

Solution Brief

HP Workforce Experience Platform
Intel vPro®



Resilient Retail Operations through Out-of-Band Remote Remediation with HP Workforce Experience Platform (WXP) and Intel vPro® Platform

HP and Intel join forces to deliver secure, revolutionary remote management and remediation with the HP Workforce Experience Platform (WXP) and Intel vPro® technology supporting business continuity for retail operations.

Retailers face mounting pressure to deliver seamless customer experiences while reducing costs and maintaining operational resilience. Every hour of downtime can significantly impact revenue, and erode customer trust, yet traditional in-band IT tools often fail when devices are unresponsive, forcing costly on-site interventions and prolonged outages.

HP and Intel have partnered to address this challenge with the out-of-band management capabilities of HP Remote Connect¹. Powered by Intel vPro® technology, out-of-band management is natively integrated into the HP Workforce Experience Platform (WXP)², HP's centralized hub for holistic workforce experience management across the device ecosystem. This unified solution developed by HP and Intel integrates advanced hardware-based remote manageability, secure cloud connectivity, and an intuitive software layer. It allows IT Teams to drive down costs through AI-powered analytics, actionable insights and proactive control across the entire employee device ecosystem. With the addition of HP Remote Connect to WXP, IT teams are better equipped to support the management of devices remotely with proactive device maintenance and streamlined support - even when the OS is down.

Using Intel® Active Management Technology (Intel® AMT), a feature of Intel vPro, IT teams can now securely access retail devices (including PCs and POS systems) below the operating system through encrypted connections. The power of this remote management capability is amplified by WXP's intuitive platform interface, as IT can remotely run BIOS-level diagnostics, apply firmware updates, initiate re-imaging, and remotely power cycle devices directly from the WXP console. This eliminates the need for in-store intervention, reduces downtime, and accelerates issue resolution. This cloud-based licensed software solution is further enhanced by its strong security with 256-bit encryption, GDPR compliance, and robust access controls.³

By combining HP WXP's focus on powering intelligent retail operations with Intel's platform security focus, retailers gain a scalable, resilient solution that minimizes disruption, optimizes IT resources, and supports exceptional customer experiences.

Retail at a crossroads

Today, the demand for retailers to deliver cohesive solutions that integrate exceptional customer experiences, operational excellence, and innovation has never been greater. Shoppers expect seamless interactions across physical and digital channels, while generative AI sets new standards for personalization.

At the same time, the need to reduce costs and gain an edge through new operational efficiencies in the competitive retail industry is constant. Every moment of in-store downtime of a POS system translates into a diminished customer experience and potential lost revenue that is needed to innovate and grow.



Business impact of downtime

The stakes could not be higher. A recent Retail Touchpoints study polled 100 U.S. convenience store managers and found that their C-stores lose approximately \$855 per hour when a point-of-sale (POS) device goes down in a single store.⁴

What makes this number even more pressing is that **87 percent of retailers report waiting for up to five hours or more** for support. Maintaining flawless in-store operations is no small feat, especially when a single misstep in IT systems can disrupt countless aspects of the shopping experience.⁵

The frustration builds quickly when standard in-band IT management tools are unable to address deeper device maintenance and support issues. As a result, stores are left trying to troubleshoot problems they don't fully understand, often guided over the phone through complex instructions and diagnostics in an attempt to restore downed devices.

Why current solutions are not working

Meanwhile, for IT teams, the day-to-day management challenges of today's retail are daunting. The diversity of POS hardware, software, and operating systems across multiple locations leads to continuous pressure on IT support helpdesks that cannot respond fast enough.

Inventory management of POS systems and peripherals across distributed locations is also complex, time-consuming, and error-prone, and maintaining security and compliance is critical given the sensitive customer data handled by today's POS systems. General maintenance and troubleshooting are further challenged by the need to support large, distributed multi-vendor fleets, often without on-site IT staff.

