

EMV[®] Chip Card Payments

Strengthen Your Business Through Secure Payments



Overview

EMV chip technology is the global standard for secure, in-store card payments. It provides a strong foundation for reducing fraud, enhancing transaction security, and increasing customer confidence at the point of sale. By enabling your systems to accept American Express[®] chip cards, you not only enhance security for chip transactions, but also establish the infrastructure to support other advanced payment methods, including contactless and mobile payments.

A Global Standard for Secure Card Payments

EMV is a global standard for chip-enabled payment cards and terminals, designed to deliver secure and interoperable card-based payments. By strengthening authentication between the card and terminal, EMV helps protect transactions at the point of sale and beyond.

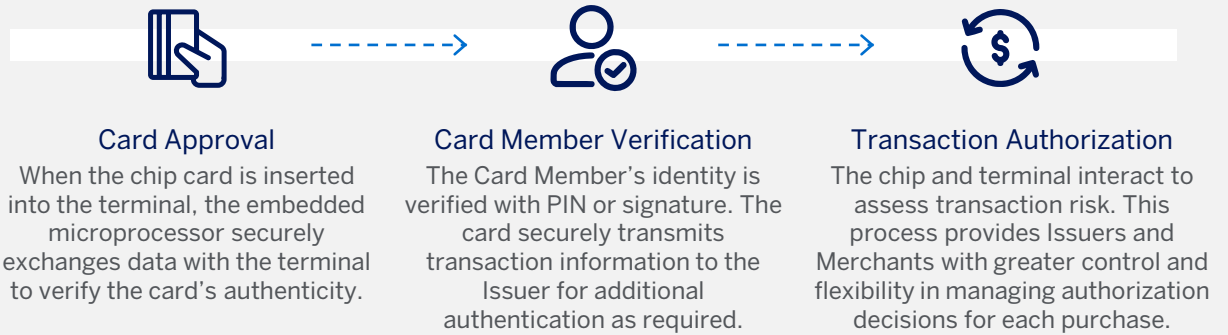
EMV chip cards contain an embedded microprocessor that generates dynamic, encrypted data for each transaction, making them highly resistant to counterfeiting and significantly reducing card-present fraud.

The standard is managed by EMVCo — jointly owned by American Express, JCB, Mastercard, UnionPay, and Visa — which maintains specifications for both contact and contactless payments.

EMV[®] is a registered trademark in the U.S. and other countries and an unregistered trademark elsewhere. The EMV trademark is owned by EMVCo.

A More Secure Transaction Process

American Express chip cards work in conjunction with EMV-enabled terminals to enhance transaction security through three key steps:



Key Benefits

Enhanced Security for Merchants

Migrating to American Express chip cards and EMV-enabled terminals helps strengthen transaction security and reduce fraud by:

- Enhancing authentication for all card-present transactions
- Deterring counterfeit and lost/stolen card fraud at the point of sale
- Leveraging the global standard behind today's most secure payment methods

Stronger Card Member Relationships

EMV technology helps you:

- Provide added protection with every purchase
- Increase confidence at checkout
- Enable secure, seamless payments worldwide

