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
A full range of eSIM, SIM and NFC/SE for Mobile

Tailored to support OEM eSIM and OEM Wallet strategy

**ST33 eSIM**: #1 source at Tier 1 OEMs
- Few hundred millions shipped to date
- GSMA SAS-UP certified since 2019

**ST21 NFC Controller**: Mediatek lead partner

**ST54 NFC+SE**: reference in Android ecosystem
- Recognized RF performances
- Single die WLCSP form factor (ST54J, ST54K)
- eSIM convergence support (flagships)
- Support of UWB Secure Transactions
# ST eSIM solution for 5G connectivity

**A key enabler of 5G eSIM solution**

<table>
<thead>
<tr>
<th>ST &amp; partners for</th>
<th>ST influence and wide footprint</th>
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<tbody>
<tr>
<td>• 30 years of experience in Telecom</td>
<td></td>
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<tr>
<td>• 450 Worldwide Mobile Telecom Operators</td>
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<td>• 300+ digitalized subscriptions</td>
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<tr>
<td>• 300+ compatible eSIM Management Platform</td>
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<tr>
<th>ST migration position</th>
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<tr>
<td>• Complete MNO’s profile migration &amp; standard support</td>
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<tr>
<td>• ST &amp; partner ecosystem deployed for migration</td>
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<td>• Interoperability pilots started</td>
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**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

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* International Mobile Subscriber Identity
# NFC Controller solutions

## Large volume market

<table>
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<tr>
<th>Market</th>
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<tr>
<td>• NFC market opportunity</td>
<td>• CAGR 19-22: 10%</td>
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<td></td>
<td>• Close to 1B units* by 2022, incl. 250 Mu standalone NFC controller</td>
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<tr>
<th>ST positioning</th>
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<tr>
<td>• More than 300 projects at OEM/ODMs</td>
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<tr>
<td>• Integrated in Tier-one OEMs</td>
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<tr>
<td>• Best-in-class RF performance</td>
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<td>• Reduced bill of material &amp; power consumption</td>
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Source: *ST estimates, September 2020
ST54 solutions

ST54 NFC/SE, reference solution in Android ecosystem

<table>
<thead>
<tr>
<th>Market</th>
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| • NFC/SE market opportunity  
  • CAGR 19-22: 17%  
  • Close to 700 units* by 2022 |

<table>
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<th>ST positioning</th>
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</table>
| • Volume production at various Tier-one OEMs  
  • #1 Felica, MIFARE® integration in Android framework  
  • Best-in-class RF performances  
  • Reduced bill of material & power consumption |

Source: *ABI Secure Smartcard and Embedded Security IC technologies – March 2020
Mobile security consumer takeaways

- eSIM leader (> 400Mu ST33 eSIM sold to date)
- ST54 NFC/SE in Mass Production at various Tier 1 OEMs
- Partnership in place with major OS vendors
- Long-term roadmap and commitment
Thank you