



**SafeSign** is encryption middleware, integrating hardware tokens supporting digital signatures into applications that support the use of digital signatures and certificates, using industry standard APIs like PKCS #11 and Microsoft Crypto API.

The AET middleware package installs the PKCS #11 library and includes a Cryptographic Service Provider (CSP) that allows you to store public and private data on a personal token, a smart card or an USB token. The system can initialise (i.e. define PINs, generate keys, integrate certificates) and use the token for encryption, authentication or digital signatures. The middleware includes all functionality necessary to use hardware tokens in a variety of PKIs.

Hardware tokens include smart cards and USB tokens supporting the use of digital signatures.

Examples are smart cards from IBM, G&D, Axalto, Gemplus, Oberthur CS, Orga, Aspects Software, KeyCorp, ...

The SafeSign solution consists of:

- SafeSign middleware
- Choice of smart card reader - Omnikey smart card readers recommended
- Choice of smart card - Native OS, Java Card, Multos

SafeSign consists of:

- PKCS #11 library
- Cryptographic Service Provider (CSP)
- Token Utilities (TU)
- Certificate Registration Utility (CRU)
- PKCS #12 for importing Digital IDs
- PKCS #15 compatible card structure

The SafeSign PKCS#11 library integrates each PKCS #11 compatible application with a SafeSign supported hardware token. Examples include:

- Entrust
- Netscape, Firefox, Mozilla
- Lotus Notes (version 6.x)
- SunRay thin client
- and many more

The SafeSign PKCS#11 Library is unique as it:

- One PKCS #11 library for all applications
- Provides the same PKCS #11 functionality across all supported platforms including Windows, Windows CE, Solaris, Mac OS X and Linux (compiled from one code base)

The SafeSign CSP solution:

Integrates each MS Crypto API compatible application with a SafeSign supported hardware token. Examples:

- Windows 2000 / XP logon
- MS Terminal Server 2003 logon
- Citrix Metaframe logon
- Outlook and all MS Crypto compatible applications
- Cisco and CheckPoint VPN

SafeSign CSP is designed as a smart card CSP and therefore in line with Windows 2006 "Longhorn" architecture with CSP functionality delegated as much as possible to Microsoft default CSP. Reduces code complexity and therefore compatibility issues as well. It has also been tested with all known Microsoft applications.

AET middleware is the first product in its class available on multiple platforms and comes in a standard version with an installation shield for the following environments: Windows 98 SE / ME / NT 4.0\*, Windows 2000 / XP / 2003 Server, Linux, Sun Solaris 9 and Mac OS X (Jaguar, Panther). A version for Windows CE is available for Windows CE 4.2\*\* and for PocketPC 2002/2003.

Any PC/SC smart card reader is supported. PC/SC driver software is either included on the (master) CD-ROM and / or available from the web site of the smart card reader manufacturer. A.E.T. Europe is constantly seeking to extend the range of PC/SC smart card readers supported by its middleware product. However to avoid power problems smart card readers must be capable to provide at least a current of 60mA. If you are a reader manufacturer, and would like to have your reader certified for use with AET middleware, please [contact us](#).

AET middleware supports the STARCOS SPK range of smart cards developed by Giesecke & Devrient GmbH (G&D), the Rainbow iKey 3000 USB token, G&D StarKey100 USB token and Java Card 2.1.1+ compliant smart cards by G&D, GemPlus, IBM, MartSoft, Oberthur, ORGA and Schlumberger.

\*Windows NT 4.0 is supported up to version 1.0.9.04

\*\*Availability depends on the hardware platform / support for the processor platform used with Windows CE.

SafeSign Token Utility also enables you to personalise your token to be part of your secure applications:

- Initialise token with a label, PUK (SO-PIN) and PIN
- Supports Multi-language (automatically adapts to locality)
- View contents of token
- Import digital IDs
- Import root CA certificates
- Delete digital IDs and objects
- Check expiration of certificates

SafeSign Certificate Registration Utility provides:

- An automatic certificate registration and de-registration upon hardware token insertion / removal.
- Registers complete trust chain stored on smart card. Solves problem of secure distribution of (Root) CA certificates.

It Automatically registers and de-registers certificates:

- No user interaction required
- Dynamic: detects reader insertion / removal
- De-registration on token removal: efficient for multi-user workstations

SafeSign is:

- Entrust Ready
- CheckPoint OPSEC certified
- RSA SecurID certified
- RSA KEON certified
- Citrix certified

Advanced Encryption Technology (A.E.T.) Europe B.V is an independent Dutch company offering solutions for e-commerce and information security. These solutions are based upon Public Key Infrastructure (PKI) technology using digital certificates to secure information exchanged and distributed over the Internet. A.E.T. Europe offers solutions based upon industry standards and protocols.

A.E.T. Europe is specialized in integrating and interfacing the different components necessary to create a complete PKI. One of our specialities is the integration of smart cards, USB and soft tokens into PKI aware applications using industry standard API's. Other areas of expertise include large scale deployment, including distribution, of smart cards within a PKI.

### About eB2Bcom

eB2Bcom is an innovative Australian owned company specialising in the distribution, implementation and support of best-of-breed products for Identity Management, Security, MetaDirectory infrastructure & applications, Telecommunications, and ISP Messaging and solutions for Defence, Police, Intelligence & Enforcement. An experienced team of software engineers are available for consulting in and around X.500/LDAP directories. These services including:-

- X.500, X.509 and LDAP architectural consulting and design of directory and security solutions.
- X.500 schema and basic access control design and implementation.
- Interface design and implementation for directory centric solutions



**Sydney:** +61-2-9779-1597  
**Melbourne:** +61-3 -9896-7800  
**Brisbane:** +61-7-3871-1440  
**Singapore:** +65-6841-7374  
**email:** [sales@eb2bcom.com](mailto:sales@eb2bcom.com)  
**Web:** [www.view500.com](http://www.view500.com) or [www.eb2bcom.com](http://www.eb2bcom.com)