

SERVICE MANUAL

P570WM/P570WM3

notebook



Notebook Computer

P570WM/P570WM3

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 *P570WM/P570WM3* 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:

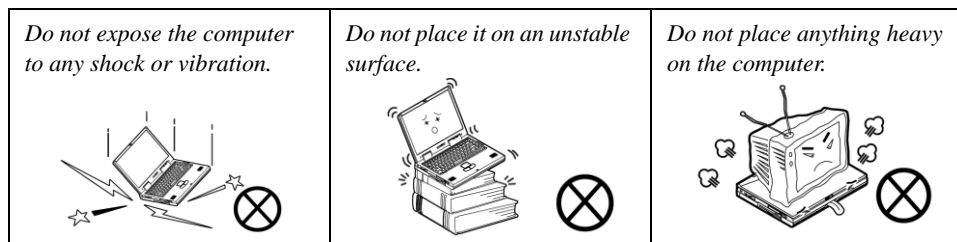
1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. 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 (Full Range AC/DC Adapter – AC Input 100 - 240V, 50 - 60Hz, DC Output 19.5V, 16.9A (330W) or 20V, 15A (300W) minimum).

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

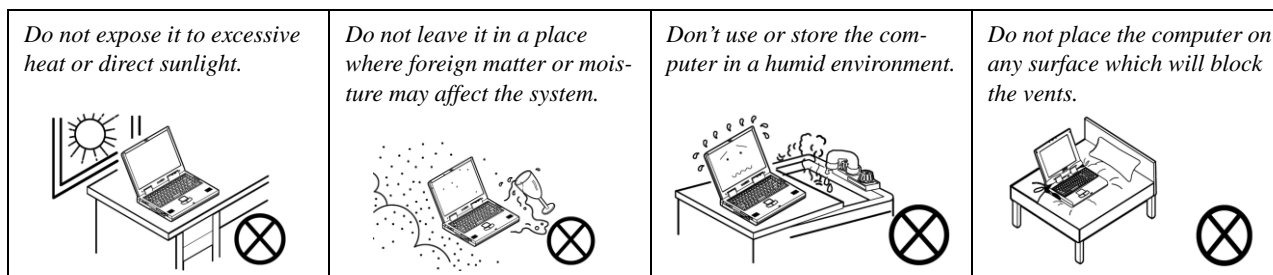
Instructions for Care and Operation

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

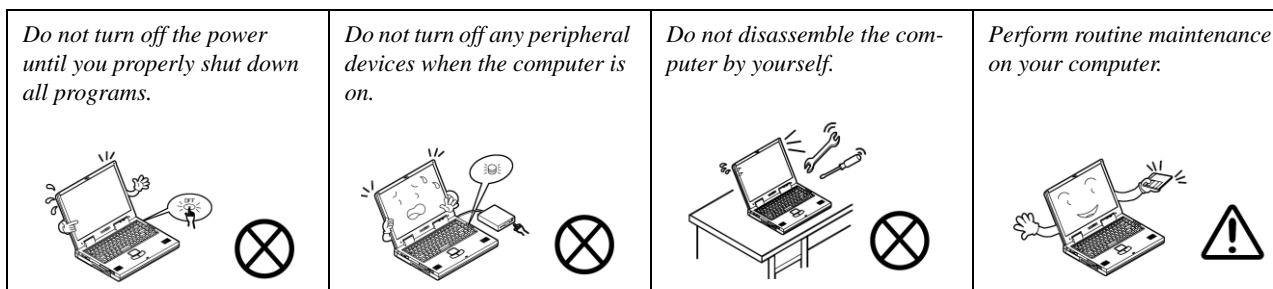
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



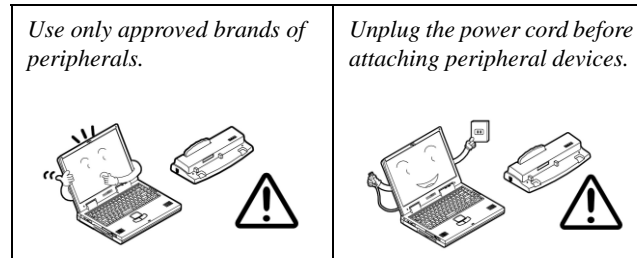
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.



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



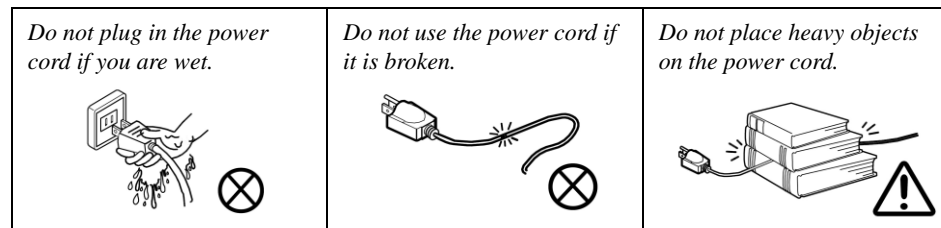
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



Power Safety

The computer has specific power requirements:

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



Power Safety Warning

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

Battery Precautions

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

Battery Guidelines

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

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





Battery Disposal

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

Caution

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

Battery Level

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

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.

System Startup

1. Remove all packing materials, and place the computer on a stable surface.
2. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
3. Attach the AC/DC adapter to the DC-In jack at the rear of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
4. Use one hand to raise the lid/LCD to a comfortable viewing angle (it is preferable not to exceed 135 degrees); use the other hand to support the base of the computer (**Note: Never** lift the computer by the lid/LCD).
5. Raise the lid/LCD to a comfortable viewing angle, and press the power button.

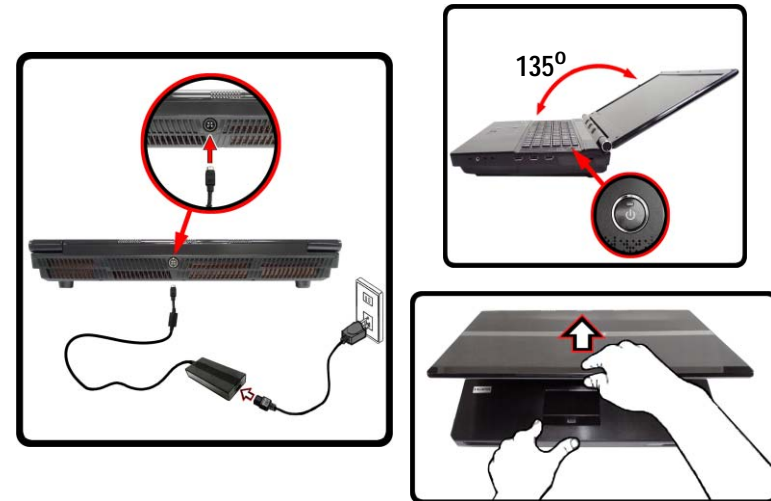


Figure 1
Computer with AC/DC Adapter Plugged-In /
Opening the Lid/LCD

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Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the **P570WM/P570WM3** series notebook computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in *User's Manual*. That manual is shipped with the computer.

Operating systems (e.g. *Windows 7*, 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 **P570WM/P570WM3** 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

Processor Options

Intel® Core™ i7-3960X (3.30GHz)

15MB L3 Cache, 32nm, DDR3-1600MHz, TDP 130W

Intel® Core™ i7-3930K (3.20GHz)

12MB L3 Cache, 32nm, DDR3-1600MHz, TDP 130W

Intel® Core™ i7-3820 (3.60GHz)

10MB L3 Cache, 32nm, DDR3-1600MHz, TDP 130W

LCD (P570WM)

17.3" (43.94cm) FHD LCD

LCD (P570WM3)

17.3" (43.94cm) FHD LCD

Supports 3D solution with NV 3D VISION Kit (Shutter Glasses Only)

Core Logic

Intel® X79 Chipset

Memory

Four 204 Pin SO-DIMM Sockets Supporting **DDR3 1333/1600MHz** Memory

Memory Expandable up to 32GB

(The real memory operating frequency depends on the FSB of the processor.)

BIOS

AMI BIOS (64Mb SPI Flash-ROM)

Storage

Up to Three (**Factory Option**) Changeable 2.5" (6cm) 9.5mm (h) **SATA** (Serial) Hard Disk Drives supporting RAID level 0/1/5

One 12.7mm(h) Optical Device Type Drive (Super Multi Drive/Blu-Ray Combo Drive/Blu-Ray Writer Drive)

Video Adapter (P570WM)

nVIDIA® GeForce GTX 680M PCIe Video Card

4GB GDDR5 Video RAM on board

Microsoft DirectX® 11 Compatible

Supports nVIDIA® SLI Technology

nVIDIA® GeForce GTX 670MX PCIe Video Card

3GB GDDR5 Video RAM on board

Microsoft DirectX® 11 Compatible

Supports nVIDIA® SLI Technology

Video Adapter (P570WM3)

nVIDIA® GeForce GTX 680M PCIe Video Card

4GB GDDR5 Video RAM on board

Microsoft DirectX® 11 Compatible

Supports nVIDIA® SLI Technology

Supports 3DTV Play

Security

Security (Kensington® Type) Lock Slot

BIOS Password

Fingerprint Reader Module

TPM 1.2

Keyboard

Illuminated Full-size "WinKey" keyboard (with numeric keypad)

Pointing Device

Built-in Touchpad (scrolling key functionality integrated)

Card Reader

Embedded Multi-In-1 Push-Push Card Reader

MMC (MultiMedia Card) / RS MMC

SD (Secure Digital) / Mini SD / SDHC / SDXC

MS (Memory Stick) / MS Pro / MS Duo

Slots

One ExpressCard (54/34) Slot

One Mini Card Slot for **WLAN** Module or **WLAN and Bluetooth** Combo Module

Communication

Built-In Gigabit Ethernet LAN

(**Factory Option**) 2.0M FHD/ 2.0M HD USB PC Camera Module

(**Factory Option**) Bluetooth 2.1 + EDR (Enhanced Data Rate) Module

WLAN/ Bluetooth Half Mini-Card Modules:

(**Factory Option**) Intel® Centrino® Ultimate-N 6300 Wireless LAN (**802.11a/g/n**)

(**Factory Option**) Intel® Centrino® Advanced-N 6235 Wireless LAN (**802.11a/g/n**) + Bluetooth **4.0**

(**Factory Option**) Intel® Centrino® Wireless-N 2230 Wireless LAN (**802.11b/g/n**) + Bluetooth **4.0**

(**Factory Option**) Wireless LAN (**802.11b/g/n**) + Bluetooth **4.0**

Audio

High Definition Audio Compliant Interface

S/PDIF Digital Output

Five Speakers

One Sub Woofer

Built-In Microphone

Sound Blaster® X-Fi™ MB2

Interface

Three USB 3.0 Ports (Including one AC/DC Powered USB/eSATA port)

Two USB 2.0 Ports

One eSATA Port (USB 3.0 Port Combined)

One HDMI-Out Port

One DVI-Out Port

One S/PDIF Out Jack

One Headphone/Speaker-Out Jack

One Microphone-In Jack

One Line-In Jack

One Mini-IEEE1394b Port

One RJ-45 LAN Jack

One DC-In Jack

One DisplayPort

419mm (w) * 286mm (d) * 57.9mm - 62.1mm (h)

Around 5.5kg with 1 Video Card, Battery and ODD

Note: External 7.1CH Audio Output Supported by Headphone, Microphone, Line-In and S/PDIF Out Jacks

Environmental Spec

Temperature

Operating: 10°C - 35°C

Non-Operating: -20°C - 60°C

Relative Humidity

Operating: 20% - 80%

Non-Operating: 10% - 90%

Power

Full Range AC/DC Adapter

AC Input: 100 - 240V, 50 - 60Hz

DC Output: 19.5V, 16.9A (**330W**)

DC Output: 20V, 15A (**300W**)

Removable Polymer Smart Li-Ion 78.44WH Battery Pack

(Factory Option) Power Converter Box

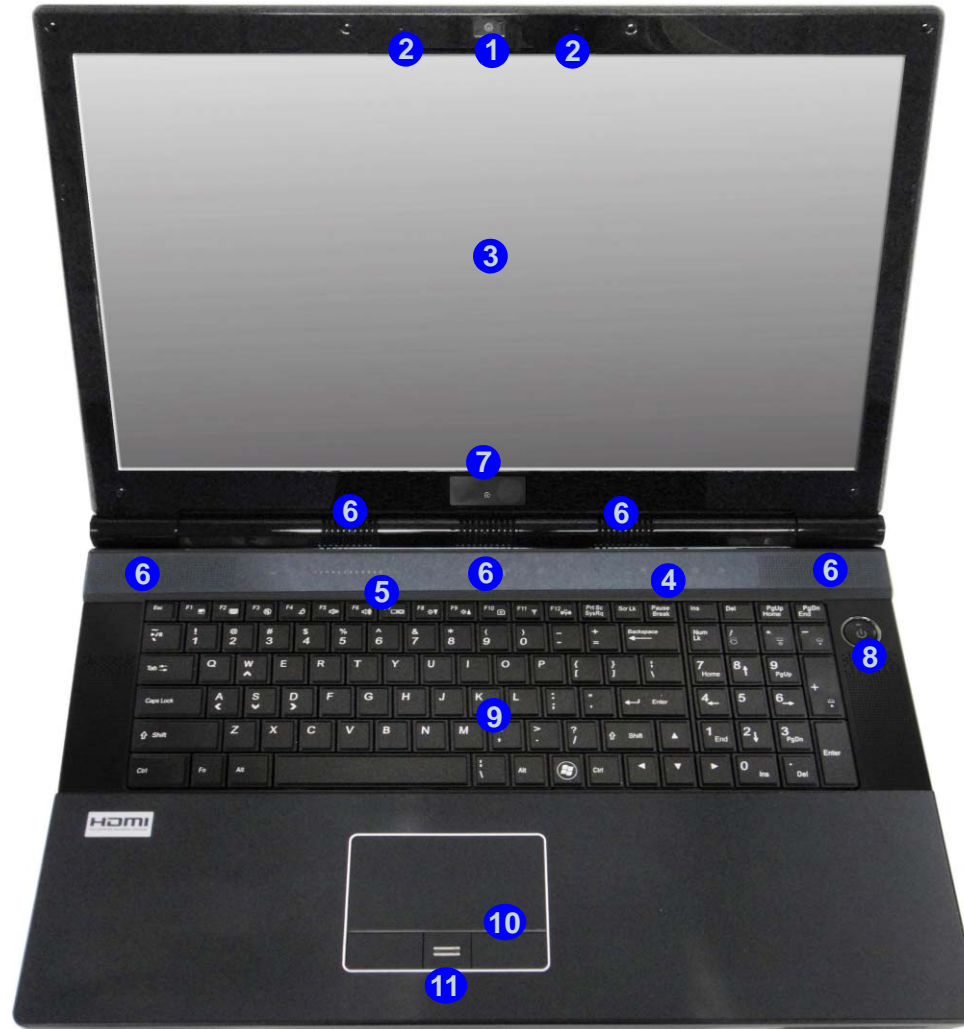
Dimensions & Weight

Introduction

External Locator - Top View with LCD Panel Open

Figure 1
Top View

1. Built-In PC Camera
2. Built-In Microphone
3. LCD
4. LED Status Indicators
5. Touch Sensor Instant Keys
6. Speakers
7. 3D IR Emitter (P570WM3 Only)
8. Power Button
9. Keyboard
10. TouchPad and Buttons
11. Fingerprint Reader Module



External Locator - Front & Right side Views



Figure 2
Front Views

1. LED Power Indicators
2. Express Card Slot
3. Multi-In-1 Card Reader



Figure 3
Right Side Views

1. Line-In Jack
2. S/PDIF-Out Jack
3. Microphone-In Jack
4. Headphone-Out Jack
5. 2 * USB 2.0 Ports
6. Sub Woofer
7. Security Lock Slot

Introduction

External Locator - Left Side & Rear View

Figure 4
Left Side View

1. DVI-Out Port
2. RJ-45 LAN Jack
3. HDMI-Out Port
4. Display Port
5. 2 * USB 3.0 Ports
6. Combined eSATA/
Powered USB 3.0
Port
7. Mini-IEEE 1394b
Port
8. Optical Device Drive
Bay



Figure 5
Rear View

1. DC-In Jack
2. Vent



External Locator - Bottom View

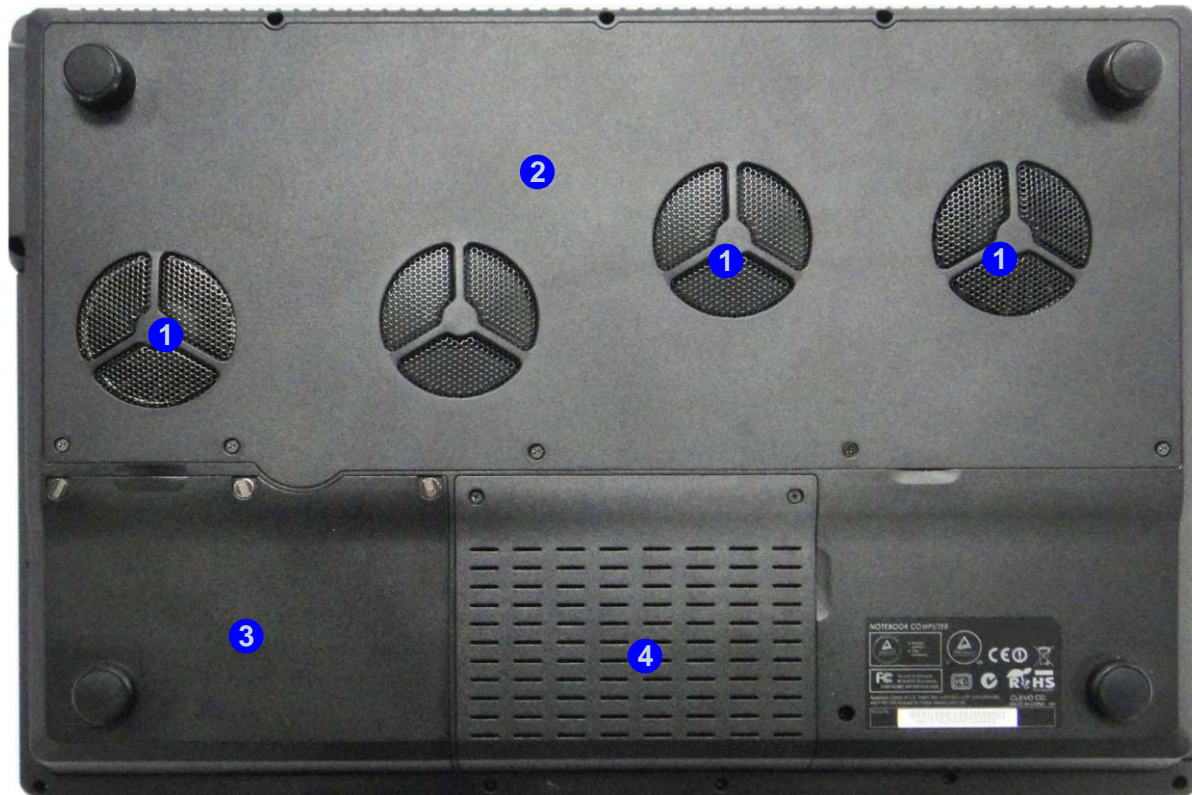


Figure 6
Bottom View

1. Fan Outlet/Intake
2. Component Bay Cover
3. Battery
4. HDD Bay Cover



Overheating

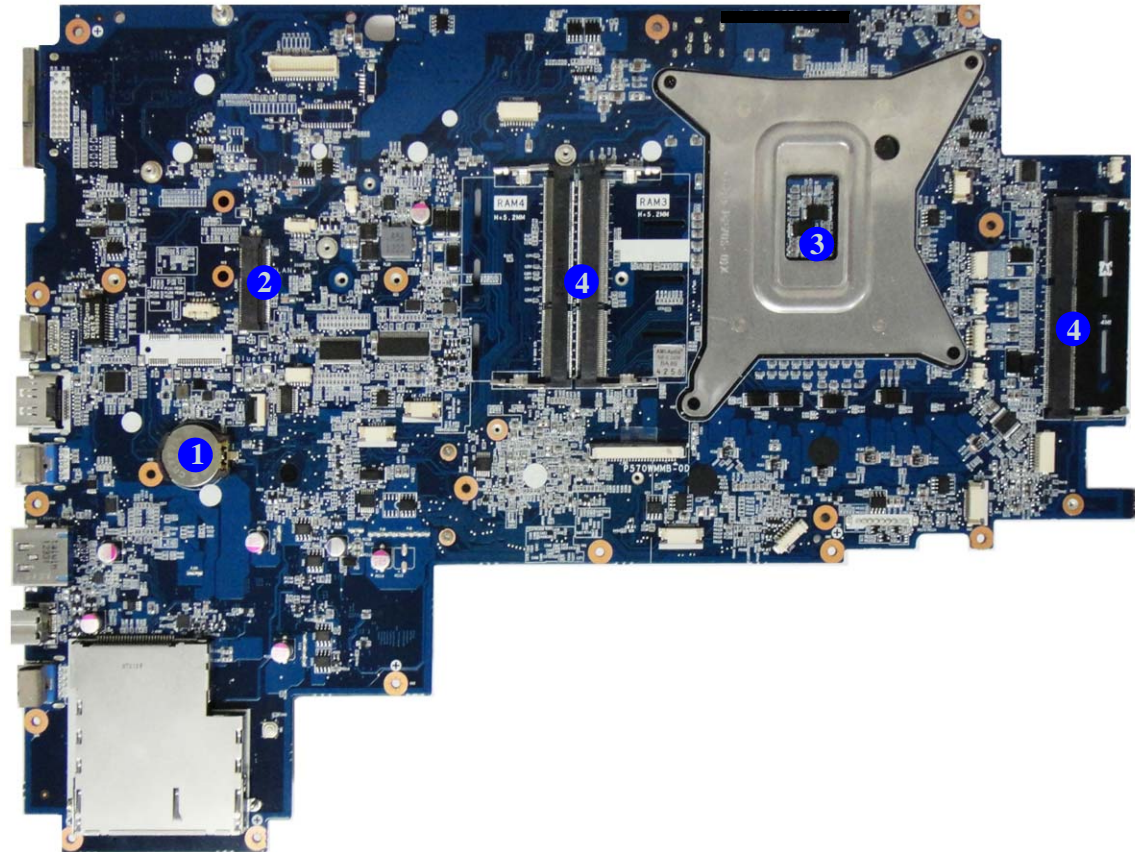
To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

Introduction

Figure 7
**Mainboard Top
Key Parts**

1. CMOS Battery
2. Mini-Card Connector (WLAN Module)
3. SandyBridge Controller
4. Memory Slots DDR3 So-DIMM

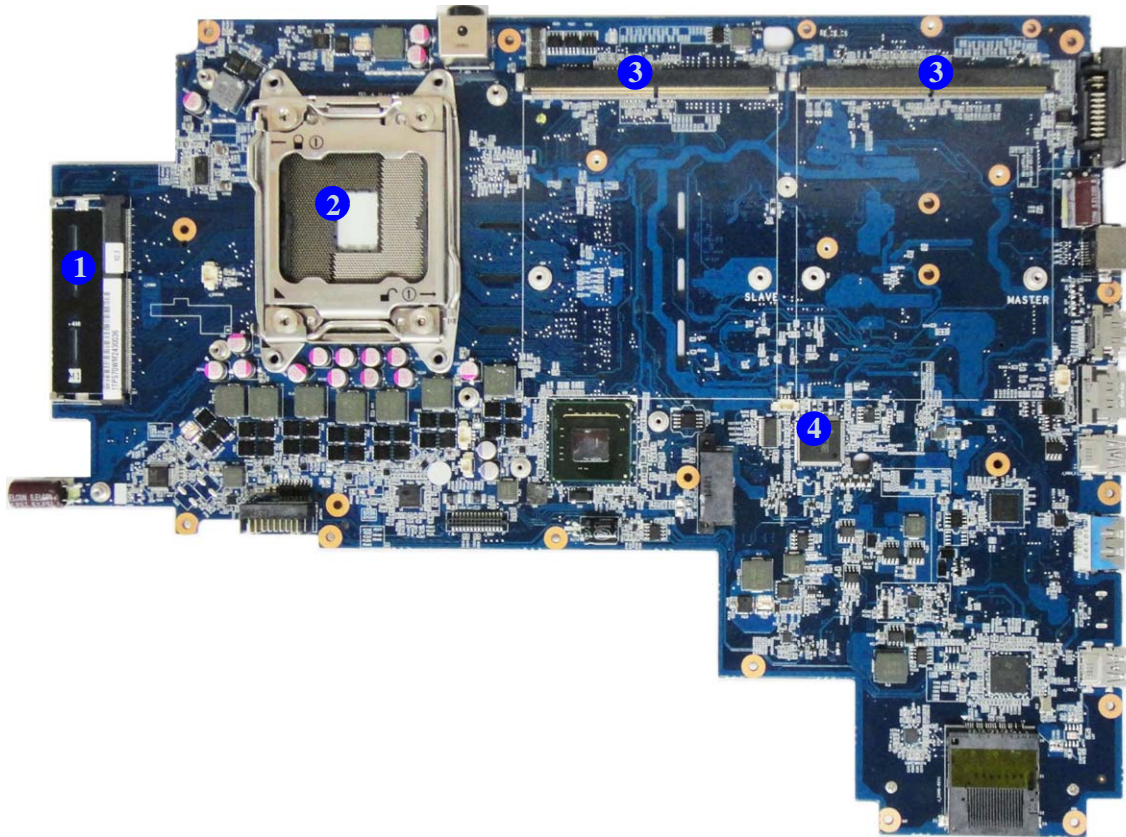
Mainboard Overview - Top (Key Parts)



Mainboard Overview - Bottom (Key Parts)

Figure 8
**Mainboard Bottom
Key Parts**

1. Memory Slots DDR3 So-DIMM
2. CPU Socket
3. VGA Sockets
4. Audio Codec ALC892

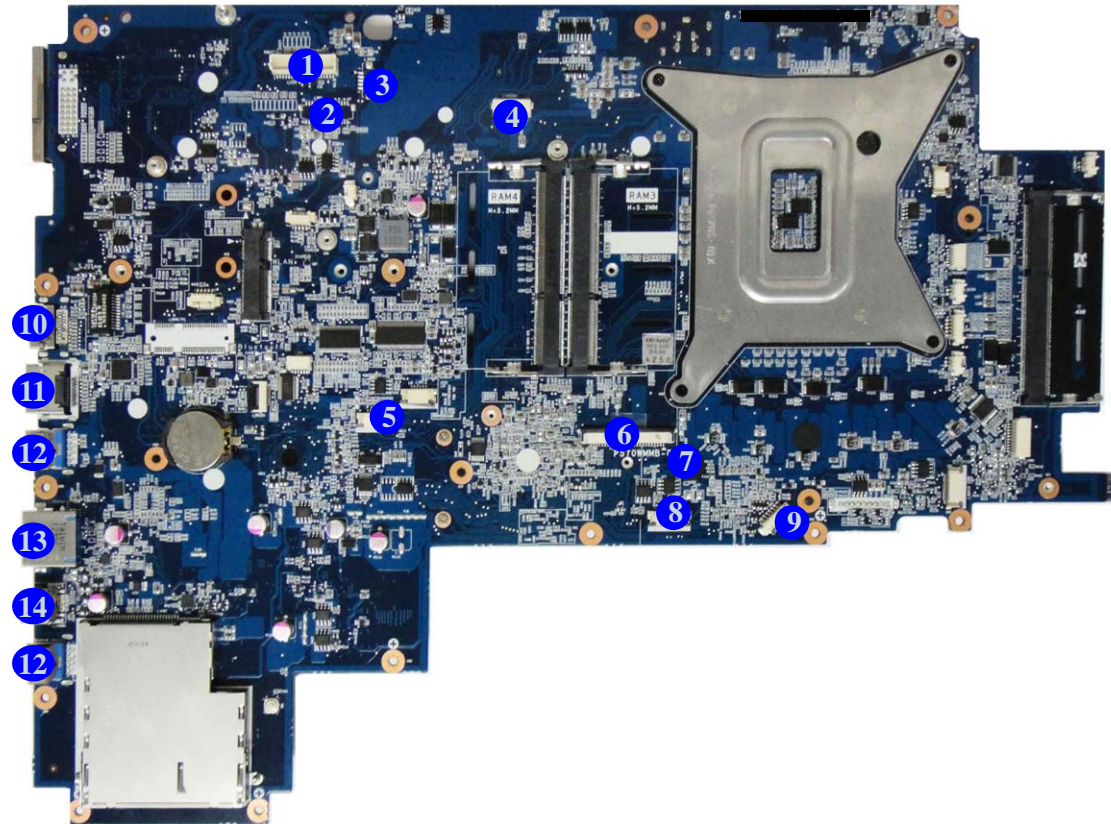


Introduction

Figure 9
**Mainboard Top
Connectors**

Mainboard Overview - Top (Connectors)

1. LCD Cable Connector
2. LCD 3D Cable Connector
3. 3D Emitter Cable Connector
4. JMIC
5. JSpeaker
6. Keyboard Cable Connector
7. Keyboard LED Cable Connector
8. HDD Connector
9. LED Connector
10. HDMI-Out Port
11. Display Port
12. USB 3.0 Ports
13. eSATA/Powered USB 3.0 Port
14. Mini-IEEE 1394 Port



Mainboard Overview - Bottom (Connectors)

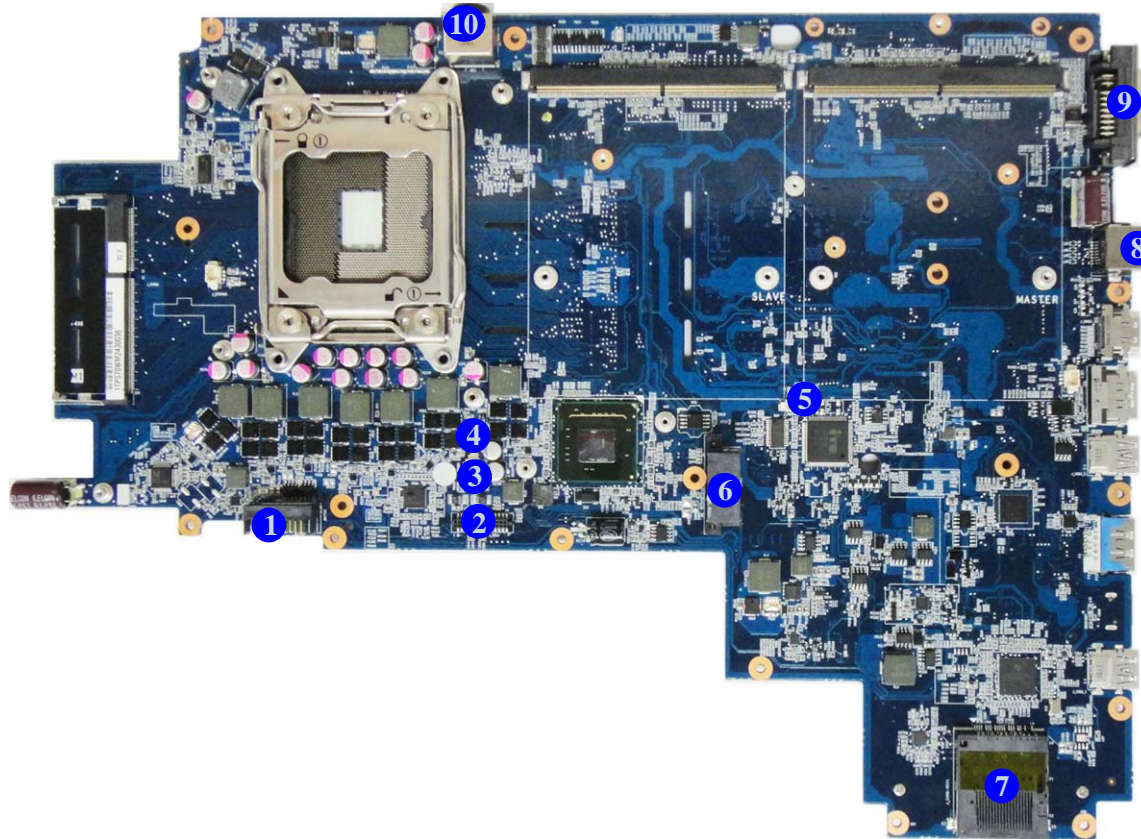


Figure 10
**Mainboard Bottom
Connectors**

1. Battery Connector
2. HDD Connectors
3. Thermal Sensor Connector
4. CPU Fan Connector
5. VGA Fan
6. ODD Connector
7. Multi-in-1 Card Reader
8. RJ-45 LAN Jack
9. DVI Port
10. DC-In Jack


Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the *P570WM/P570WM3* series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

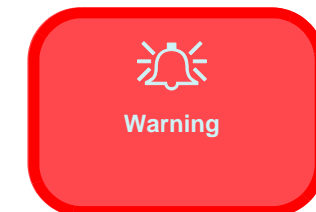
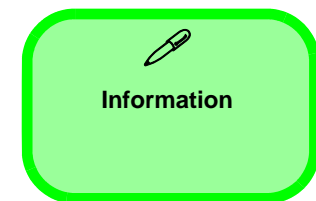
We suggest you completely review any procedure before you take the computer apart.

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

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

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

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



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 Optical Device:

1. Remove the battery *page 2 - 5*
2. Remove the Optical device *page 2 - 6*

To remove the HDD:

1. Remove the battery *page 2 - 5*
2. Remove the HDD *page 2 - 7*

To remove the Keyboard:

1. Remove the battery *page 2 - 5*
2. Remove the System Memory *page 2 - 10*

To remove the System Memory:

1. Remove the battery *page 2 - 5*
2. Remove the System Memory *page 2 - 12*

To remove and install the Processor:

1. Remove the battery *page 2 - 5*
2. Remove the Processor *page 2 - 16*
3. Install the Processor *page 2 - 18*

To remove the VGA card:

1. Remove the battery *page 2 - 5*
2. Remove the VGA card *page 2 - 19*

To remove the Wireless LAN Module:

1. Remove the battery *page 2 - 5*
2. Remove the Keyboard *page 2 - 10*
3. Remove the Wireless LAN *page 2 - 22*

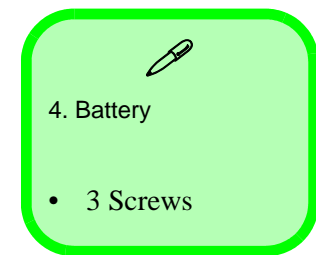
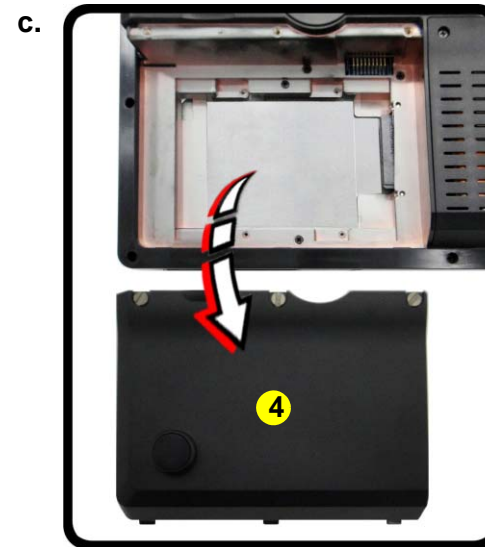
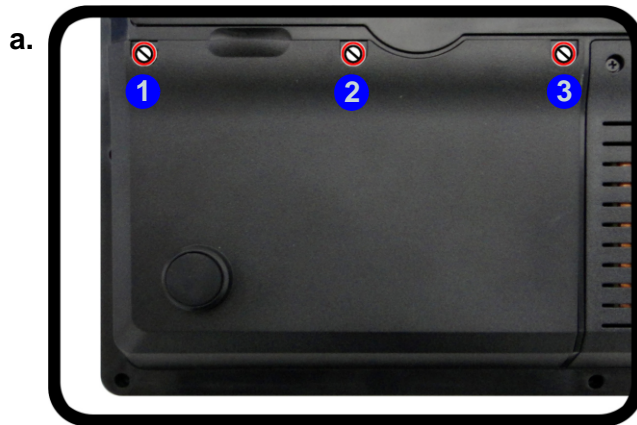
Removing the Battery

If you are confident in undertaking upgrade procedures yourself, for safety reasons it is best to remove the battery.

1. Turn the computer off, remove the AC/DC adapter and turn it over.
2. Loosen screws ① - ③ and carefully lift the battery ④ up.
3. Lift the battery ④ up (*Figure b*) and out of the battery bay.

Figure 1
Battery Removal

- a. Loosen the screws.
- b. Release the battery.
- c. Lift the battery out of the bay as indicated.



Disassembly

Figure 2
**Optical Device
 Removal**

- Remove the screws.
- Remove the cover.
- Remove the screw.
- Push the optical device out of the computer.

Removing the Optical (CD/DVD) Device

- Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)).
- Locate the hard disk bay cover and remove screws **1** - **2**, and remove the bay cover **3**.
- Remove the screw at point **4**, and use a screwdriver to carefully push out the optical device at point **5**.
- Push the optical device drive **6** out of the bay and reverse the process to install the new device.



- 3. Hard Disk Bay Cover
- 6. Optical Device

- 3 Screws



Blu-Ray Device Bezel Removal

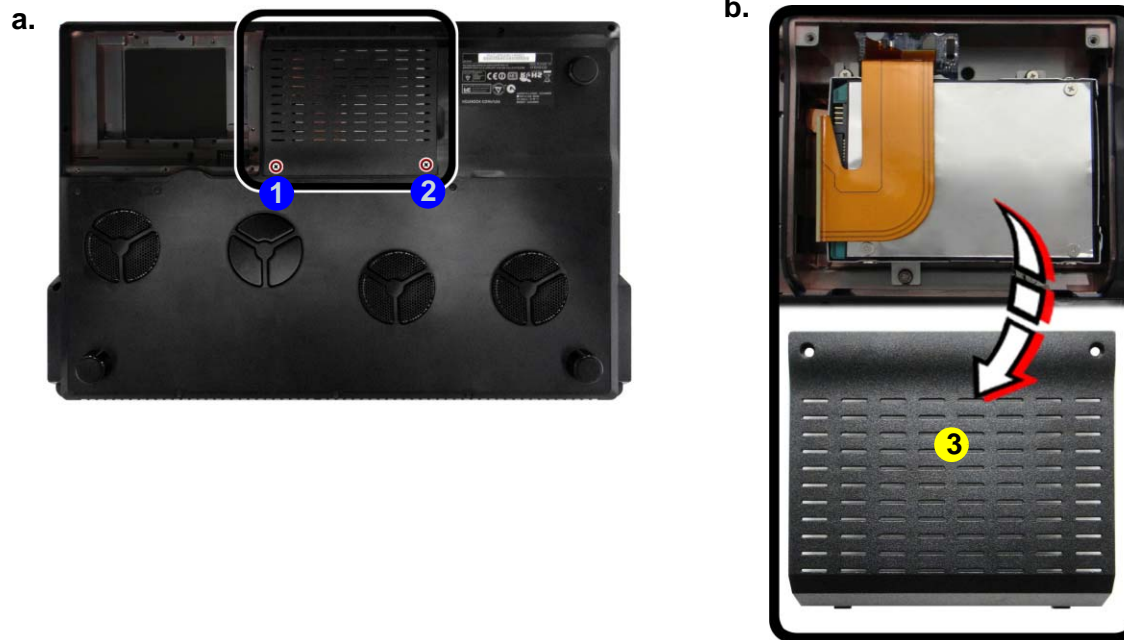
Note that some Blu-Ray modules (e.g. Pioneer) have a small piece of mylar inserted in the left side (as viewed front on) of the bezel cover; in order to prevent the bezel cover of the module from being removed accidentally. If you need to replace the bezel cover, you will need to use a screwdriver to ease out and remove the mylar before attempting to remove the bezel cover. You will need to re-insert the mylar when replacing the bezel cover.

Removing the Hard Disk Drive


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

Hard Disk Upgrade Process

1. Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)).
2. Locate the Hard disk bay cover and remove screws **1** & **2**.
3. Remove the bay cover **3**.



