Intel® Identity Protection Technology and MasterPass™ by MasterCard® Deliver a Great Shopping Experience

Developed to make the online shopping experience faster and more convenient, new technologies from Intel and MasterCard also deliver strong identity protection. Consumers expect everyday activities—such as conducting bank transactions, purchasing goods, interacting with government sites, and communicating with friends and colleagues—to be simple, seamless, and safe. Toward this end, MasterPass by MasterCard and Intel® Identity Protection Technology (Intel® IPT) strengthen consumer confidence and streamline online activities. MasterPass stores payment credentials in a convenient digital wallet that works across multiple sites and supports multiple cards. Intel IPT helps protect the privacy of each transaction, using hardware-based authentication. Combined, these technologies deliver a great online shopping experience and offer opportunities for online merchants and organizations to improve consumer confidence and trust.

Media coverage of computer fraud, privacy breaches, and security flaws has made many consumers sensitive to the dangers of conducting transactions online. Online merchants and organizations realize that establishing a secure environment and building trust are vital to persuading consumers to shop online and share personal information. The end-to-end solution from Intel IPT and MasterPass establishes a shopping environment that is uncomplicated, accessible, and oriented to consumer needs.

Making Shopping Easier

Online shopping gives consumers tremendous access to products from all over the world, but difficult, convoluted checkout processes discourage many shoppers and often provide an annoying, uncomfortable conclusion to an online purchase. With MasterPass, MasterCard applied expertise in online and retail payment techniques to craft a solution that makes checkout significantly easier, in some cases as simple as a single tap. MasterPass also features the flexibility to incorporate the cards, computing devices, and financial tools that consumers favor into a single, time-saving approach.

Too frequently, security is an afterthought in online shopping, placing a burden on consumers. To confirm their identities, consumers often have to receive an SMS message with a passcode, answer additional security questions, or quickly type in a number that is generated by an external token. The beauty of Intel IPT-enabled solutions is that the security features are internal to the hardware and automated, providing all the strengths of two-factor authentication without the need for consumers to perform a series of tasks for the log-in process.

Intel IPT provides additional protection by confirming both the identity of the site being accessed (for the consumer) and the individual logging in (for the site operator). Once mutual trust has been established, a transaction can be completed or site access can be granted. MasterPass uses these Intel IPT technologies, which are embedded within the computer hardware, to make shopping faster and easier, with improved levels of security.

“Every device is becoming a shopping device. MasterPass brings together all of the ways we pay for things, from traditional plastic cards to digital wallets, and gives consumers the ability to make a payment from wherever they are and with one simple experience.”

- Ed McLaughlin, Chief Emerging Payments Officer, MasterCard

MARKET PERSPECTIVE
Intel IPT and MasterPass by MasterCard
Combining Technologies for a Complete Solution

Working together, Intel and MasterCard have created an efficient, reliable way to enhance online shopping, as well as a means to offer the strong security that consumers expect to protect privacy and personal assets. At Barcelona Mobile World Congress 2013, Ed McLaughlin, chief emerging payments officer of MasterCard, announced the release of MasterPass. “MasterPass is basically MasterCard beyond plastic,” he said. “What it will enable you to do is: from your handset, from your PC, from your tablet, from your wearable computer of the future, bring all of your payments together.”

“If you think about it,” he continued, “it is the ability to make transactions in all sorts of new shopping experiences. So when I want to tap & go to get off a taxi or on to a transit system, if I’m in the aisle of my favorite store and I just want to use the camera to make a purchase and have it shipped home, at my desk at work, from my sofa at home, MasterPass makes transactions happen in all those environments.”

Intel and MasterCard have been collaborating for nearly two years on refining and enhancing e-commerce transactions. George Thangadurai, general manager of PC Client Services Division at Intel, said, “Online commerce is a key focus area for Intel, and through this partnership with MasterCard, we intend to deliver an innovative, personalized, and safer e-commerce experience to consumers.”

Built-In Security

The Intel and MasterCard collaboration has resulted in the development of a wide range of devices that are essentially preconfigured for use with MasterPass and Intel IPT. The rollout of 4th generation Intel® Core™ processors has inspired the design of modern computing machines with these built-in capabilities, including an extensive range of Ultrabook™ devices, all-in-one computers, 2-in-1 devices, tablets, and powerful desktop workstations.

All Ultrabook devices and PCs with the latest Intel Core processors have the basic mechanism of Intel IPT for two-factor authentication—an identity protection measure recommended by many security professionals—embedded in silicon. Websites, businesses, and organizations equipped with support for Intel IPT can automatically use this technology to validate the identity of users logging in. Because this technology is tightly integrated with MasterPass, consumers linking to MasterPass-connected wallets gain an additional level of protection from the built-in hardware security.

