

SERVICE MANUAL

W310CZ-T

notebook



Notebook Computer

W310CZ-T

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 *W310CZ-T* series notebook PC.

The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications.

Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.

Appendix A, Part Lists

Appendix B, Schematic Diagrams

Appendix C, Updating the FLASH ROM BIOS

IMPORTANT SAFETY INSTRUCTIONS

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

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit with an AC Input of 100 - 240V, 50 - 60Hz, DC Output of 19V, 2.1A (**40 Watts**) minimum AC/DC Adapter.

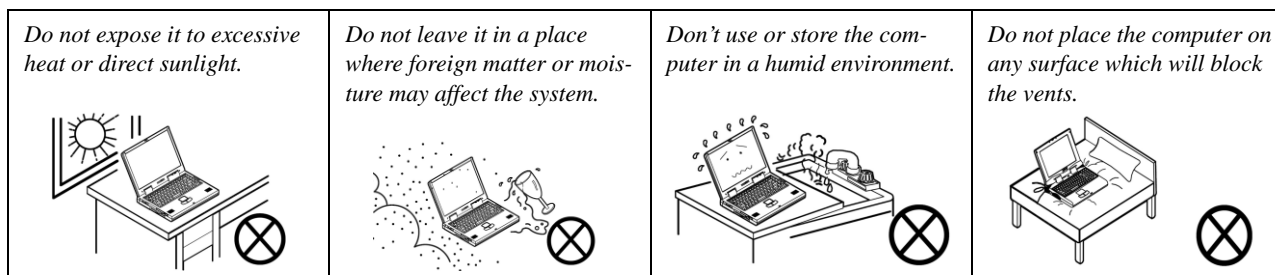
Instructions for Care and Operation

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

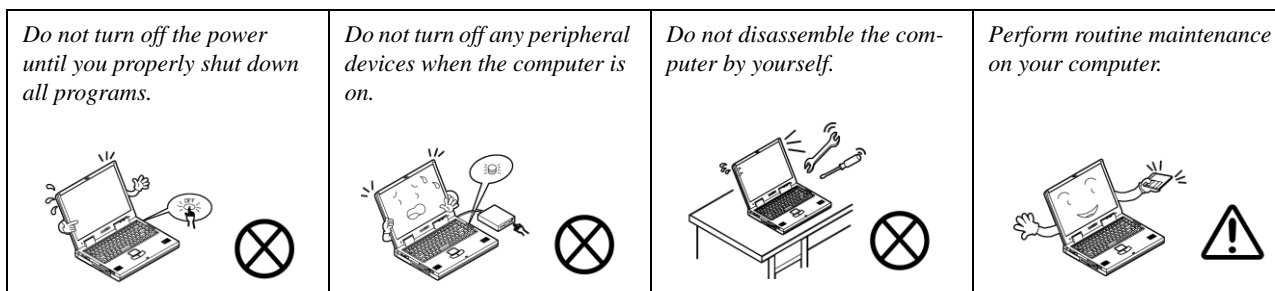
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



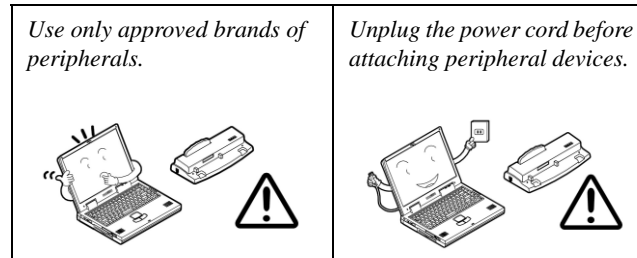
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.



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.



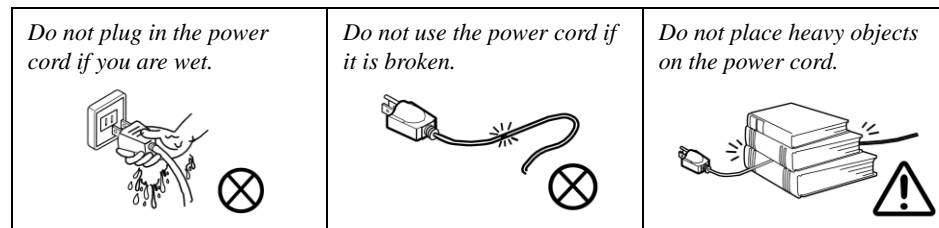
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



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 and power cord).

You must also remove your battery in order to prevent accidentally turning the machine on. **Before removing the battery disconnect the AC/DC adapter from the computer.**

Battery Precautions

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

Battery Guidelines

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

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




Battery Disposal

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

Caution

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

Battery Level

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

Preface

Related Documents

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

User's Manual on DVD

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.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

System Startup

1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Insert the battery and make sure it is locked in position.
4. Attach the AC/DC adapter to the DC-In jack on the left of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
5. Use one hand to raise the lid/LCD to a comfortable viewing angle (do not exceed 130 degrees); use the other hand (as illustrated in [Figure 1](#)) to support the base of the computer (**Note: Never** lift the computer by the lid/LCD).
6. Press the power button to turn the computer “on”.

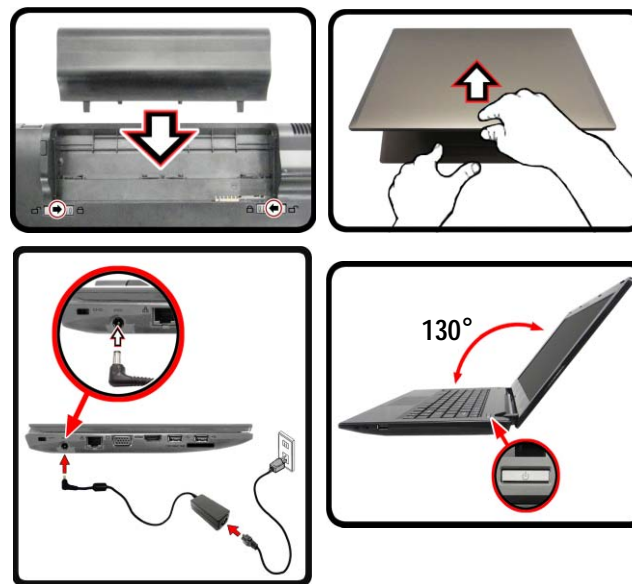


Figure 1
Opening the Lid/LCD/Computer with
AC/DC Adapter Plugged-In

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To update the FLASH ROM BIOS, you must: C-1


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Set the computer to boot from the external drive	C-1
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Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the **W310CZ-T** 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 the *User's Manual*. The manual is shipped with the computer.

Operating systems (e.g. *Window 8*, etc.) has its own manuals as do application softwares (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The **W310CZ-T** 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 take note of the warning and safety information indicated by the “” symbol.

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

Introduction

Specifications



Latest Specification Information

The specifications listed here are correct at the time of sending them to the press. Certain items (particularly processor types/speeds) may be changed, delayed or updated due to the manufacturer's release schedule. Check with your service center for more details.



CPU

The CPU is not a user serviceable part. Accessing the CPU in any way may violate your warranty.

Processor Options

Intel® Celeron™ Processor
1017U (1.60GHz), 1037U (1.80GHz)
2MB L3 Cache, 22nm, DDR3-1600MHz, TDP 17W

Core Logic

Intel® NM70 Chipset

BIOS

48Mb SPI Flash ROM
AMI BIOS

Memory

One 204 Pin SO-DIMM Socket Supporting **DDR3 1333/1600MHz** Memory
Memory Expandable up to 8GB

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

LCD

11.6" (19.46cm) HD LCD

Multi Touch

Storage

One Changeable 2.5" 9.5mm (h) SATA HDD
(**Factory Option**) One mSATA Solid State Drive (SSD)

Audio

High Definition Audio Compliant Interface
2 * Built-In Speakers
Built-In Microphone

Security

Security (Kensington® Type) Lock Slot
BIOS Password

Keyboard

"WinKey" keyboard (with embedded numeric keypad)

Pointing Device

Built-in Touchpad

Interface

Three USB 2.0 Ports
One HDMI-Out Port
One External Monitor Port
One Headphone-Out Jack
One Microphone-In Jack
One RJ-45 LAN Jack
One DC-in Jack

Mini Card Slot

One Slot for **WLAN** Module or **WLAN and Bluetooth** Combo Module
(**Factory Option**) Slot 2 for **3G** Module

Video Adapter

Intel HD Graphics
(*GPU is Dependent on Processor*)

Intel HD Graphics (847 Processor)

Dynamic Frequency (Intel Dynamic Video Memory Technology for up to **1.7GB**)
Microsoft DirectX® 10.1 Compatible

Intel HD Graphics (1007U/1017U/1037U Processor)

Dynamic Frequency (Intel Dynamic Video Memory Technology for up to **1.7GB**)
Microsoft DirectX® 11 Compatible

Card Reader

Embedded Multi-In-1 Card Reader
MMC (MultiMedia Card) / RS MMC
SD (Secure Digital) / Mini SD / SDHC/ SDXC
MS (Memory Stick) / MS Pro / MS Duo

Communication

Built-In 10/100Mb Ethernet LAN

(Factory Option) 1M HD PC Camera Module/300K Pixels
PC Camera Module

(Factory Option) 3G Mini-Card Module

WLAN/Bluetooth Half Mini-Card Modules:

(Factory Option) Intel® Centrino® Wireless-N 105 Wireless LAN (802.11b/g/n)

(Factory Option) Intel® Centrino® Wireless-N 135 Wireless LAN (802.11b/g/n) + Bluetooth 4.0

(Factory Option) Third-Party Wireless LAN (802.11b/g/n)

(Factory Option) Third-Party Wireless LAN (802.11b/g/n) + Bluetooth 4.0

Environmental Spec

Temperature

Operating: 5°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: 19V, 2.1A (40W)

(Factory Option) 4 Cell Smart Lithium-Ion Battery Pack,
32.56WH

(Factory Option) 4 Cell Smart Lithium-Ion Battery Pack,
41.44WH

Dimensions & Weight

287mm (w) * 207mm (d) * 15.9 - 27.9mm (h)

(Height Excluding Battery Area)

1.4kg (with Battery)

Introduction

External Locator - Top View with LCD Panel Open

Figure 1
Top View

1. PC Camera
(Optional)
2. Built-In Microphone
3. *PC Camera LED
(1M HD Camera
Only)
**When the PC
camera is in use,
the LED will be
illuminated in red*
4. LCD
5. Power Button
6. Keyboard
7. Touchpad & Buttons



External Locator - Front & Right Side Views

FRONT VIEW



Figure 2
Front View
1. LED Indicators

RIGHT SIDE VIEW

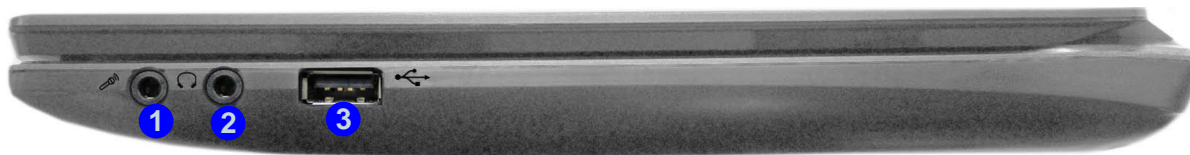


Figure 3
Right Side View
1. Microphone-In Jack
2. Headphone-Out Jack
3. USB 2.0 Port

Introduction

External Locator - Left Side & Rear View

Figure 4
Left Side View

1. Security Lock Slot
2. DC-In Jack
3. RJ-45 LAN Jack
4. External Monitor Port
5. HDMI-Out Port
6. USB Ports
7. Multi-in-1 Card Reader

LEFT SIDE VIEW



Figure 5
Rear View

1. Battery
2. Vent/Fan Intake

REAR VIEW



External Locator - Bottom View

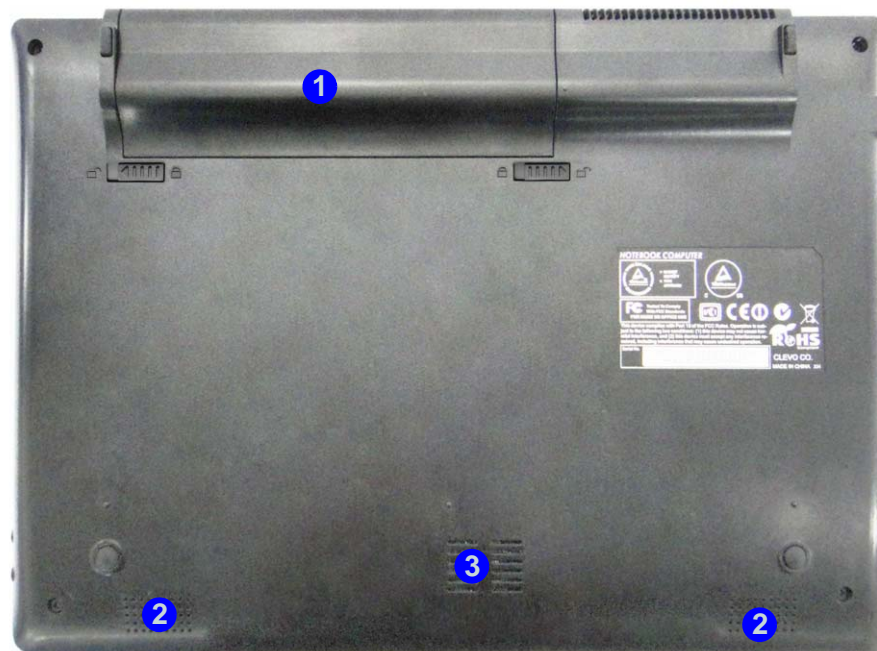


Figure 6
Bottom View

1. Battery
2. Speakers
3. Fan Intake/Vent



Overheating

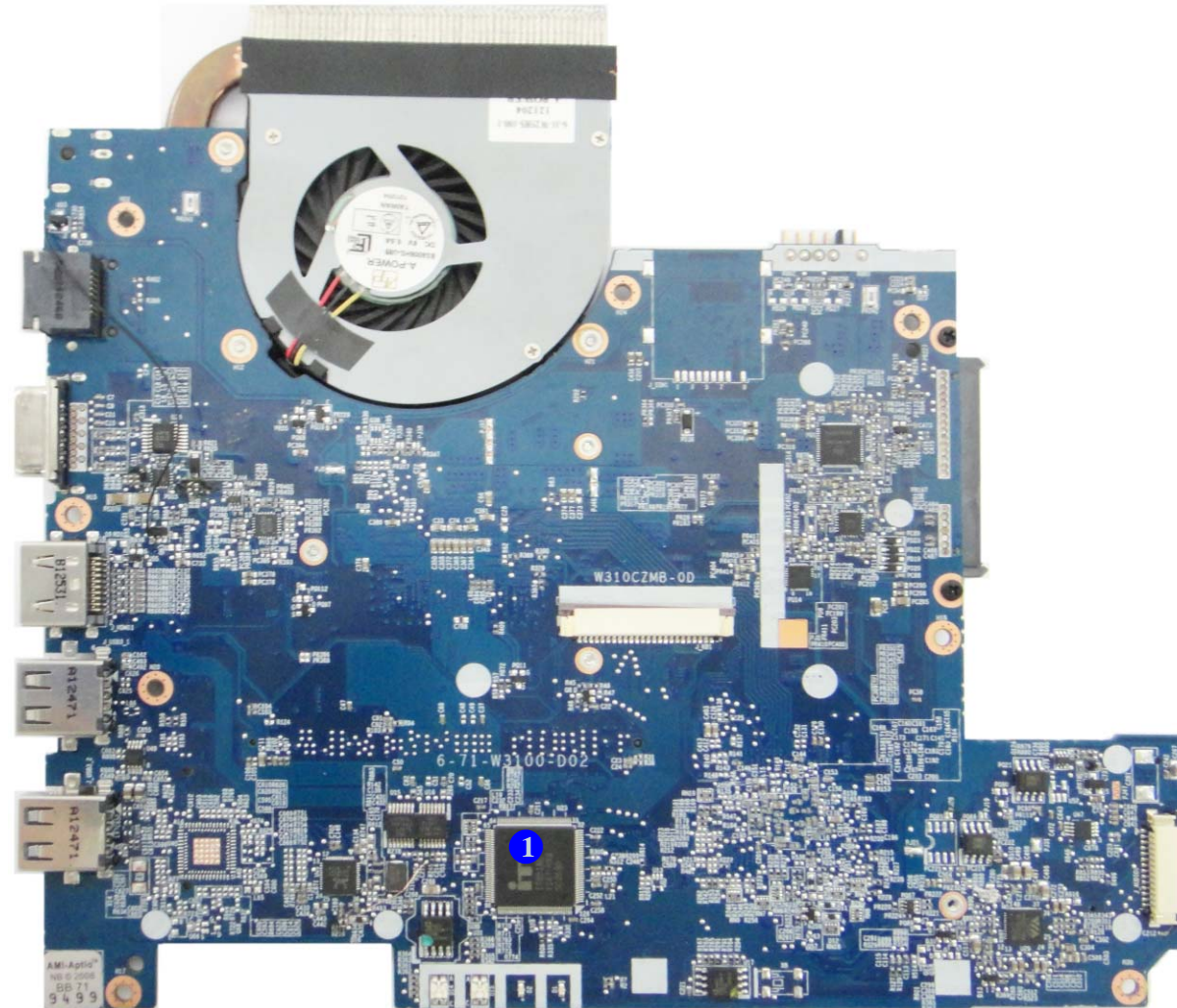
To prevent your computer from overheating, make sure nothing blocks any vent while the computer is in use.

Introduction

Figure 7
Mainboard Top
Key Parts

Mainboard Overview - Top (Key Parts)

1. KBC ITE IT8518



Mainboard Overview - Bottom (Key Parts)



Figure 8
Mainboard Bottom
Key Parts

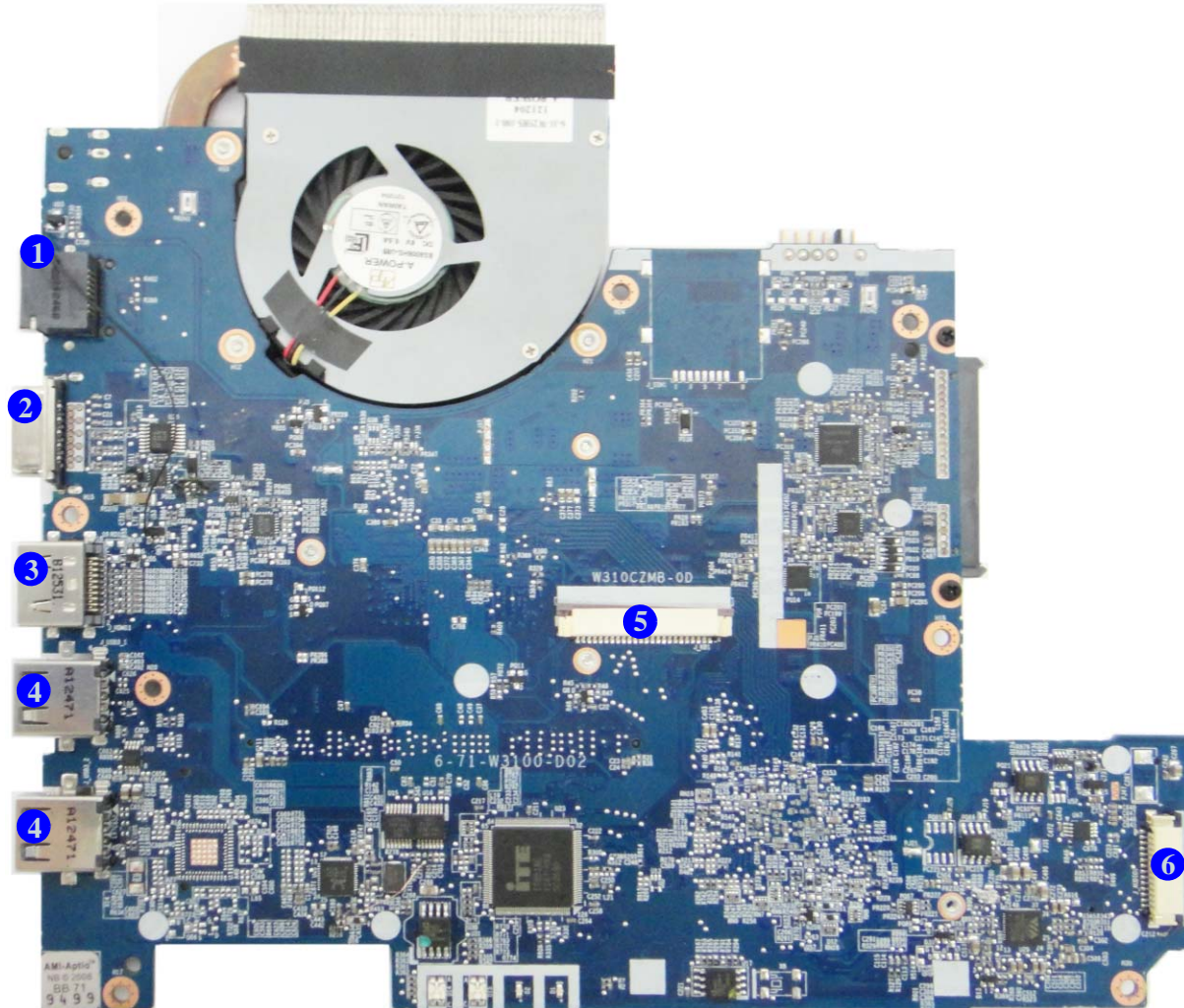
1. HDD Connector
2. Mini-Card Connector (3G/mSATA module)
3. Mini-Card Connector (WLAN Module)
4. Intel PCH
5. CPU
6. Memory Slot DDR3 SO-DIMM
7. Card Reader Socket

Introduction

Figure 9
**Mainboard Top
Connectors**

1. RJ-45 Lan Port
2. External Monitor Port
3. HDMI-Out Port
4. USB Port
5. Keyboard Cable Connector
6. Audio Cable Connector

Mainboard Overview - Top (Connectors)



Mainboard Overview - Bottom (Connectors)

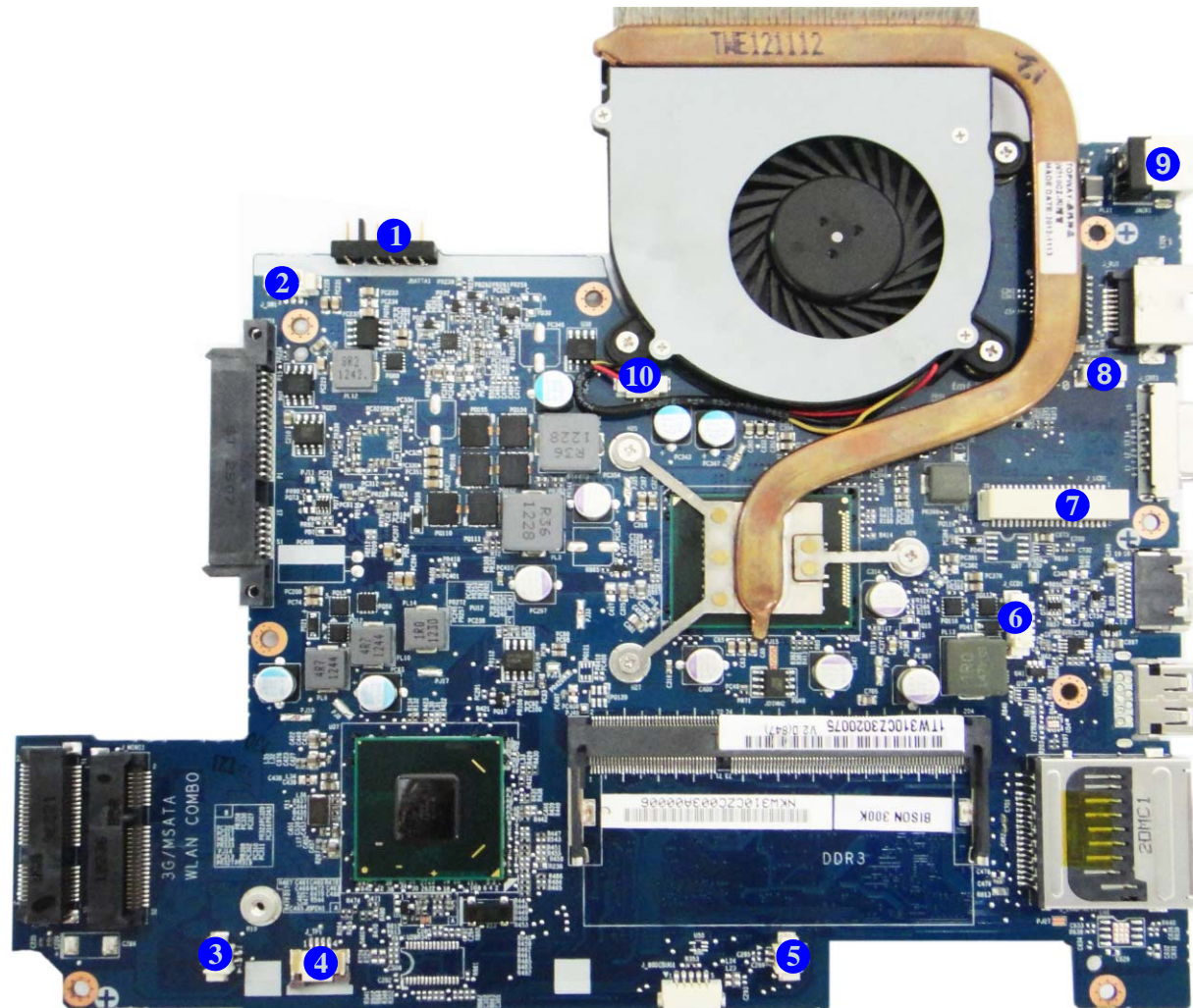


Figure 10
**Mainboard Bottom
Connectors**

1. Battery Connector
2. Power Switch Connector
3. RTC Battery Connector
4. Touchpad Connector
5. Speaker Cable Connector
6. CCD Cable Connector
7. LVDS Cable Connector
8. Int. Microphone Connector
9. DC-In Jack
10. Fan Cable Connector


Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the *W310CZ-T* series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

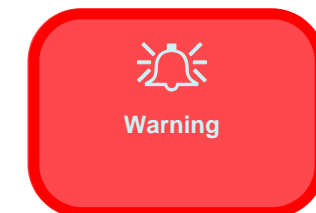
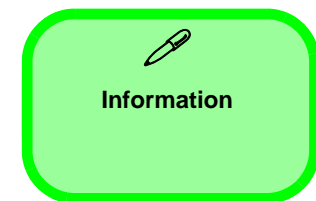
We suggest you completely review any procedure before you take the computer apart.

