

SERVICE MANUAL

W760S / W765S

notebook



Contents

Introduction1-1

Overview	1-1
System Specifications	1-2
External Locator - Top View with LCD Panel Open	1-5
External Locator - Front & Right side Views	1-6
External Locator - Left Side & Rear View	1-7
External Locator - Bottom View	1-8
Mainboard Overview - Top (Key Parts)	1-9
Mainboard Overview - Bottom (Key Parts)	1-10
Mainboard Overview - Top (Connectors)	1-11
Mainboard Overview - Bottom (Connectors)	1-12

Disassembly2-1

Overview	2-1
Maintenance Tools	2-2
Connections	2-2
Maintenance Precautions	2-3
Disassembly Steps	2-4
Removing the Battery	2-5
Removing the Hard Disk Drive	2-6
Removing the Optical (CD/DVD) Device	2-8
Removing the System Memory (RAM)	2-9
Removing the Inverter Board	2-11
Removing and Installing the Processor	2-12
Removing the Wireless LAN Module	2-15
Removing the Bluetooth Module	2-16
Removing the Keyboard	2-17
Removing the Modem	2-18

Part ListsA-1

Part List Illustration Location	A-2
---------------------------------------	-----

Top without Fingerprint (W760S)	A-3
Top without Fingerprint (W765S)	A-4
Bottom	A-5
LCD	A-6
HDD	A-7
SATA DVD SUPER-MULTI	A-8

Schematic Diagrams.....B-1

System Block Diagram	B-2
Penryn (Socket-P) 1/2	B-3
Penryn (Socket-P) 2/2	B-4
SiSM672 Host, PCIE 1/5	B-5
SiSM672 DRAM 2/5	B-6
SiSM672 MuTIOL VGA 3/5	B-7
SiSM672 PWR 4/5	B-8
SiSM672 GND 5/5	B-9
DDRII SO-DIMM - 1	B-10
DDRII SO-DIMM - 2	B-11
SiS307ELV	B-12
Panel, CRT	B-13
Inverter, Bluetooth, Fan	B-14
968 PCI, IDE, MuTIOL, SPI 1/4	B-15
968 PCIE, LAN, GPIO 2/4	B-16
968 USB SATA 3/4	B-17
968 PWR, GND 4/4	B-18
Clock Generator & Clock Buffer	B-19
PHY Realtek 8201CL	B-20
KBC ITE8512E	B-21
JMB385, Card Reader	B-22
Audio Codec ALC662	B-23
Audio AMP	B-24

Preface

SATA HDD, PWR, LID	B-25
Multi I/O, ODD, 3G, Click BD for M74	B-26
New Card, Mini PCIE, USB	B-27
LED, PC Beep, TP, FP	B-28
System/Ext-VGA Power	B-29
AC-IN, Charger	B-30
VCORE	B-31
VDD3, VDD5)	B-32
1.05VS, 1.2V, 1.5V	B-33
1.8V, 0.9VS	B-34
Click BD, Finger BD for M76	B-35
Multi Function Board	B-36
Audio Board	B-37
Power Switch Board for M74	B-38
External ODD Board for W76	B-39
Updating the FLASH ROM BIOS.....	C-1
Download the BIOS	2-1
Unzip the downloaded files to a bootable CD/DVD/ or USB Flash drive	2-1
Set the computer to boot from the external drive	2-1
Use the flash tools to update the BIOS	2-2
Restart the computer (booting from the HDD)	2-2

Notebook Computer

W760S/W765S

Service Manual

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About this Manual

This manual is intended for service personnel who have completed sufficient training to undertake the maintenance and inspection of personal computers.

It is organized to allow you to look up basic information for servicing and/or upgrading components of the **W760S/W765S** series notebook PC.

The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications.
Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.

Appendix A, Part Lists

Appendix B, Schematic Diagrams

Appendix C, Updating the FLASH ROM BIOS

Preface

IMPORTANT SAFETY INSTRUCTIONS

Follow basic safety precautions, including those listed below, to reduce the risk of fire, electric shock and injury to persons when using any electrical equipment:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit with an AC Input of 100 - 240V, 50 - 60Hz, DC Output of 19V, 3.42A **OR** 18.5V, 3.5A (**65** Watts) minimum AC/DC Adapter.

CAUTION

Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

**TO REDUCE THE RISK OF FIRE, USE ONLY NO. 26 AWG OR LARGER,
TELECOMMUNICATION LINE CORD**

This Computer's Optical Device is a Laser Class 1 Product

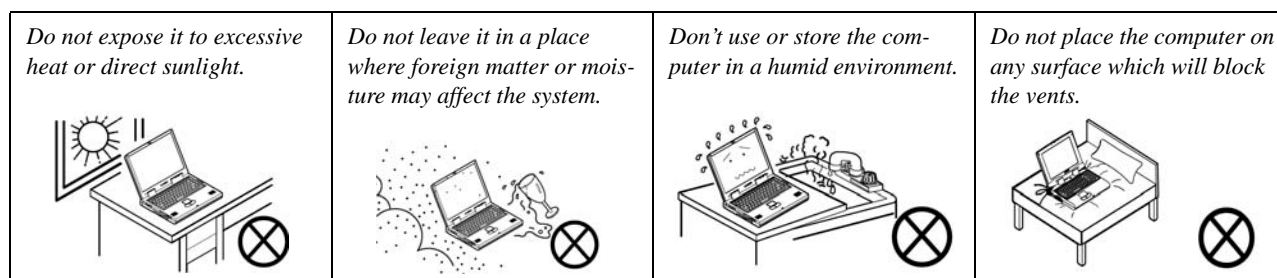
Instructions for Care and Operation

The notebook computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:

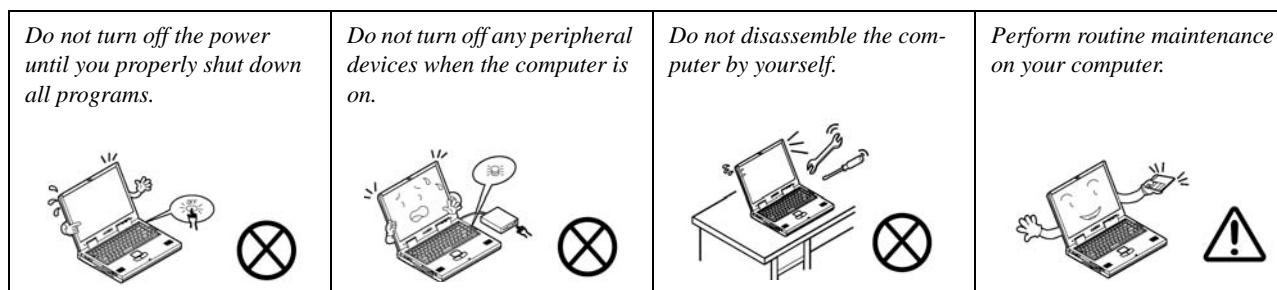
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

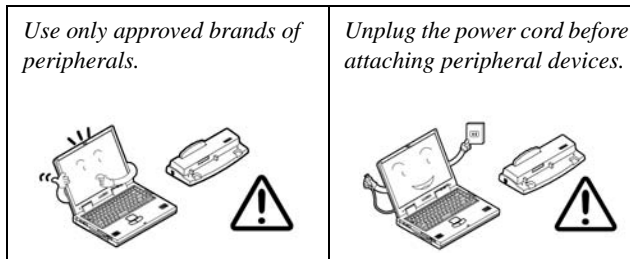


3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



Preface

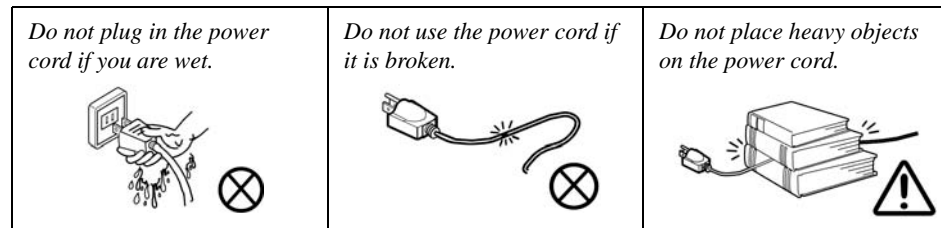
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



Power Safety

The computer has specific power requirements:

- Only use a power adapter approved for use with this computer.
- Your AC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.
- The power adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies.



Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- Recharge the batteries using the notebook's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not touch the battery contacts with your hands or metal objects.

Battery Guidelines

The following can also apply to any backup batteries you may have.

- If you do not use the battery for an extended period, then remove the battery from the computer for storage.
- Before removing the battery for storage charge it to 60% - 70%.
- Check stored batteries at least every 3 months and charge them to 60% - 70%.




Battery Disposal

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Battery Level

Click the battery icon  in the taskbar to see the current battery level and charge status. A battery that drops below a level of 10% will not allow the computer to boot up. Make sure that any battery that drops below 10% is recharged within one week.

Preface

Related Documents

You may also need to consult the following manual for additional information:

User's Manual on CD


This describes the notebook PC's features and the procedures for operating the computer and its ROM-based setup program. It also describes the installation and operation of the utility programs provided with the notebook PC.

Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the **W760S/W765S** series notebook computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in *User's Manual*. That manual is shipped with the computer.

Operating systems (e.g. *Windows XP*, *Windows Vista*, etc.) have their own manuals as do application software (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The **W760S/W765S** series notebook is designed to be upgradeable. See ***“Disassembly” on page 2 - 1*** for a detailed description of the upgrade procedures for each specific component. Please note the warning and safety information indicated by the “” symbol.

The balance of this chapter reviews the computer's technical specifications and features.

System Specifications

Feature	Specification
Processor	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package, Socket P T8100/ T8300 45nm (45 Nanometer) Process Technology 3MB On-die L2 Cache & 800MHz FSB 2.1/ 2.4 GHz
	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package, Socket P T9300/ T9500 45nm (45 Nanometer) Process Technology 6MB On-die L2 Cache & 800MHz FSB 2.5/ 2.6 GHz
	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package, Socket P T7100/ T7250 65nm (65 Nanometer) Process Technology 2MB On-die L2 Cache & 800MHz FSB 1.80/ 2.0 GHz
	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package, Socket P T7300/ T7500/ T7700/ T7800 65nm (65 Nanometer) Process Technology 4MB On-die L2 Cache & 800MHz FSB 2.0/ 2.2/ 2.4/ 2.6 GHz
	Intel® Celeron® M Processor (478-pin) Micro-FCPGA Package, Socket P T1600/ T1700 65nm (65 Nanometer) Process Technology 1MB On-die L2 Cache & 667MHz FSB 1.66/ 1.83 GHz
	Intel® Celeron® M Processor (478-pin) Micro-FCPGA Package, Socket P 575/ 585 65nm (65 Nanometer) Process Technology 1MB On-die L2 Cache & 667MHz FSB 2.0/ 2.16 GHz
Core Logic	SiS M672 + SiS968 Chipset
LCD	15.6" HD TFT LCD
Video Adapter	SIS M672 Integrated Video High Preference 3D/2D Graphic Accelerator Shared Memory Architecture (up to 256MB dynamically allocated from system memory where needed) Supports DirectX 9.0 Supports Vertex Shader 2.0 and Pixel Shader 2.0
Memory	64-bit Wide DDRII (DDR2) Data Channel Two 200 Pin SO-DIMM Sockets Supporting DDRII (DDR2) 667MHz Memory Expandable up to 4GB (1024MB/ 2048MB DDRII Modules)

Feature	Specification
Security	Security (Kensington® Type) Lock Slot Fingerprint ID Reader Module (Factory Option) BIOS Password
BIOS	One 8Mb SPI Flash ROM Phoenix™ BIOS
Storage	One Changeable 12.7mm(h) Optical Device (CD/DVD) Type Drive (See “Optional” on page 4.) Easy Changeable 2.5" 9.5 mm (h) SATA (Serial) HDD
Audio	High Definition Audio (HDA) Compliant with Microsoft UAA (Universal Audio Architecture) Direct Sound 3D™ Compatible 2 * Built-In Speakers Built-In Microphone
Keyboard & Pointing Device	Winkey Keyboard Built-In TouchPad with Scrolling Function
Interface	Three USB 2.0 Ports One Headphone-Out Jack One Microphone-In Jack One S/PDIF-Out Jack One RJ-11 Modem Jack One RJ-45 LAN Jack One DC-In Jack One External Monitor Port
Card Reader	Embedded 7-in-1 Card Reader (MS/ MS Pro/ SD/ Mini SD/ MMC/ RS MMC/ MS Duo) Note: MS Duo/ Mini SD/ RS MMC Cards require a PC adapter
ExpressCard Slot	One ExpressCard/34(54) Slot
Power Management	Supports ACPI 3.0 Supports Wake on LAN Supports Wake on USB Supports Resume from Modem Ring
Communication	10M/100Mb Base-T Ethernet LAN 56K MDC Modem V.90 & V.92 Compliant 802.11b/g Wireless LAN Mini-Card Module with USB interface (Option) Bluetooth 2.1 + EDR (Enhanced Data Rate) Module (Factory Option) 1.3M (UVC or non UVC) or 2.0M Pixel USB PC Camera Module (Factory Option) 3.5G Module: UMTS/HSPDA-based 3.5G Module with Mini-Card Interface (Factory Option) Quad-band GSM/GPRS (850 MHz, 900 MHz, 1800 MHz, 1900 MHz) UMTS WCDMA FDD (2100 MHz)
Power	Full Range AC/DC Adapter AC input 100 - 240V, 50 - 60Hz, DC Output 19V, 3.42A OR 18.5V, 3.5A (65 Watts)



UMTS Modes

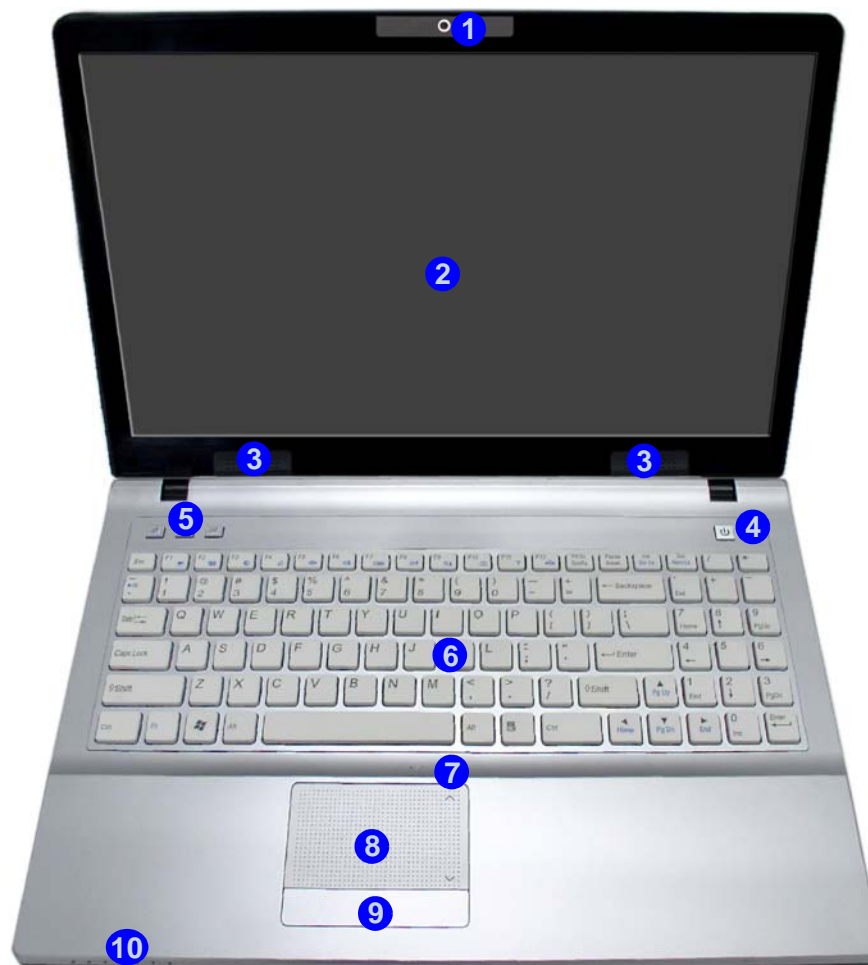
Note that UMTS modes CAN NOT be used in North America.

Introduction

Feature	Specification	
Battery	6 Cell Smart Lithium-Ion Battery Pack, 4400mAh 9 Cell Smart Lithium-Ion Battery Pack, 7200mAh (Option)	
Environmental Spec	Temperature Operating: 5°C - 35°C Non-Operating: -20°C - 60°C	Relative Humidity Operating: 20% - 80% Non-Operating: 10% - 90%
Dimensions & Weight	374mm (w) * 256mm (d) * 25 - 37.9mm (h) 2.7 kg With 6 Cell Battery	
Optional	Optical Drive Module Options: DVD Dual (Super Multi) Drive Module 802.11b/g Wireless LAN Mini-Card Module with USB interface 9 Cell Smart Lithium-Ion Battery Pack 1.3M (UVC or non UVC) or 2.0M Pixel USB PC Camera Module (Factory Option) Fingerprint ID Reader Module (Factory Option)	*Bluetooth 2.1 + EDR (Enhanced Data Rate) Module (Factory Option) OR *UMTS/HSPDA-based 3.5G Module with Mini-Card Interface (Factory Option) *Note: The Bluetooth and 3.75G/HSPA Optional Modules cannot coexist. If one of the factory options is included in your purchase option, then the other is unavailable .

External Locator - Top View with LCD Panel Open

Figure 1
Top View



1. Optional Built-In PC Camera
2. LCD
3. Speakers
4. Power Button
5. Hot Key Buttons
6. Keyboard
7. Built-In Microphone
8. Touchpad & Buttons
9. Fingerprint Module (Optional)
10. LED Indicators

Introduction

Figure 2
Front Views

1. LED Power & Communication Indicators

External Locator - Front & Right side Views



Figure 3
Right Side Views

1. S/PDIF-Out Jack
2. Microphone-In Jack
3. Headphone-Out Jack
4. USB 2.0 Port
5. Optical Device Drive Bay
6. RJ-11 Phone Jack
7. Security Lock Slot



External Locator - Left Side & Rear View



Figure 4
Left Side View

1. DC-In Jack
2. External Monitor Port
3. RJ-45 LAN Jack
4. Vent
5. 2 * USB 2.0 Ports
6. ExpressCard Slot
7. 7-in-1 Card Reader

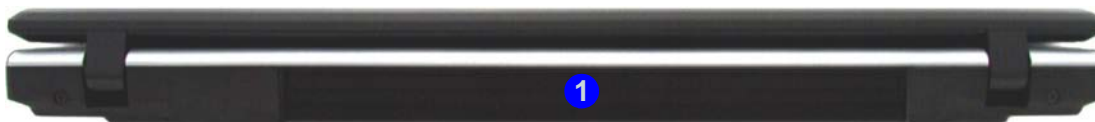


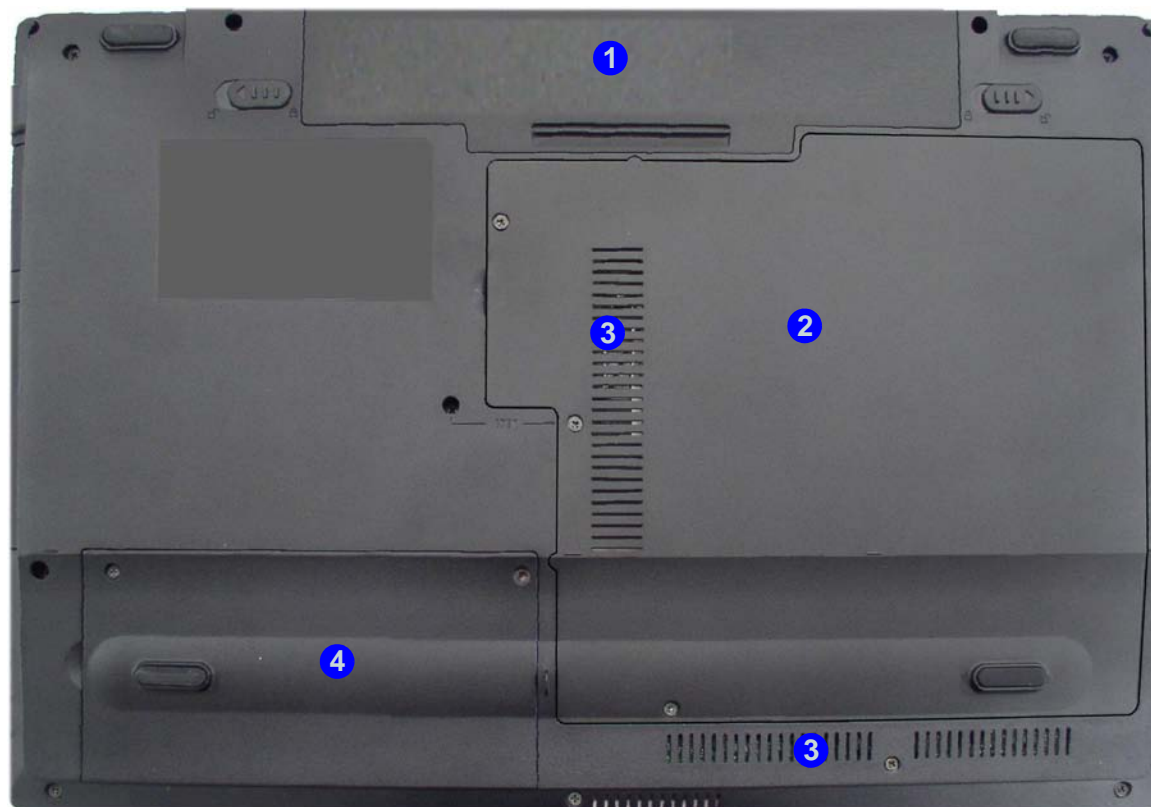
Figure 5
Rear View

1. Battery

External Locator - Bottom View

Figure 6
Bottom View

1. Battery
2. RAM & CPU Bay Cover
3. Vent/Fan Intake/Outlet
4. Hard Disk Bay Cover



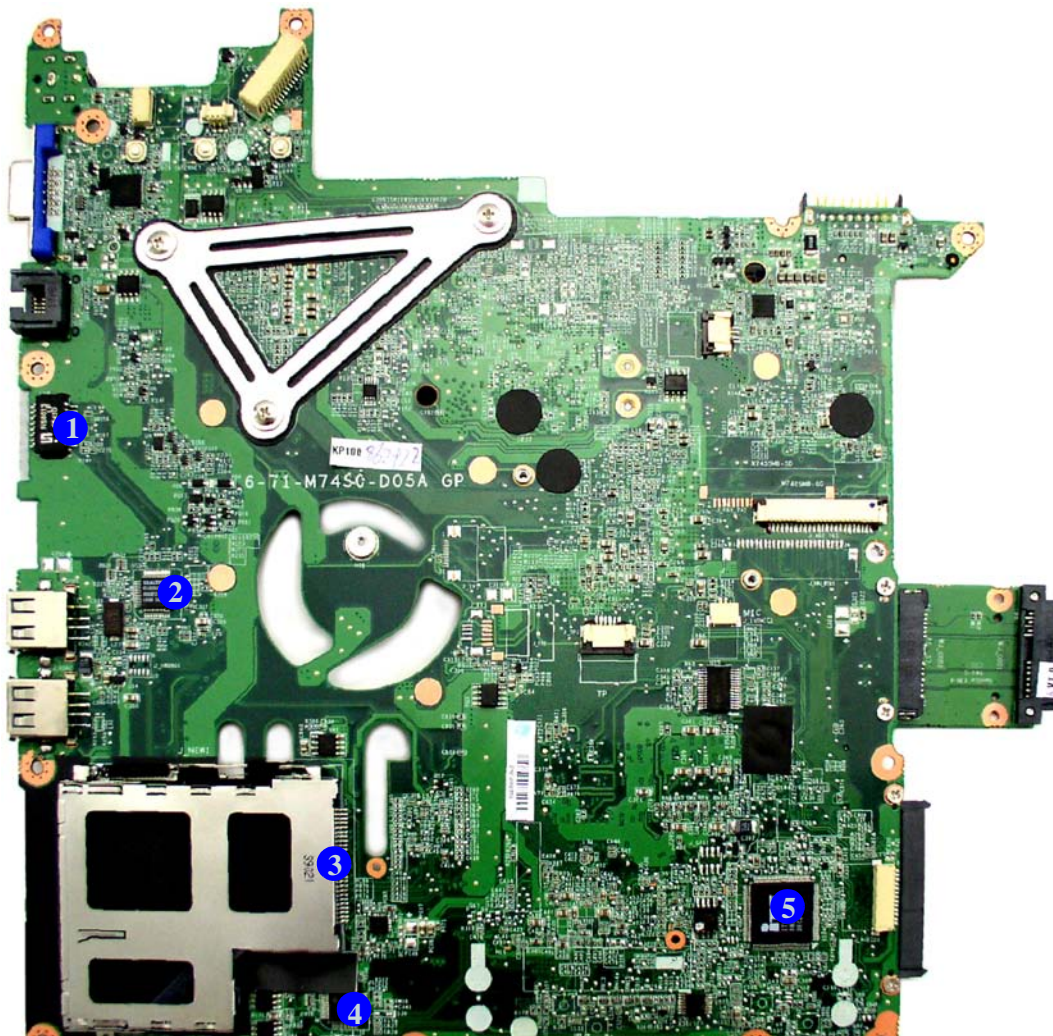
Overheating

To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

Mainboard Overview - Top (Key Parts)

