



Retail Interactive™

Technology Solutions

Retail Interactive Technology Solutions Pty Ltd

Interactive electronic shelf label system

Transforming retail business for the future

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Who we are

Retail Interactive Technology Solutions Pty Limited (Retail Interactive) is an Australian private company located in the Brisbane Technology Park in Queensland.

Retail Interactive was founded after three senior level management professionals and business owners exited their respective professions and business environments to pursue an opportunity to provide leading Interactive Electronic Shelf Label (iESL's) to large Australian retailers.

The iESL System provides Retail Business Intelligent Tools with advanced technology retail store management software and interactive multi-functional hardware solutions to the retail business sector.



Background

During May 2015 the founders of Retail Interactive were introduced to Hanshow Technology Co. Limited (Hanshow) and their proprietary ESL System.

Since that introduction the founders of Retail Interactive began to conduct extensive international and domestic market research and analysis as well as making direct contact with various large retailer representatives in order to gauge and assess the possible demand, suitability and acceptance of an ESL System.

The experience internationally revealed that a number of large retailers located throughout Asia, Europe, Canada, and the United States of America have successfully trialled ESL Systems, and then implemented the technology throughout their retail store network. The overwhelming reason for this is due to the impact of the highly competitive and dynamic international and on-line retailers who are rapidly acquiring market share from the traditional off-line or bricks and mortar stores.

As ESL Systems are non-existent in Australia, and a growing number of international off-line (bricks and mortar stores) and on-line retailers continue to enter the Australian retail market, the need and demand for solutions that allow Australian retailers to compete with these international off-line (bricks and mortar stores) and on-line retailers will continue to increase with the ESL System being perfectly positioned to provide the solution.



Our partnership



Retail Interactive began to form a longer-term relationship with Hanshow not only because of their ESL System but also because of their desire to become an active and fully supportive business partner, their professionalism, creditable business approach, and rapid expansion into not only the Asian retail market but also Europe, and more recently Canada.

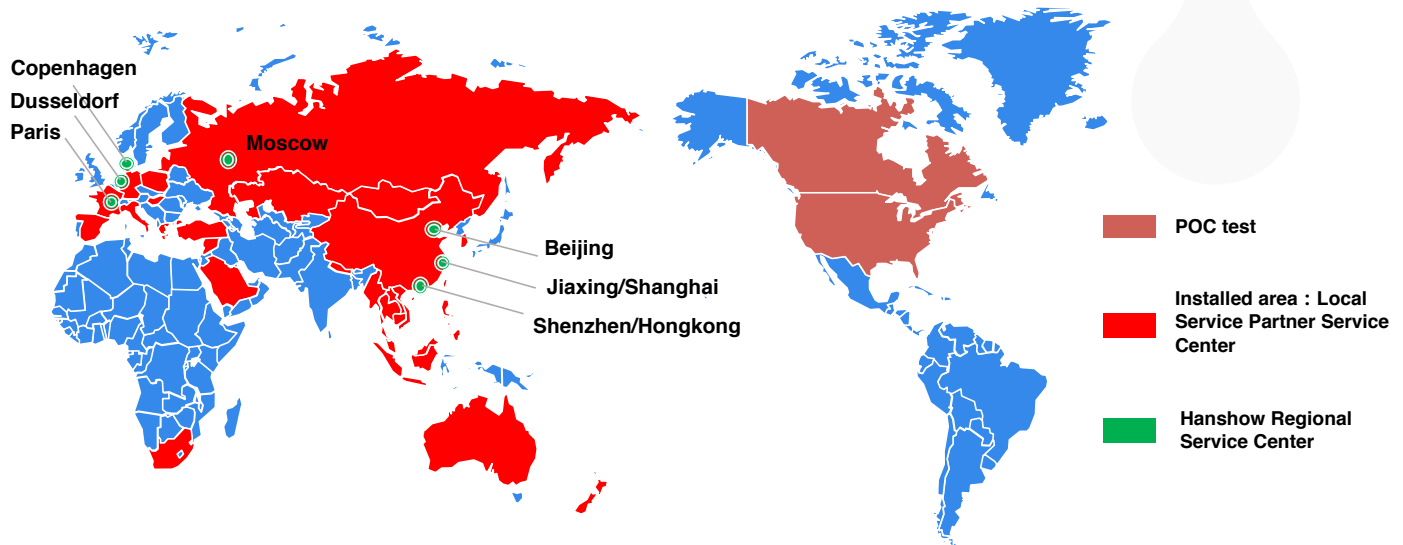
Our formal partnership with Hanshow provides Retail Interactive with a very dedicated, and experienced Sales, Support, Manufacturing, Software, Hardware, and Research & Development team of more than 350 employees.

Hanshow has now become the most complete end to end iESL software and hardware supply chains in the world.

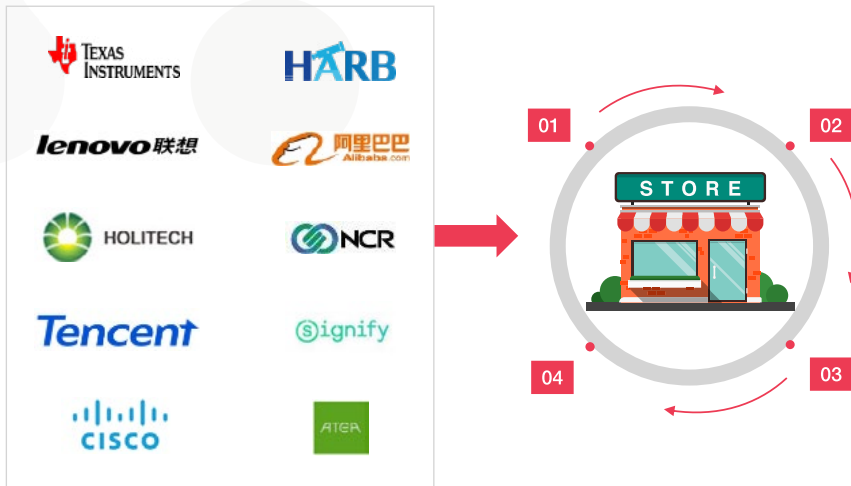
In the last few years Hanshow has grown rapidly in the global market and has established its reputation in the international retail industry in more than 40 countries.

