

# SERVICE MANUAL

W340EU/W345EU

*notebook*





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**Notebook Computer**

**W340EU/W345EU**

**Service Manual**

## Notice

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May 2012

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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 **W340EU/W345EU** 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

## Preface

---

### 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, 3.42A or 18.5V, 3.5A (**65W**) minimum AC/DC Adapter.

### CAUTION

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

### 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.

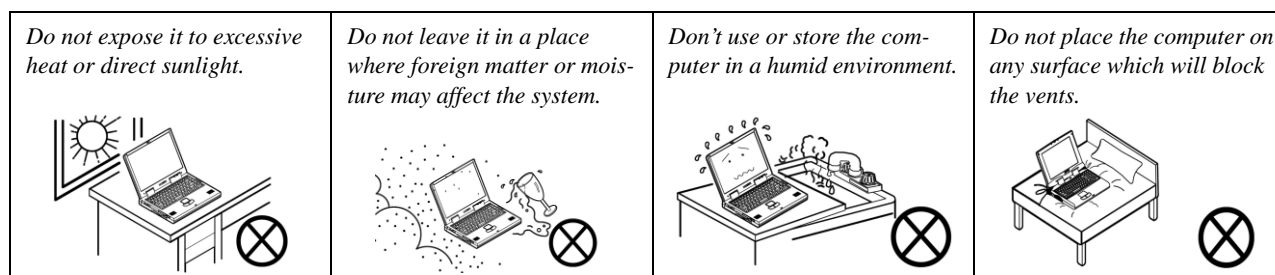
## Instructions for Care and Operation

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

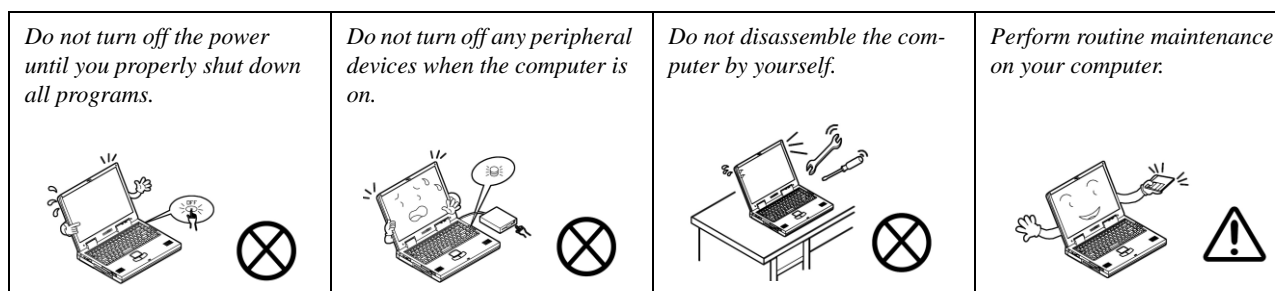
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



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

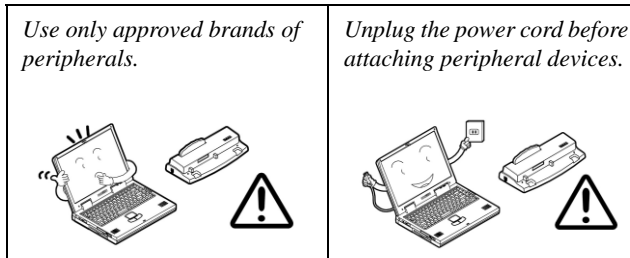


3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



## Preface

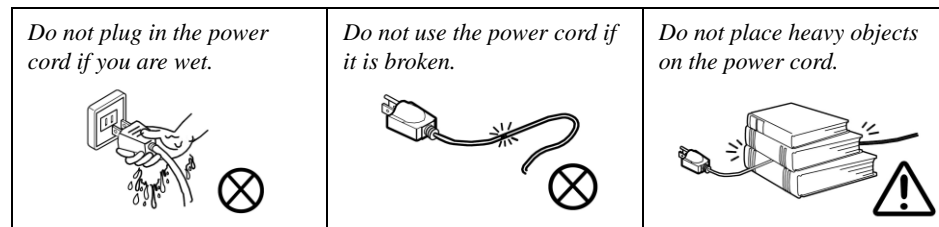
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



## Power Safety

The computer has specific power requirements:

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



### Power Safety Warning

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

## Battery Precautions

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

## Battery 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:

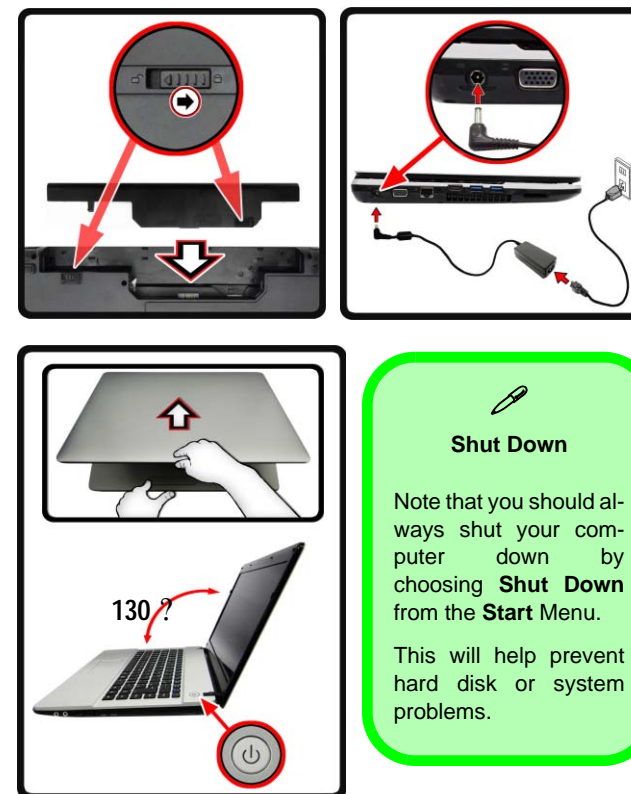
### User's Manual on CD/DVD

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.

## 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. Securely attach any peripherals you want to use with the computer (e.g. keyboard and mouse) to their ports.
5. 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.
6. 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).
7. Press the power button to turn the computer "on".

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




# Chapter 1: Introduction

## Overview

This manual covers the information you need to service or upgrade the **W340EU/W345EU** 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 7*, etc.) have their 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 **W340EU/W345EU** 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® Core™ i7 Processor

#### i7-3612QM (2.1GHz)

6MB L3 Cache, 22nm, DDR3-1600MHz, TDP 35W

#### i7-3520M (2.90GHz)

4MB L3 Cache, 22nm, DDR3-1600MHz, TDP 35W

### Intel® Core™ i5 Processor

#### i5-3360M (2.80GHz), i5-3320M (2.60GHz),

#### i5-3210M (2.50GHz)

3MB L3 Cache, 22nm, DDR3-1600MHz, TDP 35W

### Intel® Core™ i3 Processor

#### i3-3110M (2.40GHz)

3MB L3 Cache, 22nm, DDR3-1600MHz, TDP 35W

### Intel® Core™ i7 Processor

#### i7-2620M (2.7GHz)

4MB L3 Cache, 32nm, DDR3-1333MHz, TDP 35W

### Intel® Core™ i5 Processor

#### i5-2540M (2.60GHz), i5-2520M (2.50GHz),

#### i5-2450M (2.50GHz), i5-2430M (2.40GHz),

#### i5-2410M (2.30GHz)

3MB L3 Cache, 32nm, DDR3-1333MHz, TDP 35W

### Intel® Core™ i3 Processor

#### i3-2370M (2.40GHz), i3-2350M (2.30GHz),

#### i3-2330M (2.20GHz), i3-2310M (2.10GHz)

3MB L3 Cache, 32nm, DDR3-1333MHz, TDP 35W

### Intel® Pentium® Processor

#### B970 (2.30GHz), B960 (2.20GHz), B950 (2.10GHz),

#### B940 (2.00GHz)

2MB L3 Cache, 32nm, DDR3-1333MHz, TDP 35W

### Intel® Celeron® Processor

#### B840 (1.90GHz), B815 (1.60GHz), B810 (1.60GHz),

#### B800 (1.50GHz)

2MB L3 Cache, 32nm, DDR3-1333MHz, TDP 35W

#### B720 (1.70GHz), B710 (1.60GHz)

1.5MB L3 Cache, 32nm, DDR3-1333MHz, TDP 35W

## Core Logic

Intel® HM76 Chipset

## BIOS

One 32Mb SPI Flash ROM

AMI BIOS

## Memory

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

Memory Expandable up to 8GB

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

## LCD

14" (35.56cm) HD TFT LCD

## Video Adapter

### Intel Integrated GPU

*(GPU is Dependent on Processor)*

#### Intel® HD Graphics 3000

Dynamic Frequency (Intel Dynamic Video Memory Technology for up to **1.7GB**)

Microsoft DirectX®10 Compatible

#### Intel® HD Graphics 4000

Dynamic Frequency (Intel Dynamic Video Memory Technology for up to **1.7GB**)

Microsoft DirectX®11 Compatible

## Security

Security (Kensington® Type) Lock Slot

BIOS Password

**Audio**

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

**Storage**

**(Factory Option)** One Changeable 12.7mm(h) Optical Device Type Drive (Super Multi Drive Module or Blu-Ray Combo Drive Module)  
 One Changeable 2.5" 9.5mm (h) SATA HDD

**Pointing Device**

Built-in Touchpad

**Keyboard**

"WinKey" keyboard (with embedded numeric keypad)

**Interface**

One HDMI-Out Port  
 One Headphone-Out Jack  
 One Microphone-In Jack  
 One RJ-45 LAN Jack  
 One External Monitor Port  
 One USB 2.0 Port  
 Two USB 3.0 Ports  
 One DC-in Jack

**Mini Card Slots**

Slot 1 for WLAN Module or Combo WLAN and Bluetooth Module  
**(Factory Option)** Slot 2 for 3.75G/HSPA Module

**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 Gigabit Ethernet LAN  
**(Factory Option)** 300K/1.3M Pixel USB PC Camera Module  
**(Factory Option)** 3.75G/HSPA Mini-Card Module

**WLAN/ Bluetooth Half Mini-Card Modules:**

**(Factory Option)** Intel® Centrino® Wireless-N 2230 Wireless LAN **(802.11b/g/n)** + Bluetooth 4.0  
**(Factory Option)** Intel® Centrino® Wireless-N 135 Wireless LAN **(802.11b/g/n)** + Bluetooth 4.0  
**(Factory Option)** Intel® Centrino® Wireless-N 105 Wireless LAN **(802.11b/g/n)**  
**(Factory Option)** Third-Party Wireless LAN **(802.11b/g/n)**  
**(Factory Option)** Third-Party Wireless LAN **(802.11b/g/n)** + Bluetooth 3.0  
**(Factory Option)** Third-Party Wireless LAN **(802.11b/g/n)** + Bluetooth 4.0

**Power**

6 Cell Smart Lithium-Ion Battery Pack, 48.84WH  
**(Factory Option)** 6 Cell Smart Lithium-Ion Battery Pack, 62.16WH

Full Range AC/DC Adapter  
 AC Input: 100 - 240V, 50 - 60Hz  
 DC Output: 19V, 3.42A or 18.5V, 3.5A **(65W)**

**Environmental Spec****Temperature**

Operating: 5°C - 35°C  
 Non-Operating: -20°C - 60°C

**Relative Humidity**

Operating: 20% - 80%  
 Non-Operating: 10% - 90%

**Dimensions & Weight****W340EU:**

342mm (w) \* 241.5mm (d) \* 34.95mm (h)  
 2.1 kg (with 48.84WH Battery and ODD)

**W345EU:**

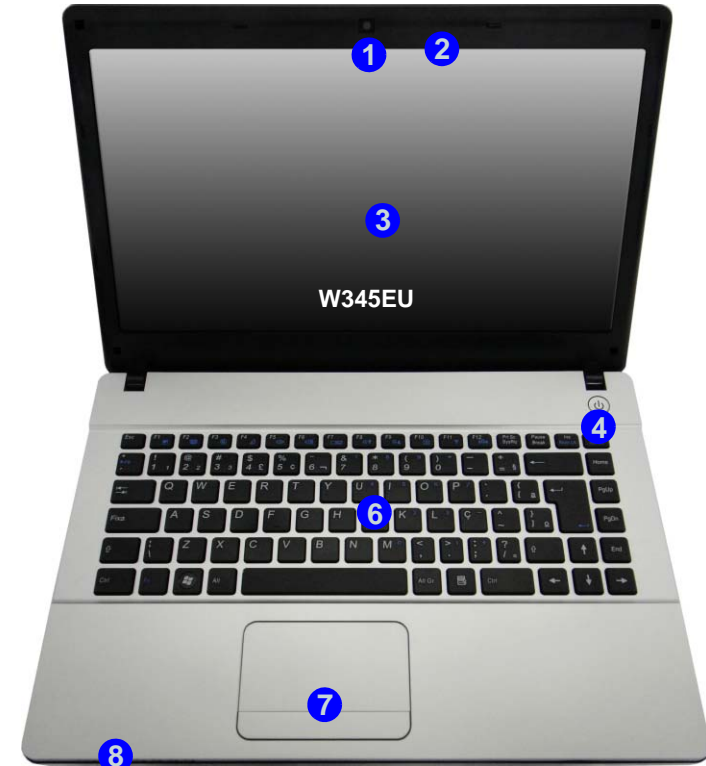
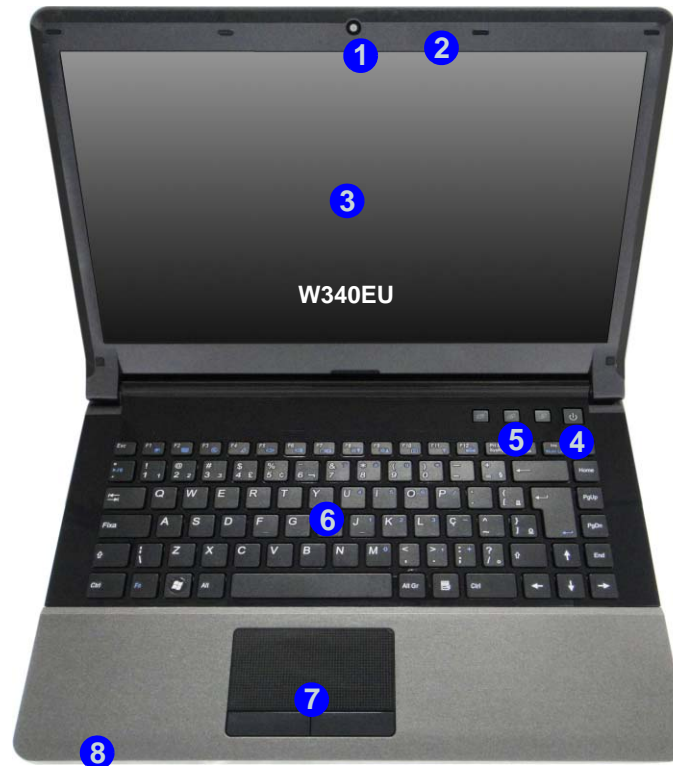
342mm (w) \* 240mm (d) \* 34.7mm (h)  
 2.1 kg (with 48.84WH Battery and ODD)

## Introduction

*Figure 1*  
**Top View**

### External Locator - Top View with LCD Panel Open

1. PC Camera  
(Optional)
2. Built-In  
Microphone
3. LCD
4. Power Button
5. Hot-Key Buttons  
(**Model A Only**)
6. Keyboard
7. Touchpad &  
Buttons
8. LED Status  
Indicators



## External Locator - Front & Right Side Views

FRONT VIEW



*Figure 2*  
**Front View**

1. LED Power Indicator

RIGHT SIDE VIEW



*Figure 3*  
**Right Side View**

1. Microphone-In Jack
2. Headphone-Out Jack
3. USB 2.0 Port
4. Optical Device Drive Bay
5. Emergency Eject Hole
6. Security Lock Slot

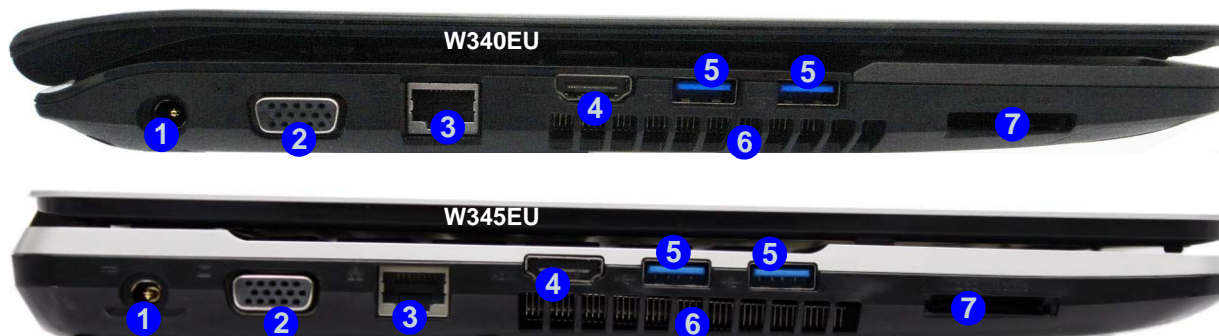
## Introduction

### External Locator - Left Side & Rear View

*Figure 4*  
**Left Side View**

1. DC-In Jack
2. External Monitor Port
3. RJ-45 LAN Jack
4. HDMI-Out Port
5. USB 3.0 Ports
6. Vent
7. e-SATA Port
8. Multi-in-1 Card Reader

LEFT SIDE VIEW



*Figure 5*  
**Rear View**

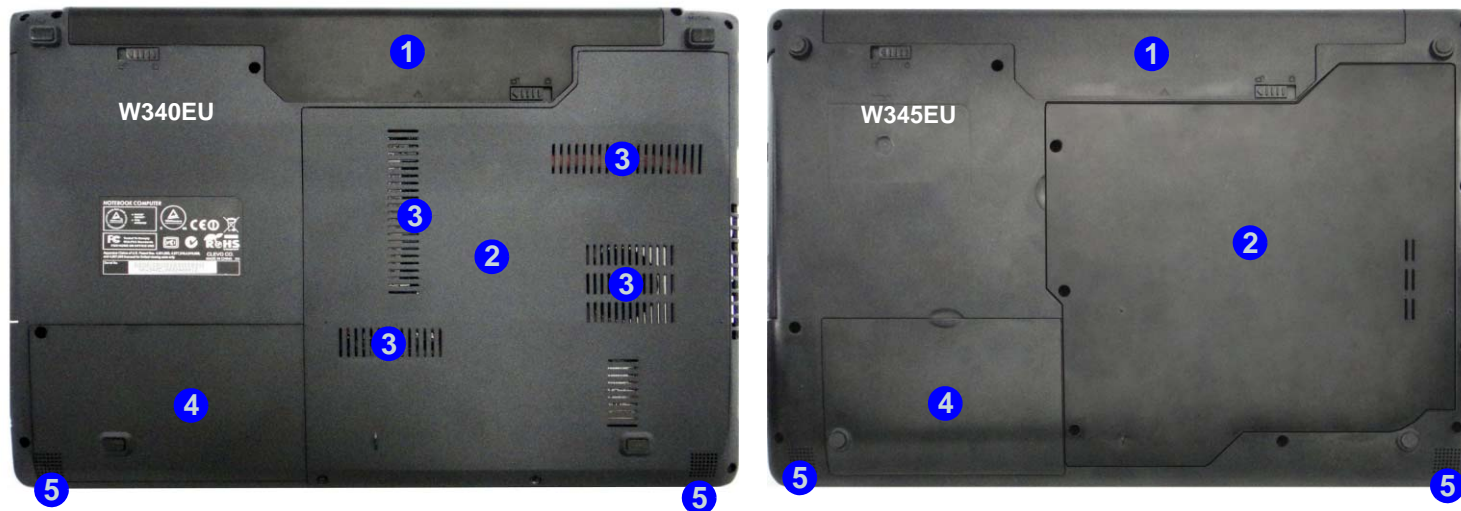
1. Battery

REAR VIEW





## External Locator - Bottom View



*Figure 6*  
**Bottom View**

1. Battery
2. Component Bay Cover
3. Vent
4. Hard Disk Bay Cover
5. Speakers



### Overheating

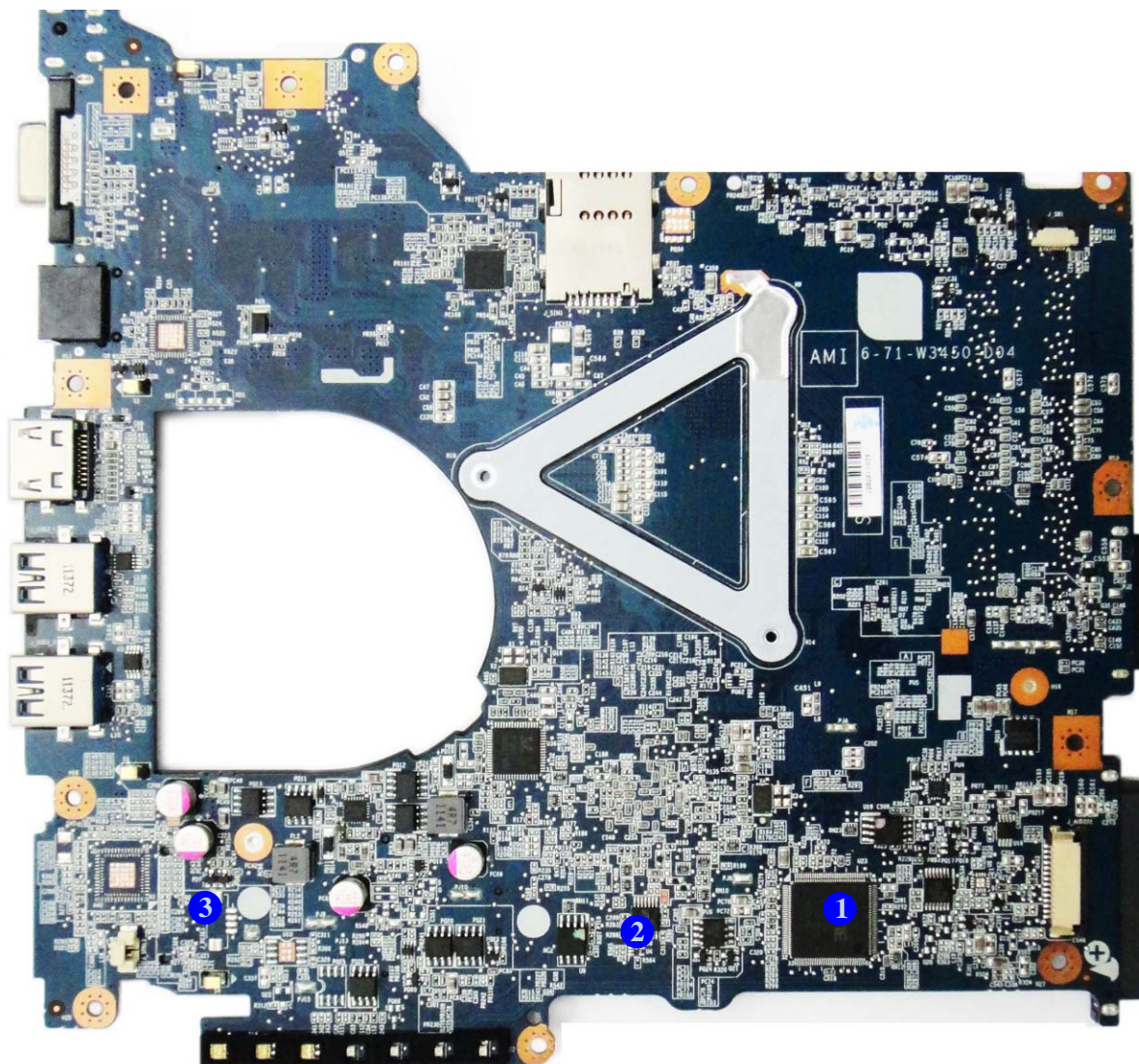
To prevent your computer from overheating, make sure nothing blocks any vent while the computer is in use.

## Introduction

*Figure 7*  
**Mainboard Top  
Key Parts**

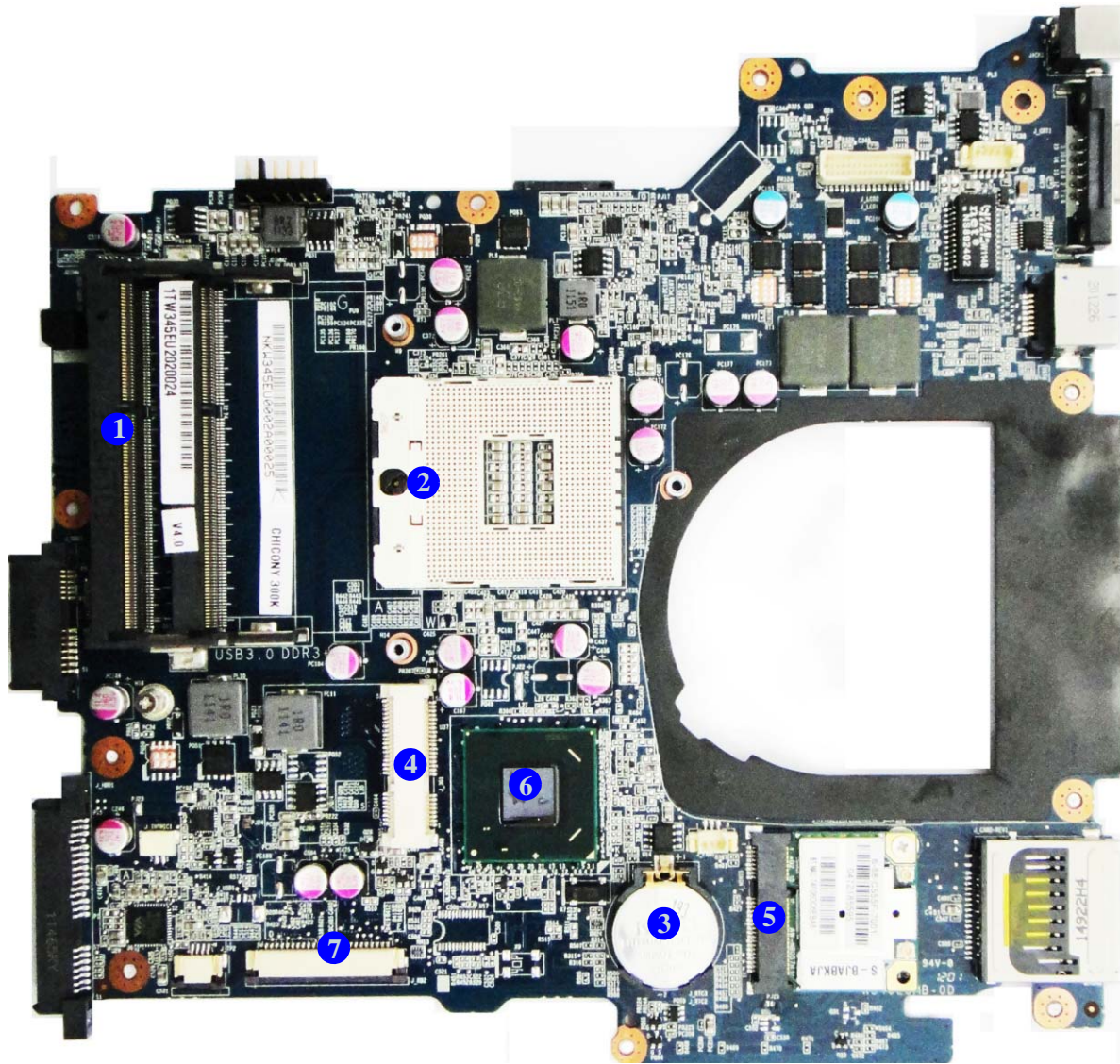
1. KBC-ITE IT8518
2. Audio Codec  
ALC269
3. JMICRO JMC251 C

## Mainboard Overview - Top (Key Parts)





## Mainboard Overview - Bottom (Key Parts)



*Figure 8*  
**Mainboard Bottom  
Key Parts**

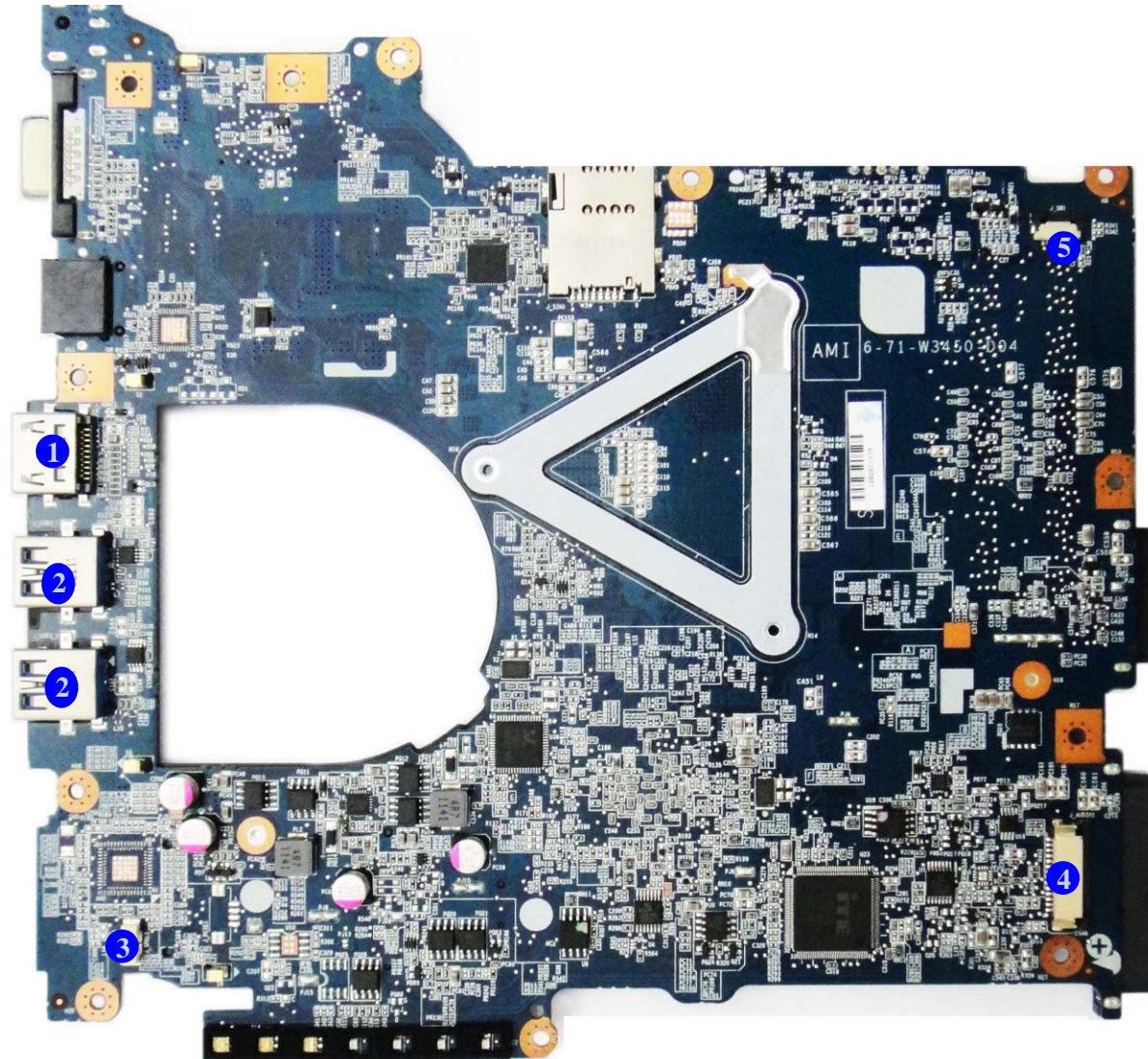
1. Memory Slots  
DDR3 SO-DIMM
2. CPU Socket (no  
CPU installed)
3. CMOS Battery
4. Mini-Card  
Connector (WLAN  
Module)
5. Mini-Card  
Connector (3G  
Module)
6. nVIDIA VGA
7. Platform Controller  
Hub

## Introduction

*Figure 9*  
**Mainboard Top  
Connectors**

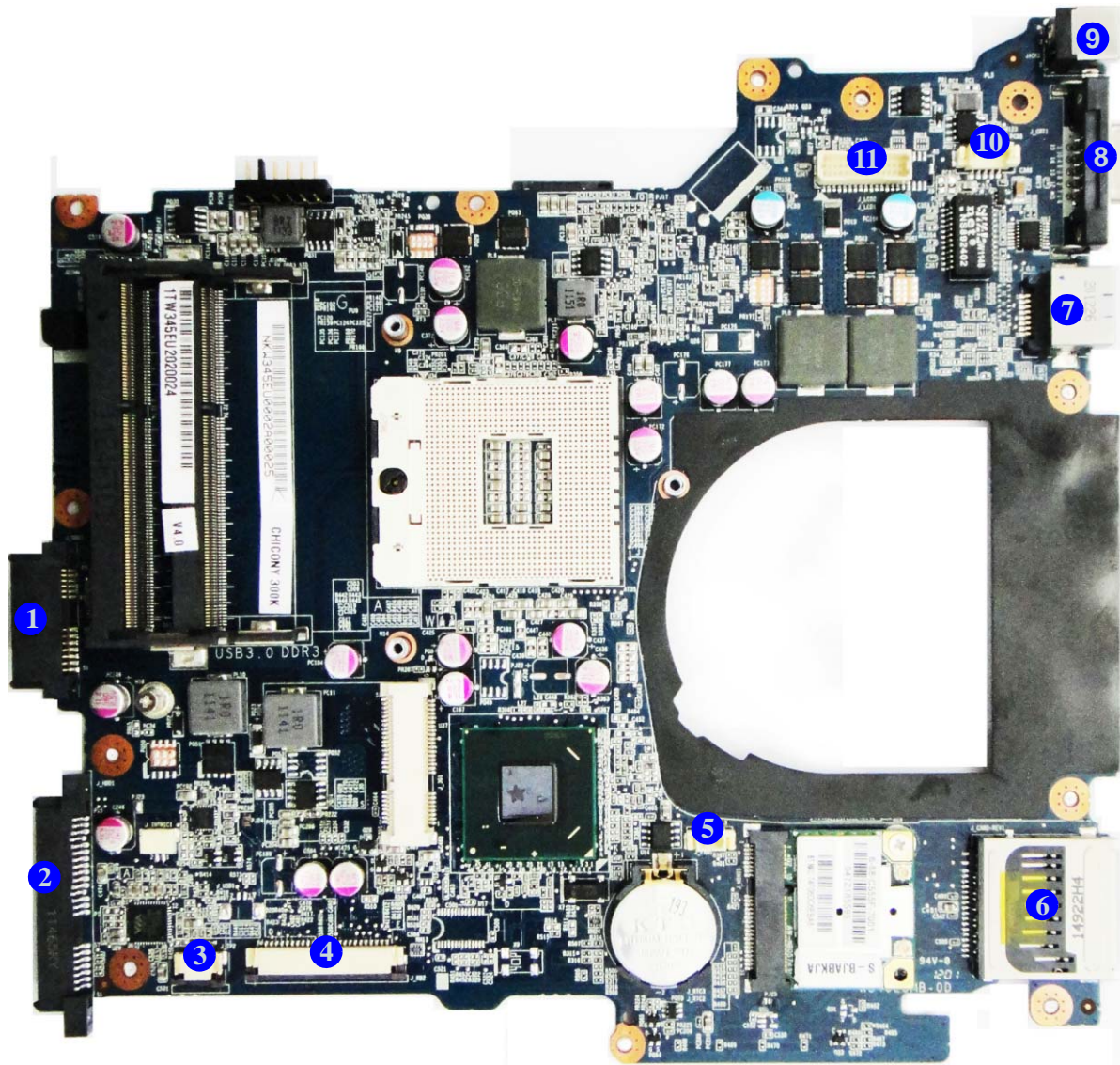
1. HDMI-Out Port
2. USB Port 3.0
3. Audio Board Connector
4. TouchPad Cable Connector
5. Switch Board Cable Connector

## Mainboard Overview - Top (Connectors)





## Mainboard Overview - Bottom (Connectors)



*Figure 10*  
**Mainboard Bottom  
Connectors**

1. ODD Connector
2. HDD Connector
3. Cable Connector
4. Keyboard Cable Connector
5. CPU Fan Cable Connector
6. Multi-in-1 Card Reader
7. RJ-45 LAN Jack
8. External Monitor Port
9. DC-In Jack
10. CCD Cable Connector
11. LCD Cable Connector




# Chapter 2: Disassembly



## Overview

This chapter provides step-by-step instructions for disassembling the *W340EU/W345EU* 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.

