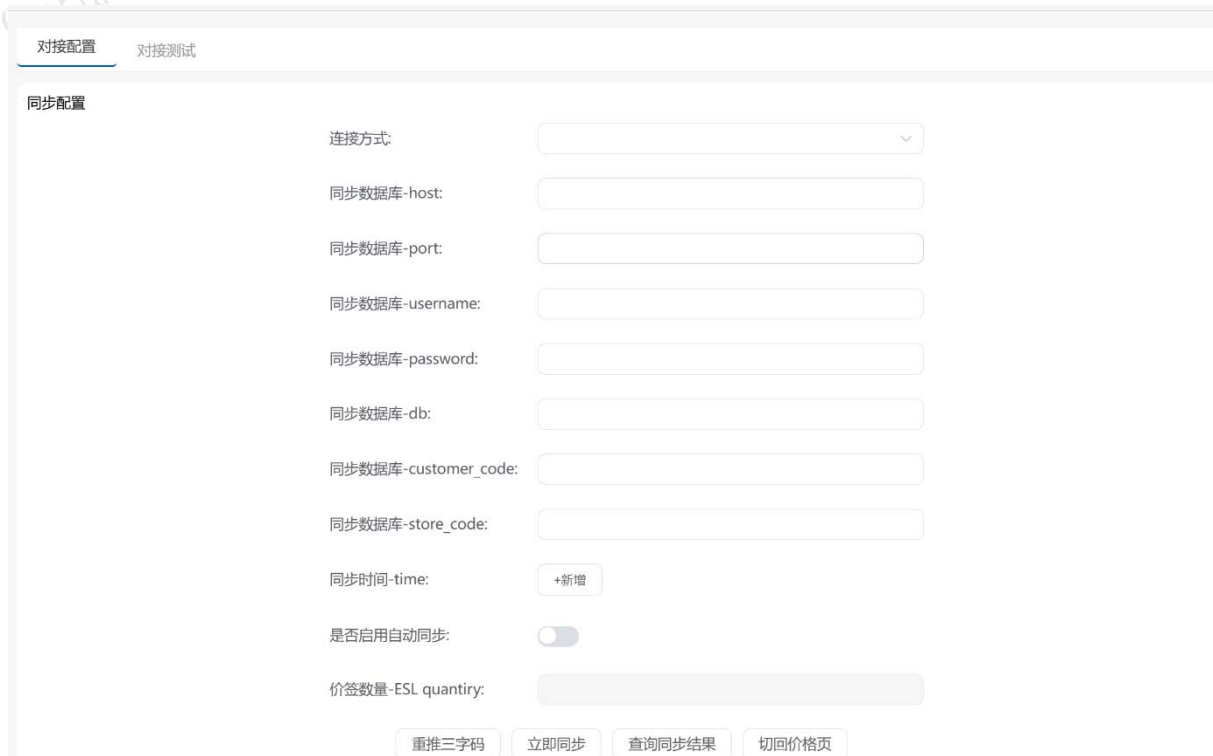
3.3.1. Camera and Edge Server Binding

In the server binding menu, bind the devices to the edge server.



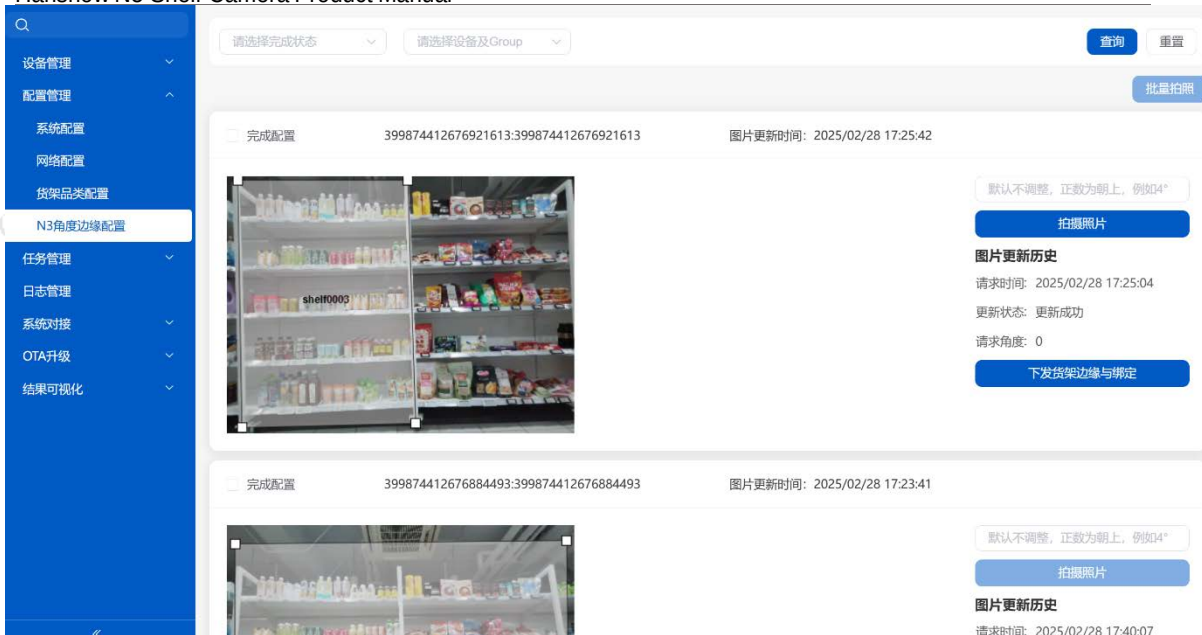
3.3.2. Price Tag Environment Configuration

Configure prismart and esl-working.



3.3.3. Shelf Edge Drawing

Configure the shelf edges for the camera's captured images, and you can also adjust the camera's angle.



3.3.4. Network Configuration

Configure WIFI for the camera.