Figure 7
**Mainboard Top
Key Parts**

1. Transformer
2. RTL8201CL
3. ExpressCard
Connector
4. JMB385
5. KBC ITE IT8512E

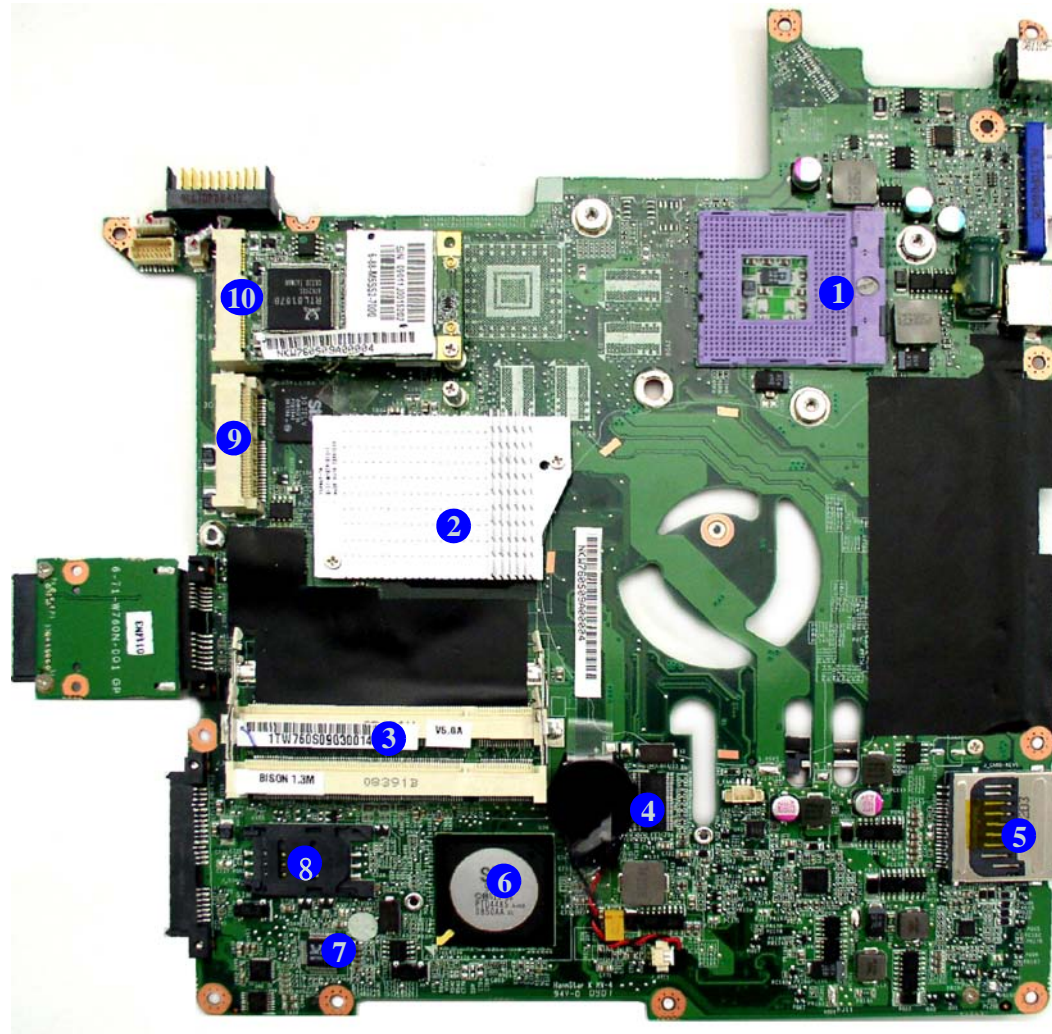


Introduction

Figure 8
**Mainboard Bottom
Key Parts**

1. CPU Socket (no CPU installed)
2. SiSM672
3. Memory Slots
DDR2 SO-DIMM
4. ICS
9LPR600CGLF
5. Card Reader
Socket
6. SiS968
7. Audio Codec
ALC62
8. SIMLOCK
9. Mini-Card
Connector (3G
Module)
10. Mini-Card
Connector (WLAN
Module)

Mainboard Overview - Bottom (Key Parts)



Mainboard Overview - Top (Connectors)

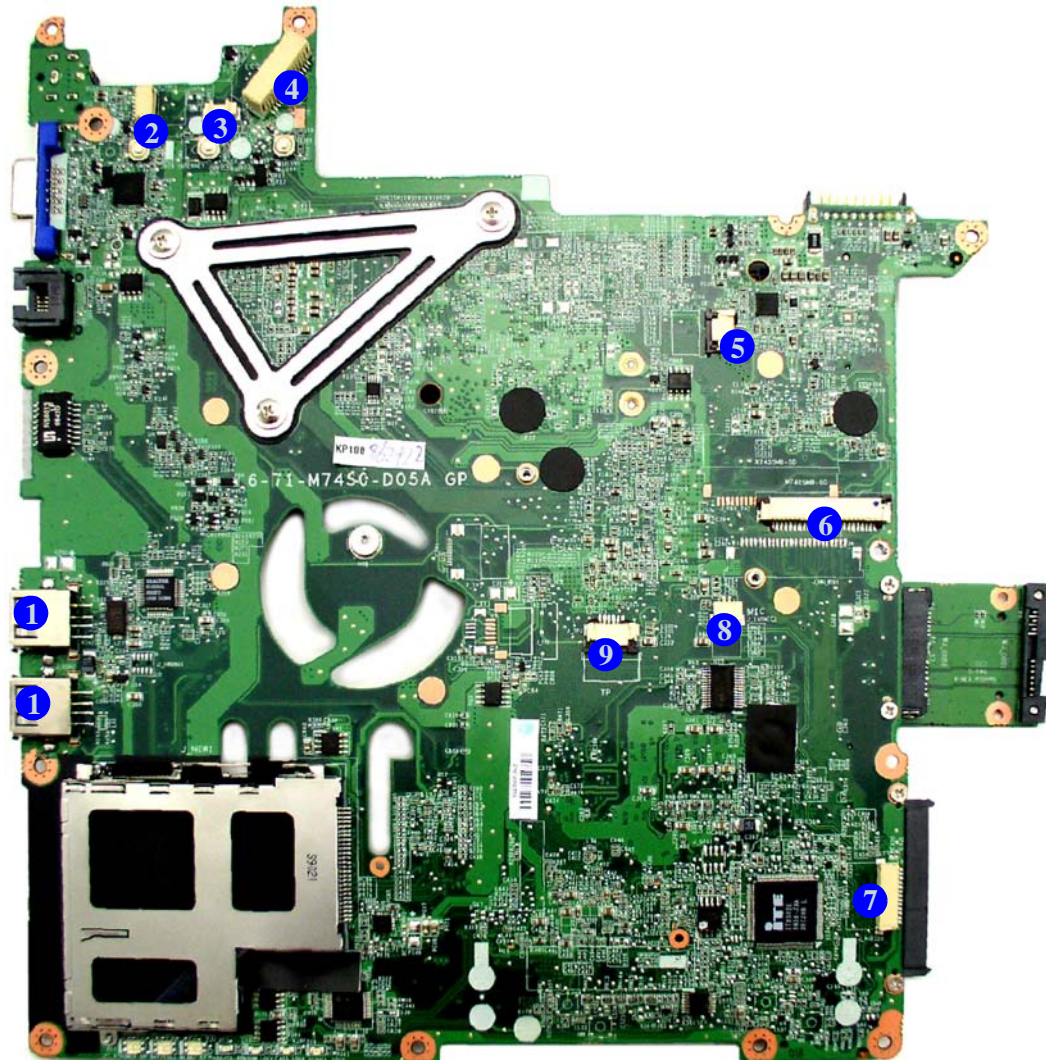


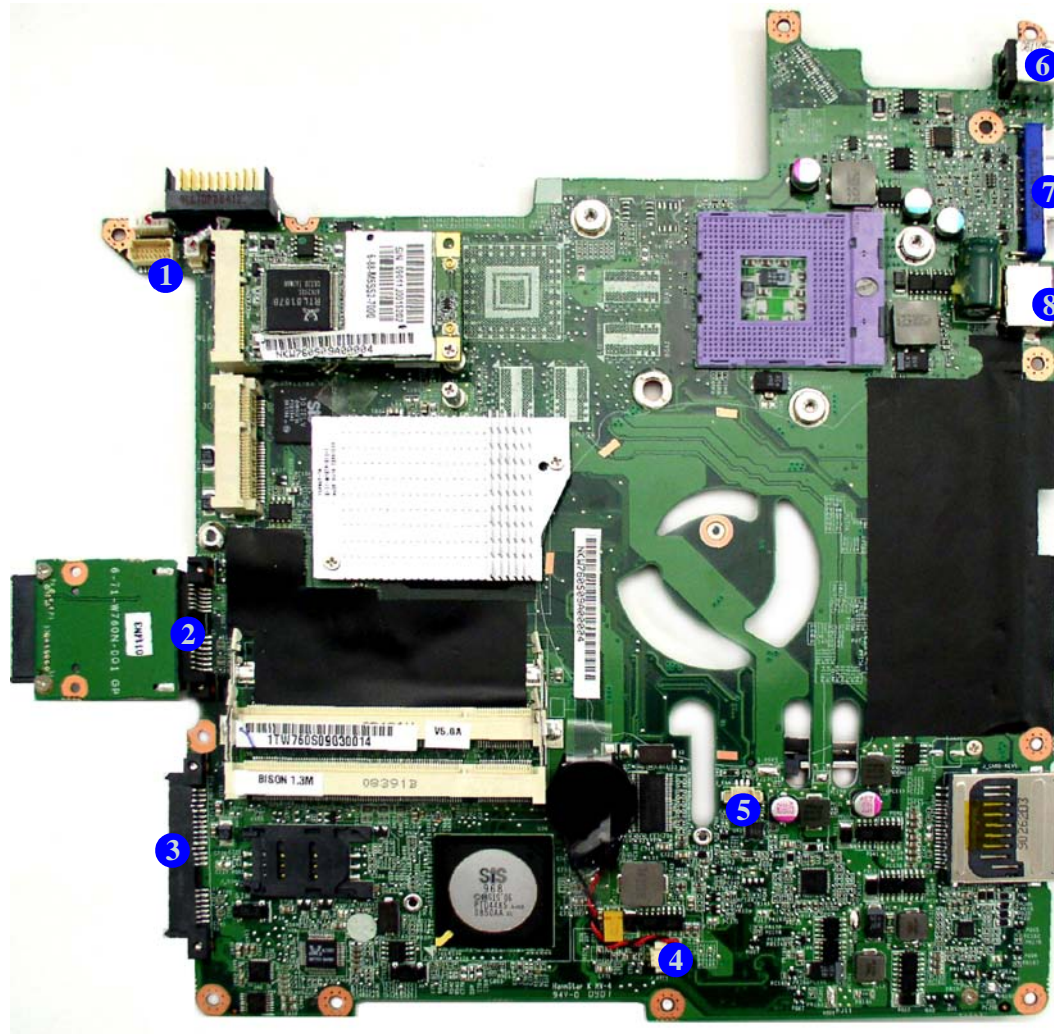
Figure 9
**Mainboard Top
Connectors**

1. USB Ports
2. Inverter Connector
3. Speaker Connector
4. LCD Cable Connector
5. Power switch connector
6. Keyboard Cable Connector
7. Audio Board Connector
8. Microphone Cable Connector
9. TouchPad Cable Connector

Introduction

Figure 10
**Mainboard Bottom
Connectors**

1. Multi Board Connector
2. CD-ROM Connector
3. HDD Connector
4. CMOS Bat. Connector
5. CPU Fan Cable Connector
6. DC-In Jack
7. External Monitor Port
8. RJ-45 LAN Jack




Chapter 2: Disassembly



Overview

This chapter provides step-by-step instructions for disassembling the W760S/W765S series notebook's parts and sub-systems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

We suggest you completely review any procedure before you take the computer apart.

Procedures such as upgrading/replacing the RAM, optical device and hard disk are included in the User's Manual but are repeated here for your convenience.

To make the disassembly process easier each section may have a box in the page margin. Information contained under the figure # will give a synopsis of the sequence of procedures involved in the disassembly procedure. A box with a  lists the relevant parts you will have after the disassembly process is complete. **Note:** The parts listed will be for the disassembly procedure listed ONLY, and not any previous disassembly step(s) required. Refer to the part list for the previous disassembly procedure. The amount of screws you should be left with will be listed here also.

A box with a  will also provide any possible helpful information. A box with a  contains warnings.

An example of these types of boxes are shown in the sidebar.


Information
Warning

Disassembly

NOTE: All disassembly procedures assume that the system is turned **OFF**, and disconnected from any power supply (the battery is removed too).

Maintenance Tools

The following tools are recommended when working on the notebook PC:

- M3 Philips-head screwdriver
- M2.5 Philips-head screwdriver (magnetized)
- M2 Philips-head screwdriver
- Small flat-head screwdriver
- Pair of needle-nose pliers
- Anti-static wrist-strap

Connections

Connections within the computer are one of four types:

Locking collar sockets for ribbon connectors	To release these connectors, use a small flat-head screwdriver to gently pry the locking collar away from its base. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Pressure sockets for multi-wire connectors	To release this connector type, grasp it at its head and gently rock it from side to side as you pull it out. Do not pull on the wires themselves. When replacing the connection, do not try to force it. The socket only fits one way.
Pressure sockets for ribbon connectors	To release these connectors, use a small pair of needle-nose pliers to gently lift the connector away from its socket. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Board-to-board or multi-pin sockets	To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - use just enough force to start.

Maintenance Precautions

The following precautions are a reminder. To avoid personal injury or damage to the computer while performing a removal and/or replacement job, take the following precautions:

1. **Don't drop it.** Perform your repairs and/or upgrades on a stable surface. If the computer falls, the case and other components could be damaged.
2. **Don't overheat it.** Note the proximity of any heating elements. Keep the computer out of direct sunlight.
3. **Avoid interference.** Note the proximity of any high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage components and/or data. You should also monitor the position of magnetized tools (i.e. screwdrivers).
4. **Keep it dry.** This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.
5. **Be careful with power.** Avoid accidental shocks, discharges or explosions.
 - Before removing or servicing any part from the computer, turn the computer off and detach any power supplies.
 - When you want to unplug the power cord or any cable/wire, be sure to disconnect it by the plug head. Do not pull on the wire.
6. **Peripherals** – Turn off and detach any peripherals.
7. **Beware of static discharge.** ICs, such as the CPU and main support chips, are vulnerable to static electricity. Before handling any part in the computer, discharge any static electricity inside the computer. When handling a printed circuit board, do not use gloves or other materials which allow static electricity buildup. We suggest that you use an anti-static wrist strap instead.
8. **Beware of corrosion.** As you perform your job, avoid touching any connector leads. Even the cleanest hands produce oils which can attract corrosive elements.
9. **Keep your work environment clean.** Tobacco smoke, dust or other air-born particulate matter is often attracted to charged surfaces, reducing performance.
10. **Keep track of the components.** When removing or replacing any part, be careful not to leave small parts, such as screws, loose inside the computer.

Cleaning

Do not apply cleaner directly to the computer, use a soft clean cloth.

Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.



Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

Disassembly Steps

The following table lists the disassembly steps, and on which page to find the related information. **PLEASE PERFORM THE DISASSEMBLY STEPS IN THE ORDER INDICATED.**

To remove the Battery:

1. Remove the battery [page 2 - 5](#)

To remove the HDD:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)

To remove the Optical Device:

1. Remove the battery [page 2 - 5](#)
2. Remove the Optical device [page 2 - 8](#)

To remove the System Memory:

1. Remove the battery [page 2 - 5](#)
2. Remove the system memory [page 2 - 9](#)

To remove the Inverter Board:

1. Remove the battery [page 2 - 5](#)
2. Remove the inverter board [page 2 - 11](#)

To remove and install a Processor:

1. Remove the battery [page 2 - 5](#)
2. Remove the processor [page 2 - 12](#)
3. Install the processor [page 2 - 14](#)

To remove the Wireless LAN Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the wireless LAN [page 2 - 15](#)

To remove the Bluetooth Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the Bluetooth [page 2 - 16](#)

To remove the Keyboard:

1. Remove the battery [page 2 - 5](#)
2. Remove the keyboard [page 2 - 17](#)

To remove the Modem:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the Optical device [page 2 - 8](#)
4. Remove the processor [page 2 - 12](#)
5. Remove the keyboard [page 2 - 17](#)
6. Remove the modem [page 2 - 18](#)

Removing the Battery

1. Turn the computer **off**, and turn it over.
2. Slide the latch **1** in the direction of the arrow.
3. Slide the latch **2** in the direction of the arrow, and hold it in place.
4. Slide the battery **3** in the direction of the arrow **4**.

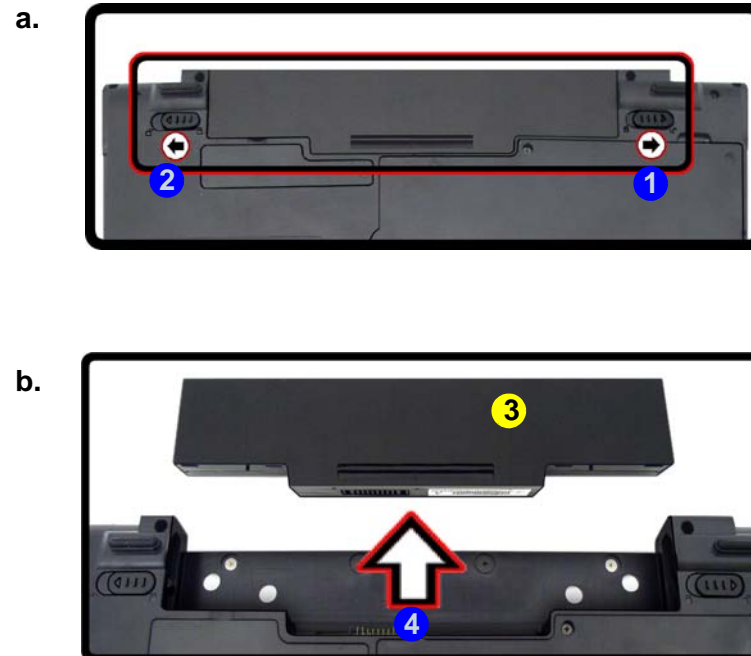


Figure 1
Battery Removal

- a. Slide the latch and hold in place.
- b. Slide the battery in the direction of the arrow.



3. Battery

Disassembly

Figure 2
**HDD Assembly
Removal**

- a. Locate the HDD bay cover and remove the screw(s).

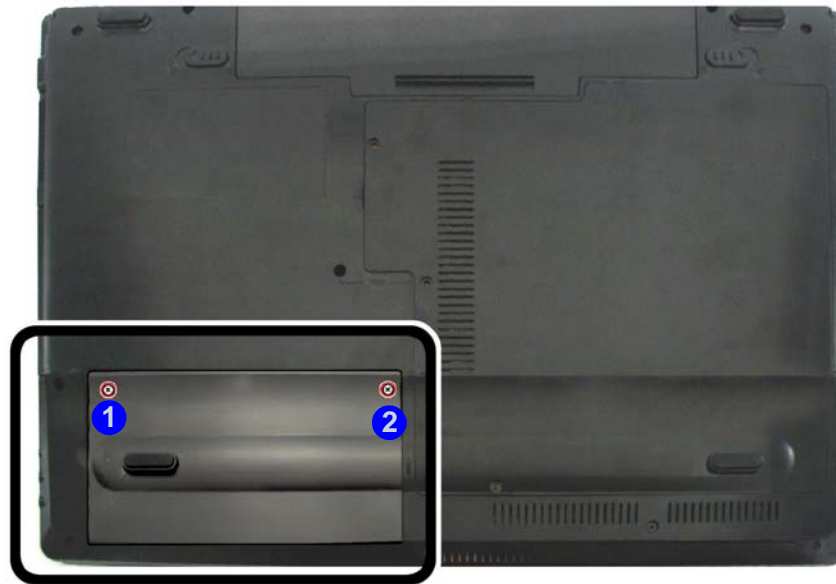
Removing the Hard Disk Drive

The hard disk drive can be taken out to accommodate other 2.5" serial (SATA) hard disk drives with a height of 9.5mm (h). Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in **Chapter 4 of the User's Manual**) when setting up a new hard disk.

Hard Disk Upgrade Process

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
2. Locate the hard disk bay cover and remove screw **1** & **2**.

a.



- 2 Screws



HDD System Warning

New HDD's are blank. Before you begin make sure:

You have backed up any data you want to keep from your old HDD.

You have all the CD-ROMs and FDDs required to install your operating system and programs.

If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

3. Remove the hard disk bay cover **3**.
4. Grip the tab and slide the hard disk in the direction of arrow **4**.
5. Lift the hard disk out of the bay **5**.
6. Remove the screw **6** and the adhesive cover **7** from the hard disk **8**.
7. Reverse the process to install a new hard disk (do not forget to replace all the screws and covers).

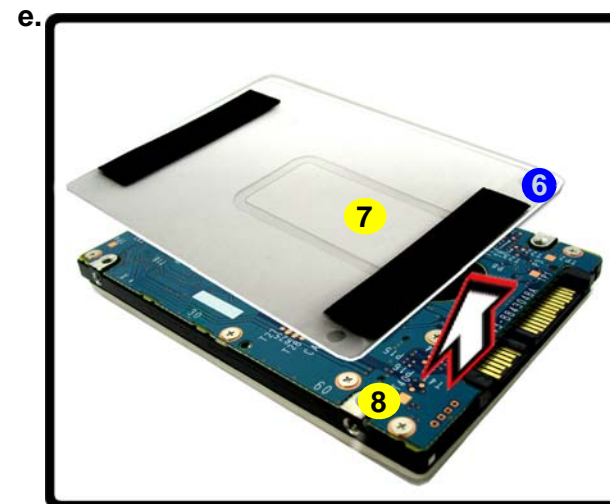
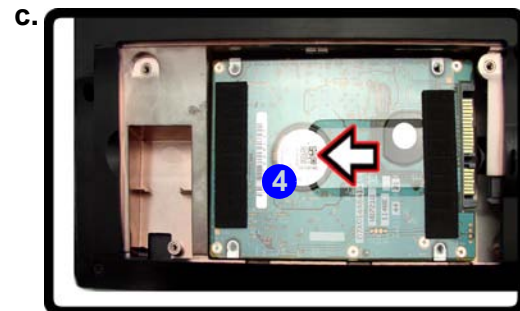
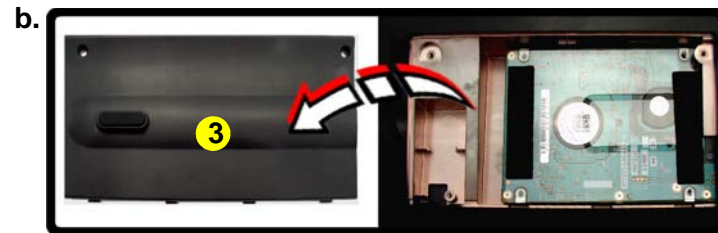


Figure 3
**HDD Assembly
Removal (cont'd.)**

- b. Remove the HDD bay cover.
- c. Grip the tab and slide the HDD in the direction of the arrow.
- d. Lift the HDD assembly out of the bay.
- e. Remove the screws and adhesive cover.



3. HDD Bay Cover
7. Adhesive Cover
8. HDD

- 2 Screws

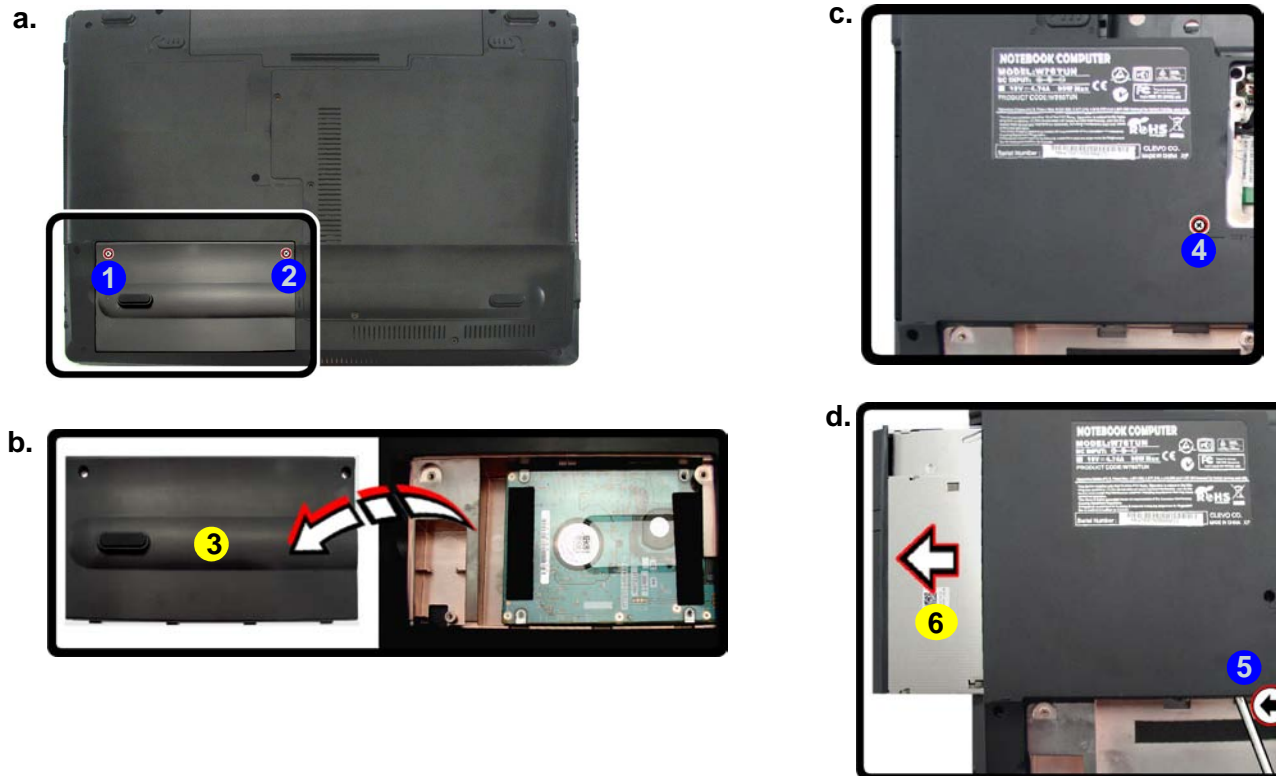
Disassembly

Figure 4
**Optical Device
Removal**

- Remove the screws.
- Remove the HDD bay cover.
- Remove the screw.
- Push the optical device out off the computer at point 6.

