



ZKONG ESL Products & Solutions for Smart Retail & Digital Stores

2024



## Common goals

Info Kod and ZKONG join forces to provide Macedonian companies with modern, effective and easy-to-use solutions that support the development of retail trade in the 21st century. Together we want to create better conditions for the development of enterprises in Macedonia, introducing a new quality in information management at points of sale.



## Access to the latest technologies

Thanks to the cooperation with ZKONG, Info Kod introduces one of the most modern ESL technologies to the Macedonian market. ZKONG electronic labels, based on the structure of the computing cloud and advanced wireless communication, enable dynamic price management and improvement of operational efficiency at points of sale.

## Local support and experience

Info Kod, using the experience of its sales representatives with over 20 years of experience in the industry, perfectly understands the needs of the Macedonian market. We offer support at every stage of implementation, from consultation to after-sales service, fully adapted to local business realities.





## Operational efficiency and cost reduction

ZKONG solutions help Macedonian companies reduce pricing errors, streamline merchandising processes and reduce operating costs. Automation of shelf information management saves time and resources, which translates into increased efficiency of companies.

## Retail revolution

ZKONG products are designed to meet the needs of multi-sector trade, and their versatility makes them suitable for both large retail chains and smaller enterprises. Customers in Macedonia gain solutions tested on global markets that help meet the challenges of modern retail trade.







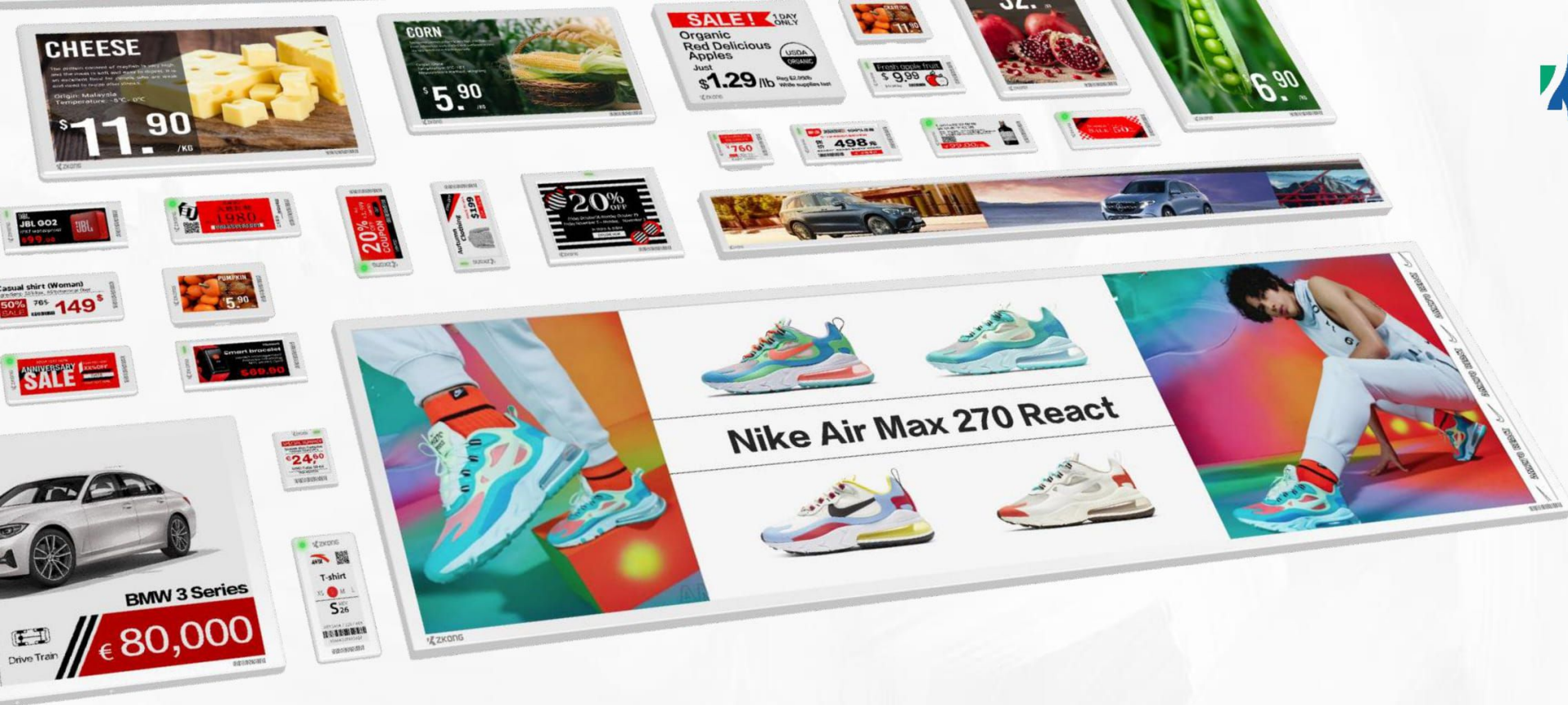
## Global know-how in local hands

Cooperation with ZKONG allows Macedonian clients to benefit from global experience and innovative technological solutions, while also benefiting from local support and extensive business contacts of Info Kod.

## Ecological approach

Electronic shelf labels are more environmentally friendly than traditional paper labels. They support waste reduction and fit into the growing expectations of the Macedonian market in terms of sustainable development.





# About **ZKONG**

## Achievements & Metrics

# BEST CHOICE

Global Leading ESL Innovator



Owning a 40,000m<sup>2</sup> automated manufacturing factory, 50+ million annual production capacity.

**40,000m<sup>2</sup>**  
Self-developed factory

Developed and manufactured in-house, with over 220 invention patents.

**18+ years**  
2006-2024

18+ years of research and development in wireless communication

**220+**  
patents

**100,000+**  
Stores equipped

Available in 50+ countries and regions, working with 1000+ brands and 100,000+ stores worldwide

**300+**  
employees

With 300+ employees (over 70% R&D staff), core members of Alibaba, HUAWEI, TP-link and other TOP100 companies in the world



# Manufacturing & Production



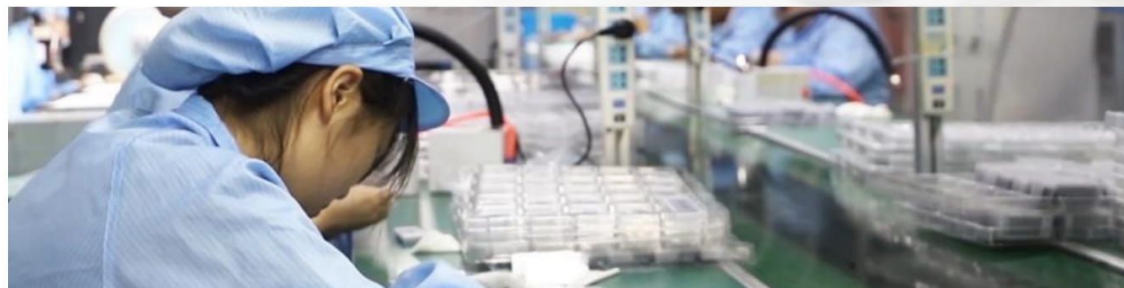
Lead Time

**2-4 Weeks** Fast Delivery

Production Capacity

**2,000,000**  
pieces / month

ZKONG owns a 40,000m<sup>2</sup> self-developed production factory with an annual production capacity of 50+ million.