This rapid expansion is supported by international offices in Beijing, Jiaxing, Suzhou, Shenzhen, Shanghai, Denmark, France, Germany, and a comprehensive network of partners in 58 countries.

Our worldwide service network



Partner eco-system



As one of world leading providers for intelligent devices, Hanshow **has a solid supplier ecosystem and is capable to launch new innovative projects** by working together with our clients closely.

In the era of big data, as a practical digital store provider, we integrate different third-party partners to create value for our clients.

Our collaboration with **world-wide retailers allows us to provide valuable suggestions to our clients.**

Aiming to be the leading new retail solution provider by integrating technologies of big data, AI and other smart devices.

Our international customers

Hianshow



France



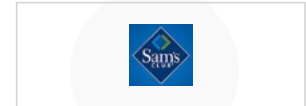
Germany



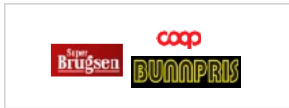
Hongkong



USA



Nordic



Netherlands Belgium



Thailand



Japan



Italy



Spain



Russia



Singapore



Our Chinese customers

Hianshow

| Region | Major Clients |
|----------------------------|--|
| Eastern China |       |
| Central China |       |
| Southern China |        |
| Northern China |        |
| Greater China (HK, Taiwan) |   |
| New Retail |         |

What we can offer

Our iESL System:

- is paperless and will replace the current requirement for paper price labels to be purchased, printed, and manually replaced every time product information and sales pricing is changed.
- has digital displays which can include full graphics with three colour options, LED flash light with three colour options, and bluetooth beacon functionality.
- network infrastructure has been designed to operate independently and require minimal changes to existing in-store inventory shelving and displays, and existing computer network systems and hardware.
- can be easily scaled to cover large store floor areas, and multiple store locations, and will allow the remote control over the digitally displayed information across a single store, or multiple stores, in any location, in real time.

This means retailers can react quickly to competitor sales promotions, determine if in-store promotions are effective, display detailed product information and offers either direct to customers, or their smartphones by QR codes or by bluetooth beacon based on their location in-store, more easily mark downgoods to maximise margins for old/discontinued or perishable stock, while reducing stock write-offs and wastage, and display product and merchandising information to your staff to help improve operational efficiencies.



iESL benefits

More efficient and cost effective pricing

- iESL's are paperless and do not need to be printed and manually replaced.
- Price changes can be affected across any number of inventory items located in any number store locations on-demand and in real time.
- Dynamic pricing will improve market competitiveness and increase profitability by optimizing margins.
- iESL's will synchronise pricing on the shelf to point of sale systems and eliminate differences due to manual input errors.

Management optimisation

- Improve inventory and shelf management by indicating low inventory levels, displaying inventory on hand and restocking quantities, as well as slow moving inventory
- More efficient in-store picking for 'Click and Collect' by using planograms, in-store digital navigation, 'picking route' optimisation while indicating the inventory items to be picked.





iESL benefits (Continued)

Operational efficiency

- React to competitor promotional strategies quickly by having the iESL System to allow immediate price changes and sales promotion advertising.
- QR codes can displayed and used by customers with their smartphones to either apply or obtain on-line coupons for discounts or incentives when purchasing products, related products, and accessories or for purchases on the future.
- QR codes can also be used to provide alternative payment methods which will result in a more efficient payment process.

Customer experience

- The iESL display is customisable can have up to 8 templates. These templates can display more detailed product information, and various sales and promotional offers. The templates can also display QR codes which can allow customers to access more detailed product information available on-line. This provides an interaction and experience with the customer which will be the same whether they are purchasing on-line or in-store. This information may be product details and specifications, sales price, current promotions, and comparisons of the same with similar products. This allows the customer the opportunity to make informed purchasing decisions.
- The in-store 'Easy Search' – 'Easy Find' ability for customers is facilitated by using planograms, and in-store digital navigation to provide an accurate route to inventory locations.

iESL benefits (Continued)

