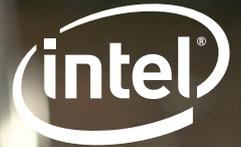


SOLUTION OPPORTUNITY BRIEF

Intel IoT
Intelligent Vending



BUILDING SMART VENDING INTO THE HEART OF MACHINES

Intel collaborates to revolutionize vending with a single piece of hardware that consolidates workloads and speeds deployment of smart machines

The black box consolidates workloads and management onto a single platform, while providing a cloud-based foundation for valuable real-time data analytics.

A Dramatic Makeover for Vending

Most of the vending machines in today's break rooms, shopping centers, and airports look and act the same as they did decades ago—and are being rendered obsolete by new services that deliver on consumers' rapidly changing demands. Now, the International Vending Alliance (IVA) and Intel have developed a smart "black box" solution that quickly upgrades vending machines. The box delivers the technologies and cloud-based data analytics that lead to incredible customer experiences, more efficient management, and faster response times to diverse consumer preferences.

"To compete, the vending industry needs to rethink how machines operate and how data can be used to drive sales. The IVA's goal is to help our members overcome the technical obstacles," said Martijn van den Hazenkamp, CEO of IVA.

The box, powered by Intel® vPro™ processors, reduces development time and costs for manufacturers who want to enable new features, such as cashless payment, touch screens, online monitoring, and more. With network connectivity from Jersey Telecom (JT), the black box was expertly designed to meet the competitive needs of manufacturers, consumer brands, and fleet operators.

Vending Faces New Competition

While other retail sectors have embraced digital as a means to improve operations and customer engagements, the vending industry has remained largely unchanged over the last 25 years. Meanwhile, customer expectations have exploded. They want flexible, convenient ways to pay for purchases; smooth interactions enabled by touch screens; and immediate access to their desired products.

"Manufacturers have been eager to incorporate new features, but they've struggled with hardware-based machines that are largely siloed and have varying protocols," said Joe Jensen, worldwide VP and general manager for retail solutions at Intel. Many attempts to enhance telemetry, management, and payment have only resulted in frustration, as solutions fail to rework the core of the machine.



The IVA has grown increasingly concerned about the vending industry's decline, especially as sales are lost to new concepts, such as micromarkets that offer touch screen kiosks and a convenience store-like selection of products. As the largest vending network in the world, the IVA includes 82 providers that operate more than 1.7 million machines in 70 countries. In 2013, the group approached Intel to explore how solutions enabled by the Internet of Things (IoT) could help the vending industry rise to meet customer expectations.

Redesigning the Machine's Core

Together, Intel and the IVA designed a new smart vending black box—a unit that consolidates multiple hardware-based workloads onto a single, software-defined platform. The cloud-based solution enables a wide range of new features, including:

- Immediate product and campaign data analytics
- Remote management with online monitoring and diagnostics
- Cashless payment options
- Touch screen solutions
- Interactive digital signage
- New customer loyalty technology

These features help fleet operators and consumer brands tighten up supply chains, sell more product, and reduce losses related to overstocking. They also open new paths to revenue for fleet operators, with more opportunities to learn from data and to package that data so that brands can better market to consumers.

A Better Vending Solution Means Everyone Wins

Consumer Packaged Goods Brands

Conduct smarter and more effective marketing with immediate campaign feedback and details about product performance.



Vending Operators

Use real-time performance data to stock and sell the most popular products. Reduce truck rolls and other operational costs with machines that can be managed remotely and deliver predictive maintenance data.

Vending Management Service Providers

More easily build innovative, cloud-based applications that leverage data with a foundation built on Intel® technology.



Machine Manufacturers

Get to market faster and reduce engineering time with a box that's easy to build into new or existing vending machines.

With a cloud-based black box solution that's easy to integrate, manufacturers can help operators offer more payment options and just the right products.



Offer new experiences

- Enable cashless payments via smartphone and NFC
- Offer a greater variety of products
- Let customers make selections on digital touch screens
- Offer a smartphone app so machines can communicate with customers through beacon technology
- Target advertising to end customers with interactive screen technology

Accelerate time to smart machines

- Reduce engineering time and get to market faster
- Consolidate multiple discrete workloads onto one scalable platform

Improve manageability and security

- Gain better visibility into the quality of dispensing mechanisms
- Monitor temperature for machines that serve hot or cold beverages
- Perform proactive maintenance instead of reacting to machine failures
- Reduce the number of truck rolls and miles driven
- See which items are popular and ensure machines are fully stocked
- Save money with online monitoring and diagnostics

Flexible Platform, Strong Connectivity

The black box is based on the Intel® vending reference platform—a secure, flexible architecture that streamlines systems and protocols. The box replaces the standard microprocessor in a vending machine with an Intel®-based PC platform that makes the machine smart.

For high performance and secure remote management, the platform employs Intel vPro technology. It also includes a cloud-based fiscal compliance solution based on Intel® technology to manage the collection of value-added tax (VAT).

