

SERVICE MANUAL

M660JE / M665JE

notebook



Notebook Computer

M660JE / M665JE

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 *M660JE*/*M665JE* 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 minimum AC/DC Adapter, **OR** by a DC Output 20V, 4.5A minimum AC/DC Adapter if you are using the **optional port replicator**.

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

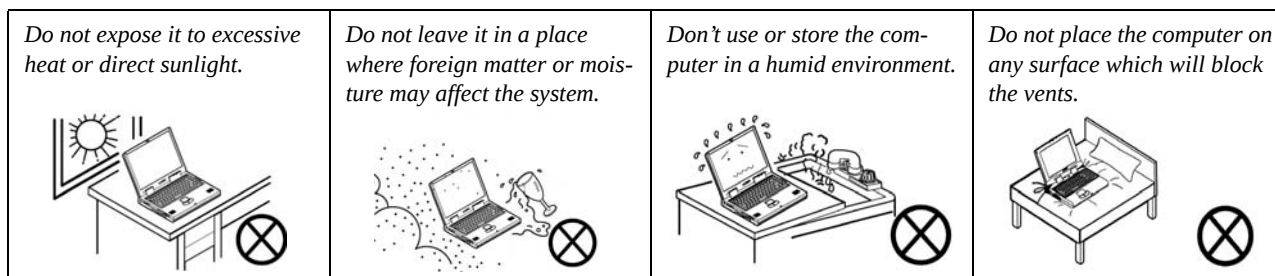
Instructions for Care and Operation

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

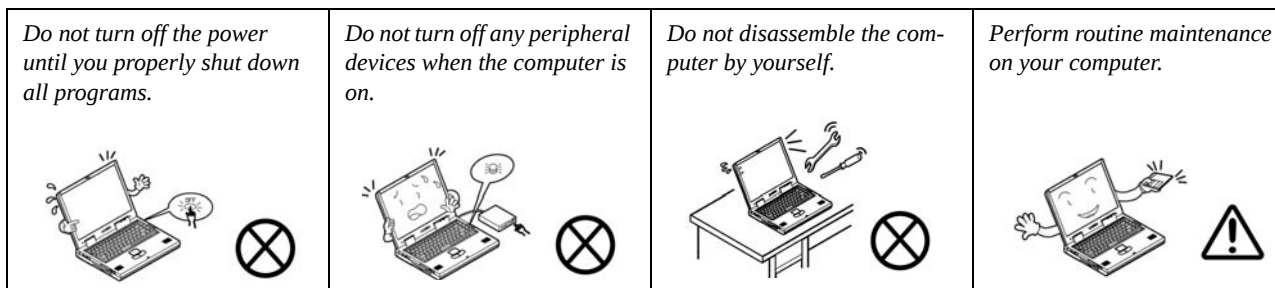
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



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.

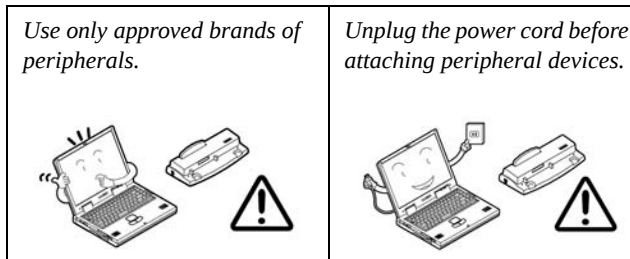


3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



Preface

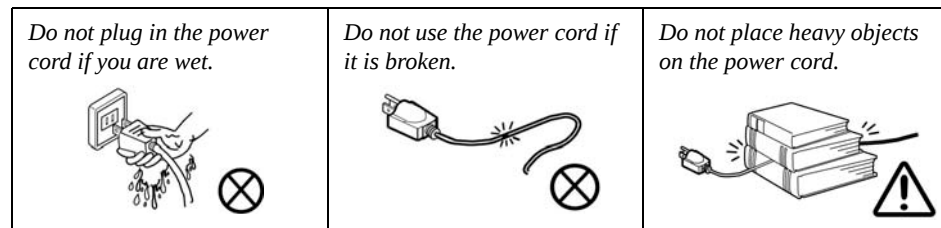
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



Power Safety

The computer has specific power requirements:

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



Power Safety Warning

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

Battery Precautions

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



Battery 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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Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the **M660JE/M665JE** 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 **M660JE/M665JE** 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



Latest Specification Information

The specifications listed in this Appendix are correct at the time of going to press. Certain items (particularly processor types/speeds and CD/DVD device types) may be changed, delayed or updated due to the manufacturer's release schedule. Check with your service center for details.

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 Model 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 Models 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	Two 200 Pin SO-DIMM Sockets Supporting DDRII (DDR2) 533/667 MHz 64-bit Wide DDRII (DDR2) Data Channel Memory Expandable up to 2GB (256/ 512/ 1024 MB DDRII Modules) (Note: Do Not Use Other Module Types)	
Security	Security (Kensington® Type) Lock Slot	BIOS Password
BIOS	One 4Mb Flash ROM	Phoenix™ BIOS

Feature	Specification	
LCD	15.4" WXGA TFT LCD OR 15.4" WSXGA+ TFT LCD	
Video Adapter	NVIDIA GeForce Go 6100 (C51MV) Integrated Video Supports up to 128MB of Shared Video Memory Integrated High Quality 3D Graphics Engine Supports Microsoft DirectX 9.0 Vertex Shader 3.0	
Storage	One Changeable 12.7mm(h) Optical Device (CD/DVD) Type Drive Easy Changeable 2.5" 9.5 mm (h) SATA (Serial) HDD	
Audio	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-Out, Microphone-In, Line-In and S/ PDIF Out Jacks	
Keyboard & Pointing Device	Winkey Keyboard	Built-In TouchPad with Scrolling Function
Interface	Three USB 2.0 Ports One Serial Port One External Monitor Port One Headphone-Out Jack (7.1 CH) One Microphone-In Jack (7.1CH) One Line-In Jack (7.1CH) One S/PDIF Out Jack (7.1CH) Note: External 7.1 CH Audio Output Support Configurable Through Headphone-Out, Microphone-In, Line-In and S/ PDIF Out Jacks	One RJ-11 Modem Jack One RJ-45 LAN Jack One Mini-IEEE 1394 Port 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	

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Feature	Specification	
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)	
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%
Dimensions & Weight	360mm (w) * 267mm (d) * 25.4-34mm (h)	2.6 kg With 6 Cell Battery and DVD-ROM
Optional	Optical Drive Module Options: DVD/CD-RW Combo Drive Module DVD-Dual Drive Module (Factory Option) 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 300K or 1.3M Pixel USB PC Camera Module (Factory Option) USB (2.0) Bluetooth Module - Version 2.0 (Factory Option) USB Floppy Disk Drive (Factory Option)

Model Differences

The models vary slightly in external cover design and color.



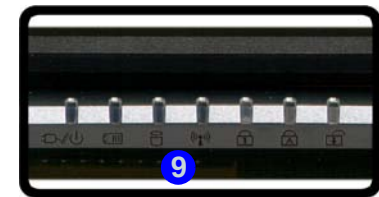
Figure 1
Model Differences

Introduction

Figure 2
Top View

External Locator - Top View with LCD Panel Open

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



External Locator - Front & Rear Views

Figure 3

Front Views

1. LED Indicators



Figure 4

Rear Views

1. Serial Port
2. Mini-IEEE 1394 Port
3. 1 * USB Port
4. DC-In Jack
5. Battery



Introduction

External Locator - Left & Right Side Views

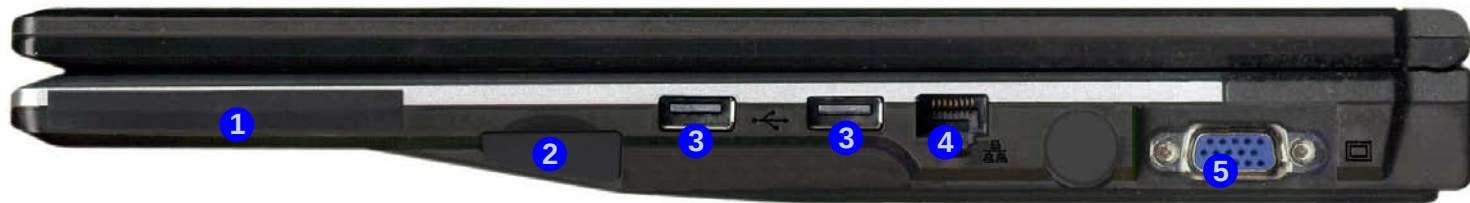
Figure 5
Left Side View

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



Figure 6
Right Side View

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



External Locator - Bottom View

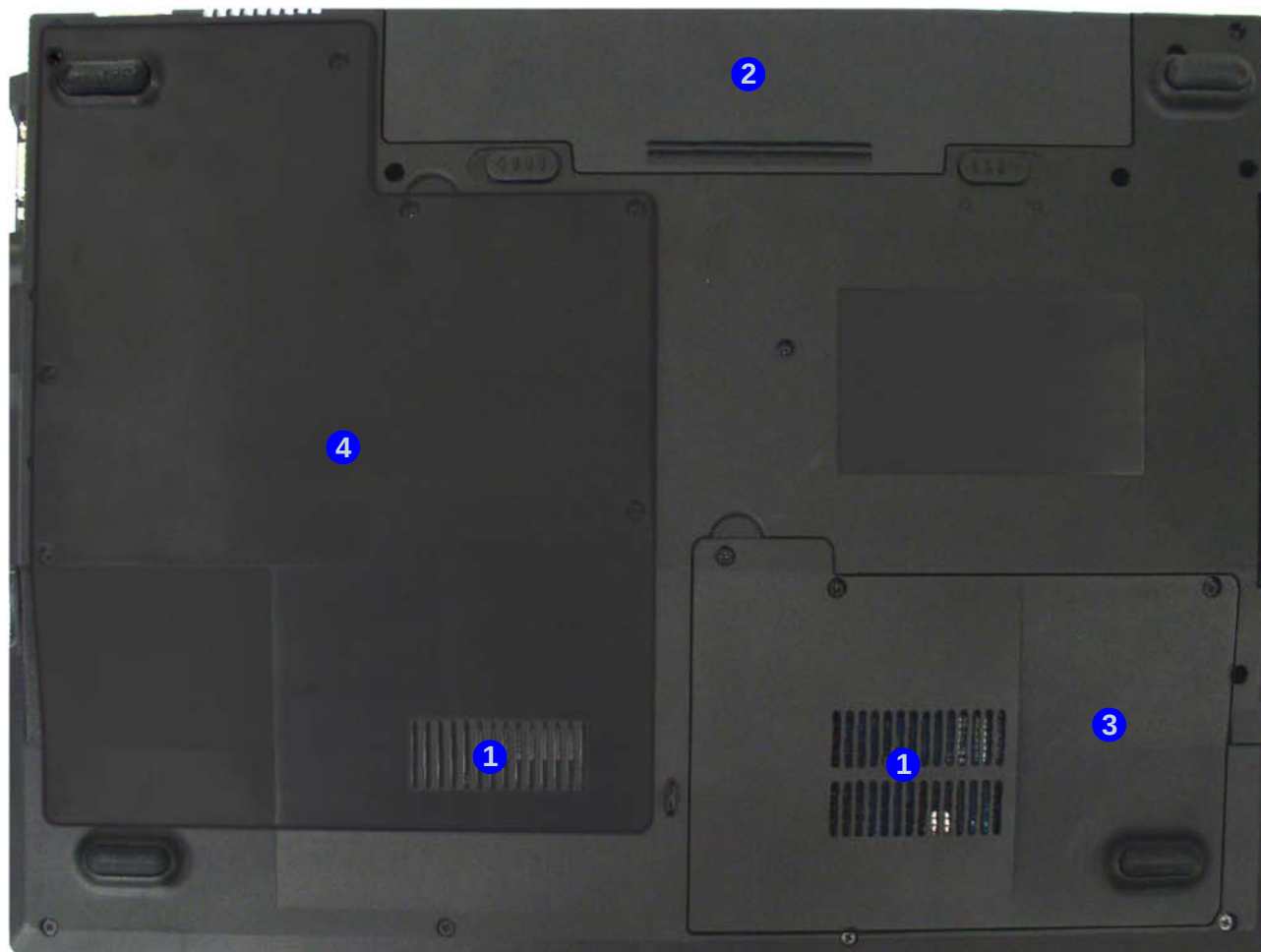


Figure 7
Bottom View

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



Overheating

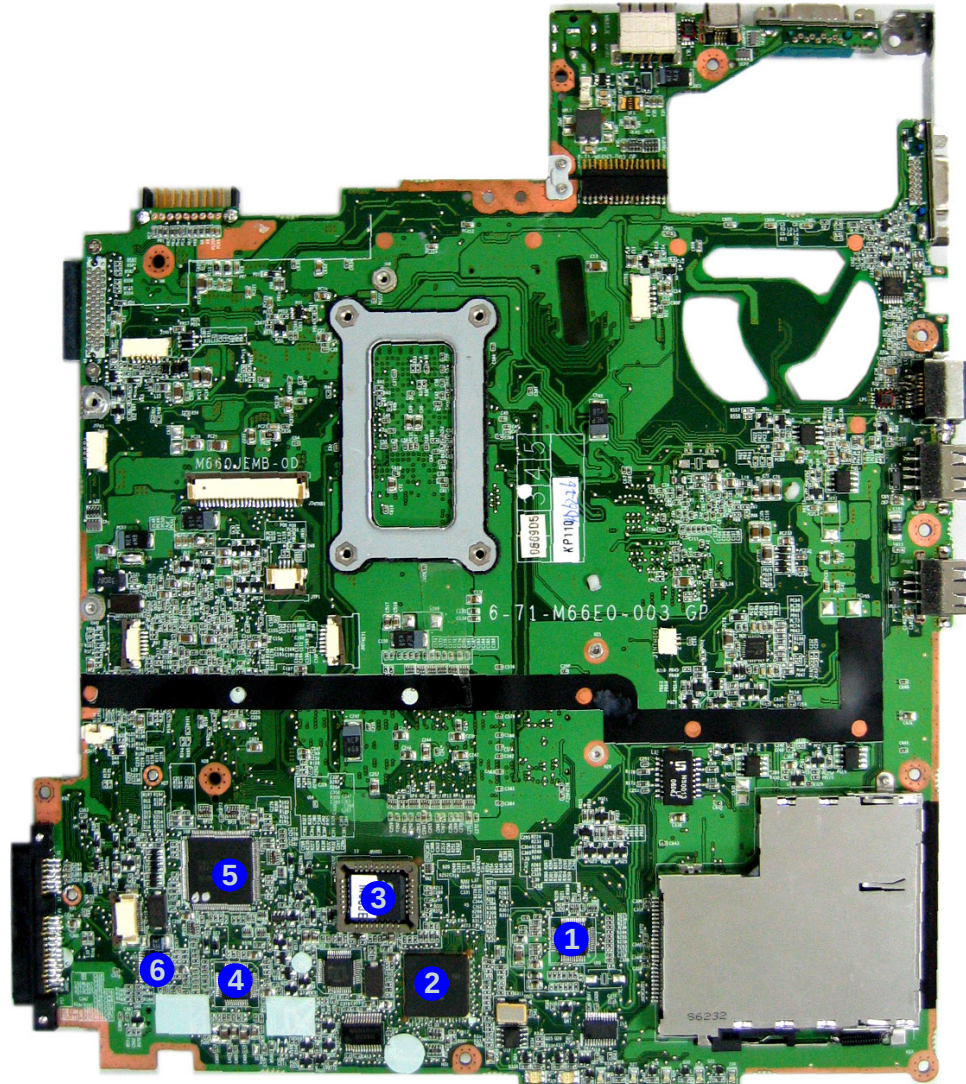
To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

Introduction

Figure 8
Mainboard Top
Key Parts

1. Realtek
RTL8201CL
2. CardBus
PC17402
3. Flash BIOS ROM
4. ALC880 Audio
Codec
5. Hitachi H8
6. Audio Amp.

M660JE Mainboard Overview - Top (Key Parts)



M660JE Mainboard Overview - Bottom (Key Parts)

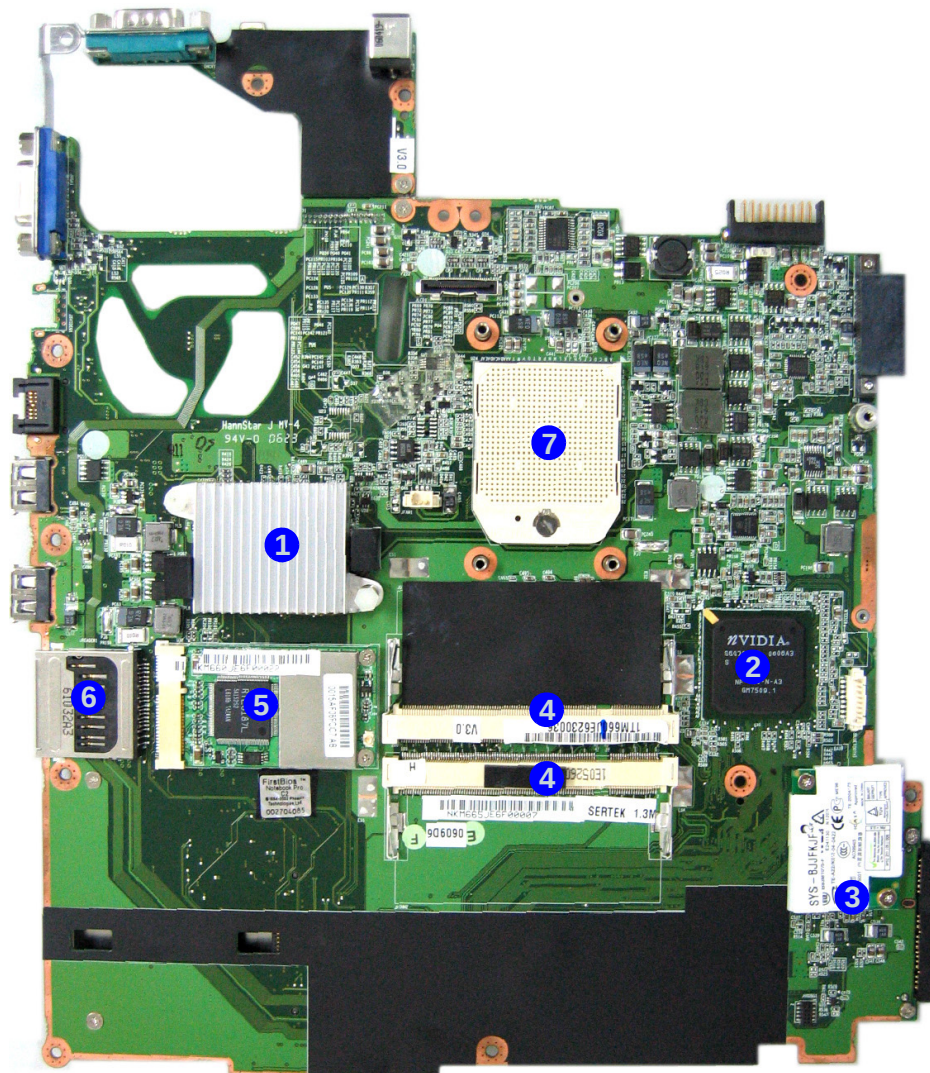


Figure 9
**Mainboard Bottom
Key Parts**

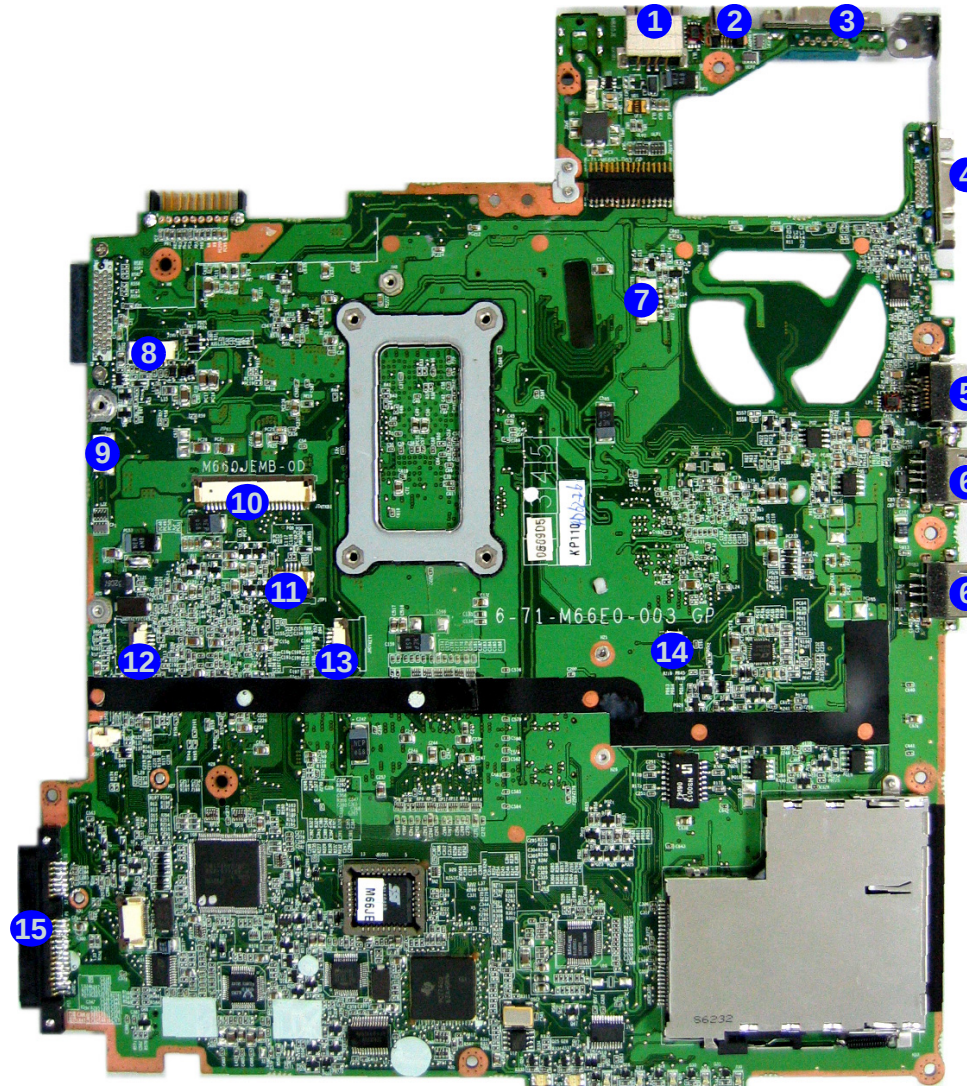
1. Northbridge-
nVIDIA C51MV
(w/ Heat sink
installed)
2. Southbridge-
nVIDIA MCP51M
3. Modem
Connector
4. Memory Slots
DDR2 So-DIMM
5. Mini PCIe Socket
6. 7-in-1 Card
Reader Socket
7. CPU Socket (no
CPU installed)

Introduction

Figure 10
**Mainboard Top
Connectors**

1. USB Port
2. Mini-IEEE 1394 Port
3. Serial Port
4. External Monitor Port
5. RJ-45 LAN Jack
6. USB Port
7. CCD Cable Connector
8. Inverter Cable Connector
9. Speaker Cable Connector
10. Keyboard Cable Connector
11. Touch Pad Cable Connector
12. Hotkey Cable Connector
13. Power Hotkey Cable Connector
14. Microphone Cable Connector
15. SATA HDD Connector

M660JE Mainboard Overview - Top (Connectors)



M660JE Mainboard Overview - Bottom (Connectors)

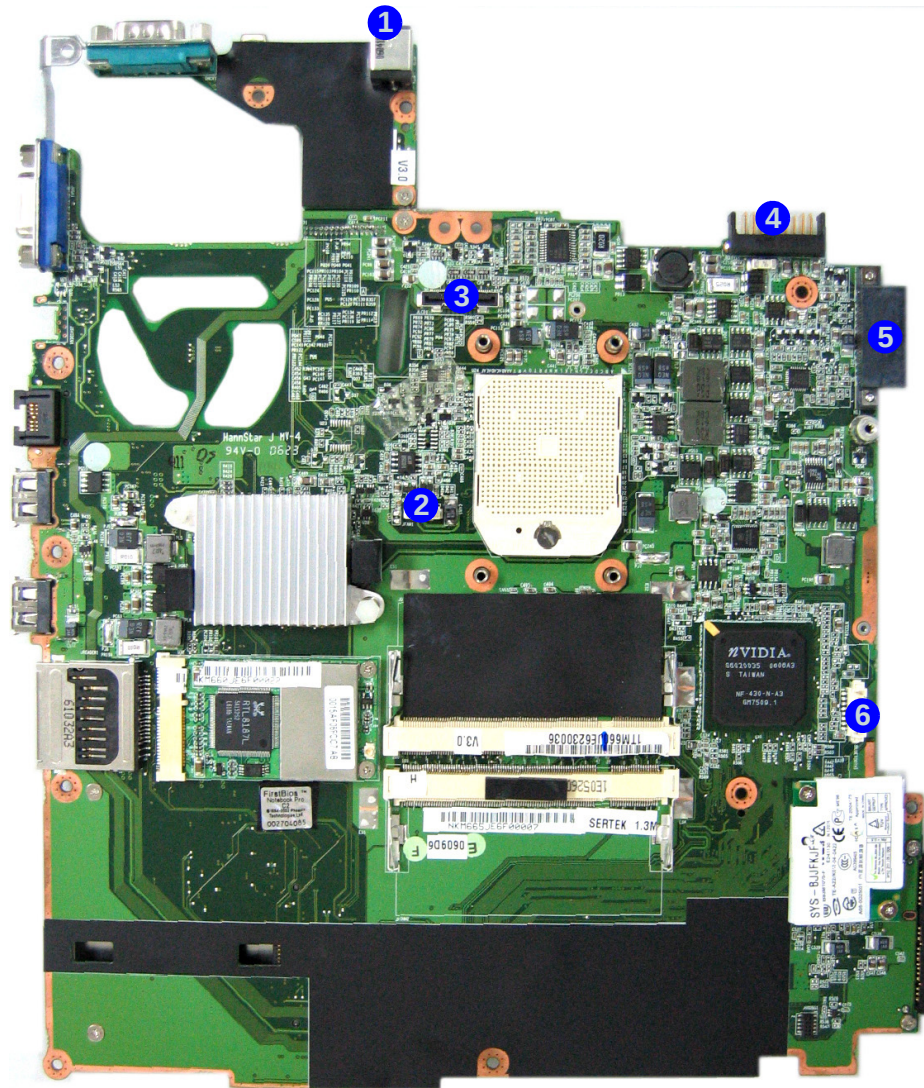


Figure 11
**Mainboard Bottom
Connectors**

1. DC-In Jack
2. Fan Cable Connector
3. LCD Cable Connector
4. Battery Connector
5. Optical Device Drive Connector
6. Bluetooth Cable Connector

Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the *M660JE/M665JE* 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.


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 System Memory:

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

To remove the Processor:

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

To remove the Wireless LAN Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the wireless LAN [page 2 - 12](#)

To remove the Modem :

1. Remove the battery [page 2 - 5](#)
2. Remove the modem [page 2 - 13](#)

To remove the Bluetooth:

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

To remove the Optical Device:

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

To remove the Keyboard:

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

Removing the Battery

1. Turn the computer **off**, and turn it over.
2. Slide the latches (1 & 2) the direction of the arrow, and hold it in place.
3. Slide the battery in the direction of the arrow 3.
4. Lift the battery 4 out.