  
Information

Warning



## Disassembly

---

**NOTE:** All disassembly procedures assume that the system is turned **OFF**, and disconnected from any power supply (the battery is removed too).

### Maintenance Tools

The following tools are recommended when working on the notebook PC:

- M3 Philips-head screwdriver
- M2.5 Philips-head screwdriver (magnetized)
- M2 Philips-head screwdriver
- Small flat-head screwdriver
- Pair of needle-nose pliers
- Anti-static wrist-strap

### Connections

Connections within the computer are one of four types:

Locking collar sockets for ribbon connectors	To release these connectors, use a small flat-head screwdriver to gently pry the locking collar away from its base. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Pressure sockets for multi-wire connectors	To release this connector type, grasp it at its head and gently rock it from side to side as you pull it out. Do not pull on the wires themselves. When replacing the connection, do not try to force it. The socket only fits one way.
Pressure sockets for ribbon connectors	To release these connectors, use a small pair of needle-nose pliers to gently lift the connector away from its socket. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Board-to-board or multi-pin sockets	To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - use just enough force to start.

## Maintenance Precautions

The following precautions are a reminder. To avoid personal injury or damage to the computer while performing a removal and/or replacement job, take the following precautions:

1. **Don't drop it.** Perform your repairs and/or upgrades on a stable surface. If the computer falls, the case and other components could be damaged.
2. **Don't overheat it.** Note the proximity of any heating elements. Keep the computer out of direct sunlight.
3. **Avoid interference.** Note the proximity of any high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage components and/or data. You should also monitor the position of magnetized tools (i.e. screwdrivers).
4. **Keep it dry.** This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.
5. **Be careful with power.** Avoid accidental shocks, discharges or explosions.
  - Before removing or servicing any part from the computer, turn the computer off and detach any power supplies.
  - When you want to unplug the power cord or any cable/wire, be sure to disconnect it by the plug head. Do not pull on the wire.
6. **Peripherals** – Turn off and detach any peripherals.
7. **Beware of static discharge.** ICs, such as the CPU and main support chips, are vulnerable to static electricity. Before handling any part in the computer, discharge any static electricity inside the computer. When handling a printed circuit board, do not use gloves or other materials which allow static electricity buildup. We suggest that you use an anti-static wrist strap instead.
8. **Beware of corrosion.** As you perform your job, avoid touching any connector leads. Even the cleanest hands produce oils which can attract corrosive elements.
9. **Keep your work environment clean.** Tobacco smoke, dust or other air-born particulate matter is often attracted to charged surfaces, reducing performance.
10. **Keep track of the components.** When removing or replacing any part, be careful not to leave small parts, such as screws, loose inside the computer.

## Cleaning

Do not apply cleaner directly to the computer, use a soft clean cloth.

Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.



### Power Safety Warning

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

## Disassembly Steps

The following table lists the disassembly steps, and on which page to find the related information. **PLEASE PERFORM THE DISASSEMBLY STEPS IN THE ORDER INDICATED.**

### To remove the Battery:

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

### To remove the HDD:

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

### To remove and install Bay Cover:

1. Remove the battery [page 2 - 5](#)
2. Remove the bay cover [page 2 - 6](#)
3. Install the bay cover [page 2 - 8](#)

### To remove the Optical Device:

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

### To remove the System Memory:

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

### To remove and install a Processor:

1. Remove the battery [page 2 - 5](#)
2. Remove the processor [page 2 - 17](#)
3. Install the processor [page 2 - 19](#)

### To remove the 3.75G Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the 3.75G module [page 2 - 20](#)

### To remove the Wireless LAN Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the WLAN module [page 2 - 21](#)

### To remove the CCD:

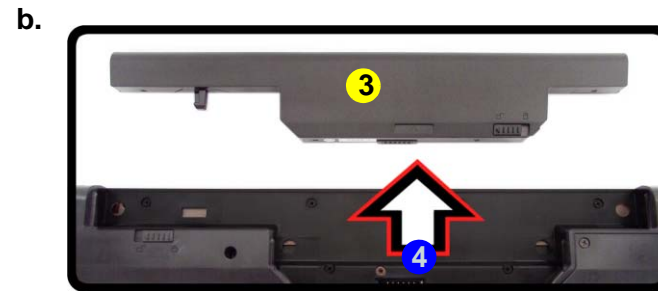
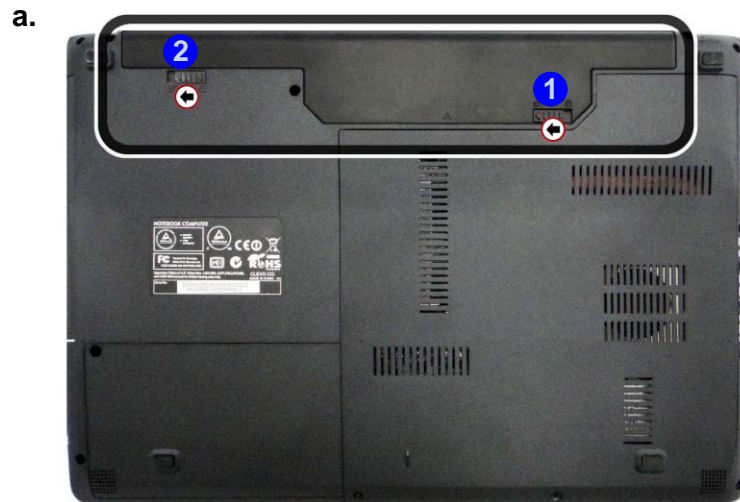
1. Remove the battery [page 2 - 5](#)
2. Remove the CCD [page 2 - 22](#)

### To remove the Keyboard:

1. Remove the battery [page 2 - 5](#)
2. Remove the Optical device [page 2 - 14](#)
3. Remove the CCD [page 2 - 22](#)
4. Remove the keyboard [page 2 - 22](#)

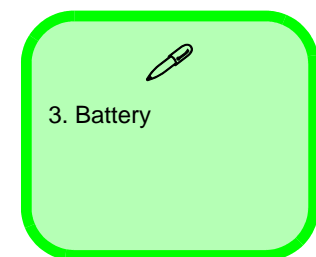
## Removing the Battery

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 it in place.
- b. Slide the battery in the direction of the arrow.



## Disassembly

*Figure 2*  
**Bay Cover Removal**  
**(W340EU)**

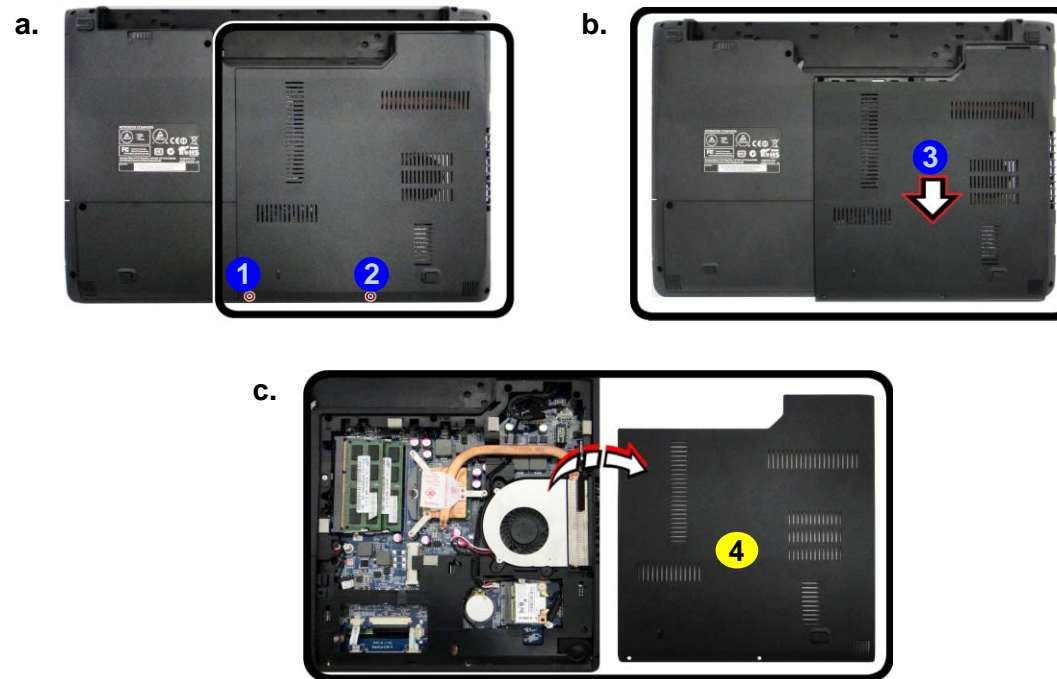
- Remove the screws.
- Slide the bay cover in the direction of the arrow.
- Lift the bay cover off the computer.

## Removing and Installing the Component Bay Cover

To upgrade any components you need to remove the component bay cover first. The procedure for removing the component bay cover will depend upon your particular computer model:

### Component Bay Cover Removal Procedure (W340EU)

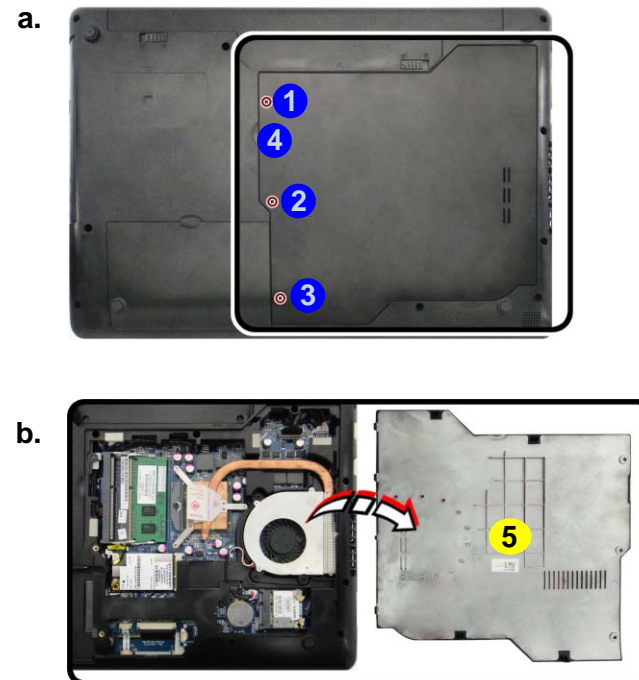
- Turn **off** the computer, turn it over, and remove the battery ([page 2 - 5](#)).
- Locate the component bay cover and remove screws **1** & **2** ([Figure 2a](#)).
- Slide the cover in the direction of arrow **3** ([Figure 2b](#)).
- Remove the component bay cover **4** ([Figure 2c](#)).



4. Bay Cover
- 2 Screws

### (W345EU)

1. Turn **off** the computer, turn it over, and remove the battery ([page 2 - 5](#)).
2. Locate the component bay cover and remove screws **1** - **3** ([Figure 3a](#)).
3. Lift the cover off computer at point **4**.
4. Remove the component bay cover **5** ([Figure 3b](#)).



*Figure 3*  
**Bay Cover Removal**  
**(W345EU)**

- a. Remove the screws.
- b. Lift the bay cover off the computer.



5. Bay Cover
- 3 Screws

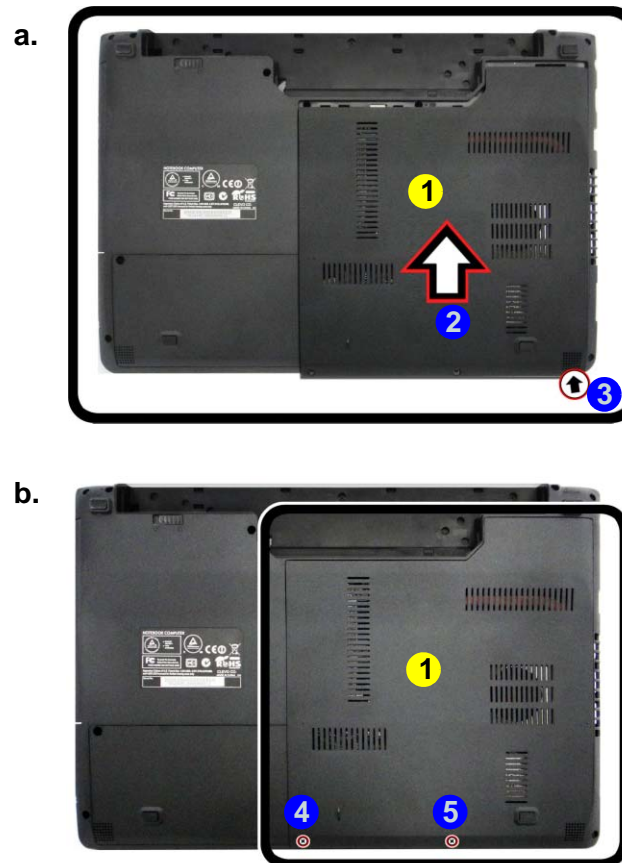
## Disassembly

*Figure 4*  
**Bay Cover  
Installation  
(W340EU)**

- a. Insert the bay cover.
- b. Tighten the screws.

### Component Bay Cover Installation Procedure (W340EU)

1. Reinsert the component bay cover by placing it on the bottom case assembly and sliding it on to the case in the direction of arrow ① (and make sure you press down on the case at point ② to insure a proper fit) (*Figure 4a*).
2. Replace screws ③ & ④ (*Figure 4b*).

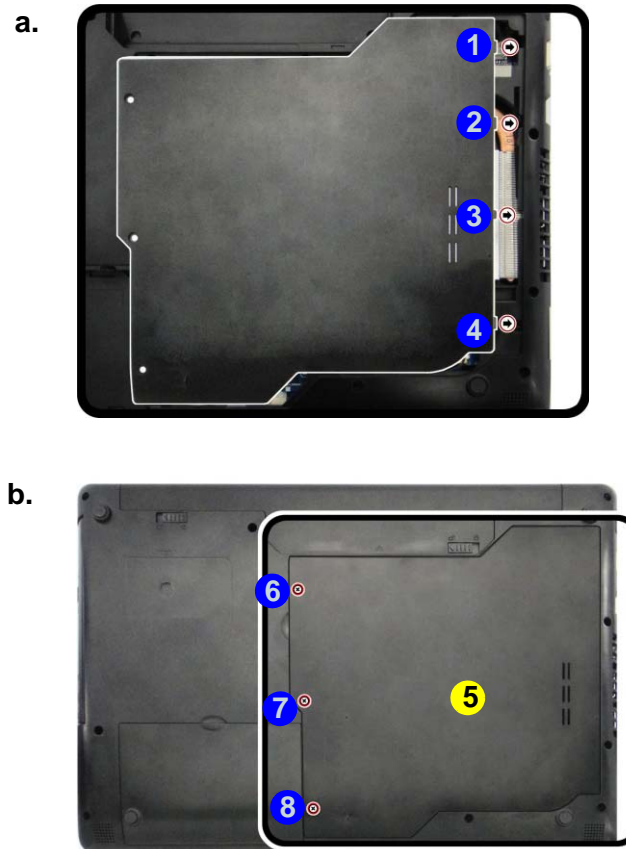


- 1. Bay Cover
- 2 Screws



### (W345EU)

1. This computer model has four component bay cover pins ① - ④, and these need to be aligned with slots in the case to insure a proper cover fit (*Figure 5a*).
2. After inserting the bay cover ⑤, replace the screws ⑥ - ⑧ (*Figure 5b*).



*Figure 5*  
**Bay Cover  
Installation  
(W345EU)**

- a. Insert the bay cover.
- b. Tighten the screws.



5. Bay Cover
- 3 Screws

## Disassembly

*Figure 6*  
**HDD Assembly  
Removal (W340EU)**

- a. Remove the screw and lift the hard disk cover out of the bay at point 3.
- b. Remove the hard disk cover.

## Removing the Hard Disk Drive

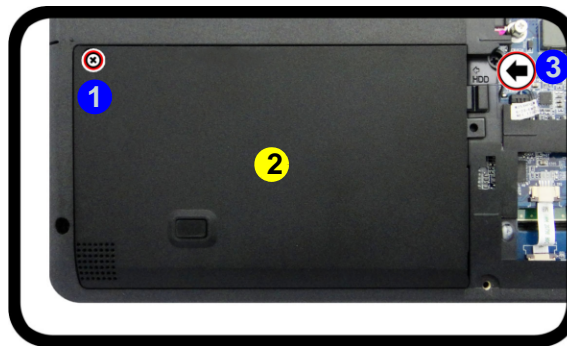
The hard disk drive can be taken out to accommodate other 2.5" serial (SATA) hard disk drives with a height of 9.5mm (h). Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in **Chapter 4 of the User's Manual**) when setting up a new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

### Hard Disk Upgrade Process

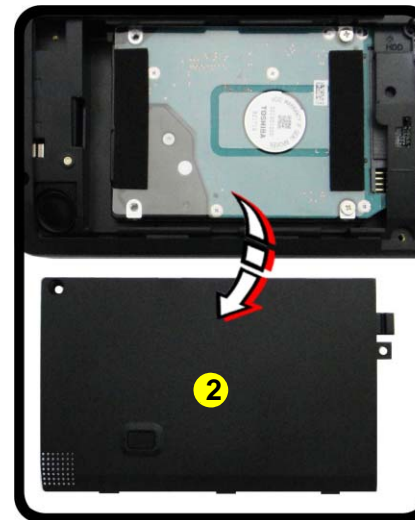
#### W340EU

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)) and component bay cover ([page 2 - 6](#)).
2. Locate the hard disk bay cover and remove screws **1**.
3. Lift the hard disk cover **2** out of the bay at point **3** ([Figure 6a](#)).
4. Remove the hard disk cover **2** ([Figure 6b](#)).

a.



b.



2. HDD Bay Cover

- 1 Screw



#### HDD System Warning

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

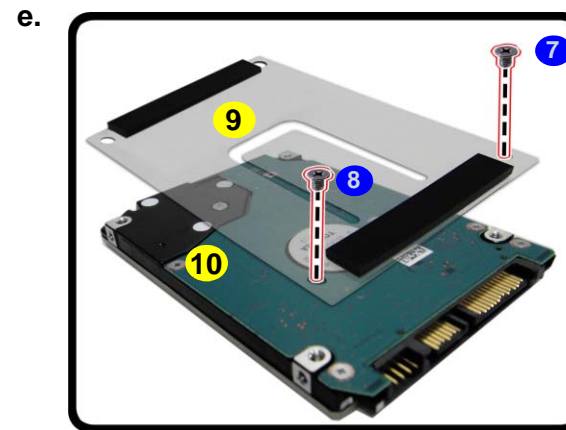
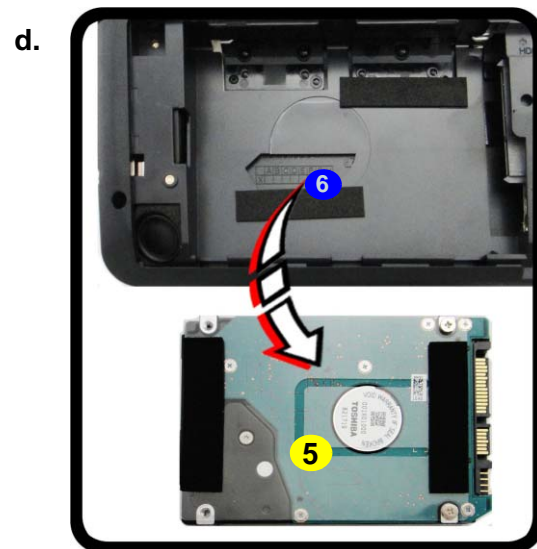
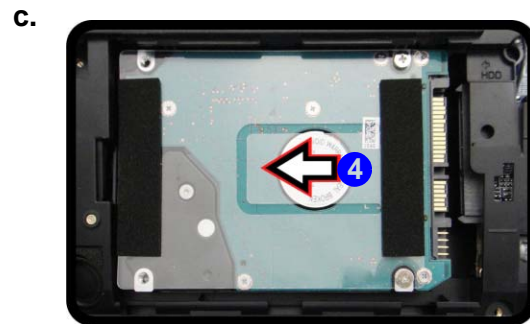
You have backed up any data you want to keep from your old HDD.


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

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

*Figure 7*  
**HDD Assembly  
Removal (W340EU -  
cont'd.)**

- f. Grip the tab and slide the HDD assembly in the direction of the arrow.
- g. Lift the HDD assembly out of the bay.
- h. Remove the screws and mylar cover.



- 
- 5 HDD Assembly
  - 9. Mylar Cover
  - 10. HDD
  - 2 Screws

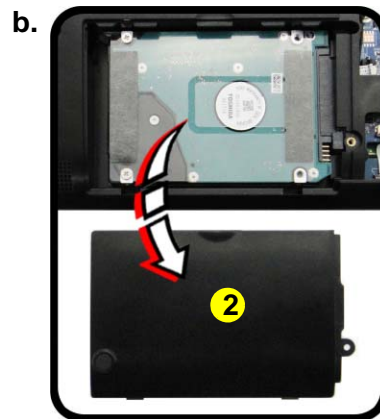
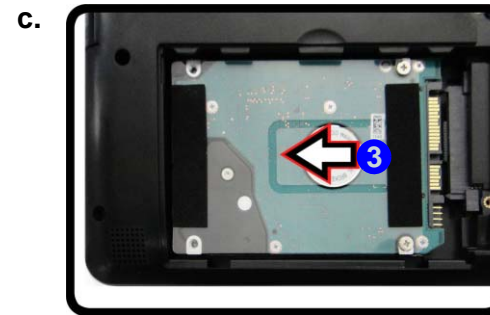
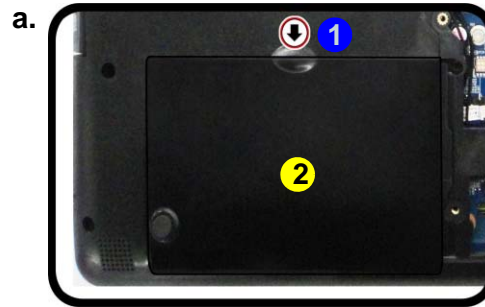
## Disassembly

*Figure 8*  
**HDD Assembly  
Removal (W345EU)**

- a. Lift the hard disk cover up from point 1.
- b. Remove the hard disk cover.
- c. Grip the tab and slide the HDD assembly in the direction of the arrow.

### W345EU

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)) and component bay cover ([page 2 - 7](#)).
2. Lift the hard disk bay cover up from point 1 ([Figure 8a](#)).
3. Remove hard disk bay cover 2 ([Figure 8b](#)).
4. Grip the tab and slide the hard disk assembly in the direction of arrow 3 ([Figure 8c](#)).



2. HDD Bay Cover



#### 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.

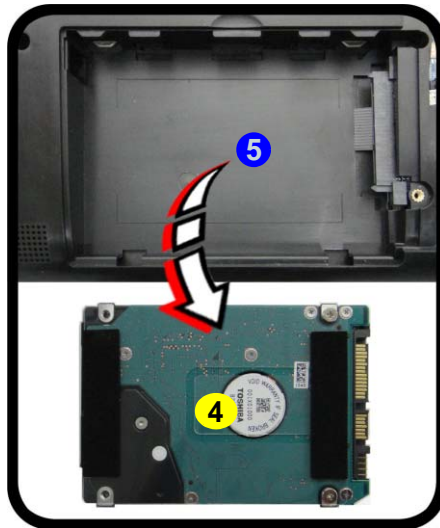
You have all the CD-ROMs and FDDs required to install your operating system and programs.

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.

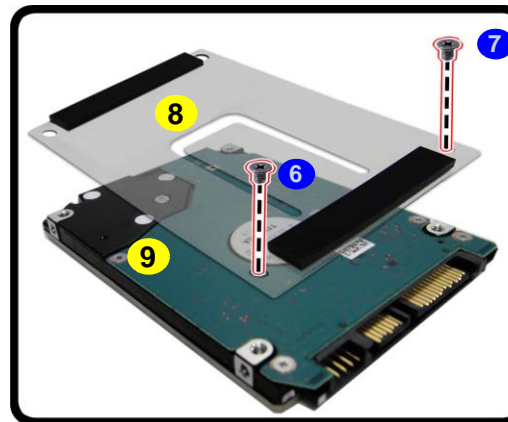
*Figure 9*  
**HDD Assembly  
Removal (W345EU -  
cont'd.)**

5. Lift the hard disk assembly **4** out of the bay **5** (*Figure 9d*).
6. Remove the screw **6** - **7** and the mylar cover **8** from the hard disk **9** (*Figure 9e*).
7. Reverse the process to install a new hard disk (do not forget to replace all the screws and covers).
8. Replace the hard disk bay cover by inserting it at an angle, replace the screw, and then replace the component bay cover (see page **2 - 9**).

d.



e.



- d. Lift the HDD assembly out of the bay.  
e. Remove the screws and mylar cover.



- 4 HDD Assembly
- 8. Mylar Cover
- 9. HDD

- 2 Screws

## Disassembly

### Figure 10 Optical Device Removal (W340EU)

- a. Remove the screw at point ①.
- b. Use a screwdriver to carefully push out the optical device at point ②.

## Removing the Optical (CD/DVD) Device

### W340EU

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and component bay cover ([page 2 - 6](#)).
2. Remove the screw at point ① ([Figure 10a](#)).
3. Use a screwdriver to carefully push out the optical device ③ at point ② ([Figure 10b](#)).
4. Insert the new device and carefully slide it into the computer (the device only fits one way. DO NOT FORCE IT; The screw holes should line up).
5. Replace the component bay cover (see [page 2 - 8](#)).
6. Restart the computer to allow it to automatically detect the new device.

a.



b.



#### 3. Optical Device

- 1 Screw



### W345EU

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and component bay cover ([page 2 - 7](#)).
2. Remove the screw at point **1** ([Figure 11a](#)).
3. Use a screwdriver to carefully push out the optical device **3** at point **2** ([Figure 11b](#)).
4. Insert the new device and carefully slide it into the computer (the device only fits one way. DO NOT FORCE IT; The screw holes should line up).
5. Replace the component bay cover (see [page 2 - 9](#)).
6. Restart the computer to allow it to automatically detect the new device.

a.



b.



*Figure 11*  
**Optical Device  
Removal (W345EU)**

- a. Remove the screw at point **1**.
- b. Use a screwdriver to carefully push out the optical device at point **2**.



2. Optical Device

## Disassembly

*Figure 12*  
**RAM Module Removal**

- Locate the memory module(s) 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.



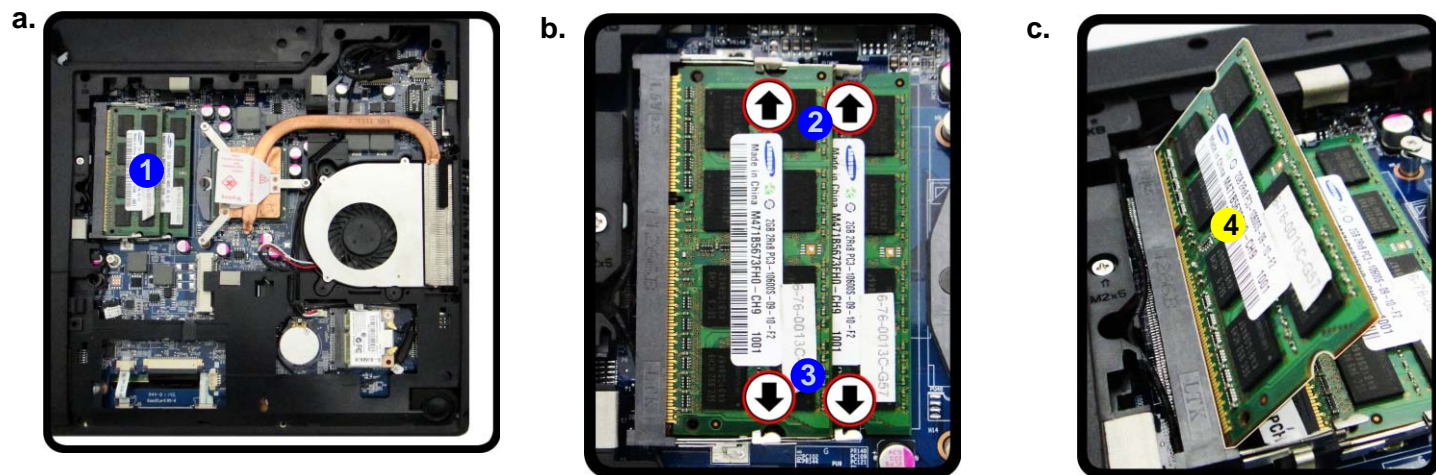
### 4. RAM Module

## Removing the System Memory (RAM)

The computer has two memory sockets for 204 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDRIII (DDR3) Up to 1066/1333 MHz. 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](#)) and the component bay cover ([page 2 - 6](#)).
- The RAM modules will be visible at point **1** on the mainboard ([Figure 12a](#)).
- Gently pull the two release latches (**2** & **3**) on the sides of the memory socket in the direction indicated by the arrows ([Figure 12b](#)).
- The RAM module **4** will pop-up ([Figure 12c](#)), and you can then remove it.
- Pull the latches to release the second module if necessary.
- Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
- The module 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.
- Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
- Replace the component bay cover and screws accordingly.
- Restart the computer to allow the BIOS to register the new memory configuration as it starts up.





