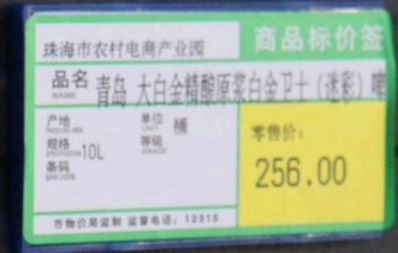




شركة كويت كارپوريشن ليميتيد
KUWAIT CORPORATION LIMITED



2.4GHz Electronic Shelf Label

Solutions

Kuwait Corporation Limited

Contents

1. ESL Solution Background	1
2. 2.4GHz Electronic Shelf Label solution	3
2.1. Software Introduction	5
2.1.1. Product Matrix	5
2.1.2. Steps to Deploy eRetail 3.2	5
2.1.3. Multiple Network Architectures Available	5
2.1.4. Advantages of Zhsunyco® eRetail Server	6
2.1.5. New features of eRetail server	7
2.2. Base Station Introduction	7
2.2.1. Parameters	7
2.2.2. Characteristics	8
2.2.3. Working Principle & Status	8
2.2.4. Control Range	9
2.3. 2.4GHz Electronic Shelf Label	11
2.3.1. ESL Sizes & Parameters	11
2.3.2. ESL Pictures	12
2.3.3. ESL Structures	12
2.3.4. ESL Characteristics	13
2.3.5. Battery Removal	14
2.3.6. Accessories and Installation	14
3. Introduction of ESL solution for supermarkets	15
3.1. Solution Design Case	15
3.2. Customer Feedbacks	16
4. After-sales & Common Troubleshooting	17
5. Company Profile	18

1. ESL Solution Background

With labor costs increasing year by year and competitive pressure on commodity prices, the profits of retail supermarkets have been greatly affected. Meanwhile, talent shortage, high customer demand for store service levels and untimely updating of product price tags are problems that lead to customer complaints and compensation is not uncommon in the traditional retail industry.

Therefore, Europe, the highest labor cost countries take the lead in introducing the electronic shelf label product. With the combination of online and offline O2O mode gradually improved, the demand for electronic shelf labels is doubled year by year.

With the development of automation management, the intelligent retail management mode will gradually replace the traditional retail mode and take the dominant position.



Zhsunyco® introduces a variety of communication technology electronic label solutions to better meet the needs of different customers, help the popularization of digital displays, and contribute to the realization of global carbon peaking and carbon neutrality.



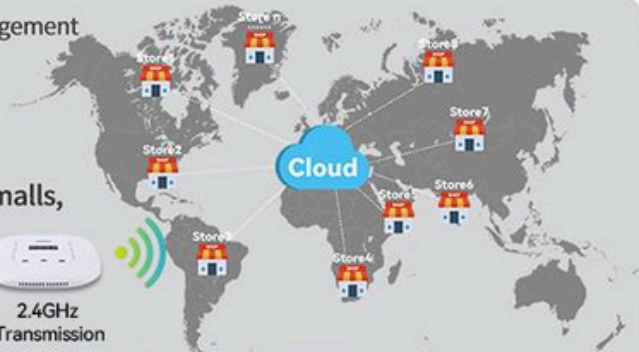
Cloud-based multi-store management

Applications:

Supermarkets, shopping malls,
chain stores, etc.



2.4GHz ESL

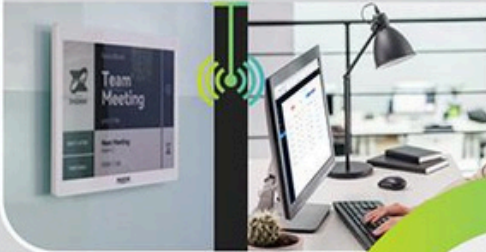


WIFI ESL

Direct WIFI Connection - Digital Display

Applications:

Office, classroom, libraries,
restaurants, etc.



