

Secure Wearables

All-in-one ST53G Secure Module



A unique secure system-in-package solution...

From optimized passive solutions to multi-application packages, ST proposes a broad portfolio for wearables. ST provides everything developers need to start building secure applications on a host, choosing from ST's proven secure element devices and adding optional antenna-booster technology.

With the development of the ST53G, ST widens its secure wearables ecosystem to optimized active solutions. Co-evolving with solution designers, ST helps them integrate support for secure payment, ticketing, digital access, and loyalty-card systems within a diversity of form factors.

FOR YOUR NEXT GENERATION OF WEARABLES

An easy integration capability

Overcoming space constraints, the ST53G's miniature size makes it a perfect solution to integrate in small designs. From fashion items to one-time devices like event wristbands, the ST53G is your partner for the development of innovative and attractive wearables in all their diversity.

A multi-application format

In Card Emulation mode, the ST53G allows consumers to use their preferred secure applications such as payment, transport or access control directly on their favorite wearable.

A secure and boosted solution

The ST53G is the perfect compilation of ST's expertise in NFC and secure transactions, delivering an advanced contactless boosted solution and secure microcontroller in the same package.

A complete ecosystem

In addition to an all-inclusive package solution, STPay-Boost, with a ready-to-host STPay smartcard operating system, its ecosystem includes radio-tuning tools and pre-defined antenna configurations.

CERTIFICATIONS

- EMVCo Level 1 & 2 functional compliance
- Common Criteria EAL5+ secure element and EMVCo certified

INTEGRATION

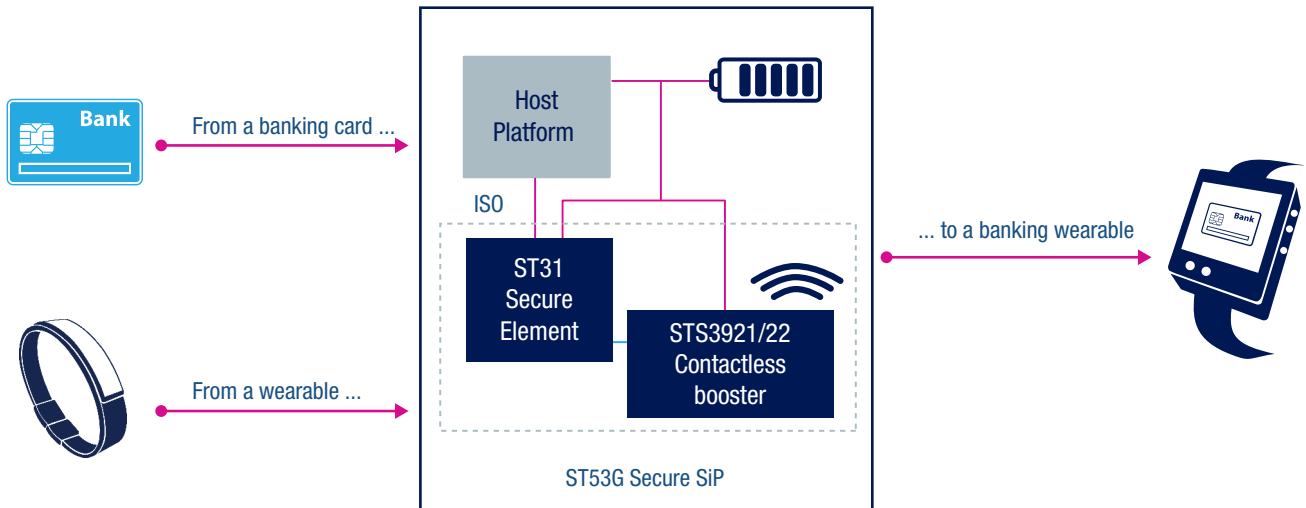
- Simplified integration
- Small BoM size
- Flexible antenna design
- Improved interoperability (auto power/gain control, fine phase control)

PERFORMANCES

- Operates at up to 700x lower signal level than passive load modulation
- 90 times reduction of the antenna size
- Improved user experience with a 9x larger operating volume

ST53G TOOLS PACKAGE

- ST53G expansion board compatible with STM32 NUCLEO
- RF parameters adjustment
- Application development
- Antenna matching
- STPay application available



MARKET TREND

According to ABI Research, by 2021 **over 500 million connected wearable devices** will be adding value to consumer and enterprise markets including healthcare, manufacturing, retail and sports/wellness.

