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Thales Gemalto Mobile Protector

Secure online transactions with your smartphone

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Banking & Payment Services

Everything customers do in their online bank today, they expect to do on their mobile as well. Without compromising security. This is what Thales Gemalto Mobile Protector makes perfectly possible - with built in multi-layer authentication and protection for eBanking, eCommerce and ePayment.

Mobile phones have become ubiquitous objects playing an integral part of our everyday lives. But they pose new security challenges requiring adapted solutions.

Next generation security for new generation services

Using a mobile phone to perform financial transactions has become so natural. For banks the challenge is not only to deliver the full spectrum of possible mobile banking services like creating new beneficiaries, transferring money to external accounts or managing your banking card. Banks also need to deliver additional services by an always connected device such as mobile wallet, proximity payment, Peer to Peer payment or mobile commerce. Banks who fail to expand services to mobile, may risk customers leaving for more innovative competitors.

At the same time the threat posed to mobile phone is greater than ever. Reports from security specialists confirm years after years that mobile malware keep growing in numbers, but also in complexity. After the wave of famous SMS malware (like Eurograbber) which forward to hackers the One Time Code received to validate transactions, fraudsters now try to disguise themselves as genuine bank applications to collect user credentials and card details. Latest versions even prevent users from alerting their bank to fraudulent transactions.

Also as mobile phones are more susceptible to theft than PCs, users need to take precautions and protect credentials against abuse if a device is stolen or misplaced.

These risks are well highlighted by regulations like FFIEC in the US or the PSD2 in Europe.

While a growing majority of banks now view mobile services as the next frontier, they have yet to keep up with the necessary security posture needed to protect these services.

Thales Gemalto Mobile Protector is a Software Development Kit providing APIs to easily implement multi-factor authentication and mitigate against malware attacks. Thales Gemalto Mobile Protector can help banks protect online services and consumers as well as comply with regulations.

Multi-factor authentication

Effective security relies on multiple and independent authentication factors to ensure that no single point of compromise can lead to unauthorized account access. But implementation of such a solution can sometimes be difficult and does not always provide an optimal user experience.

Thales Gemalto Mobile Protector overcomes these challenges by allowing banks to easily implement multiple authentication factors while offering an easy and simple user experience.

Thales Gemalto Mobile Protector offers a first layer of authentication in the form of Device Binding which consists of strongly linking the registered mobile device to a specific user account ('"What I have"). This layer of authentication is transparent to the end user and can be easily combined with other layers.

The second layer of security consists of the classic PIN code ("What I know").

This knowledge factor provides an additional layer of security and is used as the backup and root security for the other authentication factors. Strengthening this layer further, Thales Gemalto Mobile Protector includes a built-in randomized secure PIN pad aimed at defeating common attacks such as key loggers.

The third layer is composed of biometric factors including fingerprint and facial recognition. Banks have the flexibility to offer users their preferred method of authentication. Biometric factors offer convenience since they eliminate the need to use PIN codes repeatedly and generate customer confidence and by providing protections in the event a device is stolen. PIN protection and biometric factors are an integral part of the Thales Gemalto Mobile Protector Security scheme. These factors do not simply provide a yes/no answer but are used to derive keys which constitute one of the layers needed to access the deeply encrypted device key.