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 Keyboard:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 6*

To remove the HDD:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 6*
3. Remove the HDD *page 2 - 7*

To remove the System Memory:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 6*
3. Remove the system memory *page 2 - 10*

To remove the Wireless LAN Module:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 6*
3. Remove the wireless LAN *page 2 - 12*

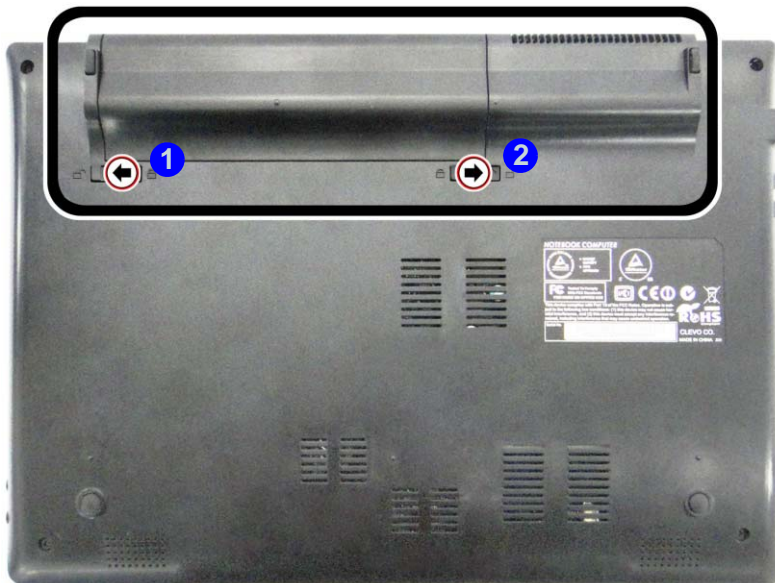
Removing the Battery

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

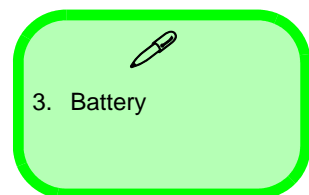
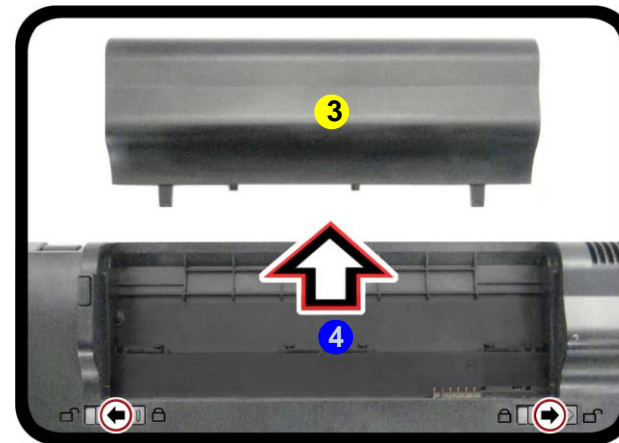
Figure 1
Battery Removal

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

a.



b.



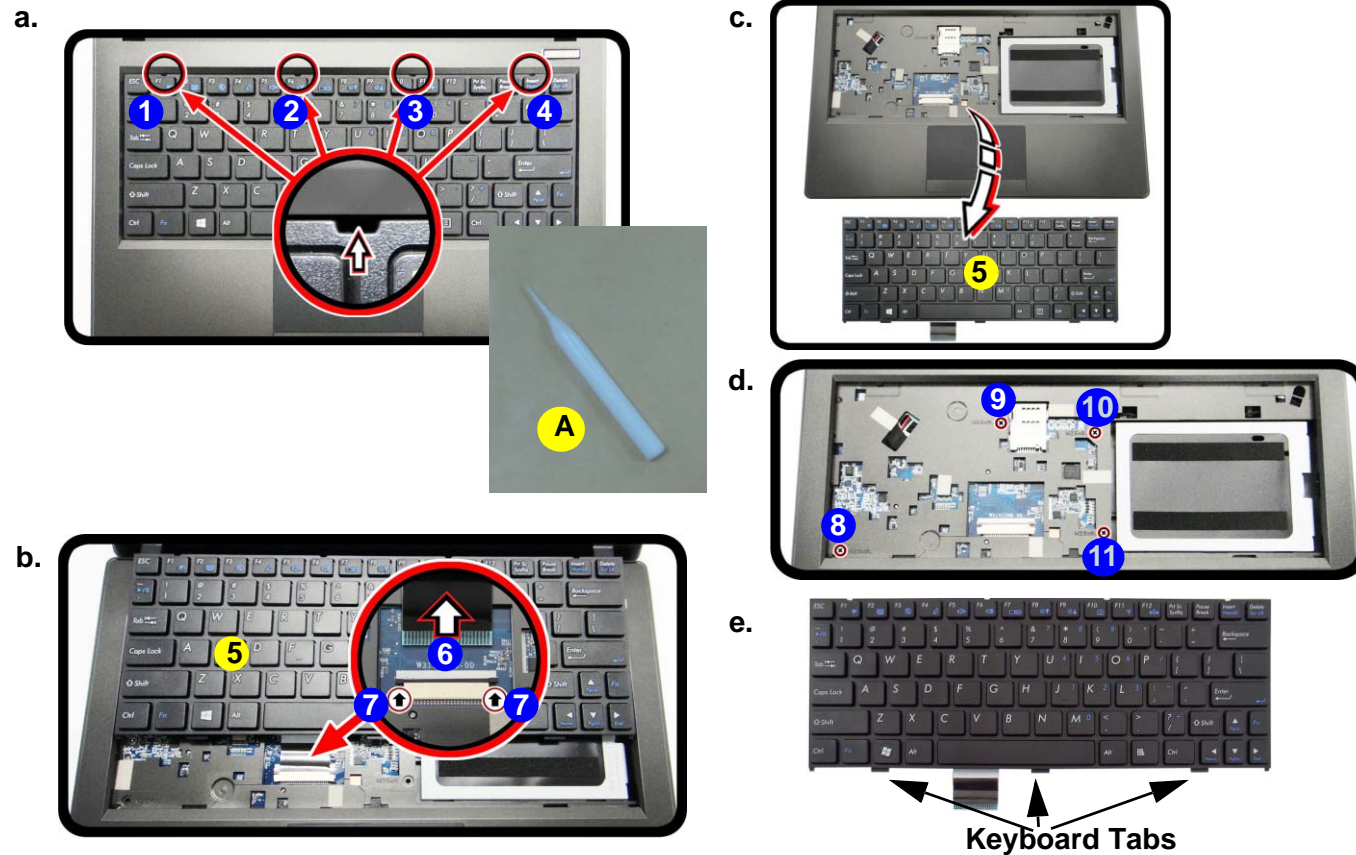
Disassembly

Figure 2
Keyboard Removal

- Press the four latches to release the keyboard.
- Lift the keyboard up and disconnect the cable from the locking collar.
- Remove the keyboard.
- Remove screws to re-release bottom case.

Removing the Keyboard

- Turn **off** the computer and remove the battery ([page 2 - 5](#)).
- Use **only** the small tool **A** provided (see picture below) to carefully press the **four** keyboard latches **1** - **4** at the top of the keyboard to elevate the keyboard from its normal position ([Figure 2a](#)).
- Carefully lift the keyboard **5** up, being careful not to bend the keyboard ribbon cable **6** ([Figure 2b](#)).
- Disconnect the keyboard ribbon cable **6** from the locking collar socket **7** ([Figure 2b](#)).
- Carefully lift up the keyboard **5** ([Figure 2c](#)) off the computer.
- Remove screws **8** - **11** to release the bottom case ([Figure 2d](#)).



Re-Inserting the Keyboard

When re-inserting the keyboard, align first the **three** keyboard tabs ([Figure 2e](#)) that are located at the bottom, to the slots in the case.



5. Keyboard

Removing the Hard Disk Drive

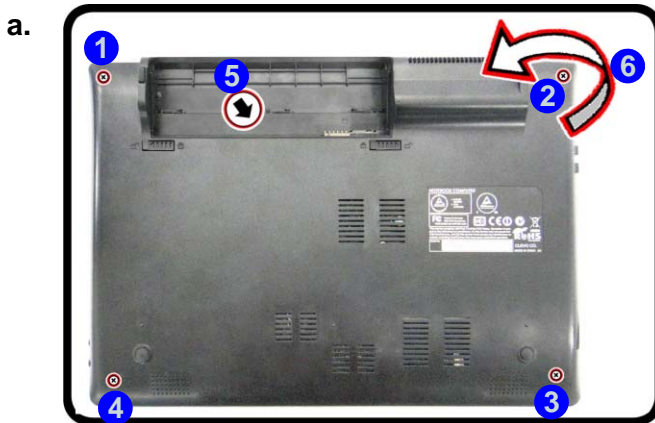
The hard disk drive can be taken out to accommodate other 2.5" serial (SATA) hard disk drives with a height of 9.5mm (h) and a speed of **5400 RPM** or lower. Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in **Chapter 4 of the User's Manual**) when setting up a new hard disk.


Hard Disk Upgrade Process

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and keyboard ([page 2 - 6](#)).
2. Remove screws **1** - **4**. Press point **5** before prying the bottom case in the direction of the arrow **6**.
3. Carefully lift the bottom case **8** up in the direction of the arrow **7** and remove it ([Figure 3b](#)).
4. The hard disk will be visible at point **9** on the computer. ([Figure 3b](#))

Figure 3
HDD Assembly Removal

- a. Remove the screws.
- b. Remove the bottom case and locate the hard disk.



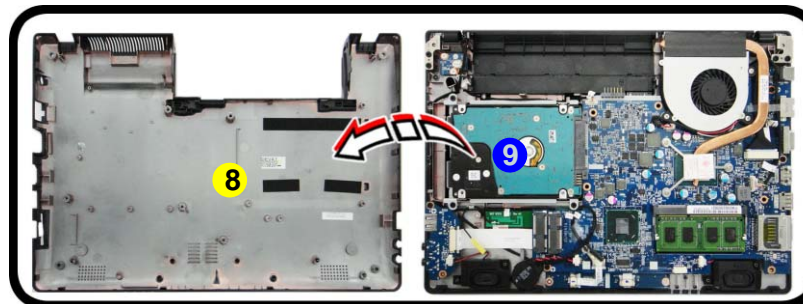

HDD System Warning


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

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

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

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





8. Bottom case

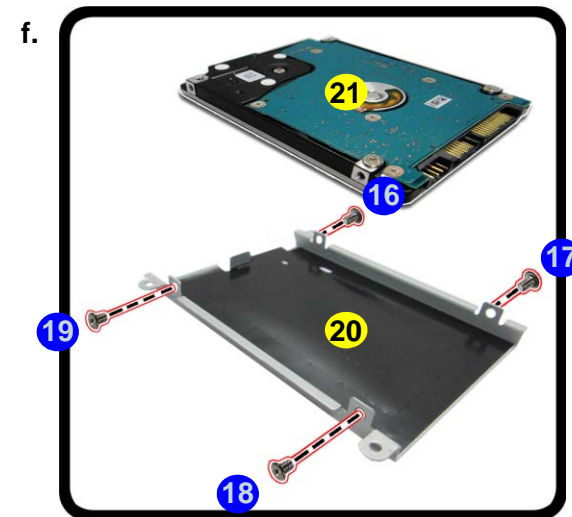
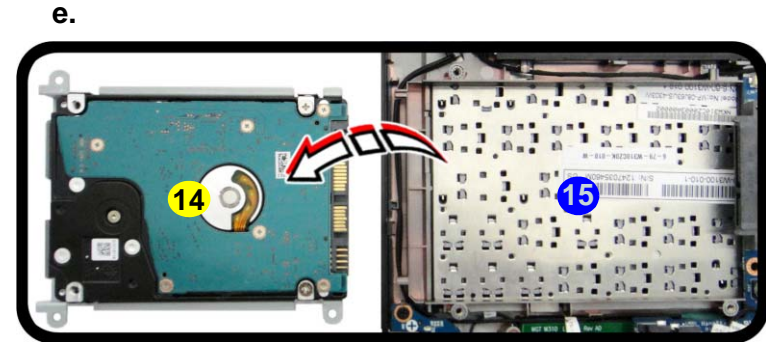
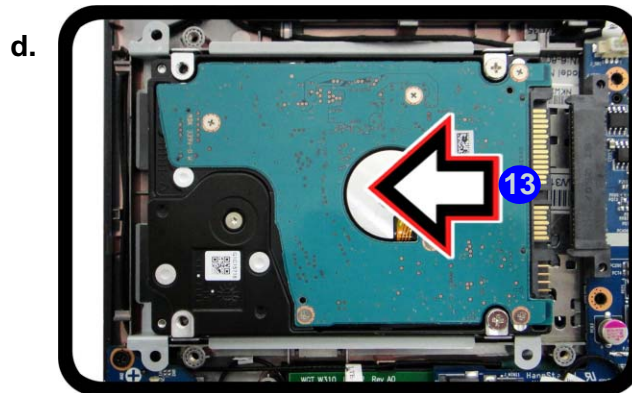
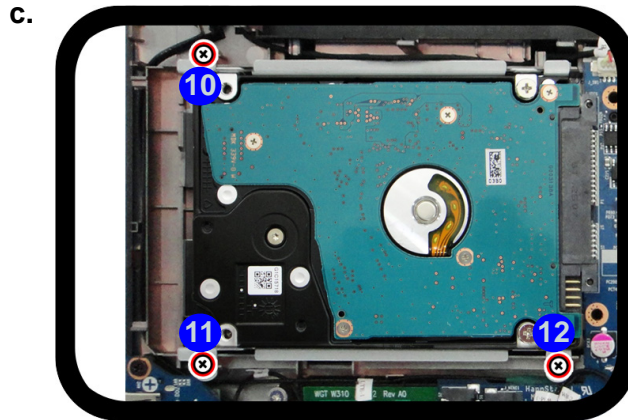
- 4 Screws

Disassembly

Figure 4
**HDD Assembly
 Removal (cont'd.)**

- c. Remove the screws.
 d. Slide the HDD in the direction of the arrow.
 d. Lift the HDD assembly out of the bay.
 e. Remove the screws and bracket case from the HDD.

5. Remove the screws **10** - **12** (*Figure 4c*).
 6. Slide the hard disk in the direction of arrow **13** (*Figure 4d*).
 7. Lift the hard disk assembly **14** out of the bay **15** (*Figure 4e*).
 8. Remove the screws **16** - **19**, and bracket case **20** from the hard disk **21** (*Figure 4f*).
 9. Reverse the process to install a new hard disk (do not forget to replace all the screws and cover).



14. HDD assembly
 20. HDD Bracket Case
 21. HDD

- 7 Screws

Hard Disk Size Note (Foam Rubber Insert)

Note that the hard disks pictured on the following pages are all 9.5mm(H) hard disk drives. In some cases 7mm(H) hard disk drives will be installed. For more information contact your distributor/supplier, and bear in mind your warranty terms.

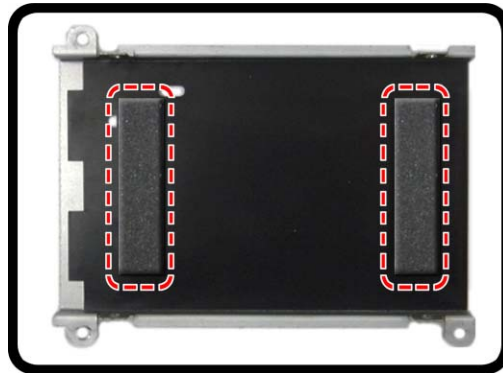


Figure 5
**Foam Rubber
Insert for 7mm(H)
HDDs**

- If you are replacing a 9.5mm(H) HDD with a 7mm(H) HDD then insert the foam rubber insert (as shown above).
- If you are replacing a 7mm(H) HDD with a 9.5mm(H) HDD then remove the foam rubber insert.

Disassembly

Figure 6
RAM Module Removal

- The RAM modules will be visible at point **1** on the mainboard.
- Pull the release latches.
- Remove the module.



Contact Warning

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



4. RAM Module

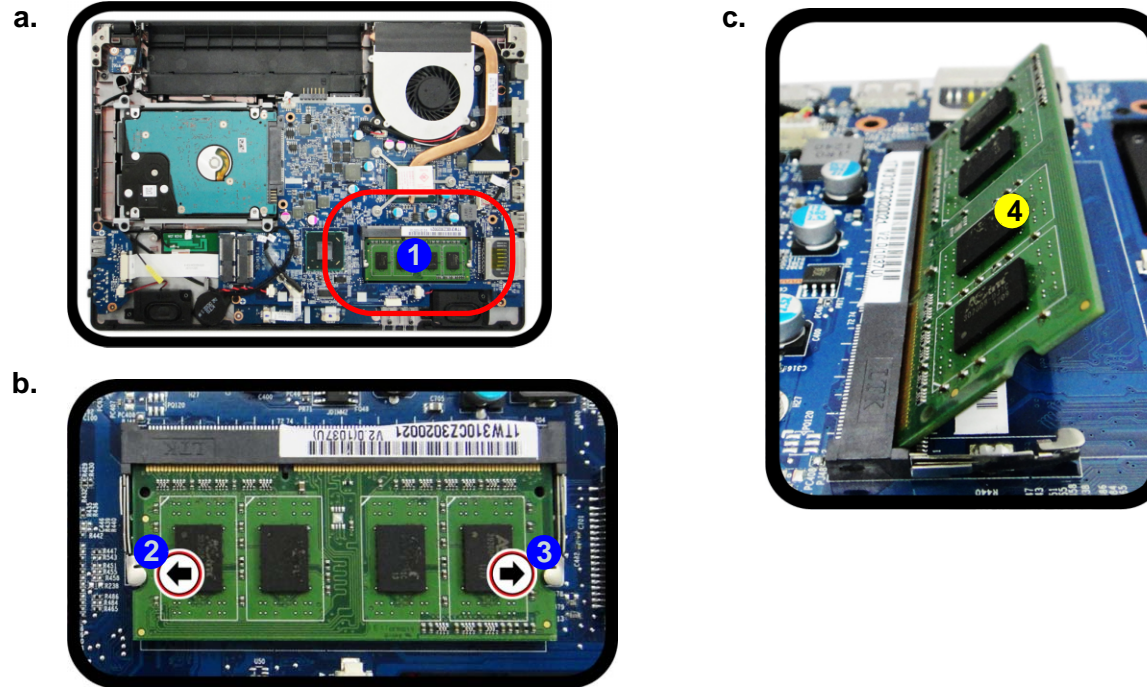
- 2 Screws

Removing the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDRIII (DDR3) Up to 1333/1600MHz. The main memory can be expanded up to 8GB. The SO-DIMM modules supported are 1024MB and 2048MB **DDRIII** Modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

- Turn **off** the computer, remove the battery ([page 2 - 5](#)), keyboard ([page 2 - 6](#)), and bottom case ([page 2 - 7](#)).
- The RAM modules will be visible at point **1** on the mainboard ([Figure 6a](#)).
- Gently pull the two release latches (**2** & **3**) on the sides of the memory socket in the direction indicated by the arrows ([Figure 6b](#)).
- The RAM module **4** will pop-up ([Figure 6c](#)), and you can then remove it.



5. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
6. The module will only fit one way as defined by its pin alignment. Make sure the module is seated as far into the slot as it will go. **DO NOT FORCE IT**; it should fit without much pressure.
7. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
8. Replace the bottom case and tighten the screws (**Figure 7d**).
9. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.
10. Pull the latches to release the second module if necessary.

Figure 7
**RAM Module
Removal (cont'd)**

- d. Replace the bottom case and tighten the screws.

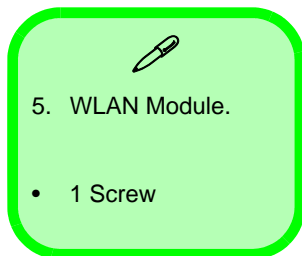


Disassembly

Figure 8
**Wireless LAN
 Module Removal**

- Locate the wireless LAN module.
- Disconnect the cables and remove the screw.
- The WLAN module will pop up.
- Lift the WLAN module out.

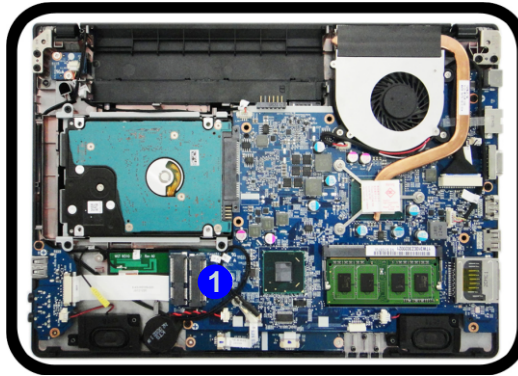
Note: Make sure you reconnect the antenna cable to “1” + “2” socket (*Figure b*).



Removing the Wireless LAN Module

- Turn **off** the computer, remove the battery ([page 2 - 5](#)), keyboard ([page 2 - 6](#)), and bottom case ([page 2 - 7](#)).
- The Wireless LAN module will be visible at point **1** (*Figure 8a*) on the mainboard.
- Carefully disconnect cables **2** & **3**, then remove screw **4** from the module socket (*Figure 8b*).
- The Wireless LAN module **5** (*Figure 8c*) will pop-up.
- Lift the Wireless LAN module **5** (*Figure 8d*) up and off the computer.

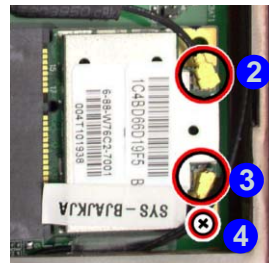
a.



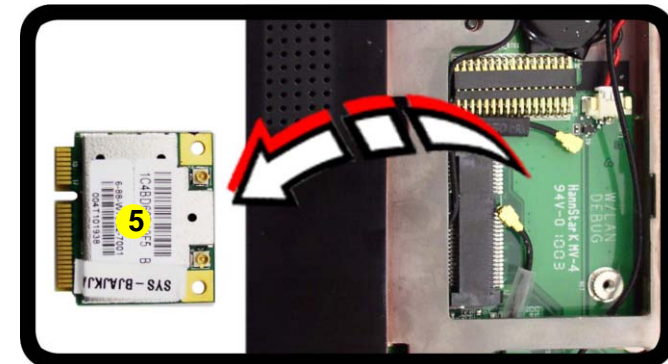
c.



b.



d.



Appendix A:Part Lists

This appendix breaks down the *W310CZ-T* 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.

