

Toshiba Checkout Environment for Consumer-Service Software

*Enhanced software delivers optimum reliability while
putting control of the self checkout environment
back into your hands – new capabilities*

**TOGETHER
COMMERCE**

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Contents

- 2 Introduction
- 3 Redefine self checkout by thinking beyond today's needs
- 4 New capabilities
- 5 Choice: the advantage of self checkout built around well-defined interfaces
- 6 Trust technologies proven through hundreds of retail implementations
- 7 Far-reaching business benefits that carve out an advantage over your competition
- 7 Rely on Toshiba retail expertise

Introduction

The changing marketplace. The changing checkout experience.

Welcome to the new retail marketplace. Not only are consumer behaviors and expectations changing, but also how consumers want to interact with their retailers. The new breed of consumers, who are increasingly knowledgeable and savvy, expect not just to access information and perform transactions more quickly, but also to have greater consistency in how they interact with retailers regardless of retail segment or store size. Retailers must be prepared to transform the checkout experience to meet this changing marketplace by doing the following:

- Create a dynamic checkout experience that is intuitive and natural for consumers to use.
- Adopt a self checkout solution that is scalable for all kinds of store environments, including smaller format stores. There is no “one size fits all” for today’s global retailers.
- Embrace change. Checkout needs change over time as retail store requirements evolve. A self checkout solution with flexible configurations helps ensure initial investments are protected.

In addition to satisfying consumer demand for a more convenient, faster checkout experience, self checkout solutions help deliver:

- **Better customer service.** Adding self checkout lanes means more open lanes, which helps shorten lines and provide a faster checkout experience for consumers.
- **Improved labor utilization.** For each transaction and item scanned through self checkout, retailers can save the labor that would have been needed to handle those items.
- **Increased sales.** Customers consider the checkout experience when making shopping decisions. Self checkout is designed to offer a greater degree of choice and speed, which can affect shoppers’ decisions about where to shop, especially for convenience trips.

Self checkout can help increase customer loyalty and enable a substantial return on investment. However, many self checkout applications fail to deliver these benefits because they can take control away from the retailer and potentially degrade system reliability through less-than-modern integration approaches. Such applications can be difficult to customize or scale as your business needs change. In particular, solutions based on a closed or proprietary architecture can be challenging to upgrade and may require frequent interaction with the software vendor. Often these solutions are supported by a limited number of vendors and partners, forcing you to work with one specific vendor regardless of the level of service you’re receiving.

Many self checkout solutions lack flexibility. When your self checkout solution is rigid or relies on an older methodology to interact with your point of sale (POS)—such as “screen scraping,” or gathering data from the POS program by reading it from the output on a smaller POS display screen instead of from the POS application—it can be difficult to maintain tight integration with your POS system. When your POS requires changes—which it almost inevitably will—you’ll most likely have to invest time and money working with your vendor to reintegrate so you can continue to present a consistent customer experience.

In retail, time to value is critical. To keep pace with changing marketplace dynamics, you need a flexible self checkout solution that can be quickly integrated with all of your systems and applications—from the POS to the back office. You also need a customizable solution so you can differentiate your customer experience from your closest competitors. With a self checkout that is easy to support, you can stay focused on your business goals—instead of worrying about the technology that supports day-to-day operations. And, of course, the easier your self checkout solution is to use, the more consumers will embrace it—paving the way to higher utilization and a greater return on investment.

Redefine self checkout by thinking beyond today's needs

The Toshiba Checkout Environment for Consumer-Service (CHEC) software offers retailers a self checkout environment that gives control of the self checkout application to the retailer. Because the software has a well-defined POS interface, it can integrate more easily with existing POS solutions. With Toshiba CHEC software that comes with Toshiba Self Checkout System 6, you have the ability to customize the self checkout experience and differentiate your customer experience from the competition's. The advanced functionality of a total software and self checkout solution helps you achieve an improved Total Cost of Ownership (TCO), including:

- **Enhanced usability.** Highly customizable graphical user interface, which can allow retailers to tailor to their specific branding and business requirements while being intuitive to use by consumers.
- **Improved reliability.** The software uses a high-level, XML-based POS interface that makes it easier to integrate with your POS solution and improves the reliability of the connection between the POS and self checkout.



