

INSTALLATION MANUAL

COMPUTERIZED REGISTRATION MANAGEMENT SYSTEM (CRMS)

SITE ATTENDANCE MODULE (SATM)

Version 2.0

DEC 2011

Construction Workers Registration Authority (CWRA)

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Amendment History				
Change Number	Revision Description	Pages Affected	Revision Number	Date
1.	Initial draft	-	1.0	8-Jan-2006
2	Added PDA requirements	6	1.01	16-Mar-2007
	Amend to use the correct Chinese term for HKSCS			
3	Amended Appendix	31-32	1.02	30-Mar-2007
	Added the procedure to change the Unicode setting in English Windows			
4	Revised for installation changes	-	1.03	2-Jun-2007
5	Pre-release changes	-	1.04	3-Jul-2007
6	Amended PC Software Requirement	6	1.05	14 Feb 2009
	Support Windows XP Professional SP3 and Windows XP Home SP3			
7	Added Upgrading SATM/SATM-Lite From 2.0.0 to 3.0.0 On PC	25-27	1.05	14 Feb 2009
8	Added System Backup Upgrade from SATM 2.0.0 / SATM Lite 2.0.0 to SATM 3.0.0 / SATM Lite 3.0.0	28-30	1.05	14 Feb 2009
9	Revised all Screen Capture for SATM 4.0.0 and SATM Lite 4.0.0 under Windows 7 environment	-	2.0	07-Dec-2011

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1 Introduction

The Site Attendance Module program (SATM) consists of 2 versions (SATM – Full Version; SATM-Lite). For the SATM – Full Version, there are 2 modules (Worker Registration Module; Attendance Capture Module). Also, the SATM – Full Version can be set up in 3 modes (Normal; Registration; Reporting). Before installing the program, user should read through the **SATM User Manual** thoroughly and decide the most suitable version/modules/modes to setup.

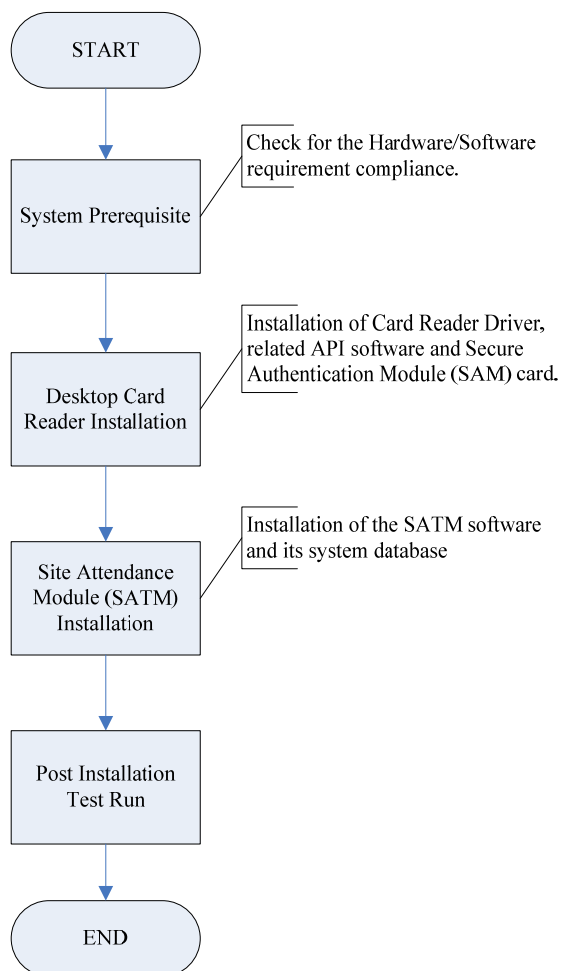
This document will guide you through the installation of the components necessary for the operation of the CWRA's Site Attendance Module (SATM) program on a PC or PDA.

This guide uses the following components as an example to illustrate the installation processes:

1. SATM CD-ROM (version 4.0)
2. Desktop Card Reader (Ominkey Cardman 5121)
3. Operating System (Windows 7 Traditional Chinese)
4. PDA with SD and CompactFlash (CF) Card Slot

1.1 Installation Flow Chart

The below flow chart illustrates the processes necessary to complete the installation:



2 System Prerequisites

This section describes the PC requirements (hardware and software) for the installation of the SATM and related programs. Also listed is the PDA requirements for installing the Attendance Capture functions on the PDA.

2.1 PC Hardware Requirement

	Minimum	Recommended
Processor	Intel 1GHz	Intel 2.4 GHz or Higher
Ram	1 GB	2 GB or Higher
Hard Disk (Free Space)	1.5 GB	3 GB or More
Video	32 bits colour 1,024x768 or Higher Resolution Display	
Network	N/A	10/100 Mbps Ethernet
Others	One USB Port for Worker Registration Module One or More USB Port(s) for Attendance Capture Module	

Note: Hardware requirements apply to both SATM (Full Version) or SATM-Lite

2.2 PC Software Requirement

	Minimum
Operating System (Chinese Version)	Windows 7 Home / Professional
Others	Microsoft Office 2003 or Later (Including MS Word and MS Excel)
Optional	HKSCS (香港增補字符集)

Note:

Software requirement (Microsoft Office 2003) is mandatory to SATM (Worker Registration Module only). SATM (Attendance Capture Module) & SATM-Lite may not require the installation of Microsoft Office 2003. However, note that if it is not installed, some report functions will not be available.

Important Note:

PC must NOT have any version of Microsoft SQL Server database installed

It is advised that SATM to be installed on a PC that has only the prerequisite software installed
For PC with any English version of Windows, please refer to Appendix B for language setting

2.3 PDA Requirement

PDA Model:

Please refer to the CWRA certified PDA model on the CWRA web site for the supported PDA models.

PDA Operating System:

The supported PDA Operating System is: Windows Mobile 2003 Second Edition, Windows Mobile 5.0, Windows Mobile 6.0

2.4 User Account Right (!)

For the installation of the PC software described in this document, it should be installed using an account that has the “*administrators*” role privilege of the Windows in local machine.

3 Desktop Card Reader Installation

This section describes the installation of card reader (Ominkey Cardman 5121)* driver, related API software and correct setup of the Secure Authentication Module (SAM) card for use by the SATM program.

3.1 Installing Card Reader Driver, API software and Diagnostic Tool

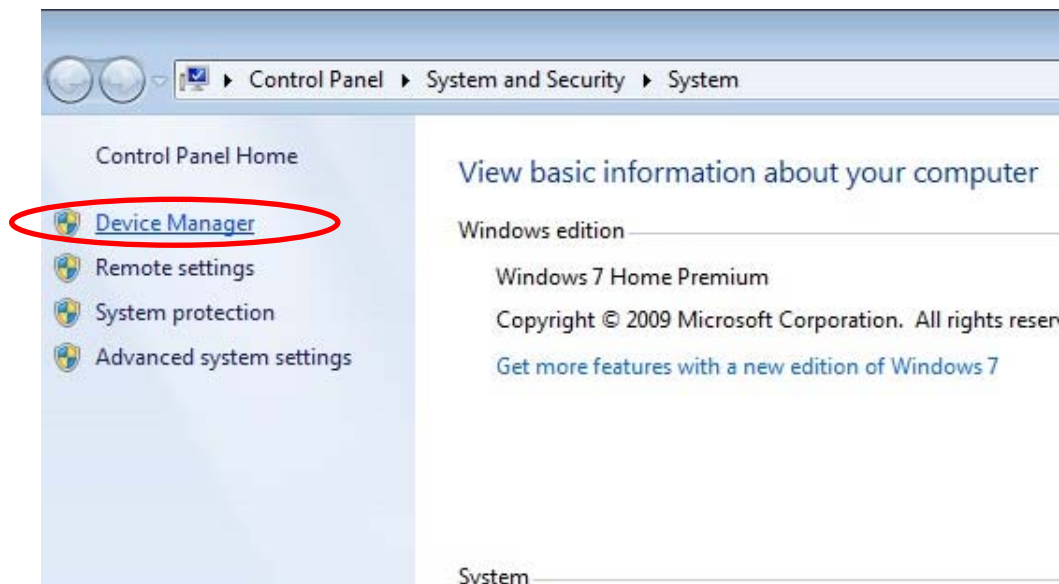
- Connect the card reader to a free USB port of the PC as shown below:



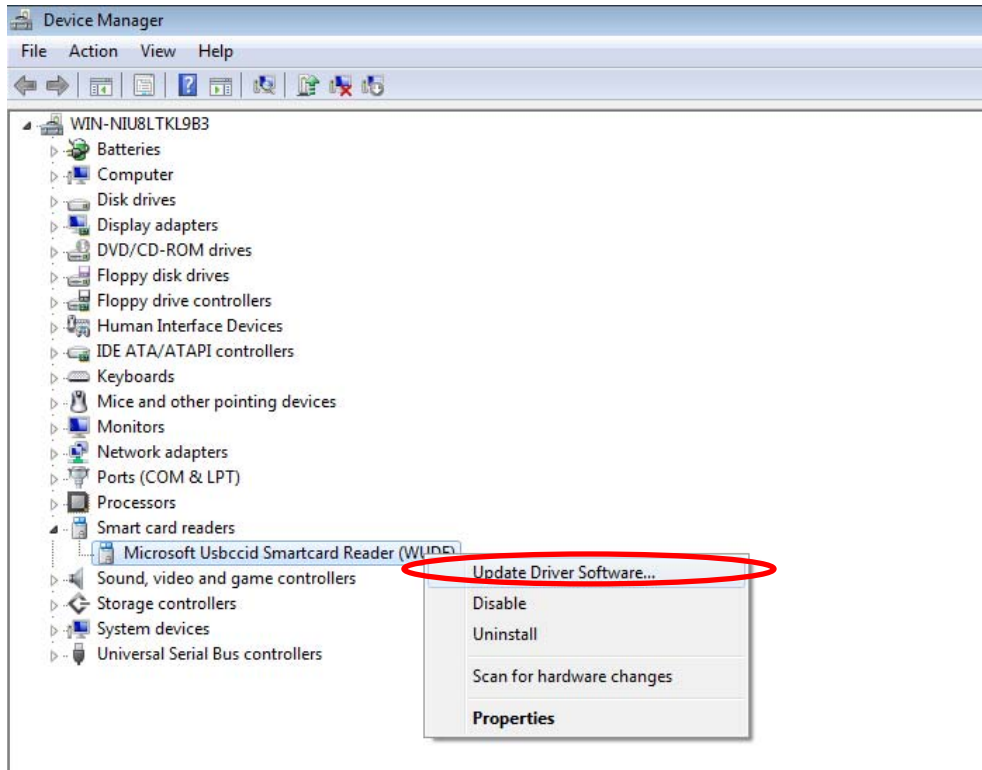
- Upon connection to the system, Windows may detect a new hardware is found automatically as shown below:



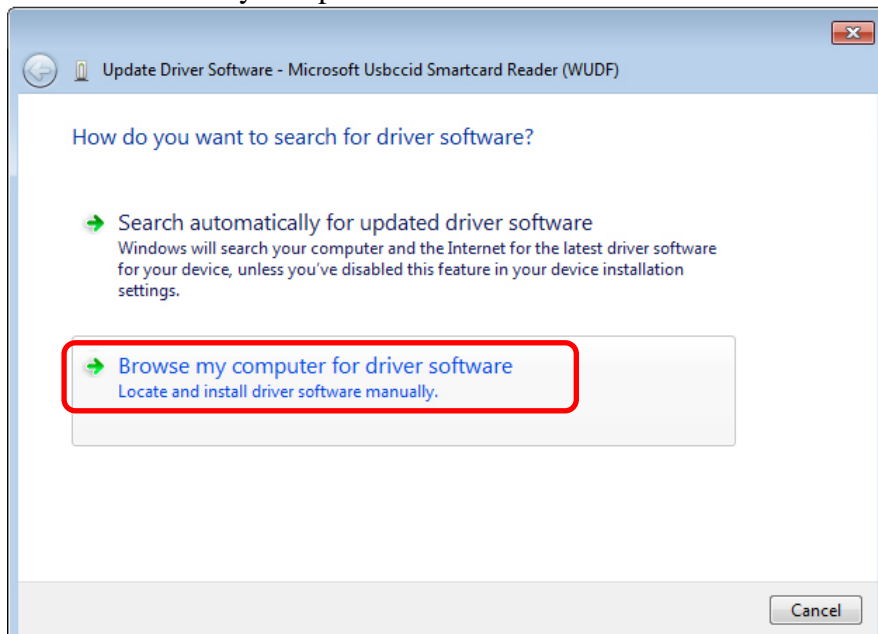
- The card reader driver is included in the SATM installation CD. Please insert the SATM installation CD in the computer before installation of the card reader driver. The latest version of the card reader driver is available on the website as below:
<http://www.omnikey.com/index.php?id=downloads>
- In the “Control Panel”, go to “System and security”, and then go to “System”. Then, select “Device Manager” (red circle).



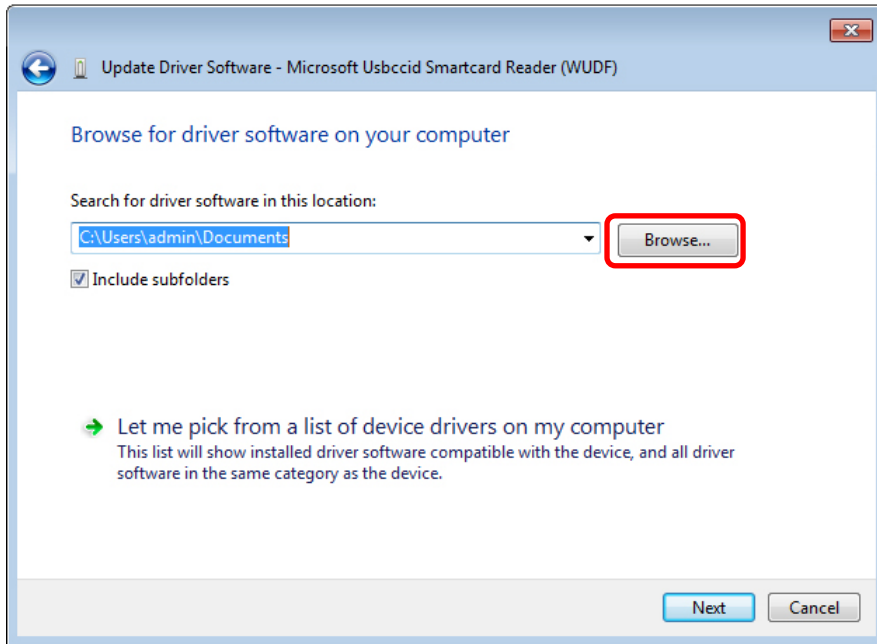
- Note that Windows 7 might have recognized the card reader as “Microsoft Usbccid Smartcard Reader (WUDF)” (under Smart card readers). In this case, right click on “Microsoft Usbccid Smartcard Reader (WUDF)”, and then press “Update Driver Software”.



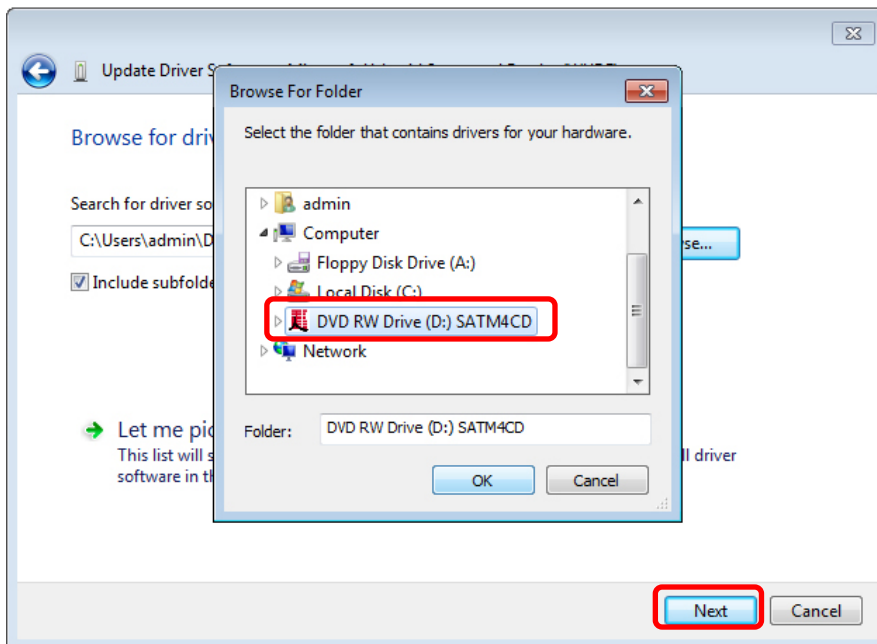
Select “Browse my computer for driver software”.

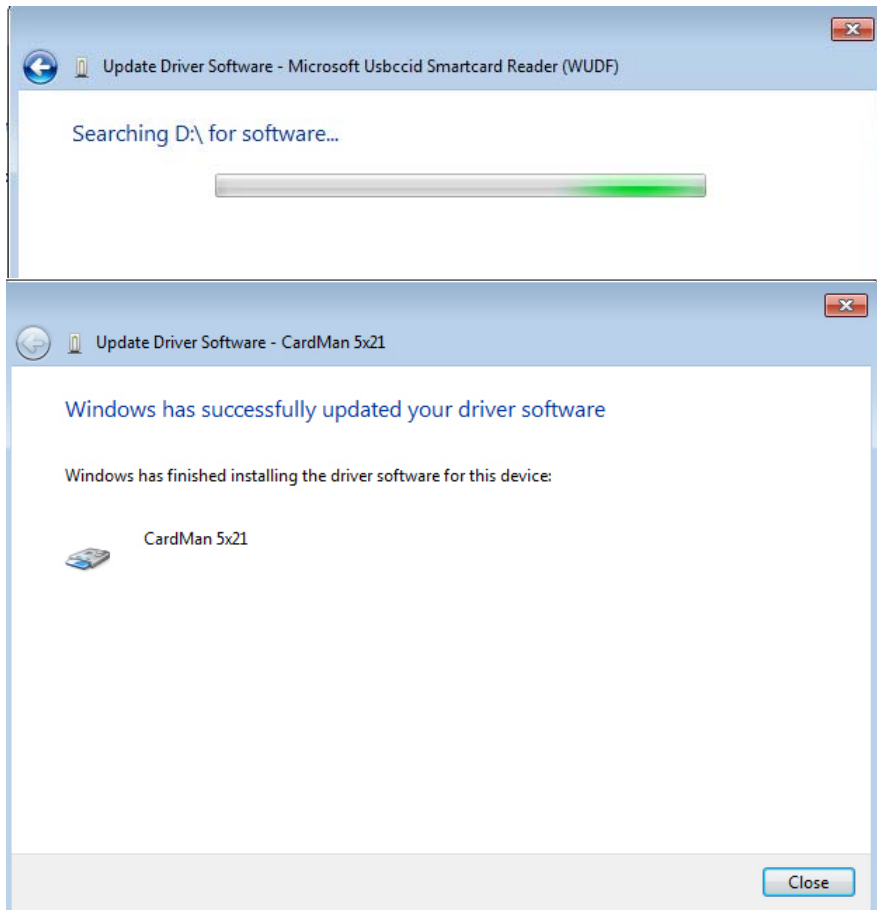


Press the button “Browse”



- Select the location of the SATM installation CD (i.e. D:\), and then press “next” to start installation of the reader driver.

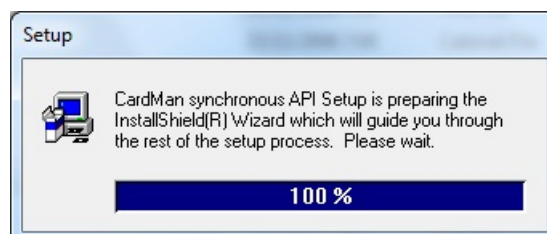


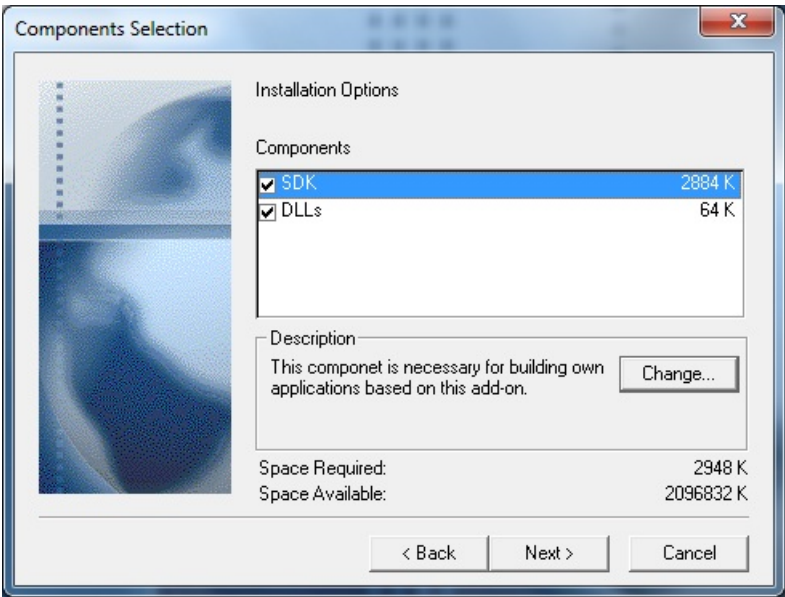
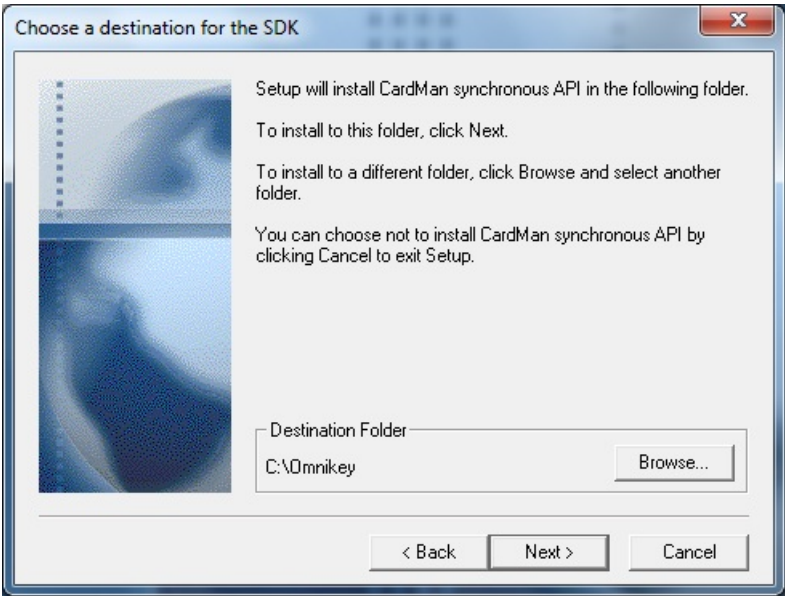
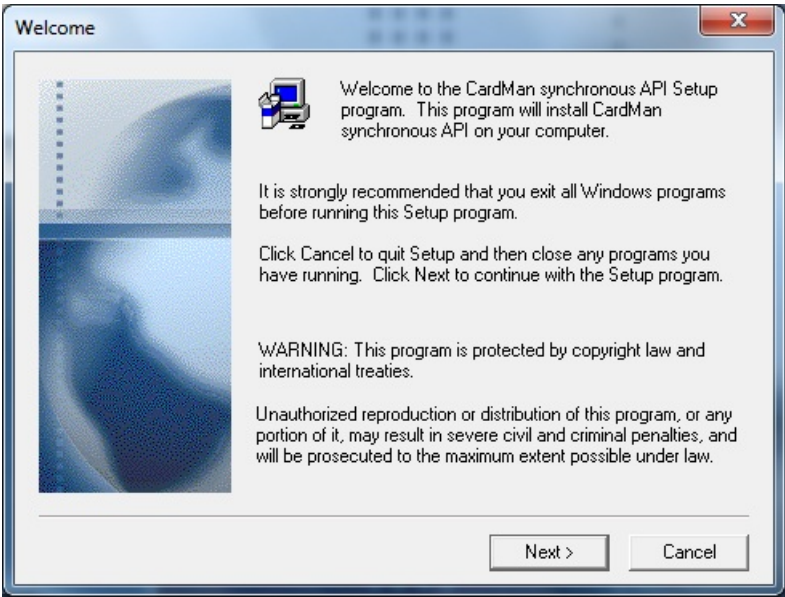


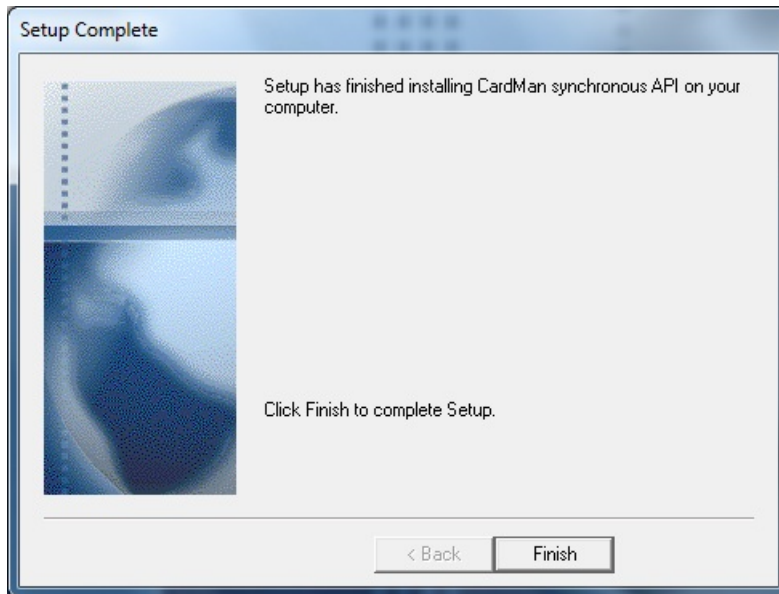
- follow the instructions in to your reader's module for installing the driver.
- **. In this sample case, use Omnikey CardMan 5121 reader and its driver located in "C:\Reader Driver\Omnikey CardMan 5121". ***

Next, install reader's API (Application Programming Interface) software on the machine. As above, use the sample reader and its API. Go to the directory "C:\Reader Driver\Omnikey CardMan 5121\CardMan_Synchronous_API_V1_1_1_3" and click the API setup program "SETUP.exe".

{Note: The API software is also included in the SATM installation CD. Go to the directory D:\SATM-PC\Reader Driver\Omnikey CardMan 5121\CardMan_API_V1_1_1_3\ and click the API setup program "SETUP.exe". (D:\ is the drive letter of the CD/DVD ROM Drive)}







- Click “Next” and “Finish” buttons to complete the installation with all default settings.

Note:

- * Refer to Appendix D for other sample reader model setup
- ** Please refer to the website of your reader’s provider, and download the appropriate driver and API software if using beside Omnikey CardMan 5121 reader
- *** If manual setup of the driver is necessary, please refer to Appendix C for the setup procedures

- Then, install the Diagnostic Tool on the machine.. The latest version of the Diagnostic Tool is available on the website below:
http://www.hidglobal.com/driverDownloads.php?techCat=19&prod_id=171)
- Follow the instructions of the setup program for installation of the Diagnostic Tool.

3.2 Setup of SAM Card

- Insert the SAM card (bought from CWRA) into the contact-type reader of the card reader
 - * with the chipset facing upward as shown below:



Note:

- * Please refer to Appendix D on how to setup the SAM card for card reader that uses small size (i.e. sim card size) SAM slot
- To confirm the installation of card reader is setup properly, please refer to Appendix E for more information

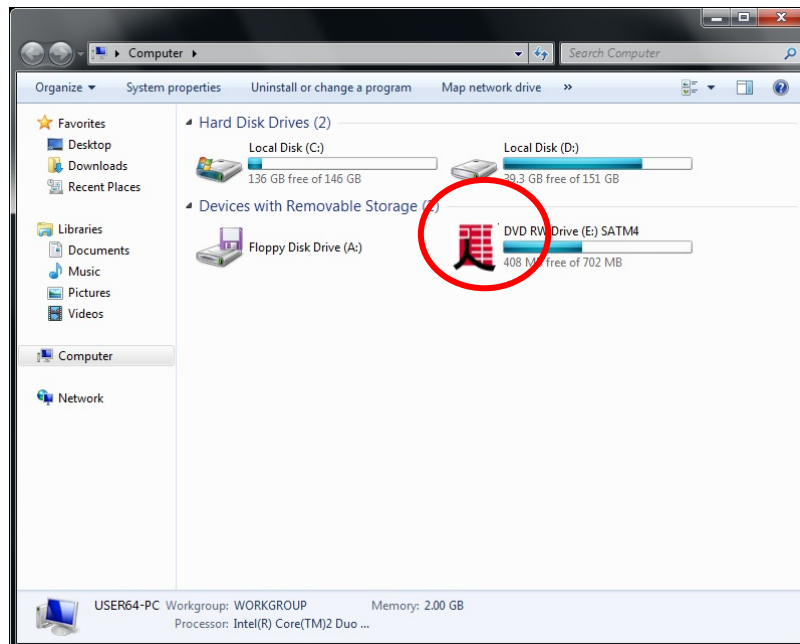
4 Site Attendance Module (SATM) Installation

4.1 Installing On PC

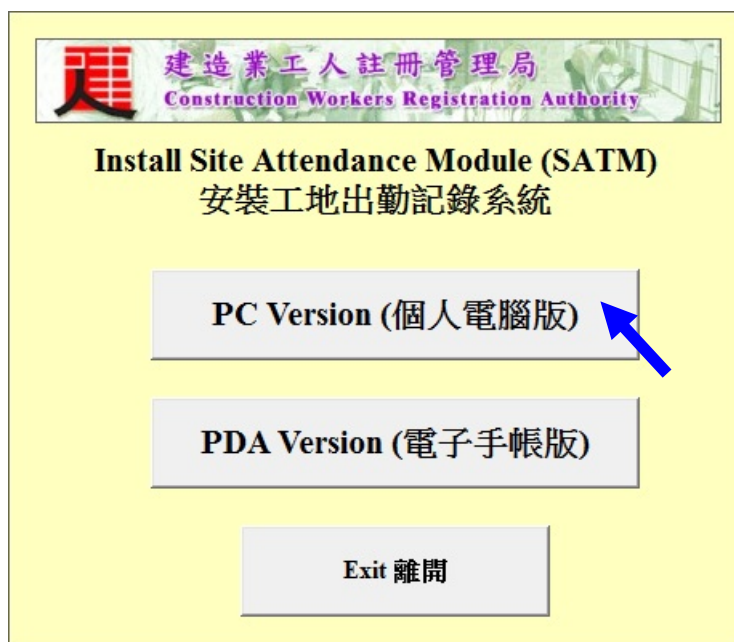
This section describes the installation of **SATM** and/or **SATM-Lite** with its related components into your PC. Some related components may **NOT** be required to install with the installation package depending on your PC settings. The installation package will auto-select the required components to install.

(Important: Please confirm that the Card Reader Driver and API software has been installed before installation of SATM. Otherwise SATM may not register workers and record the attendance records.)

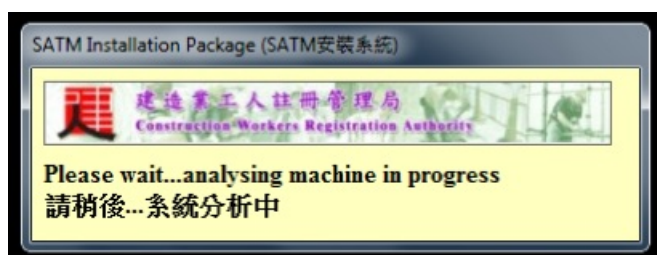
- Insert SATM CD-ROM into your PC, **SATM Welcoming** screen will popup automatically (If not, please open **My Computer** and double-click your CD-ROM drive, then double click the “**SATMWelcomeWizard**” to start installation.)



- On **SATM Welcoming** screen, click “**PC Version**” button to open **SATM Installation Package**



- **SATM Installation Package** will start to analyse your PC configurations *

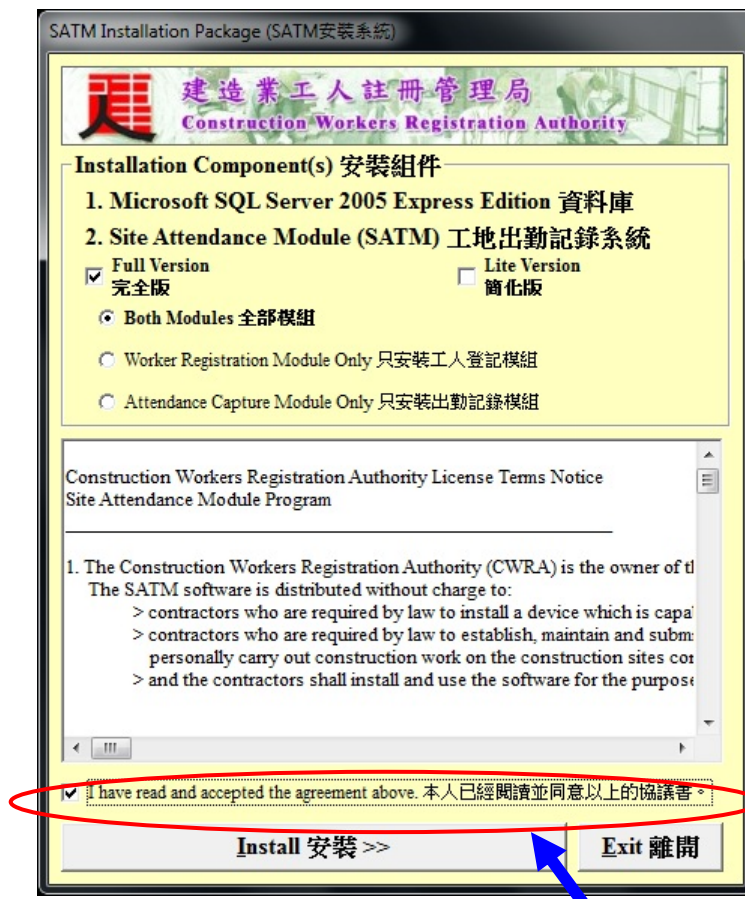


Note:

** If your PC does not meet the prerequisites for installing **SATM/SATM-Lite**, please refer to Appendix F for more information*

The CD-ROM may contain the original released version of SATM. Please refer to Appendix A on how to get the latest patch (if any) and apply the latest patch files for the latest released version

- After analysis is completed, installation menu will display on the screen



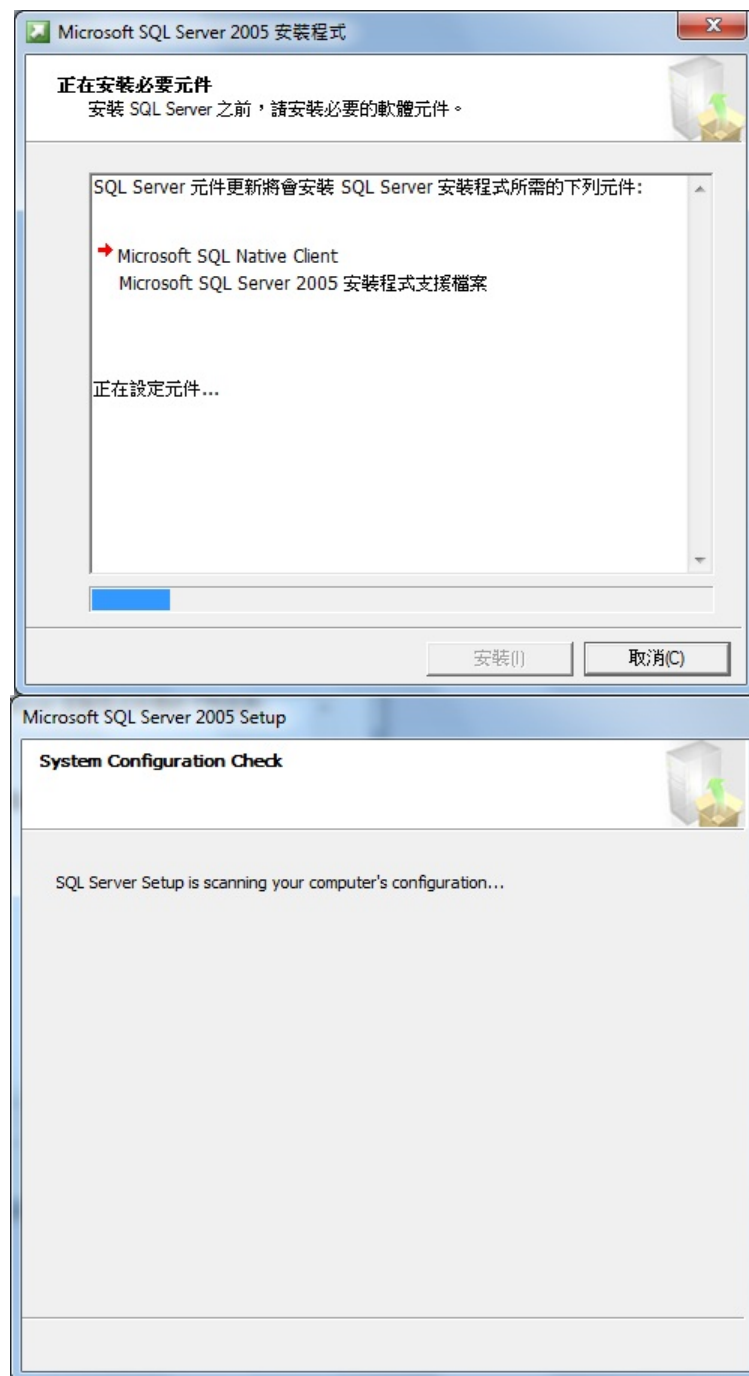
- Check the box to select the version and module(s)
- Read the agreement carefully, then check the box if accepted
- Click “**Install >>**” to start the installation

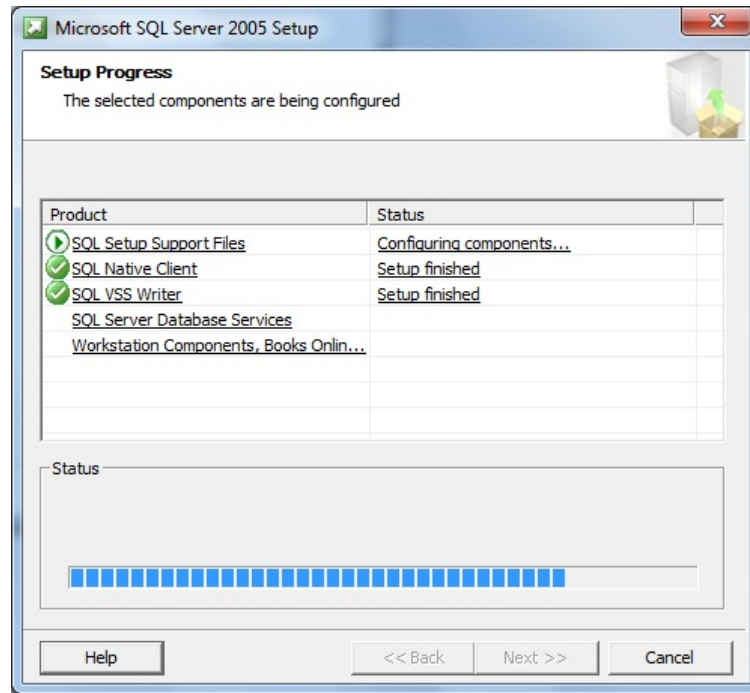


- Before installing **SATM** and its component(s), **SATM Installation Package** will automatically copy some files to your local machine and reboot your system (Please save your current work and click “**OK**” button to confirm)
- After reboot, **SATM Installation Package** will continue the installation automatically

4.1.1 Microsoft SQL Server 2005 Express Edition

(Skipped if the component has already been installed)



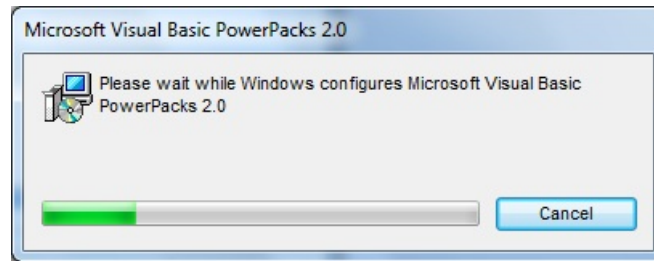


- **Microsoft SQL Server 2005 Express Edition** will start the installation and complete automatically

Note:

If your PC returns error message(s) during the installation, please go to following link for more information - <http://msdn2.microsoft.com/en-us/library/ms165706.aspx>

4.1.2 Microsoft Visual Basic PowerPacks 2.0

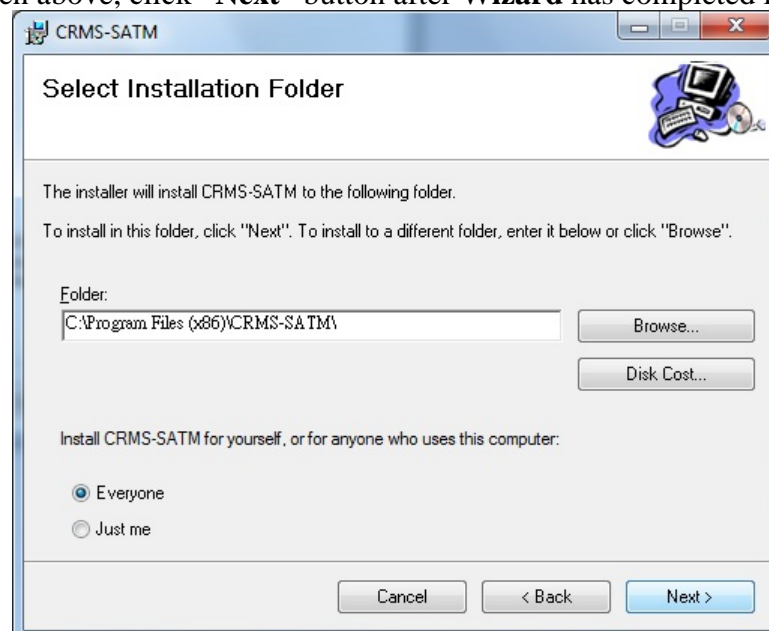


- The duration for installing **Microsoft Visual Basic PowerPacks 2.0** may vary depending on your PC's configuration. Please wait for the next step

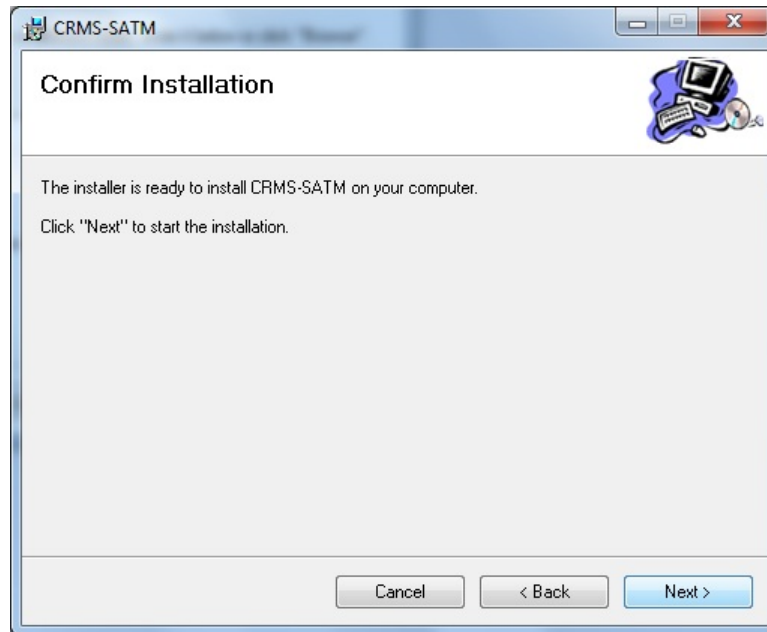
4.1.3 Site Attendance Module (SATM)



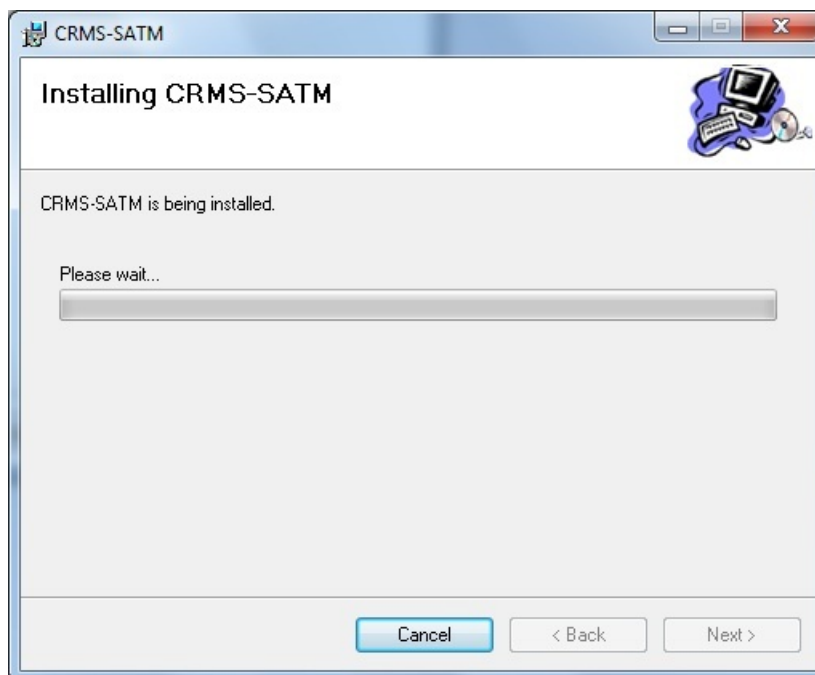
- On the screen above, click **"Next"** button after **Wizard** has completed initialization



- Click “**Browse**” to select the destination folder for installing **SATM** if necessary, otherwise click “**Next**” to continue
(Recommend use default destination folder)



- Click “**Previous**” if necessary to change the destination folder
- Click “**Install**” to begin the installation



- Be patient while installation is in progress



- After all component(s) has been installed on your PC, **Installation Package** will finalize your PC



- Click “**OK**” to exit the installation of **SATM** or **SATM-Lite**

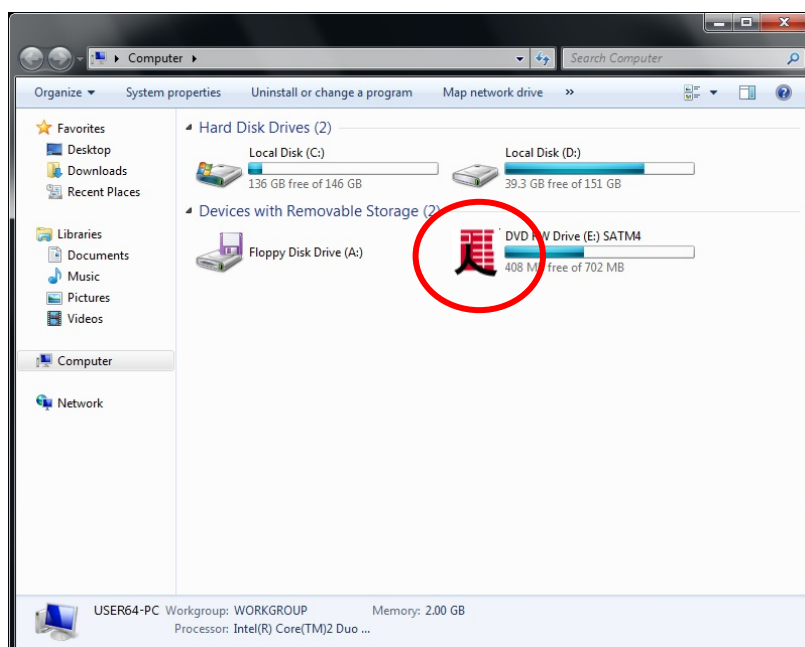
4.2 Installing On PDA (Optional)

This section describes the procedures for installing **SATM** (PDA version) on your PDA. The installation package **REQUIRES** a ready-to-use **SD card** * and any card reader able to read the **SD** card connected with your PC.

Note:

* **SD** card must have a minimum of 1 MB free space for the installation

- Insert SATM CD-ROM into your PC, **SATM Welcoming** screen will popup automatically (If not, please open **My Computer** and double-click your CD-ROM drive)
- On **SATM Welcoming** screen, click “**PDA Version**” button to open **SATM Installation Package (PDA Version)**
- Insert the **SD** card into the card reader connecting with your PC

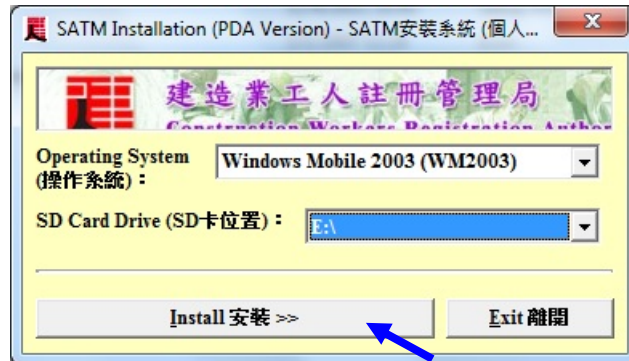


- Select “SATM for CF Reader” for the version of **SATM Capturing** program



- Select the **Operating System** of your PDA for installing **SATM Capturing** program
- Next, choose the **Drive** letter of the card reader inserting with **SD** card inserted *





- Click “**Install**” button to start the installation **



- Click “**Exit**” to complete
- Disconnect the card reader from your PC gently ***, and remove the **SD** card from the card reader ****

Note:

* You can find the drive letter of the card reader from **My Computer**

** If the installation fails, please check the following issues and repeat the installation:

- access level (read and write) of the **SD** card in the card reader
- **SD** card is inserted to the card reader properly
- card reader is connected to your PC correctly

*** For how to disconnect the card reader from Windows, please refer to Appendix G

**** If **SATM Capturing** program and its related components are not installed in the **SD** card, please repeat the installation steps above

5 Post Installation Test Run

5.1 SATM Installed on PC

5.1.1 SATM Default Code Tables Import

This section describes the import of code tables packed with **SATM Installation Package**. This is required for use of **SATM** or **SATM-Lite** for the first time.

- a. Double-click on **CRMS-SATM** or **CRMS-SATM-Lite** program icon as shown below from the desktop

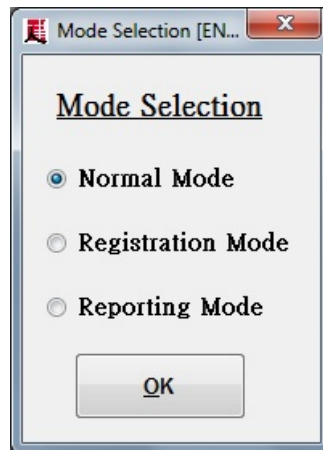


CRMS-SATM

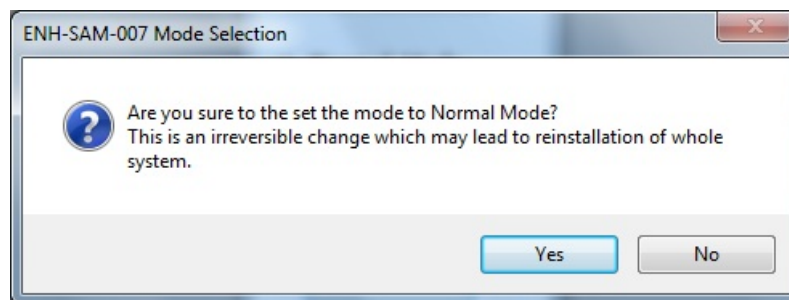


CRMS-SATM-Lite

- b. Select **Module** (**CRMS-SATM** only, either *Worker Registration Module* or *Attendance Capture Module* *) and prompt in the default **Login ID** (*admin*) and **Password** (*admin*)
- c. For use of **CRMS-SATM** for the first time, the system requires you to select the running mode in the future. Select the desired mode from either *Normal Mode*, *Registration Mode* or *Reporting Mode*, then re-login to the program. This option can be able to change after uninstall and re-install the program (Skip for **CRMS-SATM-Lite**)

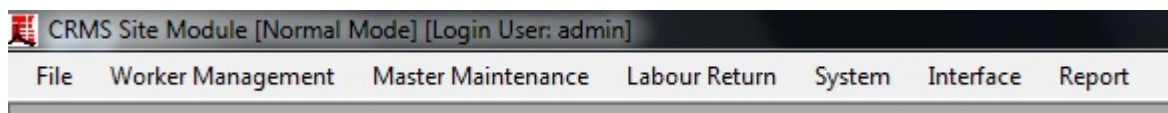


CRMS-SATM

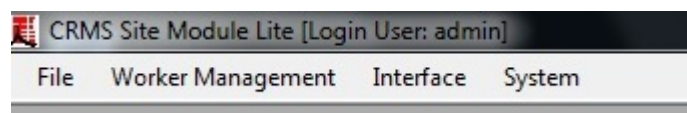


CRMS-SATM

- d. The mode and *current* user of **CRMS-SATM** are shown on the menu bar (Only current user is shown in **CRMS-SATM-Lite**)

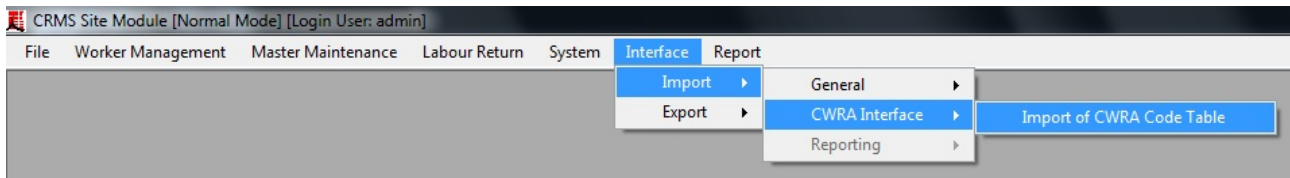


CRMS-SATM

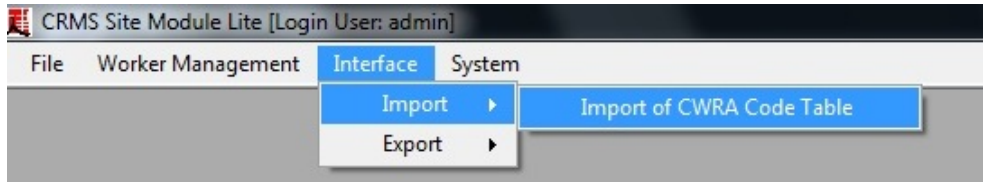


CRMS-SATM-Lite

- e. Select “**Interface→Import→CWRA Interface→Import of CWRA Code Table**”, and click “**Import**” button to load the default code tables from the zip file into the system on the opened dialogue *



CRMS-SATM



CRMS-SATM-Lite



- f. Click “Close” after import the code tables successfully

Note:

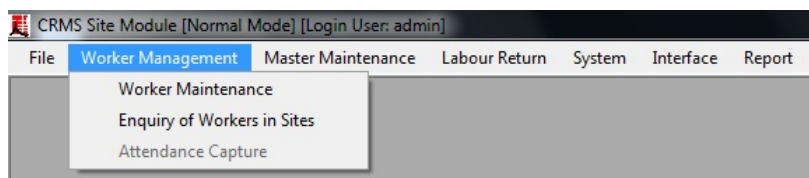
* If there is an updated version of the code tables on CWRA website, please download and replace the default code tables in the CRMS folder (C:\CRMS\Import)

5.1.2 SATM Connect Worker Registration Card Reader Ready (Optional)

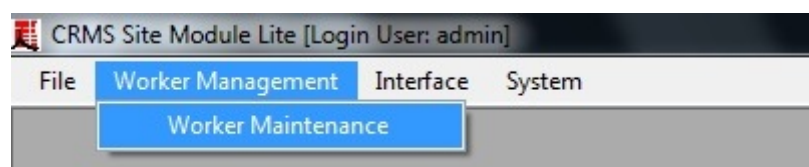
This section describes the procedure for testing the connectivity between the **card reader** and **Worker Registration Card**. To complete this task, you need to prepare the following items:

- Desktop Card Reader (refer to **Section 3**) connected to your PC
- **SAM** card is properly inserted into the card reader
- **Worker Registration Card**

- a. Select “**Worker Management**→**Worker Maintenance**” to open **Worker Maintenance** dialogue on the screen

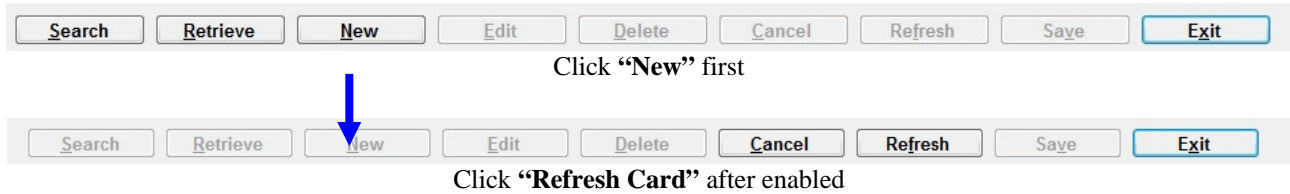


CRMS-SATM



CRMS-SATM-Lite

- b. Click **“New”** to enable the button **“Refresh Card”** in the dialogue
- c. Insert the **SAM** card into the card reader, and place the **Worker Registration Card** on it as well



- d. Next, click **“Refresh Card”** and the system will prompt a **SAM** card login information on the **Card Reader Setup** dialogue

The dialog box titled 'Card Reader Setup [FNC-SAM-0201]' contains the following fields and controls:

- Master Key:** A text input field.
- Login ID:** A text input field.
- Login Password:** A text input field.
- ☐ **Save above login to database**
- OK** and **Exit** buttons at the bottom.

- e. Click **“OK”** after fill in all correct login information on the dialogue (the login information should be sent out by CWRA to the specified person of the Contractor via email after issuing the SAM card)
- f. Check the box to save the **SAM** card login information if needed
- g. The data in **Worker Registration Card** would be retrieved and display on the dialogue *

The dialog box titled 'Worker Maintenance [FNC-SAM-0201]' displays the following information:

Registration Information			
Registration No.:	CWR10028617		
Registration Card Expiry Date (DD/MM/YYYY):	22/11/2013		
Principal Trade:	Bricklayer 砌磚工 (C305)		
Categories:	Skilled Worker	Type of Registration:	Provisional
Green Card No.:	A123457	Green Card Expiry Date (DD/MM/YYYY):	01/01/2013
Green Card Issuing Authority:	Advanced Safety Consultants Ltd. 先進安全顧問有限公司 (002)		

- h. Click **“Exit”** to close the dialogue or enter **‘HKID/Passport No.’**, then click **“Save”** button to record it

Note:

* If the reader is failed to retrieve data from **Worker Registration Card**, please go to **CWRA** website and ensure your card reader is included in the certified list. Then, please repeat **Section 5.1.1** for importing the latest code tables into the system

5.1.3 Auto-Download Code Tables Setup (Optional)

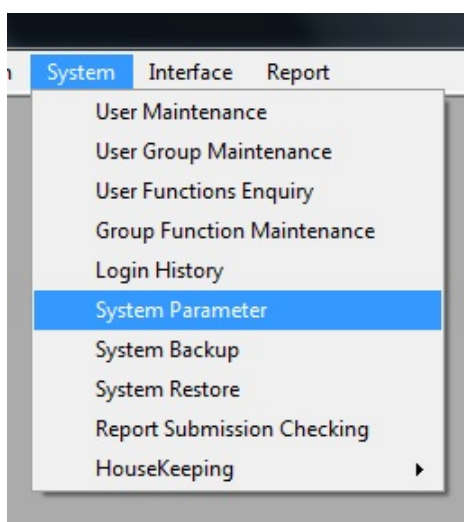
This section describes the procedure for downloading code tables from **CWRA** web portal automatically. The computer MUST have internet access and already imported the code tables *. After setup, **SATM** will automatically check the latest version of code tables from the web portal at the first time of use everyday, if found, it will download and import to the system directly.

Note:

** For those computers without internet connectivity, please refer to **User Manual** for more information about downloading **CWRA** code tables manually*

The following simulation are using **CRMS-SATM-Lite**, and also applicable to **CRMS-SATM** as well.

- a. Select “**System→System Parameter**” from the main menu



- b. Click “**Edit**” button to modify the setting of system on the opened dialogue

System Parameter

Default System Interface Path: C:\CRMS\Interface

Default Import Browse Path: C:\CRMS\Import

Default Export Browse Path: C:\CRMS\Export

Default Photo Browse Path: C:\

Code Table Download URL: http://www.cwra.org.hk/LRM/LRM_Eng/download_ac

Days before Report Submission Warning: 1

Report Submission Warning: ☐ Yes ☒ No

Auto Download of Code Table: ☐ Yes ☒ No

Days before Download Code Table: 7

Warning for download code table and good list generation: ☒ Yes ☐ No

Archive File Path: C:\CRMS\Archive

Archive File Name: Attendance_Archive.log

Edit Save Exit

Auto Download of Code Table: ☒ Yes ☐ No

- c. Confirm the URL in **Code Table Download URL** is entered correctly and select 'Yes' for the option **Auto Download of Code Table** as shown
- d. Click **"Save"** to complete the changes
- e. Afterward, **SATM** will connect to the web portal, and download the **CWRA** code tables if necessary at the first time of login everyday

Synchronize of Table[FNC-SAM-0002]

Downloading of Code Table from CWRA Portal Site...

Close

5.2 SATM Installed on PDA (Optional)

5.2.1 Import of Worker Registration Information

This section describes the transfer of information files of Worker Registration from **SATM** to **PDA**. The information files are generated by **SATM** after worker registered their data into the system on your PC.

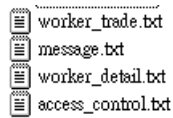
- a. Generate and export worker information files from **SATM** *

- b. Insert the **SD** card with installed **SATM Capturing** program (refer to **Section 4.2**) into corresponding card reader and connect it to your PC
- c. Copy the worker information files exported previously (*default: "C:\CRMS\Interface"*) ** into the *import* folder in **SD** card
- d. Remove the **SD** card from your PC *** and insert it into your PDA

Note:

* For the procedures to export the worker information files, please refer to **User Manual**

** The required worker information files are : *access_control.txt*, *message.txt*, *worker_detail.txt*, and *worker_trade.txt* (Filename of each file CANNOT be changed)

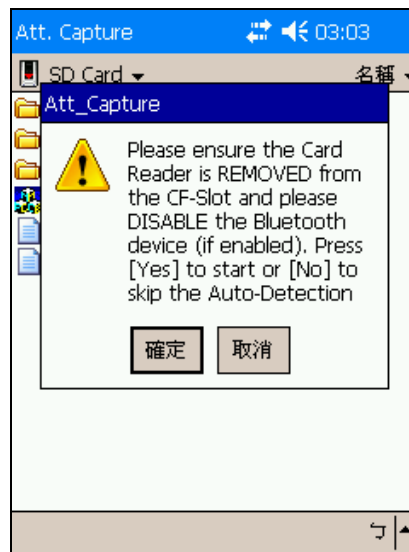


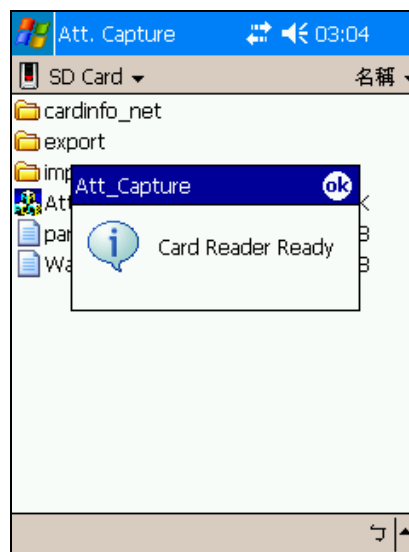
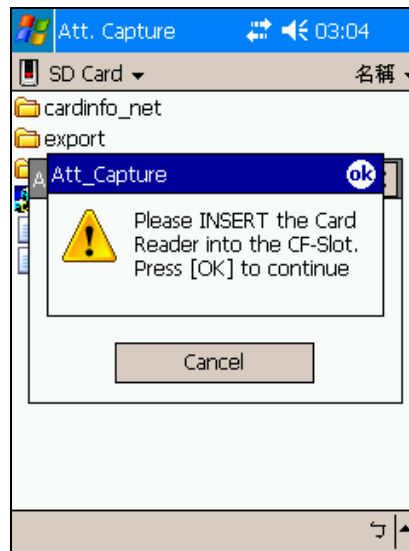
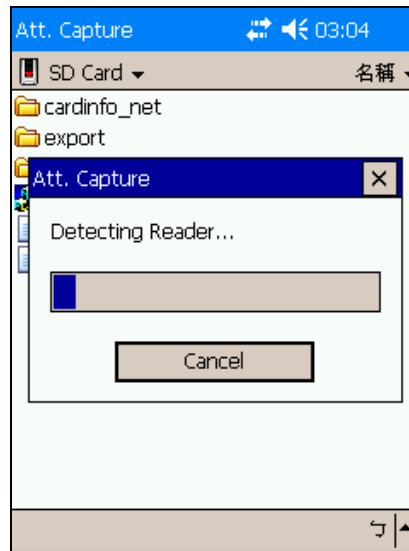
*** To remove **SD** card properly, please refer to Appendix G for more information.

5.2.2 SATM (PDA version) Setup

This section describes the procedures to configure of reading **Worker Registration Card** on the PDA. This is mandatory if the registered worker(s) needs to take attendance on the PDA.

- Insert **CompactFlash** card reader into the CF slot of your PDA
- Open the directory of inserted **SD** card (installed **SATM Capturing** program) in your PDA *
- Click on “**Att_Capture**” executable file in the directory
- The program will detect the slot inserted **CF** card reader automatically at the first time of use (Click “**OK**” to start). Wait until the card reader is ready





- e. Select '*Supervisor*' from the list of **Mode**, and fill in the supervisor's password as well (*default: '1'*) on the main menu

Att. Capture 10:43 ok

Attendance Capture

Date & Time is Valid

Exit

Friday 29 Jun 2007

10:43:38

Mode User

Last Sync. at 2007/06/21 17:57:24

Att. Capture 10:47 ok

Attendance Capture

Start

Settings Exit

Friday 29 Jun 2007

10:47:32

Mode Supervisor

Pwd *

Last Sync. at 2007/06/21 17:57:24

- f. Click **“Date & Time is Valid”** button to enable **“Settings”** button below it
- g. Click **“Settings”** button and enter the corresponding screen (*Can ignore the message of missing setting file*)

Att. Capture 10:48 ok

☒ Enable Lock Save Cancel

☒ English Set Password

☐ Export Parameters

Site Code S01

Reader Model MaCaps

Reader Power Save

Check Mode Allow In/Out

Data Sync. Warning 14

Data Retention 30

CF Reader Card Slot 4

Card Expiry Warning 7

- h. Change the **Site Code** same as the code exported in worker registration information files from **SATM** (PC version) to PDA **, and select the model of **CF** card read inserted to your PDA. Keep other options as default or change them if needed
- i. Click **“Save”** to accept the changes and return to main screen

Note:

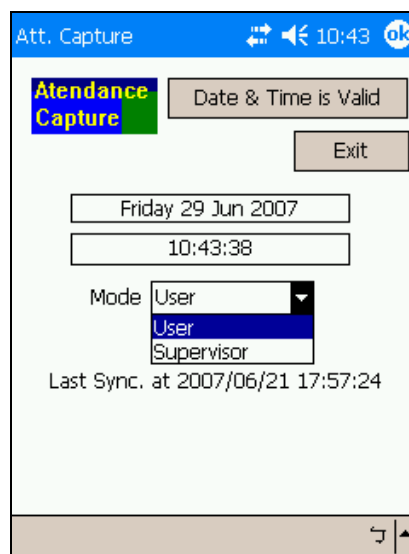
* *The method of access the **SD** card may vary on different model of PDA, please refer to your PDA manual for more information*

** *Refer to **Section 5.2.1**, the code on both **SATM** version MUST be identical*

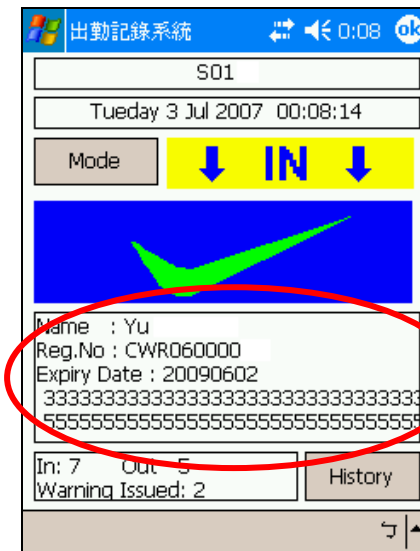
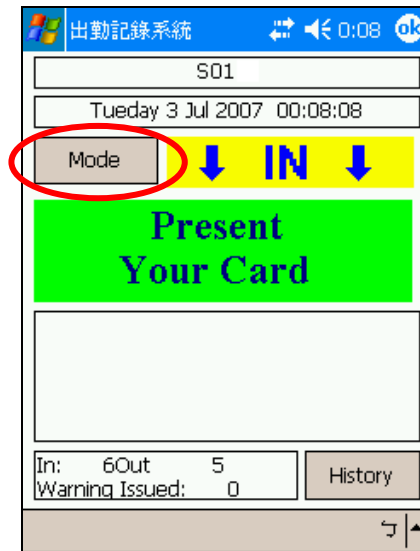
5.2.3 SATM Connect CF Card Reader Ready

This section describes the procedure to test the connectivity between the **CompactFlash** card reader to your PDA and **Worker Registration Card**. Please refer to **Section 5.2.1** and **Section 5.2.2** if the **CF** card reader is failed to access the **Worker Registration Card**.

- a. Start **SATM Capturing** program as **Section 5.2.2**
- b. Select ‘**User**’ from the option of **Mode** and click **“Date & Time is Valid”** button to continue (*No password is required*) on the main menu



- c. Click **“Start”** button to begin capturing the attendance for the worker(s) registered in **SATM** (PC version)
- d. Select **Mode** option as ‘**IN**’ or ‘**Out**’ by clicking **“Mode”** button



- e. Place a **Worker Registration Card** on the **CF** card reader
- f. If the worker already registered into the database, the program will capture the current time as attendance for the worker successfully. Otherwise, the program will return failure message on the screen *

Note:

* If **SATM** (PDA version) has no action within 20 seconds, the **CF** card reader will go to sleep mode for saving power. To activate it again, click "**Re-start Reader**" button on the screen

6 Appendix A

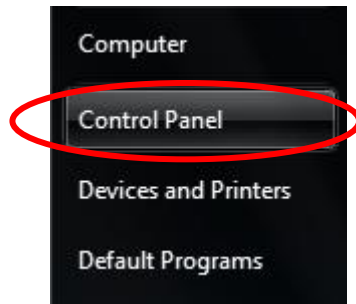
Please visit CWRA website <http://www.cwra.org.hk> for any patches for the installation CD-ROM.

7 Appendix B

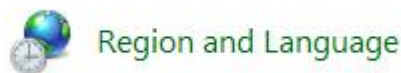
Please follow the procedures below for any English version of Windows:

7.1 Windows 7 Home/Professional Edition

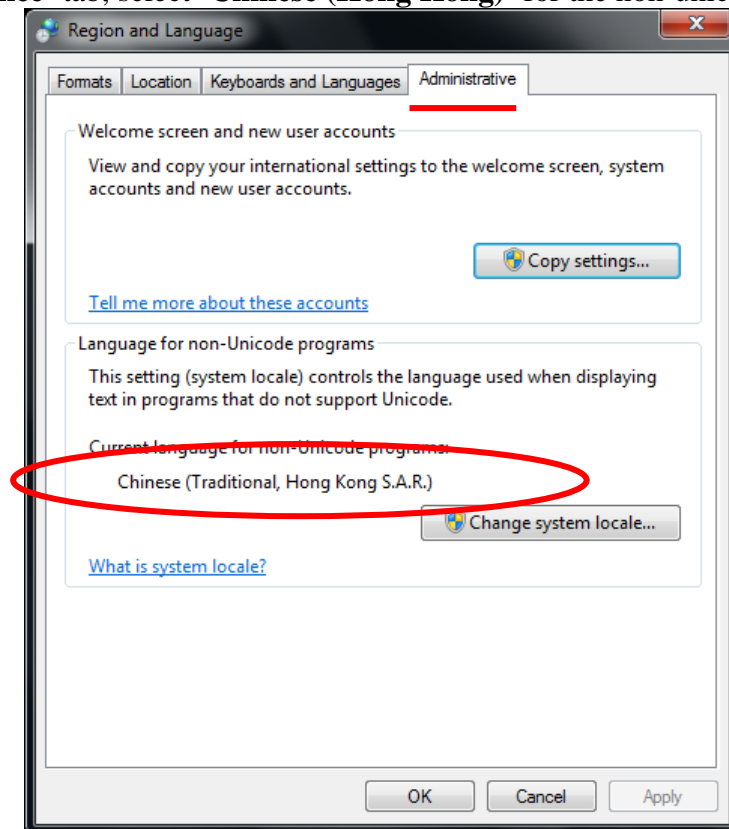
- Double Open Control Panel window, Start→Control Panel'



- Double click '**Regional and Language Setting**' icon to open corresponding dialogue



- Open '**Advance**' tab, select '**Chinese (Hong Kong)**' for the non-unicode program

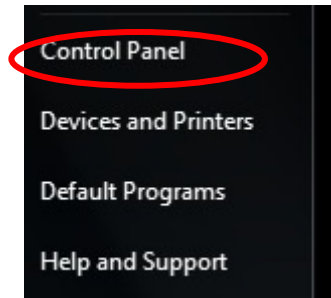


- Click "OK" buttons to all screens, and restart the system

8 Appendix C

8.1 Installing Card Reader Driver Manually

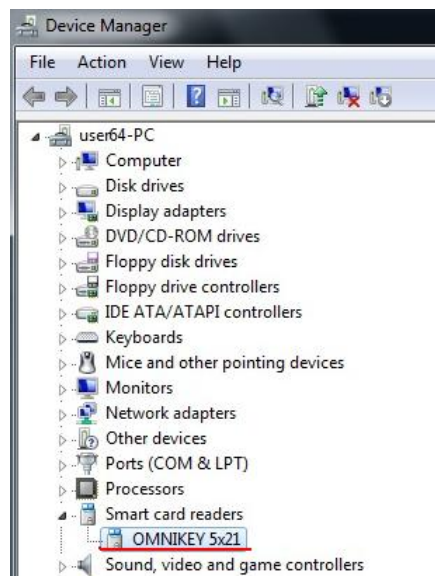
- Open Control Panel window, 'Start→Settings→Control Panel'



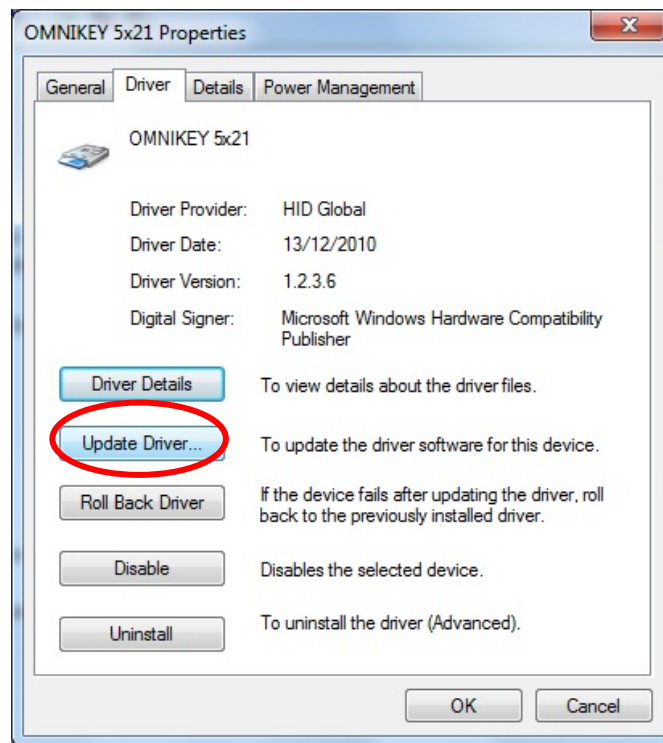
- Double click "Device Manager" icon to open corresponding dialogue



- Press the '+' sign on the left of the title 'Smart Card Readers' to open all available name of card reader



- Right click on the name 'OMNIKEY 5x21' and select 'Properties' from the popup menu
- Go to tab 'Driver', and press the button 'Update Driver'



- **'Upgrade Device Driver Wizard'** dialogue displays on the screen and continue the steps as regular procedures.

9 Appendix D

9.1 Installing Application Programming Interface (API) & Driver (Sample)

- Download the API and Card Reader driver corresponding to the Card Reader from the following website:
<http://www.omnikey.com/index.php?id=downloads>
- Run 'CardMan_Synchronous_API_V1_1_1_3.exe' (for API) and 'CardMan5x21_V1_1_1_3.exe' (for driver) to extract in "C:\Omnikey\"
- For API, double click '**Setup.exe**' in the directory of API under "C:\Omnikey\"
- Connecting Card Reader (OMNIKEY) to the System
- Generally, Windows displays "**New Hardware Found**" on the screen automatically
- If Windows does not return any action after connecting the Card Reader, go to Appendix A
- Use "**Browse**" to driver directory ("C:\Omnikey\[Driver]\") and select the corresponding driver file location ("cxru0wdm.sys")

9.2 Inserting SAM Card Into Card Reader (Sample)

9.2.1 Using OMNIKEY Card Reader [CardMan 5x21]

- a. Connect the Card Reader to any free USB port



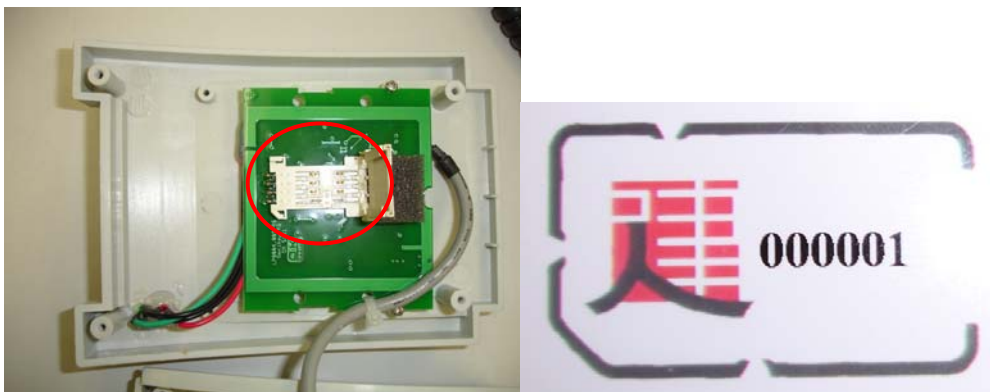
- b. Insert the SAM Card into Card Reader horizontally as shown
(Caution: The chip on the SAM card must be face up.)





9.2.2 Using MF30P Card Reader

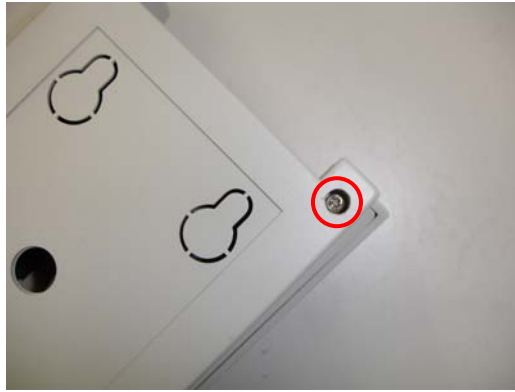
- a. Using screw driver to remove all screws from the bottom of the reader
- b. Take off the chip from the SAM Card properly
- c. As shown, inserting the SAM chip to the chip holder in the Card Reader (The middle of the circuit board)
(Caution: The chip must be face down to the circuit board)



- d. Close the chip holder and push the handle to lock the chip tightly



- e. Locate the circuit board back to the Card Reader case carefully
- f. Lock the Card Reader case with the screws



- g. Connect the Card Reader to any free USB port

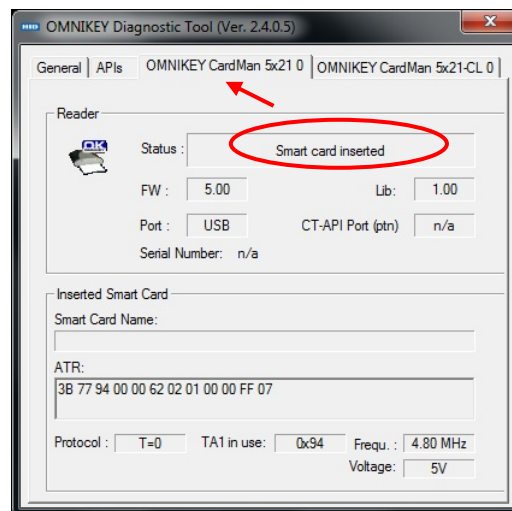


10 Appendix E

10.1 Checkup of Card Reader

10.1.1 Insertion of SAM Card

- a. Click '**Start→All Programs→OMNIKEY**' and select '**Diagnostic Tool**'
(This application tool is only available after Card Reader driver is installed properly. If it does not exist in the window, please refer to **Section 3.1**. The latest version of the Diagnostic Tool is available on the website below:
http://www.hidglobal.com/driverDownloads.php?techCat=19&prod_id=171)
- b. Go to Tab '**OMNIKEY CardMan 5x21 0**' on the dialogue
(If only two tabs '**General**' and '**APIs**' are available, please check the connection between the Card Reader and the USB port)
- c. If the '**Status**' is returned '**Smart Card inserted**' (as shown), the SAM Card is inserted successfully. If not, please remove and re-insert the SAM Card to the Card Reader again



- d. Meanwhile, in the Tab '*OMNIKEY CardMan 5x21 1*' can also return the status for the smartcard
(*The smartcard is placed on the top of the Card Reader*)

10.1.2 Insertion of Card Reader To PDA CompactFlash (CF) Card Slot

- Insert Card Reader into the free CompactFlash (CF) Card slot on the PDA
- Card Reader is ready for the smartcard if the green light is blinking

11 Appendix F

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Construction Workers Registration Authority
July 2007

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