NFC & BLE ESL

Mobile Phone - Digital Display

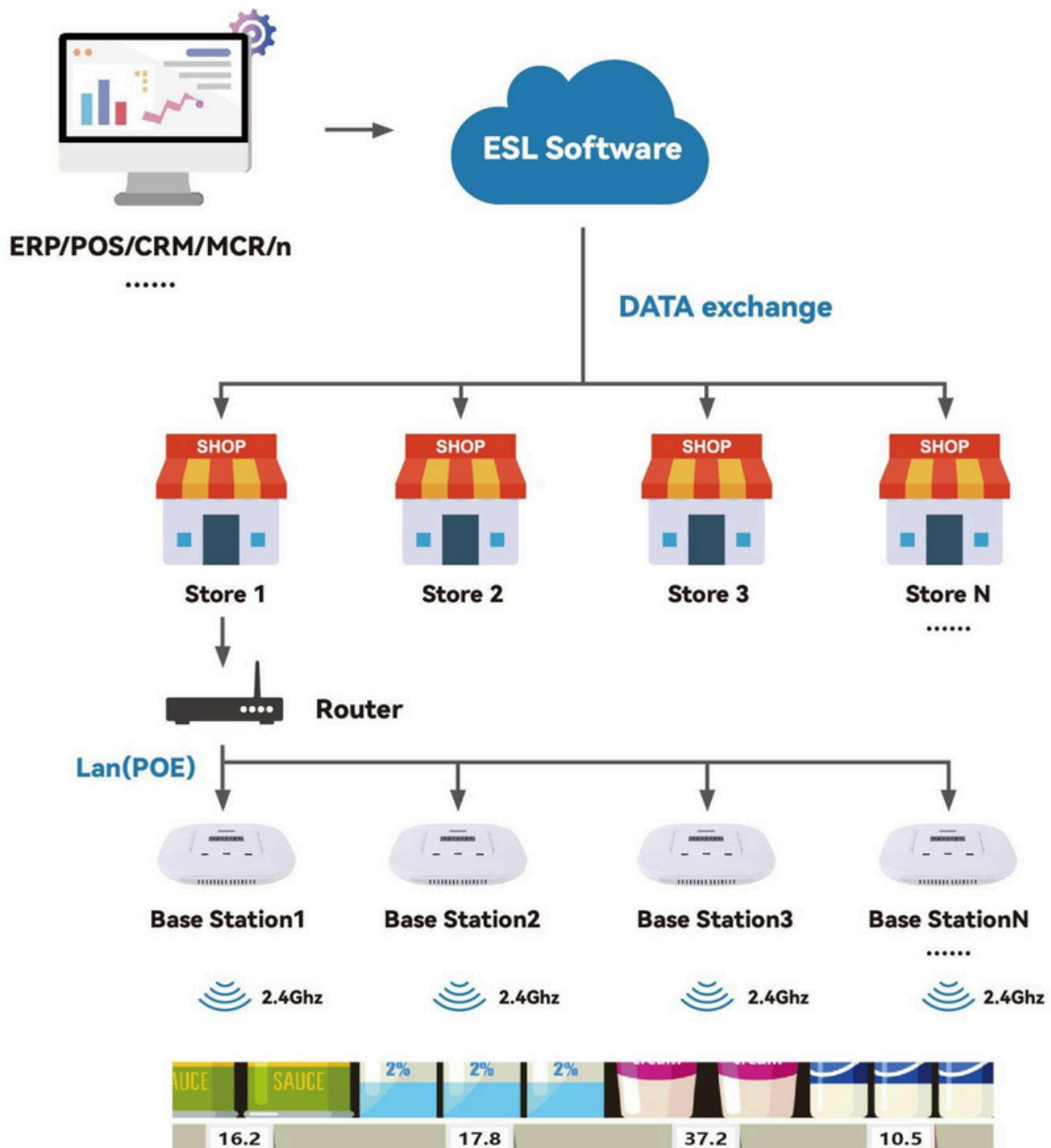
Applications:

Small retail stores, clothing
stores, gift stores, DIY stores,
restaurants, etc.



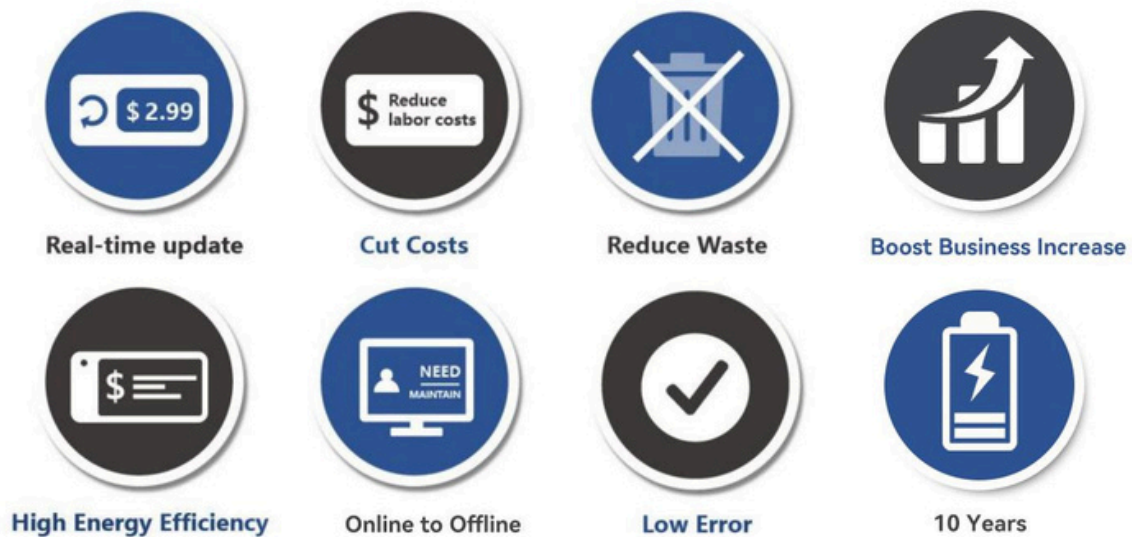
2. 2.4GHz Electronic Shelf Label solution

Zhsunyco® 2.4GHz Electronic Shelf Label solution consists of three components, including an Electronic Shelf Label management system (ESL Software), a wireless Base Station/AP and an Electronic Shelf Label.



