



# MinewTag Smart Retail Solution



SHENZHEN MINEW TECHNOLOGIES CO LTD



# ONE-STOP IoT SOLUTION INNOVATOR



## About Minew

**Minew** founded in 2007. Listed on NEEQ in 2017. Minew is a world-leading IoT hardware manufacturer and a professional ESL full-scenario solution provider. Passed IOS9001, with 2400m<sup>2</sup>+ manufacturing area, owning over 104 patents, over 80 engineers, more than 300 employees, we supply our products and service in more than 100 countries.

- Minew was founded in 2007 in Shenzhen, China, and own factory was set up in 2010.
- In 2013, we ventured into Bluetooth Module market and certified by iBeacon program.
- In 2014, we passed IOS9001 certification and obtained Utility Model patent.
- Gained numeroud iBeacon copyrights and related patents , won the best hardware quanlity award, receiving a total of 104 patents in 2015.
- In 2016, Eddystone from Minew certified by Google and honored as the national high-tech enterprise, signed IoT strategic cooperation agreement with ARM.
- In 2017, innovated and successded in smart retail with yearly cumulative shipments of IoT products exceeded 12 million units. Listed on NEEQ and released brand new Bluetooth LE 5.0MTag.
- In 2018, MTag and Blurtooth gateway won the title of the innovative product. R&D in muticolored screens of ESL, and set up the advanced fully-auto SMT lines.
- In 2019, we already achieved great performances in ESL smart retail and expanded to the smart warehouse, healthcare, and building.
- In 2020, Minew was involved in the compling of the whitepaper of Bluetooth AoA technology for high precision localization.

As the adopter member of Bluetooth SIG, FiRa, GP (GreenPartner) of Sony and the exclusive strategic partner of Nordic in Asia & Pacific region, we have stable supply capacity and our product quality is recognized by the whole industry.

Minew Group has 3 IoT subsidiaries (all of which are self-developed and have own factories):

- Electronic Labeling System (E-ink technology, one-stop solution with fully self-developed hardware and software)
- iBeacon (AoA Series / smart wearable / sensor tag / Bluetooth Beacon / IoT gateway)
- Semi (IoT module / UWB Module / LoRa Module)

Headquarter's Official website: [www.minew.com](http://www.minew.com)

Electronic Labeling System: [www.minewtag.com](http://www.minewtag.com)



