

HYPERPKI™

HYP2003 USB TOKEN User Guide

THE #1 USB TOKEN IN
THE INDIAN MARKET



HYPERSECU®



Revision History:

Date	Revisi	
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Chapter 1 Runtime Installation

1.1 Supported Platform

Windows Platform:

- Windows 2000
- Windows XP x86/x64
- Windows 2003 x86/x64
- Windows Vista x86/64
- Windows 2008 x86/x64
- Windows 7 x86/x64
- Windows 8 x86/x64
- Windows 10 x86/x64

Linux Mac OS

1.2 Preparing for installing HYP2003

Before installing HYP2003 Runtime, make sure the following requirements are satisfied:

- Your operating system is one in the above list
- Your computer has at least one USB port available
- Your BIOS supports the USB device, and USB support has been enabled in CMOS settings
- USB extension or hub available (optional)
- HYP2003 Token available

1.3 Installing HYP2003 Runtime

1. Before you can use the HYP2003, you must install the Runtime library. Execute HYP2003-Setup.exe. The following select language interface appears:

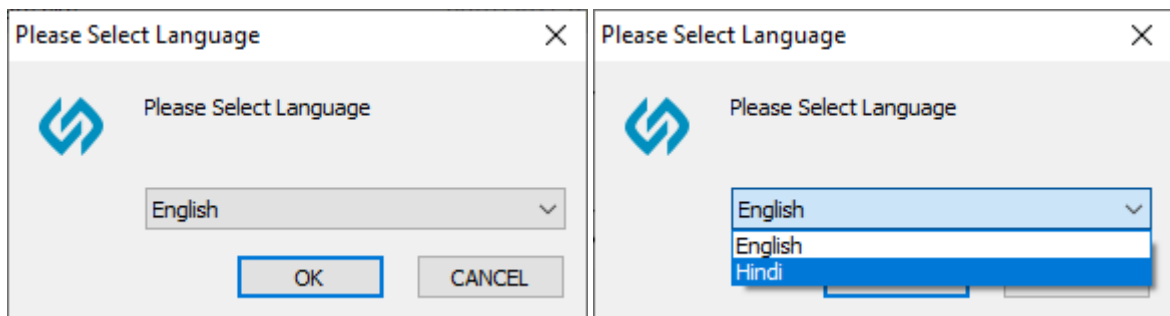


Figure 1 select language

2. After select language, click "OK", the following welcome interface appears:



Figure 2 welcome interface

3. Click "Next", the following select install path interface appears:

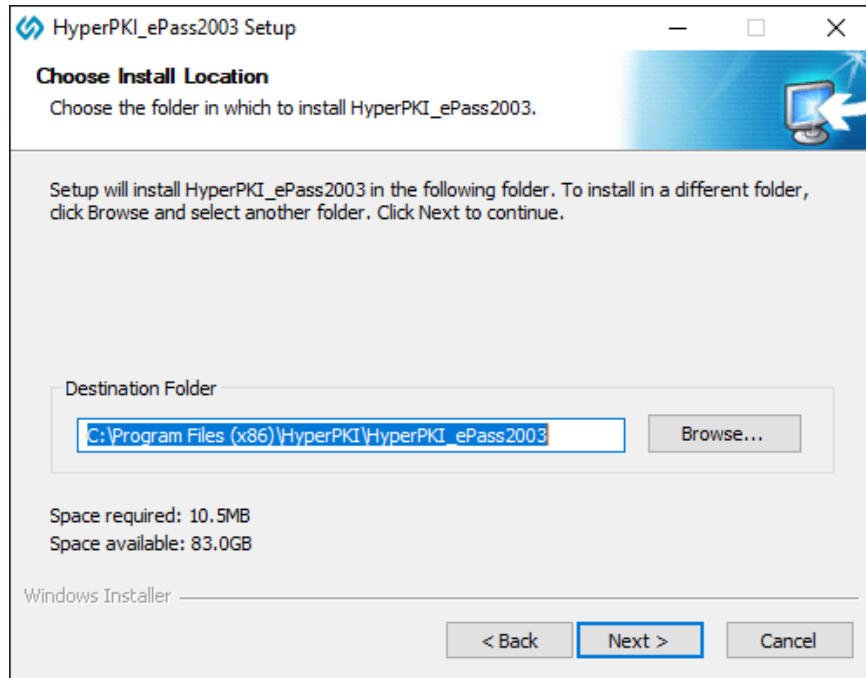


Figure 3 select install path

4. Click "Next", the following choose CSP interface appears:

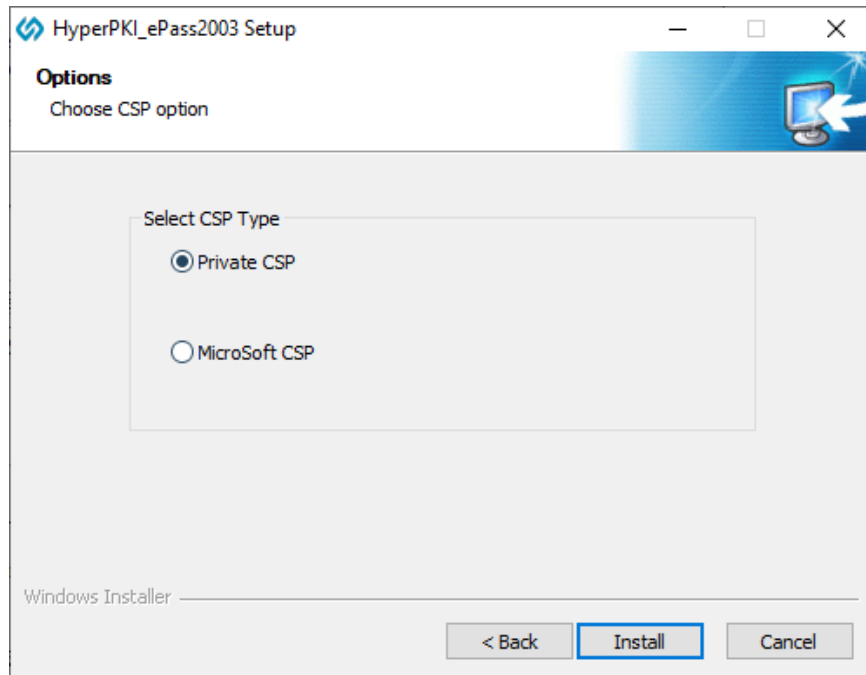


Figure 4 choose CSP

Note: HYP2003 supports Private CSP and Microsoft CSP.

For older windows systems such as Windows2000/XP, users must install patch KB909520 to enable the option 'Microsoft CSP'.

