Europay, MasterCard and Visa (EMV®) is a global fraud reduction standard for credit and debit payment cards based on chip card technology. This technology is used to combat fraud and protect sensitive payment data in card-present environments. Chip card technology, or Integrated Circuit Cards (ICC), are standard bank cards that look like traditional cards, but with an embedded chip in addition to the standard magnetic stripe on the back of the card.

Unlike a magnetic stripe transaction, where only the card’s Track 1 or 2 data containing minimal cardholder data is processed to the card issuer at the point of sale, every ICC transaction contains dozens of pieces of information to be exchanged between the chip card, the EMV-enabled device, the acquiring bank’s processor and the card issuer.

Unlike swiping a payment card with a magnetic stripe, EMV uses dynamic authentication that is unique for each transaction. Magnetic stripe transactions use static authentication data which is easy to copy and prone to skimming.