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



4. Hard disk Bay Cover

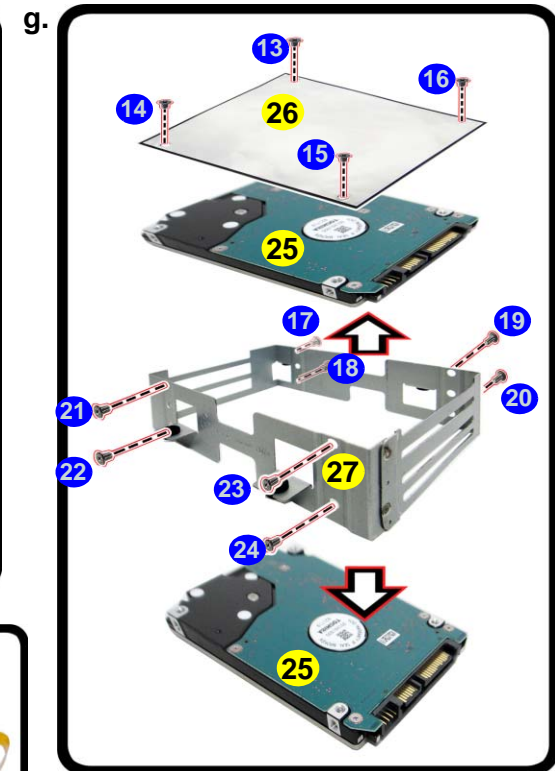
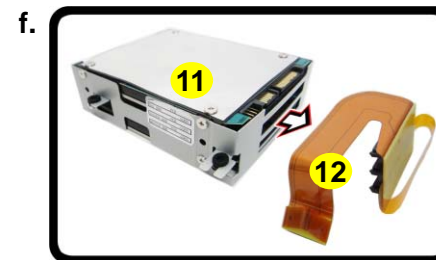
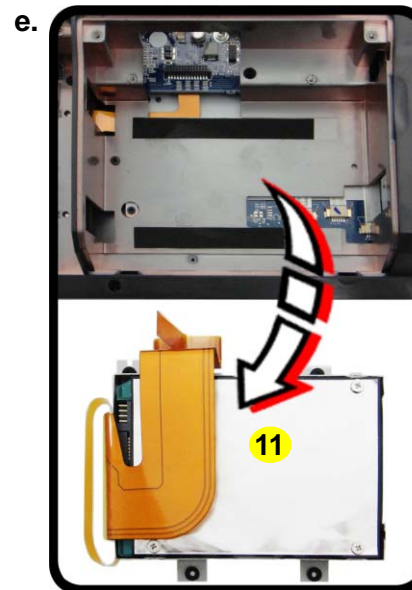
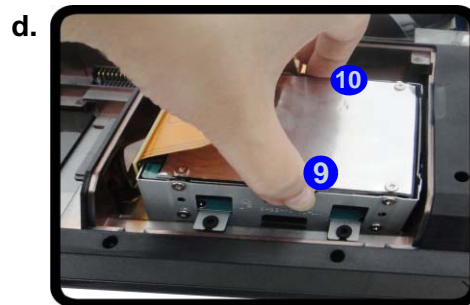
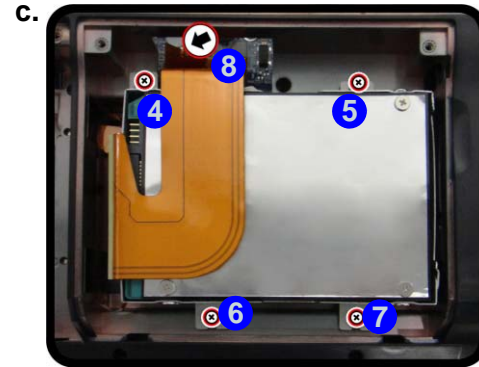
- 3 Screws

Disassembly

Figure 4 HDD Assembly Removal (cont'd.)

- c. Remove the screws.
- d. Lift the hard disk assembly using two hands at points 9 - 10.
- e. Lift the hard disk assembly up out of the computer.
- f. Remove the HDD(s) from the connector
- g. Remove the screws and separate the HDD(s) from case.

4. Remove screws 4 - 7 and pull the tab to disconnect the connector 8 from hard disk assembly.
5. Carefully lift the hard disk assembly using two hands at points 9 - 10.
6. Lift the hard disk assembly 11 out of the computer.
7. Separate the hard disk board connector 12 from the hard disk assembly.
8. Remove screws 13 - 24 (depending on how many hard disks you have installed in the assembly).
9. Separate the hard disk(s) 25 and hard disk mylar 26 from the case 27.
10. Reverse the process to install a new hard disk(s) and **make sure to connect cable 8** before screwing in screws 4 - 7 (Figure c).



- 11 Hard Disk Assembly
- 12 Hard Disk Board Connector
- 25. Hard Disks
- 26. Hard Disk Mylar
- 27. Hard Disk Case

- 16 Screws

Removing the Hard Disk(s) in the Secondary HDD Bay

1. Turn **off** the computer, and turn it over and remove the battery.
2. The secondary hard disk bay is located under the battery.
3. Remove screws **1** - **4** from the secondary hard disk assembly.
4. Grip the tab **5** and slide the hard disk assembly in the direction of the arrow **6**.
5. Lift the hard disk assembly **7** out of the compartment.
6. Remove the screws **8** - **11** to release the hard disk **12** from the case **13**.
7. Reverse the process to install any new hard disk(s).

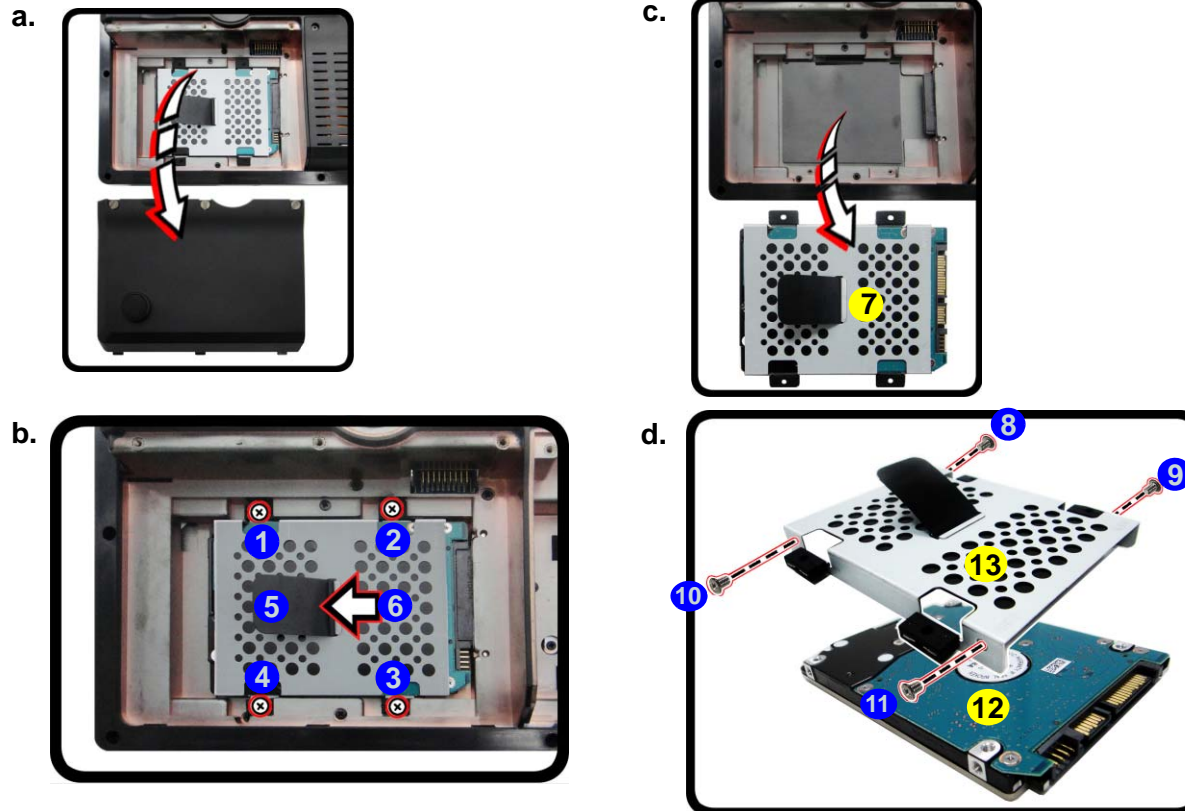



Figure 5
**Secondary HDD
Assembly Removal**

- a. Remove the battery.
- b. Remove the screws and slide the secondary hard disk assembly in the direction of the arrow.
- c. Lift the secondary hard disk assembly out of the computer.
- d. Remove the screws to release the hard disk from the case.



7. Hard Disk Assembly
12. Hard Disk Case
13. Hard Disks

- 8 Screws

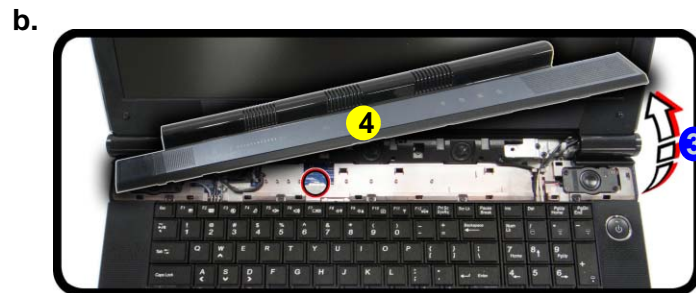
Disassembly

Figure 6
**Keyboard
Removal**

- a. Remove the screws from the bottom of the computer.
- b. Turn the computer over, open the lid/LCD and unsnap the LED cover at point 3.
- c. Lift the LED cover module and disconnect the cable.
- d. Remove the screws from the keyboard.

Removing the Keyboard

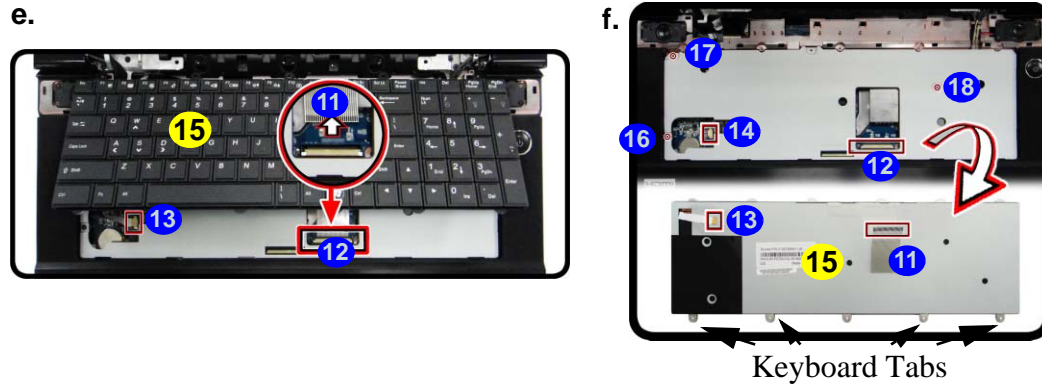
1. Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)).
2. Remove screws 1 & 2 from the bottom of the computer.
3. Turn the computer over, open the Lid/LCD, and carefully (a cable is connected to the underside of the LED cover module) unsnap up the LED cover module 4 from point 3 on the right.
4. Lift up the LED cover module 4 and disconnect the cable 5.
5. Remove screws 6 - 10 from the keyboard.




4. LED cover module

- 7 Screws

6. Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable.
7. Disconnect the keyboard ribbon cable **11** from the locking collar socket **12**, and the keyboard LED cable **13** from its locking collar socket **14**.
8. Remove the keyboard **15**, and screws **16** - **18** from the keyboard shielding plate.





Re-Inserting the Keyboard


When re-inserting the keyboard firstly align the **five** keyboard tabs at the bottom (*Figure 7f*) at the bottom of the keyboard with the slots in the case.

Figure 7
Keyboard Removal (cont'd.)

- e. Disconnect the cable from the locking collar.
- f. Remove the keyboard.
- g. Snap down the LED cover.
- h. Push the LED cover on the left side at point **22** and the slide toward the right to secure it in place.

9. Reverse the process to replace the keyboard (make sure to reconnect the keyboard cable).
10. Snap the LED cover module **19** at the top of the module at point **20** & **21**.
11. Push the LED cover module down on the left side at point **22**, and then slide the module to the right (as illustrated) and snap down to secure it in place.
12. Replace the screws on the bottom of the computer.





15. Keyboard
19. LED cover module

- 3 Screws

Disassembly

Figure 8
RAM-1 Module Removal

- Remove the keyboard shielding plate.
- Pull the release latch.
- Remove the module(s).



Contact Warning

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



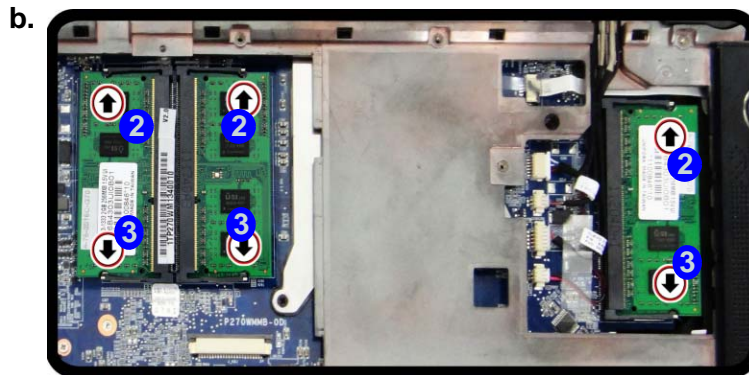
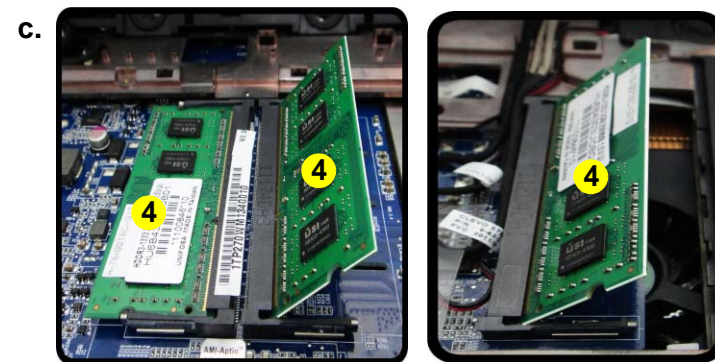
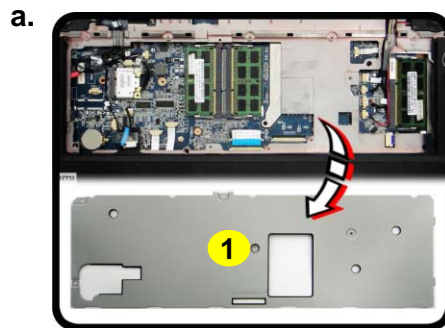
- Keyboard Shielding Plate
- RAM Module(s)

Removing the System Memory (RAM) -1

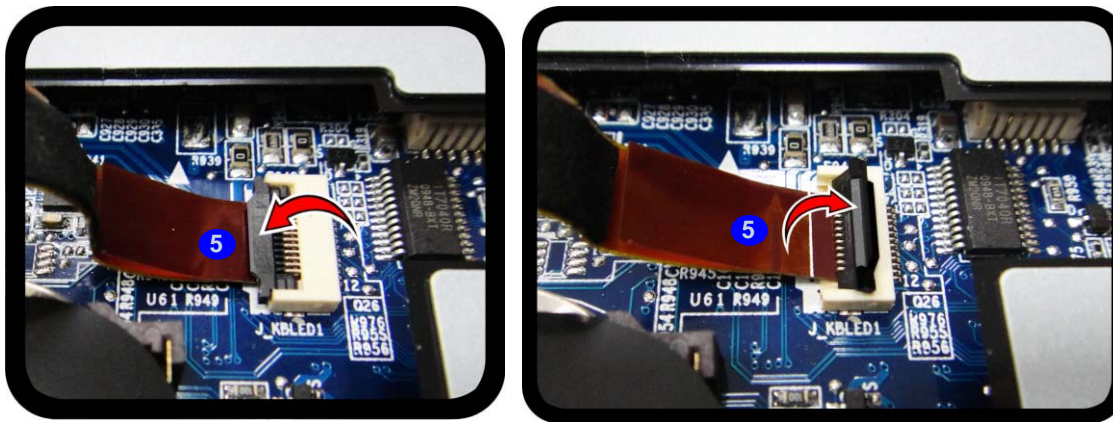
The computer has three memory sockets for 204 pin Small Outline Dual In-line Memory Modules (SO-DIMM) DDR III (DDR3) supporting 1333/1600 MHz. The main memory can be expanded up to 32GB. The total memory size is automatically detected by the POST routine once you turn on your computer.

Removing the Primary System Memory (2 memory sockets)

- Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)), and keyboard ([page 2 - 10](#)).
- Remove the keyboard shielding plate **1** ([Figure 8a](#)).
- Gently pull the two release latches (**2** & **3**) on the sides of the memory socket in the direction indicated by the arrows ([Figure 8b](#)).
- The RAM module **4** will pop-up ([Figure 8c](#)), and you can then remove it.



5. Pull the latches to release the second module if necessary.
6. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
7. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the socket as it will go. DO NOT FORCE the module; it should fit without much pressure.
8. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
9. Replace the screws and shielding plate.
10. Replace the keyboard and make sure you reconnect the keyboard cable and keyboard LED cable.
11. When reconnecting the keyboard LED cable **5**, insert the cable so that the gold colored contact is facing upwards to fit inside the connector. Make sure you tuck the cable into the recess in the shield plate to avoid trapping it between the keyboard and the shielding plate.



12. Reconnect the LED module cable and reinstall the LED cover module (see [Figure 7 on page 2 - 11](#)).
13. Replace the screws on the bottom of the computer.
14. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Disassembly

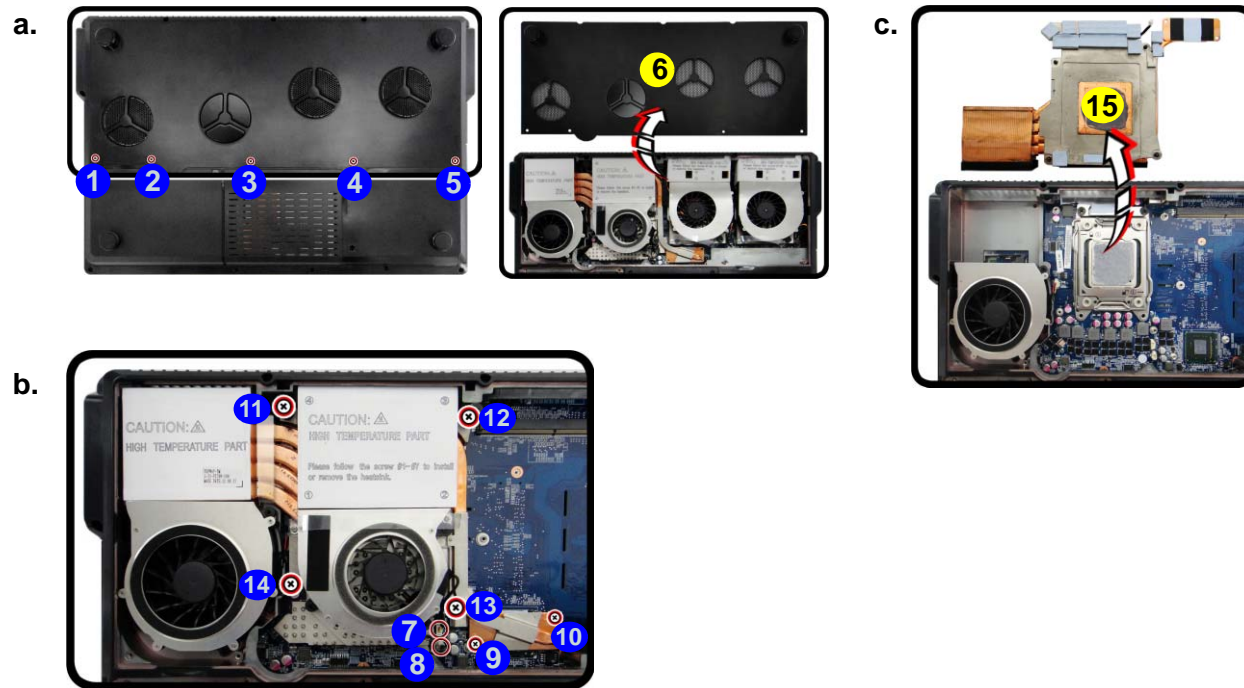
Figure 9
RAM-2 Module
Removal

- Remove screws and component bay cover.
- Disconnect the cables and remove the screws.
- Remove the heatsink.

Removing the System Memory (RAM) - 2

Memory Upgrade Process

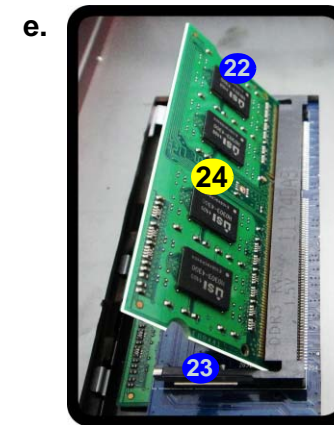
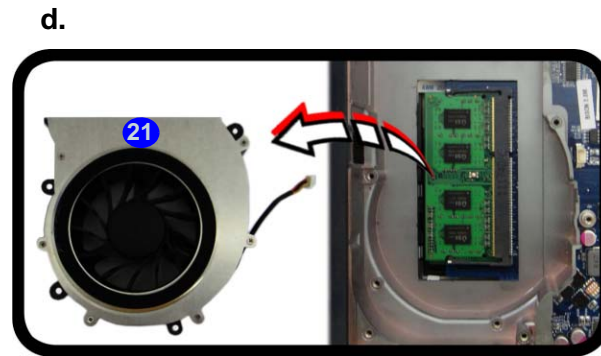
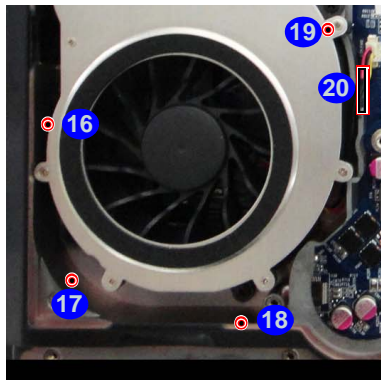
- Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)) and remove the keyboard ([page 2 - 5](#)).
- Remove screws ① - ⑤ and component bay cover ⑥.
- Carefully disconnect CPU fan cables ⑦ & ⑧, and remove screws ⑨ - ⑭ in the reverse order to that indicated on the label (i.e. remove screw ⑨ first, and lastly remove screw ⑭) and carefully pull the tab to disconnect the heat sink.
- Carefully (it may be hot) lift up the heatsink ⑮ off the computer.



6. Component Bay Cover
15. Heatsink

- 11 Screws


5. Remove screws **16** - **19** from the fan unit, disconnect the fan cable **20**, and lift the fan unit **21** off the computer (*Figure 10d*).
6. Gently pull the two **release latches** **22** & **23** on the sides of the memory socket in the direction indicated by the arrows (*Figure 10e*).
7. The RAM module **24** will pop-up, and you can then remove it.



8. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
9. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the socket as it will go. DO NOT FORCE the module; it should fit without much pressure.
10. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
11. Replace the fan unit above the RAM module slot and replace screws **16** - **19**, then reconnect the cable **20** (*Figure 10d*).
12. Insert the heatsink **15** (make sure not to trap or catch the plastic VGA heat sink tab under the CPU heat sink when inserting it) (*Figure 9c*).
13. Tighten the CPU heat sink screws **9** - **14** in the order indicated on the label (i.e. tighten screw **14** first, and lastly tighten screw **9**) and reconnect the CPU fan cables **7** & **8** (*Figure 9b*).
14. Replace the component bay cover and screws.
15. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Figure 10
RAM-2 Module
Removal (cont'd.)

- d. Remove screws and lift the fan unit.
- e. Pull the release latch and remove the module.



21. Fan Unit
 24. RAM Module

- 11 Screws

Disassembly

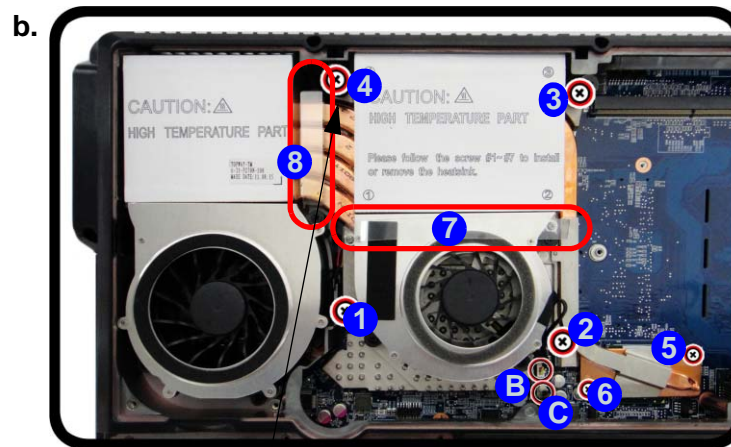
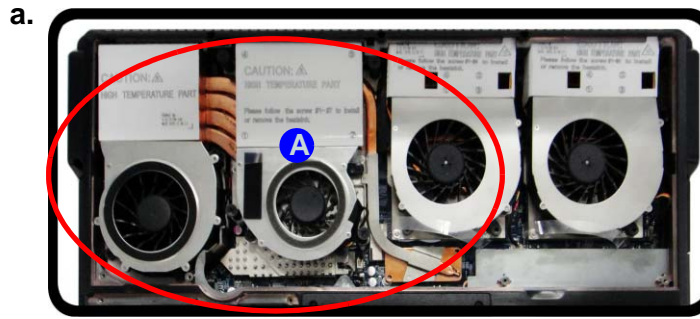
Figure 11
Processor Removal

- Locate the heat sink.
- Remove the CPU fan cables and screws.
- Remove the heat sink

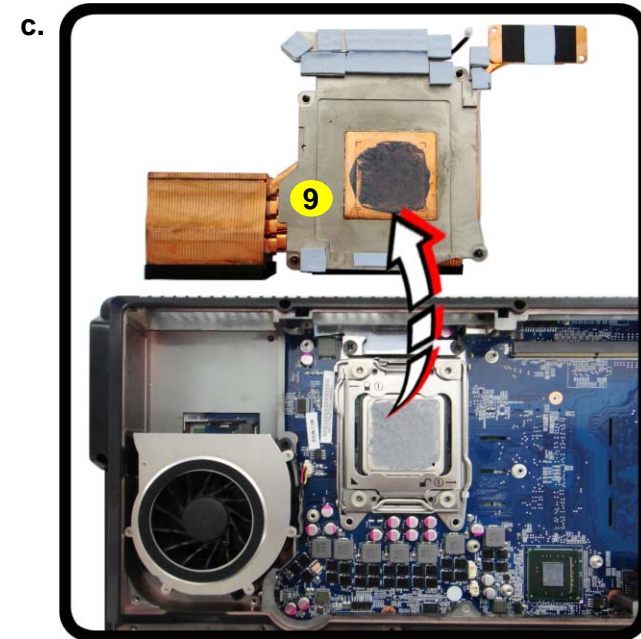
Removing and Installing the Processor

Processor Removal Procedure

- Turn off the computer, and turn it over, remove the battery ([page 2 - 5](#)), and component bay cover ([page 2 - 10](#)).
- The CPU heat sink will be visible at point **A** on the mainboard.
- Carefully disconnect CPU fan cables **B - C**, and remove screws **6, 5, 4, 3, 2, 1**, the reverse order indicated on the label ([Figure 11b](#)) and carefully pull the tabs **7 - 8** to disconnect the heat sink.
- Carefully (it may be hot) lift up the heat sink **9** off the computer.



Note: make sure not to trap or catch the plastic heat sink tab **8** while removing or tightening the screw **4**.



Caution

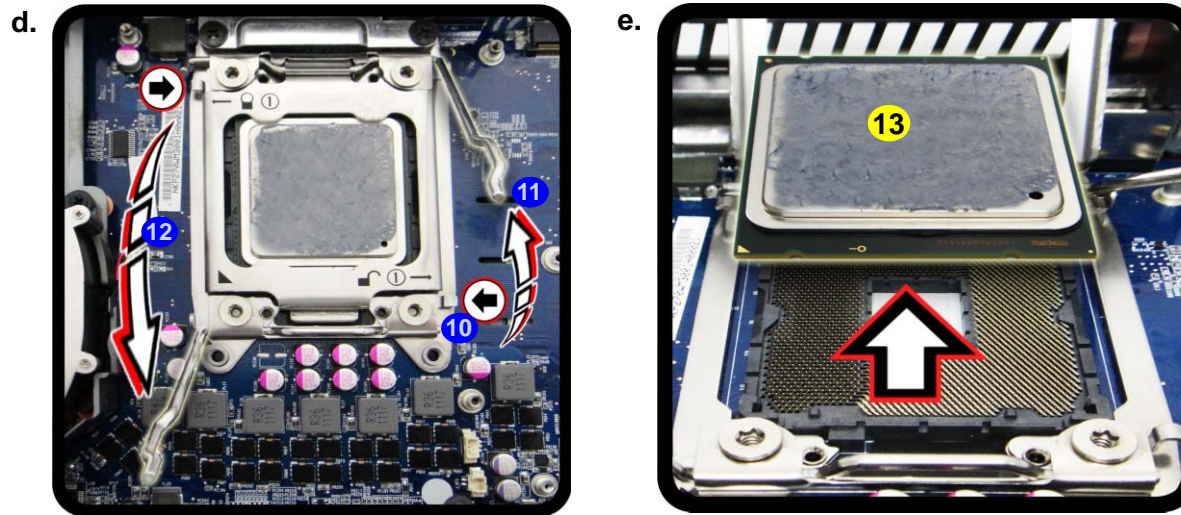
The heat sink, and CPU area in general, contains parts which are subject to high temperatures. Allow the area time to cool before removing these parts.



9. CPU Heat Sink

- 6 Screws

5. Press down and hold the latch **10** (with the latch held down you will be able to release it).
6. Move the latch **11** and bracket **12** fully in the direction indicated to unlock the CPU.
7. Carefully (it may be hot) lift the CPU **13** up out of the socket (*Figure 12e*).
8. See [page 2 - 18](#) for information on inserting a new CPU.



- d. Move the latch **12** and bracket **13** fully in the direction indicated 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.




13. CPU

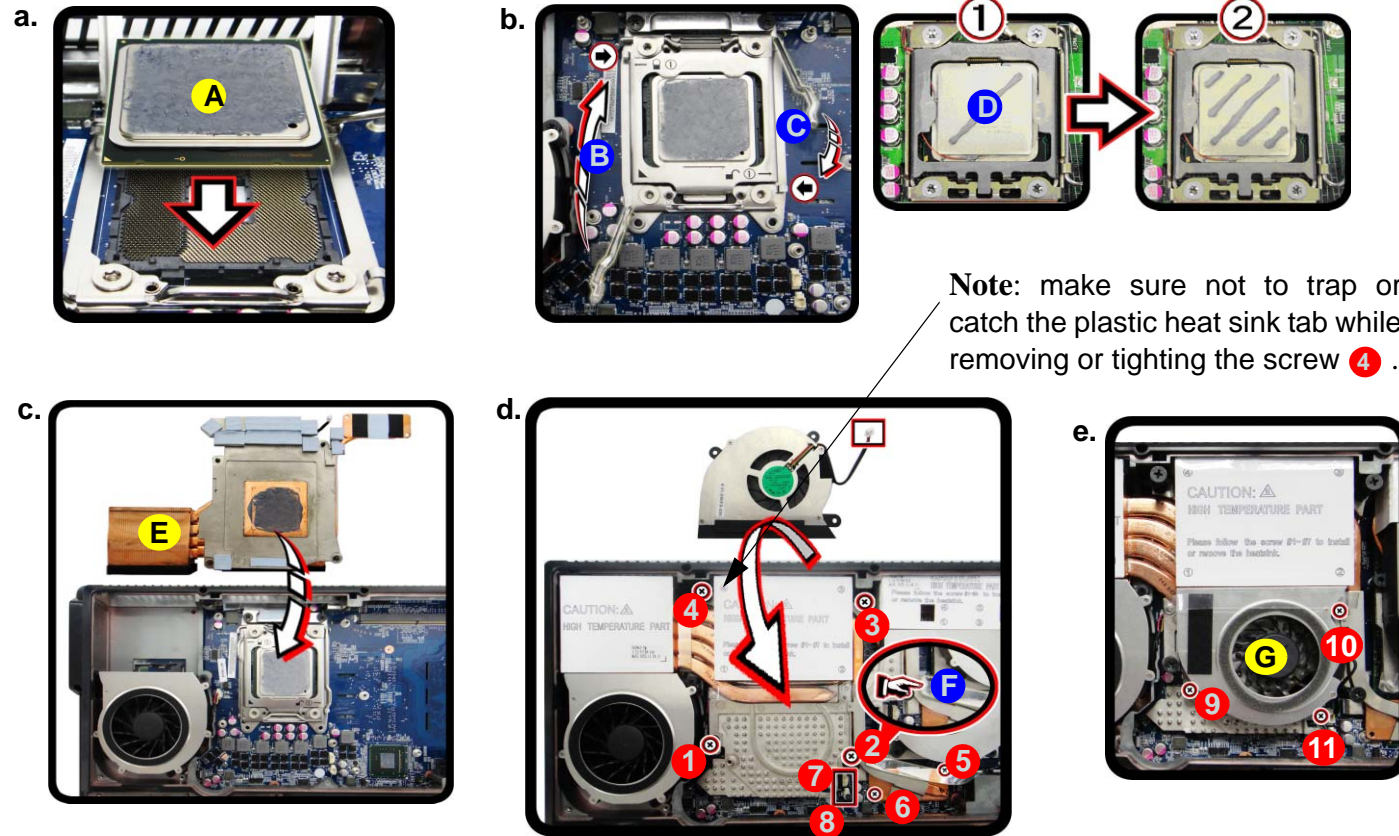
Disassembly

Figure 13
Processor
Installation

- Insert the CPU.
- Move the latch **B** towards the lock symbol  and bracket **C** fully in the direction indicated to lock the CPU. Apply thermal grease.
- Insert the heat sink.
- Tighten the screws and connect the CPU fan cables.
- Tighten the screws.

Processor Installation Procedure

- Insert the CPU **A**; pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).
- Move the latch **B** towards the lock symbol  and bracket **C** fully in the direction indicated to lock the CPU.
- Apply the thermal grease **D** to the top of the CPU as shown (*Figure 13b*).
- Insert the heat sink **E** (make sure not to trap or catch the plastic VGA heat sink tab **F** under the CPU heat sink when inserting it) note as indicated in *Figure 13c*.
- Tighten the CPU heat sink screws **1**, **2**, **3**, **4**, **5**, & **6** (*Figure 13d*) and connect the CPU fan cables **7** - **8**.
- Insert CPU fan **G** and tighten the screws **9** - **11** (*Figure 13e*).
- Replace the component bay cover and tighten the screws (*page 2 - 16*).



A. CPU
E. Heat Sink
G. Heat Sink Fan

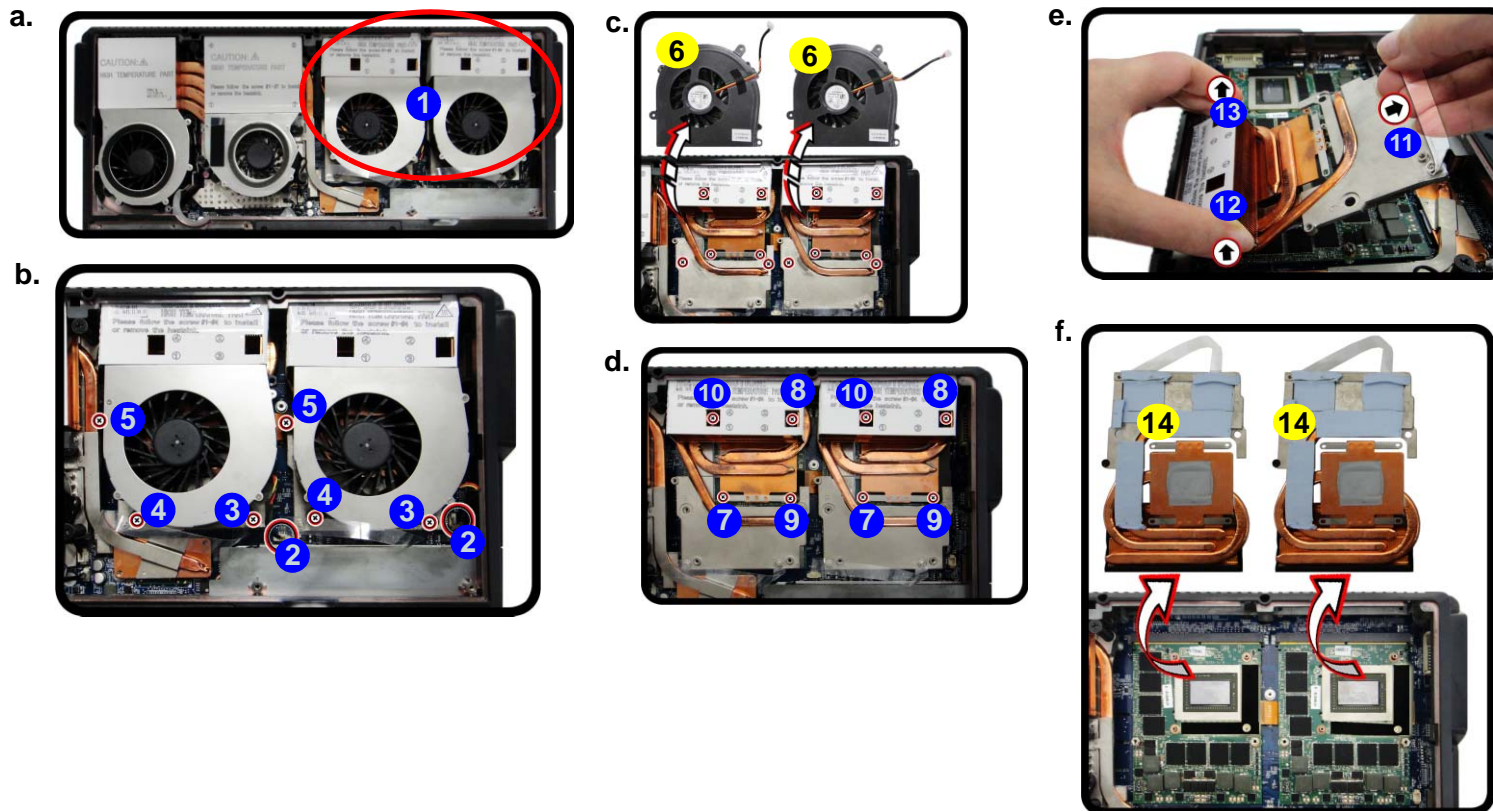
- 9 Screws


Removing the VGA Card

1. Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)) and component bay cover ([page 2 - 5](#)).
2. The VGA card will be visible at point **1** on the mainboard ([Figure 17a](#)).
3. Carefully disconnect VGA fan cable **2**, and remove screws **3** - **5**.
4. Remove the VGA fan **6** (two VGA fans are pictured here).
5. Remove screws **7** & **10** from the heat sink **in the order indicated on the label** (and on the heat sink unit itself).
6. Carefully pull the tab **11** and lift at points **12** & **13** to disconnect the heat sink from VGA assembly.
7. Remove the heat sink **14** (two heat sink units are pictured here).

Figure 14
VGA Card Removal

- a. Locate the VGA cards.
- b. Remove the VGA fan cable and screws.
- c. Remove the VGA fan.
- d. Remove the screws
- e. Lift the heat sink.
- f. Remove the heat sink.





6. VGA Card Fan
14. VGA Card Heatsink

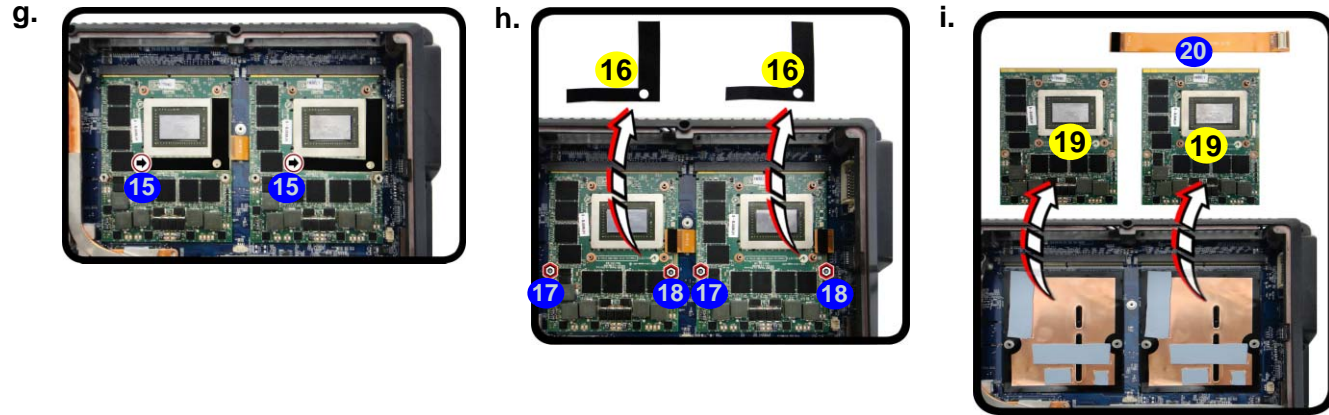
- 14 Screws

Disassembly

Figure 15 VGA Card Removal (cont'd)

- g. Locate the VGA mylar covers.
- h. Remove the VGA mylar covers and screws.
- i. Remove the VGA card.

- 8. Remove the VGA mylar covers at point **15** (two VGA mylar covers are pictured here).
- 9. Remove the VGA mylar **16** and remove screws **17** & **18** from the VGA assembly.
- 10. Carefully remove the VGA card **19**.
- 11. If your system includes two video cards you will need to disconnect the cable **20** between the master and slave cards (do not forget to reconnect the cable if you are replacing two cards).