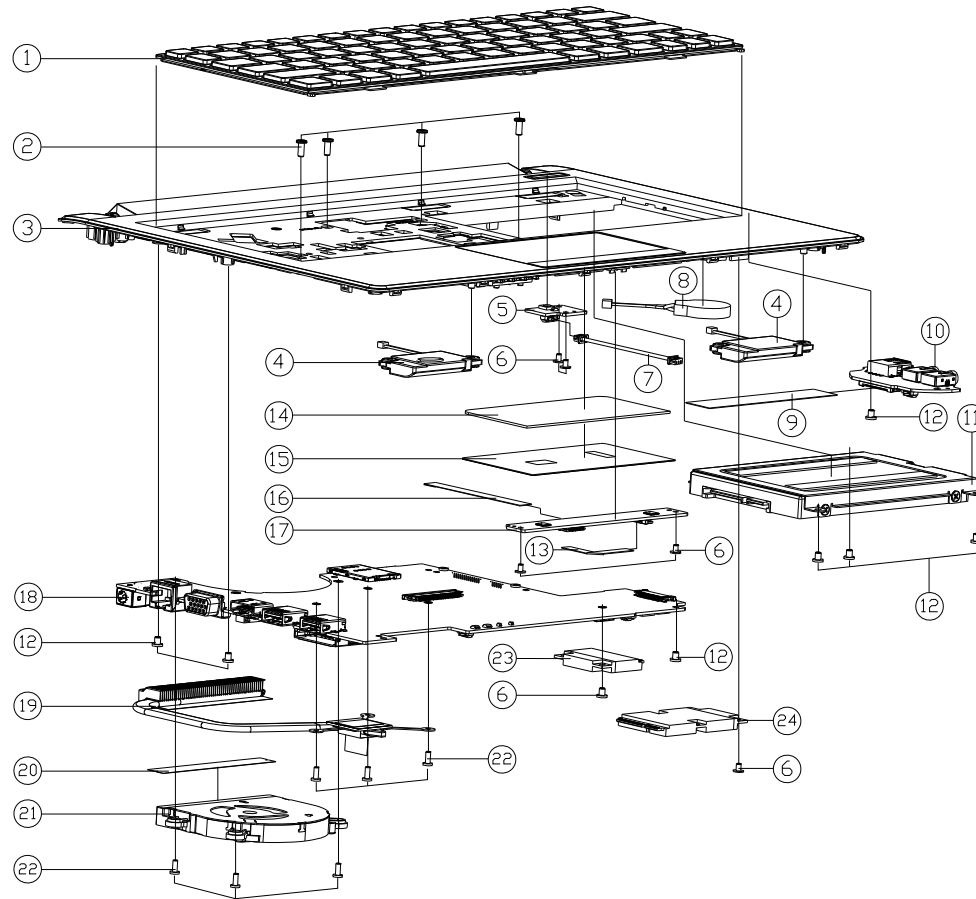
Parts List Illustration Location

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

Table A - 1
Parts List Illustration
Location

Parts	
Top	<i>page A - 3</i>
Bottom	<i>page A - 4</i>
LCD	<i>page A - 5</i>
HDD	<i>page A - 6</i>

Top

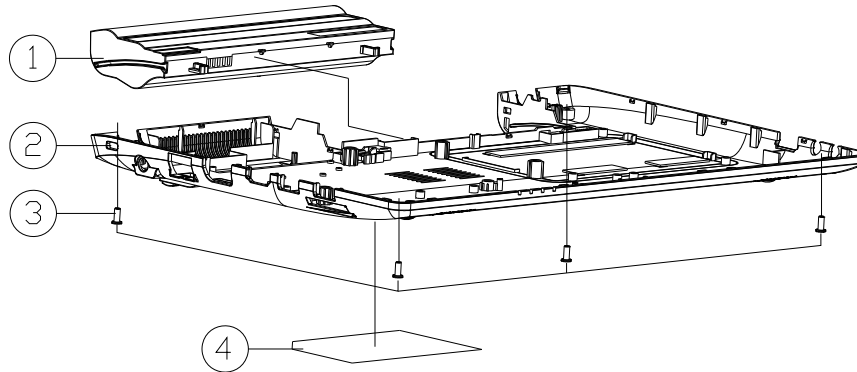


ITEM	PART NAME	PART NO	REMARK
1	VIBR VIB THE BLACK FRAME ASS MODULE W310CZ-V00Z-1	6-79-W310CZ0K-230-W	
2	SCREW M2.5*6L K BZ ICT NY	6-35-82125-6RA	
3	TOP CASE MODULE W310CZ	6-39-W3102-011	
3	TOP CASE MODULE W310CZ-C	6-39-W3102-011-C	
3	TOP CASE MODULE W311CZ	6-39-W3112-010	
3	TOP CASE MODULE W311CZ-C	6-39-W3112-010-C	
4	POWER SW 2044 5V 40 20M 125ATVL 0VY V310Z	6-23-5W310-050	
5	POWER SWITCH BOARD V2.0 W310CZ	6-77-W3105-D02	
6	SCREW M2xL KI NI ICT NY (D0=44.5,D1=44)	6-35-B1120-3RE	
7	WIRE CABLE FOR W3 TO POWER BOARD 3P RED V310Z	6-43-W3100-030	
8	MAIN BOARD V310 W310CZ 30MM 800002555MM08	6-23-22015-TC0	
9	FFC CABLE FOR AUDIO BOARD TO MP JACK V310Z	6-43-W3100-021	
10	AUDIO BOARD V3.0 W310CZ	6-77-W3108-D03	
11	W/O HDD ASS'Y W310CZ	6-79-W310CZ0J-010	
11	W/O HDD ASS'Y W310CZ	6-79-W310CZ0J-020	
12	SCREW M2.5*3L KI BZ ICT NY	6-35-86125-3R0	
13	FFC CABLE FOR CLICK BOARD TO MP JACK V310Z	6-43-W3100-010	
14	TOUCH PAD SENTELIC METPROSC20001 W310CZ	6-49-W3103-010	
15	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-40-W3402-020	
16	FFC CABLE FOR TOUCH PAD (PIN CHANGES) W310Z	6-43-C4502-010-2	
17	CLICK BOARD V2.0 W310CZ	6-77-W3102-D02	
18	MAIN BOARD V31A CEP V310 V310 W310Z-1	6-77-W310CZ10-D03A	
18	MAIN BOARD V31A CEP V310 V310 W310Z-1	6-77-W310CZ10-D03A-1	
18	MAIN BOARD V31A CEP V310 V310 W310Z-1	6-77-W310CZ10-D03A-2	
18	MAIN BOARD V31A CEP V310 V310 W310Z-1	6-77-W310CZ10-D03A-3	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (CEP)	6-77-W310CZ00-D02	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (CEP)	6-77-W310CZ00-D02-1	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (CEP)	6-77-W310CZ00-D02-2	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (CEP)	6-77-W310CZ00-D02-3	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (LVDS)	6-77-W310CZ00-D02-4	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (LVDS)	6-77-W310CZ00-D02-5	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (LVDS)	6-77-W310CZ00-D02-6	
18	MAIN BOARD V2.0 QV36V/D TPA W310CZ (LVDS)	6-77-W310CZ00-D02-7	
19	CPU HEATSINK MODULE W310CZ	6-31-W310N-101	
20	AIRDUCT MYLAR DFR117 W240HU	6-40-W24H8-011	
21	FAN MODULE W251HUQ	6-31-W25H5-100	
22	SCREW M2*5L KI NI ICT NY	6-35-B1120-5R0	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W25H2-7000	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W25H2-9400	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W345F-7000	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W345F-9400	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-P3702-9400	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-P3702-7000	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W1102-4200	
23	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W110F-4200	
24	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-88-W650W-8800	
24	W/LAR FOR TOUCH PAD (M02P020) W/LAR-CHANG0 V310Z	6-85-D4032-L00	

Figure A - 1
Top

Bottom

Figure A - 1
Bottom



ITEM	PART NAME	PART NO	REMARK
1	TOP COVER FOR W310CZ	6-87-W310S-429I	
1	TOP COVER FOR W310CZ	6-87-W310S-42F1	
2	TOP COVER FOR W310CZ	6-87-W310S-40F1	
3	BOTTOM CASE MODULE W310CZ	6-39-W3103-011	
3	BOTTOM CASE MODULE W310CZ	6-39-W3103-011-C	
3	SCREW M2.5*6L K BZ ICT NY	6-35-B2125-6RA	
4	PRODUCT LABEL FOR W310CZ	6-45-W310CZ3-010	
4	PRODUCT LABEL FOR W310CZ	6-45-W310CZ03-010	
4	PRODUCT LABEL FOR W310CZ	6-45-W310CZ03-010	

LCD

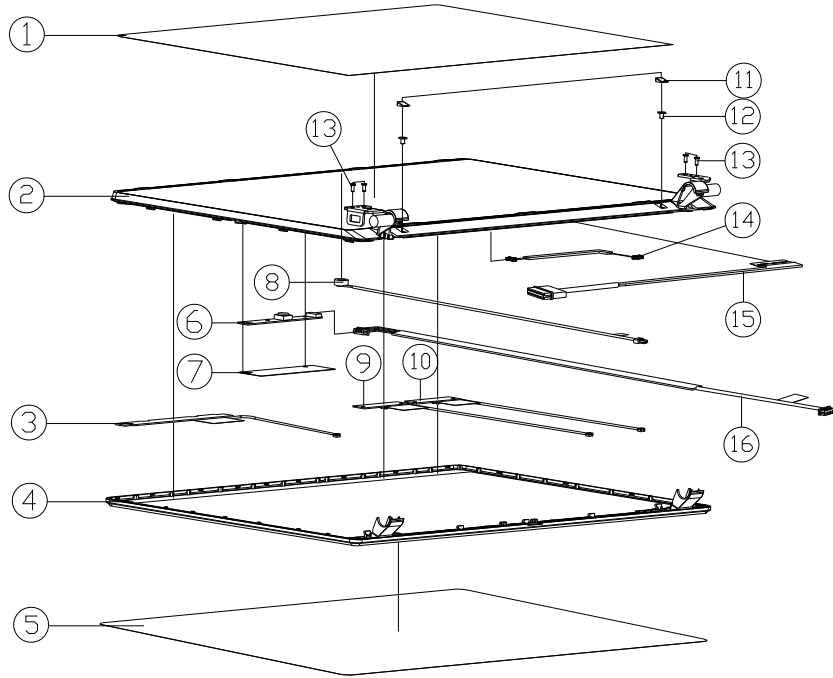


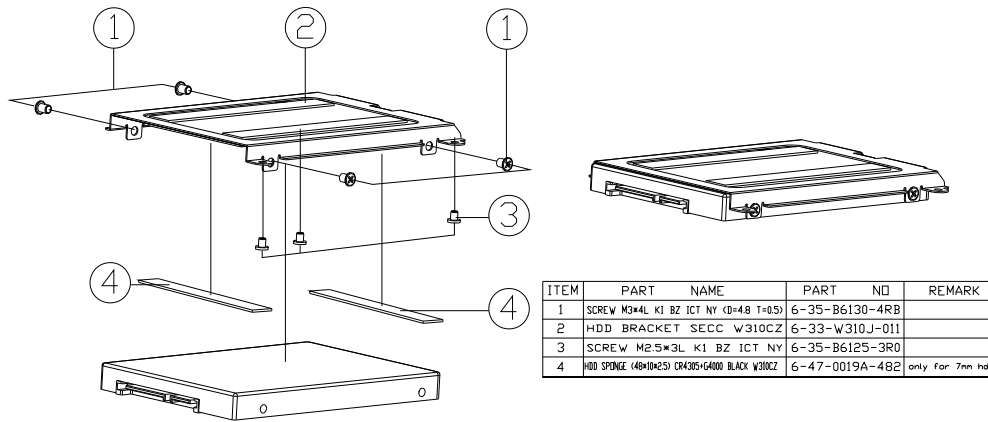
Figure A - 2
LCD

ITEM	PART NAME	PART NO	REMARK
1	LCD PANEL PROTECT MYLAR PET W310CZ	6-40-W3101-010	
2	LCD BACK COVER PROTECT MYLAR PET W310CZ	6-50-W3101-G11	
3	ANTENNA WINDUP VGT W310CZ	6-23-7W310-071	
4	LCD BACK COVER MODULE W310CZ-T	6-39-W3101-121	
5	LCD BACK COVER PROTECT MYLAR PET W310CZ	6-40-W3101-020	
6	LVC CAMERA COVER FIX CHINA	6-88-M111C-5100	
6	LVC CAMERA BEZEL FIX CHINA	6-88-M115C-4902	
6	LVC CAMERA BEZEL FIX CHINA	6-88-W310C-4900	
6	LVC CAMERA COVER FIX CHINA	6-88-W310C-5101	
7	CCD SHIELDING AL FOIL W310CZ-T	6-47-W3101-080	
8	LVC W310CZ-010M BLACK 100-100-100	6-23-EW310-010	
9	ANTENNA WINDUP VGT W310CZ	6-23-7W310-050	
10	ANTENNA WINDUP VGT W310CZ	6-23-7W310-060	
11	LCD FRONT COVER RUBBER SCREW SILECON W310CZ	6-47-W3101-060	
12	SCREW M2.5X6L K BZ ICT NY (00-44.5,DT-0.4)	6-35-B6120-3RD	
13	SCREW M2.5X6L K BZ ICT NY	6-35-82125-6RA	
14	WIRE CABLE FOR TOUCH PANEL HP 400MM CHL W310CZ-T	6-43-W3100-041	
15	WIRE CABLE FOR EIP APP W310CZ	6-43-W3101-010-C	
16	WIRE CABLE FOR CCD 5P 400MM CHL W310CZ	6-43-W310T-011	

A.Part Lists

HDD

Figure A - 3
HDD




ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*4L K1 BZ ICT NY (D=48 T=05)	6-35-B6130-4RB	
2	HDD BRACKET SECC W310CZ	6-33-W310J-011	
3	SCREW M2.5*3L K1 BZ ICT NY	6-35-B6125-3R0	
4	HDD SPONGE (48*10*25) CRX305/G4000 BLACK W310CZ	6-47-0019A-482	only for 7mm hdd

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the *W310CZ-T* notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

Table B - 1
**SCHEMATIC
DIAGRAMS**

Diagram - Page	Diagram - Page	Diagram - Page
<i>System Block Diagram - Page B - 2</i>	<i>PCH 5/9 - PCI, USB, NVRAM - Page B - 17</i>	<i>Power System - Page B - 32</i>
<i>Processor 1/7 - DMI, FDI, PEG - Page B - 3</i>	<i>PCH 6/9 - GPIO, VSS_NCTF, RSVD - Page B - 18</i>	<i>VDD3, VDD5 - Page B - 33</i>
<i>Processor 2/7 - CLK, MISC - Page B - 4</i>	<i>PCH 7/9 - PWR - Page B - 19</i>	<i>POWER 1.5V/0.75V - Page B - 34</i>
<i>Processor 3/7 - DDR3 - Page B - 5</i>	<i>PCH 8/9 - POWER - Page B - 20</i>	<i>POWER 1.05VS, VTT_CPU - Page B - 35</i>
<i>Processor 4/7 - Power - Page B - 6</i>	<i>PCH 9/9 - GND - Page B - 21</i>	<i>Power 0.85VS, 1.8VS - Page B - 36</i>
<i>Processor 5/7 - GFX PWR - Page B - 7</i>	<i>WLAN, CCD - Page B - 22</i>	<i>POWER VCORE1 - Page B - 37</i>
<i>Processor 6/7 - GND - Page B - 8</i>	<i>3G/mSATA, TPM - Page B - 23</i>	<i>POWER VCORE2 - Page B - 38</i>
<i>Processor 7/7 - RSVD - Page B - 9</i>	<i>LAN RTL8402, Card Reader - Page B - 24</i>	<i>Power AC In, Smart Charger - Page B - 39</i>
<i>DDR3 SO-DIMM_0 - Page B - 10</i>	<i>Transformer, SATA HDD - Page B - 25</i>	<i>Click Board - Page B - 40</i>
<i>LVDS, INVERTER - Page B - 11</i>	<i>USB 3.0 TI TUSB7320 - Page B - 26</i>	<i>Audio Board - Page B - 41</i>
<i>HDMI, CRT - Page B - 12</i>	<i>USB Port, USB Charger - Page B - 27</i>	<i>Power Switch & LED Board - Page B - 42</i>
<i>PCH 1/9 - HDA, SATA - Page B - 13</i>	<i>KBC-ITE IT8518 - Page B - 28</i>	<i>Power On SEQ - Page B - 43</i>
<i>PCH 2/9 - PCIE, SMBUS, CLK - Page B - 14</i>	<i>LED / LID Switch - Page B - 29</i>	
<i>PCH 3/9 - DMI, FDI, GPIO - Page B - 15</i>	<i>AUDIO CODEC VT1802S - Page B - 30</i>	
<i>PCH 4/9 - LVDS, DDI, CRT - Page B - 16</i>	<i>Fan, TP, Connector - Page B - 31</i>	

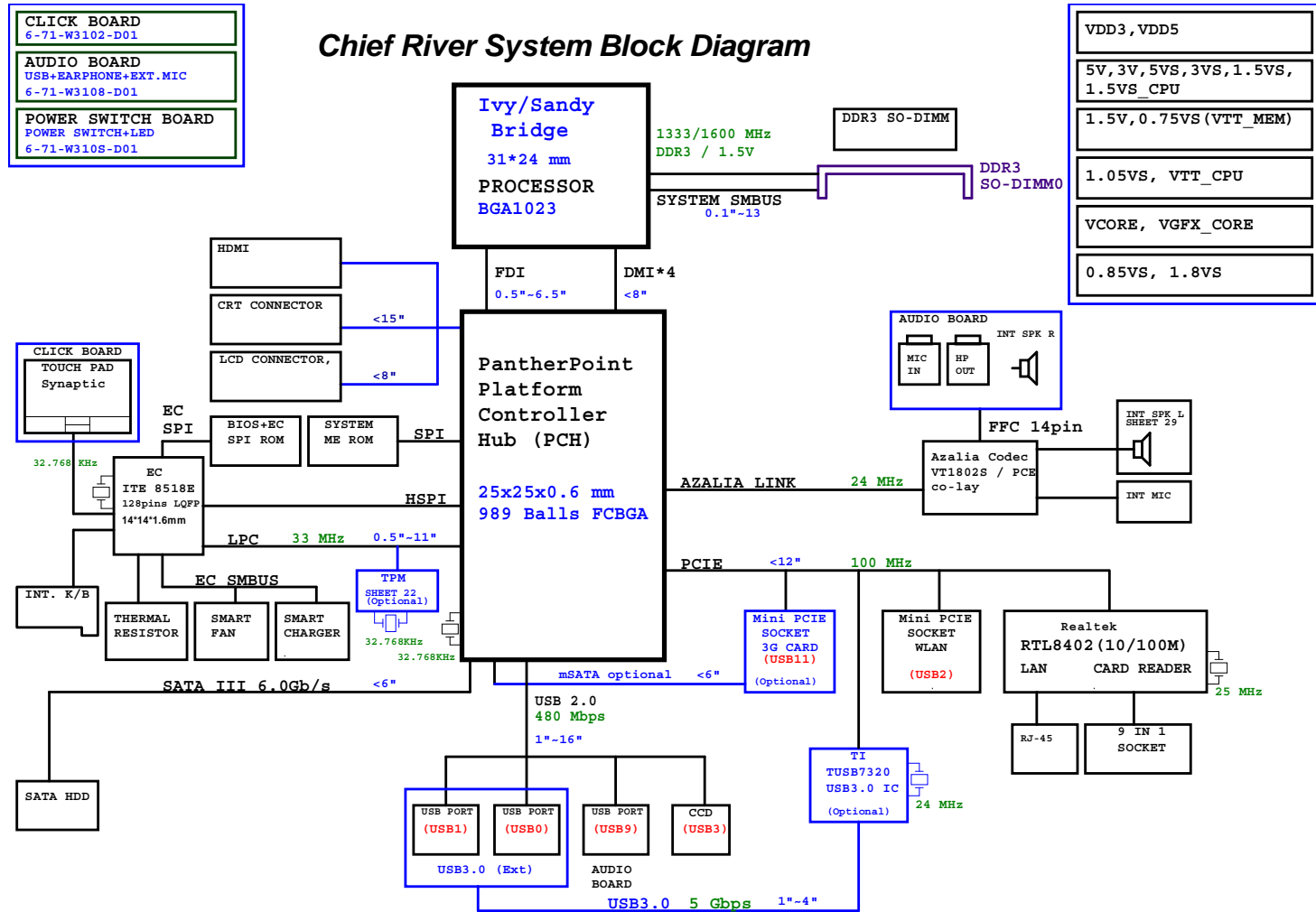


Version Note

The schematic diagrams in this chapter are based upon version 6-7P-W3104-004. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

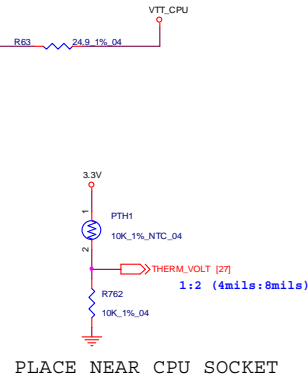
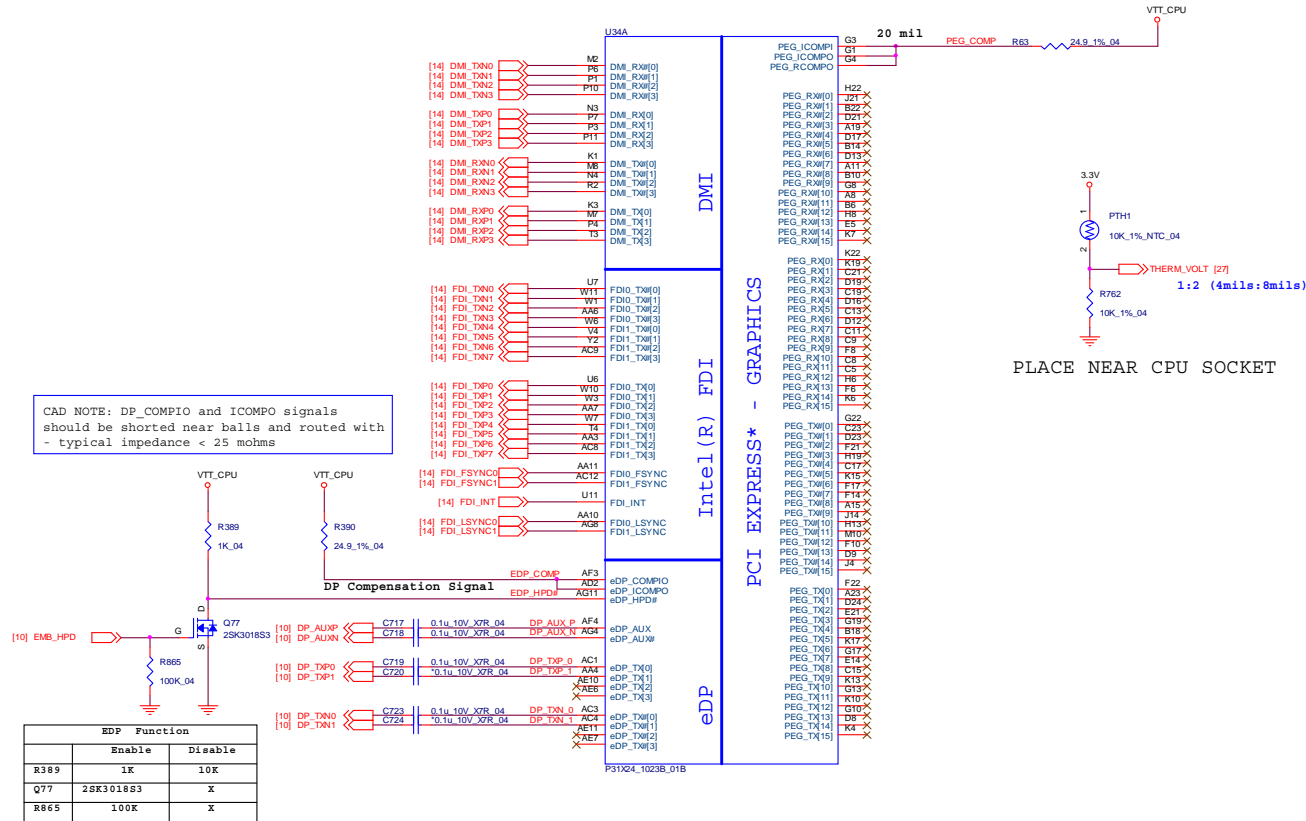
System Block Diagram

Sheet 1 of 42
System Block
Diagram



Processor 1/7 - DMI, FDI, PEG

Ivy/Sandy Bridge Processor 1/7 (DMI, PEG, FDI)

