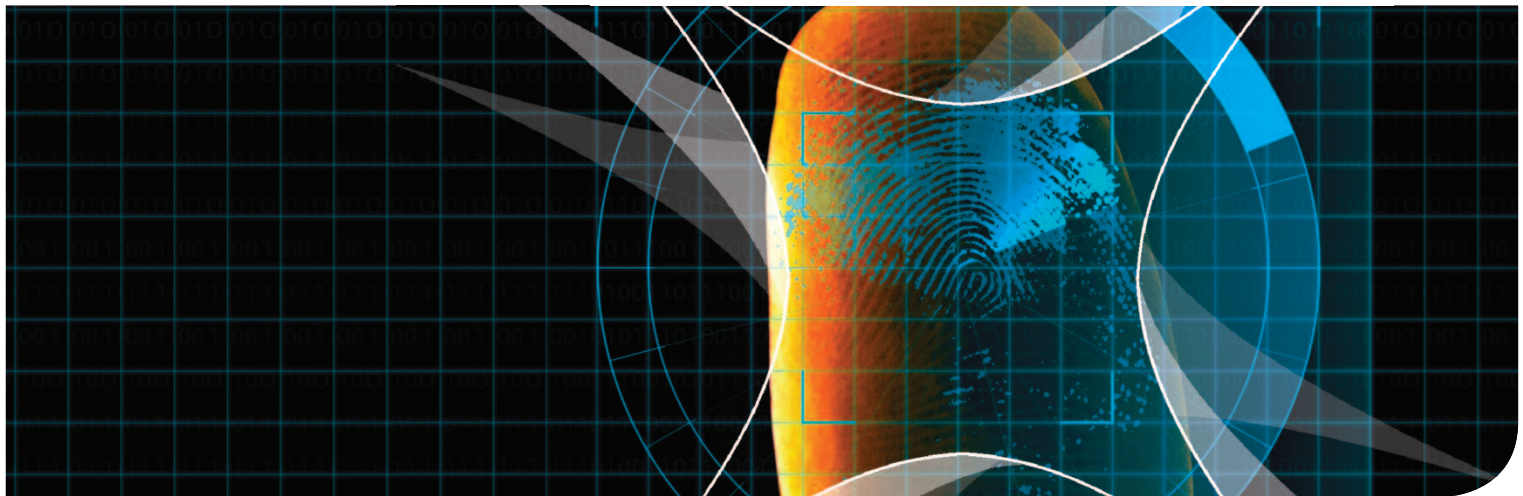


# Protiva™ .NET Bio Solution

||||| A fingerprint biometric and smart card solution for Microsoft® Windows



## ENTERPRISE > SOLUTION

**P**rotiva .NET Bio is an innovative software solution that works with Protiva .NET smart cards to seamlessly integrate biometric technology into Microsoft Windows®.

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 XP, Vista and 7. It is also compatible with the vast majority of fingerprint sensors available in the market.

Gemalto's .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 and volume encryption, secure VPN access and other PKI applications.

### ■ Convenience & enhanced security

The .NET Bio solution extends traditional PIN-based authentication either by:

> Using fingerprint authentication instead of the smart card PIN.



This provides cost savings to enterprises and convenience to users as they do not have to remember the value of the PIN, and are less likely to call the helpdesk for 'forgotten password/ PIN' support. Or

> Using 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 .NET smart card), something you know (the smart card PIN) and something you are (the user fingerprint).

### ■ User verification modes

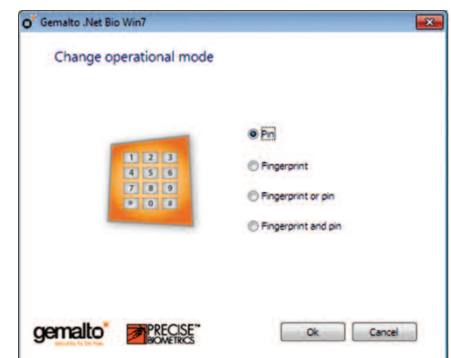
The .NET Bio solution offers four different user authentication modes so organizations can optimize security and convenience based on their specific requirements and security policies:

> **PIN only:** This is the traditional mode of user verification

> **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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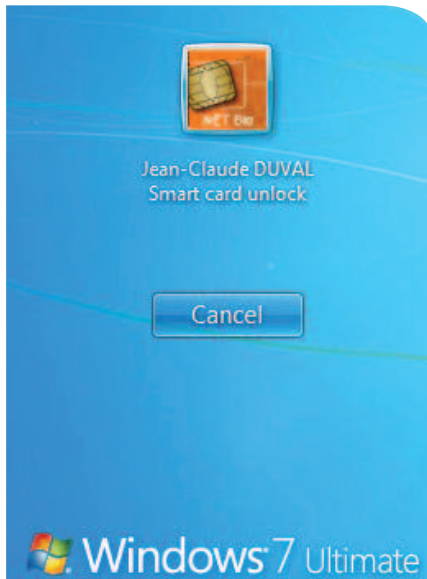
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## Integration with the Windows smart card and biometric frameworks

The Protiva .NET Bio Solution is built on top of the Windows Smart Card Framework (WSF). The solution provides the highest level of consistency with the Windows environment while at the same time requiring a minimum amount of software to be loaded on the client PC. By complying with the WSF architecture, the .NET Bio solution works not only with Windows XP, Vista and 7 operating systems, but with all Microsoft® and third party applications that also support the WSF architecture. In Windows 7, the .NET Bio solution also complies with Windows Biometric Framework (WBF), providing a more friendly user experience and interoperability among biometric applications and readers.

## 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 Protiva .NET smart cards and tokens
- Portability: 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
- Integrates seamlessly with Windows XP, Vista, 7 and associated Windows Server versions
- 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
- Supports OATH OTP as a complement to PKI technology

## 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.

> **Non-repudiation:** the fingerprint biometric provides proof of the integrity and ownership of data or transaction.

## Why biometrics Match-on-Card?

> **Privacy and security:** Smart cards are highly secure, tamper-proof devices. Biometric credentials never leave the card and fingerprint verification is performed on the smart card, thus preventing any intrusion attempts.

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

## Microsoft and 3rd party applications supporting .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®
- Microsoft Encrypted File System (EFS)
- Microsoft Bit Locker
- Microsoft Direct Access (Windows 7)
- 3rd party applications supporting Windows Smart Card Framework (such as Check Point® VPN, Adobe® Acrobat®) and PKCS#11 standard

## System requirements:

- Windows: XP, Vista, 7
- PC/SC smart card reader
- Fingerprint sensors supported:
  - Precise Biometrics 200/250 MC
  - UPEK Sensors: TCS1, TCS2, TCS3, TCS4
  - AuthenTec Sensors: AES2501, AES2550, AES2801
- Protiva .NET Bio smart card