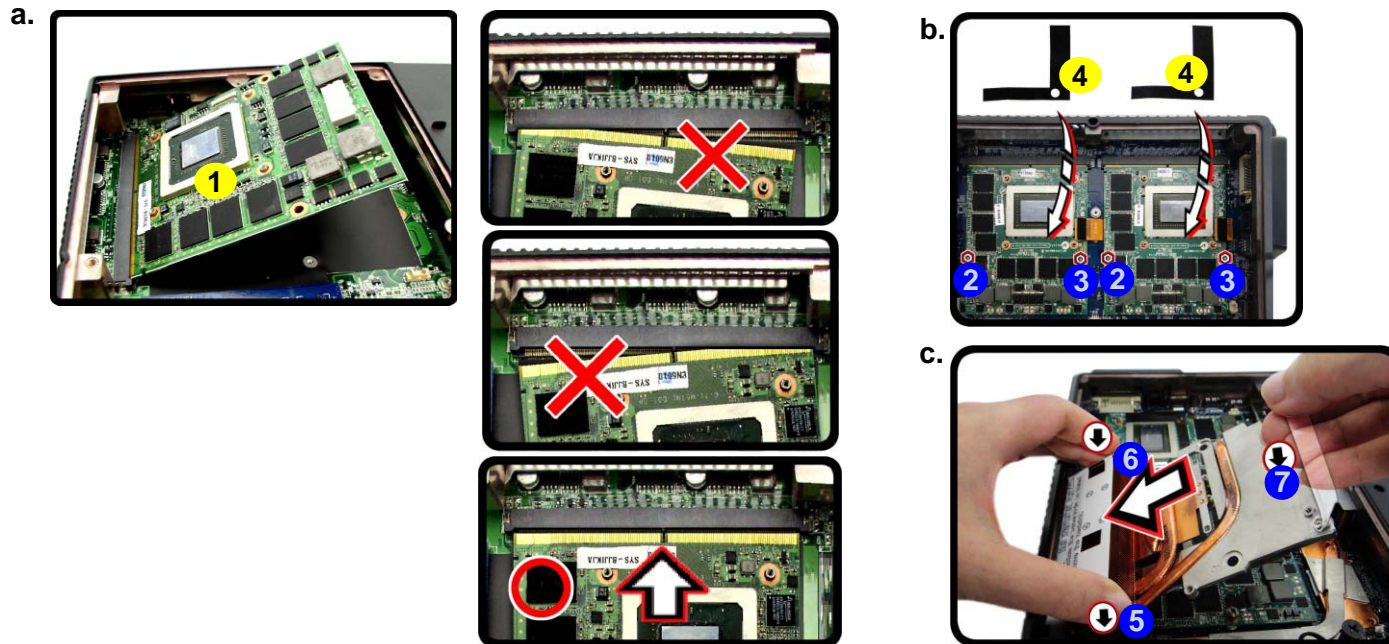
16. VGA mylar covers
19. VGA Card


- 4 Screws

Installing the VGA Card

1. Do not forget to replace the master and slave cable if you are replacing two video cards.
2. Prepare to fit the VGA card **1** into the slot by holding it at about a 30° angle.
3. The card needs to be fully into the slot, and the VGA card and socket have a guide-key and pin which align to allow the card to fit securely.
4. Fit the connectors firmly into the socket, straight and evenly.
5. DO NOT attempt to push one end of the card in ahead of the other.
6. The card's pin alignment will allow it to only fit one way. **Make sure the module is seated as far into the socket as it will go** (none of the gold colored contact should be showing). DO NOT FORCE the card; it should fit without much pressure.
7. Secure the card with screws **2** & **3** and mylar covers **4** (two video cards are pictured).
8. Hold the heatsink by the tab **5** & **6** and at point **7** and insert it back on the card and secure the screws in the order indicated in ([page 2 - 19](#)).
9. Attach the VGA card fan, secure with the screws and reconnect the fan cable as indicated in ([page 2 - 19](#)).
10. Reinsert the component bay cover, and secure with the screws as indicated in ([page 2 - 14](#)).

- a. Carefully Insert the VGA Card.
- b. Tighten the screws.
- c. Press the VGA heat sink.





1. VGA card Module
4. VGA mylar covers

Disassembly

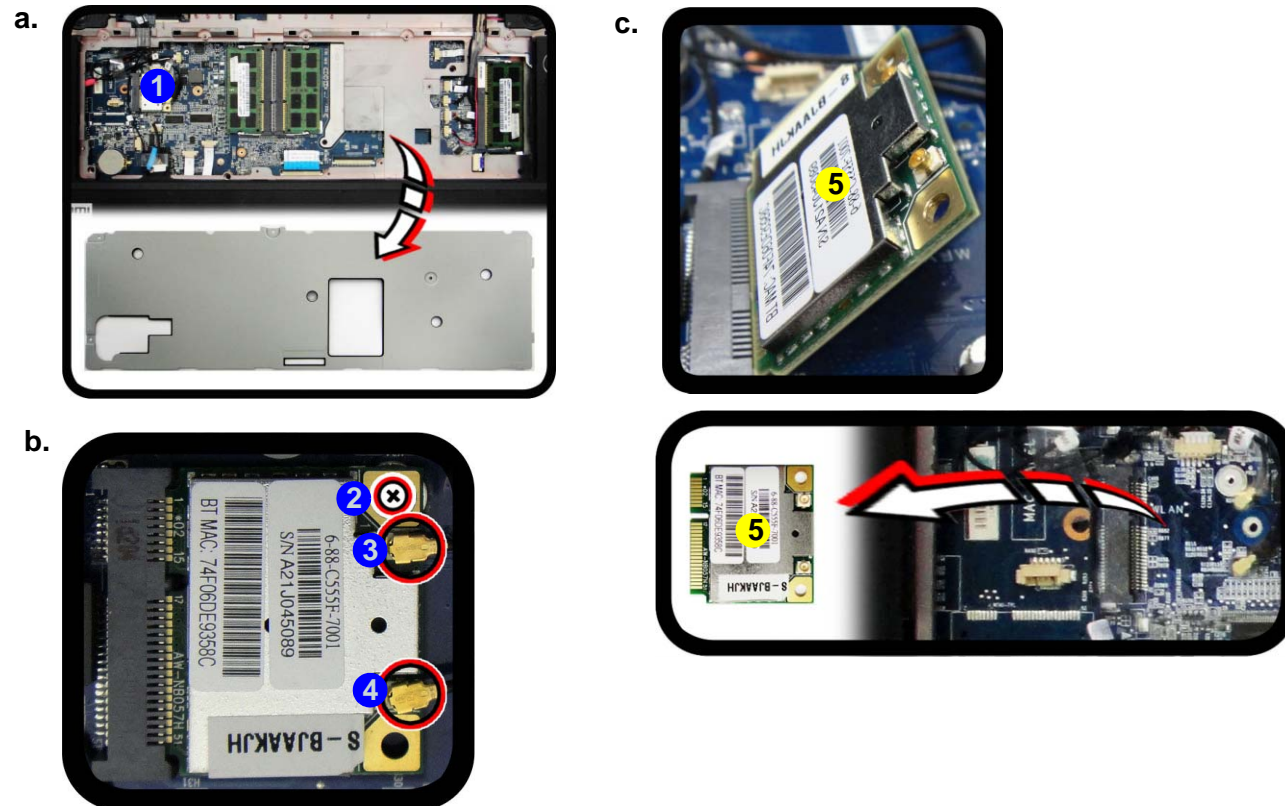
Figure 17
Wireless LAN
Module Removal

- Locate the WLAN module.
- Remove the screw and disconnect the cables.
- Remove the WLAN module.

Note: Make sure you reconnect the antenna cables.

Removing the Wireless LAN Module

- Turn off the computer, and turn it over, remove the battery ([page 2 - 5](#)), keyboard and keyboard shielding plate ([page 2 - 10](#)).
- The Wireless LAN Module will be visible at point **1**.
- Remove the screw **2** and carefully disconnect cables **3** - **4**.
- The Wireless LAN Module **5** ([Figure c](#)) will pop-up, and you can remove it.



5. Wireless LAN Module

- 1 Screw

Appendix A: Part Lists

This appendix breaks down the *P570WM/P570WM3* 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.

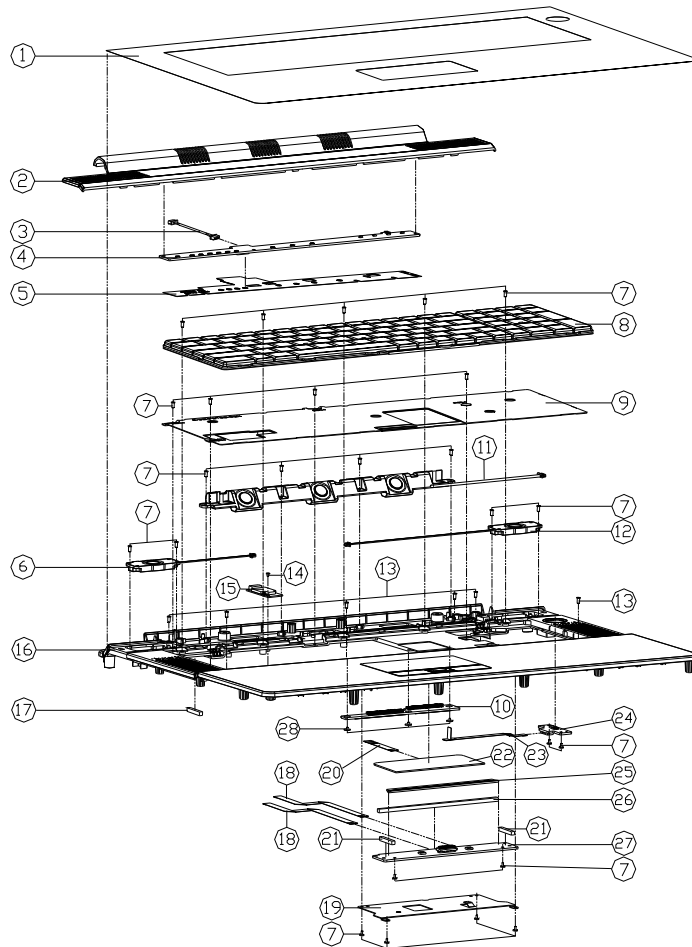
Part List Illustration Location

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

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

Parts	P570WM	P570WM3
Top	<i>page A - 3</i>	
Bottom	<i>page A - 4</i>	
LCD	<i>page A - 5</i>	<i>page A - 6</i>
Mainboard	<i>page A - 7</i>	
HDD 1	<i>page A - 8</i>	
HDD 2	<i>page A - 8</i>	
DVD	<i>page A - 10</i>	
COMBO	<i>page A - 11</i>	

Top

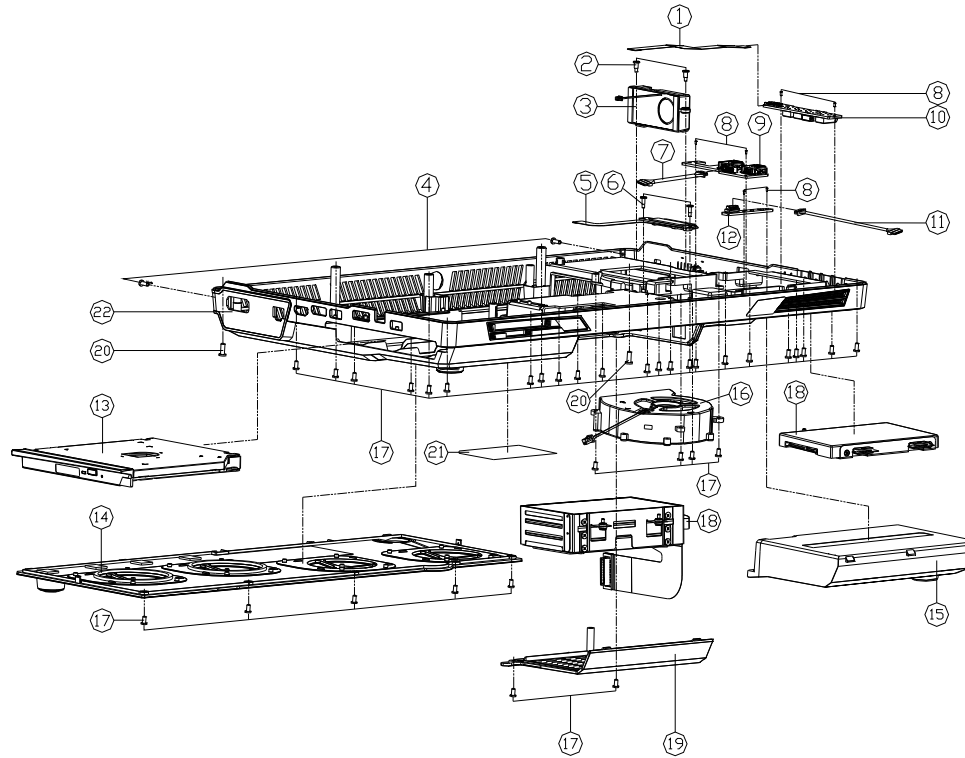


ITEM	PART NAME	PART NO	REMARK
1	TOP CASE PROTECT MYLAR PET X7200	6-40-X7208-020	
2	DEL 24H CENTER COVER MODULE ASSY P570WM	6-79-P270WM08-010	
3	WIRE CABLE 20PIN W/B TO TOUCH SENSOR FOR P270WM	6-43-P2700-030	
4	TOUCH SENSOR BOARD V1.0 P570WM	6-77-P5701-D01	
5	TOUCH SENSOR CU FOIL+MYLAR P270WM	6-40-P2702-010	
6	SPEAKER REAR-L MODULE 2W 4T 2P (VECD) P570WM	6-23-5P570-0L0	
7	SCREW M2*2L K1 BK/2 ICT NY(08,T=0.6)	6-35-C6120-4RFB	
8	K/B ISA BRACKL FRAME (US) MODULE P270WM/P270ME	6-79-P270WM0K-010	
9	K/B SHIELDING SECC P270WM	6-33-P2703-021	
10	TRANSFER KEY BOARD V1.0 P570WM	6-77-P5707-D01	
11	SPEAKER L-M-R MODULE(L-R-FRONT & CENTER) 1	6-23-5X720-031	
12	SPEAKER REAR-R MODULE 2W 4T 2P (VECD) P570WM	6-23-5P570-0R0	
13	SCREW M2.5*6L K BZ ICT NY	6-35-02125-6RA	
14	SCREW M2*3L K1 NI ICT NY (0D=0.45,DT=0.4)	6-35-B1120-3RE	
15	BUILDUP VCL BRACKET P/FR 0 P/IN 0/02 CR DEN NY 4000 W/IN 16 H	6-88-M77C5-5300	
16	DEL 24H TOP CASE MODULE + AL PLATE ASSY P570WM	6-79-P270WM02-010	
17	RUBBER (12*4*5T,SILICONE) X7200	6-47-00120-123	
18	FINGER BOARD FFC CABLE X7200	6-43-X720F-012	
19	TP BRACKET SECC X7200	6-33-X7202-050	
20	TOUCH PAD FFC CABLE X7200	6-43-X7202-012	
21	CLICK SPONGE (215*3*3T) SM55 X7200	6-47-0019A-212	
22	TOUCH PAD SYMPTICS TM-0146-003 MULTI-GESTURE C800	6-49-C4802-010	
23	POWER BOARD FFC CABLE(CHB) P270WM	6-43-P2700-011	
24	SWITCH BOARD V1.0 P570WM	6-77-P570S-D01	
25	TP LENS PMMA X7200	6-42-X7202-0A2	
26	CLICK SPONGE (112.7*3.3*3T) SM55 X7200	6-47-0019A-B20	
27	CLICK BOARD V30/FINGER SENSOR BOARD V30 ASSY MODULE P570WM	6-77-P270A-N03	
28	SCREW M2*2L K1 BK/2 ICT NY(08,T=0.6)	6-35-B6120-2RE	

Figure A - 1
Top

Bottom

Figure A - 2
Bottom



ITEM	PART NAME	PART NO	REMARK
1	AUDIO BOARD FFC CABLE X7200	6-43-X7200-052	
2	(中国用) SCREW FOR SPEAKER M2.000T	6-35-Z0Z20-000	
3	SPEAKER SUR. VIBRATOR MODULE 2Y 4T 2P 116-0110 P270W	6-23-SP270-0W1	
4	SCREW M2*6L K1 BK/Z ICT NY	6-35-B6120-8R0	
5	FFC CABLE N/B TO 3RD SATA HDD FOR X7200	6-43-X720J-011	
6	SCREW M2*7.5L D1=21 L=45 S=25 K NI ICT	6-35-81120-750	
7	WIRE CABLE 2P*1N W/B TO USB BOARD FOR P270W	6-43-P2700-020	
8	SCREW M2*5.5L W/B 1 BZ ICT 01Y-PATCH 0180 3-48	6-35-C6120-4RB	
9	USB BOARD V2.0 P570WM	6-77-P5703-D02	
10	AUDIO BOARD V2.0 P570WM	6-77-P5708-D02	
11	WIRE CABLE 6P*1N W/B TO LED BOARD FOR X7200	6-43-X7200-032	
12	POWER LED BOARD V1.0 P570WM	6-77-P5704-D01	
13	SATA HDD SUPER MULTI BK 1515GB/300/15MM ASSY P270W	6-79-P570WM00-010	
13	SATA HDD SUPER MULTI BK 1515GB/300/15MM ASSY P270W	6-79-P570WM00-020	
13	SATA BLU-RAY COMBO ASSY P570WM	6-79-P570WM00-000	
13	SATA BLU-RAY WRITER ASSY P270WM	6-79-P270WM00-010	
13	W/O ODD ASSY P570WM	6-79-P270WM02-000	
14	CPU COVER MODULE P570WM	6-42-P2708-203	
15	NOT SUITABLE FOR REMOTE OF OIL IN THE BOTTOM CASE	6-87-X720S-4Z71A	
15	NOT SUITABLE FOR REMOTE OF OIL IN THE BOTTOM CASE	6-87-P270S-467	
16	FAN MODULE SV 79*236 P270WM	6-31-P270S-100	
17	SCREW M2.5*6L K BZ ICT NY	6-35-B2125-6RA	
18	W/O 3PCS HDD ASSY P570WM	6-79-P270WM0J-010	
18	W/3PCS HDD ASSY P570WM	6-79-P270WM0J-020	
18	W/O IPC HDD ASSY P570WM	6-79-P270WM0J-030	
18	W/ IPC HDD ASSY P570WM	6-79-P270WM0J-040	
18	W/O 2PCS HDD ASSY P570WM	6-79-P270WM0J-050	
18	W/2PCS HDD ASSY P570WM	6-79-P270WM0J-060	
19	HDD COVER PC+ABS X7200	6-42-X720J-013	
20	SCREW M2.5*6L K1 BK/Z NY ICT	6-35-B6125-8R0	
21	PRODUCT LABEL FOR P570WM	6-45-P570WM03-010	
21	PRODUCT LABEL FOR P570WM3	6-45-P570WM33-010	
22	BOTTOM CASE MODULE P270WM	6-39-P2703-013	

LCD (P570WM)

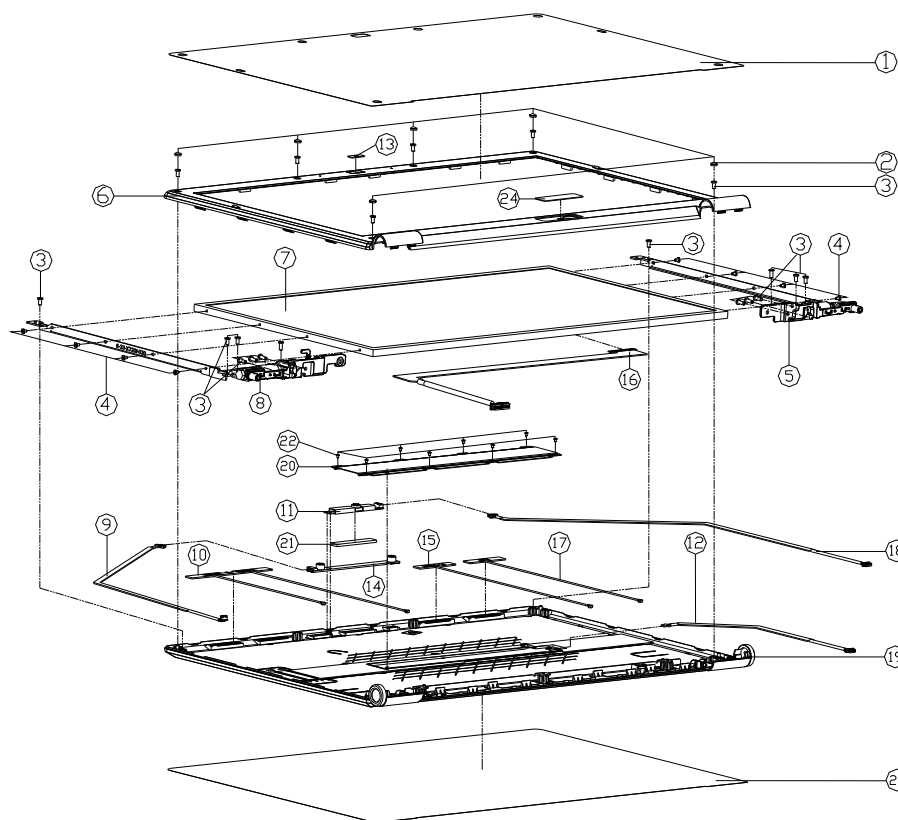


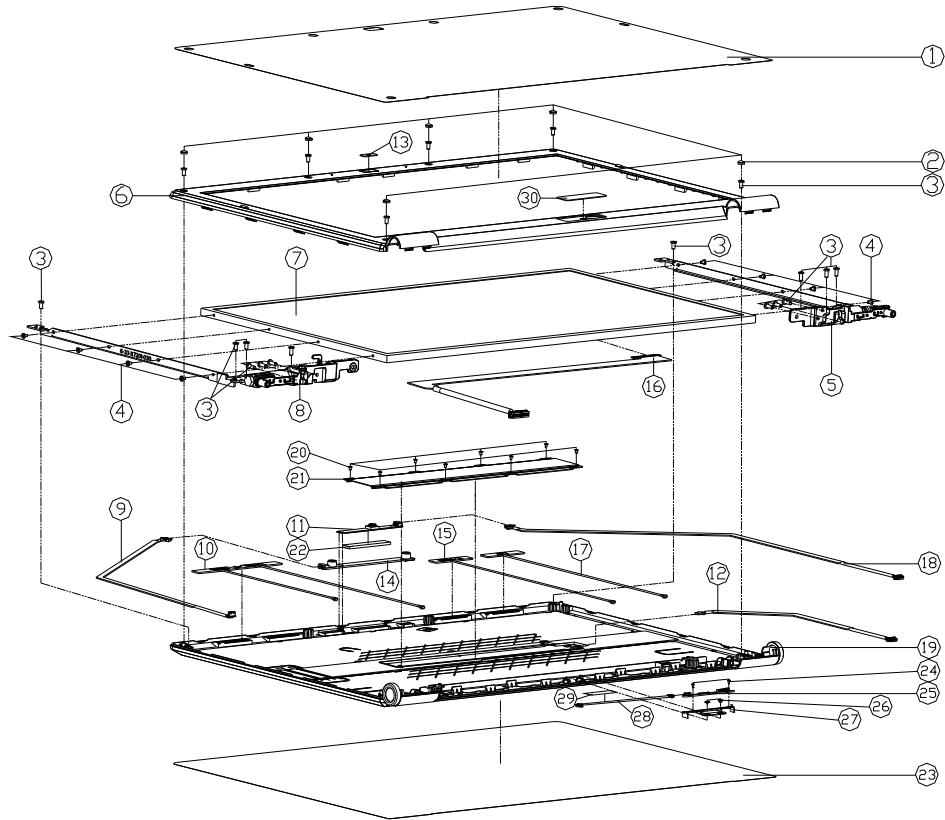
Figure A - 3
LCD (P570WM)

ITEM	PART NAME	PART NO	REMARK
1	FRONT COVER PROTECT MYLAR PET X7200	6-40-X7208-030	
2	FRONT COVER SCREW SILICON RUBBER X7200CHANG	6-47-X7201-032	
3	SCREW M2.5*6L K BZ ICT NY	6-35-82125-6RA	
4	SCREW M2*XL KI NI ICT NY (DD=045,DT=04)	6-35-B1120-3RE	
5	HINGE R SECC+SK7+ZN P270WM	6-33-P2701-0R0	
6	LCD FRONT COVER MODULE P570WM(VLED HOLE)	6-39-P2701-012	
7	LCD I27 FHD AU BEZEL(VL) 60/100 (HOLE TYPE) NICE SEC ALD 60 W	6-50-NB260-G03	(OPTION)
8	HINGE L SECC+SK7+ZN P270WM	6-33-P2701-0L0	
9	WIRE CABLE 4PIN M/B TO MIC FOR X7200(HL)	6-43-X7204-012	
10	ANTENNA VMAX CORD FVC W/PCB 246/150/256 W/ FPCB W/PCB X7200	6-23-7X720-011	
11	VIC COVER BEZEL (TO BEZEL) 20X 20X 1.5MM (HOLE) FPCB W/LED W/ MIC	6-88-P17EC-4902	(OPTION)
11	VIC COVER BEZEL (TO BEZEL) 20X 20X 1.5MM (HOLE) FPCB W/LED W/ MIC	6-88-W15EC-4903	(OPTION)
12	WIRE CABLE 2PIN M/B TO BACK LED BOARD FOR X7200	6-43-X7200-013-1	
13	CCD BRKR. PMMA M810L	6-42-M8101-011	
13	W/O CCD COSMETIC PC M810L	6-42-M8101-020	
14	DIGITAL-MIC MODULE DK-AR2 FOR M9800U	6-23-EM980-010-1	
15	ANTENNA VMAX FVC W/PCB 246/150/256 L-665MM X7200	6-23-7X720-031	
16	WIRE CABLE 4PIN W/O TO LCD LG (OPT) FOR P270WM (HOLE) HL/RL	6-43-P2701-021-K	
17	ANTENNA BLUETOOTH FVC B1 PCB 246 L-665MM FVC X7200	6-23-7X720-021	
18	WIRE CABLE 5PIN M/B TO CCD MODULE FOR X7200(HL)	6-43-X720T-013	
19	IDLE 24H BACK COVER MODULE ASSY P570WM	6-79-P270WM01-001	
20	BACK COVER BRACKET SECC X7200	6-33-X7201-091	
21	GASKET (40*10*1.5) D900C	6-47-00190-40D	
22	SCREW M2*XL 1 BZ ICT (TY-PATCH NY (T=05 B=4)	6-35-C2120-3R0	
23	BACK COVER PROTECT MYLAR 8835 X7200	6-40-X7208-040	
24	3D EMITTER PLATE (PMMA+TESA4965) P570WM3	6-42-P2701-010-D	

A.Part Lists

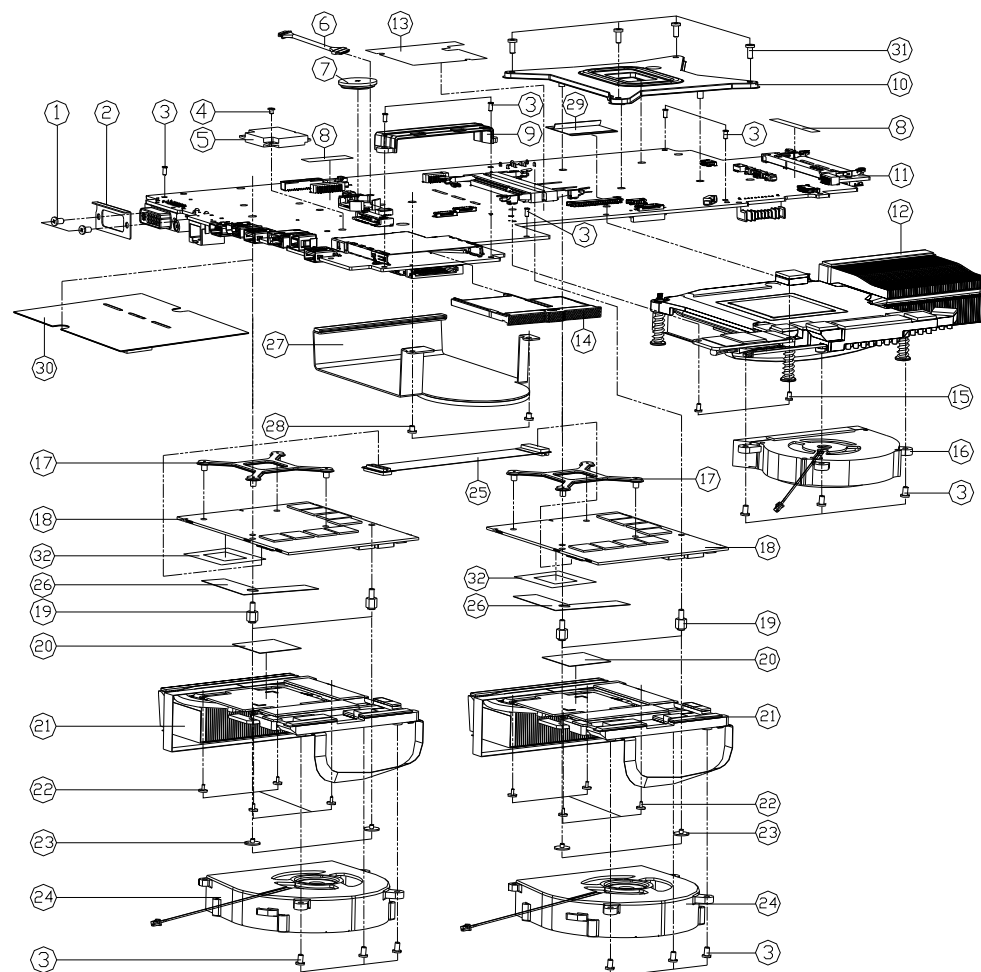
LCD (P570WM3)

Figure A - 4
LCD (P570WM3)



ITEM	PART NAME	PART NO	REMARK
1	FRONT COVER PROTECT MYLAR PET X7200	6-40-X7208-030	
2	FRONT COVER SCREW SILICON RUBBER X7200WMC	6-47-X7201-032	
3	SCREW M2.5*6L K BZ ICT NY	6-35-B2125-6RA	
4	SCREW M2*XL KI NI ICT NY (DB#445,01-04)	6-35-B1120-3RE	
5	HINGE R SECC+SK7+ZN P270WM	6-33-P2701-0R0	
6	LCD FRONT COVER MODULE P570WM(VLED HELD)	6-39-P2701-012	
7	LCD 17.3" FHD LG LP173W(P2-IPR) QLED (3D 65M)	6-50-NB265-L04	(OPTION)
8	HINGE L SECC+SK7+ZN P270WM	6-33-P2701-0L0	
9	WIRE CABLE 4PIN W/B TO MIC FOR X7200HL	6-43-X7204-012	
10	ANTENNA W/MIYAL FVC FOR PCB 242/252/254 L465MM X7200	6-23-7X720-011	
11	WIRE CABLE 4PIN W/B TO MIC FOR X7200HL	6-88-P17EC-4902	(OPTION)
11	WIRE CABLE 4PIN W/B TO MIC FOR X7200HL	6-88-W15EC-4903	(OPTION)
12	WIRE CABLE 2PIN W/B TO BACK LED BOARD FOR X7200	6-43-X7200-013-1	
13	CCD BRK PMMA M810L	6-42-M8101-011	
13	W/D CCD COSMETIC PC M810L	6-42-M8101-020	
14	DIGITAL MIC MODULE DK-A02 FOR M980N	6-23-EM980-010-1	
15	ANTENNA W/MIYAL FVC FOR PCB 242/252/254 L465MM X7200	6-23-7X720-031	
16	WIRE CABLE 4PIN W/B TO MIC FOR X7200HL	6-43-P2701-011-J	
17	ANTENNA BLUE TOOTH FVC 81 PCB 242 L465MM FVC X7200	6-23-7X720-021	
18	WIRE CABLE 5PIN W/B TO CCD MODULE FOR X7200HL	6-43-X7201-013	
19	TILE 24H - BACK COVER MODULE ASSY P570WM	6-79-P270WM01-001	
20	SCREW M2*XL 1 BZ ICT G1Y-PATCH NY (1#5 D#4)	6-35-C2120-3R0	
21	BACK COVER BRACKET SECC X7200	6-33-X7201-091	
22	GASKET <40*10*1.5> D900C	6-47-00190-40D	
23	BACK COVER PROTECT MYLAR BR35 X7200	6-40-X7208-040	
24	SCREW M1.6*4L (1#0.7 D#3.0) KI NI ICT NY	6-35-B1116-4R0	
25	SNY MIYAL COVER FOR GASKET WITH 0.5MM HOLE ON 4 PIN	6-88-P1733-7801	
26	SCREW M2*XL KI BK/2 ICT NY (06,1#05)	6-35-B6120-2RC	
27	3D EMITTER BRACKET SECC 0.5MM P270WM3	6-33-P2701-010-D	
28	WIRE CABLE FOR 3D EMITTER L85 TO MI SP FOR P270WM HL	6-43-P2706-021	
29	TAPE MYLAR (C),MYLAR M550J	6-40-M55J2-030	
30	3D EMITTER PLATE (PMMA+TESA965) P570WM3	6-42-P2701-010-D	

Mainboard



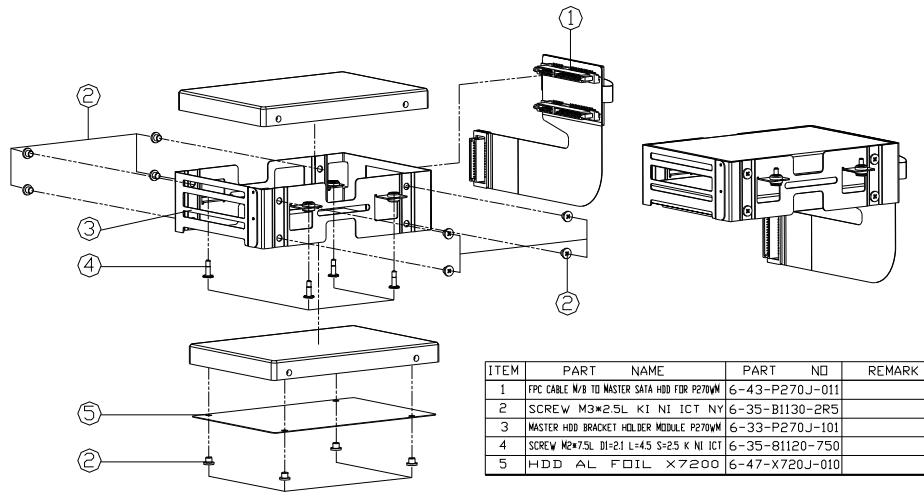
ITEM	PART NAME	PART NO	REMARK
1	SCREW 4-40*5L K NI ACT NY	6-35-B1304-5R0	
2	DVI BRACKET SUS X7200	6-33-X720S-021	
3	SCREW M2.5*6L K BZ ICT NY	6-35-8212S-6RA	
4	SCREW M2*6L KI NI ICT NY (GD=4.5,DT=0.4)	6-35-B1120-3RE	
5	W/TAPE MYLAR (C) MYLAR M550J	6-88-P17EF-4200	(OPTION)
5	W/TAPE MYLAR (C) MYLAR M550J	6-88-W25SF-4200	(OPTION)
5	W/TAPE MYLAR (C) MYLAR M550J	6-88-W345F-9400	(OPTION)
5	W/TAPE MYLAR (C) MYLAR M550J	6-88-W345F-7000	(OPTION)
5	W/TAPE MYLAR (C) MYLAR M550J	6-88-W77C2-4220	(OPTION)
5	W/TAPE MYLAR (C) MYLAR M550J	6-88-W345F-8700	(OPTION)
6	WIRE CABLE 3V 210MA CR2032 (MITSUBISHI)	6-43-P270B-010	(OPTION)
7	BATTERY 3V 210MA CR2032 (MITSUBISHI)	6-23-6201S-607	
8	TAPE MYLAR (C) MYLAR M550J	6-40-M55J2-030	
9	NEW CARD COVER (PC+ABS CM640 7010E/P270W)	6-42-P2703-010	
10	CPU SUPPORTTER FDR P270WM	6-33-P270S-011	
11	MAIN BOARD V2.0 P570WM	6-77-P5700-D02	
11	MAIN BOARD V2.0 P570WM3	6-77-P5730-D02	
12	CPU THERMAL MODULE FOR P570WM	6-31-P270N-103	
13	MYLAR PCH (72*56*0.151) FOR P570WM	6-40-P570S-010	
14	DUMMY NEW CARD PC+ABS P270WM	6-42-P270B-011	
15	W/TAPE MYLAR (C) MYLAR M550J	6-35-C6120-4RB	
16	VGA FAN MODULE ADDA D900F	6-31-D90FS-200	
17	VGA SUPPORTER SUS430 X7200	6-33-X720S-040	
18	VGA FAN MODULE ADDA D900F	6-77-PISEL-121-1	
18	VGA FAN MODULE ADDA D900F	6-77-PISEL-221-1	
18	VGA FAN MODULE ADDA D900F	6-77-PISEL-121-4	
18	VGA FAN MODULE ADDA D900F	6-77-PISEL-221-4	
19	SCREW M2.5*0.7L (I=0.5) NI ICT NY FOR VGA CARD	6-35-Z112S-AR7	
20	THERMAL PAD 28*8*0.2 FOR N13E-GTX VGA PSD P570WM	6-48-X5108-020	
21	VGA HEATSINK FDR N13E-GTX P570WM	6-31-P270N-021	
22	SCREW M1.6*3.5L KIT-I2 D=4.5) BZ ICT NY	6-35-82116-3R5	
23	SCREW M2*6L KI BK/Z ICT NY(98,1=0.6)	6-35-B6120-2RE	
24	FAN MODULE ADDA D900F	6-31-X720S-101	
25	WIRE CABLE FOR VGA CARD (P270WM) FOR NI ICT NY	6-43-X7200-070	ONLY FOR TWO VGA CARD
26	MYLAR FOR VGA SLI (M980N/CHANGE)	6-40-M9800-011	ONLY FOR TWO VGA CARD
27	VGA PLANK FDR P270WM	6-33-P270S-031	ONLY FOR ONE VGA CARD
28	SCREW M2.5*3L K1 BZ ICT NY	6-35-B612S-3R0	
29	FFC 26PIN MB TO KB BOARD P270WM HB	6-43-P2703-010	
30	CU FOIL MYLAR ON M/B FOR VGA P270WM	6-40-P270S-011	
31	SCREW M2.5*5L K1 BK/Z ICT NY	6-35-B612S-5RA	
32	VGA CHIP MYLAR FOR NV N13E-GTX P150EN	6-40-P15ES-020	

Figure A - 5
Mainboard

A.Part Lists

HDD 1

Figure A - 6
HDD 1



ITEM	PART NAME	PART NO	REMARK
1	FPC CABLE W/8 TO MASTER SATA HDD FOR P270W	6-43-P270J-011	
2	SCREW M3*2.5L KI NI ICT NY	6-35-B1130-2R5	
3	MASTER HDD BRACKET HOLDER MIDDLE P270W	6-33-P270J-101	
4	SCREW M2*7.5L DI-21 L=45 S=25 K NI ICT	6-35-B1120-750	
5	HDD AL FOIL X7200	6-47-X720J-010	

HDD 2

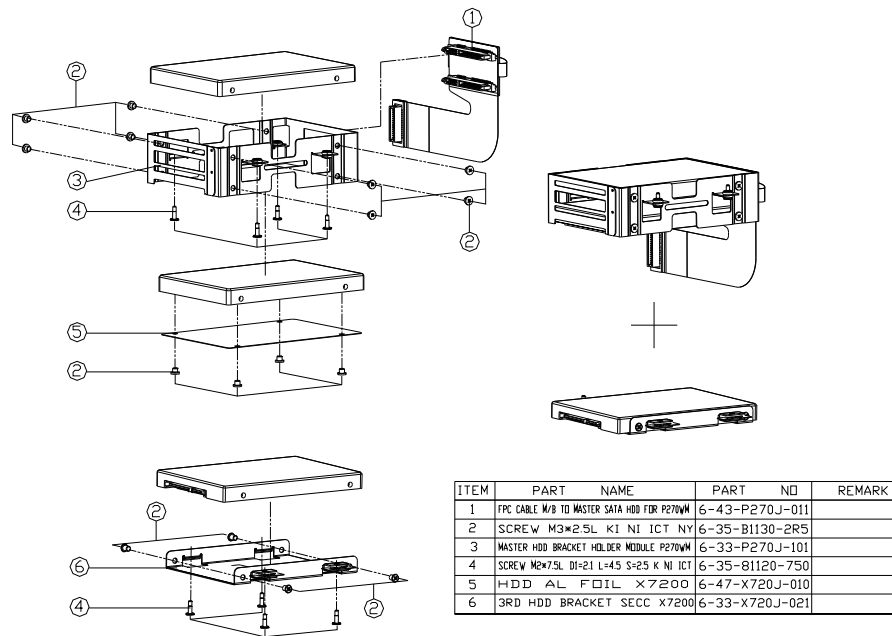
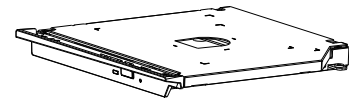
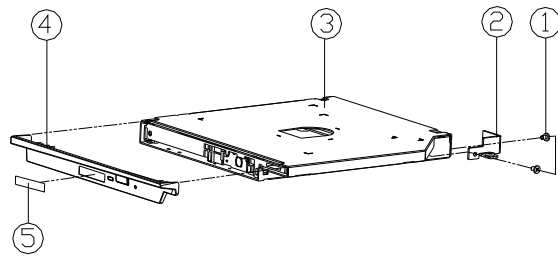


Figure A - 7
HDD 2

DVD

Figure A - 8
DVD



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*2.5L KJ NI ICT NY (04 1+0.3)	6-35-B1120-2R5	
2	CD ROM BRACKET SECC M980U	6-33-M980Z-010	
3	CD ROM DRIVE ASSEMBLY (FOR TSST)	6-85-A078X-T13	FOR TSST
3	CD ROM DRIVE ASSEMBLY (FOR PLDS)	6-85-A078X-L06	FOR PLDS
4	DDD SUPER MULTI BEZEL MODULE X7200	6-42-X7200-102	
5	SUPER MULTI DDD BEZEL LABEL (SIZE CHANGE)	6-45-W8600-011	