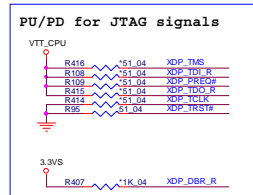


Sheet 2 of 42
Processor 1/7 -
DMI, FDI, PEG

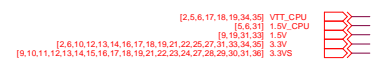
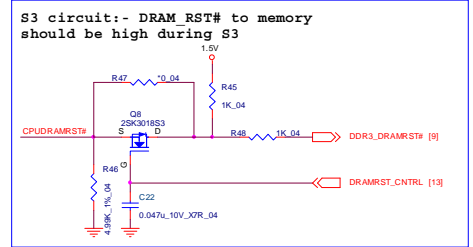
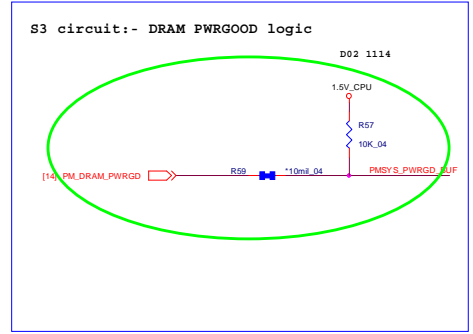
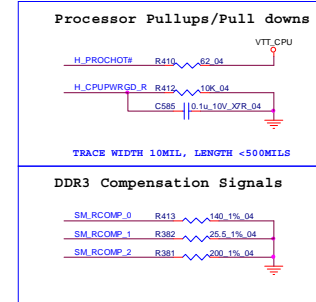
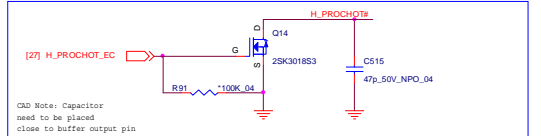
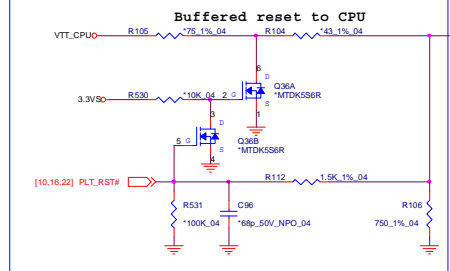
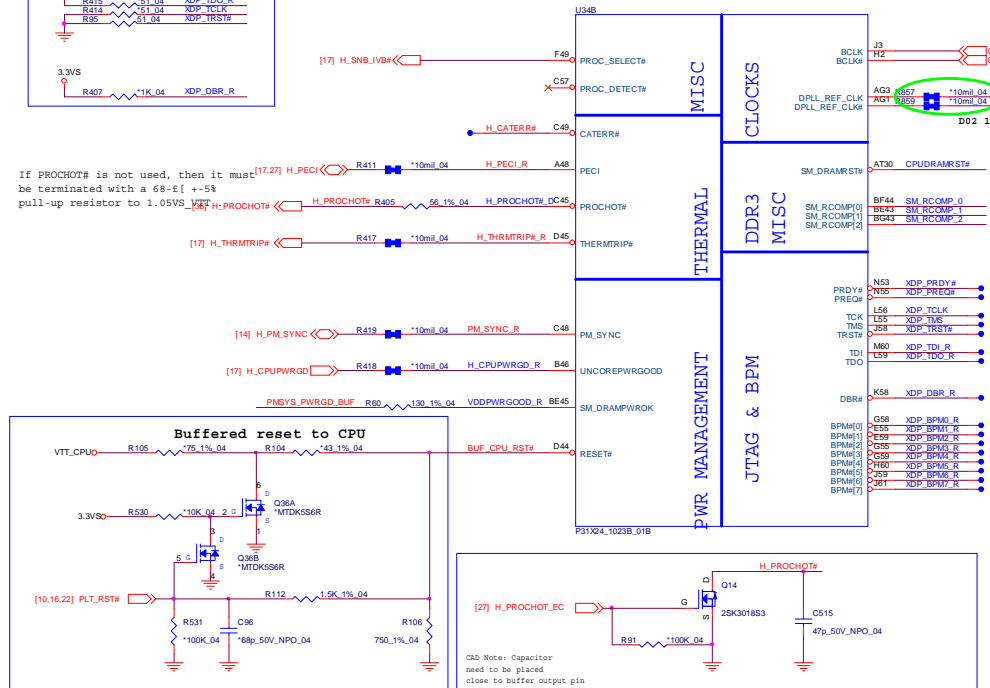
[6,10,12,13,14,16,17,18,19,21,22,25,27,31,33,34,35] 3.3V
[3,5,6,17,18,19,34,35] VTT_CPU

Processor 2/7 - CLK, MISC

Sheet 3 of 42
Processor 2/7 -
CLK, MISC

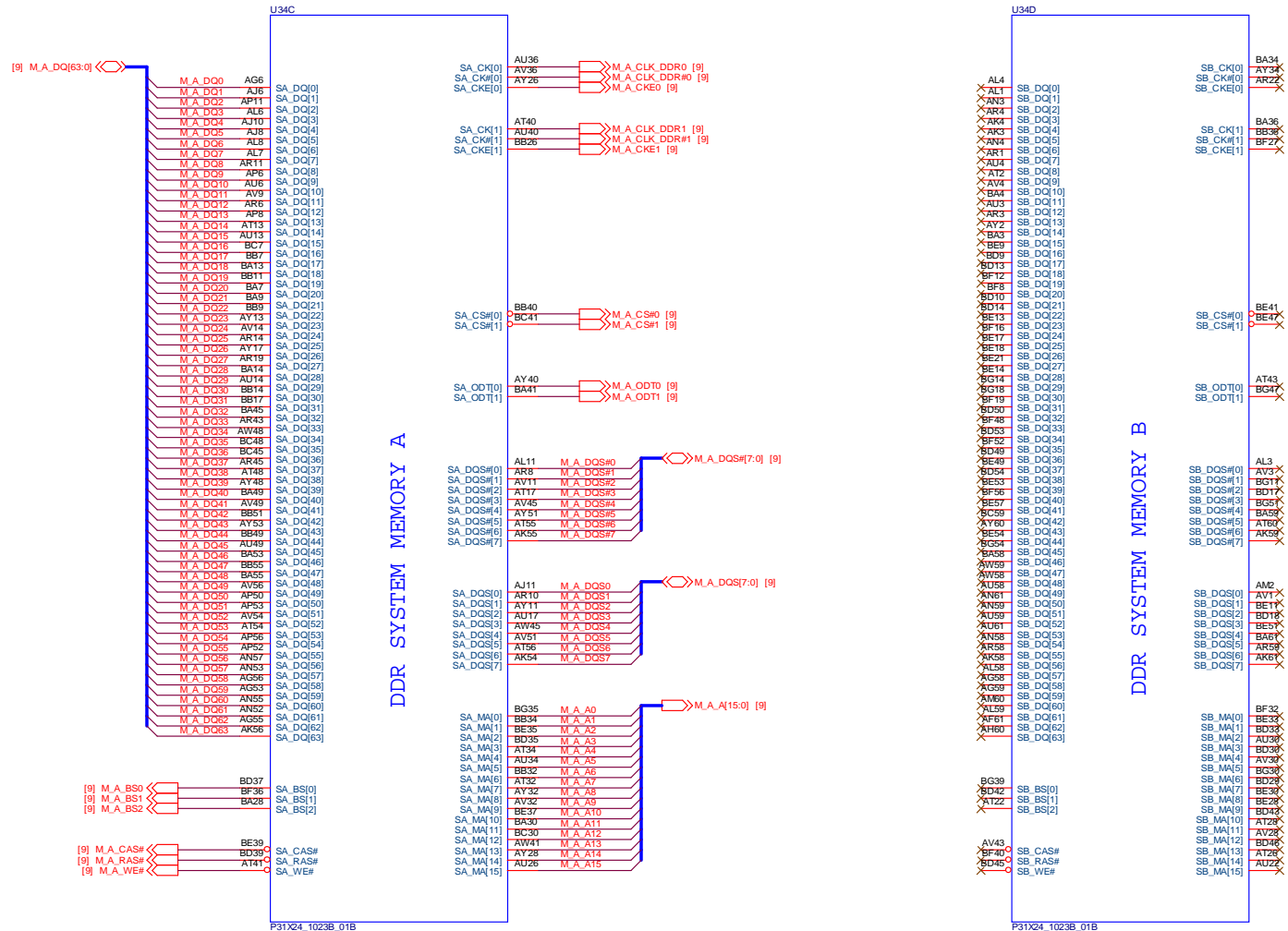


Ivy/Sandy Bridge Processor 2/7 (CLK, MISC, JTAG)



Processor 3/7 - DDR3

Ivy/Sandy Bridge Processor 3/7 (DDR3)



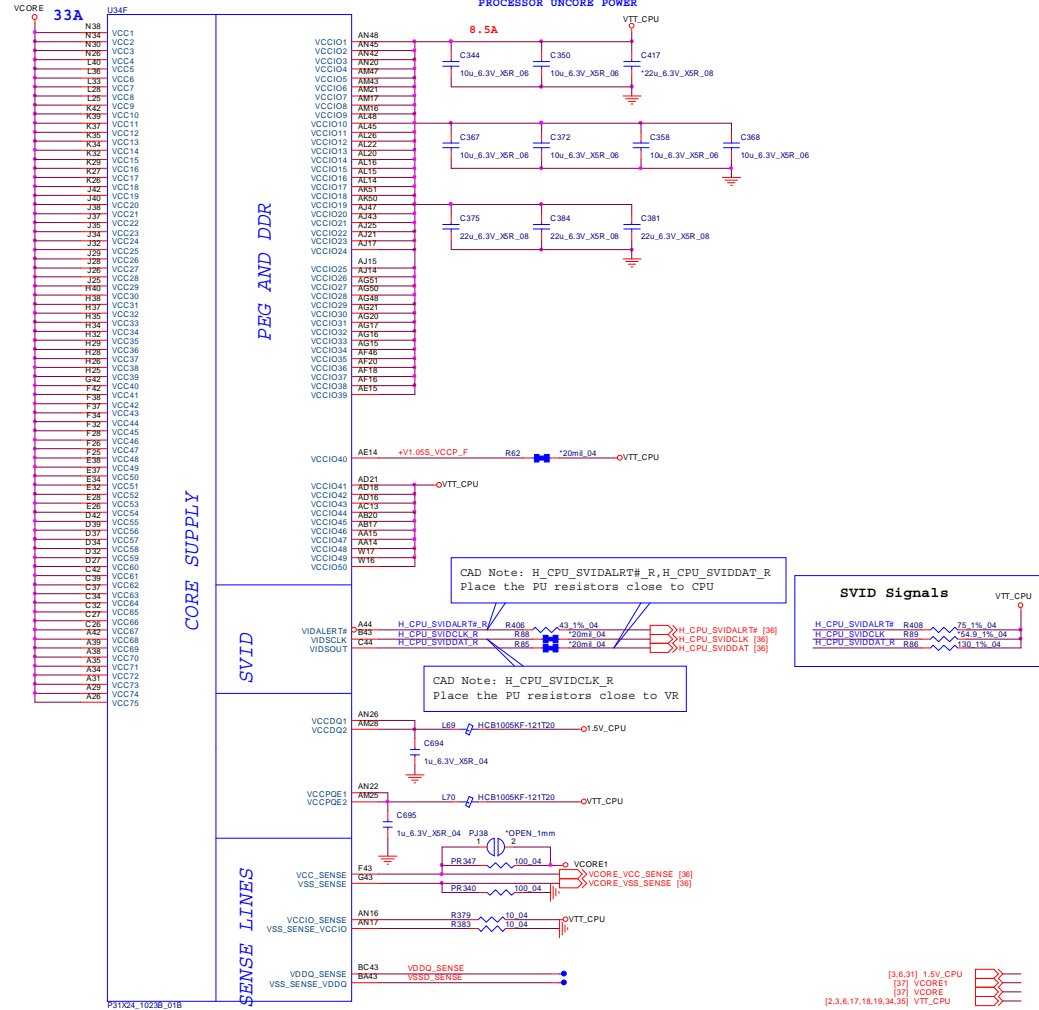
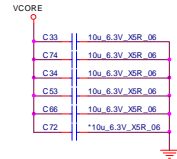
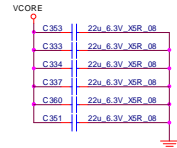
Sheet 4 of 42
Processor 3/7 -
DDR3

B.Schematic Diagrams

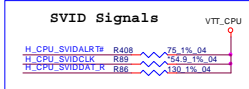
Processor 4/7 - Power

Ivy/Sandy Bridge Processor 4/7

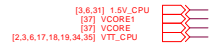
PROCESSOR CORE POWER
ICCMAX Maximum Processor SV 48



CAD Note: H_CPU_SVIDALRT#_R, H_CPU_SVIDDAT#_R
Place the PU resistors close to CPU



CAD Note: H_CPU_SVIDCLK#_R
Place the PU resistors close to VR

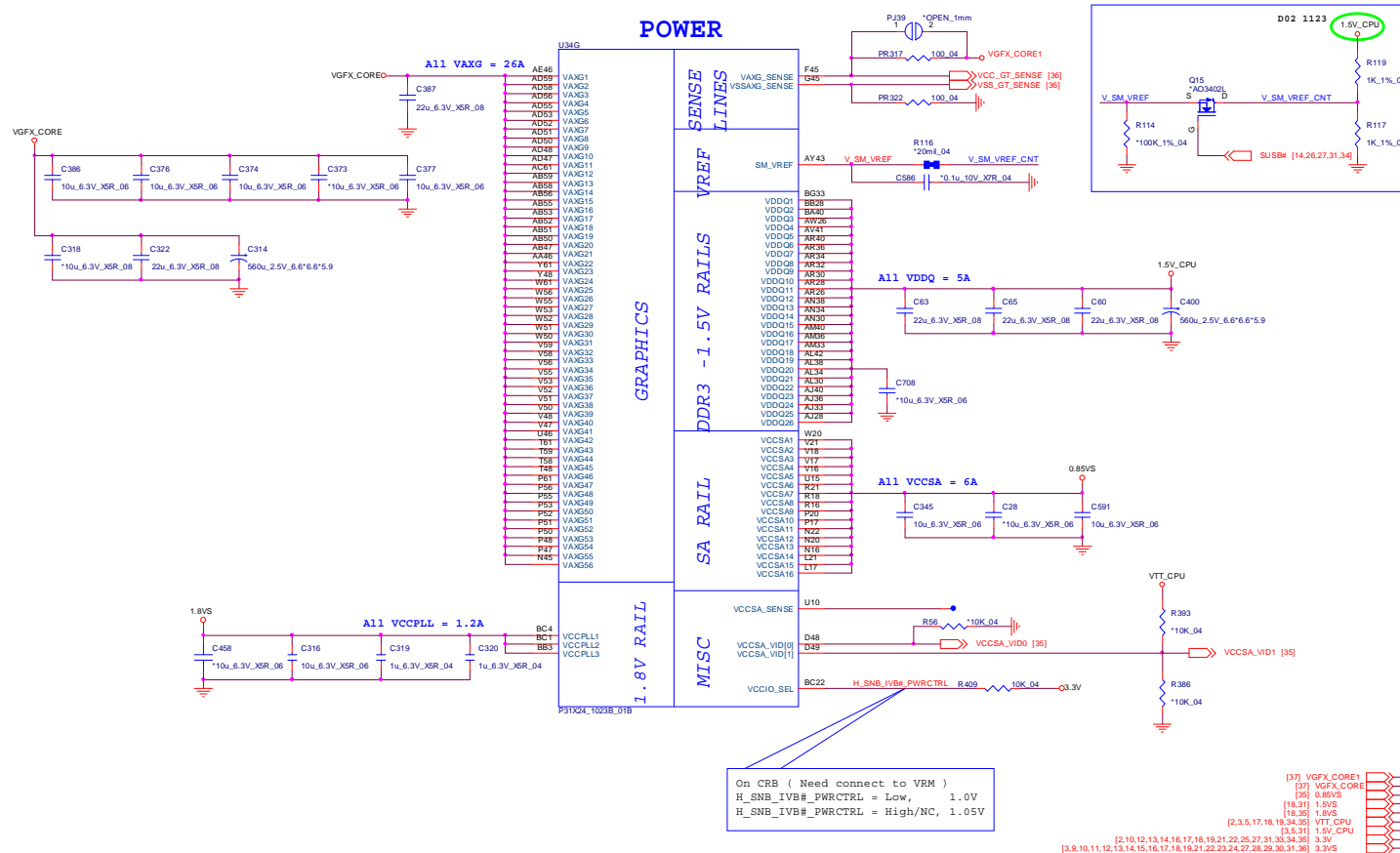


B.Schematic Diagrams

Sheet 5 of 42
Processor 4/7 -
Power

Processor 5/7 - GFX PWR

Ivy/Sandy Bridge Processor 5/7 (GRAPHICS POWER)



Sheet 6 of 42
Processor 5/7 -
GFX PWR

B.Schematic Diagrams

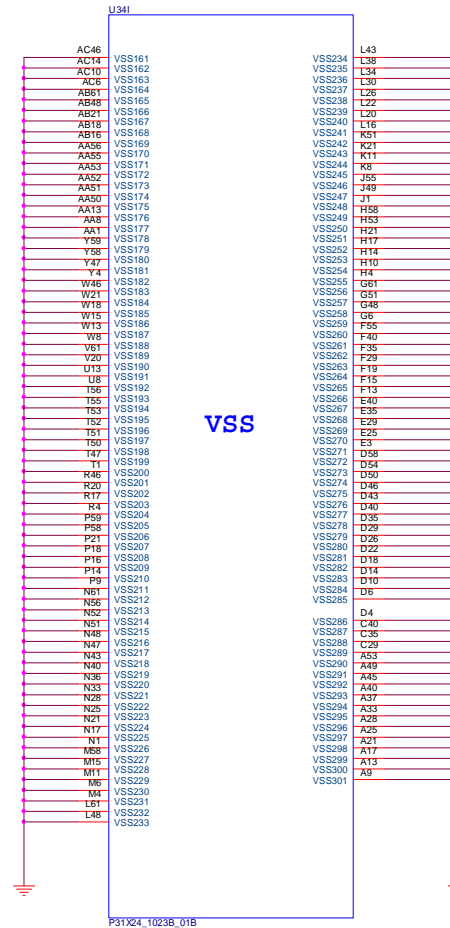
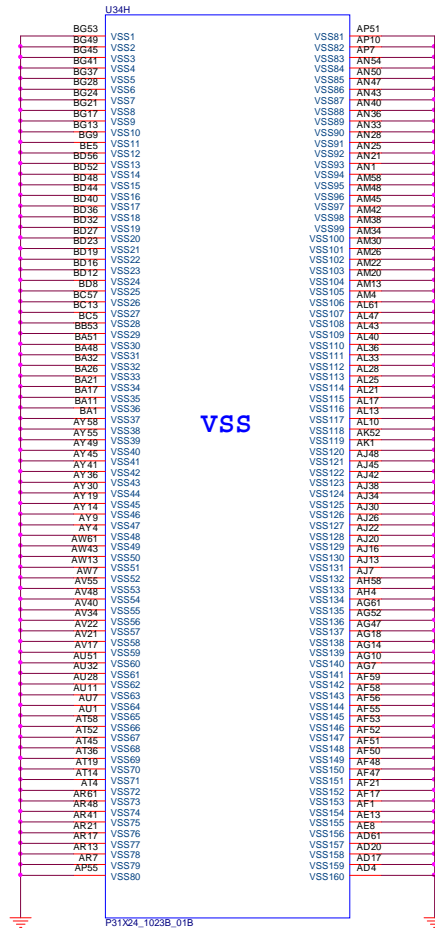
Schematic Diagrams

Processor 6/7 - GND

Ivy/Sandy Bridge Processor 6/7 (GND)

B.Schematic Diagrams

Sheet 7 of 42
Processor 6/7 -
GND



Processor 7/7 - RSVD

Ivy/Sandy Bridge Processor 7/7 (RESERVED)

CFG Straps for Processor

PEG Static Lane Reversal - CFG2 is for the 16x

CFG2	1: (Default) Normal Operation; Lane # definition matches socket pin map definition 0: Lane Reversed
------	--

Display Port Presence Strap

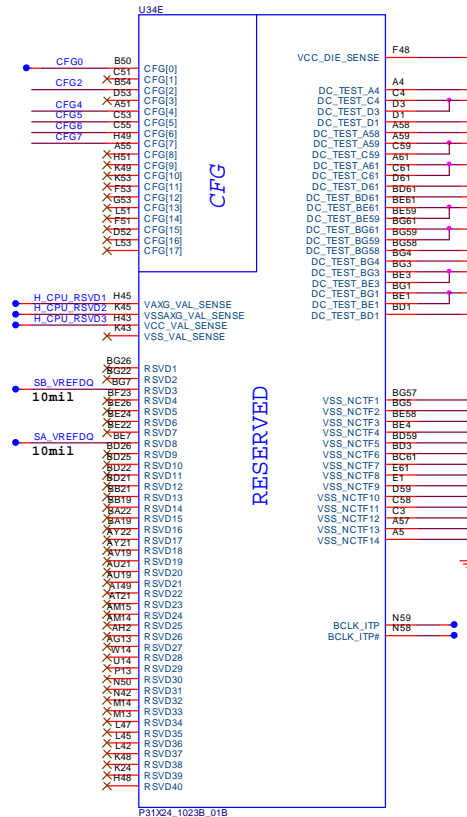
CFG4	1: (Default) Disabled; No Physical Display Port attached to Embedded Display Port 0: Enabled; An external Display Port device is connected to the Embedded Display Port
------	--

PCIe Port Bifurcation Straps

CFG [6 : 5]	11: (Default) x16 - Device 1 functions 1 and 2 disabled 10: x8, x8 - Device 1 function 1 enabled ; function 2 disabled 01: Reserved - (Device 1 function 1 disabled ; function 2 enabled) 00: x8,x4,x4 - Device 1 functions 1 and 2 enabled
-------------	--

PEG DEFER TRAINING

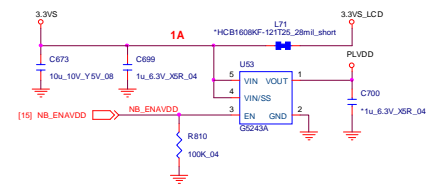
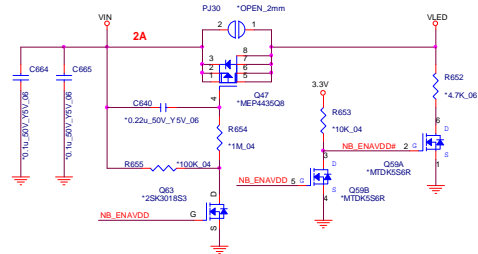
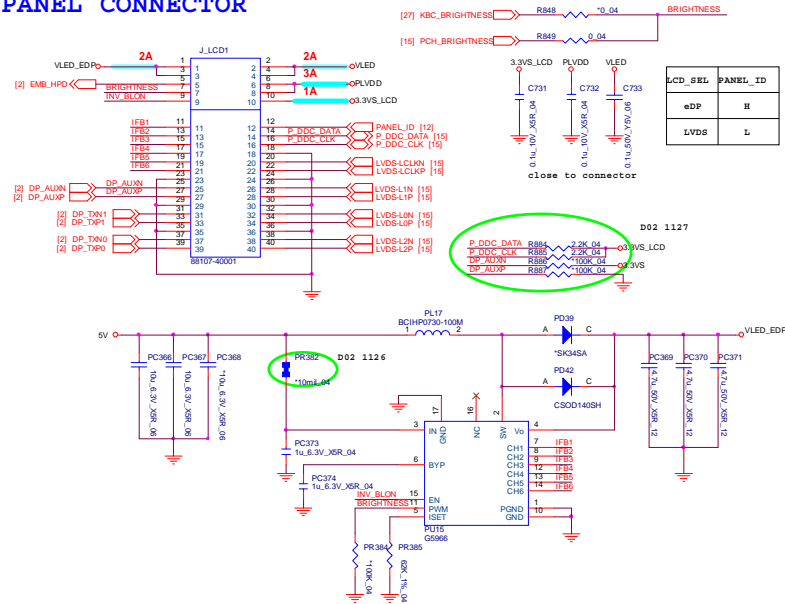
CFG7	1: (Default) PEG Train immediately following xxRESETB de assertion 0: PEG Wait for BIOS for training
------	---



