



The one that creates a new trend

mini **O**
USER'S MANUAL

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Chapter 1. Introduction

1-1. Warranty

We guarantee our POS terminal product and its parts against defects in materials and workmanship, under proper use, for a standard period of 2 years from the original date of purchase.

During this period, we will repair or replace defective and/or faulty products or parts without charge to the customer for parts and labor.

The 1st year includes servicing and new or refurbished replacement parts free of charge, with one-way shipping costs borne by the seller. The customer shall, however, be responsible for the return delivery costs.

The 2nd year also includes free of charge servicing and parts, but a limited warranty requires the entire shipping cost to be borne by the customer.

Products out of the warranty period or scope shall be diagnosed at the customer's expense.

In the case of product damage due to error on part of the consumer, incorrect usage, carelessness or natural phenomenon, the customer shall bear the full cost for both repair and delivery.

1-2. Copyright

This publication, including all photographs, illustrations and software, is protected under international copyright law with all rights reserved to the manufacturer. Neither this manual, nor any of the material contained herein, may be reproduced without express written consent of the author.

1-3. Safety Information

1. Always ensure that the correct power voltage is used as a precaution against fire and electrical shock.

2. Avoid exposing product to direct sunlight. Do not use product in areas of high humidity.

Doing so may cause low reliability and/or operational malfunction.

3. Be careful of static electricity on PCB of system with anti-static appliances. Doing so may cause inferior reliability and shorted product life.

4. Keep product away from highly static areas. This may lead to inferior performance and reduced life cycle.

5. Do not interfere with, or obstruct metal components inside product. Doing so may cause the risk of fire or electric shock.

6. Do not pull on power cable or peripheral devices' connector cable. Doing so may cause fire, electric shock or electronic system malfunction.

7. Use caution when around other electronic devices with possible high frequency or electro-magnetic effects e.g. Audio, Electronic-range etc.

Doing so will lead to the serious risk of product malfunctioning or a system error occurring.

8. Ensure that batteries are replaced correctly. Failure to do this may result in sudden explosions.

9. Dispose of used batteries properly according to the instructions.

1-4. Liability Limitation

● Installation and maintenance

We recommend that you inquire about product installation, maintenance and repair service from the official service center and agent office.

POSBANK takes no responsibility for malfunctions or system errors occurring after service and/or system check carried out by unofficial service providers.

● High frequency appliances

This product is qualified by FCC, CE, EMI and MIC compliances, and is thus governed by these qualifications' safety regulations.

However, the product can affect and be affected by other high frequencies generated around it. As such, POSBANK does not consider liability for any system error or disorder due to this issue.

● Electronic noise emitting equipment

We recommend using the product away from electronic noise emitting equipment such as heaters, motors, fluorescent lights, TVs etc. as it may cause interruption or interference with normal operation.

● Installation location

For optimal performance, the product should be kept in an environment of lower than 65% humidity and in a temperature of 10 ~ 30°C. Please also keep away from direct sun-light.

● **Cleaning procedure**

Cleaning with chemical based products (in particular those containing benzyl or chemical thinning agents) can damage the exterior surfaces of the product. We recommend using a soft damp cloth and wiping gently, taking particular care when dealing with the LCD display screen.

● **Product limitations**

1. The use of this product for anything other than POS tasks is strictly prohibited.
The product is not supported for regular PC and interface operation.
2. This product is for business use only, and not for usage in the home.
3. Both hardware and software are both fully configured.
4. Normal operating is guaranteed on a steady power connection.

1-5. Installation Recommendations

1. Avoid installing during thunderstorms. (Possibility of dangerous exposure to electricity.)
2. Install away from damp spaces or water-leaks.
3. Beware of static occurrence during installation.
4. Use only ground connected and quality certified power cords and cables.
5. Keep out of direct sun-light, extremely high or low temperatures, or high humidity areas.
6. Install product away from areas prone to shocks or vibration.
7. Install product away from sewing machines, welding equipment, electric stoves, audio equipment and other high frequency generating equipment.
8. Installation and use in close proximity to an air-conditioning unit is not recommended.
9. Do not connect cables underneath carpets or floorboards.
10. Only use power cables supplied by pre-approved and certified venders.
11. Never use power cords from high power source appliances.
e.g. Electronic heaters, Electric stoves, Audio equipment, Air-conditioners, Refrigerators etc.
12. The use of multiple connections in a shared power outlet/socket is not recommended.

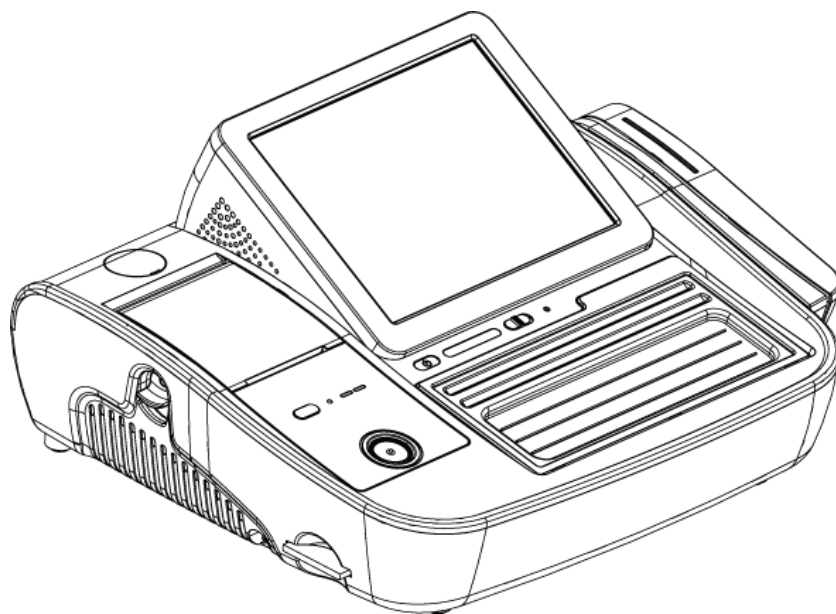


Chapter 2. Product Overview

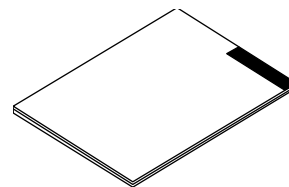
2-1. Inside Your Package

1. Please check your package and confirm its contents.
2. The POS terminal main unit, power cable, user manual, roll paper and driver CD are included in the package. If any items are missing or damaged, please contact your dealer for assistance.
 - » All user manuals and drivers are available for download on our website: www.posbank.com

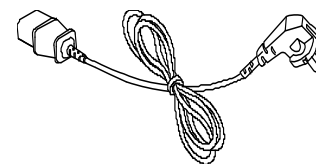
[Package Contents]



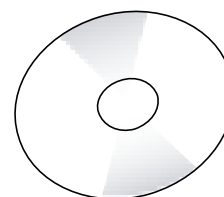
miniO main unit



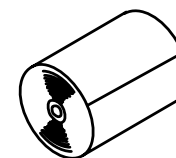
User manual



Power cable

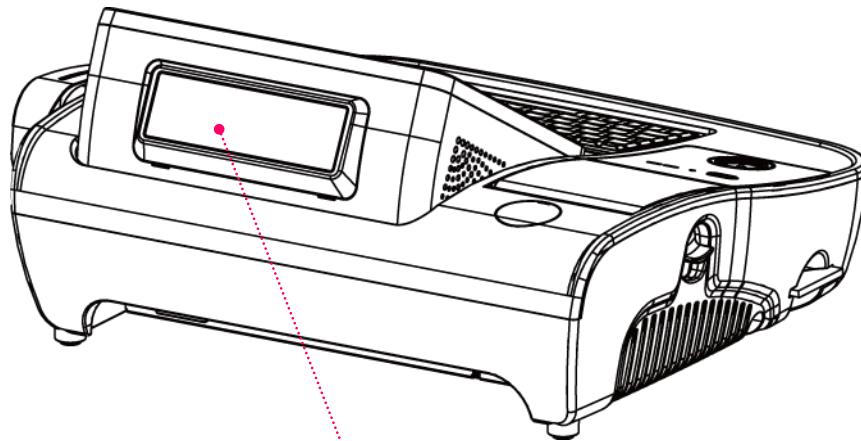


Driver CD

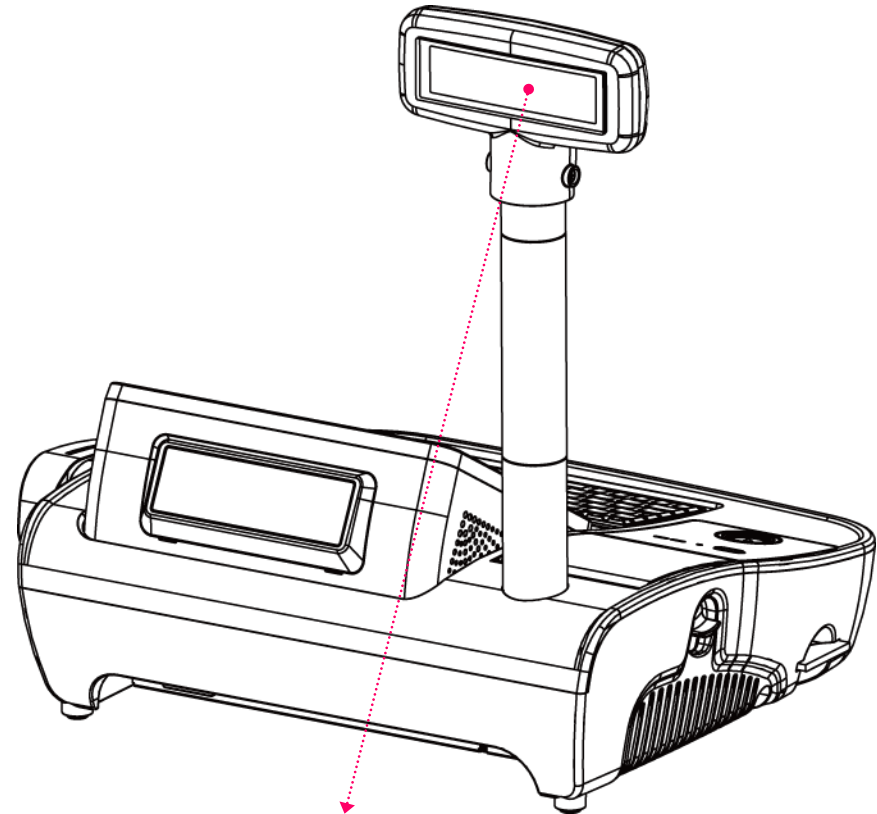


Roll paper

[Optional: Customer Display (CDP)]

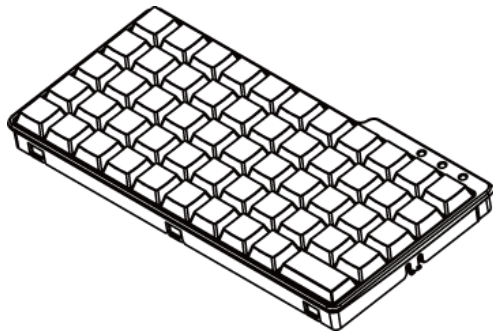


Normal CDP



Pole type CDP

[Optional: PLU Keyboard]



PLU Keyboard: 55Key

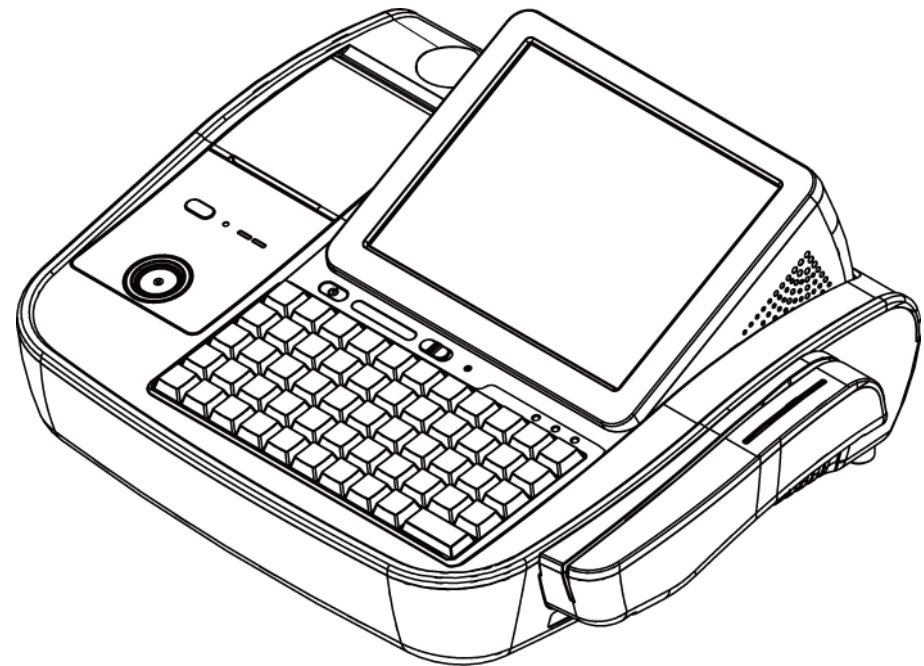
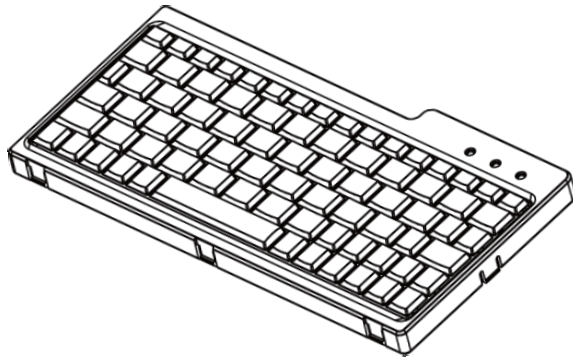


Image of Main Unit with PLU Keyboard

[Optional: Mini Keyboard]



Mini Keyboard

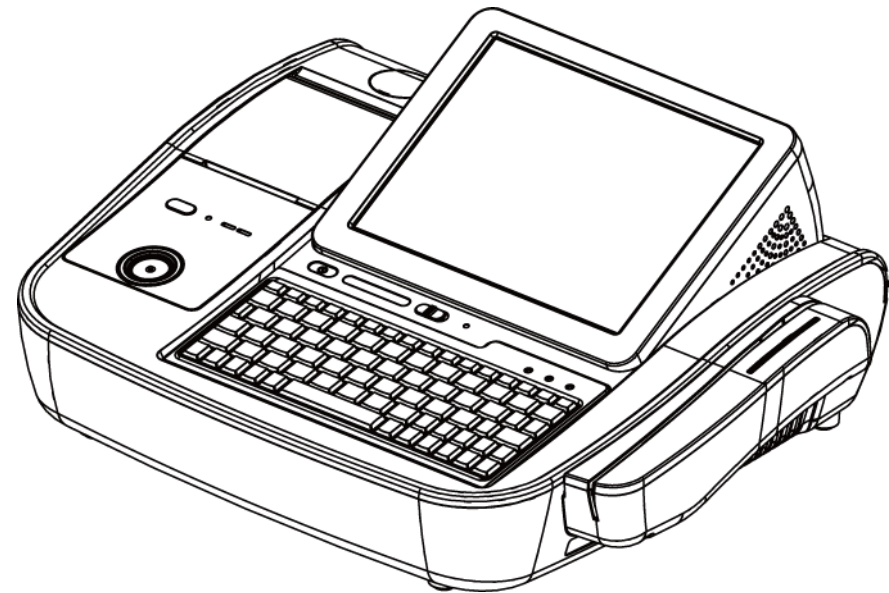


Image of Main Unit with Mini Keyboard

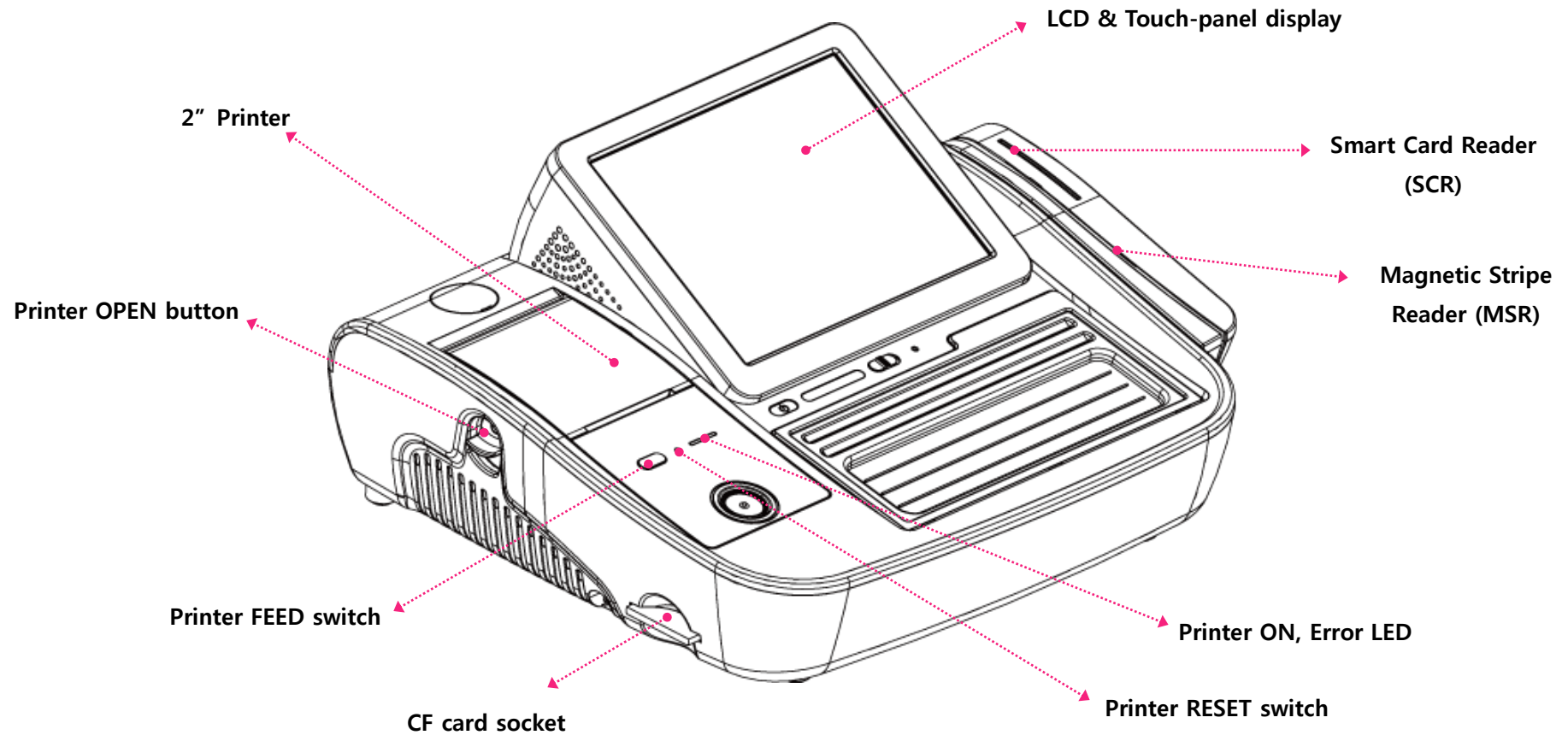
2-2. Pre-installation Preparation

1. Remove protective film from touch-screen to prevent possible operating difficulties.
2. Attach all optional parts before setting up the main POS unit.

