

SERVICE MANUAL

W950PU / W955PU

notebook



Notebook Computer
W950PU / W955PU
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 **W950PU** / **W955PU** 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, 2.1A (**40 Watts**) 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.

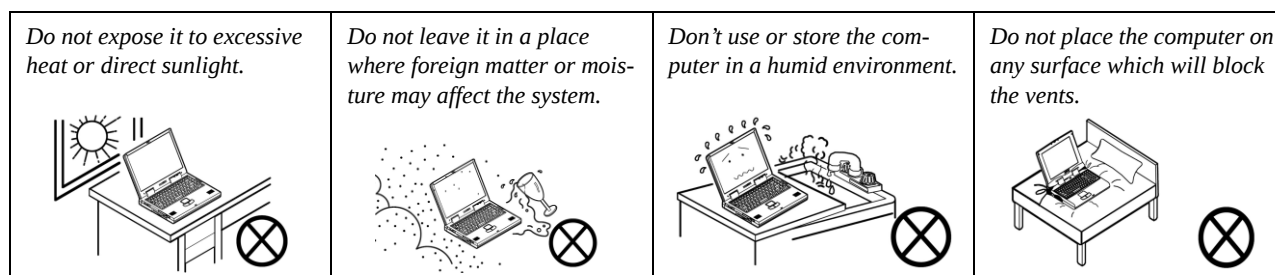
Instructions for Care and Operation

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

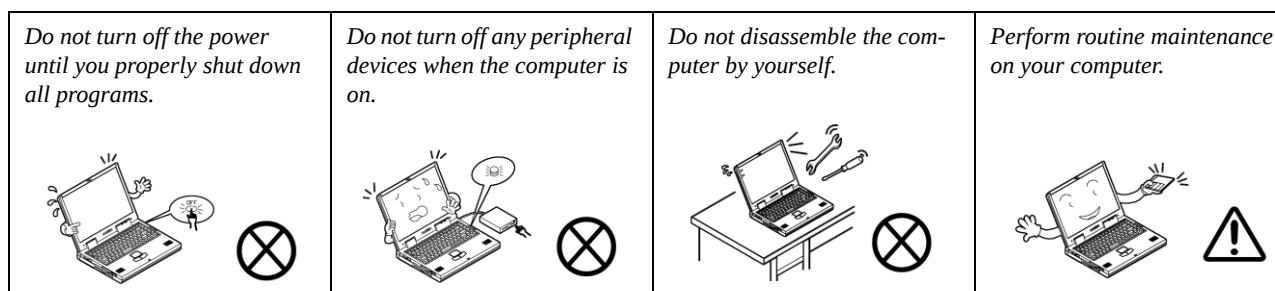
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



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.

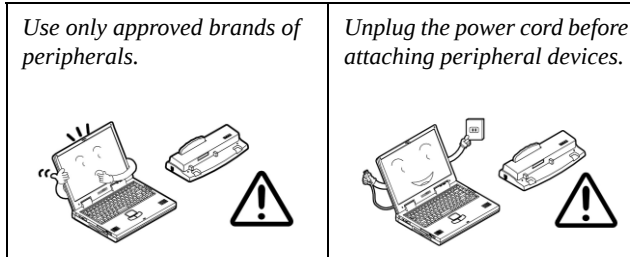


3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



Preface

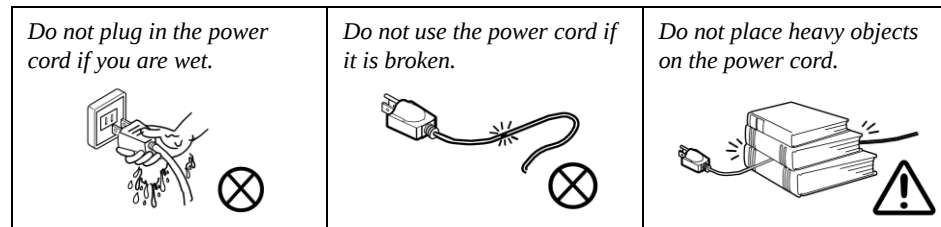
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



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 and power cord). 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 left 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**



Shut Down

Note that you should always shut your computer down by choosing **Shut Down** from the **Start** Menu.

This will help prevent hard disk or system problems.

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Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the **W950PU / W955PU** 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 10*, 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 **W950PU / W955PU** 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® Pentium® Processor

N4200 (1.10GHz)

2MB Smart Cache, **14nm**, DDR3L-1866MHz, TDP 6W

Intel® Celeron® Processor

N3450 (1.10GHz)

2MB Smart Cache, **14nm**, DDR3L-1866MHz, TDP 6W

N3350 (1.10GHz)

2MB Smart Cache, **14nm**, DDR3L-1866MHz, TDP 6W

BIOS

64Mb SPI Flash ROM

AMI BIOS

Memory

Two 204 Pin SO-DIMM Sockets Supporting **DDR3L 1600/1866MHz** Memory

Memory Expandable up to 8GB

LCD Options

15.6" (39.62cm), 16:9, HD (1366x768)/FHD (1920x1080)

Video Adapter

Intel HD Graphics

Dynamic Frequency

Intel Dynamic Video Memory Technology

Microsoft DirectX®12 Compatible

Audio

High Definition Audio Compliant Interface

2 * Built-In Speakers

Built-In Microphone

(Factory Option) Built-In Array Microphone

Security

Security (Kensington® Type) Lock Slot

BIOS Password

Intel® PTT

(Factory Option) TPM v 2.0

Storage

One Changeable 2.5" **7mm** (h) SATA **HDD/SSD**

(Factory Option) One 9.5mm(h) Optical Device Type Drive (Super Multi Drive)

Or

(Factory Option) Dummy ODD

Or

(Factory Option) 7mm 2nd **HDD** caddy

(Factory Option) 32GB eMMC

Pointing Device

Built-in Touchpad

Keyboard

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

M.2 Slots

Slot 1 for **WLAN and Bluetooth** Combo Module

(Factory Option) Slot 2 for **3G** or **4G** Module

Interface

One HDMI-Out Port

One External Monitor Port

One Headphone-Out Jack

One Microphone-In Jack

One RJ-45 LAN Jack

Two USB 3.0 Ports

One DC-in Jack

Two USB 2.0 Ports

Communication

Built-In 10/100/1000Mb Base-TX Ethernet LAN
1.0M HD PC Camera Module
(Factory Option) 3G or 4G M.2 Module

WLAN/Bluetooth M.2 Modules:

(Factory Option) Intel® Wireless-AC 3168 Wireless LAN
(802.11ac) + Bluetooth 4.0

(Factory Option) Intel® Wireless-N 7265 Wireless LAN
(802.11b/g/n) + Bluetooth 4.0

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

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

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)

Removable 4 Cell Smart Lithium-Ion Battery Pack, 32WH
(Factory Option) Removable 4 Cell Smart Lithium-Ion Bat-
tery Pack, 44WH

Dimensions & Weight

374mm (w) * 258.5mm (d) * 12 - 24.7mm (h)
2.1kg (Barebone with ODD and 32WH Battery)

Introduction

Figure 1
Top View

1. PC Camera
2. *PC Camera LED
**When the PC camera is in use, the LED will be illuminated in red.*
3. Built-In Microphone (W950PU only)
4. LCD
5. Power Button
6. Keyboard
7. Touchpad & Buttons

External Locator - Top View with LCD Panel Open



External Locator - Front & Right Side Views

FRONT VIEW



Figure 2
Front View

1. LED Indicator
2. Multi-in-1 Card Reader

RIGHT SIDE VIEW

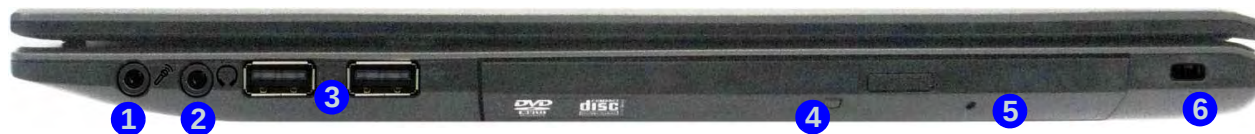


Figure 3
Right Side View

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. RJ-45 LAN Jack
3. External Monitor Port
4. Vent
5. HDMI-Out Port
6. USB 3.0 Ports

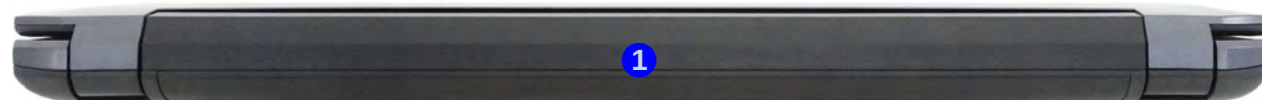
LEFT SIDE VIEW



Figure 5
Rear View

1. Battery

REAR VIEW



External Locator - Bottom View

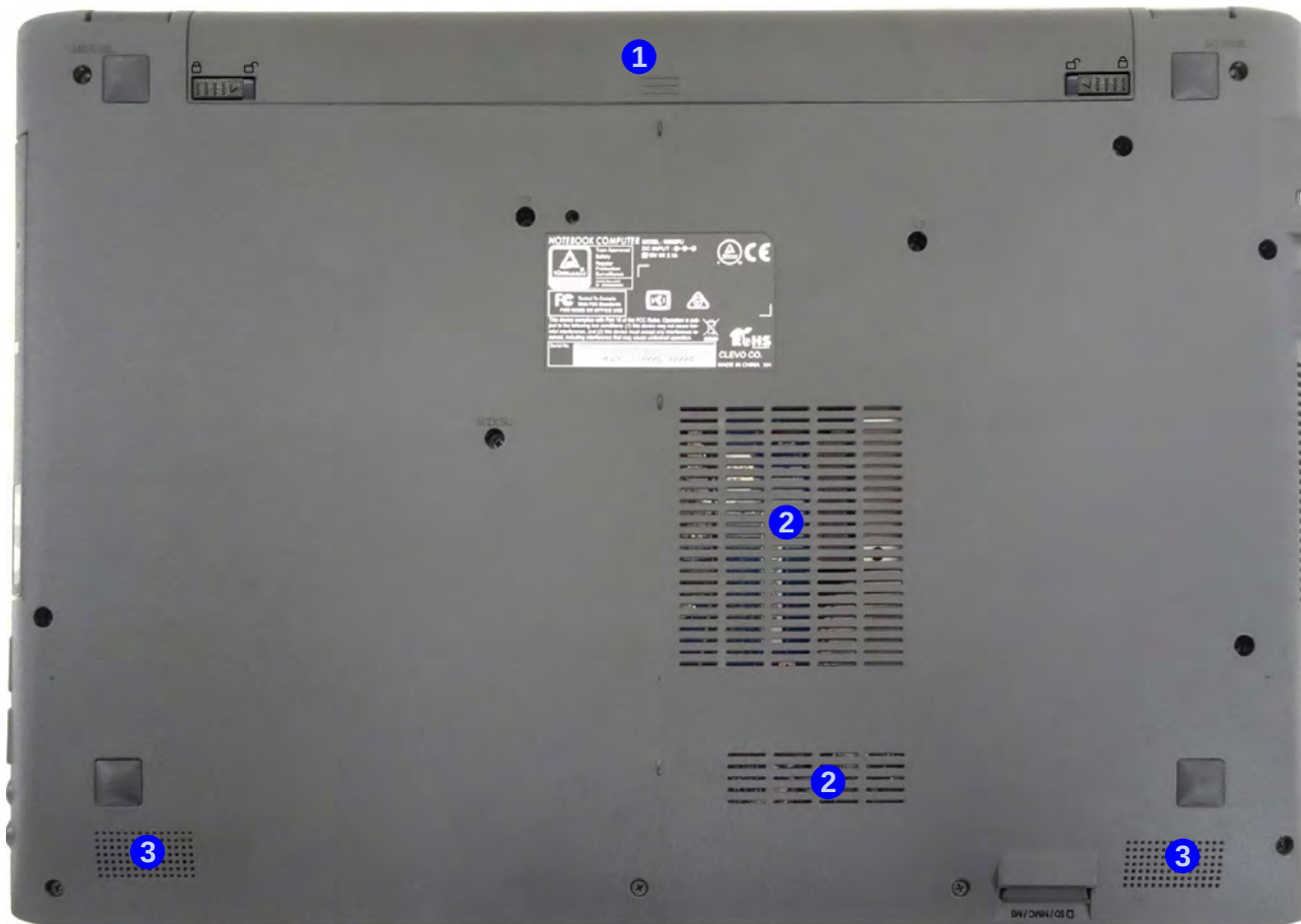


Figure 6
Bottom View

1. Battery
2. Vent
3. Speakers



Overheating

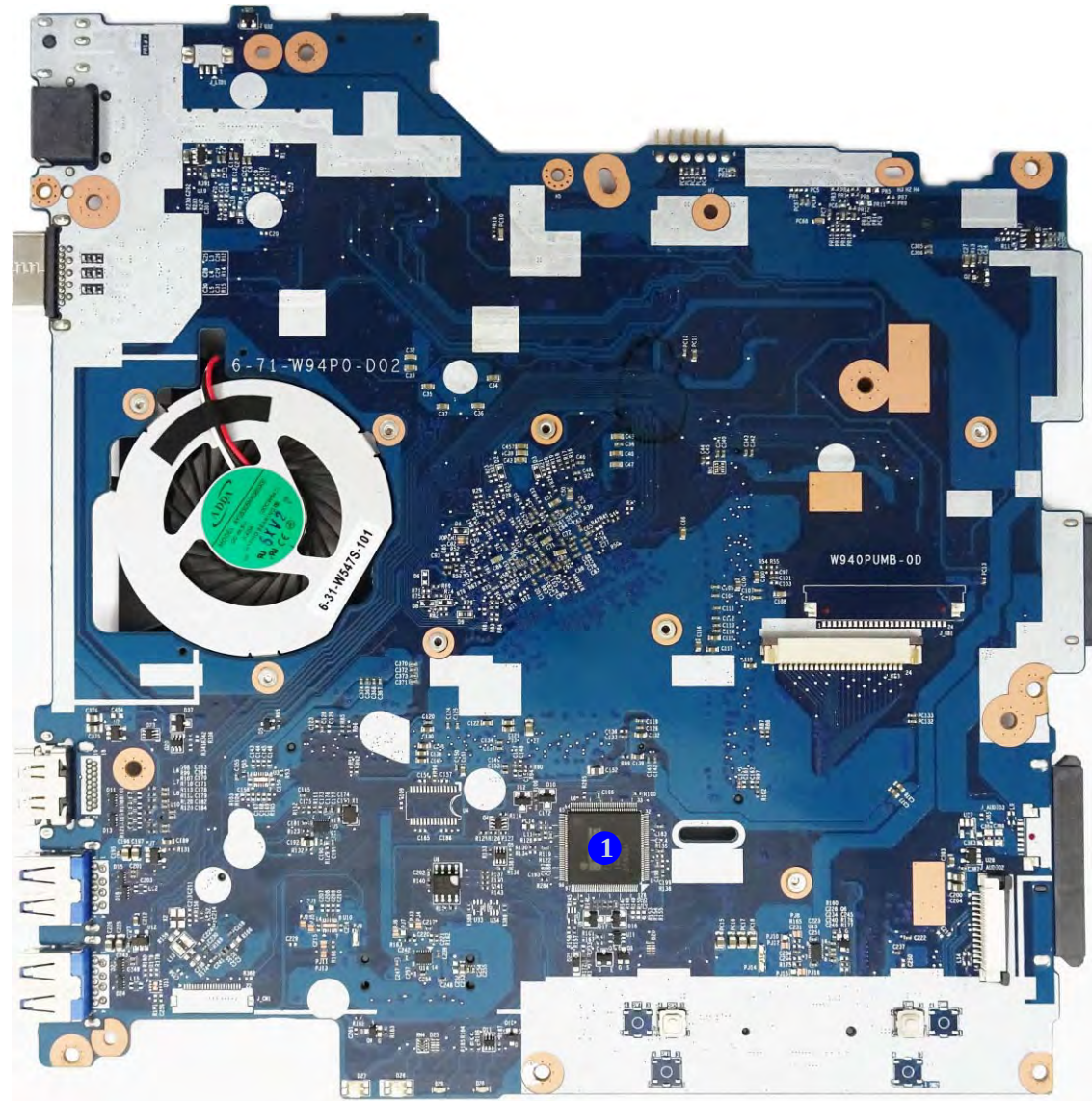
To prevent your computer from overheating, make sure nothing blocks any vent while the computer is in use.

Introduction

Figure 7
**Mainboard Top
Key Parts**

1. KBC-ITE IT8587

Mainboard Overview - Top (Key Parts)



Mainboard Overview - Bottom (Key Parts)



Figure 8
**Mainboard Bottom
Key Parts**

1. M.2 Card Connector (3G Module)
2. Memory Slots (DDR3L SO-DIMM)
3. CPU
4. M.2 Card Connector (WLAN Module)
5. CMOS Battery

Introduction

Figure 9
**Mainboard Top
Connectors**

1. HDMI-Out Port
2. USB Port 3.0
3. Keyboard Cable Connector
4. Audio Board Cable Connector

Mainboard Overview - Top (Connectors)

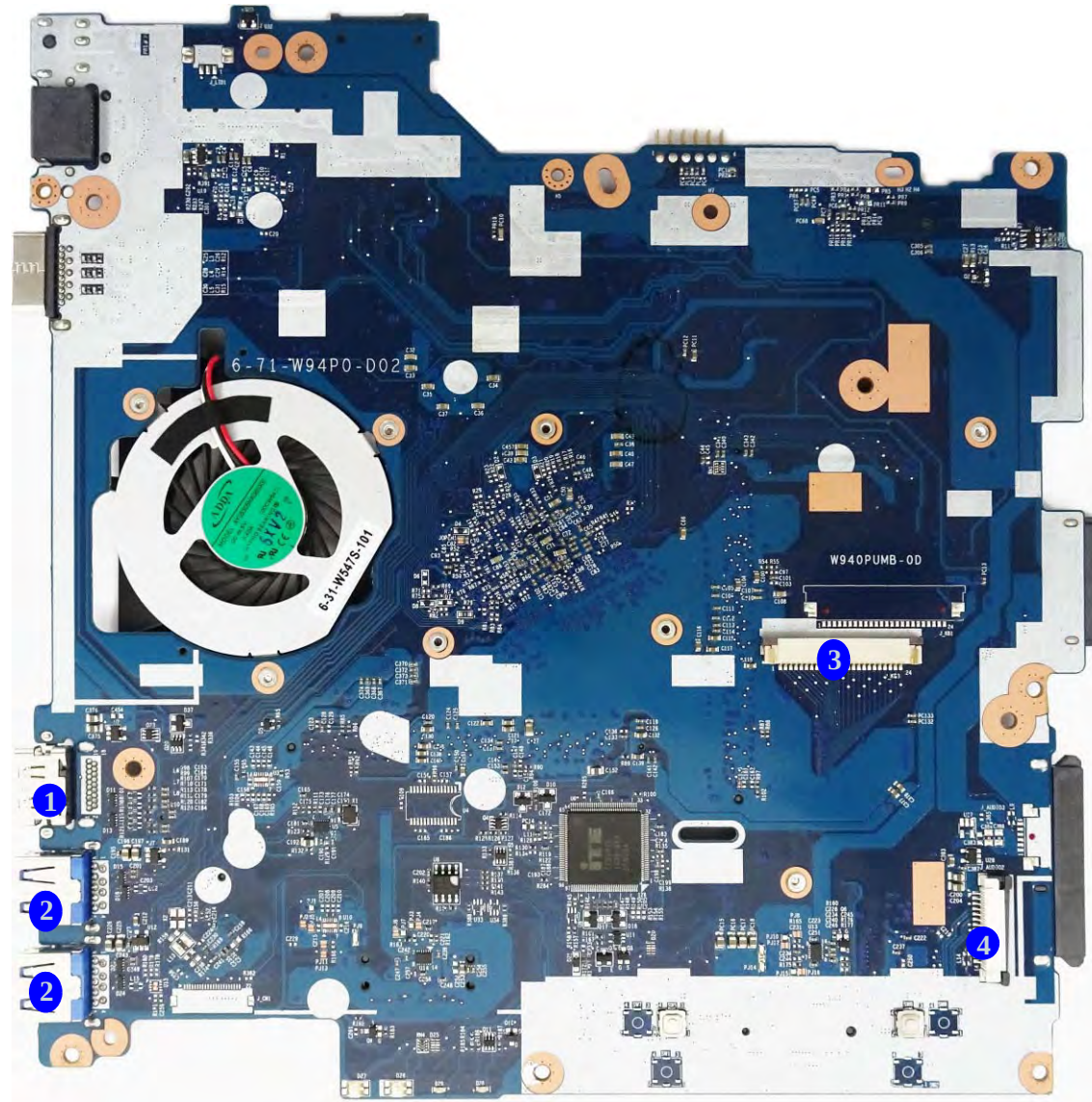


Figure 10
Mainboard Bottom
Connectors

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



Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the **W950PU / W955PU** 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 and power cord). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

Disassembly Steps

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

To remove the Battery:

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

To remove the HDD:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)

To remove the Optical Device:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the optical device [page 2 - 8](#)

To remove the Caddy/2nd HDD:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the optical device [page 2 - 8](#)
4. Remove the caddy [page 2 - 10](#)

To remove the System Memory:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the system memory [page 2 - 11](#)

To remove the Keyboard:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the keyboard [page 2 - 13](#)

To remove the Wireless LAN Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the WLAN [page 2 - 15](#)

To remove the 3G Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the 3G [page 2 - 15](#)

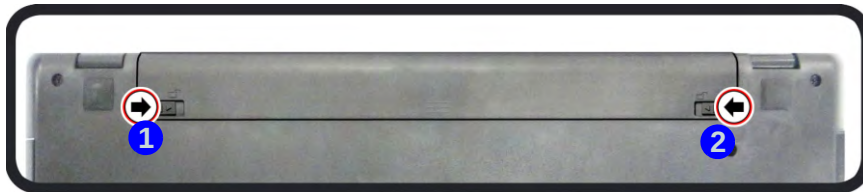
To remove the CCD Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the CCD module [page 2 - 18](#)

Removing the Battery

1. Turn **off** the computer, 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*).

a.



b.

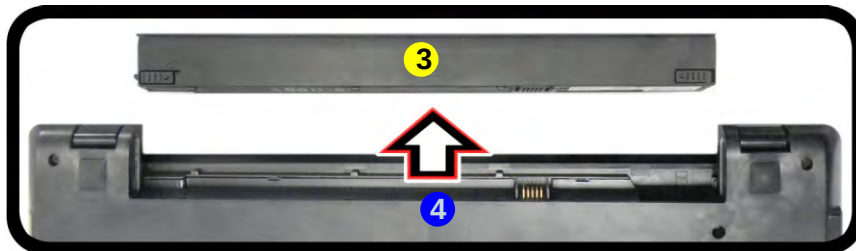


Figure 1
Battery Removal

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



3. Battery

Disassembly

Figure 2
**HDD Assembly
Removal**

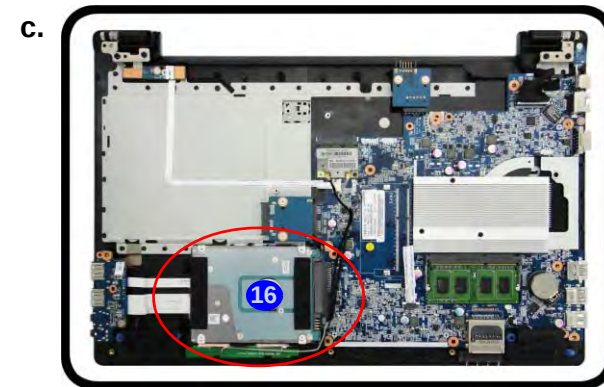
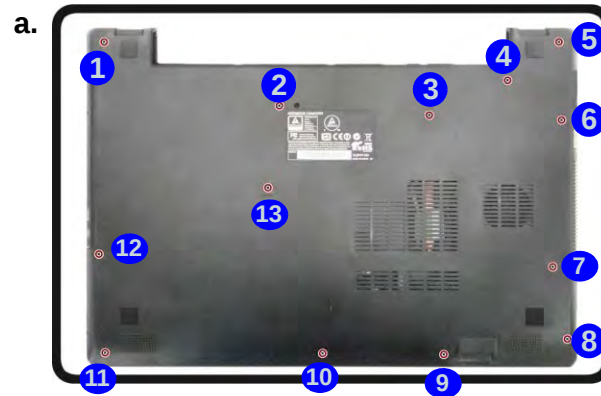
- Remove the screws.
- Remove the bottom cover.
- Locate the HDD assembly.