WIFI Configuration

device ID:

WIFI SSID:

WIFI password:

subnet mask:

gateway:

DNS address:

enable password: ☐

enable DHCP: ☐

Static IP configuration (camera)

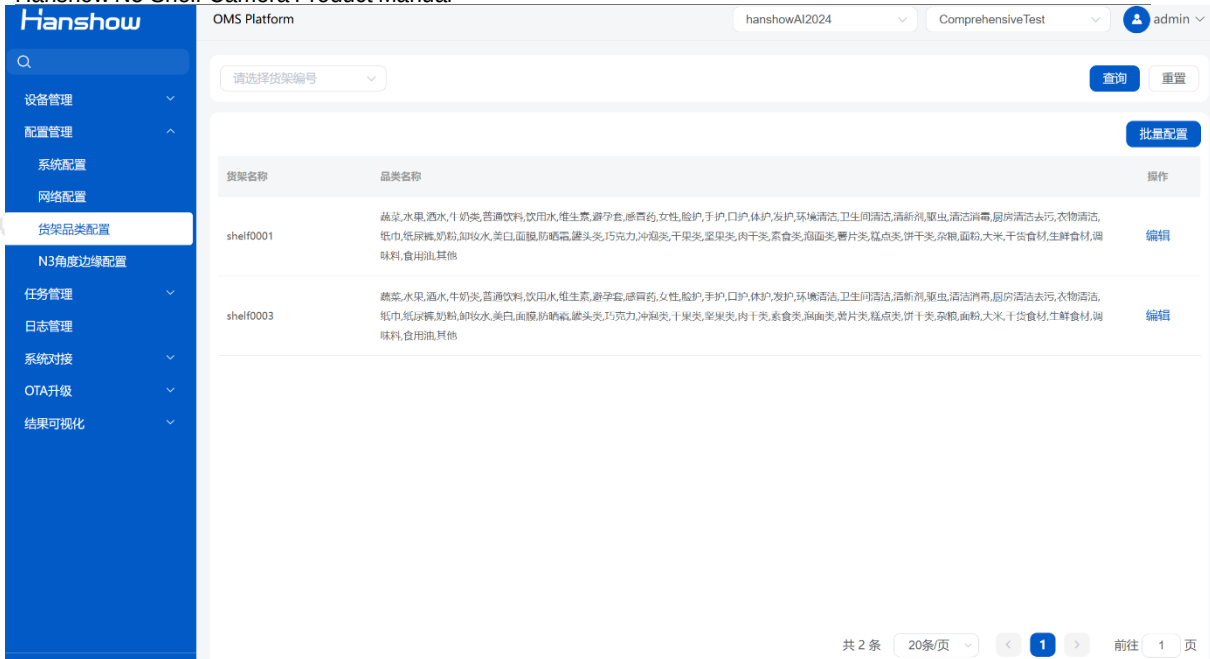
available IP

address range:

initial IP	terminal IP	operation
192.168.8.50	192.168.8.100	delete

3.3.5. Configure Algorithm Category

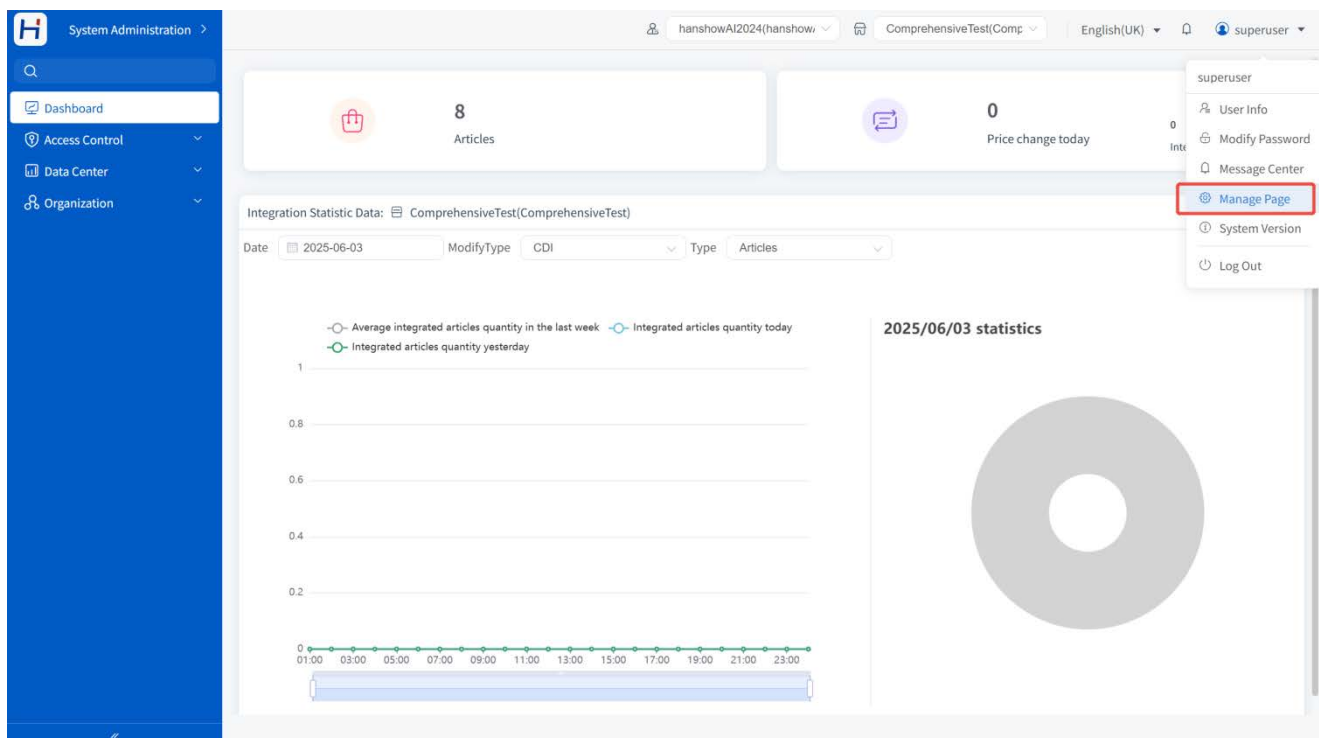
Configure the algorithm category for the shelf to narrow down the scope of algorithm feature retrieval.