Figure 1. Improved icon buttons, color schemes and advanced graphics part of enhanced intuitive interface in new CHEC software.

- **Greater control.** A powerful software toolkit changes the way you build, run and support your solution. You're no longer dependent on the vendor. You have the control to configure and extend the self checkout application to meet your unique needs.
- **Enhanced manageability.** The software includes remote management capabilities, which can help maximize system uptime for reliable store operations.

Configure and extend to meet your unique needs

The client application runs at the self checkout lane and features an intuitive interface that enables customers to process items quickly. Audio, video and text prompts guide shoppers through the transaction, and graphic item lookup screens allow shoppers to select and weigh items that don't have barcodes. Shoppers also can easily scan coupons and loyalty and membership cards and can access other promotions.

Toshiba Checkout Environment for Consumer-Service Software

You can also configure the CHEC software environment to allow consumers the ability to use their own or store-bought reusable ecology bags by pressing the “Use My Own Bag” button. Setting these configurations allows you to keep control of the security levels while providing your consumers with added choice and flexibility.

Toshiba Self Checkout models accept a variety of payment methods, including cash, credit and debit cards, and electronic benefit transfer (EBT). The client application provides a shopper assistant interface that allows shopper assistants to perform price and department entries, item and transaction voids, cash device diagnostics, and more.

Toshiba Self Checkout software solutions include robust, multifaceted security capabilities that not only provide added security, but also help increase throughput. Belted lanes with sophisticated weight and dimensional security, verify items individually, speed transactions, and reduce the need for shopper assistance. Belted lanes also include a belt-reverse feature that makes the self checkout solution easier to use. When an item doesn't match expected characteristics, it is returned on the belt, and the shopper is instructed to rescan the item. On units with “scan & bag” modules, the interface offers configurable, weight-based security with adjustable tolerances to facilitate faster throughput and help lower intervention rates. In addition, CHEC software has extensive security features that enable retailers to implement a PCI-compliant self checkout solution following the guidelines of the Payment Card Industry Data Security Standard (PCI-DSS).

NEW – CHEC supports Toshiba 4690 OS

Toshiba Self Checkout System 6 CHEC now supports 4690 OS, which gives retailers the ability to have a consistent front-end platform for POS and self checkout running in the 4690 environment. With this new capability, CHEC and Toshiba POS not only share a common operating system, GUI, and POS interface, they have common hardware components, data and processes.

Toshiba Self Checkout System 6 CHEC with 4690 OS offers the following benefits:

- Eliminates the need for controller-based virtual sessions – and the capacity and performance requirements associated with them
- CHEC on the 4690 Enhanced terminal takes on the traditional characteristics of device support, terminal load, terminal offline and controller backup capabilities of a 4690 system
- Flexible enough to run Classic controller w/ Enhanced terminal configurations
- Less susceptible to software viruses; no need for continuous OS patching
- Continues to leverage existing POSBC enabling (no throw-away code)
- Load hard drive from controller (eliminate HDD images)
- Use ASM for self-checkout software (same tools for all SW maintenance)
- Use terminal dumps for SCS problem determination (same PD tools)

The Toshiba Back-Office System Server (BOSS) manages all self checkout systems in the back office, away from the lane. It provides automatic updates to every self checkout lane and generates multiple reports to help promote effective management. The BOSS application allows retailers to effectively manage shopper assistant IDs and perform quick lookups as well.

NEW – Enterprise BOSS capabilities

Toshiba Self Checkout System 6 now has Enterprise BOSS (eBOSS) capabilities which enable retailers to centralize functions of the BOSS so that critical functions can be managed from the enterprise with outcomes distributed down to the store level and lanes. Retailers can determine the most effective way to administer critical functions and choose between an in-store BOSS (one per store) or a single centralized BOSS (eBOSS) which administers shopper assistants, reports, user management, quick-lookup screens, and item security data remotely. Enterprise BOSS also provides retailers with a single enterprise-wide DB2 database that can be used to more deeply analyze the performance of self checkout stores against key performance indicators.