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 7.0mm (h). Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in **Chapter 4 of the User's Manual**) when setting up a new hard disk.

Hard Disk Upgrade Process

- Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)).
- Remove the screws **1** - **13** ([Figure 2a](#)).
- Lift the bottom cover **14** up from point **15** ([Figure 2b](#)).
- The hard disk drive will be visible at point **16** ([Figure 2c](#)).



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.



14. Bottom Cover

- 13 Screws

5. Slightly lift and pull the hard disk assembly in the direction of arrow 17 (Figure 3d).
6. Lift the hard disk assembly 18 out of the bay 19 (Figure 3e).
7. Remove the screws 20 - 21 and the adhesive cover 22 from the hard disk 23 (Figure 3f).
8. Reverse the process to install a new hard disk (do not forget to replace all the screws and bottom cover).

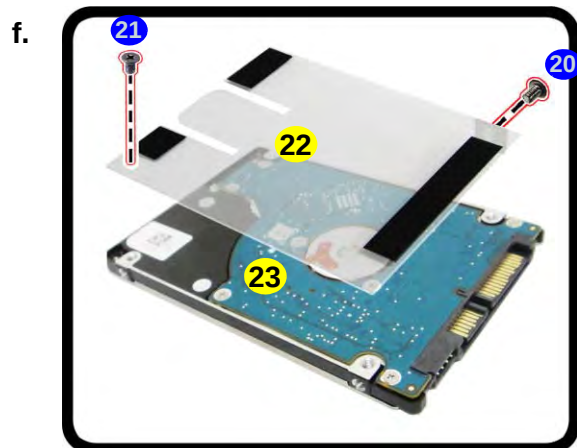
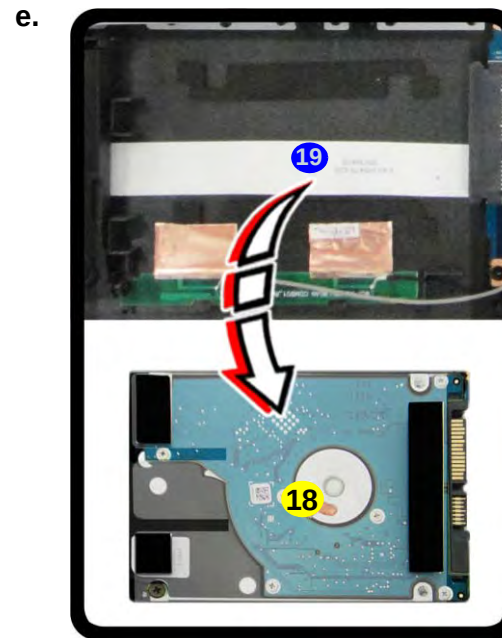
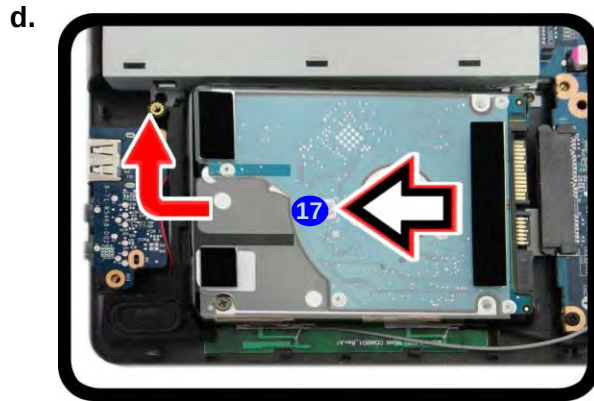


Figure 3
**HDD Assembly
Removal (cont'd.)**

- d. Slightly lift and pull the HDD assembly in the direction of the arrow.
- e. Lift the HDD assembly out of the bay.
- f. Remove the screws and adhesive cover.



18. HDD Assembly
22. Adhesive Cover
23. HDD

- 2 Screws

Disassembly

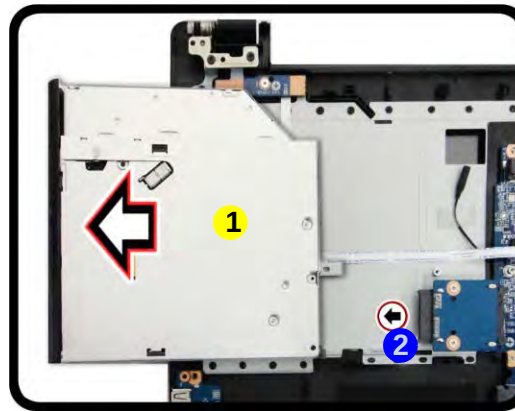
Figure 4
**Optical Device
Removal**

- Pull out the optical device.
- Pry the bezel off the optical device.
- Separate the bezel and optical device.

Removing the Optical (CD/DVD) Device

- Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)) and bottom cover ([page 2 - 6](#)).
- Carefully pull out the optical device **1** out of the bay at point **2** ([Figure 4a](#)).
- Carefully pry the bezel **4** off the optical device at point **3** ([Figure 4b](#)).
- Separate the bezel **4** and the optical device ([Figure 4c](#)).

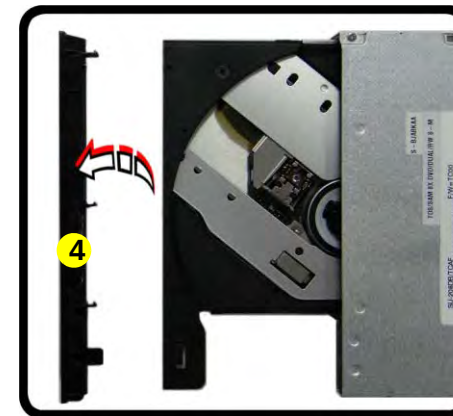
a.



b.



c.



- Optical Device
- Bezel

- Reverse the process to attach the front bezel **4** with the new optical device at point **5** (*Figure 5e*).
- Insert the new optical device **1** and carefully slide it into the computer (the device only fits one way. DO NOT FORCE IT; The screw holes should line up). Take care to avoid folding the connector underneath.
- Replace the bottom cover and tighten the screws.
- Restart the computer to allow it to automatically detect the new device.

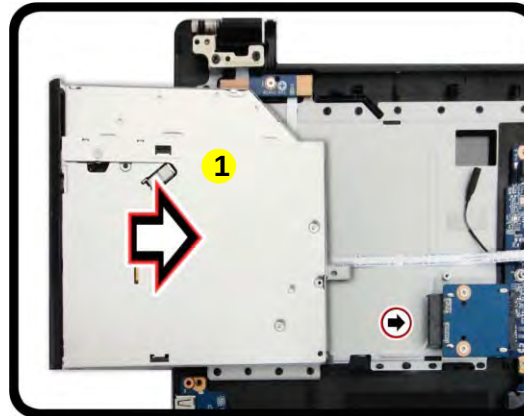
Figure 5
**Optical Device
Assembly**

- d. Install the front bezel.
e. Insert the optical device.

d.



e.



- 1. Optical Device
- 4. Bezel

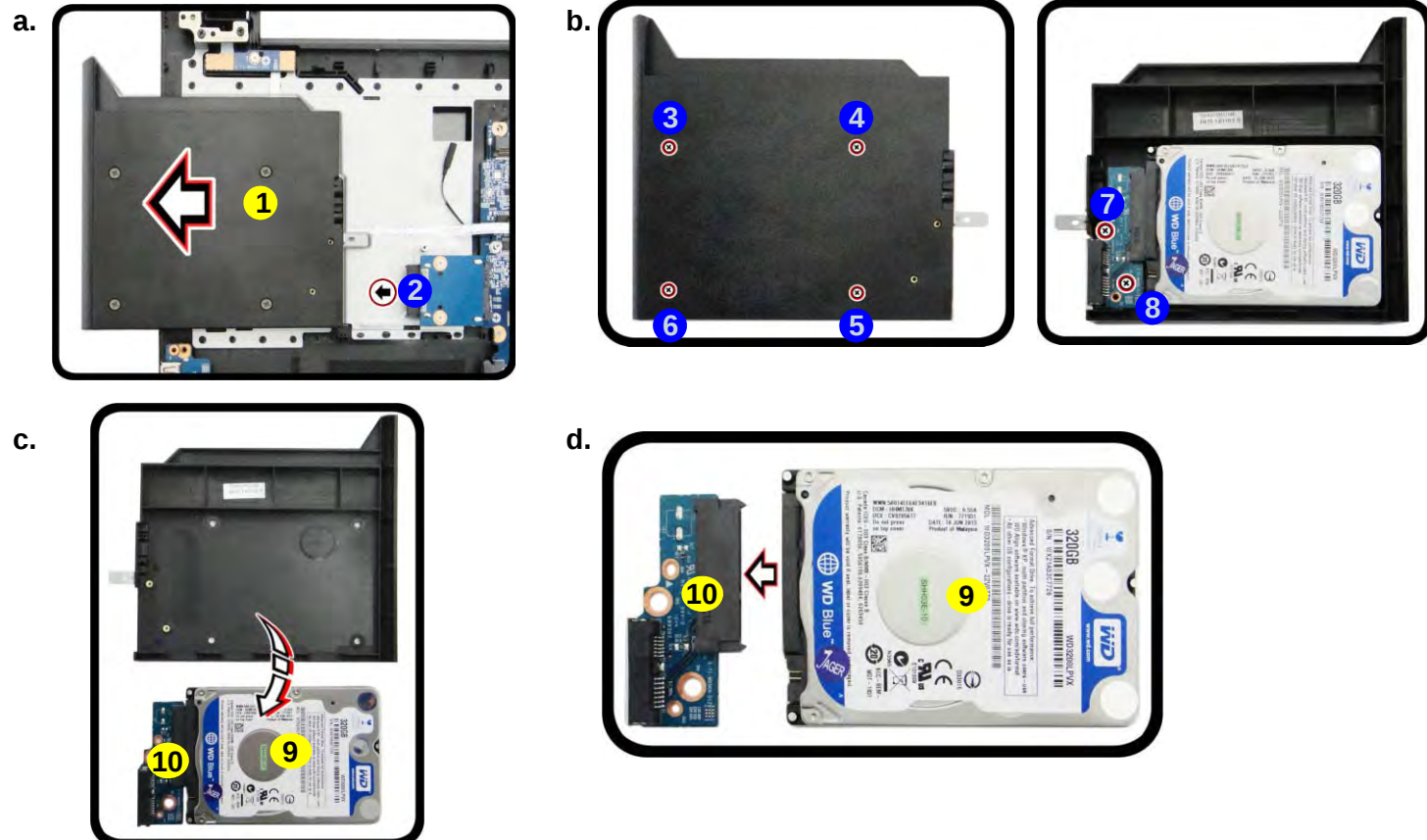
Disassembly

Figure 6
**Caddy/2nd HDD
Removal**

- Remove the caddy from the ODD bay.
- Remove the screws.
- Lift the HDD assembly out.
- Separate the connector and HDD.

Removing the Caddy/Second Hard disk

- Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)) and bottom cover ([page 2 - 6](#)).
- Carefully pull out the caddy **1** out of the bay at point **2** ([Figure 6a](#)).
- Remove screws **3 - 8** ([Figure 6b](#)) to release the hard disk assembly.
- Lift the hard disk **9** and connector **10** out ([Figure 6c](#)).
- Separate the hard disk **9** and connector **10** ([Figure 6d](#)).
- Reverse the process to install a new HDD (do not forget to replace the screws and bottom cover).
- Restart the computer to allow it to automatically detect the new device.



1. Caddy
9. HDD
10. HDD Connector
- 6 Screws

Removing the System Memory (RAM)

The computer has two memory sockets for 204 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDR3L Up to 1600/1866 MHz. The main memory can be expanded up to 8GB. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

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

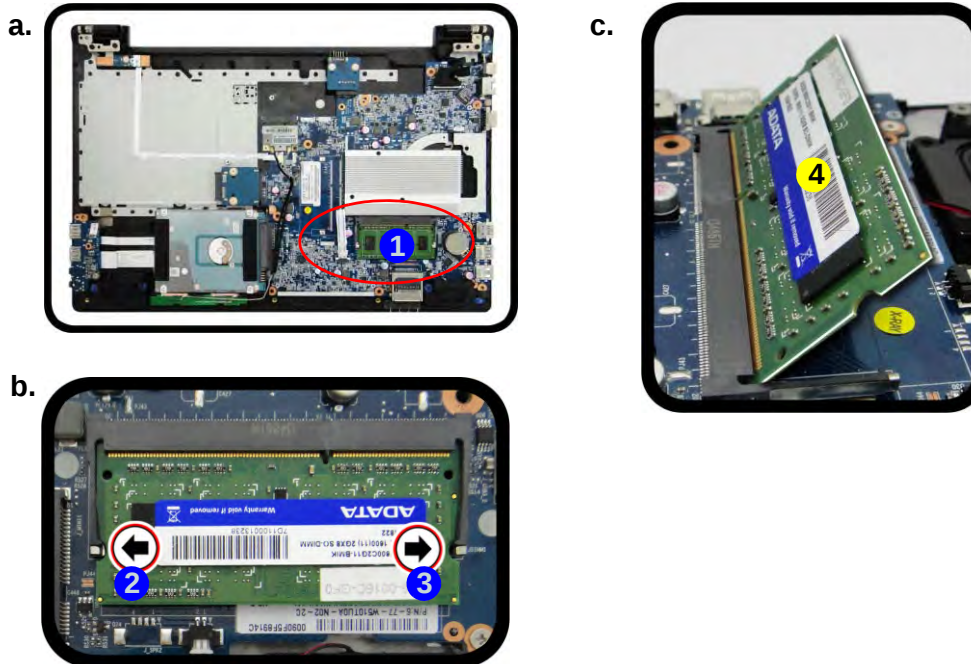


Figure 7
RAM Module Removal

- a. The RAM modules will be visible at point **1** on the mainboard.
- b. Pull the release latches.
- c. 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

Disassembly

Figure 8
RAM Module Assembly

d. Insert the RAM modules properly.

4. Pull the latches to release the second module if necessary.
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. Replace the bottom case and the screws (see [page 2 - 6](#)).
8. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

d.

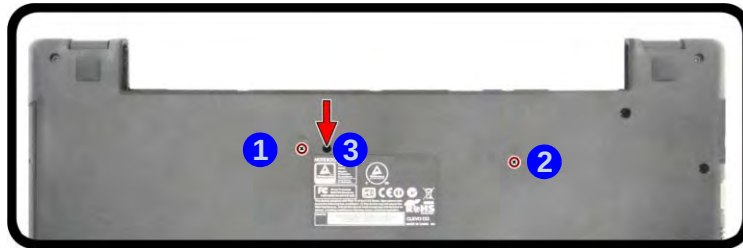


4. RAM Module

Removing the Keyboard

1. Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)).
2. Remove screws **1** - **2** from the bottom case and press at point **3** to release the keyboard ([Figure 9a](#)).
3. Turn the computer over, remove the keyboard **4** ([Figure 9c](#)).
4. Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable **5**. Disconnect the keyboard ribbon cable from the locking collar socket **6** ([Figure 9d](#)).
5. Carefully lift up the keyboard **4** off the computer ([Figure 9e](#)).

a.



c.



b.

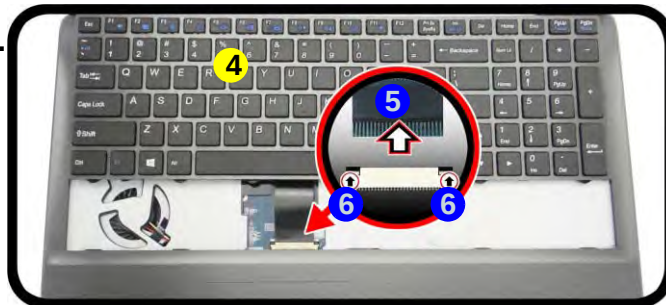


Figure 9
Keyboard Removal

- a. Remove screw and release the keyboard by pressing at point **3**.
- b. Disconnect the keyboard ribbon cable from the locking collar socket.
- c. Remove the keyboard.



4. Keyboard

- 2 Screws

Disassembly

Figure 10
Keyboard Assembly

- d. Connect the keyboard ribbon cable to the locking collar socket.
- e. Insert the keyboard at point 9 and slide it in at point 10 and 11 (Figure 10e).
- f. Tighten the screws.

- 6. Connect the keyboard ribbon cable to the locking collar socket 8, and be careful not to bend the keyboard ribbon cable 7 (Figure 10d).
- 7. Insert the keyboard 4 at point 9 and then slide the keyboard in at point 10 and 11 (Figure 10e).
- 8. Tighten the screws 12 - 13 to secure the keyboard (Figure 10f).

d.



e.



f.



4. Keyboard

- 2 Screws

Removing the Wireless LAN Module

1. Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)) and bottom cover ([page 2 - 6](#)).
2. The Wireless LAN module will be visible at point **1** on the mainboard ([Figure 11a](#)).
3. Carefully disconnect the cables **2** & **3**, and then remove the screw **4** ([Figure 11b](#)).
4. The Wireless LAN module **5** ([Figure 11c](#)) will pop-up, and you can remove it from the computer.

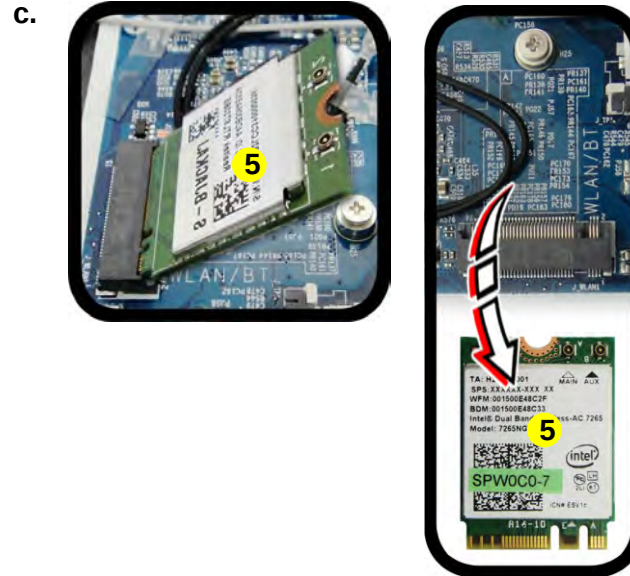
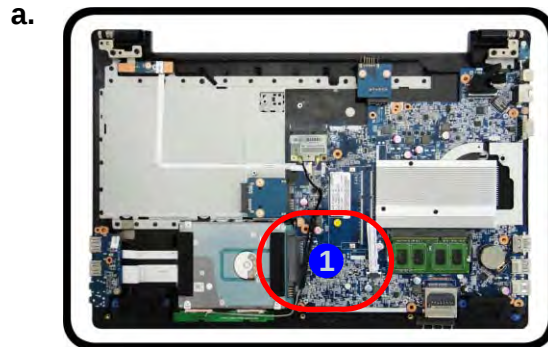


Figure 11
**Wireless LAN
Module Removal**

- a. Locate the WLAN.
- b. Disconnect the cable and remove the screw.
- c. The WLAN module will pop up and lift it out of the computer.

Note: Make sure you reconnect the antenna cable to the “1 + 2” socket ([Figure 11b](#)).



5. Wireless LAN Module

- 1 Screw

Disassembly

Wireless LAN and Combo Module Cables

Note that the cables for connecting to the antennae on WLAN, WLAN & Bluetooth Combo, 3G and LTE modules are not labelled. The cables/covers (each cable will have either a black or transparent cable cover) are color coded for identification as outlined in the table below.

Module Type	Antenna Type	Cable Color	Cable Cover Type
WLAN/WLAN & Bluetooth Combo	WM 1	Black	Transparent
	WM 2	Gray	
	WM 3	White	
LTE Broadband	LTE 1	Black	Black
	LTE 2	Gray	
3G Broadband	3G 1	Black	Black
	3G 2	Gray	

Cable 1 is usually connected to antenna 1 (Main) on the module, and cable 2 to antenna 2 (Aux).

Removing the 3G Module

1. Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)) and bottom cover ([page 2 - 6](#)).
2. The 3G module will be visible at point **1** on the mainboard ([Figure 12a](#)).
3. Carefully disconnect the cables **2** & **3**, and then remove the screw **4** ([Figure 12b](#))
4. The 3G module **5** ([Figure 12c](#)) will pop-up, and you can remove it from the computer.



Figure 12
3G Module Removal

- Locate the 3G.
- Disconnect the cable and remove the screw.
- The 3G module will pop up and lift it out of the computer.



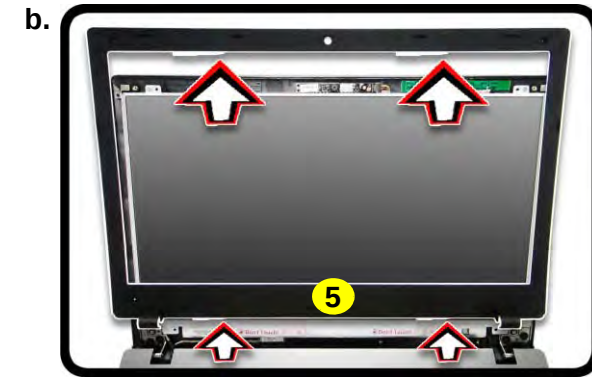
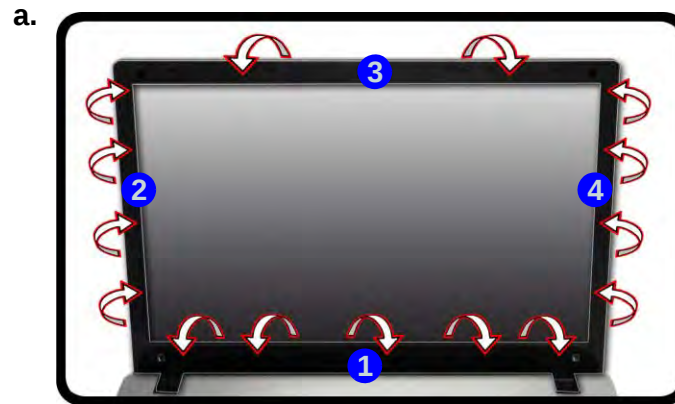
5. Wireless LAN Module

- 1 Screw

Disassembly

Figure 13
CCD Removal

- a. Run your fingers around the inner frame of the LCD panel at the points indicated by the arrows.
 - b. Lay the computer down on a flat surface with the top case up forming a 90 degree angle. Push the LCD front panel upwards before carefully lifting it up.
 - c. Remove the LCD front cover.
1. Turn **off** the computer, turn it over to remove the battery ([page 2 - 5](#)).
 2. Run your fingers around the inner frame of the LCD panel at the points as indicated by the arrows **1** - **4** ([Figure 13a](#)).
 3. Lay the computer down on a flat surface with the top case up forming a 90 degree angle. Push the LCD front cover **5** upwards before carefully lifting it up.
 4. Remove the LCD front cover **5** ([Figure 13c](#)).



5. LCD Front Cover

5. Disconnect the cable ⑥.
6. Remove the CCD module ⑦ (Figure 14f).
7. Reverse the process to install a new CCD module.

d.



e.

