

SERVICE MANUAL

M540JE / M550JE

notebook



Notebook Computer

M540JE/M550JE

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 *M540JE/M550JE* 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 19V, 3.42A (**65W**) 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 I Product

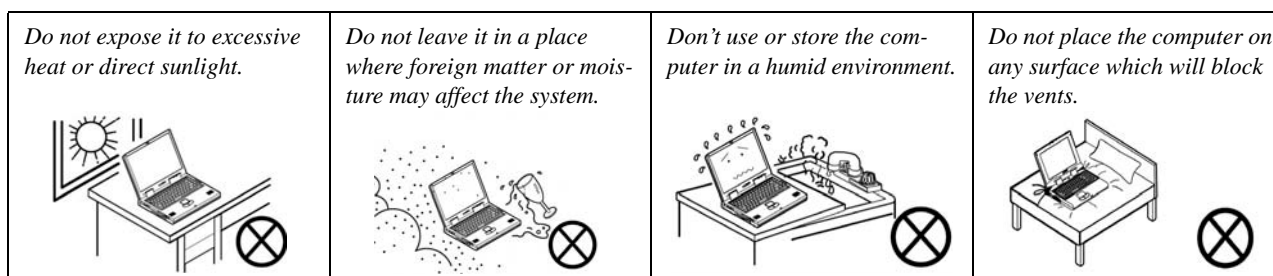
Instructions for Care and Operation

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

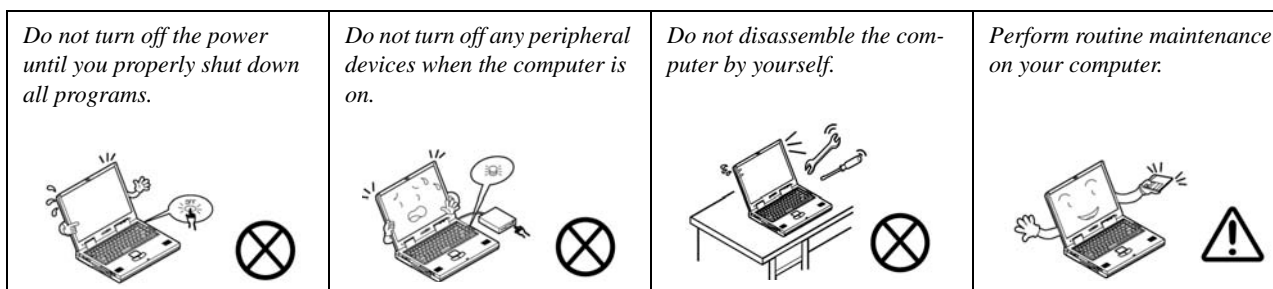
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



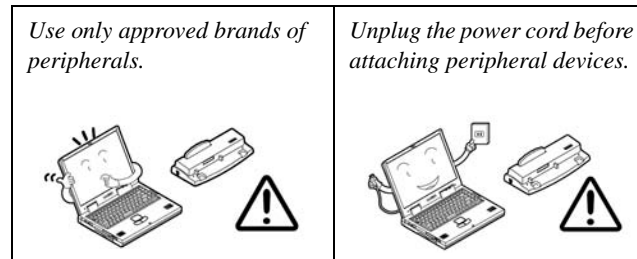
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.



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.



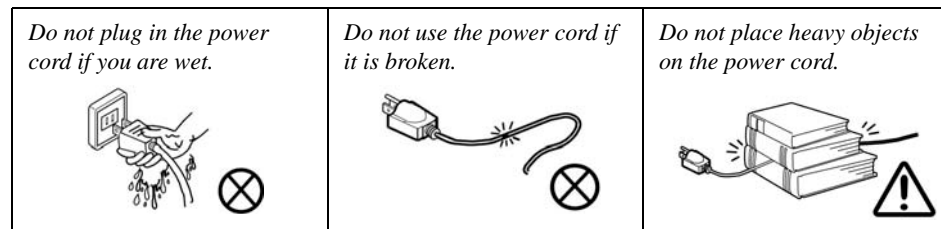
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



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 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.

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.

Contents

Introduction1-1

Overview	1-1
System Specifications	1-2
Model Differences	1-5
External Locator - Top View with LCD Panel Open	1-6
External Locator - Front & Right side Views	1-7
External Locator - Left Side & Rear View	1-8
External Locator - Bottom View	1-9
M540JE Mainboard Overview - Top (Key Parts)	1-10
M540JE Mainboard Overview - Bottom (Key Parts)	1-11
M540JE Mainboard Overview - Top (Connectors)	1-12
M540JE Mainboard Overview - Bottom (Connectors)	1-13
M550JE Mainboard Overview - Top (Key Parts)	1-14
M550JE Mainboard Overview - Bottom (Key Parts)	1-15
M550JE Mainboard Overview - Top (Connectors)	1-16
M550JE Mainboard Overview - Bottom (Connectors)	1-17

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 System Memory (RAM)	2-8
Removing the Optical (CD/DVD) Device	2-10
Removing the Processor	2-11
Removing the Wireless LAN Module	2-13
Removing the Modem	2-14

Removing the Keyboard	2-15
Removing the Bluetooth Module	2-16

Part ListsA-1

Part List Illustration Location	A-2
Top (M550JE)	A-3
Bottom (M550JE)	A-4
LCD (M550JE)	A-5
DVD-RW Drive (M550JE)	A-6
COMBO (M550JE)	A-7
Top (M540JE)	A-8
Bottom (M540JE)	A-9
LCD (M540JE)	A-10
DVD-RW Drive (M540JE)	A-11

Schematic Diagrams.....B-1

System Block Diagram	B-2
AMD S1: HT	B-3
AMD S1: MISC	B-4
AMD S1: MEMORY	B-5
AMD S1: POWER	B-6
DDR2-1	B-7
DDR2-2	B-8
PANEL, INVERTER, FAN	B-9
M51MV HT CPU	B-10
C51MV HT MCP	B-11
C51MV PCI EXPRESS	B-12
C51MV DAC / IFP	B-13
C51MV PWR / GND - DECOUPLING	B-14
MCP51M HT	B-15
MCP51M PCI	B-16

Preface


MCP51M SATA / IDE	B-17
MCP51M AUDIO / USB / MISC	B-18
MCP51M RGMII	B-19
MCP51M PWR / GND	B-20
MINI CARD, USB2.0*2	B-21
SIO, SATA HDD, CD-ROM	B-22
LAN RTL8201CL	B-23
FWH, TOUCHPAD, LED	B-24
H8/2111	B-25
MDC, USB BT, PWRGD, DDB CON	B-26
AZALIA CODEC ALC883	B-27
AUDIO AMP, USB2.0* 2	B-28
PCI17402/ 1394	B-29
NEW CARD	B-30
3 IN 1 SOCKET	B-31
SYSEYEM POWER, BRIDGE BATT	B-32
+1.8V, +0.9V	B-33
+VCORE	B-34
+1.2VS	B-35
+VDD3, +VDD5	B-36
D/D BD (CRT & Serial Port)	B-37
D/D BD (CCD CON. & INVERTER CON.)	B-38
D/D BD (CHARGER, DC IN), RJ-11	B-39
AUDIO BD (PHONE JACK, USB)	B-40
HOT KEY BD (HOT KEY, LED)	B-41
LED BOARD	B-42
CLICK BOARD	B-43
RJ-45 BOARD	B-44
USB DONGLE BOARD	B-45

Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the *M540JE/M550JE* 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. *DOS*, *Windows 9x*, *Windows NT 4.0*, *Windows 2000*, *Windows XP*, *OS/2 Warp*, *UNIX*, 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 *M540JE/M550JE* 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	AMD Turion™ 64 X2 Mobile Technology Processor 638-pin Micro PGA-S1 Package Model TL-50	(90nm) 90 Nanometer Process Technology, 2 * 256KB, L2 Cache 1.6GHz
	AMD Turion™ 64 X2 Mobile Technology Processor 638-pin Micro PGA-S1 Package Models TL-52/ TL-56/ TL-60	(90nm) 90 Nanometer Process Technology, 2 * 512KB, L2 Cache 1.6GHz/ 1.8Ghz/ 2.0GHz
	Mobile AMD Sempron™ Processor 638-pin Micro PGA-S1 Package Model 3400+	(90nm) 90 Nanometer Process Technology, 256KB L2 Cache 1.8GHz
	Mobile AMD Sempron™ Processor 638-pin Micro PGA-S1 Package Models 3200+ /3500+	(90nm) 90 Nanometer Process Technology, 512KB L2 Cache 1.6GHz/ 1.8Ghz
Core Logic	nVIDIA C51MV + MCP51M	
Memory	64-bit Wide DDR 2 (DDRII) Data Channel Two 200 Pin SO-DIMM Sockets Supporting DDR 2 (DDRII) 533 / 667 MHz Memory Expandable up to 2GB (256/ 512/ 1024 MB Modules) (Note: Do Not Use Other Module Types)	
Security	Security (Kensington® Type) Lock Slot	BIOS Password
BIOS	One 4Mb Flash ROM	Phoenix™ BIOS, Plug and Play
LCD	<u>M550JE:</u> 15.0" XGA (1024*768) Flat Panel TFT OR 15.0" SXGA+ (1400*1050) Flat Panel TFT	<u>M540JE:</u> 14.0" WXGA (1280*768) Flat Panel TFT
	Video Adapter nVIDIA C51MV Integrated Graphics Adapter Shared Memory Architecture of up to 128MB of Video Memory Integrated High Quality 3D Graphics Engine Accelerator Supports Microsoft DirectX 9.0 Vertex Shader 3.0	

Feature	Specification
Storage	One Changeable 12.7mm(h) Optical Device (CD/DVD) Type Drive (see "Optional" on page 1 - 4 for drive options) Easy Changeable 2.5" 9.5 mm (h) HDD with SATA (Serial) Interface
Audio	Integrated AZALIA Compliant Interface (HDA) 3D Stereo Enhanced Sound System Sound-Blaster PRO™ Compatible 2 * Built-In Speakers Built-In Microphone S/PDIF Digital Output Note: External 7.1 CH Audio Output Support Configurable through Headphone, Microphone, Line-In and S/PDIF Jacks
Keyboard & Pointing Device	Winkey Keyboard Built-In TouchPad with Scrolling Function
Interface	Three USB 2.0 Ports One External Monitor Port One Headphone-Out Jack One Microphone-In Jack One Line-In Jack One Serial Port One Mini-IEEE 1394 Port One S/PDIF Output Jack (5.1CH) One RJ-11 Modem Jack One RJ-45 LAN Jack One DC-in Jack
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
Communication	AZALIA 56K Plug & Play Fax/Modem V.90/92 Compliant 10M/100Mb Base-T Ethernet LAN 802.11 b/g USB Wireless LAN Module (Option) USB (2.0) Bluetooth Module - Version 2.0 (Factory Option) 300K or 1.3M Pixel USB PC Camera Module (Factory Option)
Power Management	Supports ACPI 2.0 Supports Resume from Modem Ring Supports Wake on LAN
Power	Full Range AC/DC Adapter 19V, 3.42A, 100~240V, 47~63Hz Full Range AC/DC Adapter 20V, 4.5A (90 Watts), 100~240V, 50~60Hz (Supplied for the Optional Port Replicator Only)

Introduction

Feature	Specification	
Battery	6 Cell Smart Lithium-Ion Battery Pack, 4000mAh	
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	<u>M550JE:</u> 333mm (w) * 276mm (d) * 24-33mm (h) 2.6 kg With 6 Cell Battery	<u>M540JE:</u> 333mm (w) * 243mm (d) * 24-33mm (h) 2.4 kg With 6 Cell Battery
Optional	<u>Optical Drive Module Options:</u> DVD/CD-RW Combo Drive Module DVD-Dual Drive Module Battery Charger Box USB Floppy Disk Drive Port Replicator (10/100 Base-T Ethernet Port, 4 * USB 2.0 Ports, Serial Port, Parallel Port, External Monitor Port, DC-In Jack) (Note: Port Replicator requires the supplied 90W power adapter)	802.11 b/g USB Wireless LAN Module (Factory Option) PC Camera (300k or 1.3M Pixel) with USB Interface (Factory Option) Bluetooth V2.0 Module

Model Differences

This notebook series includes **two** different model types (each model includes two design styles). The models differ slightly in design style including the LCD type, and the location of the card reader (the easiest way to differentiate between the model types is the location of the card reader).



Feature	M550JE	M540JE
LCD Type	15.0" XGA (1024 * 768) TFT OR 15.0" SXGA+ (1400 * 1050) TFT	14.0" WXGA (1280 * 768) TFT
Card Reader Location	Left Side	Front
Design Styles		

Table 1 - 1
Model difference

Introduction

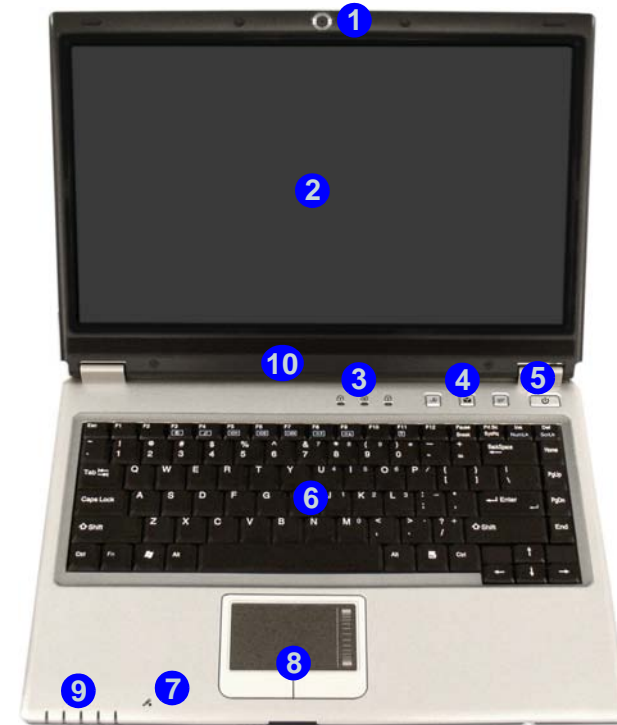
External Locator - Top View with LCD Panel Open

Figure 1
Top View

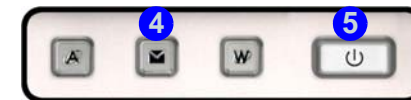
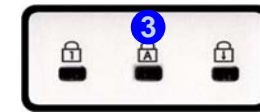
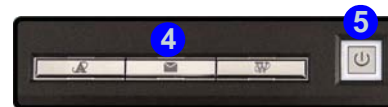
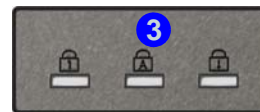
1. Optional Built-In PC Camera
2. LCD
3. LED Status Indicators
4. Hot Key Buttons
5. Power Button
6. Keyboard
7. Built-In Microphone
8. TouchPad and Buttons
9. LED Power & Communication Indicators
10. Speaker



M550JE



M540JE



External Locator - Front & Right side Views



Figure 2
Front Views

1. LED Power & Communication Indicators
2. LCD Latch (M550JE Only)
3. 4-in-1 Card Reader (M540JE Only)

Figure 3
Right Side Views

1. Headphone-Out Jack
2. Microphone-In Jack
3. USB 2.0 Port
4. RJ-11 Modem Jack
5. Optical Device Drive Bay
6. DC-In Jack

Introduction

External Locator - Left Side & Rear View

Figure 4
Left Side View

1. RJ-45 LAN Jack
2. Vent/Fan Intake
3. 2 * USB 2.0 Ports
4. S/PDIF-Out Jack
5. Line-In Jack
6. Mini-IEEE 1394 Port
7. ExpressCard Slot
8. 7-in-1 Card Reader (M550JE Only)

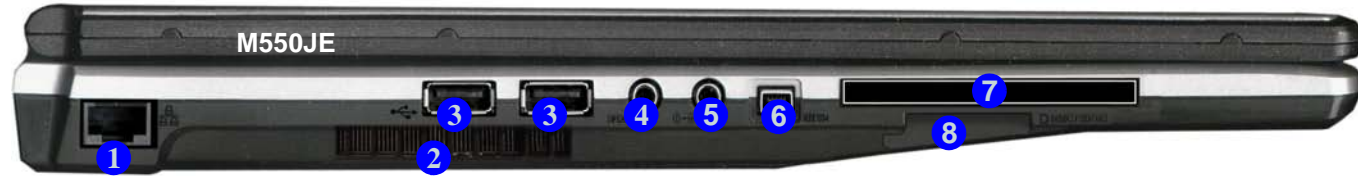


Figure 5
Rear View

1. External Monitor Port
2. Serial Port
3. Security Lock Slot
4. Battery



External Locator - Bottom View

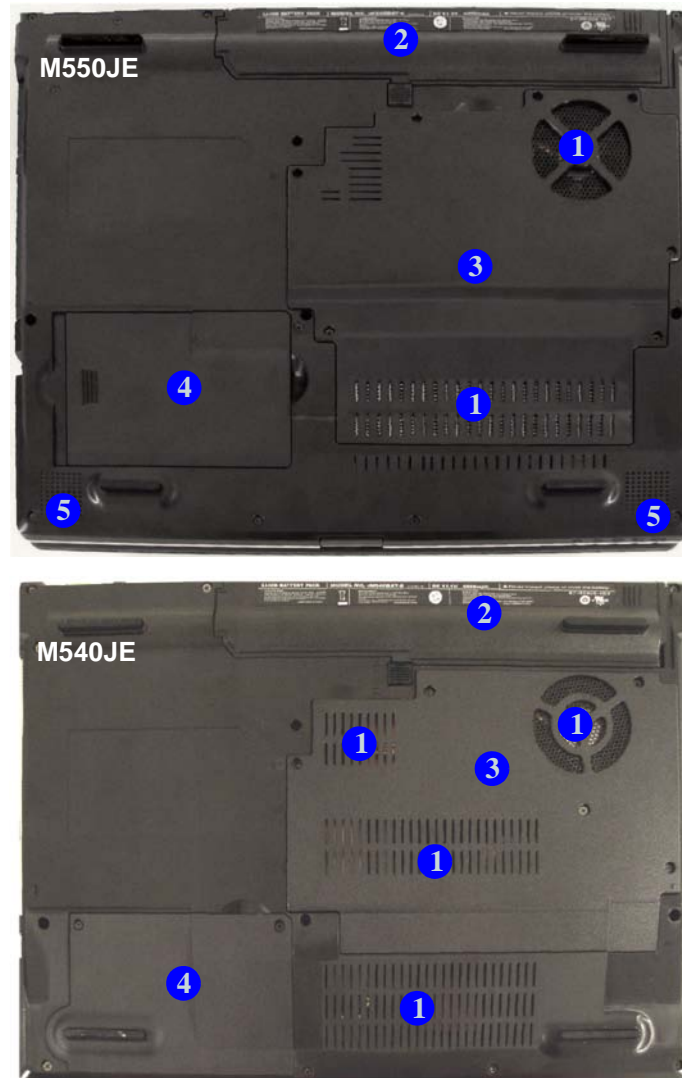


Figure 6
Bottom View

1. Vent/Fan Intake
2. Battery
3. Component Bay Cover
4. Hard Disk Cover
5. Speakers (M550JE Only)



Overheating

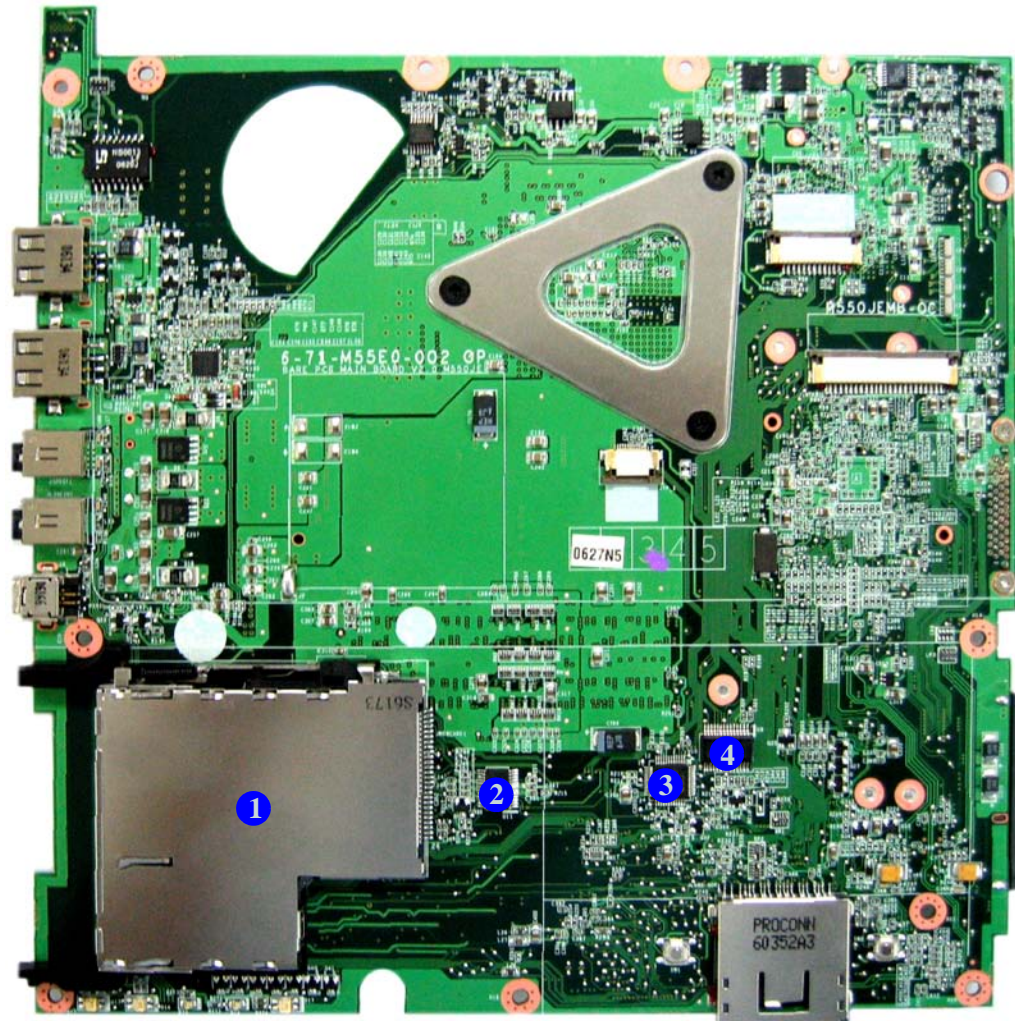
To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

Introduction

Figure 7
**Mainboard Top
Key Parts**

1. ExpressCard Assembly
2. P2231
3. PC87381 Super I/O
4. RS-232 Transceivers

M540JE Mainboard Overview - Top (Key Parts)



M540JE Mainboard Overview - Bottom (Key Parts)

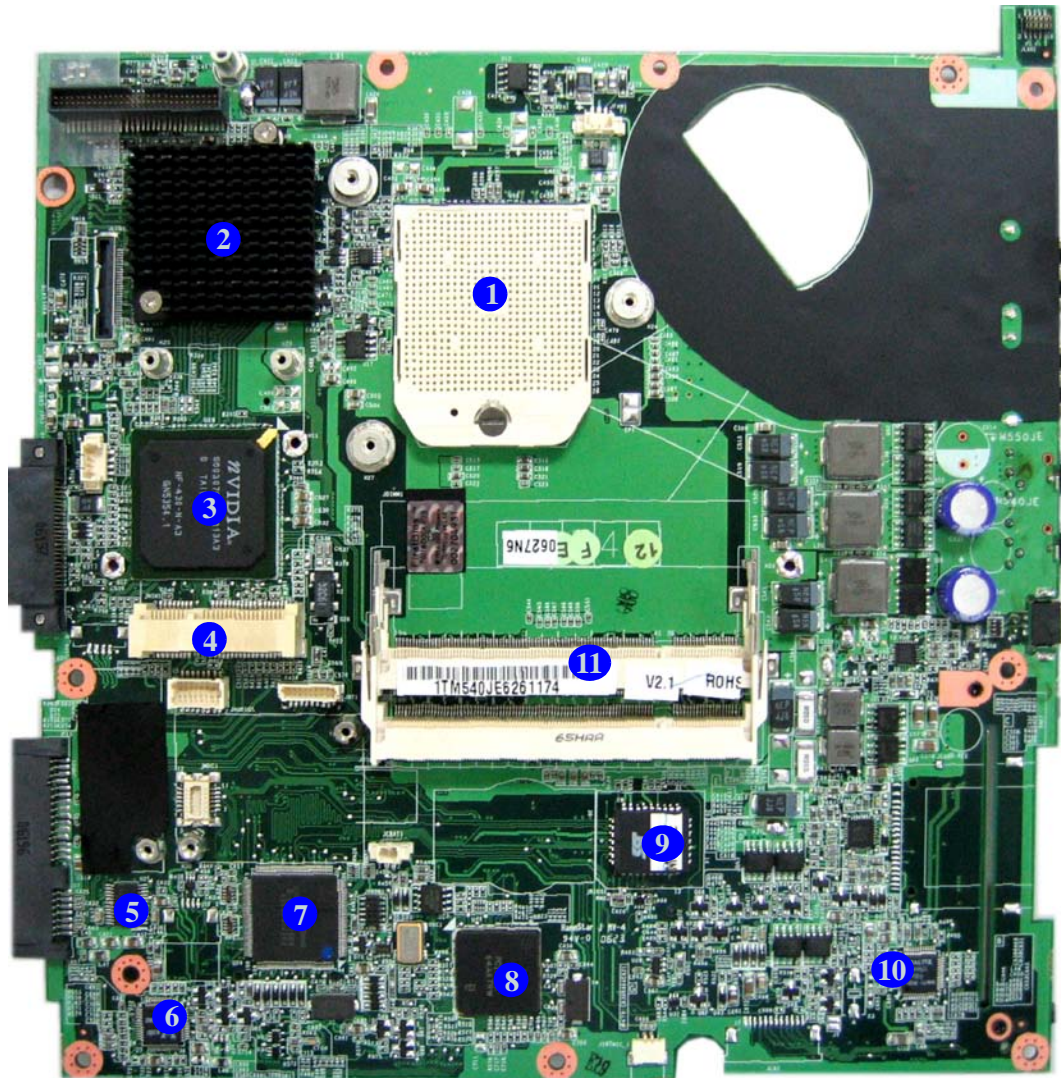


Figure 8
Mainboard Bottom
Key Parts

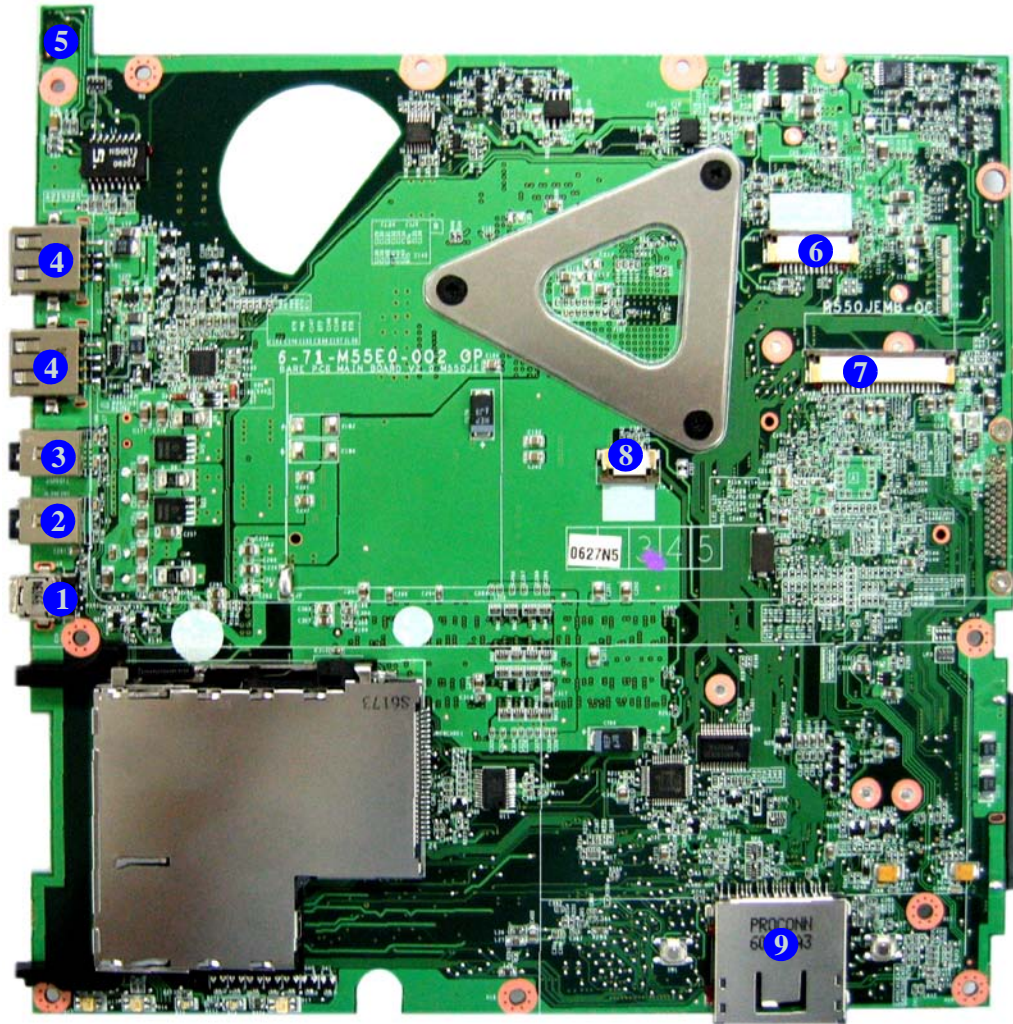
1. CPU Socket (no CPU installed)
2. Northbridge-C51MV (with heat sink installed)
3. Southbridge-MCP51M
4. Mini-PCI (WLAN Module) Connector
5. Audio Amp.
6. AZALIA CODEC ALC883
7. H8/2111
8. NEW CARD PCI7402
9. Flash BIOS ROM
10. RTL 8201CL
11. Memory Slots
DDR2 So-DIMM

Introduction

Figure 9
**Mainboard Top
Connectors**

1. Mini-IEEE 1394 Port
2. Line-In Jack
3. S/PDIF-Out Jack
4. USB Port
5. LAN Board Connector
6. Hot-key board Connector
7. Keyboard Cable Connector
8. TouchPad Cable Connector
9. Card Reader Socket

M540JE Mainboard Overview - Top (Connectors)



M540JE Mainboard Overview - Bottom (Connectors)

