Intel Security and Empathy Team up to Improve Retail Payment Security

Industry leaders embed security into world-class, business-oriented payment device.

Securing business-to-consumer retail transactions is an ongoing battle. Recent breaches at US retailers Home Depot and Target Stores highlight the serious risks, including the loss of consumer confidence, trust, and satisfaction. In addition to alienating customers, retailers that suffer a security breach may face tough scrutiny by the press, regulatory bodies, and investors. To date, most payment-system OEMs have relied on retailers—who often have limited IT and security resources—to secure their devices.

Forward-thinking OEMs are seizing this opportunity and differentiating their products by designing advanced security capabilities into their devices. Discover how payment-system OEM Empathy has partnered with Intel® Security to solve this pressing issue.

Two Industry Leaders, One Common Goal

Intel Security offers an unmatched portfolio of security technologies for information technology and a 30-year history of securing the world's most demanding digital environments. To that end, Intel Security is partnering with system manufacturers and OEMs to embed leading-edge security technologies into all types of devices. For the past decade, Tokyo-based Empathy Co. Ltd. has developed payment devices, applications, and mobile payment solutions. Empathy believes that maintaining security should be the top priority for any company that accepts customer payments. That's why Empathy has partnered with Intel Security to secure its new line of all-in-one, business-oriented mobile payment devices.

Secure, Rugged, and Versatile Payment Devices

Empathy has created a business-oriented, high-performance payment device with integrated MSR, IC Card Readers, and NFC readers/writers as standard equipment. These highly versatile mobile payment devices run Windows Embedded 8.1, are powered by Intel® Atom™ processors, and include McAfee Embedded Control software to ensure a new level of device integrity and security. Empathy payment solutions have received certification for PCI DSS Version 2.0, ISMS (ISO/IEC 27001) and, Pivacy Mark (JIPDEC).

The Solution at a Glance

- **Built-in security** by integrating McAfee® Embedded Control software into Empathy's EM10 and EM08 mobile payment devices to prevent access by unauthorized applications and code, making the devices malware and tamper-resistant.

- **Multipayment** capability allows these devices to accept Contact IC cards, Contactless IC cards, magnetic stripe reader (MSR) cards, and FeliCa contactless IC cards.

- **Dynamic whitelisting** ensures that only authorized, trusted software is permitted to execute on the device. This low-overhead solution only requires marginal use of the device's CPU resources.

(intel) Security

Empathy's EM10 and EM08 mobile payment devices complement the company's suite of ASP/Software-as-as-Service (SaaS) programs for:

- EM+CARDs point-card system service for reward points, coupon, and prepaid.
- Credit Payment services for VISA, MasterCard, American Express, Diners Club, Union Pay, RAKUTEN, and TS3.
- Point of Sale (POS) for a real-time and mobile service.
- Booking services including reservation/booking for restaurants, taxis, sports gyms as well as shuttle and taxi network service.

Image 1. Empathy's highly secure payment devices are available in rugged eight-inch and 10-inch tablets. Devices are equipped to read MSR cards, IC Cards, and include an NFC reader/writer, wireless LAN, wireless WAN, and Bluetooth capabilities.

According to Empathy CEO, Yoshihiro Azuma, "Our EM10 and EM08 bring convenience and efficiency to any business that accepts credit card payments by offering secure payment transactions using an unprecedented number of payment options. Many system development companies ask their clients to implement security measures. At Empathy, we believe in delivering a secure solution to retailers. That's why we focus on the applications as well as secure, reliable products to shield retailers and customers from risk. With McAfee Embedded Control, we can help ensure that electronic payments and customer data remain secure on our devices."

McAfee Embedded Control Software: Bringing Security, Control, and Compliance to Retail OEMs

McAfee Embedded Control software blocks unauthorized applications and changes on retail POS infrastructures. This simple, lightweight software technology makes devices resilient to malware infections and attacks. Only programs contained in the solution's dynamic whitelist can execute. Other programs (exes, dlls, and scripts) are considered unauthorized—their execution is prevented and the failure is logged. This prevents worms, viruses, spyware, and other malware from executing.

McAfee Embedded Control installs quickly and runs transparently on embedded systems, enabling the entire point-of-service infrastructure to be monitored. This small-footprint, low-overhead solution does not require file scanning or signature updates that could impact system performance.

The Solution at a Glance cont.
- **Compliant with security standards** such as PCI-DSS and other mandates designed to protect consumer payment card transactions and personal data.
- **Control retail device risks**, support costs, patching/updates, system downtime, and management throughout the devices' entire lifecycle.

McAfee Embedded Control

Security

- Prevent known and unknown threats with industry-leading security.
- Eliminate dependency on virus updates.

Control

- Control what software is installed to help maintain a consistent state.
- Gain operational efficiencies by allowing only the required programs to execute.
- Reduce patching frequency to minimize outages and reduce support costs.

Compliance

- Enforce software change policy to attain more control.
- Prevent out-of-policy changes for quicker time to recovery.
- Monitor file integrity for compliance requirements to gain visibility and accountability into change.

Figure 1. McAfee Embedded Control software uses a dynamic whitelisting trust model and McAfee Global Threat Intelligence to block unauthorized applications and foil advanced persistent threats. It allows you to control who can apply changes, what certificates are required to allow changes, what may be changed, and when changes may be applied.

Turning Challenges into Opportunities

Today's retailers face unprecedented challenges regarding security, device management, and compliance regulations. In addition, they require mobile payment solutions that improve efficiency, convenience, and customer satisfaction. By addressing these needs, Empathy Co. Ltd is gaining a competitive advantage in the marketplace while ensuring a bright future for its mobile payment solutions and its customers.

To learn more about Intel Security embedded security solutions and partnership opportunities, visit **www.mcafee.com/embedded**.