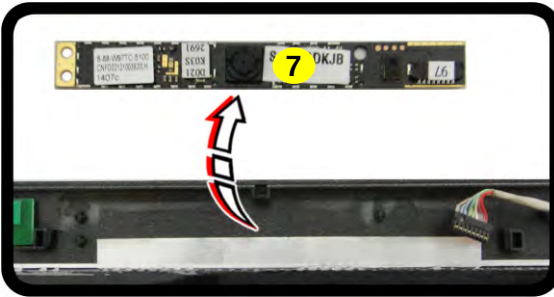


Figure 14
CCD Removal
(cont'd)

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



7. CCD Module

Appendix A:Part Lists

This appendix breaks down the **W950PU / W955PU** series notebook's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

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

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

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

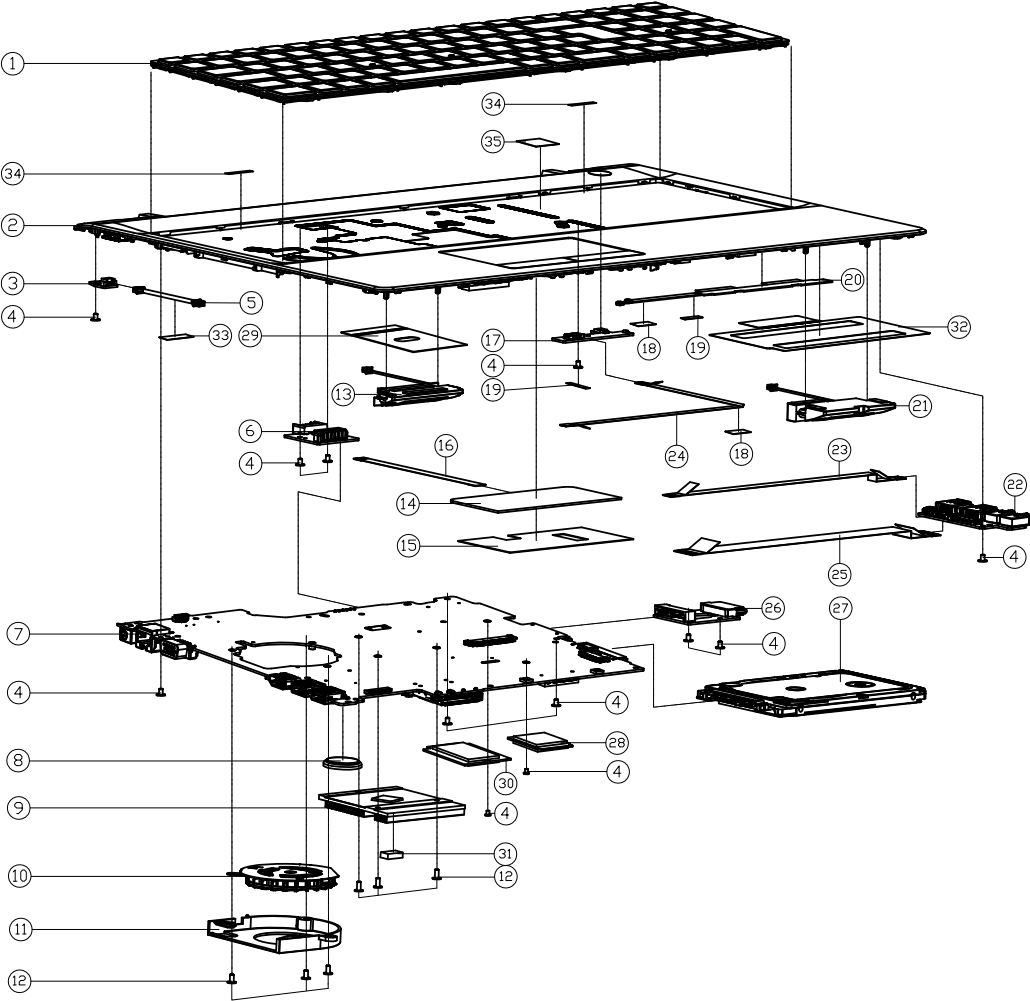
Part List Illustration Location

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

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

Part	W950PU	W955PU
Top (6W)	<i>page A - 3</i>	<i>page A - 4</i>
Bottom	<i>page A - 5</i>	<i>page A - 6</i>
LCD	<i>page A - 7</i>	<i>page A - 8</i>
DVD Dual Drive	<i>page A - 9</i>	<i>page A - 10</i>
Dummy ODD	<i>page A - 11</i>	
HDD	<i>page A - 12</i>	
HDD Caddy	<i>page A - 13</i>	

Top (6W) - W950PU



ITEM	PART NAME	PART NO	REMARK
1	VIBR VIB USABLAZOL FRAME(MD) MODULE W950AU	6-79-W950AUK-010-W	
2	TOP CASE MODULE W950SUB	6-39-W95S2-014	
3	HALL SENSOR BOARD V1.0 W950KU	6-77-W95K1-D01	
4	SCREW M2X4 KI NI ICT NY (C0445,01-84)	6-35-B1120-3RE	
5	WIRE CABLE FOR LID 3P 40MM (GL) W550EU	6-43-W5503-011	
6	BATTERY BOARD V2.0 W950KU	6-77-W95KQ-D02	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950LU00-D02-F	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950LU00-D02-3E	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950LU00-D02-4D	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950LU00-D02-5F	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950LU00-D02-5D	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950LU00-D02-4E	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950PU00-D02-D	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950PU00-D02-3E	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950PU00-D02-BF	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950PU00-D02-1D	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950PU00-D02-7F	
7	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-77-W950PU00-D02-5F	
8	BATTERY 3V 220MA BB8C2R2028 (KTS)	6-23-6A2B2-030	
9	CPU HEATSINK AL6063 W940TU	6-31-W940S-011	
10	FAN MODULE (ADDA) W547BL	6-31-W547S-101	
11	FAN HOUSING THERMOPLASTIC W547BL	6-42-W940S-011	
12	SCREW M2X4 KI BZ ICT NY	6-35-B6120-4RA	
13	SPK CABLE L 2W 4T 23MM (P23524900) W950U	6-23-5W95K-0L1	
14	TOUCH PAD SYNAPTICS TM-0146-003 MULTI-GE3	6-49-C4802-010	
15	TP TAPE MYLAR PET W540EU	6-40-W5401-010	
16	IFC CABLE FOR HOT KEY TO HALL SENSOR 4PIN C0400 W500U	6-43-W35E2-011	
17	POWER SWITCH BOARD V2.0 W94SLU	6-77-W94LS-D02-A	FOR W950LU
17	POWER SWITCH BOARD V2.0 W950PU	6-77-W94PS-D02-A	FOR W950PU
18	TAPE MYLAR TRANSPARENT (C0400) P200M	6-40-P1803-020	
19	TAPE MYLAR TRANSPARENT (C0400) W250PU	6-40-W25P3-010	
20	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-23-7W950-030	
21	SPK CABLE R 2W 4T 23MM (P23524900) W950U	6-23-5W95K-0R1	
22	AUDIO BOARD (HEADPHONE) V2.0 W950U	6-77-W95L8-D02	
23	IFC CABLE NO TO AUDIO BOARD C0400 34MM 5V 4P W950U	6-43-W95S0-020-2	
24	IFC CABLE FOR POWER TO NO 34MM 2W 4P W950U	6-43-W95S0-010	
25	IFC CABLE NO TO AUDIO BOARD C0400 34MM 5V 4P W950U	6-43-W95S0-030-2	
26	DDD BOARD V3.0 W950KU	6-77-W95KN-D03	
27	W/D HDD ASS'Y W950KU	6-79-W950KUJ-010	
27	W/D HDD ASS'Y W950KU	6-79-W950KUJ-020	
27	2ND HDD CADDY ASS'Y W/D W950KU	6-79-W950KUJ-030	(OPTION)
27	2ND HDD CADDY ASS'Y W/D W950KU	6-79-W950KUJ-040	(OPTION)
28	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-S210F-9400	
28	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-N240F-4200	
28	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-N170F-5100	
28	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-W95L-4240	
28	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-P655F-4210	
29	TOP CASE AL TOL (SHAPED) VAL TOL (MET) 1 T200 W950U	6-47-W95L2-011	
30	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-S210W-8810	
30	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-W3306-8830	
30	W950 D001 CPU/SENSOR/BOARD CPU/PALETTE/PRISM COVER W950U	6-88-W3306-8841	
31	CONDUCTIVE GEL (THERMAL) (C0400) W540EU	6-47-00190-109	
32	TOP ANTENNA AL FDL (943X30.5) W950AU	6-47-W9502-010	ONLY FOR LTE-2
33	TAPE MYLAR (C) MYLAR M550J	6-40-M55J2-030	
34	MYLAR (M2X4.75T) FOR W940SUB	6-40-00150-12D	
35	MYLAR MAGNET 25X25X0.3MM FOR W950AU	6-40-W9402-060	

Figure A - 1
Top (6W) - W950PU

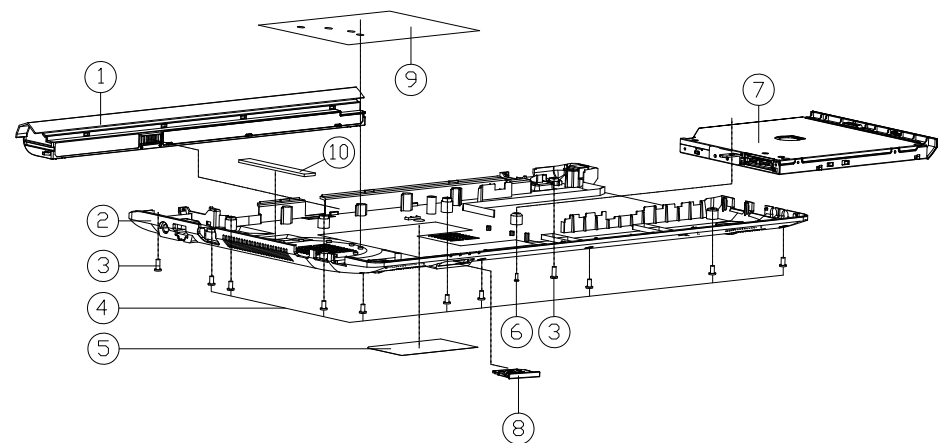
A.Part Lists

This exploded view diagram illustrates the assembly of the HP Z840 G2 Workstation. The components are numbered 1 through 34, indicating the sequence of assembly. The diagram shows the following parts:

- 1**: Top cover (chassis lid)
- 2**: Main chassis plate
- 3**: Front bezel
- 4**: Various screws and fasteners
- 5**: Front panel assembly
- 6**: Front panel connector
- 7**: Front panel assembly (bottom)
- 8**: Front panel assembly (bottom)
- 9**: Front panel assembly (bottom)
- 10**: Front panel assembly (bottom)
- 11**: Front panel assembly (bottom)
- 12**: Front panel assembly (bottom)
- 13**: Front panel assembly (bottom)
- 14**: Front panel assembly (bottom)
- 15**: Front panel assembly (bottom)
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- 30**: Front panel assembly (bottom)
- 31**: Front panel assembly (bottom)
- 32**: Front panel assembly (bottom)
- 33**: Front panel assembly (bottom)
- 34**: Front panel assembly (bottom)

ITEM	PART	NAME	PART NUMBER	QTY	REMARK
1	VNA K1 USB4000A	FRANCOIS MODEL V950U	6-77-V9500U-00-W		
2	TOP CASE MODULE	V955SU	6-39-V9552-01		
3	HALL SENSOR BOARD	V10 V9500U	6-77-V9551-D01		
4	SCREW NICKL KI M6 T8 CT	44532-04	6-35-B1120-3RE		
5	WIRE CABLE FOR LID 3P 40MM 40V	V950U	6-43-V9503-011		
6	BATTERY BOARD	V20 V9500U	6-77-V9500Q-D02		
7	W/O HDD OVERVOLTAGE PROTECT	PLATE	6-77-V9500LU-D02-F		
8	W/O HDD OVERVOLTAGE PROTECT	PLATE	6-77-V9500LU-D02-3C		
9	W/O HDD OVERVOLTAGE PROTECT	PLATE	6-77-V9500LU-D02-4B		
10	W/O HDD OVERVOLTAGE PROTECT	PLATE	6-77-V9500LU-D02-5F		
11	W/O HDD OVERVOLTAGE PROTECT	PLATE	6-77-V9500LU-D02-5D		
12	W/O HDD OVERVOLTAGE PROTECT	PLATE	6-77-V9500LU-D02-E		
13	W/O BATTERY BOARD	6-77-V9500LU-D02-F	6-77-V9500LU-D02-F		
14	W/O BATTERY BOARD	6-77-V9500LU-D02-3C	6-77-V9500LU-D02-3C		
15	W/O BATTERY BOARD	6-77-V9500LU-D02-4B	6-77-V9500LU-D02-4B		
16	W/O BATTERY BOARD	6-77-V9500LU-D02-5F	6-77-V9500LU-D02-5F		
17	W/O BATTERY BOARD	6-77-V9500LU-D02-5D	6-77-V9500LU-D02-5D		
18	W/O BATTERY BOARD	6-77-V9500LU-D02-E	6-77-V9500LU-D02-E		
19	W/O BATTERY BOARD	6-77-V9500LU-D02-F	6-77-V9500LU-D02-F		
20	BATTERY 3V ZEMAX	BB90020328 OKTS	6-23-6A282-030		
9	CPU HEATSINK	AL6063 V940TU	6-31-V940S-011		
10	FAN MODULE	ADDA W547BL	6-31-W547S-101		
11	FAN HOLDING THERMAL PASTE	NOTES	6-42-V940S-011		
12	SPEAKER 1 2W 41 20MM	PS9500 V950U	6-23-V959K-0L1		
13	TIDCH PAD SYNTHEIC	TM-0416-03 MULTI-GE3	6-49-C4802-010		
14	TP TAPE MYLAR PET	V5040U	6-49-V5401-010		
15	FEI CABLE FOR NET 10 TO HALL SENSOR BOARD	V950U	6-43-V9522-011		
16	POWER SWITCH BOARD	V20 V9450LU	6-77-V945L-D02-A		
17	POWER SWITCH BOARD	V20 V950PU	6-77-V94PS-D02-A		
18	TAPE MYLAR TRANSPARENT	COMPOUND P20M	6-40-P1803-020		
19	TAPE MYLAR TRANSPARENT	COMPOUND V950PU	6-40-W25P3-010		
19	TAPE MYLAR PET FOR TRANSPARENT COMPOUND	6-23-V7950-030	6-23-V7950-030		
20	SPEAKER 1 2W 41 20MM	PS9500 V950U	6-23-V959K-0R1		
21	ALUMI BOARD	DEALP200 V20 V950U	6-77-V95L8-D02		
22	FEI CABLE NO TO ADD BATTERY BOARD 3V 40V	V950U	6-43-V9550-020-2		
23	FEI CABLE FOR PAPER TO NET 10 SW 3P	V950U	6-43-V9550-010		
24	ODDD BOARD	V3.0 V950KU	6-77-V95KN-D03		
25	FEI CABLE NO TO ADD BATTERY BOARD 3V 40V	V950U	6-43-V9550-030-2		
26	W/O HDD ASSY	V950KU	6-79-V950KU0-020		
27	W/HDD ASSY	V950KU	6-79-V950KU0-020		
28	CONDUCTIVE ADHESIVE	ADHESIVE	6-47-00190-109		
29	SCREW NICKL KI 3.2 CT	101	6-35-B6120-4A0		
30	W/O HDD ASSY	V950KU	6-88-S210F-9400		
31	W/O HDD ASSY	V950KU	6-88-N240F-4200		
32	W/O HDD ASSY	V950KU	6-88-N170F-5100		
33	W/O HDD ASSY	V950KU	6-88-V95LF-4240		
34	W/O HDD ASSY	V950KU	6-88-P655F-4240		
35	W/O HDD ASSY	V950KU	6-88-S210V-9810		
36	W/O HDD ASSY	V950KU	6-88-V3306-8841		
37	W/O HDD ASSY	V950KU	6-88-V3306-8841		
38	TAPE MYLAR	CYAL MILAR MS50J	6-40-M55J-032		
39	TOP CASE LID	6-40-M55J-032	6-40-M55J-032		
40	TOP ANTENNA AL FEEL	9343309 V950U	6-47-V9502-010		
41	MYLAR MATERIAL	254250300 FOR FOR V950U	6-40-V9402-060		ONLY FOR LITE-2

Bottom (W950PU)

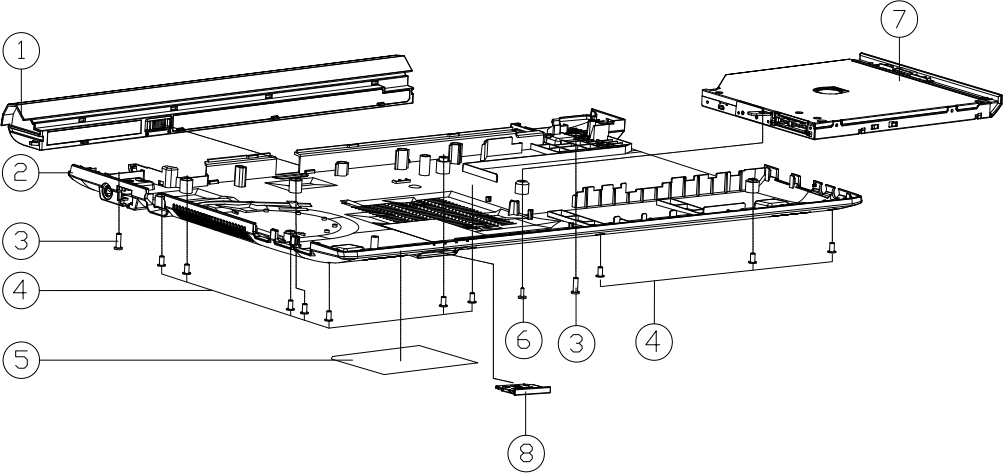


ITEM	PART NAME	PART NO	REMARK
1	W95PU S/L HARD/SDRAM KEF DRV/IDE HARD/IDE2 22MM W950LU TEXTURE	6-87-W95KS-42F2	
1	W95PU S/L SD/IDE/SDRAM/HD/KEF DRV/IDE HARD/IDE2 22MM W97KS-42L	6-87-W97KS-42L	
1	W95PU S/L HARD/SDRAM KEF DRV/IDE HARD/IDE2 22MM W95KS-42F3	6-87-W95KS-42F3	
1	W95PU S/L SD/IDE/SDRAM/HD/KEF DRV/IDE HARD/IDE2 22MM W97KS-42L1	6-87-W97KS-42L1	
2	BOTTOM CASE MODULE W950SU2	6-39-W95S3-012	
2	BOTTOM CASE MODULE W950SU2-C	6-39-W95S3-012-C	
3	SCREW M2.5x8L KI BK/Z NY ICT	6-35-B6125-8R0	
4	SCREW M2.5x6L K BZ ICT NY	6-35-B2125-6RA	
5	PRODUCT LABEL FOR W950LU	6-45-W950LU03-010	
6	SCREW M2x5L KKT-0.8 D=4.0 BK/Z ICT NY	6-35-B6120-5R0	
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W950LU00-001	<OPTION>
7	W/O ODD ASS'Y W950KU	6-79-W950KU02-000	<OPTION>
7	(PRE-PROCESS) DUMMY ODD ASS'Y W950KU	6-79-W950KU02-010	<OPTION>
8	DUMMY 30IN NON PUSH TYPE PC HBS (C7220P-7000) W9700W	6-42-W9708-030	
9	BOTTOM CASE AL FOIL (AL+3M467) W950TU	6-40-W9503-010	
10	SPONGE FOR TOP CASE (57x64x2) (S855+SDNY 64000)	6-47-0019A-570	ONLY FOR W950LU-C

Figure A - 3
Bottom (W950PU)

Bottom (W955PU)

Figure A - 4
Bottom (W955PU)



ITEM	PART NAME	PART NO	REMARK
1	TOP COVER OF BOTTOM MODULE (W955PU) (OPTIONAL)	6-87-W955S-42F2	
1	TOP COVER OF BOTTOM MODULE (W955PU) (OPTIONAL)	6-87-W955S-42F3	
2	BOTTOM CASE MODULE W955TU	6-39-W9553-T11	
2	BOTTOM CASE MODULE W955KL	6-39-W9553-K11	
2	BOTTOM CASE MODULE W955KL-C	6-39-W9553-K11-C	
3	SCREW M2.5*5L KI BK/Z NY ICT	6-35-B6125-8R0	
4	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6125-5RA	
5	PRODUCT LABEL FOR W955KL	6-45-W955KL03-010	
5	PRODUCT LABEL FOR W955KU	6-45-W955KU03-010	
5	PRODUCT LABEL FOR W955TU	6-45-W955TU03-010	
5	PRODUCT LABEL FOR W955SU2	6-45-W955SU23-010	
5	PRODUCT LABEL FOR W955AU	6-45-W955AU03-010	
5	PRODUCT LABEL FOR W955LU	6-45-W955LU03-010	
5	PRODUCT LABEL FOR W955JU	6-45-W955JU03-010	
5	PRODUCT LABEL FOR W955PU	6-45-W955PU03-010	
6	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6120-5R0	
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W955AU00-010	(OPTION)
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W955SU00-000	(OPTION)
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W955KL00-010	(OPTION)
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W955LU00-002	(OPTION)
7	SATA BLU-RAY COMBO ASS'Y (OPTION)	6-79-W955SU2W-010	(OPTION)
7	SATA BLU-RAY COMBO ASS'Y (OPTION)	6-79-W955AU0W-001	(OPTION)
7	W/O ODD ASS'Y W955SU2	6-79-W955SU2Z-000	(OPTION)
7	W/O ODD ASS'Y W955AU	6-79-W955AU0Z-000	(OPTION)
8	SCREW 2.0*4.0 PPH TYPE PCHAS (C723P-710) W/POW	6-42-W9708-030	

LCD (W950PU)

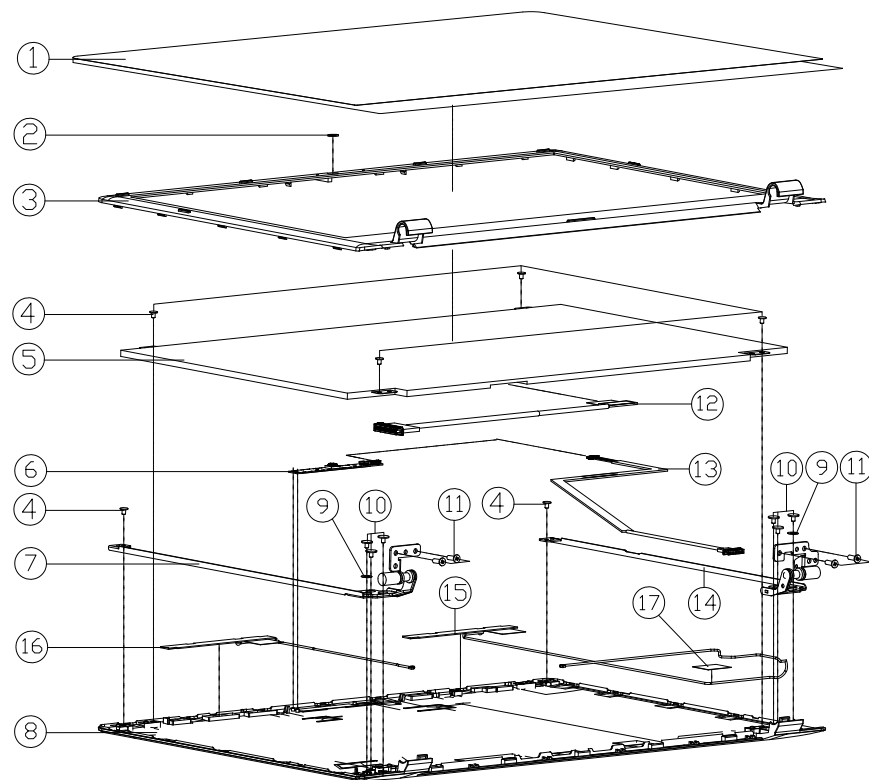


Figure A - 5
LCD (W950PU)

