



# Mobile Security



# Mobile security consumer multiple secure applications

**Secure connectivity**



**Payment**



**Ticketing**



**NFC wireless charging**



**Digital car key**



**Device security**



# ST's offering for security in mobile applications

## ST33

eSIM



Leader in Consumer eSIM with  
**1+ billion units**  
of ST33 already shipped

## ST54

NFC+eSE / NFC+eSIM  
NFC+eSE+eSIM



Deployed in every  
**Google Pixel** since 2019  
and in all major Android OEMs

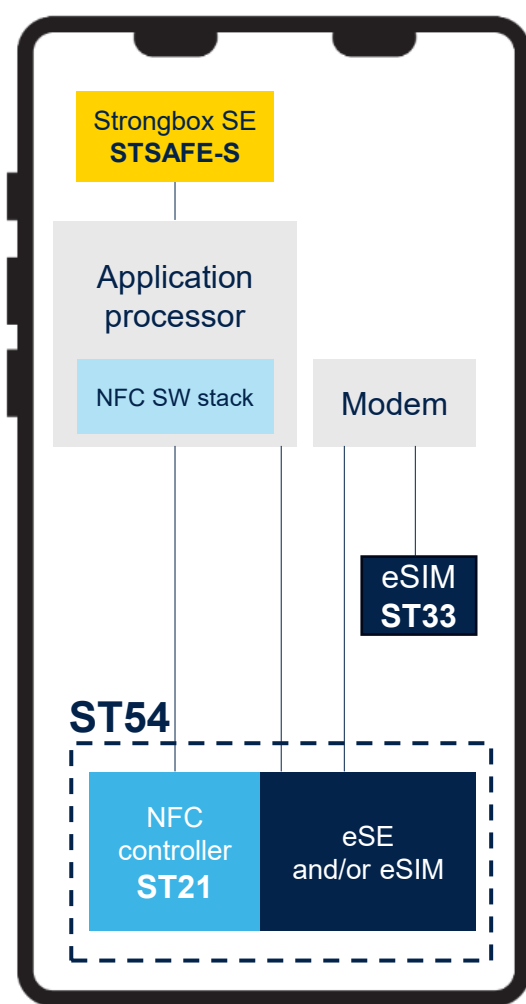
## STPay-Mobile

Digital wallet



**Digitizing mobile services**  
**worldwide** like transit, payment  
and access control

# A full range of eSIM, NFC, and NFC+eSE/eSIM



## ST33 eSIM

#1 source at Tier 1 OEMs

- 1+ Billion units shipped to date
- GSMA SAS-UP certified since 2019

## ST54 [NFC + eSE/eSIM] and ST21NFC [NFC Ctlr]

Reference in Android ecosystem

- Recognized RF performances
- Transport (MIFARE®, FeliCa®, China transit), payment, access control
- eSIM convergence with MEP
- Digital car key and UWB secure transactions
- Strongbox Android Ready SE

## STPay-Mobile

White label OEM wallet

## Strongbox SE

Android Ready SE compliant



# ST33 eSIM: #1 in consumer eSIM

## ST partners

- Partnership with major eSIM OS developers
- Access to 90+% MNOs worldwide <sup>(1)</sup>
- Compatible with all eSIM Management Platforms worldwide
- Partnering with undisputable leaders in SM-DP+ deployment
- Support of Non-Terrestrial Network

## Standards

- ST participation to key industry standards



## ST positioning

- Pioneer in Consumer eSIM deployment
- ST market share: over 90% in 2024 <sup>(1)</sup>
- 1+ Billion units eSIM shipped to date
- Proven interoperability
- Selected by all Tier 1 OEMs
- Android, iOS, Windows
- Multiple Enabled Profile (MEP) ready
- Tiny WLCSP package

Sources:  
(1) ST estimates



# NFC Controller solutions

Validated by most Tier-1 OEMs

## ST21 positioning

- Standalone NFC controller
- Consumer devices: smartphones, wearables, consoles

## Key applications

- Mobile ticketing
- Mobile payment
- Access control

## ST21 benefits

- Volume production at major OEMs
- Best-in-class RF performance
- Reduced bill of material and power consumption
- Pin-to-pin to ST54



# ST54 NFC + Secure Element solutions

Reference solution in Android ecosystem

## ST54 positioning

- Single chip solution, WLCSP package
- Flexible configuration, NFC + (eSE &/or eSIM)
- For multiple application and devices

## Key applications

- Mobile ticketing
- Mobile payment
- Digital Car Key

## ST54 benefits

- 3<sup>rd</sup> generation ST54
- Reference solution in Android
- Referenced in Qualcomm and MediaTek
- Volume production at major OEMs
- #1 Felica, MIFARE® integration in Android framework
- Best-in-class RF performance
- Reduced bill of material and power consumption