# Qualification certificate



Test report **50+**



Software copyright **80+**



Patent certificate **90+**



ISO9001



BSCI



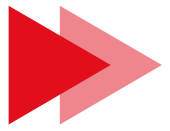
CE



FCC



RoHS



# Traditional Retail Industry Dilemma



**High labor and  
time costs**



**Low efficiency**



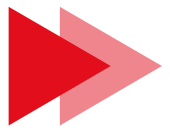
**Error prone**



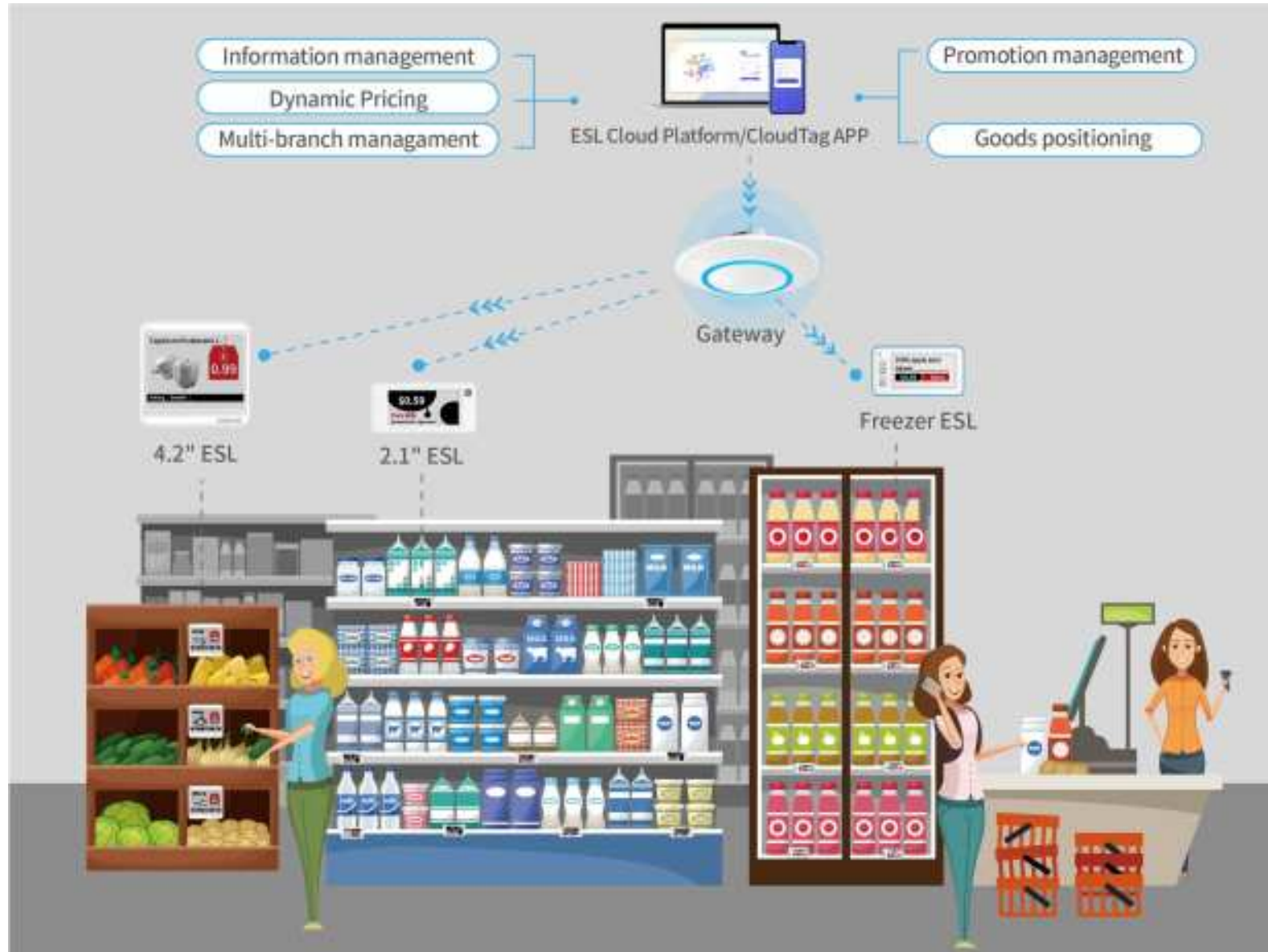
**Inconsistent  
display effect**

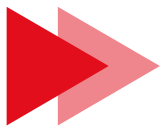


**Not  
environmental  
friendly**



# Minew Digital Retail Solutions





# Minew Digital Retail Solutions



## Smart Retail

### MinewTag Smart Retail Solutions

#### MinewTag Cloud Platform

Cloud Data Center

Device Management

Operation Platform

Security Maintenance

API Intergrating

BLE5.0  
*http/https*

WiFi  
*2.4G Private Agreement*

MQTT



IoT gateway



Shopping guide label



Multiple sizes labels



Bluetooth location beacon



Asset Tag



Temperature Humidity Sensor

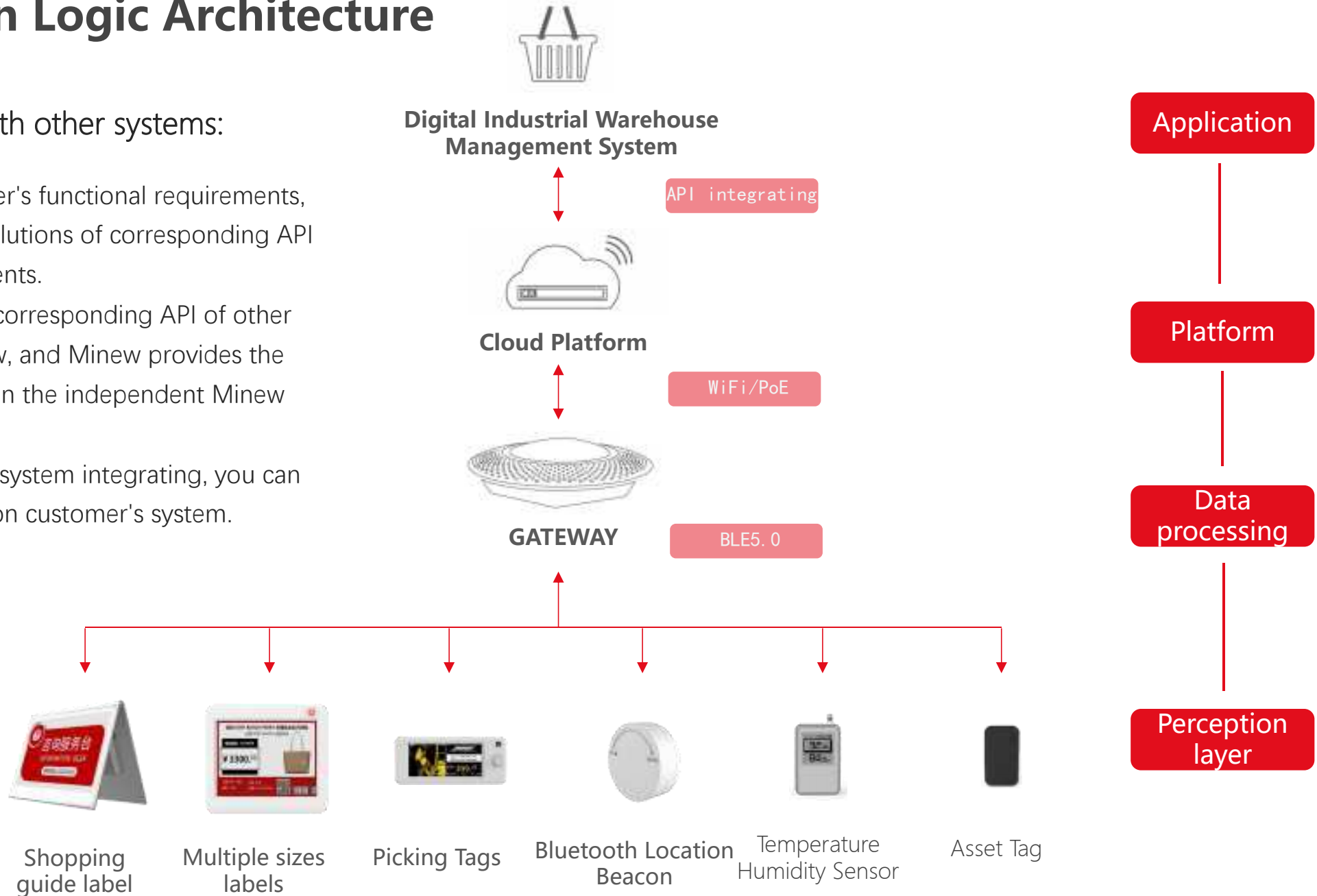
MinewTag

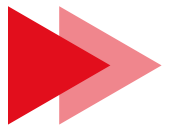
Application	Data Presentation Customer Interaction
platform	Data Storage Retrieval, Usage Business Planning Security, Maintenance
web	Access and transmission networks
device	Information Collection Information Processing