Sheet 8 of 42
Processor 7/7 -
RSVD

LVDS, INVERTER

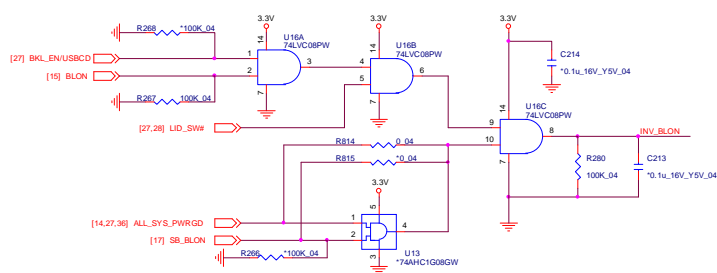
PANEL CONNECTOR



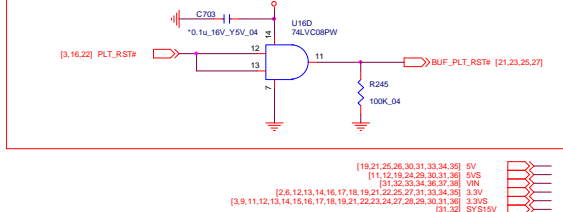
Sheet 10 of 42
LVDS, INVERTER

B.Schematic Diagrams

INVERTER CONNECTOR

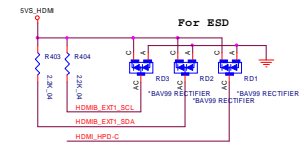
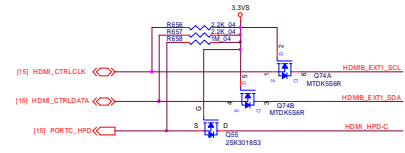
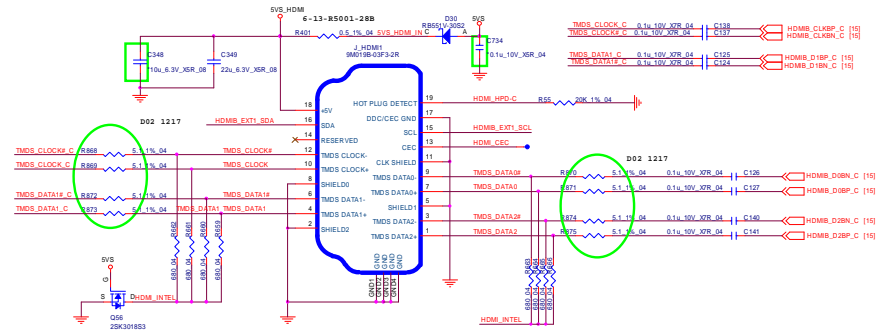


PLT_RST# Buffer



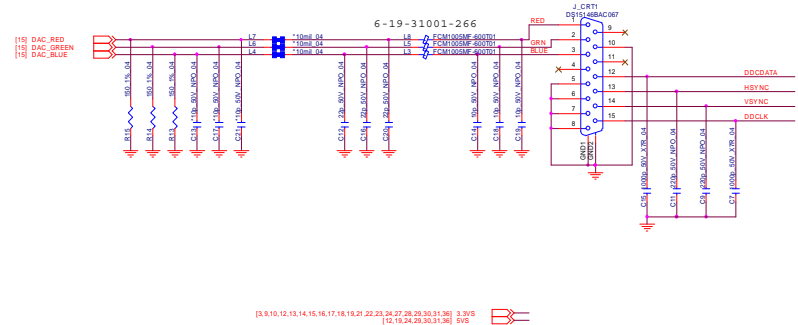
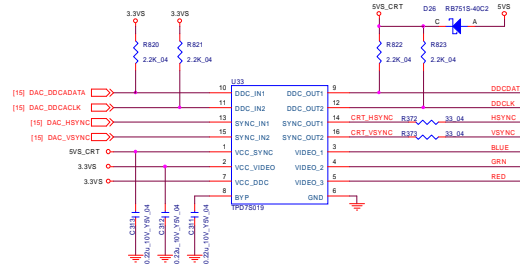
HDMI, CRT

HDMI PORT

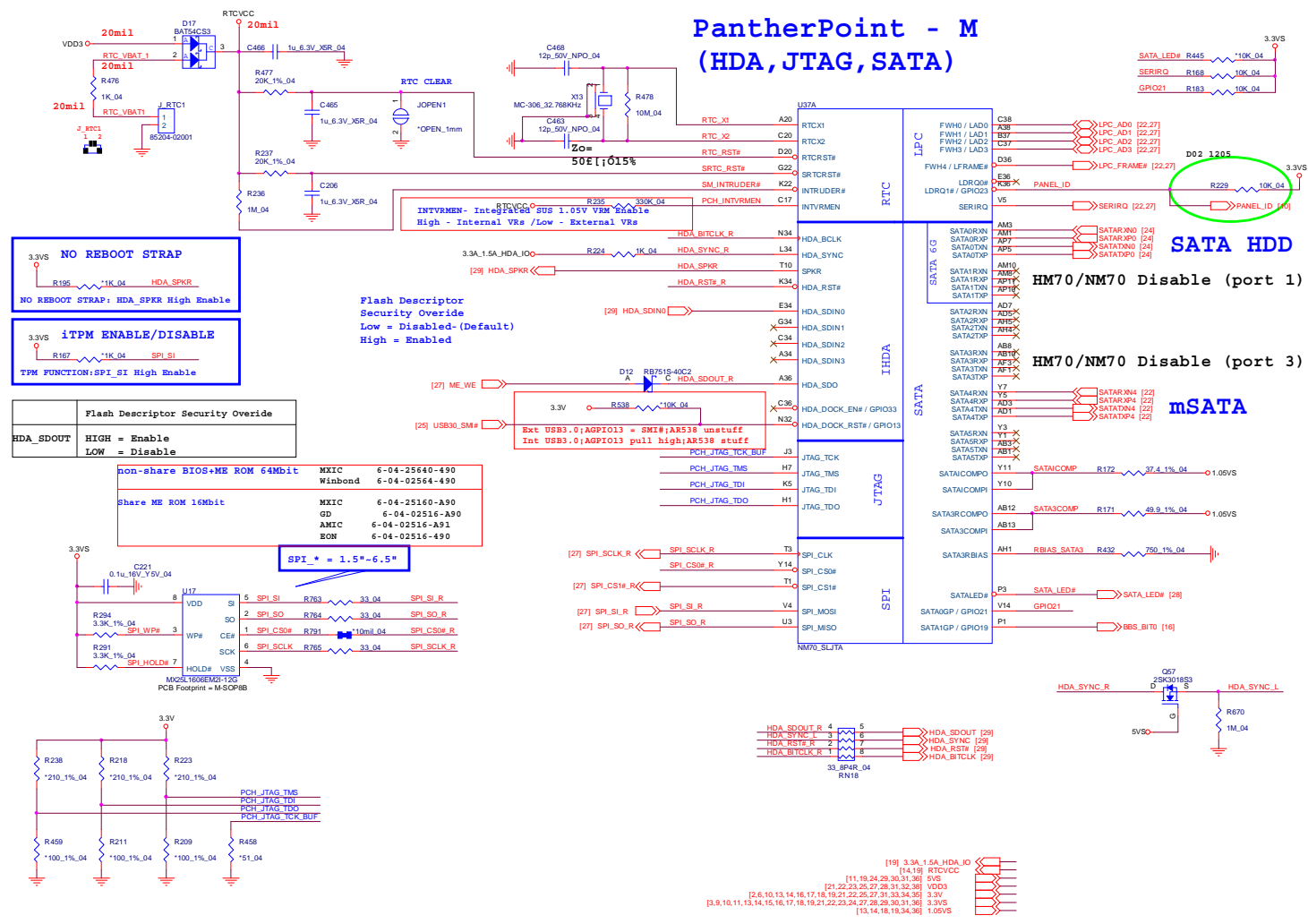


Sheet 11 of 42
HDMI, CRT

CRT PORT



PCH 1/9 - HDA, SATA



Sheet 12 of 42
PCH 1/9 - HDA, SATA

B.Schematic Diagrams

PCH 2/9 - PCIE, SMBUS, CLK

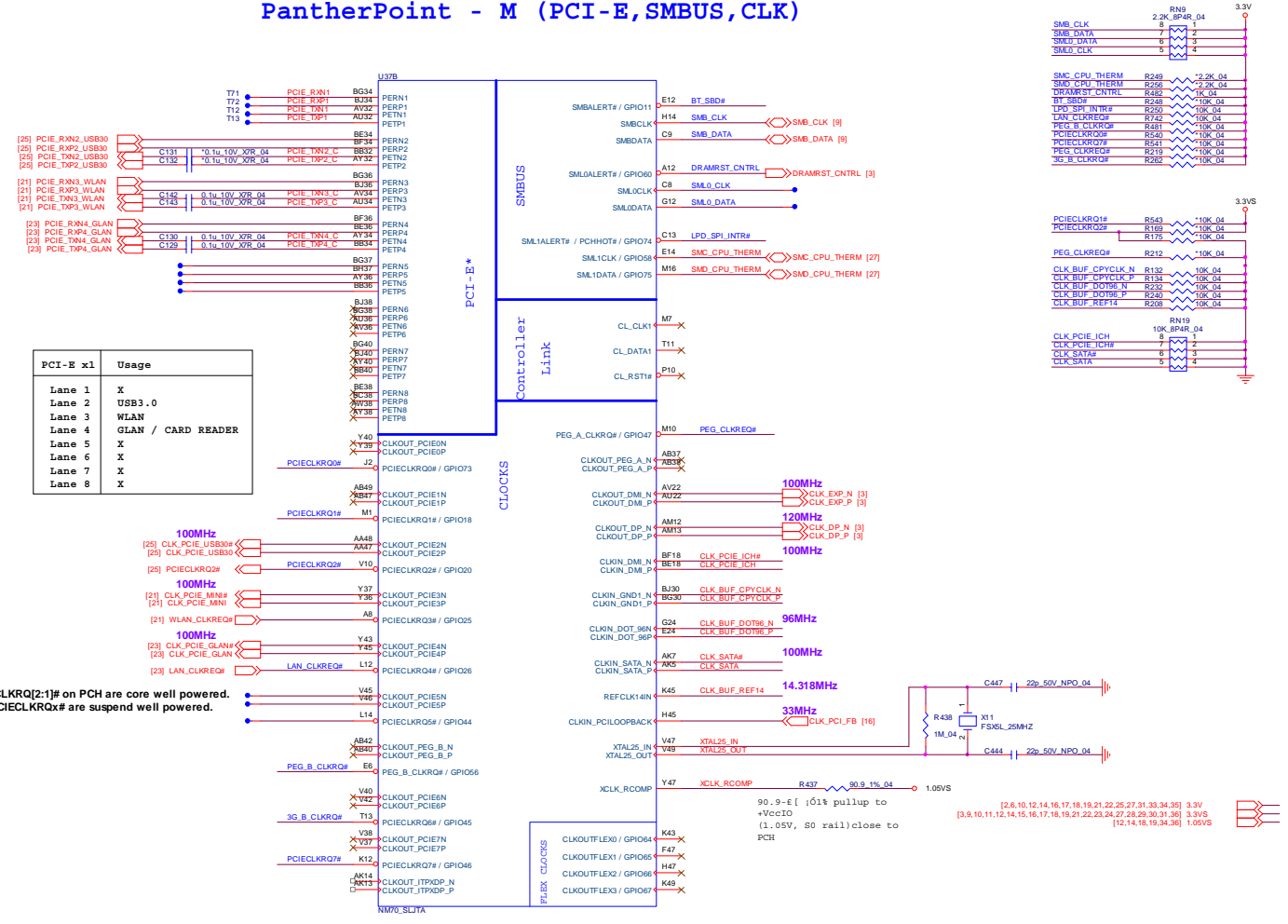
PantherPoint - M (PCI-E, SMBUS, CLK)

B.Schematic Diagrams

Sheet 13 of 42
PCH 2/9 - PCIE,
SMBUS, CLK

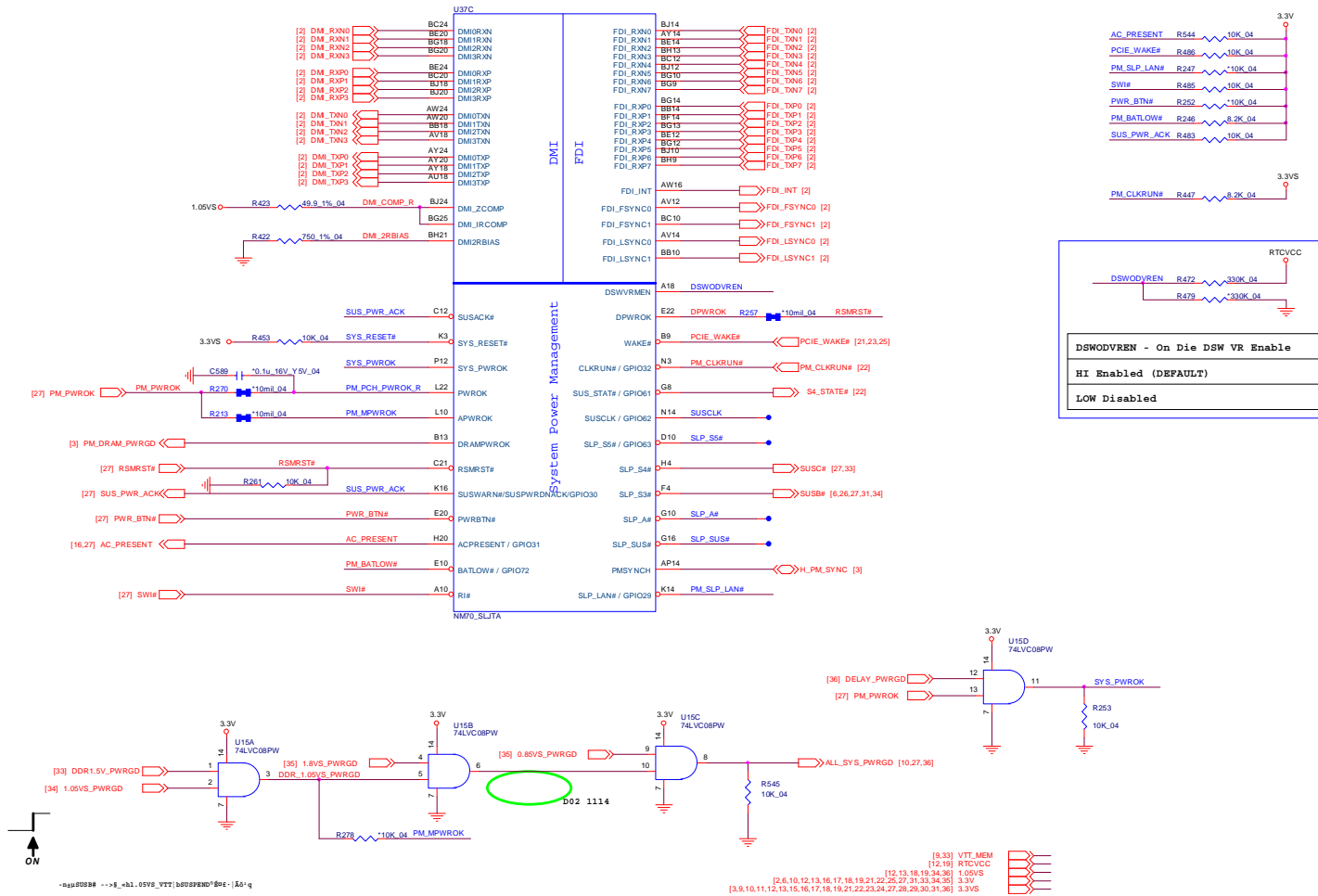
PCI-E x1	Usage
Lane 1	X
Lane 2	USB 3.0
Lane 3	WLAN
Lane 4	GLAN / CARD READER
Lane 5	X
Lane 6	X
Lane 7	X
Lane 8	X

Only PCIECLKRQ[2:1]# on PCH are core well powered.
All other PCIECLKRQx# are suspend well powered.

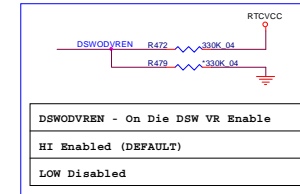


PCH 3/9 - DMI, FDI, GPIO

PantherPoint -M (DMI, FDI, GPIO)



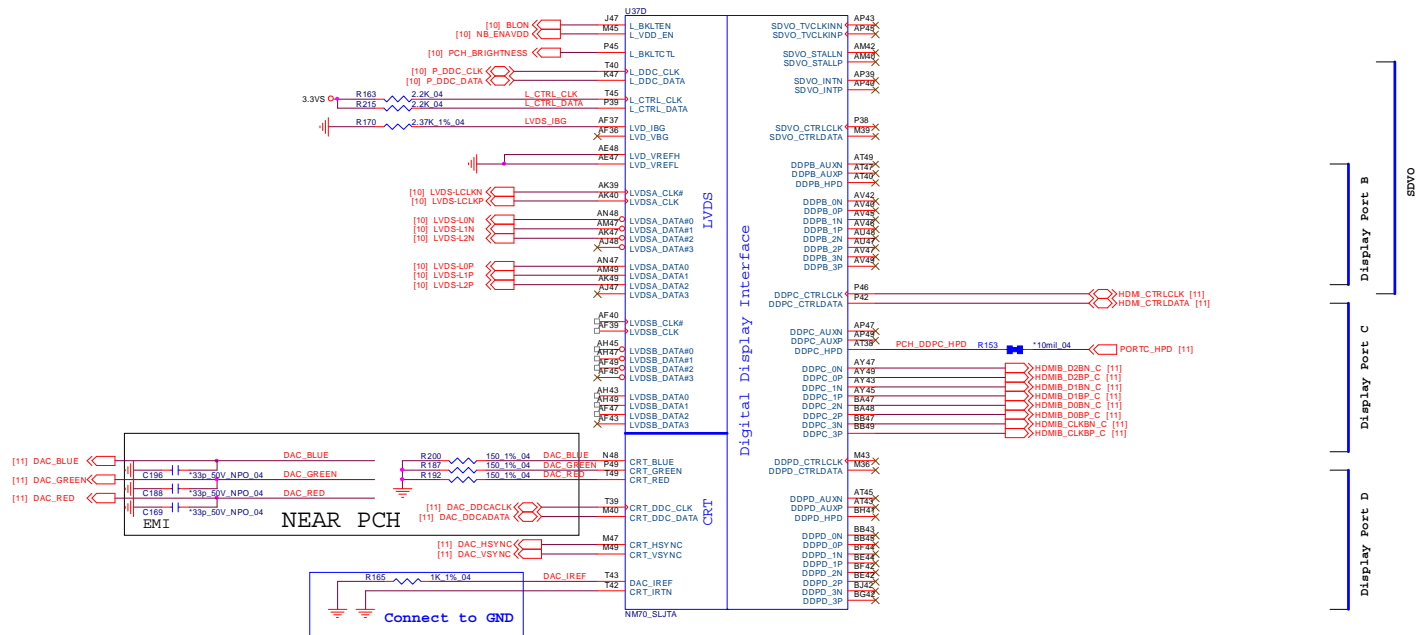
Sheet 14 of 42
PCH 3/9 - DMI, FDI,
GPIO



PCH 4/9 - LVDS, DDI, CRT

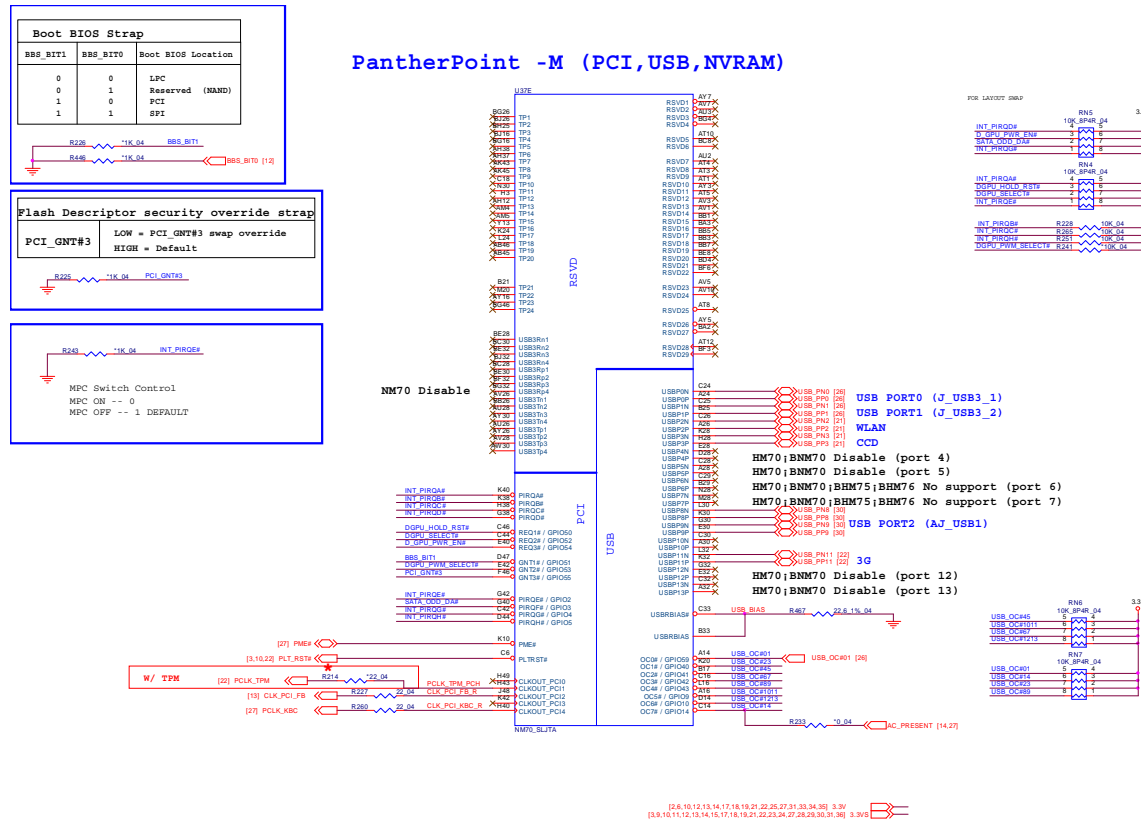
Sheet 15 of 42
PCH 4/9 - LVDS,
DDI, CRT

PantherPoint -M (LVDS, DDI, CRT)



[11, 12, 19, 24, 29, 30, 31, 36] 5V
[3, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 27, 28, 29, 30, 31, 36] 3.3VS

PCH 5/9 - PCI, USB, NVRAM



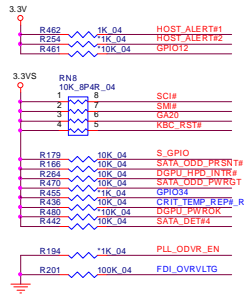
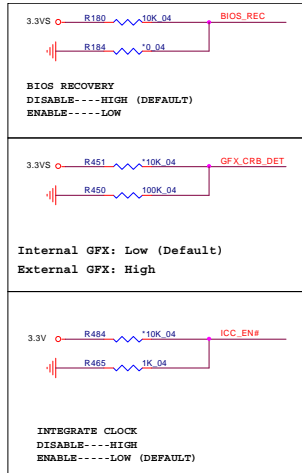
Sheet 16 of 42
PCH 5/9 - PCI, USB,
NVRAM