3.4. Wise Bussiness View

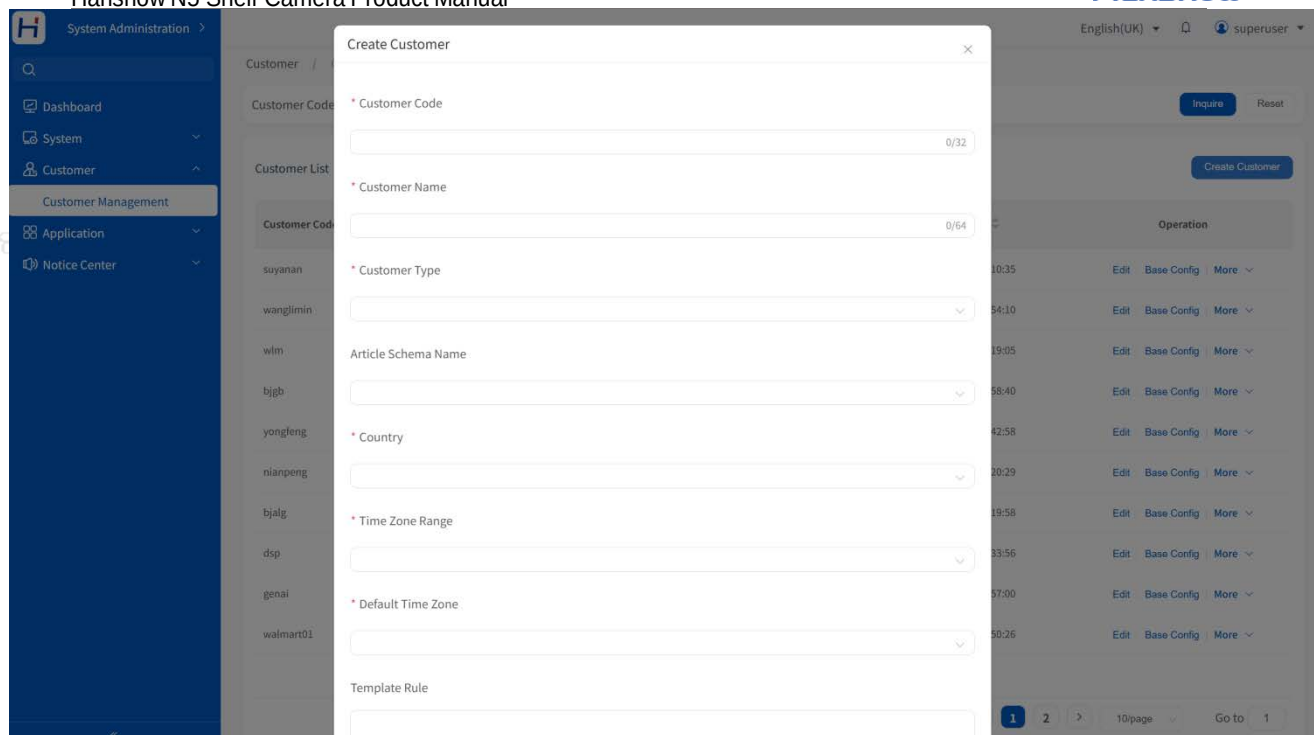
3.4.1. Create Customer Account

3.4.1.1. Customer and Store Creation

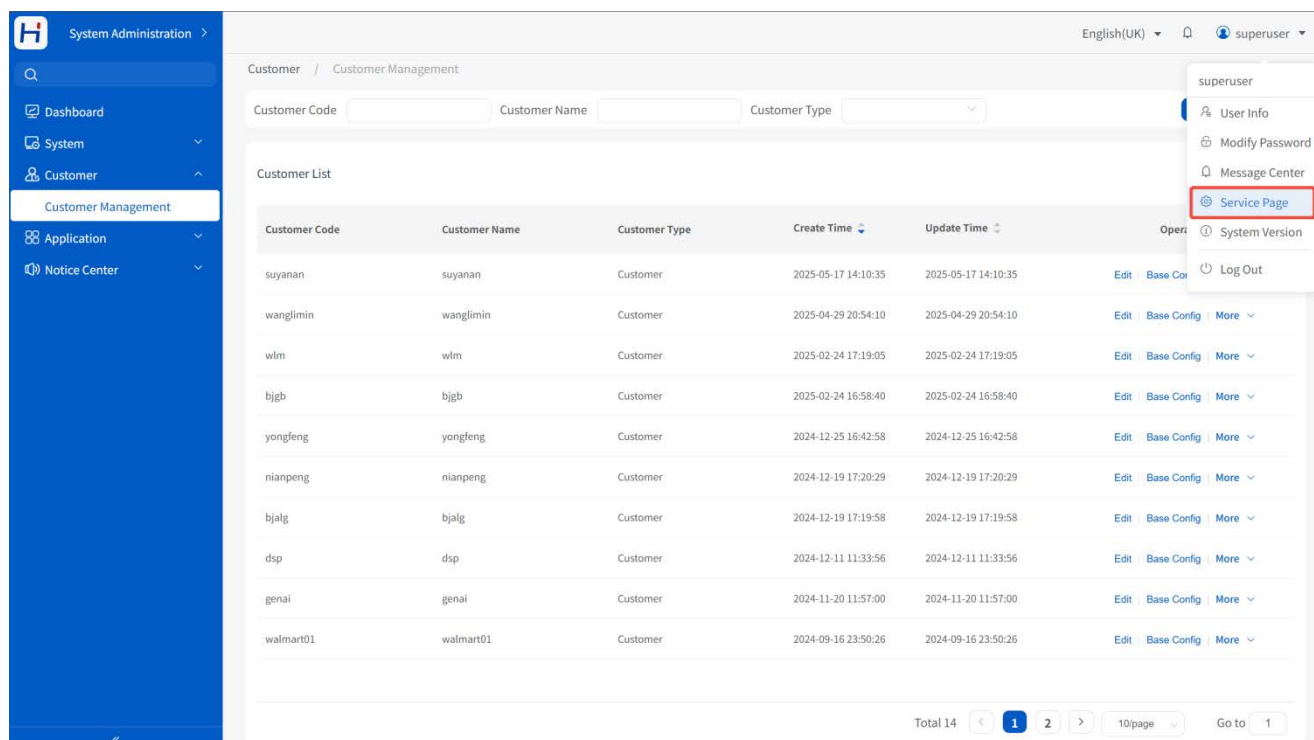


Click the "Create Customer" button and enter the relevant information about the customer.

