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Mobile Security Consumer



Mobile security consumer

Multiple Secure Applications



Secure Connectivity



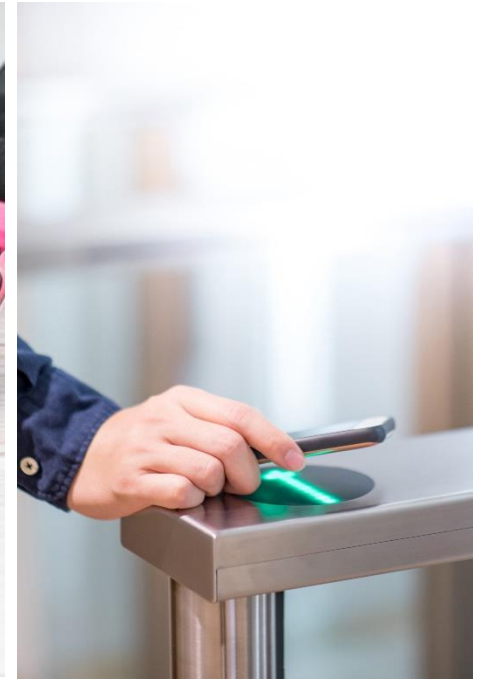
Digital Car Key



Payment



NFC Wireless Charging



Ticketing

A full range of NFC & secure elements and eSIM

To address multiple secure transactions in mobile

ST33 eSIM, SIM, eSE

- Up to 2MBytes Flash
- Multi-packages (WLCSP, MFF2, DFN8)
- GSMA SAS-UP certified flow
- EMVCo, CC EAL5+, MTPS

#1 eSIM
300+ Mu sold

ST21NFC controller

- Boosted for tiny & metal cover antenna
- Reduced BOM
- Low Power mode
- Card emulation, Reader & P2P

Best-in-class performance

ST54 convergence

- ST33 eSE, eSIM + ST21NFC
- SiP BGA and single chip WLCSP
- GSMA SAS-UP certified flow
- EMVCo, CC EAL5+, MTPS
- MIFARE® & FeliCa®

All-in-one solution

The mobile convergence

embedded SIM, NFC controller & Secure Element for Mobile

ST33 eSIM

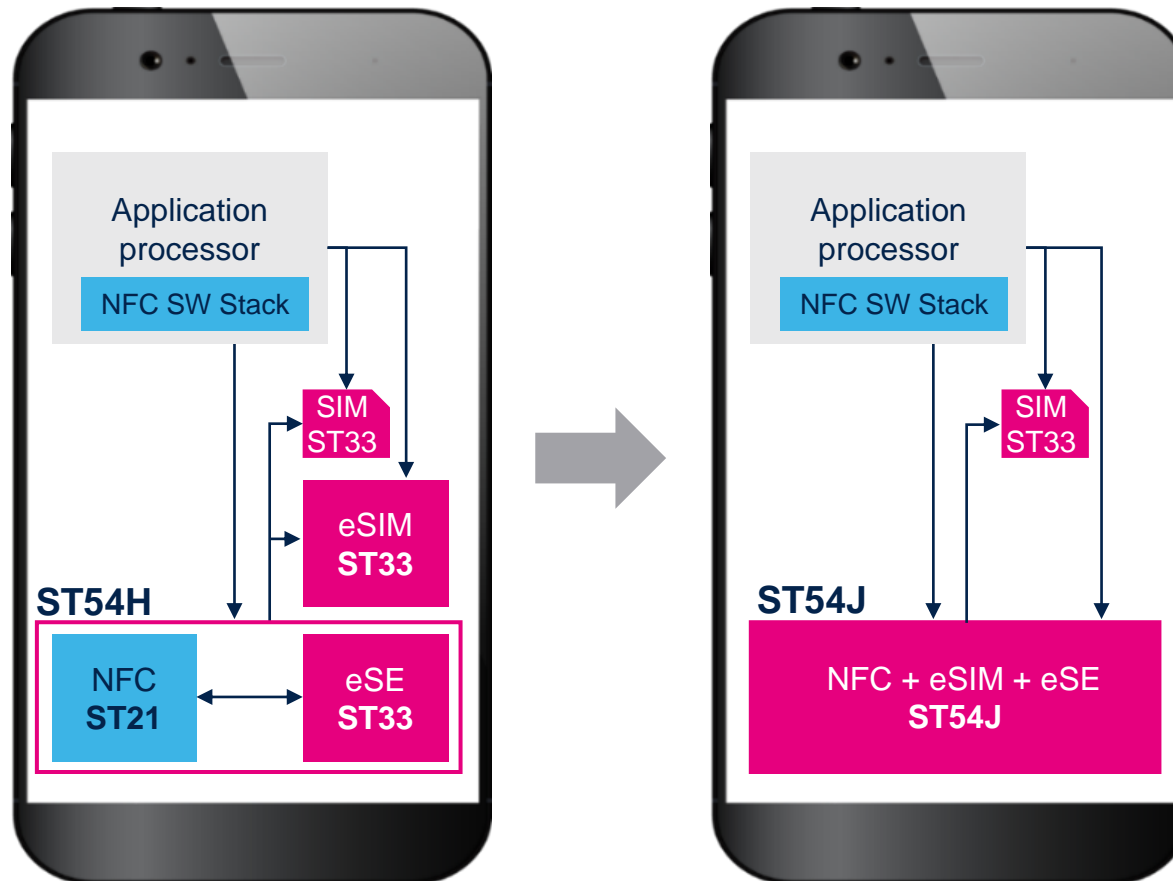
- #1 source Tier-1 OEMs
- #1 GSMA SAS-UP certification