- Private CSP is provided by HYPERSECU, the CSP name is "EnterSafe ePass2003 CSP v2.0".
- Microsoft CSP means Microsoft Base CSP (Microsoft Base Smart Card Crypto Provider), it supports Minidriver, and user can install the middleware through system update, no redundant installation package, no complicated installation process; we also have installation package for the user who doesn't have the Internet. But please pay attention, from Vista and above, Microsoft has integrated Minidriver into Windows system, for XP and below, Windows system doesn't install Base CSP (Microsoft CSP option disable), user can add Base CSP through system patch KB909520.

5. After select CSP, click "Install" to continue, the following interface appears:

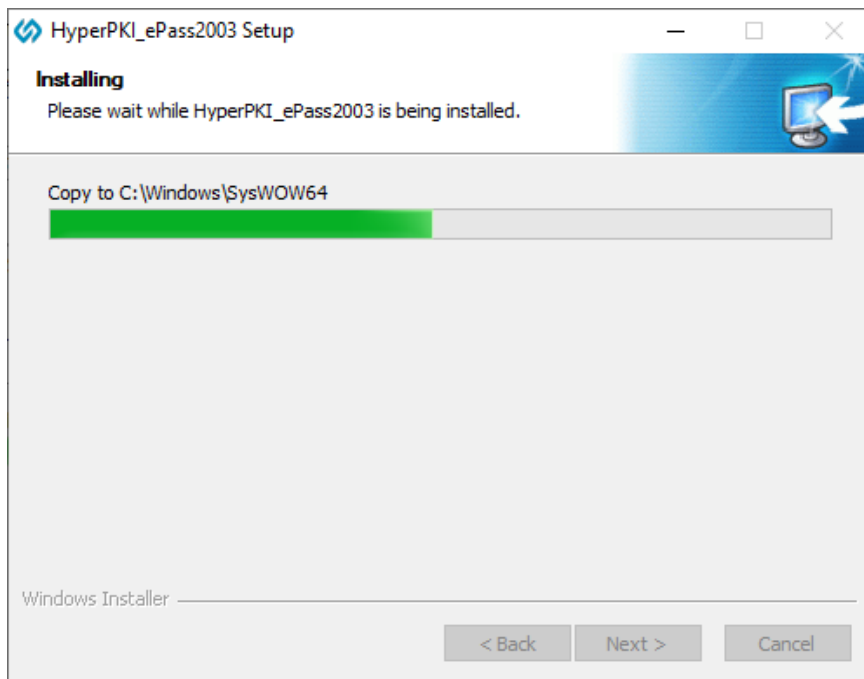


Figure 5 install process

6. After install process finish, the following interface appears:



Figure 6 install completed

7. Click “Finish” to finish the installation.

1.4 Uninstalling HYP2003 Runtime

After install the HYP2003 runtime, you can uninstall it through following methods:

- Use “Add or Remove Programs” to uninstall

Open “start” menu → select “Control Panel”, double click “Add or Remove Programs”, choose “HYP2003 (Remove only)” in the “Currently installed programs” list, then click “Change/Remove”.

- Uninstall it from start menu

Open “start” menu → “All Programs” → “Hypersecu” → “HYP2003” → “Uninstall HYP2003”.

1. Both of above two methods can launch the Uninstall Wizard of HYP2003, see following interface:



Figure 7 uninstall wizard interface

2. Click "Uninstall", the following uninstall process interface appears:

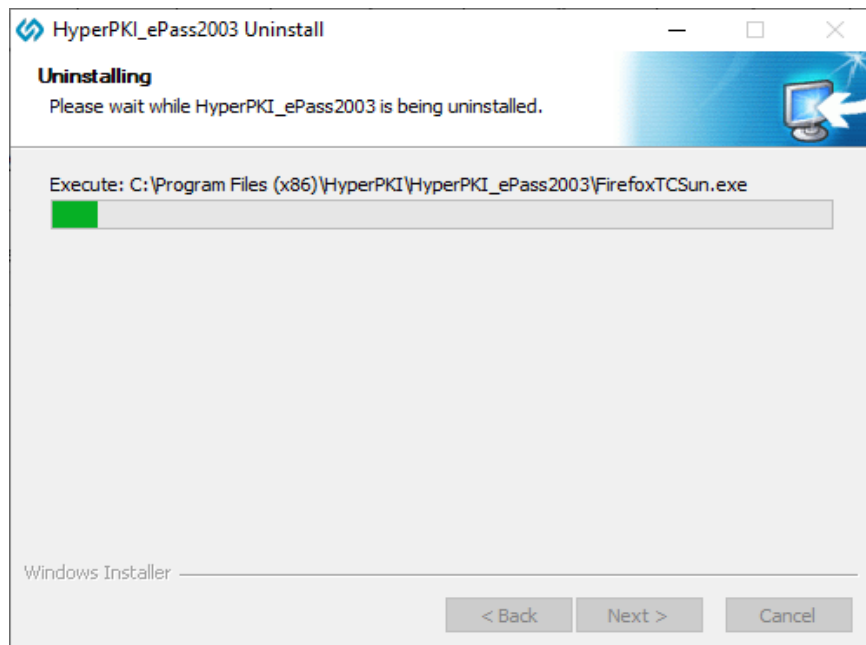


Figure 8 uninstall process

3. After uninstall process finish, the following interface appears:



Figure 9 uninstall completed

4. Click "Finish" to close uninstall wizard, now HYP2003 has been already uninstalled from your computer.

Chapter 2 HYP2003 Token Manager

2.1 Prerequisite

Because the Manager is based on the middleware of HYP2003 and it needs to access the token, you must have installed HYP2003 product on your computer before using the Manager.

The token must be PKI initialized before use.

2.2 Overview

2.2.1 Interface without USB Key Insertion

You can find the shortcut for the Manager by clicking Start -> All Programs -> Hypersecu -> HYP2003. Click the shortcut to start the Manager. The following interface appears:

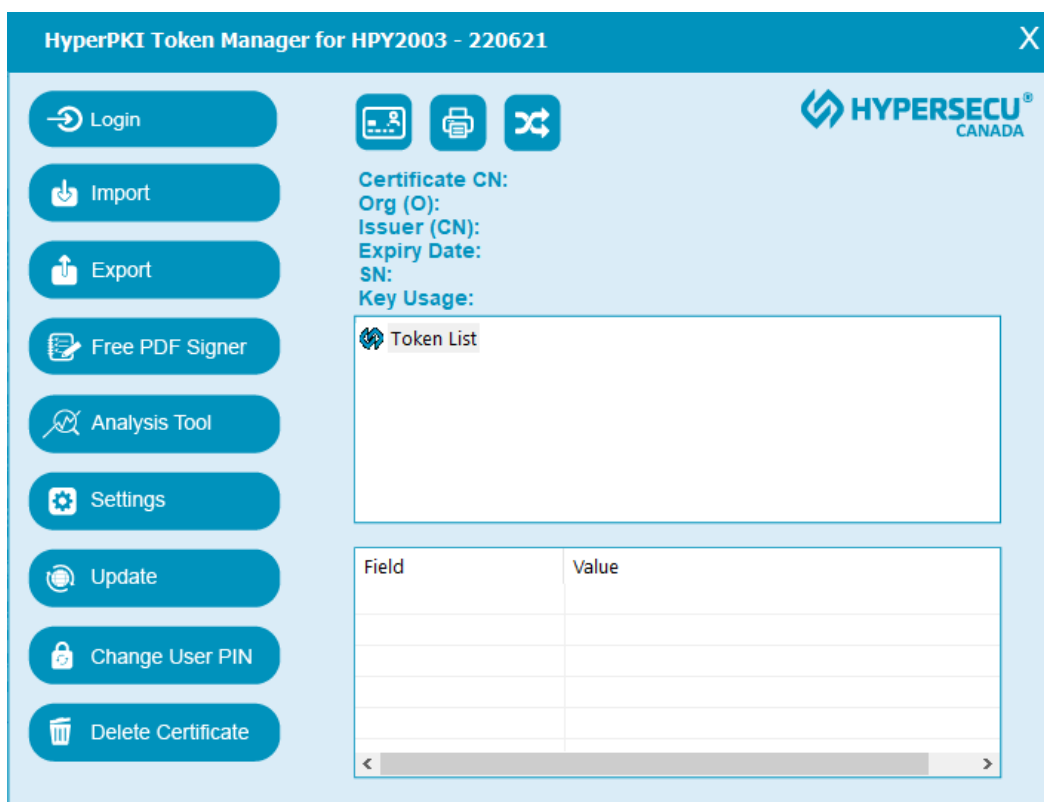


Figure 10 USB Key Not Inserted

2.2.2 Interface with USB Key Insertion

Connect HYP2003 to a USB port on your computer. The Manager will recognize it immediately as follows:

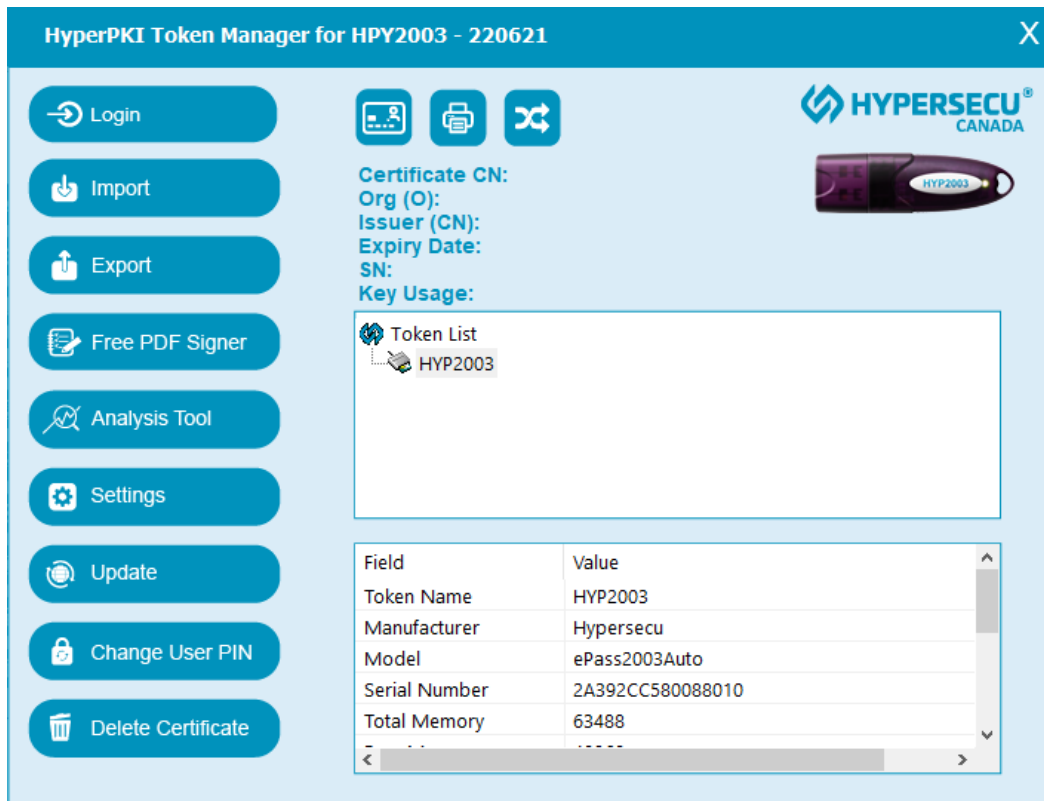


Figure 11 USB Key Inserted

Note: The total private memory space and the free private memory space refer to the PIN protected spaces. Since the private key is extremely sensitive and it is managed by the COS, it doesn't show the total private memory space and the free private memory space.

2.2.3 Interface Buttons

The buttons on the interface are: Login, Import, Export, Delete, Change User PIN, Change USB Key Name, View Certificate Information, Update, Analysis Tool and Setting.

2.3 Login

Select a USB key from the list on the right to which you want to log in and click Login. The following interface appears:

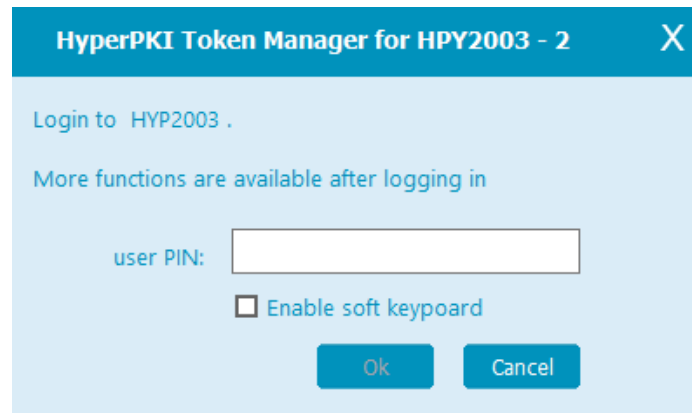


Figure 12 Login dialog box

Note: When the PIN input dialog is displayed, the Manager will start the safe desktop. In this status, only the box is highlighted. Except input in the box, most of other operations are disabled. Default password is 12345678.

Optionally, you can use a soft keyboard by checking Soft keyboard option here to avoid monitoring of a potential Trojan program.



Figure 13 Soft Keyboard

Note: The physical keyboard is disabled when you are using the soft keyboard.

After you enter a proper PIN and click OK, the interface as shown in Figure 5 appears. A token list is displayed on the top. Below are the properties and their values. By clicking Hide Details or More Details button, you can hide the details or show them. After you have logged in, you can view not only the public data but the private data. In addition, the Login button changes to Log out button. To securely log out, click this button.

