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NexStore Personalizes Shopping Experience for Revenue Growth

NexStore adopts innovative technologies to create the personalized shopping experience while enabling retailers to serve more customers and drive revenue growth with less effort

With insights from sensors and smart devices, physical stores are now able to challenge the established ways of doing business, offering more tailored experiences and incorporating digital elements into the shoppers' journey. Digital Transformation in the retail business answers the demands of customers by creating a new concept of connected stores to bring interactive and customized shopping experiences. NexStore provides smart retail solutions to greatly reduce labor costs and allow store employees to focus on better customer service. Smart retail will also allow chain store administration to better understand the needs of their customers and provide customized products and services.

NEXCOM

Summary

Technology and personalization are dictating the level of customer satisfaction. With insights from sensors and smart devices, physical stores are now able to challenge the established ways of doing business, offering more tailored experiences and incorporating digital elements into the shoppers' journey. Digital Transformation in the retail business answers the demands of customers by creating a new concept of connected stores to bring interactive and customized shopping experiences. Retailers can now leverage real time data that allows the prediction of customer trends in physical stores. Access to this data helps improve the shopping experience by making use of available technological solutions and improves efficiency and sales.

As technologies are emerging to address different aspects of retail shopping experiences, NEXCOM has concentrated on personalizing customer interactions in brick-and-mortar stores with its NexStore Solution Package including Intelligent Facial Recognition Solution, Smart Wayfinding Solution, Smart Shelf Solution, O2O Solution, Smart Self-Service Checkout Solution, Cloud-based Self-Ordering Solution with Service Robot, and Smart Retail Dashboard Solution.

NexStore Experience

When a customer enters a store, Intelligent Facial Recognition will recognize their face and instantly identify them, thereby reducing the need for membership cards. Customers simply need to look at the screen, have their photo taken, be registered, and walk in. Smart Wayfinding App will then help the customer find the items on their shopping list. On the way through the store, the customer gets shown product recommendations, product details and availability from Smart Shelves, and the O2O Promotion Kit allows the customer to download coupons online and redeem them in the shop.

After picking their items, the customer can simply walk out of the store by paying with their face thereby saving a wait in the queue. After shopping, the customer can order a cup of coffee made by a robot barista at the nearby Cloud-based Self-Ordering Kiosk. This kiosk, combined with anonymous audience measurement tools, collects all sales records and customer demographics and produces a report to the retailers for further reference. All of the scenarios above will greatly reduce labor costs and free store employees from routine chores to better engage with customers. In addition, Smart Retail Dashboard will allow chain store administration to better understand the needs of their customers and provide customized products and services (See Figure 1).

Figure 1. NexStore adopts innovative technologies to create the personalized shopping experience.

NEXCOM Solutions

- **Intelligent Facial Recognition Solution**

  NEXCOM's Intelligent Facial Recognition Solution uses biometric authentication to let customers enter and exit a store. Powered by 7th generation Intel® Core™ processors, NEXCOM's Intelligent Facial Recognition Solution provides precise facial recognition to trace shoppers' behavior, whether customers take a specific product from the shelf, or dwell in front of a product browsing the product's details. With NEXCOM's solution delivers easy integration to any system, usability for easy sign up and management process, and cost efficiency. Better still, the solution offer scalability for users to leverage speech recognition, computer vision, and text analytics services.

- **Smart Wayfinding Solution**

  NEXCOM's Smart Wayfinding Solution enables shoppers to quickly find the easiest route to their products, receive location based coupons and product promotions, and connect to shop personnel for immediate assistance. The solution leverages wall or ceiling mounted Wi-Fi and/ or Bluetooth Low Energy Beacons that send signals to the shoppers' smartphone app. Shoppers can store their shopping list in the app that's connected to the shop's product database. The app will sort the list by location and navigate the shopper through the shop. To create personalized shopping experiences, retailers can make product recommendations based on historical transaction data and send shoppers promotional coupons for products located at aisles they must pass to get to goods on their list.