The BOSS application is supported by IBM DB2® database and the IBM WebSphere® Application Server platform to provide a robust base that can support a comprehensive set of new features and capabilities from Toshiba and Toshiba Business Partners, as well as just about any future enhancements you wish to make. Later, this paper will examine in greater detail the proven Toshiba technologies that form the basis of the back-office application.

Choice. Self checkout built around well-defined interfaces

With its ability to integrate with virtually any POS system and support many customizations and enhancements, the Checkout Environment for Consumer-Service application can change the way you interact with your self checkout vendor. Because it is built around well-defined interfaces and backed by the latest systems development methodologies, it's easier for you or your IT partner to make changes—without having to continually go back to the initial software vendor.

Improve flexibility and responsiveness

Flexibility starts with open standards-based integration. The CHEC software's POS integration is based on the Toshiba Retail Integration Framework, a flexible, scalable Java Platform, Enterprise Edition operating environment and componentized architecture built for retail stores. Using the Retail Integration Framework component, called Store Integrator, the CHEC software is designed to use a common method to access the POS system's business logic—whether you're using self checkout, a kiosk, wireless devices, fuel pumps or other applications. The solution provides an open standards-based integration layer that redefines the way the self checkout application communicates with the POS system. This results in an overall solution that is more tightly integrated than ever before. And the tighter the integration between the POS and self checkout systems, the more responsive and dynamic your self checkout solution can be—without the added hassle and expense of constantly working with an outside vendor.

Speed deployment timeframes

Because the CHEC application can integrate to any POS application more quickly and easily using clear messaging application programming interfaces (APIs), it can reduce your integration time and speed the time to deployment. The application allows for various standard configuration options to customize it for your specific store environment.

Toshiba CHEC software includes both the Toshiba SurePOS™ Application Client/Server Environment (ACE) V6 POS application and the Toshiba 4680-4690 Supermarket Application (SA), reinforcing the proven capability of CHEC to run various POS applications through this well defined interface layer. This pre-integration provides a total solution that can be used with minimal store and retailer-specific configurations. A clearly defined POS interface, called the POS Business Component, enables you to send POS changes out to the self checkout application more quickly. Discussed in more detail later in the paper, this interface helps reduce testing cycle times and ensures that your POS and self checkout applications are in sync so your customers have access to up-to-date information—whether they are using self checkout or regular lanes.

Adapt and evolve your environment

Another important aspect of a self checkout solution is the ability to quickly and easily adapt your checkout processes. That's where the built-in CHEC toolkit comes in. It's a comprehensive toolkit that enables you to build, support and run your self checkout environment. The toolkit gives you the control and flexibility to customize and differentiate your self checkout experience as well as to rapidly introduce new functionality and extensions into your solution—either by Toshiba, an authorized Business Partner or your own IT staff. For example, using the toolkit, you can trace transactions through the system and locate the source of errors, helping to reduce the time to issue resolution. The toolkit has a POS simulator that lets you preview the self checkout interface before the POS is integrated. The simulator also allows you to test GUI changes, such as changing screens or buttons without having to establish an actual POS connection. GUI debug and emulation tools allow you to trace and test GUI changes.

Versatile CHEC software leverages Remote Management Agent

CHEC software can be used on both next-generation Toshiba Self Checkout lanes as well as the new Self Checkout System 6 modular units, providing a consistent user experience across both Toshiba Self Checkout platforms.

CHEC provides a flexible common user interface and leverages Toshiba Remote Management Agent to provide a single point of control for all store devices to help minimize disruptions to store operations. As a result, you can deliver a common user experience while simplifying the management challenges associated with multiple platforms. IBM WebSphere Application Server software provides a reliable, scalable operating environment, while the IBM DB2 database enables you to maintain consistent data across your enterprise.

