

CONNECTED, UNIFIED
INTELLIGENT, INNOVATIVE

Hanshow

www.hanshow.com

Hanshow Technology Co., Ltd. hereby declares and reserves the final explanation right and other irrevocable and exclusive rights with respect to all contents contained in this promotional document, including but not limited to the right to explain or determine the meaning, scope and applicability of any of the terms, provisions and regulations contained herein and to resolve any disputes or discrepancies in relation thereto; without the prior written consents of Hanshow Technology Co., Ltd., no other party shall have the right to explain or modify the contents hereof.
This promotional document is made as comprehensive and detailed as possible based on the existing information. However, Hanshow Technology Co., Ltd. reserves the right to modify the price, color, equipment, parameters, etc. without further notice.
The color of the products in this promotional document are slightly different from the actual product due to shooting and printing reasons. The images are for reference only; the actual products serve as the standard. This promotional document shall be valid until December 31st, 2026.

www.fsc.org
The mark of responsible forestry
FSC® A000523

Product Catalog

Contents

01 Company Introduction

05 Product Introduction

07 Hanshow Nebular Series

15 Hanshow Polaris Products

21 Hanshow Lumina Series

25 Hanshow Accessories

27 Hanshow Smart Cart

33 Hanshow AI Shelf Camera N5

37 Hanshow NexOptim

41 ESL Controller & Proprietary Protocol

45 All-Star Platform

HS1648 Confidential 2026-07-10

COMPANY INTRODUCTION

Hanshow is one of the world's leading providers of digital store solutions for the pan-retail industry. We are equipped with independent R&D and innovation capabilities, expertise in integrating hardware and software solutions, and the ability to leverage resources across the entire industry chain.Founded in 2012, Hanshow is headquartered in Jiaxing, Zhejiang, with its R&D and corporate management center based in Beijing. We have established branches in domestic locations including Shanghai and Shenzhen, as well as overseas offices in France, Germany, the Netherlands, the United Kingdom, the United States, Australia, New Zealand, Singapore, and Vietnam.

Powered by IoT, AI and big data technologies, Hanshow delivers industry-leading digital store solutions to customers worldwide, encompassing a full portfolio of products and application solutions such as electronic shelf labels (ESLs), promotional digital signage, smart shopping carts, and in-store robots. To date, Hanshow serves retail customers in more than 80 countries and regions globally, supporting tens of thousands of stores — including partnerships with multiple of the world's top 100 retailers.



Headquarters

Beijing - China

Supply Chain

China | Vietnam | Mexico

Global Subsidiaries & Branches

China | Singapore | Malaysia
United States | Canada | United Kingdom
Netherlands | France | Germany
Sweden | Poland | Spain | Greece | Turkey
Australia | New Zealand | Japan

Global R&D Centers

China - Beijing, Jiaxing, Shanghai
Singapore - Singapore
Netherlands - Amsterdam
United States - Dallas



FROM PERCEPTION TO DECISION

HOW TO USE AI TO ADVANCE RETAIL

1st Party Data

ESL+Camera



Smart Cart



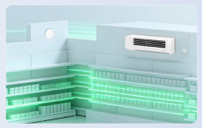
AI Robot



Ambient Sensors



Controllers



2nd Party Data

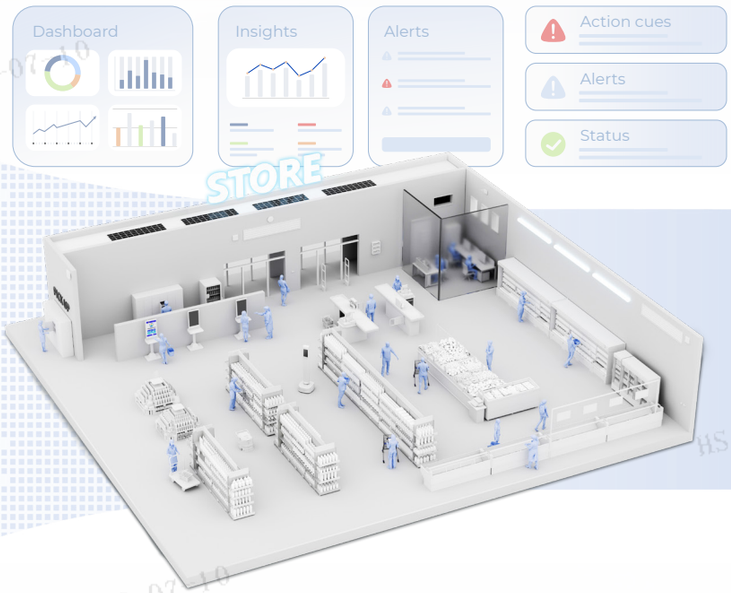
transaction, membership, merchandize, category

3rd Party Data

industry, weather

Digital Twin + AI Agent

3D store view,alerts, insights, recommendations, and guided actions



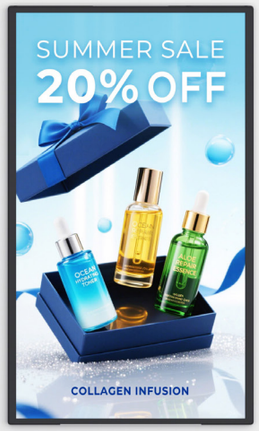
- Merchandising
- Supply Chain
- Store Operation
- Customer Engagement