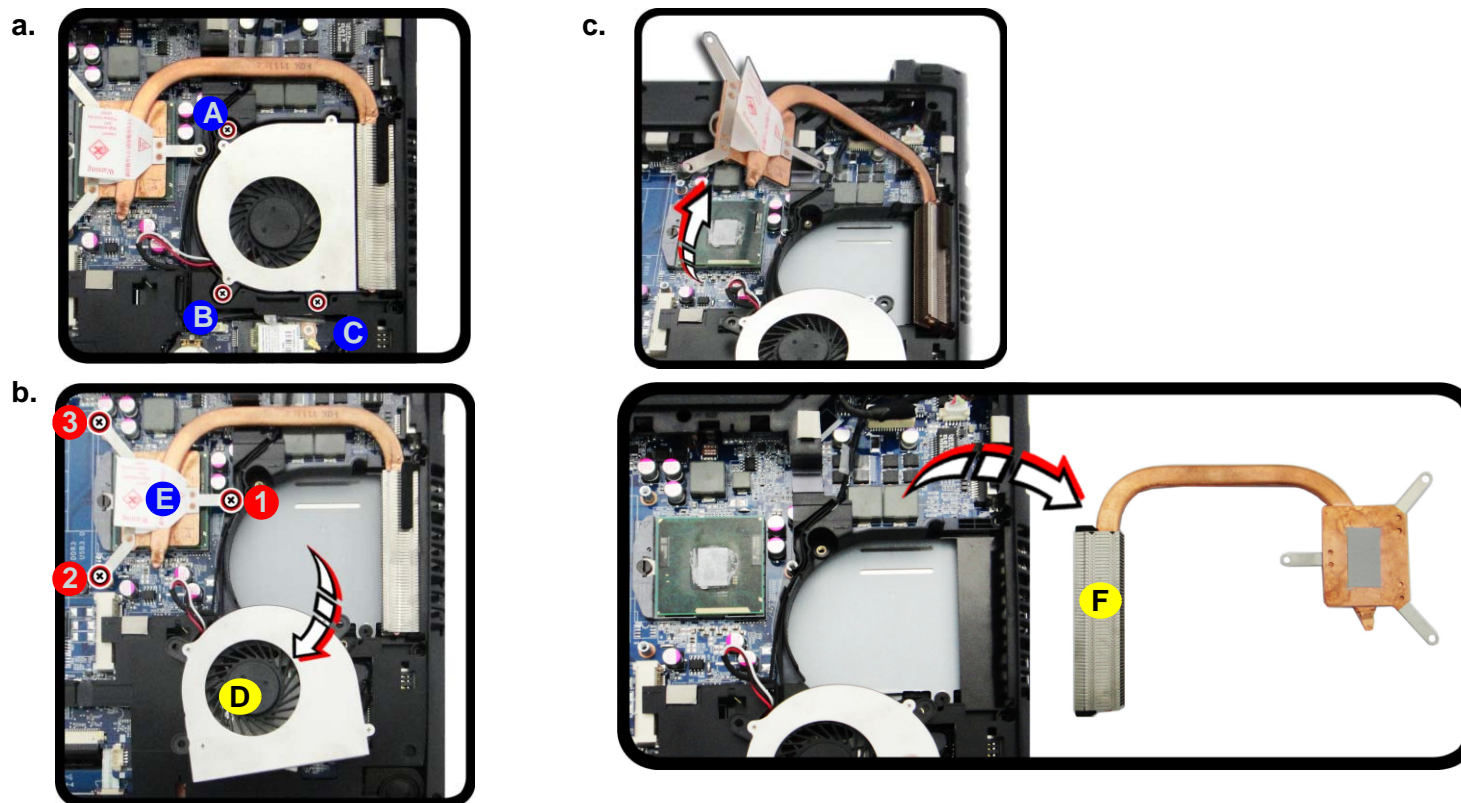
# Removing and Installing a Processor


## Processor Removal Procedure

1. Turn **off** the computer, turn it over, and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
2. Remove screws **A** - **C** from the CPU fan **D** ([Figure 13a](#)).
3. Lift the CPU fan **D** off the computer without disconnecting the cable.
4. The CPU heat sink will be visible at point **E** ([Figure 13b](#)).
5. Loosen the CPU heat sink screws in the order **3**, **2** & **1** (the reverse order as indicated on the label [Figure 13b](#)).
6. Grip the heat sink tab and carefully lift the heat sink **F** up and off the computer ([Figure 13c](#)).

*Figure 13*  
**Processor Removal**


- a. Remove the screws from the CPU fan.
- b. Lift the CPU fan without disconnecting the cable. And then remove the screws from the CPU heatsink.
- c. Grip the heat sink tab and carefully lift the heat sink up and off the computer.



- 
4. CPU Fan
  5. Heat Sink
- 6 Screws

## Disassembly

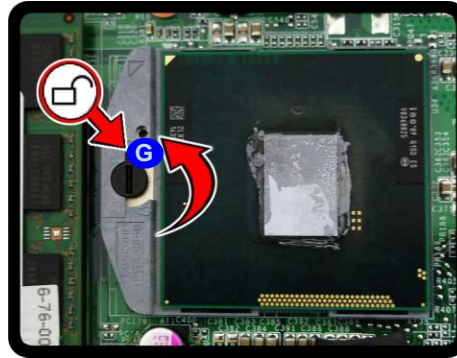
*Figure 14*  
**Processor Removal**  
**(cont'd)**

7. Turn the release latch **G** towards the unlock symbol  to release the CPU (*Figure 14d*).
8. Carefully (it may be hot) lift the CPU **H** up and out of the socket (*Figure 14e*).
9. Reverse the process to install a new CPU.
10. When re-inserting the CPU, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).

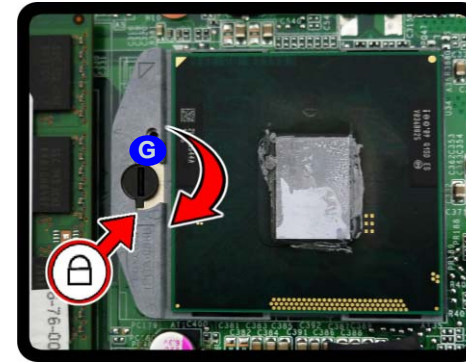
d. Turn the release latch to unlock the CPU.

e. Lift the CPU out of the socket.

d.

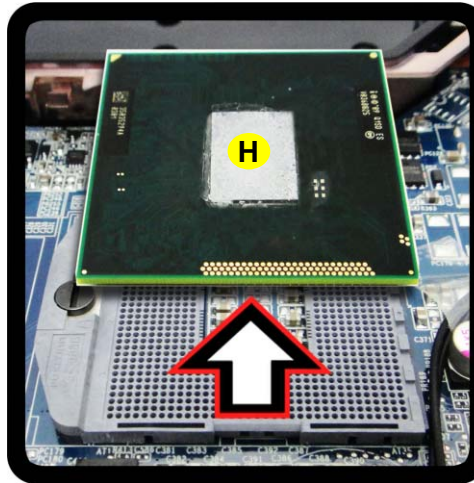


Unlock



Lock

e.




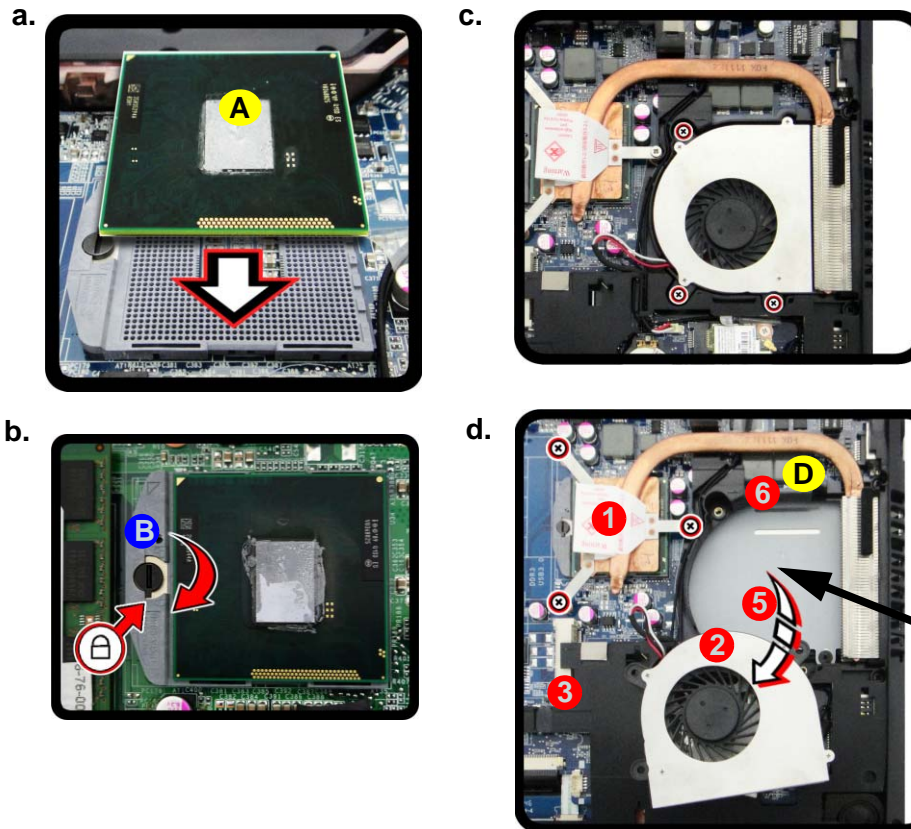
Caution

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

7. CPU

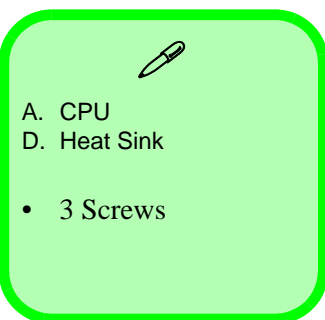
## Processor Installation Procedure

1. Insert the CPU **A** (**Figure 15a**), pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!), and turn the release latch **B** towards the lock symbol  (**Figure 15b**).
2. **Remove the sticker C** (**Figure 15c**) from the heat sink.
3. Insert the heat sink **D** as indicated in **Figure 15d**.
4. Tighten the CPU heat sink screws in the order **1**, **2** & **3** (the order as indicated on the label and **Figure 15d**).
5. Replace the component bay cover (don't forget to replace the fan cable) and tighten the screws (**page 2 - 16**).



### Note:

Tighten the screws in the order as indicated on the label.



*Figure 15*  
**Processor Installation**

- a. Insert the CPU.
- b. Turn the release latch towards the lock symbol.
- c. Remove the sticker from the heat sink and insert the heat sink.
- d. Tighten the screws.



## Disassembly

Figure 16  
3G Module Removal

- Locate the 3.75G module.
- Disconnect the cables and remove the screw.
- The module will pop-up.
- Remove the 3.75G module.

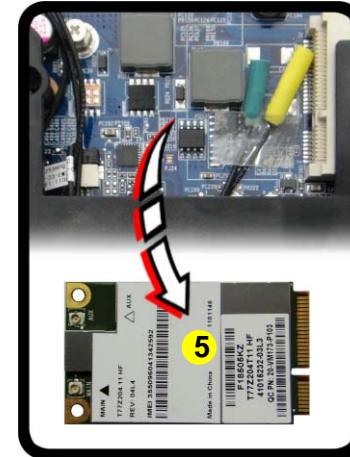
Note: Make sure you reconnect the antenna cable to socket.

#### 5. 3.75G Module

- 1 Screw

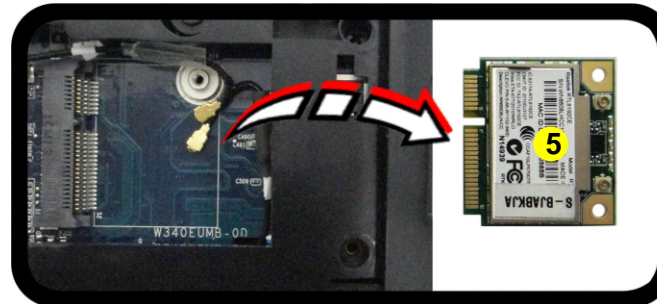
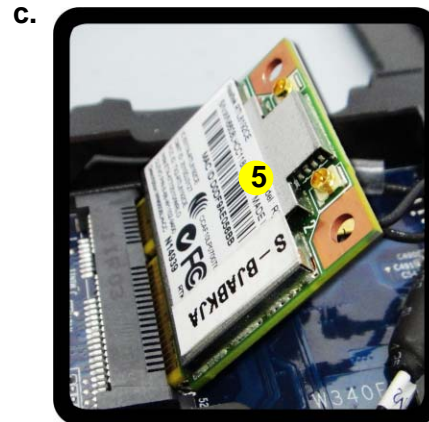
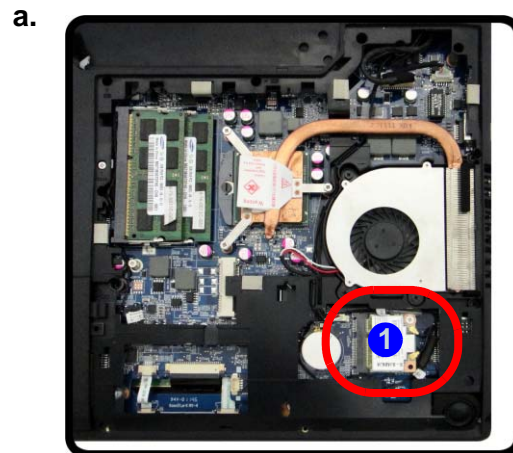
## Removing the 3.75G Module

- Turn **off** the computer, turn it over, and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
- The 3.75G module will be visible at point **1** on the mainboard ([Figure 16a](#)).
- Carefully disconnect the cables **2** - **3**, and then remove the screw **4** ([Figure 16b](#)).
- The 3.75G module **5** will pop-up, and you can remove it from the computer ([Figure 16c](#)).



## Removing the Wireless LAN Module

1. Turn **off** the computer, turn it over, and remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 6](#)).
2. The Wireless LAN module will be visible at point **1** on the mainboard ([Figure 17a](#)).
3. Carefully disconnect the cables **2** - **3**, and then remove the screw **4** ([Figure 17b](#)).
4. The Wireless LAN module **5** ([Figure 17c](#)) will pop-up, and you can remove it from the computer.



*Figure 17*  
**Wireless LAN  
Module Removal**

- a. Locate the WLAN.
- b. Disconnect the cables and remove the screw.
- c. The WLAN module will pop up and remove it.

Note: Make sure you reconnect the antenna cable to the “1 + 2” socket ([Figure 17b](#)).



### 5. Wireless LAN Module

- 1 Screw

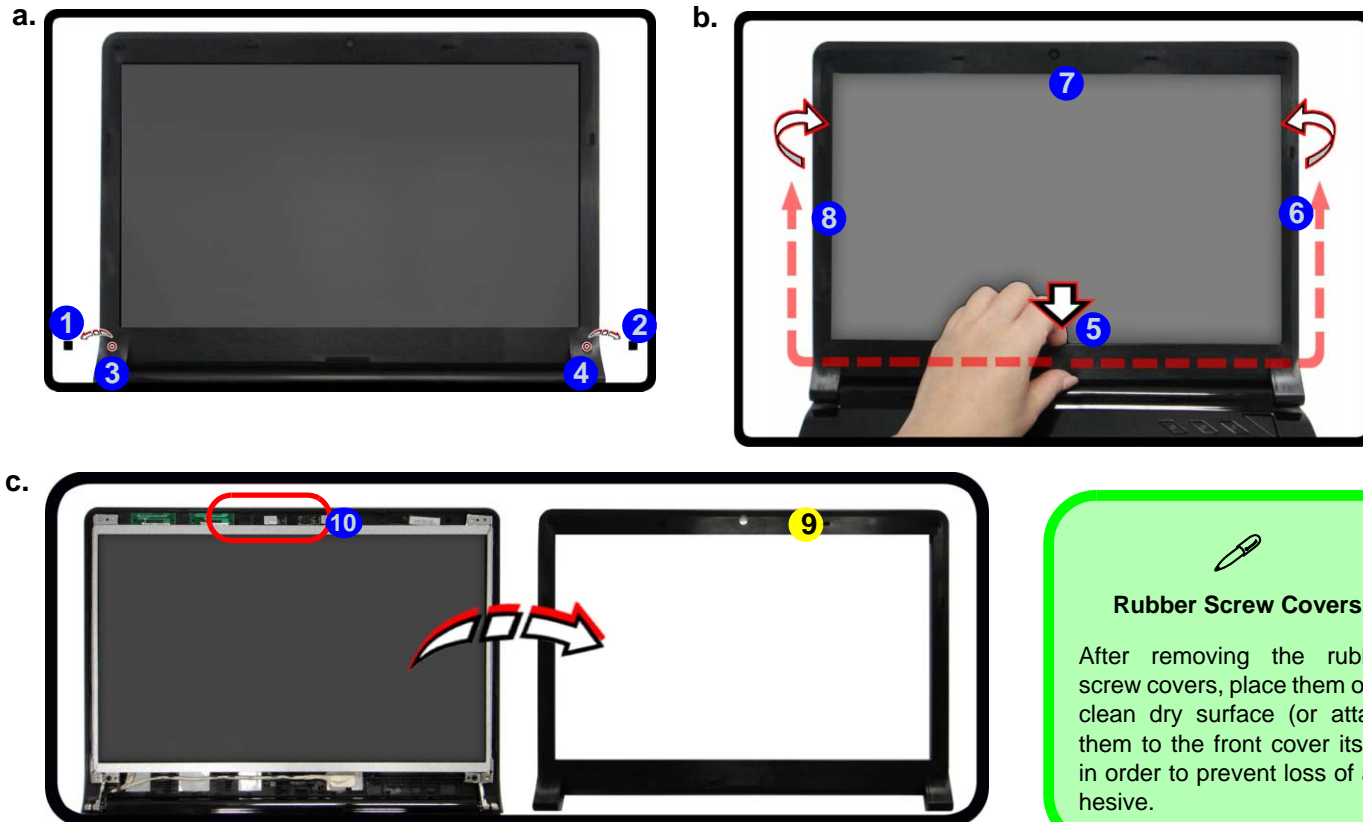
## Disassembly

Figure 18  
CCD Removal

- Remove the rubber covers and screws.
- Run your fingers around the inner frame to unsnap the LCD panel at point 5 and run your fingers around the outer frame of the LCD panel to unsnap.
- Remove the LCD front panel.

## Removing the CCD

- Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)).
- Open the LCD and carefully remove the rubber screw covers 1 & 2 and screws 3 & 4 from the front cover.
- Run your finger around the inner frame of the LCD panel at point 5 to unsnap the frame, and then run your fingers around the outer frame of the LCD panel at points 6, 7 & 8 to unsnap it ([Figure 18b](#)).
- Remove the LCD front panel 9 from the LCD assembly and the CCD module will be visible at point 10.



9. LCD Front Panel
- 2 Screws

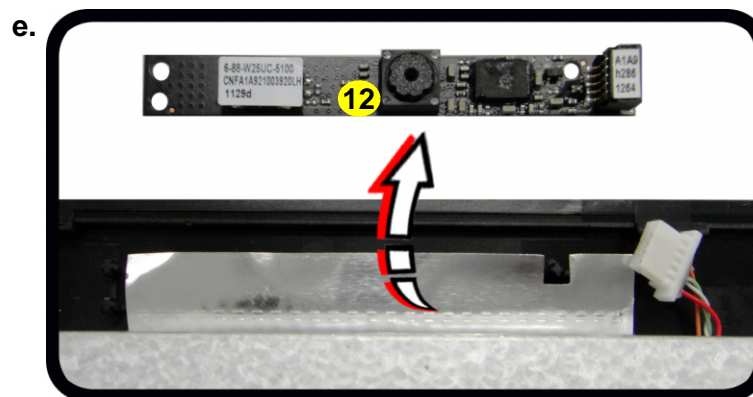
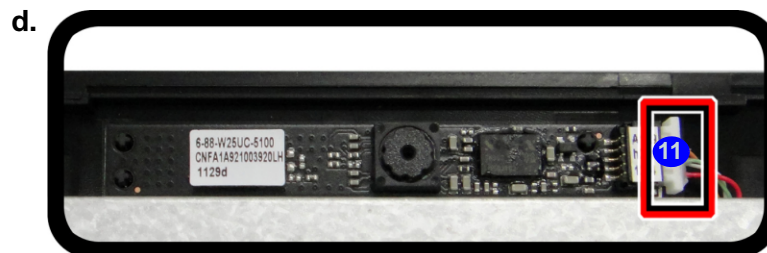
#### Rubber Screw Covers

After removing the rubber screw covers, place them on a clean dry surface (or attach them to the front cover itself) in order to prevent loss of adhesive.

5. Disconnect the cable 11 from the module.
6. Remove the CCD module 12 (Figure 19e).

*Figure 19*  
**CCD Removal**  
**(cont'd)**

- d. Disconnect cable.
- e. Remove the CCD module.



12. CCD Module



## Disassembly

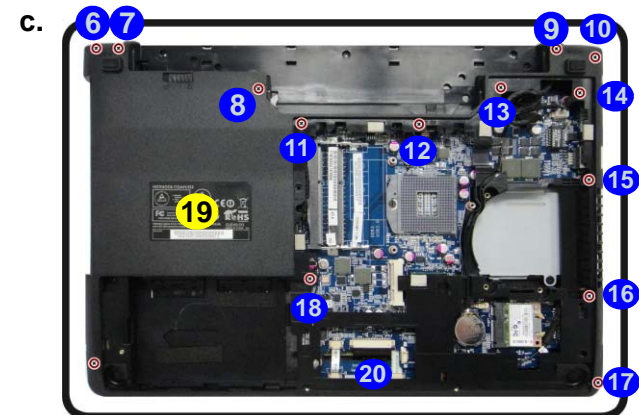
Figure 20

### Keyboard Removal

- Remove screws to release the LCD hinge cover.
- Lift the LCD hinge cover off the computer.
- Remove screws to release the upper frame assembly. Disconnect the keyboard ribbon cable.
- Run your fingers around the side frame to unsnap the upper frame case at point 20 and then run your fingers around the outer frame to separate it.

## Removing the Keyboard

- Turn **off** the computer, remove the battery ([page 2 - 5](#)), component bay cover ([page 2 - 6](#)), optical device ([page 2 - 14](#)) and CCD ([page 2 - 22](#)).
- Remove screws 1 - 3 from the bottom of the computer to release the LCD hinge cover.
- Lift the LCD hinge cover 5 at point 4 off the computer ([Figure 20b](#)).
- Remove screws 6 - 18 to release the upper frame assembly from the bottom case 19 and disconnect the keyboard ribbon cable 20 from the locking collar socket ([Figure 20c](#)).
- Run your finger around the side frame of the bottom case at point 21 to unsnap the upper frame case 22, and then run your fingers around the outer frame to completely separate it ([Figure 20d](#)).

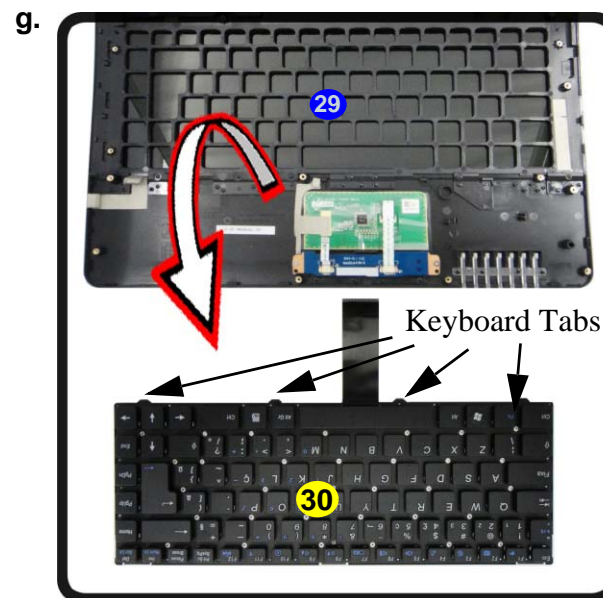
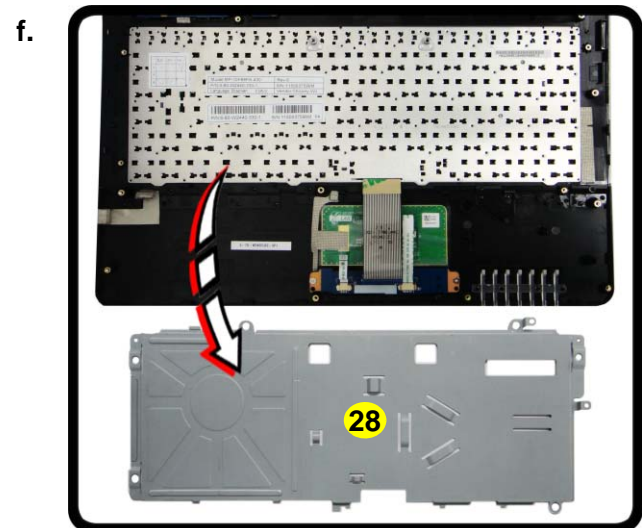
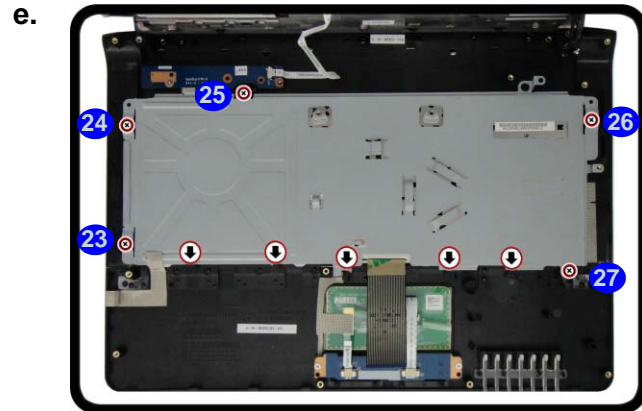


5. LCD Hinge Cover  
19. Bottom Case  
22. Upper Frame Case

- 16 Screws



6. Turn the upper frame over, and remove screws 23 - 27 from the shielding plate (**Figure 21e**).
7. Lift the keyboard shielding plate 28 up, being careful not to bend the keyboard ribbon cable (**Figure 21f**).
8. Carefully lift up the keyboard 30 (**Figure 21g**) off the upper frame case 29 of the computer.



*Figure 21*  
**Keyboard Removal**  
**(cont'd)**

- e. Remove screws.
- f. Remove the keyboard shielding plate.
- g. Carefully lift the keyboard off the computer.



### Re-Inserting the Keyboard

When re-inserting the keyboard firstly align the **four** keyboard tabs at the bottom (**Figure 21g**) at the bottom of the keyboard with the slots in the case.



28. Shielding Plate  
30. Keyboard

- 5 Screws



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# Appendix A:Part Lists

This appendix breaks down the *W340EU/W345EU* 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.

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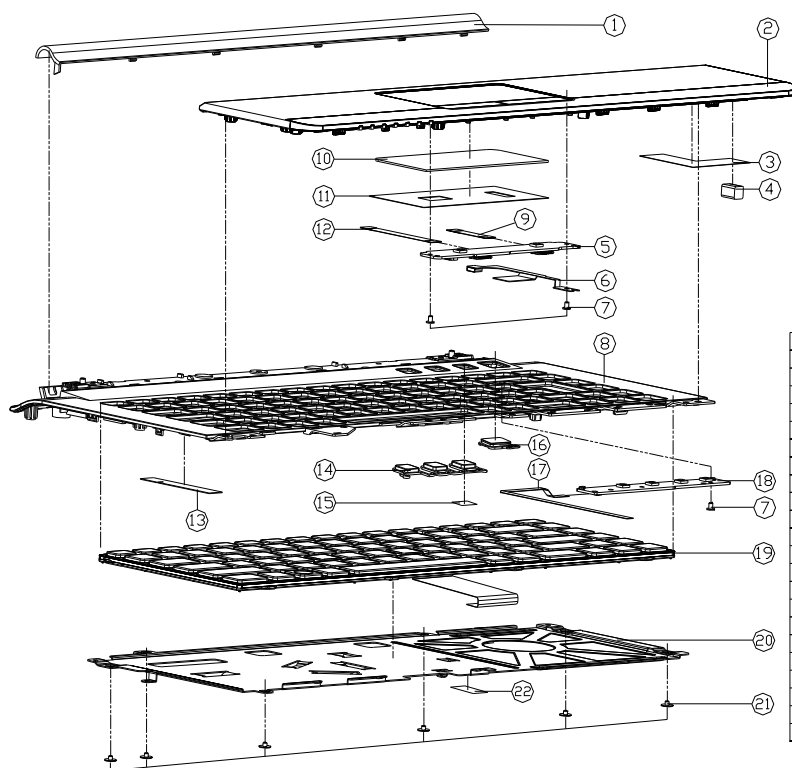
## Part List Illustration Location

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

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

Part	W340EU	W345EU
Top	<i>page A - 3</i>	<i>page A - 9</i>
Bottom	<i>page A - 4</i>	<i>page A - 10</i>
SATA BLU RAY COMBO	<i>page A - 5</i>	<i>page A - 11</i>
Super Multi Drive	<i>page A - 6</i>	<i>page A - 12</i>
LCD	<i>page A - 7</i>	<i>page A - 13</i>
HDD	<i>page A - 8</i>	

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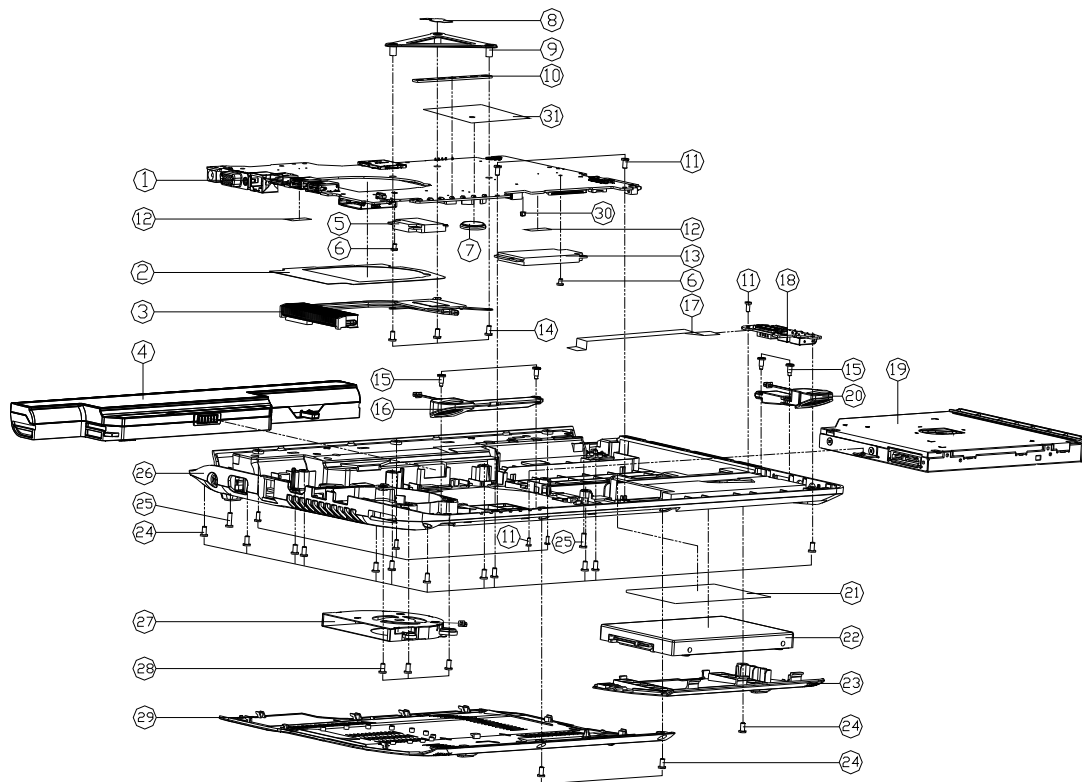