COMBO

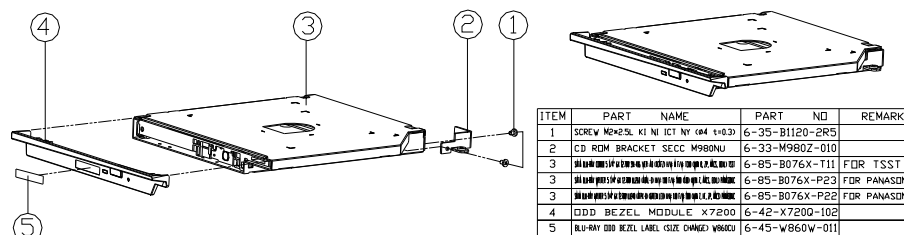


Figure A - 9
COMBO

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the *P570WM/P570WM3* 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>PCH PCI - Page B - 23</i>	<i>HDD, ODD - Page B - 44</i>
<i>Sandy Bridge - DDR 0 & 1 - Page B - 3</i>	<i>PCH USB/PCIE/DMI - Page B - 24</i>	<i>AC_IN, Charger - Page B - 45</i>
<i>Sandy Bridge - DDR 2 & 3 - Page B - 4</i>	<i>PCH SATA - Page B - 25</i>	<i>eSATA+USB, USB Charge - Page B - 46</i>
<i>Sandy Bridge - DDR Control - Page B - 5</i>	<i>PCH GPIO/HDA - Page B - 26</i>	<i>Power V_SM 1.5V, VTT MEM - Page B - 47</i>
<i>Sandy Bridge - Control - Page B - 6</i>	<i>PCH NVRAM - Page B - 27</i>	<i>Power CPU_PLL, 1.05V - Page B - 48</i>
<i>Sandy Bridge - PEG & DMI - Page B - 7</i>	<i>PCH SAS - Page B - 28</i>	<i>Power I2V, 1.1VM - Page B - 49</i>
<i>Sandy Bridge - PEG - Page B - 8</i>	<i>PCH Power - Page B - 29</i>	<i>Power Switch - Page B - 50</i>
<i>Sandy Bridge - N-Power - Page B - 9</i>	<i>PCH GND - Page B - 30</i>	<i>Power VDD3/VDD5 - Page B - 51</i>
<i>Sandy Bridge - O-Power - Page B - 10</i>	<i>Clock Generator, Buffer - Page B - 31</i>	<i>Power CPU_VTT - Page B - 52</i>
<i>Sandy Bridge - VSS - Page B - 11</i>	<i>TPM 1.2 - Page B - 32</i>	<i>CPU1 ISL6366CR Controller - Page B - 53</i>
<i>Sandy Bridge - QPI - Page B - 12</i>	<i>USB 3.0 - Page B - 33</i>	<i>CPU2 Power Stage - Page B - 54</i>
<i>DDR3 CHA SO-DIMM 0 - Page B - 13</i>	<i>EC ITE8519 - Page B - 34</i>	<i>DAUGHTER CON - Page B - 55</i>
<i>DDR3 CHB SO-DIMM 1 - Page B - 14</i>	<i>Fan Control - Page B - 35</i>	<i>Backlight Keyboard - Page B - 56</i>
<i>DDR3 CHC SO-DIMM 2 - Page B - 15</i>	<i>Audio Codec ALC892, DMIC - Page B - 36</i>	<i>AUDIO BOARD - Page B - 57</i>
<i>DDR3 CHD SO-DIMM 3 - Page B - 16</i>	<i>Audio AMP - Page B - 37</i>	<i>CLICK BOARD - Page B - 58</i>
<i>MXM 3.0 PCI-E MASTER - Page B - 17</i>	<i>WLAN, TV Card - Page B - 38</i>	<i>K/B CONVERTER BOARD - Page B - 59</i>
<i>MXM 3.0 PCI-E SLAVE - Page B - 18</i>	<i>LAN PHY Intel 82579V - Page B - 39</i>	<i>SWITCH BOARD - Page B - 60</i>
<i>Display Port, New Card - Page B - 19</i>	<i>Card Reader RTS5229 - Page B - 40</i>	<i>USB BOARD - Page B - 61</i>
<i>HDMI - Page B - 20</i>	<i>IEEE 1394 - Page B - 41</i>	<i>FINGER SENSOR BOARD - Page B - 62</i>
<i>LCD, eDP, 3D Emitter - Page B - 21</i>	<i>POWER SYSTEM - Page B - 42</i>	<i>TOUCH SENSOR BOARD - Page B - 63</i>
<i>DVI - Page B - 22</i>	<i>BT, CCD - Page B - 43</i>	<i>POWER LED BOARD - Page B - 64</i>

Table B - 1
**Schematic
Diagrams**



Version Note

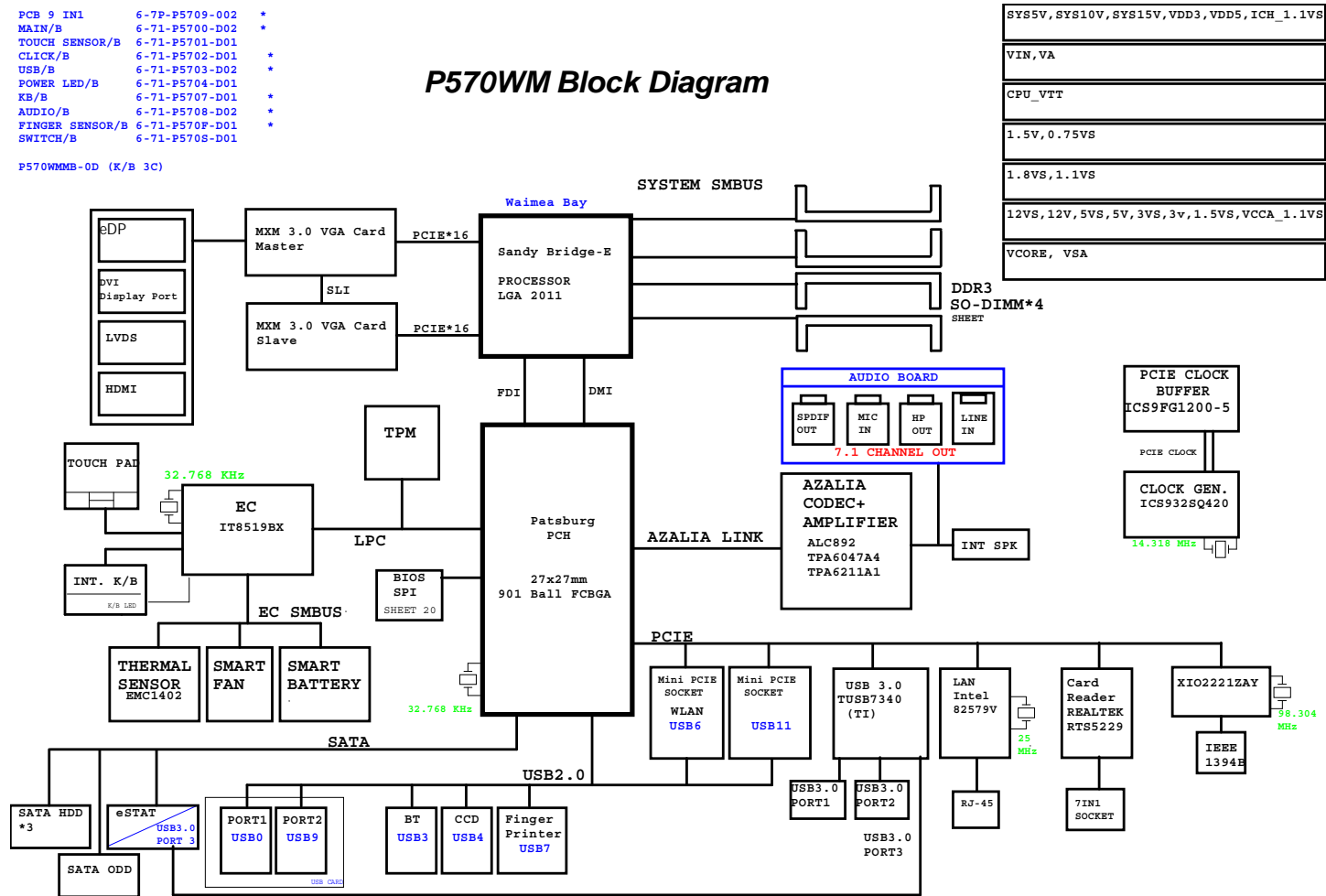
The schematic diagrams in this chapter are based upon version 6-7P-P5709-002. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram

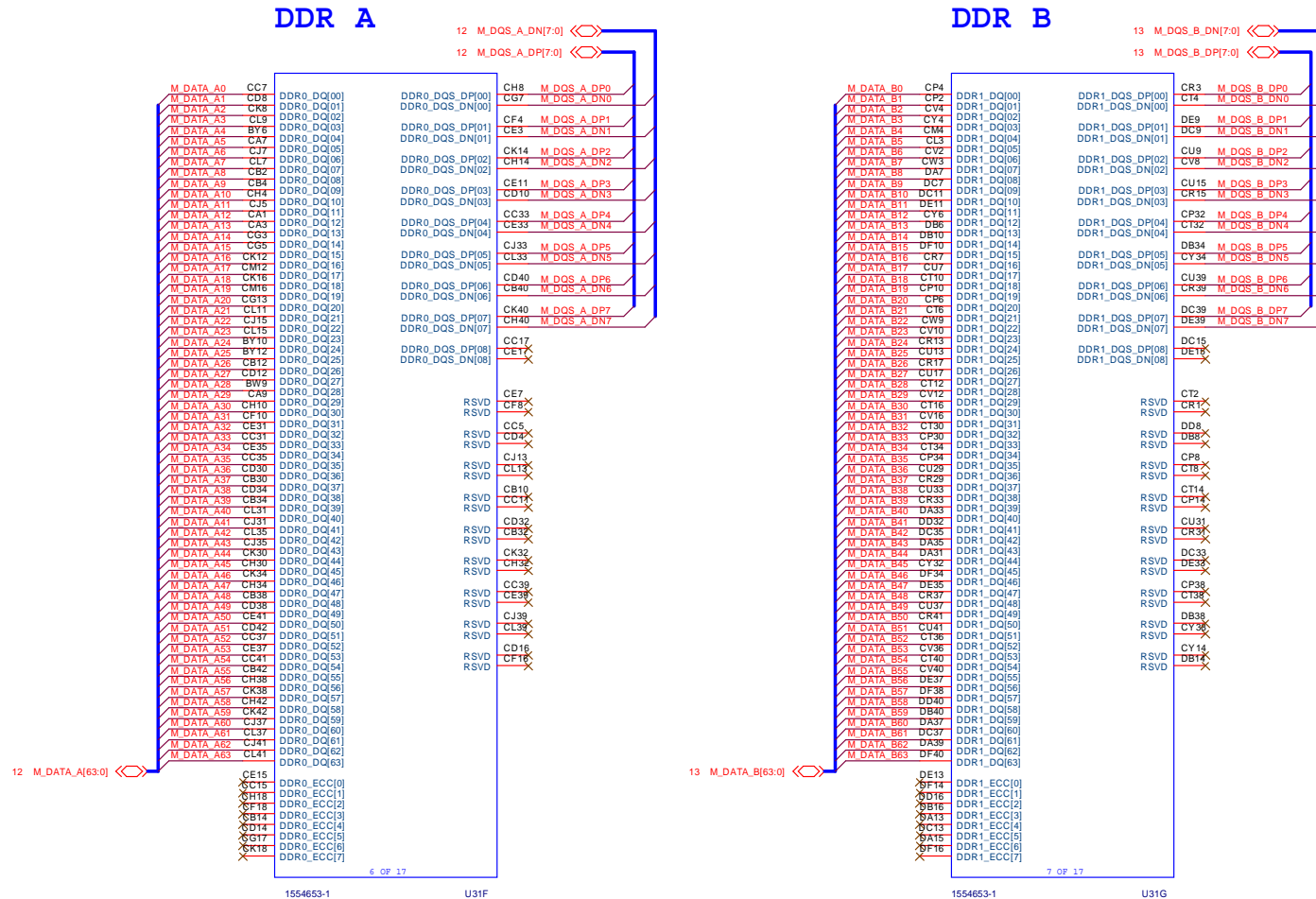
Sheet 1 of 63
System Block
Diagram

- PCB 9 IN1 6-7P-P5709-002 *
 - MAIN/B 6-71-P5700-D02 *
 - TOUCH SENSOR/B 6-71-P5701-D01
 - CLICK/B 6-71-P5702-D01 *
 - USB/B 6-71-P5703-D02 *
 - POWER LED/B 6-71-P5704-D01
 - KB/B 6-71-P5707-D01 *
 - AUDIO/B 6-71-P5708-D02 *
 - FINGER SENSOR/B 6-71-P570F-D01 *
 - SWITCH/B 6-71-P570S-D01
- P570MMB-0D (K/B 3C)

P570WM Block Diagram



Sandy Bridge - DDR 0 & 1



Sheet 2 of 63
Sandy Bridge -
DDR 0 & 1

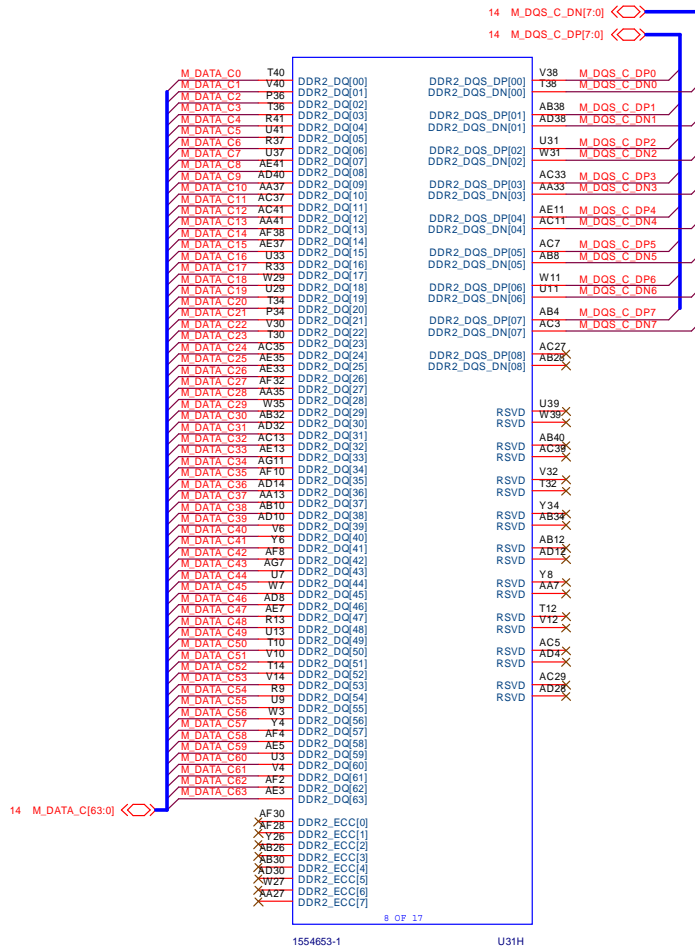
B.Schematic Diagrams

Schematic Diagrams

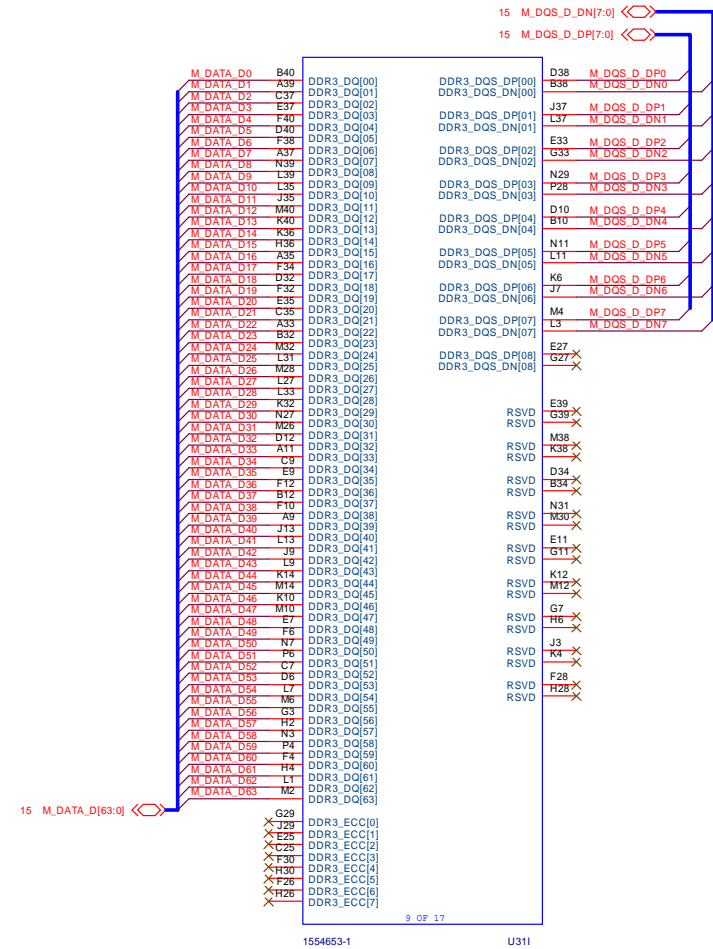
Sandy Bridge - DDR 2 & 3

Sheet 3 of 63
Sandy Bridge -
DDR 2 & 3

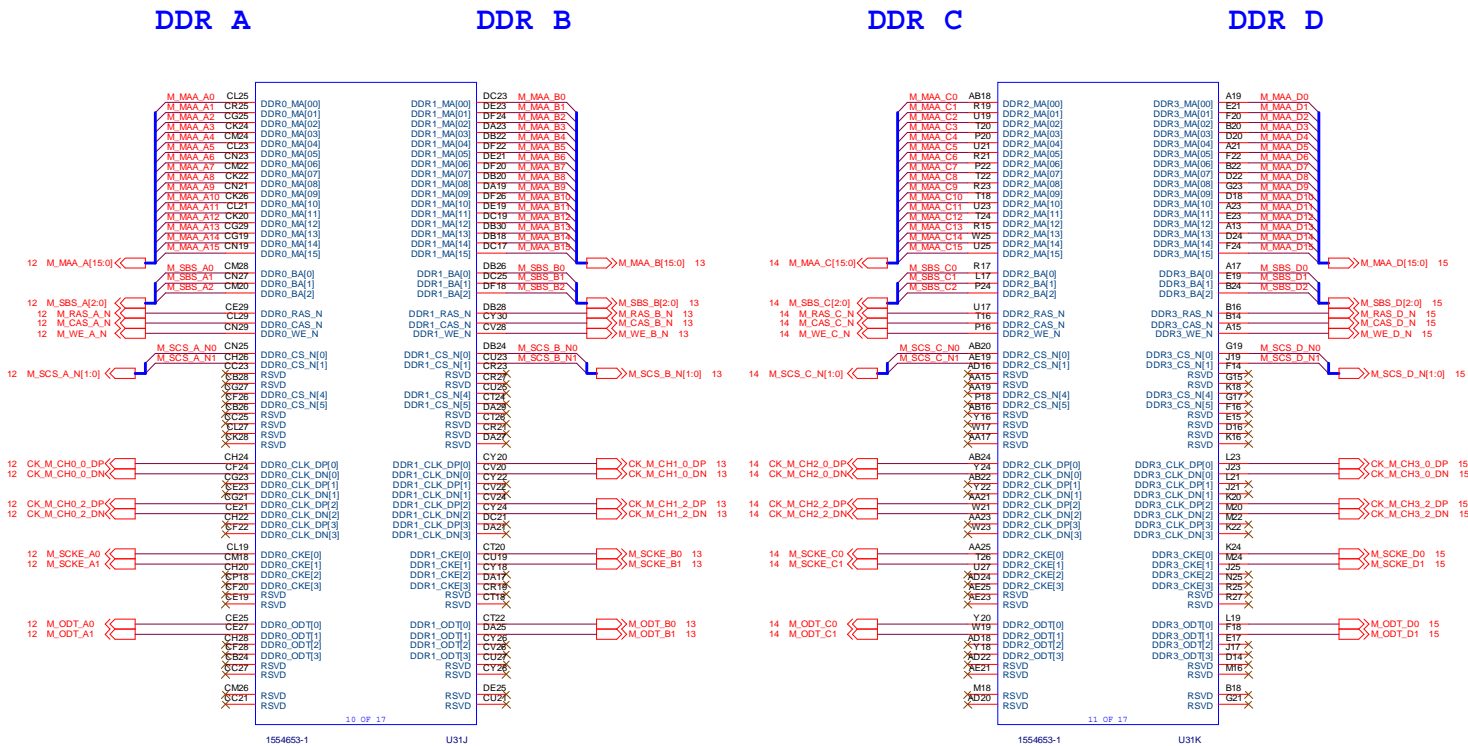
DDR C



DDR D



Sandy Bridge - DDR Control



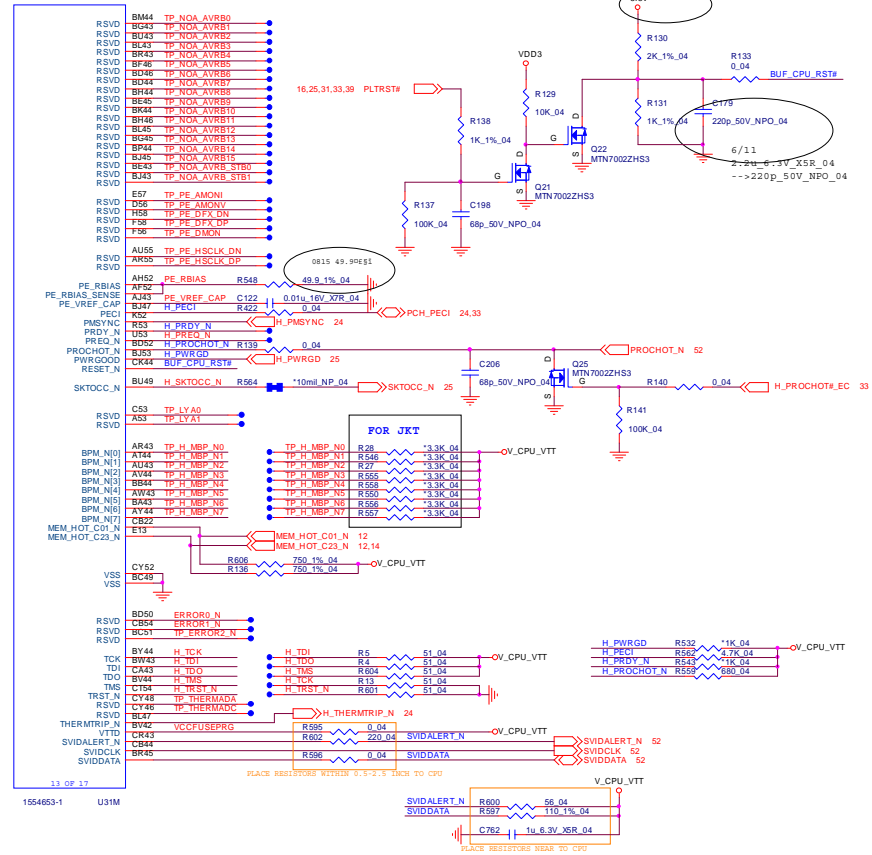
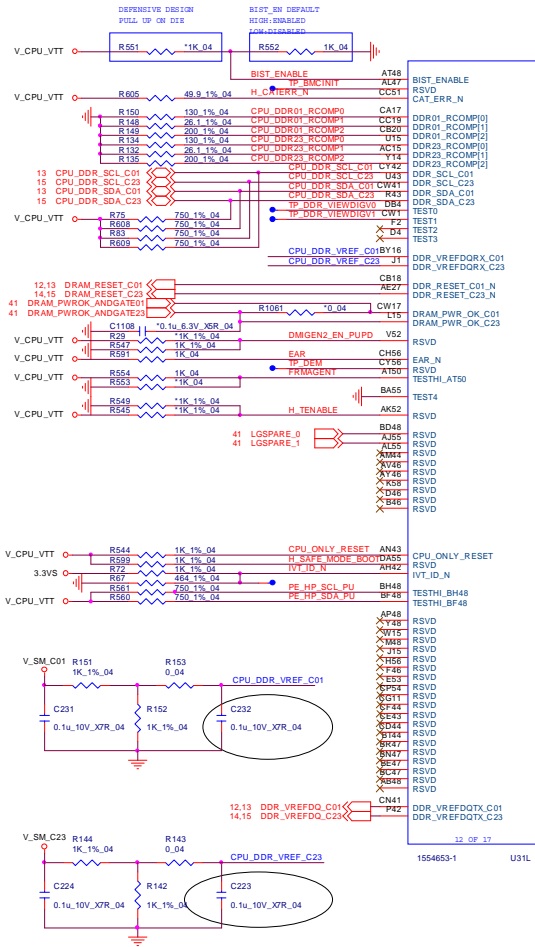
Sheet 4 of 63
Sandy Bridge -
DDR Control

B.Schematic Diagrams

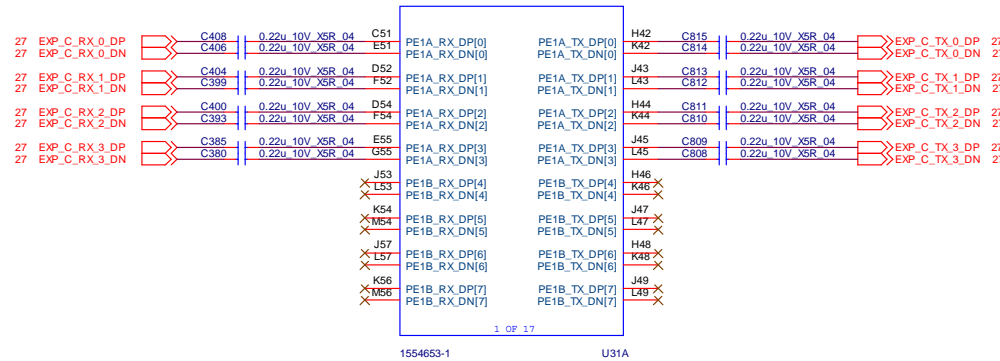
Schematic Diagrams

Sandy Bridge - Control

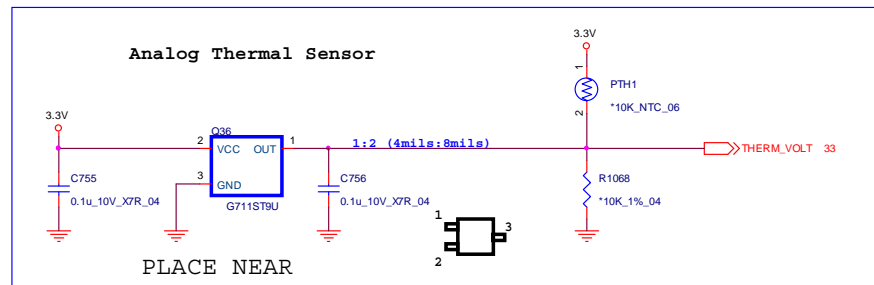
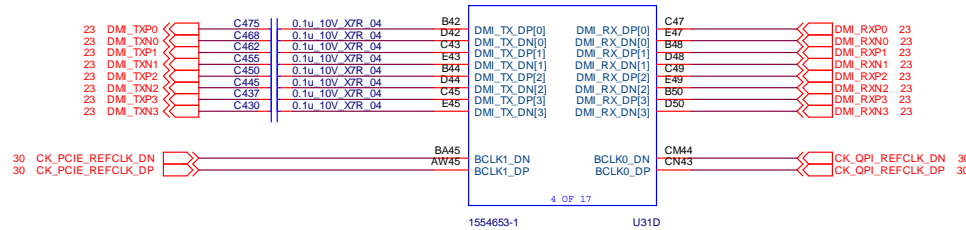
Sheet 5 of 63
Sandy Bridge - Control



Sandy Bridge - PEG & DMI



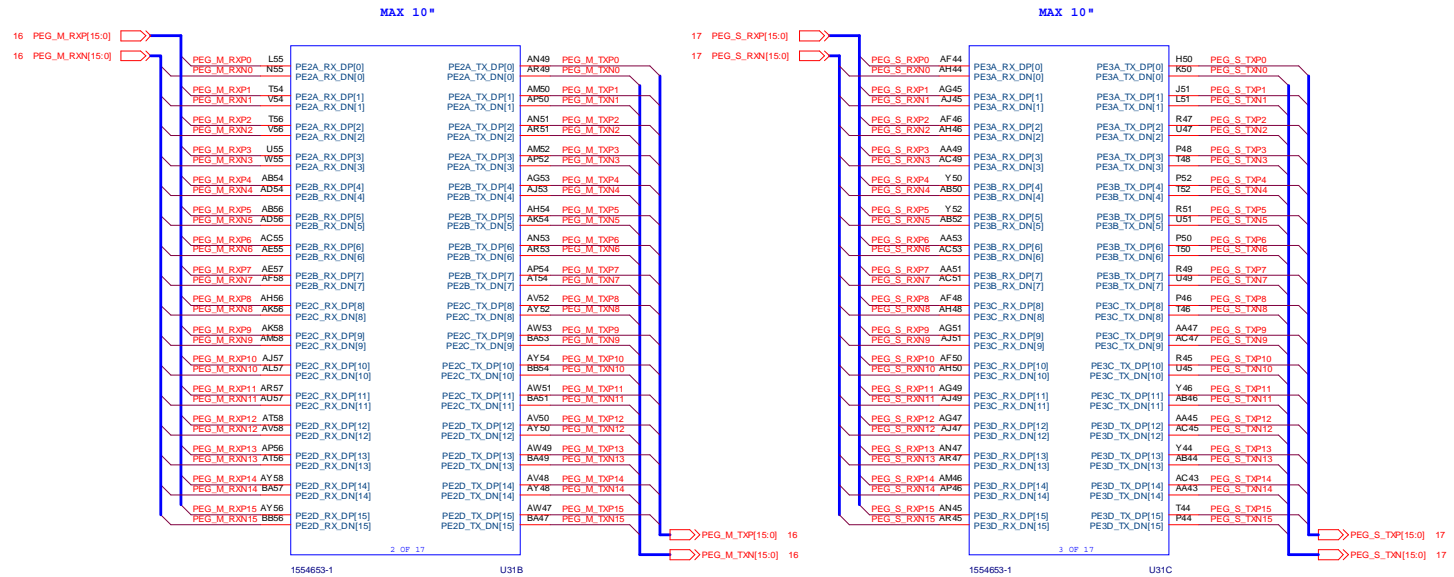
Sheet 6 of 63
Sandy Bridge -
PEG & DMI



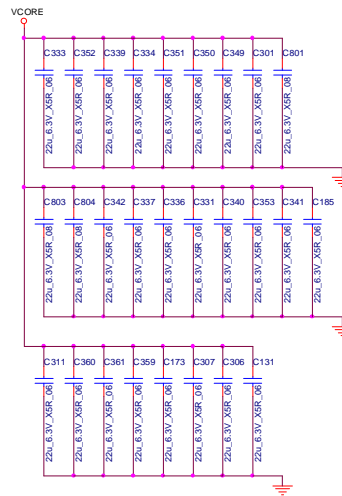
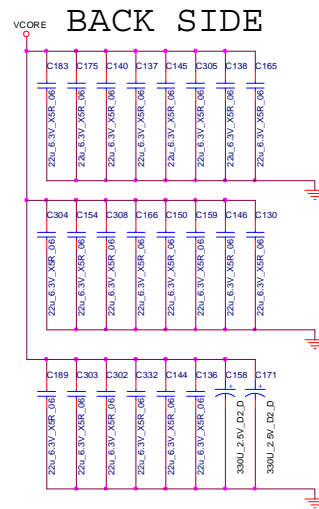
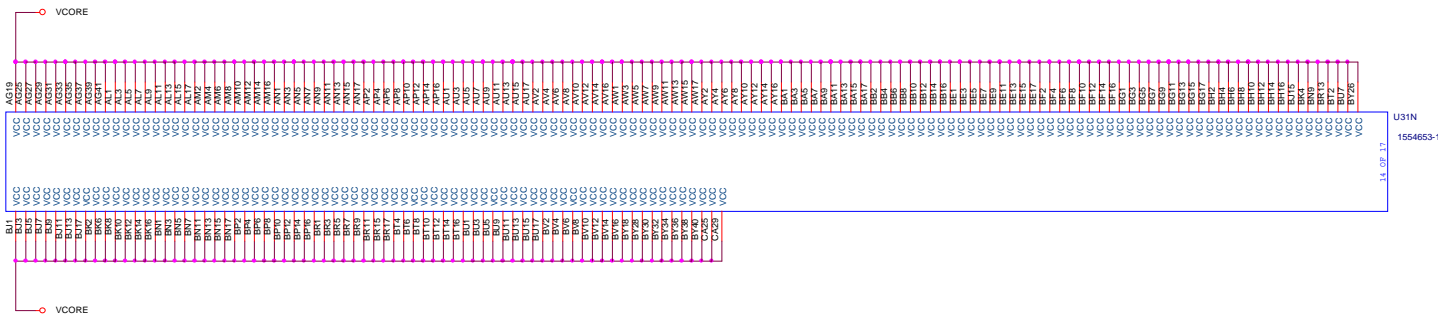
B.Schematic Diagrams

Sandy Bridge - PEG

Sheet 7 of 63
Sandy Bridge - PEG



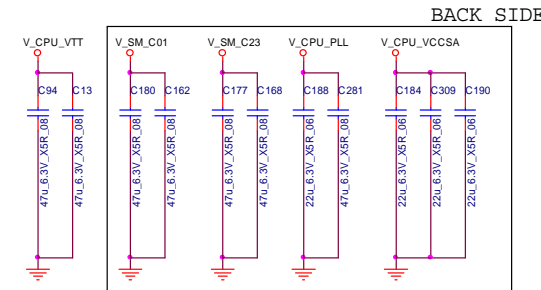
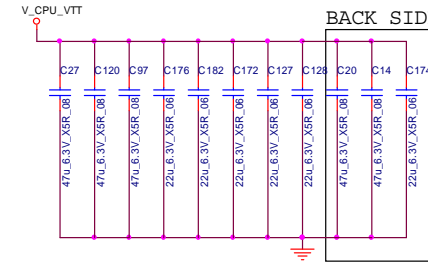
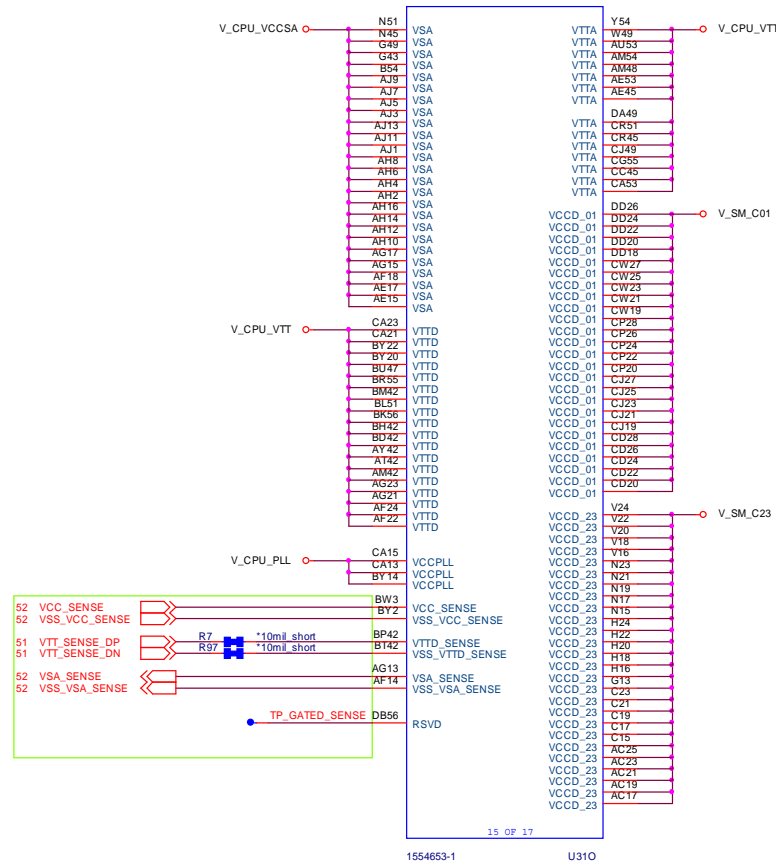
Sandy Bridge - N-Power



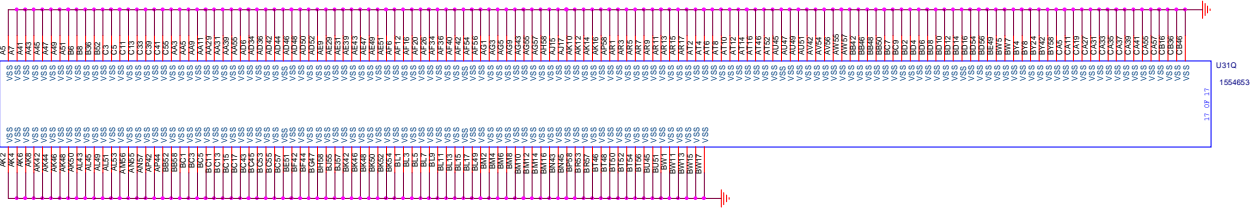
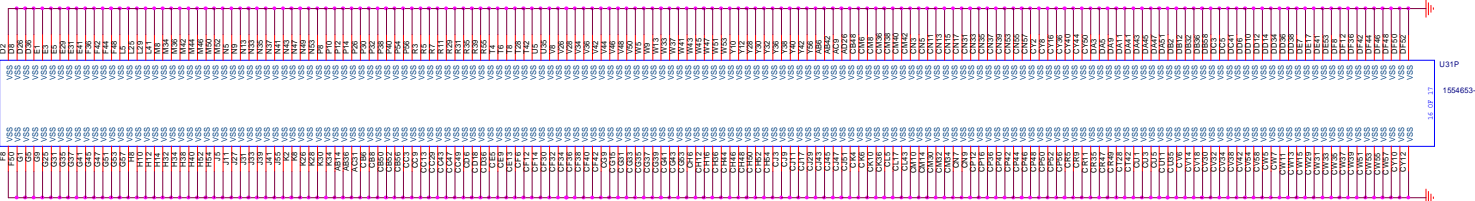
Sheet 8 of 63
Sandy Bridge -
N-Power