Store Operation Efficiency

Customer Shopping Experience

New Revenue Opportunities

PRODUCT INTRODUCTION















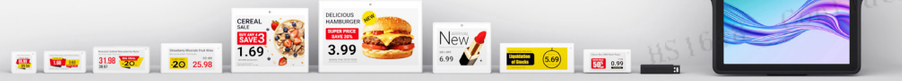














Hanshow Nebular Series

Flagship product, Best performance

Winner of both iF and G-Mark global design awards. Advanced IC and communication technology redefines the standard for ESL. Equipped with Hanshow's first self-developed ESL-dedicated chip, it delivers improved performance, reduced power consumption, and a battery life of up to 10 years.



DESIGN AWARD 2021

GOOD DESIGN AWARD 2020

Hanshow Nebular Series

Nebular Ultra Features



Full-Scene Positioning

Product & Customer Positioning & Navigation

Real-Time Shelf Planogram

Real-Time Planogram Perception & Audit

Support Out-of-Stock Detection

Smart Out-of-Stock Detection, Low Cost and High Precision

Smart Interactive ESL

Approachable Interaction, Innovative Marketing

Dual-Mode Communication

Driven by HiLPC and BLE Dual Protocols

Four-Color Freezer ESL

Unified Store ESL Color Presentation

* All data involved are calculated average values measured in simulated specific environments in Hanshow's laboratories. Some parameters and functions may vary depending on the actual product model and usage environment.

Hanshow Nebular Series

Nebular Plus Features



4-color Display and Instant Update

- 4-color display
- Update speed up to 60,000 updates/h/AP
- Flash LED in 1 second to locate product

Low Power Consumption and High Efficiency

- Highly integrated chip with optimized energy efficiency
- Replaceable batteries with a lifespan of up to 15 years
- satisfying both ambient and refrigerated conditions

Free Movement & Seamless Roaming

- Reliable connectivity in diverse scenarios
- Supports updating & flashing in real time during movement
- Regional dynamic frame listening, Flexible Mode Settings

Safety Management of Massive Devices

- Capability to manage hundreds of millions of ESLs
- IoT security chips that can protect intensive data
- Strong communication anti-interference capability

Industrial Top-Level Protection

- Slim 9.5mm body
- IP68 certified, outstanding water and dust resistance
- 4H screen hardness with improved abrasion resistance

Rich Applications

- Compatible with all Nebular accessories
- 8-page template storage space
- 7-color flashing light

* All data involved are calculated average values measured in simulated specific environments in Hanshow's laboratories. Some parameters and functions may vary depending on the actual product model and usage environment.

Hanshow Nebular Ultra



Hanshow Nebular Ultra-160

Display Size: 1.6”
Product Dimensions: 43.4*36.6*10.1mm
Active Display Area: 28.2*27.4mm
Resolution: 200*200px



Hanshow Nebular Ultra-190

Display Size: 1.9”
Product Dimensions: 43.2*48.3*10.2mm
Active Display Area: 27.9*38.1mm
Resolution: 184*232px



Hanshow Nebular Ultra-260

Display Size: 2.6”
Product Dimensions: 72.3*38.1*10.1mm
Active Display Area: 56.2*28.1mm
Resolution: 296*152px



Hanshow Nebular Ultra-300

Display Size: 3.0”
Product Dimensions: 78.7*48.3*10.2mm
Active Display Area: 63.5*38.1mm
Resolution: 416*232px



Hanshow Nebular Ultra-350

Display Size: 3.5”
Product Dimensions: 97.0*45.5*10.1mm
Product Dimensions: 81.1*35.6mm
Resolution: 480*232px



Hanshow Nebular Ultra-260F

Display Size: 2.6”
Product Dimensions: 72.3*38.1*10.1mm
Product Dimensions: 56.2*28.1mm
Resolution: 296*152px



Hanshow Nebular Ultra-350F

Display Size: 3.5”
Product Dimensions: 97.0*45.5*10.1mm
Product Dimensions: 81.1*35.6mm
Resolution: 480*232px

Hanshow Nebular Plus



Hanshow Nebular Plus-160

Display Size: 1.6”
Display Size: 43.4*36.6*10.1mm
Active Display Area: 28.2*27.4mm
Resolution: 200*200px



Hanshow Nebular Plus-190

Display Size: 1.9”
Display Size: 43.2*48.3*10.2mm
Active Display Area: 27.9*38.1mm
Resolution: 184*232px



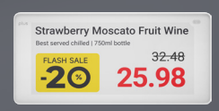
Hanshow Nebular Plus-260

Display Size: 2.6”
Display Size: 72.3*38.1*10.1mm
Active Display Area: 56.2*28.1mm
Resolution: 296*152px



Hanshow Nebular Plus-300

Display Size: 3.0”
Display Size: 78.7*48.3*10.2mm
Active Display Area: 63.5*38.1mm
Resolution: 416*232px



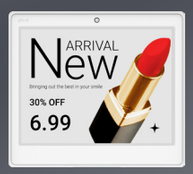
Hanshow Nebular Plus-350

Display Size: 3.5”
Display Size: 97.0*45.5*10.1mm
Active Display Area: 81.1*35.6mm
Resolution: 480*232px