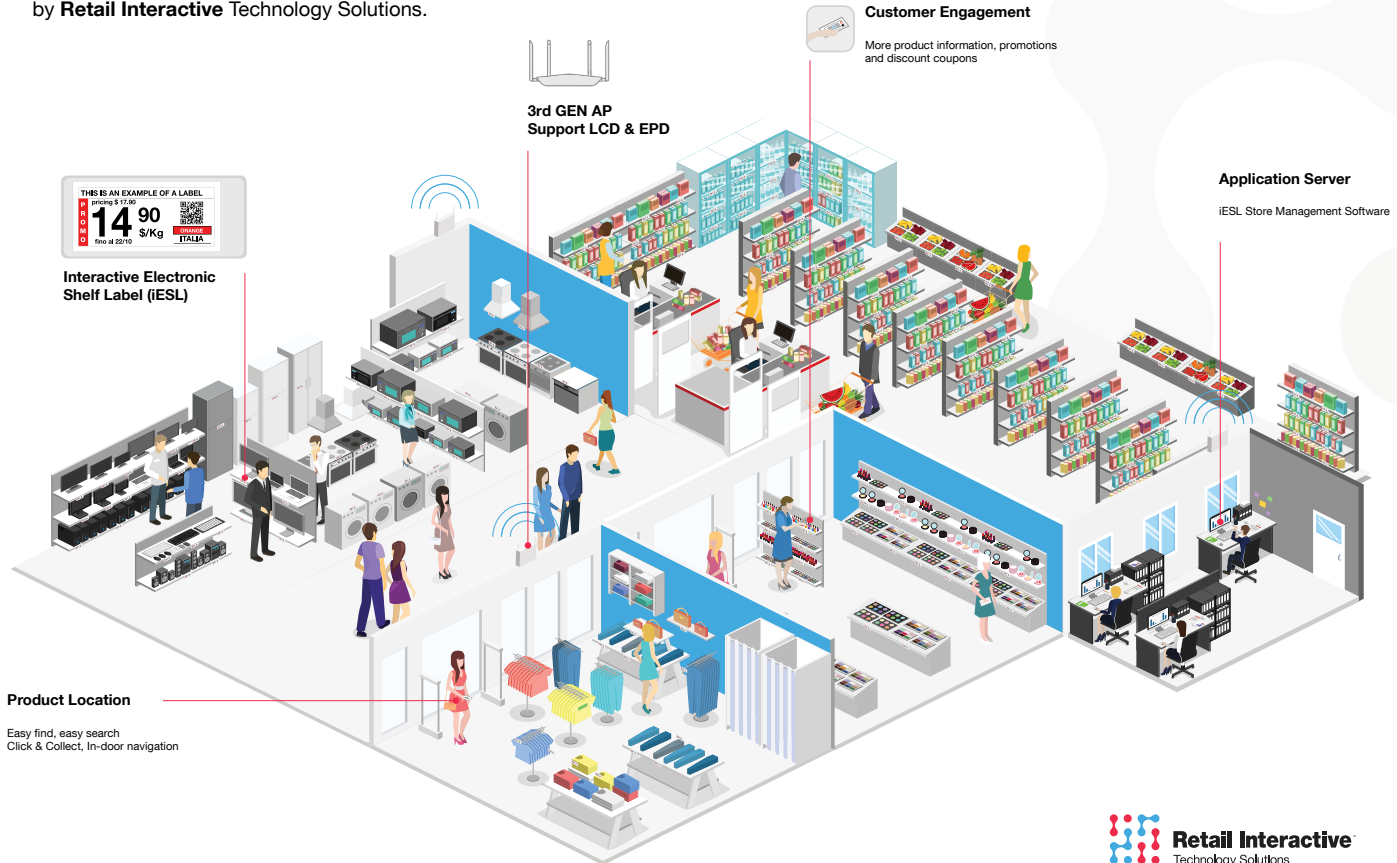
Marketing influence

- Australian retailers that introduce our iESL System will not only benefit financially, and improve their retail sales operations, but also build their brand reputation by becoming a leader of retail business technology that offers a complete and focused in-store customer experience that will transform their retail business.
- Sales and promotional strategies can be employed so quickly that your retail business will cease being reactionary to the competition and become a dominant leader of sales promotion and pricing.
- The use of QR codes in marketing campaigns can be recorded, measured, and reported to show whether the campaigns were effective.
- The iESL System is the bridge towards omni-channel retail business and the IOT which allows retailers to be prepared for the future.






The Connected Store

by **Retail Interactive** Technology Solutions.



Our hardware - iESL's

Electronic Shelf Label Technical Data 1





| Model ² | Stellar-STN 1.5" | Stellar-S3TN 1.5" | Stellar-S3YTN 1.5" |
|-----------------------------|--|--|--|
| |  |  |  |
| Dimensions (WxHxD) | 48 x 35 x 15.8mm | 48 x 35 x 15.8mm | 48 x 35 x 15.8mm |
| Display size | 1.5" | 1.5" | 1.5" |
| Weight | 27g | 27g | 27g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Right side | Right side | Right side |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (1 update per day) | 5 years (1 update per day) | 5 years (1 update per day) |
| Replaceable batteries | 1 x CR2477 (1,000 mAh) | 1 x CR2477 (1,000 mAh) | 1 x CR2477 (1,000 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

1. ESL Technical Data is subject to change at Retail Interactive's discretion.

2. ESL Labels are covered by a 12 month manufacturer's warranty, which is in addition to and does not limit any Australian Consumer Law rights. An extended warranty can be provided at an additional cost. Please refer to Retail Interactive for details.




3. A full replacement warranty for a 5 year battery life can be provided at an additional cost.

Our hardware - iESL's

| Electronic Shelf Label Technical Data 1 | | | | |
|---|--|--|--|--|
| Model ² | Stellar-MN 2.1" | Stellar-M3N 2.1" | Stellar-MFN 2.1" | Stellar-MFN 2.1" |
| |  |  |  |  |
| Dimensions (WxHxD) | 70 x 35 x 13.2mm | 70 x 35 x 13.2mm | 70 x 35 x 14.5mm | 70 x 35 x 13.2mm |
| Display size | 2.1" | 2.1" | 2.1" | 2.1" |
| Weight | 35g | 35g | 37g | 35g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Right side | Right side | Right side | Right side |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | -20°C to 0°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |




Our hardware - iESL's

Electronic Shelf Label Technical Data 1




| Model ² | Stellar-XMN 2.66" | Stellar-XM3N 2.66" | Stellar-XM3YN 2.66" |
|-----------------------------|--|--|--|
| |  |  |  |
| Dimensions (WxHxD) | 84.03 x 41.03 x 13mm | 84.03 x 41.03 x 13mm | 84.03 x 41.03 x 13mm |
| Display size | 2.6" | 2.6" | 2.6" |
| Weight | 41g | 41g | 41g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Right side | Right side | Right side |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

Our hardware - iESL's

Electronic Shelf Label Technical Data 1



| Model ² | Stellar-LN 2.9" | Stellar-L3N 2.9" | Stellar-L3YN 2.9" |
|-----------------------------|--|--|--|
| |  |  |  |
| Dimensions (WxHxD) | 91 x 41 x 13.1mm | 91 x 41 x 13.1mm | 91 x 41 x 13.1mm |
| Display size | 2.9" | 2.9" | 2.9" |
| Weight | 44.2g | 44.2g | 44.2g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Right side | Right side | Right side |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) | 2 x CR2450 (1,100 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

Electronic Shelf Label Technical Data 1




| Model ² | Stellar-XLN 4.2" | Stellar-XL3N 4.2" | Stellar-XL3YN 4.2" |
|-----------------------------|--|--|--|
| |  |  |  |
| Dimensions (WxHxD) | 104.8 x 94 x 11.8mm | 104.8 x 94 x 11.8mm | 104.8 x 94 x 11.8mm |
| Display size | 4.2" | 4.2" | 4.2" |
| Weight | 115g | 115g | 115g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Bottom front | Bottom front | Bottom front |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 4 x CR2450 (2,200 mAh) | 4 x CR2450 (2,200 mAh) | 4 x CR2450 (2,200 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

Our hardware - iESL's




Electronic Shelf Label Technical Data 1

| Model ² | Stellar-XLN 5.8" | Stellar-XL3N 5.8" |
|-----------------------------|--|--|
| |  |  |
| Dimensions (WxHxD) | 138.2 x 113.6 x 12.35mm | 138.2 x 113.6 x 12.35mm |
| Display size | 5.8" | 5.8" |
| Weight | 165.5g | 165.5g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Bottom front | Bottom front |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 4 x CR2450 (2,200 mAh) | 4 x CR2450 (2,200 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