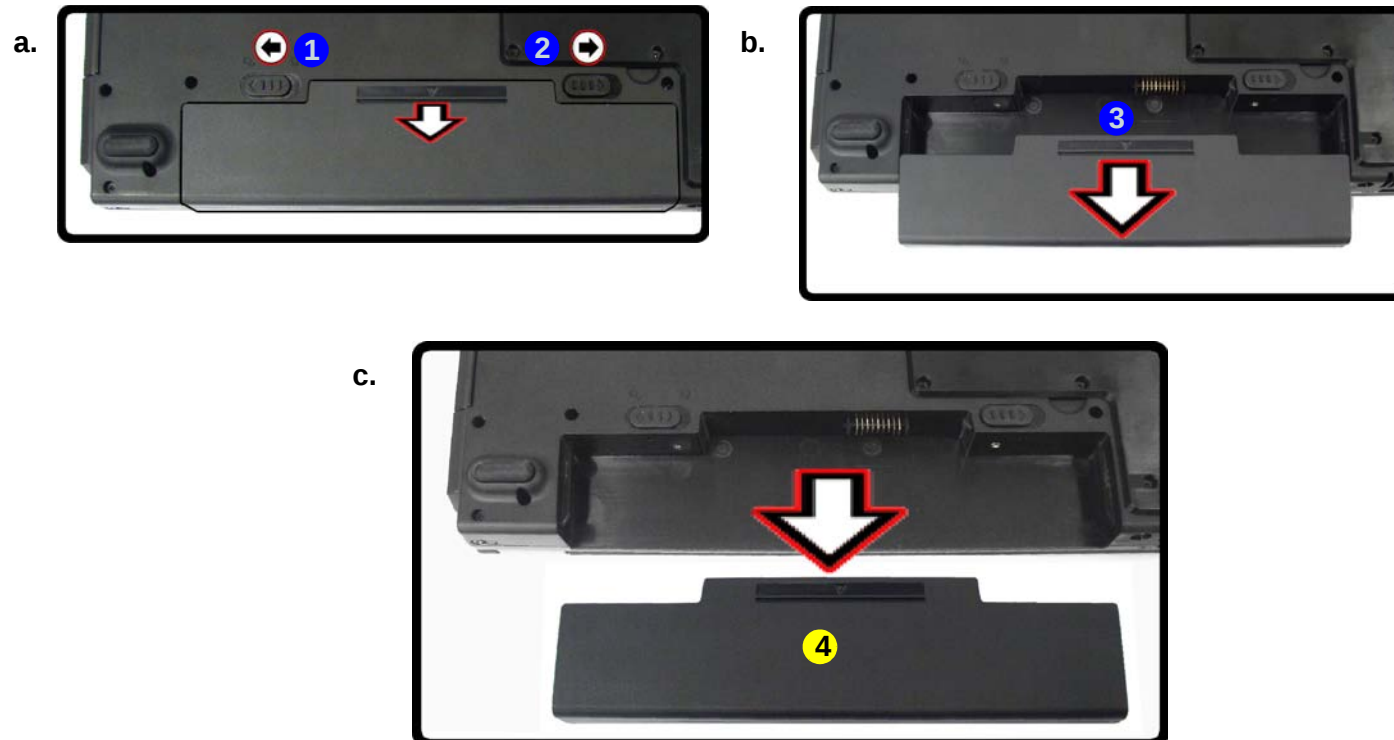
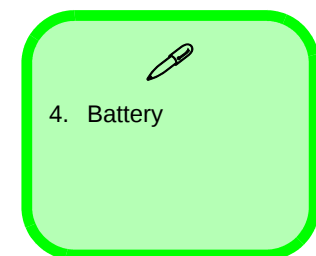


Figure 1
Battery Removal

- a. Slide the 2 latches and hold latch 2 in place.
- b. Slide the battery in the direction of the arrow.
- c. Lift the battery out.



Disassembly

Figure 2
**HDD Assembly
Removal**

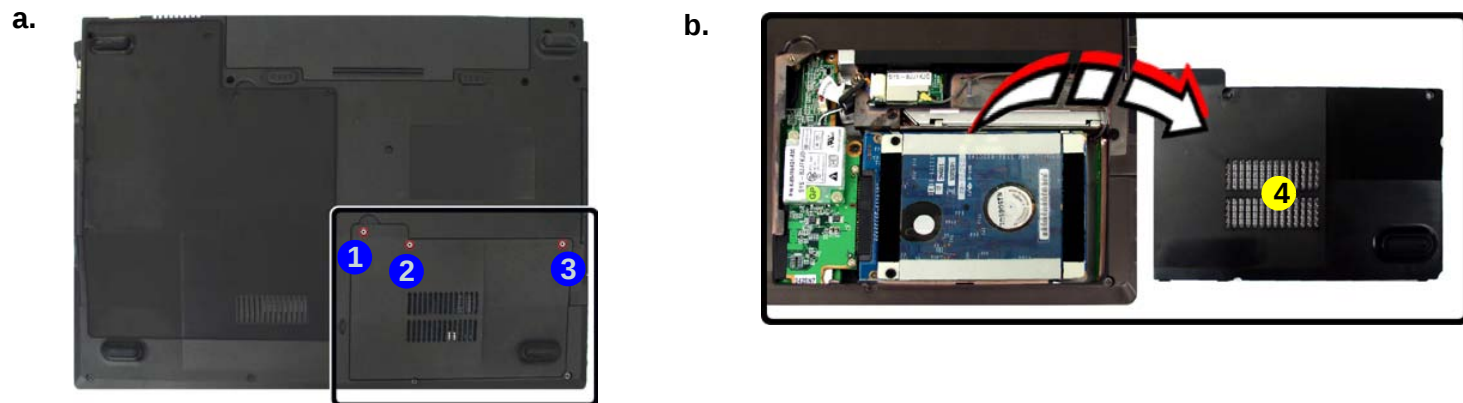
- Locate the HDD bay cover and remove the screws.
- Remove the bay cover.

Removing the Hard Disk Drive

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

Hard Disk Upgrade Process

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



4. HDD Bay Cover

- 3 Screw



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.

4. Carefully grip the mylar tab **5** and slide the hard disk in the direction of arrow .
5. Lift the hard disk up (**Figure d**) in the direction of arrow.
6. Remove the screws **6** - **7** and separate the mylar **8** from the hard disk **9** .
7. Reverse the process to install any new hard disk.

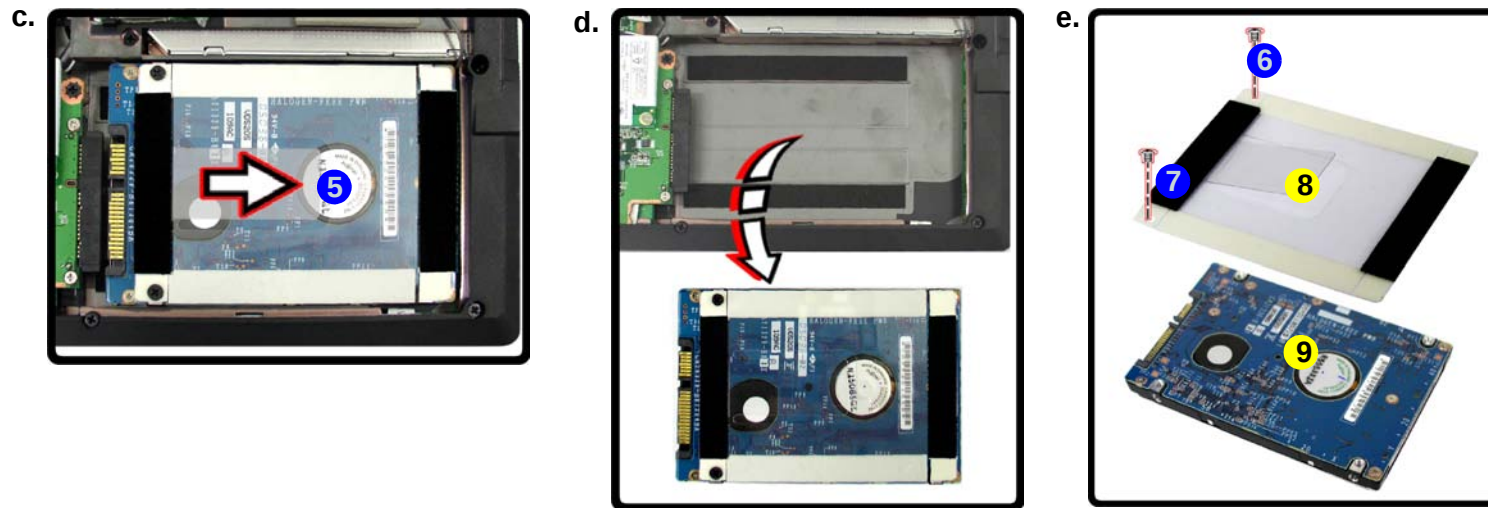


Figure 3
**HDD Assembly
Removal Sequence**

- c. Slide the HDD in the direction of the arrow.
- d. Lift the HDD out of the bay.
- e. Remove the screws and separate the mylar cover from the HDD.



8. Mylar Cover
9. HDD

Disassembly

Figure 4
**RAM Module
Removal**

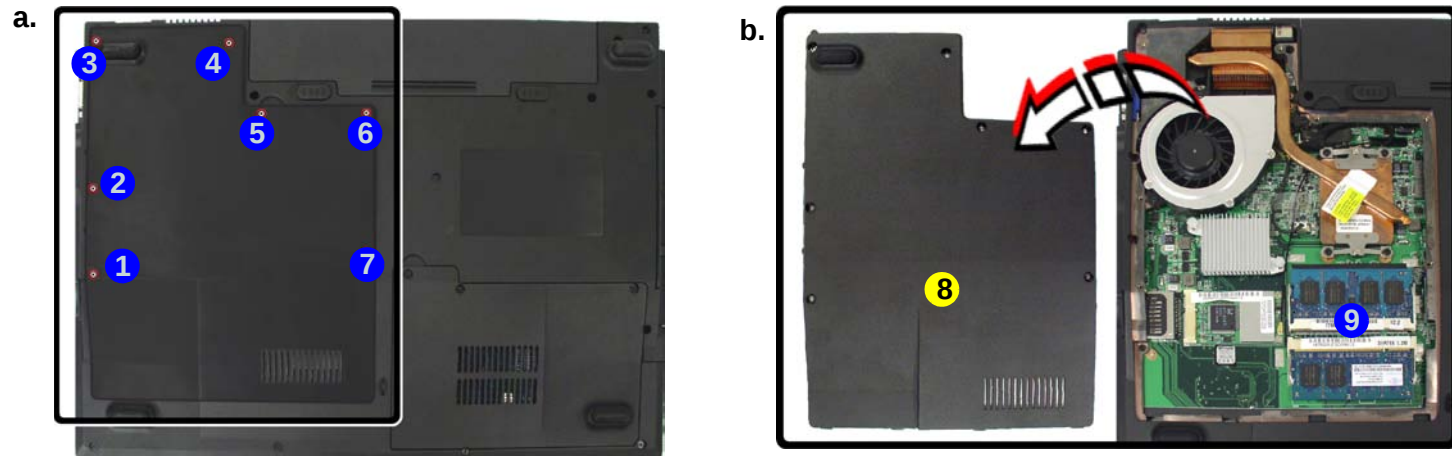
- Remove the screws.
- Remove the cover.

Removing the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting **DDRII** 677MHz. The main memory can be expanded up to 2GB. The SO-DIMM modules supported are 256MB, 512MB and 1024MB **DDRII** 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 CPU/RAM bay cover, and remove screws ① - ⑦.
- Remove the bay cover ⑧.
- The RAM will be visible at point ⑨ on the mainboard.



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.

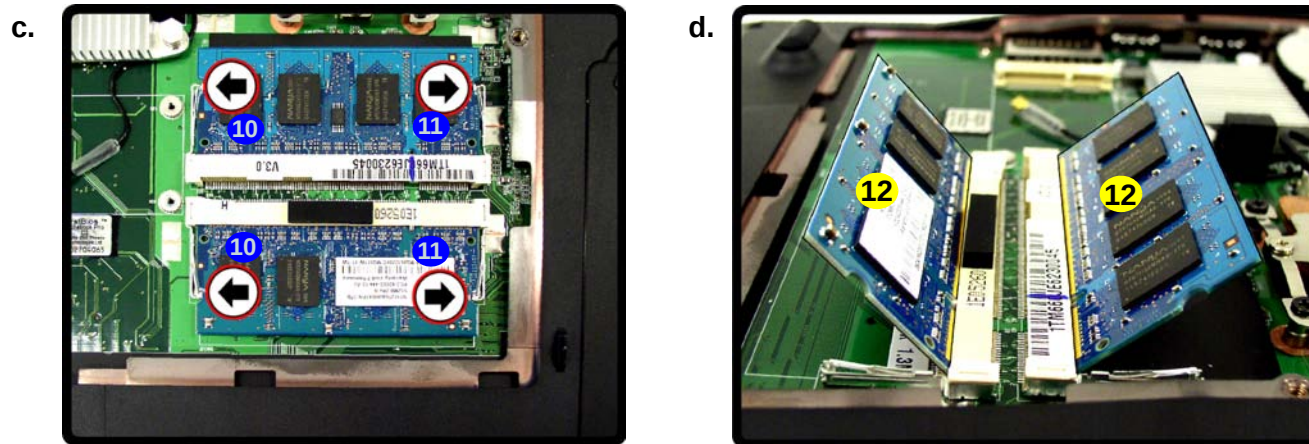


8. CPU/RAM Bay Cover

- 7 Screws

Figure 5
Memory Removal Sequence

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



- 7. Pull the latches to release the second module if necessary.
- 8. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
- 9. The module 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.
- 10. Press the module down towards the mainboard until the slot levers click into place to secure the module.
- 11. Replace the bay cover and the screws (see [page 2 - 8](#)).
- 12. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.



12 Ram Module(s)

Disassembly

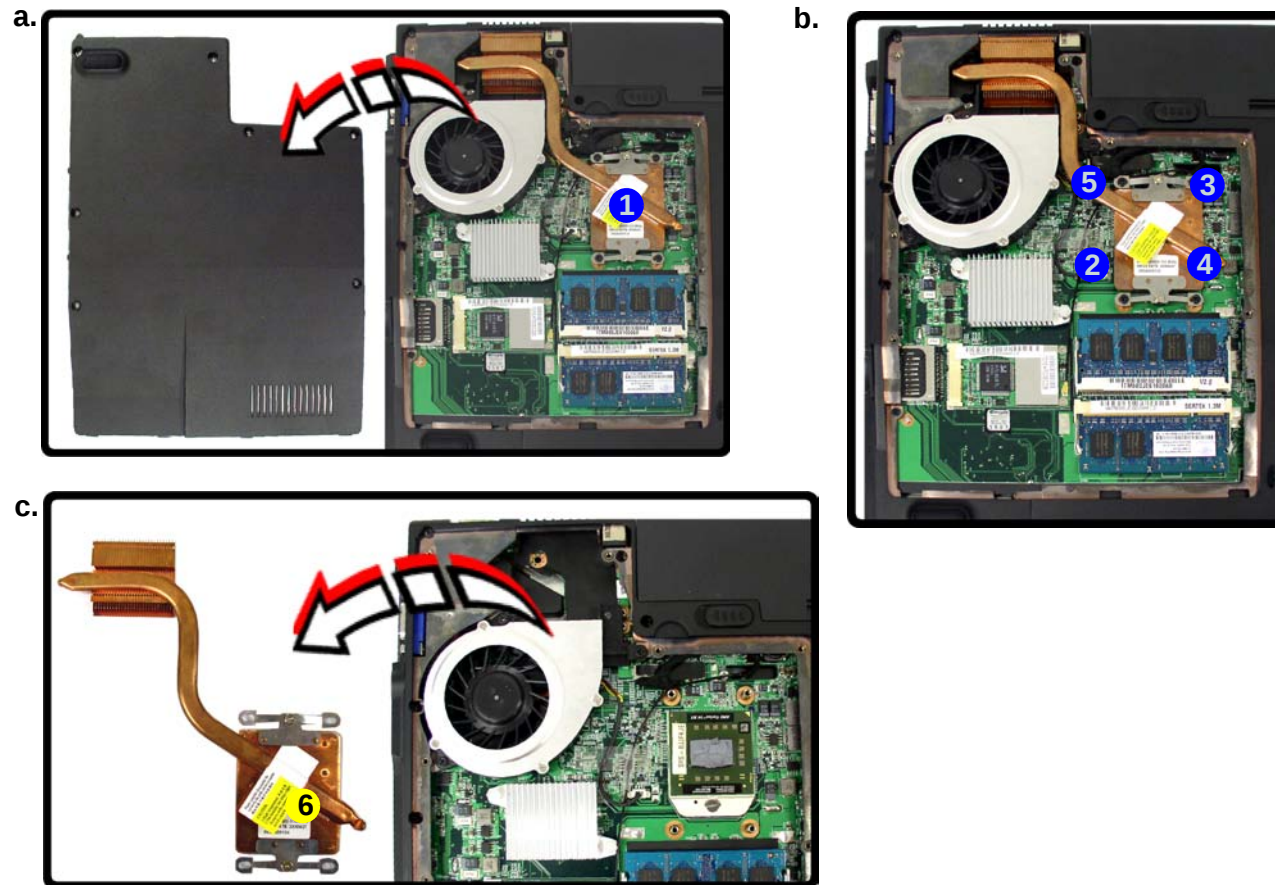
Figure 6

Processor Removal

- Remove the cover and locate the heat sink.
- Remove the 4 screws in the order indicated.
- Remove the heat sink.

Removing the Processor

- Turn **off** the computer, and remove the battery ([page 2 - 5](#)) and the CPU/RAM bay cover ([page 2 - 8](#)).
- The CPU heat sink will be visible at point **1** on the mainboard.
- Remove screws **2** - **5** from the heat sink in the order indicated.
- Carefully lift up the heat sink **6** ([Figure c](#)) off the computer.



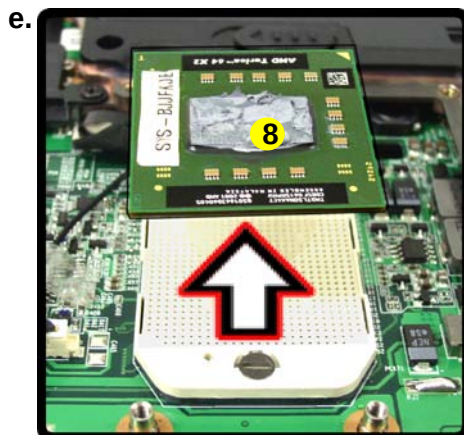
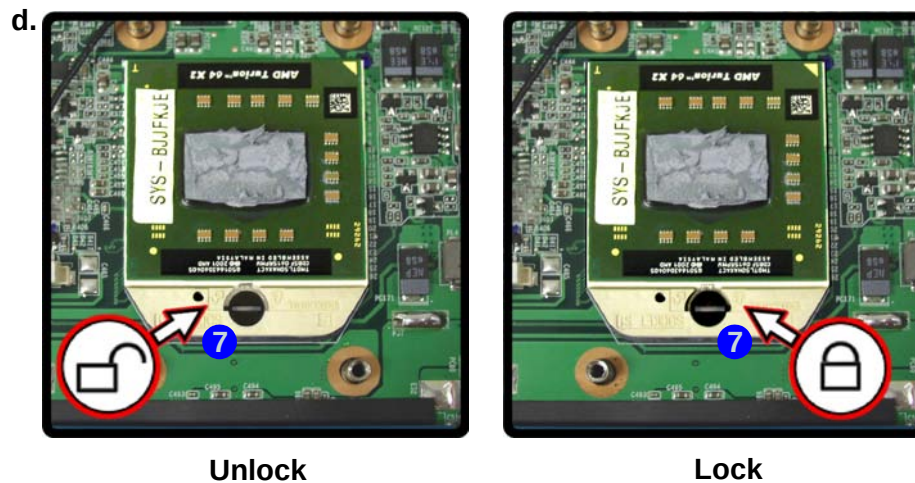
6. Heat Sink

- 4 Screws

5. Turn the release latch **7** towards the unlock symbol , to release the CPU (**Figure d**).
6. Carefully (it may be hot) lift the CPU **8** 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!).

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.



8. CPU

Disassembly

Figure 8
**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. Remove the WLAN module.

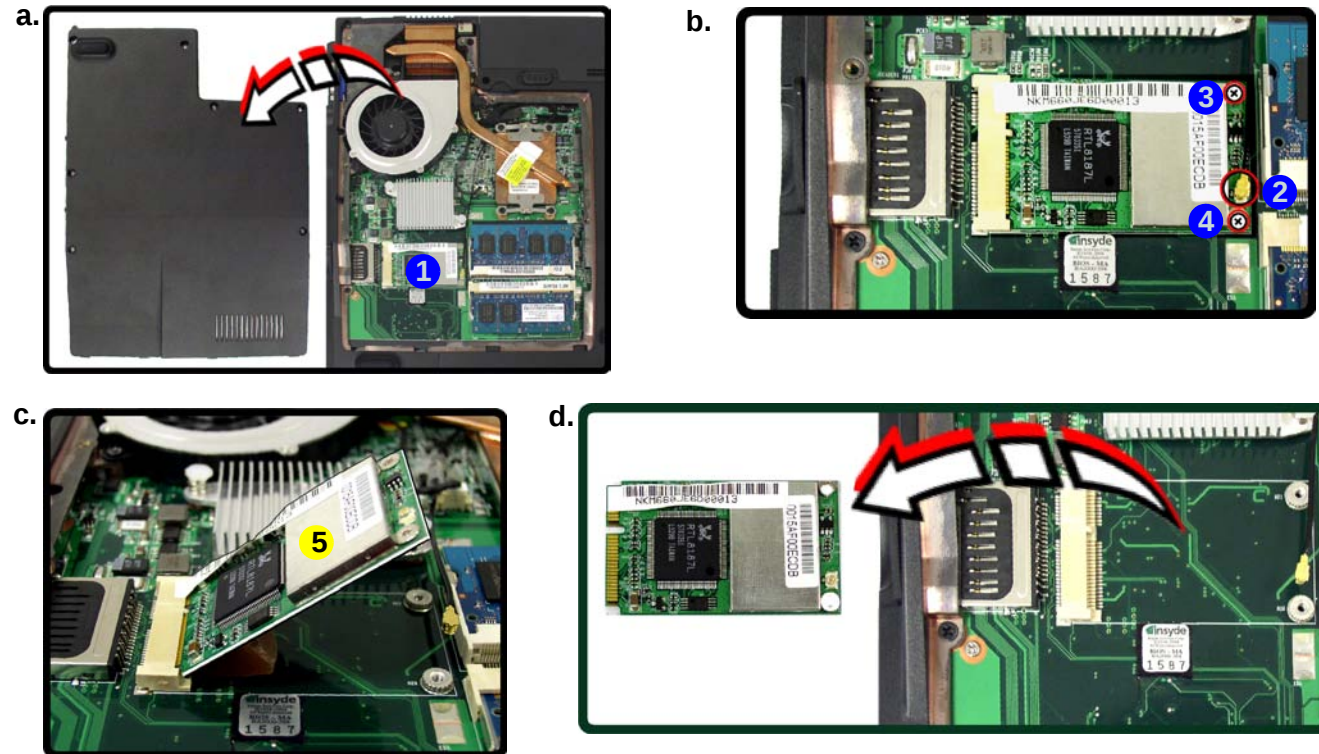
Note: Make sure you reconnect the antenna cable to the “Main” socket (*Figure a*).

5. WLAN Module

- 2 Screws

Removing the Wireless LAN Module

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



Removing the Modem

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

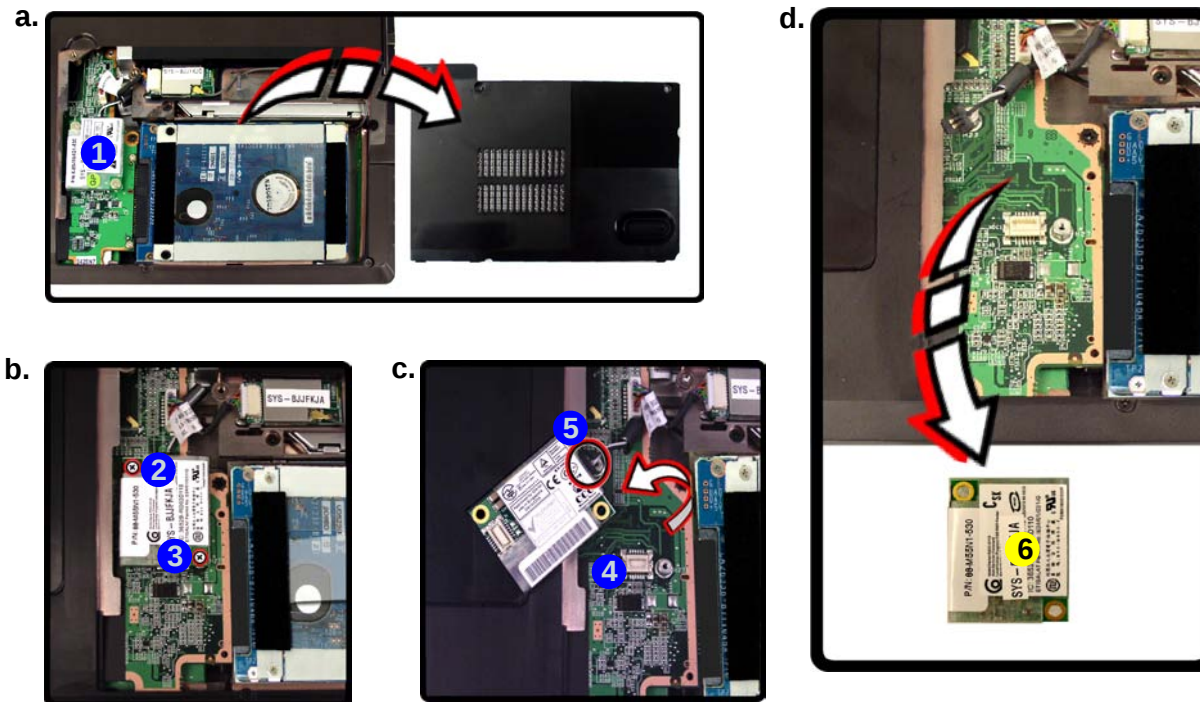


Figure 9
Modem Removal

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

6. Modem

- 2 Screws

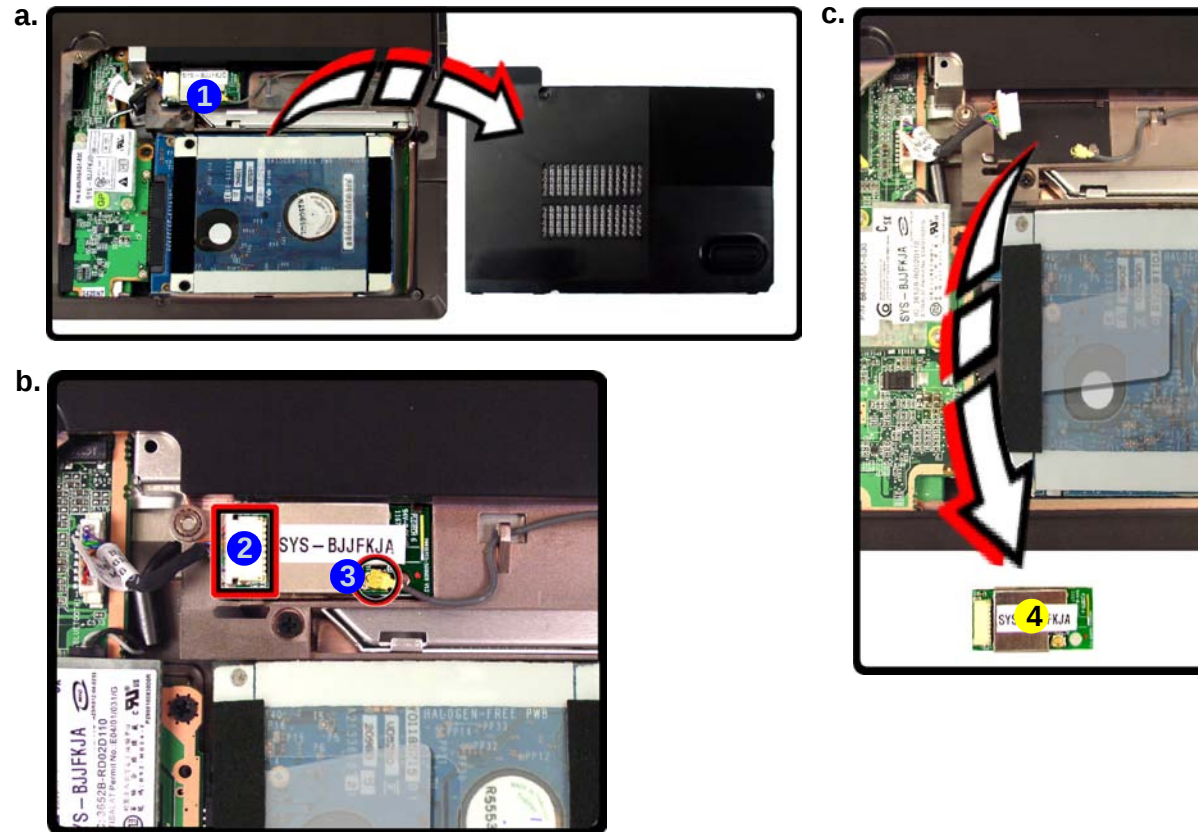
Disassembly

Figure 10
Bluetooth Removal

- Remove the cover and locate the Bluetooth module.
- Separate the connector and disconnect the cable.
- Remove Bluetooth module.