*Figure A - 1*  
**Top (W340EU)**

ITEM	PART	NAME	PART NO	REMARK
1	HINGE COVER (PC+ABS)	W340UE	6-42-W3402-082	
2	PALM REST MODULE	W340UE	6-42-W3402-101	
3	CONDUCTIVE CLOTH FOR AUDIO BOARD	W340UE	6-47-W3402-011	Only W340UE
4	CONDUCTIVE CLOTH (TIN-BALE-MS) FOR KEYBOARD	W340UE	6-47-00190-109	Only W340UE
5	CLICK BOARD V4.0	W345UE	6-77-W3452-004	Only W345UE
6	CONDUCTIVE CLOTH FOR CLICK BOARD	W345UE	6-47-W3452-021	Only W345UE
7	SCREEN M2x2, 1 IN 1 CT, 1 IN 1 (0.45x0.31) 40A		6-35-B1120-3RE	
8	TOP CASE REIN FOR PA (PC+ABS) M20	W340UE	6-39-W3402-21B	
9	FFC FOR CLICK BOARD TO I/OB	W345UE	6-43-W3452-021	
10	TOUCH PAD SYMPTOM (IN-BALE-MS) MULTI-TOUCH CASE		6-49-C4802-010	
11	WIRE FOR TOUCHPAD CONNECTION	W340UE	6-40-W3402-020	
12	FFC CABLE FOR TOUCH PAD SPIN	C4500	6-43-C4502-010	
13	CONDUCTIVE CLOTH FOR TOUCH PAD	W345UE	6-47-W3452-010	Only W340UE
14	HOT KEY (PC+ABS)	W340UE	6-42-W3402-090	
15	CONDUCTIVE CLOTH FOR POWER BOARD	W340UE	6-47-W3402-032	Only W340UE
16	POWER BUTTON MODULE	W340UE	6-42-W3402-041	
17	FFC FOR POWER BOARD	W345UE	6-43-W3452-011	
18	POWER SWITCH BOARD V404V4+KEY	W340UE	6-77-W3455-004-A	
19	KEYBOARD SHIELDING SHIELD (PC+ABS)		6-80-W2440-191-1	
20	KEYBOARD SHIELDING SECC	W340UE	6-33-W3402-020	
21	SCREEN M2x2, 1 IN 1 CT, 1 IN 1 (0.61x0.51)		6-35-B6120-2RC	
22	AL FOIL FOR KEY SHIELDING (AL-FOLIO-MS) 100A		6-47-W3402-050	Only W340UE

## Bottom (W340EU)

*Figure A - 2*  
**Bottom (W340EU)**

[illegible]



# SATA BLU RAY COMBO (W340EU)

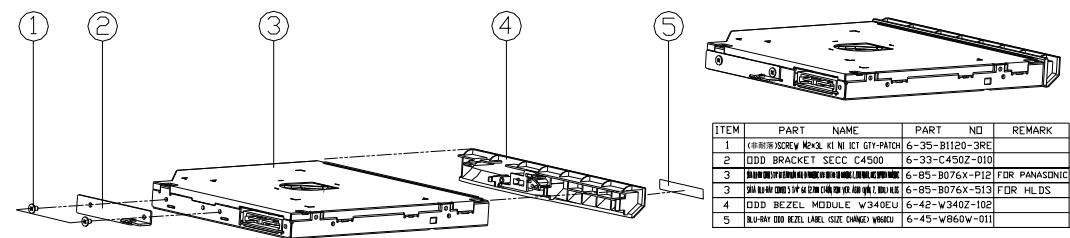
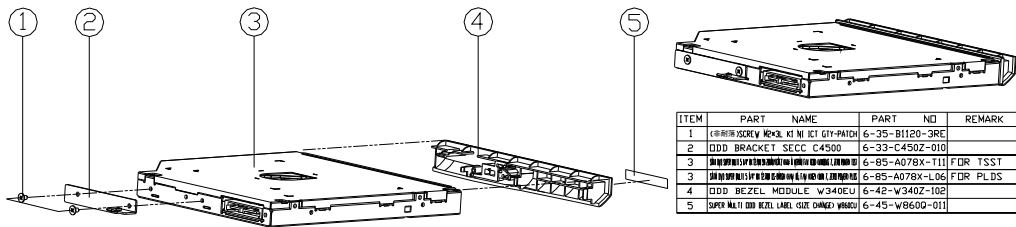


Figure A - 3  
SATA BLU RAY  
COMBO (W340EU)

ITEM	PART NAME	PART NO	REMARK
1	SCREWS M2X0.5 KI W KIT GY-PATCH	6-35-B1120-3RE	
2	ODD BRACKET SECC C4500	6-33-C450Z-010	
3	SATA BLU RAY COMBO DRIVE FOR PANASONIC	6-85-B076X-P12	FOR PANASONIC
3	SATA BLU RAY COMBO DRIVE FOR HLDS	6-85-B076X-S13	FOR HLDS
4	ODD BEZEL MODULE W340EU	6-42-W340Z-102	
5	BLU-RAY ODD BEZEL LABEL (SIZE CHANGED VERSION)	6-45-W860W-011	

*Figure A - 4*  
**Super Multi**  
**(W340EU)**



LCD (W340EU)

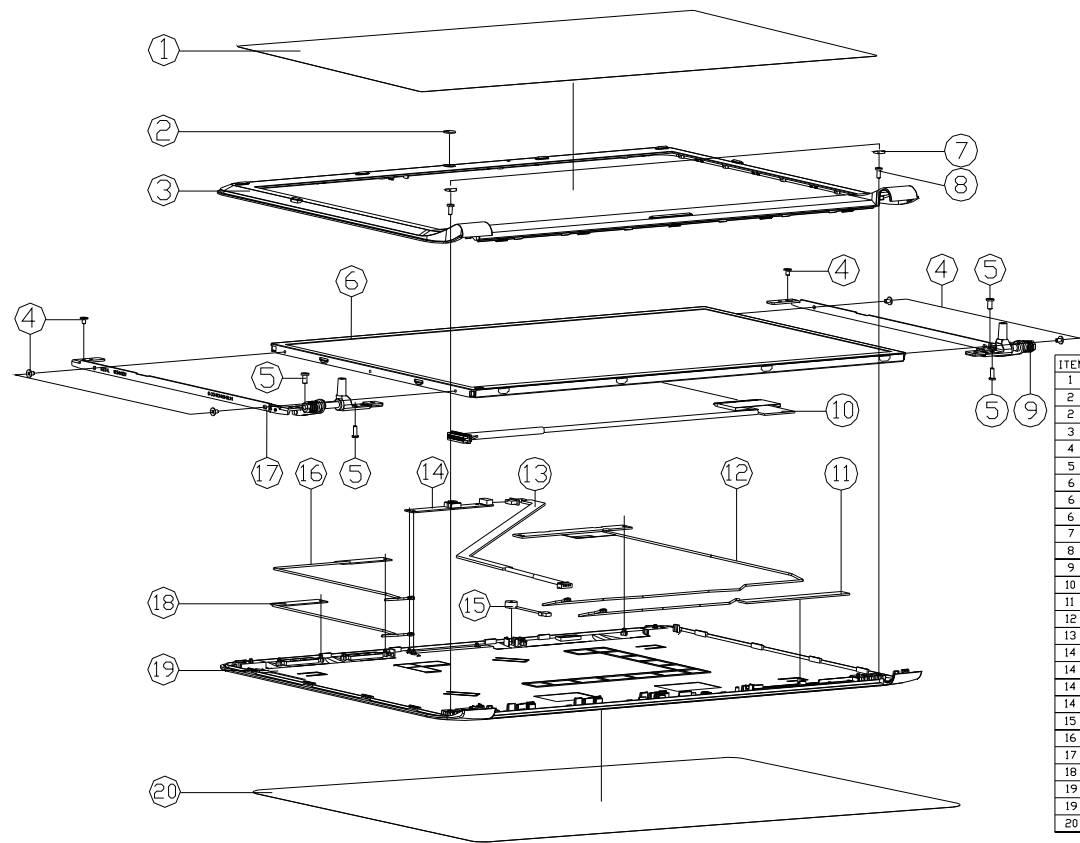
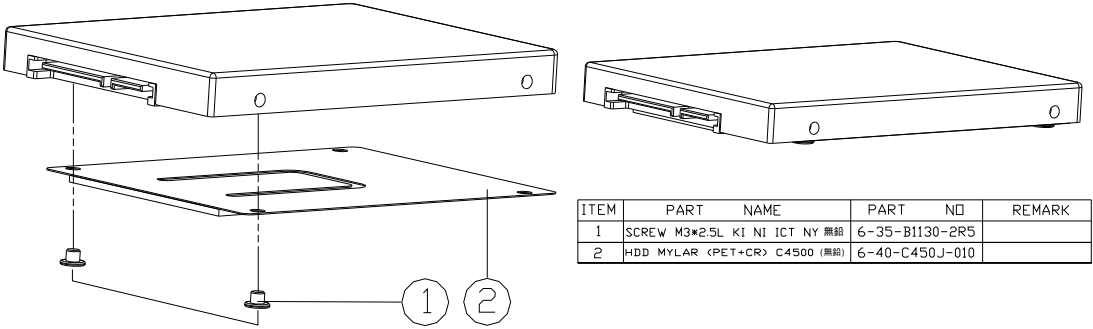


Figure A - 5  
LCD (W340EU)

ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER PROTECTION PLATE (P/10005) (0.000)	6-40-C4501-011	
2	CCD LENS PMMA W340EU	6-42-W340T-020	
3	W/D CCD LENS PMMA W340EU	6-42-W340T-010	
4	LCD FRONT COVER MODULE W340EU	6-39-W3401-012	
5	SCREW M2.5X5 L KT BK/Z ICT NY (00-04531-04)	6-35-B1120-3RE	
6	SCREW M2.5X5 L KT BK/Z ICT NY	6-35-B6125-SRA	
7	LCD MAP HD REC #100000-001 GLARE TYPE LED 52MM	6-50-JBT52-H02	
8	LCD MAP HD LG (P/10000-001) GLARE TYPE LED 52MM	6-50-JBT52-L09	
9	LCD MAP HD CHRM (P/10000-001) GLARE TYPE LED 52MM	6-50-JBT52-D04	
10	FRONT COVER RUBBER SCREW SILICON W340EU	6-47-W3408-011	
11	SCREW M2.5X5 L KT BK/Z ICT NY	6-35-B6120-SRO	
12	LCD HINGE R SECC W340EUSZS	6-33-W3401-0R1-1	
13	WIRE CABLE FOR LENS 300MM CHANGE (000000 0010 0000)	6-43-C4801-052	
14	ANTENNA 30 X 10 X 10 (000000/000000/000000) L-0000 0000	6-23-7W244-010	
15	ANTENNA 30 X 10 X 10 (000000/000000/000000) L-0000 0000	6-23-7E412-010	
16	WIRE CABLE FOR CCD 5P 300MM (C4500 0000)	6-43-C450T-011	
17	LCD HINGE L SECC W340EUSZS	6-33-W3401-0L1-1	
18	LCD HINGE L SECC W340EUSZS	6-33-W3401-0L1-1	
19	LCD BACK COVER MODULE W340EU	6-39-W3401-022-C	
20	BACK COVER PROTECTION PLATE (P/10005) (0.000)	6-40-C4501-020	

HDD

Figure A - 6  
HDD



ITEM	PART	NAME	PART	NO	REMARK
1	SCREW	M3*2.5L KI NI ICT NY 無鉛	6-35-B1130-2R5		
2	HDD	MYLAR (PET+CR) C4500 (黒鉛)	6-40-C450J-010		

Top (W345EU)

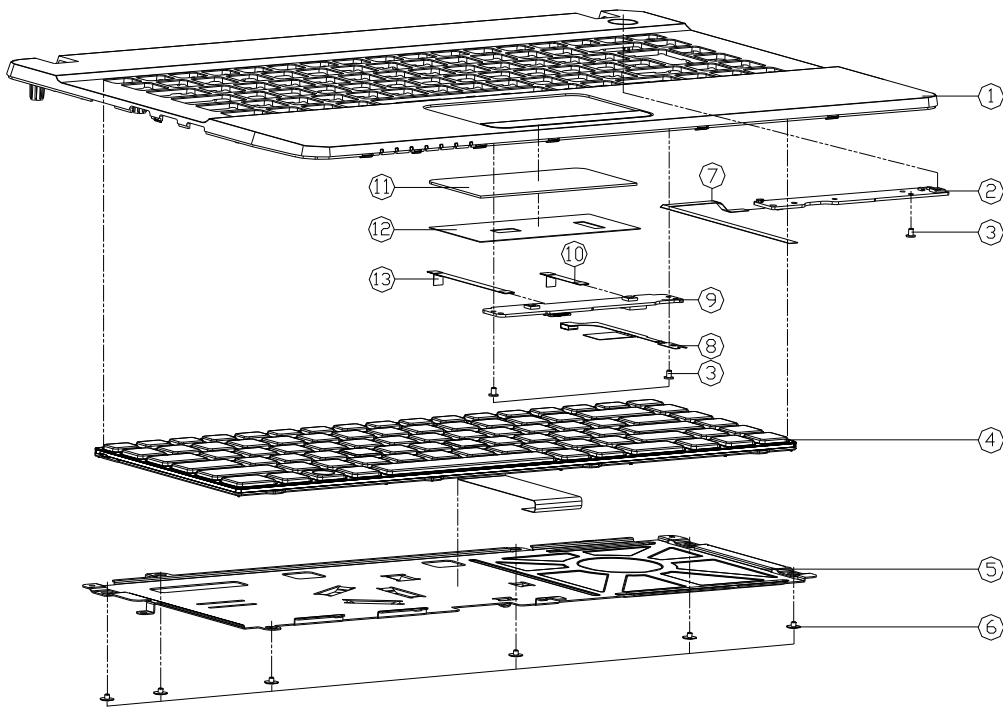
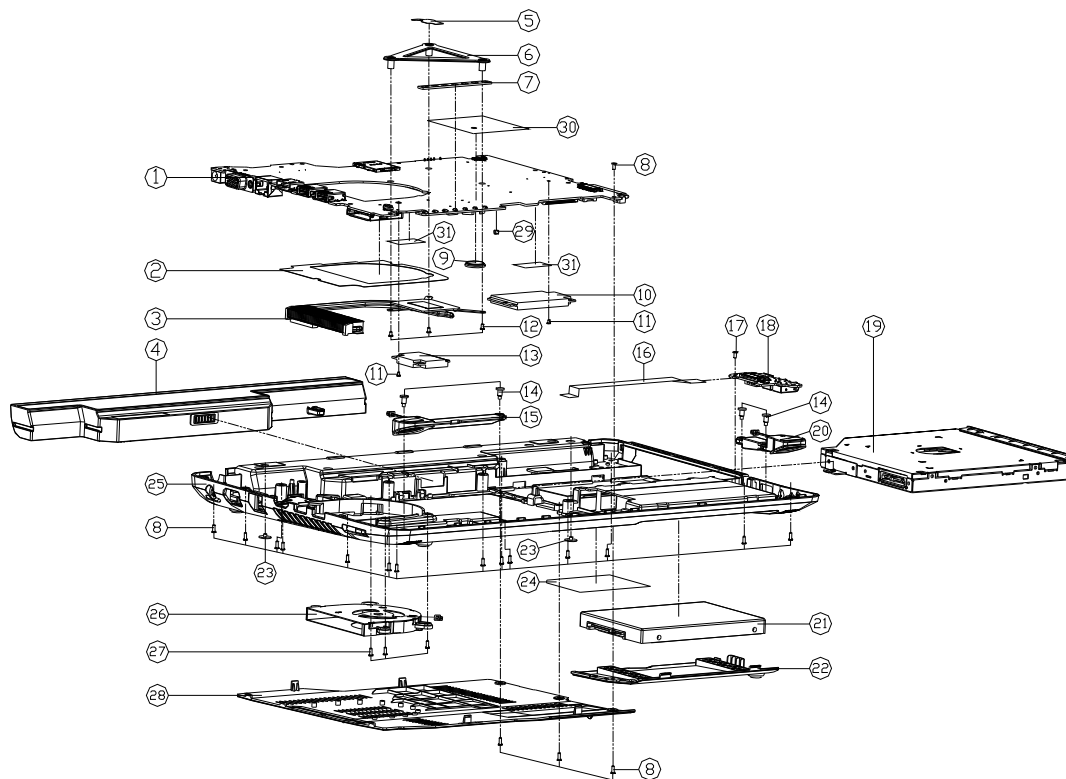


Figure A - 7  
Top (W345EU)

ITEM	PART NAME	PART NO	REMARK
1	TOP CASE MODULE FOR PA KEYBOARD W345EU	6-39-W3452-013	
1	TOP CASE MODULE FOR PA KEYBOARD W345EU-C	6-39-W3452-012-C	
1	TOP CASE MODULE FOR GB KEYBOARD W345EU	6-39-W3452-111	
1	TOP CASE MODULE FOR GB KEYBOARD W345EU-C	6-39-W3452-110-C	
2	POWER SWITCH BOARD V40W/D AP-KEY W345EU	6-77-W345S-D04	
3	SCREW M2x2L KI NI ICT NY (DD=0.45,DT=0.4)	6-35-B1120-3RE	
4	KEYBOARD SHIELDING SECC W345EU	6-80-W2440-331-1	
5	KEYBOARD SHIELDING SECC W345EU	6-33-W3452-013	
6	SCREW M2x2L KI BK/Z ICT NY (06,T=0.5)	6-35-B6120-2RC	
7	FFC FOR POWER BOARD W345EU	6-43-W3450-011	
8	CONDUCTIVE CLOTH FOR CLICK BOARD W345EU	6-47-W3452-021	ONLY FOR W345EU
9	CLICK BOARD V4.0 W345EU	6-77-W3452-D04	
10	FFC FOR CLICK BOARD TO MB W345EU	6-43-W3450-021	
11	TOUCH PAD SYMPHONY IN-0146-003 MULTI-GESTURE C4800	6-49-C4802-010	
12	TAPE MYLAR FOR T/P W345EU	6-40-W3452-010	
13	FFC CABLE FOR TOUCH PAD 6PIN C4500	6-43-C4502-010	

## Bottom (W345EU)

Figure A - 8  
Bottom (W345EU)



ITEM	PART NAME	PART NO	REMARK
1	MAIN BOARD V4.0 CW/3D W345EU	6-77-W3450-D04	
1	MAIN BOARD V4.0 CW/3D W345EU	6-77-W3450-D04-1	
2	MB MYLAR FOR FAN AREA PET W345EU	6-40-W345S-011	
3	CPU THERMAL MODULE W345EU	6-31-W345N-102	
4	IMP 1.0 10V/500uF/20P 50V/0.045V/0.045V/0.045V	6-07-W345S-4W42	(OPTION)
4	IMP 1.0 10V/500uF/20P 50V/0.045V/0.045V/0.045V	6-07-W345S-4G41	(OPTION)
4	IMP 1.0 10V/500uF/20P 50V/0.045V/0.045V/0.045V	6-07-W345S-4B72	(OPTION)
5	CONDUCTIVE CLOTH FOR CPU SUPPORTER W345EU	6-47-W345S-040	
6	CPU SUPPORTER FOR HARDY RIVER SEC. W345EU	6-33-W150S-011	
7	LED LENS SPONGE (SS4040S) CH40S W345EU	6-47-0019A-554	
8	SCREW M2.5*6L K BZ ICT NY	6-35-82125-6RA	
9	BATTERY 3V 220MA 888020208 (KTS)	6-23-6A282-030	
10	VCOM (CROSSIN) 130V RPN FULL RM-C080 100	6-88-W24HW-2410	(OPTION)
11	SCREW M2*3.5 KI NI ICT NY (004453) 040	6-35-81120-3RC	
12	SCREW M2.5*4L F NI ICT NY	6-38-21125-4RB	
13	W/O HDD ASS'Y W345EU	6-88-C555F-7001	(OPTION)
13	W/O HDD ASS'Y W345EU	6-88-W1102-9400	(OPTION)
13	W/O HDD ASS'Y W345EU	6-88-C555F-5300	(OPTION)
13	W/O HDD ASS'Y W345EU	6-88-C555F-5301	(OPTION)
13	W/O HDD ASS'Y W345EU	6-88-W1102-5301	(OPTION)
14	SCREW M2*4.0L NI ICT NY FOR SPEAKER	6-35-21120-6R2	
15	SPEAKER L RM 10V 40 20W (CROSSIN) 00V 1000	6-23-5W340-0L2	
16	RTC CABLE 10M 10V 40 20W (CROSSIN) 00V 1000	6-43-W2400-012-1	
17	CROSSIN V4.0 1.0 10V/500uF/20P 50V/0.045V/0.045V/0.045V	6-35-C6120-4RB	
18	AUDIO BOARD V4.0 W345EU	6-77-W345B-D04	
19	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W345U00-010	
19	SATA BLU-RAY COMBO ASS'Y (OPTION)	6-79-W345U00V-000	
20	SPEAKER R RM 10V 40 20W (CROSSIN) 00V 1000	6-23-5W340-0R2	
21	W/O HDD ASS'Y W345EU	6-79-W345U00J-000	
21	W/O HDD ASS'Y W345EU	6-79-W345U00J-000	
22	HDD COVER MODULE W345EU	6-42-W345J-103	
22	HDD COVER MODULE W345EU-C	6-42-W345J-103-C	
23	SCREW M2*3.5 KI BK/Z ICT NY (061410S)	6-35-86120-3RC	
24	PRODUCT LABEL FOR W345EU (KTS) 1000	6-49-W345U03-011	
25	BOTTOM CASE MODULE W345EU	6-39-W3453-013	
25	BOTTOM CASE MODULE W345EU-C	6-39-W3453-013-C	
26	FAN MODULE W251HUQ	6-31-W25HS-100	
27	SCREW M2.5*5L KI BK/Z ICT NY	6-35-86125-5RA	
28	CPU COVER MODULE W345EU	6-42-W3453-102	
28	CPU COVER MODULE W345EU-C	6-42-W3453-102-C	
29	MB RUBBER W345EU	6-47-W345S-020	
30	MB AL FOIL FOR TP W345EU	6-47-W345S-030	
31	TAPE MYLAR TRANSPARENT (061410S) 1000	6-40-P1803-020	



# SATA BLU RAY COMBO (W345EU)

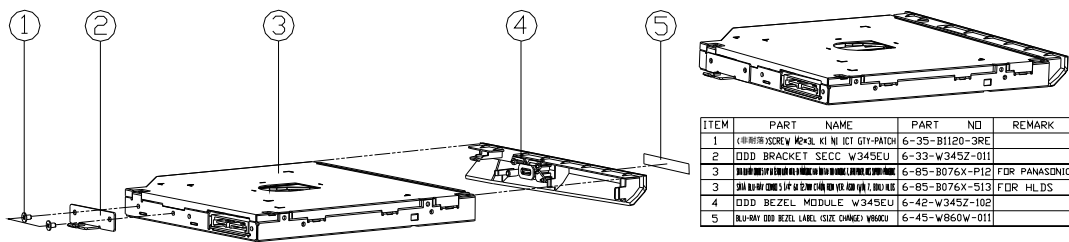
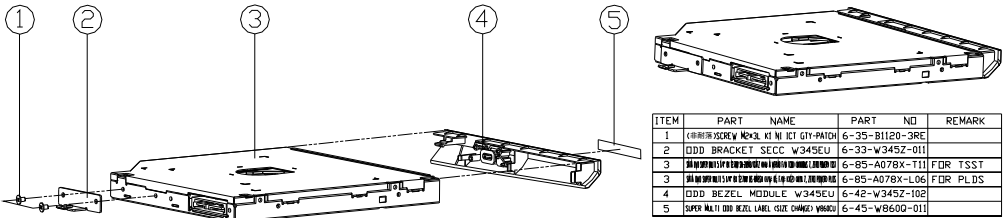


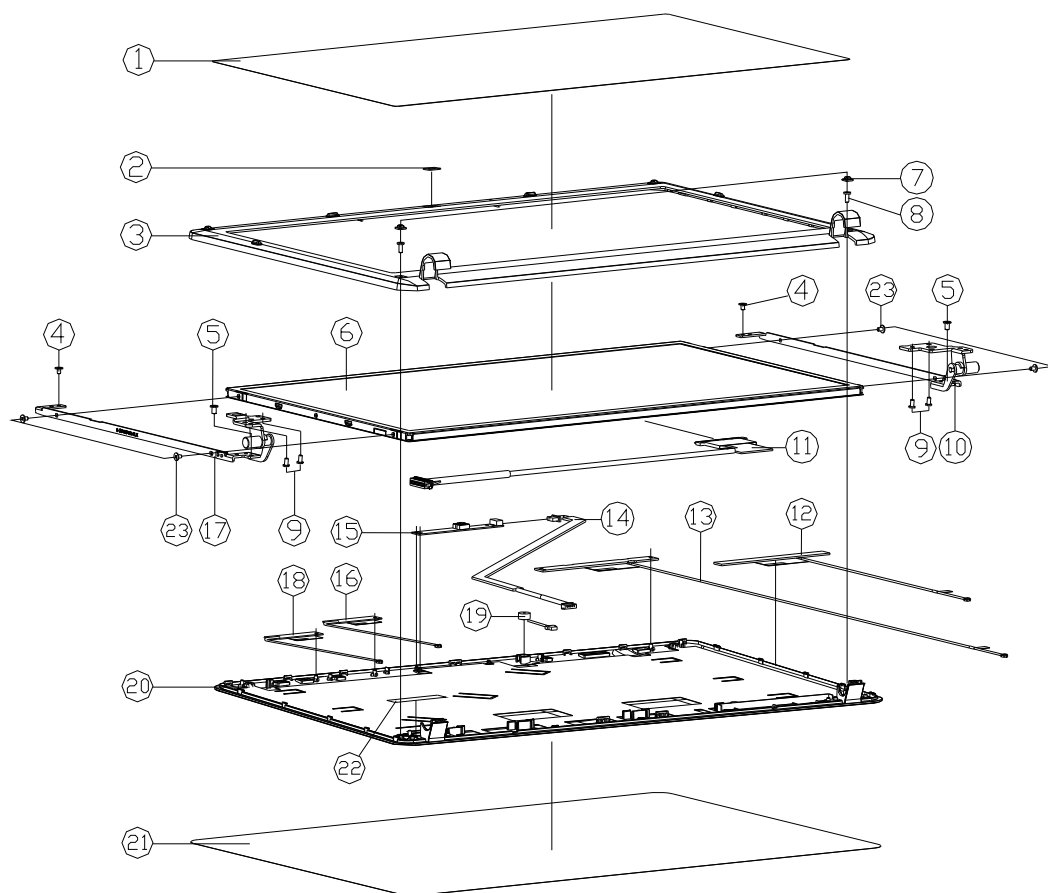
Figure A - 9  
SATA BLU RAY  
COMBO (W345EU)

# Super Multi (W345EU)

Figure A - 10  
Super Multi  
(W345EU)



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*Figure A - 11*  
**LCD (W345EU)**

ITEM	PART	NAME	PART	NO	REMARK
1	LED FRONT COVER PROTECT MILAR PET W3450U		6-40-W3458-010		
2	CCD LENS PMMA E5120Q		6-42-E5101-031		
3	W/D CCD LENS PMMA E5120Q		6-42-E5101-040		
3	LED FRONT COVER MODULAR W3450U		6-39-W3451-013		
4	SCREW HEXAL KIT IN ICT NY (CT-0451-041) BZ KT		6-35-B1120-380		
5	SCREW M2X34L KIT(CT-05 D-45) BZ KT		6-35-B6125-490		
6	LED MAP HP LG HYPERION-3D GLARE TYPE QLED S5M		6-50-J8152-H02		
6	LED MAP HP LG HYPERION-3D GLARE TYPE QLED S5M		6-50-J8152-L09		
6	LED MAP HP LG HYPERION-3D GLARE TYPE QLED S5M		6-50-J8152-D04		
6	LED MAP HP LG HYPERION-3D GLARE TYPE QLED S5M		6-50-J8152-C00		
7	LED FRONT COVER RUBBER SILENCER C5500		6-47-C4501-031		
9	SCREW HEXAL KIT(CT-08 D-40) BZ KT		6-35-B6120-580		
9	SCREW M2.5X6L KIT BZ KT NY		6-35-B2125-68A		
10	LED HINGE (L)SC5C-K77 W3450U		6-33-W3451-091		
11	WIRE CABLE FOR LVS (S)S2000 (CABLE) (L)S2000		6-43-C4801-052		
12	ANTENNA 3D W/ 3D PAPER HYPERION-3D GLARE TYPE QLED S5M		6-23-7W244-010		
13	ANTENNA 3D W/ 3D PAPER HYPERION-3D GLARE TYPE QLED S5M		6-23-7E412-010		
14	WIRE CABLE FOR CCD SP. 2035MM (CABLE) (CT-077)		6-43-C4501-011		
15	LED COVER HINGE FOR HYPERION-3D GLARE TYPE QLED S5M		6-88-W51CC-490		OPTION
15	LED COVER HINGE FOR HYPERION-3D GLARE TYPE QLED S5M		6-88-M111C-5100		OPTION
15	LED COVER HINGE FOR HYPERION-3D GLARE TYPE QLED S5M		6-88-M115C-490		OPTION
15	LED COVER HINGE FOR HYPERION-3D GLARE TYPE QLED S5M		6-88-W51CC-5100		OPTION
16	ANTENNA 3D W/ 3D PAPER HYPERION-3D GLARE TYPE QLED S5M		6-23-7W345-020		
17	LED HINGE (L)SC5C-K77 W3450U		6-33-W3451-0L1		
18	ANTENNA 3D W/ 3D PAPER HYPERION-3D GLARE TYPE QLED S5M		6-23-7W345-010		
19	MIC. 0222 2W 22K MICALRE L668M V53090		6-23-CEW53-011		
20	LED BACK COVER MODULAR W3450U		6-39-W3451-023		
20	LED BACK COVER MODULAR W3450U-C		6-39-W3451-023-C		
21	LED BACK COVER PROTECT MILAR PET W3450U		6-40-W3458-010		
22	TAPE MYLAR (B) MYLAR M550J		6-40-M55J-320		
23	SCREW HEXAL KIT IN ICT PATCH NY (CT-0451-041) BZ KT		6-35-C2120-080		



# Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the **W340EU/W345EU** 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 4/9- LVDS, DDI, CRT - Page B - 17</i>	<i>System Power - Page B - 32</i>
<i>Processor 1/7- DMI, FDI, PEG - Page B - 3</i>	<i>PCH 5/9- PCI, USB, RSVD - Page B - 18</i>	<i>VDD3, VDD5 - Page B - 33</i>
<i>Processor 2/7- CLK, MISC - Page B - 4</i>	<i>PCH 6/9- GPIO, CPU - Page B - 19</i>	<i>Power 1.5V/0.75V, 1.8VS - Page B - 34</i>
<i>Processor 3/7- (DDR3) - Page B - 5</i>	<i>PCH 7/9- PWR - 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 8/9 POWER - Page B - 21</i>	<i>POWER 0.85VS - Page B - 36</i>
<i>Processor 5/7- GFX PWR - Page B - 7</i>	<i>PCH 9/9- GRD - Page B - 22</i>	<i>POWER VCORE1 - Page B - 37</i>
<i>Processor 6/7- GND - Page B - 8</i>	<i>USB3.0, Power, WLAN - Page B - 23</i>	<i>POWER VCORE/GFX_VCORE - Page B - 38</i>
<i>Processor 7/7- RSVD - Page B - 9</i>	<i>CCD, 3G, TPM - Page B - 24</i>	<i>AC IN, CHARGER - Page B - 39</i>
<i>DDR3 SO-DIMM_0 - Page B - 10</i>	<i>Card Reader / LAN RTL8411 - Page B - 25</i>	<i>CLICK BOARD - Page B - 40</i>
<i>DDR3 SO-DIMM_1 - Page B - 11</i>	<i>LAN, SATA HDD, ODD - Page B - 26</i>	<i>AUDIO BOARD / USB - Page B - 41</i>
<i>LVDS, INVERTER - Page B - 12</i>	<i>USB3.0 TI TUSB7320 - Page B - 27</i>	<i>POWER SWITCH &amp; LID BOARD - Page B - 42</i>
<i>HDMI, CRT - Page B - 13</i>	<i>KBC-ITE IT8518 - Page B - 28</i>	<i>Power On SEQ - Page B - 43</i>
<i>PCH 1/9- RTC, HDA, SATA, SPI - Page B - 14</i>	<i>LED - Page B - 29</i>	
<i>PCH 2/9- PCIE, SMBUS, CLK - Page B - 15</i>	<i>AUDIO CODEC ALC269, VIA1802 - Page B - 30</i>	
<i>PCH 3/9- DMI, FDI, PWRGD - Page B - 16</i>	<i>USB Charger, FAN, TP, CONN - Page B - 31</i>	