ITEM	PART NAME	PART NO	REMARK
1	LCD PROTECT MYLAR BOPP W650RC	6-40-W6508-020	
2	CCD LENS PMMA W650SR	6-42-W6501-010	
3	LCD FRONT COVER MODULE W950SU2	6-39-W95S1-013	
4	SCREW M2*3L KI NI ICT NY (DD=0.45,DT=0.4)	6-35-B1120-3RE	
5	LCD 15.6" HD LG LP156WHB-TL.B1 (LED) 3.8 MM	6-50-L8138-L08	
5	LCD 15.6" HD (EDP) AU B156XTN03.5 3.2MM LED	6-50-L8132-G03	
5	LCD 15.6" HD GLARE TYPE (EDP) LG LP156WHB-TPM (LED) 3.2 MM	6-50-L8132-L00	
5	LCD 15.6" HD EDP INNOLUX N156G0E-EA2 (LED) 3.25 MM	6-50-L8132-V00	
5	LCD 15.6" HD EDP GLARE TYPE INNOLUX N156G0E-EA2 (LED) 3.25 MM	6-50-L8132-V01	
5	LCD 15.6" HD EDP GLARE TYPE SAMSUNG L156S6T09-H01 (LED) 3.0MM	6-50-L8138-M03	
5	LCD 15.6" HD (EDP) AU B156XTN07.1 (3.2MM) LED	6-50-L8132-G04	
5	LCD 15.6" FHD (EDP) INNOLUX N156G0E-EA2 4' W (UPATED) LED 3.2 MM	6-50-LB232-V02	
5	LCD 15.6" FHD/IPS/EDP LG LP156WF6-SPK3 (04) (LED) 3.2MM	6-50-LB232-L08	
6	DVC CAMERA BEZEL FOR D940007-30 IN HD 1080P 60 VPHOTO FRAME W/LED W/PC	6-88-W940C-4902	OPTION
6	DVC CAMERA CHIMNEY FOR D940007-30 IN HD 1080P 60 VPHOTO FRAME W/LED W/PC	6-88-W940C-5100	OPTION
6	DVC CAMERA CHIMNEY FOR D940007-30 IN HD 1080P 60 VPHOTO FRAME W/LED W/PC	6-88-W51PC-5100	OPTION
6	DVC CAMERA BEZEL FOR D940007-30 IN HD 1080P 60 VPHOTO FRAME W/LED W/PC	6-88-N650C-4900	OPTION
6	DVC CAMERA CHIMNEY FOR D940007-30 IN HD 1080P 60 VPHOTO FRAME W/LED W/PC	6-88-W51PC-5110	OPTION
6	DVC CAMERA BEZEL FOR D940007-30 IN HD 1080P 60 VPHOTO FRAME W/LED W/PC	6-88-N650C-4910	OPTION
7	LCD HINGE L SECOND SOURCE W950SU2	6-33-W95S1-0L1-1	
8	LCD BACK COVER MODULE W950SU2	6-39-W95S1-025	
8	LCD BACK COVER MODULE W950SU2-C	6-39-W95S1-023-C	
9	WASHER Ø6*Ø3*0.3t (MYLAR)	6-37-02000-601	
10	SCREW M2*2L KI BK/Z ICT NY(Ø8,T=0.6)	6-35-B6120-2RE	
11	SCREW M2.5*6L K BZ ICT NY	6-35-82125-6RA	
12	WIRE CABLE FOR LVDS 20MM 20V 40P (UL/UL CONDUCTANCE-H) V550U (C-OUT)	6-43-W95K1-011-K	
12	WIRE CABLE FOR EDP 20MM 20V 30P (UL/UL CONDUCTANCE-H) V550U	6-43-W95S1-011-N	
13	WIRE CABLE FOR CCD D-MIC 420MM 3.3V 8P (HT) V950TU	6-43-W95KT-011-1	
14	LCD HINGE R SECOND SOURCE W950SU2	6-33-W95S1-0R1-1	
15	ANTENNA PEEL PLATE COMET VET V104L2 PCB ZAG500E M2-50MM M2-60MM V550U	6-23-7W95L-011	OPTION
16	ANTENNA PEEL PLATE VET LIE-1 PCB AG500E/AG500E/AG500E/AG500E V550U	6-23-7W950-020	需要43G/LTE 模組 必須30/LTE+天線
17	TDP CASE MYLAR FR83 25*7*0.05 P180H	6-40-P1802-030	

A.Part Lists

[illegible]

ITEM	PART	NAME	PART NO	REMARK
1	LCD PROTECT MYLAR BOPP	W650RC	6-40-W6508-020	
2	CCD LENS PPMVA	W955SU2	6-42-W9551-010	
3	LCD FRONT COVER MODULE	W955SU2	6-39-W9551-011	
4	SCREW M2x3L KI NI ICT NY	(DD=44.5,DT=0.4)	6-35-B1120-3RE	
5	LCD 15.6" HD LG LP156WHB-TLBI	(LED) 3.8 MM	6-50-L8138-L08	
5	LCD 15.6" HD (EDP) AU B156XTN035	32MM LED	6-50-L8132-G03	
5	LCD 15.6" HD (GLARE TYPE) (EEP) LG LP156WHB-TPL	LED 32 MM	6-50-L8132-L00	
5	LCD 15.6" HD EDP INNOPIX N156BGE-EA2	(LED) 325 MM	6-50-L8132-V00	
5	LCD 15.6" HD (GLARE TYPE) INNOPIX N156BGE-EA2	(LED) 325 MM	6-50-L8132-V01	
5	LCD 15.6" HD EDP GLARE TYPE SAMSUNG LTN156AT39-HH	(LED) 33MM	6-50-L8138-M03	
5	LCD 15.6" HD (EDP) AU B156XTN071	(32MM) LED	6-50-L8132-G04	
5	LCD 15.6" FHD (EEP) INNOPIX N156GE-EA2	IF/UP UPDATED LED 32	6-50-L8232-V02	
5	LCD 15.6" FHD (EEP) LG LP156WHB-SPK3	040 (LED) 32MM	6-50-L8232-L08	
6	ONE CAMERA CORDON FIB OPTIC IN HD SETI STOP VHSU0	FIBER WLED VHS-MC	6-88-W940C-5100	OPTION
6	ONE CAMERA FIBER FIB OPTIC IN HD SETI STOP VHSU0	FIBER WLED VHS-MC	6-88-W940C-4902	OPTION
6	ONE CAMERA CORDON FIB OPTIC IN HD SETI STOP VHSU0	FIBER WLED VHS-MC	6-88-W51PC-5100	OPTION
6	ONE CAMERA FIBER FIB OPTIC IN HD SETI STOP VHSU0	FIBER WLED VHS-MC	6-88-N650C-4910	OPTION
7	LCD HINGE L	W955SU2	6-33-W9551-0L1	
8	ANTENNA PEHA 364E 1W 700MHZ FOR LG/HP/ASUS/MSI/DELL/ACER/SONY	1.5MM	6-23-7W950-020	需索出SCVLE 材料 必須在10月17日以前
9	LCD BACK COVER MODULE	W955SU2	6-39-W9551-021	
10	SCREW M2x2L KI BK/2 ICT NY(Ø8,T-0.6)		6-35-B6120-2RE	
11	SCREW M2.5x5L KI BK/2 ICT NY		6-35-B6125-SRA	
12	WIRE CABLE FOR LVDS 30MM 20V 4P QWLV CONNEXION-HD VHSU0	(C-01)	6-43-W95K1-011-K	
12	WIRE CABLE FOR EDP 20MM 20V 3P QWLV CONNEXION-HD VHSU0		6-43-W9551-011-N	
12	WIRE CABLE FOR CCD D-MIC 420MM 3.3V 8P (HD) V950TU		6-43-W95KT-011-1	
13	LCD HINGE R	W955SU2	6-33-W9551-0R1	
15	ANTENNA PEHA 364E 1W 700MHZ FOR LG/HP/ASUS/MSI/DELL/ACER/SONY	1.5MM	6-23-7W950-011	OPTION
16	TOP CASE MYLAR FR83	25x7x0.05 P180H	6-40-P1802-030	

DVD DUAL (W950PU)

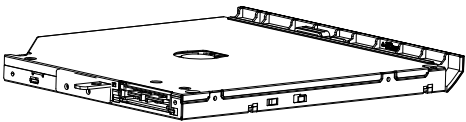
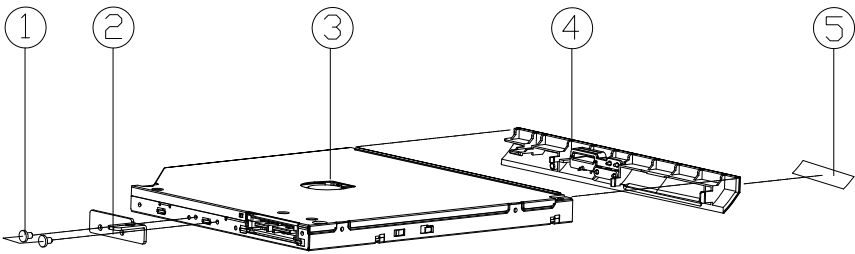
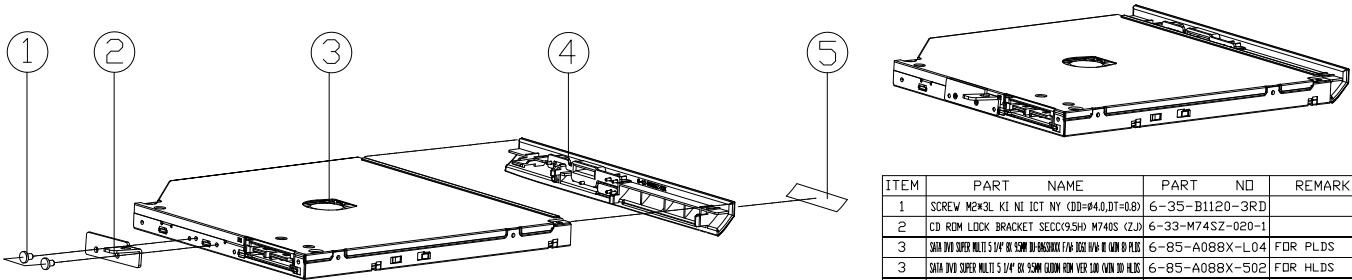


Figure A - 7
DVD DUAL
(W950PU)

ITEM	PART NAME	PART NO	REMARK
1	SCREW M2X3L KI NI ICT NY (DD=04.5,DT=0.4)	6-35-B1120-3RE	
2	CD ROM LOCK BRACKET SECCX9.5H M740S (Z.D)	6-33-M74SZ-020-1	
3	SATA DVD SUPER MULTI S 24P BK 950M GDRM ROM VER LDD (40W 100 HLDS)	6-85-A088X-502	FOR HLDS
3	SATA DVD SUPER MULTI S 24P BK 950M D0-0800000 F/W D040 HW-00 QUN 00 PLDS	6-85-A088X-L04	FOR PLDS
4	ODD BEZEL MODULE W950SU2	6-42-W95SZ-101	
5	SUPER MULTI ODD BEZEL LABEL (SIZE CHANGE)	6-45-W860Q-011	

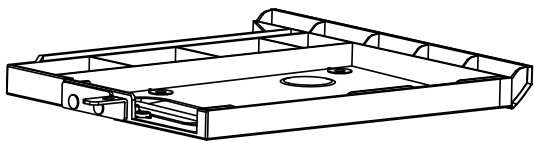
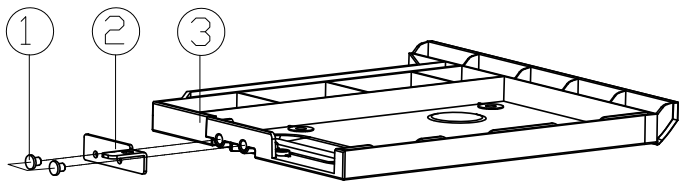
DVD DUAL (W955PU)

Figure A - 8
DVD DUAL
(W955PU)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2X3L KI NI ICT NY (DD=04.0,DT=0.8)	6-35-B1120-3RD	
2	CD ROM LOCK BRACKET SECC(9.5H) M740S (ZJ)	6-33-M74SZ-020-1	
3	SATA DVD SUPER MULTI 5 1/4" 8X 5200 IN-OUT/READ / 16X 8500 IN-OUT / 48X 16000 IN-OUT	6-85-A088X-L04	FOR PLDS
3	SATA DVD SUPER MULTI 5 1/4" 8X 5200 IN-OUT/READ / 16X 8500 IN-OUT / 48X 16000 IN-OUT	6-85-A088X-S02	FOR HLDS
4	DDD BEZEL MODULE W955SU2	6-42-W955Z-102	
5	SUPER MULTI DDD BEZEL LABEL (SIZE CHANGE)	6-45-W860Q-011	

Dummy ODD (W950PU)

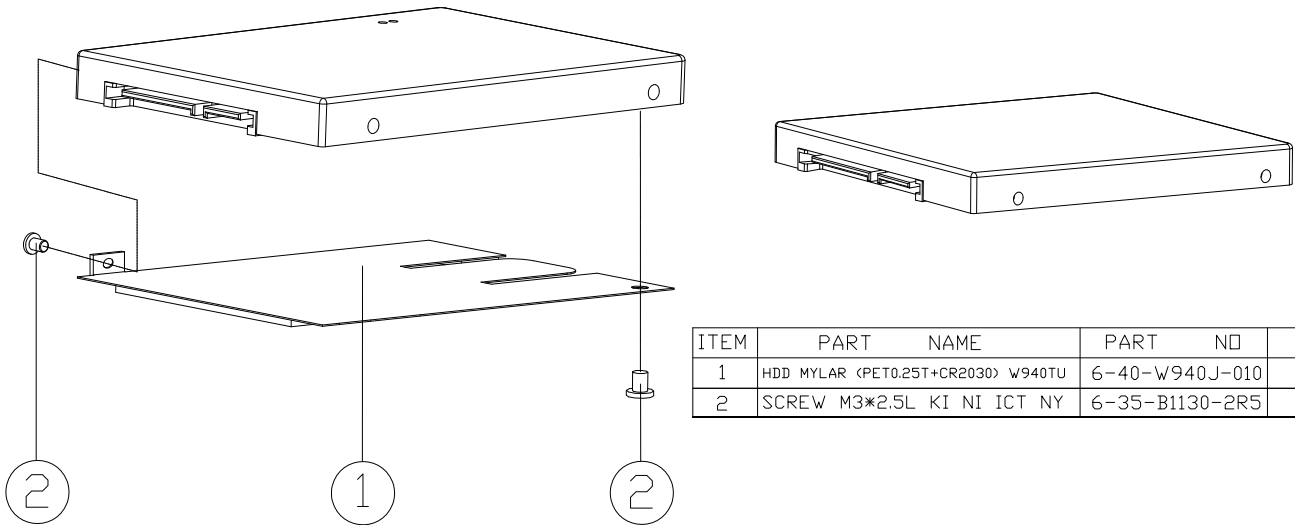


ITEM	PART NAME	PART NO	REMARK
1	.SCREW M2*3L KI NI ICT NY (DD=04.5,DT=04)	6-35-B1120-3RE	
2	CD ROM LOCK BRACKET SECC(9.5H) M740S (Z.D)	6-33-M74SZ-020-1	
3	DUMMY ODD PC+ABS GINAR D231(+) W950SU2	6-42-W95SZ-041	

Figure A - 9
Dummy ODD
(W950PU)

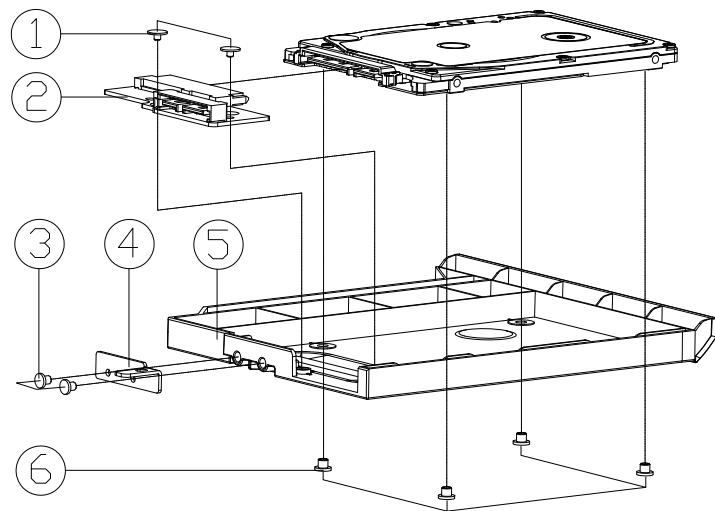
HDD

Figure A - 10
HDD



ITEM	PART NAME	PART NO	REMARK
1	HDD MYLAR (PET0.25T+CR2030) W940TU	6-40-W940J-010	
2	SCREW M3*2.5L KI NI ICT NY	6-35-B1130-2R5	

HDD Caddy (W950PU)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*2L KI BK/Z ICT NY (Ø6,T=0.5)	6-35-B6120-2RC	
2	DDD TO HDD BOARD V3.0 W950SU2 (W/ REPEATER)	6-77-W95KN-D13-A	
3	SCREW M2*3L KI NI ICT NY (DD=Ø4.5,DT=0.4)	6-35-B1120-3RE	
4	CD ROM LOCK BRACKET SECC(9.5H) M740S (ZJ)	6-33-M74SZ-020-1	
5	DUMMY DDD PC+ABS GINAR D231(+*) W950SU2	6-42-W95SZ-041	
6	SCREW M3*2.5L KI NI ICT NY	6-35-B1130-2R5	

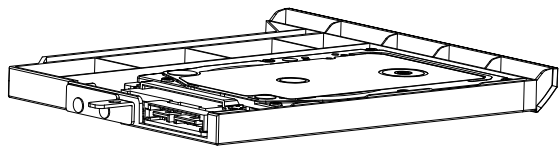


Figure A - 11
HDD Caddy
(W950PU)

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the **W950PU / W955PU** notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

Diagram - Page	Diagram - Page	Diagram - Page
System Block Diagram - Page B - 2	Panel Conn - Page B - 15	1.05VA, 1.8VA, 1.24VA - Page B - 28
Processor 1/8 - Page B - 3	RTD2168, CRT - Page B - 16	PWR_VCGI - Page B - 29
Processor 2/8 - Page B - 4	HDMI - Page B - 17	PWR_VNN - Page B - 30
Processor 3/8 - Page B - 5	Audio Codec - Page B - 18	AC_IN, Charger - Page B - 31
Processor 4/8 - Page B - 6	RTL8411B - Page B - 19	Audio Board - Page B - 32
Processor 5/8 - Page B - 7	Fan, Click, CCD Conn - Page B - 20	Power SW Board - Page B - 33
Processor 6/8 - Page B - 8	HDD, ODD, LED, LID, TPM - Page B - 21	Power Sequence - Page B - 34
Processor 7/8 - Page B - 9	NGFF - Page B - 22	
Processor 8/8 - Page B - 10	USB - Page B - 23	
eMMC - Page B - 11	KBC IT8987E - Page B - 24	
DDR SO-DIMM_A - Page B - 12	System Power - Page B - 25	
DDR SO-DIMM_B - Page B - 13	VDD3, VDD5 - Page B - 26	
PS8625 - Page B - 14	PWR_VDDQ, VTT - Page B - 27	

Table B - 1
**SCHEMATIC
DIAGRAMS**

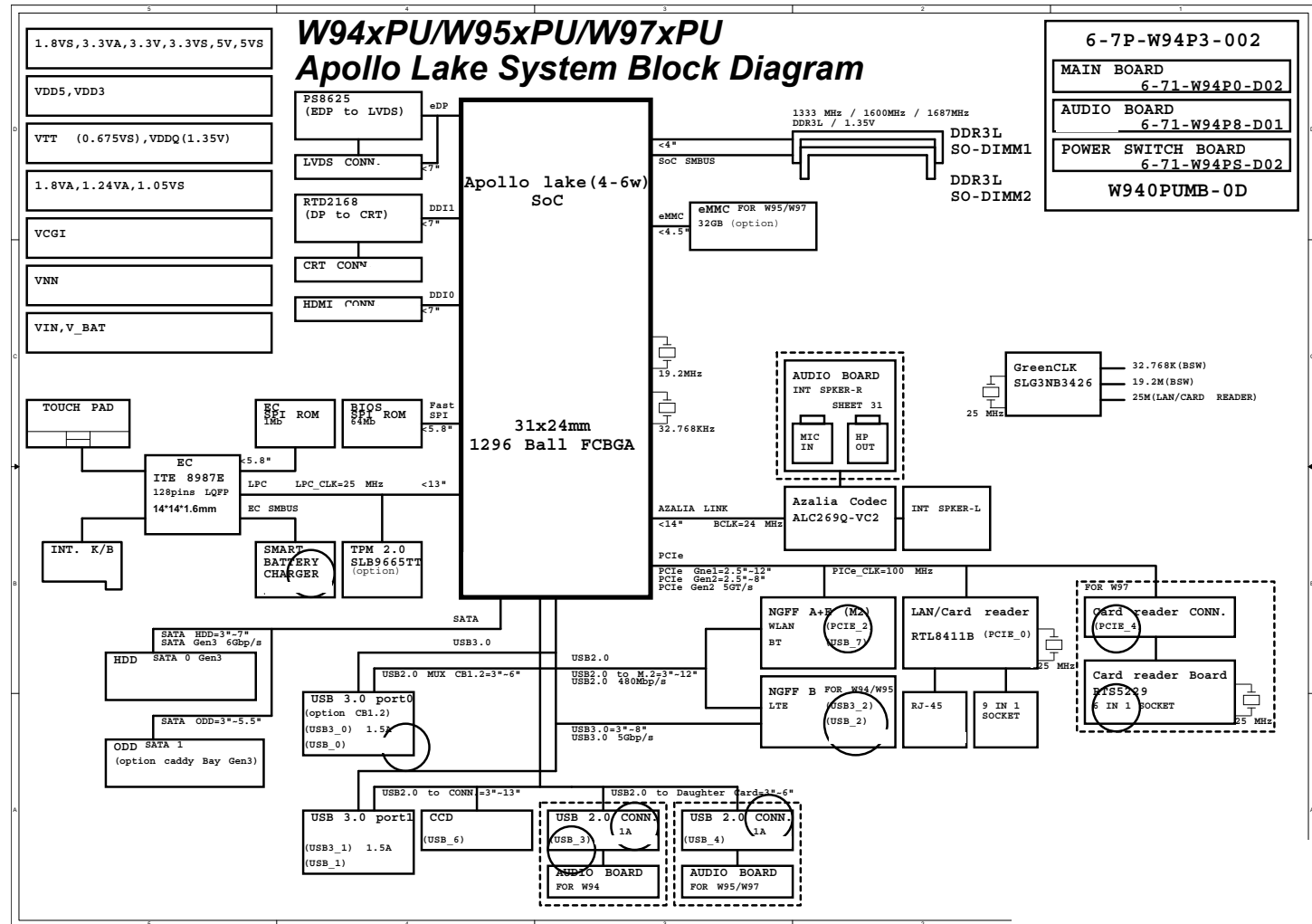


Version Note

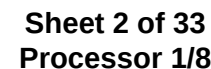
The schematic diagrams in this chapter are based upon version 6-7P-W94P3-002. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram

Sheet 1 of 33
System Block
Diagram

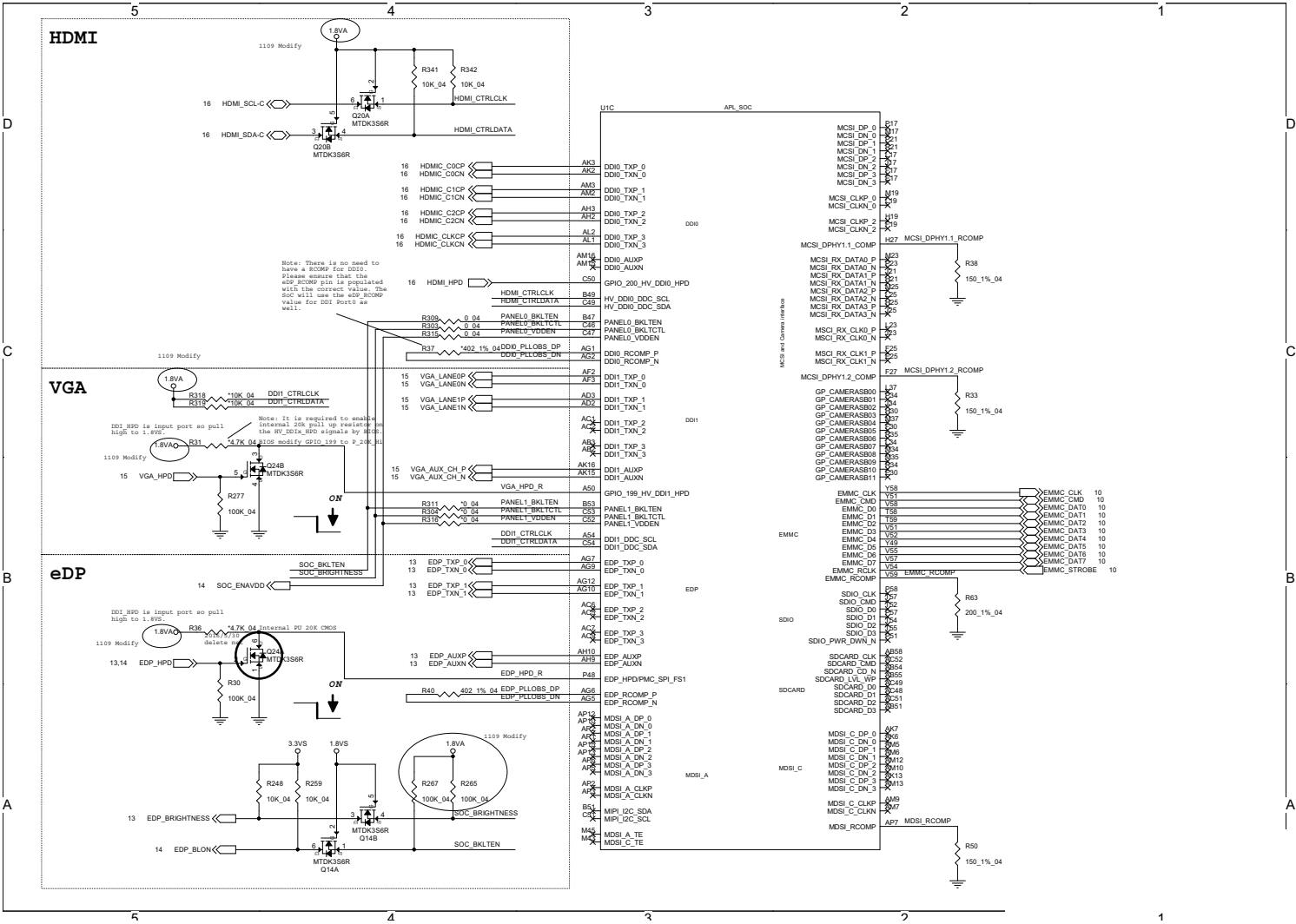


Processor 1/8 B - 3



Processor 2/8

Sheet 3 of 33
Processor 2/8



The schematic illustrates the hardware connections for the W97 card reader board. It includes sections for LAN/CARD READER, WLAN, SATA HDD, and BIOS ROM. The LAN/CARD READER section shows connections for LAN_CLKREQ# and WLAN_CLKREQ# signals. The WLAN section shows connections for WLAN_CLKREQ# and WLAN_CLK# signals. The SATA HDD section shows connections for SATA_LED# and SATA_LED# signals. The BIOS ROM section shows connections for SPI signals and a 64Mbit BIOS ROM chip.