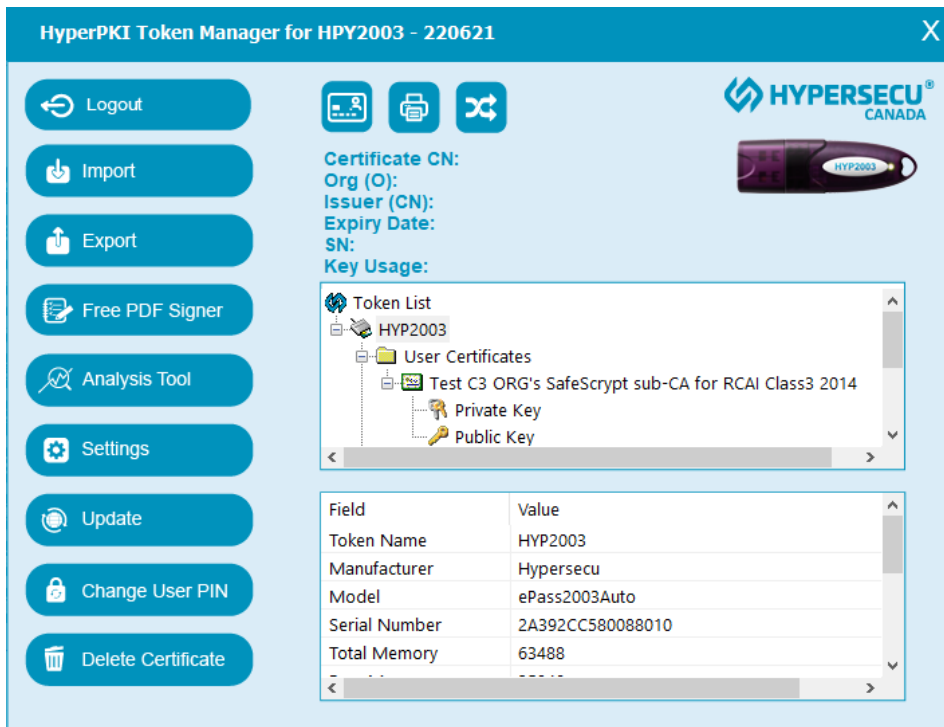


Figure 14 Logged In

If you type an incorrect password in the PIN input box, the following interface appears:

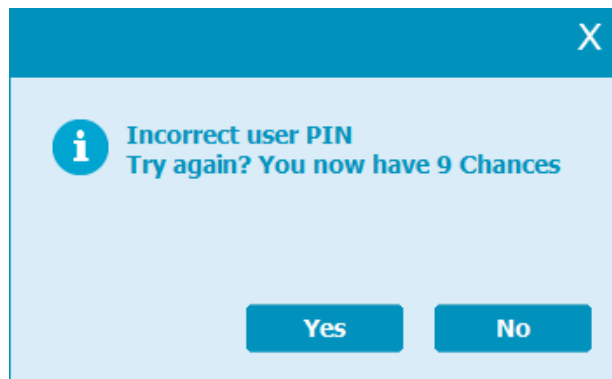


Figure 15 Incorrect PIN Prompt

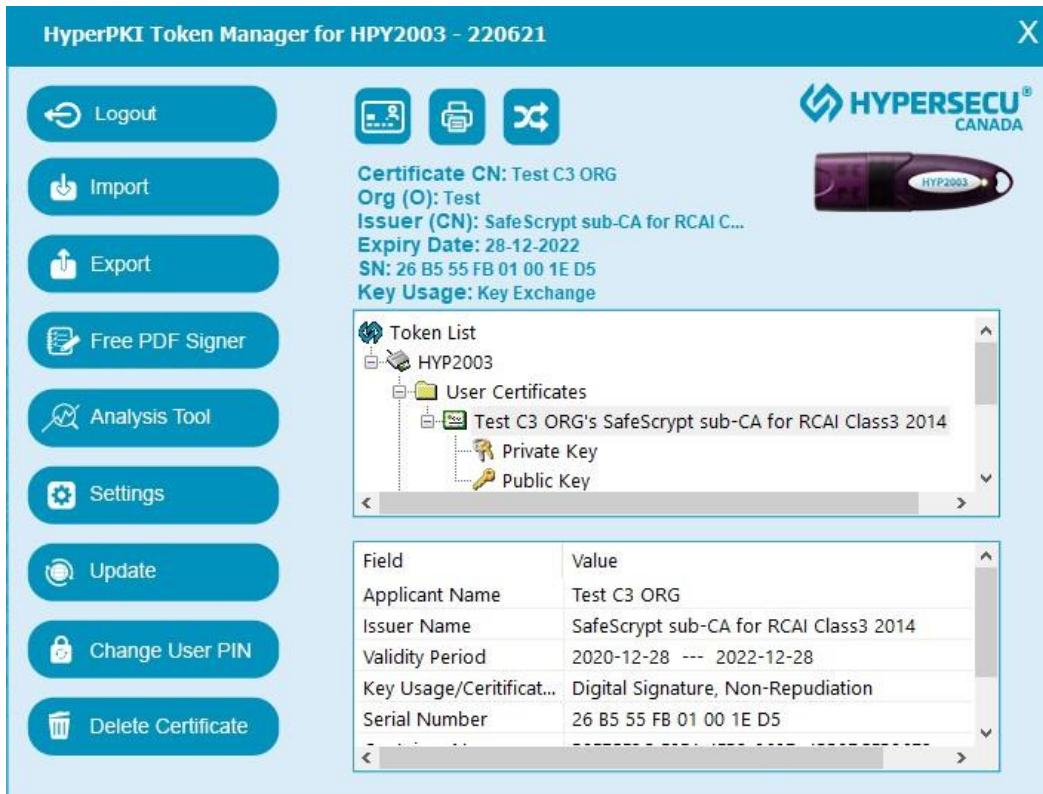
Note: There is a limit on the number of incorrect PIN inputs. If this number reaches 9, the token will be locked. You cannot perform any operations with it in this case.

2.4 Certificate Management

After you have logged into the Manager, you can view certificate information, import a certificate, delete a certificate etc.

2.4.1 Viewing Certificate Information

1. Click the “+” on the left side of a container (folder icon) in the token list or double-click the icon to display its content. Click the “+” on the left side of a certificate icon to display the key-pair. When a certificate is selected, the Certificate View button is enabled.



