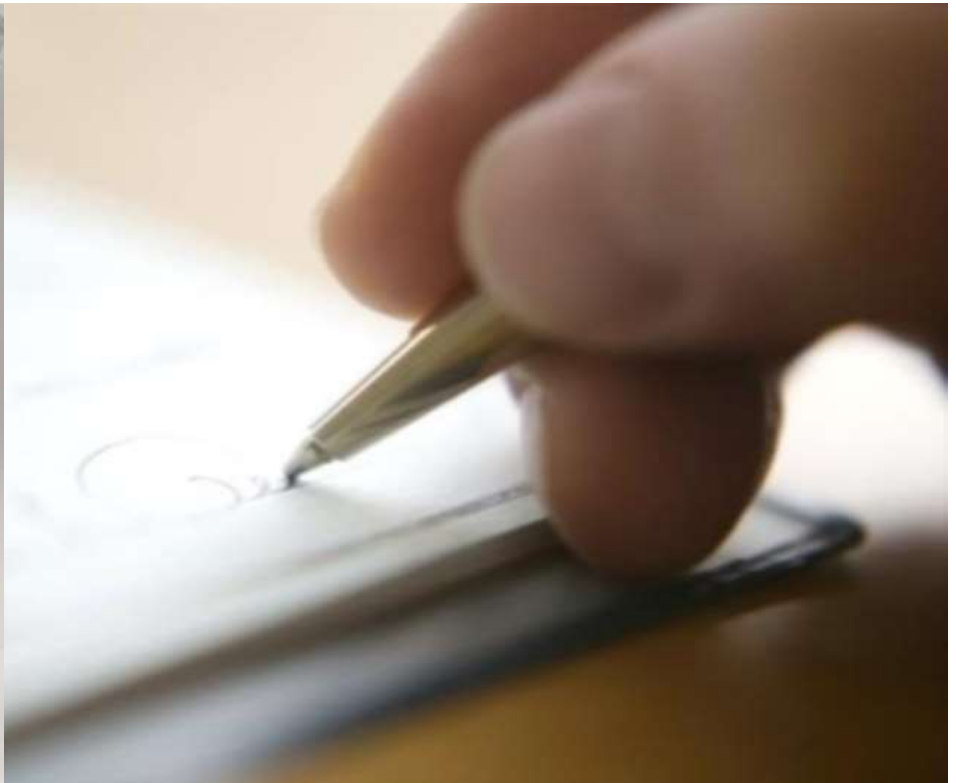


AT.Sign (for e-Cheque)

A Leading Digital Signature Solution
Supporting e-Cheque



Winner of Bronze Award
2016 Internet Finance Competition

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AT.Sign (for e-Cheque)

Extension of a Leading Digital Signature Solution to Support e-Cheques

e-Cheque Opportunities and Benefits

While cheques are commonly used for payment in a wide range of transactions, there is certainly room for enhancing the efficiency of this age-old payment form and automating the processes in view of the rapid technological advancements in recent years.

The Hong Kong Monetary Authority (HKMA) has taken a leading role to facilitate the development of an innovative payment instrument which is legally and functionally equivalent to conventional cheques. This new payment instrument is referred to as the e-Cheque.

The HKMA is working with banks on the launch of these e-Cheque services and targeting a territory-wide rollout by the end of 2015. These e-Cheque services will revolutionize the electronic payment market by creating a highly secure and very cost-effective alternative to the conventional online and electronic payment solutions.

Why AT.Sign for e-Cheque

AT.Sign is a leading Digital Signing Solution designed and developed by iASPEC. Many of our local and overseas customers are using the standard AT.Sign product to support a variety of application systems for the meeting of digital signature requirements. The standard features of AT.Sign can be found in the AT.Sign product literature.

AT.Sign (for e-Cheque) is an extended version of the standard AT.Sign product. It is designed and developed to support various requirements of the e-Cheque in accordance the standards adopted by the Hong Kong Monetary Authority (HKMA). Some of the benefits and extended features of this AT.Sign (for e-Cheque) platforms are highlighted in this brochure.

Business Benefits

Support for wide range of e-Cheque scenarios

AT.Sign supports e-Cheque requiring single signature or multiple signatures, the batch issuance and signing of a group of e-Cheques, as well as the issuance of electronic bank-draft and cashier cheques.

Enhanced user experience

e-Cheques can be digitally signed via server-side (Special Purpose Cert.) and client-side certificates (General Purpose Cert). Client libraries are provided for implementation on a variety of platforms, such as iOS, Android and Windows.

