



P2000

User Manual

Version 1.2





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SAFETY INSTRUCTIONS

1. Read these instructions carefully. Keep these instructions for future reference.
2. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
3. Please keep this equipment from humidity.
4. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
5. Make sure power cord such a way that people can not step on it. Do not place anything over the power cord.
6. All cautions and warnings on the equipment should be noted.
7. If the equipment is not used for long time, disconnect the equipment from main to avoid being damaged by transient over voltage.
8. Never pour any liquid into opening, this could cause fire or electrical shock.
9. If one of the following situations arises, get the equipment checked by a service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well or you can not get it work according to user manual.
 - e. The equipment has dropped and damaged.
10. Do not leave this equipment in an environment unconditioned, storage temperature below -20°C or above 60°C, it may damage the equipment.
11. Unplug the power cord when doing any service or adding optional kits.

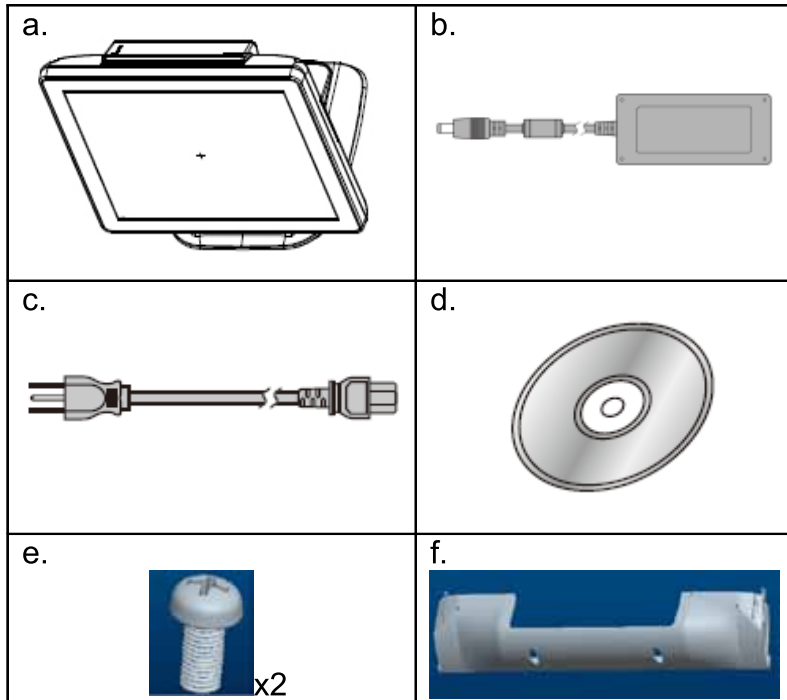
Lithium Battery Caution:

Danger of explosion can happen if the battery is incorrectly replaced, Replace only the original or equivalent type recommended by the manufacture. Dispose used batteries according to the manufacture's instructions.

Do not remove the cover, and ensure no user serviceable components are inside. Take the unit to the service center for service and repair.

PACKING LIST

1-1. Standard Accessories



a. System (with stand)

b. Power Adapter

c. Power Cord

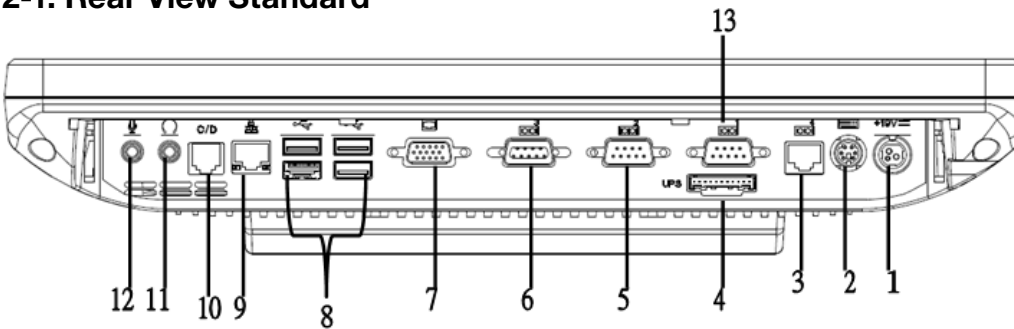
d. Driver Bank

e. Screw

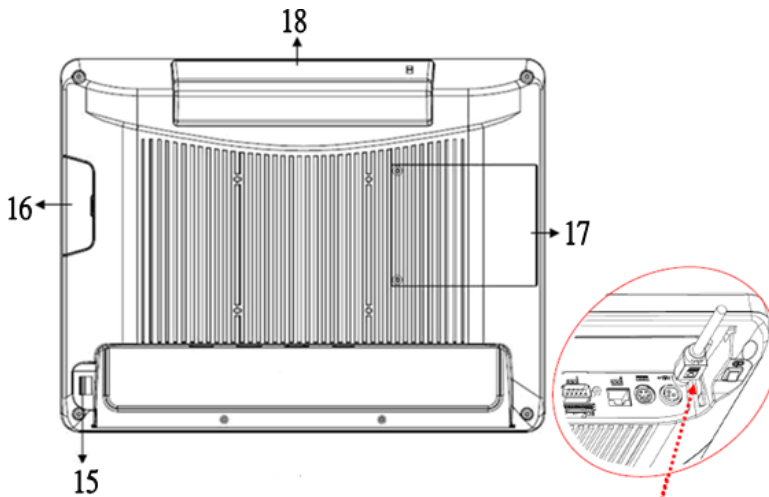
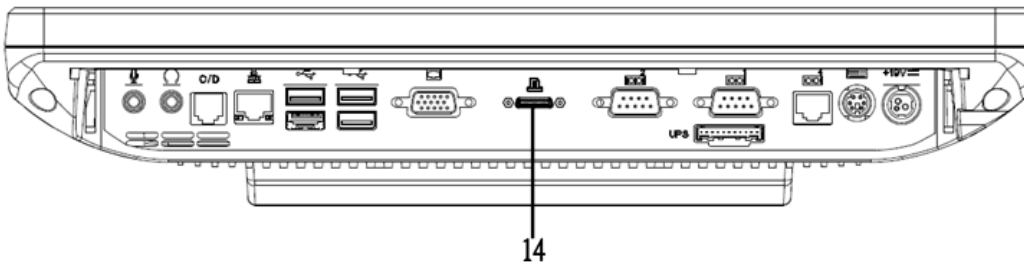
f. Cable Cover

SYSTEM VIEW

2-1. Rear View Standard



2-1. Rear View with Optional LPT Port



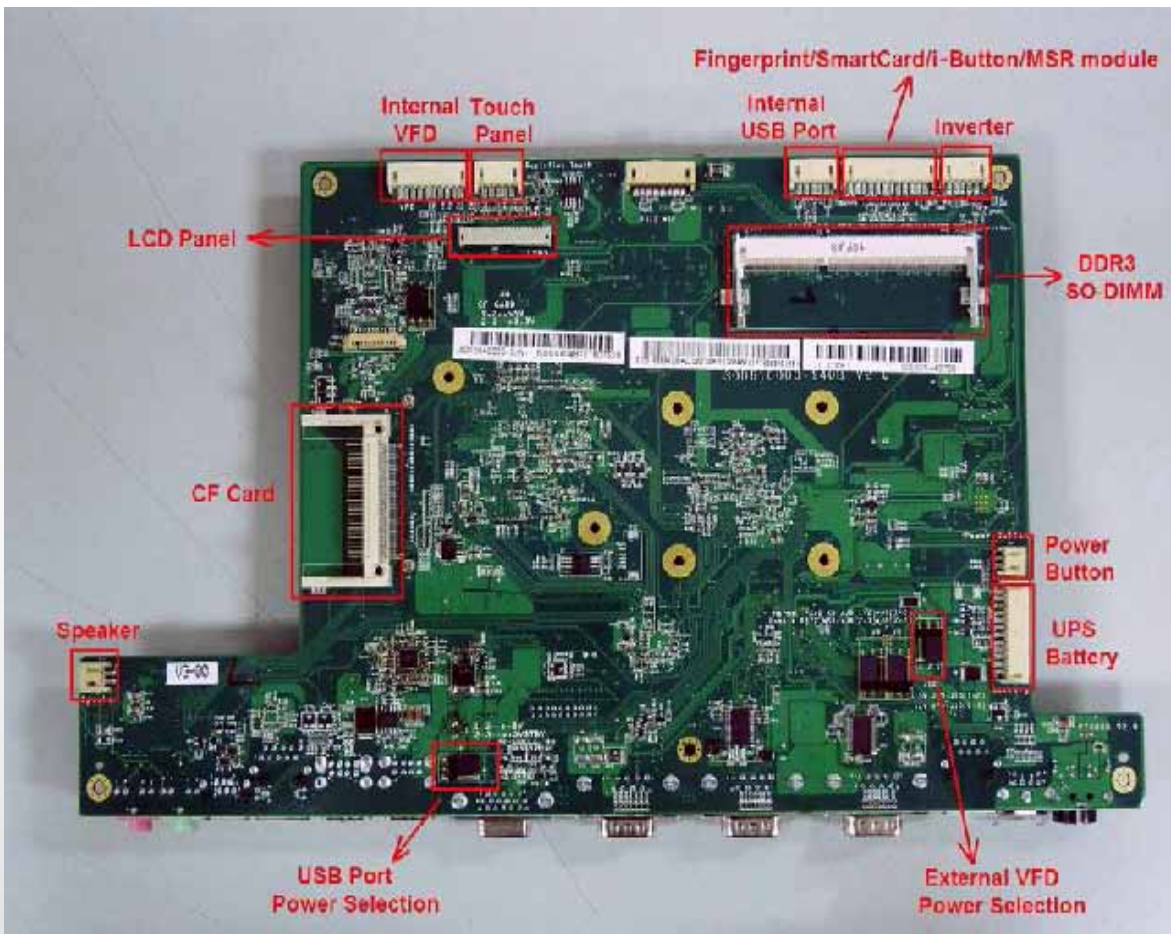
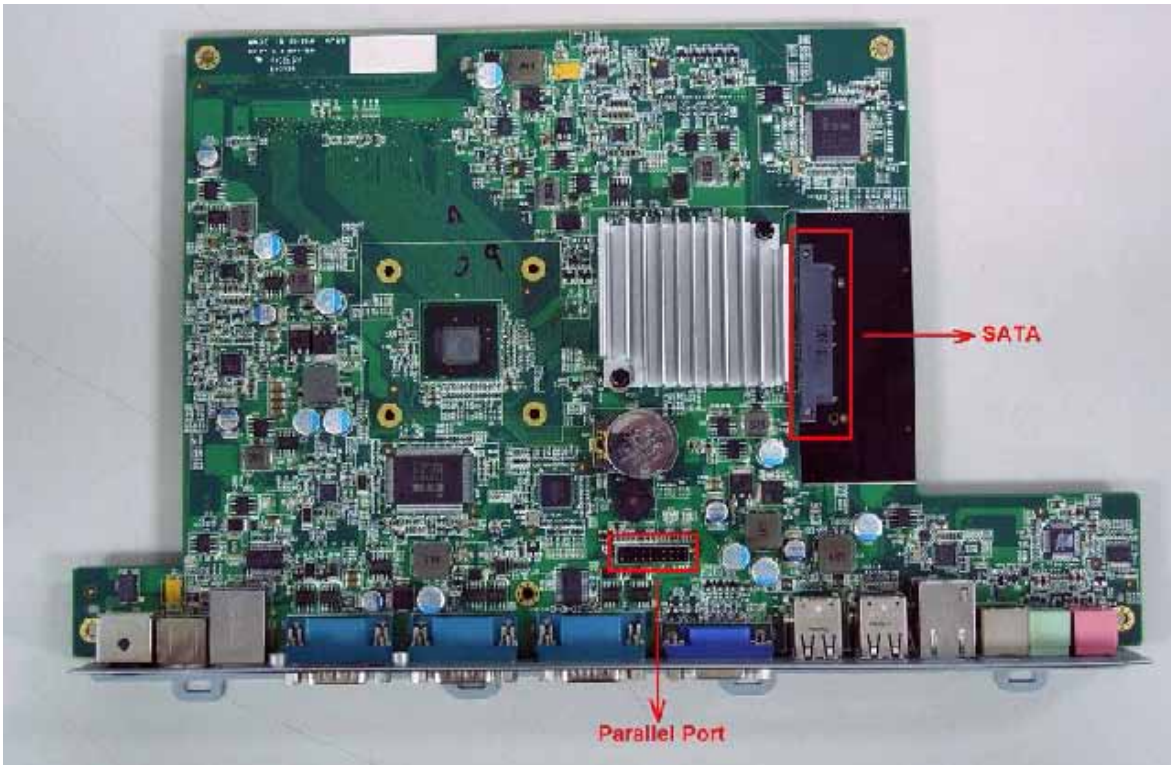
* Please make sure 19V DC plug in the right direction before plugging in DC jack.

Item	8. USB 2.0/1.1 X4	16. HDD/CF CARD
1. 19V DC Input	9. RJ45(LAN)	17. MSR/smart card/IBUTTON/ Fingerprint/RFID(Optional)
2. PS2(K/B)	10. RJ11	18. VFD(Optional)
3. RJ45(RS232 for VFD)	11. Line-Out	
4. UPS Battery	12. Mic	
5. COM2	13. COM1	
6. COM3	14. Parallel port(Optional)	
7. VGA	15. Power Button	

2-2. Specification

Processor	Intel® Atom™ processor D525 (1M Cache, 1.80GHz)
Chipsets: North Bridge/South Bridge	ICH8-M
Memory	One SO-DIMM socket supports DDR3 800 up to 4GB
Audio	Line-out/Mic-in
Network	RJ45 10/100/1000 Base-T
USB	4*USB 2.0
Storage	CF card / 2.5" SATA HDD / SSD
BIOS	Award PnP BIOS, 8Mb SPI ROM
Power	DC 19V/4.74A 90W Adaptor
Thermal Solution	Fan-less
Dimension	368 (W) x 264.2 (H) x 285 (D) mm
Operating Temperature	0°C ~ 35°C
Storage Temperature	-20°C ~ 60°C
Storage Humidity	20% ~ 80%, non-condensing
Display	
LCD Panel Size	15-inch TFT Active Matrix Display
Resolution	1024*768 Pixels
Brightness	250 cd/m2
Touch Panel	5-wire Resistive Type / Projected Capacitive Type
Tilt Angle	30°~90°

2-3. Internal Layout



PIN DEFINITION

1. Parallel J7

Pin NO.	Pin Name	Description
1	STB#	Printer Strobe
2	PD0	Parallel Port DATA0
3	PD1	Parallel Port DATA1
4	PD2	Parallel Port DATA2
5	PD3	Parallel Port DATA3
6	PD4	Parallel Port DATA4
7	PD5	Parallel Port DATA5
8	PD6	Parallel Port DATA6
9	PD7	Parallel Port DATA7
10	ACK#	Printer Acknowledge
11	BUSY	Printer Busy
12	PE	Printer Paper End
13	SLCT	Printer Select
14	AFD#	Printer Auto Line Feed
15	ERR#	Printer Error
16	INIT#	Printer Initialize
17	SLIN#	Printer Select Input
18	GND	Ground
19	GND	Ground
20	GND	Ground

2. Jumper for CF CARD Selection

Pin NO.	Pin Name	Description
1	5V	+5V
2	CF POWER	CF POWER
3	3.3V	+3.3V

3. Lin-out J3

Pin NO.	Pin Name	Description
1	GND	Ground
2	GND	Ground
3	Line OUT R	Line out
4	Line OUT L	Line out
5	Detect	Detect

4. VFD Connector CN9

Pin NO.	Pin Name	Description
1	5V	+5V
2	NDSR	DSR
3	GND	Ground
4	NRTS	DTR
5	NRTS	RTS
6	NCTS	CTS
7	NTXD	TXD
8	NRXD	RXD
9	GND	Ground
10	12C	+12V

5. Mic

Pin NO.	Pin Name	Description
1	GND	Ground
2	GND	Ground
3	Mic R	Mic
4	Mic L	Mic
5	Detect	Detect

8. Inverter CN14

Pin NO.	Pin Name	Description
1	VCC	+12V
2	GND	Ground
3	NC	NC
4	BKL_CTL	Back Light Brightness
5	BKL_EN	Back Light Enable

6. Speaker SP1

Pin NO.	Pin Name	Description
1	+	Speaker +
2	-	Speaker -

9. Extra USB CN13

Pin NO.	Pin Name	Description
1	VCC	+5V
2	- DATA	D-
3	+ DATA	D+
4	GND	Ground
5	GND	Ground

7. LVDS CN 2

Pin NO.	Pin Name	Description
1	LCDVCC	+3.3v
2	LCDVCC	+3.3v
3	GND	Ground
4	NC	NC
5	DATA 0-	LVDS Output DATA0-
6	DATA 0+	LVDS Output DATA0+
7	GND	Ground
8	DATA 1-	LVDS Output DATA1-
9	DATA 1+	LVDS Output DATA1+
10	GND	Ground
11	DATA 2-	LVDS Output DATA2-
12	DATA 2+	LVDS Output DATA2+
13	GND	Ground
14	CLK-	LVDS CLK-
15	CLK+	LVDS CLK+
16	GND	Ground
17	NC	NC
18	NC	NC
19	GND	Ground
20	NC	NC

REAR I/O INTERFACE

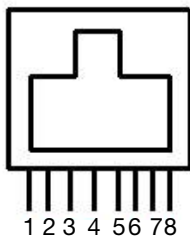
1. COM1' COM2' COM3 port

Pin	Signal	Function
1	CD	Carrier Detect (IN)
2	RD	Receive Data (IN)
3	TD	Transmit Data(OUT)
4	DTR	Data Terminal Ready(OUT)
5	GND	Ground
6	DSR	Data Set Ready (In)
7	RTS	Request To Send (OUT)
8	CTS	Clear To Send (IN)
9	Ring/5V/12V	Setting by BIOS

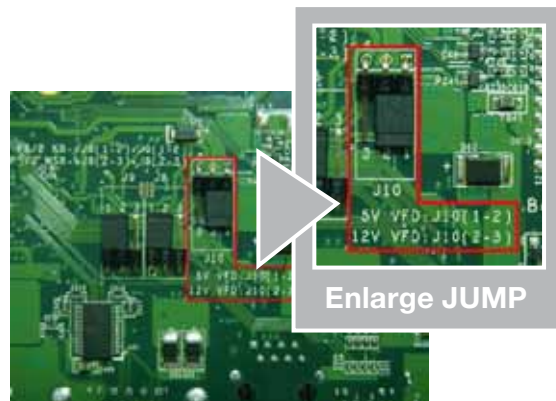
3. USB port

Pin	Signal Name	Wire Colour	Comment
1	Vcc	Red	Cable Power
2	- Data	White	Data Transfer
3	+ Data	Green	Data Transfer
4	Ground	Black	Cable Ground
Shell	Shield	-	Drain Wire

COM4 port. Warning!! COM4 (RJ45 Connector) for external VFD use only. Never use on network device. If you are using on the network device will cause the device damaged.



