

SERVICE MANUAL

W950AU / W955AU

notebook



Notebook Computer

W950AU /W955AU

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 **W950AU** / **W955AU** series notebook PC.

The following information is included:

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

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

Appendix A, Part Lists

Appendix B, Schematic Diagrams

Appendix C, Updating the FLASH ROM BIOS

IMPORTANT SAFETY INSTRUCTIONS

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

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

FCC Statement

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

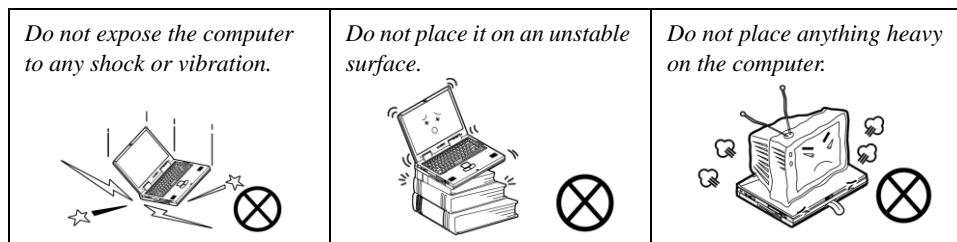
This device may not cause harmful interference.

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

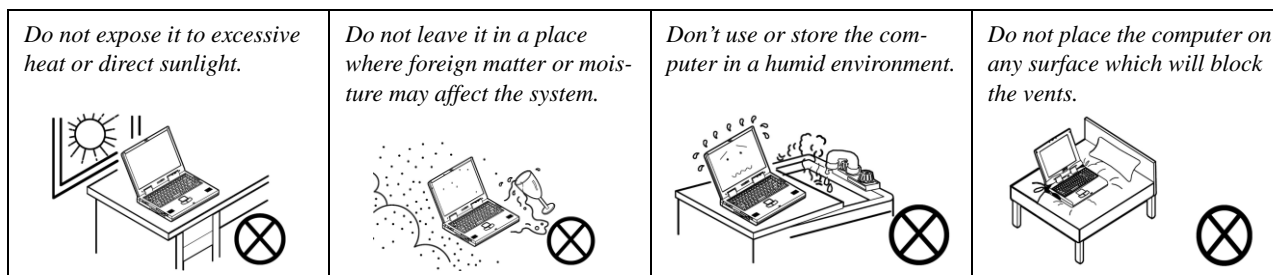
Instructions for Care and Operation

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

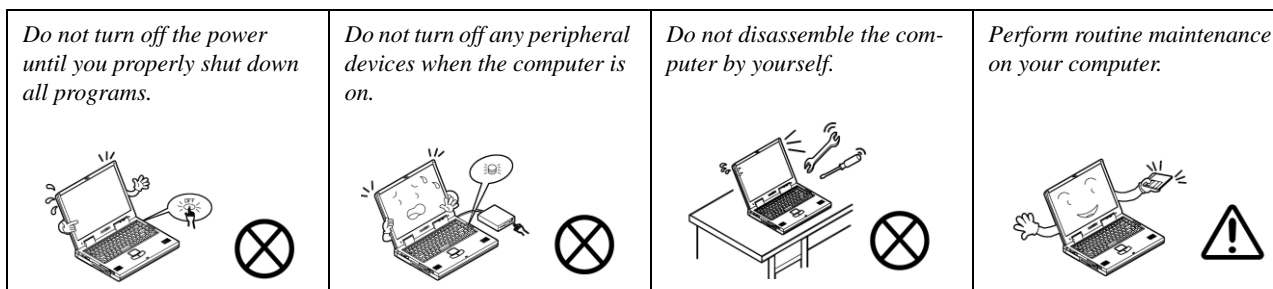
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



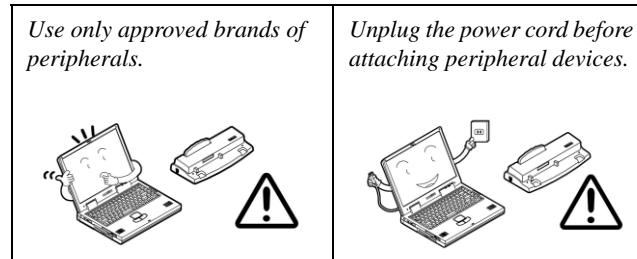
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.



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.



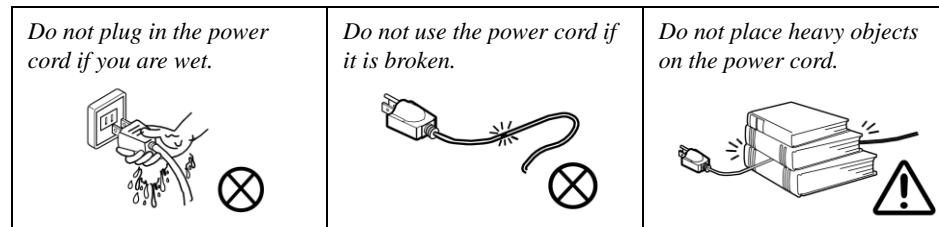
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



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 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".

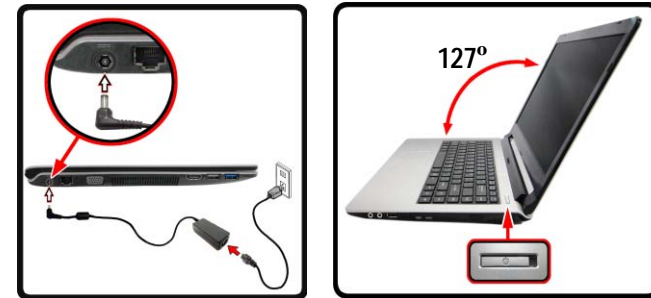



Figure 1
Opening the Lid/LCD/Computer with AC/DC Adapter Plugged-In




Shut Down

Note that you should always shut your computer down by choosing the **Shut down** command in **Windows** (see below). This will help prevent hard disk or system problems.

Click **Settings** in the **Charms Bar** (use the **Windows Logo Key**  + **C** key combination to access the Charms Bar) and choose **Shut down** from the **Power** menu.

Or

Choose **Shut down or sign out** > **Shut down** from the context menu (use the **Windows Logo Key**  + **X** key combination to access the context menu).

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Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the **W950AU /W955AU** series notebook computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in the *User's Manual*. The manual is shipped with the computer.

Operating systems (e.g. *Window 8.1*, 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 **W950AU /W955AU** 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.

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

i7-5500U (2.40GHz)

4MB L3 Cache, **14nm**, DDR3L-1600MHz, TDP 15W

Intel® Core™ i5 Processor

i5-5200U (2.20GHz)

3MB L3 Cache, **14nm**, DDR3L-1600MHz, TDP 15W

Intel® Core™ i3 Processor

i3-5010U (2.10GHz), i3-5005U (2.00GHz)

3MB L3 Cache, **14nm**, DDR3L-1600MHz, TDP 15W

Intel® Pentium® Processor

3805U (1.90GHz)

2MB L3 Cache, **14nm**, DDR3L-1600MHz, TDP 15W

Intel® Celeron® Processor

3755U (1.70GHz), 3205U (1.50GHz)

2MB L3 Cache, **14nm**, DDR3L-1600MHz, TDP 15W

BIOS

64Mb SPI Flash ROM

AMI BIOS

Memory

Two 204 Pin SO-DIMM Sockets Supporting **DDR3L**

1600MHz Memory

Memory Expandable up to 16GB

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

Storage

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

(**Factory Option**) One 9.5mm(h) Optical Device Type Drive (Super Multi Drive/Blu-Ray Combo Drive/Blu-Ray Writer Drive)

Or

(**Factory Option - W950AU**) Dummy ODD or 7mm 2nd HDD/SSD caddy

(**Factory Option for Core i7-5500U/i5-5200U/i3-5010U**) One mSATA Solid State Drive (SSD)

LCD Options

15.6" (39.62cm) HD/FHD (Thickness: 3.8mm)

Audio

High Definition Audio Compliant Interface

2 * Built-In Speakers

Built-In Microphone

Video Adapter

Intel GPU (CPU integrated)

Intel HD Graphics 5500 (Core i7/i5/i3 CPU)

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

Microsoft DirectX®11.1 Compatible

Intel HD Graphics (Pentium/Celeron CPU)

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

Microsoft DirectX®11.1 Compatible

Security

Security (Kensington® Type) Lock Slot

BIOS Password

Pointing Device

Built-in Touchpad

Keyboard

Full-size “WinKey” keyboard (with numeric keypad)

**Mini Card Slots
(Core i7-5500U/i5-5200U/i3-5010U)**

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

Slot 2 for mSATA **SSD**

Or

(Factory Option) Slot 2 for **M.2 3G/4G** Module (require interface adaptor card)

**Mini Card Slots
(Core i3-5050U/3805U/3755U/3205U)**

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

(Factory Option) Slot 2 for **M.2 3G/4G** Module (require interface adaptor card)

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

Interface

One HDMI-Out Port

One External Monitor Port

One Headphone-Out Jack

One Microphone-In Jack

One RJ-45 LAN Jack

One DC-in Jack

Two USB 3.0 Ports

Two USB 2.0 Ports

Communication

Built-In Gigabit Ethernet LAN

1.0M HD PC Camera Module

(Factory Option) 3G or 4G M.2 Module

WLAN/ Bluetooth Half Mini-Card Modules:

(Factory Option) Intel® Wireless-AC 3160 Wireless LAN **(802.11ac)** + Bluetooth 4.0

(Factory Option) Intel® Wireless-N 7260 Wireless LAN **(802.11b/g/n)** + Bluetooth 4.0

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

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

Environmental Spec**Temperature**

Operating: 5°C - 35°C

Non-Operating: -20°C - 60°C

Relative Humidity

Operating: 20% - 80%

Non-Operating: 10% - 90%

Power

Full Range AC/DC Adapter

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

DC Output: 19V, 2.1A **(40W)**

Removable 4 Cell Smart Lithium-Ion Battery Pack, 32WH

(Factory Option) Removable 4 Cell Smart Lithium-Ion Battery 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
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