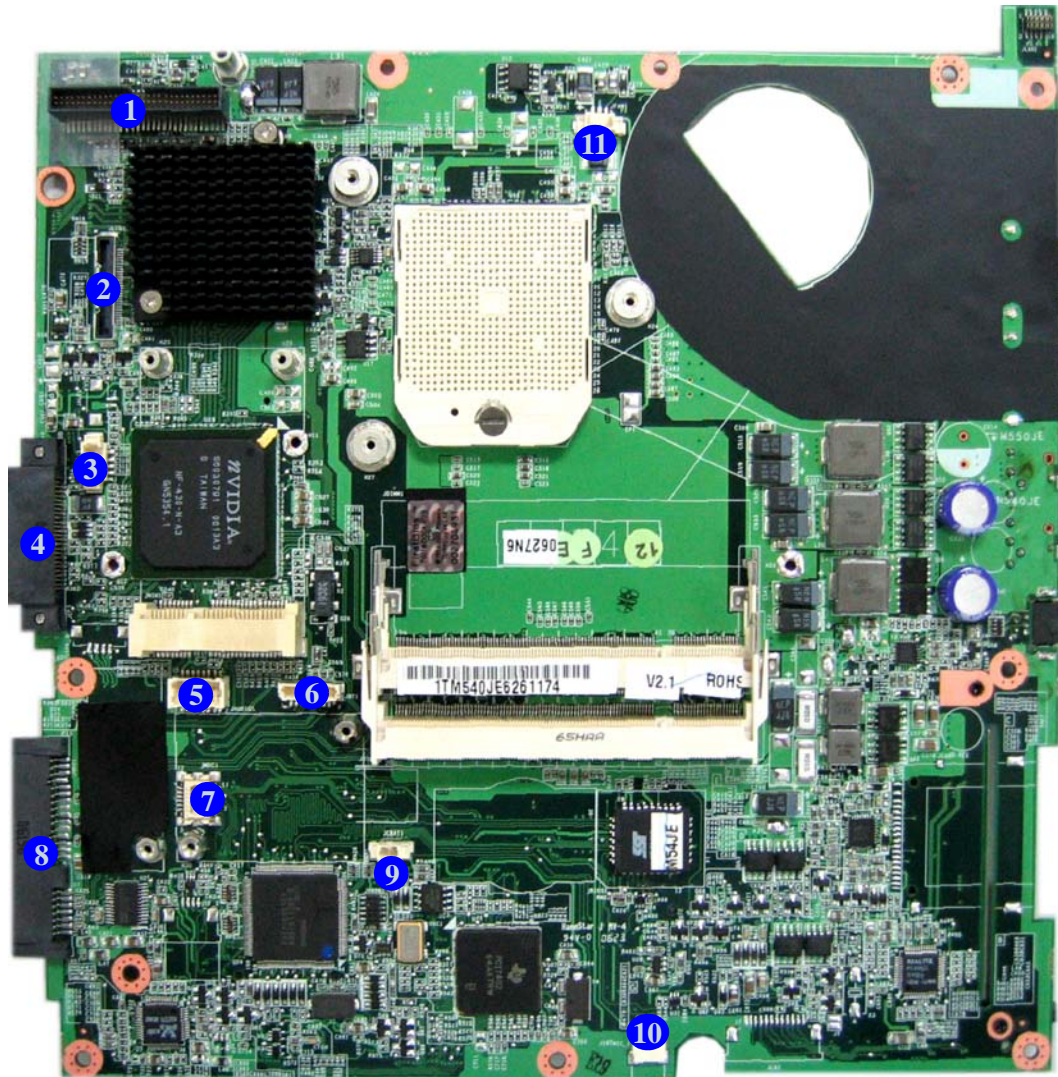


Figure 10
**Mainboard Bottom
Connectors**

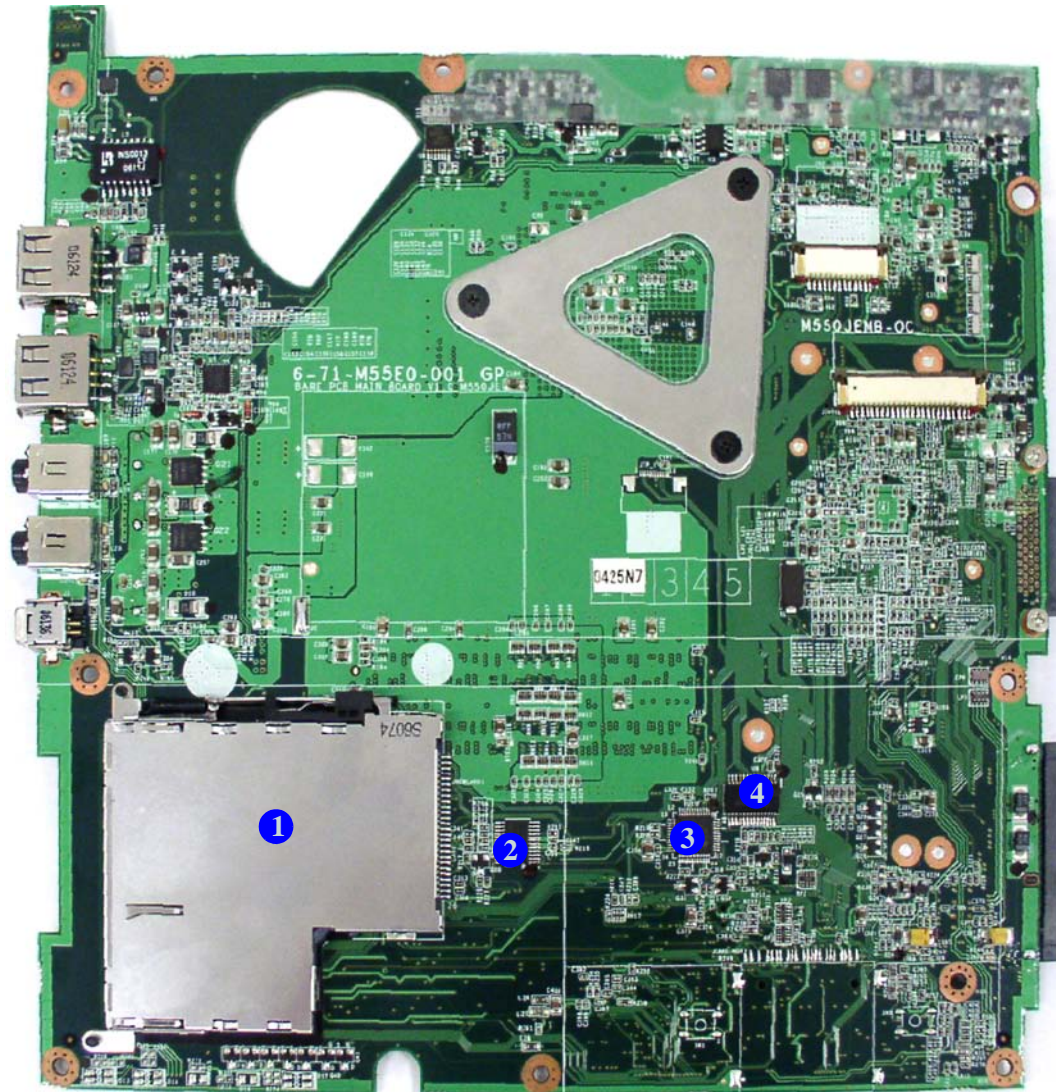
1. D/D Board Connector
2. LCD Connector
3. Speaker Cable Connector
4. CD Connector
5. Audio Board Connector
6. BT Cable Connector
7. Modem Module Connector
8. HDD Connector
9. CMOS Bat. Connector
10. Microphone Cable Connector
11. CPU Fan Cable Connector

Introduction

Figure 11
**Mainboard Top
Key Parts**

1. ExpressCard
Assembly
2. P2231
3. PC87381
Super I/O
4. RS-232
Transceivers

M550JE Mainboard Overview - Top (Key Parts)



M550JE Mainboard Overview - Bottom (Key Parts)

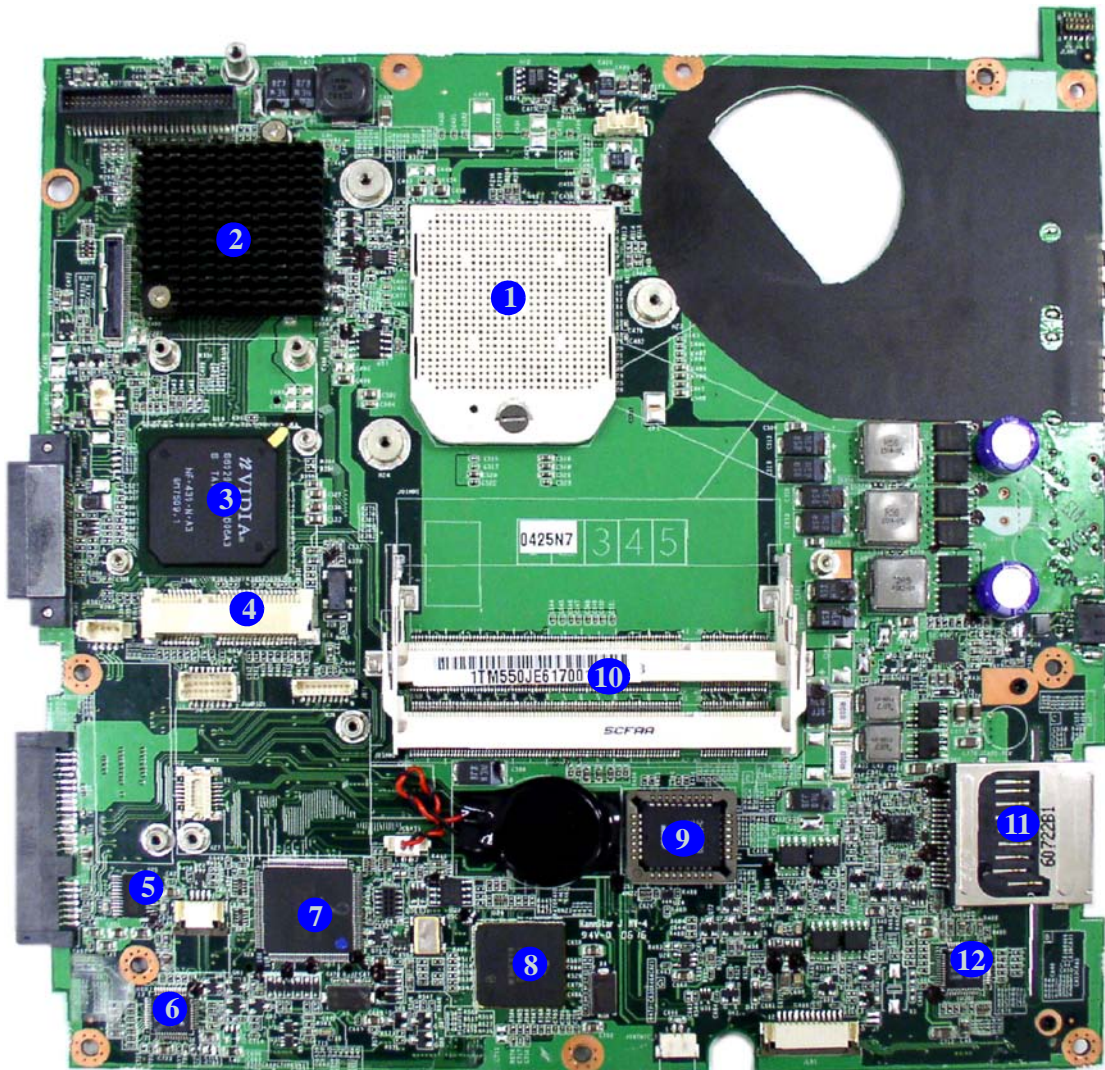


Figure 12
**Mainboard Bottom
Key Parts**

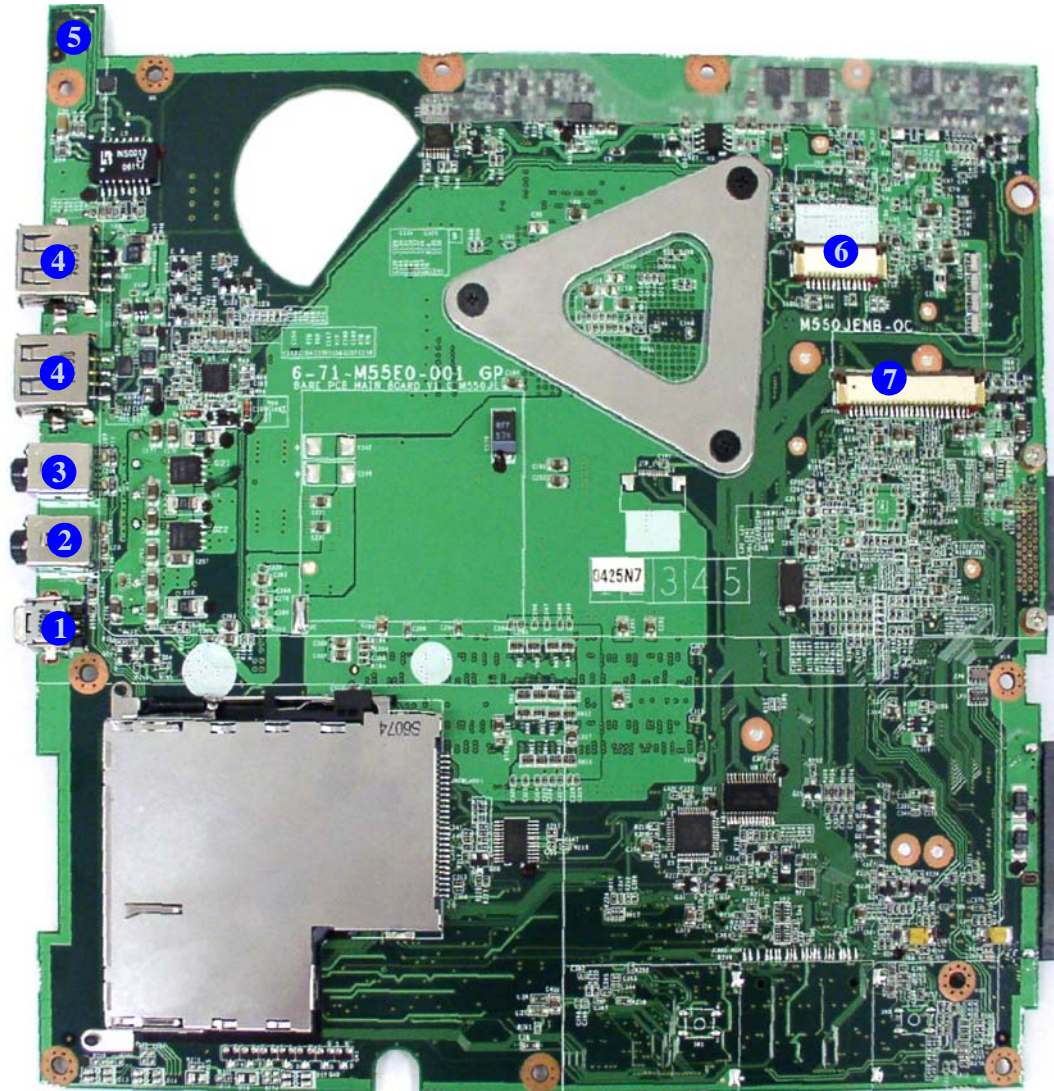
1. CPU Socket (no CPU installed)
2. Northbridge-C51MV (with heat sink installed)
3. Southbridge-MCP51M
4. Mini-PCI (WLAN Module) Connector
5. Audio Amp.
6. AZALIA CODEC ALC883
7. H8/2111
8. NEW CARD PCI7402
9. Flash BIOS ROM
10. Memory Slots DDR2 So-DIMM
11. Card Reader Socket
12. RTL 8201CL

Introduction

Figure 13
**Mainboard Top
Connectors**

1. Mini-IEEE 1394 Port
2. Line-In Jack
3. S/PDIF-Out Jack
4. USB Port
5. LAN Board Connector
6. Hot-key board Connector
7. Keyboard Cable Connector

M550JE Mainboard Overview - Top (Connectors)



M550JE Mainboard Overview - Bottom (Connectors)

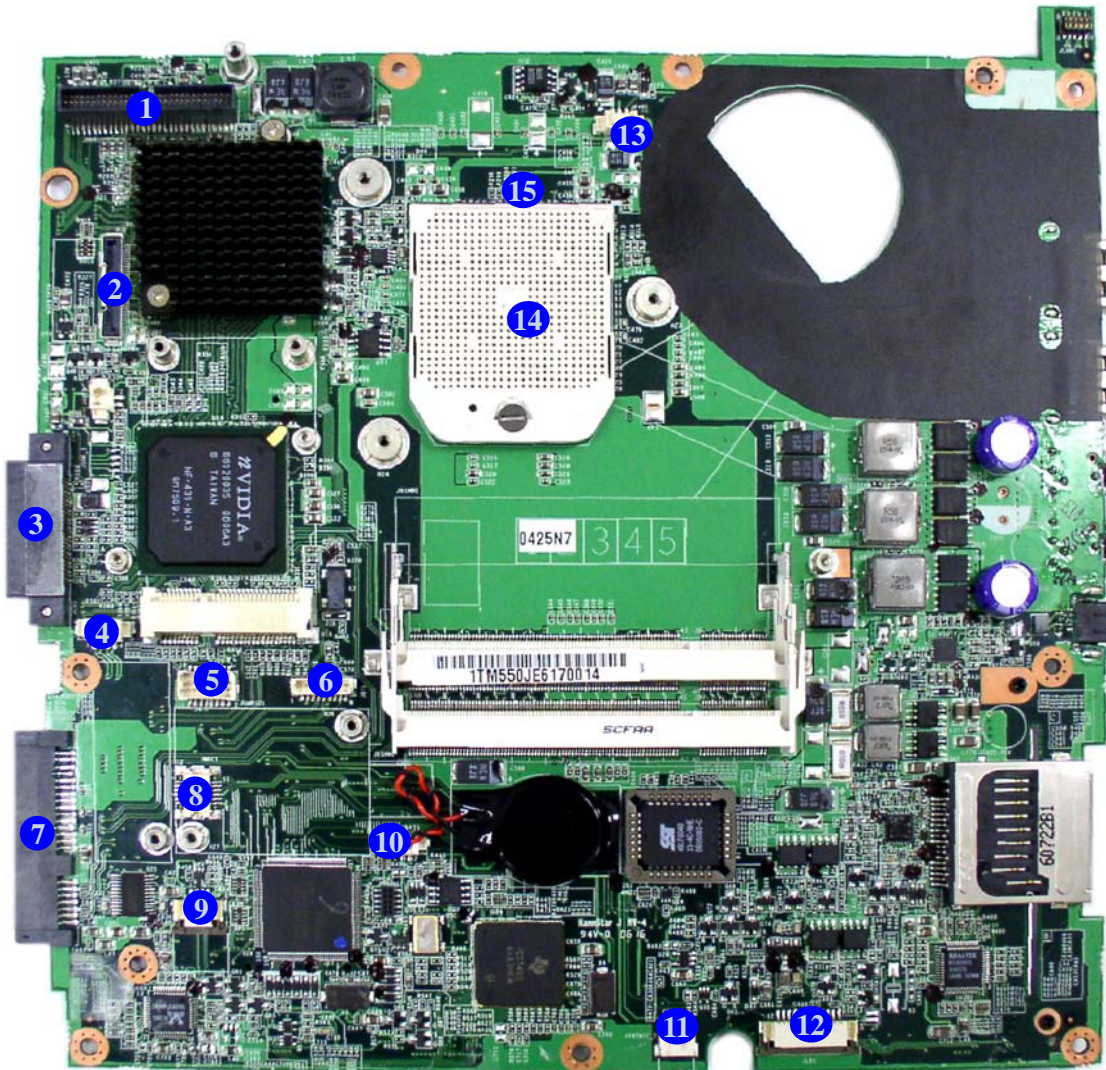


Figure 14
**Mainboard Bottom
Connectors**

1. D/D Board Connector
2. LCD Connector
3. CD Connector
4. Speaker Cable Connector
5. Audio Board Connector
6. BT Cable Connector
7. HDD Connector
8. Modem Module Connector
9. TouchPad Cable Connector
10. CMOS Bat. Connector
11. Microphone Cable Connector
12. LED Board Cable Connector
13. CPU Fan Cable Connector


Chapter 2: Disassembly


Overview

This chapter provides step-by-step instructions for disassembling the *M540JE/M550JE* series notebook's parts and sub-systems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

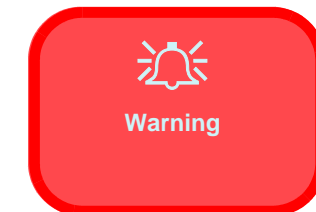
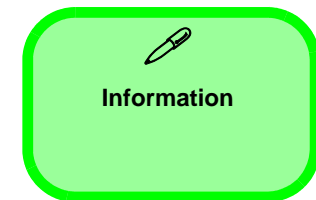
We suggest you completely review any procedure before you take the computer apart.

Procedures such as upgrading/replacing the RAM, 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.



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-borne 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 System Memory:

1. Remove the battery [page 2 - 5](#)
2. Remove the system memory [page 2 - 8](#)

To remove the Optical Device:

1. Remove the battery [page 2 - 5](#)
2. Remove the Optical device [page 2 - 10](#)

To remove the Processor:

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

To remove the Wireless LAN Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the Wireless LAN module [page 2 - 13](#)

To remove the Modem:

1. Remove the battery [page 2 - 5](#)
2. Remove the modem [page 2 - 14](#)

To remove the Keyboard:

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

To remove the Bluetooth Modules:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the Optical device [page 2 - 10](#)
4. Remove the CPU heat sink [page 2 - 11](#)
5. Remove the keyboard [page 2 - 15](#)
6. Remove the Bluetooth module [page 2 - 16](#)

Removing the Battery

1. Turn the computer **off**, and turn it over.
2. Locate the battery bay at point **1** (*Figure a*).
3. Slide the latch **1** in the direction of the arrow, and hold it in place.
4. Slide the battery in the direction of the arrow **2**.
5. Lift the battery out in the direction of the arrow **3**.
6. Lift the battery **4** out off the computer.

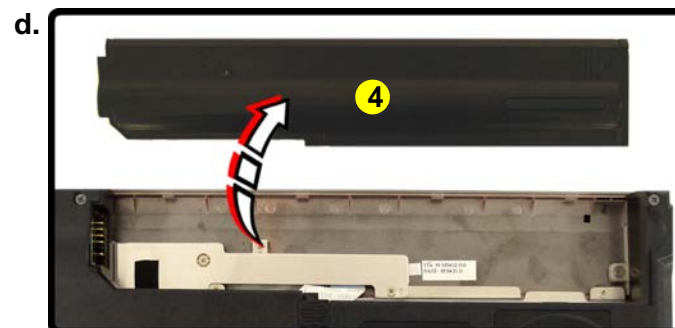
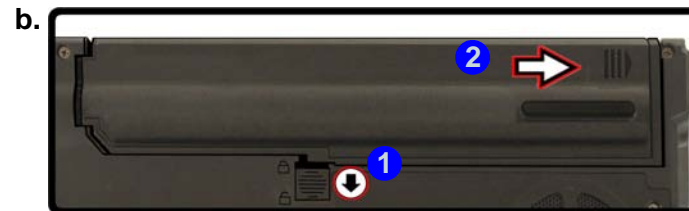
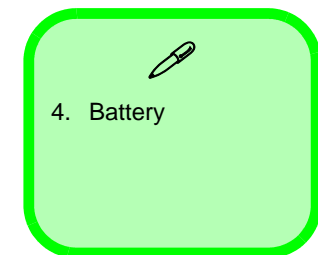


Figure 1
Battery Removal

- a. Locate the battery release latch.
- b. Slide the latch and hold in place, and slide the battery in the direction of the arrow.
- c. Lift the battery out in the direction of the arrow.
- d. Lift the battery out.



Removing the Hard Disk Drive

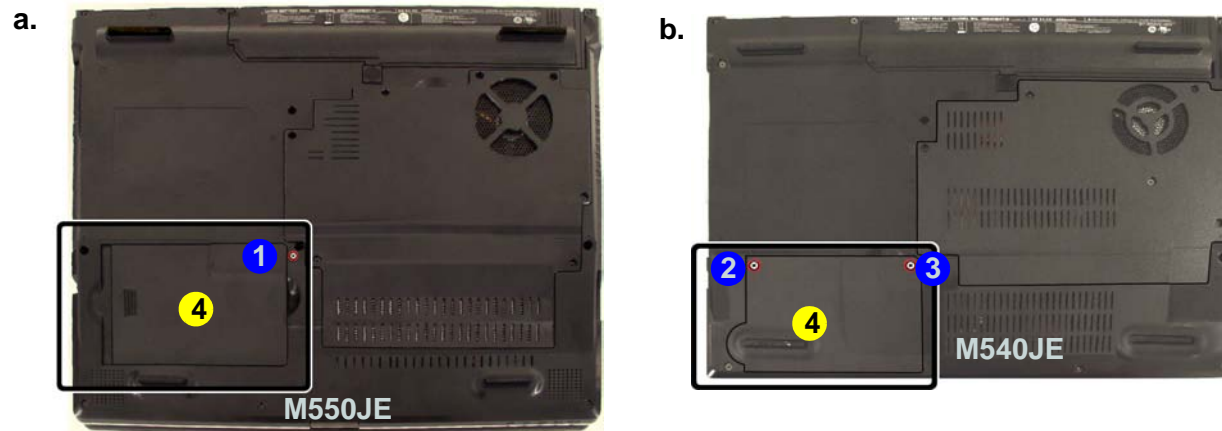
The hard disk drive can be taken out to accommodate other 2.5" serial (SATA) hard disk drives with a height of 9.5mm (h). Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in **Chapter 4 of the User's Manual**) when setting up a new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

Figure 2
HDD Assembly Removal

- a. Locate the HDD bay cover.
- b. Remove the screw(s).

Hard Disk Upgrade Process

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
2. Locate the hard disk bay cover **4** and remove screw **1** **M550JE**, OR screws **2 - 3** **M540JE**.



4. HDD Bay Cover

- 1 Screw (M550JE)
- 2 Screws (M540JE)



HDD System Warning

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

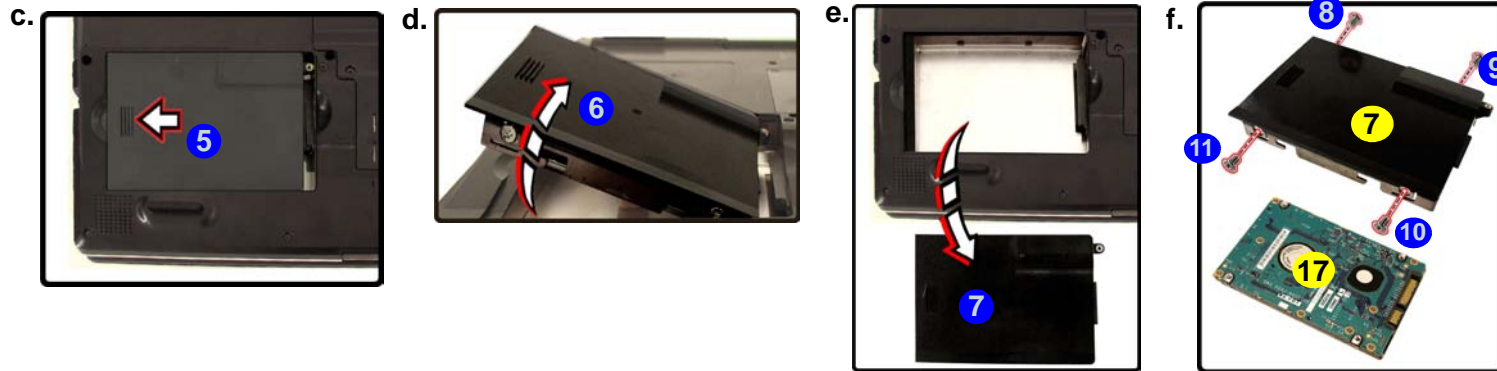
You have backed up any data you want to keep from your old HDD.

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.

For **M550JE/M555JE computers:**

3. Slide the hard disk and cover assembly in the direction of arrow 5.
4. Lift the hard disk and cover assembly up in the direction of arrow 6.
5. Remove the hard disk and cover assembly 7.
6. Remove screws 8 - 11 to release the hard disk from the assembly cover, and reverse the process to install any new hard disk.



For **M540JE/M545JE computers:**

7. Pull the tab to slide the hard disk and case assembly in the direction of arrow 12.
8. Lift the hard disk and case assembly out of the bay in the direction of arrow 13.
9. Remove screws 14 - 15 to release the hard disk 17 from the case 16, and reverse the process to install any new hard disk.

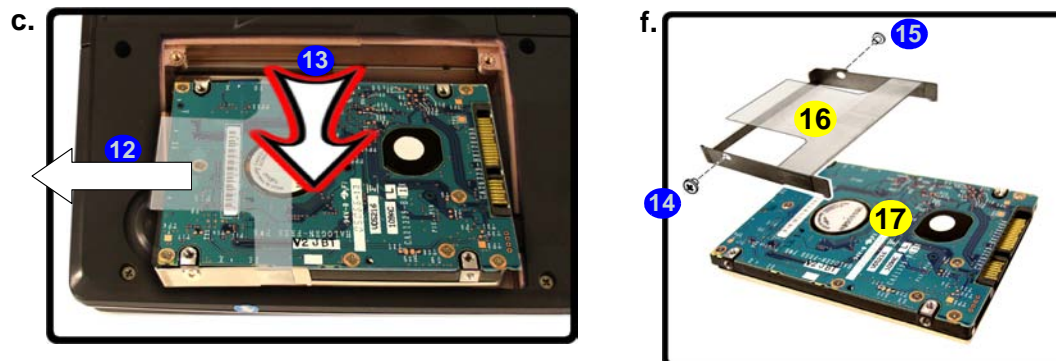



Figure 3
HDD & Case Assembly Removal

- c. Slide out the HDD assembly.
- d. Lift the HDD up.
- e. Lift the HDD assembly out of the bay.
- f. Remove the screws and separate the cover and HDD.



7. HDD Case (M550JE/M555JE)
16. HDD Case (M540JE/M545JE)
17. HDD

- 4 Screws (M550JE)
- 2 Screws (M540JE)

Disassembly

Figure 4
**RAM Module
Removal**

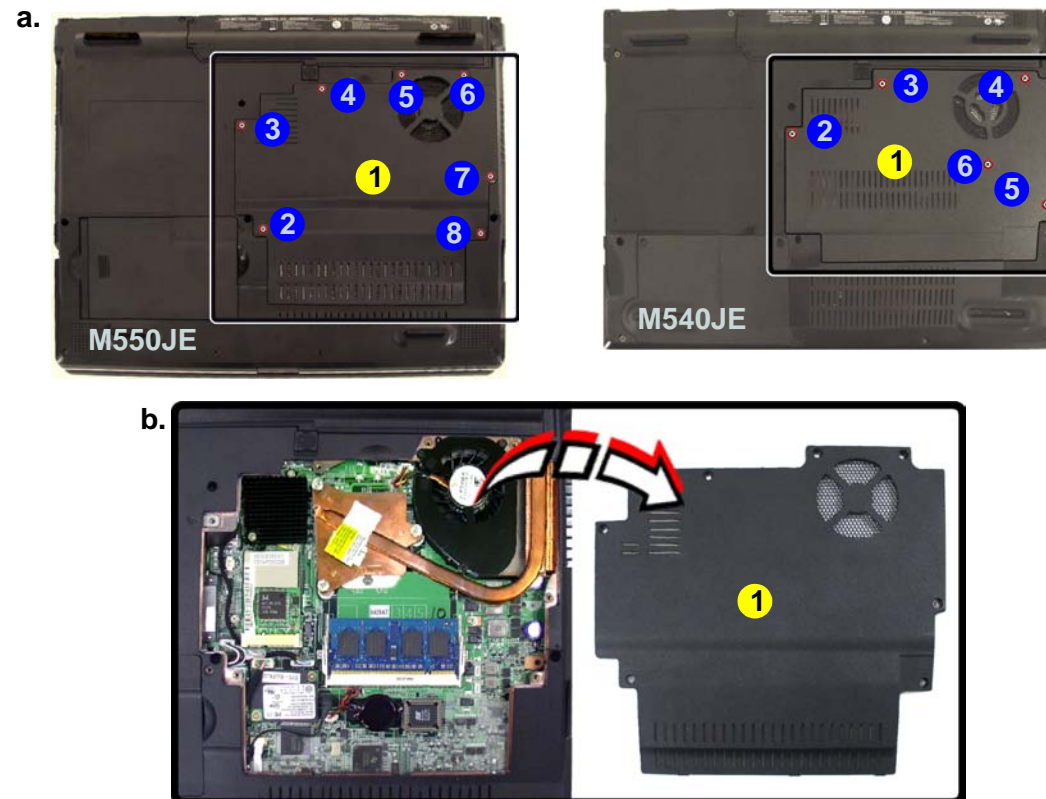
- Remove the screws.
- Remove the cover.

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** 533/667MHz. The main memory can be expanded up to 2GB. The SO-DIMM modules supported are 256MB, 512MB and 1024MB **DDR2** Modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

- Turn **off** the computer, remove the battery ([page 2 - 5](#)).
- Locate the bay cover **1**, and remove screws **2 - 8** (for **M550JE**) OR screws **2 - 6** (for **M540JE**).
- Remove the bay cover **1**.



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. Bay Cover

- 7 Screws (M550JE)
- 5 Screws (M540JE)

- Gently pull the two release latches (9 & 10) on the sides of the memory socket in the direction indicated by the arrows (*Figure c*).

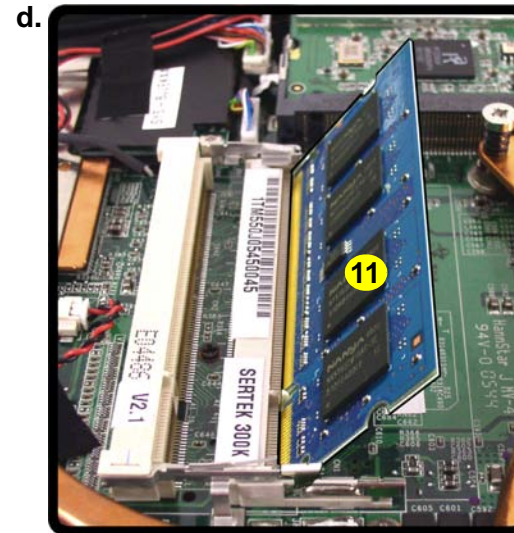
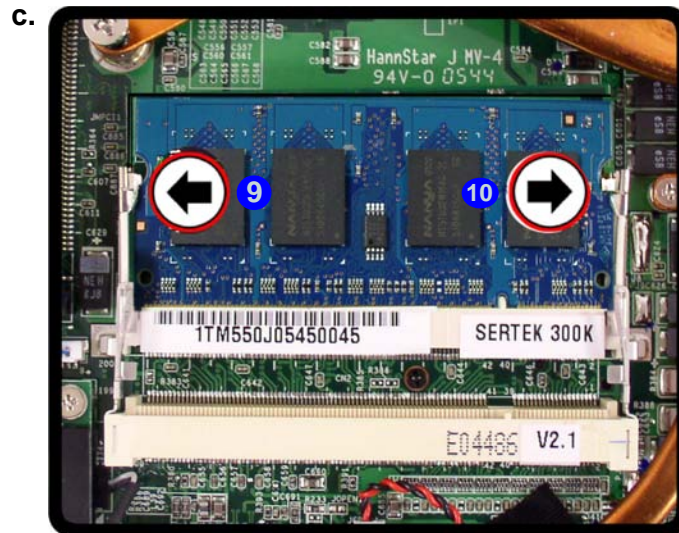


Figure 5
Memory Removal Sequence

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

- The RAM module(s) 11 will pop-up (*Figure d*), and you can then remove it (them).
- Pull the latches to release the second module if necessary.
- Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
- 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.
- Press the module down towards the mainboard until the slot levers click into place to secure the module.
- Replace the memory socket cover and the screws (see [page 2 - 8](#)).
- Restart the computer to allow the BIOS to register the new memory configuration as it starts up.