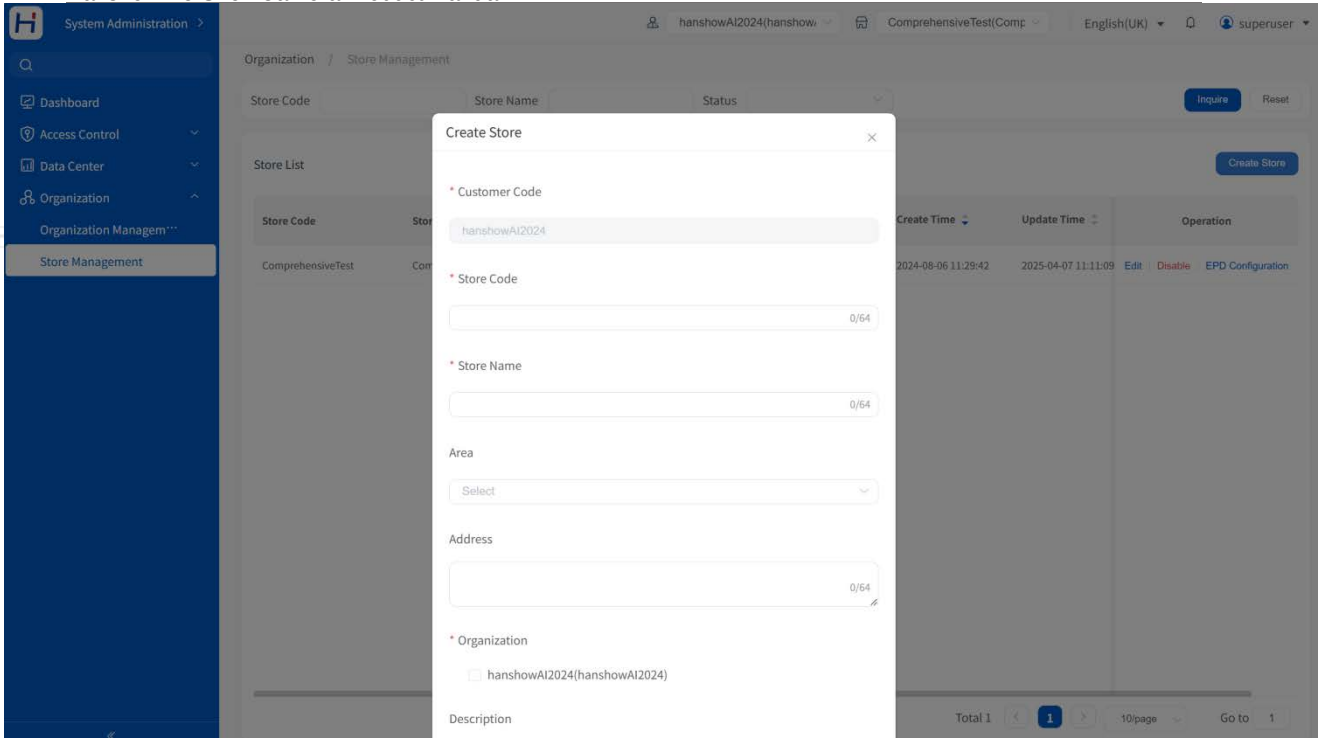
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After creating the customer, click the account icon in the upper right corner to switch to the business page.

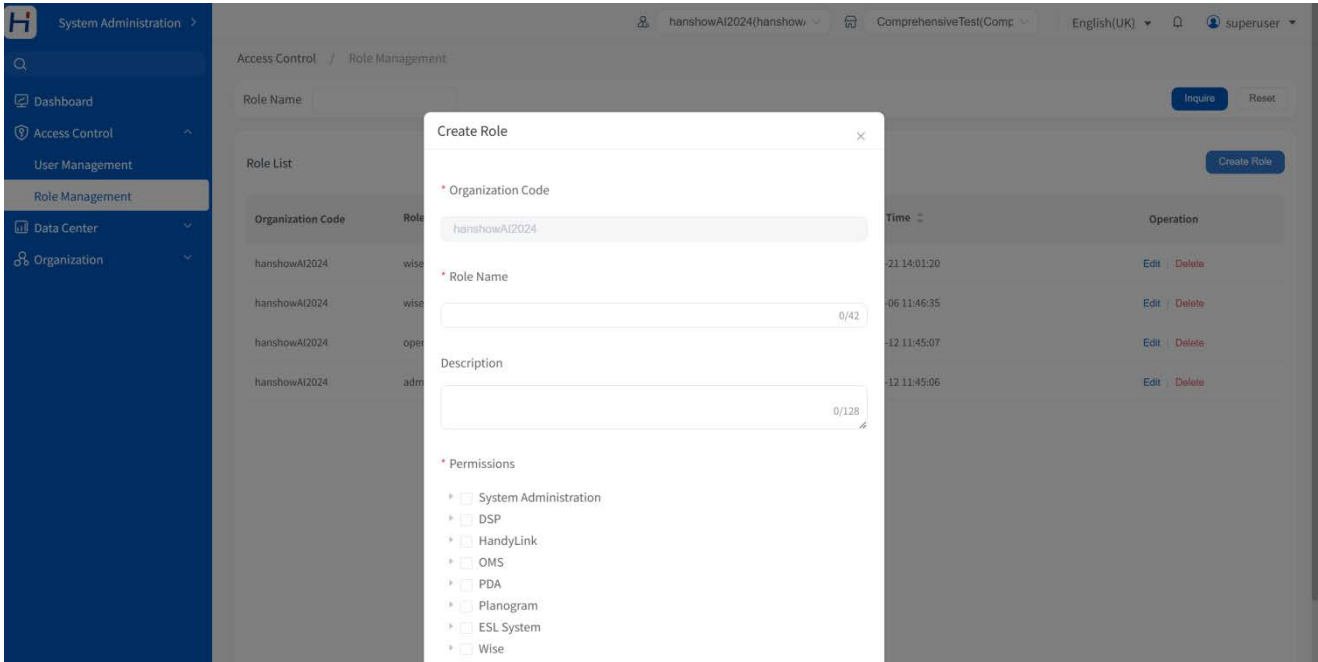


Select the created customer, click on "Organization - Store Management - Create Store", and enter the relevant information about the store.