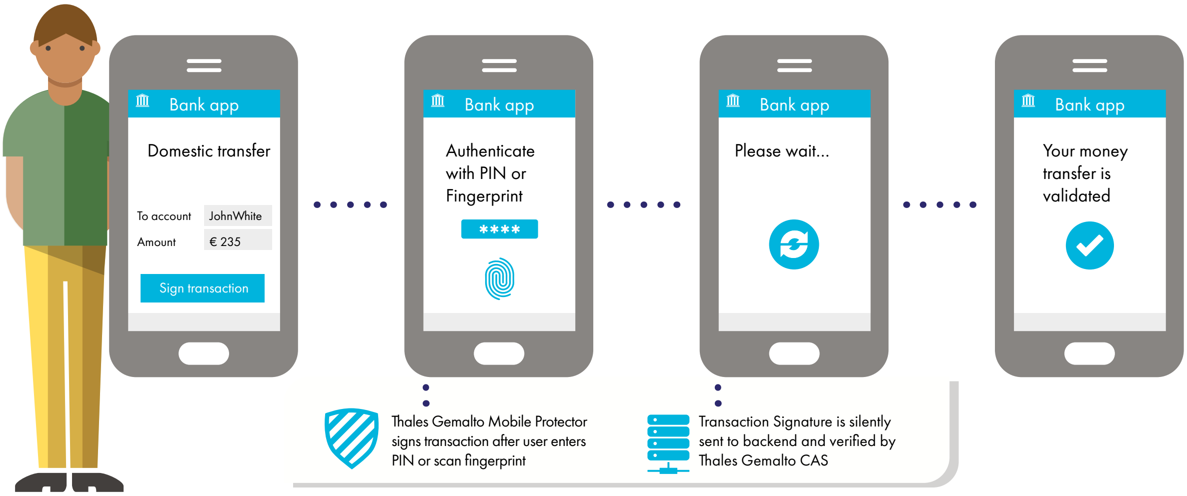
Advanced security

Thales Gemalto Mobile Protector leverages Thales' unrivalled experience in digital security. The multi-layer encryption model makes the solution safe against after-theft-attacks. The personalization phase, which consist of enrolling the mobile device and provisioning secret keys, is secured by a proprietary protocol which protect the solution against Man-In-The-Middle as well as SSL weaknesses (BEAST, CRIME, etc.).

Malware protection

Excellent cryptographic implementation is required to provide efficient protection, but it can't be the only layer of defense against malware.

Thales Gemalto Mobile Protector also includes several security features which contain the risks of malware attacks. The most critical parts are developed in native language and concealed with Thales unique obfuscation techniques to prevent reverse engineering from hackers. It also provides detection techniques to prevent the application from being linked to a debugger or hooked and thus forces hackers to spend time identifying these protections and trying to bypass them.



Thales Gemalto Mobile Protector signs transaction after user enters PIN or scan fingerprint

Transaction Signature is silently sent to backend and verified by Thales Gemalto CAS

It also detects phones which are rooted or jailbroken and where the mobile OS security features have been removed thus exposing them to potential malware contamination. In addition it also looks for the presence of cloaking tools which try to hide the fact that the phone is jailbroken or rooted.

Optimized user experience

After installing the application developed with Thales Gemalto Mobile Protector, customers simply enroll by entering a registration code when first launched. This enrolment can be further facilitated by using QR code. Once the application is personalized, customers benefit from the best experience, either using simple PIN code or their biometric characteristic to authenticate themselves to mobile services.

Thales Gemalto SDK's various layers of authentication can be combined to achieve an optimal balance between user experience and risk mitigation. For example, a simple login request may rely either on fingerprint authentication or device binding. However, for more risky transactions it is possible to combine the PIN and a biometric factor (or several biometric factors), thus allowing financial operations that would not have been possible with the use of a static password.

Flexible integration

As part of Thales' versatile Thales Suite, Thales Gemalto Mobile Protector fits perfectly into a bank's security lifecycle. It can be accompanied by your choice of complementary products such as Thales Gemalto Confirm Authentication Server (CAS) to validate authentication and signature, Thales Gemalto Mobile Secure Messenger to perform Out-of-Band authentication or Thales Gemalto Assurance Hub (GAH) to take smart authentication decision based on risk analyses.

And since it uses open standards, it can also integrate easily with third party authentication schemes.

Future proof

Security in general, and especially in the mobile world, is in constant evolution and requires permanent investments to keep up with the latest threats and attacks. Thales Gemalto mobile security solution benefits from a clear and continuously innovative technology roadmap which relies on Thales' experience in digital and mobile security and unrivalled experience in secure element.

KEY FEATURES

Enhanced Features

- One Time Password, Challenge/Response and Transaction Data Signing
- Easy to implement native API
- PIN Authentication with randomized Secure Pin Pad
- Biometric Authentication with Fingerprint and Facial Recognition
- Device Binding
- Jailbreak/Root detection, Anti-Debug, Anti-Hooking
- Advanced Obfuscation
- Secure Storage
- Secure Channel (on top of SSL)
- HSM based key protection
- Security audited by independent third party

Multi-Channel and use cases protection

- eBanking
- ePayment
- eCommerce

Supported platforms

- iOS (8.X and above)
- Android (4.X and above)
- Windows Phone (8.X and above)

Supported Algorithms

- OATH (HOTP/TOTP) and OCRA
- EMV CAP (mode 1, 2, 3, 2TDS)
- FIDO UAF

Thales Gemalto Mobile Suite help banks comply with:

- EU PSD2 regulation
- FFIEC Retail Payment Service Appendix 5 on Mobile Financial Security
- NIST 800-63-3 Digital Authentication Guideline

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