

Accelerating retailers' digital transformation journey with Integrated Retail Solution

Transforming the small and medium retail landscape via workload consolidated POS with multiple optimized AI and non-AI applications running together on Intel-based Integrated Retail Solution.

Executive Summary

There are certain technology requirements that undoubtedly appear on almost every retailer's shopping list. But industry data shows that small and medium retailers (especially those in emerging markets) are looking for solutions that offer exceptional value, a space-efficient design, high reliability and ease of use. Of comparable importance are system security, and easy installation and maintenance. These retailers are also often looking for opportunities to automate inventory tracking and supply chain management, as well as simplify tax accounting to help them make smarter business decisions.

Intel's Integrated Retail Solution aims to empower these retailers by switching from traditional legacy systems to technologically powered solutions, which will enable them to improve their daily operations, address customers more systematically, and increase profitability.

Modernizing the Retail Landscape with Integrated Retail Solution

India has 16 million retail shops, where except for the big retail chains, others use little to no technology in their day-to-day operations^[1]. A point of sale (POS) system is a necessity in any retail store, and it is crucial to use a highly reliable and high-performance system for this. Intel's Integrated Retail Solution encompasses POS, security surveillance, digital signage and video analytics in a cost-effective package, eliminating the need for the retailer to invest in multiple, small and often unreliable systems for these applications.

Integrated Retail Solution will allow retailers to receive security surveillance notifications, analytical insights and execute invoicing and inventory management tasks – all from one place. Moreover, while analytics can be leveraged to increase sales and profits, digital signage can bring additional revenue opportunities for the store by running local ads, schemes and promotions.

Solution Overview

Intel's Integrated Retail Solution, while running the POS application as a priority, can also seamlessly run other workloads, such as video-based analytics to get footfall statistics, mask-detection, purchase-detection, safety detections, etc. Moreover, store or customer management applications for CRM, payment management and many more can be driven through this solution.

The offering is an integrated POS solution that consolidates AI and non-AI workloads with optimized performance on a stable and reliable compute platform powered by an Intel® Core™ processor. It brings together a POS app, surveillance system, AI solution, digital signage and remote manageability in one Intel-based POS hardware platform.