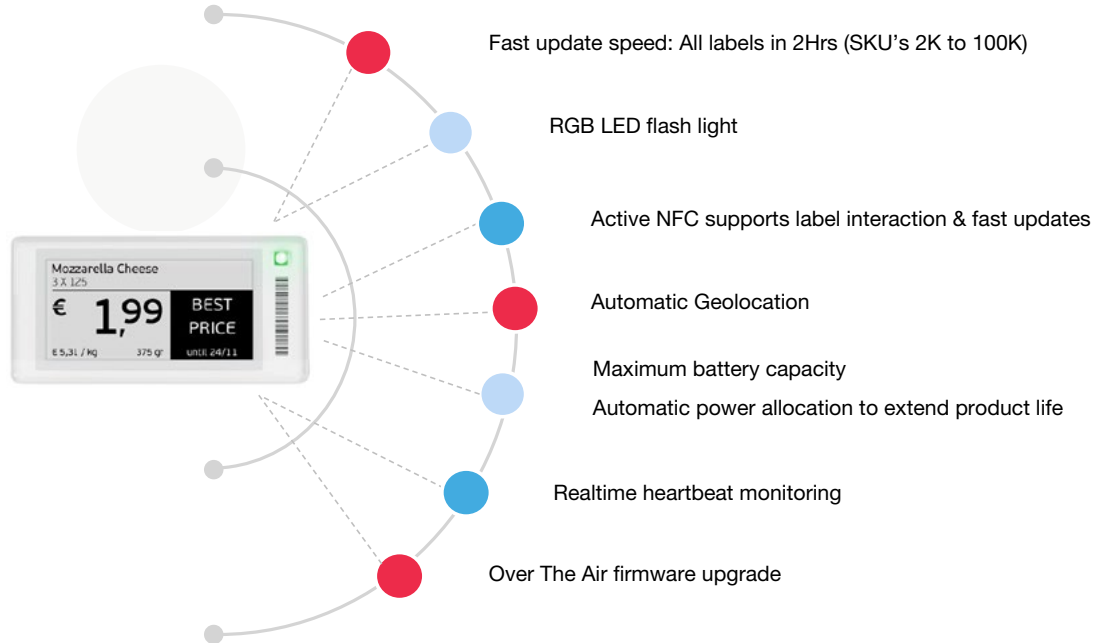
Electronic Shelf Label Technical Data 1

| Model ² | Stellar-XXXLN 7.5" | Stellar-XXXL3N 7.5" | Stellar-XXXL3YN 7.5" |
|-----------------------------|--|--|--|
| |  |  |  |
| Dimensions (WxHxD) | 183.9 x 126.9 x 13.2mm | 183.9 x 126.9 x 13.2mm | 183.9 x 126.9 x 13.2mm |
| Display size | 7.5" | 7.5" | 7.5" |
| Weight | 270g | 270g | 270g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Bottom front | Bottom front | Bottom front |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 6 x CR2450 (3,300 mAh) | 6 x CR2450 (3,300 mAh) | 6 x CR2450 (3,300 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

Electronic Shelf Label Technical Data 1

| Model ² | Stellar-XXXXLN 10.2" | Stellar-XXXXL3N 10.2" | Stellar-XXXXL3YN 10.2" |
|-----------------------------|--|--|--|
| |  |  |  |
| Dimensions (WxHxD) | 215.5 x 174 x 12.6mm | 215.5 x 174 x 12.6mm | 215.5 x 174 x 12.6mm |
| Display size | 10.2" | 10.2" | 10.2" |
| Weight | 365g | 365g | 365g |
| Display type | E-Ink, Bi-Stable, Graphic, Black, White, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Red, Led Flash, NFC | E-Ink, Bi-Stable, Graphic, Black, White, Yellow, Led Flash, NFC |
| Orientation | Landscape or Portrait | Landscape or Portrait | Landscape or Portrait |
| Viewing angle | Near 180° viewing angle | Near 180° viewing angle | Near 180° viewing angle |
| Appearance | Standard, white bezel front | Standard, white bezel front | Standard, white bezel front |
| Unit identifier barcode | Bottom front | Bottom front | Bottom front |
| Operating temperature range | 0°C to 30°C | 0°C to 30°C | 0°C to 30°C |
| Update time | Up to 18,000 labels per hour | Up to 18,000 labels per hour | Up to 18,000 labels per hour |
| Battery life ³ | 5 years (4 updates per day) | 5 years (4 updates per day) | 5 years (4 updates per day) |
| Replaceable batteries | 6 x CR2450 (3,300 mAh) | 6 x CR2450 (3,300 mAh) | 6 x CR2450 (3,300 mAh) |
| Accessories | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. | ESLs attach securely to our shelf-rails and accessories are also available for common fixtures and fittings. |
| Communications | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless | 2.4 GHz Band 2-way wireless |

iESL Wireless Features & Functions Overview



iESL Wireless Features & Functions Overview

Auto-Geolocation

Fully automatic
Self developed protocol
IoT based
High precision: within 1m



- In-store navigation
- In-store picking
- Shopping guide
- Smart replenishment

Interaction

Device/ESL NFC interaction
Data transmission
ESL control
Work flow element



- Page switch
- LED control
- Bind/Unbind
- Data update
- Custom application
- Store operation