11. RAM Module

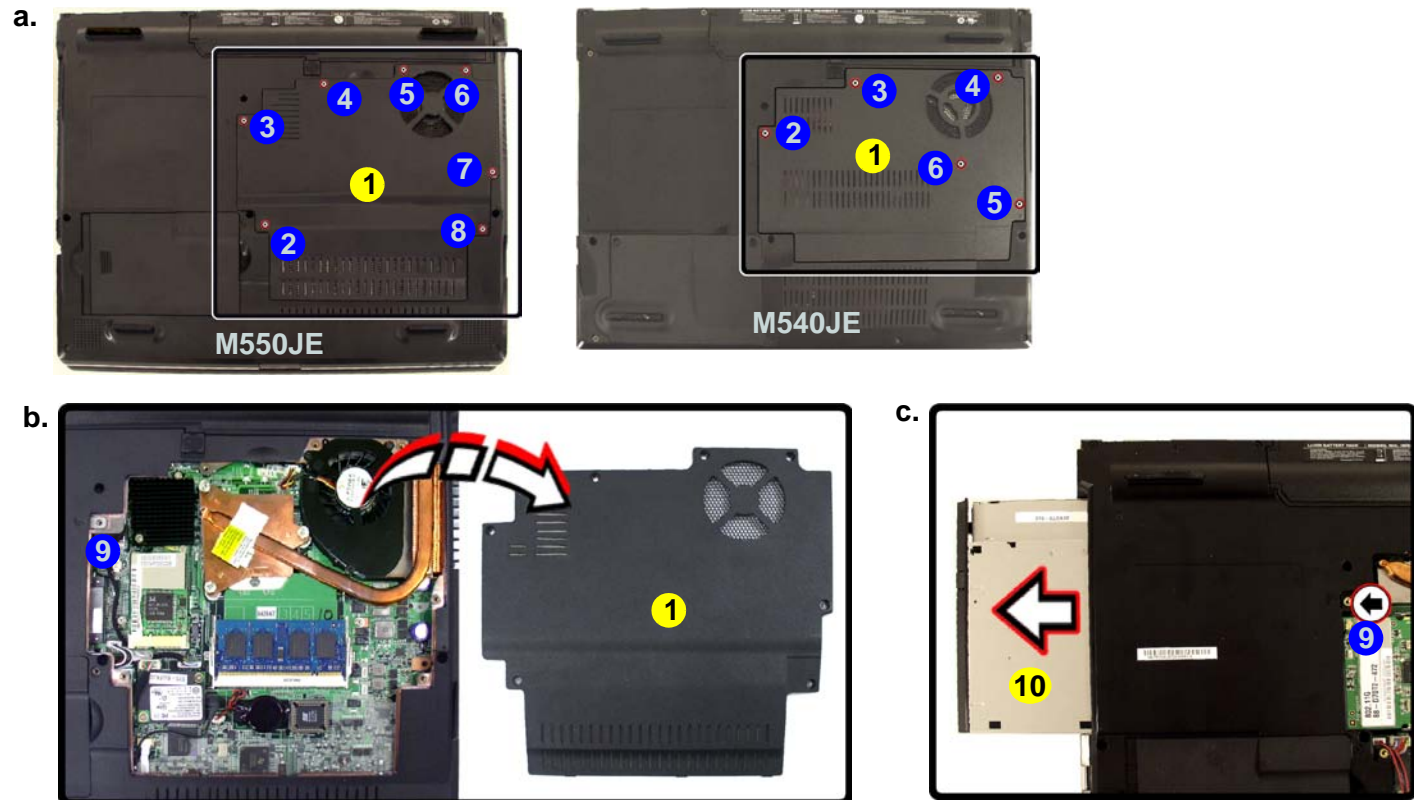
Disassembly

Figure 6
**Optical Device
Removal**

- Remove the screws.
- Remove the cover.
- Push the optical device out off the computer at point 9.

Removing the Optical (CD/DVD) Device

- Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
- Locate the component bay cover **1**, and remove screws **2 - 8** (for **M550JE**) OR screws **2 - 6** (for **M540JE**).
- Remove the component bay cover **1**.
- Use a screwdriver to carefully push out the optical device **10** at point **9**.
- 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.



Removing the Processor

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 8](#)).
2. The CPU heat sink will be visible at point **1** on the mainboard.
3. Remove screws **2** - **4** (**Figure b**) from the heat sink in the order indicated.
4. Carefully lift up the heat sink **5** (**Figure c**) off the computer.

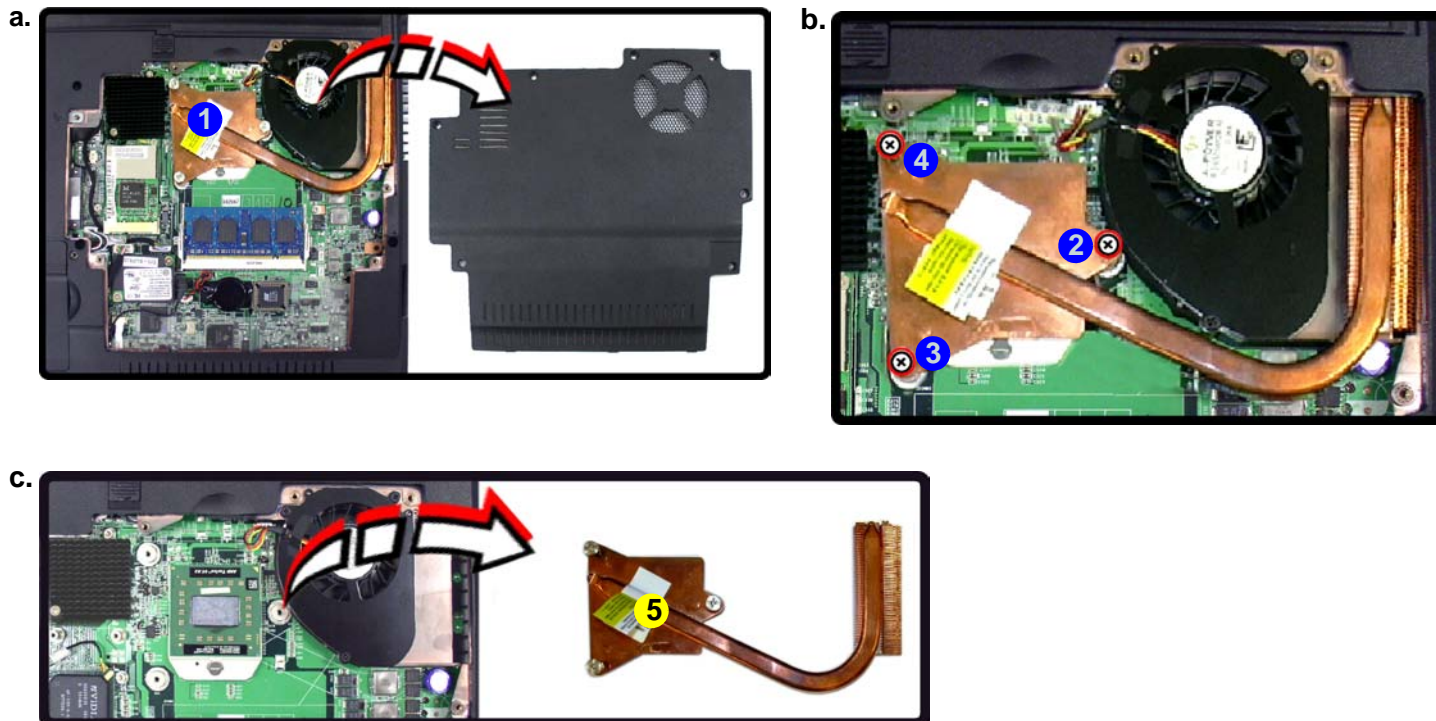
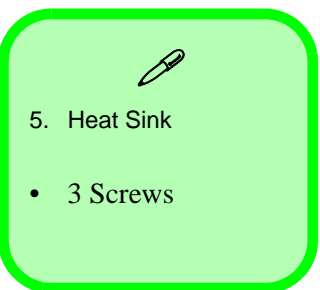


Figure 7
Processor Removal


- a. Remove the cover and locate the heat sink.
- b. Remove the 3 screws in the order indicated.
- c. Remove the heat sink.

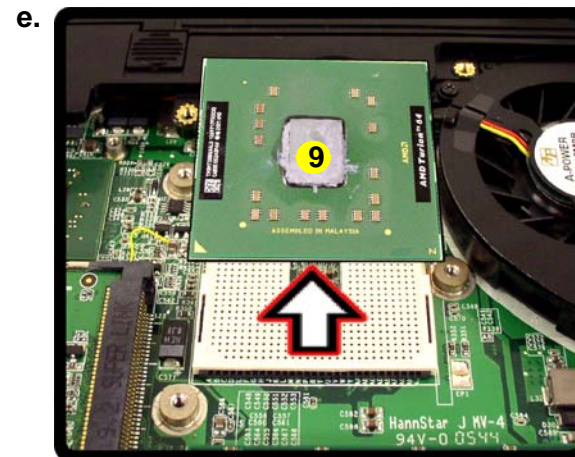
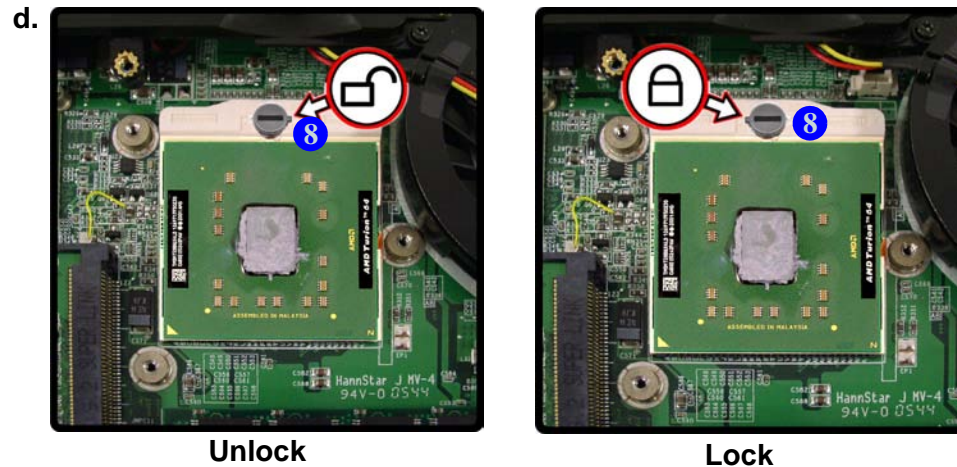


Disassembly

Figure 8 Processor Removal (cont'd)

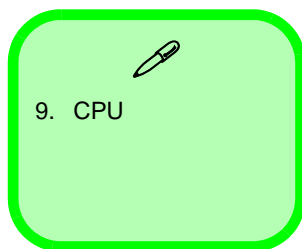
- d. Turn the release latch to unlock the CPU.
e. Lift the CPU out of the socket.

5. Turn the release latch **8** towards the unlock symbol , to release the CPU (*Figure d*).
6. Carefully (it may be hot) lift the CPU **9** up out of the socket (*Figure e*).
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!).



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.



Removing the Wireless LAN Module

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 8](#)).
2. The Wireless LAN module will be visible at point **1** on the mainboard.
3. Carefully disconnect cable **2**, then remove the screws **3** - **4** from the module socket.
4. The Wireless LAN module **5** will pop-up.
5. Lift the Wireless LAN module ([Figure d](#)) up and off the computer.

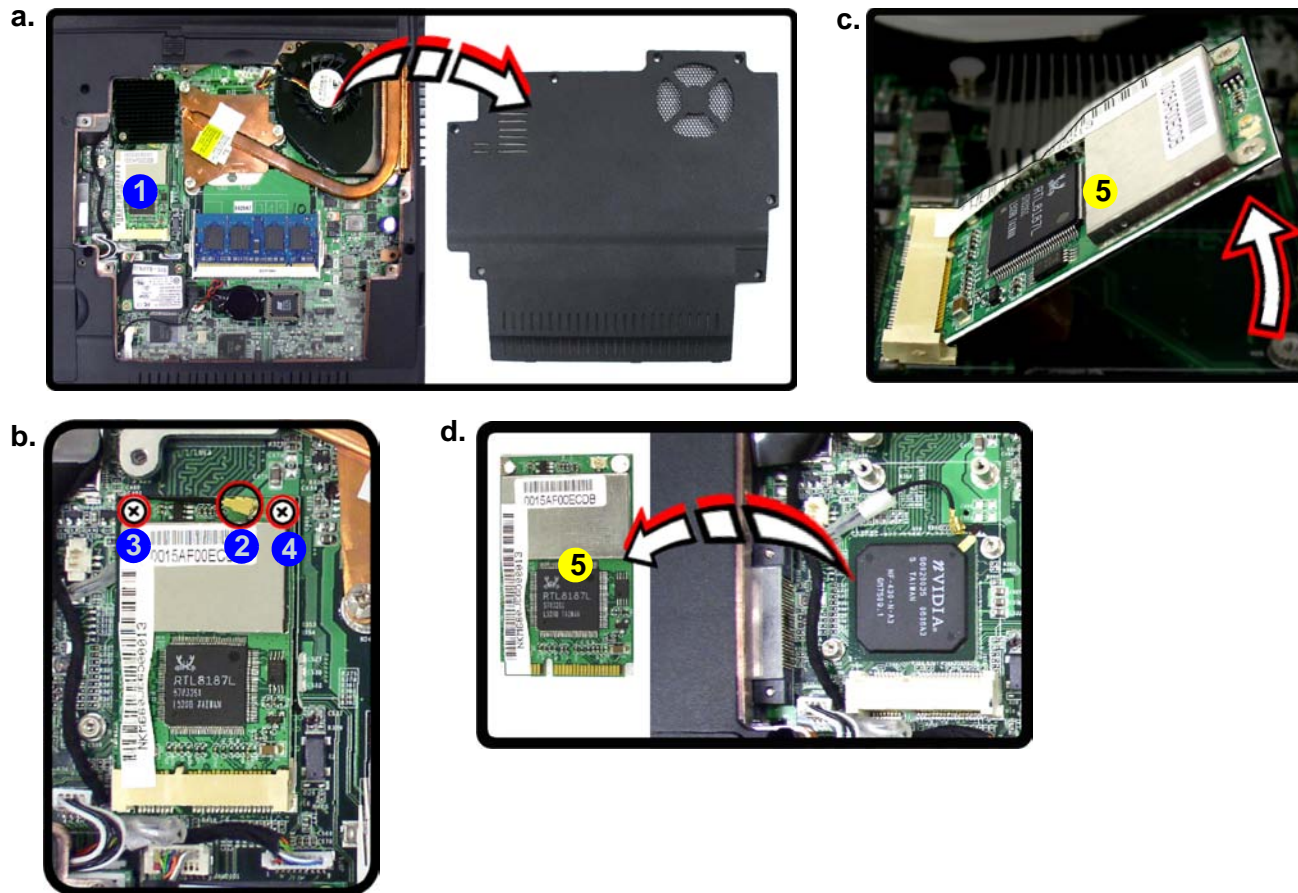



Figure 9
**Wireless LAN
 Module Removal**

- a. Remove the cover and locate the heat sink.
- b. Disconnect the cable and remove the 2 screws.
- c. The WLAN module will pop up.
- d. Lift the WLAN module out.

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



5. WLAN Module.

- 2 Screws

Disassembly

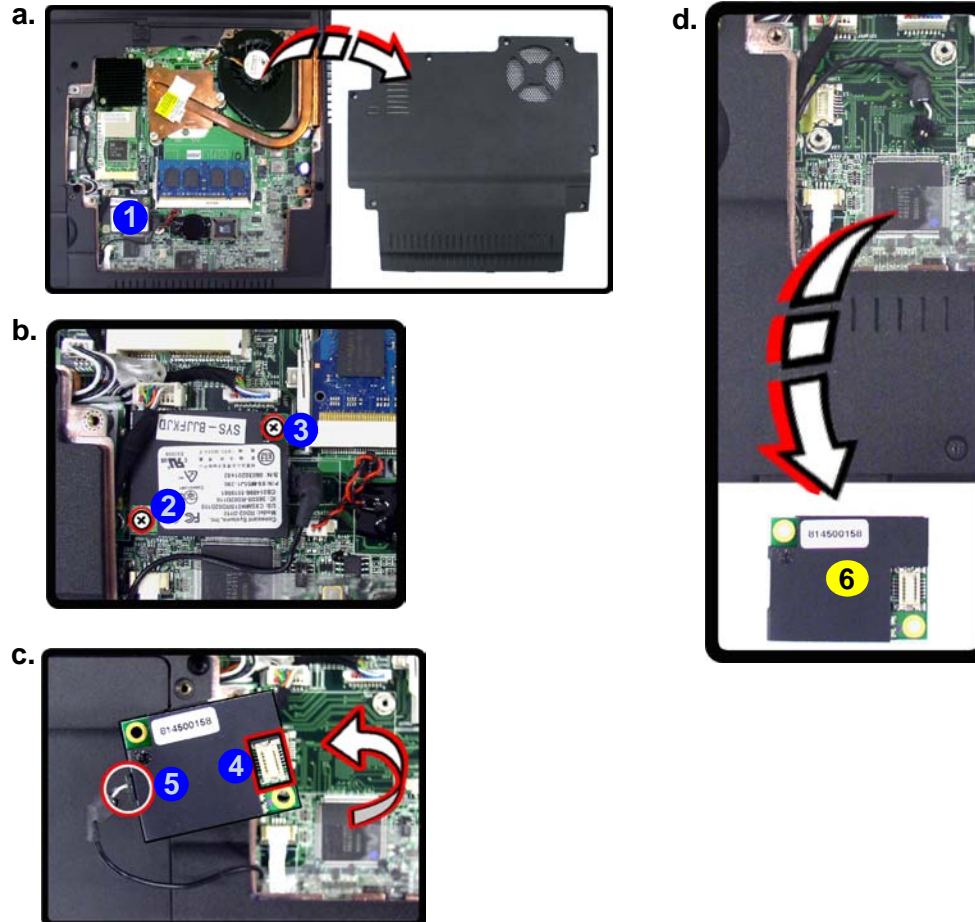
Figure 10

Modem Removal

- Remove the cover and locate the modem.
- Remove the screws.
- Lift the modem up off the socket and disconnect the connector.
- Lift the modem out.

Removing the Modem

- Turn **off** the computer, remove the battery ([page 2 - 5](#)), and the component bay cover ([page 2 - 8](#)).
- The modem will be visible at point **1** on the mainboard.
- Remove screws **2** - **3** ([Figure b](#)) from the modem module.
- Lift the modem up and off the socket **4** and separate the modem from the connector **5**.
- Lift the modem **6** up and off the computer.



6. Modem

- 2 Screws

Removing the Keyboard

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
2. Press the **three** 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).
3. Carefully lift the keyboard **4** up, being careful not to bend the keyboard ribbon cable ([Figure b](#)).
4. Disconnect the keyboard ribbon cable **5** from the locking collar socket **6**.

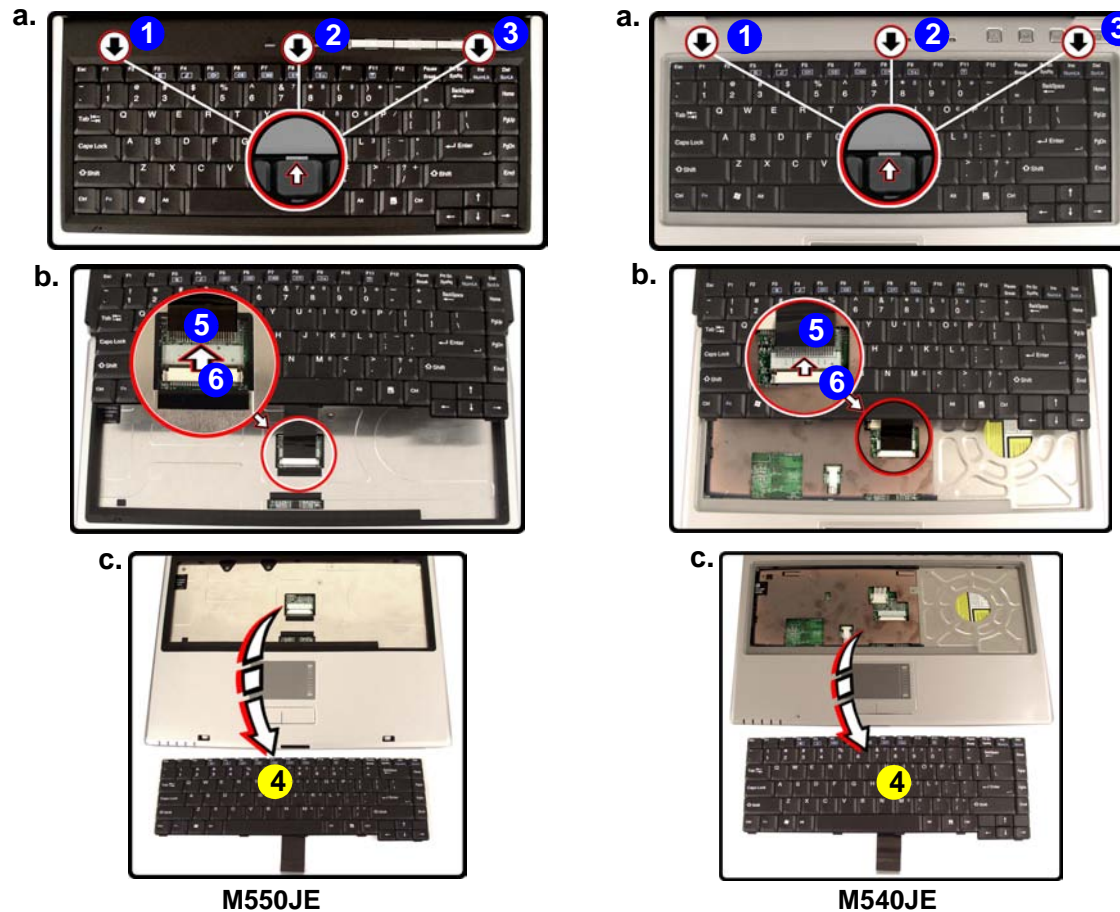


Figure 11
Keyboard Removal

- a. Press the three latches to release the keyboard.
- b. Lift the keyboard up and disconnect the cable from the locking collar.
- c. Remove the keyboard.



Re-Inserting the Keyboard

When re-inserting the keyboard firstly align the **five** keyboard tabs at the bottom of the keyboard with the slots in the case.



4. Keyboard

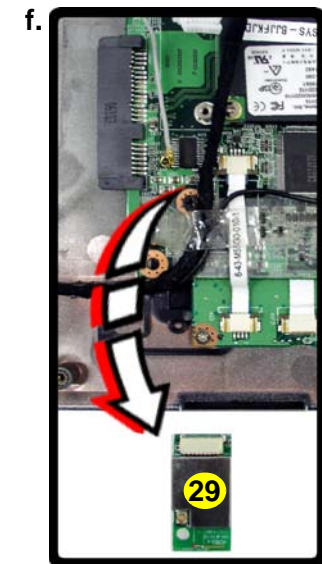
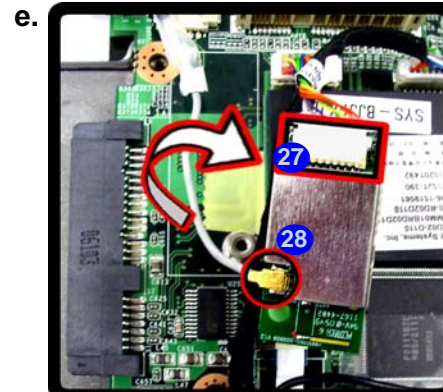
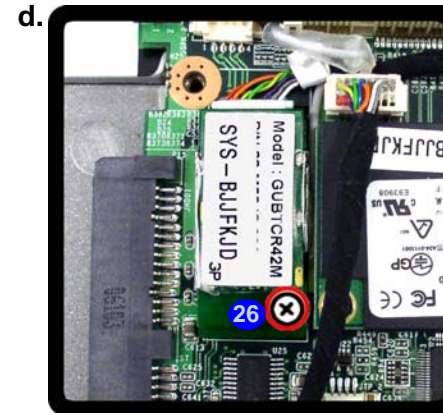
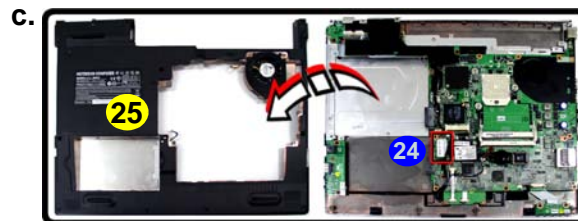
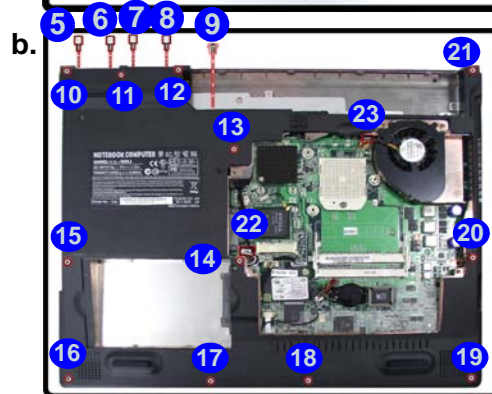
Disassembly

Figure 12

Bluetooth Removal

1. Turn off the computer, remove the battery ([page 2 - 5](#)), hard disk ([page 2 - 6](#)), optical device ([page 2 - 10](#)), heat sink ([page 2 - 11](#)), and the keyboard ([page 2 - 15](#)),.
 2. Remove the screw screws ① -④ from under the keyboard and turn it over.
 3. Remove the screws ⑤ - ②① from the bottom case and disconnect the speaker connector ②② and the CPU fan connector ②③ on the mainboard.
 4. Carefully lift up the bottom case ②⑤ off the computer and the Bluetooth will be visible at point ②④ on the mainboard.
 5. Remove the screw ②⑥ from the module.
 6. Carefully separate the Bluetooth module from the connector ②⑦ and disconnect the cable ②⑧.
 7. Lift the Bluetooth module ②⑨ ([Figure f](#)) up and off the computer.
- a. Remove the 4 screws.
 - b. Remove the 17 screws and disconnect the speaker and CPU fan connectors.
 - c. Remove the bottom case.
 - d. Remove the 1 screw.
 - e. Disconnect the cable and the connector.
 - f. Lift the Bluetooth up off the socket.

Removing the Bluetooth Module



25. Bottom Case
29. Bluetooth Module

- 22Screws

Appendix A:Part Lists

This appendix breaks down the *M540JE/M550JE* 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.

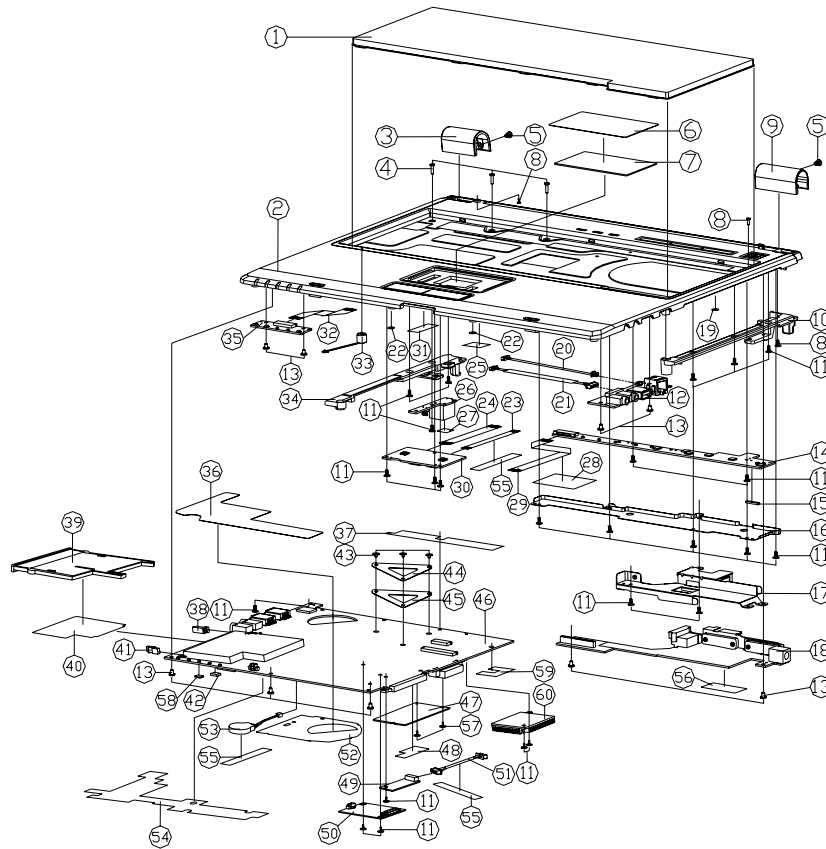
Part List Illustration Location

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

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

Parts	M550JE/M540JE
Top - (M550JE)	<i>page A - 3</i>
Bottom - (M550JE)	<i>page A - 4</i>
LCD - (M550JE)	<i>page A - 5</i>
DVD-RW Drive - (M550JE)	<i>page A - 6</i>
COMBO - (M540JE)	<i>page A - 7</i>
Top - (M540JE)	<i>page A - 8</i>
Bottom - (M540JE)	<i>page A - 9</i>
LCD - (M540JE)	<i>page A - 10</i>
DVD-RW Drive - (M540JE)	<i>page A - 11</i>

Top (M550JE)



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD OPTION M550G	6-80-M550G-011	
2	TOP CASE MODULE M550G	6-39-M550G-010	
3	HINGE COVER GL3.PC#00000000	6-42-M550Y-021	
4	SCREW M2.5X4 KI BK/Z ICT NY #000	6-35-B6125-99A	
5	SCREW M2.5X4 KI BK/Z ICT NY #000 I-4.0	6-35-B6120-3RE	
6	TRACK PAD MYLAR#0000000000	6-40-M550G-024	
7	TOUCH PAD B10469-5103 M550N	6-49-M550N-010	
8	SCREW M2.5X4 KI BK/Z ICT NY#035 I-6.0	6-35-B6120-6RB	
9	HINGE COVER CRJ.PC#00000000	6-42-M550Y-011	
10	TOP CASE BECASTING #00000000	6-33-M55J2-021	
11	SCREW M2.5X4 KI NI ICT G1Y-PATCH #000	6-35-B1120-3RE	
12	ALU.DI.D BOARD V3.0 M550N	6-77-M550N-005	
13	SCREW M2.5X4 KI BK/Z ICT NY	6-35-B6125-99A	
14	HOT KEY BOARD V3.0 M550G	6-77-M550G-003	
15	GASKET QWMS0410 FOR HOTKEY M550G	6-47-00190-115	
16	HOTKEY BRACKET.AL M550G #000	6-33-M550G-041	
17	CHANGER BRACKET.SICC M550J #000	6-33-M55J2-011	
18	DC/DC BOARD V2.0 M550JE	6-77-M550E-002	
19	MYLAR QWMS0410/AS01 FOR FIB CASE	6-40-11A5J-020	
20	WIRE CABLE FOR AUDIO BOARD TO MAIN BOARD	6-43-M550N-012	
21	WIRE CABLE FOR AUDIO BOARD TO W/B EP BOARD	6-43-M550N-031	
22	WASER REMOVAL W/BLU FOR 20X2 LED#000	6-37-02000-603	
23	FTC CABLE FOR CLICK TO W/B AP M550G #000	6-43-M550G-010	
24	FTC CABLE FOR CLICK TO TOUCH PAD EP M550G	6-43-M550G-010	
25	TOUCH PAD GROUND AL TOL02040 FOR DUAL	6-47-M550G-010	
26	LAN BOARD V3.0 M550G	6-77-M550G-003	
27	GASKET QWMS0410 FOR LAN M550G	6-47-00190-093	
28	HOTKEY CABLE MYLAR.MYLAR M550G	6-40-M550G-060	
29	FTC CABLE FOR HOTKEY TO W/B L-560M EP W	6-43-M550G-040	
30	DE.BUG BOARD V2.0 M590K	6-77-M590K-002	
31	TOUCH PAD GROUND AL TOL02040 FOR DUAL	6-47-M550G-020	
32	FTC CABLE FOR LED TO W/B EP M550G #000	6-43-M550G-021	
33	MOPHENE QWMS0410/AS01 IN VEVY 2XK	6-23-EM55G-010	
34	TOP CASE BECASTING GL3 #00000000	6-33-M55J2-031	
35	LED BOARD V3.0 M550G	6-77-M550G-003	
36	M/B TOP MYLAR L80 M550JE #000	6-40-M550E-030	
37	M/B TOP MYLAR L40 M550JE #000	6-40-M550E-020	
38	NEWCARD RUBBER A FOR "M5J" M550J #000	6-47-M55JA-010	
39	NEW CARD DUMMY FOR M550N #000	6-42-M55NP-010	
40	M/B NEW CARD MYLAR M550N #000	6-40-M55NS-010	
41	NEWCARD RUBBER B FOR "M5J" M550J #000	6-47-M55JA-020	
42	GASKET QWMS0410 FOR CARD READER M550J	6-47-00190-09B	
43	SCREW M2.5X4 KI BK/Z ICT NY #6.1-4.50 #000	6-35-B6120-2RC	
44	CPU SUPPORT BRACKET.SUS M550J #000	6-33-M55JS-030	
45	CPU SUPPORT BRACKET.MYLAR.MYLAR M550J #000	6-40-M55JS-010	
46	MAIN BOARD V2.0 M550JE	6-77-M550E-002	
47	BREIT 6IG M5C CARBONISED REAL TEX CHIPSET	6-88-M7702-700	
48	MYLAR FOR BLUE TOUCH W/B M5400 #000	6-40-M540S-070	
49	BLUE TOUCH ID PIN MYLAR QWMS0410	6-88-M55JS-390	
50	MYLAR ID PIN MYLAR QWMS0410	6-88-M66S1-620	
51	MYLAR ID PIN MYLAR QWMS0410	6-88-M540G-530	
52	MYLAR ID PIN MYLAR QWMS0410	6-88-M55S1-530	
53	WIRE CABLE FOR BLUE TOUCH TO W/B M550G	6-43-M550G-071	
54	M/B FAN MYLAR M550JE #000	6-40-M55SE-010	
55	BAT. 2000 3V ZINNAM W/CABLE SAM CR00001	6-23-22015-P2C	
56	M/B BOTTOM MYLAR A M550N #000	6-40-M55NS-020	
57	TAPE MYLAR GL3.MYLAR M550J #000	6-40-M55J2-010	
58	TAPE MYLAR GL3.MYLAR M550J #000	6-40-M55J2-030	
59	SCREW M2.5X4 KI BK/Z ICT G1Y-PATCH I-4.0 #000	6-35-C6120-4RB	
60	GASKET QWMS0410 FOR CARD READER M550J	6-47-00190-076	
61	DVE CONNECTOR MYLAR.PC M550J #000	6-40-M55JV-010	
62	HEAT SINK.AL M550JE #000	6-31-M55ES-011	

Figure A - 1
Top (M550JE)

A.Part Lists

Bottom (M550JE)

