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Improve Customer Experience and Store Operations with Toshiba Self Checkout Solutions

Toshiba Global Commerce Solutions Self Checkout transforms grocery store front-ends with future-ready technology and fast, intuitive shopper experiences. The solution is powered by the Intel edge technologies engineered into the Toshiba TCx® 700 POS system, a retail-hardened computing unit based on the Intel® Core™ processor and TCx® EDGEcam technology.
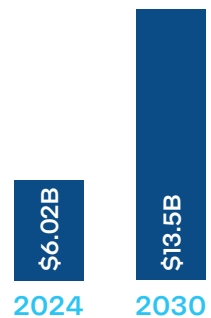
TOSHIBA

Self-checkout helps grocery chains improve the shopper experience with faster, lower-friction paths to payment while also enhancing store profitability. In an environment where most shoppers want to speed up their grocery shopping experience,[1] customers are increasingly using the technology, with a substantial majority using self-checkout options at least occasionally.[2] Grocery chains are rapidly adopting and upgrading their solutions, which is helping them achieve shorter average transaction times and higher operational efficiency.

73%
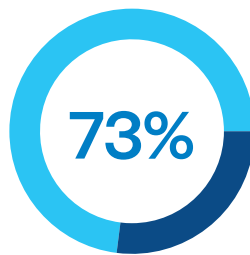
want a faster grocery shopping experience[1]

62%
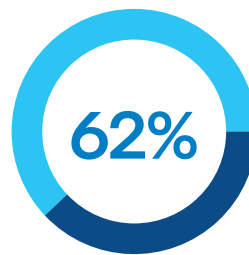
use self-checkout at least occasionally[2]

$6.02B — 2024

$13.5B — 2030

global self-checkout market ($US)[3]

Toshiba Self Checkout is a customer-centric, end-to-end self-service platform that provides an appealing and intuitive way for customers to utilize self-service checkout. The solution allows grocers to deploy more self-service lanes while minimizing space requirements. It offers flexible design options to tailor implementations to their specific needs and ensures future readiness by allowing the addition and reconfiguration of functional modules to adapt to evolving business demands.

Watch the Toshiba Self Checkout video.

Customer-centric experiences with Toshiba Self Checkout

Toshiba Self Checkout embraces the digital present, with modern in-store experiences evolving to deliver the flexibility and convenience that consumers have come to expect. The solution offers customer control with a fast, simple shopping journey while providing grocery store operators with a cost-effective solution built to meet their business needs for the long term. Toshiba Self Checkout provides an intuitive user experience for customers, meeting or exceeding their expectations with responsive systems.

Designed for flexibility, Toshiba Self Checkout enables store management to tailor the solution to specific needs. It includes both cash-recycling and cashless configurations for conventional payment methods. These designs incorporate produce recognition through a TCx® EDGEcam camera and visual AI that works with a built-in scale to efficiently detect, identify and price items without barcodes, such as fresh fruits and vegetables.

The produce-recognition solution provides investment protection through back-compatibility, enabling this functionality to be readily added to existing Toshiba Self Checkout devices. It provides customer convenience and speeds up checkout by saving as much as five seconds per produce item scan.[4] It is sophisticated enough to sense an apple placed in the checkout area and identify the probable variety, differentiating a Granny Smith from a Golden Delicious.

A separate kiosk option can be modified for various uses, such as in-store fulfillment for Buy Online, Pick Up In Store (BOPIS) orders or small transactions, including grab-and-go orders for prepared snacks, drinks and meals.

Toshiba Self Checkout kiosks are designed for simplicity and convenience, align with grocery chains' omnichannel shopping initiatives and help draw on-the-go shoppers into stores to make quick purchases. The combination of system form factors enable store designs to deploy a variety of checkout options for customers that optimize traffic flow and maximize the amount of valuable floor space.

User interactions with Toshiba Self Checkout devices are powered by an intuitive, readily customizable customer interface for high usability, with branding that retailers can easily customize to store requirements. The solution intelligently distinguishes situations where employees must intervene immediately from issues that can be handled at the end of the checkout process. This ability empowers consumers to fix simple issues on their own and reduces the need for repeated interventions that would diminish the customer experience.

The solution also provides configurable alerts and reporting, as well as a powerful set of assistance functions for store employees to resolve customer checkout issues quickly. It readily integrates with existing point-of-sale (POS) systems for cost-effective, reliable implementation. A powerful software toolkit accompanies the solution, adding to future-readiness by enabling grocery chains' in-house development teams to configure and extend checkout functionality as needed, without involving third parties that add to project time and cost.

Toshiba Self Checkout supports multi-store remote administration from a centralized site as well as in-store digital access. Optional dashboards provide dynamic visibility into metrics and KPIs that business analysts and C-level decision makers can use to adjust operations and optimize return on investment (ROI).

Toshiba Self Checkout: cash recycling, cashless and kiosk.

