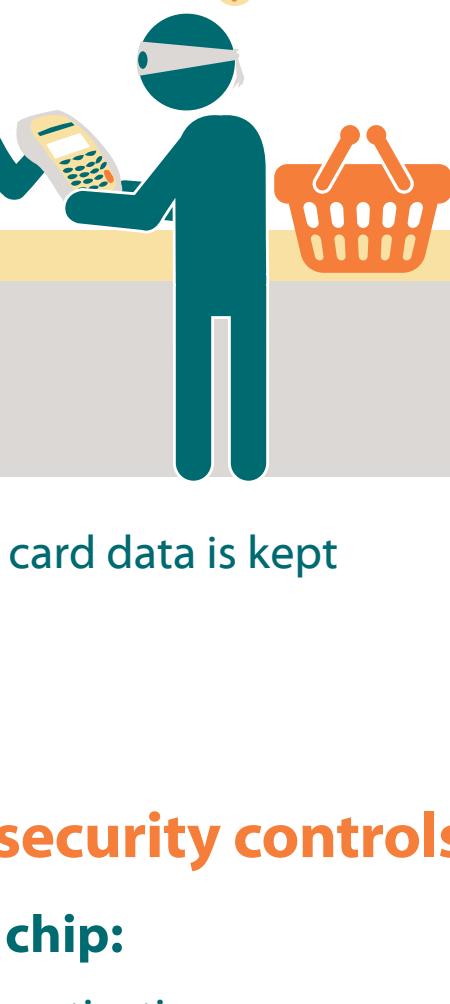




Increasing Security and Reducing Fraud with EMV Chip and PCI Standards



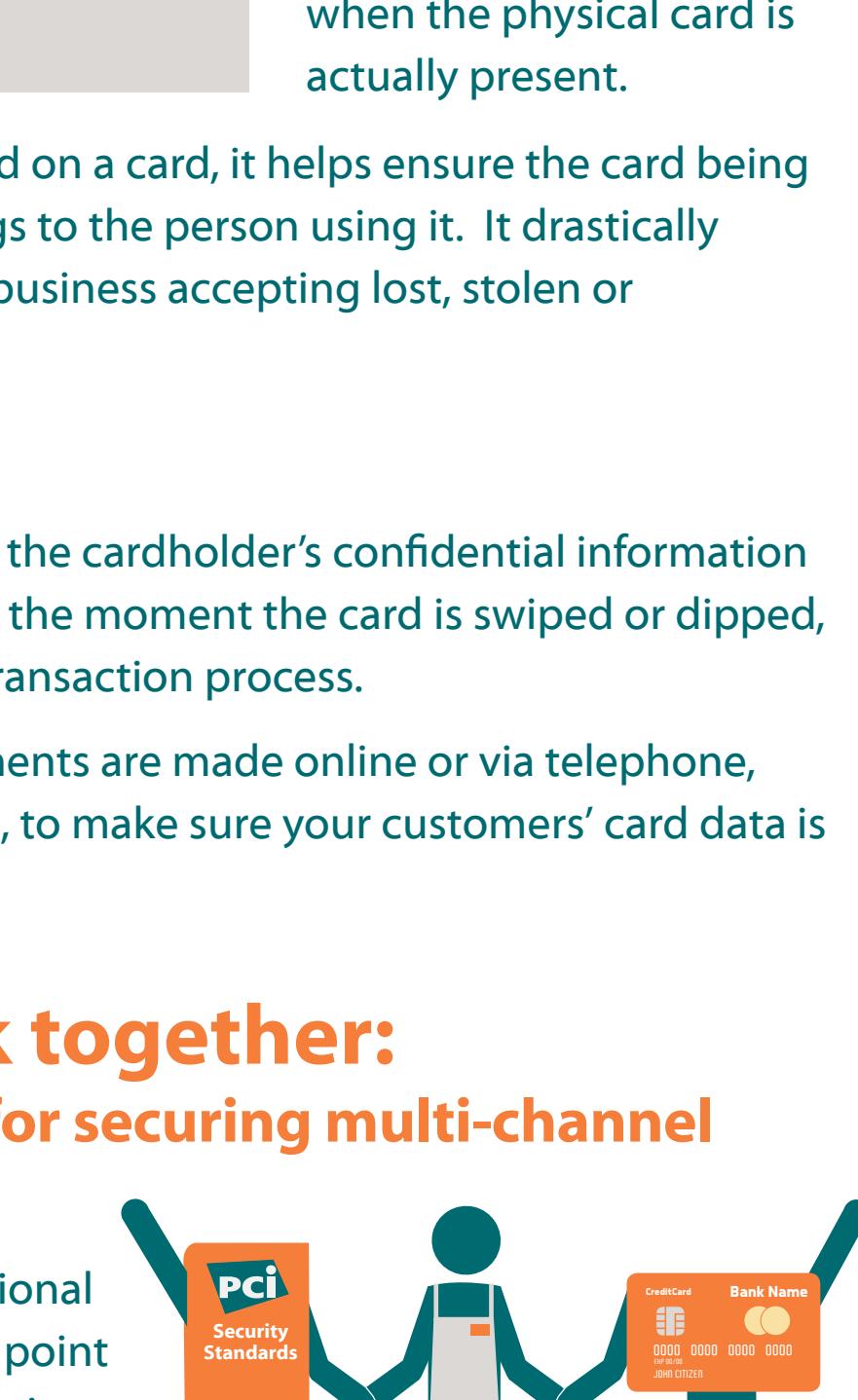
When data is exposed, it puts your customers and your reputation as a business at serious risk. EMV chip technology combined with PCI Security Standards offer a powerful combination for increasing card data security and reducing fraud.