Sandy Bridge - O-Power

Sheet 9 of 63
Sandy Bridge -
O-Power



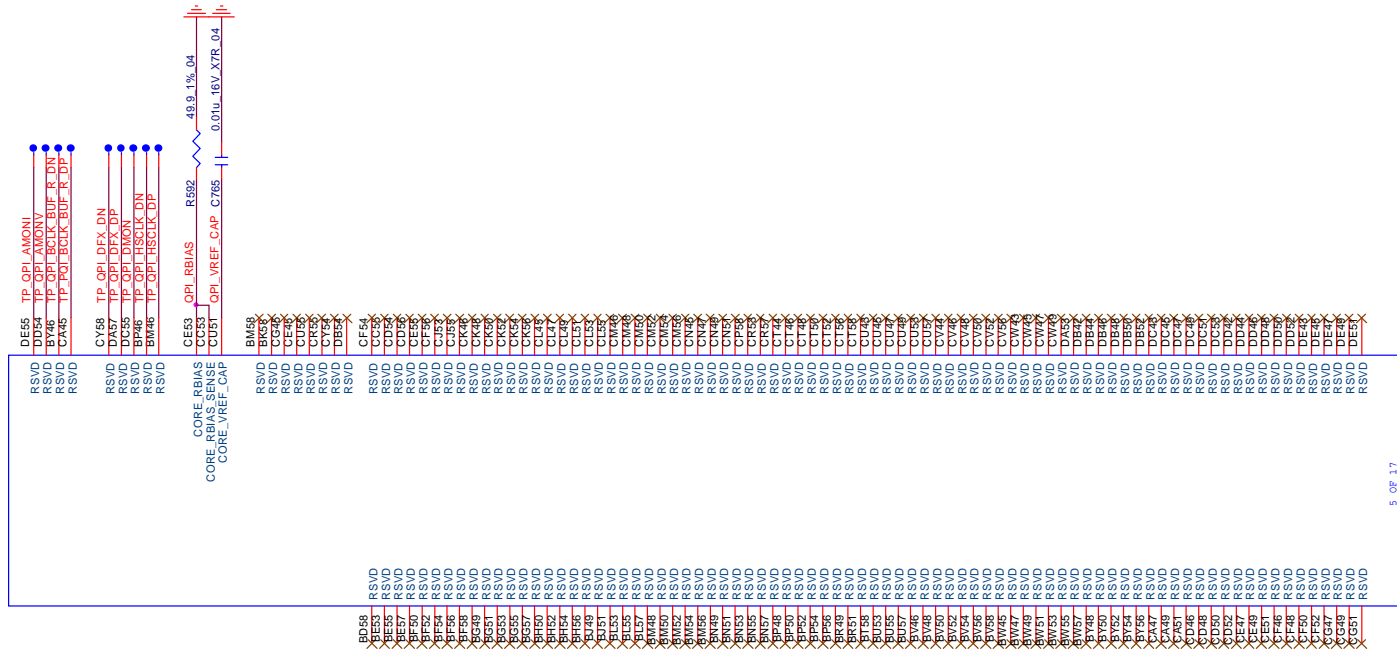
Sandy Bridge - VSS



Sheet 10 of 63
Sandy Bridge - VSS

Sandy Bridge - QPI

Sheet 11 of 63
Sandy Bridge -
QPI

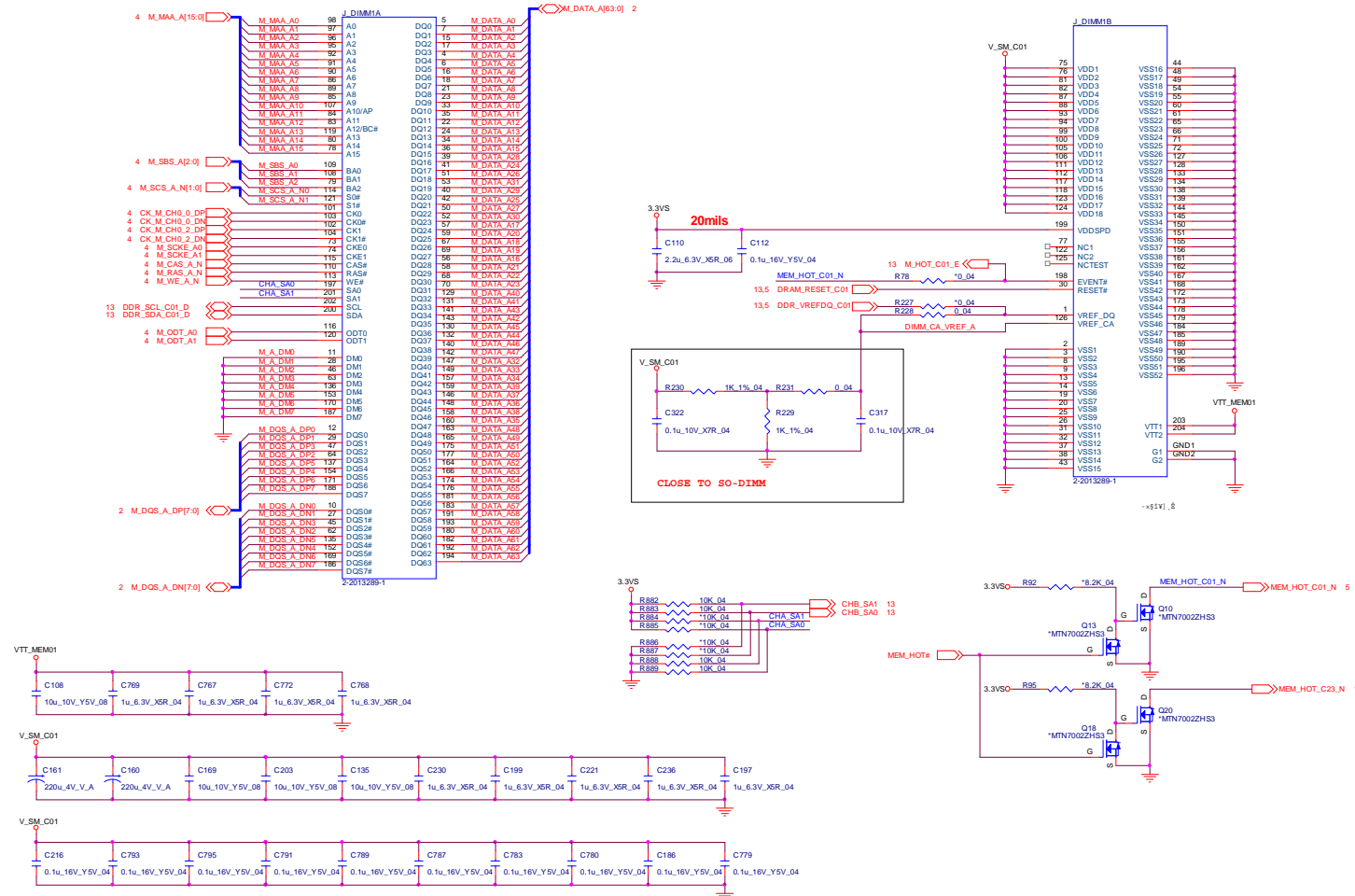


U31E
1554653-1

5 OF 17

DDR3 CHA SO-DIMM 0

Channel A SO-DIMM 0



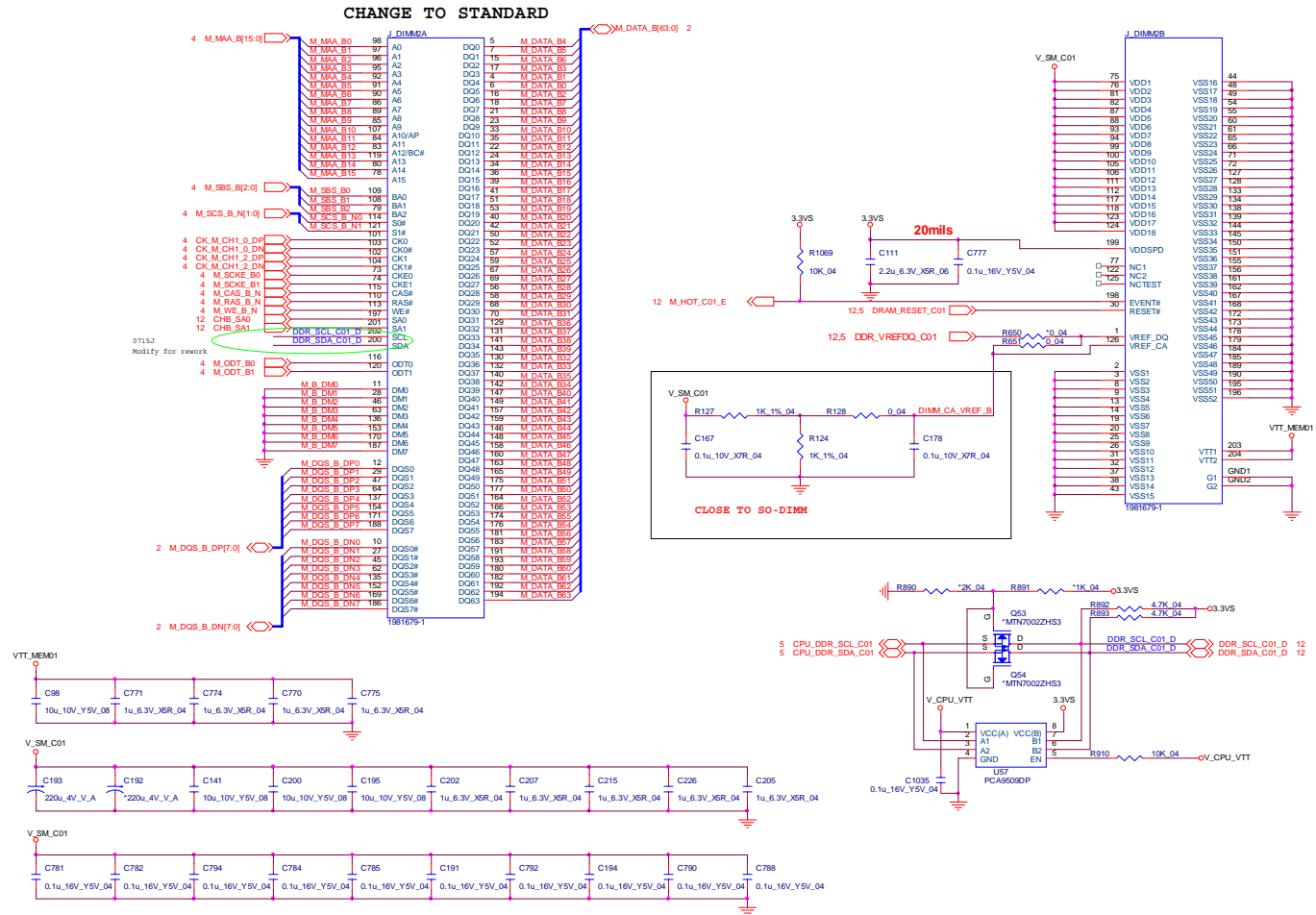
Sheet 12 of 63
DDR3 CHA
SO-DIMM 0

B.Schematic Diagrams

DDR3 CHB SO-DIMM 1

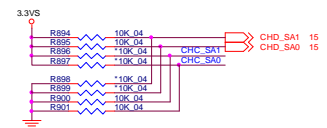
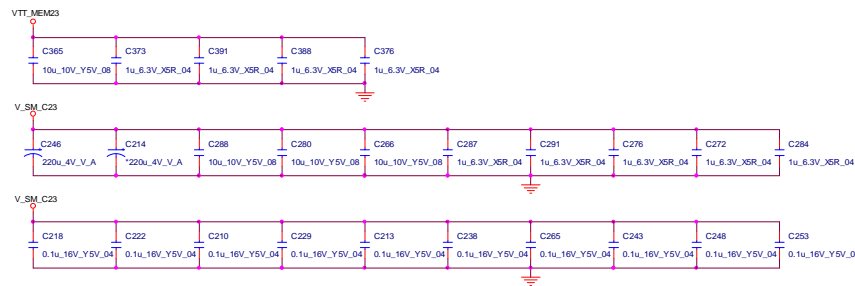
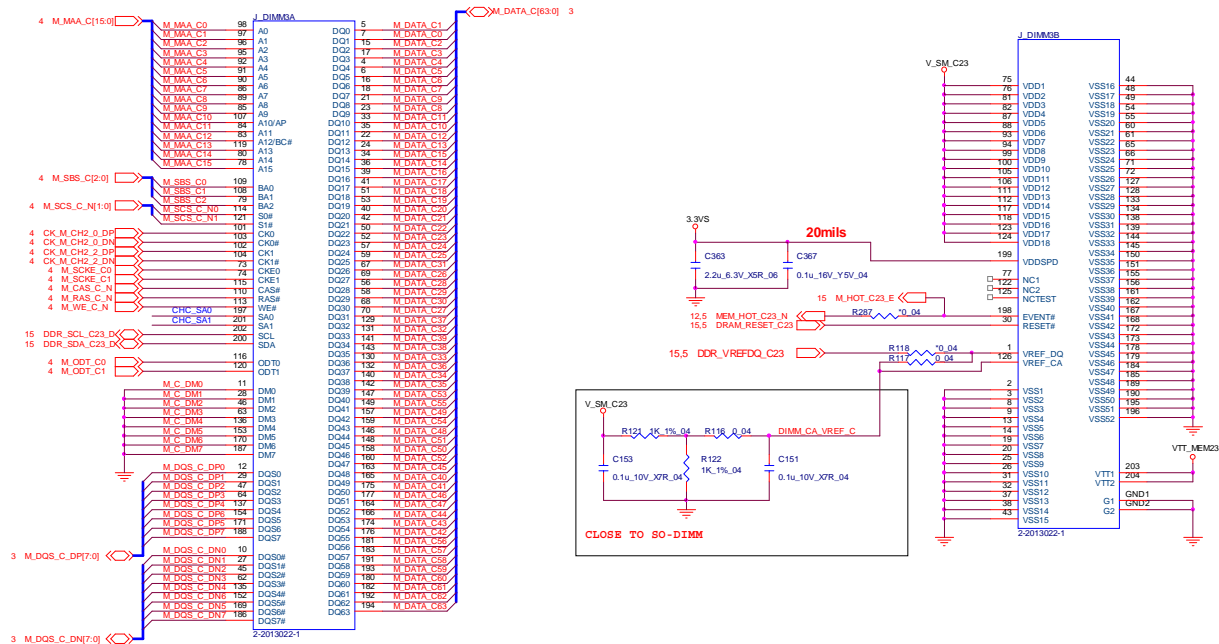
Channel B SO-DIMM 1

Sheet 13 of 63
DDR3 CHB
SO-DIMM 1



DDR3 CHC SO-DIMM 2

Channel C SO-DIMM 2



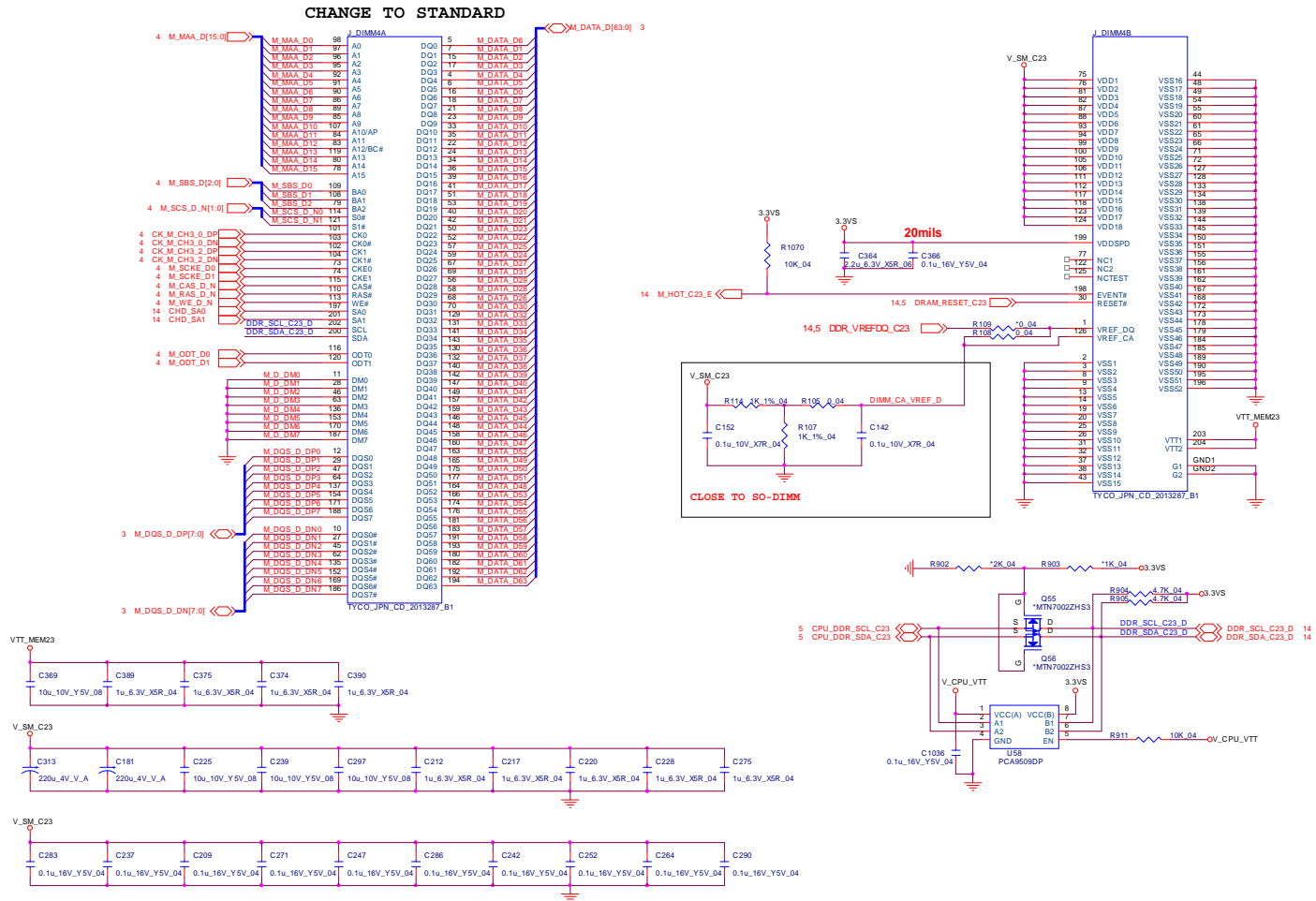
Sheet 14 of 63
DDR3 CHC
SO-DIMM 2

B.Schematic Diagrams

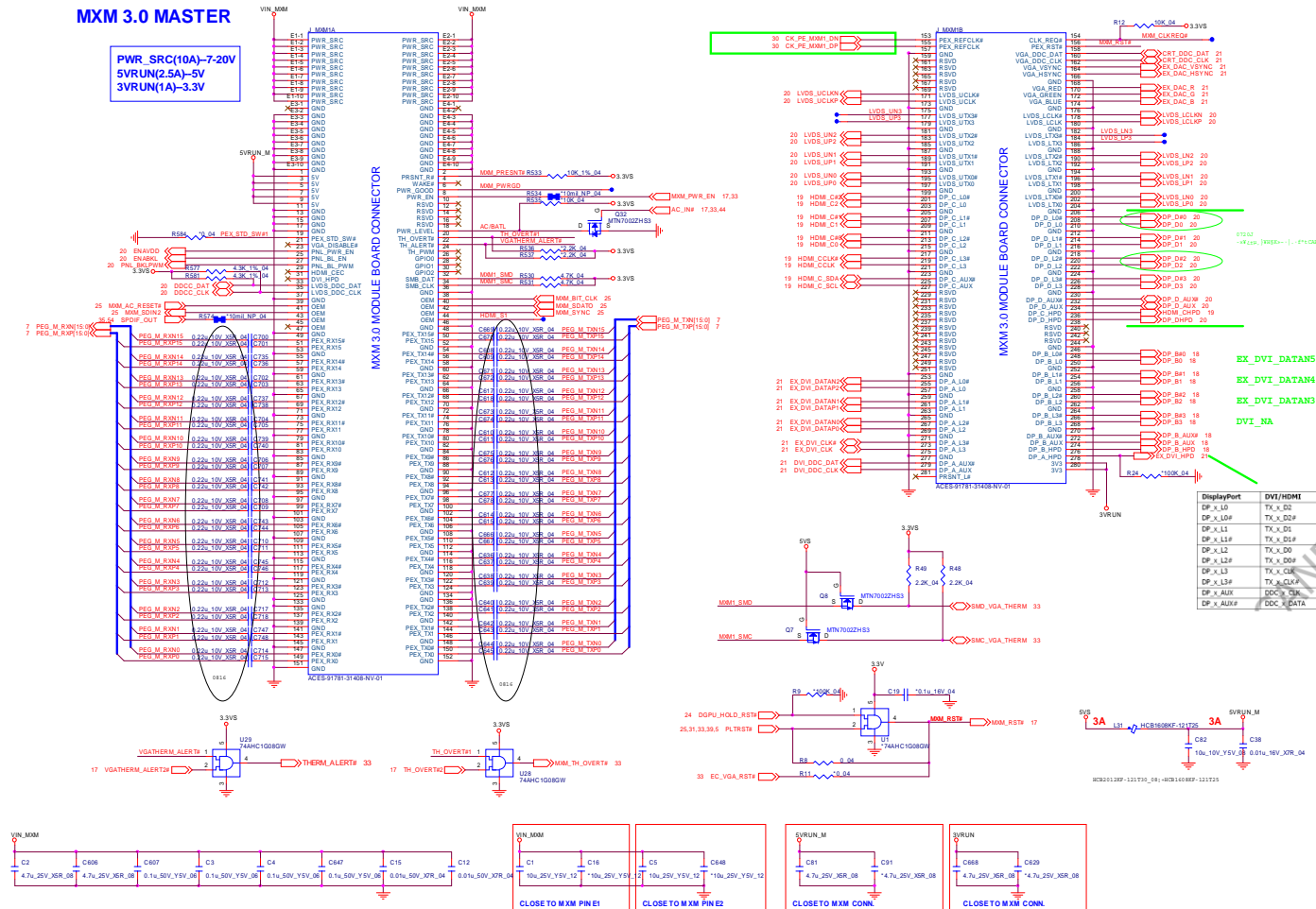
DDR3 CHD SO-DIMM 3

Channel D SO-DIMM 3

Sheet 15 of 63
PCH 1/8
DDR3 CHD
SO-DIMM 3



MXM 3.0 PCI-E MASTER

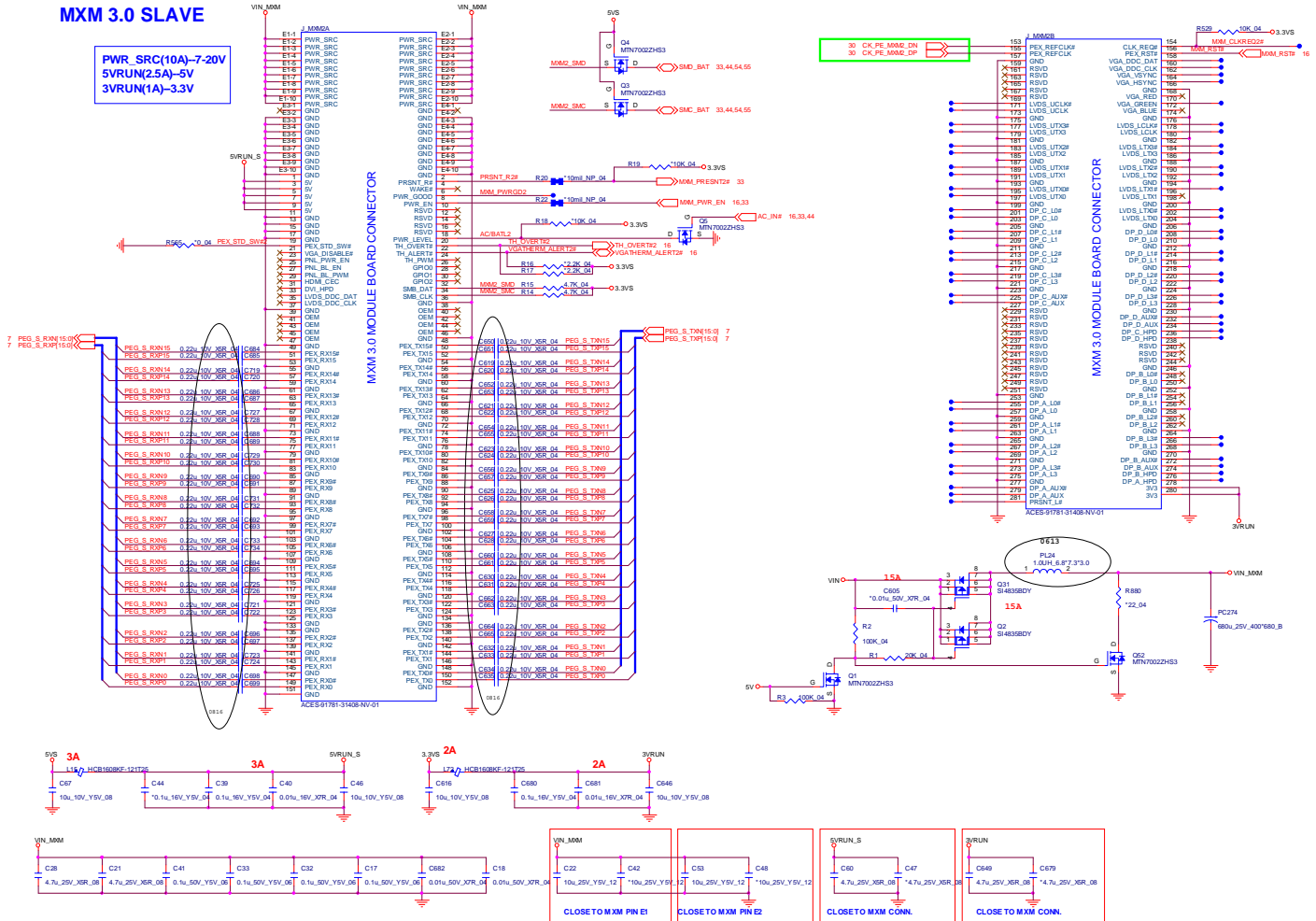


Sheet 16 of 63
MXM 3.0 PCI-E
MASTER

B.Schematic Diagrams

MXM 3.0 PCI-E SLAVE

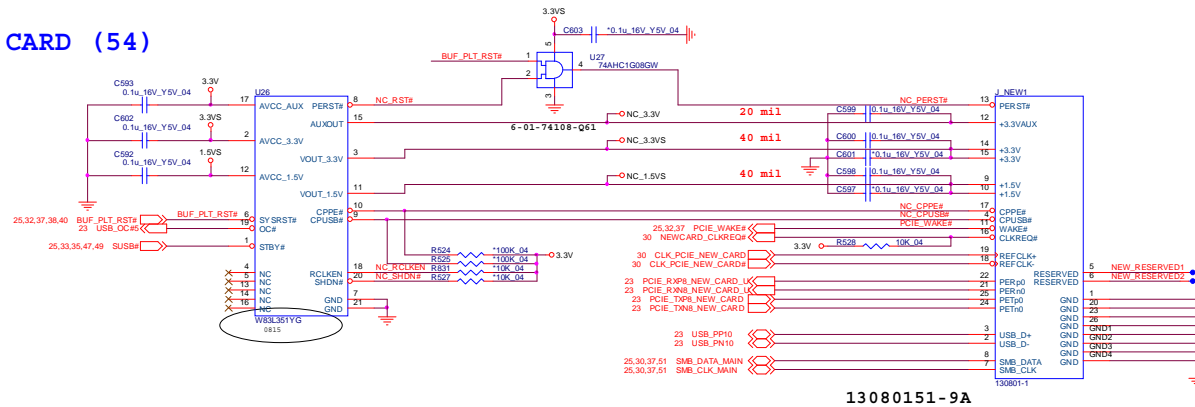
Sheet 17 of 63
MXM 3.0 PCI-E
SLAVE



B - 18 MXM 3.0 PCI-E SLAVE

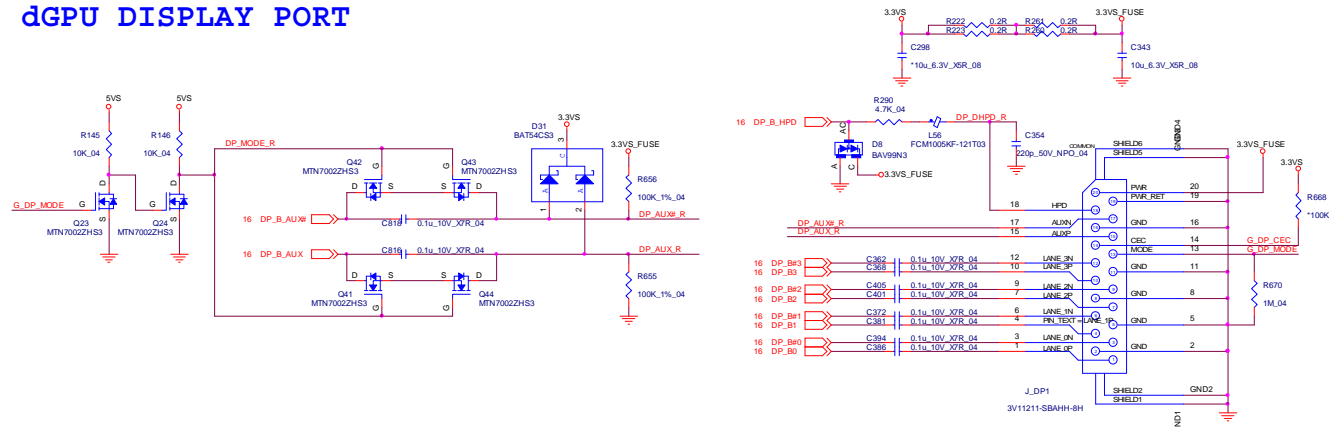
Display Port, New Card

NEW CARD (54)



Sheet 18 of 63
Display Port,
New Card

dGPU DISPLAY PORT



B.Schematic Diagrams

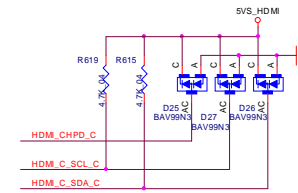
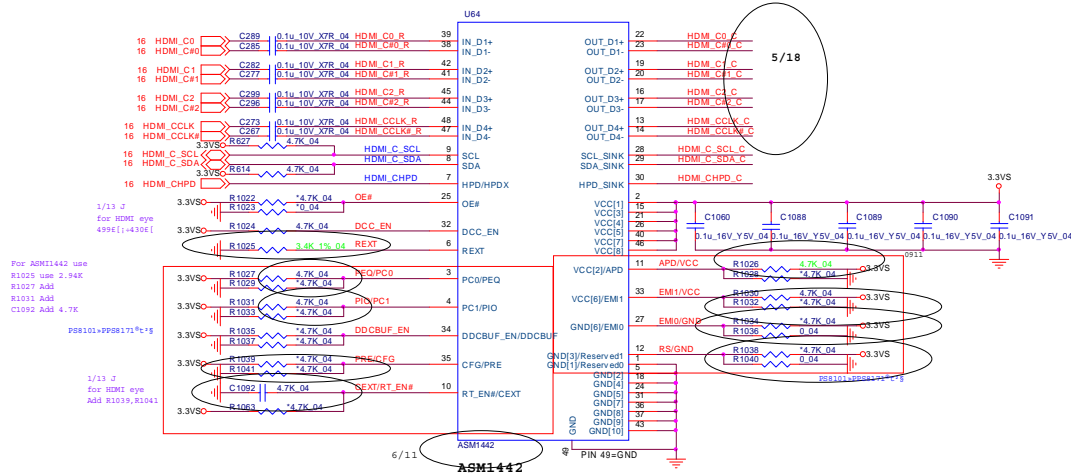
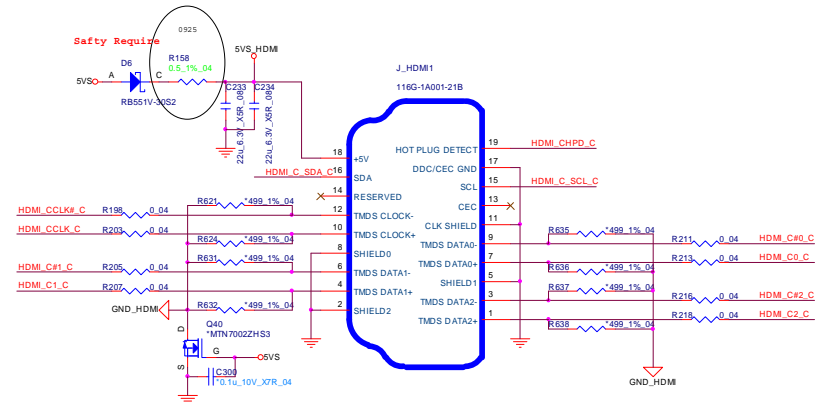
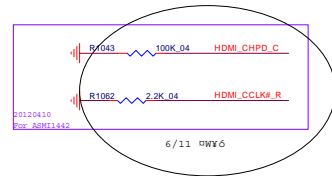
Schematic Diagrams

HDMI

HDMI

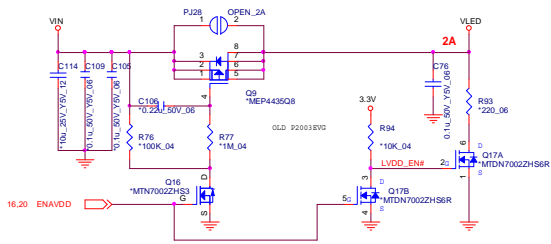
Sheet 19 of 63
HDMI

B.Schematic Diagrams

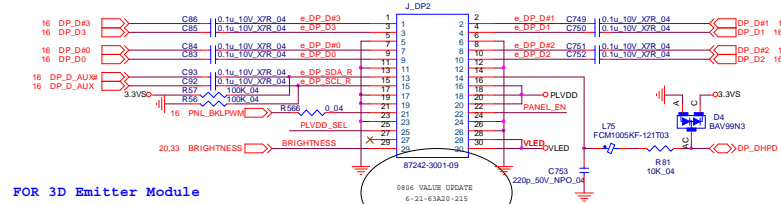


LCD, eDP, 3D Emitter

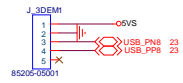
VLED Power



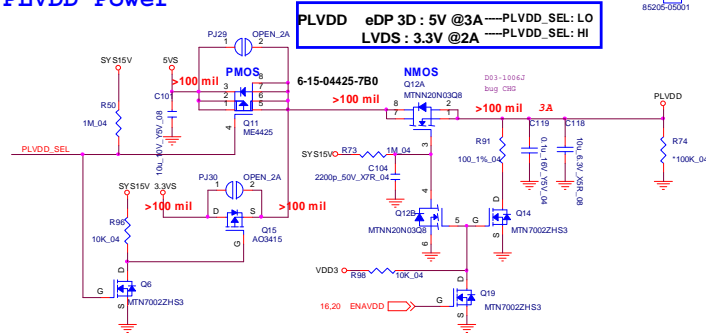
eDP Connector



FOR 3D Emitter Module

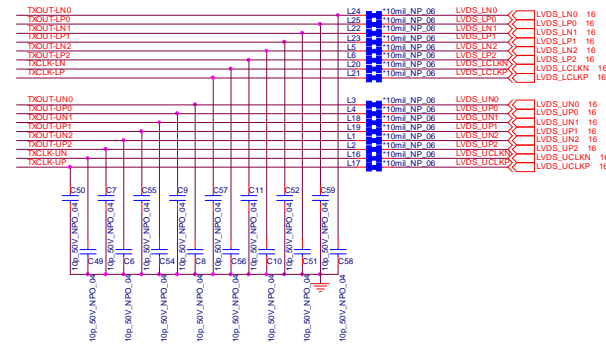
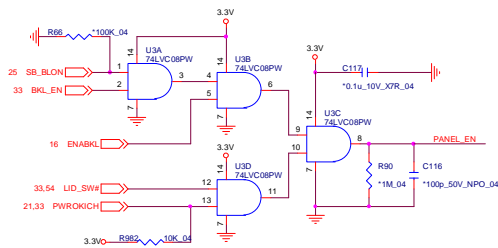
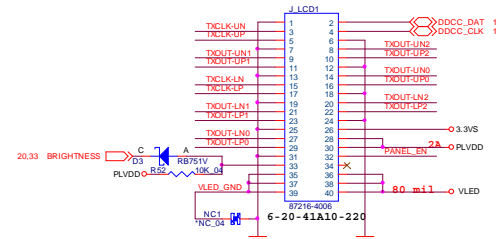


PLVDD Power



PLVDD eDP 3D : 5V @3A ----PLVDD_SEL: LO
LVDS : 3.3V @2A ----PLVDD_SEL: HI

LED PANEL

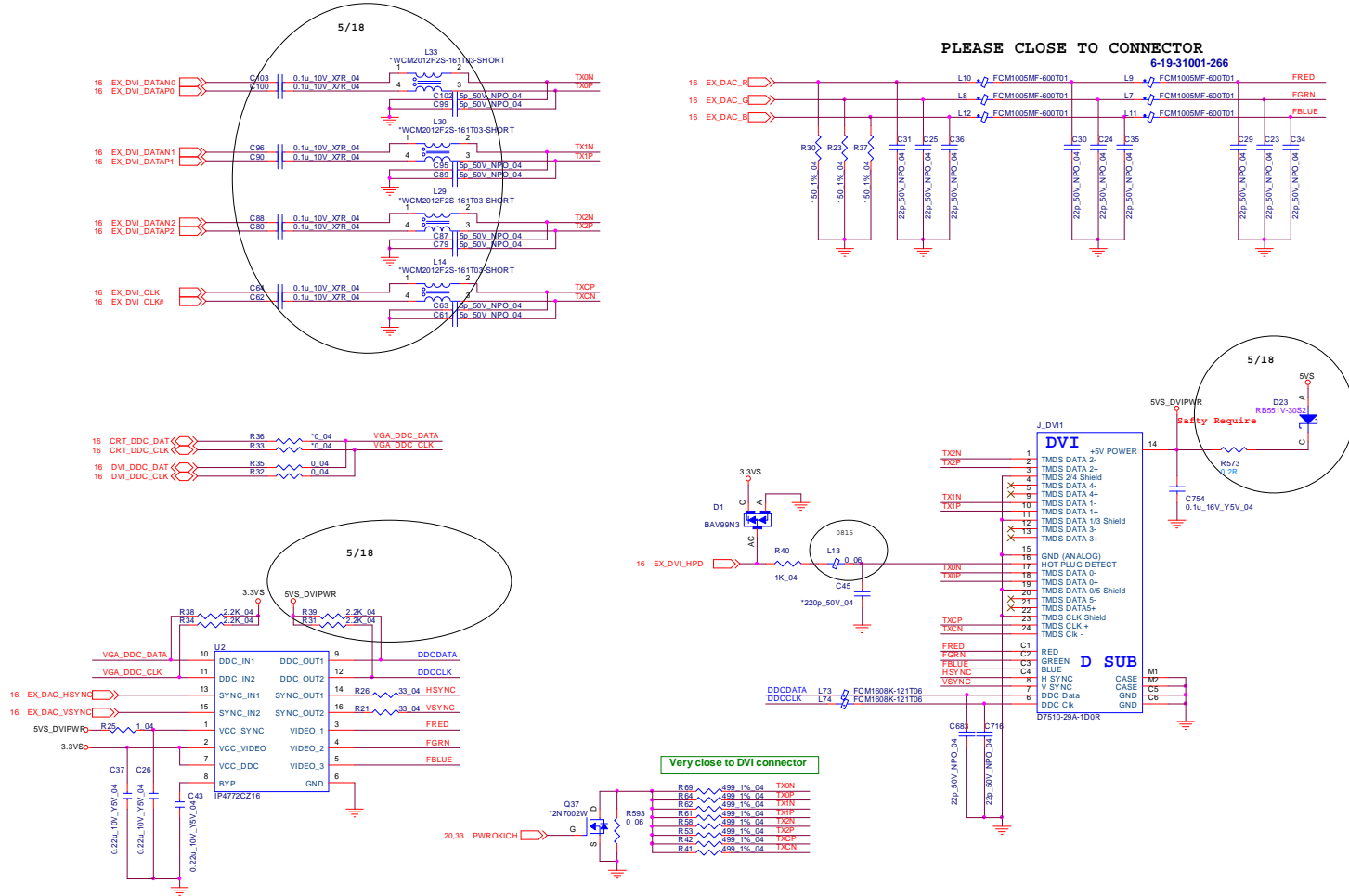


Sheet 20 of 63
LCD, eDP,
3D Emitter

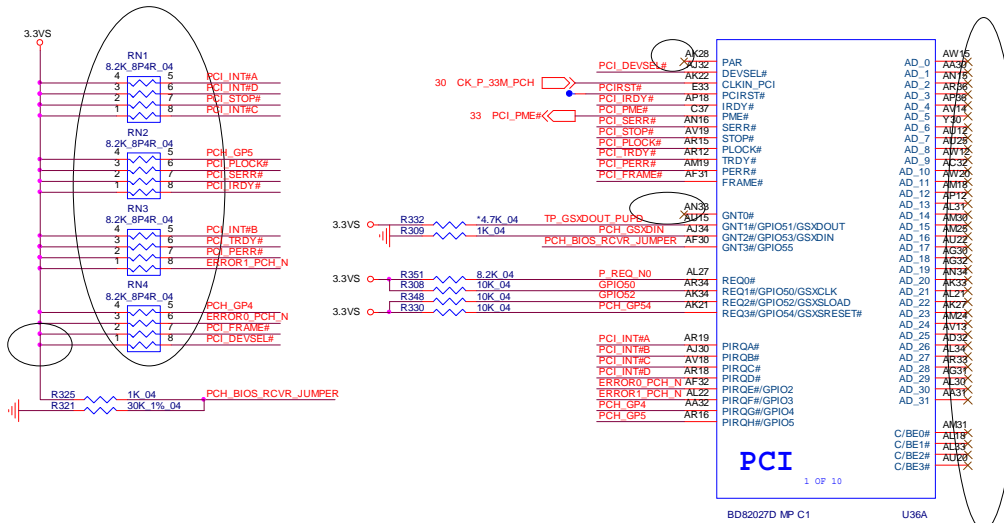
Schematic Diagrams

DVI

Sheet 21 of 63
DVI

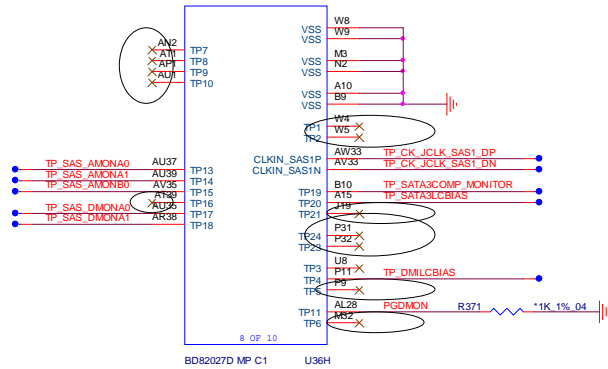


PCH PCI



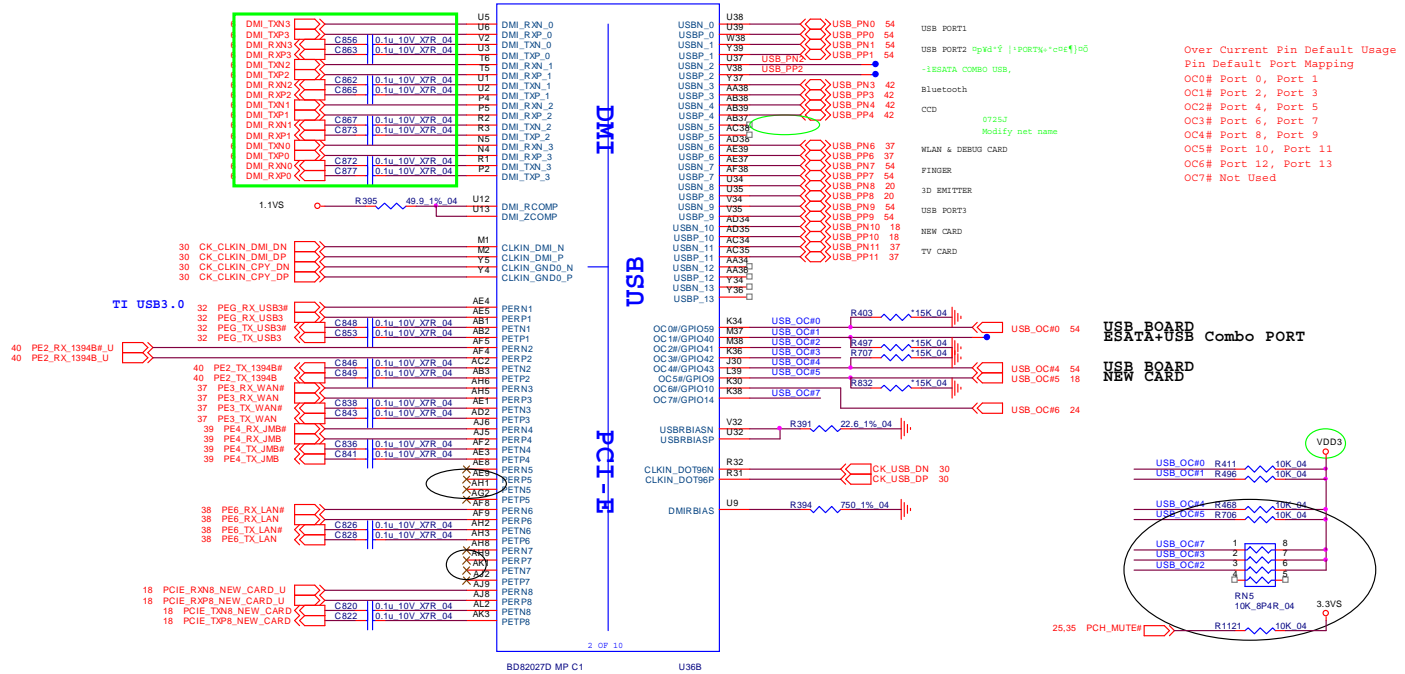
Sheet 22 of 63
PCH PCI

B.Schematic Diagrams



PCH USB/PCIE/DMI

Sheet 23 of 63
PCH USB/PCIE/DMI

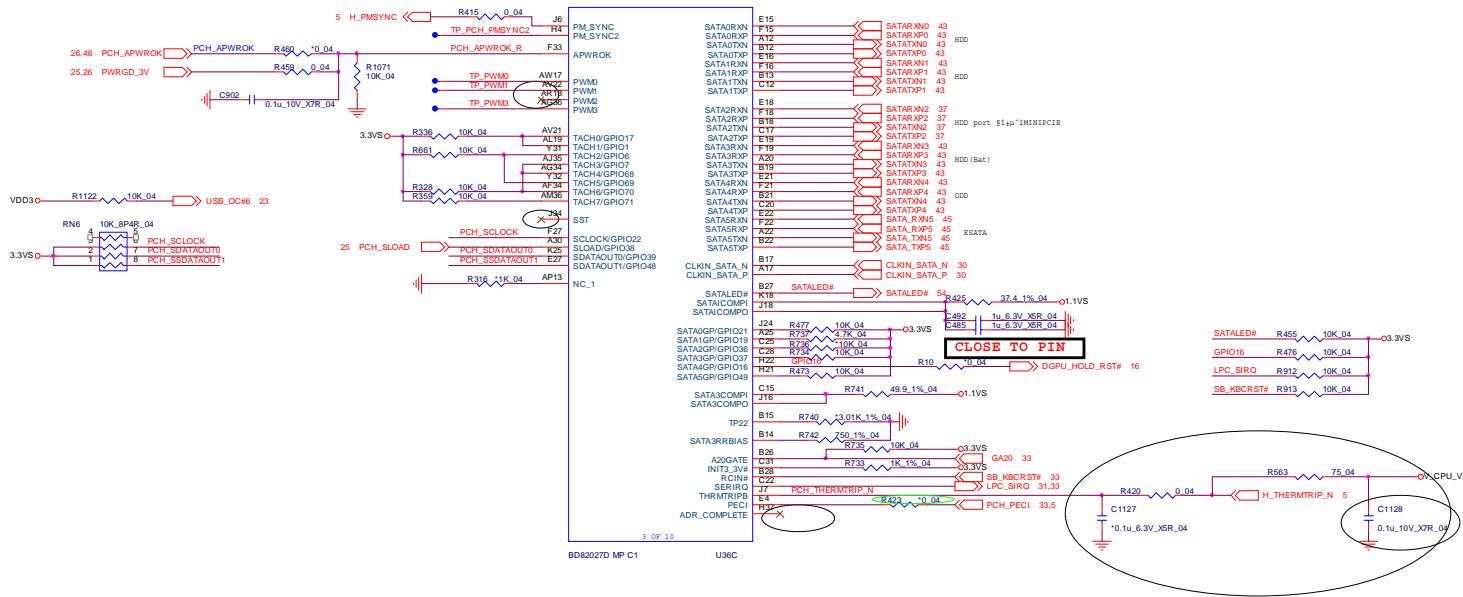


Over Current Pin Default Usage
Pin Default Port Mapping
OC0# Port 0, Port 1
OC1# Port 2, Port 3
OC2# Port 4, Port 5
OC3# Port 6, Port 7
OC4# Port 8, Port 9
OC5# Port 10, Port 11
OC6# Port 12, Port 13
OC7# Not Used

