



Smart Shelves: Enabling Electronic Shelf-Labeling in Retail

Brick and Mortar Retail

Turning Traditional into Digital

Amid the rise of online retailers, who provide highly convenient and highly personalized services to shoppers, brick and mortar stores are embracing digitalization and investing in strategic technologies. The objectives? Create enhanced shopping experiences while generating efficient cost-saving applications for traditional business components. As part of this shift, retailers are now transforming in-store shelves – a central part of every retail store – into ‘smart’ shelves, by deploying digital shelving solutions throughout their environment.

Simply put, electronic shelf labeling (ESL) is used by retailers to electronically display the pricing of products on their respective shelves, in addition to product information, pricing promotions, and more. Typically, electronic display modules are attached to the front edge of retail shelving, and use electronic paper (e-paper) or LCD displays to show the current product price to the customer. A communication network or an IT network solution allows the product pricing to be manually controlled or automatically updated at the business’ discretion.

Driving Cost-Savings and Efficiency

Electronic shelf-labeling solutions deliver significant benefits to both the retailer and the shopper. For retail businesses, investment in ESL technologies typically creates substantial cost-savings; physical price tags or product labels do not need to be printed out, and in-store associates no longer need to manually replace the new tags. Pricing can be updated autonomously or manually from a central platform. For any brick and mortar store, the long-term savings of overhead costs and increased efficiency adds up. This is especially compelling for stores that experience price changes on a week to week basis and/or have large physical footprints.

With an ESL solution, retailers can have the ability to dynamically update the price of products. Dynamic pricing enables the ability to price products based off internal and external factors. Dynamic pricing helps businesses keep up with market trends and competitor pricing, it allows businesses to boost stagnant sales during slow periods or easily raise product prices to maximize margins (when there’s an opportunity to do so), not to mention equipping retailers with an understanding of how scalable their pricing strategy is over time and across locations –

ensuring sustainability and long-term success for the business. ESL also helps guarantee product pricing on the shelf is the same as advertised, keeping parity between the two, a condition that is mandated by law in many countries around the world.

In-Store Personalization and Convenience

Electronic shelf-labeling offers several benefits to the customer as well. As stated above, ESL helps safeguard price parity between advertised pricing and pricing on the shelf; the customer can feel confident knowing the product price will be the same regardless of the channel.

Furthermore, ESL transforms the in-store shopping experience, offering more convenience and more value to customers compared to traditional labels. For example, a retail store may include real-time product reviews or ratings, as well as recommend related products that customers bought – all displayed on the digital tag and updated autonomously. Similarly, a store may provide a scannable code (like a QR code) that customers can access through a brand mobile app, to view additional product details and upcoming sales. Customers are known to check their mobile devices while shopping in-store, so creating a seamless avenue to access relevant information adds another layer of value and convenience. This functionality also bridges the gap between the online experience and the in-store experience, an omni-channel approach that's a priority for every retailer.

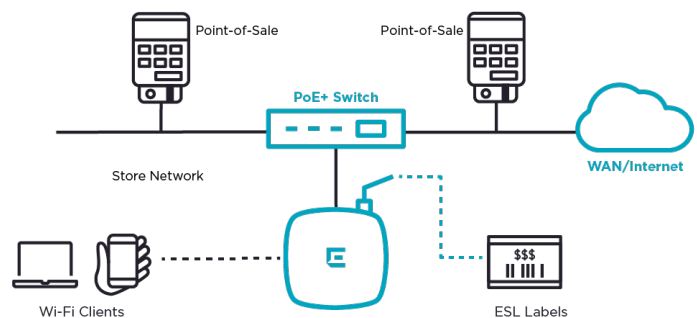
ESL technologies can also integrate with other applications to enhance the in-store shopping experience. LED lights can be incorporated into digital displays to help customers find products in the store. Some electronic shelf-labels have BLE-integrated capabilities, to assist with in-store navigation for shoppers and pull actionable location-based analytics for the business, in order to better understand how customers move throughout their environment – and then optimize the store's layout based off of these trends. These use cases just scratch the surface of what's possible with ESL.

Network-Powered Smart Shelving

To deploy and operate an ESL solution, a retailer must also implement dedicated in-store network, or they can leverage the existing infrastructure in their environment. That's where Extreme Networks offers the most effective model for retailers planning to deploy ESL.

Extreme's networking solutions are purpose-built for the unique business needs and specific physical challenges in retail and transportation & logistics. This technology, which delivers secure, scalable, reliable connectivity to organizations and their customers also powers ESL technologies. The in-store Extreme WLAN infrastructure integrates seamlessly with select commercially available ESL solutions, no extra cabling for power or switching ports are necessary. Extreme's IoT-enabled wireless access points are engineered to support several types of ESL technologies. This saves a business significant time and money when deciding to implement ESL in their store(s).

Extreme's network infrastructure is flexible and adaptable, which means technical integrations with third-party hardware and software is relatively seamless. Today, Extreme's networking solutions are technically tested and validated with several leading ESL vendors in the market, and whose joint solutions are in operation in several live environments with brand-name global retailers, demonstrating the combined power that an ESL and wireless solution can bring to a retail store, to truly augment the shopping experience for customers and incite vital cost-saving practices for the business.



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