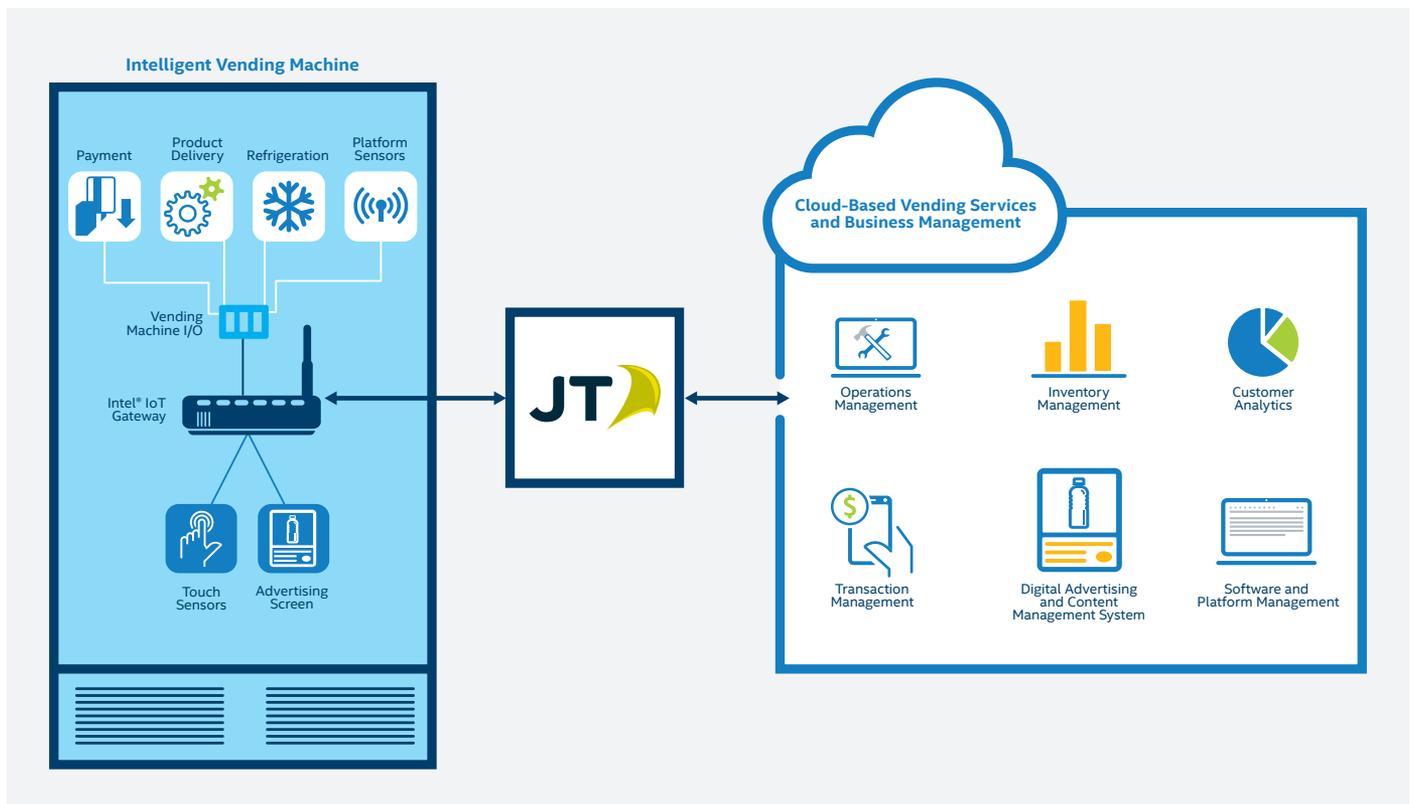
Because the solution required a strong machine-to-machine connectivity layer and support for a global rollout, JT was selected for its world-class network and services. A SIM management platform works with all major telecom providers and provides real-time connectivity status and dynamic control. JT offers IVA members the option to lease the black box solution, empowering a shift toward business models that enable faster refresh cycles and speed time to market.

Rethinking Retail

Customer expectations are changing—and retail technology is changing in response. Intel® technology makes it easier for customers to find what they want, when and where it suits them. It also gives retailers a flexible foundation for better inventory tracking, smarter use of data, and the frictionless experiences that build brand loyalty.

- **Mobile solutions**, including ruggedized tablets and kiosks, empower sales associates with vital knowledge and help customers find product information while shopping.
- **Digital signage and vending solutions** help retailer's present customized offers and showcase products.
- **Omnichannel solutions**, like Intel® Retail Client Manager, deliver a consistent experience across a growing number of channels.
- **Data-driven solutions**, including sensors, beacons, gateways, servers, and analytics programs, collect and analyze real-time data for valuable insights.
- **Security solutions** help protect retailers against growing malware threats.

BLACK BOX PLATFORM



Technology for Competitive Vending

With a smart black box from Intel, the IVA, and JT, vending is now poised for a dramatic makeover. Manufacturers can bring valuable new features to market faster, while fleet operators and brands can better compete with improved telemetry and more efficient operations. Best of all, vending will offer amazing experiences customers will love and turn to time and time again.

Learn More

For more information or to order the black box solution, visit jtm2m.com or ivavending.com.

To learn more about JT, visit jtglobal.com.

See other Intel vending solutions at intel.com/vending.

To learn more about IVA, visit ivavending.com.



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