# Solution Overview

## HARDWARE DEVICES



## SOFTWARE PLATFORM



### EPD (E-paper Display )

Use efficient e-paper displays to provide clear, energy-saving, long-lasting pricing and product information and improve the shopping experience while saving energy.



### LCD Display

With high brightness and vivid colors, LCDs are ideal for a variety of retail environments, providing customers with instant and eye-catching product information and promotions.



### Wireless Base Station

Ensure stable and efficient communication between ESLs and system, support large-scale deployment and real-time data updates to create a reliable intelligent retail network.



### Cloud ESL System

Leverages powerful data processing and analytics capabilities to enable retailers to intelligently manage inventory, pricing and promotions, improving operational efficiency and decision accuracy.

# EPD (E-paper Display )



Zkong offers necessary functions such as dynamic pricing for the digitalization of various industries with our brilliant cloud ESL.

The combination of Bluetooth, Wi-Fi and cloud technology offers the most valuable solutions.

## 5 SERIES & 1 BASE STATION

Shield  
Series

Blade  
Series

Valley  
Series

Essence  
Series

Picking  
Label

Wireless  
Base Station

Accessory





# Shield Series

Robust

## Dot Matrix EPD



Multiple page switch



Black / White / Red



Ordinary temperature 0°C-40°C/  
Low-temperature -25°C-25°C



Bluetooth 5.1



NFC



LED Alert



Battery Life Cycle: 5 to 10 years

( Replaceable Battery )

All V-Series products now support 4-color!



ZKC15S | 1.54 " screen



ZKC21S | 2.13 " screen



ZK21SF | 2.13 " screen



ZKC27S | 2.7 " screen



ZKC26S | 2.66 " screen



ZK26SF | 2.66 " screen



ZKC29S | 2.9 " screen



ZKC37S | 3.7 " screen





# Blade Series

Slim

## Dot Matrix EPD



4mm Ultra-thin



Black / White / Red



IP67 resistant (Optional)



Multiple page switch



Bluetooth 5.1



NFC



LED



Battery Life Cycle 5-10 years

All V-Series products now support 4-color!



ZKC18B | 1.8 " screen



ZKC21B | 2.1 " screen



ZKC22B | 2.2 " screen



ZKC26B | 2.6 " screen



ZKC29B | 2.9 " screen



ZKC35B | 3.5 " screen



ZKC21BP | 2.1 " screen



ZKC26BP | 2.6 " screen



ZKC29BP | 2.9 " screen



ZKC42B | 4.2 " screen



ZKC43B | 4.3 " screen



ZKC58B | 5.8 " screen



ZKC75B | 7.5 " screen



# Valley Series

Elegant

## Dot Matrix EPD



Multiple page switch



Black / White / Red



Ordinary temperature 0°C-40°C/



Bluetooth 5.1



NFC



LED Alert



Battery Life Cycle: 5 to 10 years

( Replaceable Battery )

All V-Series products now support 4-color!



ZKC15V | 1.54 " screen



ZKC18V | 1.8 " screen



ZKC21V | 2.1 " screen



ZKC26V | 2.66 " screen



ZKC29V | 2.9 " screen



ZKC35V | 3.5 " screen



ZKC37V | 3.7 " screen



ZKC42V | 4.2 " screen



ZKC58V | 5.8 " screen



# Valley Series

Elegant

## Dot Matrix EPD

ZKC75V | 7.5 " screen



ZKC102V | 10.2 " screen



ZKC116V | 11.6 " screen



ZKC133V | 13.3 " screen



All V-Series products now support 4-color!



# Valley Series

## Dual Screen



Dual screen



Black / White / Red (Yellow)



Ordinary temperature 0°C-40°C



Bluetooth 5.1



NFC



LED



Battery Life Cycle: 5 to 10 years

( Replaceable Battery )

ZKC75V-D | 7.5 " screen



# Essence Full Color Series

Multi-color

B/W/R/Y



Ultra-high reduction rate



Multi-page switching



Black White Red Yellow / Full color



Temperature 0°C-40°C



Bluetooth 5.1



NFC



LED



Battery life: 5 to 10 years

(replaceable battery)

ZKC73V-DE4 | 7.3 " screen



Full Color



ZKC58V-E7 | 5.8 " screen



ZKC133V-E7 | 13.3 " screen





# Picking Label



Fast positioning through ESL positioning and LED equipment, warehouse managers can quickly locate specific goods via the software platform, improving the efficiency of inbound and outbound management.



Precise picking



Black White/Red



Temperature 0°C-40°C



Bluetooth 5.1



NFC



LED

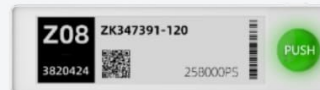


Battery Life Cycle: 5 years

ZKC29B-J | 2.9 " screen



ZK43B-J | 4.3 " screen



ZK58B-J | 5.8 " screen



# Wireless Base Station



## High scalability

Unlimited labels can be managed by a single base station



## Multi-network mode

Supports Gigabit LAN, WIFI, CAT1



## Security and stability

AES (Advanced Encryption Standard)  
128-bit encryption secures the system with security and stability



## Easy installation

Easy installation and BST connection to the Internet, automatic activation to the cloud, automatic connection to all ESL and remote control via Bluetooth



## Superior coverage

Up to 700 m<sup>2</sup> indoor coverage per base station and 40 meters range in an unobstructed environment



## Custom IoT protocols

Supports various IoT protocols like BLE, Sub1GHz, Wi-Fi etc. for different customizations