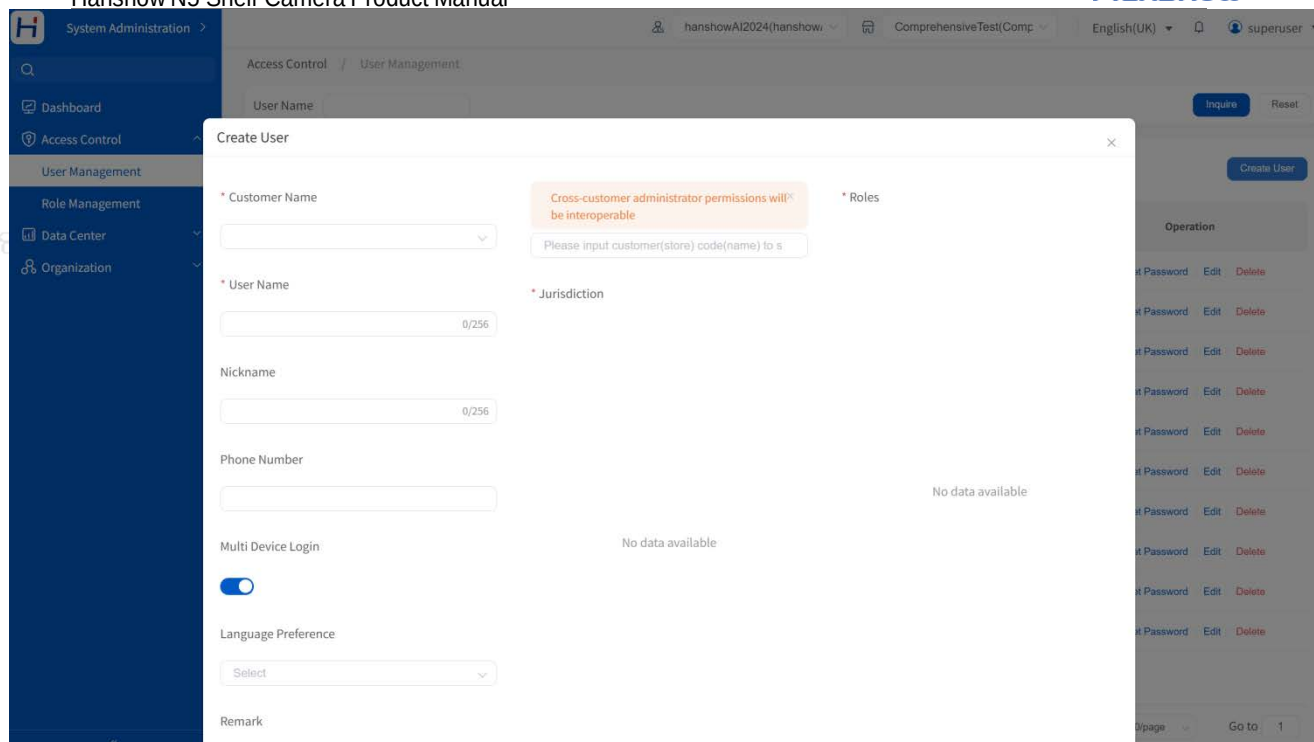
3.4.1.2. Role and User Creation

Click on “Access Control - Role Management - Create Role” to create a new role and assign relevant menu and function permissions to this role.

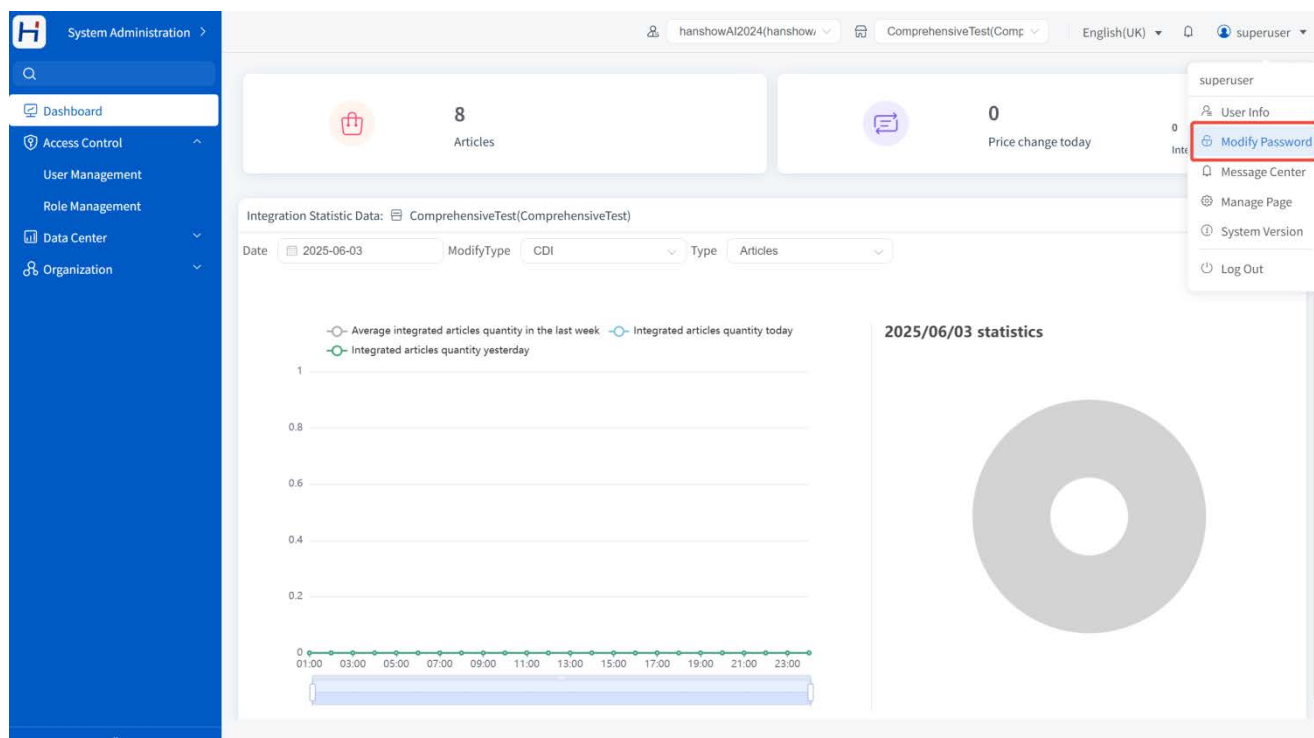


Click on “Access Control - User Management - Create User” to create a user and assign a specific role permission to the user.

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The default password for all users is 000000. If a password change is needed, click the account icon in the upper right corner and switch to "Change Password".



3.4.2. Parameter Configuration

3.4.2.1. System Parameter Configuration

Click on "System Configuration - Store Configuration" to configure the customer's devices and the required business types. You can also configure the parameters required for

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the corresponding business.

Device type
☐ Robot ☒ Camera

Business Type
☒ OOS Detection ☒ Product Display, Planogram Compliance

OOS Configuration
businessManage.esl switch OOS template
☒ Do Not Switch OOS Template ☐ Switch OOS Template by app Template is on the ESL 1 Page

Standard Shelf
Display drawing solut Facings Fill Rate Threshold: 70 %

Bread Shelf
Display drawing solut Facings Fill Rate Threshold: 50 %

Fresh Shelf
Display drawing solut Facings Fill Rate Threshold: 50 %

Hanging Rack
Display drawing solut Facings Fill Rate Threshold: 50 %

Planogram Compliance Configuration
* Check Type
☒ By Planogram
Note: Before issuing the task, please generate the shelf drawing in the "Display Drawing" menu.

3.4.2.2. Department Configuration

Click on "System Configuration - Department Configuration" to add new departments based on the customer's class group definitions (e.g., FMCG Group, Liquor Group).

