

What is ESLS?

Why we use ESLS?

ESLS is short of Electronic Shelf Label System







Electronic shelf label system, is such an electronic display device can be placed on the shelf and replaced the traditional paper price label. Each electronic shelf label is connected to the store's computer database through wireless network and displays the latest price on its screen. In fact ESLS has controlled the price by the computer program successfully, changed the status of replacing the price labels by handwork, and realized the consistency of price between the counter and shelves.

System
Advantage

System
Architecture

System
Application






The traditional paper label

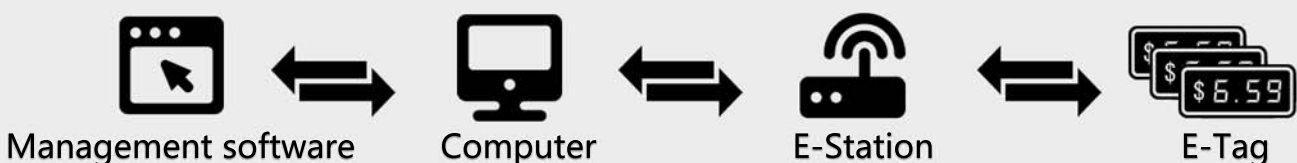
-  Complex procedures of manual price changing :
Update system data –print paper tags -look for tags need to be changed -take away overdue tags-ensure tags accuracy. It's Time losing and low efficiency.
-  Continuous cost of consumable items (annual printer changing, ink and paper purchasing). It's high expense.
-  Staff need to do overtime work because price changing always happens not in business hours.
-  Manual price changing mistakes ratio can be 6%.
-  Missing labels ratio can be 2%, high damage rate of paper tags for various reasons. It will cause repeated works, decline of staff satisfaction and increasing of customers' complaints.
-  Failing to change price tags in time or pricing errors can cause price labels in-store not match your back-end database, and customers' complaints will bring bad reputation and related penalties to the store.



Traditional paper is complicated to replace, it needs to check the product price by manual work, and has to write or print the price tag first, then replace the old labels on the shelves.

Electronic Shelf Label

-  Two-way high speed RF transmission and secure verification to ensure transmission efficiency and accuracy.
-  Automatic price and content changing system by real time synchronizing with POS database.
-  Reduce artificial mistakes and improve information management to better increase company reputation and customer satisfaction.
-  5 years long life for energy and cost saving.
-  Environmental protection, without too much material waste.
-  High-end design, increasing customer' s purchase desire

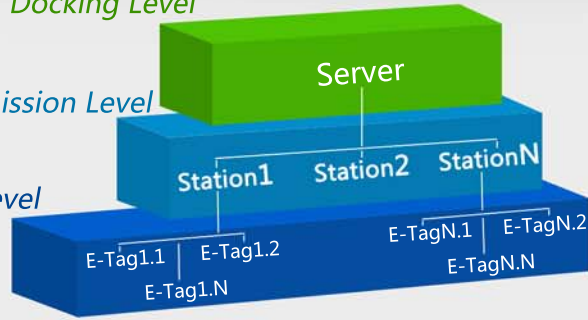


E-Station can receive the refresh data sent by computer with cable and transmit information to E-Tag to display new contents.

A: System Docking Level

B: Wireless Transmission Level

C: Terminal Display Level



ESLS Overall Architecture

The system hardware cylinder including three levels : system Docking level (E-Management), wireless transmission level (E-Station), Terminal display level (E-Tag)

ESLS Devices Form



1. Binding product barcode and E-Tag label ID by handheld decoder, to achieve a unique identity identification



2. The product information is bound to import server database, you can achieve to modify and refresh the specified product information.



3. E-Station receiving server command, launching the changing product information command to the E-Tag via wireless RF.



4. E-Tag Screen info Updating Progress



E-Tag

- ▶ Display mode: Dot-matrix pixel, reflecting display, no backlights, paper like reading performance, and good vision
- ▶ Low power, Zero-power consumption to keep the display information
- ▶ Display format: Dot Matrix display
- ▶ Multi-languages enabled and can show complex information and barcode
- ▶ Outdoor performance: readable under direct light
- ▶ Gray levels: 4 Color: Solo

Display area(diagonal)	2.8 inch (65.88mm×25.77mm)
Resolution	232(C)X88(R)
Reflect contrast	7:1
Whiteness Reflect	33%
Visual angle	175°



E-Tag can withstand normal drops



E-Tag has IPX6 level (water jet) waterproof

Diversified Labels Info

E-Tag can realize the custom screen content layout, and adjust the displayed location and size according to the actual demand



E-Station

Two-way communication data encryption base station



E-Station is an important information hub for connecting servers and E-Tag terminal, refresh command issued by the base station receives the server through the network cable and display data wirelessly transmit information to the E-Tag terminals, to achieve the E -Tag display control.

