

Cross Semiconductor & Technology, Inc.

SMART CARD Reader CST-10U

User's Guide

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

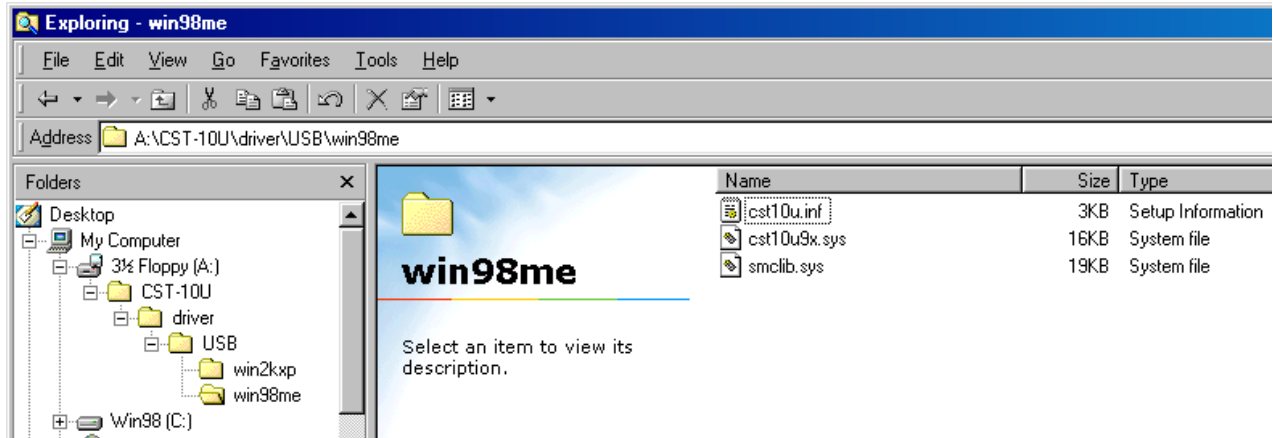
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1 Install Driver on Windows 98