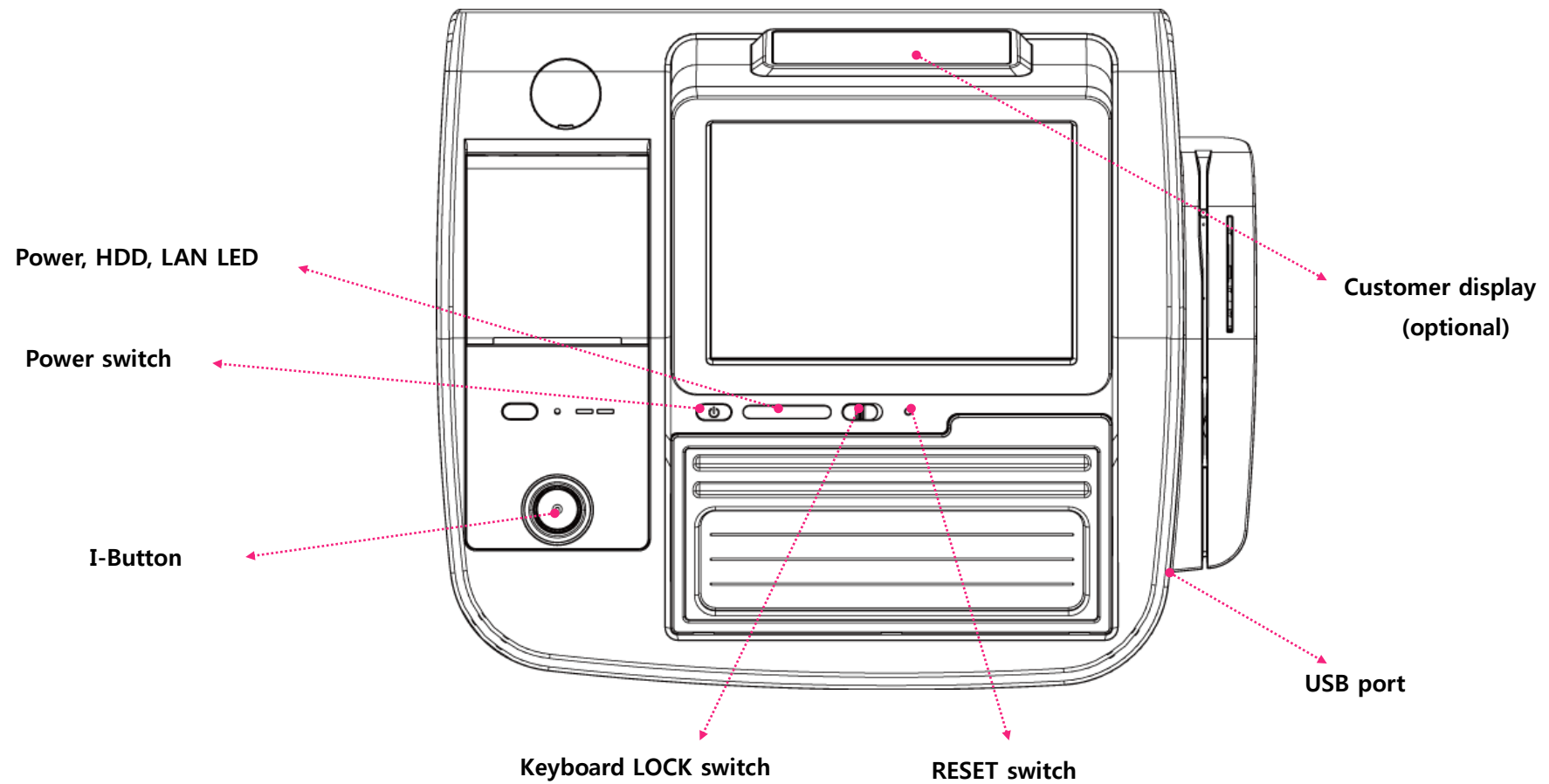
2-3. Product Outline

- Each part of product may differ depending on the specific POS model.
- Model-specific data sheets are provided on our website at www.posbank.com.

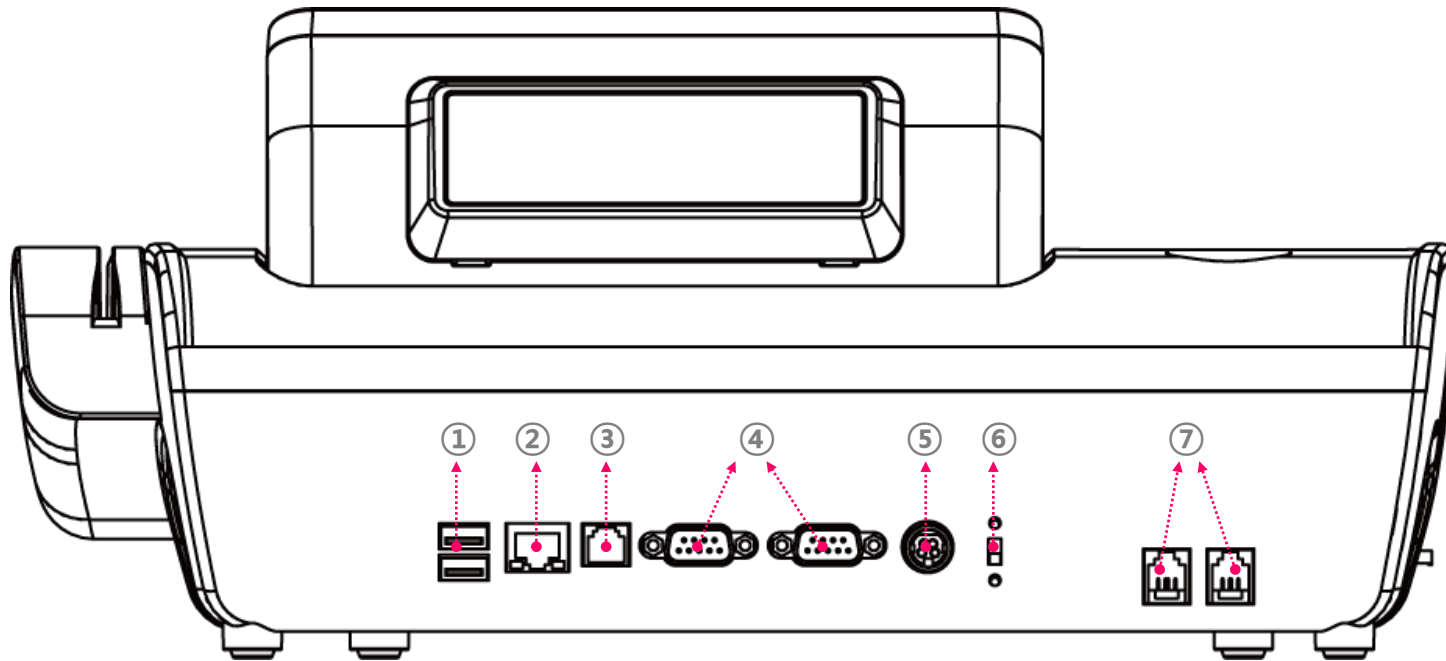
[Side View]



[Top View]



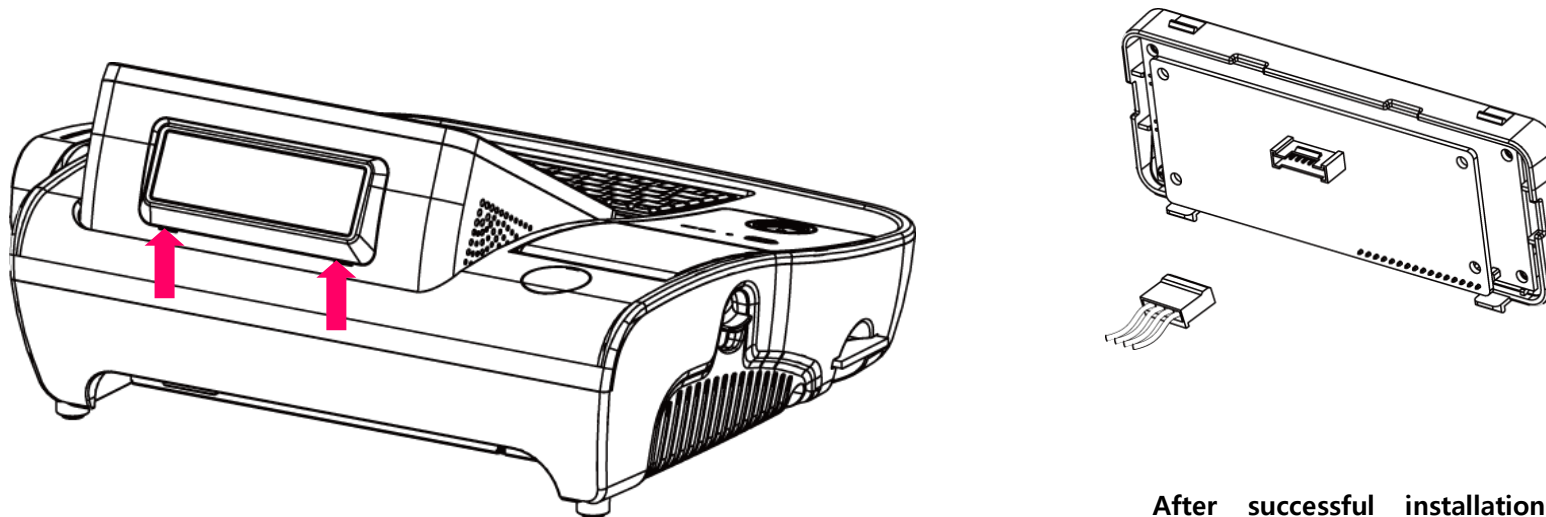
[Power & I/O Ports]



Description		Description	
1	USB port	5	Power connector
2	Ethernet port (LAN)	6	Fiscal / PC switch
3	Cash box port	7	Modem port
4	COM1, COM2 port		

2-4. Installation of Optional Devices

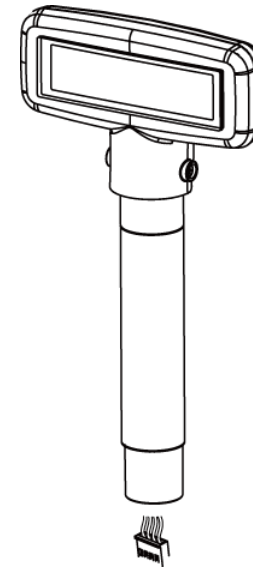
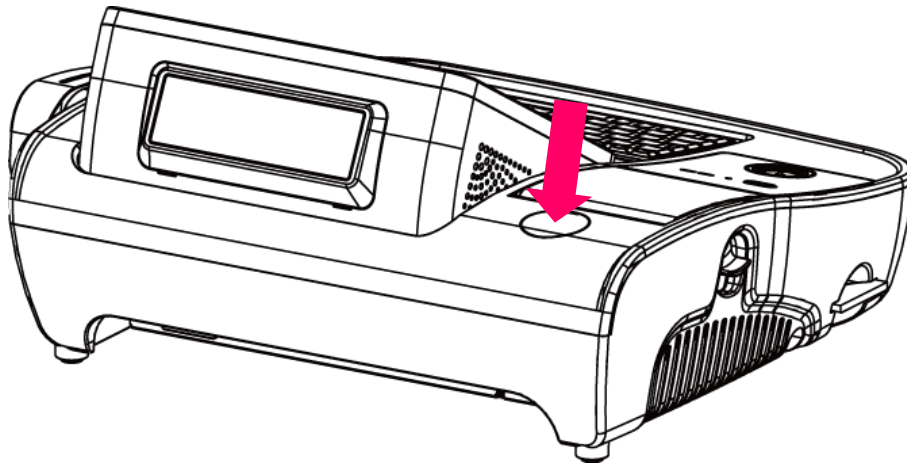
[CDP Installation] ⚠ **Warning:** Completely remove power cable when opening main unit or installing optional devices.



After successful installation of O/S, default text will be displayed on the CDP upon the POS unit being reset.

- | | |
|---|--|
| 1. Insert (-) driver in the grooves marked ↑ and detach cover from main unit. | 2. Connect to the main unit using the CDP-cable and install. |
|---|--|

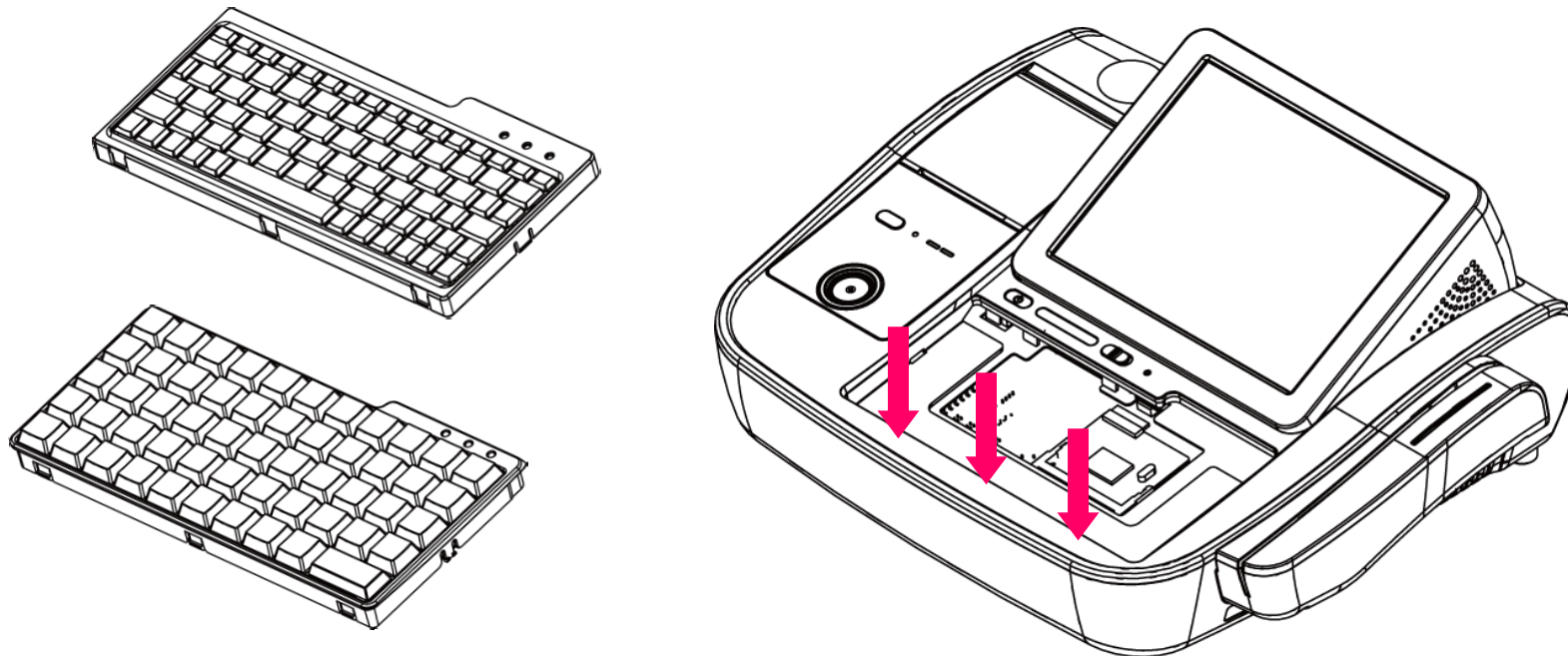
[CDP Installation: Pole Type] ⚠ **Warning:** Completely remove power cable when opening main unit or installing optional devices.



After successful installation of O/S, default text will be displayed on the CDP upon the POS unit being reset.

-
- | | |
|---|--|
| 1. Insert (-) driver in the grooves marked ↑ and detach cover from main unit. | 2. Connect to the main unit using the CDP-cable and install. |
|---|--|
-

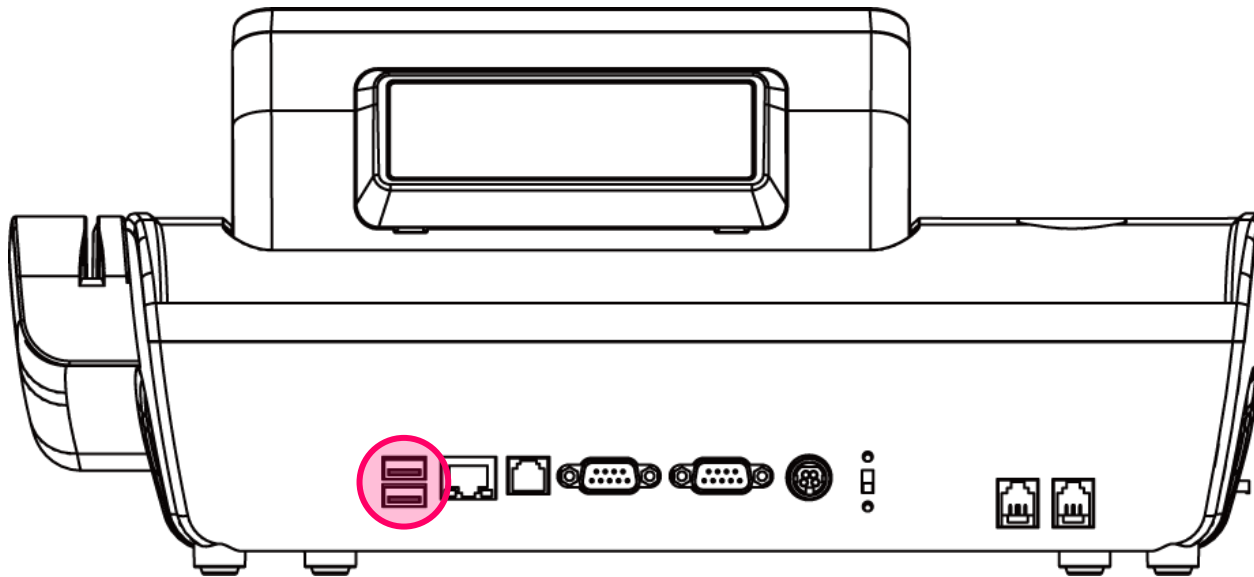
[Mini Keyboard Installation] ⚠ **Warning:** Completely remove power cable during installation



1. Put (-) driver in the grooves marked ↓ and detach dummy cover from main unit.
2. Connect cable to interface connector.

3. Insert keyboard into main unit from above.
- *After successful installation of O/S, an LED will light up in the upper-left corner of the keyboard upon the POS being reset.**

[Connection via USB Port]



Three USB ports are provided in the POS unit, two at the rear I/O and one at the side, all of which support the standard USB 2.0.

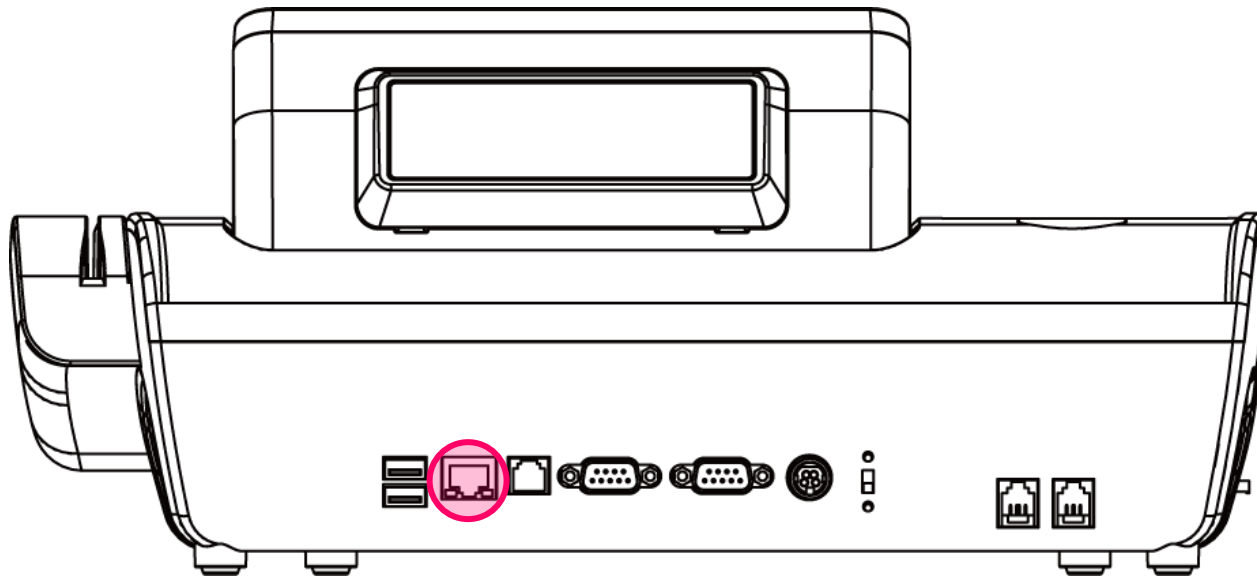
Some USB devices (optional devices) are only functional with specific driver software installed.

If multiple USB devices are used together, this may result in abnormal functionality.

Using a USB hub with external adapter for supplying power is recommended.

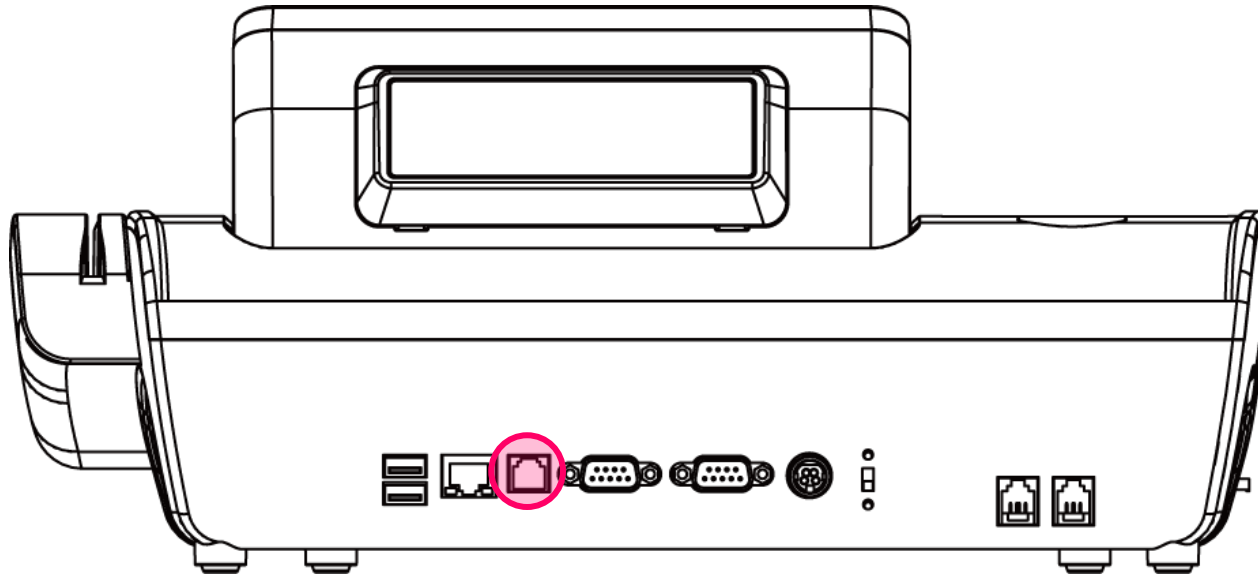
Dependent on the type of device, it is possible for the USB device to be recognized later than normal.