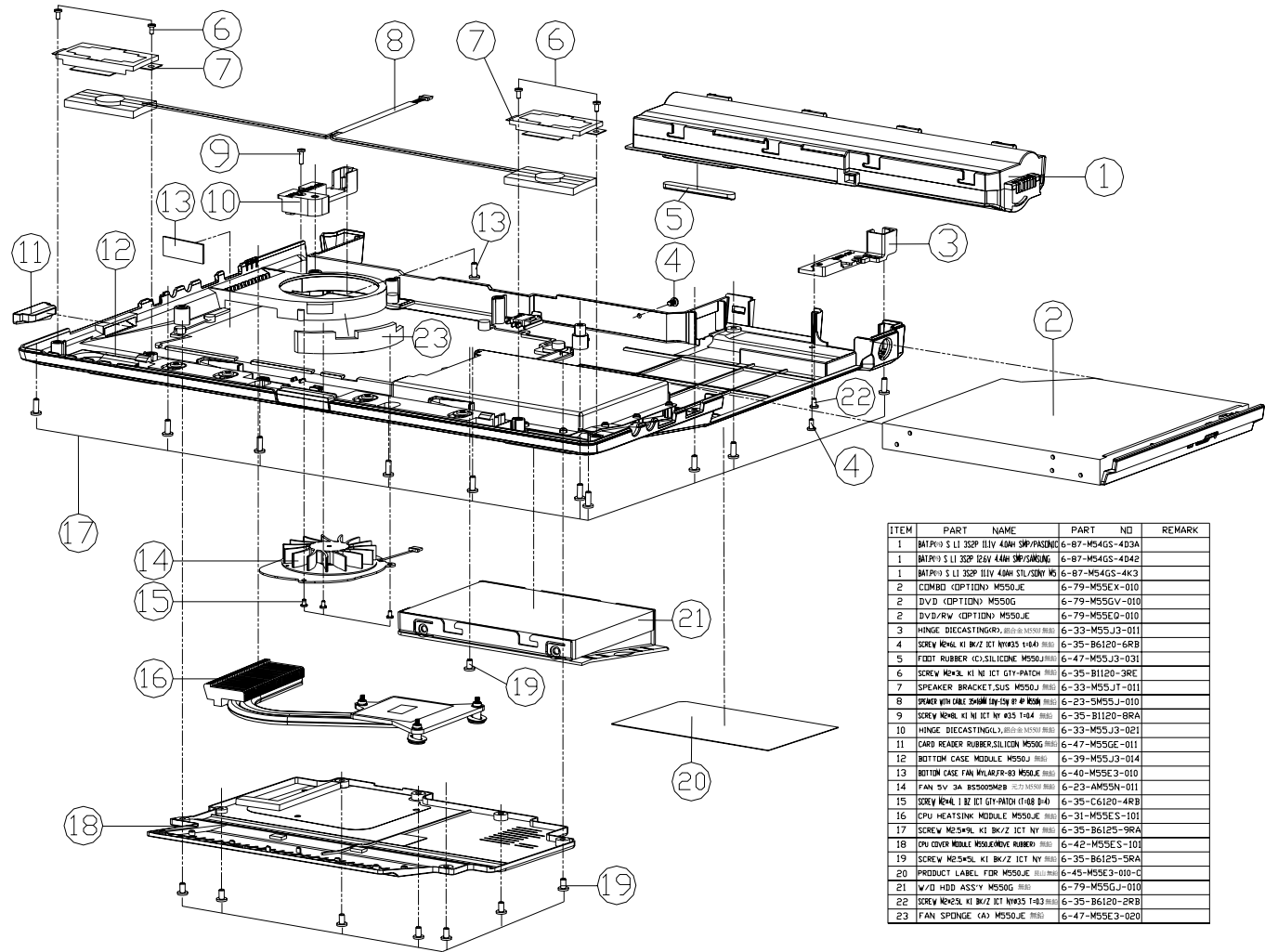


Figure A - 2
Bottom
(M550JE)

A.Part Lists

ITEM	PART	NAME	PART NO	REMARK
1	BAT P	S LI 32P 11V 40M SMP/PADNG	6-87-M54GS-403A	
1	BAT P	S LI 32P 12V 44M SMP/SMDNG	6-87-M54GS-404A	
1	BAT P	S LI 32P 11V 40M STL/SMDV N6	6-87-M54GS-4K3	
2	COMBO	(OPTION) M550JE	6-79-M55EX-010	
2	DVD	(OPTION) M550G	6-79-M55GV-010	
2	DVD/RW	(OPTION) M550JE	6-79-M55E0-010	
3	HINGE	DIECASTING(L), REB M550JE	6-33-M55J3-011	
4	SCREW	N4X4 KI BK/Z ICT NY#35 1#4	6-35-B6120-6RB	
5	FOOT	RUBBER (CS)SILICONE M550J	6-47-M55J3-031	
6	SCREW	N4X4 KI NI ICT G1Y-PATCH	6-35-B1120-3RE	
7	SPEAKER	BRACKET,SUS M550J	6-33-M55JT-011	
8	PINCH	VIN TAPE SHAW (V)S# 8" M550JE	6-23-5M55J-010	
9	SCREW	N4X4 KI NI ICT NY #35 1#4	6-35-B1120-6RA	
10	HINGE	DIECASTING(L), REB M550JE	6-33-M55J3-021	
11	CARD	READER RUBBER,SILICONE M550G	6-47-M55GE-011	
12	BOTTOM	CASE MODULE M550J	6-39-M55J3-014	
13	BOTTOM	CASE FAN W/LAR-F8 M550JE	6-40-M55E3-010	
14	FAN	5V 3A B55005M8 (C) M550JE	6-23-AM55N-011	
15	SCREW	N4X4 L BZ ICT G1Y-PATCH (1#8 B-D)	6-35-C6120-4RB	
16	CPU	HEATSINK MODULE M550JE	6-31-M55ES-101	
17	SCREW	M2.5X4 KI BK/Z ICT NY	6-35-B6125-9RA	
18	IOV	COVER MODULE/RUBBER	6-42-M55ES-101	
19	SCREW	M2.5X4 KI BK/Z ICT NY	6-35-B6125-9RA	
20	PRODUCT	LABEL FOR M550JE	6-45-M55E3-010-C	
21	W/O	HDD ASS'Y M550G	6-79-M55J-010	
22	SCREW	N4X4 KI BK/Z ICT NY#35 1#4	6-35-B6120-6RB	
23	FAN	SPINDLE (A) M550JE	6-47-M55E3-020	

LCD (M550JE)

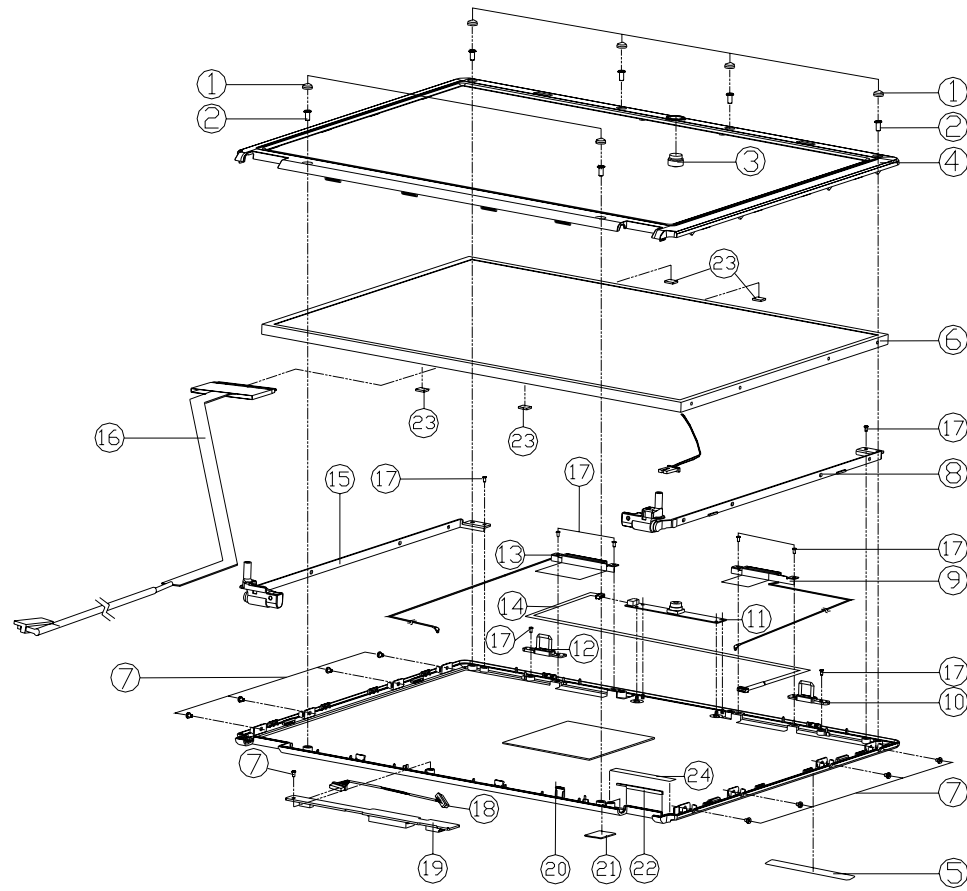


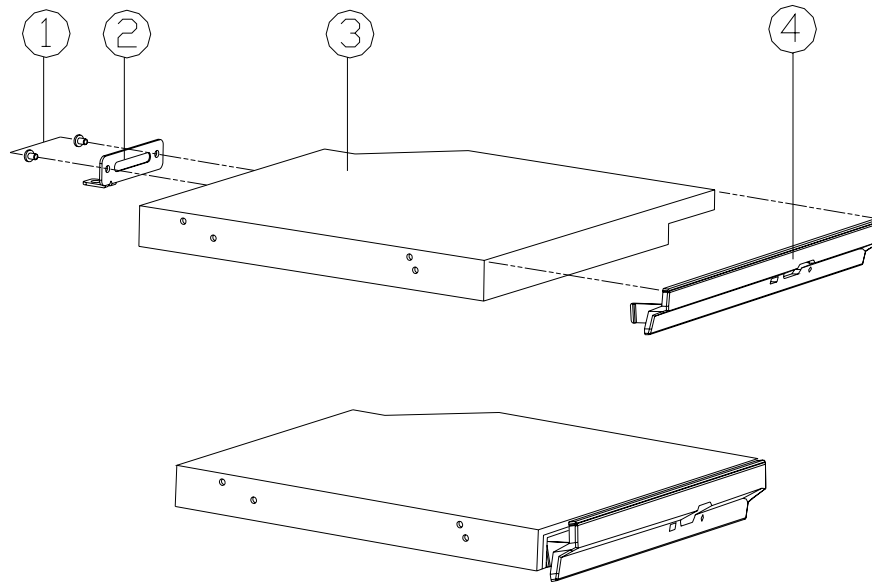
Figure A - 3
LCD (M550JE)

ITEM	PART NAME	PART NO	REMARK
1	LCD RUBBER PAD	6-47-D7011-000	
2	SCREW M2.5X6 KT BAVZ ICT NY#H	6-35-B6120-59A	
3	W/D CCD RUBBER/RUBBER M550	6-47-M55GT-020	FOR W/D CCD
4	LCD FRONT COVER MIDDLE M550	6-39-M55G1-017-12	
5	FR. M550	6-45-M55G1-020	
6	LED 15" TFT AU B550G02 V/D SIGA 6.5MM	6-50-L5265-C00	FDR AU
6	LED 15" AU B550G02 V4 15" XGA 6.4MM	6-50-L2264-C02	FDR AU
6	LED 15" AU B550G01 V8 (GLARE TYPE) 15" XGA	6-50-L2257-C00	FDR AU
6	LED 15" OPT CPMS550G03 15" XGA 6.5MM	6-50-L5265-C00	FDR CPT
7	SCREW NYL 1.8X ICT 017-PRDN (148 3-40)	6-35-C6120-4R8	
8	LCD BRACKET (R) SUS M550G	6-33-M55G1-012	
9	ANTENNA VIBRA DUAL BAND PFA 6.5MM BLACK M550G	6-23-7M55G-013	
10	LCD LATCH (R) ZINC M550G	6-33-M55G1-051	
11	CRIS VIDEO CAMERA (W/O P/ISO) 3.0MM P/REL	6-88-M56AC-610	(OPTION)
11	CRIS VIDEO CAMERA (W/O P/ISO) 3.0MM P/REL	6-88-M55GC-612	(OPTION)
12	LCD LATCH (L) ZINC M550G	6-33-M55G1-061	
13	ANTENNA BLUE/TEETH DUAL BAND PFA 6.5MM GRN	6-23-7M55G-022	
14	WIRE CABLE FOR CCD TO M/R SP MOSSN	6-43-M55NO-021	
15	LCD BRACKET (L) SUS M550G	6-33-M55G1-022	
16	COAXIAL CABLE FOR A/D550G03 SIGA M550	6-43-M55NI-020	
16	COAXIAL CABLE FOR OPTICAL/M550HD XGA M550	6-43-M55NI-010	
17	SCREW NYL 1.8X BAVZ ICT NY #05 14320	6-35-B6120-3RE	
18	WIRE CABLE FOR INVERTER BOARD TO M/R SP M5	6-43-M55NO-010	
19	INVERTER MIDDLE (EPS) V14 M550G	6-76-M55OR-014	
19	INVERTER MIDDLE M550G	6-76-M55OR-030	
20	LCD BACK COVER MIDDLE M550G	6-39-M55G1-025-2	
21	NYLON (2742040154) FOR M540G	6-40-00150-270	
22	PC NYLON (4046SH13) FOR M550G	6-40-00150-409	
23	PORON (54742) FOR TOP CASE M550G	6-47-00192-500	
24	TAPE NYLON (8) NYLON M550J	6-40-M55J2-020	

A.Part Lists

DVD-RW Drive (M550JE)

Figure A - 4
DVD-RW Drive
(M550JE)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET,SECC M550G	6-33-M55GZ-011	
3	DVD/DUAL RW 5 1/4" 8X 12.7MM DVR-K16RSCSUP	6-85-A078X-B04	
4	DUAL DVD BEZEL MODULE M550G	6-42-M55GV-204	

COMBO (M550JE)

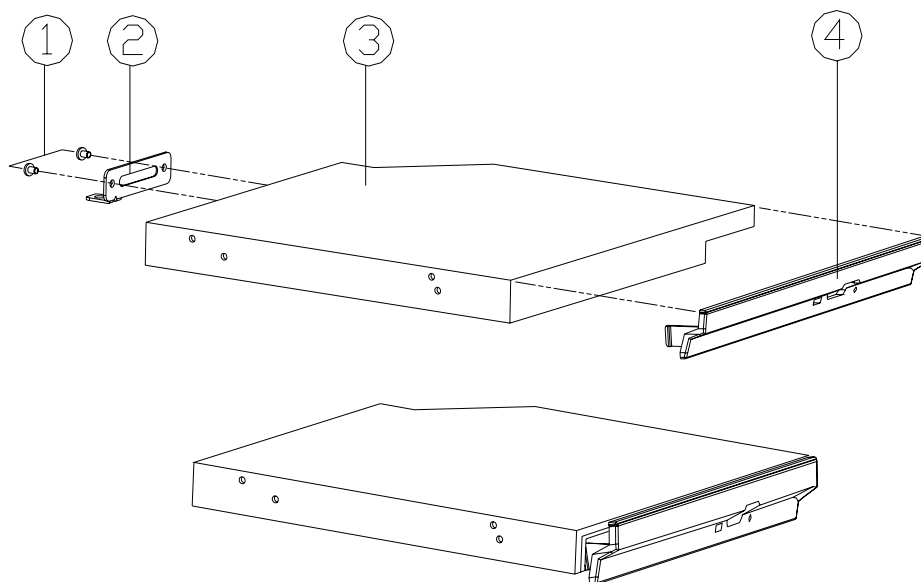


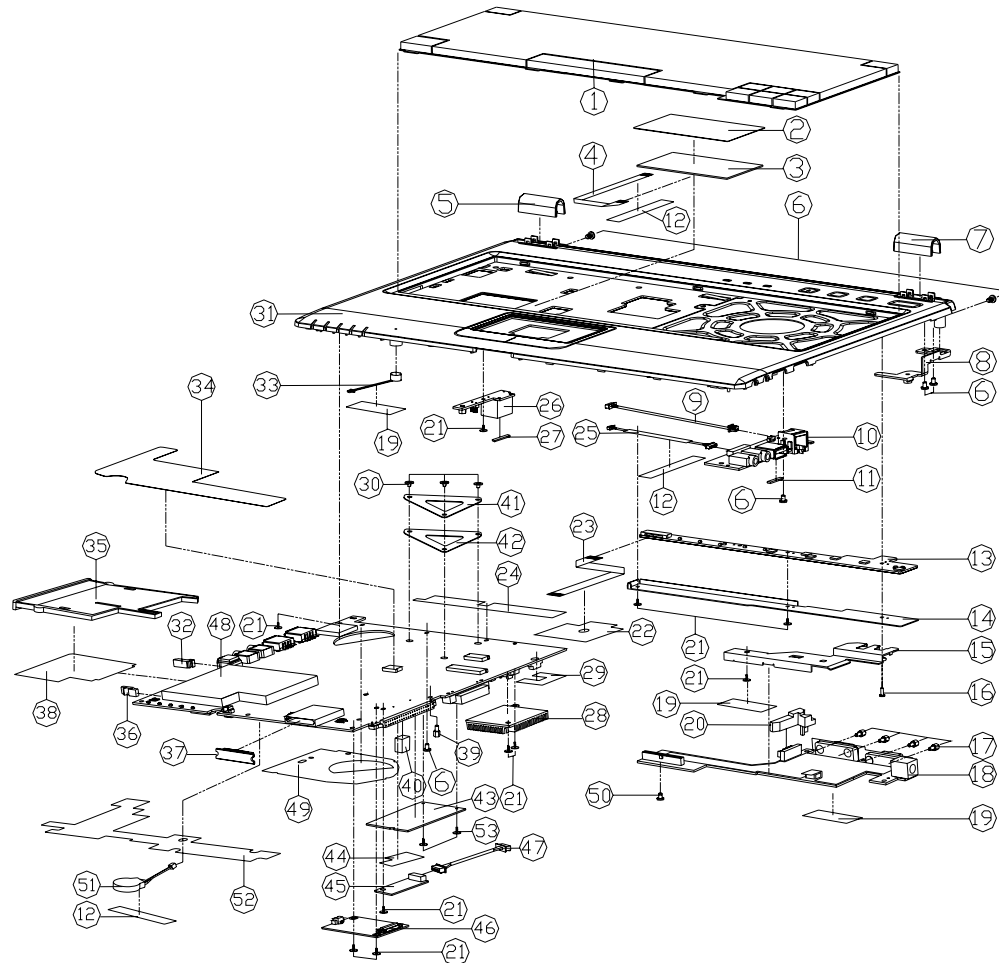
Figure A - 5
COMBO (M550JE)

ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L K1 NI ICT GTY-PATCH 無鉛	6-35-B1120-3RE	
2	CD-R/DW LOCK BRACKET,SECC M550G 無鉛	6-33-M55GZ-011	
3	CD-RW/DVD 5 1/4" 24X 12.7MM TS-L462C TOSH 無鉛	6-85-907PX-T00	
4	COMBO BEZEL MODULE M550G 無鉛	6-42-M55GX-103	

A.Part Lists

Top (M540JE)

Figure A - 6
Top (M540JE)



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD (OPTION) M5X0G	6-88-M550G-011-1	
2	TOUCH PAD MYLAR T-022 M540G	6-48-M54G2-021	
3	TOUCH PAD 810409-5103 M550N	6-49-M55NE-010	
4	HTC CABLE FOR TOUCH PAD TO M/B M54G	6-43-M54G0-011	
5	HINGE COVER (L) M540G	6-42-M54NY-020	
6	SCREW M2.5x4L F NI ICT NY	6-35-21125-4R0	
7	HINGE COVER (R) M540G	6-42-M54NY-010	
8	TOP CASE SUPPORT (R)US T-10 M54G	6-33-M54G2-032	
9	WIRE CABLE FOR AUDIO BOARD TO M/B M54G	6-43-M54NU-012	
10	AUDIO BOARD V5.0 M540N	6-77-M54NB-005	
11	GASKET (L)H54H253 FOR USB M54G	6-47-00190-13A	
12	TAPE MYLAR (A)M54R M550J	6-40-M55J2-010	
13	HOT KEY BOARD V3.0 M540G	6-77-M54GS-003	
14	HOTKEY SHIELDING T-05 M540G	6-33-M54G2-020	
15	CABLE SUPPORT BRACKET M540J	6-33-M54J2-011	
16	SCREW M2x4L KI ICT GMS T-10M	6-35-B1020-4R0	
17	HEX STUD SLUR2 NI-PL 10mm	6-34-96020-000	
18	DC/DC BOARD V2.0 M540JE	6-77-M54EC-002	
19	TAPE MYLAR (C)M54R M550J	6-40-M55J2-030	
20	RUBBER FOR BATTERY CON M540G	6-47-M54G2-011	
21	SCREW M2x4L KI NI ICT GT-PATCH	6-35-B1120-3RE	
22	HOTKEY CABLE MYLAR M540G	6-40-M54G2-070	
23	HTC CABLE FOR HOTKEY BOARD TO M/B M54G	6-43-M54G0-041	
24	M/B TOP MYLAR (A) M550JE	6-40-M55E5-020	
25	WIRE CABLE FOR AUDIO BOARD TO M/B M54G	6-43-M54NB-010	
26	LAN BOARD V3.0 M550G	6-77-M55G2-003	
27	GASKET (L)H54H253 FOR LAN BOARD M54G	6-47-00190-145	
28	HEAT SINK (AL) M550JE	6-31-M55E5-010	
29	MYLAR FOR M/B TO CON M540J	6-40-M54J2-040	
30	SCREW M2x4 KI BZT ICT NY M54H253	6-35-B6120-2RC	
31	TOP CASE MIDDLE M540S	6-39-M54S2-010	
32	NEW CARD RUBBER A FOR MCF M550J	6-47-M55JA-010	
33	MC 0M55S0E5-TEL-0 2V-0V 22K VIDA	6-23-EM54G-011	
34	M/B TOP MYLAR (B) M550JE	6-40-M55E5-030	
35	NEW CARD DUMMY FOR M550N	6-42-M55NP-010	
36	NEW CARD RUBBER B FOR MCF M550J	6-47-M55JA-020	
37	RUBBER FOR CARD READER M540G	6-47-M54GE-010	
38	M/B NEW CARD MYLAR M550N	6-40-M55NS-010	
39	STUD H-0M M2.5x4M FOR M/B M540G	6-34-M54GS-020	
40	RUBBER FOR CPU COVER SUPPORT M540J	6-47-M54JS-020	
41	CPU SUPPORT BRACKET (US M540J)	6-33-M55JS-030	
42	CPU SUPPORT BRACKET (US)M54R M550J	6-40-M55JS-010	
43	W/LN DRIVING LINE CARD FEEL 2P54H21	6-88-M6A20-224	
44	MYLAR FOR BLUETOOTH M540G	6-40-M54GS-070	
45	BLUETOOTH 2.0 PIN HEAD GREEN BLUETOOTH	6-88-M55JS-290	
46	MOEM COOL (MIDDLE) M550J ASSY MO50E	6-79-M55EU-010	
46	MOEM CASTLENET M550A20 ASSY MO50E	6-79-M55EU-020	
46	MOEM CASTLENET M550A20 ASSY MO50S	6-79-M55EU-010	
47	WIRE CABLE FOR BLUETOOTH TO M/B M54G	6-43-M55G0-070	
48	MAIN BOARD V2.0 M540JE	6-77-M54E0-002	
49	M/B FAN MYLAR M550JE	6-40-M55E5-010	
50	SCREW M2.5x4L KI NI ICT NY 0854-053	6-35-B1125-6RB	
51	DR 20M 2V 20MM V-CABLE 5MM EXP2CT1	6-23-E2015-2PC	
52	M/B BOTTOM MYLAR A M550N	6-40-M55NS-020	
53	SCREW M2x4 KI NI ICT GT-PATCH 0-8 0-40	6-35-C6120-4RB	

A.Part Lists

Bottom (M540JE)

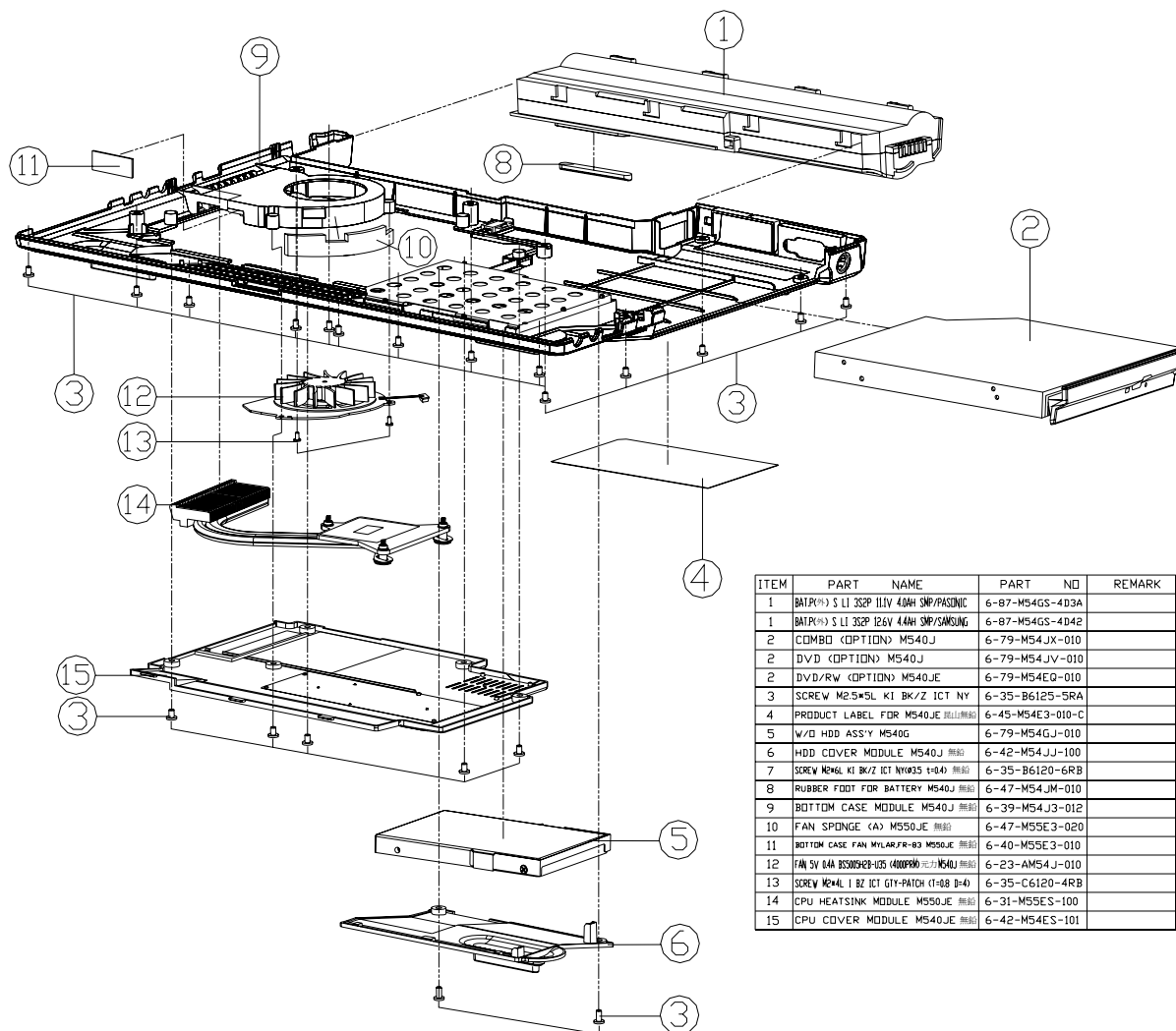


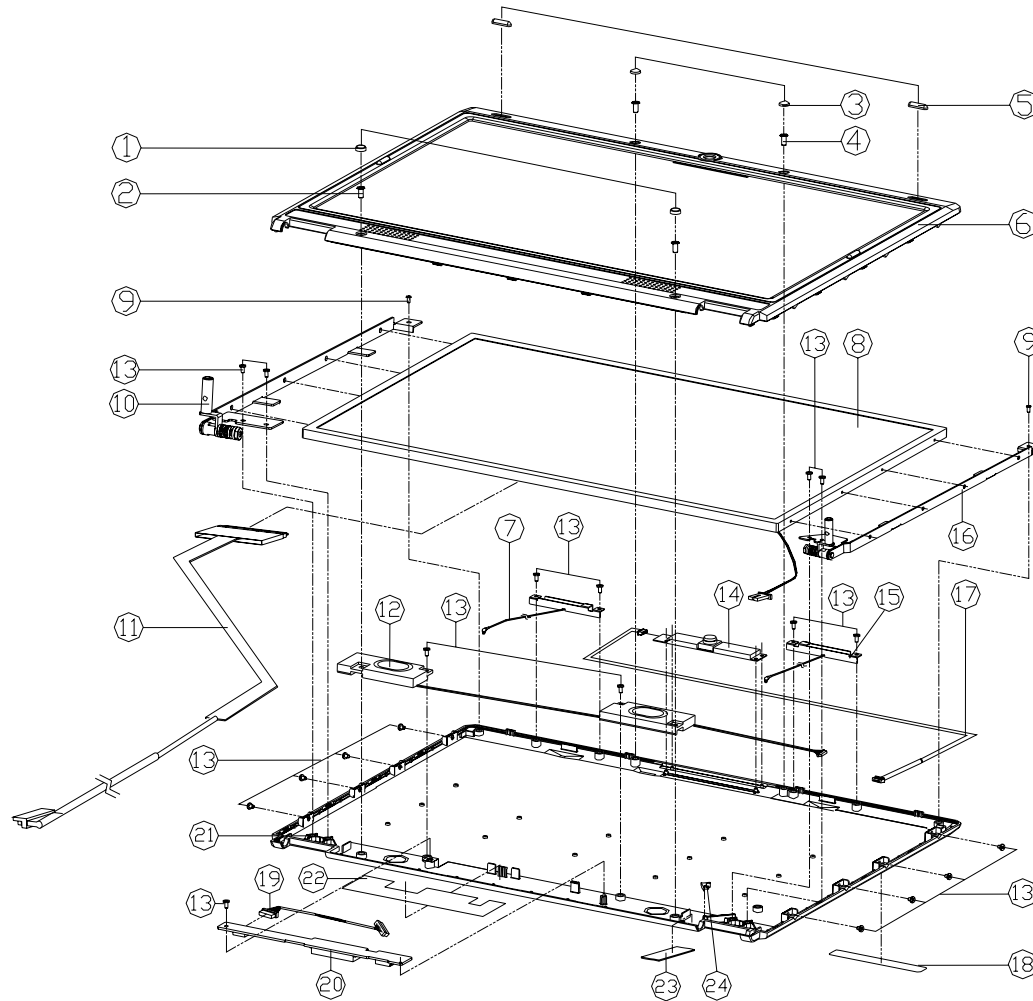
Figure A - 7
Bottom (M540JE)

ITEM	PART NAME	PART NO	REMARK
1	BATRY(1) S LI 352P 111V 40AH SMP/SAMSUNG	6-87-M54GS-4D3A	
1	BATRY(2) S LI 352P 126V 44AH SMP/SAMSUNG	6-87-M54GS-4D4E	
2	COMBO (OPTION) M540J	6-79-M54JX-010	
2	DVD (OPTION) M540J	6-79-M54JV-010	
2	DVD/RW (OPTION) M540JE	6-79-M54EQ-010	
3	SCREW M2.5*SL K1 BK/Z ICT NY	6-35-B6125-5RA	
4	PRODUCT LABEL FOR M540JE 黒山無鉛	6-45-M54E3-010-C	
5	W/D HDD ASS'Y M540G	6-79-M54GJ-010	
6	HDD COVER MODULE M540J 無鉛	6-42-M54JJ-100	
7	SCREW M4xL ICT NY#935 1#04 無鉛	6-35-B6120-6RB	
8	RUBBER FOOT FOR BATTERY M540J 無鉛	6-47-M54JM-010	
9	BOTTOM CASE MODULE M540J 無鉛	6-39-M54J3-012	
10	FAN SPONGE (A) M550JE 無鉛	6-47-M55E3-020	
11	BOTTOM CASE FAN MYLARFR-B3 M550JE 無鉛	6-40-M55E3-010	
12	FAN 5V 0.4A B5509E3-105 (4000RPM) 黒山無鉛	6-23-AM54J-010	
13	SCREW M4xL 1 BZ ICT G1Y-PATCH (1#08 D=4)	6-35-C6120-4RB	
14	CPU HEATSINK MODULE M550JE 無鉛	6-31-M55ES-100	
15	CPU COVER MODULE M540JE 無鉛	6-42-M54ES-101	

A.Part Lists

LCD (M540JE)

Figure A - 8
LCD (M540JE)



ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR LCD FRONT COVER (CIRCLE) (PH) (M5)	6-47-M54G1-030	
2	SCREW M2.5xSL K1 BK/Z ICT NY	6-35-B6125-5RA	
3	RUBBER FOR LCD FRONT COVER (CIRCLE) (PH) (M5)	6-47-M54G1-041	
4	SCREW M2xSL I BZ ICT	6-35-C6120-5R0	
5	RUBBER FOR LCD FRONT COVER (ELLIPSE) (M54G)	6-47-M54G1-052	
6	LCD FRONT COVER MODULE M540G (PH)	6-39-M54G1-015-1	
7	ANTENNA BLUETOOTH DUAL BAND PIFA 630MM GRN	6-23-7M54G-022	(OPTION)
8	LCD 14" TFT AU B40EVO1 V0 WGA 5.7MM	6-50-JC257-G00	FDR AU
8	LCD 14" TFT AU B40EVO1V0GLARE TYPE WGA 5.7MM	6-50-JC257-G01	FDR AU
8	OPT GLASS/INVA FOR GLARE TYPE WGA (200X8) LCD (5.7MM)	6-50-JC257-C01	FDR CPT
9	SCREW M2xSL I NHYCD-4.5 T+0.8 (PH)	6-35-C1120-2R0	
10	HINGE (L) M540G (PH)	6-33-M54G1-024	
11	CONVAL CABLE FOR AUX/VIDEO WGA M540 (PH)	6-43-M54N1-010	
12	SPEAKER WITH CABLE 200MM Ø 10V 4Ω 2000HZ (M540)	6-23-SMS4J-012	
13	SCREW M2xSL I NH ICT NY (PH) (CROSS) (M540)	6-35-C1120-3R8	
14	CRDS VIDEO CAMERA INFC-PC030-B 300K PIXEL	6-88-M56AC-610	(OPTION)
14	CRDS VIDEO CAMERA INFC-PC030-B 500K LCM	6-88-M56GC-612	(OPTION)
15	ANTENNA WLAN DUAL BAND PIFA 470MM BLACK	6-23-7M54G-011	
16	HINGE (R) M540G (PH)	6-33-M54G1-014	
17	WIRE CABLE FOR CCD TO M/B M540 (PH)	6-43-M54ND-022	
17	WIRE CABLE FOR CCD TO M/B M540 (PVC) (PH)	6-43-M54ND-023	
18	M540G (PH) LOGO (STYLE -NDTE)	6-45-M54G1-020	
19	WIRE CABLE FOR INVERTER BOARD TO M/B M540 (PH)	6-43-M54ND-013	
20	INVERTER MODULE (EPS) V14 M550G (PH)	6-76-M55GR-014	
20	INVERTER MODULE M550G (PH)	6-76-M55GR-030	
21	LCD BACK COVER MODULE M540G (PH)	6-39-M54G1-024-2	
22	SHIELDING FDR INVERTER M540J (PH)	6-47-M54JS-030	
23	(PH) (54MM) (M540) FDR M54 LCD CABLE (PH)	6-40-00150-540	
24	RUBBER FOR M540V B-CVR (PH)	6-47-M54V1-020	

DVD-RW Drive (M540JE)

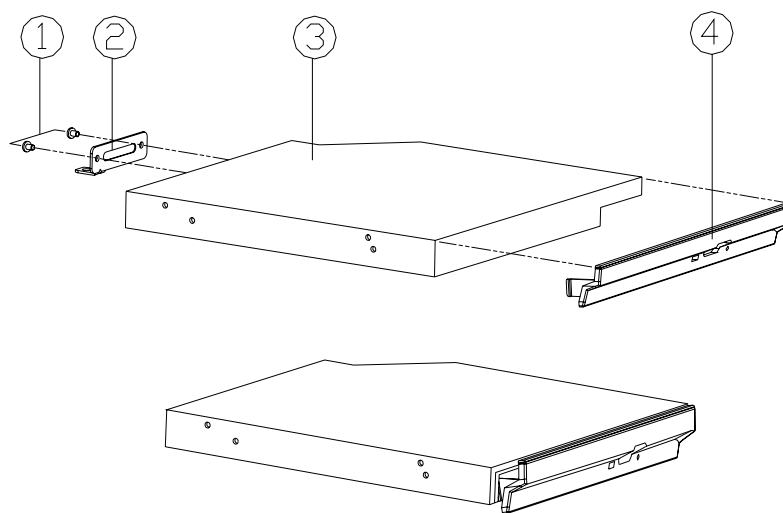


Figure A - 9
DVD-RW Drive
(M540JE)

ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET,SECC M550G	6-33-M55GZ-011	
3	DVD/DUAL RW 5.1/4" 8X 12.7MM DVR-K16R3XSUP	6-85-A078X-B04	
4	DUAL DVD BEZEL MODULE M540V	6-42-M54VV-200	

Appendix B:Schematic Diagrams

This appendix has circuit diagrams of the *M540JE/M550JE* 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>MCP51M SATA / IDE - Page B - 17</i>	<i>SYSEEM POWER, BRIDGE BATT - Page B - 32</i>
<i>AMD S1: HT - Page B - 3</i>	<i>MCP51M AUDIO / USB / MISC - Page B - 18</i>	<i>+1.8V, +0.9V - Page B - 33</i>
<i>AMD S1: MISC - Page B - 4</i>	<i>MCP51M RGMII - Page B - 19</i>	<i>+VCORE - Page B - 34</i>
<i>AMD S1: MEMORY - Page B - 5</i>	<i>MCP51M PWR / GND - Page B - 20</i>	<i>+1.2VS - Page B - 35</i>
<i>AMD S1: POWER - Page B - 6</i>	<i>MINI CARD, USB2.0*2 - Page B - 21</i>	<i>+VDD3, +VDD5 - Page B - 36</i>
<i>DDR2-1 - Page B - 7</i>	<i>SIO, SATA HDD, CD-ROM - Page B - 22</i>	<i>D/D BD (CRT & Serial Port) - Page B - 37</i>
<i>DDR2-2 - Page B - 8</i>	<i>LAN RTL8201CL - Page B - 23</i>	<i>D/D BD (CCD CON. & INVERTER CON.) - Page B - 38</i>
<i>PANEL, INVERTER, FAN - Page B - 9</i>	<i>FWH, TOUCHPAD, LED - Page B - 24</i>	<i>D/D BD (CHARGER, DC IN), RJ-11 - Page B - 39</i>
<i>M51MV HT CPU - Page B - 10</i>	<i>H8/2111 - Page B - 25</i>	<i>AUDIO BD (PHONE JACK, USB) - Page B - 40</i>
<i>C51MV HT MCP - Page B - 11</i>	<i>MDC, USB BT, PWRGD, DDB CON - Page B - 26</i>	<i>HOT KEY BD (HOT KEY, LED) - Page B - 41</i>
<i>C51MV PCI EXPRESS - Page B - 12</i>	<i>AZALIA CODEC ALC883 - Page B - 27</i>	<i>LED BOARD - Page B - 42</i>
<i>C51MV DAC / IFP - Page B - 13</i>	<i>AUDIO AMP, USB2.0* 2 - Page B - 28</i>	<i>CLICK BOARD - Page B - 43</i>
<i>C51MV PWR / GND - DECOUPLING - Page B - 14</i>	<i>PCI17402/ 1394 - Page B - 29</i>	<i>RJ-45 BOARD - Page B - 44</i>
<i>MCP51M HT - Page B - 15</i>	<i>NEW CARD - Page B - 30</i>	<i>USB DONGLE BOARD - Page B - 45</i>
<i>MCP51M PCI - Page B - 16</i>	<i>3 IN 1 SOCKET - Page B - 31</i>	

Table B - 1
Schematic Diagrams

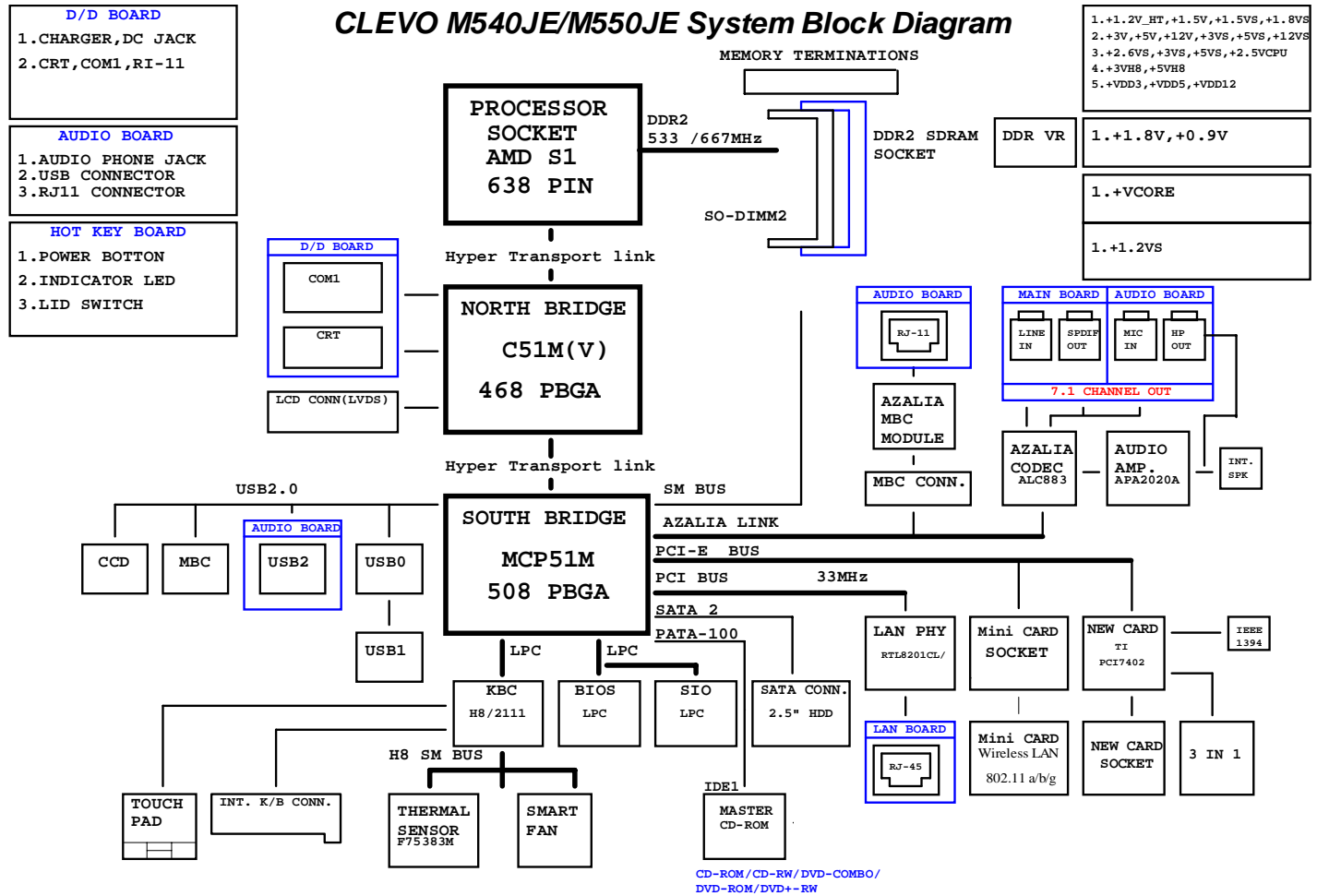


Version Note

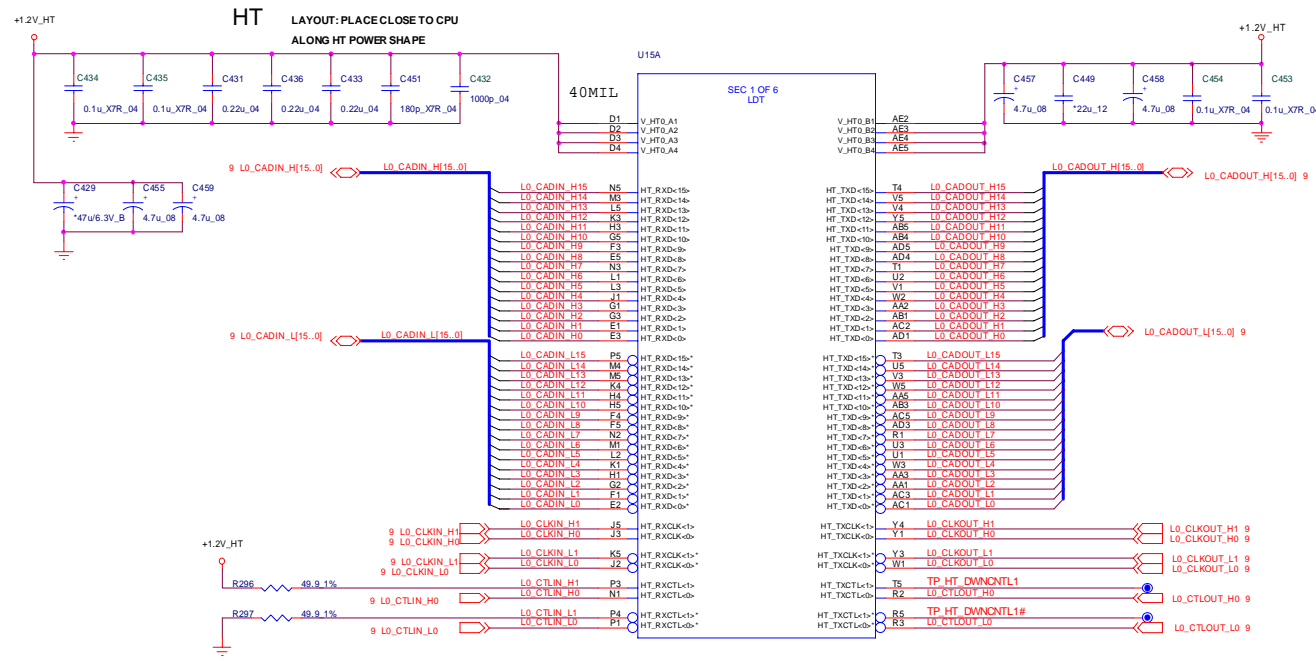
The schematic diagrams in this chapter are based upon version **6-71-M55E0-002**. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram

Sheet 1 of 44
System Block
Diagram

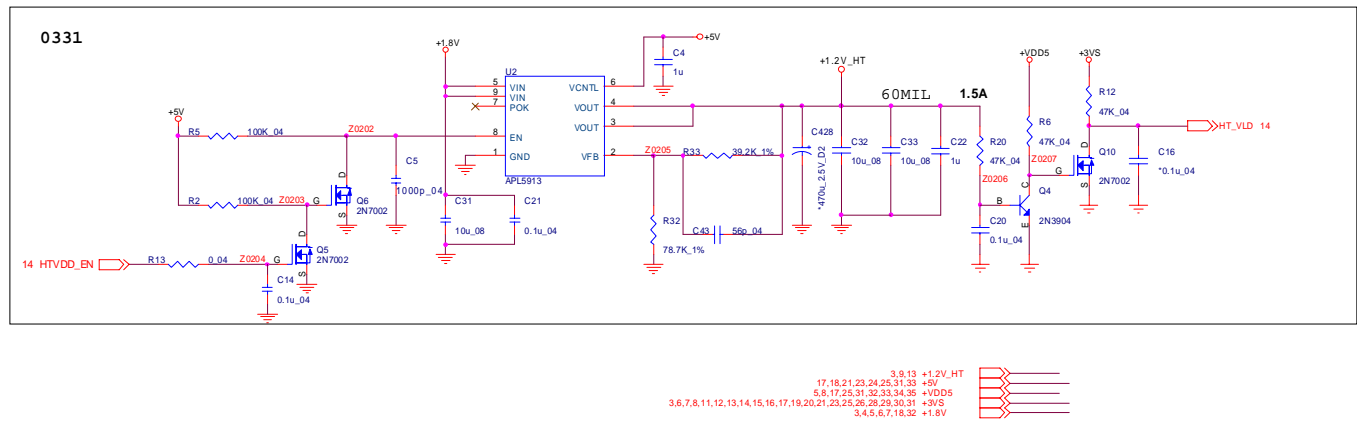


AMD S1: HT



Sheet 2 of 44
AMD S1: HT

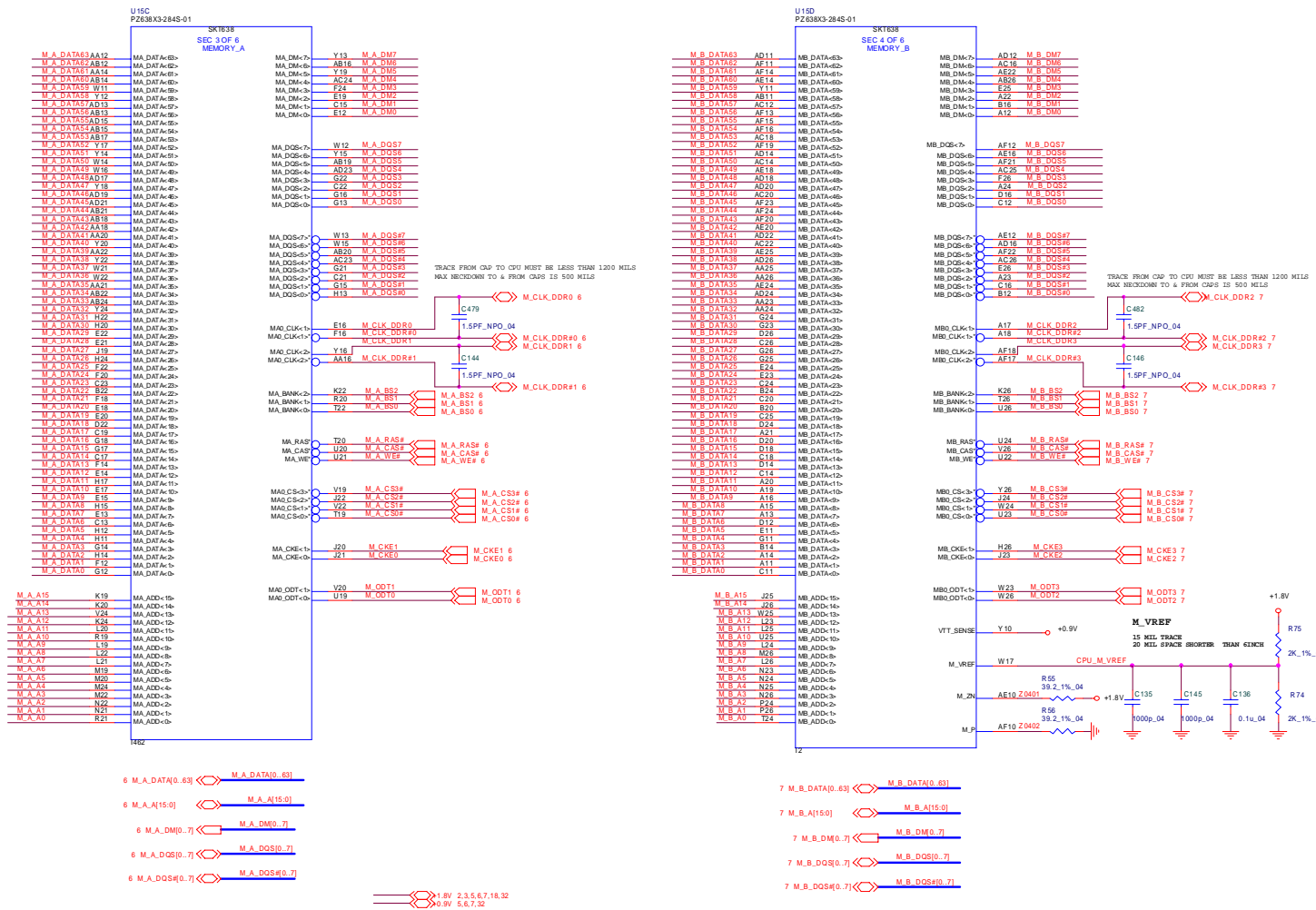
B. Schematic Diagrams



AMD S1: MEMORY

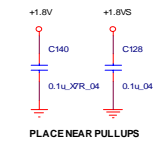
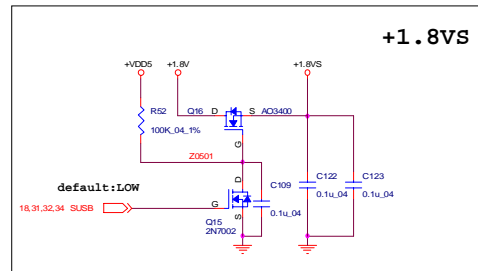
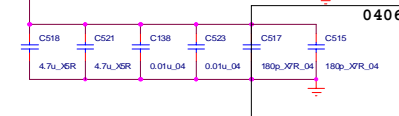
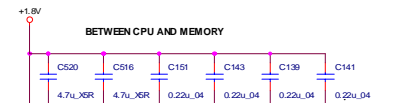
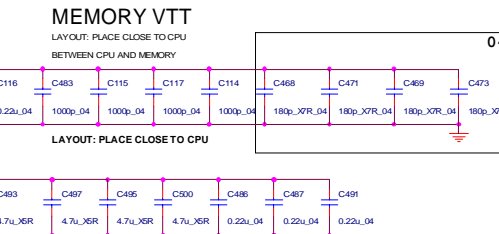
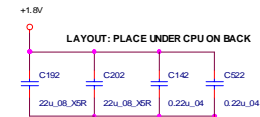
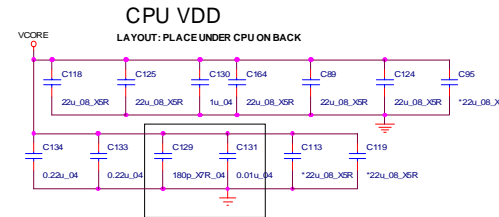
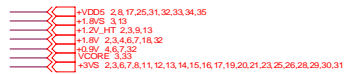
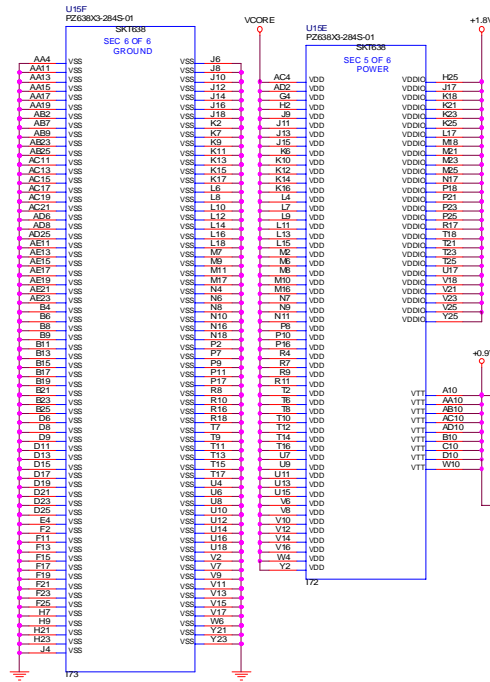
B.Schematic Diagrams

Sheet 4 of 44
AMD S1: MEMORY

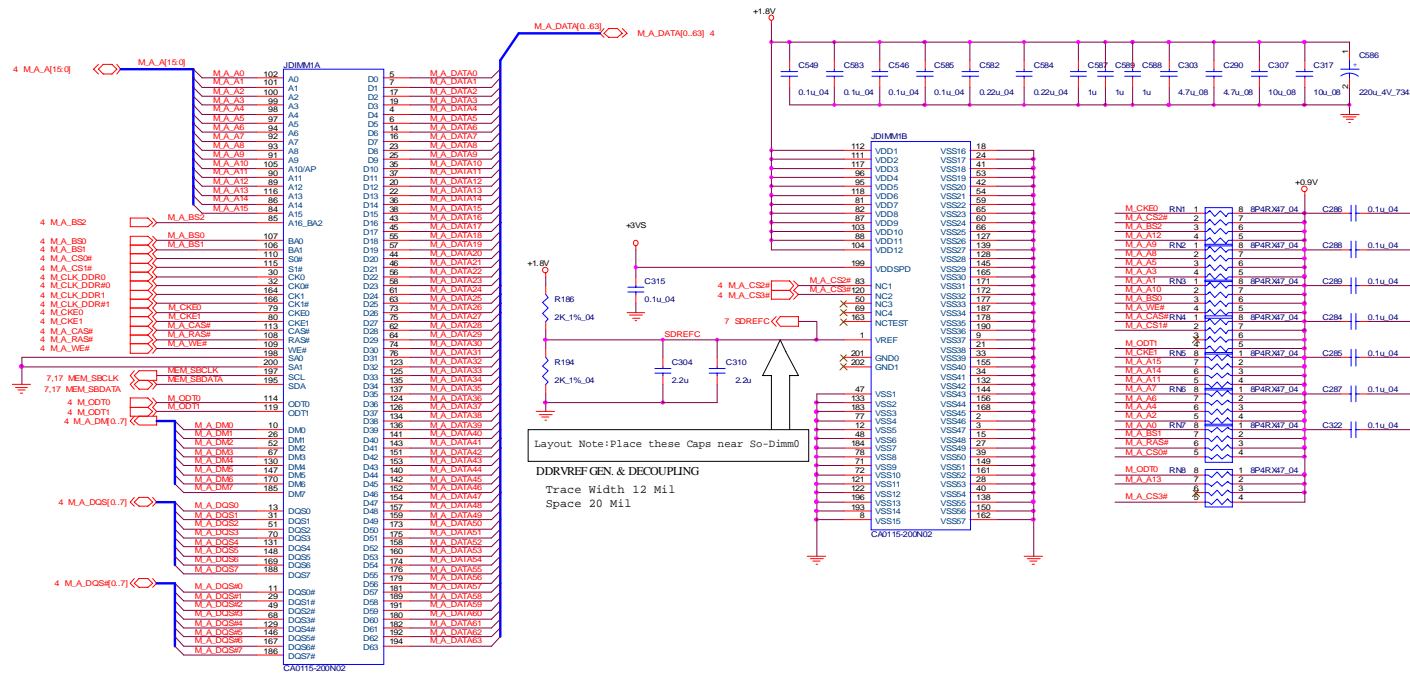


AMD S1: POWER

Sheet 5 of 44
AMD S1: POWER



DDR2-1



Layout Note: Place these Caps near So-Dimm0
Trace Width 12 Mil
Space 20 Mil

+0.9V 4,5,7,32
+1.8V 2,3,4,5,7,18,32
+3VS 2,3,7,8,11,12,13,14,15,16,17,19,20,21,23,25,26,28,29,30,31

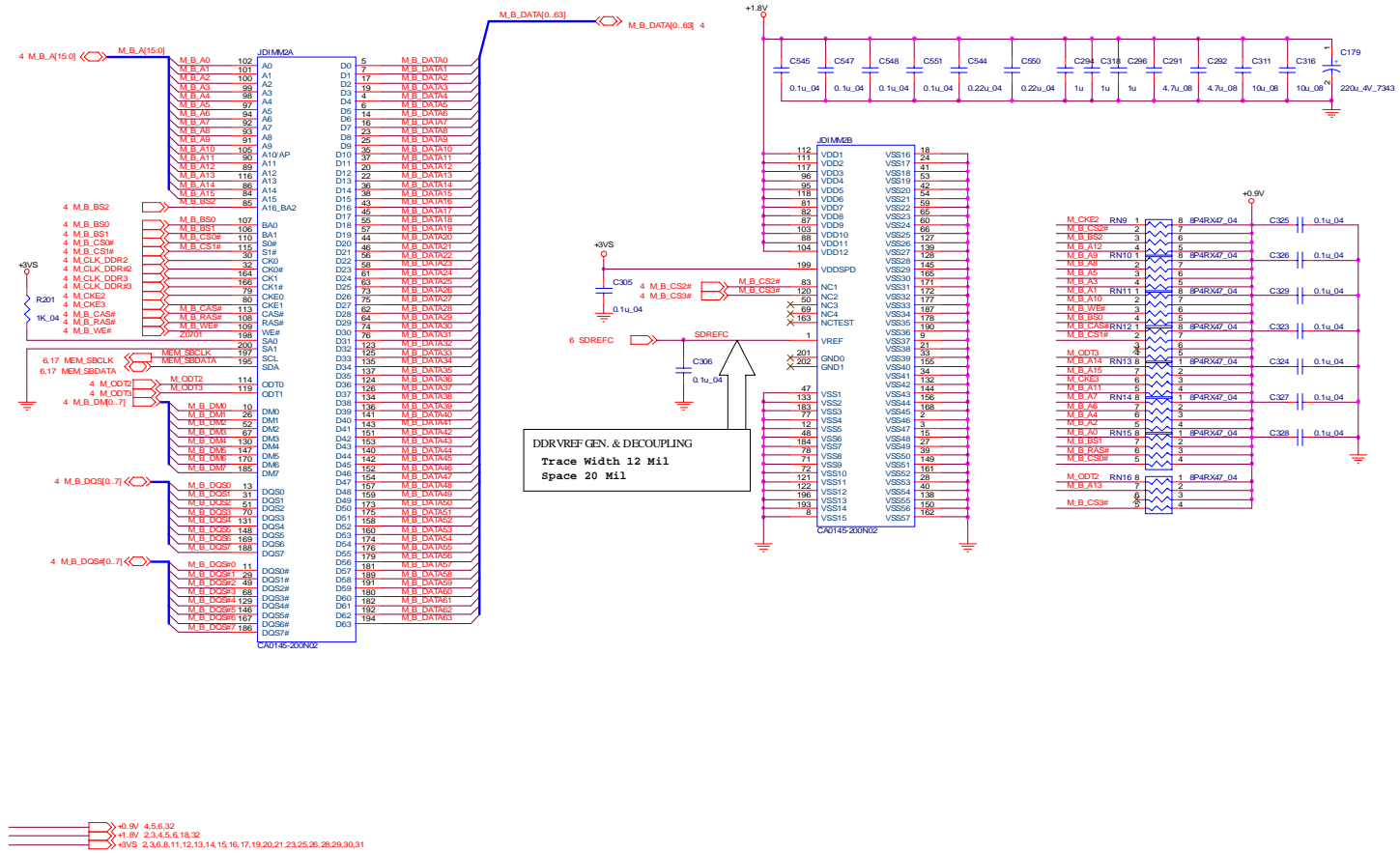
Sheet 6 of 44
DDR2-1

Schematic Diagrams

DDR2-2

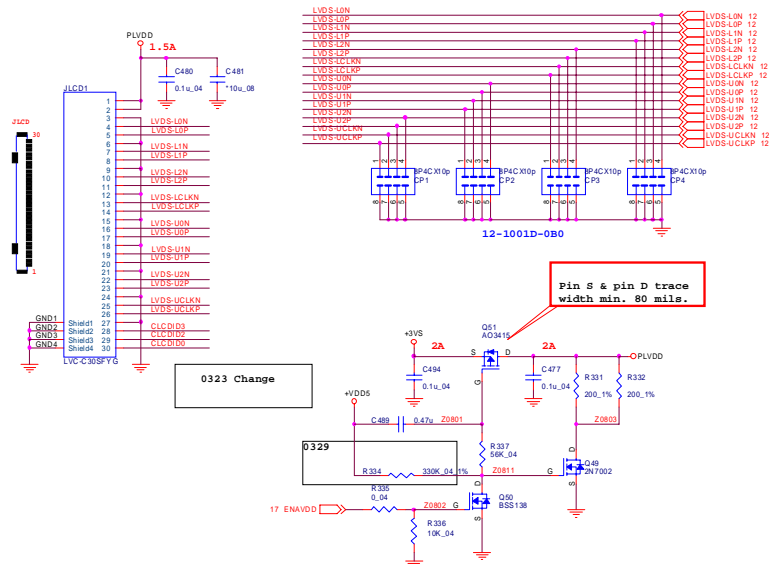
B.Schematic Diagrams

Sheet 7 of 44
DDR2-2

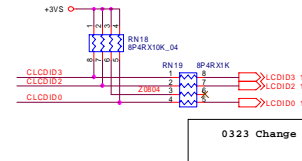


PANEL, INVERTER, FAN

PANEL



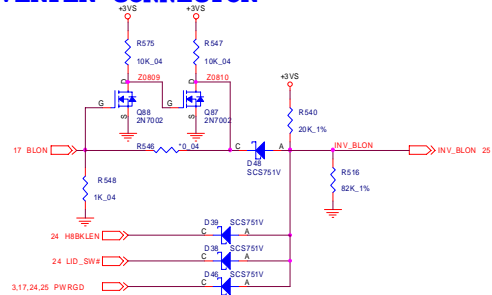
PANLE ID SELECTOR



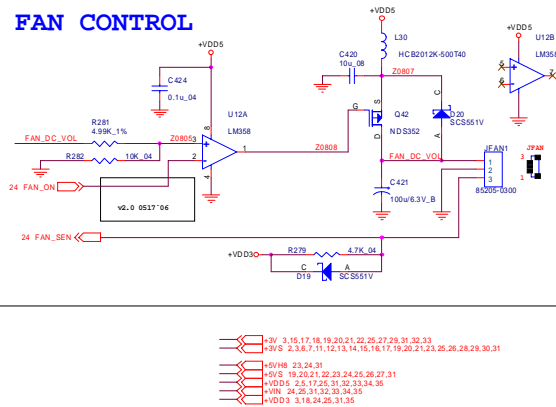
PANEL ID Select		LCDID0 JLCD-30(GPI062)	LCDID2 Osaki#1 Cable	LCDID3 JLCD-28(GPI060)
15* XGA	AU B150XG01	0 (GND)	0 (GND)	0 (GND)
15* XGA	CPT CLAA150XH01	0 (GND)	0 (GND)	0 (GND)
15* SXGA+	AU B150PG03	1 (NC)	0 (GND)	0 (GND)
15* SXGA+	CPT CLAA150PB03	1 (NC)	0 (GND)	0 (GND)
14* WXGA	Hydis HT140WXL-100	0 (GND)	1 (NC)	0 (GND)
14* WXGA	AU B140BW01	0 (GND)	1 (NC)	0 (GND)
14* WXGA	SAMSUNG LTN140W1-L01	0 (GND)	1 (NC)	0 (GND)

