

## What is EMV<sup>®</sup> and how does it work?



EMV is a global standard for credit cards containing a crime-fighting computer chip and the technology to read and authenticate cards in a way that seriously reduces fraud.

EMV stands for Europay, MasterCard, Visa—the three companies that created the standard more than a decade ago. Banks and credit card issuers have begun the transition to EMV which is set to fully take effect in the U.S. on Oct. 1, 2015.

The micro processing chip is embedded behind the small metallic square (called a contact plate) on the front of an EMV card. That chip stores secure information necessary during payment processing.

The encoded information combats card cloning and skimming. The card is authenticated each time it is used, so even if card data is stolen, it cannot be used again because each transaction generates a unique code.

“Data lifted off magnetic stripe payment cards fetches a high price on the black market because it can be used to print counterfeit cards, and skimmers make it relatively easy to steal,” writes Sara Peters, Senior Editor at Dark Reading, “Payment cards equipped with EMV chips—for ‘Chip-and-PIN’ transactions—eliminate that particular risk.

“Yet while 99.9 percent of the PoS (point of sale) terminals in Europe are chip-enabled by now, the U.S. is one of the last countries to adopt EMV.”

Much like credit cards with the familiar magnetic strip, the EMV card operates in concert with a terminal at the point of sale. Cards are inserted into the terminal or, in the case of contactless transactions, held within proximity of a reader. During the process, data flows between the chip-enabled card and the issuing financial institution to assure that the card is legitimate and to create a new set of transaction data.

The United States is the last major market to embrace EMV technology which has been proven successful in limiting security breaches and counterfeit card fraud in Europe and around the globe. According to the Smart Card Alliance, 47 percent of world-wide credit card fraud originates in the U.S., while face-to-face credit card fraud has been reduced 72 percent in Great Britain since 2004, thanks largely to EMV. Not only does it protect consumers, it helps reduce costs associated with illegal credit card activity which is estimated to be in excess of \$10 billion in the U.S. alone.

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For more information about EMV, contact an account representative at 800-652-2370.