# Solution Logic Architecture

Steps for integrating with other systems:

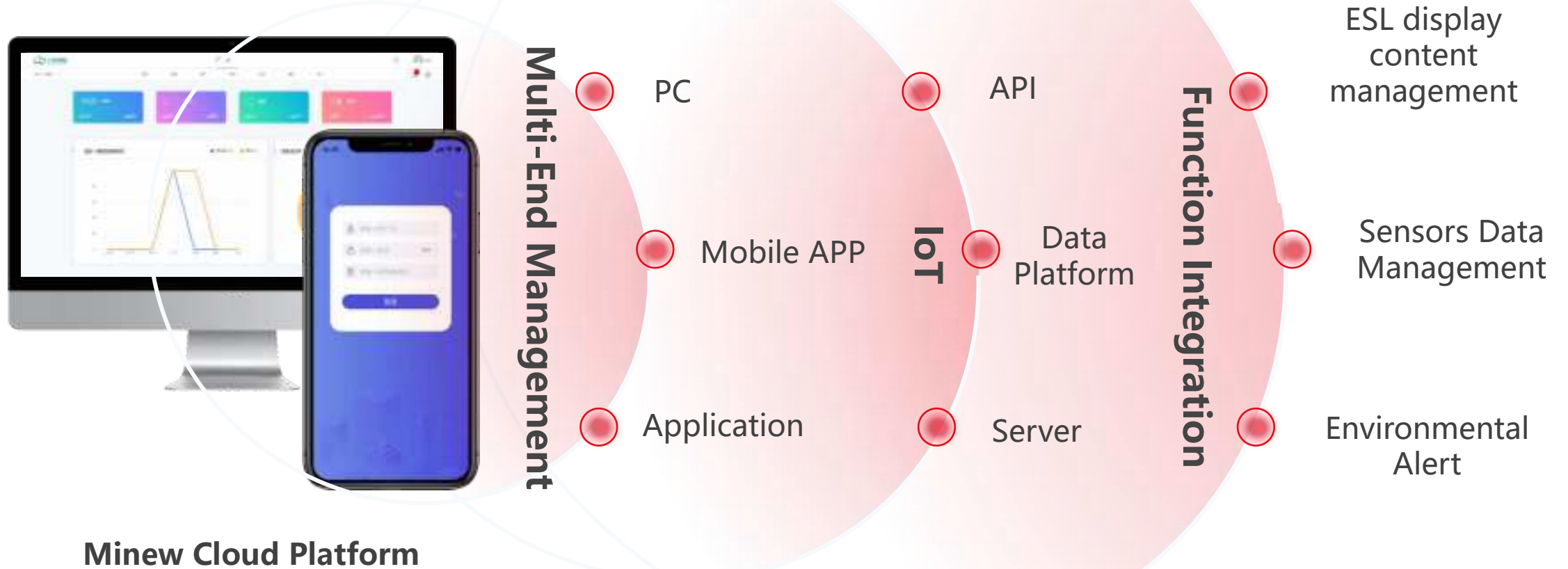
- ▶ Understand the customer's functional requirements, and provide customized solutions of corresponding API according to the requirements.
- ▶ Customer provides the corresponding API of other systems(e.g. POS) to Minew, and Minew provides the corresponding API based on the independent Minew Cloud Platform.
- ▶ After the completion of system integrating, you can control all kinds of device on customer's system.

