

# TRANSFORMING

The Retail Industry Through Digital Innovation

Discover how electronic shelf labels and digital solutions are reinventing the retail store



Over **85%** of retail sales still occur in physical stores, underscoring the crucial role of brick-and-mortar locations in the retail industry despite the rise of e-commerce. This significant percentage highlights that while online shopping is growing, the majority of consumer purchases continue to be made in-store.



## INTRODUCTION

# The Enduring Role of Physical Stores and Unified Retail Commerce

Investing in technology is crucial for transforming physical stores into the cornerstone of unified retail commerce. By generating immersive and engaging customer experiences, empowering frontline store associates to make operational decisions, and providing relevant intelligence and timely business insights, retailers can achieve profitable outcomes.

Additionally, managing inventory as close to the customer as possible ensures efficiency and customer satisfaction. These investments collectively enhance store operations, improve customer engagement, and drive business success.

As retailers plan and adopt more technology in-store to address these complex issues, the **electronic shelf label (ESL)** has emerged as a foundational system-wide tool that can boost any store's journey into the unified digital future of retail.

Hanshow understands that retailers are looking for so much more than an electronic or digital tag; they are looking to create a unified in-store ecosystem where the electronic tags serve as the basis for more optimized in-store processes.





## ESLs Are the Building Block of Store Digitization and Unified Retail Integration

The global ESL market is expected to achieve **\$4.831 billion** by 2028, exhibiting a CAGR of 23% during the forecast period.

Source: Research Reports World (RRW), "The Electronic Shelf Label (ESL) Market Latest Research Report (2023-2030)"

There's no doubt that digital innovation is reimagining the retail store — leaving an indelible mark everywhere from the back room to the front end. But what's driving this amazing growth, and how does the ESL serve as the foundation for all-encompassing digital retail solutions?

### 1. Efficiency

ESLs revolutionize retail operations by enabling swift and accurate price updates. With Hanshow ESLs, prices can be updated across the store instantly, eliminating the need for manual price changes and significantly reducing the time and labor required. This efficiency not only improves operational workflow but also ensures that pricing is always current, reducing discrepancies and potential customer dissatisfaction.

### 2. Productivity

ESLs enhance store productivity with advanced features like "Stock to Light" and "Pick to Light." These functionalities streamline stock replenishment and order-picking processes, enabling associates to locate items quickly and accurately. By optimizing these tasks, ESLs help improve overall store efficiency and accuracy, allowing staff to focus on more customer-centric activities.

### 3. Customer Experience

The integration of ESLs in retail environments elevates the customer experience by providing clear and transparent pricing. Customers benefit from up-to-date price information and quicker service, as associates are less burdened with manual tasks. This technology ensures that pricing is accurate and visible, fostering trust and enhancing the shopping experience.

### 4. Sustainability

ESLs contribute to sustainability by reducing the need for paper price tags, minimizing operational waste. This shift not only supports environmental initiatives but also reduces the costs and resources associated with printing and replacing paper tags. By adopting ESLs, retailers can demonstrate their commitment to eco-friendly practices while optimizing their operational efficiency.

# Our Difference - One of the Most Advanced ESL Solutions on the Market

Hanshow's upgraded ESL wireless communication system supports intelligent location and automation capabilities. Our ESL products support a wide range of sizes, multiple colors, and versatile scenarios. This advanced system enhances operational efficiency and customer experience by providing the following flexible and dynamic in-store solutions:

## 1. Unrivalled Accuracy and Speed in ESL Pricing

Analog pricing systems pose significant challenges for retailers, as they are labor intensive, costly, and contribute to material waste. Additionally, they often lead to manual price overrides due to discrepancies, eroding customer trust. Hanshow's ESL products ensure consistent pricing across systems, minimizing discrepancies and reducing manual interventions. With advanced features like high-speed updates and cross-base station roaming, Hanshow ESLs lower labor costs. Timed, synced promotions and rapid price updates also enhance pricing accuracy, boost sales, and reduce waste.

Hanshow's ESL solution supports real-time updates for 1,000+ ESLs per second per access point, allowing for unrivalled speed and precision, with synced and timed updates that can be executed even with the loss of power or network.