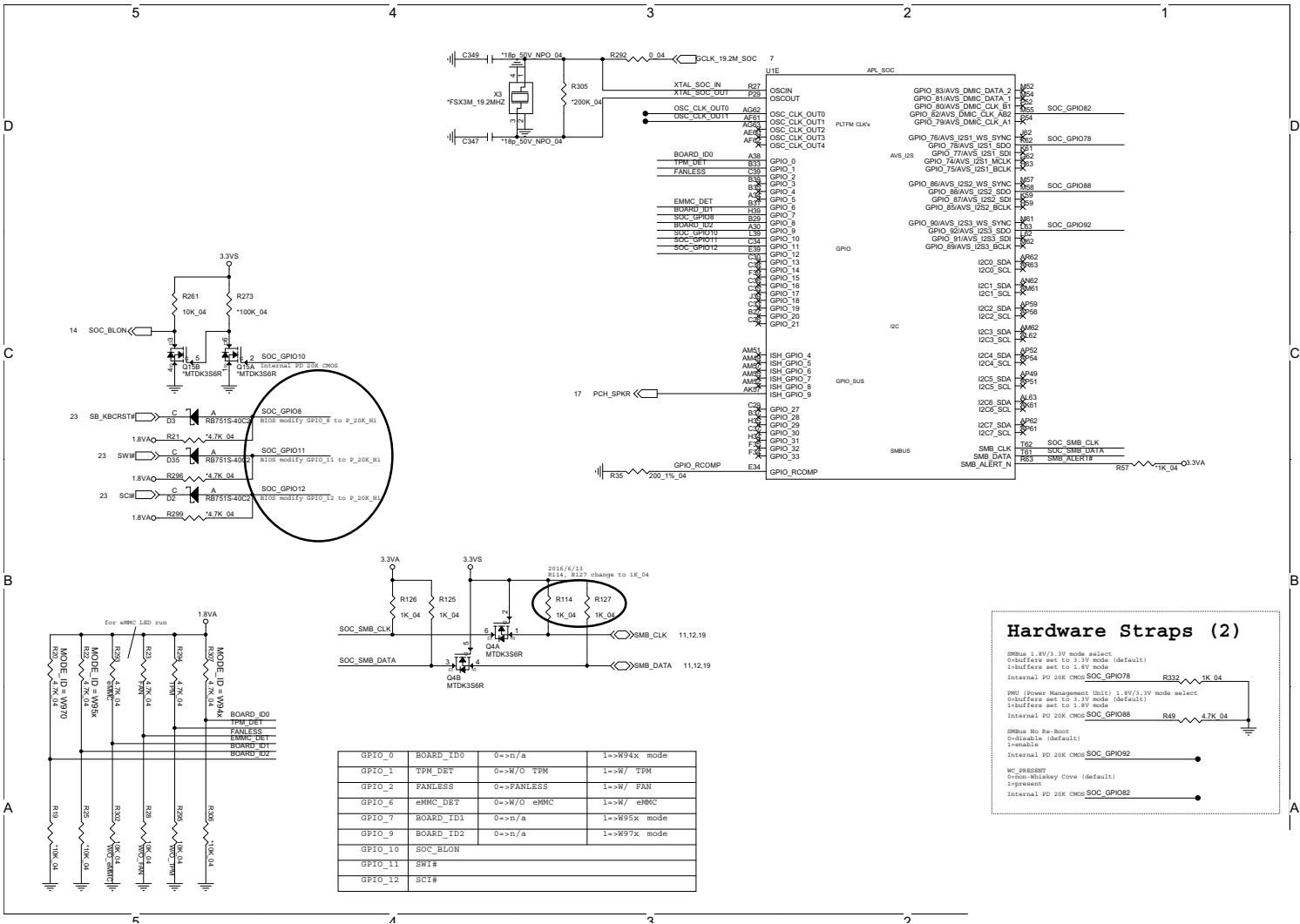
Hardware Straps (1)

Strap	Default	Config
K1 Boot halt	0=do not halt (default)	1=halt
Internal PU 20K CMOS SOC_GPIO105		
Halts early boot for debug	0=enable (default)	1=disable (default)
Internal PU 20K CMOS SOC_GPIO106		
Enable metal password auth	0=disable (default)	1=enable
Internal PU 20K CMOS SOC_GPIO112		
VID disable	0=enable SVID For RVPIA (default)	1=disable VID For RVPIA
Internal PU 20K CMOS SOC_GPIO113		
Stall boot FPM for debug	0=do not stall boot FPM (default)	1=stall boot FPM
Internal PU 20K CMOS SOC_GPIO117		
Enable debug features	0=enable (default)	1=disable
Internal PU 20K CMOS SOC_GPIO123		
LPC 1.8V/3.3V mode select	0=buffers set to 1.8V mode (default)	1=buffers set to 3.3V mode
Internal PU 20K CMOS SOC_GPIO110		
Root BIOS STRAP	0=boot from SPI (default)	1=do not boot from SPI
Internal PU 20K CMOS SOC_GPIO111		
Flash Descriptor Override	0=do override (Normal operation)	1=override
Internal PU 20K CMOS		
23 ME_W#	0=enable (default)	1=disable
Internal PU 20K CMOS SOC_GPIO120		
GPIO_104, 121	0=enable (default)	1=disable
Internal PU 20K CMOS SOC_GPIO121		

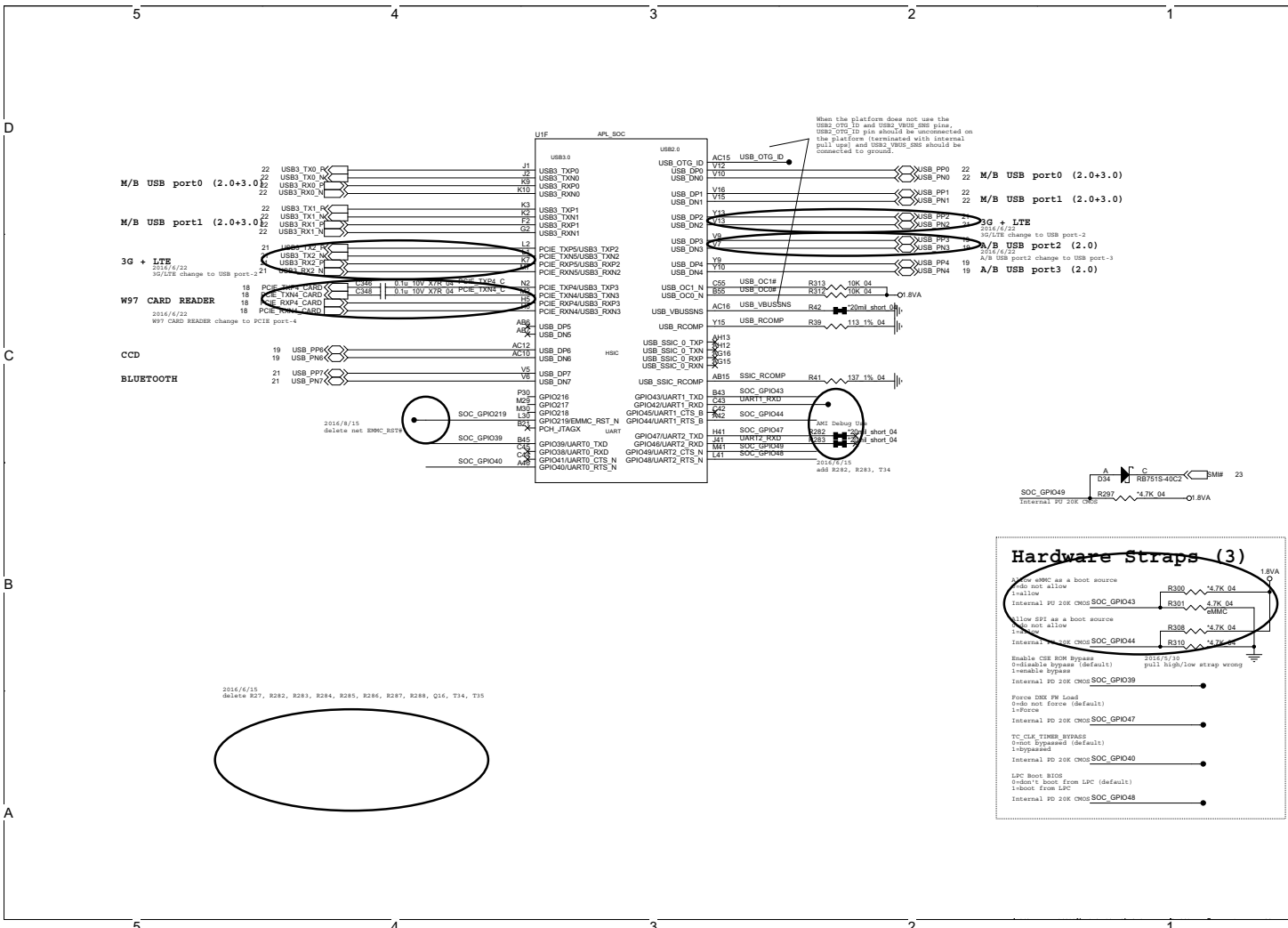
Schematic Diagrams

Processor 4/8

Sheet 5 of 33
Processor 4/8

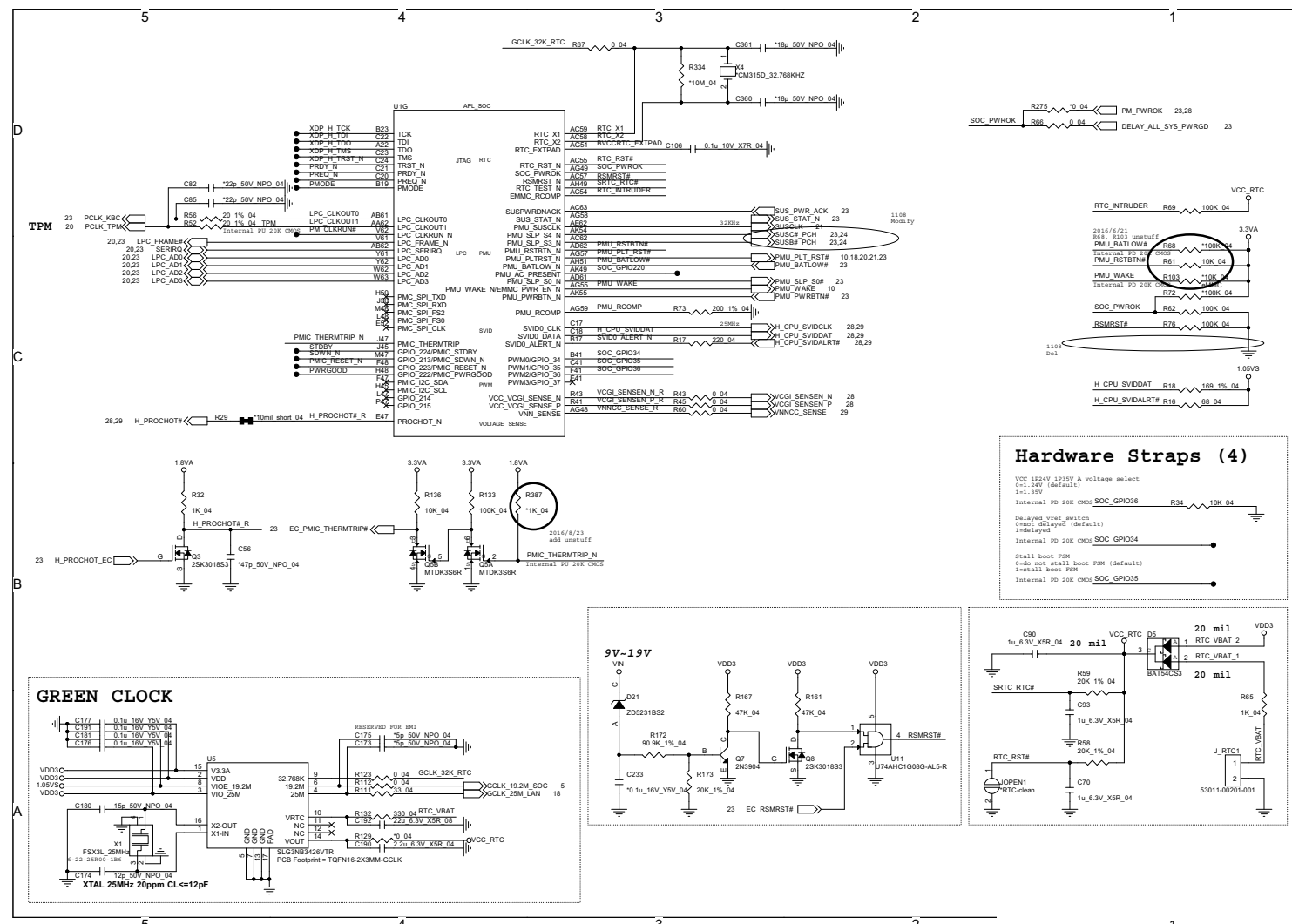


Processor 5/8

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Processor 5/8

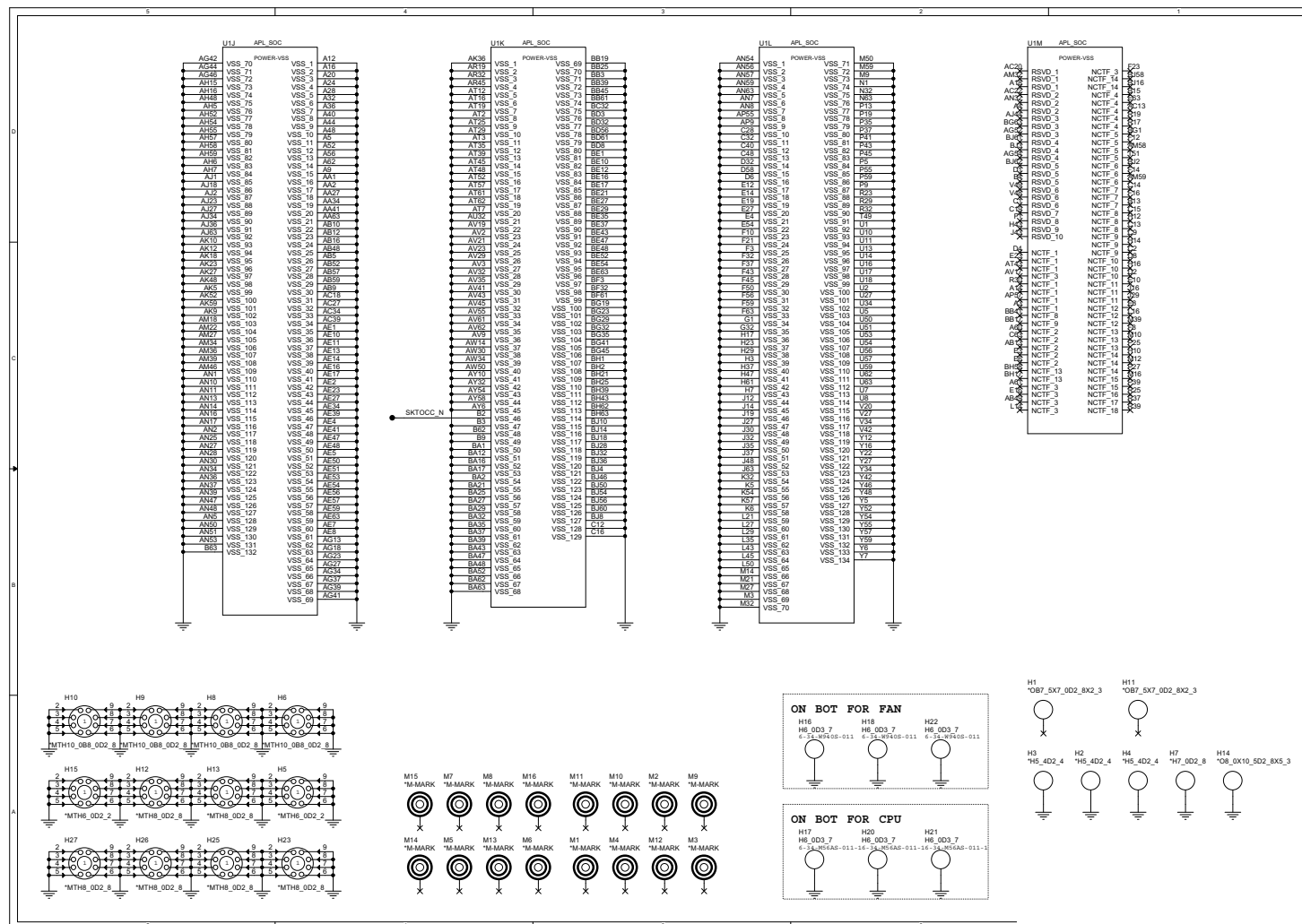
Processor 6/8

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Processor 6/8



Processor 8/8

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Processor 8/8



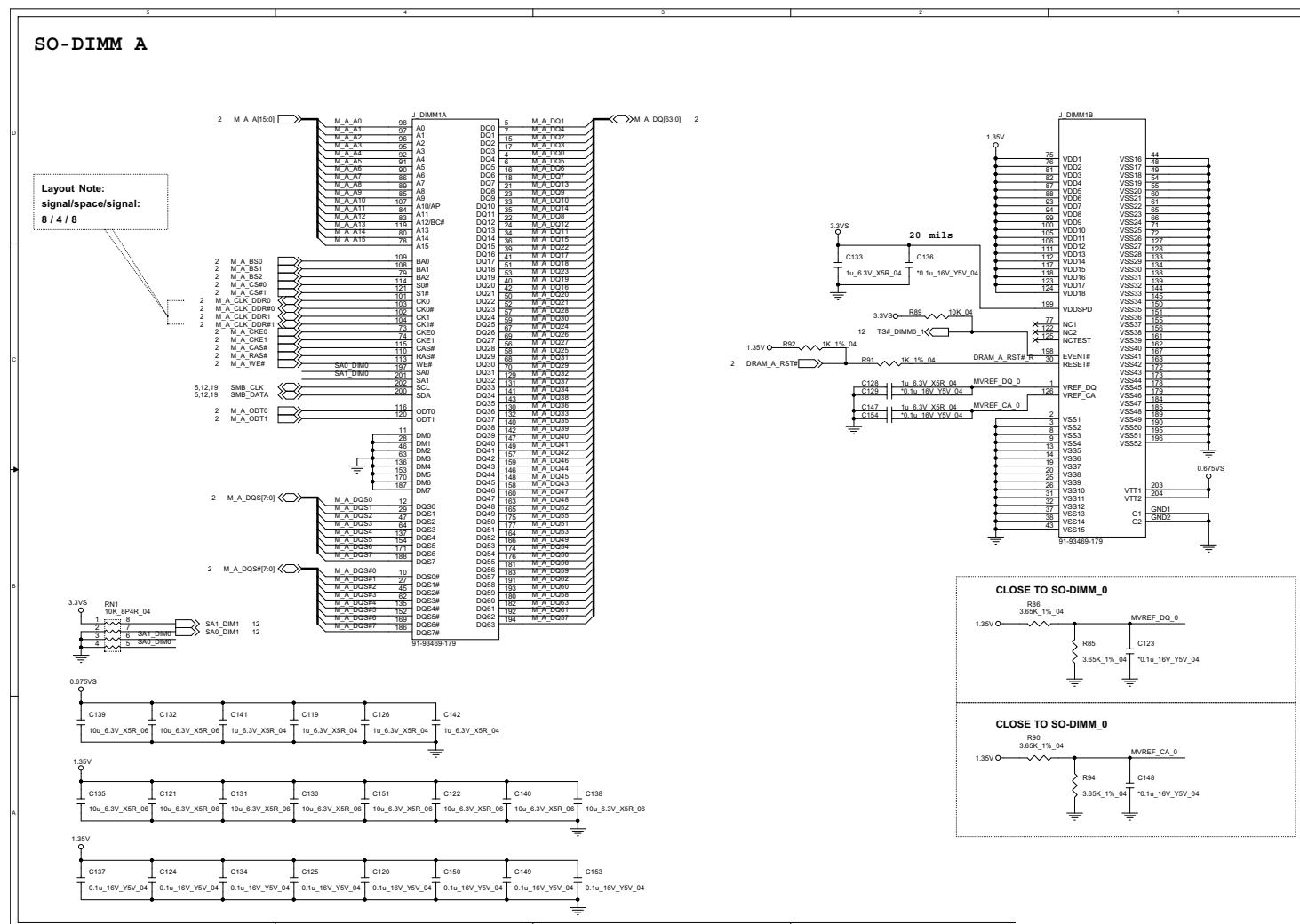
eMMC B - 11



DDR SO-DIMM_A

Layout Note:
signal/space/signal:
8 / 4 / 8

B. Schematic Diagrams



SO-DIMM B

Layout Note:
signal/space/signal:
8 / 4 / 8

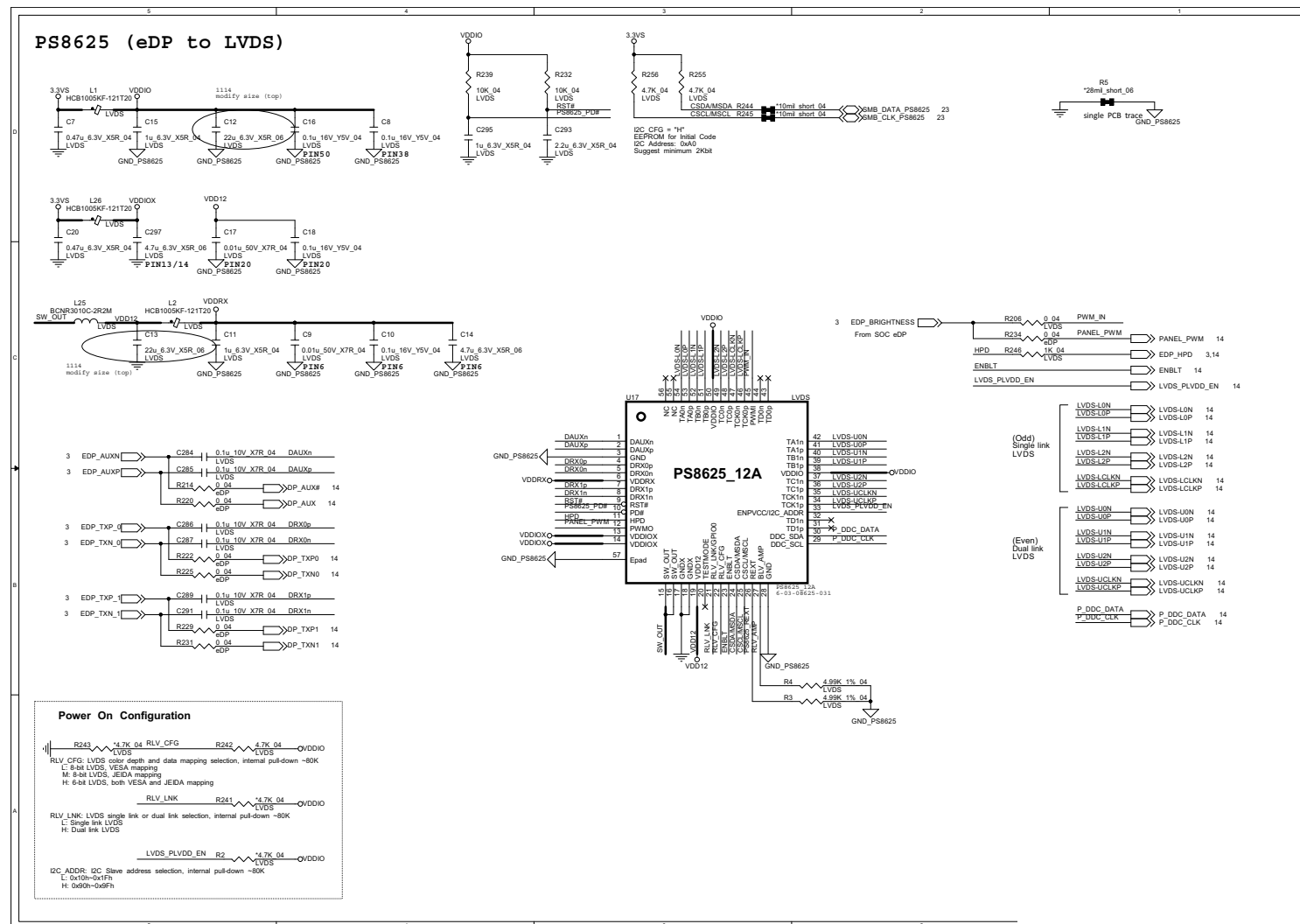
Pinout Table:

J DIMM2A				J DIMM2B			
2	M_B_A[15:0]	M_B_A0	88	5	M_B_DO1	M_B_DQ[63:0]	2
2	M_B_B[0:7]	M_B_B0	89	7	M_B_DQ1		
2	M_B_B[8:15]	M_B_B16	90	9	M_B_DQ2		
2	M_B_C[0:7]	M_B_C0	91	11	M_B_DQ3		
2	M_B_C[8:15]	M_B_C16	92	13	M_B_DQ4		
2	M_B_D[0:7]	M_B_D0	93	15	M_B_DQ5		
2	M_B_D[8:15]	M_B_D16	94	17	M_B_DQ6		
2	M_B_E[0:7]	M_B_E0	95	19	M_B_DQ7		
2	M_B_E[8:15]	M_B_E16	96	21	M_B_DQ8		
2	M_B_F[0:7]	M_B_F0	97	23	M_B_DQ9		
2	M_B_F[8:15]	M_B_F16	98	25	M_B_DQ10		
2	M_B_G[0:7]	M_B_G0	99	27	M_B_DQ11		
2	M_B_G[8:15]	M_B_G16	100	29	M_B_DQ12		
2	M_B_H[0:7]	M_B_H0	101	31	M_B_DQ13		
2	M_B_H[8:15]	M_B_H16	102	33	M_B_DQ14		
2	M_B_I[0:7]	M_B_I0	103	35	M_B_DQ15		
2	M_B_I[8:15]	M_B_I16	104	37	M_B_DQ16		
2	M_B_J[0:7]	M_B_J0	105	39	M_B_DQ17		
2	M_B_J[8:15]	M_B_J16	106	41	M_B_DQ18		
2	M_B_K[0:7]	M_B_K0	107	43	M_B_DQ19		
2	M_B_K[8:15]	M_B_K16	108	45	M_B_DQ20		
2	M_B_L[0:7]	M_B_L0	109	47	M_B_DQ21		
2	M_B_L[8:15]	M_B_L16	110	49	M_B_DQ22		
2	M_B_M[0:7]	M_B_M0	111	51	M_B_DQ23		
2	M_B_M[8:15]	M_B_M16	112	53	M_B_DQ24		
2	M_B_N[0:7]	M_B_N0	113	55	M_B_DQ25		
2	M_B_N[8:15]	M_B_N16	114	57	M_B_DQ26		
2	M_B_O[0:7]	M_B_O0	115	59	M_B_DQ27		
2	M_B_O[8:15]	M_B_O16	116	61	M_B_DQ28		
2	M_B_P[0:7]	M_B_P0	117	63	M_B_DQ29		
2	M_B_P[8:15]	M_B_P16	118	65	M_B_DQ30		
2	M_B_Q[0:7]	M_B_Q0	119	67	M_B_DQ31		
2	M_B_Q[8:15]	M_B_Q16	120	69	M_B_DQ32		
2	M_B_R[0:7]	M_B_R0	121	71	M_B_DQ33		
2	M_B_R[8:15]	M_B_R16	122	73	M_B_DQ34		
2	M_B_S[0:7]	M_B_S0	123	75	M_B_DQ35		
2	M_B_S[8:15]	M_B_S16	124	77	M_B_DQ36		
2	M_B_T[0:7]	M_B_T0	125	79	M_B_DQ37		
2	M_B_T[8:15]	M_B_T16	126	81	M_B_DQ38		
2	M_B_U[0:7]	M_B_U0	127	83	M_B_DQ39		
2	M_B_U[8:15]	M_B_U16	128	85	M_B_DQ40		
2	M_B_V[0:7]	M_B_V0	129	87	M_B_DQ41		
2	M_B_V[8:15]	M_B_V16	130	89	M_B_DQ42		
2	M_B_W[0:7]	M_B_W0	131	91	M_B_DQ43		
2	M_B_W[8:15]	M_B_W16	132	93	M_B_DQ44		
2	M_B_X[0:7]	M_B_X0	133	95	M_B_DQ45		
2	M_B_X[8:15]	M_B_X16	134	97	M_B_DQ46		
2	M_B_Y[0:7]	M_B_Y0	135	99	M_B_DQ47		
2	M_B_Y[8:15]	M_B_Y16	136	101	M_B_DQ48		
2	M_B_Z[0:7]	M_B_Z0	137	103	M_B_DQ49		
2	M_B_Z[8:15]	M_B_Z16	138	105	M_B_DQ50		
2	M_B_AA[0:7]	M_B_AA0	139	107	M_B_DQ51		
2	M_B_AA[8:15]	M_B_AA16	140	109	M_B_DQ52		
2	M_B_AB[0:7]	M_B_AB0	1				