[Connection via Ethernet Port (LAN)]



The Ethernet port located at the rear I/O supports 10/100/1000Mbps using an RJ45 connector cable.
When connected properly, the LAN LED light will be switched on.

[Cash Drawer Connection]

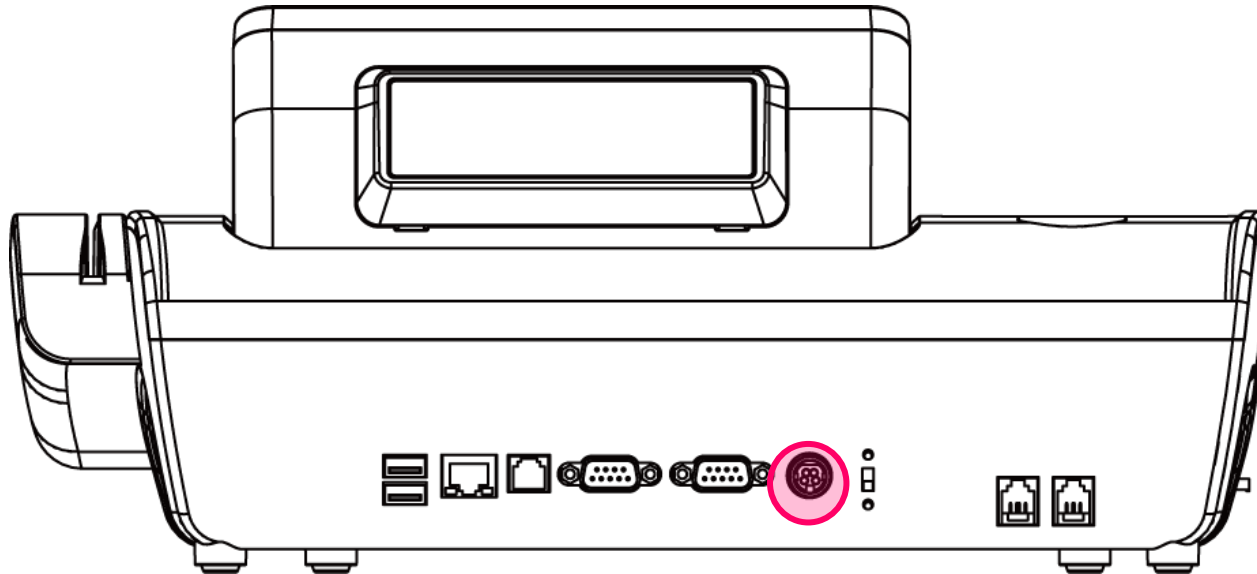


The cash drawer port (RJ11) is located at the rear I/O, and supports 24V Solenoid type.

The cash drawer port is connected to the internal printer on the mother board. The POS will not operate properly if no printer is attached to the POS.

* The miniO *only* supports cash drawers that are compatible with EPSON.

[Power Cable Connection]

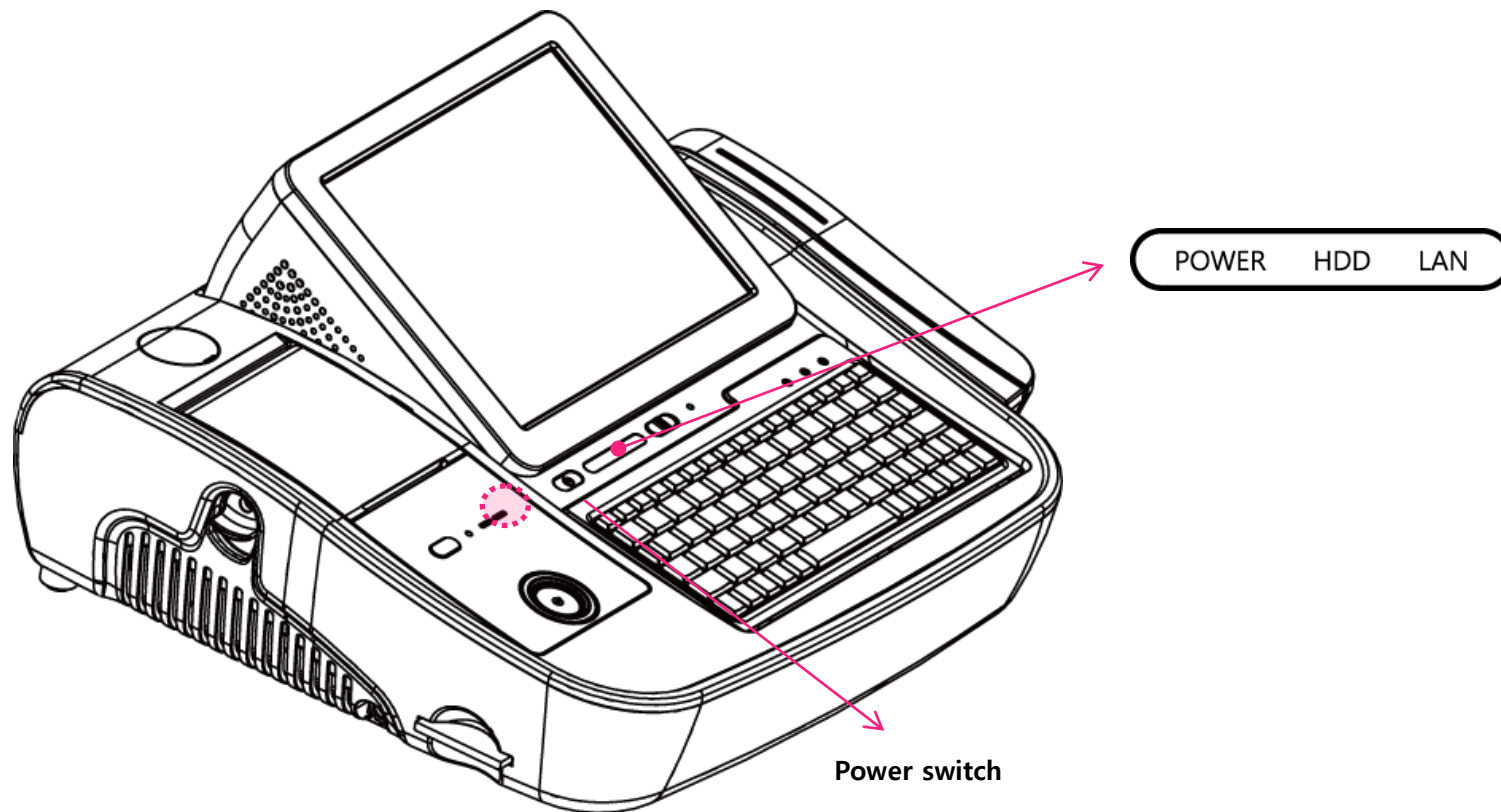


Insert power cable into power connector socket.

INPUT: 100-240V~,50/60Hz 1.5A OUTPUT: DC 24V 2.5A

2-5. Basic Operations

[Switching On POS]

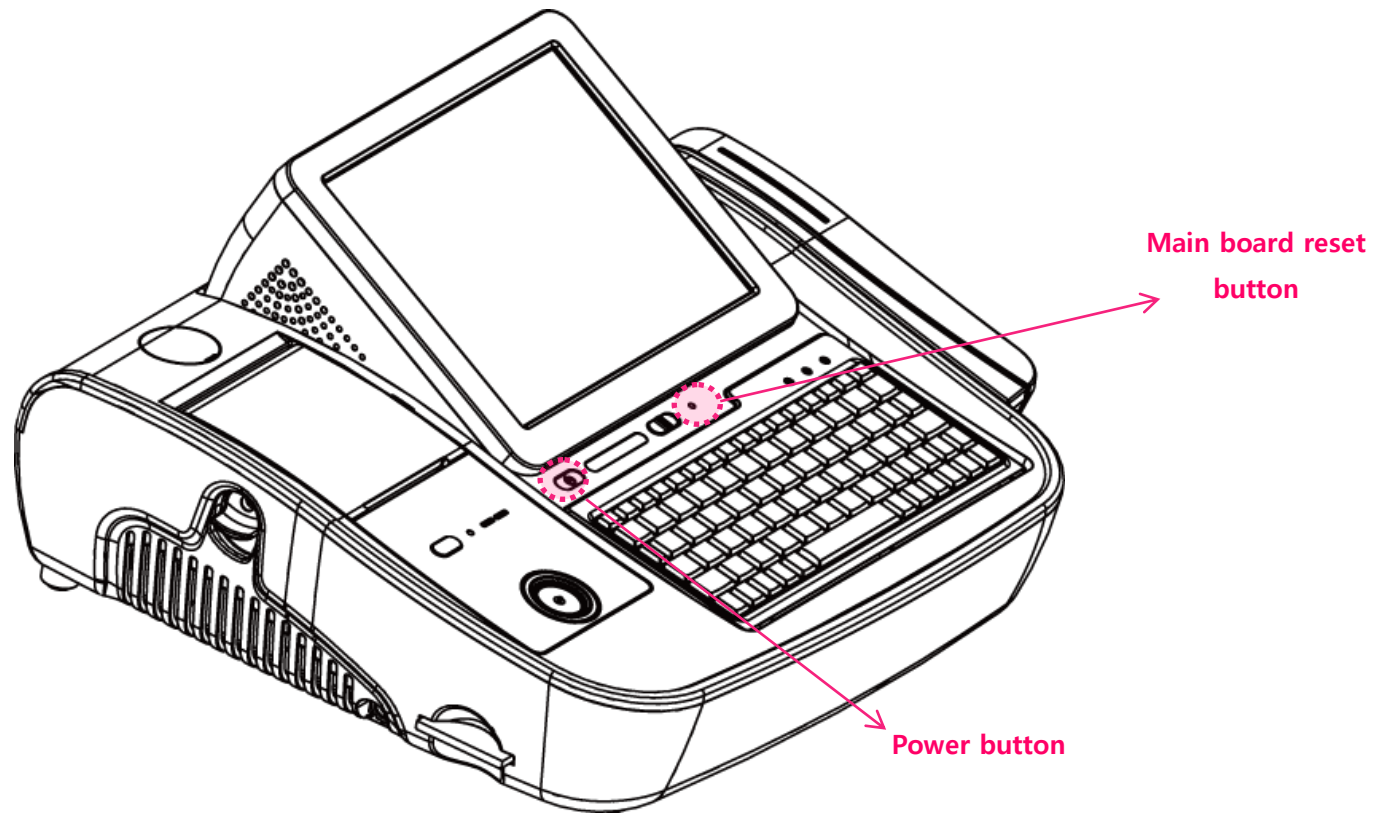


» Ensure that all additional POS accessories and peripherals are switched on before switching on the POS.

1. Press 'Power' button on the POS unit. (POWER LED will light up.)

2. Confirm that Windows is booting.

[Shutting Down POS]



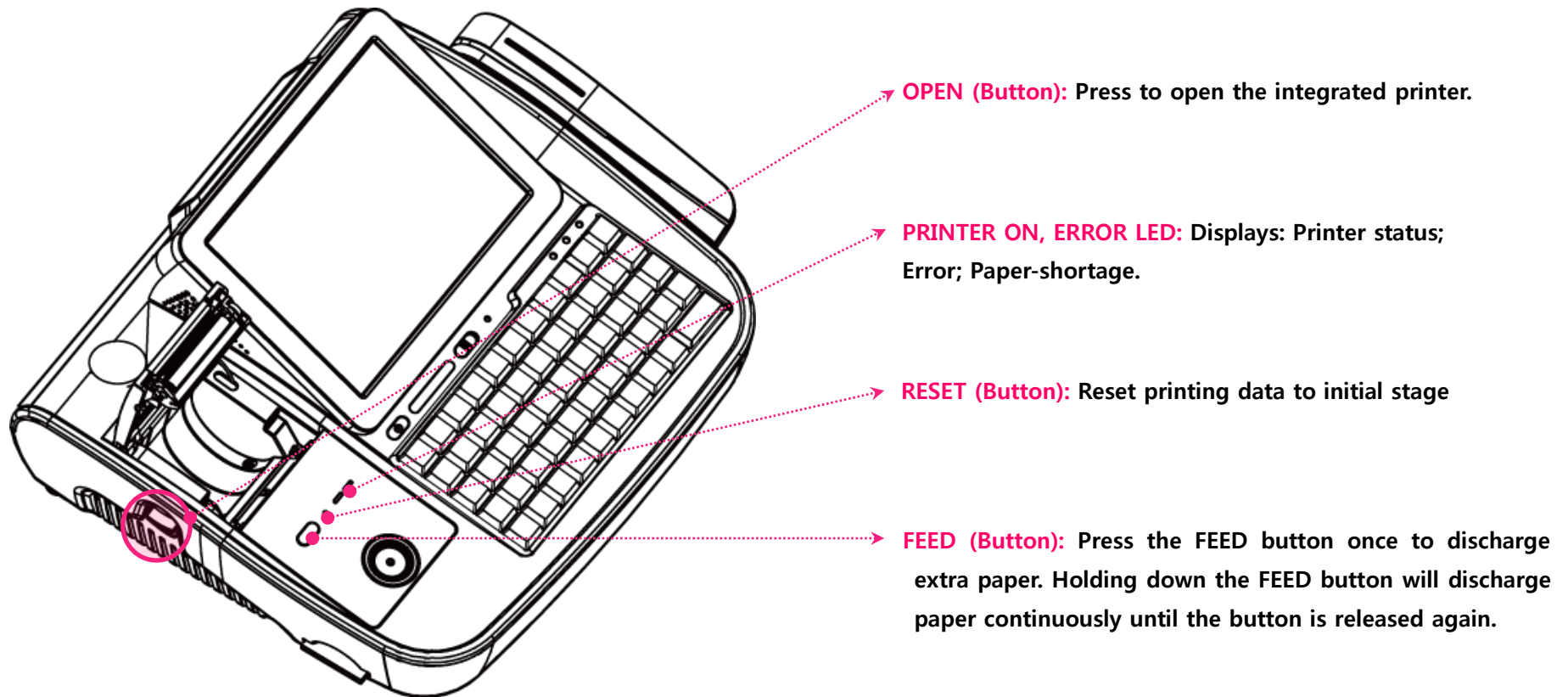
For product stability, it is recommended closing Windows directly in the O/S by clicking 'Start' -> 'Turn Off Computer' -> 'Shut Down'.

Please make sure that you have closed all applications before terminating Windows.

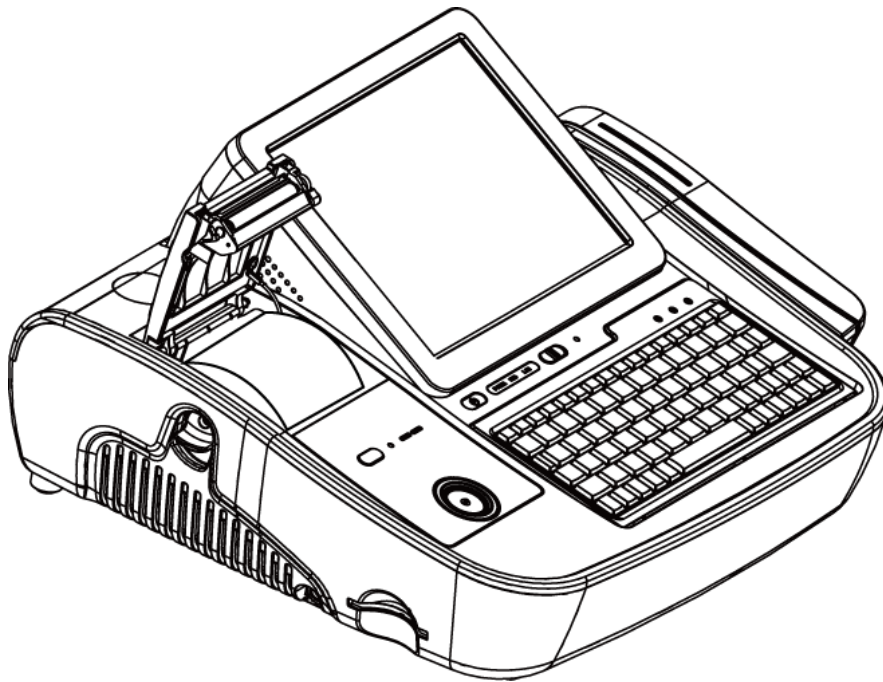
* Alternatively, you may shut down Windows by simply pressing the 'Power' switch on the Main Unit.

You may also perform a system-reboot by pressing the 'Reset' button on the Main board.

[Integrated Printer: Control Panel]



[Integrated Printer: Self-test]



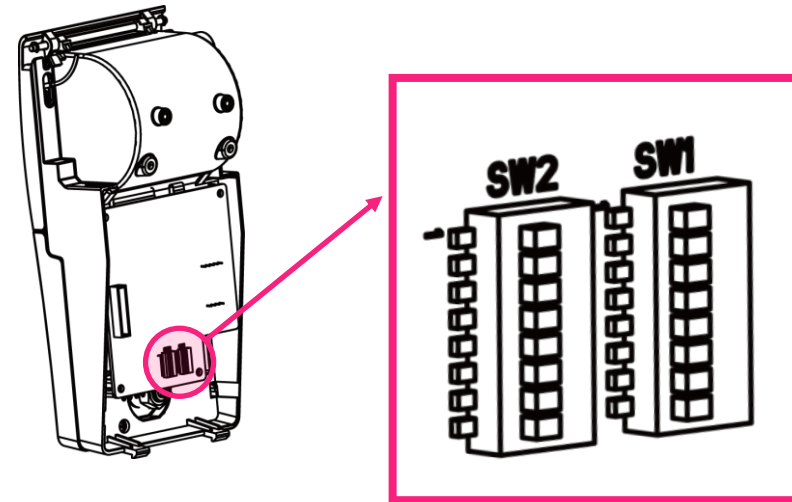
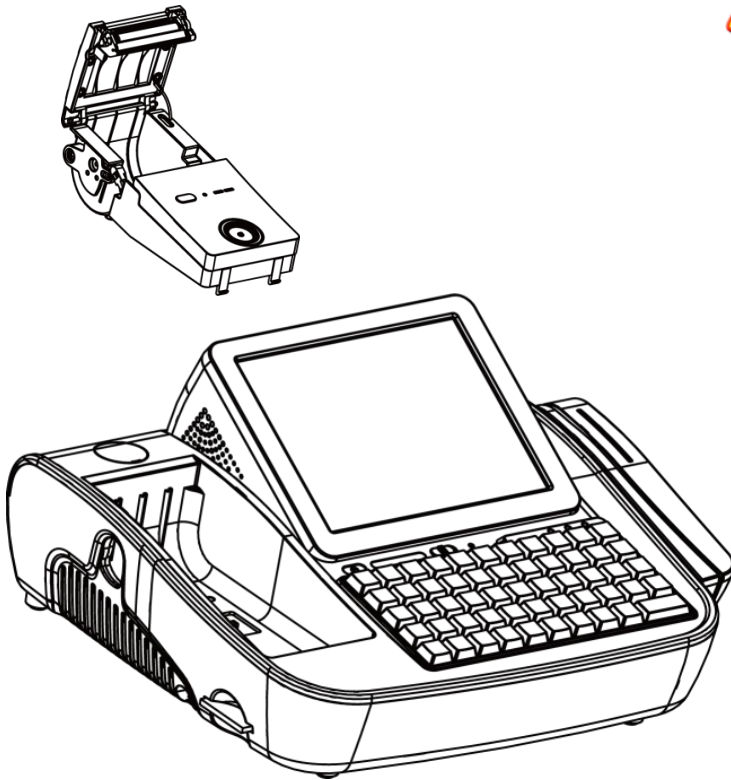
1. Ensure the paper roll is installed correctly.
2. The self-test prints out the current firmware version and DIP switch settings.
3. Self-test 1 (When miniO is powered Off)
While holding down the FEED button, turn on the power to begin the self-test.
4. Self-test 2 (When miniO is powered On)
While holding down the printer RESET button, press the FEED button. Next, release the printer RESET button and the self-test will begin.
5. Two pages will be printed in total:
 1. Current printer status
 2. Font display
6. Upon completion of the self-tests, press the RESET button to resume operation.

