

DIGITAL SIGNATURE

# Secure Digital Signatures

CreaSign is a software component, which enables simple creation and verification of digital signature within different applications. By means of a digital signature, it ensures a rock-solid, legally binding security of your e-business: guarantees authenticity and prevents repudiation or tampering with digitally signed documents. Secure digital signature, endorsed by CreaSign, is as legally binding as a handwritten signature on paper.



While implementing an e-business application, you were probably already faced with the complicated international digital signature legislation, standards and technical recommendations. Don't waste your time interpreting different legal issues or standards and searching for an appropriate solution. With CreaSign you will be able to overcome these obstacles and plunge into the e-business world with no risk. Have no fear of incorrect integration of digital signature functionality, filling it with security holes or perhaps even taking on a task too demanding for your small team of IT developers. Apart from the pure cryptographic functionality, CreaSign also endorses a series of well chosen features, which bring considerable advantage to a correct implementation or use of e-documents and implementation of different e-business scenarios.

### Finally a web-browser-compatible digital signature component

**CreaSign** is a software component, which enables simple and secure implementation of digital signatures and digital signature verification, encryption and decryption. It complies with all the European recommendations and technical standards. An easy-to-use high level API enables integration of the component into different applications.

**CreaSign** can be easily and securely used even from a web browser. Web browser happens to be the most popular client application for end-user related e-business, yet it is extremely challenging to properly and efficiently integrate digital signature functionality into it. Forget about demanding installations of fat clients. CreaSign component is small, it installs automatically on a first use, it doesn't pose unnecessary questions and it protects the user from malicious web pages.

### What do you gain?

- **You save time**

Implementation of your own e-business application can be extremely challenging and time-consuming. The use of digital signature poses additional risks: the law about digital signatures is clear and quite demanding, while the implementation of digital signature functionality is complicated and filled with security traps. Using CreaSign, the time for integration of digital signature will be measured in hours instead of months.

- **Forget legal issues**

We have checked all of the European recommendations and all of the technical standards, pertaining to digital signatures. You can rest assured that CreaSign endorses them all and that e-business, based on CreaSign, will comply with them entirely.

- **Support web-based applications**

Efficient implementation of digital signature functionality in a web browser is extremely difficult and filled with security traps, due to its specific architecture. CreaSign provides answers to all of the technological and security issues, which could challenge secure and simple implementation of digital signatures, even in a web browser.

### How does it work?

- **Securely and in accordance with the law**

CreaSign ensures the highest level of security for your business documents and other sensitive information, while correct implementation and integration of digital signature functionality in your application is simple and easy to perform. You will not have to dive into the analysis of different digital signature security issues, since all this work has already been covered within CreaSign. It is completely compliant with all relevant European guidelines, including Directive 1999/93/ EC with all pertaining technical recommendations (CEN/ISSS, ETSI).

- **It is flexible**

CreaSign can help implement any form of digital-signature-based e-business, since it supports:

- secure submission of web-based electronic forms (HTML, Adobe PDF etc.) and their integration into back-end systems,
- secure e-business in custom Windows applications (like fat client, desktop or network application),
- secure web-browser-based file upload and download,
- secure publication of digitally signed documents,
- secure B2B communication – digitally signed data transfer and exchange of messages in different formats (XML, EDIFACT, CSV, TXT).

Due to its flexible implementation, CreaSign will enable a seamless, simple and user-friendly integration of digital signature.

- **It is simple, yet efficient**

Even though CreaSign is extremely simple to use, it does not limit you in usage of advanced options, like left and right signature, parallel or sequential (counter) signatures, partial signature, signing a large file, using digital certificates on smart cards, etc. The unique LiveXML! technology also allows advanced users to directly access the XML structure of the underlying electronic document and customize it to their own individual needs.

### CREA d.o.o.

Gospodinjaska 8, SI-1000 Ljubljana, Slovenia

t: +386 1 518 66 81; f: +386 1 518 66 82; www.crea.si

**CreaSign****Technical description****TYPE OF SOLUTION**

- COM component,
- does not require additional run-time environments, like JRE and Microsoft .NET Framework.

**SIGNATURE FORMAT**

- different forms of W3C XML-Signature (enveloped, enveloping, detached),
- XADES,
- PKCS#7.

**SUPPORT FOR ELECTRONIC DOCUMENTS**

Simple creation and use of e-documents, which include:

- structured data,
- data visualization,
- attachments,
- signatures and
- timestamps.

**SIGNING**

- multiple signatures,
- sequential (counter) or parallel signatures, signature hierarchy (left, right signer),
- partial signatures,
- signature of a document batch,
- signing external references,
- W3C XML-Signature of large binary files,
- use of digital certificates on smart cards.

**SIGNATURE VERIFICATION**

- certificate chain verification,,
- certificate revocation checking (CRL),
- detailed information about the verification status, signer and invalid signature error message.

**TIMESTAMP**

- supports Enturst's XML based timestamping protocol
- contains its own timestamping authority (testing purposes)

**WEB BROWSER SUPPORT**

- simple web browser integration,
- malicious website protection.

**ENCRYPTION**

- W3C XML – Encryption and Decryption,
- PKCS#7 Encryption and Decryption.

**SIMPLE INTEGRATION**

- supported languages: Visual Basic, Visual Basic .NET, C#, C, C++, Delphi, JScript, VB Script ...,
- COM API,
- simple client- and server-side integration,
- LiveXML! technology for direct access to XML structure

**DEPLOYMENT**

- standalone Windows Installer installation, appropriate for Active Directory Installation,
- web-browser-based installation,
- Windows Installer Merge Module (include CreaSign in the installation of your custom application).

**CREA d.o.o.**

Gospodinjaska 8, SI-1000 Ljubljana, Slovenia; t: +386 1 518 66 81; f: +386 1 518 66 82; www.crea.si