**ZAP-C**



**ZAP-C Pro**





# Accessory



Waterproof Shells



Clamp



Ice plug



Pendant

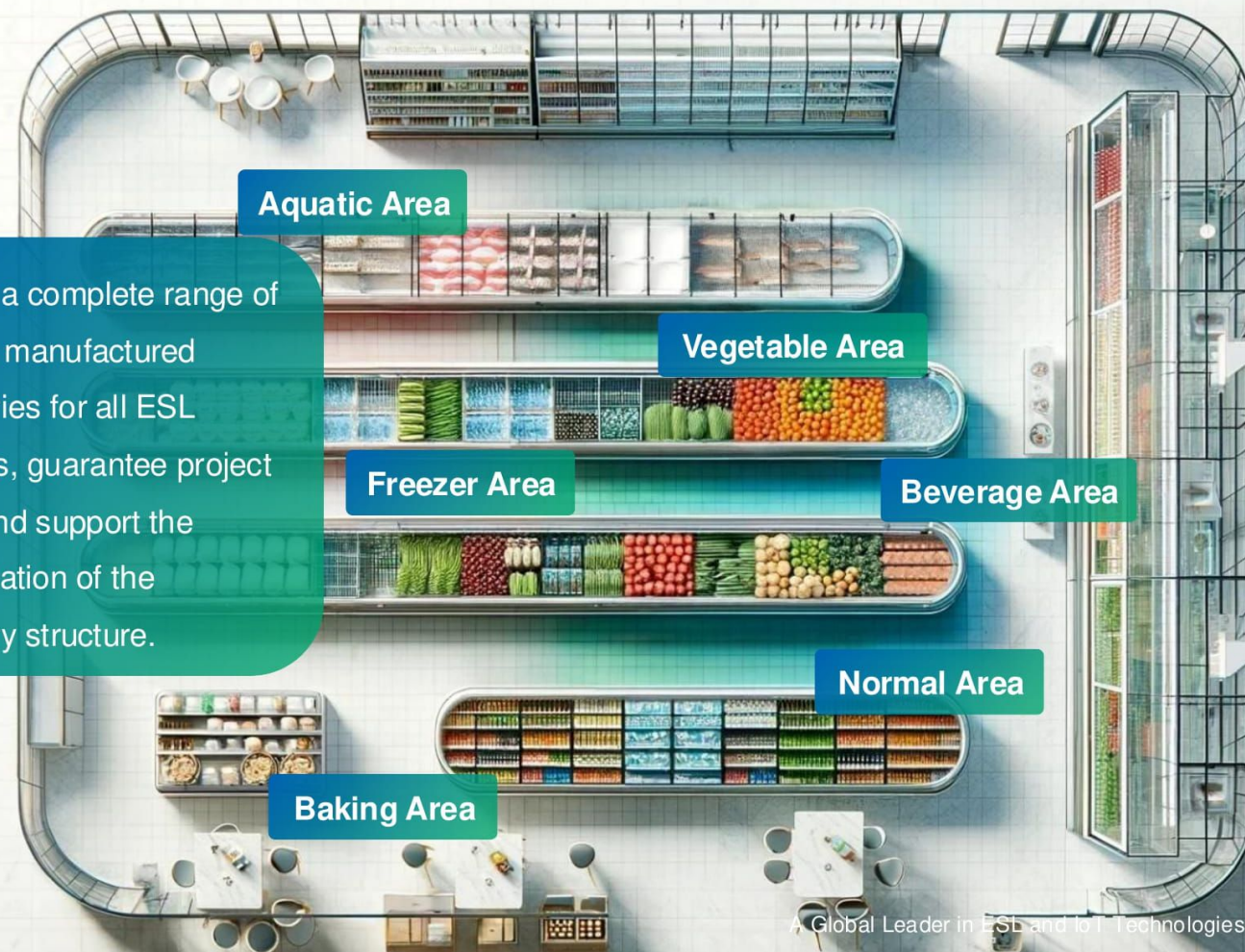


rails



Ornament

We offer a complete range of in-house manufactured accessories for all ESL scenarios, guarantee project quality and support the customization of the accessory structure.



# Advantages

## Update in Seconds

Update price, QR code, product images and other information within 3 seconds via ESL system

## Page-changing Automatically

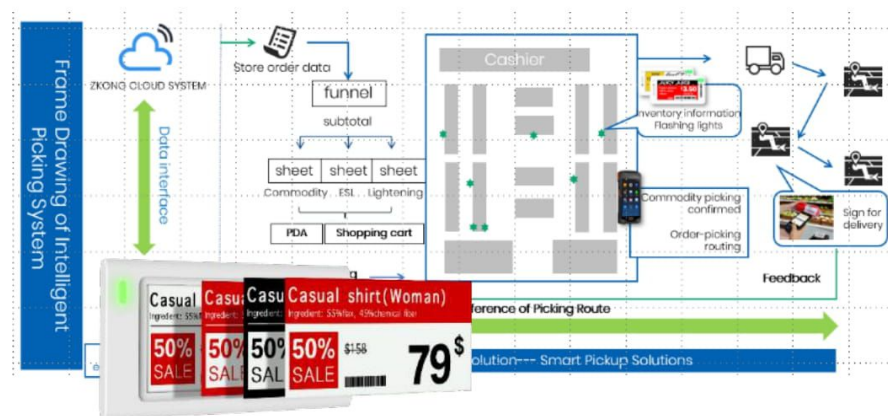
Set up in advance to support scheduled, automatic content switching, daily updates and page rotation features

## Automatic Stock Change & Intelligent Picking

Connect to the system platform and provide picking route reference through IoT technology to dock price tag LEDs to determine the destination. PDA operation supported

## Bluetooth 5.1

Embedded in self-developed private protocol, lower power consumption and wider application (AOA precise positioning, ibeacon)



**5** years



Battery Life

**-25°C**



Low Temperature

**2.9**  $\mu$ A



Low Standby Current

**1.3** MB



High Speed



**LCD Display**

「  
**More than you can imagine**  
**Just a sight!**

Start with Cloud Thinking  
Innovation with Cloud Architecture

**2 SERIES**

**Sparkle Series**

**Legendary Series**



# Sparkle Series

## LCD Display



Ultra-clear full-color display with excellent picture quality

Supports image and video formats



IP65 dustproof and waterproof



The cloud platform brings together a huge amount of material to promote a more comprehensive perspective



DC/Type-C power cable



Cloud architecture management with perfect integration



Temperature: -20°C-50°C (25±5°C for ZKS101 series)



Provides a quick and easy system installation tool,

Ready to use with one click



7\*24 hours full-time broadcast



Wireless transmission: Wi-Fi/Bluetooth

ZKS101/ZKS101D I 10.1" LCD



ZKS101-A/ZKS101D-A I 10.1" LCD



ZKS135 I 13.5" LCD



ZKS140-A/ZKS141D-A I 14.1" LCD



ZKS156-A I 15.6" LCD



# Legendary Serie

## LCD Display



Ultra-clear full-color display with excellent picture quality Supports image and video formats



Temperature: 0°C-50°C



Unified management via cloud-based system



Available sizes/specifications to meet market needs



Different contents can be played at regular intervals via intelligent system, with the screen arbitrarily split to meet the needs of different scenes

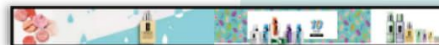


7\*24 hours full-time broadcast

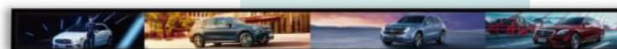


Wireless transmission: Wi-Fi / Bluetooth

ZKL231 | 23.1" LCD



ZKL350 | 35" LCD



ZKL470 | 47" LCD



ZKL290 | 29" LCD



ZKL356 | 35.6" LCD



ZKL490 | 49" LCD



ZKL550 | 55" LCD





# Advantages

## Full-color dynamic display

**HD full-color display | High resolution | Colorful quality**

Support any display strategy, video playback, partial flashing, scrolling display, fast page turning and other file formats in a free combination

- Maximize the effective display area
- Ultra-thin design with 7.1mm screen bezel

## Double-sided connection

**2-sided LCD | Multi-screen syndication | Unlimited bezel**

- Durable devices with wired power supply
- Special power supply rails, hooks and other accessories
- Easy installation with one click

## Varied information display

### Track the origin of goods

Origin, supplier, test results, shelf life...