Removing the Bluetooth Module

- Turn off the computer, remove the battery ([page 2 - 5](#)) and remove the hard disk bay cover ([page 2 - 6](#)).
- The Bluetooth module will be visible at point ① on the mainboard.
- Carefully separate the module from the connector ② and disconnect the cable ③.
- Lift the Bluetooth module ④ ([Figure d](#)) up and off the computer.



4. Bluetooth Module

Removing the Optical (CD/DVD) Device

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

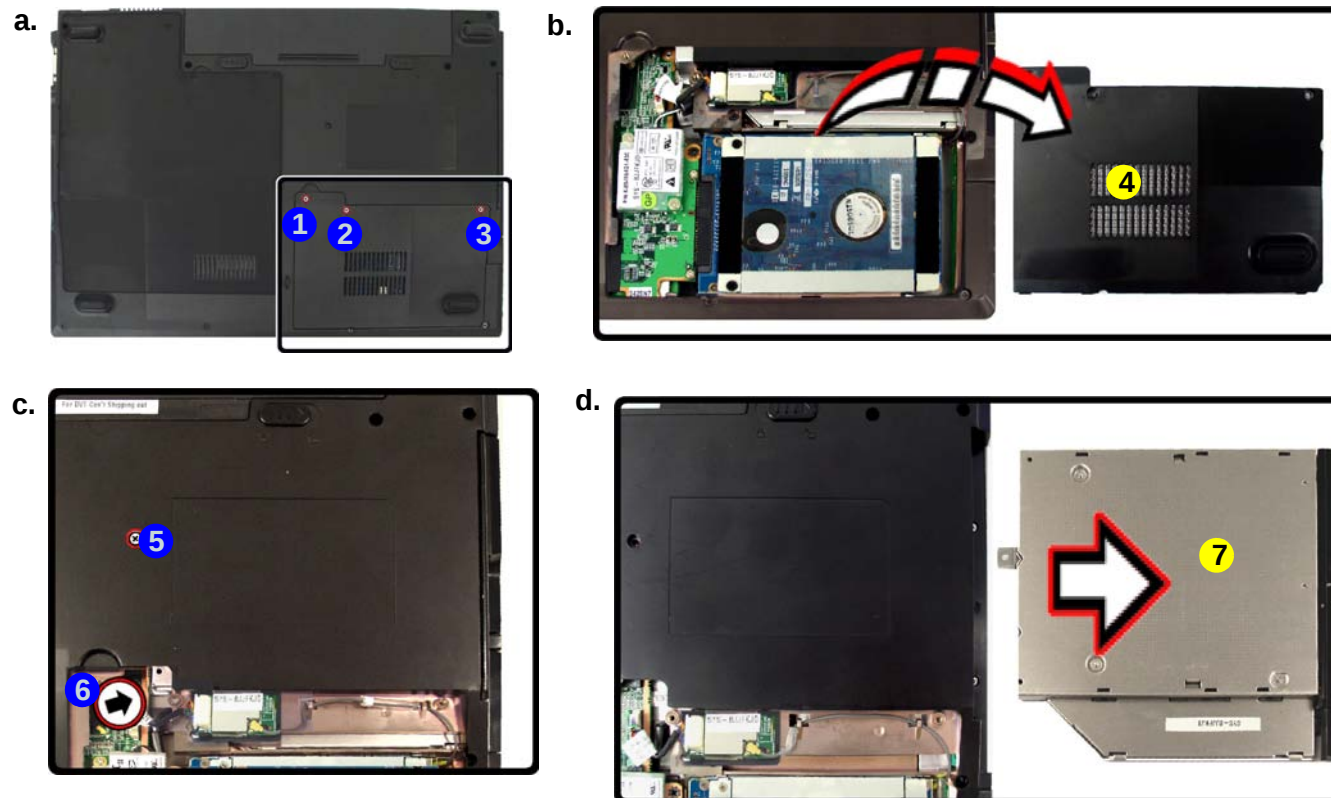


Figure 11
Optical Device
Removal

- a. Remove the screws.
- b. Remove the cover.
- c. Remove the screw and push the optical device out off the computer at point 6.
- d. Remove the optical device.



- 4 HDD Bay Cover
- 7 Optical Device

- 4 Screws

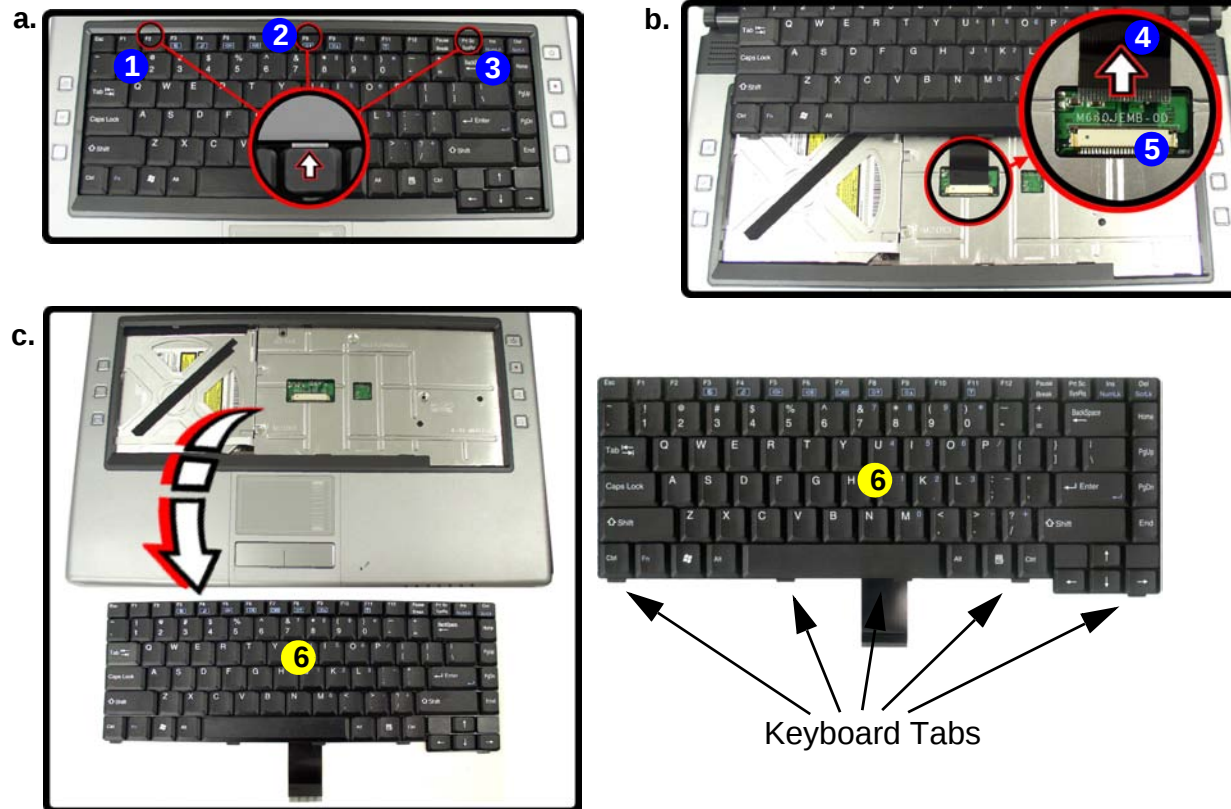
Disassembly

Figure 12
Keyboard Removal

- Press the three 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 **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).
- Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable ([Figure b](#)).
- Disconnect the keyboard ribbon cable **4** from the locking collar socket **5**.
- Carefully lift up the keyboard **6** ([Figure c](#)) off the computer.



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.



6. Keyboard

Appendix A:Part Lists

This appendix breaks down the *M660JE/M665JE* series notebook’s construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

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

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

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

Part Lists

Part List Illustration Location

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

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

Part	M660JE/M665JE
Top - (M660JE)	<i>page A - 3</i>
Bottom	<i>page A - 4</i>
LCD - (M660JE)	<i>page A - 5</i>
Top - (M665JE)	<i>page A - 6</i>
LCD - (M665JE)	<i>page A - 7</i>
HDD	<i>page A - 8</i>
COMBO	<i>page A - 9</i>
DVD Dual	<i>page A - 10</i>

Top (M660JE)

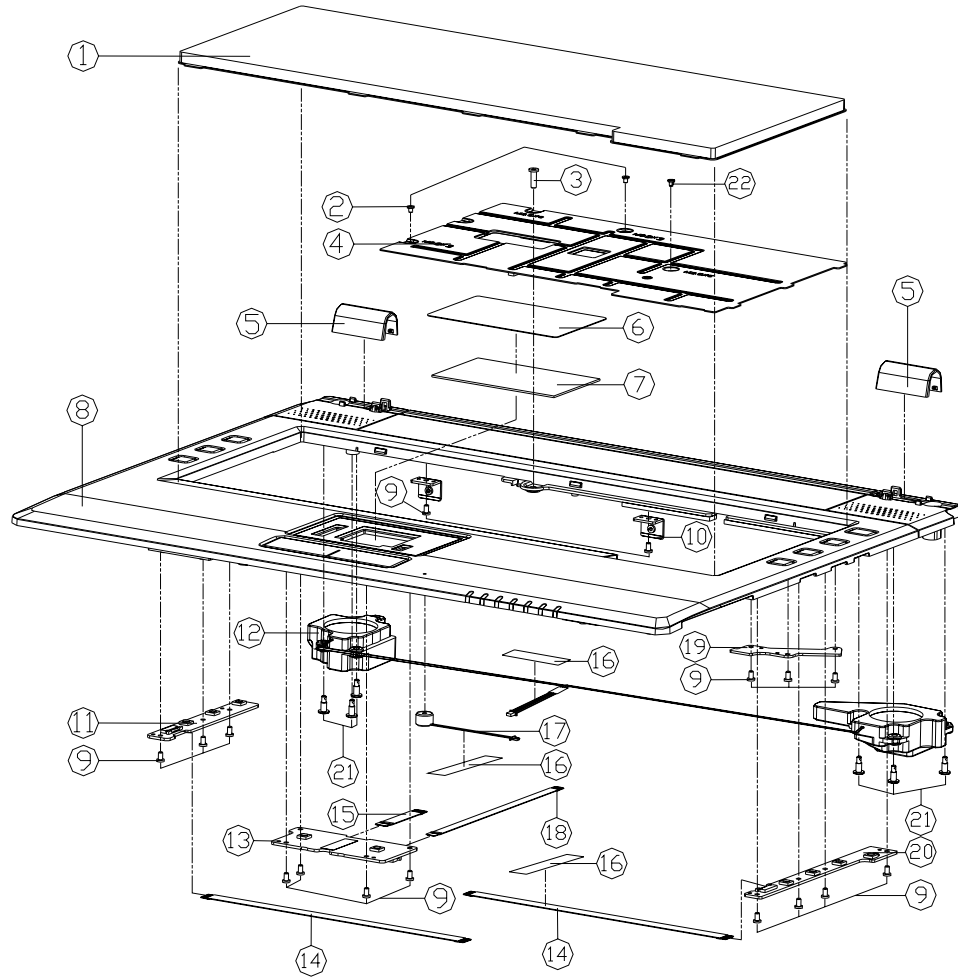


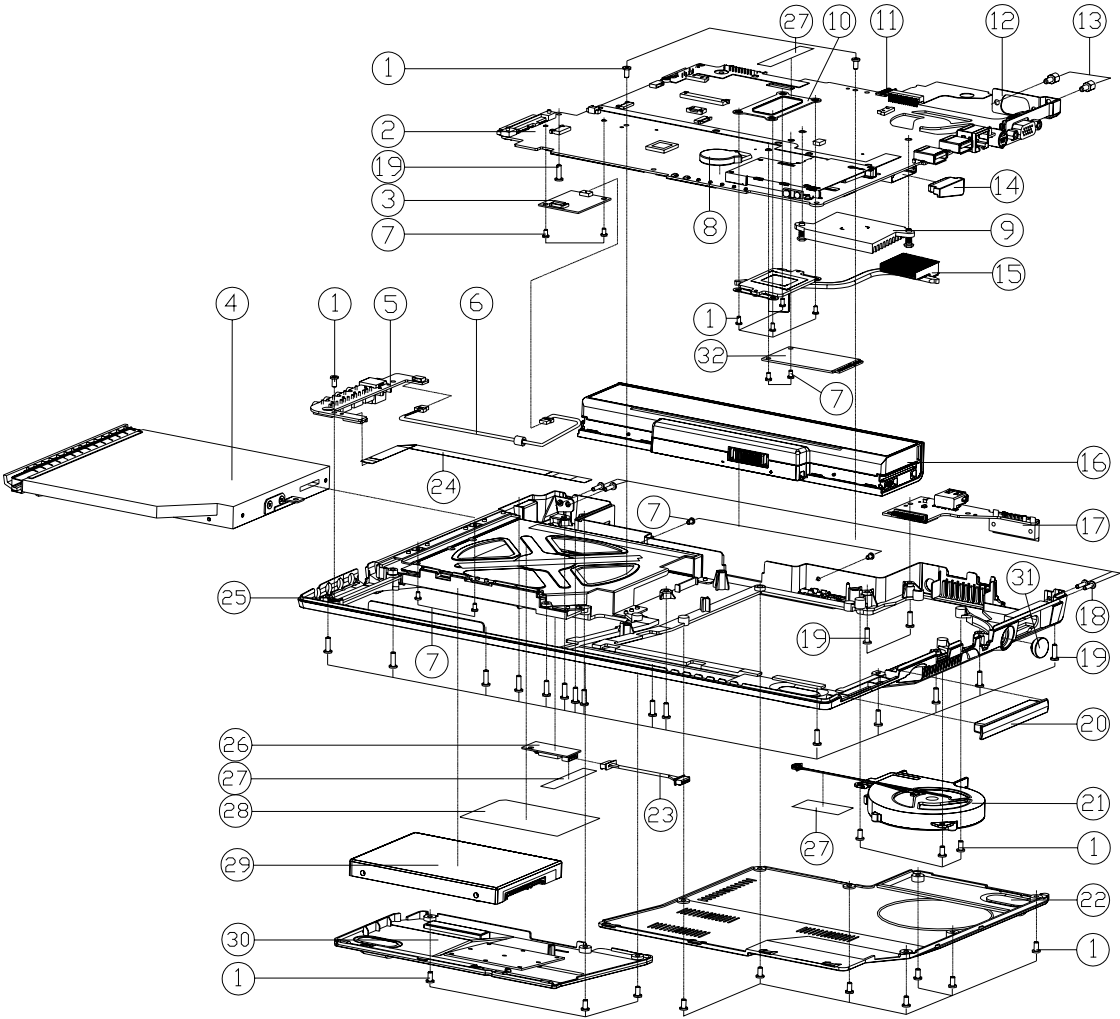
Figure A - 1
Top (M660JE)

ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD(OPTION)	6-80-M55G0-011-1	
2	SCREW M2*3L KI NI ICT GY-PATCH	6-35-B1120-3RE	
3	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-6R0	
4	KEYBOARD SHIELDING M660JE	6-33-M66E7-010	
5	HINGE COVER FOR M660N	6-42-M66N2-011	
6	TOUCH PAD MYLAR (C) 8825 M55G184U/0K	6-40-M55G2-024	
7	TOUCH PAD TM61PDZIR389 M660JE	6-49-M66E2-010	
8	TOP CASE ASS'Y M660N (PVT) (M660JE)	6-39-M66N2-013	
9	SCREW M2*3SL KI NI ICT NY	6-35-B1120-350	
10	REAR REINFORCE BRACKET	6-33-M66N2-031	
11	HOTKEY LT BOARD	6-77-M66NS-D11	
12	SPEAKER-L/R 25W/80H 15V 40W 185W/240W	6-23-SM66N-012	
13	CLICK BOARD	6-77-M66N2-D02	
14	FFC CABLE FOR PWR-HOTKEY 6P PITCH=1.0MM	6-43-M66N0-010	
15	FFC CABLE FOR TOUCHPAD BOARD 12P PITCH=0.5	6-43-M66N0-030	
16	TAPE MYLAR (C) MYLAR M550J	6-40-M55J2-030	
17	MICPHONE 6MM*35MM*6.05-FIL-1D 10V/2V 22K	6-23-EM55G-010	
18	FFC CABLE FOR CLICK BOARD 4P PITCH=1.0MM	6-43-M66N0-020	
19	CABLE ALIGN BRACKET	6-33-M66N2-040	
20	POWER HOT BOARD	6-77-M66NS-D01	
21	SCREW FOR SPEAKER M2	6-35-Z0220-000	
22	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6125-5RA	FOR M660S

Part Lists

Bottom

Figure A - 2
Bottom



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5XBL KI BK/Z ICT NY (80)	6-35-B612S-SRA	
2	MAIN BOARD V3.0 M660JE (80)	6-77-M660D-003	
3	MOUSE AZUL/ANSEY 12 PIN (MOTOROLA SOLID)	6-88-M55SI-530	
3	MOUSE 12 PIN (MOTOROLA SOLID)	6-88-M66SI-620	
4	DVD RW 18 PHILIPS DVD/READ ASSY M660 (80)	6-79-M66E0-010	
4	CD RW /DVD 24X PHILIPS DVD/READ ASSY M660 (80)	6-79-M66NX-010	
5	AUDIO BOARD V4.0 (80)	6-77-M66NB-D04	
6	MDC CABLE 2P AVG.30 (80)	6-43-M66ND-050	
7	SCREW M2.5XBL KI NI ICT GY-PATCH (80)	6-35-B112D-3RE	
8	BAT 2000 3V 230MH V/CABLE 14MM (80)	6-23-2201S-P39	
9	HEATING HT FOR NORTH BRIDGE M660JE (80)	6-33-M66EN-011	
10	CPU SUPPORTER M660JE (80)	6-33-M66ES-010	
11	REWORK BRACKETING LINK UP SERIAL B (80)	6-33-M66NS-050	
12	L/D BRACKET FOR M/B (80)	6-33-M66NS-011	
13	KEY STK M4000-994-M660 M660 (80)	6-34-9600D-00B	
14	CARD READER RUBBER COVER (80)	6-47-M66NE-010	
15	CPU HEATSINK MODULE M660JE (80)	6-31-M66EN-101	
16	BATTERY L1 4000mAh FOR M660JE /PAN (80)	6-87-M66N3-453	
17	USB BOARD V3.0 (80)	6-77-M66N3-D03	
18	SCREW M2.5XBL KI BK/Z ICT NY (80)	6-35-B612S-BR0	
19	SCREW M2.5XBL KI BK/Z NY ICT (80)	6-35-B612S-BR0	
20	RUBBER COVER FOR NEW CARD SOCKET (80)	6-47-M66N3-020	
21	CPU FAN MODULE (80)	6-31-M66NN-204	
22	CPU COVER MODULE M660JE (80)	6-42-M66ES-101	
23	BLUETOOTH CABLE 8P AVG.30 (80)	6-43-M66NB-010	
24	ITE CABLE FOR AUDIO JACK BOARD TOP PITCH (80)	6-43-M66ND-041	
25	BOTTOM CASE MODULE (80)	6-39-M66N3-013	
26	BLUETOOTH 2.0 8 PIN MODULE (80)	6-88-M55JS-390	
27	TAPE W/LAR 100 MYLAR M550J (80)	6-40-M55JC-030	
28	PRODUCT LABEL FOR M660JE (80)	6-45-M66S3-010-C	
28	PRODUCT LABEL FOR M660JE (80)	6-45-M66S3-010-C	
29	V/D HDD ASSY M660N (80)	6-79-M66NJ-010	
30	MDC CABLE 2P AVG.30 (80)	6-43-M66NB-010	
31	TV-OUT RUBBER (80)	6-47-M66S3-010	
32	BR21 3HC MINI CAROUSEL REALTEK CHIPSET (80)	6-88-M7702-700	

LCD (M660JE)

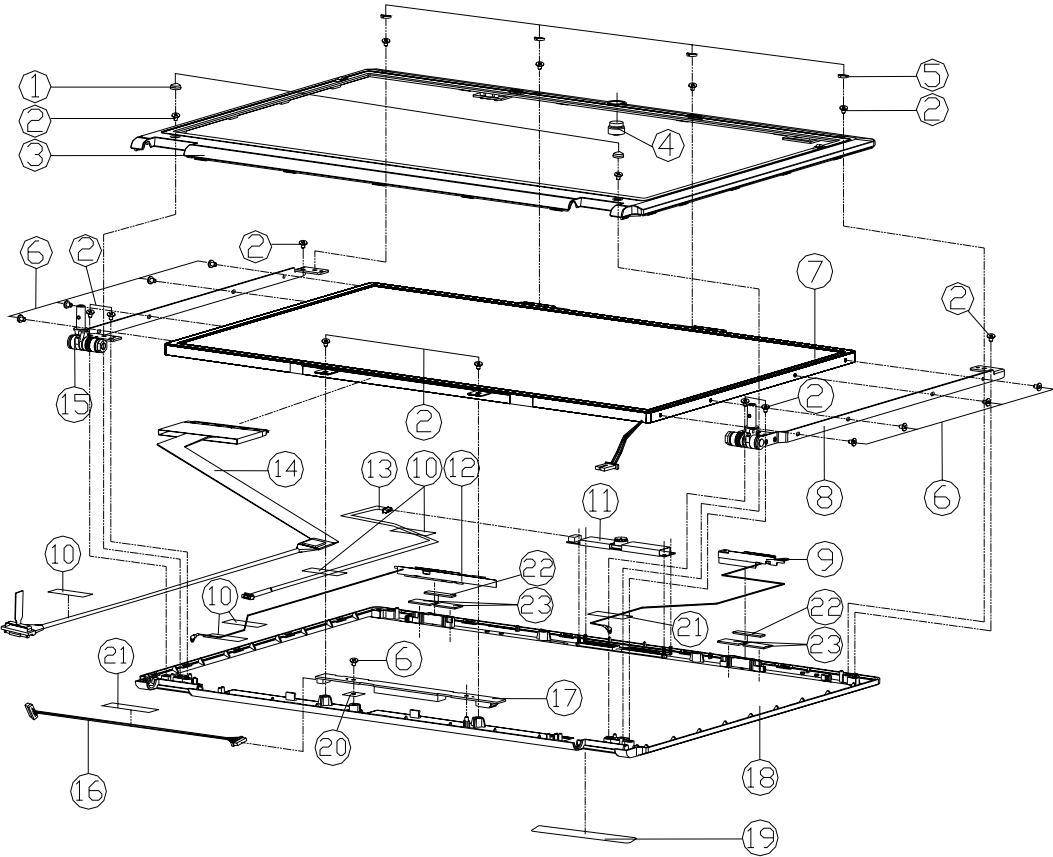
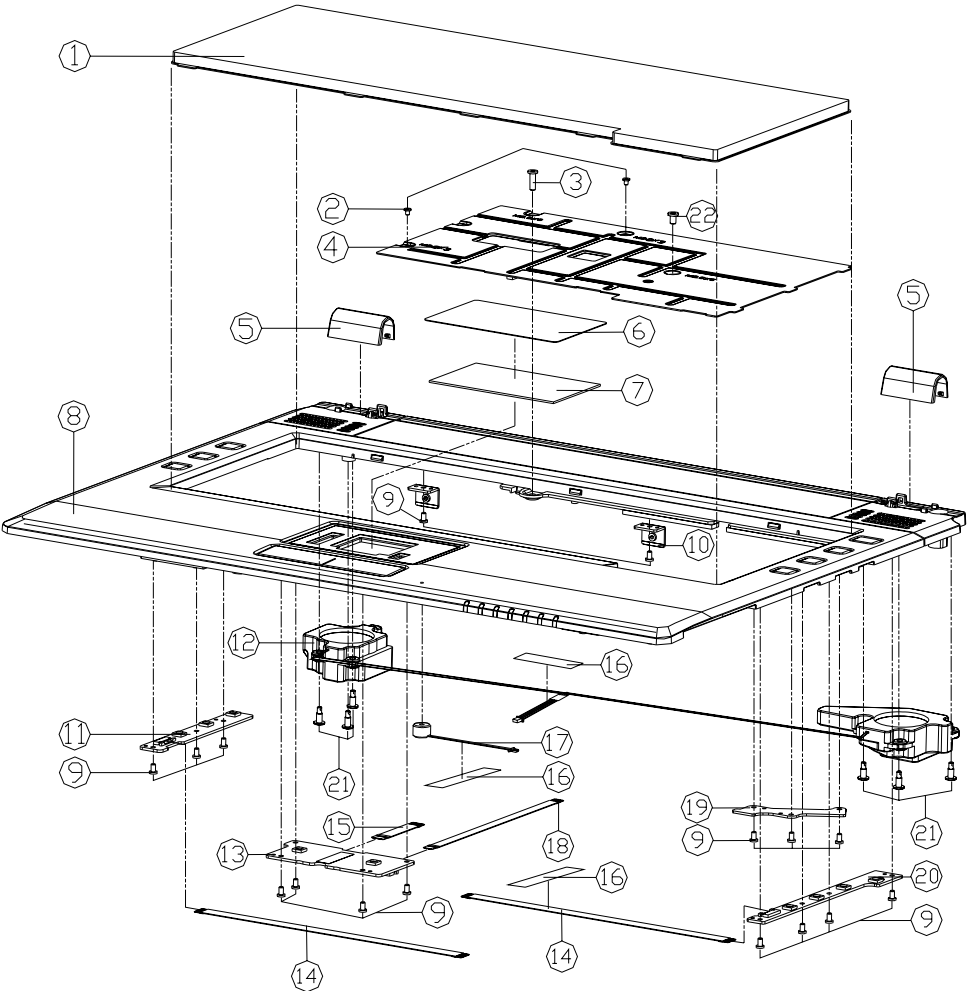


