

SOLUTION BRIEF

# Digital Signature Solutions

## Digital Signing with Adobe® Acrobat® & Adobe LiveCycle® ES2, and Gemalto's SafeNet eToken & Hardware Security Modules



### A Standard Digital Signature Solution for Adobe and Gemalto users

As organizations move from paper toward digital business processes and initiatives, Adobe and Gemalto offer a secure, portable, and simple-to-use solution that streamlines business processes and reduces the time and costs associated with traditional paper-based document signing. Together with Adobe, Gemalto users can digitally sign documents, files, forms, and transactions anywhere using SafeNet eTokens or SafeNet Hardware Security Modules as the Secure Signature Creation Device (SSCD), ensuring compliance with regulatory requirements, and a seamless transition towards a paperless office environment. Adobe and Gemalto guarantee signer authenticity and the data integrity of documents in a manner that is secure and easy to deploy and manage.

### An Integrated Approach

Together, Gemalto and Adobe Acrobat enable the strongest utilization of desktop (client-side) digital signatures on Adobe's Portable Document Format (PDF) files.

### The Advantages of Secure Digital Signing with Adobe and Gemalto

**Streamline Business Processes** - Replace handwritten signatures and paperwork, and reduce approval process timelines for multiple authorizing signatures.

**Paperless office** - Reduce costs associated with traditional paper-based processes (i.e., paper, printing, ink, faxing, postage, and processing time).

**Compliance** - Utilizing standards-based digital signatures and X.509 certificates in accordance with regulatory guidelines enables the integrity of documents to be maintained.

### Why use Digital Signatures

- > Easy to use
- > Expedite Business Processes
- > Paperless office
- > Legal compliance

**Non-Repudiation** - Gemalto and Adobe integrate to provide non-repudiation of documents or transactions. Digitally signed documents and transactions are sealed electronically, providing evidence of signer and document authenticity and guaranteeing document integrity and thus are resistant to fraud and tampering. Utilizing a hardware-based device ensures users that the private keys are never exposed outside the hardware token or module.

**High assurance** - With PKI-based trusted credentials, the level of assurance is typically higher than that of electronic signatures protected only by a password.

**Standards-Based** - Adobe and Gemalto enable compliance with security and privacy standards. Adobe products feature industry-leading support for PKI standards, FIPS-validated cryptographic modules, NIST test suite validation, and JITC/SAFE/IdenTrust certification, all of which combine to provide a powerful, dependable, and interoperable digital signature solution. SafeNet offers FIPS 140-2 validated solutions with a PKI Client standards-based middleware that enables smooth integration with Adobe applications. Gemalto eTokens and eToken PKI Client support Mac and Linux users, as well as those using Windows-based operating systems.

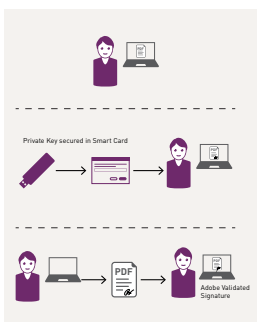
## SafeNet eToken for Portable Hardware-Based Digital Signing

Adobe Acrobat users who want to digitally sign or secure documents need only select the digital certificate that is stored on the eToken. This process enables users to create certified documents that authenticate their identity and validate their integrity. Since users carry their certificates and credentials with them on a convenient-to-use USB device, eToken provides an easy and fully portable way to securely sign documents. This hardware-based approach allows users to use a PKI-based smart card token to securely digitally sign documents from anywhere, eliminating the challenges of other signing solutions that tie credentials to a singular computer or laptop while ensuring the validity of the signature.

## SafeNet Hardware Security Modules Protect the Digital Signing Key

SafeNet HSMs address the security and operational needs required to maintain the integrity of PKIs with true hardware key management, trusted path multi-person authentication, and direct hardware-to-hardware backup. Enabling the strictest hardware security for Certificate Authorities (CAs) issuing digital identities in PKIs, SafeNet HSMs protect the PKI root key and performs all key management, key storage, and key operations (such as digital signing) exclusively within hardware. Adobe LiveCycle ES2 Digital Signatures leverages this robust hardware with the ability to sign and certify large volumes of PDF documents, as well as validate signatures on forms in a round trip scenario. The combination of these products enables customers to protect the integrity of critical documents as well as establish authorship. SafeNet HSMs advanced features include direct hardware-to-hardware backup, split user role administration, multi-person authentication, and trusted path authentication coupled with proven security and operational deployment experience in some of the largest PKIs in the world.

## How Digital Signing Works



### 1. User views document

User views document, fills in form fields, chooses credential, and clicks signature field to approve

### 2. Signing process

User initiates signing process and is prompted for smart card token pin to authenticate to credentials stored on the hardware token or smartcard

### 3. Document received

Adobe Acrobat or Adobe Reader® validates signature from trusted CA. Recipient views signed document



### Digital ID Protection

Secure certificate issuance and key management provided by HSMs

## Key SafeNet eToken Benefits

- > Paperless office for efficient and cost-effective organizations
- > Dual solution for digital signing and secure access based on strong two-factor authentication
- > Offers a portable USB design: users carry their digital identity with them - no special reader needed
- > Based on industry-standard interfaces for out-the-box integration with digital signing applications
- > Cost-effective: no back-end infrastructure or ongoing maintenance required

## Key SafeNet eToken Features

- > On-board PKI generation; private keys are never exposed outside the hardware token or module for secure storage of user credentials, keys, and sensitive information
- > FIPS 140-2 validated and Common Criteria certified cards and smart card chips
- > Native support for long key encryption including RSA 2048-bit

## About Adobe

Adobe revolutionizes how the world engages with ideas and information. Our award-winning software and technologies have set the standard for communication and collaboration for more than 25 years, bringing vital and engaging experiences to people across media and to every screen in their lives, at work and at play. For more information, visit [www.adobe.com](http://www.adobe.com).

## About Gemalto's SafeNet Identity and Data Protection Solutions

Gemalto's portfolio of Identity and Data Protection solutions offers one of the most complete portfolios of enterprise security solutions in the world, enabling its customers to enjoy industry-leading protection of data, digital identities, payments, and transactions—from the edge to the core. Gemalto's SafeNet Identity and Data Protection solutions enable enterprises across many verticals, including major financial institutions and governments, to take a data-centric approach to security by utilizing innovative encryption methods, best-in-class crypto management techniques, and strong authentication and identity management solutions to protect what matters, where it matters. Through these solutions, Gemalto helps organizations achieve compliance with stringent data privacy regulations and ensure that sensitive corporate assets, customer information, and digital transactions are safe from exposure and manipulation in order to protect customer trust in an increasingly digital world.

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