### Convenient selection

Product name, price, matching products...

### Application suggestions

Storage methods,

### Methods and seasonal combinations

Custom LCD frame

### ZKONG APP:

- Supports split screen
- Multi-product display
- Custom texts, images, videos
- A variety of templates, linked to
- Multiple screens in the store
- additional equipment

**LICHI**

PRICE: \$6-  
SALES: **\$4.89** /500g

Origin: Hainan  
Storage time: 1 day  
Storage Mod: 0°C - 5°C  
Picking time: 2022.4.15  
On shelf time: 2022.4.17

**WATERMELON**

PRICE: \$3-  
SALES: **\$1.99** /500g

Origin: Kamen  
Storage time: 5 days  
Storage Mod: 0°C - 5°C  
Picking time: 2022.4.15  
On shelf time: 2022.4.17

Origin

Storage Mod

Storage Time

Picking Time

Sugar Level

On Shelf Time

# Intelligent LCD Solution

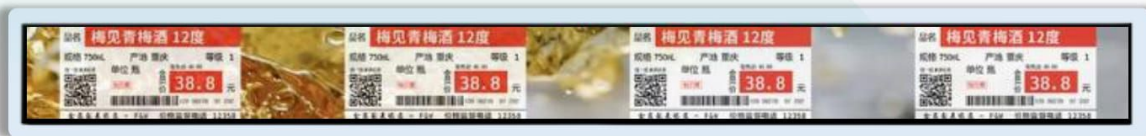


**\*Used for daily advertising**  
Ads, videos, posters, images



Connected with AI camera to customize playback in real time according to customer needs

1. AI camera recognizes customer behavior and plays product promotional videos
2. Automatically recognize customer gender and age and promote ads that customer may be interested in



**\*The middle level LCD display supports the price label style to facilitate the display of product information**



# Face Recognition

Identify the user's age and gender to play targeted videos



Standard video is played in a loop if the camera does not detect the approach of a customer

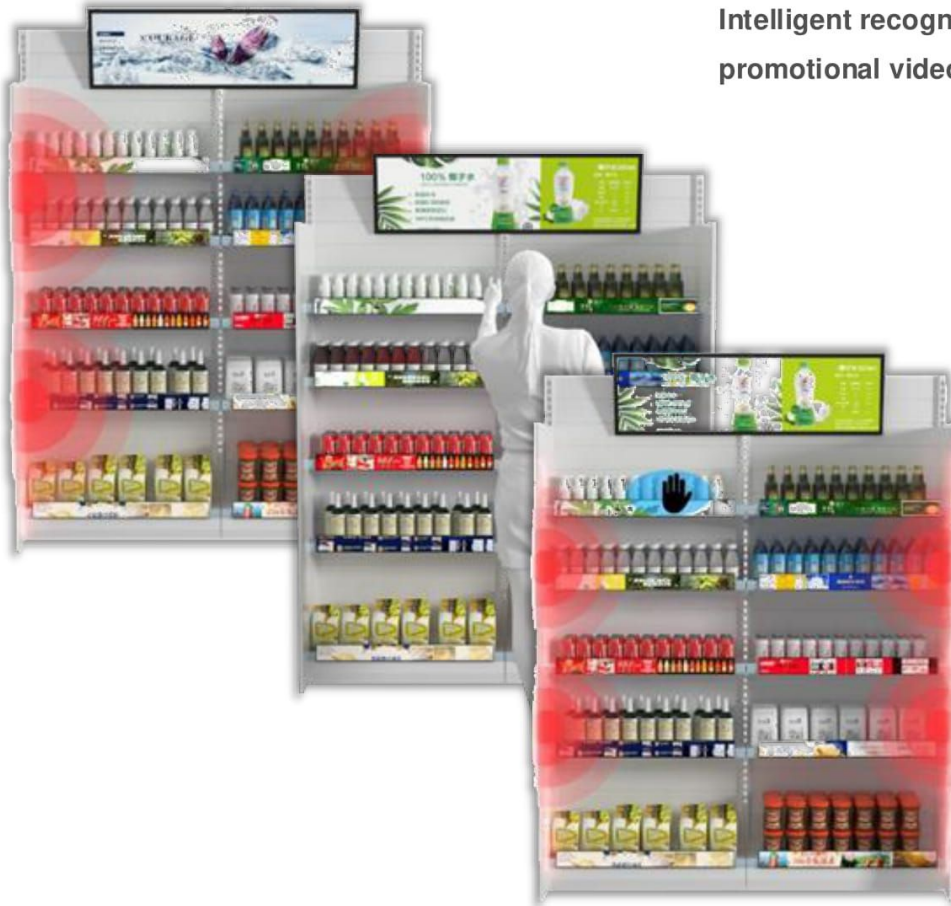
Detect the age and gender of a customer by proximity when capturing them and play an advertising video accordingly (freely configurable in the cloud)



Identify data stored in the cloud to create reports. Help count the preferences of different genders and age groups and adapt their strategies



# Smart Interaction



Intelligent recognition of the product touched by the customer through motion perception. A promotional video for this product is played on the LCD.

1

## Sensor Equipped

Infrared sensor strips are installed on both sides of the shelves and connected to the LCD screen via USB. When there is no customer interaction, the LCD plays content set by the system.

2

## Identification

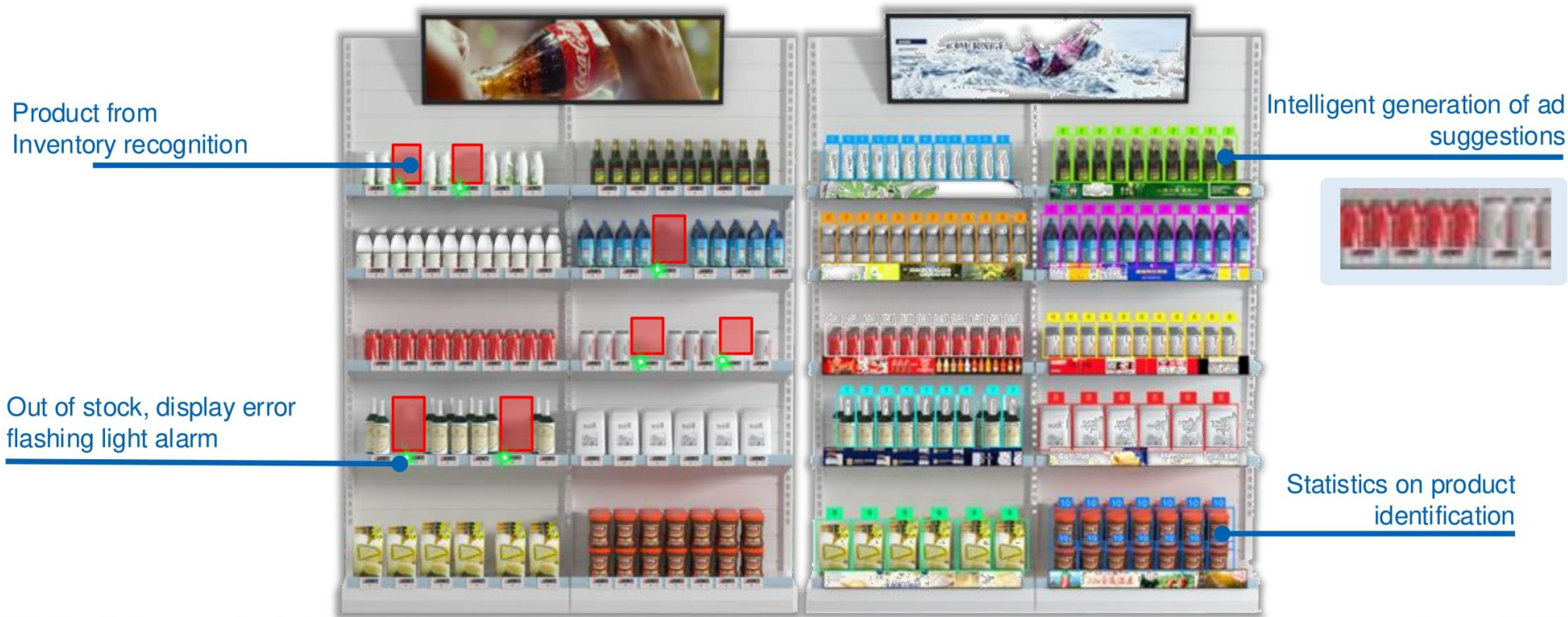
Customers approach the shelves and when they find an interesting item, they reach for the item to view the details

