



HOW IT WORKS

Apple Pay: Compatible Devices

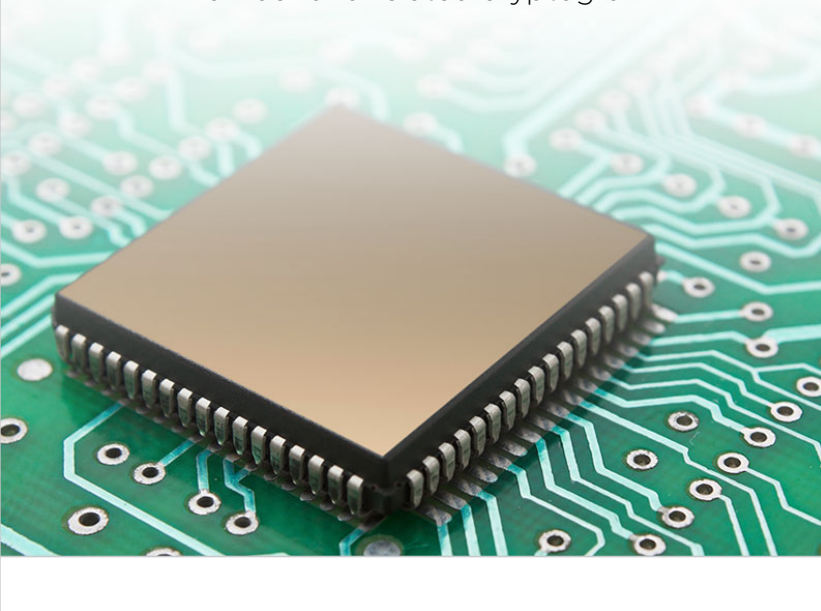
iPhone 6 Plus, iPhone 6, Apple Watch
(iPhone 5, 5c and 5s when paired with Apple Watch)



COMPONENTS

Secure Element

EMV-compatible chip inside device assigns, encrypts and stores each Device Account Number and related cryptogram.



Touch ID

Built-in biometric fingerprint reader must be used to authorize Apple transactions.



Device Account Number

A 16-digit payment token that stands in for a real credit card number, and which gets generated and supplied by the payment network, is stored in Secure Element.



Cryptogram

Supplied by the payment network, this gets attached to the Device Account Number to help validate every transaction.



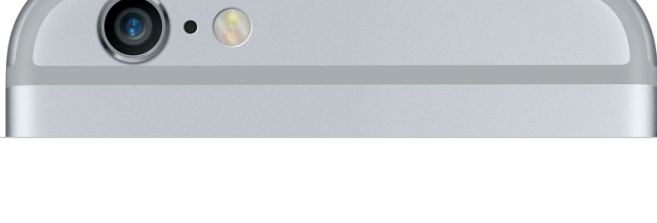
GETTING STARTED

1 Open Passbook app



2 Add cards to app in one of three ways:

- Import stored card from iTunes, after reentering card security code
- Photograph card using built-in iPhone camera
- Manually enter card details

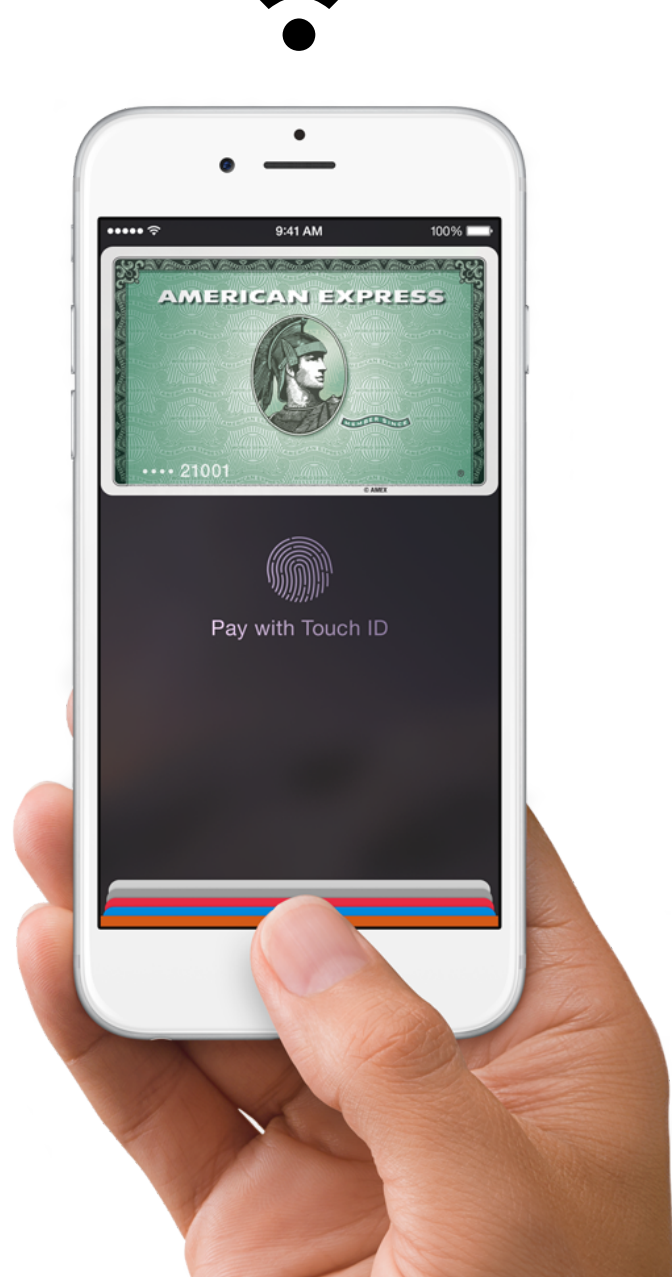


3 Once card information is entered, the iOS device communicates with the payment card provider's network - American Express, MasterCard, Visa.

In response, the network returns the following, which is encrypted and stored on the Secure Element chip inside the device:

- 16-digit code**, or payment token - Apple calls it a Device Account Number - which stands in for the credit card number, and which will be transmitted for every payment
- Cryptogram**, which gets attached to the unique token every time it's used to make a payment, and transmitted to payment network

HOW TO USE IT



When a compatible POS terminal requests payment, pay using:

Default card: Simply place a finger over the Touch ID* button to verify transaction. (The default card is the first one entered in Step 2 above.)

Alternate card: Wait until device prompts user for payment method. Select desired card from Passbook, then use Touch ID to verify.

After the user initiates payment, the Secure Element relays the 16-digit payment token, together with the cryptogram - creating a "transaction-specific dynamic security code" - to the payment network, which decrypts the token and decides whether or not the transaction should be authorized.

If transaction approved: Device displays notification of successful transaction.

Apple Pay also works with Touch ID for in-app purchases.

*iPhone 5, 5s, and 5c require pairing with Apple Watch to use Apple Pay.

WHAT DOESN'T HAPPEN



POS device never sees actual card number



Apple sees no aspect of the transaction, nor stores any related data



The employee manning the POS device never touches credit/debit card, or sees card user's name or card details

View this infographic online

<http://www.inforisktoday.com/infographic-apple-pay-how-works-a-7367>

Sources

<http://www.inforisktoday.com/apple-pay-how-will-work-a-7328>

<http://bankinnovation.net/2014/09/heres-how-the-security-behind-apple-pay-will-really-work/>

<http://www.ft.com/cms/s/0/7ffa706e-3a63-11e4-bd08-00144feabdc0.html>