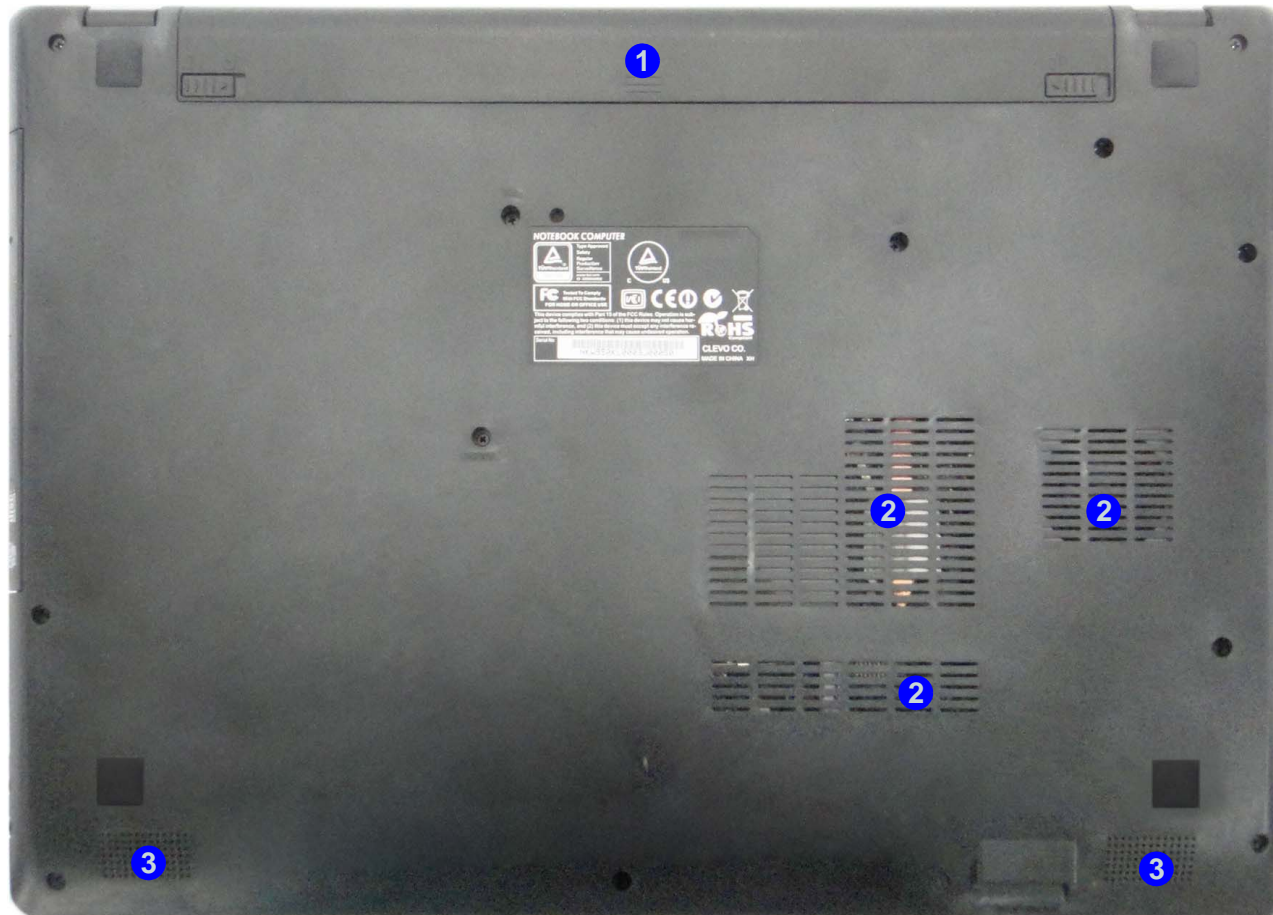


Figure 6
Bottom View

1. Battery Location
2. Vent
3. Speakers



Overheating

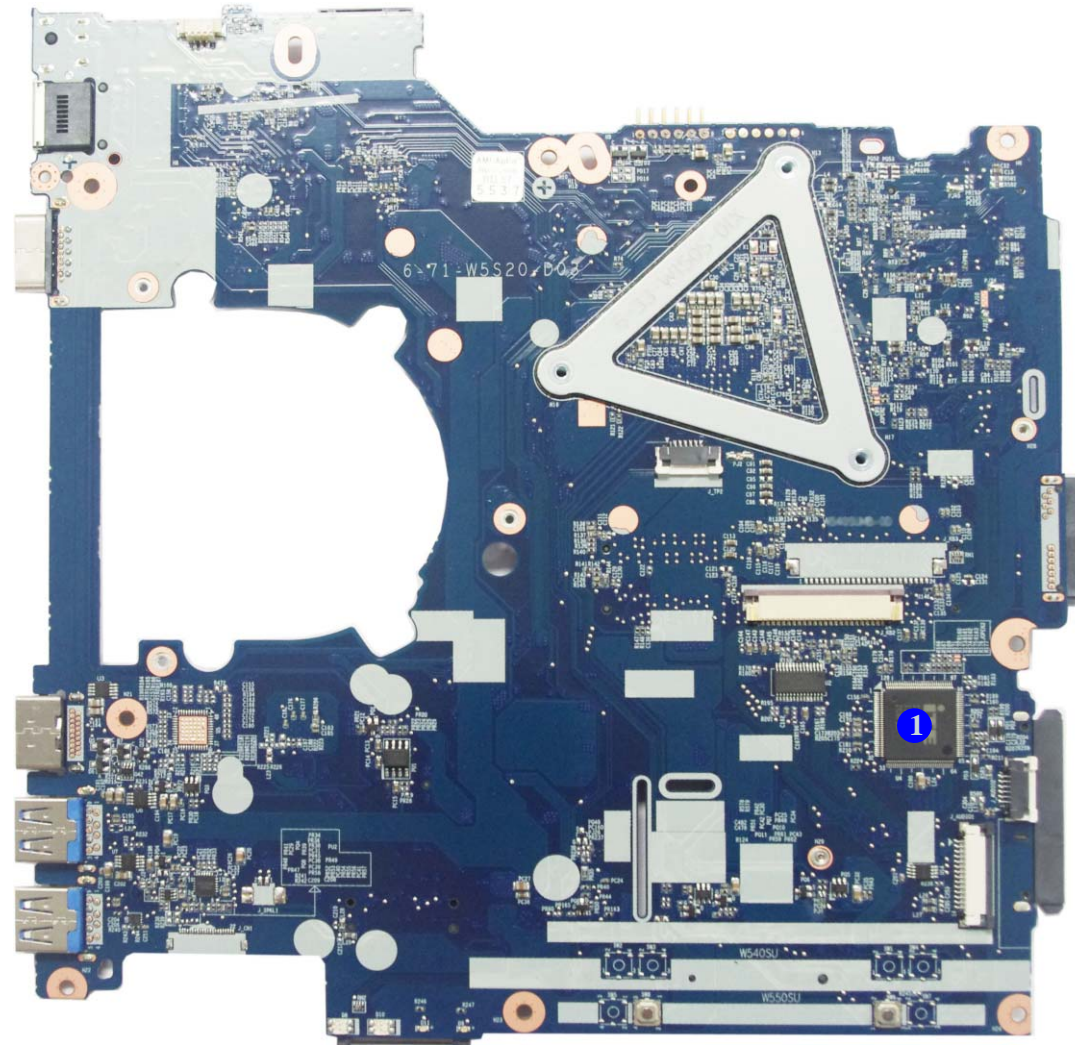
To prevent your computer from overheating, make sure nothing blocks any vent while the computer is in use.

Introduction

Figure 7
Mainboard Top
Key Parts

1. KBC-ITE IT8587

Mainboard Overview - Top (Key Parts)



Mainboard Overview - Bottom (Key Parts)