Trust technologies proven through hundreds of retail implementations

Toshiba Checkout Environment for Consumer-Service software includes Toshiba technologies that have strong track records within a wide range of rugged retail environments. Each component, described below, plays a vital role in the CHEC environment and all are packaged with the CHEC license, including standard self checkout support.

- **IBM WebSphere Application Server software** resides on the store's BOSS device and provides a reliable, scalable, highly available environment to keep your self checkout environment running smoothly.
- **IBM DB2 database** features data replication capabilities that enable you to maintain consistent data across your entire enterprise. The client application relies on Toshiba DB2 Personal Edition software, while the back-end application includes Toshiba DB2 Express Edition software.

- **Toshiba Store Integrator POS Business Component (POSBC)** creates a seamless experience for consumers by enabling you to create the same POS interface for virtually all of your devices, from an in-store kiosk to the self checkout lanes. With a consistent interface, customers can view the same prices, receive the same discounts and accrue the same loyalty points from any device in your enterprise.
- **Toshiba Store Integrator GUI** enables you to build intuitive GUIs for your POS applications without disrupting your existing POS functionalities.
- **Toshiba Remote Management Agent** empowers you to manage the store environment with optimal efficiency. The application provides a single point of control for all of your store devices and allows you to remotely monitor, collect and filter availability and utilization thresholds. Using centralized management, you can quickly introduce new features and technologies into your environment, helping to improve IT staff productivity and reduce your total cost of ownership. This software also helps minimize disruptions to your store operations by helping you proactively identify and fix potential issues. Its remote management capabilities can help you resolve issues quickly from remote locations—within your store or from a head office—and therefore improve the uptime of your POS solution.

CHEC software also includes the following:

- Support for the new Toshiba Self Checkout System 6 hardware, which includes cash recycling
- Cash tracking and reporting features that provide detailed currency information and alerts for both non-recycling and recycling configurations
- Serviceability of cash devices for cash troubleshooting and the Cash Tracking Application
- User Interface (UI) with icon buttons, color schemes and advanced graphics that appeal to the consumer and are easy to read and understand
- Support for an accessibility mode that allows shoppers to modify the user interface so that all buttons are within reach limits for customers with disabilities

Far-reaching business benefits carve out your competitive advantage

Opting for a flexible, extensible CHEC self checkout solution—instead of a more rigid alternative—helps you reap benefits across the enterprise. Specifically, it is designed to help you:

- **Improve the customer experience.** With the ability to control your self checkout interface and configure it to suit your customers' preferences, you gain the opportunity to improve the customer experience.
- **Increase system availability.** Using CHEC management tools and the toolkit, you can proactively address issues before they disrupt operations, helping to optimize availability.
- **Lower your total cost of ownership.** Because the software is easier to support and maintain, it can help lower your total cost of ownership.
- **Increase return on investment.** All of these benefits should entice more shoppers into your self checkout lanes, which in turn can help you realize more value, more quickly, from your self checkout solution.
- **Improve control, reliability and manageability.** Toshiba CHEC software is designed to give you better control, making it easier to manage and maintain a highly reliable, available self checkout environment.

Rely on Toshiba retail expertise

As the world's leading provider of integrated in-store solutions and retail insights, Toshiba Global Commerce Solutions delivers end-to-end solutions for checkout, consumer interactions and retail operations that unlock amazing new possibilities for our clients and shoppers everywhere. In partnership with the Together Commerce Alliance, our global business partner program, we help bring innovation and value to every retailing experience so that you can delight your customers every day, everywhere.

Together Commerce

Together Commerce is Toshiba's vision for the new future of retail where retailers adapt their strategies, their stores and their technology to engage with consumers throughout the buying process in a seamless and helpful way. This collaborative approach enables retailers and customers to create mutually rewarding commerce—**together**

For more information

To learn more about Toshiba Self Checkout solutions please contact your Toshiba representative or visit: toshibagcs.com

Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize an IT financing solution to suit your business goals, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit: ibm.com/financing

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