[Integrated Printer: DIP Switch Settings]



Warning: Ensure power is OFF when changing the dip switch settings.

Tip: Change density setting to "Normal" when printing with "B" Font



1. Detach integrated printer from main unit.

2. Check DIP SW on underside of printer.

No	Function	Setting				Default
1	RS232-C (Transmission speed)		SW1-1	SW1-2	SW1-3	9600 BPS
		2400 BPS	OFF	OFF	OFF	
		4800 BPS	ON	OFF	OFF	
		9600 BPS	OFF	ON	OFF	
		19200 BPS	ON	ON	OFF	
		38400 BPS	OFF	OFF	ON	
		57600 BPS	ON	OFF	ON	
		115200 BPS	OFF	ON	ON	
2	RS232-C (Handshaking)		SW1-4			DTR/DSR
		DTR/DSR	OFF			
		XON/XOFF	ON			
3	Auto cutter		SW2-7			Enable
		Enable	OFF			
		Disable	ON			
4	Sound		SW1-5	SW1-6		No Sound
		No Sound	OFF	OFF		
		Internal buzzer	ON	OFF		
		External buzzer	OFF	ON		
		Voice	ON	ON		

No	Function	Setting			Default
5	Print density		SW1-7	SW1-8	Low
		Low power	OFF	OFF	
		Normal	ON	OFF	
		Slightly	OFF	ON	
		Dark	ON	ON	
6	Auto cutter function		SW2-8		Partial cut
		Partial cut	OFF		
		Full cut	ON		

[Language Settings]

NO	CODE PAGE	LANGUAGE	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6
1	CP-437	English USA/Standard Europe	OFF	OFF	OFF	OFF	OFF	OFF
2	Katakana	Japanese	ON	OFF	OFF	OFF	OFF	OFF
3	CP-850	Multilingual	OFF	ON	OFF	OFF	OFF	OFF
4	CP-860	Portuguese	ON	ON	OFF	OFF	OFF	OFF
5	CP 863	Canadian-French	OFF	OFF	ON	OFF	OFF	OFF
6	CP-865	Nordic	ON	OFF	ON	OFF	OFF	OFF
7	CP-1252	Latin I	OFF	ON	ON	OFF	OFF	OFF
8	CP-866	Cyrillic Russian	ON	ON	ON	OFF	OFF	OFF
9	CP-852	Latin II	OFF	OFF	OFF	ON	OFF	OFF
10	CP-858	Euro	ON	OFF	OFF	ON	OFF	OFF
11	Thai-42	Thailand characters	OFF	ON	OFF	ON	OFF	OFF
12	Thai-11		ON	ON	OFF	ON	OFF	OFF
13	Thai-14	Thailand characters	OFF	OFF	ON	ON	OFF	OFF
14	Thai-16		ON	OFF	ON	ON	OFF	OFF
15	Thai-18		OFF	ON	ON	ON	OFF	OFF
16	CP-874		ON	ON	ON	ON	OFF	OFF
17	CP-737	Greek	OFF	OFF	OFF	OFF	ON	OFF
18	CP-775	Baltic	ON	OFF	OFF	OFF	ON	OFF
19	CP-855	Cyrillic	OFF	ON	OFF	OFF	ON	OFF
20	CP-857	Turkish	ON	ON	OFF	OFF	ON	OFF
21	CP-861	Icelandic	OFF	OFF	ON	OFF	ON	OFF
22	CP-862	Hebrew	ON	OFF	ON	OFF	ON	OFF
23	CP-864	Arabic	OFF	ON	ON	OFF	ON	OFF
24	CP-869	Greek II	ON	ON	ON	OFF	ON	OFF

25	CP-1251	Cyrillic	OFF	OFF	OFF	ON	ON	OFF
26	CP-1253	Greek	ON	OFF	OFF	ON	ON	OFF
27	CP-1254	Turkish	OFF	ON	OFF	ON	ON	OFF
28	CP-1255	Hebrew	ON	ON	OFF	ON	ON	OFF
29	CP-1256	Arabic	OFF	OFF	ON	ON	ON	OFF
30	CP-1257	Baltic	ON	OFF	ON	ON	ON	OFF
31	CP-1258	Vietnamese	OFF	ON	ON	ON	ON	OFF
32	CP-950	Traditional Chinese Big5	OFF	OFF	ON	ON	ON	ON
33	CP-936	Simplified Chinese GBK	ON	OFF	ON	ON	ON	ON
34	CP-932	Japanese Shift-JIS	OFF	ON	ON	ON	ON	ON
35	CP-949	Korean	ON	ON	ON	ON	ON	ON



Chapter 3. BIOS Setup Utility

3-1. BIOS Setup Program

The motherboard supports a programmable firmware chip that can be updated using the provided utility described in the following. Use the BIOS Setup program when you are installing a motherboard, reconfiguring your system, or prompted to "Run Setup". This section explains how to configure your system using this utility.

Even if you are not prompted to use the Setup program, you can still change the configuration of your computer in the future. For example, you can enable the security password feature or change the power management settings. This requires you to reconfigure your system using the BIOS Setup program so that the computer can recognize these changes and record them in the CMOS RAM of the firmware hub.

The firmware hub on the motherboard stores the Setup utility. When you start up the computer, the system provides you with the opportunity to run this program. Press during the Power-On-Self-Test (POST) to enter the Setup utility; otherwise, POST continues with its test routines.

If you wish to enter Setup after POST, restart the system by pressing <Ctrl+Alt+Delete>, or by pressing the reset button on the system chassis. You can also restart by turning the system off and then back on. Only do this as a last option if the first two fail.

The Setup program is designed to make it as easy to use as possible. Being a menu-driven program, it lets you scroll through the various sub-menus and make your selections from the available options using the navigation keys.

3-1-1. Legend Box

The keys in the legend bar allow you to navigate through the various setup menus.

Key(s)	Function Description
F1	General help, only for Status Page Setup Menu and Option Page Setup Menu
Esc	Return to the main menu from a sub-menu or prompts you to quit the setup program
←, →	Move to the item in the left or right hand
↑, ↓	Move to previous or next item
Enter	Brings up a selection menu for the highlighted field
+ or PgUp	Moves the cursor to the first field
- or PgDn	Moves the cursor to the last field
F5	Loads the previous values
F6, F7	Loads the fail-safe / optimized defaults
F10	Saves changes and exits Setup

3-1-2. List Box

This box appears only in the opening screen. The box displays an initial list of configurable items in the menu you selected.

3-1-3. Sub-menu

Note that a right pointer symbol (►) appears to the left of certain fields. This pointer indicates that you can display a sub-menu from this field. A sub-menu contains additional options for a field parameter. To display a sub-menu, move the highlight to the field and press <Enter>.

The sub-menu appears. Use the legend keys to enter values and move from field to field within a sub-menu as you would within a menu.

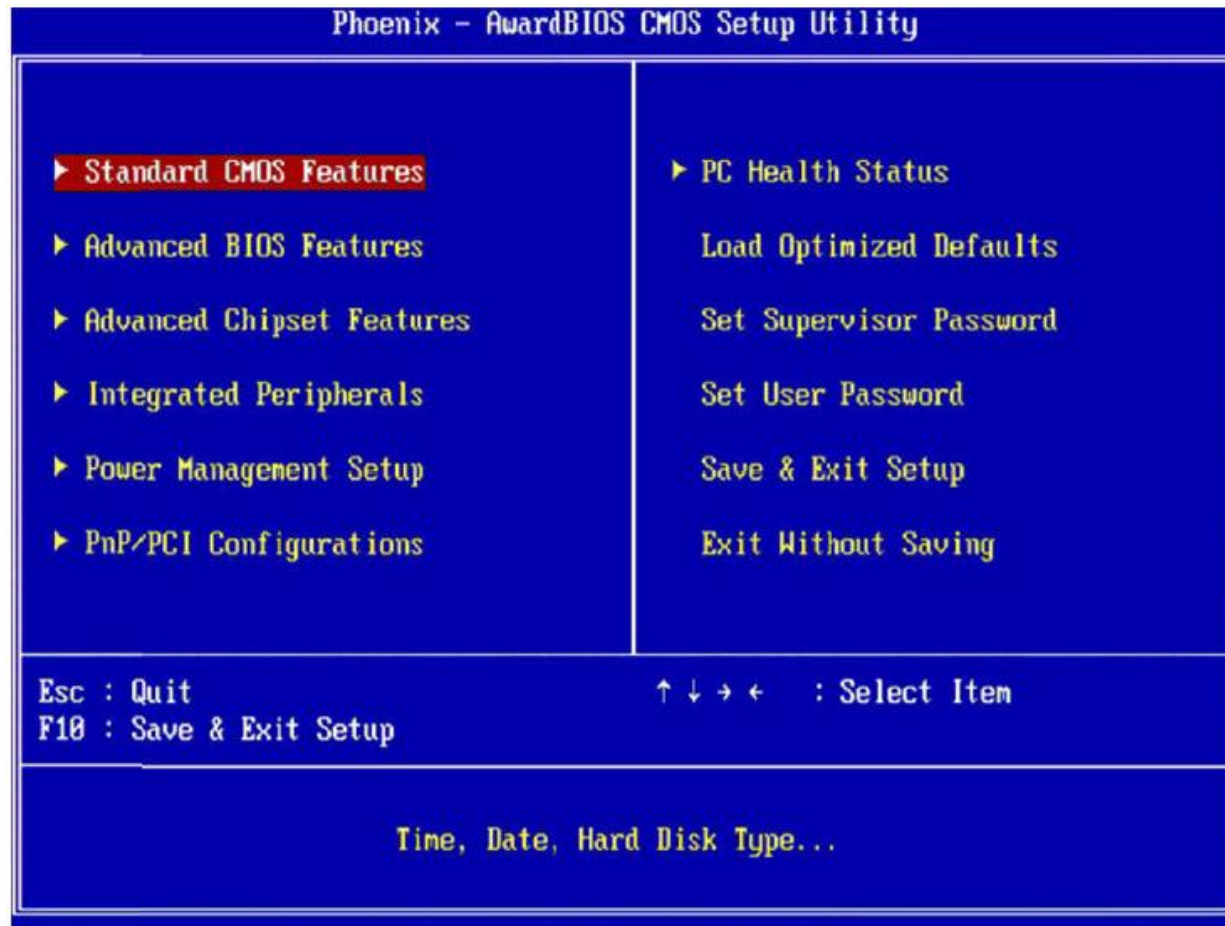
Use the <Esc> key to return to the main menu.

Take some time to familiarize yourself with the legend keys and their corresponding functions.

Practice navigating through the various menus and submenus. If you accidentally make unwanted changes to any of the fields, press <F6> to load the fail-safe default values. While moving around through the Setup program, note that explanations appear in the Item Specific Help window located to the right of each menu. This window displays the help text for the currently highlighted field.

3-2. BIOS Menu Screen

When entering the BIOS, the following screen appears. The BIOS menu screen displays the items that allow you to make changes to the system configuration. To access the menu items, press the up/down/right/left arrow key on the keyboard until the desired item is highlighted, then press [Enter] to open the specific menu.



3-3. Standard CMOS Features

The "Standard CMOS Features" screen gives you an overview of the basic system.

Phoenix - AwardBIOS CMOS Setup Utility	
Standard CMOS Features	
Date (mm:dd:yy)	Mon, Sep 27 2010
Time (hh:mm:ss)	15 : 28 : 33
▶ IDE Channel 0 Master	[None]
▶ IDE Channel 0 Slave	[None]
▶ IDE Channel 1 Master	[None]
▶ IDE Channel 1 Slave	[None]
Video	[EGA/VGA]
Halt On	[All , But Keyboard]
Base Memory	639K
Extended Memory	1038336K
Total Memory	1039360K
Item Help	
Menu Level ▶	
Change the day, month, year and century	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Date [Day, xx/xx/xxxx]

The date format is <day>, <month>, <date>, <year>.

Time [xx:xx:xx]

The time format is <hour>, <minute>, <second>, based on the 24-hour clock.

IDE Channel 0/1 Master/Slave

IDE HDD Auto-Detection : [Press Enter] to select this option for automatic device detection.

IDE Device Setup

[Auto] : Automatically detects IDE devices during POST

[None] : Select this when no IDE device is used. The system will skip the auto-detection setup to make system start up faster.

[Manual] : User can manually input the correct settings.

- Access Mode : The options are CHS/LBA/Large/Auto
- Capacity : Capacity of currently installed hard disk
- Cylinder : Number of cylinders
- Head : Number of heads
- Precomp : Write precomp
- Landing Zone : Landing zone
- Sector : Number of sectors

Video

This category detects the type of adapter used for the primary monitor that must match your video display card and monitor.

- EGA/VGA : Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SVGA or PGA monitor adapters.
- CGA 40 : Color Graphics Adapter, power up in 40 column mode.
- CGA 80 : Color Graphics Adapter, power up in 80 column mode.

Halt On

Sets the system to halt on errors according to the system functions specified in each option.

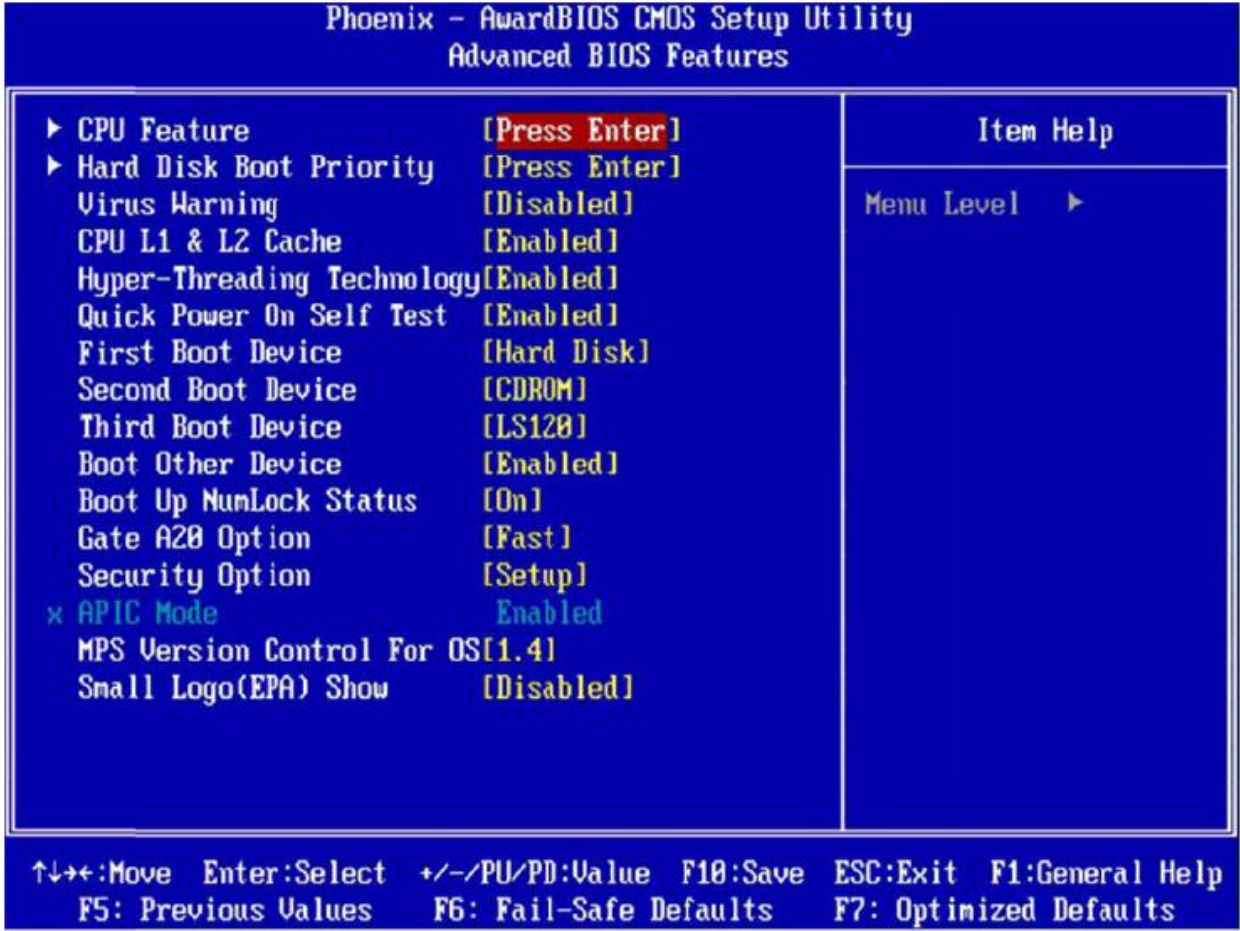
Configuration options : [All Errors] [No Errors] [All, But Keyboard]

Memory

This category displays base memory, extended memory, and total memory detected during POS (Power On Self Test)

3-4. Advanced BIOS Features

The "Advanced BIOS Features" screen appears when choosing the "Advanced BIOS Features" item from the "Initial Setup Screen" menu. It allows the user to configure the RX945G according to their particular requirements. Below are some major items that are provided in the Advanced BIOS Features screen. A quick booting function is provided for your convenience. Simply enable the Quick Booting item to reduce the system's booting time.



[Hard Disk Boot Priority]

Set hard disk boot device priority.

Phoenix - AwardBIOS CMOS Setup Utility	
Hard Disk Boot Priority	
1. Ch0 S. : TRANSCEND	Item Help
2. Bootable Add-in Cards	Menu Level ▶
	Use <↑> or <↓> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7:Setup Defaults

CH0 S.

Primary SATA channel with Master Device. It will show the device model / type when a SATA HDD or CD ROM is connected.

Bootable Add-in Cards

"Bootable add-in cards" is an item on the HDD boot priority list.

Virus Warning

Enables or disables the virus warning.

Item	Description
Enable	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
Disable	No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

CPU L1 & L2 Cache

Enabling this feature speeds up memory access.

Item	Description
Enable	Enable cache
Disable	Disable cache

Hyper Threading Technology

System will detect automatically and show up when you installed the Intel® Pentium® 4 processor with HT Technology. Set to "Enabled" for faster system performance.

Quick Power On Self Test (POST)

This allows the system to skip certain tests to speed up the boot-up procedure.

Item	Description
Enable	Enable quick POST
Disable	Normal POST

First / Second / Third Boot Device

The BIOS tries to load the OS from the devices in the sequence set here. The options are:

Item	Description
LS120	LS120 Device
HDD	Hard Disk Device
CDROM	CDROM Device
ZIP100	ZIP-100 Device
USB-FDD	USB Floppy Device
USB-ZIP	USB ZIP Device
USB-CDROM	USB CDROM Device
USB-HDD	USB Hard Disk Device
Legacy LAN	Network Device
Disabled	Disabled any boot device

Boot Other Device

Use this to boot another device. The options are "Enabled" and "Disabled".

Boot Up NumLock Status

Sets the boot up NumLock status. The options are "On" and "Off".

Item	Description
On	Enable NumLock
Off	Disable NumLock

Gate A20 Option

Item	Description
Normal	A pin in the keyboard controller controls GateA20
Fast	Lets chipset control GateA20 (Default)

Security Option

This category determines whether a password is required when the system boots up or only when entering setup. The options are:

Item	Description
System	The system will not boot, and access to Setup will be denied, if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied, if the correct password is not entered at the prompt.

APIC Mode

This setting allows you to enable the APIC mode. The choices are "Disabled" or "Enabled."

MPS Version Control for OS

This option is only valid for multiprocessor motherboards as it specifies the version of the Multiprocessor Specification (MPS) that the motherboard will use. The MPS is a specification by which PC manufacturers design and build Intel architecture systems with two or more processors.

MPS 1.1 was the original specification. MPS version 1.4 adds extended configuration tables for improved support of multiple PCI bus configurations and greater expandability in the future. In addition, MPS 1.4 introduces support for a secondary PCI bus without requiring a PCI bridge.

Small Logo (EPA) Show

This item allows you to enable/disable the small EPA logo being shown on screen at during the POST.

Item	Description
Enabled	EPA Logo is shown
Disabled	EPA logo is hidden

3-5. Advanced Chipset Features

Phoenix - AwardBIOS CMOS Setup Utility	
Advanced Chipset Features	
DRAM Timing Selectable	[By SPD]
x CAS Latency Time	Auto
x DRAM RAS# to CAS# Delay	Auto
x DRAM RAS# Precharge	Auto
x Precharge dealy (tRAS)	Auto
x System Memory Frequency	Auto
System BIOS Cacheable	[Enabled]
Video BIOS Cacheable	[Disabled]
Memory Hole At 15M-16M	[Disabled]
** VGA Setting **	
On-Chip Frame Buffer Size	[8MB]
DVMT Mode	[DVMT]
DVMT/FIXED Memory Size	[128MB]
Boot Display	[CRT+LFP]
Panel Number	[800x600 18bit]
Item Help	
Menu Level ▶	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

DRAM Timing Selectable

When set to "BySPD", the DRAM timing parameters are set according to DRAM SPD (Serial Presence Detect). When disabled, one can manually set the DRAM timing parameters through the sub items below. Set to "BySPD" if unsure about this feature.

CAS Latency Time

Controls the latency between the SDRAM Read command and the time data actually becomes available.

DRAM RAS# to CAS# Delay

Controls the latency between the DDR SDRAM active command and the read/write command.

DRAM RAS# Precharge

Controls the idle clocks after issuing a precharge command to the DDRSDRAM.

Precharge Delay (tRAS)

This setting determines the timing delay for DRAM precharge.

System Memory Frequency

Allows user to choose different frequencies of memory module.

System BIOS Cacheable

Selecting "Enabled" allows caching of the system BIOS ROM at F0000h- FFFFFh, resulting in better system performance. However, a system error may occur if data is written to this area of memory by any programs.

Video BIOS Cacheable

Selecting "Enabled" allows caching of the video BIOS ROM at F0000h-FFFFFh, resulting in better video performance. However, a system error may occur if data is written to this area of memory by any programs.

Memory Hole At 15M-16M

Enabling this feature reserves 15 MB to 16 MB memory address space for ISA expansion cards that specifically require this setting. This makes memory from 15 MB and up unavailable to the system. Expansion cards can only access memory up to 16 MB. The default setting is "Disabled".

On-Chip Frame Buffer Size

The On-Chip Frame Buffer Size can be set to 1MB or 8MB. This memory is shared with the system memory.

DVMT Mode

Use this field to select the type of memory to allocate as video memory. Configuration options: "Fixed", "DVMT" and "BOTH".

DVMT/FIXED Memory Size

Specify the size of DVMT/system memory to allocate for video memory.

Boot Display

The options are: [Auto], [CRT], [LFP], [CRT+LFP], [DVI]

Panel Number

The options are: [640x480 18bit] [800x600 18bit] [1024x768 18bit] [1280x1024 18bit/2]
[1400x1050 18bit/2] [1400x1050 18bit/2] [1600x1200 18bit/2] [1280x768 18bit]
[1680x1050 18bit/2] [1920x1200 18bit/2] [1024x768 18bit/2] [1024x768 24bit] [1024x768 18bit]
[1280x800 24bit] [1280x600 18bit] [2048x1536 18bit/2]

3-6. Integrated Peripherals

Use this menu to specify settings for integrated peripherals.



[OnChip IDE Device]

Phoenix - AwardBIOS CMOS Setup Utility		Item Help
OnChip IDE Device		
IDE HDD Block Mode	[Enabled]	Menu Level ▶ If your IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support
IDE DMA transfer access	[Enabled]	
On-Chip Primary PCI IDE	[Enabled]	
IDE Primary Master PIO	[Auto]	
IDE Primary Slave PIO	[Auto]	
IDE Primary Master UDMA	[Auto]	
IDE Primary Slave UDMA	[Auto]	
On-Chip Secondary PCI IDE	[Enabled]	
IDE Secondary Master PIO	[Auto]	
IDE Secondary Slave PIO	[Auto]	
IDE Secondary Master UDMA	[Auto]	
IDE Secondary Slave UDMA	[Auto]	
*** On-Chip Serial ATA Setting ***		
× SATA Mode	IDE	
On-Chip Serial ATA	[Auto]	
× PATA IDE Mode	Secondary	
SATA Port	P0,P2 is Primary	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (which is the case for most newer hard drives), select "Enabled" for automatic detection of the optimal number of block read/writes per sector that the drive can support.

IDE DMA Transfer Access

To Enable/Disable the IDE DMA transfer access.

OnChip Primary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select "Enabled" to activate each channel separately.

IDE Primary/Secondary Master/ Slave PIO

The four IDE PIO fields allow you to set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

IDE Primary/Secondary Master/ Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and system software both support Ultra DMA/33, select Auto to enable BIOS support.

On-Chip Secondary PCI IDE

Enables the secondary IDE channel.

On-Chip Serial ATA

The chipset contains a SATA IDE interface with support for two IDE channels. Select Enabled to activate the primary IDE interface (Channel0). Select Disabled to deactivate this interface. The options are: [Disabled], [Auto], [Combined Mode], [SATA Only].

[Onboard Device]

Phoenix - AwardBIOS CMOS Setup Utility		
Onboard Device		
Azalia Audio Select	[Enabled]	Item Help
Onboard LAN Device	[Enabled]	Menu Level ▶
Onboard Lan Boot ROM	[Disabled]	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Azalia Audio Select

Select [Disabled] if you do not want to use Azalia audio. Configuration options: [Auto], [Disabled]

[SuperIO Device]

Phoenix - AwardBIOS CMOS Setup Utility	
SuperIO Device	
Onboard Serial Port 1	[3F8/IRQ4]
Onboard Serial Port 2	[2F8/IRQ3]
Onboard Parallel Port	[378/IRQ7]
Parallel Port Mode	[SPP]
x EPP Mode Select	EPP1.7
x ECP Mode Use DMA	3
PWRON After PWR-Fail	[Off]

Item Help
Menu Level ▶

↑↓→←:Move	Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help
F5: Previous Values	F6: Fail-Safe Defaults	F7: Optimized Defaults			

Onboard Serial Port 1/2

The configuration options are "3F8/IRQ4", "2F8/IRQ3", "3E8/IRQ4", "2E8/IRQ3", and "Disabled" for the on-board serial connector.

PWRON After PWR-Fail

This item allows you to choose whether you want to power on the system after power failure. Configuration options: [Off], [On], [Former-Sts].

Onboard Lan1/2 Boot ROM

Configuration options: [Enable], [Disable].

Watch Dog Timer Select

This option allows you to configure the watch dog timer. Configuration options: [Disabled], [10], [20], [30], [40] Sec. [1], [2], [4] Min.

Onboard Serial Port 3/4

Configuration options: [3F8/IRQ4], [2F8/IRQ3], [3E8/IRQ4], [2E8/IRQ3], and [Disabled] for the on-board serial connector.

[USB Device Setting]

Phoenix - AwardBIOS CMOS Setup Utility

USB Device Setting

USB 1.0 Controller	[Enabled]	Item Help
USB 2.0 Controller	[Enabled]	
USB Operation Mode	[High Speed]	Menu Level ▶
USB Keyboard Function	[Enabled]	[Enable] or [Disable]
USB Mouse Function	[Enabled]	Universal Host
USB Storage Function	[Enabled]	Controller Interface
*** USB Mass Storage Device Boot Setting ***		for Universal Serial
		Bus.

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help

F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

USB 1.0 Controller

If your system has a USB controller installed on the system board, select "Enabled" to make it usable. Even if equipped, in case you wish to add a higher performance controller, this feature should be disabled.

USB 2.0 Controller

Enables/Disables the USB 2.0 controller.

USB Keyboard Function

Select "Enabled" if your system contains a USB controller and you wish to use a USB keyboard.

USB Mouse Function

Select "Enabled" if your system contains a USB controller and you wish to use a USB mouse.

3-7. Power Management Setup

The power management setup controls the single board computer's "green" features for power saving.

Phoenix - AwardBIOS CMOS Setup Utility		
Power Management Setup		
ACPI Function	[Enabled]	Item Help
ACPI Suspend Type	[S3(STR)]	
Run VGABIOS if S3 Resume	[Auto]	Menu Level ▶
Power Management	[User Define]	
Video Off Method	[DPMS]	
Video Off In Suspend	[Yes]	
Suspend Type	[Stop Grant]	
MODEM Use IRQ	[3]	
Suspend Mode	[Disabled]	
HDD Power Down	[Disabled]	
Soft-Off by PWR-BTN	[Instant-Off]	
Wake-Up by PCI card	[Enabled]	
Power On by Ring	[Enabled]	
USB KB Wake-Up From S3	[Disabled]	
Resume by Alarm	[Disabled]	
x Date(of Month) Alarm	0	
x Time(hh:mm:ss) Alarm	0 : 0 : 0	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

ACPI Function

The choices are: [Enabled], [Disabled].

ACPI Suspend Type

This item allows you to set ACPI suspend type to [S1(POS)] ("Power On Suspend"), or [S3(STR)] ("Suspend To RAM").

Run VGABIOS if S3 Resume

Select "Auto" to run 'VGABIOS if S3 resume' automatically. Selecting "Yes" enables this function. Selecting "No" disables this function.

Power Management

There are three selections for Power Management, with each containing fixed parameter settings.

Item	Description
Min. Power Saving	Minimum power management, HDD Power Down = 15 Min
Max. Power Saving	Maximum power management, HDD Power Down = 1 Min
User Defined	Allows you to set each parameter individually. When not disabled, both ranges are between 1 min. and 1 hr., with the exception of HDD Power Down, which ranges from 1 min. to 15 min. and disable.

Video Off Method

Use this to select the method in which the video is turned off. Configuration options: [Blank Screen], [V/H SYNC+ Blank], and [DPMS].

Video Off In Suspend

While the system is in suspend mode, the video can be set to turn off automatically. Selecting "Yes" enables this function. Selecting "No" disables it.

Suspend Type

Select the suspend type. The choices are: [Stop Grant], [Pwron suspend].

MODEM Use IRQ

This determines the IRQ in which the MODEM can use. The choices are: [NA], [3], [4], [5], [7], [9], [10], [11].

Suspend Mode

Item	Description
Min. Power Saving	Minimum power management, HDD Power Down = 15 Min
Max. Power Saving	Maximum power management, HDD Power Down = 1 Min
User Defined	Allows you to set each parameter individually. When not disabled, both ranges are between 1 min. and 1 hr., with the exception of HDD Power Down, which ranges from 1 min. to 15 min. and disable.

HDD Power Down

Select "1-15 min." to enable HDD Power Down mode between 1 to 15 min. Select "Disabled" to disable HDD Power Down function.

Soft-Off by PWR-BTTN

[Instant-Off] : Pushing the 'soft power' button once switches the system off.

[Delay 4 sec] : Pushing and holding the 'soft power' button for more than 4 seconds turns the system off. Pushing the button momentarily i.e. less than 4 seconds, switches the system to "Suspend" mode.

Wake-up by PCI Card

This will enable the system to wake up through PCI/LAN peripheral.

Configuration options: [Enabled] and [Disabled].

Power On by Ring

Select "Enabled" to power on the system from a soft off state by an input signal on the serial Ring Indicator (RI) line. The choices are: [Disabled], [Enabled].

USB KB Wake-up From S3

When "Enabled", enter any key to wake up the system from S3 state.

The choices are: [Disabled], [Enabled].

Resume by Alarm

When "Enabled", the date and time at which the RTC (real-time clock) alarm awakens the system from "Suspend" mode can be set.

3-8. PnP/PCI Configuration

Phoenix - AwardBIOS CMOS Setup Utility	
PnP/PCI Configurations	
Init Display First	[Onboard]
Reset Configuration Data	[Disabled]
Item Help	
Menu Level ▶	
Resources Controlled By	[Auto(ESCD)]
x IRQ Resources	Press Enter
PCI/UGA Palette Snoop	[Disabled]
INT Pin 1 Assignment	[Auto]
INT Pin 2 Assignment	[Auto]
INT Pin 3 Assignment	[Auto]
INT Pin 4 Assignment	[Auto]
INT Pin 5 Assignment	[Auto]
INT Pin 6 Assignment	[Auto]
INT Pin 7 Assignment	[Auto]
INT Pin 8 Assignment	[Auto]
** PCI Express relative itens **	
Maximum Payload Size	[128]

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Reset Configuration Data

"Disabled" is selected by default. If the system configuration is as such that the OS cannot boot due to a newly installed add-on card, select "Enabled" to reset the Extended System Configuration Data (ESCD) when booting.

Resources Controlled By

Selecting "Manual" requires you to choose resources from the sub-menu.

"Auto(ESCD)" automatically configures all of the boot and Plug and Play devices (Windows 95 or above).

PCI/VGA Palette Snoop

This is set to "Disabled" by default.

Maximum Payload Size

This option allows you to set the maximum TLP payload size for PCI Express devices.

Configuration options: [128 bytes], [256 bytes], [512 bytes], [1024 bytes], [2048 bytes], and [4096 bytes].

3-9. PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility		
PC Health Status		
Shutdown Temperature	[Disabled]	Item Help
CPU Warning Temperature	[Disabled]	
Current System Temp	40°C/ 104°F	Menu Level ▶
Current CPU Temperature	34°C/ 93°F	
SYSTEM FAN Speed	0 RPM	
Vcore	0.89V	
+12V	11.85V	
+ 5V	5.22V	
Smart Fan Function	[Silent Mode]	
✓System Te		
↑↓↔:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Shutdown Temperature

Defines the core system temperature at which the system will automatically shutdown to prevent damage by overheating

CPU Warning Temperature

Defines the processor temperature at which the system will emit a buzzing sound to alert the user.

Current SYSTEM Temperature

Displays the current system temperature.

Current CPU1 Temperature

Displays the current CPU temperature.

CPU Fan Speed

Displays the current CPU fan speed.

System Fan Speed

Displays the current system fan speed.

Vcore

Displays the current Vcore voltage value.

+12V

Displays the current +12V voltage value.

+5V

Displays the current +5V voltage value.

Smart Fan Function

System controls fan speed automatically according to temperature.

[Smart Fan Function]

Phoenix - AwardBIOS CMOS Setup Utility		PC Health Status	
Shutdown Temperature	[Disabled]	Item Help Menu Level ▶	
CPU Warning Temperature	[Disabled]		
Current System Temp	41°C/ 105°F		
Current CPU Temperature	34°C/ 93°F		
SYSTEM FAN Speed			
Vcore			
+12V			
+5V			
Smart Fan Function			
Smart Fan Function Disabled [] Performance Mode [] Optimal Mode [] Silent Mode [■] ↑↓:Move ENTER:Accept ESC:Abort			
↑↓:Move Enter:Select +/-:PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults			

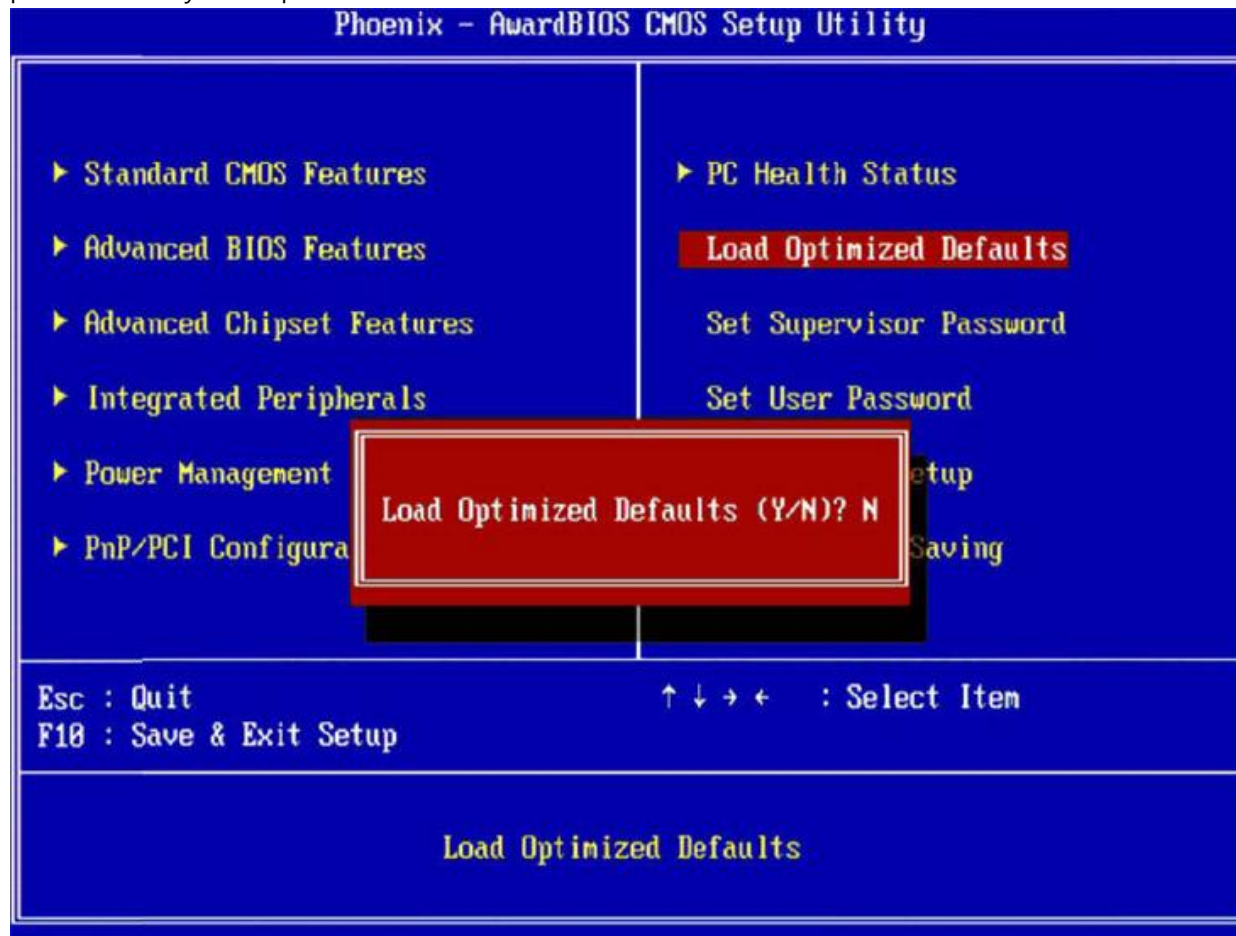
Performance Mode : Fan is activated at 40°.

Optimal Mode : Fan is activated at 50°.

Silent Mode : Fan is activated at 60°.

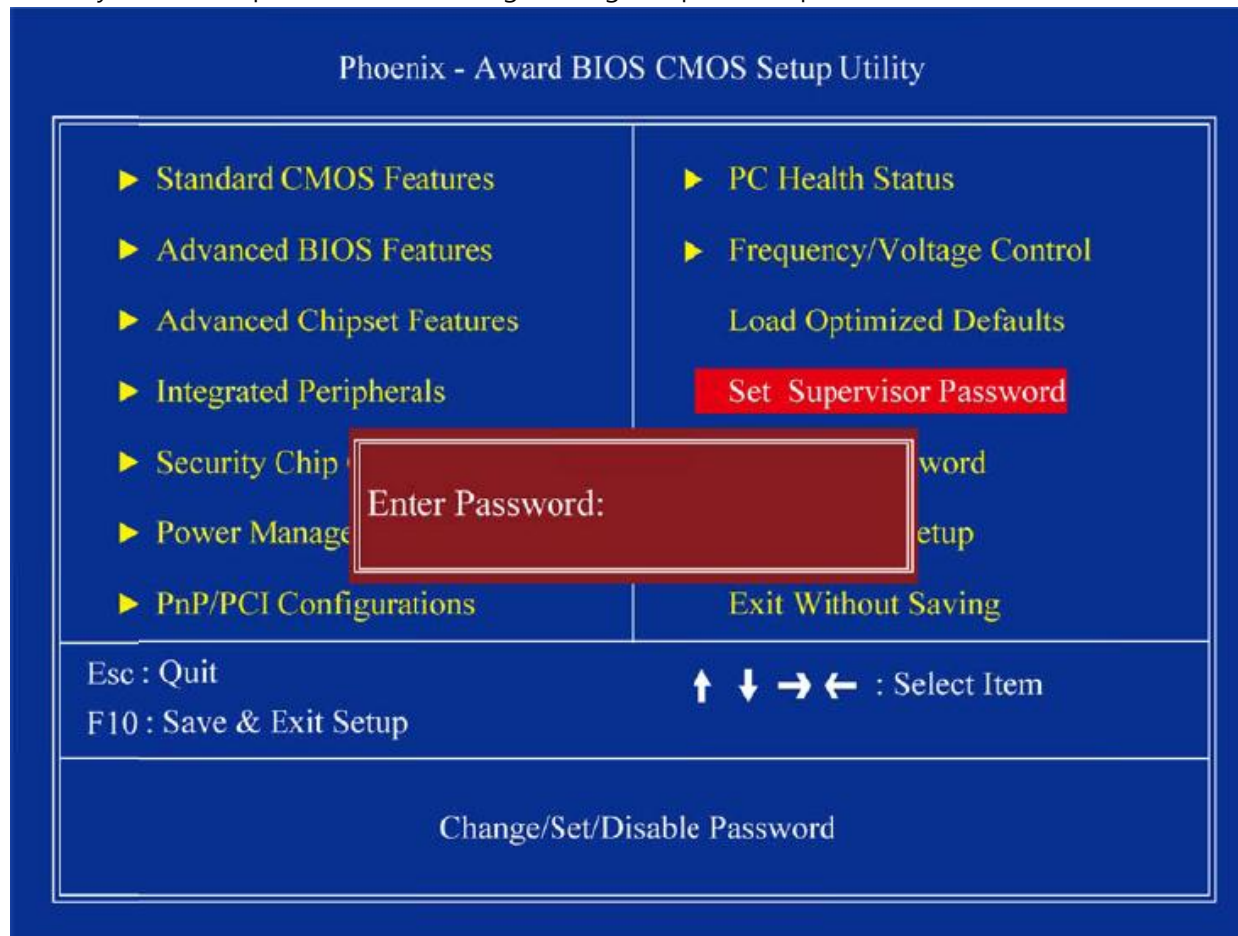
3-10. Load Optimized Defaults

Use this menu to load the BIOS default values for minimal/stable system operation. Press <Y> to load the BIOS default values for the most stable, optimal performance system operations.