Schematic Diagrams

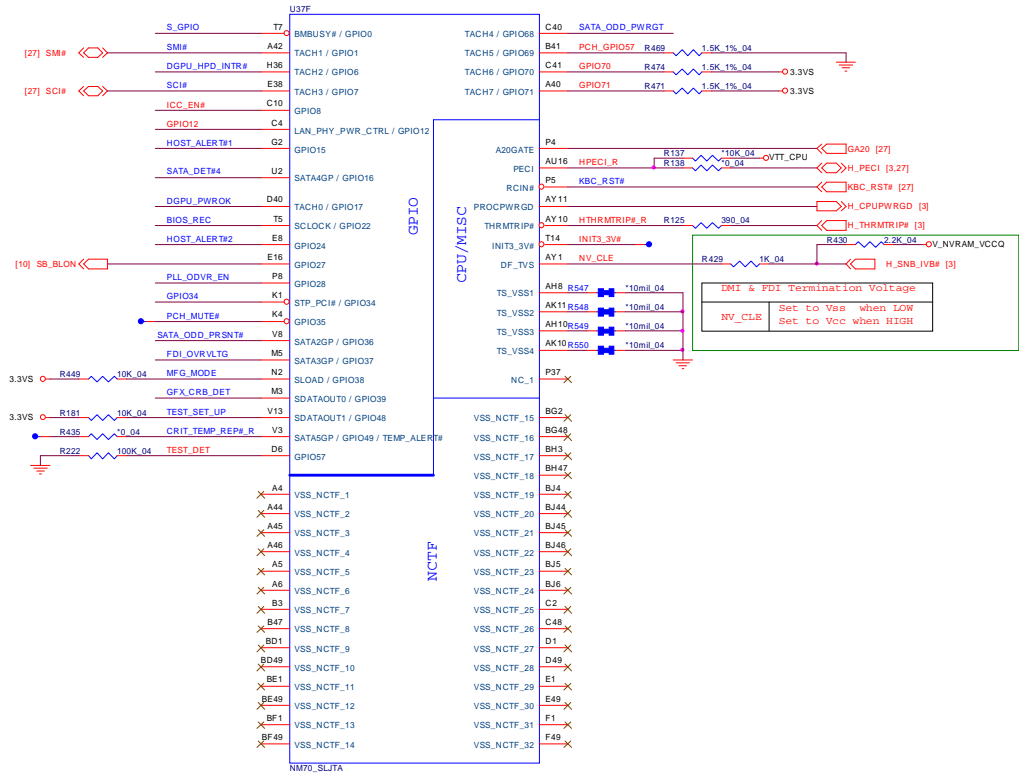
PCH 6/9 - GPIO, VSS_NCTF, RSVD

B.Schematic Diagrams

Sheet 17 of 42
PCH 6/9 - GPIO,
VSS_NCTF, RSVD

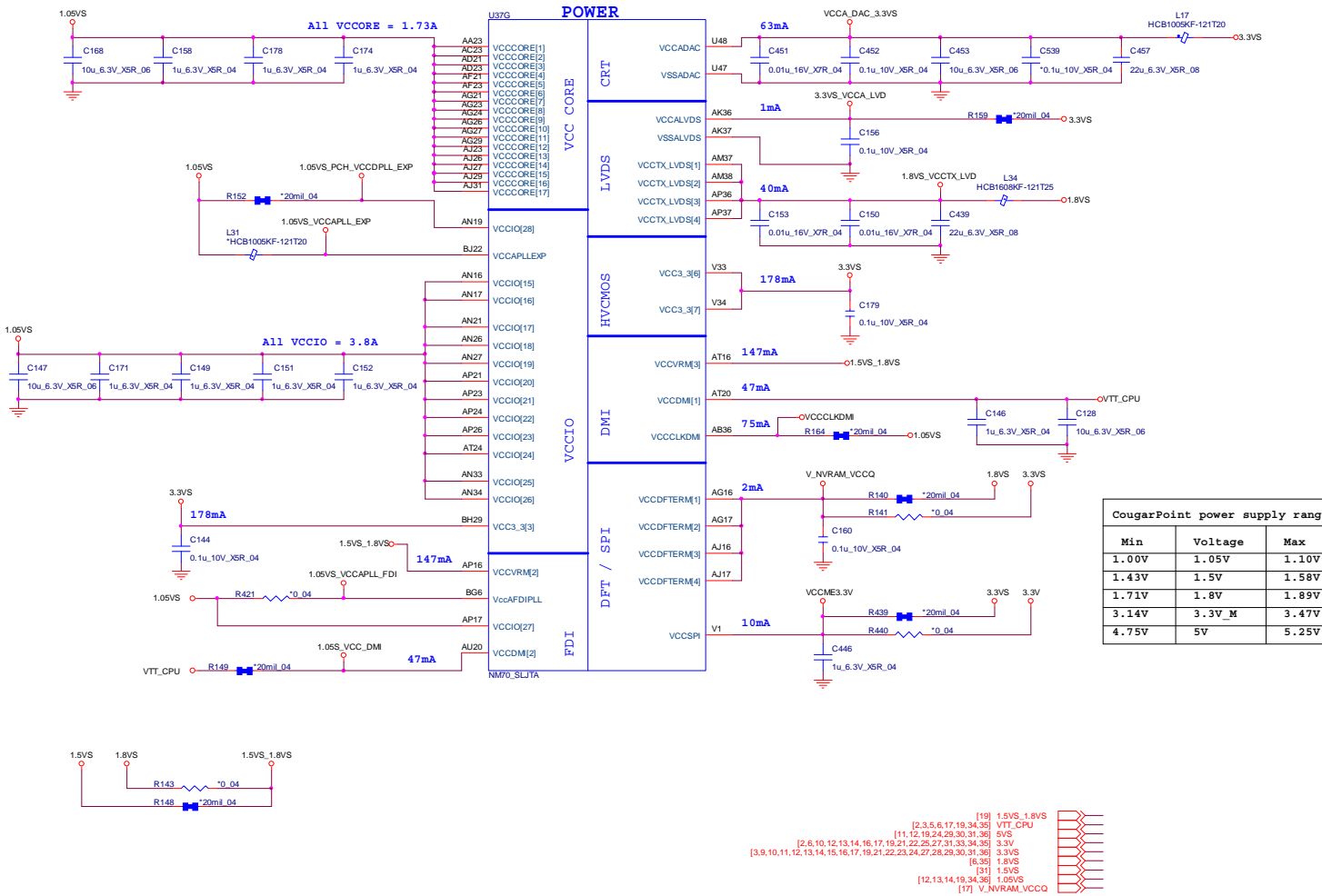


PantherPoint - M (GPIO, VSS_NCTF, RSVD)



PCH 7/9 - PWR

PantherPoint -M (POWER)



Sheet 18 of 42
PCH 7/9 - PWR

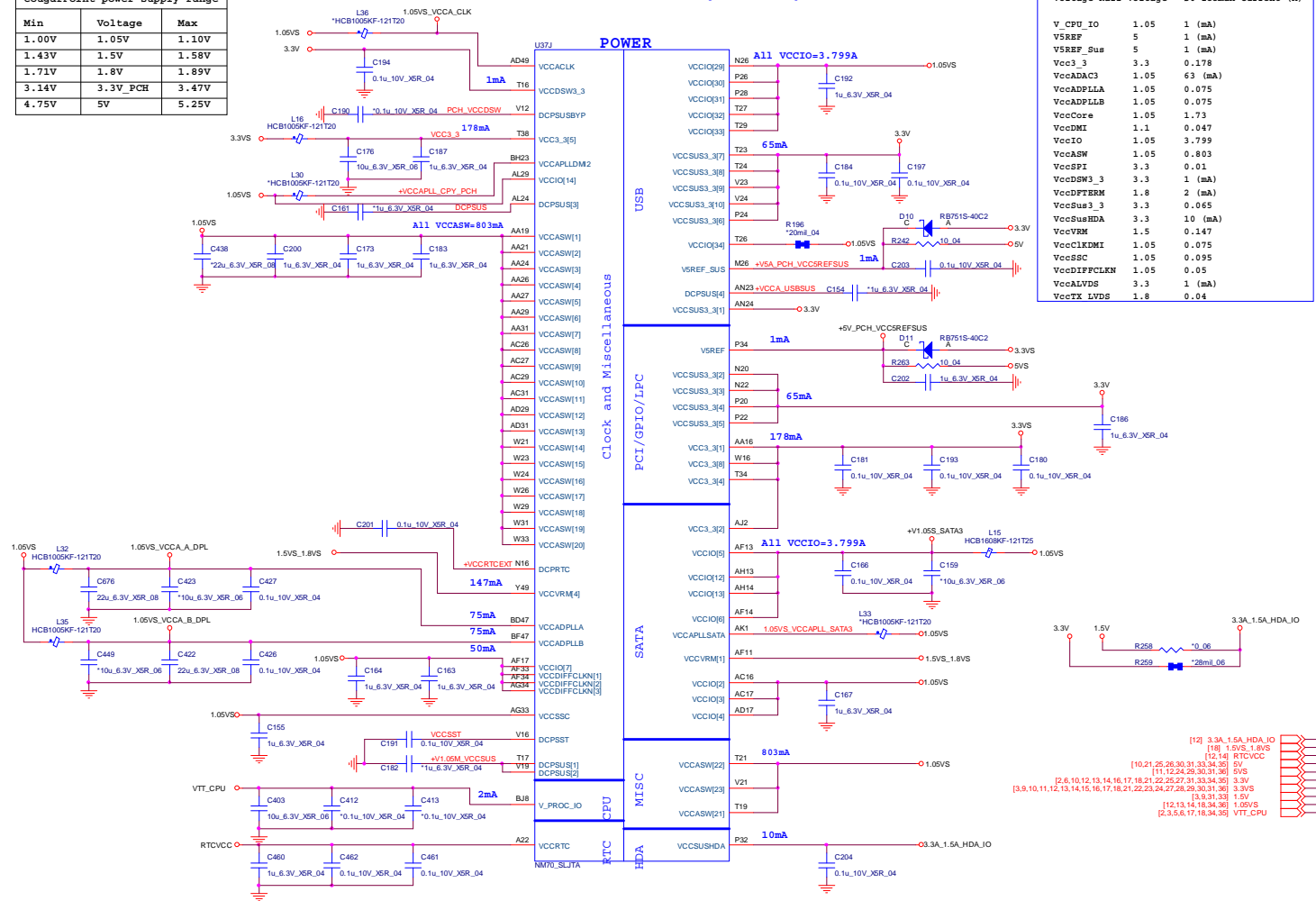
B.Schematic Diagrams

PCH 8/9 - POWER

Sheet 19 of 42
PCH 8/9 - POWER

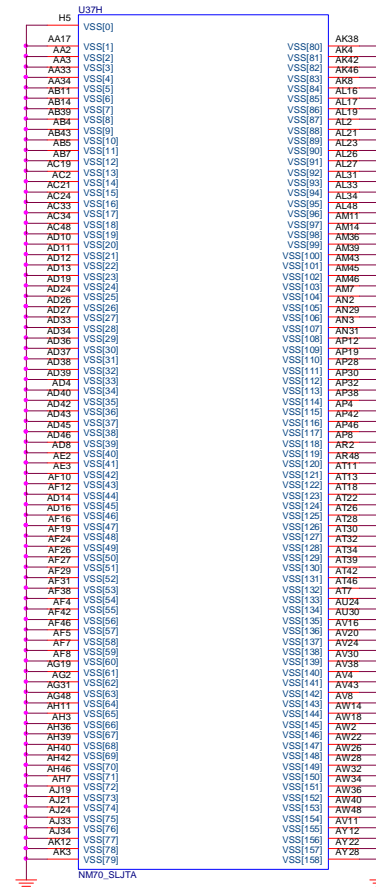
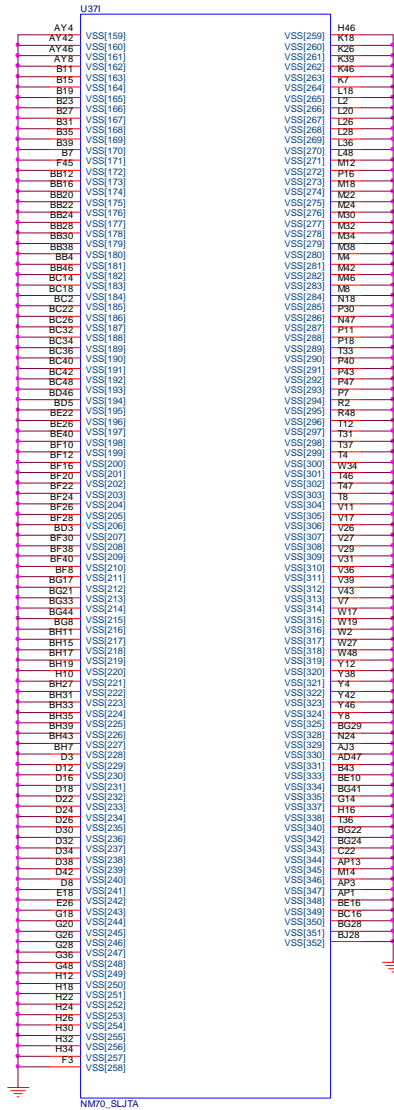
CougarPoint power supply range		
Min	Voltage	Max
1.00V	1.05V	1.10V
1.43V	1.5V	1.58V
1.71V	1.8V	1.89V
3.14V	3.3V_PCH	3.47V
4.75V	5V	5.25V

PantherPoint - M (POWER)



PCH 9/9 - GND

PantherPoint -M (GND)

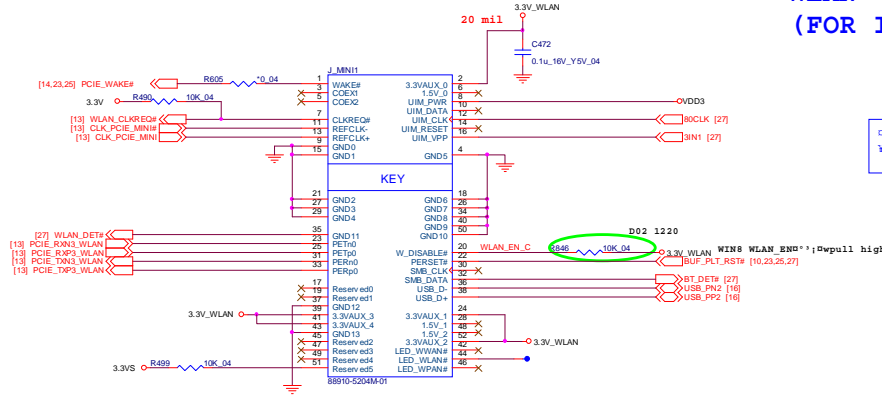


Sheet 20 of 42
PCH 9/9 - GND

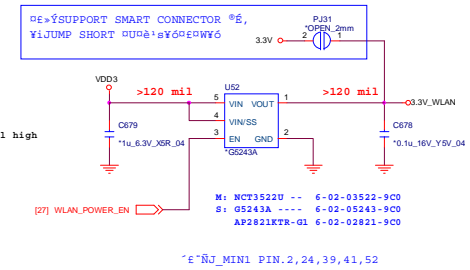
B.Schematic Diagrams

WLAN, CCD

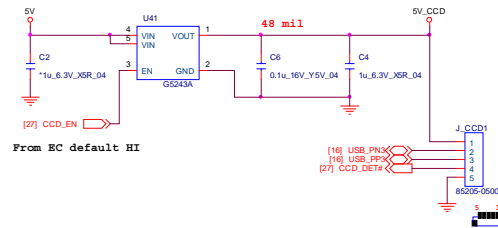
MINI CARD WLAN



WLAN POWER (FOR INTEL SMART CONNECTOR)



CCD

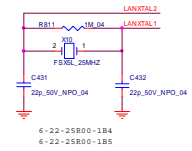


- [3,9,10,11,12,13,14,15,16,17,18,19,22,23,24,27,28,29,30,31,36] 3.3VS
- [2,6,10,12,13,14,16,17,18,19,22,26,27,31,33,34,35] 3.3V
- [10,19,25,26,30,31,33,34,35] 5V
- [12,22,23,25,27,28,31,32,38] VDD3

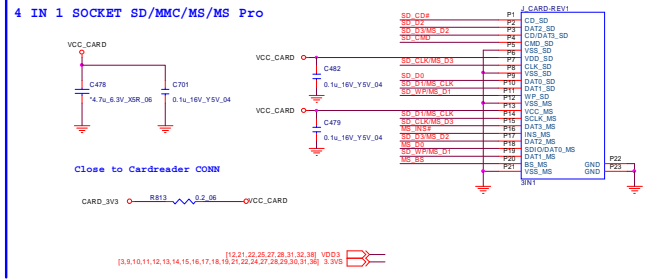
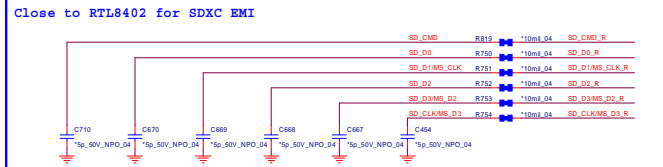
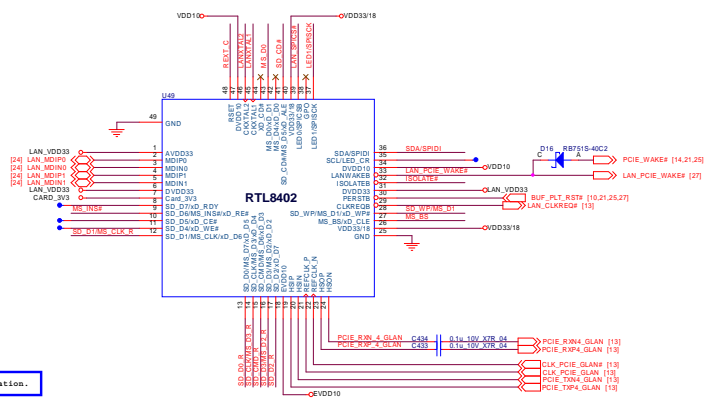
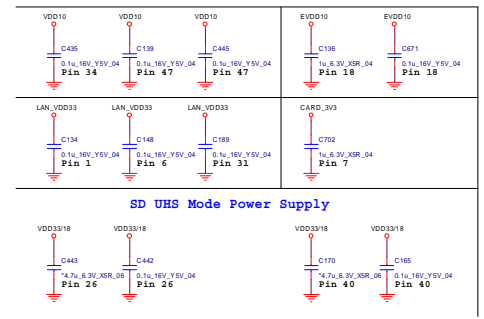
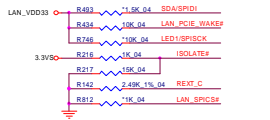
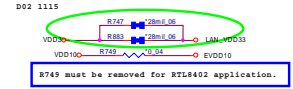
Sheet 21 of 42
WLAN, CCD

LAN RTL8402, Card Reader

RTL8402



LAN VDD33 Rising Time;G
1ms ~ 100ms

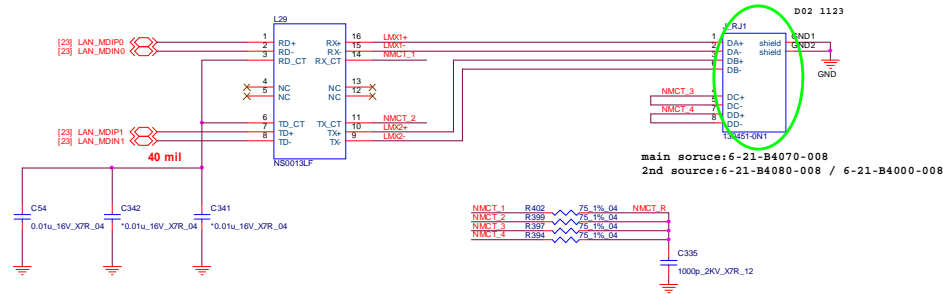


Sheet 23 of 42
LAN RTL8402,
Card Reader

B.Schematic Diagrams

Transformer, SATA HDD

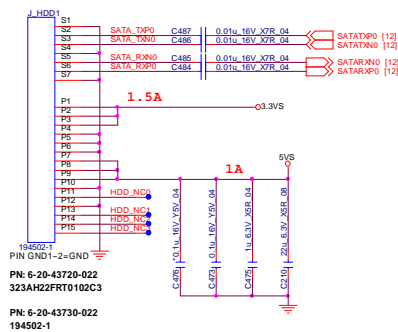
10/100 LAN Transformer



Sheet 24 of 42
Transformer,
SATA HDD

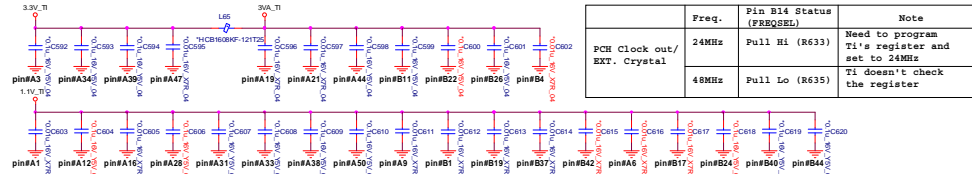
B.Schematic Diagrams

SATA HDD



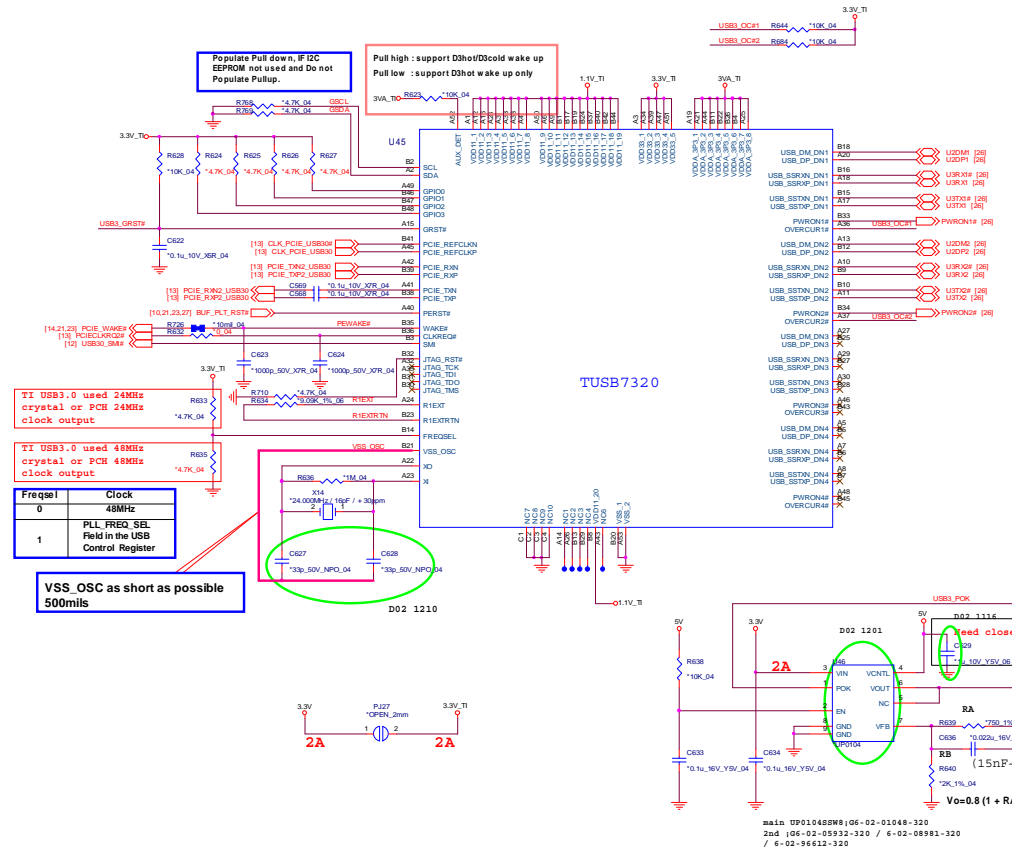
[3,9,10,11,12,13,14,15,16,17,18,19,21,22,23,27,28,29,30,31,36] 3.3VS
[11,12,19,23,30,31,36] 5VS

USB 3.0 TI TUSB7320



Sheet 25 of 42
USB 3.0 TI
TUSB7320

B.Schematic Diagrams



Internal Chip Trace Length Mismatch

Ball no	NetName	Bondwire Length(m)	Difference (mil)
A41	PCIE_RXN2_USB30	118	28
B38	PCIE_RXP2_USB30	89	
A42	PCIE_TXN2_USB30	112	27
B39	PCIE_TXP2_USB30	85	
B41	CLK_PCIE_USB30#	87	19
A45	CLK_PCIE_USB30	106	

