

SUNMI × **intel**

Intel Partners with SUNMI to Develop Smart Commercial Solutions and Drive AI Transformation in Retail



A person with red nail polish is holding a dark smartphone in their right hand and a yellow, rounded object in their left hand, positioned over a light-colored wooden counter. The background is a blurred retail environment with clothing racks and shelves. There are orange geometric shapes (a square and a rectangle) on the left side of the image.

As a Business IoT (BIoT) solution provider deeply rooted in global physical commerce, SUNMI has observed that numerous retail and F&B chain operators have established mature Windows-based business systems. While eager to embrace AI, these enterprises are reluctant to discard years of accumulated digital assets or bear the hefty costs of full-scale system overhauls. To connect underlying computing power with real-world in-store operational scenarios, we have partnered with Intel to develop out-of-the-box edge AI commercial terminals compatible with legacy business workflows. These terminals enable merchants of all sizes worldwide to deploy AI capabilities spanning product recognition, intelligent loss prevention and voice-assisted shopping directly at store frontlines, delivering a seamless transition from digital record-keeping to intelligent business operations without the need to restructure their existing systems.

– Frank Yuan
Rotating President
Shanghai SUNMI Technology Co., Ltd.

The next phase of AI adoption will be defined by how effectively businesses bring intelligence closer to where decisions are made. Success will depend not only on AI models, but on the ability to deploy computing and AI at the edge, where business operations, data, and customer interactions occur. By building on existing infrastructure and integrating with established IT environments, organizations can address critical challenges such as latency, data privacy, and operational complexity. Through our collaboration with SUNMI, Intel combines its edge AI, security, manageability, and heterogeneous computing capabilities with SUNMI's deep expertise in physical commerce to transform advanced technologies into scalable, deployable solutions. Together, we are helping physical business operators build AI-era capabilities on their existing infrastructure.

– Mariya Zorotovich
General Manager Consumer Industries
Client Computing and Physical AI Group, Intel

Overview

The proliferation of AI and edge computing technologies is driving global physical commerce into a brand-new phase, shifting from digital penetration to intelligent operations. For numerous retail and F&B chain enterprises that have built mature business processes on their existing IT systems, the core principle of AI upgrading is not to discard legacy assets and rebuild from scratch, but to achieve a smooth, sustainable evolution of capabilities on the basis of existing digital foundations.

As a world-leading provider of Business IoT (BIoT) terminals and solutions, SUNMI has forged an in-depth partnership with Intel. Built on Intel® Core™ Ultra processors, the two companies have developed a smart commercial solution that combines high performance, robust security and strong management capabilities. The solution fully addresses the operational needs across micro, small and medium-sized merchants as well as large global retail key accounts. It not only smoothly supports concurrent multi-task operations during peak hours, but also provides a solid computing foundation for emerging intelligent applications such as intelligent loss prevention, product recognition and voice interaction, helping global retail enterprises achieve an efficient, secure and smart digital-intelligent upgrade.

AI Reinvents Commerce: Global Physical Commerce Enters a New Era of Digital-Intelligent Transformation

Over the past decade, global physical commerce has completed its first wave of digital penetration, with core operational links including point-of-sale (POS), inventory management, membership management and supply chains gradually going online and becoming data-driven. As we enter the AI era, the core of business competition has shifted from "having digital tools" to "leveraging data and AI to optimize operational decisions".

From an industry perspective, the AI upgrade of physical commerce is not an isolated issue of terminal replacement, but a systematic evolution taking place on the world's largest installed base of commercial computing platforms. According to StatCounter Global Stats, Windows recorded an average 74.9% share of the global desktop operating system market from January to August 2026. In September 2026, its market share hit 76.36%, sustaining its absolute dominant position¹. As Microsoft ends official support for Windows 10, enterprises and commercial customers worldwide are accelerating their migration to Windows 11, creating a substantial wave of commercial terminal replacement. At the same time, AI penetration in physical commerce continues to accelerate. AI capabilities such as intelligent loss prevention, visual product recognition, voice interaction, passenger flow analysis and personalized recommendations are moving from the cloud to store frontlines, becoming a core lever for enterprises to reduce costs, increase efficiency and optimize consumer experiences.

