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Contactless Transactions at the ATM

What You Need to Know

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QR, or Quick Response, codes are machine-readable optical labels similar to bar codes. QR codes use four standard encoding modes – numeric, alphanumeric, binary and kanji) – to store data. Once created, the image can be read by a barcode reader or software application to complete the transaction.

Radio-frequency identification (RFID)/near field communication (NFC) is a system allowing software to establish extremely short distance (typically around 4 in or 10 cm) radio communication with other NFC capable devices through electromagnetic induction. Once connection is established, coded information can be transmitted to complete commands such as payment transactions.

NFC has three modes: NFC peer-to-peer, NFC card emulation and NFC reader/writer. Peer-to-peer mode allows two devices to exchange information. Emulation allows users to perform transactions such as making purchases. Reader/writer mode reads information stored on NFC tags

such as advertisements embedded in posters or labels.



Why Contactless?

Contactless transactions are already gaining steam in countries outside the U.S. According to RBR's [Global Payment Cards Data and Forecasts 2013-2019](#), there were 133 million contactless cards issued in Europe at the end of 2013. The Czech Republic and Poland have some of the highest acceptance rates for contactless transactions, resulting in a high volume of usage – more than ten contactless payments per card in 2013. Currently, contactless in Europe relies on contactless capable cards, rather than cardless technologies.

In the U.S., the introduction of contactless transactions has taken a different approach – focusing on the utilization of smartphone technologies and mobile wallets, rather than contactless cards.

American Express and several large banks have introduced contactless card options for their U.S. customers. JPMorgan Chase has deployed a program for over seven million credit and debit cards called “blink” in several major U.S. cities. American Express has also issued more than two million Blue Cards with a contactless payment technology called ExpressPay. Bank of America, Citibank, Keybank and HSBC Bank all have similar programs for contactless cards.

“While use of contactless card systems has yet to take off in the U.S., the introduction of Apple Pay has pushed contactless – and cardless – to the forefront of consumer attention,” says Executive Vice President of [ATMequipment.com](#) Spencer Matthews.



In March 2015, Apple, Inc. Chief Executive Tim Cook announced nearly 700,000 merchants in the U.S. accept Apple Pay – including many top retailers such as Starbucks, Walgreens, Whole Foods and McDonalds. The system is now responsible for two out of every three contactless payments on the major card networks. To compete with Apple's new payment system, Android phones recently received an updated Google Wallet – setting the stage for NFC contactless, cardless payments to boost even further throughout the U.S.

“Two of the most appealing benefits of contactless payments are the speed of use and security,” Matthews says. The [SmartCardAlliance](#) reports contactless payments are 63 percent faster than cash and 53 percent faster than traditional (magnetic stripe) cards. This speed allows terminals to service customers faster – assisting in addressing long line issues and potentially bringing in more business per day.

“With contactless transactions security is heightened,” says Matthews. “While the processing of a contactless transaction is the same as that of a regular card, avoidance of actual machine contact reduces chances of duplicate card fraud based on current skimming device technology.”

“Contactless cards are also capable of utilizing a built-in encryption to generate unique card cryptograms. Each card has a separate code which, along with the cardholder name, are not included in the transaction processing transmittal,” he continues.



Contactless Equipment for the U.S.

Seeing contactless implementation growing at the point of sale terminal, several ATM manufacturers have begun introducing contactless options for ATMs, some of which are becoming available in the U.S.

Diebold, Nautilus Hyosung, NCR and Wincor Nixdorf all offer solutions for Windows 7-based ATMs. Similarly, Triton and Genmega have demonstrated Windows CE-based solutions.

NCR, Wincor Nixdorf and Diebold provide options utilizing cardless QR code options rather than NFC. Both QR codes and NFC require initial transaction setup through a financial institution mobile app. The NCR solution requires a password to be entered into the mobile app to initiate transaction – triggering a QR code to appear on the ATM screen. The code must be scanned into the mobile device to complete the transaction and a receipt is e-mailed to the cardholder. Similarly, Diebold’s



solution displays the QR code on the mobile device to be scanned by a device supplied at the ATM. Wincor's solution also utilizes the QR code as a token to be scanned at the ATM but requires a secondary authentication such as a biometric fingerprint or PIN, ATMequipment.com Sales Manager Cooper Frandsen, explains.

Triton's ARGO machines are NFC capable – only requiring software upgrades to be operational," he says.

"Hyosung has introduced primarily NFC options with some QR codes in foreign markets," says

Frandsen. "They are currently waiting for demand to increase before introducing options for the U.S."

"Genmega, like Hyosung, also has NFC solutions deployed in foreign markets and is open to bringing these options to the U.S. once demand is generated," he says. "However, Genmega recently partnered with PAYeNETWORK to demonstrate a third contactless option utilizing a mobile application and text messaging capabilities. Users set up the transaction in an app on their phone, instructing the system to send a one-time use PIN to a specific device. The phone number associated with the receiving device as well as the transmitted PIN must be entered at the ATM to complete the transaction."

Planning for the Future

Contactless payments are not only taking off in foreign markets, with the introduction of NFC and Apple Pay, they are becoming more popular in the U.S. Due to a continuing rise in interest and acceptance, several ATM manufacturers have already introduced contactless capabilities at the ATM in other markets – and, tentatively, into the U.S. as well.

Matthews says, "based on this increasing popularity, it is prudent for ATM deployers to begin looking into contactless ATM technologies as they plan for the future. ATM owners and operators should educate themselves and speak with their suppliers and processors to find out more about what options and solutions are available to keep current with consumer demand."

FAQ

I'm spending money on EMV, is this a waste if Contactless takes over?

New technology takes a while to be adopted on a widespread format. While contactless transactions and mobile payments have made a big splash in the media, only major retailers have begun to implement a mobile payment platform – and even these retailers do not agree on the platform to use. The U.S. is still juggling NFC, RFID and QR Code as well as company provided platforms such as PayPal, Apple and Android. With such a continued disconnect in the mobile/contactless system, it is unlikely contactless payments will take national hold in time to render EMV a waste of time or money.

What is holding up mobile adoption?

While manufacturers have equipment ready, no clear mobile payments technology –NFC, RFID or QR codes – has emerged as the winner.

How will contactless effect the need for cash?

It is unlikely contactless will have a drastic effect on cash use. This is partially due to the current spotty adoption of the technology. However, data shows that countries with high contactless implementation still see a rise in overall cash utilization. ATMIA's most recent [Global Cash Demand report](#), released in October 2015, shows an increase in cash demand for 29 of the 30 countries studied. Even countries in Africa, the contactless payments capital of the world, saw an increase in cash demand. The single country with a steady decline remains Sweden, which currently implements governmental policies to limit cash usage.

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