

EMV® Validation (on-behalf-of) Service

Provides Issuers with the ability to implement EMV quickly and easily

Overview

EMV Validation (on-behalf-of) Service provides a cryptogram validation and EMV to magnetic stripe service for both EMV contact card and contactless transactions, enabling participants to take advantage of EMV without some of the additional costs.

Issuers benefit from the American Express EMV Validation Service through:

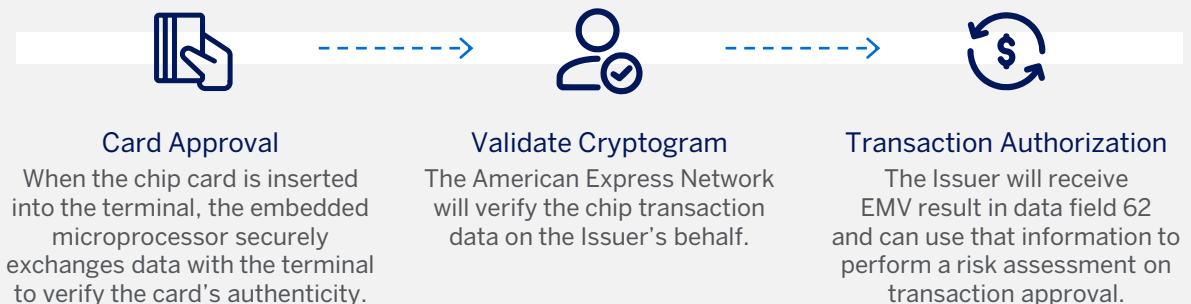
- Reducing the amount of effort and cost to upgrade their host systems
- A simple system upgrade
- Deploying added security for transactions
- Leveraging a global standard for card present security

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.

Key Benefits

Seamless System Upgrade.

EMV cryptogram validation is a central feature of EMV transaction processing and associated fraud reduction benefits. The EMV cryptogram Validation Service provided by the American Express Global Network allows Issuers to reduce the need to upgrade their host systems to perform this validation.

The EMV to magnetic stripe processing service reduces the development even further by validating all the EMV data fields within the message and sending the transaction to their Issuer as a magnetic stripe transaction but with all the results of EMV included within Bit 62. This means the Issuer will receive the authorization message as they do today, without the need to build the new chip field (Bit 55) and receives the results of EMV in existing Bit 62.

Helps Strengthen Transaction Security and...

- Reduces costs by providing a service for EMV cryptogram validation
- Increases speed to market with minimal lead time to implement
- Allows for fewer system modifications by using the EMV Validation Service
- Reduces host development with EMV to magnetic stripe processing service

Built for Global Standards and Future Innovation

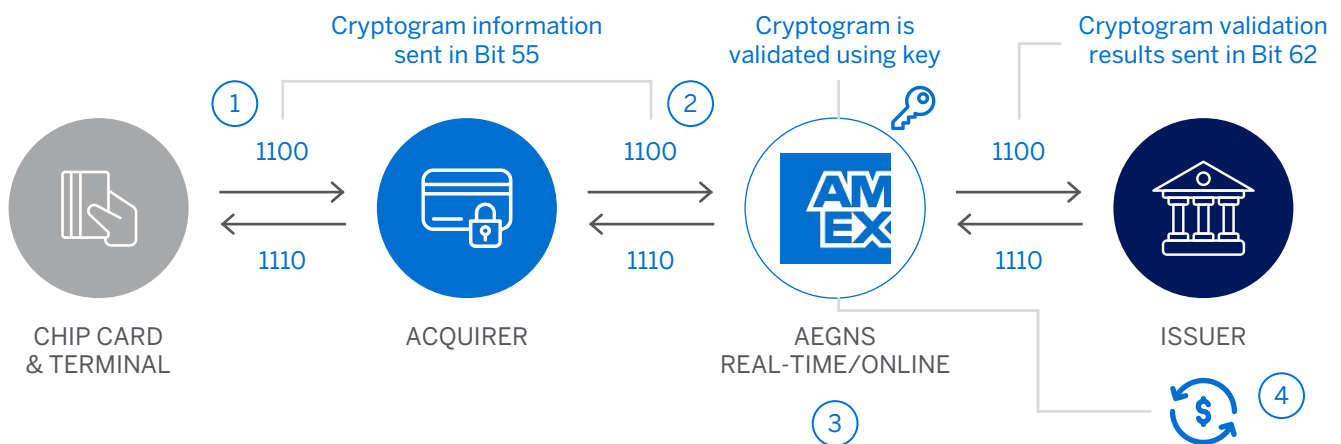
Adopting EMV positions your business to:

- 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 EMV Validation Works

When American Express performs EMV Validation on behalf of Issuers, the transaction process for Acquirers remains the same. The main difference between a standard EMV transaction and one that is being validated by American Express is that American Express will validate the required fields on the Issuer’s behalf and send results to them. The process is seamless to Acquirers.

This capability resides within the Authorization system to provide on-behalf-of processing of the signed data or certificates generated for EMV contact and contactless transactions. Issuers must provide their cryptogram validation keys with the network before starting the service.



- 1 The Merchant sends the 1100 Authorization Request to the AEGN via the Acquirer.
- 2 The Acquirer receives and forwards the 1100 Authorization Request to the Credit Authorization System (CAS), which identifies it as an AEIPS transaction for an Issuer which has signed up for the On Behalf of Service.
- 3 CAS identifies the content of Data Element 55 and using the key information which has been provided by the Issuer and uses the keys to validate the cryptogram. Then CAS will send the results of the cryptogram validation operations via the current authorization messaging infrastructure to the Issuer via Data Element 62. The Issuer can use this data as part of their decision engine without incurring additional expense to validate the cryptogram on their side.
- 4 The Issuer then responds to the Authorization Request with the 1110 message, and provides an Authorization Response code in the message.

Implementation and Investment Considerations

To help Issuers fully leverage EMV technology, American Express developed the ICC Payment Specifications set (AEIPS), which defines how the EMV standard applies specifically to American Express Issuers and Acquirers. In addition, AEIPS and Expresspay each have their own specifications, including detailed card and terminal technical manuals as well as implementation guides.

Issuer:

Implementation

- Certification and beta testing of AEIPS and Expresspay (if planned) must be completed before implementation. Time frames for completion of certification may be obtained from your American Express representative.
- Exchange cryptogram validation key with Network
- Changes to Issuer authorization system to accept Bit 62 and use it for decisions in their Authorization System
- Features for AEIPS and Expresspay transactions must be set “on” to enable AEIPS and Expresspay in the AEGN

Certifications and Requirements

- All AEIPS certifications, and AEIPS chip card requirements must be completed as a part of the AEIPS implementation
- Network messaging certification, if not already completed (Authorization, Clearing and Settlement including Disputes)
- Certify for Bit 62 (for 1100/1200) and Bit 55 for (1100/1110/1120/1210)
- Exchange cryptogram validation key with Network

Acquirer/Merchant:

No impact to Acquirers/Merchants beyond standard AEIPS and Expresspay certification.

Related Products/Features

Stand-In Processing:

The EMV Validation Services are available to be used during Stand-In. Stand-In processing provides a way to process authorization requests when the Issuer host is not available:

- Transactions can be processed while the Issuer host is undergoing maintenance or cannot be reached for some reason
- Card Member transactions are processed against specific limits identified by the Issuer
- Limits are processed by transaction types and spend can be limited according to the level of risk associated with the transaction number
- Results of the EMV Validation Services can be used to help decision the transaction

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.

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
- AEIPS/Expresspay Specifications
- EMV Chip Card Overview
- EMV Chip Card FAQs
- AEIPS Terminal Implementation Guide

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



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