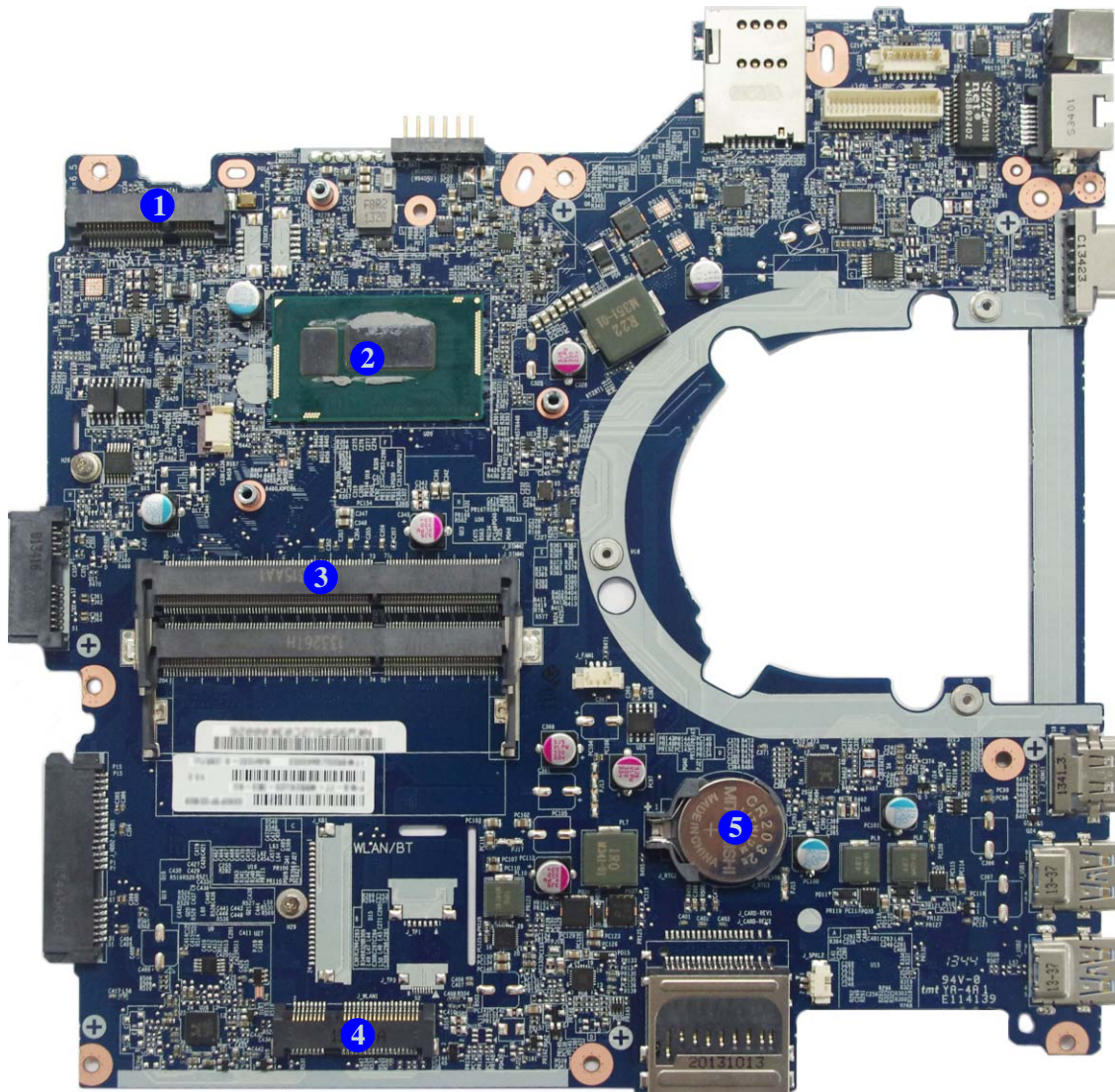


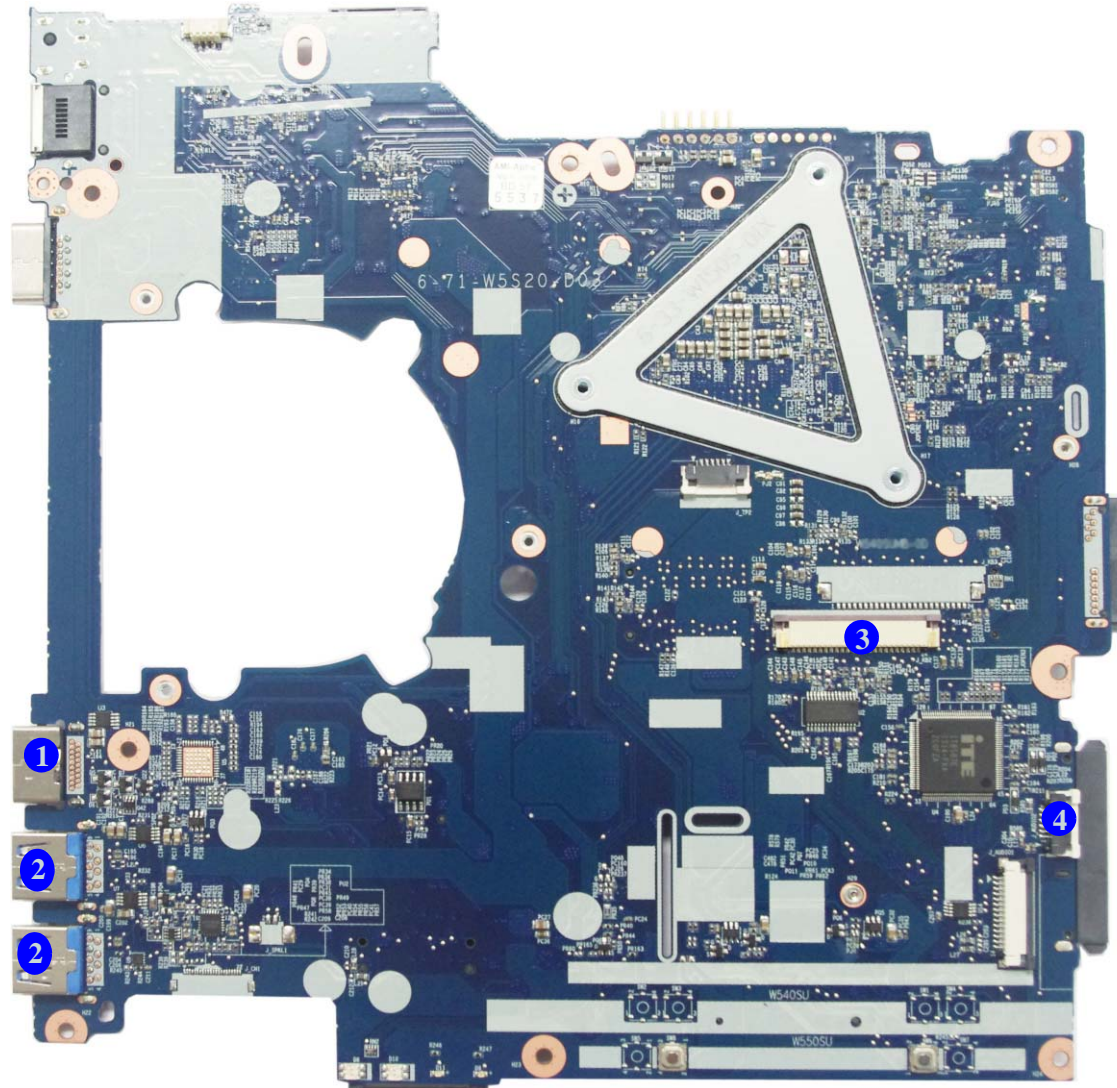
Figure 8
**Mainboard Bottom
Key Parts**

1. Mini-Card Connector (3G/mSATA module)
2. CPU
3. Memory Slots (DDR3 SO-DIMM)
4. Mini-Card Connector (WLAN Module)
5. CMOS Battery

Mainboard Overview - Top (Connectors)

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 - Bottom (Connectors)

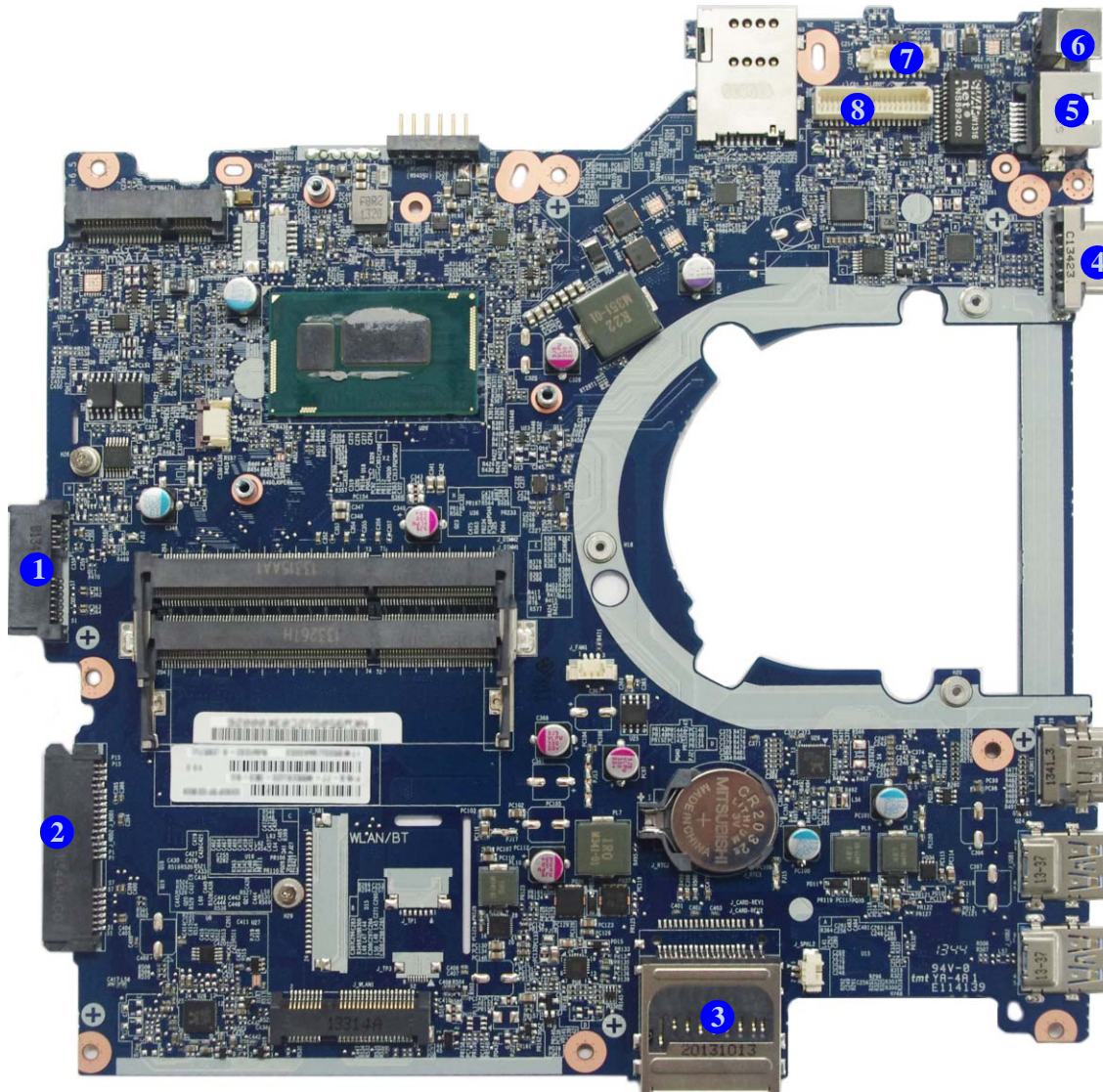


Figure 10
**Mainboard Bottom
Connectors**

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


Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the *W950AU /W955AU* series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

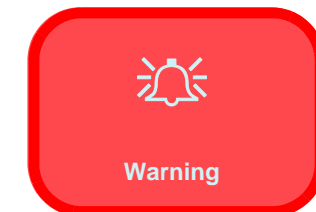
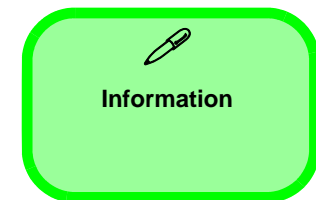
We suggest you completely review any procedure before you take the computer apart.

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

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

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

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



Disassembly

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

Maintenance Tools

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

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

Connections

Connections within the computer are one of four types:

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

Maintenance Precautions

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

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

Cleaning

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

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



Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines 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 System Memory:

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

To remove the Keyboard:

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

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 - 14*

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 - 16*

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*).

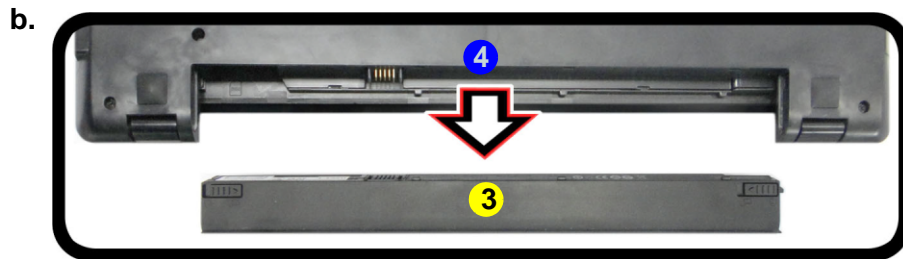
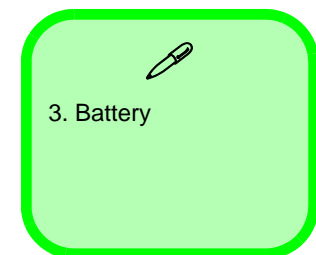


Figure 1
Battery Removal

- a. Remove screws from the bottom case.
- b. Separate the top and bottom case.
- c. The battery will be visible.



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 7mm (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](#)).