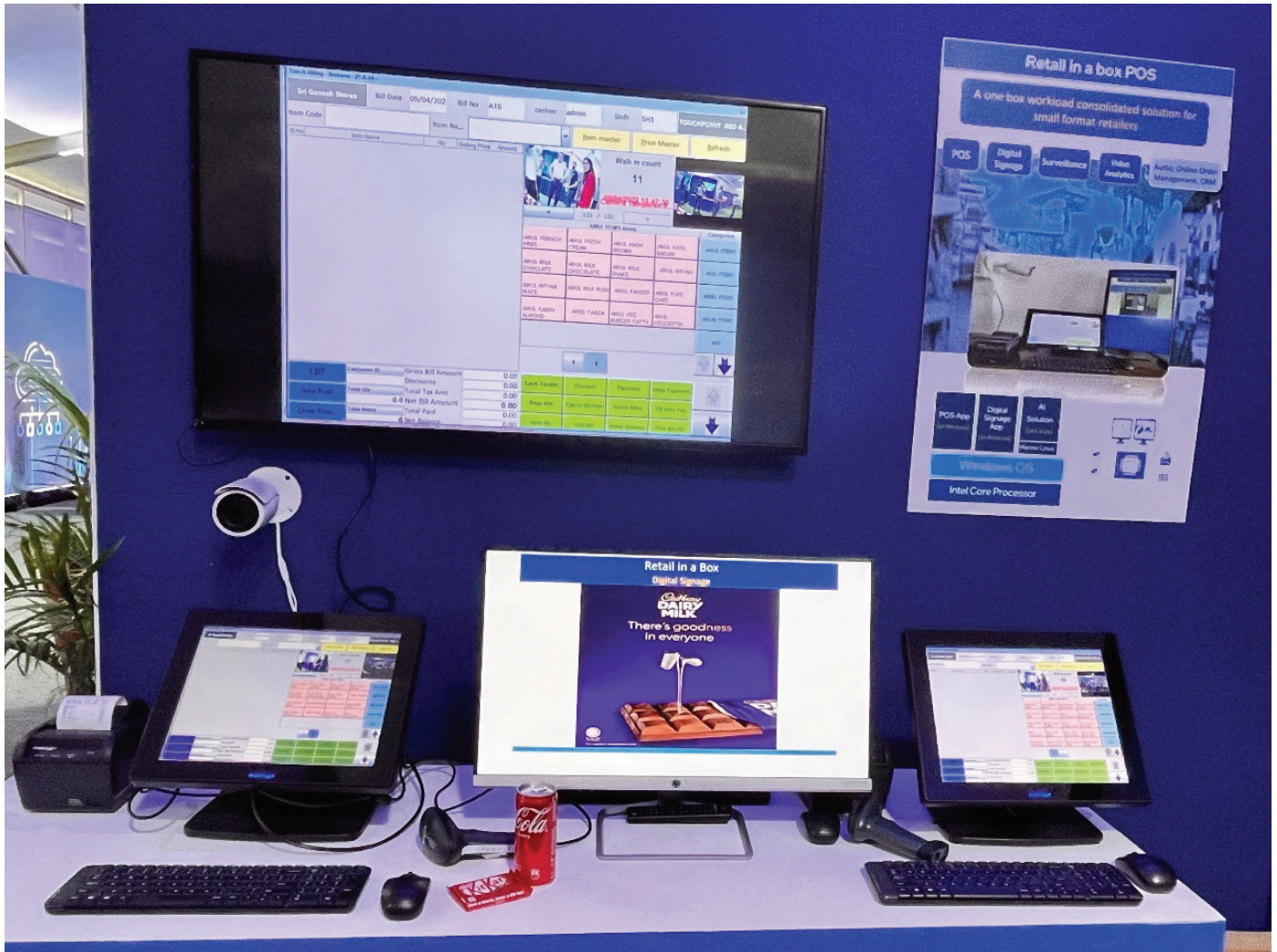


Figure 1: Reference building blocks of Intel's Integrated Retail Solution.

Powerful Features for Smart Use Cases

To stay in sync with the ever-changing market landscape, it is key for retailers to adopt the latest technology that can drive their business ahead. And POS being a critical and essential part of any retail setup, it is important to use a highly reliable and high-performance system for POS.

Intel's Integrated Retail Solution can help retailers extract maximum value from their POS investment. The advantage of Integrated Retail Solution is that it is designed as a workload consolidated system. While the POS is the main application, it can also run other workloads. Some of the key applications or workloads that can be utilized through the Integrated Retail Solution are:



POS App	Surveillance + Analytics Solution	Digital Signage	Management Applications
<ul style="list-style-type: none"> Billing using bar code scanner & printer Inventory management Stream real-time video from camera Display AI-based alerts and status updates 	<ul style="list-style-type: none"> Recording surveillance footage Generate footfall count and send message to POS app Detect camera tampering and send alerts to POS app 	<ul style="list-style-type: none"> Features that support digital signage Dynamic content based on analytical data from surveillance footage or other advertainment 	<ul style="list-style-type: none"> CRM application Payment Management

Maximizing the Power of AI

Combining POS systems with in-store AI computing solutions that collect and analyze data in near-real time enables businesses to enhance the customer shopping experience in the moment. With the integration of AI, businesses can leverage analytics at the POS-enabled checkout station and

also help with business insights such as footfall statistics and demographics. Integrated Retail Solution delivers this with AI solutions that are optimized for integrated GPU using Intel® Distribution of OpenVINO™ toolkit.

