

# What Merchants Need to Know About EMV

## What is EMV?

EMV is a technical standard that ensures chip-based payment cards (also known as smart cards) and terminals are compatible around the world. A chip-based payment transaction occurs when a microprocessor embedded in a plastic card or mobile phone connects to an EMV-enabled POS terminal (either contact or contactless) in order to execute a payment. The smart card technology provides an additional form of card authentication for the transaction—validating the legitimacy of the payment type being used and helping reduce the use of counterfeit, lost and stolen payment cards at ATMs and retail points of sale.

### Implications of Smart Card Adoption

Payment industry experts generally agree that a chip-based standard (i.e., EMV) will come to the U.S., but predictions of when and in what form vary dramatically. Smart card adoption in the U.S. is an industry-wide issue, and there is substantial education required for all participants to understand what chip-based payment enablement means to them. In the face of this uncertainty, merchants should start considering how smart card implementation would affect their businesses, and look into options for accepting chip-based credit and debit cards.

Merchants of all sizes—from single location to nationwide—have many decisions to make. Visa and MasterCard have come out with directives on implementing smart card technologies, and more announcements will likely come. (It's important to note that there is no government-enforced mandate at this time; these roadmaps are an industry call-to-action.) Merchants are starting their education process and beginning to formulate plans.

To implement smart card acceptance, merchants would be responsible for upgrading/replacing their POS devices and would assume the cost of doing so. Smaller merchants will likely follow the advice of their acquirer; larger merchants will do their own research and make an educated choice. A major decision is whether to deploy contactless along with a contact connection. All merchants will want to future-proof their investment as much as possible. The cost of an EMV terminal will be determined by the features, functionality, quality, support and form. Many manufacturers and payments players are adding new functionalities into the EMV-enabled equipment to position merchants to be ready for future innovations by making their equipment more innovation-agnostic.

Merchants will need to coordinate with their acquirer/processor to accommodate the transaction messaging for EMV-based payments. More data is sent to the acquirer in an EMV-compliant transaction than is sent in a conventional transaction. Both message types will need to be supported while merchants continue to accept magnetic stripe cards along with the new EMV cards and contactless devices.

Another decision for merchants and their acquirers to coordinate in smart card acceptance is whether to require a PIN, a signature or neither for cardholder authentication. The Durbin Amendment gave this authority to merchants for the first time for debit cards and it is just now being phased in for magnetic stripe transactions. This decision is also based on what issuers allow on their chip-based cards.

As EMV is deployed, there will be procedural changes at the POS. Customers who are unfamiliar with the chip-based cards, phones and fobs will need to be shown the proper way to insert or tap their cards in or over the devices and then to authenticate their identification. Employees will need to understand these new procedures in order to help customers and to explain the security benefits as customers complain or ask questions.

And then there's the issue of liability shift. Today financial institutions bear the brunt of the liability for fraud, but a new policy likely will assign liability to acquirers in certain instances. Merchants will want to get a full understanding of when and how liability will shift to their acquirer/processor and ultimately to them.

There are positive implications for merchants as well. For example, most EMV-enabled POS equipment will include contactless technology, allowing merchants to accept contactless and mobile payments which will provide a higher level of convenience for customers and will speed up the check-out time. In addition to faster transactions, some of the new smart chip-enabled POS devices will also help drive loyalty and repeat business by pushing offers out to mobile phones and redeeming the offers through the devices themselves. Moreover, customers will appreciate the higher level of security and feel more confident about using their cards with the merchant. While smart cards won't solve every security problem, they will go a long way toward boosting customer confidence at the POS.

## What can merchants do now to prepare?

- Engage a POS provider and begin assessing what a smart card payment enablement plan would look like for upgrading all consumer-facing POS devices.
- Speak to your third-party POS software providers to understand their strategy for becoming EMV compliant.
- Discuss with your processor when it will be ready for smart card processing and discuss other ways you can reduce fraud and data theft risks as part of a comprehensive payments security plan.

It appears some form of EMV will eventually come to the U.S. marketplace, and your organization is a key player in this very serious game. We recommend you conduct a full assessment to understand the impact of EMV on your business. Be a part of the industry discussions so you can understand and influence how the payments ecosystem moves forward with smart card implementations.

Now is also the time to get educated so you can understand the issues and the choices ahead. First Data recommends the following reading list to learn more about chip technology and related security measures for the payments industry.

### First Data white paper:

[EMV in the U.S.: Putting It into Perspective for Merchants and Financial Institutions](#)

### EMVCo white papers:

[A Guide to EMV](#)

[EMV Contactless Mobile Payments](#)

### Smart Card Alliance white papers:

[Card Payments Roadmap in the United States: How Will EMV Impact the Future Payments Infrastructure?](#)

[The Mobile Payments and NFC Landscape: A U.S. Perspective](#)