## 2. Geolocation Solution for Pick and Pack Optimization

As e-commerce grows, the cost and complexity of fulfilling online orders challenge retailers' margins and staff efficiency. Speed and accuracy are critical in today's digitized retail. Hanshow's pioneering ESLs with geolocation automatically monitor stock levels, supported by a high-density low-power cellular network (HiLPC), allowing rapid SKU binding, updating, and tracking. These capabilities enable store associates to efficiently fulfill online and in-store orders with optimized pick paths and quick product recognition, significantly reducing workload and improving operational efficiency.

With Hanshow's geolocation solution for pick and pack optimization, picking speed can increase by 30%-50%, while the picking error rate can be reduced to 0.01%-0.03%.

## 3. Energy Efficiency and Reduced Material Waste Through ESLs and Digital Displays

Hanshow ESLs not only reduce paper waste but are also highly energy efficient with low carbon emissions, with its SaaS operating platform reducing energy use by more than 90% compared with local infrastructure solutions. With a battery life of up to 15 years, these ESLs minimize energy consumption and are highly recyclable. They operate efficiently across various temperatures, contributing to sustainable retail practices.

Hanshow helped a major European retailer reduce food waste by 17%-30% via ESL adoption from 2016 to 2020.



# How Leroy Merlin France Bridges the Gap Between the Digital and Physical

**Home improvement and gardening retailer Leroy Merlin in France set out to bridge the gap between the digital and physical worlds by enhancing the shopping experience in its stores and improving customer engagement.**

**To achieve this, Leroy Merlin installed state-of-the-art ESLs in combination with its mobile application.**

**But it didn't stop there.**  
**The French-headquartered retailer implemented:**

-  **Up-to-the-minute pricing linked to its e-commerce site**
-  **Ultra-precise product geolocation**
-  **NFC redirection to extended product sheets**
-  **Label flashing directly from the mobile app**
-  **Customer reviews for improved shopping assistance**

By integrating ESLs into its mobile application, Leroy Merlin enables customers to efficiently navigate the retailer's extensive product range. Since deployment, one in four visitors — over 1 million users — has used the app for guidance. With Hanshow's ESL technology, Leroy Merlin saves approximately \$42,044 per store annually in service costs by providing accurate item finding without additional labor expenses.

[Read the full press release](#)





## Engaging Consumers Through ESLs and Digital Displays

Hanshow's in-store marketing and digital display solutions create impactful advertising, consumer interaction, and synchronized online and offline promotions. The Lumina Digital Display Solution offers versatile marketing themes and templates, catering to diverse creative needs and expanding to include large-screen displays for strategic placements in stores. These screens provide ad placement, map navigation, and promotional information, enhancing marketing touchpoints and store efficiency.

Hanshow digital displays can be remotely managed, generating content from client databases. They facilitate cohesive store

promotions, minimize associate workload, support intelligent advertising, enhance consumer interaction, and synchronize online/offline promotions. The displays feature switchable templates and easy installation for diverse marketing needs.

The deployment of the Lumina Aqua series across 3,000 stores for an Asian retailer has revolutionized their marketing capabilities and operational efficiency.

Each store now achieves over \$9,000 in annual savings on material and labor costs, along with \$4,000 from in-store digital advertising revenue.

# Driving Technological Innovation in Retail

Hanshow is revolutionizing the retail industry by integrating IoT, cloud computing, big data, and AI. This technology bridges online and offline channels, enhancing efficiency and customer experience and solving critical challenges. As a global leader in retail IT architecture, Hanshow's unified IoT ecosystem delivers reliable data insights to optimize operations and elevate the shopping experience.



## Innovation

At Hanshow, we prioritize innovation by delivering high-performing, stable, and durable products. Our trailblazing R&D, constituting 8% of our revenue, focuses on co-innovation with customers and partners, emphasizing technology leadership and sustainability.

## Integration

We are deeply integrated into the supply chain and provide the most compatible integration platform for retailer systems. Our ESL solutions enhance navigation through integration with associate and customer apps, optimizing the store experience.

## Customer Service

With extensive global experience in deploying IoT SaaS solutions, Hanshow offers reliable, 24/7 localized after-sales service. We maintain close customer relationships and deliver premium customer service on the largest scale possible.



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In Collaboration With Hanshow



Hanshow is a global leader in the development and manufacturing of electronic shelf labels and digital store solutions. The company offers customized IoT touchpoints and digital store solutions that deliver customer-centric insights. Hanshow's solutions are used in a growing number of retail stores across more than 50 countries and regions, helping streamline operations, optimize pricing strategies, and offer consumers more personalized experiences. Currently, Hanshow's ESLs are found in over 40,000 stores serving more than 400 retailers around the world.

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