These challenges are compounded by the limitations of traditional in-band support tools, which cannot access diagnostics and remediate unresponsive devices at the BIOS level, as they rely on standard network channels to gain access and control at the OS level. The upshot is often costly onsite manual interventions.

To address this, IT professionals are looking for responsive and comprehensive in-band and out-of-band remote support toolsets that are integrated into a unified platform. These solutions must also ensure compliance to help mitigate escalating security and privacy risks.

The breakthrough: A unified solution for fast and powerful remote support

To address the business-critical demands of today's dynamic retail environment, engineers from Intel and HP collaborated closely to create a transformative integrated solution that combines workforce experience management with WXP from HP, and the Intel vPro® Platform. This unified solution brings together cutting-edge Intel vPro technology for secure out-of-band remote management with the insights and proactive control of WXP across today's multi-vendor employee device ecosystem. The value for retail customers is that the solution unifies retail associates, customer experience, operations, and IT needs into one intelligent, orchestrated solution, enabling retailers to ensure every lane in every store is fully operational. The Workforce Experience Platform (WXP) serves as the unified, cloud-based endpoint experience management platform that connects device (PCs and POS systems) and peripherals telemetry, diagnostics, and remote remediation into consistent workflows for IT teams.



With the out-of-band management of HP Remote Connect, IT Teams gain access to Intel's encrypted cloud connection and Intel vPro components via an intuitive software platform. In just a few simple clicks, IT support agents can establish a secure connection at the BIOS level with Intel AMT to fix POS device issues remotely—even if the OS is down or unresponsive.

In the future, Intel and HP plan to extend their collaboration with WXP to give IT Administrators the ability to force a power-off using a virtual long-button hold (while maintaining complete control through every power cycle) for unattended POS systems, and even initiate a re-image to help recover a POS system without the need for any in-store human intervention.⁶

Intel vPro®: Powering smarter retail device management

Intel AMT forms the foundation of Intel vPro's out-of-band capabilities. The management engine maintains network connectivity even when the system is powered off or the OS has crashed, enabling WXP to access and control systems regardless of OS state. Operating on an independent network stack separate from the host operating system's network layer, Intel AMT ensures network communication with the management platform remains functional even when the primary OS network stack has failed or becomes compromised. Through this connection, administrators can perform diagnostics, execute recovery procedures, and monitor system health.

Key Intel® AMT out-of-band management capabilities

Hardware-based KVM Remote Control

Intel AMT includes KVM (Keyboard, Video, Mouse) functionality, enabling remote screen viewing and system control as if the helpdesk user were physically present at the device. Unlike software-based remote desktop tools that require a functioning operating system, hardware KVM operates at the Basic Input/Output System (BIOS) level and, during boot processes, enables administrators to access BIOS settings, select boot options, and diagnose hardware issues without traveling to the site.

Out-of-Band Power Management

Remote power control enables system power-on and reset from a central management console, providing capabilities that range from powering on systems for scheduled maintenance windows to performing forced resets when systems become unresponsive. Administrators can execute graceful shutdowns to prevent data corruption or reboot systems directly into BIOS for configuration changes. These power management capabilities reduce the need for physical intervention, allowing systems to be maintained and recovered remotely.

Hardware Alarm Clock

Intel vPro platforms include a hardware-based alarm clock that operates independently of the operating system, enabling administrators to schedule automatic system power-on at predetermined times. This capability supports maintenance windows by ensuring systems power on during off-hours for patch management, software updates, and system maintenance. The hardware alarm clock functions even when systems are fully powered off, providing reliable scheduling for distributed POS deployments where manual intervention is impractical.

Hardware-rooted protections for PCI-DSS compliance

Security and compliance requirements are an important aspect of the POS management challenge. Payment Card Industry Data Security Standard (PCI-DSS) compliance for POS systems mandates protection of cardholder data during both storage and transaction processing. These compliance standards increasingly specify hardware-level protections that software-based security alone cannot provide. Payment card industry audits examine both data protection mechanisms and threat detection capabilities to ensure comprehensive security measures are in place. Intel vPro platform integrates hardware-based security capabilities leveraged by HP Engage devices to meet these requirements while maintaining the performance characteristics necessary for transaction processing environments.