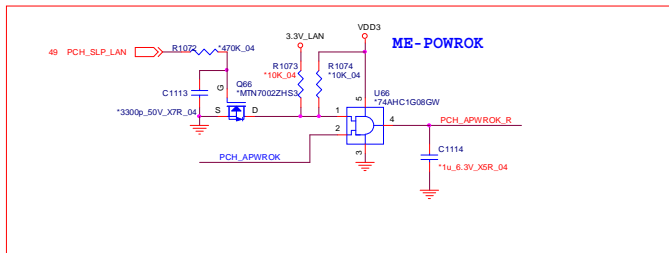
USB BOARD
ESATA+USB Combo PORT
NEW BOARD
NEW CARD

25.35 PCH_MUTE#

PCH SATA



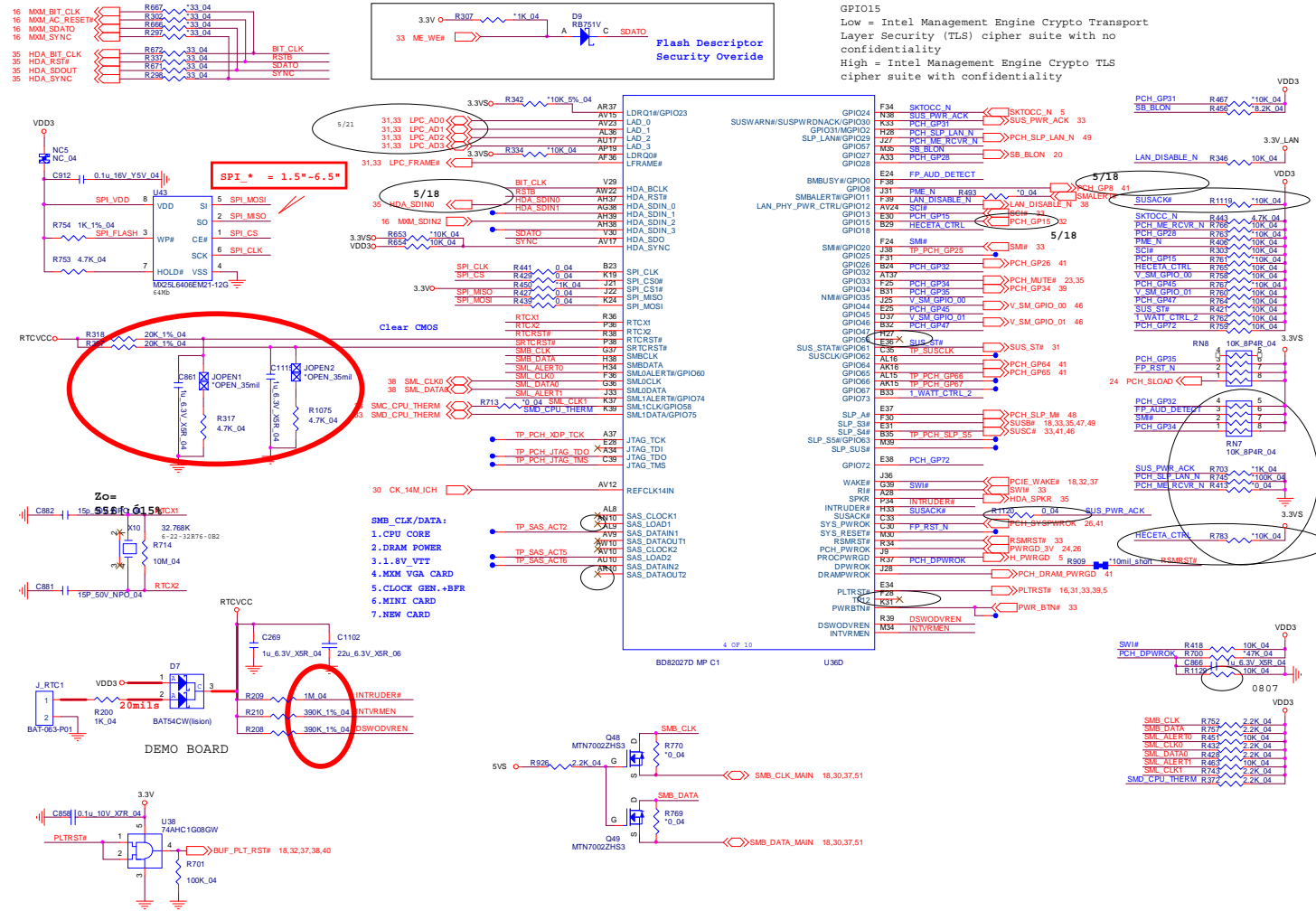
Sheet 24 of 63
PCH SATA



B.Schematic Diagrams

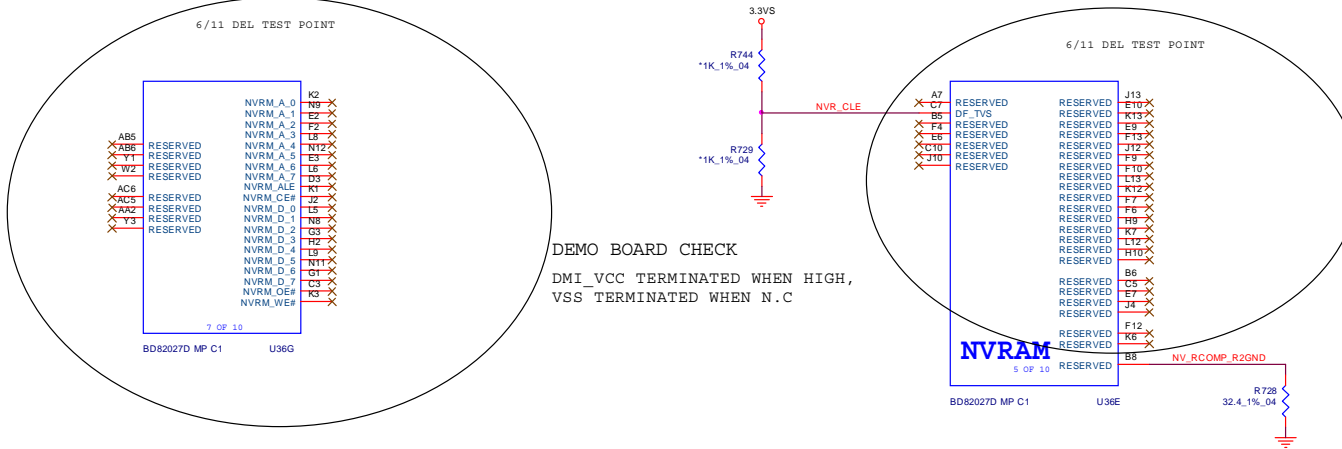
PCH GPIO/HDA

Sheet 25 of 63
PCH GPIO/HDA



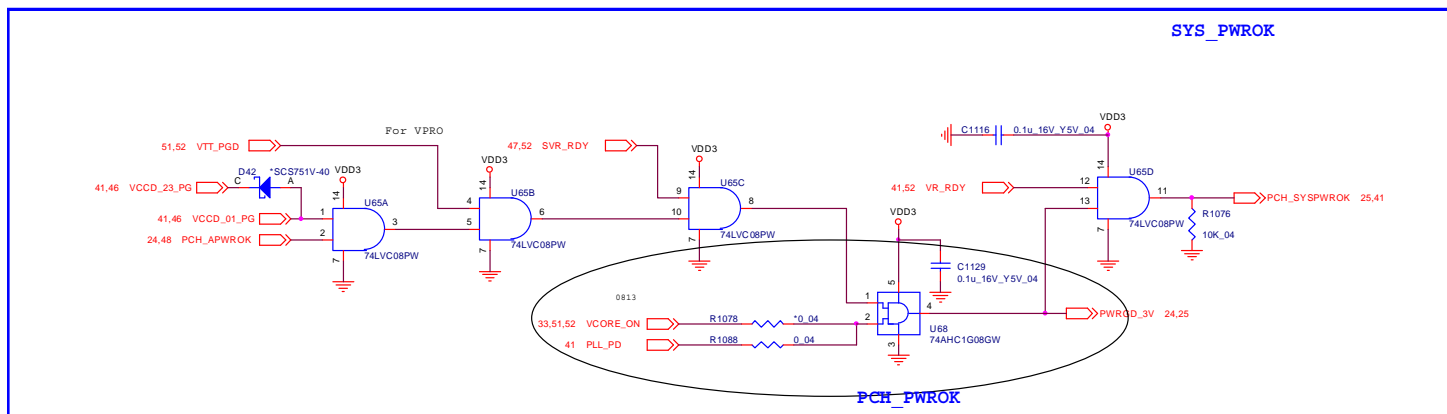
GPIO15
Low = Intel Management Engine Crypto Transport Layer Security (TLS) cipher suite with no confidentiality
High = Intel Management Engine Crypto TLS cipher suite with confidentiality

PCH NVRAM



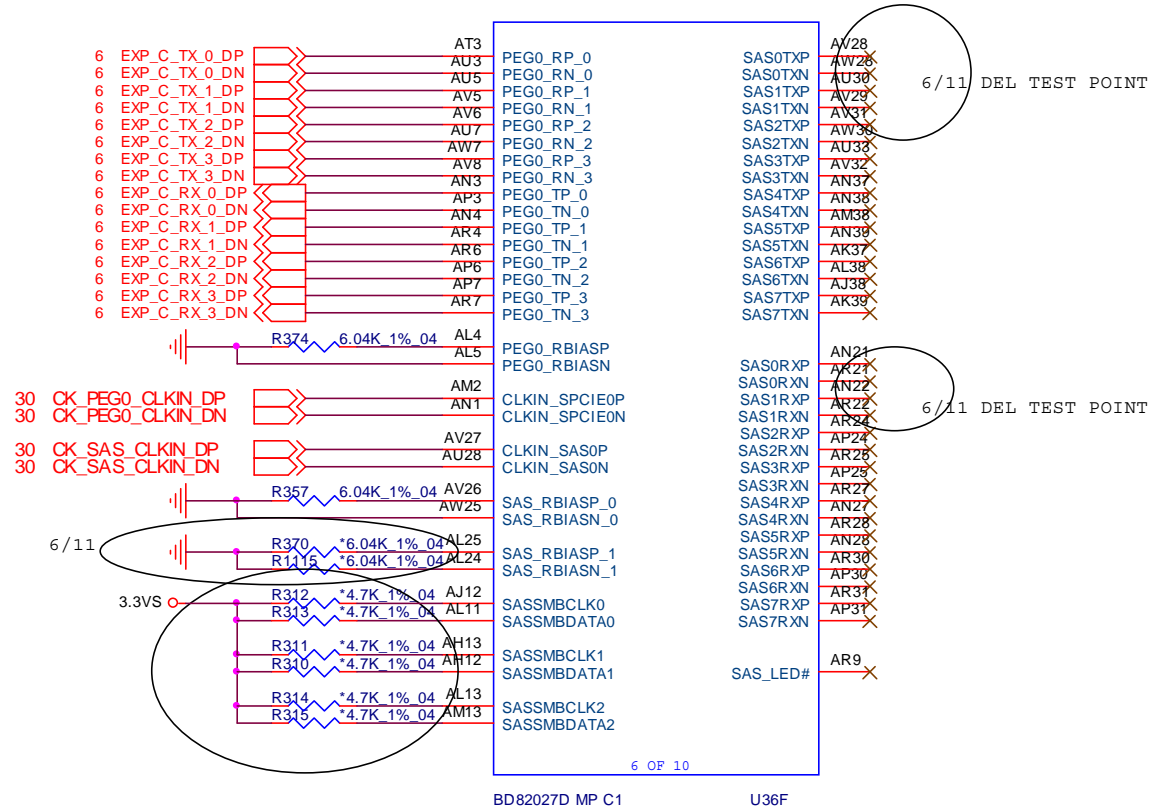
Sheet 26 of 63
PCH NVRAM

B.Schematic Diagrams

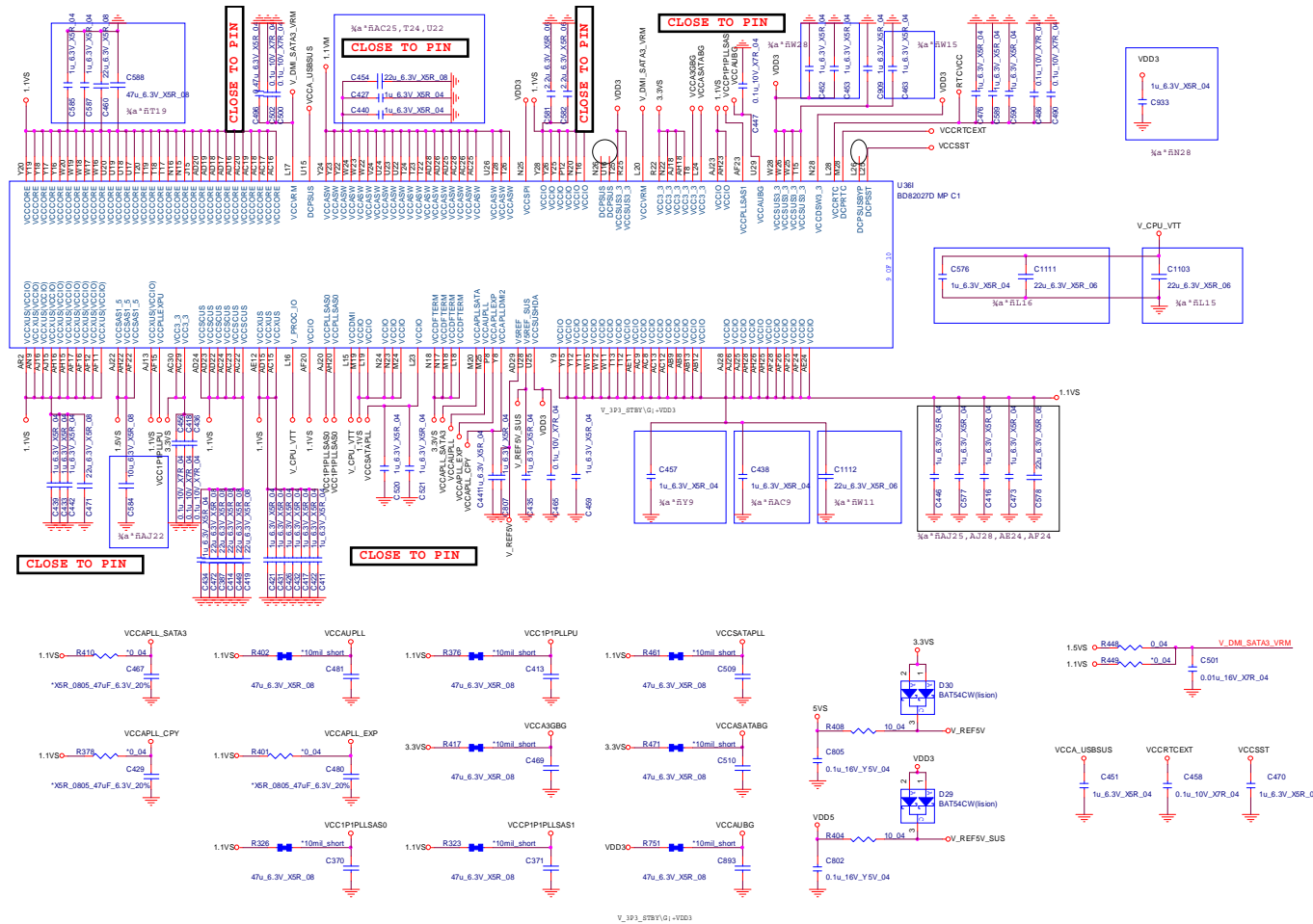


PCH SAS

Sheet 27 of 63
PCH SAS



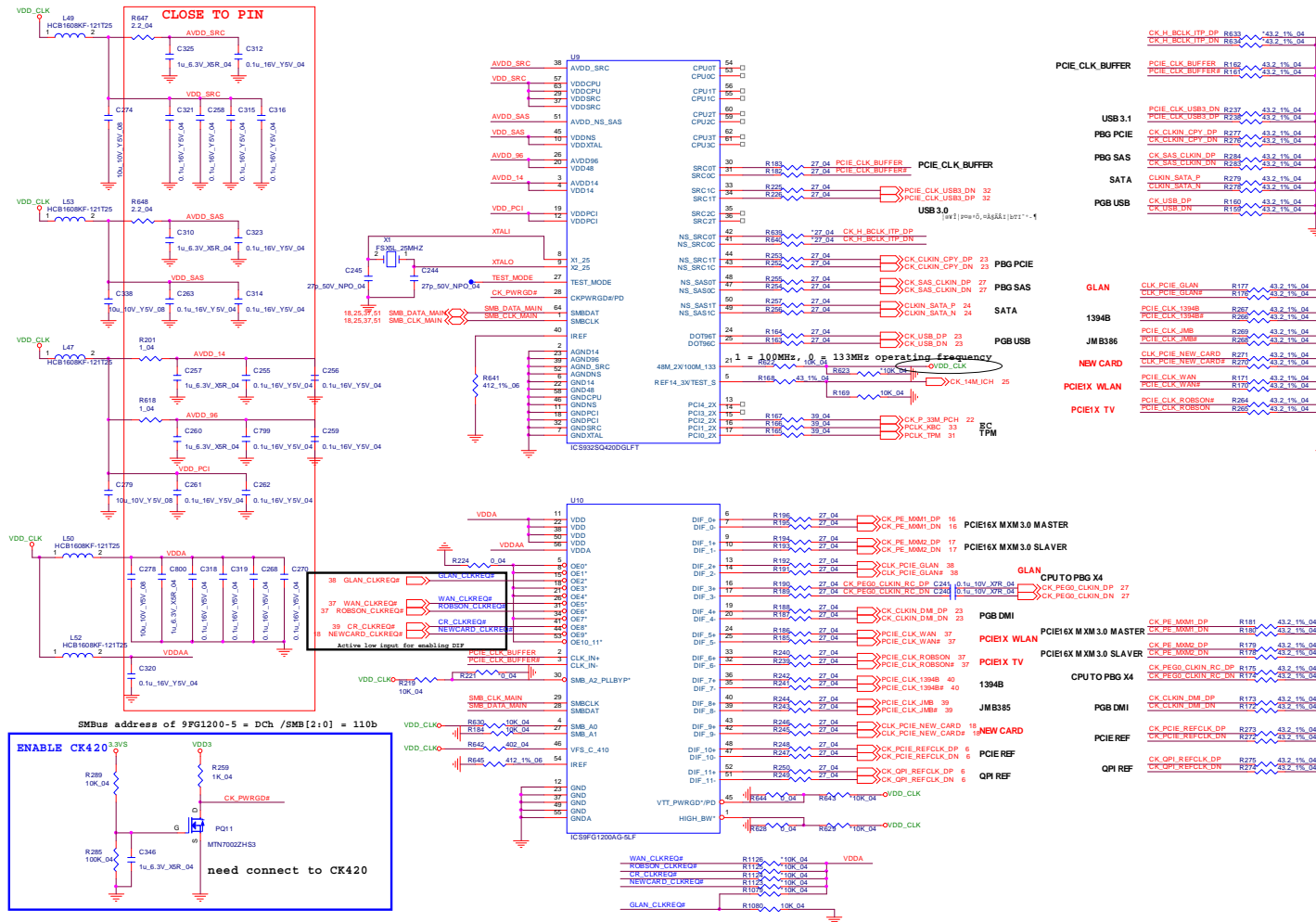
PCH Power



Sheet 28 of 63
PCH Power

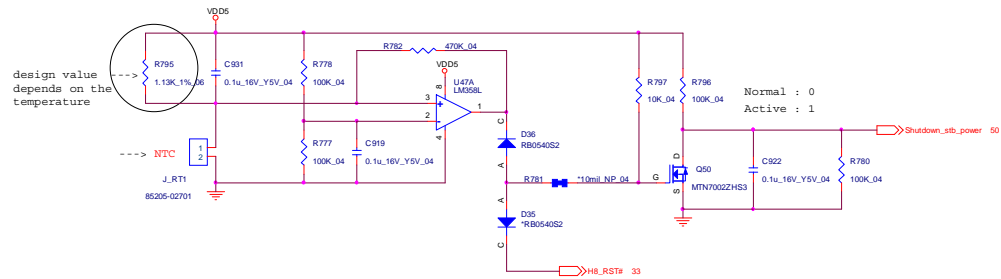
Clock Generator, Buffer

Sheet 30 of 63
Clock Generator, Buffer

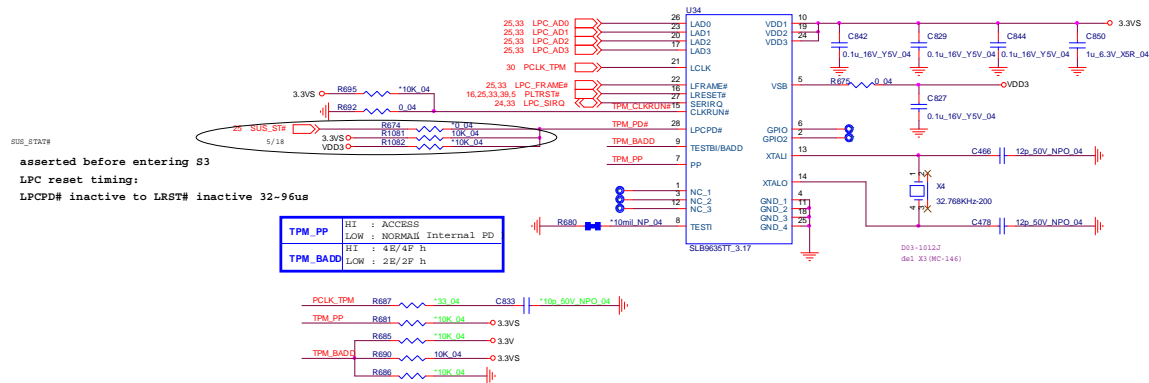


TPM 1.2

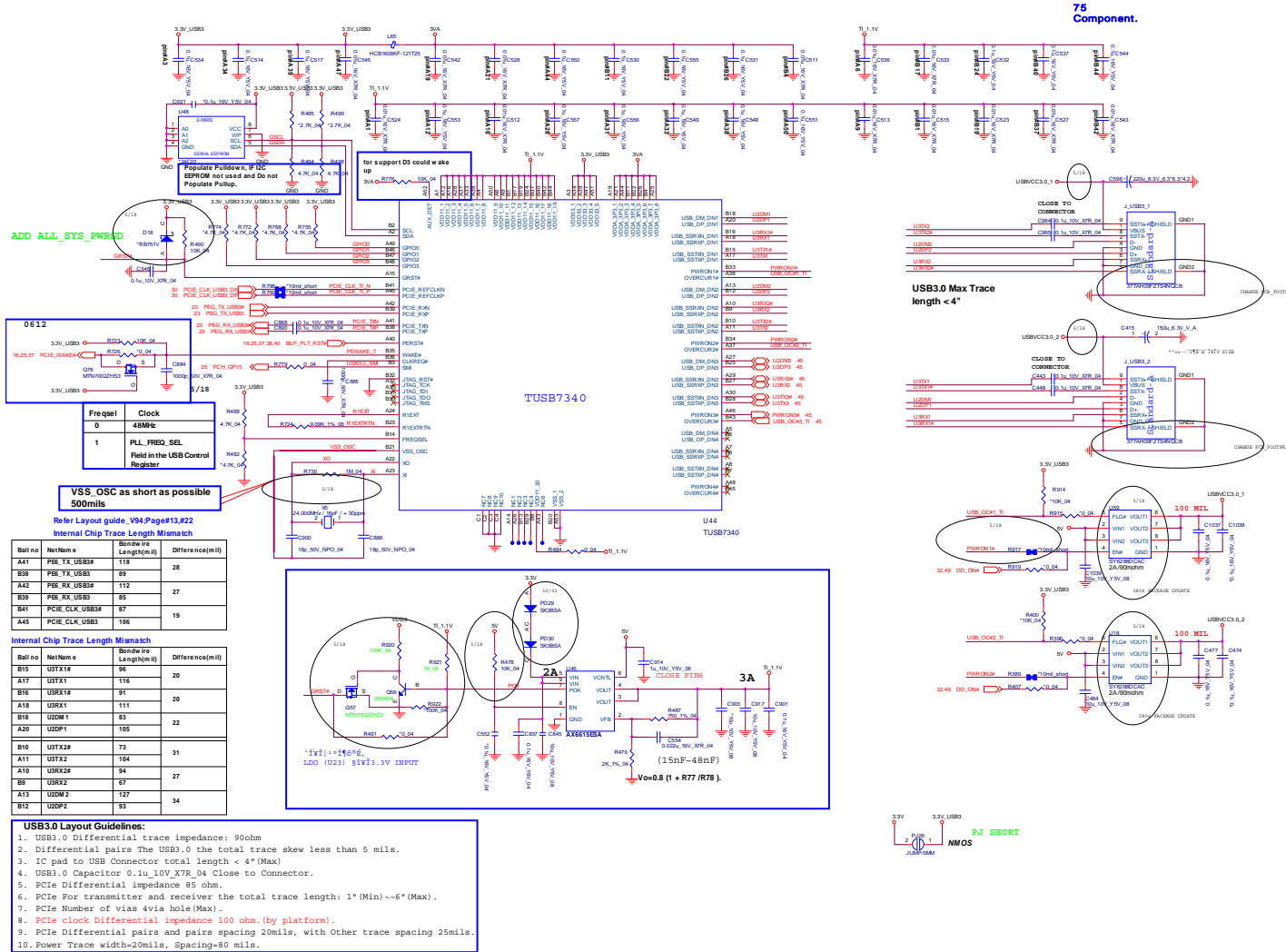
Sheet 31 of 63
TPM 1.2



TPM 1.2



USB 3.0

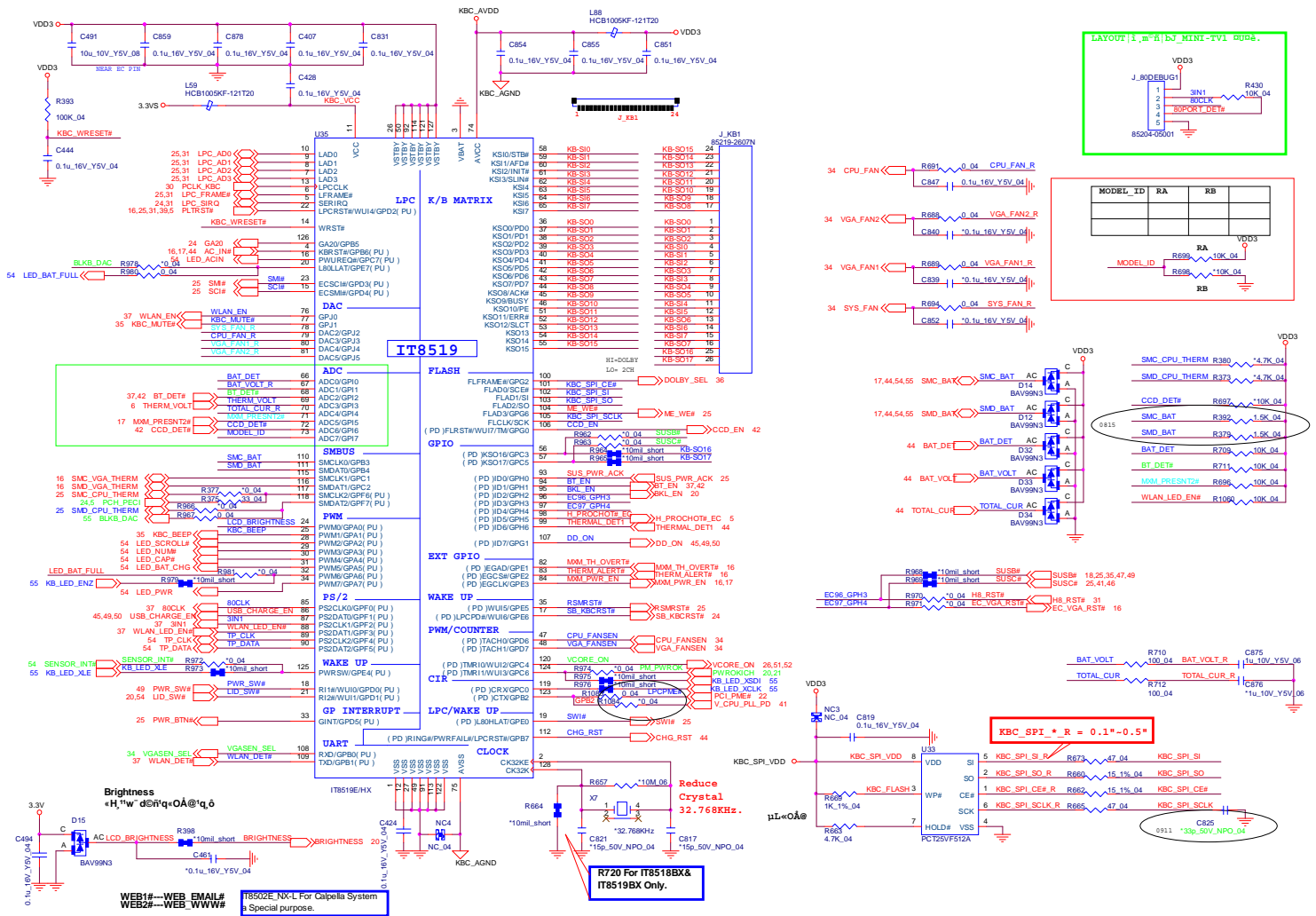


Sheet 32 of 63
USB 3.0

EC ITE8519

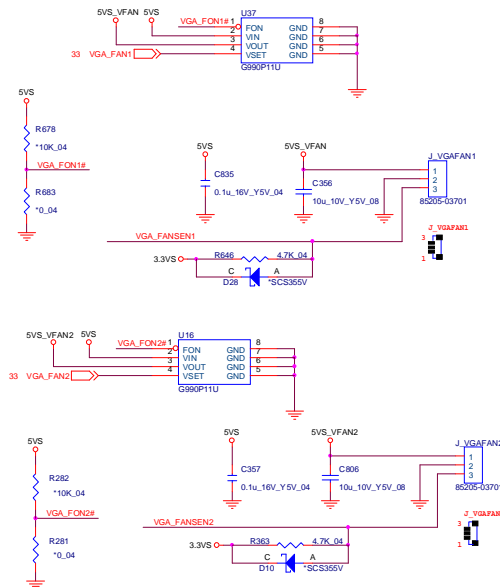
B.Schematic Diagrams

Sheet 33 of 63
EC ITE8519

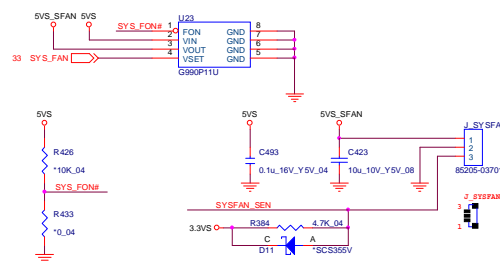


Fan Control

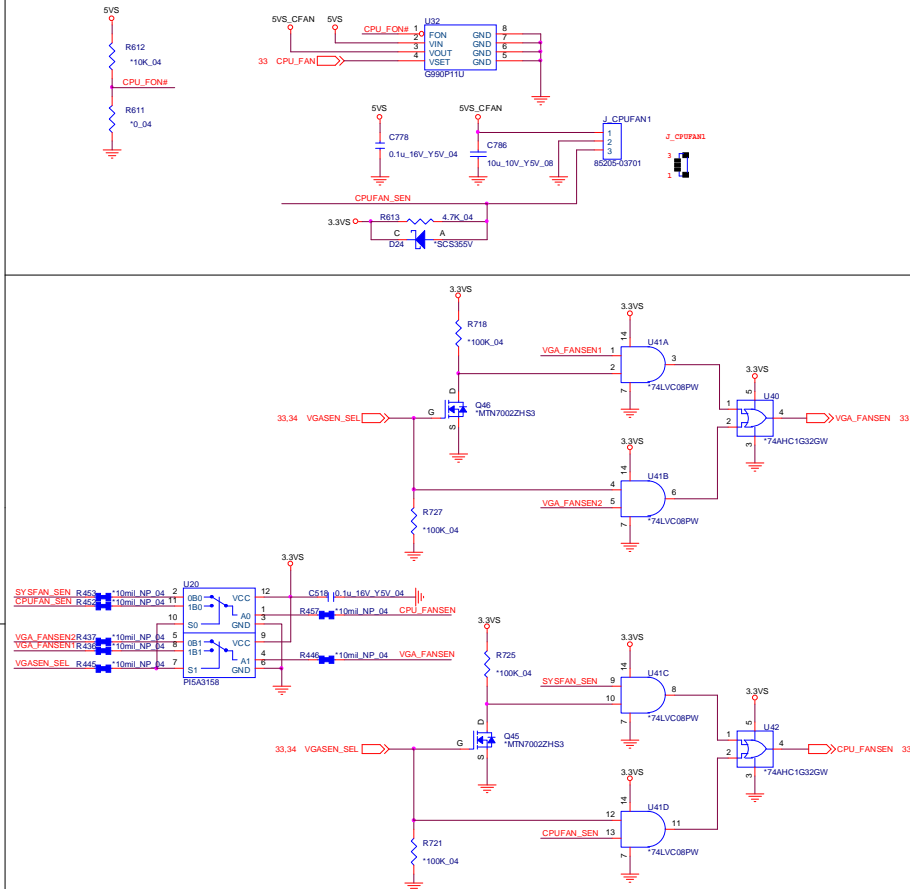
VGA FAN CONTROL



SYS FAN CONTROL



CPU FAN CONTROL

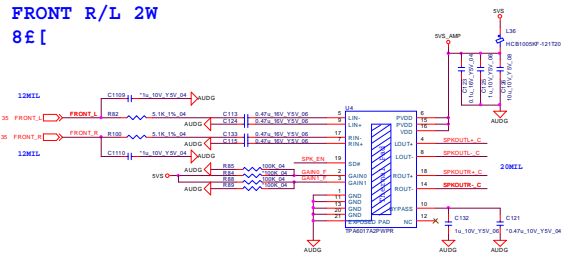


Sheet 34 of 63
Fan Control

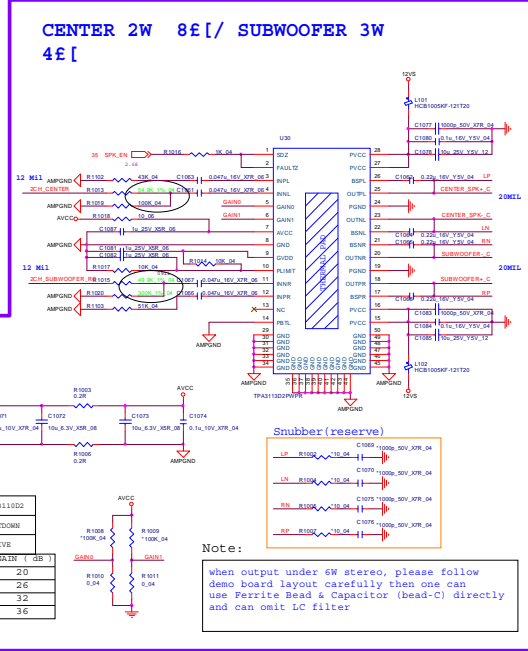
B.Schematic Diagrams

Audio AMP

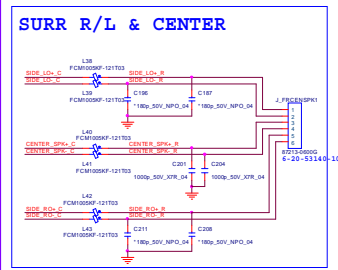
FRONT R/L 2W
8 ϵ [



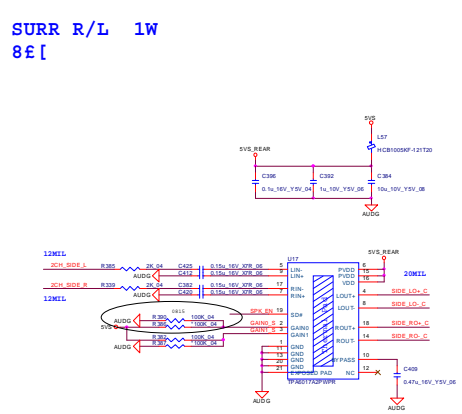
CENTER 2W 8 ϵ [/ SUBWOOFER 3W
4 ϵ [



SURR R/L & CENTER
4 ϵ [



SURR R/L 1W
8 ϵ [

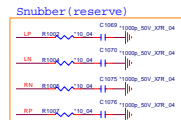


Sheet 36 of 63
Audio AMP

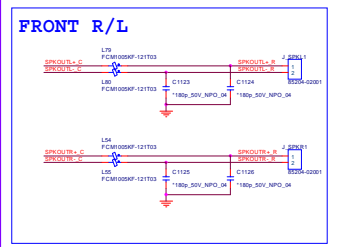
SHUTDOWN TDA1102

L	(AV - AV)	SHUTDOWN
0	0	2.0
1	0	2.6
0	1	3.2
1	1	3.6

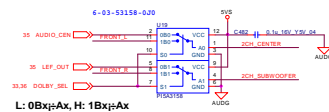
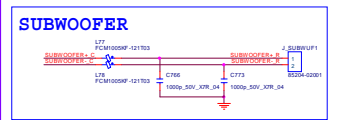
Note:
when output under 6W stereo, please follow demo board layout carefully then one can use Ferrite Bead & Capacitor (bead-C) directly and can omit LC filter