Figure A - 3
LCD (M660JE)

ITEM	PART NAME	PART NO	REMARK
1	LCD RUBBER	6-47-M56A1-010	
2	SCREW M2.5*SL K1 NI ICT NY	6-35-B6125-5RA	
3	LCD FRONT COVER MODULE	6-39-M66N1-012	
4	W/O CCD RUBBER/RUBBER M550G	6-47-M55GT-020	
5	LCD RUBBER Ø6	6-47-M66N1-030	
6	SCREW M2*SL K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
7	LCD T AU B54EVIH V70GLARE TYPD 15.4" Vx	6-50-L8260-G02	FOR AU
7	LCD T OPT CLAU54VW4S 15.4" VxGA (2800X800	6-50-L8262-C00	FOR CPT
7	LCD T OPT CLAU54VW4GLARE TYPD 15.4" Vx	6-50-L8260-C01	FOR CPT
7	LCD T OPT CLAU54VW4GLARE TYPD 15.4" Vx	6-50-L8260-C03	FOR CPT
7	LCD T LG LP154V02-B1K5 15.4" VxGA+ 65NM	6-50-LA265-L02	FOR LG
7	LCD T SAMSUNG LTN54P1-L02 (V00) 15.4" Vx	6-50-LA265-M00	FOR SAMSUNG
8	LCD HINGE ASSY R M660N	6-33-M66N1-011	
9	M660N ANTENNA WITH BLACK CABLE AND PEY CONNECT	6-23-7M66N-022	
10	TAPE: MYLAR (C) MYLAR M550J	6-40-M55J2-030	
11	CMOS VIDEO CAMERA B10A-0V/550-D-50IG L3W	6-88-M55GC-612	(OPTION)
12	M660N BT ANTENNA WITH GRAY CABLE AND PEY	6-23-7M66N-012	
13	CCD CABLE 5P AWG30 (M) M660N-D04	6-43-M66N1-062	
14	LCD CABLE FOR 15.4" VxGA+VGA+VGA	6-43-M66N1-011	FOR M660N
14	LCD CABLE FOR 15.4" VxGA+VGA+VGA	6-43-M66E1-010	FOR M660JE
15	LCD HINGE ASSY L M660N	6-33-M66N1-021	
16	INVERTER CABLE Ø 4x0.28-1/3 0M (M) M660N	6-43-M66N2-053	
17	INVERTER MODULE FOR M550G (OPT)	6-76-M52GR-010-2	FOR M660N
17	INVERTER EPS V2.0 ASSY M660S	6-79-M66SR-010	FOR M660JE/M660S
18	LCD BACK COVER MODULE	6-39-M66N1-023	
19	FOR M550G (H) LOGO STYLE-NOTE	6-45-M55G1-020	
20	MYLAR FOR INVERTER (4x10.4x0.4) M660N	6-40-M66N3-060	
21	TAPE: MYLAR (A) MYLAR M550J	6-40-M55J2-010	
22	SPONGE (L33*W5*H0.65MM) (H) M660N	6-47-M66S1-010	Only FOR LCD AU
23	SPONGE (L22*W10*H1.65) (H) M660N	6-47-M66S1-020	Only FOR LCD AU

Top (M665JE)

Figure A - 4
Top (M665JE)



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD(OPTION)	6-80-M55G0-011-1	
2	SCREW M2x3L KI NI ICT GY-PATCH	6-35-B1120-3RE	
3	SCREW M2.5xBL KI BK/Z NY ICT	6-35-B6125-8R0	
4	KEYBOARD SHIELDING M660JE	6-33-M66E7-010	
5	HINGE COVER FOR M665N	6-42-M66E2-010	
6	TOUCH PAD MYLAR (C)MYLAR M550J	6-40-M55G2-024	
7	TOUCH PAD TM61PDZIR389 M660JE	6-49-M66E2-010	
8	TOP CASE MODULE M665N	6-39-M66E2-012	
9	SCREW M2x3.5L KI NI ICT NY	6-35-B1120-350	
10	REAR REINFORCE BRACKET	6-33-M66N2-031	
11	HOTKEY LT BOARD	6-77-M66N5-D11	
12	SPEAKER-L/R 250mW 15W 40MM 185MM/240MM	6-23-SM66N-012	
13	CLICK BOARD	6-77-M66N2-D02	
14	FFC CABLE FOR PWR-HOTKEY 6P PITCH=1.0MM	6-43-M66N0-010	
15	FFC CABLE FOR TOUCHPAD BOARD 12P PITCH=0.5	6-43-M66N0-030	
16	TAPE MYLAR (C)MYLAR M550J	6-40-M55J2-030	
17	MICPHONE 6MMx35MMx6.25-TOL-UP 10V-2V 22K	6-23-EM55G-010	
18	FFC CABLE FOR CLICK BOARD 4P PITCH=1.0MM	6-43-M66N0-020	
19	CABLE ALIGN BRACKET	6-33-M66N2-040	
20	POWER HOT BOARD	6-77-M66N5-D01	
21	SCREW FOR SPEAKER M2	6-35-Z0Z20-000	
22	SCREW M2.5x5L KI BK/Z ICT NY	6-35-B6125-SRA	FOR M665S

LCD (M665JE)

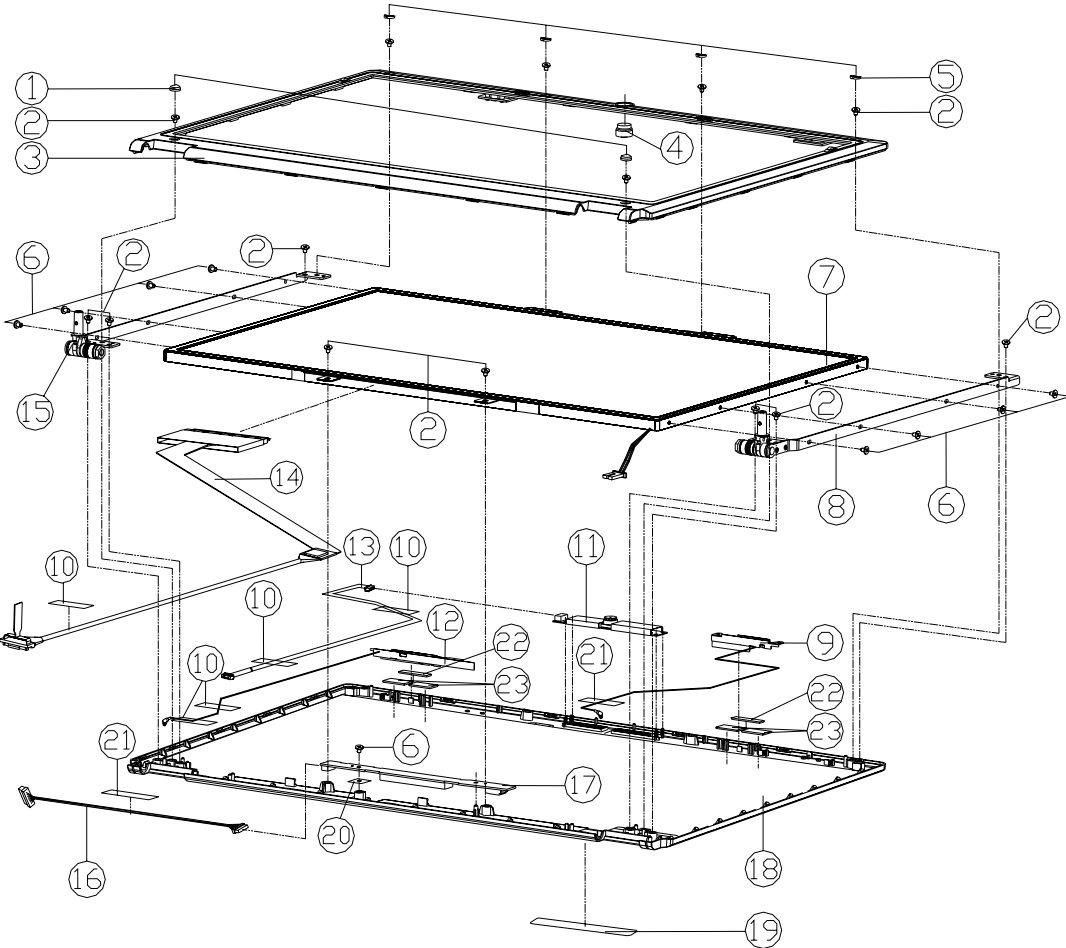


Figure A - 5
LCD (M665JE)

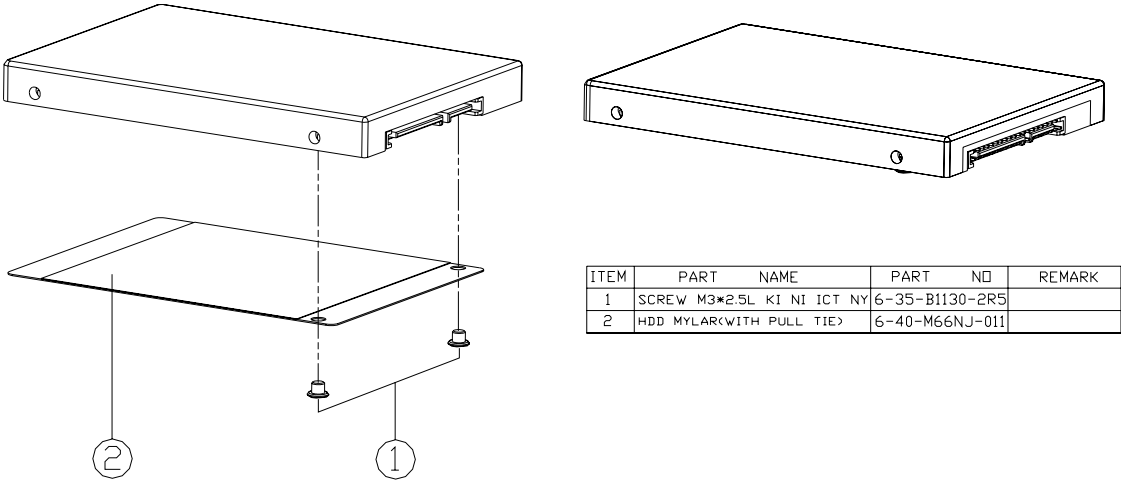
ITEM	PART NAME	PART NO	REMARK
1	LCD RUBBER 無鉛	6-47-M56A1-010	
2	SCREW M2.5*SL K1 NI ICT NY 無鉛	6-35-B6125-SRA	
3	LCD FRONT COVER MODULE 無鉛	6-39-M66N1-011	
4	W/O CCD RUBBER/RUBBER M550G 無鉛	6-47-M55GT-020	
5	LCD RUBBER Ø6 無鉛	6-47-M66N1-030	
6	SCREW M2*SL K1 NI ICT GTY-PATCH 無鉛	6-35-B1120-3RE	
7	LCD T AU B104EVO1 V7GLARE TYPE 15.4" WX 無鉛	6-50-L8260-G02	FOR AU
7	LCD T CPT CLAM54W40GLARE TYPE 15.4" WX 無鉛	6-50-L8262-C00	FOR CPT
7	LCD T CPT CLAM54W40GLARE TYPE 15.4" V 無鉛	6-50-L8260-C01	FOR CPT
7	LCD T CPT CLAM54W40GLARE TYPE 15.4" V 無鉛	6-50-L8260-C03	FOR CPT
7	LCD T LG LP154V02-BK15 15.4" WXGA+ 65NM 無鉛	6-50-LA265-L02	FOR LG
7	LCD T SAMSUNG LTN154P1-LB2 (V00) 15.4" V 無鉛	6-50-LA265-M00	FOR SAMSUNG
8	LCD HINGE ASSY R M660N 無鉛	6-33-M66N1-011	
9	MAIN W/L ANTENNA WITH RIBB CABLE AND PEX CONNECT 無鉛	6-23-7M66N-022	
10	TAPE MYLAR (C) MYLAR M550J 無鉛	6-40-M55J2-030	
11	ONS VIDEO CAMERA INEA-DV9630-D-50IG 13M 無鉛	6-88-M55GC-612	(OPTION)
12	MAIN BT ANTENNA WITH GRAY CABLE AND PEX 無鉛	6-23-7M66N-012	
13	CCD CABLE 5P AVG.30 無鉛	6-43-M66N1-062	
14	LCD COAXIAL CABLE FOR 15.4" WXGA+ WXGA+ 無鉛	6-43-M66N1-011	
15	LCD HINGE ASSY L M660N 無鉛	6-33-M66N1-021	
16	INVERTER CABLE 4P AVG.28 無鉛	6-43-M66N2-053	
17	INVERTER MODULE FOR M520G (MPT) 無鉛	6-76-M52GR-010-2	FOR M665N
17	INVERTER EPS V20 ASSY M660S 無鉛	6-79-M66SR-010	FOR M665JE
18	LCD BACK COVER MODULE 無鉛	6-39-M66S1-022	
19	FOR M550G 無鉛	6-45-M55G1-020	
20	MYLAR FOR INVERTER (14X10.4X0.4) M660N 無鉛	6-40-M66NS-060	
21	TAPE MYLAR (A) MYLAR M550J 無鉛	6-40-M55J2-010	
22	SPONGE (L33*W5*H0.65MM 泡綿) 無鉛	6-47-M66S1-010	Only FOR LCD AU
23	SPONGE (L22*W10*H1.65 泡綿) 無鉛	6-47-M66S1-020	Only FOR LCD AU

A.Part Lists

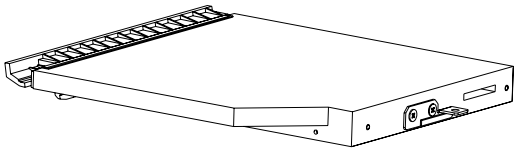
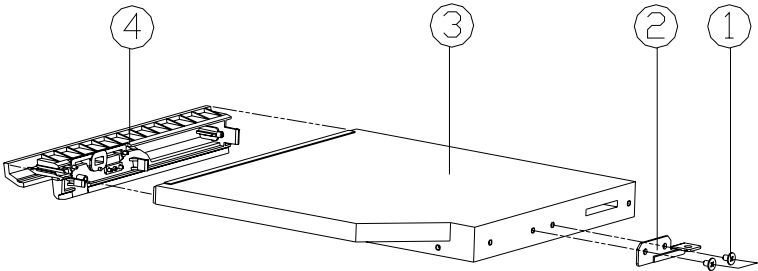
Part Lists

HDD

Figure A - 6
HDD



COMBO

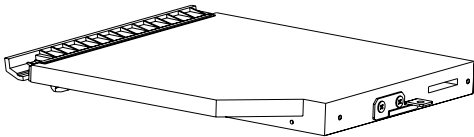
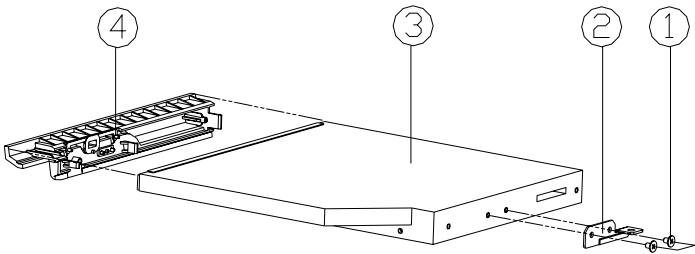


ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L KI NI ICT GTY-PATCH	6-35-B1120-3RE	
2	DDD FIX BRACKET M660N	6-33-M66NZ-010	
3	CD-RW/DVD 5 1/4" 24X 12.7MM TS-L462C TOSHI	6-85-907PX-T00	
3	CD-RW/DVD 5 1/4" 24X 12.7MM UJDA770CL-A PA	6-85-907PX-P00	
4	G BEZEL MODULE FOR DVD COMBO	6-42-M66NX-101	

Figure A - 7
COMBO

DVD Dual

Figure A - 8
DVD Dual



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
2	ODD FIX BRACKET M660N	6-33-M66NZ-010	
3	DVD/DUAL RW S 1/4" 8X 12.7MM SDVD8441 PHIL	6-85-A078X-C03	
4	G BEZEL MODULE FOR DVD DUAL M660N	6-42-M66NQ-101	

Appendix B:Schematic Diagrams

This appendix has circuit diagrams of the *M660JE/M665JE* 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>MCP51 SATA / IDE - Page B - 16</i>	<i>SUPER I/O - Page B - 30</i>
<i>AMD S1: HT - Page B - 3</i>	<i>MCP51 AUDIO / USB / MISC - Page B - 17</i>	<i>AUDIO ALC883 - Page B - 31</i>
<i>AMD S1: MISC - Page B - 4</i>	<i>MCP51 RGMII - Page B - 18</i>	<i>CHARGER, DC IN - Page B - 32</i>
<i>AMD S1: Memory - Page B - 5</i>	<i>MCP51 PWR / GND - Page B - 19</i>	<i>SYSTEM POWER - Page B - 33</i>
<i>AMD S1: Power - Page B - 6</i>	<i>HDD & CDROM - Page B - 20</i>	<i>+1.8V, 0.9V - Page B - 34</i>
<i>DDR2-1 - Page B - 7</i>	<i>CARD READER/1394 - Page B - 21</i>	<i>+1.2VS, +1.5VS - Page B - 35</i>
<i>DDR2-2 - Page B - 8</i>	<i>CARD SOCKET/NEW CARD - Page B - 22</i>	<i>VCORE - Page B - 36</i>
<i>C51 HT CPU - Page B - 9</i>	<i>LAN RTL8201CL - Page B - 23</i>	<i>PWR HOT BOARD - Page B - 37</i>
<i>C51 HT MCP - Page B - 10</i>	<i>USB & CCD, MDC, Inverter - Page B - 24</i>	<i>HOTKEY LT BOARD - Page B - 38</i>
<i>C51 PCI Express - Page B - 11</i>	<i>H8 - Page B - 25</i>	<i>USB BOARD - Page B - 39</i>
<i>C51 DAC / IFP - Page B - 12</i>	<i>CRT & LVDS, TV-Out - Page B - 26</i>	<i>AUDIO & MODEM BOARD - Page B - 40</i>
<i>C51 PWR / GND-DECOUPLING - Page B - 13</i>	<i>FAN CONN, LPC ROM - Page B - 27</i>	<i>CLICK BOARD - Page B - 41</i>
<i>MCP51 HT - Page B - 14</i>	<i>JLED - Page B - 28</i>	
<i>MCP51 PCI - Page B - 15</i>	<i>MINI CARD, +3VH8 - Page B - 29</i>	

Table B - 1
**Schematic
Diagrams**

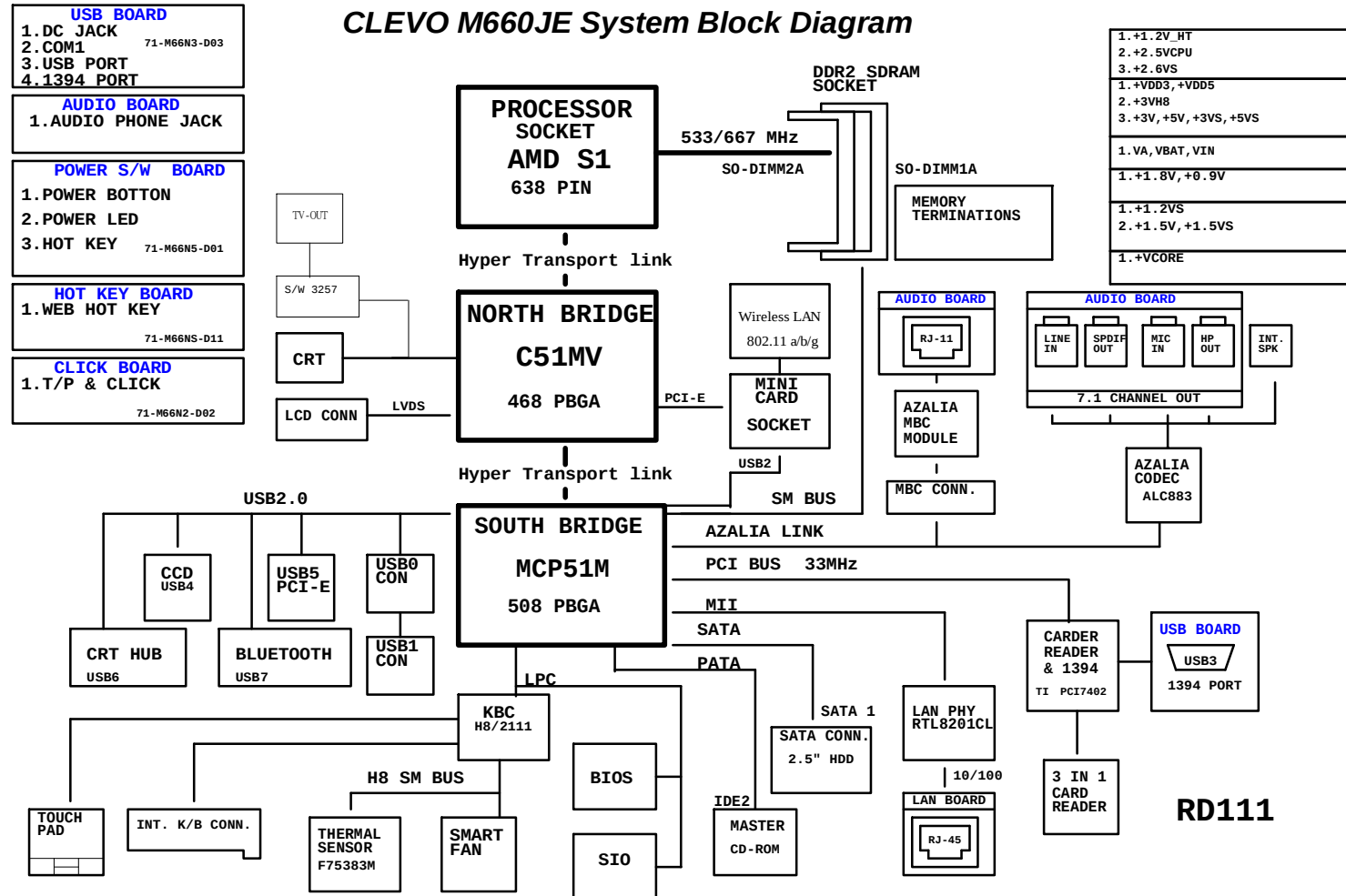


Version Note

The schematic diagrams in this chapter are based upon version **6-71-M66E0-003**. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