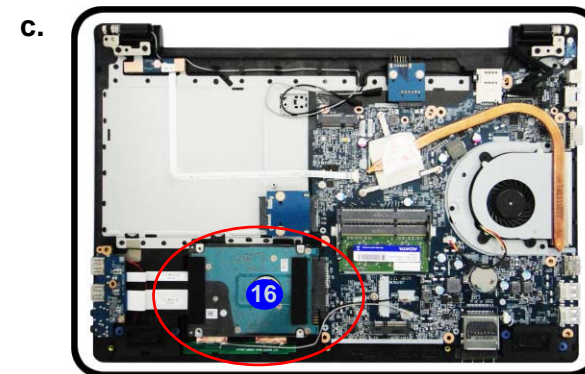
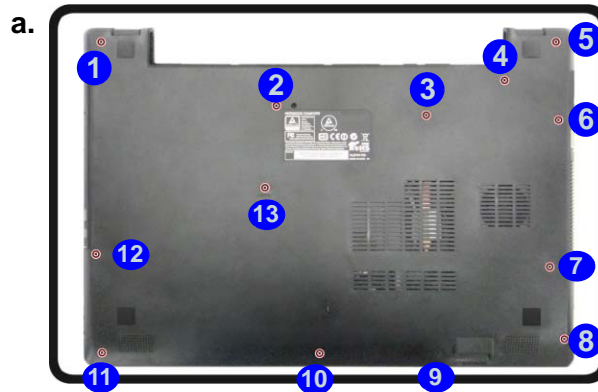
HDD System Warning

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).

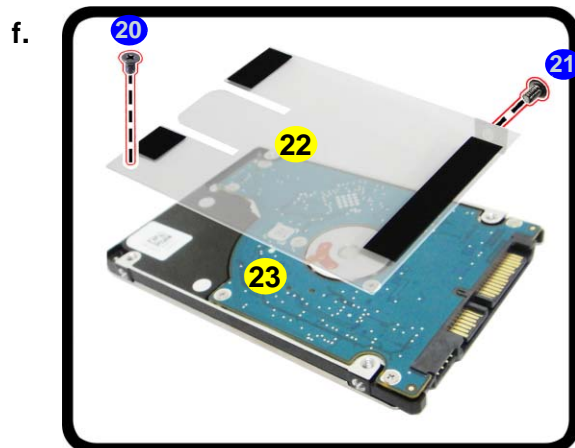
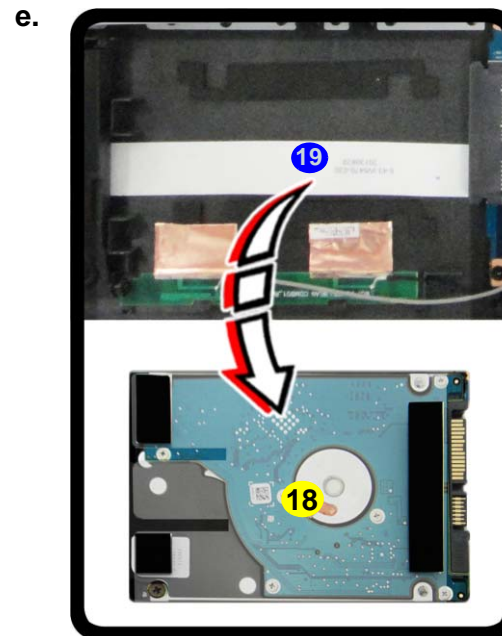
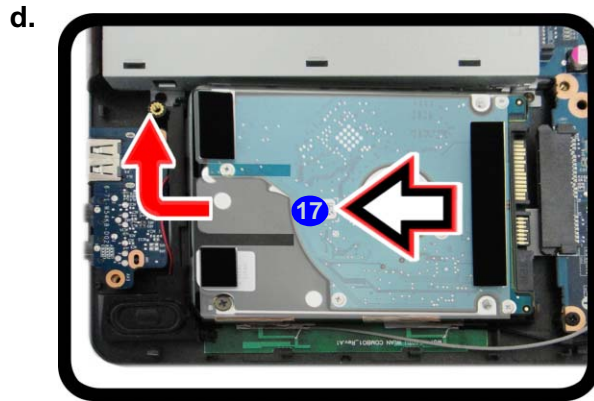
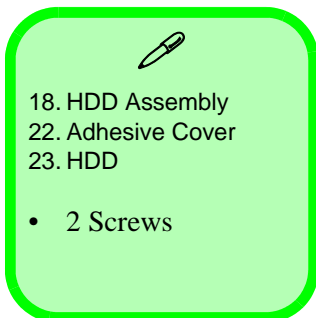


Figure 3
**HDD Assembly
Removal (cont'd.)**

- 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.



Disassembly

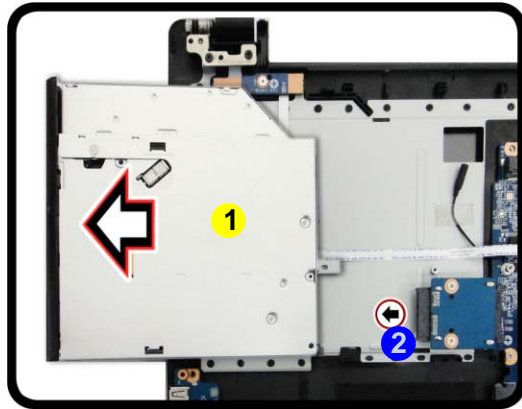
Figure 4
**Optical Device
Removal**

- 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

Figure 5
**Optical Device
Assembly**

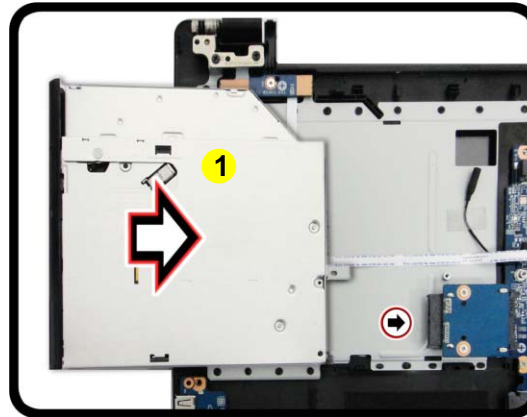
- d. Install the front bezel.
- e. Insert the optical device.

- 5. Reverse the process to attach the front bezel **4** with the new optical device at point **5** (*Figure 5e*).
- 6. 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.
- 7. Replace the bottom cover and tighten the screws.
- 8. Restart the computer to allow it to automatically detect the new device.

d.



e.



- 1. Optical Device
- 4. Bezel

Disassembly

Figure 6
RAM Module Removal

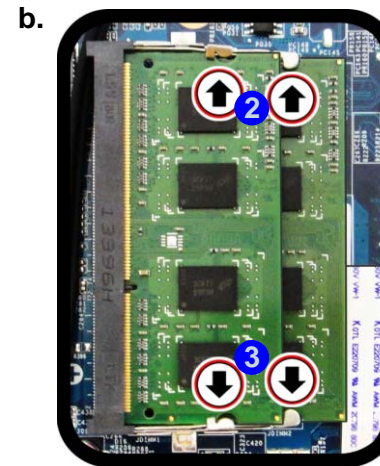
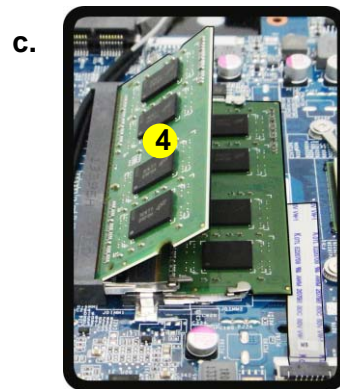
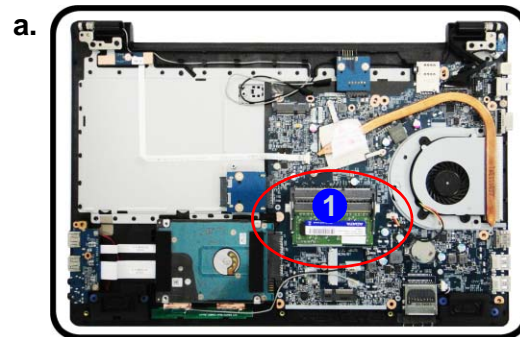
- The RAM modules will be visible at point **1** on the mainboard.
- Pull the release latches.
- Remove the module.

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 MHz). The main memory can be expanded up to 16GB. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

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



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.

Single Memory Module Installation

If your computer has a single memory module, then insert the module into the **Channel 0 (JDIMM1)** socket. In this case this is the **upper memory socket** (the socket furthest to the mainboard).

4. RAM Module

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 - 5](#)).
8. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Disassembly

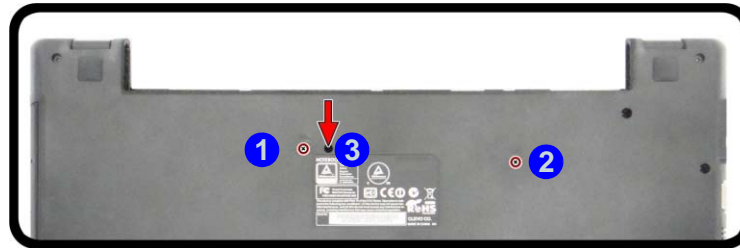
Figure 7
Keyboard Removal

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

Removing the Keyboard

- Turn off the computer, turn it over to remove the battery (page 2 - 5).
- Remove screws 1 - 2 from the bottom case and press at point 3 to release the keyboard (Figure 7a).
- Turn the computer over, remove the keyboard 4 (Figure 7c).
- 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 7d).
- Carefully lift up the keyboard 4 off the computer (Figure 7e).

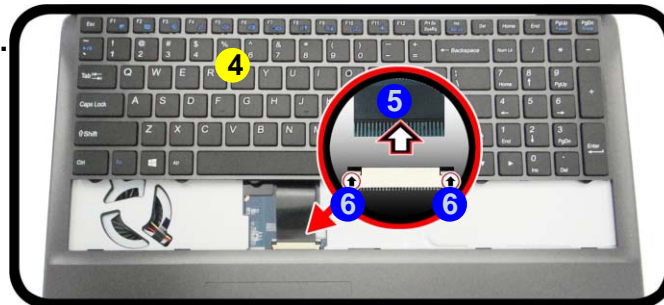
a.



c.



b.



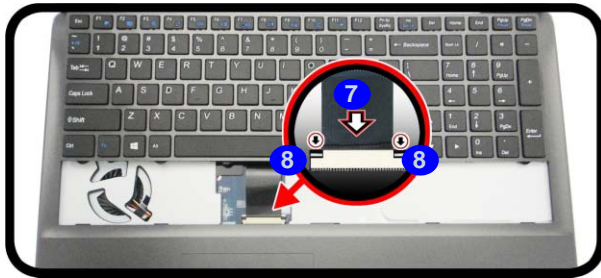
4. Keyboard

- 2 Screws

Disassembly

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

d.



e.



f.



Figure 8
Keyboard Assembly

- Connect the keyboard ribbon cable to the locking collar socket.
- Insert the keyboard at point **9** and slide it in.
- Tighten the screws.