Department name: Department code: Search Reset

Add Department

* Department code:

* Department name:

Cancel Confirm

Department name	Department code	Operations
0011		Edit Delete
111111		Edit Delete
121212		Edit Delete
131313		Edit Delete
141414	141414	Edit Delete
151515	151515	Edit Delete
161616	161616	Edit Delete
DailyChemical	DailyChemical	Edit Delete
Drink	Drink	Edit Delete
Snacks	Snacks	Edit Delete

1 Go to 1 20/page Total 10

3.4.2.3. Shelf Configuration

Click on "System Configuration - Shelf Configuration - Shelf Editing" to add new shelves and set the class group and shelf type for each shelf.

Shelf name:

Shelf number:

Search

Reset

Batch delete

Batch update

Shelf template

Import shelf

Add shelf

☐	Shelf number	Shelf name	Department name	Shelf type	Tier position	Operations
☐	shelf0001	shelf0001	121212	Standard Shelf		Edit Delete
☐	shelf0003	shelf0003名称	151515	Standard Shelf		Edit Delete
☐	shelf00033333	货架00033333				Edit Delete
☐	shelf0004	货架0004	121212	Standard Shelf		Edit Delete
☐	shelf0005	货架0005	121212	Standard Shelf		Edit Delete
☐	shelf0006	货架0006	121212	Standard Shelf		Edit Delete
☐	shelf0007	货架0007	151515	Standard Shelf		Edit Delete
☐	shelf0008	货架0008	Drink	Standard Shelf		Edit Delete
☐	shelf0009	shelf0009名称	151515	Standard Shelf		Edit Delete
☐	shelf0010	货架0010	121212	Standard Shelf		Edit Delete
☐	shelf0012	货架0012	121212	Standard Shelf		Edit Delete