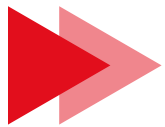




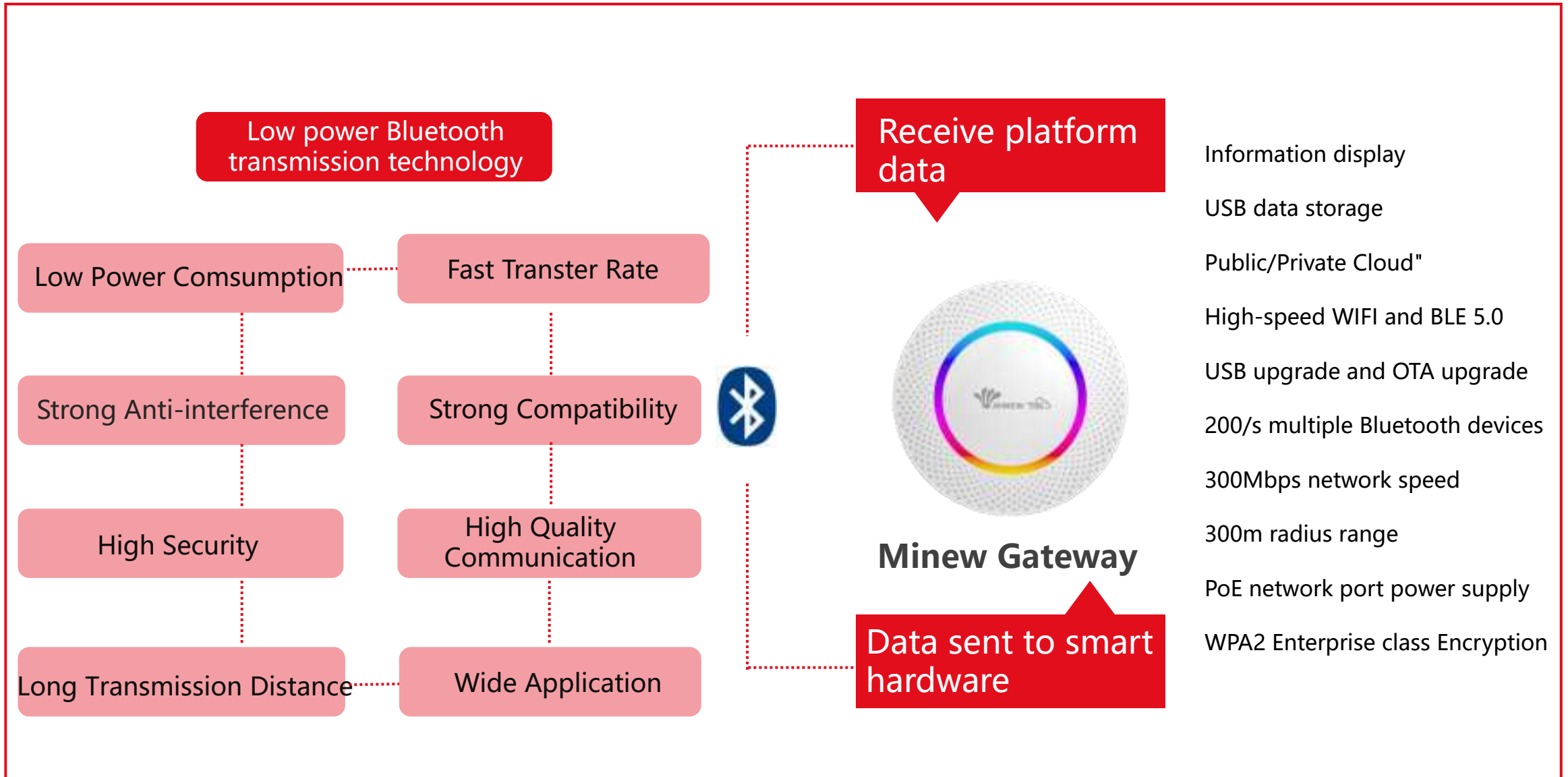
# Minew Cloud Platform

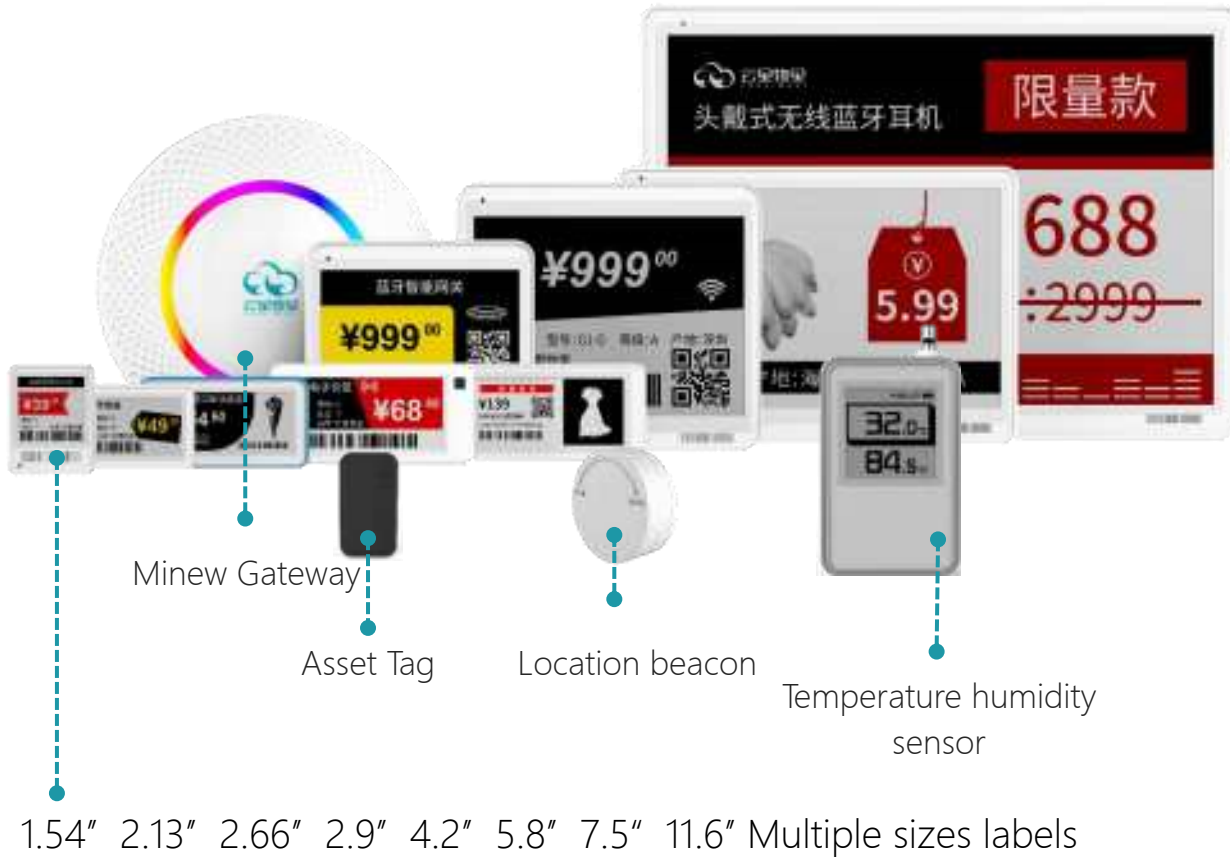
Minew Cloud Platform is an enabling applied IoT security management platform, based on security monitoring and management of low-power wireless IoT devices. The platform integrates wireless IoT data collection, highly reliable and secure transmission, basic IoT, Internet / mobile Internet, AI, big data analysis, cloud computing and other technologies. Minew Cloud Platform can access a variety of application scenarios, provide customized APIs to connect various application systems, and achieve smart upgrading.