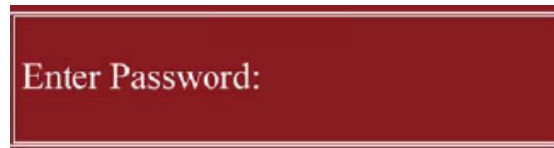
3-11. Set Supervisor Password

Allows you to set a password for entering/altering setup menu options.



To change the password:

- Select "Set Supervisor Password" from the "Initial Setup Screen" menu and press <Enter>. The screen displays the following message:



- Enter your password.
- Press <Enter>.
- If the CMOS is working and the default password is being changed, the user will be asked for the password to be stored in the CMOS. Next, the following message will appear:

"Please Confirm Your Password"

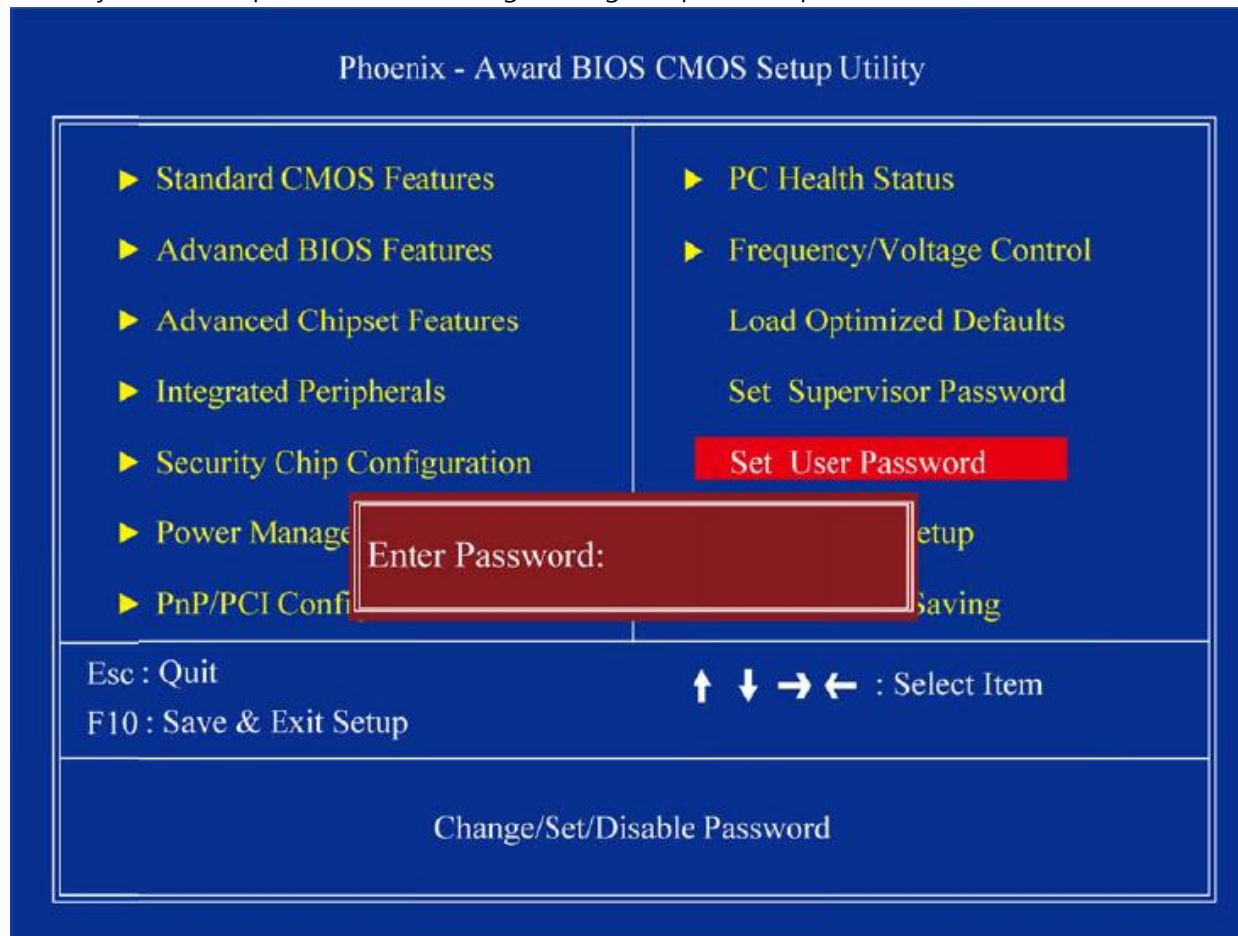
- Type the password once more and press <Enter>.
- After pressing <Enter>, the ROM password or current password (user-defined) that is stored in the CMOS can be changed.

Note:

- The password must be no longer than eight (8) characters.
- To enable the password setting feature, you must first select either "Setup" or "System" from the "Advanced BIOS Features" menu.

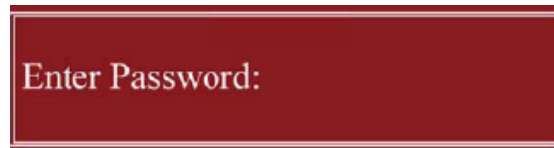
3-12. Set User Password

Allows you to set a password for entering/altering setup menu options.



To change the password:

- Select "Set User Password" from the "Initial Setup Screen" menu and press <Enter>. The screen displays the following message:



- Enter your password.
- Press <Enter>.
- If the CMOS is working and the default password is being changed, the user will be asked for the password to be stored in the CMOS. Next, the following message will appear:

"Please Confirm Your Password"

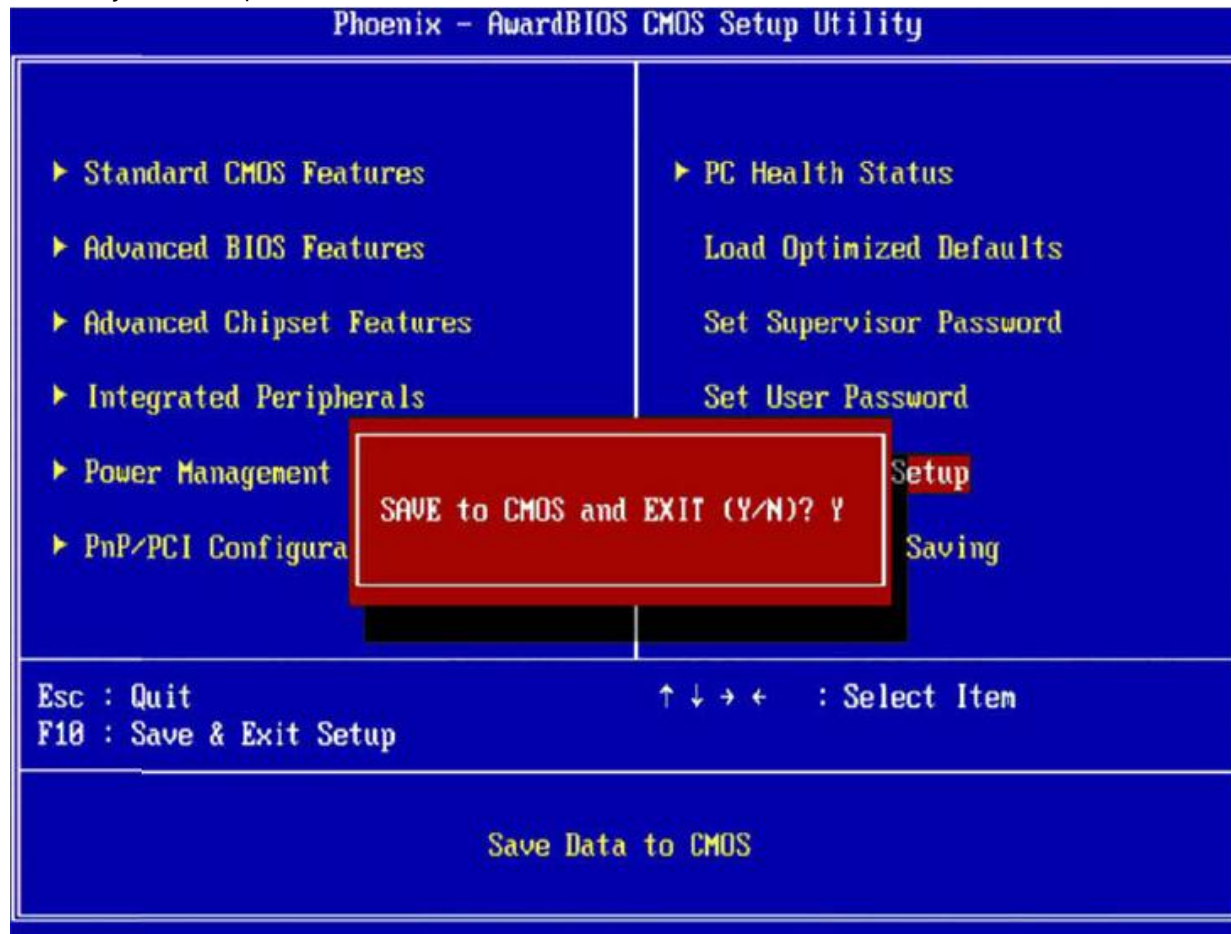
- Type the password once more and press <Enter>.
- After pressing <Enter>, the ROM password or current password (user-defined) that is stored in the CMOS can be changed.

Note:

- The password must be no longer than eight (8) characters.
- To enable the password setting feature, you must first select either "Setup" or "System" from the "Advanced BIOS Features" menu.

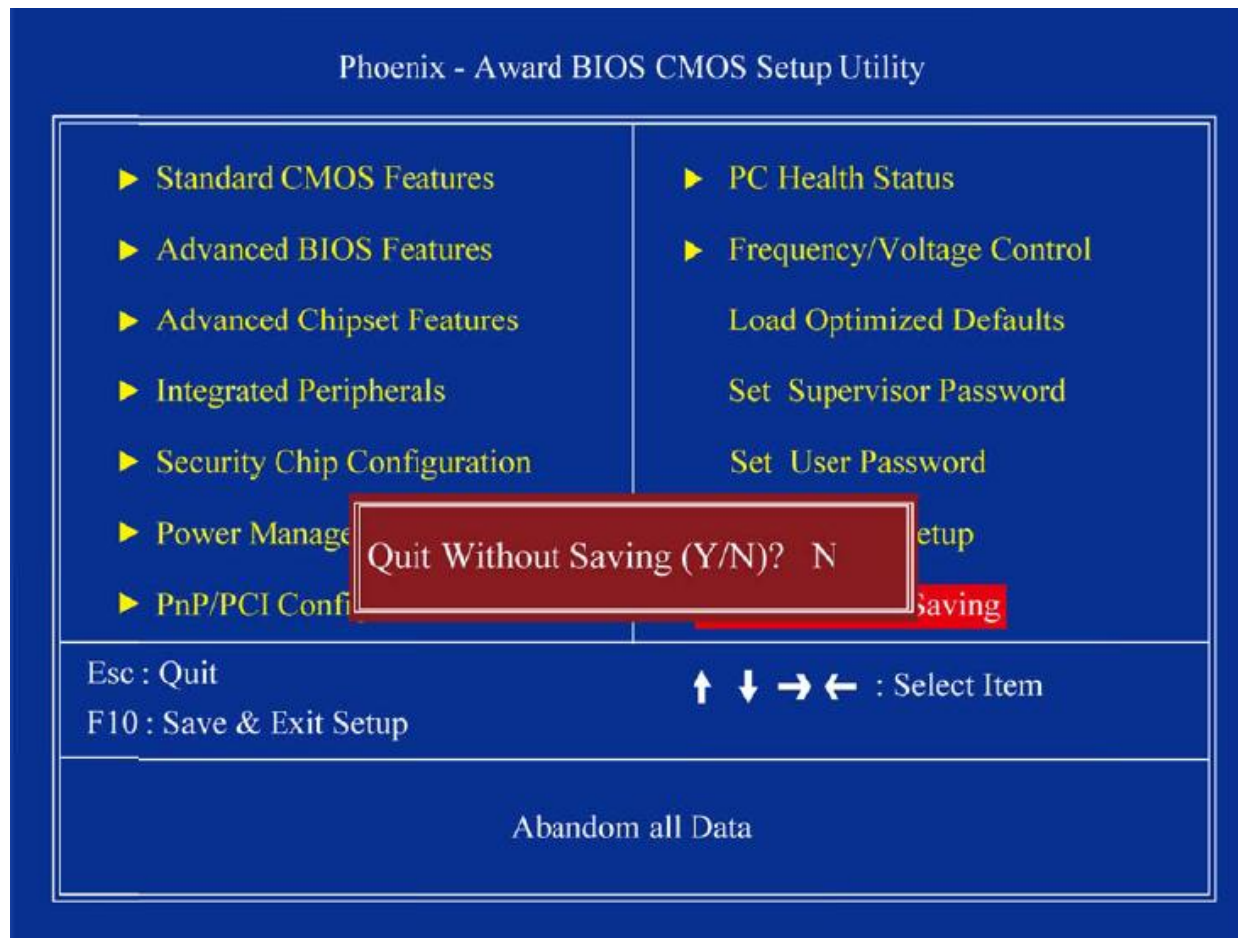
3-13. Save & Exit Setup

When exiting, selecting "Save & Exit Setup" will record all changed entries to the CMOS memory of the chipset. Press "Y" to save values, or "N" to not save at this time. Every time the system is switched on, the processor will check and compare these values to what it finds on the system. NB: This record is required for the system to operate.



3-14. Exit Without Saving

Selecting this option when exiting allows you exit the setup program without recording any new values, or changing old ones, to the CMOS. To discard all changes and exit the setup, press "Y", otherwise press "N" to go back without discarding the changes you have made.





Chapter 4. Troubleshooting

4-1. Network Issues

Symptom	Corrective Procedure
Cannot access LAN	▪ Check if hub or switch is working correctly ▪ Check RJ45 cable connection ▪ Check LED Window LAN on/off ▪ Reinstall LAN card ▪ Connect LAN to motherboard after removing mother board and I/O LAN cable. ▪ Replace motherboard

4-2. MSR Issues

Symptom	Corrective Procedure
MSR does not respond	▪ Check cable after disassembling ▪ Reset by pressing SW1 of MSR board with cable connected ▪ Check motherboard connection and USB PCB status ▪ Replace MSR

4-3. USB Issues

Symptom	Corrective Procedure
USB port doesn't work	▪ Check Windows device manager ▪ Check keyboard and touch performance by pressing the Num Lock/Caps Lock keys after removing external USB devices ▪ Check USB cable connection ▪ Replace motherboard

4-4. LCD Issues

Symptom	Corrective Procedure
LCD backlight doesn't work	▪ Check LCD cable connection ▪ Check inverter cable connection ▪ Replace inverter cable ▪ Replace LCD panel

4-5. Touch-screen Issues

Symptom	Corrective Procedure
Touch-screen doesn't detect touch operations	▪ Check touch-screen cable connection ▪ Check motherboard and LCD cable connection ▪ Dismantle monitor and check touch-controller connection ▪ Replace touch-controller

4-6. Power Issues

Symptom	Corrective Procedure
System switches off abruptly and system does not load	▪ Check motherboard cable connection ▪ Remove all external peripheral devices and check again ▪ Replace power supply unit

4-7. Booting Issues

Symptom	Corrective Procedure
Re-booting during system operating	▪ Check serial peripheral devices connection status ▪ Check USB peripheral devices connection status ▪ Check device manager ▪ Replace power supply unit and/or motherboard

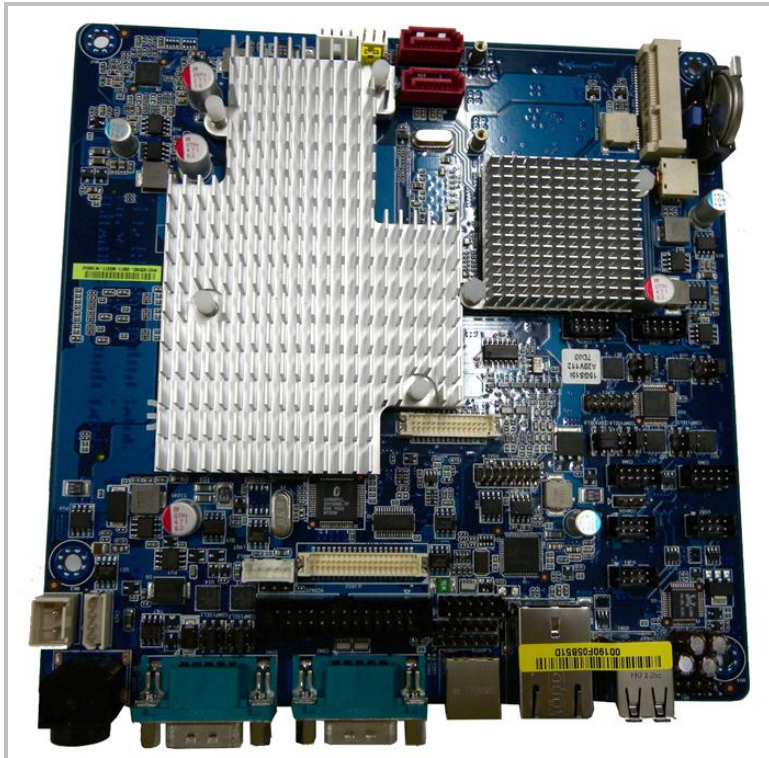
4-8. Printer Issues

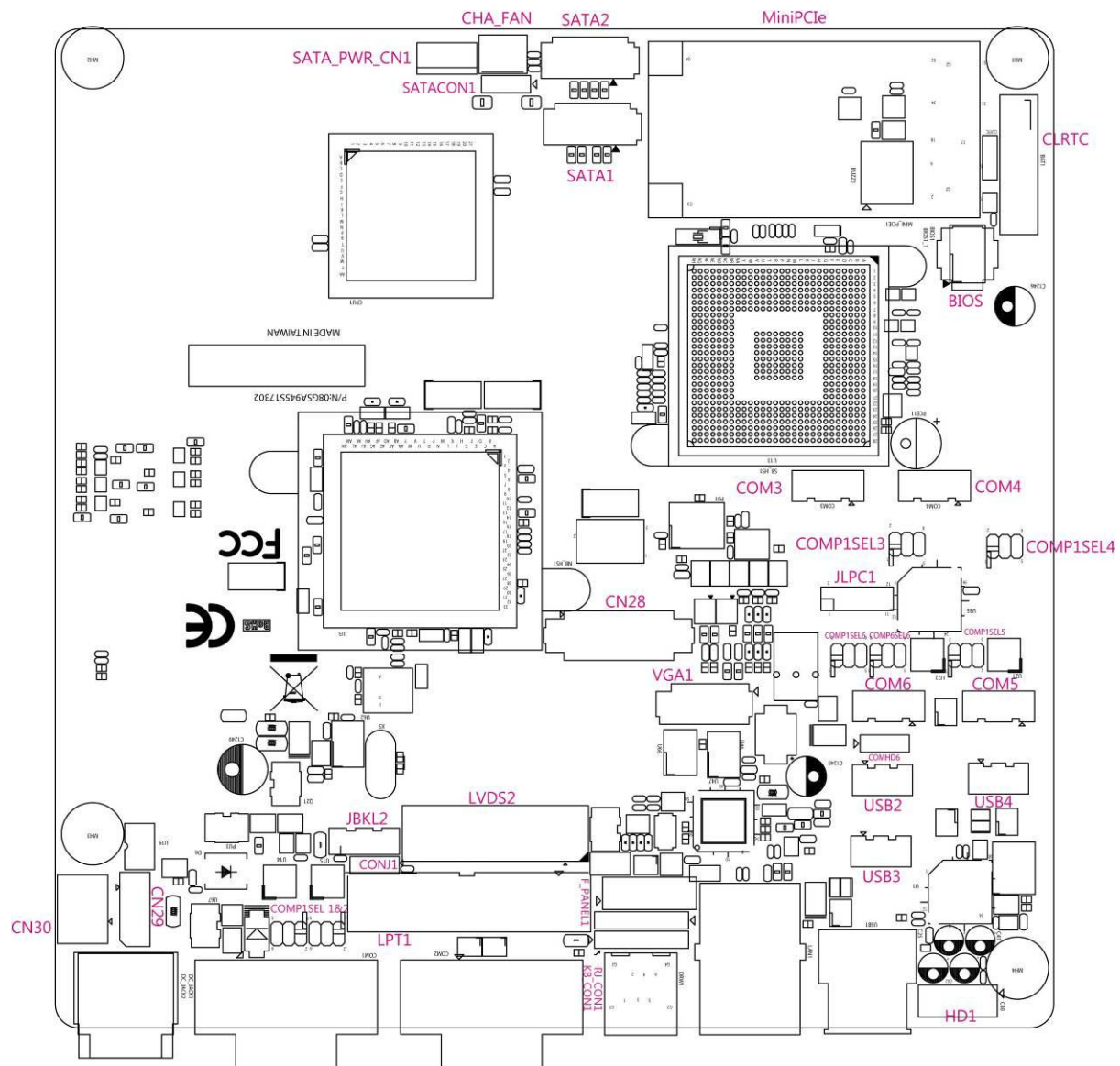
Symptom	Corrective Procedure
Printer won't operate	▪ Check printer power supply ▪ Perform printer self test by pressing printer Reset and Feed button ▪ Try resetting printer by pressing printer Reset button ▪ Check cable connections status ▪ Check printer cable



