

Retail just got smarter. Welcome to the evolution of retail powered by 5G.

Solution brief

5G Edge Cashierless Checkout for retail and venues

Rising customer expectations and new tech-enabled competitors pose challenges to many retail businesses. Retailers may also face labor shortages, data protection needs, and problems with inventory shrinkage and operational efficiency.

5G Edge Cashierless Checkout can help you turn those challenges into opportunities.¹

This solution provides autonomous checkout and inventory management, using computer vision and machine learning. It works well in traditional retail settings, such as convenience stores, airports and train stations, as well as venues such as stadiums, theaters and racetracks.

How does it work?

Here's a three-step look at how 5G Edge Cashierless Checkout provides a simplified shopping experience that can benefit you and your customers.

Step 1. Shoppers enter the store and check in using their credit card or your branded loyalty app. A turnstile or gate entry can be implemented to access the shopping space.

Step 2. Cameras work in conjunction with a computer vision system and machine learning to track shopper movement and interactions with specific retail items, without the use of facial recognition.

Step 3. When shoppers are done shopping, they can simply exit the store—a digital receipt can then be generated and sent to them.

In one prelaunch customer trial, 5G Edge Cashierless Checkout users saw a 50% reduction in customer transaction time.²

Why use 5G Edge Cashierless Checkout?

Consider these statistics:

- 97% of consumers have backed out of a purchase because it was inconvenient to them³
- 83% of consumers say convenience while shopping is more important now compared with five years ago³
- 60% consider long lines for payment checkout as a leading pain point when shopping in-store⁴
- 87% of shoppers prefer in-store touchless or self-checkout options⁵

Benefits of 5G Edge Cashierless Checkout

Whether you're looking to redefine the retail experience or provide a unique and convenient way to purchase goods while at a venue, 5G Edge Cashierless Checkout may be your solution. It could help you:

- **Reduce customer transaction time.**
When customers are finished shopping, they simply exit the store. No need to scan items or interact with a cashier
- **Find the optimal inventory mix for each location.**
Front-end store analytics enable data-driven decision-making
- **Increase transaction counts and basket size.**
Leverage data analytics to prioritize best-selling items to help bolster transactions
- **Reduce or repurpose onsite labor.**
Checkout personnel can be reassigned to other tasks and customer-service-based activities; in some cases, a store location can be completely unstaffed
- **Improve overall sales efficiency.**
You can enable a higher sales-per-store ratio by reducing checkout lanes and creating more shopping space
- **Reduce shrinkage.**
Computer vision monitors store activities to limit shrinkage and improve inventory tracking

Delivering transformational results

In prelaunch trials, 5G Edge Cashierless Checkout created new revenue streams.⁶ In one instance, a customer saw:

- **78%** increase in transaction count²
- **80%** increase in basket size²
- **50%** reduction in customer transaction time²
- **67%** reduction in the required amount of personnel²
- **139%** revenue increase²

Solution details

5G Edge Cashierless Checkout, when paired with 5G Ultra Wideband, provides a secure platform for contactless checkout.^{7,8} Available as a software-as-a-service (SaaS) subscription, our solution utilizes overhead cameras and computer vision. Unlike other solutions, ours does not require weighted shelf systems.

The solution includes:

- Autonomous checkout
 - Overhead cameras
 - Computer-vision application
 - Contactless entry and exit system⁹
 - Application programming interfaces (APIs) to integrate with retailer point-of-sale (POS) applications
 - Hardware (routers/switches/server)
- Inventory management
 - Track and monitor inventory
 - Collect data on buying patterns
 - Receive inventory alert notifications
 - Leverage data to find the optimal mix of SKUs for your location



1 Precommercial solution; features and timing subject to change. Multi-access edge computing (MEC) and 5G are sold separately.

2 Based on Verizon Ford Field point-of-contact (POC) trials.

3 "Convenience and the Consumer," National Retail Federation, January 2020.

4 "Frictionless Commerce 2020: How Coronavirus Is Accelerating Seamless Omnichannel Retail," eMarketer, May 2020.

5 "87% of Shoppers Prefer to Shop in Stores with Touchless or Robust Self-Checkout Options During COVID-19 Pandemic," Bloomberg, April 7, 2020.

<https://www.bloomberg.com/press-releases/2020-04-07/87-of-shoppers-prefer-to-shop-in-stores-with-touchless-or-robust-self-checkout-options-during-covid-19-pandemic>

6 Based on Indy 500 and Live Nation POC trials.

7 5G Ultra Wideband available in select areas.

8 Please note that connectivity is sold separately.

9 Retailer is solely responsible for construction/store deployment and for obtaining credit card readers and all credit card vendors.

10 Most reliable 5G network based on more first-place rankings in the RootMetrics® 5G data reliability assessments of 125 metro markets conducted in 1H 2022. Tested with best commercially available smartphones on three national mobile networks across all available network types. Your experiences may vary. RootMetrics rankings are not an endorsement of Verizon.

Network details & coverage maps at vzw.com. © 2022 Verizon. SB4860922

In one prelaunch customer trial, 5G Edge Cashierless Checkout resulted in a 78% increase to transaction count and an 80% increase to basket size.²

Deployment possibilities for 5G Edge Cashierless Checkout⁹

We can help you decide which deployment option is best for your business model and needs, based on Verizon trials with early adopters.



Create a new store.

Set up, deploy and monetize a new autonomous shopping experience.



Transform a store.

Add automation to an existing store location.



Deploy a mobile pop-up store.

Add a fully assembled, autonomous store location.

Why Verizon? The power of 5G Edge

5G Edge, when connected to Verizon 5G Ultra Wideband, gives you the ultra-high speeds, low latency, advanced security and massive capacity you need to transform the retail and venue experience—from the nation's most reliable 5G network.

With our award-winning networks, expertise and unique capabilities, we look forward to partnering with you to transform your retail infrastructure and venue experience capabilities in ways that help delight your customers.

Learn more:

To find out how 5G Edge Cashierless Checkout can help your business operate more efficiently and provide better service, contact your Verizon Business Account Manager.