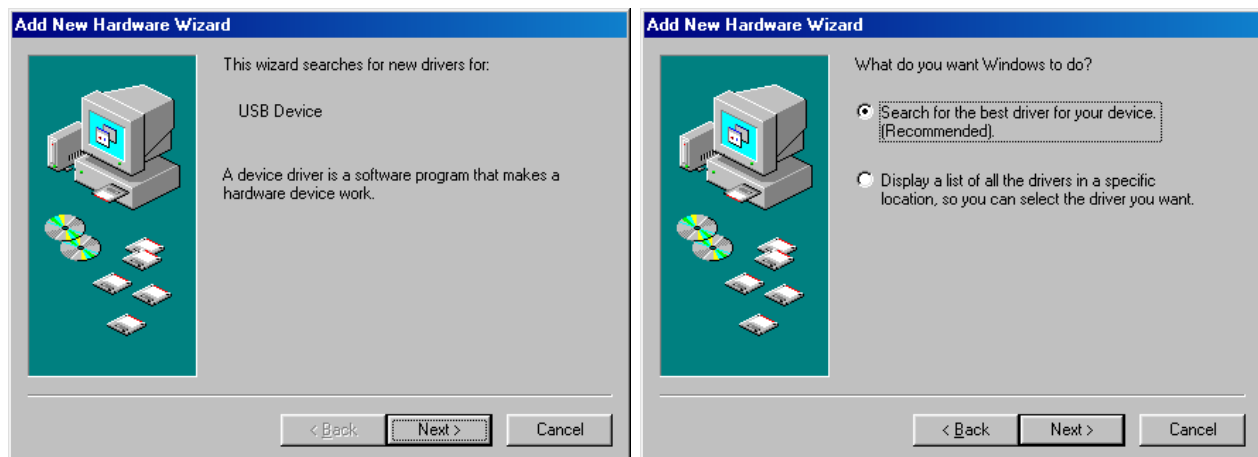
1.1 Copy driver file -

Copy the folder “CST-10U” that contains the driver file cst10u9x.sys to C: Drive

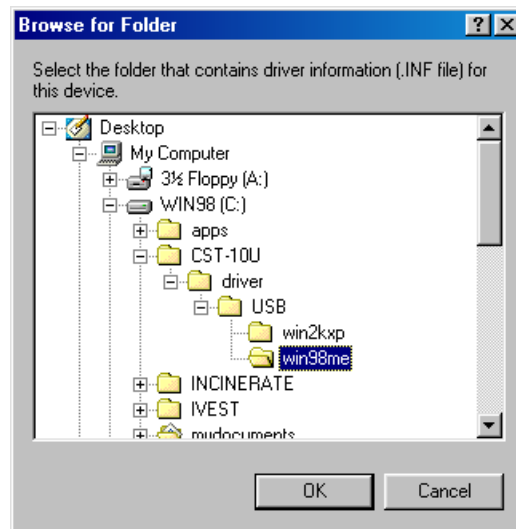


1.2 Install driver -

*1.2.1 - Connect CROSS S&T Smart Card Reader to the USB port. You will see the **Blinking Red LED** on the smart card reader, which indicates that the reader power is on and detects no card. The Add New Hardware Wizard will display as below to request for driver disk :*



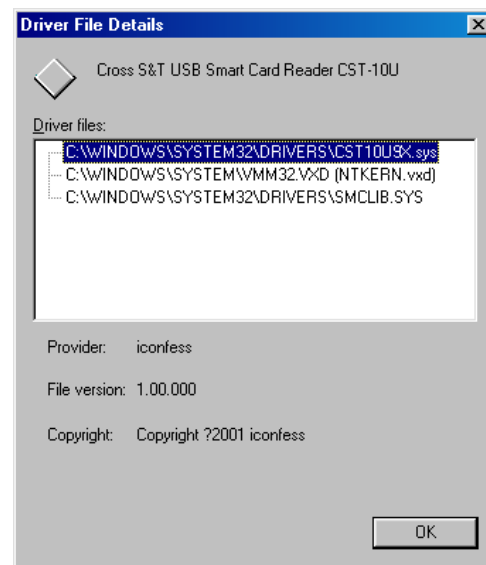
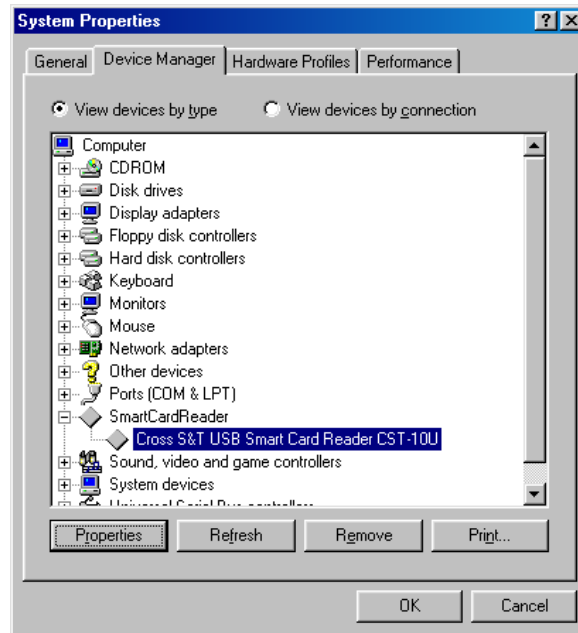
1.2.2 - Use {Browse} to select the driver file cst10u9x.sys from C:\CST-10U\driver\USB\cst10u9x.sys and click {OK}



**1.2.3 - Click {Next} at “Add New Hardware Wizard” page and the driver file will be installed.
If you like to confirm the driver file is installed, please go to step 1.3. If not, skip to step 1.4.**

1.3 Checking Driver device -

To confirm the driver file is successfully installed, check your device manager :