Intel® Total Memory Encryption (Intel® TME)

Intel TME encrypts system memory using a dedicated AES encryption engine that operates transparently without requiring application changes. For POS systems, Intel TME protects against physical memory attacks where adversaries attempt to read cardholder data directly from memory chips. By performing cryptographic operations through dedicated encryption engines rather than software implementations, Intel TME remains resistant to OS-level compromise.

Intel® Threat Detection Technology (Intel® TDT)

Intel TDT leverages hardware telemetry and AI to detect advanced threats that traditional signature-based antivirus solutions may miss. By monitoring system behavior through hardware telemetry, Intel TDT identifies anomalous activity patterns characteristic of malware attacks. This approach offloads detection workload from the main processor, enabling robust security monitoring without impacting system responsiveness during high-volume transaction periods. Operating independently of the host operating system, Intel TDT ensures monitoring continues even when the OS has been compromised.

Versatility for maximum utility

The HP Remote Connect solution allows IT teams to seamlessly switch between in-band and out-of-band management to remotely validate, repair, and remediate devices. The feature is available for any Intel vPro-enabled device, regardless of vendor. This includes HP's industry-leading Engage hardware solutions and other Intel vPro-enabled devices to create a complete multi-vendor remote management software solution.

Use cases for Out-of-Band Management with HP Remote Connect

1. **POS device crashing and not booting to Windows.** IT support agents can remote into the POS terminal to investigate the problem.
2. **Boot error confirmation.** IT Support agents can see the POS system while it is booting and confirm the error, enabling them to understand the situation and take the next steps.
3. **Run hardware diagnostics.** In BIOS, IT Support can run diagnostic tools to quickly diagnose the issue and provide a remediation plan.
4. **System restore options.** If diagnostics indicate that the hardware is fine, IT can recover the POS system using Windows Recovery or reimage options.
5. **Hardware failure identification.** If diagnostics indicate a hardware issue, IT can identify the faulty part, such as the processor, memory, storage, power, system motherboard, or keyboard. This enables IT to be proactive and order the necessary parts before conducting a desk-side visit.
6. **Firmware updates.** The IT agent can perform system and device firmware updates to fix bugs and improve system stability.
7. **Network boot and external images.** IT can boot the POS system from the network or from external images to run hardware tests without changing the operating system.

Results that matter for retailers

The joint solution from HP and Intel helps retailers dramatically reduce POS downtime by enabling IT teams to fix devices remotely, even when the operating system is unresponsive.

Reduced Complexity and Cost

The native integration of **Intel vPro** into **WXP** allows IT teams to execute advanced hardware commands—such as boot-to-BIOS, power cycles, and diagnostics—directly from the WXP dashboard. By eliminating the need for secondary interfaces or dedicated on-premises infrastructure, this cloud-based service significantly reduces operational complexity and costs. IT teams gain high-level control through a simplified, consumable software license without the overhead of managing a separate environment.

Accelerated Remediation and Improved Customer Experience

By allowing instant remediation through the WXP platform, the solution accelerates issue resolution and eliminates long waits for on-site support. This shift not only reduces lost revenue and improves customer experience but also cuts operational costs by eliminating the need for costly in-store interventions and manual troubleshooting. Retailers can centrally manage diverse, multi-vendor POS fleets, as all Intel vPro-enabled devices are supported within WXP's unified platform.

Actionable Insights and Robust Security

Beyond recovery and cost savings, the solution strengthens operational insight and control. WXP integration enhances inventory management and analytics, giving IT teams visibility and actionable intelligence across all POS assets. Intel vPro's encrypted cloud connections, 256-bit encryption, and GDPR compliance help protect sensitive customer and business data. The platform also enables proactive maintenance through coordinated hardware, software, and cloud-based services.

