

# EMV® Chip



## Enabling seamless and secure contact and contactless payments around the world

EMV® Chip technology helps payment card issuers and merchants improve the security of in-store payments and prevent card fraud. EMV Chip Specifications provide a blueprint for EMV Chip technology to work consistently anywhere in the world to deliver the same result – secure, seamless and reliable in-store payments.




### EMV Chip Snapshot

Nearly  
**12 billion**  
EMV Chip payment cards are in use today powering over **91%** of in-store transactions globally<sup>1</sup>

More than  
**80**  
countries have adopted EMV Chip<sup>2</sup>

 EMV Chip technology is recognised as providing the best protection against losses from counterfeit cards<sup>3</sup>

 The globally established EMV Chip infrastructure provides a foundation for the next generation of secure and reliable digital payments

#### World Pre-EMV Chip:

- ✗ Rampant counterfeit fraud
- ✗ Chip card payments only possible domestically
- ✗ Magstripe technology only option for international card payments
- ✗ Greater reliance on other payment types, e.g., cheques, travellers' cheques, cash, etc.

#### World With EMV Chip:

- ✓ Significantly reduced counterfeit fraud
- ✓ More than 80 countries have adopted EMV Chip
- ✓ Over 91% of card transactions globally are chip
- ✓ Reduction in use of less convenient payment types, e.g., cheques, travellers' cheques, cash, etc.

### Did you know?

EMV Chip Specifications provide a common and secure foundation for the development and deployment of payment products that will work on a global scale, while also supporting regional requirements. For example, EMV Chip Specifications are flexible to support transaction routing choices and network competition in accordance with U.S. regulation.







<sup>1</sup>Worldwide EMV® Deployment Statistics | <sup>2</sup>Mastercard | <sup>3</sup>Nilson Report, 'Issue 1068'

## How Do EMV® Chip Payments Work?

EMV® Chip technology uses advanced cryptography to validate the authenticity of a card and generate a one-time use security code for every transaction, which helps prevent counterfeit, lost and stolen fraud.

- An EMV Chip transaction requires communication between the chip in the card, smartphone, or other device making the payment and the acceptance terminal.
- EMV Chip Specifications define the requirements for the chip to communicate with the acceptance terminal and exchange information to execute a transaction.
- This makes it possible for merchants anywhere in the world to accept domestic and international chip-based payments seamlessly and securely.

### Ways to pay with EMV Chip

	01	02	03	04
	Contact Chip	Contactless Chip	Mobile	QR Code
WHAT:	Payment cards with chips	Contactless payment cards with chip	Smartphone, watch or another mobile NFC (Near Field Communication) device that acts as a contactless chip card	Static or dynamic QR codes
HOW:	Inserting or dipping chip card into a reader	Tapping chip card against a terminal	Tapping device against a terminal	Scanning or presenting QR code with a device
				

## Benefits Of EMV Chip

The globally deployed EMV Chip infrastructure makes it possible for chip technology to be used consistently anywhere in the world to deliver the same result – secure, seamless, and reliable in-store payments. The specifications support card-based transactions across contact, contactless and mobile channels and provide a trusted foundation for new ways to pay.



### Technology Providers

**Global compatibility**  
EMV Chip Specifications provide a blueprint for developing products that will work seamlessly and securely anywhere they are used.

**Flexible requirements**  
EMV Chip Specifications are flexible to support loyalty programmes, transit ticketing and other offerings not dedicated to payments.

### Card Issuers and Merchants

**Fraud prevention**  
Using EMV Chip technology as part of a layered approach, payment card issuers and merchants around the world prevent fraud resulting from counterfeit, lost and stolen cards, and increase the security of in-store payments.

**Seamless acceptance**  
Global EMV Chip infrastructure makes it possible for merchants anywhere in the world to accept domestic and international chip-based payments seamlessly and securely.

### Consumers

**Secure and reliable payment**  
Consumers benefit from EMV Chip technology every day by being able to follow a familiar payment process to make secure, reliable card-based payments wherever they are in the world – whether inserting or tapping a card at a terminal or using a smartphone to make a contactless purchase.

## Did you know?

EMVCo manages and licenses the Contactless Indicator, a globally recognised consumer facing mark that demonstrates an EMV contactless payment can be made. This is supported by the Contactless Symbol, signifying that a payment terminal can accept EMV Contactless payments.



Contactless Indicator



Contactless Symbol

For more information on EMVCo please visit:

[www.emvco.com](http://www.emvco.com)

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