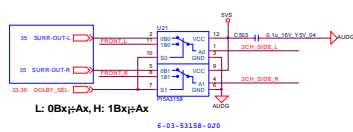
FRONT R/L



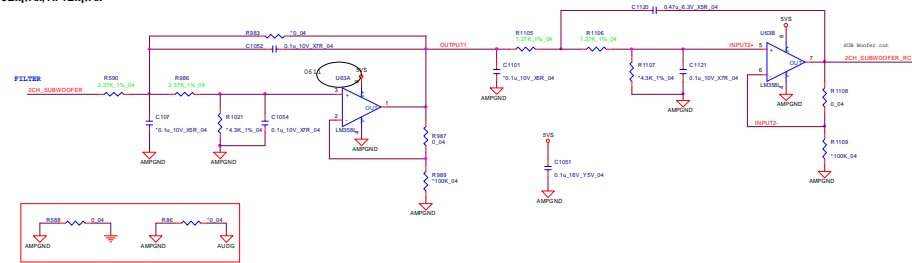
SUBWOOFER



L: 0Bx4Ax, H: 1Bx4Ax



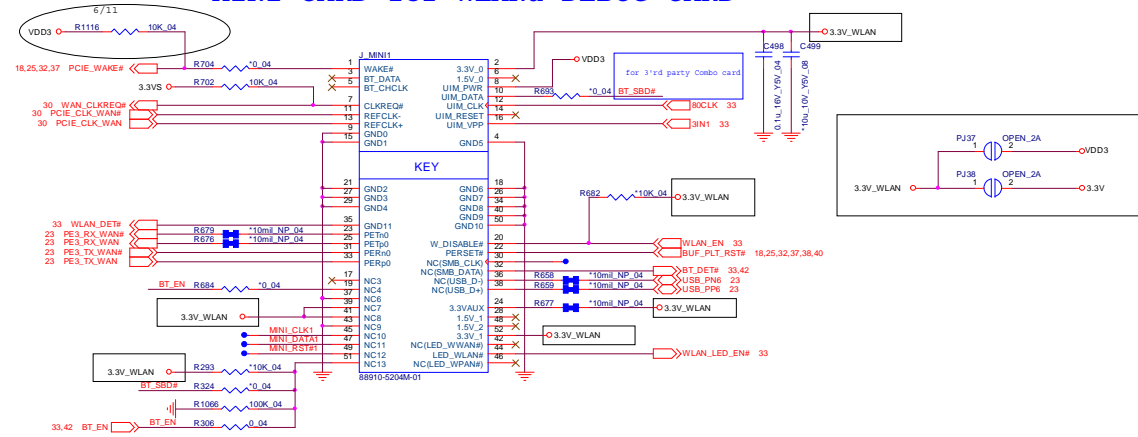
L: 0Bx4Ax, H: 1Bx4Ax



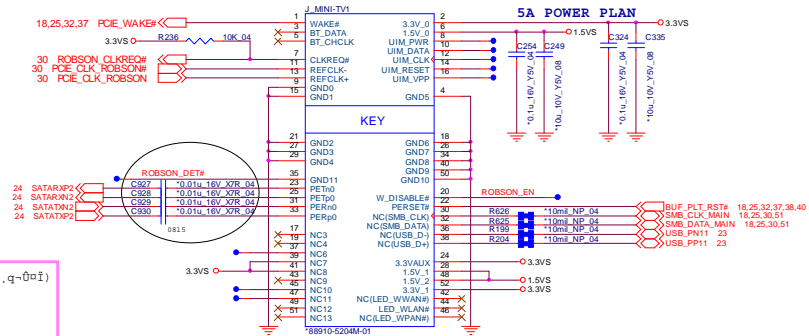
WLAN, TV Card

Sheet 37 of 63
WLAN, TV Card

MINI CARD for WLAN& DEBUG CARD



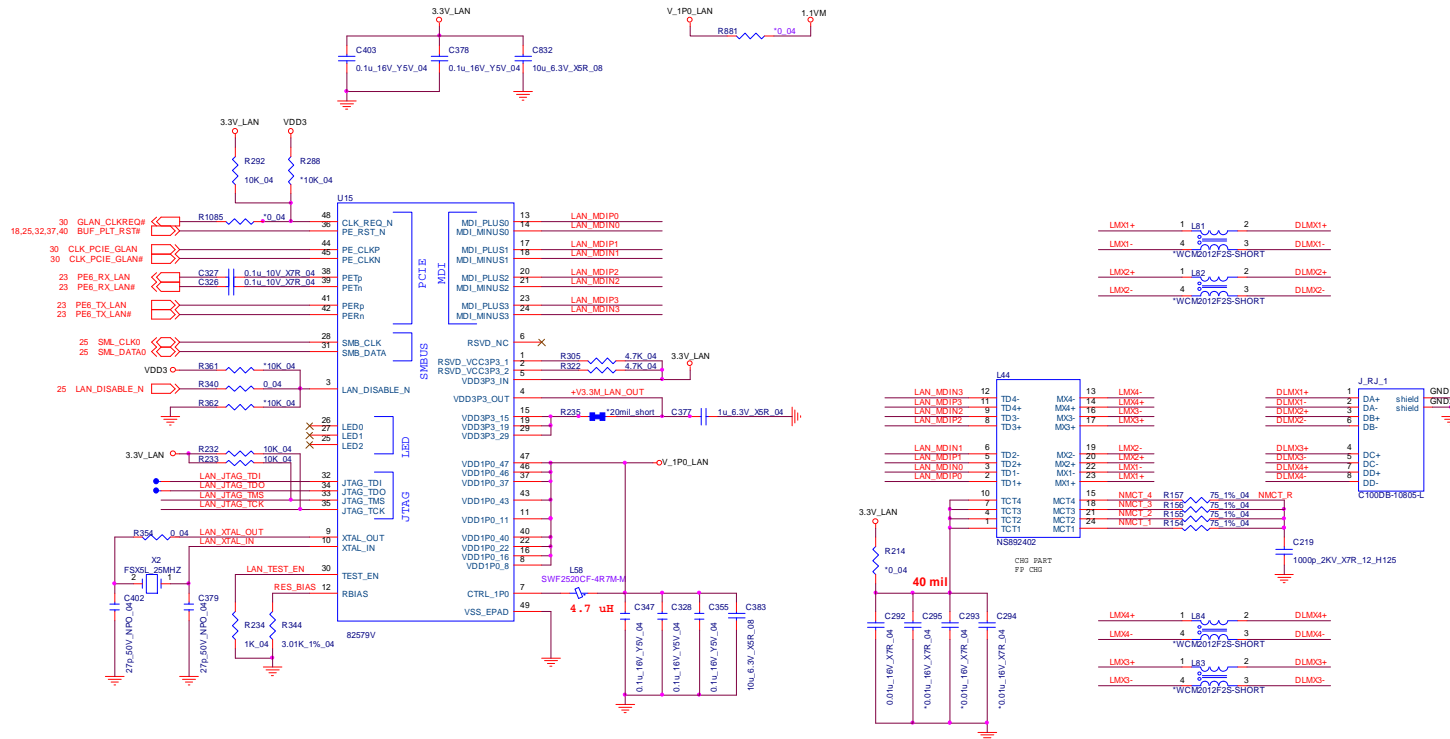
TV CARD



MSATA CARD PIN DEFINE (PIN23 / PIN25 »PCONNECTOR#w,q-0=I)			
33	PERp0	34	GND
31	PERn0	32	SMB_DATA
29	GND	30	SMB_CLK
27	GND	28	+1.5V
25	PETm0	26	GND
23	PETp0	24	+3.3Vaux

LAN PHY Intel 82579V

LAN 82579V



1.05Vdc POWER OPTIONS

Shared with PCHs 1.05V SVR*	Internal SRV
STUFF: R?	STUFF: R?
NO STUFF: R?	NO STUFF: R?

*NOTE: 1.05Vdc can be shared from PCH's 1.05V SVR (typically the ME rail). When sharing, make sure both +3.3V_LAN & 1.05Vdc rails are remained powered on during ALL Sx states, as required to support WOL.

Sheet 38 of 63
LAN PHY Intel
82579V

B.Schematic Diagrams

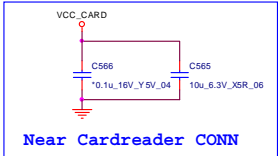
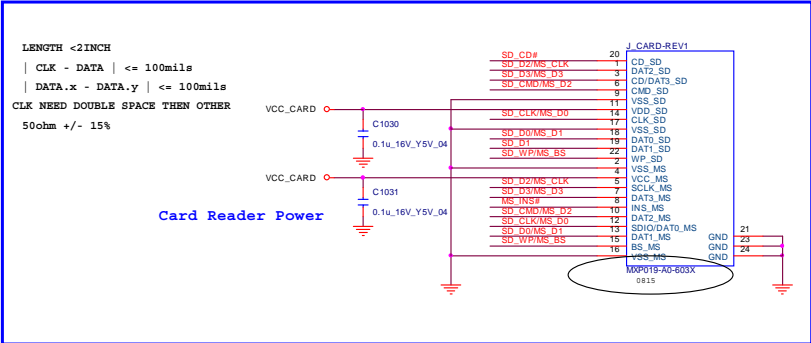
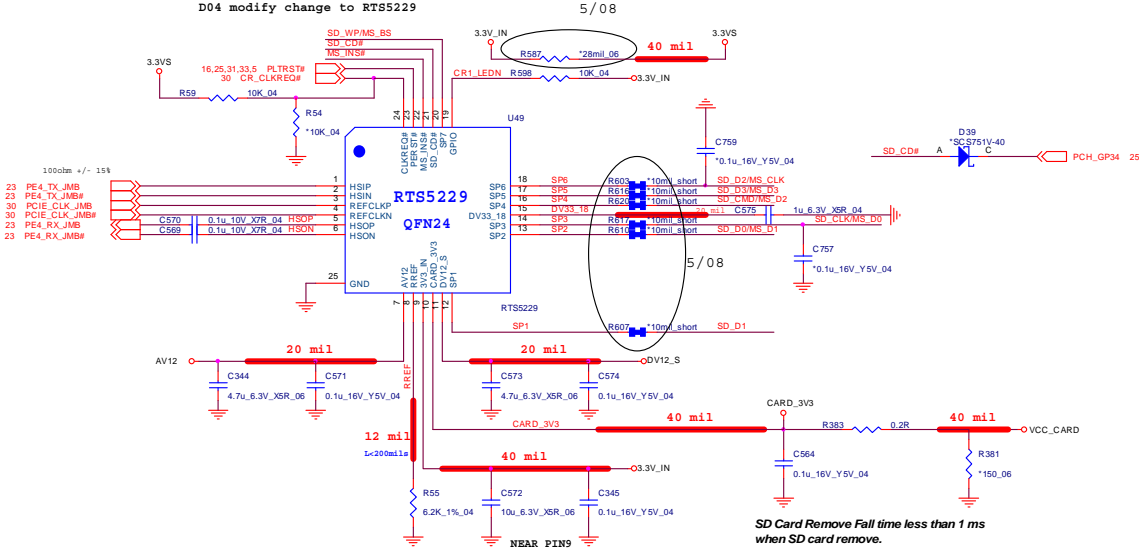
Schematic Diagrams

Card Reader RTS5229

CARD READER RTS5229

B. Schematic Diagrams

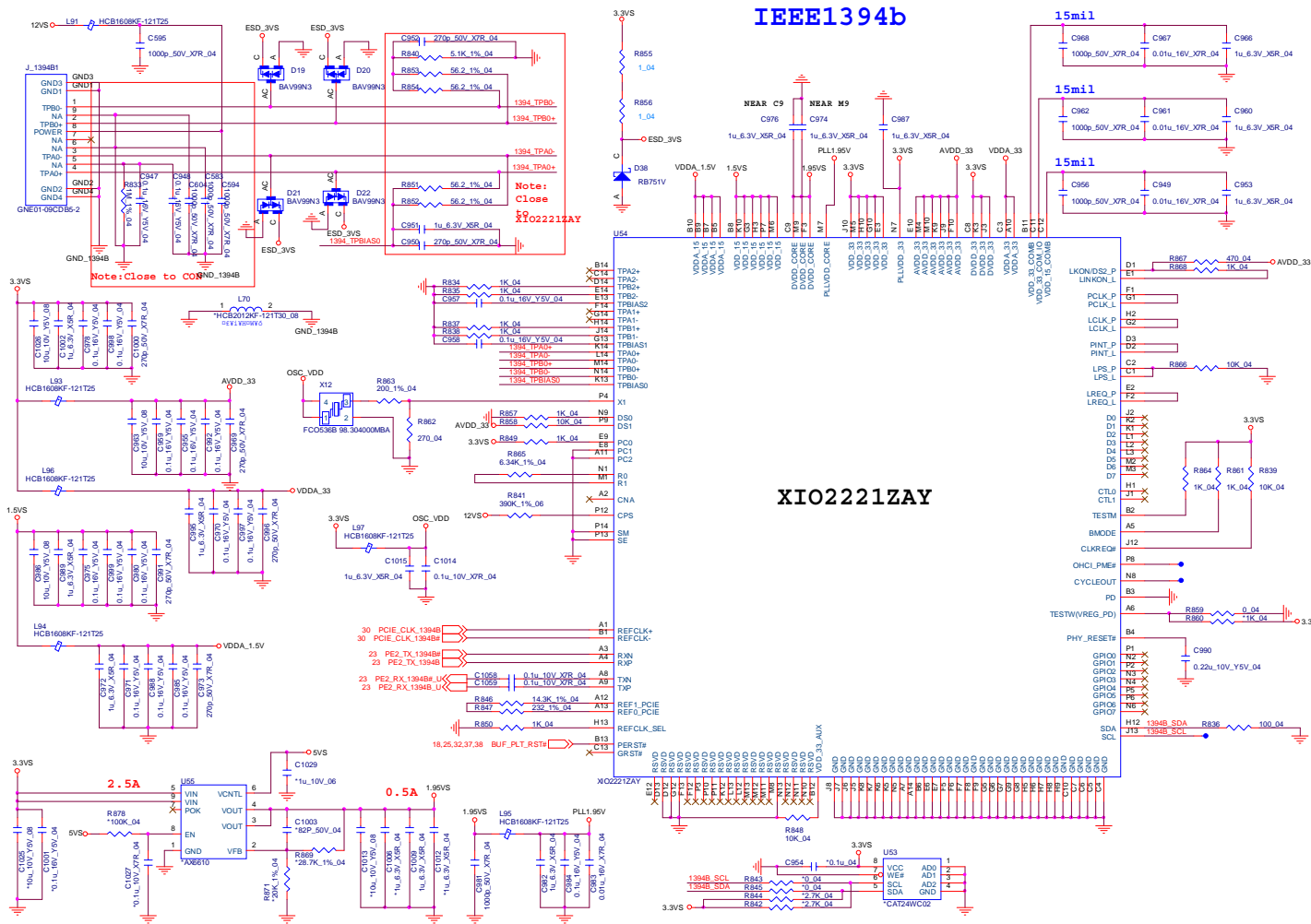
Sheet 39 of 63
Card Reader
RTS5229



IEEE 1394

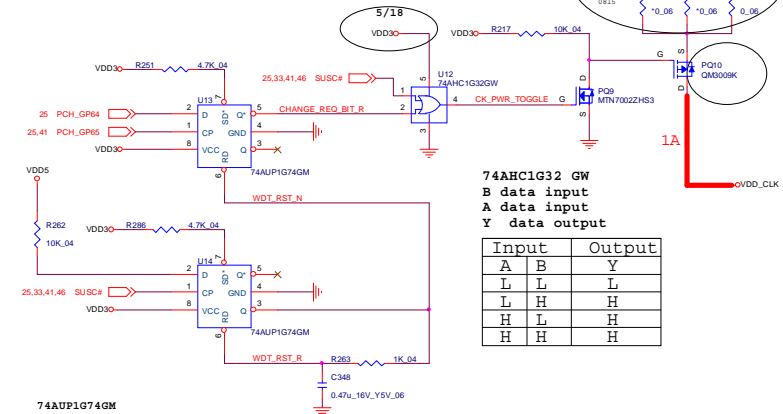
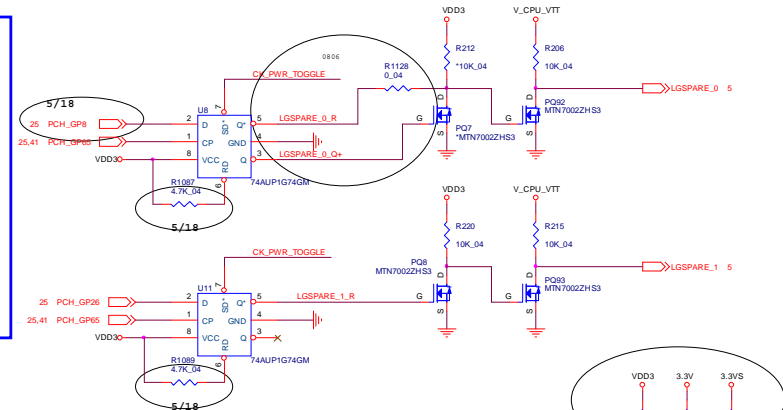
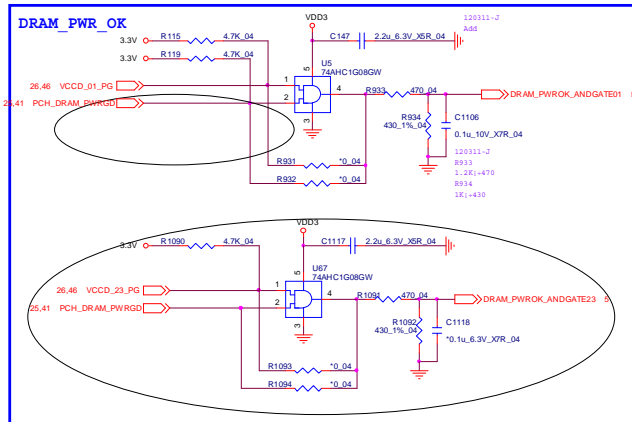
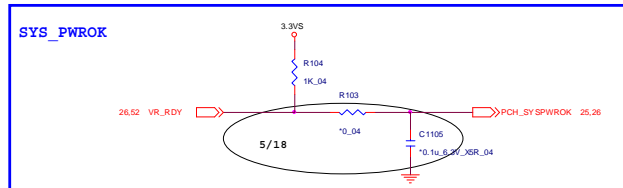
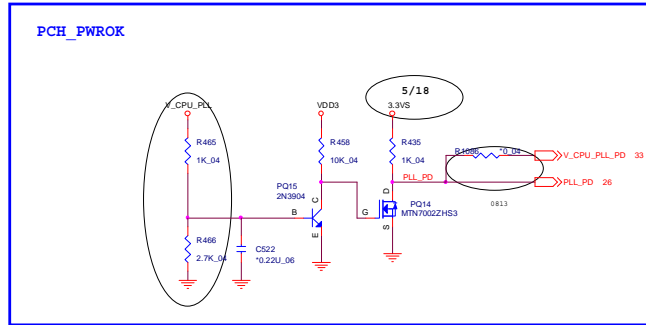
B.Schematic Diagrams

Sheet 40 of 63
IEEE 1394



POWER SYSTEM

Sheet 41 of 63
POWER SYSTEM



74AHC1G32 GW
B data input
A data input
Y data output

Input	A	B	Output	Y
L	L	L	L	L
L	L	H	H	H
H	L	L	H	H
H	H	L	H	H

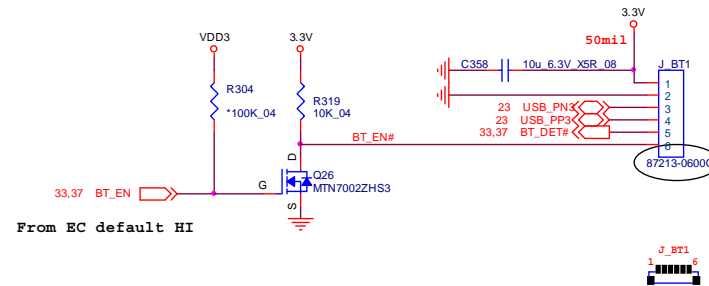
74AUP1G74GM

CP clock input
D data input
Q* complement output
Q true output
RD asynchronous reset input (active LOW)
SD asynchronous set input (active LOW)

Input	SD	RD	CP	D	Output	Qn+1	Qn*+1
H	H	iδ	L	L	L	H	L
H	H	iδ	H	H	H	L	L

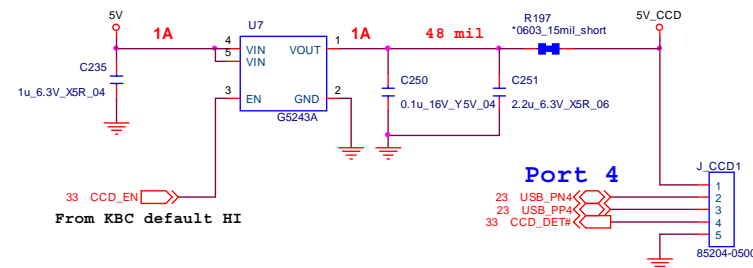
BT, CCD

Bluetooth



Sheet 42 of 63
BT, CCD

CCD Saving PCB Spaces Solution



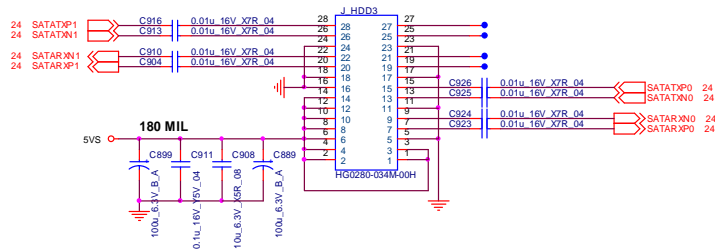
Schematic Diagrams

HDD, ODD

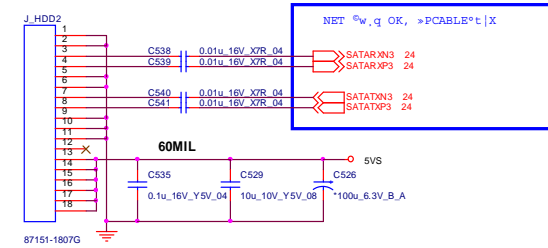
B.Schematic Diagrams

Sheet 43 of 63
HDD, ODD

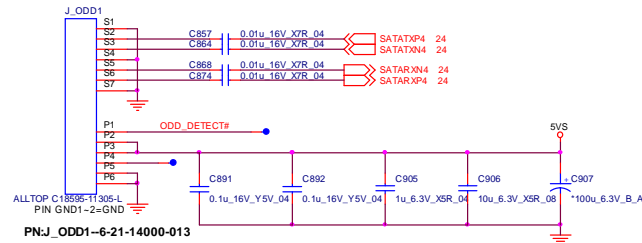
SATA HDD 1~2



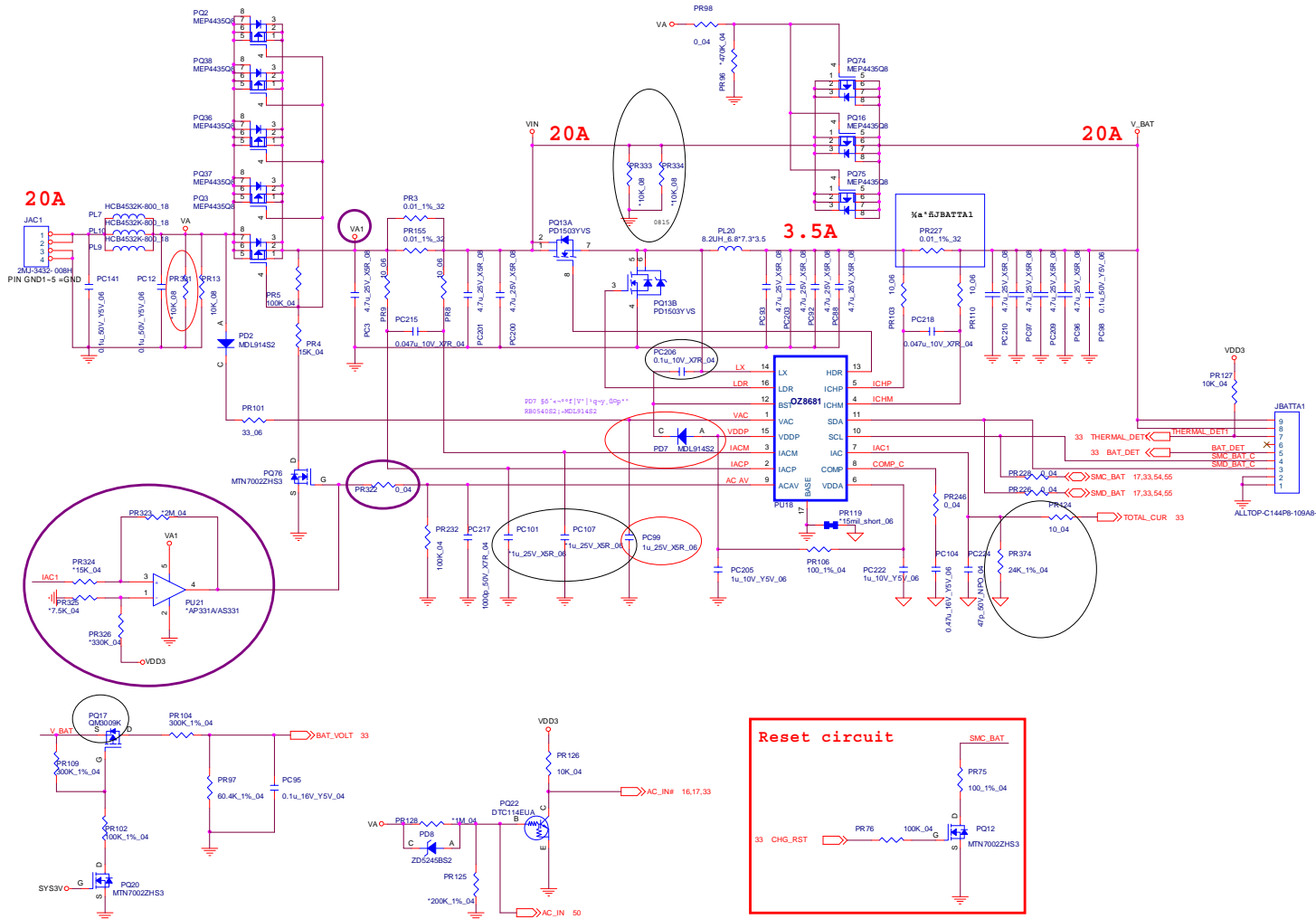
SATA HDD 3



SATA ODD



AC_IN, Charger



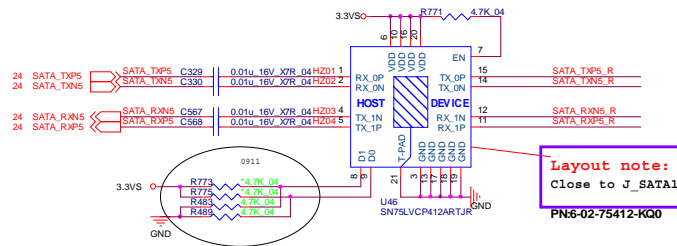
Sheet 44 of 63
AC_IN, Charger

B.Schematic Diagrams

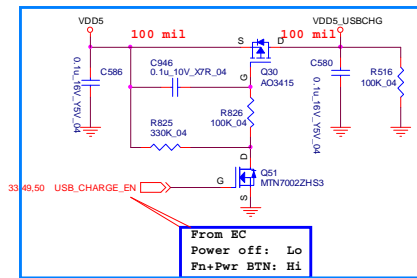
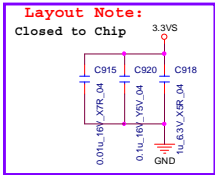
eSATA+USB, USB Charge

Sheet 45 of 63
eSATA+USB,
USB Charge

e SATA REDRIVER

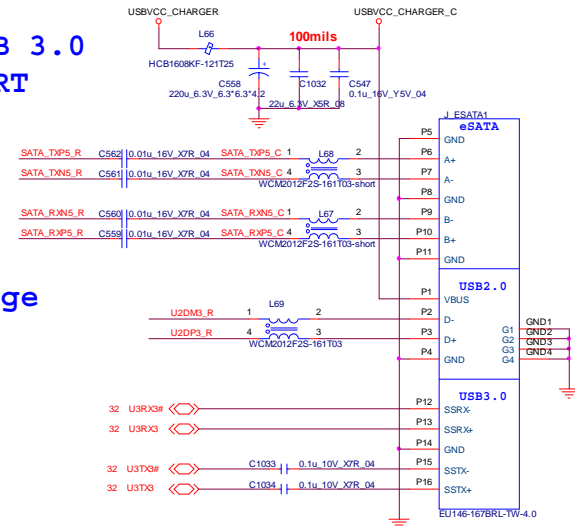


Layout note:
Close to J_SATA1
PN6-02-75412-KQ0

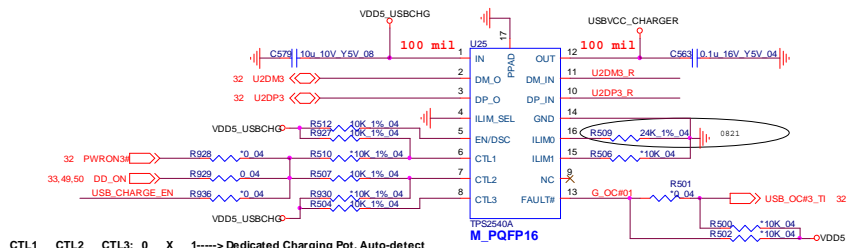


From EC
Power off: Lo
Fn+Pwr BTN: Hi

ESATA+USB 3.0 Combo PORT



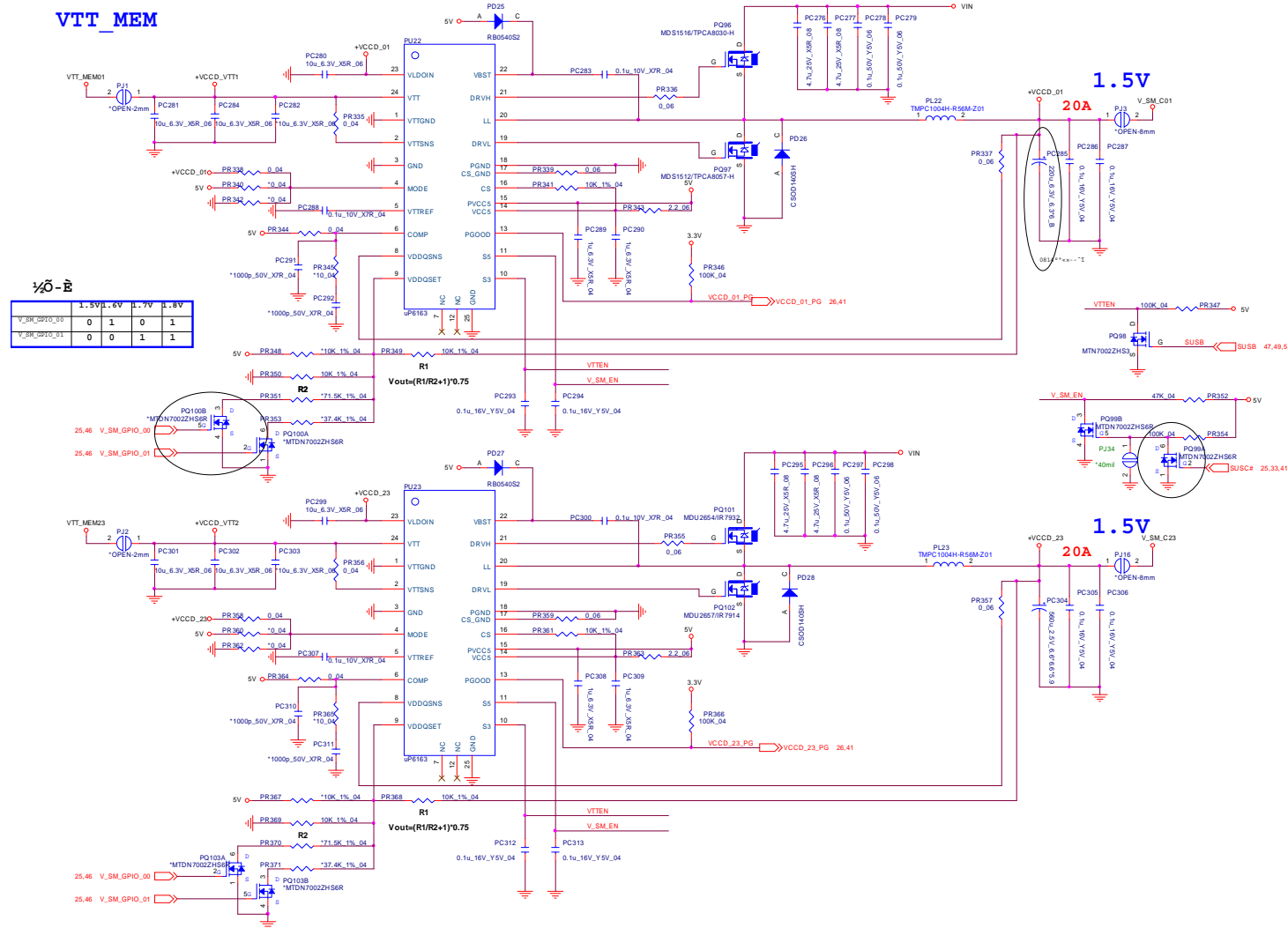
USB Charge



CTL1 CTL2 CTL3: 0 X 1----> Dedicated Charging Pot, Auto-detect
CTL1 CTL2 CTL3: 1 1 1----> Charging Downstream Port, BC Specification 1.1
CTL1 CTL2 CTL3: X 1 0----> Standard Downstream Port, USB 2.0 Mode

	DD_ON	VDD5	VDD5
	CTL1	CTL2	CTL3
Mode 1	Power off & Discharge	0	0
Mode 2	Power off & Charge	0	1
Mode 3	Power on & Charge	1	1

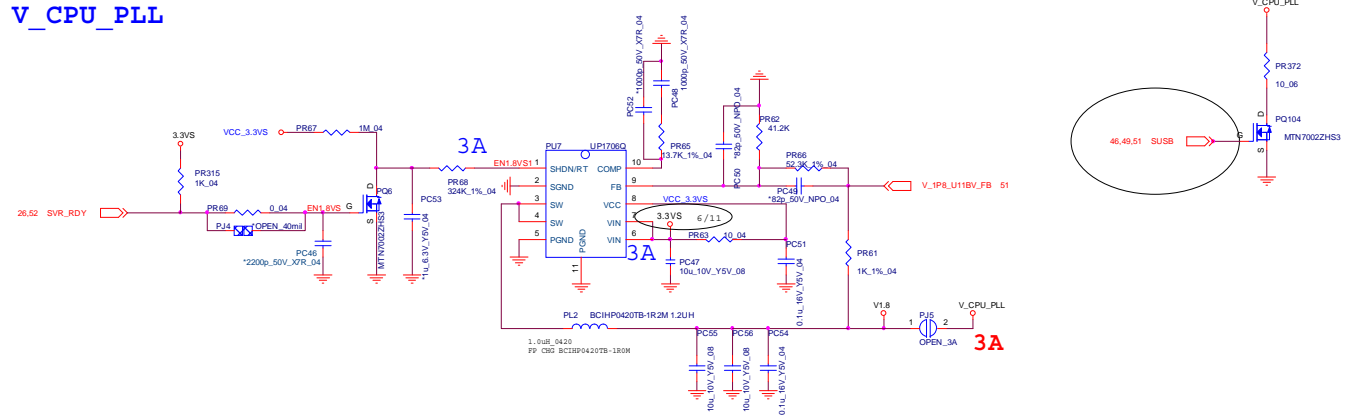
Power V_SM 1.5V, VTT MEM



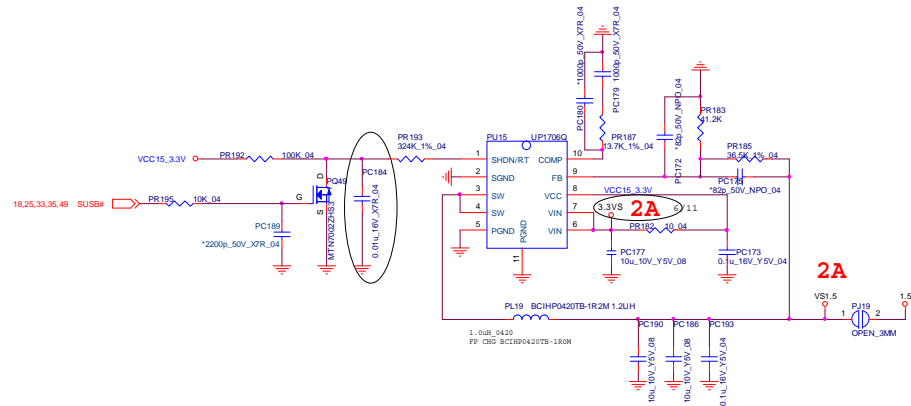
Sheet 46 of 63
Power V_SM 1.5V,
VTT MEM

Power CPU_PLL, 1.05V

Sheet 47 of 63
Power CPU_PLL,
1.05V

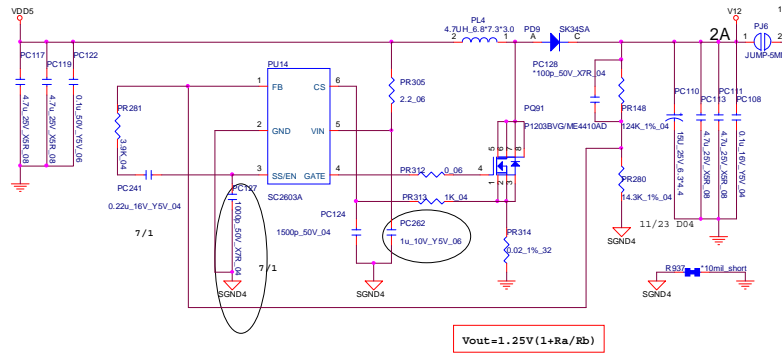


1.5VS



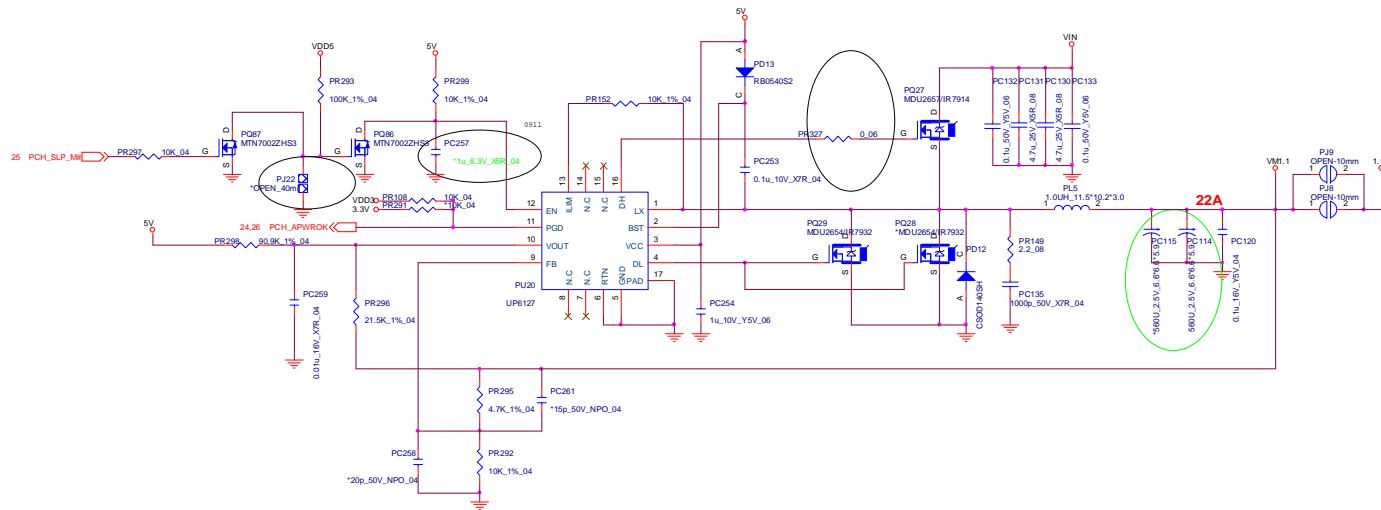
Power 12V, 1.1VM

12V



Sheet 48 of 63
Power 12V, 1.1VM

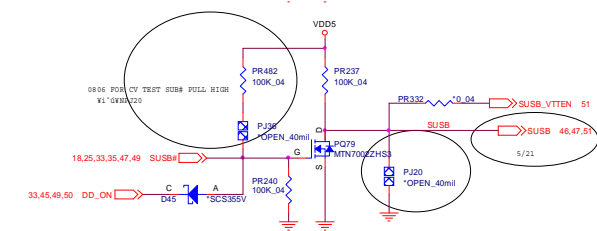
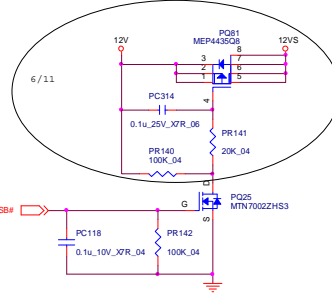
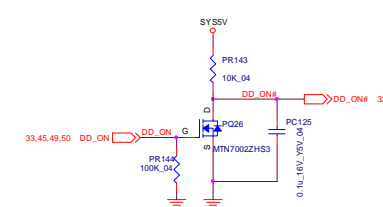
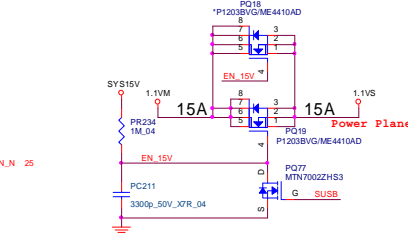
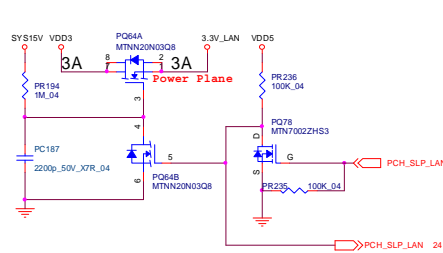
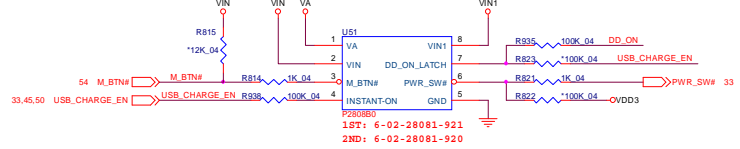
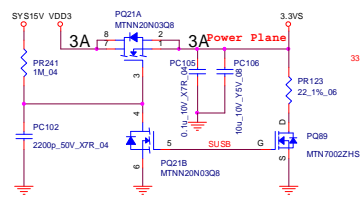
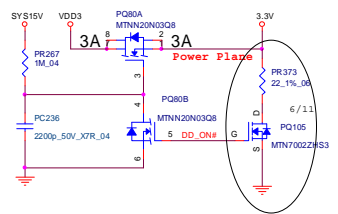
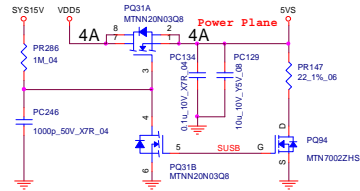
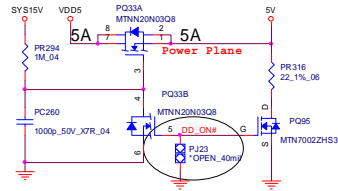
1.1VM



