CardOS API
powerful integration

The standard cryptographic Interface for CardOS tokens

A product for sophisticated requirements – CardOS API enables efficient user-friendly and simple implementation of smart cards for user authentication, data encryption and creation of digital signatures in a variety of application scenarios, like system login, web authentication, or secure email.

AtoS

Great convenience by supporting technical standards

Overview

The CardOS API product family offers powerful integration software for the use of CardOS smart cards and security tokens in a variety of standard applications.

CardOS API enables efficient user-friendly and simple implementation of smart cards for user authentication, data encryption and creation of digital signatures in a variety of application scenarios, like system login, web authentication, or secure email.

CardOS API is available for all common operating systems. CardOS API for Windows with Minidriver supports Microsoft smart card Crypto Provider (Base CSP) and thus allows the simple use of the new Microsoft smart card architecture. CardOS API is compatible with international standards like PKCS#11 Cryptoki and PKCS#15. Beside Microsoft Windows CardOS API is available also for Linux and Mac OS X.

CardOS API combined with the secure smart card operating system CardOS provides the perfect foundation for ID cards in different industries, especially in the public sector and in the healthcare sector. Employee IDs at companies and organizations, student cards and signature cards can be realized simply and cost-effectively with these products.

Current Versions

▸ CardOS API V5.2 for Windows
▸ CardOS API V5.2 for Linux
▸ CardOS API V5.1 for Mac
▸ CardOS API V5.2 for Mac (in preparation)

Description

CardOS API provides powerful implementations of the two standard application interfaces for cryptographic services: PKCS#11 (Cryptographic Token Interface) and support of Microsoft CAPI through CardOS API Minidriver.

Via the CAPI interface under Microsoft Windows, CardOS API provides key and certificate management for applications which is seamlessly integrated in the operating system.

The PKCS#11 interface allows applications under Windows, Linux and Mac OS X to use the CardOS API functionalities.

Various applications can access the same key material via both interfaces simultaneously.

The CardOS API provides a standards-based dynamic PKCS#15 file system on the smart card which can be flexibly customized according to customer requirements.

Thus the CardOS API enables simple and efficient use of CardOS smart cards with cryptographic keys and certificates in numerous applications. Support of various operating systems, use of international standards and the realization of state-of-the-art cryptographic algorithms ensure sustainability for the future.

The new option to insert PINs via PinPad reader (SPE) protects against eavesdropping of PINs on the computer.

Utilities

Additional utilities extend the scope of application.

The CardOS API – Viewer provides functions to initialize smart cards and import or delete data (such as keys, certificates or other objects). Objects saved on the smart card and their attributes as well as the properties of the smart card used can be displayed.

PIN management (change PIN, reset retry counter with PUK) can either be carried out using a separate PIN management utility or via the CardOS API – Viewer.

CardOS API for Windows is equipped with a special SigG PIN utility for handling of signature PIN/PUK. This utility has been designed specifically for the CardOS signature application according to the German signature law (SigG).

License

The software license is required in order to install and use the CardOS API software on a client workstation or on a Windows / Citrix terminal server.

In the case of clients, the number of licenses corresponds to the total number of systems on which CardOS API software is installed.

In the case of terminal servers, the number of licenses corresponds to the maximum number of concurrent users for each terminal server.

Supported Standards

- Microsoft smart card Minidriver for Windows Base CSP V7.06: Application interface on Windows platforms
- RSA Public Key Cryptographic Standard PKCS #11: Cryptographic Token Interface Standard Cryptoki (V2.11): RSA standard application interface on Windows, Linux and Mac OS X
- RSA Public Key Cryptographic Standard PKCS #15: Cryptographic Token Information Format Standard: Dynamic PKCS#15 file system on the smart card
- PC/SC V2.01: Interface to smart card readers
- PC/SC V2.01, Part 10: Interface to smart card readers with PIN pad
- Tokend on Mac OS X

Technical Data

Supported Operating Systems:

- Windows XP Professional Edition (SP3)
- Windows XP Professional x64 Edition (SP2)
- Windows Vista Enterprise Edition (SP2)
- Windows Vista Enterprise x64 Edition (SP2)
- Windows 7 (SP1)
- Windows 7 x64 (SP1)
- Windows Server 2003 Enterprise Edition (SP2)
- Windows Server 2003 Enterprise x64 Edition (SP2)
- Windows Server 2008 (SP2)
- Windows Server 2008 x64 Edition (SP2)
- Windows Server 2008 R2 Enterprise Edition x64 (SP1)
- Citrix Terminalserver (Windows Server)
- Linux
- Mac OS X

The CardOS API product family offers powerful integration software for the use of CardOS smart cards and security tokens in a variety of standard applications.