The overall benefit of the solution is a better shopping experience for all the transactions consumers typically use today, providing new ways to shop for everything from paying for a theater ticket to using online purchase links embedded in a favorite app. The evolution from plastic to digital is well underway.

Intel IPT Streamlines Two-Factor Authentication

One of the major benefits of combining MasterPass with Intel IPT is that it takes advanced, sophisticated security practices and makes them a nearly invisible part of online transactions, handling two-factor security exchanges automatically without involving the consumer in tedious or repetitious tasks.

The term two-factor authentication, while sounding like geeky jargon, is really very simple. Instead of relying on just one factor—such as a username and password—to access an account, two-factor authentication requires two separate forms of identification. These factors are often described as something you know (such as your username and password) and something that you have (such as a hardware token). In the case of Intel IPT, that token is physically part of the hardware of all recent Intel Core processor-based devices. Security code runs in a tamper-resistant region outside the operating system (which isolates it from many common hacker attacks). This establishes a bond between the individual user and the computer so that if a hacker somehow steals a user’s private information, such as a username/password combination, the information is unusable. Without physical possession of the user’s computer, log-ins cannot be accomplished.

Sites that have been enabled for MasterPass and Intel IPT recognize the availability of the technology during the login process and can automatically begin the communication that authenticates the user. This begins with the site sending a seed number to the computer that is attempting the log-in. Upon receiving the seed number, the Intel IPT-enabled device generates a six-digit, time-based passcode. The passcode is sent to the site to be accessed and it is valid for approximately 30 seconds, during which time the identity of the user logging in can be positively authenticated.

Because performing the two-factor authentication requires both a username/password combination as well as the actual computer associated with the user’s account (which generates the unique passcode), hackers are rebuffed if they try to log in from a different computer.
The result is that strong security is provided in a nearly invisible way that doesn’t detract from the shopping experience. By integrating MasterPass software with the hardware protection of Intel IPT, consumers gain assurance that their privacy is being guarded at the same time as security is being enhanced. The additional protection is also invisible to anyone who attempts to hijack a user’s private information.

**Benefits of Near-Field Communication**

One of the most time-consuming aspects of online shopping is being required to physically enter personal information and shipping details to complete a transaction. With tap & pay™, MasterPass and an Intel IPT-enabled device with near-field communication (NFC) provide any required data to the merchant with a single tap. Tapping a MasterCard contactless payment card or similar device on an Intel IPT-capable computer that is equipped with NFC triggers authentication and provides consumer information using an encrypted exchange with the issuing bank and e-commerce vendor. This level of security is equivalent to a *card-present transaction*, and this mechanism minimizes the risks of fraud. As an added advantage, consumers gain the capability to load new cards into their MasterPass-connected wallet through a single tap.

This technology is currently available to owners of select Ultrabook devices and is increasingly being designed into other computing devices, including smartphones. As more vendors and services adopt this technology, MasterPass users will be able to tap into an expanding range of streamlined purchase channels anywhere that MasterPass is accepted, providing a shopping experience that is safer and designed for consumer convenience.
Getting Started with MasterPass™ by MasterCard®

Consumers can sign up for the free MasterPass service as a part of the checkout process wherever the "Buy with MasterPass" button appears. Optionally, MasterCard offers a page for creating new accounts: the MasterPass Account Registration page. Anyone who already has a MasterCard can register for MasterPass using their current log-in information. As a part of the MasterPass registration process, you have the option of having MasterCard remember your personal device. If you select "Yes" and you are using an Intel IPT-enabled computer, the bond between the Intel IPT security mechanisms and MasterPass is established.

Once MasterPass stores an individual's favorite cards and shipping addresses, checkout from online stores is a simple matter of signing in to MasterPass. The rest of the details are handled through the digital wallet. With NFC, a single tap provides seamless checkout with the built-in encryption and protections equivalent to a card-present transaction.

An Ideal Approach to Safe and Secure Shopping

By combining the advanced silicon-based security features of 4th gen Intel Core processors with the trusted digital services provided by MasterPass, consumers can enjoy a positive, safer shopping experience built around ease of use, convenience, and privacy. Opportunities are expanding for consumers who want to use this technology as well as retailers and organizations that plan to offer it to customers. Projections indicate that by the end of 2013, hundreds of millions of Intel IPT-enabled devices will be active in the market, creating a thriving user base for this service.

The stellar functionality introduced with 4th gen Intel Core processors now encompasses a wide range of the latest computer device types, including all-in-one computers, tablets, and all of the Ultrabook devices now on the market. As MasterPass gains momentum, support for this streamlined approach to shopping is quickly gaining ground, winning over whole new generations of consumers who appreciate the twin benefits of convenience and enhanced security.

For more information about MasterPass by MasterCard, visit: https://masterpass.com/Wallet/Home

For a list of devices that support Intel IPT, go to http://ipt.intel.com/Home/devices-with-intel-ipt