The screenshot shows the HyperPKI Token Manager interface for HPY2003 - 220621. The interface includes a sidebar with buttons for Logout, Import, Export, Free PDF Signer, Analysis Tool, Settings, Update, Change User PIN, and Delete Certificate. The main area displays certificate information for a selected certificate:

Certificate CN: Test C3 ORG
Org (O): Test
Issuer (CN): SafeScript sub-CA for RCAI C...
Expiry Date: 28-12-2022
SN: 26 B5 55 FB 01 00 1E D5
Key Usage: Key Exchange

The interface also shows a Token List tree view with the following structure:

- HYP2003
 - User Certificates
 - Test C3 ORG's SafeScript sub-CA for RCAI Class3 2014
 - Private Key
 - Public Key

Below the tree view is a table showing the certificate details:

Field	Value
Applicant Name	Test C3 ORG
Issuer Name	SafeScript sub-CA for RCAI Class3 2014
Validity Period	2020-12-28 --- 2022-12-28
Key Usage/Certificat...	Digital Signature, Non-Repudiation
Serial Number	26 B5 55 FB 01 00 1E D5

Figure 16 Viewing Certificate Information

2. By clicking Certificate View button or double-clicking a certificate icon, the following dialog box appears:

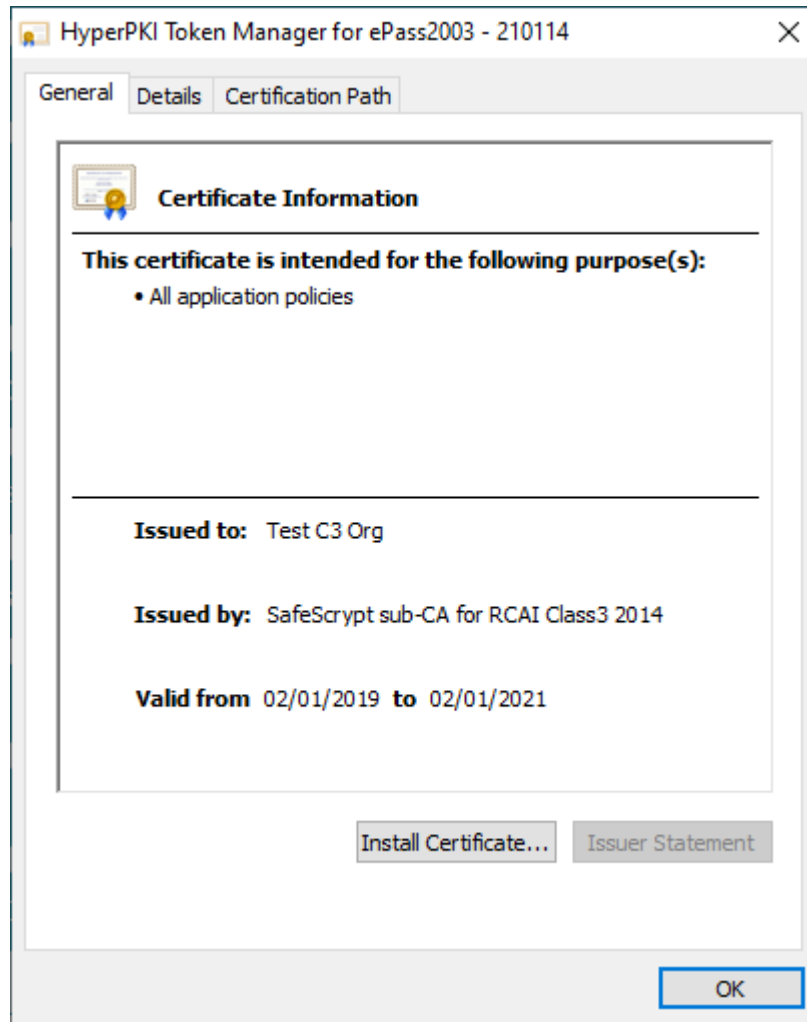


Figure 17 Certificate Information

You can view the information of your interest.

2.4.2 Importing

Currently, HYP2003 supports to import the certificate from file or from Certificate Store. The following certificate types: P12, PFX and CER. The P12 and PFX types contain a key-pair (a public key and a private key), while the CER type does not. The PFX and CER types are used as examples below.

2.4.2.1 Importing the certificate from file

Click Import button in the main interface of the Manager. The following interface appears. Click Browse button to choose a certificate file to be imported. If necessary, enter a password below. Click OK.

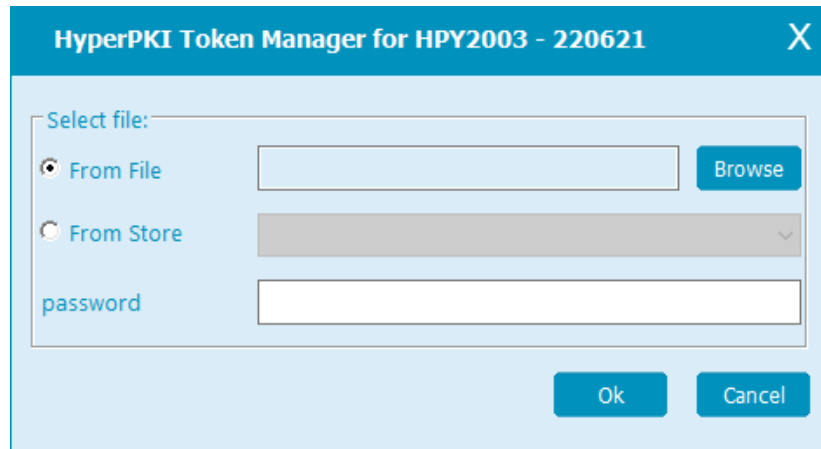


Figure 18 Certificate Import

2.4.2.2 Importing the certificate from Certificate Store

Click Import button in the main interface of the Manager. The following interface appears. Click “From Store” option to import a certificate from Certificate Store. It will list the certificates, and then you could choose one to import the certificate to the HYP2003 token. Click OK.

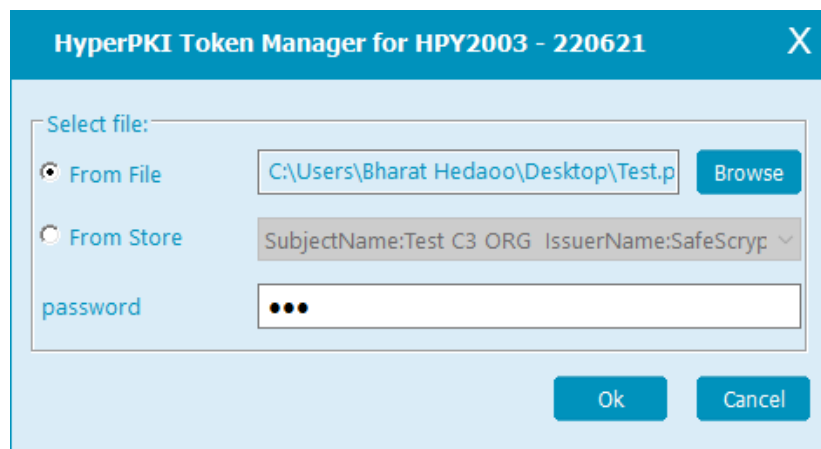


Figure 19 Certificate Import

2.4.3 Exporting

You can export a certificate from HYP2003 token to a file.