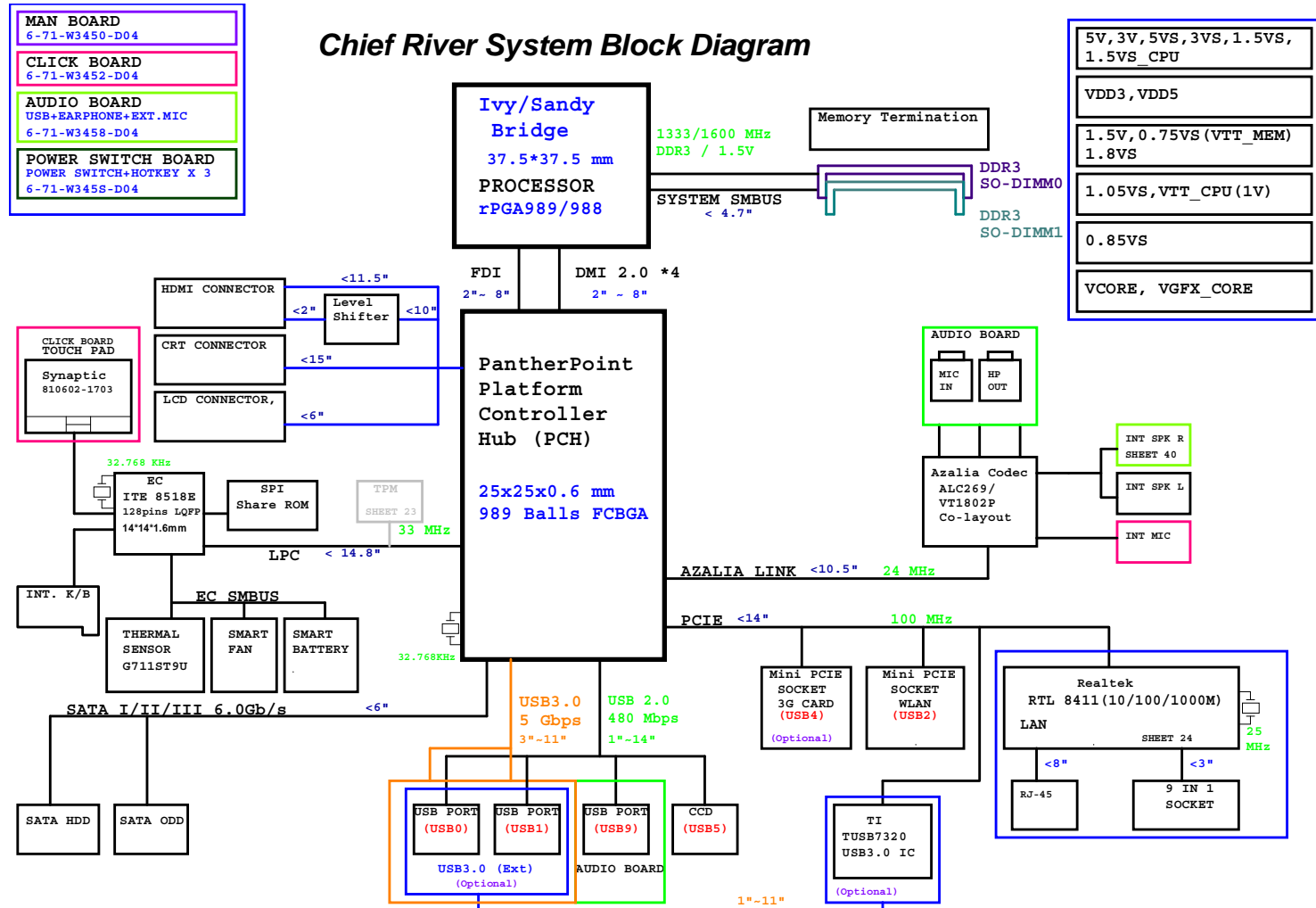
*Table B - 1*  
**SCHEMATIC  
DIAGRAMS**



## Version Note

The schematic diagrams in this chapter are based upon version 6-7P-W3454-004. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

# System Block Diagram

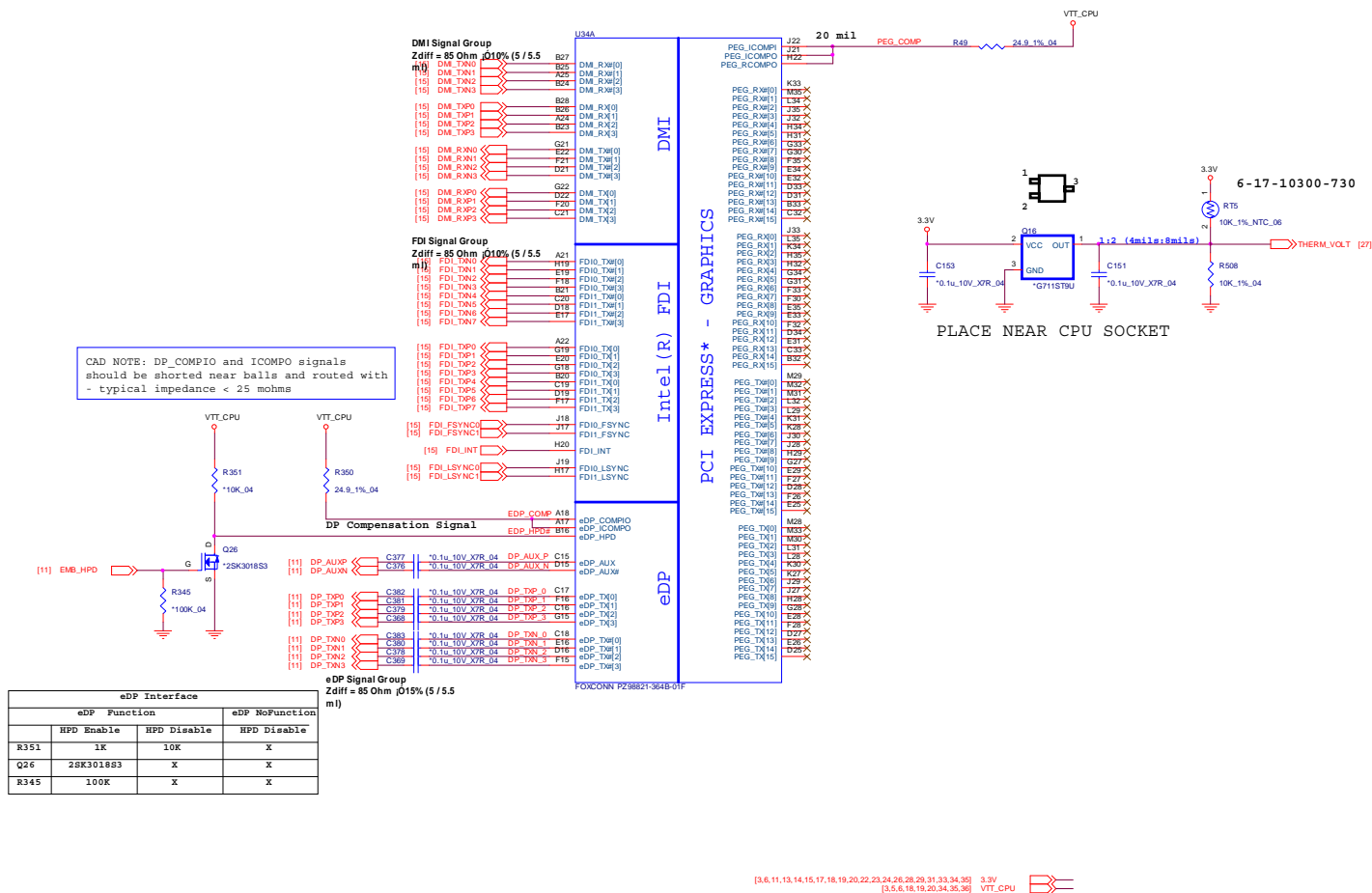


Sheet 1 of 42  
System Block  
Diagram



# Processor 1/7-DMI, FDI, PEG

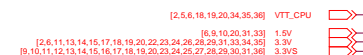
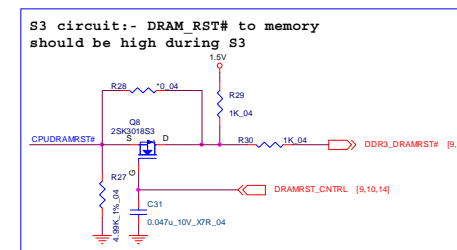
## Ivy/Sandy Bridge Processor 1/7 ( DMI,PEG,FDI )



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

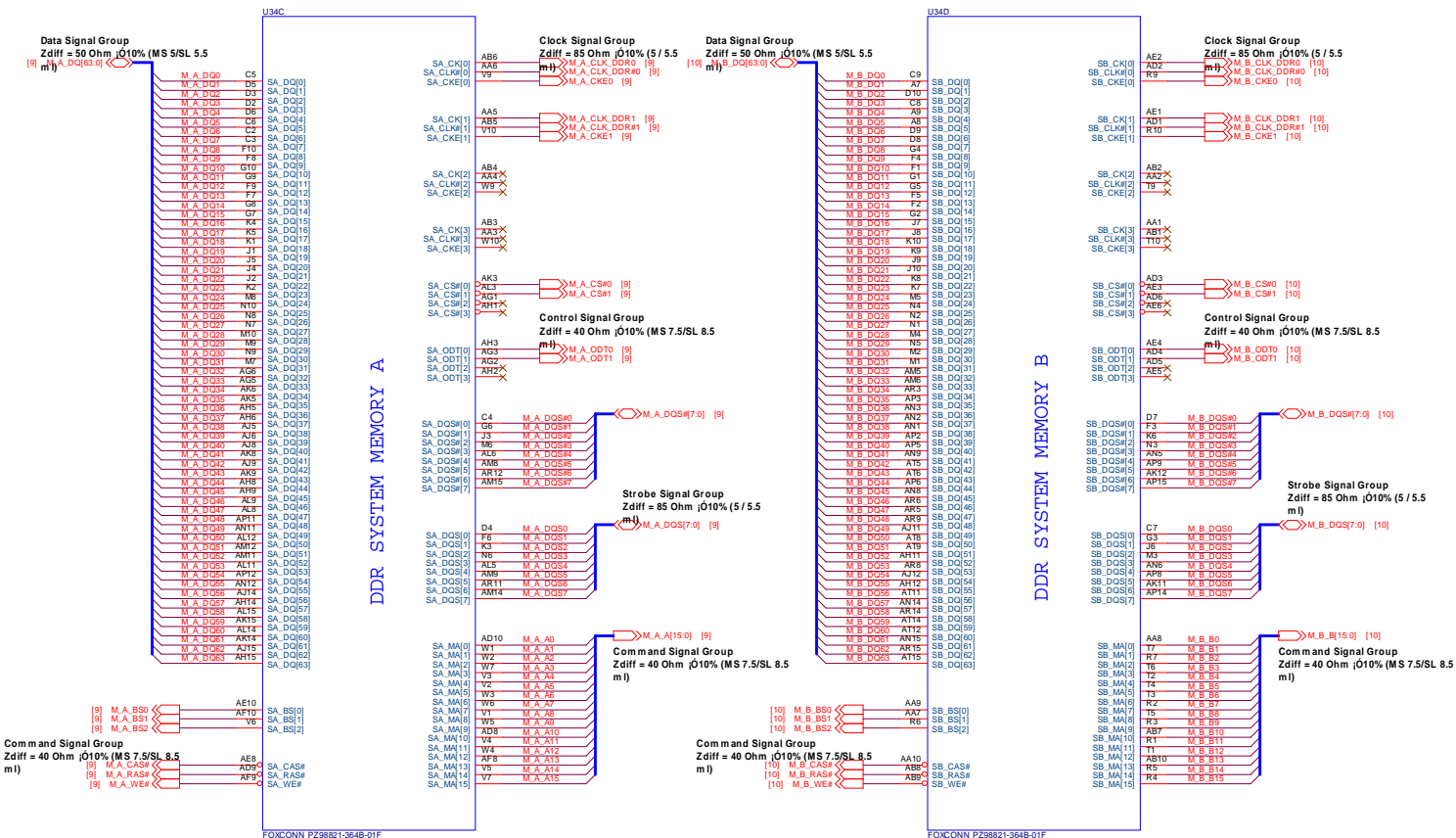
## Processor 2/7- CLK, MISC

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



## Processor 3/7- (DDR3)

## Ivy/Sandy Bridge Processor 3/7 ( DDR3 )



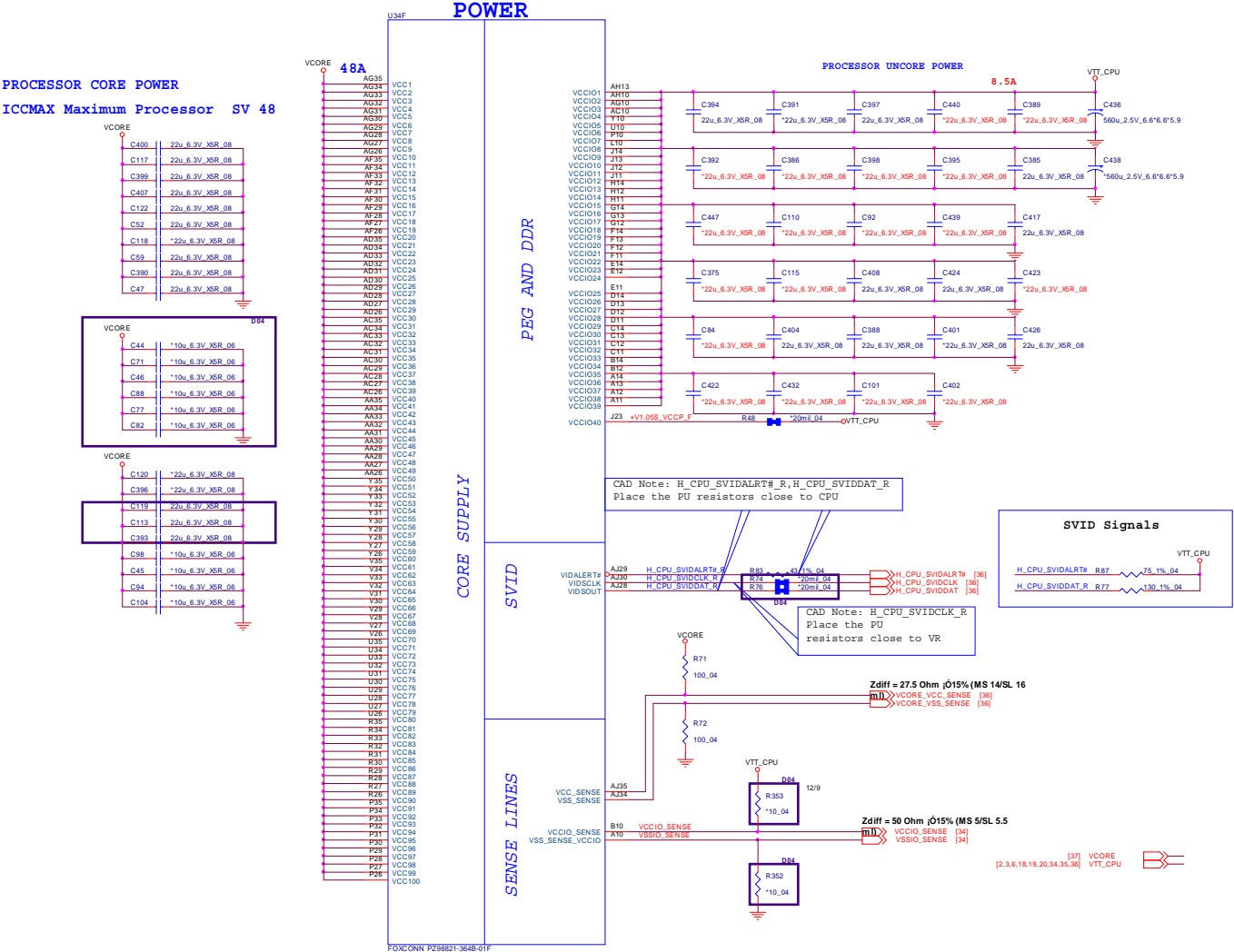
Sheet 4 of 42  
Processor 3/7-  
(DDR3)

Schematic Diagrams

Processor 4/7- Power

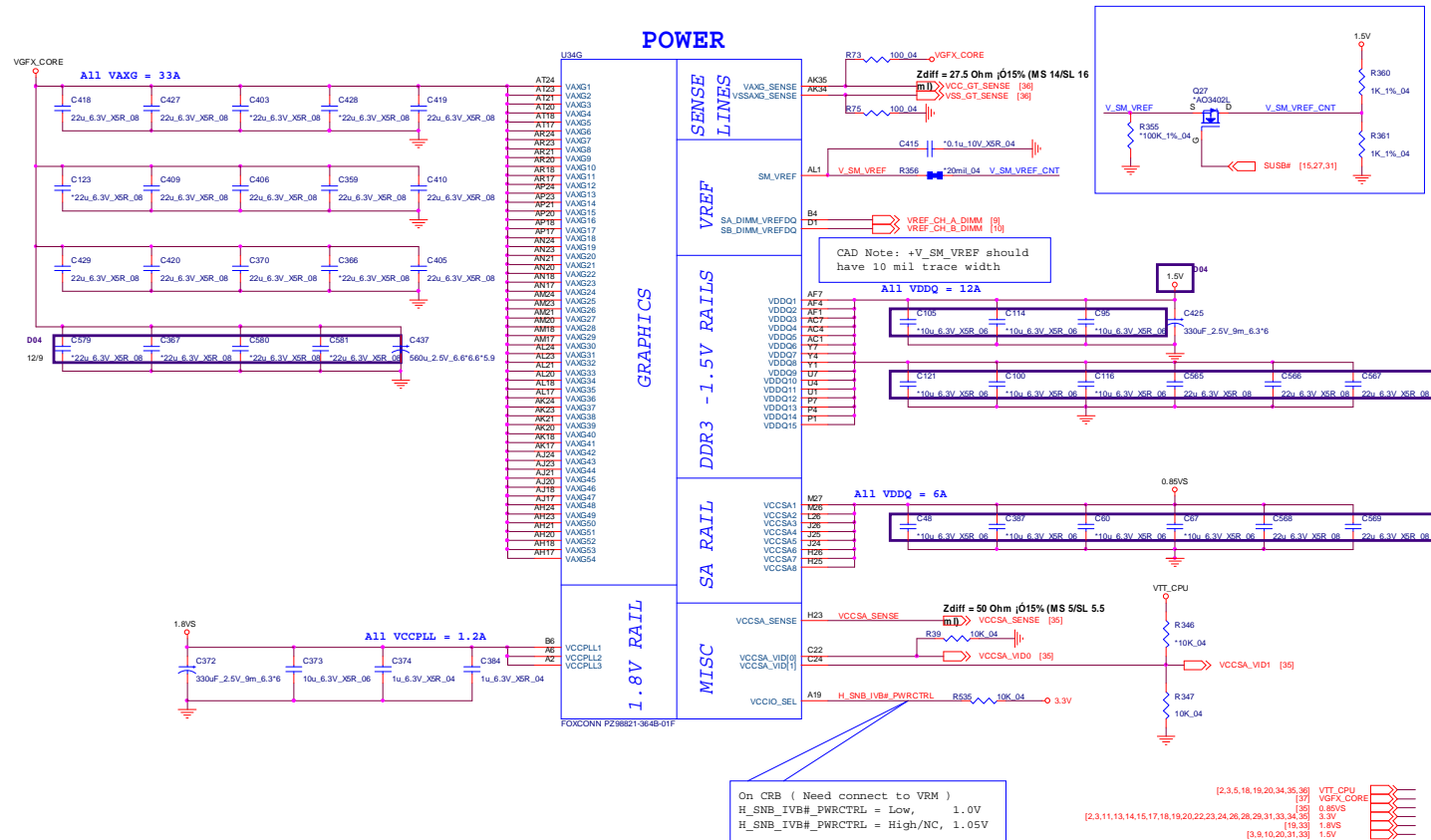
Sheet 5 of 42  
Processor 4/7-  
Power

Ivy/Sandy Bridge Processor 4/7



## Processor 5/7- GFX PWR

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



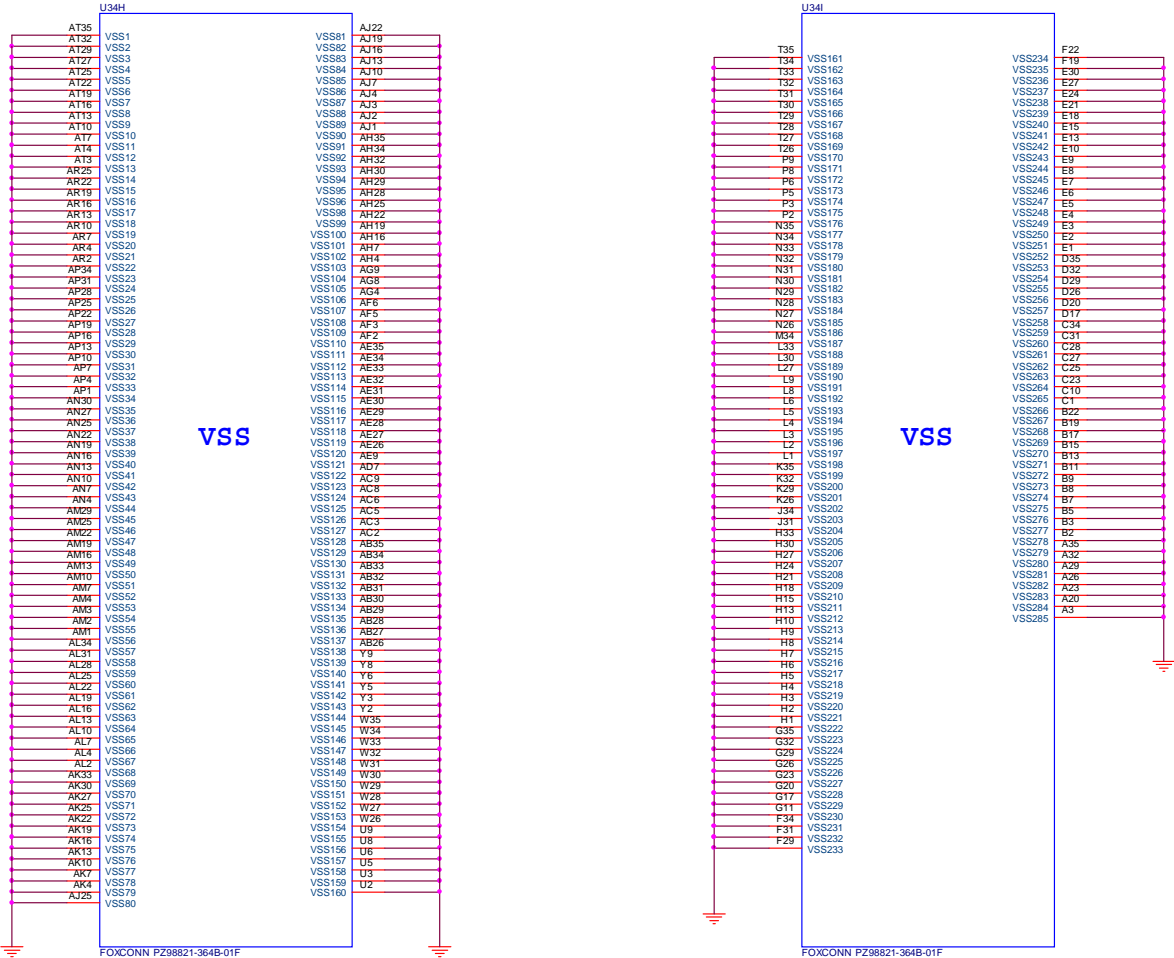
Schematic Diagrams

Processor 6/7- GND

Ivy\Sandy Bridge Processor 6/7 ( GND )

CAD Note: 0 ohm resistor  
should be placed close  
to CPU

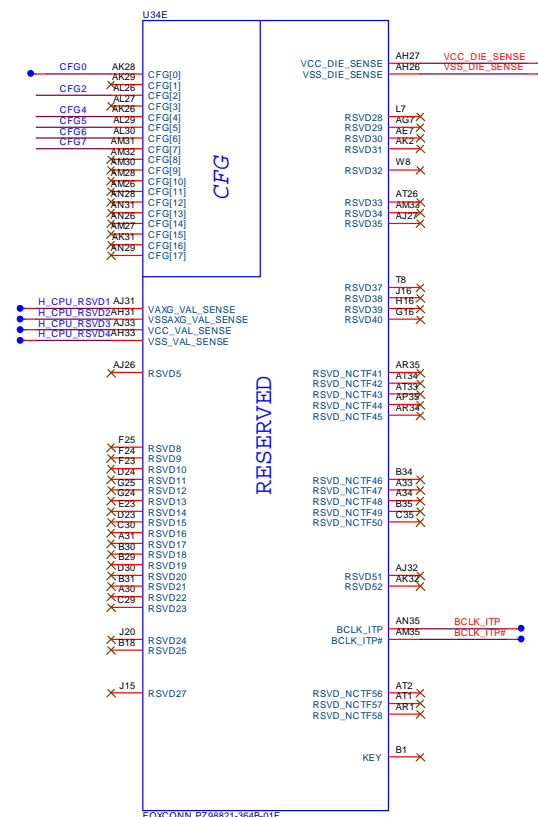
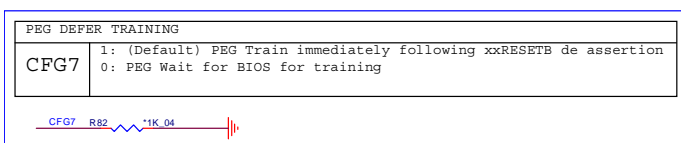
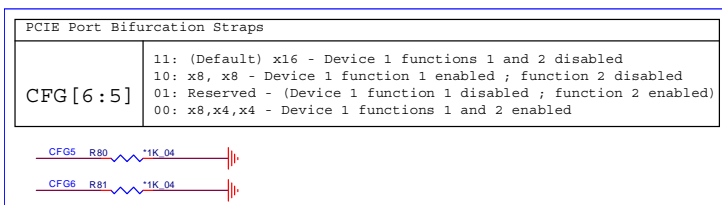
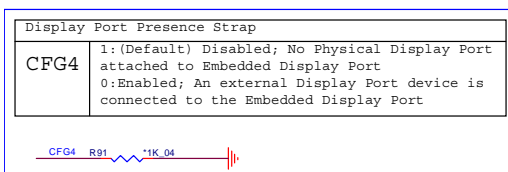
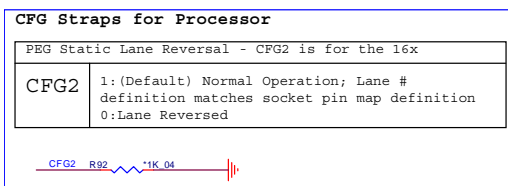
Sheet 7 of 42  
Processor 6/7- GND





# Processor 7/7- RSVD

## Ivy/Sandy Bridge Processor 7/7 ( RESERVED )



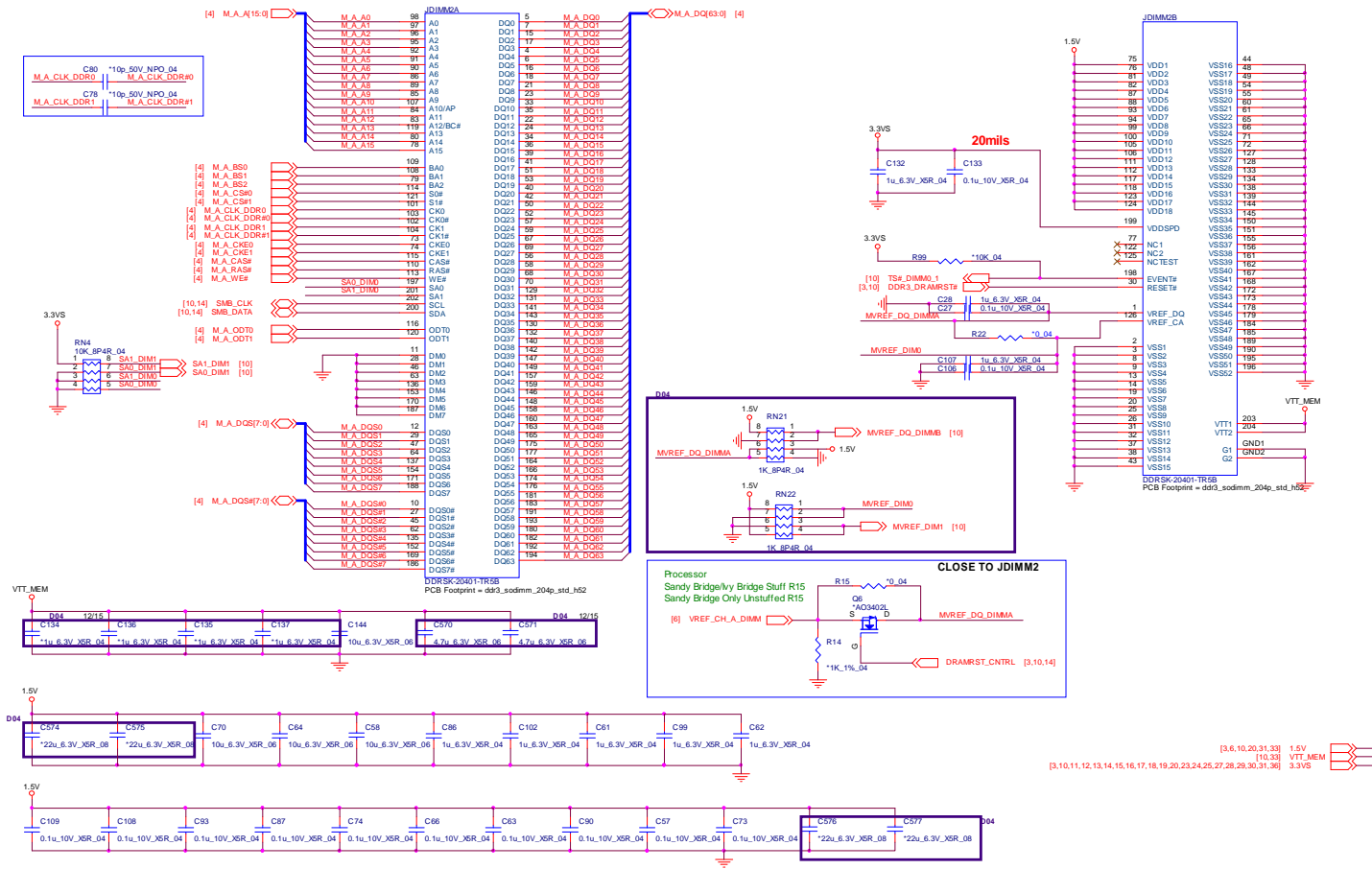
Sheet 8 of 42  
Processor 7/7-  
RSVD

Schematic Diagrams

DDR3 SO-DIMM\_0

SO-DIMM A CHANGE TO STANDARD

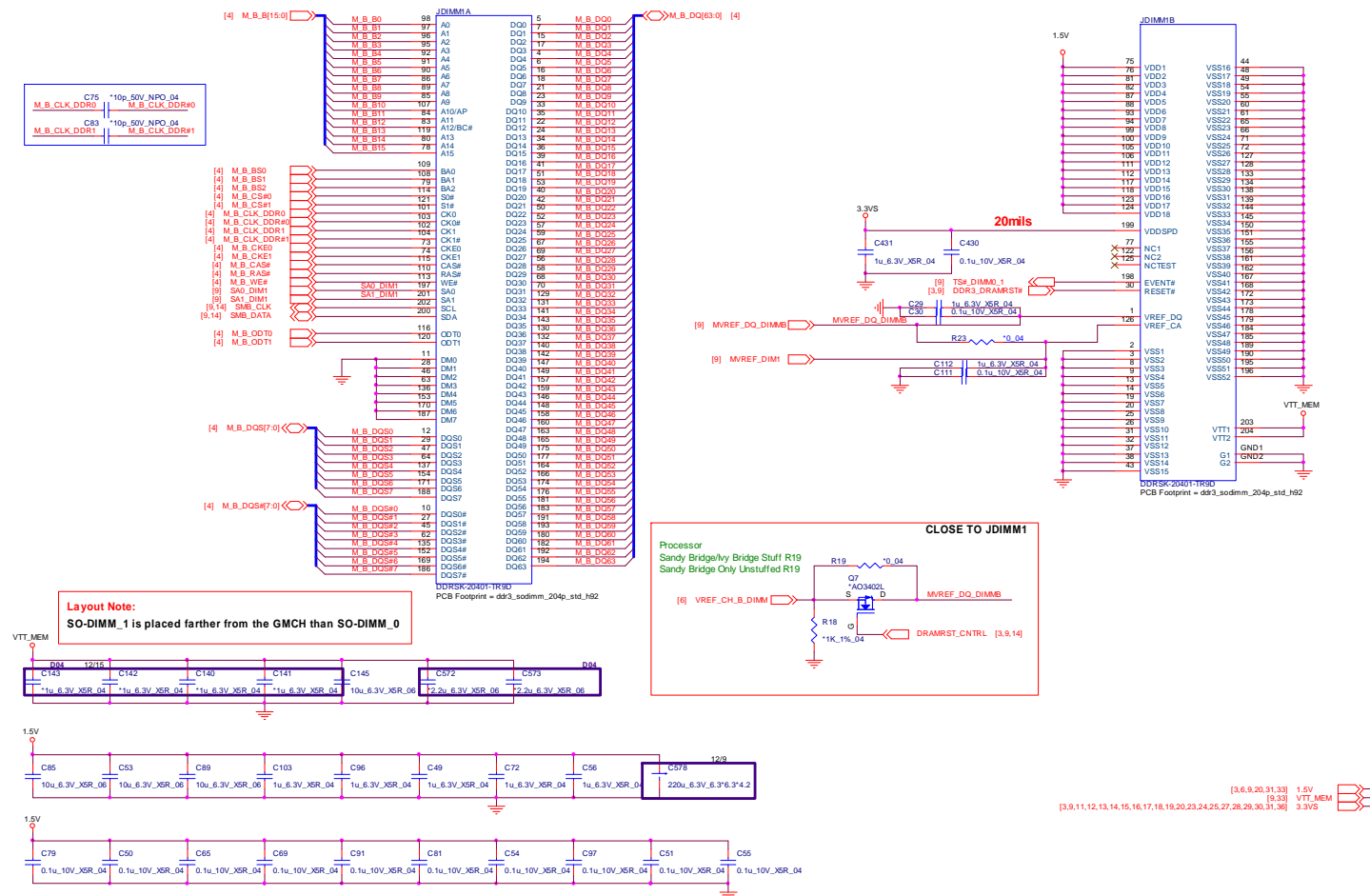
Sheet 9 of 42  
DDR3 SO-DIMM\_0



## B.Schematic Diagrams

## SO-DIMM B

CHANGE TO STANDARD

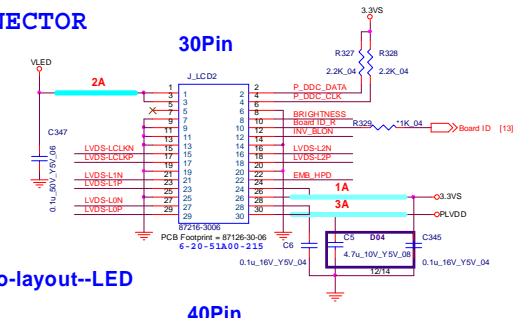


Schematic Diagrams

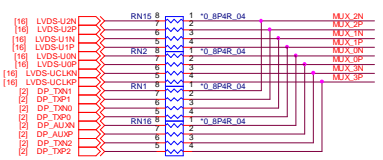
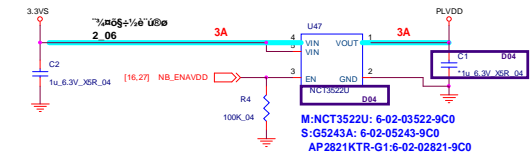
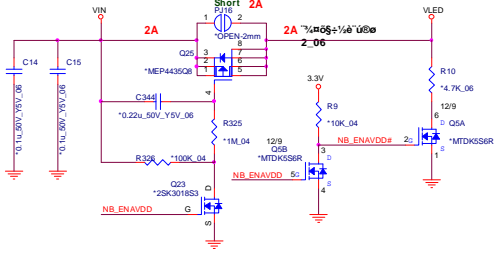
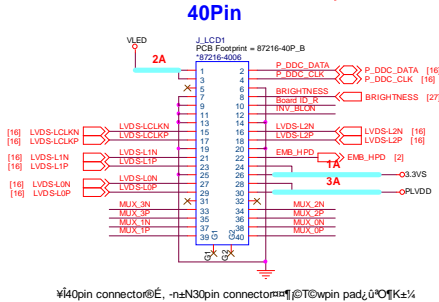
LVDS, INVERTER

