

Gemalto .NET Bio

■■■■ A Biometric Security Solution for MS Vista



ENTERPRISE > SOLUTION

Gemalto .NET Bio is an innovative software solution that works with Gemalto .NET smart cards to seamlessly integrate biometric technology into Windows Vista®.

This solution provides a secure two and three factor authentication system that is convenient for users, easy to deploy and manage, and fully compatible with the smart card security components in Windows Vista SP1. It is also compatible with the vast majority of fingerprint sensors available in the market.

The Gemalto .NET Bio solution enables fingerprint match-on-card user authentication as an alternative or complement to smart card PIN verification. This in turn gives access to the digital certificates on the card, that can then be used for Windows logon, digital signature, file encryption, secure VPN access and other PKI applications.

The match-on-card operation does not introduce any noticeable delay in the overall cryptographic operation.

■ Convenience & Enhanced Security

Traditionally, smart cards are protected by a PIN that the user must present to access the cryptographic keys and associated digital certificates stored inside the card. The Gemalto .NET Bio solution extends PIN-based authentication with a flexible system that can be deployed to:

> Use fingerprint authentication instead of the Smart Card PIN. This provides user convenience and cost savings as users don't have to remember the value of the PIN, and are less likely to call the helpdesk for 'forgotten password/ PIN' support.

Or
> Use fingerprint authentication as a complement to the Smart Card PIN. This provides the highest security by enabling a three-factor authentication: something you have (the Gemalto .NET smart card), something you know (the smart card PIN) and something you are (the user fingerprint).

■ Four User Authentication Modes Available

The Gemalto .NET Bio solution offers four different user authentication modes so organizations can optimize

security and convenience based on their specific requirements and security policies:

- > **PIN only:** This is the traditional mode of authentication to the card
- > **Fingerprint only:** Conveniently replacing the use of the smart card PIN
- > **PIN or Fingerprint:** Provides higher convenience by giving the user two different authentication options
- > **PIN and Fingerprint:** Provides significantly enhanced security by introducing a three-factor authentication through the use of a fingerprint in addition to the PIN.



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Integration with the Windows Smart Card Framework

The Gemalto .NET Bio solution builds on top of the latest release of the Windows Smart Card Framework (WSF). The solution provides the highest level of consistency with the Windows Vista environment while at the same time requiring a minimum amount of software to be loaded on the Vista SP1 client (less than 7 MB). By complying with the Windows Smart Card Framework architecture (WSF), the Gemalto .NET Bio solution supports not only the Vista SP1 operating system, but all Microsoft® applications that provide smart card support.

Key Features and Benefits

- Replaces passwords with strong two or three-factor authentication for secure logon, remote access, encryption, and digital signature services
- Adds the convenience and enhanced security of fingerprint match-on-card user authentication to the many features and benefits of the Gemalto .NET smart cards and tokens
- Fingerprints are enrolled on the smart card or token, not on the machine. This allows users to logon with their fingerprint and badge/token to any machine in the corporate domain
- Solution compatible with the vast majority of fingerprint sensors in the market (90% approx)
- Integrates seamlessly with Windows Vista SP1
- Employees no longer need to remember long, frequently changing passwords, nor smart card PINs
- Reduces helpdesk support costs by lowering the need for password resets and smart card unblock
- Supports enrollment of up to 10 fingerprints
- Fingerprint enrollment and management integrated in Vista's secure desktop for additional security



Why Biometrics?

> **Identity:** Biometrics allow user authentication based on a unique physical personal characteristic. From a user perspective, there is a stronger perception of representation compared to usernames and passwords or PINs.

> **Security** greatly varies depending on the biometric solution and implementation, but undoubtedly biometrics (something you are) enhance the level of security of a solution when combined with other authentication factors, such as a smart card or token (something you have) or a password / PIN (something you know).

> **Convenience:** compared to passwords, biometrics can't be forgotten. Users don't have to keep track of them. They are always available, always with the user.

Why Biometrics match-on-card (MoC)?

> **Security:** Smart Cards are by definition and construction highly secure, tamper proof devices. Storage and verification of biometric credentials on the smart card are safer compared to a non secure device or a network. Smart card and biometrics combined provide a highly secure three factor authentication solution.

> **Convenience:** Biometrics match-on-card introduce the benefit of Portability: Users can log on throughout the corporate network using their smart card or token and biometric credentials.

> **Privacy:** Match performed on the card: Biometric credentials never leave the card.

> **Compliance:** Certain countries implement privacy protecting policies that prevent database storage of biometric information.

Operations supported within Vista SP1 Secure Desktop

- Smart Card Logon
- Computer Lock / Unlock
- Enrollment and management of on-card Fingerprints
- Unblock Smart Card and Reenroll on-card fingerprints
- Policy driven ability to change user authentication mode

Microsoft and 3rd party applications supporting use of biometrics through Gemalto .NET Bio solution:

- Microsoft Office: Word, Excel, PowerPoint for digital signature of documents
- Microsoft Outlook for digital signature and encryption of email
- Microsoft Internet Explorer
- Encrypted File System (EFS)
- Other Microsoft applications supporting Windows Smart Card Framework
- 3rd party applications on Vista SP1 supporting Windows Smart card Framework (such as Checkpoint VPN, Adobe Acrobat)

System Requirements:

- Vista SP1
- PC/SC smart card reader
- Fingerprint sensor supported:
 - UPEK Sensors: TCS1, TCS2, TCS3
 - Authentec Sensors: AES2501
- Gemalto .NET v2+ smart card