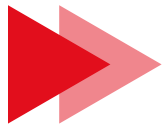
# Minew Gateway



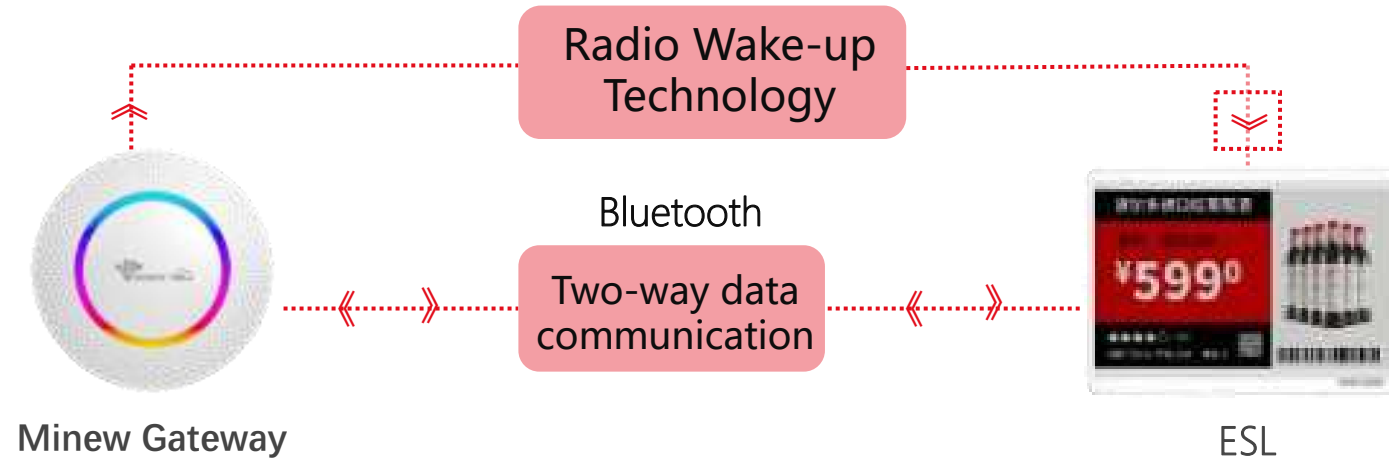


## Linked retail management system

► Connect retail cashier and other systems, and realize the transformation from traditional retail to digital retail in information display management, data management, branch management, production environment management and asset management.

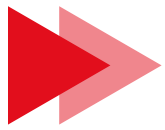


# Minew Base Station & ESL High Interference Immunity



## Communication Technologies.

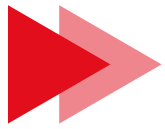
- ▶ Direct Sequence Spread Spectrum with super anti-interference capability, extremely high working reliability and confidentiality
- ▶ AES-128 encryption with highly secure and ensures data transmission safety.
- ▶ automatic frequency hopping connection in 2.4G channels separated from WiFi, fixed on three channels 2402, 2426 and 2480 for efficient broadcasting to avoid signal interference.



# ESL SPECIFICATION



Product Model	DZ026	STag29A	DS035	STag42	STag58	MTag75	STag116
Size	84.6*41*7.8 mm	103*43*13 mm	99.5*49.5*9.8mm m	105*94*14mm	140*120* 14 mm	183*129*16 mm	272*196*14 mm
Display area	30.7*60.1 mm	67*29 mm	79.4*37.9mm	85*64mm	119 * 88 mm	163 * 98 mm	245* 163 mm
Screen size	2.66 inch	2.9 inch	3.5 inch	4.2 inch	5.8 inch	7.5 inch	11.6 inch
Resolution	296*152 px	296 * 128 px	384*184 px	400*300 px	648 * 480 px	800 * 480 px	960 * 640 px
Pixel	125dpi	112dpi	122dpi	120dpi	138dpi	124dpi	100dpi
Weight	30g	42g	45g	92g	146g	293g	416g
Display color	Black White Red	Black White Red / Black White Yellow / Black and White	Black White Red	Black White Red / Black White Yellow / Black and White	Black White Red / Black White Yellow / Black and White	Black White Red / Black White Yellow / Black and White	Black White Red / Black White Yellow / Black and White
Battery type	Customized battery	CR2450 * 2	CP502440	CR2450 * 4	CR2450 * 4	CR2477 * 6	Customized charging version
Battery lifetime	8 Years (5 updates/day)	5 Years (5 updates/day)	10 Years	5 Years (5 updates/day)			