Sheet 11 of 42  
LVDS, INVERTER

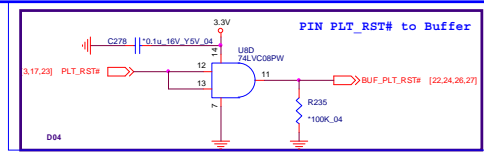
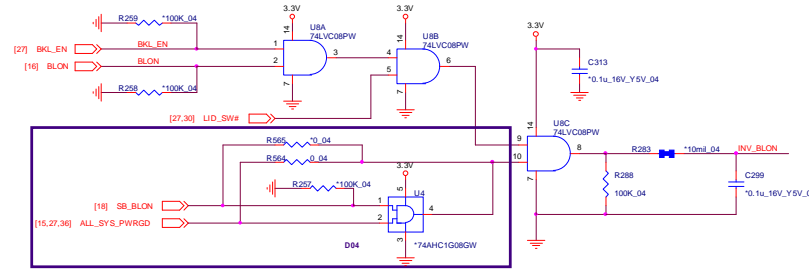
PANEL CONNECTOR



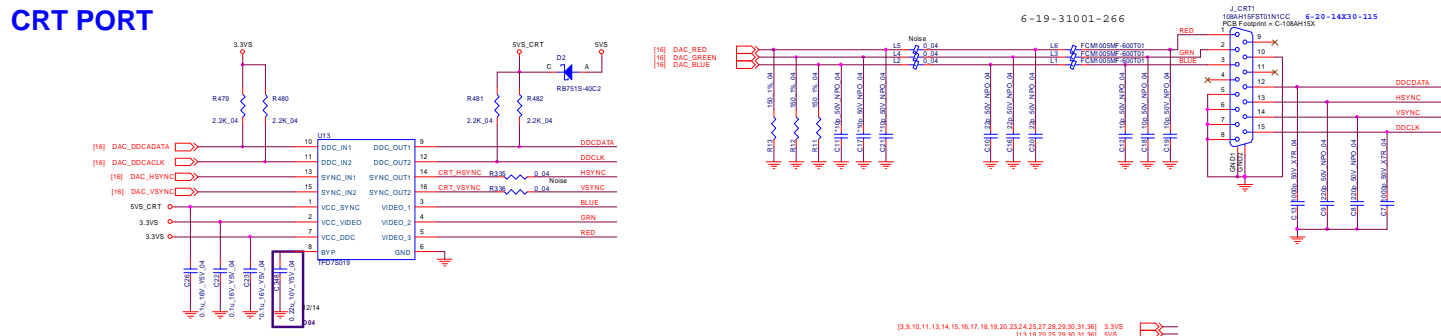
30Pin & 40 Pin Co-layout--LED PANEL.



INVERTER CONNECTOR

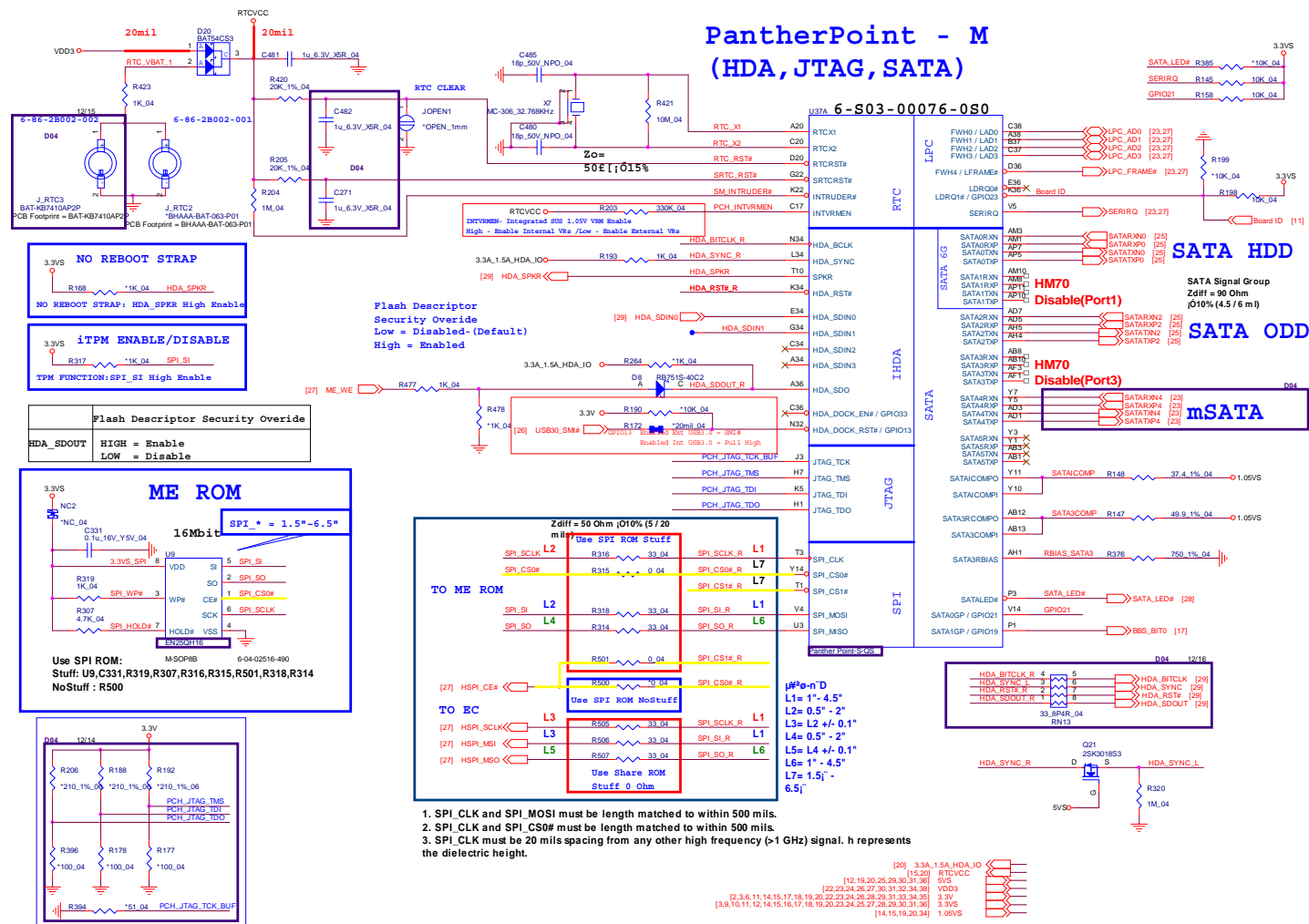


## HDMI PORT FOR INTEL GRAPHIC OPTION



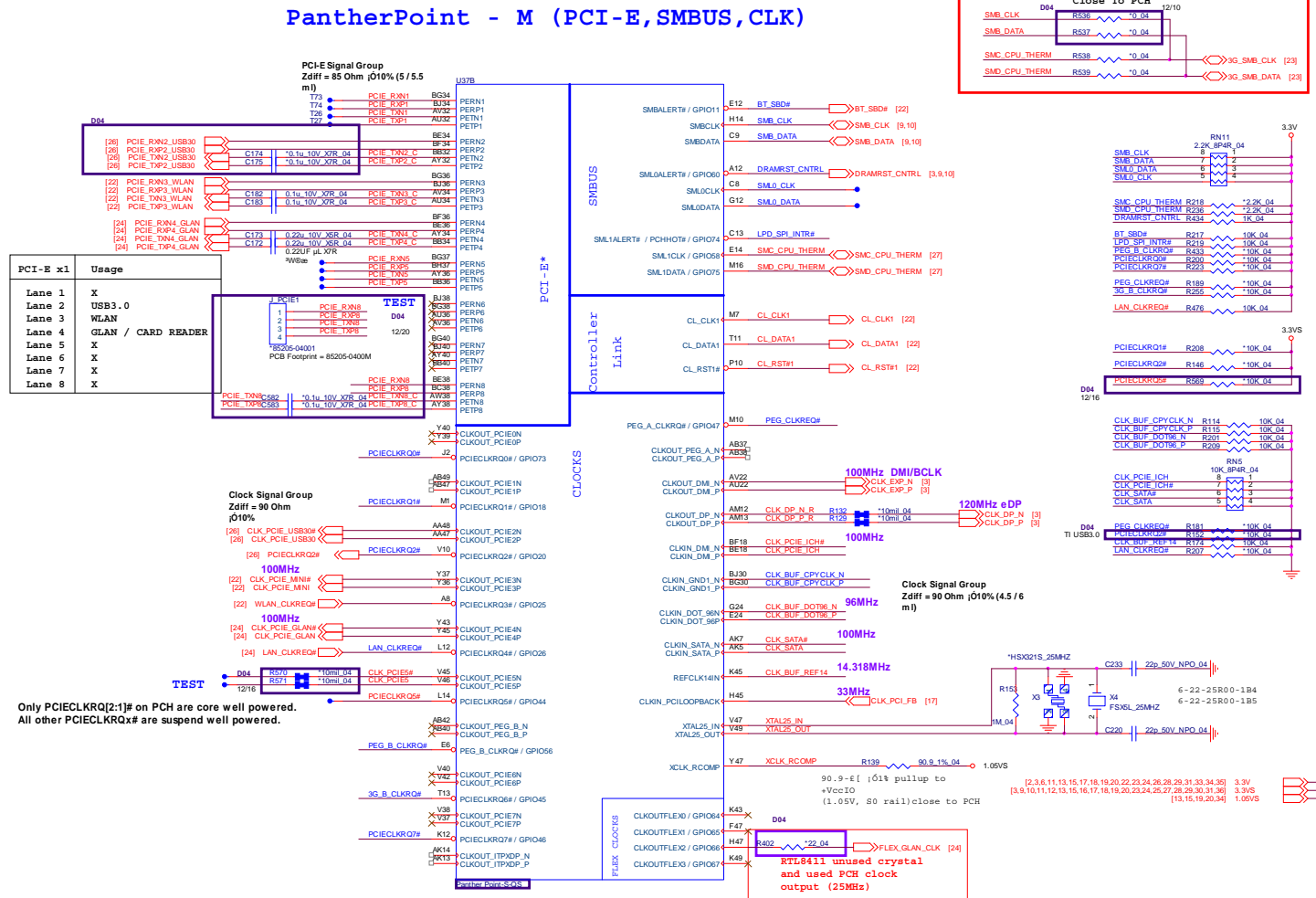
## B. Schematic Diagrams

Sheet 13 of 42  
PCH 1/9- RTC, HDA,  
SATA, SPI





## PCH 2/9- PCIE, SMBUS, CLK

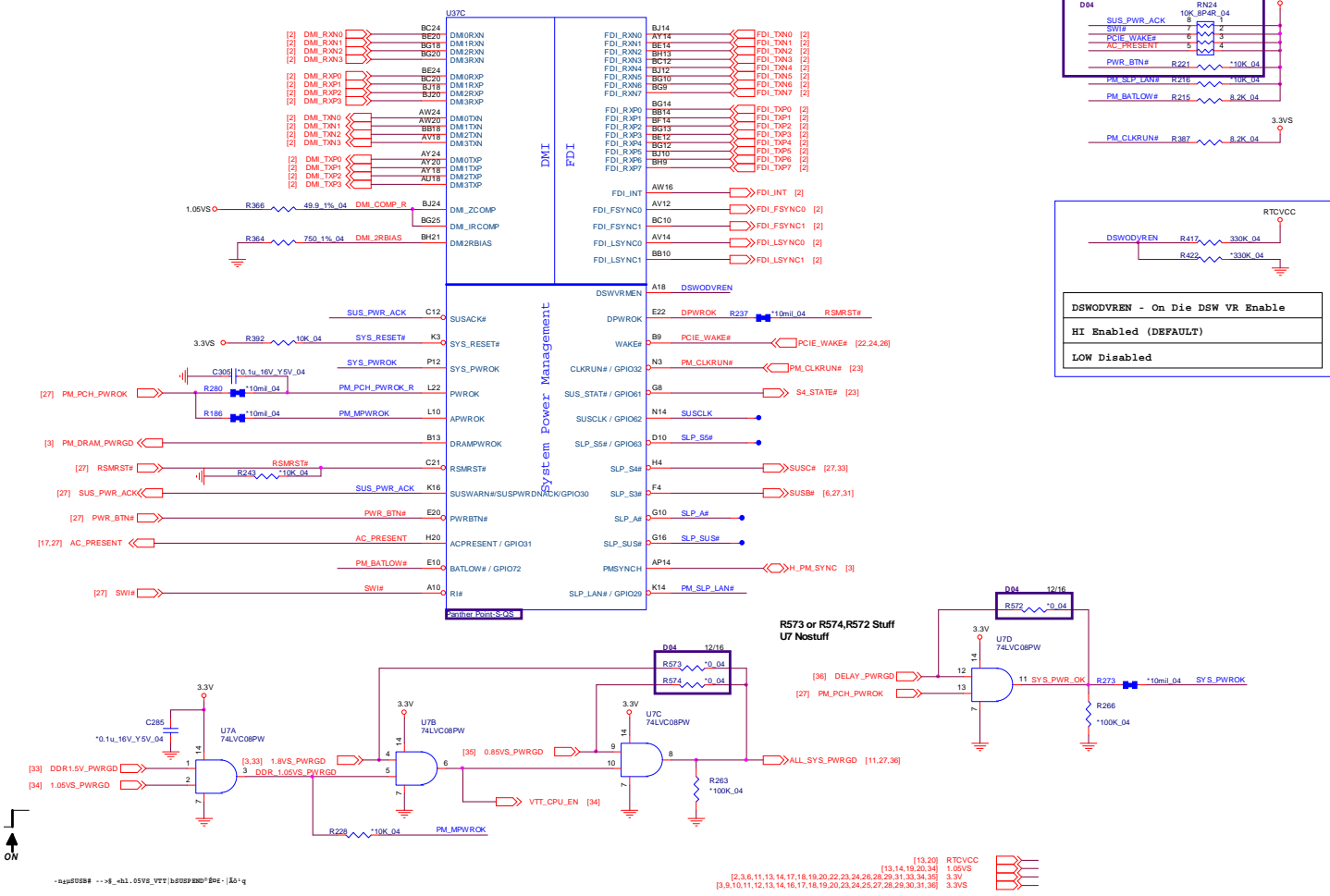


Schematic Diagrams

PCH 3/9- DMI, FDI, PWRGD

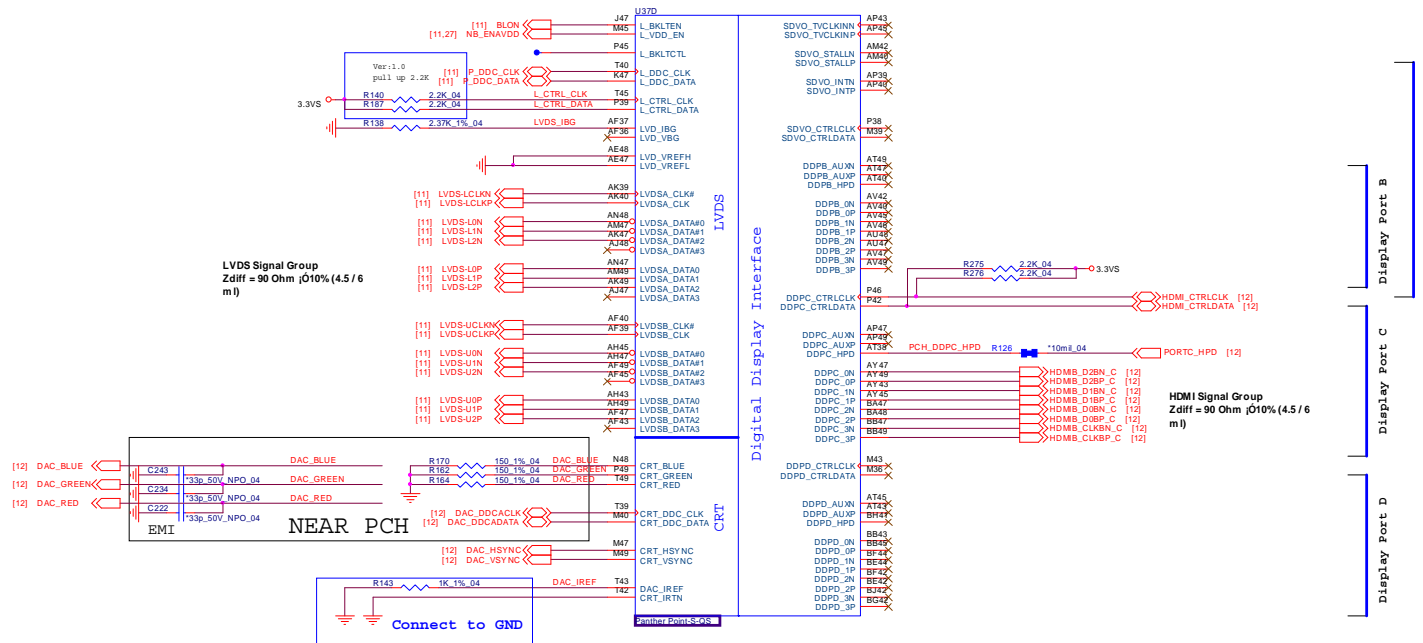
PantherPoint -M (DMI,FDI,GPIO)

Sheet 15 of 42  
PCH 3/9- DMI, FDI,  
PWRGD



# PCH 4/9- LVDS, DDI, CRT

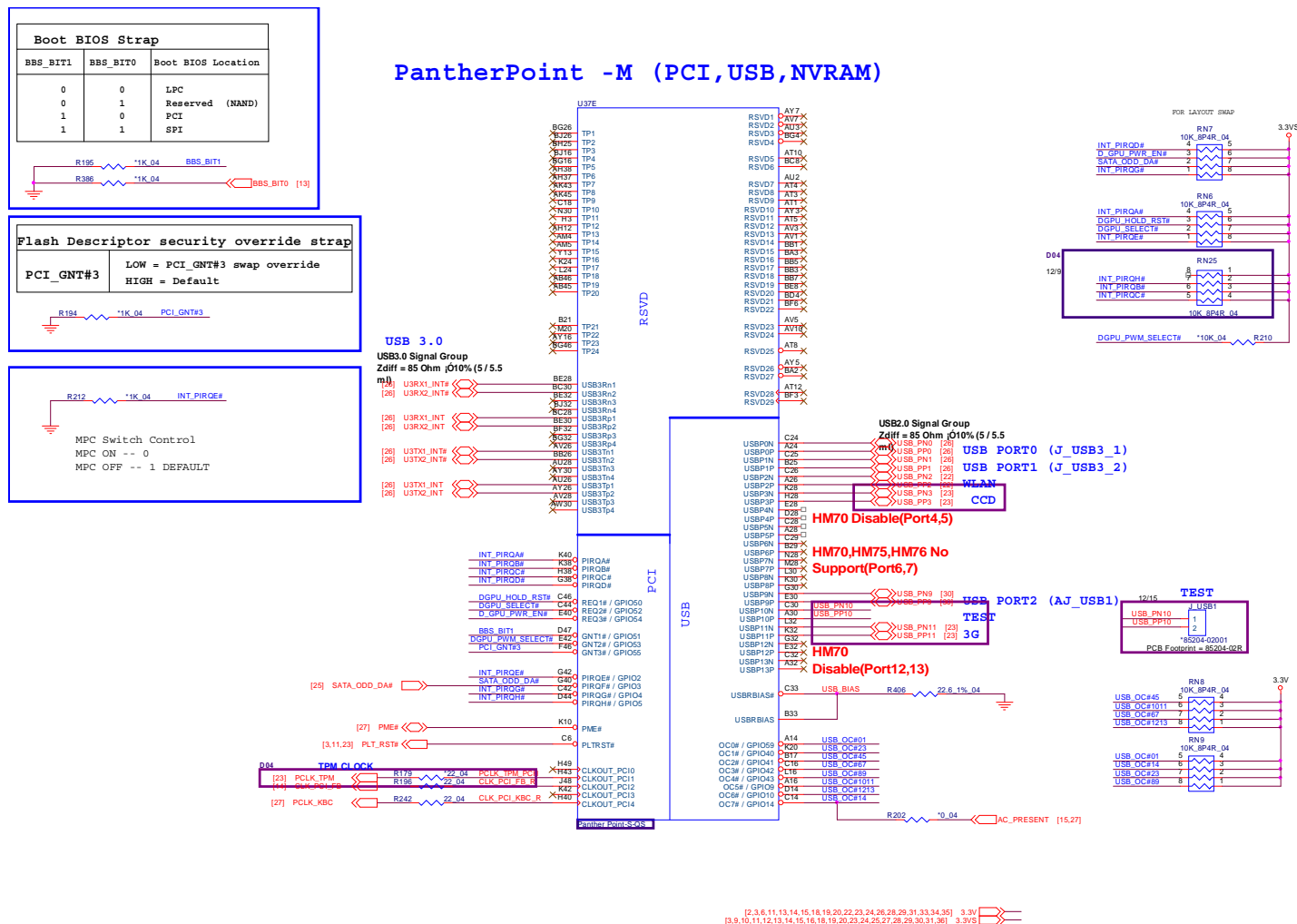
## PantherPoint -M (LVDS, DDI, CRT)



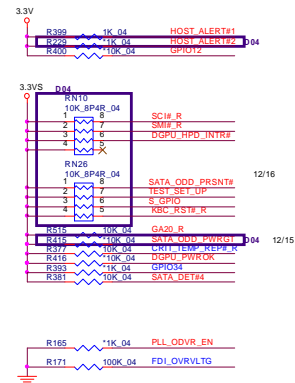
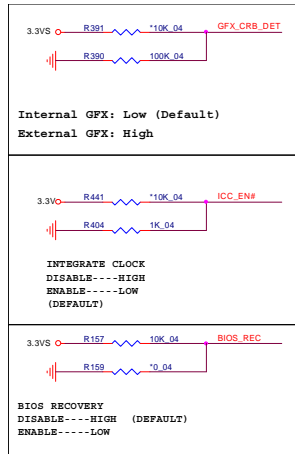
Sheet 16 of 42  
PCH 4/9- LVDS,  
DDI, CRT

## PCH 5/9- PCI, USB, RSVD

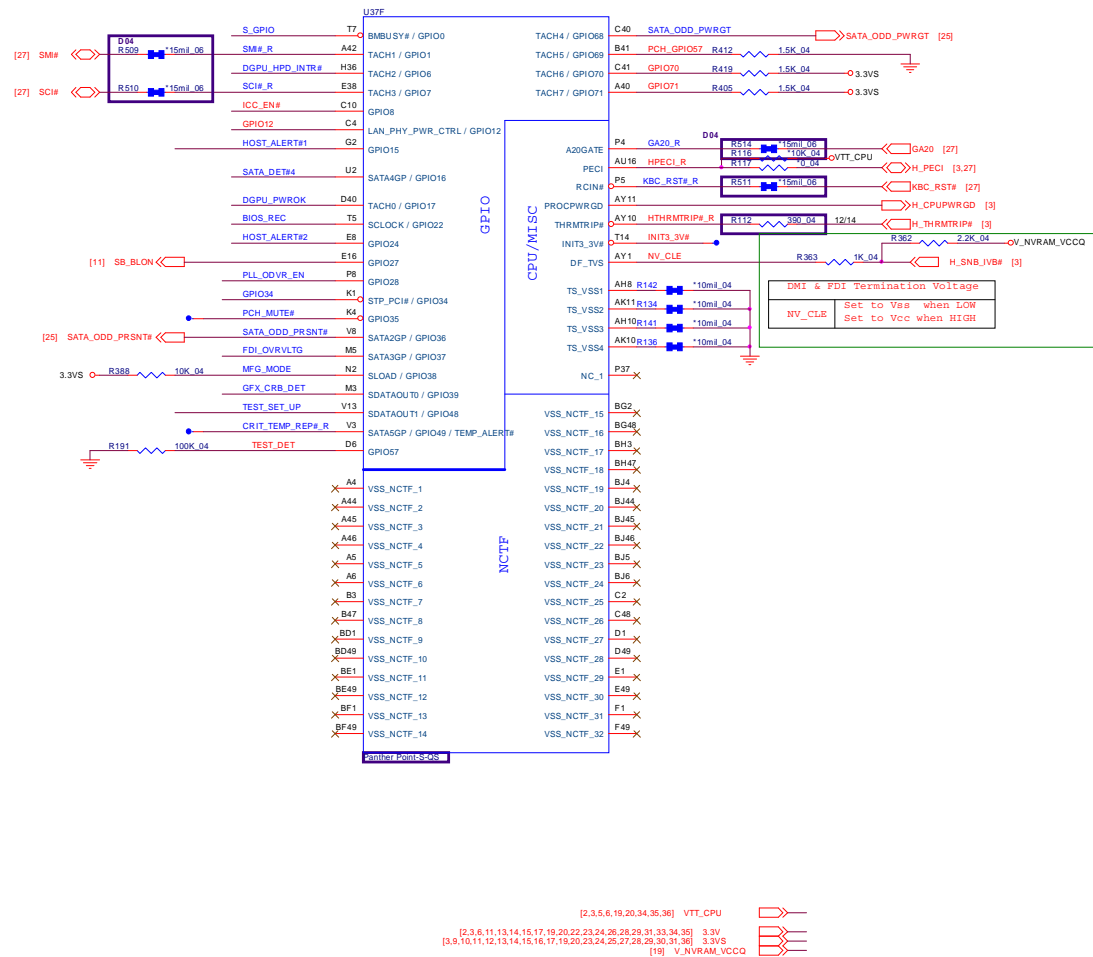
Sheet 17 of 42  
PCH 5/9- PCI, USB,  
RSVD



## PCH 6/9- GPIO, CPU



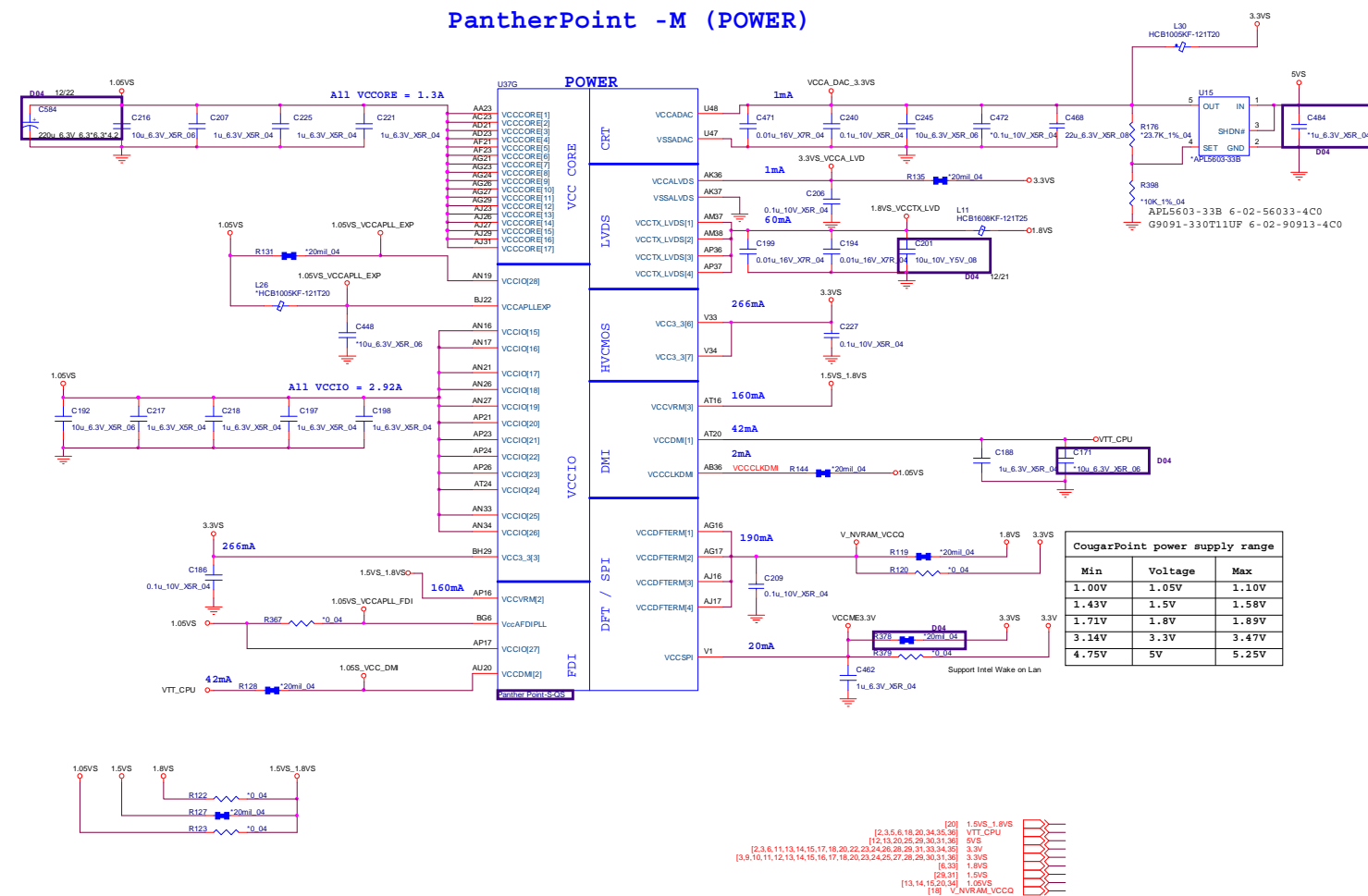
## PantherPoint - M (GPIO,VSS\_NCTF,RSVD)