SYSTEM BLOCK DIAGRAM

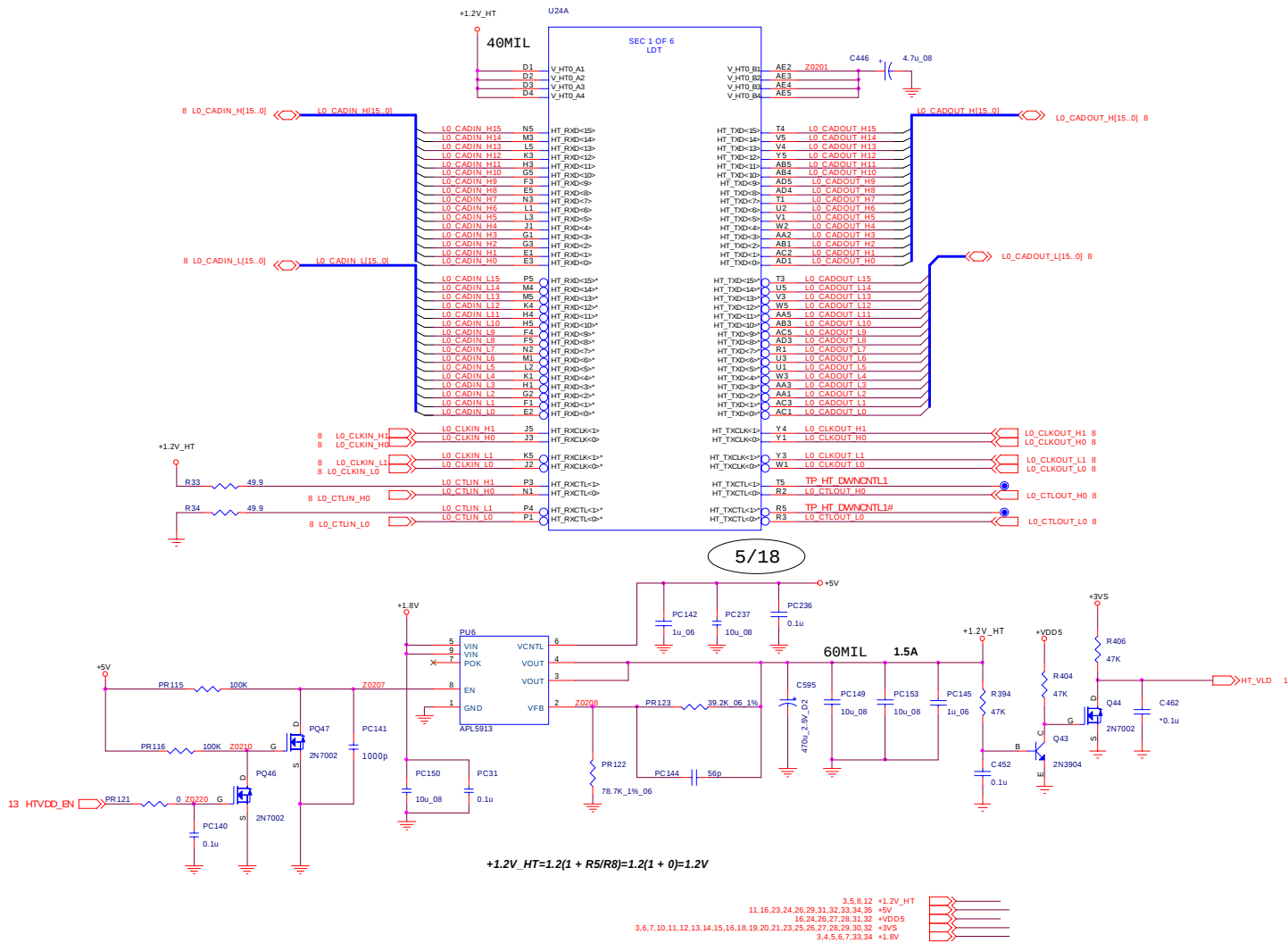
Sheet 1 of 40
SYSTEM BLOCK
DIAGRAM



AMD S1: HT

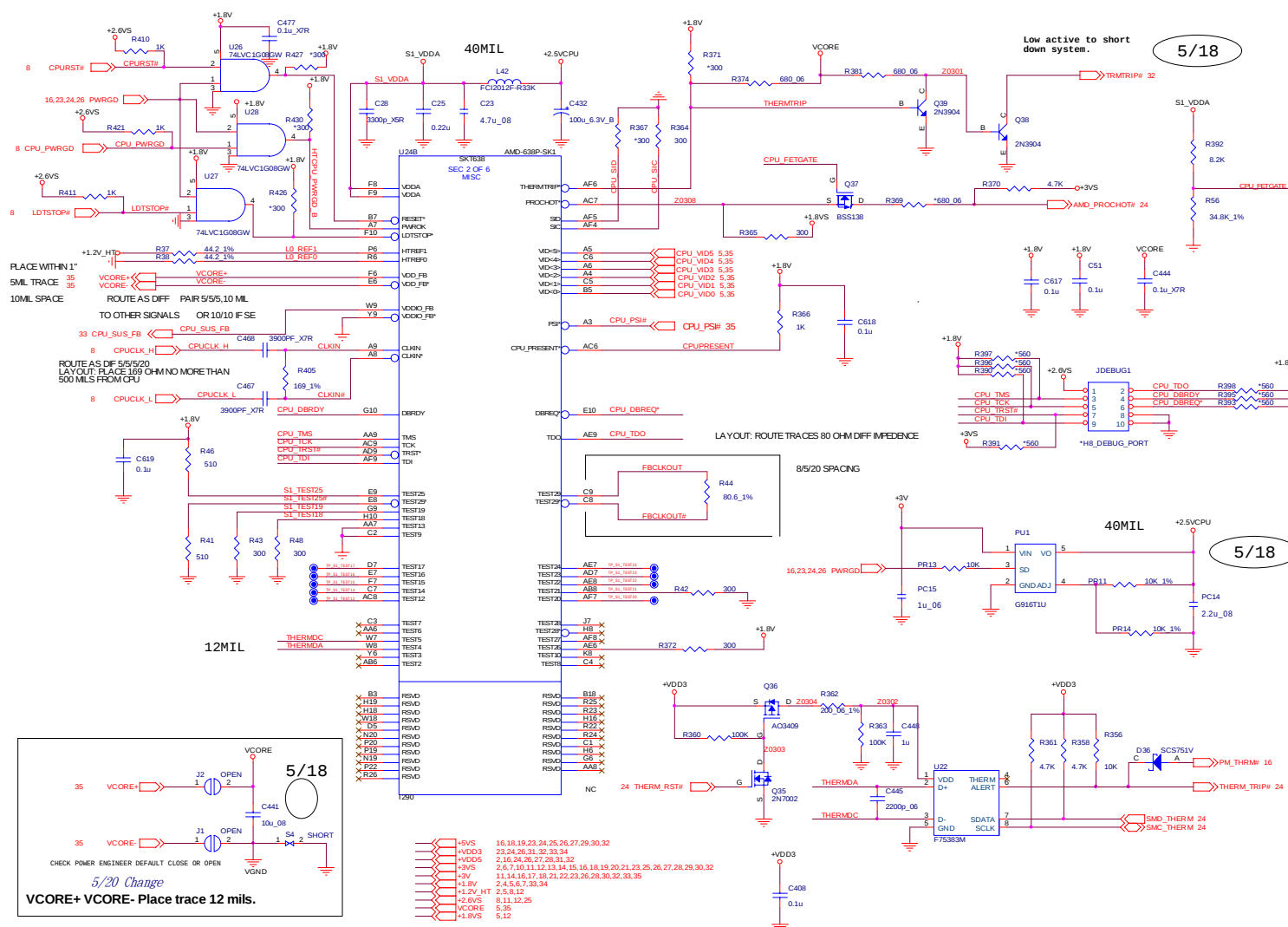
Sheet 2 of 40
AMD S1: HT

B.Schematic Diagrams

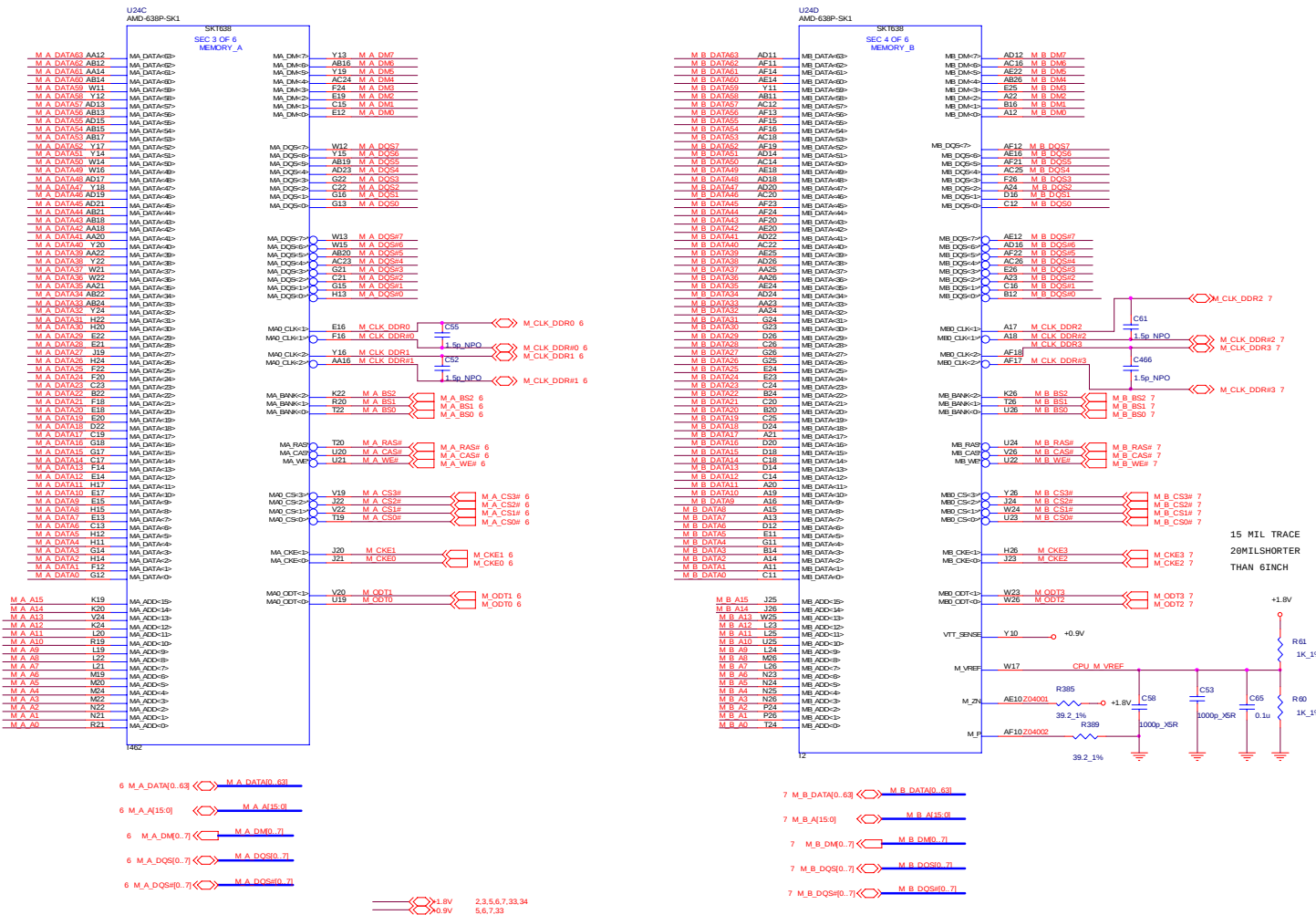


B.Schematic Diagrams

Sheet 3 of 40
AMD S1: MISC



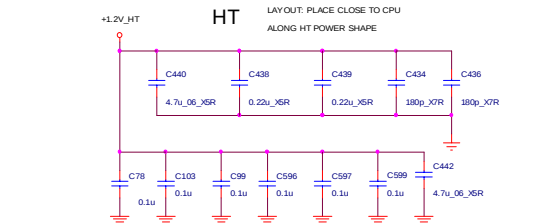
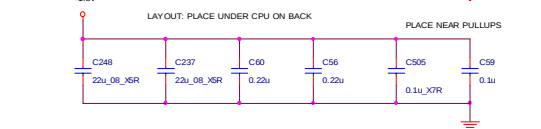
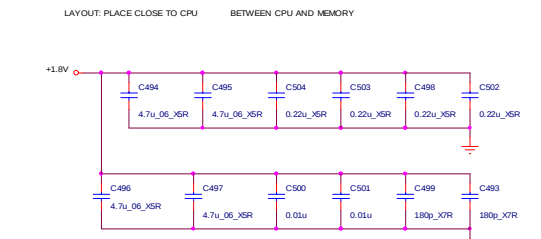
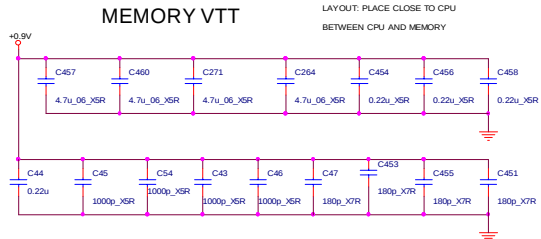
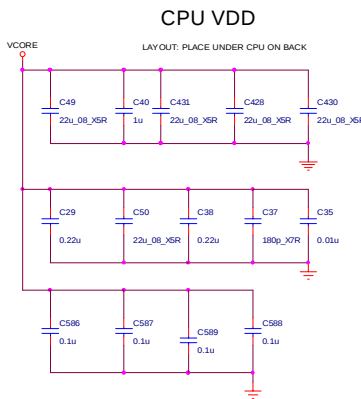
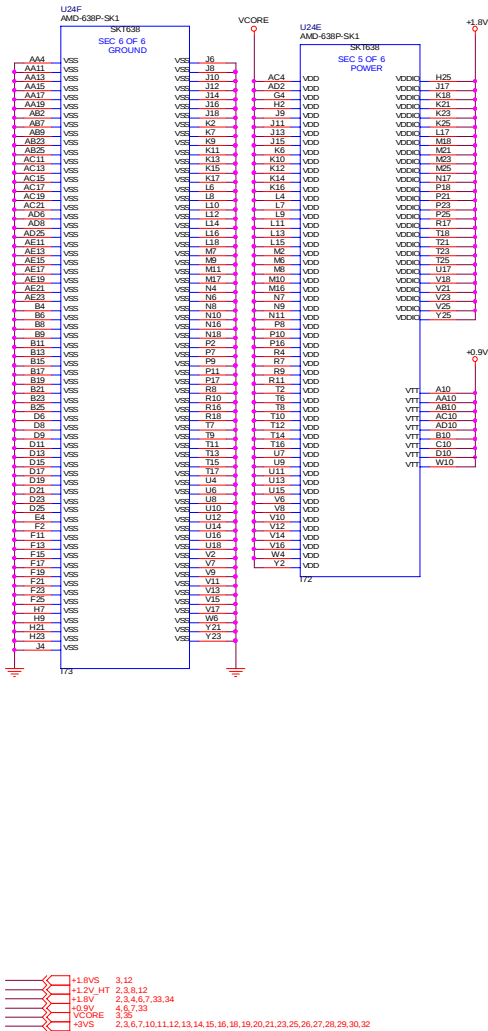
AMD S1: Memory