Sheet 8 of 44
PANEL, INVERTER,
FAN

INVERTER CONNECTOR



FAN CONTROL



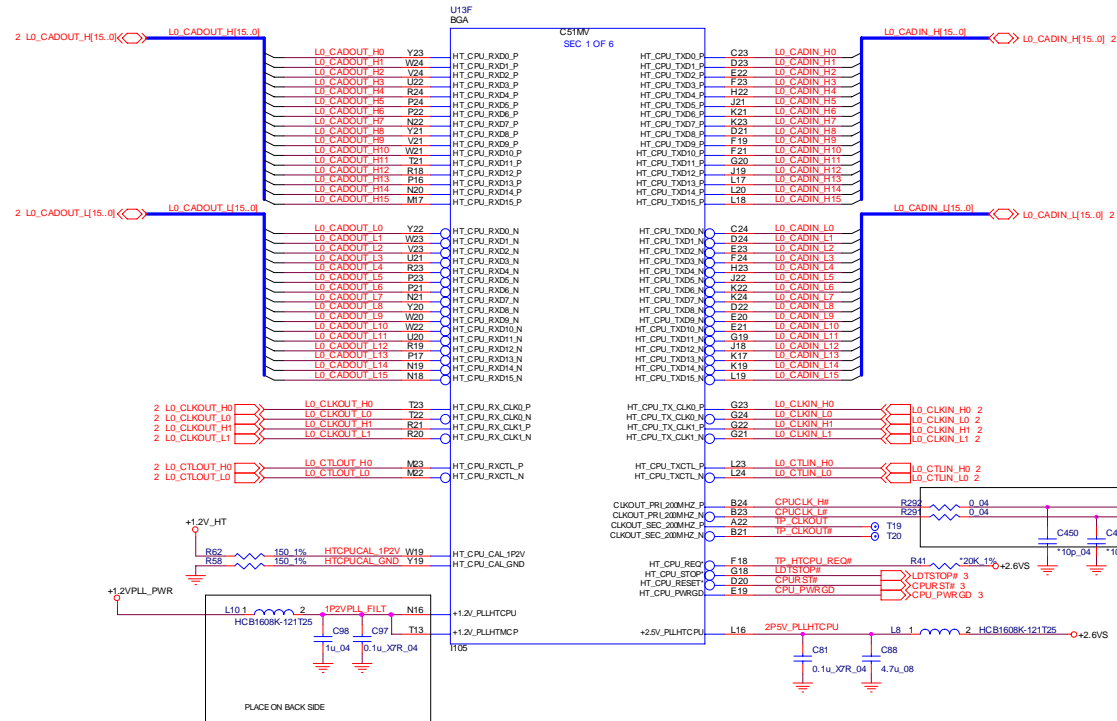
Schematic Diagrams

M51MV HT CPU



B.Schematic Diagrams

Sheet 9 of 44
C51MV HT CPU

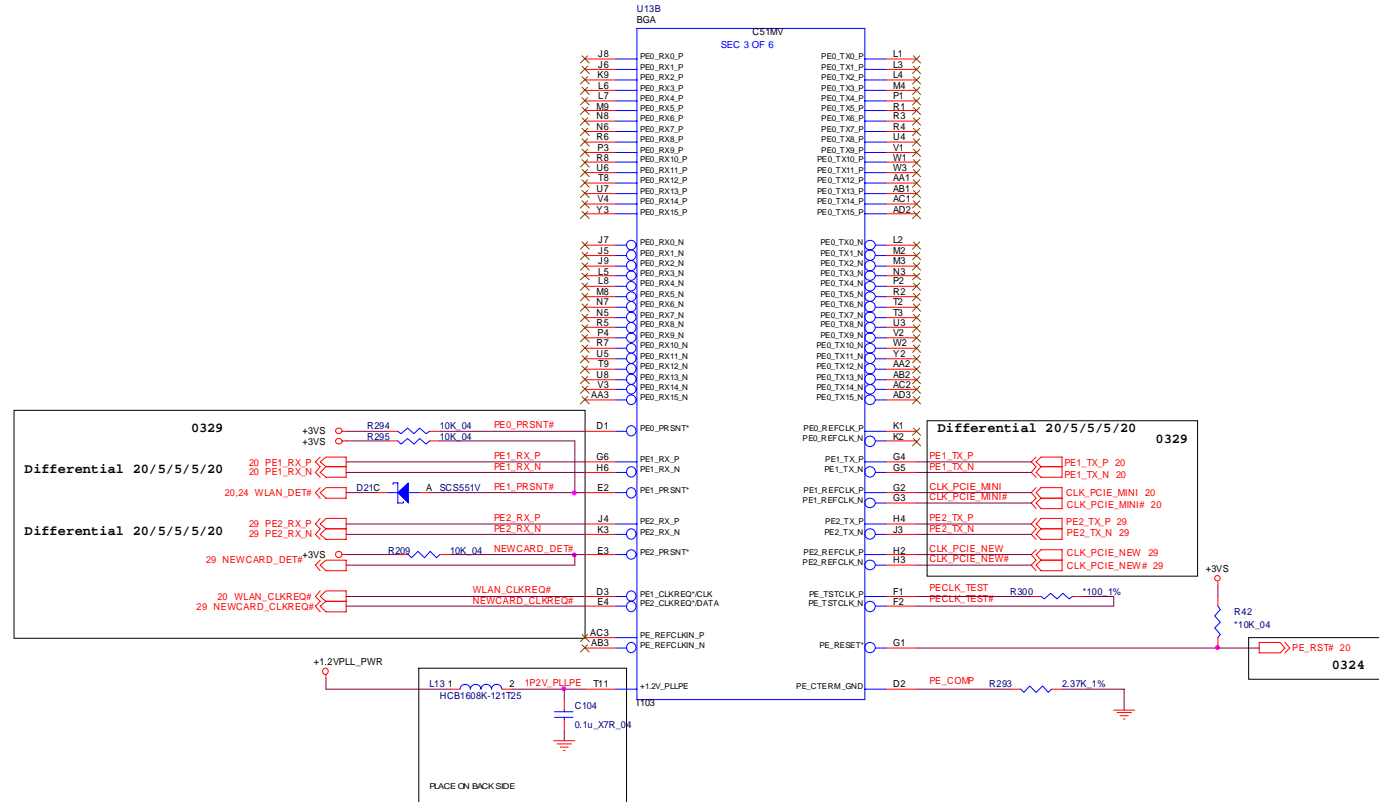


C51MV PCI EXPRESS

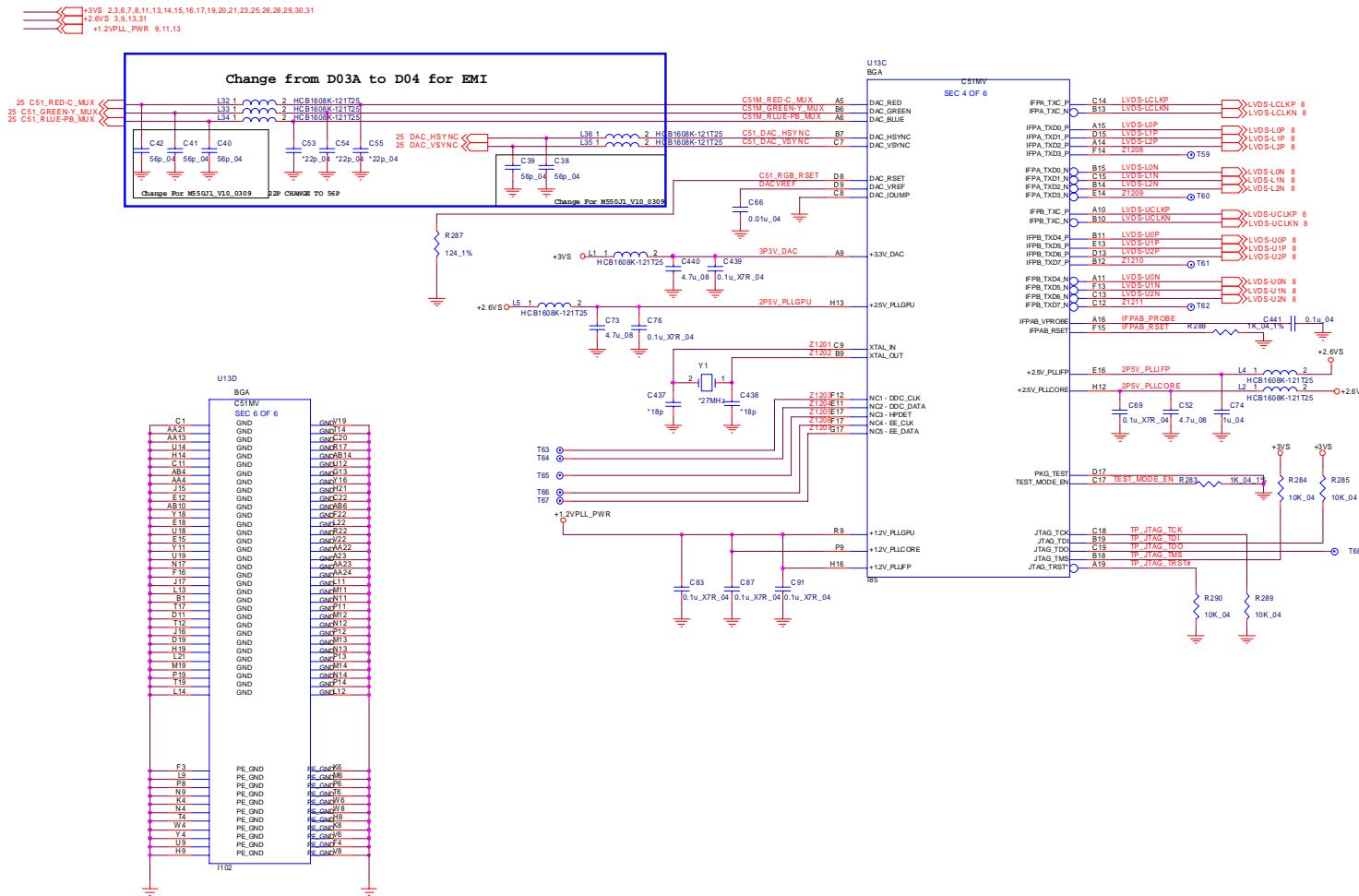

 +3VS 2,3,6,7,8,12,13,14,15,16,17,19,20,21,23,25,26,28,29,30,31
 +1.2VPLL_PWR 9,12,13

B.Schematic Diagrams

Sheet 11 of 44
C51MV PCI EXPRESS



C51MV DAC / IFP

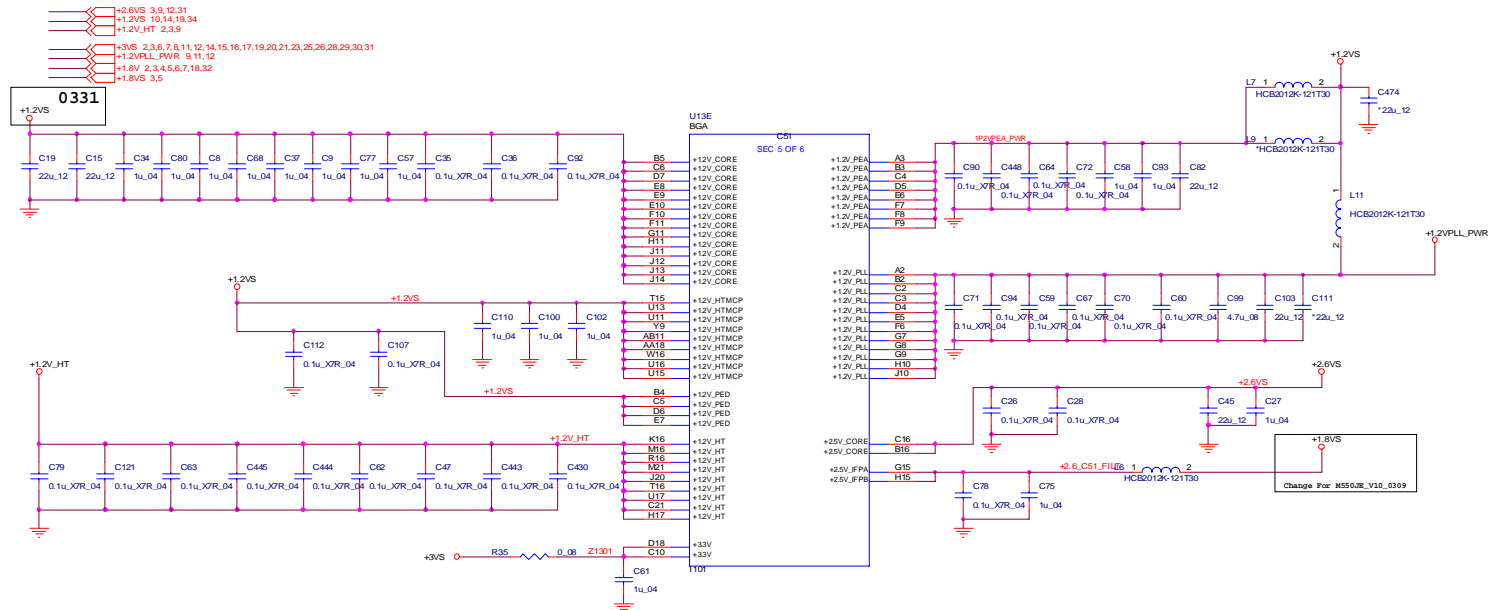


Sheet 12 of 44
C51MV DAC / IFP

B. Schematic Diagrams

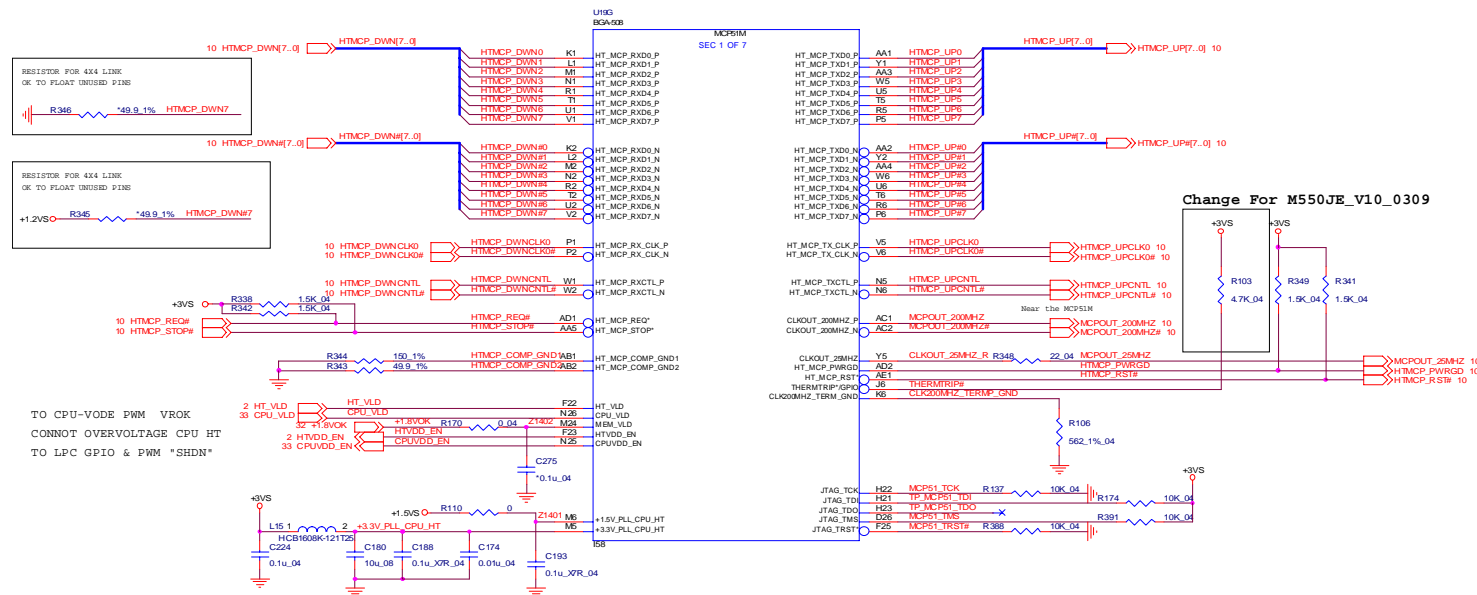
C51MV PWR / GND - DECOUPLING

Sheet 13 of 44
C51MV PWR / GND
- DECOUPLING



MCP51M HT

- +1.5VS 3,5,13
- +1.5VS 16,17,18,19,20,29
- +3VS 2,3,6,7,8,11,12,13,15,16,17,18,20,21,23,25,26,28,29,30,31
- +1.2VS 10,13,19,34
- +2.6VS 9,9,12,13,31

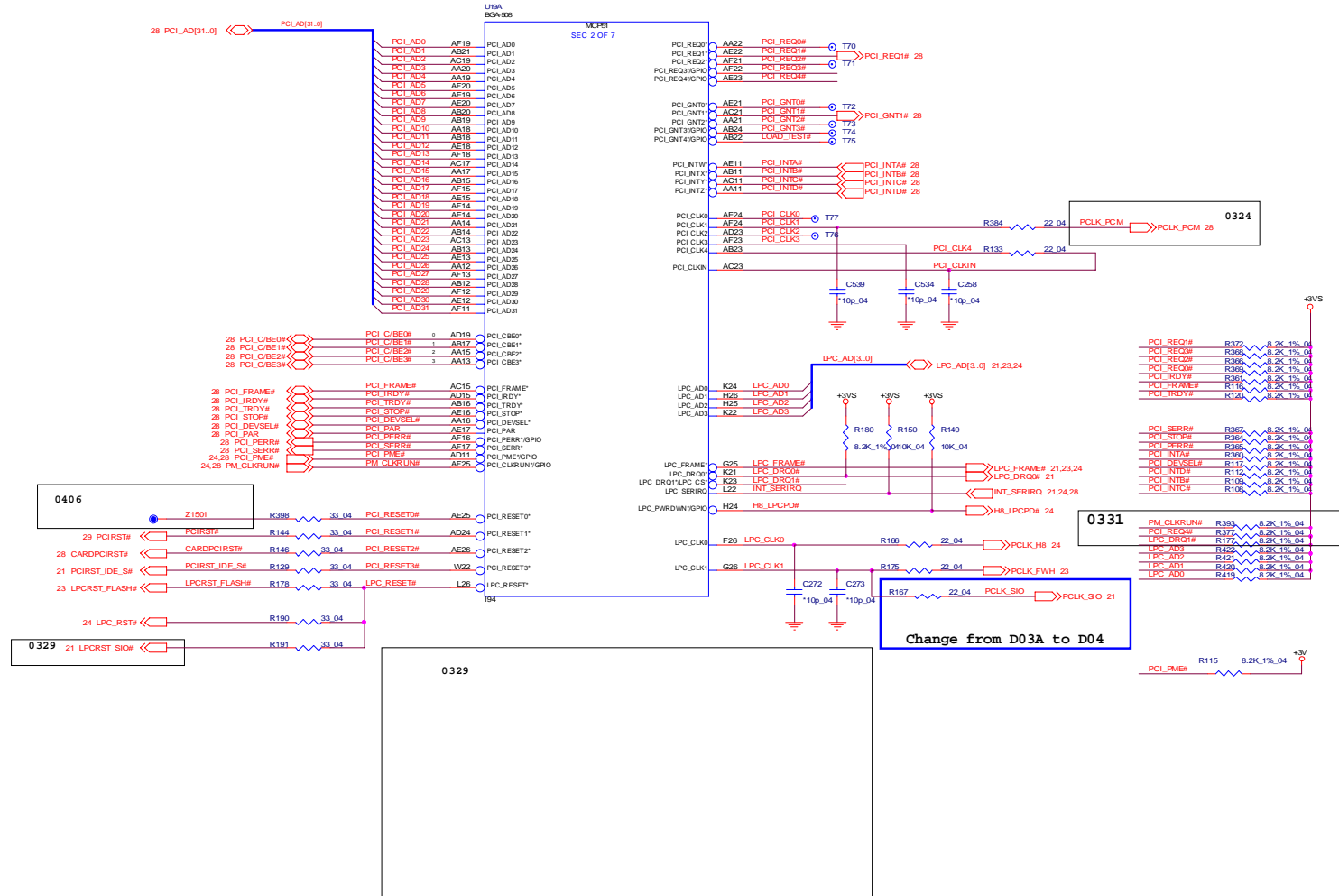


Sheet 14 of 44
MCP51M HT

B. Schematic Diagrams

MCP51M PCI

+3VS 2,3,6,7,8,11,12,13,14,16,17,19,20,21,23,25,26,28,29,30,31
 +5VS 19,20,21,22,23,24,25,26,27,31
 +3V 3,17,18,19,20,21,22,25,27,29,31,32,33