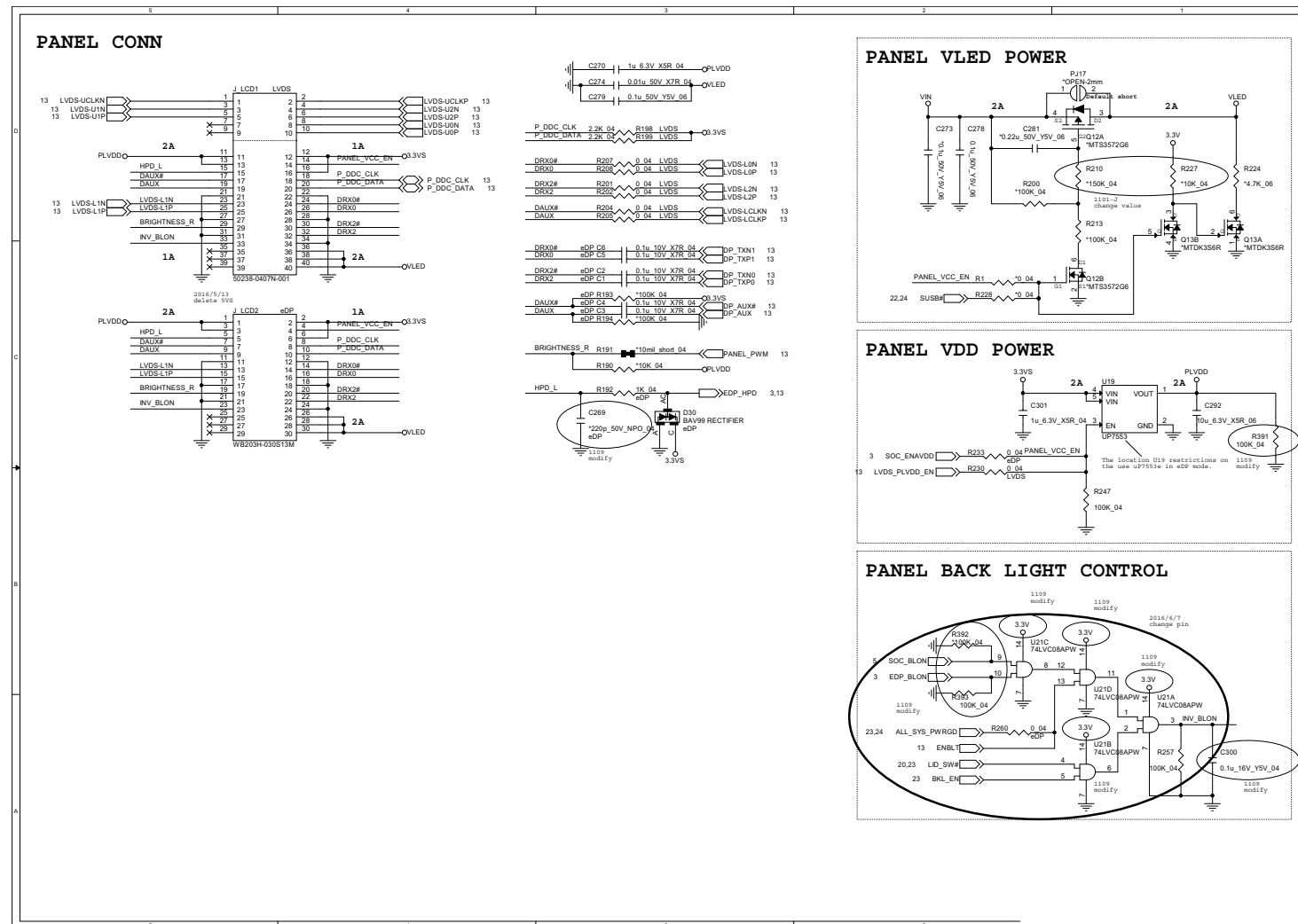
B.Schematic Diagrams

PS8625

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PS8625



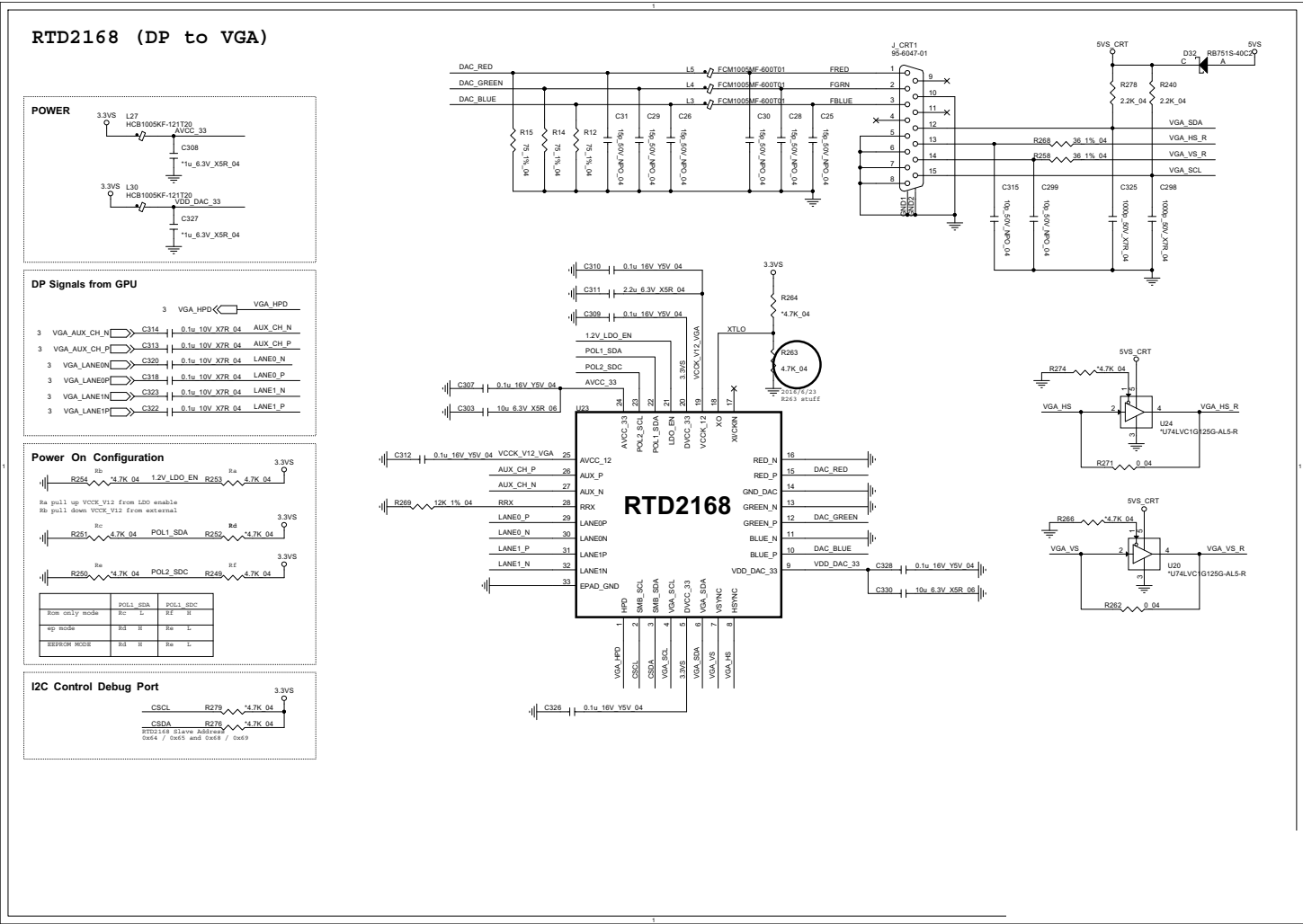
Panel Conn

Sheet 14 of 33
Panel Conn

Schematic Diagrams

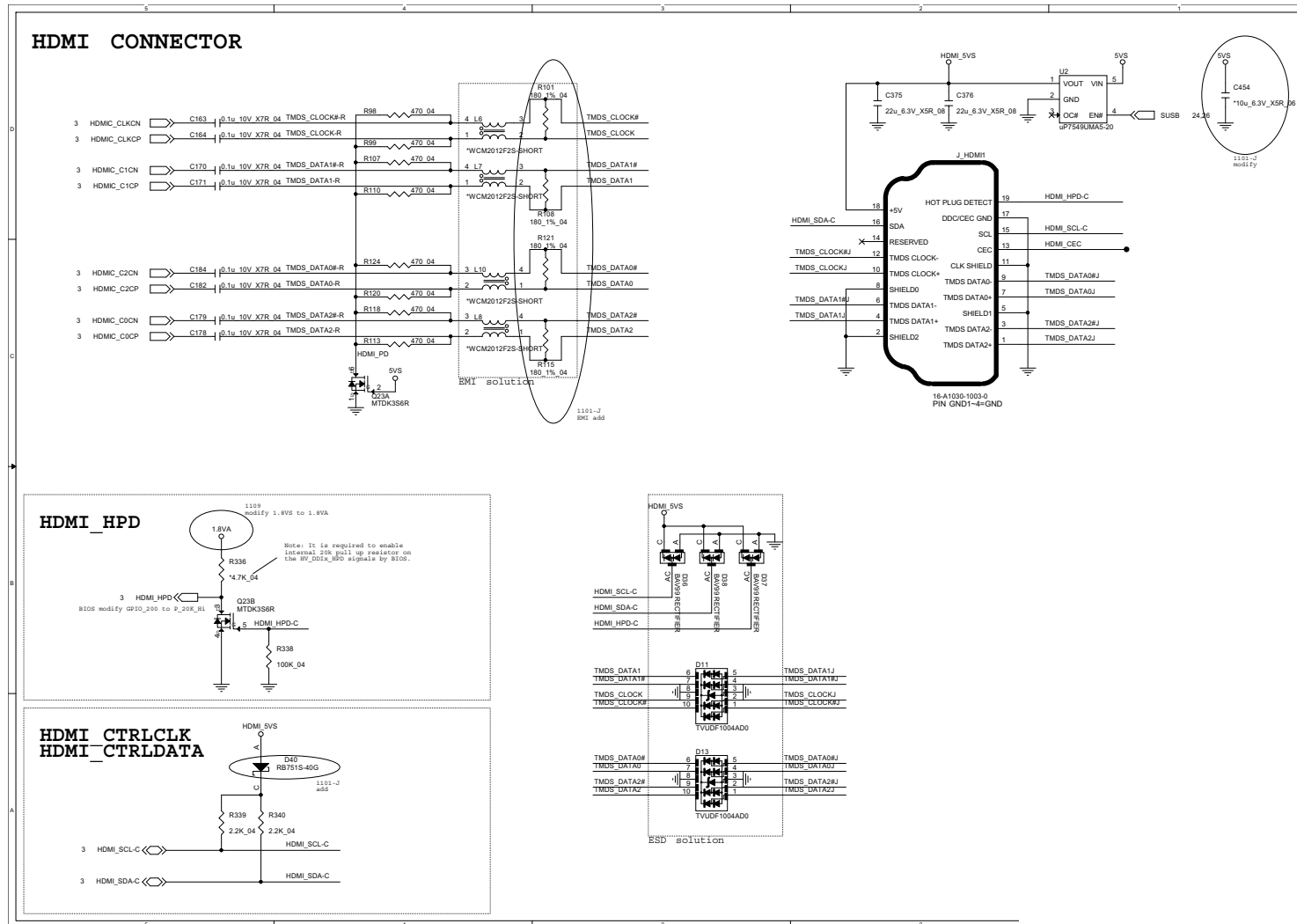
RTD2168, CRT

Sheet 15 of 33
RTD2168, CRT



Schematic Diagrams

HDMI

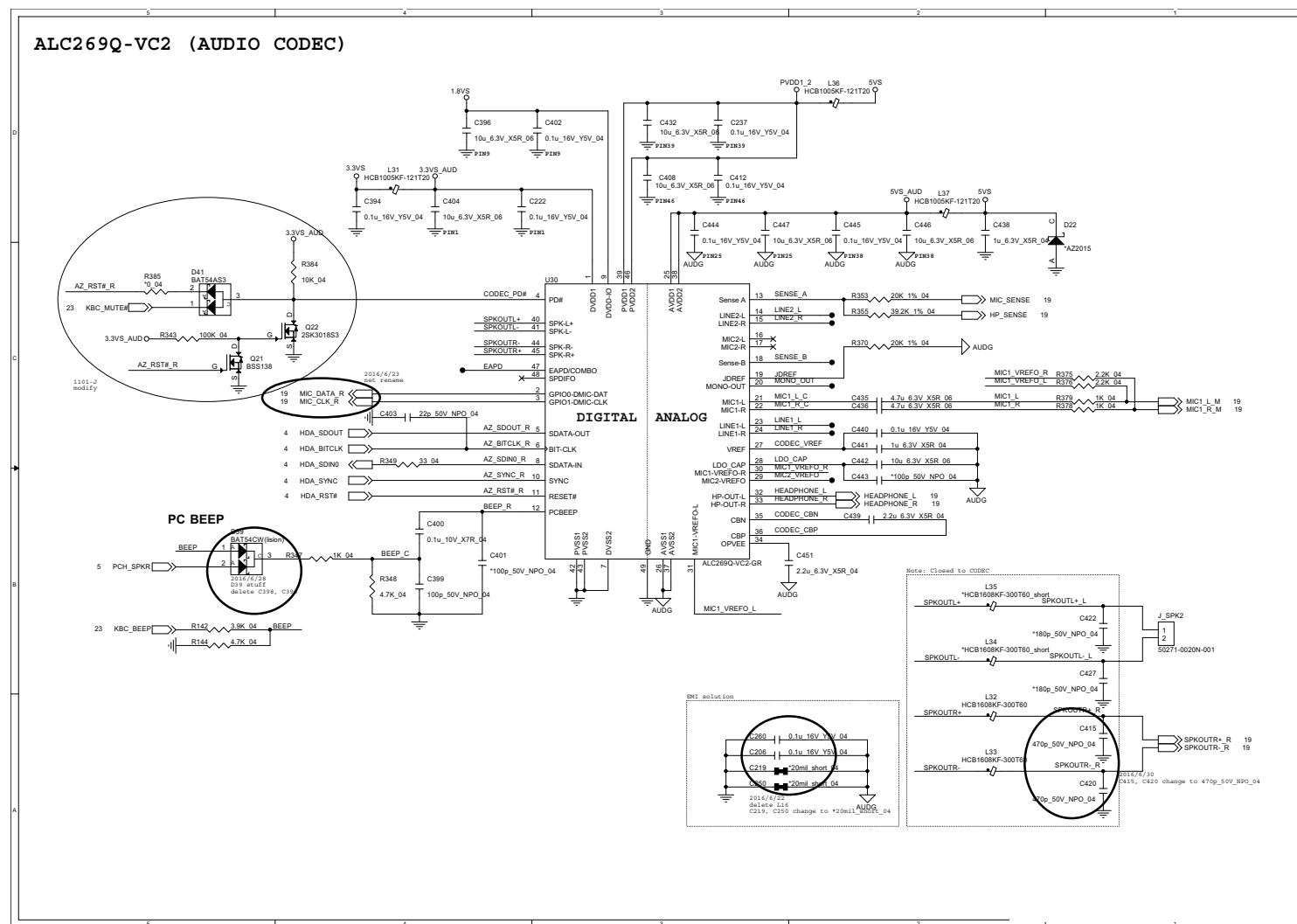


Sheet 16 of 33
HDMI

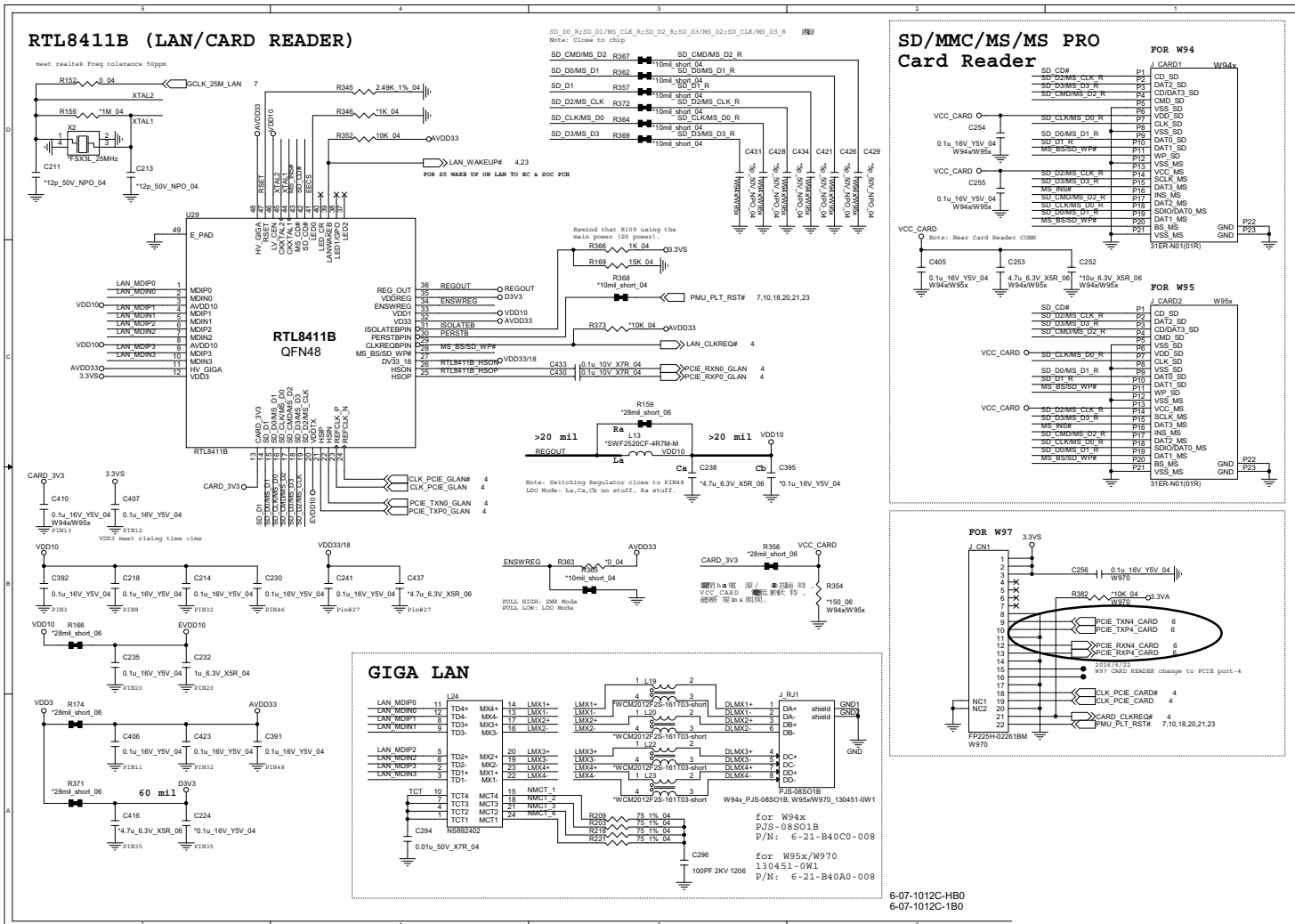
B.Schematic Diagrams

Audio Codec

Sheet 17 of 33
Audio Codec



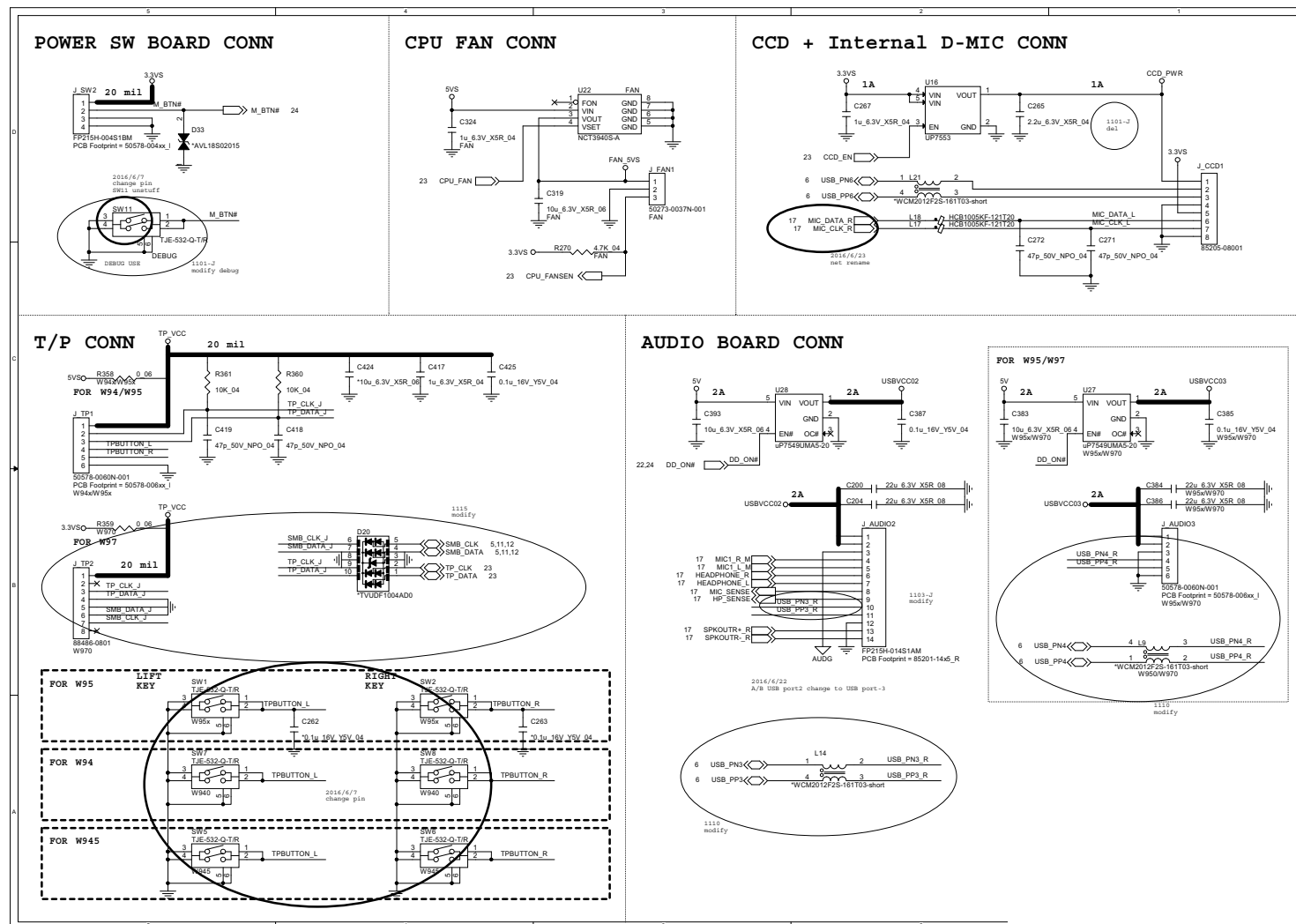
RTL8411B



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RTL8411B

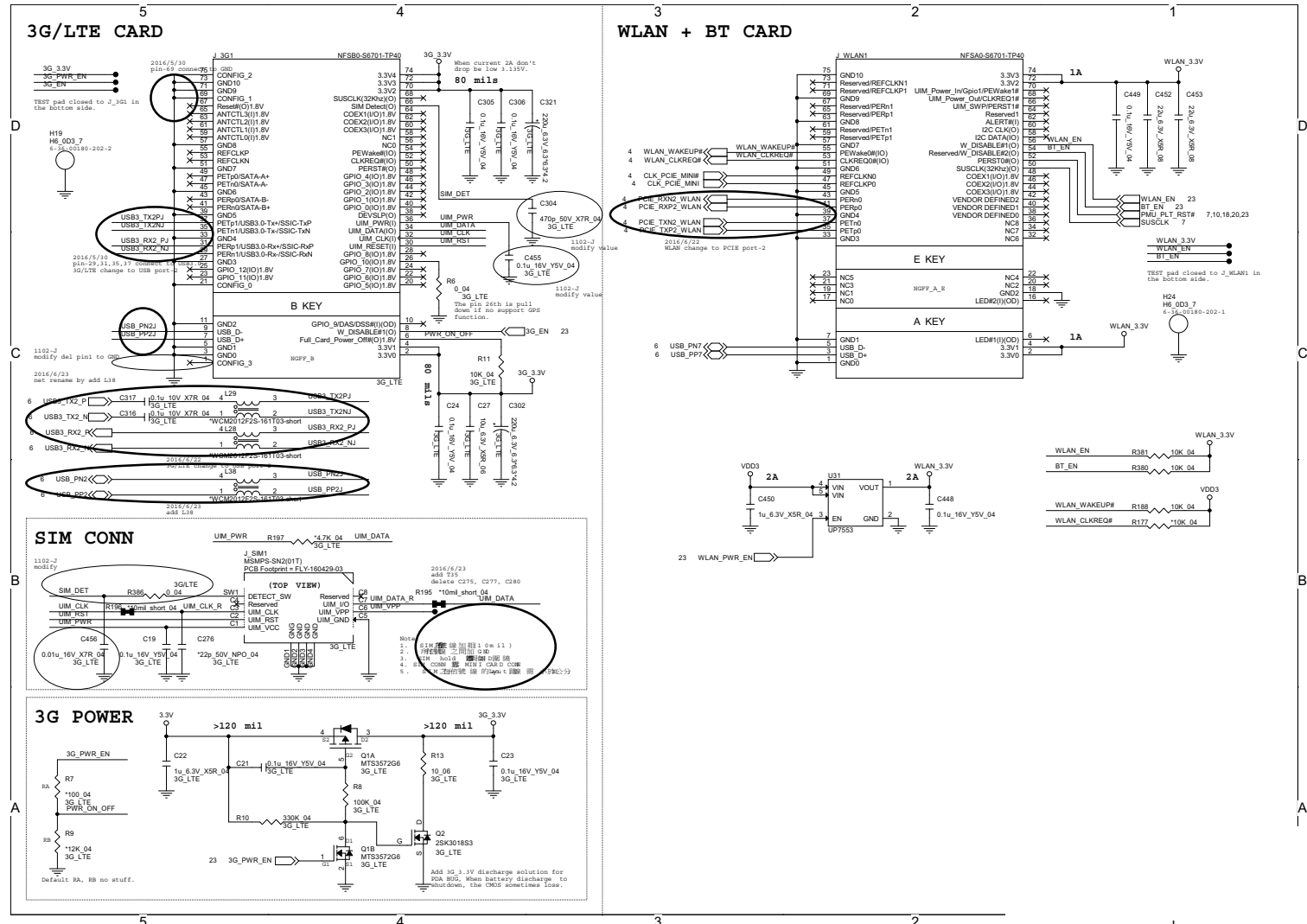
B. Schematic Diagrams

Sheet 19 of 33
Fan, Click, CCD
Conn



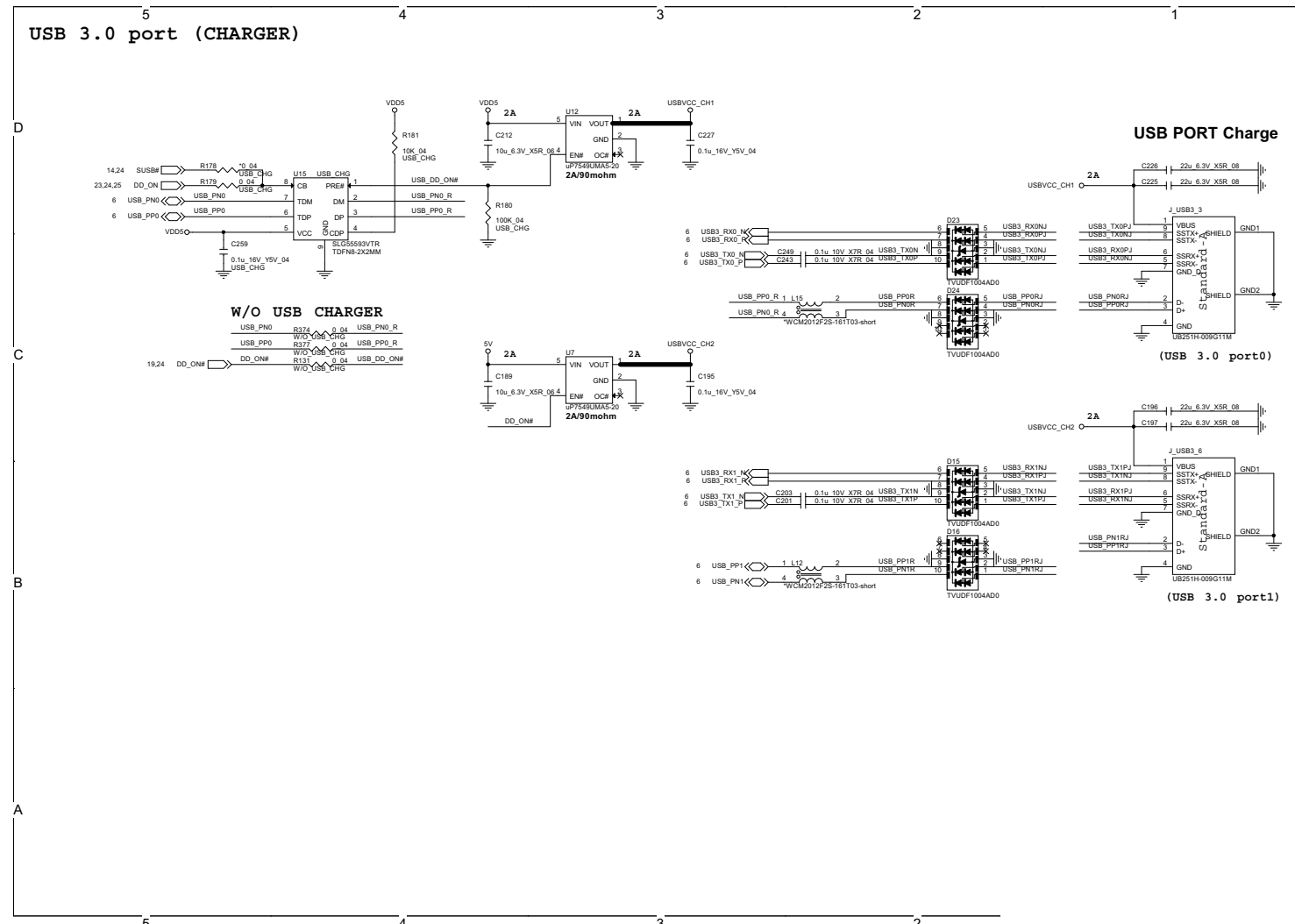
HDD, ODD, LED, LID, TPM B - 21

NGFF

Sheet 21 of 33
NGFF

Schematic Diagrams

USB

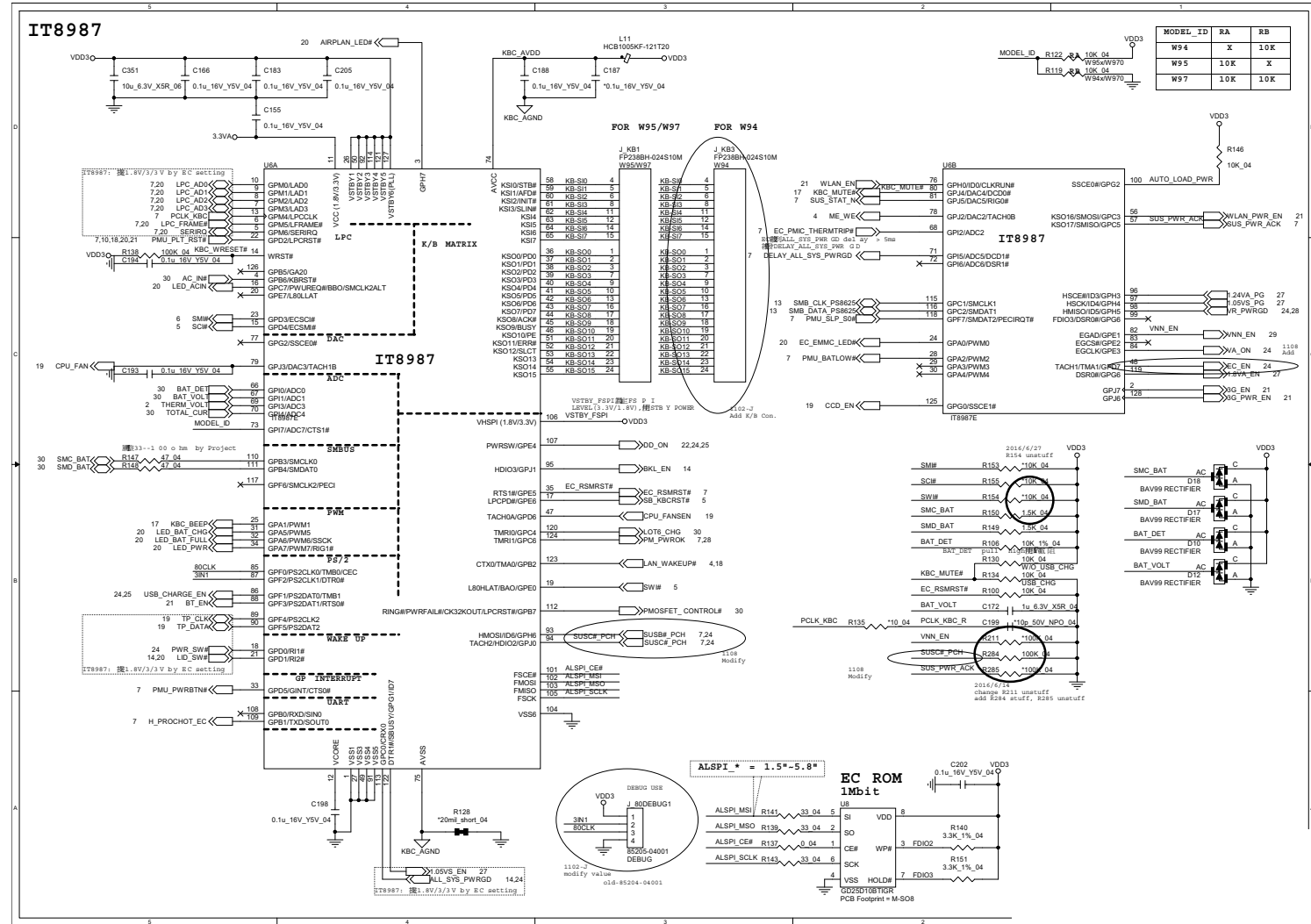


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USB

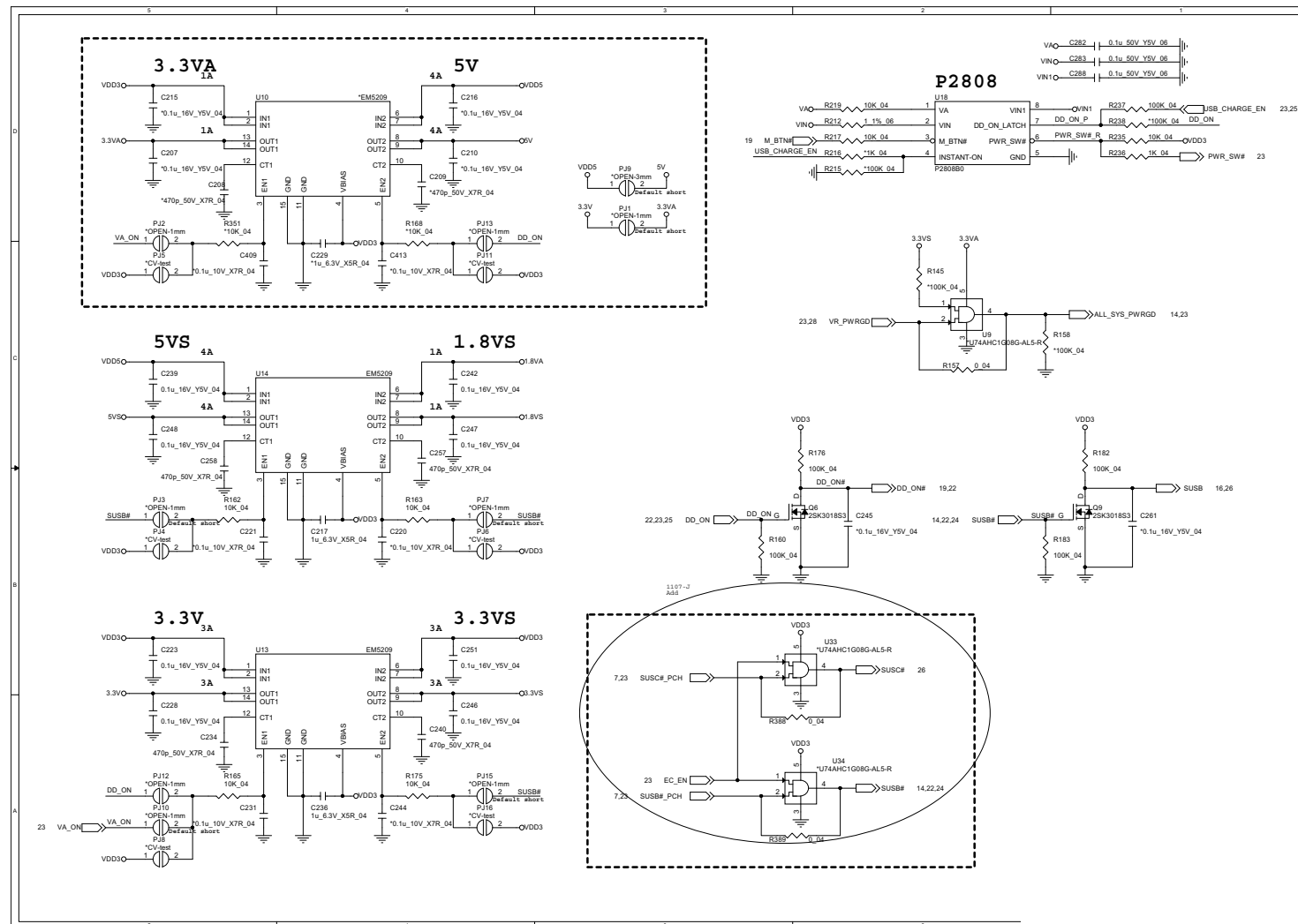
B.Schematic Diagrams

KBC IT8987E

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KBC IT8987E



System Power



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System Power

VDD3, VDD5

B.Schematic Diagrams

VDD5

$I_{out}=6A$
 $OCP=1.3A$
 $\Delta I=2.1A$
 $Ripple=mV$
 $Freq.385-420kHz$

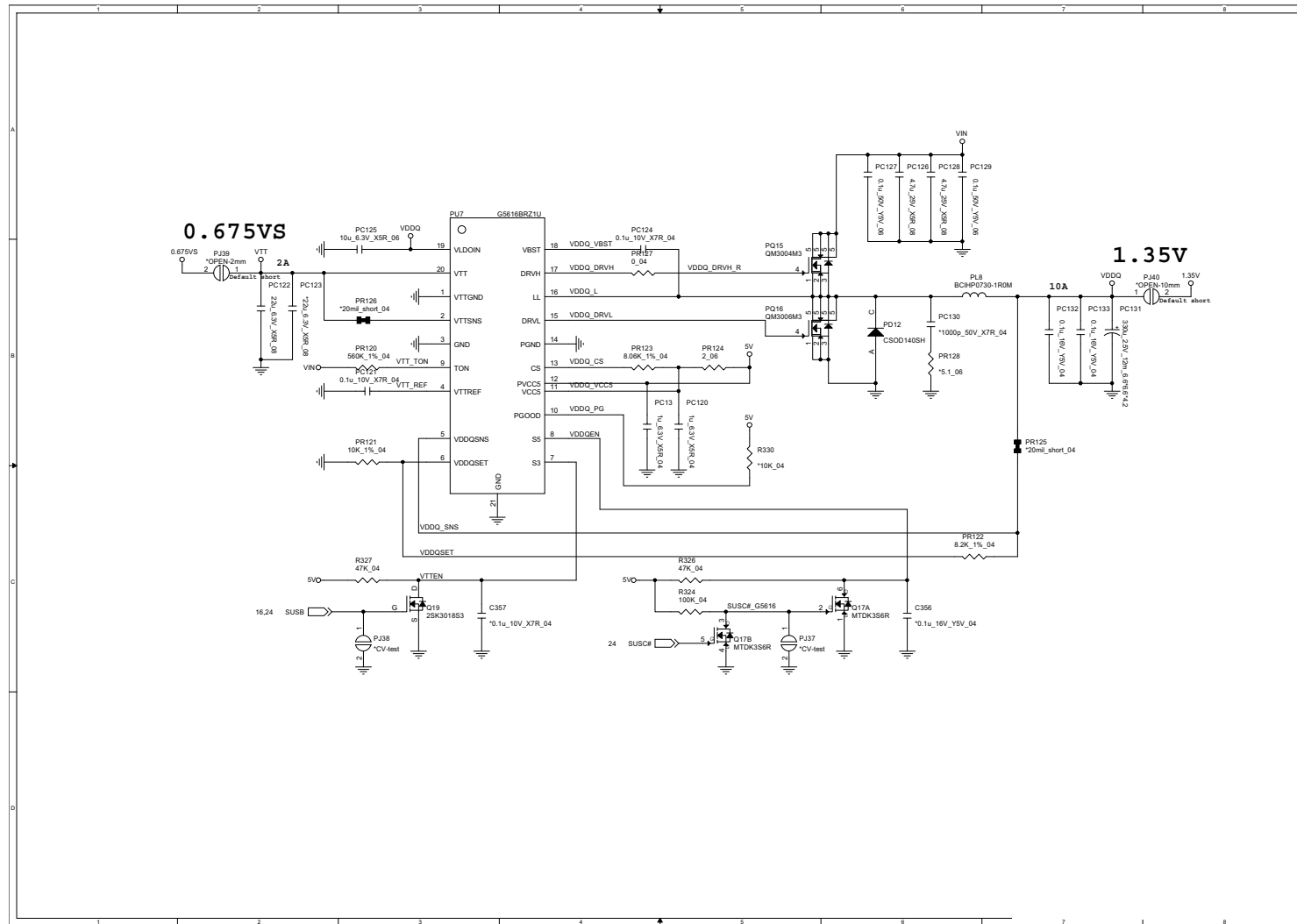
Heat Reating Current=6A
 Saturation Current 13.5A
 30m3 / MAX