Removing the Optical (CD/DVD) Device

- Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
- Locate the hard disk bay cover and remove screw ① & ②.
- Remove the hard disk bay cover ③.
- Remove the screw at point ④, and use a screwdriver to carefully push out the optical device ⑥ at point ⑤.
- Insert the new device and carefully slide it into the computer (the device only fits one way. **DO NOT FORCE IT**; The screw holes should line up).
- Restart the computer to allow it to automatically detect the new device.



- HDD Bay Cover
- Optical Device

- 3 Screws

Removing the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting **DDR2** 667/800MHz. The main memory can be expanded up to 4GB. The SO-DIMM modules supported are 1024MB, and 2048MB and **DDRII** Modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)).
2. Locate the component bay cover **1**, and remove screws **2** - **4**.
3. Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
4. Carefully disconnect the fan cable **5**, and remove the cover **1**.

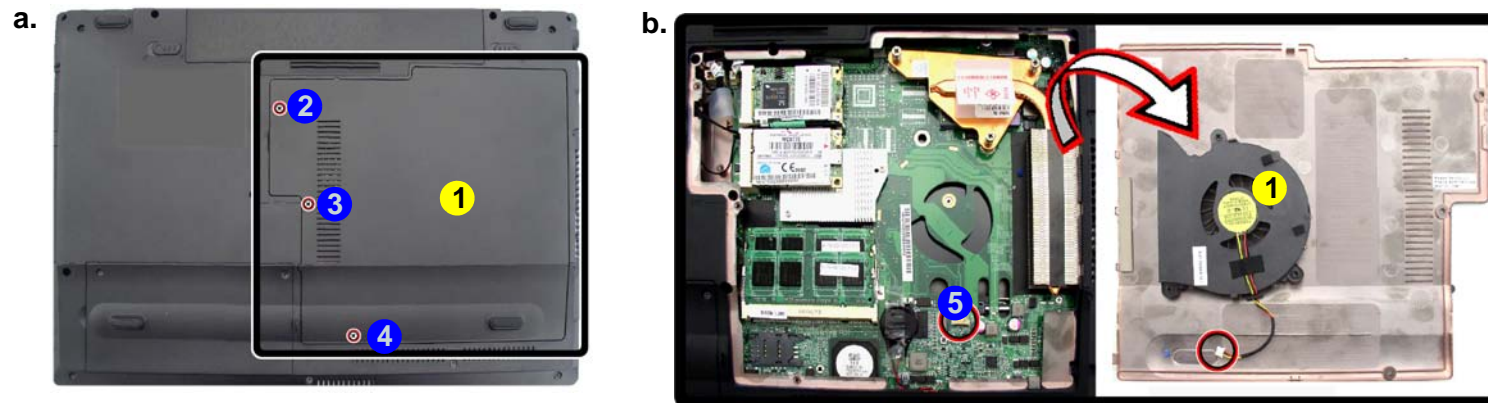


Figure 5
RAM Module Removal

- a. Remove the screws.
- b. Remove the cover.



Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.



1. Component Bay Cover

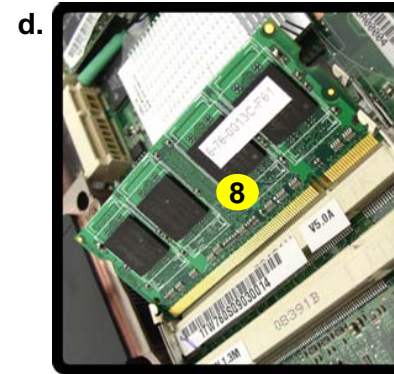
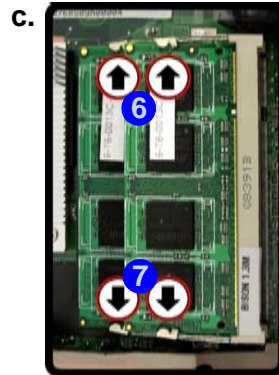
- 3 Screws

Disassembly

Figure 6
**RAM Module
Removal (cont'd.)**

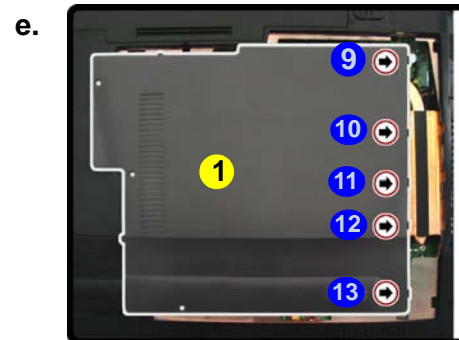
- c. Pull the release latch(es).
d. Remove the module(s).

5. Gently pull the two release latches (6 & 7) on the sides of the memory socket in the direction indicated by the arrows (*Figure 6c*).



6. The RAM module(s) 8 will pop-up (*Figure 6d*), and you can then remove it.
7. Pull the latches to release the second module if necessary.
8. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
9. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE the module; it should fit without much pressure.
10. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
11. Replace the bay cover and screws (**make sure you reconnect the fan cable before screwing down the bay cover**).

Note that there are five 9 - 13 cover pins which need to be aligned with slots in the case, to insure a proper cover fit, before screwing down the bay cover 1.



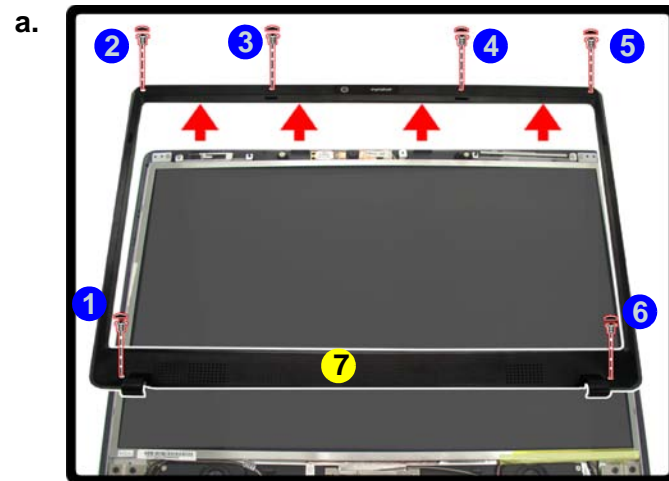
12. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.



8. RAM Module(s)

Removing the Inverter Board

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
2. Remove any rubber covers, screws **1** - **6** ([Figure 7a](#)), then run your finger around the middle of the frame to carefully unsnap the LCD front panel module **7** from the back.
3. Discharge the remaining system power (see [“Inverter Power Warning”](#) below).
4. Remove screw **8** ([Figure 7b](#)) from the inverter, and carefully lift the inverter board up slightly.
5. Disconnect cables **9** & **10** ([Figure 7c](#)) from the inverter, then remove the inverter **11** ([Figure 7d](#)) from the LCD back cover module.



Inverter Power Warning

In order to prevent a short circuit when removing the inverter it is necessary to discharge any remaining system power. To do so, press the computer's power button for a few seconds before disconnecting the inverter cable.

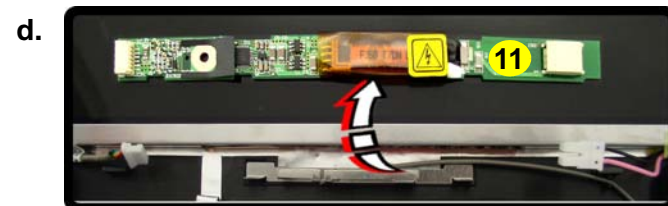


Figure 7
Inverter Board Removal

- a. Remove the 6 screws and unsnap the LCD front panel module from the back.
- b. Remove the screw and discharge the remaining power from the inverter board and lift the board up slightly.
- c. Disconnect the cables from the inverter.
- d. Remove the inverter.



7. LCD Front Panel
11. Inverter Board

- 6 Screws

Disassembly

Figure 8

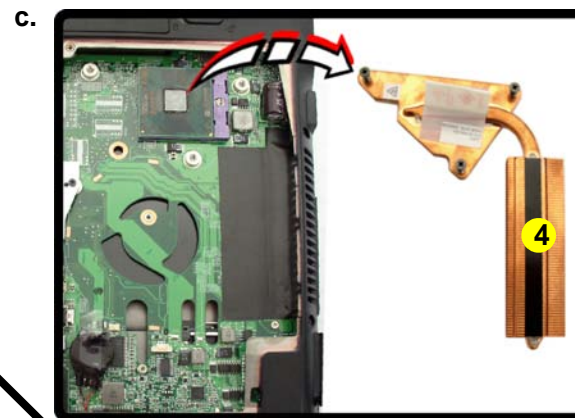
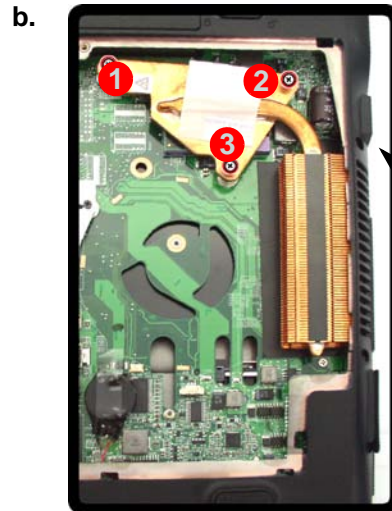
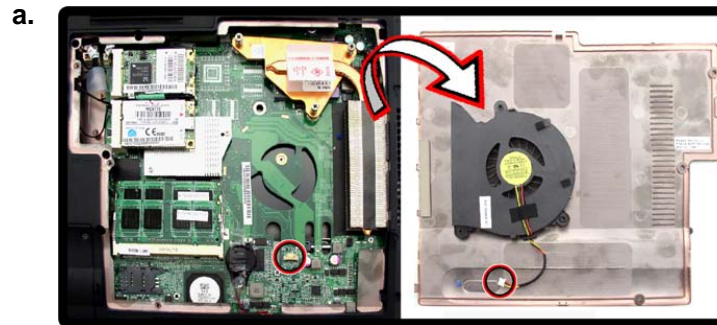
Processor Removal

- Remove the cover and locate the heat sink.
- Loosen the screws in the order indicated.
- Remove the heat sink.

Removing and Installing the Processor

Processor Removal Procedure

- Turn **off** the computer, remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 9](#)).
- Loosen the CPU heat sink screws in the order **3**, **2** & **1** (the reverse order as indicated on the label).
- Carefully lift up the heat sink **4** ([Figure 8c](#)) off the computer.



Note:

Loosen the screws in the order 3, 2, 1 as indicated on the label.



4. Heat Sink

- 3 Screws


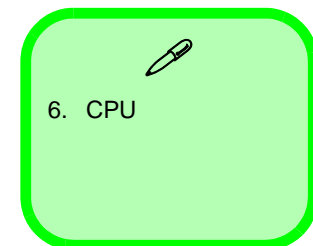
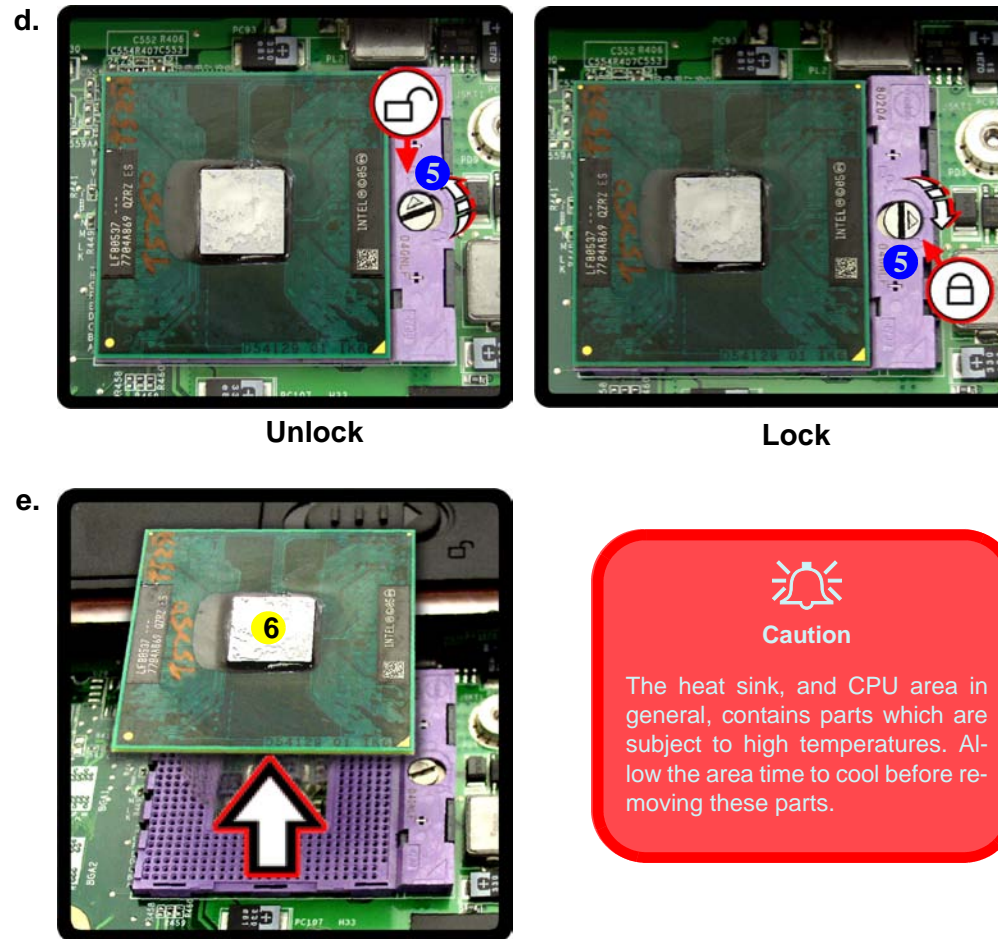
4. Turn the release latch **5** towards the unlock symbol , to release the CPU (**Figure 9a**).
5. Carefully (it may be hot) lift the CPU **6** up out of the socket (**Figure 9b**).
6. See [page 2 - 14](#) for information on inserting a new CPU.
7. When re-inserting the CPU, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).

Figure 9
Processor Removal
(cont'd)

- d. Turn the release latch to unlock the CPU.
- e. Lift the CPU out of the socket.



Disassembly

Figure 10
Processor Installation


- Insert the CPU.
- Turn the release latch towards the lock symbol.
- Remove the sticker from the heat sink and insert the heat sink.
- Tighten the screws.

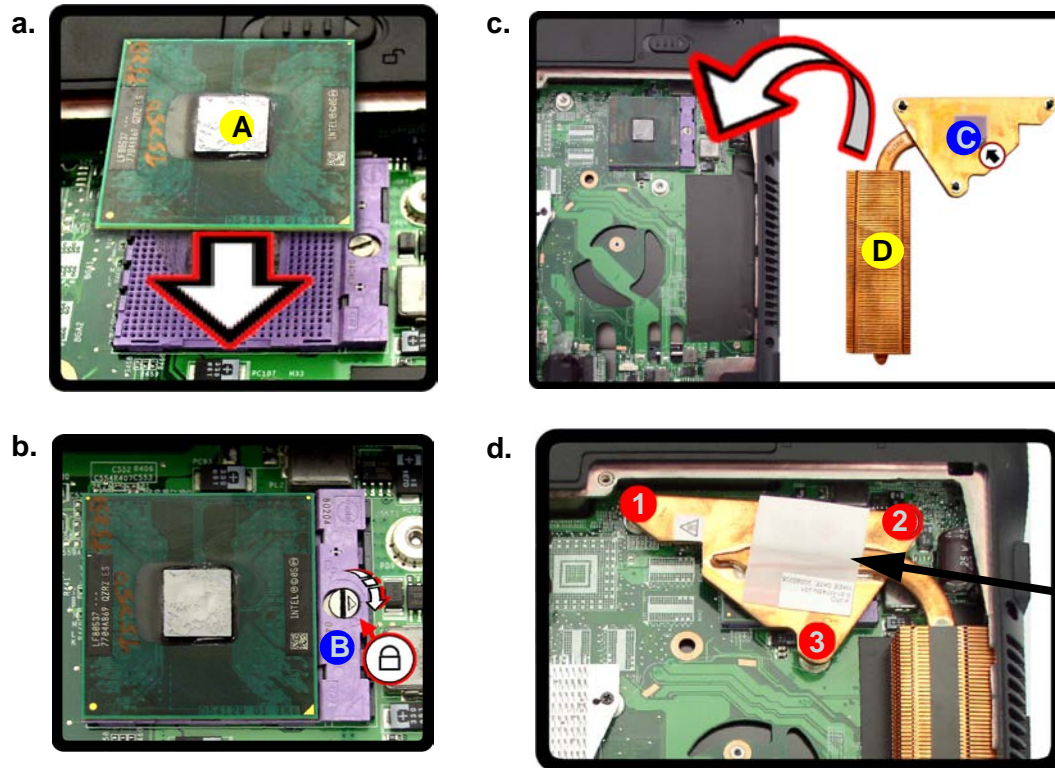


A. CPU
D. Heat Sink

- 3 Screws

Processor Installation Procedure

- Insert the CPU **A**, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!), and turn the release latch **B** towards the lock symbol  (*Figure 10b*).
- Remove the sticker **C**** (*Figure 10c*) from the heat sink.
- Insert the heat sink **D** as indicated in *Figure 10c*.
- Tighten the CPU heat sink screws in the order **1**, **2** & **3** (the order as indicated on the label and *Figure 10d*).
- Replace the component bay cover and tighten the screws (*page 2 - 12*).



Note:

Tighten the screws in the order 1, 2, 3 as indicated on the label.

Removing the Wireless LAN Module

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 9](#)).
2. The Wireless LAN module will be visible at point **1** on the mainboard.
3. Carefully disconnect cables **2** - **3**, then remove screw **4** from the module socket.
4. The Wireless LAN module **5** will pop-up.
5. Lift the Wireless LAN module ([Figure 11d](#)) up and off the computer.

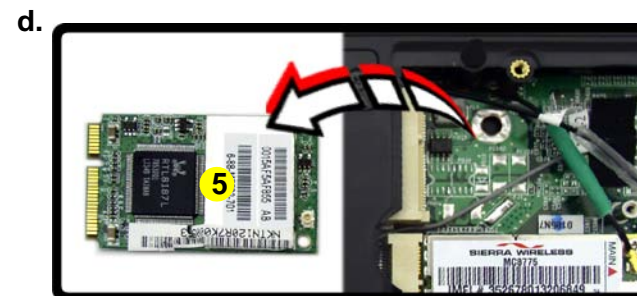
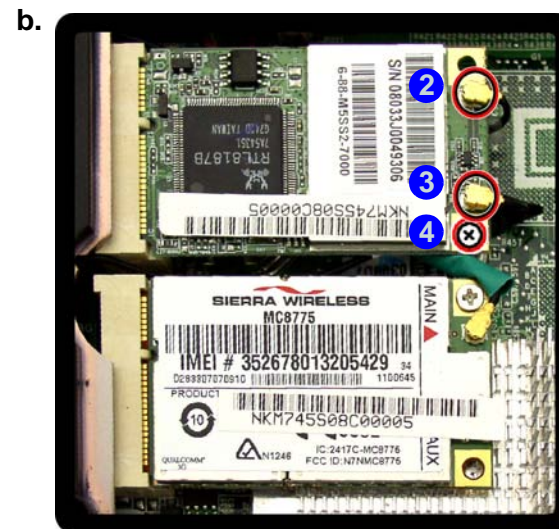


Figure 11
**Wireless LAN
Module Removal**

- a. Remove the cover.
- b. Disconnect the cable and remove the screw.
- c. The WLAN module will pop up.
- d. Lift the WLAN module out.

Note: Make sure you reconnect the antenna cable to “1” + “2” socket ([Figure b](#)).



5. WLAN Module.

- 1 Screw

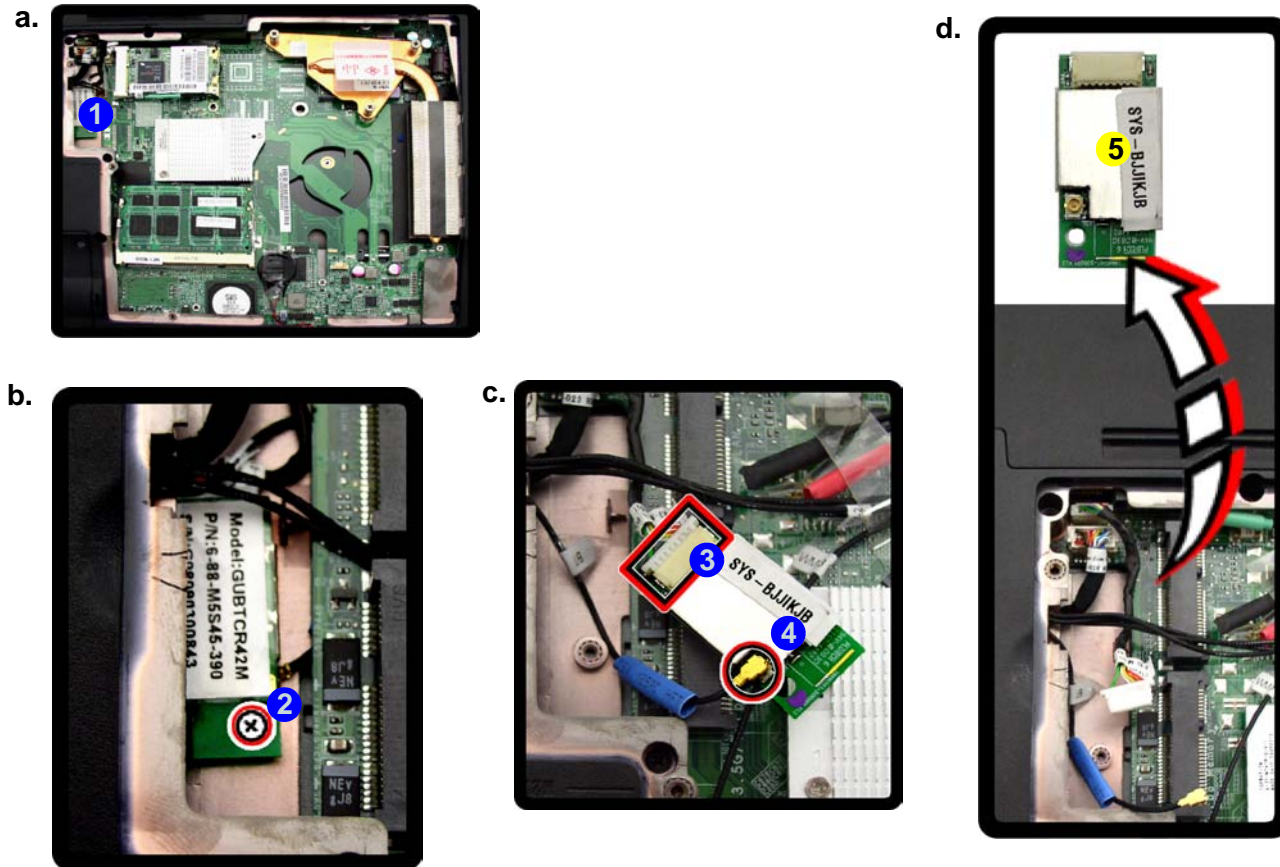
Disassembly

Figure 12
Bluetooth Module Removal

- a. Remove the cover and locate the Bluetooth.
- b. Remove the screw.
- c. Disconnect the cable and the connector.
- d. Lift the Bluetooth module up off the socket.

Removing the Bluetooth Module

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 9](#)).
2. The Bluetooth will be visible at point **1** on the mainboard.
3. Remove the screw **2** and turn the module over.
4. Carefully separate the Bluetooth module from the connector **3** and disconnect the cable **4**.
5. Lift the Bluetooth module **5** ([Figure 12d](#)) up and off the computer.



5. Bluetooth Module

- 1 Screw

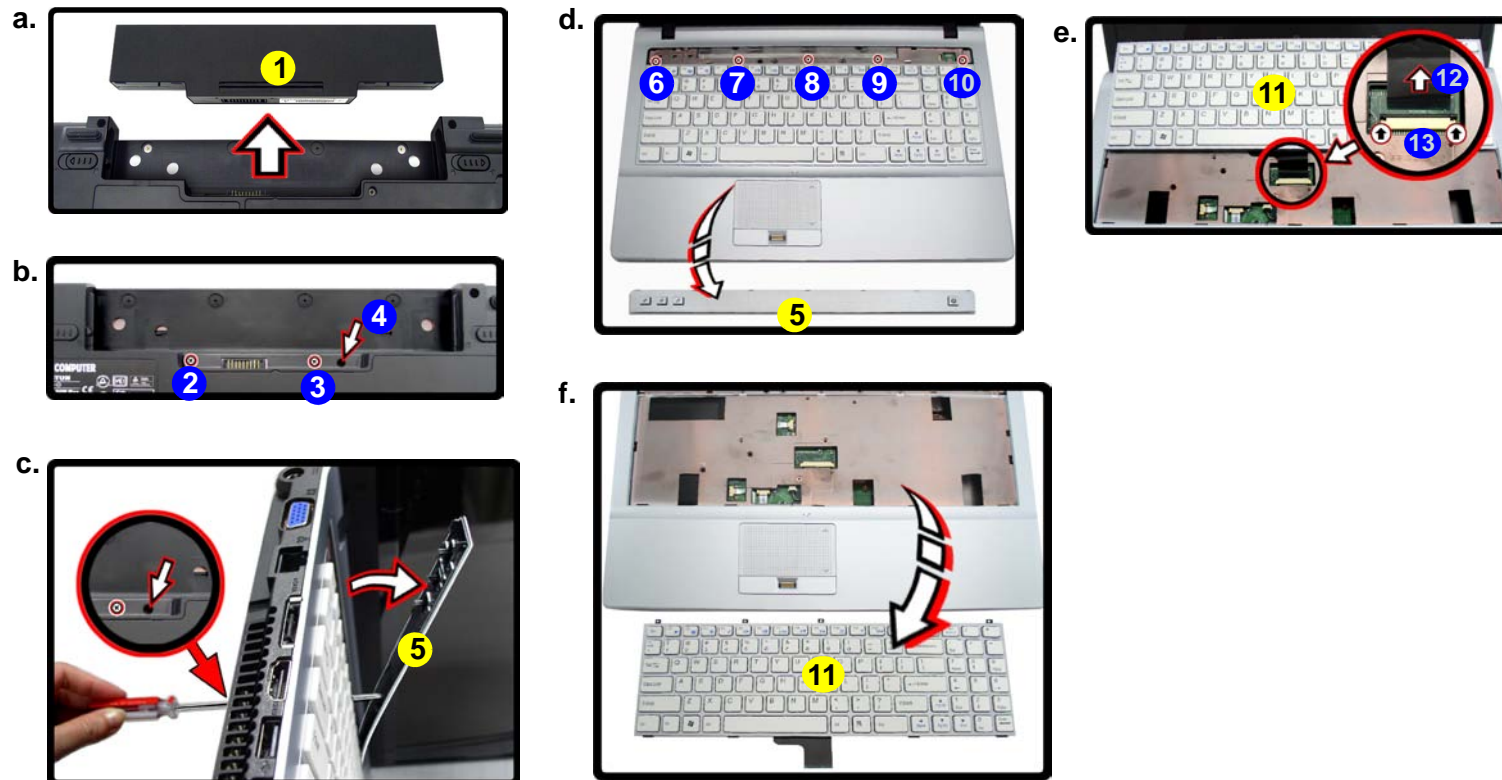
Removing the Keyboard

1. Turn **off** the computer.
2. Remove the battery
3. Remove the screws ② - ③ and use a screwdriver to carefully push out the top cover module ⑤ at point ④.
4. Remove the top cover module ⑤ and the screws ⑥ - ⑩ (*Figure 13d*),
5. Carefully lift the keyboard ⑪ up, being careful not to bend the keyboard ribbon cable (*Figure 13e*).
6. Disconnect the keyboard ribbon cable ⑫ from the locking collar socket ⑬.
7. Carefully lift up the keyboard (*Figure 13f*) off the computer.