B.Schematic Diagrams

Sheet 15 of 44
MCP51M PCI

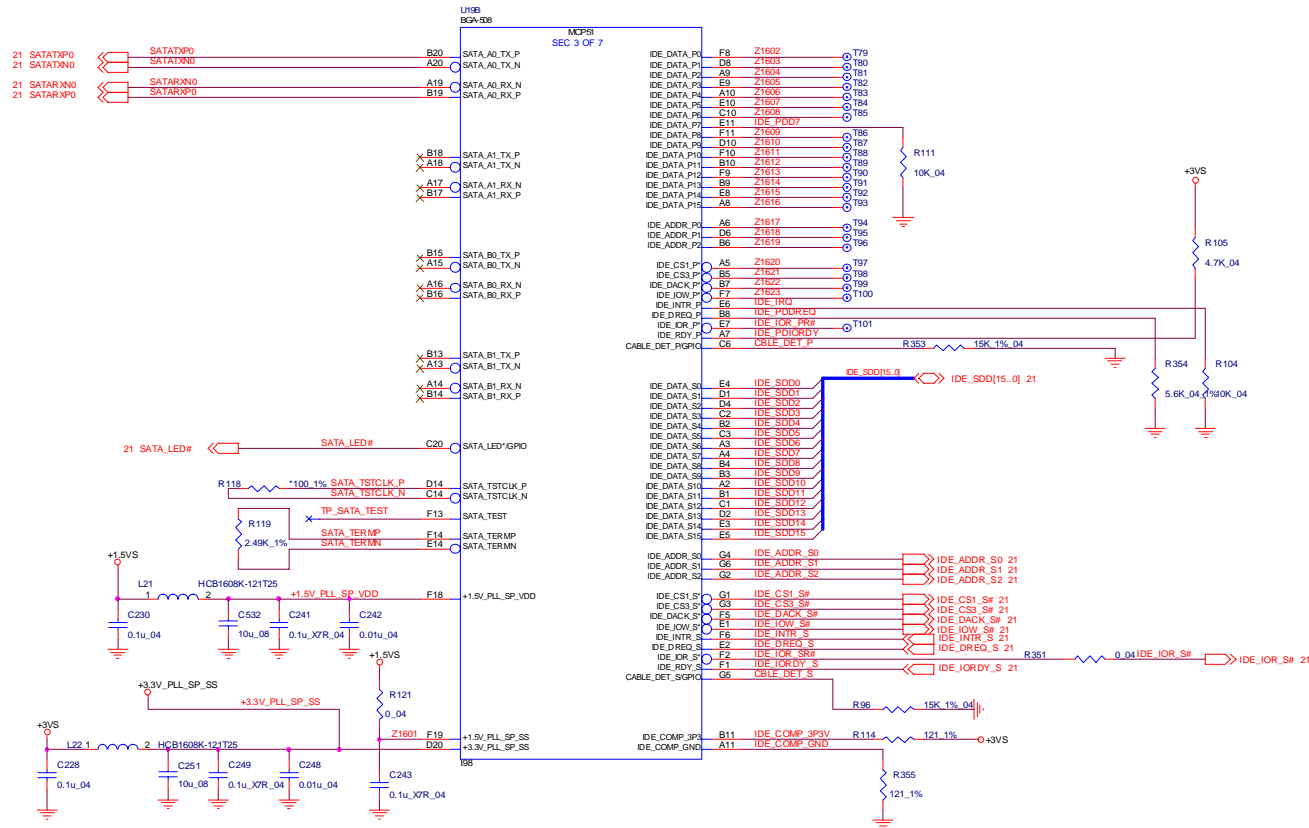
MCP51M SATA / IDE



 +3VS 2,3,6,7,8,11,12,13,14,15,17,19,20,21,23,25,26,28,29,30,31

 +1.5VS 14,17,18,19,20,29

 +3.3V_PLL_SP_SS 17



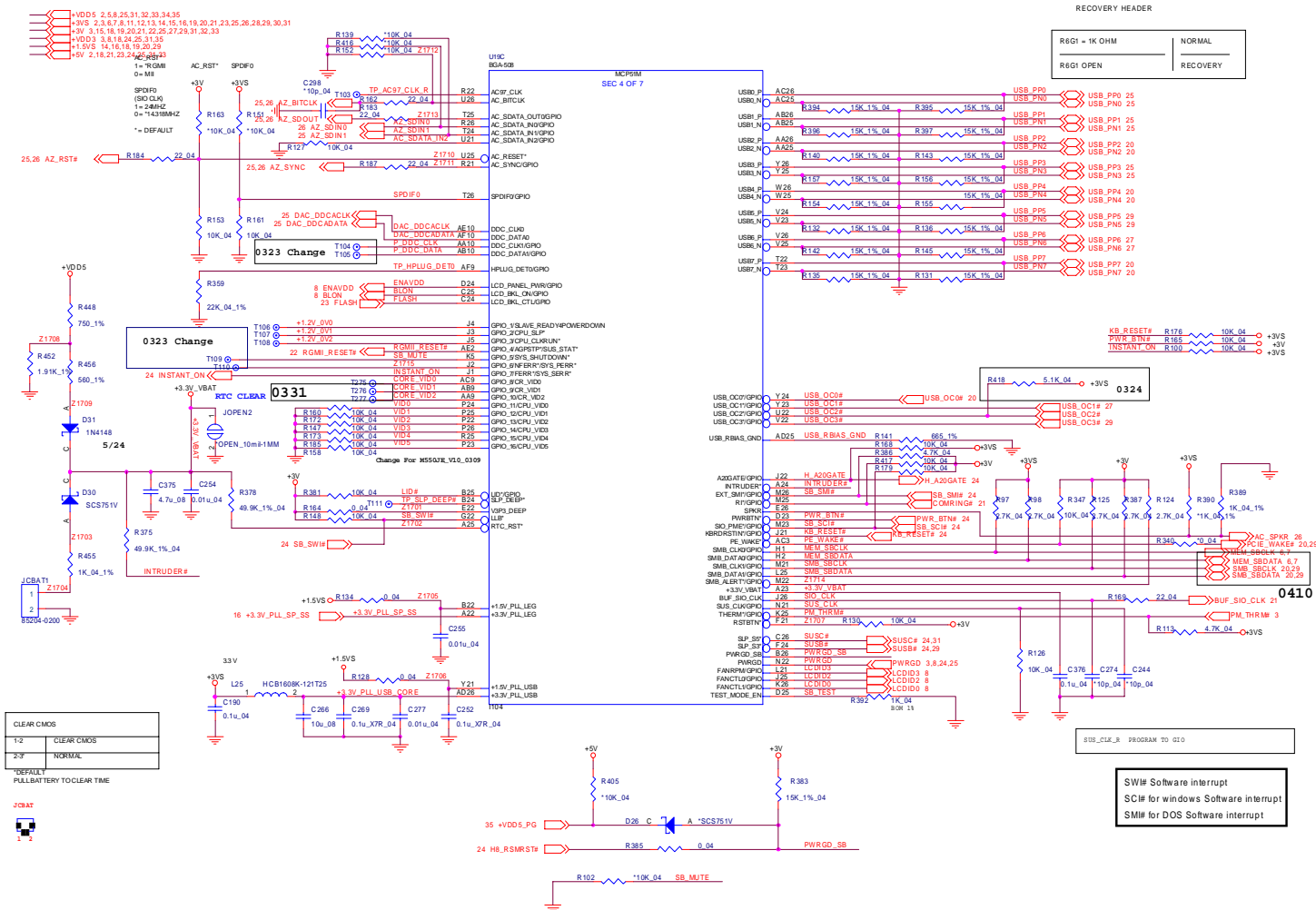
Sheet 16 of 44
 MCP51M SATA /
 IDE

B. Schematic Diagrams

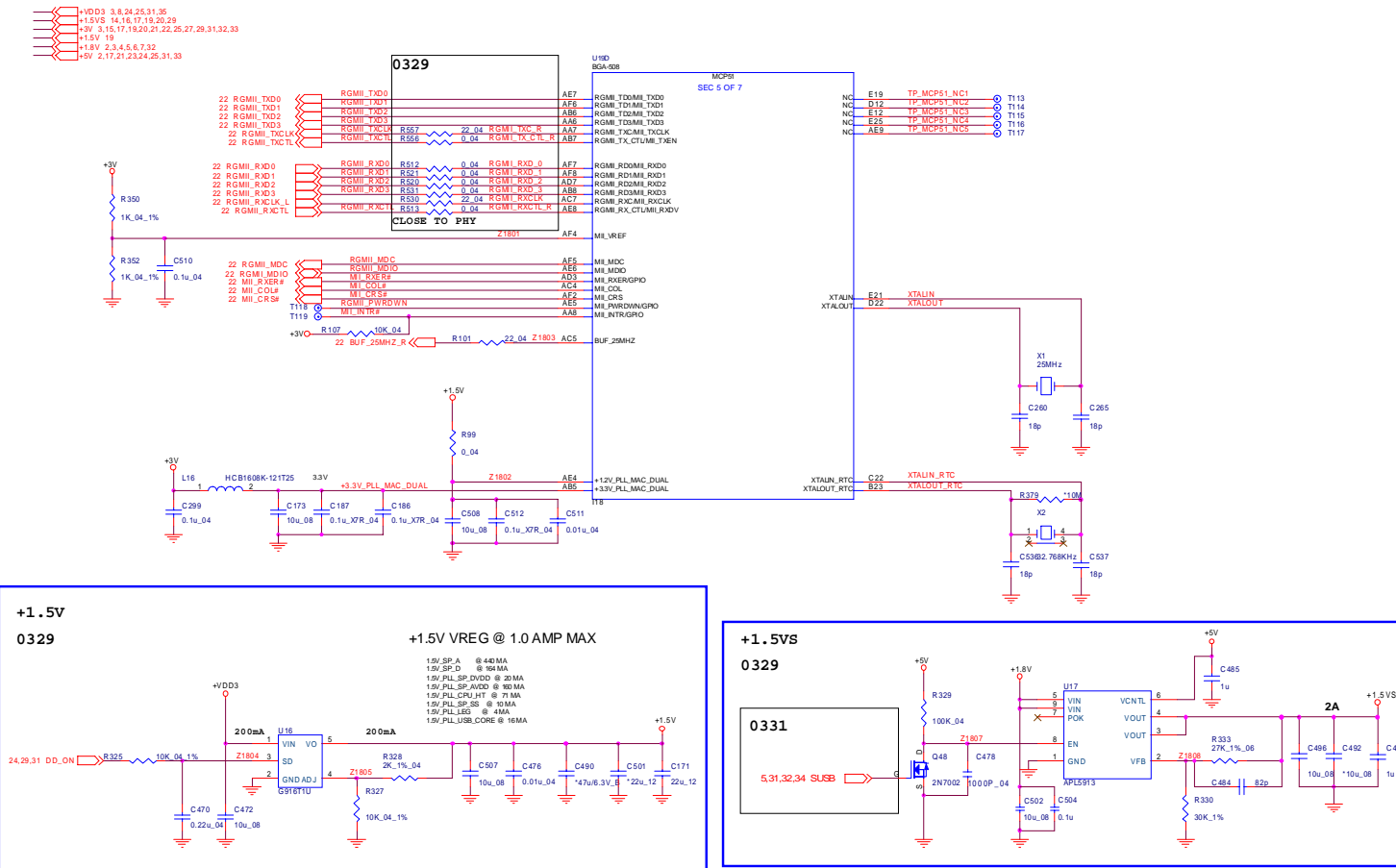
MCP51M AUDIO / USB / MISC

B.Schematic Diagrams

Sheet 17 of 44
MCP51M AUDIO /
USB / MISC



MCP51M RGMII



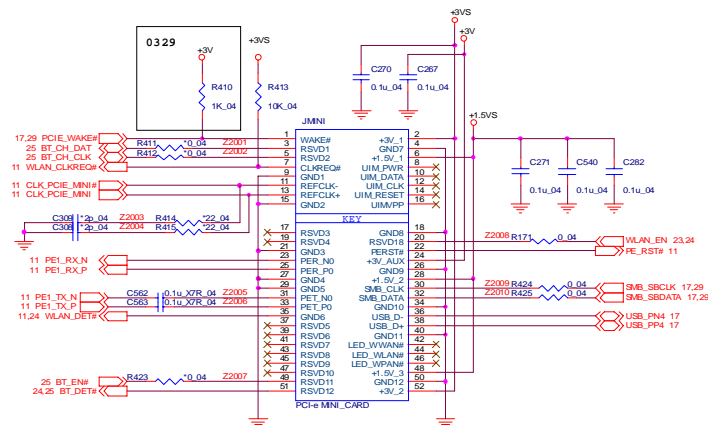
Sheet 18 of 44
MCP51M RGMII

B. Schematic Diagrams

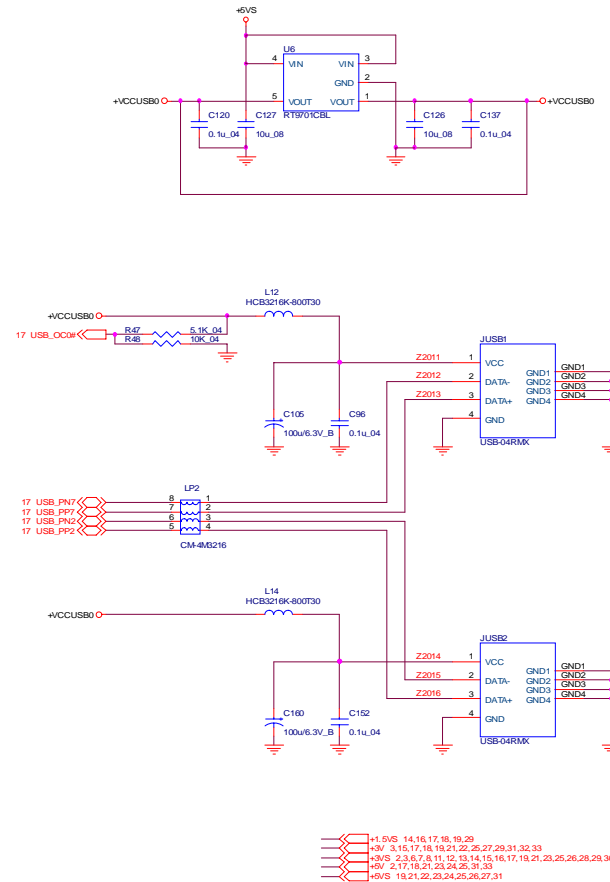
MINI CARD, USB2.0*2

MINI CARD

0324



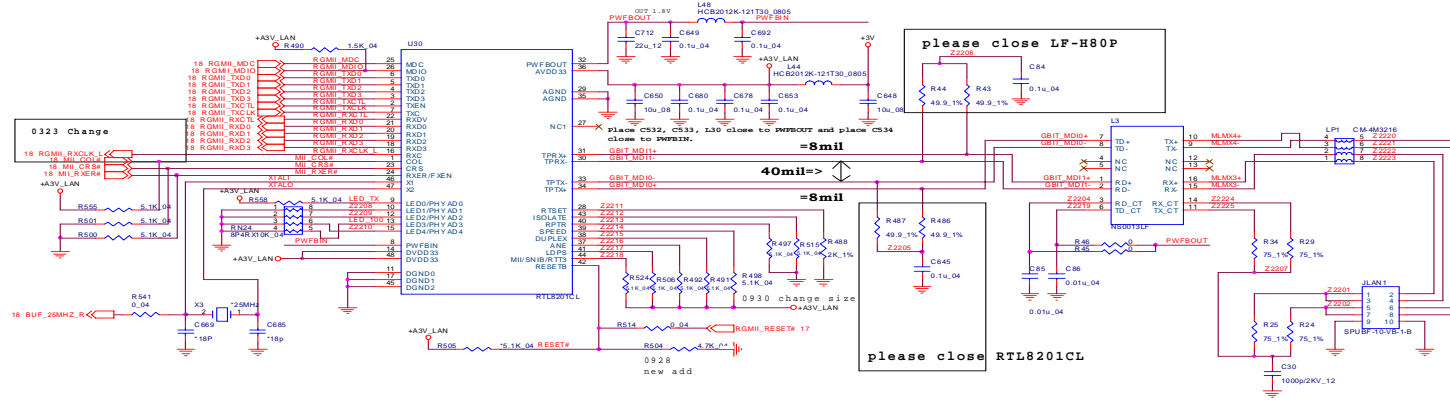
USB 2.0



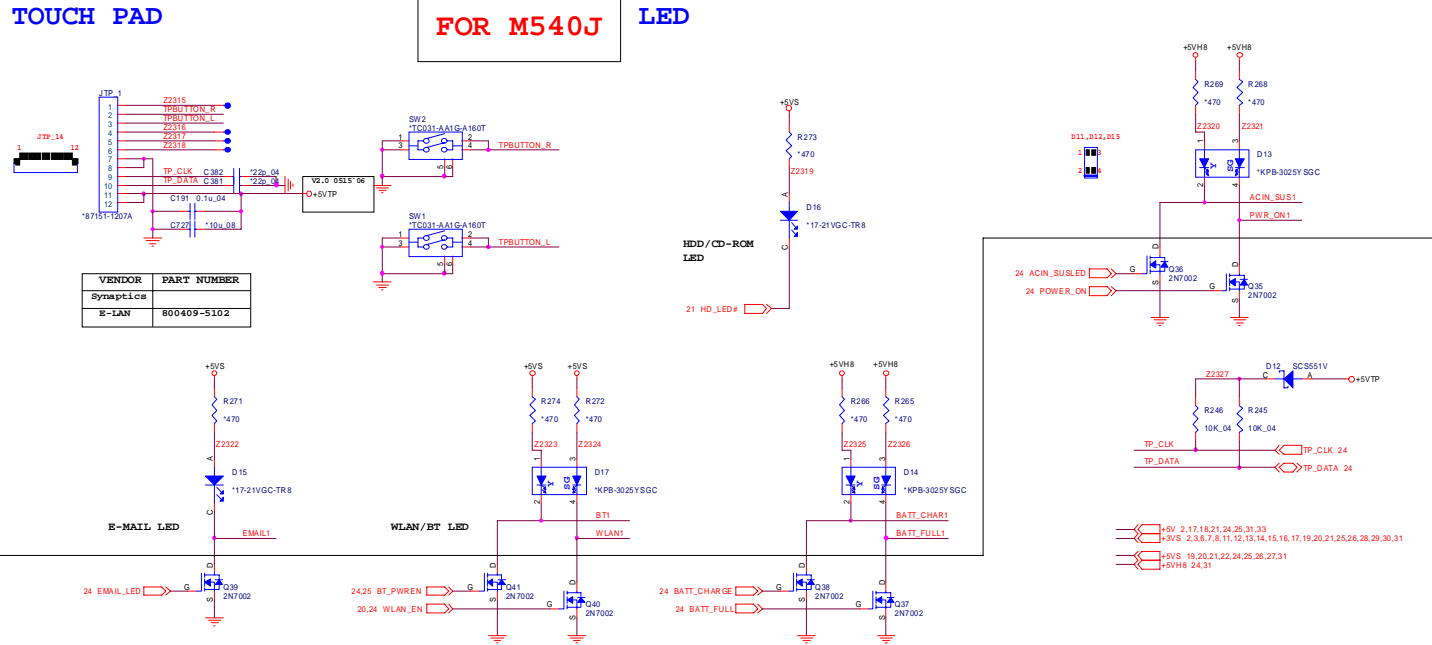
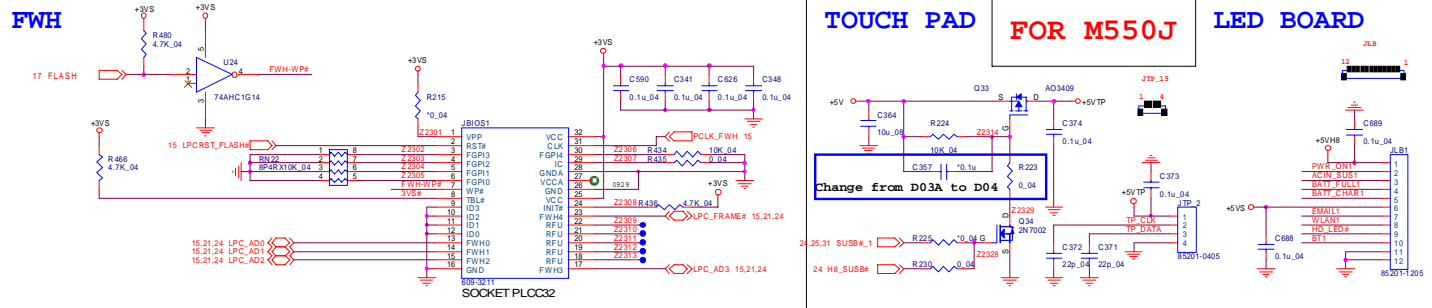
Sheet 20 of 44
MINICARD, USB2.0*2

B. Schematic Diagrams

LAN RTL8201CL

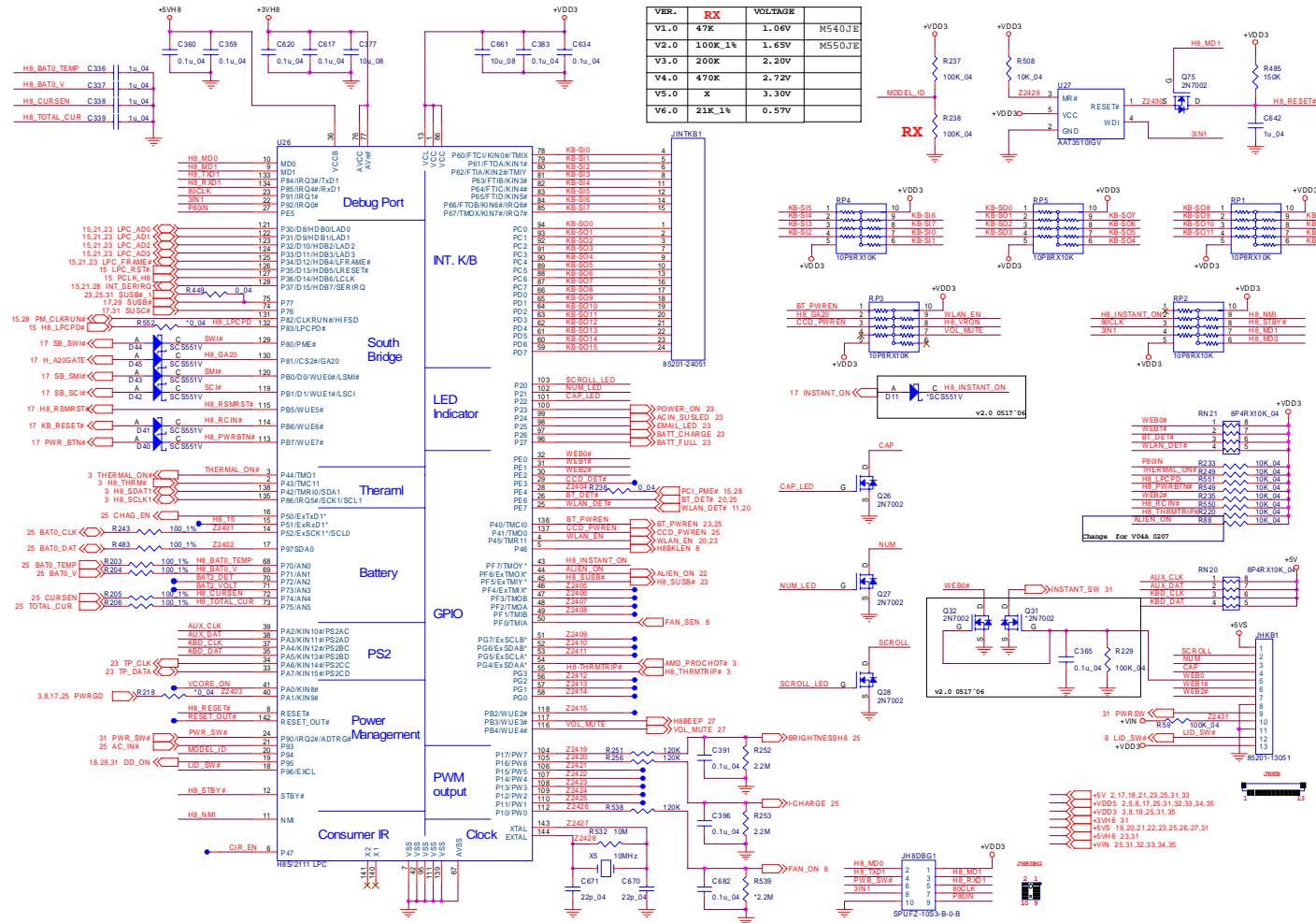


FWH, TOUCHPAD, LED



Sheet 23 of 44
FWH, TOUCHPAD,
LED

H8/2111

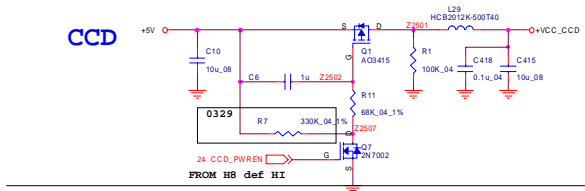
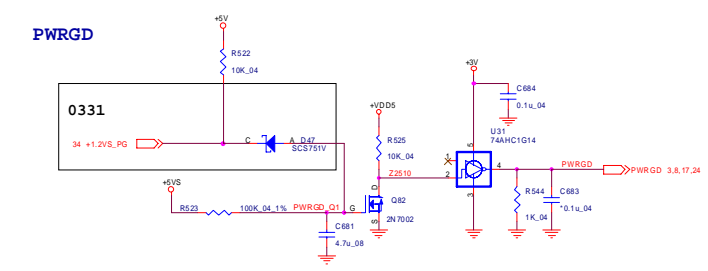


Sheet 24 of 44
H8/2111

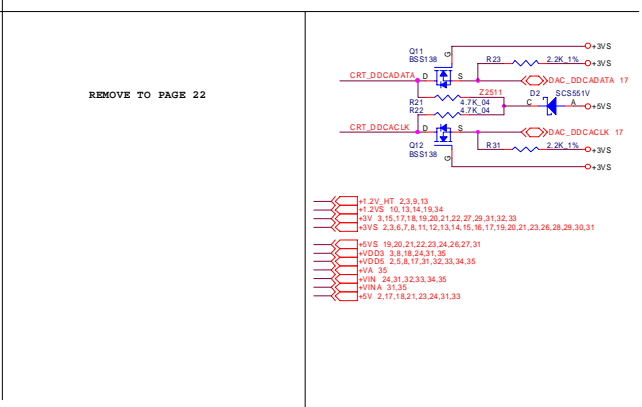
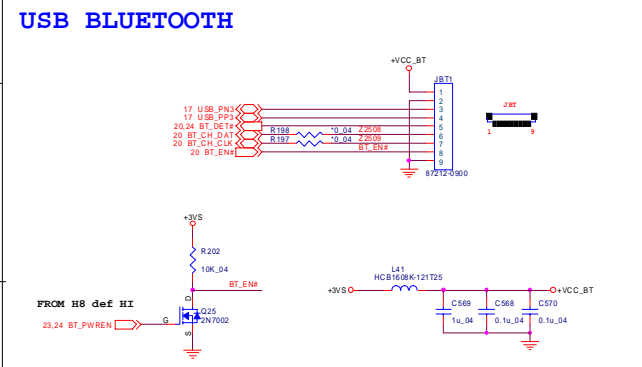
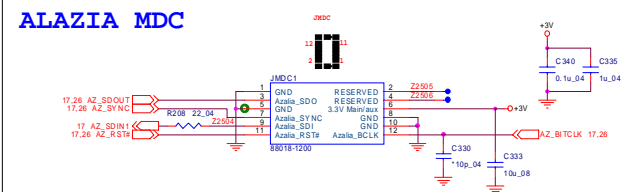
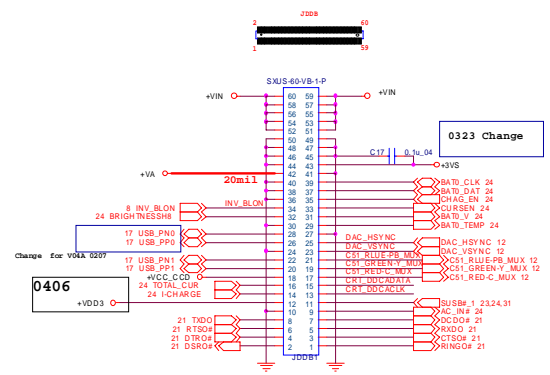
B.Schematic Diagrams

MDC, USB BT, PWRGD, DDB CON

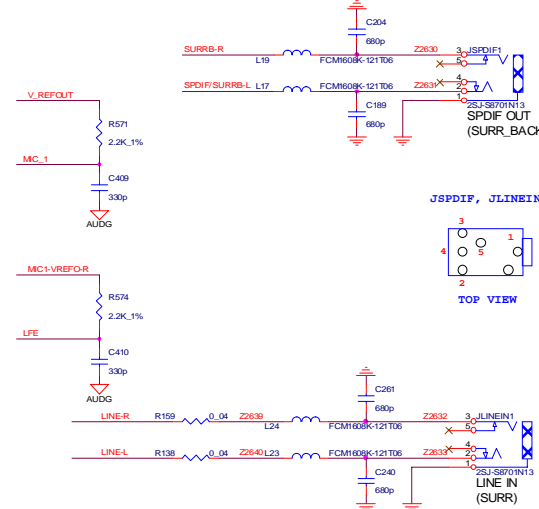
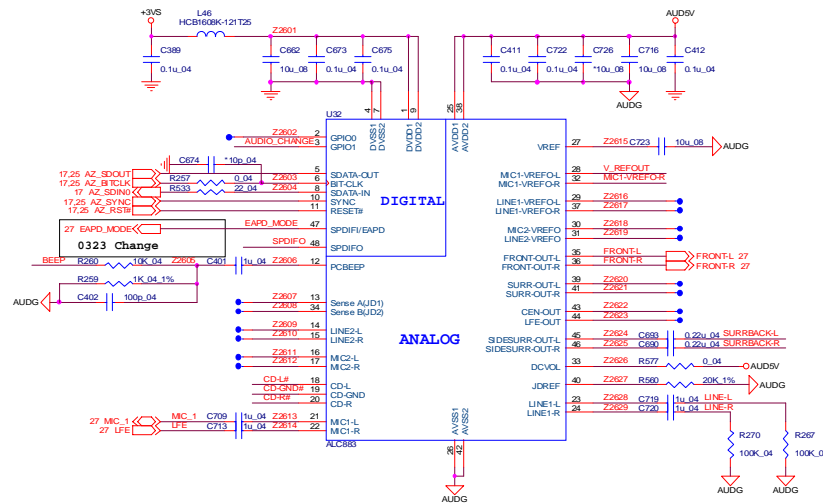
Sheet 25 of 44
MDC, USB BT,
PWRGD, DDB CON



TO MULTI-FUNCTION BOARD



AZALIA CODEC ALC883

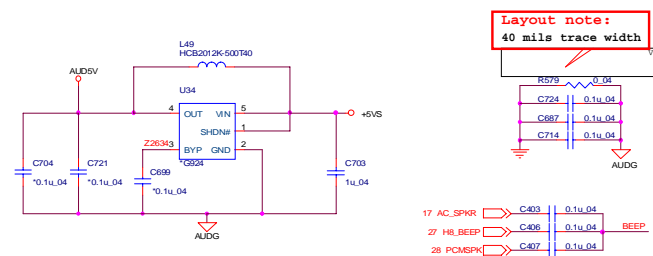


Note:
U13 pin 1 - pin 11 and pin 47 and pin 48 are Digital signals.
The others are Analog signals.

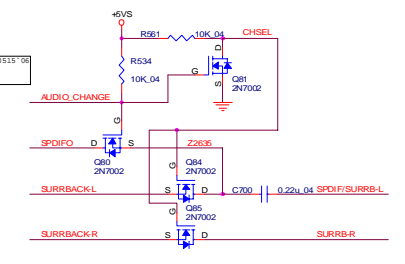
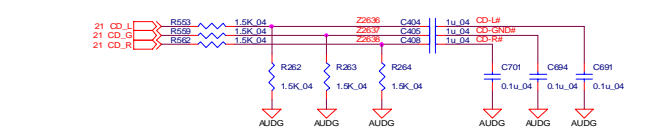
Layout Note:
(1)MIC_1 (U13.21) (2)LFE (U13.22)
(3)LINE-L (U13.23) (4)LINE-R (U13.24)
(5)CD_L (U13.18) (6)CD_G (U13.19)
(7)CD_R (U13.20)
? ? ? ? ? AUDG, ? ? ? ? ?
+5VS & +VIN plane.

Layout Note:
CD_R & CD_G & CD_L must parallel routing to audio Codec. The space must be equal.

From	AUDG	To
CD-ROM	Signal:Space = 1:1	AUDIO
	Signal:Space = 1:1	CODEC
	Signal:Space = 1:1	
	Signal:Space = 1:1	



Layout note:
40 mils trace width



+3VS 2,3,6,7,8,11,12,13,14,15,16,17,19,20,21,23,25,26,29,30,31
+5VS 19,20,21,22,23,24,25,27,31

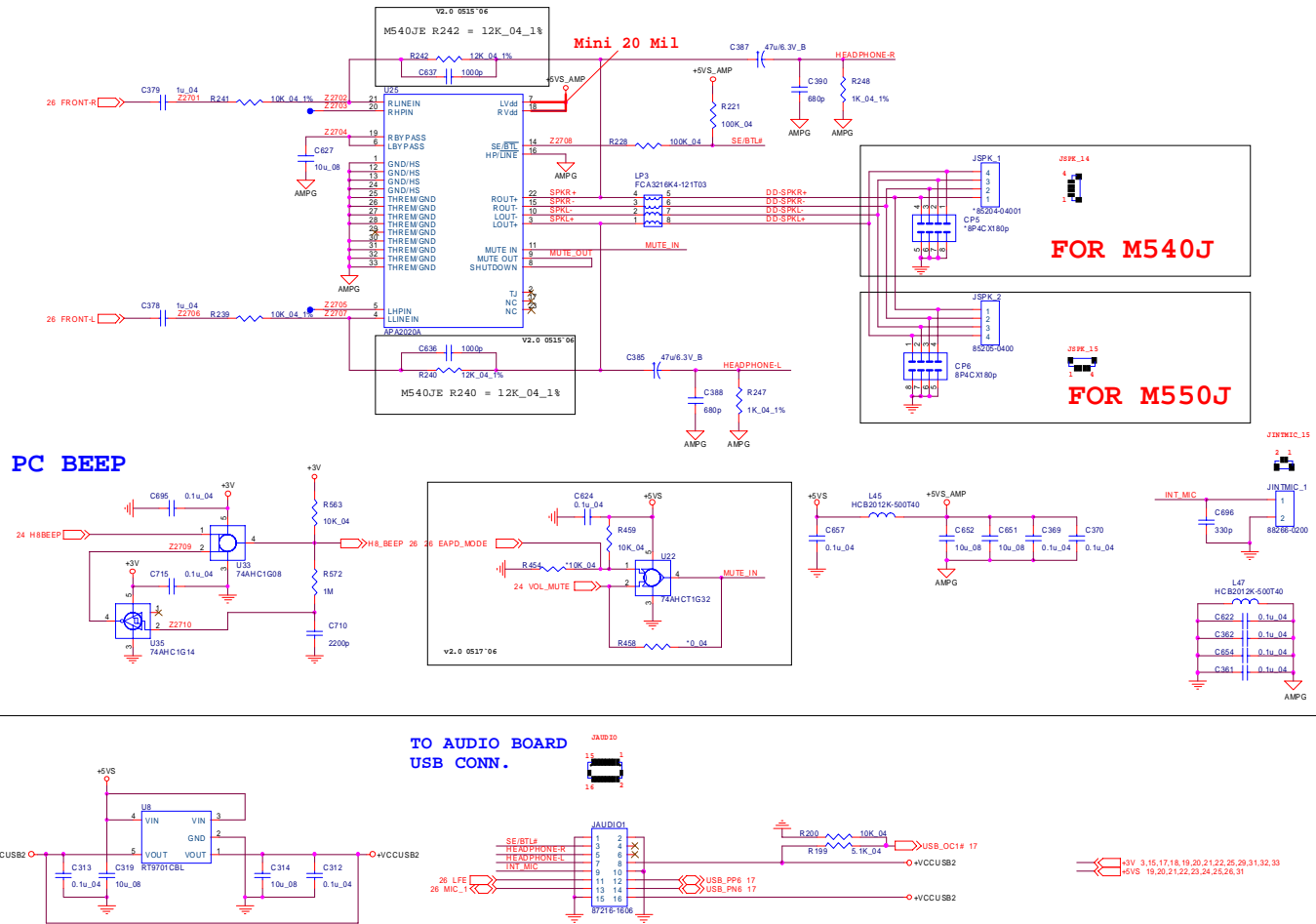
B.Schematic Diagrams

Sheet 26 of 44
AZALIA CODEC
ALC883

AUDIO AMP, USB2.0* 2

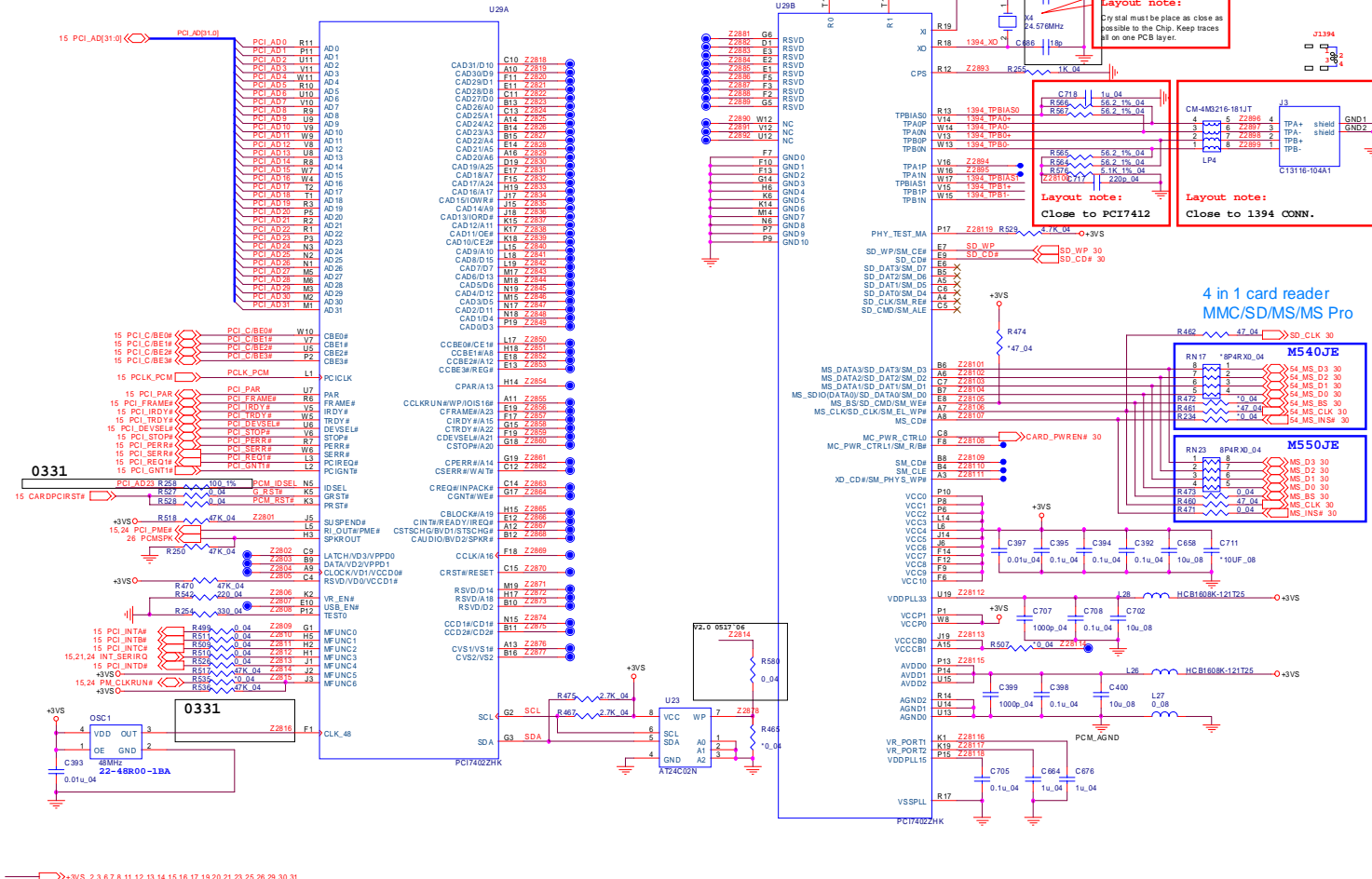
B.Schematic Diagrams

Sheet 27 of 44
AUDIO AMP,
USB2.0



PCI17402/ 1394

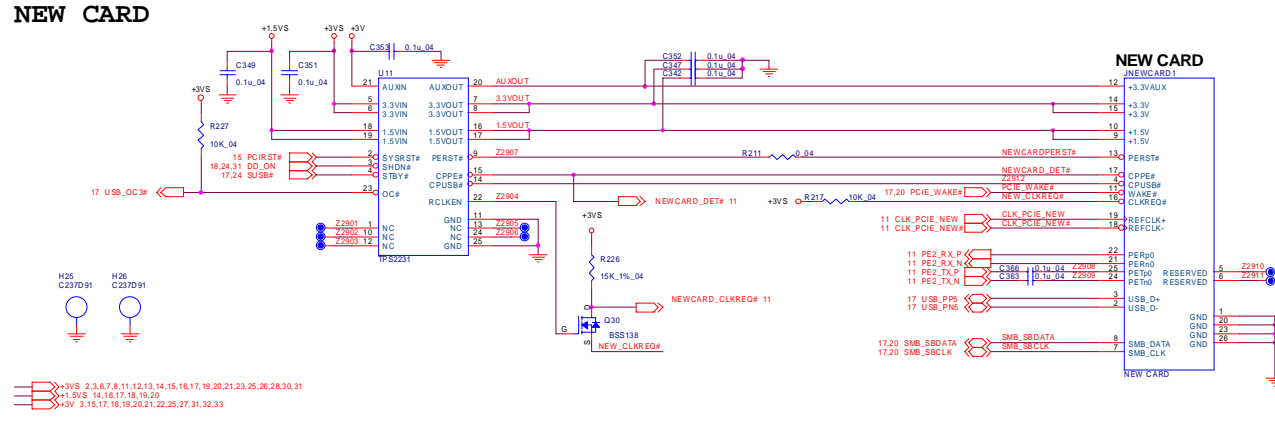
ADD 0324



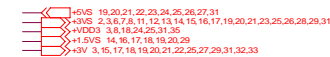
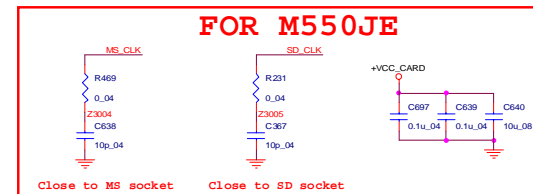
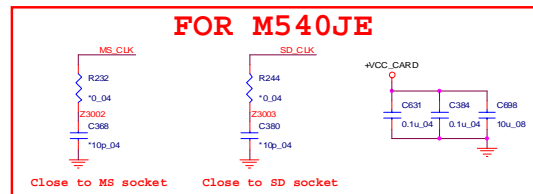
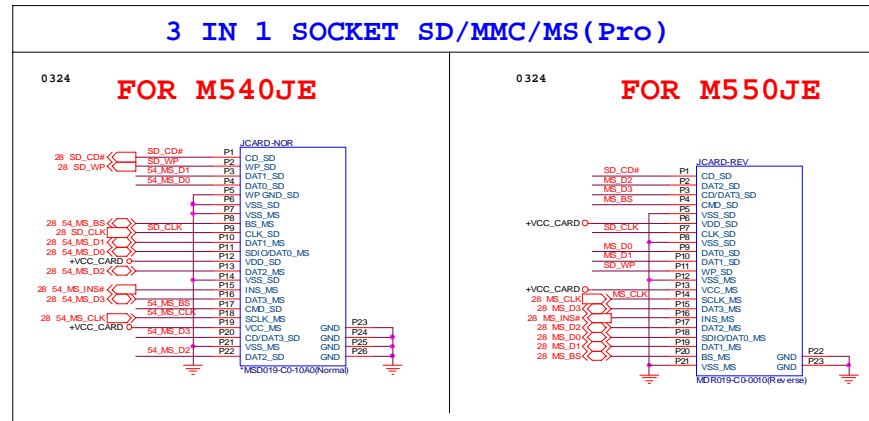
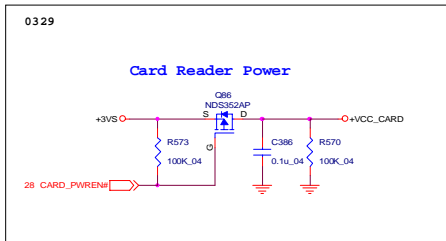
NEW CARD

ADD 0324

Sheet 29 of 44
NEW CARD



3 IN 1 SOCKET

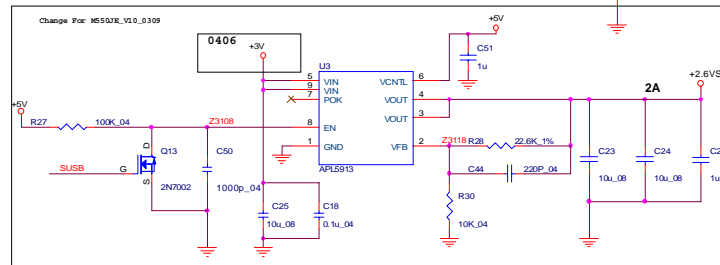
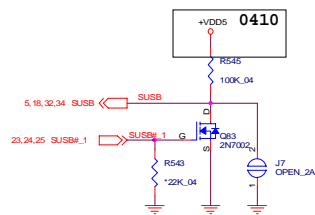
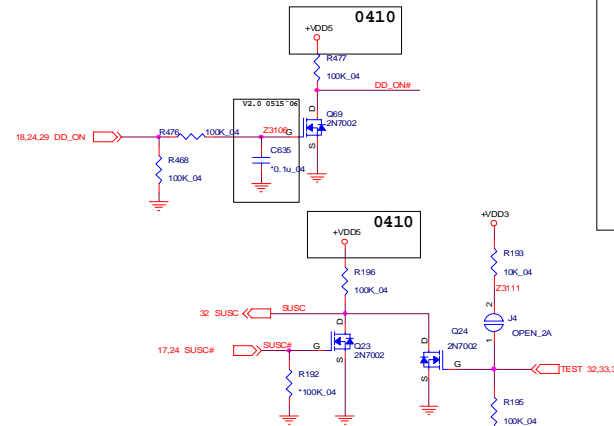
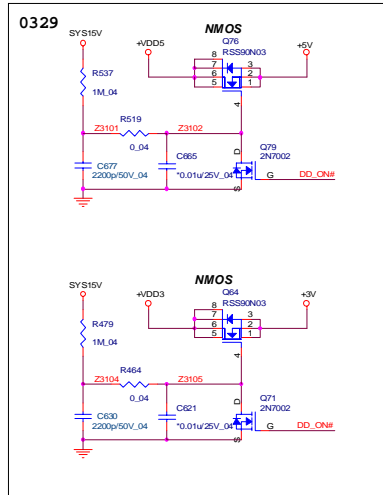
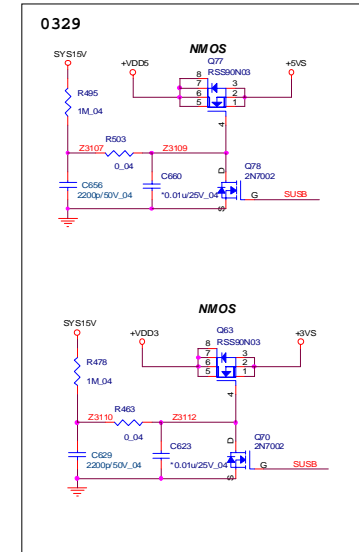
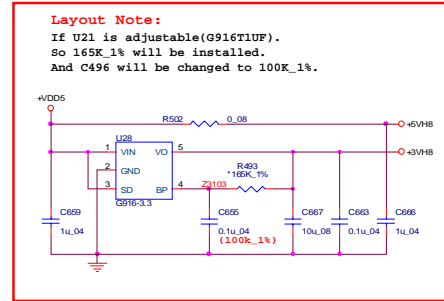
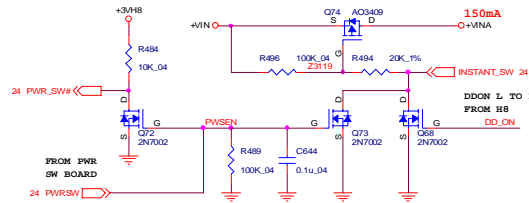


