Secure solutions
for wearables

Wearable applications

Payment	Transport	Access Control	Authentication	Connectivity
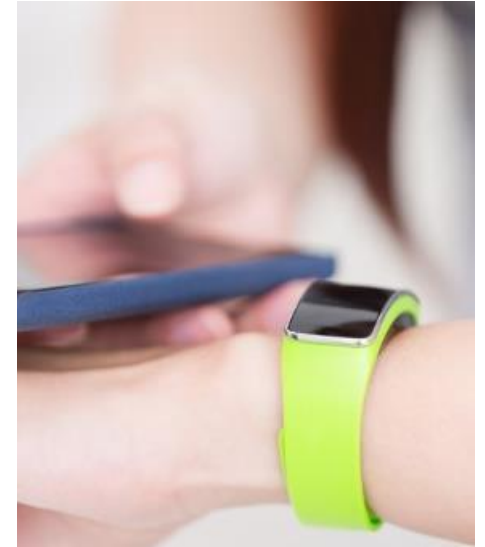
Challenges of wearable solutions

From single to multi-application secure wearables

Secure solution

Security
Know-how architecture

Certification
HW & SW certifications
NFC Forum, EMVCo, HCE, PTCRB, GCF

Worldwide access
HW various payment
ecosystem / region

Remote management
Activation / Deactivation
Creation / Destruction

boostedNFC™

User experience
Reading distances

Interoperability

Footprint & ease integration
BOM optimization, Flexible tiny antenna design
Easy tuning & trimming
Android and RTOS support

Power Consumption
Low power, 2uA in field detect

ST offer for secure wearables
From optimized to multi-application

Optimized Passive

ST31P450 secure MCU

- Cost optimized
- ARM® SecurCore® SC000 Secure element
- Card Emulation, ISO14443, types A
- MIFARE® (must be on a banking application)
- With or without STPay Payment application
- Class 1 - Class 6 antennas supported
- Mainly for banking & transport application

ST31

Card emulation only passive

Advanced Active

ST54x

- For middle & **high-end** wearables
- Combined SE (**ST33**) & NFC controller ST21NFC
- Payment, **eSIM GSMA RSP v2.**
- MIFARE for Mobile® v2.
- NFC Card Emulation ISO14443 **A,B,F 106-848kb/s**
- NFC Reader, P2P
- Typical antenna <100mm2 and metal cover
- Supports **multiple secure applications**

Host platform

I²C

ST54
(NFC + SE)

Card Emulation, , Reader/Writer, Peer to Peer
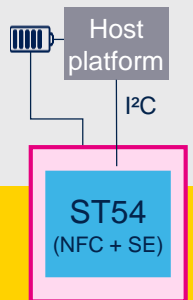
Wearable solutions takeaways

Scalable offer from optimized passive to multi-application active solutions

From hardware to System-on-Chip (SoC) solutions for an easy integration

boostedNFC™ technology for the best user experience

Learn more at www.st.com/securewearable

Our technology starts with You

🌐 Find out more at www.st.com/secure-wearables

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