Colormetrics

PS1000
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.

TABLE OF CONTENTS

1-1 Standard Accessories

1-2 Optional Accessories

VFD

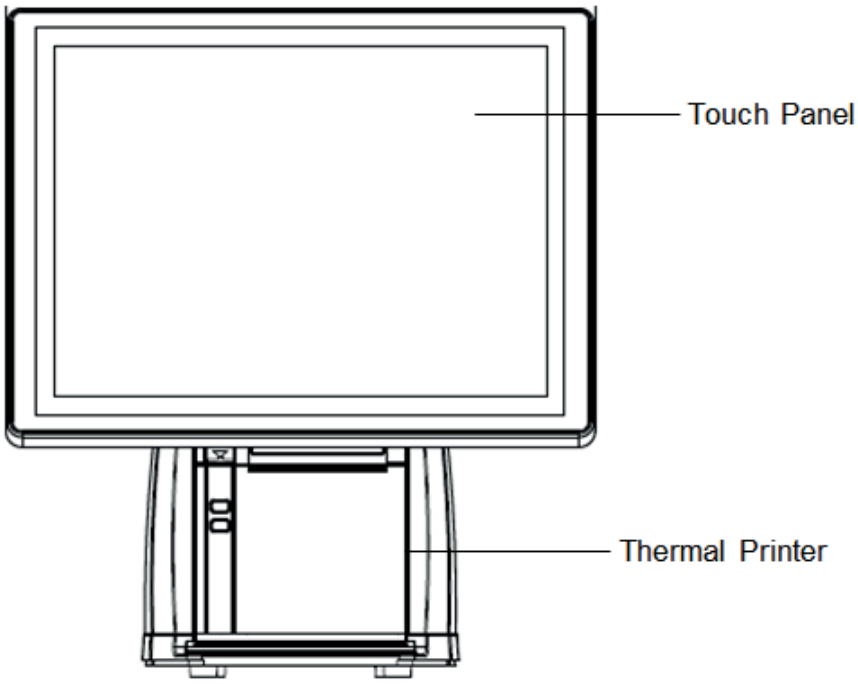
8" or 10.4" 2nd Display

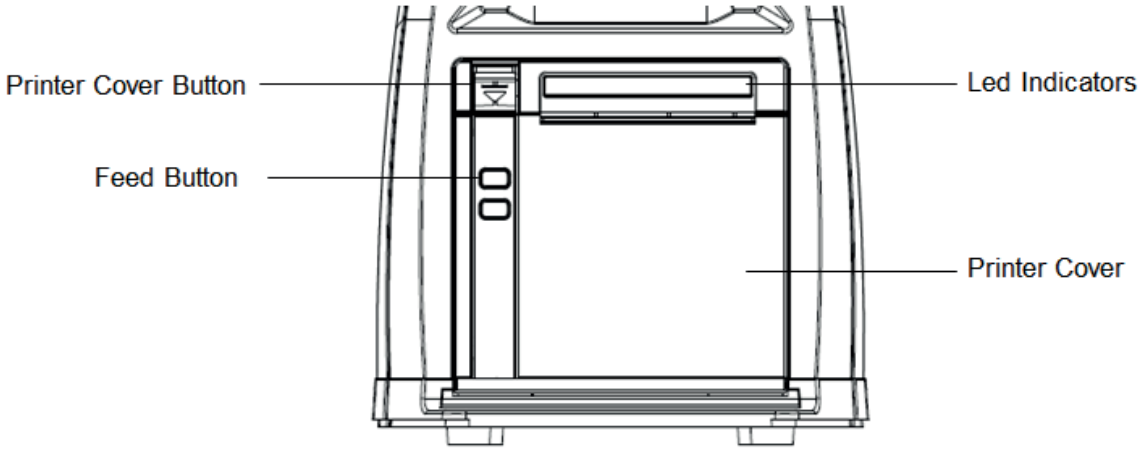
MSR

i-button

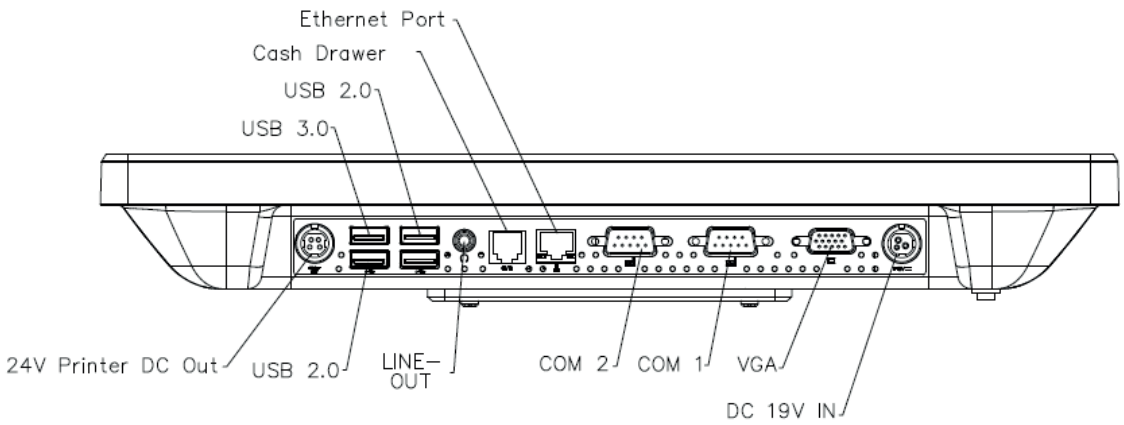
Barcode Scanner 1D / 2D

2-1 Front View



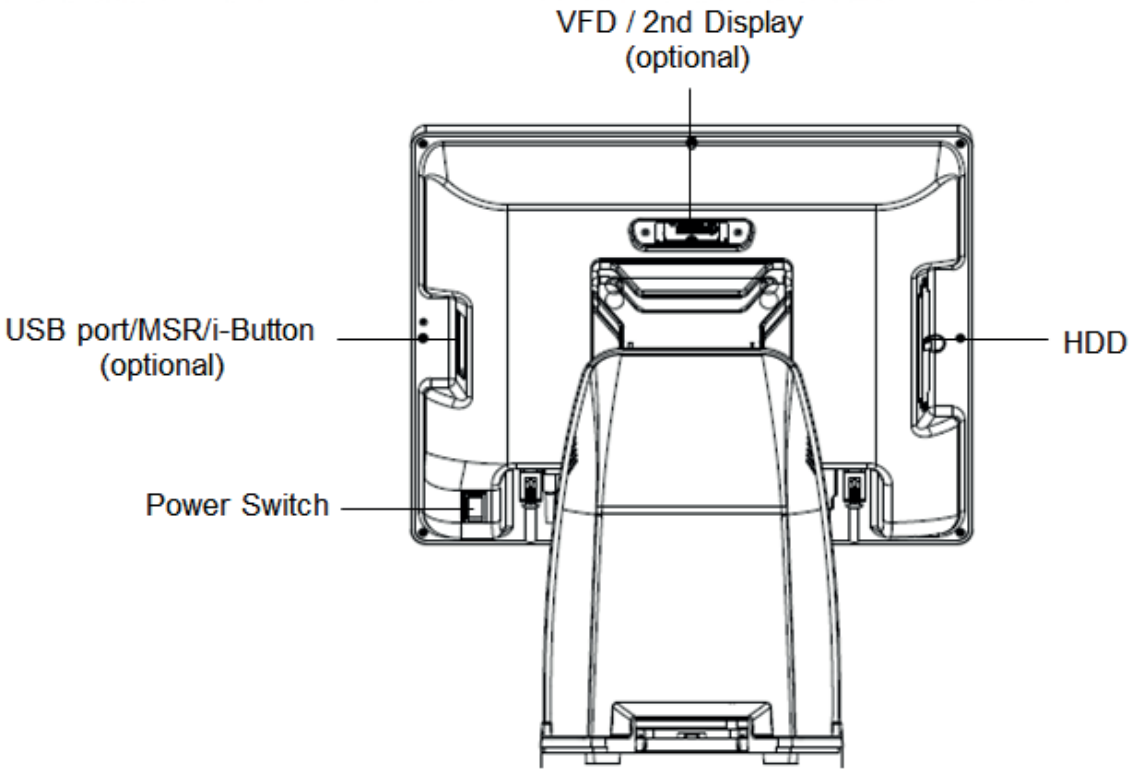


2-2 Rear View



Please make sure the 19V DC is plugged in the right direction before plugging in DC jack.

2-3 Back View



2-4 Specification

Display	Display Size		15“ TFT LCD
	Resolution		1024 X 768
	Brightness / Color		300 cd/m^2 , 16.7M colors
	Backlight		LED
Touch Panel	Type		Projected Capacitive touch
Processor	CPU/ Chipset		Intel® Celeron J1900 Quad-Core 2.0Ghz
Memory			X 1 DDR3L SO-DIMM, up to 8GB
Storage			X 1 (2.5” SATAII HDD or SSD)
I/O Connectors	USB 2.0		X 4 (Rear X 3, Side X 1)
	USB 3.0		X 1 (Rear)
	Powered COM (RS232)		X 2 (DB9 powered COM 5V/ 12V selected by jumper)
	Cash Drawer Port		X 1 (24V RJ11 Cash Drawer port)
	Audio Port	Line-out	X 1
	LAN		x 1 (RJ45 10/100/1000 Base-T)
	VGA		X 1 (DB15)
	DC out		24V 4-pin Connector for Printer
	DC In		Lockable 3-pin DC input
OS Support			Win 10 IoT Enterprise
Built-in 80mm Printer			X 1
Optional Peripherals			VFD / 8“/10.4” 2nd Display / MSR / i-Button /1D, 2D Scanner
Power Supply			150W 19V lockable 3-pin Power Adaptor
Environment	Temperature	Operation	32° to 95° F (0° to 40° C)
		Storage	-4° to 140° F (-20° to 60° C)
	Relative Humidity		20% to 80% non-condensing
Dimension (W x H x D) mm			364 x 410 x 257
Certifications			CE / FCC / LVD
Protection			IP64 on front bezel

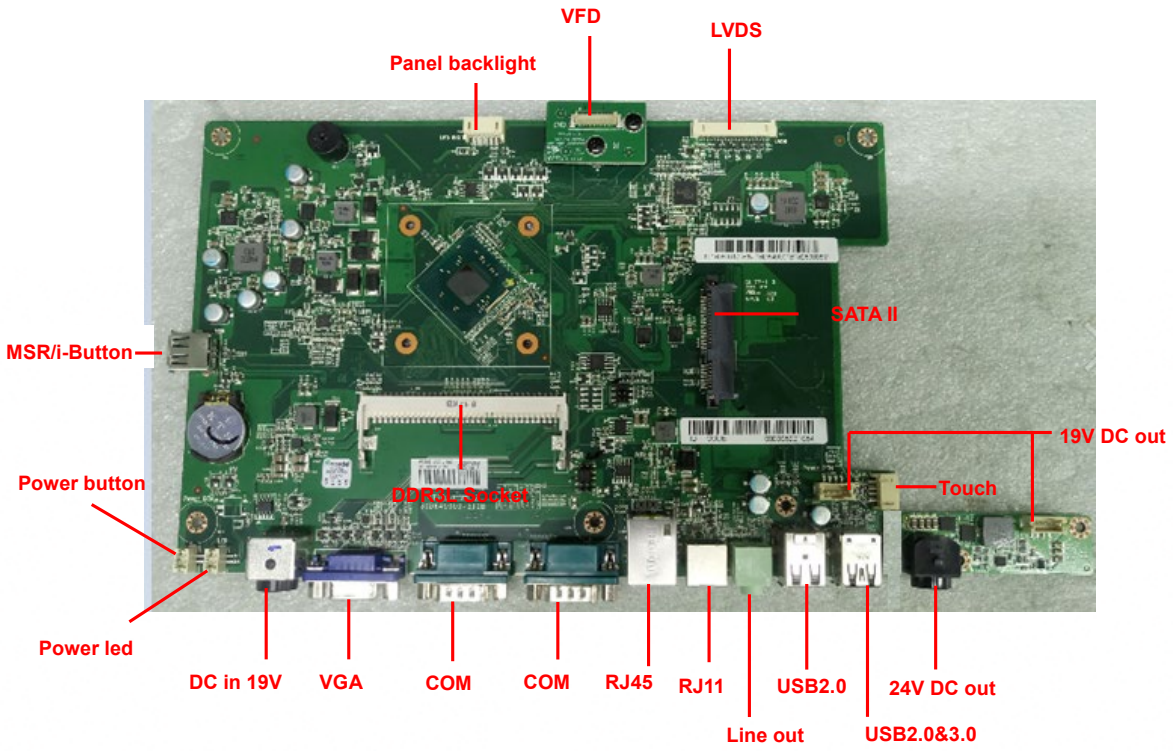
2-5 Thermal printer Specification (PRT650)

Item		Parameter
Printing Parameter	Printing Method	Direct thermal line printing
	Resolution	203dpi, 8dots/mm
	Printing Width	72mm
	Print Speed	260mm/s
	Interface	USB, Serial, Ethernet, Cash drawer
	Print density	Adjustable from level 1 to level 4
Page Mode		Support
Memory	RAM	4Mbyte
	Flash	4Mbyte
Fonts	Chinese	GBK 24×24
	Alphanumeric	ASCII9×17,12×24.
	User-defined	Support
	Code page	Optional international character sets: PC437(std.Europe), Katakana, PC850(Multilingual), PC860(Portuguese), PC863(Canadian), PC865(Nordic), PC857(Turkish), PC737(Greek), ISO08859-7(Greek), WPC1252, PC866(Cyrillic #2), PC852(Latin 2), PC858(Euro), KU42(Thai), TIS11(Thai), TIS18(Thai), PC720(Arabic), WPC775(Baltic Rim), PC855(Cyrillic), PC862(Hebrew), PC864(Arabic), ISO8859-2(Latin2), ISO8859-15(Latin9), WPC1250(Latin 2), WPC1251(Cyrillic), WPC1253(Greek), WPC1254(Turkish), WPC1255(Hebrew), WPC1256(Arabic),WPC1257(Baltic Rim), WPC1258(Vietnamese), MIK(Cyrillic), PC755(Latin 2), Iran, Iran II, Latvian, ISO-8859-1(WestEur), ISO-8859-3(Latin 3), ISO-8859-4(Baltic), ISO-8859-5(Cyrillic), ISO-8859-6(Arabic), ISO-8859-8(Hebrew), ISO-8859-9(Turkish), PC856, PC3848(ABICOMP), MONGOLIAN, VISCII
Barcode	1D	UPC-A, UPC-E, EAN8, EAN13, CODE39, ITF, CODEBAR, CODE128
	2D	PDF417, QR code, (DataMatrix, Maxicode and Aztec) for optional
Graphics		Support varied density bitmap as and download bitmap printing Max size of each bitmap is 40K, the total size of bitmap is 256k.
Detection	Sensors	Paper out detection, Cover open detection
Indicator	Power LED	Blue LED
	Error LED	Red LED
	Paper LED	Orange LED

Item		Parameter
Power Supply	Input	24V
Paper	Paper type	Specified Thermal Paper
	Paper width	58+-0 mm/ 80+-0 mm
	Paper thickness	0.056~0.13mm
	Roll paper diameter	Max. OD ф83mm
	Paper load	Easy-loading structure of forward open cover or upward open cover
	Paper cut	Partial cut or full cut
Physical Spec.	Operating condition	0°C~50°C, 20%~85%RH
	Storage condition	-20°C~70°C, 5%~95%RH
	Dimensions	137.3(L)*132(W)*130.5(H)mm
	Weight	1.33kg
Command		ESC/POS
Software	Driver	Win 10 IoT Enterprise

2-6 Internal Layout

M/B PCBA



PIN DEFINITION

1. LVDS connector

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

2. SATA

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

3. Power On/Off connector

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

4. Projected capacitive touch connector

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

5. Resistive touch connector

No.	Definition
1	+5V
2	RxD
3	TxD
4	GND

6. Sideward MSR connector Pin Definition

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

7. VFD connector

No.	Definition
1	RTS#
2	DSR#
3	TxD
4	RxD
5	CTS#
6	DTR#
7	+5V
8	USB D-
9	USB D+
10	GND

8. CN1: MB to small card connector

No.	Definition
1	+19V
2	+19V
3	GND
4	GND

System

1. DC Jack Pin Definition

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

2. 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

3. 2-Layer USB3.0+2.0 connector Pin Definition

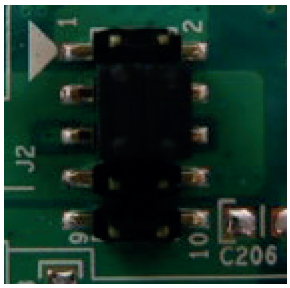
No.	Definition	No.	Definition
1	+5V	8	TX-
2	D-	9	TX+
3	D+	10	+5V
4	GND	11	D-
5	RX-	12	D+
6	RX+	13	GND
7	GND		

4. LAN: RJ45 Pin Definition

No.	Wire color(T568B)	Definition
1	White / Orange	Transmit
2	Orange	Transmit
3	White / Green	Receive
4	Blue	1000Base-T
5	White / Blue	1000Base-T
6	Green	Receive
7	White / Brown	1000Base-T
8	Brown	1000Base-T

5. COM connector Pin Definition

No.	Definition
1	DCD#
2	RxD
3	TxD
4	DTR#
5	GND
6	DSR#
7	RTS#
8	CTS#
9	+5V/+12V/Ring



COM1	J2
+V5	1-3
Ring/Default	3-5
+12V	7-9

COM2	J2
+V5	2-4
Ring/Default	4-6
+12V	8-10

You can change the com port voltage by jumper

6. RJ11 (Cash Drawer) connector Pin Definition

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

7. Line-out Jack Pin Definition

No.	Definition
1	GND
2	GND
3	LINE_OUT
4	LINE_OUT
5	Detect

8. JS1: Small card to printer connector Pin Definition

No.	Definition
1	+24V
2	+24V
3	GND
4	GND

Thermal receipt printer

1. USB

No.	Definition
1	VBUS
2	D-
3	D+
4	GND

2. RS232

No.	Definition
1	NC
2	TXD
3	RXD
4	NC
5	GND
6	RTS
7	CTS
8	RTS
9	NC

3. Ethernet

No.	Definition
1	TX+
2	TX-
3	RX+
4	NC
5	NC
6	RX-
7	NC
8	NC

4. Cash Drawer

No.	Definition
1	FC
2	Drawer 1
3	DRSW
4	VDR
5	Drawer 2
6	GND

Electrical characteristics

· Driving voltage : DC 24V

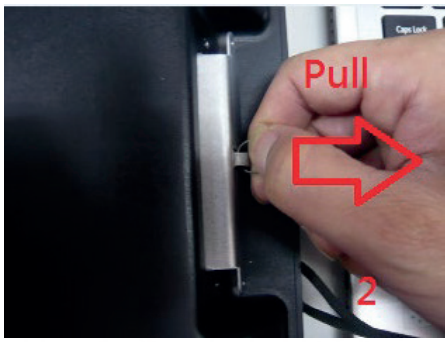
· Driving current : Maximum 0.8A (In 510 ms)

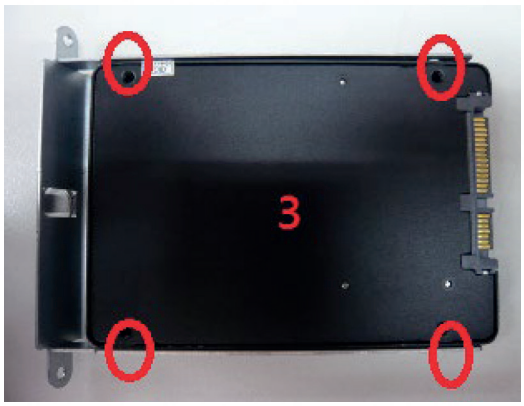
Drawer check signal : “L”=0~0.5V “H”=3~5V

5. Power supply

No.	Definition
1	FC
2	Drawer 1
3	DRSW
4	VDR

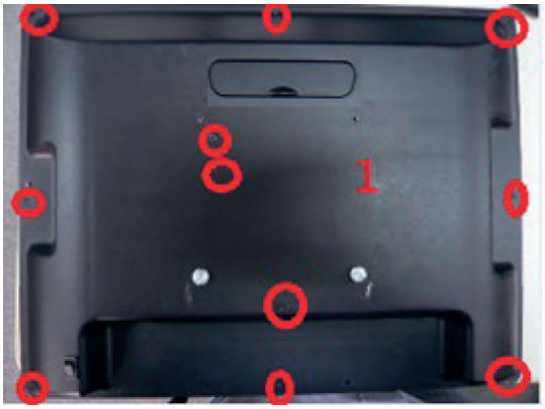
5-1. HDD





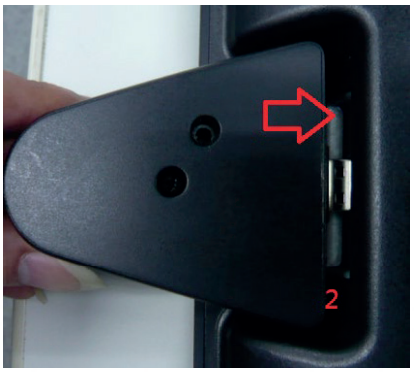
1. Dis-fasten 2 screws.
2. Pull out the hard drive case in an outward direction to remove it from the system.
3. Install the hard drive in the hard drive case and fasten 4 hard drive case screws.

5-2. Memory



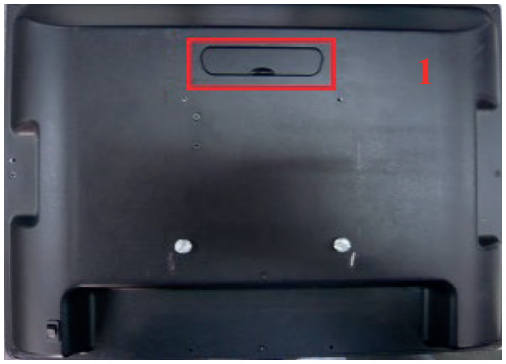
1. Dis-fasten 11 screws and remove the back cover.
2. Insert the RAM into the RAM slot.

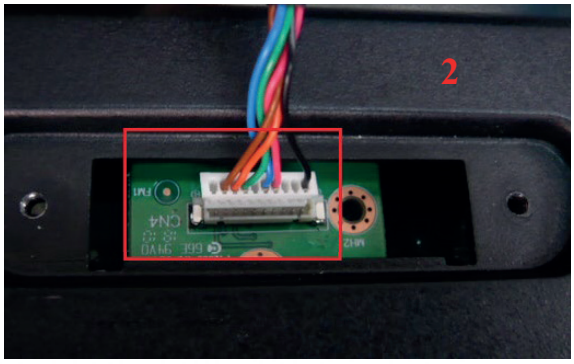
5-3. MSR / i-Button / RFID



1. The MSR/i-Button easily install on the side of the LCD Touch Screen's USB 2.0 connector.
2. Insert the USB connector on the MSR/i-Button into the side USB port
3. Secure the module with the two screws onto the system.

5-4 VFD / 8" or 10" 2nd Display



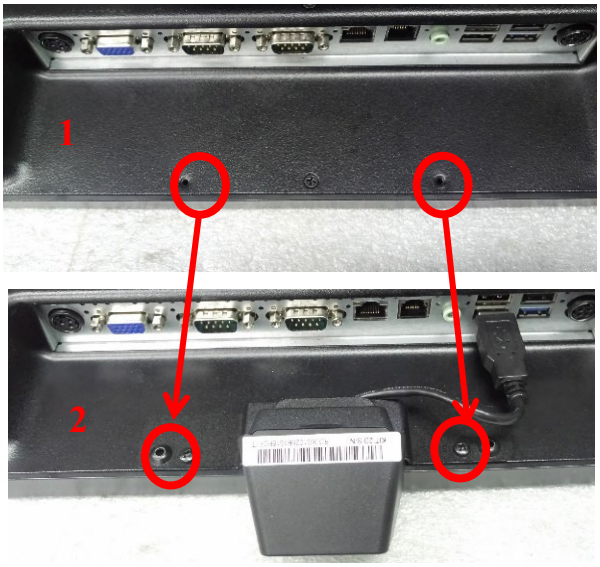


1. Remove top cover.

2. Either plug the VFD cable into the VFD connector or plug the 8” or 10” 2nd display cable into the 2nd display’s connector (note: display connector can only be connected to one device at a time).

3. Install VFD with 2 screws / Install 8"or 10" 2nd display with 2 screws.

5-5. 1D/2D Barcode Scanner

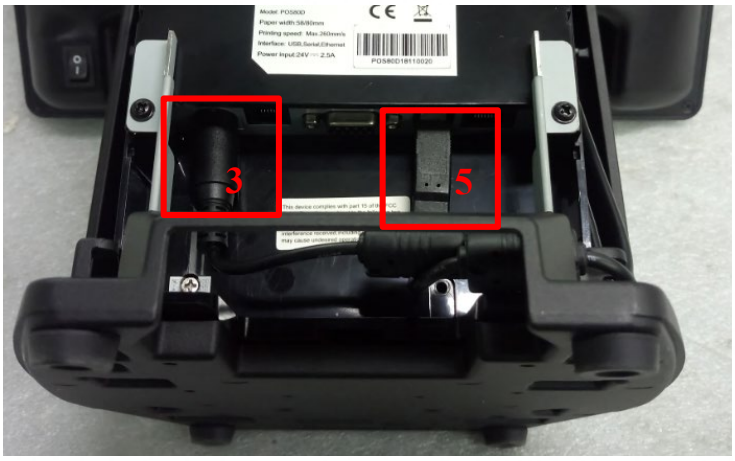


1. Install the barcode scanner with bracket attached by tightening the 2 screws
2. Plug the barcode scanner Type-A Male USB cable into a USB port

5-6. Thermal printer

5-6-1 Thermal printer module replacement

1. Press outward on the two triangle mark on each side of the printer stand's back cover to remover the cover



2. Disconnect the 4-pin end of power cable from the 24V DC out port on the system

3. Disconnect the 3-pin end of power cable from the 24V DC in port on the printer

4. Disconnect the Type-A Male USB cable from the USB port on the system

5. Disconnect the Type-B Male USB cable from the printer

6. Remove the 2 screws from the base tray at the bottom of the printer module

7. Slide the printer module in an outward direction to remove it from the stand

8. Remove the 2 bracket screws that hold the printer module

9. Remove the printer module

5-6-2 Paper Installation

1) Pull the cover open button in an outward direction to open the printer cover

2) In the correct direction of the roll paper, insert the paper
3) Pull out some roll paper, and close the printer cover

4) Tear the extra paper in the direction of printer

Notes:

► According to the paper size to adjust the paper guide;

- When using 58mm(width) roll paper, insert the paper guide to each side.

► Make sure the paper inside is at tight status, or it will issue paper or other obstacle.

6-1 MagSwipe Card Reader / i-Button reader Configuration utility

The MagSwipe Configuration utility is used to set up the output format of MagSwipeCIDTestAp V07.01 Operation Manual

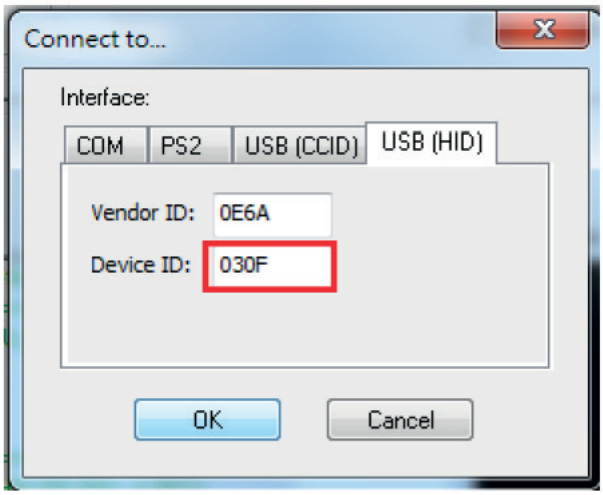
1. Device Connection
2. Utility Features
3. Configuration Setup

Version: V01.00 .

1. Device Connection

1. USB(HID) Interface

Select the USB HID device which has been plug into the PC USB port, enter the correct Vendor ID = 0E6A and Device ID then press ‘OK”, different device has its own Device ID., e.g. DID=0x030F for keyboard and HID USB, DID=0x5082 for keyboard, HID and VCP USB.

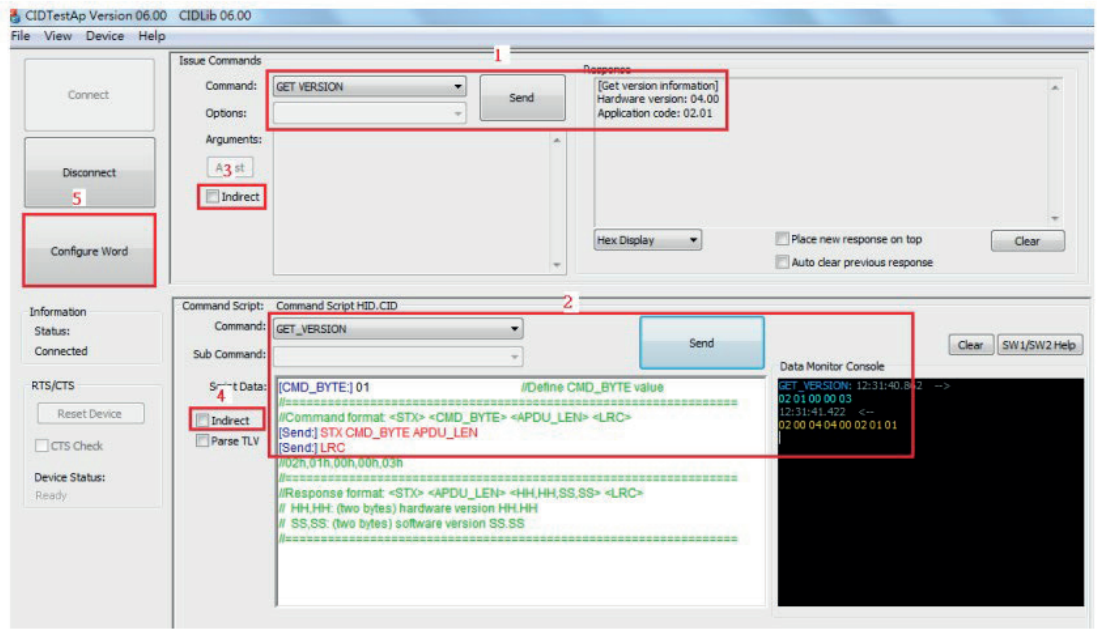


2. Utility Features

After success device connection each supported command will get its response, e.g. Get Version command should response with the device HW/FW version, for all command set supported please reference its programming guide.

There are two command/response windows can be used (see block1 & 2).

For second level device the Indirect command signal should be selected (see block3 & 4). Press the button “Configure Word” to enter the parameter setting function (see Block 5). The two response windows show up the data from the device connected.



2. Configuration Setup

Device functions(e.g. MSR, i-Button, RFID, Chip card) behavior can be defined and stored by this tool.

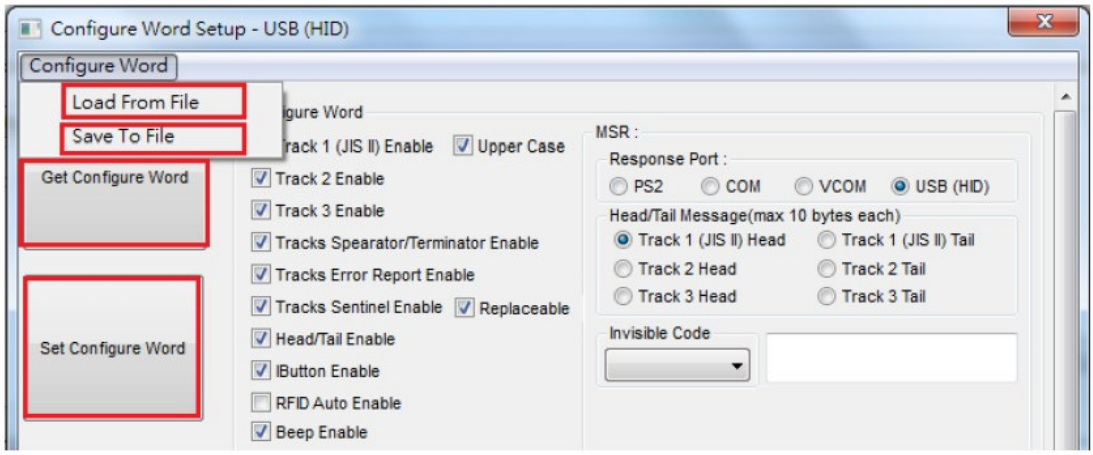
Four operation buttons define as below:

“Load From File”: Load the previous setting configuration file from storage.

“Save To File”: Save the current screen setting to file in storage.

“Get Configuration Word”: Get current setting in the device connected.

“Set Configuration Word”: Set current setting on the screen to the device connected.



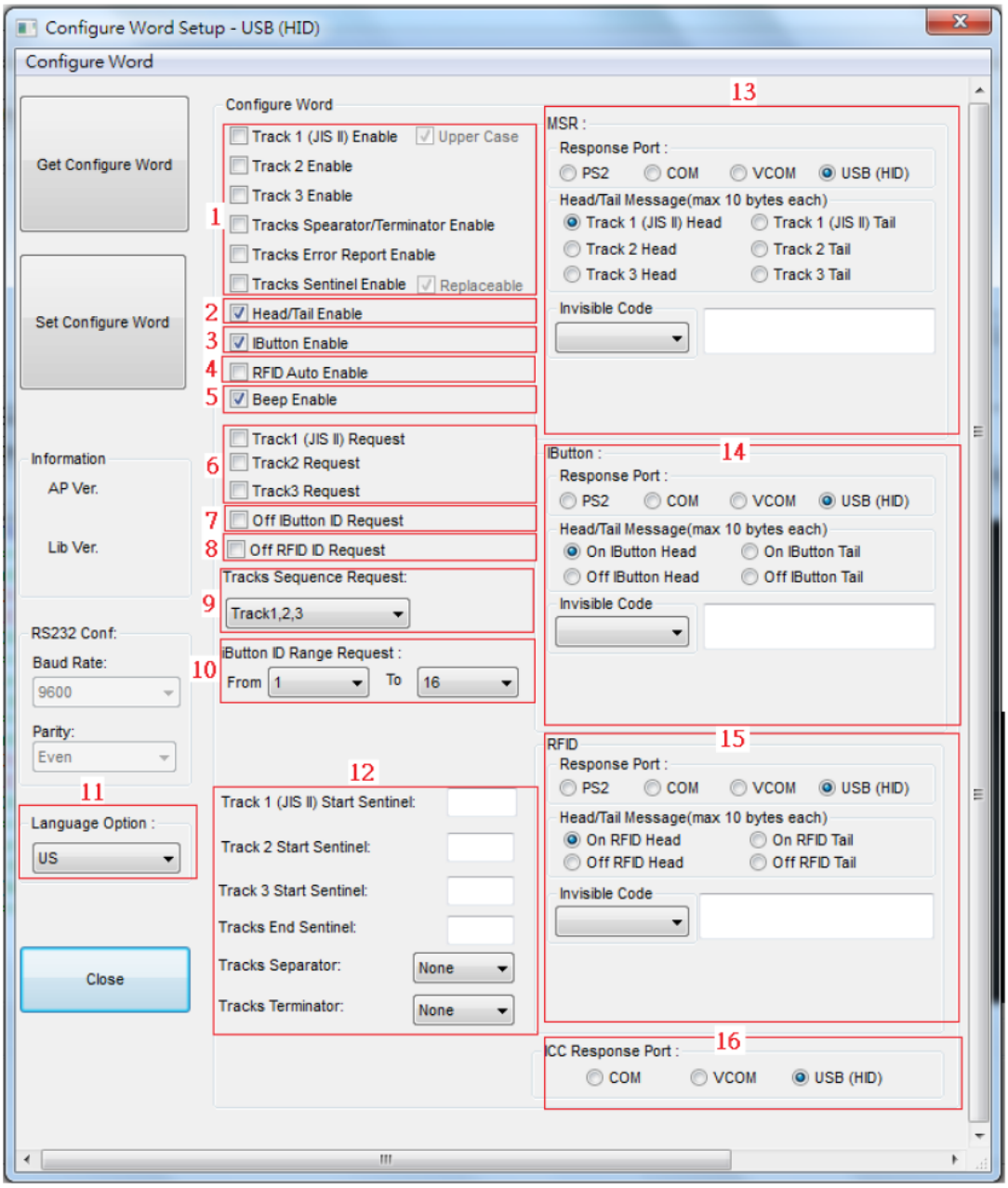
16 parameter areas(see below) are used for four functions, each function related area should be setup correctly and press Set Configure Word button before operation.

MSR function areas: 1,2,5,6,9,11,12,13

i-Button function areas: 2,3,5,7,10,11,14

RFID function areas: 2,4,5,8,11,15

Chip card function areas: 16


Configure Word Setup - USB (HID)
Configure Word
Get Configure Word
Set Configure Word
Information
AP Ver.
Lib Ver.
RS232 Conf:
Baud Rate:
9600
Parity:
Even
Language Option :
US
Close
Configure Word
Track 1 (JIS II) Enable
Upper Case
Track 2 Enable
Track 3 Enable
Tracks Spearator/Terminator Enable
Tracks Error Report Enable
Tracks Sentinel Enable
Replaceable
Head/Tail Enable
IButton Enable
RFID Auto Enable
Beep Enable
Track1 (JIS II) Request
Track2 Request
Track3 Request
Off IButton ID Request
Off RFID ID Request
Tracks Sequence Request:
Track1,2,3
IButton ID Range Request :
From 1
To 16
Track 1 (JIS II) Start Sentinel:
Track 2 Start Sentinel:
Track 3 Start Sentinel:
Tracks End Sentinel:
Tracks Separator:
None
Tracks Terminator:
None
MSR :
Response Port :
PS2 COM VCOM USB (HID)
Head/Tail Message(max 10 bytes each)
Track 1 (JIS II) Head
Track 1 (JIS II) Tail
Track 2 Head
Track 2 Tail
Track 3 Head
Track 3 Tail
Invisible Code
IButton :
Response Port :
PS2 COM VCOM USB (HID)
Head/Tail Message(max 10 bytes each)
On IButton Head
On IButton Tail
Off IButton Head
Off IButton Tail
Invisible Code
RFID
Response Port :
PS2 COM VCOM USB (HID)
Head/Tail Message(max 10 bytes each)
On RFID Head
On RFID Tail
Off RFID Head
Off RFID Tail
Invisible Code
ICC Response Port :
COM VCOM USB (HID)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Configure word detail

Area 1

Track 1 (JIS II) Enable:	If enabled, the track 1 data will response.
Track 2 Enable:	If enabled, the track 2 data will response.
Track 3 Enable:	If enabled, the track 3 data will response.
Upper Case:	If selected, the track1 data read will transfer to upper case before response.
Track Separator /Terminator Enable:	If enabled, the reader will send Track Separator and Track Terminator code defined in this configure word between tracks data or after the last track data.
Track Error Report Enable:	If enabled, the character “F” will response when track data read fail.
Track Sentinel Enable & Replaceable:	If enabled, the reader will send start and end sentinel at begin and last position of each track data. If replaceable, these sentinels will be replaced by the sentinel defined in this configure word.

Area 2

Head/Tail Enable:	If enabled, all of the Head/Tail message defined in this configure word will prefix and suffix to each data returned.

Area 3

i-Button Enable:	If enabled, i-Button key ID may response when key attached or removed.

Area 5

Beep Enable:	If enabled, the beeper will activate to indicate the operation result.

Area 6

Track 1 (JIS II) Request:	If selected, the reader will response track data only if track1 read correctly.
Track 2 Request:	If selected, the reader will response track

	data only if track2 read correctly.
Track 3 Request:	If selected, the reader will response track data only if track3 read correctly.

Area 7

Off i-Button ID Request:	If selected, key ID will response while key removed.

Area 8

Off RFID ID Request:	If selected, RFID ID will response while RFID card removed.

Area 9

Tracks Sequence Request:	Select the order of three tracks data returned.

Area 10

i-Button ID Range Request:	Define the i-Button data range returned.

Area 11

Language Option:	Select one of supported keyboard language for PS2 or keyboard USB interface.

Area 12

Track 1 (JIS II) Start Sentinel:	Define Track 1 Start sentinel byte, default is “%”.
Track 2 Start Sentinel:	Define Track 2 Start sentinel byte, default is “;”.
Track 3 Start Sentinel:	Define Track 3 Start sentinel byte, default is “+”.
Tracks End Sentinel:	Define all Tracks End sentinel byte, default is “?”.
Tracks Separator:	Define the insertion byte between each track data returned.
Tracks Terminator:	Define the appending byte after the last track data returned.

Area 13

MSR Response Port:	Select MSR data response port right after swiped.
Head/Tail Message:	Message prefix and suffix to each track data returned.

Each Head/Tail accepts10 bytes max. long. Invisible code:	Enter keyboard control code.

Area 14

I-Button Response Port:	Select i-Button key ID response port right after key attached or removed.
Head/Tail Message:	Message prefix and suffix to key data returned. Each Head/Tail accepts10 bytes max. long.
Invisible code:	Enter keyboard control code.

Area 15

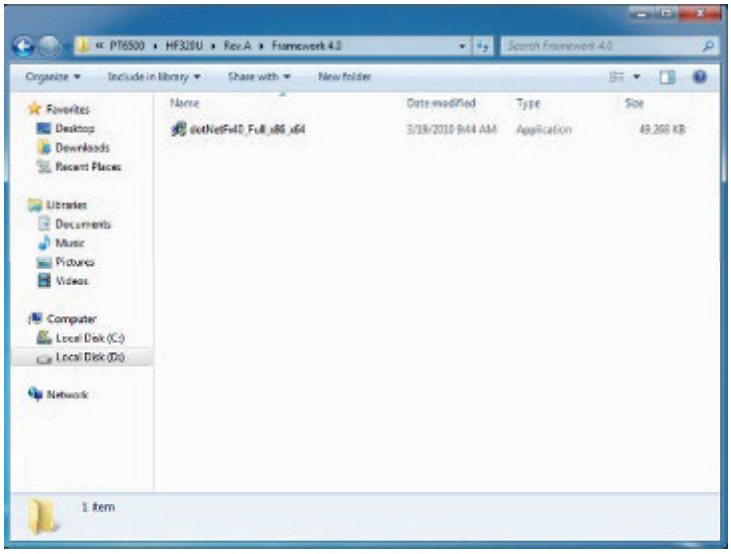
RFID Response Port:	Select RFID ID response port right after tag attached or removed.
Head/Tail Message:	Message prefix and suffix to tag data returned. Each Head/Tail accepts10 bytes max. long.
Invisible code:	Enter keyboard control code.

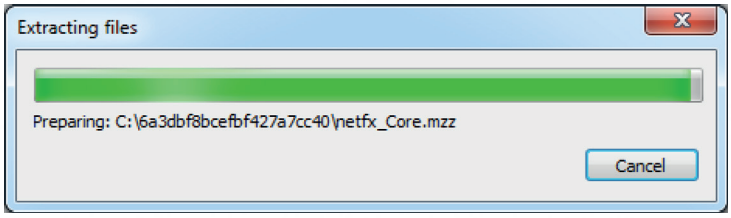
Area 16

ICC Response Port:	Select chip card auto. ATR response port,

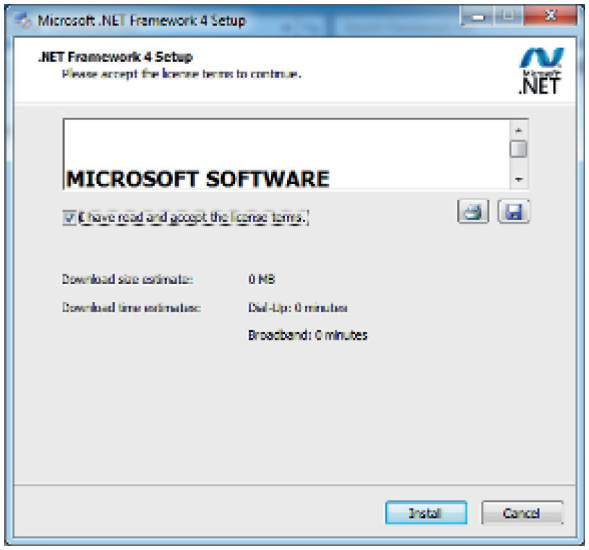
6-2. Install framework 4.0

1. Double-click to install.

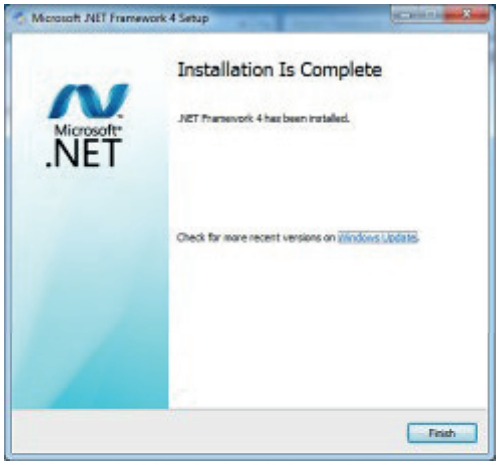




2. Select “I have read and accept the license terms. And click Install..



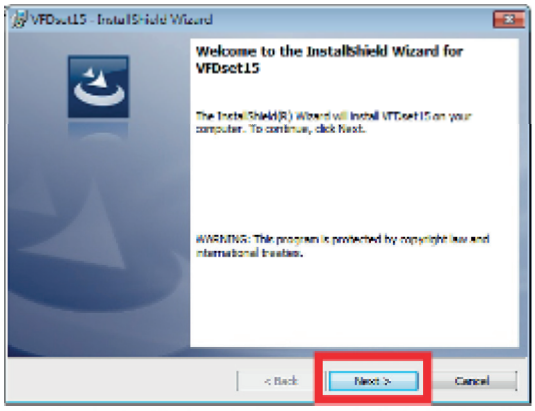
3. Click Finish.

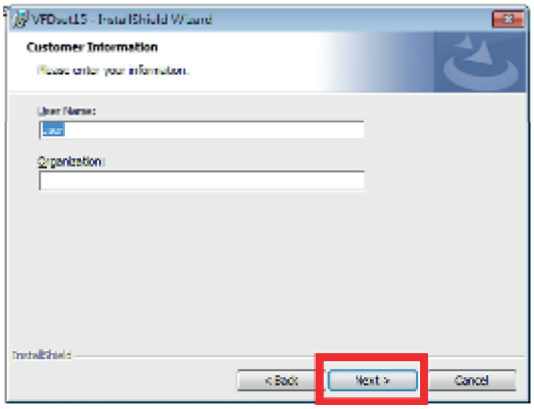


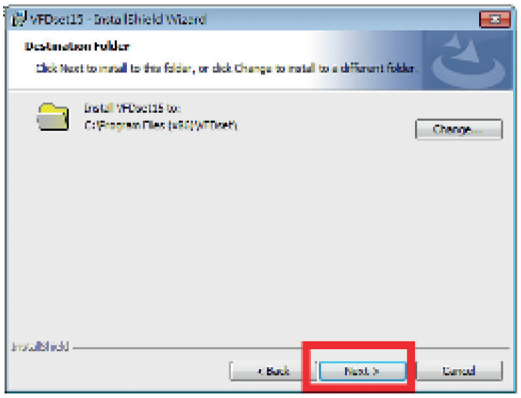
6-3. VFD

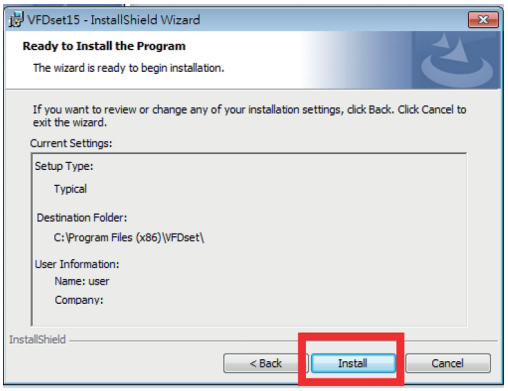
1. Power on VFD and waiting test page of EEPROM test, Baud rate and Command page. Set up the customer display by " VFDset.exe”

2. Setup VFDset.exe software.

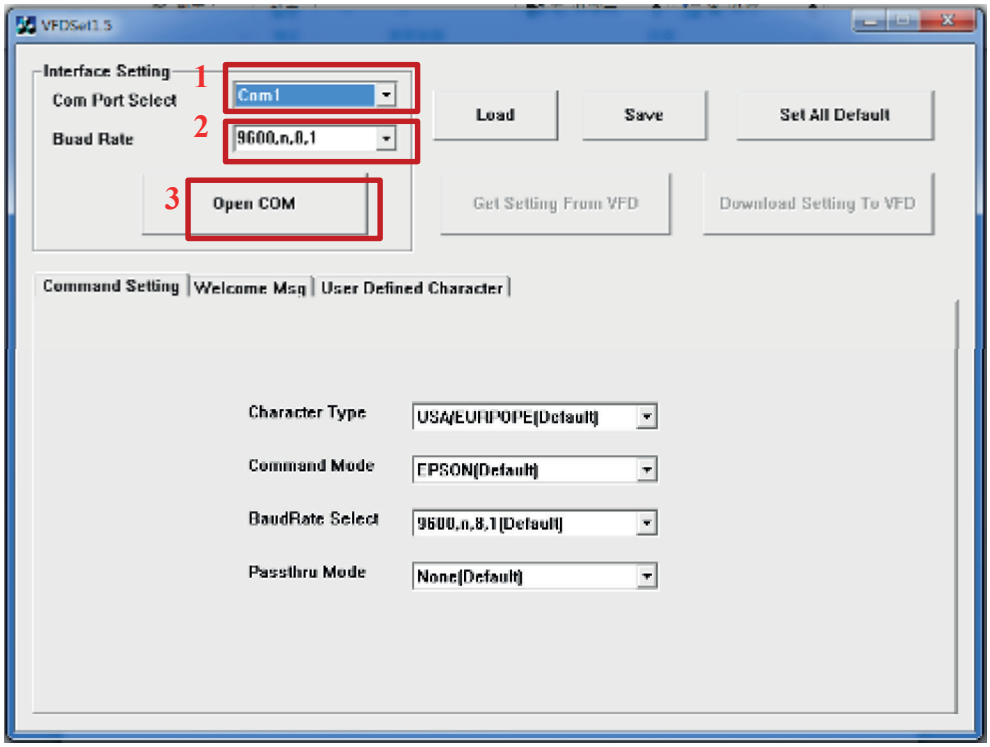








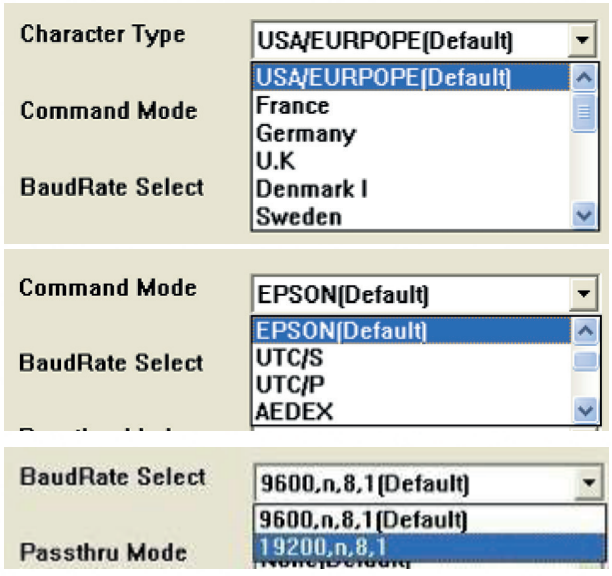
3. To execute “VFDset.exe” for setting up communication between software and VFD module.



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 the VFD and it’ll refresh the “VFDset.exe” software.

5. Select “Character Type”/ “Command Mode”/ “Baud Rate Select”/ “pass thru 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

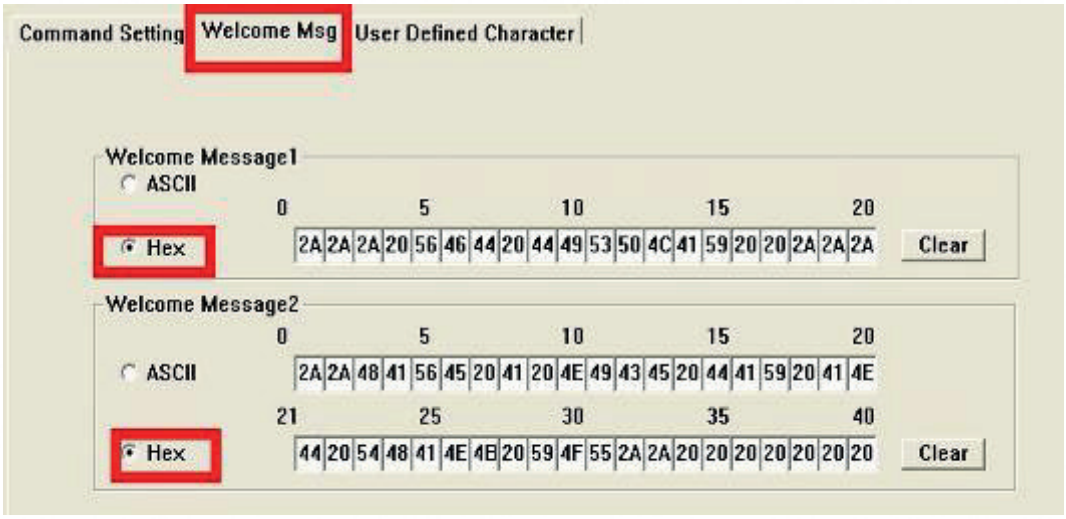
Welcome msg line1 : *** VFD DISPLAY ***

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

7. Welcome Message

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

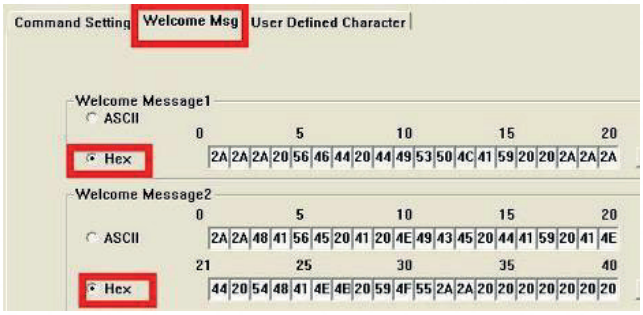
a. ASCII mode



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



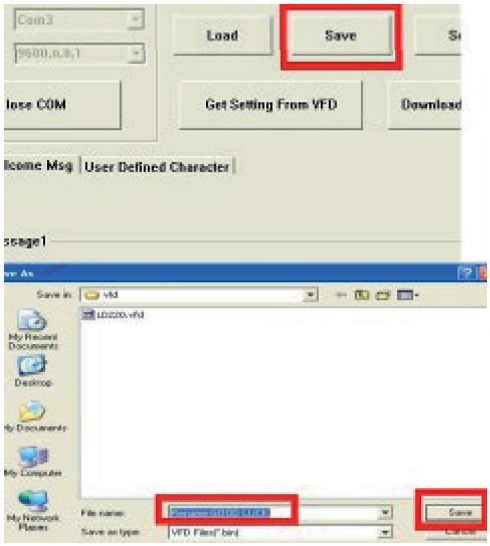
Like the first character (0x80) in default code page will show on VFD module.

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

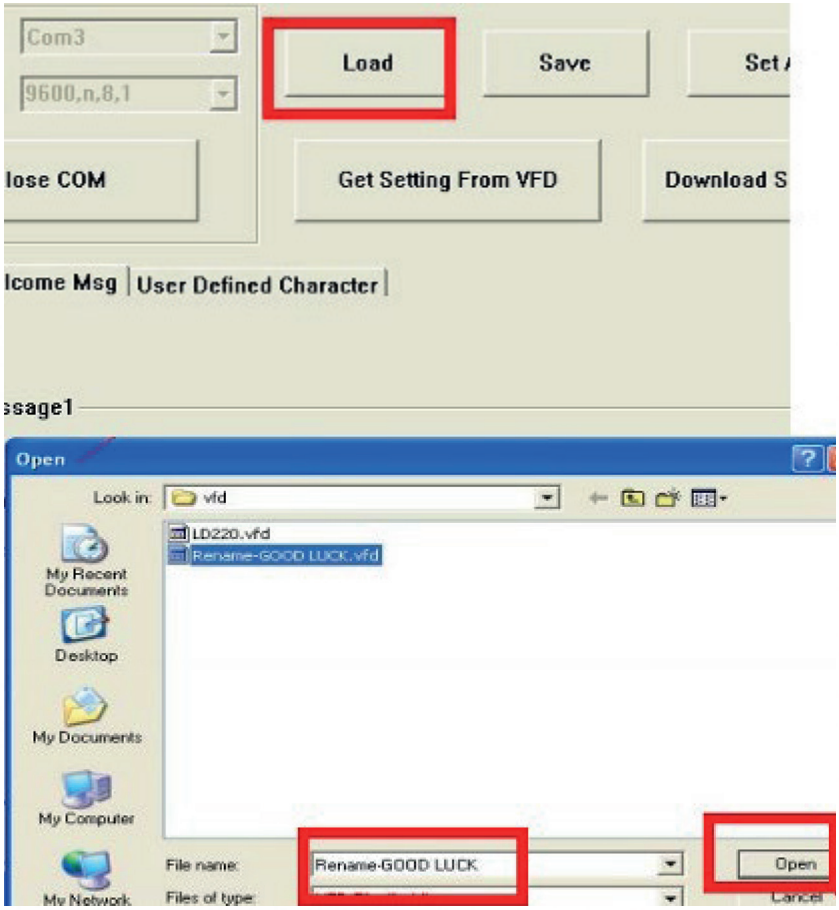
9. Click “Save” button

To save user’s setting in file; for example, below picture to save file name as “GOODLUCK” file set for Welcome Message.



10. Click “Load” button

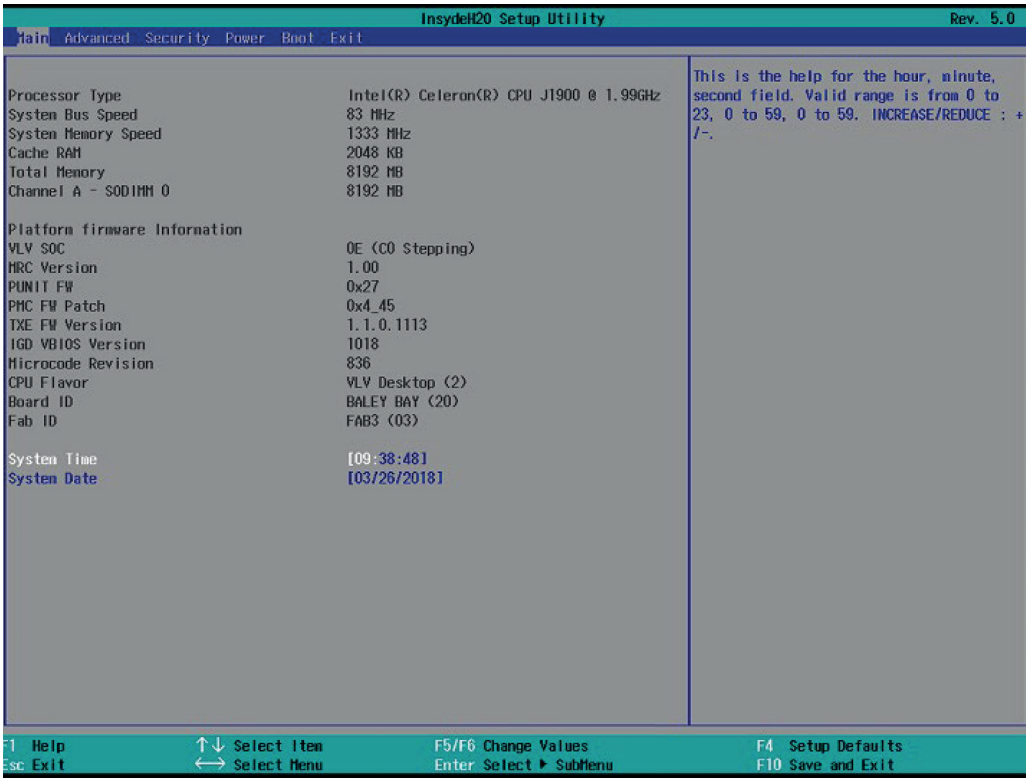
After saving, you must restart the utility here. Then load your setting rename-GOODLUCK.vfd.

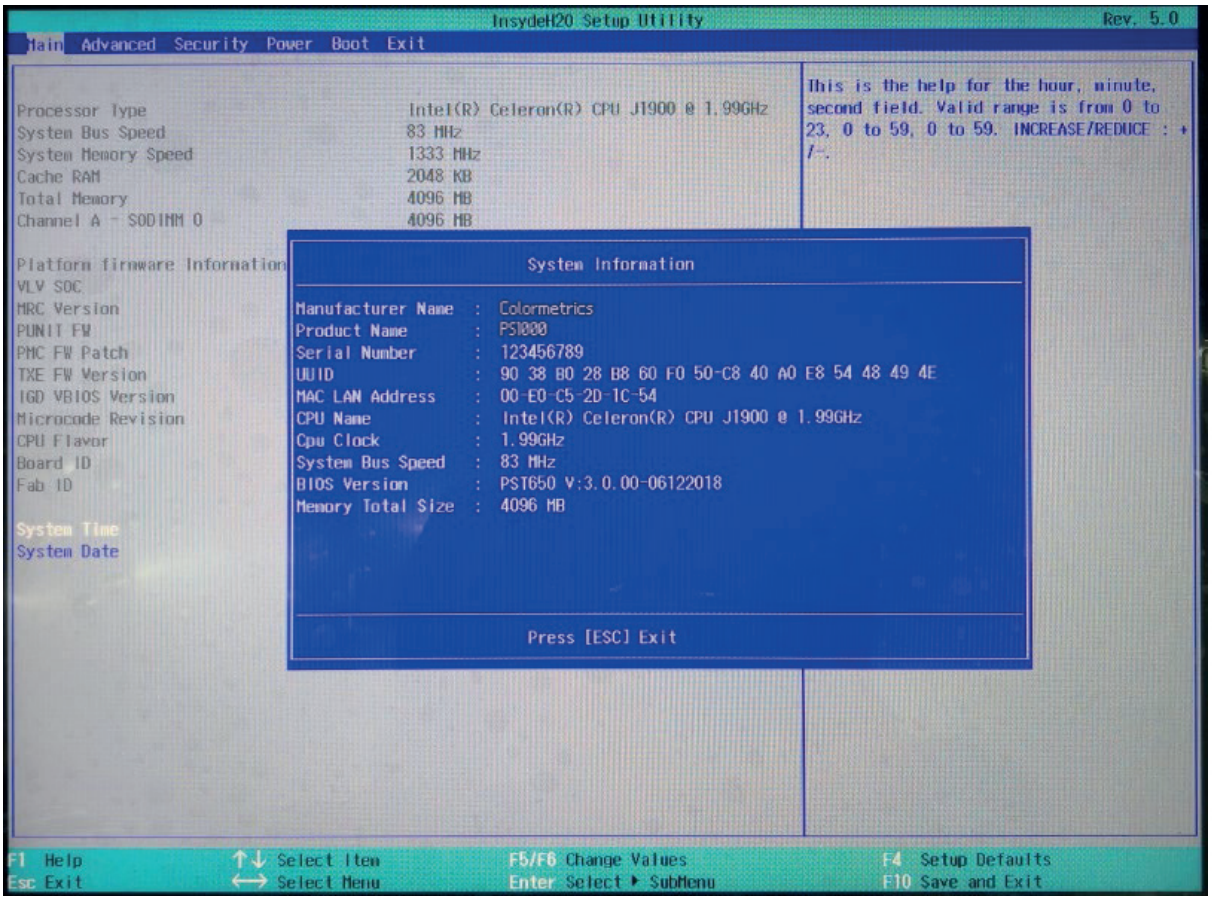


BIOS/UTILITY SETUP

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

2. Press <ENTER >over SCU button to enter the utility.





Date and Time

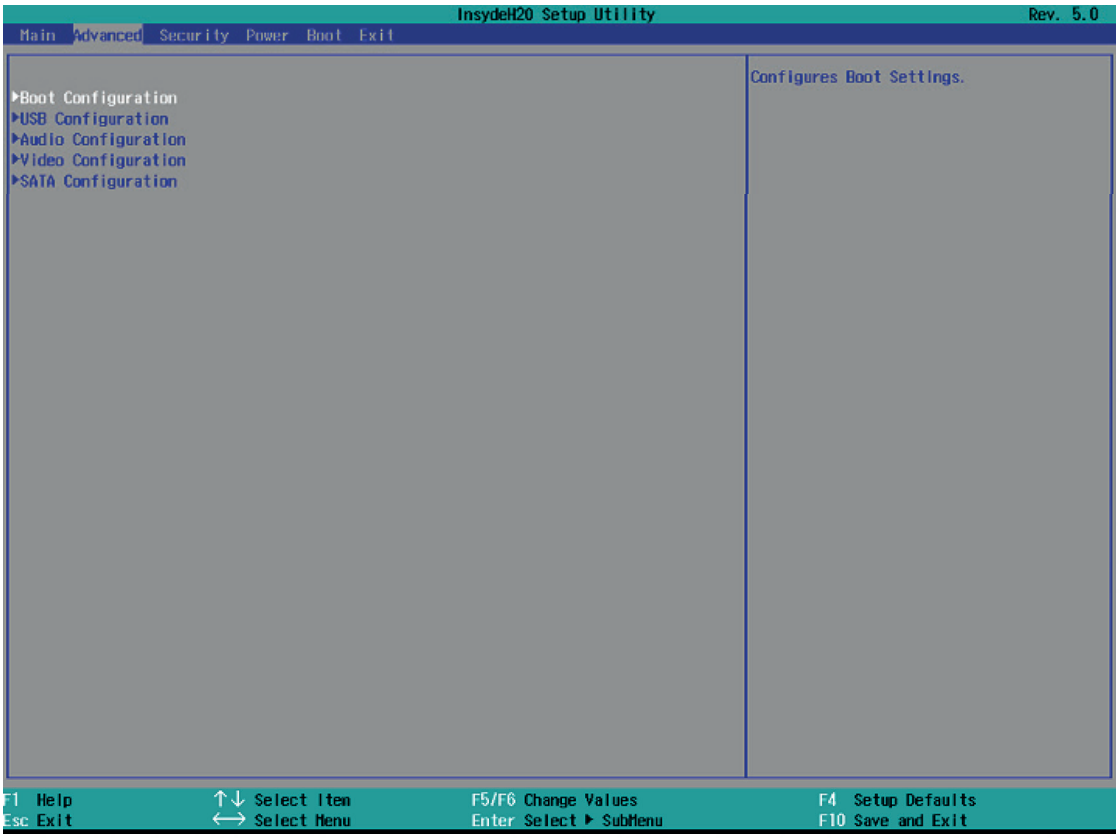
The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

WARNING!

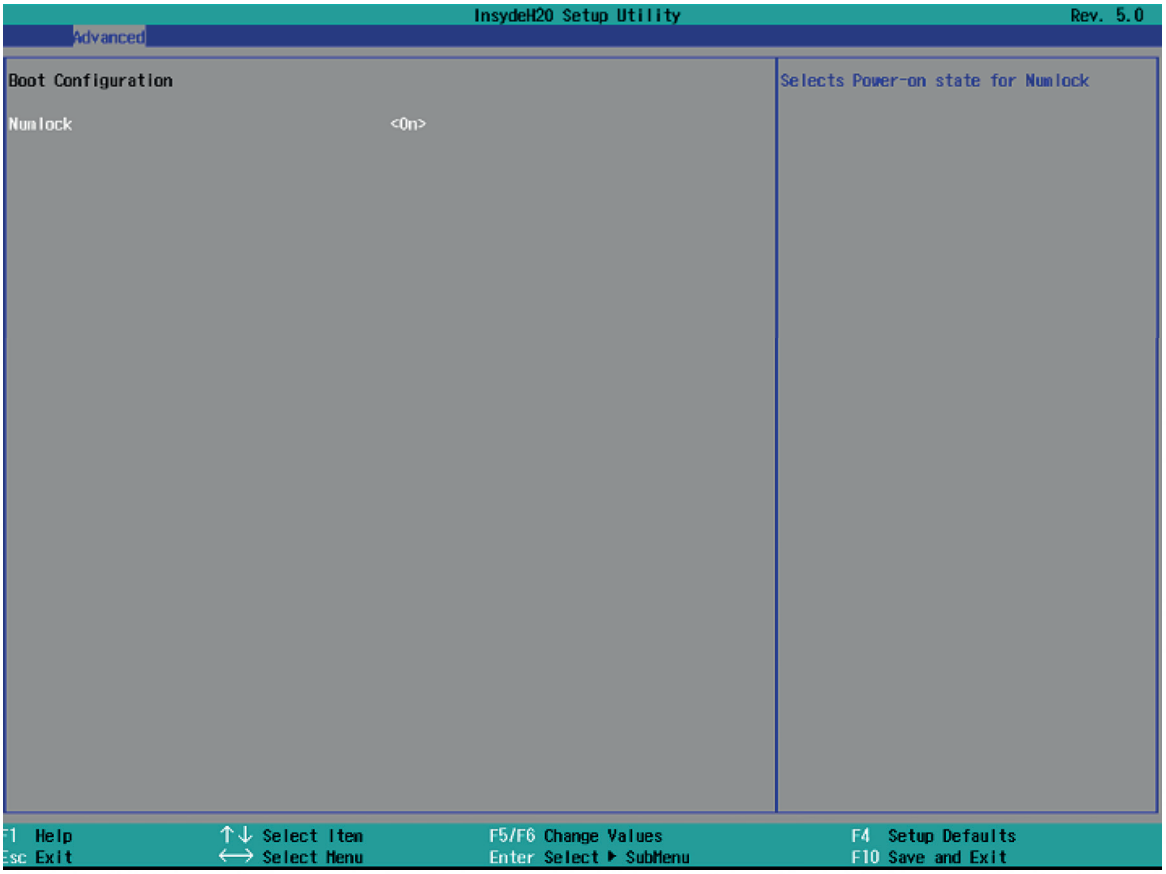
Setting the wrong values in the sections below may cause the system to malfunction. Make sure that the settings made are compatible with the hardware.

7-1. Advanced

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

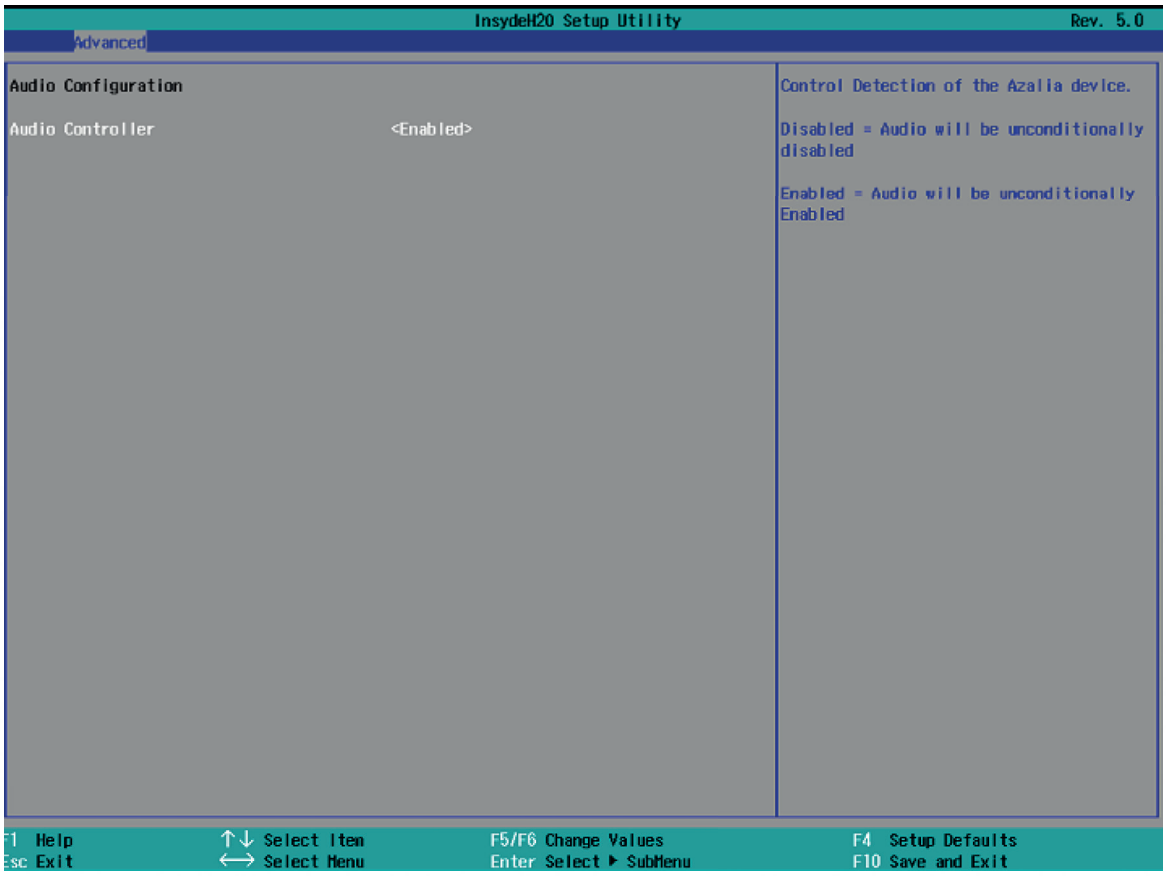


Use the Boot Configuration menu to select power-on state for Numlock.

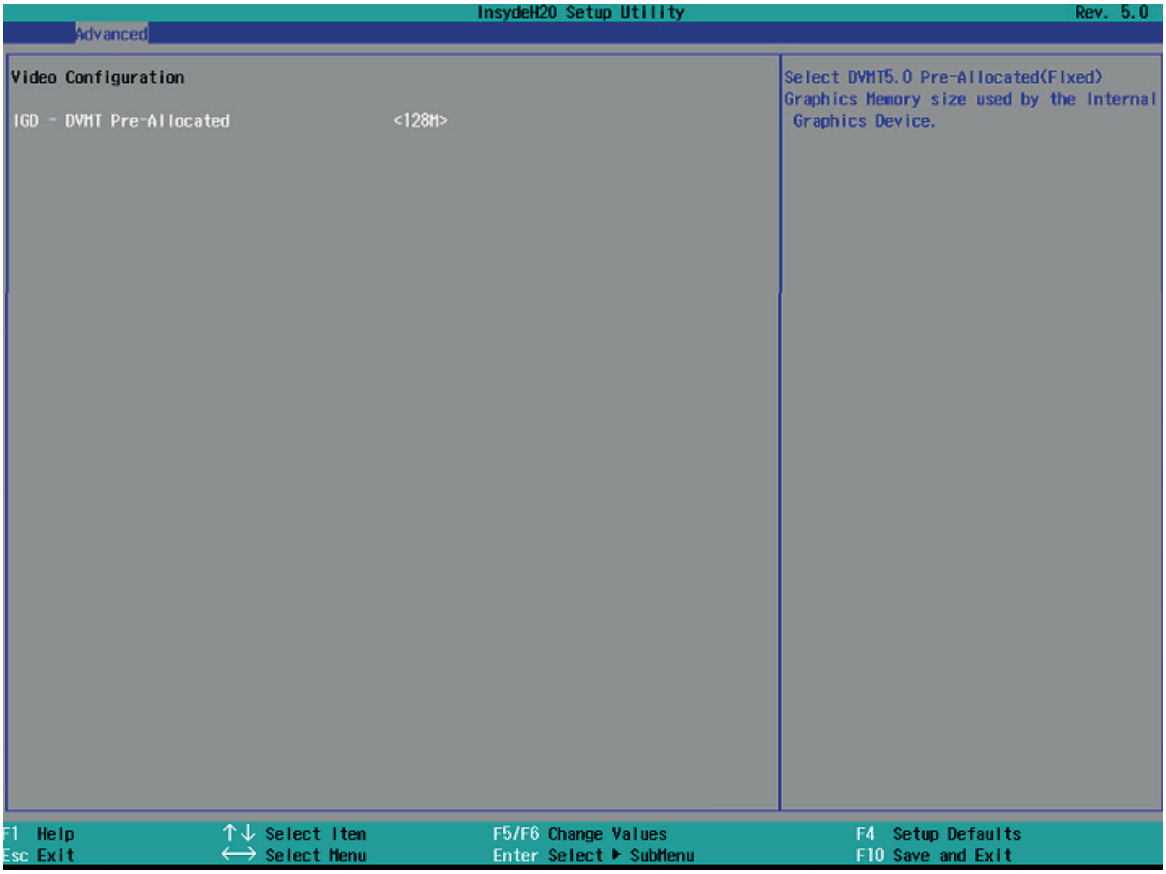


7-1-2. Audio Configuration

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

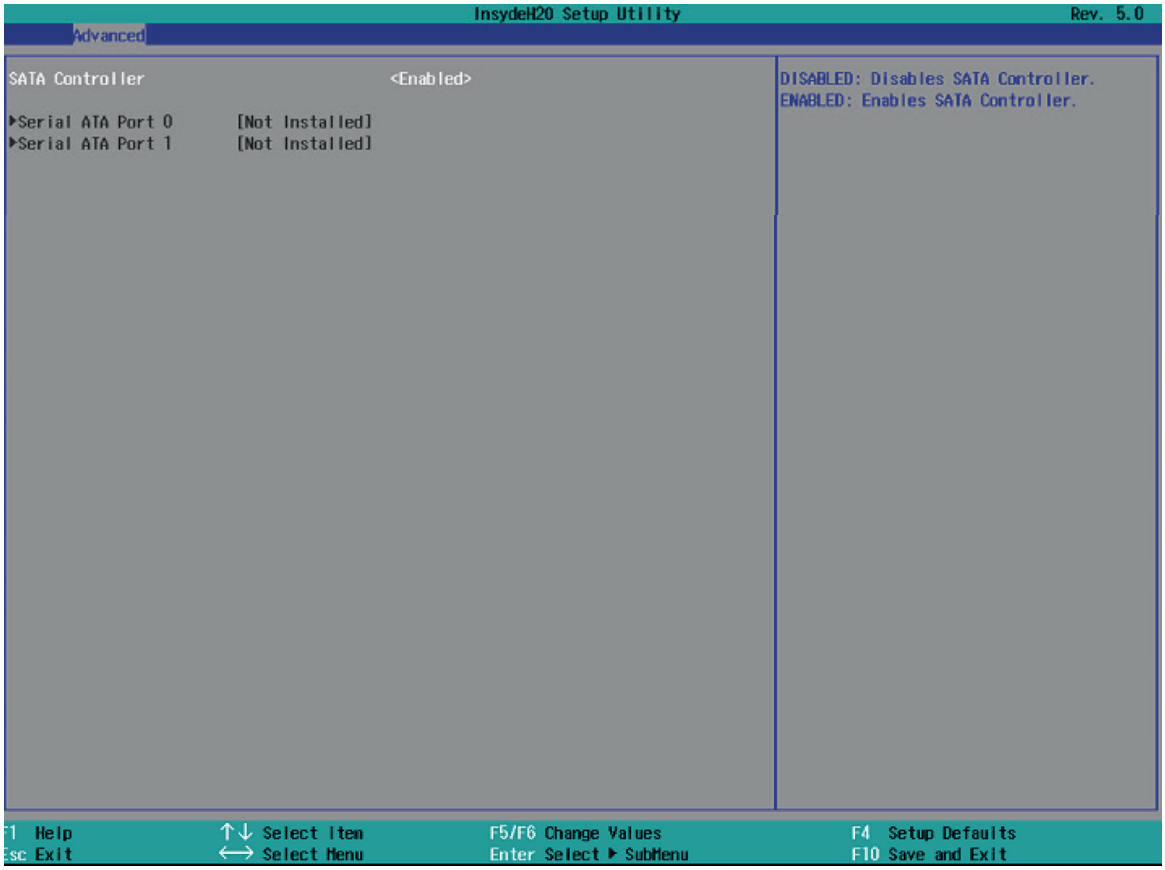


Use the Video Configuration menu to read Video configuration information and configure the Video settings

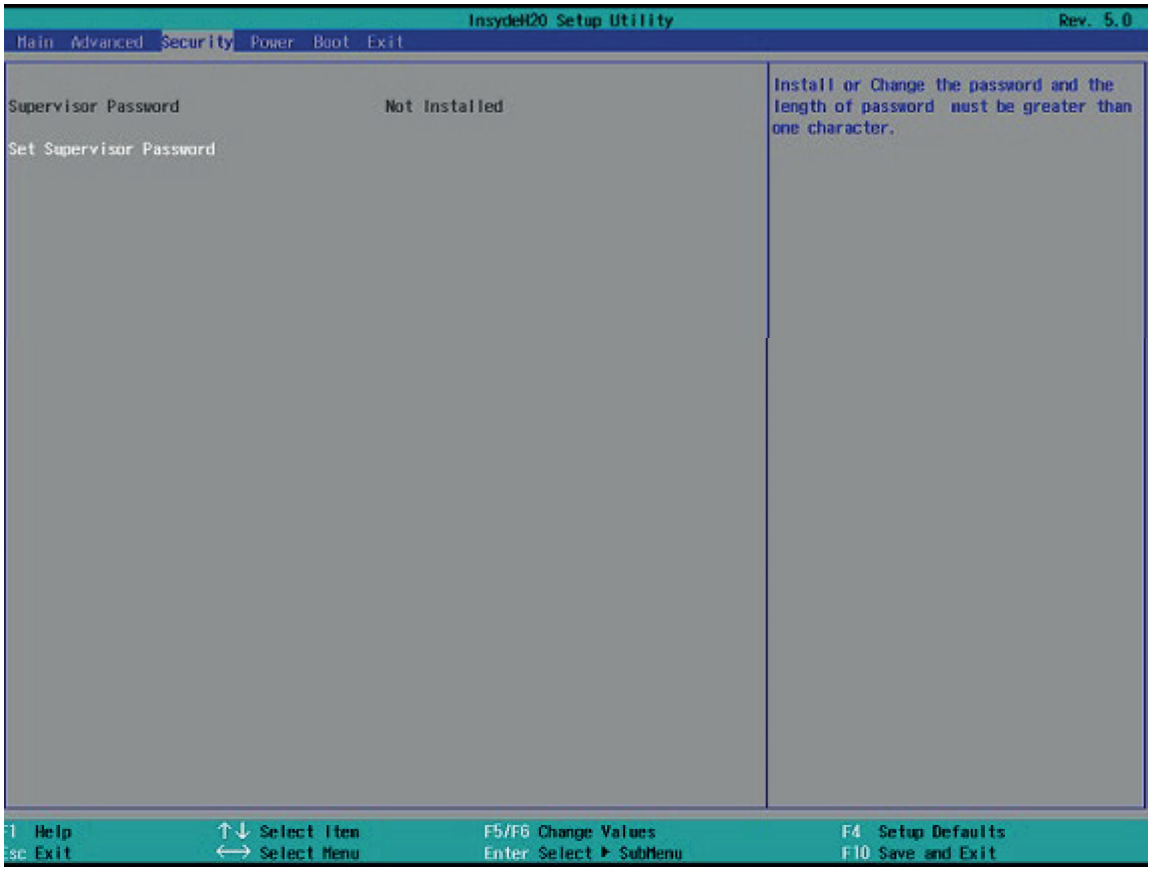


7-1-4. SATA Configuration

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

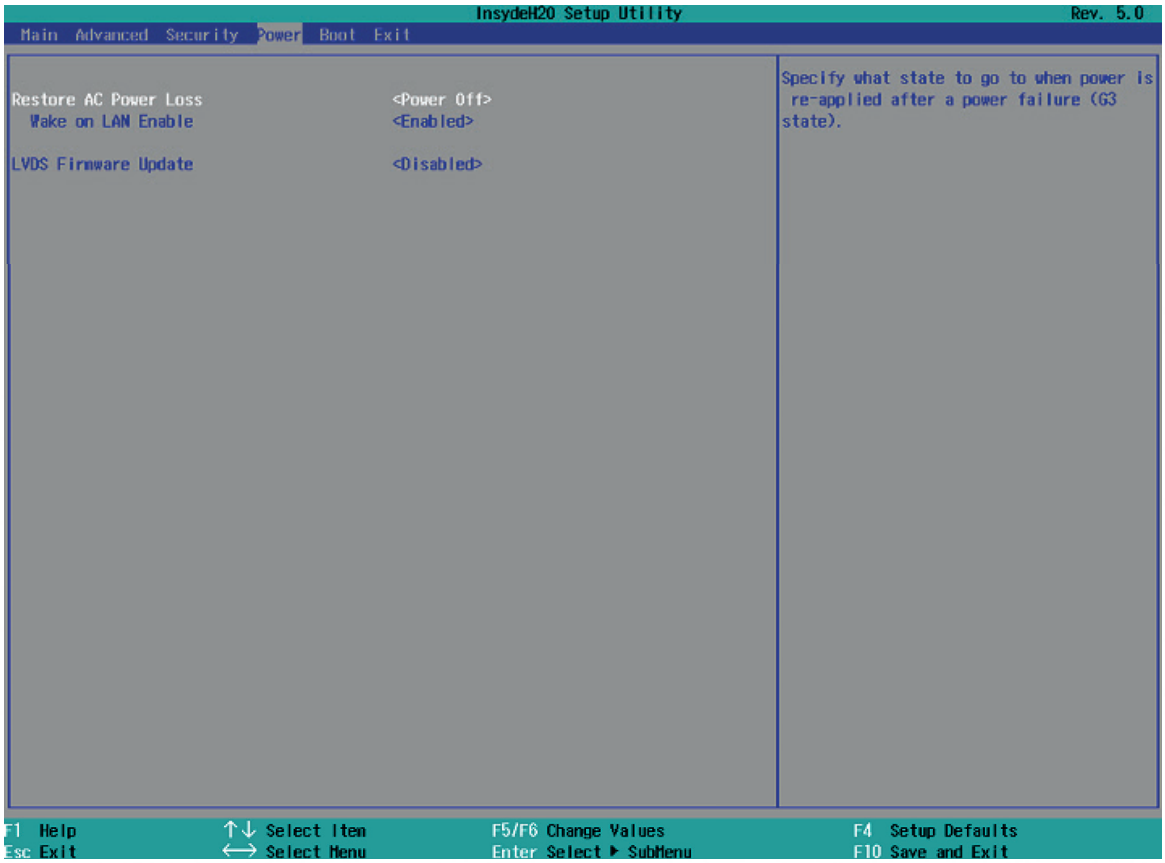


Use the Security menu to install or change the password



7-3. 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

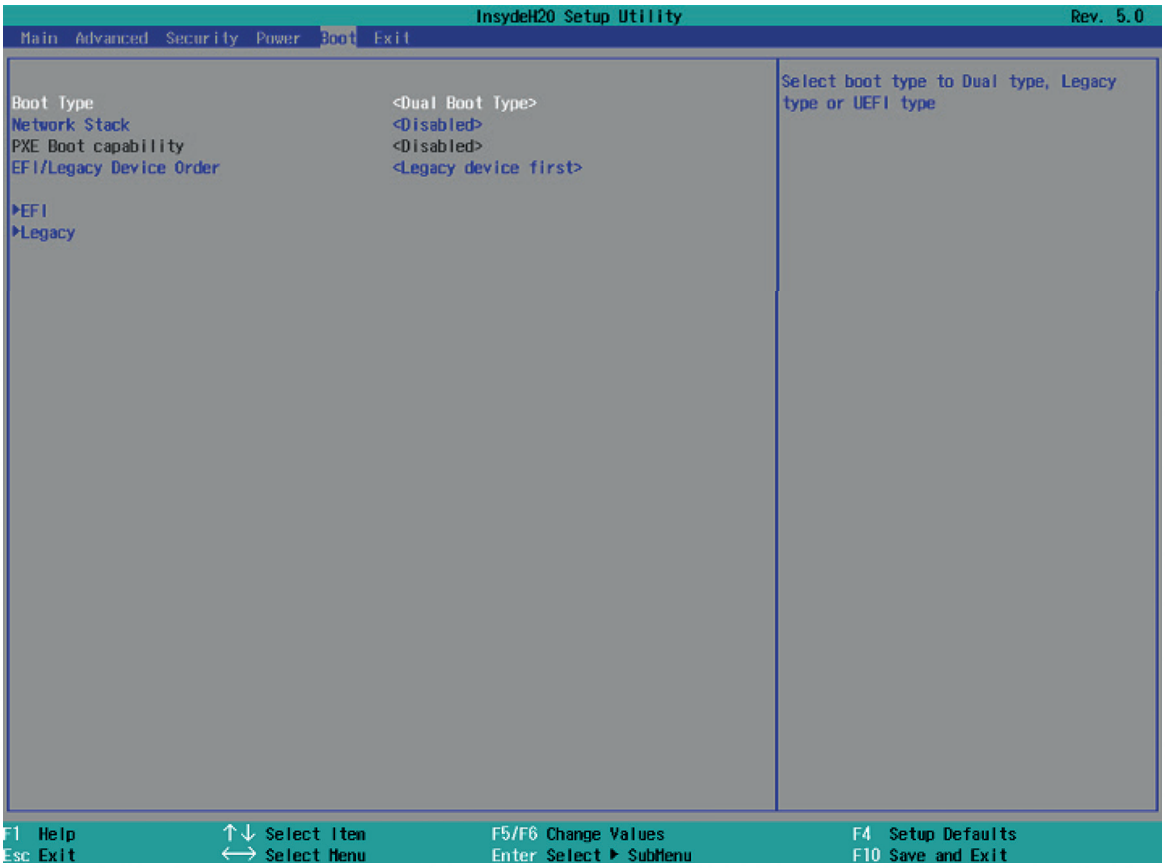
Wake on LAN

Enable or disable system wake by onboard LAN chip

LVDS Firmware update

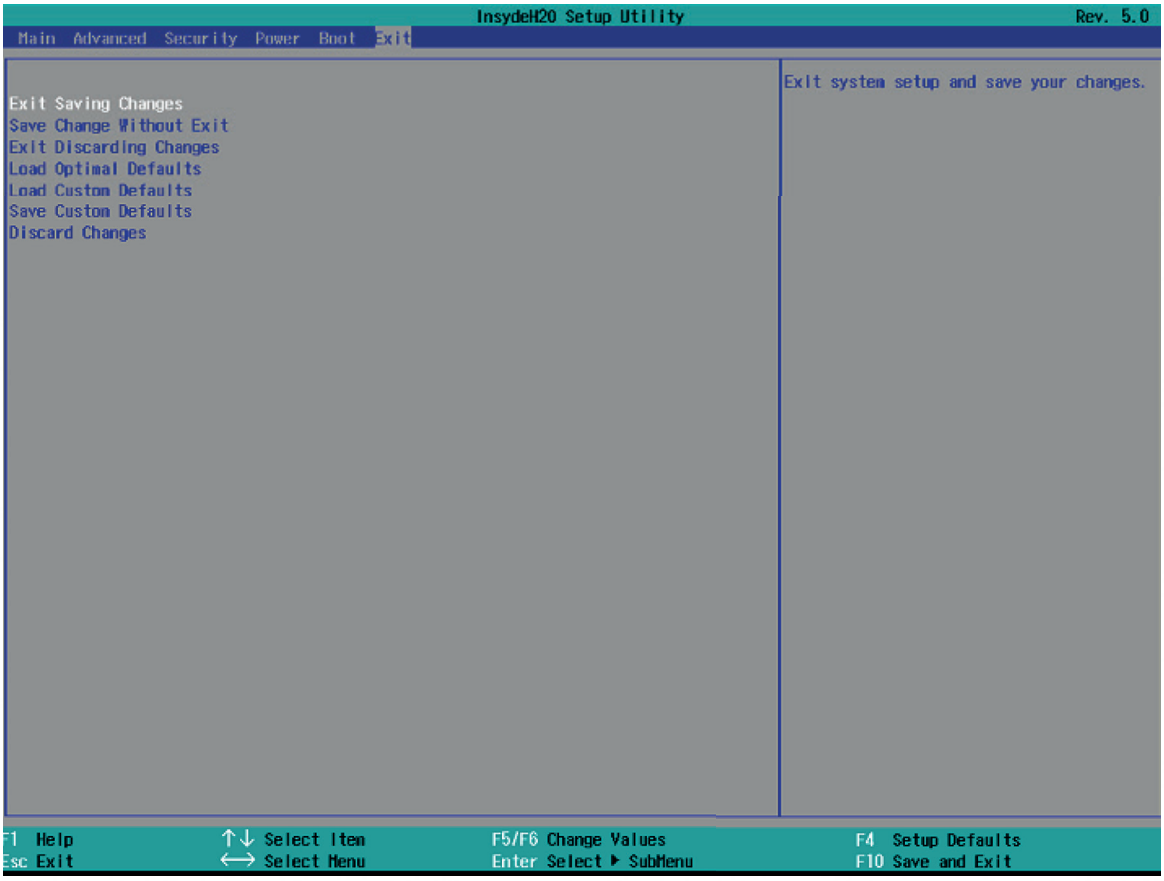
This item allows you to enable or disable LVDS Firmware update

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



7-5. Exit

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



Your printer is very reliable, but occasionally problems may occur. This chapter provides information on some common problems you may encounter and how to solve them. If you encounter problems that you can not resolve, contact your dealer for assistance.

8.1 Printer Not Working

Problem Description	Probable Reason	Solution
LED indicator off, printer not working	Printer without power	Connecting the power supply
	Printer switched off	Turn on the printer
	Circuit board broken	Contact with the dealer

8.2 LED Indicator and Beeper

Problem Description	Probable Reason	Solution
Paper LED always on	Paper roll near to the end	The roll paper is near to the end, the printer can work normally
Error LED always on and beeper alarms	Printer Cover open	Close the printer cover
Paper LED and Error LED always on and beeper alarms	Paper out	Reload the roll paper
Error LED blinks and beeper alarms	Thermal print head overheated	Turn the printer off and resume when it cools
	Overvoltage	Print with specified voltage
	Low-voltage	Print with specified voltage

8.3 Troubles Occur During Printing

Problem Description	Probable Reason	Solution
Coloured stripe in the paper	Paper near end	Reinstall the roll paper
Blurred printing or spot	Incorrect roll paper installation	Check if the roll paper is installed
	Unqualified roll paper	Use recommended thermal roll paper
	Dirty thermal head or print roller	Clean the thermal head or print roller
	Low print density	Increase the print density level
Paper Jam	Paper strike	Open the printer cover, check the paper path and remove jammed paper
Vertical print words missing	Dirty thermal head or print roller	Clean the thermal head or print roller
	Thermal head damaged	Contact your dealer for assistance

NOTE: The density of setting, please refer to "Utility Tool Manual"

8.4 Problems Emerge During The Paper Cutting

Problem Description	Probable Reason	Resolution
Cutter jam, the movable cutter cannot back	Cutter abrasion, insufficient cutting	Replace the cutter
	Worm gear and worm wheel abrasion	Replace the worm gear and worm wheel
	Motor burnt	Replace the motor
	Paper scraps	Clean the paper scraps on the transmission system
Insufficient cutting	Cutter edge abrasion, paper too thick	Replace the cutter
Paper jam	Thermal printer head over heat	Reduce the density of printing
	Driving too fast	Reduce the printer speed to the limit of thermal printer head
	Wrong paper feeding position	Put the paper parallel with the paper mount and insert into the space between platen roller and the thermal printer head.

NOTE: The density of setting, please refer to "Utility Tool Manual"

8.5 Removing Jammed Paper

 **Warning**: Do not touch the thermal print head because it becomes very hot after printing.

If the printer cover can be opened, operate it according to the next steps.

1) Turn off the printer and pull open cover button.

2) Remove jammed paper, reinstall the roll, and close the printer cover.

Print quality might be degraded by dust, foreign substance, adhesive substance, or other pollution materials stuck in the printer head or inside the printer.

When dirty, clean the print head as follows:

※ **CAUTION**

- Make sure to turn off the printer prior to cleaning.
- As the print head gets hot during printing, intending to clean the print head, turn the printer off and wait approximately 2~3 minute before commencement.
- When cleaning the print head, take care not to touch the heated portion of the print head. Print Head is susceptible to damage from static electricity, etc.
- Take care not to allow the print head become scratched and/or damaged in any way.

9.1 Cleaning Head

1) Open the Printer Cover and then use the cleaning pen to clean the head in the direction from the center of the head to the edges.
2) After cleaning the head, do not use the printer until the alcohol used for cleaning evaporates completely (1~2 min) and the printer has completely dried.

9.2 Cleaning Sensors, Roller and/or Paper Path

1) Open the printer cover and then remove the paper.
2) Remove any dust or foreign substance using dry cloth or cotton swab.
3) Soak the cloth or cotton swab in alcohol for medical use and use it to remove adhesive foreign substances or other pollution materials.
4) After cleaning the parts, do not use the printer until the alcohol evaporates completely (1~2 min) and the printer has completely dried.

※ Clean the parts whenever print quality or paper detection degraded.

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