Integrate the Electronic Shelf Label management system with the POS system/ERP system/CRM system/MCR system of the supermarket, the information of the customer database is sent to the Electronic Shelf Label management system, the Electronic Shelf Label management system will send the information to the wireless base station through LAN and the wireless base station will send the content to be displayed to the Electronic Shelf Label through the 2.4GHz communication frequency to realize the commodity information in real time update.

ESL Solution Benefits



- Wireless RFID technology for real-time updating of bulk price tags.
- Reducing labor costs and achieving profit growth in supermarkets.
- Reducing paper waste and protecting the environment.
- Improving the customers' experience with accurate, reliable pricing is a good way to achieve a business increase
- Improving operational efficiency and saving time costs.
- Online and offline, timely synchronization of product information across multiple stores.
Reducing error rates, customer complaints and merchant compensation.
- Battery:High-performance,service life can up to 10 years.

2.1. Software Introduction

2.1.1. Product Matrix

Free test software

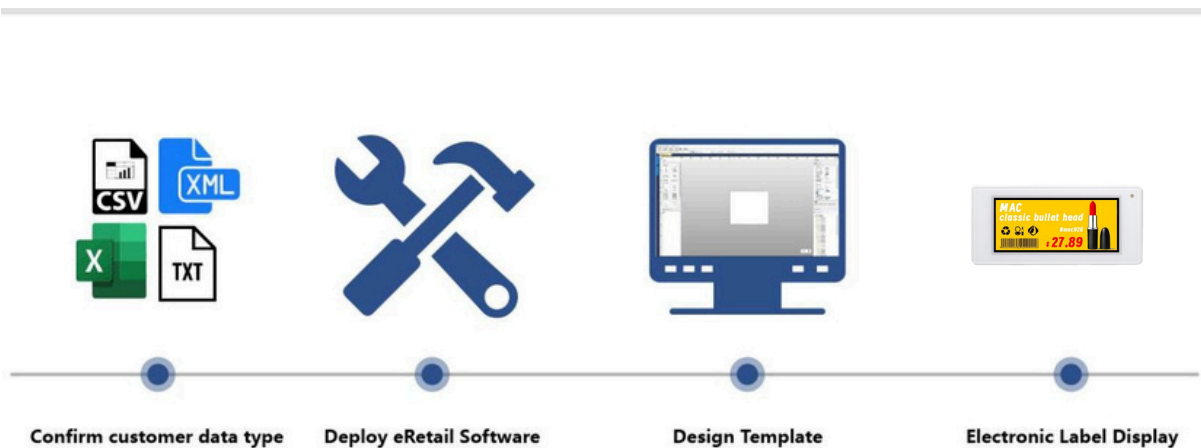
eDesigner3.2(ForeRetail3.2)

Pay to use software

eRetail3.2

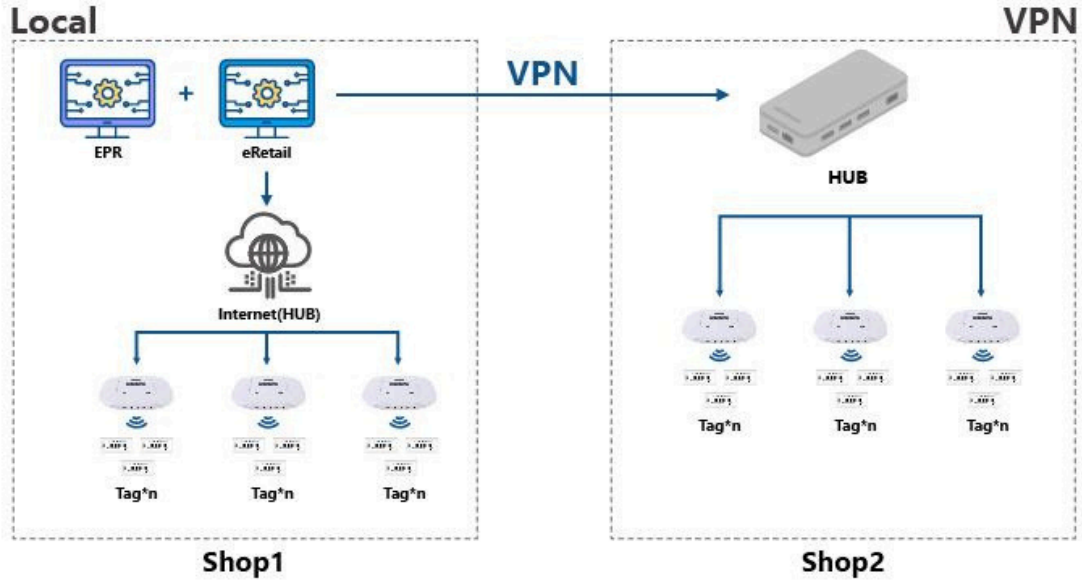
2.1.2. Steps to Deploy eRetail 3.2

Confirm customer data type → Deploy eRetail Software → Design Template → Electronic Label Display