< 1 2 3 4 5 6 7 >

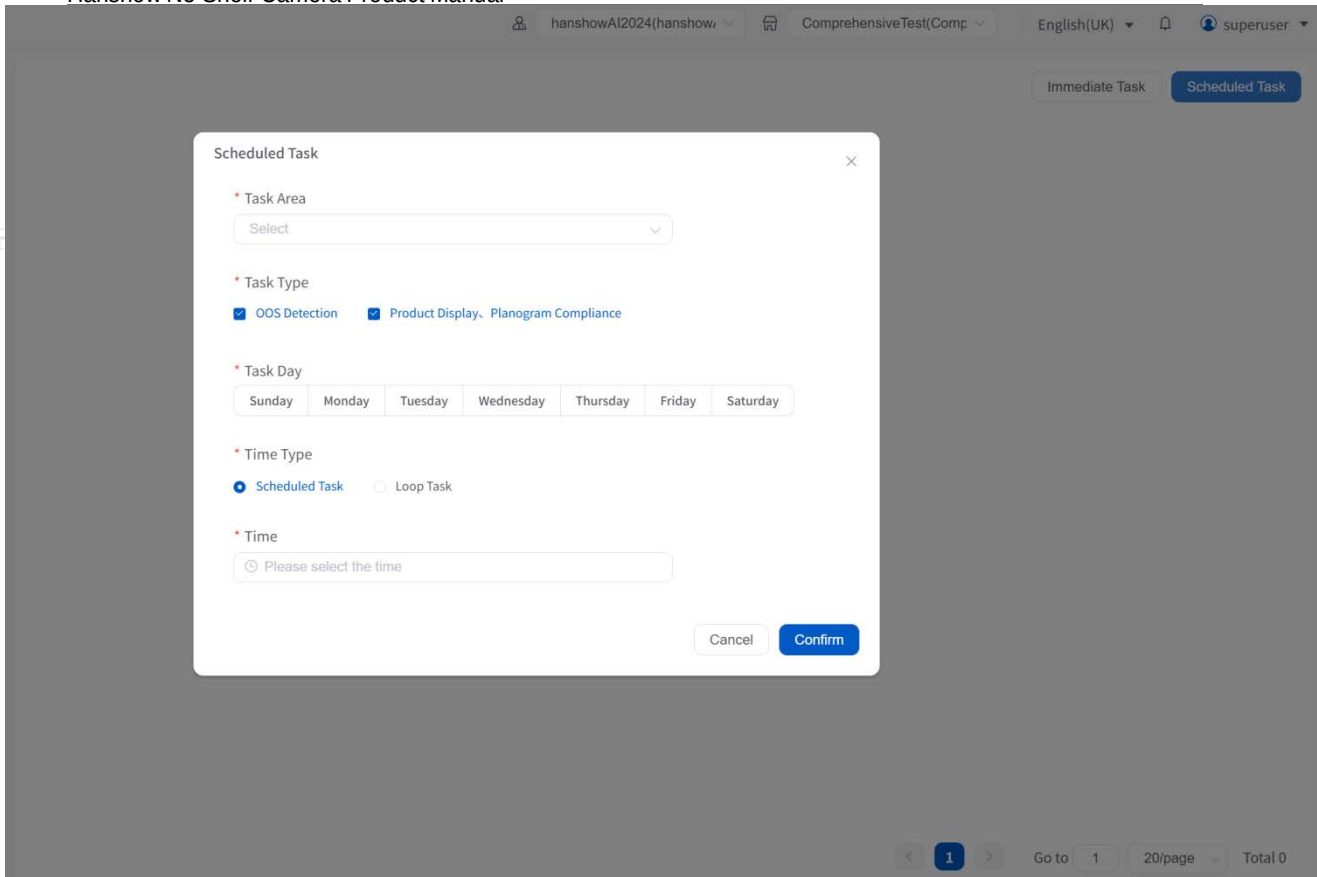
Go to 1

20/page

Total 140

3.4.2.4. Planogram Configuration

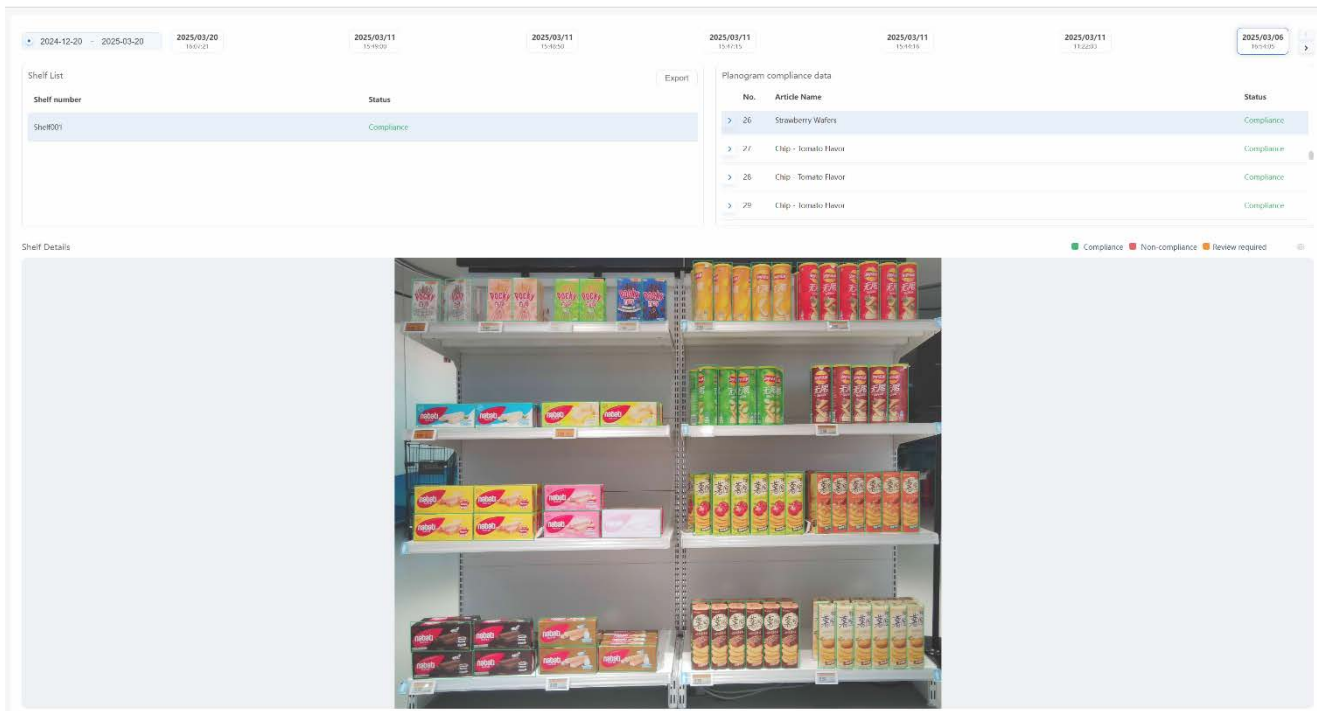
Click on the “Planogram Configuration” edit button to configure the display plan for the shelf. There are two configuration methods: 1. Manual editing; 2. Reverse generation of the display plan based on product recognition results.



3.4.4. Business Results Viewing

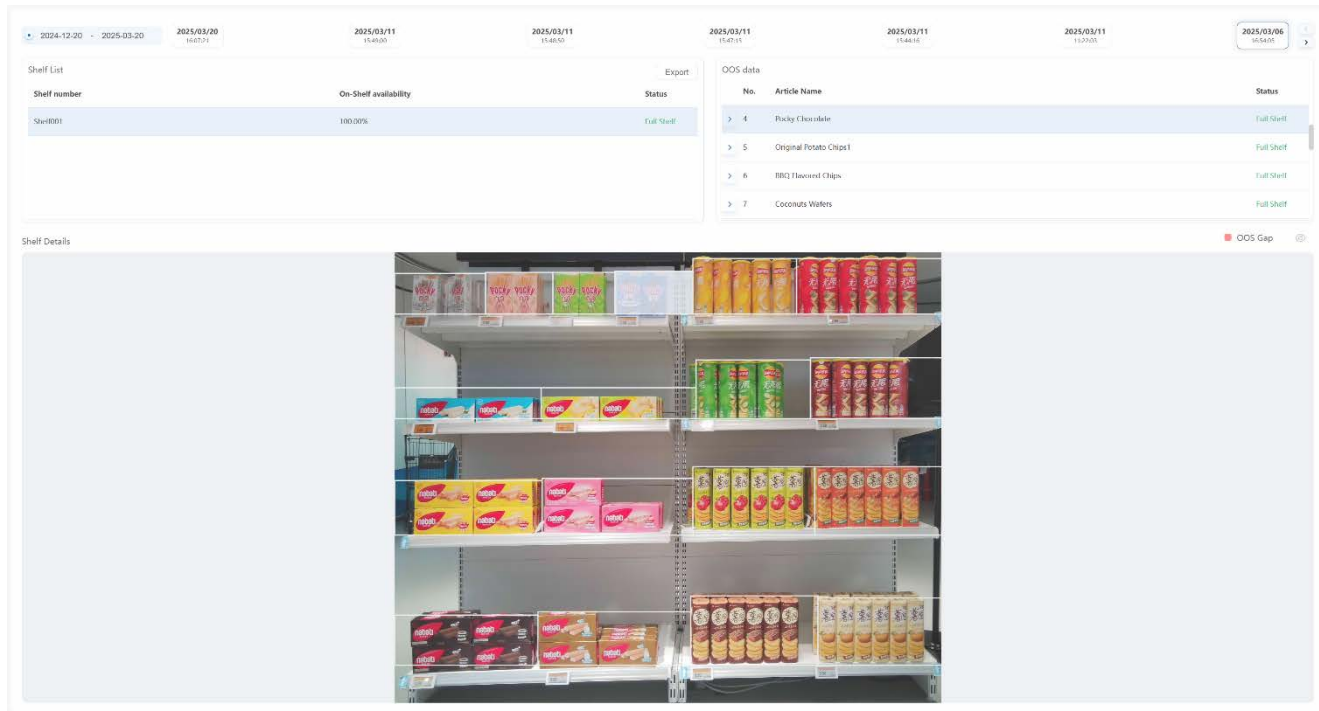
3.4.4.1. Planogram Compliance Results Viewing

Click on "Shelf Health – Planogram Compliance" to compare the actual display with the display diagram, and output the compliance results of the display face.