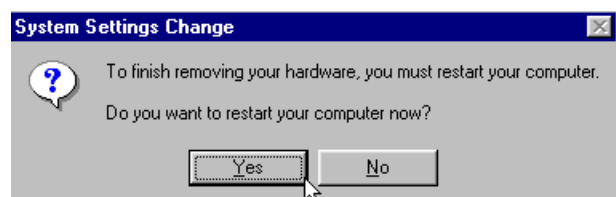
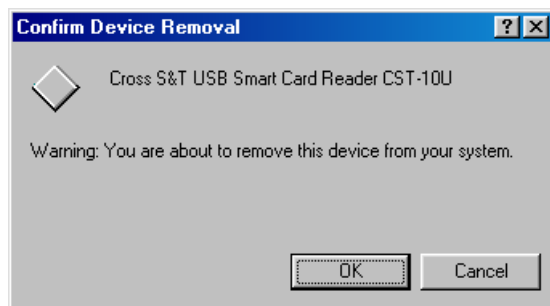
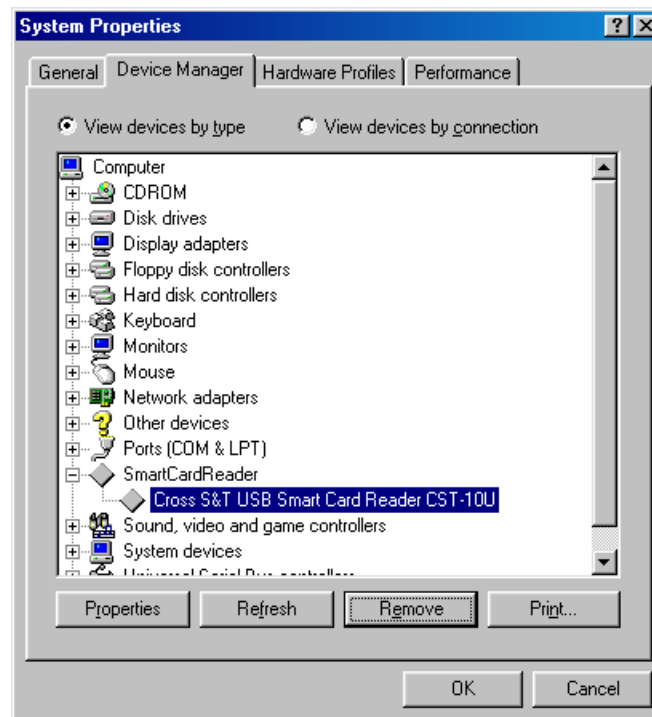
1.4 Re-start PC –

1.4.1 - Disconnect the Smart Card Reader from the USB port and Re-start your PC

1.4.2 - Re-connect the smart card reader to the USB port. The reader should give Blinking Red LED indicating power is on and no card is detected.

2 Uninstall Driver on Windows 98

Go to [Control Panel] → [System Properties] → [Device Manager]. Select [Smart card readers] → [CROSS Semiconductor Technology Inc. USB Smart Card Reader] → Click on “Remove” to uninstall driver.



To remove the CSTU.sys file completely, delete the CSTU.sys file from C:\Windows\System32\Driver\CSTU.sys

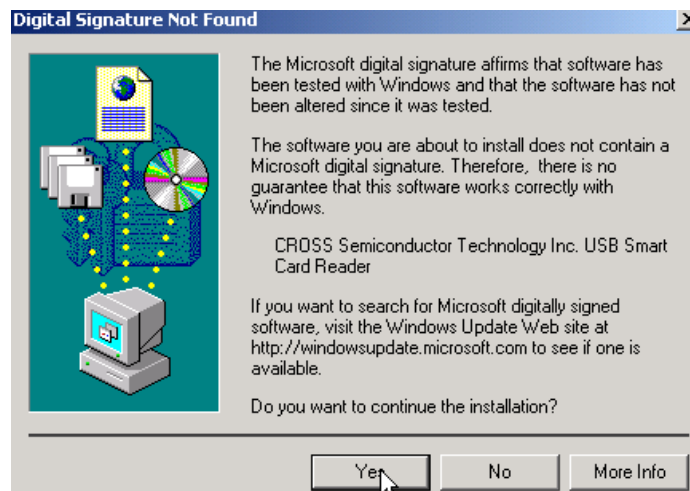
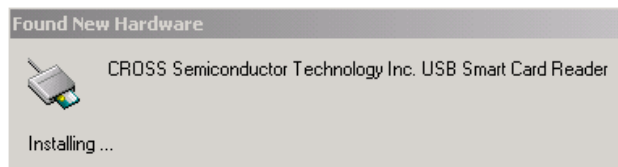
3 Install Driver on Windows 2000