3

## Videos Auto-play

The infrared sensor strip detects the product picked up by the customer and plays a promotional video for that product

# Product Management



**6**

Missing SKU  
under 70 SKUs

**5 +**

Wrong price  
label

**\$ 2.55**

average price

**1.84**

Sold out  
1.84/sku/day

**\$ 1500**

loss of \$1500 in  
sales revenue



A Global Leader in ESL and IoT Technologies



# ZKONG Cloud ESL System



## One Stop Cloud Service

Integrated ESL, LCD and AI intelligence modules

## Shop Management

Cloud-based management of all shops with uniform setup of ESL, LCD and other devices

## Flexible Data Interfacing

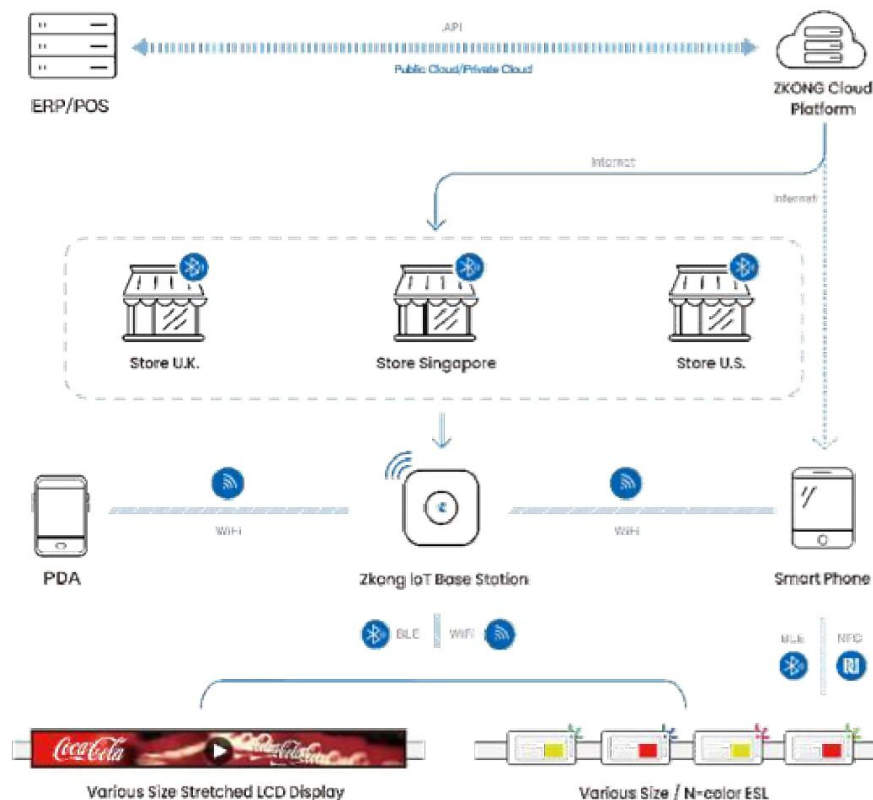
Various API interfaces to enable data exchange at different business levels

## Fast Update

Simultaneous update of ESL and LCD in all shops,  
15 minutes for branch-wide switchover

ZKONG Cloud architecture solves the problem of duplicate store deployments and significantly reduces server and daily operation and maintenance costs.

## Pioneering SaaS Platform



A Global Leader in ESL and IoT Technologies

# Cloud Platform Management



## Cloud Server

Use cloud architecture (SaaS) to respond to the digital needs of smart retail and deploy it worldwide without installation.

## Flexible Deployment

It meets multiple deployment models such as group layout, enterprise-level layout and single-point layout.

## Easily Docking

Easily connect the Zkong system with the customer's via the API interface.

## Unlimited Capacity

With the ability to process billions of pieces of information and endless storage, we can meet the growing data needs of businesses.



## Customized Template

Visible design, highly customizable, not limited by content format and change times, use immediately after editing.

## Interface Opened

Support various ERP, API and custom developments with specific requirements so that data can operate efficiently in the same system.

## Safe and Reliable

AES 128-bit encryption technology for information security and data protection.

## Secondary Development

Secondary development gives the software and hardware new functions, offering users a new, tailor-made solution.

# Advantages of SaaS

## Easy to use

Verwendung des SaaS-Systems  
Multi-User-Nutzung ohne lokale  
Installation



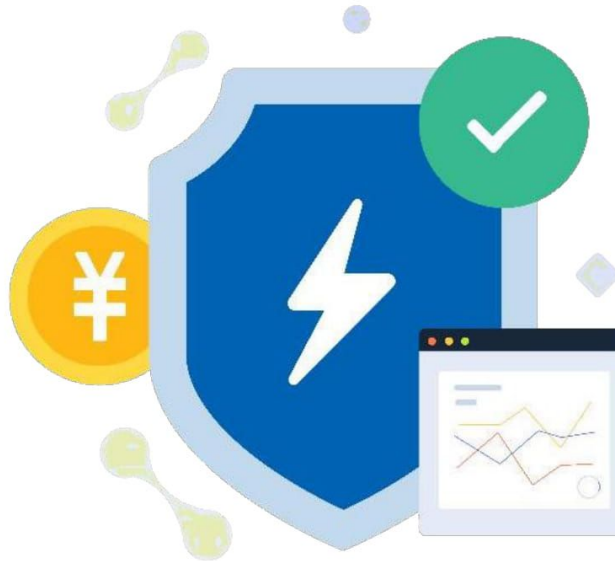
## Performance liberation

Die Berechnungskapazität kann durch  
Servererweiterung unendlich überlagert  
werden - Keine Ressourcenbesetzung