The basic parameters	Data Verification
Model	E-Station
Processor	ARM
Network Connections	RJ45
Power Interface	5VDC/2A
Communication	Two-way data communication protocol
Direction of Propagation	Comprehensive, no dead Angle
Frequency Spectrum	433 ~ 434.92M
Coverage Area	Coverage radius 15 meters (slightly impact in complicated environment)
Management terminals	65535PCS
Size	200*127*31mm
Weight	280g
Operating Temperatur	-20°C ~ 70°C
Update Speed	1000PCS E-Tag/10 Minutes

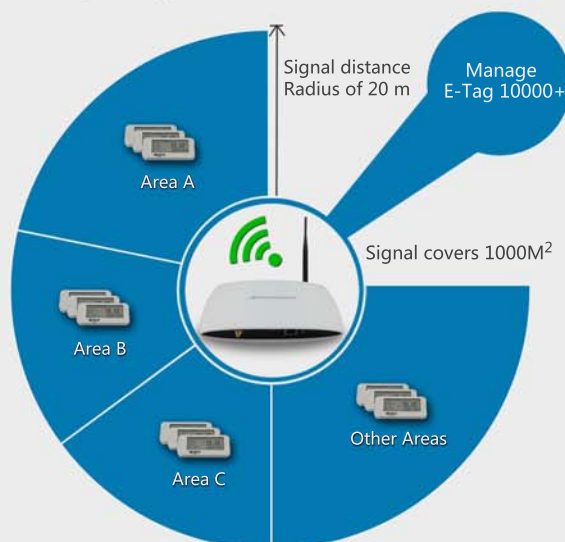
E-Station Features :

- ▶ According to the definition of the international telecommunication union radio communications agency, By China national ministry of wireless administration for examination and approval
- ▶ communication protocol based on the International radio frequency (rf) scheme, can cover the world's major countries and regions
- ▶ Communications solutions, fast response, stable, reliable, low power consumption, strong anti-interference, covering a wide range, fit for multi-terminal nodes and complex business environment scene.

E-Station multiple connectivity options



E-Station signal range



E-Touch

High-speed laser handheld scanner



An indispensable part of electronic labeling system.via a code match software,E-touch scanning the Tag ID(Bar code) and corresponding goods Bar code and generating a specific correspondence.Via wireless network server transmitting the data to related e-labels and realize information real-time updated and displaying on the label screen in ESL management system.








E-Touch Configuration :

- ▶ Adopted with Symbol SE955I high-efficiency scanning engine.with the speed of 100 times/second brings with excellent performances.even if destroyed or low quality bar codes can be scanned as well.
- ▶ Developing independently on interface of E-touch operating system enables it easier and more convenient for live operation personnels.
- ▶ Real-time recording information of goods via Tag ID and fast wireless communication makes it steadier.batch data processing and convenient operation interface improve its high efficiency.

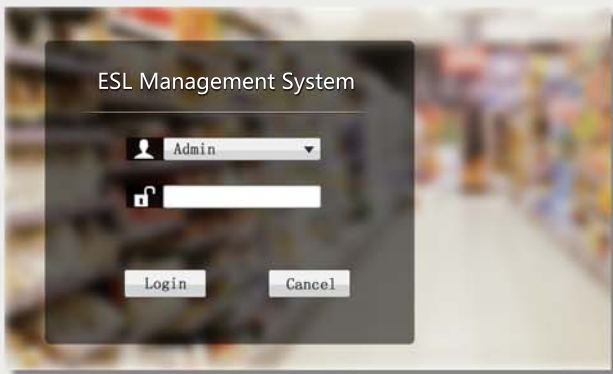
Parameters	Data Verification
Model	R-CHT5010
Processor	SumSang S3C2450-533MHZ
RAM/ROM	DDR2-128M/256M (512M)
System	Windows CE5.0
Screen Size	3.5 inch (240*320)
Communication	802.11B/G 无线Wifi通讯
Input	29 Keyboard and Touch Screen
Size	15*7.5*2.8CM
Industrial Grade	IP54
Data Collection	One-dimensional code scanning
Scanning Gate	104/sec ±12/sec (two-way)
Weight	360g
Battery	3.7V 2800mAH Polymer

E-Touch Performances. :