3.1 Copy driver file -

Copy the folder “CROSS S&T” that contains the driver file CSTU.sys to C: Drive

3.2 Install driver -

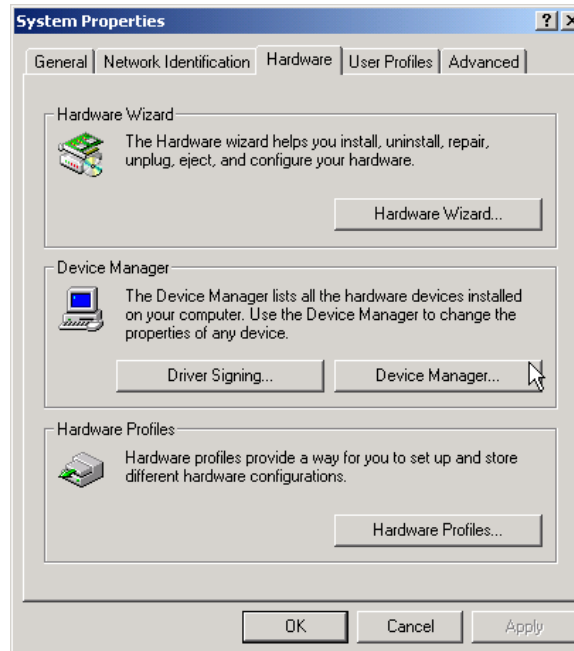
3.2.1 - Connect CROSS S&T Smart Card Reader to the USB port. You will see the Blinking Red LED on the smart card reader, which indicates that the reader power is on and detects no card. The New hardware found will display as below to request for driver disk :



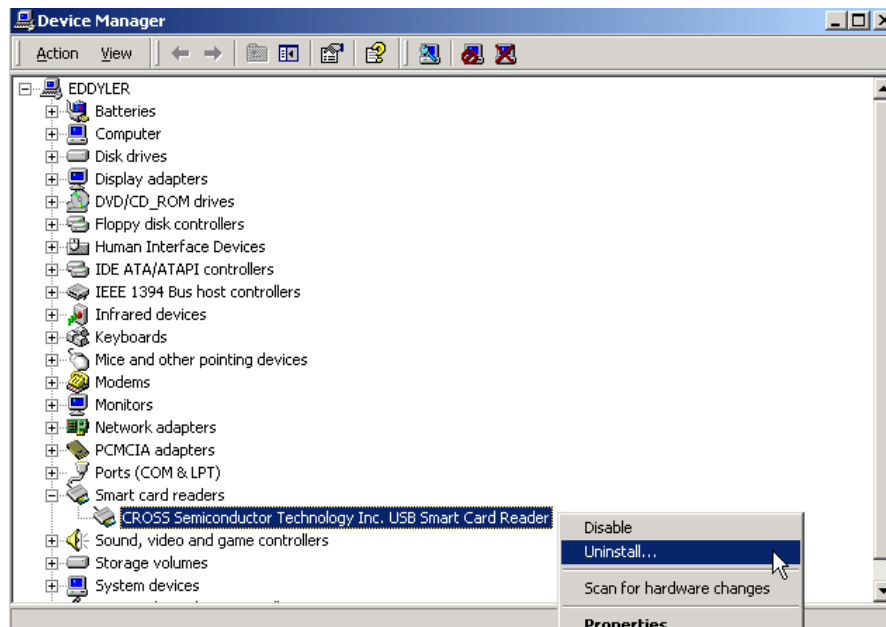
Select {YES} and the driver will be installed.