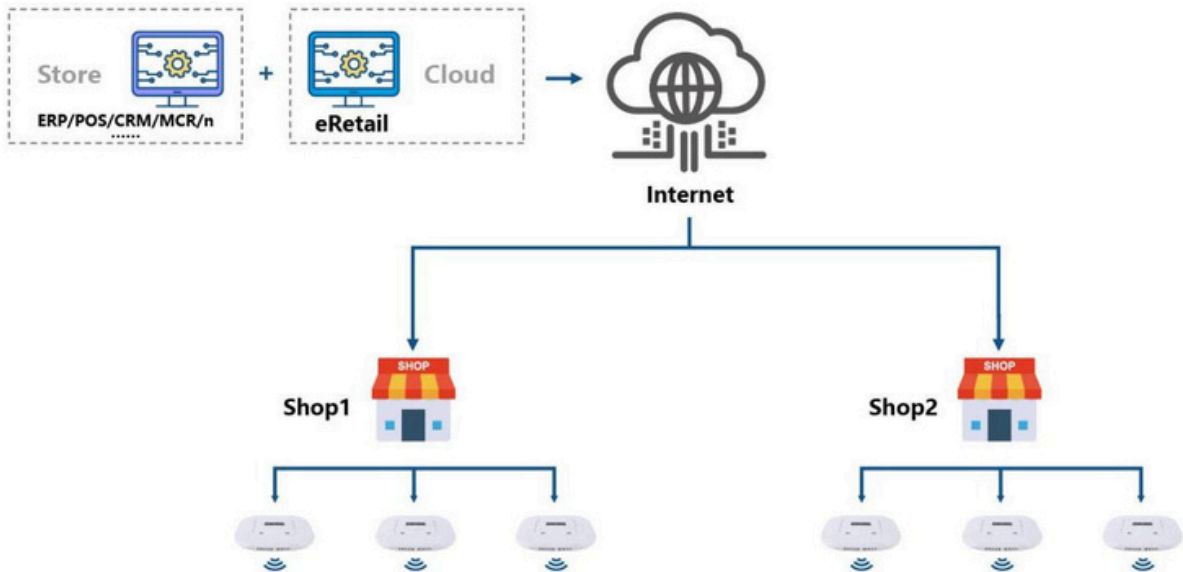


2.1.3. Multiple Network Architectures Available

- **Local LAN Advantages:** faster and more secure information transfer



- **Cloud Advantage:** Product information can be updated anytime and anywhere; multi-store management is more convenient.



2.1.4. Advantages of Zhsunyco® eRetail Server


- Server: NET 6.0, cross-platform, Windows, Linux, or macOS. Also support Docker deploy;
- Client App: Android 5.0+, iOS 14.0+;
- 100% Customize interface or UI support.

2.1.5. New features of eRetail server

1. Support the real-time task statistics of color screen.
2. Support the use of color screen price tags, and support the adaptation and use of 37-inch advertising screens, which enrich the functions of the system.
3. Added a template design tool for the web version, which simplifies of use.
4. Added Redis to improve the throughput of the system.
5. Add the function of changing the display content regularly.