  Retailers can see their shoppers' behavior through a non-intrusive channel, and design tailored promotions to targeted individuals. They can also see where the high traffic or long dwelling time areas are in the shop, so as to improve staff arrangement and facility management.

- **Smart Shelf Solution**

  Traditional shop shelves only show the most prominent products on the shelf leaving many goods to go unsold or get close to their sell by dates before being bought. Smart Shelf Solution provides interactive technologies to engage customers in new and exciting ways. The solution includes a high-definition facial recognition camera which collects data and sends it to an NDiS B325 — a signage player based on 6th generation Intel® Core™ processor and pre-installed with Quividi audience measurement software. After analysis of the customer's age, gender and emotions, the solution offers real-time tailored messages and promotions for different customers through NEXCOM's PowerDigiS web-based digital signage software. By communicating information with vivid visual aids, a Smart Shelf is an ideal point of interest to deliver sales-oriented content which engages optimized sales strategies for owners and increases customer satisfaction.

  Another key feature of the Smart Shelf is that customers see the product details i.e. product origin, weight, ingredients, and availability directly on the shelf. New technologies like object detection are also deployed on the shelves, so customers can get the product details by simply picking up the product from the shelf.

- **O2O Solution**

  Many bricks-and-mortar stores are integrating multiple online channels so that customers can benefit from the seamless shopping experience. Customers who are used to online shopping, but may be frustrated at not receiving the desired size or color of the product, can see these online items in a traditional store using location-based services. Location-based services quickly guide the customers to their desired products by combining the customers' position in the store with their smartphone and the corresponding information in the online store.

  Another O2O application is the use of accumulated purchase bonus points from online stories to offline purchases. Location-based services recognize where the shopper is situated within the store, triggering the app to send a coupon for the product when the shopper is standing. For products that require more waiting time, like the deli counter or fresh sushi, customers can pre-order their items using the app, and retailers are alerted through location-based services when the shoppers are in the store, so they no longer have to wait in line. Personalized location-based services will make shopping easier for customers, bringing in more revenue for retailers.

- **Smart Self-Service Checkout Solution**

  In a traditional store, checkout owners must worry about arranging shifts, short-handed manpower and labor costs. In order to solve these problems, NEXCOM is dedicated to developing a Smart Self-Checkout solution to save labor costs, reduce queuing time and record each product's sales.

  NEXCOM Smart Self-Checkout Solution, designed for interactive signage applications, can equip the NDiS series with facial recognition and object detection in Microsoft Azure to help customers save time during the checkout process and help retailers put personnel in other services in the retail store. When the shopper walks out of the store, all they need to do is look at the screen and check-out is automatically performed. All payments are automatically deducted from a connected bank account, saving the hassle waiting in a long line.

  Self-Service Checkout Solution can be integrated with digital scales, and can potentially replace traditional barcode recognition systems to improve checkout times and convenience. The NEXCOM NDiS B325-SI series feature an advanced fanless thermal design for public environments while maximizing the system with the excellent performance of a 6th generation Intel® Core™ processor. The fact that the NDiS B325-SI series is capable of rendering multiple high resolution display outputs simultaneously makes it an ideal platform for a variety of retailer's applications.

  The NDiS P Series can accommodate PCIe x16 graphic cards for GPU intensive applications in visual recognition based self-service checkout systems. The NDiS P Series is perfectly designed for applications that require high graphic computing power. Applications include facial recognition solution, smart shelf self-checkout solution, business intelligence solution, security & surveillance system, and other artificial intelligence applications.

- **Cloud-based Self-Ordering Solution with Service Robot**

  Increasingly retailers are considering implementing self-ordering services to enhance customer engagement, simplify the ordering process, streamline their labor, convey brand messages, and make inventory management more efficient.