Built for Global Standards and Future Innovation

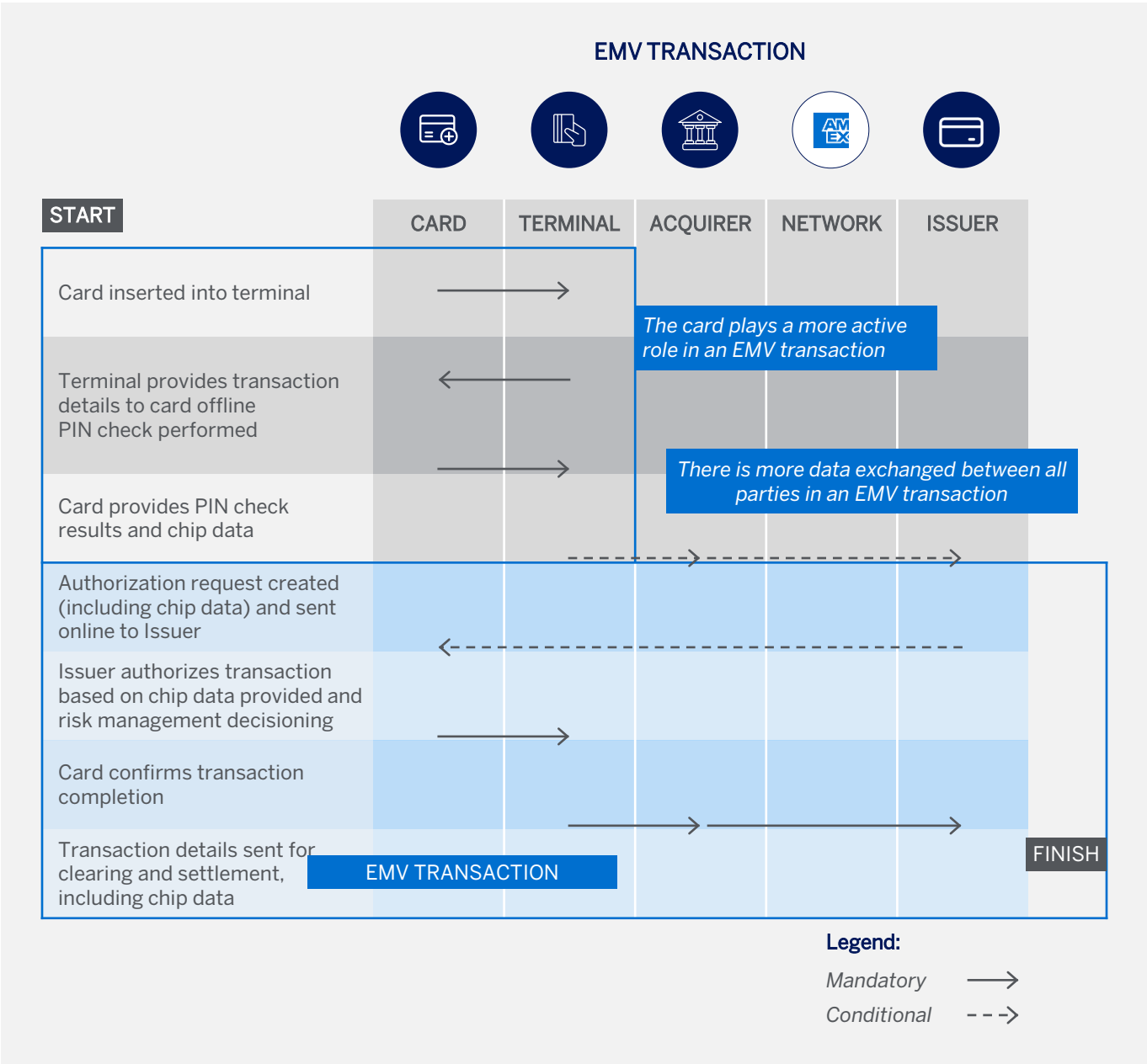
Adopting EMV positions your business to:

- Align with the leading global payment security standard
- Partner with American Express to support interoperability and acceptance
- Prepare for continued innovation, including contactless and mobile payments

How an EMV Transaction Works

An EMV transaction engages the entire payments ecosystem — the card, terminal, Acquirer, Network, and Issuer.

The chip plays an active role by securely generating and exchanging dynamic authentication data throughout the process. This additional data strengthens risk management and helps protect each transaction.

