EMV® Validation (on-behalf of) Service

Provide Issuers with the Ability to Implement EMV Quickly and Easily

A global security standard for card payments.

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

EMV is a global standard for credit and debit payment cards based on chip card technology. EMV refers to the technical specifications that outline the interaction between chip cards and terminals for credit, debit, and charge transactions.

The specifications aim to facilitate an interoperable framework for chip card based payment transactions while giving a card scheme or bank the flexibility to meet specific requirements with regards to security, risk management and card holder authentication.

The specifications provide for an EMV certificate, a cryptogram, which can be validated to provide proof of the authenticity of the transaction details. To allow Issuers to leverage EMV technology at a lower cost, American Express provides an EMV cryptogram Validation Service.

Card Approval

When a chip card is read by the terminal, the embedded microchip exchanges card data with the terminal to verify the card is genuine.

Validate Cryptogram

The American Express Network will verify the chip transaction data on the Issuer's behalf.

Transaction Authorization

The Issuer will receive EMV result in data field 62 and can use that information to perform a risk assessment on transaction approval.

Powerful Security for Merchants

You're not in this alone, and as you move to American Express chip cards and payment terminals, you can count on the payments know-how and global experience that have helped countless Merchants like you quickly and easily adapt to these new technologies.

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 service reduces the development even further by validating all the EMV data fields within the message and sending the transaction to the 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), but receive the results of EMV in existing Bit 62.

Deploying more secure transactions.

With American Express EMV Validation Service, you have the ability to improve your business by:

- Accepting a more secure payment option
- Reducing cost by providing a service for EMV cryptogram validation
- Speed to market with minimal lead time to implement
- Fewer system modifications by using the EMV Validation Service
- Reduces host development with EMV to magnetic stripe service

Leverage a global standard for card present security.

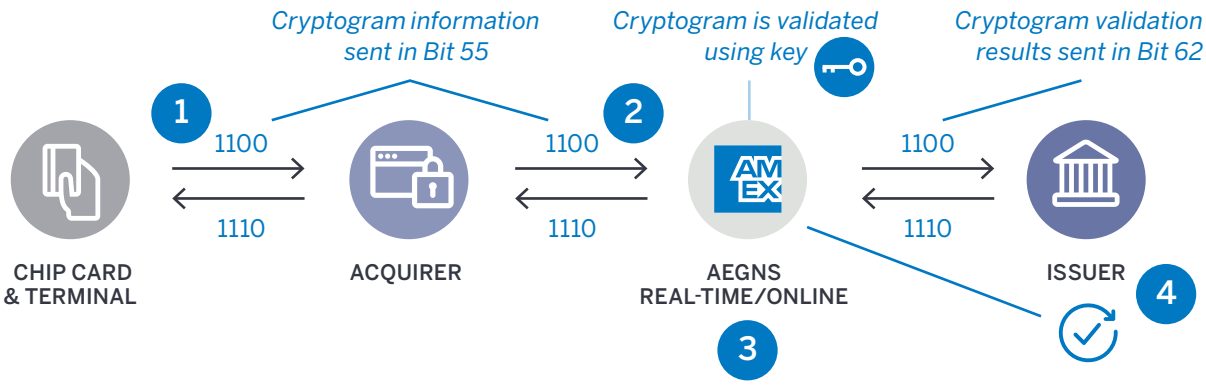
When you process EMV chip cards, you can be confident that you are:

- Adopting a dominant global standard in payment security, one that will only gain greater acceptance
- Working with American Express who is fully committed to EMV and aligned with other major networks to drive EMV standards, interoperability, and acceptance globally

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 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 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. In this way, 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 enable Issuers to best leverage EMV technology, the American Express ICC Payment Specifications set, which defines the implementation of the EMV specification as applicable to American Express Issuers and Acquirers, has been produced. AEIPS and Expresspay have separate specifications: American Express Card and Terminal specifications/technical manuals and 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 American Express Deployment
- 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

AEIPS/EMV Expresspay*:

AEIPS/EMV Expresspay is an EMV-based payment application that uses a contactless interface to communicate with a terminal.

Expresspay delivers benefits such as:

- Enables faster transactions leading to increased operational throughput
- Allows for different form factors e.g., fobs, mobile phones
- Reduces cash handling for Merchants
- Increases convenience, making it easier to process a transaction

*Expresspay is also available for magnetic stripe mode transactions.

Resources:

- Business and Operational Policies
- Network Specifications
- Issuer Implementation Guide
- Acquirer Implementation Guide
- AEIPS/Expresspay Specifications
- EMV Chip Card FAQs
- EMV Capability Guide
- AEIPS Terminal Implementation Guide

To access Resources, log into Knowledge Base at www.amexglobalnetwork.com

Learn More: Ask your **American Express Representative** about EMV Validation Services and how it can help your business migrate to EMV.


Chip Card


Contactless


Mobile

Visit: https://network.americanexpress.com/globalnetwork/emv