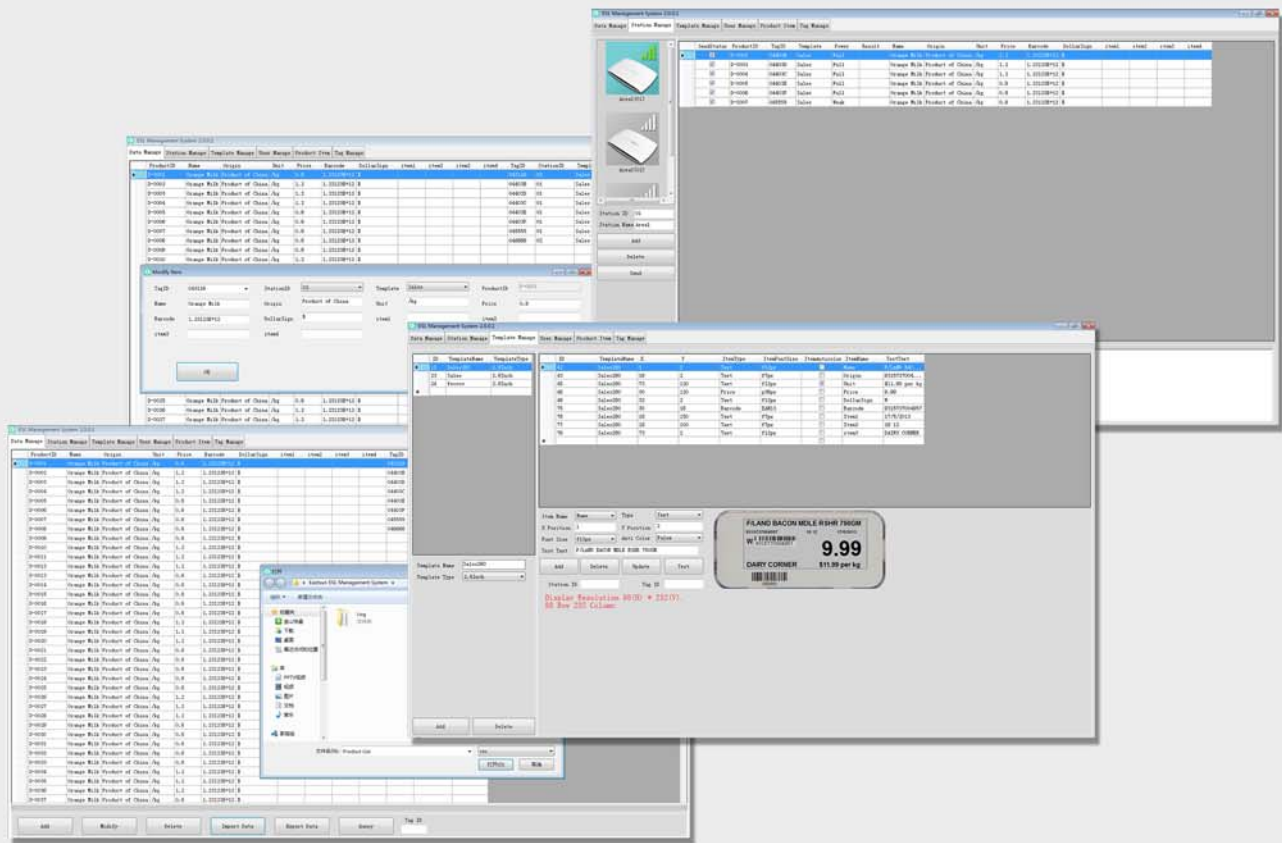


-  According to the assigned user name password login authentication, the system can support multi-user login.
-  For the product bar codes and E-Tag id is binding on the code to achieve a unique correspondence between.
-  Users are supposed to input all info into the system when running the system the first time,can be batch scanned and uploaded.
-  Tag to leave the system or is no longer in use, need to set the label from the delete operation.
-  Query for the electronic label identity and goods in the system information.
-  Updates of E-tag ID and related information.
-  Configure the connection to the server

ESL Management System



ESLS Management System is based on C/S framework, it is installed on the server and used to manage E - Tag and E - Station, The software achieves the function of managing the base station and tags. It is specifically designed for electronic shelf label System and developed. The ESL System supports not only single store Management but also multiple shop.