Chapter 5. Motherboard

5-1. Motherboard Layout





5-2. Clearing CMOS

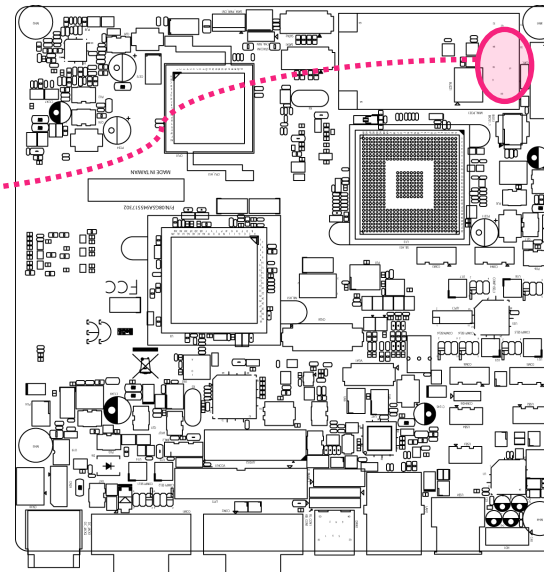
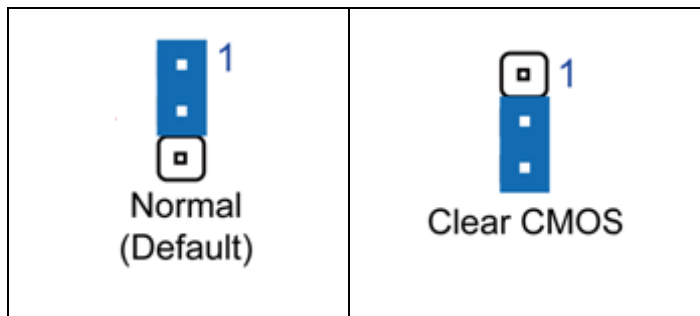
This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which includes system setup information e.g. system passwords.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Remove the onboard battery.
3. Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3 for 5~10 seconds, then move the cap back to pins 1-2.
4. Re-install the battery.
5. Plug in the power cord again and turn ON the computer.
6. Hold down the key during the boot process and enter BIOS setup to re-enter data.



Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure.



5-3. Serial Port Power Jumper Settings

12V	RI	+5V
		

COM3 Port ←

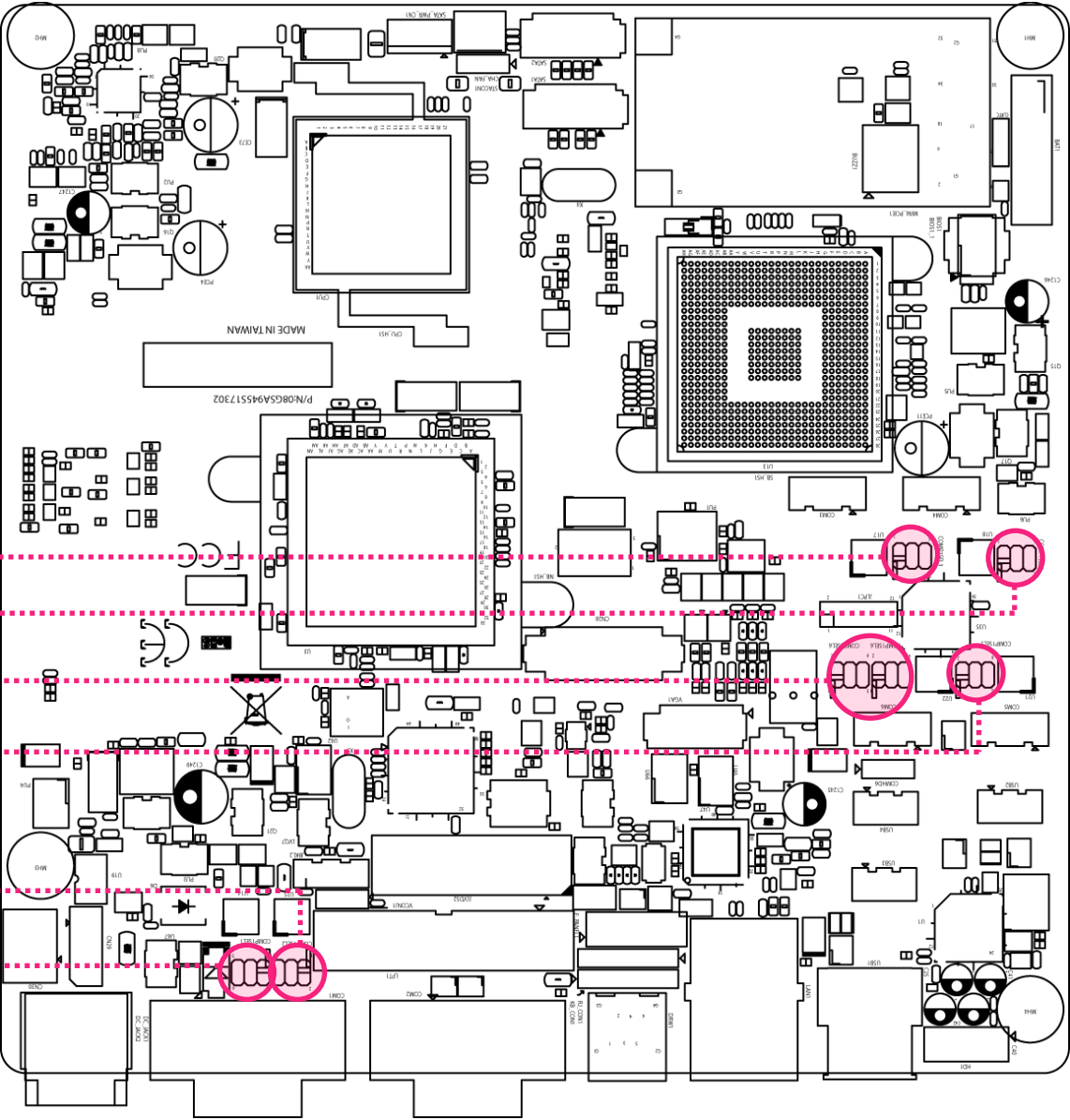
COM4 Port ←

COM6 Port ←

COM5 Port ←

COM2 Port ←

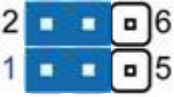
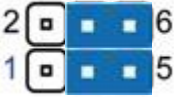
COM1 Port ←



[COM6 Signal Level Select]

This jumper allows you to select COM6 TTL level for COMHD6.

Set COMP6SEL6 to pins 1-3 and pin 2-4 to select normal RS-232. Set COMP6SEL6 to pins 3-5 and 4-6 to select TTL level for COMHD6.

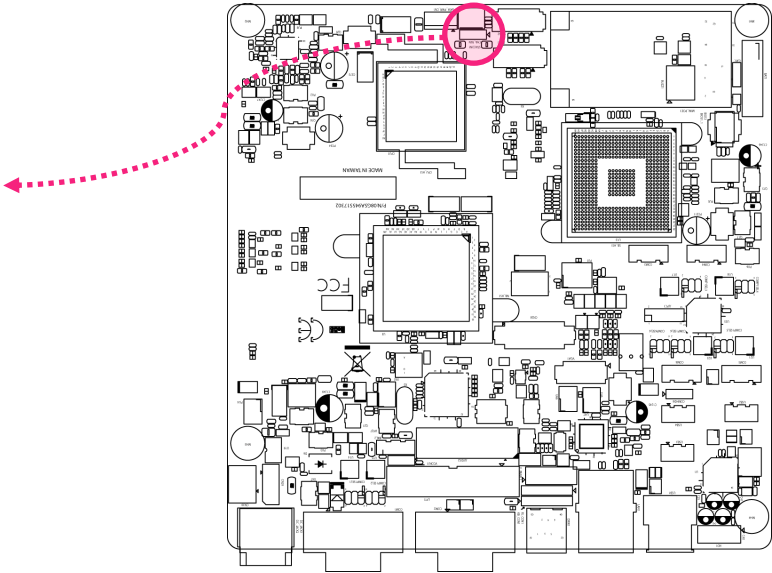
NORMAL RS-232	TTL LEVEL
	

5-4. STACON1

This jumper allows you to use SATA DOM on SATA1.

Set STACON1 to pins 2-3 to select GND. Set STACON1 to pins 1-2 to select +5V for SATA DOM.

+5V	GND
	





Chapter 6. Maintenance

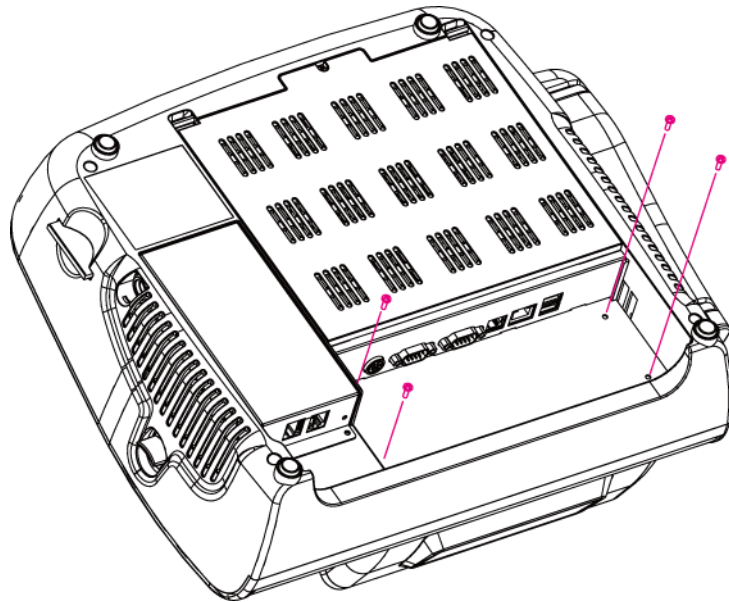
6-1. Safety Warning

POSBANK will not be held responsible for repairs conducted via service providers other than those officially specified by the seller.

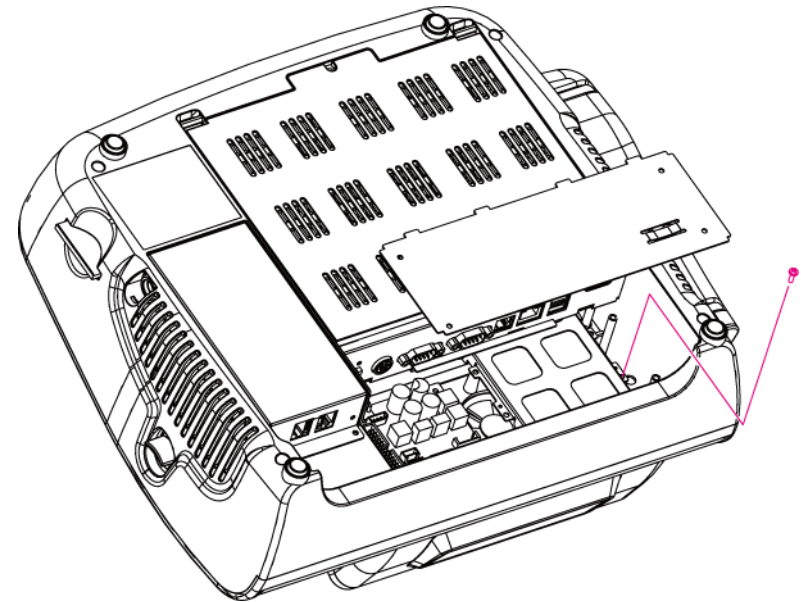
General Guidelines

1. Always disconnect the unit from the power outlet.
2. Disconnect all cables from the POS main unit before attempting reparation.
3. Keep all components in the static-proof packaging provided until ready for installation.
4. If the device still is not functioning after repair, please turn off the POS unit and contact the customer service center for a follow-up inspection.
5. We recommend that power supply unit (PSU) checks and monitor repairs *only* be performed at a certified service center.

[HDD Replacement]

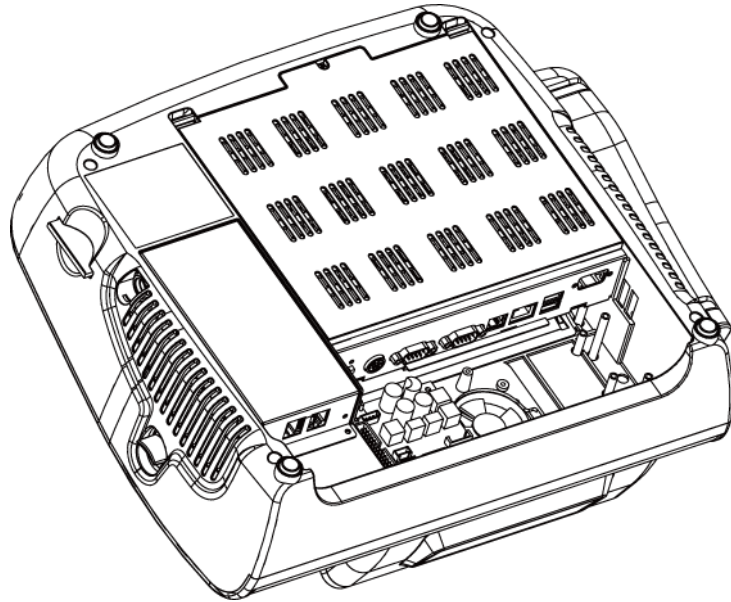


1. Remove the 4 screws from the underside of main unit as shown above.

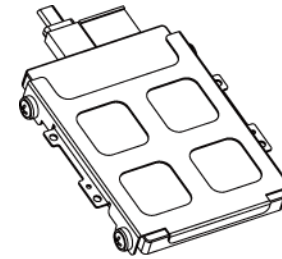


2. Remove cover from unit.

3. Remove screw from metal frame attached to HDD.

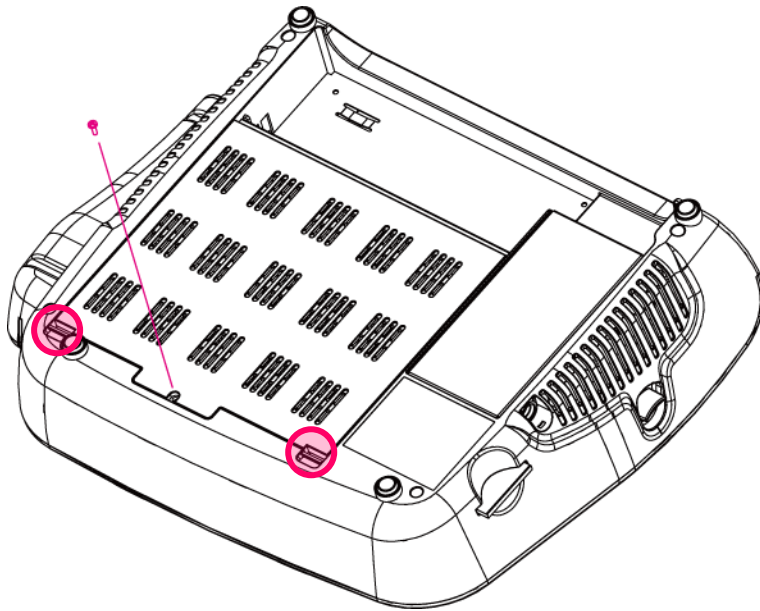


4. Disconnect cable connected to HDD.

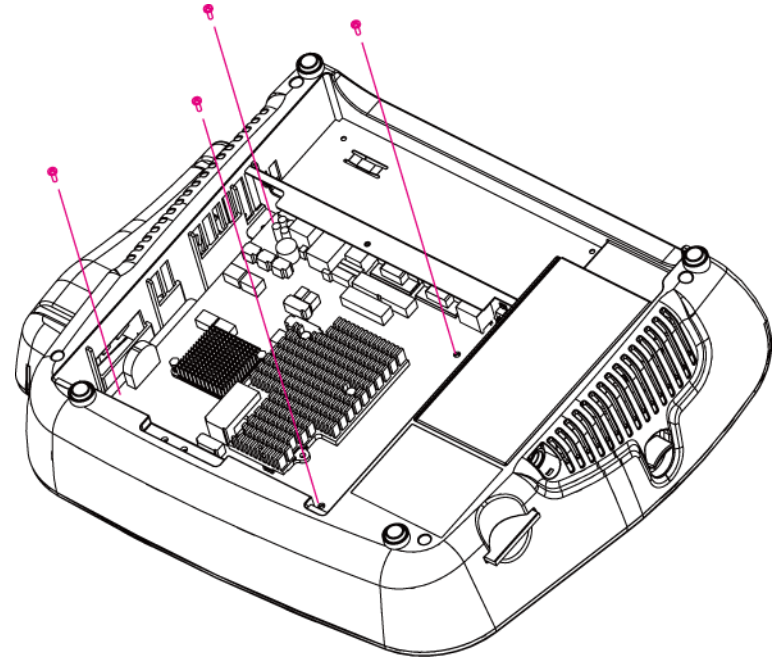


5. Replace with new HDD and reassemble unit using the reverse procedure of steps 1-4 as shown previously.

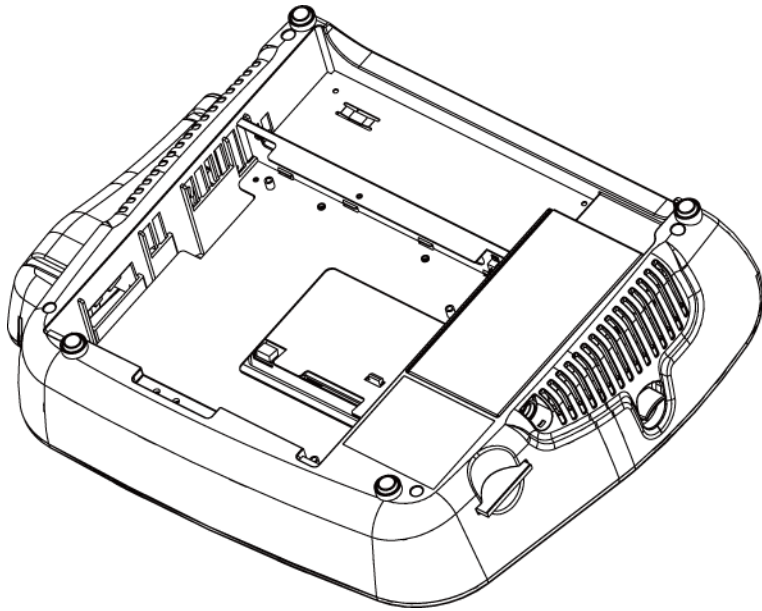
[Motherboard Replacement]



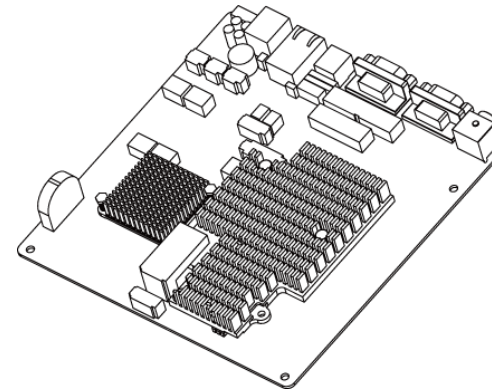
1. Remove screw from the underside of main unit as shown above.
2. Detach bottom-cover using hooks on both sides.