Quick Update

Cellular network
Auto hopping
Self net link
Broadcast: 100K/5min



- Update within 2hrs
- Co-exist within 2.4GHz

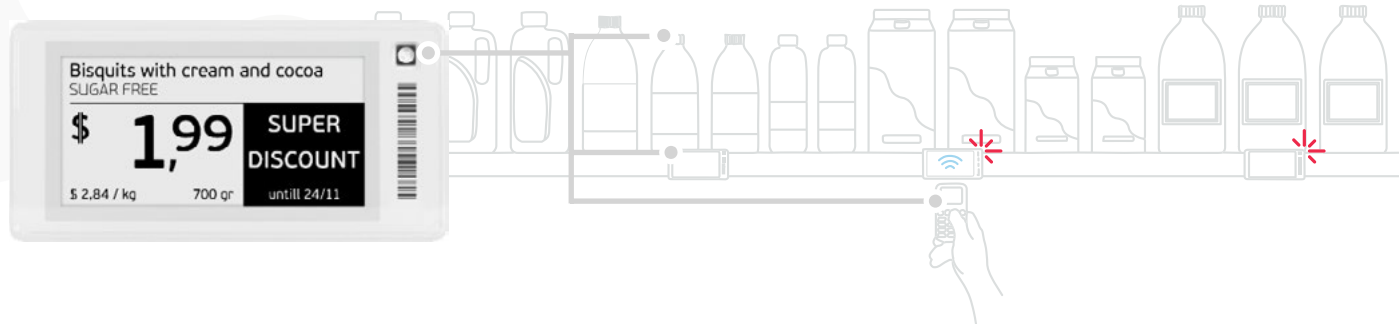
Monitoring

Multiple stores
Software IHM
Interface
Cloud service



- AP + iESL monitoring
- Periodic alert
- Dashboard

iESL LED flash lights



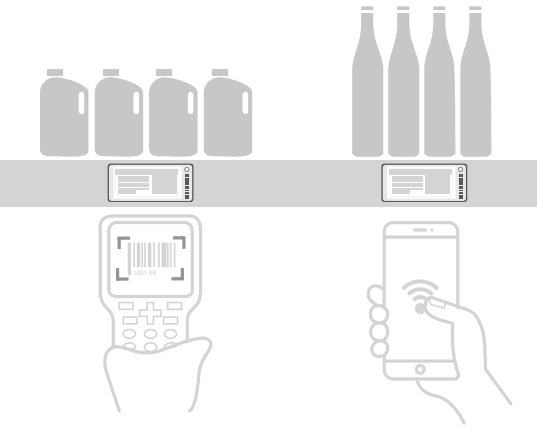
Promotion reminder

Member promotion

Operation reminder

Inventory reminder

iESL NFC interaction



NFC Data Sync

Sync the article data with NFC
Note: up to 400 Bytes.
In development stage, it will be deployed in POC.



Page Control

4 Pages switching control with NFC



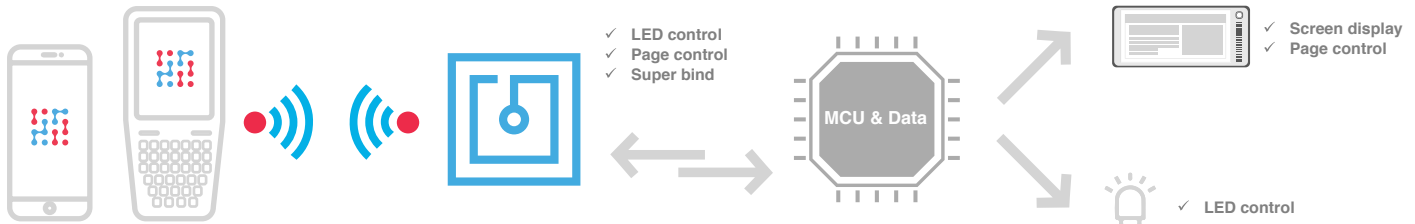
LED Control

Full LED control with NFC including duration, color and on/off

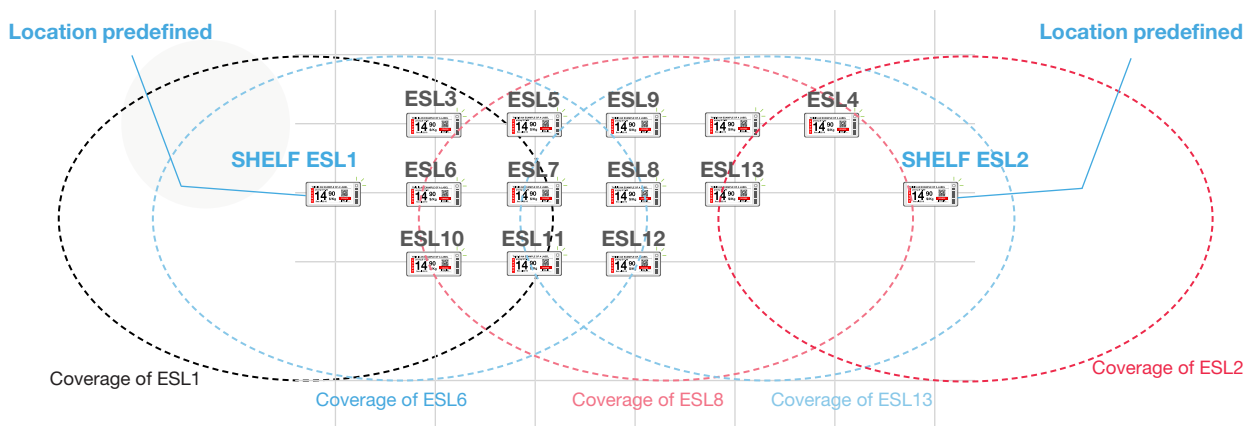


Super Bind

Reversely pull fresh data



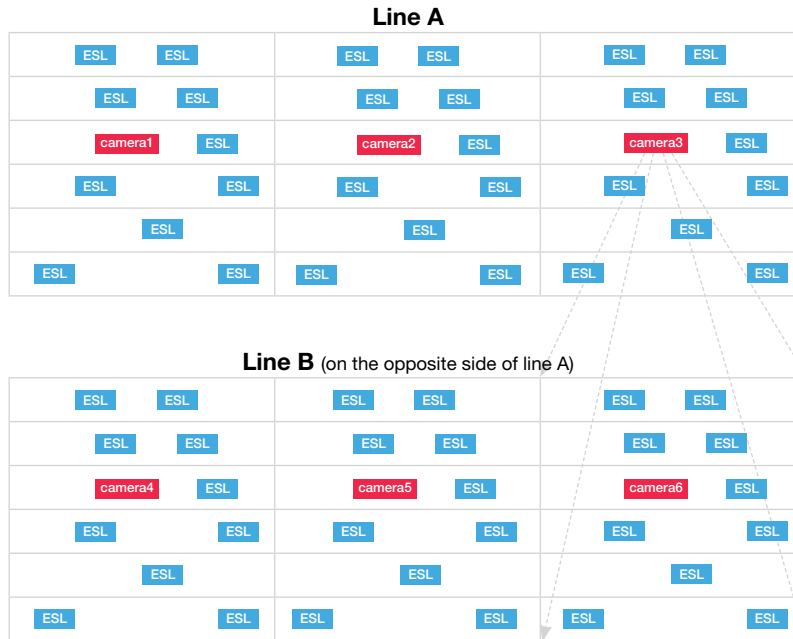
iESL Geolocation RF Based (accuracy 90% <1m)