## Universalness

Kompatibel mit den wichtigsten Betriebs-  
systemen wie Linux und Windows



**Adopt B/S architecture**



## Security

Data storage in the cloud  
You don't have to worry about data loss due  
to a local server failure



## Extensiveness

Based on WAN to support users  
around the world



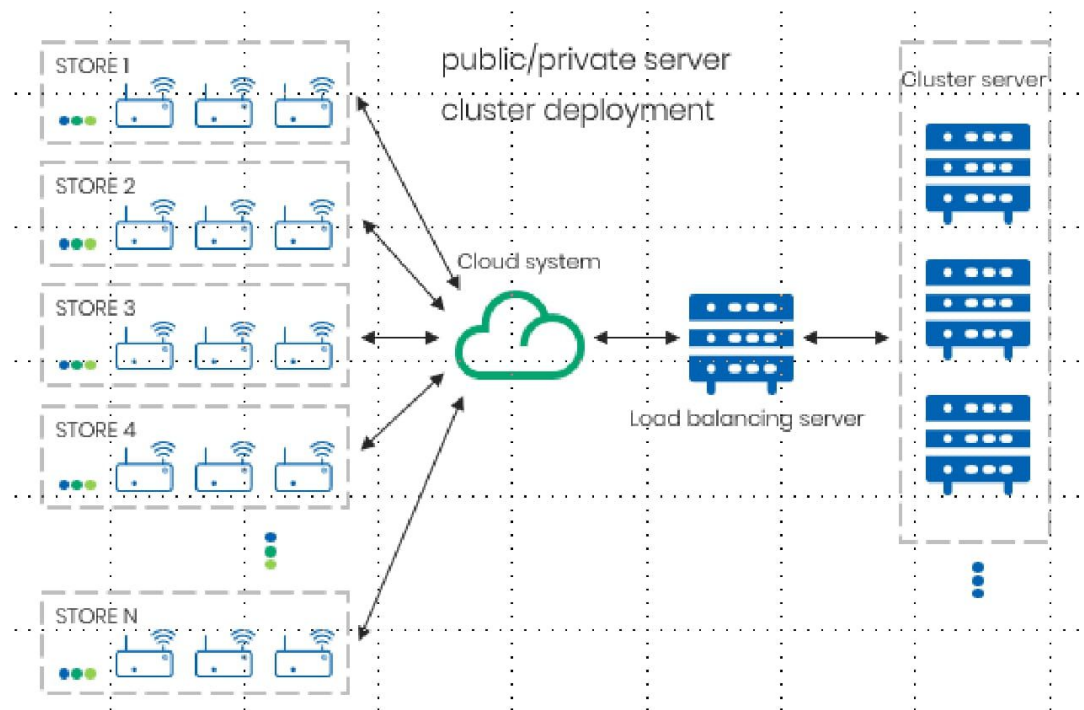
## Low cost

Reduction of software and hardware  
costs through the increased capacity of  
the Local server



# Data Processing & Expansion

Zkong ESL system uses real cloud services and management, allowing unlimited expansion of server deployments. All processing tasks are done in the cloud to meet the needs of billions of ESL management.



## Advantages

### Variable Capacity

The number of servers can be expanded indefinitely to improve performance.

### High Throughput

Achieve high concurrent processing of tasks by reducing the pressure on a single server.

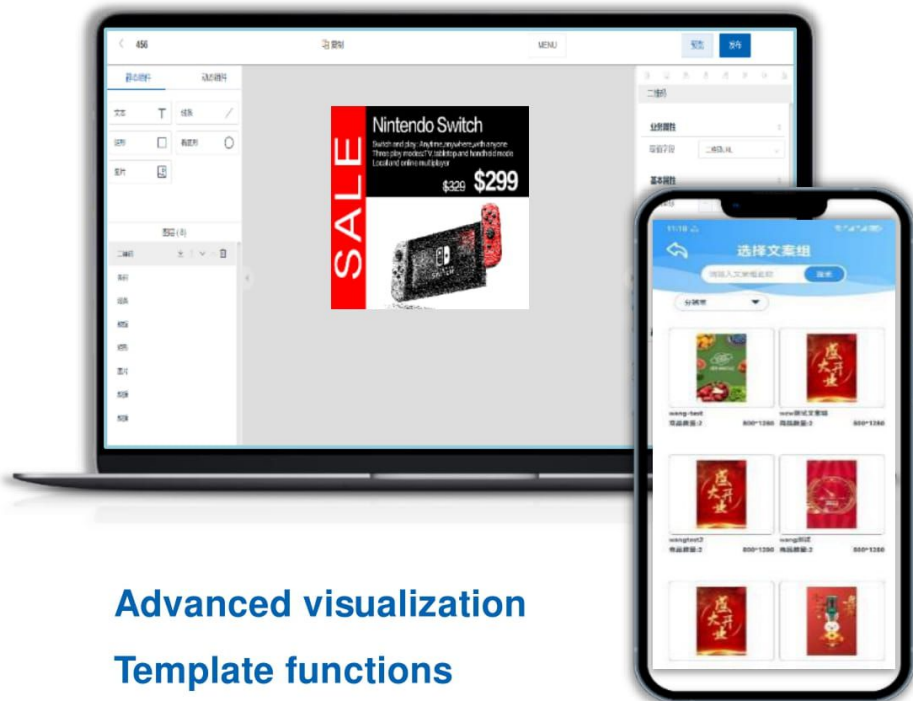
### High Availability

If a single server fails, the system dynamically assigns tasks to other servers to ensure functionality.

### Low Cost

The server can achieve higher utilization rate to reduce the number of servers and cost with the clustering method and balancing algorithm.