Source Code protected by Escow

Through mutually agreed arrangement, AT.Sign source code can be deposited at third-party escrow agent or internally with the customer to ensure your software investment is protected.

Technical Benefits

Create PDF conforming to HKICL Standards

The sheer complexity of the e-Cheque PDF standard requires in-depth expertise in PDF manipulation and PKI integration. AT.Sign abstracts away the technical details so that you can focus on the user experience in your e-Cheque applications.

Integrate HSM / TSA

AT.Sign integrated with HSM (Hardware Security Module) and TSA (Time Stamping Authority). In addition, it further expands the storage capacities of current HSMs while still complying with FIPS 140-2 level 3. Your keys will never be exposed outside of HSM perimeter.

Ease of integration

A set of Web Services API is provided for the integration of this product with different applications operated by the banks.

Highly scalable and reliable

The product can be deployed in a load-sharing (active/active) or backup stand-by mode to meet different scalability and reliability requirements.

Core Features of AT.Sign for e-Cheque

- [e-Cheque \(PDF\) Generation and Signature](#)
Based on user input data, PDF e-Cheque is generated and signed in accordance to the published e-Cheque standard by HKICL.
- [HSM and TSA integration](#)
AT.Sign integrates seamlessly with HSM and TSA manufactured by different vendors. Banks can choose their own HSM by implementing different software adapters for these HSM products. All digital signatures functions are performed inside the HSM without the risk of exposing the digital certificates. In addition, it further expands the digital certificate storage capacity of selected HSM.
- [Different Certificate Types](#)
Users can digitally sign e-Cheques using Special Purpose Cert stored in the servers of the banks, or using the General Purpose Certs that are stored in HKID cards or USB devices belonging to the authorized signers.
- [Signer Certificate Management](#)
Manage digital certificates, including the association of general purpose certs and special purpose certs with the designated Signer records.
- [E-Cheque Signature Verification](#)
At the time of e-Cheque presentment to the Payee bank, digital signatures of the e-Cheque can be verified to establish the authenticity and integrity of the e-Cheque.
- [Integration with Certificate Authority](#) -- An abstraction layer is provided for the integration with different Certificate Authorities which the customer choose to use.
- [Signatory Rules Management](#)
It manages signatory rules on a per-bank account basis. Similar to signature cards, it controls the number of signatures and who is required to sign for this account at different cheque amount thresholds.
- [e-Cheque Ledger by account](#)
An e-Cheque ledger is maintained for each e-Cheque account. It contains details of all e-Cheques for this account during the retention period adopted by the bank. Audit trail is available for all auditable actions related to these e-Cheques.

- [Payee Name Matching](#)
A configurable name matching engine supporting probabilistic matching of the Payee Name on the e-Cheque to the Account Name. This engine can be "trained" to accept name variations per account.
- [Cheque Number Management](#)
Cheque numbers allocated to e-cheques are the same as those allocated to paper cheques.
- [Different application scenarios](#)
A variety of e-Cheque issuing scenarios are supported, including e-Cheques with a single signature, multiple signatures and the batch preparation and signing of a group of e-Cheques in accordance to pre-defined rules.

Technical Requirements

AT.Sign Server Requirements

Operating System

Windows (x86/x64) w/JRE 1.6 or above
Unix/Linux (x86/x64) w/JRE 1.6 or above including Redhat 6+ and SUSE 9+
Virtual and Physical machine environment

Application Server

J2EE 5+ Application Server

Database

Relational DB via JDBC
Oracle 9i or above
IBM DB2
Sybase
SQL Server 2008 or above (All editions)



[A sample displayable e-Cheque](#)



The iASPEC Technologies and Services group is a leader in supplying OTP-based (One-time Password) identity authentication solutions and PKI-based digital signature platform products.

Brief history of the Group in the OTP and PKI technology areas:

- 1988 – Founding of the Company in Hong Kong.
- 2005 – Released the AT.Pass, an award winning One-Time-Password authentication solution.
- 2009 – Released the AT.Sign digital signature solution. AT.Sign is currently deployed by government departments, public service organizations and large enterprises in Hong Kong and Mainland China to support various digital signature applications.
- 2011 - Launched SecurDS, a cloud-based digital signature service based on the AT.Sign technology,
- 2012 - Involved in the early discussions on the e-Cheque initiative through the HKPKI Forum.
- 2013 - Received the Most Reliable Offshore Software Development Services from Mediazone Group for its achievement in software services.
- 2014 – Extended the standard AT.Sign product to support e-Cheque.
- 2016 – Winner of the Internet Finance Bronze Award