VDD3

$I_{out}=6A$
 $OCP=8A$
 $\Delta I=1.5A$
 $Ripple=mV$
 $Freq.430-470kHz$

2016/6/29
 2043 short, 2043 gsm
 AC change USB_CHARGE_EN sequence

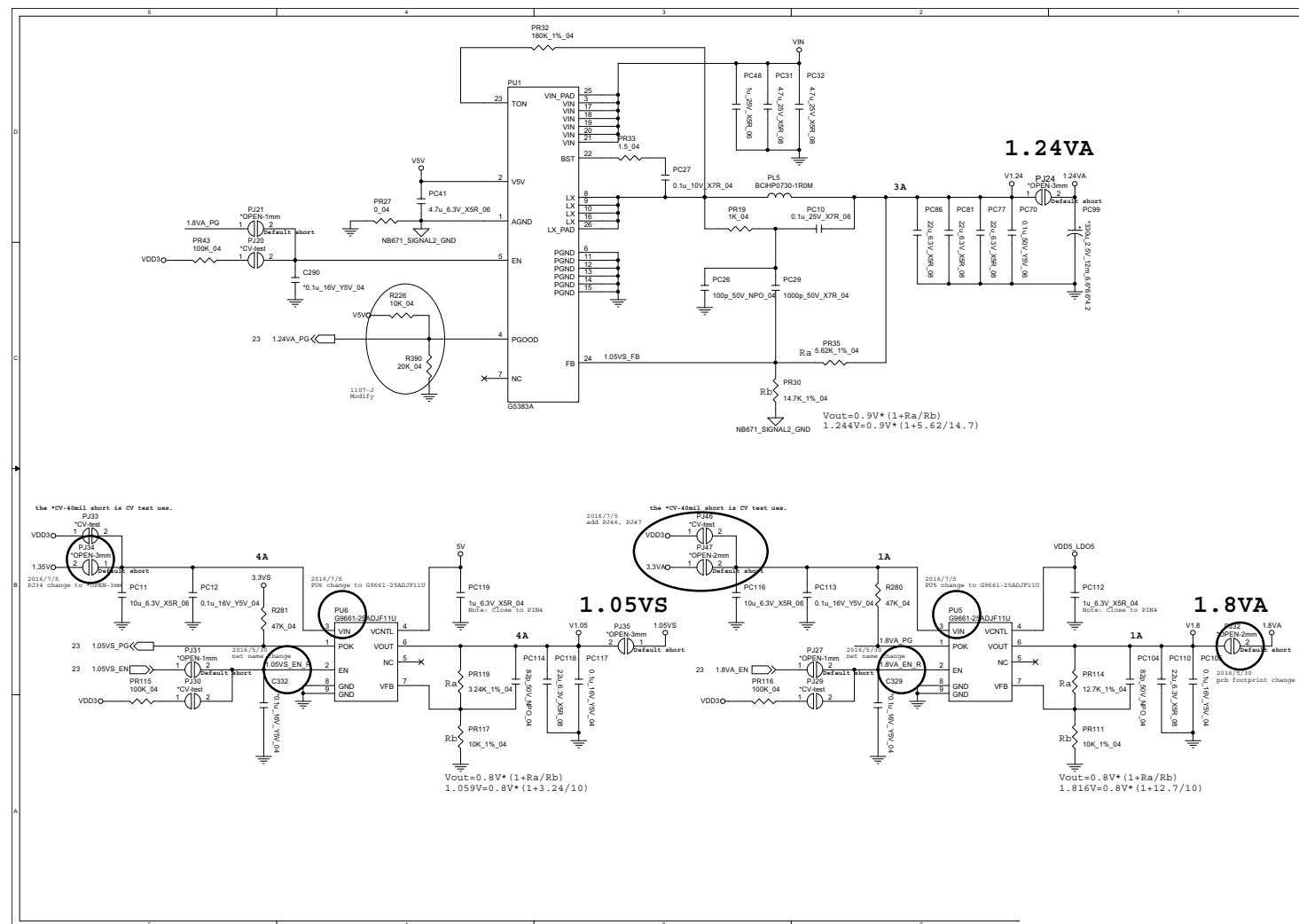
PWR_VDDQ, VTT B - 27



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PWR_VDDQ, VTT

B.Schematic Diagrams

Sheet 27 of 33
1.05VA, 1.8VA,
1.24VA

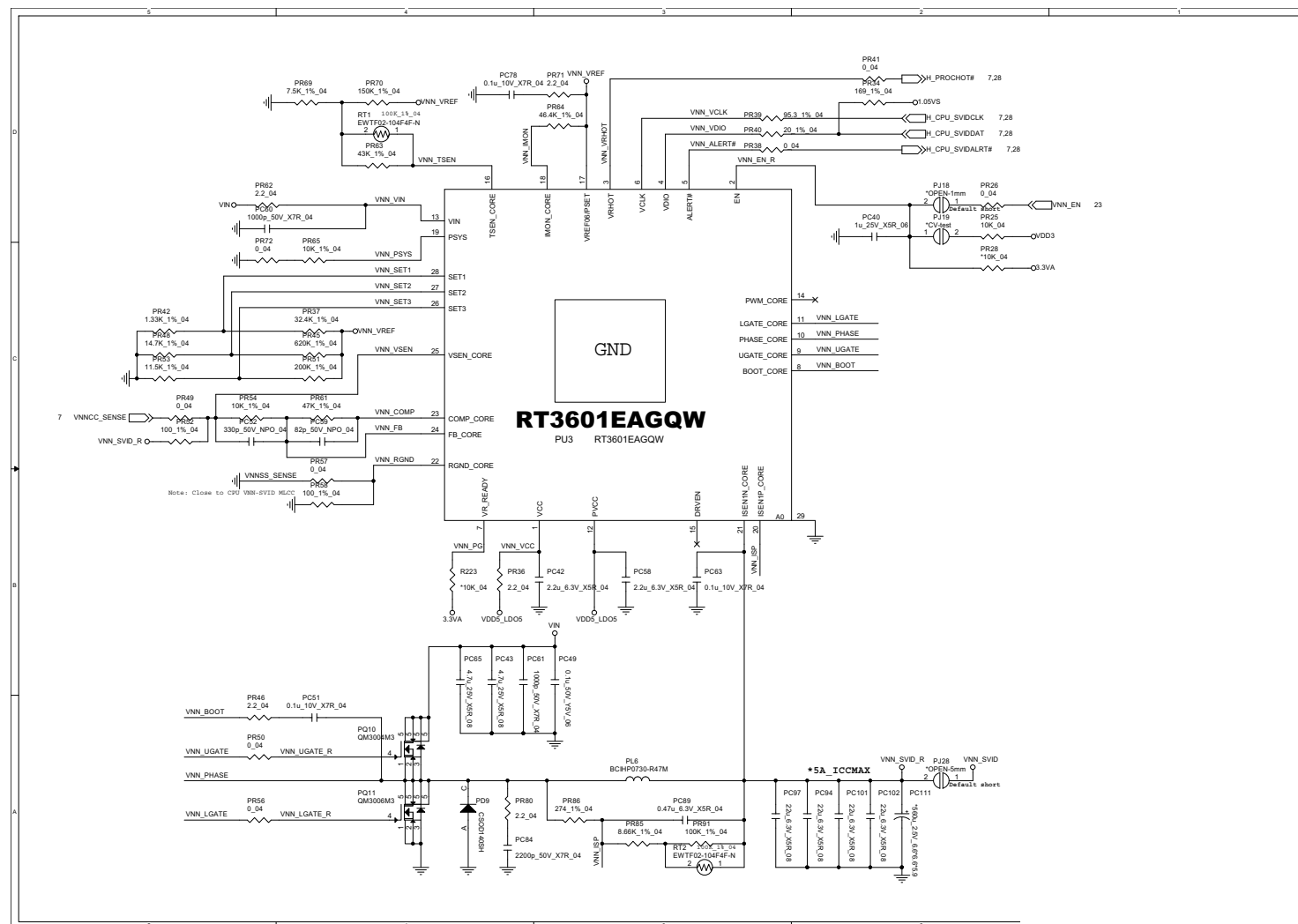


[illegible]

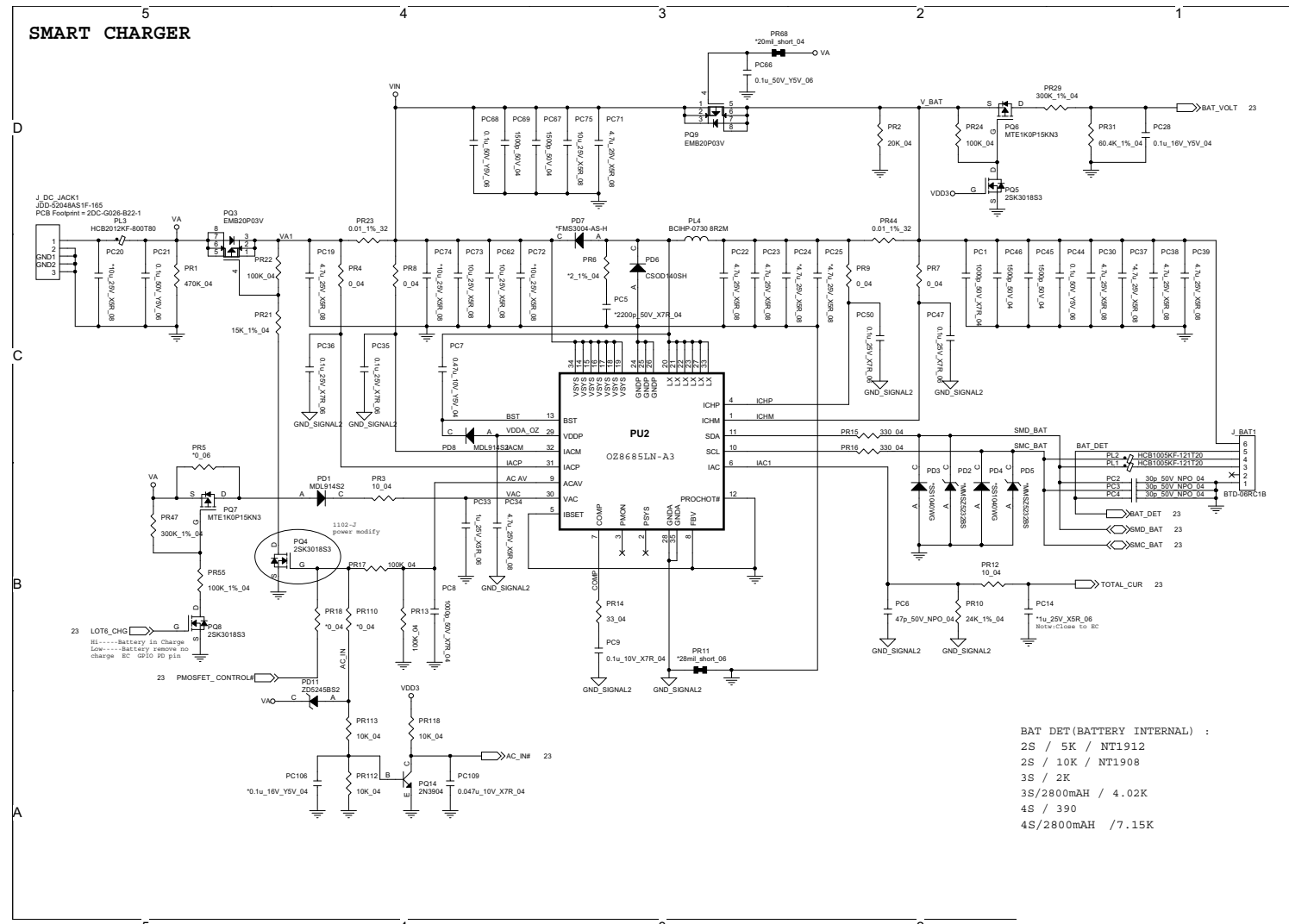
PWR_VCGI B - 29

PWR_VNN

B. Schematic Diagrams



AC_IN, Charger B - 31

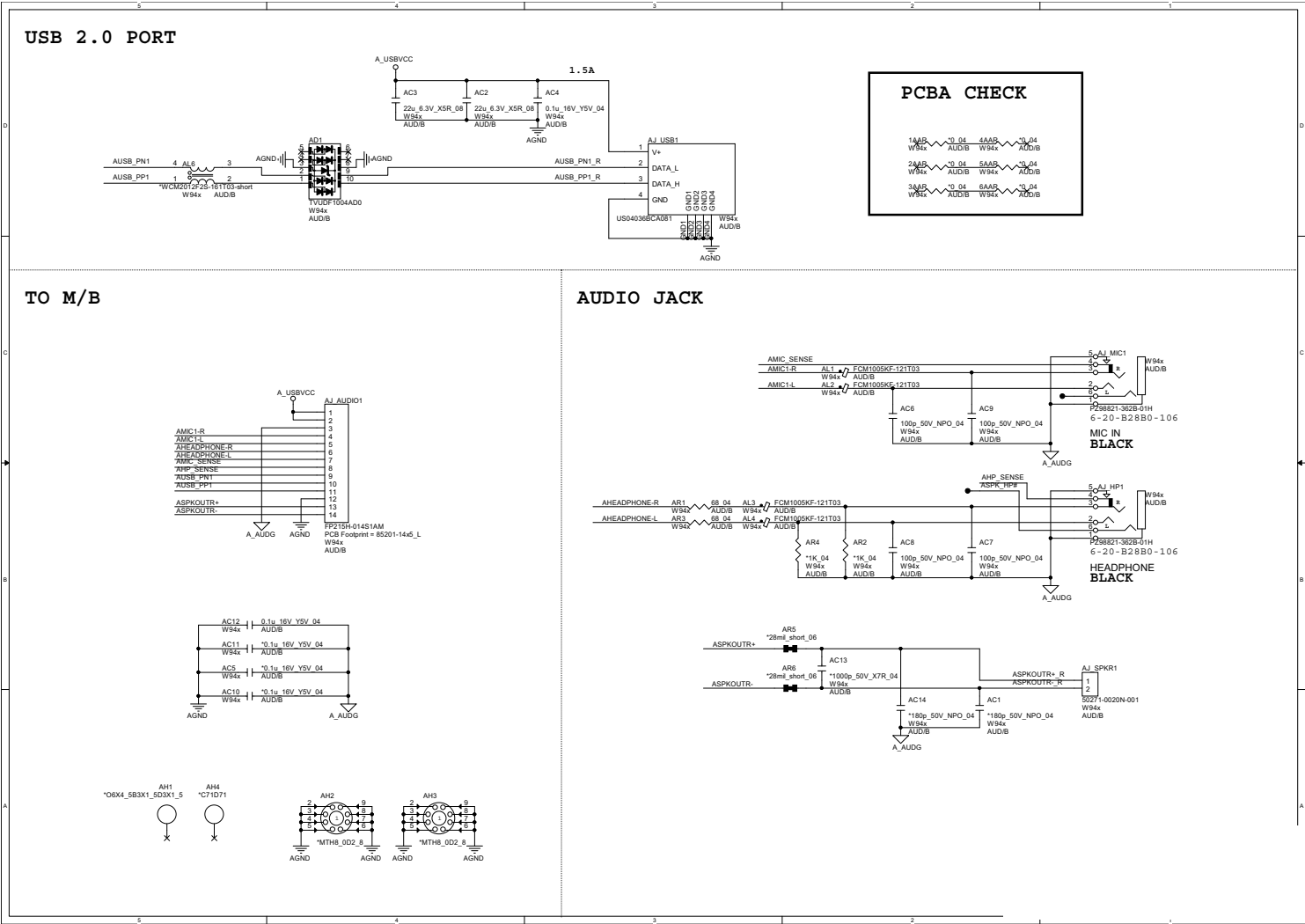


Sheet 30 of 33
AC_IN, Charger

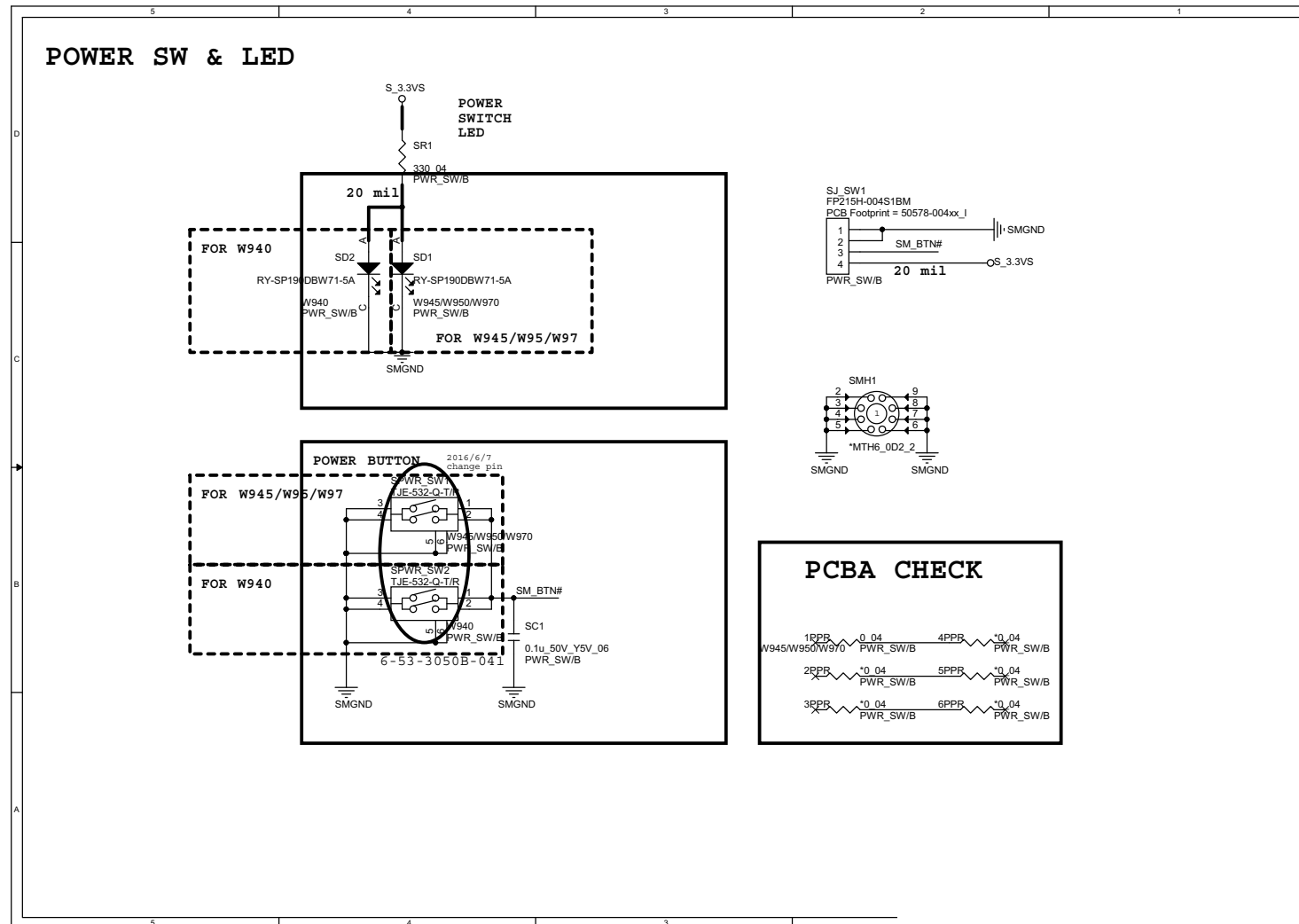
Schematic Diagrams

Audio Board

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Audio Board



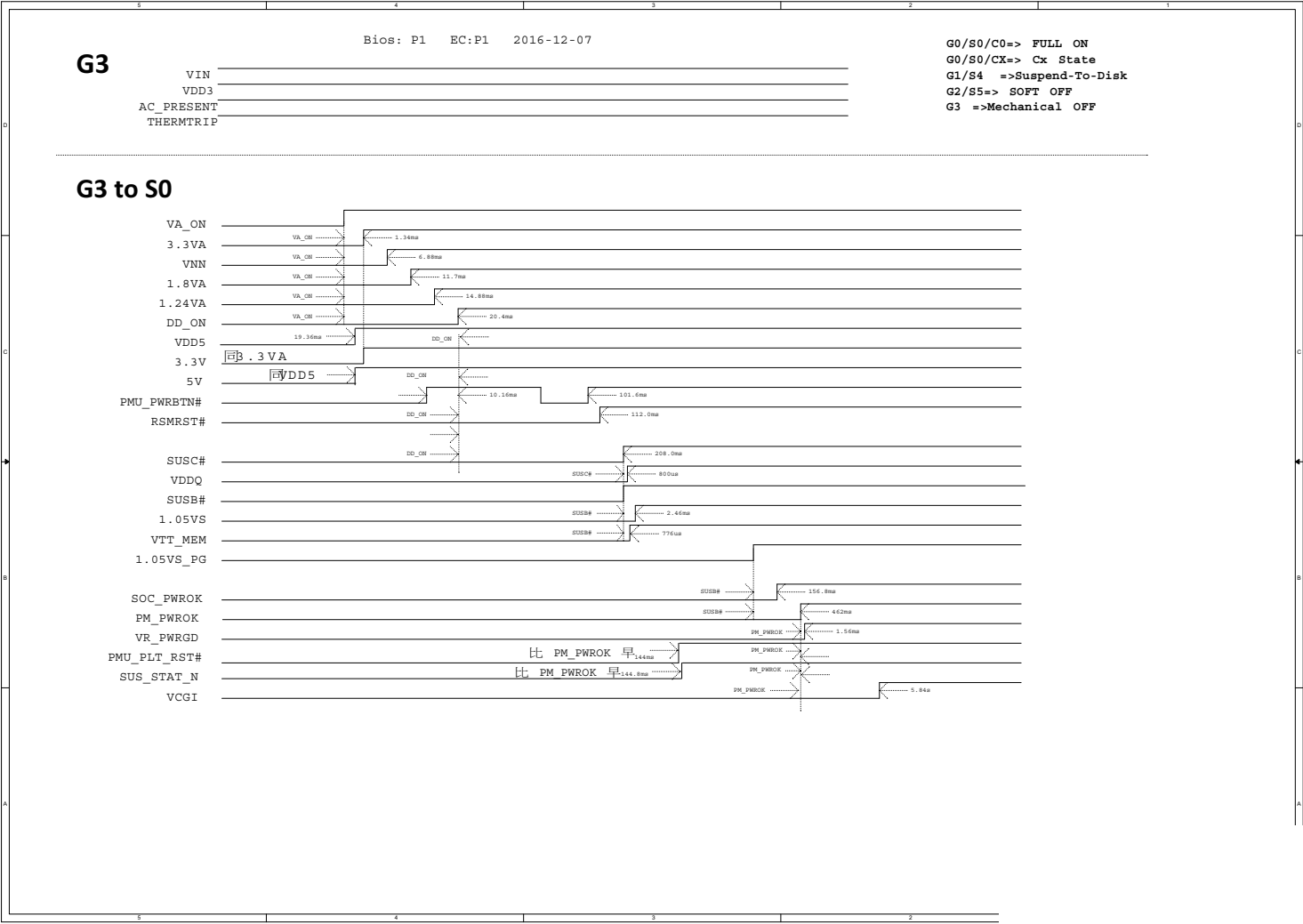
Power SW Board



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Power SW Board

Power Sequence

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Power Sequence



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 V1.0X.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 1.0X.05, you **MAY NOT** then go back and flash the BIOS to ver 1.0X.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 “**EFI Shell**”. You will then be prompted to give “**Y**” or “**N**” responses to the programs being loaded by EFI Shell. Choose “**N**” for any memory management programs.
2. You should now see **DISK fsX:\>** (X is the designated drive number for the CD/DVD drive/USB flash drive).
3. **Type the following command:**

fsX:\> Flash.nsh

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.