- The neighbour list of each ESL is built up of its coverage and gathered to the center server through APs.
- The connection relationship is generated from the neighbor list of all ESLs onsite and location is calculated from the predefined location of shelf ESLs and the connection relationship.

iESL Geolocation Wireless & AI Based

(accuracy 90% <20cm)



camera shelf ESL

ESL normal ESL

Functionalities

- Acquire full or partial image of the opposite shelf
- Find the proximate location of iESLs via wireless signal
- Detect iESLs on the opposite shelf image
- Identify iESLs on the opposite shelf image
- Report iESL distribution changes
- Count the items on the opposite shelf image
- Report item vacancies

iESL Enhanced Security

- **AES128 and above** is the standard encryption algorithm for IoT products
- All iESL's are **equipped with AES128 encryption chip for secure wireless communication**
- **HTTPS + TLS 2.0** protects the entire data stream transmission from the customer's network
- LDAP/SAML 2.0 integration is also **supported for authorisation**



Our hardware - access point

High Coverage Area

550m2 coverage with no line-of-sight required for transmission

Simple Infrastructure

Directly connect to the cloud

Realtime Status Report

Realtime heartbeat for monitoring

Automatic Frequency Hopping

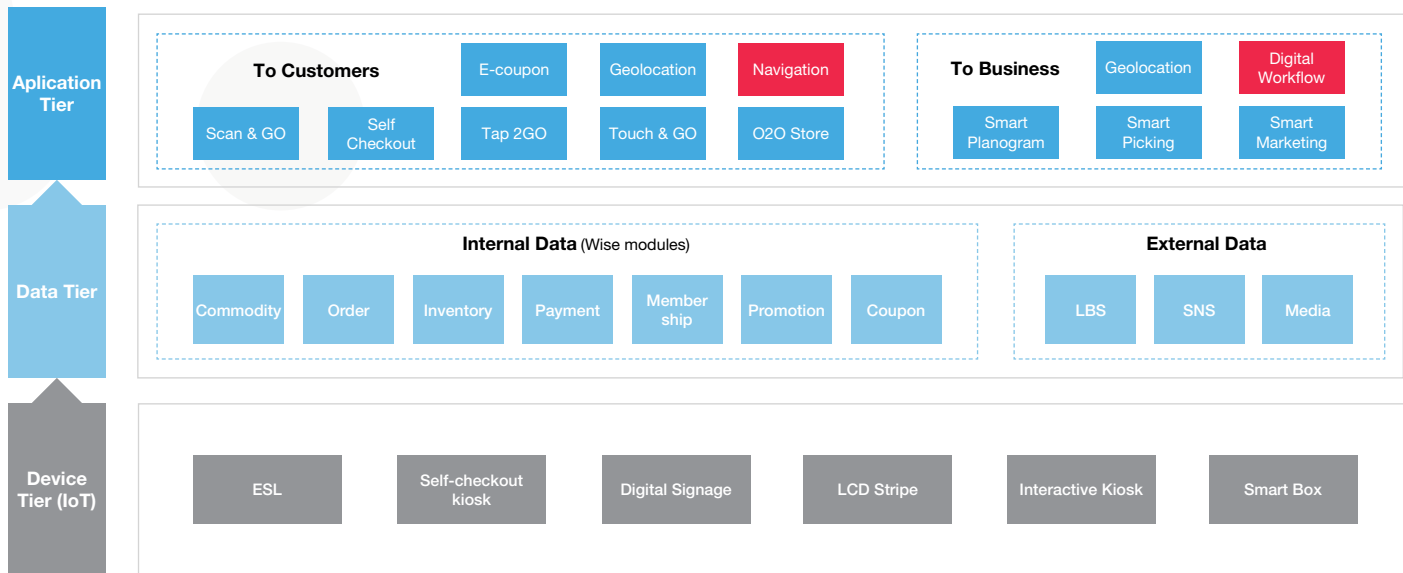
Co-exist with other 2.4GHz devices (e.g. Wi-Fi, Bluetooth, Zigbee) with automatic frequency hopping mechanism

Cellular Network Supported

Automatically establish cellular network for maximum concurrent communications

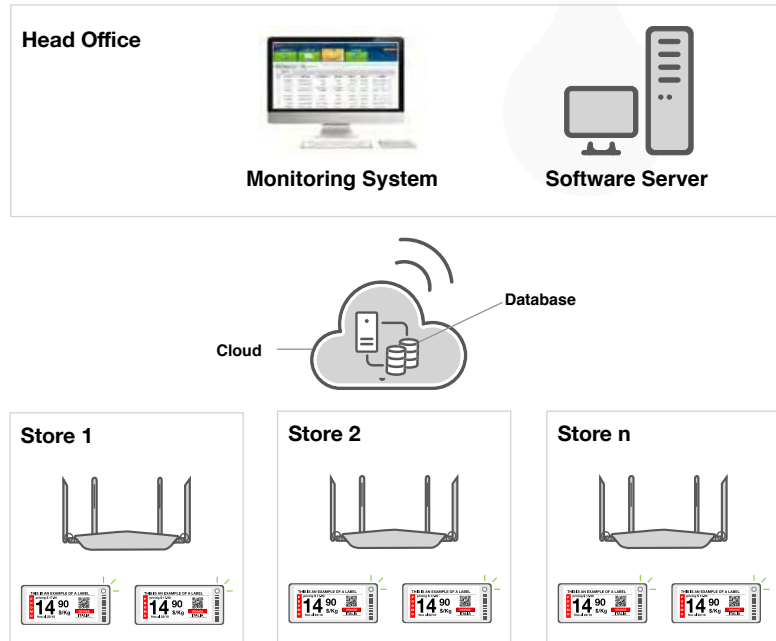


IoT based platform for smarter retail



Multiple store management overview

- Multiple stores can be supported by minimal cloud server infrastructure
- Head Office can efficiently monitor and manage multiple stores
- New stores can be easily added
- Multiple stores can be easily maintained