  ### Cloud-based Self-Ordering Solution Benefits

  - Drive traffic to increase sales
  - Decreased customer queuing time
  - Enhanced order accuracy to improve customer satisfaction
  - More efficient staffing to trim extra labor costs
  - Industrial grade, stable and affordable kiosk solution to increase management efficiency
  - Pay-as-you-go pricing of PowerDigiS on Microsoft Azure to avoid upfront costs
  - Remote and centralized management of digital signage players

  When imaging a customer walking up to one of concession self-ordering kiosks, the computer will process the customer's face and recommend a customized meal or promotion to the customer. Through only a few clicks, the customer can create their own order, securely process the payment directly from the kiosk, and enjoy a cup of coffee made by a robot barista.

  To enhance the self-ordering experience, NEXCOM offers a bundled solution integrated with the NDiS B325-SI3 player,

Full HD cameras, 32" 10-point PCAP touch screen, facial recognition technology, and Quividi audience and attention analytics software, allowing the NDiS B325-SI3 to analyze audience demographics such as age, gender and other attributes to recommend the perfect meal tailored to the target audience.

All interactive menu content can be easily developed and scheduled by the PowerDigiS software. The statistical analytics data report can also be accessed from the Microsoft Azure Cloud Computing Platform & Services to help retailers collect sales records and accurately analyze demographics and buying patterns, and measure customer engagement. Available with players including NDiS S538 SDM-L designed by Intel® Smart Display Module (Intel® SDM) specification, the solution can give a sleek outlook to self-ordering kiosks to blend in retail outlets, department stores, entertainment venues, hotels, bus/train stations, hospitals, and QSRs.

This provides retailers with valuable information to enhance customer engagement, craft marketing strategies, create an interactive dining experience, trim extra labor costs, boost customer satisfaction, and ultimately optimize in-store sales and efficiencies.

- **Smart Retail Dashboard Solution**

  Over the past few years, traditional analytics dashboards are delivered from customer relationship management (CRM), enterprise resource planning (ERP), point of sale (POS) systems, and sales' reports, and they often provide overcomplicated data and inaccurate documents which don't help retailers improve their sales. In the modern retail environment this is not acceptable, and the collection of big data to analyze the statistics and to develop customized business intelligence for retailers is necessary.

  NEXCOM is dedicated to developing a Smart Retail Dashboard which connects to customers' ERP system, CRM system, POS system, digital signage system, and even self-ordering kiosks, to offer customer profile analysis, in-store hotspots, transaction analysis, popular goods analysis and much more.

  NEXCOM Smart Retail Dashboard enables retailers to migrate to smart retail by providing a comprehensive Smart Dashboard that delivers all store-related analytics and in-store shopper data from multiple sources into one simple dashboard (See Figure 2), so that all the data, usually displayed in spreadsheets is presented more intuitively. It allows retailers to monitor their in-store status remotely from their mobile phones or other portable devices.

  Smart Retail Dashboard also allows retailers to optimize their staff shifts, provide customer visits and dwelling time analysis reports related to weather, holidays, or promotions. Retailers can now use this information to arrange staff rotas and avoid being over or under staffed.

  Smart Retail Dashboard also lets retailers see the conversion rate of their shoppers, including all of the real purchases made by visitors to the store, and the relation between these purchases and a specific promotion or holiday season. Analysis of the top selling products can be highlighted to retailers so they can identify the best-selling items in a specific period and design promotional activities according to the report.