Use-case benefits that deliver ROI

Increased customer satisfaction is a strong reason for installing self-checkout lanes, as their performance supports key business benefits such as higher profitability and ROI. From the store's perspective, automating checkout processes applies technology to gain a lasting efficiency advantage. Store operators begin to see broad financial benefits starting on the first day of implementation:

- **Faster checkout completion**, offering customers increased convenience and reduced queue times for improved shopper experiences, as well as higher transaction throughput to reduce overhead for store operators.

- **Increased customer adoption** by simplifying checkout with produce recognition, better utilizing capital investment and reducing overhead by offloading work from human cashiers.

- **Improved employee focus on high-value tasks** such as shelf-stocking and customer assistance that recover lost revenue by connecting shoppers with the items they want to buy.

- **Reduced shrink while preserving customer satisfaction**, with produce recognition to enforce accurate pricing and provide low-friction checkout experiences with fewer interruptions.

Toshiba maintains end-to-end services that help grocery chains plan, deploy and maintain Toshiba Self Checkout solutions. From designing lane layouts for optimal throughput to integration planning with existing store systems, expert guidance helps maximize the business benefits of self-checkout technology. Toshiba-managed services coordinate deployment, training and testing for a smooth transition, while ongoing client services provide site, depot repair and maintenance to keep the solution running smoothly.

Edge computing, powered by Intel

For an excellent self-checkout experience, it is essential for the computer vision that drives produce recognition to be as fast as it is accurate. To make the solution as responsive as possible for customers, the TCx® EDGEcam performs those computing workloads at the edge. Processing the data close to where it is generated avoids the need to transmit that data back and forth to remote infrastructure such as a public cloud or data center, providing a number of benefits:

- **Crisp user experience**. Avoiding the latency of long-range data transfer delivers nearly immediate produce recognition results, helping reduce friction in the checkout process for customers.

- **Reduced bandwidth cost**. By handling the AI inference needed to recognize produce at the edge, stores avoid the expense of large-scale data transmission.

- **Simplified, cost-effective solution infrastructure**. Processing directly on the Toshiba Self Checkout device avoids the need to buy and maintain servers.

- **Increased reliability**. Eliminating the long-haul network from the self-checkout workflow simplifies the data path to avoid service interruptions due to factors such as outages or dropped connections.

- **Better security and Personal Identifiable Information (PII) protection**. By keeping PII and other sensitive data at the edge, close to where it is generated, the solution avoids potential internet-based attacks, enhancing overall cybersecurity posture.

The Intel Core processors that drive Toshiba Self Checkout provide robust, retail-hardened security features and optional Intel® vPro™ technology that improves the manageability and security of the device. Administrators can access the Intel vPro platform in-store or remotely, even if it is powered down or has a non-functioning operating system. That capability makes maintenance more efficient and helps ensure that all systems are protected by the latest security patches and software updates.

The ongoing collaborative relationship between Toshiba Global Commerce Solutions and Intel helps deliver system-oriented cost advantages to grocery store operators by means of low maintenance, long life and cost-effectiveness. Toshiba Self Checkout provides power savings through overall platform efficiency, as well as the ability to enter deep sleep mode when the lane is idle and then wake quickly when needed for the next customer. Grocery companies also benefit from the alignment of the two companies' technology roadmaps, including Toshiba involvement in Intel's Early Access Program, which provides advance samples of emerging platforms. This collaboration helps ensure future-readiness for ongoing product planning and enhancements.

Conclusion

Toshiba Self Checkout is a modern grocery self-service solution that improves shopper experiences and helps stores improve profitability. Visual AI using the integrated TCx® EDGEcam camera recognizes produce almost instantly for accurate, frictionless checkout. The intuitive user interface streamlines the customer experience, minimizes superfluous employee interactions and resolves checkout problems quickly. From the store operator's perspective, Toshiba Self Checkout provides rich automation that helps reduce store costs and shrink as it improves operations.

Intel edge technology provides robust compute power for the solution, enhancing usability, reliability, security and investment protection. Toshiba and Intel are working together to drive intelligence for self-checkout that delivers dividends today and future readiness for tomorrow, against a backdrop of continuing innovation.

Learn More

Toshiba Retail Solutions

Intel Retail Technology Solutions

Solution provided by:

intel + **TOSHIBA**

[1] Software Advice, April 23, 2024. "More Retail Automation, Less Conversation—Global Trends Show Where Shoppers Want Tech and Where They Don't." https://www.softwareadvice.com/resources/retail-automation/.

[2] Zipdo Education Report, July 25, 2024. "Self Checkout Statistics: Market Growth, Consumer Preferences, and Impact." https://zipdo.co/self-checkout-statistics/.

[3] Capital One Shopping Research, February 20, 2024. "Self-Checkout Adoption & Theft Statistics." https://capitaloneshopping.com/research/self-checkout-statistics/.

[4] Based on recent retailer data received from one of Toshiba's top clients, the company has concluded that Toshiba's Produce Recognition can save as much as five seconds per produce item lookup for customers during checkout.