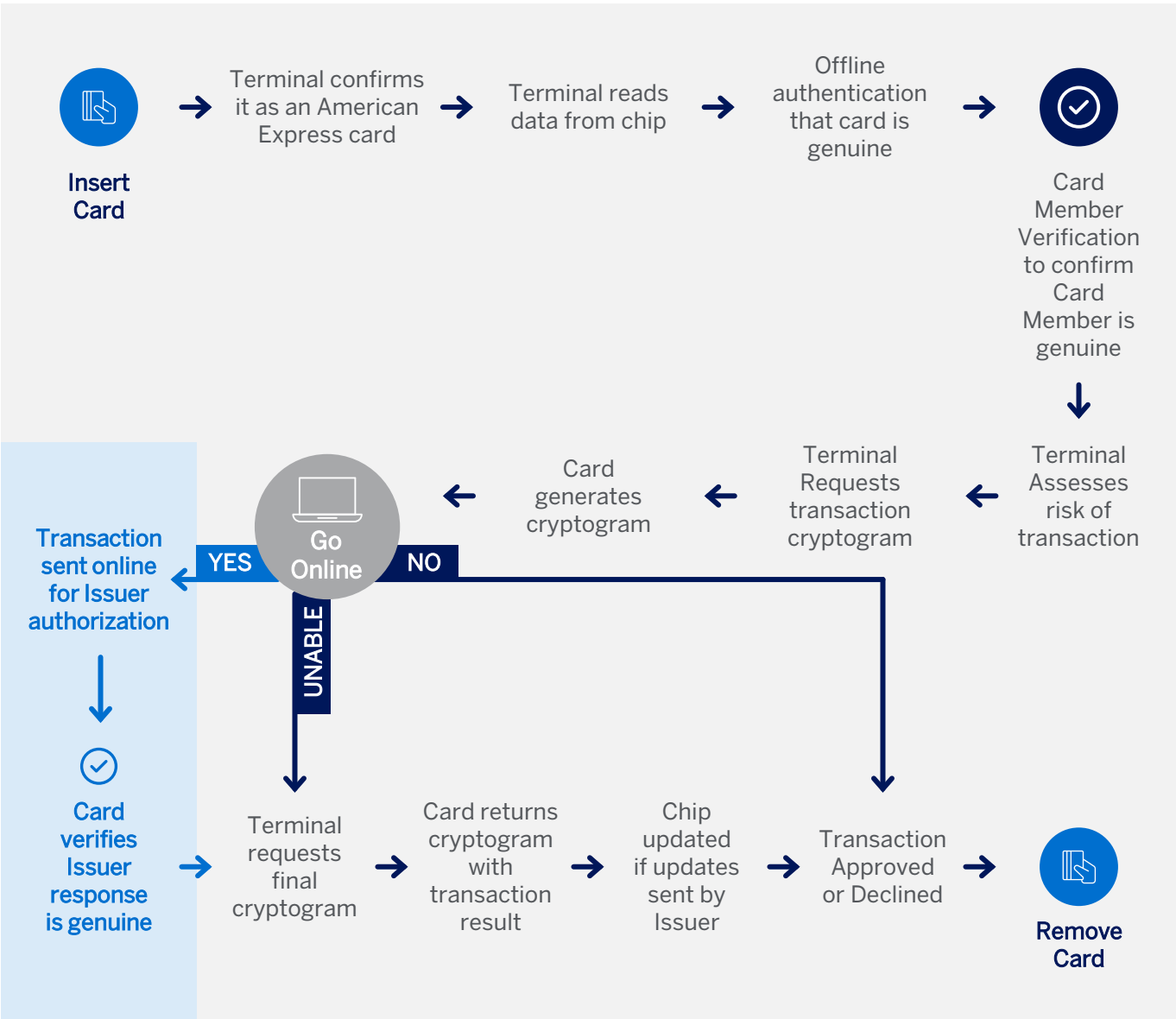


EMV Card/Terminal Interaction

During an EMV transaction, the card and terminal communicate to either:

- Authorize the transaction offline, or
- Perform additional authentication online with the Issuer

One of the advantages of EMV is the ability to support offline approvals when appropriate. This can be beneficial in industries such as transit or in environments with limited connectivity, where batch authorization or delayed processing may be required.



Implementation Considerations

American Express ICC Payment Specifications (AEIPS) define the implementation of EMV standards for American Express Issuers and Acquirers. AEIPS is divided into:

- AEIPS Chip Card Specifications
- AEIPS Terminal Specifications



Issuer

Implementation:

- Card production with embedded chip modules
- Cryptographic data preparation for personalization
- Secure card personalization and distribution to Card Members
- Chip Card Personalization Infrastructure Certification
- Certification to support American Express network messaging

Investment Components*:

- Chip procurement, card design, and personalization
- Issuance systems (including one-time and ongoing chip bureau costs)
- Host system upgrades (Authorization, Risk Management, Clearing & Settlement, Disputes)
- PIN management systems to support Cardholder Verification Methods



Acquirer

Implementation:

- EMV and AEIPS terminal certification (Level 1, Level 2, and end-to-end testing)
- Merchant training, servicing, and communications
- Certification to support American Express network messaging

Investment Components*:

- Terminal hardware and software upgrades
- Host system updates to process chip-related data elements
- Terminal management system enhancements
- Updates to disputes and chip transaction processing workflows

*Precise costs will depend on several factors.

Related Products/Features

EMV Validation Service

EMV technology relies on cryptographic validation to authenticate transactions. However, implementing full Issuer host validation capabilities can require significant investment.

American Express offers a cryptogram validation solution that provides:

- Reduced implementation lead time
- Fewer system modifications
- Lower overall implementation costs

American Express Contactless Payments

Contactless payments allow transactions to be completed without inserting the card into the terminal.

American Express Expresspay* is an EMV-based payment specification that uses a contactless interface to securely communicate with the terminal.

Benefits include:

- Faster transaction times and improved operational throughput
- Support for multiple form factors (e.g., mobile devices, wearables)
- Reduced cash handling
- Increased convenience and efficiency at checkout

*For implementation details, please consult the Issuer and Acquirer Chip Card Implementation Guides.

Amex Quick Chip

While EMV adoption has strengthened payment security across the U.S., traditional chip processing can affect checkout speed in certain merchant environments.

Amex Quick Chip modifies the EMV transaction flow for American Express branded cards to improve the checkout experience. It allows:

- The card to be inserted before the final transaction amount is known
- The card to be removed before online authorization is completed

This approach helps maintain security standards while improving speed and customer experience in high-throughput environments.

Resources:

The following materials are available on Knowledge Base at www.amexglobalnetwork.com:

- Business and Operational Policies
- Network Specifications
- Issuer Chip Card Implementation Guide
- Acquirer Chip Card Implementation Guide
- EMV Chip Card FAQs
- EMV Validation Service (on-behalf-of)
- Product Capability Guide
- AEIPS Terminal Implementation Guide
- Amex Quick Chip Implementation Guide
- Amex Quick Chip Technical Manual

For more information, visit: www.amexglobalnetwork.com
or contact your American Express Representative.



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