



Smart Enterprise Guardian

Security, Convenience, Portability and Simplicity

FINANCIAL SERVICES & RETAIL

ENTERPRISE > PRODUCT

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Lexar™

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security to be free

Smart Enterprise Guardian A Personal Portable Security Device

The cascading effects of pervasive network access and an ever-increasing amount of digital information present IT organizations with a new array of challenges.

Strong network security is essential because employees, partners, suppliers and customers require on-demand access to data and applications from anywhere using any type of system. Availability of applications and data needs to be managed and controlled at the individual user level. And protection of sensitive corporate data that is increasingly stored on mobile devices is mandatory.

Information loss is costly, whether it is due to theft or accident, and it can adversely impact an organization's reputation and financial performance. According to a study by Ponemon Institute in 2006, data breaches cost companies an average of \$182 per compromised record, a 31 percent increase over 2005. In addition, regulations such as Sarbanes - Oxley, European Union Data Protection Directive, and the Health Insurance Portability and Accountability Act (HIPAA) are forcing enterprises to invest in new infrastructure and technologies to meet the requirements for enhanced protection of their networks, applications and data.

In order to meet these needs and optimize total cost of ownership, organizations today need identity management and data access solutions that are interoperable, scalable and portable. The security ecosystem involves numerous frameworks, standards and infrastructure providers so interoperability is essential. Solutions that are easy to deploy and support are necessary because of the scarcity of IT resources and the constantly growing need to protect business data and personal identity information.

Smart Enterprise Guardian - A Personal Portable Security Device Jointly Developed by Gemalto and Lexar

Smart Enterprise Guardian is a unique USB device based on industry standards that secures identity credentials and sensitive files with proven smart card technology. In addition to protecting up to 2 GB of data on a USB drive, it supports strong authentication, digital signature and file encryption. This device features an intuitive user interface, requires no software set-up and delivers the highest levels of security, convenience and manageability.

Incorporating Gemalto .NET technology, Smart Enterprise Guardian enables enterprise of all sizes to:

- Protect network access and confidential information
- Enhance productivity with easy-to-use security services and simple administration
- Make business transactions more efficient and safe
- Optimize ROI with a highly interoperable solution that leverages existing IT infrastructure



Smart Enterprise Guardian

Smart Enterprise Guardian is one of the first personal portable security device (PPSD) that offers secure portable memory with hardware-based encryption and strong authentication using Gemalto One-Time-Password or PKI (Public Key Infrastructure) services. Support for the device is built into Windows Vista® and also is available for Windows® XP and 2000 systems via Windows update.

Secure Network Access **> Strong Authentication**

Smart Enterprise Guardian uses tamper-proof Gemalto .NET smart card technology to store personal digital identity credentials and logon information. This secures access to networks, applications and data at the user-level and enables deployment of additional PKI services using a single device. Organizations can implement either One-Time Password or PKI-based strong authentication for network access and remote access. With Smart Enterprise Guardian, they can also deploy PKI-services for application access, file and email encryption, and digital signature.

Strong authentication can also be used for secure logon to Windows workstations and for desktop file encryption. This means only the appropriate users have access to a specific desktop and enables the highest level of protection for laptops used by mobile workers.

Protect Confidential Information

> Encryption

Smart Enterprise Guardian incorporates either 1 GB or 2 GB portable memory and uses Advanced Encryption Standard (AES) hardware-based encryption to cipher all types of files and documents on the device. A 256-bit encryption key is generated and securely stored by the smart card to ensure that no traces are left on the computer and to protect the encrypted data from being compromised in case of physical attack. Organizations can utilize this comprehensive USB encryption system for advanced protection of networks, portable PCs and data.

Enhance productivity

> Ease-of Use

Smart Enterprise Guardian features an intuitive user interface that requires no training, even for users with minimal PC or security knowledge. The device runs automatically when plugged into a USB port and no software set-up is required. Users enter a PIN to unlock the secure memory partition and access confidential files stored in the drive. File encryption and decryption are performed on-the-fly without any additional user interaction, making it simple and convenient. The device also stores the user's digital identity credentials so digital signature of documents using standard PKI services, such as those in Microsoft® Office and Adobe® Acrobat®, is straightforward and easy. This feature makes business transactions safer and more efficient, and helps avoid the costs involved in handling physical documents.

> Simple Administration and Support

Smart Enterprise Guardian is designed with a user lock-down mode to ensure that only authorized access is allowed. In addition, an administrative unblock credential is built-in to enable administrators to unblock the device remotely for authorized users. Administrators also have the flexibility to reset the drive to create public storage as needed. Support for Smart Enterprise Guardian is

integrated into Microsoft Identity Lifecycle Manager and Gemalto Strong Authentication Server. Organizations can leverage their existing IT and security infrastructure to deploy the device without investment in additional hardware and resources.

In addition, Smart Enterprise Guardian is also supported by Gemalto's Allynis Device Administration Service, a comprehensive Web-based provisioning, administration and support service for small and medium size enterprises. This service enables IT administrators and end-users to perform routine deployment and device management services for Gemalto .NET devices with an easy-to-use browser-based interface.

