Service Manual

Model : X130 Series

2009.12.25

Contents

Chapter 1. Service information

1-1. Important service information

■ Strategy for replacing parts (FRU-Field Replaceable Units)

> **Before replacing parts**
>
> Make sure that latest BIOS and drivers are installed before replacing any parts (FRUs) listed in this

Use the following strategy to prevent unnecessary expense for replacing and servicing parts

1. If you are instructed to replacing a part but the replacement does not correct the problem, reinstall the original part before you continue.

2. Some computers have both a processor board and system board. If you are instructed to replace either the processor board or the system board, and replacing one of them does not correct the problem, reinstall that board, and then replace the other one.

3. If an adapter or device consists of more than one part, any of the parts (FRUs) may be the cause of the error. Before replacing the adapter or device, remove the parts (FRUs), one by one, to see if the symptoms change. Replace only the part that changed the symptoms.

> **Caution**
>
> The BIOS configuration on the computer you are servicing may have been customized. Running Automatic Configuration my alter the settings. Note the current configuration settings; then, when service has been completed, verify that those settings remain in effect.

■ Strategy for replacing a hard-disk drive

You have to get a User's approval before formatting or replacing a hard-disk drive. You must let the User know that the user is responsible for the loss data

> **Caution**
>
> The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

1-2. Safety notices

> **Warning**
>
> Before the computer is powered-on after part (FRU) replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

> **Warning**
>
> some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery

> **Warning**
>
> The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

> **Warning**
>
> If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately was the affected areas with water for at least 15 minutes. Seek medical care if any symptoms from the fluid are present after washing.

> **Warning**
>
> To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

> **Warning**
>
> Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

> **Warning**
>
> Before removing any part (FRU), turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

1-3. Safety information

■ General safety

Follow these rules to ensure general safety

· Observe good housekeeping in the area of the machines during and after maintenance.

· When lifting any heavy object

  1. Ensure you can stand safely without slipping.

  2. Distribute the weight of the object equally between your feet.

  3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift.

  4. Lift by standing or by pushing up with your leg muscles

    (This action removes the strain from the muscles in your back.)

· Do not attempt to lift any object weights more then 16kg(35lb) or object that you think are too heavy for you.

· Do not perform any action that causes hazards to the customer, or that makes the equipment unsafe.

· Before you start the machine, ensure that other service representatives and the customer's personnel are not in a hazardous position.

· Place removed covers and other parts in a safe place, away from all personnel, while you are servicing the machine.

· Keep your tool box away from walk areas so that other people will not trip over it.

· Do not wear loose clothing that can be trapped in the moving parts of a machine. Make sure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.

· Insert the ends of your necktie or scarf inside clothing or fasten it with a nonconductive clip, approximately 8 centimeters(3 inches) from the end.

· Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for you clothing.

· Wear safety glasses when you are hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that might be hazardous to your eyes.

· After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.

· Reinstall all covers correctly before returning the machine to the customer.

> ⚠ **Caution**
> Metal objects are good electrical conductors.

■ Electrical safety

Observe the following rules when working on electrical equipment.

<table>
<tr><td rowspan="2">⚠</td><td>Important</td></tr>
<tr><td>Use only approved tools and test equipment. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.
Many customers have, near their equipment, rubber floor mats that contain small conductive fibers to decrease electrostatic discharges. Do not use this type of mat to protect yourself from electrical shock.</td></tr>
</table>

· Find the room emergency power-off switch, disconnecting switch, or electrical outlet. If an electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.

· Do not work alone under hazardous conditions or near equipment that has hazardous voltages.

· Disconnect all power before
  1. Performing a mechanical inspection
  2. Working near power supplies
  3. Removing or installing main units

· Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine and to lock the wall box in the off position.

· If you need to work on a machine that has exposed electrical circuits, observe the following precautions : Ensure that another person, familiar with the power-off controls, is near you.

<table>
<tr><td>⚠</td><td>Caution
Another person must be there to switch off the power, if necessary.</td></tr>
</table>

· Use only one hand when working with powered-on electrical equipment. Keep the other hand in your pocket or behind your back

<table>
<tr><td>⚠</td><td>Caution
An electrical shock can occur only when there is a complete circuit. By observing the above rule, you may prevent a current from through your body.</td></tr>
</table>

· When using testers, set the controls correctly and use the approved probe leads and accessories for that tester

· Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal
  floor strips and machine frames.

· Observe the special safety precautions when you work with very high voltages. These instructions are in
  the safety sections of maintenance information. Use extreme care when measuring high voltages.

· Regularly inspect and maintain your electrical hand tools for safe operational condition.

· Do not use worn or broken tools and testers.

· Never assume that power has been disconnected from a circuit. First check that it has been powered off.

· Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors,
  non-grounded power extension cables, power surges, and missing safety grounds.

· Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is
  conductive such touching can cause personal injury and machine damage.

· Do not service the following parts with the power on when they are removed from their normal operating
  places in a machine.

  1. Power supply units

  2. Pumps

  3. Blowers and fans

  4. Motorgenerators

     and similar units. (This practice ensure correct grounding of the units.)

· If an electrical accident occurs

  1. Use caution ; do not become a victim of yourself.

  2. Switch off power.

  3. Send another person to get medical aid.

■ Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potentially unsafe conditions.

As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards due to attachment of non-LG features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

· Consider these conditions and the safety hazards they present

1. Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock)
2. Mechanical hazards, such as loose or missing hardware

Refer to the following checklist and begin the checks with the power off, and the power cord disconnected.

· Checklist

1. Check exterior covers for damage (loose, broken, or sharp edges)
2. Power off the computer. Disconnect the power cord.
3. Check the power cord for :
    a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 Ω or less between the external ground pin and frame ground.
    b. The power cord should be the type specified in the parts list.
    c. Insulation must not be frayed or worn.
4. Remove the cover.
5. Check for any obvious non-LG alterations. Use good judgment as to the safety of any non-LG alterations.
6. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
7. Check for worn, frayed, or pinched cables.
8. Check that the power-supply cover fasteners (screw or rivets) have not been removed or tampered with.

■ Handling devices that are sensitive to electrostatic discharge

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Note

Use product-specific ESD procedures when they exceed the requirements noted here.

Make sure that the ESD protective devices you use have been certified (ISO9000) as fully effective.

· When handling ESD-sensitive parts :

1. Keep the parts in protective packages until they are inserted into the product.
2. Wear a grounded wrist strap against your skin to eliminate static on your body.
3. Prevent the part from touching your clothing. Most clothing retains a charge even when you are wearing a wrist strap.
4. Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
5. Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

Note

The use of a grounding system is desirable but not required to protect against ESD damage.

---

   a. Attach the ESD ground clip too any frame ground, ground braid, or green-wire ground.
   b. Use an ESD ground or reference point when working on a double-insulated or battery-operated system. You can use coax or connector-outside shells on these systems.
   c. Use the round ground-prong of the AC plug on AC-operated computers.

■ Grounding requirements

Electrical grounding of the computers is required for operator safety and correct system function.

Proper grounding of the electrical outlet can be verified by a certified electrician.

1-4. Laser compliance statement

When a CD-ROM drive, DVD drive or the other laser product is installed, note the following :

> **Caution**
>
> Use of controls or adjustments or performance of procedures other than those specified here in might result in hazardous radiation exposure.

Opening the CD-ROM drive, DVD-ROM drive or the other optical storage device could result in exposure to hazardous laser radiation.

There are no serviceable parts inside those drives. Do not open

> **Danger**
>
> Emits visible and invisible laser radiation when open. Do not stare into the beam , do not view directly with optical instruments, and avoid direct exposure to the bean.

1-5. Backup (Standby) RTC battery safety information

When replacing or disposing of the backup (standby) RTC battery, note the following :

> **Caution**
>
> There is the risk of explosion if the backup (standby) RTC battery is replaced by an incorrect type.
> Dispose of used backup (standby) RTC battery according to your local ordinances or regulation.
>
> Для замены, используйте соответствующий тип батареек.
> Существует опасность воспламенения.
>
> Удаляйте отработанные батарейки согласно местным правилам или нормам.
> Неправильное удаление батареек может привести к их взрыву или пожару.
>
> .باطری ذخیره (یدکی)را با نوع درست آن عوض کنید
>
> .خطر انفجار وجود دارد
>
> .باطری های ذخیره های (یدکی) استقاده شده را بر اساس دستور العمل داخلی مصرف کنید
>
> .مصرف باطریهای نادرست منجر به انفجار یا آتش سوزی میشود
>
> غیر البطاریة البدیلة على الطراز المناسب.
>
> وهناك احتمال الانفجار.
>
> تخلص من البطاریات البدیلة المستعملة حسب القوانین والانظمة المحلیة.
>
> البطاریات المتخلص منها بصورة غیر مناسبة قد تؤدي الى انفجار او احتراق.

1-6. Read this first

Before you go to the checkout guide, be sure to read this section.

Important Notes

· Only trained personnel certified by LG should service the computer.

· Read the entire FRU removal and replacement page before replacing any FRU.

· Use new nylon-coated screws when you replace FRUs.

· Be extremely careful during such write operations as copying, saving, formatting.

   Drives in the computer that you are servicing sequence might have been altered. If you selected an

   incorrect drive, data or programs might be overwritten.

· Replace FRUs only for the correct mode.

· When you replace a FRU, make sure the model of the machine and the FRU part number are correct by

   referring to the FRU parts list.

· A FRU should not be replaced because of a single, irreproducible failure. Single failures can occur for a

   variety of reasons that have nothing to do with a hard ware defect, such as cosmic radiation,

   electrostatic discharge, or software errors.

· Consider replacing a FRU only when a problem recurs. If you suspect that a FRU is defective, clear the

   error log and run the test again. If the error does not recur, do not replace the FRU.

· Be careful not to replace a non-defective FRU.

■ What to do first

You must fill out the record form first.

During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer. The following list provides some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use. Before checking problems with computer, determine whether the damage is covered under the warranty by referring to the following :

The followings are not covered under warranty :

· CD panel cracked from the application of excessive force or from being dropped

· Scratched (cosmetic) parts

· Distortion, deformation, or discoloration of the cosmetic parts

· Cracked or broken plastic parts, broken latches, broken pins, or broken connectors caused by excessive force

· Damage caused by liquid spilled into system

· Damage caused by improper insertion of a PC Card or the installation of an incompatible card

· Damage caused foreign material in the diskette drive

· Diskette drive damage caused by pressure on the diskette drive cover or by the insertion of a diskette with multiple labels

· Damaged or bent diskette eject button

· Fusses blown by attachment of a non-supported device

· Forgotten computer password (making the computer unusable)

· Sticky keys caused by spilling a liquid onto the keyboard

The following symptoms might indicate damage caused by non-warranted activities :

· Missing parts might be a symptom of unauthorized service or modification.

· If the spindle of a hard-disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Chapter 2. Locations

■ Left View

1.Power Port

2.LAN Port

3.Fan Louvers

4.USB Port

■ Right View

5.Microphone Port

6.Headphone Port

7.USB Port

8.VGA Port

9.Kensington lock

■ Front View

10.Built-in Microphone

11.Smart Cam

12.Smart ON Button

13.Power Button

14.Keyboard

15.Touch pad

16.Multi Card Slot

17.Stereo speaker

Chapter 3. System information

■ Specification

Available Processors

• Intel® Atom™ Processor (L2 Cache Size: 512KB) is supported.

   ※ The user must not replace or expand the CPU capacity arbitrarily.

      The CPU capacity differs depends on model type.

Main Memory

• Main memory supports both 512 MB and 1024 MB. The expansion memory slot is not supported.

   ※ Memory types and specifications may differ depending on the model.

Secondary Storage Devices

• 2.5" Hard Disk Drive (S-ATA)

   ※ The hard disk capacity and the type depend on the notebook PC model.

• External Optical Disk Drive

   ※ The external Optical Disk Drive is optional, and so it may not be available in some models.

LCD

• 10.1" WSVGA(1024 x 600) TFT Color LCD

   ※ Some models are equipped with the Glare‐type LCD featuring enhanced sharpness. This type of LCD appears to glare more than other types, but it is a normal phenomenon in the Glare type.

   ※ The size and the resolution rate of the LCD depend on the notebook PC model.

Authentication for Anticopy Technology

• U.S Patent Nos.4,631,603;4,577,216;4,819,908;4,907,093;5,315,448;and 6,516,132. Patent number of Macrovision™.

• This product includes the technologies that are possessed by Macrovision and corresponding companies and protected by the US Patent Law and other related laws. Use of all technologies subject to the copyrigts must be approved by Macrovision in advance. Otherwise, the technologies may only be used for internal display. Do not disassemble or remodel the product.

Bluetooth

• Broadcom BCM92070MD_REF
• Ver2.1 Bluetooth Module + EDR

   ※ Bluetooth is optional, and so it may not be installed in some models.

Web Camera

• 1.3 Web Camera module

• UVC(USB Video Class) driver support

   ※ Web Camera is optional, and so it may not be installed in some models.

External I/O Interface

• External VGA Monitor Port: 1
• Microphone: 1
• Microphone Input Port (Mic in): 1
• Headphone Port: 1
• USB 2.0 Ports: 3
• Multi-card Slot: 1
• RJ 45 (LAN) Port: 1
• USIM Card Slot: 1
  ※ USIM card slot may not be provided depending on the model.

Video

• Mobile Intel Graphic Media Accelerator 950 (Dynamic Video Memory Technology)

  ※ The DVMT actively utilizes part of the system memory when processing large graphic data like 3D graphics. Therefore, the size of the graphic memory is displayed as the sum of the actual graphic memory size and the utilized amount of memory, which is decided by the size of system memory.

  ※ Applications (graphics program, game, etc.) requiring strong graphic processing power may not work properly.

  ※ Specifications may differ by model type.

Sound

• Realtek High Definition Audio Codec(ALC262)
• Built‐in Stereo Speakers

MODEM

• Ericsson F3607gw (HSPA Modem)
  ※ The wireless data modem is optional, and so it may not be available in some models.

LAN

• Realtek RTL8102E/RTL8103EL Family PCI‐E Fast Ethernet NIC (10/100Mbps)
• RJ 45 Jack
 ※ The LAN specifications may differ depending on the model.

Wireless LAN

• Ralink RT3090
  ※ Wireless LAN specifications may differ by model type and cannot be arbitrarily changed by the user.

Weight

• Full Installation: Approx. 1.14kg (3‐cell battery pack) / 1.27kg (6‐cell battery pack) / 1.54kg (9‐cell battery pack)
• Battery: Approx. 180g (3 cells) / 310g (6 cells) / 470g (9 cells)
 ※ Weight descriptions may differ by model type.

■ **System Block Diagram**
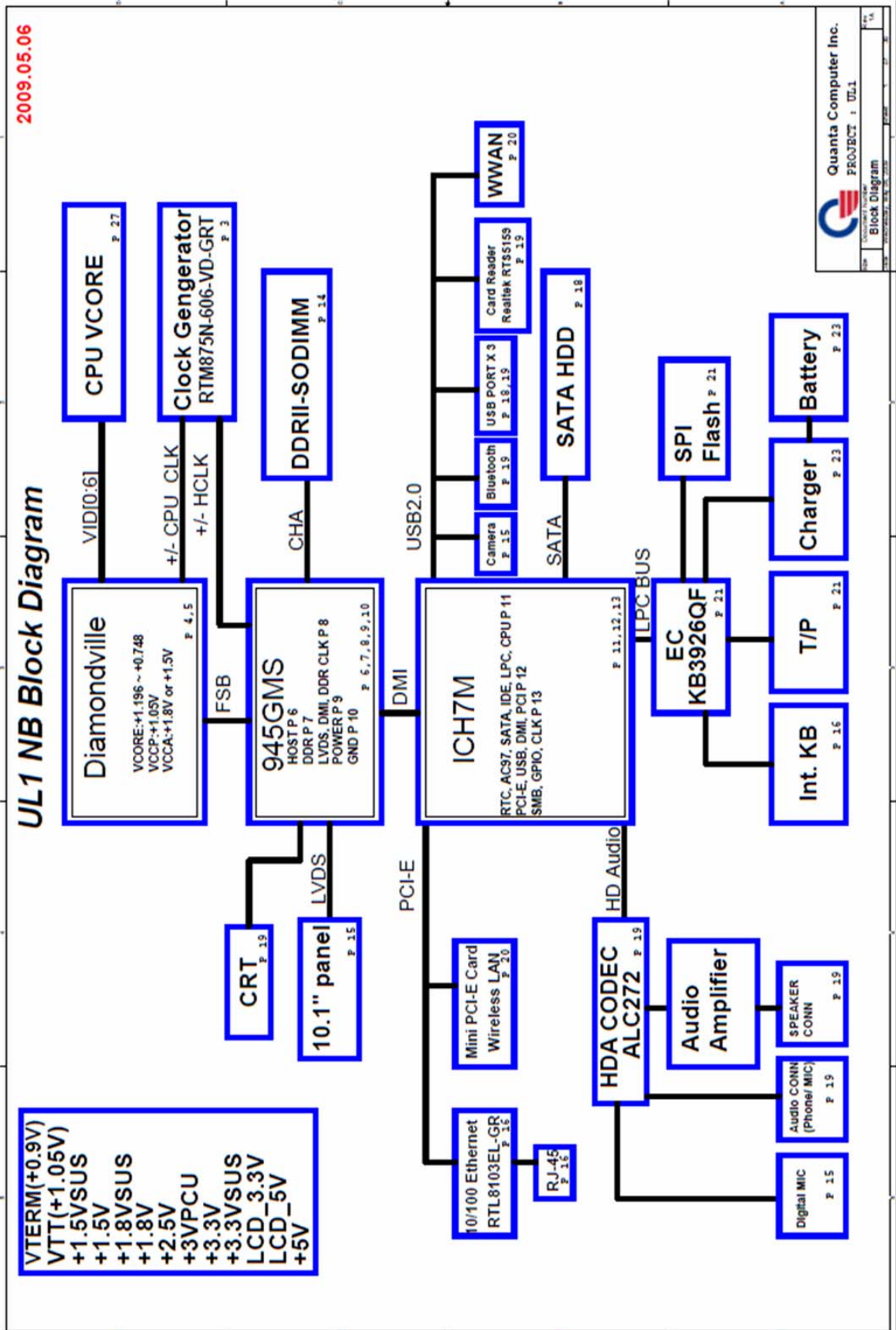
■ Fn key combinations

The following table shows the function of each combination of Fn with a function key.
Function of Fn keys has nothing to do with Operating System.

Fn + F1	Customizable hot keys. (Configurable through OSD settings)
Fn + F2	Customizable hot keys. (Configurable through OSD settings)
Fn + F3	Magnifying hot keys.
Fn + F4	Windows Executes the mode defined in the Power Save Mode. (Example: Standby, Hibernate)
Fn + F5	When the user presses **Fn + F5** keys, the touchpad mode toggles from Touchpad Disable, to Touchpad Auto‐Disable (upon connection of external USB/PS2 mouse), to Touchpad Enable in order. (Initialization takes 1˜2 seconds. It is recommended to use after the initialization.)
Fn + F6	Turns the wireless devices (incl. Wireless LAN and Bluetooth) on and off (Bluetooth is optional, and so it may not be installed in some models.)
Fn + F7	Monitor toggle. If you have an external monitor connected to the computer, press **Fn + F7** keys to rotate the display mode between **LCD only, Monitor only,** and **LCD + Monitor both** in order.
Fn + F8	When you press **Fn + F8** keys, the sound mode toggles from SRS WOW HD,, to SRS TruSurround XT, to SRS Off in order.
Fn + F9	**Mute** (Sound ON / Sound OFF)
Fn + ▲	Increases LCD brightness within a nine‐grade range.
Fn + ▼	Decreases LCD brightness within a nine‐grade range.
Fn + ◄	Turns down the volume.
Fn + ►	Turns up the volume.
Fn + F10	System Information. System summary information will be displayed.
Fn + F11	Fan Control feature. Switches the cooling fan mode between Normal and Silent for each pressing.
Fn + F12	Hibernates (When OSD is installed)
Fn + Num Lk	When the **Num Lock** lamp is turned on, you can enter numbers (0~9) using the embedded numeric keys. If you press **[Fn] + [Num Lk]** again, the **Num Lock** lamp is turned off and you can enter text characters.
Fn + PgUp	You can enter **[Prt Sc Sys Rq]** button.
Fn + PgDn	You can enter **[Pause Break]** button.
Fn + Delete	You can enter **[Insert]** button.

■ Status indicators

The system status indicators show the status of the computer
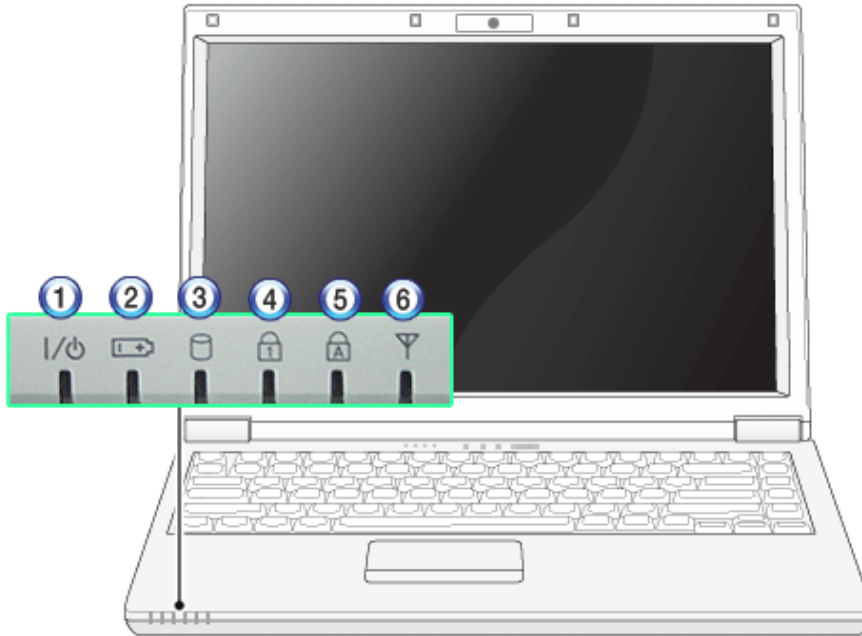
1 . Power Lamp:

- Blinking: System Standby
- On: The system is running on the AC power or battery.
- Off: The system is turned off or in Hibernates.

2. AC Power and Battery Status Lamp

- Orange: The battery is being charged.
- Orange/Green Blinking: Charged more than 90%
- Off: The AC adapter is not connected and the battery is being discharged.
- Green: The AC adapter is connected and the battery is not in charging stage, or the battery is fully charged.
- Green Blinking: The battery is charged less than 10%
- Red Blinking: In faulty state
- If you try to turn on the system that has entered the Hibernates mode or been turned off after a low-battery alarm, the system will not be turned on but the lamp will blink three times.

3. Hard Disk Drive Lamp

- The lamp is turned on when the HDD is running.

  ※ Do not turn off the power forcibly while the hard disk drive lamp is on. Otherwise, the data may get impaired.

4. Num Lock lamp

- **Num Lock** lamp is turned on when you press **[Fn]** + **Num Lock** keys, indicating the embedded numeric keys are available. If you press **[Fn]** + **[Num Lk]** again, the **Num Lock** lamp is turned off and you can enter text characters.

5. Caps Lock lamp

- **Caps Lock** lamp is on when the it is active. When this lamp is on, you can type uppercase letters without holding **Shift** key.

6 . Wireless LAN/Bluetooth lamp

- Off: Wireless LAN is not in use.

- Blinking (short interval): Wireless LAN/Bluetooth is connected and data are being transmitted.

- Blinking (every 2 ~ 3 seconds): Wireless LAN/Bluetooth is not connected but Wireless Radio is on.

- Blinking (every 3 ~ 4 seconds): An access Point is being searched for to connect Wireless LAN/Bluetooth.

- On: An access point is being searched for or Wireless LAN is connected.
  ※ The Wireless LAN/Bluetooth lamp may operate differently depending on model type.

  ※ The Wireless LAN card and the Bluetooth device are optional, and so it may not be supported in some models.

■ BIOS Flash

You Can update BIOS using USB Device (FDD/USB Memory)

Because this system is not equipped with any USB Device, you have to use an external USB Device

for a BIOS update.

In order to boot up with an USB Device, please set Removable Device as the

first boot up drive in the boot menu of BIOS Setup.

· How to update flash Rom in Dos

1. Create 'boot up' flash update USB Device (FDD/USB Memory).
2. Copy BIOS Flash software to the flash update USB Device (FDD/USB Memory).
3. Connect the USB Device for USB Port.
4. Press F12 Key while the "LG LOGO" appears.
5. A while later, the system setup home screen appears.
6. Type in "go.bat ". (x_xxx is Model Name & BIOS version)
7. You can see the BIOS flash process as below.

```
C:\>

C:\>go.bat

C:\>FLASHIT QLXL3B14.fd


            Insyde Flash Utility for InsydeH20
                                 Version 1.2t

        Initializing

        File Ioading    100%

        Current BIOS version: QL8L3B14
        Nwe     BIOS version: 3B14


        Updating Block at FFF10000
```
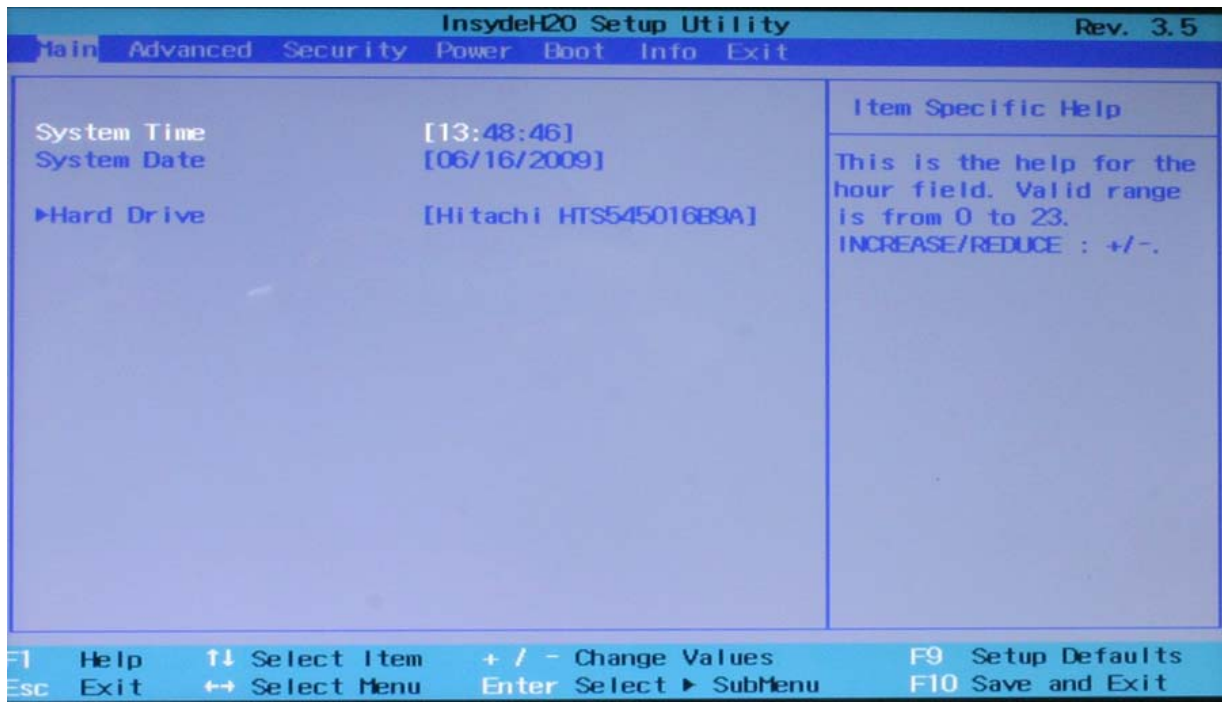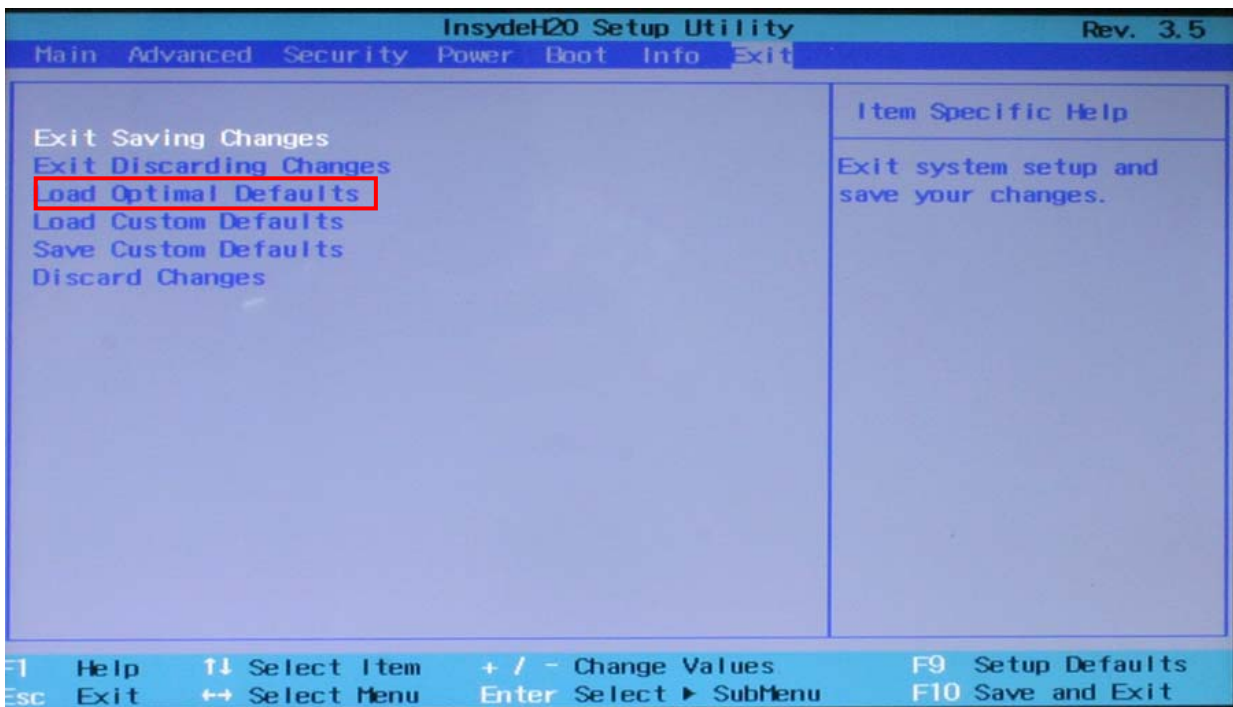
8. After flashing is completed, The computer turn off with automatic movement. .

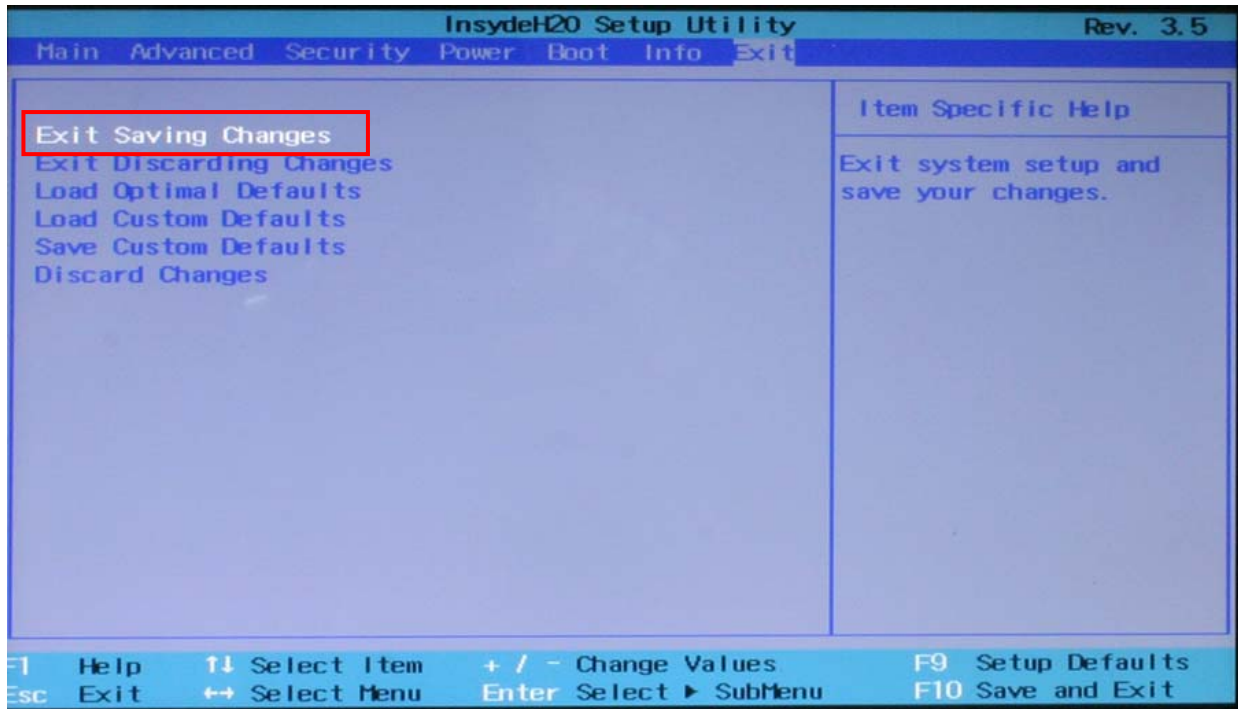9. Press [F2] Key, then you can see the BIOS SETUP UTILITY screen as below.

10. It selects the :" Load Optimal Dafault" and it summons a BIOS settings at initial value.

11. It selects the "Exit & Saving Change" and it stores system a settings and the reboot

■ BIOS Release Process and Making Bootable CD

1. LGE(Korea) will upload BIOS Image(*.iso) to GCSC(Global Cyber Service Center:http://biz.lgservice.com) when BIOS should be updated.

2. BIOS will include both System BIOS and EC(Embedded Controller) BIOS.

3. Service center can download BIOS file from GCSC and update BIOS according to below procedure.

4. Service center will make Bootable Image CD with Image file(*.iso) as below

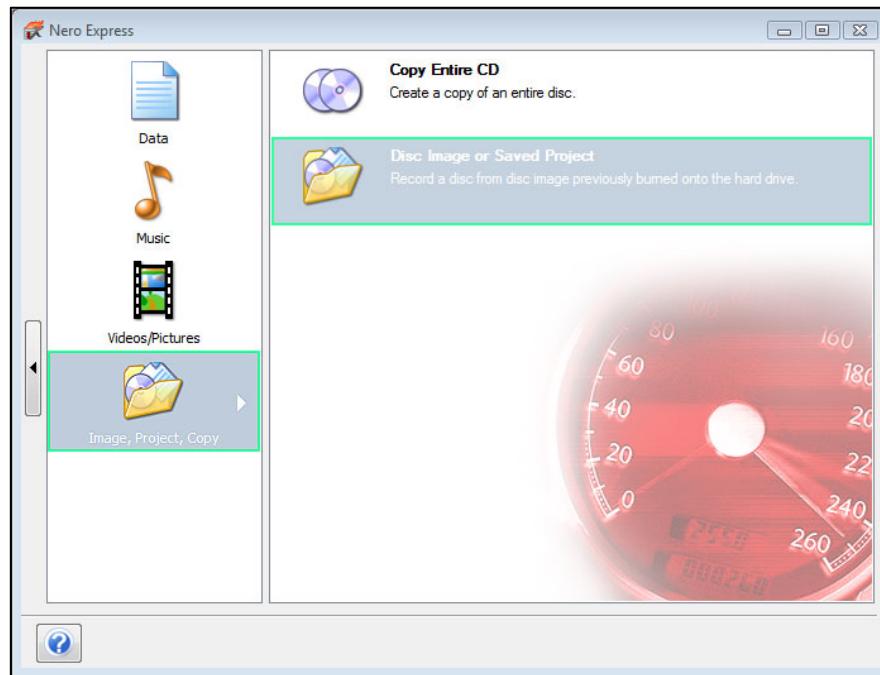a. Insert empty disc to CD-RW Drive and start Nero "StartSmart".
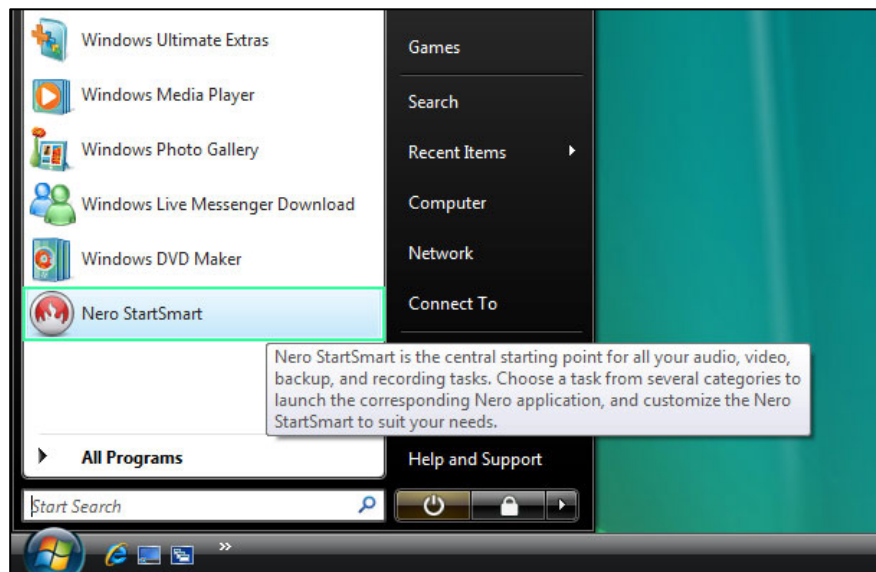
b. Select "Nero Express".
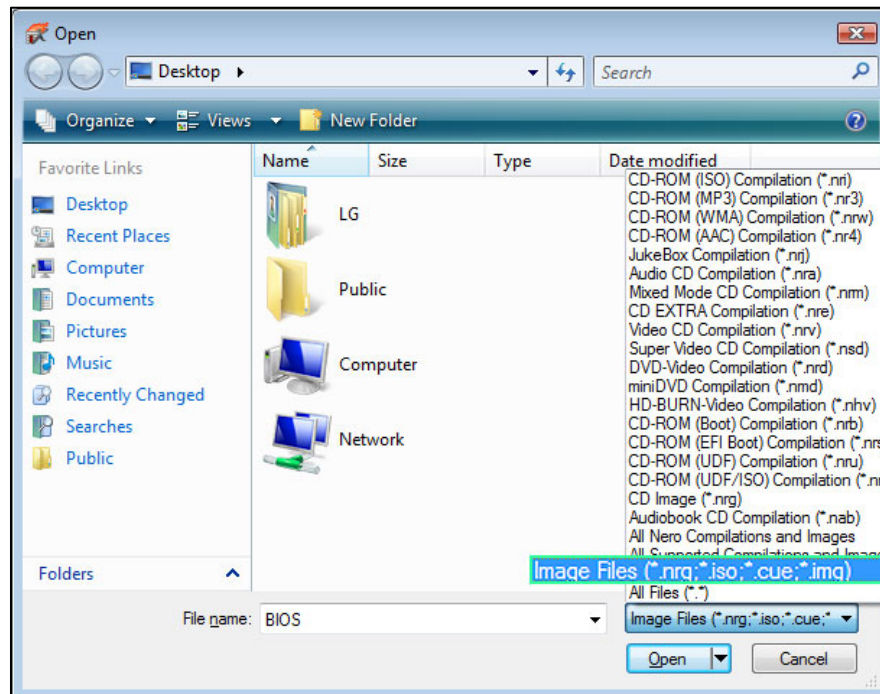
c. Select "Disc Image or Saved Project"

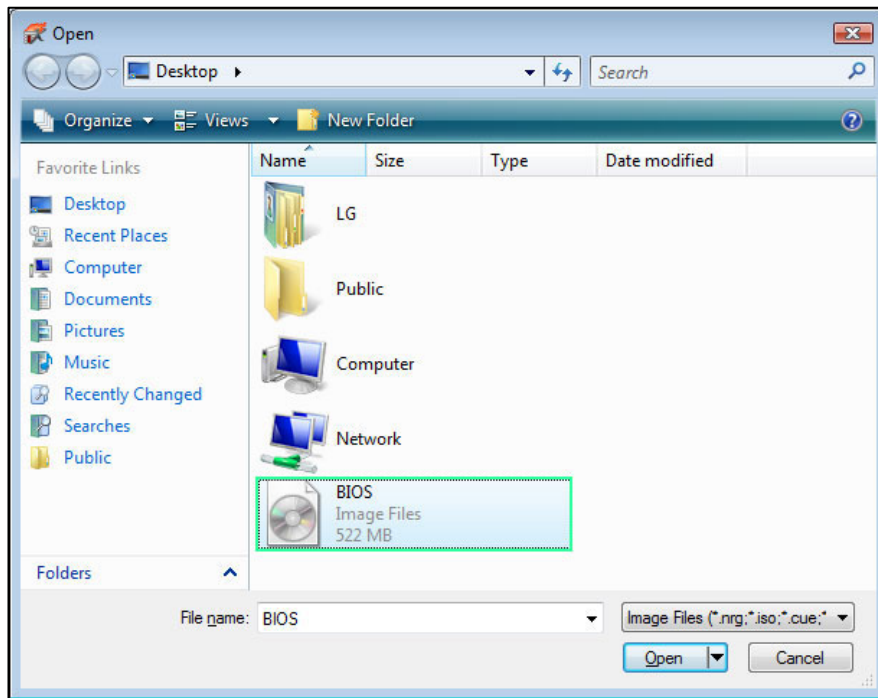d. Select File Format as "Image Files(*.iso)".

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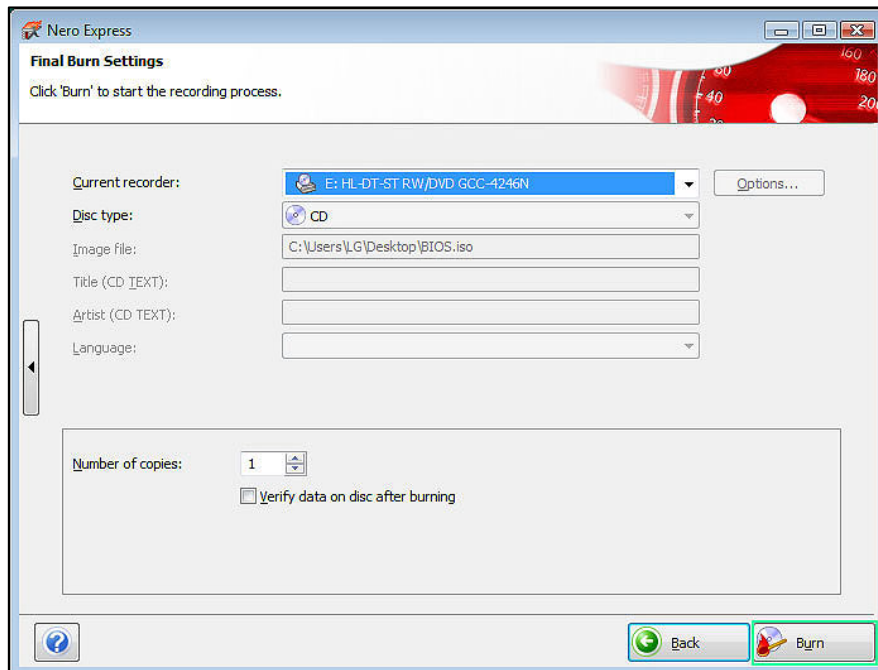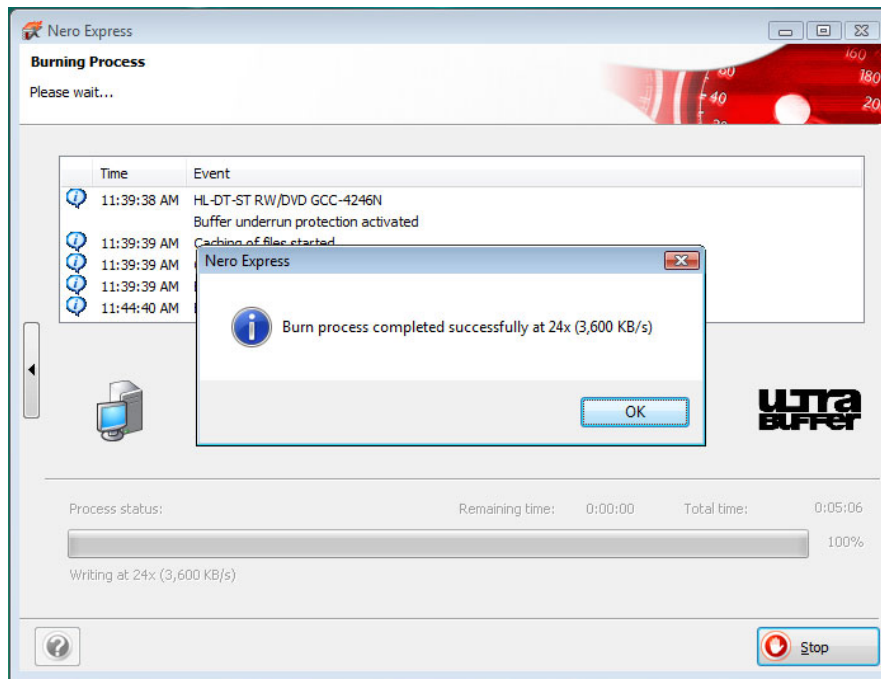e. Open Image File(*.iso) which is sent from LGE

f. Tab Burn then burning will be started

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g. Burn process completed as below, and tab "OK

■ BIOS/EC Flash Process

1. Insert Bootable CD in PC, and Turn it on, then PC will boot by DOS mode as below

   (If the EC is not correct or old version, then automatically update EC first and reboot again)

2. Select Boot mode, then press "Enter" Key.

```
Microsoft Windows 98 Startup Menu
------------------------------------

    1. Start Computer with IDE CDROM
    2. Start Computer with USB CDROM

Enter a choice: 1










F5=Safe    mode Shift+F5= command prompt    Shift+F8=Step-by-Step confirmation [N]
```

3. Type in LOGO SETTING at the "WIP ID :" then press Enter key (You must use Capital Letter)

```
================================================
                  LOGO SETTING

               input "LG" or "XNOTE"
================================================


WIP ID :
```

4. Type in Mode Name at the "WIP ID :" then press Enter key (You must use Capital Letter)

(You can see the Model Name in ID Label at the bottom Case of PC: "M/N: LMXX-XXXX")

```
========================================
                MODEL NAME
========================================




WIP ID :
```

5. Type in Serial No at the "WIP ID :" then press Enter key (You must use Capital Letter)
(You can see the Serial No in ID Label at the bottom Case of PC: "S/N: 412KIXXXXXXXX"(13digits))

```
========================================
        SERIAL        SERIAL        SERIAL
========================================




WIP ID :
```

6. You can see the BIOS flash process as below

```
MSI Frimware Update Utility — Version 3.11
Copyright (C)2005 Micro Star, Inc.  All rights reserved.

ROM File Name : A1034IL1.704
ROM Size : 80000h
Flash Part Name : WINBOND 39L040
BootBlock : 10000h
NVRAM : 10000h ... Reserved


Reading file .......... done
Erasing flash ......... done
Writing flash ......... done
Verigying flash ....... done
Erasing BootBlock ..... done
Writing Bootblock ..... done
```

5. After flashing is completed, you can see the "PASS" on your screen, and reboot your PC

■ BIOS Setup

BIOS (Basic Input and Output System) Setup saves the system configuration in **CMOS RAM**, and check the configurations during startup. Use the **BIOS Setup Utility** to change and save the system environment, hardware configurations, power saving mode, etc.

· Open the BIOS Setup Utility in the following situations :

1. to change the BIOS setup
2. to replace the backup battery
3. system configuration error occurs
4. to change the boot order
5. to set/change a password

Press the power button.

When the **LG** logo appears on the screen, press F2 and enter the **BIOS Setup Utility**.

■ Using the keys

The keys used in the BIOS Setup Utility and their functions are described at the bottom.

· $\boxed{\text{F1}}$, $\boxed{\text{Alt}}$ + $\boxed{\text{H}}$: General Help

Display the descriptions of the keys used in the setup utility.

· $\boxed{\downarrow}$, $\boxed{\uparrow}$: Select Item

Navigate and select items in the setup utility. The selected item becomes highlighted.

· $\boxed{\leftarrow}$, $\boxed{\rightarrow}$: Select Menu

Move to another menu.

· $\boxed{-}$ / $\boxed{+}$, $\boxed{\text{Space Bar}}$: Change Values

Change the value of a selected item.

· $\boxed{\text{F9}}$: Load Default Configuration

Display Setup Confirmation window. Press Enter to load default configuration.

· $\boxed{\text{Enter} \downarrow}$: Select Sub-Menu

Some items have sub-menus. Display the sub-menu for a selected item.

· $\boxed{\text{F10}}$: Save and Exit

Display Setup Confirmation window. Press **Enter** to save and exit.

· $\boxed{\text{Esc}}$: Exit
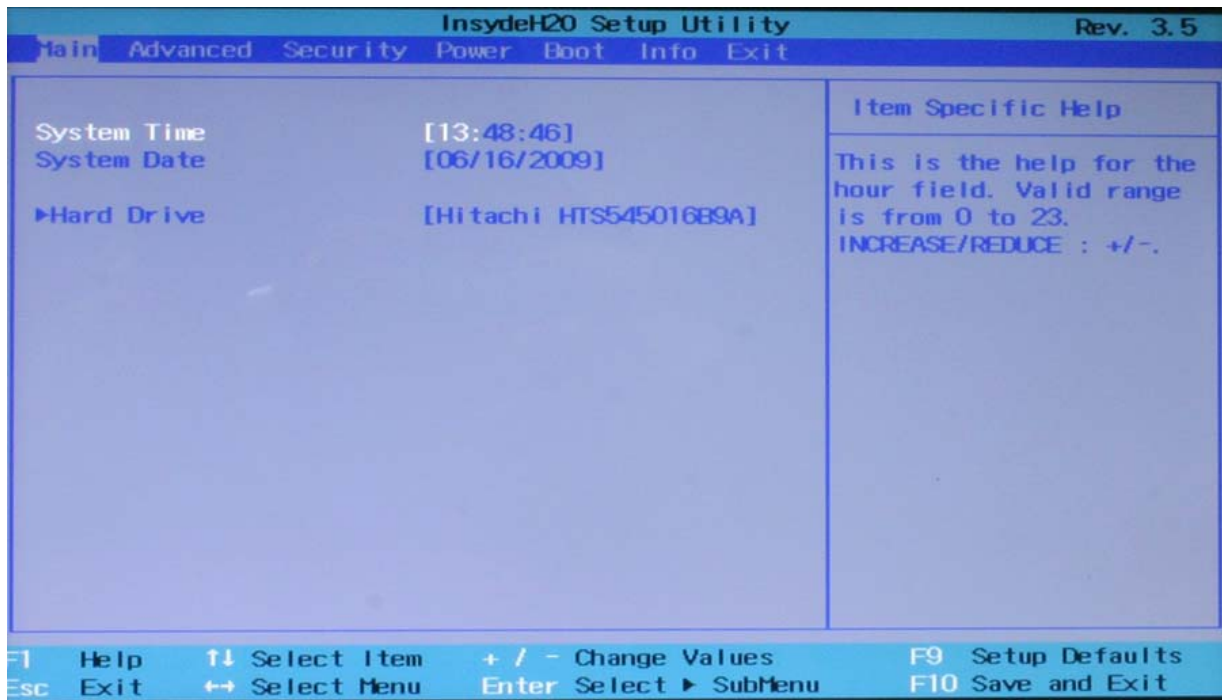
In a sub-menu, press **Esc** to move to the previous window. In Main menu, click **Esc** to move to Exit menu.

■ Main menu


```
                    InsydeH2O Setup Utility              Rev. 3.5
Main  Advanced  Security  Power  Boot  Info  Exit

                                                Item Specific Help
System Time              [13:48:46]
System Date              [06/16/2009]           This is the help for the
                                                hour field. Valid range
▶Hard Drive              [Hitachi HTS545016B9A]  is from 0 to 23.
                                                INCREASE/REDUCE : +/-.




F1   Help      ↑↓ Select Item     + / - Change Values      F9  Setup Defaults
Esc  Exit      ↔ Select Menu      Enter Select ▶ SubMenu    F10 Save and Exit
```

▪ **System Time**

   Current time. To change the value, press <+> or <–> key.
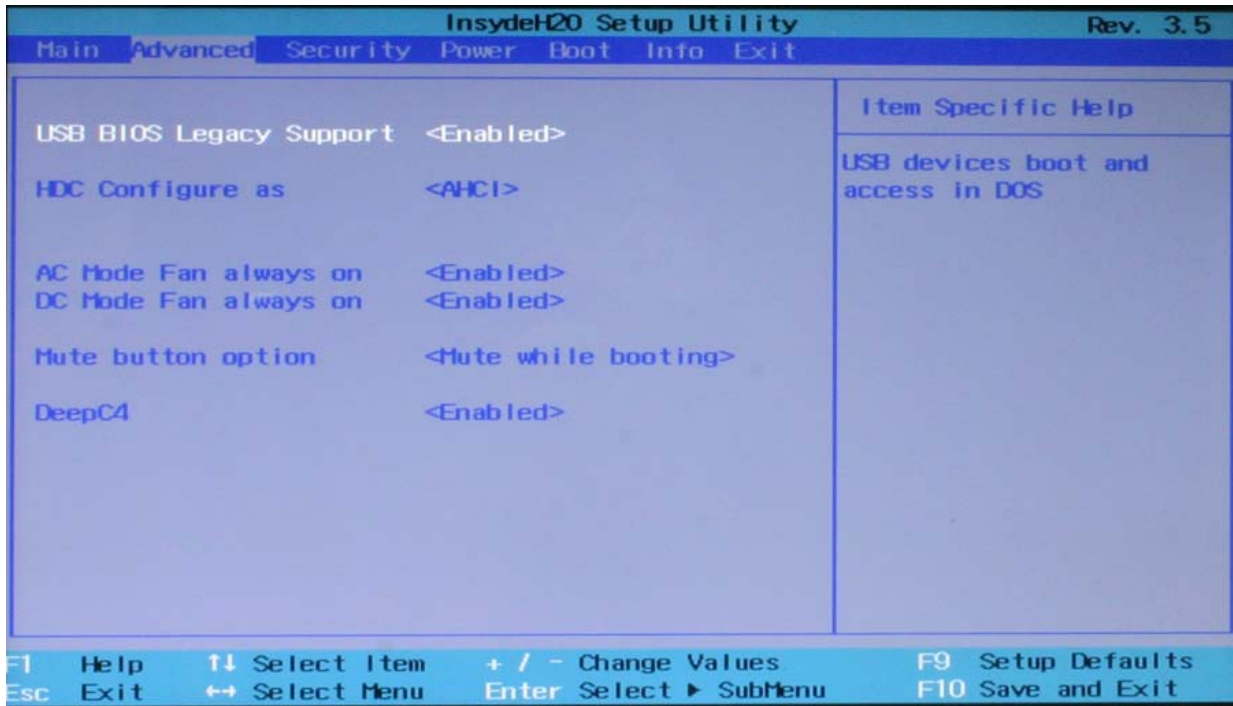
▪ **System Date**

   Current date. To change the value, press <+> or <–> key.

▪ **Hard Drive**

   To change the settings of the connected drive, click **<Enter>** after selecting this option.

.

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■ Advanced menu

. **USB BIOS Legacy Support**

This enables to use the USB devices in the MS-DOS environment.

. **HDC Configure as**

This configures the compatibility settings for the SATA controller.

. **VT Support**

Set whether or not to support the Intel virtualization technology.

. **AC Mode Fan always on**

Select any of Normal, Silent, and Cool for the operating speed of CPU cooling fan (for AC power).

. **DC Mode Fan always on**

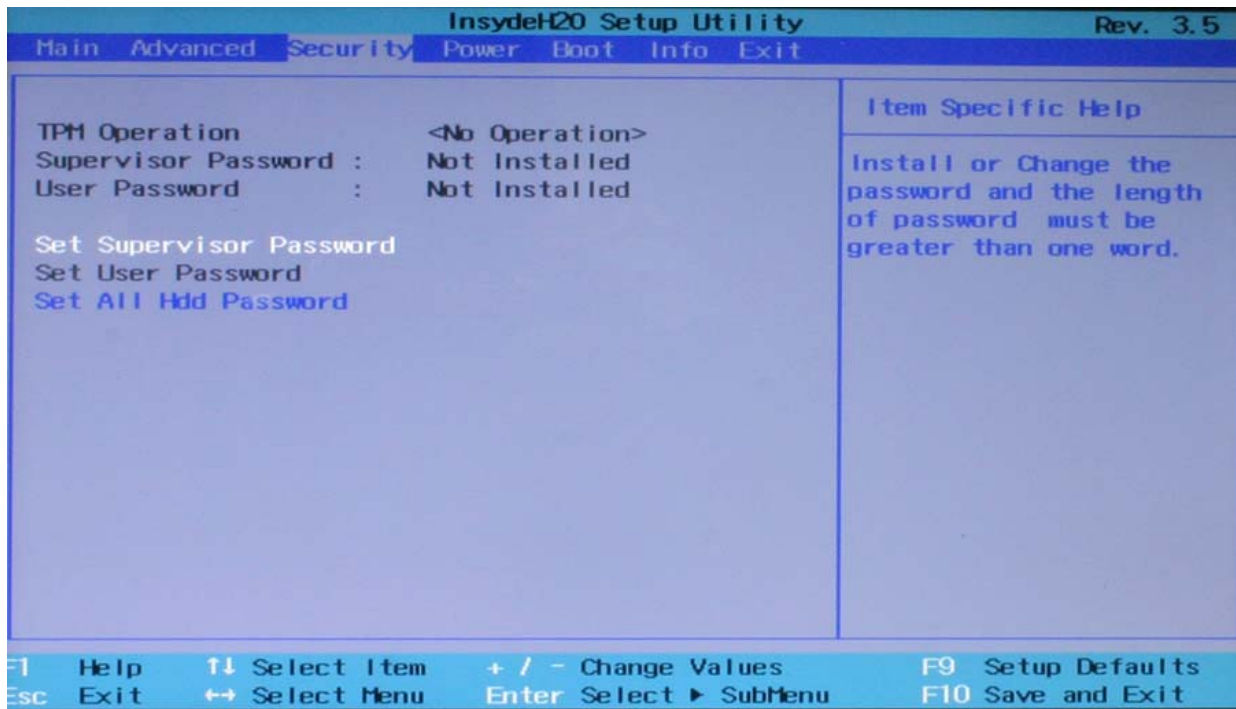Select any of Normal, Silent, and Cool for the operating speed of CPU cooling fan (for DC power).

. **Mute button option**

Set whether or not to support the Mute function (Fn + F9) during the system startup.

. **DeepC4**

In order to reduce electricity cache L2 disable, CPU to idle conditions and in order to enter.

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■ Security menu

· TPM Operation

Trusted with Platform Module abbreviations keyboard input or the hazard which removes a different security risk factor they are SW and HW security modules which devise.

· Supervisor Password

The password setting prevents not allowed users from using the notebook computer. The password is not set when starting the system for the first time. When the system is turned on, any other user cannot change the BIOS settings without entering the specified password.

· User Password

Set User Password is for setting the password lower than the one set in Set Supervisor Password. Set User Password is active only when the supervisor password is set.
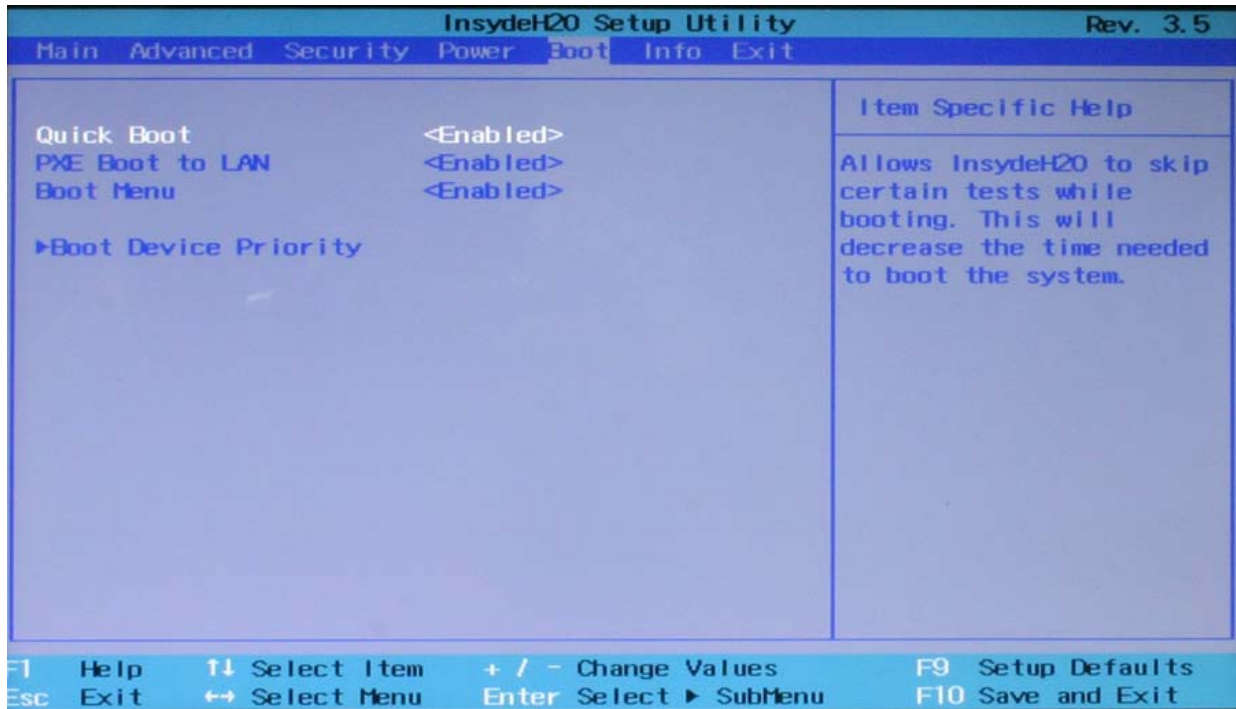
· Set Supervisor Password
Set Supervisor Password.

· Set User Password
Set User Password.

· Set All Hdd Password

Set the HDD password.

■ Boot menu

· **Quick Boot**

Set whether or not to use Quiet Boot.

· **PXE Boot to LAN**
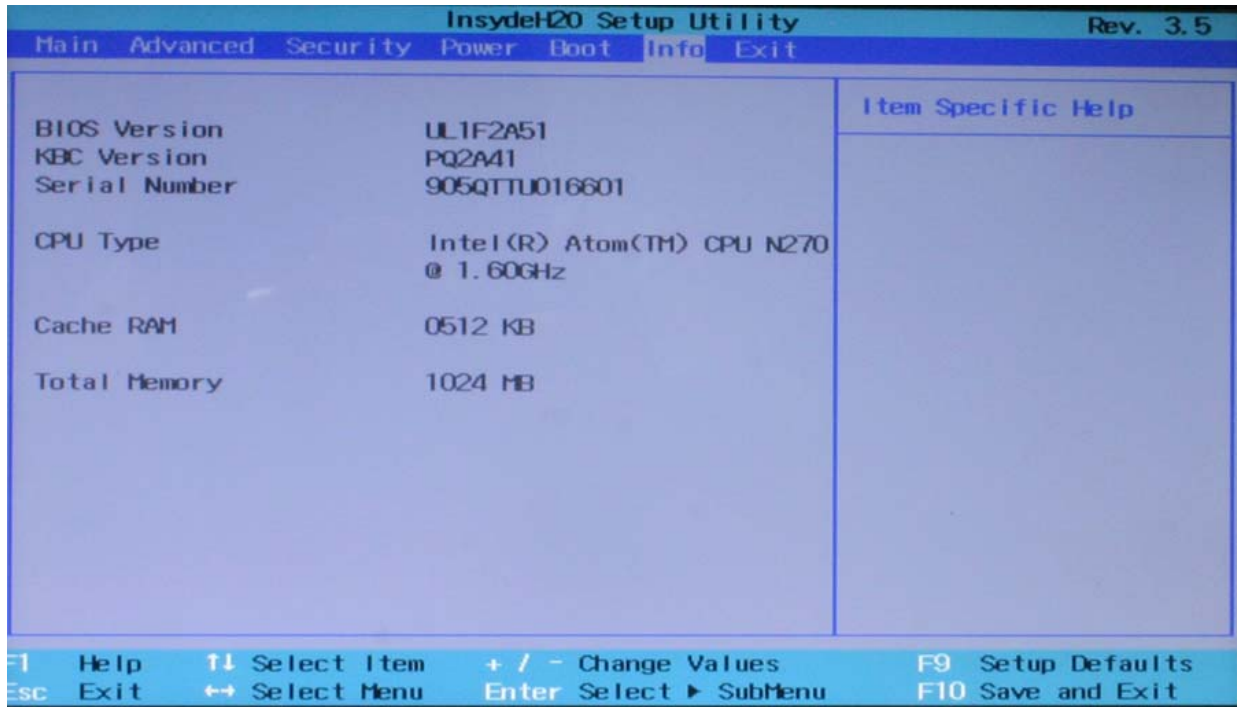
Set whether or not to use the HDD password.

· **Boot Menu**

Boot poem F12 pressing, boot device Selection the boot device.

· **Boot Device Priority**

Select the desired device drive by using the arrow buttons and change its booting sequence by using the [+] or [−] key.

■ Info menu


```
                          InsydeH2O Setup Utility                    Rev. 3.5
 Main   Advanced   Security   Power   Boot   Info   Exit

                                                    Item Specific Help
 BIOS Version            UL1F2A51
 KBC Version             PQ2A41
 Serial Number           905QTTU016601

 CPU Type                Intel(R) Atom(TM) CPU N270
                         @ 1.60GHz

 Cache RAM               0512 KB

 Total Memory            1024 MB




F1   Help       ↑↓ Select Item      + / -  Change Values      F9   Setup Defaults
Esc  Exit       ↔ Select Menu       Enter Select ▶ SubMenu     F10  Save and Exit
```

· BIOS Version

This shows the Version of BIOS.

· KBC Version

This shows the Version of KBD firm ware.

· Serial Number

This shows the serial number of the product.

· CPU Type
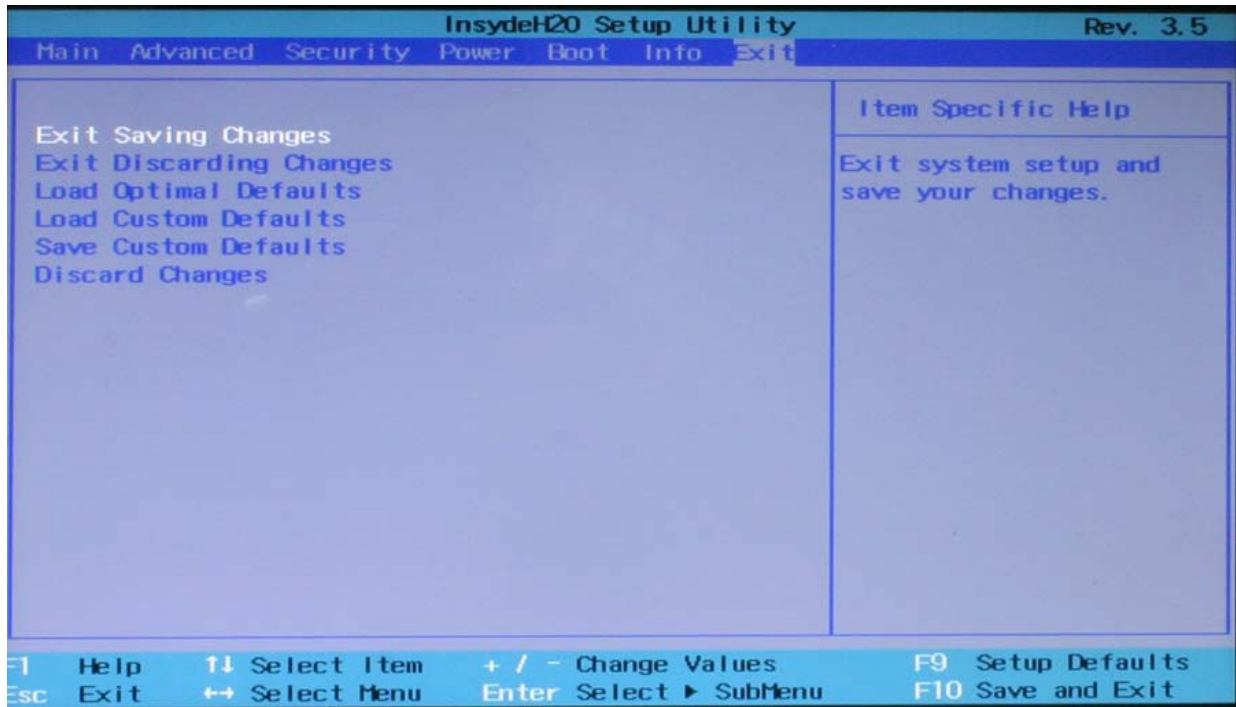
This shows the type of the CPU installed in the system.

· Cache RAM

This shows the size of L2 Cache for the CPU.

· Total Memory

This is for display only. This shows size of system memory.

■ **Exit menu**

· **Exit & Save Change**

Save the changes you have made and exit the utility.

· **Exit & Discard Changes**

Exit the utility without saving the changes you have made.

· **Load Optimal Defaults**

This changes the parameters in the Setup menu to the factory default settings. When it is selected or [F9] key is pressed, the confirmation message appears. Click [Yes] to change the settings.

· **Load Custom Defaults**

This returns the user-defined settings for the parameters in the Setup menu.

· **Save Custom Defaults**

This saves the desired values for each parameter in the Setup menu.

· **Discard Changes**

This returns to the factory default settings for each parameter in the Setup menu.

■ Backup and Restore Security Platform Data

Security Platform Backup includes all data required in case of emergency. After a hardware or storage media failure or a Trusted Platform Module failure, Security Platform Restoration reestablishes access to Security Platform Features for all users.

In addition you can backup and restore your Personal Secure Drive data. Data from other applications using the Security Platform Solution (e.g. Secure e-mail) is not included in Security Platform backup.

■ Backup scope

Security Platform backup comprises the following data:

Security Platform Credentials and Settings	
Backup Contents	A copy of the user-specific credentials and settings which are stored on the Security Platform.
Purpose	Restoration of user-specific credentials and settings after a hardware or storage media failure. Otherwise users could not access Security Platform Features anymore and user data would be lost.
Archives	• **Automatically written Backup Archive** ("System Backup Archive", e.g. file `SPSystemBackup.xml` and folder `SPSystemBackup`): Set up by Security Platform Administrator. Contains credentials and settings of all Security Platform Users (for one or multiple Security Platform computers). Also contains computer identification and user identification, which are used to match computers and users during the restoration process. • **Manually written Backup Archive** (e.g. `SPBackupArchive.xml`): Created by Security Platform User. Contains credentials and settings of one Security Platform User (for one Security Platform computer). Also contains computer identification and user identification, which are used to match computer and user during the restoration process.
Emergency Recovery	
Backup Contents	All Security Platform Basic User Keys, encrypted specifically for Emergency Recovery.
Purpose	Re-encryption of all Basic User Keys after a Trusted Platform Module failure. In this case a new Security Platform has to be set up and a new owner key is created. Emergency Recovery allows the re-encryption of Basic User Keys from the old owner key to the new one. Otherwise users could not access Security Platform Features anymore and user data would be lost.
Archives	• Emergency Recovery data is included in **automatically written Backup Archives**. • **Emergency Recovery Token** (e.g. `SPEmRecToken.xml`): Created by Security Platform Administrator. Protected with a dedicated password. Is required for a restoration of Emergency Recovery data.

Personal Secure Drive	
Backup Contents	A copy of the PSD encrypted data and configuration settings.
Purpose	Restoration of PSD encrypted data and configuration settings after a hardware or storage media failure. Otherwise users could not decrypt their PSD data anymore. **Notes:** • In contrast to the PSD Backup, standard hard disk backup tools produce unencrypted backups. • Lost PSD credentials can only be restored via Personal Secure Drive Recovery.
Archives	• PSD configuration settings are included in both **automatically written Backup Archives** and **manually written Backup Archives**. • **PSD backup file** (e.g. `SpPSDBackup.fsb`): A backup copy of the PSD image file may be created during a Security Platform User's manual backup.

■ Restoration Cases

Depending on the type of emergency there are different restoration cases

Restoration Case	Affected Restoration Scope
Broken hard disk or lost data	Security Platform Credentials and Settings, Personal Secure Drive
New Trusted Platform Module	Emergency Recovery
New Security Platform to be initialized	Emergency Recovery, Security Platform Credentials and Settings, Personal Secure Drive

■ How to Backup and Restore

How to configure automatic backups ("System Backup")	Software Component to use
Administrative Task: Configure automatic backups for all users (including Security Platform Credentials and Settings, Emergency Recovery and PSD configuration settings).	If Security Platform is not yet initialized: *Initialization Wizard* If Security Platform is already initialized: *Settings Tool - Backup - Configure...*
How to backup ("Manual Backup")	**Software Component to use**
User Task: Run backup manually for the current user.	*Settings Tool - Backup - Backup...*
How to restore	**Software Component to use**
Administrative Task: Prepare restoration for certain users. User Task: Run restoration manually for current user. If restoration has been prepared for current user, then complete the restoration. If a manually written Backup Archive is available and no Emergency Recovery data needs to be restored, then a user can perform restoration without preparation by an administrator.	*Settings Tool - Backup - Restore...*

■ Backup

With this page you can configure automatic Security Platform backups.

The following table gives hints on how to use this wizard page.

Wizard Page Element	Explanation
Backup location: Browse...	Security Platform credentials and settings will be regularly saved to a Backup Archive. Type in path and file name or browse for it. An automatically written Backup Archive consisting of an XML file and a folder with the same name will be created, e.g. file `SPSystemBackup.xml` and folder `SPSystemBackup.` Please use the extension *.xml.
Schedule...	A scheduled backup will be created. Click here to view and modify the backup scheduling. Please note that automatic backups are only executed if your PC is not shut down at the scheduled time. Please note that the user account chosen for the scheduled backup must be member of the group "Administrators" or "Backup Operators".

■ Infineon Platform Security Backup

With this page you can backup and restore Security Platform credentials, Security Platform settings and Personal Secure Drives.
If Enhanced Authentication is enabled, you can also create backups of your authentication device.

Availability of page: This page is only available on an initialized Security Platform, if one of the following conditions is fulfilled:

•The current user has administrative rights.
•The current user is an initialized Security Platform User, and the policy *Allow User Enrollment* is enabled.

Buttons:

•Buttons for administrative tasks are disabled for users without administrative rights.
•Buttons are disabled, if corresponding functions are not available in a certain Security Platform state.

The following table describes all backup and restore functions.

Explanation
Click here to set up automatic Security Platform backups. Infineon Security Platform Initialization Wizard will be started. This feature is only available, if the current user account has administrative rights.
Click here to start a manual backup of your Security Platform Settings and credentials. If you have configured Personal Secure Drive (PSD), you can backup your PSD too. The Infineon Security Platform Backup Wizard will be started. This button is disabled, if the Infineon Security Platform is disabled, not yet set up or the user is not set up.
Click here to start a manual restore of archived Security Platform Settings and credentials. If you have a backup of your Personal Secure Drive (PSD), you can restore your PSD too. The restore part of the Infineon Security Platform Backup Wizard will be started. This button is disabled, if the Infineon Security Platform is disabled or not yet set up.
Click here to create a backup authentication device. This feature is only available, if Enhanced Authentication is enabled.

Chapter 4. Symptom-to-part index

The symptom-to-part index in this section lists symptoms and errors and their possible causes.

The most likely cause is listed first.

Note

If replacing a part (FRU) does not solve the problem, put the original part back in the computer.

Do not replace a non-defective FRU.

■ Power system checkout

· To verify a symptom, do the following :

1. Power off the computer.

2. Remove the battery pack.

3. Connect the AC adapter.

4. Check that power is supplied when you power on the computer.

5. Power off the computer.

6. Disconnect the AC adapter and install the charged battery pack.

7. Check that the battery pack supplies power when you power on the computer.

· If you suspect a power problem, see the appropriate one of the following power supply checkouts :

1. Checking the AC adapter

2. Checking the operational charging

3. Checking the battery pack

4. Checking the backup battery

· Checking the AC adapter

If the power-on indicator does not turn on, check the power cord of the AC adapter for correct continuity and installation.

If the computer does not charge during operation, go to "Checking operational charging."

To check the AC adapter, do the following :

  1. Unplug the AC adapter cable from the computer.

  2. Measure the output voltage at the plug of the
     AC adapter cable. See the following figure :

  3. If the voltage is not correct, remove the power code
     form AC adapter.

  4. 10 seconds later, connect the power code, then measure the output voltage.

  5. If the voltage is not correct, change the AC adapter.
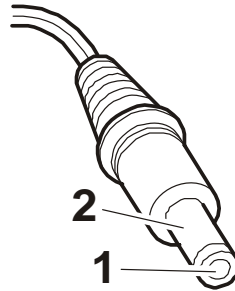
Pin	Voltage (V dc)
1	+18.05 ~ +19.95
2	Ground

· If the voltage is not correct, replace the AC adapter.

· If the voltage is acceptable, do the following :

  1. Replace the system board.

  2. If the problem persists, check the AC adapter whether it is correct product or not.

Note

Noise from the AC adapter does not always indicate a defect.

· Checking operational charging

  1. To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer. Perform operational charging. If the battery status indicator or icon does not turn on, remove the battery does not turn on, replace the battery pack.

  2. If the charge indicator still does not turn on, replace the system board. Then reinstall the battery pack.

Note

Do not charge battery pack, when its temperature is below 0℃ or above 75℃.

· Checking the battery pack

  1. Open the Power Meter window by clicking **Start → Control Panel → Power Options** and then; check the total power remains. Battery charging does not start until the power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

  2. To check the status of your batter, move your cursor to the Power Meter icon in the icon tray of the Windows taskbar and wait for a moment (but do not click), and the percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Note

If the battery pack becomes hot, it may not be able to charge. Remove it from the computer and Leave it at room temperature for a while. After it cools down, reinstall and recharge it.

· The Characteristics of the battery pack

1. Self-discharge

    The battery gradually loses its power over time without ever being used.

2. Periodic full discharge / charge

    Frequent recharge of the battery pack can reduce the capacity of the battery pack. When this happens,

    you can perform the full discharge / charge to improve the capacity. You should perform periodic full

    discharge /charge once every 30~60 days.

    You should always use the battery until its power is low; then fully charge the battery.

3. Trickle charge

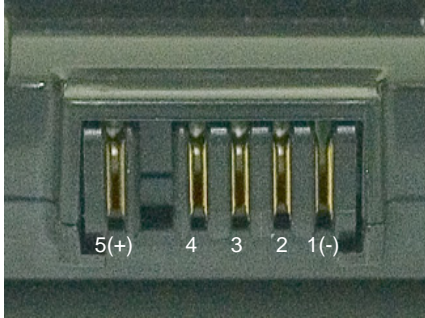   If the temperature of the battery pack drops below 10℃ , the trickle charging begins.

    The trickle charging may take 32 hours for the battery pack to be fully charged.

· To check the battery pack, do the following :

1. Power off the computer.

2. Remove the battery pack and measure the voltage between battery terminals 1(-) and 5(+).

   See the following figure :

Terminal	Voltage (V dc)
1	Ground(-)
5	+0V ~ +12.6V (6 cell)

3. If the voltage is still less than +11.1 V DC after recharging, replace the battery.

4. If the voltage is more than +11.1 V DC, measure the resistance between battery terminals 1 and 2.
   The resistance must be 2 to 4kΩ (typically 3kΩ).

5. If the resistance is not correct, replace the battery pack. If the resistance is correct, replace the system board.

Note

Charging will take at least 3 hours.

Note

Battery is an expendable supplier, so its capacity and used time can be reduced by using the computer.

■ Numeric error codes

Symptom / Error	FRU or action, in sequence
0200 Fixed disk failure (The hard disk is not working)	1.Reset the hard-disk drive. 2.Load Setup Defaults in BIOS Setup Utility. 3.Hard-disk drive. 4.System board.
0210 Stuck Key error	1.Check the keyboard if it is pressed. 2.Replace the keyboard.
0211 Keyboard error	Run interactive tests of the keyboard and the auxiliary input device.
0212 Keyboard Controller Failed	System board.
0220 Monitor type error - Monitor type does not match the one specified in CMOS.	Load Setup Defaults in BIOS Setup Utility.
0230 System RAM error - System RAM Failed at offset.	1.DIMM 2.System board
0231 Shadow RAM error - Shadow RAM failed at offset	System board
0232 Extended RAM error - Extended RAM Failed at address line	1. DIMM 2. System board
0250 System battery error – System battery is dead	Replace the backup battery and run BIOS Setup Utility to reset the time and date.

Symptom / Error	FRU or action, in sequence
0251 System CMOS checksum bad – System CMOS checksum is not correct. – Default configuration used.	Replace the backup battery and run BIOS Setup Utility to reset the time and date.
0252 Password checksum bad – The password is cleared.	Reset the password by running BIOS Setup Utility.
0260 System timer error	1. Replace the backup battery and run BIOS Setup Utility to reset the time and date. 2. System board.
0271 Check date and time settings – Date and time error.	Run BIOS Setup Utility to reset the time and date.
0280 Previous boot incomplete - Default configuration used	1. Load "Setup Default" in BIOS Setup Utility. 2. DIMM. 3. System board.
0281: Memory Size found by POST differed from EISA CMOS	Load Setup Defaults in BIOS Setup Utility.
02B0 Diskette drive A error	Set up the diskette type in BIOS Setup Utility.
02B1 Diskette drive B error	Set up the diskette type in BIOS Setup Utility.
02B2 Incorrect drive A type – Floppy diskette drive error	1. Floppy diskette drive. 2. External FDD cable. 3. I/O card.
02B3 Incorrect Drive B type	1. Floppy diskette drive. 2. External FDD cable. 3. I/O card.
02D0 System cache error – Cache disabled (RAM cache failed and BIOS disabled)	1. Load "Setup Default" in BIOS Setup Utility. 2. System board.
02F4 EISA CMOS not writable	1. Load "Setup Default" in BIOS Setup Utility. 2. Replace the backup battery. 3. System board.
02F5 DMA test failed	1. DIMM 2. System board
02F6 Software NMI failed	1. DIMM 2. System board

Symptom / Error	FRU or action, in sequence
02F7 Fail – Safe timer NMI failed	1. DIMM 2. System board
0611 IDE configuration changed	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0612 IDE configuration error	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0613 Com A configuration changed	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0614 Com A configuration error	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0615 Com B configuration changed	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0616 Com B configuration error	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0617 Floppy configuration changed	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0618 Floppy configuration error	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
0619 Parallel port configuration changed	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.
061A Parallel port configuration error	1. Load Setup Defaults in BIOS Setup Utility. 2. System board.

■ Error message

Symptom / Error	FRU or action, in sequence
Device address conflict.	1. Load Setup Defaults in BIOS Setup Utility. 2. Backup battery. 3. System board.
Allocation error for device.	1. Load Setup Defaults in BIOS Setup Utility. 2. Backup battery. 3. System board.
Failing bits: nnnn.	1. DIMM. 2. System board.
Invalid System Configuration Data.	1. DIMM. 2. System board.
I/O Device IRQ Conflict.	1. Load Setup Defaults in BIOS Setup Utility. 2. Backup battery. 3. System board.
Operating System not found.	1. Check that the operating system has no failure and is installed correctly. 2. Enter BIOS Setup Utility and see whether the hard-disk drive and the diskette drive are properly identified. 3. Reset the hard-disk drive. 4. Reinstall the operating system. 5. Diskette drive. 6. Hard-disk drive. 7. System board.
Hibernation error.	1. Restore the system configuration to what it was before the computer entered hibernation mode. 2. If memory size has been changed, re-create the hibernation file.
FAN error.	Fan.
Thermal sensing error.	System board.

■ LCD-related symptoms

> **Note**
>
> Before removing or disassembling LCD, power off the computer, unplug all power cords from electrical
>
> outlets, remove the battery pack also.

Symptom / Error	FRU or action, in sequence
LCD screen becomes dark suddenly.	Check out Battery Miser.
Nothing displayed on LCD screen.	1. Check out Battery Miser. 2. Choose Never in the Turn off Monitor item on Power Options Properties. 3. Check the power save mode switch if it is pressed by something. 4. Check the System is in standby or hibernation mode.
LCD backlight not working. LCD too dark. LCD brightness cannot be adjusted.	1. Reconnect inverter to the board connector. 2. Replace inverter. 3. LCD Assembly. 4. System board.
LCD color cannot be adjusted. LCD screen abnormal. Characters missing pixels. LCD screen unreadable. Wrong color displayed.	1. Reset all LCD connectors. 2. Replace LCD cable. 3. LCD Assembly. 4. System board.
Horizontal or vertical lines displayed on LCD	LCD Assembly.
Power-on indicator on, and a blank\LCD during POST.	LCD Assembly. System board.

■ Indeterminate problems

· You are here because the diagnostic tests did not identify which adapter or device failed, wrong devices
   are installed, a short circuit is suspected, or the system is inoperative.
   Follow these procedures to isolate the failing FRU (do not isolate FRUs that have no defects).
· Verify that all attached devices are supported by the computer.
· Verify that the power supply being used at the time of the failure is operating correctly.
  1. Power off the computer
  2. Visually check each FRU for damage. Replace any damaged FRU.
  3. Remove or disconnected all of the following devices :
      a. Non-LG devices.
      b. Printer, mouse, and other external devices.
      c. Battery pack.
      d. PC cards.
      e. ODD (CD-ROM, Combo) drive or FDD drive in the Bay.
      f. Hard-disk drive.

Note

Use the other memory card because it needs when operating computer.

---

  4. Power on the computer.
  5. Determine whether the problem has changed.
  6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
  7. If the problem remains, replace the following FRUs one at a time.
      (do not replace a non-defective FRU)
      a. LCD Assembly (Check external monitor whether the same problem recurs or not).
      b. Keyboard.
      c. Keydeck (TouchPad and Scroll Button Assembly).
      d. System board.

Chapter 5. Removing and replacing a part (FRU)

> **Danger**
>
> Before removing any FRU, power off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

> **Caution**
>
> Before the computer is powered on after FRU replacement, make sure that all screws, springs, and other small parts are in place and are not loose inside the computer. Verify metal flakes can cause electrical short circuits.

> **Note**
>
> -As for the screw, every Torque 3 ±0.2Kgfcm(0.196Nm)
>
> -For further information on Removing and Replacing a Part(FRU), refer to Explore view.

■ 1010 Battery Pack

1. Push the battery latch in the direction shown below; then slide the battery pack out of the slot.
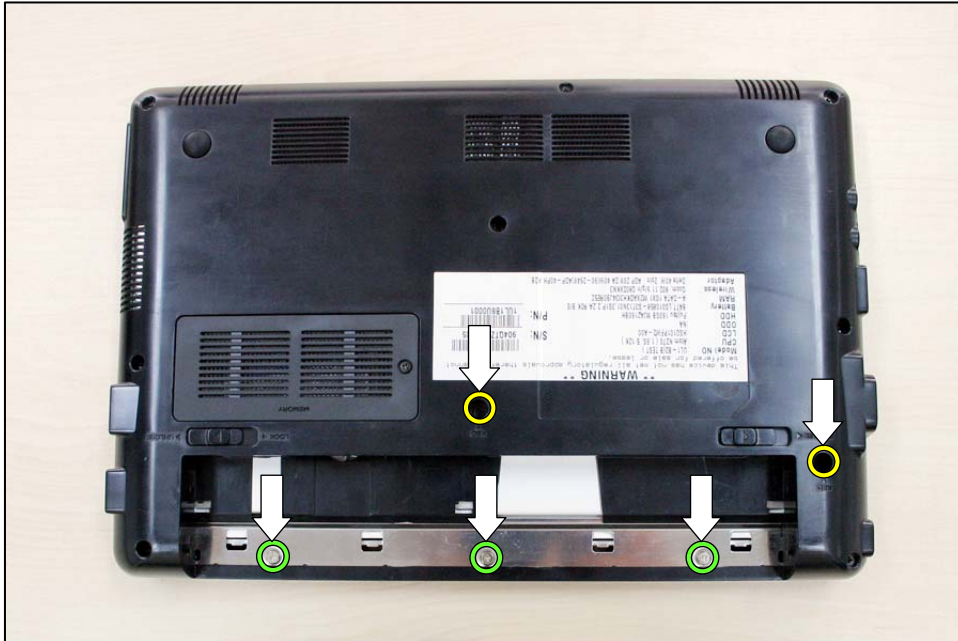

2. Remove the Battery Pack.

■ 1020 Hinge / Keyboard

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010)

1. Remove the 5 screw.

No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0) White	3EA
2	FAB30248901	(M2.5*6.5) black	2EA

2. Remove the Hinge.

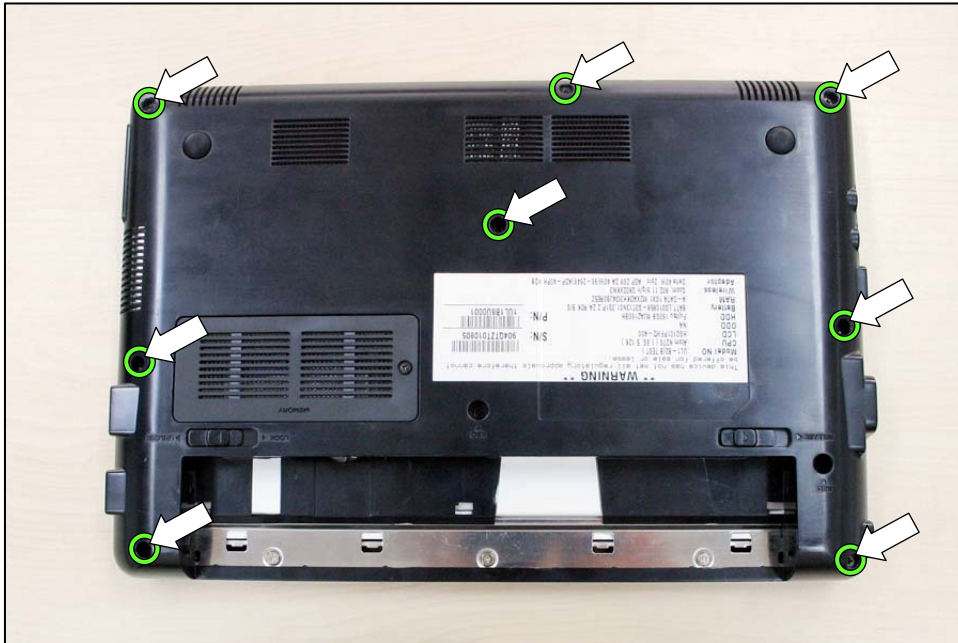3. It uses JIG and it removes the Hooks.
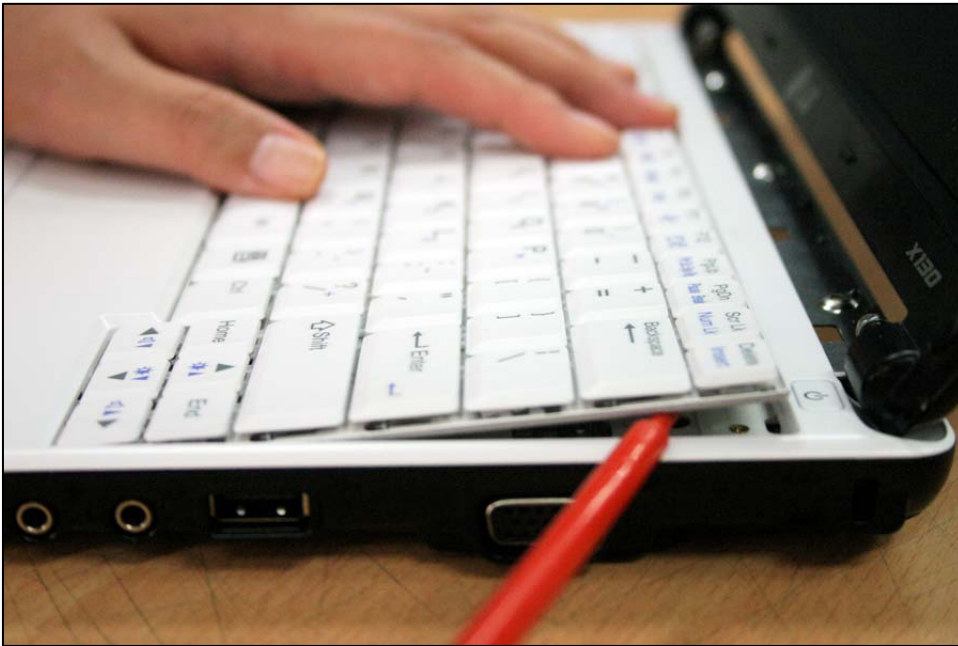
4. Remove the Keyboard Connector Cable.

5. Remove the Keyboard.

■ 1030 Bottom Case

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010), b. Hinge / Keyboard(1020)

1. Remove the 8 screw.

No.	FRU No.	Specification	Qty
1	FAB30487201	(M2.0*5.0) black	8EA

2. Remove the 1 Cable and 2 Screw.
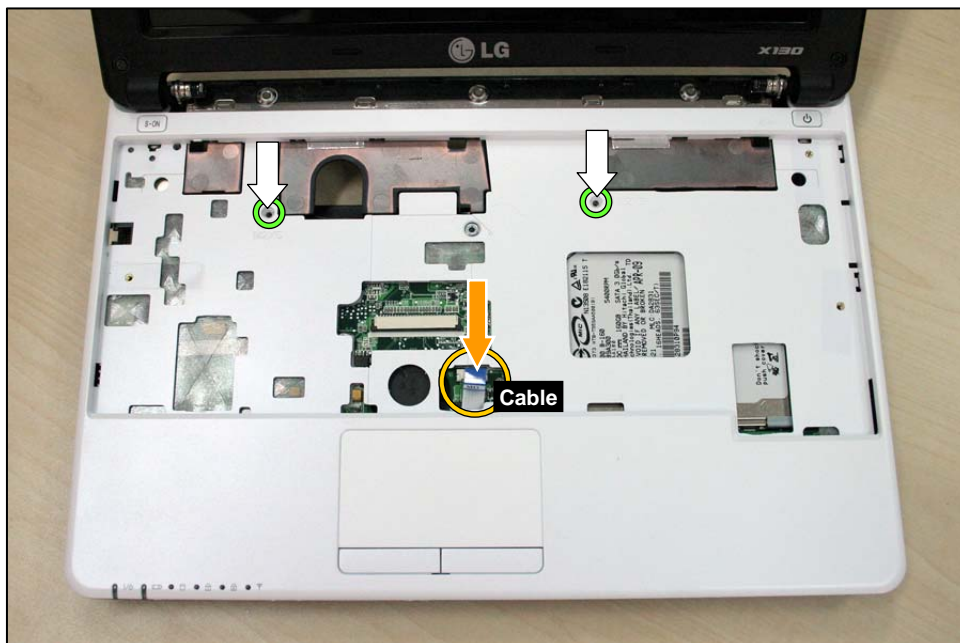
Cable

No.	FRU No.	Specification	Qty
1	FAB30487201	(M2.0*5.0) black	2EA

3. Uses JIG and from the left side removes Bottom Case.
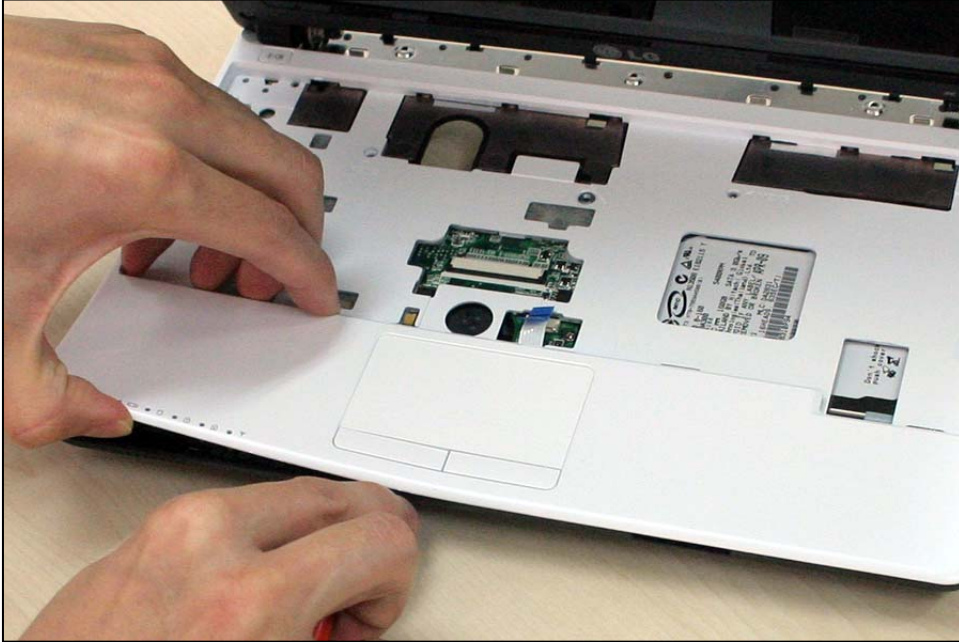
■ 1040 LCD Assembly

> ※ Remove the following parts in order before replacing this part
>
> a. Battery Pack(1010), b. Hinge / Keyboard(1020) , c. Bottom Case(1030)

1. Remove the 5 cable.
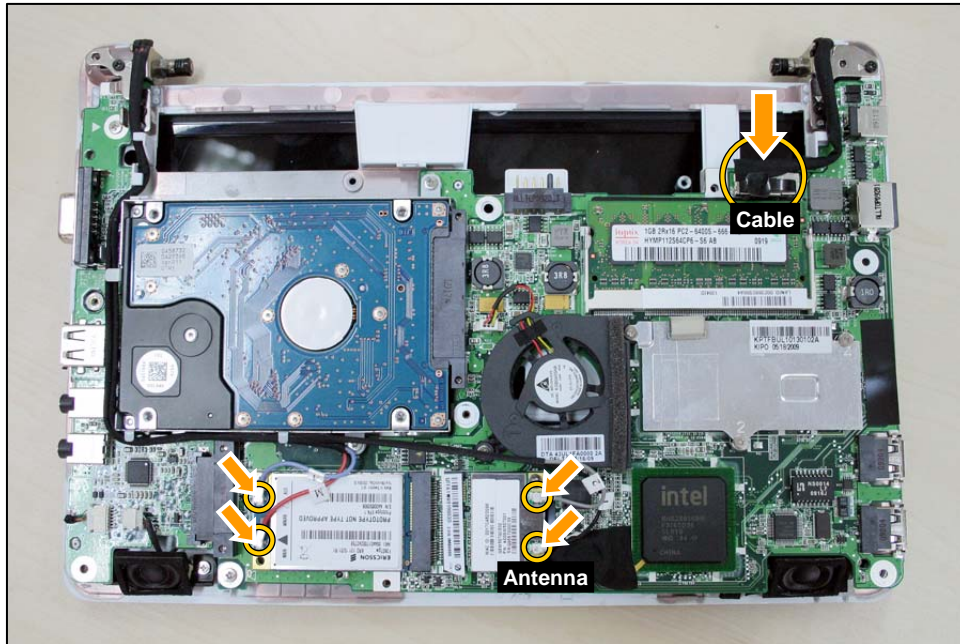
2. Remove the 4 screw.

No.	FRU No.	Specification	Qty
1	FAB30487201	(M2.0*5.0) black	4EA

3. Remove the LCD Assembly.

■ 1050 HDD

> ※ Remove the following parts in order before replacing this part
>
> a. Battery Pack(1010), b. Hinge / Keyboard(1020) , c. Bottom Case(1030)

   1. Remove the 3 screw.

No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0) White	3EA

   2. Remove the HDD

3. Remove the 4 screw.
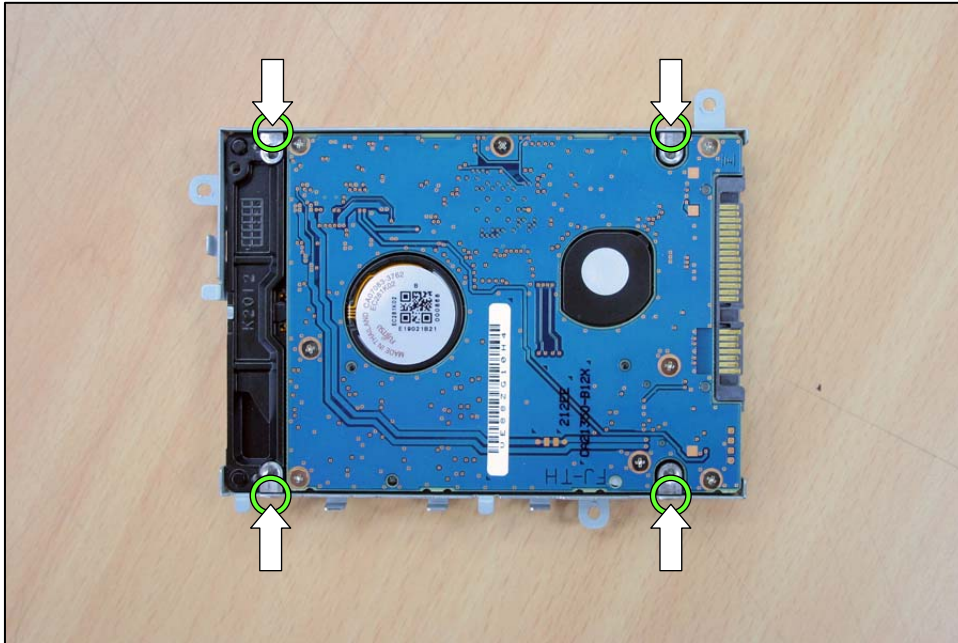
No.	FRU No.	Specification	Qty
1			4EA

4. Remove the HDD Shield.
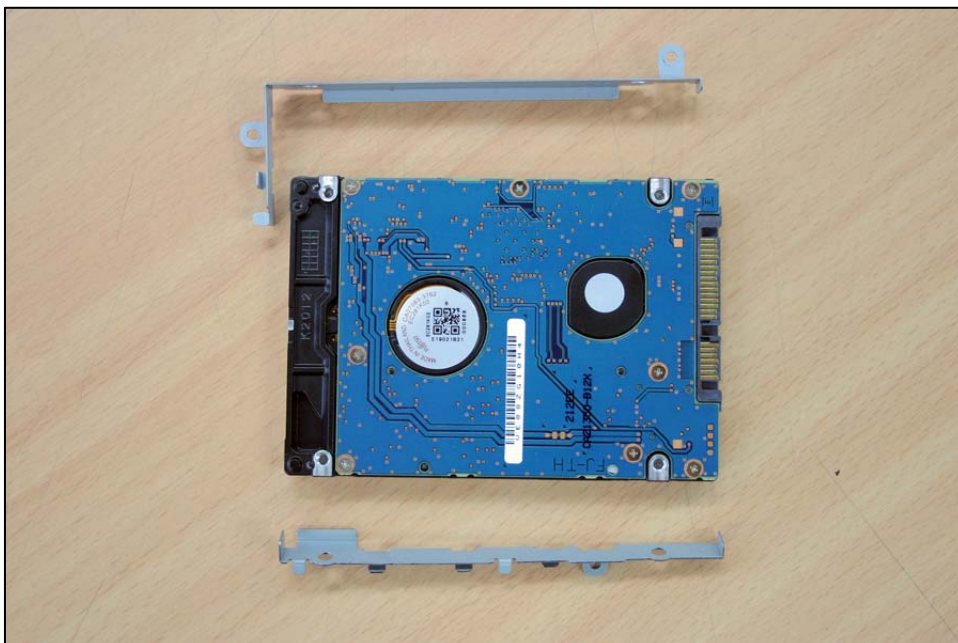
■ 1060 Mainboard

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030) d.HDD(1050)

1. Remove the 2 cable.

2. Remove the 2 screw.

No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0) White	2EA

3. Remove the Mainboard / USB(R) Sub Board.

■ 1070 Bluetooth Module

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030) d.HDD(1050)
e. Mainboard(1060)

1. Remove the bluetooth.
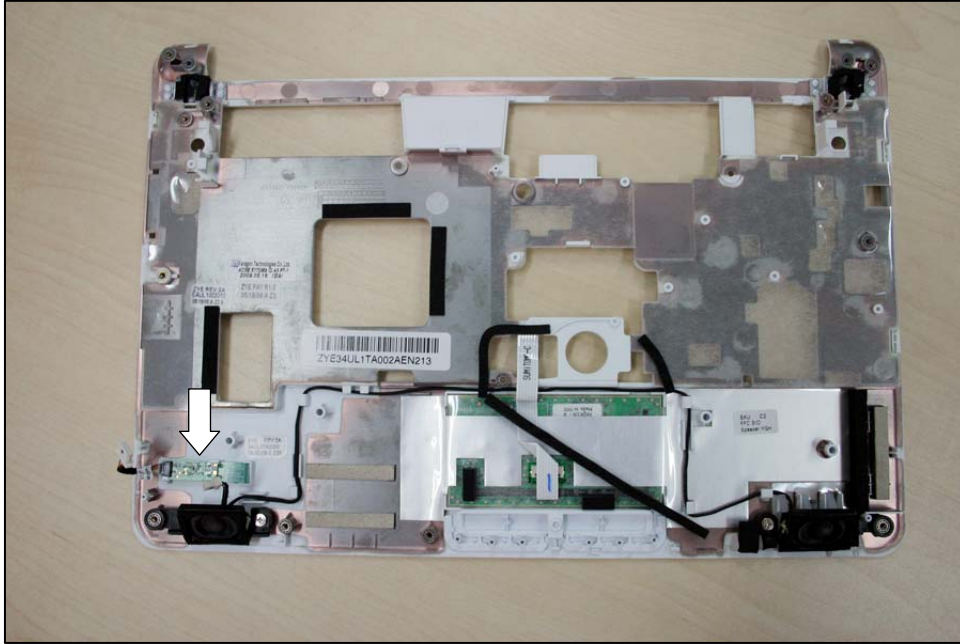
2. Remove the bluetooth module.

■ 1080 Speaker

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030) d.HDD(1050)
e. Mainboard(1060)

1. Remove the 2 screw.
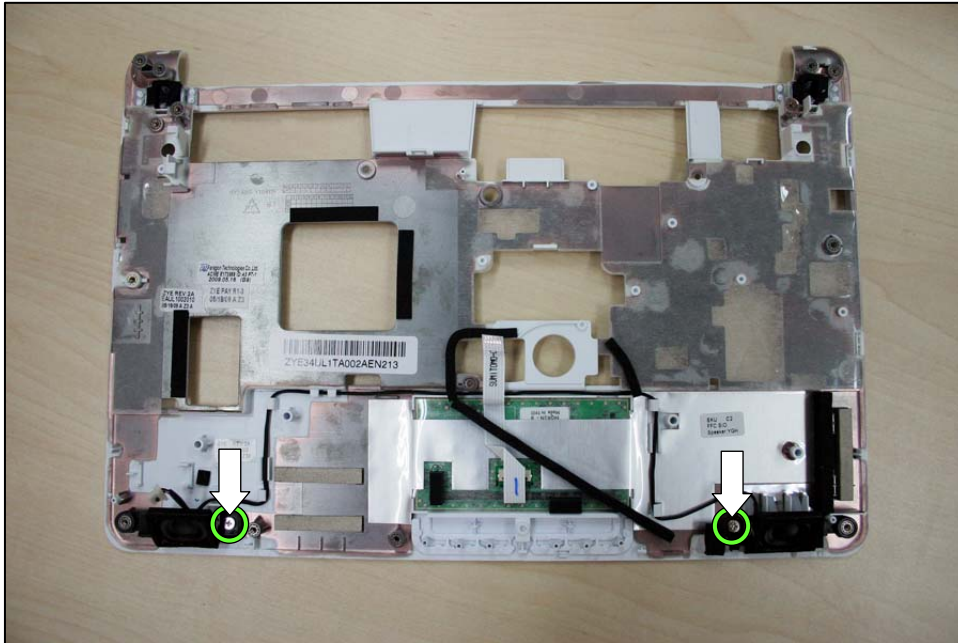
No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0) White	2EA

2. Remove the Speaker.

■ 1090 CPU Fan Assembly

※ **Remove the following parts in order before replacing this part**

a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030)
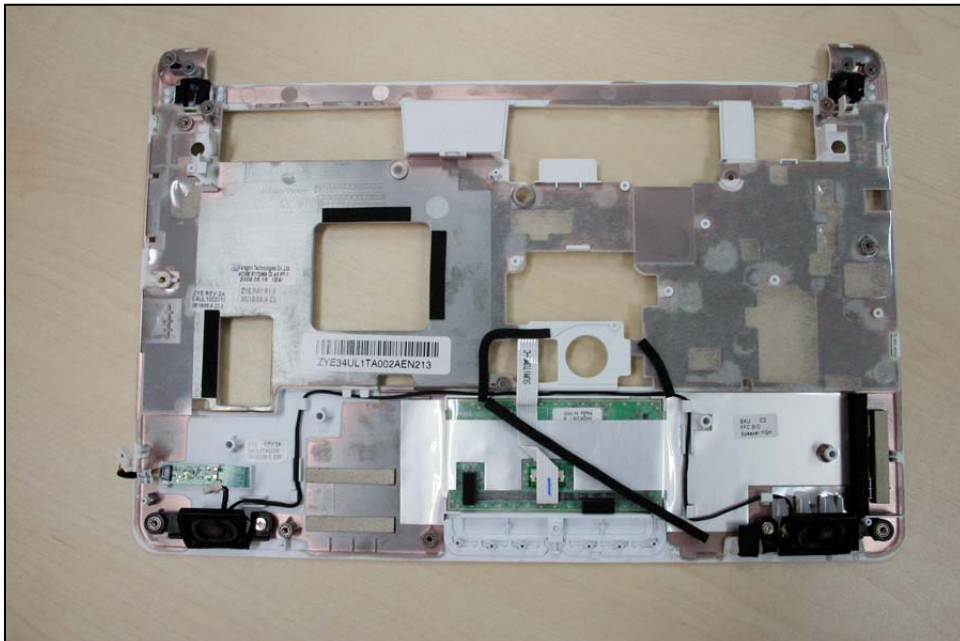
1. Remove the 1 Cable and 4 Screw.
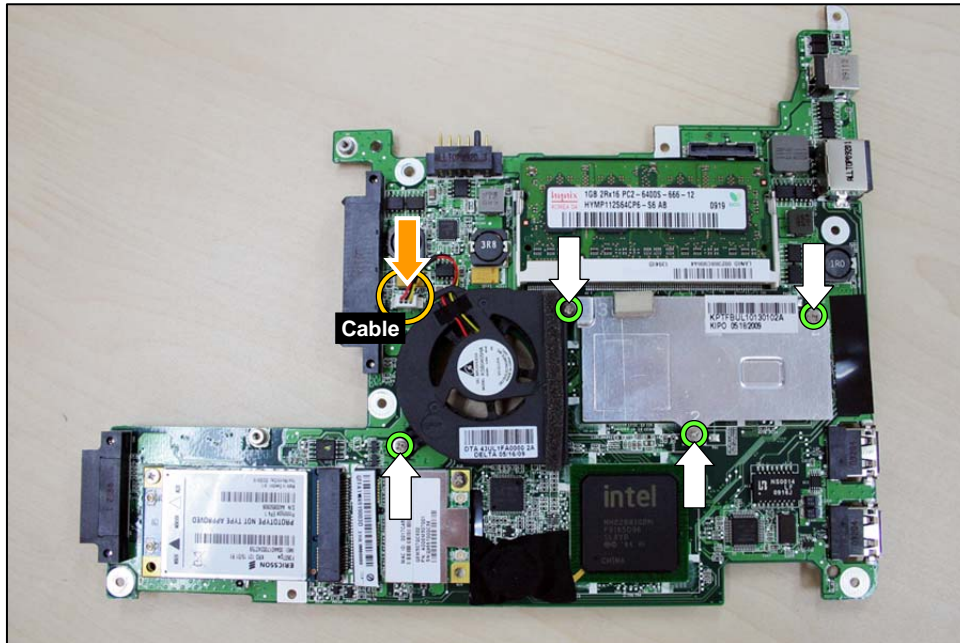
No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0) White	4EA

2. Remove the CPU Fan Assembly.

■ 1100 HSDPA Module

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030)

1. Remove the 1 screw.

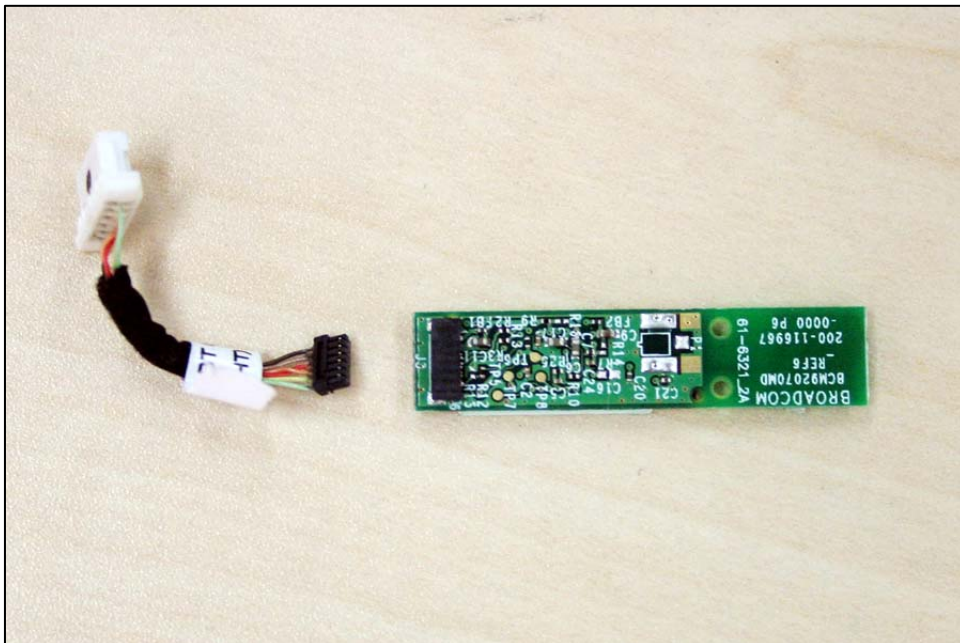| No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0)White	1EA

2. Remove the HSDPA Module.

■ 1110 WLAN Module

> ※ Remove the following parts in order before replacing this part
>
> a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030)

1. Remove the 1 screw.

No.	FRU No.	Specification	Qty
1	FAB30208501	(M2.0*3.0) White	1EA

2. Remove the WLAN Module.

■ 1120 DIMM

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010) b. Hinge / Keyboard(1020) c. Bottom Case(1030)

1. Remove the Hook.
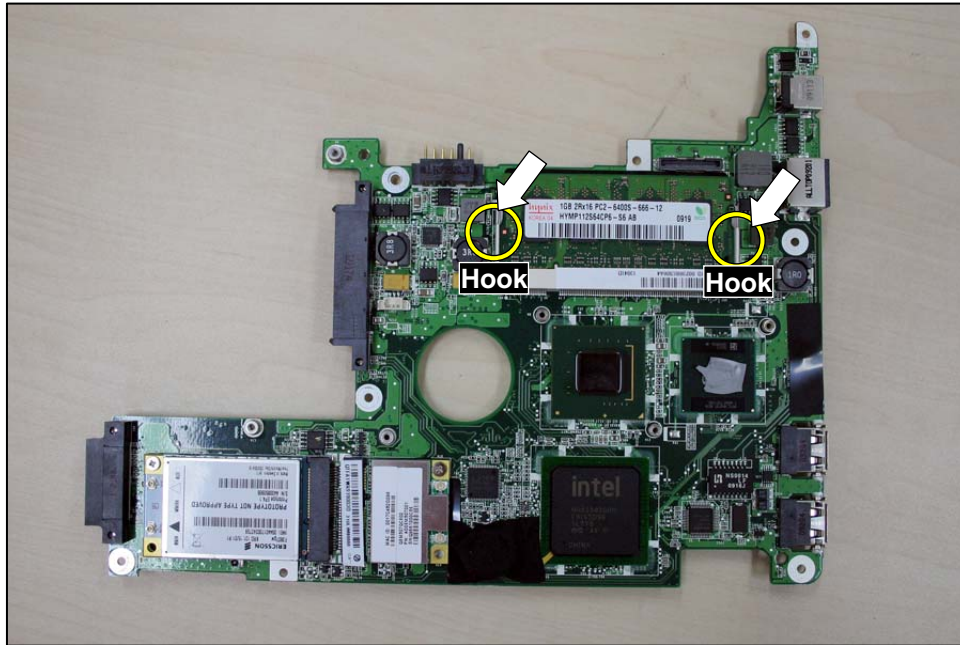
2. Remove the DIMM.

■ 1130 LCD Front Case

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010), b. Keyboard(1020) , c. Bottom Case(1030), d. F. LCD Assembly (1040)

1. Remove the 4 Rubber and 2 screw.

No.	FRU No.	Specification	Qty
1	FAB30493201	(M2.0*5.0) white	4EA

2. Uses JIG and from the removes LCD Front Case.

■ 1140 LCD Panel

> ※ Remove the following parts in order before replacing this part
>
> a. Battery Pack(1010), b. Keyboard(1020) , c. Bottom Case(1030), d. LCD Assembly (1040),
> e. LCD Front Case(1130)

1. Remove the 1 cable andd and 2 screw.
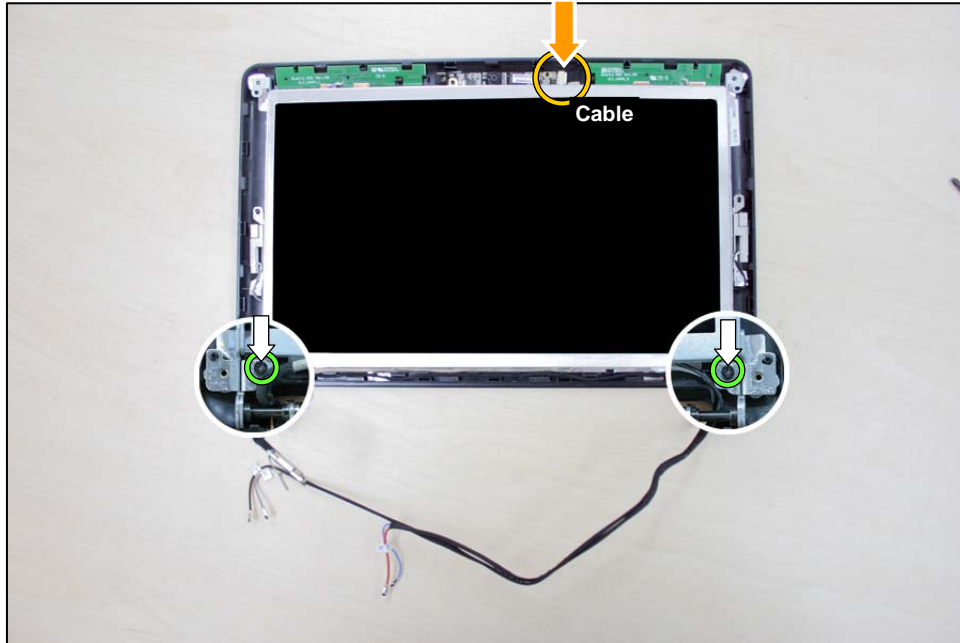
Cable

No.	FRU No.	Specification	Qty
1	FAB30493201	(M2.0*5.0) white	2EA

2. Remove the 4 screw.

No.	FRU No.	Specification	Qty
1	FAB30487201	(M2.0*5.0) white	4EA

3. Remove the LCD Panel.

■ 1150 LCD Cable

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010), b. Keyboard(1020) , c. Bottom Case(1030), d. LCD Assembly (1040),
e. LCD Front Case(1130), f. LCD Panel(1140)

1. Remove the LCD Cable.
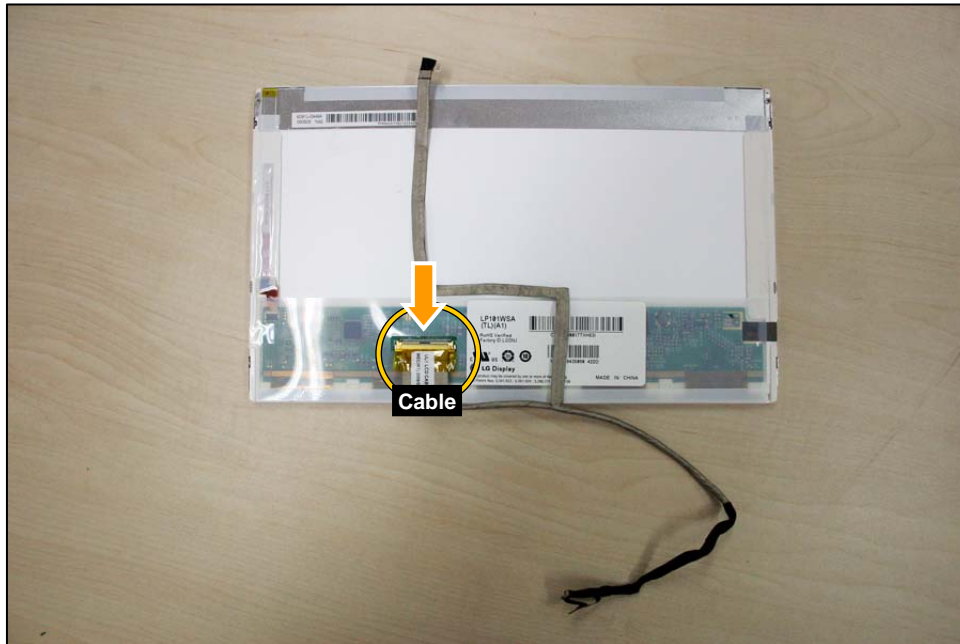
■ 1160 Web Cam Module

※ Remove the following parts in order before replacing this part

a. Battery Pack(1010), b. Keyboard(1020) , c. Bottom Case(1030), d. LCD Assembly (1040),
e. LCD Front Case(1130), f. LCD Panel(1140)

1. Remove the Web Cam Module.
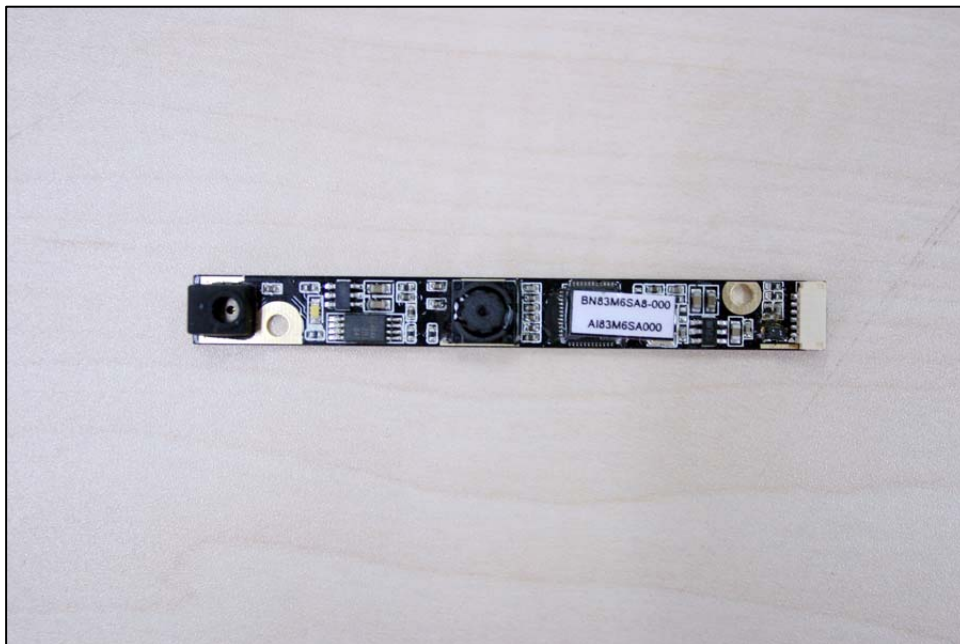
Chapter 6. Part lists   REV.07

Category	Loc. No.	LG P/N	Description	Remark
MAIN B/D	NMLB01	EBR63943001	UL1 M/B N270(1.6G/945GMS/ICH7M) FSB533Mhz	
	NMLB01	EBR63943002	UL1 M/B N280(1.66G/945GMS/ICH7M/WO 3G) FSB667Mhz	10/30 add(09')
Cover	NCVR01	ACQ74811101	Memory_ DOOR Cover _ White	
	NCVR01	ACQ74811102	Memory_DOOR Cover _ Black	
HDD	NHDD01	EAZ60666001	HDD(160G)_HITACHI	
	NHDD01	EAZ60666901	HDD(160G)_Fujitsu	
	NHDD01	EAZ50165401	HDD(160G)_WESTERN DIGITAL	
	NHDD01	EAZ60665701	HDD(160G)_SEAGATE	
	NHDD01	EAZ40236713	HDD(250G)_SEAGATE	12/22 add(09')
	NHDD02	MAZ61973302	HDD BKT LEFT UL1(FBUL1004,REV3A)	
	NHDD03	MAZ61973301	HDD BKT RIGHT UL1(FBUL1003,REV3A)	
Keyboard	NKBD01	AEW72909201	Korean type	
	NKBD01	AEW72909202	English type	
	NKBD01	AEW72909203	UK type	
	NKBD01	AEW72909204	Nordic type	
	NKBD01	AEW72909205	German type	
	NKBD01	AEW72909206	Brazilian type	
	NKBD01	AEW72909207	Russian	
	NKBD01	AEW72909208	Spanish	
	NKBD01	AEW72909209	Turkish	
	NKBD01	AEW72909210	Portuguese	
	NKBD01	AEW72909211	Greek	
	NKBD01	AEW72909212	canadian french	
	NKBD01	AEW72909213	French	
	NKBD01	AEW72909214	Hebrew	
	NKBD01	AEW72909215	Arabic	
	NKBD01	AEW72909216	Italian	
MiniCard	NMINI01	EAT60670601	BLUETOOTH 2.1+EDR USB MODUL(QBT410UB-01)	
	NMINI02	EAD60864201	CABLE ASSY UL1 BLUETOOTH(6/6P,REV1A)5V	Alternative
	NMINI02	EAD60864202	CABLE ASSY UL1 BLUETOOTH(6/6P,2A)5V-MEC	
	NMINI02	EAD60864203	CABLE ASSY UL1 BLUETOOTH(6/6P,3A)5V-XME	
	NMINI03	EAT60666303	3G CARD_F3607GW	
	NMINI04	EBM60659701	WLAN 802.11 B/G/N Q802XKN3	
	NMINI04	EBM60659401	WLAN 802.11B/G/N 9WEM307QCE02Q	

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Category	Loc. No.	LG P/N	Description	Remark
Memory	NMRY01	EAN56411504	RAM(1GB)DDR2_A-DATA	
	NMRY01	EAN48754301	RAM(1GB)DDR2_Hynix	
Battery	NBATT01	EAC60674704	LGC sole 2200 mAh LGC cell_3 cell white	
	NBATT01	EAC60674705	LGC sole 2200 mAh LGC cell_3 cell black	
	NBATT01	EAC60674702	LGC first 2200 mAh LGC cell_6 cell white	
	NBATT01	EAC60674706	LGC first 2200 mAh LGC cell_6 cell black	
	NBATT01	EAC60674701	Foxlink second 2250 mAh Sanyo cell_6 cell white	
	NBATT01	EAC60674707	Foxlink second 2250 mAh Sanyo cell_6 cell black	
	NBATT01	EAC60674709	Foxlink sole 2600 mAh LGC cell_9 cell white	
	NBATT01	EAC60674708	Foxlink sole 2600 mAh LGC cell_9 cell black	
Webcam	NWEBC01	EBP60718901	Webcam 1.3M CMOS BISON Electronics Inc_(for non 3G SKU)	3G / Non 3G 모델에는 Webcam P/N EBP60718901 , EBP60718904 대치로 가능
	NWEBC01	EBP60718904	Webcam 1.3M CMOS BISON Electronics Inc_(for 3G SKU)	3G 모델에는 Ali-foil을 붙여 3G Ant. 성능 개선한 것
Dummy Socket	NDOS01	MCK62677202	DUMMY CARD _BLACK	
	NDOS01	MCK62677201	DUMMY CARD_WHITE	
Thermal Module	NFAN01	EAL60660001	FAN moduel _ Fan_DIS	Alternative
	NFAN01	EAL60660101	FAN DIS ASSY FCN, 5V(51.3*47*7.9)0F966	
	NFAN02	MAZ61986201	HEAT SINK FCN	Alternative
	NFAN02	MAZ61986202	HEAT SINK KPT	
SUB B/D	NSUB01	EBR63943601	Audio / USB Sub board	
Keyboard Deck	NKDECK01	ABQ72952601	Keyboard Deck Assy (with touch pad & touch cable & speaker)	
Bottom	NBOTM01	AFP72922402	Bottom case Assy_Black	
	NBOTM01	AFP72922401	Bottom case Assy_White	
LCD	NLCD01	MCK62674301	Hinge cap	
	NLCD01	MCK62674302	Hinge cap black normal paint	10/7 add(09')
	NLCD02	ABQ72954802	Front case assy _ Black	
	NLCD02	ABQ72954801	Front Case assy _ White	
	NLCD03	ABQ72953503	rear case assy (black_Xnote)	
	NLCD03	ABQ72953506	rear case assy (black_LG)	
	NLCD03	ABQ72953509	rear case assy (black_LG_HSPA)	
	NLCD03	ABQ72953501	rear case assy (white_Xnote)	

# Chapter 6. Part lists   REV.07

Category	Loc. No.	LG P/N	Description	Remark
LCD	NLCD03	ABQ72953504	rear case assy (white_LG)	
	NLCD03	ABQ72953507	rear case assy (white_LG_HSPA)	
	NLCD03	ABQ72953505	rear case assy (pink_LG)	
	NLCD03	ABQ72953502	rear case assy (pink_Xnote)	
	NLCD03	ABQ72953508	rear case assy (pink_LG_HSPA)	
	NLCD03	ABQ72953511	rear case assy(Red-LG) ASSY	8/10 add(09')
	NLCD03	ABQ72953512	rear case assy(Red-LG-HSPA)	8/10 add(09')
	NLCD03	ABQ72953510	rear case assy(Red-Xnote)	8/10 add(09')
	NLCD03	ABQ72953513	rear case assy(Black_CI-Xnote)	10/7 add(09')
	NLCD03	ABQ72953514	rear case assy (black normal CI_LG)	12/22 add(09')
	NLCD04	EAJ60741701	LCD 10.1" WSVGA 1024X600 LED LCD	
	NLCD05	EAD60863601	LCD CABLE ASSY (40/30/6P,REV1A)5V_non 3G	Alternative
	NLCD05	EAD60863602	LCD CABLE ASSY (40/30/6P,REV2A)5V_non 3G	
	NLCD05	EAD60863603	LCD CABLE ASSY(40/30/6P,R3A)5V-FOX for 3G	7/20 add(09') Alternative
	NLCD05	EAD60863604	LCD CABLE ASSY(40/30/6P,R3A)5V-MEC for 3G	
	NLCD06	ABQ72952202	HINGE LEFT SZS UL1(FBUL1007,REV3A)	Alternative
	NLCD06	ABQ72952302	HINGE LEFT JAR UL1(FBUL1009,REV3A)	
	NLCD06	ABQ72952402	HINGE LEFT SNR UL1(FBUL1011,REV3A)	
	NLCD06	ABQ72954902	HINGE LEFT AJP UL1(FBUL1014,REV3A)	
	NLCD07	ABQ72952201	HINGE RIGHT SZS UL1(FBUL1006,REV3A)	Alternative
	NLCD07	ABQ72952301	HINGE RIGHT JAR UL1(FBUL1008,REV3A)	
	NLCD07	ABQ72952401	HINGE RIGHT SNR UL1(FBUL1010,REV3A)	
	NLCD07	ABQ72954901	HINGE RIGHT AJP UL1(FBUL1015,REV3A)	
	NLCD08	MCQ62785601	LCD RUBBER UL1_Black	8/31 add(09')
	NLCD08	MCQ62785602	LCD RUBBER UL1_White	8/31 add(09')
Power code	NPWCD01	EAD50520401	Korea type 2pin	
	NPWCD01	EAD50481701	EU (Turkey,Sweden,Finland,Denmark,Norway,Germany,Spain) type 2pin	
	NPWCD01	EAD50476201	UK (UAE,Hong Kong,Singapore,Nigeria,Levant) type 2pin	
	NPWCD01	EAD55718605	Brazil type 3pin	
	NPWCD01	EAD30750802	Israel type 2pin	
	NPWCD01	EAD50479201	USA (Canda,Mexico,Venezuela,Ecuador) type 2pin	
	NPWCD01	EAD50485501	South Africa type 2pin	
	NPWCD01	EAD50520801	Argentina type 2pin	
	NPWCD01	EAD60977402	POWER CORD SP021A+IS033 1.8M(W/O LABEL)	10/14 add(09')

Chapter 6. Part lists   **REV.07**

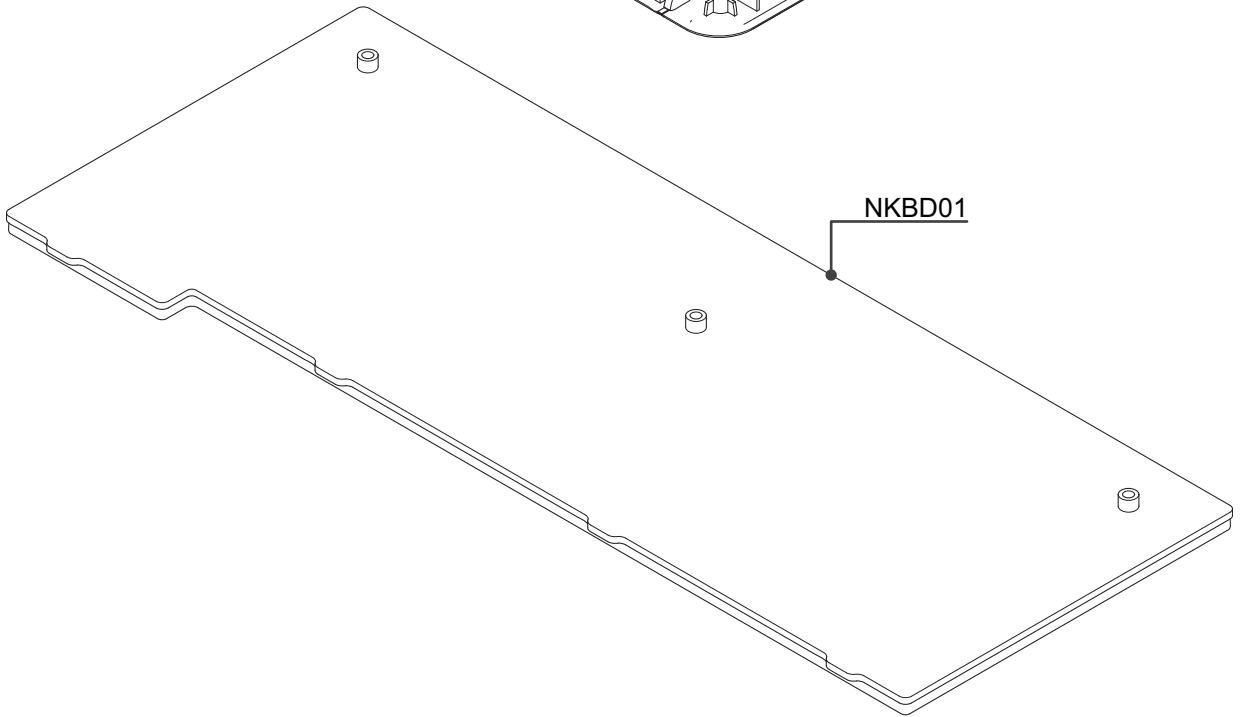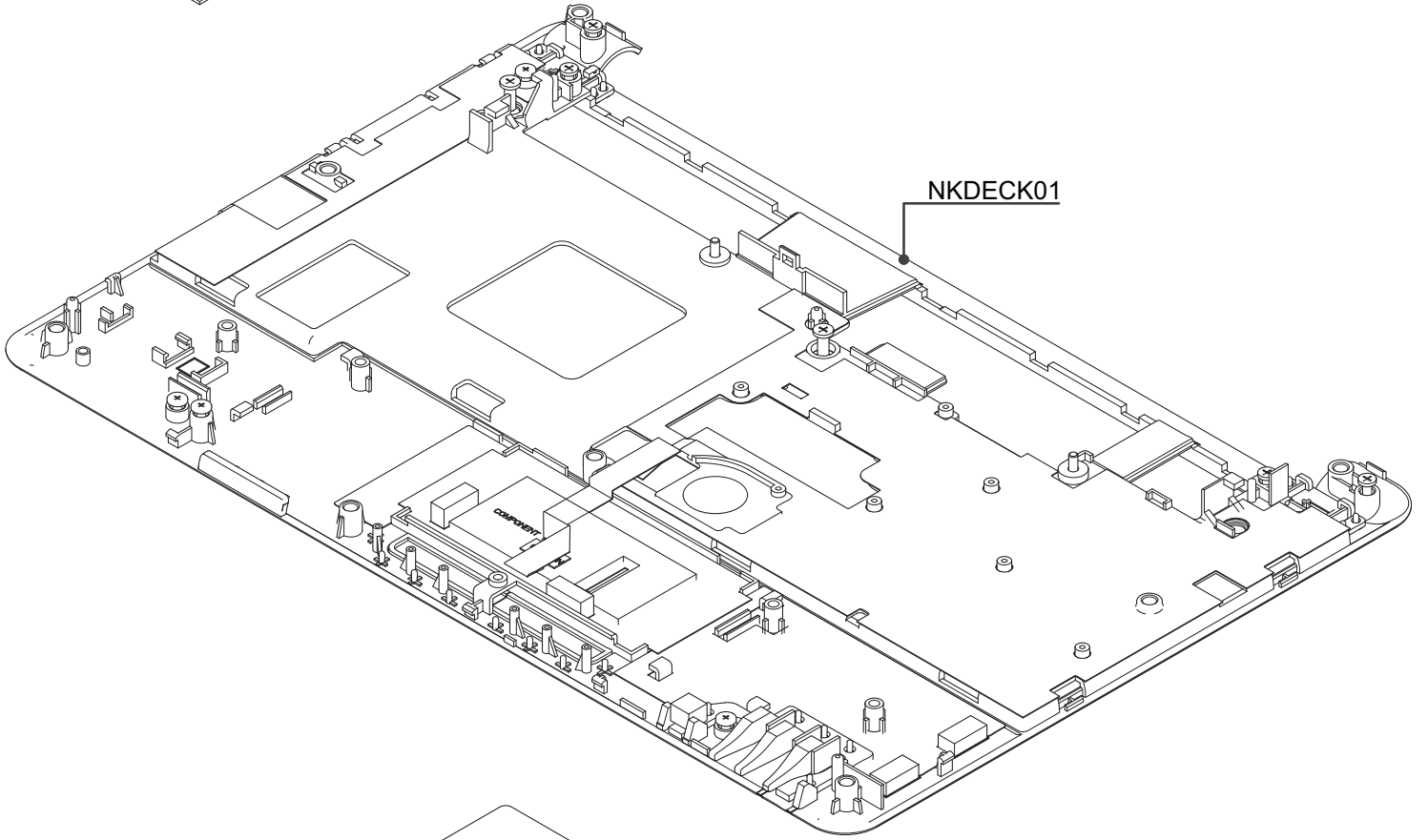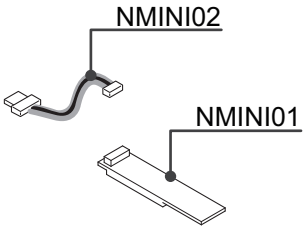| Category	Loc. No.	LG P/N	Description	Remark
Adapter	NAPT01	EAY60725501	Delta 40W, 2pin	
	NAPT01	EAY60725502	Delta 40W, 3-pin 450V	
	NAPT01	EAY60776601	LITEON 40W 2pin	Quanta no use
Screw	NSCR01	FAB30248901	SCREW M2.5*6.5-I(BZN(NYLOK-RED)D4.4 T0.8	
	NSCR01	FAB30493201	SCREW M2*5-I(BZN)(NYLOK)IRON	
	NSCR01	FAB30487201	SCREW M2.0*5.0-I(NI)(NYLOK)IRON	
	NSCR01	FAB30208501	SCREW M2.0*3.0-I-NI-NYLOK IRON	
LABEL	NLAB01	MEZ62302201	Name Label X130_white	
	NLAB01	MEZ62272801	Name Label X130_black	
	NLAB01	MEZ62272802	Name Label XD130 FREE DOS black	
	NLAB01	MEZ62272803	Name Label XB130 commercial black	
	NLAB01	MEZ62302202	Name Label XD130 FREE DOS white	
	NLAB01	MEZ62302203	Name Label XB130 commercial white	
	NLAB02	MEZ62085401	CPU Label All model Intel Atom Processor (2009) 320976-001	
	NLAB03	MEZ62245701	X130 POP LABEL 3G GLOBAL	
	NLAB03	MEZ62245702	X130 POP LABEL 3G BRAZIL	8/11 add(09')
	NLAB03	MEZ62245703	X130 POP LABEL NON-3G KOREA	
	NLAB03	MEZ62245704	X130 POP LABEL NON-3G GLOBAL	
	NLAB03	MEZ62245705	X130 POP LABEL NON-3G BRAZIL	8/11 add(09')
	NLAB04	MEZ62370103	Windows 7 Starter for Small Notebook	10/12 add(09')

NLCD02

NWEBC01

NLCD06

NLCD04

NLCD07

NLCD05

BEZEL OPENING

NLCD03

LCD
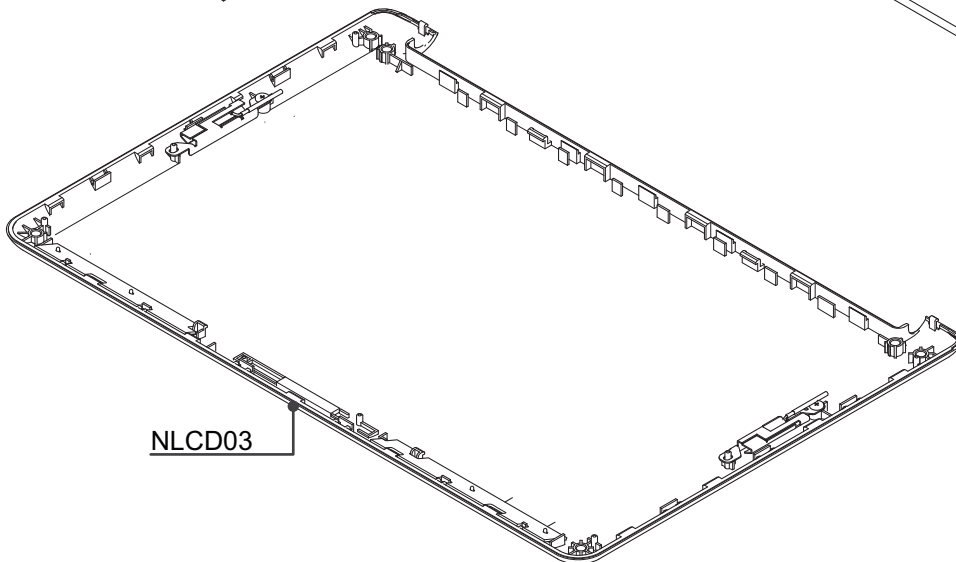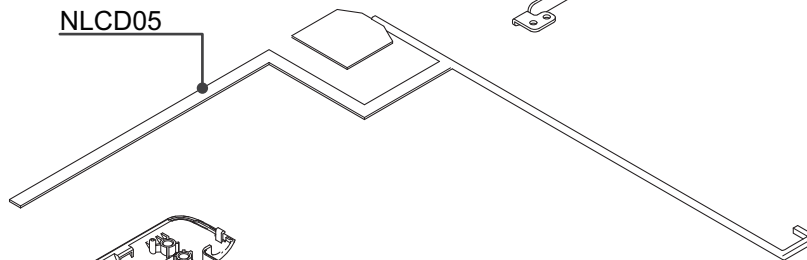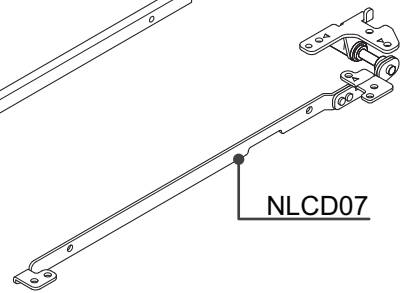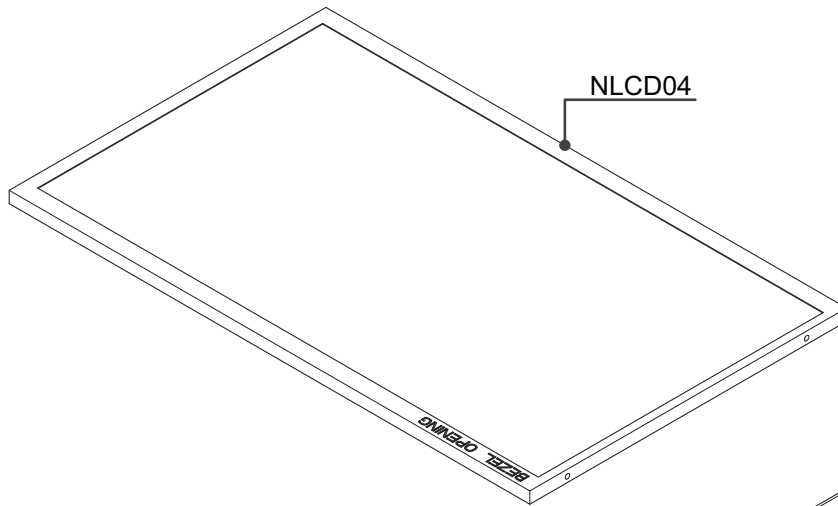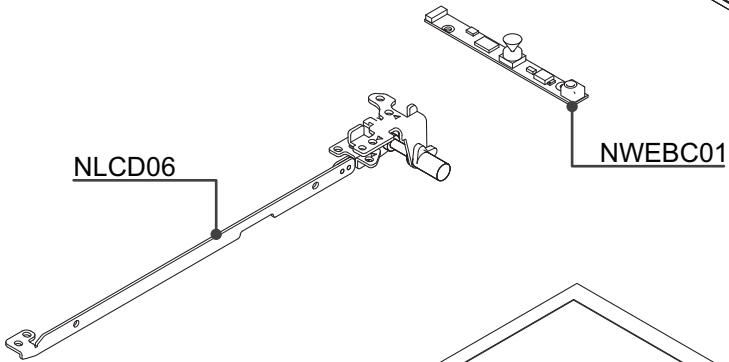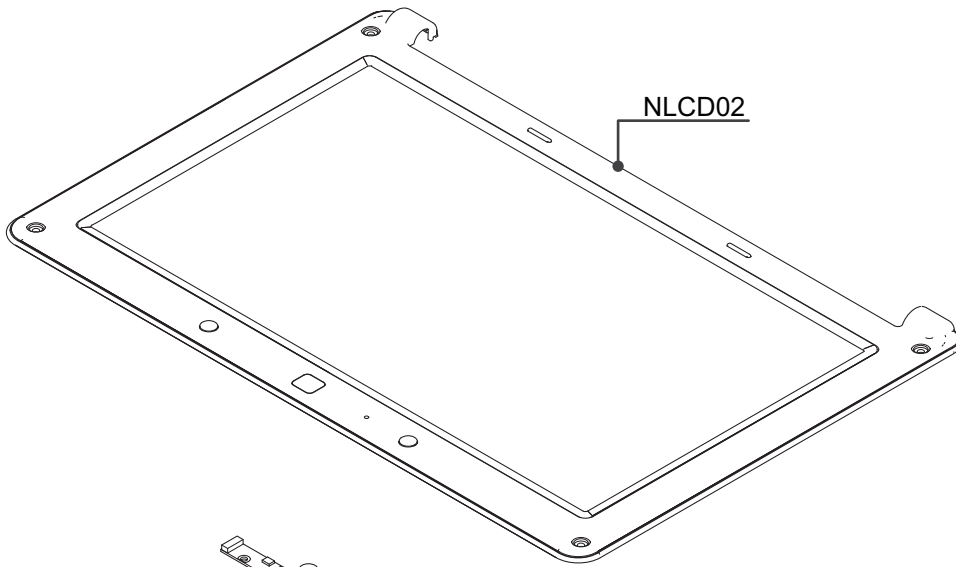
Category	Loc. No.	LG P/N	Description	Remark
Webcam	NWEBC01	EBP60718901	Webcam 1.3M CMOS BISON Electronics Inc_(for non 3G SKU)	3G / Non 3G 모델에는 Webcam P/N EBP60718901 , EBP60718904 대치로 가능
	NWEBC01	EBP60718904	Webcam 1.3M CMOS BISON Electronics Inc_(for 3G SKU)	3G 모델에는 Ali-foil을 붙여 3G Ant. 성능 개선한 것
LCD	NLCD01	MCK62674301	Hinge cap	
	NLCD01	MCK62674302	Hinge cap black normal paint	10/7 add(09')
	NLCD02	ABQ72954802	Front case assy _ Black	
	NLCD02	ABQ72954801	Front Case assy _ White	
	NLCD03	ABQ72953503	rear case assy (black_Xnote)	
	NLCD03	ABQ72953506	rear case assy (black_LG)	
	NLCD03	ABQ72953509	rear case assy (black_LG_HSPA)	
	NLCD03	ABQ72953501	rear case assy (white_Xnote)	
	NLCD03	ABQ72953504	rear case assy (white_LG)	
	NLCD03	ABQ72953507	rear case assy (white_LG_HSPA)	
	NLCD03	ABQ72953505	rear case assy (pink_LG)	
	NLCD03	ABQ72953502	rear case assy (pink_Xnote)	
	NLCD03	ABQ72953508	rear case assy (pink_LG_HSPA)	
	NLCD03	ABQ72953511	rear case assy(Red-LG) ASSY	8/10 add(09')
	NLCD03	ABQ72953512	rear case assy(Red-LG-HSPA)	8/10 add(09')
	NLCD03	ABQ72953510	rear case assy(Red-Xnote)	8/10 add(09')
	NLCD03	ABQ72953513	rear case assy(Black_CI-Xnote)	10/7 add(09')
	NLCD03	ABQ72953514	rear case assy (black normal CI_LG)	12/22 add(09')
	NLCD04	EAJ60741701	LCD 10.1" WSVGA 1024X600 LED LCD	
	NLCD05	EAD60863601	LCD CABLE ASSY (40/30/6P,REV1A)5V_non 3G	Alternative
	NLCD05	EAD60863602	LCD CABLE ASSY (40/30/6P,REV2A)5V_non 3G	
	NLCD05	EAD60863603	LCD CABLE ASSY(40/30/6P,R3A)5V-FOX for 3G	7/20 add(09') Alternative
	NLCD05	EAD60863604	LCD CABLE ASSY(40/30/6P,R3A)5V-MEC for 3G	
	NLCD06	ABQ72952202	HINGE LEFT SZS UL1(FBUL1007,REV3A)	Alternative
	NLCD06	ABQ72952302	HINGE LEFT JAR UL1(FBUL1009,REV3A)	
	NLCD06	ABQ72952402	HINGE LEFT SNR UL1(FBUL1011,REV3A)	
	NLCD06	ABQ72954902	HINGE LEFT AJP UL1(FBUL1014,REV3A)	

LCD

Category	Loc. No.	LG P/N	Description	Remark
LCD	NLCD07	ABQ72952201	HINGE RIGHT SZS UL1(FBUL1006,REV3A)	Alternative
	NLCD07	ABQ72952301	HINGE RIGHT JAR UL1(FBUL1008,REV3A)	
	NLCD07	ABQ72952401	HINGE RIGHT SNR UL1(FBUL1010,REV3A)	
	NLCD07	ABQ72954901	HINGE RIGHT AJP UL1(FBUL1015,REV3A)	
	NLCD08	MCQ62785601	LCD RUBBER UL1_Black	8/31 add(09')
	NLCD08	MCQ62785602	LCD RUBBER UL1_White	8/31 add(09')

NMINI02

NMINI01

NKDECK01

NKBD01

Key deck

Category	Loc. No.	LG P/N	Description	Remark
Keyboard	NKBD01	AEW72909201	Korean type	
	NKBD01	AEW72909202	English type	
	NKBD01	AEW72909203	UK type	
	NKBD01	AEW72909204	Nordic type	
	NKBD01	AEW72909205	German type	
	NKBD01	AEW72909206	Brazilian type	
	NKBD01	AEW72909207	Russian	
	NKBD01	AEW72909208	Spanish	
	NKBD01	AEW72909209	Turkish	
	NKBD01	AEW72909210	Portuguese	
	NKBD01	AEW72909211	Greek	
	NKBD01	AEW72909212	canadian french	
	NKBD01	AEW72909213	French	
	NKBD01	AEW72909214	Hebrew	
	NKBD01	AEW72909215	Arabic	
	NKBD01	AEW72909216	Italian	
MiniCard	NMINI01	EAT60670601	BLUETOOTH 2.1+EDR USB MODUL(QBT410UB-01)	
	NMINI02	EAD60864201	CABLE ASSY UL1 BLUETOOTH(6/6P,REV1A)5V	Alternative
	NMINI02	EAD60864202	CABLE ASSY UL1 BLUETOOTH(6/6P,2A)5V-MEC	
	NMINI02	EAD60864203	CABLE ASSY UL1 BLUETOOTH(6/6P,3A)5V-XME	
	NMINI03	EAT60666303	3G CARD_F3607GW	
	NMINI04	EBM60659701	WLAN 802.11 B/G/N Q802XKN3	
	NMINI04	EBM60659401	WLAN 802.11B/G/N 9WEM307QCE02Q	
Keyboard Deck	NKDECK01	ABQ72952601	Keyboard Deck Assy (with touch pad & touch cable & speaker)	

NHDD02

NHDD02

NHDD03

NMINI04

NMINI03

NFAN02

NSUB01

NFAN01

NMRY01
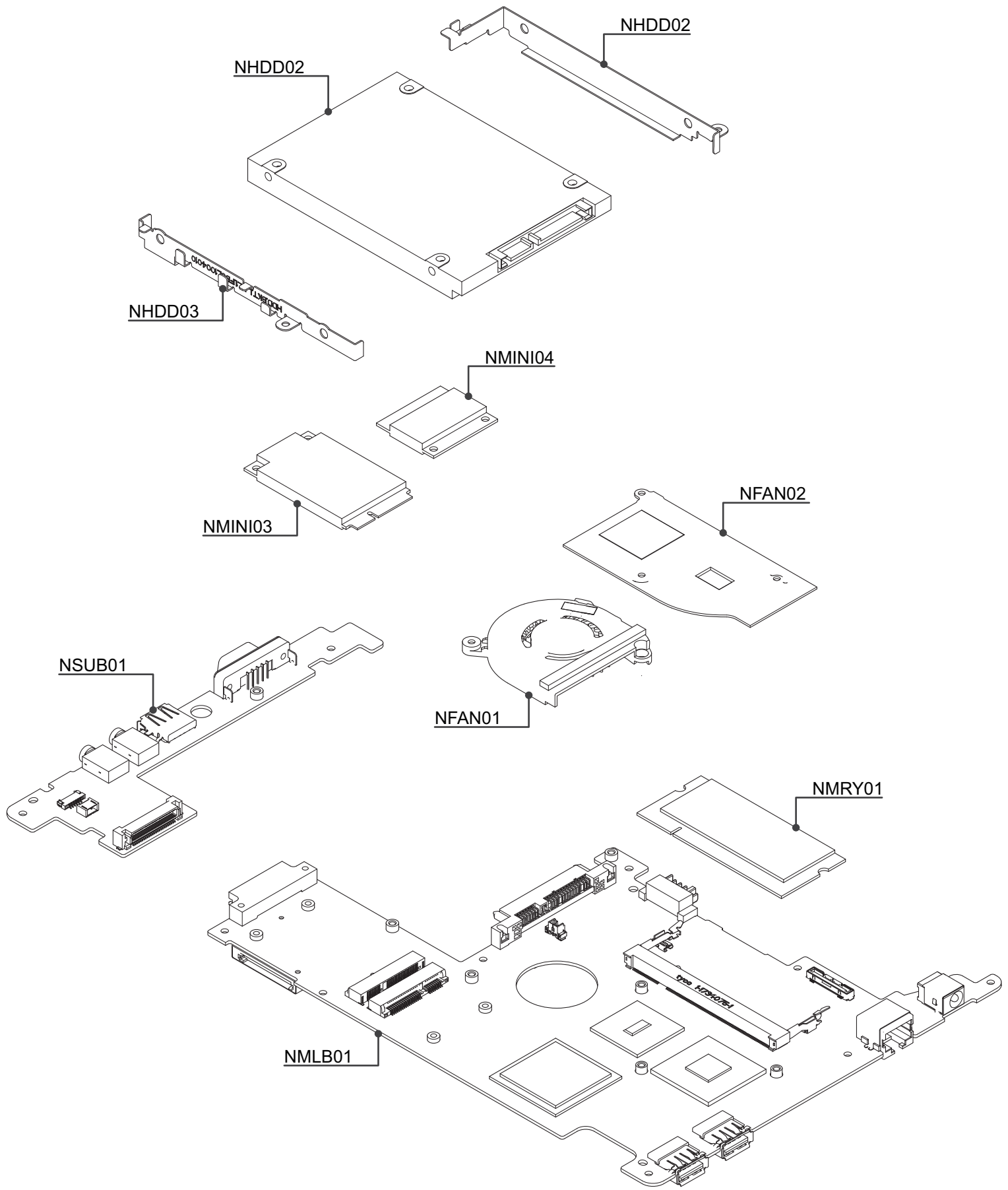
NMLB01

Main

Category	Loc. No.	LG P/N	Description	Remark
MAIN B/D	NMLB01	EBR63943001	UL1 M/B N270(1.6G/945GMS/ICH7M) FSB533Mhz	
	NMLB01	EBR63943002	UL1 M/B N280(1.66G/945GMS/ICH7M/WO 3G) FSB667Mhz	10/30 add(09')
HDD	NHDD01	EAZ60666001	HDD(160G)_HITACHI	
	NHDD01	EAZ60666901	HDD(160G)_Fujitsu	
	NHDD01	EAZ50165401	HDD(160G)_WESTERN DIGITAL	
	NHDD01	EAZ60665701	HDD(160G)_SEAGATE	
	NHDD01	EAZ40236713	HDD(250G)_SEAGATE	12/22 add(09')
	NHDD02	MAZ61973302	HDD BKT LEFT UL1(FBUL1004,REV3A)	
	NHDD03	MAZ61973301	HDD BKT RIGHT UL1(FBUL1003,REV3A)	
MiniCard	NMINI01	EAT60670601	BLUETOOTH 2.1+EDR USB MODUL(QBT410UB-01)	
	NMINI02	EAD60864201	CABLE ASSY UL1 BLUETOOTH(6/6P,REV1A)5V	Alternative
	NMINI02	EAD60864202	CABLE ASSY UL1 BLUETOOTH(6/6P,2A)5V-MEC	
	NMINI02	EAD60864203	CABLE ASSY UL1 BLUETOOTH(6/6P,3A)5V-XME	
	NMINI03	EAT60666303	3G CARD_F3607GW	
	NMINI04	EBM60659701	WLAN 802.11 B/G/N Q802XKN3	
	NMINI04	EBM60659401	WLAN 802.11B/G/N 9WEM307QCE02Q	
Memory	NMRY01	EAN56411504	RAM(1GB)DDR2_A-DATA	
	NMRY01	EAN48754301	RAM(1GB)DDR2_Hynix	
Thermal Module	NFAN01	EAL60660001	FAN moduel _ Fan_DIS	Alternative
	NFAN01	EAL60660101	FAN DIS ASSY FCN, 5V(51.3*47*7.9)0F966	
	NFAN02	MAZ61986201	HEAT SINK FCN	Alternative
	NFAN02	MAZ61986202	HEAT SINK KPT	
SUB B/D	NSUB01	EBR63943601	Audio / USB Sub board	

NCVR01

NBATT01

NBOTM01

NLCD01

Etc.
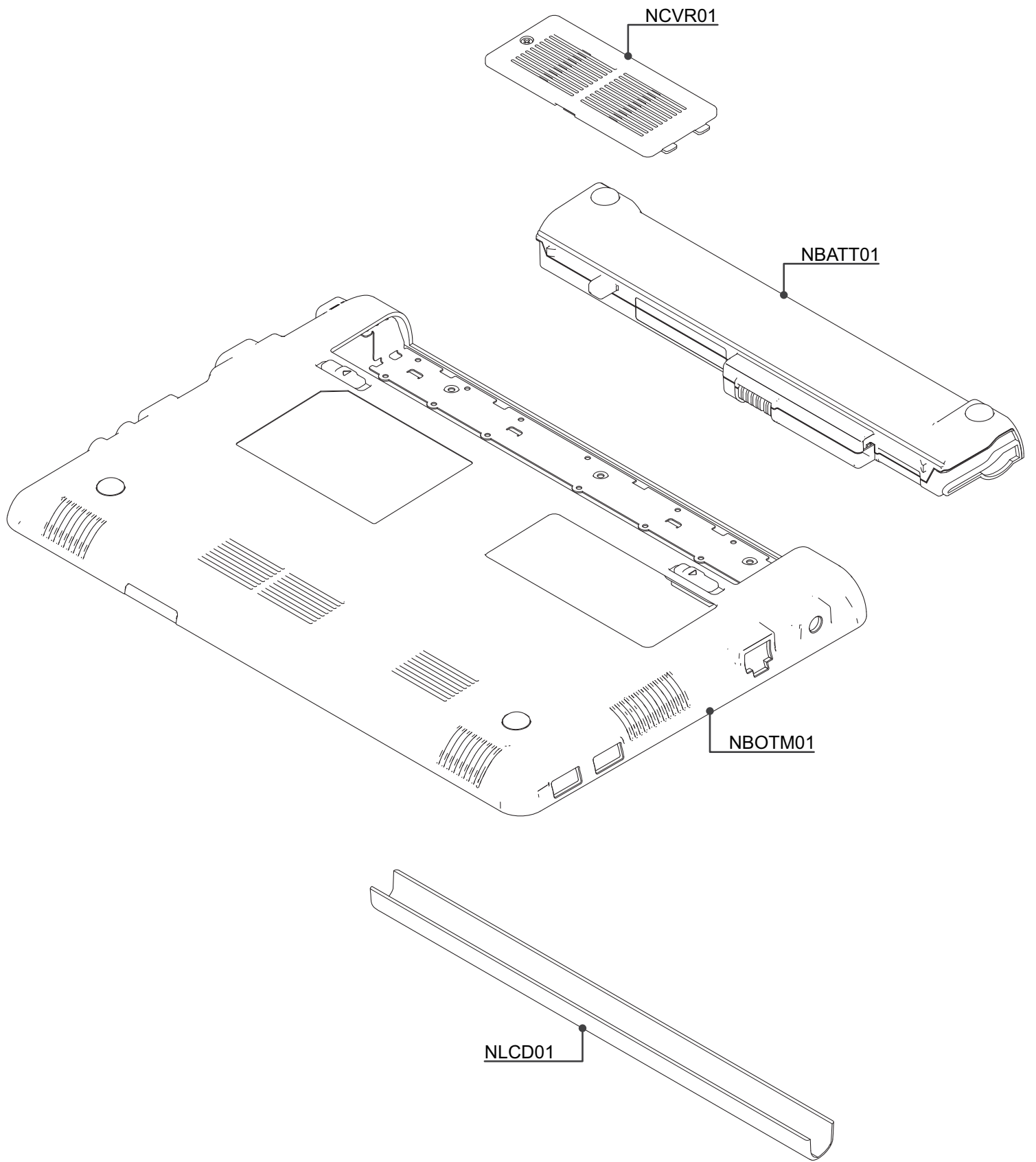
Category	Loc. No.	LG P/N	Description	Remark
Cover	NCVR01	ACQ74811101	Memory_ DOOR Cover _ White	
	NCVR01	ACQ74811102	Memory_DOOR Cover _ Black	
Battery	NBATT01	EAC60674704	LGC sole 2200 mAh LGC cell_3 cell white	
	NBATT01	EAC60674705	LGC sole 2200 mAh LGC cell_3 cell black	
	NBATT01	EAC60674702	LGC first 2200 mAh LGC cell_6 cell white	
	NBATT01	EAC60674706	LGC first 2200 mAh LGC cell_6 cell black	
	NBATT01	EAC60674701	Foxlink second 2250 mAh Sanyo cell_6 cell white	
	NBATT01	EAC60674707	Foxlink second 2250 mAh Sanyo cell_6 cell black	
	NBATT01	EAC60674709	Foxlink sole 2600 mAh LGC cell_9 cell white	
	NBATT01	EAC60674708	Foxlink sole 2600 mAh LGC cell_9 cell black	
Bottom	NBOTM01	AFP72922402	Bottom case Assy_Black	
	NBOTM01	AFP72922401	Bottom case Assy_White	
LCD	NLCD01	MCK62674301	Hinge cap	
	NLCD01	MCK62674302	Hinge cap black normal paint	10/7 add(09')
	NLCD02	ABQ72954802	Front case assy _ Black	
	NLCD02	ABQ72954801	Front Case assy _ White	
	NLCD03	ABQ72953503	rear case assy (black_Xnote)	
	NLCD03	ABQ72953506	rear case assy (black_LG)	
	NLCD03	ABQ72953509	rear case assy (black_LG_HSPA)	
	NLCD03	ABQ72953501	rear case assy (white_Xnote)	
	NLCD03	ABQ72953504	rear case assy (white_LG)	
	NLCD03	ABQ72953507	rear case assy (white_LG_HSPA)	
	NLCD03	ABQ72953505	rear case assy (pink_LG)	
	NLCD03	ABQ72953502	rear case assy (pink_Xnote)	
	NLCD03	ABQ72953508	rear case assy (pink_LG_HSPA)	
	NLCD03	ABQ72953511	rear case assy(Red-LG) ASSY	8/10 add(09')
	NLCD03	ABQ72953512	rear case assy(Red-LG-HSPA)	8/10 add(09')
	NLCD03	ABQ72953510	rear case assy(Red-Xnote)	8/10 add(09')
	NLCD03	ABQ72953513	rear case assy(Black_CI-Xnote)	10/7 add(09')
	NLCD03	ABQ72953514	rear case assy (black normal CI_LG)	12/22 add(09')
	NLCD04	EAJ60741701	LCD 10.1" WSVGA 1024X600 LED LCD	
	NLCD05	EAD60863601	LCD CABLE ASSY (40/30/6P,REV1A)5V_non 3G	Alternative
	NLCD05	EAD60863602	LCD CABLE ASSY (40/30/6P,REV2A)5V_non 3G	
	NLCD05	EAD60863603	LCD CABLE ASSY(40/30/6P,R3A)5V-FOX for 3G	7/20 add(09') Alternative
	NLCD05	EAD60863604	LCD CABLE ASSY(40/30/6P,R3A)5V-MEC for 3G	

Etc.

Category	Loc. No.	LG P/N	Description	Remark
LCD	NLCD06	ABQ72952202	HINGE LEFT SZS UL1(FBUL1007,REV3A)	Alternative
	NLCD06	ABQ72952302	HINGE LEFT JAR UL1(FBUL1009,REV3A)	
	NLCD06	ABQ72952402	HINGE LEFT SNR UL1(FBUL1011,REV3A)	
	NLCD06	ABQ72954902	HINGE LEFT AJP UL1(FBUL1014,REV3A)	
	NLCD07	ABQ72952201	HINGE RIGHT SZS UL1(FBUL1006,REV3A)	Alternative
	NLCD07	ABQ72952301	HINGE RIGHT JAR UL1(FBUL1008,REV3A)	
	NLCD07	ABQ72952401	HINGE RIGHT SNR UL1(FBUL1010,REV3A)	
	NLCD07	ABQ72954901	HINGE RIGHT AJP UL1(FBUL1015,REV3A)	
	NLCD08	MCQ62785601	LCD RUBBER UL1_Black	8/31 add(09')
	NLCD08	MCQ62785602	LCD RUBBER UL1_White	8/31 add(09')