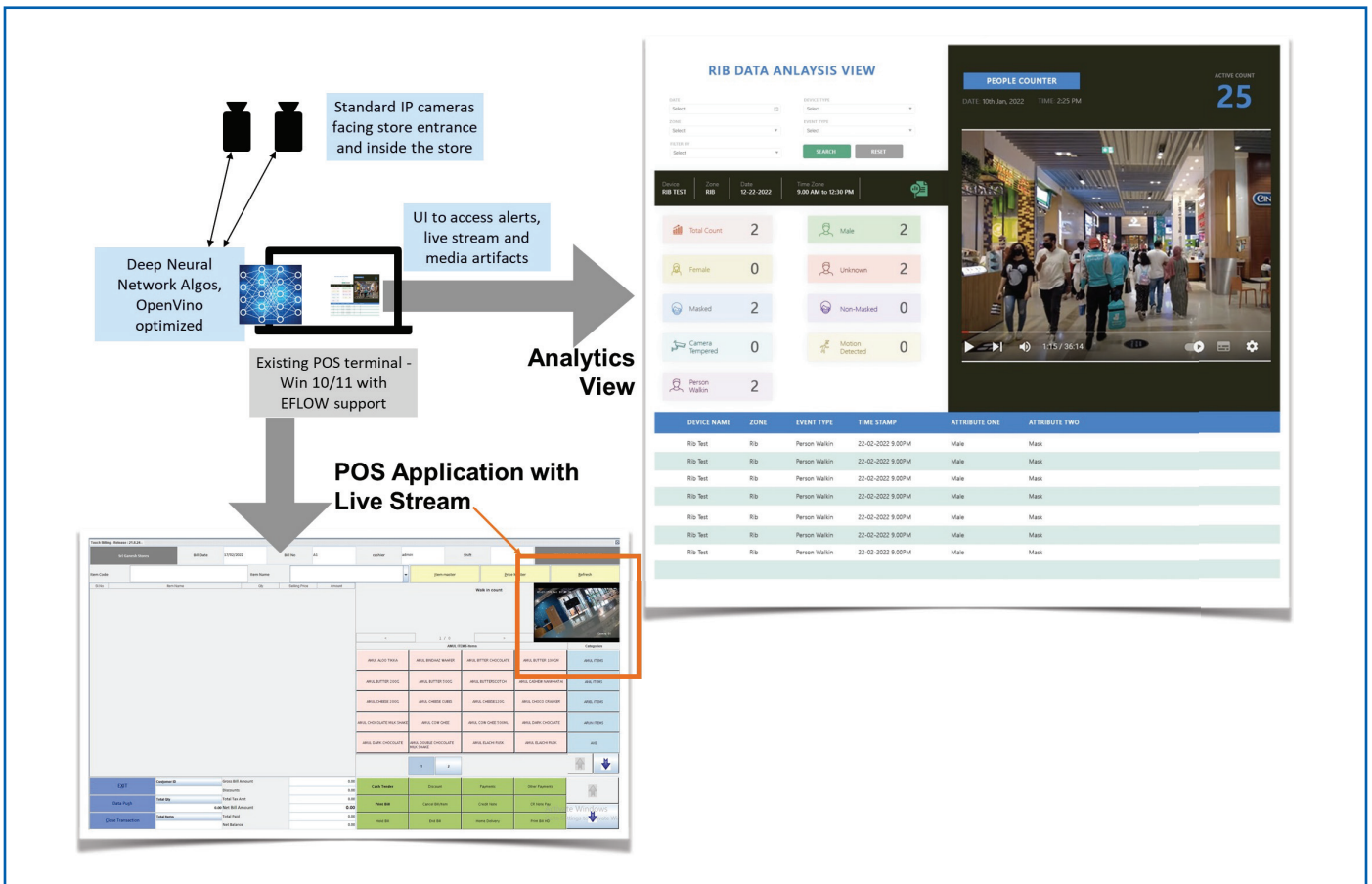


Figure 2: AI-based business insights on Integrated Retail Solution

Making Multi-OSes Work on One Seamless Platform

Application solutions required by retailer may not be always on the same operating system. This is a challenge while consolidating multiple applications. Integrated Retail Solution uses Microsoft EFLOW for seamless integration of Windows and Linux workloads in one system. Stable release available from Microsoft with support availability makes this a good choice for consolidation. Furthermore, AI solution can make use of the integrated GPU as accelerator and free up the CPU for other workloads. EFLOW provides access for Linux workload to get access to integrated GPU through OpenVINO.

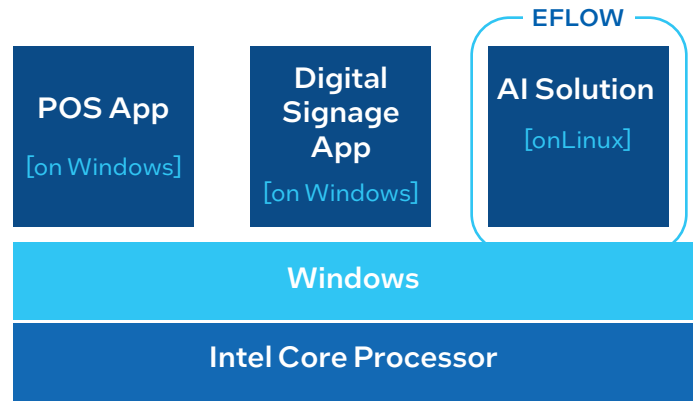


Figure 2: Multi-OS Architecture for Integrated Retail Solution

Delivering Maximum Value for Retailers

Integrated Retail Solution brings numerous benefits for small and medium retailers looking to maximize technology and take their business ahead. Some of the advantages are:

- Easy to manage single system consolidating multiple workloads
- Brings a high-tech experience to retail stores
- Creates revenue avenue through digital signage
- Keeps consumers engaged and opportunity to upscale
- Provides security surveillance to support loss prevention
- Provides consumer buying insights and inventory/stock planning

Conclusion

Customer behavior is dynamic and POS systems must keep up as a powerful way to support customer expectations and engagement. Intel and ecosystem partners offer technologies that continue to evolve the modern POS experience to both support customers and surface ways to improve business operations, increase efficiency and identify new growth opportunities.

Explore more retail solutions at: intel.com/retail

Solution Provided By:



Source:

^[1]Frost and Sullivan

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