4. Keyboard

- 2 Screws

Disassembly

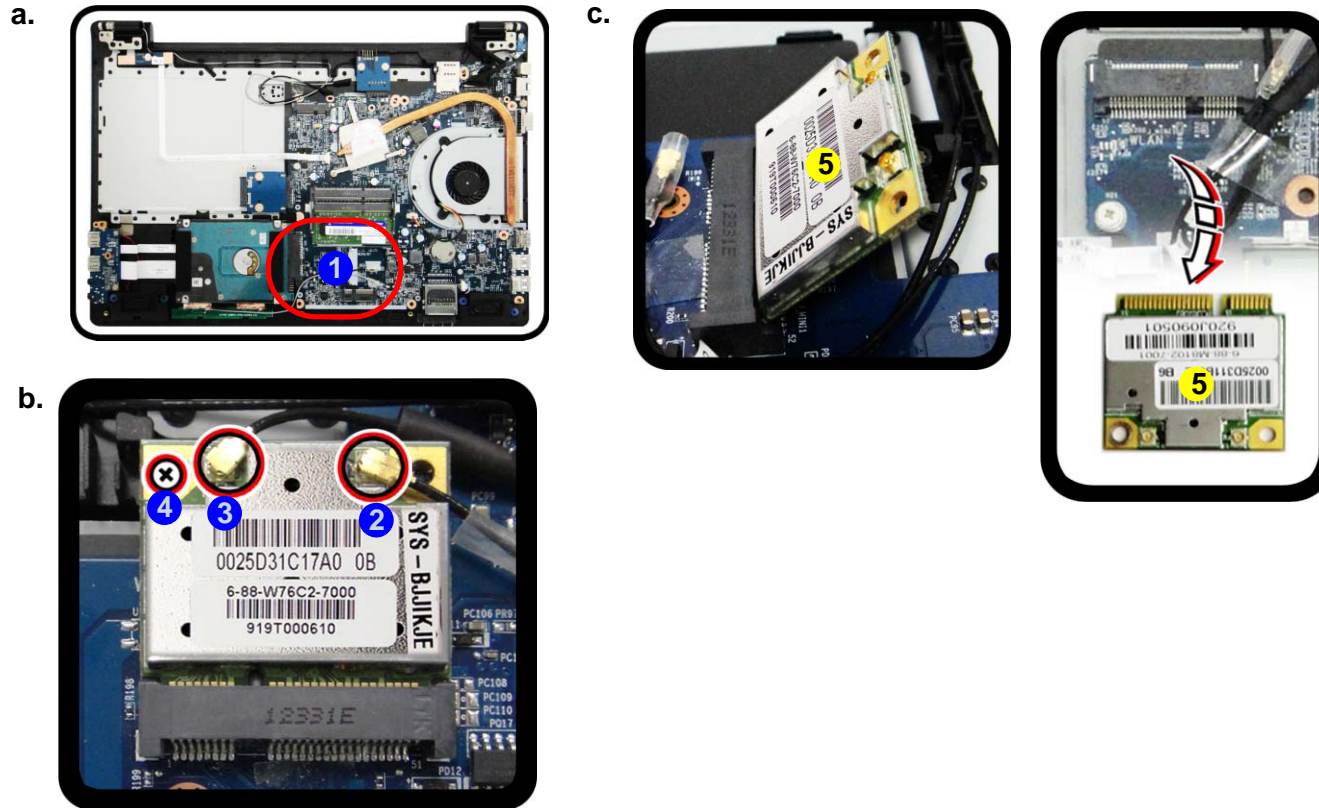
Figure 9
**Wireless LAN
Module Removal**

- Locate the WLAN.
- Disconnect the cable and remove the screw.
- 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 9b*).

Removing the Wireless LAN Module

- Turn **off** the computer, turn it over to remove the battery (*page 2 - 5*) and bottom cover (*page 2 - 6*).
- The Wireless LAN module will be visible at point **1** on the mainboard (*Figure 9a*).
- Carefully disconnect the cables **2** & **3**, and then remove the screw **4** (*Figure 9b*).
- The Wireless LAN module **5** (*Figure 9c*) will pop-up, and you can remove it from the computer.



5. Wireless LAN Module

- 1 Screw

Wireless LAN and Combo Module Cables

Note that the cables for connecting to the antennae on WLAN and WLAN & Bluetooth Combo 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).

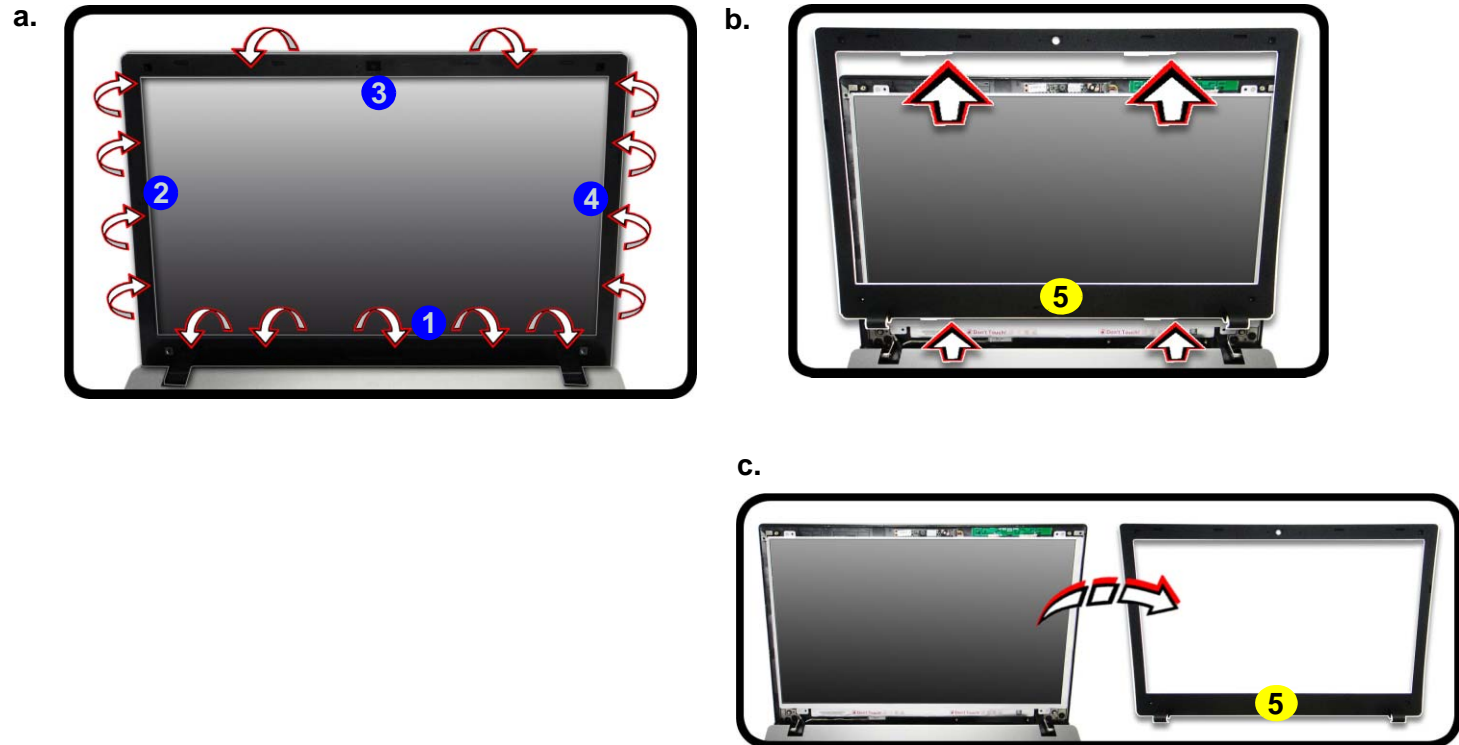
Disassembly

Figure 10
CCD Removal

- Run your fingers around the inner frame of the LCD panel at the points indicated by the arrows.
- 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.
- Remove the LCD front cover.

Removing the CCD

- Turn **off** the computer, turn it over to remove the optical device ([page 2 - 8](#)) and battery ([page 2 - 5](#)).
- Run your fingers around the inner frame of the LCD panel at the points as indicated by the arrows **1** - **4** ([Figure 10a](#)).
- 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.
- Remove the LCD front cover **5** ([Figure 10c](#)).



5. LCD Front Cover

Disassembly

5. Disconnect the cable **6**.
6. Remove the CCD module **7** (*Figure 11e*).
7. Reverse the process to install a new CCD module.

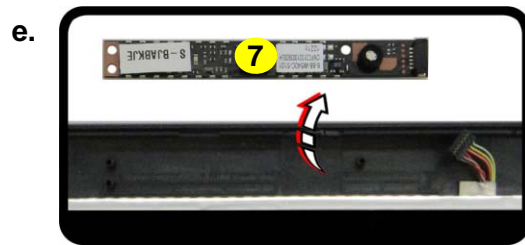


Figure 11
CCD Removal
(cont'd)

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



7. CCD Module

Appendix A:Part Lists

This appendix breaks down the *W950AU/W955AU* 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.

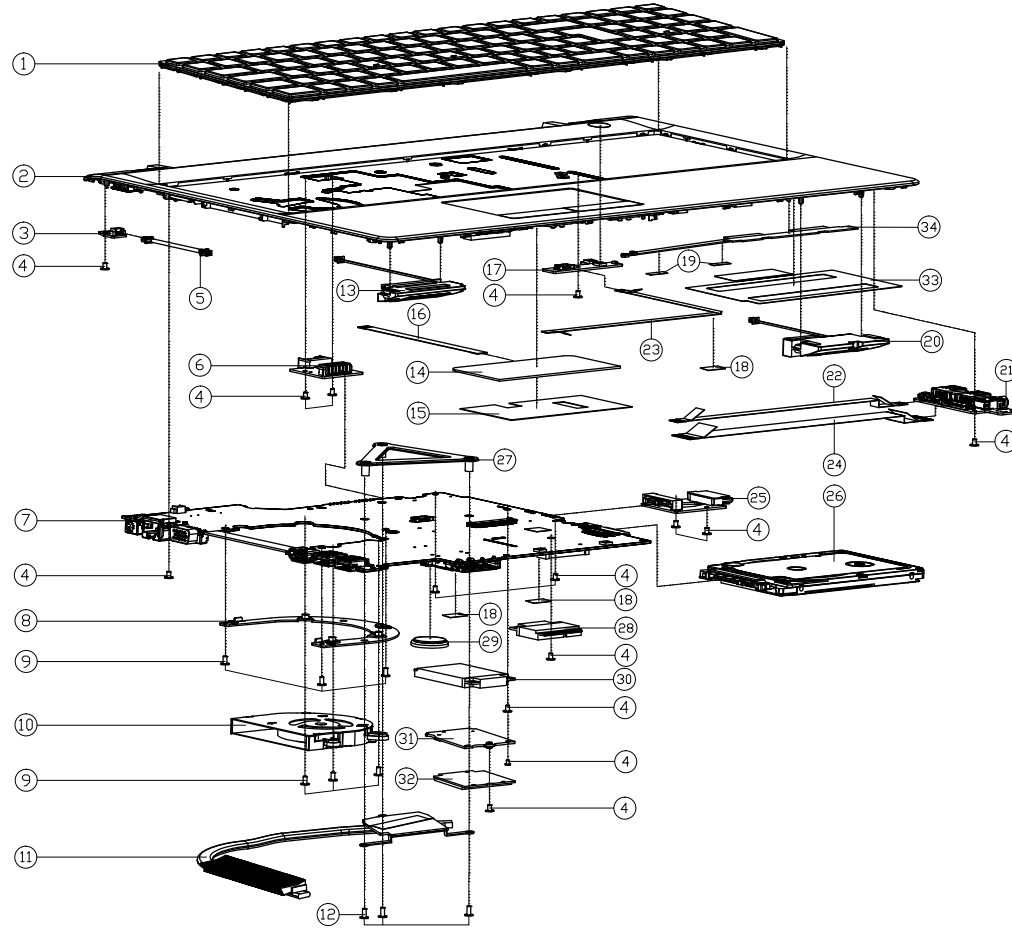
Part List Illustration Location

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

Table A - 1
Part List Illustration
Location

Part	W950AU	W955AU
Top	<i>page A - 3</i>	<i>page A - 4</i>
Bottom	<i>page A - 5</i>	<i>page A - 6</i>
HDD	<i>page A - 7</i>	
HDD Caddy	<i>page A - 8</i>	
LCD	<i>page A - 9</i>	<i>page A - 10</i>
Combo	<i>page A - 11</i>	<i>page A - 12</i>
DVD Dual Drive	<i>page A - 13</i>	<i>page A - 14</i>
Dummy ODD	<i>page A - 15</i>	