Sheet 4 of 40
AMD S1: Memory

Schematic Diagrams

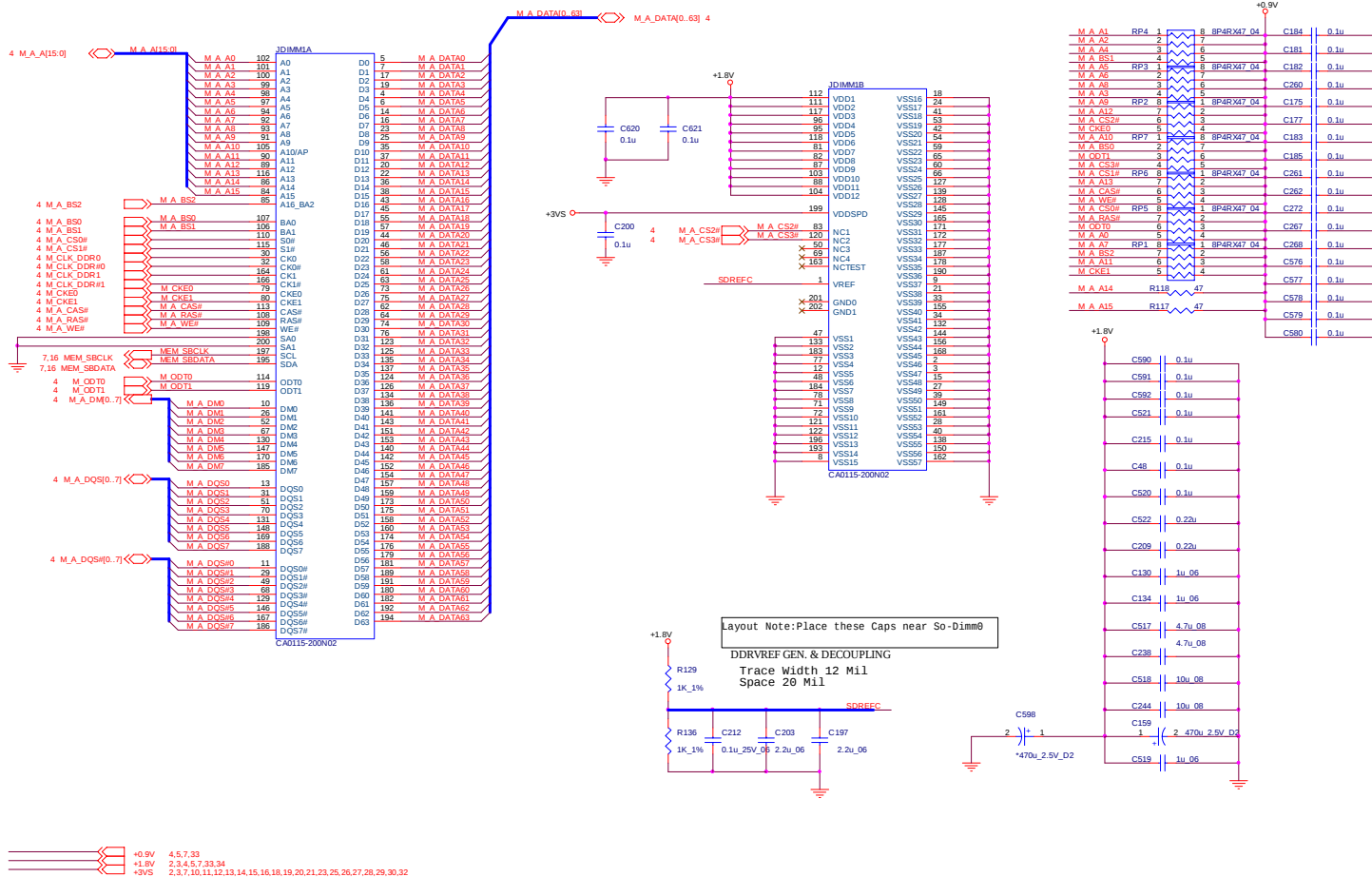
AMD S1: Power

Sheet 5 of 40
AMD S1: Power



Schematic Diagrams

DDR2-1

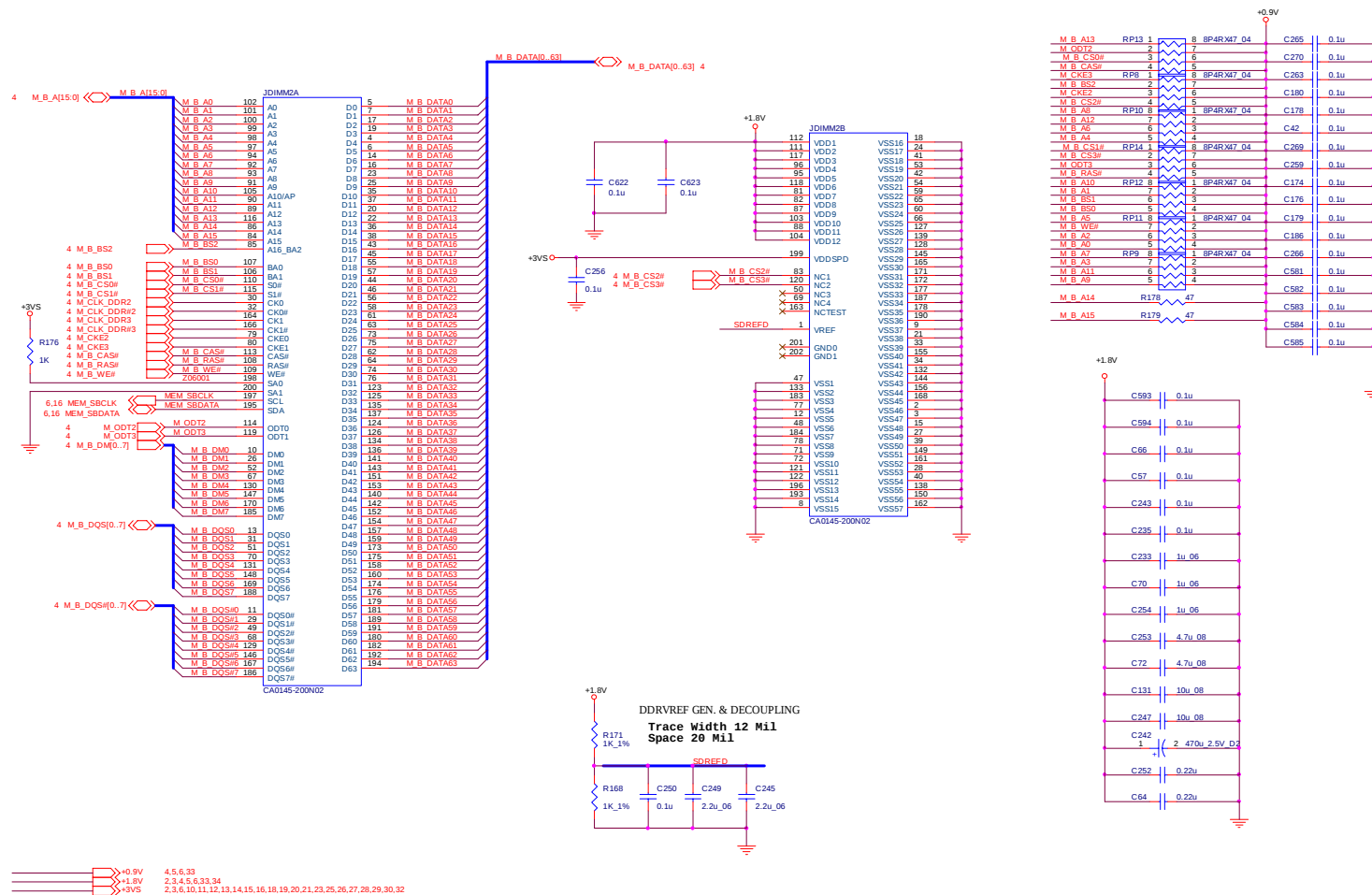


Sheet 6 of 40
DDR2-1

B.Schematic Diagrams

B.Schematic Diagrams

Sheet 7 of 40
DDR2-2

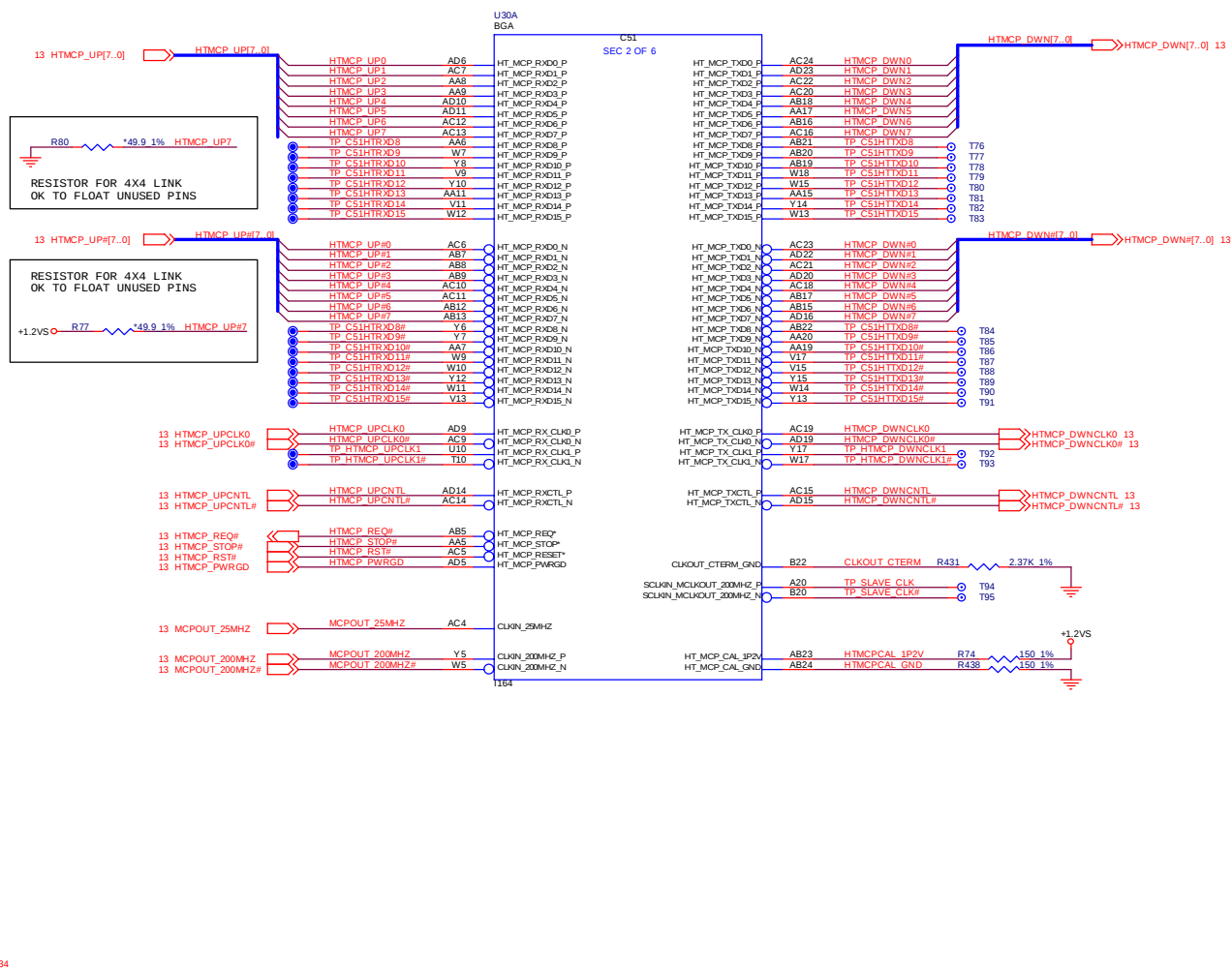


C51 HT CPU B - 9

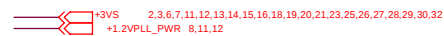


C51 HT MCP

B.Schematic Diagrams

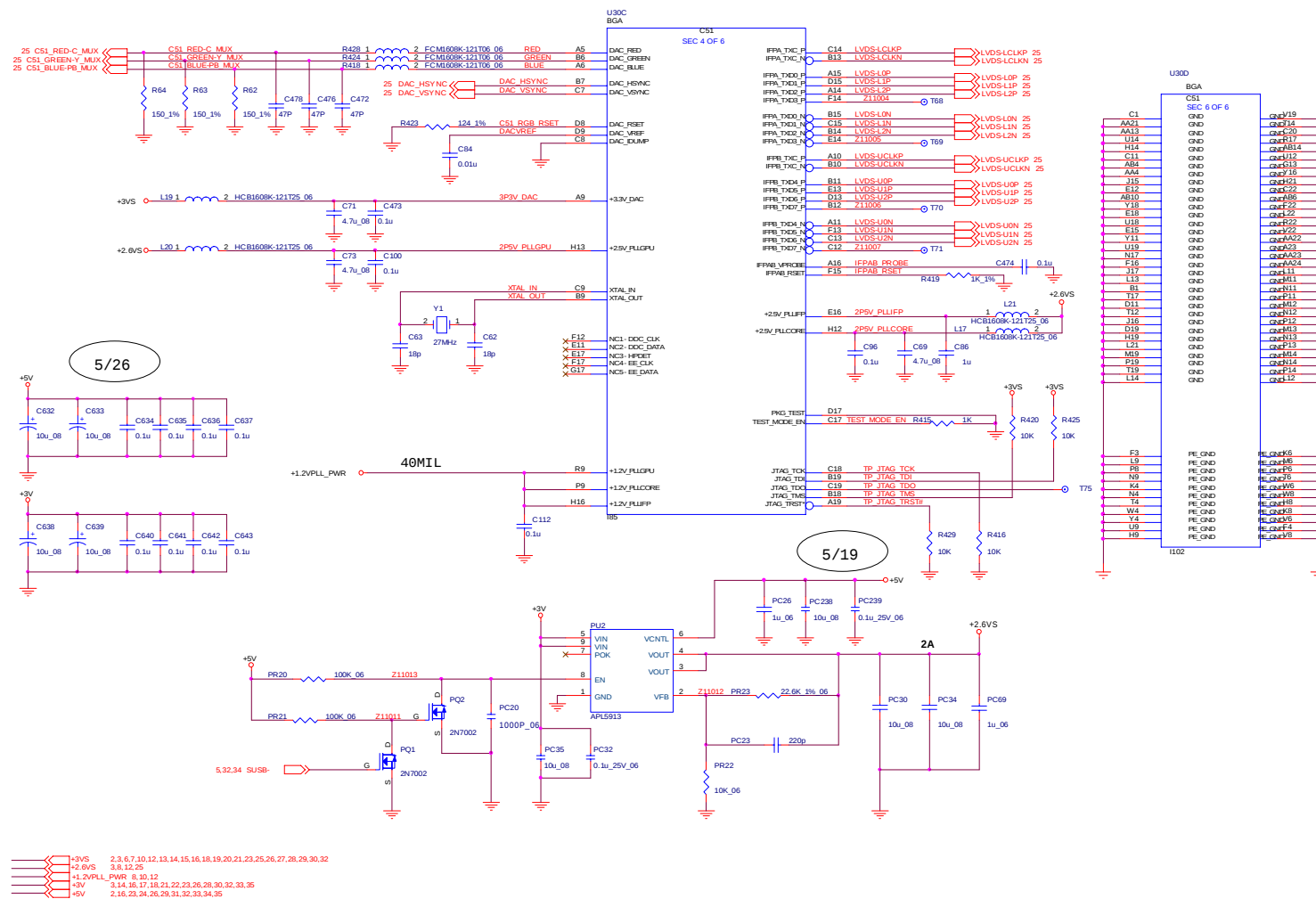


Sheet 10 of 40
C51 PCI Express

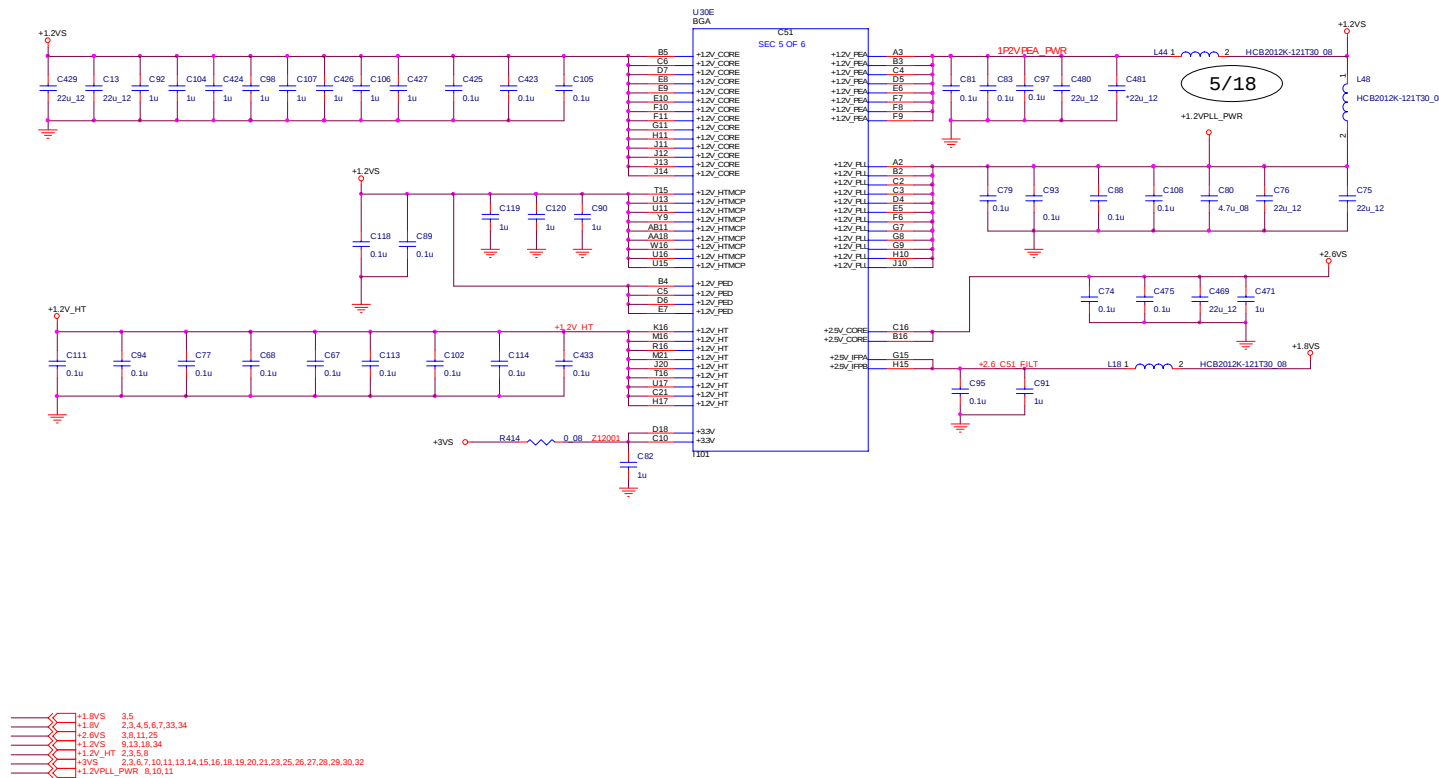


C51 DAC / IFP

B.Schematic Diagrams

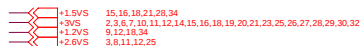


C51 PWR / GND-DECOUPLING



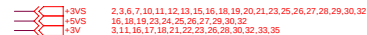
Sheet 12 of 40
C51 PWR /
GND-DECOUPLING

Sheet 13 of 40
MCP51 HT



B.Schematic Diagrams

MCP51 PCI

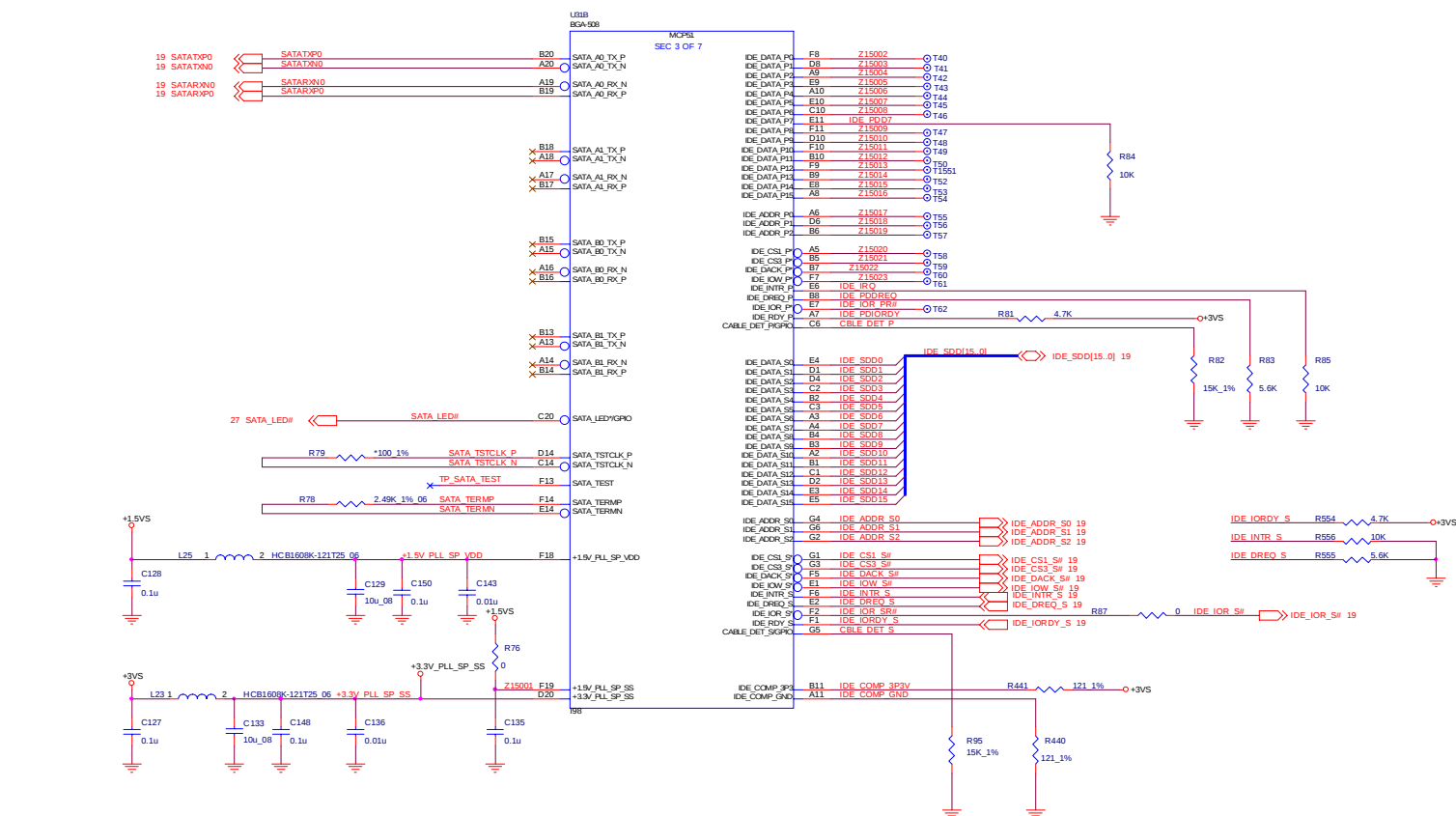


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MCP51 PCI

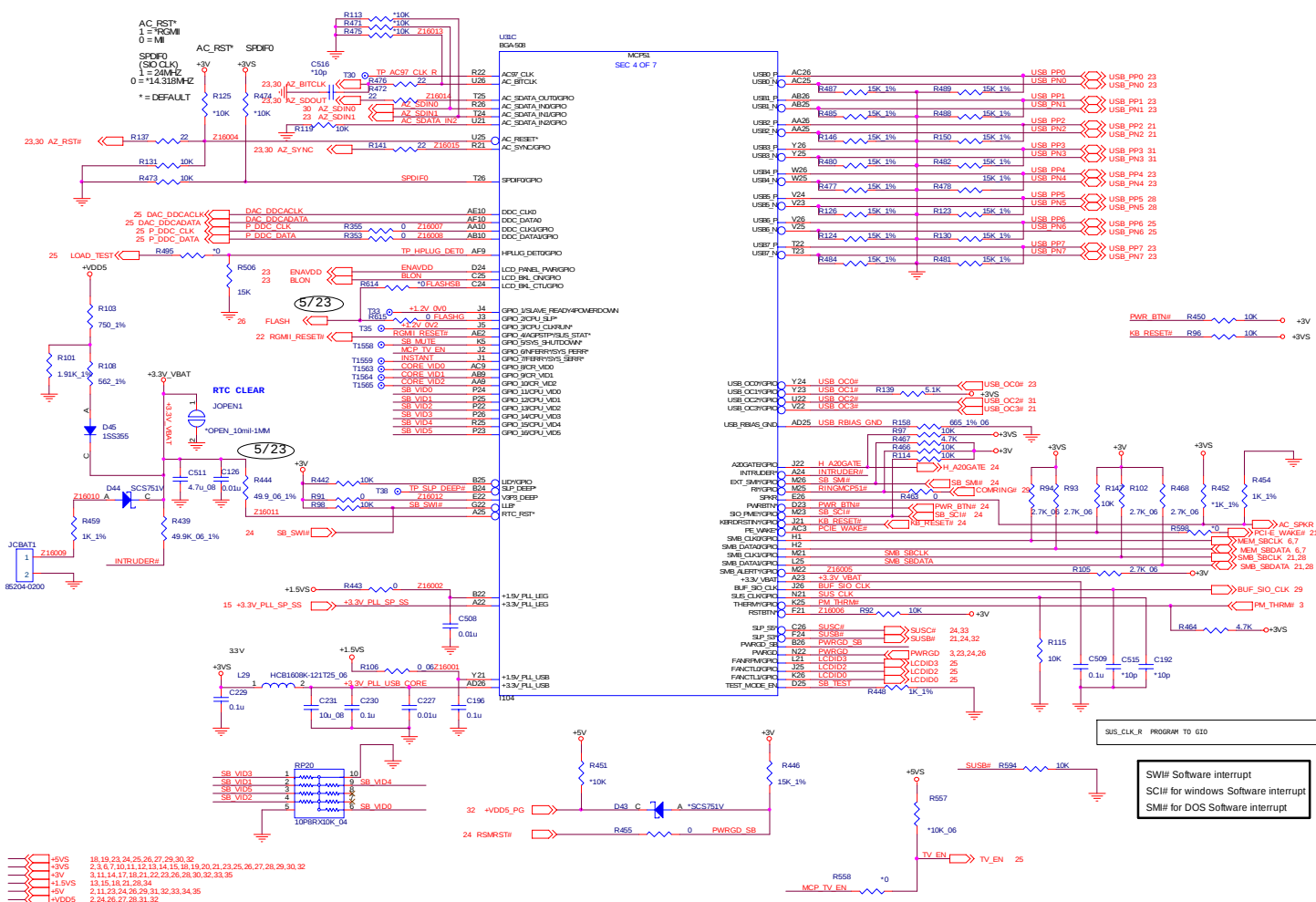
MCP51 SATA / IDE

B.Schematic Diagrams

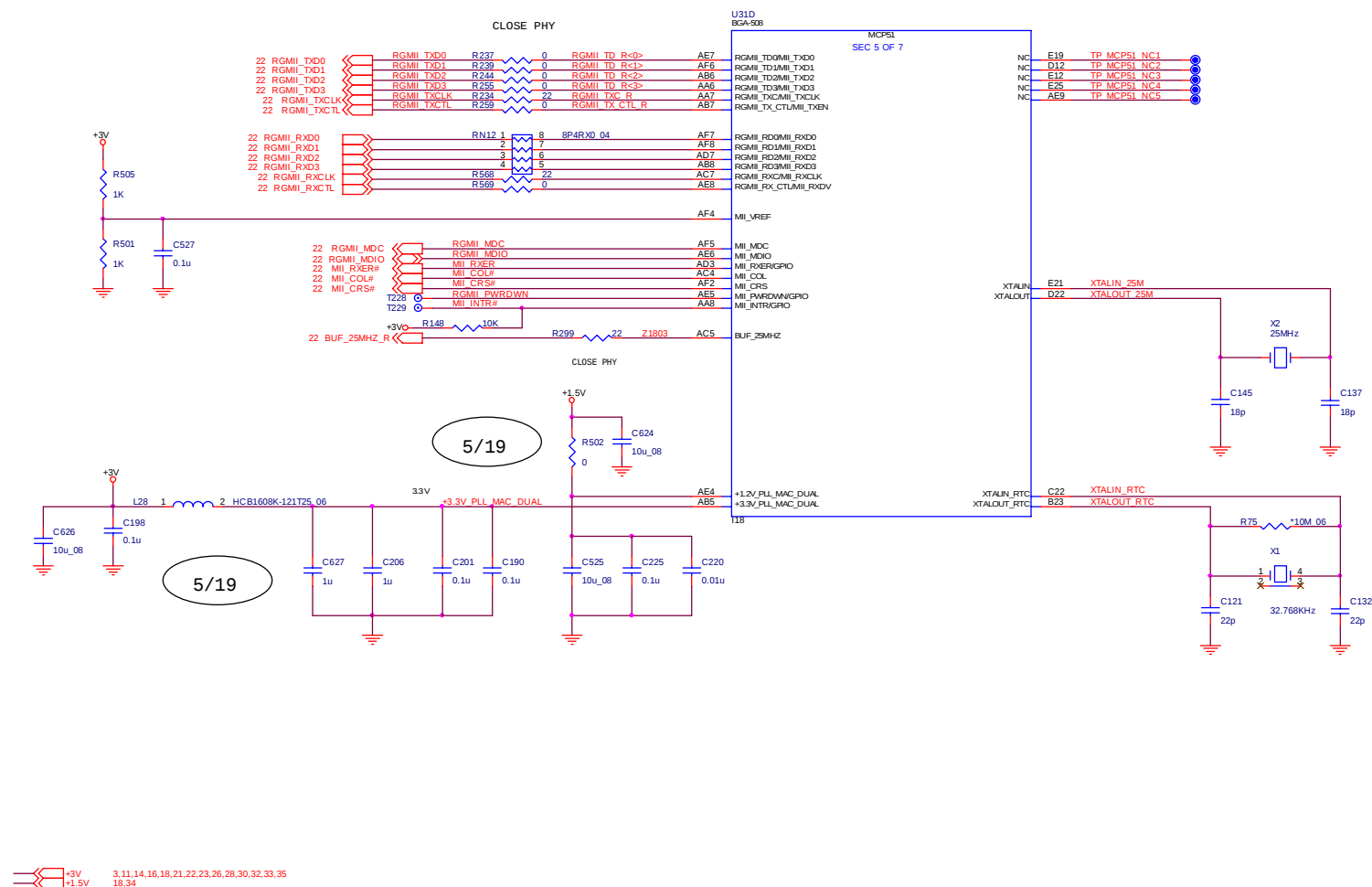
 +3VS 2,3,6,7,10,11,12,13,14,16,18,19,20,21,23,25,26,27,28,29,30,32
 +1.5VS 13,16,18,21,28,34
 +3.3V PLL SP SS 16