Hanshow Nebular Plus-437

Display Size: 4.37”
Display Size: 119.4*48.3*10.2mm
Active Display Area: 104.1*38.1mm
Resolution: 600*200px



Hanshow Nebular Plus-420

Display Size: 4.2”
Display Size: 100.1*88.0*9.5mm
Active Display Area: 84.8*63.6mm
Resolution: 400*300px



Hanshow Nebular Plus-583

Display Size: 5.83”
Display Size: 132.8*112.2*9.8mm
Active Display Area: 118.8*88.2mm
Resolution: 648*480px



Hanshow Nebular Plus-750

Display Size: 7.5”
Display Size: 178.1*125.7*10.8mm
Active Display Area: 163.2*97.9mm
Resolution: 800*480px



Hanshow Nebular Plus-260F

Display Size: 2.6”
Display Size: 72.3*38.1*10.1mm
Active Display Area: 56.2*28.1mm
Resolution: 296*152px



Hanshow Nebular Plus-350F

Display Size: 3.5”
Display Size: 97.0*45.5*10.1mm
Active Display Area: 81.1*35.6mm
Resolution: 480*232px

Hanshow Polaris

Vivid Color, Vision Redefined

The Hanshow Polaris Series is a new generation of ESL independently developed by Hanshow Technology. It features a slim lightweight design, ultra-long service life and high-definition visual performance. With a wealth of functional applications, it empowers stores to meet diverse business scenario demands.



HS1648 Confidential 2026-07-10

Hanshow Polaris Features



Four-color Display & High Screen-to-body Ratio

- Full series supports four-color display
- High screen-to-body ratio for more space
- New lens-free design for clearer visuals

Efficient Operation & Long-lasting Battery Life

- Highly integrated SiP chip for optimized energy efficiency
- Slim swappable battery design with a 10-year service life
- Stable operation in full scenarios from refrigerated to room temperature

Free Movement & Seamless Roaming

- Reliable connectivity in diverse scenarios
- Supports updating & flashing in real time during movement
- Regional dynamic frame listening, Flexible Mode Settings

Powerful Functions for Operational Efficiency

- 8-page storage capacity for easy multi-content switching
- 7-color LED lights for multi-scenario use, enabling precise instant product positioning
- Millisecond-level scheduled price changes and POS synchronization available offline and power-off

Multiple Sizes & Flexible Adaptation

- Multiple new sizes to meet different scenario needs
- Free horizontal or vertical installation – no placement restrictions
- Compatible with all Hanshow Nebular series accessories

Low-carbon & Eco-friendly Design

- Highly integrated chip
- Manufactured with green energy
- Supports low-carbon operations

* All data involved are calculated average values measured in simulated specific environments in Hanshow's laboratories. Some parameters and functions may vary depending on the actual product model and usage environment.

Hanshow Polaris



Hanshow Polaris-160

Display Size: 1.6”
Display Size: 42.9*39.2*9.5mm
Active Display Area: 28.2*27.4mm
Resolution: 200*200px



Hanshow Polaris-200

Display Size: 2.0”
Display Size: 58.9*36.3*9.5mm
Active Display Area: 43.4*23.7mm
Resolution: 250*128px



Hanshow Polaris-230

Display Size: 2.3”
Display Size: 66.5*36.8*9.5mm
Active Display Area: 51.0*24.2mm
Resolution: 250*122px



Hanshow Polaris-230F

Display Size: 2.3”
Display Size: 67.0*34.1*9.5mm
Active Display Area: 51.0*24.2mm
Resolution: 250*122px



Hanshow Polaris-260

Display Size: 2.6”
Display Size: 71.7*40.8*9.5mm
Active Display Area: 56.2*28.1mm
Resolution: 296*152px



Hanshow Polaris-310

Display Size: 3.1”
Display Size: 72.2*64.2*10.0mm
Active Display Area: 56.3*53.4mm
Resolution: 300*300px



Hanshow Polaris-420

Display Size: 4.2”
Display Size: 100.2*88.1*10.6mm
Active Display Area: 84.8*63.6mm
Resolution: 400*300px



HS1648 Confidential 2026-07-10

Hanshow Lumina Series

In-store Marketing, Slim Design, Fresh View

Boasting outstanding visual performance, the Hanshow Lumina series efficiently delivers product information and enlightens retail spaces, greatly boosting product exposure.
Available in multiple sizes to fit diverse in-store scenarios, it expands retail media touchpoints while helping retailers and brands elevate brand image.