As AI applications sink to the store level, the limitations of cloud deployment are becoming increasingly prominent: network latency undermines real-time performance, data transmission costs are high, and user privacy faces leakage risks. Deploying computing and AI inference capabilities on-site in operational scenarios – known as "edge computing" – has become an inevitable trend for AI implementation in physical commerce.

This trend sets new requirements for in-store computing infrastructure: it must not only support the stable operation of traditional business processes, but also possess capabilities for device-local AI inference, concurrent multi-task processing, full-scenario adaptability and unified remote management, serving as an intelligent foundation for future operational innovation.

For medium and large retail chains, global brands and cross-regional F&B enterprises, business systems built on Windows and x86 architecture are core assets accumulated over long-term operations. From POS settlement and inventory management to membership operations and financial accounting, a large number of customized business systems are deeply integrated with workflows, representing substantial IT investments and organizational process alignment, and cannot be readily replaced.

Essentially, enterprises' demand for AI upgrading is to "infuse AI and next-generation computing capabilities into existing systems without disrupting ongoing operations or incurring redundant costs", rather than replacing systems from scratch. In the face of operational demands in the AI era, traditional commercial computing facilities generally face four core bottlenecks that restrict enterprises' digital-intelligent advancement:

Insufficient Computing Capacity

Modern store operations have shifted from single settlement to parallel multi-business operations. During peak hours, systems for POS, membership programs, marketing and reporting run simultaneously. When combined with AI inference demands, traditional facilities are susceptible to stuttering, delays and even downtime, directly impacting operational efficiency and consumer experience.

¹ Source: gs.statcounter.com/os-market-share/desktop/worldwide/2026

Lack of Local AI Capabilities

Most existing facilities lack dedicated AI acceleration engines and are unable to run deep learning models at the edge. AI applications can only rely on cloud deployment, bringing triple risks of latency, cost and privacy, preventing many AI use cases from being effectively deployed.

Limited Scenario Flexibility

Stores of different formats and sizes have significantly different requirements for the form factors, sizes and functions of computing facilities. Traditional facilities have fixed form factors and limited peripheral compatibility, making it difficult to cover diverse scenarios such as self-service, desktop POS and brand experience stores at the same time, resulting in high system integration costs and long implementation cycles.

Rising Operations and Compliance Costs

The distributed layout of cross-regional, multi-store operations makes unified facility management, batch upgrades and fault response extremely challenging. Meanwhile, global data security regulations are becoming increasingly stringent. The security capabilities of traditional facilities are often unable to meet compliance requirements such as GDPR and PCI DSS, exposing enterprises to potential compliance risks.

SUNMI × Intel Joint Exploration: A Smooth Evolution Path for Next-Generation Retail Commercial Computing

Guided by the core concept of "Bringing Next-Generation Computing into Commerce", SUNMI and Intel are bringing next-generation heterogeneous computing, edge AI and enterprise-grade management capabilities to physical commerce, helping enterprises enter a new phase of AI-driven operations smoothly and cost-effectively, all built on their existing Windows business systems. They help retail customers connect end-to-end business workflows with IoT technology, gain deep insights into operational dynamics with AI capabilities, and co-create deliverable business value with global ecosystem partners.

As long-term strategic partners, Intel and SUNMI leverage their respective core strengths to achieve end-to-end integration from underlying technologies to commercial deployment. Intel provides full-stack next-generation computing technology support from chips to software, including heterogeneous computing architectures, edge AI optimization tools, and enterprise-grade security and management systems, extending cloud-level computing and AI capabilities to the front lines of commercial operations and providing a solid technical foundation for commercial AI deployment. SUNMI is deeply rooted in the physical commerce landscape. Leveraging its service footprint across over 200 countries and regions worldwide, it integrates various commercial peripherals and operational workflows via IoT capabilities, transforming underlying computing technologies into operation-ready solutions tailored to different business formats, and enabling technology to drive improvements in business efficiency.