3. Remove the 4 screws from the area shown above.



4. Disconnect cable connected to the motherboard.



5. Replace with new motherboard and reassemble unit using the reverse procedure of steps 1-4 as shown previously.

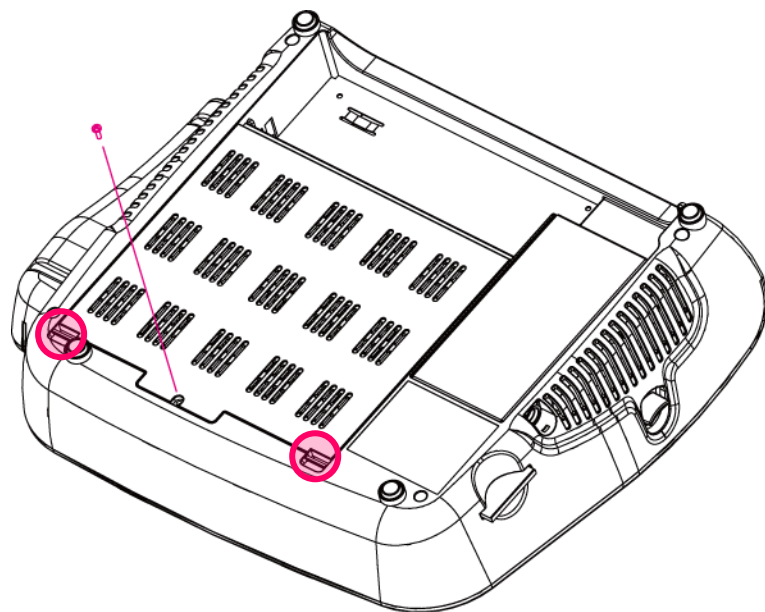
[Memory (RAM) Replacement]



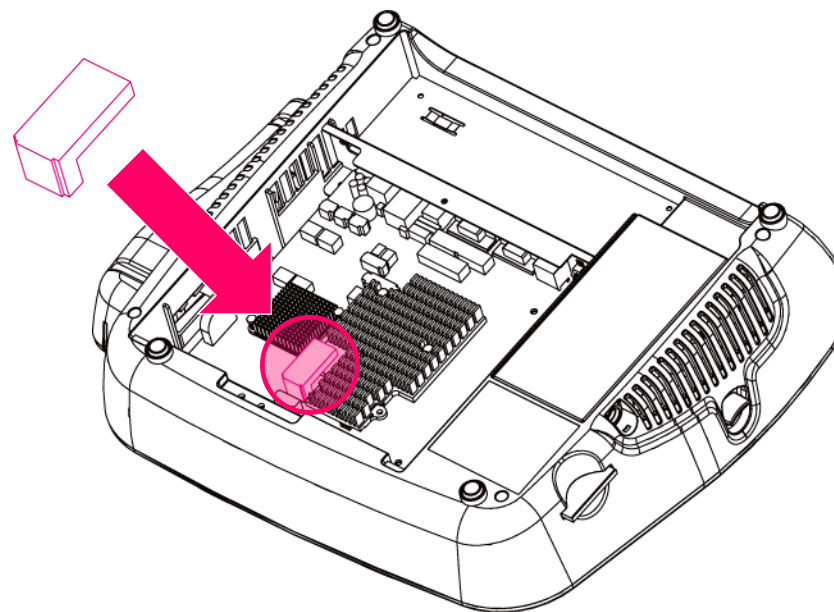
1. First, remove motherboard as shown on P. 83.
2. Push fixtures on both sides outwards (as shown above) and remove the memory from its slot.

3. Insert new memory in slot and press lightly to fix into place.

[SSD Replacement]

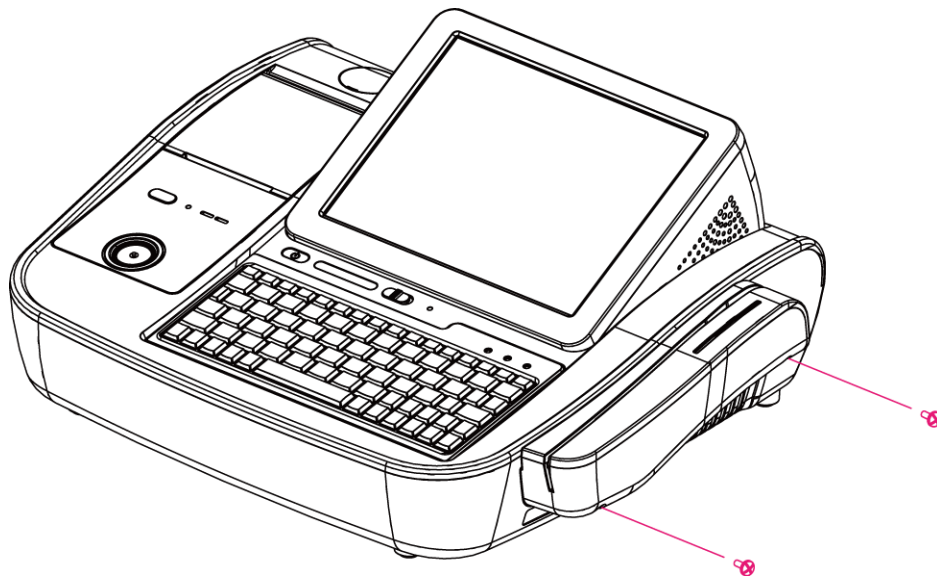


1. Remove screw from the underside of main unit as shown above.
2. Detach bottom-cover using hooks on both sides.

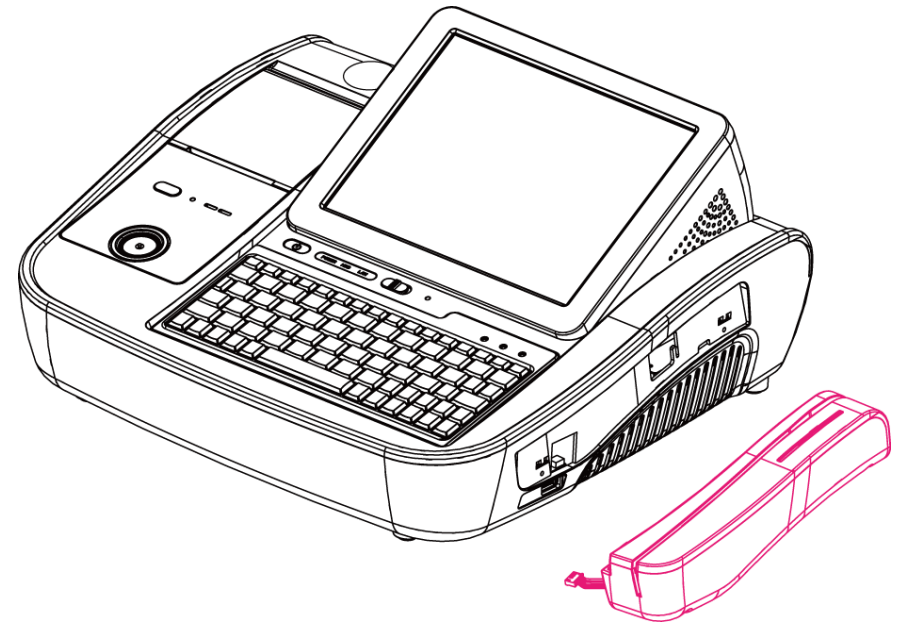


3. Disconnect cable connected to SSD and remove by pushing the SSD clip.
4. Replace with new SSD and reassemble unit using the reverse procedure of steps 1-3 as shown previously.

[MSR Replacement]



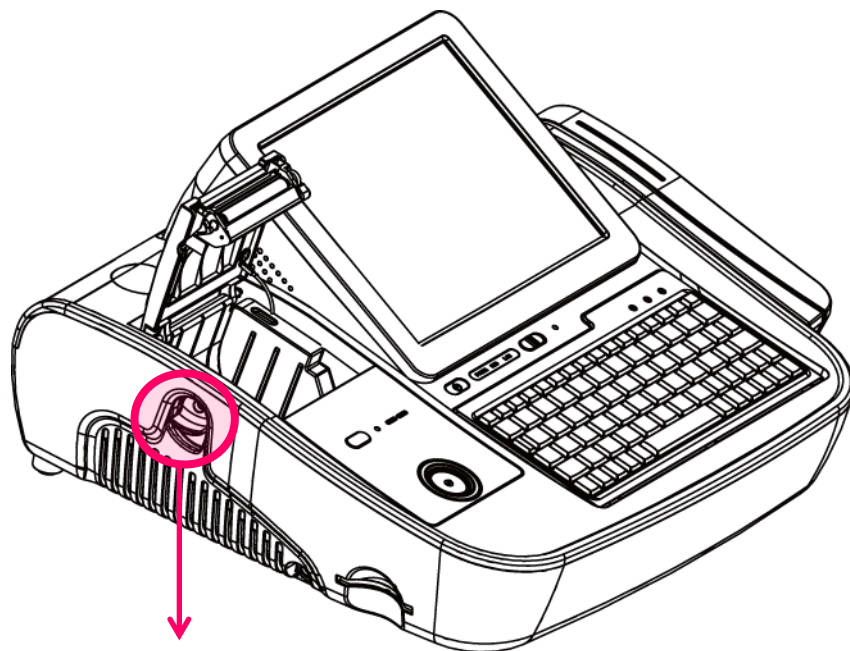
1. Remove the 2 screws as shown above.



2. Disconnect cable connected to MSR.

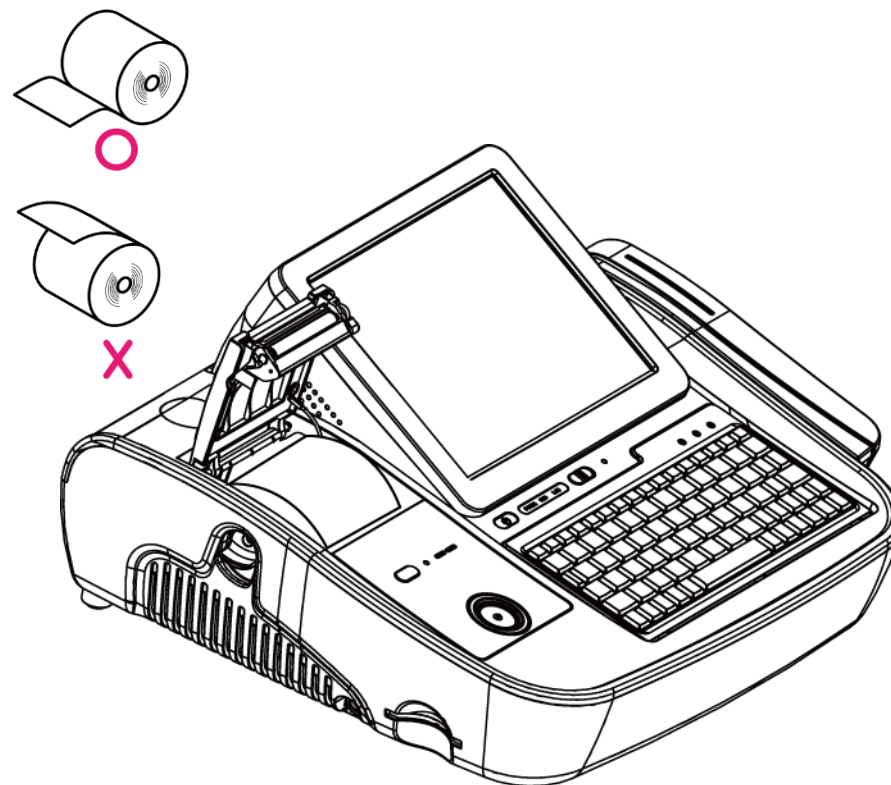
3. Replace with new MSR and reassemble unit using the reverse procedure of steps 1-2 as shown previously.

[Paper-Roll Replacement]



"Open" button

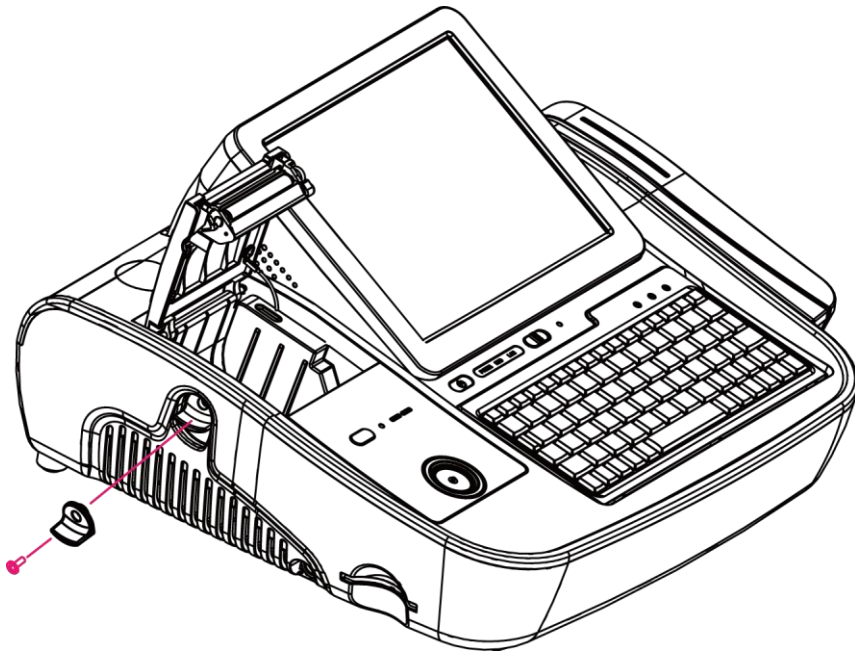
1. Press "Open" button on printer cover to open cover.



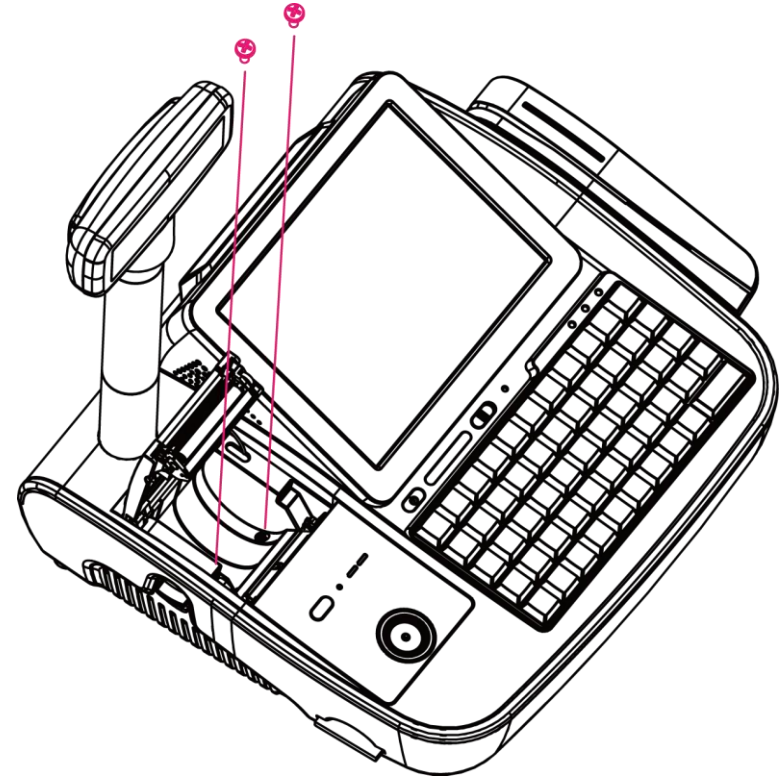
After closing the printer cover, ensure to press the *centre* of the cover to ensure the paper is in contact with the roller

2. Install new roll of paper as shown above.
3. Slightly draw out end of the roll and close printer cover.

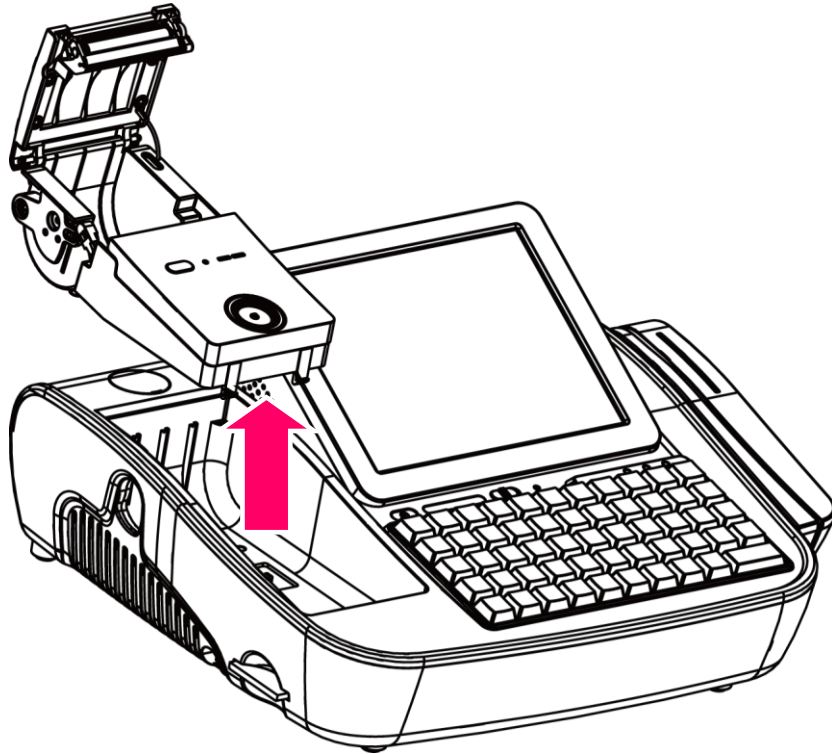
[Printer Replacement]



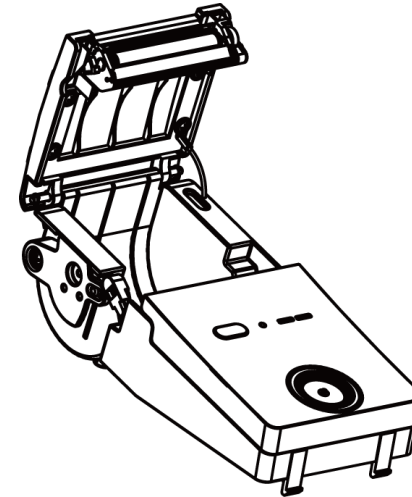
1. Remove the lever-screw at side of main unit as shown above.



2. Open printer cover and remove both screws from inside.



3. Pull printer upwards to unlock and detach from main unit.



4. Replace with new printer and reassemble unit using the reverse procedure of steps 1-3 as shown previously.

6-2. Technical Specifications

[miniO Main Unit]

CPU		Intel Atom N270 1.6GHz processor
Chipset		Intel 945GSE+ICH7M
HDD		1GB SSD (HDD option)
Memory		DDR2 SODIMM x 1 slot (Default 1GB up to 2GB)
VGA		Intel 945GSE GMA950 Engine
Printer		2" thermal printer(24V) 200mm/sec max(Auto cutter)
Display		8.4" (800 x 600)
Internal I/O	Parallel	1 Port (reserved for internal printer)
	USB	1 x touch screen, 1 x keyboard, 1 x MSR, 1 x I-Button reserved, 1 x SCR
	RS-232	COM 4 reserved for VFD or 2nd display
		COM 3 reserved for 2" mini printer
	LVDS	Main display use
Mini PCIe		1 slot support
External I/O	USB	Side 1, Rear 2
	RS-232	COM 1 ~ 2 with +5/12V power output on 9pin
	LAN	GbE LAN
	Cash drawer	1 x RJ11 , Cash drawer port
Optional	MSR	Comply with ISO 7811, Support 1& 2 & 3 track
	SCR	IC card reader
	Dallas	Dallas I-button reader
	Keyboard	Mini standard keyboard or Programmable keyboard : 55 Key

	VFD	Customer display LCD type (16 x 2) or VFD type (20 x 2) / pole type customer display
	CF CARD	CF card reader
Power Supply		INPUT: 100-240V~,50/60Hz 1.5A OUTPUT: DC 24V 2.5A
Qualification		CE, FCC, KCC
OS Support		Windows CE 6.0 on SSD, Windows XP/XPE, POS Ready(WEPOS) on HDD, Linux
Dimension		325(mm) x 393(mm) x 176(mm)

[Integrated Printer]

Printing	
Method	3" Jam-free Thermal line dot printing
Number of dots/line	576
Resolution (dots/mm)	8
Paper width (mm)	80 ^{+0 -1}
Printing width (mm)	72
Speed (mm/sec)max	170
Paper path	Curved
Detection	
Head temperature	By thermistor
Platen position	By mechanical switch
Out of paper	By photo interrupter
Cutter home position	By photo interrupter
Power Supply(V)	
Operation voltage (Vdd)	2.7 to 3.6 / 4.75 to 5.25
Operation voltage (Vp)	21.6 to 26.4
Peak current(A)	
Head	2.61 (26.4V/144dots) 5.23 (26.4V/288dots)
Motor	0.44
Cutter	0.64
Auto cutter	
Method	Slide type
Paper thickness (μm)	54 to 80*1

Cutting type	Full cut/Partial cut (Leave center point)
Operating time (sec/cycle)max	Approx. 0.5
Cutting pitch (mm)min	10
Cut frequency(cut/min)max	30
Service life	
Pulse activation	100 million
Abrasion resistance (km)	100 ^{*1}
Life (cut)	700,000 ^{*1}
Operating temperature(°C)	-10 to 50