Figure 13

Keyboard Removal

- a. Remove the battery.
- b. Remove the screws and use a screwdriver to carefully push out the top cover module at point ④.
- c. Remove the Top cover module.
- d. Remove the screws.
- e. Lift the keyboard up and disconnect the cable from the locking collar.
- f. Remove the keyboard.



- 1. Battery
- 5. Top cover module
- 11. Keyboard

Disassembly

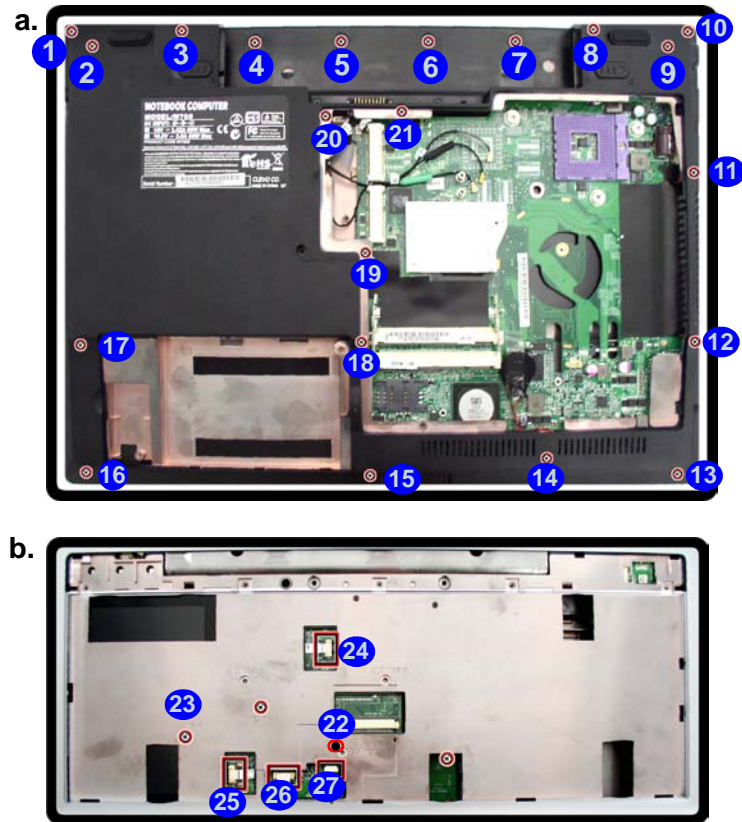
Figure 14

Modem Removal

- a. Remove the screws.
- b. Turn the computer over, remove the screws and disconnect the cable.

Removing the Modem

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)), HDD ([page 2 - 6](#)), component bay cover ([page 2 - 9](#)), optical device ([page 2 - 8](#)), CPU ([page 2 - 12](#)), bluetooth ([page 2 - 16](#)) and keyboard ([page 2 - 17](#)).
2. Remove screws ① - ②① from the bottom case.
3. Turn the computer over, remove screws ②② - ②③ and disconnect cables ②④ - ②⑦ ([Figure 15b](#)).



- 23 Screws

4. Carefully lift the top case **28** up and off the computer (**Figure 15c**).
5. Remove screws **29** - **31** (**Figure 15d**) from the computer.
6. Remove screws **32** - **33** (**Figure 15e**) and disconnect the cable **34** from the modem module.
7. Lift the modem up and separate the modem from the connector **35**.
8. Lift the modem **36** off the computer.

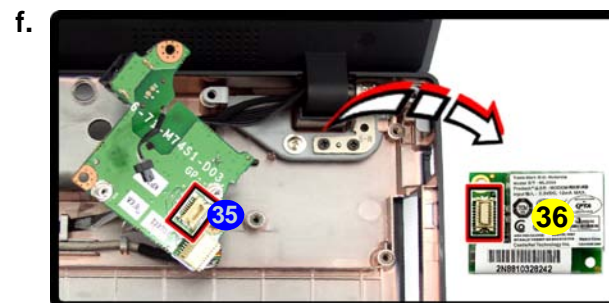
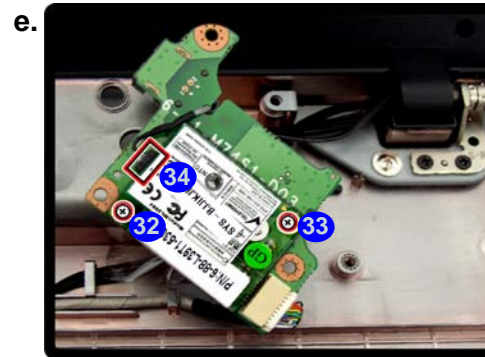
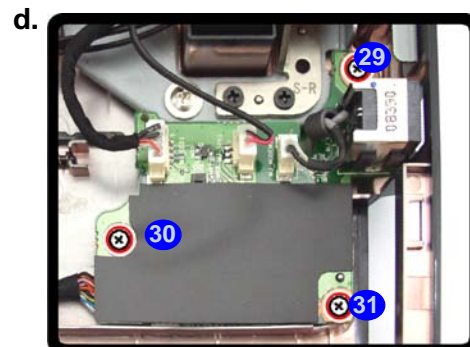
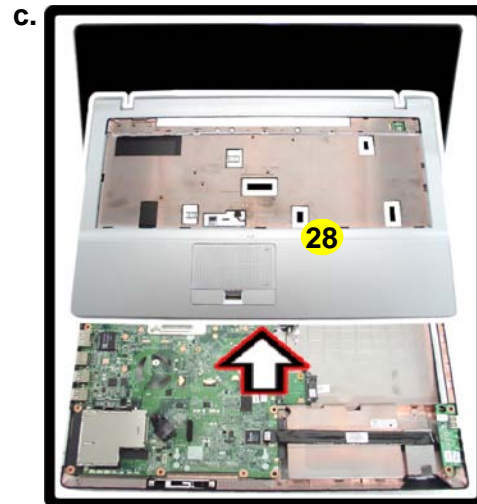


Figure 15
Modem Removal
(cont'd.)

- c. Lift the cover off the computer.
- d. Remove the screws.
- e. Remove the screws and disconnect the connector.
- f. Lift the modem out.



28. Top Case
36. Modem

- 5 Screws

Appendix A: Part Lists

This appendix breaks down the *W760S/W765S* series notebook’s construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

Note: This section indicates the *manufacturer’s* part numbers. Your organization may use a different system, so be sure to cross-check any relevant documentation.

Note: Some assemblies may have parts in common (especially screws). However, the part lists DO NOT indicate the total number of duplicated parts used.

Note: Be sure to check any update notices. The parts shown in these illustrations are appropriate for the system at the time of publication. Over the product life, some parts may be improved or re-configured, resulting in *new* part numbers.

Part Lists

Part List Illustration Location

The following table indicates where to find the appropriate part list illustration.

Table A- 1
**Part List Illustration
Location**

Parts	W760S	W765S
Top without Fingerprint	<i>page A - 3</i>	<i>page A - 4</i>
Bottom	<i>page A - 5</i>	
LCD	<i>page A - 6</i>	
HDD	<i>page A - 7</i>	
DVD-Super-Multi	<i>page A - 8</i>	

Top without Fingerprint (W760S)

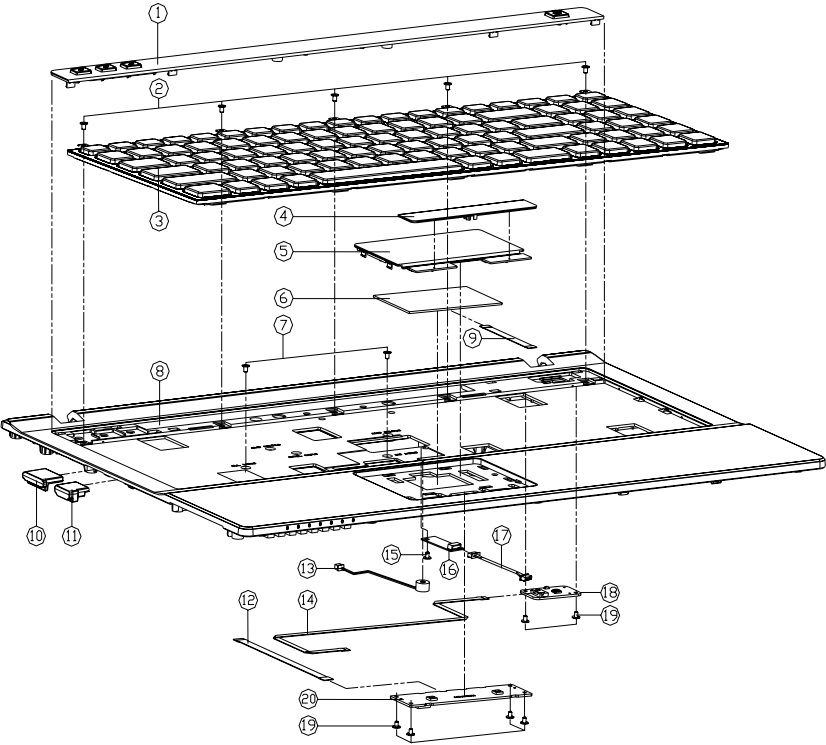


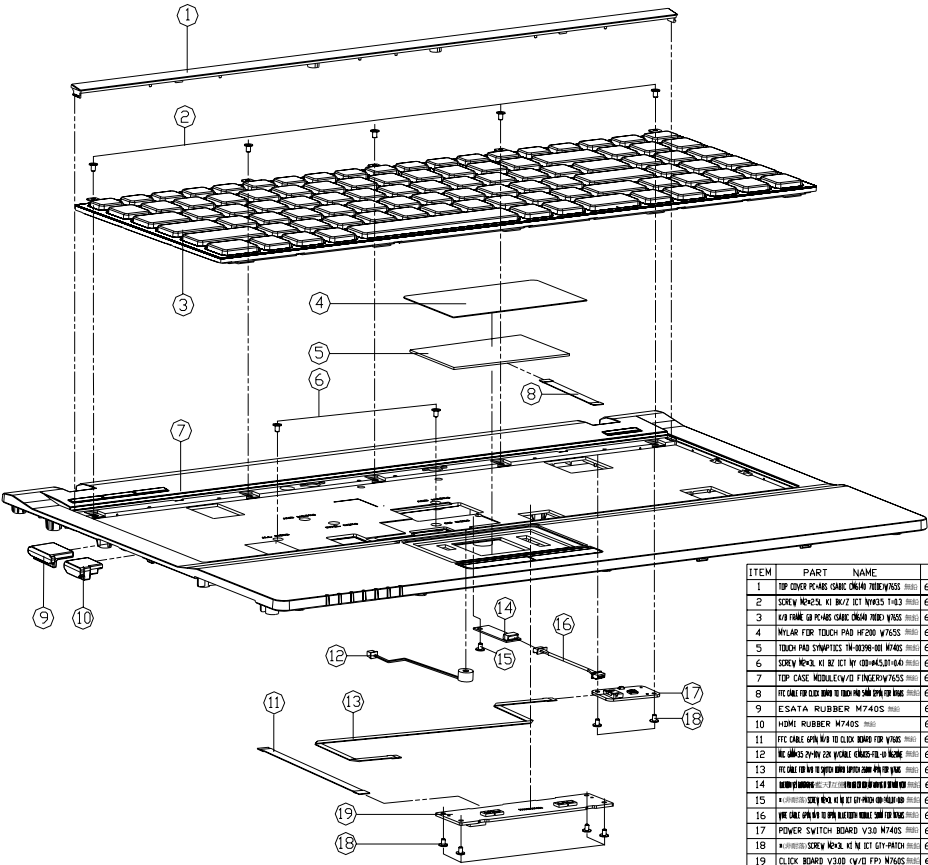
Figure A - 1
Top with
Fingerprint

ITEM	PART	NAME	PART NO	REMARK
1	TOP COVER MODULE	W760S	6-42-W7652-B01	
2	SCREW NICKEL PLATE	W760S	6-35-B6120-2H8	
3	SCREW NICKEL PLATE	W760S	6-40-W7652-000-1	
4	CLICK BUTTON COVER	W760S	6-42-W7652-000	
5	CLICK BUTTON PLATE	W760S	6-42-W7652-011	
6	TOUCH PAD SWAPPLERS	W760S	6-49-W7452-010	
7	SCREW NICKEL PLATE	W760S	6-35-B6120-3R0	
8	TOP CASE MODULE	W760S	6-39-W7652-012 FOR W760S	
9	TOP CASE MODULE	W760S-C	6-39-W7652-012-C FOR W760S-C	
10	REAR COVER	W760S	6-43-W7652-041	
11	ESATA RUBBER	W760S	6-47-W7452-030	
12	HDMI RUBBER	W760S	6-47-W7452-020	
13	FFC CABLE	W760S	6-43-W7652-020	
14	REAR COVER	W760S	6-23-EM62C-010	
15	REAR COVER	W760S	6-43-W7652-010	
16	REAR COVER	W760S	6-35-B6120-3R0	
17	REAR COVER	W760S	6-40-W7375-3Y00	(OPTION)
18	REAR COVER	W760S	6-43-W7652-011	(OPTION)
19	POWER SWITCH BOARD	W760S	6-77-W7452-003	
20	CLICK BOARD	W760S	6-35-B6120-3R0	
21	CLICK BOARD	W760S	6-77-W7652-000-1	

Part Lists

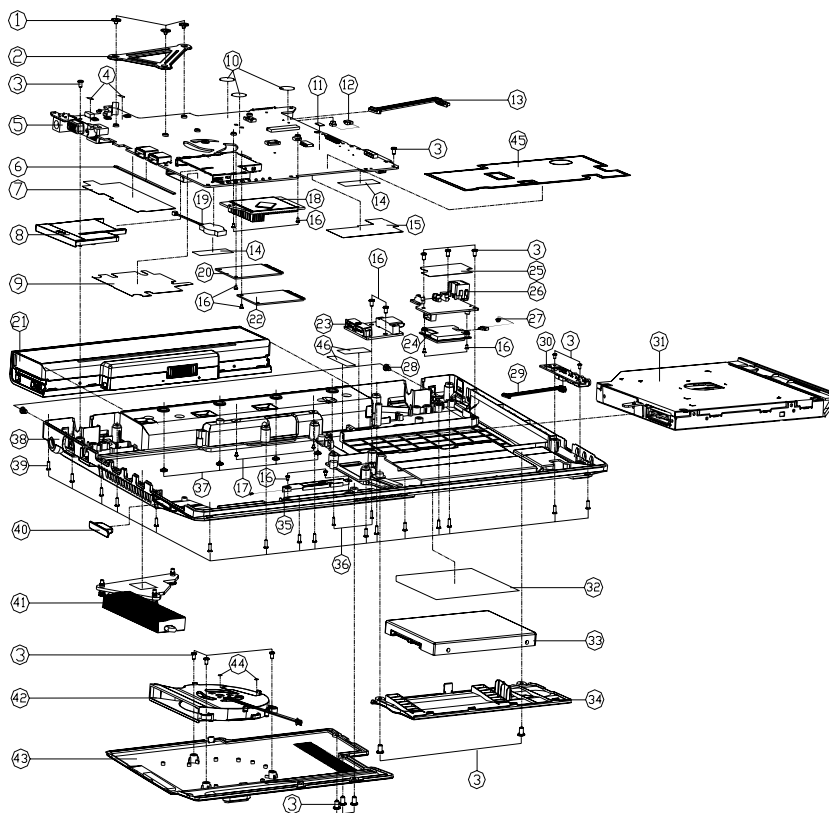
Top without Fingerprint (W765S)

Figure A - 2
Top with
Fingerprint



ITEM	PART NAME	PART NO	REMARK
1	TOP COVER PLATE (CASE) (W765S) (W765S)	6-42-W765S-000	
2	SCREW (M2.5X1.0) (W765S) (W765S)	6-35-B6120-2R0	
3	DISPLAY PANEL (W765S) (W765S)	6-40-W765S-000-1	
4	TOUCH PAD (W765S) (W765S)	6-49-W765S-000	
5	TOUCH PAD COVER (W765S) (W765S)	6-49-W765S-000	
6	TOUCH PAD BRACKET (W765S) (W765S)	6-39-B6120-3RD	
7	TOP CASE (MODULE) (W765S) (W765S)	6-39-W765S-000	
8	TOUCH PAD CABLE (W765S) (W765S)	6-43-W765S-041	
9	ESATA RUBBER (W765S) (W765S)	6-47-W765S-030	
10	HDMI RUBBER (W765S) (W765S)	6-47-W765S-020	
11	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-43-W765S-000	
12	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-23-EM62E-010	
13	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-43-W765S-010	
14	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-88-W7315-3900	(OPTION)
15	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-35-B1120-3RD	
16	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-43-W765S-011	(OPTION)
17	POWER SWITCH BOARD (W765S) (W765S)	6-77-W765S-003	
18	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-35-B1120-3RD	
19	TOUCH PAD CABLE TO TOUCH PAD BRACKET (W765S) (W765S)	6-77-W765S-003-1	

Bottom

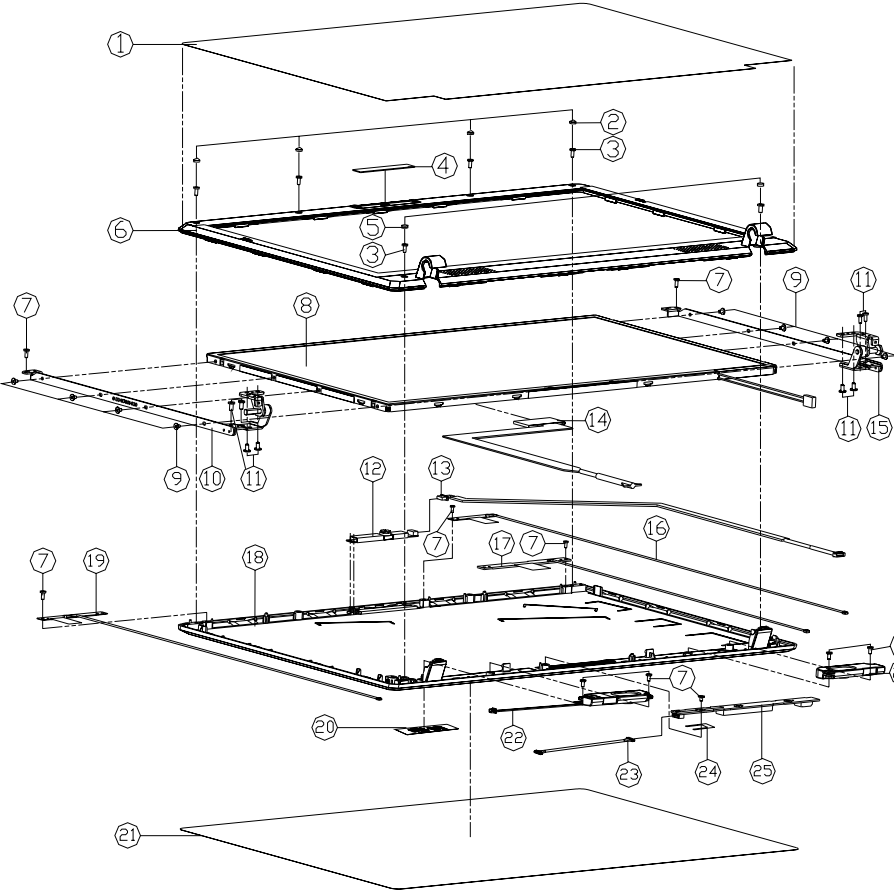


ITEM	PART	NAME	PART NO	REMARK
1	4-35-0105	WALB FIBER OPTIC CABLE 100 FT 40	4-35-0105-0105	
2	CPU SUPERIOR MODEL 481	W745S	4-6-33-04025-SRA	
3	SCREW M4X4L INT BOLT 1/2 IN	NY-16	4-35-06125-SRA	
4	WALB SCAFFOLD FIBER OPTIC 100 FT	4-6-33-04025-SRA	4-6-33-04025-SRA	
5	MAIN BRIDGE BRIDGE 100 FT	W745S	4-6-33-04025-SRA	BLUETON
6	MAIN BRIDGE BRIDGE 100 FT	W745S	4-6-33-04025-SRA	BLUETON
7	HEAT SHIELD W/ALB FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
8	DUNNY W/ALB FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
9	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
10	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
11	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
12	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
13	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
14	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
15	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
16	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
17	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
18	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
19	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
20	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
21	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
22	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
23	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
24	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
25	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
26	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
27	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
28	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
29	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
30	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
31	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
32	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
33	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
34	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
35	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
36	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
37	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
38	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
39	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
40	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
41	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
42	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
43	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
44	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
45	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
46	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
47	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
48	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
49	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	
50	NEW CARBON FIBER OPTIC 100 FT	W745S	4-6-33-04025-SRA	

Figure A - 3
Bottom

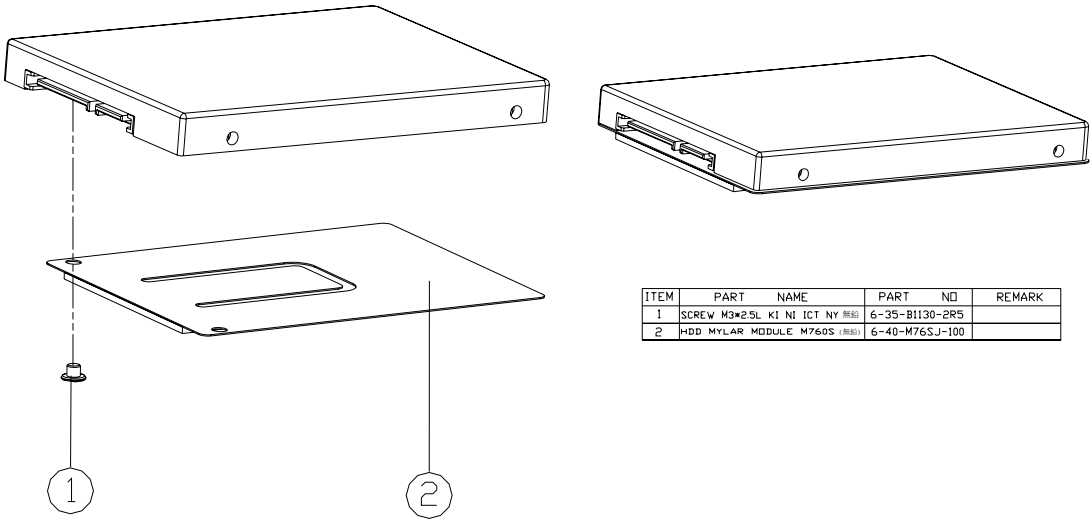
LCD

Figure A - 4
LCD



ITEM	PART NAME	PART NO	REMARK
1	LCD PROTECT FILM (W/PROTECT FILM) (W/PROTECT FILM)	6-40-W76S1-041	
2	LCD PROTECT FILM (W/PROTECT FILM) (W/PROTECT FILM)	6-47-W76S1-050	
3	SCREW NUTS (W/PROTECT FILM) (W/PROTECT FILM)	6-35-B6120-5R0	
4	CCD LINES (W/PROTECT FILM) (W/PROTECT FILM)	6-42-W76S1-011	W/ CCD
5	CCD LINES (W/PROTECT FILM) (W/PROTECT FILM)	6-42-W76S1-020	W/D CCD
6	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
7	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
8	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
9	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
10	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
11	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
12	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
13	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
14	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
15	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
16	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
17	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
18	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
19	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
20	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
21	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
22	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
23	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
24	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
25	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	
26	LCD FRONT COVER MODULE (W/PROTECT FILM) (W/PROTECT FILM)	6-39-W76S1-012	

HDD



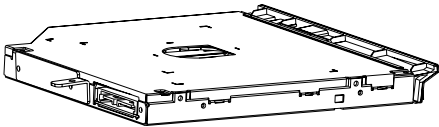
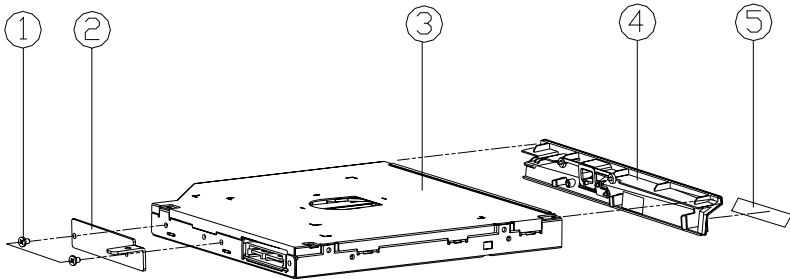
ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*2.5L K1 NI ICT NY (H8)	6-35-B1130-2R5	
2	HDD MYLAR MODULE M760S (H8)	6-40-M76SJ-100	

Figure A - 5
HDD

Part Lists

SATA DVD SUPER-MULTI

Figure A - 6
SATA DVD SUPER-MULTI



ITEM	PART NAME	PART NO.	REMARK
1	CD ROM BRACKET SECC: 6060 W740S 無鉛	6-35-B1120-3RD	
2	CD ROM BRACKET SECC: 6060 W740S 無鉛	6-33-W74SZ-012-1	
3	SATA DVD SUPER MULTI 5 1/4" 24X / 8X 12.7MM 無鉛	6-85-A0724-501	FOR HLDS
3	SATA DVD SUPER MULTI 5 1/4" 24X / 8X 12.7MM 無鉛	6-85-A0724-T02	FOR TSST
4	DDD BEZEL MODULE 黒色 W760S 無鉛	6-42-W76SZ-102	
5	DDD BEZEL LABEL(SUPER MULTI) W760S 無鉛	6-45-W76SZ-010	

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the **W760S/W765S** notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

Diagram - Page	Diagram - Page	Diagram - Page
<i>System Block Diagram - Page B - 2</i>	<i>968 PCI, IDE, MuTIOL, SPI 1/4 - Page B - 15</i>	<i>LED, PC Beep, TP, FP - Page B - 28</i>
<i>Penryn (Socket-P) 1/2 - Page B - 3</i>	<i>968 PCIE, LAN, GPIO 2/4 - Page B - 16</i>	<i>System/Ext-VGA Power - Page B - 29</i>
<i>Penryn (Socket-P) 2/2 - Page B - 4</i>	<i>968 USB SATA 3/4 - Page B - 17</i>	<i>AC-IN, Charger - Page B - 30</i>
<i>SiSM672 Host, PCIE 1/5 - Page B - 5</i>	<i>968 PWR, GND 4/4 - Page B - 18</i>	<i>VCORE - Page B - 31</i>
<i>SiSM672 DRAM 2/5 - Page B - 6</i>	<i>Clock Generator & Clock Buffer - Page B - 19</i>	<i>VDD3, VDD5) - Page B - 32</i>
<i>SiSM672 MuTIOL VGA 3/5 - Page B - 7</i>	<i>PHY Realtek 8201CL - Page B - 20</i>	<i>1.05VS, 1.2V, 1.5V - Page B - 33</i>
<i>SiSM672 PWR 4/5 - Page B - 8</i>	<i>KBC ITE8512E - Page B - 21</i>	<i>1.8V, 0.9VS - Page B - 34</i>
<i>SiSM672 GND 5/5 - Page B - 9</i>	<i>JMB385, Card Reader - Page B - 22</i>	<i>Click BD, Finger BD for M76 - Page B - 35</i>
<i>DDRII SO-DIMM - 1 - Page B - 10</i>	<i>Audio Codec ALC662 - Page B - 23</i>	<i>Multi Function Board - Page B - 36</i>
<i>DDRII SO-DIMM - 2 - Page B - 11</i>	<i>Audio AMP - Page B - 24</i>	<i>Audio Board - Page B - 37</i>
<i>SiS307ELV - Page B - 12</i>	<i>SATA HDD, PWR, LID - Page B - 25</i>	<i>Power Switch Board for M74 - Page B - 38</i>
<i>Panel, CRT - Page B - 13</i>	<i>Multi I/O, ODD, 3G, Click BD for M74 - Page B - 26</i>	<i>External ODD Board for W76 - Page B - 39</i>
<i>Inverter, Bluetooth, Fan - Page B - 14</i>	<i>New Card, Mini PCIE, USB - Page B - 27</i>	

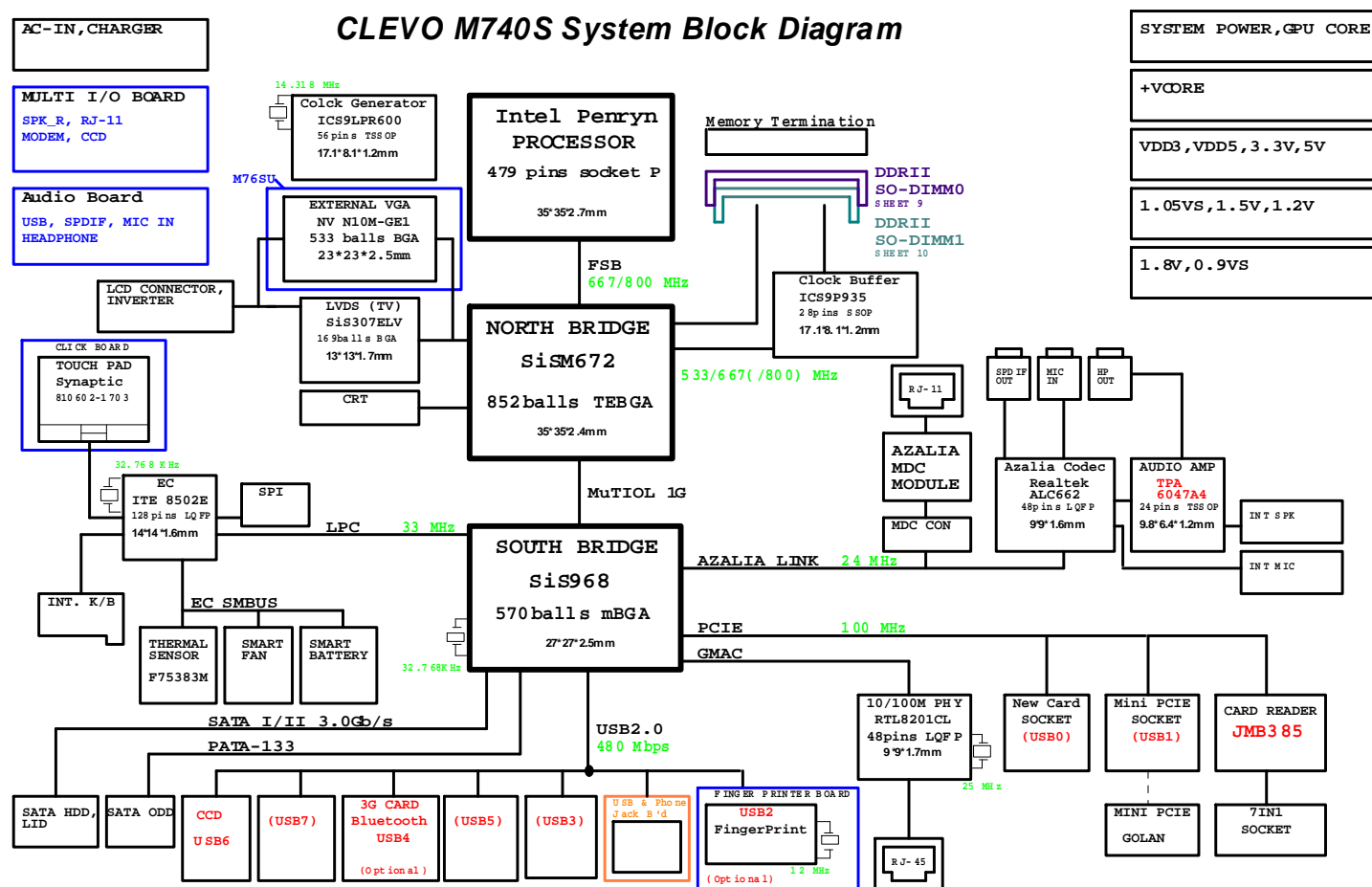
Table B - 1
**Schematic
Diagrams**



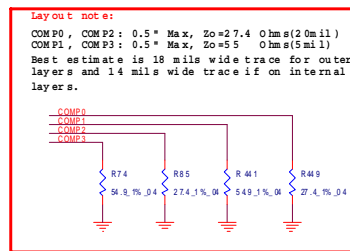
Version Note

The schematic diagrams in this chapter are based upon version 6-7P-M74SA-001. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

Sheet 1 of 38
System Block
Diagram



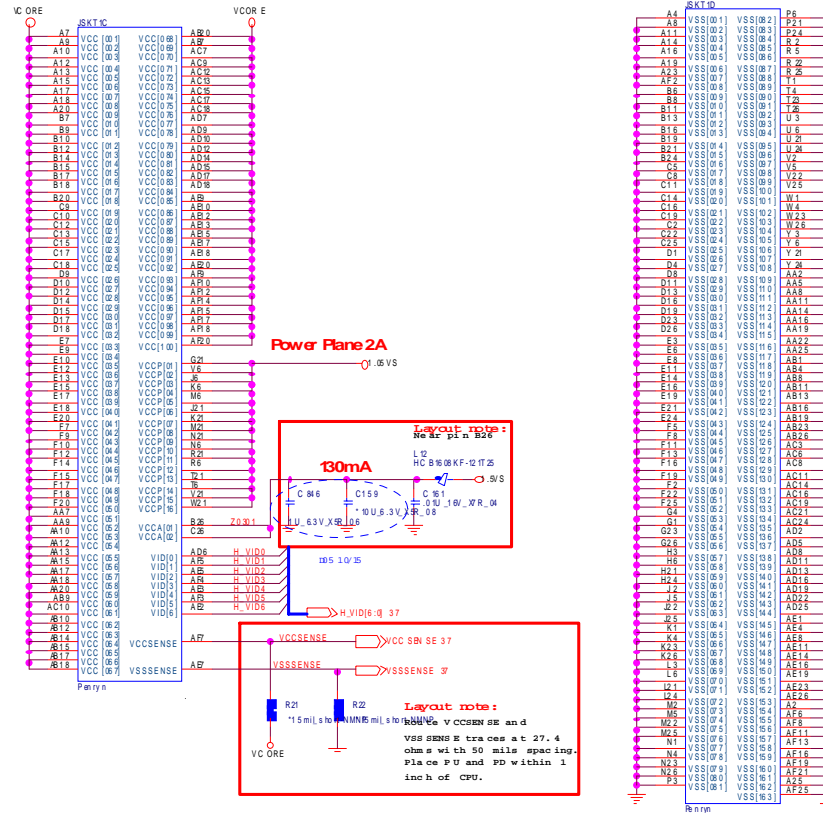
Sheet 2 of 38
Penryn (Socket-P)
1/2



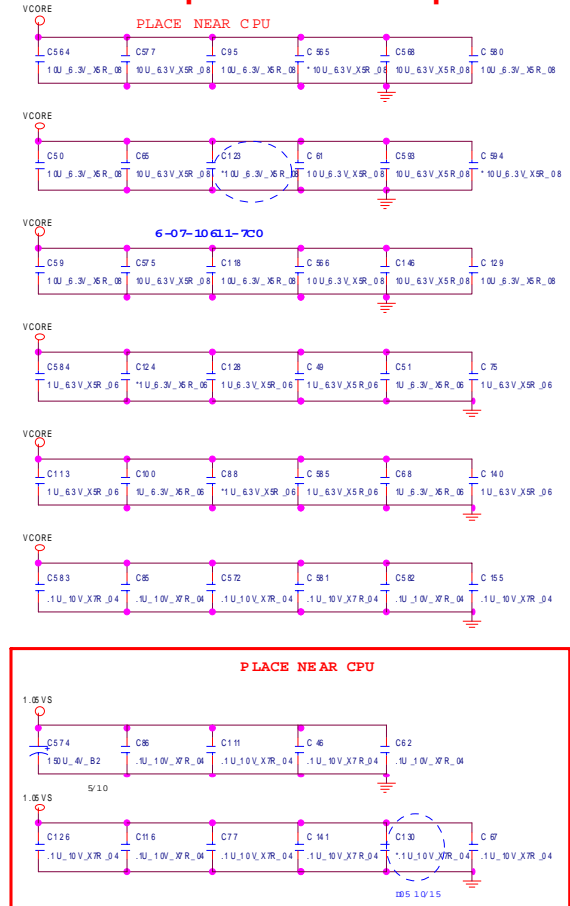
Schematic Diagrams

Penryn (Socket-P) 2/2

Sheet 3 of 38
Penryn (Socket-P)
2/2

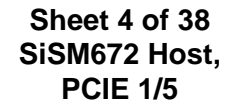


Check cap for santa rosa platform



105VS 2.46 72439
15VS 6.3 35
VCCOR E 37

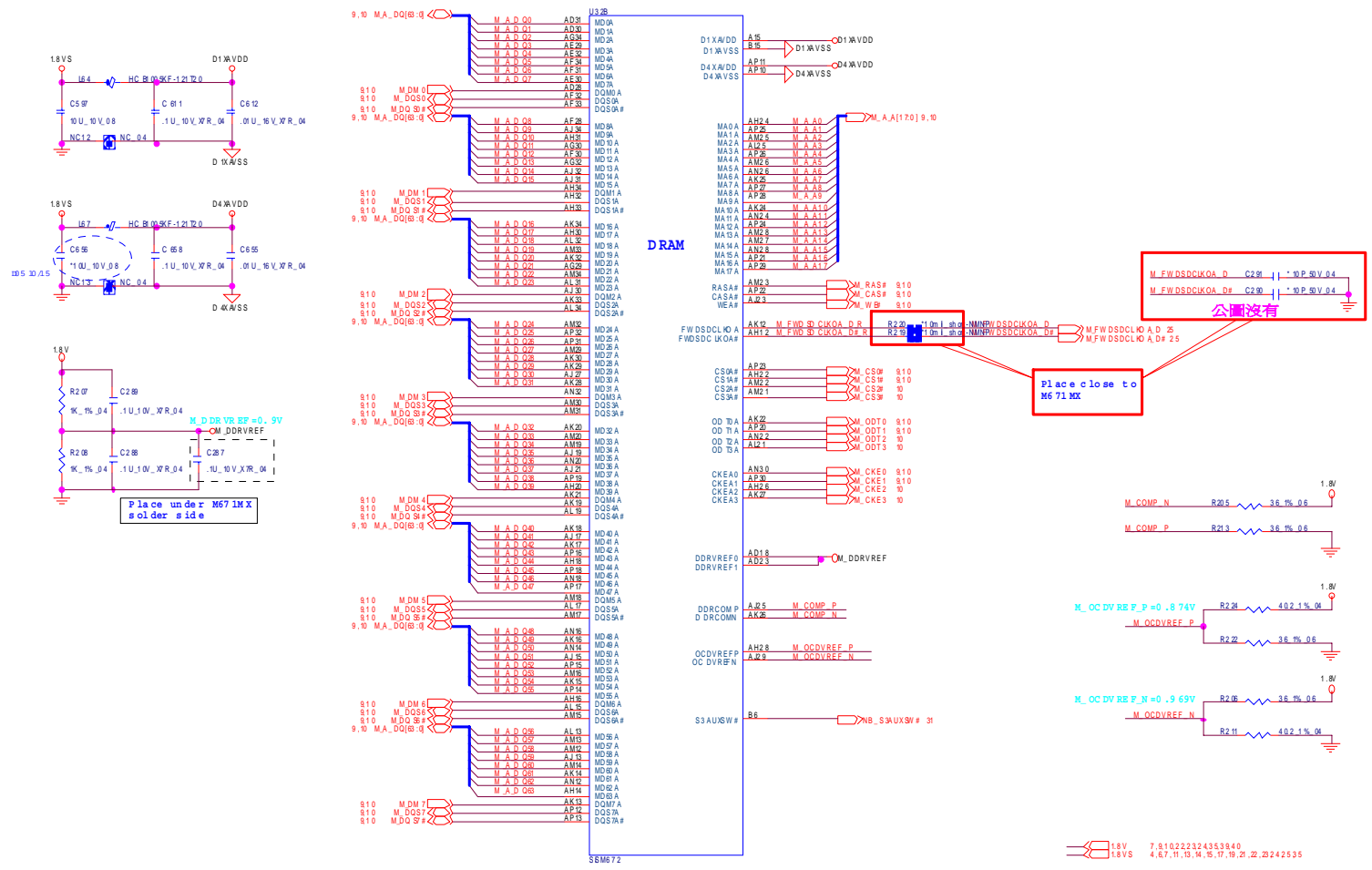
1.0 5/S

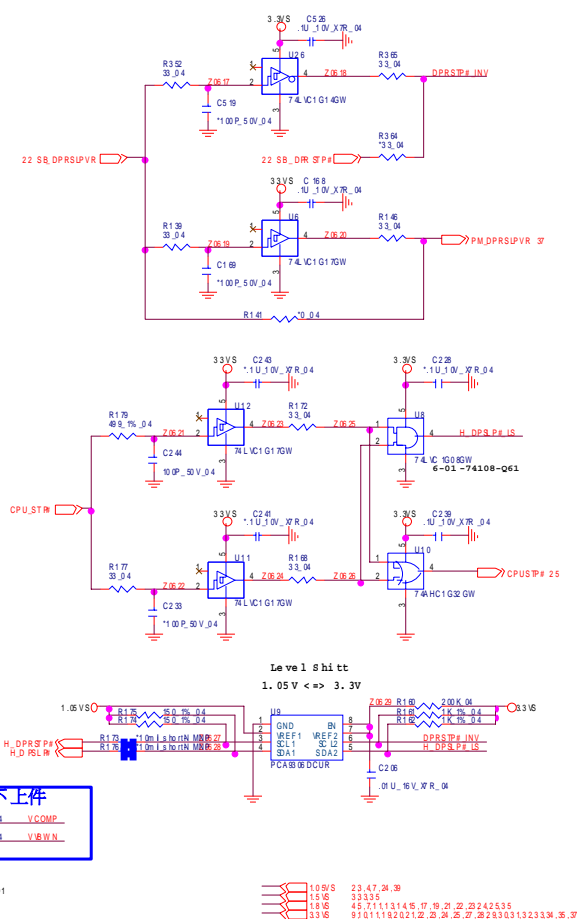


Schematic Diagrams

SiSM672 DRAM 2/5

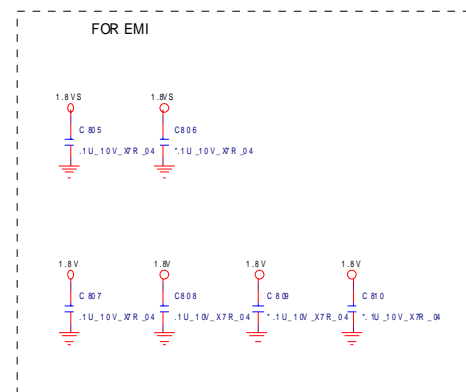
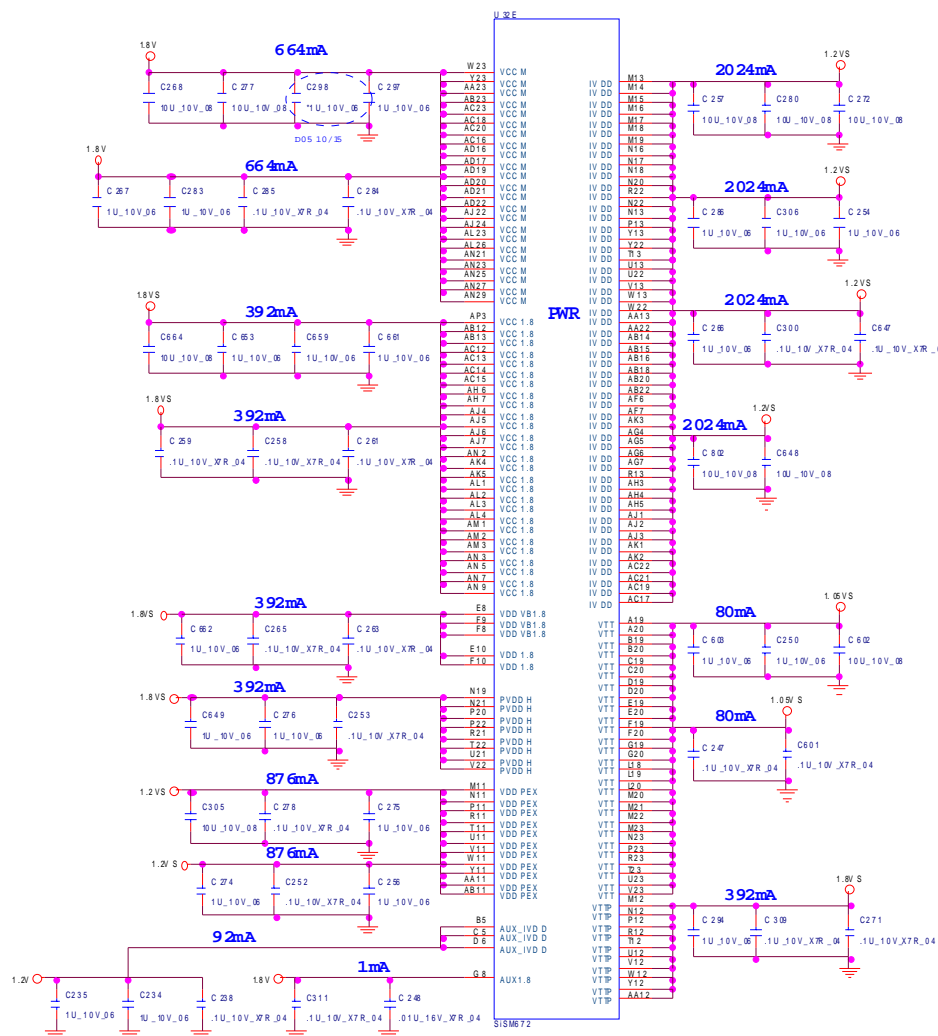
Sheet 5 of 38
SiSM672 DRAM 2/5





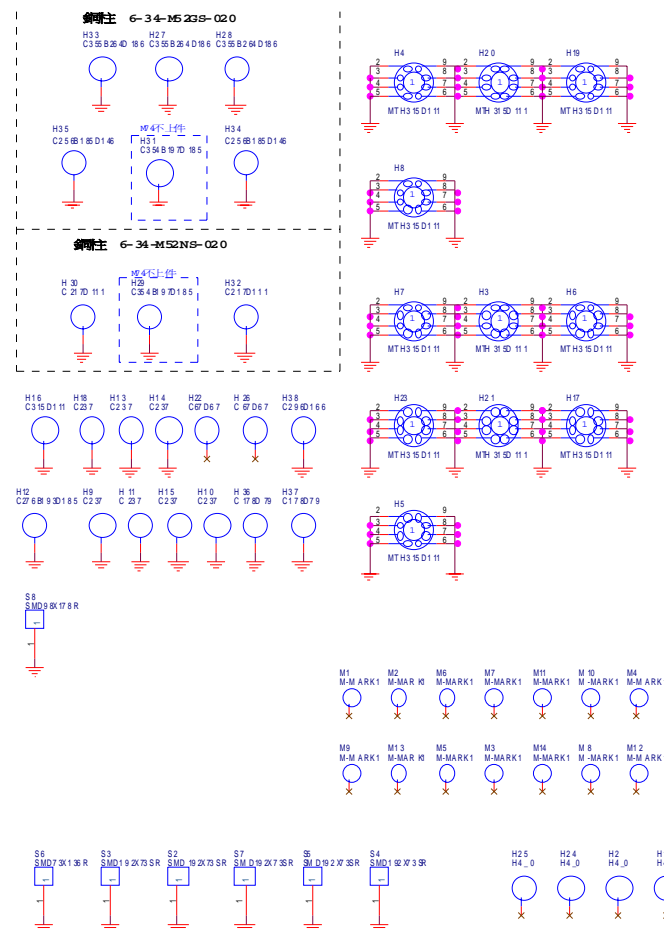
SiSM672 PWR 4/5

Sheet 7 of 38
SiSM672 PWR 4/5



1.05V S	2,3,4,6,24,39
1.2V	35,39
1.2VS	4,35
1.8V	5,9,10,22,23,24,35,39,40
1.8VS	4,5,6,11,13,14,15,17,19,21,22,23,24,25,38

Sheet 8 of 38
SiSM672 GND 5/5



SO-DIMM 1

[illegible]