# Simple Operation



## Advanced visualization

### Template functions

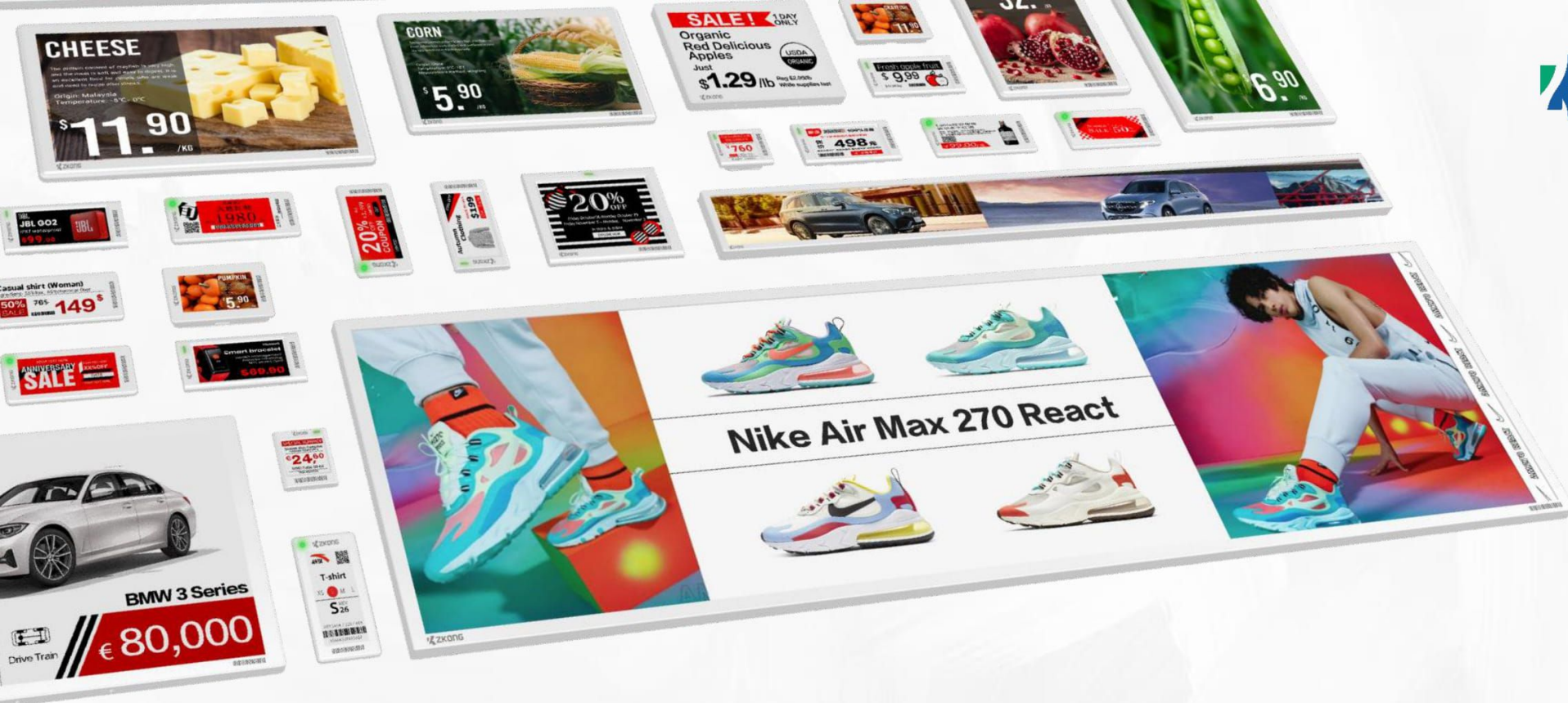
1. Visualization templates
2. Minimalist UI with real-time preview
3. Support for PC, APP and small programs
4. Unlimited fonts, unlimited number
5. Comes with the system, no installation required

## Robust material and marketing support

1. Extensive material library
2. Many advertising templates
3. Support for predefined, colorful marketing content
4. NFC Smart Online synchronized







“

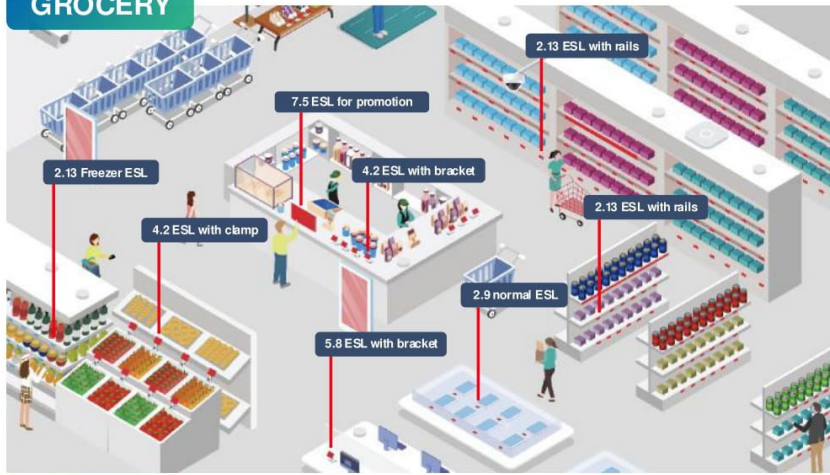
**Why ZKONG?**

”



# Industries Overview

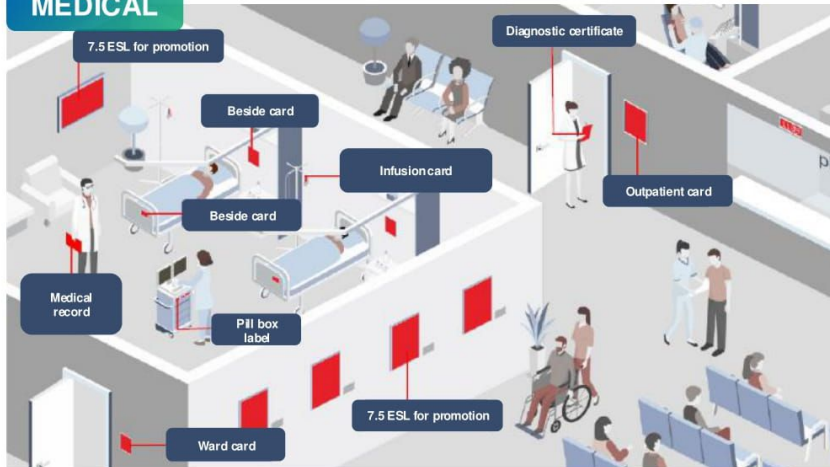
## GROCERY



## SMART OFFICE



## MEDICAL



## WAREHOUSE



# Intelligentes Management

With a monthly production capacity of over 1.5 million pieces, our own supply chain has the potential to easily meet the demand of the global market.



## Fully automated production lines

- ZKONG has SMT/DIP lines, injection molding and assembly lines, which means ZKONG is able to manufacture complete machines while maintaining high quality and performance.
- The in-house production line enables ZKONG to customize each product according to the customer's flexible customization needs and provide the customer with a cost-effective product.



## Digital Production Management

With the MES + ERP digital management system, ZKONG is able to clearly track the details of each part in the production line to ensure the best quality of each part, while accurately tracking production problems to ensure timely correction and improvement of products and reduce costs.