Hanshow Lumina Series

Lumina Pro / Edge / Slim Features

Full-color display

Rich presentation of brand information
Enhances product appeal

Online and offline integration
Strengthens brand promotion

Digital empowerment
Improves marketing efficiency

Smart touchpoint terminals
Build an in-store Retail Media Network



Hanshow Lumina Pro



Lumina Pro 1010

Screen: Single side / double side
Display Size: 10.1”
Product Dimensions: 259.1*1156.4*112.7mm
Resolution: 800*1280px
Wireless Communication:
WiFi 2.4G/5G+HiLPC



Lumina Pro 1560

Screen: Single side
Display Size: 15.6”
Product Dimensions: 370.1*221.4*10.7mm
Resolution: 1080*1920px
Wireless Communication:
WiFi 2.4G+HiLPC

Hanshow Lumina Edge



HS-AT2301

Display Size: 23”
Product Dimensions: 597*60.4*16.0mm
Active Display Area: 585.6*48.2mm
Resolution: 1920*158px



HS-AT3701

Display Size: 37”
Product Dimensions: 914.9*280.8*43.5mm
Active Display Area: 899.7*253.0mm
Resolution: 1920*540px

Hanshow Lumina Slim



Hanshow Lumina Slim-750

Display Size: 7.5”
Product Dimensions: 178.1*125.7*10.6mm
Active Display Area: 160.0*96.0mm
Resolution: 800*480px



Hanshow Lumina Slim-820

Display Size: 8.2”
Product Dimensions: 199.7*134.1*10.8mm
Active Display Area: 180.2*101.4mm
Resolution: 1024*576px



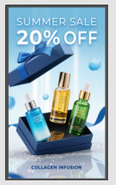
Hanshow Lumina Slim-970

Display Size: 9.7”
Product Dimensions: 171.7*227.1*7.1mm
Active Display Area: 141.1*201.6mm
Resolution: 1120*784px



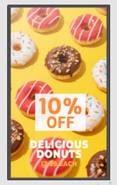
Hanshow Lumina Slim-1330

Display Size: 13.3”
Product Dimensions: 219.1*303.9*7.1mm
Active Display Area: 202.8*270.4mm
Resolution: 1200*1600px



Hanshow Lumina Slim-3150D1

Display Size: 31.5”
Product Dimensions: 420.8*718.5*13.5mm
Active Display Area: 391.8*696.4mm
Resolution: 2560*1440px



Hanshow Lumina Slim-3150D2

Display Size: 31.5”
Product Dimensions: 420.8*718.5*13.5mm
Active Display Area: 391.8*696.4mm
Resolution: 2560*1440px

Hanshow Accessories

Based on the specific conditions of customers' stores, Hanshow offers a wide variety of exquisite accessories, ensuring that electronic price tags can seamlessly adapt to different scenarios.





Hanshow Smart Cart

A New, Intelligent, AI-Powered Shopping Journey

- **A CLOSER FOR BRANDS**
  Realize targeted promotion, measure true sales, boost conversion

- **AN ALLY FOR RETAILERS**
  Ensure security, maximize efficiency, and drive growth

- **A CO-PILOT FOR SHOPPERS**
  Shop with ease, choose with confidence, go home with joy



HS1648 Confidential 2026-07-10



Push the Cart, Push the Future

Hanshow Smart Cart Business Values



The Multiplier of Retailer Revenue

- Smart shopping and personalized promotions help shoppers find and decide faster
- Reduce checkout lanes, more floor space for revenue-generating activities
- Strengthen membership and grow at scale

The Leap of Shopper Loyalty

- Real-time order and discount visibility for a more confident shopping experience
- Frictionless & Express Checkout reduces time spent at payment
- Location-based recommendations and in-store navigation to optimize the shopping journey

The Reorientation of Store Efficiency

- Reduce staff labor and unleash potential
- Centralized management and data-driven insights to optimize store flow and layout
- Queue-free self-checkout to increase overall store throughput

The Closed-Loop of Retail Media Network

- High-frequency in-store RMN touchpoint ensuring consistent shopper engagement
- Proximity-based, high-frequency brand exposure for more precise and effective campaign delivery
- Measurable and accountable brand campaign performance



Hanshow Smart Cart

Full Cart Solution



Full Cart Advantages: Enhanced Experience, Expanded Choices

- Deep Hardware-Software Integration: High synergy between software and hardware for complete out-of-the-box readiness and efficient deployment.
- Enhanced Loss Prevention: Dual weight and vision monitoring with a configurable security framework for a comprehensive protection experience.
- Ultimate Shopper Experience: Award-winning ergonomic design and user-centric accessories for effortless usability.
- Elevated Store Image: Internationally recognized ID design that positions your store at the cutting edge of intelligent retail technology.