2.2. Base Station Introduction

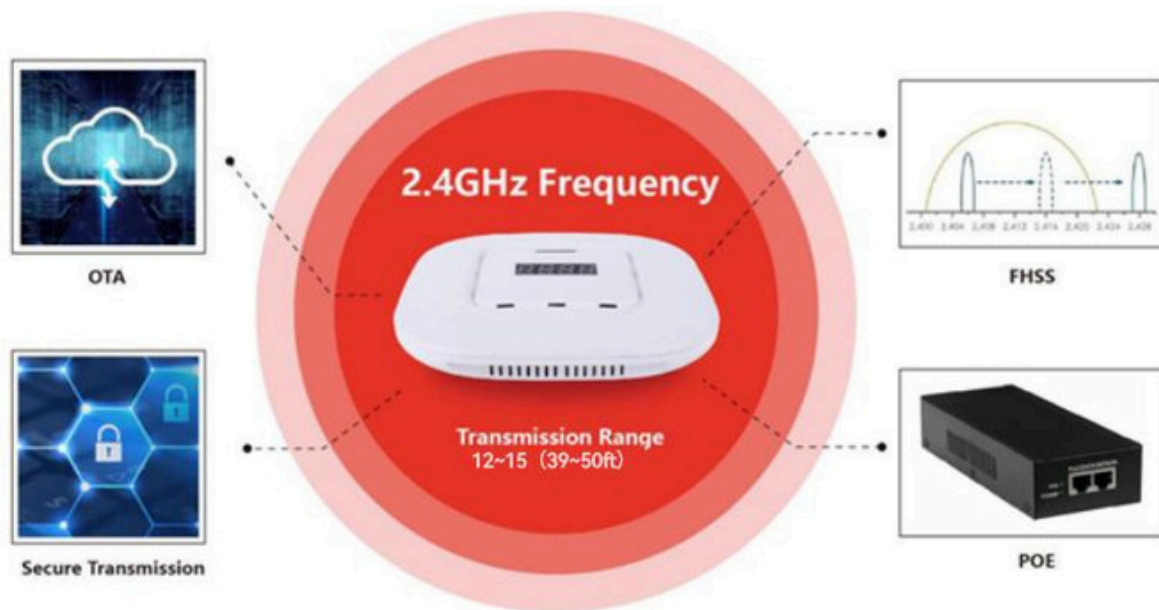
2.2.1. Parameters

		Item	Parameters
		Product Model	ETAP05
		H*V*D	190*190*41(mm)
		Weight	360g
		Color	White
Operating Voltage	DC 12V POE	Operating Current	Less than 300mA
Operating Temperature	-10~55°C	Communication Method	2.4Ghz
Storage Temperature	-20~70°C	Communication Distance	12-15m
Storage Humidity	45%~70%RH	Data Interface	Standard Network Cable Interface

Advantages of eRetail3.2:

1. Operating system: support Linux system.
2. Network configuration: Support DHCP automatic acquisition, fixed IP and other configurations.
3. Data processing speed: fast (self-contained system, can process data by itself)
4. Support log function

2.2.2. Characteristics

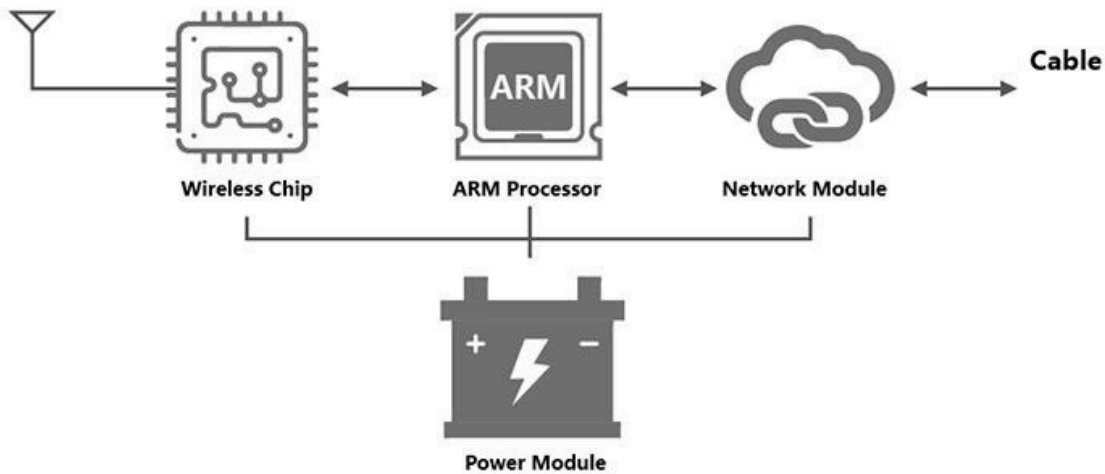


- Over-the-Air (OTA) firmware upgrade: Firmware upgrade via over-the-air download.
- FHSS: Improve the anti-interference of data transmission through frequency hopping spread spectrum technology and ensure 100% label update.
- POE: Support POE technology to simplify wiring and save costs.
- Encrypt on-the-fly: Automatically encrypt data in real time to ensure data security.

2.2.3. Working Principle & Status

- Working principle:
 1. After Base Station power on, the ARM processor starts working, initialize the network chip and wireless chip
 2. After initialization, Base Station enters the network receiving state and waits for data from the server

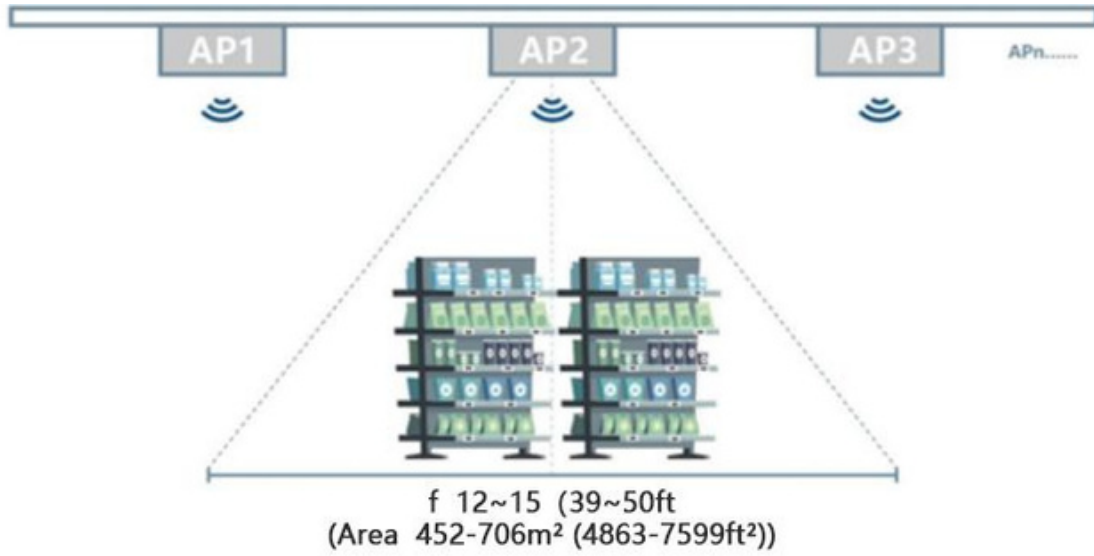
3. When the server has tag data, it sends the data to Base Station through the network.
4. Base Station receives the data and sends it to the corresponding tag by wireless