What they are – Fraud protection & data security

EMV chip:

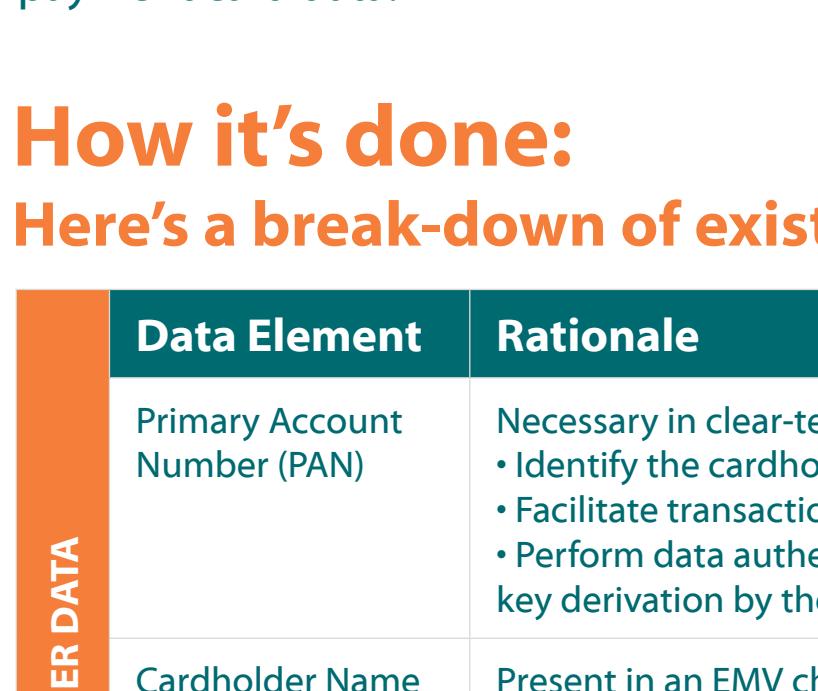
- Technology that uses secret cryptographic keys to help protect against fraud at the point of sale and make payment cards more difficult to counterfeit.



PCI Security Standards:

- Security controls for making sure that customers' card data is kept secure throughout the entire transaction process.

How they're different: Authentication technology vs. data security controls

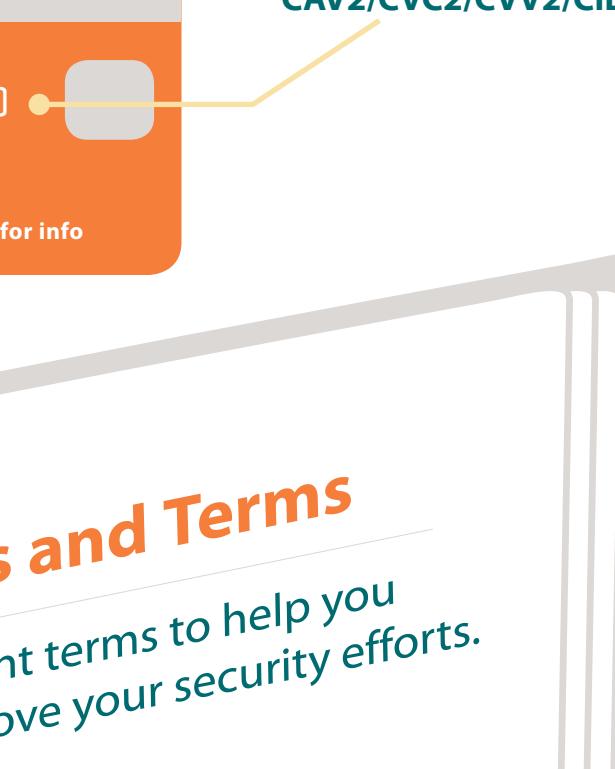


EMV chip:

- Authentication technology for the point of sale part of the transaction when the physical card is actually present.