# SENSOR SPECIFICATION



Product Model	S3 Temperature Humidity Sensor	S1 Temperature Humidity Sensor	S2 Light Sensor	E6 Asset Tag	E8S Asset Tag
Size	81*45*22 mm	70.6*38*17.8 mm	52.6*23.7* 5.3 mm	42.5*23.5*5.3 mm	36.5*23.7*5 mm
Broadcast distance	100m (open space)	100m (open space)	50m (open space)	50m (open space)	60m (open space)
Lifetime	2 years	3 years	3-5 years	3-5 years	200 days
Shell & Protection	PC IP66	ABS IP65 (main body) IP66 (long probe)	ABS IP65	ABS IP65	ABS
Product features	<ul style="list-style-type: none"> <li>* Support OTA</li> <li>* Replaceable battery</li> <li>* With a variety of probe and screen combinations</li> <li>* Up to 2048 local data</li> <li>* Real time monitoring &amp; threshold alarm</li> <li>* High precision EPD screen</li> </ul>	<ul style="list-style-type: none"> <li>* With a variety of probe combinations</li> <li>* Monitoring range: -40 °C ~60 °C</li> <li>* Replaceable battery</li> <li>* High precision digital screen</li> <li>* Real time monitoring &amp; threshold alarm</li> </ul>	<ul style="list-style-type: none"> <li>* Built in light sensor, light alarm</li> <li>* Anti disassembly alarm function</li> <li>* Small and light, easy to deploy</li> <li>* Ultrasonic assembly process</li> <li>* Suitable for fixed or mobile assets</li> </ul>	<ul style="list-style-type: none"> <li>* Built in light sensor</li> <li>* Anti disassembly alarm function</li> <li>* Small and light, easy to deploy</li> <li>* Suitable for fixed or mobile assets</li> </ul>	<ul style="list-style-type: none"> <li>* Replaceable battery</li> <li>* Small and light, easy to deploy</li> <li>* Suitable for fixed or mobile assets</li> </ul>

# Information Display Management

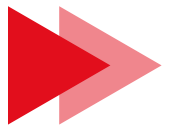


## Smart Price Change, Update in Seconds

- ▶ One click Update, no manual operation, reduce manpower and errors;
- ▶ Unified managed by system, easily deal with the frequent mass price changes;
- ▶ Real time update, get through online and offline, and flexible marketing activities;



- ▶ Promotion appointment update, intelligent and rapid price change;
- ▶ Backend data management, data classification import and export.



# Information Display Management



QR Code  
Function  
examples

## Information Synchronization

Online Q&A

Coupon Placement

Order Online

Details link to offline product labels through QR code, and scan the code to view offline product information.

Links to the background consultation window, scans the code to ask questions, and staff answer questions remotely.

Connects the customer member system and POS system, scans the code for coupons, and the settlement is automatically written off.

Get through the merchant marketing applet, scan the code to place an order, and pick up the goods offline.



# Information Display Management

Seven Colors LED



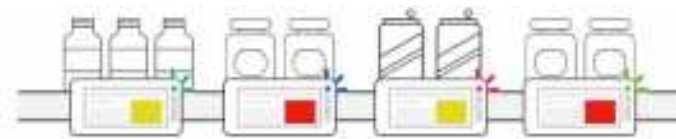
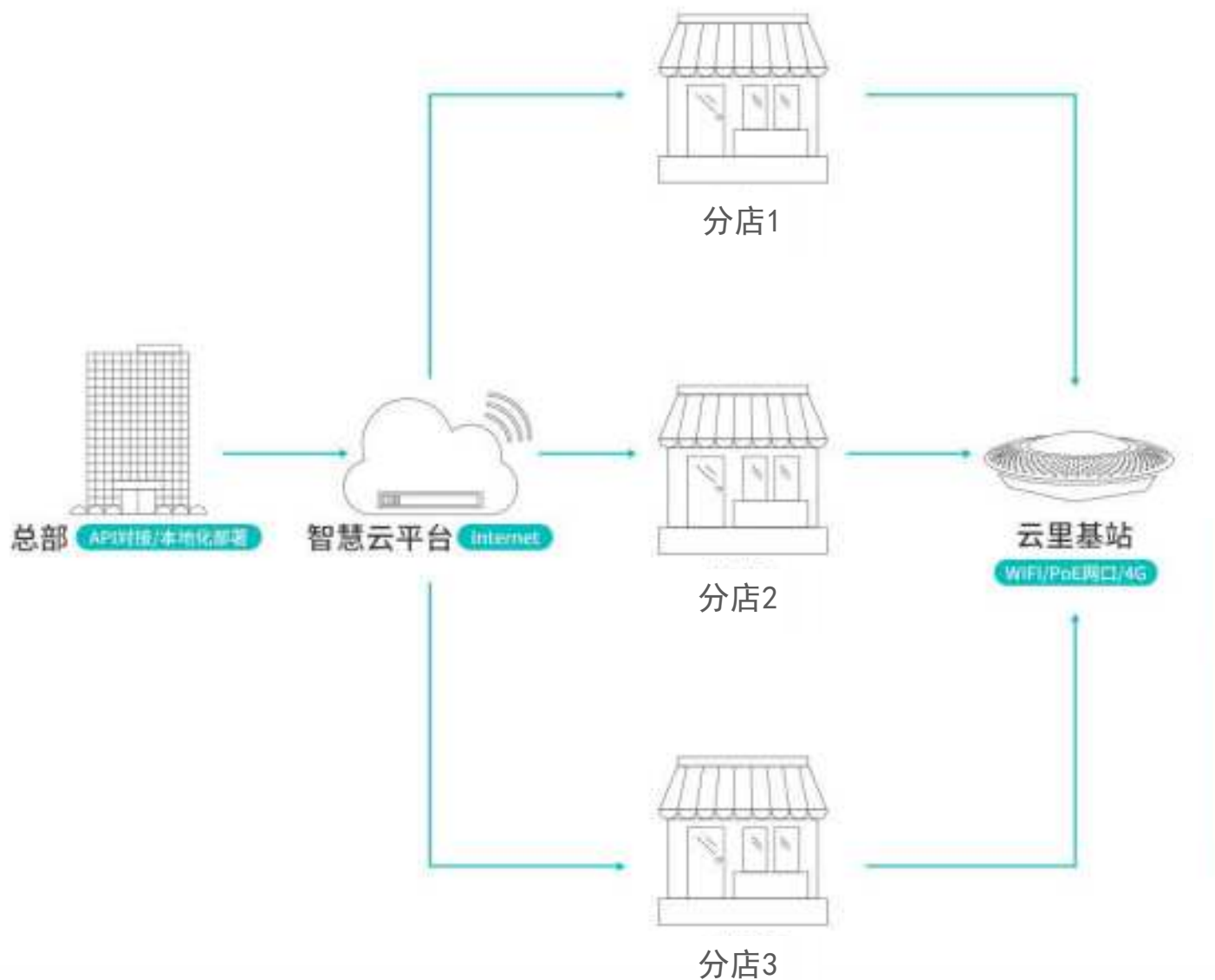
## ESL LED Functions