- Base station status:
 1. Start up: plug in the power supply and POE network cable, and the screen of the base station will display "F-01"
 2. Network connection: WLAN port is connected to the router, and the screen of the base station displays "A-01"
 3. Configuration: Configure the base station online through software, the base station screen will change, and finally display "A-01"
 4. Communication: Use the background to send data, the base station screen will change, and finally display "A-01"

2.2.4. Control Range

- Connection method: TCP/IP (Private Protocol)
- Control area: Circle with a radius of 12-15m (39-50 ft) (Area 452-706m² (4863-7599ft²))



2.3.2.4GHz Electronic Shelf Label

2.3.1ESL Sizes & Parameters

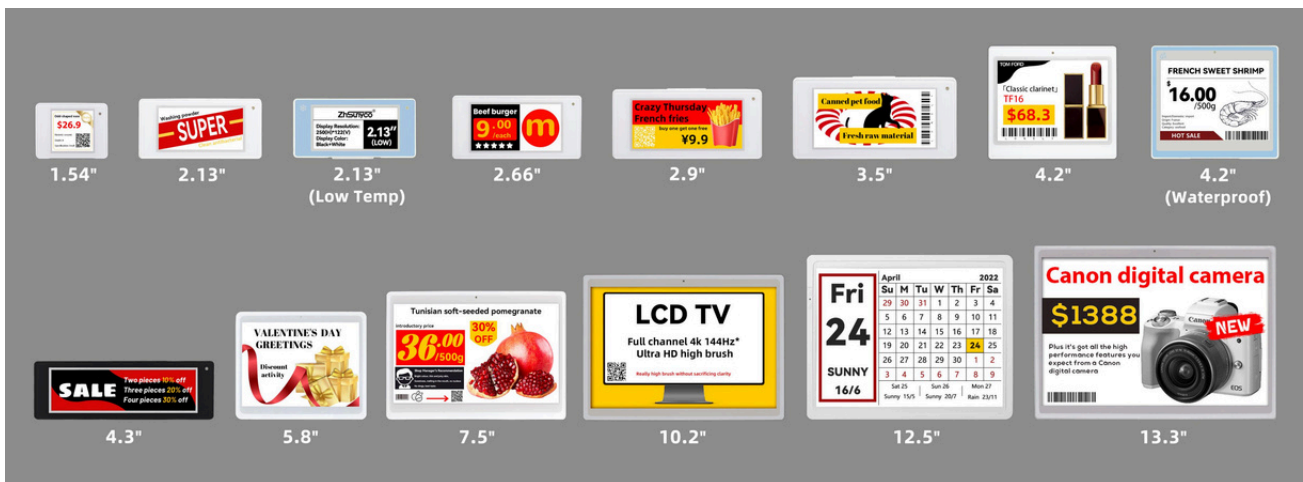
Labels can be made into 3 forms: without front cover version, common version and three-proof version according to customer needs.