Top (W950AU)



ITEM	PART NAME	PART NO	REMARK
1	V08 K/8 ISAGLACK FRAMESS MODULE W950U	6-79-V950AUK-010-V	
2	TOP CASE MODULE W950U2	6-39-W95S2-013	
3	HALL SENSOR BOARD V10 W950KU	6-77-W95K1-D01	
4	SCREW M2X4 KI NI ICT NY (00#45JIT-4M)	6-35-B1120-3RE	
5	WPC CABLE FOR LID 3" 40MM OLD W950U	6-43-W9503-011	
6	BATTERY BOARD V2.0 W950KU	6-77-W95K0-D02	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-P	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-1K	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-1EJ	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-1L	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-3H	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-17H	
7	NO DISPLAYS/SCREENS OR LCD OR SUPPLEMENTARY DISPLAY PANEL FROM OTHER PART NO.	6-77-W950A00-D03-9N	
8	FAN BRACKET SECC028MM W940SU	6-33-W951S-012	
9	SCREW M2X4 KI BZ ICT NY	6-35-B6120-4RA	
10	FAN MODULE W251HUQ	6-31-W25HS-100	
11	CPU HEATSINK MODULE W540SU2	6-31-W5S2N-103	
12	SCREW M2.5X5L KI NI ICT NY	6-35-B1125-5RA	
13	SPRIGABLE L 2W 4T 20MM (P63224700) W950U	6-23-5W95K-0L1	
14	TOUCH PAD SYMPHONICS TM-0146-003 MULTI-GE5	6-49-C4802-010	
15	TP TAPE MYLAR PET W540U	6-40-W5401-010	
16	FTC CABLE FOR HOT KEY TO HALL SENSOR (PIN COLDS W950U)	6-43-W35E2-011	
17	POWER SWITCH BOARD V30 W950SU2	6-77-W54KS-D03-B	
18	TAPE MYLAR TRANSPARENT CONDUCTIVE PIGTAIL	6-40-P1803-020	
19	TAPE MYLAR TRANSPARENT CONDUCTIVE W950P	6-40-W25F3-010	
20	SPRIGABLE R 2W 4T 20MM (P63224700) W950U	6-23-5W95K-0R1	
21	AUDIO BOARD (OPTIONAL) V2.0 W950SU2	6-77-W95K8-D02-A	
22	FTC CABLE NO TO AUDIO BOARD (COLD SWMM SV IP W950U)	6-43-W95S0-020-2	
23	FTC CABLE FOR FINGER BI TO KEY SWMM SV (PIN COLDS W950U)	6-43-W95S0-010	
24	FTC CABLE NO TO AUDIO BOARD (COLD SWMM SV (PIN W950U)	6-43-W95S0-030-1	
25	DDD BOARD V3.0 W950KU	6-77-W95KN-D03	
26	W/D HDD ASS'Y W950KU	6-79-W950KUJ-010	
26	W/ HDD ASS'Y W950KU	6-79-W950KUJ-020	
27	CPU SUPPORTER FOR HUAWEI RIVER SECC W950U	6-33-W150S-011	
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-P6502-4240	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-P6502-4270	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-W54SF-7000	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-W54SF-9400	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-W230F-4210	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-W25WF-4200	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-P3702-9400	OPTION
28	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-88-P3702-7000	OPTION
29	BATTERY 3V 220MA 480C32032B (KTS)	6-23-6A2B2-030	
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D40C0-Z01	OPTION
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D40C0-Z01	OPTION
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D40C0-100	OPTION
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D405B-100	OPTION
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D401T-S00	OPTION
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D404J-100	OPTION
30	WEIHAISS SSD 32GB MLC 3.5" (S70000000) INTL. CSW. S5000	6-85-D4000-Z00	OPTION
31	WAVE PICE. TO KEYS CARD FOR 3G (OPTION) W950U	6-77-W84AG-D01	
32	IE 4 IN 1 (OPTION) W950U	6-88-S210W-8810	OPTION
32	IE 4 IN 1 (OPTION) W950U	6-88-W3306-8830	OPTION
32	IE 4 IN 1 (OPTION) W950U	6-88-W3306-8841	OPTION
33	TOP ANTENNA AL. FTDL. (94.3x30.9) W950AU	6-47-W9502-010	ONLY FOR LTE-2
34	WARRANTY LABEL (OPTIONAL) FOR THE PRODUCT (PRINTED ON PAPER)	6-23-7W950-030	

Figure A - 1
Top (W950AU)

Top (W955AU)

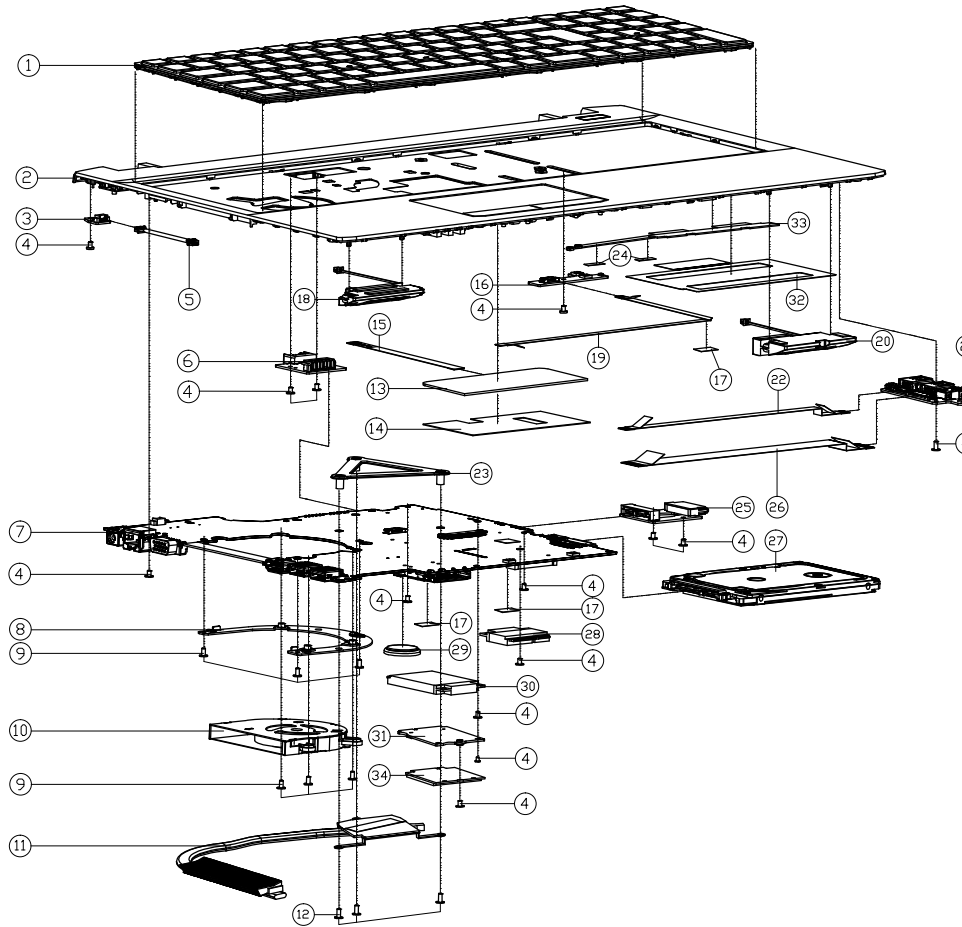
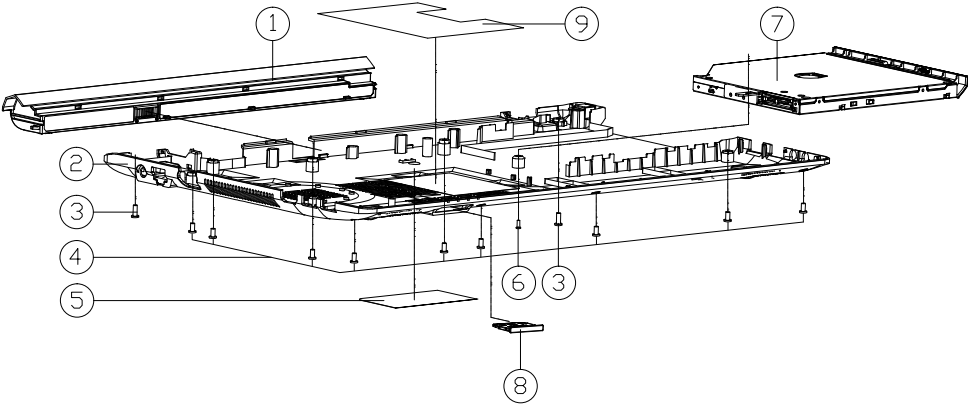


Figure A - 1
Top (W955AU)