From the tree view in the main interface of the Manager, choose the certificate to be exported and click Export button. A dialog box appears. Specify a path to the certificate file and its name.

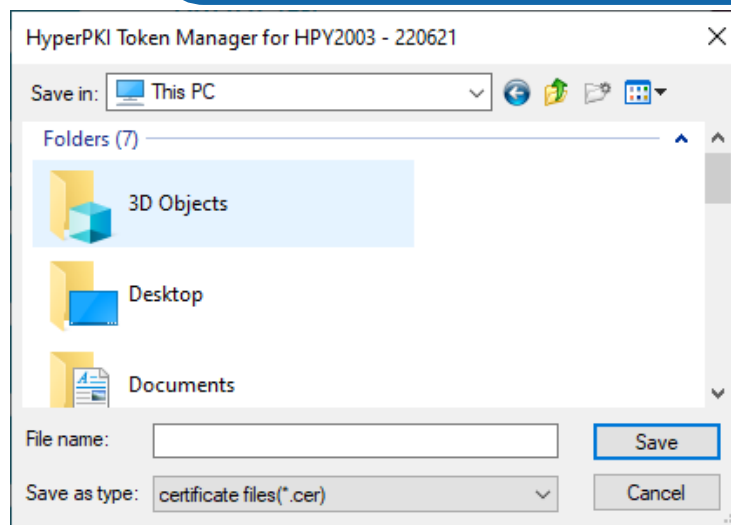


Figure 20 Certificate Export Path

Click Save. If the operation has succeeded, the following message will appear:



Figure 21 Successful Export

Note: The private/public key-pair cannot be exported.

2.4.4 Deletion

From the tree view of the main interface of the Manager, choose the certificate you want to delete and click Delete. The following interface appears:

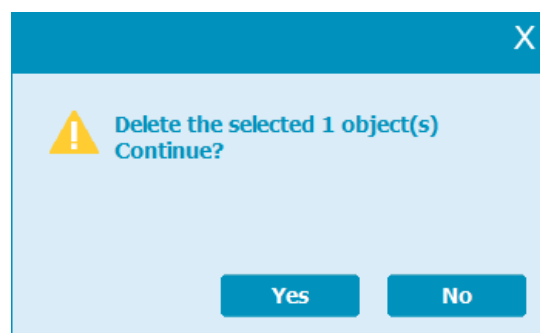



Figure 22 Deleting Certificate

Click Yes to delete the selected certificate if you do want.

2.4.5 Single Sign On (SSO):

HYP2003 has introduced a new feature Single Sign On (SSO).

Click Setting button  Settings in the main interface of the Manager. The following interface appears:

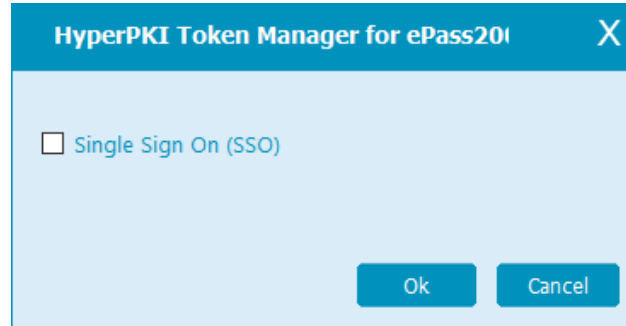


Figure 23 Enabling SSO

Click Ok to enable this feature.

2.4.6 Analysis Tool:

New Enhancements & Features added to Analysis Tool:

1. Check and Repair ActiveX setting in Windows System.
2. Check Java Version Installed and if there is no Java installed on current system, open link to install the Java .
3. Check and Repair Java Plug-in setting in Windows System.
4. Check and Install necessary DLL Files for using Digital Certificate in Windows System.

To run Analysis Tool, click on Analysis Tool button in  Analysis Tool the main interface of the Token Manager and then click on Analysis. The following interface appears:

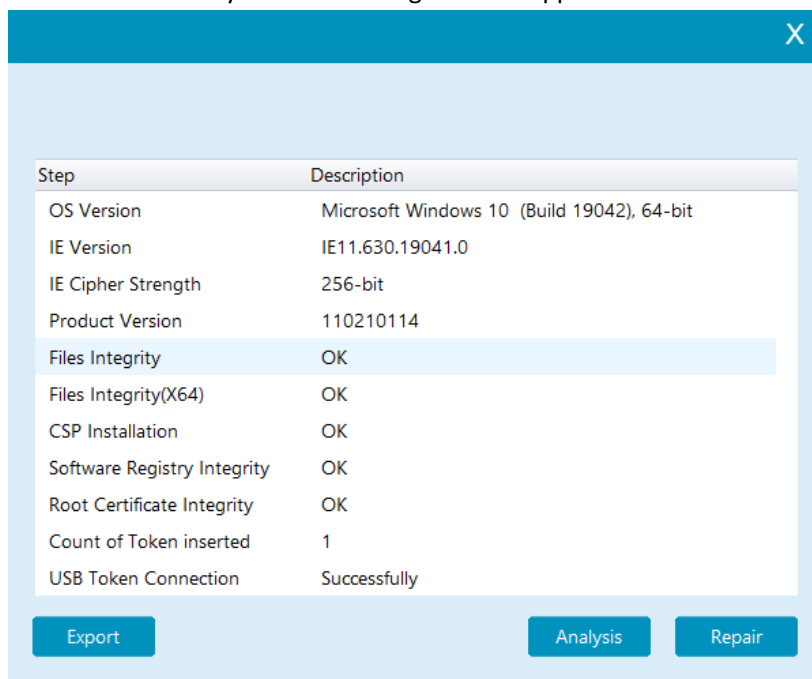


Figure 24 Running Analysis Tool

After Clicking on Repair button, following Interface appears:

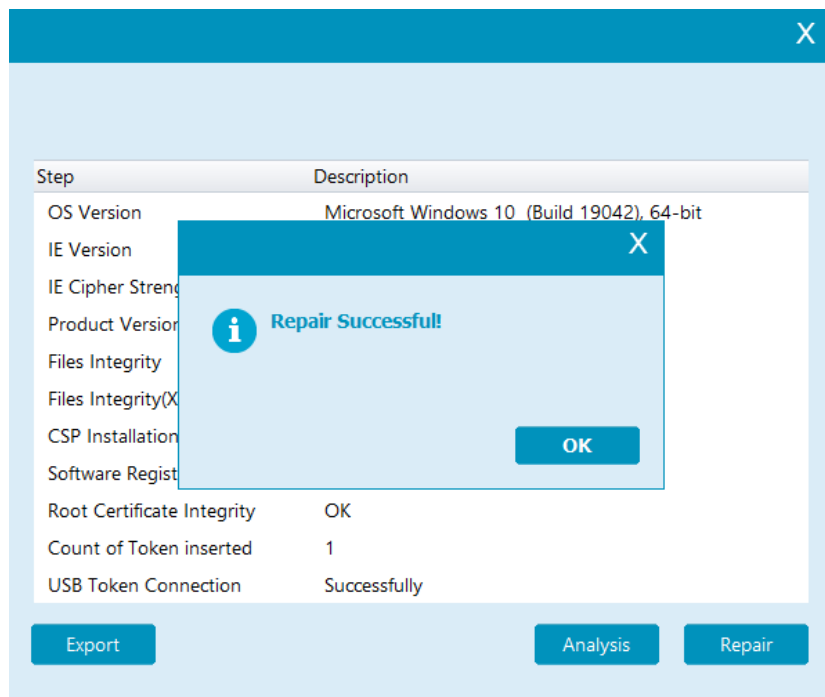


Figure 25 Running Repair Tool

2.5 Changing Token Name

Generally, the token is distinguished by serial number. For intuitive purpose, the token can be given a common name.

1. Click Change Token Name button.  The following interface appears:
- 2.

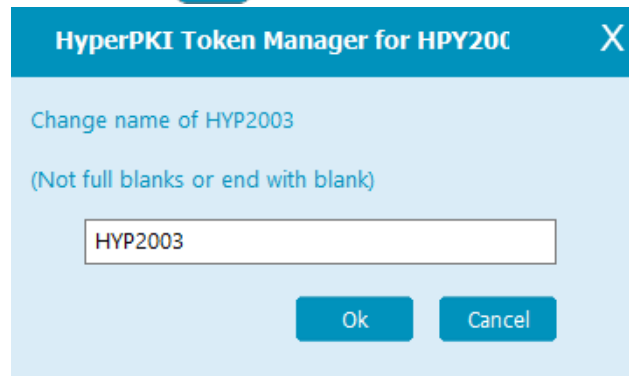


Figure 26 Changing Token Name

3. Enter a name for the token and click OK.

Note: At most a 32-character name can be provided.

2.6 Changing User PIN

You can change the PIN of your token. In the main interface of the Manager, click Change User PIN button. The following interface appears. Enter the old and new PINs and confirm the new PIN. Click OK.



Figure 27 Changing User PIN

You can also enter the PINs by a soft keyboard. To do so, check Soft keyboard.

HyperPKI Token Manager for HPY2003 - 220621

Change user PIN of HYP2003

Old PIN: [Masked]

New PIN: [Masked]

Check Intensity

Confirm: [Masked]

Enable soft keyboard

Timeout(in min): 0

Ok Cancel

~ (9 ! 1 @ 2 ^ 6 \$ 4) 0 # 3 & 7 % 5 * 8 - + = <-Bspc

Q W E R T Y U I O P { [] \ | Del

Caps A S D F G H J K L ; : " ' , Home End

Shift Z X C V B N M < > ? / Space

Figure 28 Soft Keyboard Input

You can check intensity option to get aware of the security strength of the PIN you have set. “L” surrounded by red means “Low”.

HyperPKI Token Manager for HPY2003 - 22062

Change user PIN of HYP2003

Old PIN: [Masked]

New PIN: [Masked]

Check Intensity **Low**

Confirm: [Masked]

Enable soft keyboard

Timeout(in min): 0

Ok Cancel

Figure 29 Low Strength

If the strength is higher, the following interface appears:

HyperPKI Token Manager for HPY2003 - 22062

Change user PIN of HYP2003

Old PIN: [Masked]

New PIN: [Masked]

Check Intensity **Mid**

Confirm: [Masked]

Enable soft keyboard

Timeout(in min): 0

Ok Cancel

Figure 30 Medium Strength

We recommend long PINs made up of lower and upper-case letters, numbers and special characters.

HyperPKI Token Manager for HPY2003 - 22062

Change user PIN of HYP2003

Old PIN: [Masked]

New PIN: [Masked]

Check Intensity **High**

Confirm: [Masked]

Enable soft keyboard

Timeout(in min): 0

Ok Cancel

Figure 31 High Strength

By clicking OK, the following interface may appear:

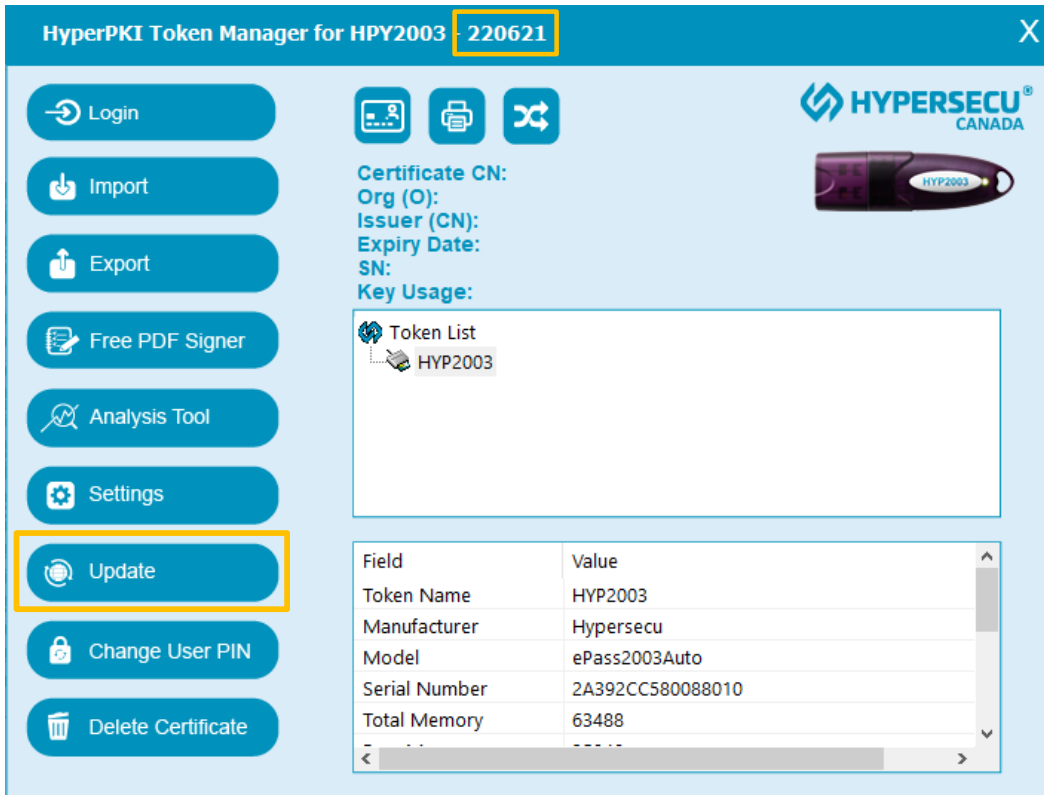
Changing user PIN Succeeded!