ST21NFC Controller

- Mediatek lead partner

ST54H SiP (NFC + ST33)

- Excellent RF performance
- Fast transaction time for transit and payment



ST54J single die

- Improved performance
- 20% smaller PCB area and BOM
- NFC + eSE + eSIM
- NFC Wireless Charging

Market leadership & experience

Devices adopting eSIM



Google Pixel 2*, 3, 4
(*1st primary device)



iPhone 11, X



Galaxy S20 ,z Flip ,Fold



Moto Razer



iPad Pro 9.7"



Microsoft
Surface Pro LTE



Apple
Watch



Samsung
Galaxy



Huawei



Huami



Xiaomi



Ticwatch

eSIM Market

- eSIM market opportunity
 - CAGR 19-22: 32%
 - 608 Munits by 2022*



ST eSIM positioning

- **ST market share over 95%** in consumer market
- **300+ Munits** shipped to date
- **Selected by major WW OEMs,**
- **eSIM in various environments**
Android, iOS, Windows

#1 eSIM



Source: * ABI – Digital Authentication and Embedded Security Feb 2020

ST eSIM solution for 5G connectivity

A key enabler of 5G eSIM solution

ST & partners for

- **30 years** of experience in Telecom
- **450 Worldwide Mobile Telecom Operators**
- 300+ digitalized subscriptions
- 300+ compatible eSIM Management Platform

ST migration position

- Complete MNO's **profile migration** & standard support
- **ST & partner ecosystem** deployed for migration
- **Interoperability pilots** started

#1
5G eSIM



Standards

ST influence and wide footprint



5G values

Key features

- IMSI* **privacy**
- Baseband modem / SIM-eSIM Toolkit extensions
- Enhanced security (Long term **key update**)

End user benefits

- Enhanced **data protection**
- **Power** efficiency
- **Optimized network** resource usage



NFC Controller solutions

Large volume market

Market

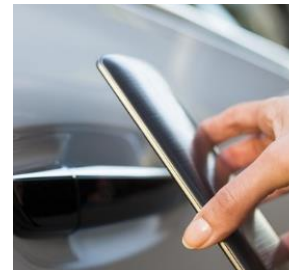
- NFC standalone market opportunity
 - CAGR 19-22: 11.7%
 - 1.4 B.units* by 2022



ST positioning

- More than 300 projects at OEM/ODMs
- Integrated in Tier-one OEMs
- Best-in-class RF performance
- Reduced bill of material & power consumption

Ready



Source: *ABI Secure Smartcard and Embedded Security IC technologies – March 2020

ST54 solutions

All-in-one solution ready for volume

Market

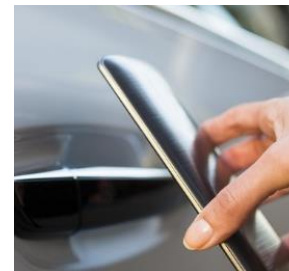
- Convergence market opportunity
 - CAGR 19-22: 2%
 - 490 Munits*



ST positioning

- All-in-one ST54 solution ready for production
- Integrated in Tier-one OEMs
- #1 Felica, MIFARE® integration in Android framework
- Best-in-class RF performances
- Reduced bill of material & power consumption

Ready



Source: *ABI Secure Smartcard and Embedded Security IC technologies – March 2020

Mobile security consumer takeaways

- eSIM leader (> 300Mu ST33 sold to date)
- Ready for convergence (single-die ST54J)
- Partnership in place with major OS vendors

Thank you

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