# ST solution for Mobile OEMs



## STPay-Mobile\*

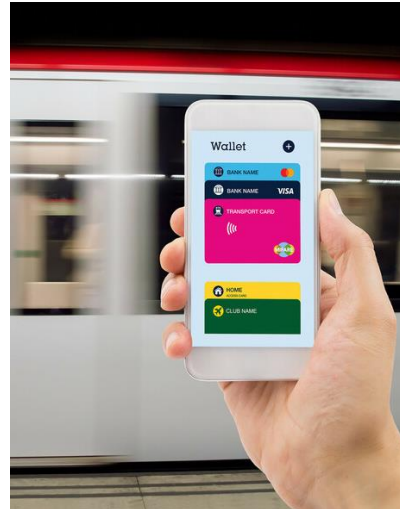
enables secure virtual applications



An **innovative** solution for new, connected lifestyles

An **end-to-end** solution to secure the assets that people value the most

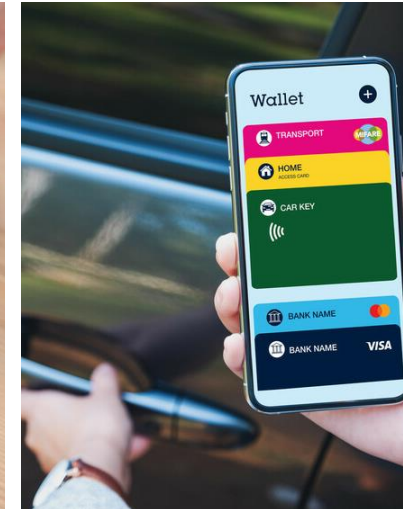
A **fast and cost-effective** way to digitalize services overseas



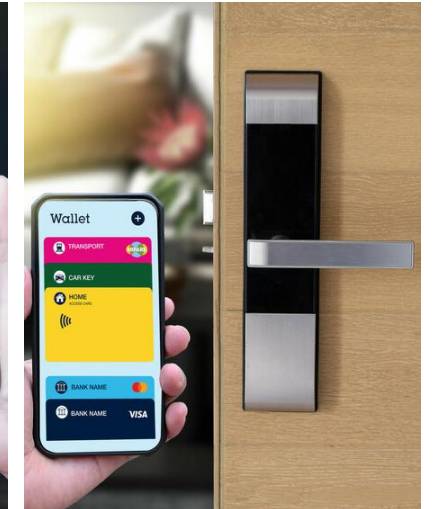
Mobile  
ticketing



Mobile  
payment



Mobile  
car access



Mobile  
access control



# STPay-Mobile transport solution

## Connects to existing technology and schemes

- Virtual transit card emulation on mobile
- Same scheme and technology as existing physical cards
- Compatible with any proprietary and open-transit card standards

Calypso  
Networks Association

ospt  
ALLIANCE

MIFARE

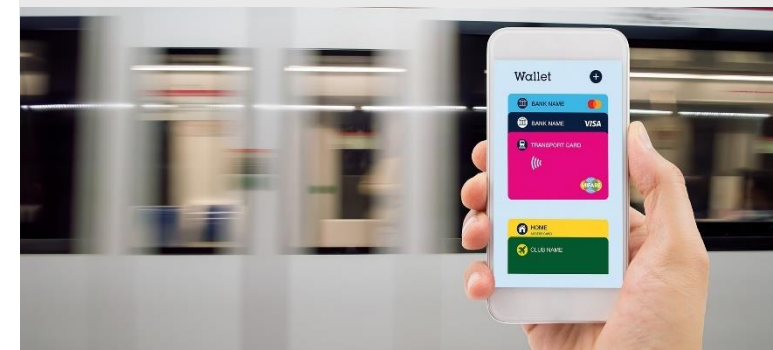
## Offers a white-label solution: STPay-Mobile

- An ST cloud-based solution powered by **SNOWBALL**
- A secure transit platform
- Installation, top-up, transaction
- Refund, backup, restore
- Based on ST54 secure element



## Deploys a single-tap mobile solution worldwide

- 50 public transit agencies worldwide
- Deployed in 125+ cities globally
- Used by 680 million people in urban areas



# STPay-Mobile payment solution

## Connects to service providers and standards

- Connected to major token service providers worldwide  
(Mastercard MDES, Visa VTS, and more)



- Compliant with PCI DSS security standards



## Offers a white-label NFC wallet: STPay-Mobile

- An ST cloud-based solution
- A certified payment SDK
- Token management
  - TR-TSP (request to TSP)
  - I-TSP (interface)
  - Lifecycle management
- Based on ST54 secure element



## Deploys a Plug & Play solution for digital payment services

- For online / in-app / in-store payment
- Android-iOS interoperability
- Multi-user authentication (CD-CVM certification)
- Multi-card enrollment option



# Mobile Security takeaways



eSIM market leader: 1+ billion ST33 eSIMs shipped to date

ST54 NFC/SE in mass production at major Tier-1 OEMs

Referenced in Qualcomm and MediaTek platforms

STPay-Mobile “white-label wallet” for ticketing and payment services

STSAFE-S the strongbox solution for mobile

# Our technology starts with You



Find out more at [st.com/secure-nfc](https://st.com/secure-nfc)  
[st.com/sim-esim](https://st.com/sim-esim)

© STMicroelectronics - All rights reserved.

ST logo is a trademark or a registered trademark of STMicroelectronics International NV or its affiliates in the EU and/or other countries.

For additional information about ST trademarks, please refer to [www.st.com/trademarks](https://www.st.com/trademarks).

All other product or service names are the property of their respective owners.