Internal Chip Trace Length Mismatch

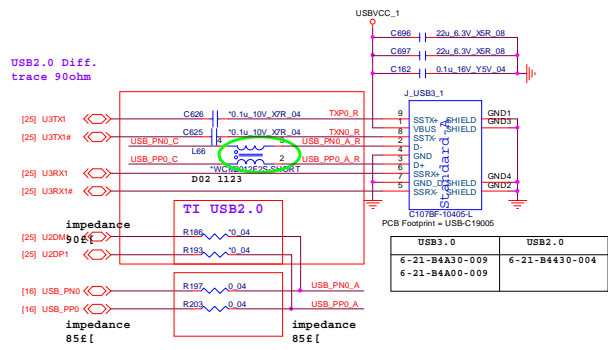
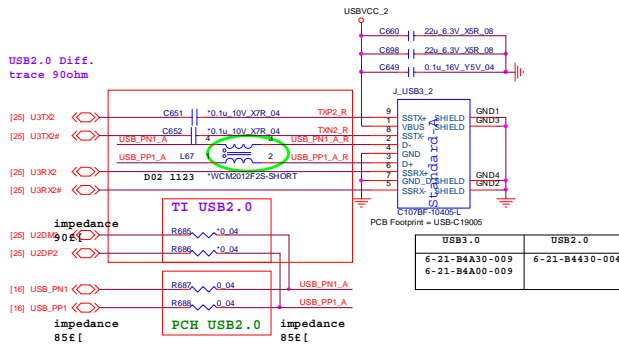
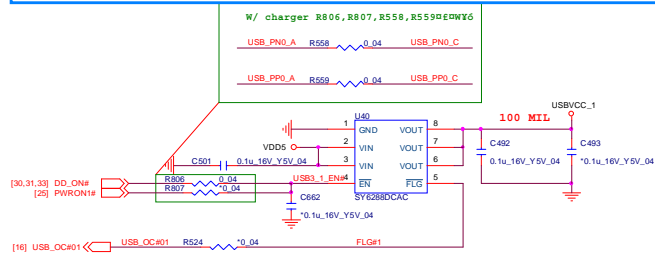
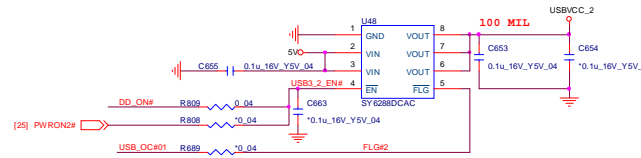
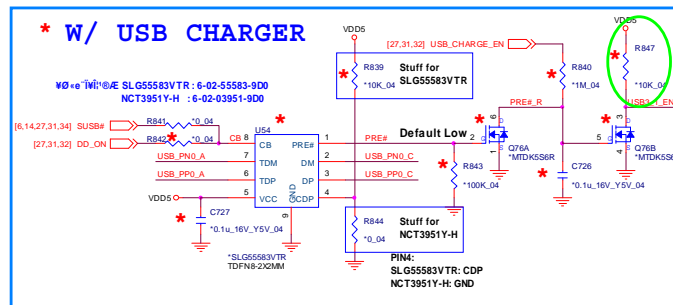
Ball no	NetName	Bondwire Length(m)	Difference (mil)
B15	USTX1#	96	20
A17	USTX1	116	
B16	USRX1#	91	20
A18	USRX1	111	
B18	UZDM1	83	22
A20	UZDP1	105	
B10	USTX2#	73	
A11	USTX2	104	31
A10	USRX2#	94	
B9	USRX2	67	27
A13	UZDM2	127	
B12	UZDP2	93	34

main UP01048SW8|06-02-01048-320
2nd |06-02-05932-320 / 6-02-08981-320
/ 6-02-96612-320

(2,6,10,12,13,14,16,17,18,19,21,22,27,31,33,34,36) 3.3V
(10,19,21,26,30,31,33,34,36) 5V
(12,21,22,25,27,28,31,33,36) VDD3

USB Port, USB Charger

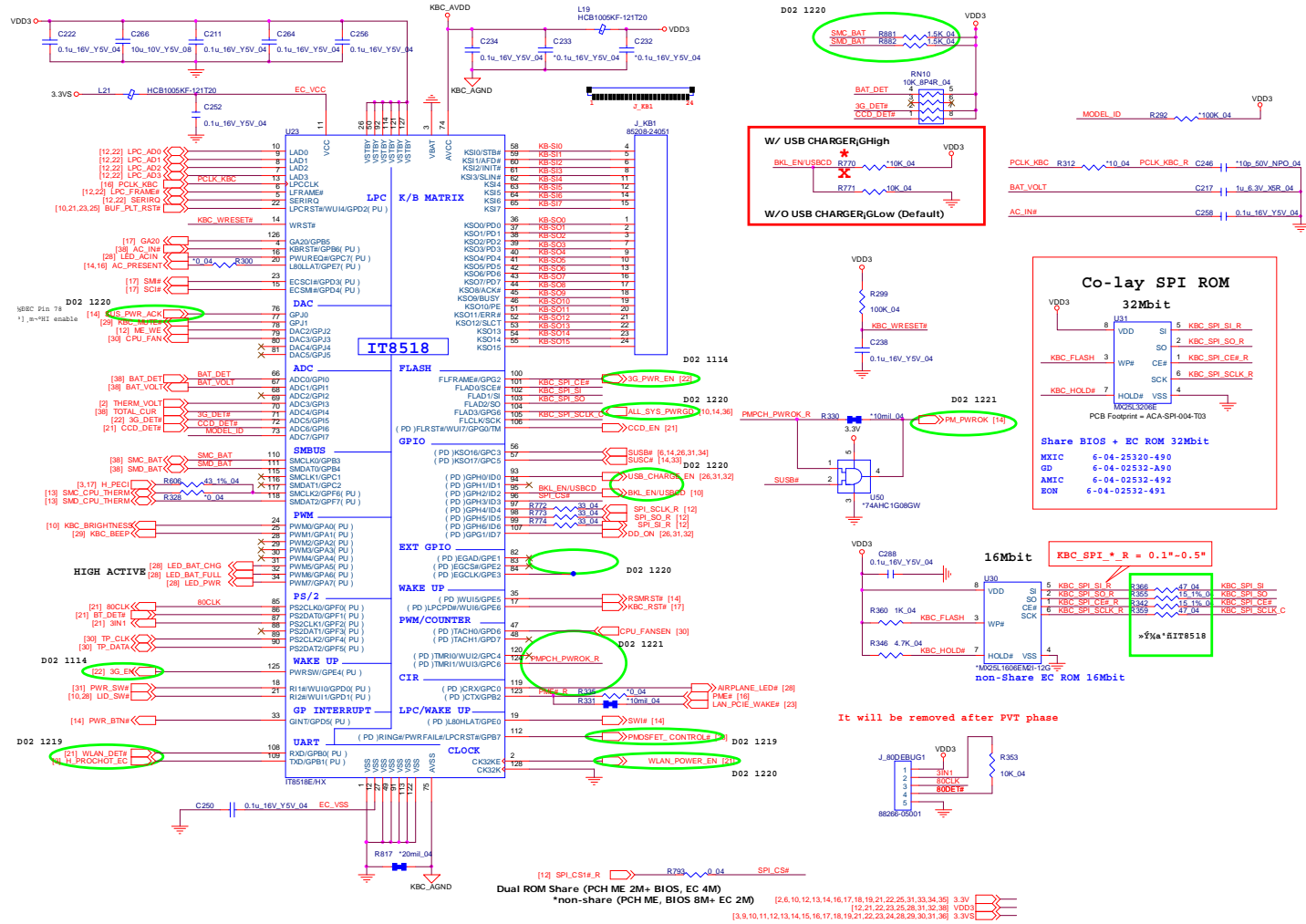
USB 3.0/USB2.0



Sheet 26 of 42
USB Port,
USB Charger

KBC-ITE IT8518

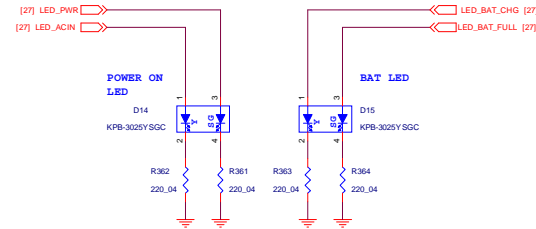
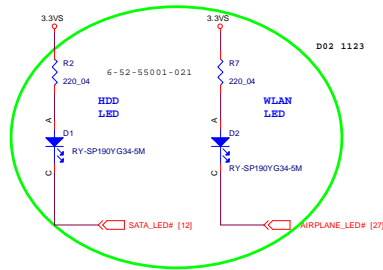
Sheet 27 of 42
KBC-ITE IT8518



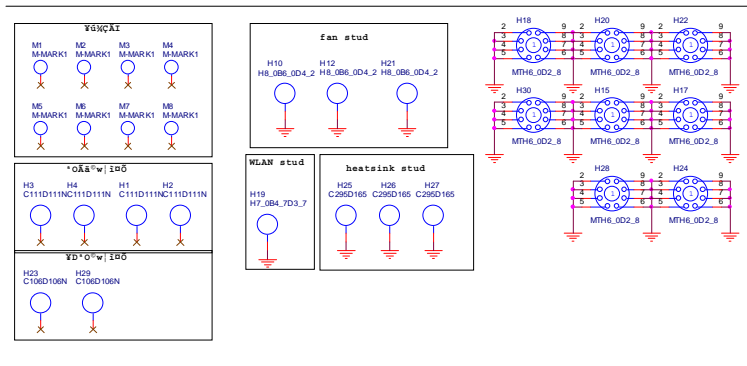
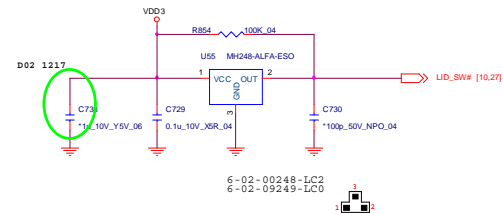
It will be removed after PVT phase

LED / LID Switch

LED



LID SWITCH IC



[3,9,10,11,12,13,14,15,16,17,18,19,21,22,23,24,27,29,30,31,36] VDD3 [12,21,22,23,25,27,31,32,38] 3.3V5

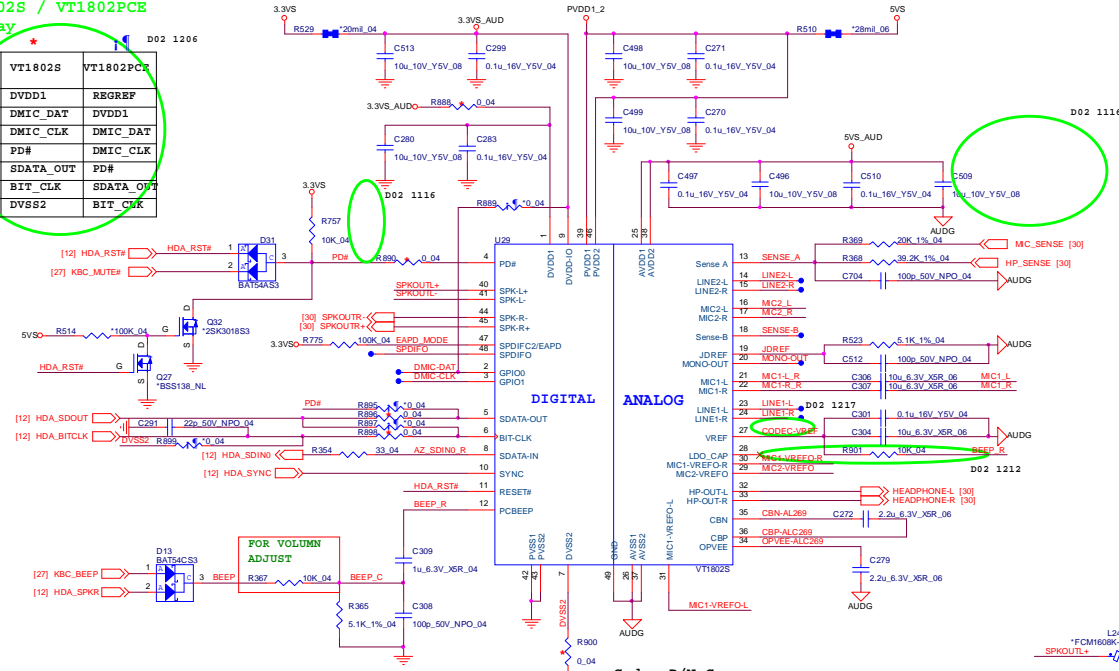
Sheet 28 of 42
LED / LID Switch

AUDIO CODEC VT1802S

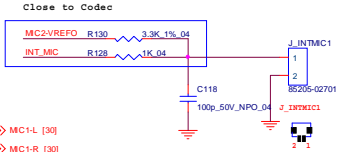
Sheet 29 of 42
AUDIO CODEC
VT1802S

AUDIO CODEC
VT1802S / VT1802PCE
co-layer

	VT1802S	VT1802PCE
pin1	DVDD1	RBGREF
pin2	DMIC_DAT	DVDD1
pin3	DMIC_CLK	DMIC_DAT
pin4	PD#	DMIC_CLK
pin5	SDATA_OUT	PD#
pin6	BIT_CLK	SDATA_OUT
pin7	DVSS2	BIT_CLK



Codec P/N: G
1st: G6-03-01802-033



3.3VS_AUD

5VS

AZ_RST#

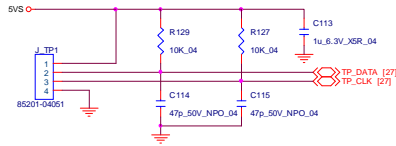
PD#

Speaker wire length less than 8000mils, It don't need LC Filter.
SPKOUT+R-,L+,L- Trace width
Speaker 4 ohm ----> 40mils
Speaker 8 ohm ----> 20mils

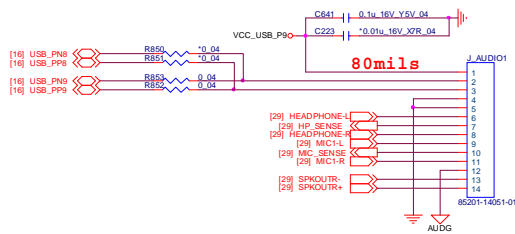
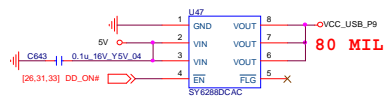


Fan, TP, Connector

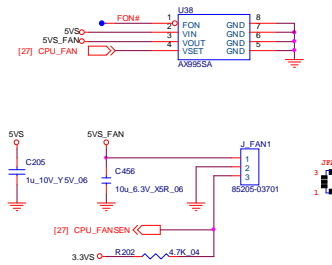
CLICK B'd CONN



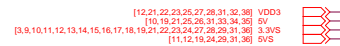
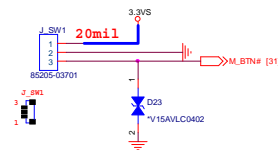
Audio B'd CONN



FAN CONTROL

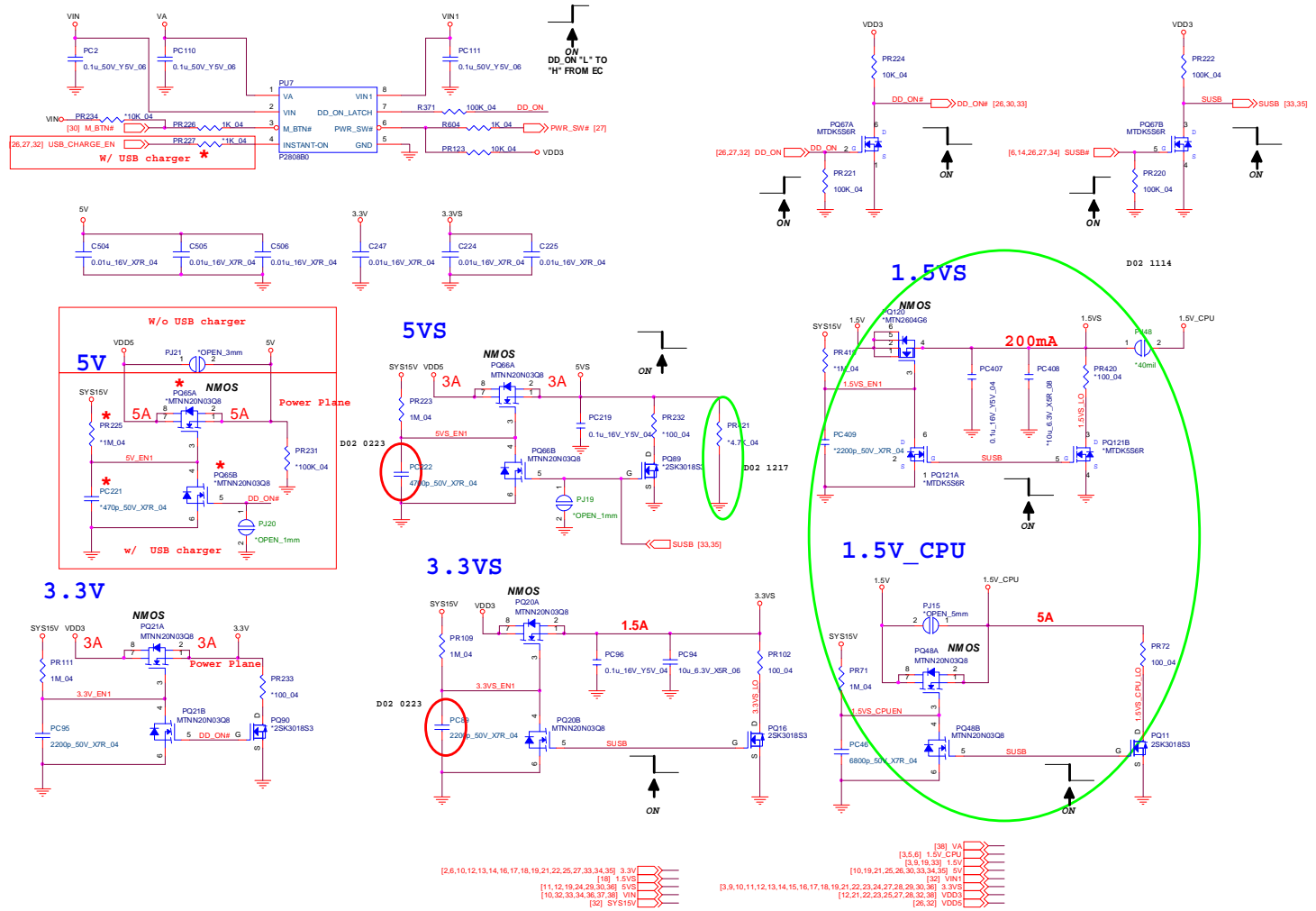


POWER SWITCH B'd CONN



Sheet 30 of 42
Fan, TP, Connector

Power System

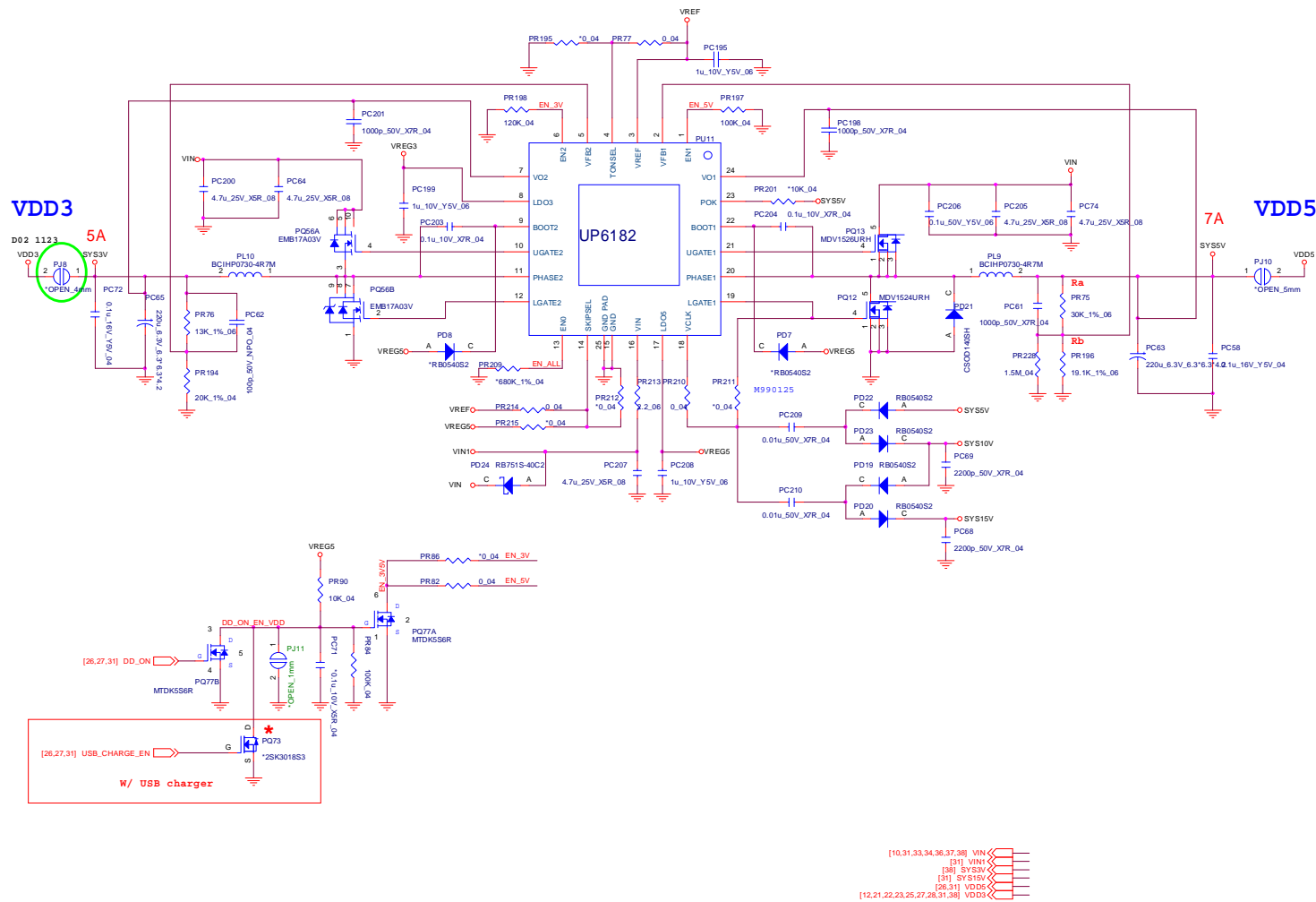


Sheet 31 of 42
Power System

B.Schematic Diagrams

VDD3, VDD5

VDD3/VDD5



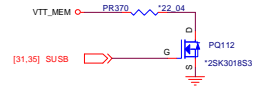
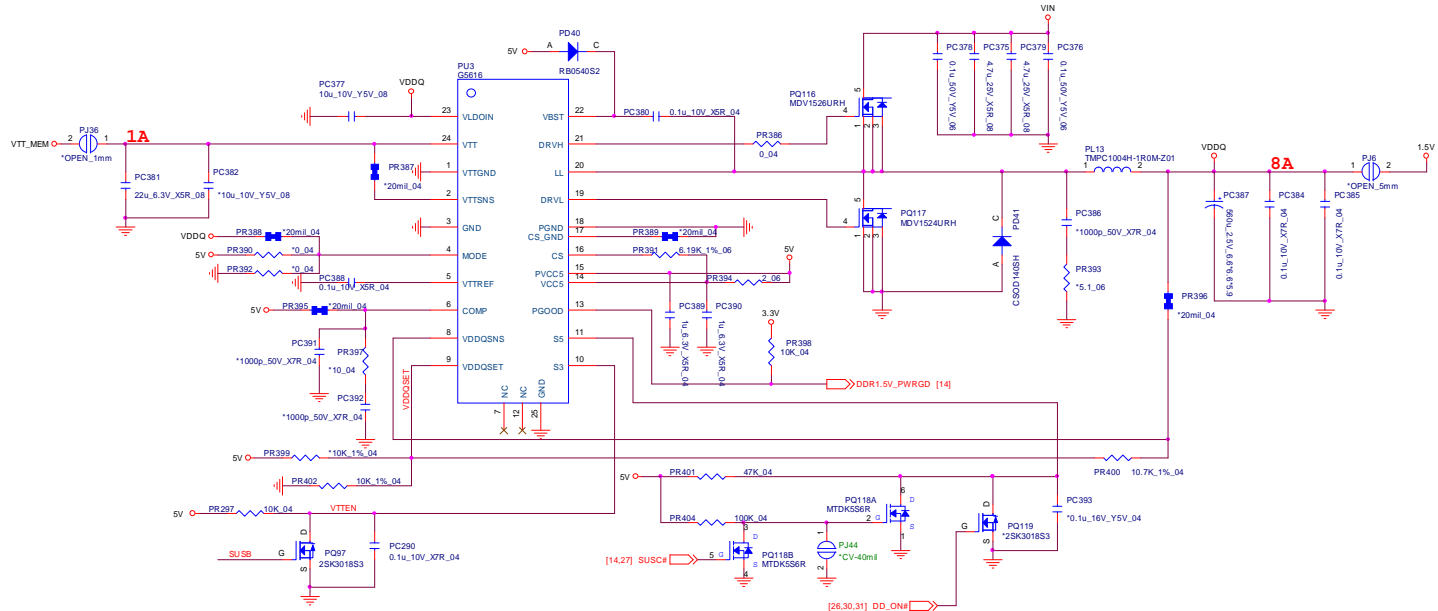
Sheet 32 of 42
VDD3, VDD5