Product Features



Loss Prevention



Nested Magnetic Wireless Charging



In-door Navigation



Proximity Marketing

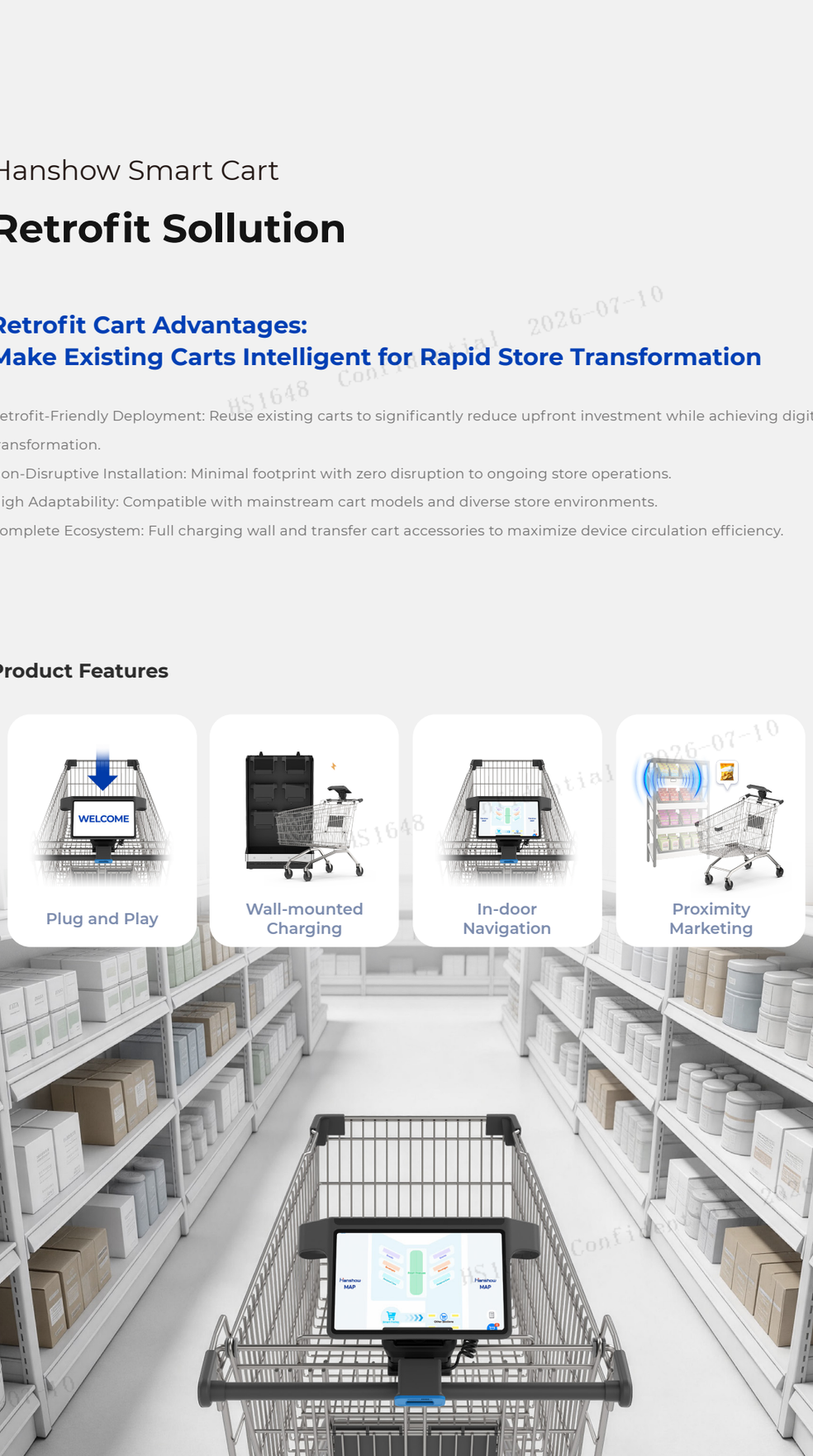
Hanshow Smart Cart

Retrofit Sollution

Retrofit Cart Advantages: Make Existing Carts Intelligent for Rapid Store Transformation

- Retrofit-Friendly Deployment: Reuse existing carts to significantly reduce upfront investment while achieving digital transformation.
- Non-Disruptive Installation: Minimal footprint with zero disruption to ongoing store operations.
- High Adaptability: Compatible with mainstream cart models and diverse store environments.
- Complete Ecosystem: Full charging wall and transfer cart accessories to maximize device circulation efficiency.

Product Features



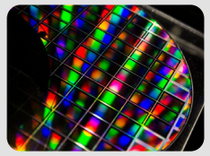
Shelf Camera Solution

Hanshow AI Shelf Camera N5

Hanshow AI Shelf Camera N5 serves as a core component of Hanshow NexShelf solution. Equipped with high-resolution imaging capability, it delivers real-time monitoring of shelf status. By leveraging edge computing and cloud-based AI algorithms, the camera achieves precise product recognition and reliable planogram compliance auditing. It empowers retailers to boost on-shelf availability, optimize replenishment workflows and upgrade merchandising standards. This enables more consistent in-store execution and accelerates the transformation toward digital, data-driven store operations.

Shelf Camera Solution

N5 Shelf Camera



Advanced ISP & Imaging Performance

- High-performance SoC with advanced ISP for superior image processing
- Up to 12MP resolution for high-definition capture
- <1 mm/pixel density for enhanced imaging precision
- Coverage range from 80 cm to 600 cm



Low Power Consumption

- Over 3 years of battery life in image capture mode
- Low-power video mode for video capture scenarios
- Supports RTC scheduled wake-up for automated inspection plan management





HiLPC + Wi-Fi 6 Dual-Network Architecture

- Real-time device management at ultra-low power via narrowband network
- Dynamic IP address assignment based on narrowband connectivity
- Significantly reduces overall power consumption