A.Part Lists

ITEM	PART NAME	PART NO	REMARK
1	VNB K/B USABALACKA FRAME(S) MOBILE W95AU	6-79-W950AUK-010-W	
2	TOP CASE MODULE W955SU2	6-39-W9552-012	
3	HALL SENSOR BOARD V1.0 W950KU	6-77-W95K1-D01	
4	SCREW HEX3. KI NI ICT NY (03-143JH14)	6-35-B1120-3RE	
5	WIRE CABLE FOR LID 3P 40MM 0LJ W950KU	6-43-W5503-011	
6	BATTERY BOARD V2.0 W950KU	6-77-W95KQ-D02	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-F	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1H	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1B	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1C	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1D	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1E	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1F	
7	NO BATTERY BOARD TO USE W950AUK FROM CASE 2000000000000000	6-77-W950AUK-D03-1G	
8	FAN BRACKET SECCO3800 W940SU	6-33-W951S-012	
9	SCREW M2X4L KI BZ ICT NY	6-35-B6120-4RA	
10	FAN MODULE W251HUG	6-31-W25HS-100	
11	CPU HEATSINK MODULE W540SU2	6-31-W552N-103	
12	SCREW M2.5X5L KI NI ICT NY	6-35-B1125-SRA	
13	TOUCH PAD SYNAPTICS TM-0146-003 MULTI-GES	6-49-C4802-010	
14	TP TAPE MYLAR PET W540EU	6-40-W5401-010	
15	IFC CABLE FOR KEY KEY TO WALL SENSOR 07M 0LJ W950KU	6-43-W35E2-011	
16	POWER SWITCH BOARD V3.0 W955SU2	6-77-W54K3-D03-9	
17	TAPE MYLAR TRANSPARENT CR0400D W250P0	6-40-118D3-020	
18	SPK CABLE L 2W 47 20MM W92529500 W950KU	6-23-SW95K-D11	
19	IFC CABLE FOR POWER IN TO KEY SWM 2W 07M 0LJ W950KU	6-43-W9550-010	
20	SPK CABLE R 2W 47 20MM W92529500 W950KU	6-23-SW95K-0R1	
21	AUDIO BOARD (REARPHONO) V2.0 W950KU	6-77-W95K8-D02-A	
22	IFC CABLE NO TO AUDIO BOARD 040L 07M 07 W950KU	6-43-W9550-020-2	
23	CPU SUPPORTER FOR HARDEN RIVER SECC W950AUK	6-33-W150S-011	
24	TAPE MYLAR TRANSPARENT CR0400D W250P0	6-40-W25P3-010	
25	DDD BOARD V3.0 W950KU	6-77-W95KN-D03	
26	IFC CABLE NO TO AUDIO BOARD 040L 07M 07 W950KU	6-43-W9550-030-2	
27	W/D HDD ASS'Y W950KU	6-79-W950KUJ-010	
27	W/ HDD ASS'Y W950KU	6-79-W950KUJ-020	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-W545F-7000	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-W545F-9400	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-P3702-9400	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-P3702-7000	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-W230F-4210	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-W25WF-4200	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-P6502-4240	
28	NO HDD ASS'Y TO USE W950AUK FROM CASE 2000000000000000	6-88-P6502-4270	
29	BATTERY 3V 220MA BB8BC26328 (OXTS)	6-23-6A2B2-030	
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D400C-Z01	OPTION
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D400J-Z01	OPTION
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D400K-100	OPTION
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D405B-100	OPTION
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D401T-S00	OPTION
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D404J-100	OPTION
30	MEGAB SSD 32GB MLC S5500CAG000000000000000000000000	6-85-D400Q-Z01	OPTION
31	NOFF POLE TO NEFF CORD FOR 3S (NEW) V2.0 W940AUK	6-77-W84AG-D00	
32	TOP ANTENNA AL F01L (9434303.0) W950AU	6-47-W9502-010	ONLY FOR LTE-2
33	NOFF POLE TO NEFF CORD FOR 3S (NEW) V2.0 W940AUK	6-23-7W950-030	
34	NOFF POLE TO NEFF CORD FOR 3S (NEW) V2.0 W940AUK	6-88-S210V-8810	
34	NOFF POLE TO NEFF CORD FOR 3S (NEW) V2.0 W940AUK	6-88-W3306-8830	
34	NOFF POLE TO NEFF CORD FOR 3S (NEW) V2.0 W940AUK	6-88-W3306-8841	

Bottom (W950AU)

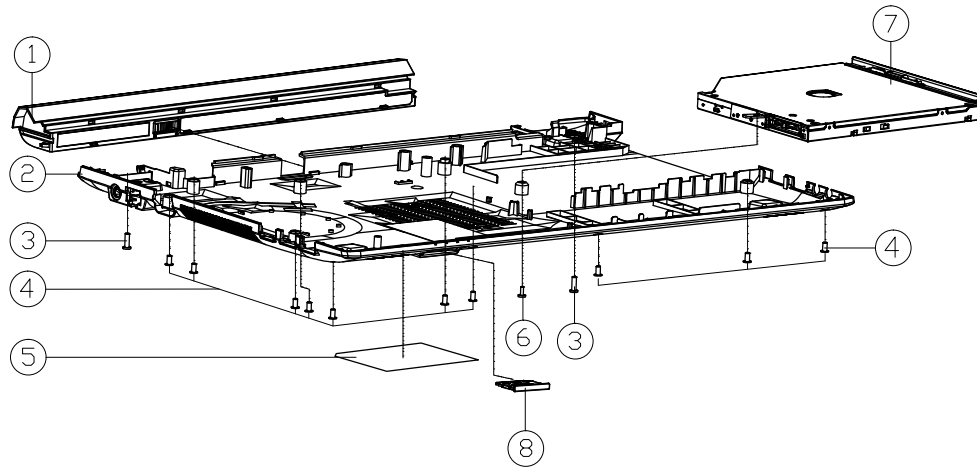


ITEM	PART NAME	PART NO	REMARK
1	TOP S LI HAV/25MM KCP 3MP/20 300232P 22MM W950AU TEXTURE	6-87-W95KS-42F2	
1	TOP S LI HAV/25MM/4MM PFC KCP 3MP/20 300232P W950AU TEXTURE	6-87-W97KS-42L	
2	BOTTOM CASE MODULE W950SU2	6-39-W95S3-012	
2	BOTTOM CASE MODULE W950SU2-C	6-39-W95S3-012-C	
3	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-8R0	
4	SCREW M2.5*6L K BZ ICT NY	6-35-82125-6RA	
5	PRODUCT LABEL FOR W950AU	6-45-W950AU03-010	
6	SCREW M2*SL KIT=0.8 D=4.0 BK/Z ICT NY	6-35-B6120-5R0	
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W950AU00-010	<OPTION>
7	SATA BLU-RAY COMBO ASS'Y (OPTION)	6-79-W950AU00-001	<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 300 NON PUSH TYPE PCB(S C723P-700) W950AU	6-42-W9708-030	
9	BOTTOM CASE AL FOIL (AL+3M467+PET) W950AU	6-40-W95A3-010	

Figure A - 2
Bottom (W950AU)

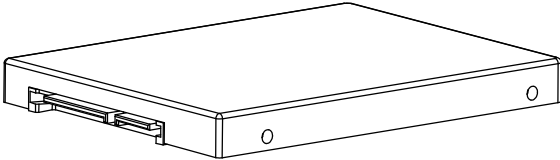
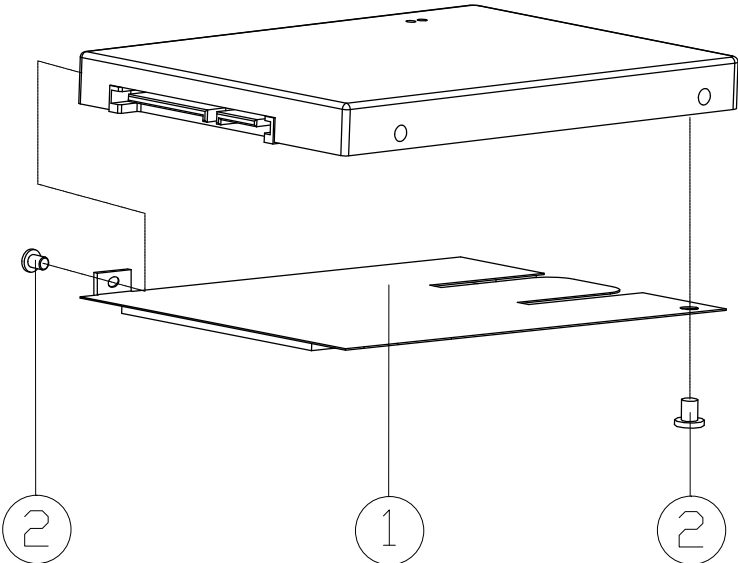
Bottom (W955AU)

Figure A - 3
Bottom (W955AU)



ITEM	PART NAME	PART NO	REMARK
1	TOP 11U (10/12U) OF 19" (20" W/1000) 2000 P/2000 (10) (10) (10) (10)	6-87-W955S-42F2	
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*8L 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	
6	SCREW M2*5L K11=08 D=4.0 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-W955SU20-000	(OPTION)
7	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W955KL00-010	(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)
8	3WAY 30N NON PWR TYPE PC/MBS (47230-7010) W9705W	6-42-W9708-030	

HDD

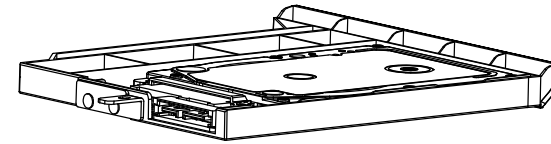
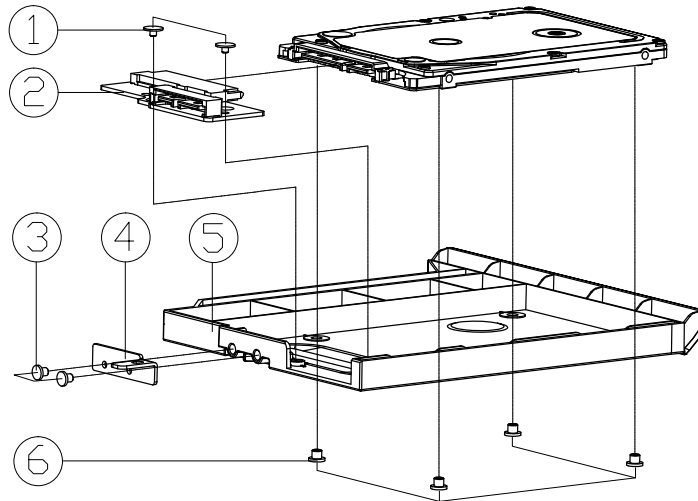


ITEM	PART NAME	PART NO	REMARK
1	HDD MYLAR (PET0.25T+CR2030) W940TU	6-40-W940J-010	
2	SCREW M3*2.5L KI NI ICT NY	6-35-B1130-2R5	

Figure A - 4
HDD

HDD Caddy

Figure A - 5
HDD Caddy



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*2L KI BK/Z ICT NY (Ø6,T=0.5)	6-35-B6120-2RC	
2	ODD 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 ODD PC+ABS GINAR D231(+) W950SU2	6-42-W95SZ-041	
6	SCREW M3*2.5L KI NI ICT NY	6-35-B1130-2R5	

LCD (W950AU)