  When a store receives a large order from a customer that requires instant delivery, they can check on the smart retail dashboard for a real-time inventory update from the different branches and the products in production. This allows retailers to fulfill orders instantly and see which products are low in stock and require production.
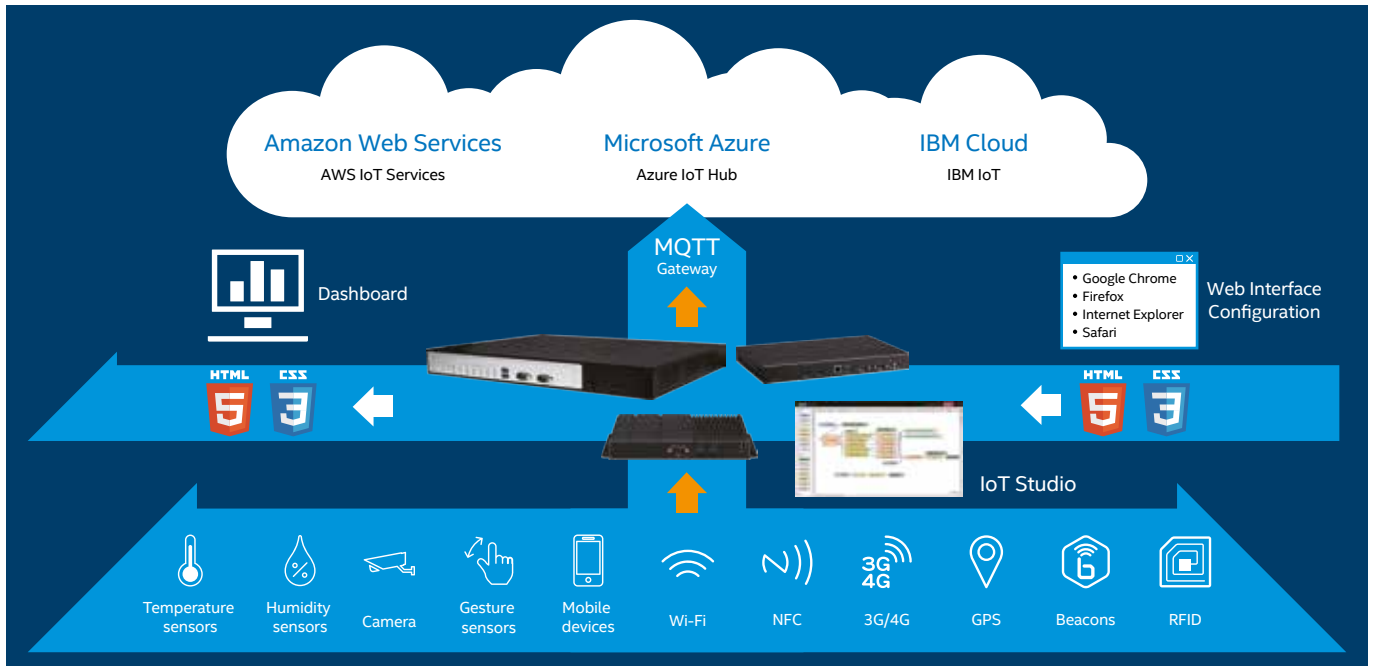
Figure 2. Smart Retail Dashboard delivers all store-related analytics and in-store shopper data from multiple sources in a comprehensive view.

The NDiS B866 is equipped with outstanding graphics performance to recreate the sophistication and vividness of 4K Ultra HD content. Featuring 6th Gen Intel Core processor and discrete graphics module, the video wall player can display amazing visuals and a holistic view of store operations and activities on a grid of up to six panels. Its slim 1U rackmount form factor can easily fit in a server rack or back office. During the course of operation content can be uploaded and the player maintained efficiently over the network.

Thanks to Intel® Active Management Technology, system engineers can use out-of-band access for remote configuration, inspection, and troubleshooting, restoring the NDiS B866 to its optimal condition even when the player is powered off or the operating system fails. Along with an intuitive, user-friendly utility interface of IoT Studio for remote management, the NDiS B866 allows the remote viewing of in-store images and operations by retailers.

Conclusion

The line between online and offline business has blurred. NexStore will become the catalyst for the Retail 4.0 transformation by helping retailers strengthen customer loyalty and drive foot traffic with delivering personalized offerings and renovated shopping experiences in new and exciting ways that give retailers an edge in an increasingly competitive retail market.

About NEXCOM International Co., Ltd.

Established in November 1992; has an outstanding reputation in the industrial PC industry. NEXCOM has actively sought to develop Industry 4.0 solutions in recent years, and has established a dedicated IoT automation solutions business unit dedicated to providing the market real-time solutions and services that take customers' costs and needs into consideration. Please visit our website for more information about NEXCOM International Co., Ltd. : www.nexcom.com.tw

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