Environmental Adaptability

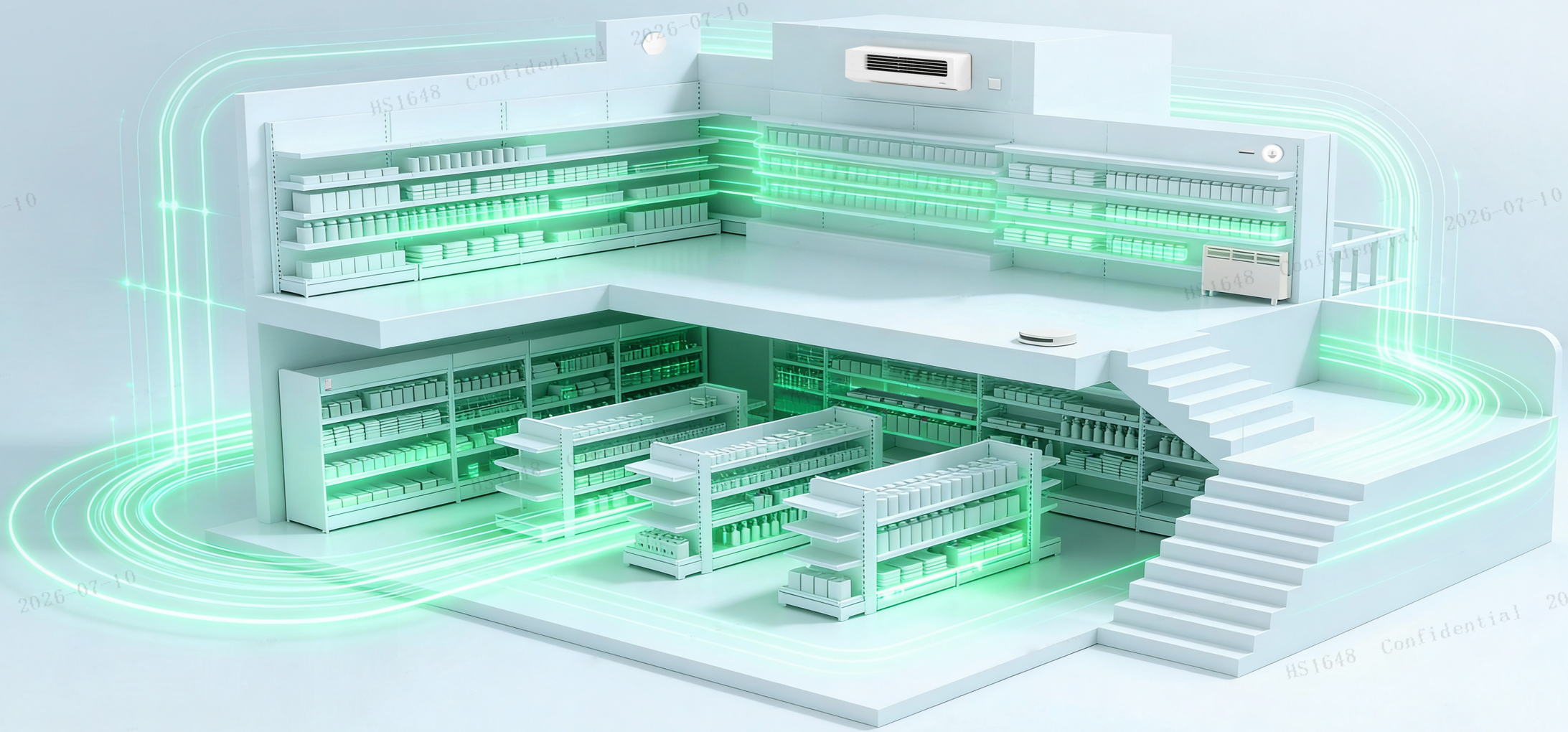
- IP68-rated for wet or dusty retail environments
- Flexible mounting on shelves, light bars, ceilings, or signage
- Seamless integration with no interference with products or sightlines



Hanshow NexOptim

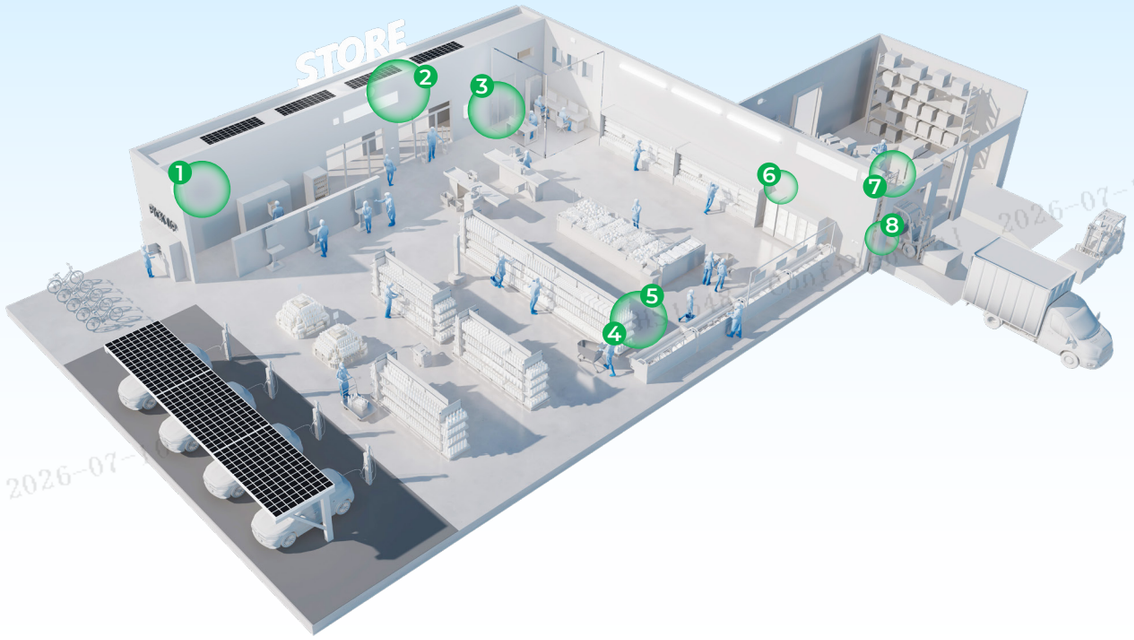
Intelligent Retail Digital Equipment Solution