Smart store digital overview

Smart Marketing

- Display special offers and events
- Tailored advertisements



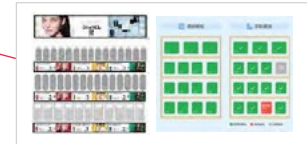
Smart Picking

- Order picking and packing
- Order hand over or delivery



Planogram Management and Adjustment

- Learn about product info and promotions
- Scan to get e-coupons



Smart Payment

- Self-service checkout
- Anti-theft
- Face ID
- Precision marketing



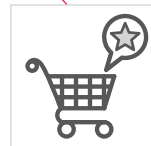
ESL Solution

- Scan & Go
- Tap2go
- Geolocation
- Dynamic pricing

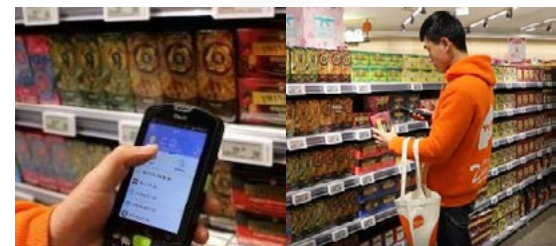
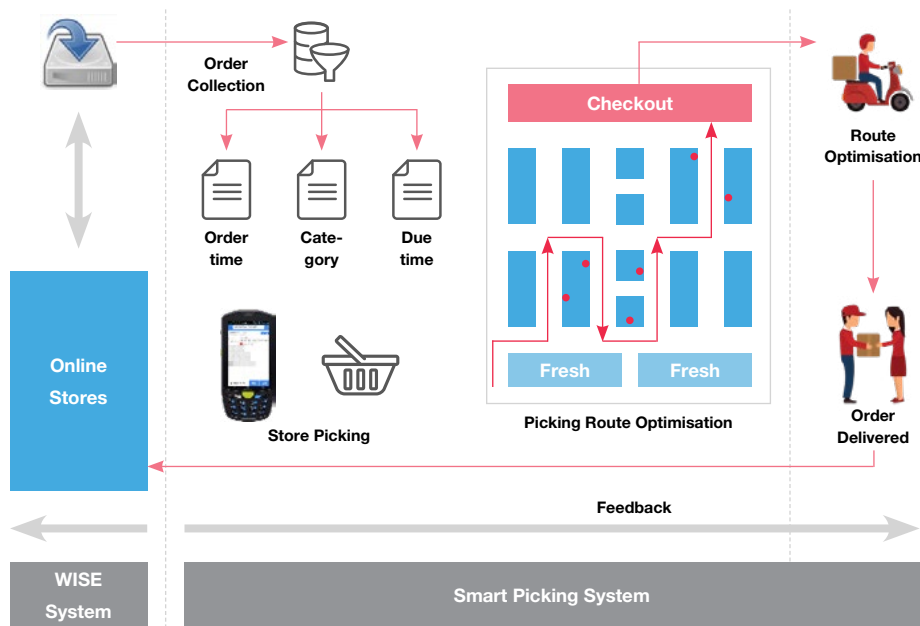


Smart Shopping

- Self-service shopping
- In-store navigation
- Related items recommendation



Smart picking



Smart store digital marketing overview

Touch Point 1: Store Entrance

Digital Signage

- Seasonal promotion videos and displays
- Facial identity or scanning with customised Direct Marketing or coupon
- Customer flow analysis & identification

Touch Point 2: Main Hall

Digital Signage

- Promotional video
- Promotion displays

Touch Point 3: Top Gondola

Digital Signage & LCD Stripe

- Promotion displays
- Interactive marketing information
- Customer flow analysis and sales transformation analysis

Touch Point 5: Cashier

Digital Signage

- Welcome page
- Barcode scanning: coupon push upon payment
- After payment: re-purchase coupon push

Touch Point 4: Shelf

LCD Stripe

- Promotion display
- Related commodity information push
- Interactive marketing information

ESL

- Promotion display for single commodity
- Scan & Go terminal
- Coupon push



Smart marketing

Multiple Device Displays



- Digital Signage
- Shelf Edge Digital Signage

Material Management



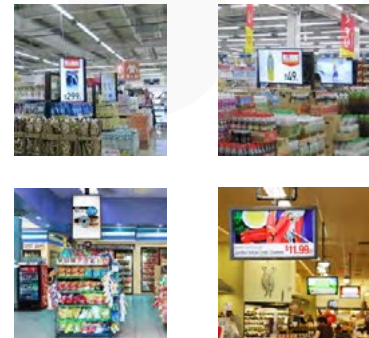
Price
Tag

Image

Video

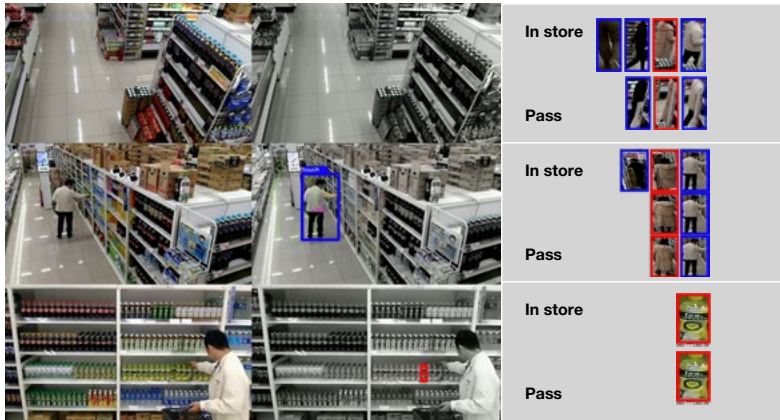
- Multiple zone layout design
- Fully integrated content creation
- Integrated planogram solution