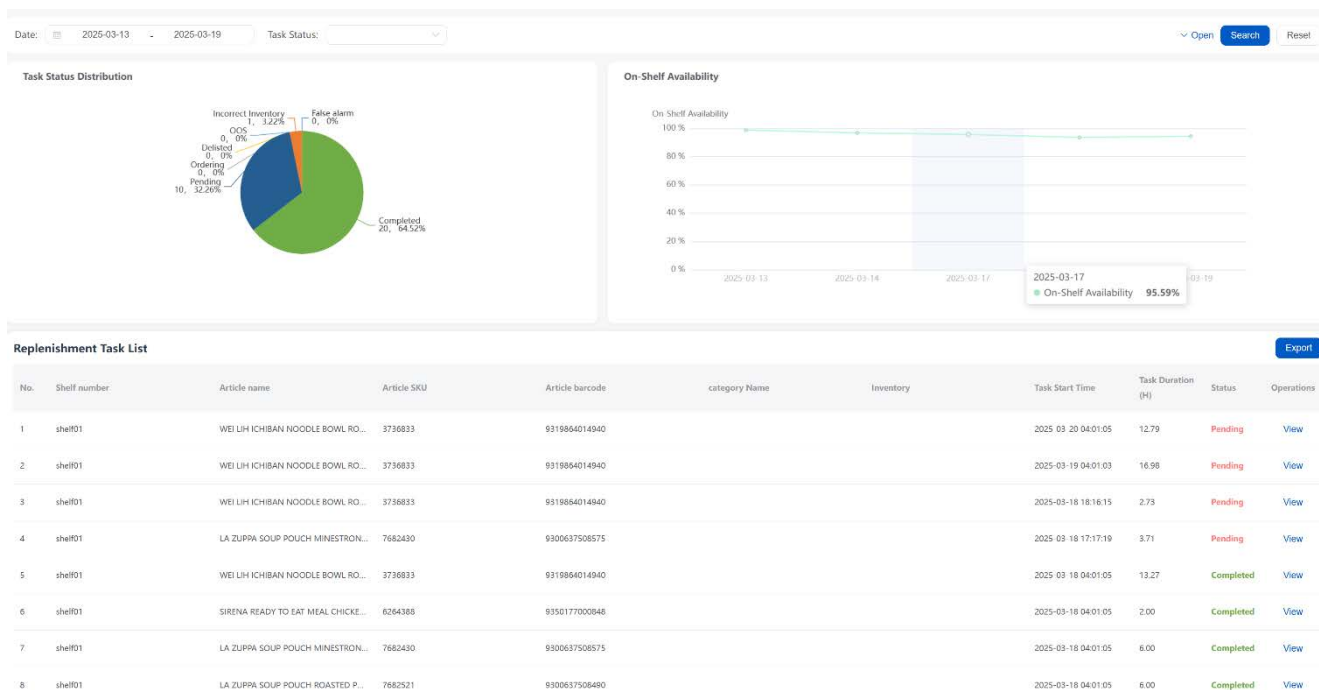


3.4.4.2. Out-of-Stock Results Viewing

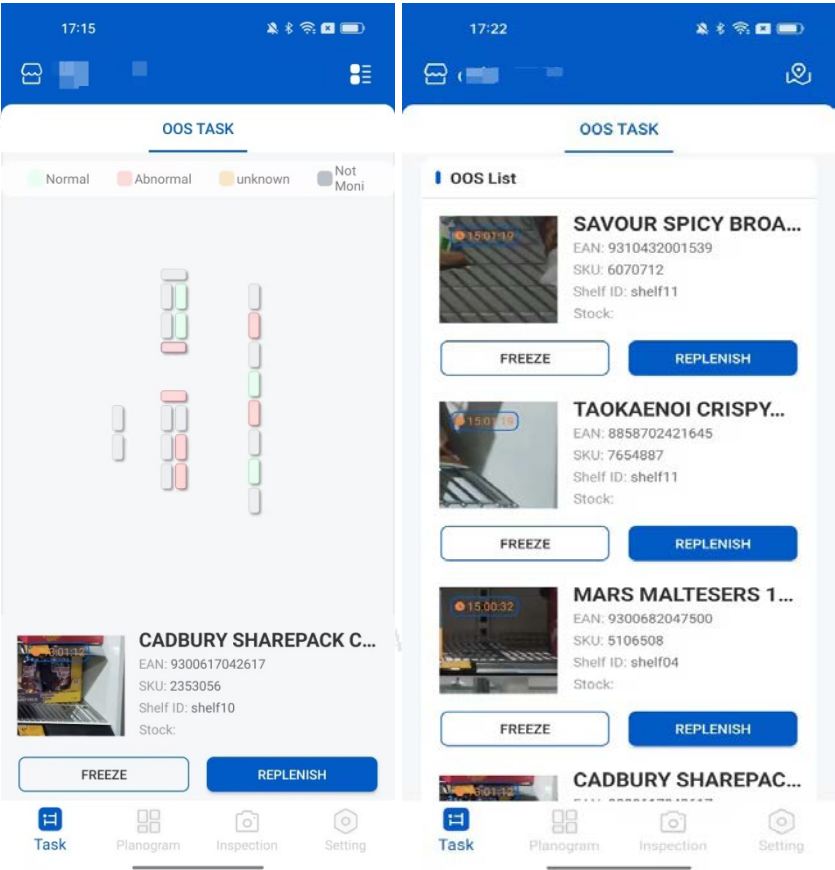
Click on “Shelf Health - Out-of-Stock Detection” to view the out-of-stock results. The out-of-stock scheme is based on the grid calculation of the full stock rate, and if it is lower than the configured threshold, it is considered out-of-stock.



Click on “Store Operations - Store Tasks” to view the status of replenishment tasks, including support for viewing replenishment task status and full stock rate information.



The APP can be used to operate the corresponding replenishment tasks.



4. Precautions

During transportation and usage of N5 shelf cameras, please note the following precautions.

4.1. Transportation considerations

Avoid the following considerations during transport:

- Water leakage or heavy moisture
- Heavy stacking
- High heat conditions above 40°C

4.2. Precautions for use

Follow the precautions:

- The room-temperature N5 shelf cameras operate best in normal operating and storage environment, -10°C ~ 50°C, 45% ~ 65%RH.
- Keep N5 shelf cameras within the specified temperature range, otherwise N5 shelf cameras might be damaged and the battery life might be shortened.
- The output capacity will degrade at low temperature.
- Frequent communications or updates might shorten battery life during the use.
- Avoid dropping or tossing N5 shelf cameras.
- Do not disassemble N5 shelf cameras without permission.
- If the screen creaks due to external factors, deal with it quickly.
- The mineral substances in rainwater, moisture or liquids might corrode the electronic circuit. Avoid water on the product as much as possible.

- Regularly clean the Lens.
- Promptly remove cosmetics, perfume and other dirty on N5 shelf cameras to avoid case, or lens damaged.
- Do not use N5 shelf cameras in water, otherwise no warranty will be provided.
- Avoid direct contact with chemical detergent.
- Do not install N5 shelf cameras in a strong magnetic environment.

- ESLs communications might be limited or affected by other wireless communication systems that share the 2.4GHz frequency-band, such as Wi-Fi, Bluetooth, or Zigbee.
- Do not place devices near kitchen appliances such as a stove, a microwave oven.

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