MCP51 AUDIO / USB / MISC

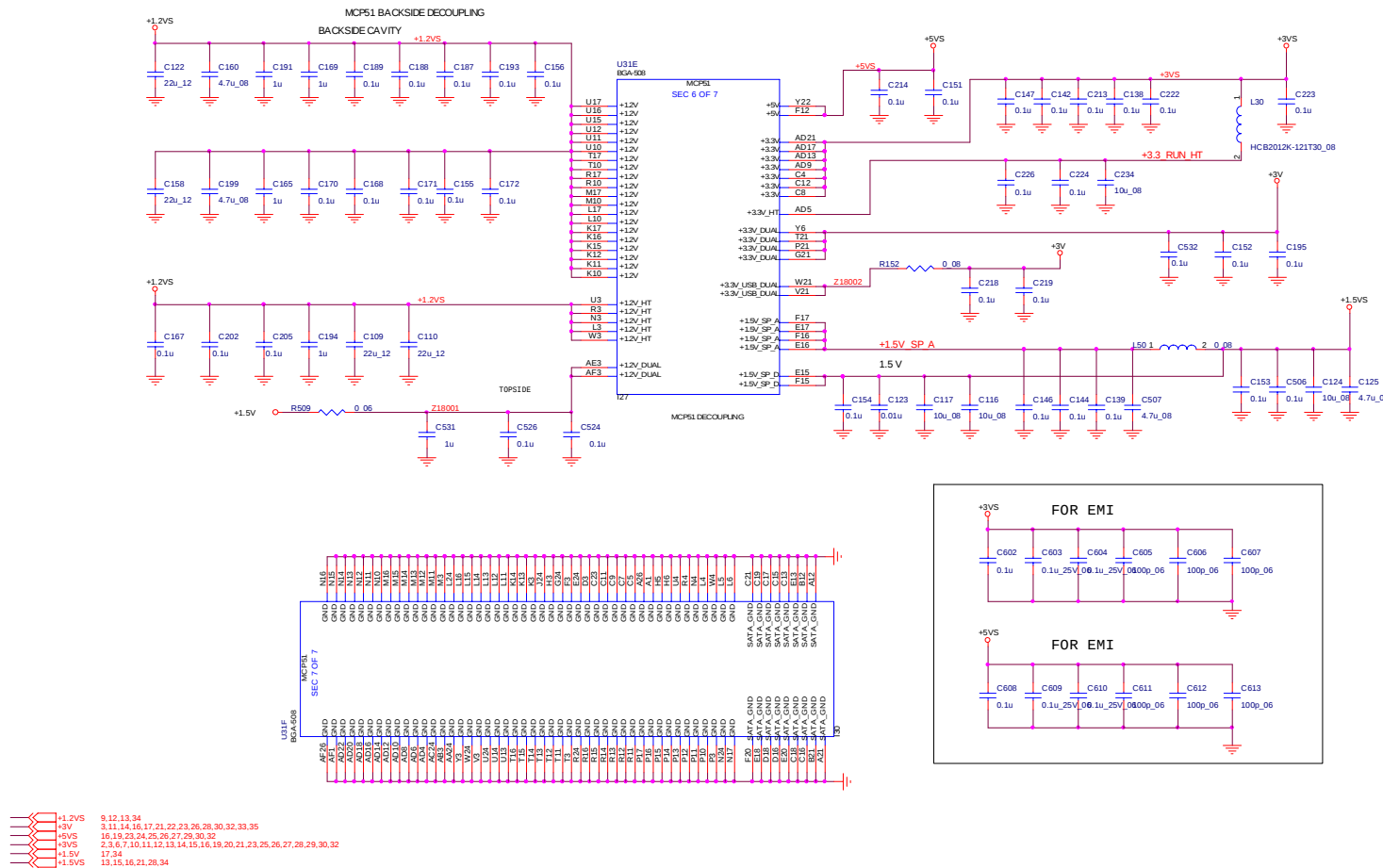


Sheet 17 of 40
MCP51 RGMII

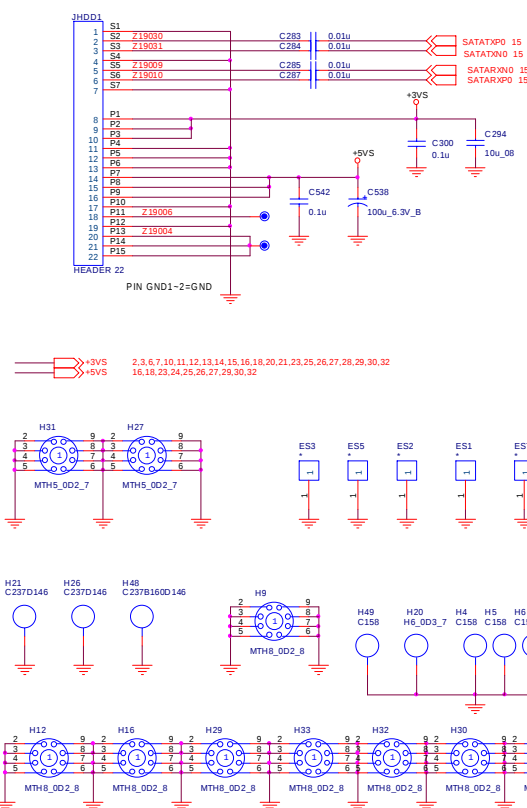


MCP51 PWR / GND

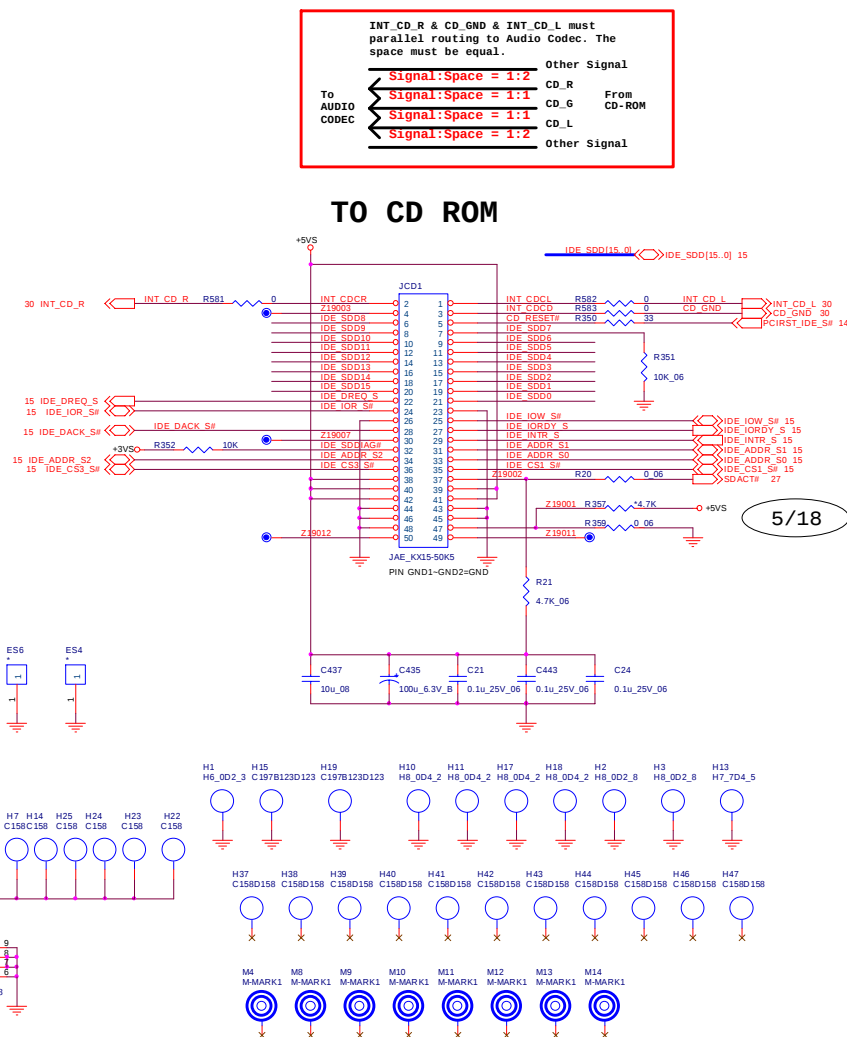
Sheet 18 of 40
MCP51 PWR / GND



HDD & CDROM

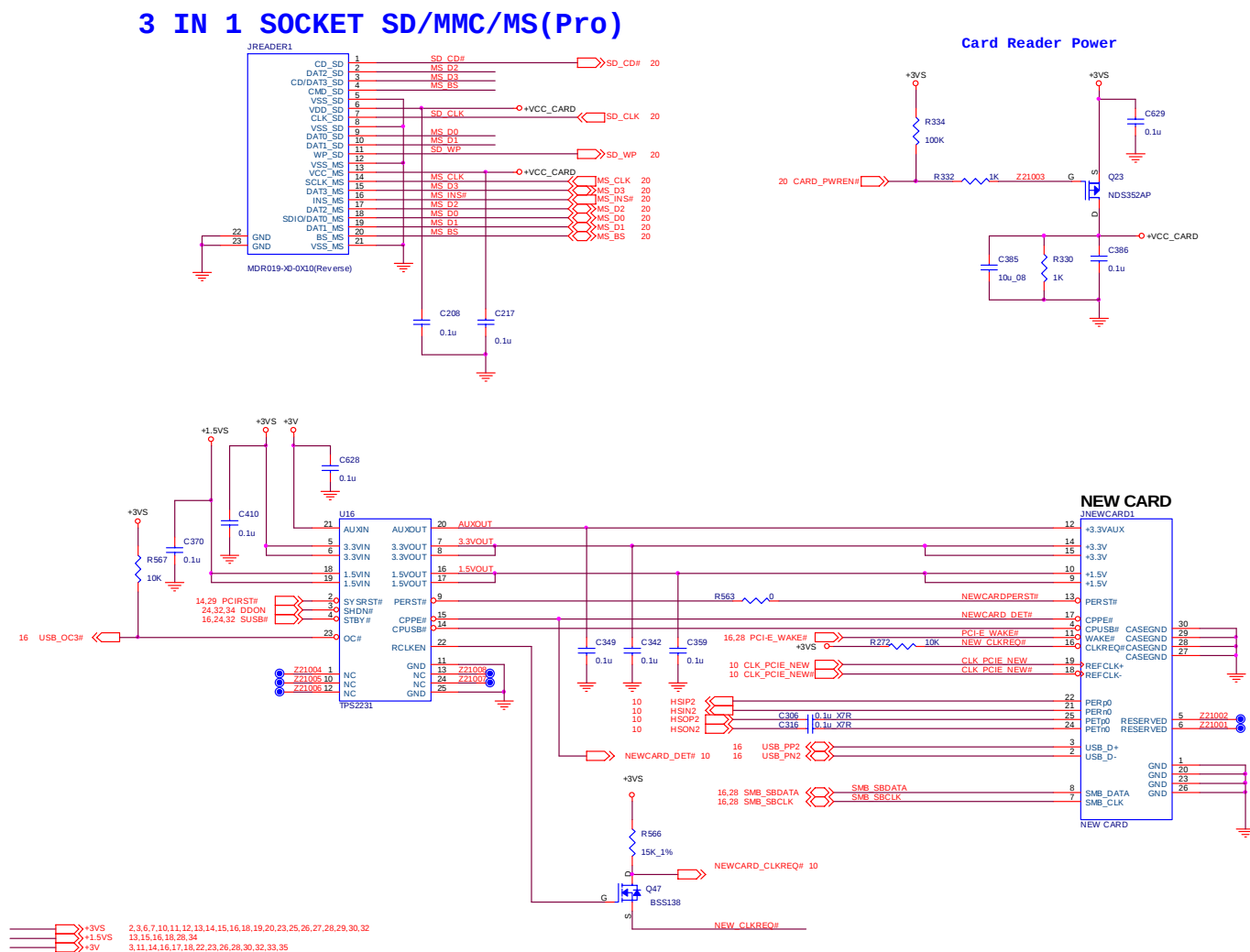
SATA CONN

Sheet 19 of 40
HDD & CDROM

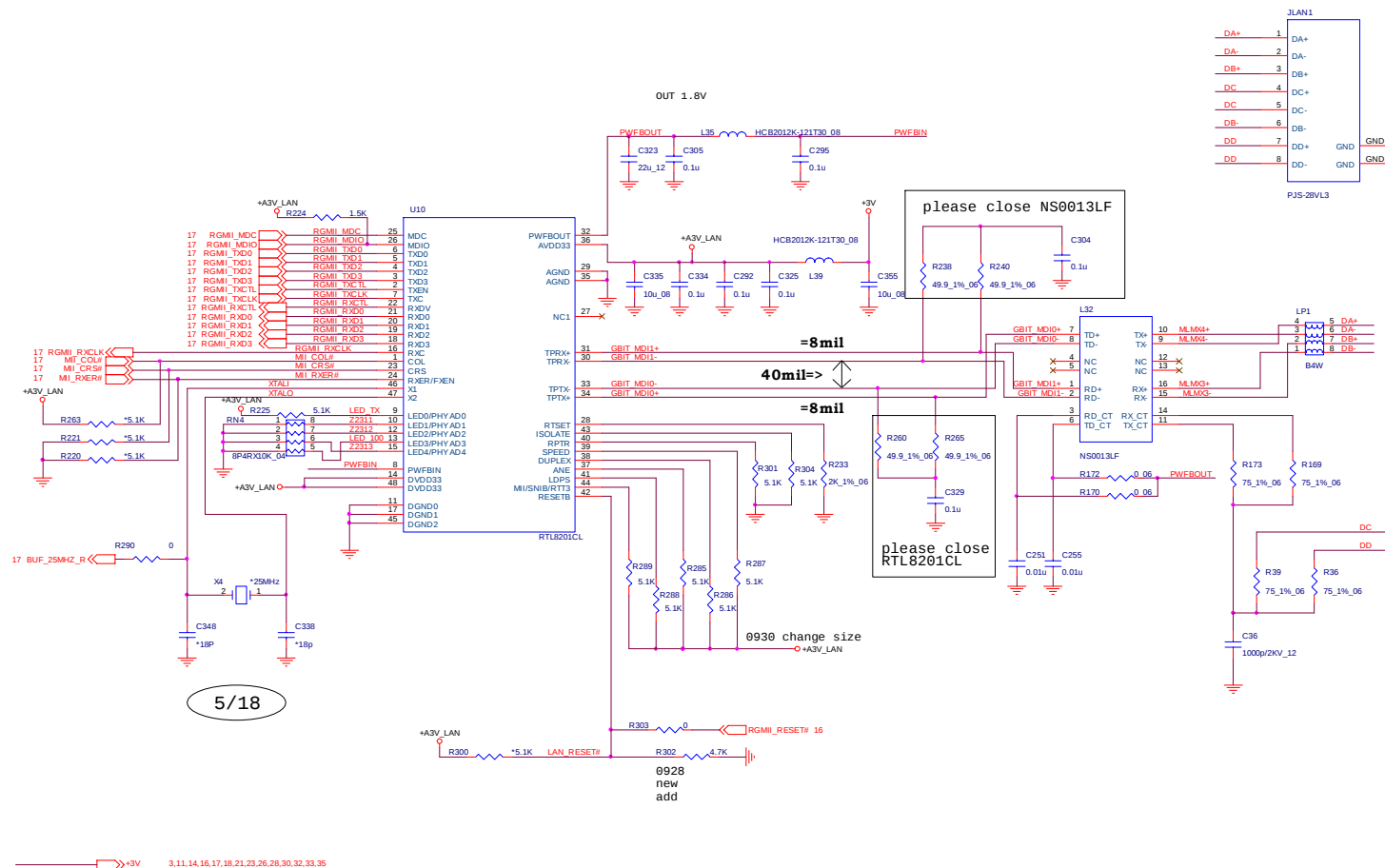




Sheet 21 of 40
CARD SOCKET/
NEW CARD



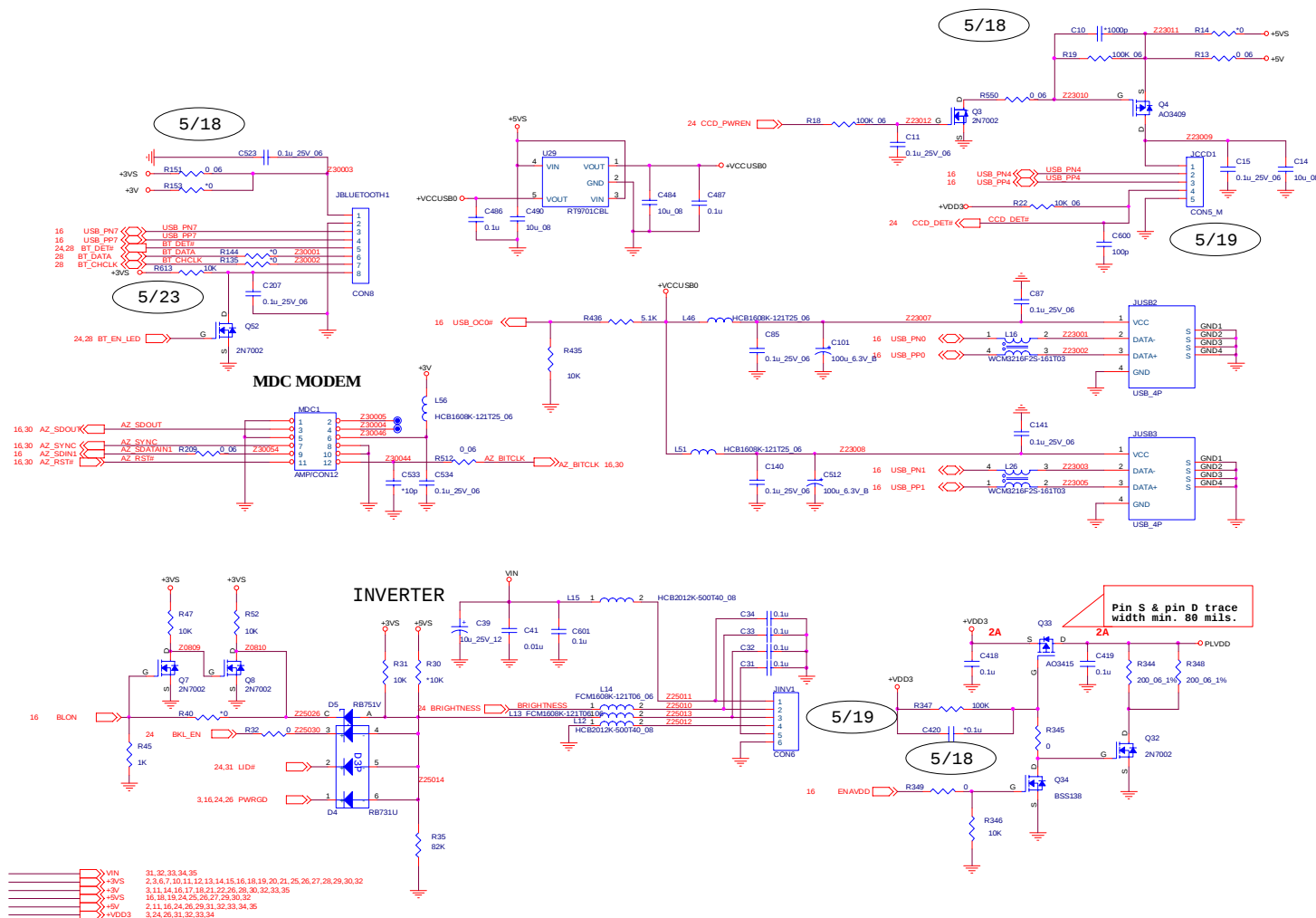
LAN RTL8201CL



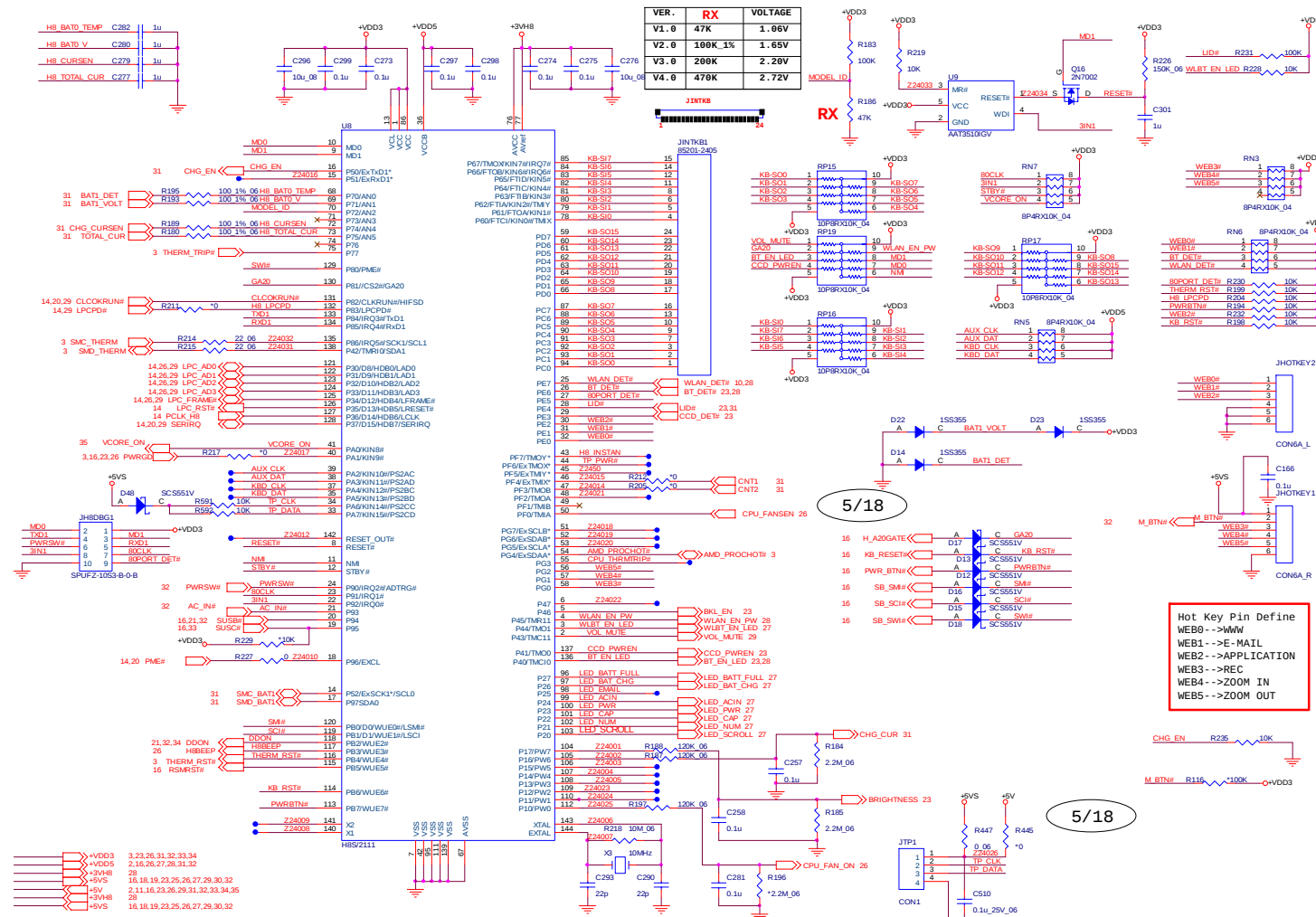
Sheet 22 of 40
LAN RTL8201CL

USB & CCD, MDC, Inverter

Sheet 23 of 40
USB & CCD, MDC,
Inverter



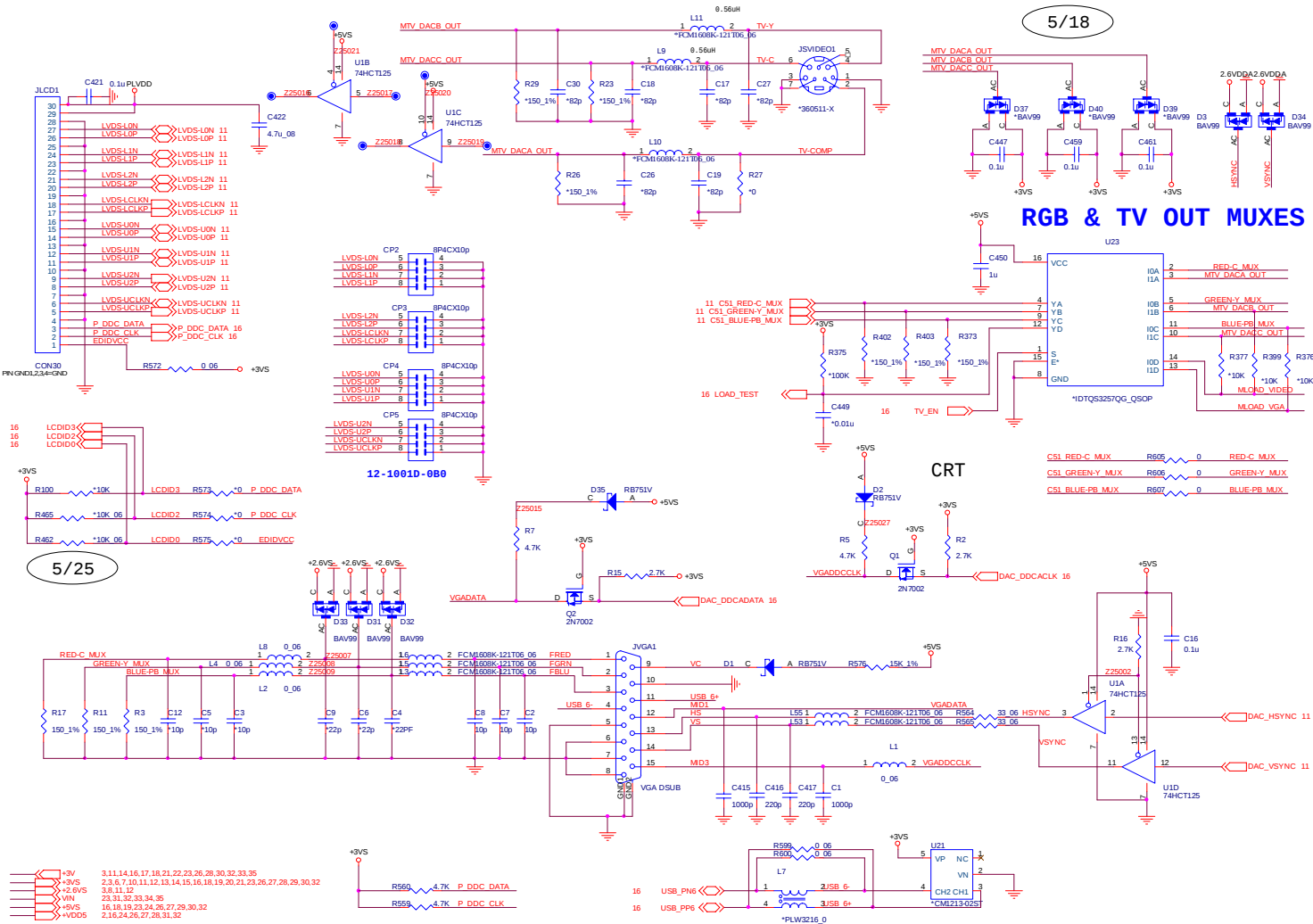
H8

Sheet 24 of 40
H8

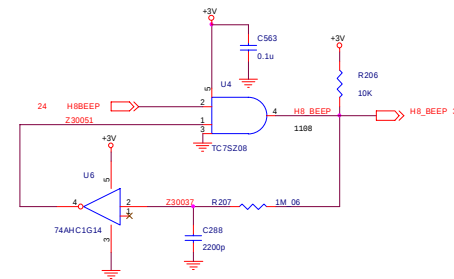
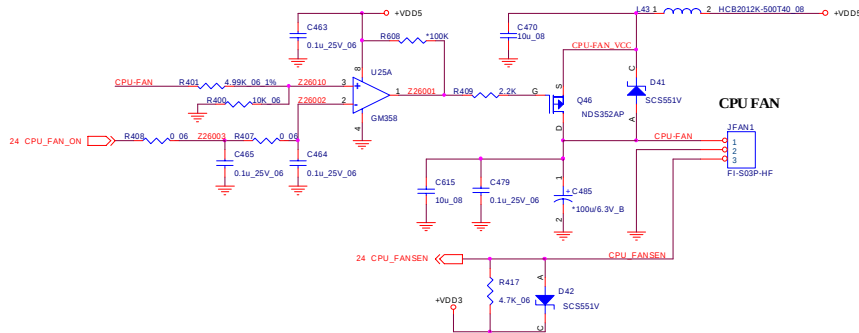
Schematic Diagrams

CRT & LVDS, TV-Out

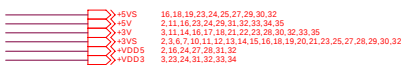
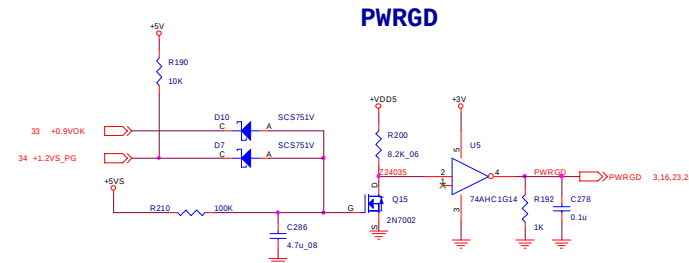
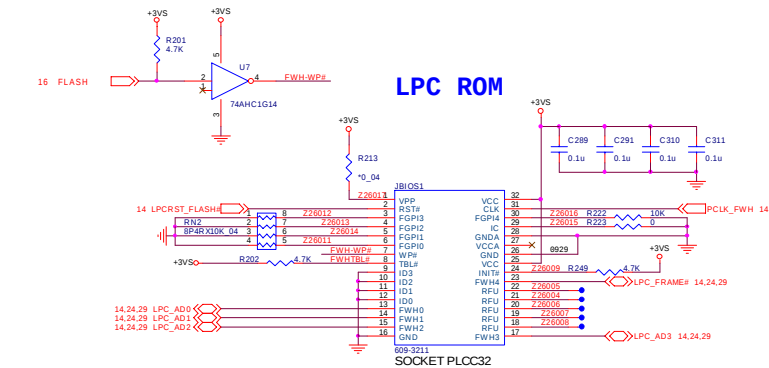
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CRT & LVDS,
TV-Out



FAN CONN, LPC ROM

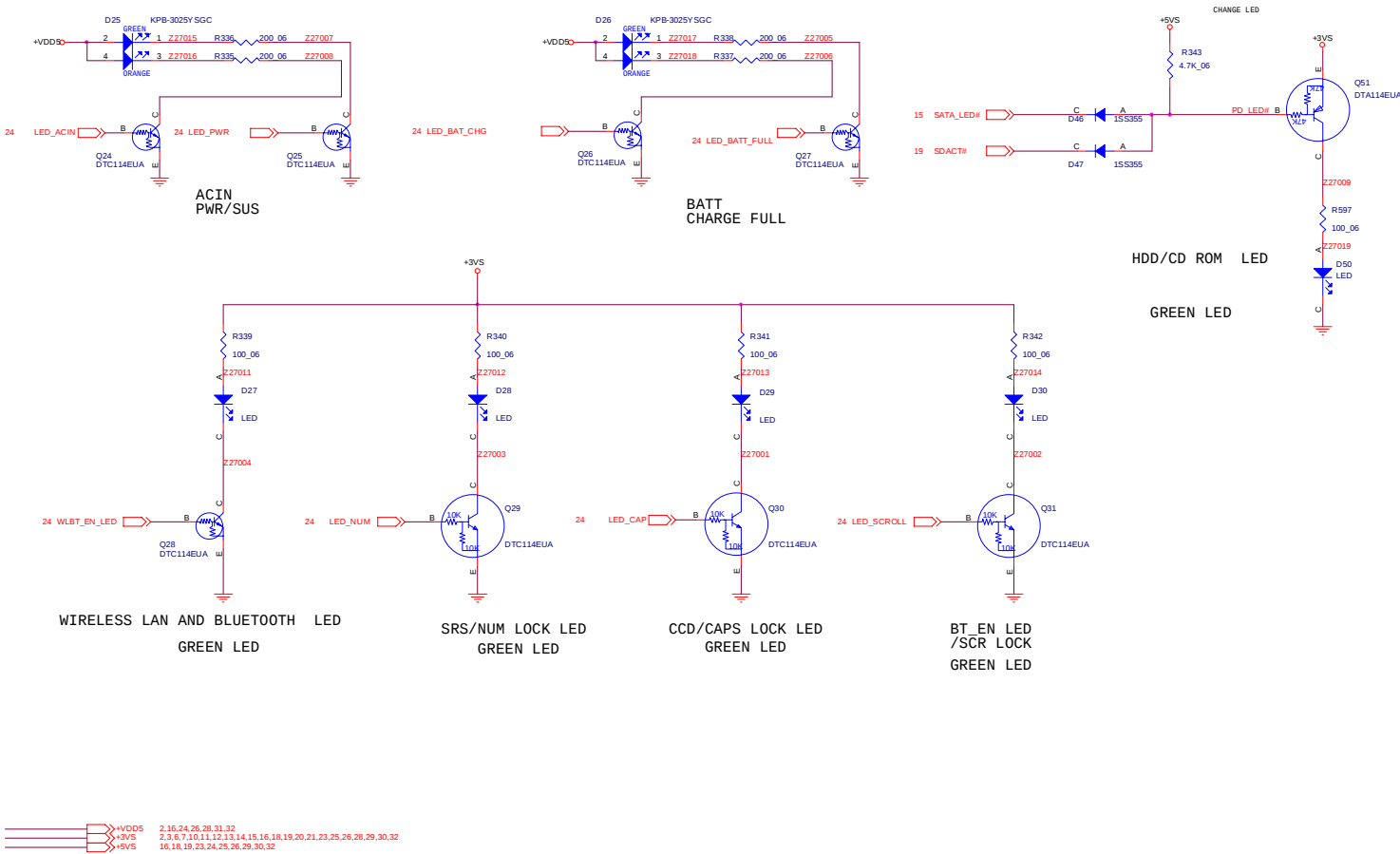


Sheet 26 of 40
FAN CONN,
LPC ROM

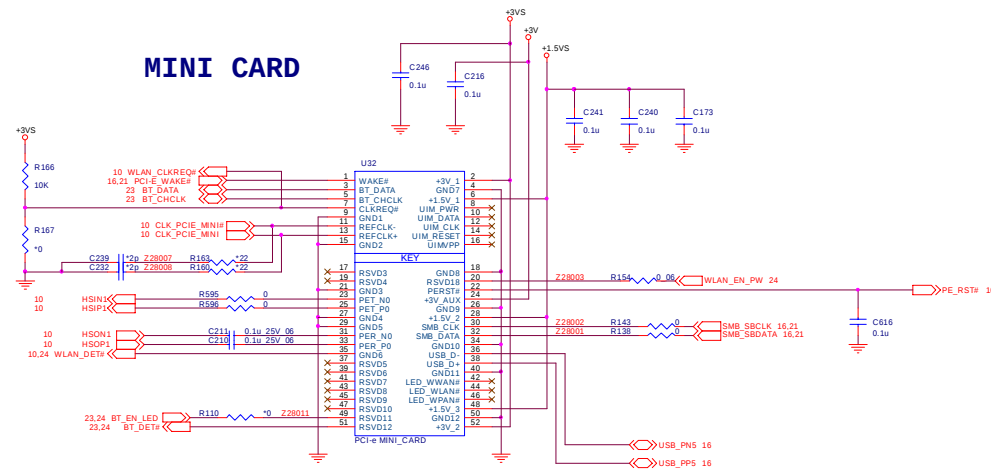


JLED

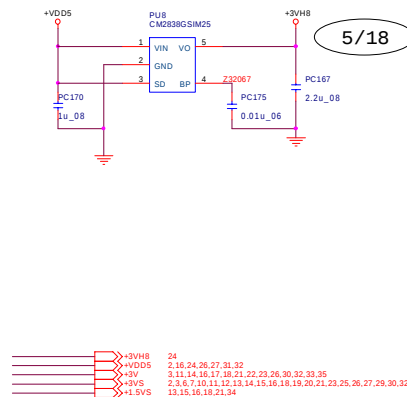
Sheet 27 of 40
JLED



MINI CARD, +3VH8

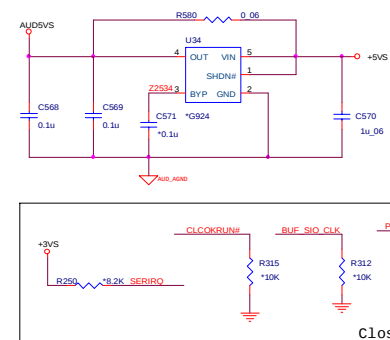
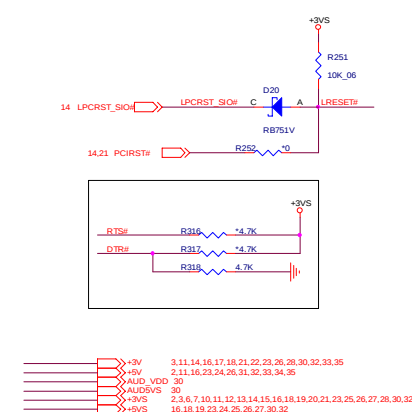