B.Schematic Diagrams

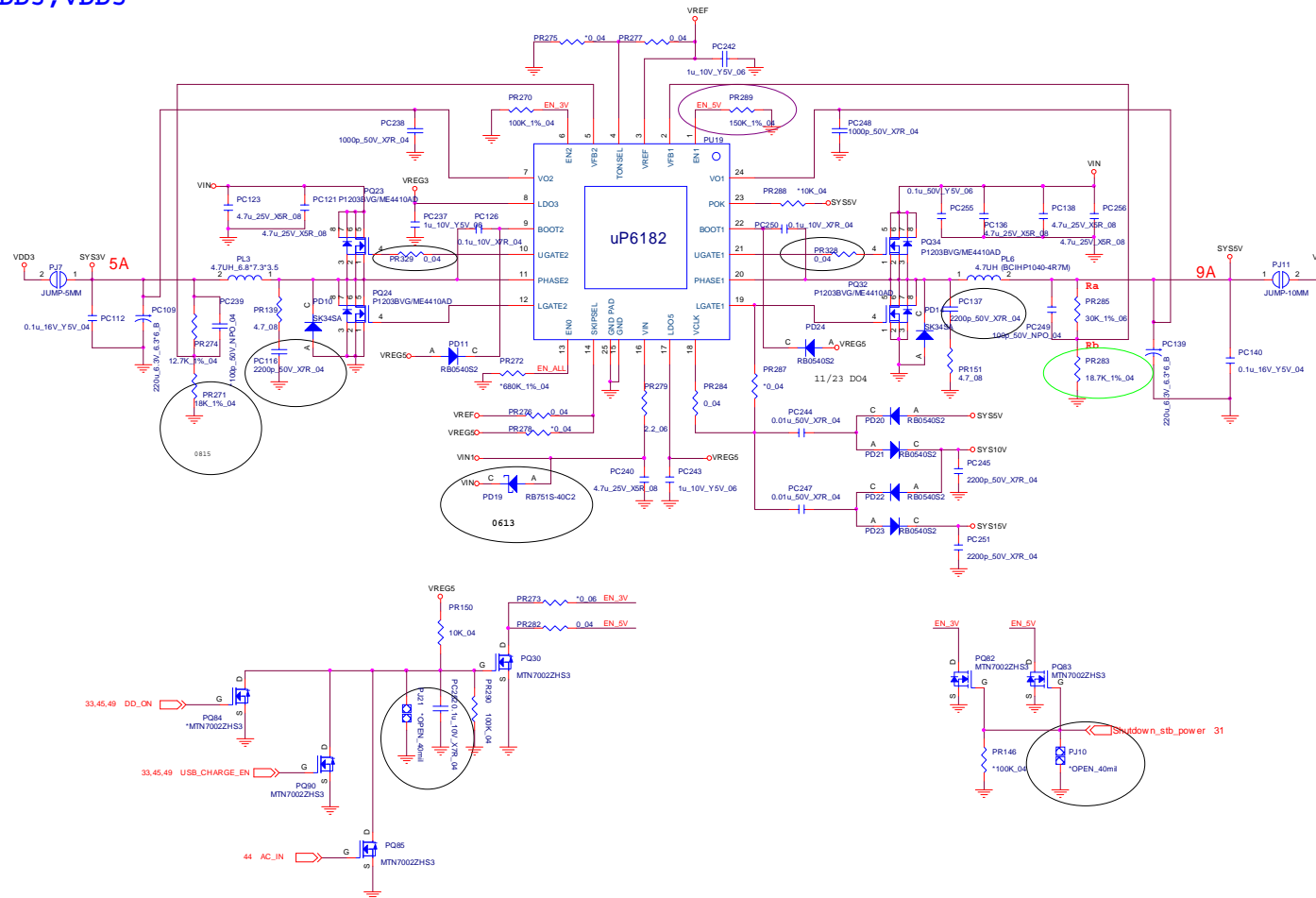
Power Switch

Sheet 49 of 63
Power Switch



Power VDD3/ VDD5

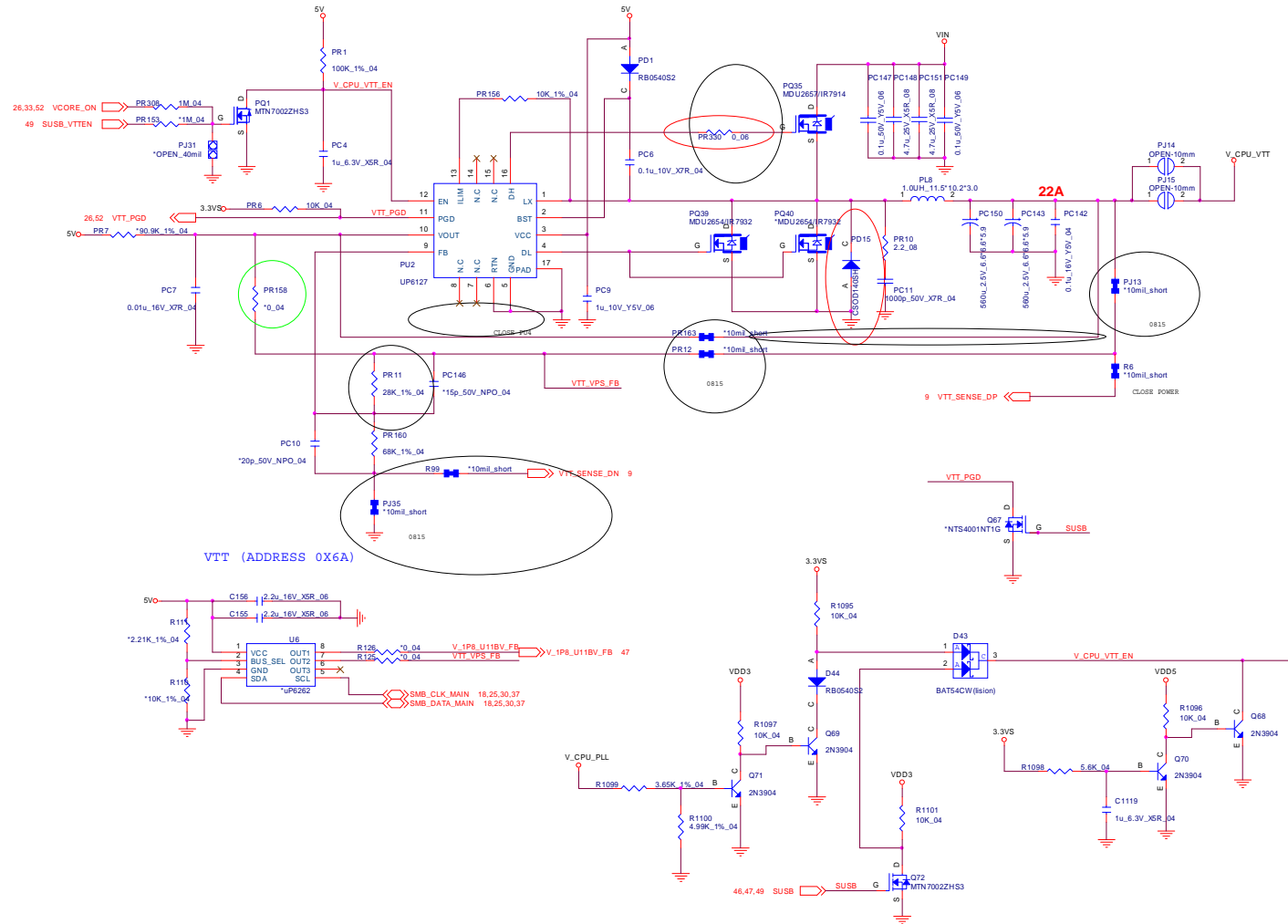
VDD3 , VDD5



Sheet 50 of 63
Power VDD3/ VDD5

Schematic Diagrams

Power CPU_VTT

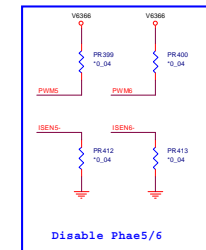
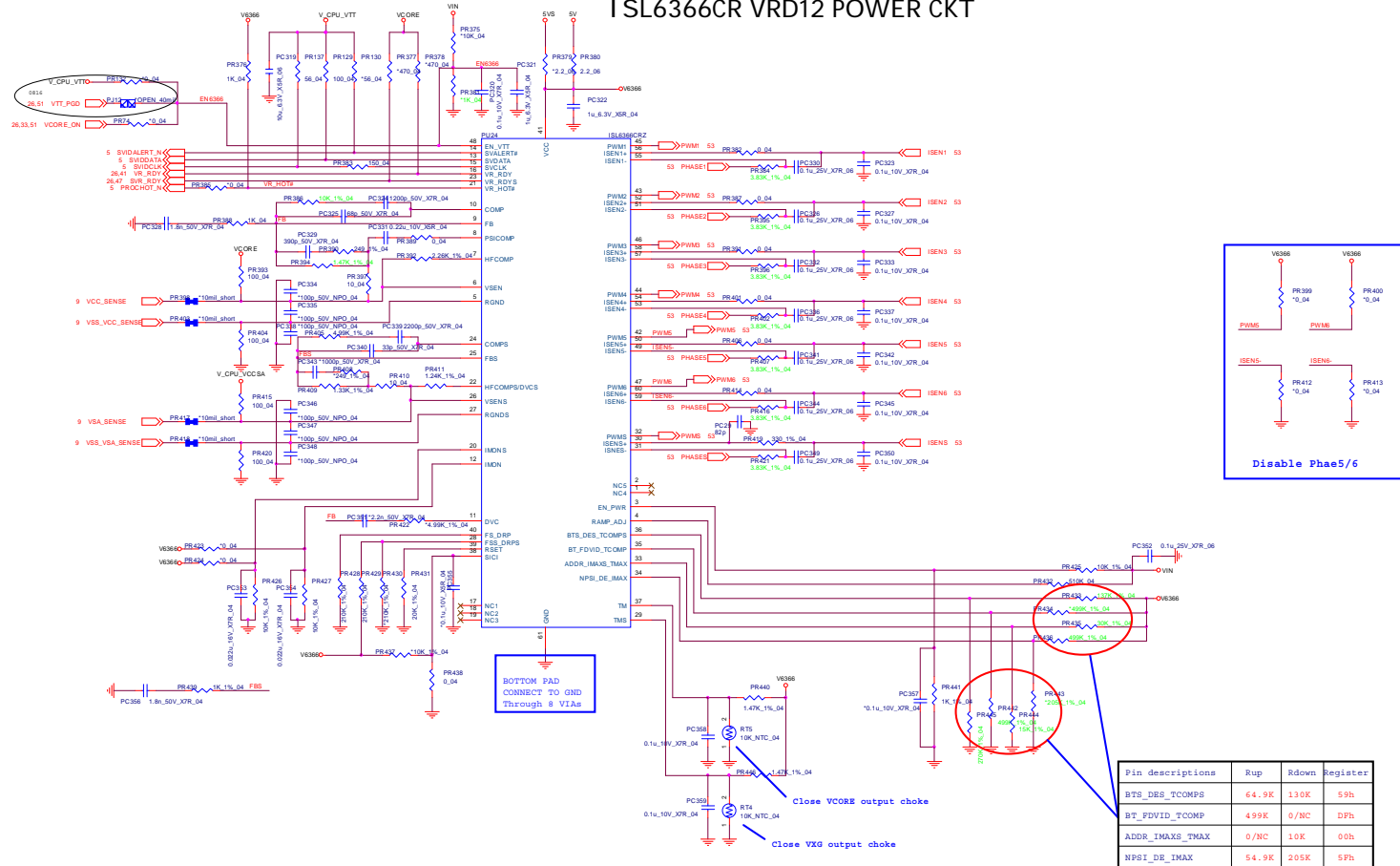


Sheet 51 of 63
Power CPU_VTT

B.Schematic Diagrams

CPU1 ISL6366CR Controller

ISL6366CR VRD12 POWER CKT



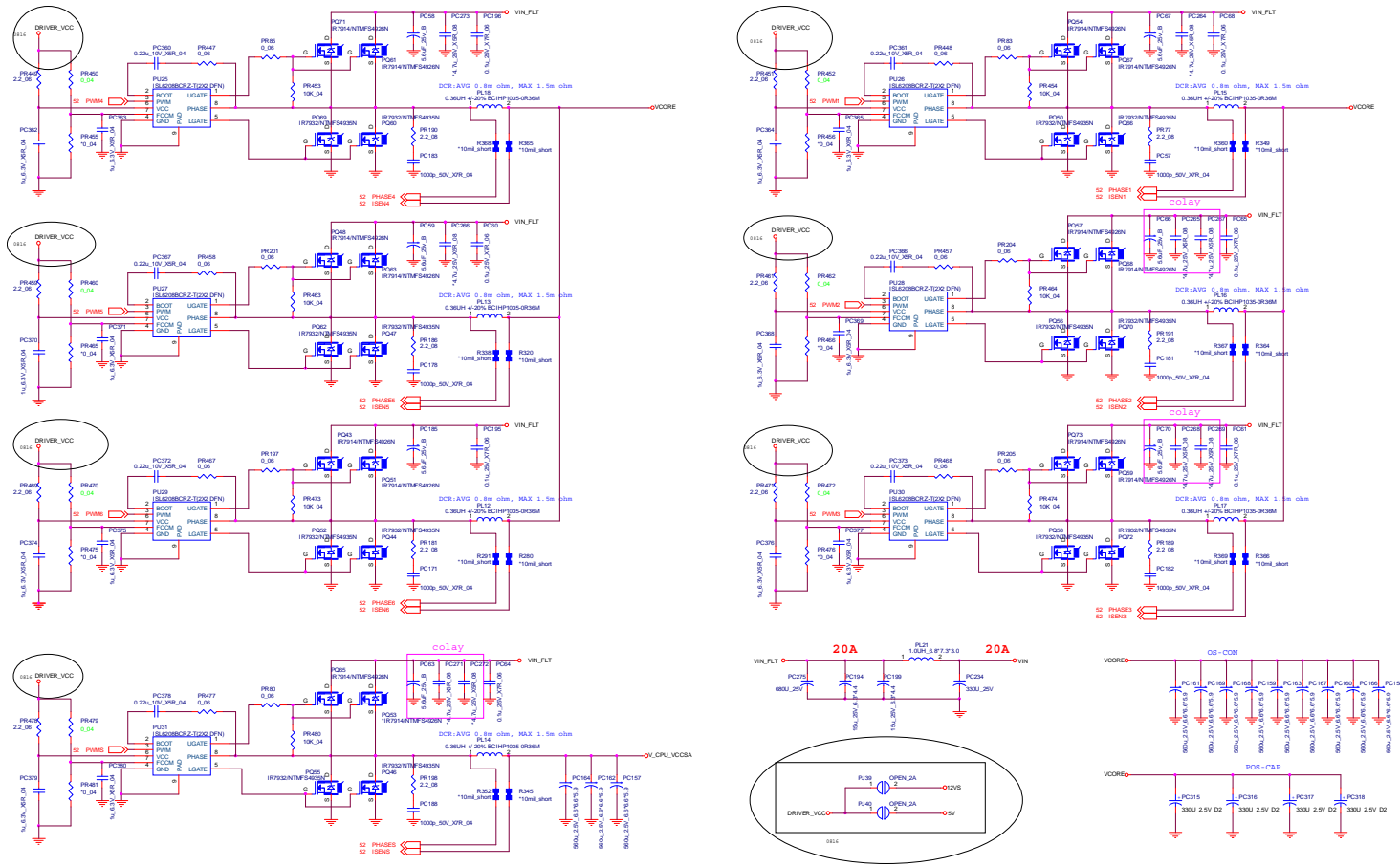
Sheet 52 of 63
CPU1 ISL6366CR
Controller

B.Schematic Diagrams

Pin descriptions	Rup	Rdown	Register
BTS_DBS_TCOMP	64.9K	130K	59h
BT_FDVID_TCOMP	499K	0/NC	DFh
ADDR_IMAXS_TMAX	0/NC	10K	00h
NPSI_DE_IMAX	54.9K	205K	5Fh

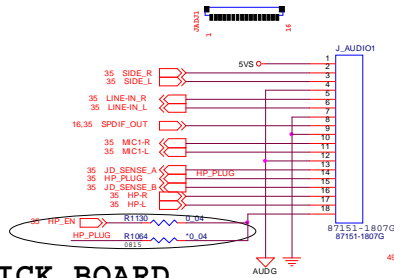
CPU2 Power Stage

Sheet 53 of 63
CPU2 Power Stage



DAUGHTER CON

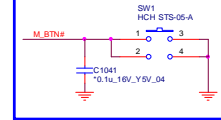
PHONE JACK BOARD



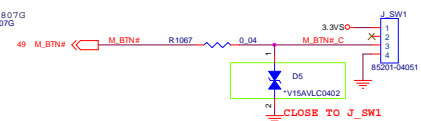
BLACK LED CON



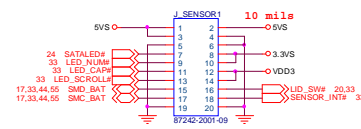
EZ SWITCH debug use



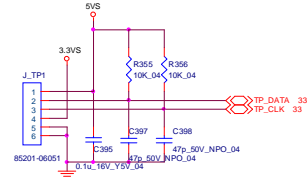
SWITCH BOARD



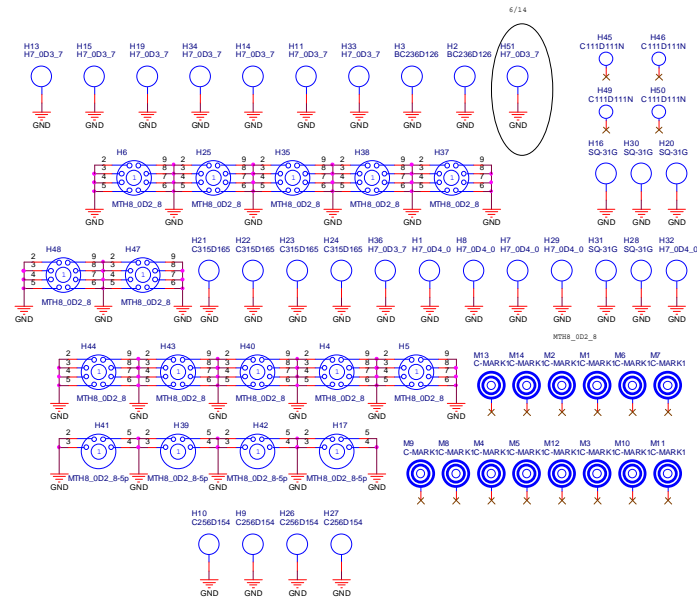
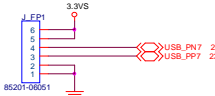
TOUCH SENSOR



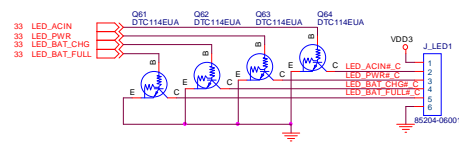
CLICK BOARD



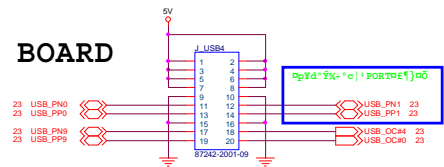
FINGERPRINT



POWER LED BOARD



USB BOARD



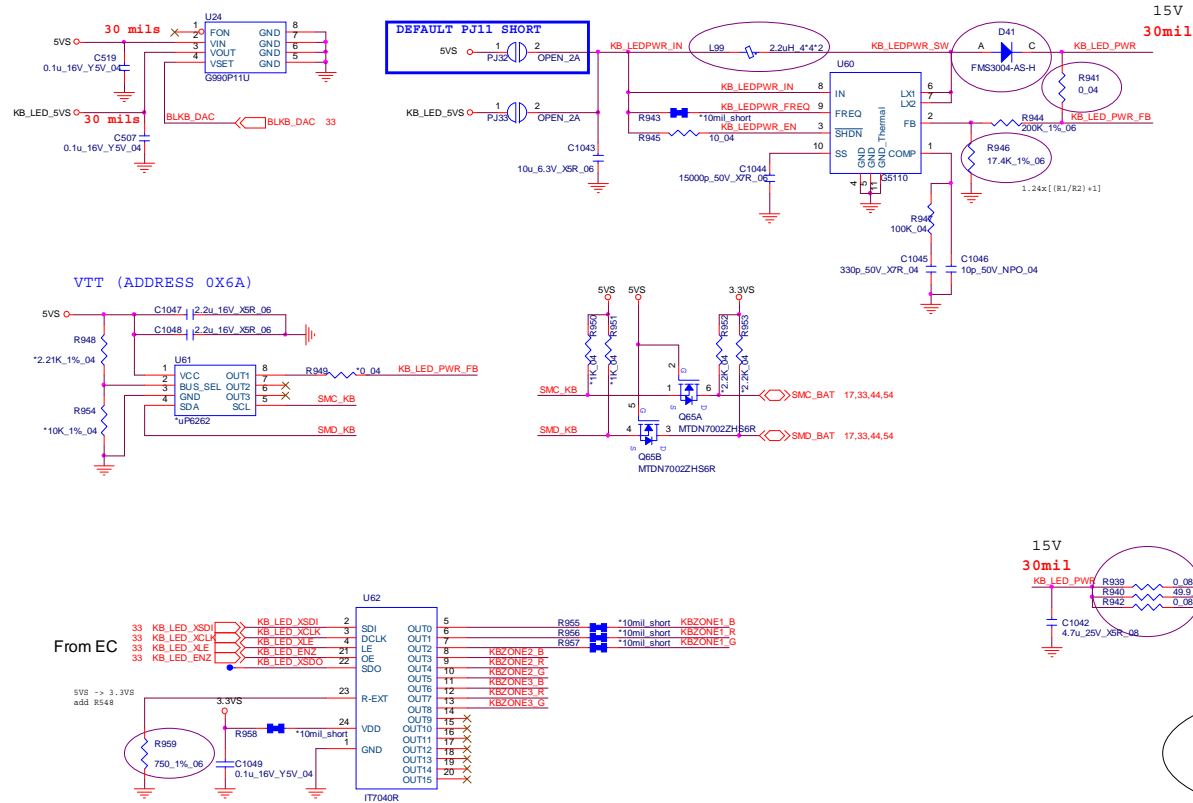
Sheet 54 of 63
DAUGHTER CON

Schematic Diagrams

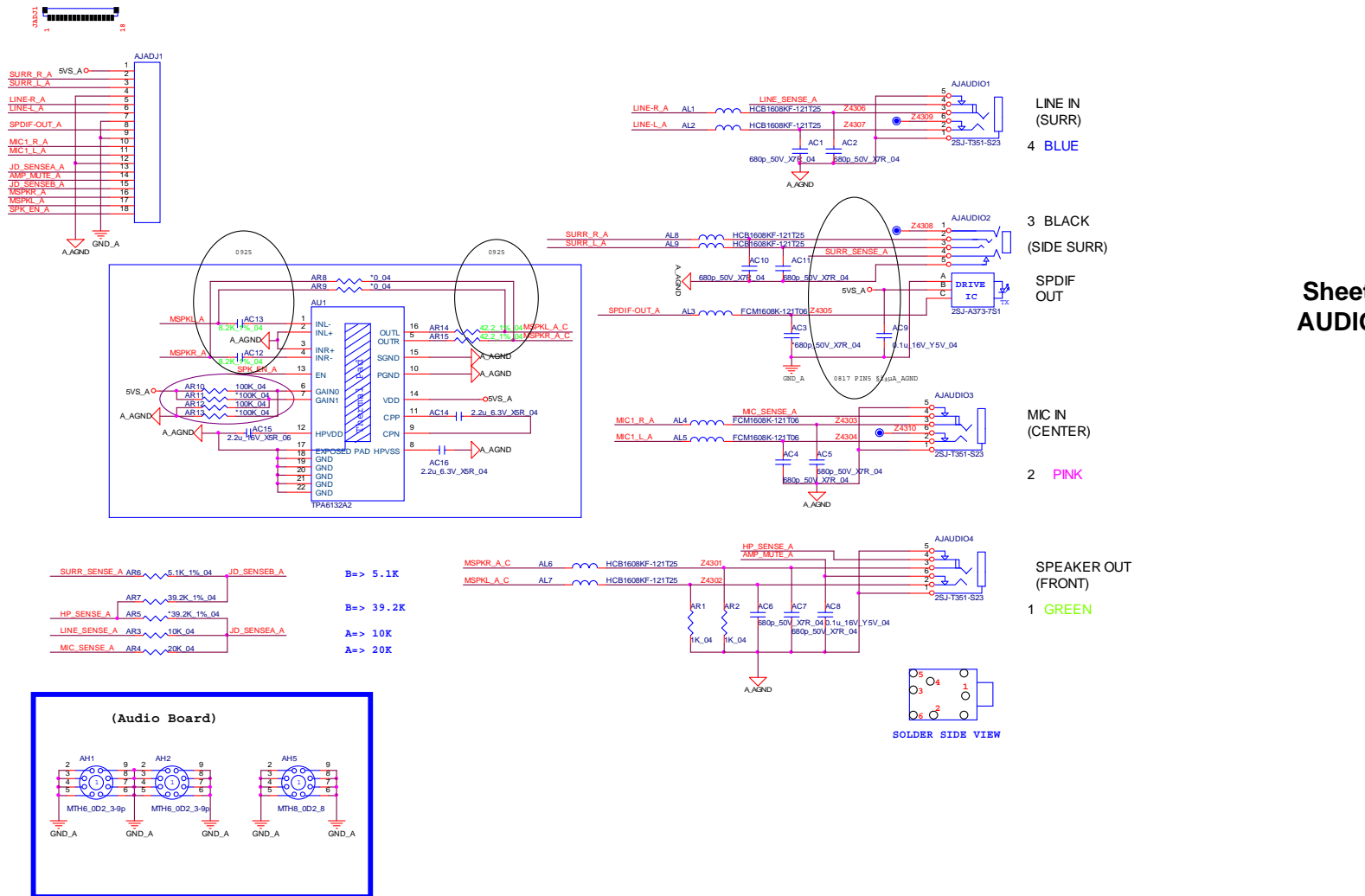
Backlight Keyboard

B.Schematic Diagrams

Sheet 55 of 63
Backlight
Keyboard



AUDIO BOARD

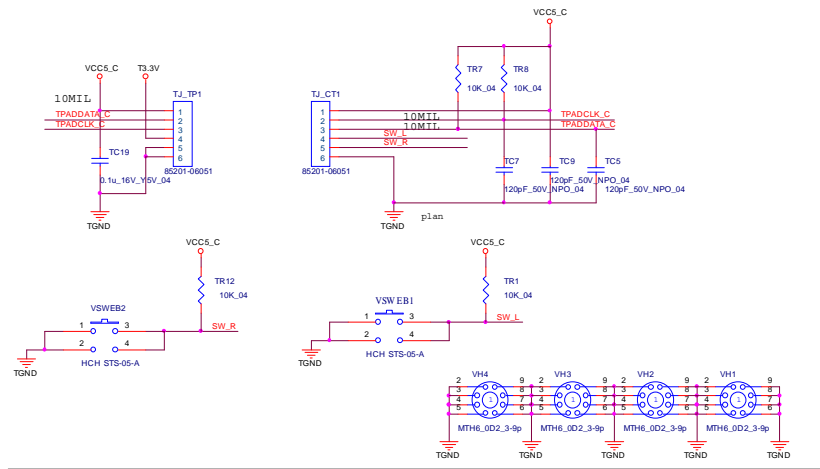


Sheet 56 of 63
AUDIO BOARD

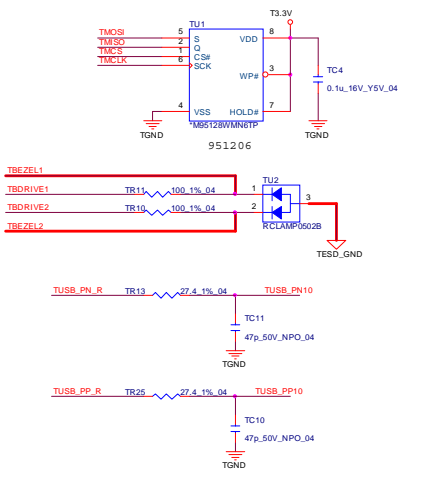
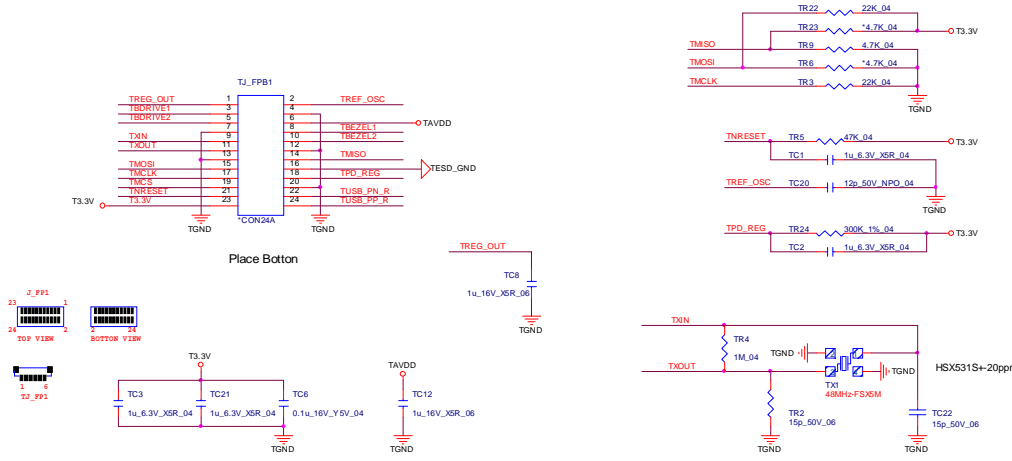
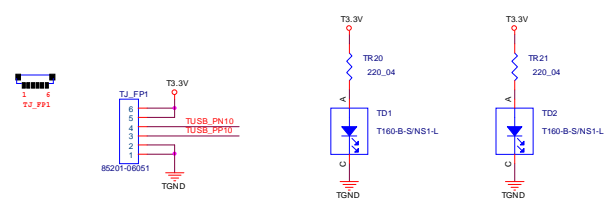
B.Schematic Diagrams

CLICK BOARD

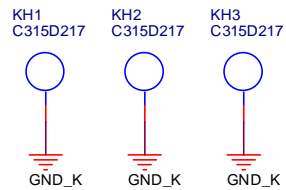
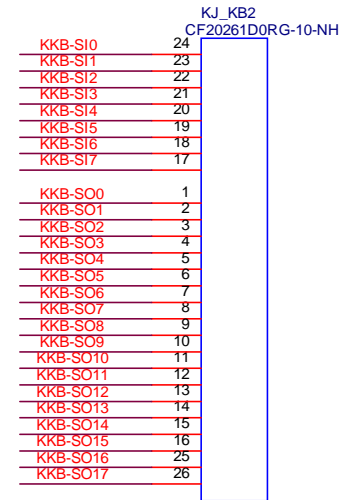
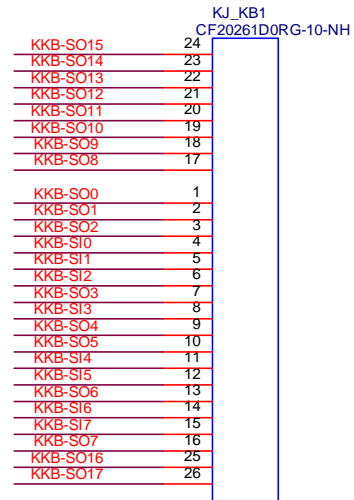
Sheet 57 of 63
CLICK BOARD



FINGER BOARD



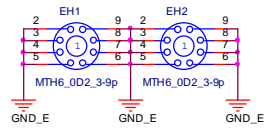
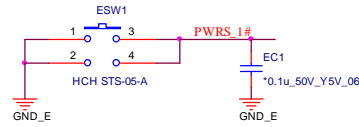
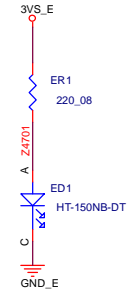
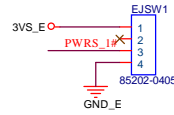
K/B CONVERTER BOARD



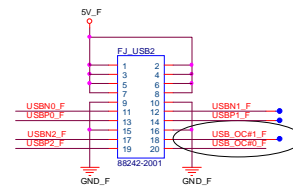
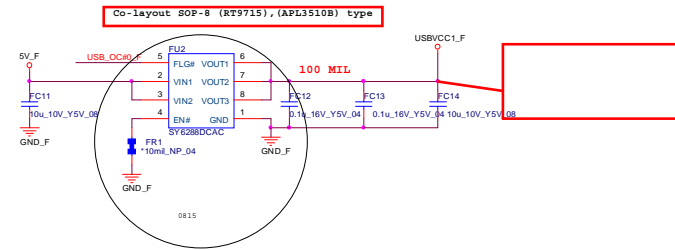
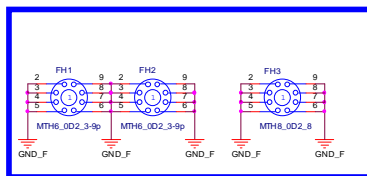
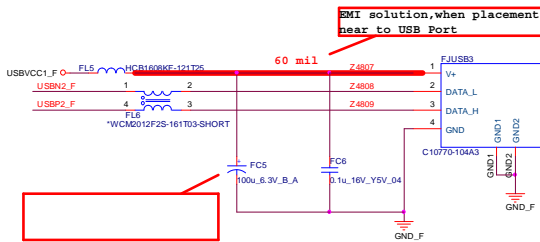
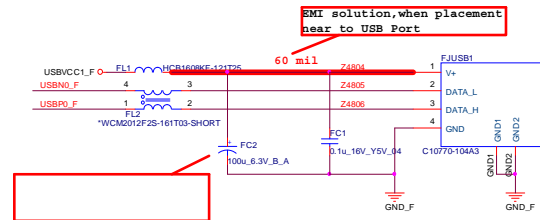
Sheet 58 of 63
K/B CONVERTER
BOARD

SWITCH BOARD

Sheet 59 of 63
SWITCH BOARD



USB BOARD

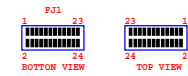
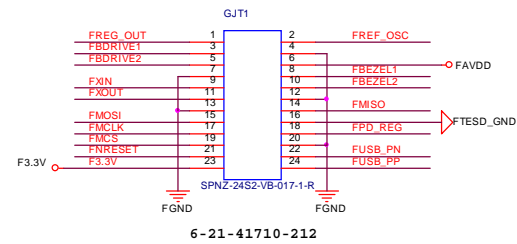
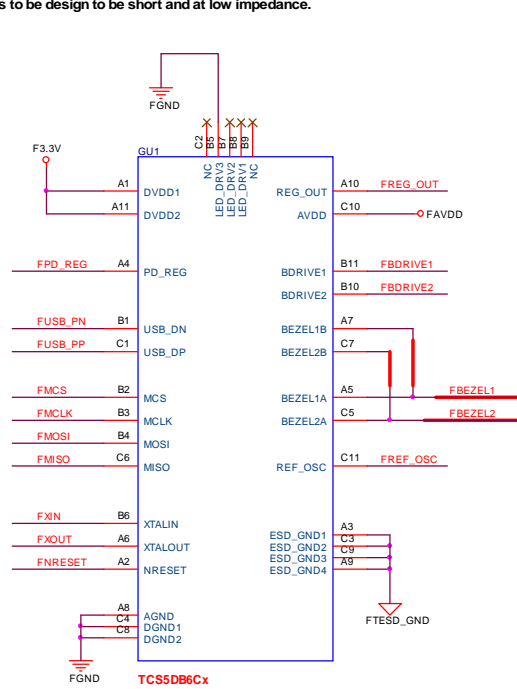


Sheet 60 of 63
USB BOARD

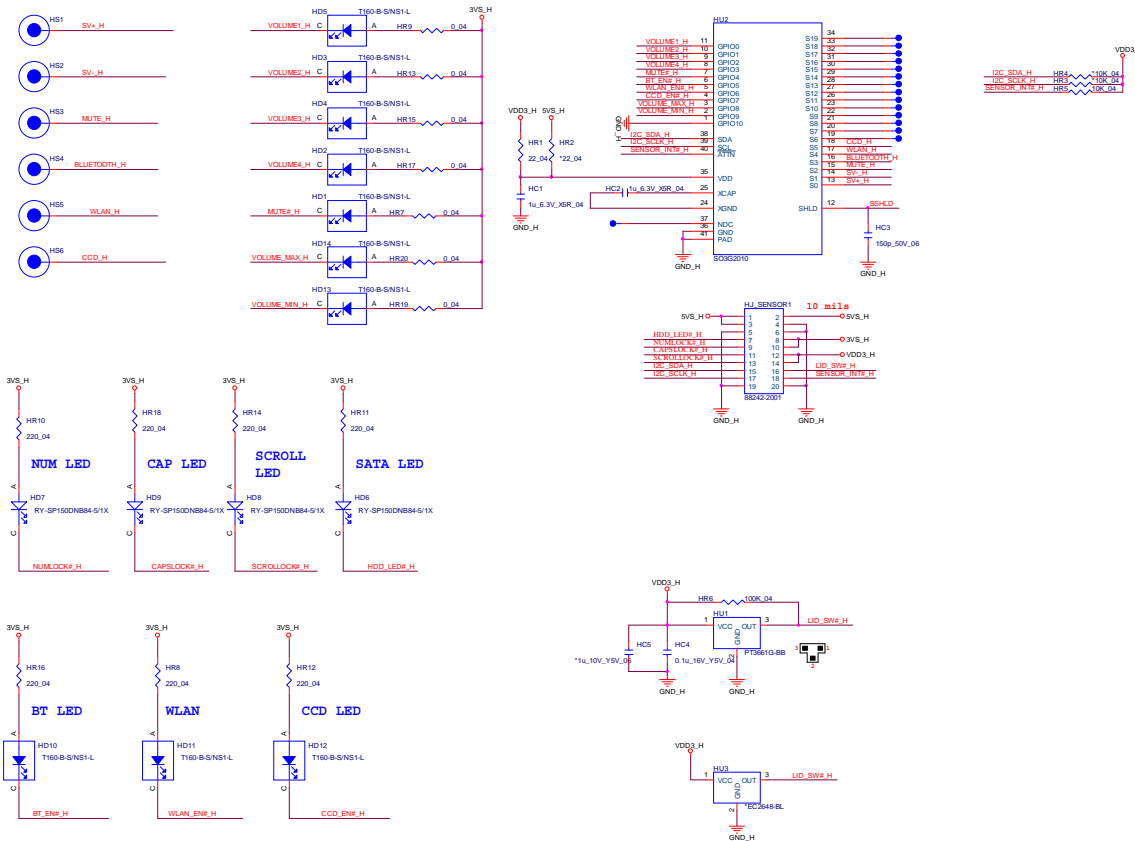
FINGER SENSOR BOARD

Sheet 61 of 63
FINGER SENSOR
BOARD

The TESD_GND trace has to be wide (> 20mil)
The path be marked in RED
needs to be design to be short and at low impedance.



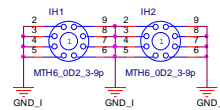
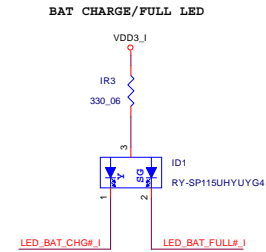
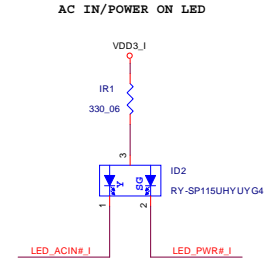
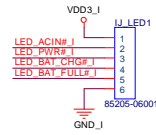
TOUCH SENSOR BOARD



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TOUCH SENSOR BOARD

POWER LED BOARD

Sheet 63 of 63
POWER LED
BOARD



Appendix C: Updating the FLASH ROM BIOS

To update the FLASH ROM BIOS, you must:

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

Download the BIOS

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

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

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

Set the computer to boot from the external drive

1. With the bootable CD/DVD/USB flash drive containing the BIOS files in your CD/DVD drive/USB port, restart the computer and press **F2** (in most cases) to enter the BIOS.
2. Use the arrow keys to highlight the **Boot** menu.
3. Use the “+” and “-” keys to move boot devices up and down the priority order.
4. Make sure that the CD/DVD drive/USB flash drive is set first in the boot priority of the BIOS.
5. Press **F4** to save any changes you have made and exit the BIOS to restart the computer.



BIOS Version

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

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

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

BIOS Update

Use the flash tools to update the BIOS

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

C:\> Flash.bat

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

Restart the computer (booting from the HDD)

1. With the CD/DVD/USB flash drive removed from the CD/DVD drive/USB port the computer should restart from the HDD.
2. Press **F2** as the computer restarts to enter the BIOS.
3. Use the arrow keys to highlight the **Exit** menu.
4. Select **Load Setup Defaults** (or press **F3**) and select “**Yes**” to confirm the selection.
5. Press **F4** to save any changes you have made and exit the BIOS to restart the computer.

Your computer is now running normally with the updated BIOS

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