OK

Figure 32 PIN Changed

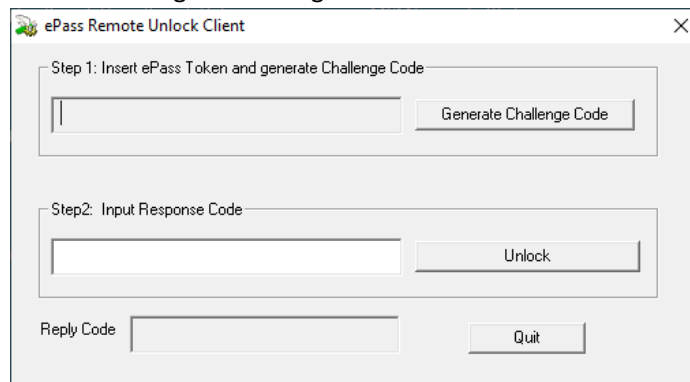
Chapter 3 Unlock/Rest User Pin

Please download the Remote Unblock Client from below: <https://taxpro.co.in/DSC/TokenDrivers/RemoteUnblockClient.zip>
 Make sure latest HYP2003 Drivers are installed in your system. Remote Unblock Client works only on 180929 and above driver version. If your system is having earlier driver version installed, then first update it by clicking on Update button as shown in image below.



Extract the downloaded Remote Unblock Client.

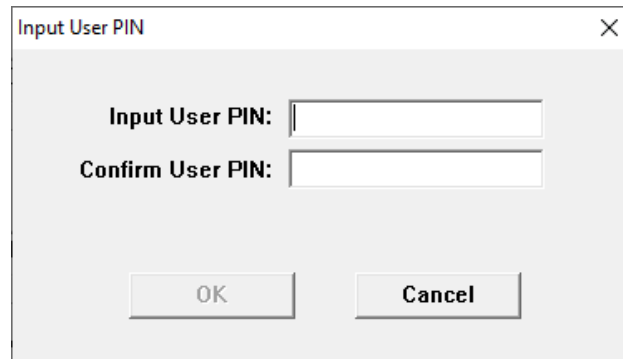
Now, open the RemoteUnblockClient.exe dialog Box showing as below.



Connect the Token which you want to unblock and Click on Generate Challenge Code button.

If you get Reply Code SNjçCert Transmit Success, please check the eMail ID which is given in the DSC present in the token for Activation/Response Code. (Please refer last page of this document to know how to get/see eMail ID of DSC from blocked token.) Activation/Response code is sent from email ID tokenunlock@charteredinfo.com to registered email ID present into digital certificate which is available into the token.

Enter the Received Activation code in text box present in Input Response Code and Click on Unlock Button.



Enter the new Password which you Required and Confirm it. Password should be 8-digit alphanumeric character. After successful unblock you will get the message Unlock success!

Process of identify registered email ID into the Certificate:

- Plug-in token to USB Port. Open the Internet Explorer and Open Tool Menu Select Internet Option
- Select Content Tab
- Click on Certificate Button
- Find out present certificate into the token and Select it. Click on View Button
- Certificate Dialog Box is Opened.
- Click on Details Tab and find the field Subject Alternative Name
- On click on that field you will find the registered email id into the Digital Signature Certificate.

Chapter 4 Free PDF Sign


On successful installation of HyperPKI_HYP2003 driver, Signer.Digital Extension is added in your system chrome browser.

On start or reopen Chrome its Prompted for enable.

For Firefox and New chromium-based Microsoft Edge browser need to add and enable extension manually.

Firefox - <https://addons.mozilla.org/en-US/firefox/addon/signer-digital/>

Microsoft Edge - <https://chrome.google.com/webstore/detail/signerdigital/glhokcicpikgImflbbelbgeafpijkkf>

Once enable the Signer.Digital extension  on browser open the HyperPKI_HYP2003 Token Manager and click on

Free PDF Signer button 

On click on button URL: - <https://web.signer.digital/InteractiveSigning> is opened in default browser.

You will bookmark that URL in your browser and directly open it.

Once page is load you will see the below set of Icon in webpage.



First Icon from Left is Sign Setting (Optional). By click on it you will get the below dialog box.

Select the options by click on check box you need to show in signing appearance. Those settings are stored in your browser catch.

Signature Settings (Optional) ✕

<input type="checkbox"/> Remember certificate selection	FileName Suffix Text	<input type="text"/>
Configure Signature Apperance		
<input checked="" type="checkbox"/> Show Organization	Organization Prefix	<input type="text" value="Org:"/>
<input type="checkbox"/> Show State	State Prefix	<input type="text"/>
<input type="checkbox"/> Show postal code	Postal Code	<input type="text"/>
<input type="checkbox"/> Show Signature Type	Signature Type	<input type="text"/>
<input type="checkbox"/> Show Certificate ID	Certificate ID	<input type="text"/>
<input type="checkbox"/> Show Reason	Reason:	<input type="text"/>
<input type="checkbox"/> Show Location	Location:	<input type="text"/>
<input type="checkbox"/> Show Designation	Designation:	<input type="text" value="Authorized Signatory"/>
<input type="checkbox"/> Show Contact	Contact:	<input type="text"/>

Once Settings saved enter the showing captcha. You will refresh captcha by click on it.

Enter the captcha and click on browse button.

If need to Add text in open PDF document click on “Add Text Annotation” button and click on appropriate position where need to add, Its optional.

Once done its time to Sign PDF. Click on Sign PDF Icon draw the rectangle where you need to sign.

On release of mouse button after draw the rectangle you will get the certificate selection dialog box.

Select the certificate and enter the User PIN. On successfully sign PDF its prompt for saving.

All signing process perform in system memory catch and not shared over internet so that its secure.

Appendix: Terms and Abbreviations

Entry	Description
HYP2003	A smart card-based token with FIPS proved for PKI applications, introduced by Hypersecu Technologies. It is designed for PKI application
CryptoAPI Interface (CAPI)	An interface used for cryptography operations, provided by Microsoft. It provides cryptographic algorithm encapsulation of equipment irrelevant or implemented by software. With this interface, it is easy to develop PKI applications for data encryption/decryption, authentication and signature on Windows platforms.
Smart Card Minidriver Interface	An interface used for cryptography operations, provided by Microsoft. It provides cryptographic algorithm encapsulation of equipment irrelevant or implemented by software for Microsoft Base Smart Card Crypto Provider and Microsoft Smart Card Key Storage
PKCS#11 Interface	A programming interface introduced by RSA. It abstracts the cryptographic device into a universal logic view - Cryptographic Token, for use by upper-level applications, providing device independency and a manner of resource sharing.