System Requirements for Windows, Linux, Mac OS X:

- 20 MB free disk space

Supported smart card Operating Systems:

- CardOS V5.0 *
- CardOS V4.4
- CardOS V4.3 B
- CardOS DI V4.2 C
- CardOS V4.2 C
- CardOS DI V4.2 B
- CardOS V4.2 B
- CardOS M4.01a

Supported smart card Readers:

PC/SC compatible smart card readers and selected PC/SC V2.01 Part 10 compatible PIN pad smart card readers under Windows.

Supported Languages:

- German
- English
- French
- Italian
- Spanish
- Portuguese
- Slovakian
- Bulgarian (only CardOS API for Windows)

Further languages on inquiry

Supported Applications

CardOS API supports various applications via the standard interfaces.

Example Applications:

- Microsoft Windows PKI
- Microsoft CA / ILM / FIM
- Microsoft Windows smart card Logon
- Microsoft Internet Explorer
- Microsoft Outlook
- Microsoft Outlook Express
- Microsoft Word, Excel, Powerpoint
- Microsoft CAPICOM
- Microsoft EFS
- Microsoft Windows Terminal Services
- Adobe Acrobat
- Mozilla Thunderbird
- Mozilla Firefox
- Mac OS X Mail
- Mac OS X Safari
- Checkpoint VPN
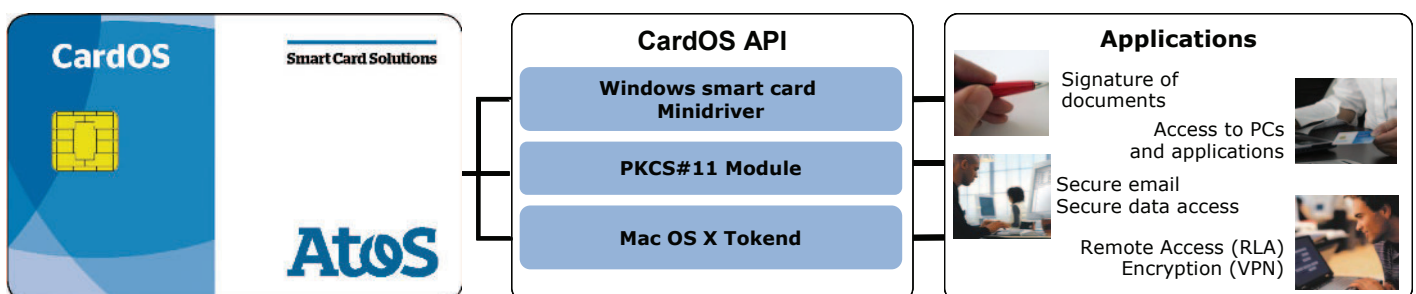
* with CardOS API V5.2

High Flexibility

Software Pack

The CardOS API software is delivered for each operating system family on CD ROM. It includes the following components:

For Windows:
- Minidriver for CardOS
- PKCS#11 crypto module for CardOS
- PIN Management utility
- CardOS API-Viewer
- Documentation
- SigGPIN utility (optional)

For Linux:
- PKCS#11 crypto module for CardOS
- PIN Management utility
- Documentation

For Mac OS X:
- PKCS#11 crypto module for CardOS
- Tokend crypto module for CardOS
- PIN Management utility
- Documentation

Further information for Developers

For application and software developers Atos offers additional consulting and support as well as developer documentation and scripts for the development of smart card applications. These offer additional information for integrating CardOS API and CardOS smart cards in application programs and smart card solutions.

About Atos

Atos is an international information technology services company with annual 2010 pro forma revenues of EUR 8.6 billion and 74,000 employees in 42 countries at the end of September 2011. Serving a global client base, it delivers hi-tech transactional services, consulting and technology services, systems integration and managed services. With its deep technology expertise and industry knowledge, it works with clients across the following market sectors: Manufacturing, Retail, Services; Public, Health & Transport; Financial Services; Telecoms, Media & Technology; Energy & Utilities.

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