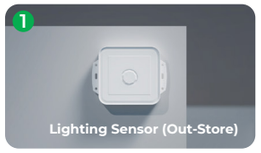
Leveraging the integrated IoT architecture and proprietary HiLPC wireless communication protocol, Hanshow NexOptim provides wiring-free, lightweight digital management solutions for retail in-store operational devices. Through centralized and policy-based management of air conditioning, lighting, cold chain and other equipment, the solution empowers retailers to achieve standardized digital operations, delivers direct energy conservation and cost reduction as well as efficiency improvement for stores, and facilitates green and sustainable business development.



Hanshow NexOptim

Intelligent Retail Digital Equipment Solution





















Hanshow NexOptim

Solution Value

Brand Experience Standardization

- Unified standard execution monitoring ensures consistent product quality.
- Efficient remote compliance supervision reduces inspection risks and losses.
- Delivering consistent customer experience and reliable employee experience.

Intelligent Equipment O&M

- Full-lifecycle health monitoring elevates intelligent management capabilities.
- Active maintenance via early warnings enables scientific equipment renewal planning.
- Visual closed-loop management of work orders shortens processing cycles and improves quality and efficiency.

Refined Energy Management

- Energy consumption measurement for different types of equipment by area improves management accuracy.
- Visual energy consumption analysis automatically identifies abnormal high-energy-consumption points.
- Intelligent strategies optimize energy utilization to minimize power costs.

ESL Controller & Protocol

Internet of All Things, Smarter and Faster

Hanshow's proprietary communication protocol, HiLPC, is based on the internationally used 2.4 GHz frequency band. It is a completely self-developed wireless communication protocol featuring high density, high real-time performance, low power consumption, and strong anti-interference capabilities. It is particularly well-suited for AIoT device communication scenarios in the retail industry.



Hanshow Proprietary Protocol

Hanshow boasts a globally leading portfolio of ESL products. Its advanced performance will be further unleashed upon integration with HiLPC. The update speed of ESLs will be significantly enhanced, supporting ultra fast binding while installed and seamless, real-time updates for tens of millions of ESLs deployed across all stores of enterprise-level customers without any congestion.
With Hanshow new-generation HiLPC, Hanshow's ESL solutions also enable advanced functionalities such as batch precise scheduled tasks, seamless roaming, and dynamic network resource allocation.
Equipped with a brand-new ESL Controller featuring a financial-grade security chip, HiLPC offers not only high performance but also enhanced reliability and security. It provides comprehensive and meticulous security protection for the data generated in enterprise IoT scenarios.

- Instant Updates, Precise Scheduling
- Instant Light-up in Seconds Convenient Item Locating
- Securely Manage Massive Amount of Devices
- Free Movement, Seamless Roaming
- Ultra-high Compatibility, Expanded Application Scenarios
- Energy Consumption Optimizated
- Meter-Level Geolocation

ESL controller

The data transmission of ESL in stores is realized through the ESL Controller. As a gateway for store data, Hanshow's ESL Controller offers high volume, fast speed, and long range for data transmission, with simple installation and deployment.

ESL Controller

Dimensions: 264.5*249.5*51.5mm
Housing Color: White/Black
Operating Frequency: 2402~2500MHz 5150~5850MHz
RF system: Four RF channels, supports parallel communication
Signal Coverage: Up to 30 meters
Other Features: Omni-directional antenna, dynamic frequency selection, intelligent channel switching, active frequency hopping