Optimize ROI with Highly Interoperable Solution

> Application Interoperability

Smart Enterprise Guardian works seamlessly with Microsoft's Windows security infrastructure for domain logon, document signature, email encryption, and Encrypting File System (EFS). The device also includes a one-time password (OTP) feature that complies with the OATH Open Authentication standard. Because the Smart Enterprise Guardian is based on the Gemalto .NET smart card, PKI support is natively integrated with Windows Vista and fully compliant with Microsoft Base Smart Card Cryptographic Service Provider (BaseCSP). For Windows XP

and 2000 systems, the BaseCSP is an optional component available for download via Windows Update.

> Platform Interoperability

Smart Enterprise Guardian is optimized for use with other network-based security products, providing a cost-effective solution with greater interoperability and security control. In addition to its support for Microsoft Windows, Office and Forefront products, it works seamlessly with end-to-end access control solutions such as Citrix Access Gateway™, Citrix Password Manager™ and Lumension Security Sanctuary Certified Device™.

Benefits

Smart Enterprise Guardian delivers the following benefits:

- **Increase access and data security** with strong authentication, mobile and portable data encryption, and PKI services
- **Reduce total cost of ownership** with support for industry standards and third-party software and applications
- **Streamline deployment and administration** using a comprehensive credential management system
- **Increase user adoption** with no software installation and an intuitive user interface
- **Flexibility and usability** with configurable private and public data partition
- **Increased security** with read-only partition for secure applications and USB port control

How secure?

Access	Data
Proven tamper-proof smart card to store user and administrative credentials and protect against hardware-based attacks	On the fly hardware based, 256-bit AES encryption makes ciphering simple and leaves no trace on the host PC
Smart card-based PIN to secure access with a lockdown mode to ensure access only by authorized users	AES key is generated by the smart card and stored inside it; no backup is maintained to protect against internal data theft
User lockdown mode and administrative PIN delayed unblock protect against software-based attacks	Administrative capability to reset the drive and flexibility to create public storage in addition to the secure partition



Smart Enterprise Guardian Specifications

Smart-card: Gemalto .NET

- Cryptographic support (RSA 1024, 2048 bits) DES, 3-DES (CBC, ECB), AES, HMAC, SHA1, SHA2 and MD5
- PKCS#11 support
- OTP application
- Retention: 10 years
- EEPROM endurance: 500,000 write/erase cycles
- Communication speed: up to 223 Kbps

Smart-card communication:

- PC/SC
- CCID

Microsoft Compatibility:

- Microsoft Windows 2000, XP and 2003
- Native in Windows Vista and Server 2008
- Microsoft Smart Card Base CSP

Flash Data Storage: 1GB, 2 GB

Flash Specifications: ADxxx-S2-100-6100, ADxxx-S2-100-6101, ADxxx-S2-100-6102

Read/Write performance: Sequential read typically 17MB; Sequential write 6MB

Encryption: Native 256-bit AES hardware encryption

Dimensions: 65mm x 20mm x 8mm

Weight: 11 g, 0.4 oz.

Temperature Range:

- Operating temperature: 0° to 60°C (32° F to 140° F)
- Storage temperature: -20°C to 85°C (-4° F to 185° F)

Vibration:

- 147 m/s² peak amplitude
- 10 to 2,000 Hz, 20 min. sweep, 12 cycles per axis, 36 cycles for 3 axis.

Shock:

- Acceleration = 490 m/s² (50G)
- Semi-sine wave, velocity change = 3.44 m/s (11.3ft/s)

Power Indicator: LED one color (blue)

Standards and Certifications:

- RoHs
- WEE
- OATH
- USB 2.0 high speed
- ISO
- Microsoft WHQL (pending)
- CE, FCC, C-Tick, VCCI

About Gemalto

In an increasingly connected society, Gemalto makes personal digital interactions secure and easy. The company provides end-to-end digital security solutions, from the development of software applications through design and production of secure personal devices such as smart cards, SIMs, e-Passports and tokens to the deployment of managed services for its customers. More than a billion people worldwide use the company's products and services for telecommunications, financial services, e-government, identity management, multimedia content, digital rights management, IT security, mass transit and many other applications. Gemalto was formed in June 2006 by the combination of Axalto and Gemplus.

For more information please visit www.gemalto.com.

About Lexar

Lexar Media is a leading marketer and manufacturer of NAND flash and DRAM memory products under the Lexar and Crucial brand names. Lexar also sells flash memory products under the Kodak brand. For more information about Lexar, visit www.lexar.com. For more information about Crucial products, visit www.crucial.com, www.crucial.com/uk or www.crucial.com/eu. Lexar Media, Inc. is a subsidiary of Micron Technology, Inc., and Lexar Media is a division of Micron Europe Limited, a division of Micron Semiconductor Asia Pte. Ltd., and a division of Micron Japan, Ltd.

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