- ▶ Promotion Sales
- ▶ Pick-up goods
- ▶ Inventory warning
- ▶ New arrivals
- ▶ Out-of-stock
- ▶ VIP goods

Note: the color, flashing frequency and light duration of LED lights can be flexibly configured to adapt to different activity scenes.



# Branch Store Management



multi-size/multi-color ESL

## Headquarters-branch management

- ▶ Change price in system, **real time price unification in branches.**
- ▶ **Unify online and offline prices,** ensure accurate information.
- ▶ The headquarters **uniformly controls the price,** and the franchisees / distributors uniformly manage the price.
- ▶ Branches / franchisees at different levels have different levels of control authority to control the display and promotion of goods in different stores on demand.

# Asset Management & Environmental Management

The system is linked with other intelligent terminal devices, e.g., asset management label, temperature and humidity sensor, door magnetic sensor, etc.,

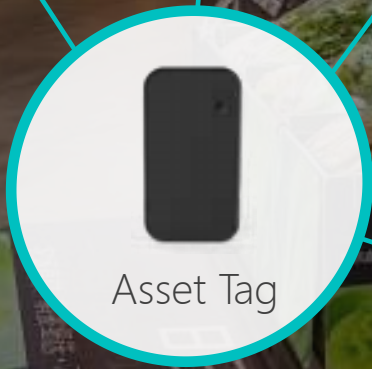
Realize real-time monitoring of the environment and important assets, Environmental abnormal override warning.