USB Dongle

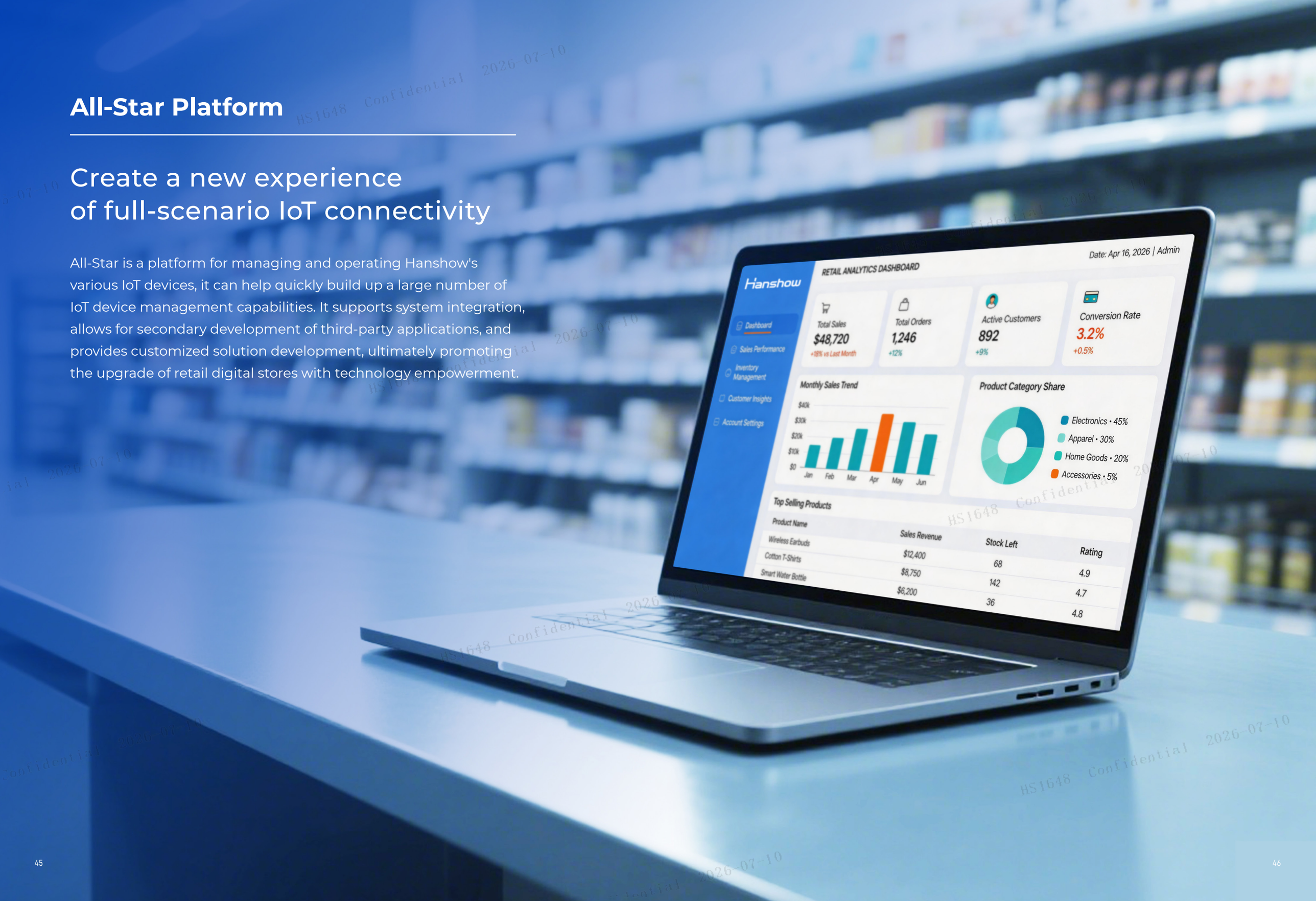
Dimensions: 40.2*99.7*15.8mm
Housing Color: White
Operating Frequency: 2402~2480MHz
RF system: Three RF channels, supports parallel communication
Signal Coverage: Up to 25 meters
Other Features: Omni-directional antenna, dynamic frequency selection, intelligent channel switching, active frequency hopping



All-Star Platform

Create a new experience of full-scenario IoT connectivity

All-Star is a platform for managing and operating Hanshow's various IoT devices, it can help quickly build up a large number of IoT device management capabilities. It supports system integration, allows for secondary development of third-party applications, and provides customized solution development, ultimately promoting the upgrade of retail digital stores with technology empowerment.



All-Star Platform

Hanshow's independently developed All-Star IoT Management Platform aggregates data from diverse IoT terminal devices. Across various scenarios including information display, store operations, consumer-product interaction, in-store marketing, and system monitoring, it delivers a comprehensive suite of services to customers, encompassing business services, data services, IoT services, and AI services.



ALL-STAR FRONT-END CLOUD

Build service scenarios with customers as the center

SCENARIO

Display Information | Store Operation | Consumer Interaction | In-store Marketing | System Monitoring

BUSINESS CAPABILITY | **DATA CAPABILITY** | **AI CAPABILITY** | **IOT CAPABILITY**

ALL-STAR TECHNOLOGY PLATFORM

Reliability

High Concurrency and High Availability

The system can support tens of millions of devices simultaneously processing price change tasks, ensuring each device performs at its maximum capability. A robust cluster architecture ensures that a single point of failure does not affect the availability of the entire system.

Maintainability

Hot Deployment of Components

The platform supports hot deployment of partial business components. It enables the addition, upgrade, and maintenance of certain business functions without interrupting core basic services, thus reducing operational risks.

Usability

Global Chain Operations

Multi-level organizational permission management based on RBAC (Role-Based Access Control) fully addresses the device and business management needs of chain enterprises from headquarters to branches. Combined with a full-time zone management solution, it ensures tasks issued by headquarters are executed accurately and efficiently at regional stores.

Security

Security Certification Assurance

The system has passed Checkmarx code security scanning tests and IOActive penetration tests, providing comprehensive security protection from the code level to the system level.