Sheet 30 of 44
3 IN 1 SOCKET

B. Schematic Diagrams

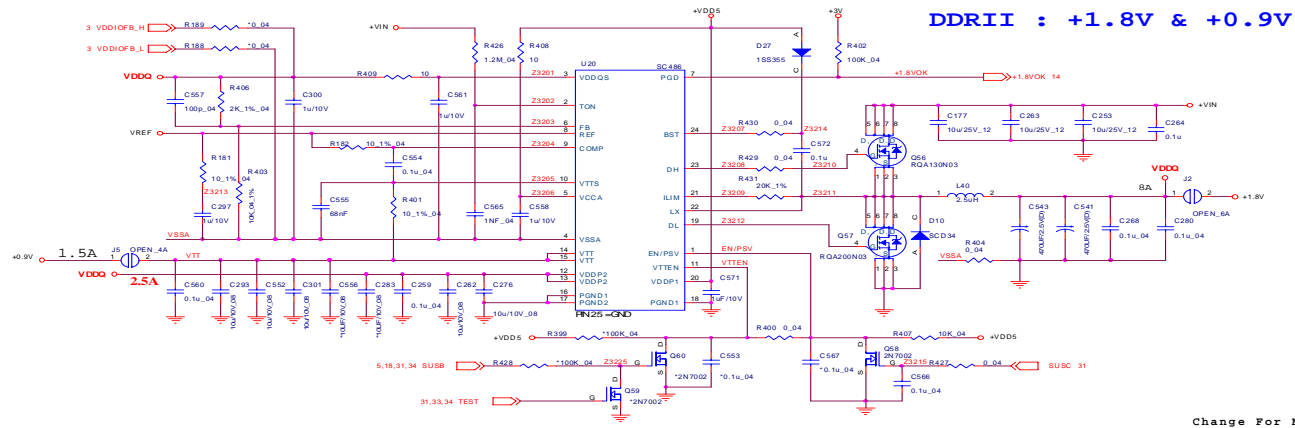
SYSTEM POWER, BRIDGE BATT

Sheet 31 of 44
SYSTEM POWER,
BRIDGE BATT



- 1.5V 18,19
 - 1.5VS 14,16,17,18,19,20,29
 - 2.6V 3,9,12,13
 - 2.6VS 10,13,14,19,34
 - 3V 3,15,17,18,19,20,21,22,25,27,29,32,33
 - 3VS 2,3,5,7,8,11,12,13,14,15,16,17,19,20,21,23,25,26,28,29,30
 - 3VHB 24
 - 3V 2,17,18,21,23,24,25,30
 - 3VS 19,20,21,22,23,24,25,26,27
 - 3VHB 23,24
 - 3V 3,8,18,24,25,35
 - 3VHB 23,24
 - 3V 2,5,8,17,25,32,33,34,35
 - 3V 2,5,35
 - 3V 2,5,32,33,34,35
 - 3VINA 35
- SYS15V 35

+1.8V, +0.9V

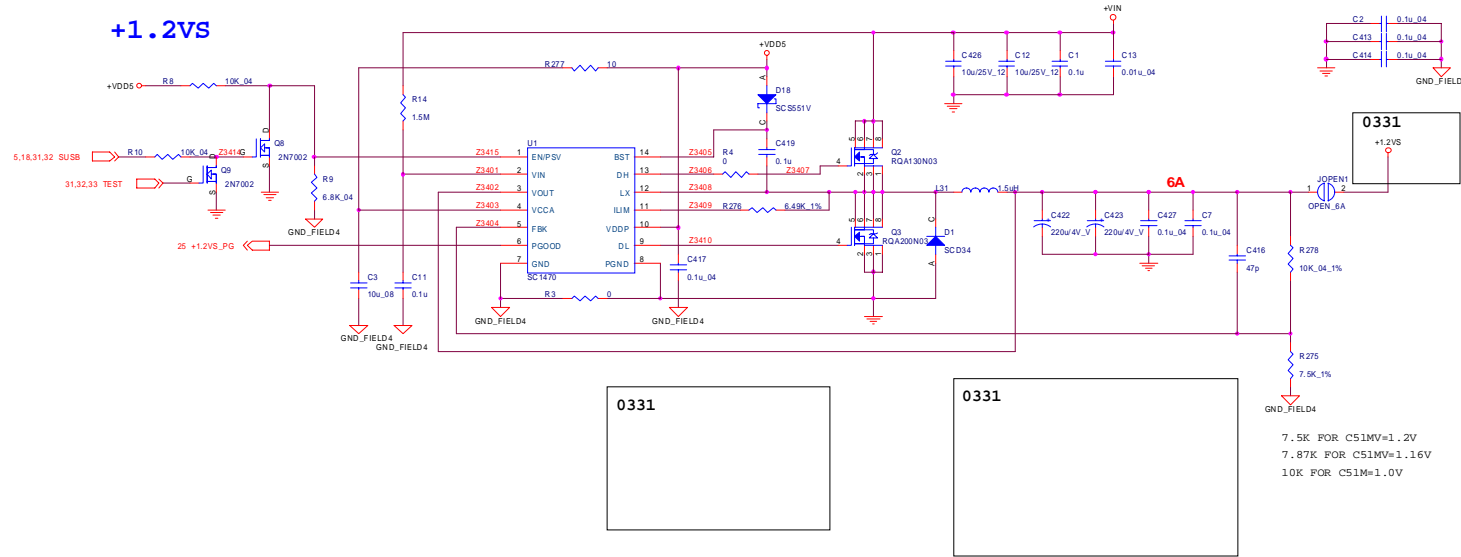


0331 DEL

- 1.8V 3,15,17,18,19,20,21,22,25,27,29,31,33
- +1.8V 2,3,4,5,6,7,18
- +0.9V 4,5,6,7
- +VDD5 9,5,8,17,25,31,33,34,35
- +VIN 24,25,31,33,34,35

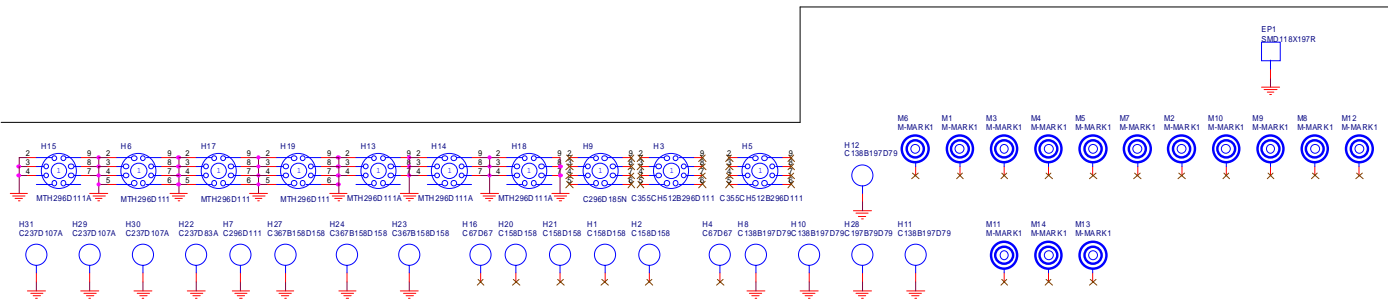
Sheet 32 of 44
+1.8V,+0.9V

+1.2VS



Sheet 34 of 44
+1.2VS

- +VDD5 2,5,8,17,25,31,32,33,35
- +1.2VS 10,13,14,19
- +3VS 2,3,6,7,8,11,12,13,14,15,16,17,19,20,21,23,25,26,28,29,30,31
- +5V 2,17,18,21,23,24,25,31,33
- +VIN 44,26,31,32,33,35

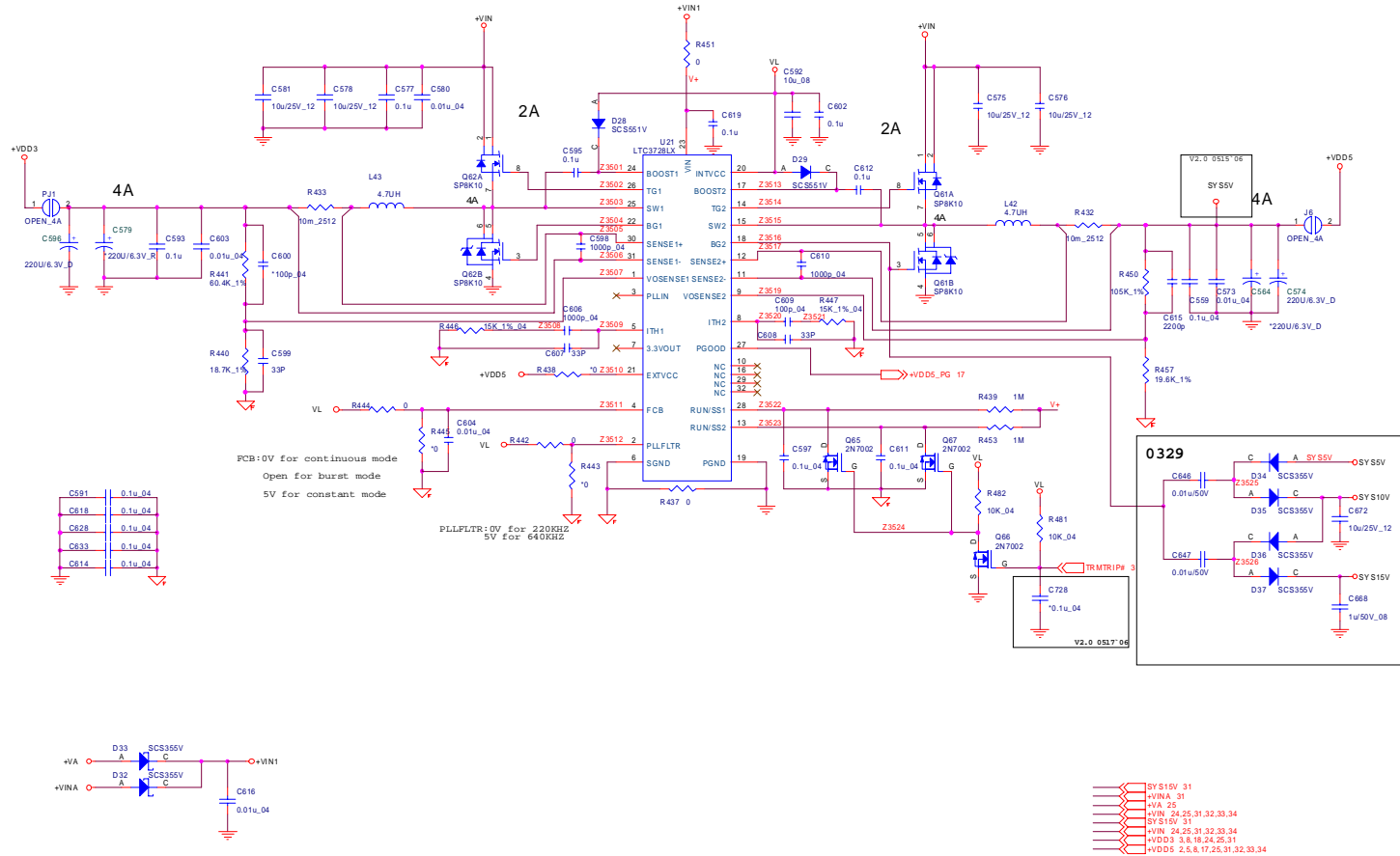


B.Schematic Diagrams

Schematic Diagrams

+VDD3, +VDD5

+VDD3, +VDD5, +VDD12

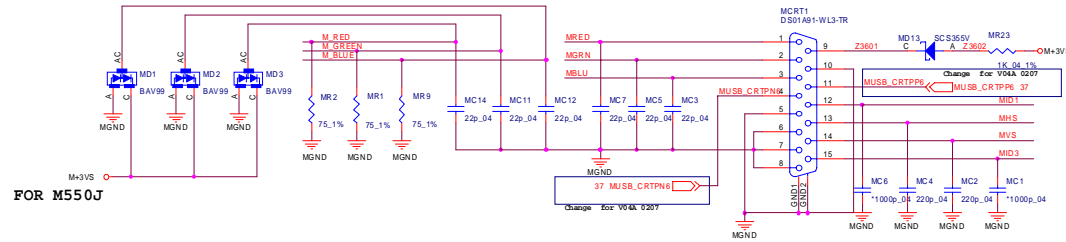


B.Schematic Diagrams

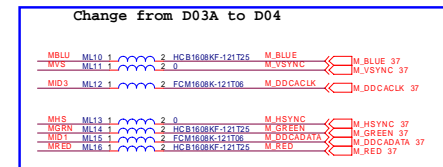
Sheet 35 of 44
+VDD3, +VDD5

D/D BD (CRT & Serial Port)

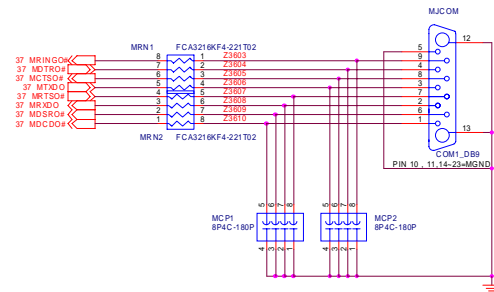
CRT



FOR M550J



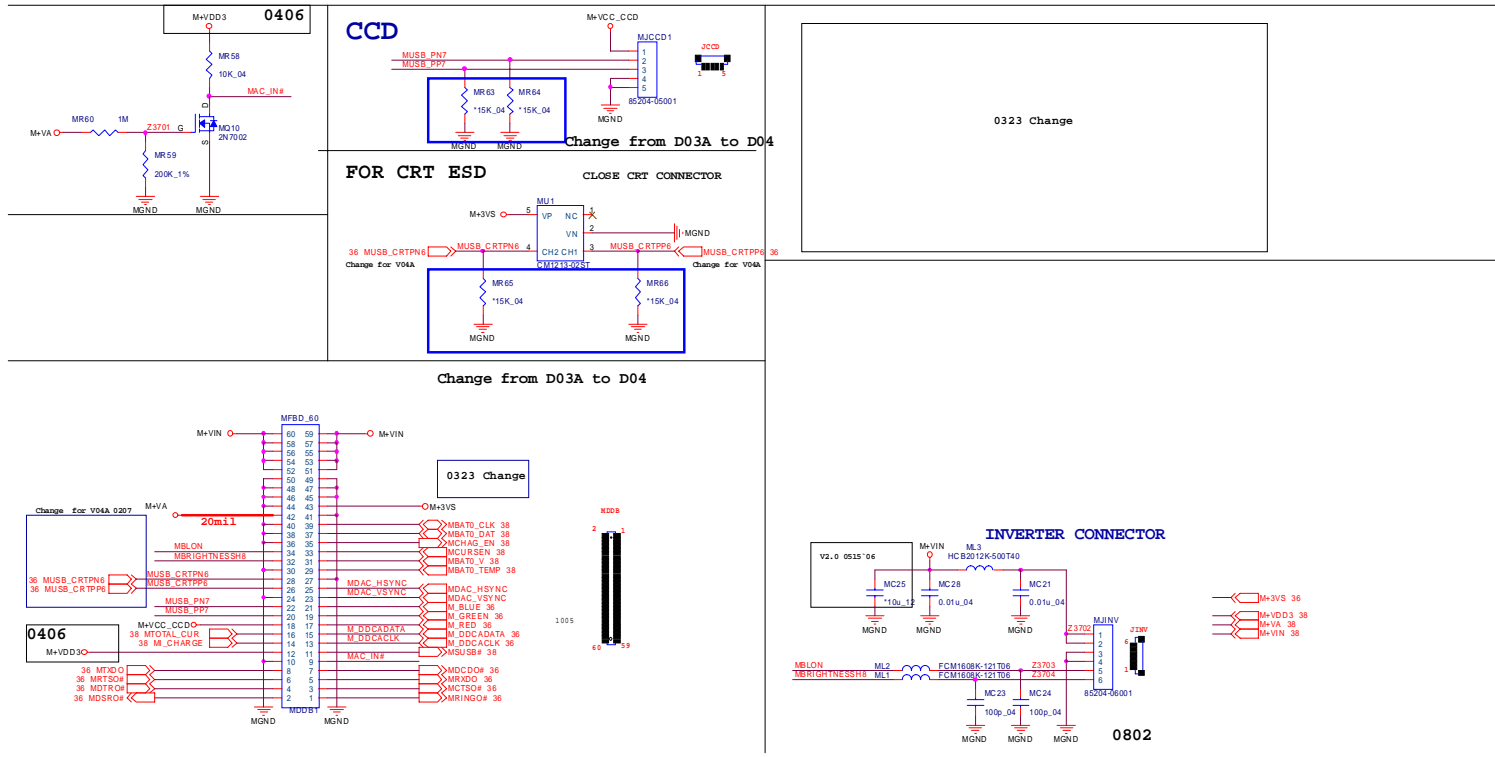
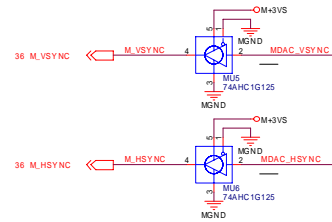
Sheet 36 of 44
D/D BD (CRT &
Serial Port)



MH3VS 37

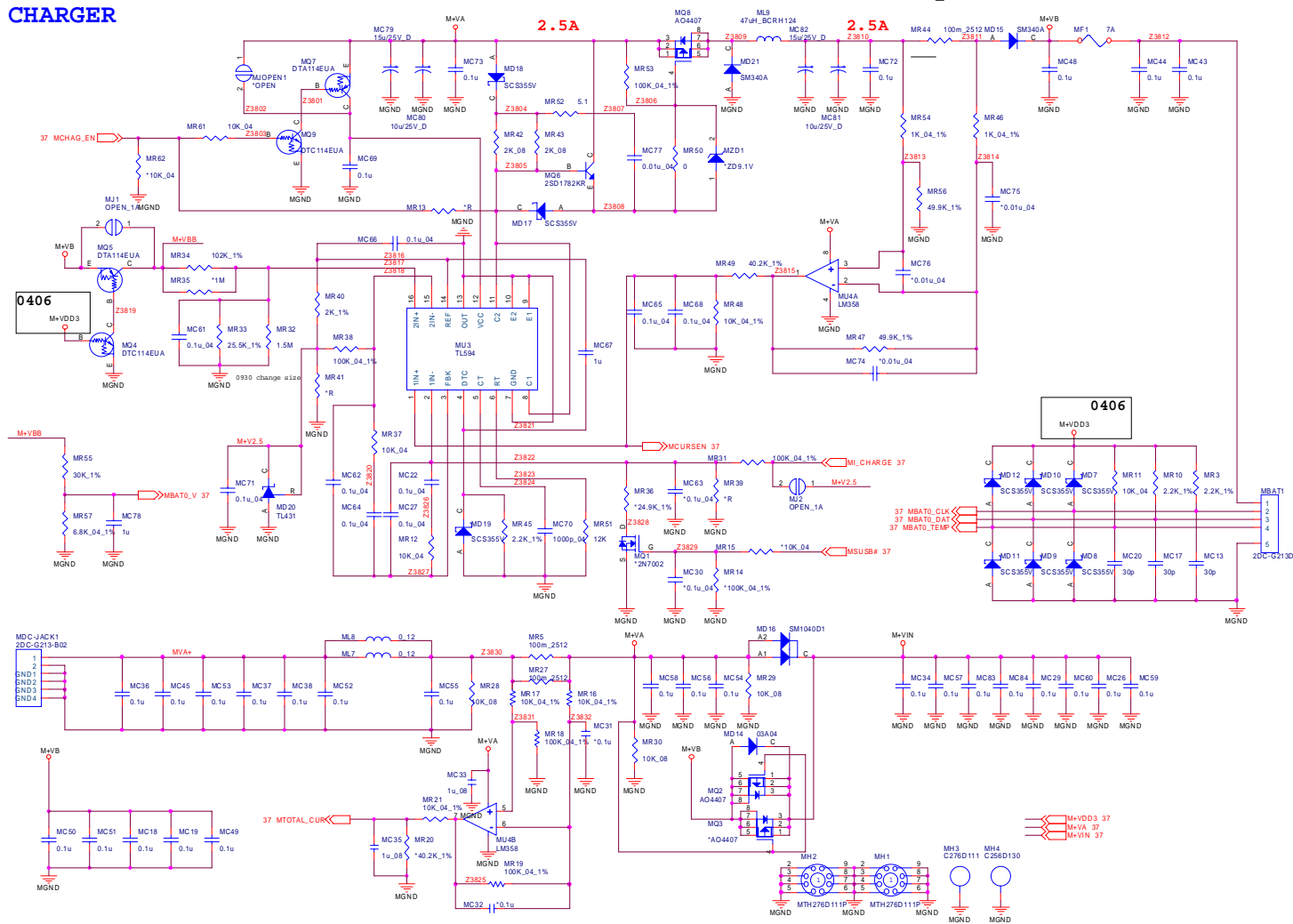
D/D BD (CCD CON. & INVERTER CON.)

Sheet 37 of 44
D/D BD (CCD CON.
& INVERTER CON.)



D/D BD (CHARGER, DC IN), RJ-11

CHARGER



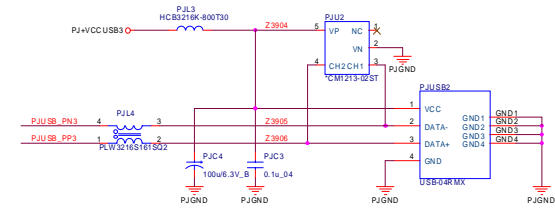
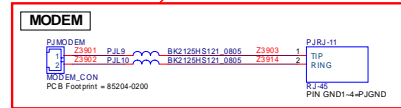
Sheet 38 of 44
D/D BD (CHARGER,
DC IN), RJ-11

B.Schematic Diagrams

AUDIO BD (PHONE JACK, USB)

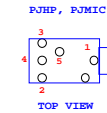
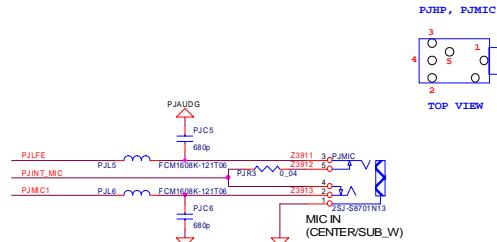
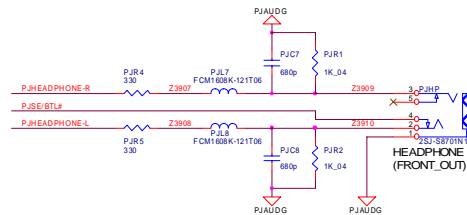
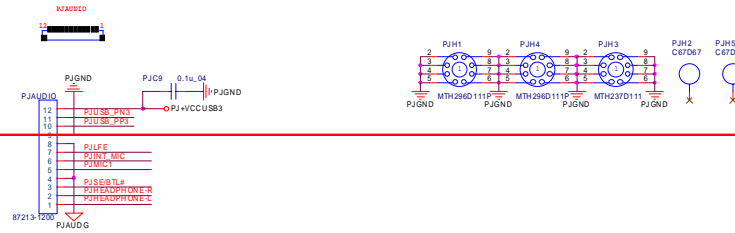
DIGITAL PLANE

須與其他零件或線路
淨空 2.5mm 以上



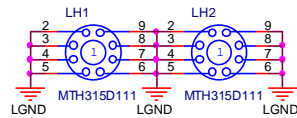
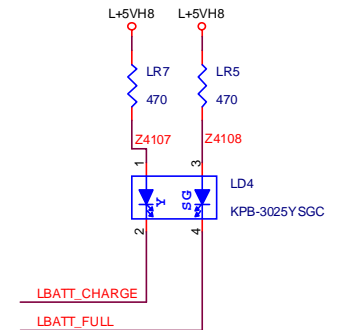
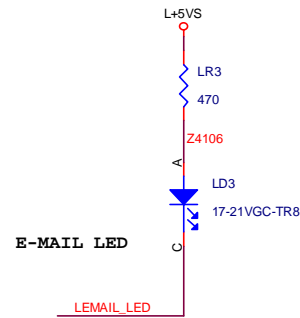
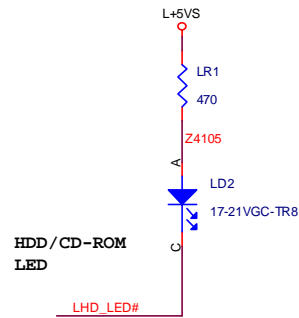
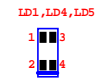
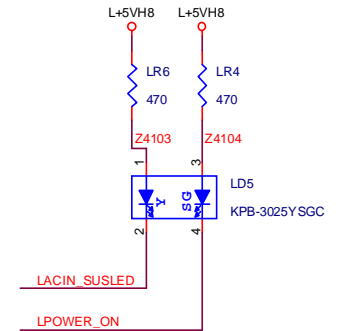
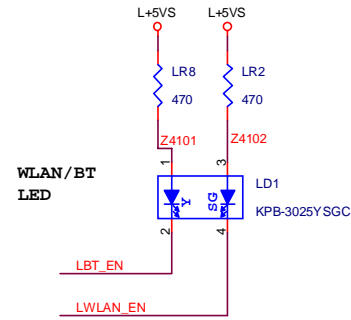
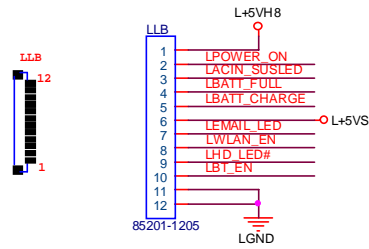
Sheet 39 of 44
AUDIO BD (PHONE
JACK, USB)

ANALOG PLANE



LED BOARD

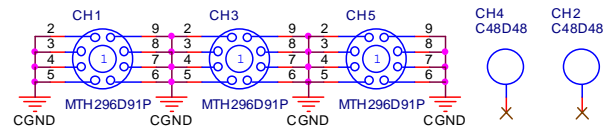
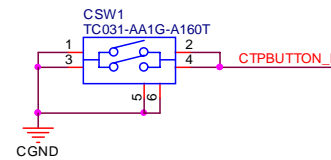
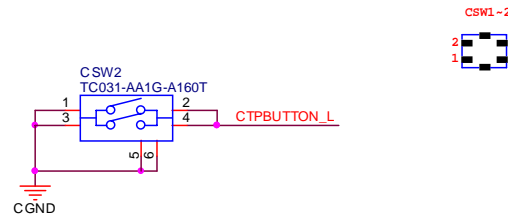
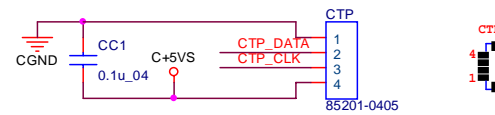
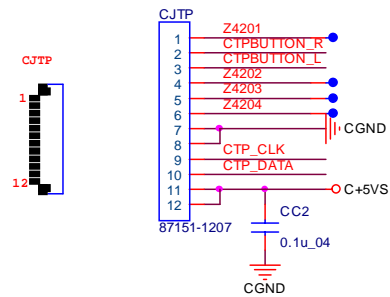
FOR M550JE



Sheet 41 of 44
LED BOARD

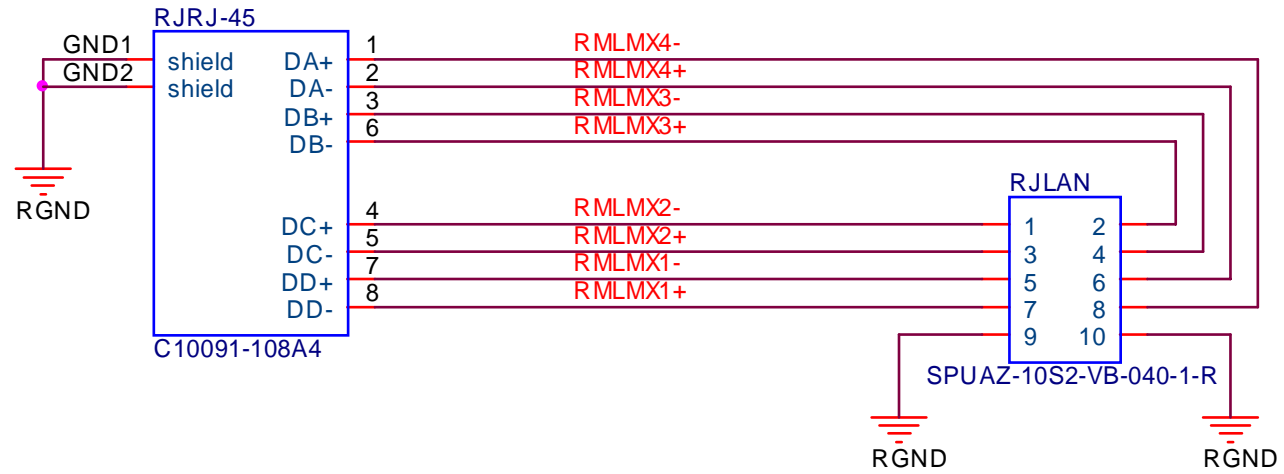
CLICK BOARD FOR M550J

VENDOR	PART NUMBER
Synaptics	
E-LAN	800409-5102



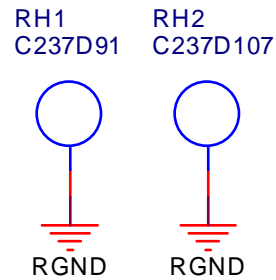
Sheet 42 of 44
CLICK BOARD

RJ-45 BOARD



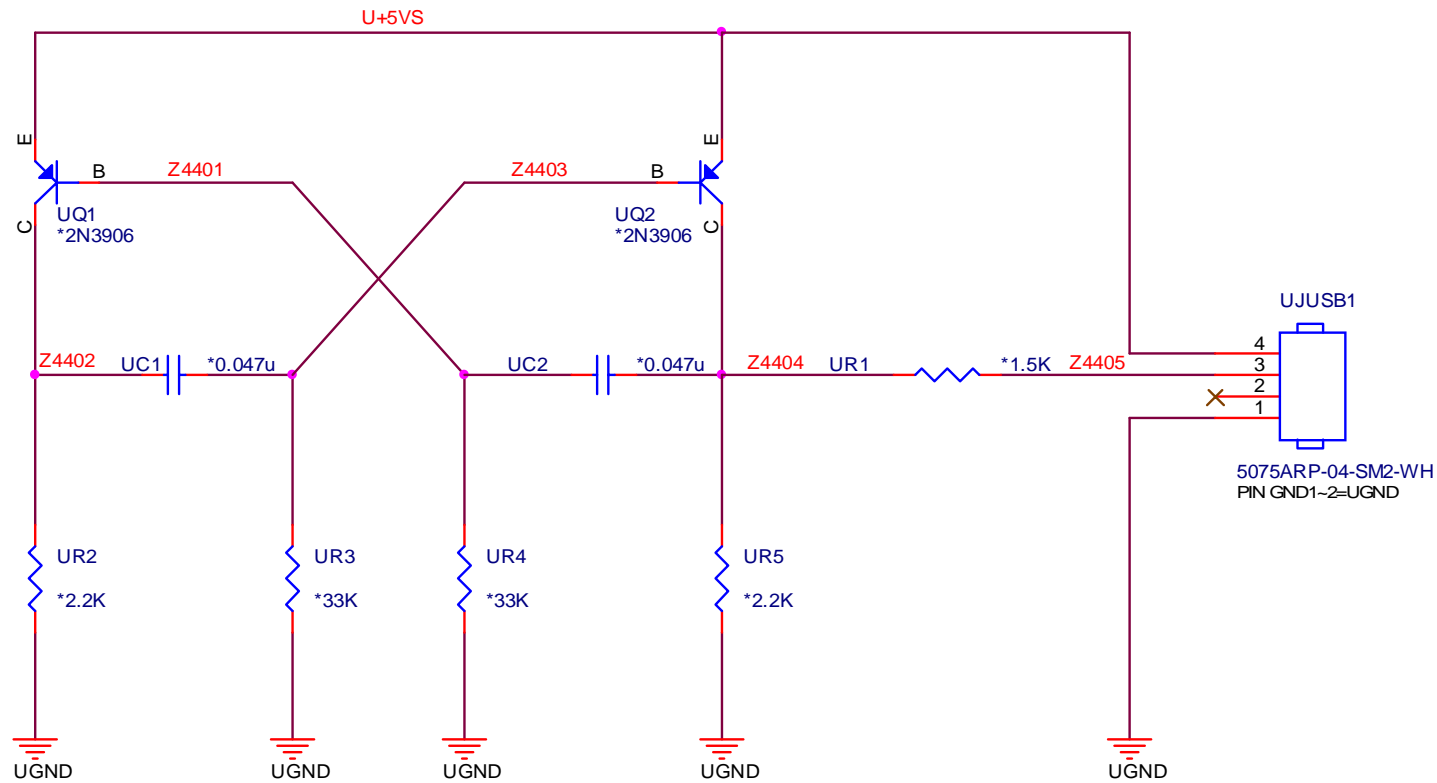
Sheet 43 of 44
RJ-45 BOARD

B.Schematic Diagrams



USB DONGLE BOARD

USB DANGLE BOARD



Sheet 44 of 44
USB DONGLE
BOARD

Schematic Diagrams

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