Pin 1: +5V / +12V
 Pin 2: DSR#
 Pin 3: GND
 Pin 4: DTR#
 Pin 5: RTS#
 Pin 6: CTS#
 Pin 7: TxD
 Pin 8: RxD



2. VGA port

Pin	I / O	Function
1	Out	Red Video
2	Out	Green Video
3	Out	Blue Video
4	In	Monitor ID 2
5	-	TTL Ground (Monitor Self Test)
6	-	Red Analogue Ground
7	-	Green Analogue Ground
8	-	Blue Analogue Ground
9	-	Key (Plugged Hole)
10	-	Sync Ground
11	In	Monitor ID 0
12	In	Monitor ID 1
13	Out	Horizontal Sync
14	Out	Vertical Sync
15	In	Monitor ID 3

4. PS/2 K/B port

Pin	Signal Name
1	Data from Device
2	Not Connected
3	Ground
4	+5V DC
5	Clock
6	Not Connected

5. LAN port

Pin	Wire Colour	Description
1	White/Orange	Transmit
2	Orange	Transmit
3	White/Green	Receive
4	Blue	Not Used
5	White/Blue	Not Used
6	Green	Receive
7	White/Brown	Not Used
8	Brown	Not Used

7. DC Jack

Pin	Signal Name
1	DC IN 19V
2	Ground

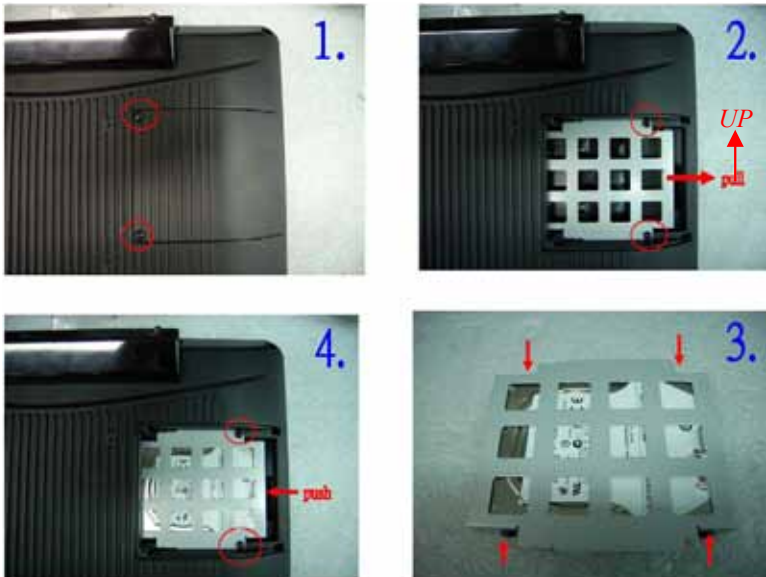
6. RJ11 port (for Cash drawer)

Pin	Signal Name	Direction
1	Frame GND	-
2	Drawer Kick-out drive signal 1	Output
3	N/C	-
4	+12V	-
5	N/C	-
6	Signal GND	-

Example DOS COMMAND for **Cash Drawer**:

1. Create the file: TEST.TXT
2. Input below **contents** in TEST.TXT
CONTEXT-"000.0"
MODE COM6:300
3. Run COMMAND under DOS mode
COPY TEST.TXT COM6

3-1. HDD



1. Unfasten the HDD cover screw*2
2. Pull out the HDD bracket
3. Fasten the screw*4
4. Place the HDD bracket back to the module

3-2. CF-Card

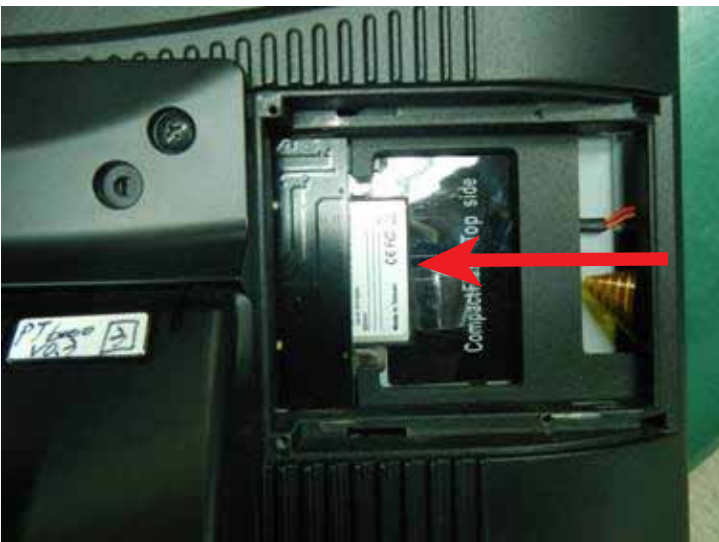
1. Please notice the notched CF Card. This side up.



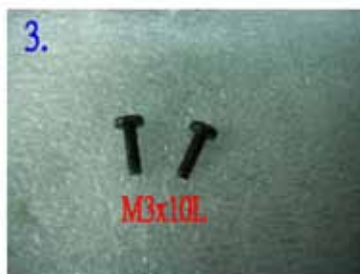
2. Before Installing CF Card.



3. After Installing CF Card.

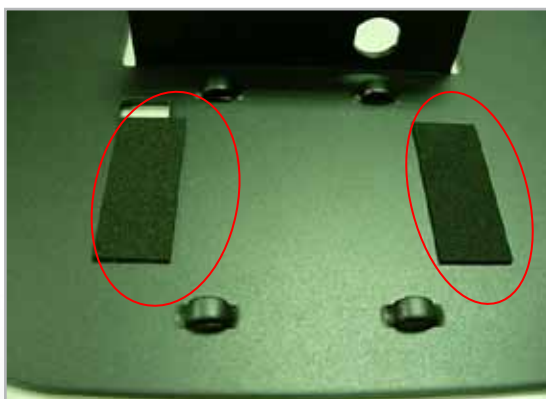


3-3. MSR

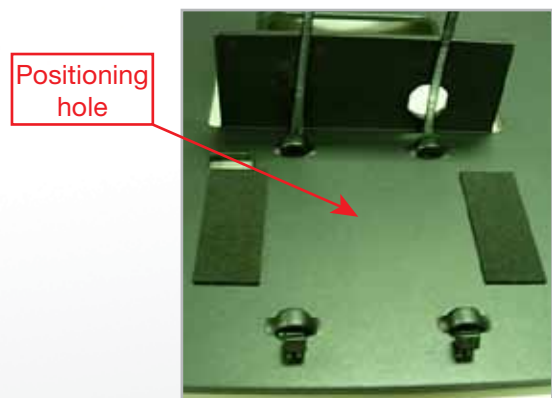


1. Open the MSR cover
2. Single MSR or 4in1MSR
3. Screw*2 M3x10L
4. Fasten the screw

3-4. UPS Battery



- (1) Paste two rubbers on the located position of the Stand Bracket.



- (2) Reeve two cable ties through the stand bracket. Place the battery pack in position and bind the cable ties tightly. Then cut the extra tail from cable ties.



(3) Reeve the cable from the battery pack through the stand bracket and click the cable lock.

3-5. cable cover



Assemble the cable cover from bottom and make sure the two latches are on the right position. Then fasten 2 screws (M3*5L).

3-6. 8"/15" 2nd Display

* Power supply must be replaced to 120W above power adapter.



(1) Remove the plastic pole cover from the stand.



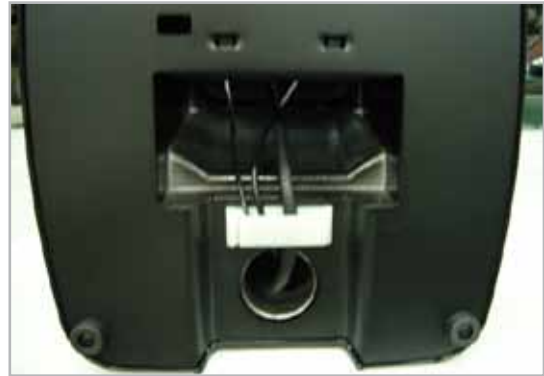
(2) Install the pole into the socket in clockwise direction.



(3) Fasten the four screws (M4*8L) to joint the VESA bracket and the rear cover.



- (4) Connect the COM port, DC cable as shown in figure (1). (Please refer to page 61 to set the COM port pin9 with 12V DC output.)
- (5) Connect the VGA cable as shown in figure (2).
- (6) Connect the audio cable as shown in figure(3).
- (7) Assemble the cable cover from bottom and make sure the two latches are on the right position, and fasten the two screws (M3*5L).
- (8) Route the cables through the opening of stand front cover and cable clip at the bottom and route the cables into the tube of pole.

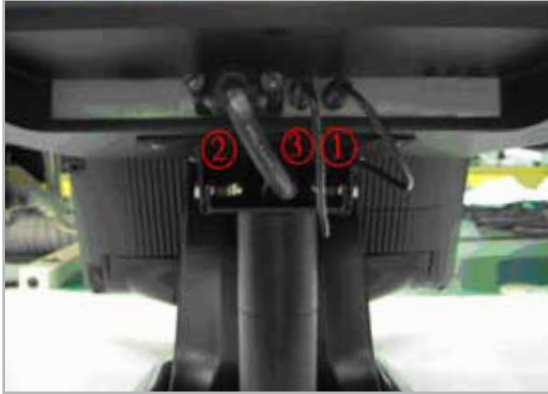


- (9) Reeve the cables out of the tube.



- (10) Mount the VESA bracket on the pole and route cables out of the tube of VESA bracket. Fasten the thumb screw to fix the VESA bracket.





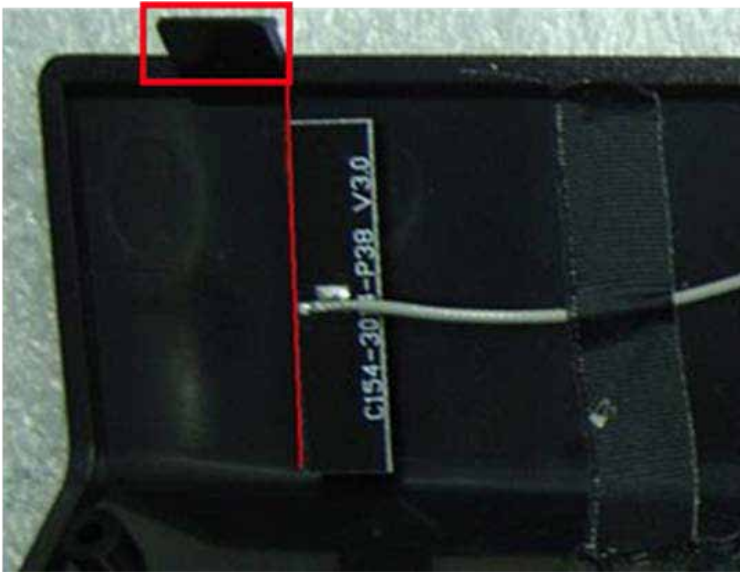
- (11) Connect the DC power cable as shown in figure (1).
- (12) Connect the VGA cable as shown in figure (2).
- (13) Connect the Audio cable as shown in figure (3).



- (14) Put the cable cover on the hinge of VESA bracket.

3-7 Wi-Fi

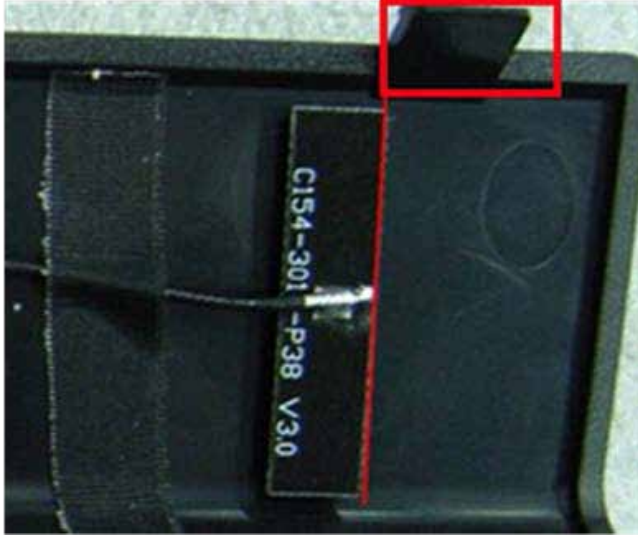
1. Fasten antenna (Part No.: 35D510530-000B) to the left side of VFD cover. Antenna is vertical to the right of the left snap(as the red frame) as shown in the figure below



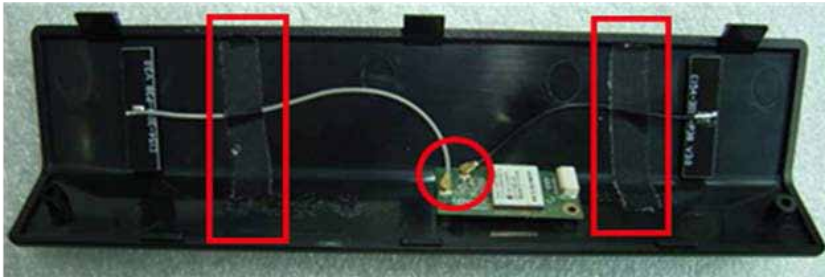
2. After fastening the Wi-Fi Module to the Rubber (Part No.: 78D200655-000T), fix this on the VFD cover. The left side of Wi-Fi module should align the interior cover as the position of the red line. The right side of Wi-Fi module should align another side as the red circle.



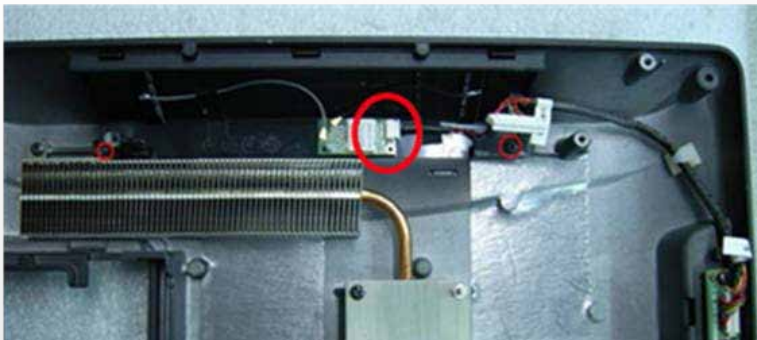
3. Fasten antenna (Part No.: 35D510530-000B) to the right side of VFD cover. Antenna is vertical to the left snap (as the red frame) as shown in the figure below.



4. Fasten antenna cable connector to Wi-Fi module terminal. Then fasten antenna cable to the cover by adhesive tapes



5. Fasten the VFD cover to the rear lid. Push the snap of the top VFD cover into the slot of rear lid and fasten the bottom cover with 2 screws (Part No.: 64D430088-000T). Then connect Wi-Fi /MSR cable (Part No.:35D510522-000B) to Wi-Fi module



3-8. 1D / 2D / iButton with RFID Module



- (1) Cable installation.
For iButton with RFID module; For 2D barcode scanner with RFID module:
Connect the cable as shown.



- (3) Fix the screws as shown.



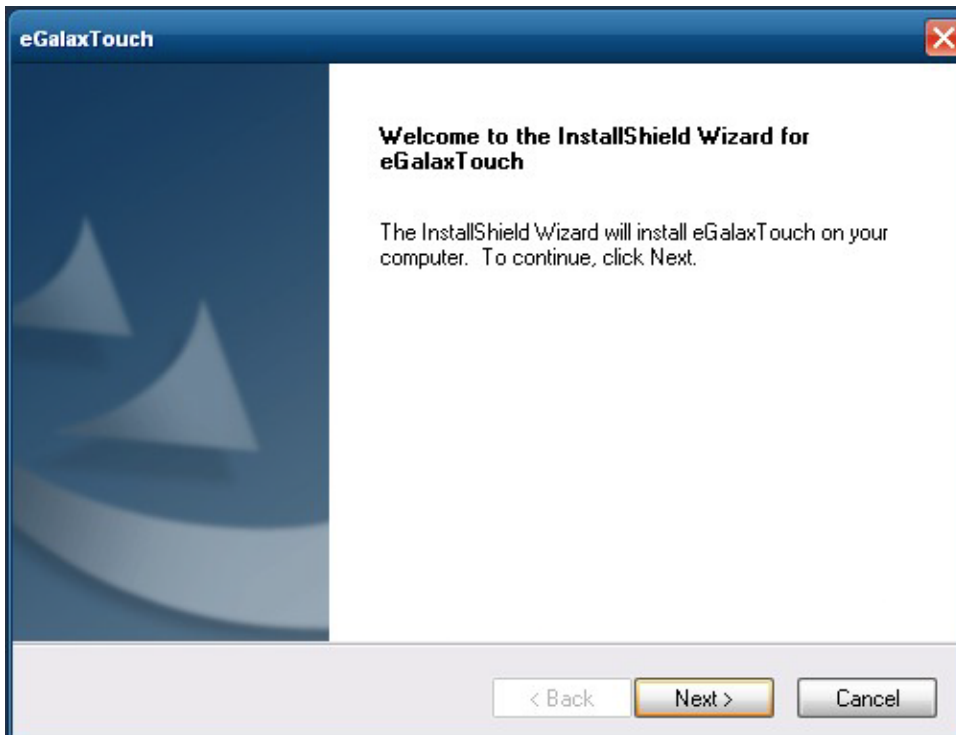
- (2) For 1D barcode scanner with RFID module: Connect the cable as shown.

* Before COM port cable connection, please setup COM port PIN9 with 5V DC output from BIOS setup.

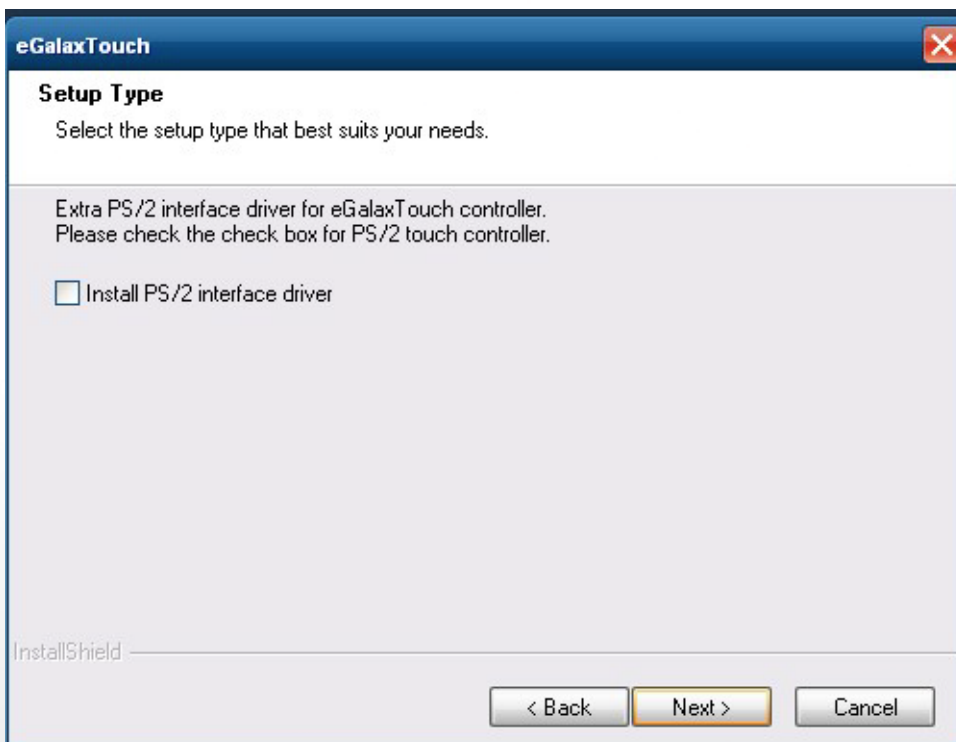
Please refer to page 61, **Advanced Chipset Features** / COM port PIN9 setting.

4-1. Resistive Type Touch Panel

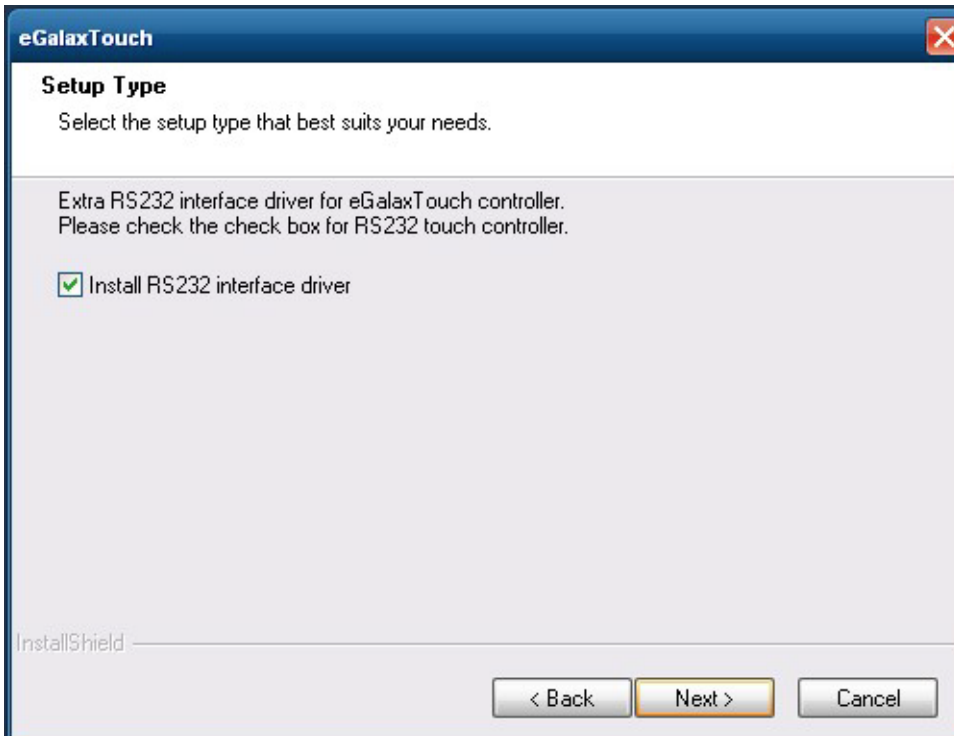
1. Click "Next"



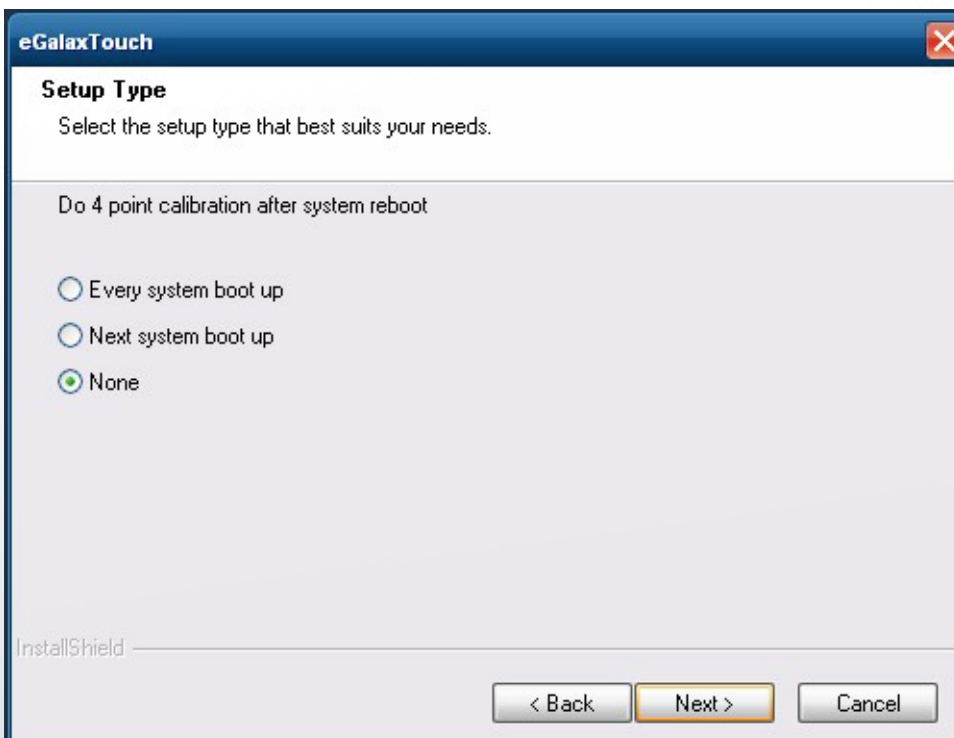
2. Click "Next"



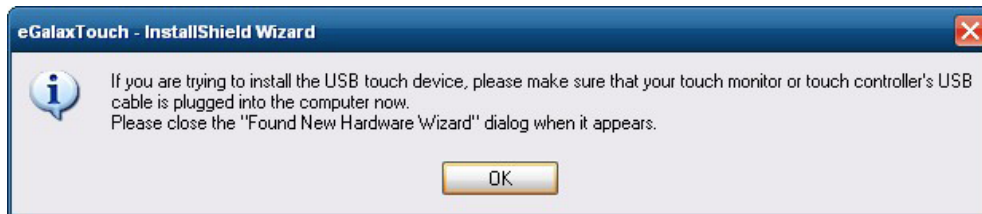
3. Click "Next"



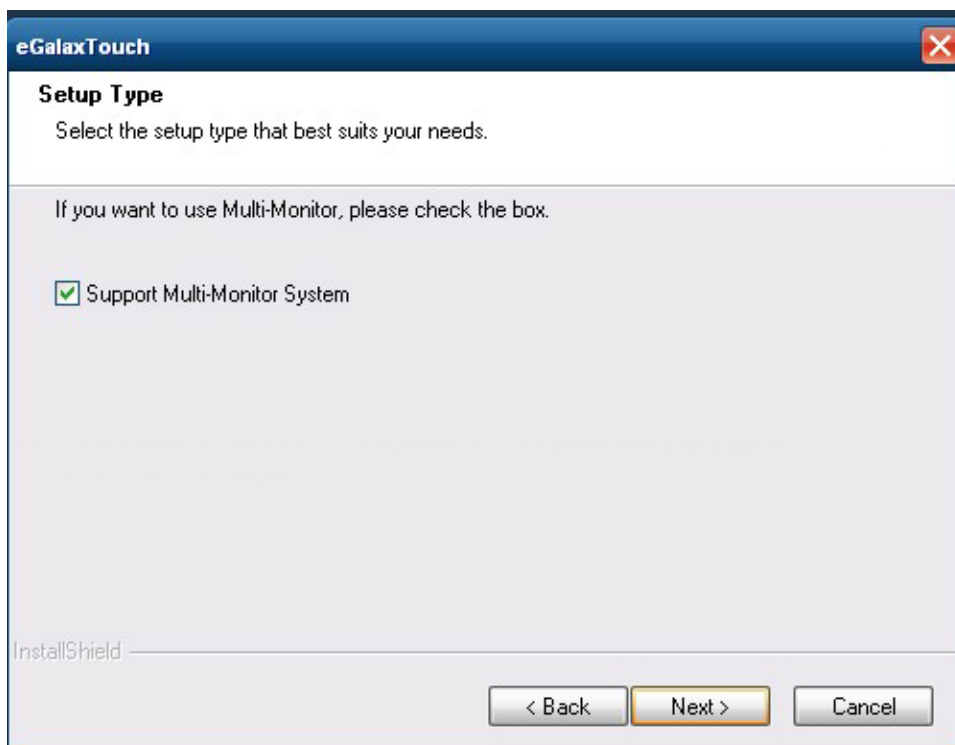
4. Select "None", Click "Next".



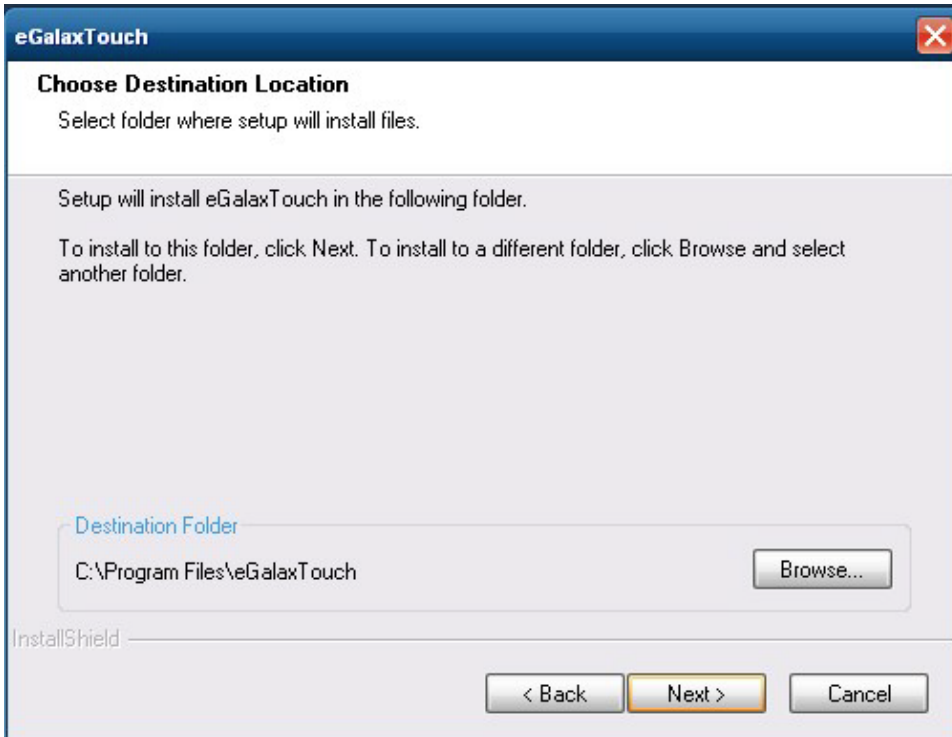
5. Click “OK”



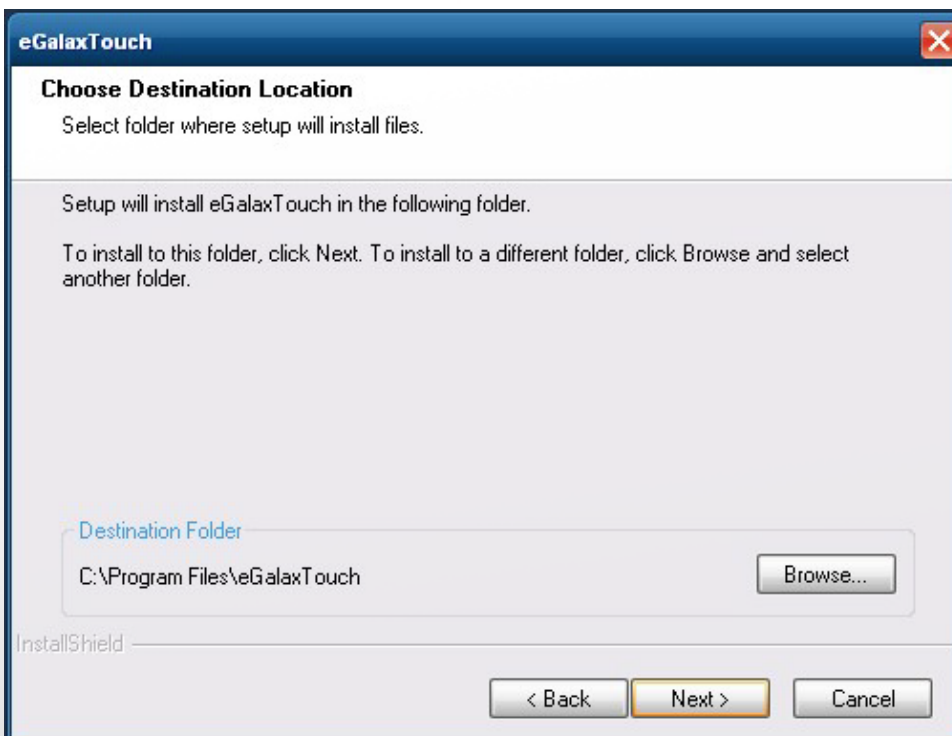
6. Select “Support Multi-Monitor System”, Click “Next”.



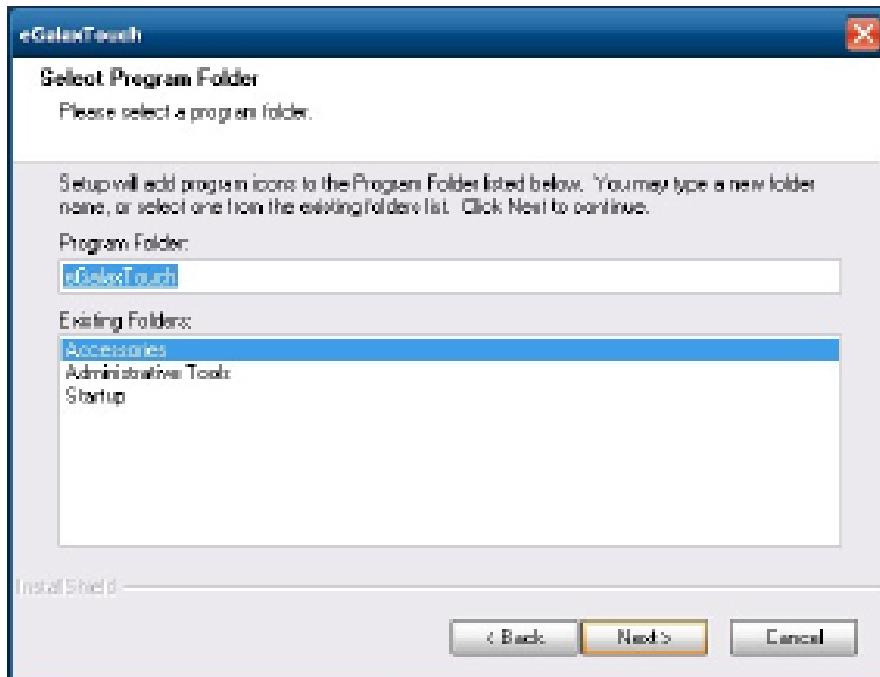
7. Click "Next".



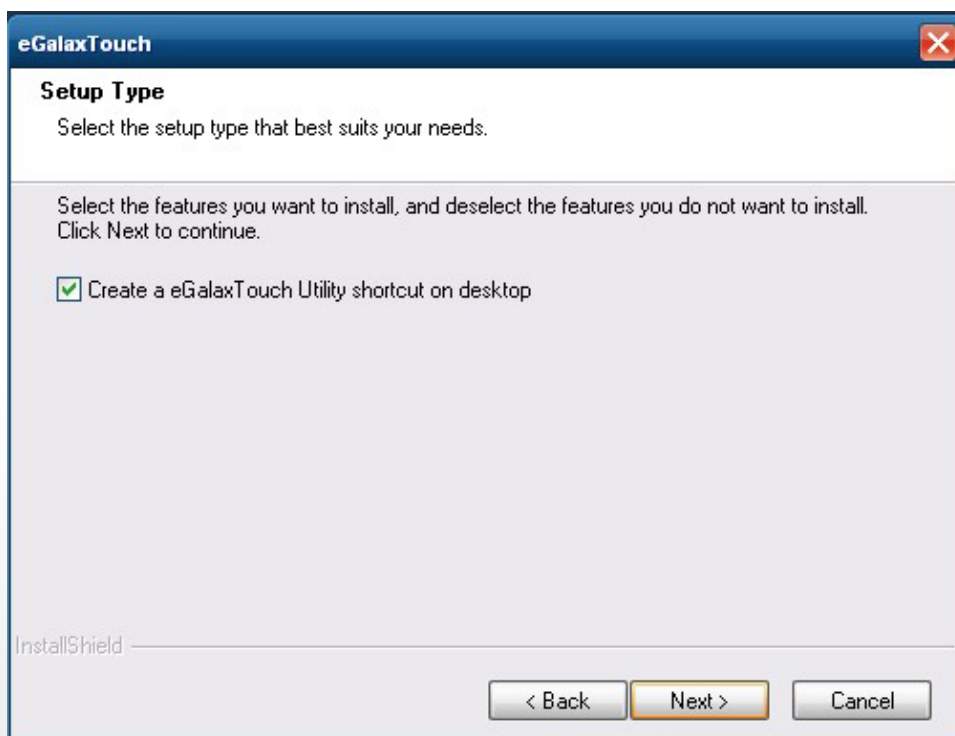
8. Click "Next".

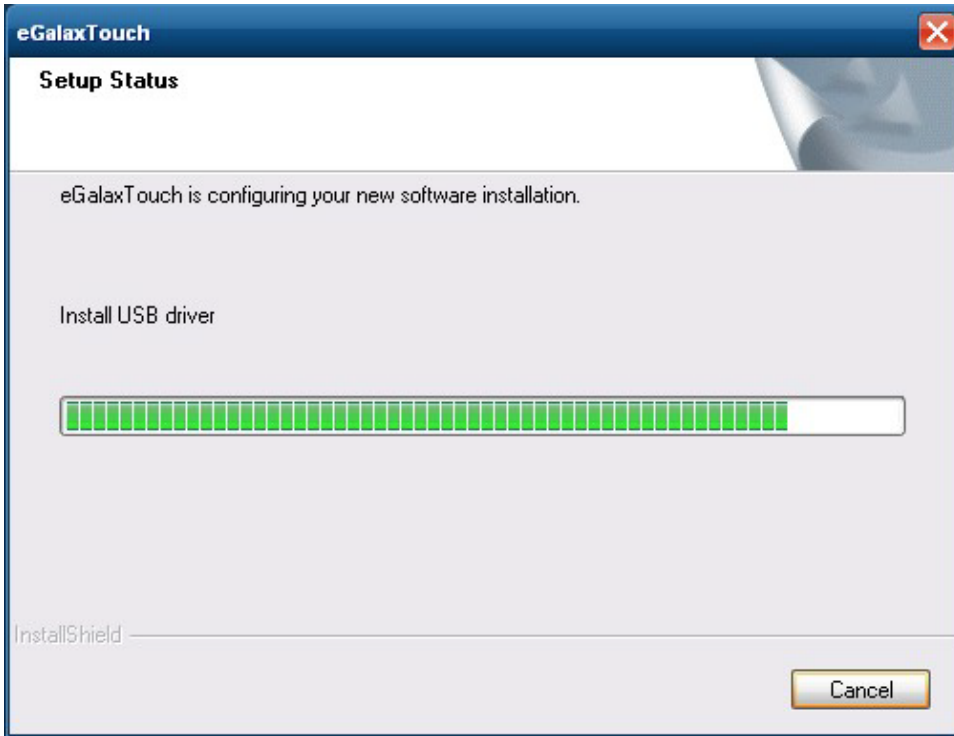


9 Click “Next”

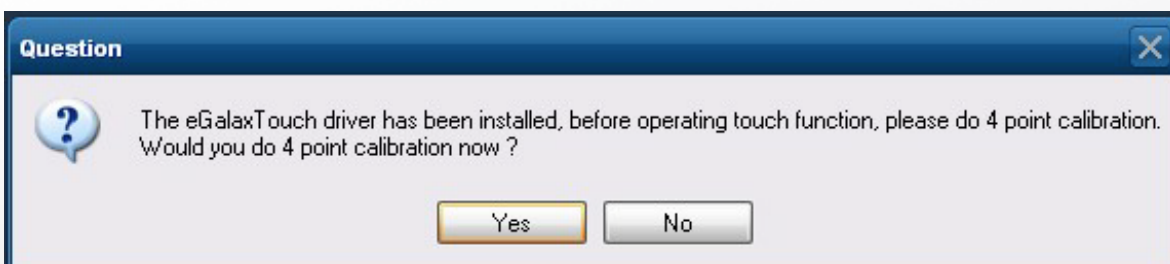


10. Select “Create a eGalaxTouch Utility shortcut on desktop”, Click “Next”.

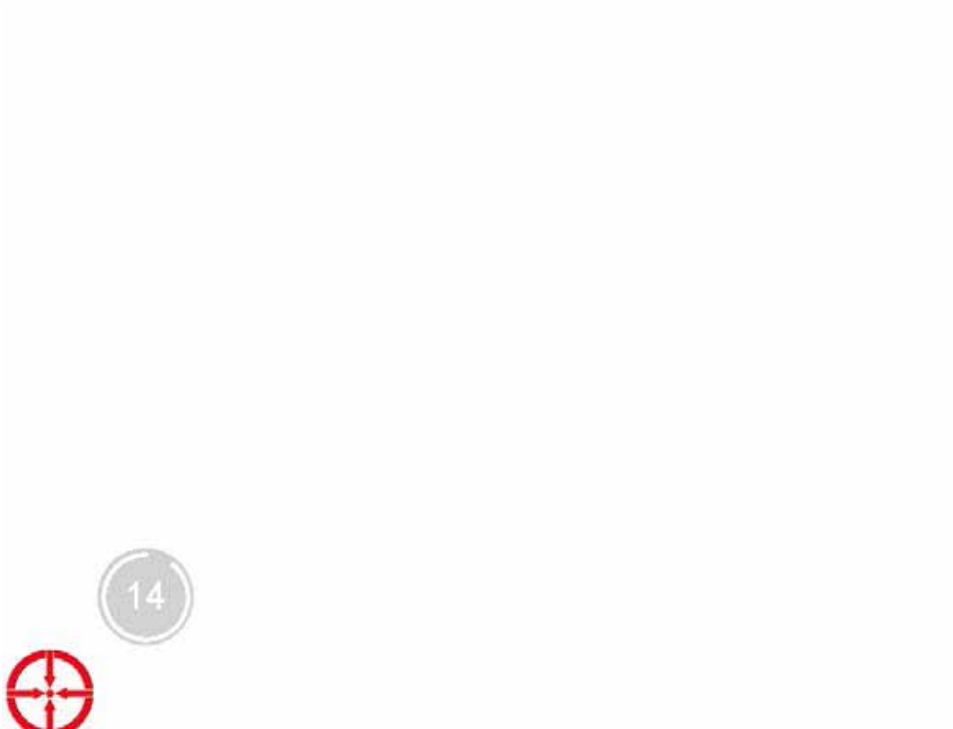




11. Would you do 4 point calibration now? Click "Yes".



12. Do 4 points alignment to match display



13. Calibration utility



4-2. MagStripe Card Reader Configuration Utility

The MagStripe Card Reader Configuration Utility is used to set up the output format of HID MSR .

Installation

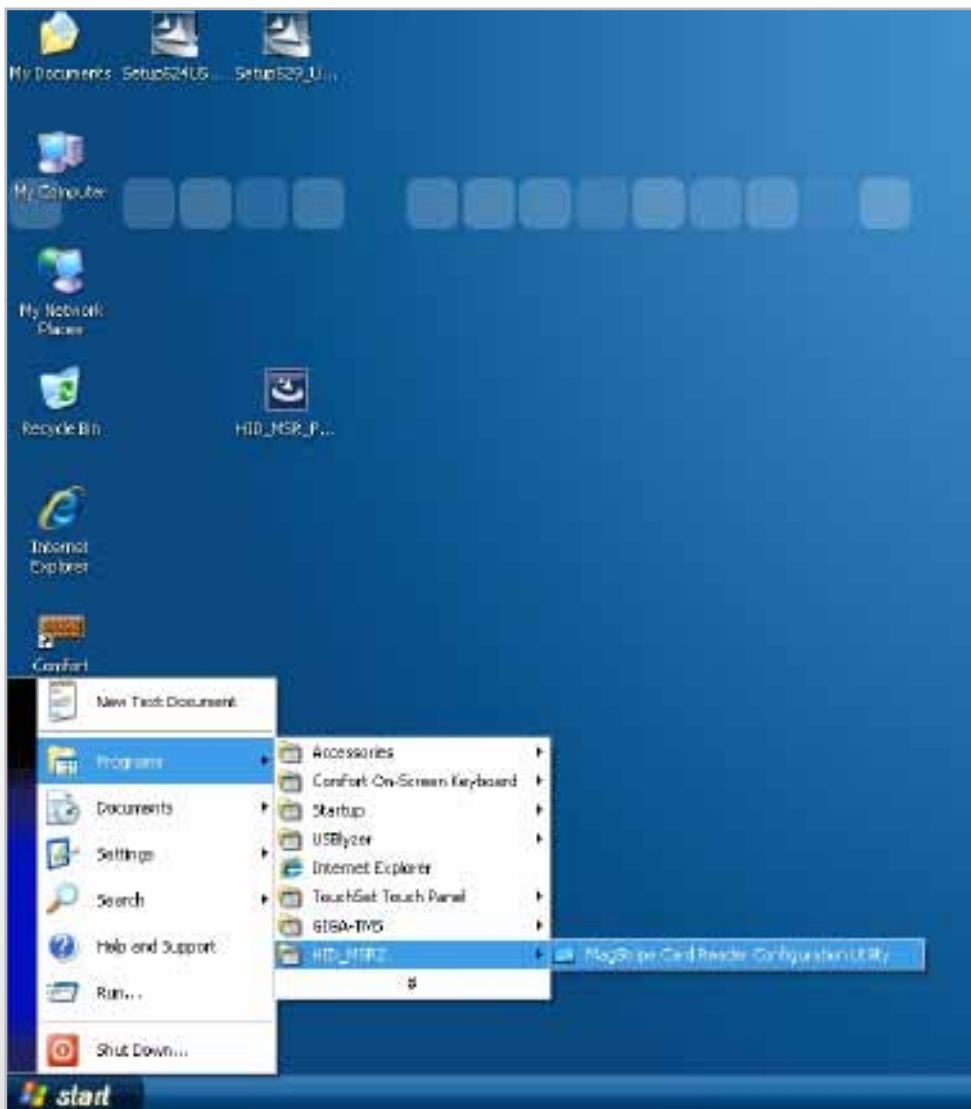
Below steps guide you how to install the Utility program.

- 1 Insert the setup CD
- 2 Run the HID_MSR_PSW00003_V2_0_0.exe setup file that is located in the Software folder of CD.
- 3 Follow the wizard to complete the installation.

Launching Program

Below steps guide you how to load the Utility program.

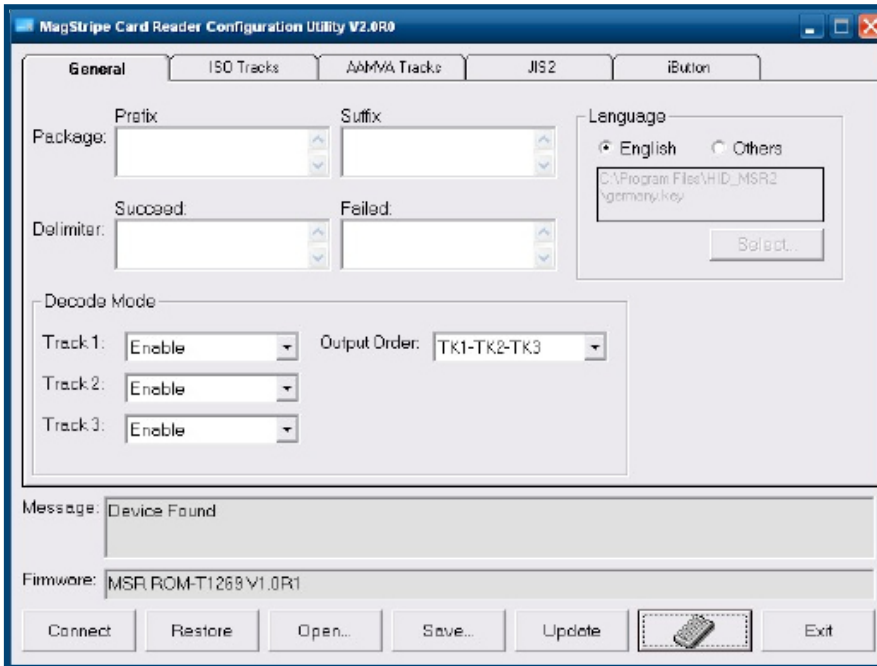
- 1 From Start/Programs, click HID_MSR2 folder
- 2 Click MagStripe Card Reader Configuration Utility to launch the program.



- 1 The utility program will detect the connected reader. If detected, all the input text boxes will be enabled.
- 2 If the reader has not been connected to PC yet, please connect the reader and then click Refresh to get connected.

Configuration

Below is the main window of Utility program.



For the settings, there are:

- 1 Language: The language defines the code positions of the keyboard. Each language should use its own settings. Wrong language selected will cause the wrong character displayed.
- 2 Prefix/Suffix: Defines the data string which you would like to append in front or end of the MSR data string.
- 3 Error Message: Indicates which track number cause the error.
- 4 Delimiter: Indicates the swipe result.
- 5 ISO: Define start and end sentinel character.
- 6 Decode Mode: Determines the way of outputting the three tracks data.

Shown below is the data structure of the output string for MSR.

PP PR1 SS1 TK1 ES1 SU1 PR2 SS2 TK2 ES2 SU2 PR3 SS3 TK3 ES3 SU3 SU DM

- | | |
|---|--|
| 1 PP: Prefix for package. | 1 SU2 : Suffix for track 2. |
| 2 PR1: Prefix for track 1. | 2 PR3: Prefix for track 3. |
| 3 SS1: Start sentinel for track 1. | 3 SS3: Start sentinel for track 3. |
| 4 TK1: Data for track 1, if error happens, using Error Message instead. | 4 TK3: Data for track 3, if error happens, using Error Message instead.. |
| 5 ES1: End sentinel for track 1. | 5 ES3: End sentinel for track 3. |
| 6 SU1: Suffix for track 1. | 6 SU3: Suffix for track 3. |
| 7 PR2: Prefix for track 2. | 7 SU: Suffix for package. |
| 8 SS2: Start sentinel for track 2. | 8 DM: Delimiter for the swipe result. |
| 9 TK2: Data for track 2, if error happens, using Error Message instead. | |
| 10 ES2: End sentinel for track 2. | |

Prefix/Suffix

In default, the prefix and suffix settings are all keep blank. There are 4 kinds of prefix and suffix to be defined, which are:

- 1 Package: For the prefix string, it is appended in the front of the whole MSR data. For the suffix, it is appended in the end of the whole MSR data. In most case, the suffix for package is always to be the "Enter" or "Tab" character. The max data length of the prefix and suffix for the package can be up to 127.
- 2 TK1: For the prefix string, it is appended in the front of the start sentinel of track 2. For the suffix, it is appended in the end of the end sentinel of track 2. The max data length of the prefix and suffix for the TK1 can be up to 127.
- 3 TK2: For the prefix string, it is appended in the front of the start sentinel of track 2. For the suffix, it is appended in the end of the end sentinel of track 2. The max data length of the prefix and suffix for the TK1 can be up to 127.
- 4 TK3: For the prefix string, it is appended in the front of the start sentinel of track 3. For the suffix, it is appended in the end of the end sentinel of track 3. The max data length of the prefix and suffix for the TK1 can be up to 127.

ISO

This group defines the start and end sentinel for each track. The sentinel is always used to extract the track data from the whole MSR data string. The data length for each sentinel is fixed to one character. Because there is ISO standard that defining the start and end sentinel for the three tracks. For the compatible reason, please do not modify the default value if possible.

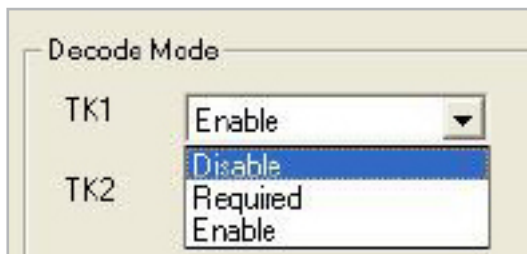
Decode Mode

For this group, it contains two kinds of settings, which are:

- 1 Track Data Filtering: Determine which track to be, not to be output or needed to be output.
- 2 Switch Output Order: Change the output order of track 1 ~ 3.

Track Data Filtering

Shown below is the filter setting for track 1. This provides a fool-proofing method in case of receiving unwanted or uncompleted track data.



These three filter settings are:

- 1 Enable: If selected, the data of specified track will be packaged in the MSR data string. If the specified track data is not decoded, it will leave blank in the MSR data string.
- 2 Required: If selected, which means the output MSR data string must contain the specified track data. If the specified track data is not decoded, even MSR data string contains other track data, it will still not to be output.
- 3 Disable: If selected, the data of specified track will not be packaged in the MSR data string. No matter it is decoded or not.

Switch Output Order

Show below is the selection of the three track data output order (sequence). The default order is Track 1–Track 2–Track 3.



There 6 orders allow to be selected. Please select one to fit your application needs.

Update Settings

Once complete the settings, click Update to update the settings to connected HID MSR reader.

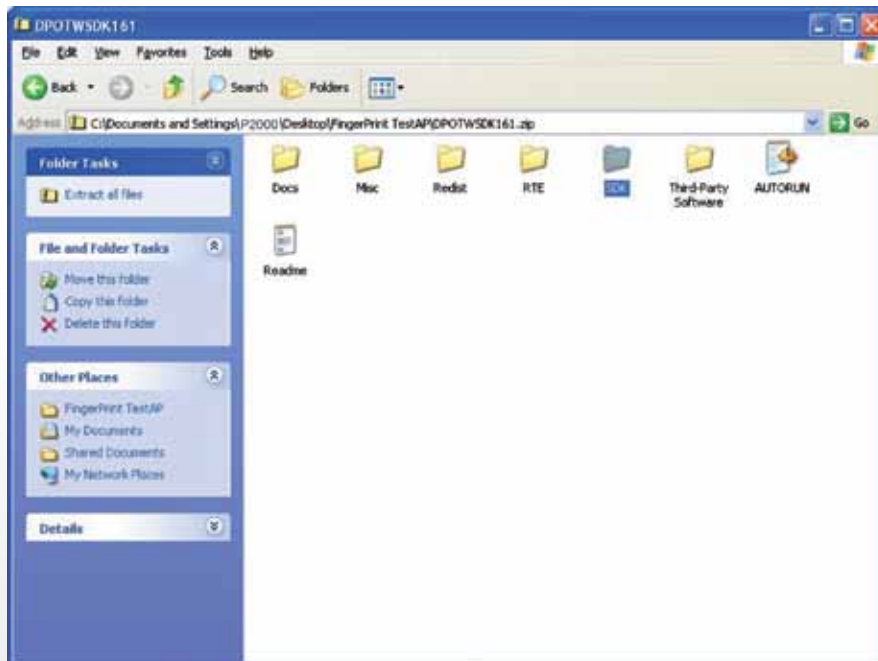
Save Settings To save the settings to a file, click Save; specify the file name and location to be saved.
Open Settings To load pre-saved settings, click Open, specify the settings file, and then click OK to load into program.
Restore MSR Reader Settings To load restore settings of connected MSR reader, click Restore
Restore ES2: End sentinel for trac

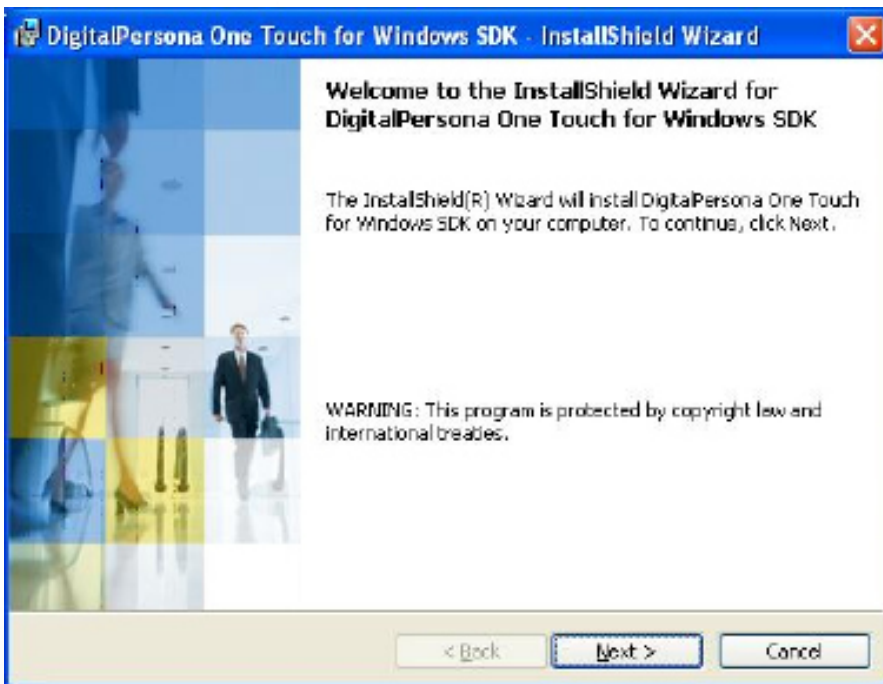
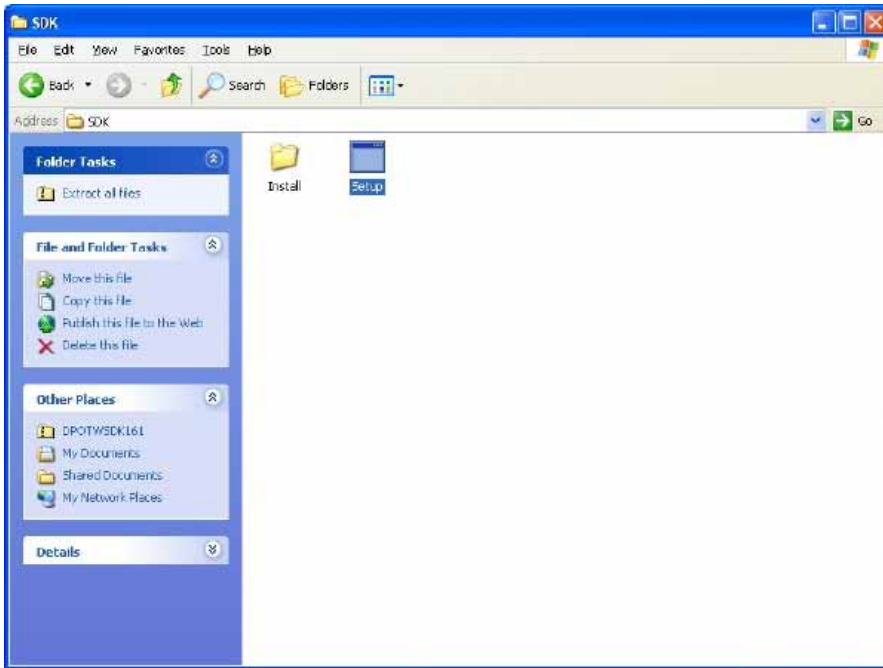
4-3. Fingerprint Reader

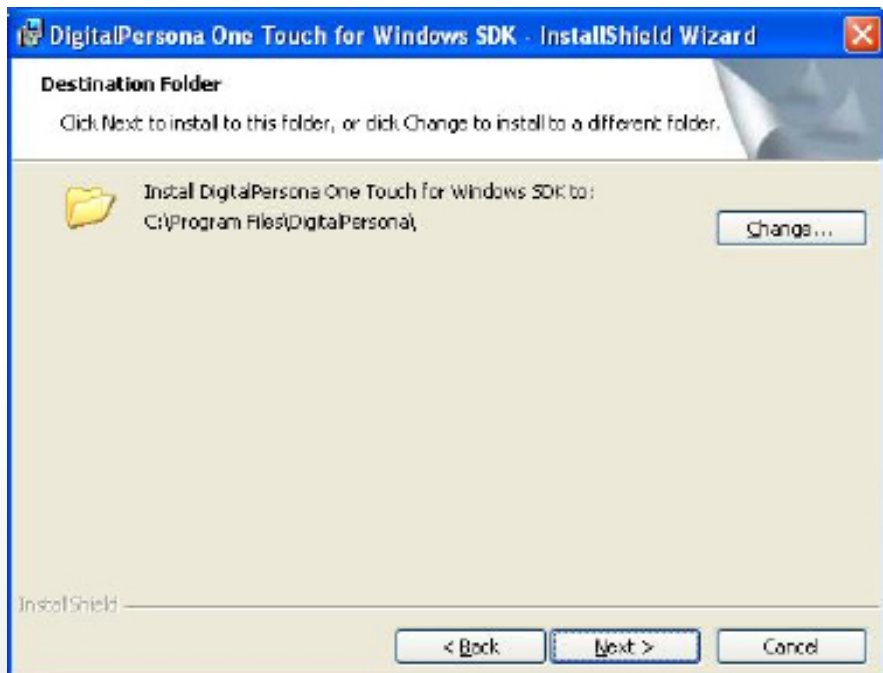
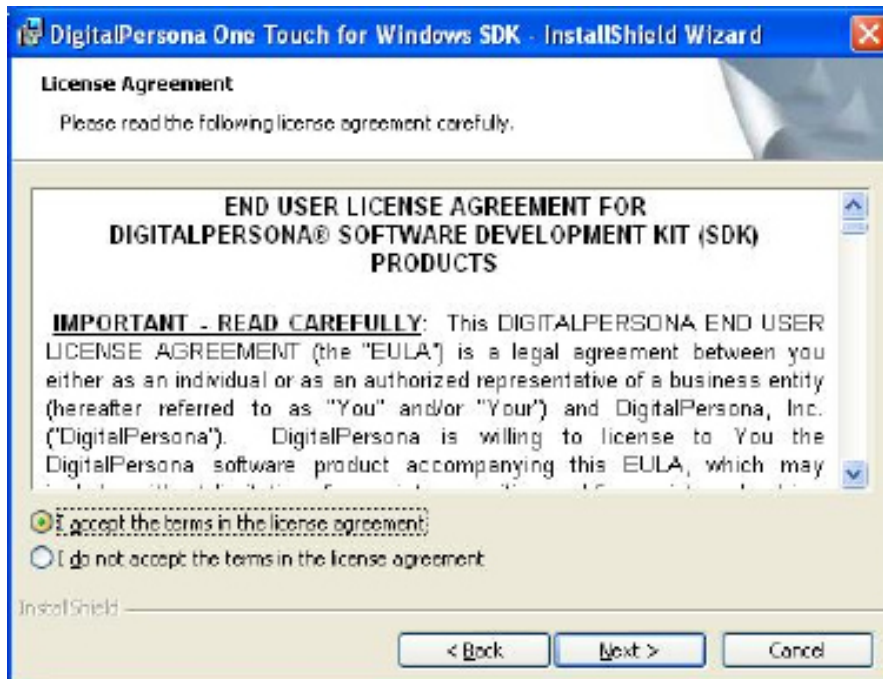
Step 1 Check Fingerprint reader be detected by “Device manager”

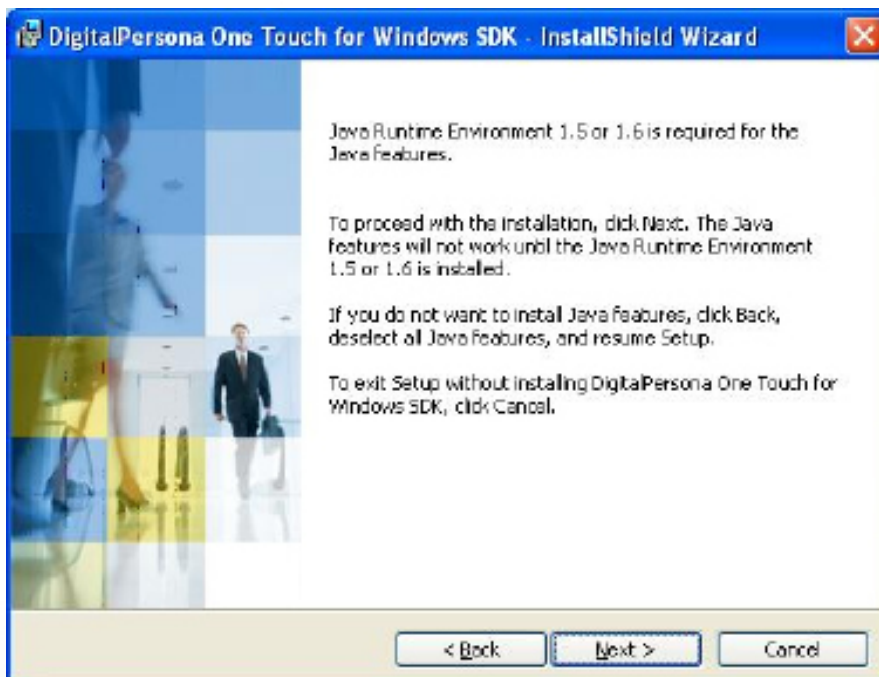
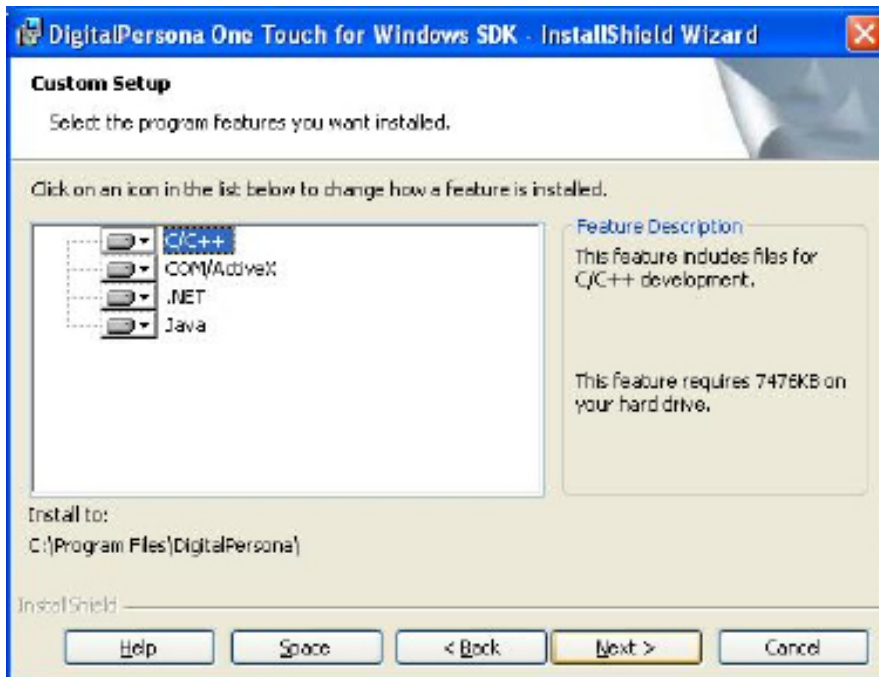


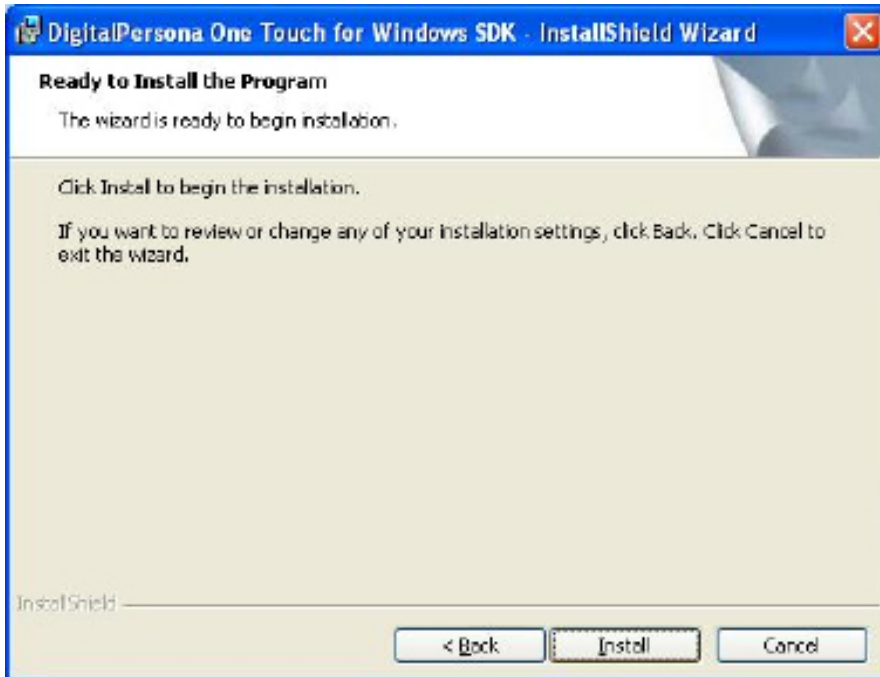
Step 2 Unzip and run **Setup.exe** from the following folder.



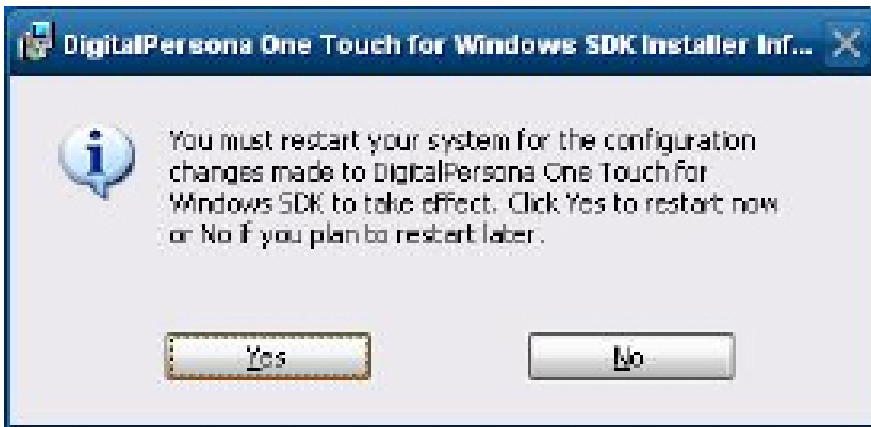




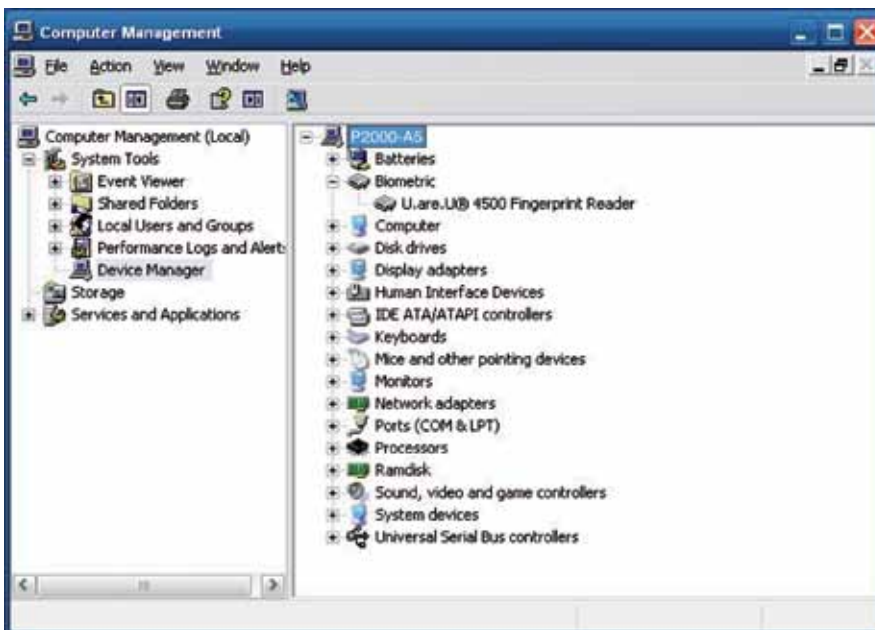




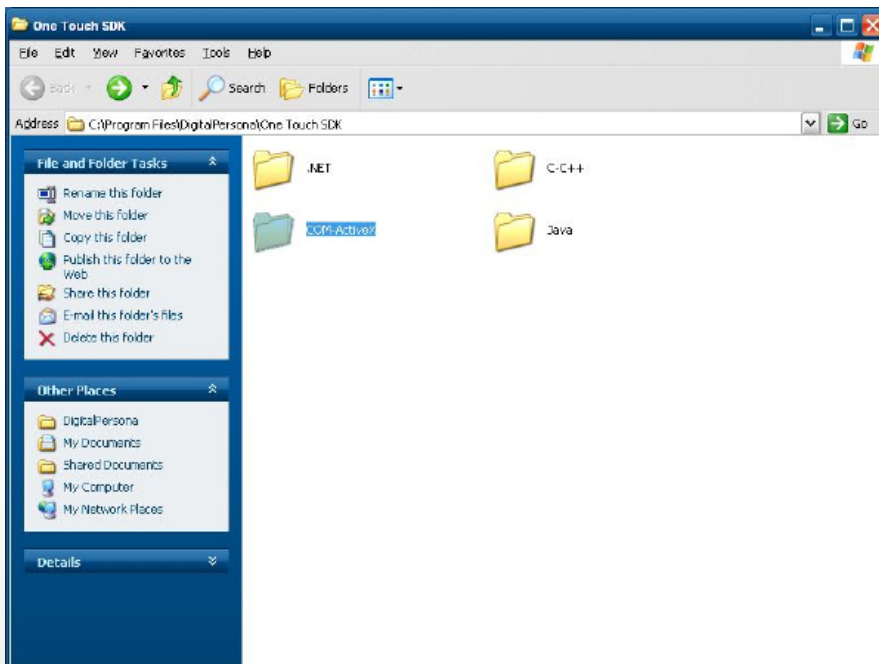
Step 3 Restart system

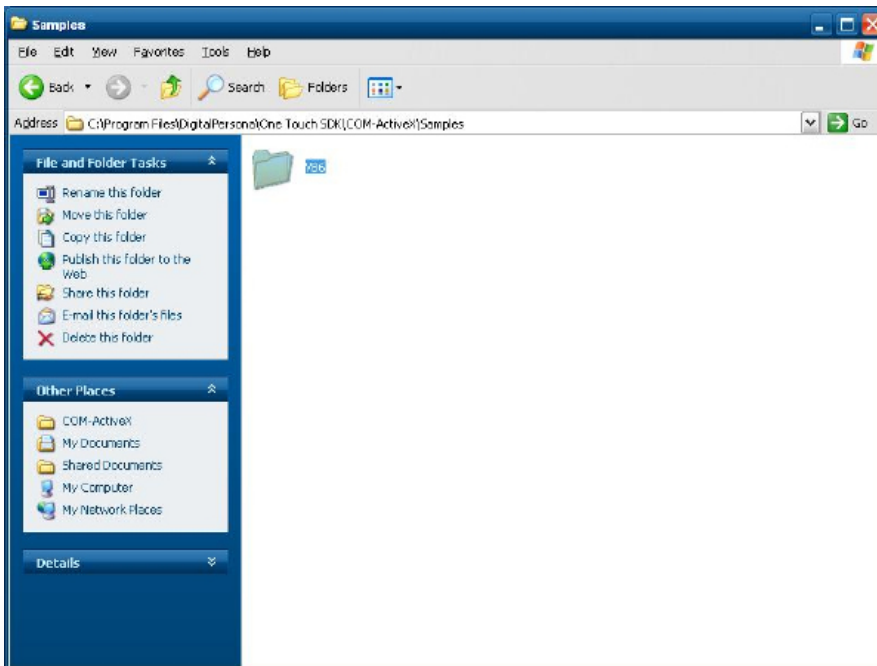
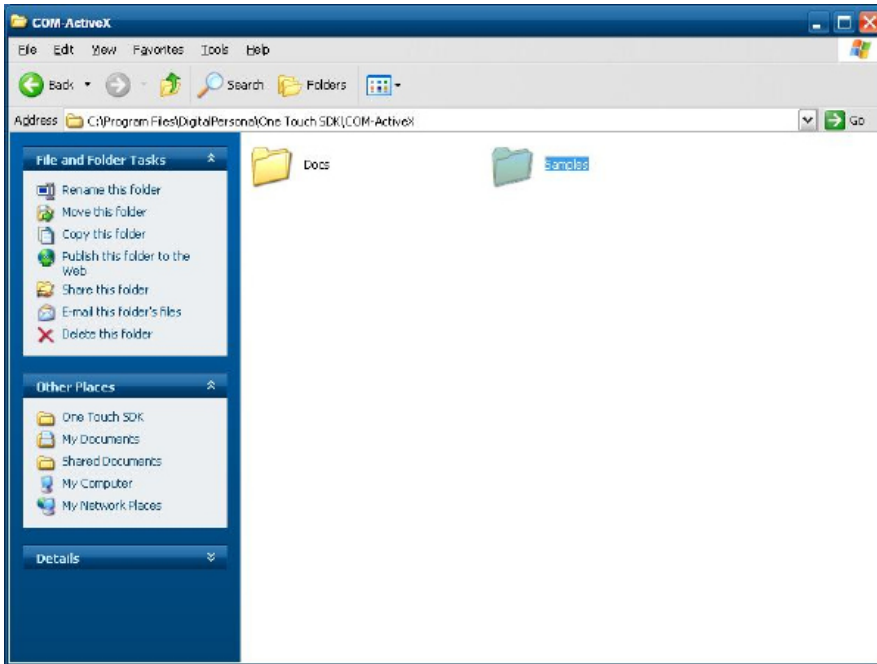


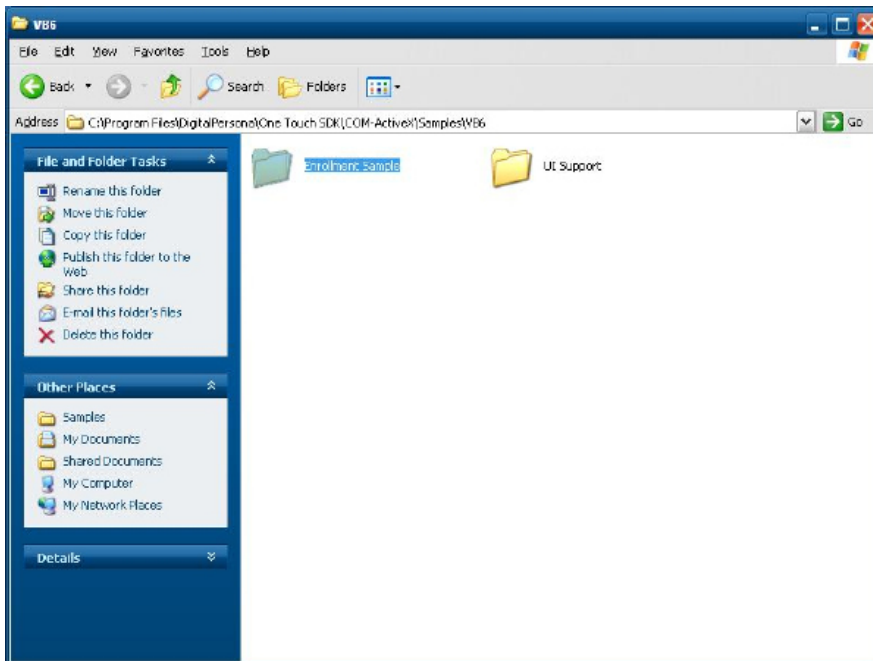
Step 4 Check Fingerprint reader in device without any extraordinary.



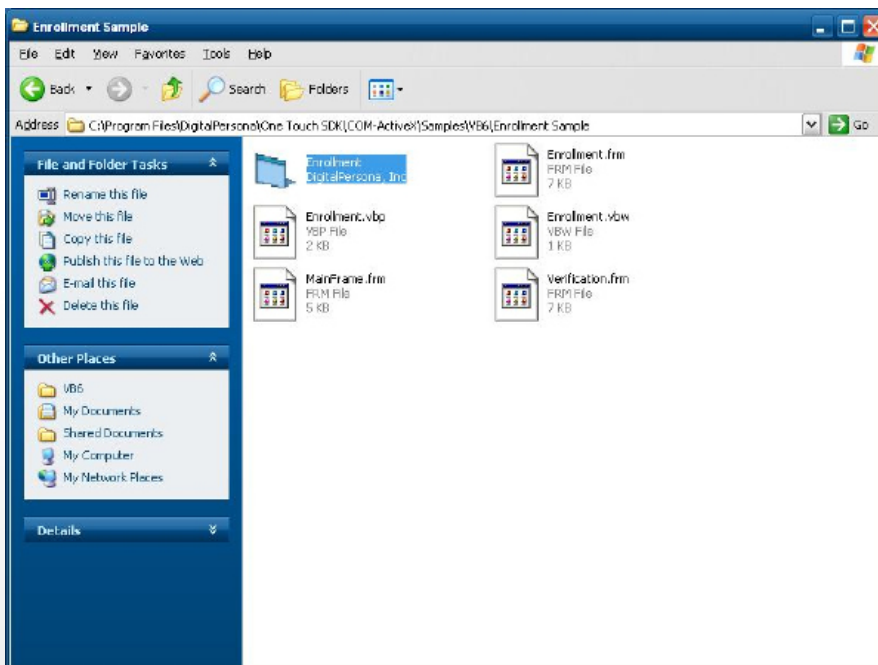
Step 5 Launch Fingerprint reader from start menu



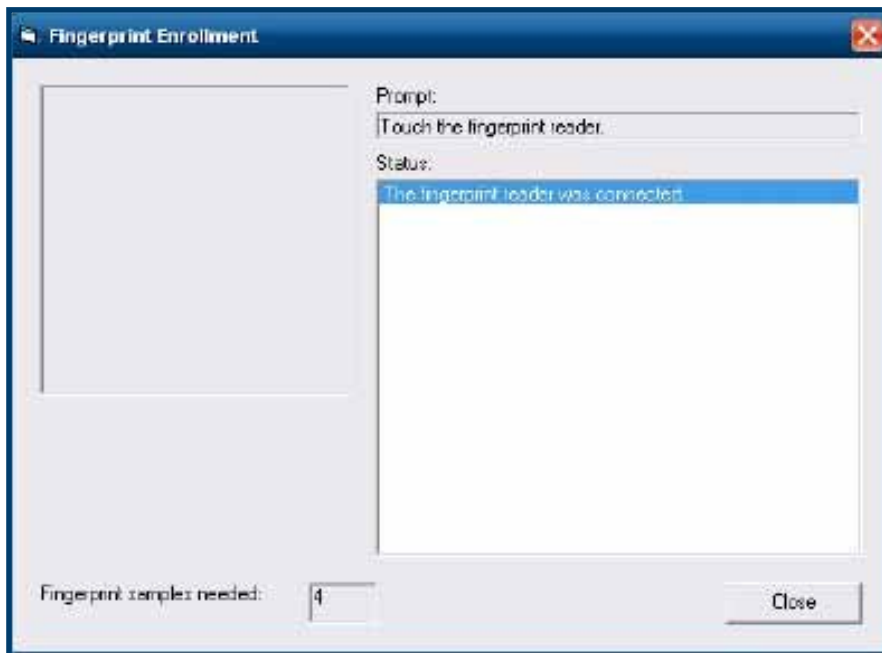
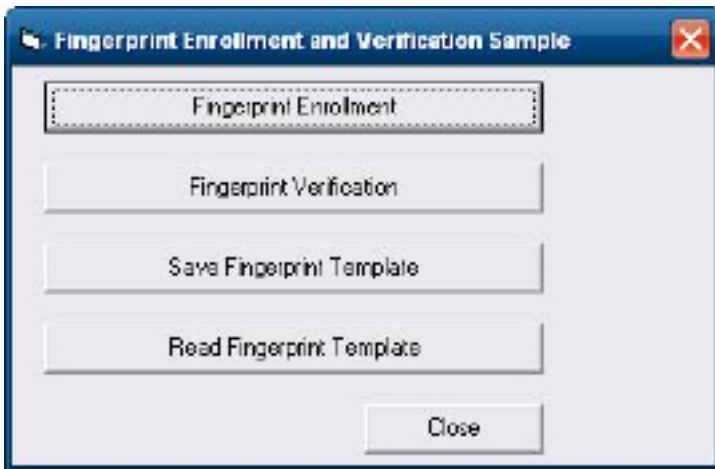




Step 6 Enroll the fingerprint by the “enrollment”



Step 7 Select "Fingerprint Enrollment"



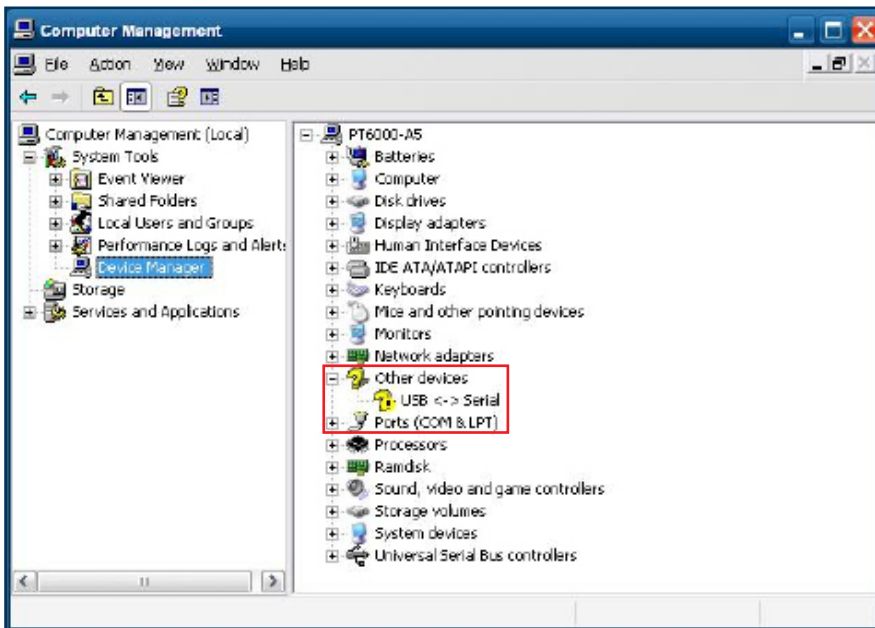
4-4. RFID

1. Install (Operating System: Microsoft Windows POSReady 2009)

1.2.2 1.1 Check the Device Manager to verify the status of RFID reader.

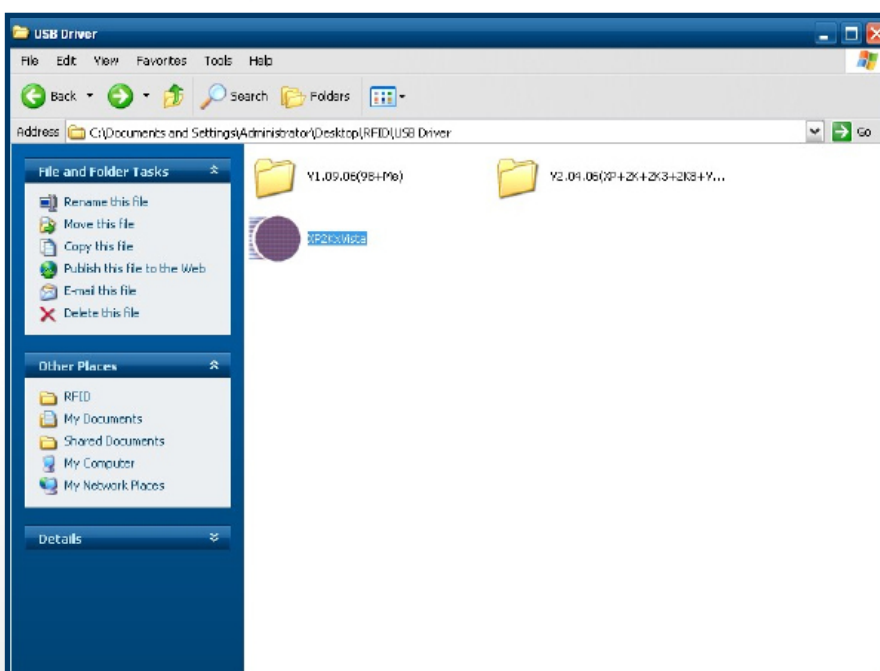
Computer Management -> Device Manager -> Other devices

(The device will show a question mark if the installation is not done properly.)

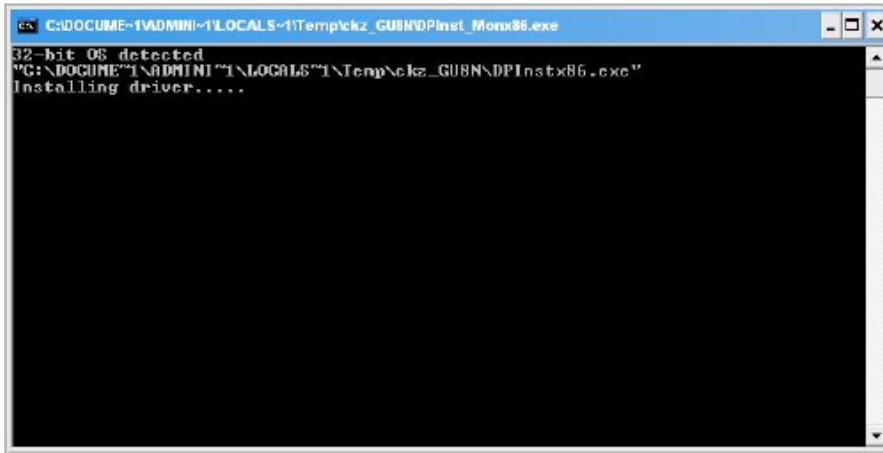


1.2 Install RFID driver file name: XP2KxVista.exe

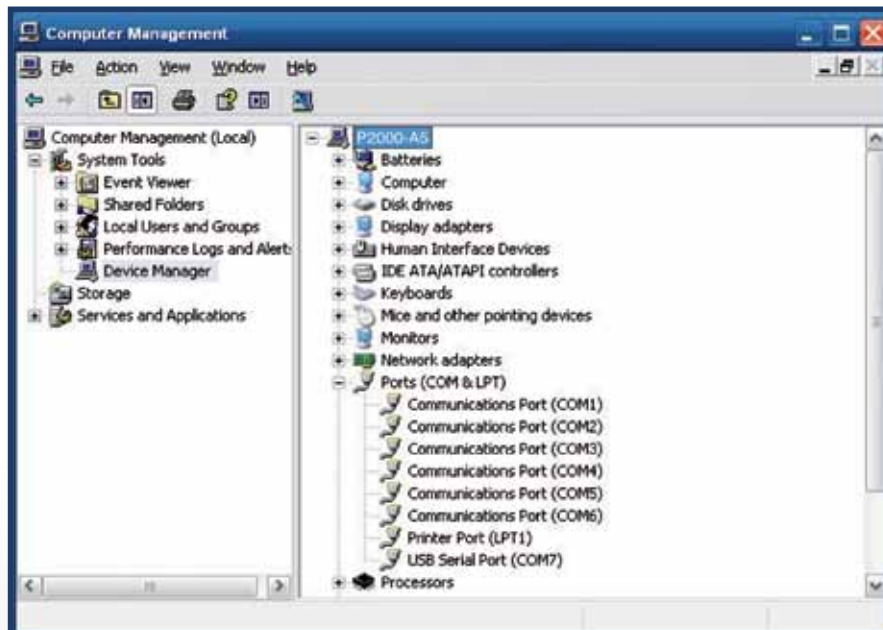
2-1 Path:\USB Driver\XP2KxVista.exe



1.2.1 After clicking Next, A pop up console window appears as below.



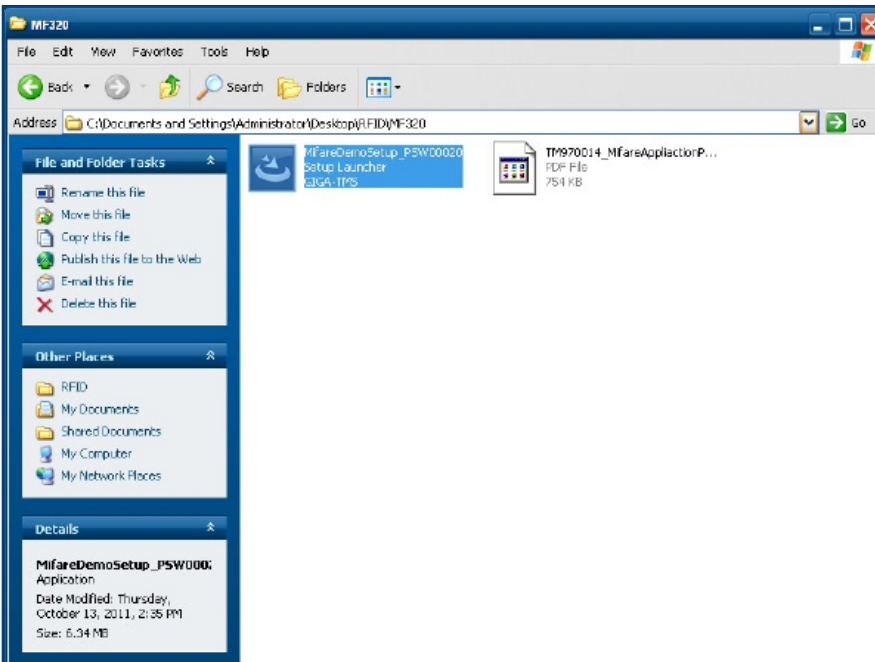
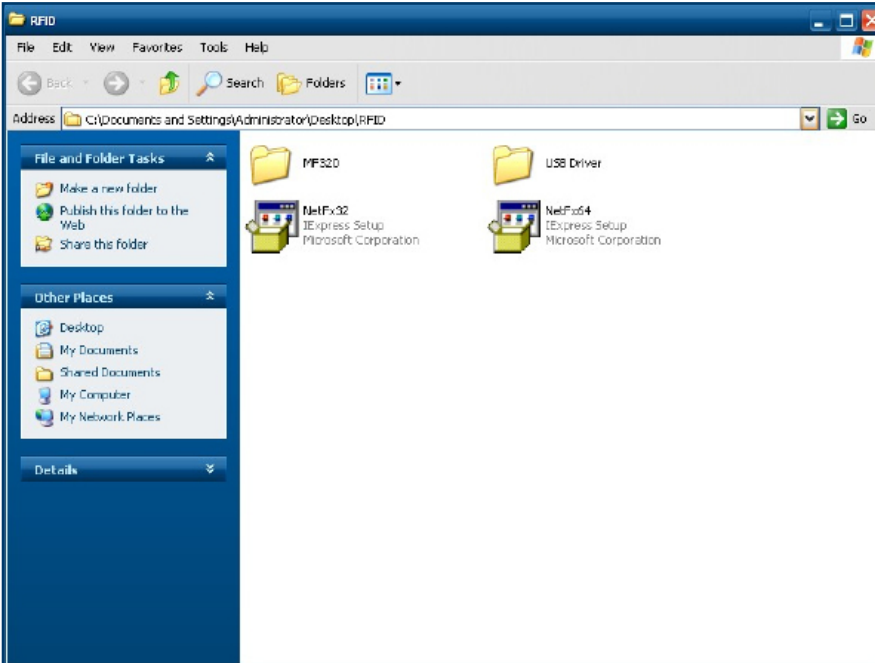
1.2.2 Check the Device Manager to verify the status of RFID reader.
Computer Management -> Device Manager -> Ports (COM & LPT)



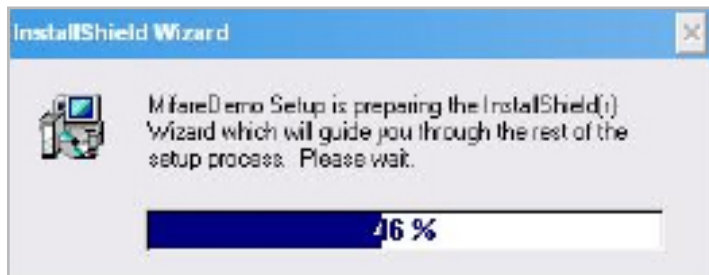
1.3 install RFID utility

MifareDemoSetup_PSW00020.exe

3-1 Path:\MF320\MifareDemoSetup_PSW00020.exe



1.3.1 InstallShield Wizard will be activated.



1.3.2 Click "Next"



1.3.3 Click “Next”



1.3.4 Click “Giga-TMS” & “Next”



1.3.5 Click “Next”



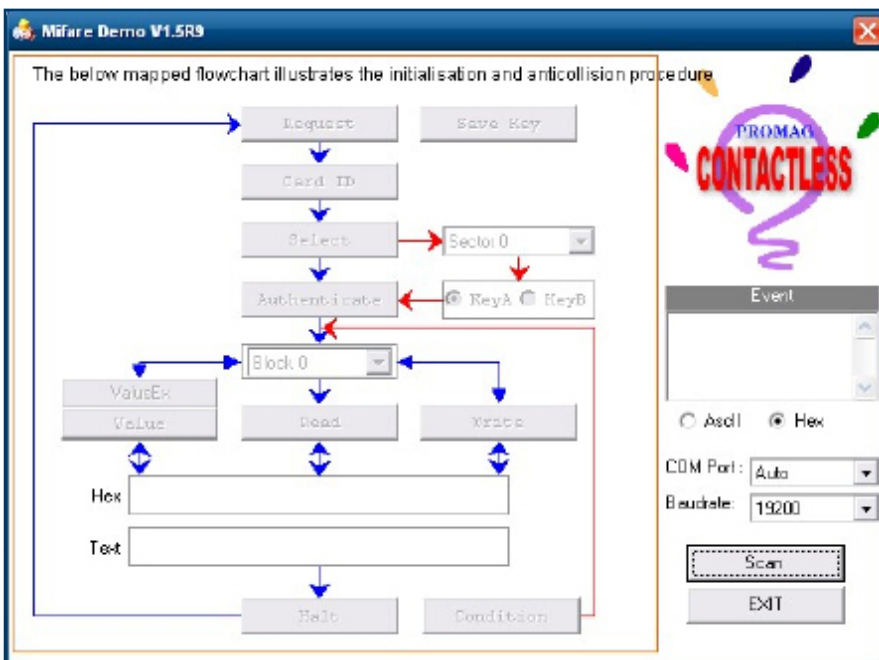
1.3.6 Click “Next”



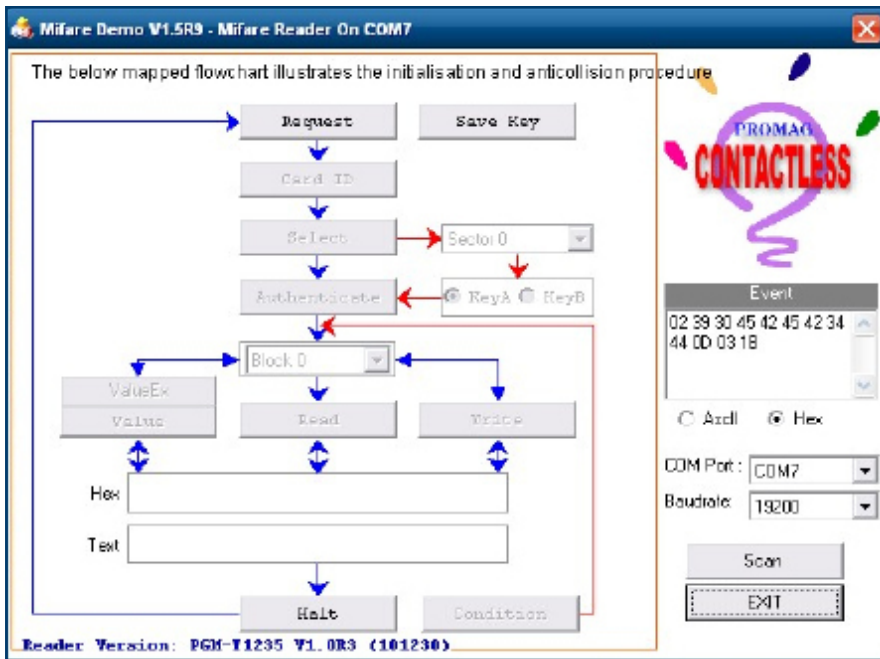
2 Run RFID demo program. Start -> All Programs -> GIGA-TMS -> Mifare Demo



2-1 Run "Auto Scan" Demo AP will detect the RFID reader automatically.
Or select the RFID COM port



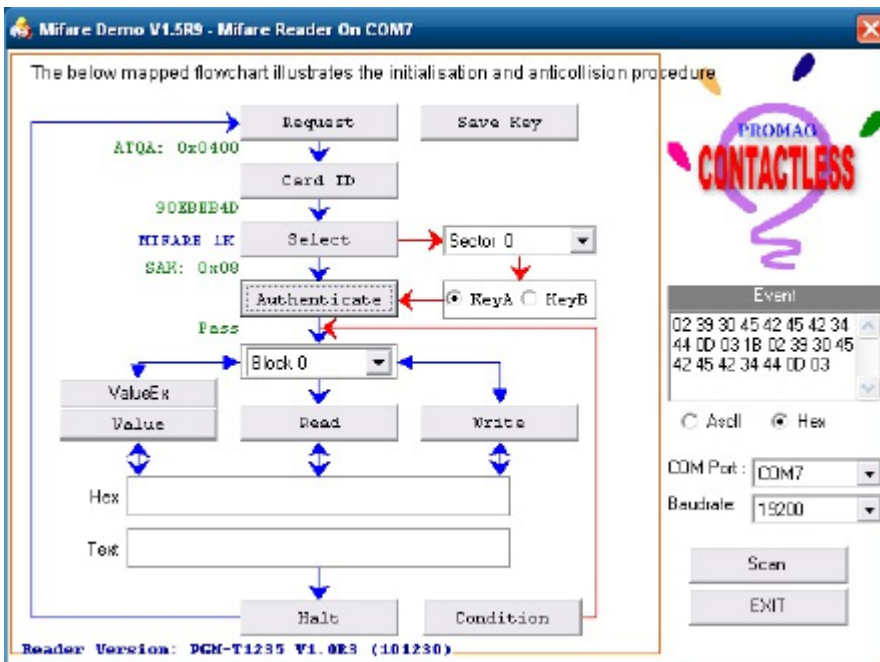
2-2 After finishing the AutoScan, Request box will be ready for the click and Reader Version will show on the position as marked. (Reader Version: PGM-T1235 V1.0R3 (101230) Place Mifare Card to the RFID reader area. Event Dialog window gets the data from the Mifare Card



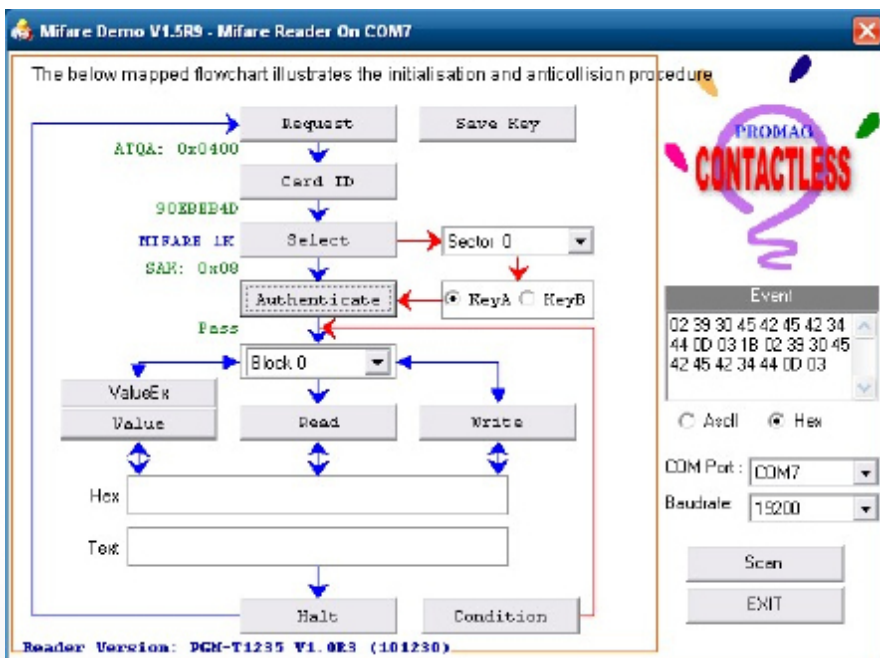
Close the RFID card to RFID reader



2-3 Card type will be recognized when you click “Request”.
 (Your Mifare card should be placed on the RFID reader area.)



2-4 Card ID will be recognized when you click “Card ID”.



2-5 SAK will be read when you click “Select”.

The below mapped flowchart illustrates the initialisation and anticollision procedure

Request → Card ID → Select → Authenticate → Block 0 → ValueEx/Value → Hex/Text → Halt/Condition

Save Key

ATQA: 0x0400
902BEB4D
MIFARE 1K
SAK: 0x09

Sector 0

KeyA KeyB

Pass

Block 0

ValueEx
Value

Hex
Text

Halt
Condition

Event

02 39 30 45 42 45 42 34
44 00 03 18 02 39 30 45
42 45 42 34 44 00 03

COM Port: COM7
Baudrate: 19200

Scan
EXIT

Reader Version: DGM-T1235 V1.0E3 (101230)

2-6 The result will show when you click “Authenticate”

The below mapped flowchart illustrates the initialisation and anticollision procedure

Request → Card ID → Select → Authenticate → Block 0 → ValueEx/Value → Hex/Text → Halt/Condition

Save Key

ATQA: 0x0400
902BEB4D
MIFARE 1K
SAK: 0x09

Sector 0

KeyA KeyB

Pass

Block 0

ValueEx
Value

Hex
Text

Halt
Condition

Event

02 39 30 45 42 45 42 34
44 00 03 18 02 39 30 45
42 45 42 34 44 00 03

COM Port: COM7
Baudrate: 19200

Scan
EXIT

Reader Version: DGM-T1235 V1.0E3 (101230)

INTERNAL VFD (OPTIONAL)

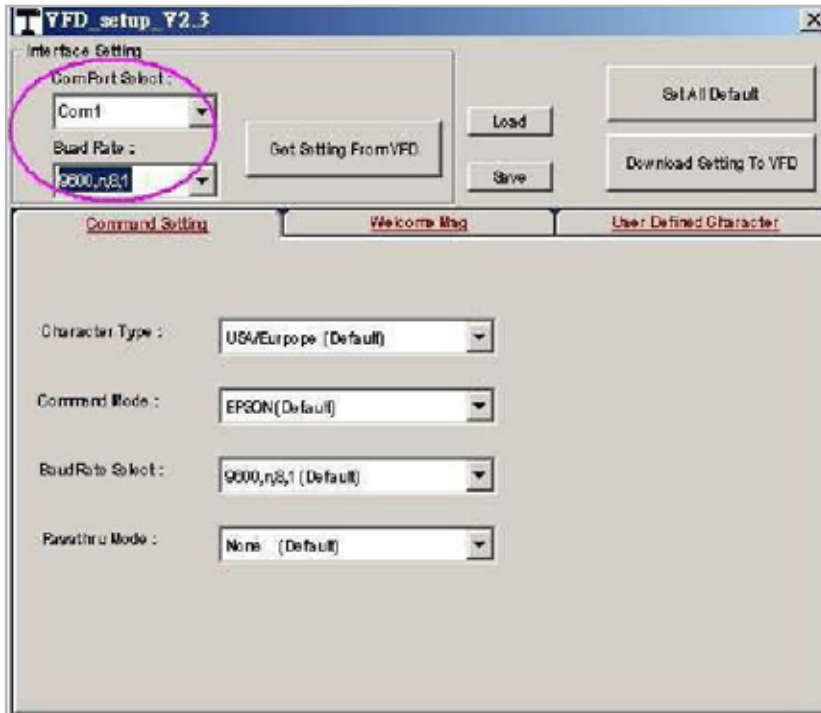
5-1. VFD Specification



General	Display Method	Vacuum Fluorescent Display (Blue-green)	
	Number of characters	40 (20 columns x 2 lines)	
	Brightness	500~1000 cd/m ²	
	Character front	5x7 dot matrix	
	Character type	95 Alphanumeric, 32 International Characters	
	Character size	6.75(H) x 3.75(W) mm	
	Dot size (X xY)	0.55x0.75 mm	
	Download characters	9 characters	
	Height	4.70" (120mm) with stand-alone base	
		9.80" (250mm) with base and 1 extension	
	Panel Dimension	75(H)x170(W)x50(D) mm	
	Pole Dimension	Per support length: 130 mm	
	Base Dimension	33(H)x159.8(W)x100(D) mm	
	Viewing Angle	Max. 90°	
	Horizontal Rotation	Max. 355°	
Weight	Approx. 980 grams		
Commands Mode	LD220, EPSON, AEDEX, UTC/S, UTC/P, ADM788, DSP800, CD5220, EMAX, LOGIC CONTROL, Ultimate		
Language Support	US English, Int'l English, Bosnia, Croatian, Czech, Danish, Dutch, Estonian, Faroese, Finnish, Flemish, French, Fr Canadian, German, Greek, Hebrew, Hungarian, Icelandic, Indonesian, Irish, Italian, Katakana, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Slovene, Slovak, Spanish, Swedish		
Interface	RS-232 (serial) / USB		
Reliability	Baud rate	Direct connection 9600 or 19,200 bps	
Connection	MTBF	30,000 hours	
Power	Consumption	5~12 VDC	
Safety	EMC standards Safety standards	FCC, CE	

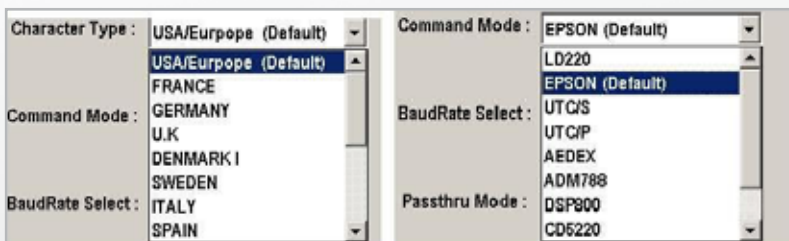
SETUP SOFTWARE GUIDE

- 1 Power on, and waiting test page of EEPROM test, Baud rate, and Command page.
And you may set up the customer display by “VFD_Setup.exe” Utility.
2. To execute “VFD_Setup.exe” for setup communication between display and Utility



The Baud Rate will show on states page of the Utility (Note: You may check it when power on the display)

3. “Get Setting From VFD” button
To get all setting from the display and It'll refresh the “VFD_Setup.exe” utility
4. “Character Type” / “Comand Mode” / “BaudRate Selcet” / “Passthru Mode”
Please refer to Chapter 4-5 user manual



BaudRate Select : 9600,n,8,1 (Default)
 Passthru Mode : None (Default)

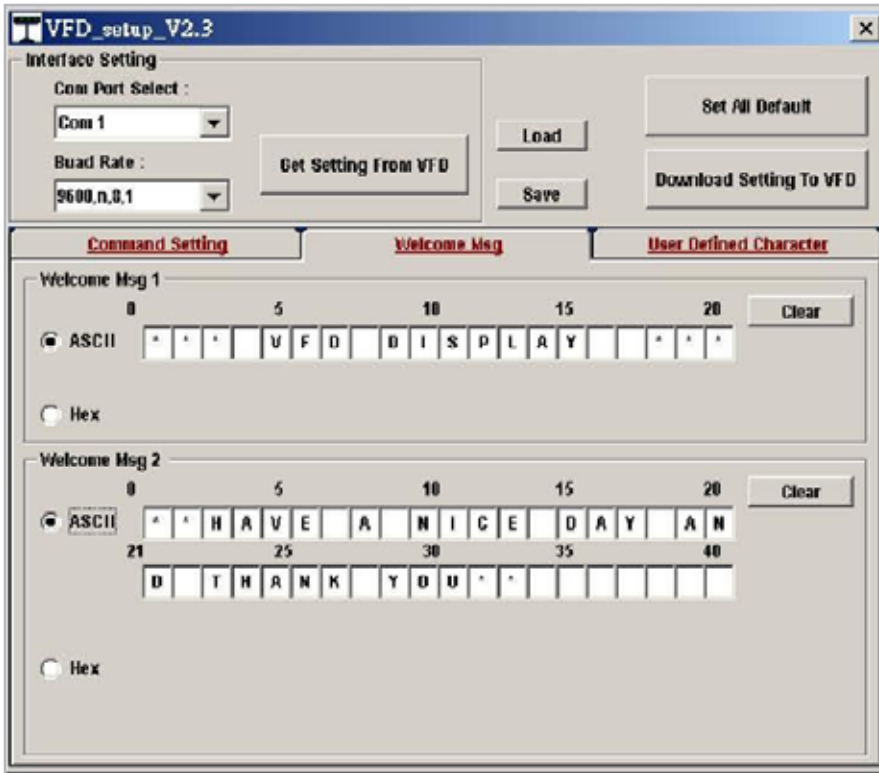
5. "Set All Default" button To show default setting, the Default table is,

Character Type: USA
 Command Type: EPSON
 BaudRate Setting: 9600/n/8/1
 Passthru Mode: None
 Welcome msg line1: ***VFD DISPLAY***
 Welcome msg line2: ***HAVE A NICE DAY AND THANK YOU***

6. Welcome Msg

Welcome Msg line1 maximum 20 characters, line 2 maximum 20 characters, total of 40 characters.

a. ASCII mode



You can type the character by keyboard (0x20h~0x7Fh), if you press clear icon, it will clear the all Msg charaters on AP.

b. Hex mode

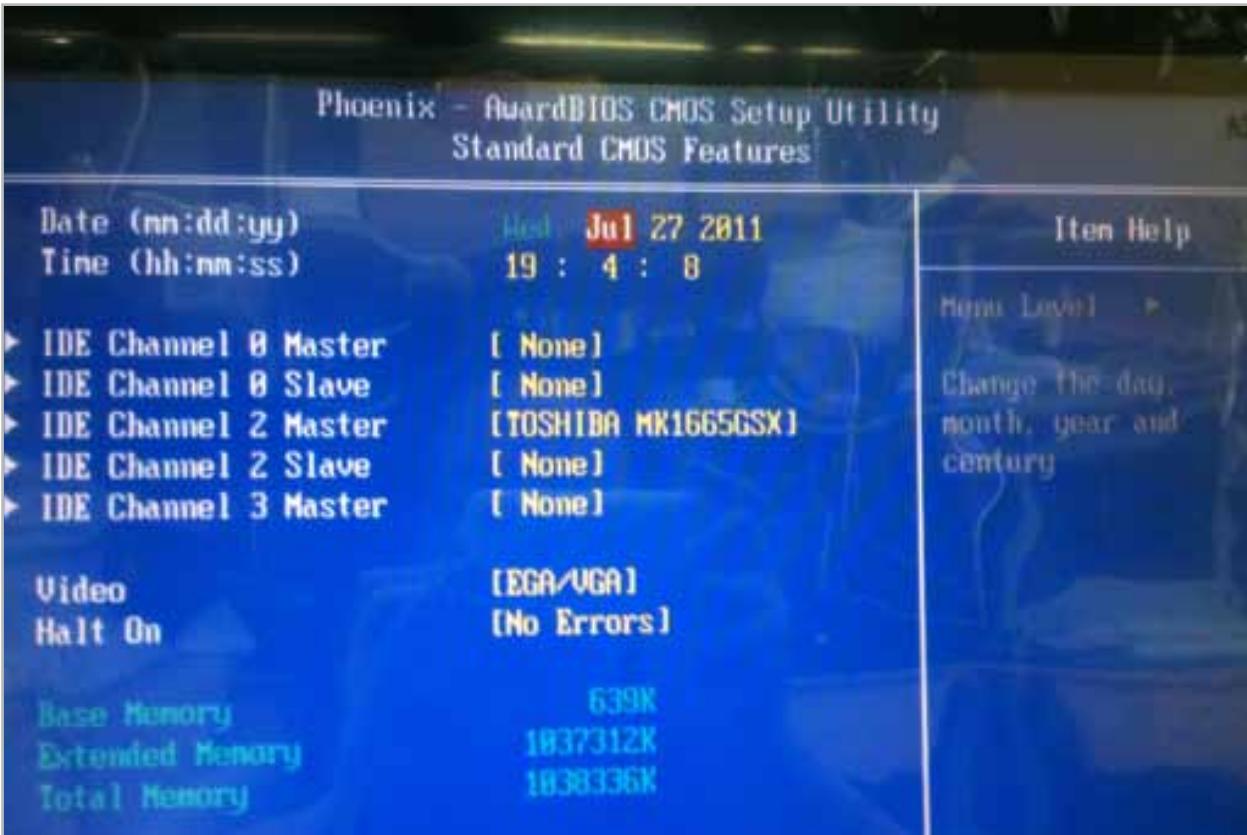
Hex mode can define the character from 0x20h to 0xFFh, the range 0x80~0xFF

BIOS/UTILITY SETUP

Press key to enter BIOS SETUP UTILITY when system boot up.



Press key to enter BIOS SETUP UTILITY when system boot up.



Date and Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

IDE Devices

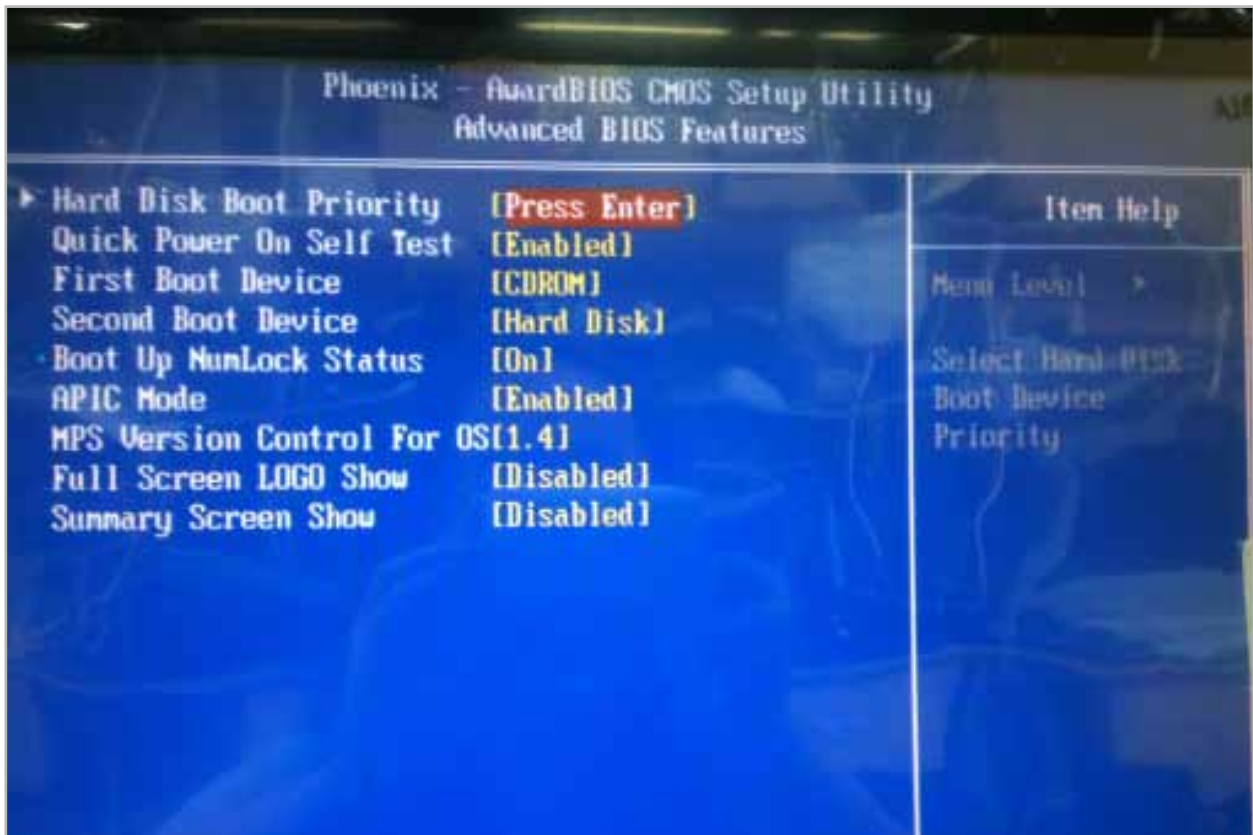
Press <Enter> to display the IDE submenu:

IDE HDD Auto-Detection	[Press Enter]	Item Help
IDE Channel 1 Master	[Auto]	Menu Level >> To auto-detect the HDD's size, head... on this channel
Access Mode	[Auto]	
Capacity	0 MB	
Cylinder	0	
Head	0	
Precom	0	
Landing Zone	0	
Sector	0	

IDE HDD Auto-Detection

Press <Enter> while this item is highlighted to prompt the Setup Utility to automatically detect and configure an IDE device on the IDE channel.

Advanced BIOS Features



Scroll to this item and press <Enter> to view the following screen:

1. Pri. Master:	Item Help
2. Pri. Slave:	
3. Sec. Master:	Menu Level >> Use <^> or <v> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.
4. Sec. Slave:	
5. USBHDD0:	
6. USBHDD1:	
7. USBHDD2:	
8. Bootable Add-in Cards	

^ v: Move PU/PD/+/-/: Change Priority F10: Save ESC:Exit

First/Second Boot Device (Floppy/Hard Disk/CDROM)

Use these three items to select the priority and order of the devices that your system searches for an operating system at start-up time.

Advanced Chipset Features

COM port PIN9 setting

Select "COM1/2/3 PIN9 Function" and press <Enter> to setup COM 1/2/3 PIN9 function.



ITEM	Option	Descriptions
COM1 PIN9 Function	RING (Default)	COM1/2/3 Pin9 select RING function
COM2 PIN9 Function	5V	COM1/2/3 Pin9 select 5V function
COM3 PIN9 Function	12V	COM1/2/3 Pin9 select 12V function

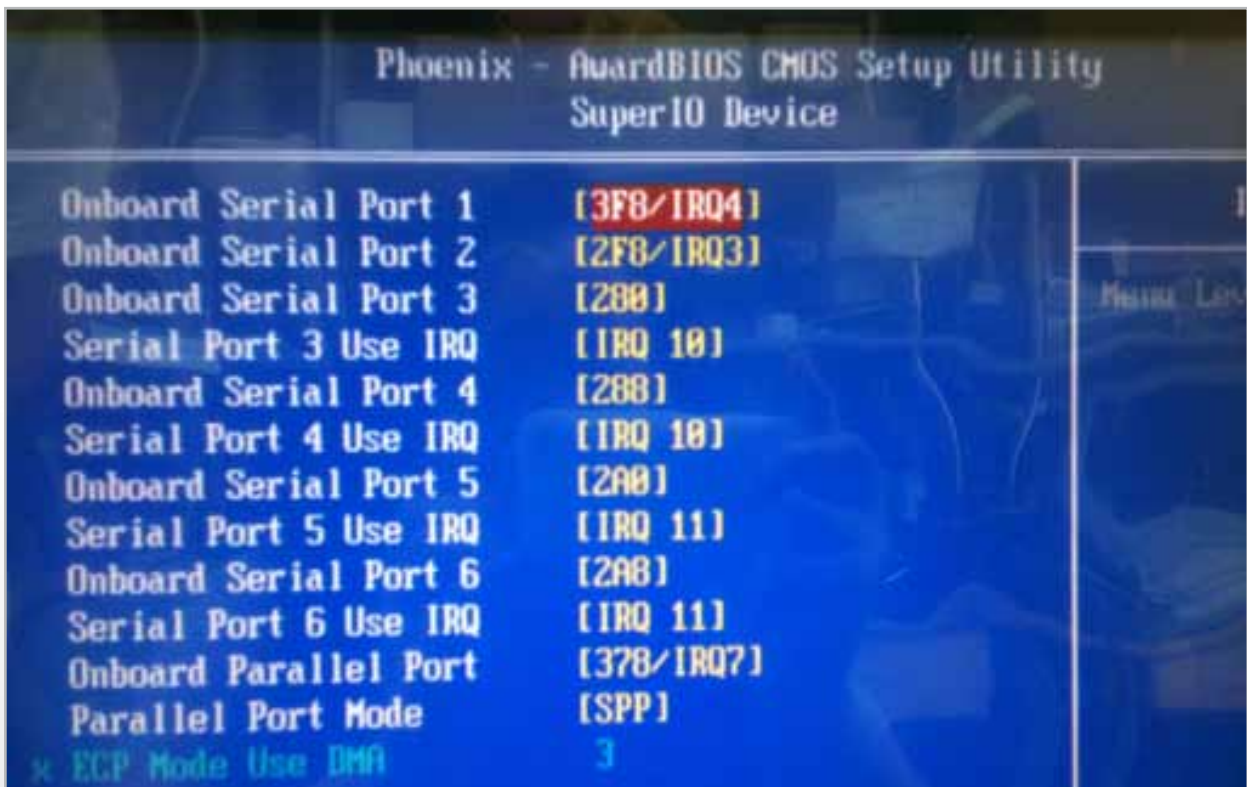
Integrated Peripherals

These options display items that define the operation of peripheral components on the system's input/output ports.



SuperIO Device (Press Enter)

Scroll to this item and press <Enter> to view the following screen:



Power Management Setup



Soft-Off by PWR-BTTN (Instant-Off)

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec. then you have to hold the power button down for four seconds to cause a software power down.

Power On After Power Fail (Off)

This item enables your computer to automatically status after power returns from a power failure.

Resume by Alarm (Disabled)

When set to Enabled, additional fields become available and you can set the date (day of the month), hour, minute and second to turn on your system. When set to 0 (zero) for the day of the month, the alarm will power on your system every day at the specified time.

Load Fail-Safe Defaults Option

This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the Setup Utility:

Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install fail-safe defaults for a specific option, select and display that option, and then press <F6>.

Load Optimized Defaults Option

This option opens a dialog box that lets you install optimized defaults for all appropriate items in the Setup Utility. Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press <F7>.

Set Supervisor/User Password

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection. To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected “System” in “Security Option” of “BIOS Features Setup” menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup. If you have selected “Setup” at “Security Option” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup. Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

Save & Exit Setup Option

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu:

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

LCD Surface Cleaning

1. How to clean the LCD surface properly?

Do not spray any liquids on the LCD screen directly, and do not use paper towels, this can cause the LCD screen to become scratched.

Always apply the solution to your cloth first, not directly to the parts you are cleaning. You want to avoid dripping the solution directly into your computer or laptop.

Stroke the cloth across the display in one direction, moving from the top of the display to the bottom.

2. What are some of the basic supplies needed to clean an LCD screen?

A soft cotton cloth. When cleaning the LCD screen it is important to use a soft cotton cloth, rather than an old rag. Some materials, such as paper towels, could cause scratches and damage the LCD screen.

Solution of water and isopropyl alcohol. This solution can be used along with the soft cotton cloth.

Computer wipes. Only use these if they specifically state on the package they are designed for LCD laptop screens. Computer wipes can come in handy for fast clean-ups or when you want to avoid mixing up a cleaning solution yourself.

3. What types of cleaners are acceptable?

- Water
- Vinegar (mixed with water)
- Isopropyl Alcohol

NOTICE: The following cleaners are unacceptable:

- Acetone
- Ethyl alcohol
- Ethyl acid
- Ammonia
- Methyl chloride

CE Notice

This device complies with the requirements of the CE directive.

FCC Notice

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 radiated 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.

Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WEEE Notice

This appliance is labelled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.