Schematic Diagrams

POWER 1.5V/0.75V

B.Schematic Diagrams

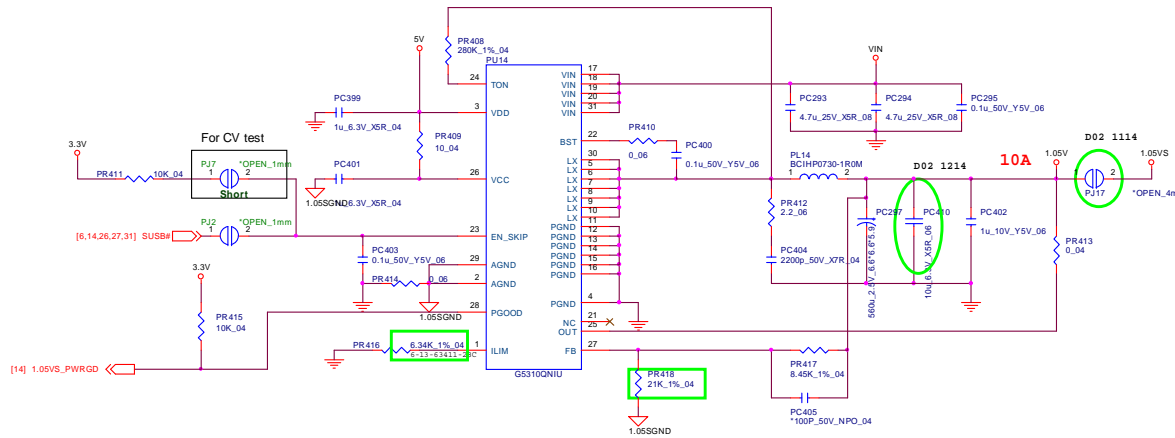
Sheet 33 of 42
POWER 1.5V/0.75V



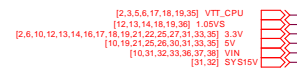
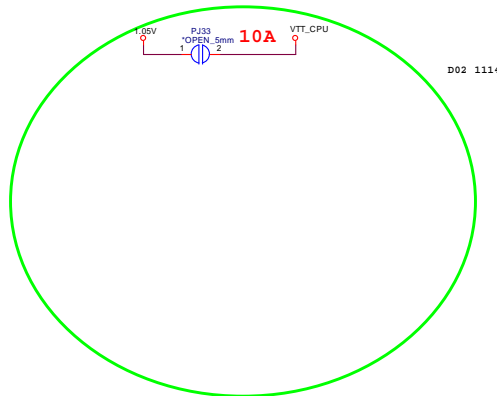
- [2,6,10,12,13,14,16,17,18,19,21,22,25,27,31,34,35] 3.3V
- [10,19,21,25,28,30,31,34,35] 5V
- [10,31,32,34,36,37,38] VIN
- [9] VTTMEM
- [3,8,18,31] 1.5V

POWER 1.05VS, VTT_CPU

1.05VS



VTT_CPU



Sheet 34 of 42
POWER 1.05VS,
VTT_CPU

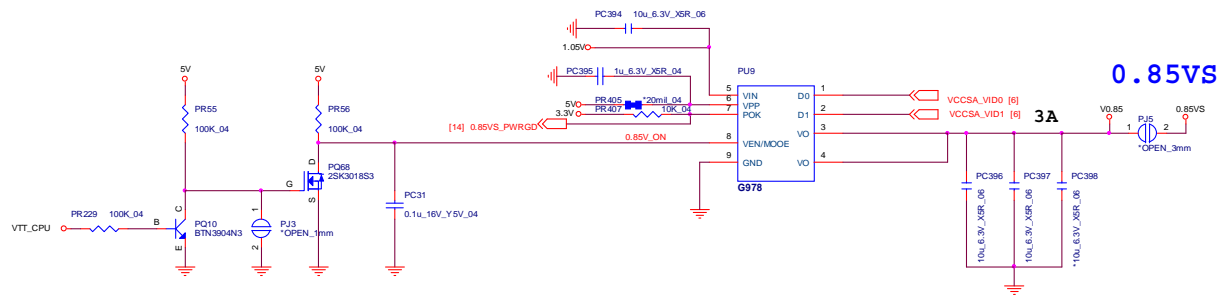
Schematic Diagrams

Power 0.85VS, 1.8VS

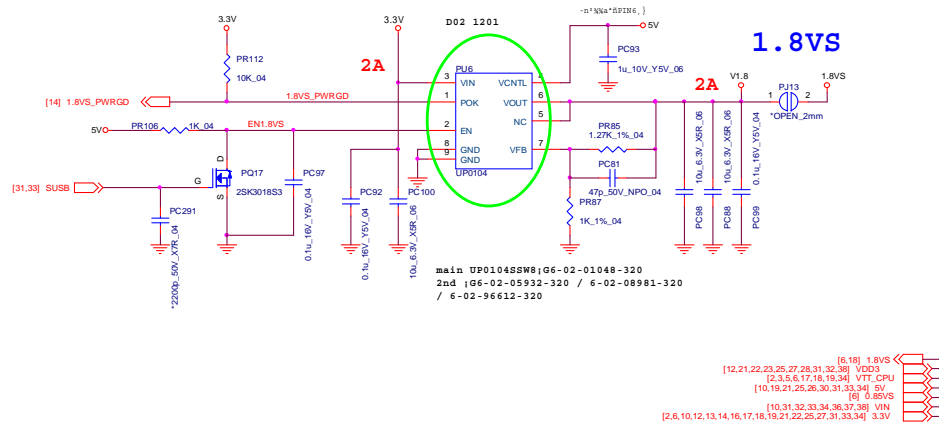
0.85VS

	0.9V	0.8V	0.725V	0.675V
VCCSA_VID0	0	0	1	1
VCCSA_VID1	0	1	0	1
	SET0	SET2	SET1	SET3

Sheet 35 of 42
Power 0.85VS,
1.8VS

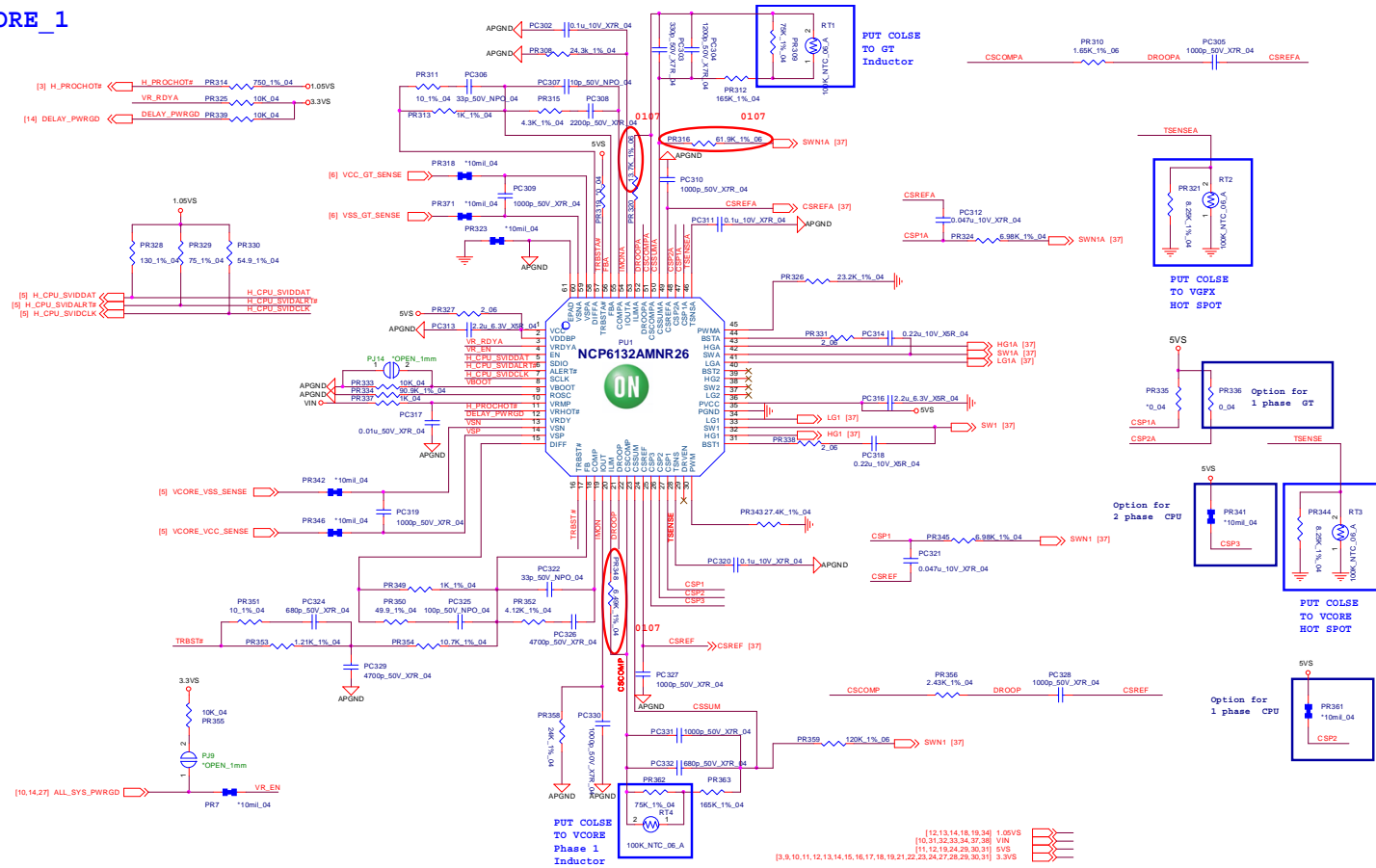


1.8VS



POWER VCORE1

VCORE_1

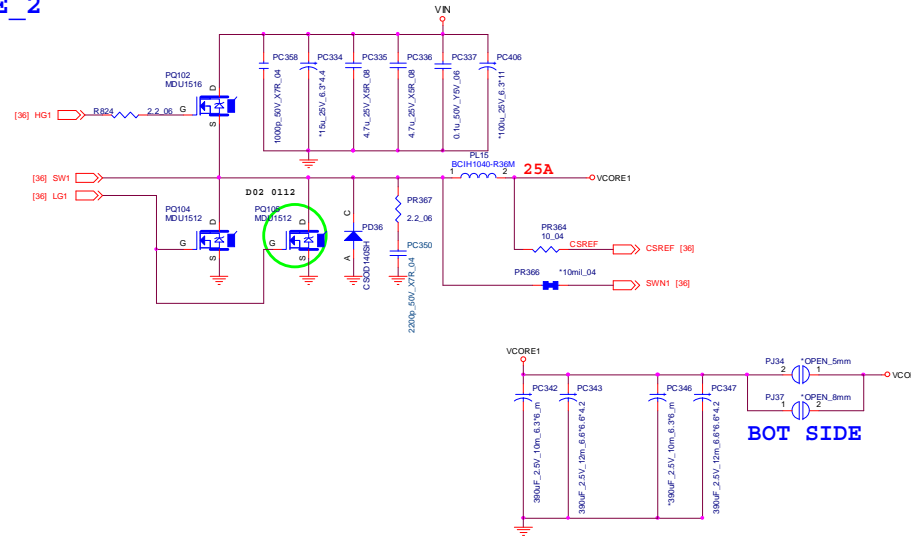


Sheet 36 of 42
POWER VCORE1

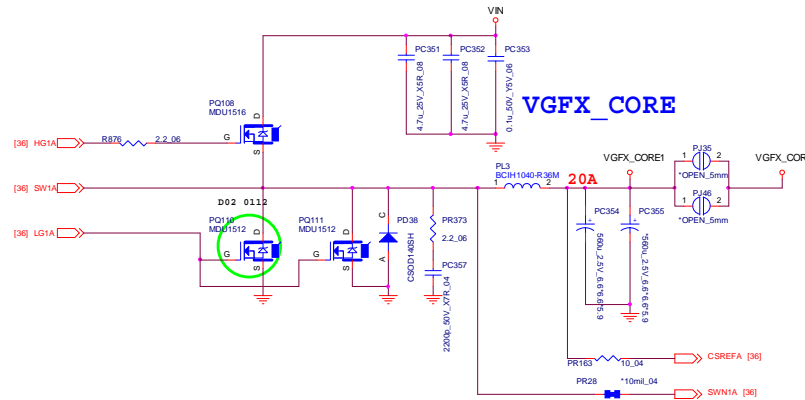
B.Schematic Diagrams

POWER VCORE2

VCORE_2



VGFX_CORE

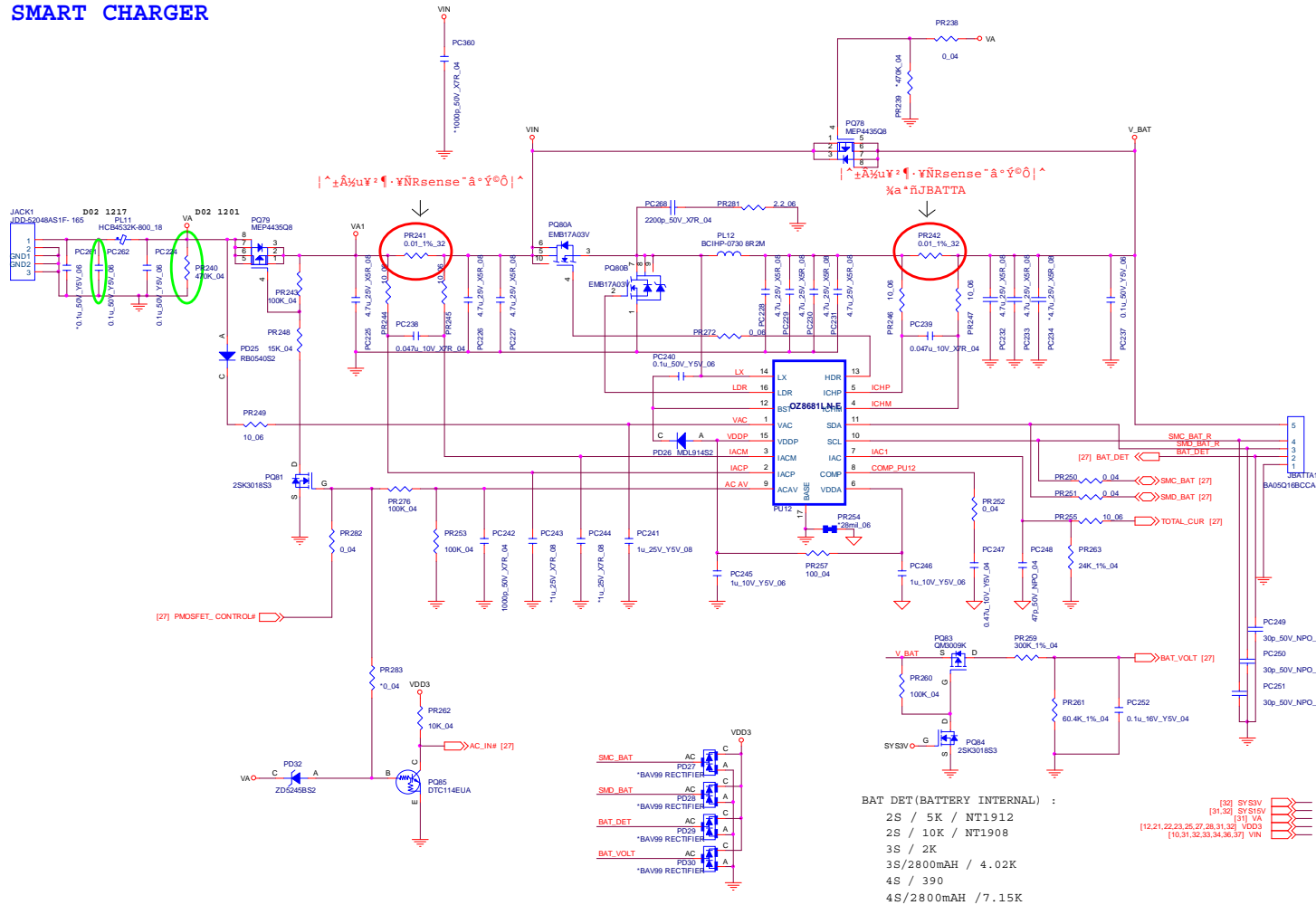


- [5] VCORE1
- [6] VGFX_CORE1
- [7] VCORE
- [8] VGFX_CORE
- [9] VCORE
- [10, 31, 32, 33, 34, 36, 38] VIN
- [11, 12, 19, 24, 29, 30, 31, 36] SVS

Sheet 37 of 42
POWER VCORE2

Power AC In, Smart Charger

SMART CHARGER

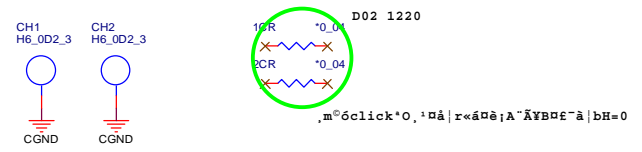
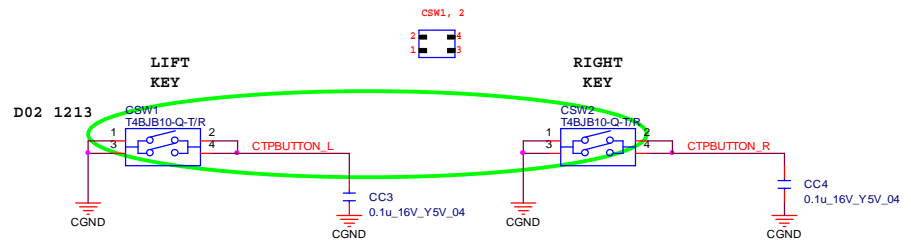
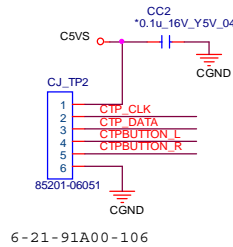
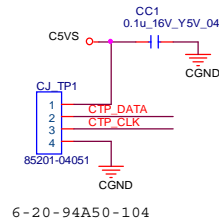


Sheet 38 of 42
Power AC In,
SmArt Charger

Click Board

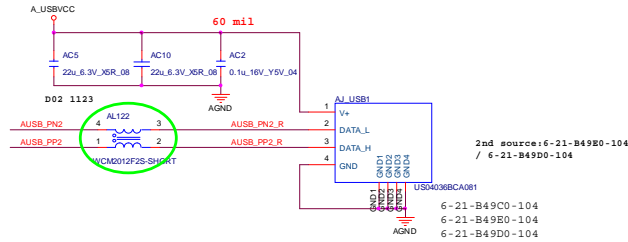
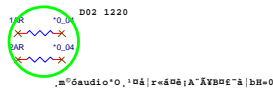
CLICK BOARD

Sheet 39 of 42
Click Board

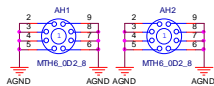
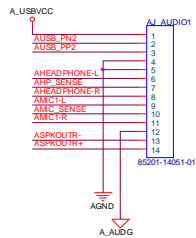


Audio Board

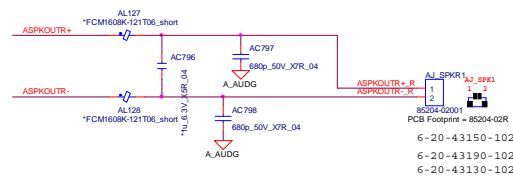
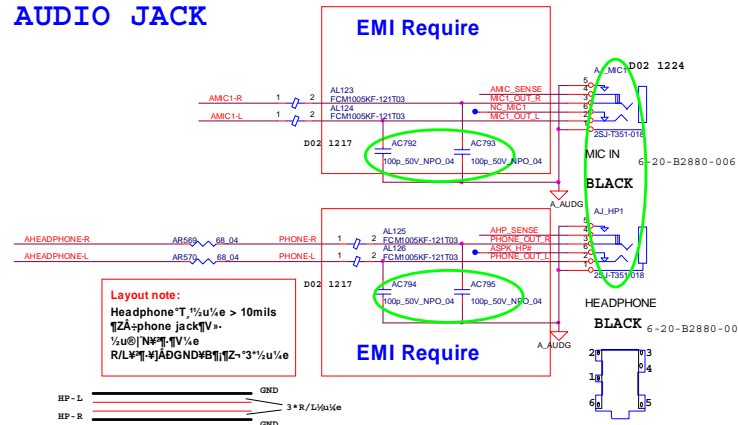
USB PORT



TO M/B



AUDIO JACK

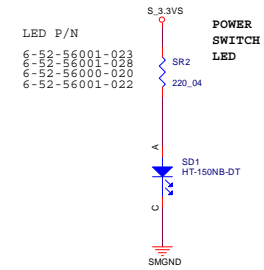
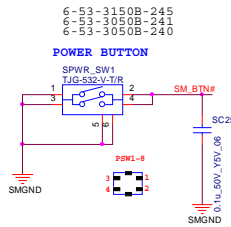
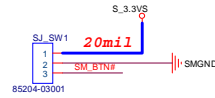


Sheet 40 of 42
Audio Board

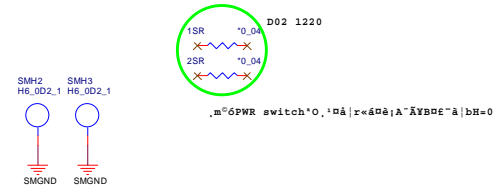
Power Switch & LED Board

POWER SW & LED

Sheet 41 of 42
Power Switch &
LED Board

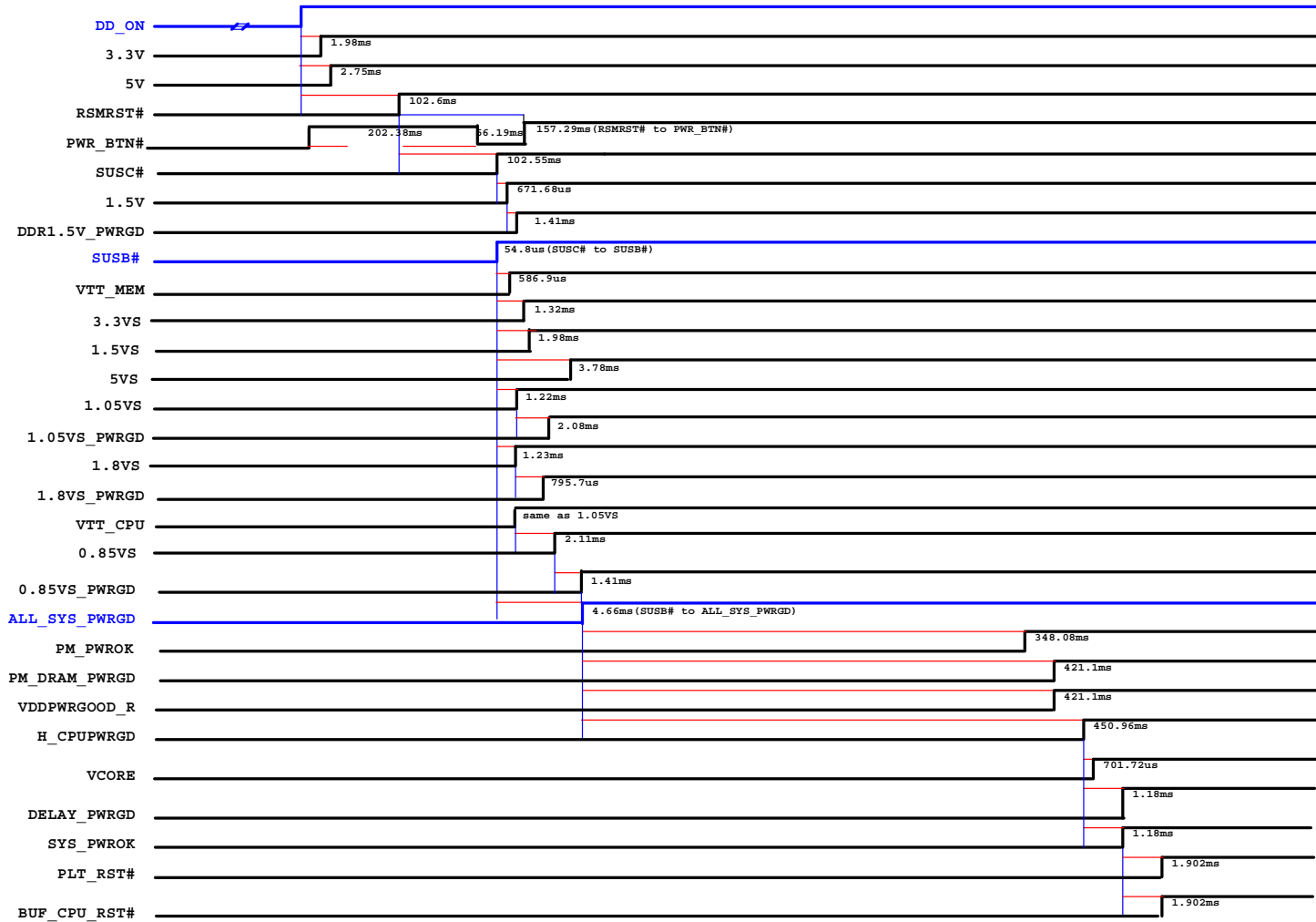


LED P/N
6-52-56001-023
6-52-56001-023
6-52-56000-020
6-52-56001-023
6-52-56001-022



Power On SEQ

POWER ON SEQUENCE



Sheet 42 of 42
Power On SEQ

Schematic Diagrams

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.