Colormetrics

V1200
User Manual

Version 1.0

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SAFETY INSTRUCTIONS

1. Read these instructions carefully. Keep these instructions for future reference.
2. Please disconnect this device from AC outlet before cleaning. Do not use liquid or spray detergent for cleaning. Use moisture sheet or cloth for cleaning.
3. Please keep your device safe from high levels of humidity.
4. Install the device and its driver on a surface plate. Any tilt plate might cause damage.
5. Do not place anything over the power cord. And avoid people from stepping on it
6. Please be aware cautious note or warnings on the device.
7. If the device will not be used for a long time, please unplug the power cord to avoid damages by transient overvoltage.
8. Never pour any liquid into the device; this could cause fire or electrical shock.
9. If one of the following situations happens, get the device checked by a service personnel:
   a. The power cord or plug is damaged.
   b. Liquid has penetrated into the device.
   c. The device has been exposed to moisture.
   d. The device does not work well or you cannot get it work according to user manual.
   e. The device has dropped and damaged.
10. Do not leave this device in an environment unconditioned, storage temperature below -20°C or above 60°C, it may damage the device.
11. Unplug the power cord when doing any service or adding optional kits.

Lithium Battery Caution:

1. 1. 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.
2. Do not remove the cover, and ensure no user serviceable components are inside. Take the unit to the service center for service and repair.

CE Notice

This device complies with the requirements of the CE directive.

WEEE Notice

This appliance is labeled 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.

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1-1 Standard Accessories

System (with stand)

Power adapter

Power cord

Driver bank

1-2 Optional Accessories

VFD

2nd Display (8,10,)

MSR

RF-ID Leser

MSR+RF-ID

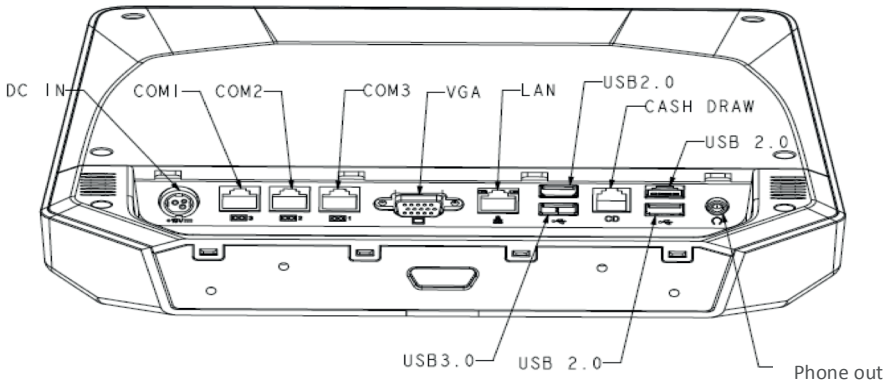
i-button

MSR+iButton

1D Scanner

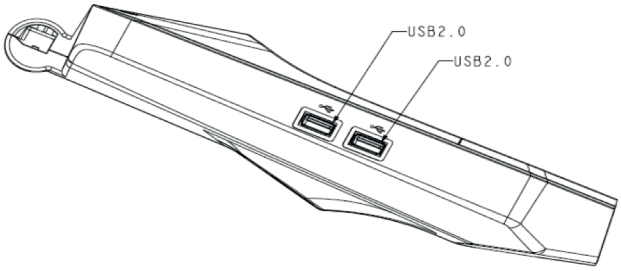
2D Scanner

2-1 Rear View

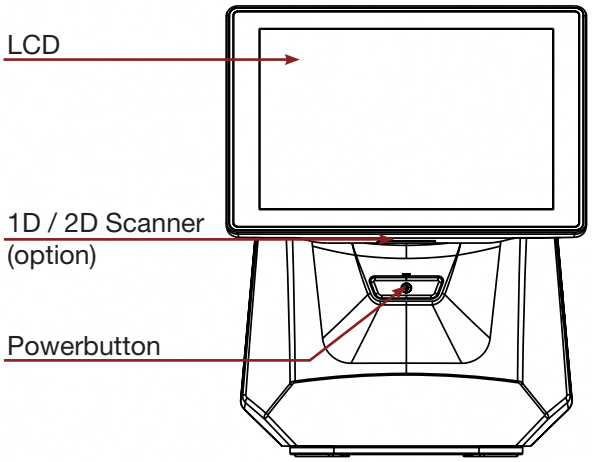


Please make sure 19V DC be plugged with the right direction.

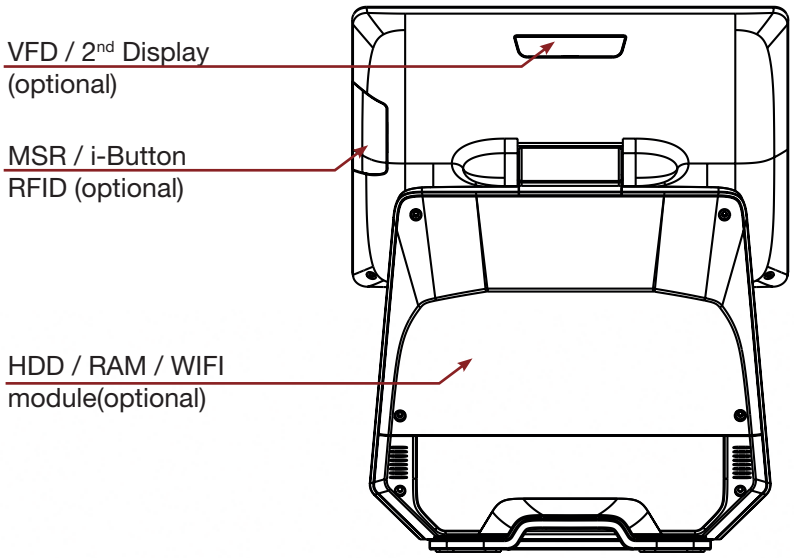
2-2 Side View



2-3 Front View



2-4 Back View


VFD / 2nd Display
(optional)
MSR / i-Button
RFID (optional)
HDD / RAM / WIFI
module(optional)

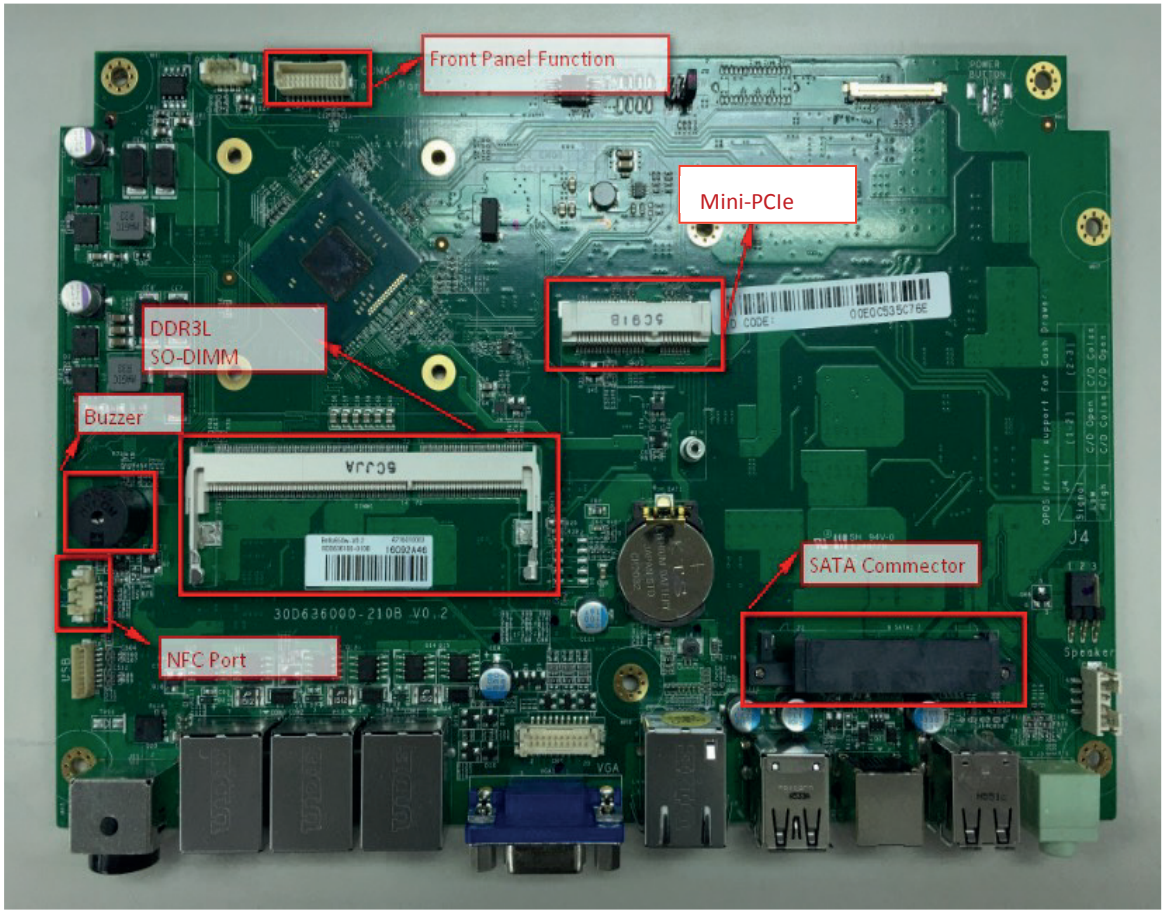
2-5 Specification

Processor	Intel® Celeron J1900 Quad Core 2.0GHz
Memory	One SO-DIMM socket supports DDR3L 1333 up to 8GB
Storage	2.5” SATA II HDD / SSD
Audio	Phone-out
Network	RJ45 10/100/1000 Base-T
USB port	5x USB 2.0 / 1x USB 3.0
COM Port	3x RJ45
BIOS	Insyde BIOS
Power	DC 19V 60W Adaptor
OS Support*	POSReady7/ Windows Embedded 8.1 Industry Pro / Win10 IoT Enterprise
Chassis Housing	Aluminum
Thermal Solution	Fan-less
Dimension	302.4(W) x 240(D) x 378.6(H) mm
Operating Temperature	0°C ~ 35°C
Storage Temperature	-20°C ~ 60°C
Storage Humidity	20% ~ 80%, non-condensing

Display	
LCD Panel Size	12.1-inch TFT LCD (LED Backlight)
Resolution	1024*768 Pixels
Brightness	500 cd/m2
Touch Panel	5-wire Resistive Type / Projected Capacitive Type

*Note:
Intel® Celeron J1900 CPU does not support POSReady 2009

2-6 Internal Layout



PIN DEFINITION

1. 2-Layer USB2.0 connector Pin Definition

No.	Definition	No.	Definition
1	+5V	5	+5v
2	D-	6	D-
3	D+	7	D+
4	GND	8	GND

2. 2-Layer USB3.0+2.0 connector Pin Definition

No.	Definition	No.	Definition
1	+5V	8	TX-
2	D-	9	TX+
3	D+	10	+5V
4	GND	11	D-
5	RX-	12	D+
6	RX+	13	GND
7	GND		

3. Ethernet: RJ45 Pin Definition

No.	Definition
1	MDI0A+
2	MDI0A-
3	MDI1A+
4	MDI1A-
5	MDI2A+
6	MDI2A-
7	MDI3A+
8	MDI3A-

4. Phone-out JACK Pin Definition

No.	Definition
1	GND_AUD
2	GND_AUD
3	LINE_OUTR2
4	LINE_OUTL2
5	LINE2-JD

5. VGA+USB+DC12V connector Pin Definition

No.	Definition	No.	Definition
1	DDC_CLK	11	GND
2	DDC_DATA	12	RED
3	GND	13	GND
4	VSYNC	14	GND
5	GND	15	+12V
6	HSYNC	16	USB D-
7	GND	17	+12V
8	BLUE	18	USB D+
9	GND	19	Reserve for VGA +5V
10	GREEN	20	+5V

6. VGA Pin Definition

No.	Definition	No.	Definition
1	Red	9	N/C
2	Green	10	GND
3	Blue	11	N/C
4	N/C	12	I2C DATA
5	GND	13	HSYNC
6	GND	14	VSYNC
7	GND	15	I2C CLK
8	GND		

7. LVDS connector Pin Definition

No.	Definition	No.	Definition
1	+3.3V	2	+3.3V
3	+3.3V	4	+3.3V
5	GND	6	GND
7	DATA1-	8	DATA0-
9	DATA1+	10	DATA0+
11	GND	12	GND
13	CLK-	14	DATA2-
15	CLK+	16	DATA2+
17	GND	18	GND
19	N/C	20	DATA3-
21	Brightness	22	DATA3+

23	BKL enable	24	GND
25	GND	26	GND
27	LED Power +12V	28	LED Power +12V
29	LED Power +12V	30	LED Power +12V

8. eDP connector Pin Definition:

No.	Definition	No.	Definition
1	N/C	16	GND
2	GND	17	HotPlug Detect
3	N/C	18	GND
4	N/C	19	GND
5	GND	20	GND
6	TxD0-	21	GND
7	TxD0+	22	BKL enable
8	GND	23	Brightness
9	AUX+	24	N/C
10	AUX-	25	N/C
11	GND	26	+12V
12	+3.3V	27	+12V
13	+3.3V	28	+12V
14	N/C	29	+12V
15	GND	30	N/C

9. DC Jack Pin Definition

No.	Definition
1	+19V
2	Ground
3	+19V

10. RJ45(COM) connector Pin Definition

No.	Definition
1	+5V/+12V
2	DSR#
3	GND
4	DTR#
5	RST#
6	CTS#

7	TxD
8	RxD

11. SATA: 22-pin SATA Pin Definition

No.	Definition	No.	Definition
S1	GND	P1	N/C
S2	SATA_TX0_P	P2	N/C
S3	SATA_TX0_N	P3	N/C
S4	GND	P4	GND
S5	SATA_RX0_N	P5	GND
S6	SATA_RX0_P	P6	GND
S7	GND	P7	+5V
		P8	+5V
		P9	+5V
		P10	GND
		P11	GND
		P12	GND
		P13	N/C
		P14	N/C
		P15	N/C

12. Mini-PCIe Pin Definition

No.	Definition	No.	Definition
1	WAKE#	29	GND
2	+V3.3V	30	SMB__CLK
3	N/C	31	PCIE_TX_N
4	GND	32	SMB_DATA
5	N/C	33	PCIE_TX_P
6	+1.5V	34	GND
7	CLKREQ#	35	GND
8	N/C	36	USB D-
9	GND	37	N/C
10	N/C	38	USB D+
11	CLK_PCIE_N	39	N/C
12	N/C	40	GND
13	CLK_PCIE_P	41	N/C
14	N/C	42	N/C

15	GND	43	N/C
16	N/C	44	N/C
17	N/C	45	N/C
18	GND	46	N/C
19	N/C	47	N/C
20	W_DISABLE#	48	+V1.5V
21	GND	49	N/C
22	RESET#	50	GND
23	PCIE_RX_N	51	N/C
24	+3.3V_AUX	52	+V3.3V
25	PCIE_RX_P	53	GND
26	GND	54	GND
27	GND	55	GND
28	+V1.5V	56	GND

13. Int. Speaker Pin Definition

No.	Definition
1	Left Out +
2	Left Out -
3	Right Out-
4	Right Out+

14. Touch Button for Power On/Off connector Pin Definition

No.	Definition
1	+5V Standby
2	+5V Status
3	Power On#
4	GND

15. NFC port connector Pin Definition

No.	Definition
1	+5V
2	USB D-
3	USB D+
4	GND

16. Sideward USB port connector Pin Definition

No.	Definition
1	GND
2	USB D+
3	USB D-
4	+5V
5	GND
6	USB D+
7	USB D-
8	+5V

17. Front Panel function connector Pin Definition

No.	Definition	No.	Definition
1	+5V	2	+5V
3	DSR4#	4	TxD5 for touch panel
5	DTR4#	6	RxD5 for touch panel
7	RTS4#	8	GND
9	CTS4#	10	+12V
11	TxD4	12	+5V
13	RxD4	14	+3.3V
15	GND	16	GND
17	+5V	18	+5V Standby
19	USB D-	20	+5V
21	USB D+	22	Power On#
23	GND	24	GND

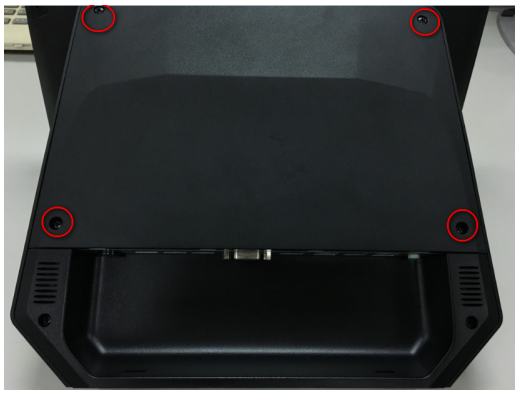
18. RJ11(Cash Drawer) connector Pin Definition

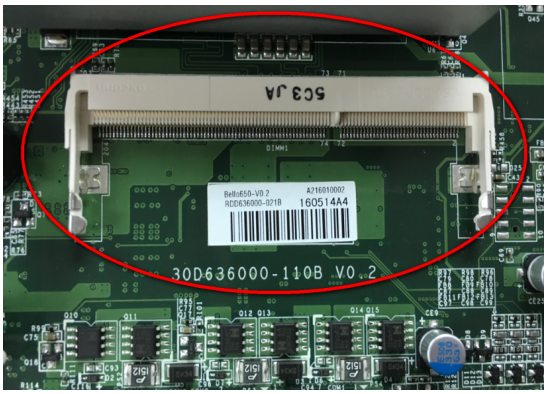
No.	Definition
1	GND
2	C/D_OPEN#
3	C/D Status
4	+12V/+24V
5	N/C
6	GND

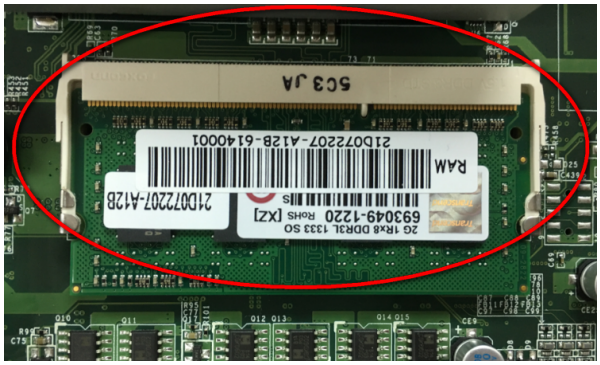
4-1 HDD

1. Dis-fasten 4 screws and remove the base cover
2. Fix HDD on HDD bracket with 2 screws
3. Install HDD with 2 screws

4-2 Memory



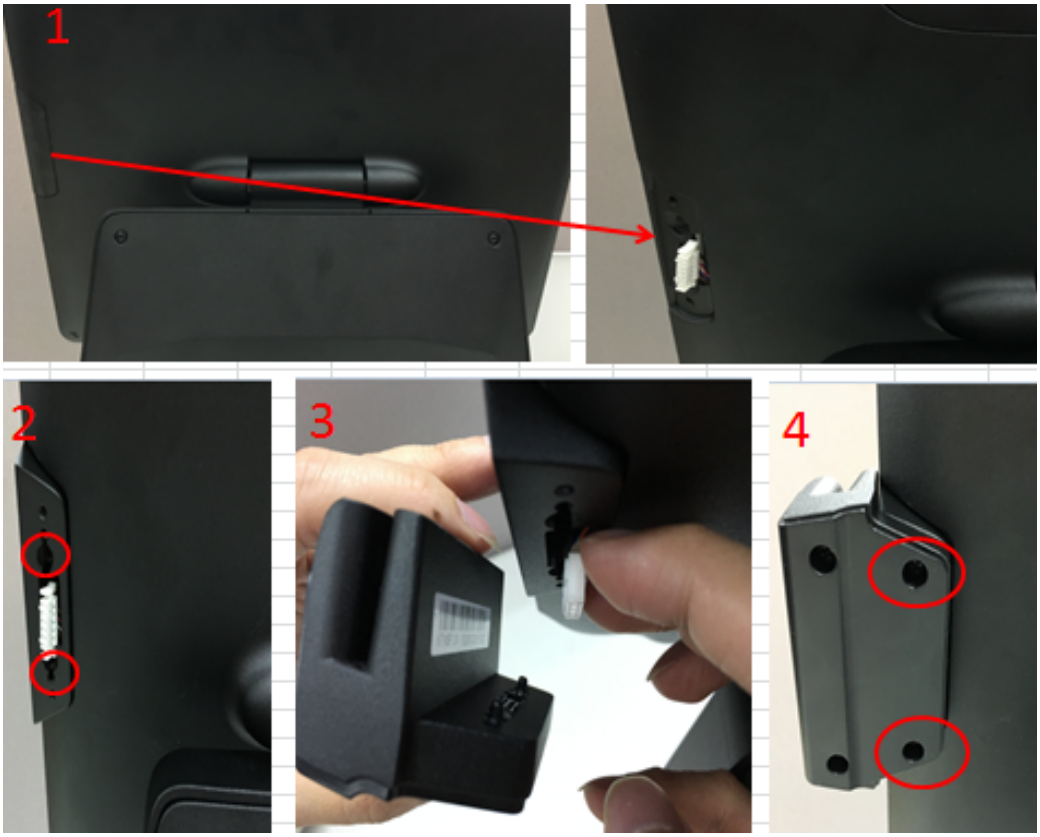




1. Dis-fasten 4 screws and remove the cover

2. Install RAM to the socket

4-3 MSR



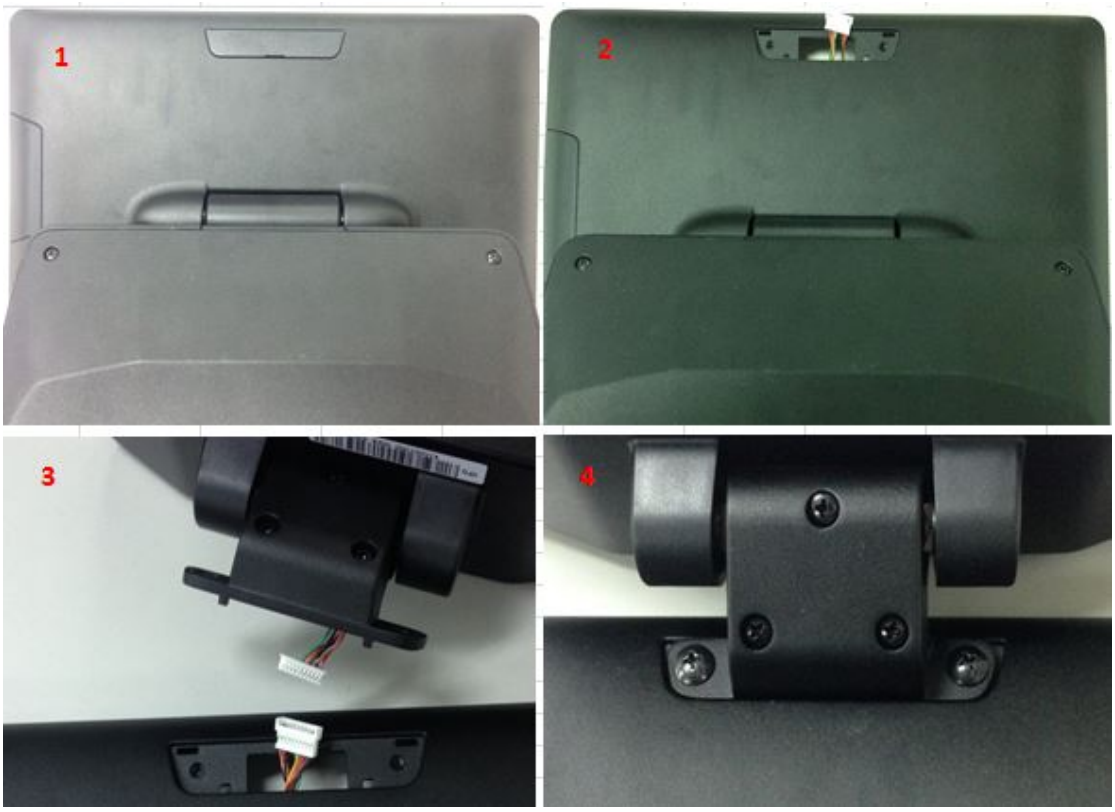
1. Remove MSR cover

2. Fix MSR holder with 2 screws

3. Plug MSR cables together

4. Fix MSR with 2 screws

4-4 VFD



1. Remove the Top cover

2. Plug VFD cables together

3. Fix VFD with 2 screws

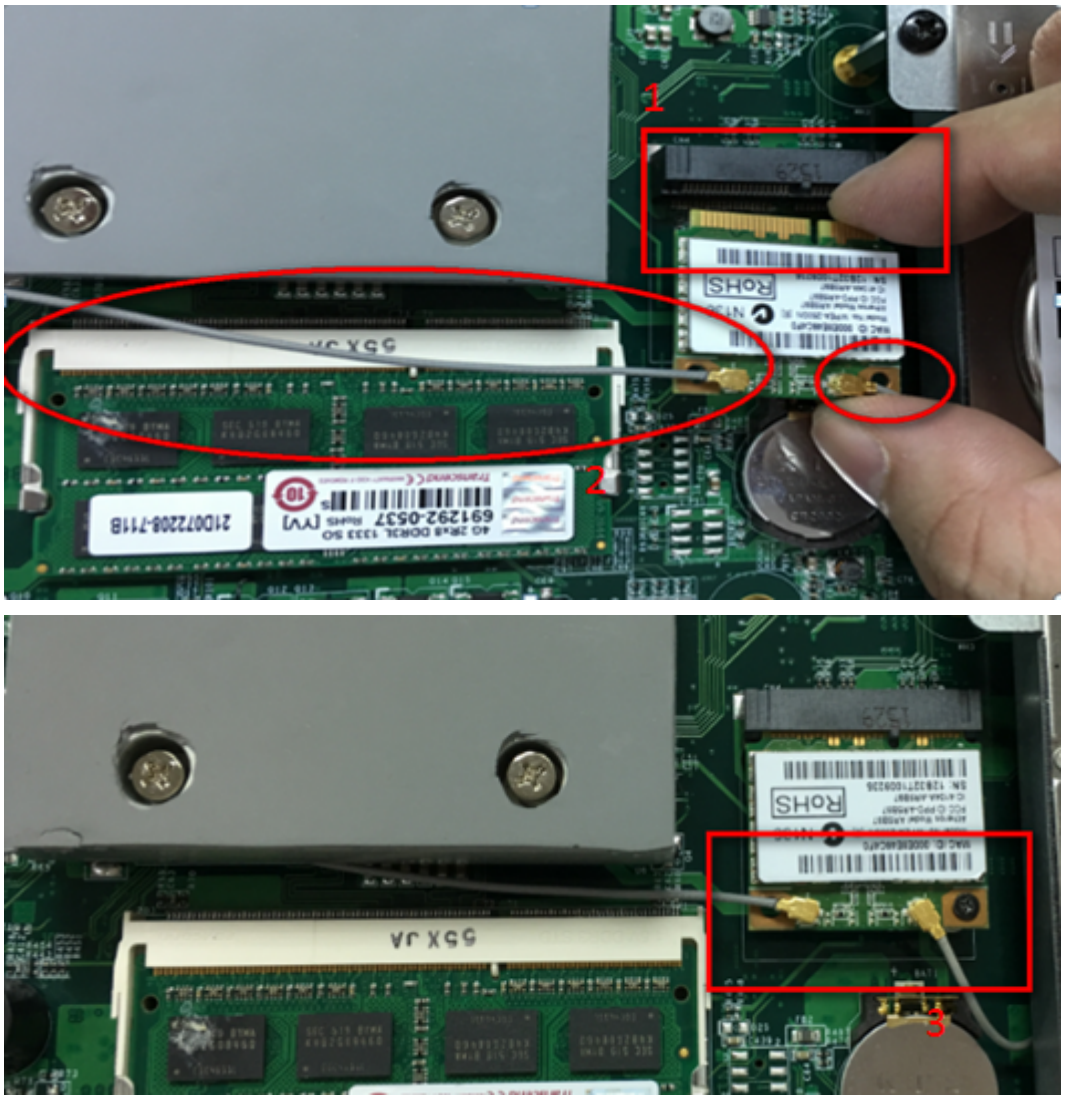
4-5 The 2nd Display

1. Remove the Top cover

2. Plug the 2nd display cable together

3. Fix the 2nd display with 2 screws

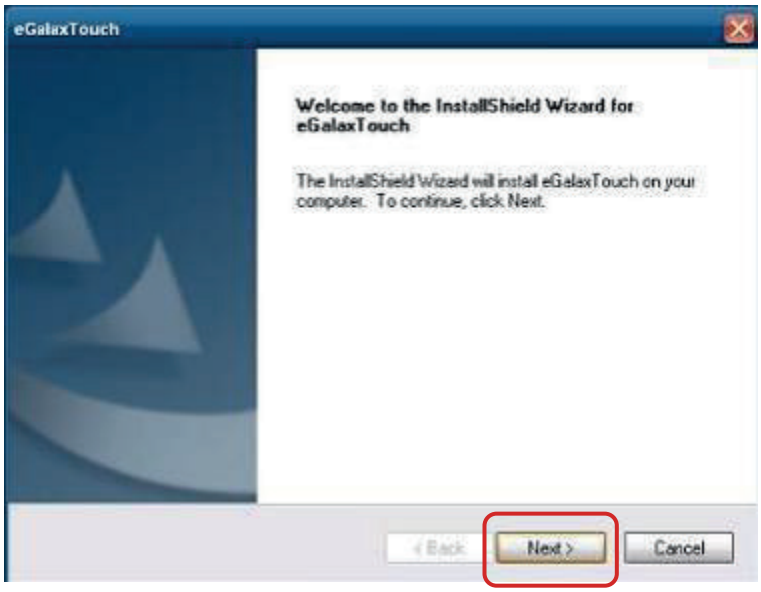
4-6 WI-FI



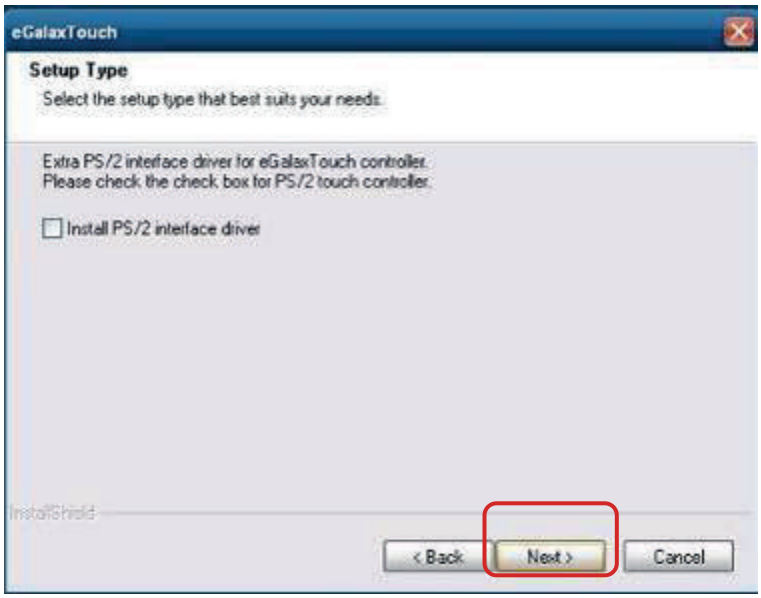
1. Install the WI-FI module to the Mini-PCIe Slot.
2. Connect 2 antennas with WI-FI module. (Notice: The antenna in black should be connected to position 1 of WI-FI module, and antenna in gray should be connected to position 2 of WI-FI module)
3. Install WI-FI module to socket with a screw

5-1 Resistive Type Touch Panel

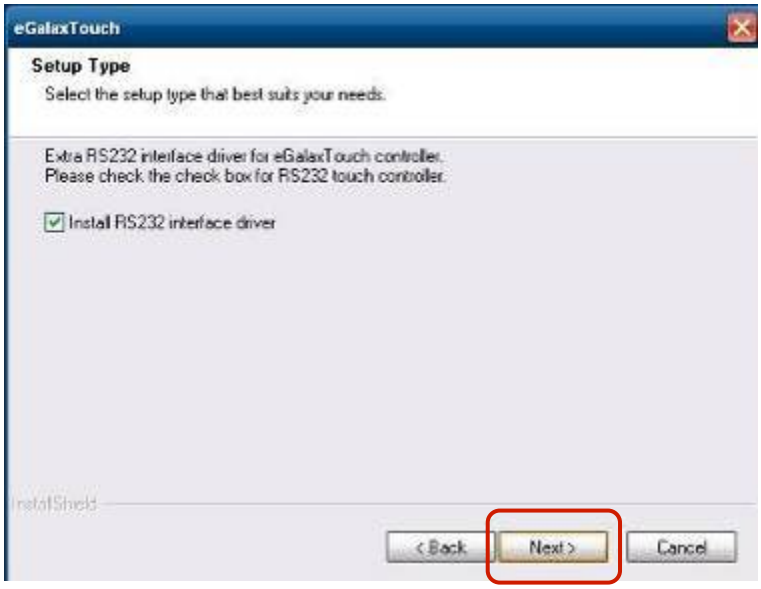
1. Click "**Next**".



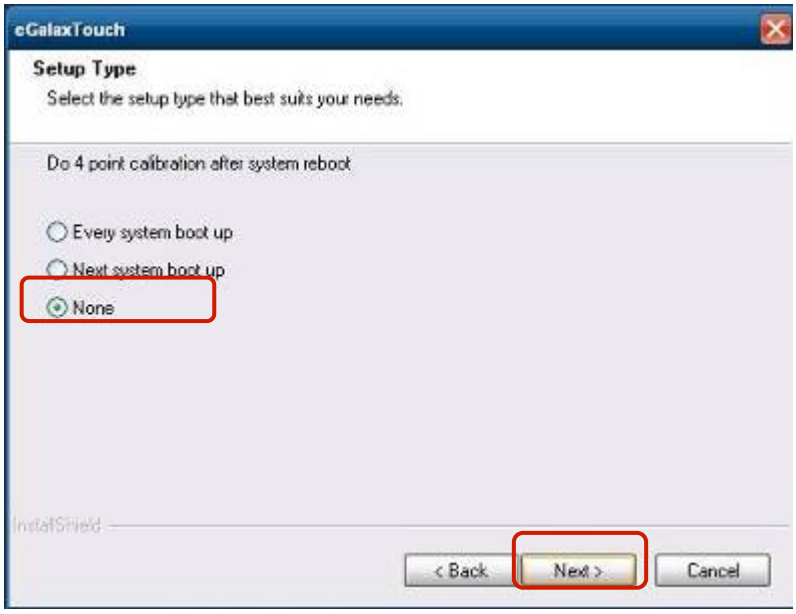
2. Click "**Next**".



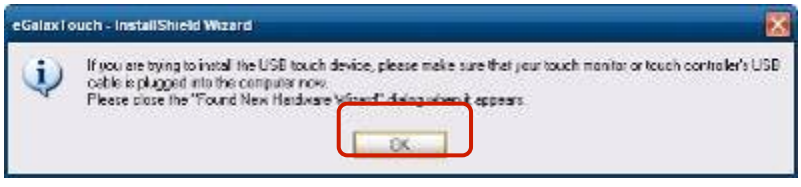
3. Click “**Next**”.



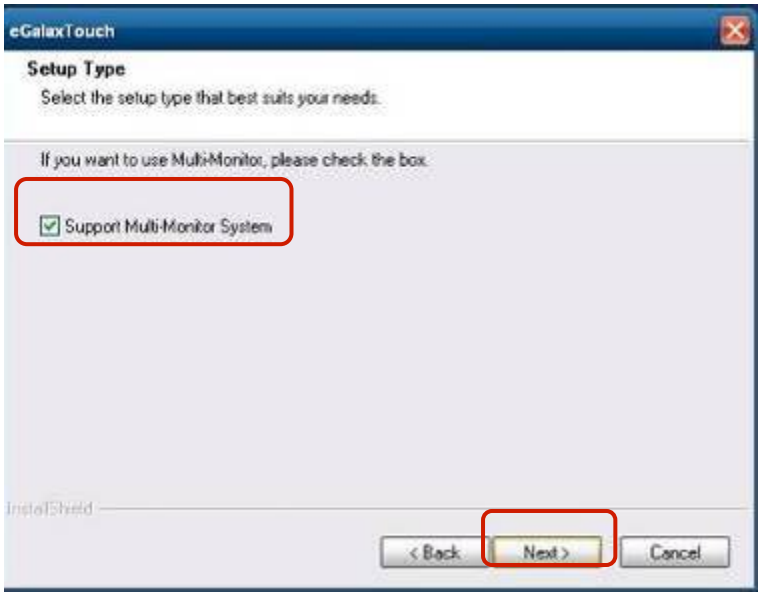
4. Select “**None**”, Click “**Next**”.



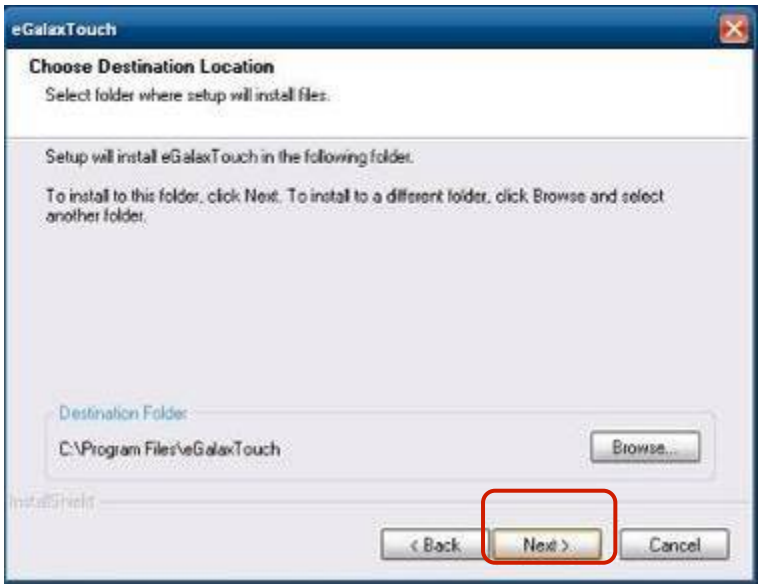
5. Click “**OK**”.



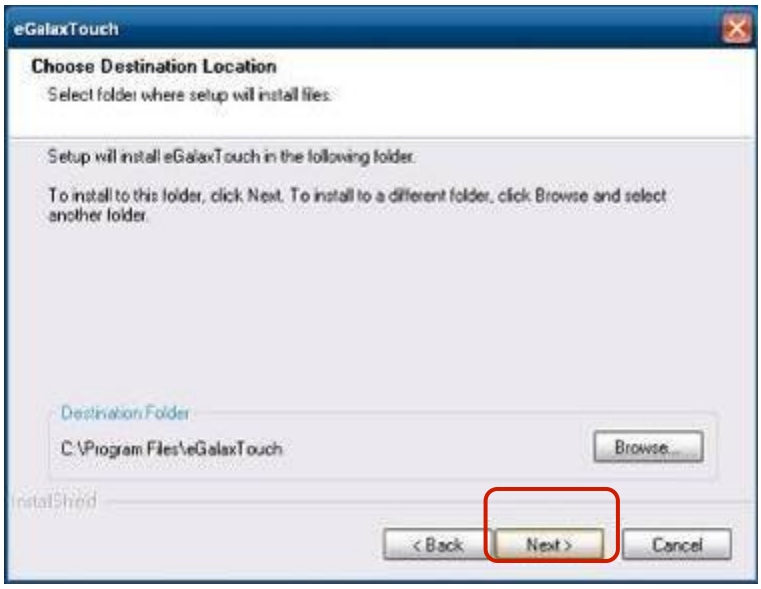
6. Select “**Support Multi-Monitor System**”, Click “**Next**”.



7. Click “**Next**”.

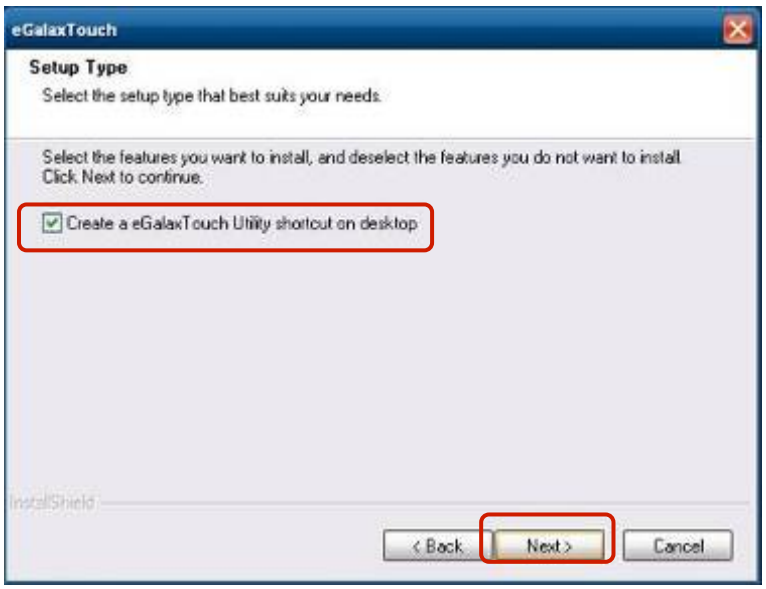


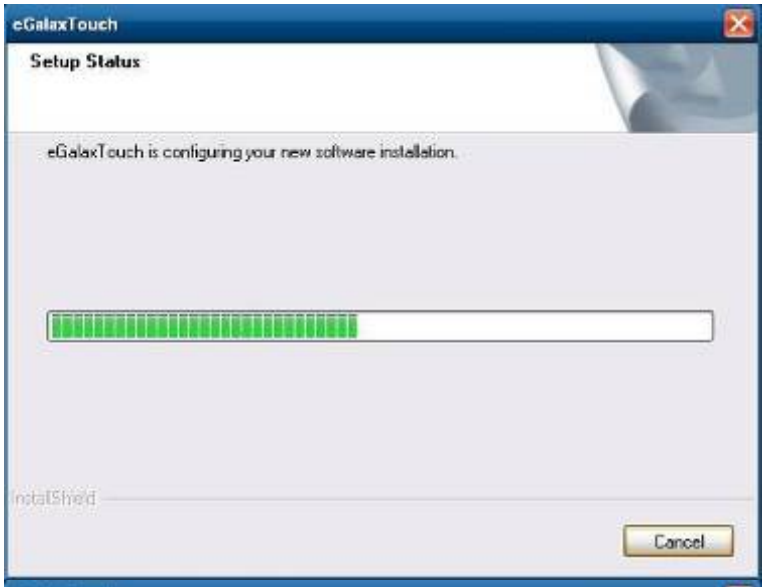
8. Click “**Next**”.

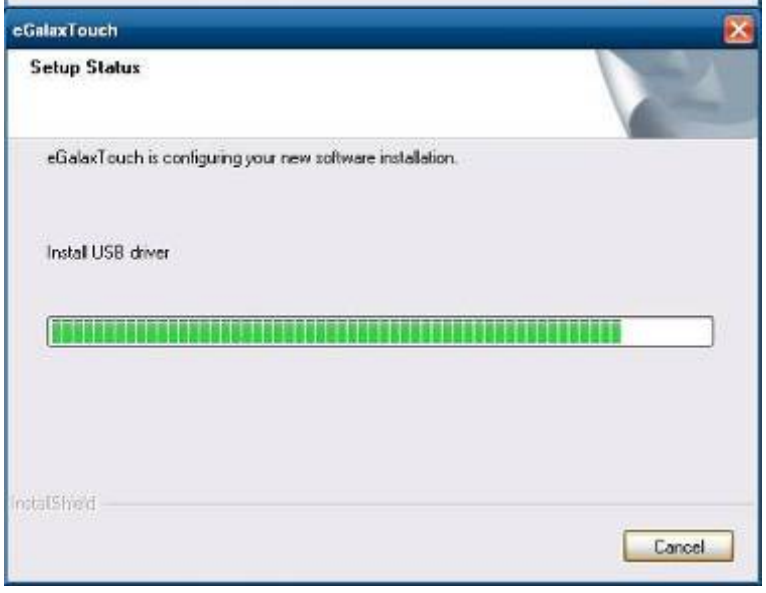


9. Click “**Next**”.

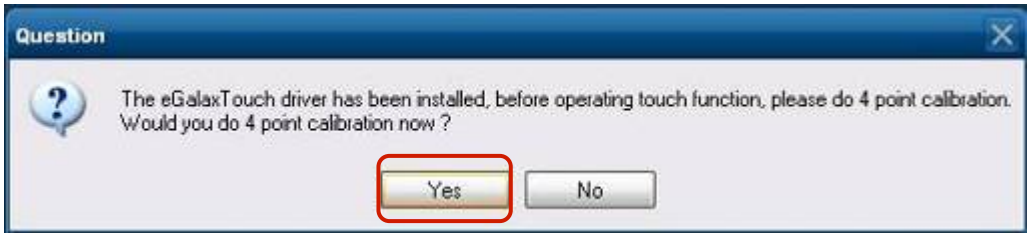
10. Select "**Create a eGalaxTouch Utility shortcut on desktop**", Click "**Next**".







11. Would you do 4 point calibration now? Click "**Yes**". **(Resistive Touch only)**



12. Do 4 points aligrment to match display.

13. Calibration utility.

5-2 MagSwipe Card Reader Configuration Utility

The MagSwipe Configuration Utility is used to set up the output format of MagSwipe

Installation

Below steps guide you how to install the Utility program

- Insert the setup CD
- Run the **80066804-006_Magswipe_Configuration_Software_V2_1_A** setup file that is located in the Software folder of CD.
- Follow the wizard to complete the installation.

Launching Program

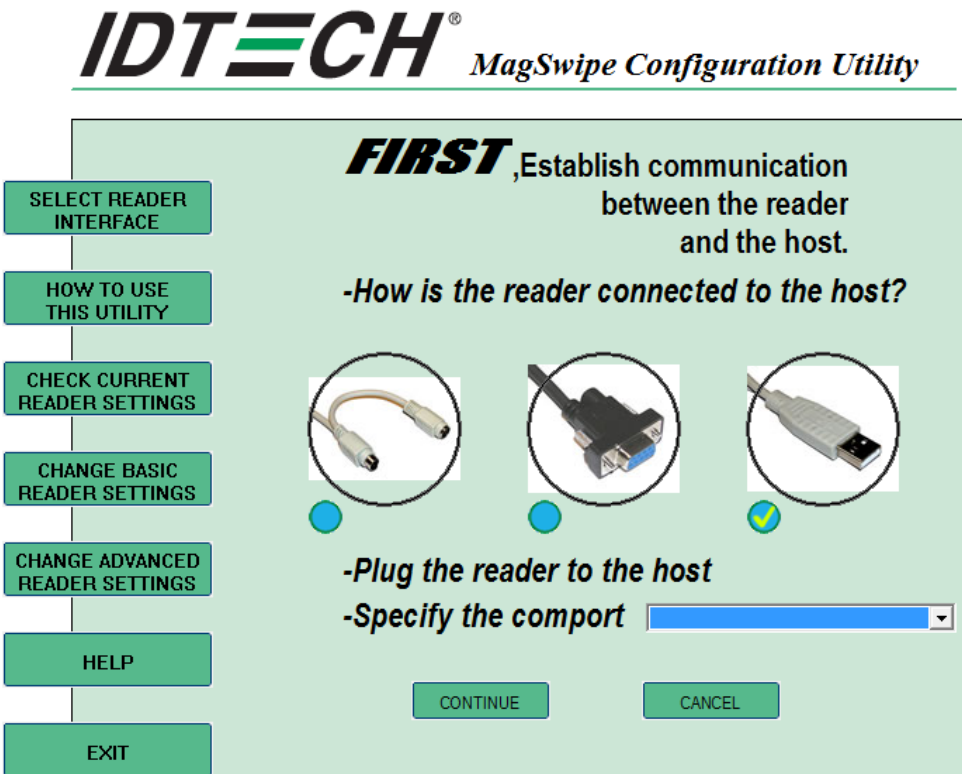
Below steps guide you how to load the **Utility** program.

- From **Start**/**Programs**, click **MagSwipe** folder
- Click **MagSwipe Configuration Utility** to launch the program.

Configuration

Select Reader Interface

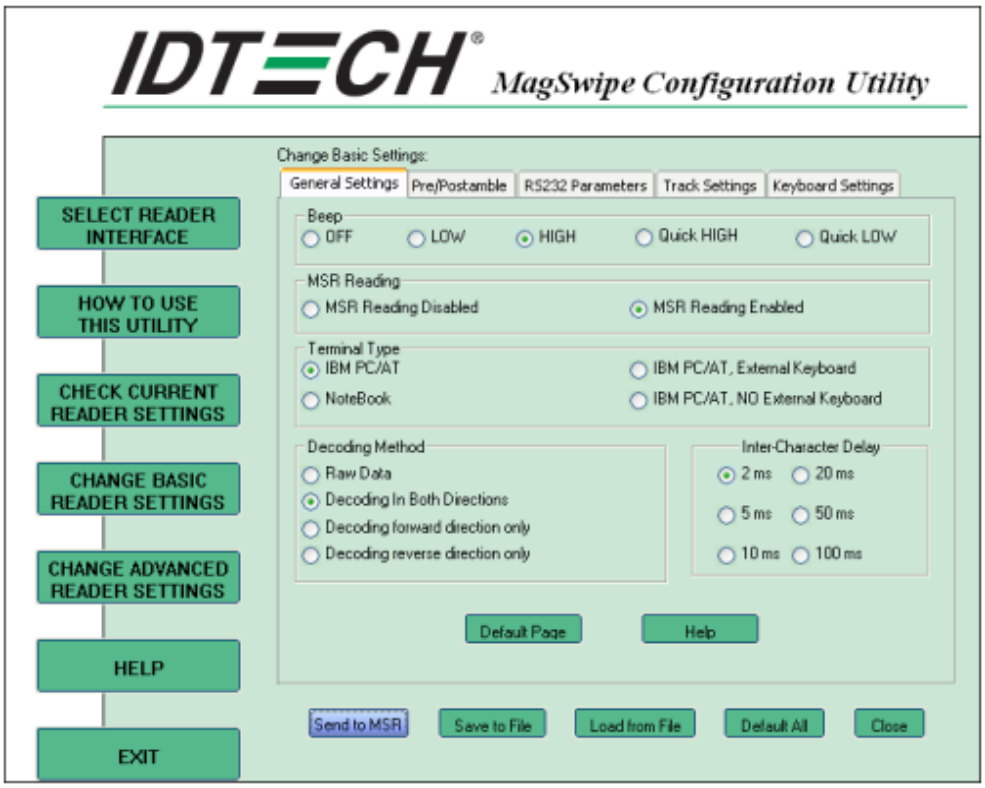
The reader to be configured should be connected. Select the corresponding connected reader interface and click the **Continue** button



After the interface selection is made, click the **Continue** button. The utility attempts to communicate with the connected reader. If successful, the Home Menu Page is displayed. The Home Menu Page is shown below

Change Basic Reader Setting

After selecting the appropriate interface for the reader, select one of the Home Menu Page buttons to proceed with the Magnetic Stripe Reader (MSR) configuration process. The "Basic Reader Settings" group defines the basic operating parameters and data output format of the reader.



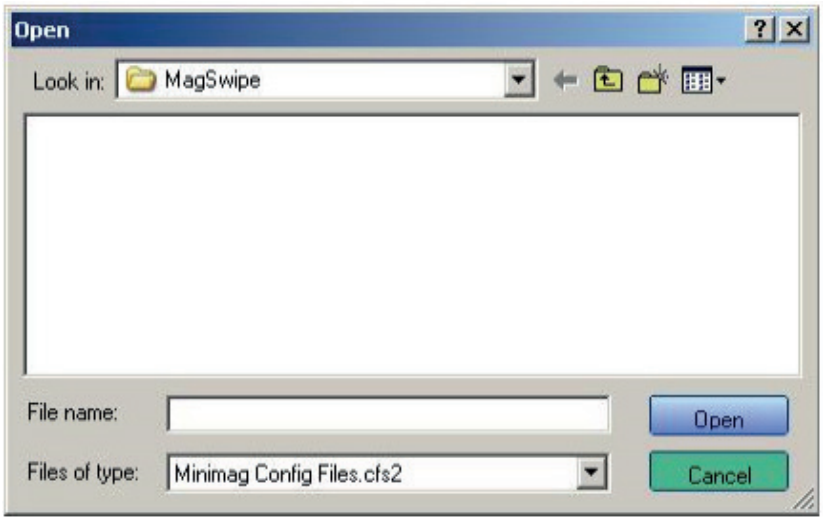
Button Definitions

Send To MSR

When all the setting parameters are selected, use the "Send To MSR..." button to send configuration data to the reader device. When the reader has received the data correctly, the settings take effect immediately.

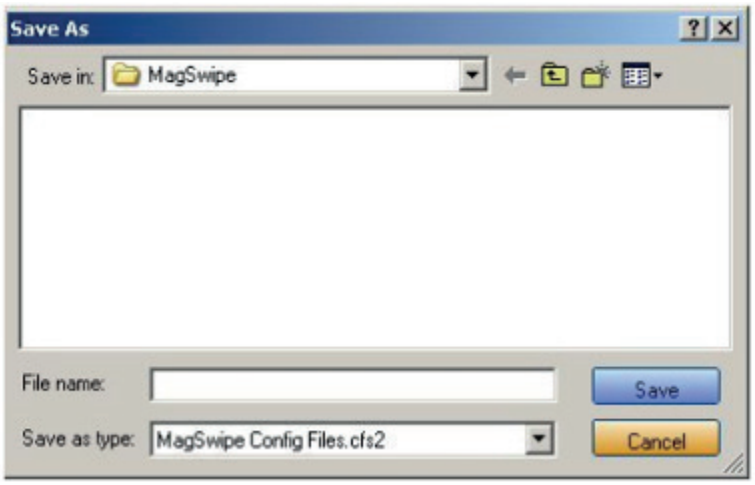
Load From File

The configuration data can be loaded into the configuration utility from a file that has been previously saved. Select this command, start a "File Open" dialog, which allows selection of the file.



Save To File

The configuration data can be saved as a file and being used later to configure other readers. When saving a configuration the "File Save" dialog is opened as shown below. Input a filename and file location.



Default All

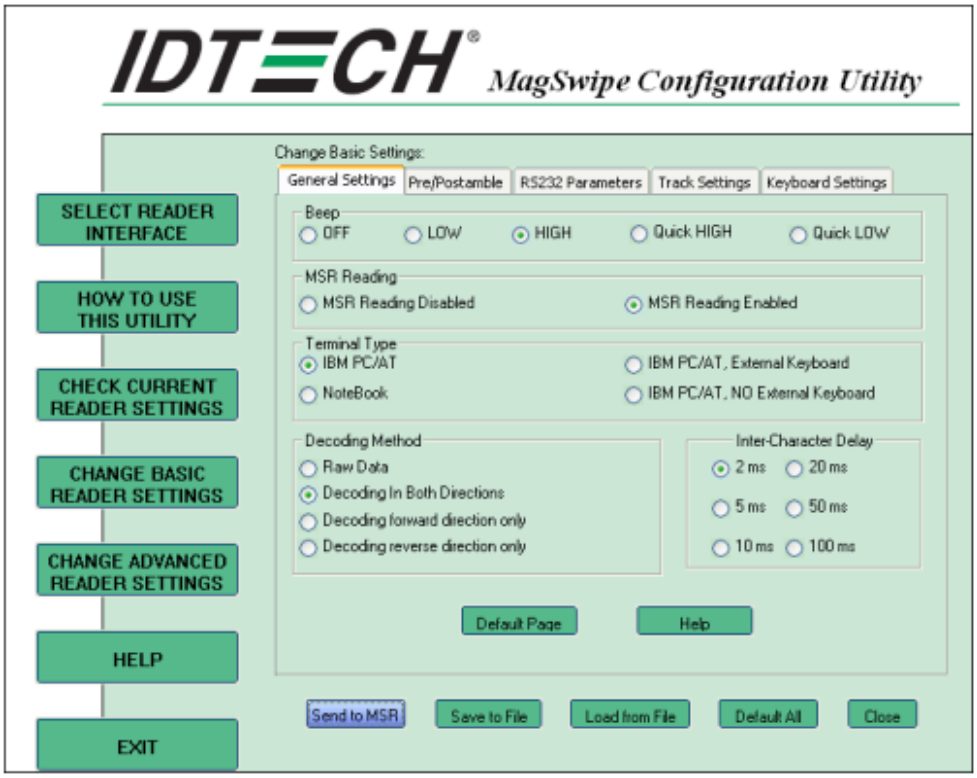
This button sets the reader with the default configuration parameters (the default factory settings). The settings take effect immediately. The default parameters affect all reader configurations settings.

Close

Close this dialog and return to the Home Menu Page.

General Settings

This group of configuration settings defines the basic operating parameters of the reader.



MSR Reading

This option will turn on or off the MSR. If MSR is disabled no data is sent out to host in any case. The default is MSR Reading Enabled.

Decoding Method Settings

This option gives four kinds of decoding methods.

Raw Data (output in both forward and reverse directions)

Decoding in Both Directions (forward and reverse reading)

Decoding in Forward Direction only (card entering slot from LED end)

Decoding in Reverse Direction only (card entering slot from end opposite LED)

With the bi-directional operation, the user can swipe the card in both swipe directions and the data encoded on the magnetic stripe will be output. In the single swipe direction selections, the card can only be swiped in one specified direction to read the card. The default setting will decoding card data with the card swiped in either the forward or the reverse direction.

„Raw Data“ is an output of the decoded magnetic stripe data in hexadecimal format (no ASCII character conversion is performed). In the Raw Data setting, the reader outputs all track-decoded data. The MSR will represent the raw data with two ASCII characters: the first ASCII character is for high bits of the raw data byte and the second is for the low bits. For example, the two ASCII characters „4“and „1“represent raw data byte 41h(01000001).

Beep Volume

The Beep volume can be adjusted to four loudness levels or off. Four loudness levels are:

Quick High
Quick Low
High
Low

The default is High beep.

Terminal Type

NoteBook
IBM-PC/AT
IBM-PC/AT, External keyboard
IBM-PC/AT, No External keyboard

The firmware can be programmed to interface as a keyboard wedge to 4 different types of terminals. The default is IBM-PC/AT.

Inter-Character Delay:

2 ms, 5 ms, 10 ms, 20 ms, 50 ms, 100 ms;
This is the time period the reader will delay between sending successive characters. Some terminals or computers (host) require an inter-character delay to simulate the effects of keystroke delays. Choosing a longer inter-character delay causes the characters to be sent at a slower rate. If the host system is not capable of receiving characters as fast as the reader can transmit, setting an appropriate inter-character delay will keep the reader from overrunning the host input buffer. The default is 2 ms.

Default Page Button

After you click the Default Button, the general settings page will change back to the default value. Settings are not sent to MSR until the „Send to MSR“ button is clicked.

Help Button

Click the help button to open the help index for this section.

Pre/Postamble

Preamble
Characters can be added to the beginning of the reader‘s output string of data. These can be special characters for identifying a specific reading station, to format a message header expected by the receiving host, or any other character string. Up to nine ASCII characters can be defined for the Premable.

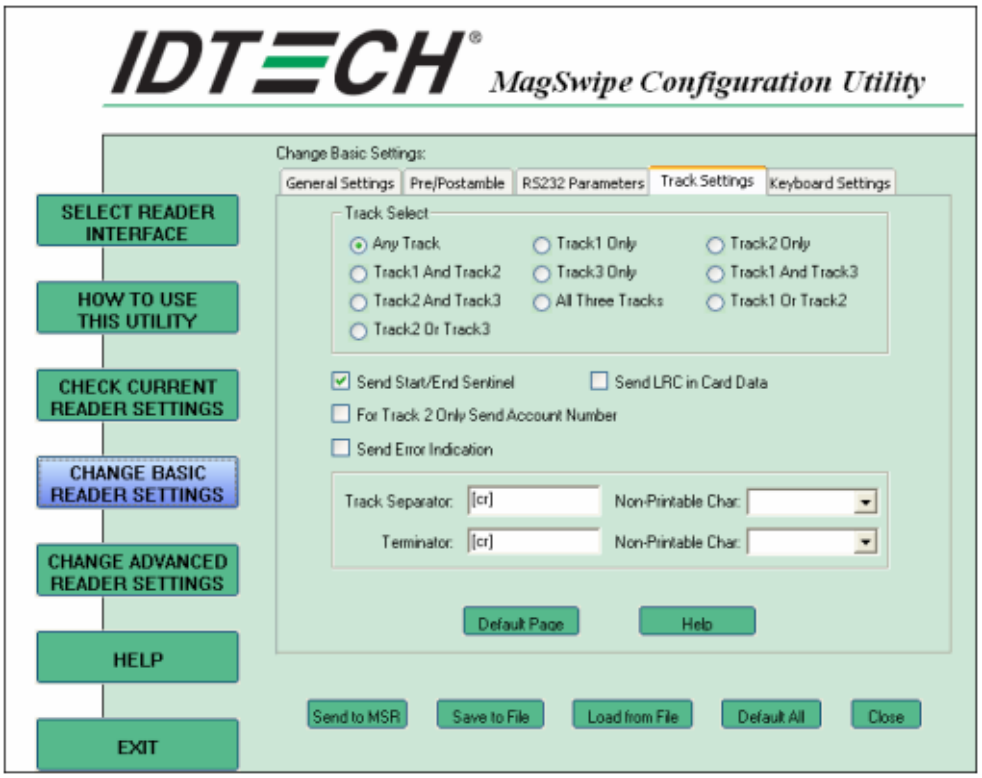
Postamble
The Postamble serves the same purpose as the Preamble, except the extra characters are added to the end of a data string. The Postamble can be added only after a terminator character, if specified.

Track Prefix and Suffix
For some Host applications, it may be convenient to start or end a string of reader data with a Sentinel or terminator character. The maximum Prefix/Suffix string is six characters and its default is NULL (no prefix or suffix).

Track Start Sentinels
Characters can be added to the beginning of each track data string to simulate the start of the track data. These can be special characters for identifying a specific track.

End Sentinel
The magnetic stripe End Sentinel character can be added to the end of a magnetic stripe data string. This character simulates the end of character for track1, track2 or track3. This default is ‚?‘

Track Settings



Track Selection

There are three tracks of information possible on a magnetic stripe. This option selects the tracks that will be decoded (read). Note that the magnetic stripe reader must have the hardware configuration (read head and circuits) for reading the specified tracks. If a single or dual track reader is used, the heads must be positioned to read the tracks selected by this option. The default is Any Track. (All tracks written on the card will be read).

Track Separator Selection

This option allows the user to select the character to be used to separate data decoded by a multiple-track reader. The default value is CR

Send Start/End Sentinel

The reader can send the Start/End sentinel for a track, decoded without error.

Send LRC in Card Data

The reader can send the track LRC for a properly decoded track.

For Track 2 only Send Account Number

The reader can only send account Number if it is true. And if it is false, the reader sends all Track 2 data.

Send Error Indication

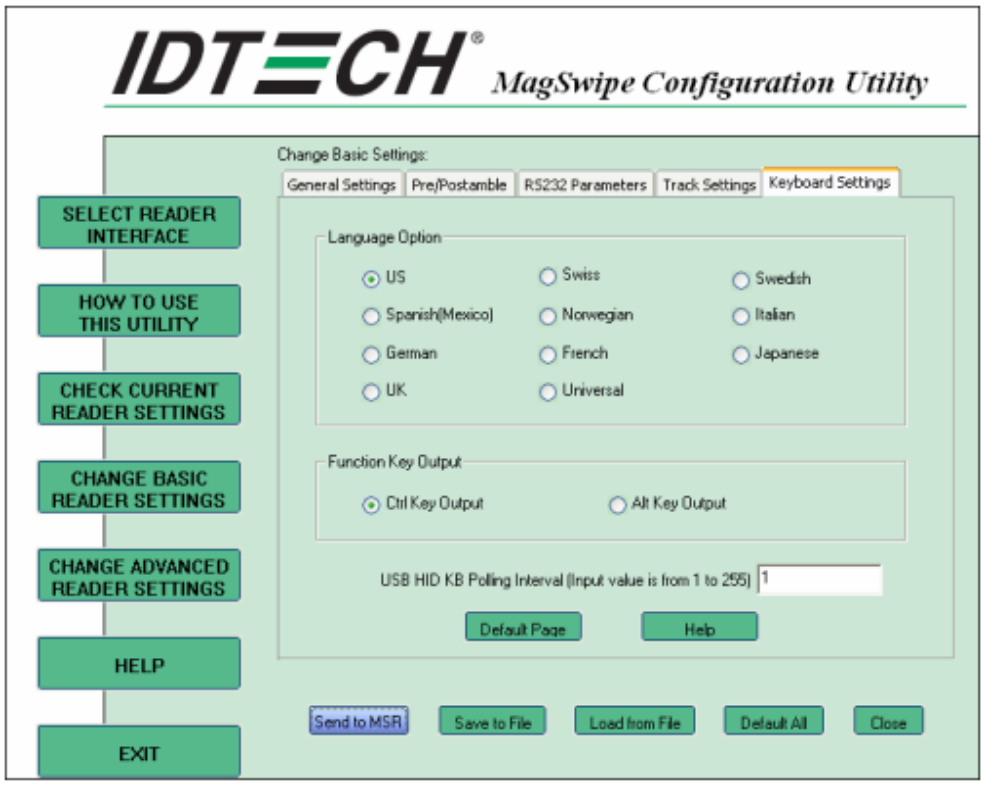
This option let reader to send out [SS]E[ES] if failed to read or missing data on a selected track. The default is off.

The error output for track 1 is "%E?".

The error output for track 2 is ";E?".

The error output for track 3 is "+E?".

Keyboard Settings



Keyboard Settings

There is keyboard settings information on a magnetic stripe. MiniMag II will support following foreign language keyboard and function key output for PS/2 and USB HID Keyboard Interface.

Language Option

This option allows the user to select the keyboard language of US, Swiss, Swedish, Norwegian, Italian, Spanish (Mexico), German, French, Japanese, UK and Universal. Universal language sends out all the data as a series of ALT keypad sequence.

Function Key Output

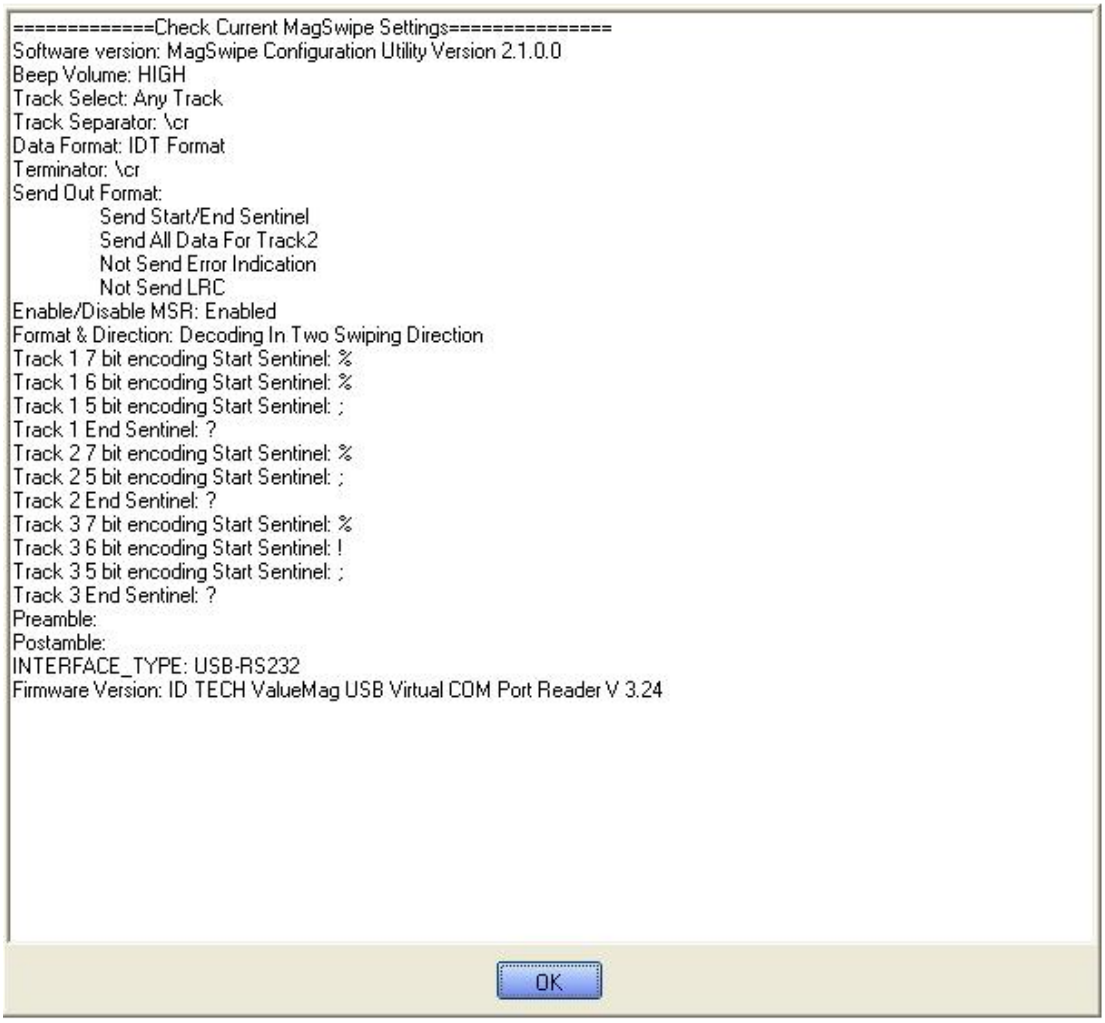
The function key output be used to support the special key to delay card data output.

USB HID KB Polling Interview

The user can input the number between 1 to 255 for the delay of output.

Check Current Reader Setting

After you connect the device, the current reader configuration can be displayed by selecting this button. The configuration data of the connected reader will be displayed like in the example:

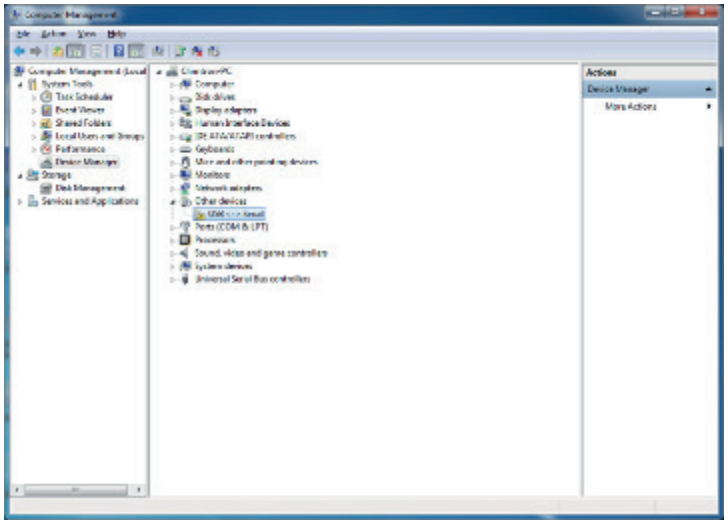


5-3 RFID

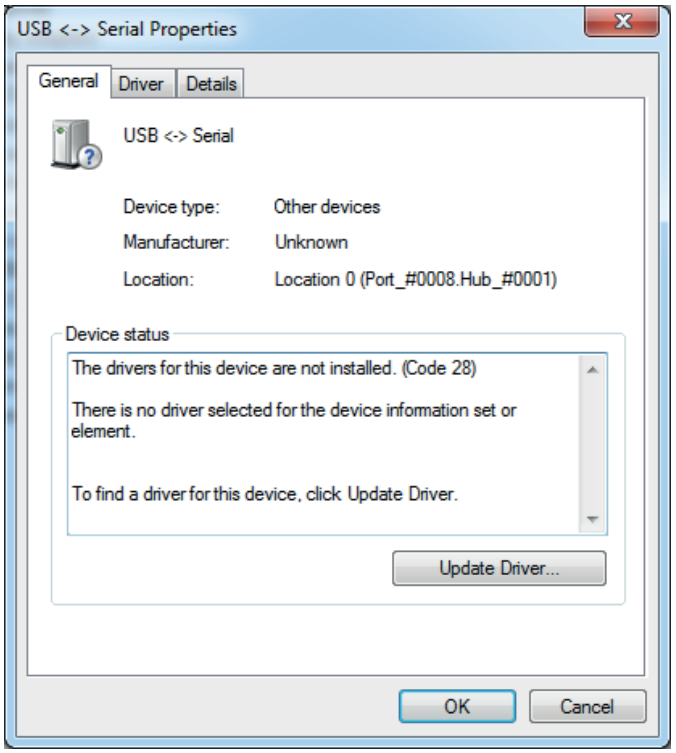
1. Install driver

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

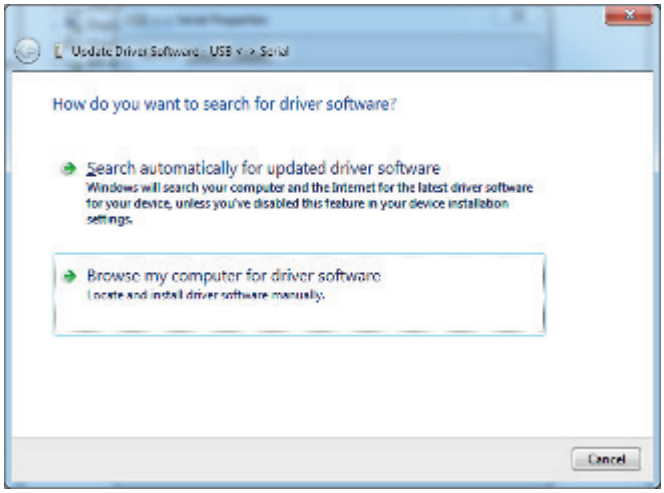
Computer Management -> Device Manager -> Other devices (The device will show a question mark if the installation is not done properly.)



1.2. Double-click to update driver.

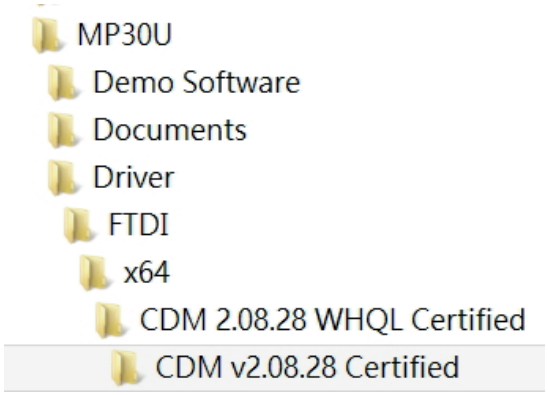


1.3. Select “**Browse my computer for driver software**” .

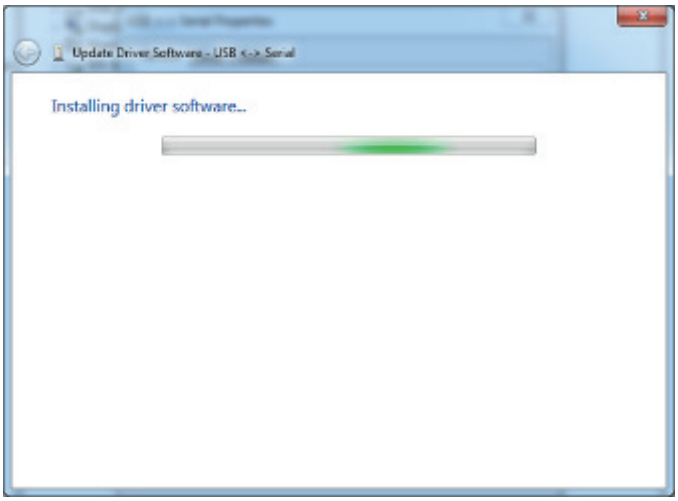


1.4 Click Browse to select file called MP30U \Driver\FTDI\x64

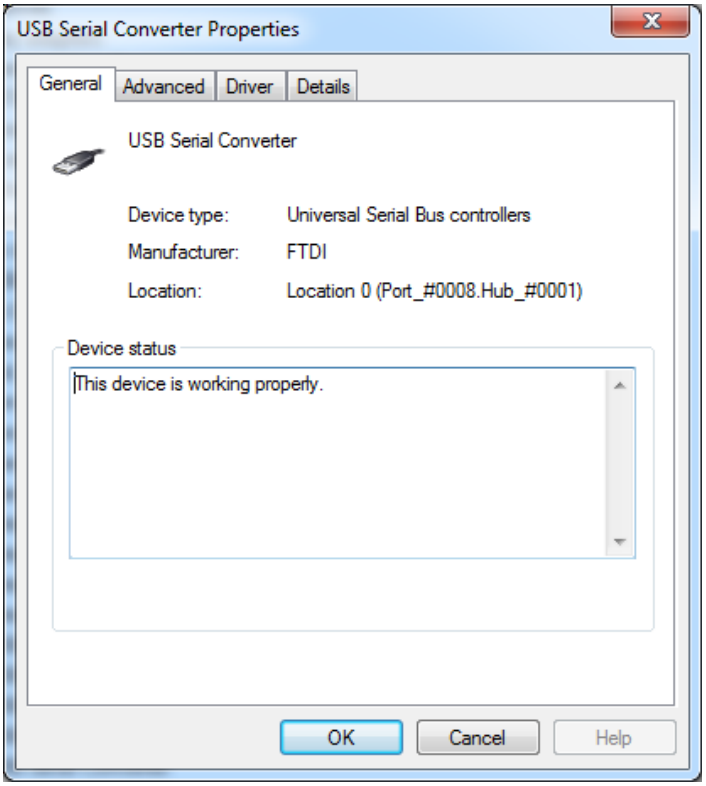
And click “**Next**”.



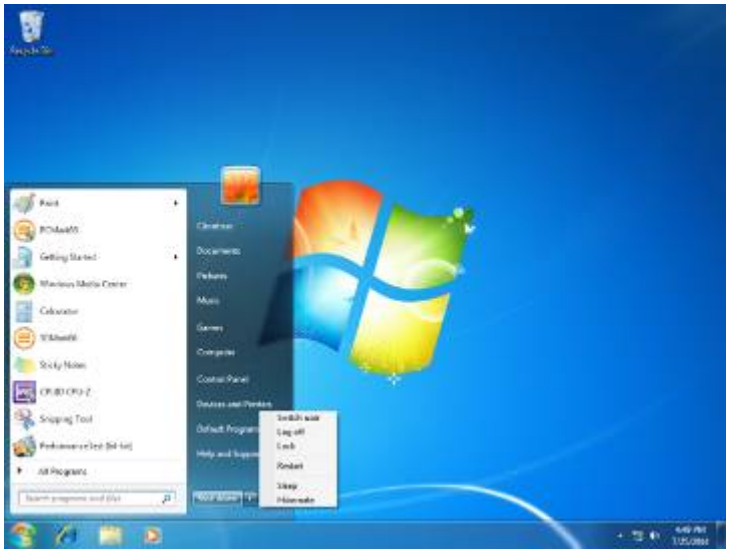
1.5. Install the driver



1.6 Install complete and then click “close”

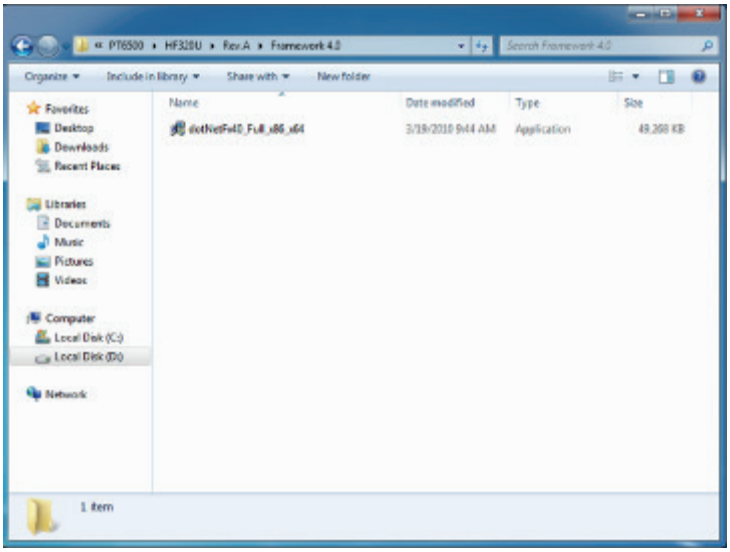


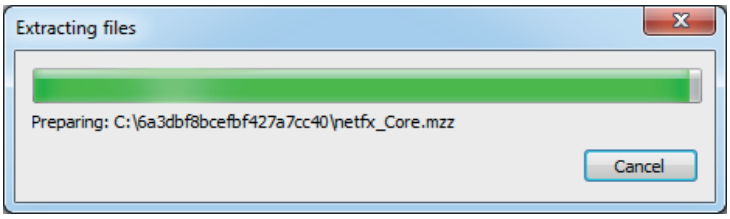
1.7 Restart the computer



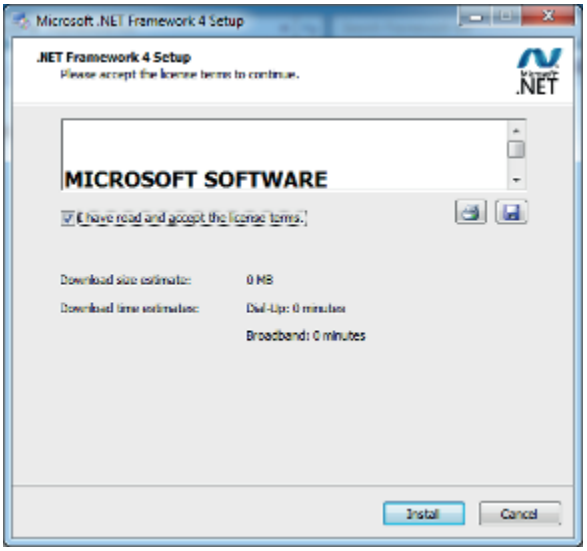
2. Install framework 4.0

2.1 Double-click to install.

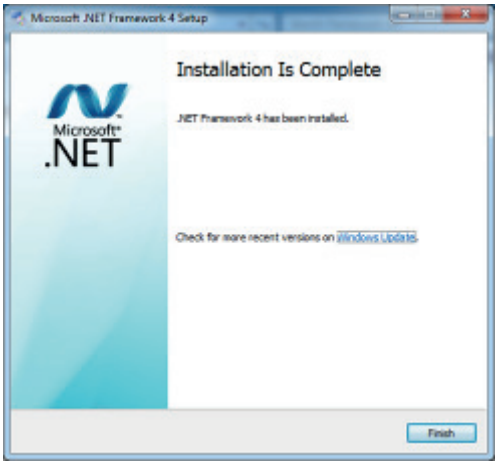




2.2 Select “**I have read and accept the license terms**”. And click “**Install**”.

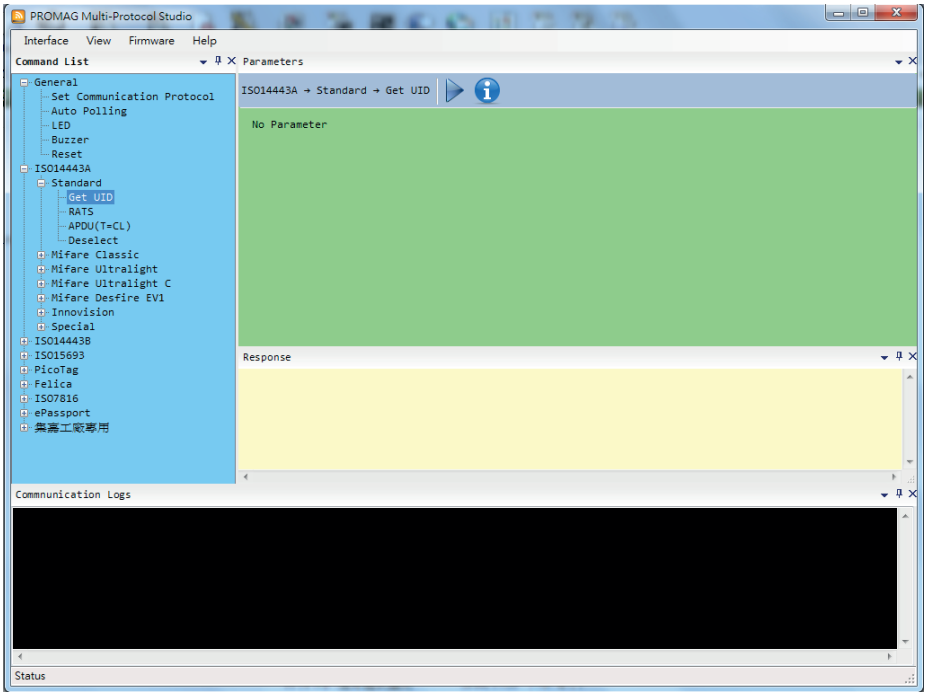


2.3 Click “**Finish**”.

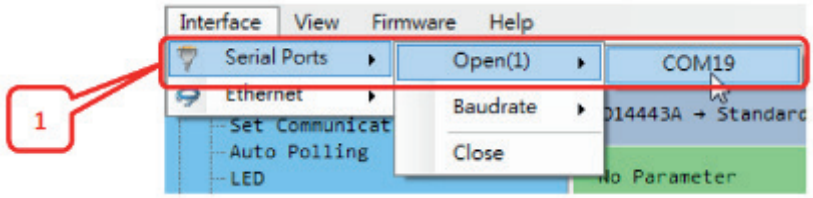


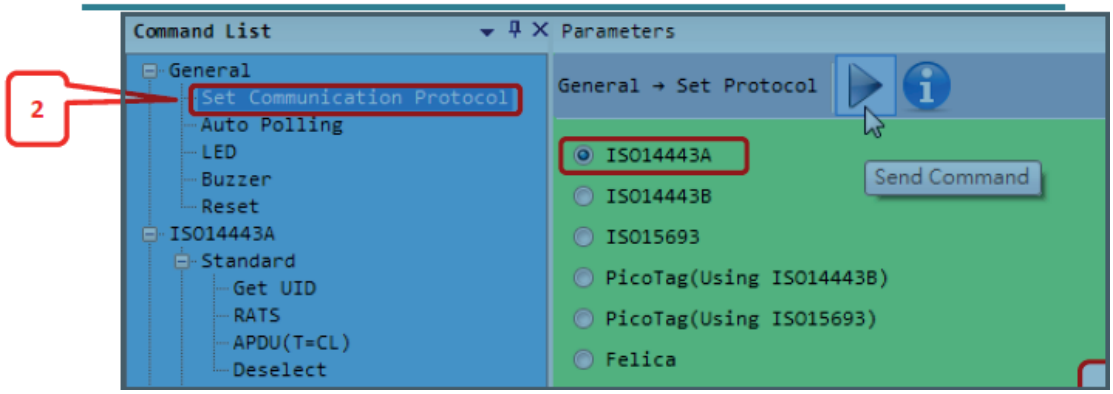
3. Quick Start with Demonstration Software

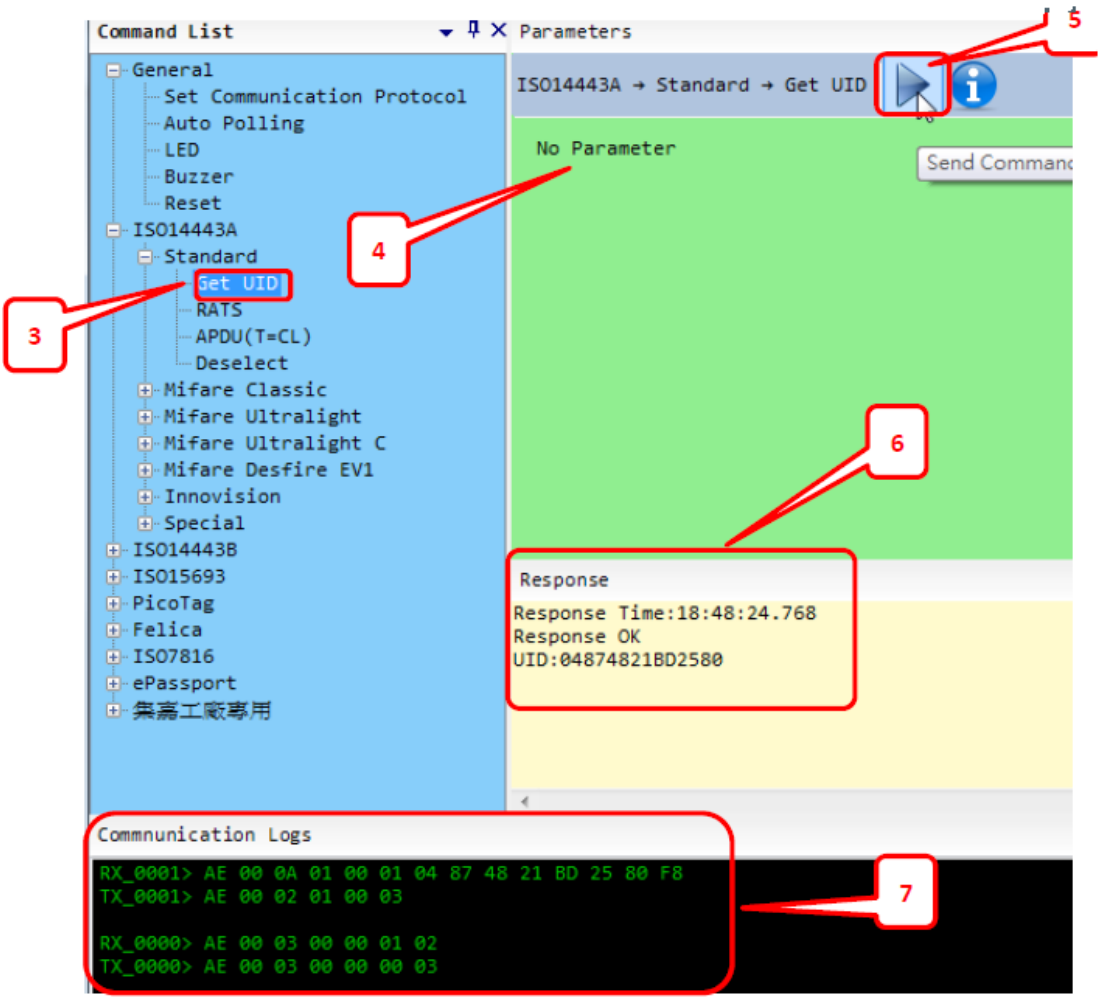
3.1. The demonstration software is “MP Studio.exe” provided in the folder “Demo Software”. There is no software setup required; just double click the”MP Studio.exe”. The demonstration software can run either from CD or a copy on hard drive. The GUI of software is shown in below picture and ready to use.



3.2 Following steps, as shown in below picture, demonstration a simple usage in reading UID of ISO14443A card for quick understanding.





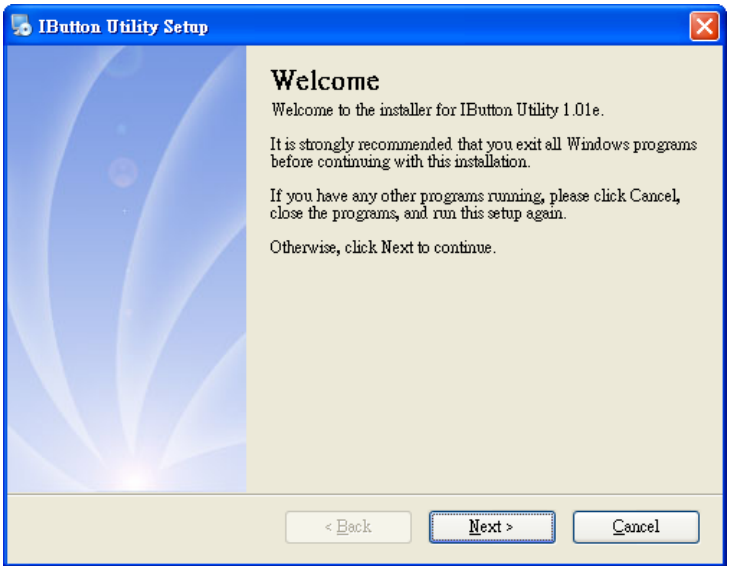

Command List
Parameters
General
Set Communication Protocol
Auto Polling
LED
Buzzer
Reset
ISO14443A
Standard
Get UID
RATS
APDU(T=CL)
Deselect
Mifare Classic
Mifare Ultralight
Mifare Ultralight C
Mifare Desfire EV1
Innovision
Special
ISO14443B
ISO15693
PicoTag
Felica
ISO7816
ePassport
ISO14443A → Standard → Get UID
No Parameter
Send Command
Response
Response Time:18:48:24.768
Response OK
UID:04874821BD2580
Commnunication Logs
RX_0001> AE 00 0A 01 00 01 04 87 48 21 BD 25 80 F8
TX_0001> AE 00 02 01 00 03
RX_0000> AE 00 03 00 00 01 02
TX_0000> AE 00 03 00 00 00 03
3
4
5
6
7

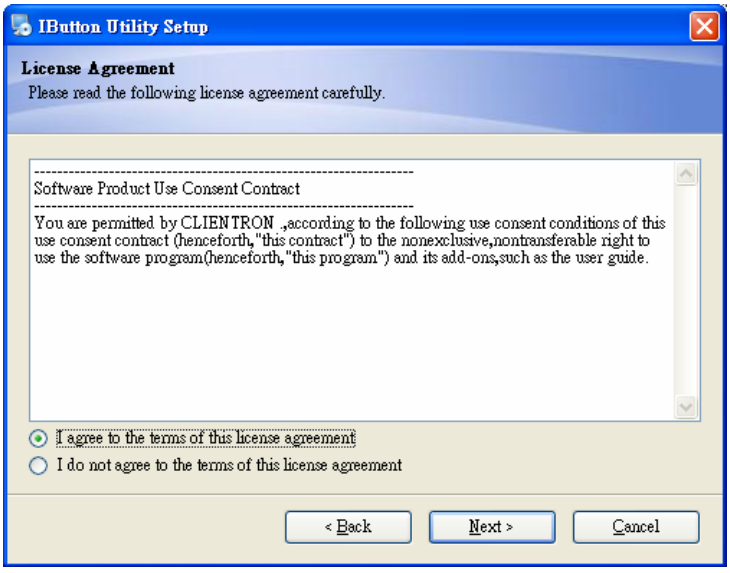
5-4 Configuration Utility of i-Button Reader Installation

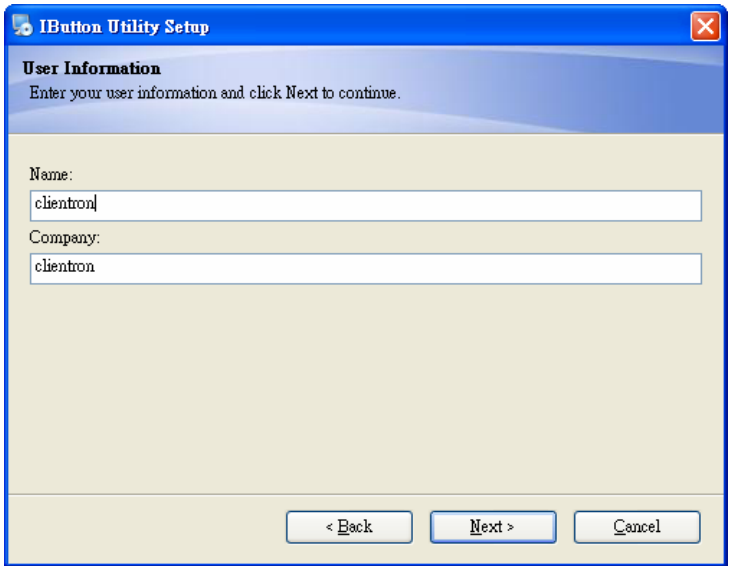
Below steps guide you how to install the Utility program.

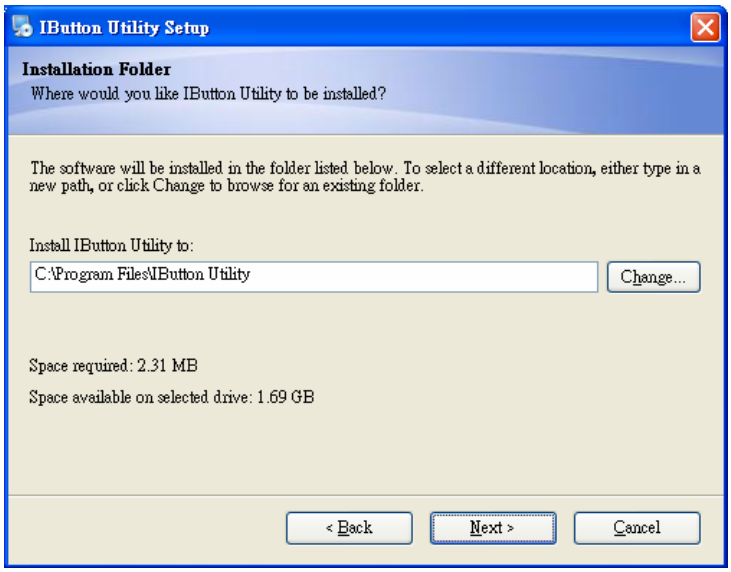
- Insert the setup CD
- Run the Colormetrics I Button Utility.exe setup file that is located in the Software folder of CD
- Follow the wizard to complete the installation.

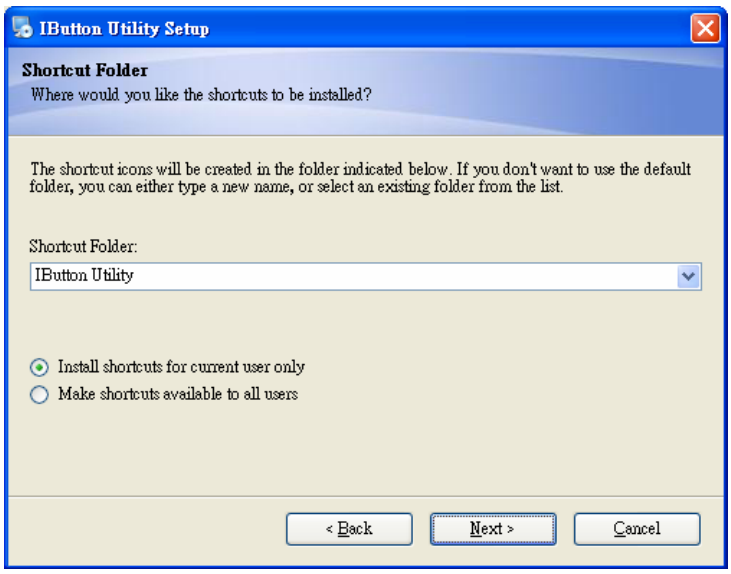
1. Setup IButton _V1.0.exe software

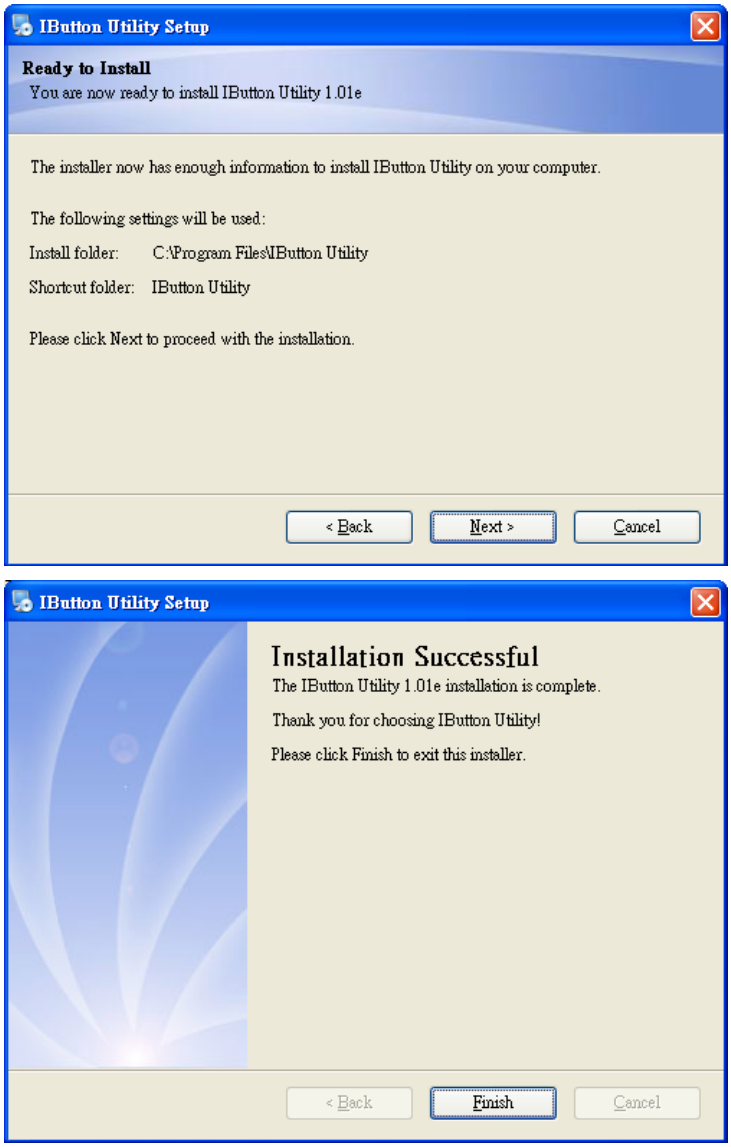





IButton Utility Setup
User Information
Enter your user information and click Next to continue.
Name:
clientron
Company:
clientron
< Back
Next >
Cancel

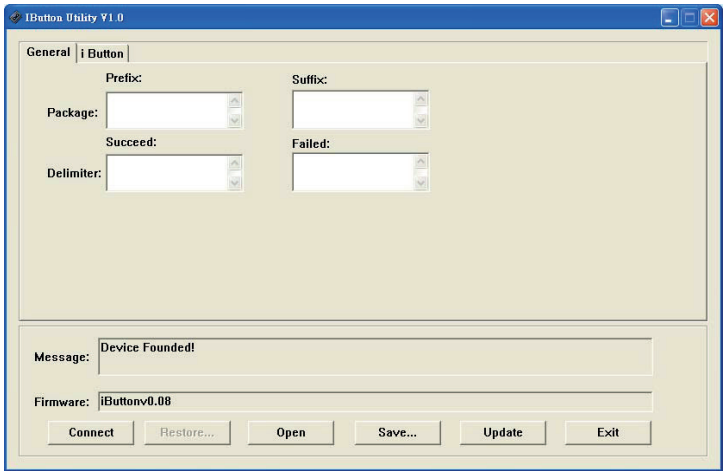

IButton Utility Setup
Installation Folder
Where would you like IButton Utility to be installed?
The software will be installed in the folder listed below. To select a different location, either type in a new path, or click Change to browse for an existing folder.
Install IButton Utility to:
C:\Program Files\IButton Utility
Change...
Space required: 2.31 MB
Space available on selected drive: 1.69 GB
< Back
Next >
Cancel


IButton Utility Setup
Shortcut Folder
Where would you like the shortcuts to be installed?
The shortcut icons will be created in the folder indicated below. If you don't want to use the default folder, you can either type a new name, or select an existing folder from the list.
Shortcut Folder:
IButton Utility
Install shortcuts for current user only
Make shortcuts available to all users
< Back
Next >
Cancel



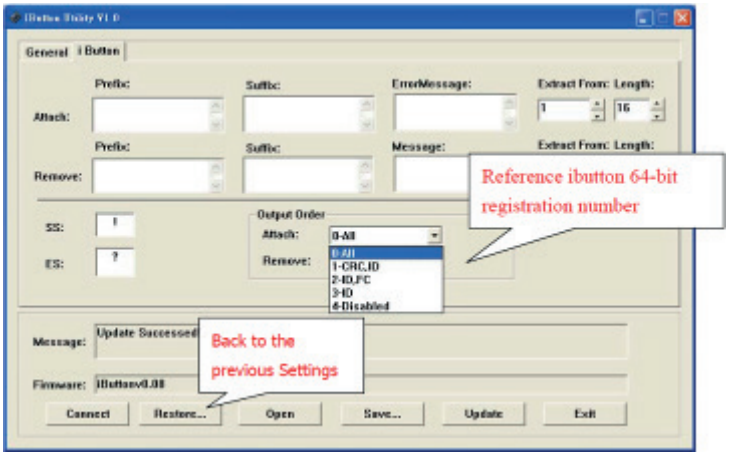
2. To execute “IButton_V1.0.exe” for setup communication between software and IButton module.

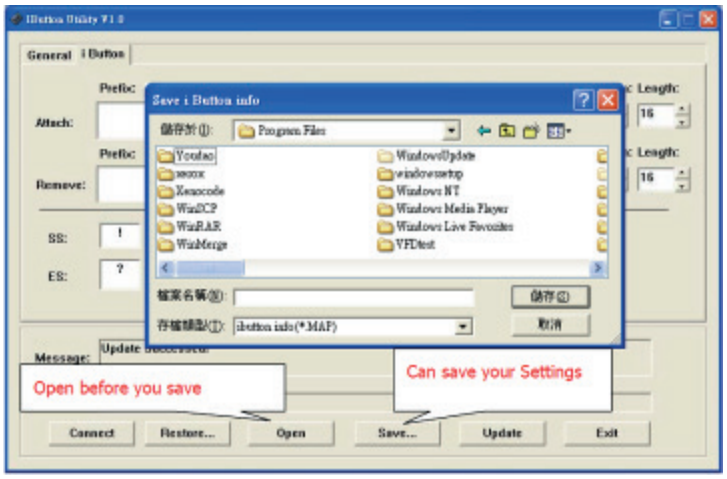
- The utility program will detect the connected reader. If detected, all the input text boxes will be enabled.
- If the reader has not been connected to PC yet, please connect the reader and then click Refresh to get connected.



Configuration

Below is the main window of i-Button Utility program.





For the settings, there are:

- Prefix/Suffix: Defines the data string which you would like to append in front or end of the i-Button key string.

iButton Data Package :

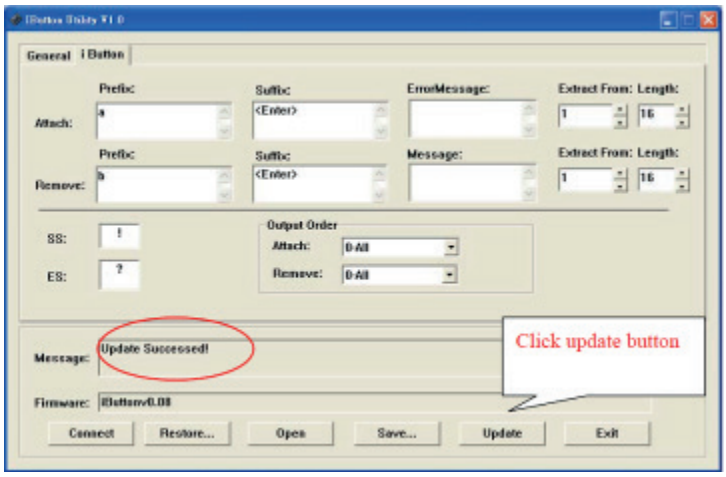
- Error Message: Indicates error message when i-Button key read fail.
- Message: Indicates message when i-Button key read correctly
- SS/ES : Define Start and End sentinel byte for the i-Button ID string

iButton data format:
SS + iButton 64- Bit Registration Number + ES

- Length : i-Button ID length request from 0~16
- Output order : 4 formats could be select at Attach /Remove i-Button ID

iButton 64- Bit Registration Number:
8-Bit CRC + 48-Bit ID + 8-Bit FC

DEMO SETUP&OUTPUT



OUTPUT DATA :

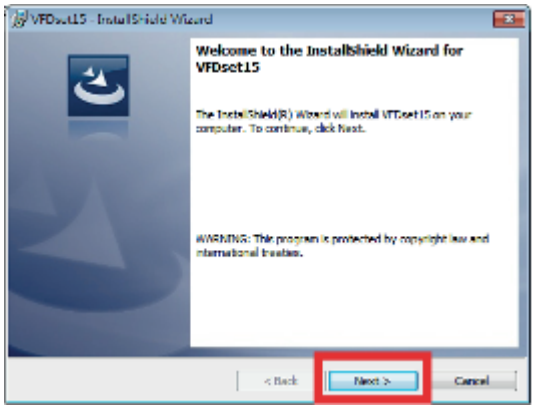
a!ab00000003bdfa01?

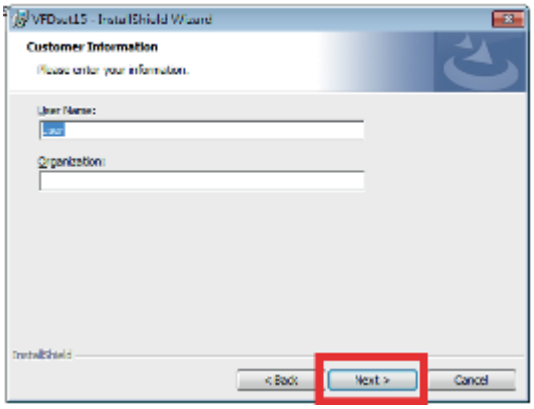
b!ab00000003bdfa01?

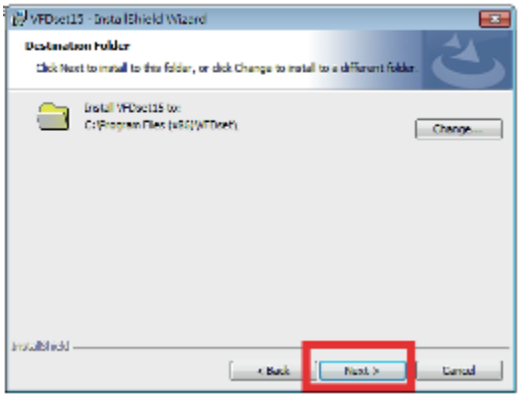
5-5 VFD

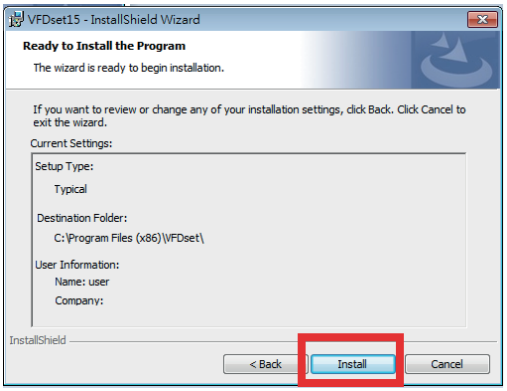
1. Power on VFD and waiting test page of EEPROM test, Baud rate and Command page. Set up the customer display by " VFDset.exe”

2. Setup VFDset.exe software.

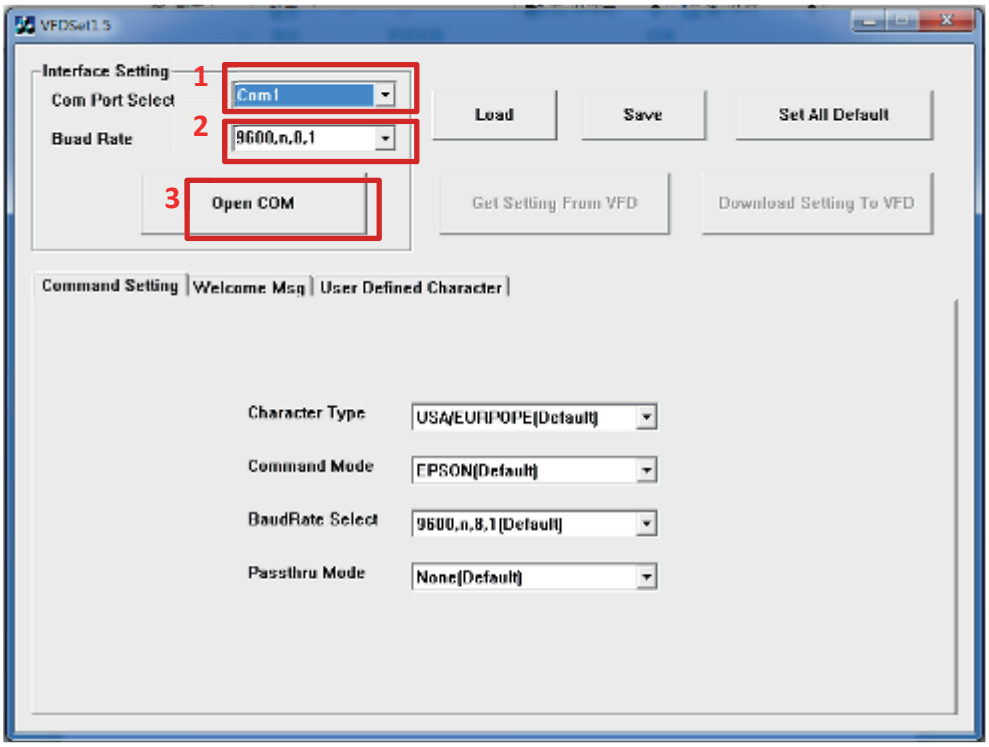








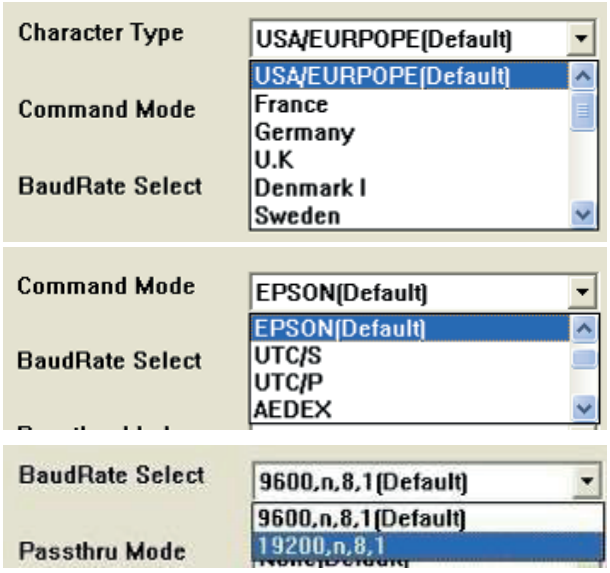
3. To execute “VFDset.exe” for setting up communication between software and VFD module.



Please then follow the steps as shown in the above figure, the baud rate will show on states page of VFD module (Note: You may check it when power on VFD module), then click “Open COM” button.

4. “Get Setting from VFD” button to get all the settings from Colormetrics and it’ll refresh the “VFDset.exe” software.

5. Select “**Character Type**”/ “**Command Mode**”/ “**Baud Rate Select**”/ “**passthru Mode**”.



6. Click “Set All Default” button to show default setting, the Default table is

Character Type ：USA

Command Type ：EPSON/EURPOPE

Baud Rate Setting ：9600/n/8/1

Pass-through Mode ：None

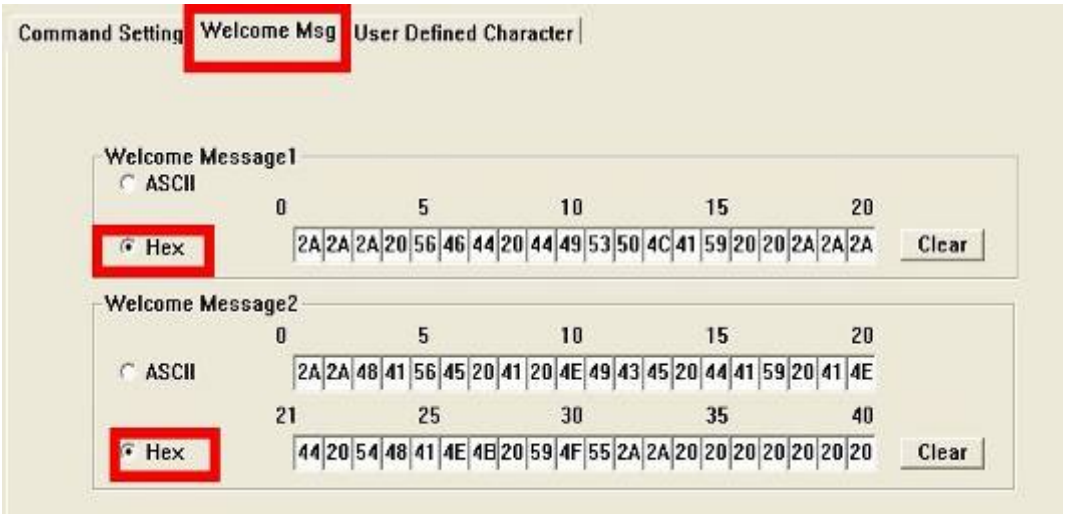
Welcome msg line1 ：*** VFD DISPLAY ***

Welcome msg line2 ：**HAVE A NICE DAY AND THANK YOU **

7. Welcome Message

Welcome Message line 1 maximum 20 characters; line 2 maximum 20 characters, total of 40 characters.

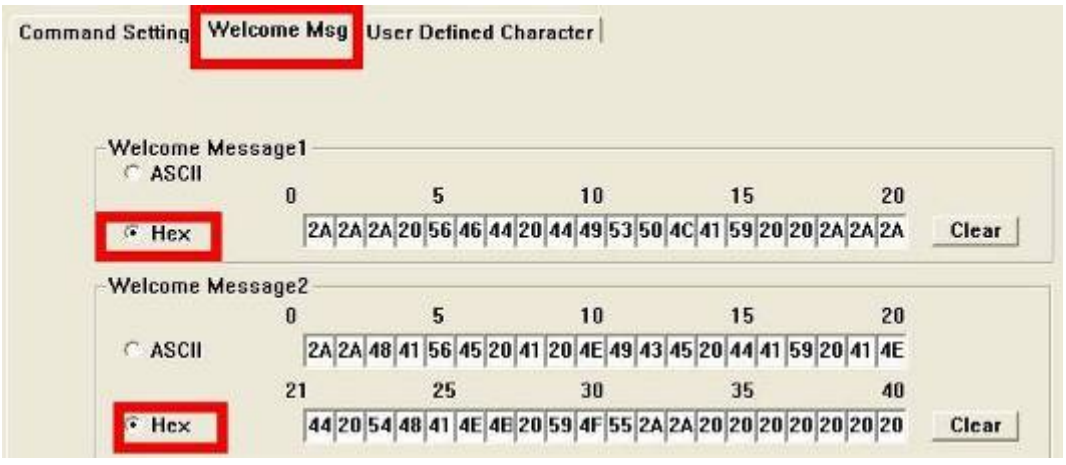
a. ASCII mode



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

b. Hex mode

Hex mode can define the character from 0x20h to0xFFh，the range 0x80~0XFF which depends on the code page table.



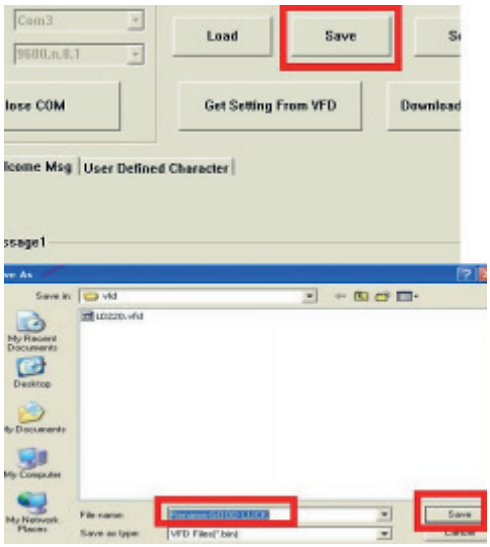
Like the first character (0x80)，in default code page will show on VFD module.

8. Click “Download setting to VFD” button

This button is to download the setting from VFDset.exe to VFD module. After success dialog “Download O.K! Please restart!” message popped up. Please restart display for enable new setting

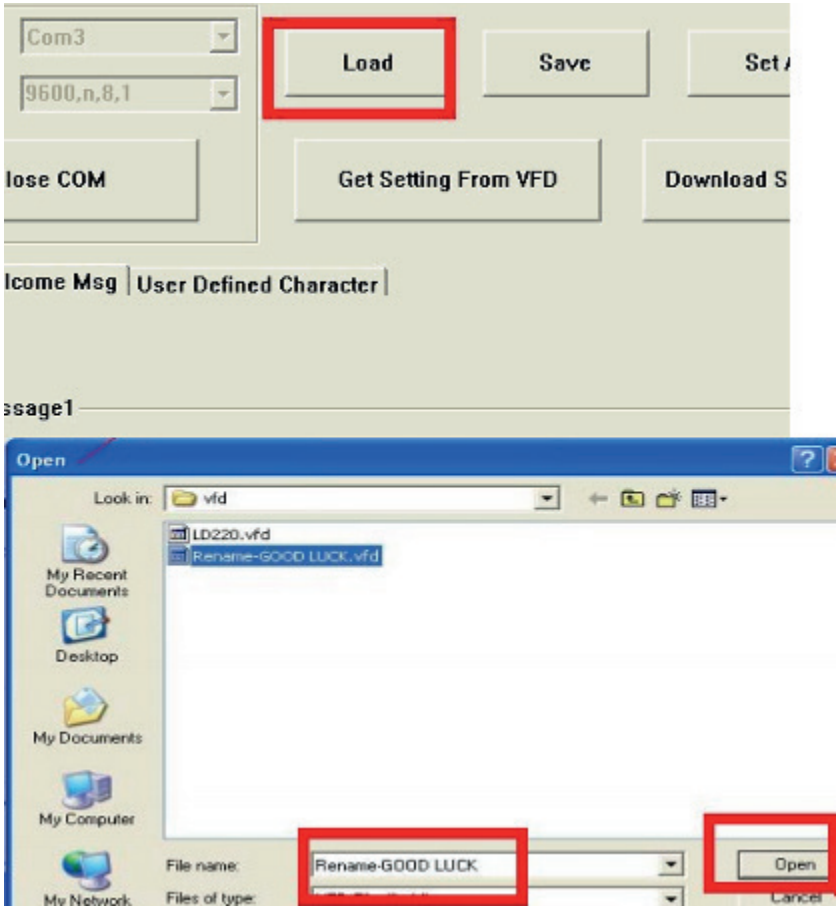
9. Click “**Save**” button

To save user’s setting in file; for example, save a file name as “GOODLUCK”, file set for welcome message.



10. Click “**Load**” button

After saving, you must restart the utility here. Then load your setting rename-GOODLUCK.vfd.



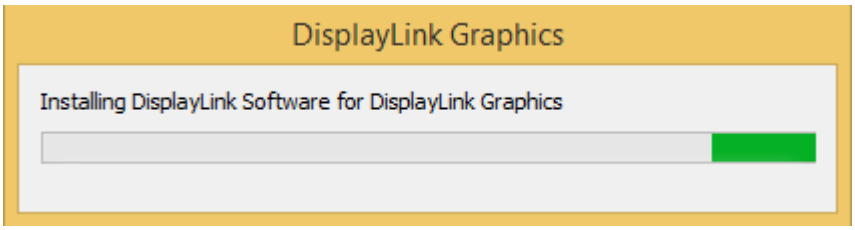
5-6 USB 2nd Display

DisplayLink software can be installed from Windows Update. Alternatively, the software can be downloaded and installed from the DisplayLink website following the steps below.

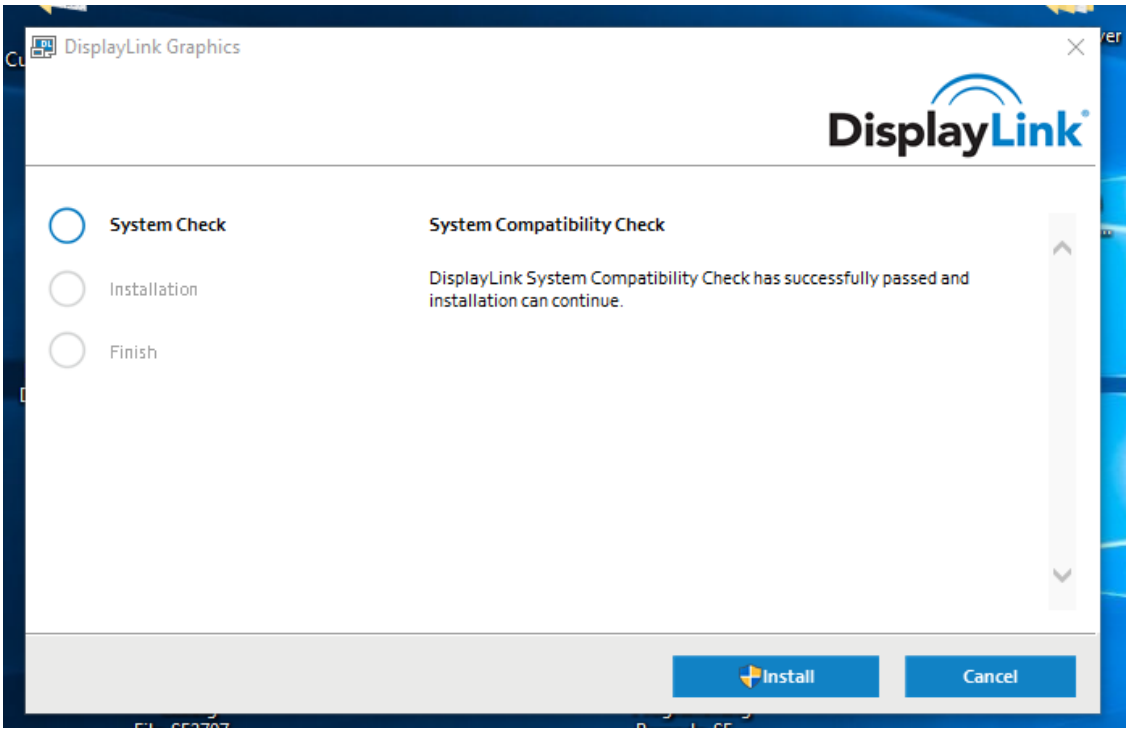
1. Double click on the DisplayLink executable, eg DisplayLink_RX.X.exe.

The Windows User Account Control window opens (if enabled in the OS).

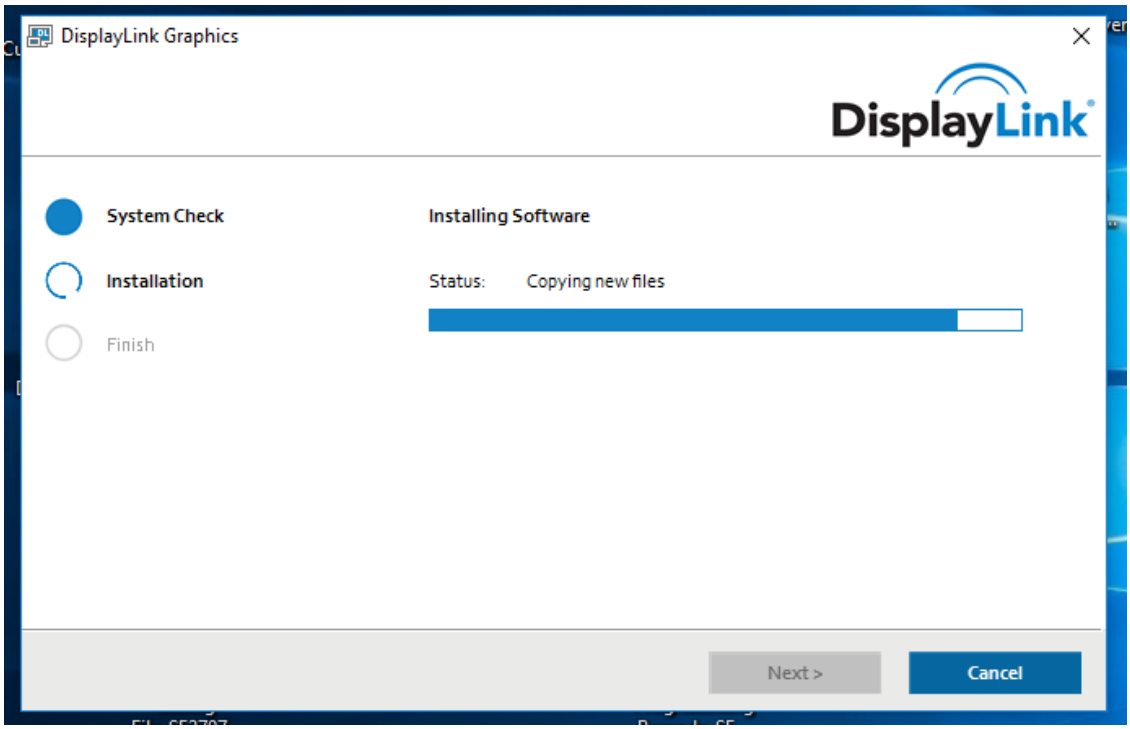
2. Click Yes. DisplayLink Core Software installs.



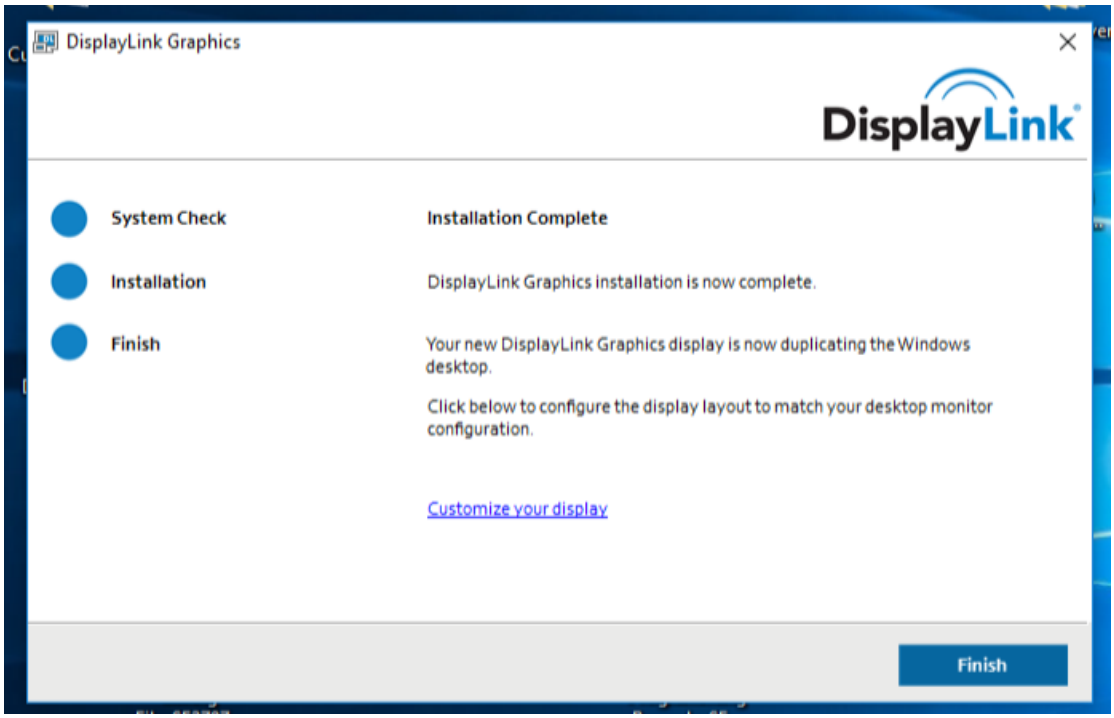
3. The System Compatibility Check then runs.
4. Click Install (if the System Compatibility Check passes).



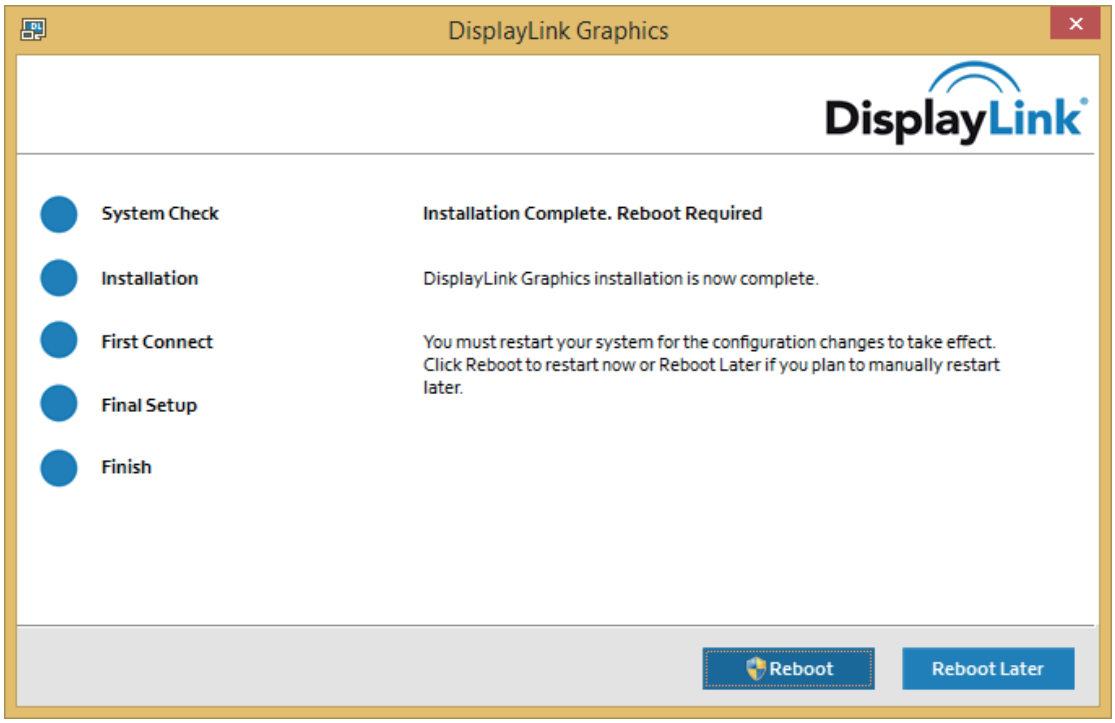
5. Connect your DisplayLink enabled device.



6. Upon detection of a DisplayLink enabled device DisplayLink Graphics installs.



7. You are then informed when installation of DisplayLink software has completed.



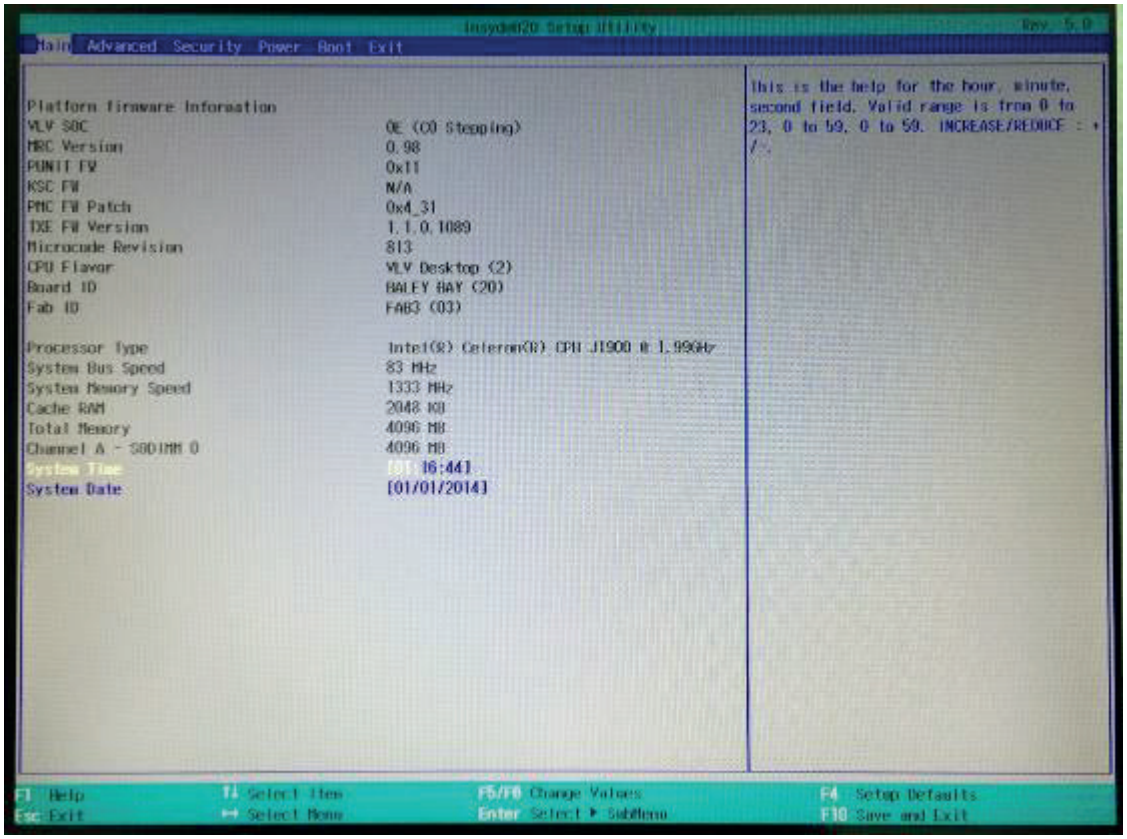
8. Reboot your SYSTEM to complete the installation.

Due to the Intel BayTrail J1900 CPU limitation, the DisplayLink driver can only be supported extend mode.

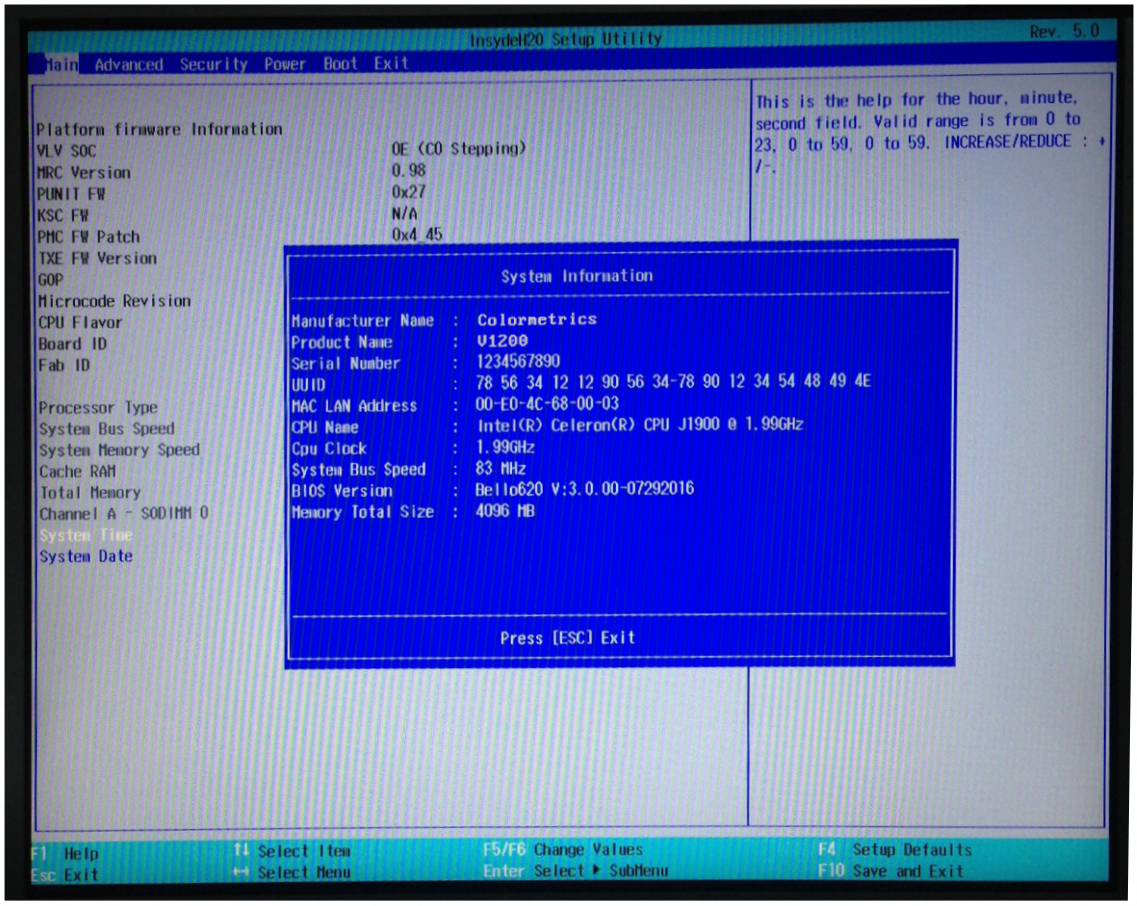
Press <DEL > key to enter SETUP CMOS UTILITY when system boot up.

☆ **Please press <DEL > key tenderly and slowly.**

☆ **Please press <ENTER >over SCU Button key.**



Press <F9> to view the system information



Date and Time

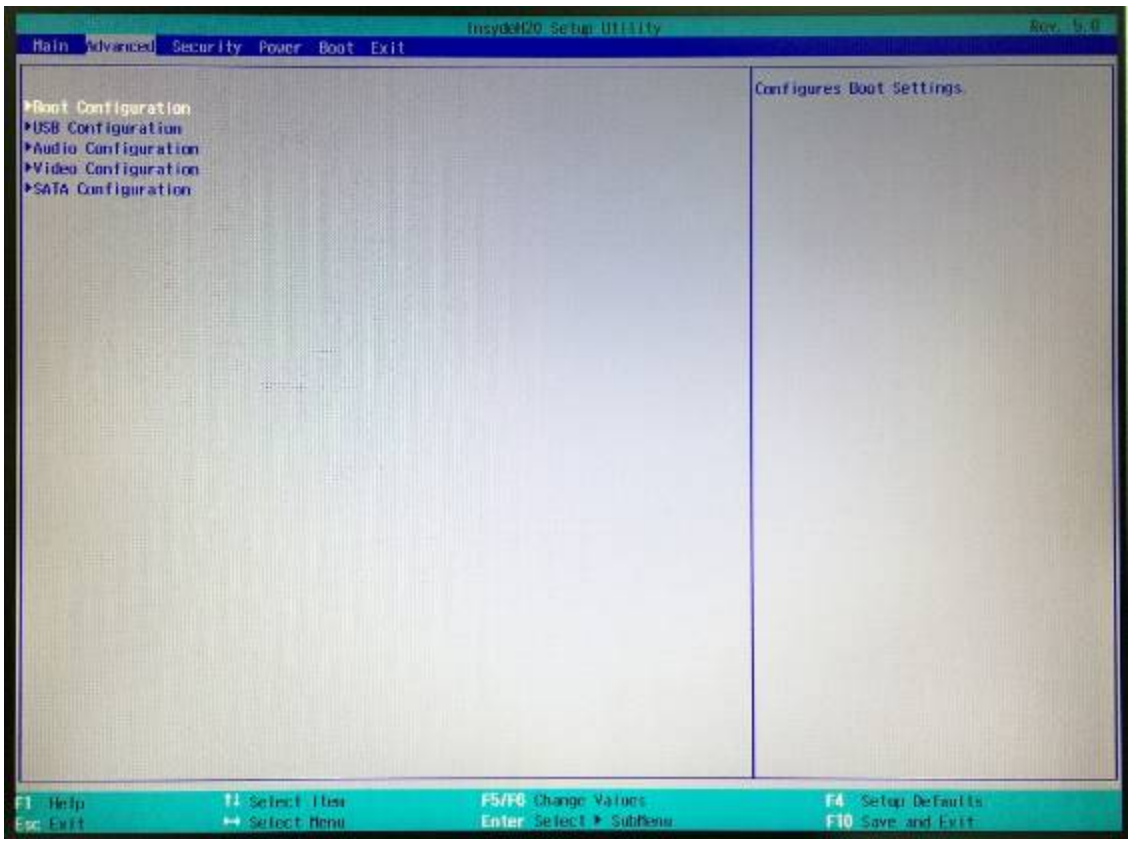
The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

WARNING!

Setting the wrong values in the sections below may cause the system to malfunction. Make sure that the settings made are compatible with the hardware.

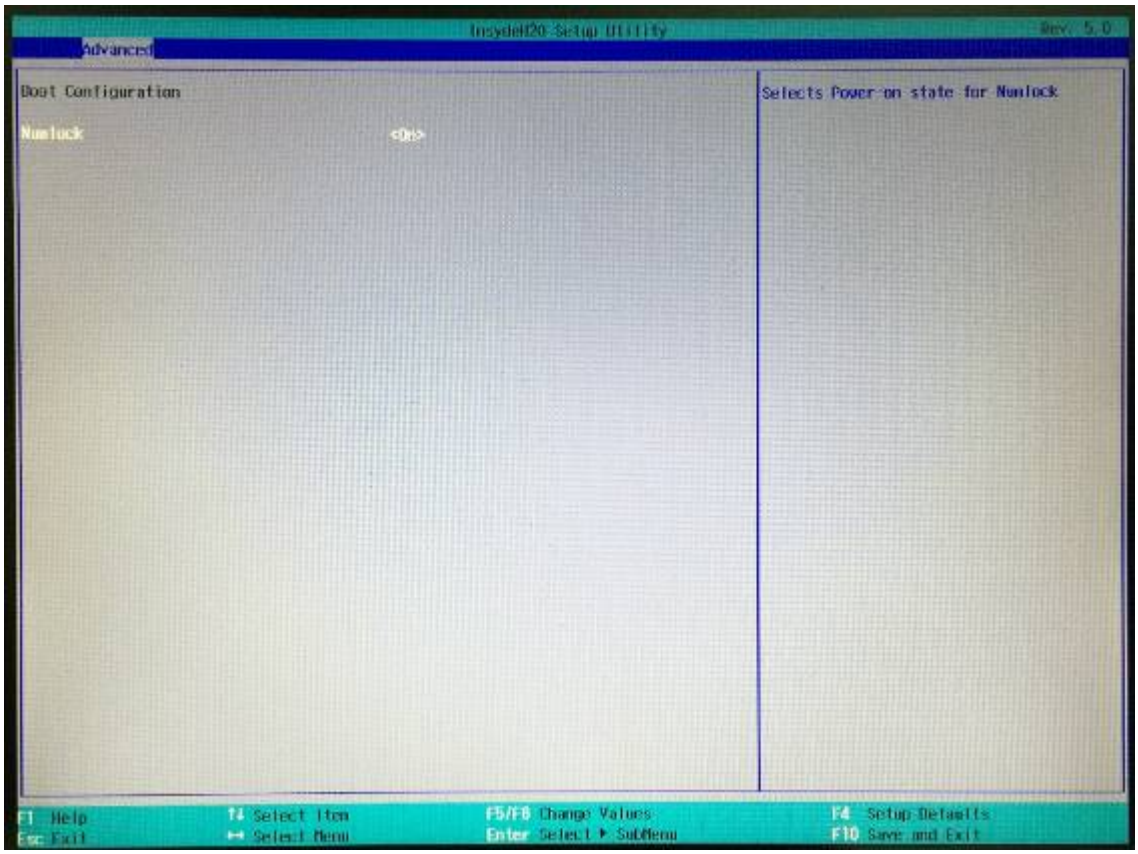
6-1 Advanced

Use the Advanced menu to configure the system for basic operation through the following sub-menus:



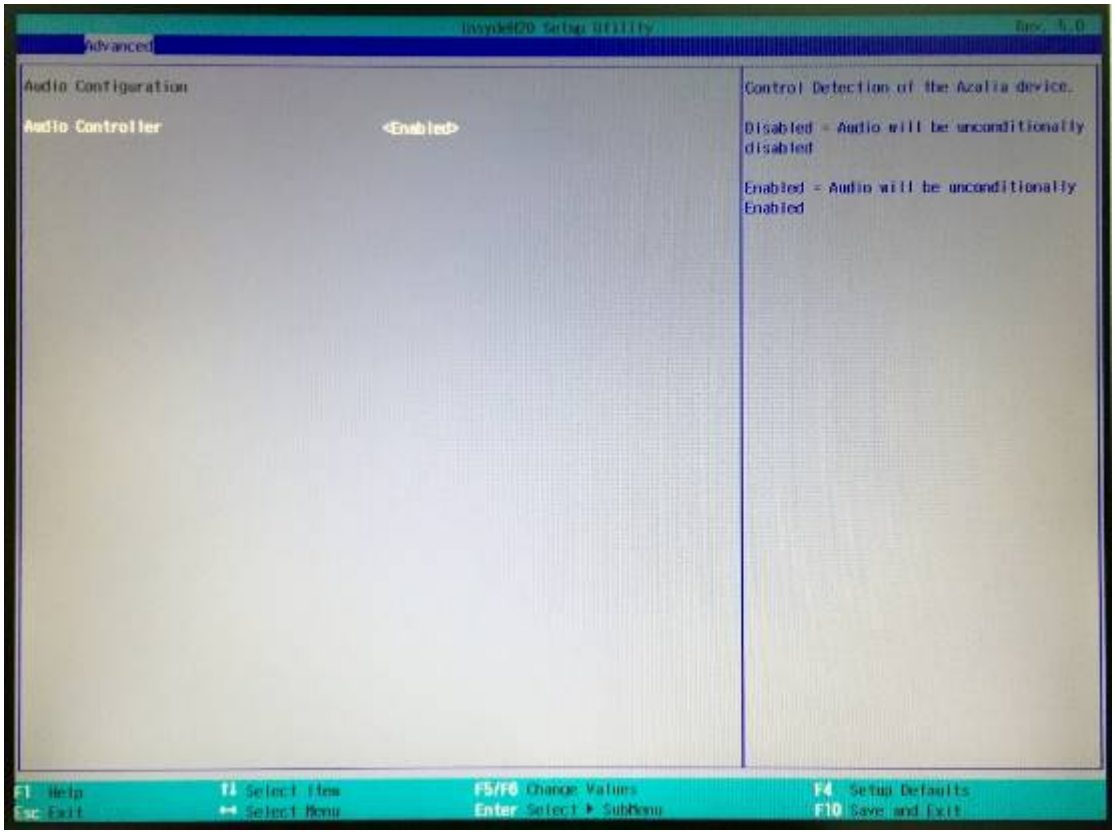
6-1-1 Boot Configuration

Use the Boot Configuration menu to select power-on state for Numlock.



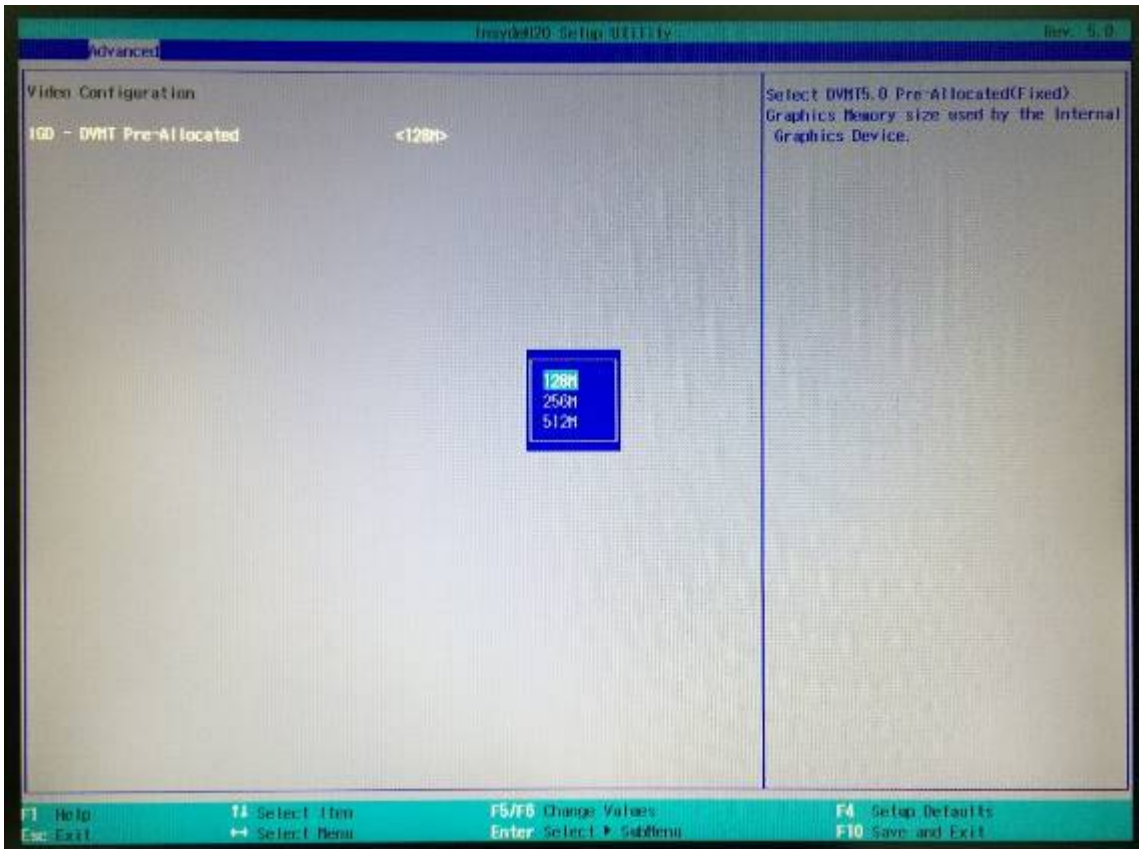
6-1-2 Audio Configuration

Use the Audio Configuration menu to read Audio configuration information and configure the Audio settings



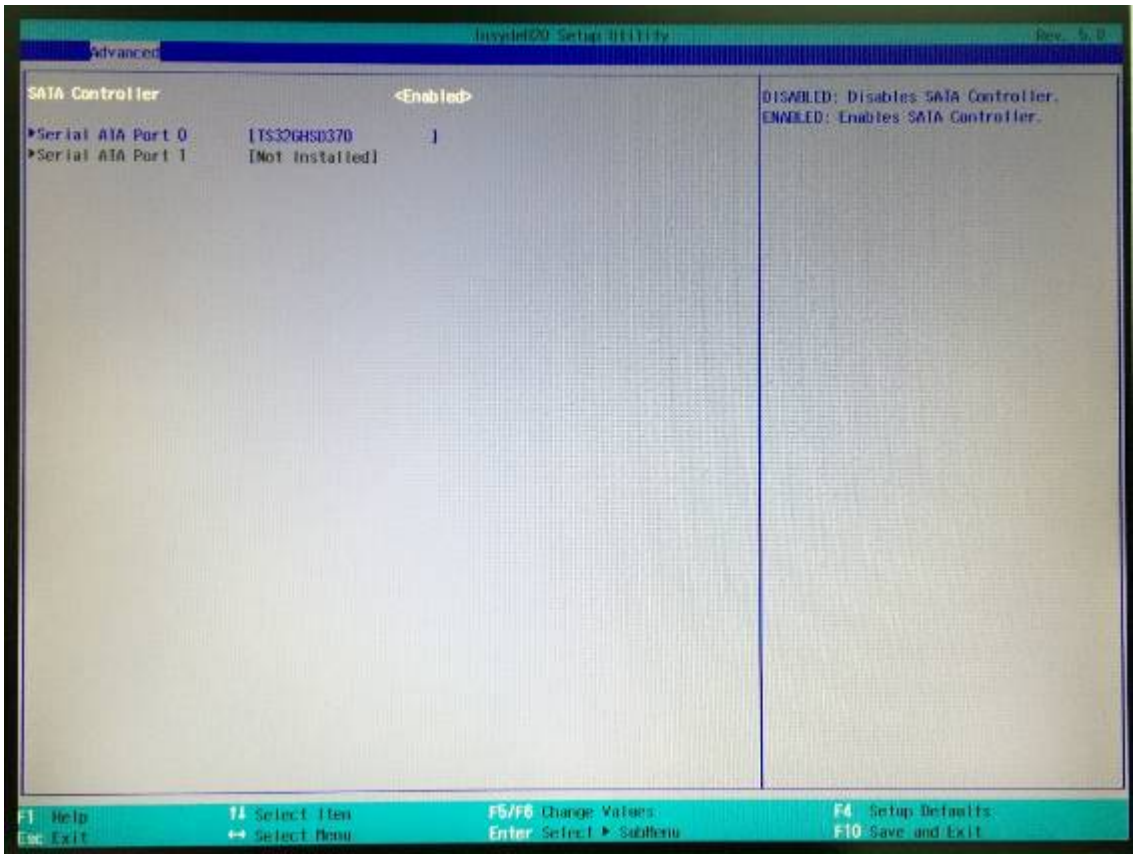
6-1-3 Video Configuration

Use the Video Configuration menu to read Video configuration information and configure the Video settings



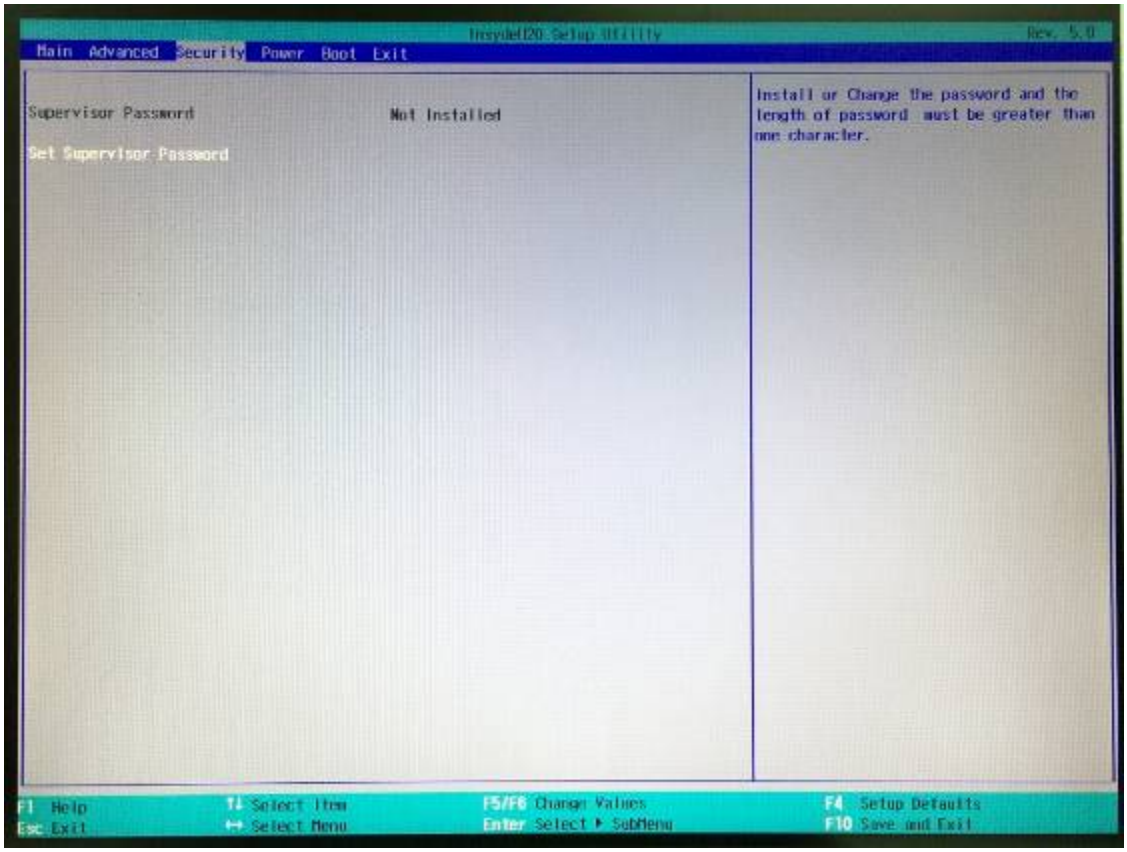
6-1-4 SATA Configuration

Use the SATA Configuration menu to read SATA configuration information and configure the SATA settings



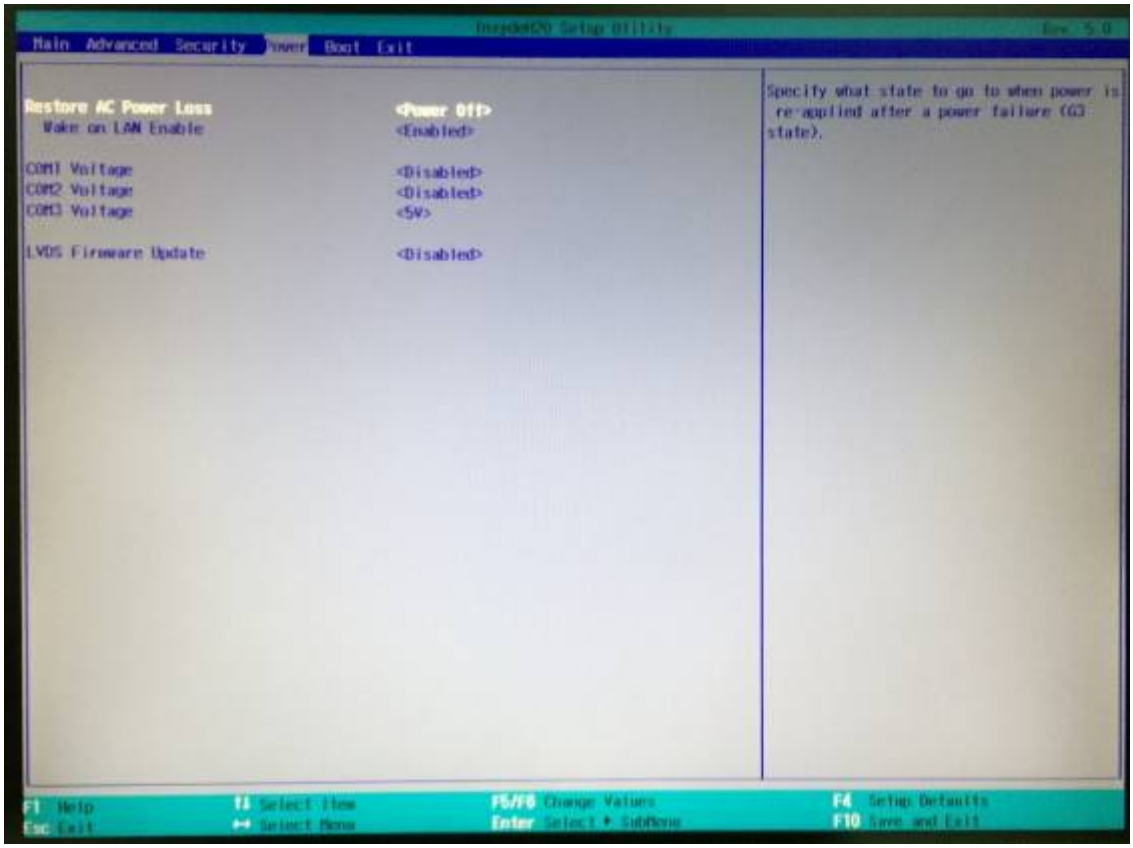
6-2 Security

Use the Security menu to install or change the password



6-3 Power

Use the Power menu to install or change the power settings.



AC Loss Auto Restart

Enable or disable system power on automatically after AC power restored

Wake on LAN

Enable or disable system wake by onboard LAN chip

COM Voltage

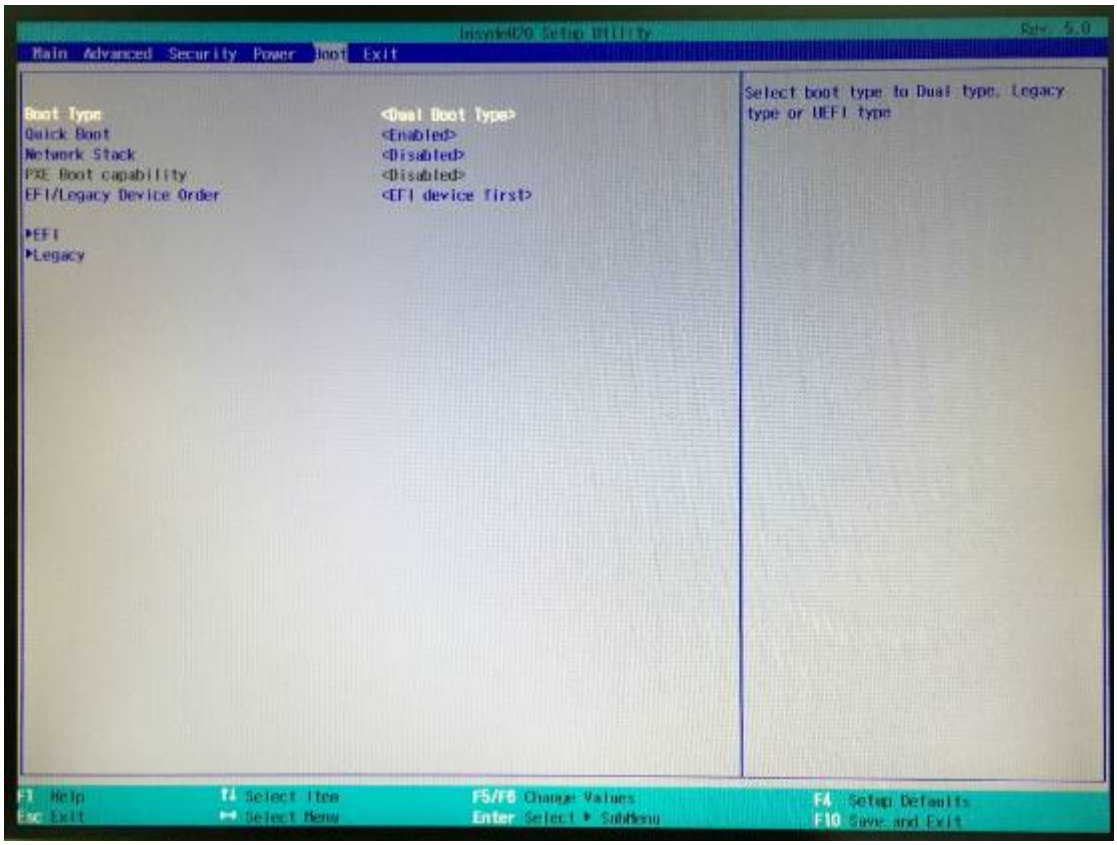
This item allows you to select off, 5V or 12V powered COM

LVDS Firmware update

This item allows you to enable or disable LVDS Firmware update

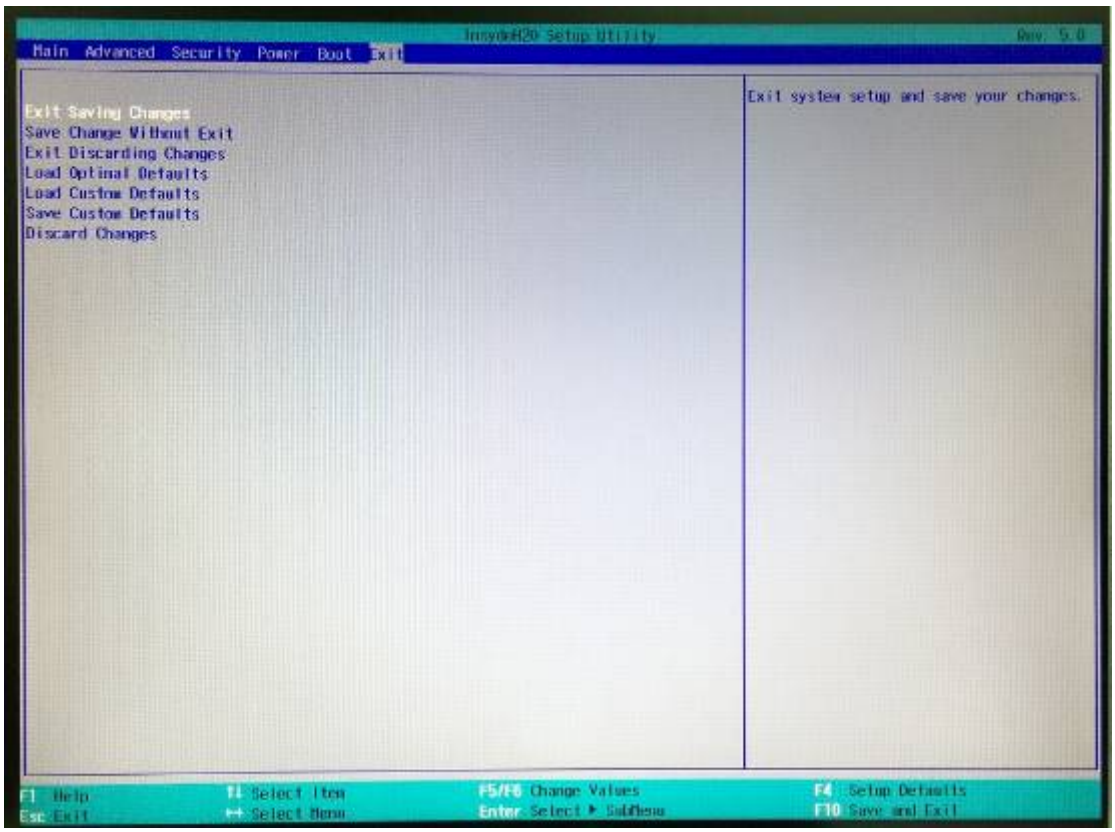
6-4 Boot

Use the Boot menu to select type to Dual type, Legacy type or UEFI type.



6-5 Exit

Use the Save & Exit menu to load default BIOS values, optimal failsafe values or to save configuration changes.



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