Increased Employee and IT Productivity

IT teams can rapidly identify faulty components and order parts in advance, reducing repair times and minimizing disruption. By simplifying support workflows, reducing frustration, and enabling faster recovery from technical issues, the solution boosts both employee and IT productivity while helping retailers maintain consistent, high-quality store operations.

Conclusion

HP and Intel's collaboration—combining the HP Workforce Experience Platform with Intel vPro capabilities—empowers retailers to overcome the challenges of today's fast-moving retail environment and ensure business continuity.

By enabling secure, remote, out-of-band management, diagnostics, and recovery for POS systems, this solution, which integrates hardware, software, and services, is an industry-first that minimizes downtime, reduces operational costs, and enhances both IT and customer experiences. Retailers gain the agility, security, and efficiency needed to deliver seamless service and drive future growth.

HP is the first service provider to offer this level of remote diagnosis and repair through an easily accessible software platform.

To learn more, contact your HP or Intel representative.

You may find the following resources helpful:

[WXP for Retail home page](#)

[HP Premium+ Support home page](#)

[HP Retail & Industry Solutions](#)

[Intel vPro®](#)

[Intel® Core™ Ultra Processors](#)

[Intel® Core™ Processors](#)



Notices & Disclaimers

¹HP Remote Connect is available as a license in varying term lengths and is vendor-agnostic for any PCs that are Intel® vPro® Enterprise and Intel® AMT enabled. Includes and requires Workforce Experience Platform Starter to administer and manage the software solution. Available in US, Canada and EU from HP representatives or HP-authorized resellers. HP Sure Recover and Remote Connect are not compatible. HP commercial platforms beginning with the EliteBook X G2x series forward are expected to be compatible.

²The Workforce Experience Platform (WXP) is available in various tiers and for multiple term license durations, and some features require optional add-on solutions. WXP is for commercial customers and some features and capabilities may require additional purchase of HP services and/or commercial hardware capable of supporting the HP Insights agent for Windows, Mac, & Android. WXP is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Activation and restrictions may apply. Select HP solutions require an HP Insights agent for Windows, Mac, & Android, available for download at <https://workforceexperience.hp.com/software>. For full system requirements and services that require the agent, please visit <https://workforceexperience.hp.com/requirements>. The agent collects telemetry and analytics around devices and applications that integrate into the Workforce Experience Platform. Internet access required. WXP Collaboration license required for audio and video collaboration technology monitoring. HP Anyware license or compatible third-party virtual machine license required for virtual machine monitoring.

³WXP Starter is included and required to administer and manage the software solution.

^{4,5}Riverstrong, 2025, What is the Cost of Downtime, <https://www.riverstrong.tech/post/what-is-the-cost-of-downtime>

⁶HP Out-of-band Remote Connect utilizes Intel® Active Management Technology (Intel® AMT), a feature of Intel vPro, and requires user consent for remote control features like KVM (keyboard, video, mouse) redirection. Unattended mode currently not supported. This document contains forward looking statements regarding future operations, product development, product capabilities and availability dates. This information is subject to substantial uncertainties and is subject to change at any time without prior notification. Statements contained in this document concerning these matters only reflect HP Inc's predictions and or expectations as of the date of this document and actual results and future plans of HP Inc. may differ significantly as a result of, among other things, changes in product strategy from technological, internal corporate, market and other changes. This is not a commitment to deliver any material, code or functionality and should not be relied upon in making purchasing decisions.

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

Performance results are based on testing by Intel and may not reflect all publicly available security updates. See configuration disclosures for 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.

All versions of the Intel vPro® platform require an eligible Intel processor, a supported operating system, Intel LAN and/or WLAN silicon, firmware enhancements, and other hardware and software necessary to deliver the manageability use cases, security features, system performance, and stability that define the platform. See <https://www.Intel.com/Performance-vPro> for details.

Remote management requires a network connection; must be a known network for Wi-Fi out-of-band management. See intel.com/vpro for details. Results may vary.

Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries.