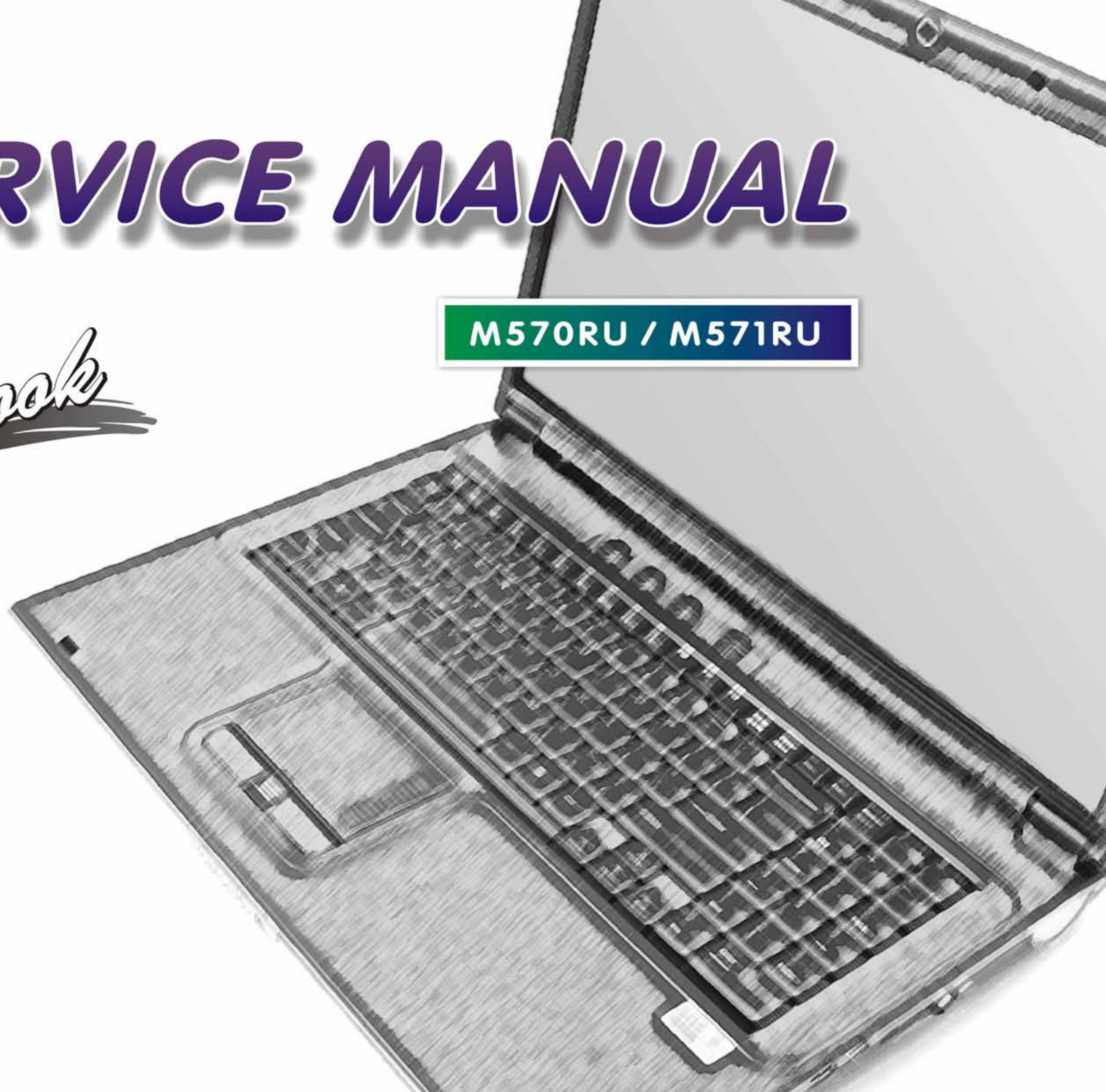


SERVICE MANUAL

M570RU / M571RU

notebook



Notebook Computer

M570RU / M571RU

Service Manual

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July 2007

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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 *M570RU/M571RU* 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

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 (DC Output 20V, 6A 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

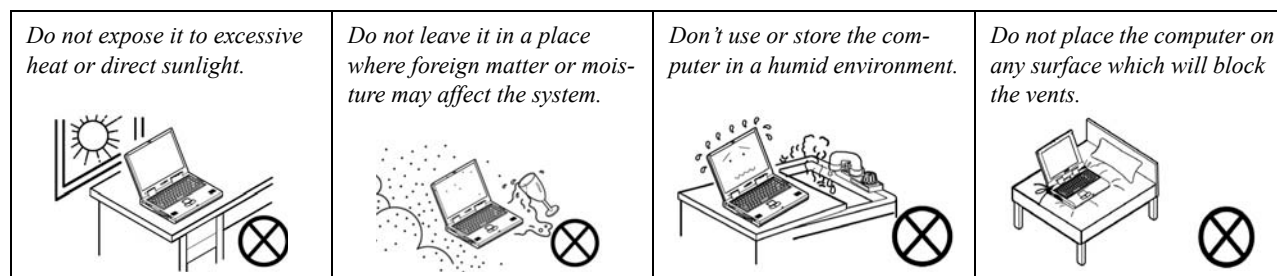
Instructions for Care and Operation

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

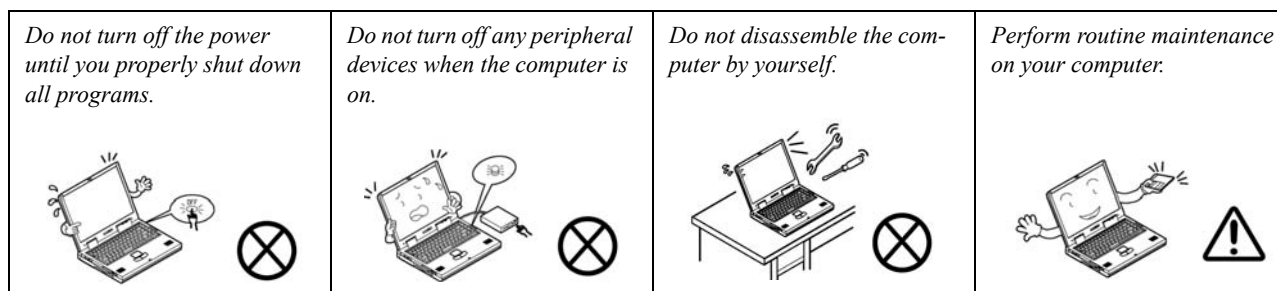
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



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.

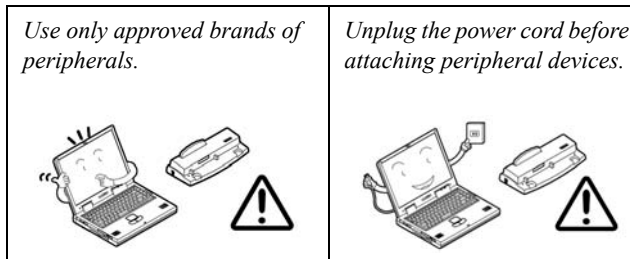


3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



Preface

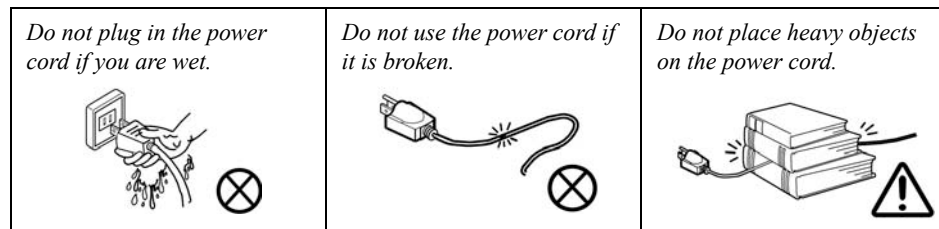
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



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 (i.e. AC/DC adapter or car adapter).



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 remove any batteries from the computer while it is powered on.
- 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 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.

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.

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1: Introduction

Overview

This manual covers the information you need to service or upgrade the **M570RU/M571RU** 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*, 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 **M570RU/M571RU** 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 Types	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package, Socket P T7100	65nm (65 Nanometer) Process Technology 2MB On-die L2 Cache & 800MHz FSB 1.80 GHz
	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package, Socket P T7300/ T7500/ T7700	65nm (65 Nanometer) Process Technology 4MB On-die L2 Cache & 800MHz FSB 2.0/ 2.2/ 2.4 GHz
Core Logic	Intel(R) PM965 + ICH8M Chipset	
LCD	Flat Panel TFT (For One of the Following Options) 17" WXGA (1280 * 800) TFT LCD (Glare Type or Non Glare Type) OR 17" WSXGA+ (1600 * 1050) TFT LCD (Glare Type) OR 17" WUXGA (1920 * 1200) TFT LCD (Glare Type)	
Security	Security (Kensington® Type) Lock Slot Trusted Platform Module V1.2 (Factory Option)	BIOS Password Fingerprint Reader Module (Factory Option)
Memory	Two 200 Pin SO-DIMM Sockets Supporting DDRII (DDR2) 533 / 667 MHz 64-bit Wide DDRII (DDR2) Data Channel Memory Expandable up to 4GB (256/ 512/ 1024/ 2048 MB DDRII Modules)	

Feature	Specification	
Video Adapter Options	NVIDIA GeForceGo 7950 G71GM-UU Modular 512MB DDR3 Video Ram On Board PCI-Express * 16 MS DirectX® 9.0 compatible MXM-IV NVIDIA GeForce 8700M GT NB8E-SE Modular 512MB DDR3 Video Ram On Board PCI-Express * 16 MS DirectX® 10.0 compatible MXM-III Supports HDCP  Video Card Options Note that card types, specifications and drivers are subject to continual updates and changes. Check with your service center for the latest details on video cards supported.	
BIOS	One 8Mb Flash ROM	Phoenix™ BIOS
Storage	One Changeable 12.7mm(h) Optical Device (CD/DVD) Type Drive (see <i>“Optional” on page 1 - 5</i> for drive options) Easy Changeable 2.5" 9.5 mm (h) HDD with SATA (Serial) Interface	
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	
Audio	Intel® High Definition Audio Interface (HDA) 3D Stereo Enhanced Sound System SRS WOW Surround Sound Technology Inside Sound-Blaster PRO™ Compatible	S/PDIF Digital Output 7.1CH Built-In Microphone 3 * Built-In Speakers (Two 1.5W, 8Ω, One Sub Woofer 1.5W 8Ω,)
Keyboard & Pointing Device	Full Size Winkey Keyboard with Numeric Keypad	Built-In TouchPad (Scroll Functionality Included)
ExpressCard Slot	ExpressCard/34/54 Slot	

Introduction

Feature	Specification	
I/O Ports	Four USB 2.0 Ports One DVI-Out Port (Supports Dual Link) One Headphone/Speaker-Out Jack One Microphone-In Jack One S/PDIF Out Jack One Line-In Jack for Audio Input One Serial Port One Mini-IEEE1394a Port One Infrared Transceiver	One RJ-11 Modem Jack One RJ-45 Giga LAN Jack One DC-In Jack One 7-Pin S-Video-Out Jack for TV & HDTV Output One CATV Antenna (Analog/Digital) Jack (Functions with Optional TV Tuner Module) One Consumer Infrared Transceiver (Functions with Optional TV Tuner Module)
Communication	Built-In 56K MDC Modem with V.90 & V.92 Compliant Built-In Gigabit Ethernet LAN Wireless LAN Module: Intel® Wireless LAN WiFi Link 4965AGN with MiniCard, PCIe Interface (Option)	TV Tuner Module (Hybrid OR Windows MCE options) with Mini-PCI Interface (Factory Option) Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (Factory Option) 1.3M Pixel USB 2.0 PC Camera Module (Factory Option)
Operating Systems Supported	Windows XP SP2	Windows Vista 64bit Home Premium/ Business/ Enterprise/ Ultimate
Power Management	Supports ACPI 3.0	Supports Resume from Modem Ring Supports Wake on LAN
Power	Full Range AC/DC Adapter – AC in 100 - 240V, 50 - 60Hz DC Output 20V, 6.A (120 Watts) Easy Changeable 8-Cell Smart Lithium-Ion 4400mAH Main Battery	
Environmental Spec	Temperature Operating: 5°C ~ 35°C Non-Operating: -20°C ~ 60°C	Relative Humidity Operating: 20% ~ 80% Non-Operating: 10% ~ 90%
Physical Dimensions & Weight	397mm (w) * 280.5mm (d) * 25.6 ~ 45.6mm (h)	Around 3.95kg (+/- 5%) with 8 Cell Battery

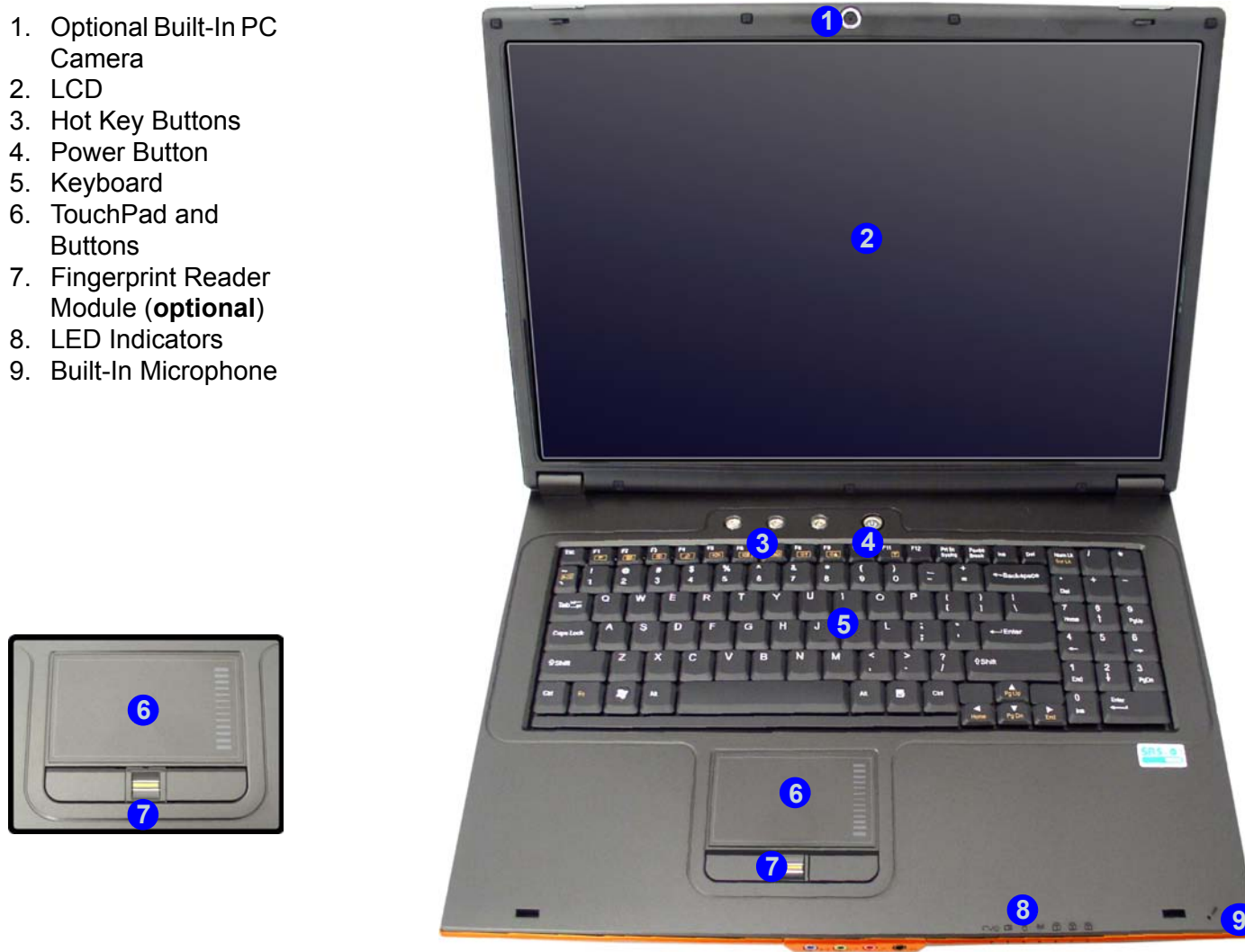
Feature	Specification
Optional	<u>Optical Drive Module Options:</u> DVD/CD-RW Combo Drive Module DVD-Super Multi Drive Module Intel® Wireless LAN WiFi Link 4965AGN with MiniCard, PCIe Interface Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (Factory Option) 1.3M Pixel USB 2.0 PC Camera Module (Factory Option) Trusted Platform Module TGC V1.2 Compliant (Factory Option) Fingerprint Reader Module (Factory Option) <u>TV Tuner Module Options:</u> <i>(All Factory Options):</i> Hybrid (Digital & Analog) TV Tuner Module with Mini-PCI Interface OR MCE TV Tuner Module with Mini-PCI Interface for <i>Windows Vista/XP Media Center Edition</i>

Introduction

Figure 1
Top View

1. Optional Built-In PC Camera
2. LCD
3. Hot Key Buttons
4. Power Button
5. Keyboard
6. TouchPad and Buttons
7. Fingerprint Reader Module (**optional**)
8. LED Indicators
9. Built-In Microphone

External Locator - Top View with LCD Panel Open



External Locator - Front & Rear View



Figure 2
Front View

1. LCD Latches
2. Line-In Jack
3. Headphone-Out Jack
4. Microphone-In Jack
5. S/PDIF-Out Jack
6. LED Indicators
7. Infrared & Consumer Infrared Transceiver



Figure 3
Rear View

1. Vent/Fan Intake/Outlet
2. 7-Pin S-Video-Out Jack
3. DVI-Out Port
4. 2 * USB 2.0 Ports
5. DC-In Jack
6. Serial Port

Introduction

External Locator - Left & Right Side View

Figure 4
Left Side View

1. Speaker
2. Security Lock Slot
3. Device Bay
(for CD/DVD
Device)



Figure 5
Right Side View

1. Express Card Slot
2. 7-in-1 Card Reader
3. 2 * USB 2.0 Ports
4. Mini-IEEE 1394 Port
5. RJ-11 Phone Jack
6. RJ-45 LAN Jack
7. CATV Antenna Jack (Enabled With TV Tuner Only)
8. Speaker



External Locator - Bottom View



Figure 6
Bottom View

1. Vent/Fan Intake/Outlet
2. Battery
3. Optical Device Release Latches
4. Component Bay Cover
5. Infrared & Consumer Infrared Transceiver
6. Sub Woofer



Overheating

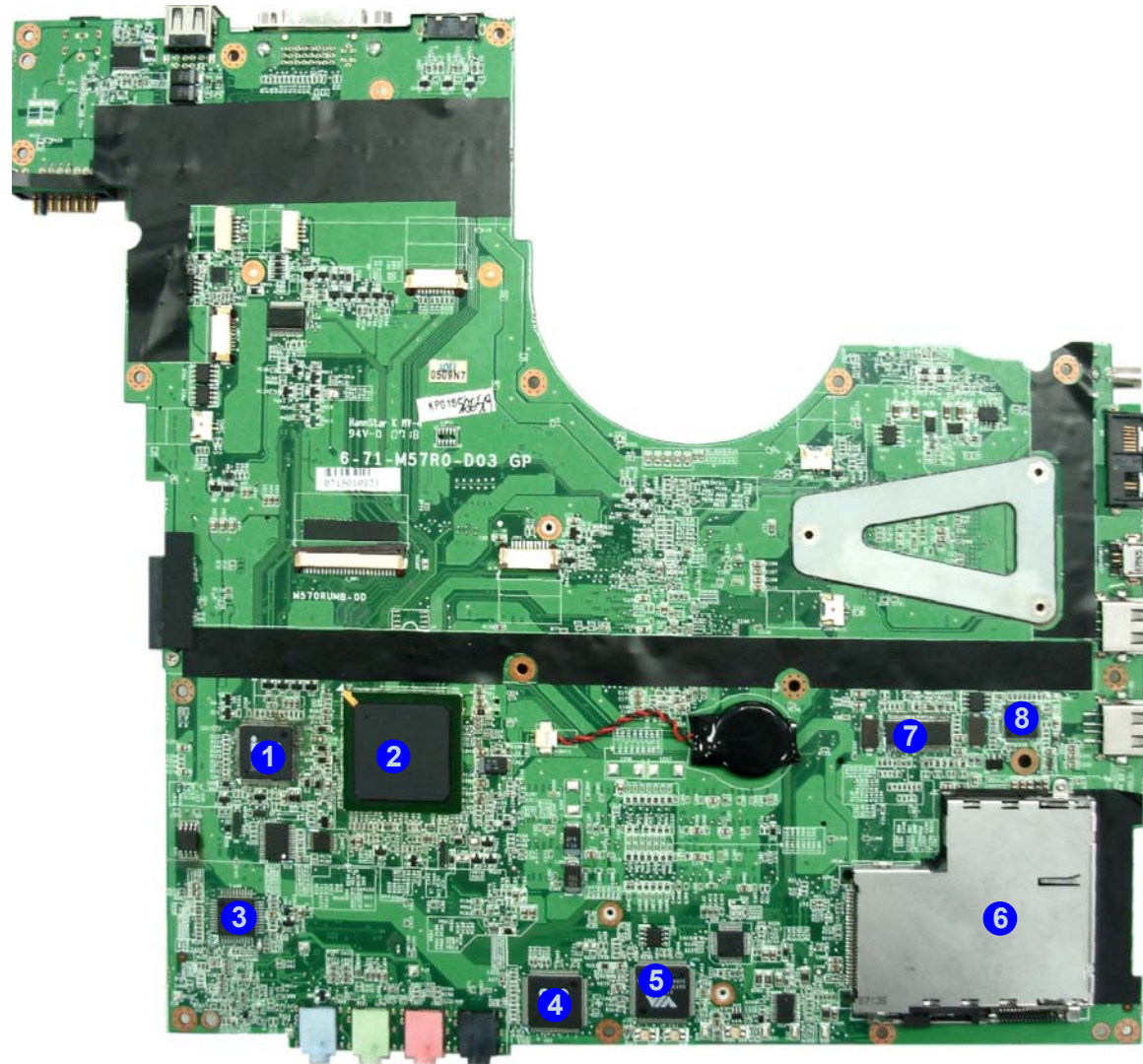
To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

Introduction

Figure 7
**Mainboard Top
Key Parts**

1. LAN Transformer
2. Super I/O
3. Audio "DJ"
4. LAN
5. Flash BIOS ROM
6. New Card Assembly
7. Clock Generator
8. 1394 and Card Reader

Mainboard Overview - Top (Key Parts)



Mainboard Overview - Bottom (Key Parts)

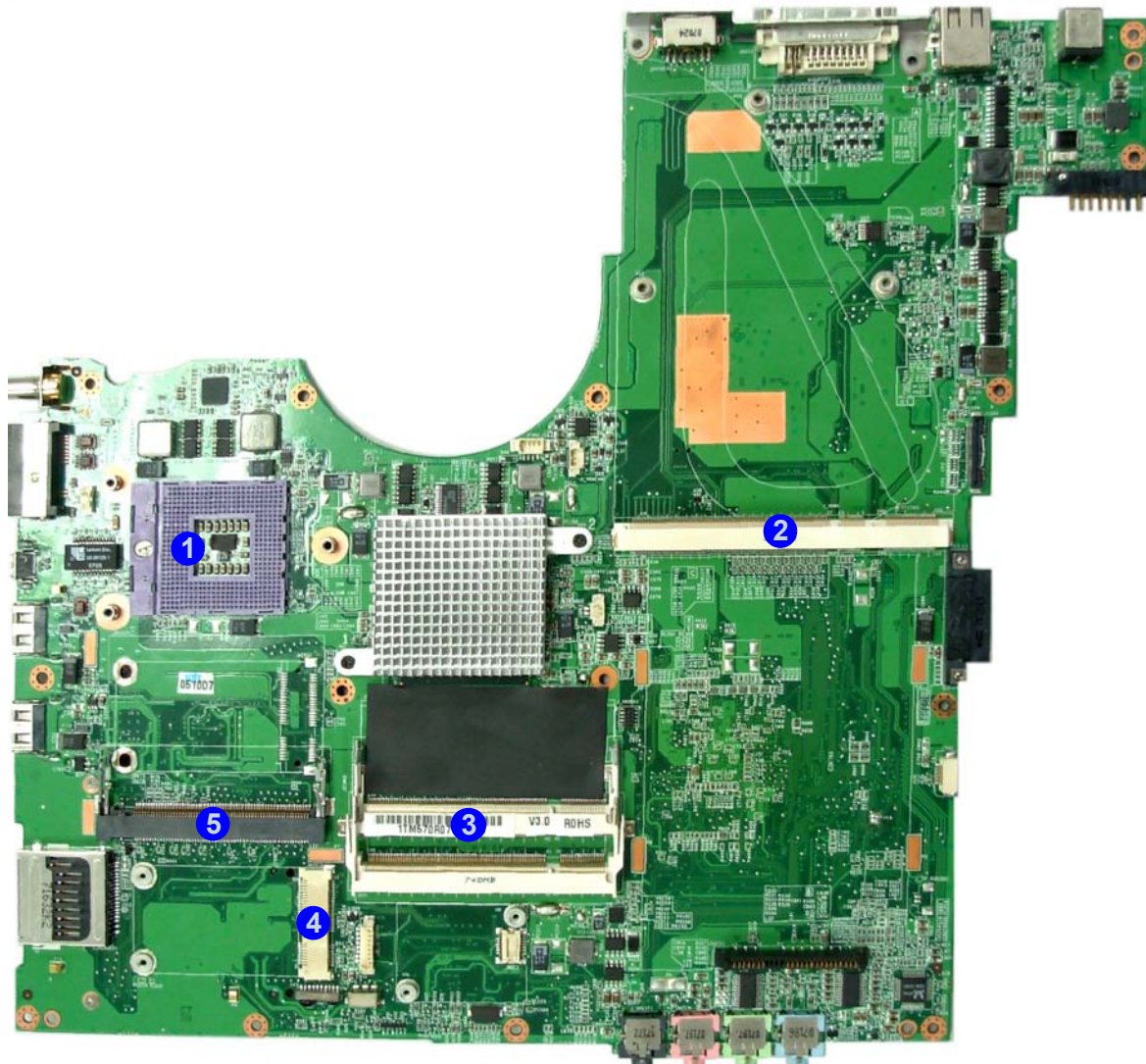


Figure 8
**Mainboard Bottom
Key Parts**

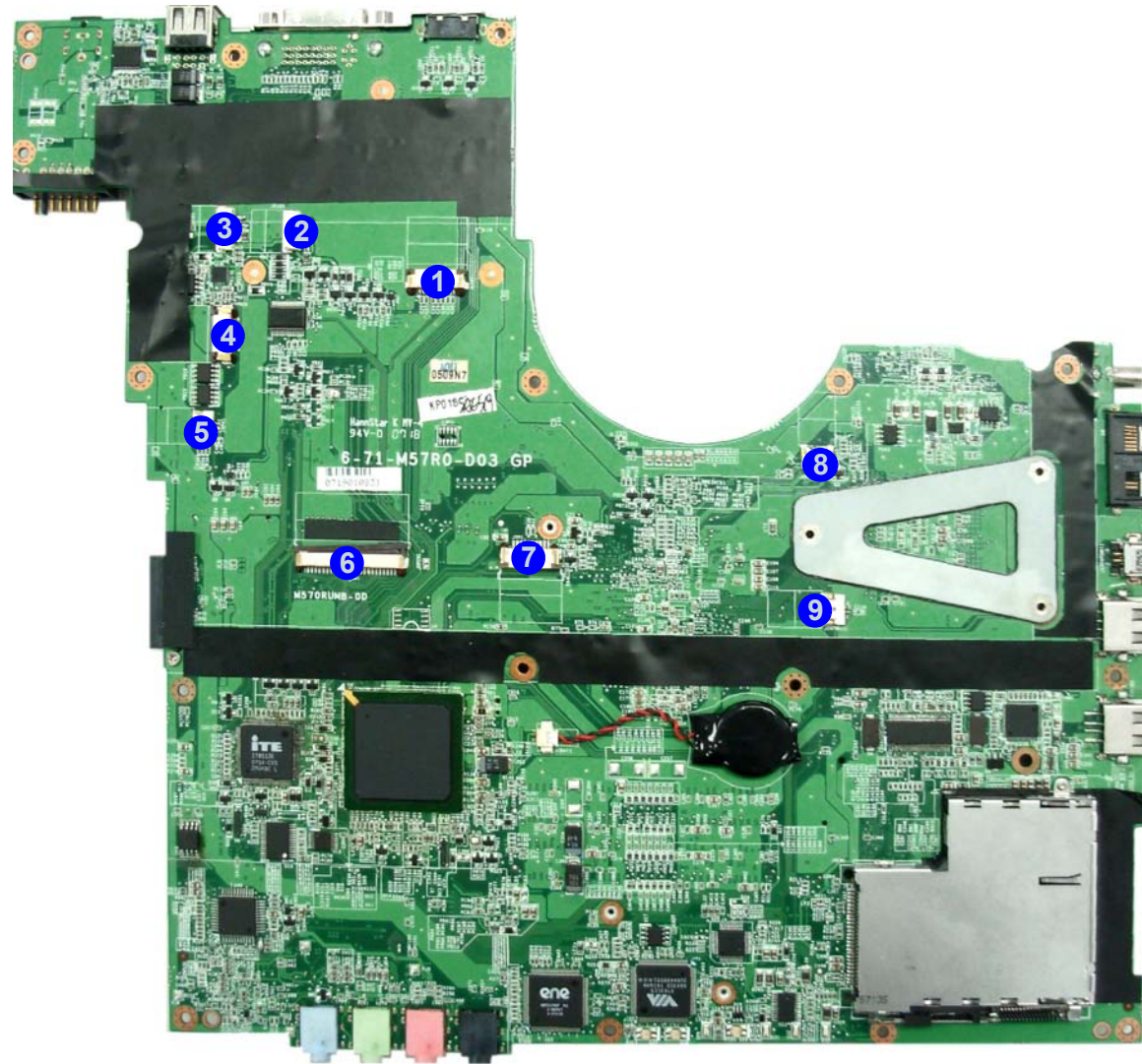
1. CPU Socket (no CPU installed)
2. VGA Socket
3. Memory Slots
DDR2 So-DIMM
4. Mini-PCle Socket
(Wireless Lan
Module)
5. Mini-PCI Socket
(TV Tuner Card)

Introduction

Figure 9
**Mainboard Top
Connectors**

1. LED Cable Connector
2. CCD Cable Connector
3. Inverter Board Cable Connector
4. COM Port Cable Connector
5. Speaker-left Cable Connector
6. Keyboard Cable Connector
7. TouchPad Cable Connector
8. Speaker-right Cable Connector
9. Mic Connector

Mainboard Overview - Top (Connectors)



Mainboard Overview - Bottom (Connectors)

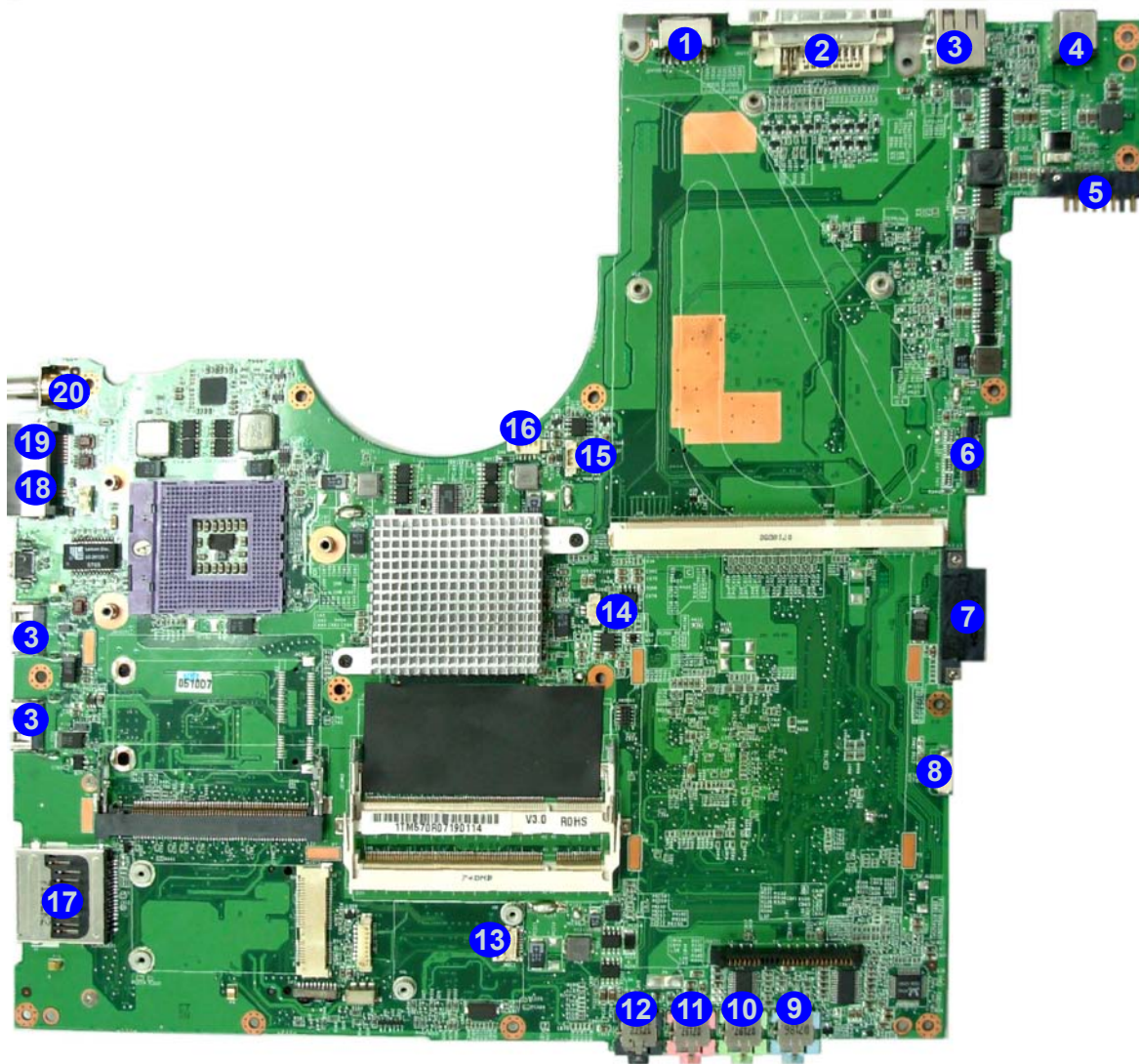


Figure 10
**Mainboard Bottom
Connectors**

1. 7-Pin S-Video-Out Jack
2. DVI-Out Port
3. USB Port
4. DC-In Jack
5. Battery Connector
6. LVDS Connector
7. ODD Connector
8. HDD Connector
9. Line-In Jack
10. Headphone Jack
11. Microphone Jack
12. S/PDIF-Out Jack
13. Bluetooth Cable Connector
14. Speaker Connector
15. VGA Fan Connector
16. Fan Connector
17. 7-in-1 Card Reader Connector
18. RJ-11 Jack
19. RJ-45 Jack
20. TV Connector

2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the *M570RU/M571RU* series notebook's parts and subsystems. 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, CD 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 Processor:

1. Remove the battery *page 2 - 5*
2. Remove the processor *page 2 - 10*

To remove the VGA Card:

1. Remove the battery *page 2 - 5*
2. Remove the VGA Card *page 2 - 12*

To remove the Wireless LAN Module:

1. Remove the battery *page 2 - 5*
2. Remove the WLAN module *page 2 - 13*

To remove the TV Tuner Card:

1. Remove the battery *page 2 - 5*
2. Remove the TV Tuner Card *page 2 - 14*

To remove the Bluetooth Module:

1. Remove the battery *page 2 - 5*
2. Remove the Bluetooth Module *page 2 - 15*

To remove the Keyboard:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 16*

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 system memory *page 2 - 9*
5. Remove the processor *page 2 - 10*
6. Remove the VGA Card *page 2 - 12*
7. Remove the WLAN module *page 2 - 13*
8. Remove the TV Tuner Card *page 2 - 14*
9. Remove the Bluetooth Module *page 2 - 15*
10. Remove the keyboard *page 2 - 16*
11. Remove the Modem *page 2 - 17*

Removing the Battery

1. Turn the computer off, and turn it over.
2. Slide latch **1** towards the unlock symbol and hold it in place, and lift the battery **2** up and out of the battery bay.

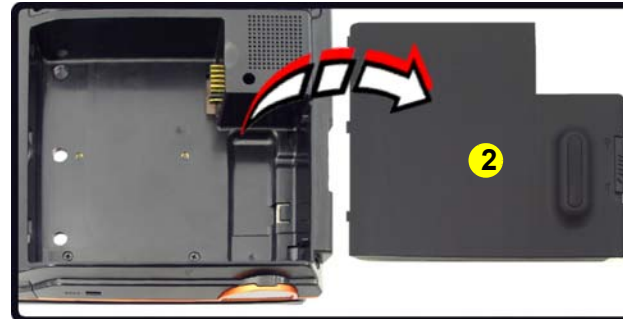


Figure 1
Battery Removal

- a. Slide latch at point 1 towards the unlock symbol and hold it in place.
- b. Lift the battery out.



2. Battery

Disassembly

Figure 2
**HDD Assembly
Removal**

- a. Remove the screws.
- b. Remove the cover and locate the HDD.

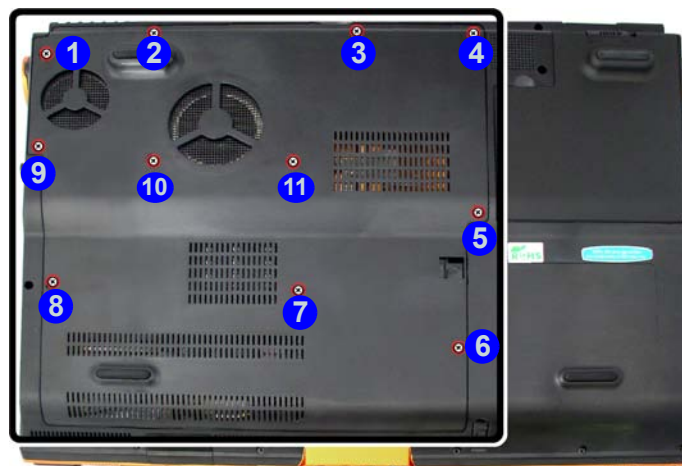
Removing the Hard Disk Drive

The hard disk drive is mounted in a removable case and 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.

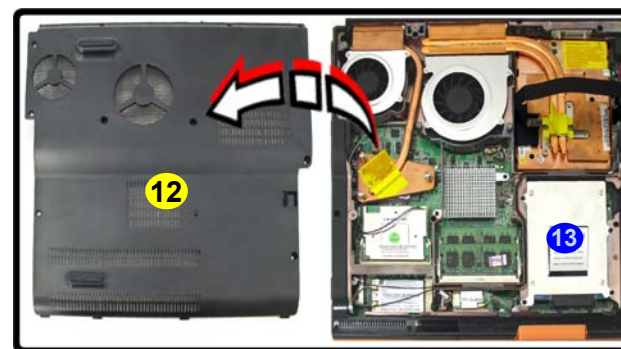
Hard Disk Upgrade Process

1. Turn **off** the computer, and turn it over and remove the battery ([page 2 - 5](#)).
2. Locate the component bay cover and remove screws ① - ⑪.
3. Remove the bay cover ⑫.
4. The hard disk assembly cover will be visible at point ⑬ on the mainboard.

a.



b.

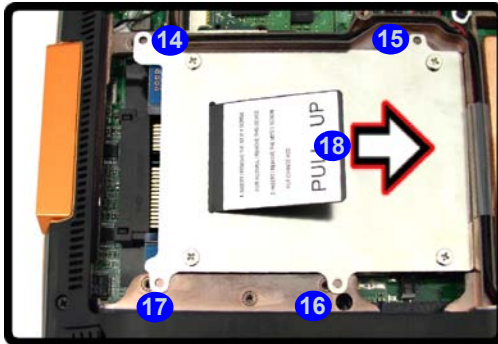


12. Component Bay Cover
13. HDD Assembly Cover

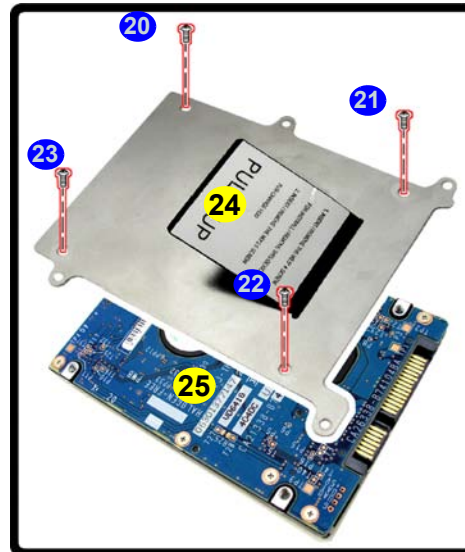
- 11 Screws

5. Remove screws 14 - 17 from the hard disk cover.
6. Slide the hard disk assembly in the direction of the arrow 18.
7. Carefully remove the hard disk assembly in the direction of the arrow 19 (Figure 3d).
8. Remove screws 20 - 23 and lift the HDD shielding plate 24 up from the hard disk 25.
9. Reverse the process to install a new hard disk(s).

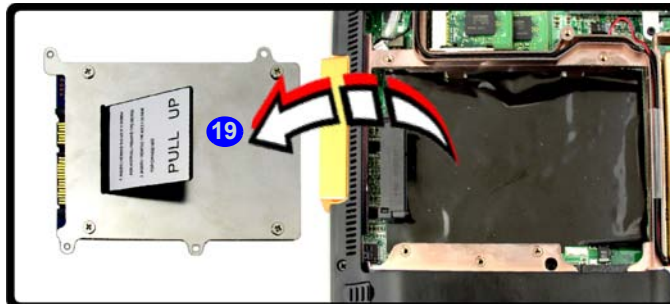
c.



e.



d.



- c. Remove screws and slide the HDD module in the direction of the arrow
- d. Remove the HDD module.
- e. Remove the screws and lift the shielding plate up from the HDD.



24. HDD Shielding Plate
25. HDD

- 4 Screws

Disassembly

Figure 4
**Optical Device
Removal**

- a. Slide latch at point 1 towards the unlock symbol and hold it in place. Slide the optical device out of the computer at point 2.

Removing the Optical (CD/DVD) Device

1. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)).
2. Slide latch **1** towards the unlock symbol and hold it in place.
3. Slide latch **2** (while still holding latch **1** in place) in the direction indicated by the arrow in order to push the optical device **3** out of the computer.
4. Restart the computer to allow it to automatically detect the new device.

a.



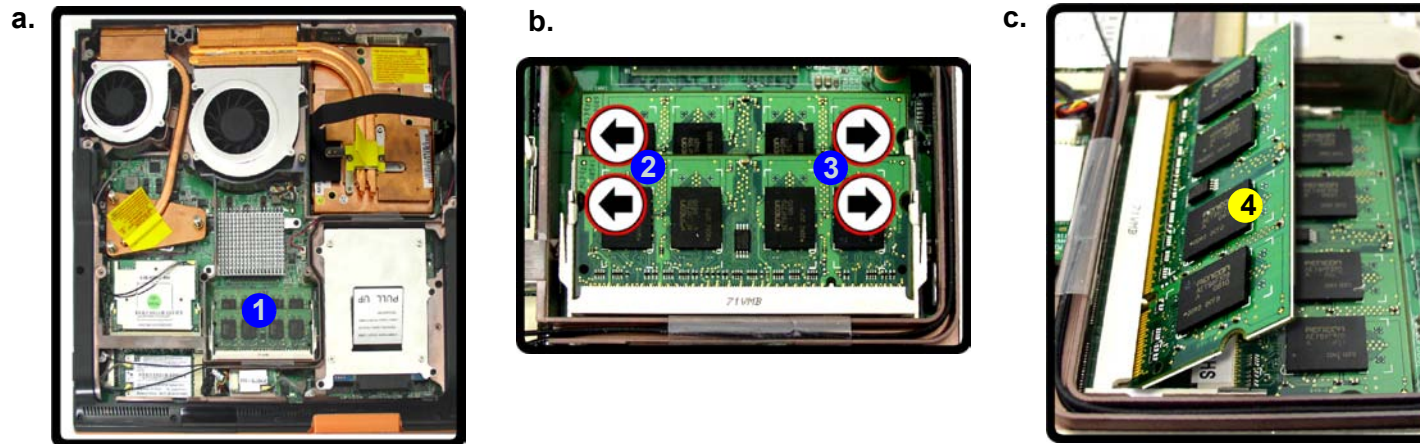
3. Optical Device

Removing the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDRII (DDR2) Up to 533/667 MHz. The main memory can be expanded up to 4GB. The SO-DIMM modules supported are 256MB, 512MB, 1024MB and 2048MB **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, turn it over and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
2. The RAM module(s) will be visible at point **1** on the mainboard.
3. Gently pull the two release latches (**2** & **3**) on the sides of the memory socket in the direction indicated by the arrows ([Figure 5b](#)).



4. The RAM module(s) **4** will pop-up ([Figure 5c](#)), and you can then remove it.
5. Pull the latches to release the second module if necessary.
6. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
7. The module will only fit one way as defined by its pin alignment. Make sure the module is seated as far into the slot as it will go. **DO NOT FORCE IT**; it should fit without much pressure.
8. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
9. Replace the bay cover and the screws (see [page 2 - 6](#)).
10. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Figure 5
RAM Module Removal

- a. Locate the memory socket.
- b. Pull the release latch(es).
- c. Remove the module(s).



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.



4. RAM Module

Disassembly

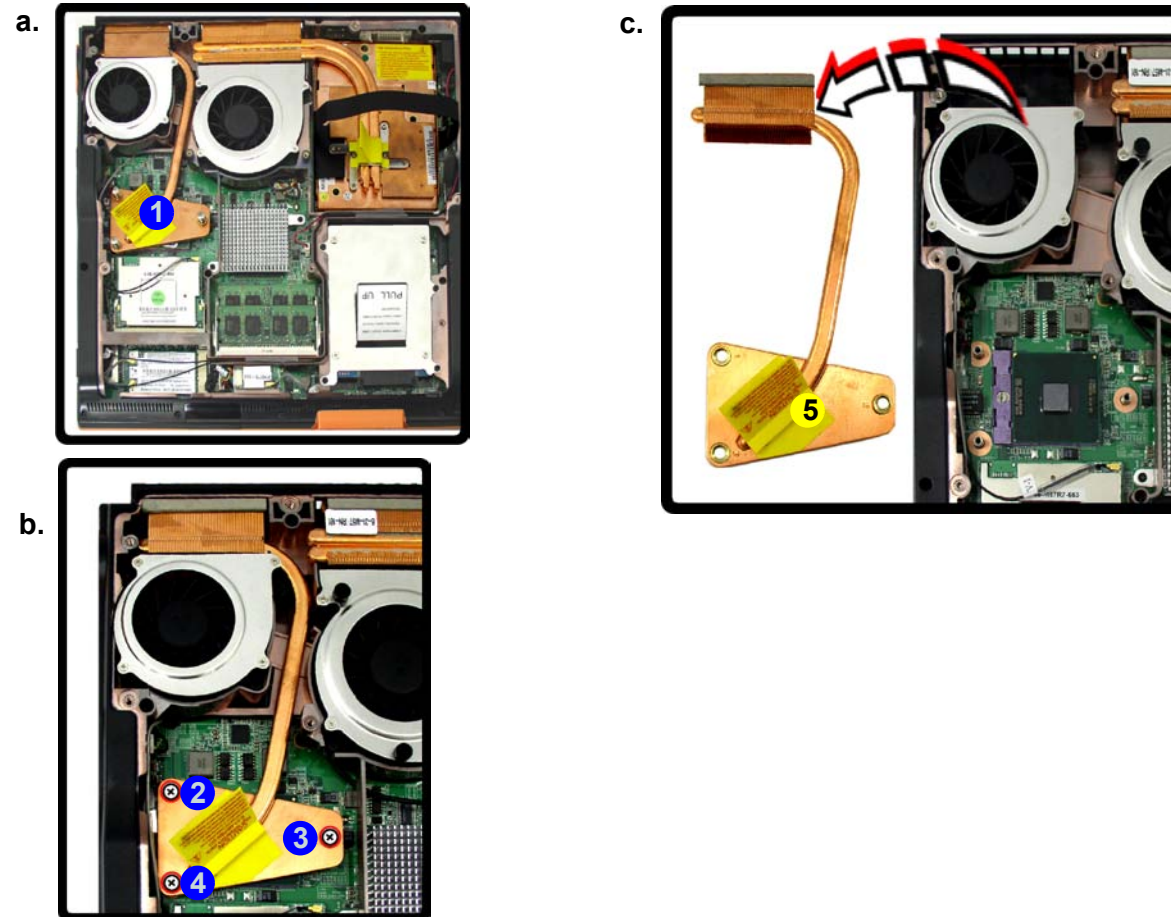
Figure 6

Processor Removal

- Locate the heat sink.
- Remove the screws in the order indicated.
- Remove the heat sink.

Removing the Processor

- Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
- The heat sink will be visible at point **1** on the mainboard
- Remove the screws **2** - **4** from the heat sink in the order indicated ([Figure 6b](#)).
- Carefully lift the heat sink **5** ([Figure 6c](#)) up and off the computer.



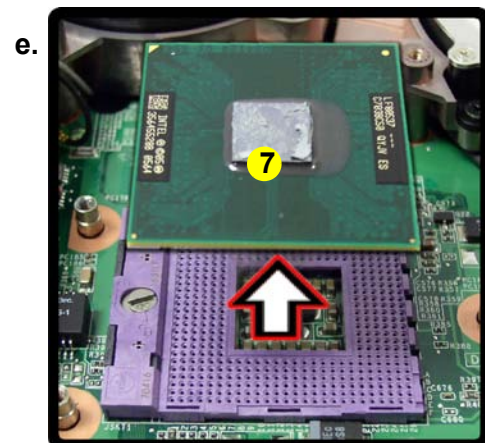
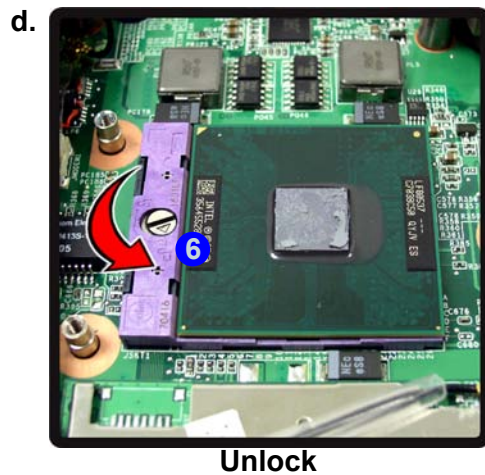
5. Heat Sink

- 3 Screws

5. Turn the release latch **6** towards the unlock symbol  to release the CPU.
6. Carefully (it may be hot) lift the CPU **7** up and out of the socket (**Figure 7e**).
7. Reverse the process to install a new CPU.
8. When re-inserting the CPU, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).

Figure 7
Processor Removal (cont'd)

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



Caution

The heat sink, and CPU area in general, contains parts which are subject to high temperatures. Allow the area time to cool before removing these parts.



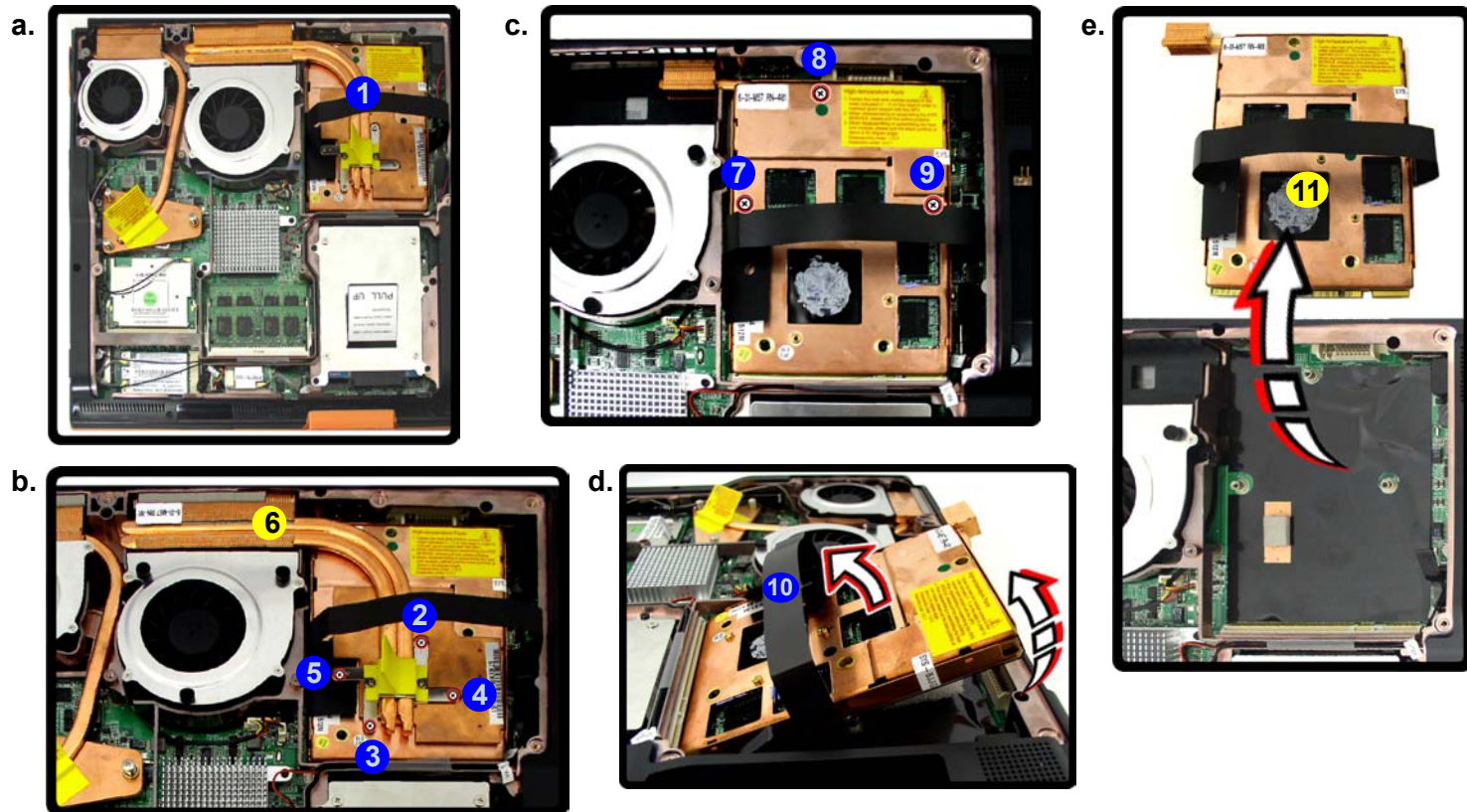
7. CPU

Disassembly

Figure 8

VGA Card Removal

- a. Locate the VGA card.
 - b. Remove the screws and VGA heatsink.
 - c. Remove the screws.
 - d. Pull the plastic holder in the direction of the arrow.
 - e. Lift the VGA card out of the socket.
1. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)), and the component bay cover ([page 2 - 6](#)).
 2. The VGA card(s) will be visible at point **1** on the mainboard.
 3. Remove screws **2** - **5** ([Figure 8b](#)) from the VGA heatsink **6**.
 4. Carefully lift the VGA heatsink **6** up and off the VGA card.
 5. Remove screws **7** - **9** ([Figure 8c](#)) from the VGA card.
 6. Carefully grip the plastic holder **10** and lift the video card **11** up and off the socket.
 7. Reverse the process to install the new VGA Card.



6. VGA Heatsink
11. VGA Card

- 7 Screws

Removing the Wireless LAN Module

1. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
2. The wireless LAN module will be visible at point **1** on the mainboard.
3. Carefully disconnect cables **2** - **3**, and then remove the screws **4** - **5**.
4. The wireless LAN module **6** ([Figure 9c](#)) will pop-up, and you can remove it.

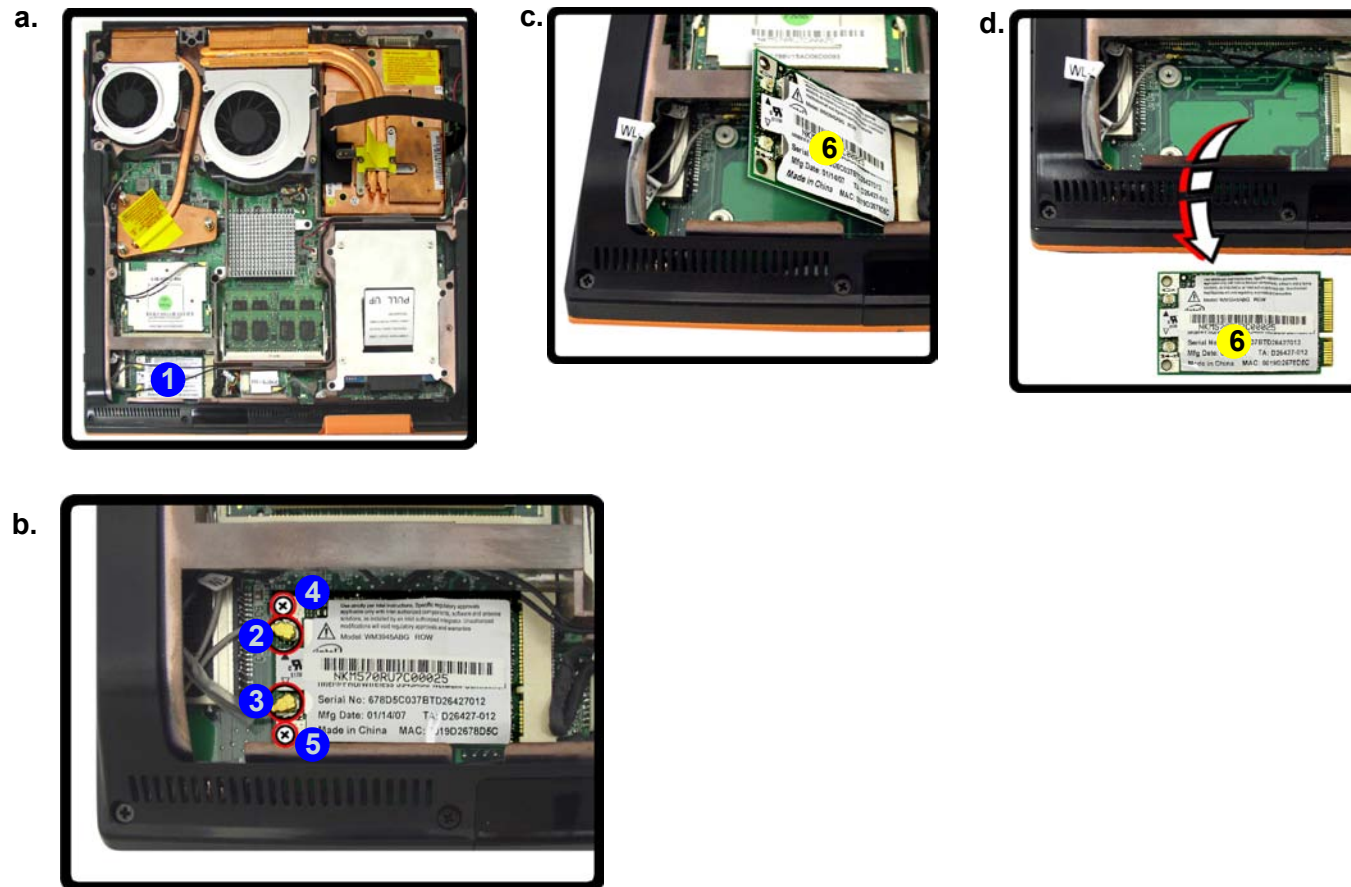
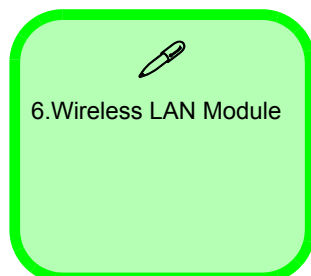


Figure 9
**Wireless LAN
Module Removal**

- a. Locate the WLAN.
- b. Disconnect the cables and remove the screws.
- c. The WLAN module will pop up.
- d. Remove the WLAN module.

Note: Make sure you reconnect the antenna cable to the “Main” socket ([Figure 9b](#)).



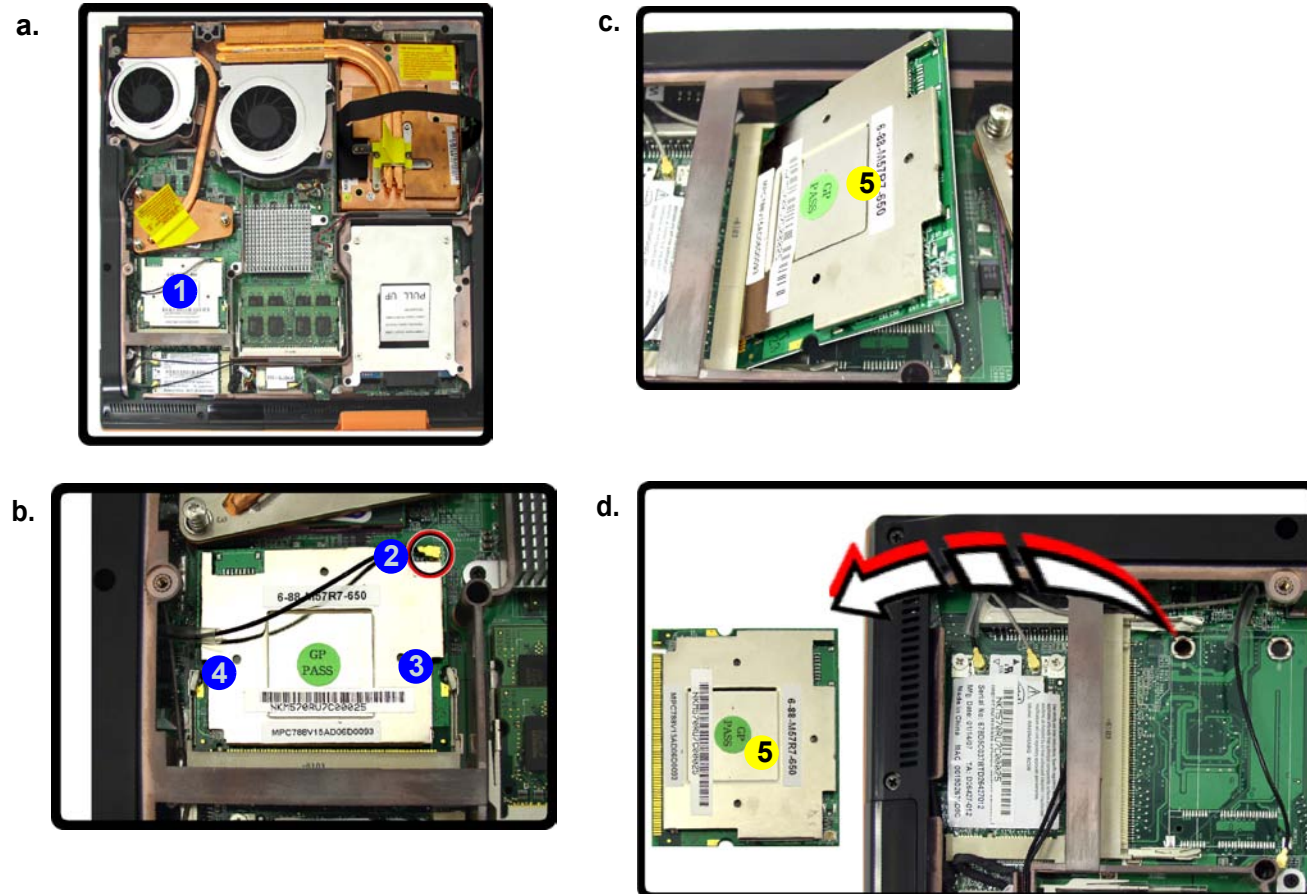
Disassembly

Figure 10
TV Tuner Card
Removal

Removing the TV Tuner Card

1. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
2. The TV Tuner card will be visible at point **1** on the mainboard.
3. Carefully disconnect cable **2**, then gently pull the two release latches (**3** - **4**) on the sides of the module socket.
4. The TV Tuner card **5** ([Figure 10c](#)) will pop-up, and you can remove it.

- a. Locate the TV Tuner card.
- b. Disconnect the cable and pull the release latches.
- c. The TV Tuner card will pop up.
- d. Remove the TV Tuner card.



5. TV Tuner Card

Removing the Bluetooth Module

1. Turn **off** the computer, turn it over, and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
2. The Bluetooth module will be visible at point ① on the mainboard.
3. Disconnect the cable ② and carefully separate the Bluetooth Module from the connector ③ ([Figure 11b](#)).
4. Lift the Bluetooth Module ④ ([Figure 11c](#)) up and off the computer.

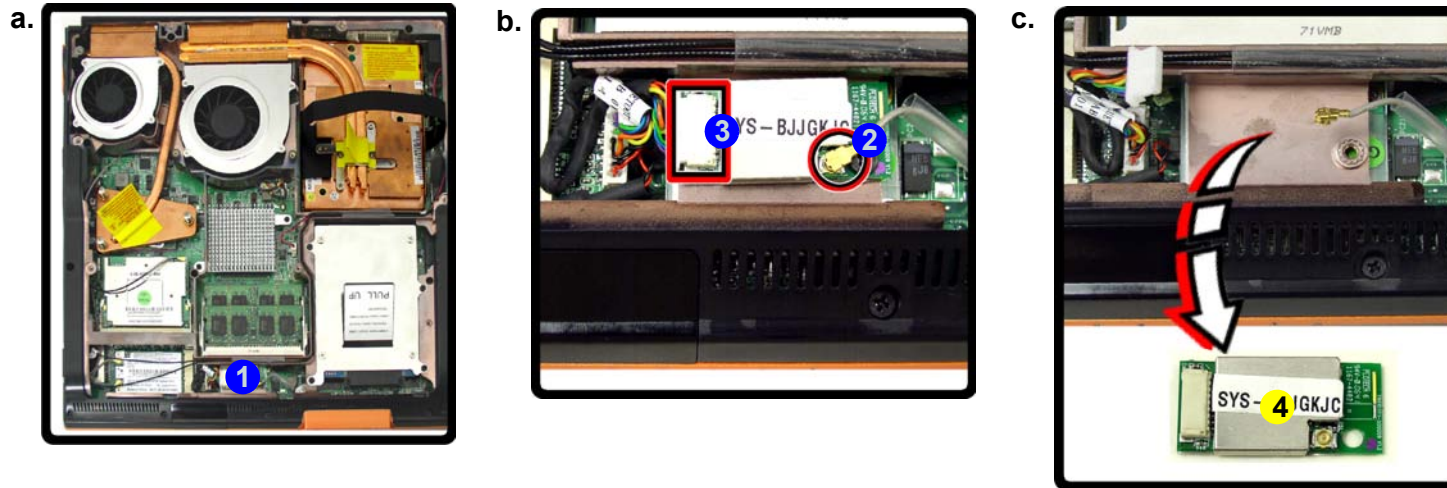


Figure 11
Bluetooth Module Removal

- a. Locate the Bluetooth module.
- b. Disconnect the cable and the connector from the bluetooth module.
- c. Lift the Bluetooth module out.



4. Bluetooth Module

Disassembly

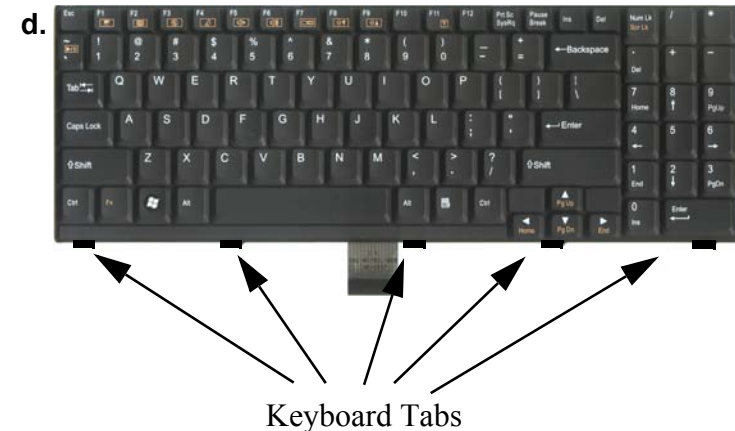
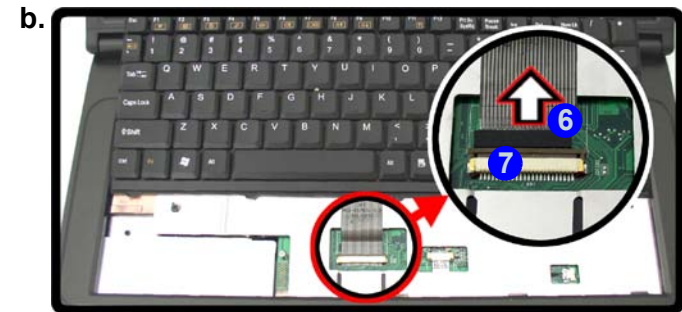
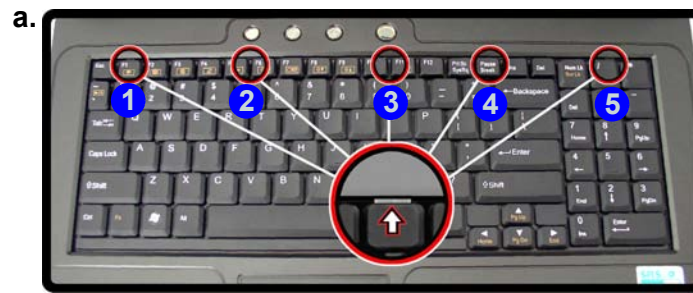
Figure 12

Keyboard Removal

- Press the five latches to release the keyboard.
- Lift the keyboard up and disconnect the cable from the locking collar.
- Remove the keyboard.

Removing the Keyboard

- Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
- Press the **five** keyboard latches at the top of the keyboard to elevate the keyboard from its normal position (you may need to use a small screwdriver to do this).
- Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable **6** ([Figure 12b](#)).
- Disconnect the keyboard ribbon cable **6** from the locking collar socket **7**.
- Carefully lift up the keyboard **8** ([Figure 12c](#)) off the computer.



Re-Inserting the Keyboard

When re-inserting the keyboard firstly align the **five** keyboard tabs at the bottom ([Figure 12d](#)) at the bottom of the keyboard with the slots in the case.

8. Keyboard

Removing the Modem

1. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)), hard disk ([page 2 - 6](#)), optical device ([page 2 - 8](#)), RAM ([page 2 - 9](#)), CPU ([page 2 - 10](#)), VGA card ([page 2 - 12](#)), wireless LAN ([page 2 - 13](#)), TV Tuner ([page 2 - 14](#)), Bluetooth ([page 2 - 15](#)) and keyboard ([page 2 - 16](#)).
2. Remove screws ① - ⑥ from the keyboard shielding plate ⑦.
3. Lift the keyboard shielding plate off the computer.
4. Carefully disconnect connectors (⑧ - ⑮) and turn the computer over.
5. Disconnect connectors (⑯ - ⑲) and remove screws ⑳ - ㉔ from the bottom case ([Figure 13d](#)) and remove screws ㉕ - ㉙ from the rear of the computer.

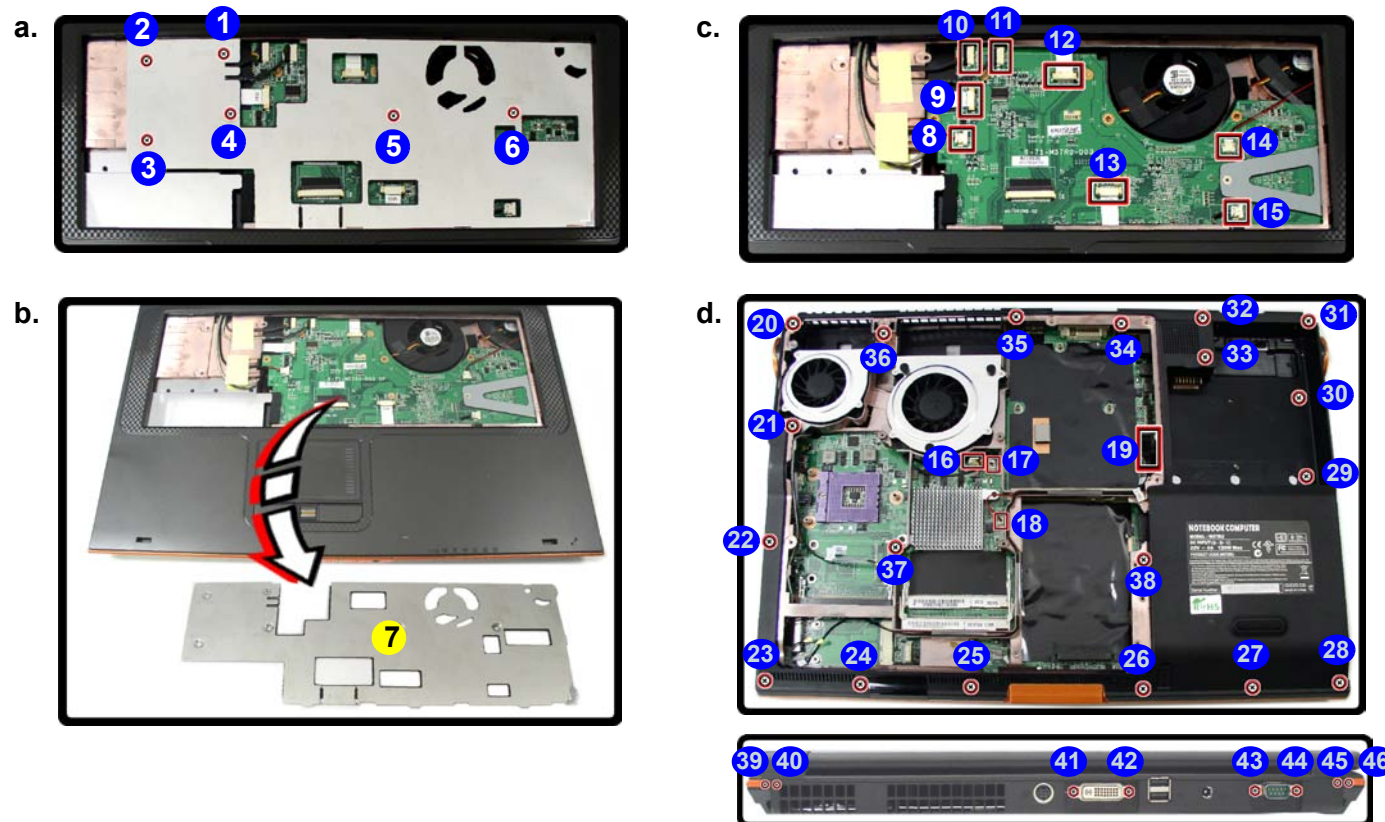


Figure 13
Modem Removal

- a. Remove the screws from the keyboard shielding plate.
- b. Lift the shielding plate off the computer.
- c. Disconnect the connectors.
- d. Disconnect the connectors and remove the screws.

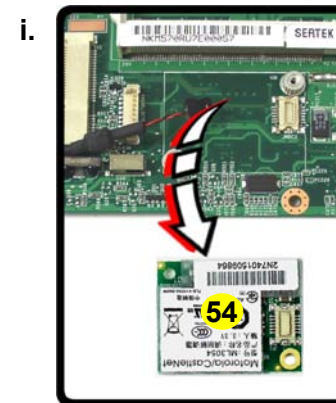
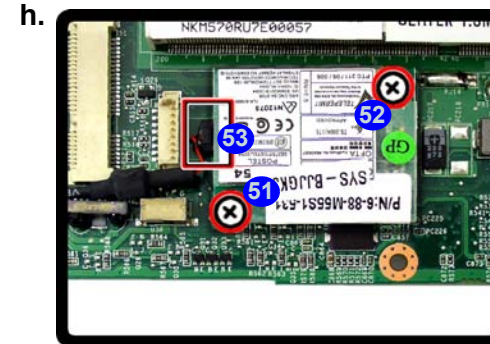
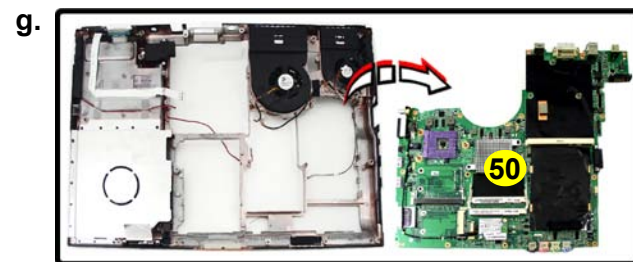
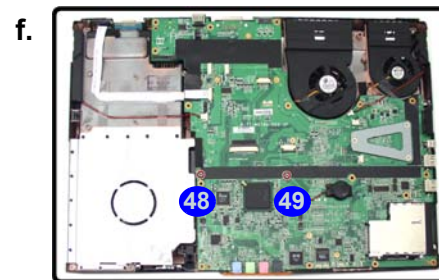
7. Keyboard Shielding Plate
- 33 Screws

Disassembly

Figure 14
Modem Removal
(cont'd)

6. Carefully lift the top case **47** (*Figure 14e*) up and off the computer.
7. Remove screws **48** - **49** from the mainboard.
8. Lift the mainboard **50** (*Figure 14g*) up and off the bottom case and turn over the mainboard.
9. Remove screws **51** - **52** from the modem and disconnect cable **53**.
10. Lift the modem **54** (*Figure 14g*) up and off the computer.

- e. Lift the top case off the computer.
- f. Remove the screws.
- g. Lift the mainboard off the bottom case.
- h. Remove the screws and disconnect the cable.
- i. Lift the modem off the computer.



47. Top Case
50. Mainboard
54. Modem

- 4 Screws

Appendix A:Part Lists

This appendix breaks down the *M570RU/M571RU* 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 List Illustration Location

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

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

Part	M570RU/M571RU
Top	<i>page A - 3</i>
Top without Fingerprint	<i>page A - 4</i>
Bottom	<i>page A - 5</i>
LCD	<i>page A - 6</i>
VGA	<i>page A - 7</i>
DVD-Dual RW Drive	<i>page A - 8</i>
Combo Drive	<i>page A - 9</i>

Top

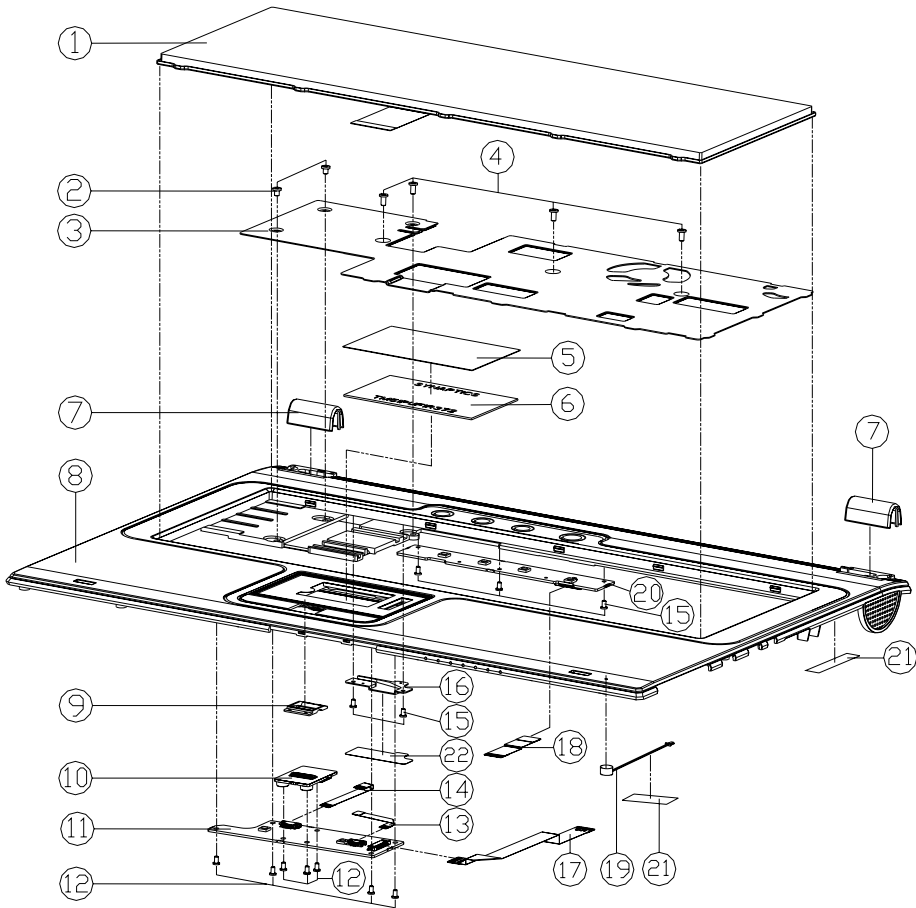
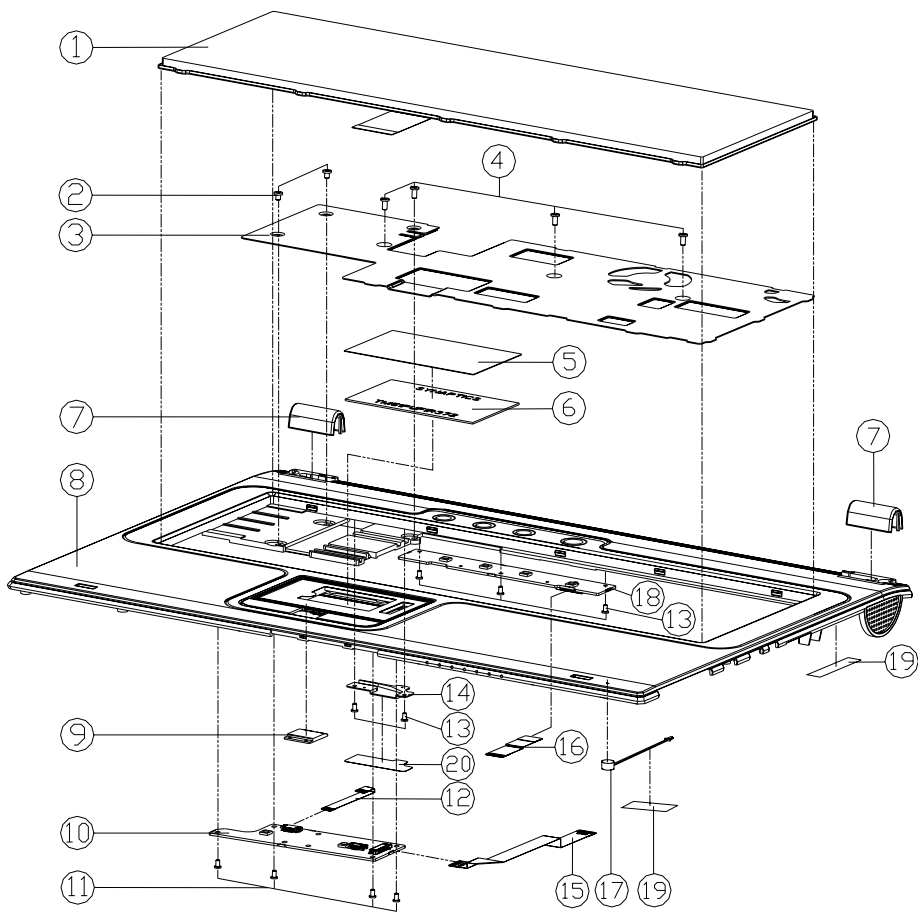


Figure A - 1
Top

ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD(OPTION)	6-80-D90C0-010-1	
2	SCREW M2.5*4L 1 BK/Z ICT (B45;T080) 無鉛	6-35-C6125-4RA	
3	KEYBOARD SHIELDING SUS MYLAR(MYLAR 無鉛)	6-33-M57R2-042	
4	SCREW M2.5*4L K1 BK/Z NY ICT 無鉛	6-35-B6125-8R0	
5	TOUCH PAD MYLAR M570RU 無鉛	6-40-M57R2-011	FDR M570RU
5	TOUCH PAD MYLAR M571RU 無鉛	6-40-M5712-010	FDR M571RU
6	TOUCH PAD SYNAPTICS TMS1P2U2R372 無鉛	6-49-M57U2-010	
7	HINGE COVER L/R PC+ABS M570RU 無鉛	6-42-M57RY-011	
7	HINGE COVER L/R PC+ABS M571RU 無鉛	6-42-M571Y-010	
8	TOP CASE MODULE M570RU 無鉛	6-39-M57R2-012	FDR M570RU
8	TOP CASE MODULE M571RU 無鉛	6-39-M5712-010	FDR M571RU
9	FINGER PRINT TOP CASE PC+ABS M570RU 無鉛	6-42-M57R2-022	FDR M570RU
9	FINGER PRINT TOP CASE PC+ABS M571RU 無鉛	6-42-M5712-020	FDR M571RU
10	FINGER PRINTER BOARD V3.0 M570RU 無鉛	6-77-M57RF-D03	
11	CLICK BOARD V3.0A M570RU 無鉛	6-77-M57R2-D03A	
12	SCREW M2.5*5L K1 BK/Z ICT NY 無鉛	6-35-B6125-5RA	
13	FFC CABLE FOR FINGER PRINTER 4 PINCH-4.1 1.37MM 無鉛	6-43-M57RF-011	
14	FFC CABLE FOR CLICK BOARD 10 PINCH-4.1 1.37MM 無鉛	6-43-M57R0-031	
15	SCREW M2*4L K1 BNL ICT NY 無鉛	6-35-B9120-4RA	
16	CABLE COVER SUS430 M570RU 無鉛	6-33-M57R2-050	
17	FFC CABLE FOR CLICK BOARD 10 PINCH-4.1 1.37MM 無鉛	6-43-M57R0-011	
18	FFC CABLE FOR CLICK BOARD 10 PINCH-4.1 1.37MM 無鉛	6-43-M57R0-040	
19	MIC CABLE 3.4MM(M570) 2V-DIV 22K 2P V(CABLE 無鉛)	6-23-EM56A-011	
20	HOT KEY BOARD V2.0 M570RU 無鉛	6-77-M57RS-D02	
21	TAPE MYLAR (C)MYLAR M550J 無鉛	6-40-M55J2-030	
22	CABLE COVER MYLAR M570RU 無鉛	6-40-M57R2-020	

Top without Fingerprint

Figure A - 2
Top without
Fingerprint



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD(OPTION)	6-80-D90C0-010-1	
2	SCREW M2.5x4L I BK/Z ICT (045/08) (M570RU)	6-35-C6125-4RA	
3	KEYBOARD SHIELDING SUS M570RU (M570RU)	6-33-M57R2-042	
4	SCREW M2.5x8L KI BK/Z NY ICT (M570RU)	6-35-B6125-BR0	
5	TOUCH PAD MYLAR M570RU (M570RU)	6-40-M57R2-011	FOR M570RU
6	TOUCH PAD MYLAR M571RU (M571RU)	6-40-M5712-010	FOR M571RU
7	TOUCH PAD SYNAPTICS TMS1P2IR372 (M570RU)	6-49-M57U2-010	
8	HINGE COVER L/R PC+ABS M570RU (M570RU)	6-42-M571Y-011	FOR M570RU
9	HINGE COVER L/R PC+ABS M571RU (M571RU)	6-42-M571Y-010	FOR M571RU
10	TOP CASE MODULE M570RU (M570RU)	6-39-M57R2-012	FOR M570RU
11	TOP CASE MODULE M571RU (M571RU)	6-39-M5712-010	FOR M571RU
12	FINGER PRINT DUMMY COVER PC+ABS M570RU (M570RU)	6-42-M57R2-082	FOR M570RU
13	FINGER PRINT DUMMY COVER PC+ABS M571RU (M571RU)	6-42-M5712-080	FOR M571RU
14	CLICK BOARD V3.0A M570RU (M570RU)	6-77-M57R2-D03A	
15	SCREW M2.5x5L KI BK/Z ICT NY (M570RU)	6-35-B6125-SRA	
16	ITE CABLE FOR CLK BOARD TP PITCH45 L-40MM (M570RU)	6-43-M57R0-031	
17	SCREW M2x4L KI BNT ICT NY (M570RU)	6-35-B9120-4RA	
18	CABLE COVER SUS430 M570RU (M570RU)	6-33-M57R2-050	
19	ITE CABLE FOR CLK BOARD TP PITCH45 L-40MM (M570RU)	6-43-M57R0-011	
20	ITE CABLE FOR CLK BOARD TP PITCH45 L-40MM (M570RU)	6-43-M57R0-040	
	MIC 6MMx3.4MMx2.5V-10V 22K 2P W/CABLE	6-23-EM56A-011	
	HOT KEY BOARD V2.0 M570RU (M570RU)	6-77-M57R2-D02	
	TAPE MYLAR (C) MYLAR M550J (M550J)	6-40-M55J2-030	
	CABLE COVER MYLAR M570RU (M570RU)	6-40-M57R2-020	

Bottom

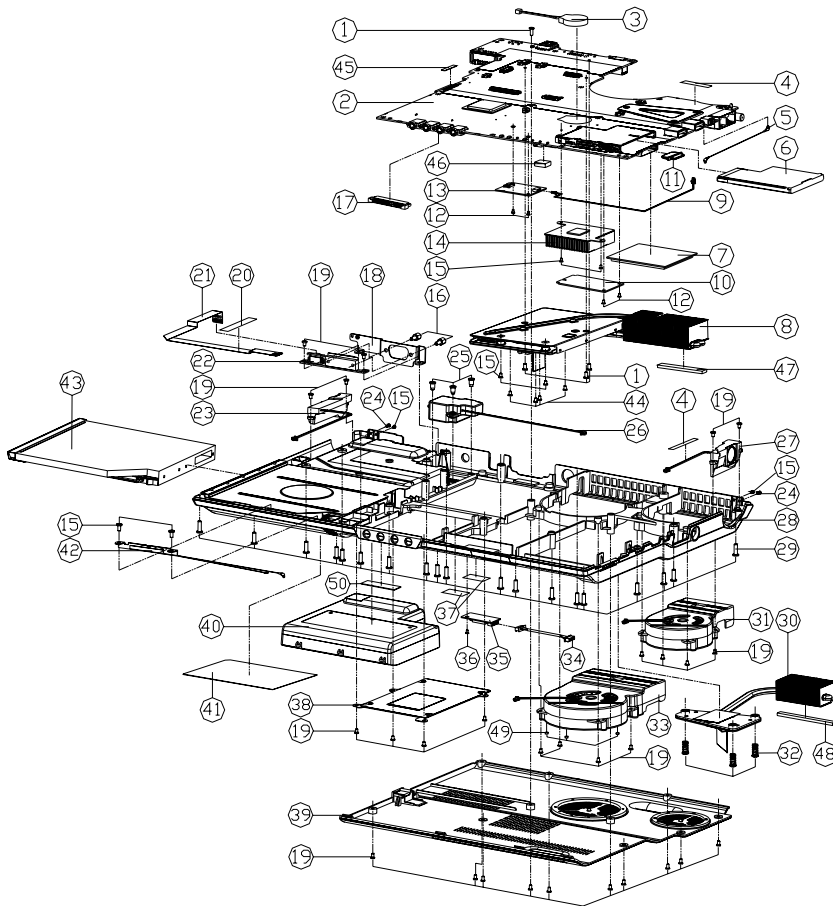
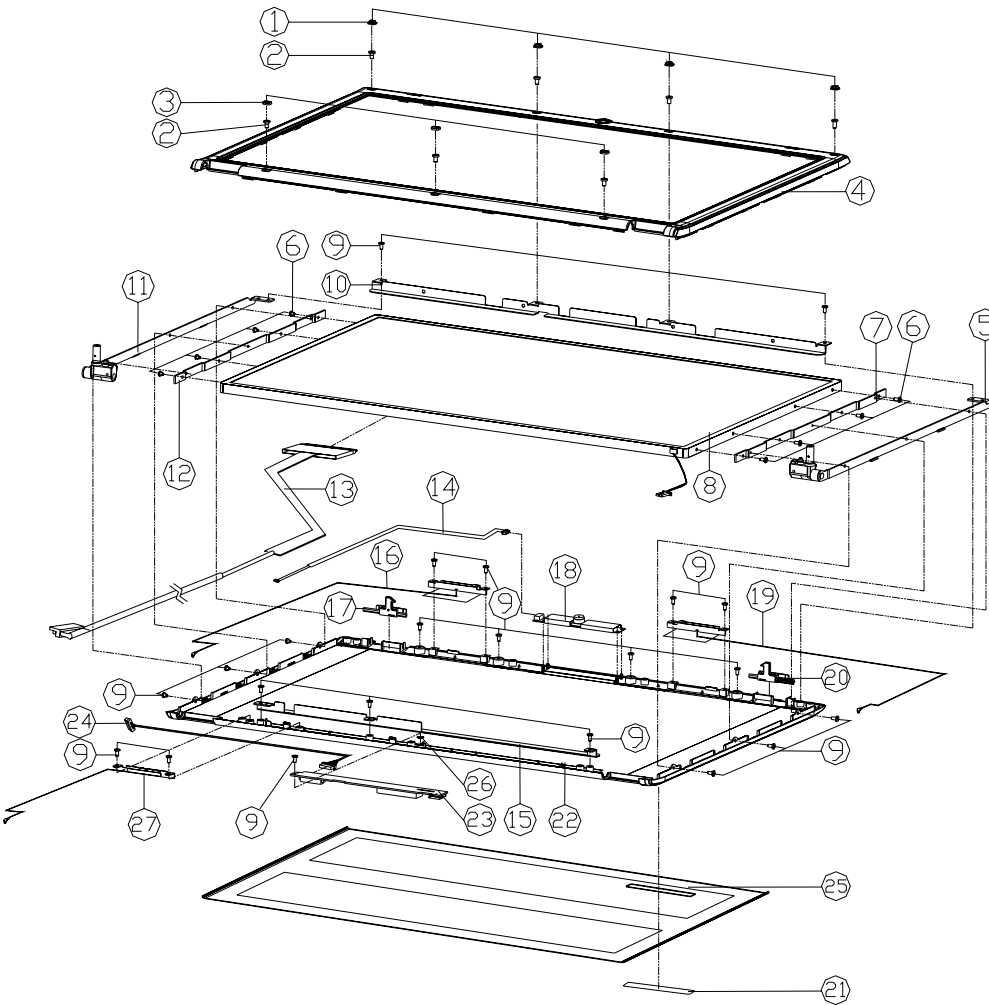
[illegible]

Figure A - 3
Bottom

LCD

Figure A - 4
LCD



ITEM	PART NAME	PART NO	REMARK
1	RUBBER LCD TOP	6-47-M57A1-011	
2	SCREW M2.5X5L KI NI ICT NY	6-35-B1125-SRA	
3	RUBBER LCD DOWN M570RU	6-47-M57R3-030	
4	LCD FRONT COVER MODULE M570RU	6-39-M57R1-011	
5	LCD HINGE ASSY R	6-33-M57A1-0A1	
6	SCREW M2X4L KI NI ICT NY	6-35-B1120-3RA	
7	CONVERT BRACKET R FOR LG17	6-33-M57A1-060	
8	LCD T/LG	6-50-NB266-L05	FOR LG
9	SCREW M2X4L KI NI ICT NY	6-35-B9120-4RA	
10	LCD BRACKET TOP FOR AU7	6-33-M57A1-051	
11	LCD HINGE ASSY L	6-33-M57A1-0B1	
12	CONVERT BRACKET L FOR LG17	6-33-M57A1-070	
13	LCD CABLE LVDS M570	6-43-M57R1-010	
14	CAMERA CABLE SP INCH USB2 VIRE L-485MM	6-43-M57UC-010	
15	LCD BRACKET DOWN	6-33-M57A1-080	
16	LCD BACK COVER MODULE M570RU	6-39-M57R1-031	
17	LCD BACK COVER MODULE M570RU	6-39-M57R1-031	
18	INVERTER MODULE FOR M570RU	6-42-M57R1-080	
19	INVERTER CABLE FOR M570RU	6-43-M57UC-010	
20	LCD BACK COVER MODULE M570RU	6-39-M57R1-021	
21	LCD BACK COVER MODULE M570RU	6-39-M57R1-021	
22	INVERTER MODULE FOR M570RU	6-42-M57R1-080	
23	INVERTER CABLE FOR M570RU	6-43-M57UC-010	
24	LCD BACK COVER MODULE M570RU	6-39-M57R1-011	
25	LCD BACK COVER MODULE M570RU	6-39-M57R1-011	
26	WASHER #6X0.3t (MYLAR)	6-37-02000-601	
27	LCD BACK COVER MODULE M570RU	6-39-M57R1-011	

VGA

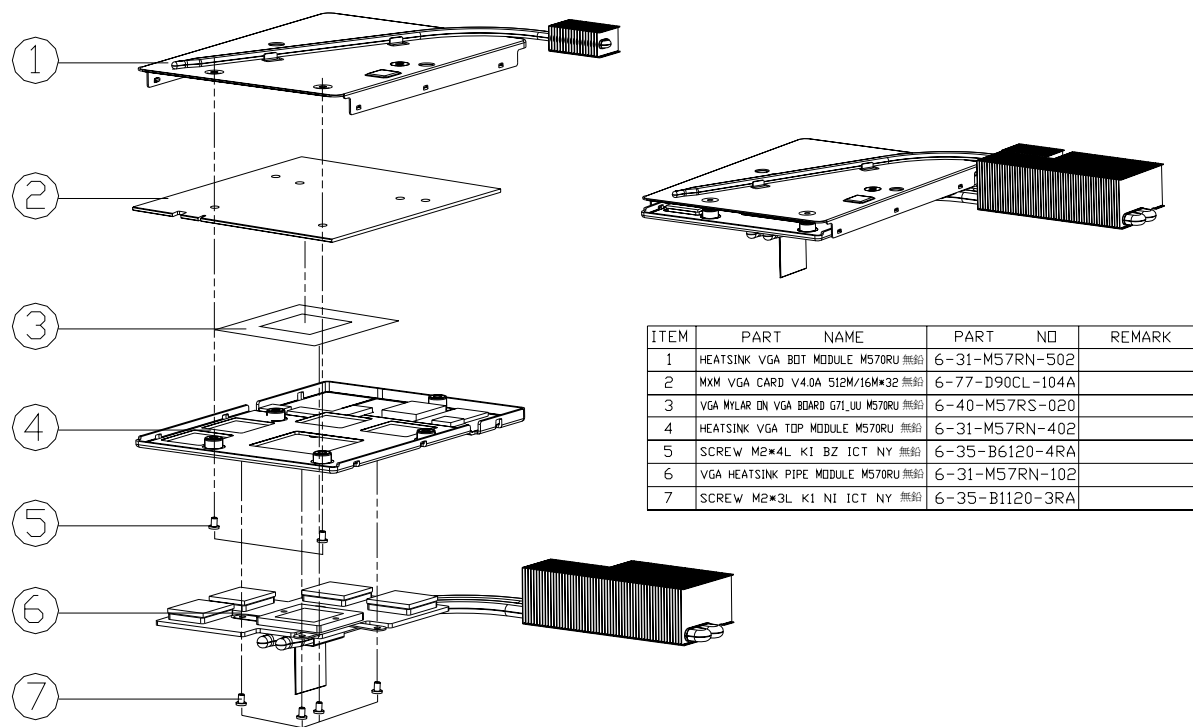
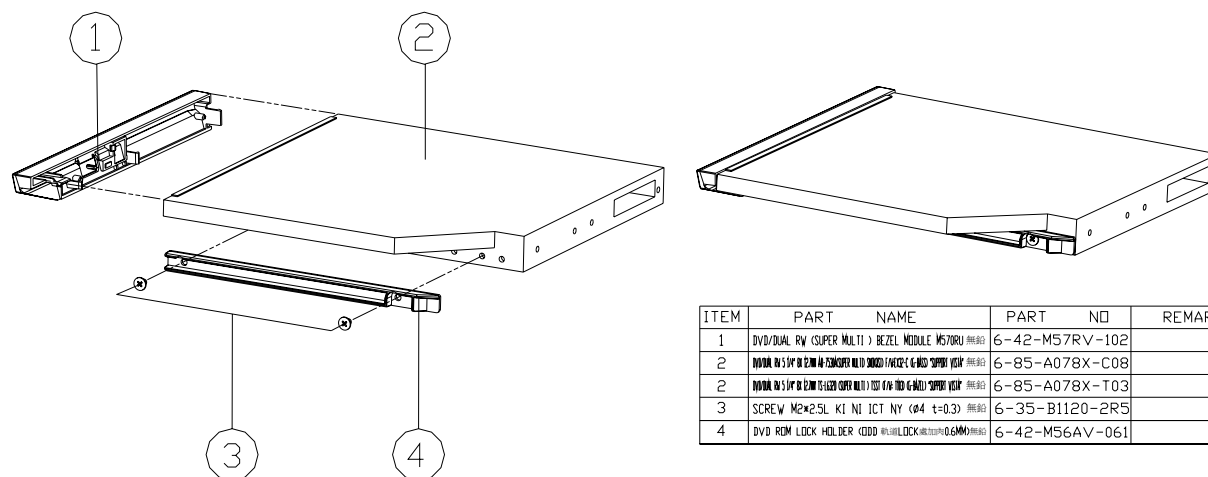


Figure A - 5
VGA

Figure A - 6
**DVD-Dual RW
Drive**



ITEM	PART	NAME	PART NO	REMARK
1	DVD/ROM RW (SUPER MULTI) X24ZL MODULE M57080		6-42-M57RV-102	
2	HARDW. 5.25 IN. 12.7MM H. 12.7MM X 12.7MM X 12.7MM (4.0MM) SPINNING		6-85-A078X-C08	
3	HARDW. 5.25 IN. 12.7MM H. 12.7MM X 12.7MM X 12.7MM (4.0MM) SPINNING		6-85-A078X-T03	
3	SCREW M2X2.5L KT IN ICT NY (44 T-0.3)		6-35-B1120-2R5	
4	DVD ROM LOCK HOLDER (1000 4.0MM X 12.7MM X 12.7MM)		6-42-M56AV-061	

Combo Drive

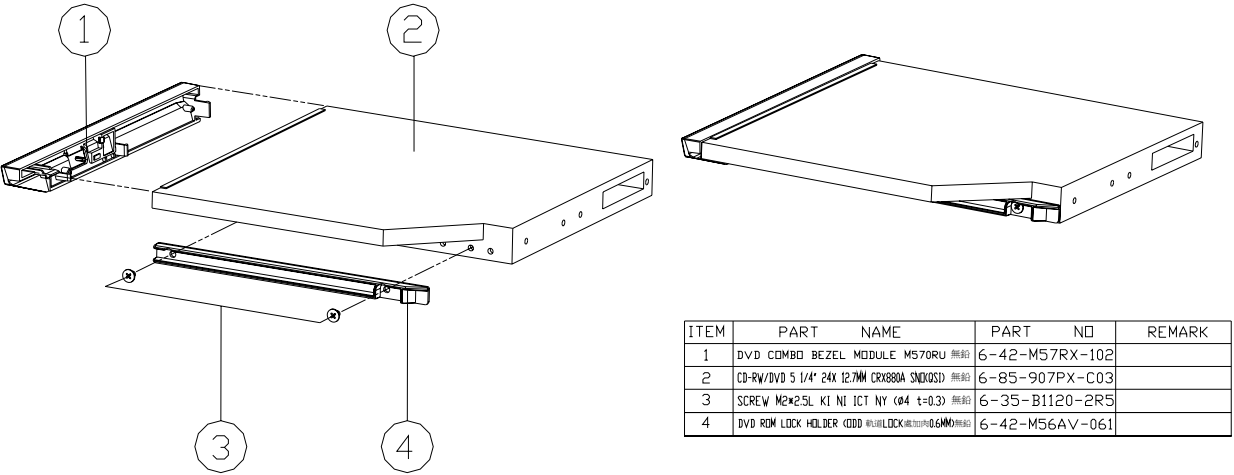


Figure A - 7
Combo Drive

Appendix B:Schematic Diagrams

This appendix has circuit diagrams of the **M570RU/M571RU** notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

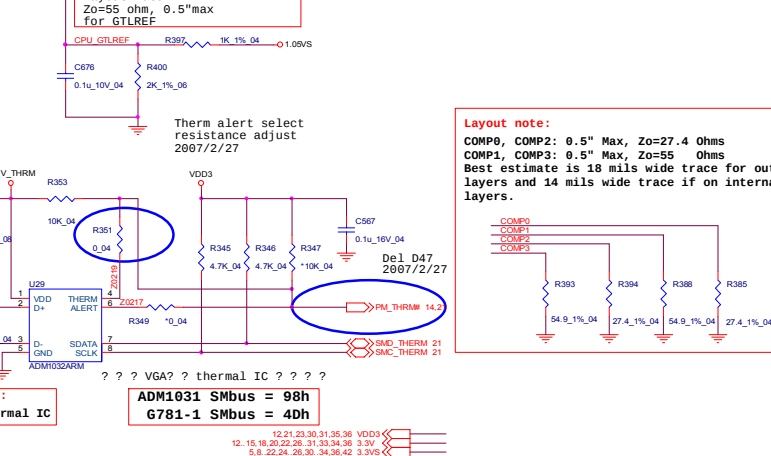
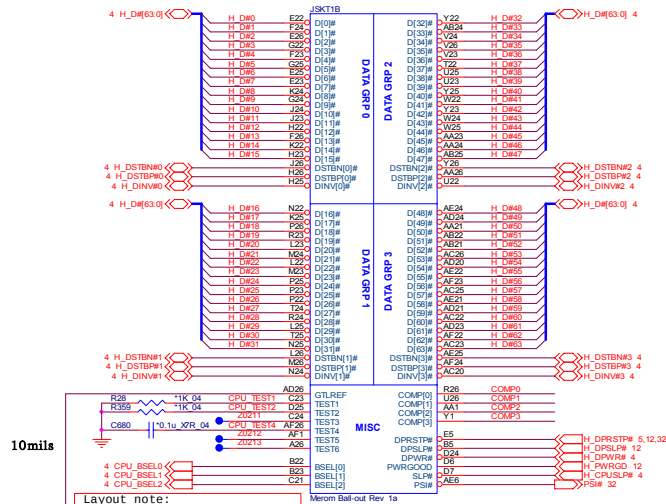
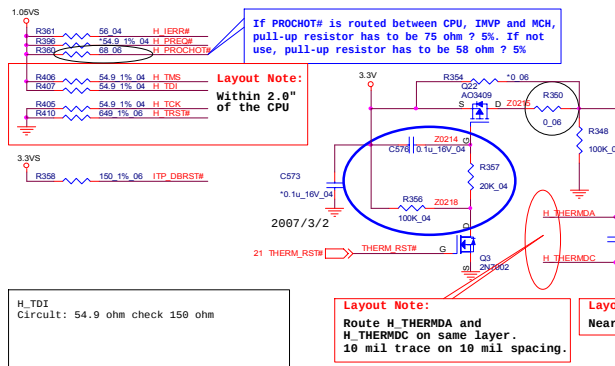
Diagram - Page	Diagram - Page	Diagram - Page
<i>SYSTEM BLOCK DIAGRAM - Page B - 2</i>	<i>CD-ROM, PC-Beep, T-P, USB2.0*4 - Page B - 17</i>	<i>Power, Hole - Page B - 32</i>
<i>Merom 1/2 - Page B - 3</i>	<i>Clock Generator, CCD - Page B - 18</i>	<i>VCORE for Merom CPU - Page B - 33</i>
<i>Merom 2/2 - Page B - 4</i>	<i>PCI-E LAN RTL8111B - Page B - 19</i>	<i>Mini-PCI, S-Video, CIR - Page B - 34</i>
<i>Crestline 1/5 Host - Page B - 5</i>	<i>Card Reader MR510 - Page B - 20</i>	<i>MXM PCI-E Type-IV - Page B - 35</i>
<i>Crestline 2/5 PEG - Page B - 6</i>	<i>New Card - Page B - 21</i>	<i>CHARGER, DC-IN - Page B - 36</i>
<i>Crestline 3/5 DDR - Page B - 7</i>	<i>KBC-ITE IT8512 - Page B - 22</i>	<i>Board to Board Connector - Page B - 37</i>
<i>Crestline 4/5 GND - Page B - 8</i>	<i>Mini Card, TPM, Super I/O - Page B - 23</i>	<i>Button Board - Page B - 38</i>
<i>Crestline 5/5 Power - Page B - 9</i>	<i>LED - Page B - 24</i>	<i>COM Port Board - Page B - 39</i>
<i>DDRII SO-DIMM 0 - Page B - 10</i>	<i>Azalia Codec ALC883 - Page B - 25</i>	<i>Click Board - Page B - 40</i>
<i>DDRII SO-DIMM 1 - Page B - 11</i>	<i>Audio Amp - Page B - 26</i>	<i>Second SATA HDD Board - Page B - 41</i>
<i>LCD, CPU Fan - Page B - 12</i>	<i>CRT, INV, MDC, BT, PWRGD - Page B - 27</i>	<i>FingerPrint Board - Page B - 42</i>
<i>ICH8-M 1/4 SATA - Page B - 13</i>	<i>Power GPU/1.25VS - Page B - 28</i>	<i>IEEE 1394 VT6311S - Page B - 43</i>
<i>ICH8-M 2/4 (PCI, USB) - Page B - 14</i>	<i>Power 1.5VS/1.05VS - Page B - 29</i>	<i>SRS - Page B - 44</i>
<i>ICH8-M 3/4 FWH - Page B - 15</i>	<i>Power 1.8V/0.9V - Page B - 30</i>	
<i>ICH8-M 4/4 - Page B - 16</i>	<i>Power 3.3V/5V - Page B - 31</i>	

Table B - 1
**Schematic
Diagrams**



Version Note

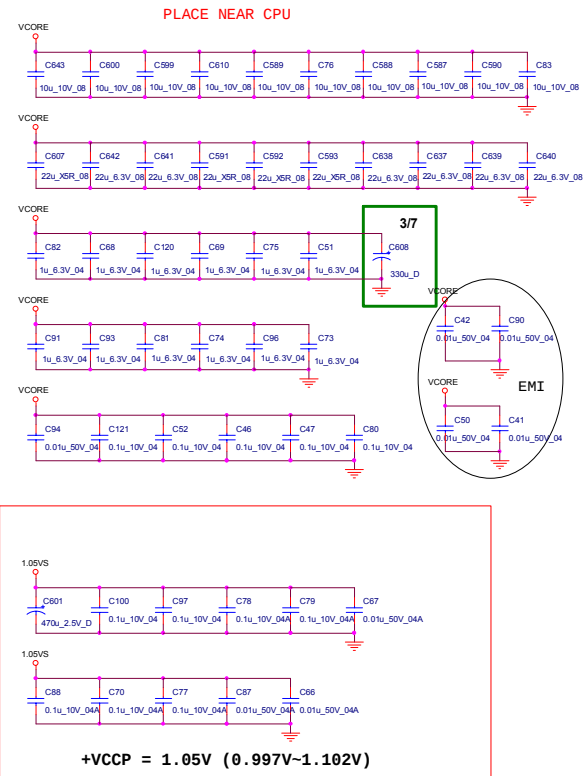
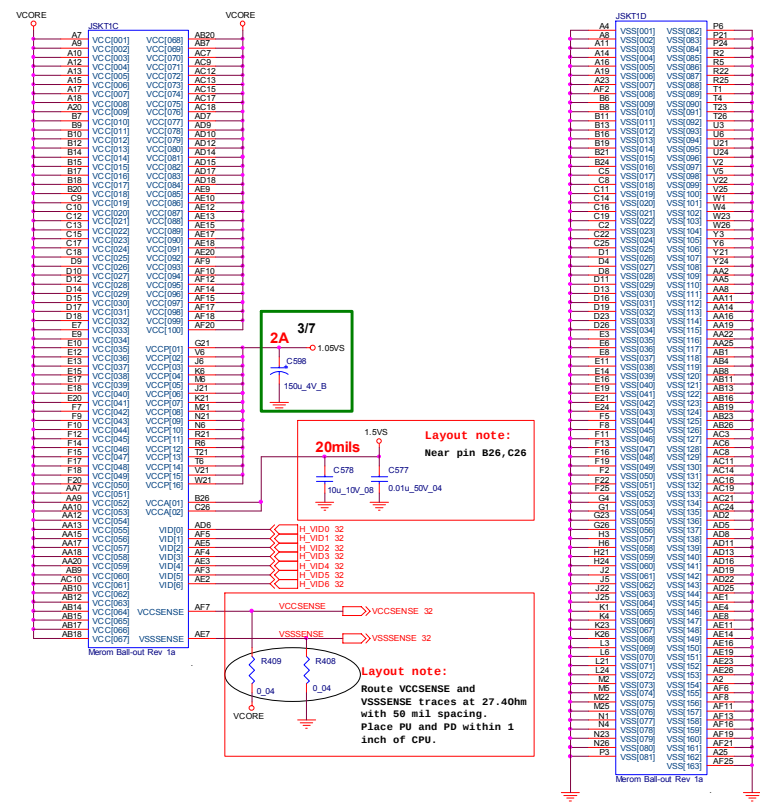
The schematic diagrams in this chapter are based upon version **6-7P-M57R6-004**. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

[illegible]

Schematic Diagrams

Merom 2/2

Sheet 3 of 43
Merom 2/2



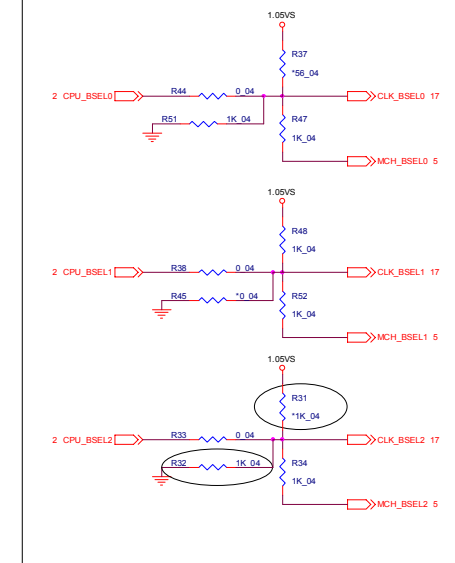
8, 12, 13, 15, 20, 22, 27, 28, 33 1.0V/S
2, 4, 5, 7, 8, 12, 15, 28 1.0V/S
32 VCCORE

B.Schematic Diagrams

Crestline 1/5 Host B - 5



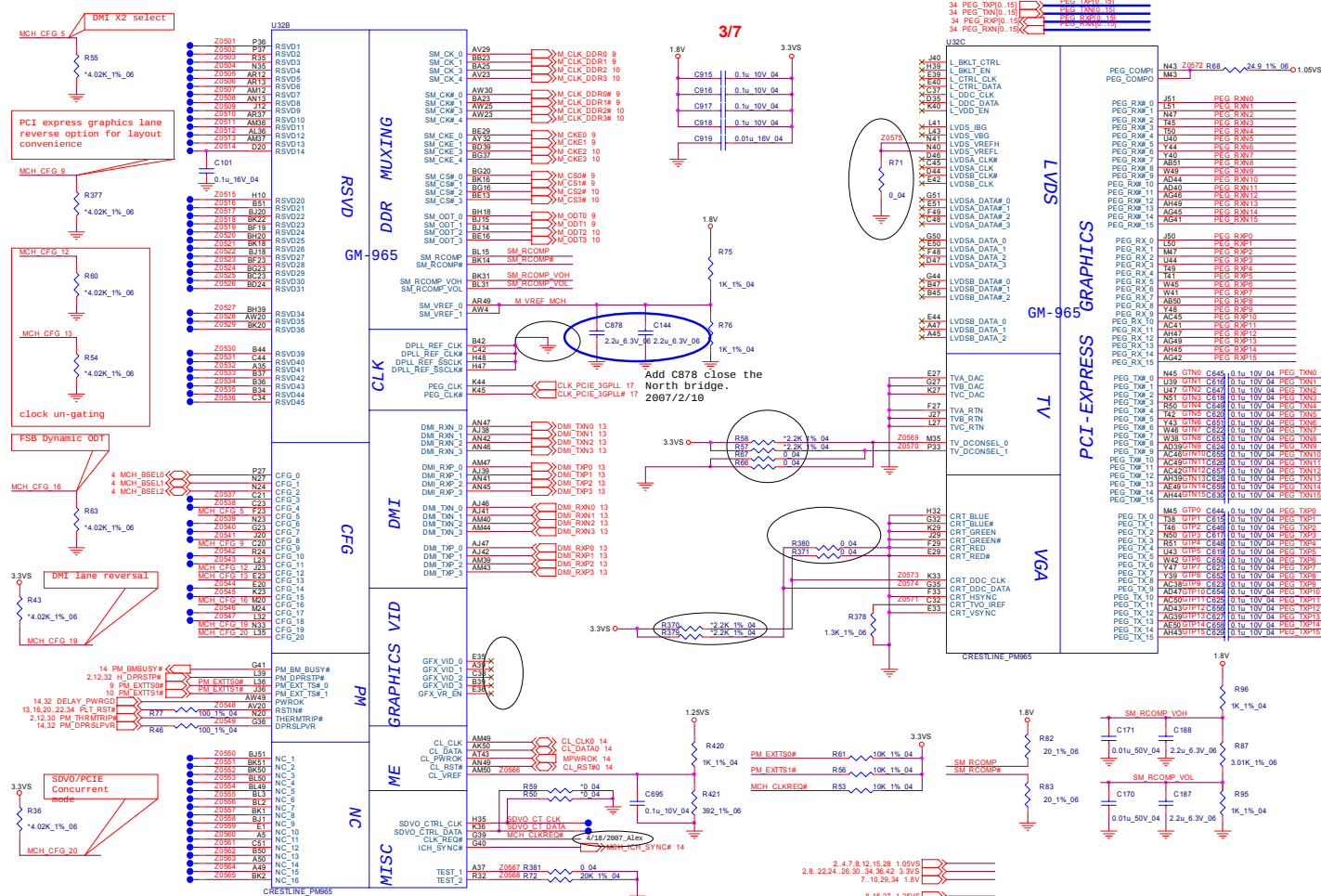
BSEL2	BSEL1	BSEL0	Host Clock Frequency
0	0	1	533 MHz
0	1	1	667 MHz
0	1	0	800 MHz



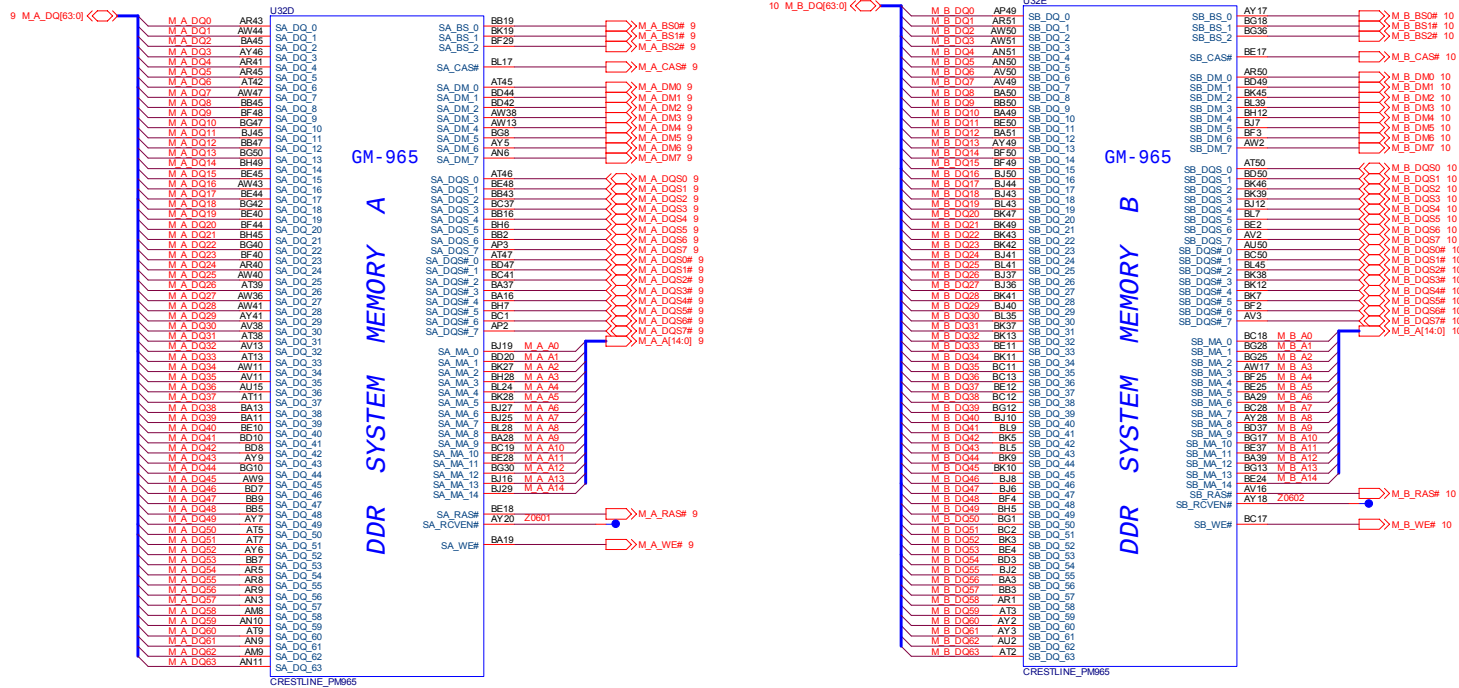
Sheet 4 of 43
Crestline 1/5 Host

Crestline 2/5 PEG

Sheet 5 of 43
Crestline 2/5 PEG

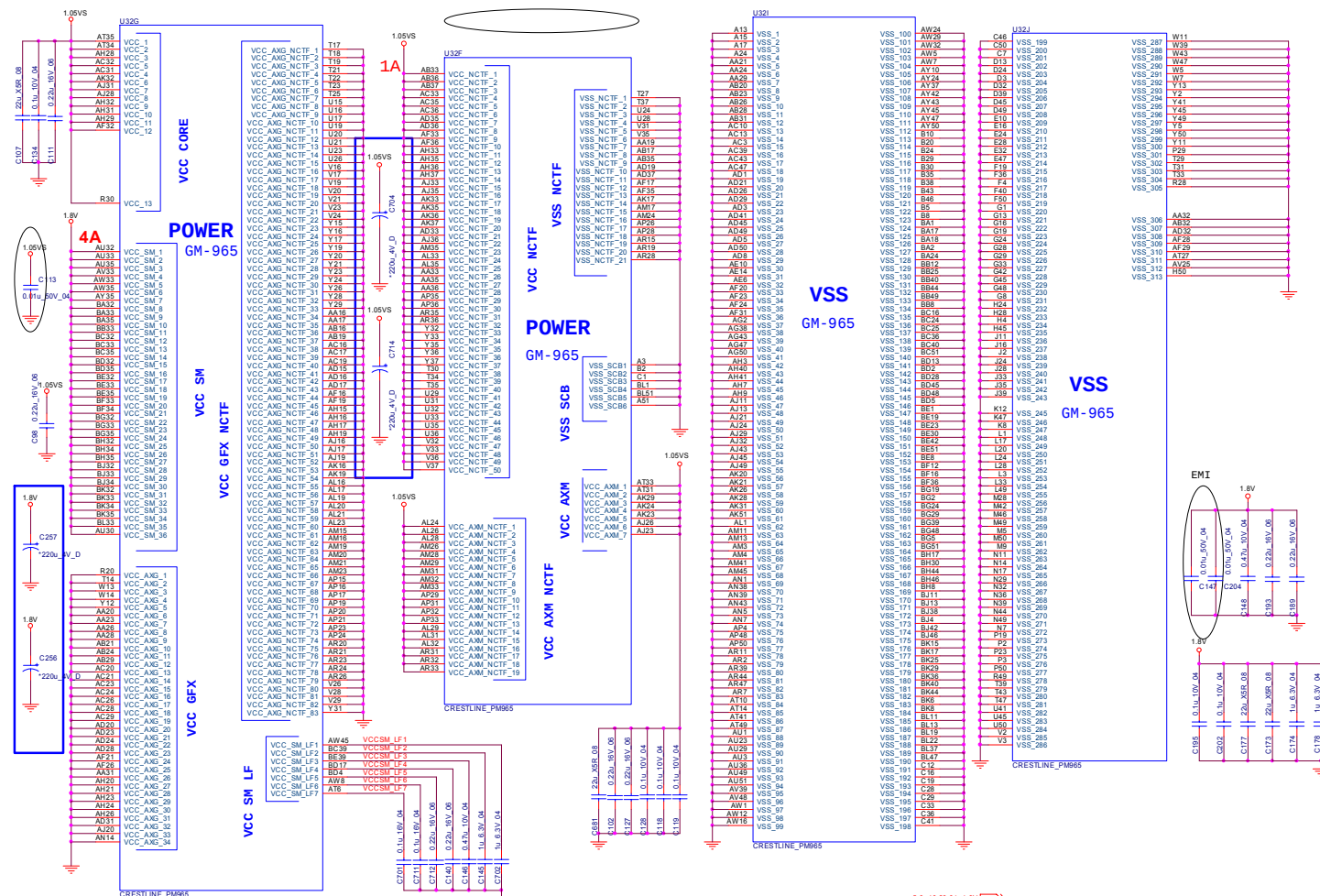


Crestline 3/5 DDR

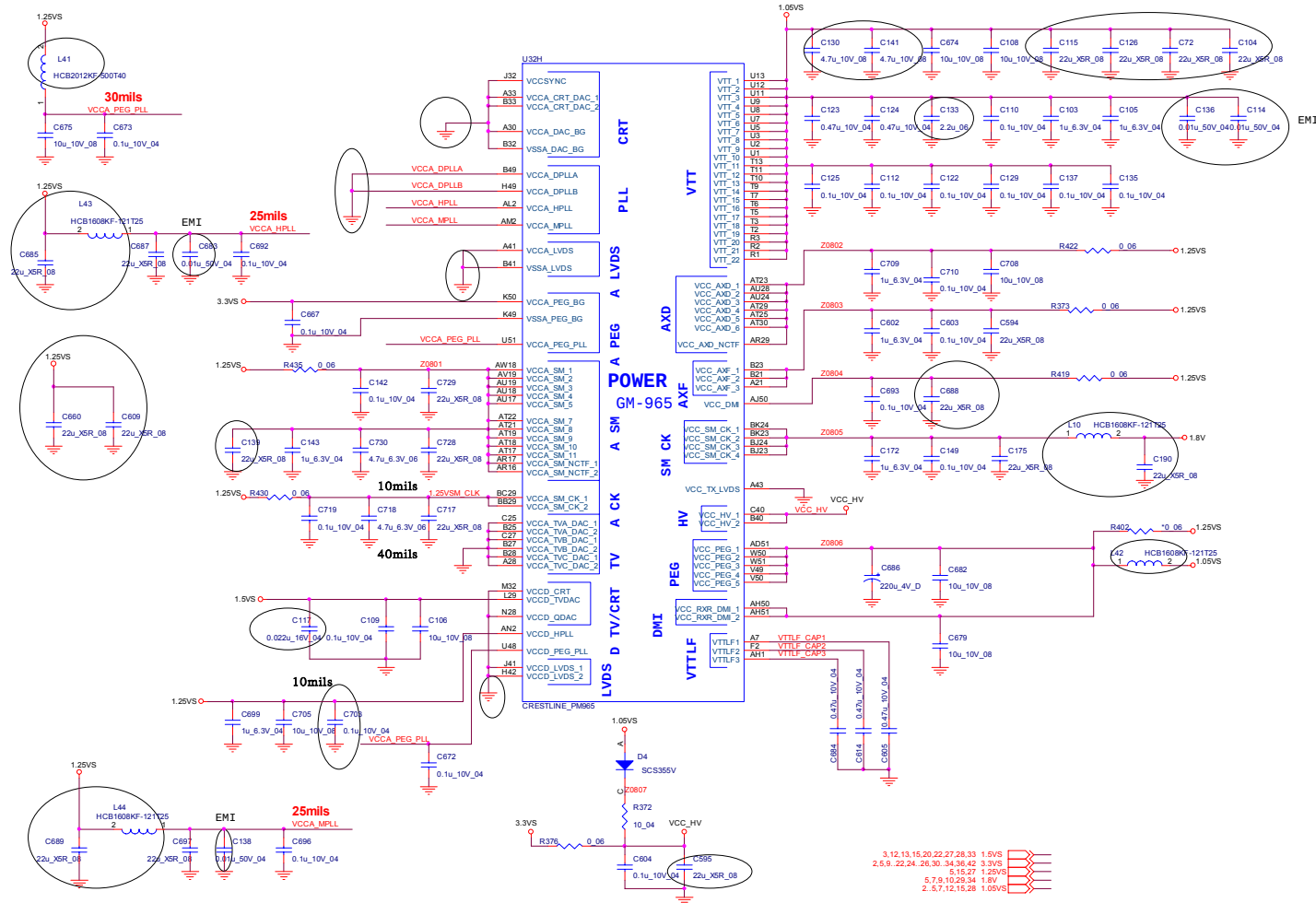
Sheet 6 of 43
Crestline 3/5 DDR

Crestline 4/5 GND

Sheet 7 of 43
Crestline 4/5 GND



Crestline 5/5 Power

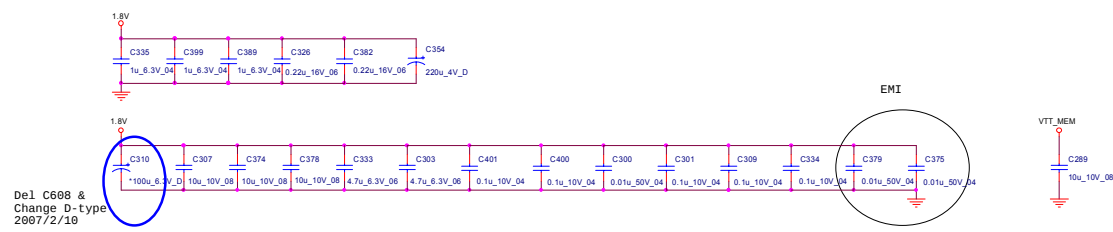
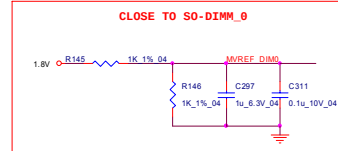
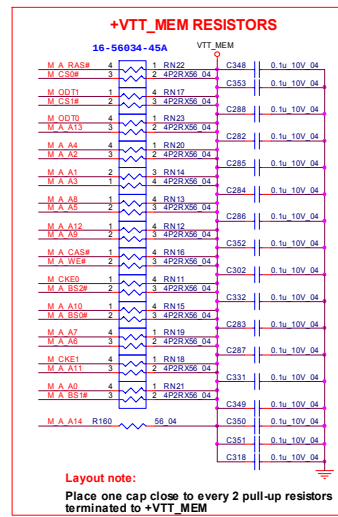
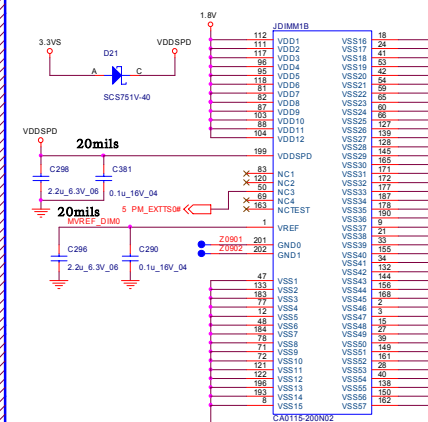
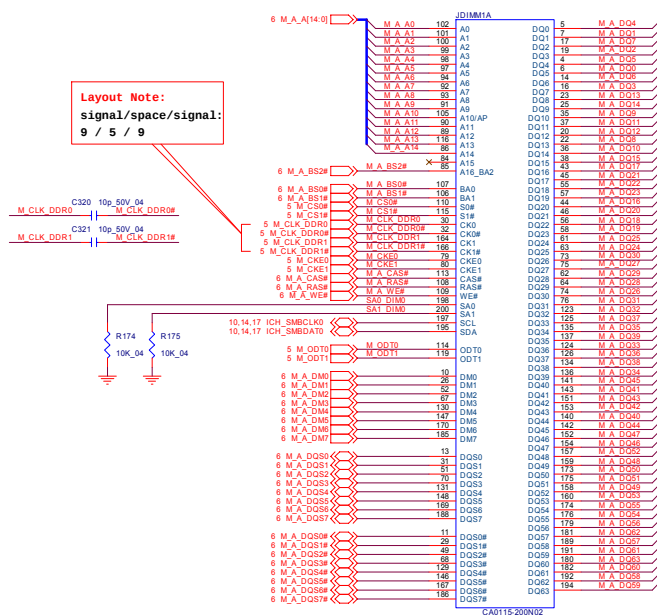


Sheet 8 of 43
Crestline 5/5 Power

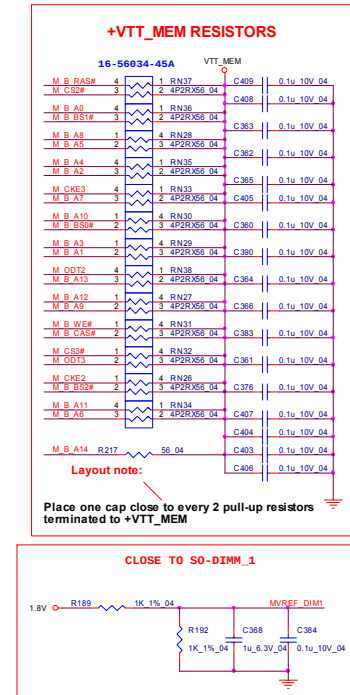
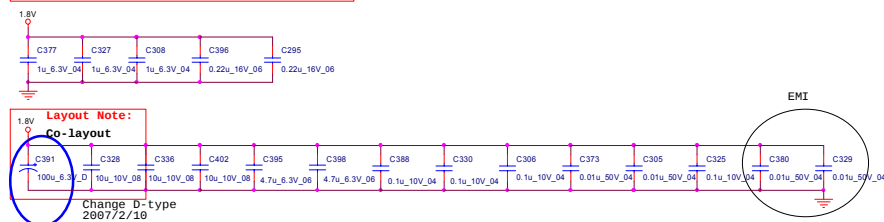
DDRII SO-DIMM 0

SO-DIMM 0

Sheet 9 of 43
DDRII SO-DIMM 0

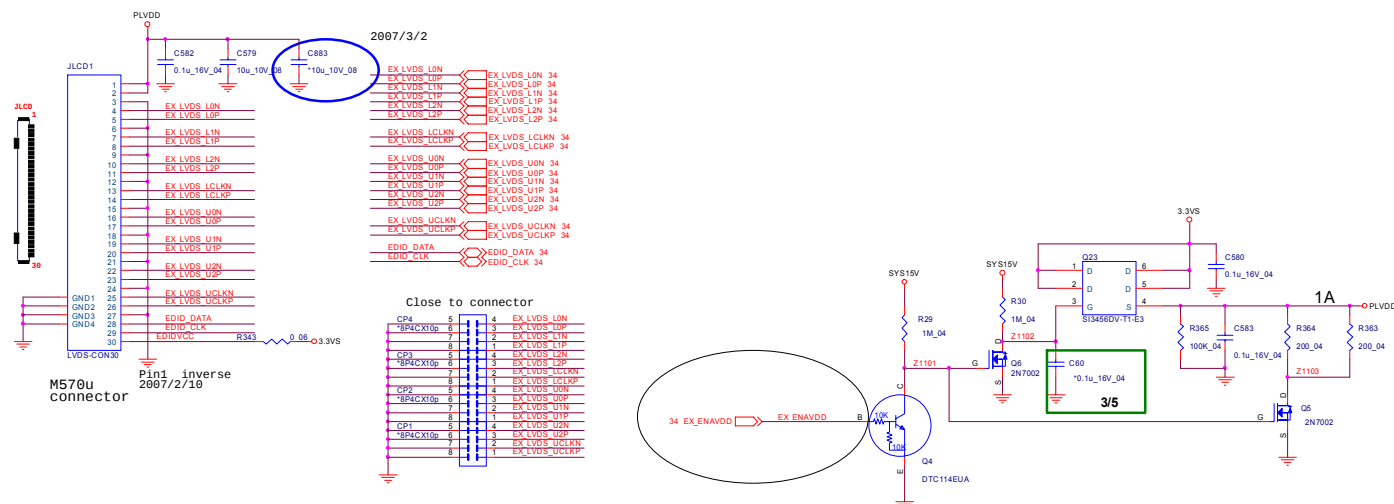


S0-DIMM 1



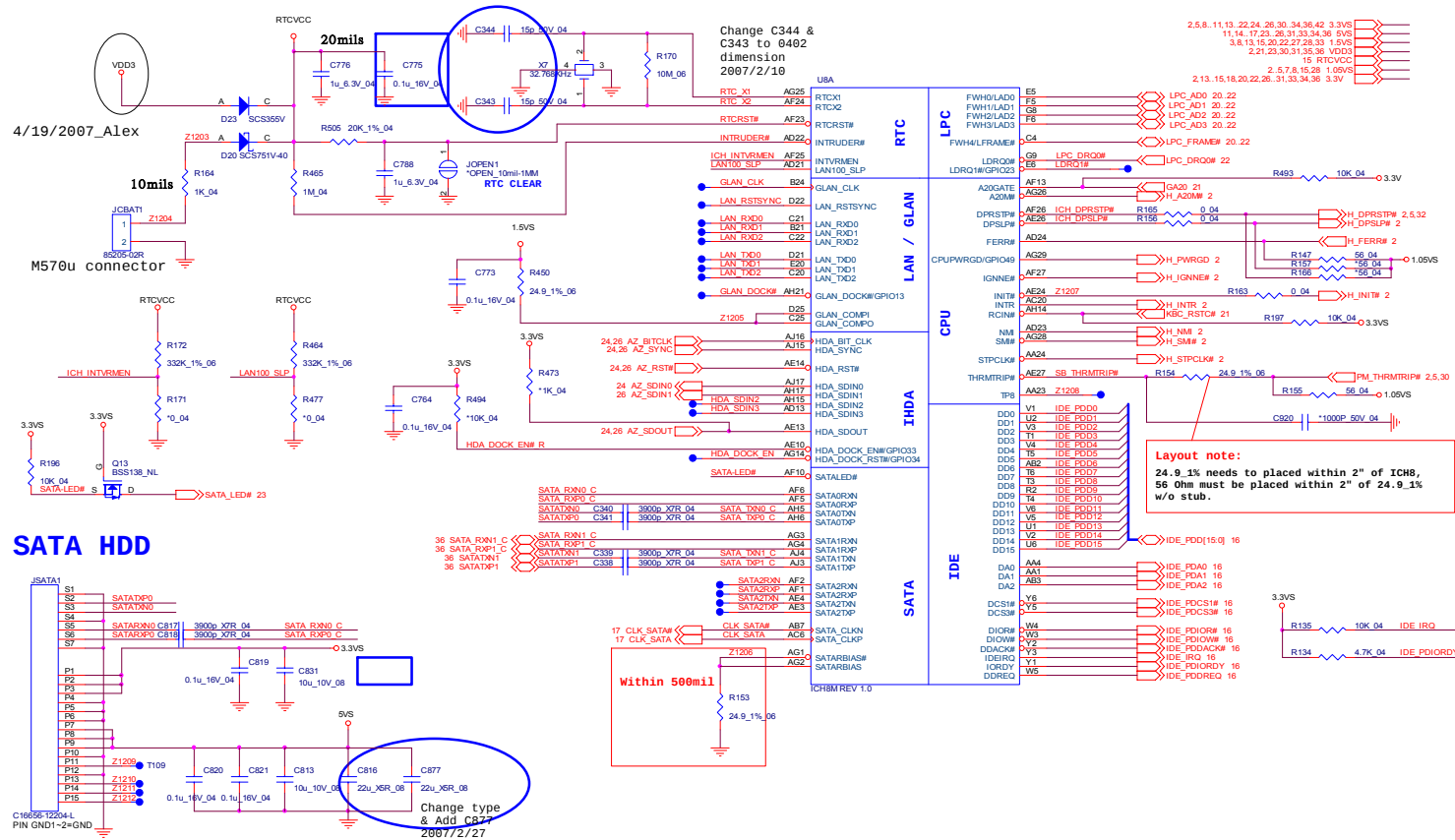
LCD, CPU Fan

Sheet 11 of 43
LCD, CPU Fan

[illegible]

ICH8-M 1/4 SATA

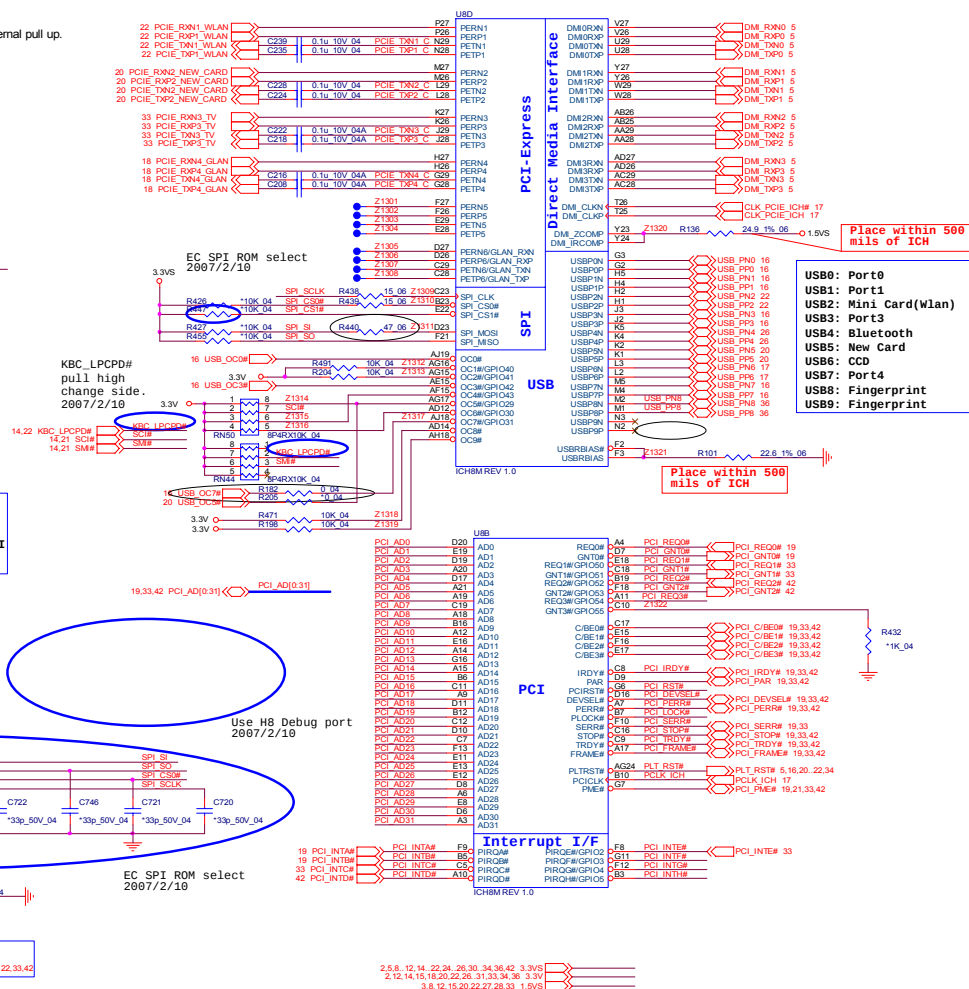
Sheet 12 of 43
ICH8-M 1/4 SATA



B.Schematic Diagrams

	ICH8M Boot BIOS select			
	Strap	PCI_GNT#0	SPI_CS#1	SPI_CS#1 have internal pull up.
FWH(default)	11	R433 unstuff	R447 unstuff	
PCI	10	R433 unstuff	R447 unstuff	
SPI	01	R433 stuff	R447 unstuff	

Sheet 13 of 43
ICH8-M 2/4
(PCI, USB)



[illegible]

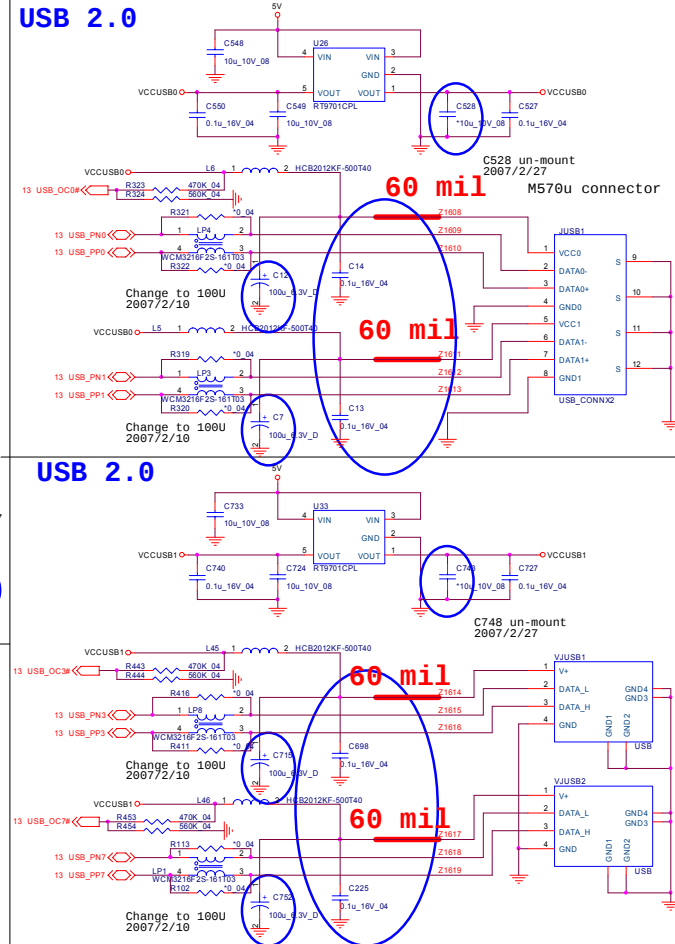
ICH8-M 4/4

Sheet 15 of 43
ICH8-M 4/4



PC BEEP

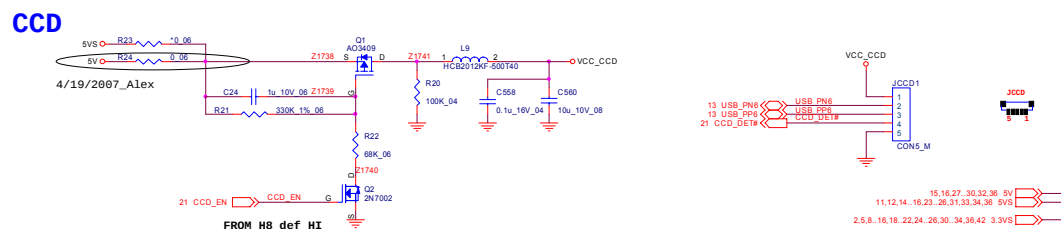
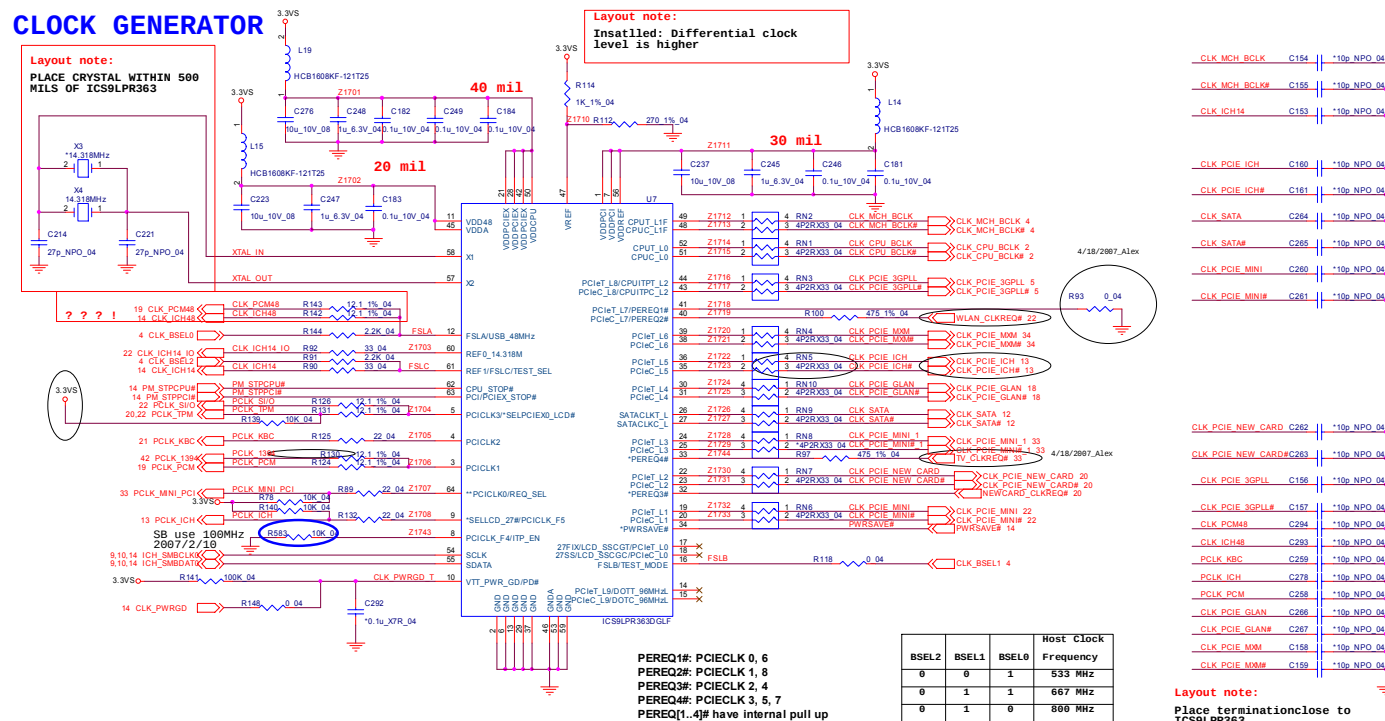
The diagram shows the BEEP signal path. The BEEP signal is connected to the CD_R pin of the audio codec. A 3.3V pull-up resistor (R241) is added to the BEEP signal line. The BEEP signal is also connected to the BEEP pin of the audio codec. The BEEP signal is also connected to the BEEP pin of the audio codec. The BEEP signal is also connected to the BEEP pin of the audio codec.



Clock Generator, CCD

Sheet 17 of 43
Clock Generator,
CCD

B.Schematic Diagrams



Sheet 18 of 43
PCI-E LAN
RTL8111B

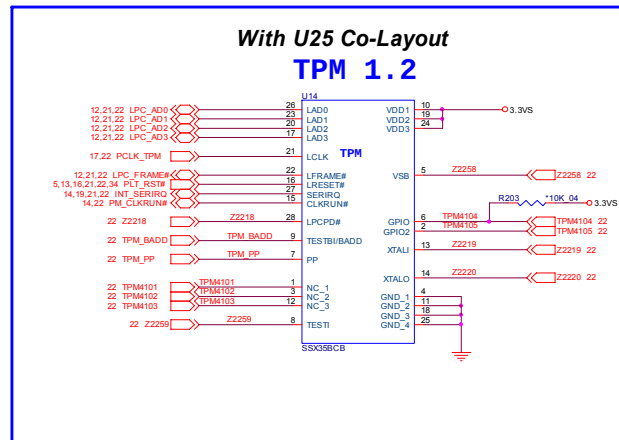
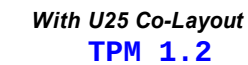


B.Schematic Diagrams

Sheet 19 of 43
Card Reader
MR510

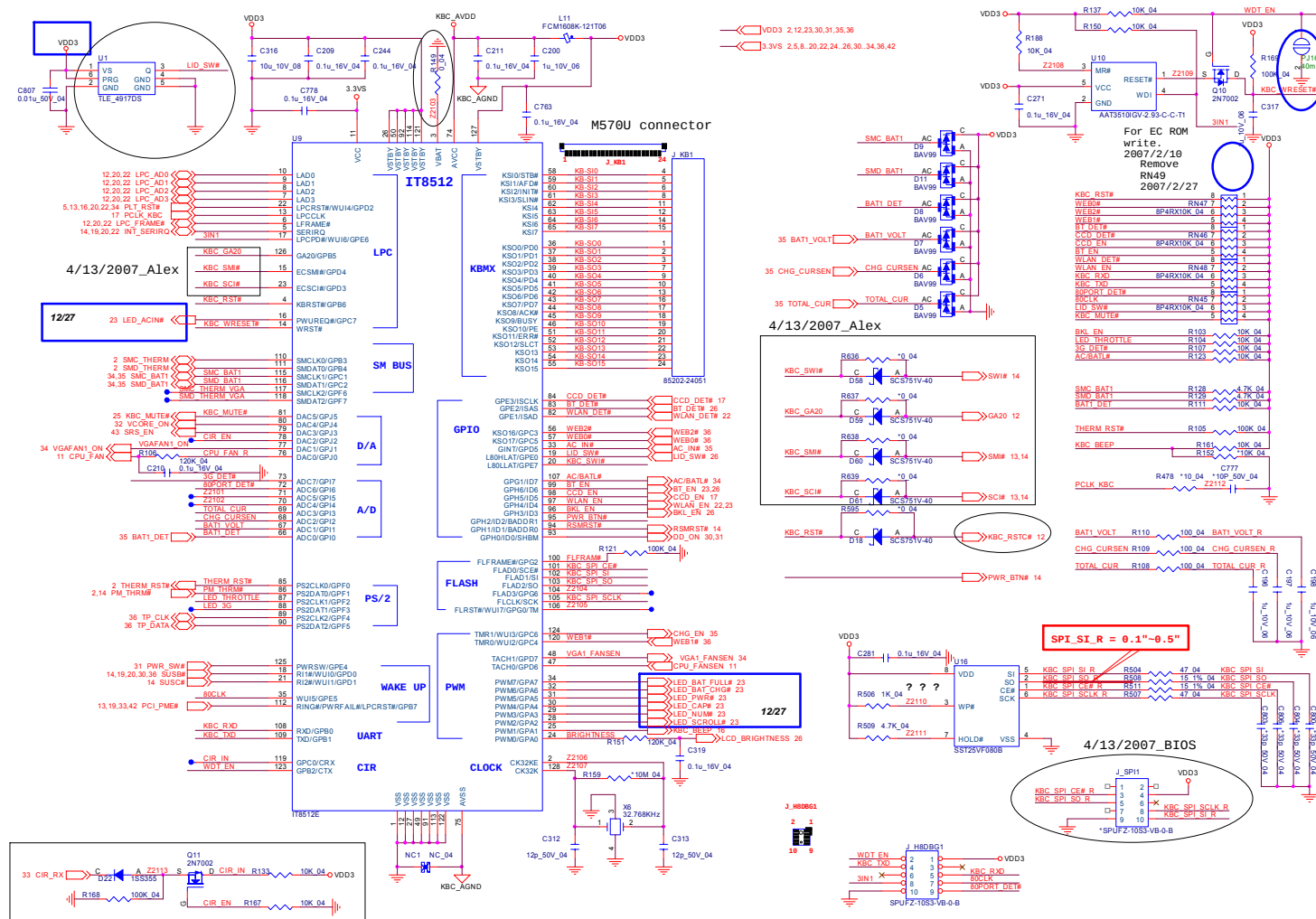


NEW CARD



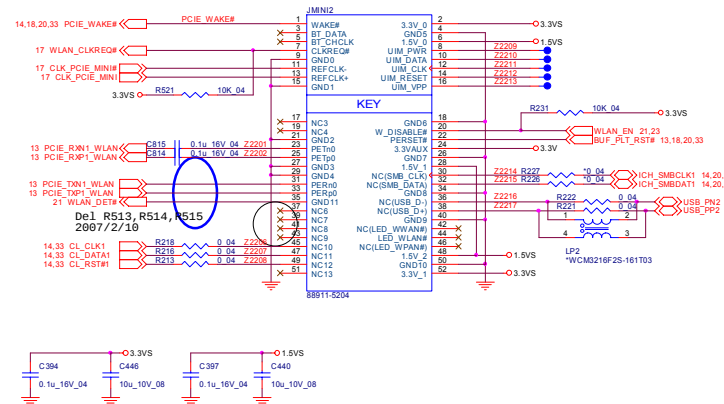
```
TPM Select
Sinsun- stuff : U14
Sinsun- unstuff : X5? C790? C791? U15
Infineon- stuff : U15? X5? C790? C791
Infineon- unstuff : U14
```

B - 22 KBC-ITE IT8512

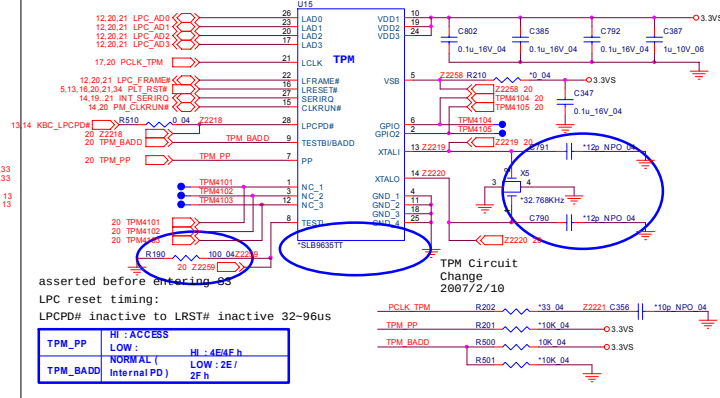


Mini Card, TPM, Super I/O

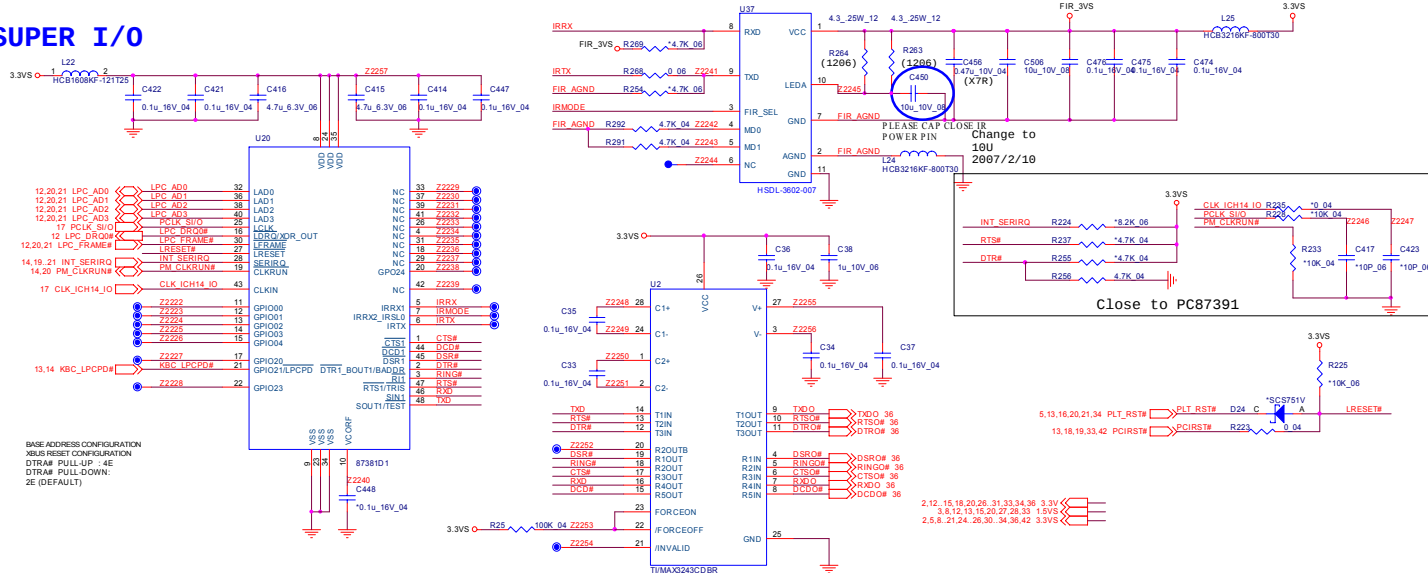
MINI-PCIE CARD (WLAN)



TPM 1.2



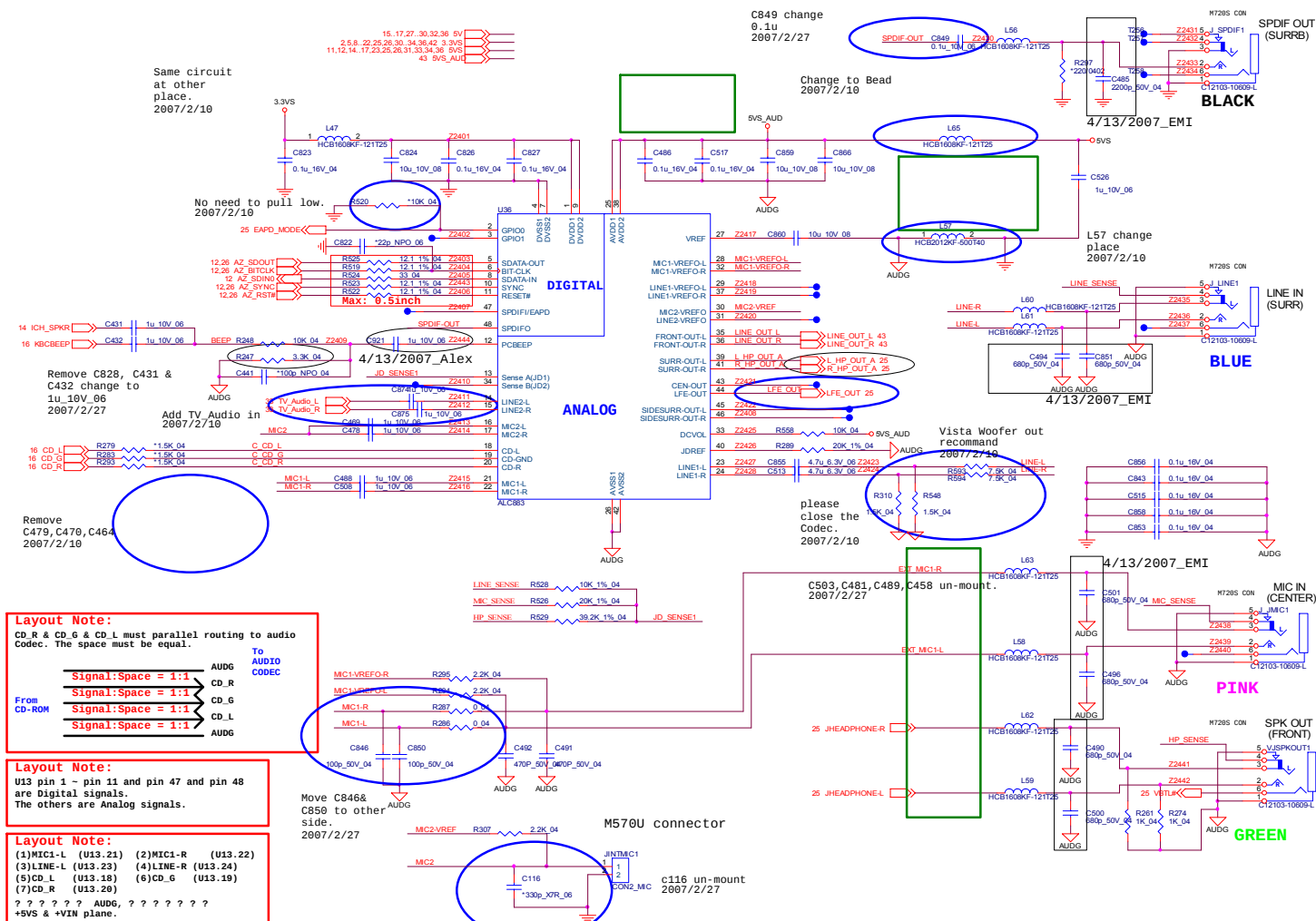
SUPER I/O



Sheet 23 of 43
LED

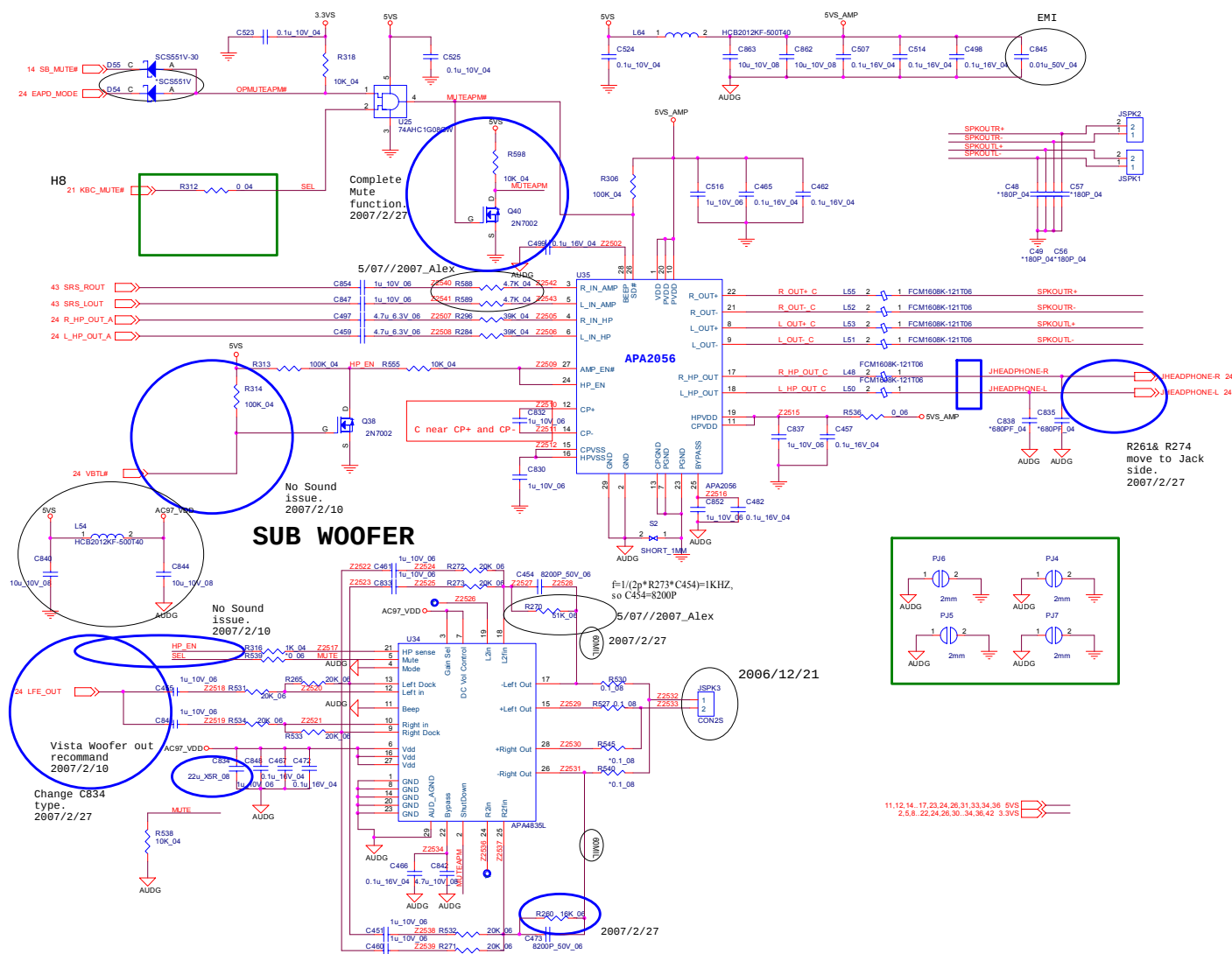


Azalia Codec ALC883

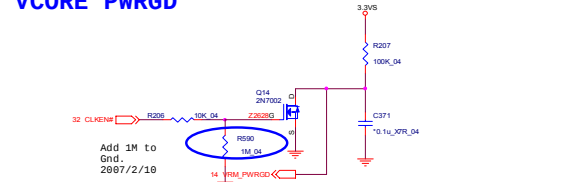


B.Schematic Diagrams

Sheet 25 of 43
Audio Amp



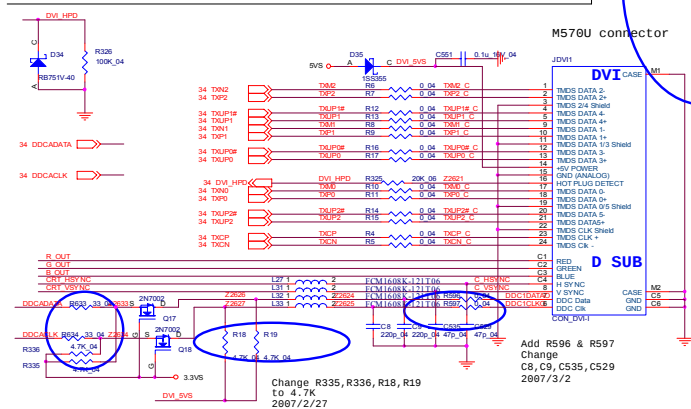
VCORE PWRGD



The diagram illustrates the internal circuitry of an LCD module. Key components and connections include:

- Power and Grounding:** A 3.3V supply is connected to the circuit. Grounding points are indicated by ground symbols.
- Capacitors:** C22, C23, C21, C562, C561, C563, and C569 are used for decoupling and timing. C22 and C23 are 10µF/25V electrolytic capacitors. C21 is a 0.1µF/50V electrolytic capacitor. C562, C561, and C563 are 100pF/50V electrolytic capacitors. C569 is a 0.1µF/16V electrolytic capacitor.
- Resistors:** R337 (100K/04), R340 (10K/04), R339 (10K/04), and R338 (1M/04) are used for signal conditioning and timing.
- Integrated Circuits:** U270 (74VHC08PW), U27A (74VHC08PW), U27B (74VHC08PW), and U27C (74VHC08PW) are 8-bit inverters. U270 and U27A are connected to the 3.3V supply and ground. U27B and U27C are connected to the 3.3V supply and ground.
- Connectors:** An M579U connector is shown on the right, with pins 1 through 6 labeled. A 28BYJ-48 stepper motor is connected to the connector.
- Annotations:**
 - "40 mil" indicates a trace width specification.
 - "Remove R338 2807/2/27" is a note indicating a component to be removed.
 - "H8" is a label for a component.

Figure 1: PCB layout for the HCB1000F-12V125. The top part shows a detailed view of the connector area with labels for pins 12, 14, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100. It includes a note "Max: 0.5 inch" and a "BOM181200" label. The bottom part shows a simplified schematic of the power and ground planes, with labels for C426, C427, C428, and various voltage levels like 3.3V_MDC, 0.1uF_16V_04, and 10uF_16V_08.

[illegible]

Change to 5P for some
Panel abnormal display
issue.
2007/2/10

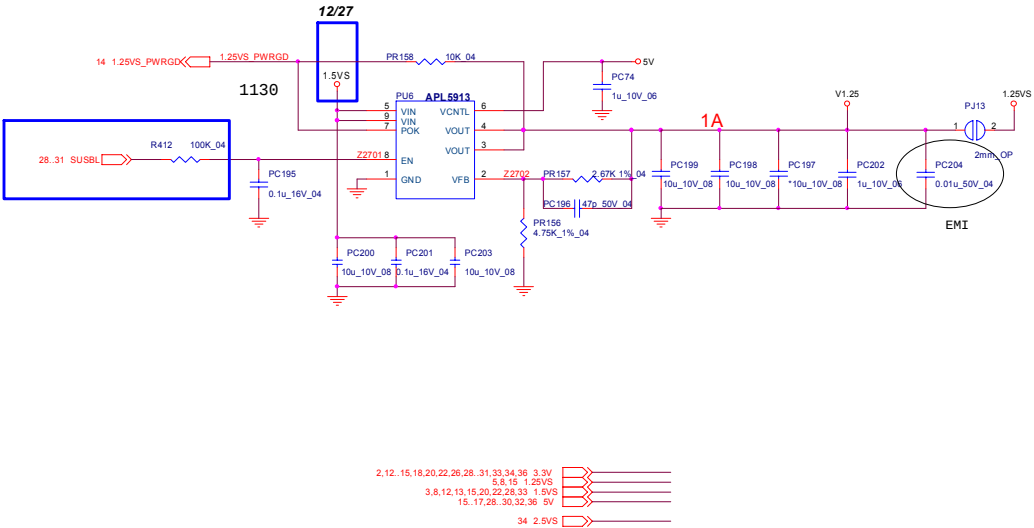
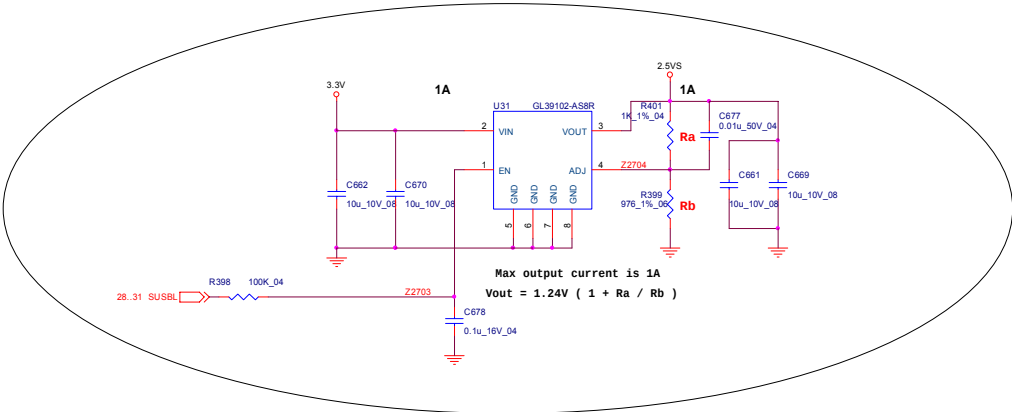
PLEASE CLOSE TO CONNECTOR

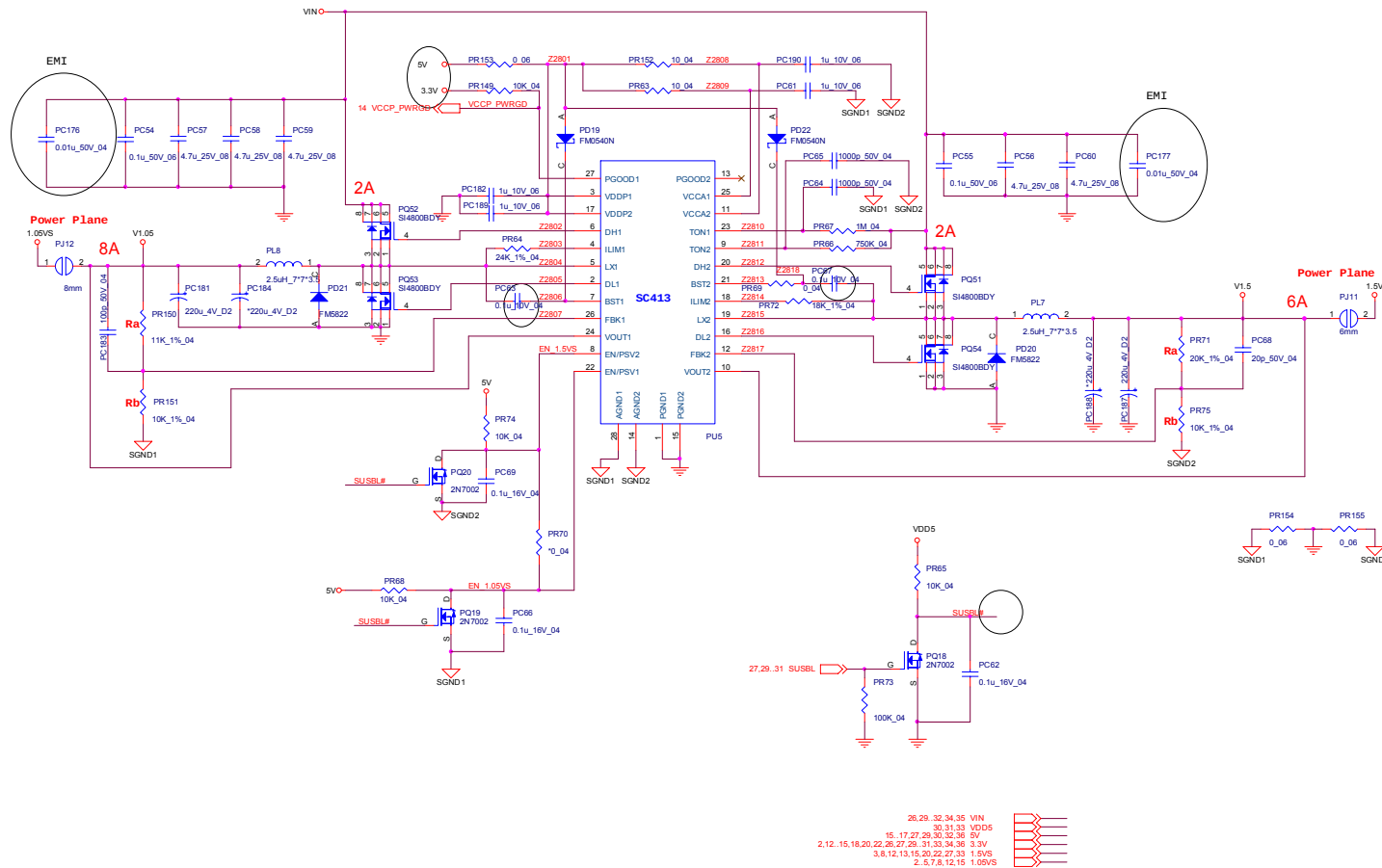
CRT, INV, MDC, BT, PWRGD B - 27

Schematic Diagrams

Power GPU/1.25VS

Sheet 27 of 43
Power GPU/1.25VS

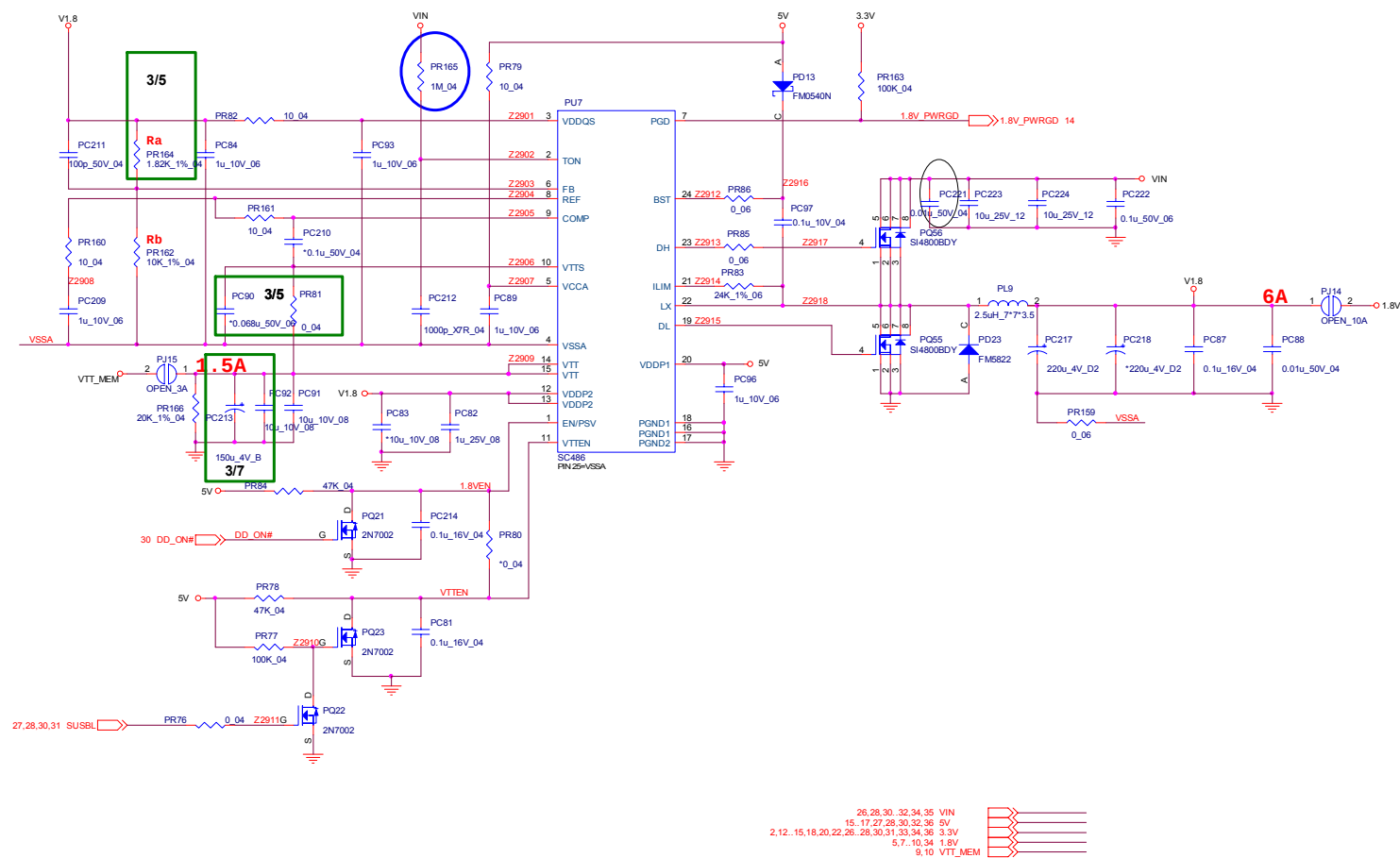




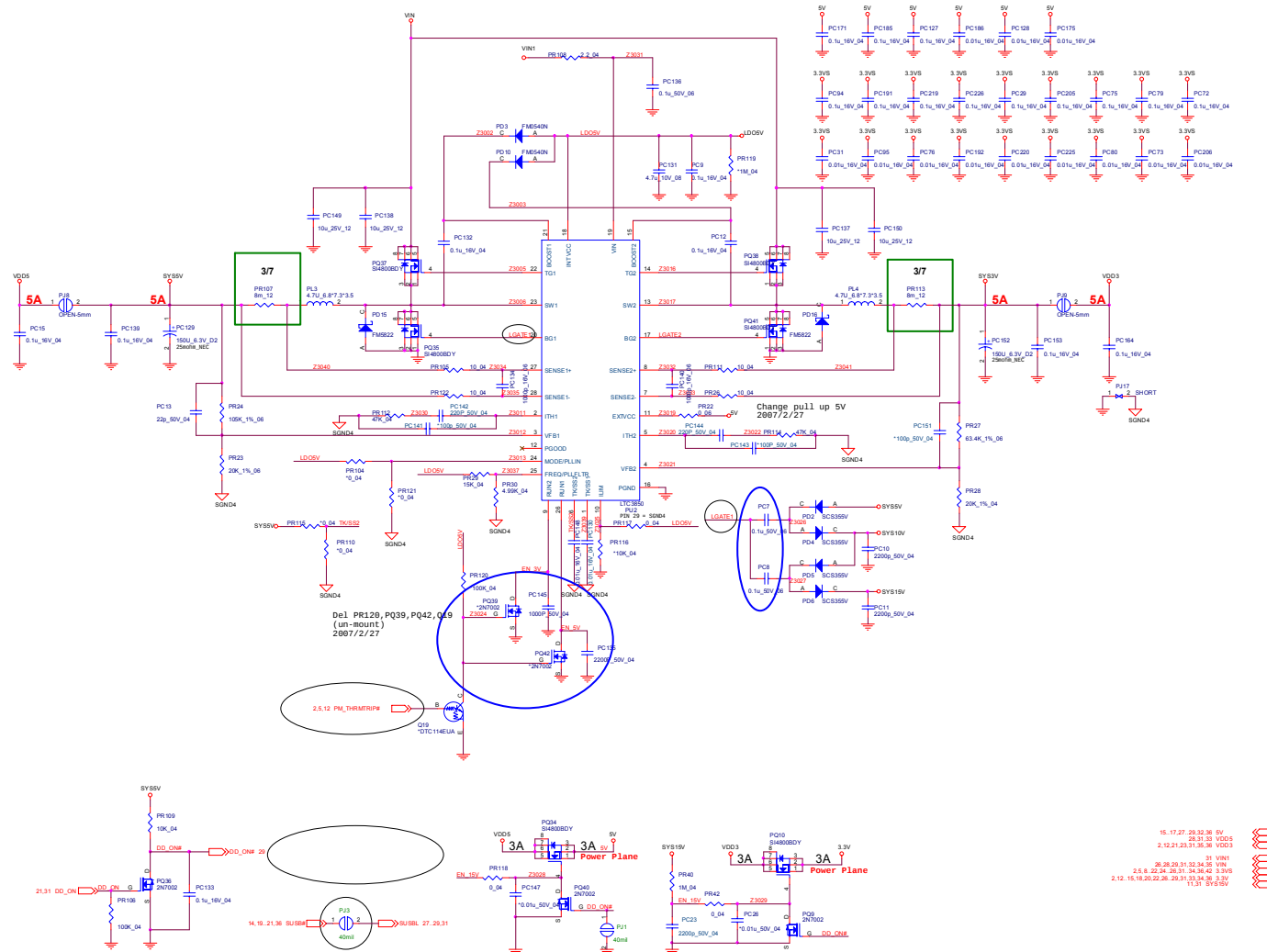
Sheet 28 of 43
Power 1.5VS/
1.05VS

B.Schematic Diagrams

Sheet 29 of 43
Power 1.8V/0.9V



B.Schematic Diagrams

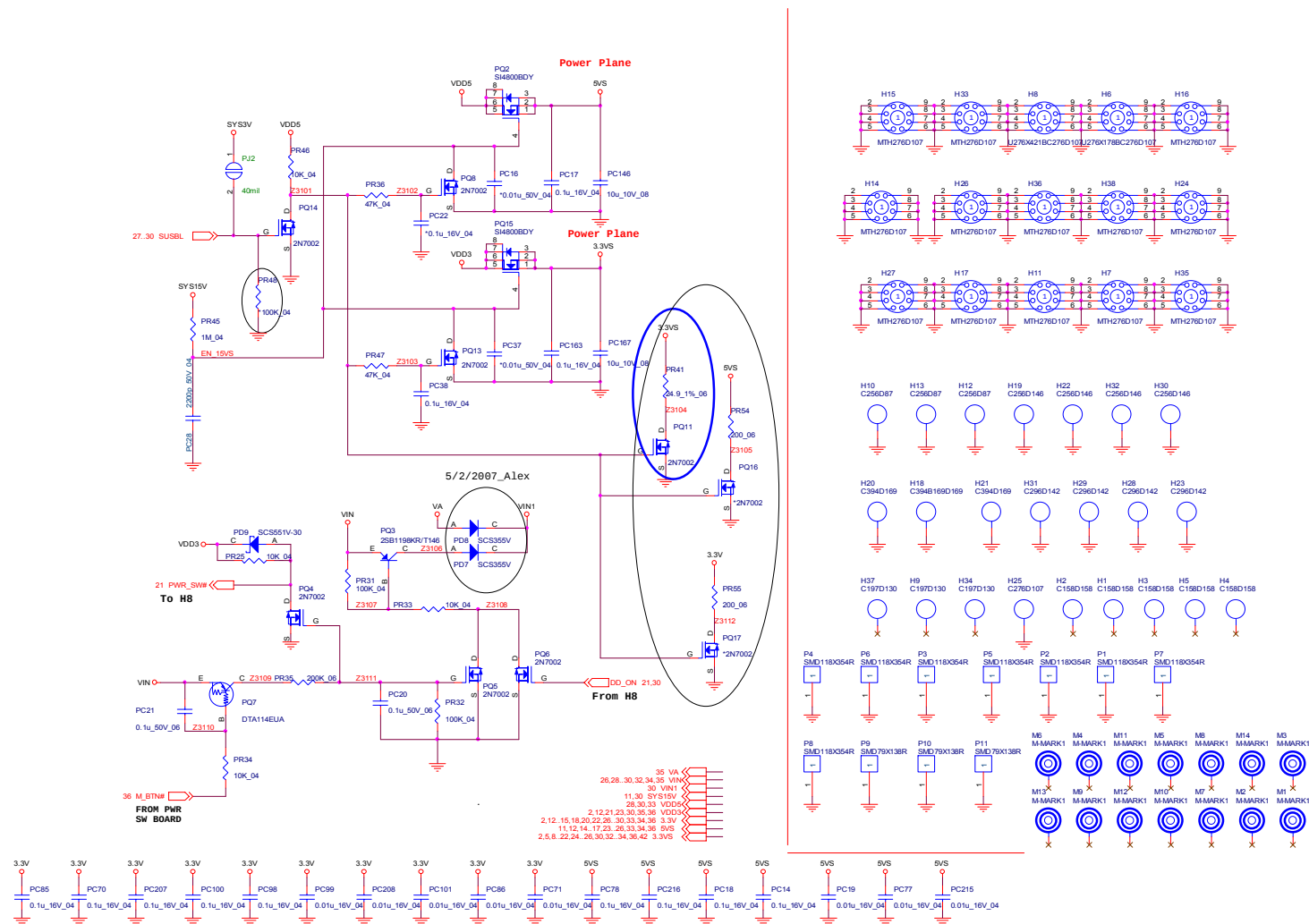


Sheet 30 of 43
Power 3.3V/5V

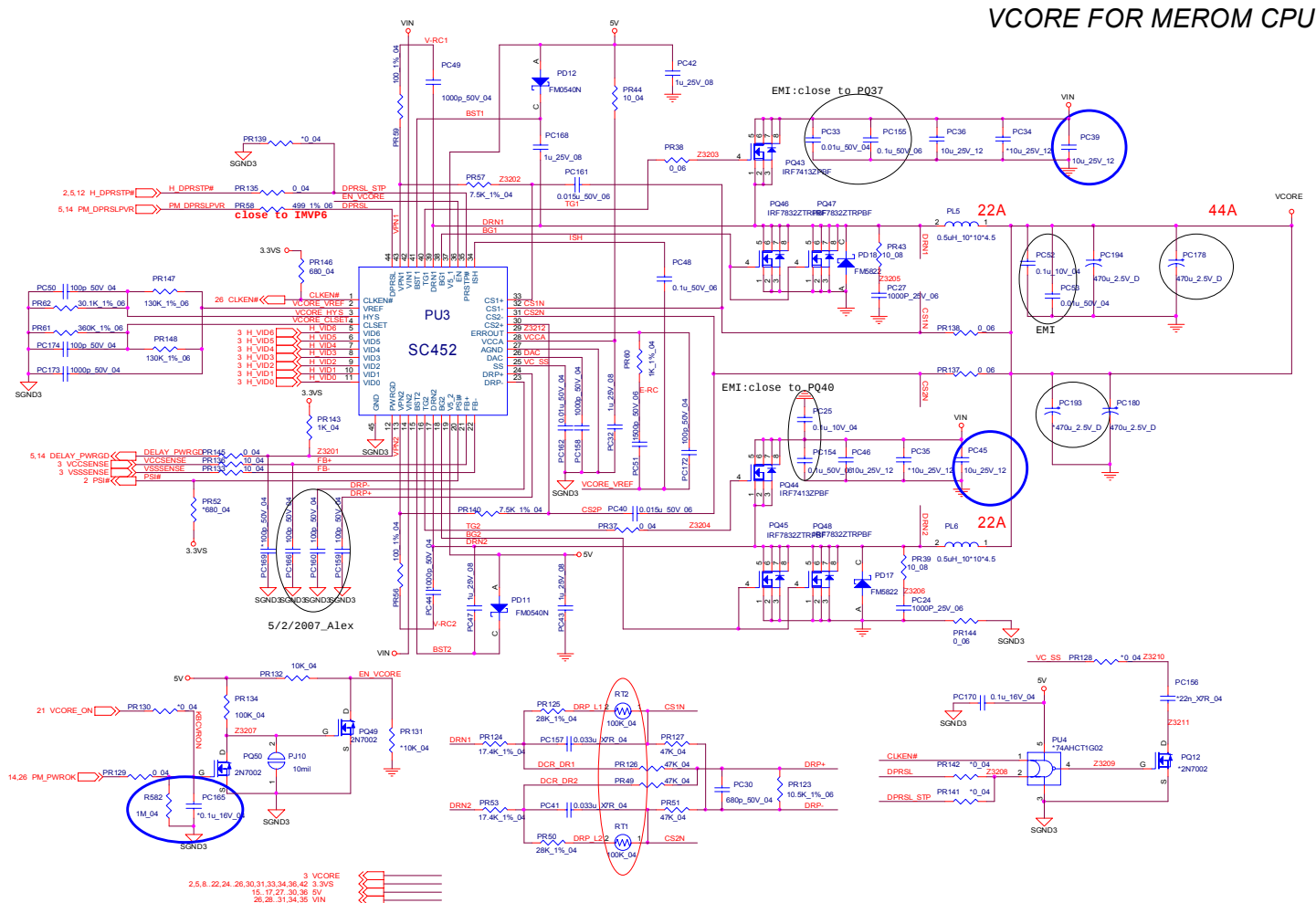
Power, Hole

B.Schematic Diagrams

Sheet 31 of 43
Power, Hole



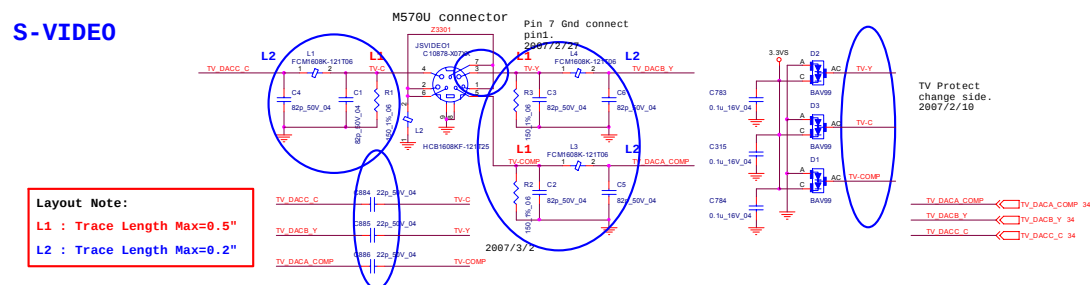
VCORE for Merom CPU



Sheet 32 of 43
VCORE for Merom
CPU

B.Schematic Diagrams

S-VIDEO



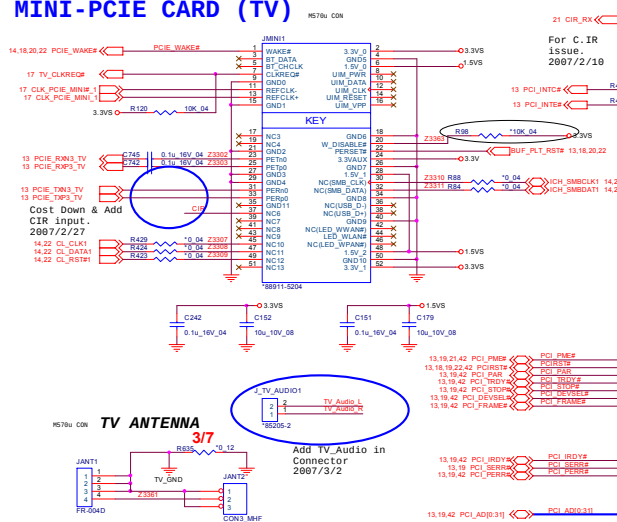
Layout Note:

L1 : Trace Length Max=0.5"
L2 : Trace Length Max=0.2"

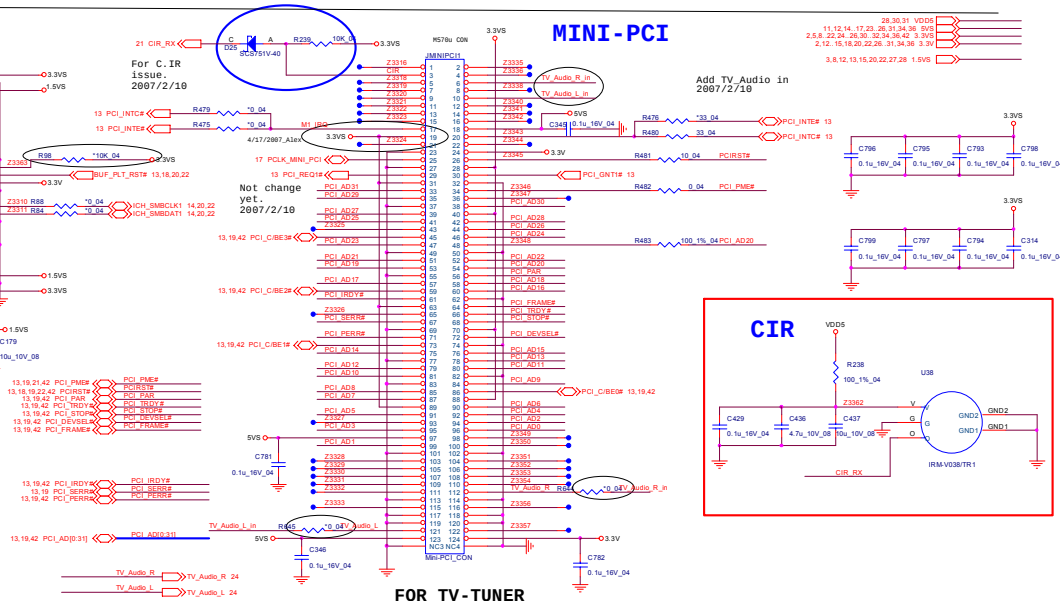
TV Protect
change side.
2007/2/10

TV_DACB_Y << TV_DACB_Y 34

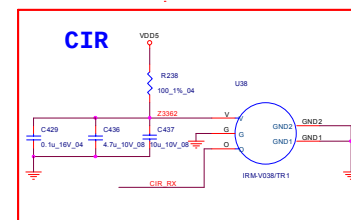
MINI-PCIE CARD (TV)



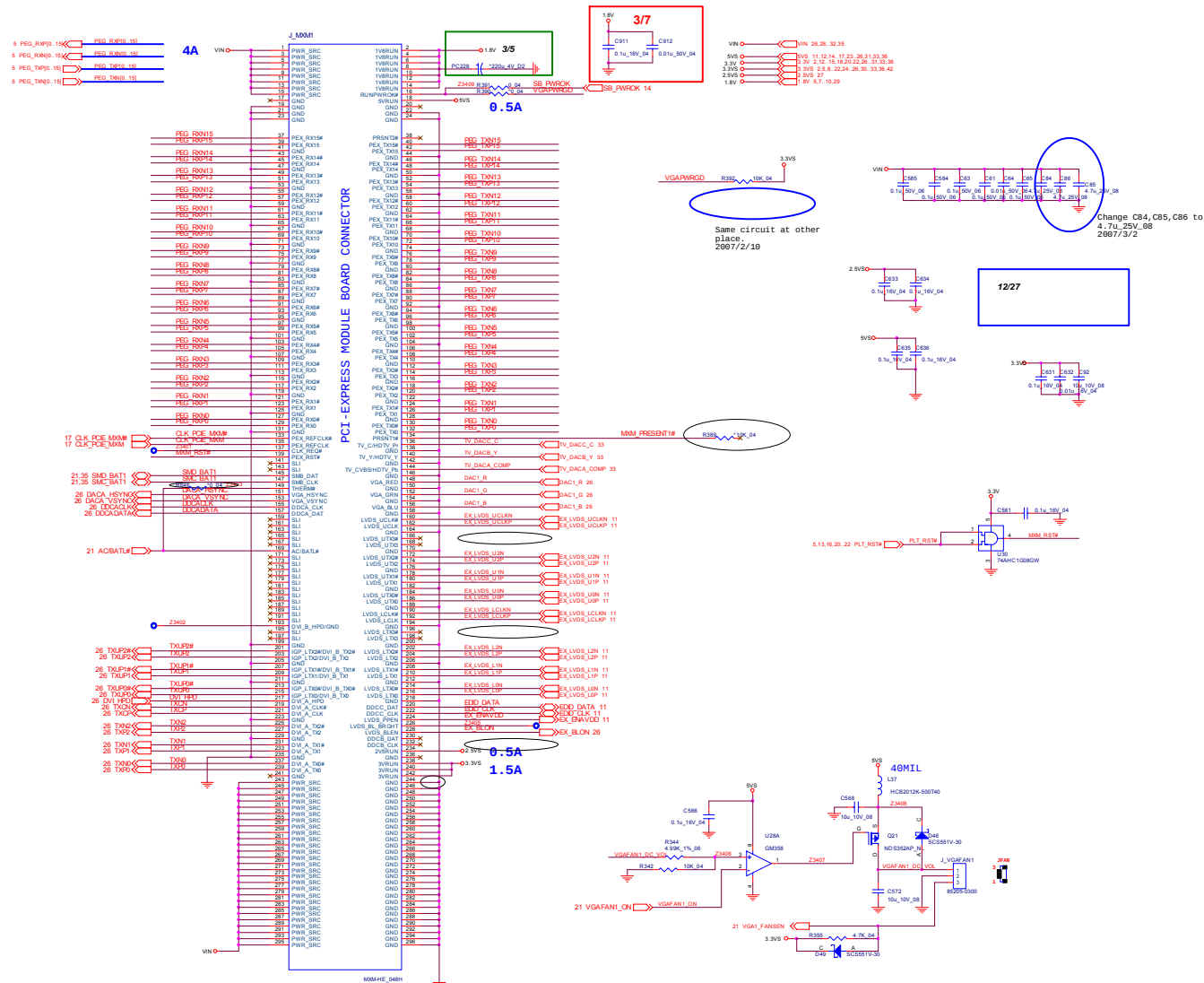
MINI-PCI



CIR

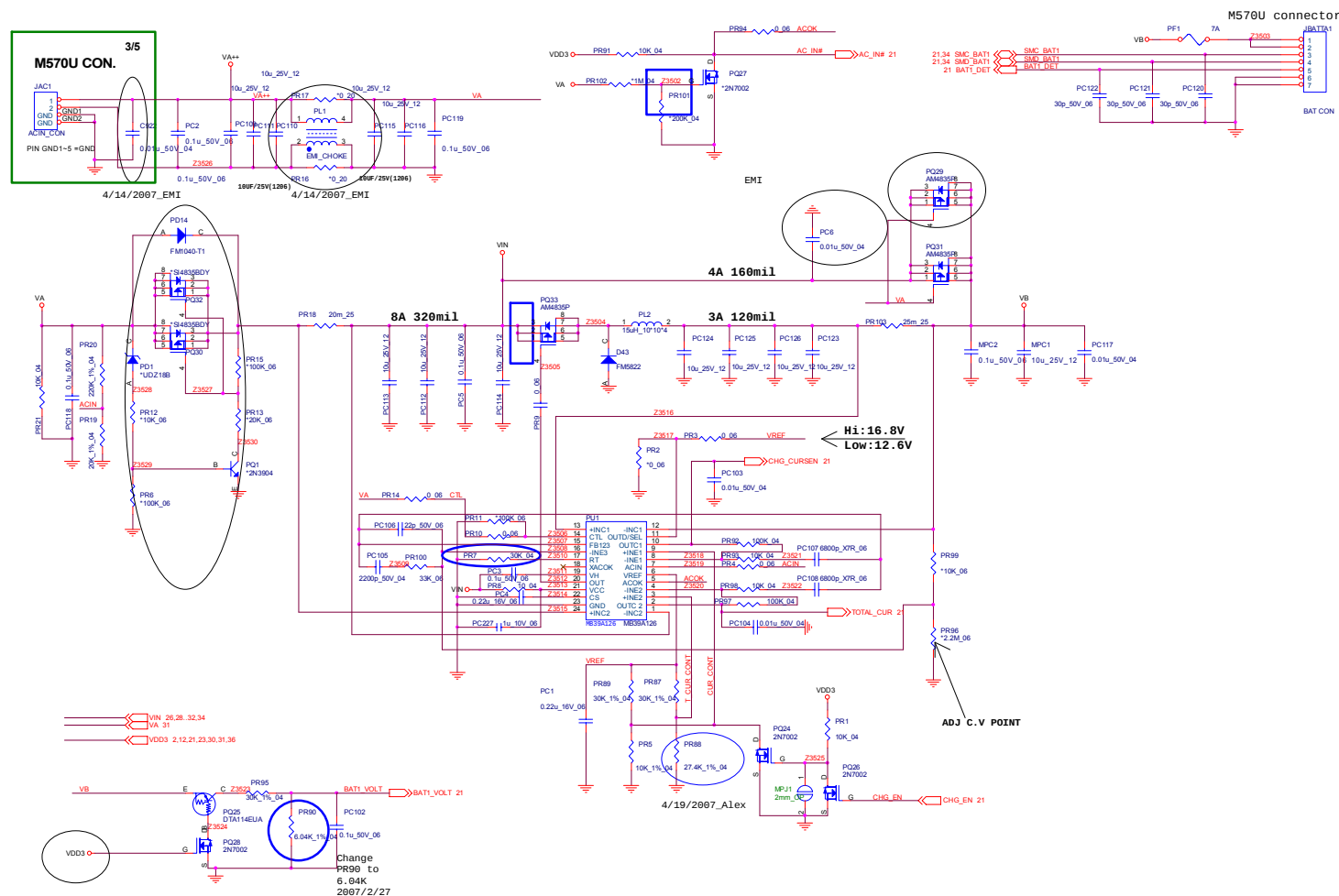


FOR TV-TUNER



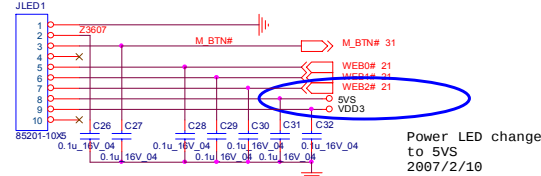
CHARGER, DC-IN

Sheet 35 of 43
CHARGER, DC-IN



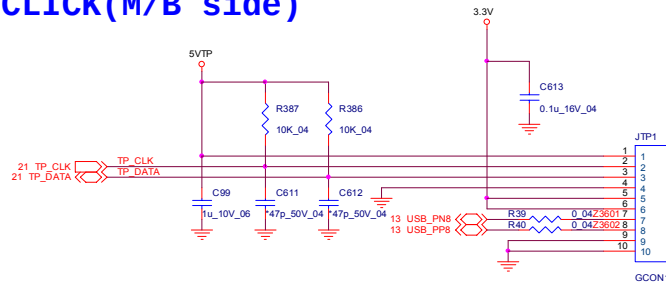
Board to Board Connector

M570U connector

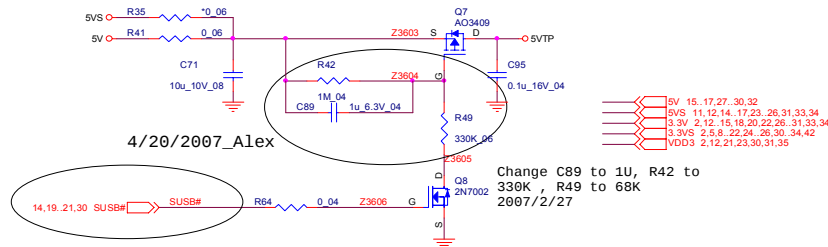


HOT KEY
(M/B side)

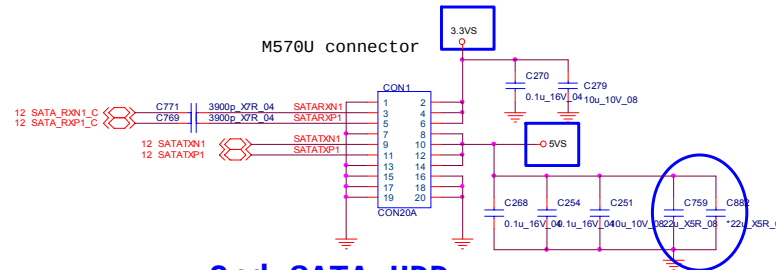
CLICK(M/B side)



4/20/2007_Alex



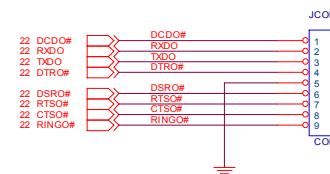
M570U connector



2nd SATA HDD
(M/B side)

Com port
(M/B side)

M570U connector

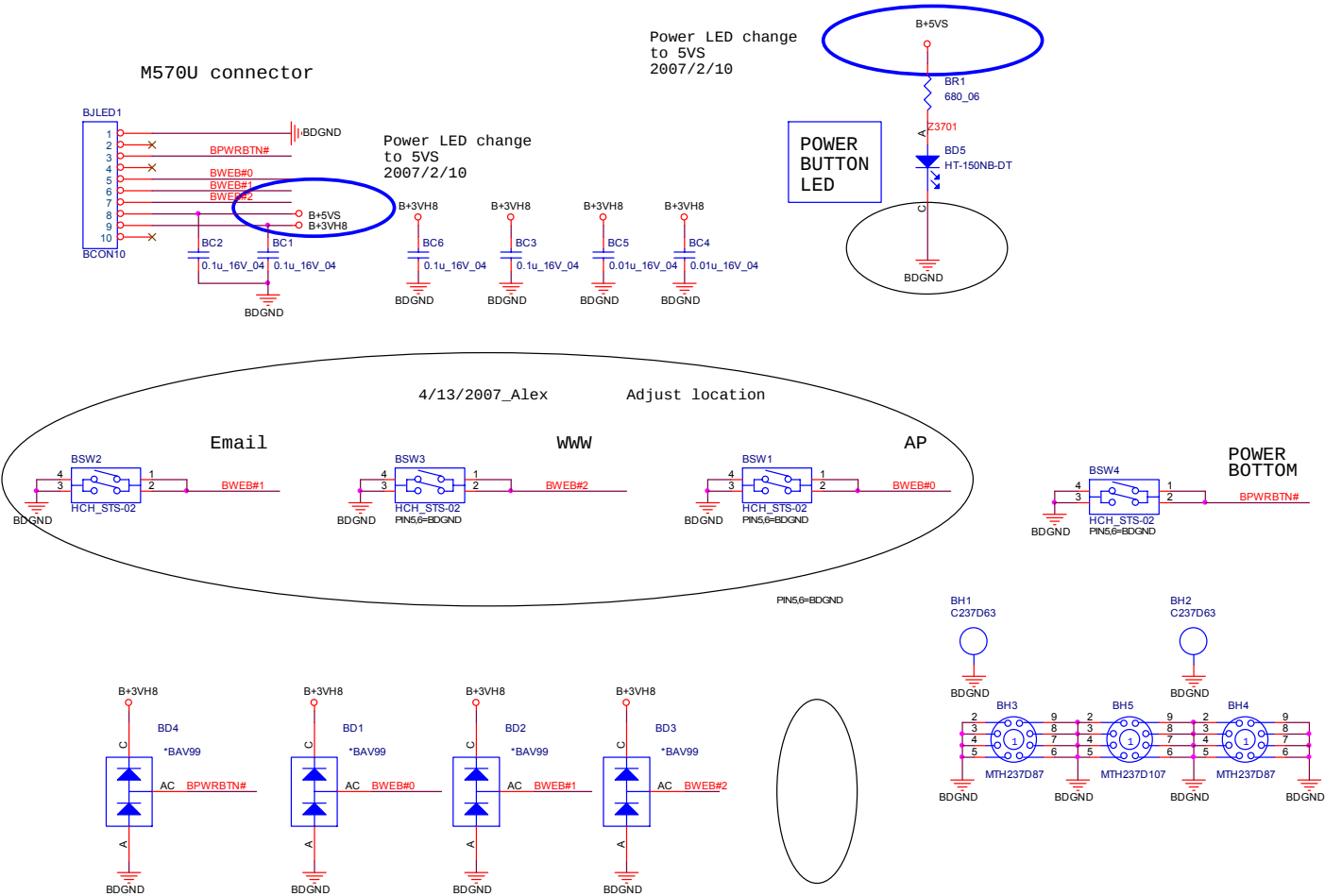


Sheet 36 of 43
Board to Board
Connector

Schematic Diagrams

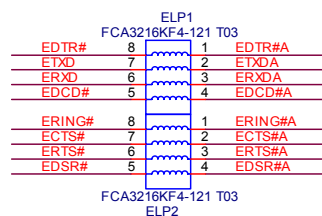
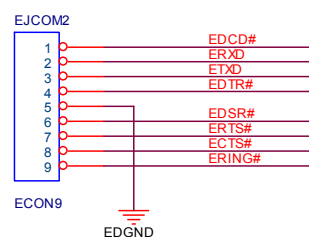
Button Board

Sheet 37 of 43
Button Board

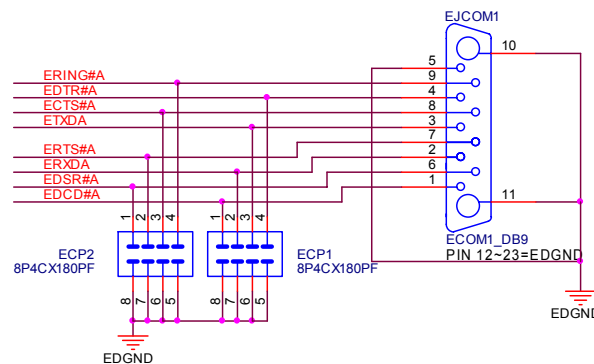


COM Port Board

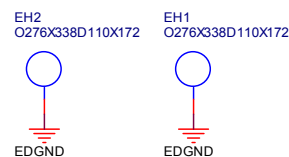
M570U connector



M570U connector



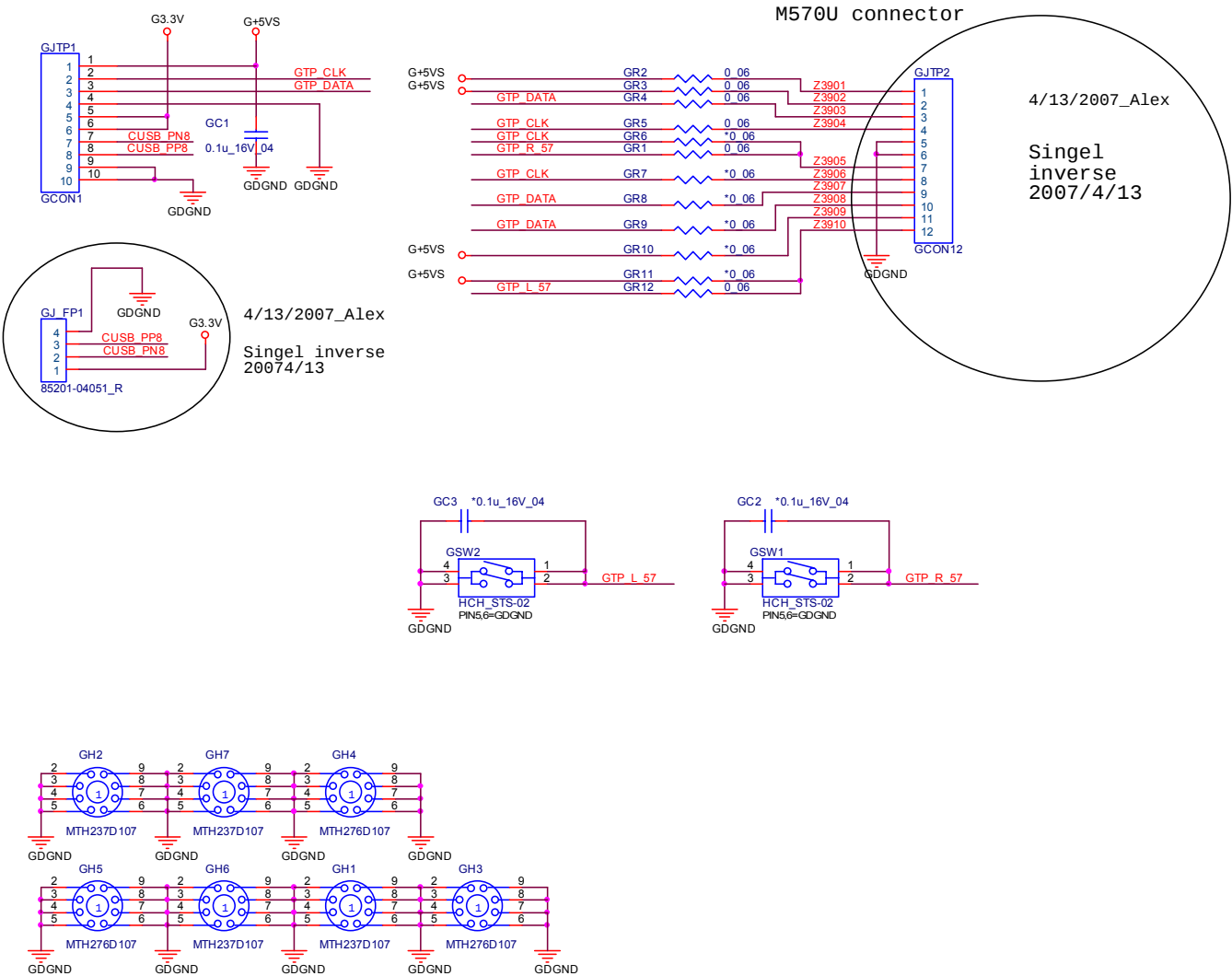
Sheet 38 of 43
COM Port Board



Schematic Diagrams

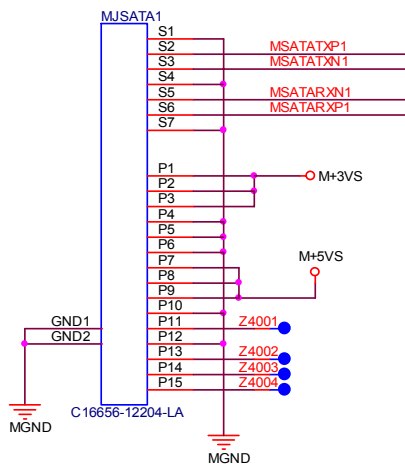
Click Board

Sheet 39 of 43
Click Board

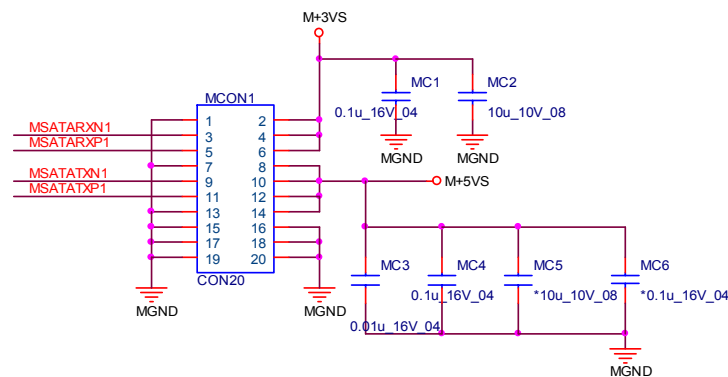


Second SATA HDD Board

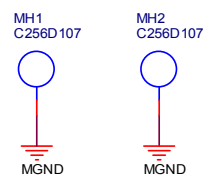
M570U connector



M570U connector

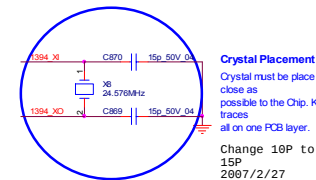
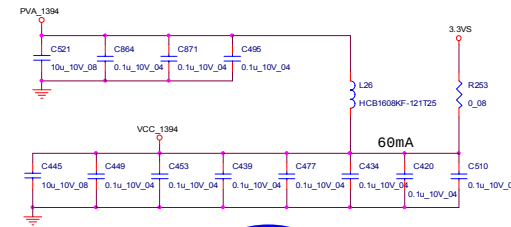
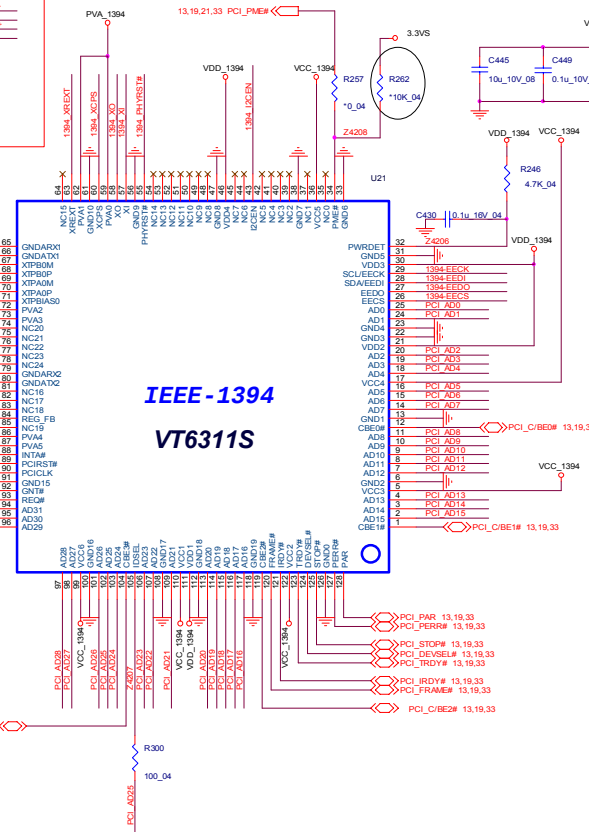
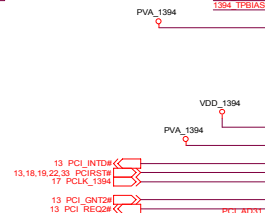
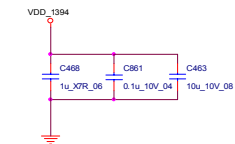
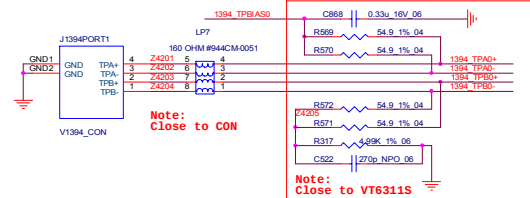


4/18/2007_Alex



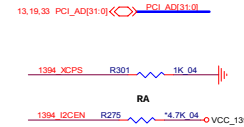
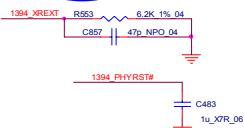
Sheet 40 of 43
Second SATA HDD
Board

FingerPrint Board

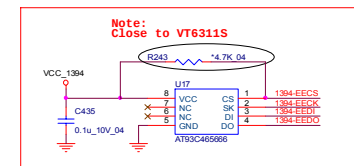


Crystal Placement
Crystal must be placed as close as possible to the chip. Keep traces all on one PCB layer.

Change 10P to 15P
2007/2/27



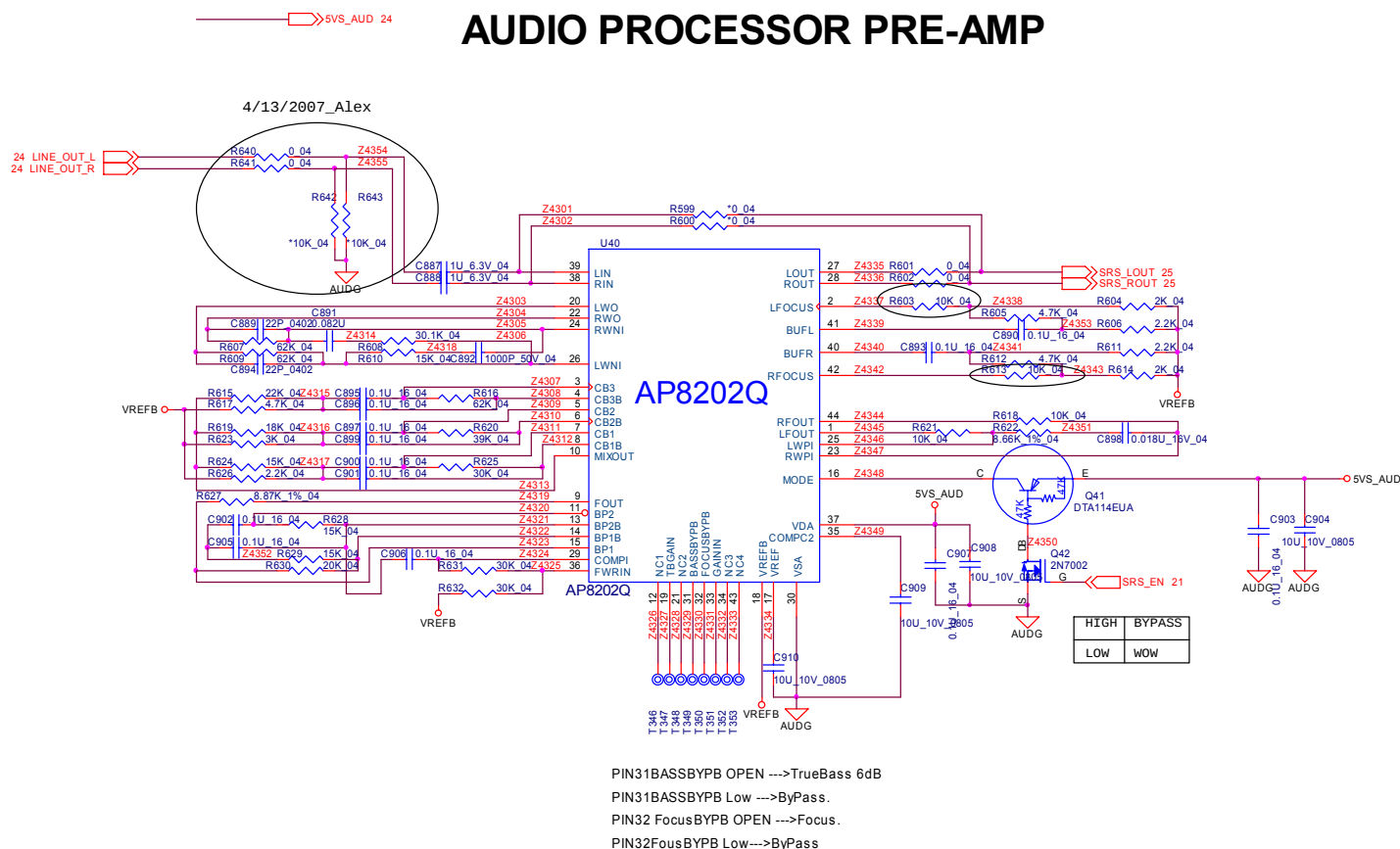
EEPROM	RA
4-Wire	X
I2C	4.7k



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Title [42]IEEE1394-VT6311S			
Size	Document Number M570RU		
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SRS

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SRS



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 Floppy Disk/USB Flash Drive.
- Reboot your computer from an external FDD/USB Flash Drive.
- Use the flash tools to update the flash BIOS using the command indicated below.
- Restart the computer booting from the HDD.

Go to www.clevo.com.tw and use your user ID and password to access the appropriate download area, and download the latest BIOS files (including BIOS refresh tools) for your computer model.

Unzip the file you have just downloaded on to a bootable floppy disk/bootable USB Flash drive.

With the bootable floppy disk/USB flash drive containing the BIOS files in your floppy drive/USB port, restart the computer (make sure that the floppy drive/USB flash drive is set first in the boot priority of 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 A:\>
3. If you have chosen to extract the zipped files to the floppy disk (A:) **type the following command** at the DOS prompt :

a:\>phlash16.exe “*BIOS File Name*”

4. Remove the floppy disk from the drive/flash drive from the USB port.
5. Restart the computer booting from the hard disk.

Your computer is now running normally with the updated BIOS.



Flash BIOS Command

Make sure that you use the command indicated in step 3 to flash the BIOS. This command will avoid any changes being made to the computer's MAC LAN address.