這部份公圖沒有！

CLK_DDR0

C364

3.3P_50V_04

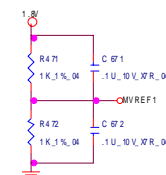
CLK_DDR0#

CLK_DDR1

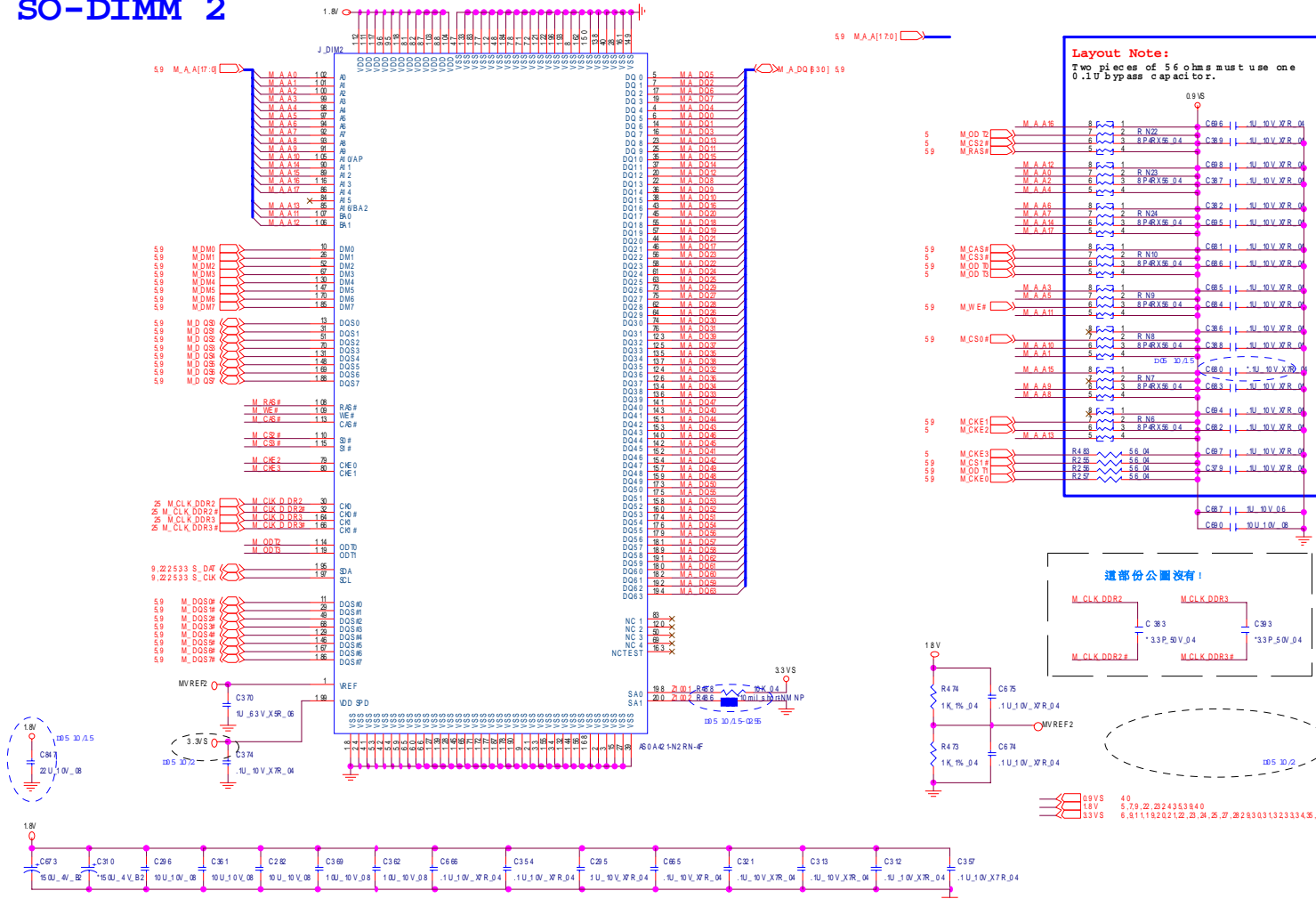
C366

3.3P_50V_01

CLK_DDR1#



 1.8V 5, 7, 10, 22, 32, 43, 539, 40
 3.3VS 6, 10, 11, 19, 20, 21, 22, 32, 42, 52, 7, 28, 29, 30, 31, 32, 33, 34, 35, 37



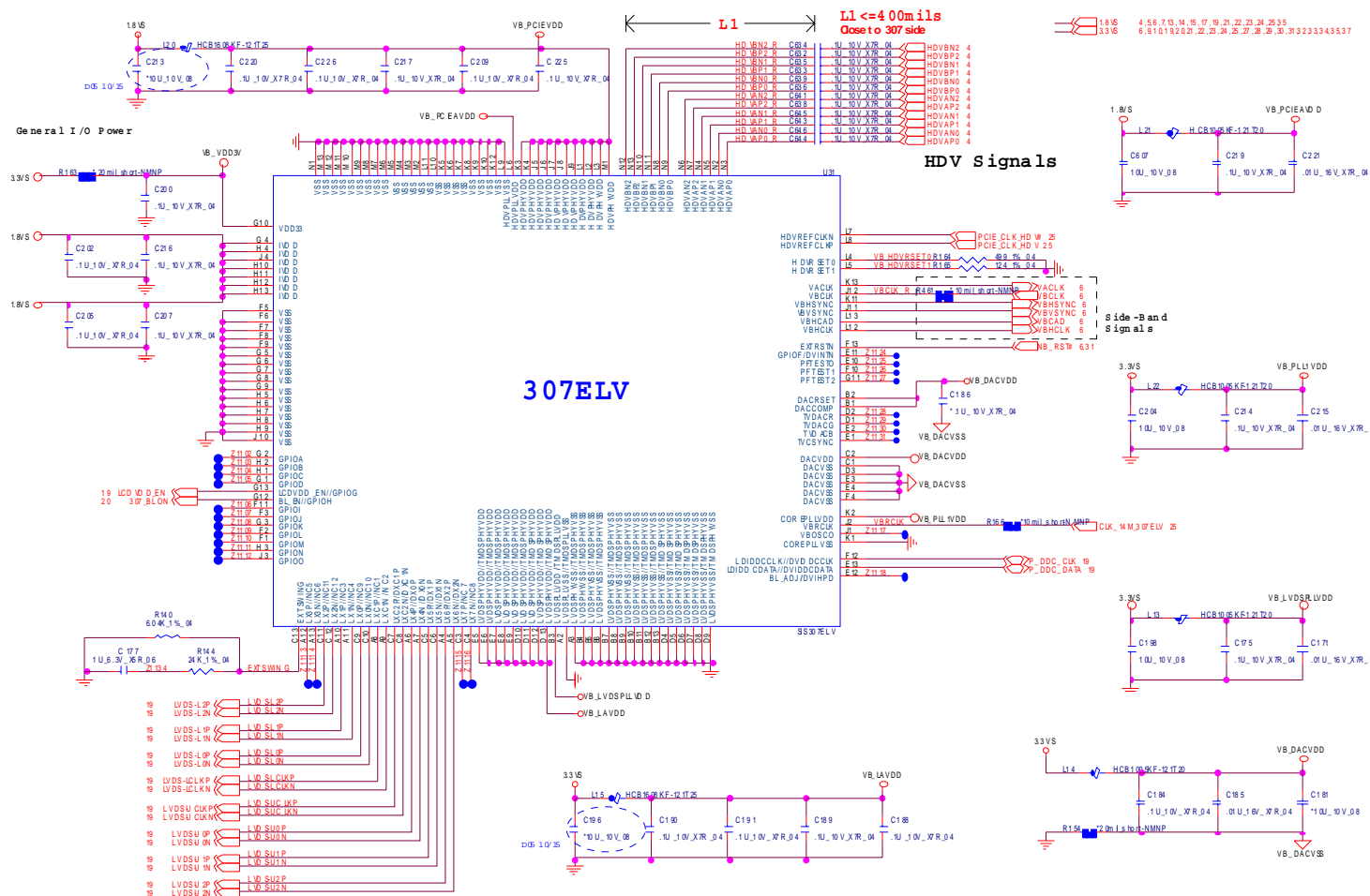
Sheet 10 of 38
DDRII SO-DIMM - 2

B. Schematic Diagrams

SiS307ELV

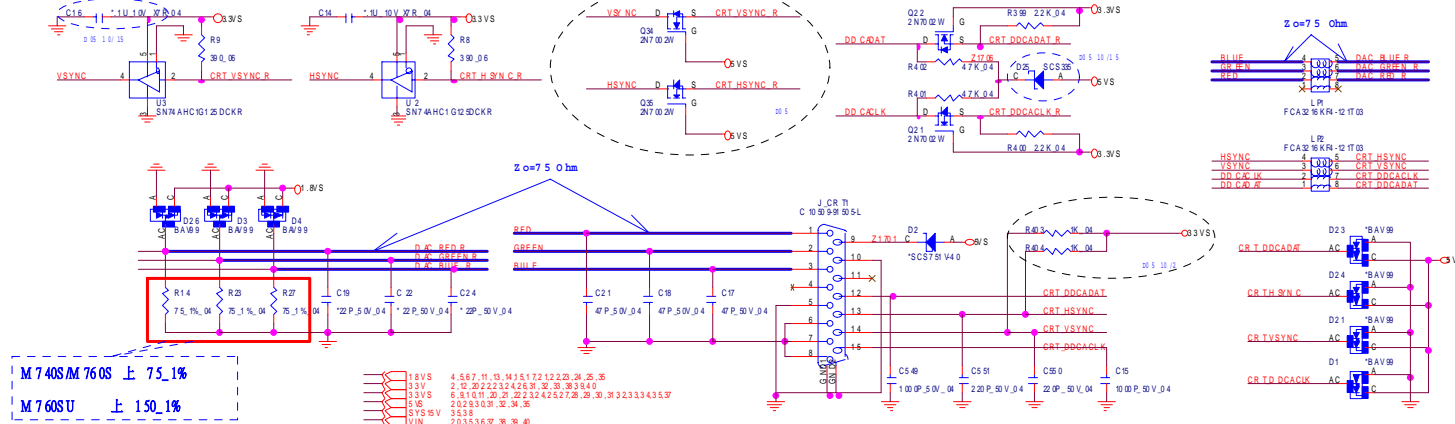
B.Schematic Diagrams

Sheet 11 of 38
SiS307ELV

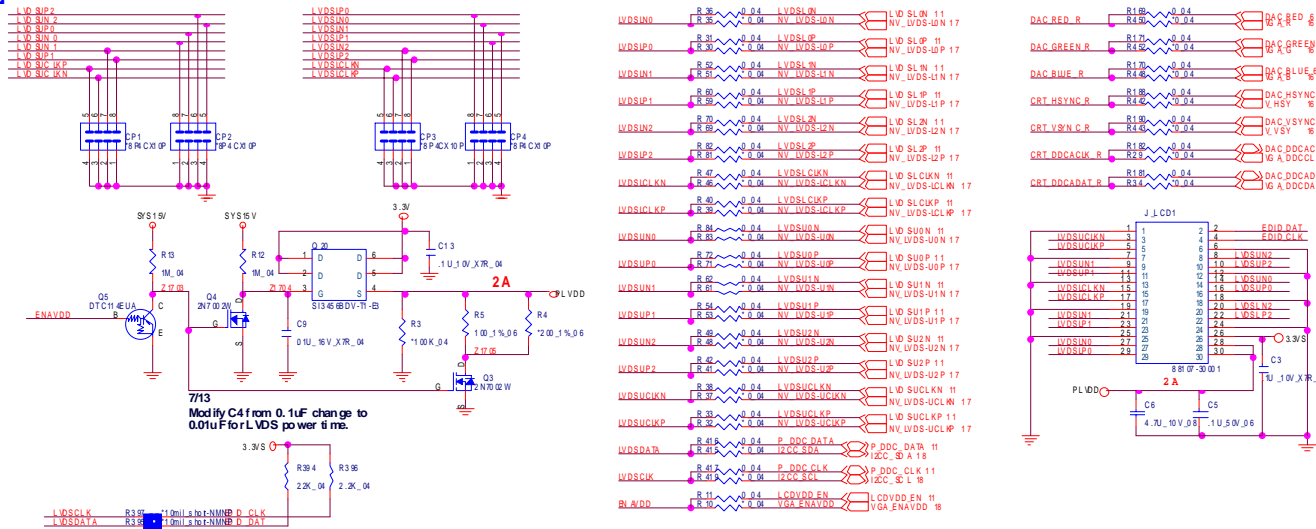


Panel, CRT

CRT



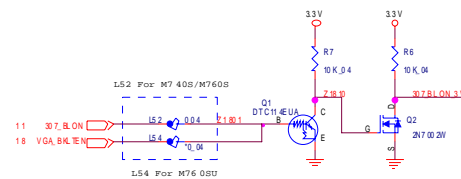
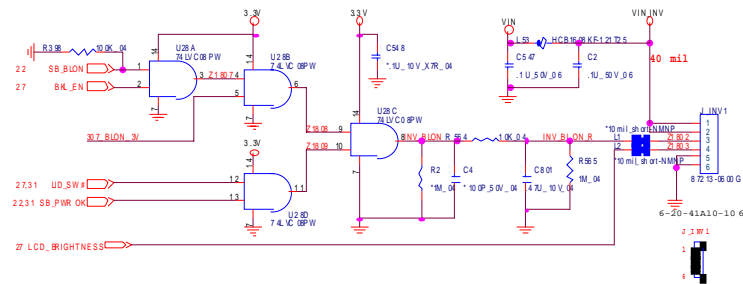
PANEL

Sheet 12 of 38
Panel, CRT

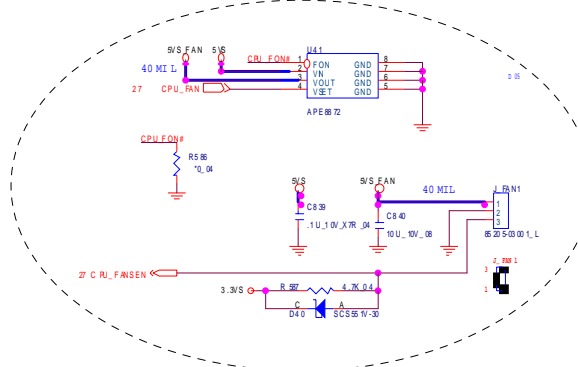
Inverter, Bluetooth, Fan

Sheet 13 of 38
Inverter, Bluetooth,
Fan

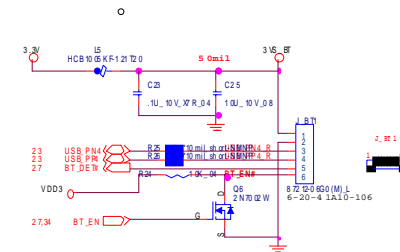
INVERTER CONNECTOR



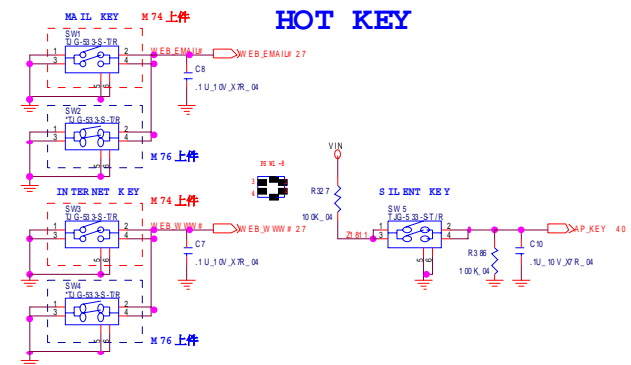
FAN CONTROL



Bluetooth

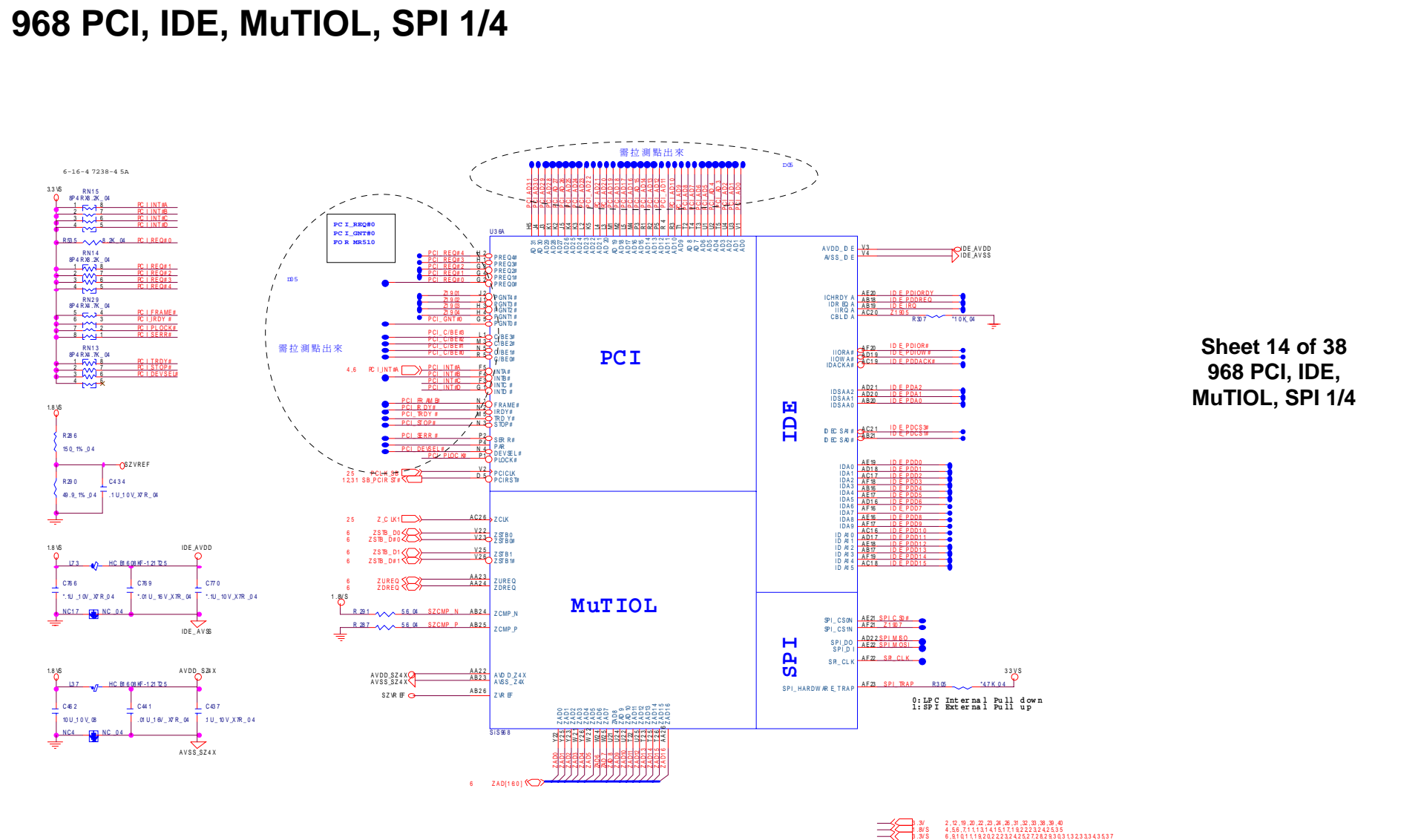


HOT KEY

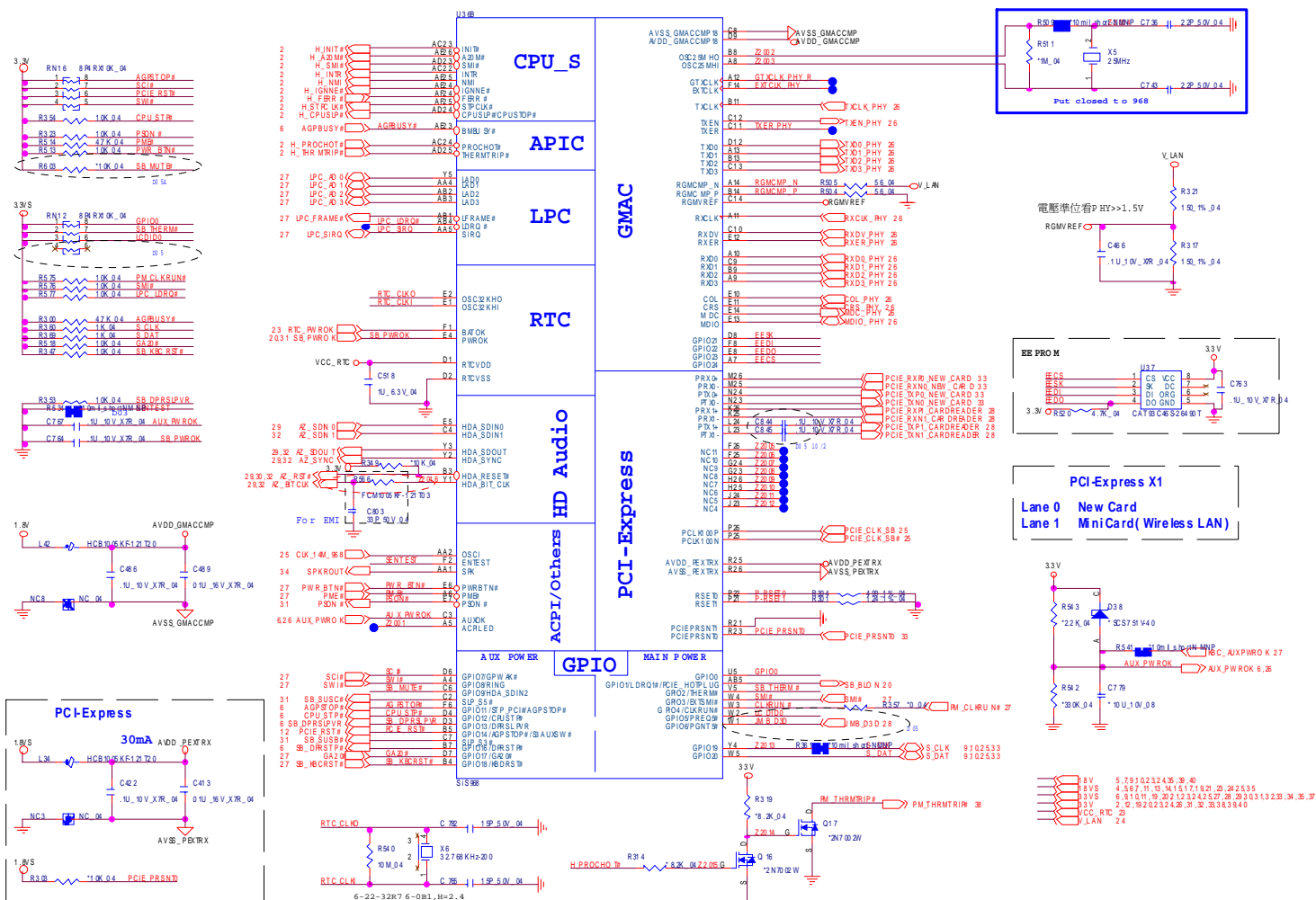


- | | | |
|--|-------|--|
| | 5 V | 1, 9, 2, 3, 0, 31, 32, 34, 35 |
| | 6 V | 2, 12, 19, 2, 2, 3, 2, 4, 26, 31, 32, 33, 8, 3, 9, 4, 0 |
| | 6 V S | 6, 8, 1, 0, 11, 19, 21, 2, 2, 2, 3, 2, 4, 2, 5, 27, 28, 29, 3, 0, 3, 1, 3, 2, 33, 34, 35, 37 |
| | DD3 | 2, 23, 27, 3, 4, 3, 5, 3, 6, 38, 40 |
| | VIN | 3, 5, 3, 6, 3, 7, 38, 39, 40 |

