

What Is EMV?



EMV is a fraud-reducing technology that can help protect your business and your customers from financial loss if a criminal uses a counterfeit, lost or stolen payment card at your point of sale. In other words, the primary purpose of EMV is to make sure the card being used is the original card issued and not a duplicate. Implementing this technology is one of various security measures that merchants can take to help reduce payment fraud. EMV only applies to card-present technology. It does not take the place of PCI compliance, nor does it protect card data from hackers/breaches.

EMV is a payment method that combines a plastic card with an integrated circuit chip (ICC). The primary purpose for using an EMV chip card is to help reduce card theft by including a mechanism to validate the identity of the user. The user's account information is securely stored on the chip. During an EMV transaction, encryption is used to generate the cryptogram. There are two types of EMV cards: chip and PIN, or chip and signature.

If you are considering adding EMV terminals to your POS system, here are three things to keep in mind:

1. EMV is one element of a complete solution to reduce credit card fraud.

EMV does not protect card information during processing in the POS system, nor does EMV protect against transactions made with a stolen card for card not-present payments, such as an online payments, unless it is also a [Chip + PIN] type EMV card. (Note that most implementations of EMV in the U.S. are planned to be [Chip + Signature] implementations.)

2. EMV with end-to-end (E2E) encryption is a better solution.

If your POS does not include E2E encryption, card account information could still be stolen while being processed. In other words, if a card entry device (including both mag stripe readers and EMV devices) does not encrypt the card information, then malware infecting a POS system can easily read the card data on the POS system. However, the use of an encrypted card reader plus E2E software in the POS application keeps the card data encrypted in the POS software.

3. EMV does not always protect against stolen cards.

If an EMV payment card is stolen, and the owner has not yet deactivated the account with the issuing bank, the card can be used with a forged signature. EMV cards come in two usage formats: a) Chip + PIN, and b) Chip + Signature. The majority of cards will be Chip + Signature, with some Chip + PIN. This means that the EMV implementation does not protect against the theft of actual credit cards.