2.4GHz ESL Parameters									
N. o.	Model	Dimensions H*V*D(mm)	Size	Display				Shell Colors	Battery In fo .
				L*H(mm)	Resolution	Colors	DPI		
1	S-ET 0154 -80	49*37.6*13	1.54	27*27	200 *200	B/W /R/Y	188	B/W	CR 2450*1
2	S-ET 0213 -81	71.3 *35.6 * 12	2.13	48.5 *23.7	250 *122	B/W /R/Y	130	B/W	CR 2450*2
3	S-ET 0266 -82	85.8 *41.8 * 12	2.66	60.09 *30.7	296 *152	B/W /R/Y	125	B/W	CR 2450*2
4	S-ET 0290 -84	91.2 *41 *12	2.9	66.9 *29.0	296 *128	B/W /R/Y	112	B/W	CR 2450*2
5	S-ET 0350 -86	100.5 *48.5* 12	3.5	79.6 *38.1	384 *184	B/W /R/Y	122	B/W	CR 2450*2
6	S-ET 0420 -87	99.2 *89 *12	4.2	84.8 *63.6	400 *300	B/W /R/Y	119	B/W	CR 2450*2
7	S-ET 0580 -88	134.5 *114 *9	5.8	118.78 *88.22	648 *480	B/W /R/Y	138	B/W	CR 2450*6
8	S-ET 0750 -89	178 * 127 *9	7.5	163.2*97.9	800 *480	B/W /R	124	B/W	CR 2430*6
9	ET 0213-39 (Low Temp)	71.3 *35.6 * 12	2.13	48.6 *23.7	250 *122	B/W	130	W	CR 2450*2
10	S- ET 0266-5B (Low Temp)	85.8 *41.8 * 12	2.66	60.1 *30.7	296 *152	B/W	125	W	CR 2450*2
11	S- ET 0290-54 (Low Temp)	91.2 *41 *12	2.9	66.9 *29.1	296 *128	B/W	112	W	CR 2450*2
12	S-ET 0420 -43 (Waterproof)	99.2 *89 *12	4.2	84.8 *63.6	400 *300	B/W /R	119	W	CR 2450*2
13	S-ET 1250 -58	281.3*229 *17.8	12.5	252.976 * 190.896	1304*984	B/W /R	131	W	CR 2450*7



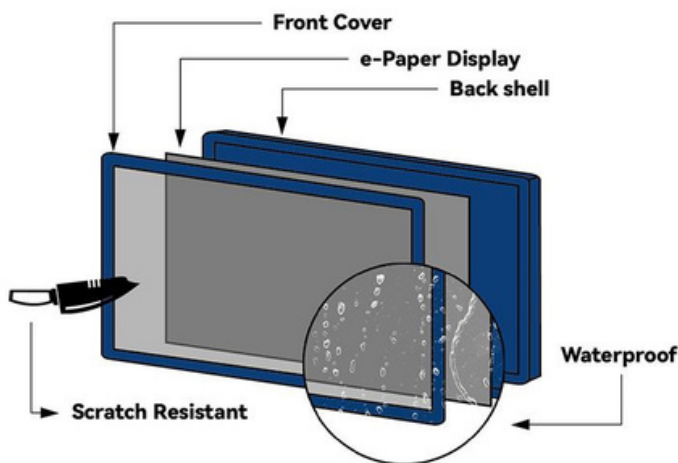
Display	Technology	Dot-matrix E-ink Display	Battery	Battery Life	10 years
	Viewable Angle	Close to 180°		Replacement Battery	Available Option
Communication Info .	Frequency	2.4GHz	Operating & Storage Ambient	Operating Temperature	0~40°C
	Protocol	Private Protocol		Storage Temperature	0~40°C
	Distance	12 - 15m		Operating Humidity	45%~70%RH

2.3.2. ESL Pictures



2.3.3. ESL Structures

ESL composition: Front cover plate, E-ink display, PCBA board, Battery, Back cover plate.



The front cover plate is made of 4H hardness acrylic, which has good anti-drop and anti-scratch characteristics.

E-ink Display: Bistable characteristics, still displaying information after power failure, low power consumption, clear without backlight.

PCBA Board: ST Microelectronics chips.

Battery: High-performance, service life can up to 10 years.

Note: The waterproof label back cover plate is welded by ultrasonic machine, the battery cannot be replaced. In addition to 4.2-inch label is fully waterproof, other sizes of labels are surface waterproof, if you need full waterproof label can contact us to customize.

2.3.4. ESL Characteristics



□ Appearance.

Thin and light design with extremely narrow frame for a better visual experience
Labeling bottom design, more simple and beautiful.

□ Function.

Information display: support for multiple languages, graphics, text, symbols, etc.

NFC function: support NFC communication function (optional)

Temperature detection: support for temperature sampling, system readable

Power detection: each tag supports power sampling and can be read by the system

LED indicators: support 3-color independent control lights, user-defined blinking frequency and color of the indicators



2.3.5. Battery Removal



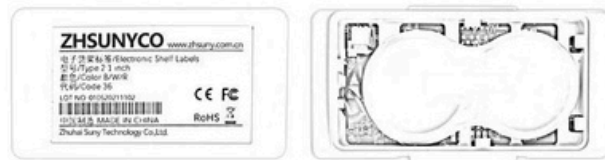
① Turn the end with the ID towards you



② Pry the bottom case off with a tool



③ Drag the bottom case to the left



④ Open successfully

2.3.6. Accessories and Installation



Desktop Holder



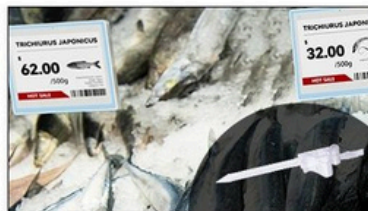
Degree Clip



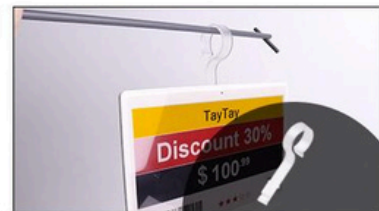
Plastic Rail



Hanger/Clip



Ice Insertion




Hanger Clip

Note: This picture listed is regular accessories, if you have other needs, please contact us.