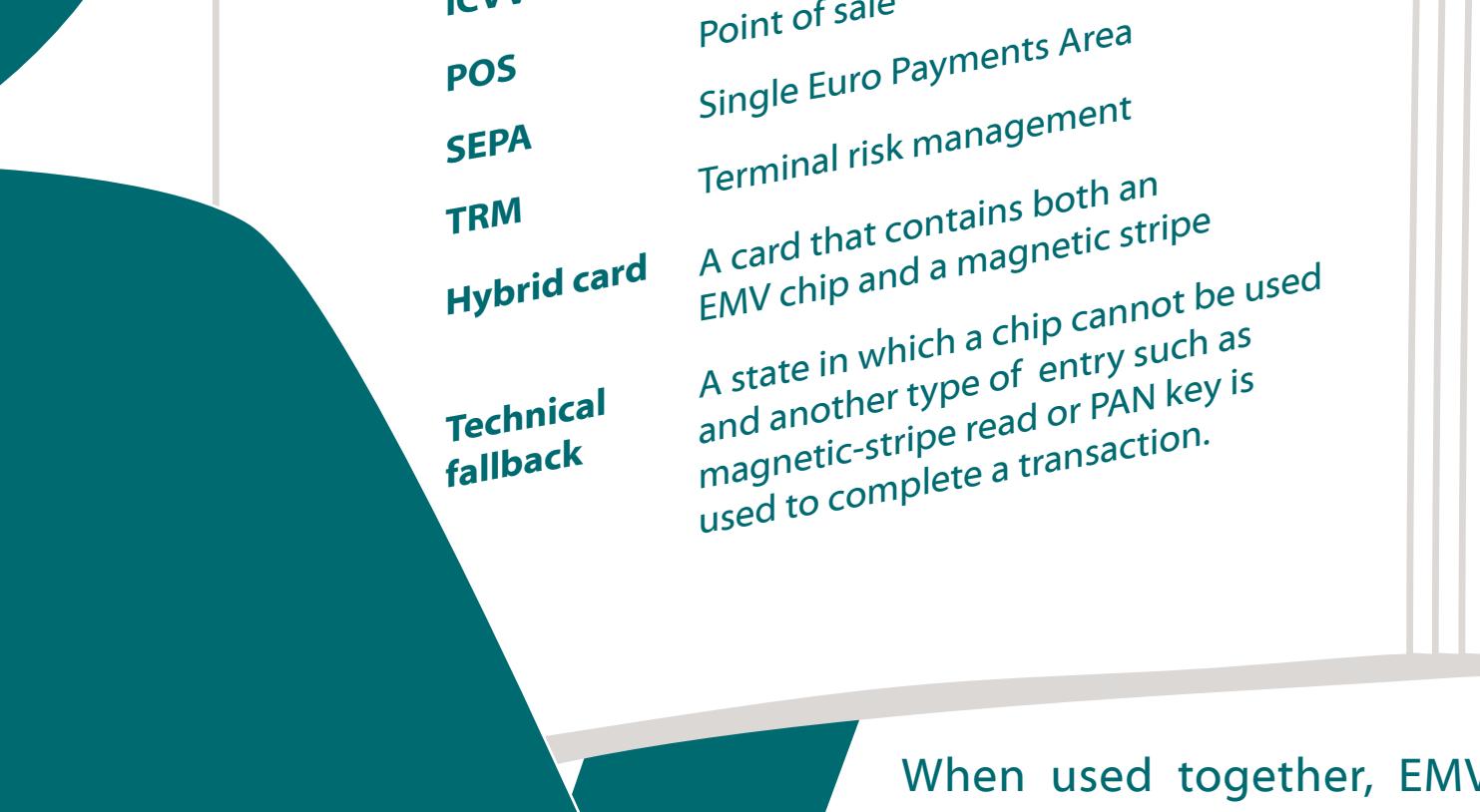
PCI Security Standards:

- Security controls to protect the cardholder's confidential information on payment cards, not just at the moment the card is swiped or dipped, but all the way through the transaction process.
- They also apply when payments are made online or via telephone, where the card is not present, to make sure your customers' card data is kept safe.



How it's done: Here's a break-down of existing data elements

CARDHOLDER DATA	Data Element	Rationale
Primary Account Number (PAN)	Necessary in clear-text for EMV transactions to:	<ul style="list-style-type: none"> Identify the cardholder and settle the transaction Facilitate transaction routing Perform data authentication at the point of sale -Enable key derivation by the Issuer
Cardholder Name	Present in an EMV chip. Not required to be transmitted in an authorization message.	
Service Code	Present in Track 2 Equivalent Data on chip. Enables the issuer to validate the card verification code or value if also included.	
Expiration Date	Always available on EMV cards in the clear with specific expiration date tag. In case of online authorization, the expiration date included in Track 2 Equivalent Data will be included in the authorization message.	



Abbreviations and Terms

A glossary of important terms to help you understand and improve your security efforts.

CNP Card-not-present
CVM & CVR Card verification methods & results
DAC Data authentication code
EMV Europay, MasterCard, Visa
Visit www.emvco.com for more info

ICC Integrated circuit card
iCVV ICC Verification Value
POS Point of sale
SEPA Single Euro Payments Area
TRM Terminal risk management

Hybrid card A card that contains both an EMV chip and a magnetic stripe
Technical fallback A state in which a chip cannot be used and another type of entry such as magnetic-stripe read or PAN key is used to complete a transaction.

When used together, EMV chip and PCI Standards are a powerful combination to increase security and reduce fraud. Protect your customers' data and your business today.

PCI Security Standards Council

Visit www.emvco.com

and www.pcisecuritystandards.org to learn more.

*See PCI PIN Transaction Security Requirements

**See PCI Data Security Standard (PCI DSS) and PCI Payment Application Data Security Standard (PA-DSS)