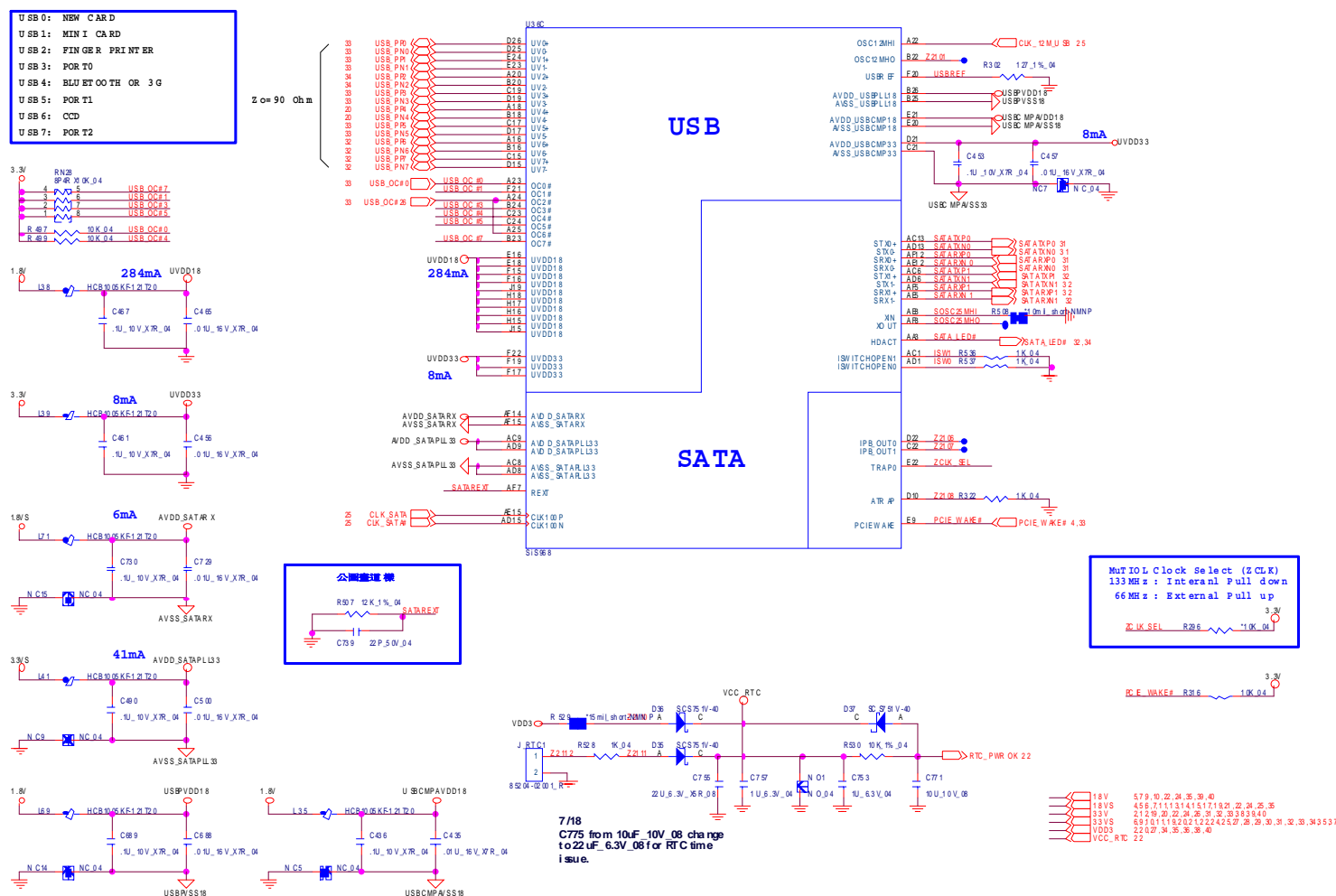
968 PCI, IDE, MuTIOL, SPI 1/4



Sheet 15 of 38
968 PCIE, LAN,
GPIO 2/4



968 USB SATA 3/4 B - 17

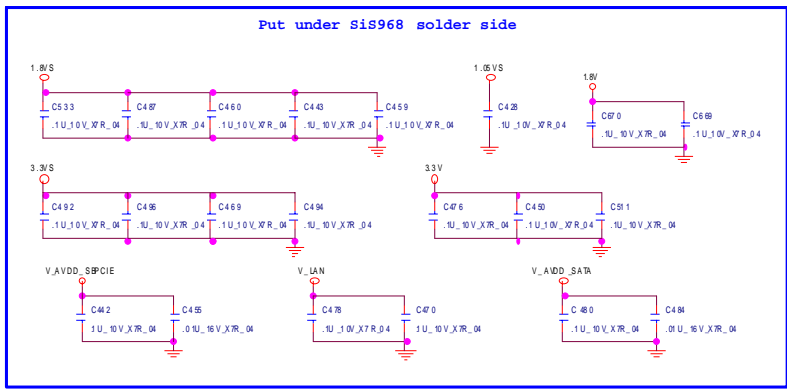
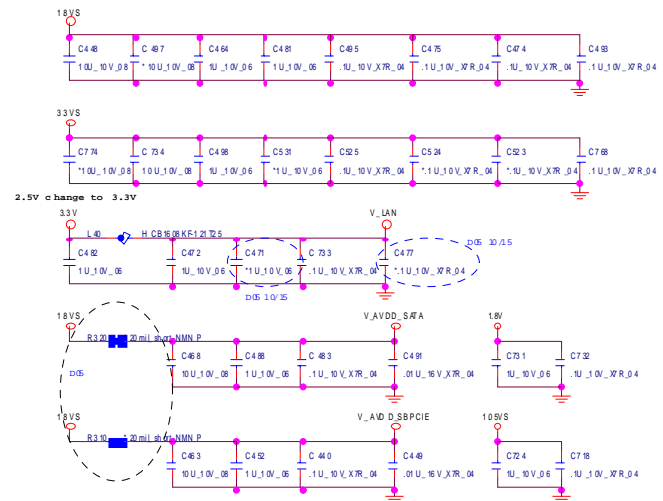
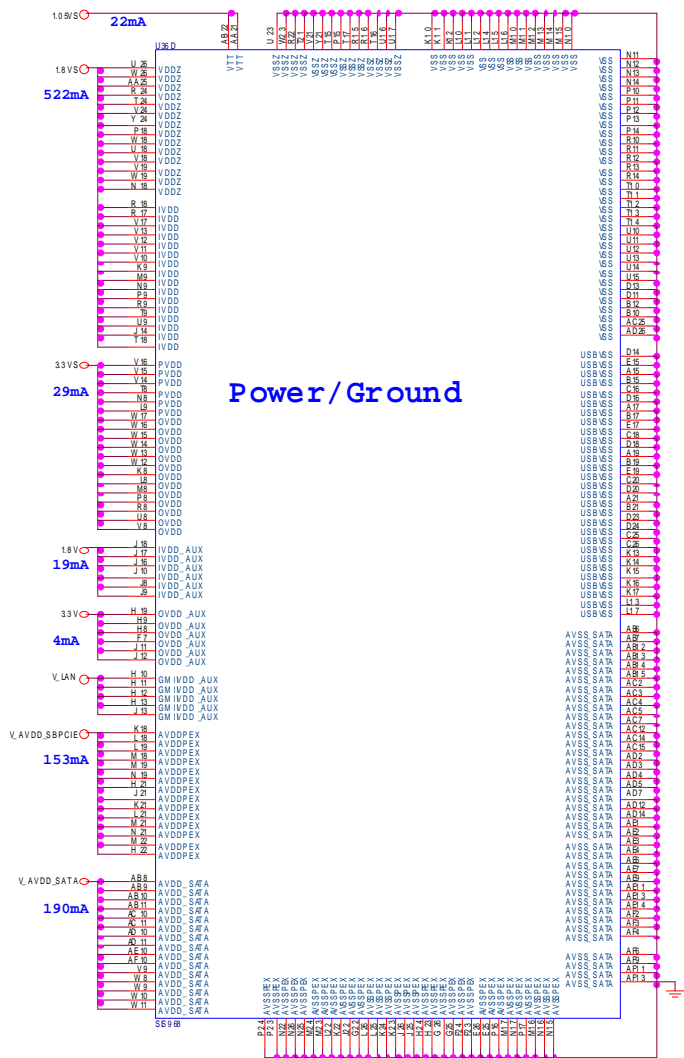


Schematic Diagrams

968 PWR, GND 4/4

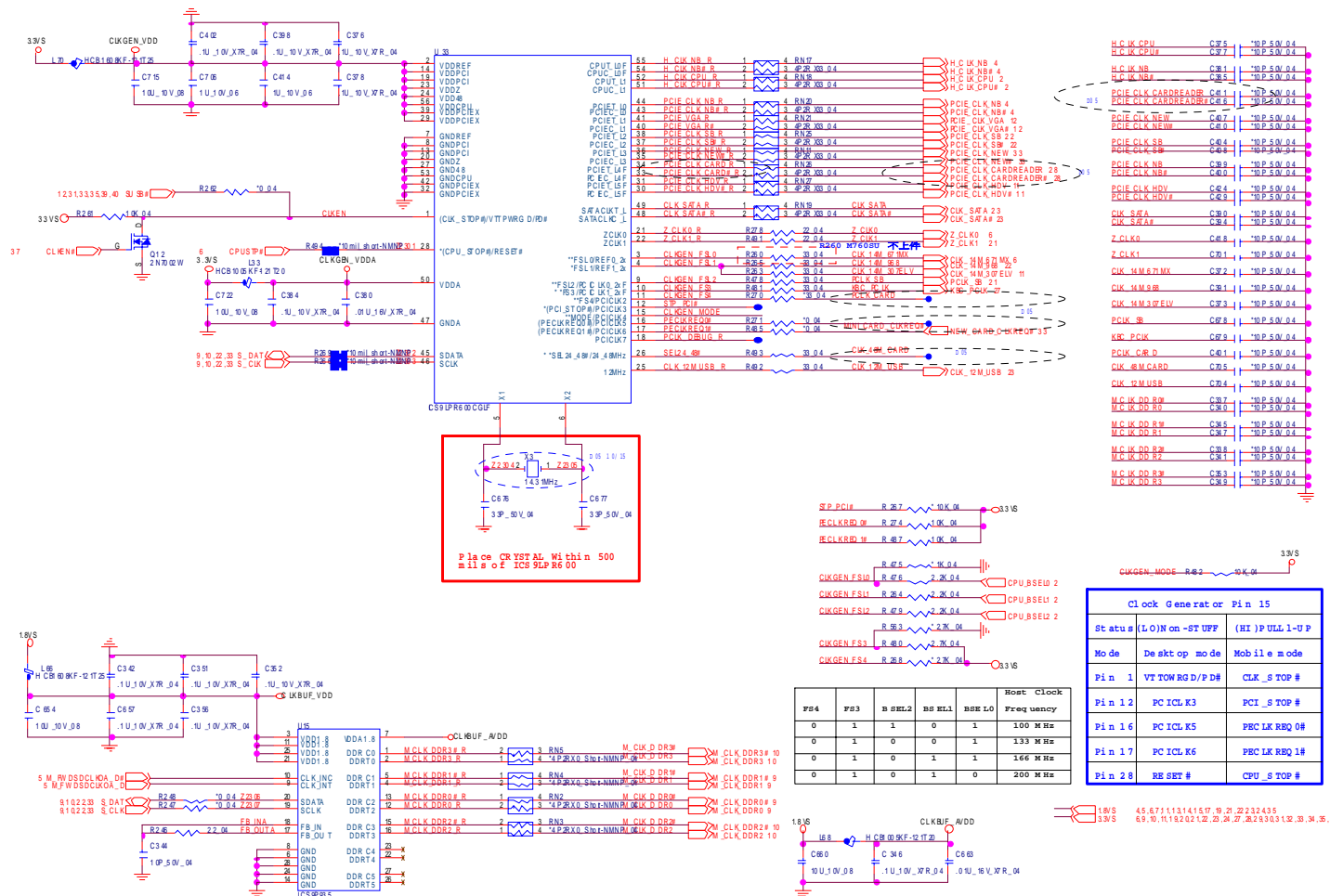
Sheet 17 of 38
968 PWR, GND 4/4

Power / Ground



1.8V	2,345,739
3.3V	5,791,022,333,840
1.8V	4,657,113,14,15,16,17,18,19,20,21,22,23,25,26
3.3V	2,12,19,20,22,23,26,31,32,33,38,40
1.8V	5,11,11,19,20,21,22,25,26,27,28,29,30,31,32,33,34,35,37
1.8V	22

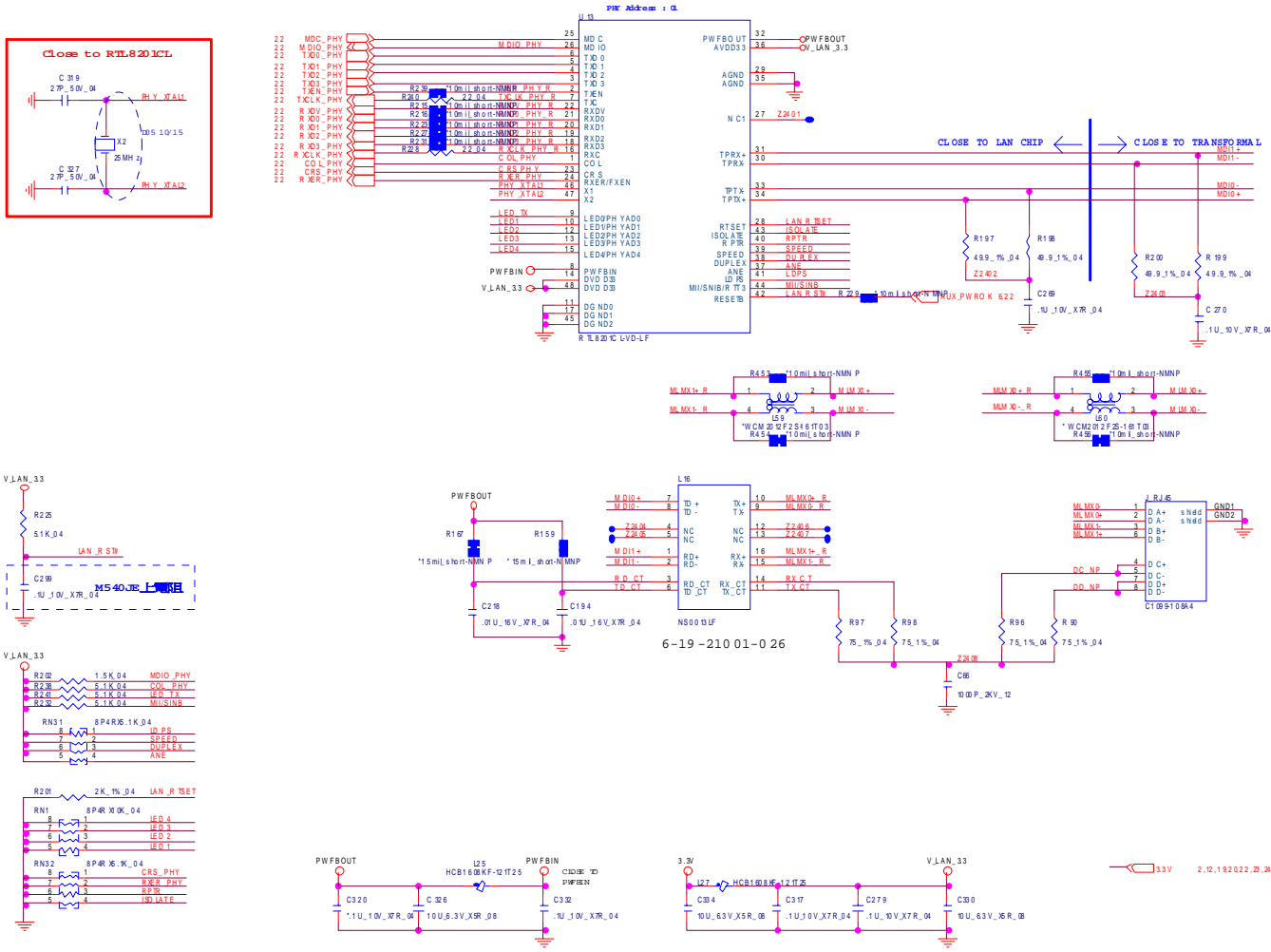
Clock Generator & Clock Buffer



Schematic Diagrams

PHY Realtek 8201CL

Sheet 19 of 38
PHY Realtek
8201CL

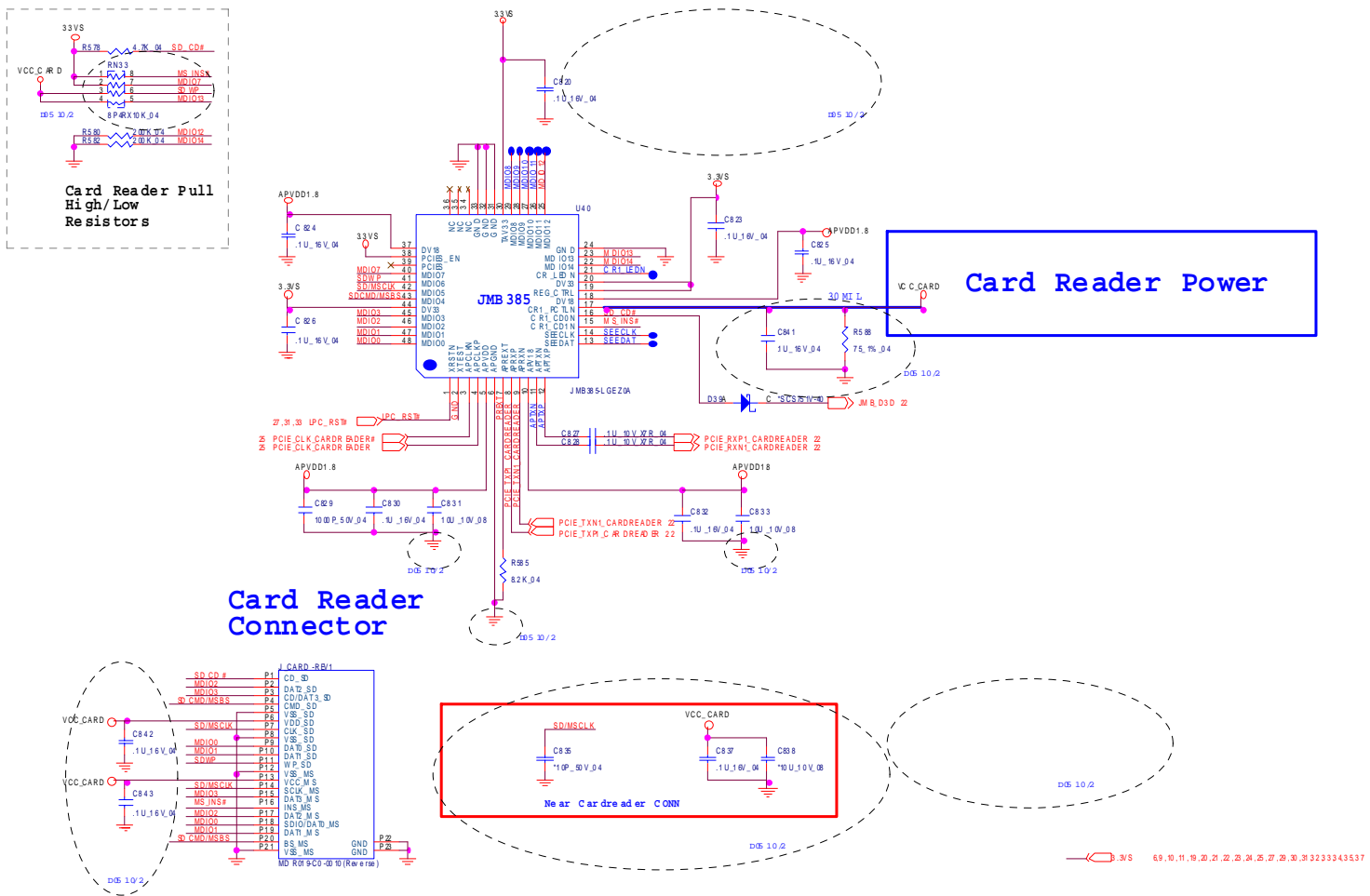


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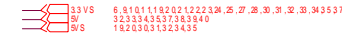
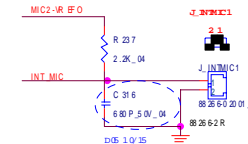
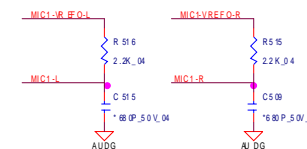
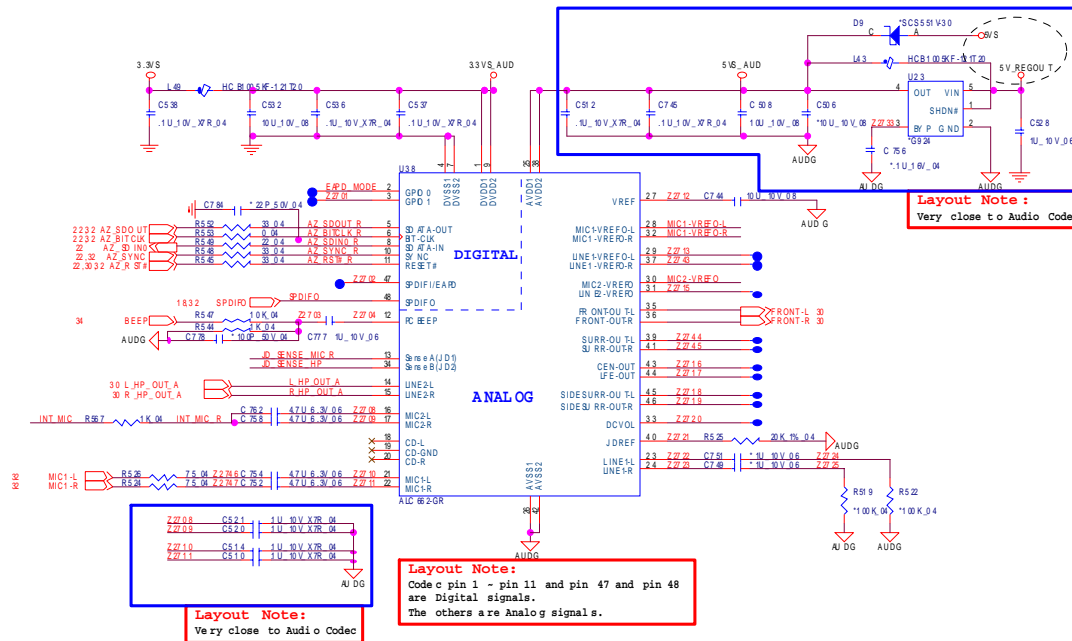
Schematic Diagrams

JMB385, Card Reader

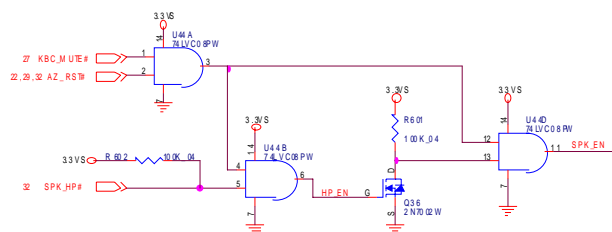
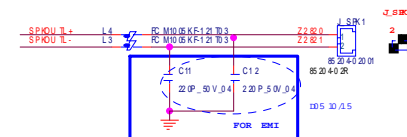
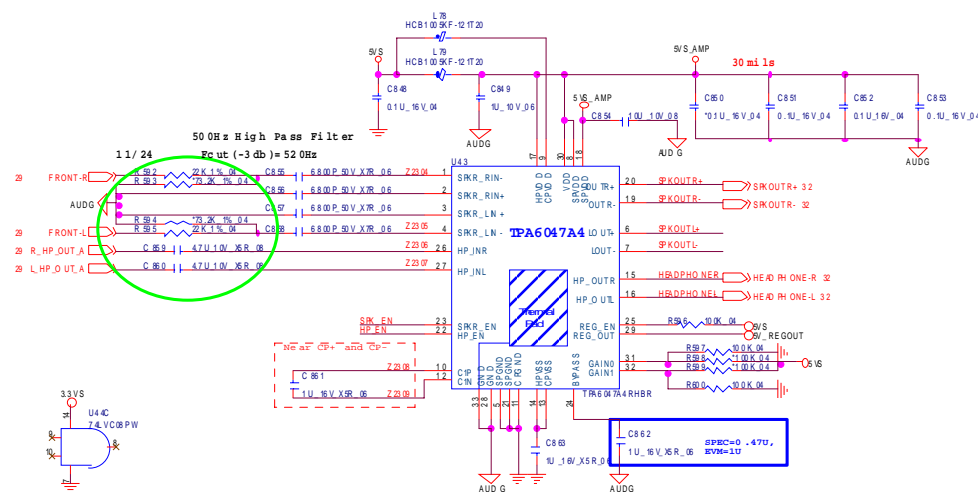
Sheet 21 of 38
JMB385,
Card Reader



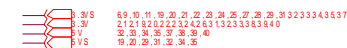
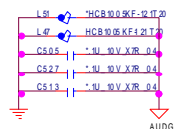
Audio Codec ALC662

Sheet 22 of 38
Audio Codec
ALC662

Sheet 23 of 38
Audio AMP

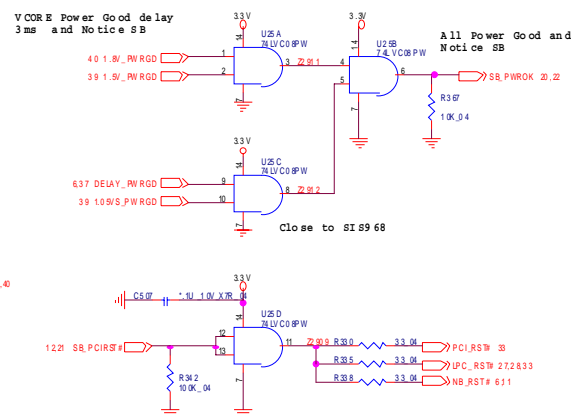


	Default(L = Mute)
AUDIOGP IO0#	H -> H
KBC_MUT E#	L -> H
AZ_RST#	L -> H
SB_MUTE #	L -> H



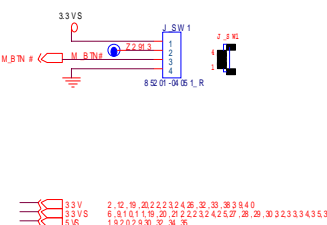
SATA HDD, PWR, LID B - 25

POWER GOOD & RESET

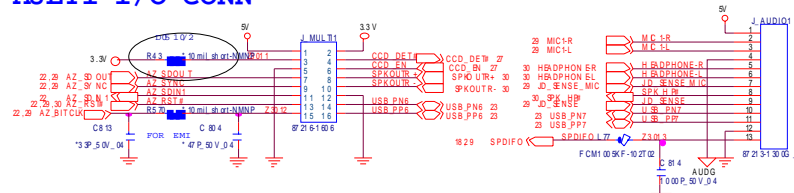


S I G N A L	S 0 / S 1	S 3	S 4 / S 5
S 3 A U X S W#	1	0	1
P S O N#	0	1	1

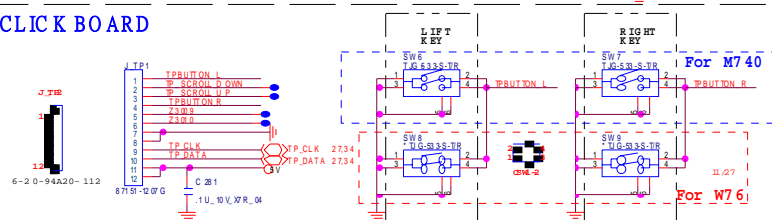
POWER SWITCH CONNECTER



ODD

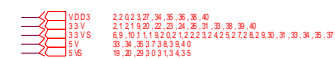


CLICK BOARD

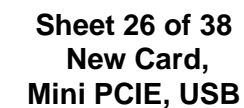


Layout時

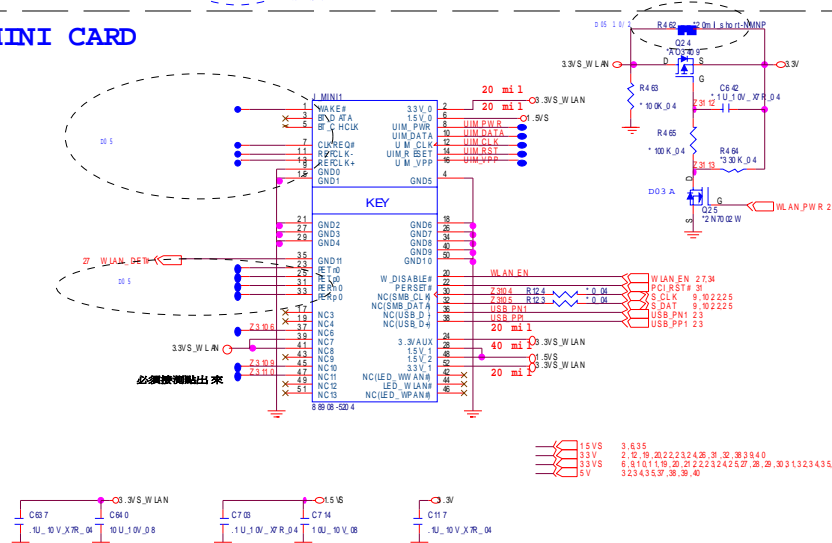
1. SIM 之所有信號線加粗(10mil)
2. 所有信號線之間加GND
3. SIM hold 本體四周加GND圍繞
4. SIM CONN 靠近 MINI CARD CONN