Sheet 18 of 42  
PCH 6/9- GPIO,  
CPU

**PCH 7/9- PWR**

**Sheet 19 of 42**  
**PCH 7/9- PWR**

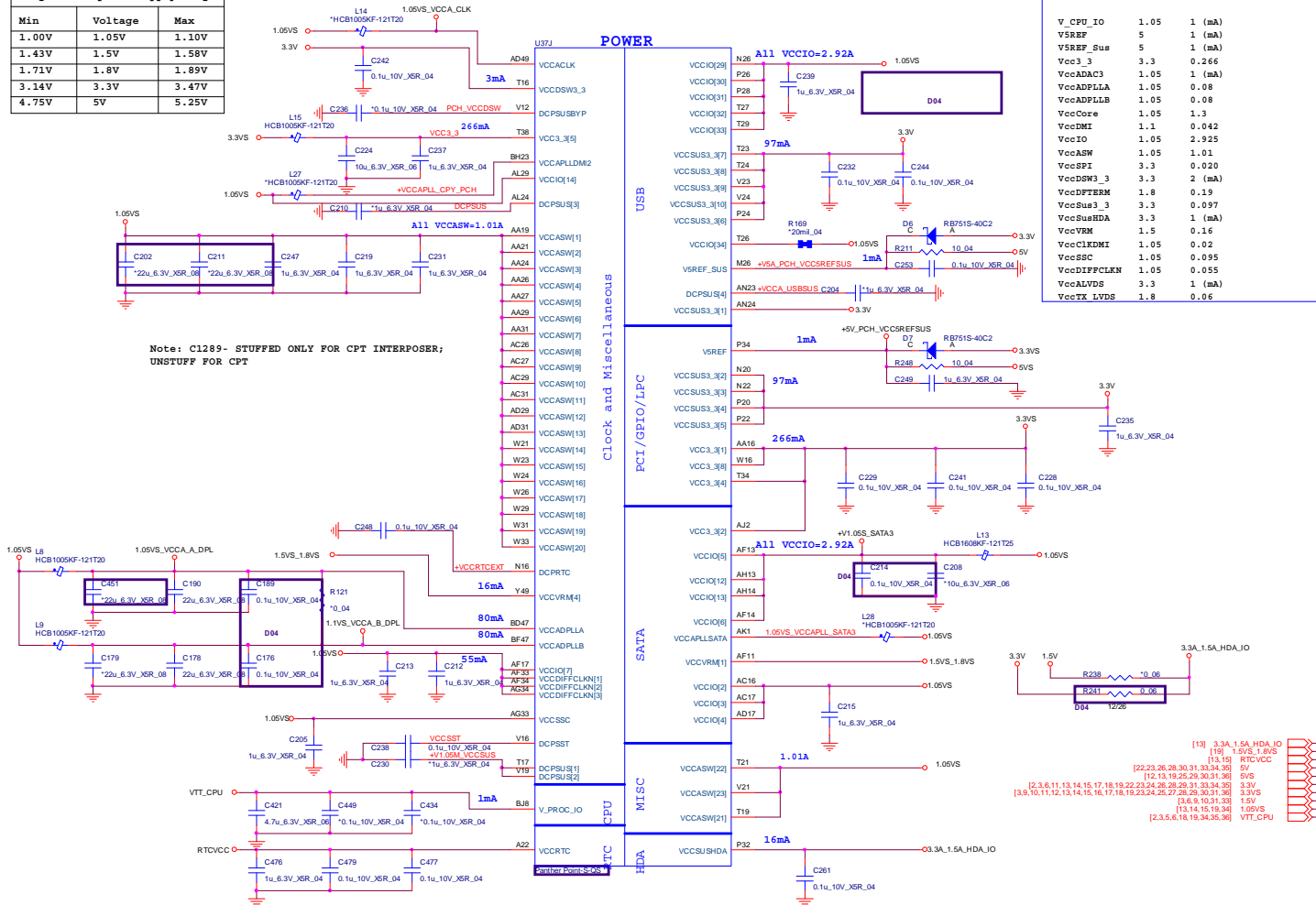




## PCH 8/9 POWER

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	3.47V
4.75V	5V	5.25V

## PantherPoint - M (POWER)

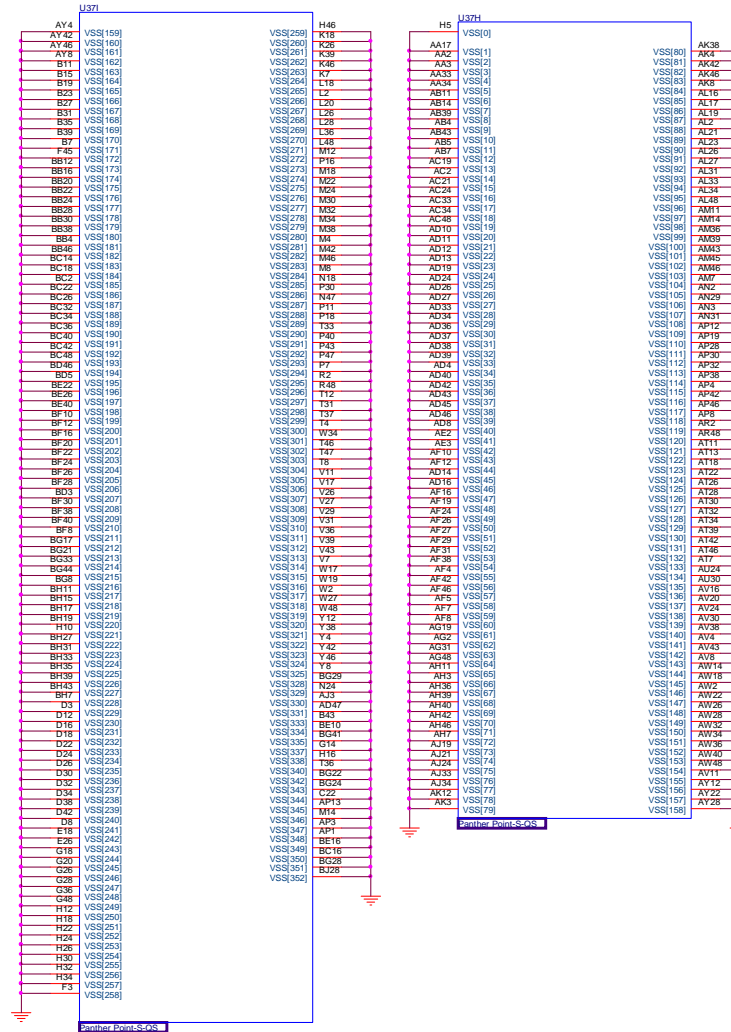


Sheet 20 of 42  
PCH 8/9 POWER

## PCH 9/9- GRD

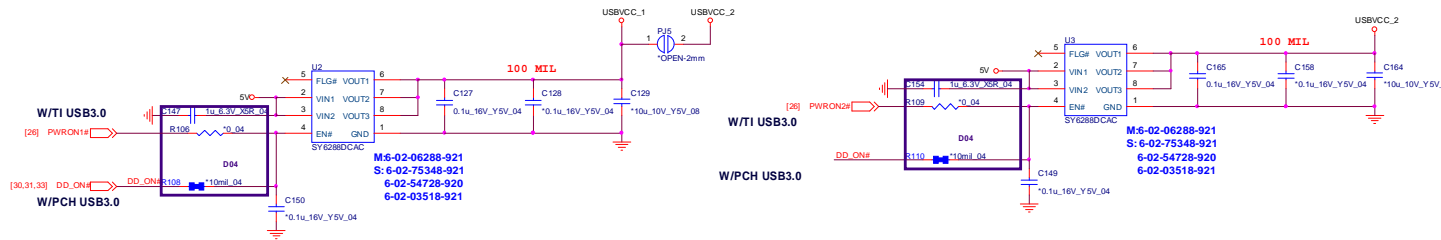
Sheet 21 of 42  
PCH 9/9- GRD

## PantherPoint -M (GND)



# USB3.0, Power, WLAN

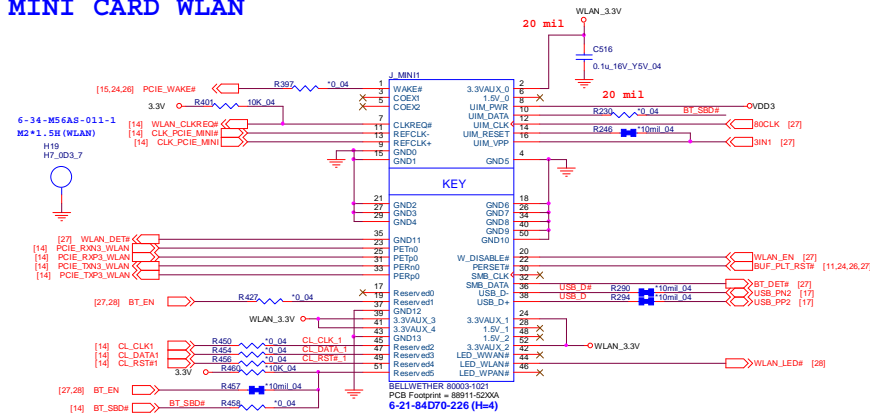
## USB 3.0 Power



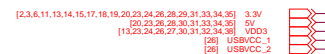
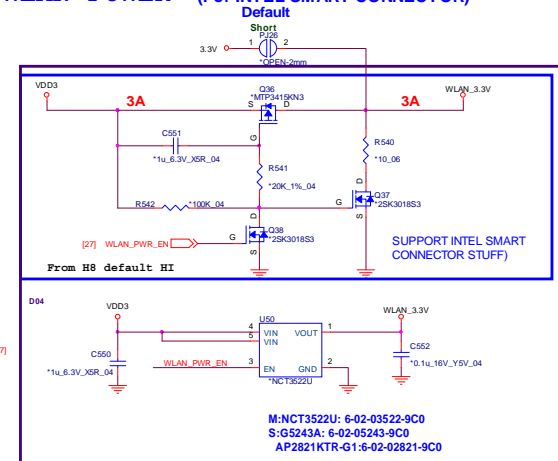
Sheet 22 of 42  
USB3.0, Power,  
WLAN

B.Schematic Diagrams

## MINI CARD WLAN

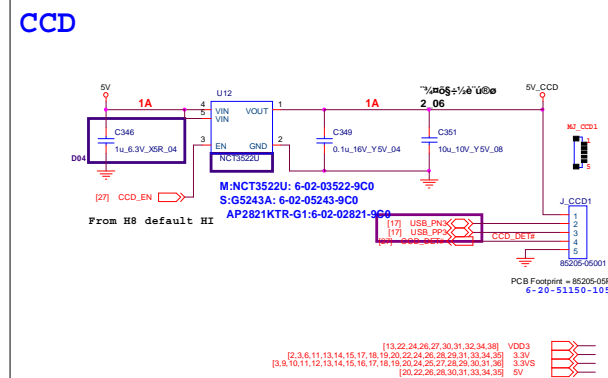
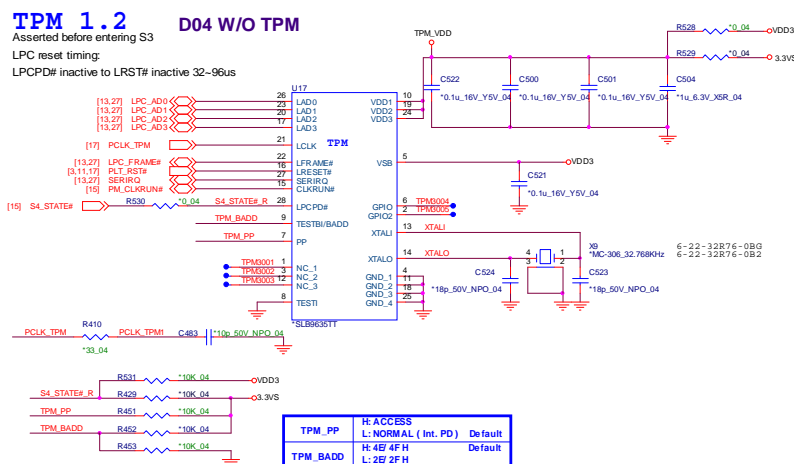
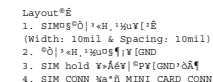


## WLAN POWER (For INTEL SMART CONNECTOR)



## CCD, 3G, TPM

Sheet 23 of 42  
CCD, 3G, TPM

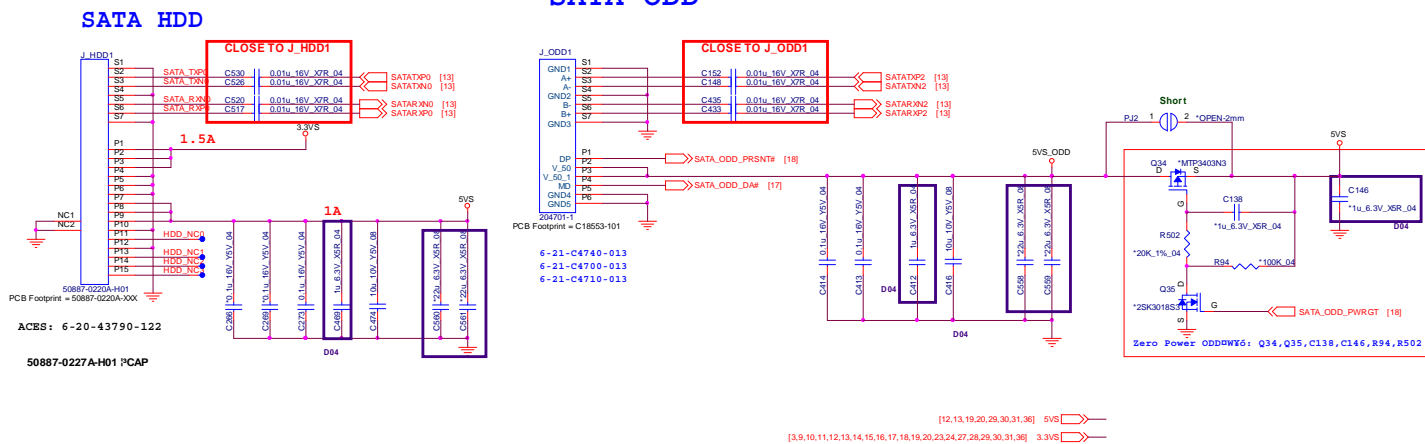
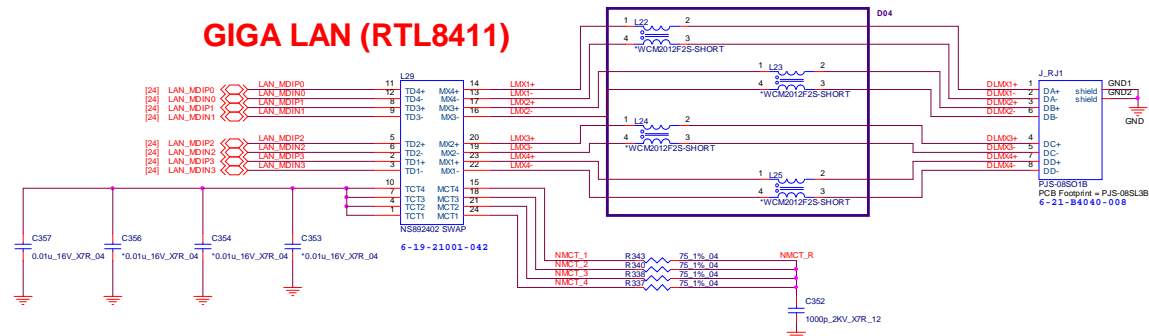


Sheet 24 of 42  
Card Reader / LAN  
RTL8411



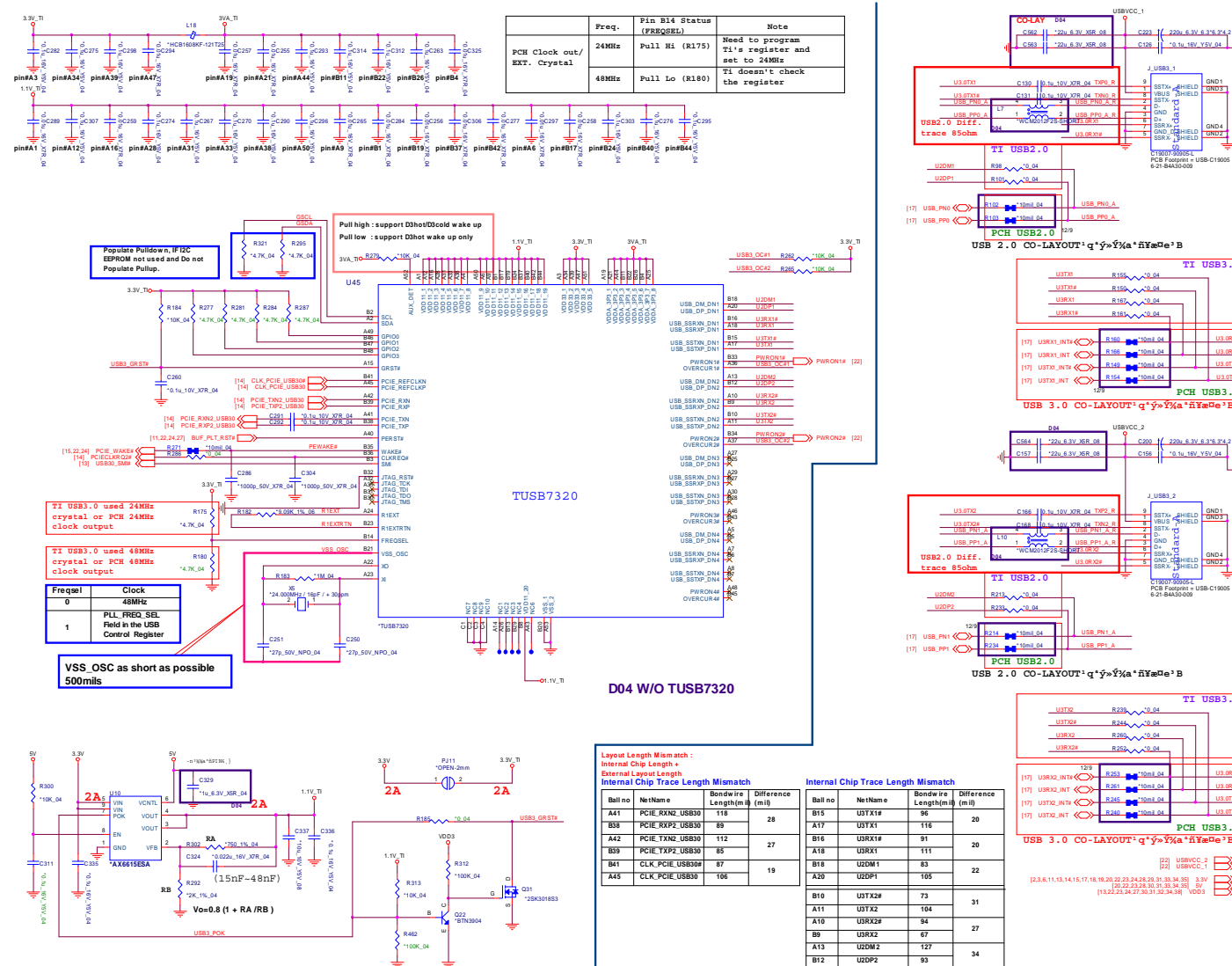
## B. Schematic Diagrams

**Sheet 25 of 42**  
**LAN, SATA HDD,**  
**ODD**



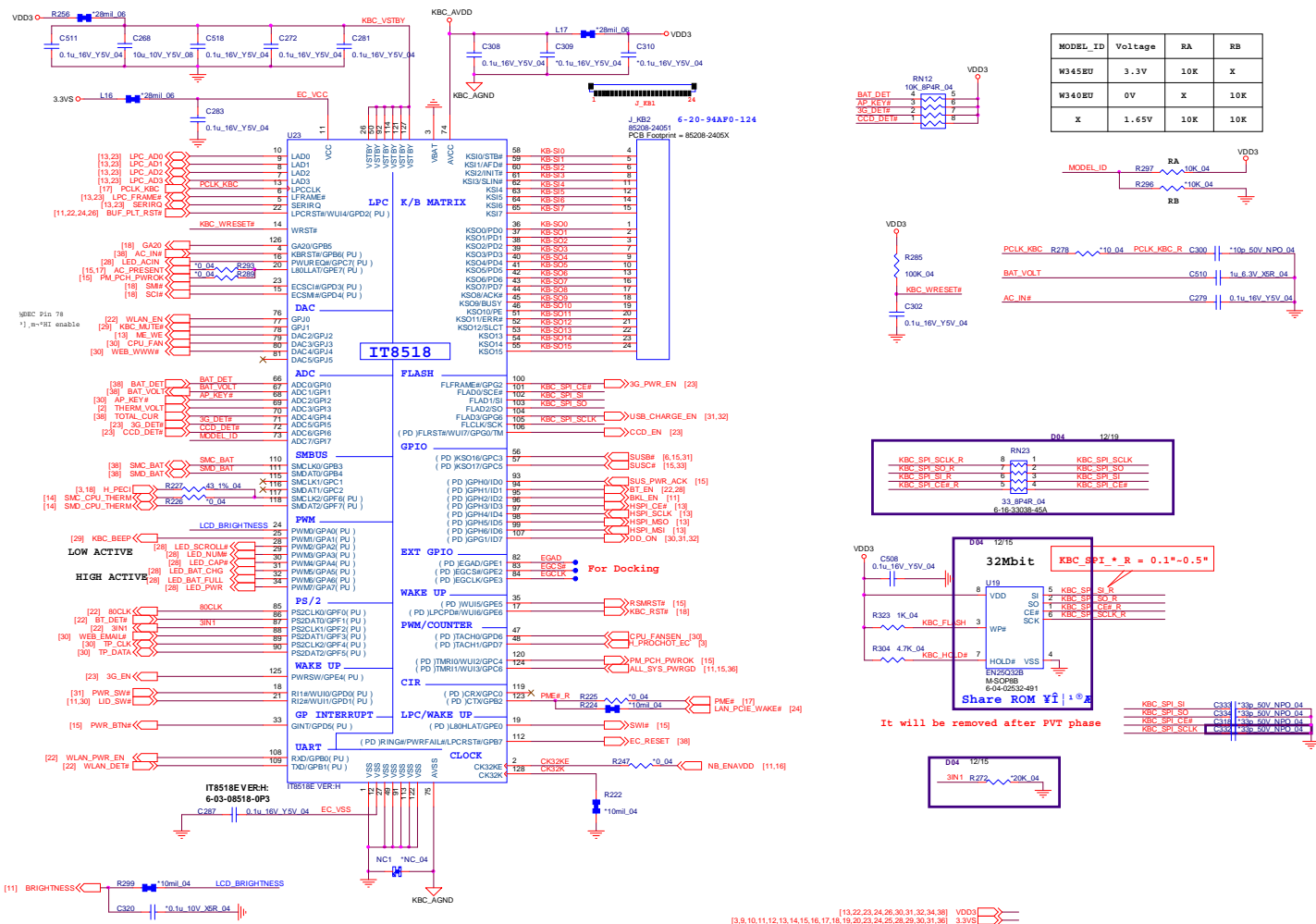


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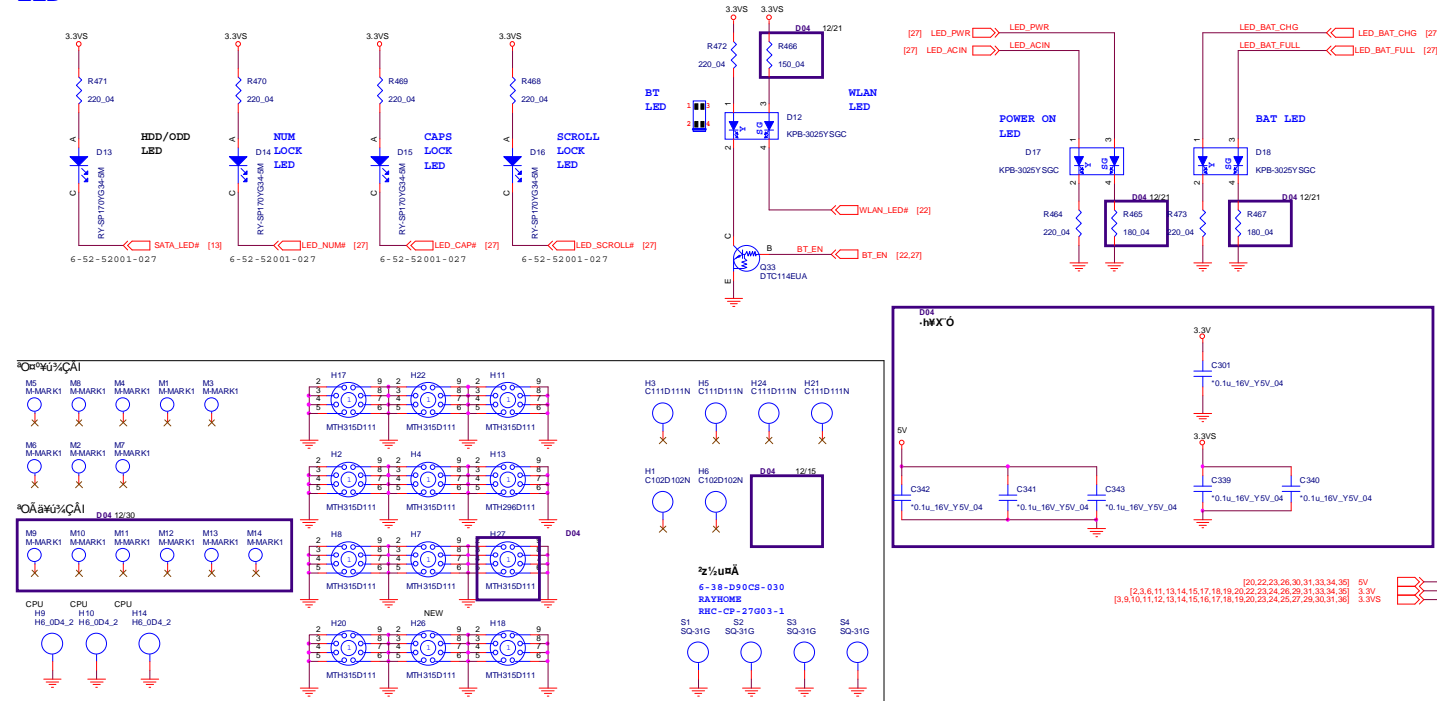
**KBC-ITE IT8518**