3. Introduction of ESL solution for supermarkets

3.1.Solution Design Case

Store Information		
Store Single Floor Plan	Basic Information	Details
	Chain store?	Yes
	How many floors?	1
	Single floor area	3500 m ² (37660ft ²)
	Product Management System (ERP/POS/CRM/MSS/Other)	ERP
	Store Type	Superm arket
	SKU	25320

Solution Configuration Recommendations				
Region	Part N.o.	Quantity	Accessory Name	Quantity
Fresh Food Area	S-ET 0420-87	2280	Hanger Clip, Desktop Holder, Degree Clip	2280
Freezing Area	S-ET0213-39	1140	Plastic Rail	190
Daily Necessities Area	S-ET 0213-81	21000	Plastic Rail	4000
Daily Necessities Area	S-ET 0290-84	300	Plastic Rail	50
Fruit & Vegetable Area	S-ET 0750-89	600	Hang Ring	600
Total. Base stations		25320	Total.	7120
	S-ETAP05-2.5	13	/	

3.2.Customer Feedback



The labels are very elegant and have a very good resolution, they have given the store a more modern touch. The software is easy to adapt and now I can keep all prices up to date without wasting time.

“The Digital Smart Label™ system is very simple and a lot better than paper labels. And it looks a lot cleaner on the shelf. It’s just an excellent product!”



“I think any retailer out there who periodically changes prices would see a lot of return if they tried this technology as well.”

4. After-sales & Common Troubleshooting

(一) After-sales: We will provide videos of installation, deployment and operation; at the same time, we will remotely assist customers with software deployment and label update demonstrations; if necessary, our company relevant technical personnel can provide on-site guidance.

(二) Common Troubleshooting:

The basestation is offline

1. Whether the basestation is connected with power supply.
2. Is the basestation transmit port filled in correctly?

Electronic Shelf Label cannot be updated

1. Make sure the tag ID is entered correctly. (For example, consider Bas8, and oas0)
2. Low battery power, you should check and replace the battery in time.

Electronic Shelf Label without information feedback alert

1. Make sure that the label is within valid control.
2. Low battery power, you should check and replace the battery in time.

If you encounter any problems in the product or software, or other installation and deployment, please contact us in time, we will assist you to complete the product testing and deployment work as soon as possible.

5. Company Profile

Zhuhai Suny Technology Co.,Ltd. was established in 2016, is a professional manufacturer of intelligent electronic display tags in software development, hardware and product design, solution deployment and after-sales maintenance have a wealth of practical experience in all aspects.

In 2020, we launched to the market zhsunyco® brand is committed to provide better services and solutions for overseas customers. Zhsunyco® adhering to the business philosophy of "customer-oriented", Zhsunyco® is committed to intelligent display solutions for retail, industry, warehousing and logistics, helping various industries around the world to reduce paper waste and contribute to the goal of global carbon neutrality.

Zhsunyco® smart display products include electronic shelf labels, e-ink screens and LCD displays. Among them, we have four different communication technology solutions including 2.4GHz, 433MHz, BLE, NFC, in order to meet the needs of different customers in different scenarios.

As of 2021, we have served more than 180 countries and more than 20,000 supermarkets worldwide, enabling customers to successfully move from the traditional retail model to the new retail model.

With 12 years of R&D experience and a hardware and software R&D team of more than 25 people, our factory can provide customized services and complete solutions according to customer needs.

We have obtained 142 utility model patents and 11 invention patents in the electronic label industry. We have 10 QC auditors with five years of experience to control our defective rate to 0.00

The Alpha 7C is approximately 124.0mm x 71.1mm x 59.7mm and weighs approximately 509g*4, which is similar in size and weight to the APS-C frame camera *5 and only about 1% heavier than the Alpha 6600.

2
Continuous shooting: 12 pictures/second
Video/High frame rate: 8K,30p/4K,120pFHD,240p
Real-time tracking: Yes
LCD flip: Flip the LCD up and down
Size: 128.9 x 96.9 x 80.8mm
Weight: 737g

HOT SALE
Whole wheat bread \$1.99
Ingredients: wheat flour
Origin: Canada

Milk Chocolate
LINDOR Bar
Net weight: 3.5 oz (100 g)
HOT SALE
\$3.99

Classic Santa Advent Calendar
ON SALE
\$29.99
Chocolate type: Milk Chocolate
Net weight: 10.2 oz (290 g)
Size (in.): 19 x 2 x 14

Classic Santa Advent Calendar
\$29.99
Chocolate type: Milk Chocolate
Net weight: 10.2 oz (290 g)
Size (in.): 19 x 2 x 14

Contact Details Kuwait Corporation Limited

Tel: +965-50272775

Email: ali@kuwaitcorp.com

Follow us: www.kuwaitcorp.com