SUNMI Windows Commercial Computing Lineup

Based on the joint technology concept, SUNMI has launched a brand-new lineup of Windows commercial computing products, featuring a complete layout of two product lines and five form factors. The FLEX 3 WIN series is available in three sizes: 18.5-inch, 21.5-inch and 27-inch. Positioned as premium Windows desktop POS and self-service terminals, it targets high-footfall, high-concurrency multi-task scenarios.

The T3 PRO WIN series features a built-in thermal printer with an auto-cutter, delivering a printing speed of 250mm/s. The entire series runs on Windows 11 IoT Enterprise LTSC, with a maximum configuration of 16 GB LPDDR5 memory and 512 GB SSD. It supports Gigabit Ethernet port, Wi-Fi 6E and Bluetooth 5.3/5.4, and has obtained global certifications including CCC, SRRC, CE, FCC, RoHS, CB and Energy Star 9.0. It adapts to full-scale operational needs of global customers, providing enterprises with stepwise and scalable upgrade options.



Figure 1. SUNMI WIN Series Lineup

Computing Foundation of the Solution

With the core goal of "staying compatible with legacy systems while unlocking incremental value", the jointly developed solution builds an intelligent commercial facility system for the AI era across four dimensions: computing foundation, form factor adaptability, management and O&M, and ecosystem compatibility.

The solution is powered by Intel® Core™ Ultra processors as its core computing foundation, adopting a highly integrated heterogeneous system-on-chip (SoC) architecture. A single chip integrates three computing engines – CPU, Intel® Arc™ GPU and dedicated NPU – which work in tandem to support complex business and AI inference tasks. For connectivity, the solution is equipped with Intel wireless modules, supporting tri-band (2.4 GHz, 5 GHz, 6 GHz) operation with 160 MHz channel width, integrated Bluetooth, as well as MU-MIMO and OFDMA technologies. It maintains low-latency, highly stable wireless connections even in high-density stores with concurrent multi-device operation.

Intel® Core™ Ultra processors enable efficient deep learning inference locally in stores. Combined with the model optimization capabilities of the OpenVINO™ toolkit, AI applications such as intelligent loss prevention, product recognition and voice interaction can run in real time without relying on the cloud, significantly reducing network costs and data privacy risks.

Building on the computing power of Intel® Core™ Ultra processors, SUNMI has also embedded an AI application matrix into its products. Leveraging on-device NPU computing and SUNMI's AI capability stack, the solution natively delivers a wide range of intelligent applications on Windows terminals. Salesbuddy AI is a multilingual intelligent sales assistant tuned for SUNMI hardware, providing end-to-end guided sales and voice services for shopping assistance and self-service scenarios. Centered on product recognition, Checkout AI supports recognition of products, passports, driver's licenses, faces, barcodes, license plates and other forms of recognition, enabling AI-assisted checkout and significantly reducing queuing and transaction time.

Solution Advantages

Built on a modular design concept, the solution can be flexibly configured to match the spatial layout, operational processes and brand identity of different business formats, achieving "one architecture for full-scenario coverage".

- **Diverse specifications for adaptability:** The FLEX 3 WIN series comes in three FHD display sizes – 18.5-inch, 21.5-inch and 27-inch (1920×1080 resolution, IPS panel, 400 nits brightness, capacitive multi-touch, anti-fingerprint coating), suited for desktop service, small-format self-service and hypermarket self-service scenarios respectively, balancing space efficiency and interactive experience.
- **Flexible deployment and expansion:** It supports desktop, floor-standing and wall-mounted installation, and works with various commercial peripherals such as card readers, scanners and printers with plug-and-play operation. No additional adaptation is required, reducing the complexity and cost of system integration.
- **Customizable brand identity:** It supports customization of decorative trims and light boxes to align with the in-store visual identity of different brands, helping enterprises create differentiated consumer experiences.
- **Full compatibility with legacy systems:** Running on Windows 11 IoT Enterprise LTSC, the enterprise-grade operating system, it is fully compatible with all types of Windows commercial software and existing business processes. Enterprises can acquire next-generation computing and AI capabilities without overhauling their core systems, so as to maximize the return on existing IT investments.

To address the management pain points of chain enterprises with cross-regional, multi-store operations, the solution establishes a three-tier management and security architecture spanning hardware, system and platform.