Sheet 28 of 40
MINI CARD, +3VH8

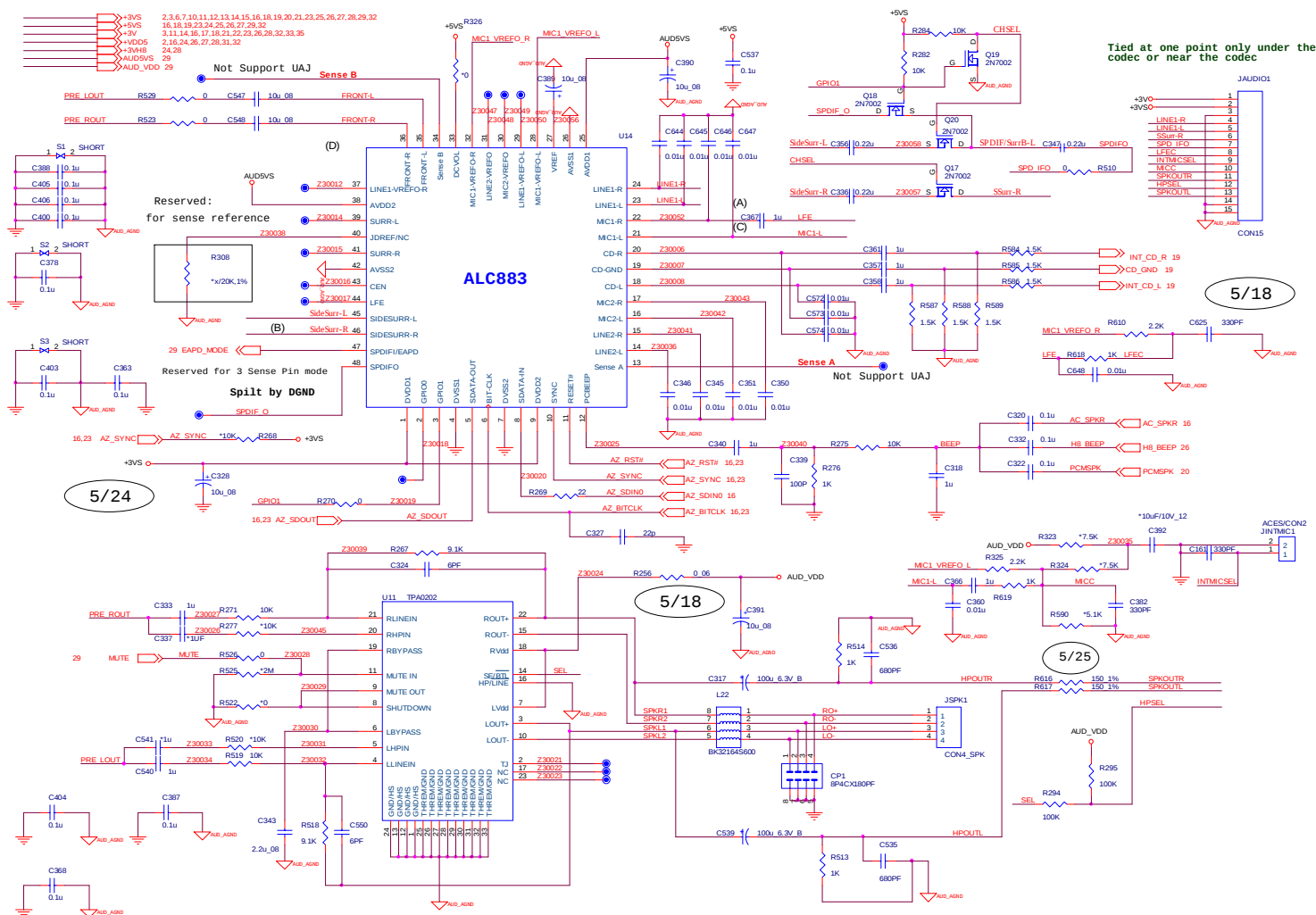


SUPER I/O

Sheet 29 of 40
SUPER I/O

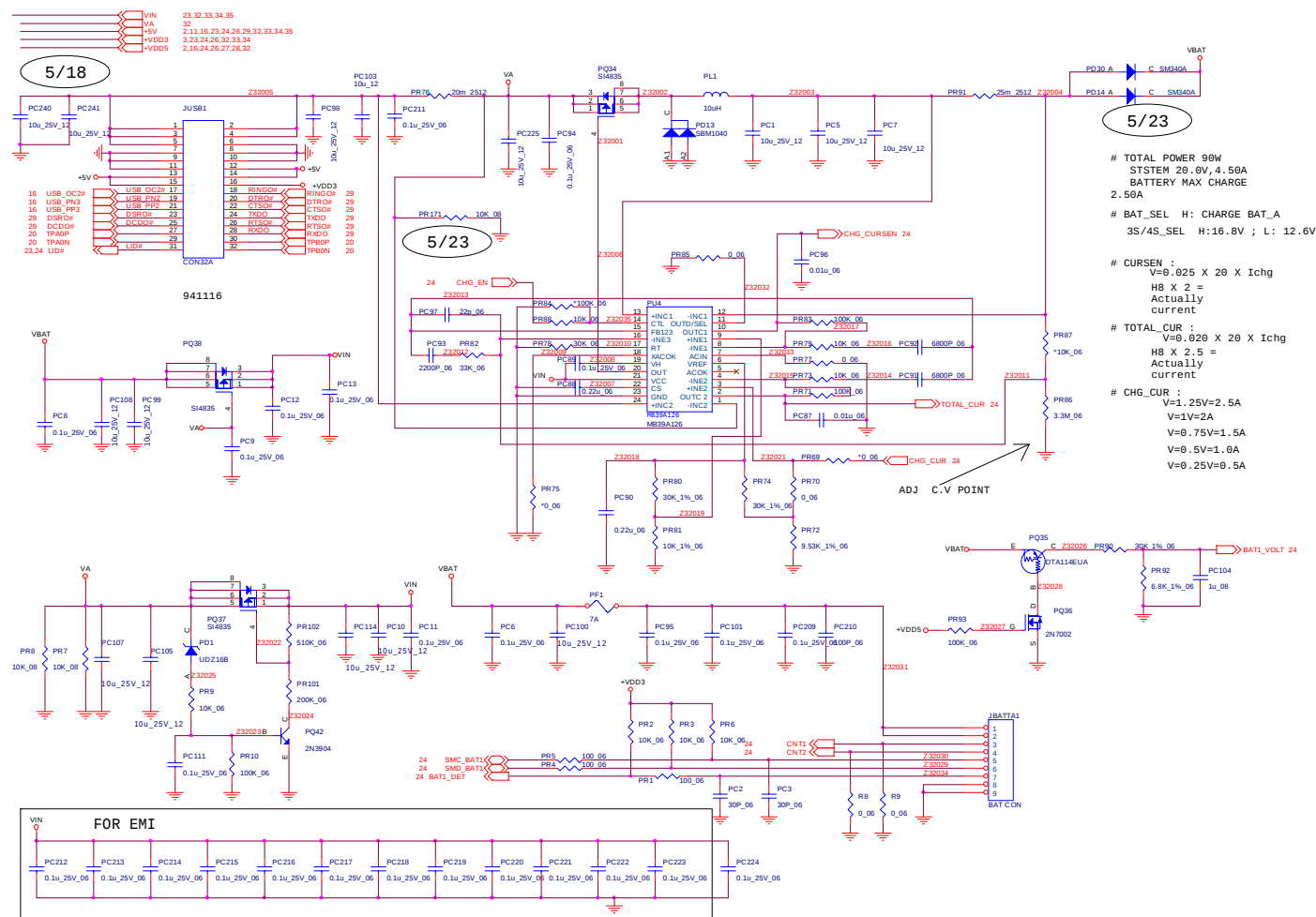


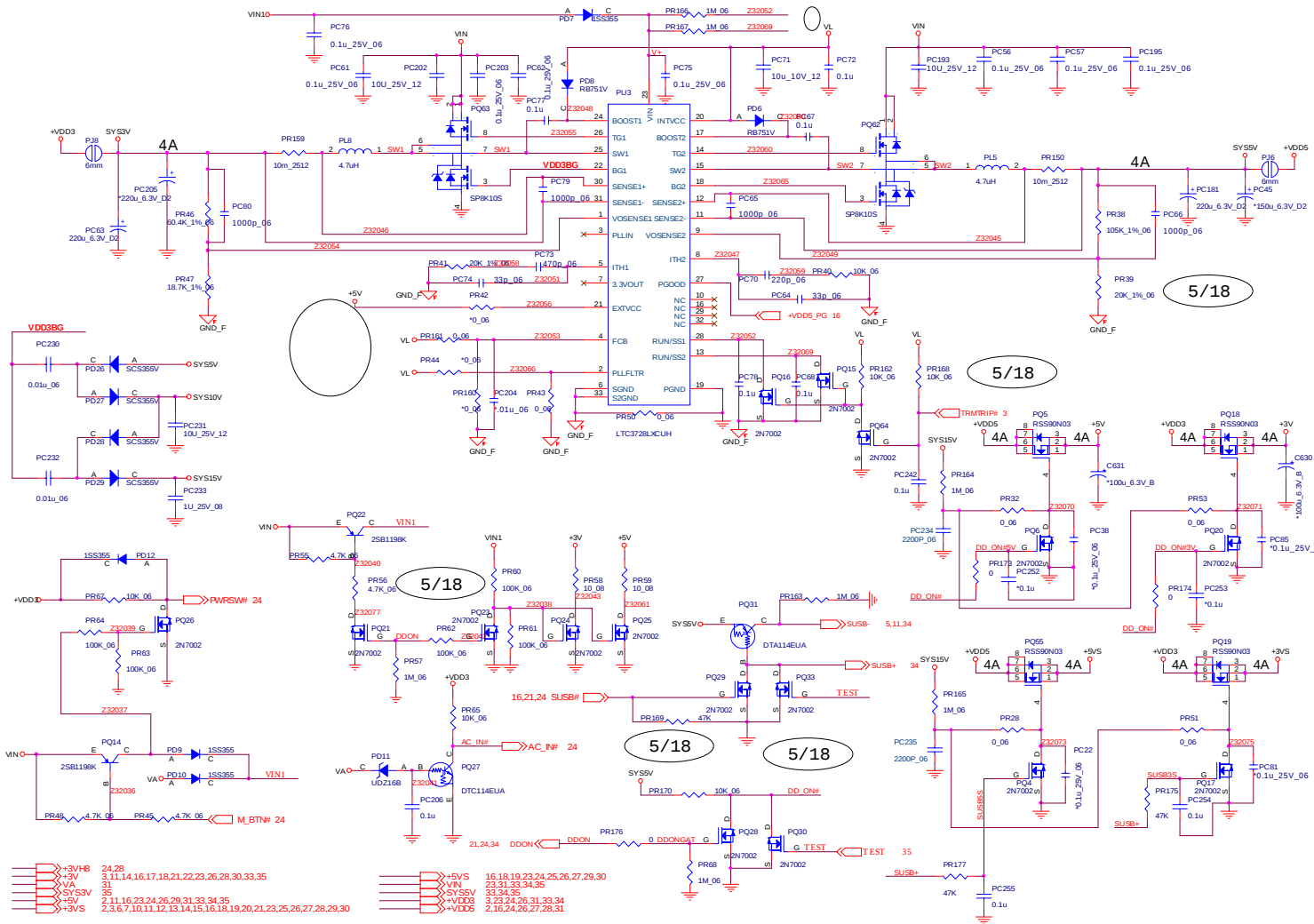
AUDIO ALC883 B - 31



B.Schematic Diagrams

Sheet 31 of 40
CHARGER, DC IN

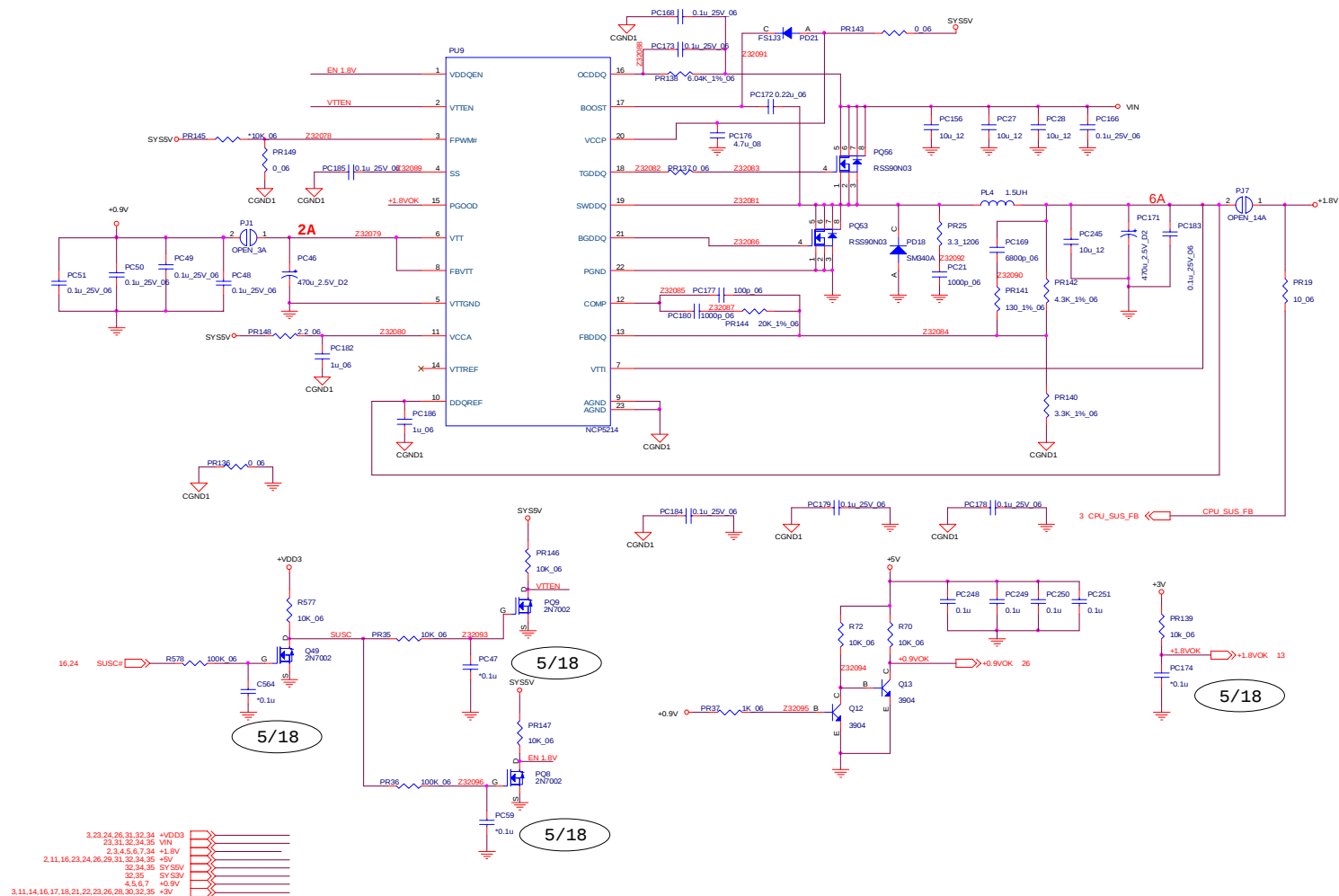




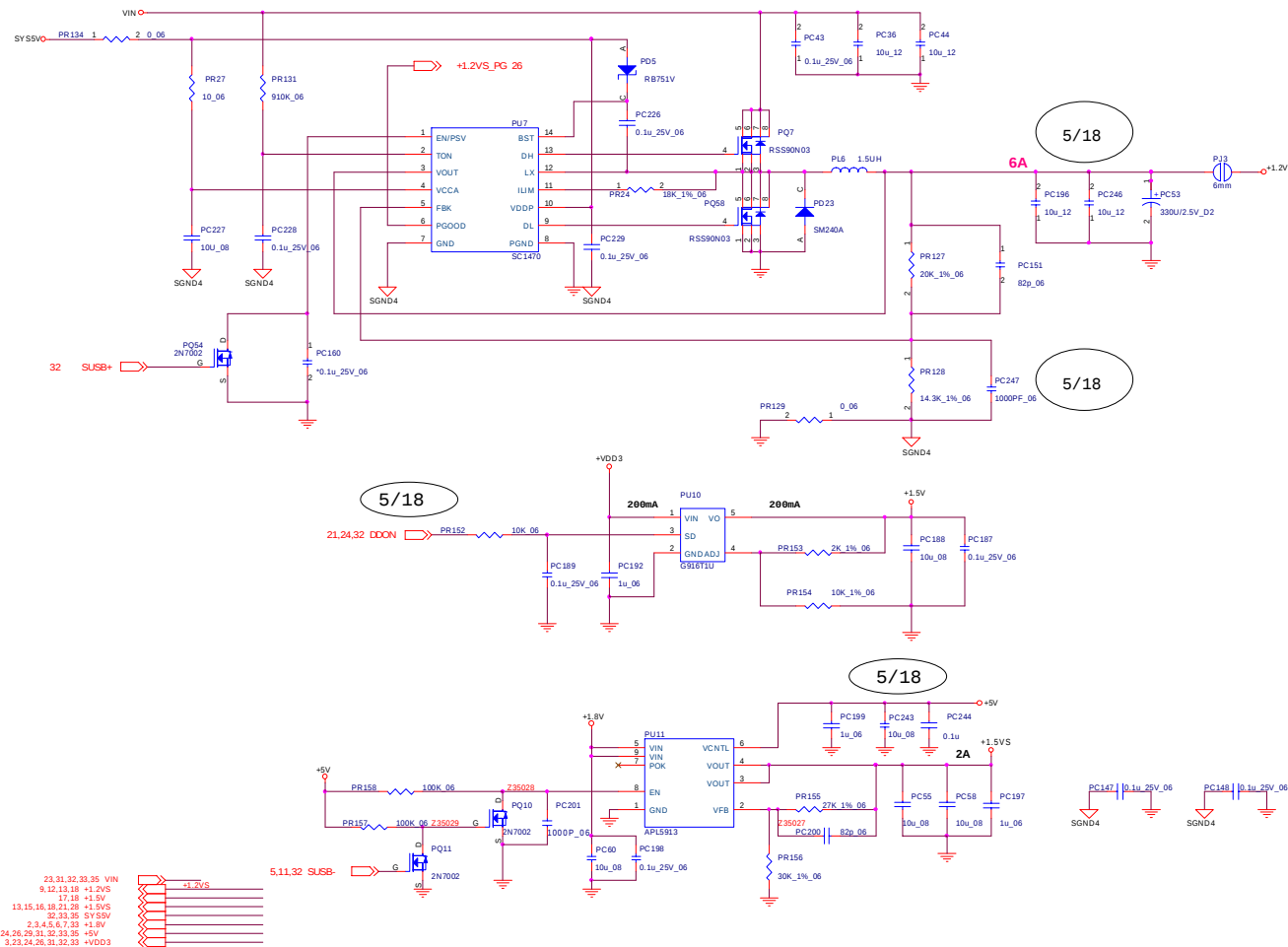
Sheet 32 of 40
SYSTEM POWER

+1.8V, 0.9V

Sheet 33 of 40
+1.8V, 0.9V



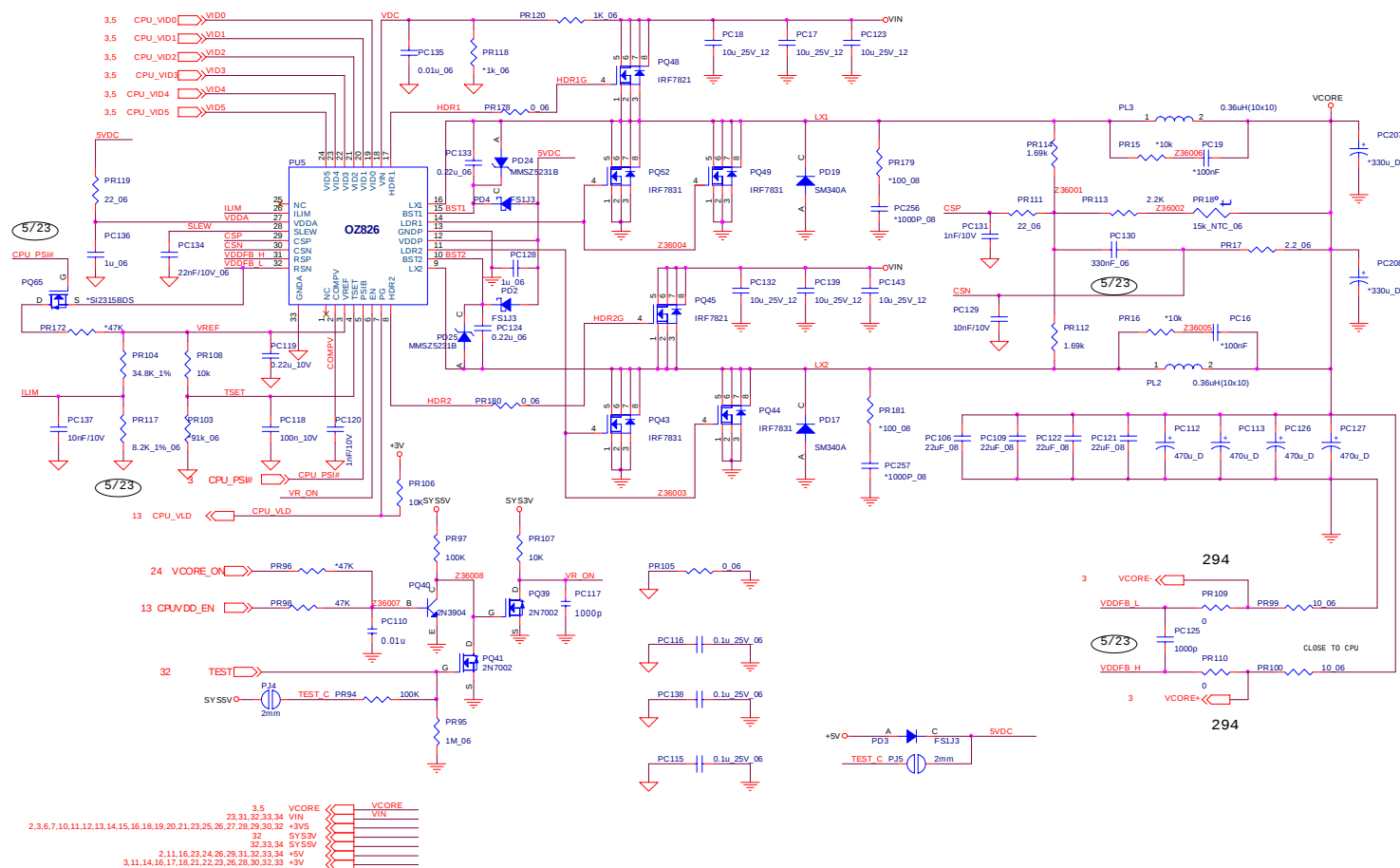
+1.2VS, +1.5VS



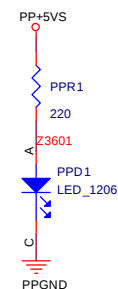
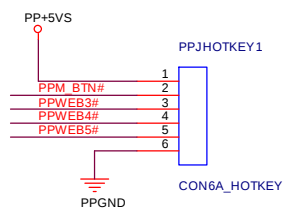
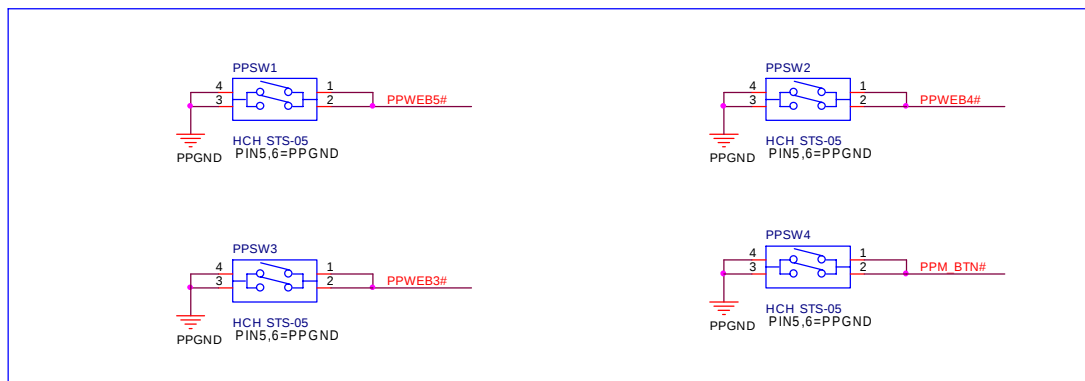
Sheet 34 of 40
+1.2VS, +1.5VS

VCORE

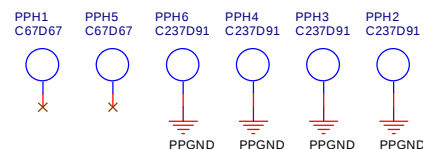
Sheet 35 of 40
VCORE



PWR HOT BOARD



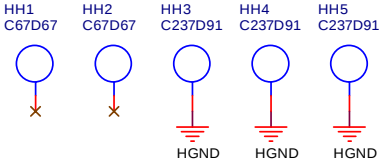
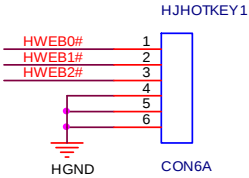
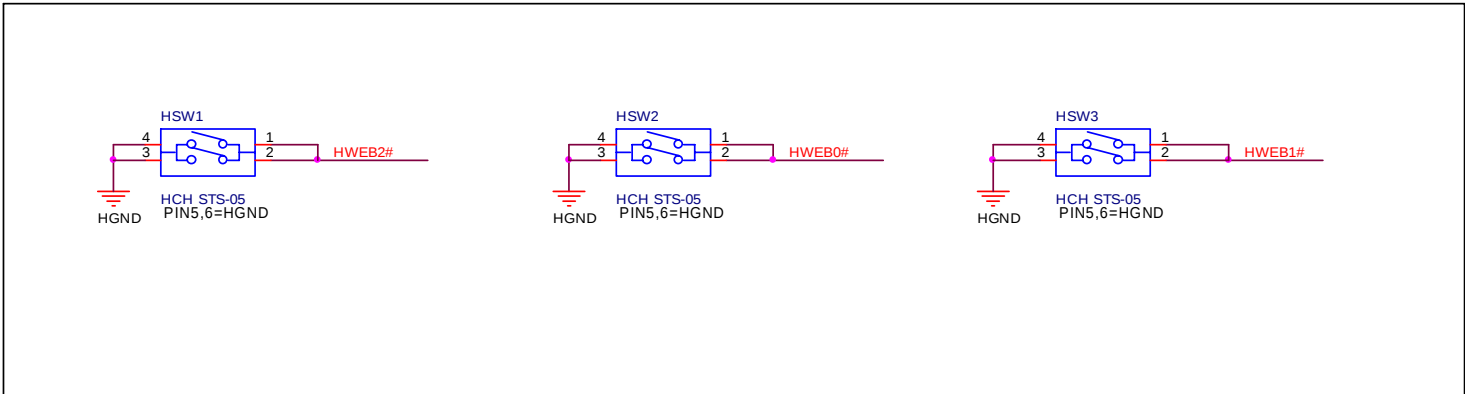
PWR_LED



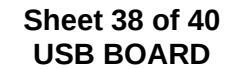
Sheet 36 of 40
PWR HOT BOARD

HOTKEY LT BOARD

Sheet 37 of 40
HOTKEY LT
BOARD



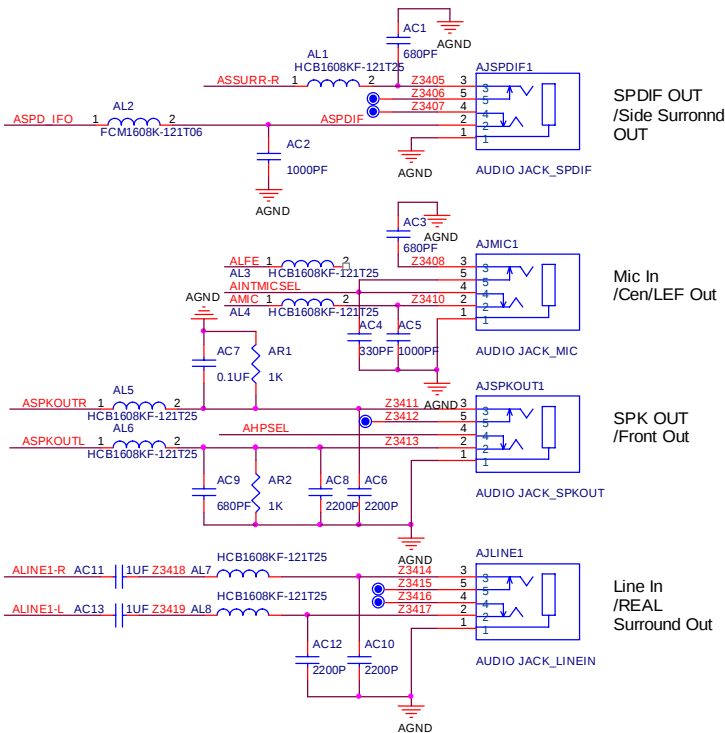
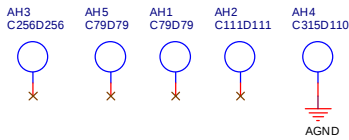
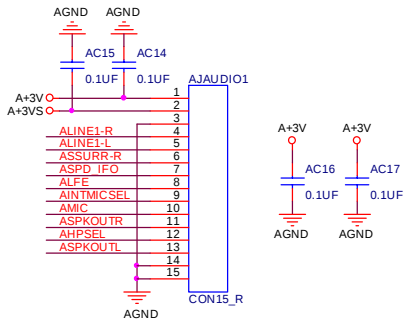
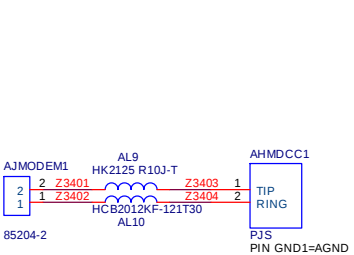
USB BOARD B - 39



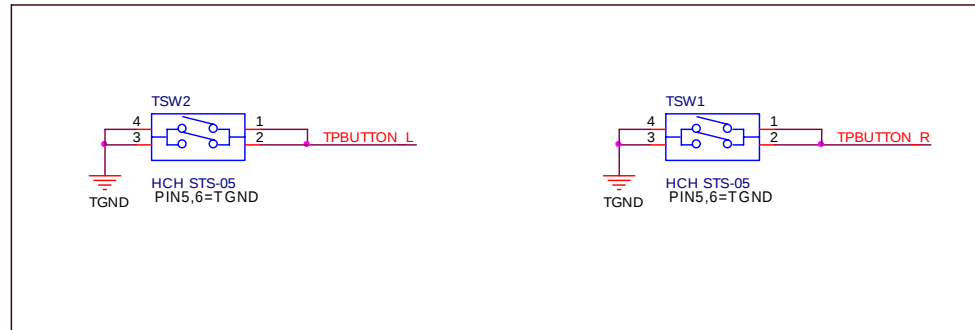
Schematic Diagrams

AUDIO & MODEM BOARD

Sheet 39 of 40
AUDIO & MODEM
BOARD



CLICK BOARD



Sheet 40 of 40
CLICK BOARD