# Variety of Customization



**Free Choice!**  
According to your brand identity and your product



# Variety of Customization



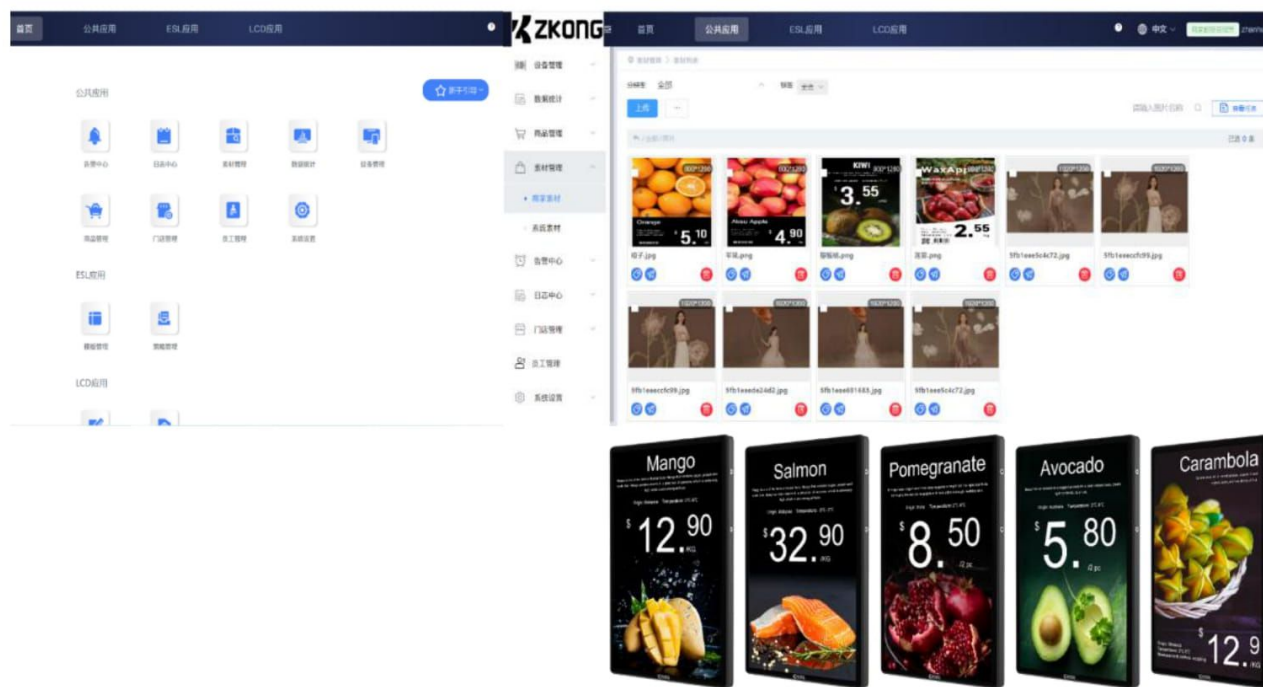
## Customization of accessories



We offer a full range of in-house manufactured accessories for all ESL scenarios, guarantee project quality and support the customization of accessory structure.



## Adaptation of the cloud platform



# Service for Partner

## Project Support

Top-level engineering team and production line to support project development

## Training Mechanism

Providing online, offline and on-site training programs for all ESL users

## Maintain and Upgrade

Support after-sales maintenance for the international market includes system upgrades.



## Solution Consultant

Consulting for the best practical solution for each industry



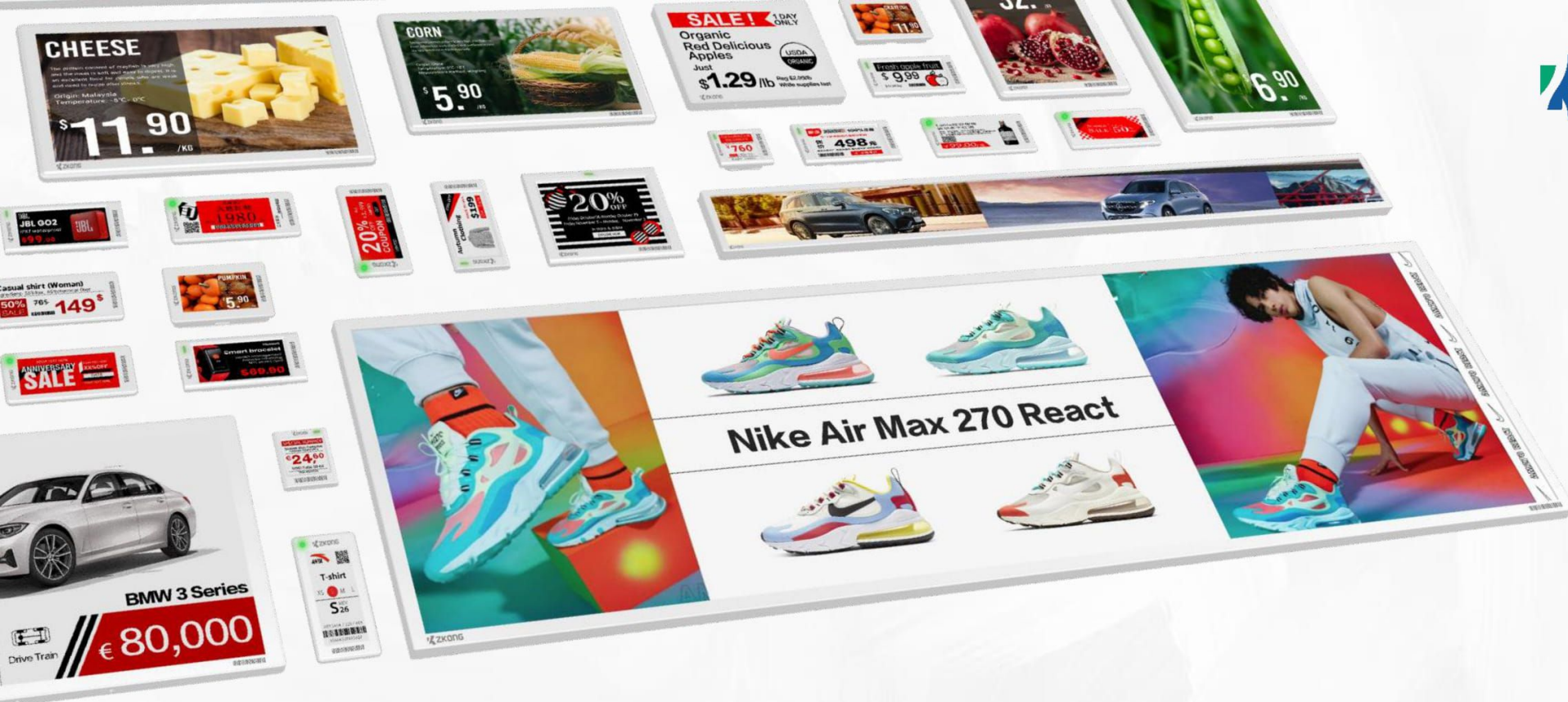
## Marketing Service

Providing the latest industry news, market information and designs, and promotional tools



## Install and Pre-run

A complete set of installation and pre-production projects to ensure smooth use



# SUCCESS CASES

A Global Leader in ESL and IoT Technologies



# Product & Service



Cooperate With

# 1,000+

World Leading Brands

# 100,000+

Retail Stores

# 60+

Countries

We provide services to retailers in cosmetics, electronics, pharmaceuticals and logistics while exploring other applications to unlock the unlimited potential of smart retail.



New Retail



Chain Store



Cosmetic



Electronics



Pharmacy



Logistics



# International Brands



New Retail



Electronics



Chain Store



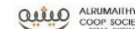
Cosmetic



Pharmacy



Logistics



# Macedonian Brands



New Retail



Electronics



Chain Store



Cosmetic



Pharmacy



Logistics



**NEPTUN**

**ZEGIN**  
ВАША СЕМЕЈНА АПТЕКА







A Global Leader in ESL and IoT Technologies



# Thanks for your attention.