NEW CARD

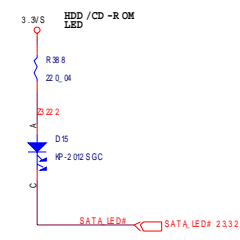
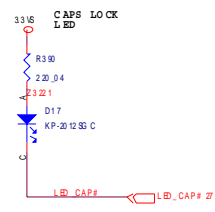
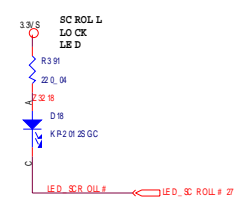
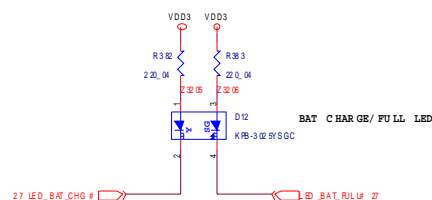


MINI CARD

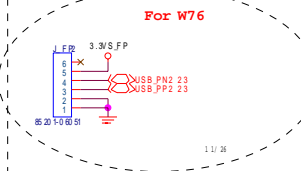
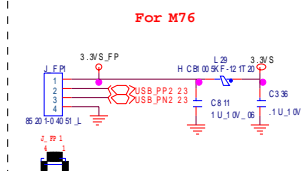


B.Schematic Diagrams

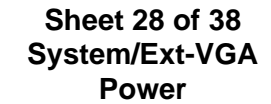
LED



FP CONN

[illegible]

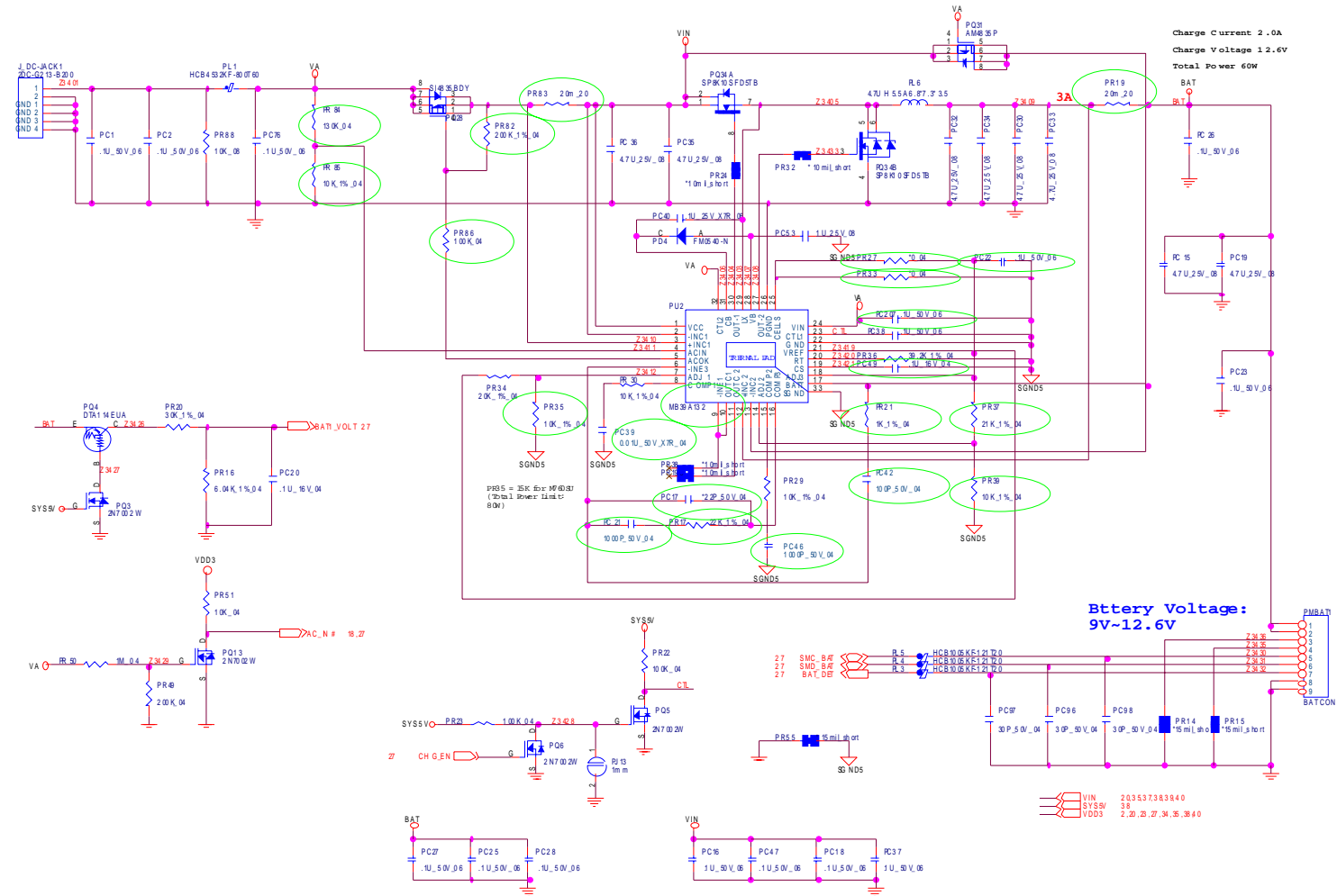
1.2VS,1.5VS,1.8VS,3.3VS,5VS


$$R_a = 3.6K \rightarrow 1.020V$$


Schematic Diagrams

AC-IN, Charger

Sheet 29 of 38
AC-IN, Charger



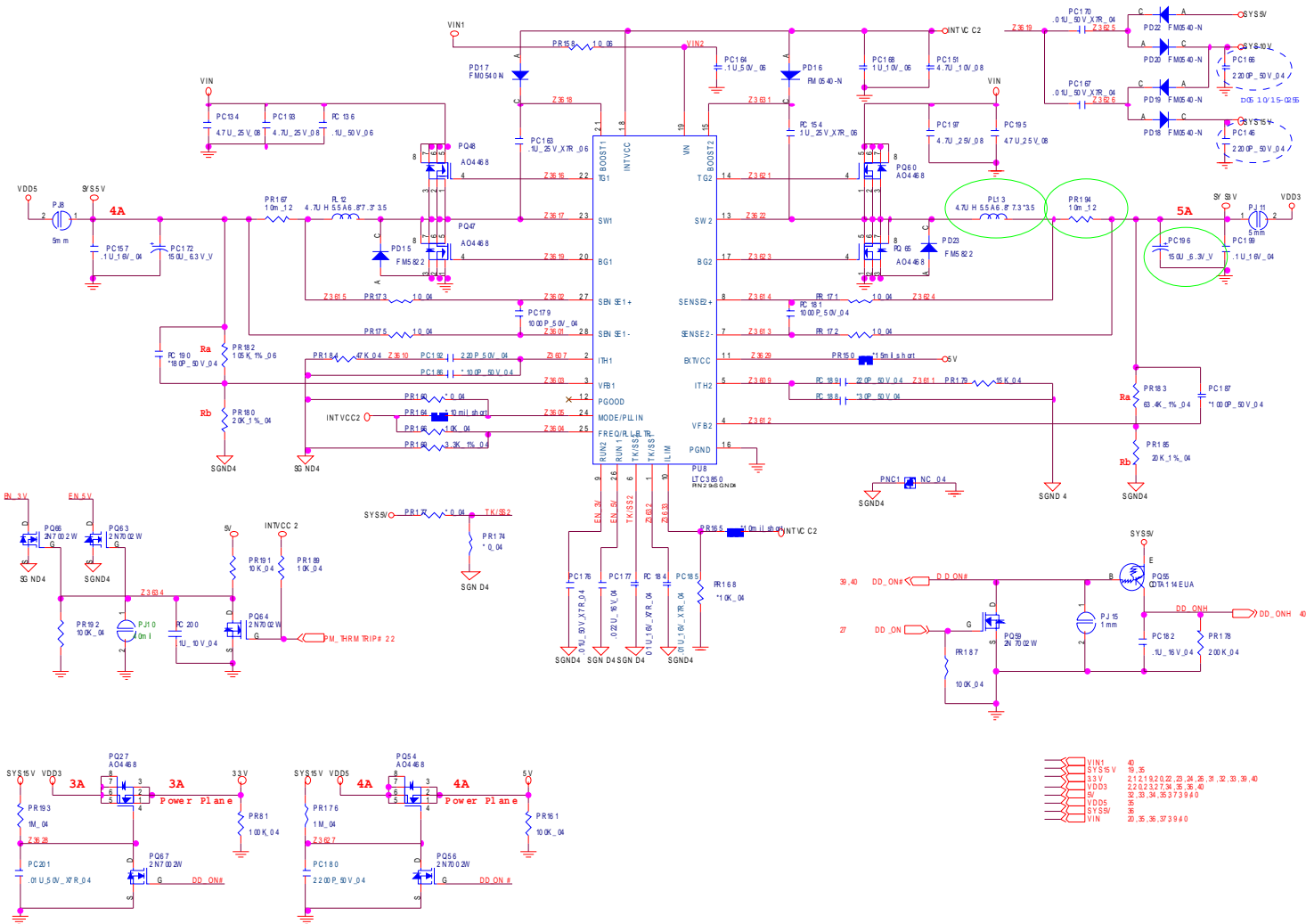
VCORE FOR PENRYN CPU



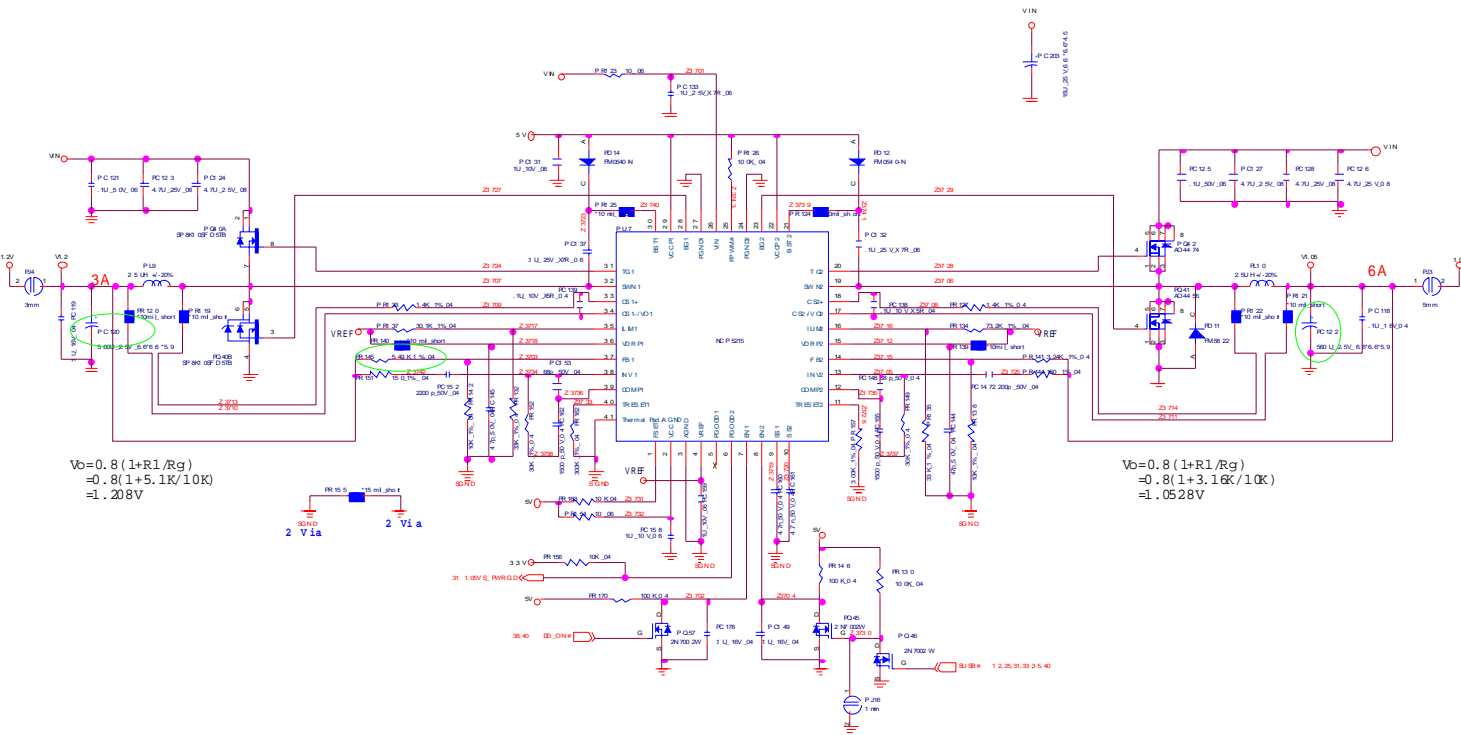
Schematic Diagrams

VDD3, VDD5)

Sheet 31 of 38
VDD3, VDD5

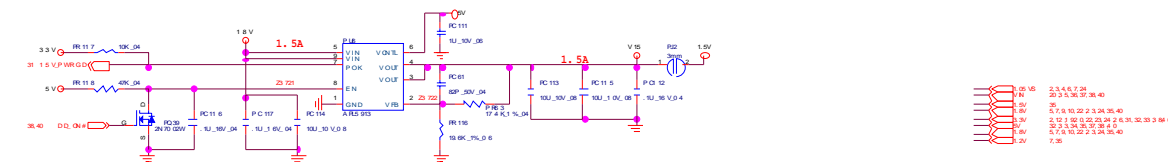


1.05VS, 1.2V, 1.5V



$$V_o = 0.8 \left(\frac{1+R_1/R_g}{1+5.1K/10K} \right) = 1.208V$$

$$V_o = 0.8 \left(\frac{1+R_1/R_g}{1+3.16K/10K} \right) = 1.0528V$$



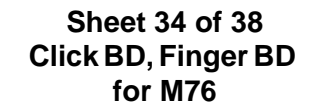
Sheet 32 of 38
1.05VS, 1.2V, 1.5V

1.8V, 0.9VS

B.Schematic Diagrams

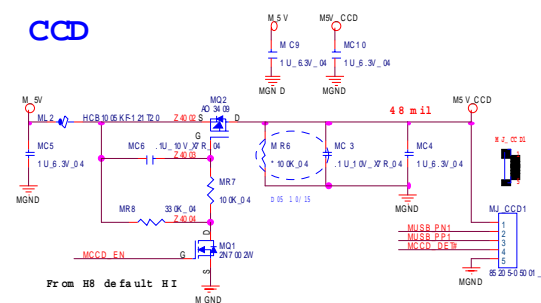
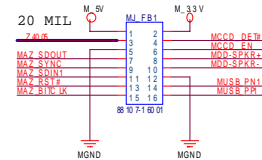
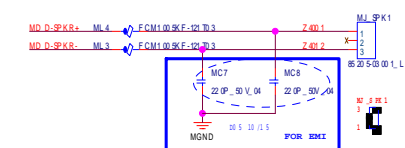
[illegible]

CLICK BOARD

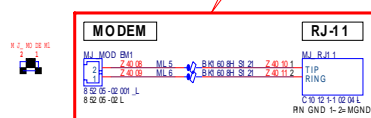


B.Schematic Diagrams

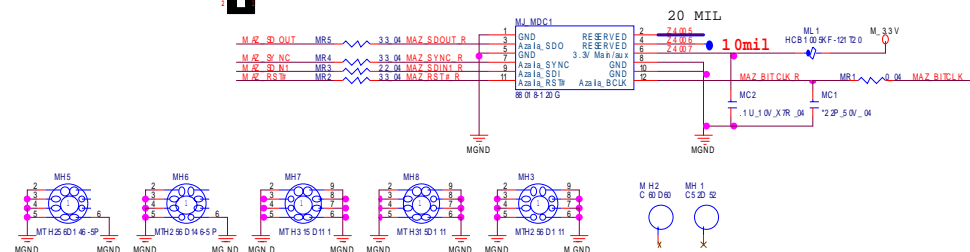
Sheet 35 of 38
Multi Function
Board



須與其他零件或線路
淨空 2.5mm 以上

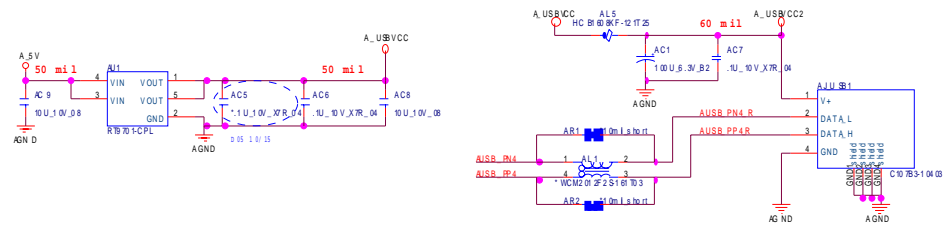


12 2 1 1



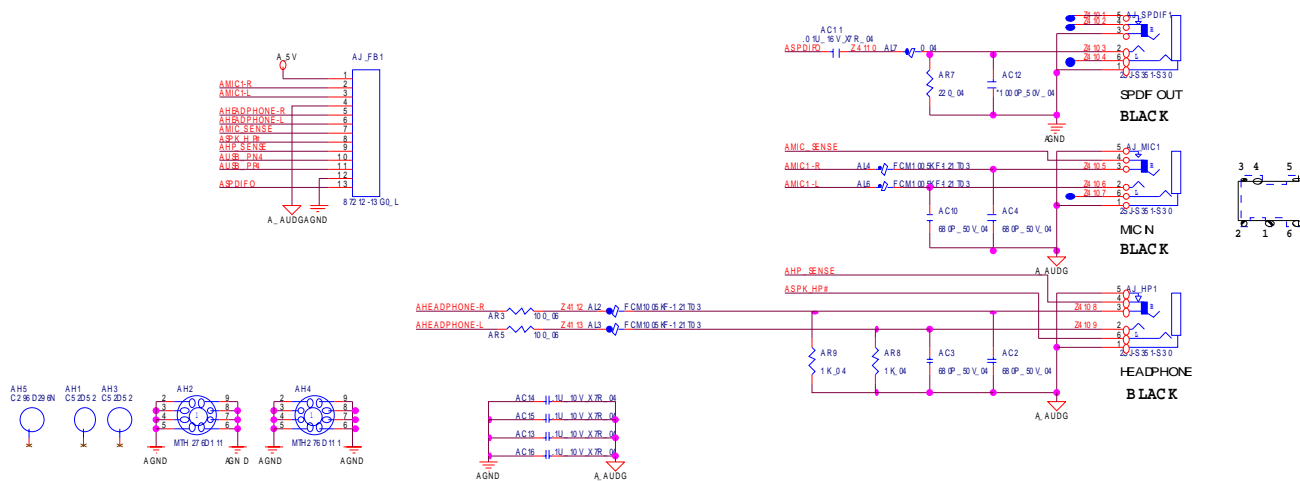
Audio Board

USB PORT



Sheet 36 of 38
Audio Board

AUDIO JACK

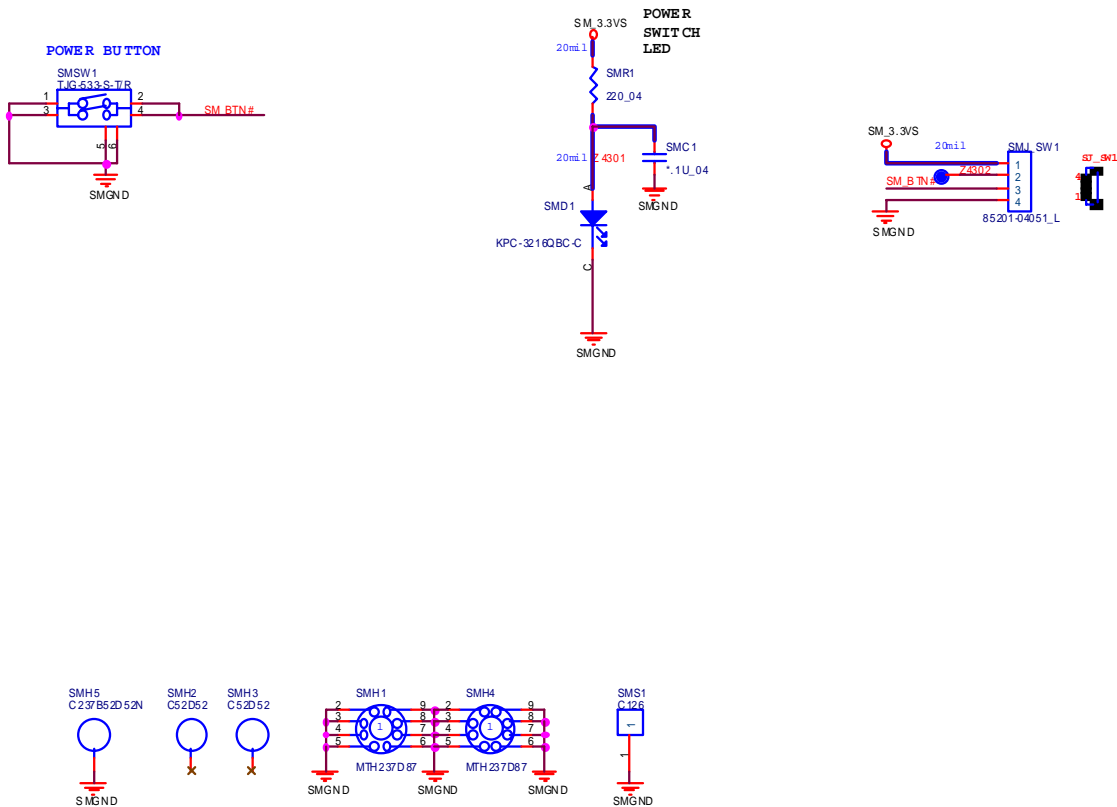


Schematic Diagrams

Power Switch Board for M74

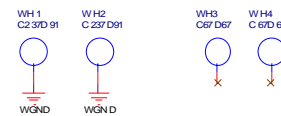
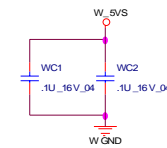
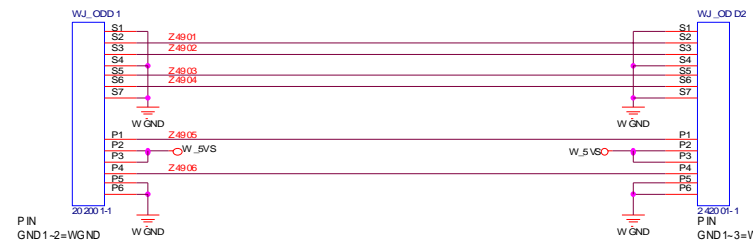
POWER SW & POWER LED FOR M74

Sheet 37 of 38
Power Switch
Board for M74



External ODD Board for W76

ODD BOARD FOR W76



Sheet 38 of 38
External ODD
Board for W76

Appendix C: Updating the FLASH ROM BIOS

To update the FLASH ROM BIOS you must:

- Download the BIOS update from the web site.
- Unzip the files onto a bootable CD/DVD/USB Flash Drive.
- Reboot your computer from an external CD/DVD/USB Flash Drive.
- Use the flash tools to update the flash BIOS using the commands indicated below.
- Restart the computer booting from the HDD and press **F2** at startup enter the BIOS.
- Load setup defaults from the BIOS and save the default settings and exit the BIOS to restart the computer.
- After rebooting the computer you may restart the computer again and make any required changes to the default BIOS settings.

Download the BIOS

1. Go to www.clevo.com.tw and point to **E-Services** and click **E-Channel**.
2. Use your user ID and password to access the appropriate download area (BIOS), and download the latest BIOS files (the BIOS file will be contained in a batch file that may be run directly once unzipped) for your computer model (see sidebar for important information on BIOS versions).

Unzip the downloaded files to a bootable CD/DVD/ or USB Flash drive

1. Insert a bootable CD/DVD/USB flash drive into the CD/DVD drive/USB port of the computer containing the downloaded files.
2. Use a tool such as Winzip or Winrar to unzip all the BIOS files and refresh tools to your bootable CD/DVD/USB flash drive (you may need to create a bootable CD/DVD with the files using a 3rd party software).

Set the computer to boot from the external drive

1. With the bootable CD/DVD/USB flash drive containing the BIOS files in your CD/DVD drive/USB port, restart the computer and press **F2** (in most cases) to enter the BIOS.
2. Use the arrow keys to highlight the **Boot** menu.
3. Use the “+” and “-” keys to move boot devices up and down the priority order.
4. Make sure that the CD/DVD drive/USB flash drive is set first in the boot priority of the BIOS.
5. Press **F10** to save any changes you have made and exit the BIOS to restart the computer.



BIOS Version

Make sure you download the latest correct version of the BIOS appropriate for the computer model you are working on.

You should only download BIOS versions that are V1.01.XX or higher as appropriate for your computer model.

Note that BIOS versions are not backward compatible and therefore **you may not downgrade your BIOS to an older version** after upgrading to a later version (e.g if you upgrade a BIOS to ver 1.01.05, you **MAY NOT** then go back and flash the BIOS to ver 1.01.04).

BIOS Update

Use the flash tools to update the BIOS

1. Make sure you are not loading any memory management programs such as HIMEM by holding the **F8** key as you see the message “**Starting MS-DOS**”. You will then be prompted to give “**Y**” or “**N**” responses to the programs being loaded by DOS. Choose “**N**” for any memory management programs.
2. You should now be at the DOS prompt e.g: `DISK C:\>` (C is the designated drive letter for the CD/DVD drive/USB flash drive).
3. **Type the following command** at the DOS prompt:

C:\> XXX.bat

4. The utility will then proceed to flash the BIOS.
5. You should then be prompted to press any key to restart the system or turn the power off, and then on again but make sure you remove the CD/DVD/USB flash drive from the CD/DVD drive/USB port before the computer restarts.

Restart the computer (booting from the HDD)

1. With the CD/DVD/USB flash drive removed from the CD/DVD drive/USB port the computer should restart from the HDD.
2. Press **F2** as the computer restarts to enter the BIOS.
3. Use the arrow keys to highlight the **Exit** menu.
4. Select **Load Setup Defaults** (or press **F9**) and select “**Yes**” to confirm the selection.
5. Press **F10** to save any changes you have made and exit the BIOS to restart the computer.

Your computer is now running normally with the updated BIOS

You may now enter the BIOS and make any changes you require to the default settings.