4 Uninstall Driver on Windows 2000

Go to [Control Panel] → [System Properties] → [Hardware] → [Device Manager].



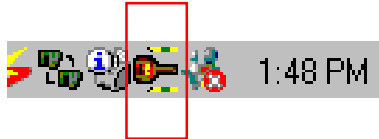
Select [Smart card readers] → [CROSS Semiconductor Technology Inc. USB Smart Card Reader] → Right click and select [Uninstall].



5 Smart Card Reader Testing

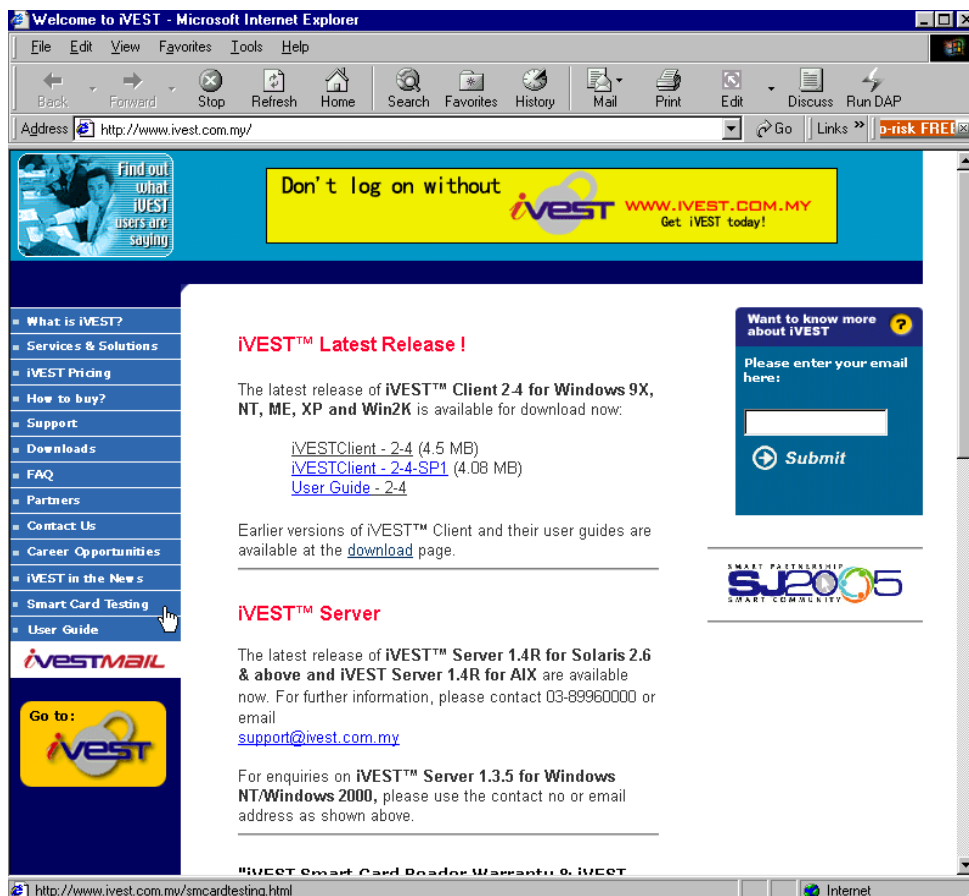
5.1 Smart Card insertion -

Insert the iVEST card to the CST-10U Smart Card Reader. The smart chip should face up and at the front. The Red LED on the smart card reader will stay ON and stop blinking to indicate card is detected. Your iVEST software will also be reading the card as can be seen on the icon at the task bar.



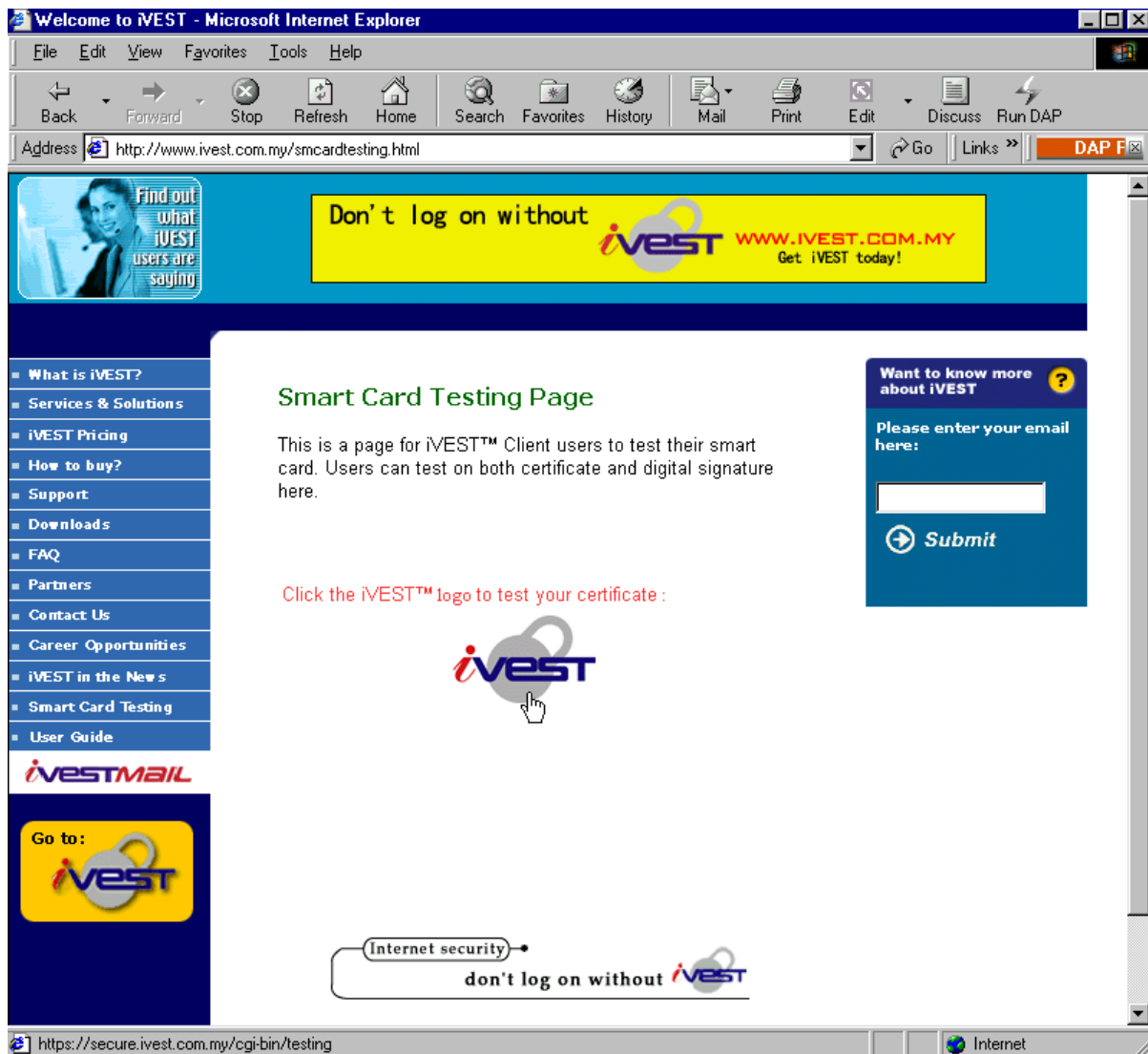
5.2 iVEST website -

5.2.1 - The iVEST website will be linked if you are already connected to the Internet. If not, connect your Internet and go to website : www.ivist.com.my. Select the “Smart Card Testing” and follow the procedure to ensure the reader is working.

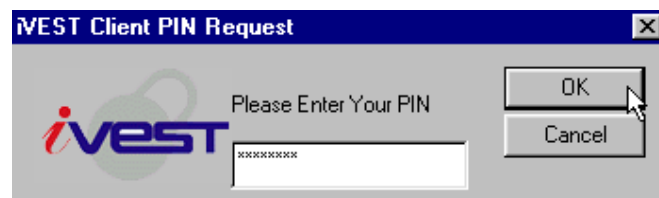


5.3 Test Certificate -

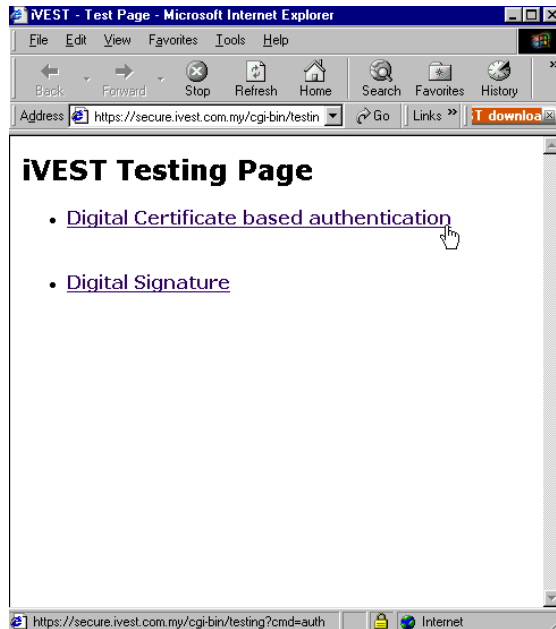
Click on the iVEST logo to test your certificate :



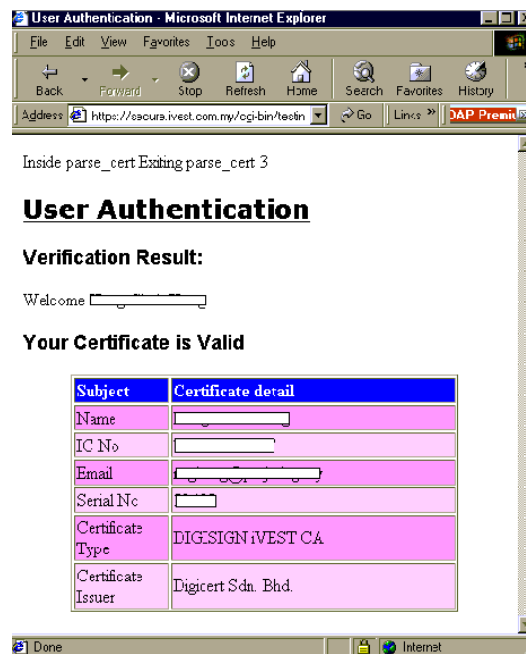
5.4 Enter PIN number -



5.5 Select Digital Certificate based authentication -



5.6 View Certificate -



6 Device Information

This equipment is a device that embeds the Smart Card interface compliant to EMV & PC/SC specification in a single chip. A host running Cross S&T's PC/SC drivers controls the Smart Card interface. Cross S&T's PC/SC drivers are based on Microsoft's implementation of the PC/SC specifications.

6.1 Specification -

- **PC compatibility** : IBM PC/AT or compatibles
- **Supported OS** : MS Windows 98 / ME / 2000 / XP
- **Supported Card Standard** : ISO 7816
- **Supported Card Thickness** : $0.76 \pm 0.08\text{mm}$

- **Power Supply** : USB Host Controller
- **Power Consumption** : Max. 40mA in Standby
Max. 50mA in IC Card read/write
- **Ripple** : 100mVp-p

- **Operational temperature** : $0 \sim 50^{\circ}\text{C}$
- **Operational Humidity** : $20 \sim 90\% \text{ RH}$
- **Shock Resistance** : Up to 30 G, 11ms

- **IC Contact Resistance** : Max. 0.5 ohm between two lines
- **IC Contact Life Time** : 200,000 round trips
- **Dimension** : Approx. 74.0 (W) x 66.3 (H) x 13.0 (D) mm

- END -