- **One-stop remote O&M:** Integrated with the SUNMI MDM Intelligent Management Platform, headquarters can realize unified, visualized management of devices across stores worldwide. It supports OTA batch system deployment and controlled automated upgrades, remote control, troubleshooting and training, as well as one-click backup and recovery. The POS Steward automatically performs hardware health inspections and accelerates fault diagnosis, greatly reducing labor and time costs for cross-regional operations.
- **Enterprise-grade security protection:** Equipped with a TPM 2.0 security chip, combined with system-level tamper resistance and end-to-end data encryption mechanisms, it builds three tiers of security protection to safeguard transaction data and user privacy. It complies with the EU GDPR and other major global data security regulations.

Deployment across Retail Scenarios

SUNMI's smart commercial solution has already been rolled out at scale in core business formats such as retail and F&B, providing replicable practices for operational transformation across different scenarios.

Large Supermarkets and Hypermarkets

In large supermarket and hypermarket scenarios, SUNMI FLEX 3 WIN serves as a self-checkout terminal, delivering a convenient self-shopping experience for consumers. It supports simultaneous scanning of multiple products and multiple payment methods including WeChat Pay, Alipay and bank cards. Powered by Intel AI computing and intelligent loss prevention algorithms optimized by the OpenVINO™ toolkit, it can detect abnormal checkout behaviors in real time, such as covered barcodes, unscanned items and failed scans. The high-performance hardware ensures smooth multi-task operation during peak hours, significantly cutting customer queuing time.



Figure 2. Use Case of SUNMI FLEX 3 WIN Series - Supermarkets

Chain Convenience Stores

Chain convenience stores are characterized by large store numbers, wide geographic distribution and 24-hour operation, placing extremely high demands on the stability and O&M efficiency of POS terminals. Used for manned checkout, SUNMI FLEX 3 WIN features a compact footprint that saves space, and is compatible with various convenience store peripherals. It supports both self-ordering and self-checkout, and runs 24/7 without interruption to meet the demand for unmanned overnight operations. Through the SUNMI MDM management platform, headquarters can perform unified device management and remote O&M across thousands of stores nationwide, shortening fault response time and significantly improving operational efficiency.



Figure 3. Use Case of SUNMI FLEX 3 WIN Series - Convenience Stores

High-end Specialty Stores (Apparel, Cosmetics, Luxury Goods)

High-end specialty stores have strict requirements for the industrial design of POS terminals and their alignment with brand image. The SUNMI FLEX 3 WIN series features an ultra-thin metal body with a premium aesthetic, perfectly matching the store decor of high-end brands and elevating overall brand image. It integrates membership management, product display and mobile payment functions, allowing shopping assistants to provide one-stop services such as product lookup, fitting registration, membership points accrual and personalized recommendations via POS terminals. Meanwhile, its enterprise-grade security system protects customer information and transaction data in compliance with global data security regulations.

Coffee and Tea Chain Stores

The coffee and tea industry is characterized by concentrated peak-hour orders and complex ordering processes. As a self-ordering kiosk, SUNMI FLEX 3 WIN supports voice and QR code ordering, allowing customers to place orders and make payments independently. This eases the pressure on staff during peak hours and reduces order errors. When used for checkout and order management, it processes large volumes of orders efficiently. In addition, its modular design facilitates rapid deployment and maintenance, adapting to the rapid expansion needs of coffee and tea brands.