Door Sensor



Temperature Humidity Sensor



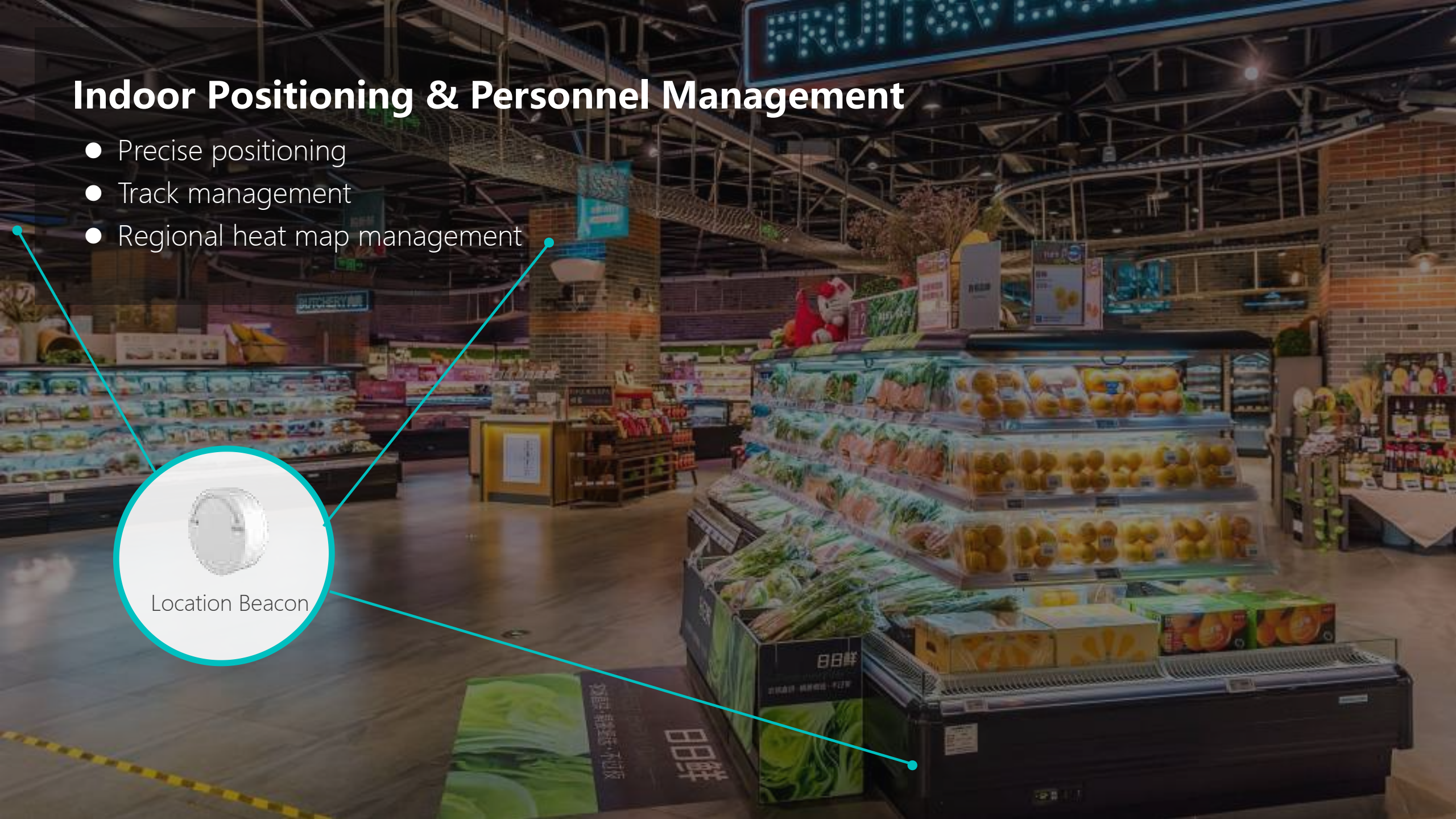
Asset Tag

# Indoor Positioning & Personnel Management

- Precise positioning
- Track management
- Regional heat map management



Location Beacon





# Unified Management & Multi-end control



PC



APP



PDA



NFC

- ▶ More efficient batch price change
- ▶ Customized information display form
- ▶ Data sharing and interworking
- ▶ Convenient app operation
- ▶ Fast code scanning operation
- ▶ Binding/unbinding, information updating, etc.,
- ▶ Close contact for rapid refresh
- ▶ Customize NFC functions

# ▶ Safety protection & low temperature working condition

- ▶ **IML shell**, oil-proof, scratch-proof, dirt-proof, peeling-proof and color-proof.
- ▶ **IP65、IP67 Waterproof Grade.**
- ▶ Specially designed **low temperature label: -25 C - 25 C**

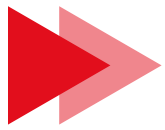




# Massive Templates & DIY Templates

System presets numerous templates, such as commodity price templates, promotional templates, commodity poster templates, etc., which can be adapted to different needed. Or make exclusive templates for each subject matter.





# Cost reduction & Efficiency increase

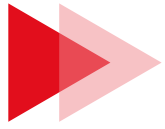


ESL

- \* 5 updates a day, can use for 5 years, change battery to reuse.
- \* Automatic price change, saving labor costs
- \* Paperless operation, saving the cost of consumables and more environmental-friendly

Paper label

- \* Each paper label can only be used once
- \* Frequent replacement, high cost of consumables and waste of paper
- \* Changing labels by people is time-consuming, laborious and error prone



# Traditional retail display VS Digital retail display

## Paper label

Frequent replacement  
cumbersome steps  
weak effectiveness  
Vulnerable and  
consumable

High labor cost,  
time-consuming and  
error prone

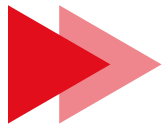
Information not broadcasting  
Data not synchronized

## ESL

One click price adjustment with  
super long service life  
Batch updates, refresh in seconds  
Online marketing, data synchronization

Mobile management  
Energy conservation  
Environmental protection





# Multi function, energy-saving and efficient operation



## Retailer

- \* Save operating costs
- \* Improve management efficiency
- \* Innovative marketing mode
- \* Improve brand image



## Information media

- \* Rapid price change
- \* Reduce error rate
- \* Connected online and offline
- \* Unified display image
- \* Digital information display



## Consumer

- \* Shopping navigation
- \* Mouth advertising
- \* User interaction
- \* Improve user experience



# Application Field



Supermarkets

3C Electronics

Fresh fruit

Cigarettes and  
drinks

Apparel and  
Fashion

Catering chain

# ▶ Model recommendation

## 01

Model recommendation: STag21、STag26、STag29、MTag21、MTag29

Applicable scenario: standard shelf



## 02

Model recommendation: STag42、STag58、MTag42、MTag58、MTag75

Applicable scenario: Cargo pile and booth



## 03

Model recommendation: STag116

Applicable scenario: Bulletin board



# ▶ Model recommendation

## 04



Model recommendation: STag21F

Applicable scenario: working in  $-25^{\circ}\text{C}$  -  $25^{\circ}\text{C}$  low temperature environment





# Project Case



Fresh food



# Project Case



Cigarettes  
and drinks

# Project Case



3C Electronics

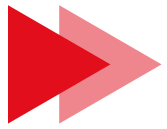


# Project Case



Fashion luggage

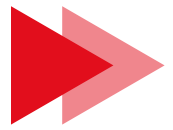




# Project Case

Beauty care

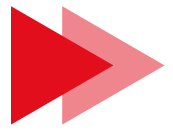




# Project Case



Watch & glasses



# Project Case

Pharmaceutical  
health care



# Business Partners

 中国石油	 中国石化 SINOPEC	 中国移动通信 CHINA MOBILE	 CHINA UNICOM 中国联通	 中国电信 CHINA TELECOM	 腾讯视频   好时光
 HUAWEI	 阿里巴巴 Alibaba.com		 FOXCONN 富士康	 GREE 格力	 360
 oppo	 CETC 中国电子科技集团有限公司 CHINA ELECTRONICS TECHNOLOGY GROUP CORPORATION	 KONKA 康佳		 FUNBUY 全球 BUY全球	 ANCSI 昂司
 长虹 CHANGHONG	 BAIYUNPORT	 ERICH GLOBAL	 PATIO	 KTC	 新国都
 联创设计	 NEOLIX	 Betterway 贝特威自动化	 中国电子信息产业集团有限公司 CHINA ELECTRONICS GROUP	 深万科技	 TAIJI 太极
 IRON	 汉云 HANYUN	 COFICAB	 CHINT	 COFICAB	
 Google	 CISCO	 IBM	 NORDIC SEMICONDUCTOR	 Panasonic	 SIEMENS
 ERICSSON	 AT&T	 here	 AB InBev	 ARM	 ocdo



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