Sheet 27 of 42  
KBC-ITE IT8518



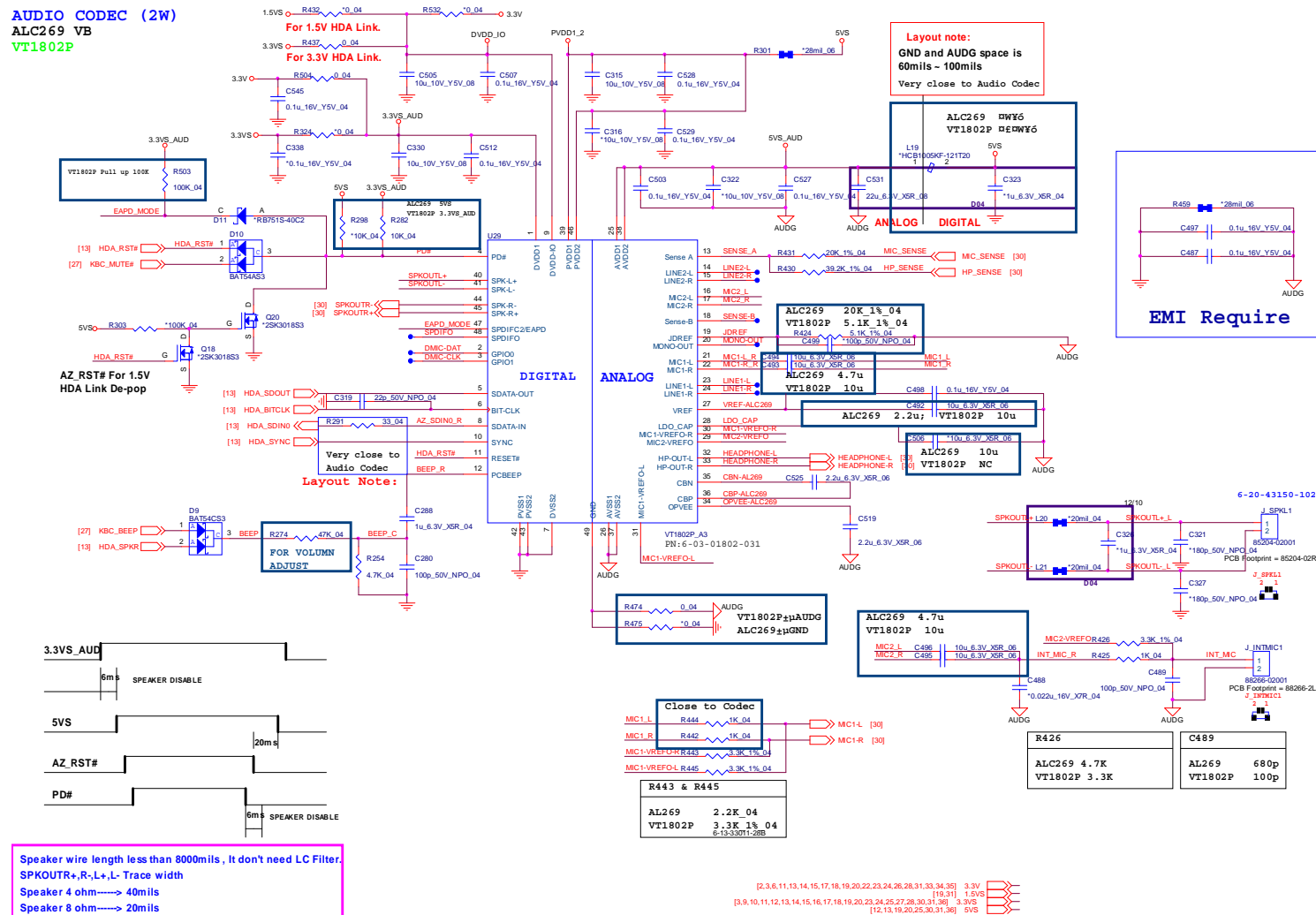
# LED

## LED



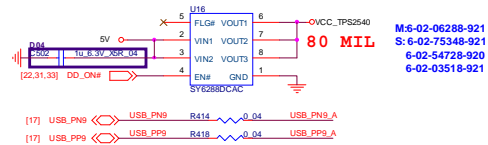
Sheet 28 of 42  
LED

Sheet 29 of 42  
AUDIO CODEC  
ALC269, VIA1802

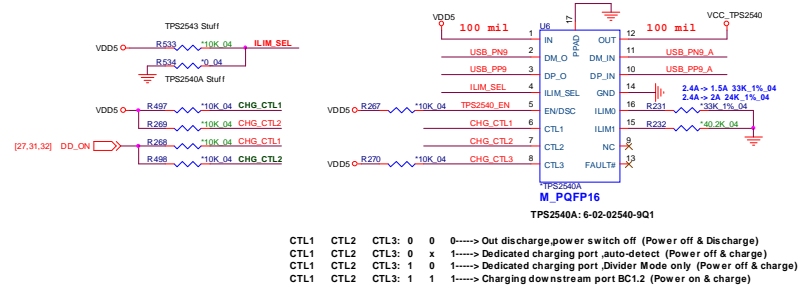


# USB Charger, FAN, TP, CONN

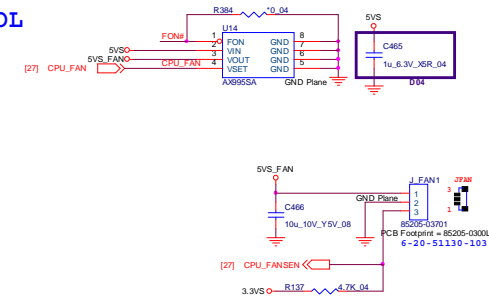
## W/O USB CHARGER



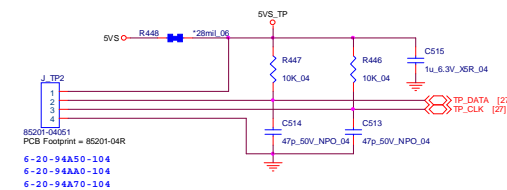
## WITH USB CHARGER D04 W/O CHARGER



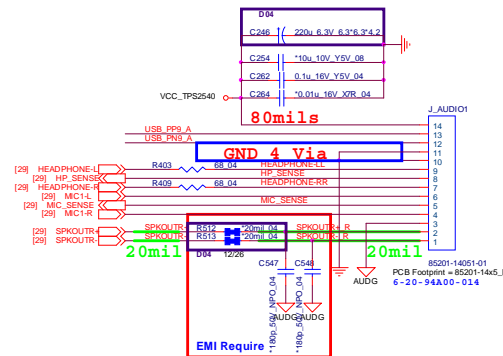
## FAN CONTROL



## CLICK B'd CONN

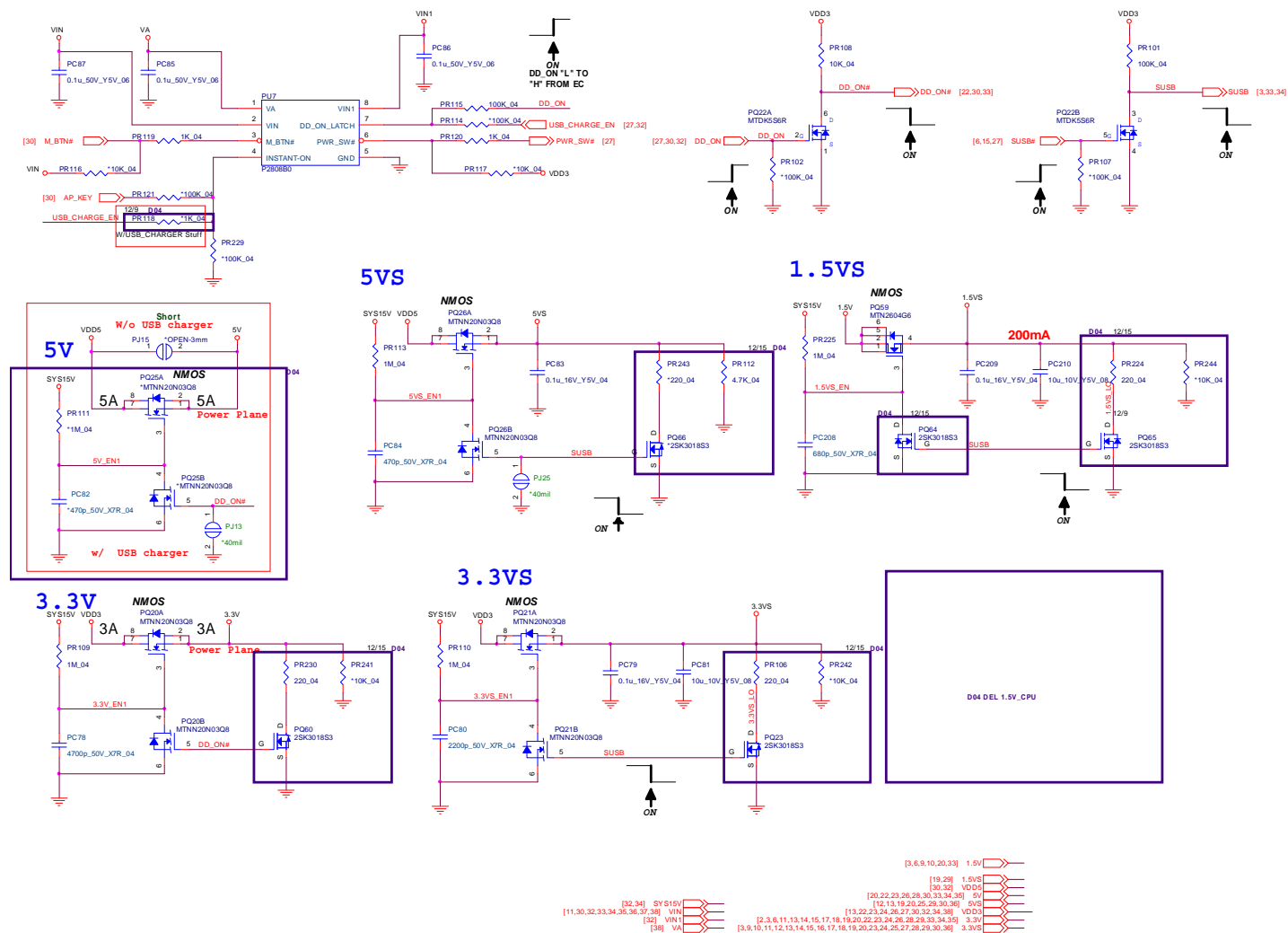


## Audio B'd CONN



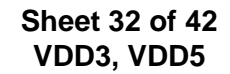
## System Power

**Sheet 31 of 42**  
**System Power**





VDD3/VDD5

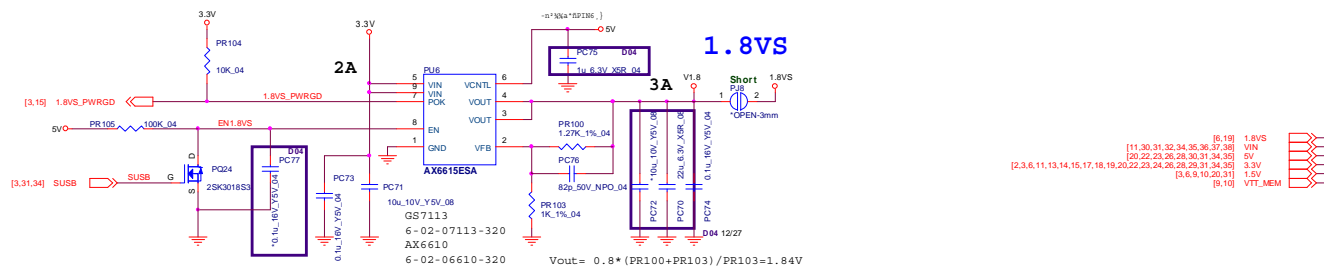


## B. Schematic Diagrams

1.5V/0.75VS/1.8VS

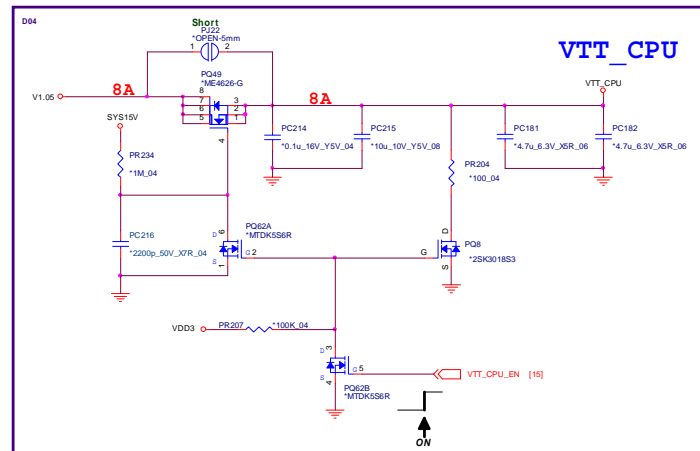
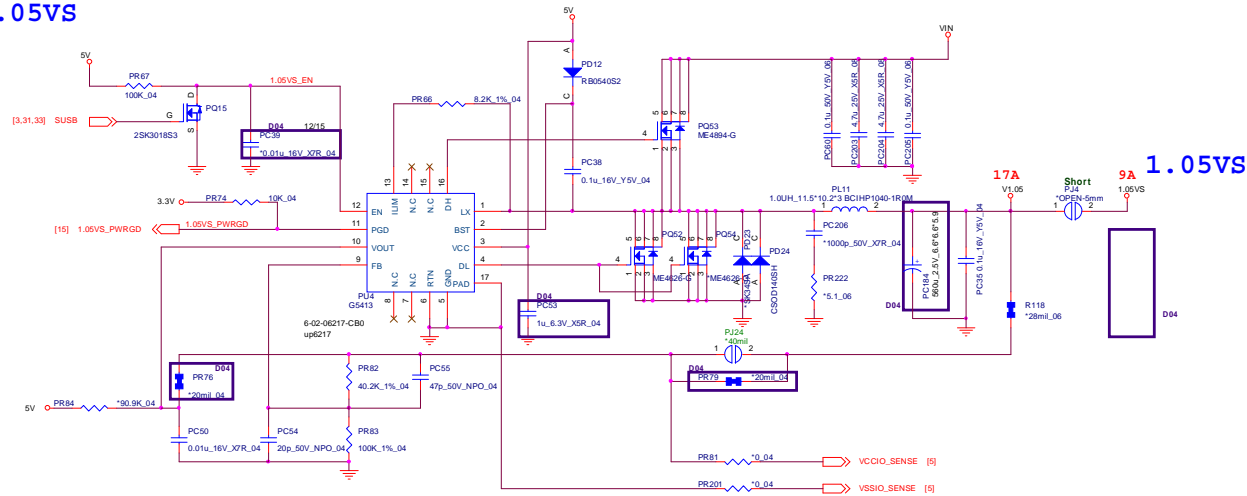


1.5V_CTRL1	1.5_CTRL0	Voltage
1	1	1.55V
1	0	1.60V
0	1	1.65V
0	0	1.70V



# POWER 1.05VS / VTT\_CPU

VTT\_CPU/1.05VS

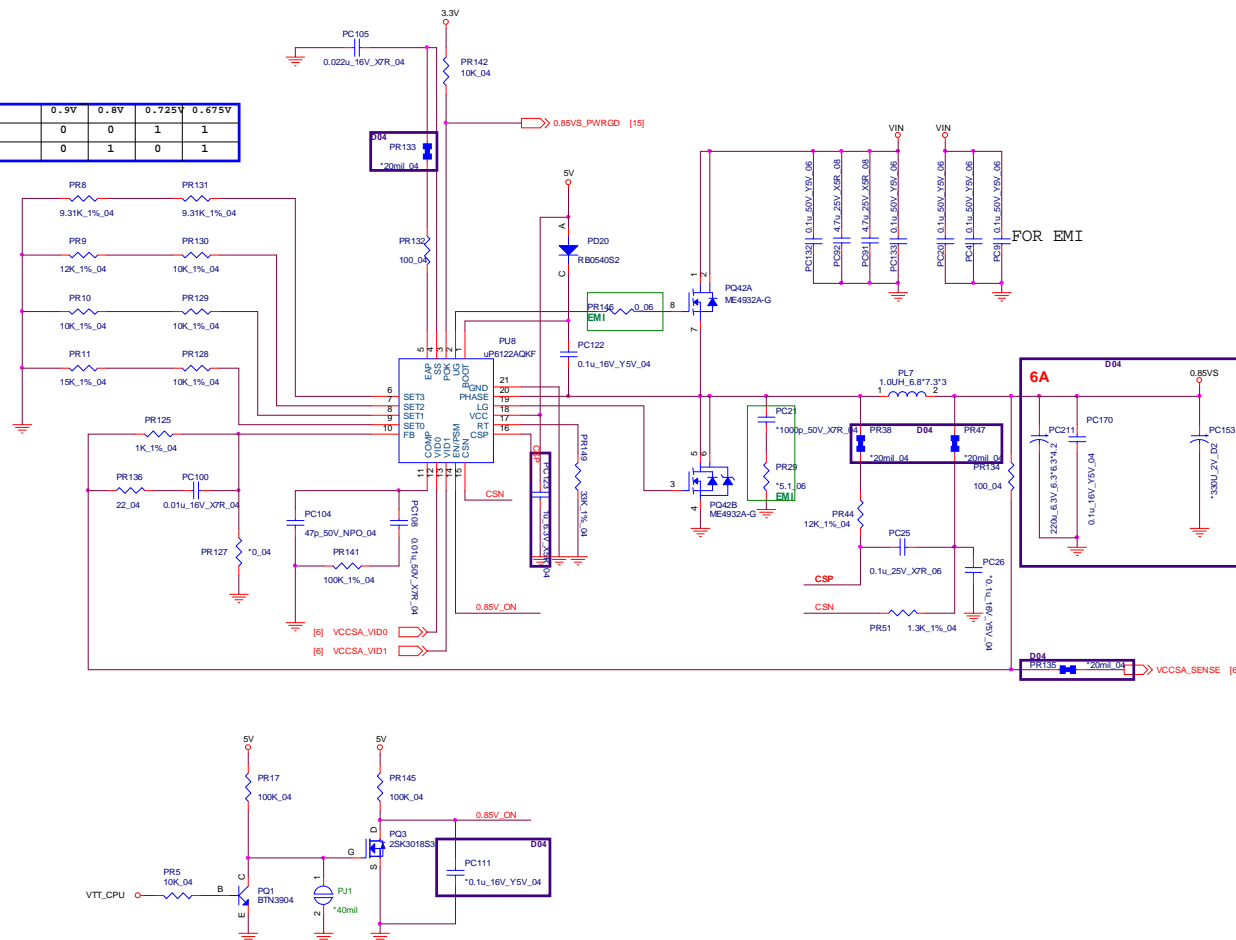


[2,3,5,6,18,19,20,35,36]	VTT_CPU
[13,14,15,19,20]	1.05VS
[21,32]	5V
[13,22,23,24,26,27,30,31,32,38]	VDD3
[2,3,6,11,13,14,15,17,18,19,20,22,23,24,26,28,29,31,33,35]	3.3V
[20,22,23,26,28,30,31,33,35]	5V
[11,30,31,32,33,35,36,37,38]	VIN

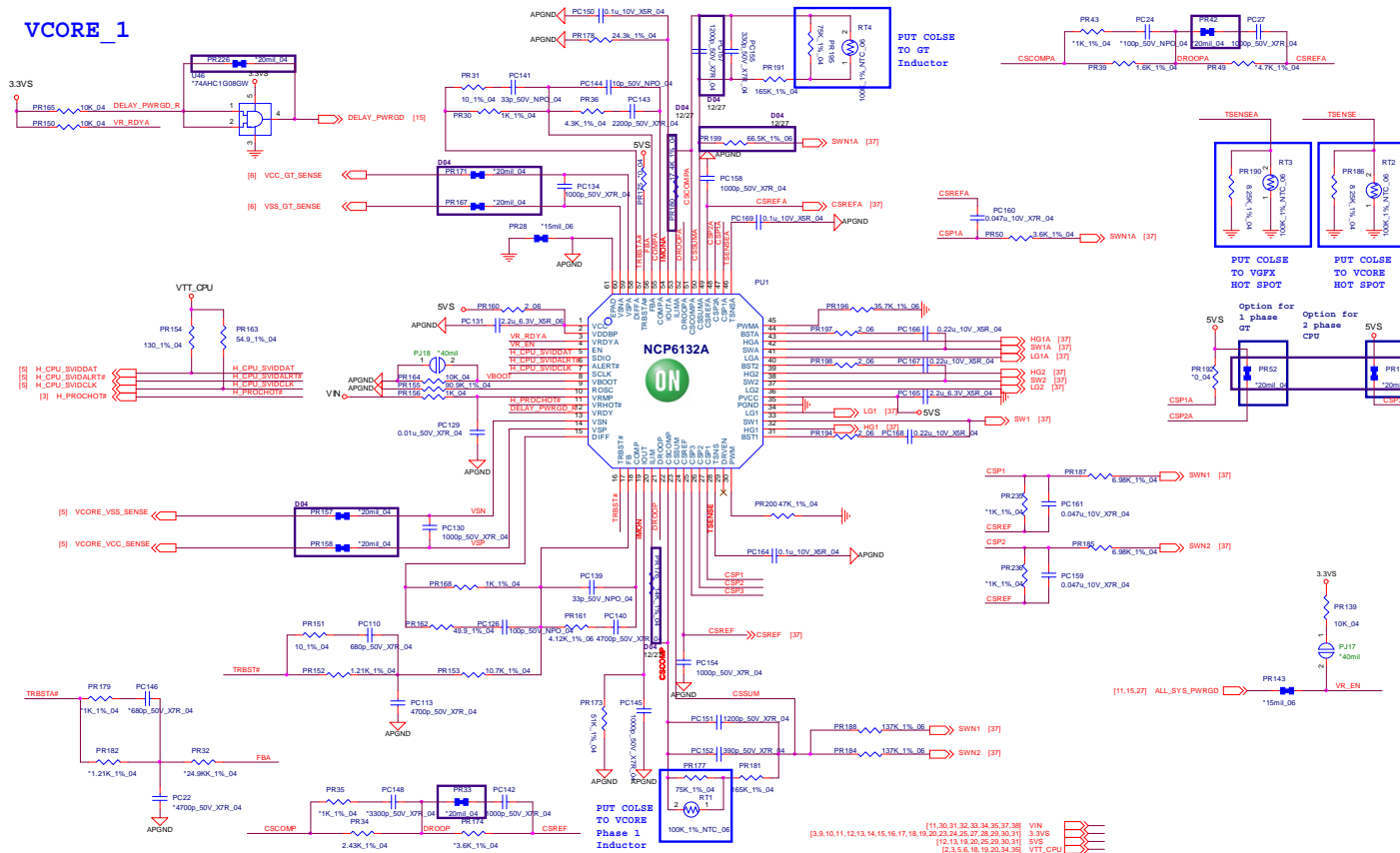
Sheet 34 of 42  
POWER 1.05VS/  
VTT\_CPU

0.85V<sub>S</sub>

	0.9V	0.8V	0.725V	0.675V
VCCSA_VID0	0	0	1	1
VCCSA_VID1	0	1	0	1

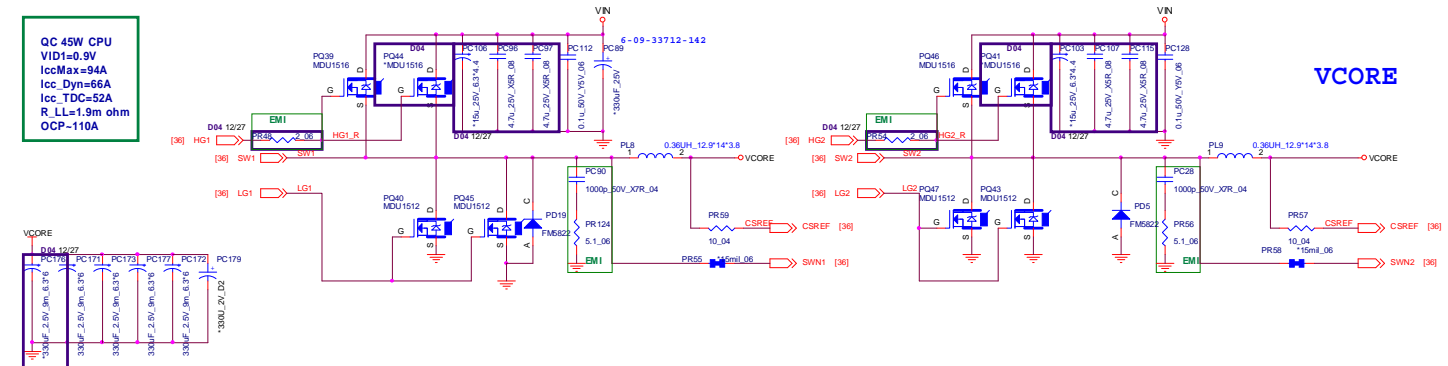


[2,3,5,6,18,19,20,34,36] VTT\_CPU  
[20,22,23,26,28,30,31,33,34] 5V  
[6] 0.85VS  
[11,30,31,32,33,34,36,37,38] VIN  
[2,3,6,11,13,14,15,17,18,19,20,22,23,24,26,28,29,31,33,34] 3.3V

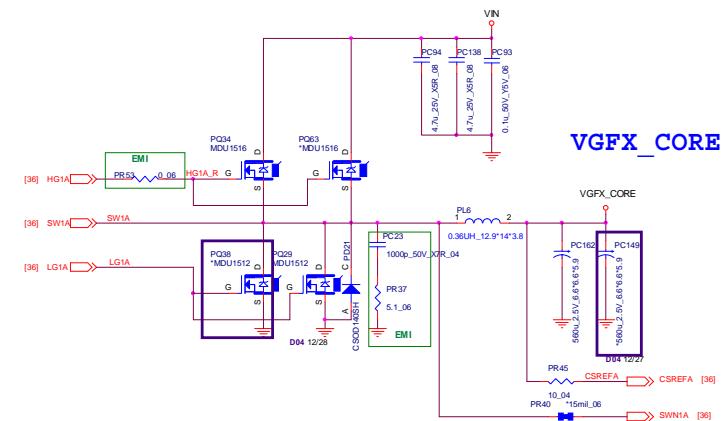


## POWER VCORE/GFX\_VCORE

QC 45W CPU  
VID1=0.9V  
IccMax=94A  
Icc\_Dyn=66A  
Icc\_TDC=52A  
R\_LL=1.9m ohm  
OCP~110A

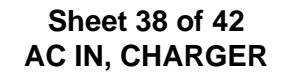


QC 45W GT2  
VID1=1.23V  
IccMax=46A  
Icc\_Dyn=37A  
Icc\_TDC=38A  
R\_LL=3.9m ohm  
OCP~55A



[11,30,31,32,33,34,35,36,38]	VIN	
[5]	VCORE	
[6]	VGFX_CORE	
[12,13,19,20,25,29,30,31,36]	5VS	

## SMART CHARGER



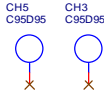
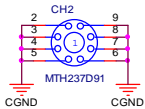
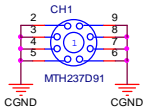
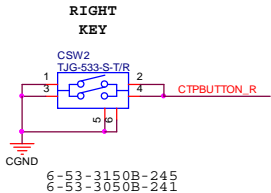
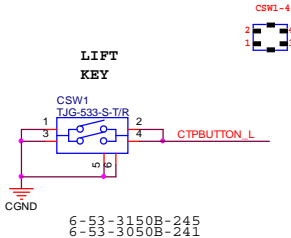
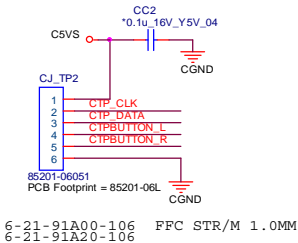
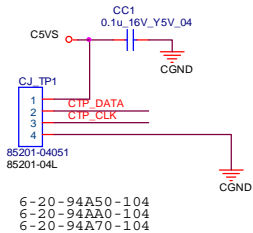


Schematic Diagrams

CLICK BOARD

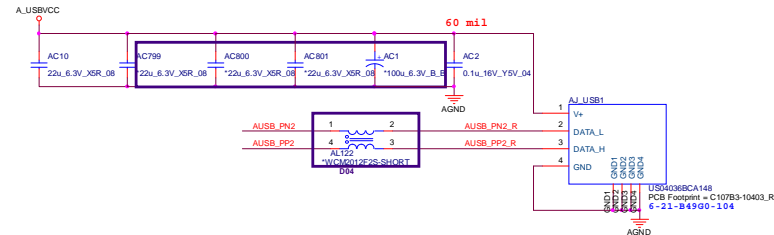
CLICK BOARD

Sheet 39 of 42  
CLICK BOARD

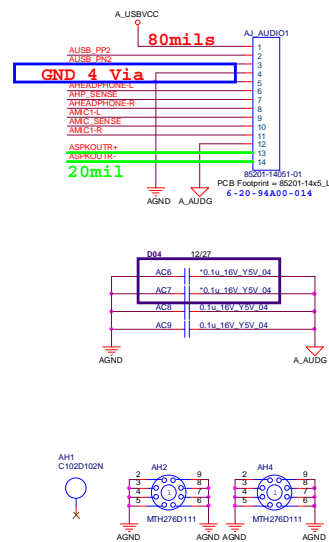


# AUDIO BOARD / USB

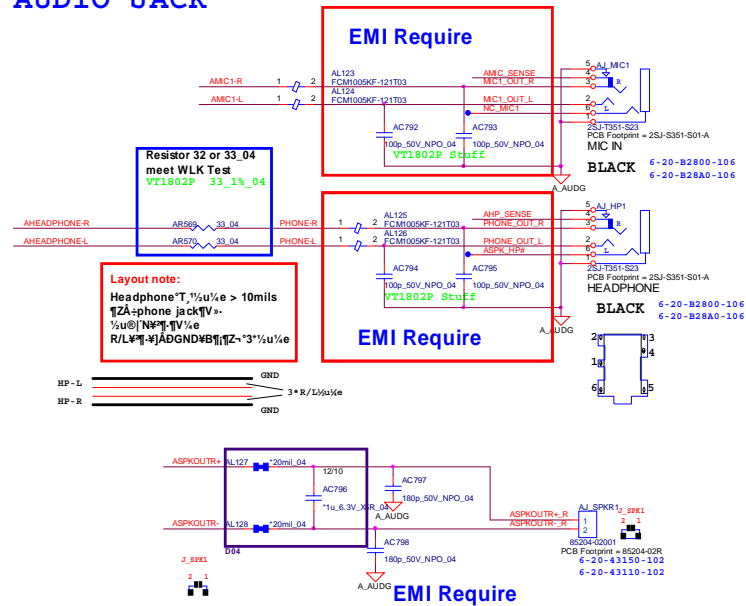
## USB PORT



## TO M/B



## AUDIO JACK



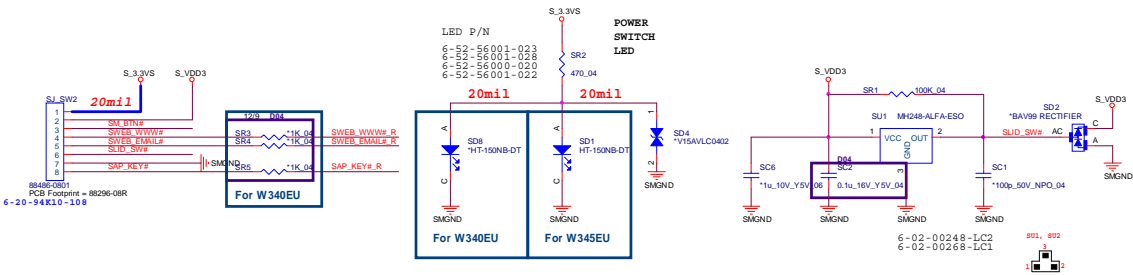
Sheet 40 of 42  
AUDIO BOARD /  
USB

Schematic Diagrams

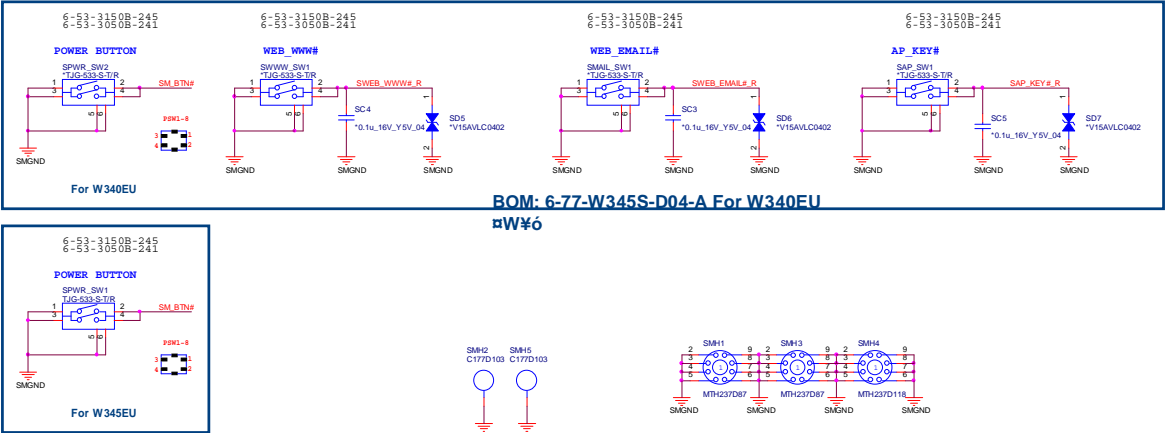
POWER SWITCH & LID BOARD

POWER SW & LED & HOT KEY

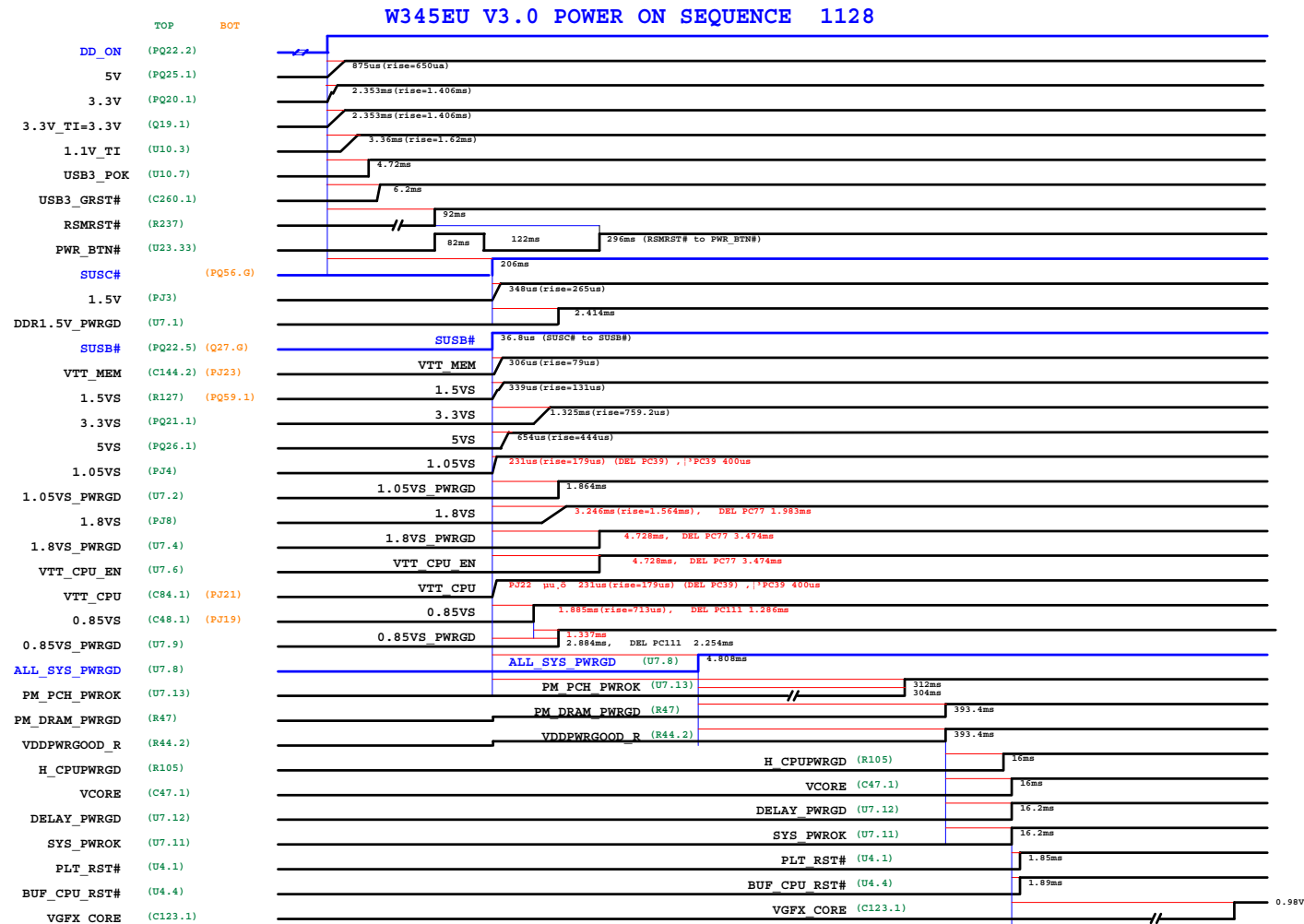
LID SWITCH IC



HOT KEY



## Power On SEQ



Sheet 42 of 42  
Power On SEQ



# 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](http://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

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### 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.