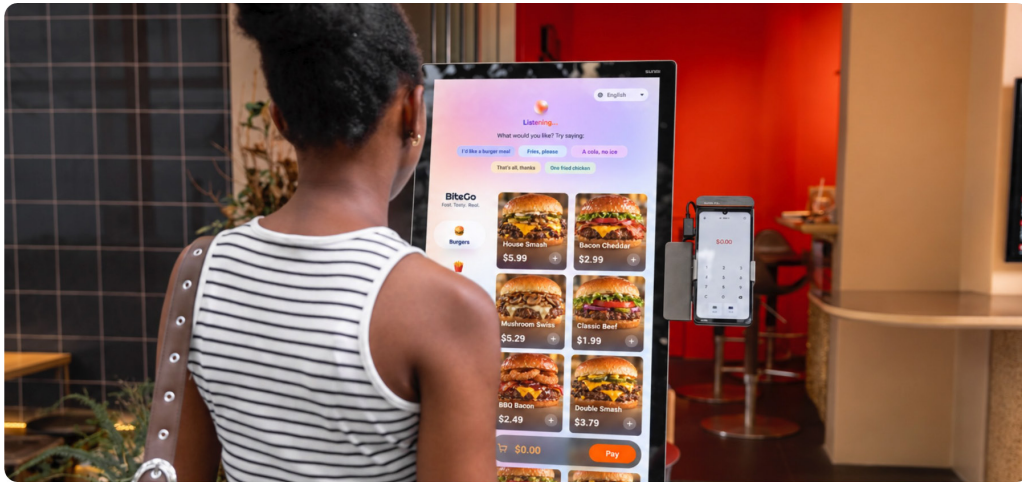


Figure 4. Use Case of SUNMI FLEX 3 WIN Series - Coffee & Tea Stores

Core Customer Value and Benefits

With its cutting-edge technology and outstanding performance, the solution delivers all-round value improvement for retail enterprises:

- **Comprehensively improved operational efficiency:** High-performance processors and an optimized system architecture help boost per-store checkout efficiency and reduce average checkout wait time.
- **Significantly reduced total cost of ownership:** Self-service terminals greatly divert customer flow, reduce the number of manned checkout counters, and cut labor costs. Meanwhile, the modular design combined with remote O&M functions lowers equipment maintenance costs and associated labor expenses.
- **Enhanced data security and compliance:** Three tiers of security protection – TPM 2.0 security chip, system tamper resistance and data backup – fully safeguard transaction data and user privacy. It complies with global data security regulations such as the EU GDPR and North American PCI DSS, helping retail enterprises mitigate compliance risks.
- **Elevated brand image and consumer experience:** Premium industrial design enhances the overall visual image of stores, boosting brand recognition and consumer preference. Smooth touch interaction and convenient self-service deliver a better shopping experience, improving customer satisfaction and repurchase rates.

Future Outlook

AI's reinvention of physical commerce has just begun, and next-generation computing capabilities will continue to penetrate a wider range of operational scenarios. Looking forward, SUNMI will further deepen its technological cooperation with Intel. This includes continuously iterating edge AI capabilities to optimize more retail AI applications – such as intelligent footfall analysis, product merchandising optimization and consumer behavior insights – based on Intel's next-generation processors and the OpenVINO™ toolkit. It further encompasses expansion into more industry scenarios by replicating proven commercial computing solutions in F&B, hospitality, healthcare and other physical sectors, bringing next-generation computing to more business formats. In addition, it covers collaboration with global ecosystem partners to continuously refine the smart commercial facility ecosystem, providing enterprises with richer, more business-relevant digital-intelligent tools.

Intel will also continue to leverage its full-stack technological strengths from cloud to edge. Collaborating with ecosystem partners including SUNMI, Intel will help guide the global physical commerce industry toward a new AI-driven phase in a smooth, efficient manner, while delivering smarter, more convenient commercial experiences for end consumers.

About SUNMI

SUNMI is a world-leading provider of Business IoT (BIoT) terminals and solutions. We empower businesses with technology to make commerce smarter worldwide, and maintain a comprehensive portfolio of commercial terminals covering checkout, self-service, printing, payment and more. Our products are available in over 200 countries and regions globally. Driven by independent innovation, SUNMI boasts robust R&D capabilities and a complete supply chain system, delivering customized digital solutions for customers across diverse industries and of all sizes.

About Intel

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to newsroom.intel.com and intel.com.



Performance varies by use, configuration and other factors. Learn more at www.Intel.com/PerformanceIndex

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure.

Your costs and results may vary.

Intel technologies may require enabled hardware, software or service activation.

Intel disclaims all express and implied warranties, including without limitation, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement, as well as any warranty arising from course of performance, course of dealing, or usage in trade.

Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

© Intel Corporation. Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.