Distribution Management

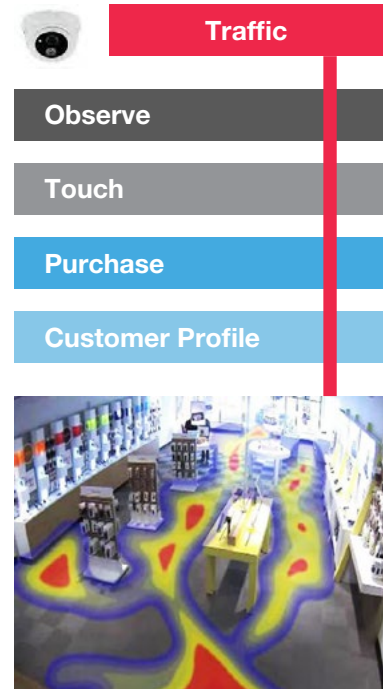


- Set operating hours
- Remote task monitoring

Smart marketing

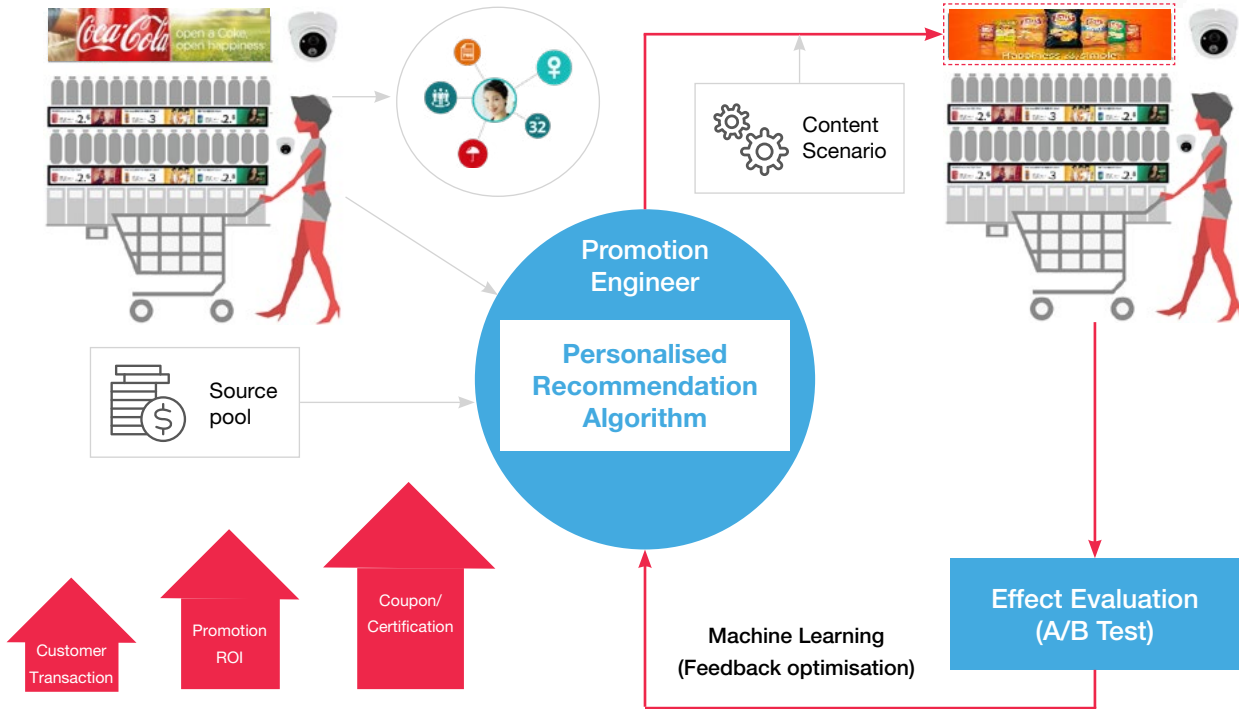


- **Heat coverage:** Space Utilisation Optimisation
- **Customer flow:** Traffic Flow Optimisation
- **Area & time of stay:** Store Layout Adjustment
- **Evaluate effectiveness of planogram:** Planogram Performance Optimisation
- **Thorough analysis based on data collected:** Raise Store Conversion Rate



Smart marketing

Combined with AI technology and smart devices, personalised ads can be displayed for customers.



New fashion tag

- 7 colour customised casings
- Ultra-Slim design
- Fashionable appearance
- Optional lens
- Low-power technology
- NFC supported



New ultra-thin iESL

- 7 colour customised casings
- Ultra-Slim design
- Fashionable appearance
- Optional lens
- Low-power technology
- NFC supported



New shelf edge signage



Features

- 23.1" / 24" wide FHD + TFT LCD Panel
- Micro-USB 2.0 x1 Input
- Micro-SD card x1 Input
- Wi-Fi 802.11 b/g/n
- Super Wide Viewing Angle

| Item | Specifications | Unit |
|-----------------------|---|---|
| LCD panel | Active Area | 585.6 (H) x 48.19 (V) (23.1" wide diagonal) |
| Max Resolution | 1920(H) x158(V) | - |
| Frame rate | 60 | Hz |
| Driver Element | a-si TFT Active Matrix | - |
| Pixel Number | 1920 x R.G.B. x 158 | pixel |
| Pixel Pitch | 0.15245 (H) x 0.4494 (V) | mm |
| Pixel Arrangement | RGB Vertical Stripe | - |
| Transmissive Mode | Normally Black | - |
| Viewing Angle (H / V) | Typical 178 / 178 | degree |
| Brightness | Typical 300 | cd/m2 |
| Contrast Ratio | Typical 5000 | - |
| Response Time | 9.5 | msec |
| Performance | OSD Language | none |
| Input Connector | Micro-USB(2.0) x1, Micro-SD card x1, Wi-Fi 802.11b/g/n x1 | - |
| Output Connector | none | - |
| User Control | none | -1 |
| Tilt angle | Upward / Downward | 15 |
| Physical | Dimension, weight | 902.1x513.8x64.5 / 6.8 902.1x571.5x200 / 6.9 |

New digital signage



- Ideal for advertising promotions, commercial displays, and event information in supermarkets, malls, hotels, reception areas, etc.
- Displays maintain high brightness in extreme conditions
- Simple content sharing and management

**Excellent
image quality**

**Wide viewing
angle**

Multiple sizes

**Flexible
installation**

**Simplified
content
management**

New smart payment kiosk



Self checkout

Mobile pay

E-Member

Coupon

Anti-theft

Recommendation

Face ID

Re-purchase



New smart trolley



Customer behavior tracking



Loyalty program



In-store navigation



Product scanning



Related product recommendations

Developing access point wi-fi integration



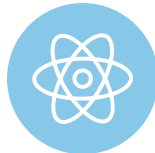
Low installation fee



Low maintenance fee



High data capacity



High integration level

Low cost & High reliability

Integration with Cisco



- In development stage
- Demo during May 2019
- POC during June 2019

Integration with Extreme Networks



- In requirement and planning stage
- Planning demo and POC during 2019 (depending on requirements)



Developing out of shelf detection



AI Module





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