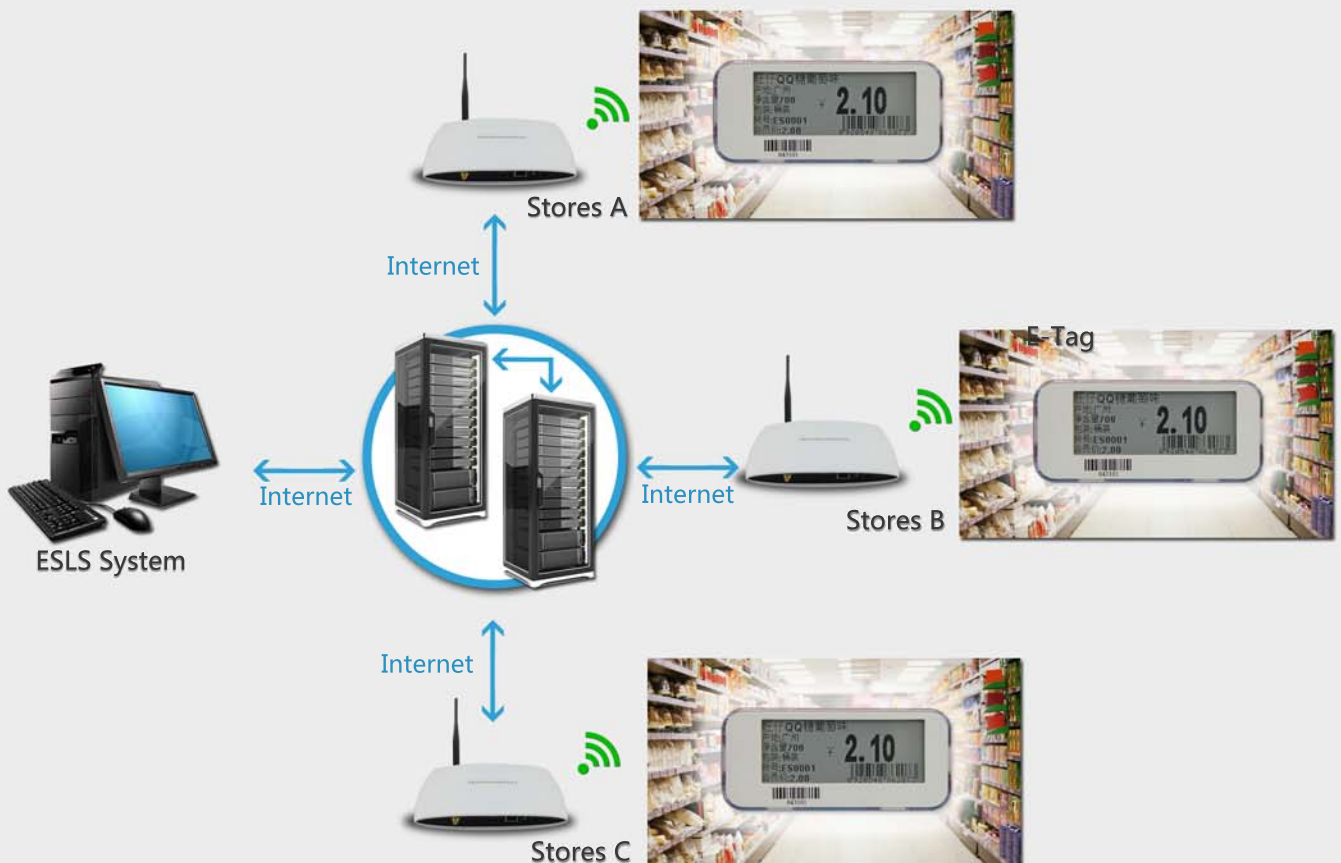
Main Function :

- Label Management:** Can display all the tags' info in the system, including its stores/tag ID/power/signal strength/label state/work state/tags template/Update frequency/Update time. Can single update or batch regularly update E – Tag info
- Data Management:** Can download/derive client' s product info, and check the info real-time .Connecting the E-Tag ID with Product Bar-code.
- Log Query:** Log query Item records all the products and tags' operation information of the system
- User Management:** Can set and edit the user' s operation jurisdiction

1.A LAN mode: single LAN stores management system for independent management of supermarkets



2 Cloud Model: Internet cloud model multi-store management systems, central cloud server system can manage multiple stores in different locations



▶ Method of Rail Type : Display shelves for retail industry, the desktop display



▶ Method of Vertical Type : Applies to the retail industry electronics, electrical appliances area



Select specific fixed base or stand, can match Various display methods to meet the storage needs of a variety of exhibitions

▶ Independent Rack: For Retail store fresh area, fruit and vegetable area, promotion zones



▶ Method of Suspension Type : Applies to the retail industry Hanging shelves