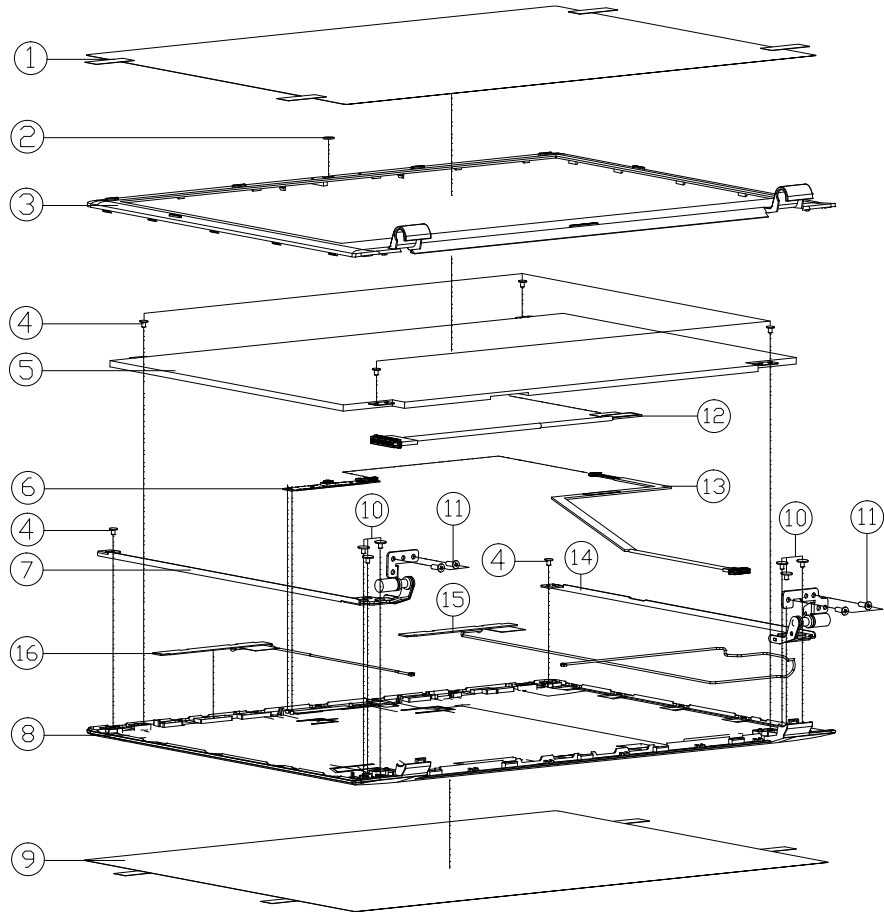
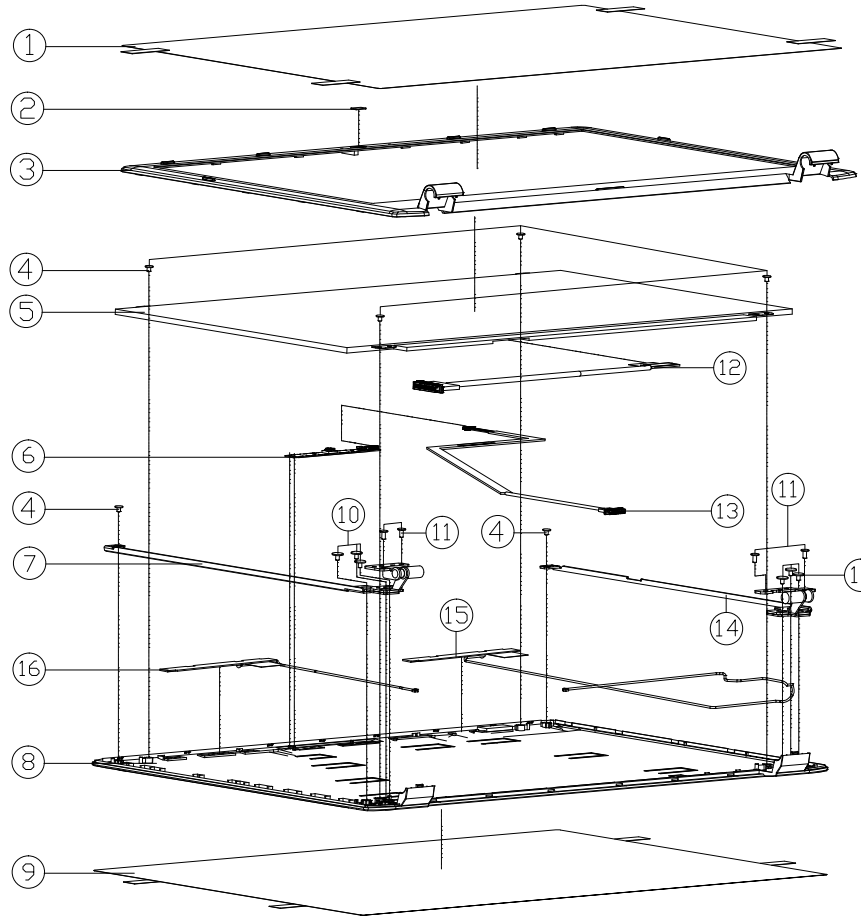


Figure A - 6
LCD (W950AU)

ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER PROTECTION MYLAR (PET+3889IS) ES1200	6-40-E51Q1-030-1	
2	CCD LENS PMMA W650SR	6-42-W6501-010	
3	LCD FRONT COVER MODULE W950SU2	6-39-W95S1-012	
4	SCREW M2*3L KI NI ICT NY CDD=04.5,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 LG LP156WHB-TPDI (LED) 3.8 MM	6-50-L8138-L09	
5	LCD 15.6" FHD CHIMEI N156HGE-LAI (LED) 3.2 MM	6-50-LB232-D01	
5	LCD 15.6" FHD/IPS/CLIP/GLARY TYPE LG LP156W4-SPUI (LED) 3.2MM	6-50-LB232-L10	
5	LCD 15.6" HD CHIMEI N156RGE-LAI (GLARE TYPE) (LED) 3.8 MM	6-50-L8138-D00	
6	UVI CAMERA CHROMY FIX CM2866 3K HD SETI 3200 VPH00 FV665 VLED W/P-MC	6-88-W940C-5100	OPTION
6	UVI CAMERA BISON FIX INNOVANT-300 3K HD HINDI 362 VPH00 FV665 VLED W/P-MC	6-88-W940C-4902	OPTION
6	UVI CAMERA CHROMY FIX CM2862 300K HINDI H-79 VPH00 FV665 VLED W/P-MC	6-88-W977C-5100	OPTION
7	LCD HINGE L W950SU2	6-33-W95S1-0L1	
8	LCD BACK COVER MODULE W950SU2	6-39-W95S1-023	
8	LCD BACK COVER MODULE W950SU2-C	6-39-W95S1-023-C	
9	LCD BACK COVER PROTECTION MYLAR (PET+3889IS) CHANGEW650SR	6-40-W6508-012	
10	SCREW M2*2L KI BK/Z ICT NY(C08,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 200M 20V 8P 04/LV CONLVDS0R-20-1F) W950U (E-00)	6-43-W95K1-011-N	
12	WIRE CABLE FOR EDP 200M 20V 30P 04/LV CONLVDS0R-20-1F) W950R2	6-43-W95S1-010-N	
13	WIRE CABLE FOR CCD D-MIC 420MM 3.3V 8P 04/L) W950KL	6-43-W95KT-011	
14	LCD HINGE R W950SU2	6-33-W95S1-0R1	
15	ANTENNA W/PIN CONRO WST W14-12 PCB 24G50R2 W17-70MM W12-70MM W950U	6-23-7W950-010	OPTION
16	ANTENNA BEAM 364LE W11 L1E-1 PCB 0.8/0.8/0.6/1.5/0.8/0.6/2.8/2.8/1.5-50MM	6-23-7W950-020	OPTION

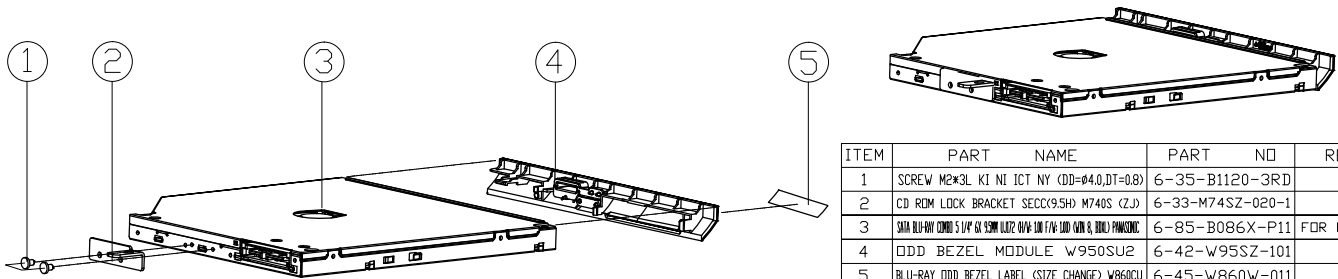
LCD (W955AU)

Figure A - 7
LCD (W955AU)



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER PROTECTION MYLAR (PET+3M8915) E51200	6-40-E5101-030-1	
2	CCD LENS PMMA W955SU2	6-42-W9551-010	
3	LCD FRONT COVER MODULE W955SU2	6-39-W9551-011	
4	SCREW M2*3L KI NI ICT NY (DD=04.5,DT=04)	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 LG LP156WHB-TPD1 (LED) 3.8 MM	6-50-L8138-L09	
5	LCD 15.6" FHD CHIMEI N156HG6-LA1 (LED) 3.2 MM	6-50-LB232-D01	
5	LCD 15.6" FHD/IPS/VA/VA/ART TYPE LG LP156WFA-3P0A (LED) 3.2MM	6-50-LB232-L10	
5	LCD 15.6" HD CHIMEI N156HG6-L41 (GLARE TYPE) (LED) 3.8 MM	6-50-L8138-D00	
6	DC CAMERA CHROMIUM FOR OUTDOOR IN HD S211 S2101 W9700 F16655 V4LED W9-ME	6-88-W940C-5100	OPTION
6	DC CAMERA CHROMIUM FOR OUTDOOR IN HD S211 S2101 W9700 F16655 V4LED W9-ME	6-88-W940C-4902	OPTION
6	DC CAMERA CHROMIUM FOR OUTDOOR 300K PIXEL HD-7M W9700 F16655 V4LED W9-ME	6-88-W977C-5100	OPTION
7	LCD HINGE L W955SU2	6-33-W9551-0L1	
8	LCD BACK COVER MODULE W955SU2	6-39-W9551-021	
8	LCD BACK MODULE W955SU2-C	6-39-W9551-021-C	
9	LCD BACK COVER PROTECTION MYLAR (PET+3M8915) W500SR	6-40-W6508-012	
10	SCREW M2*2L KI BK/Z ICT NY(Φ0.8,T=0.6)	6-35-B6120-2RE	
11	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6125-5RA	
12	WIRE CABLE FOR LVDS 20MM 20V 4P 0.4/1.4 CON.VOL308-202-HF) W9500 (C-GUT)	6-43-W95K1-011-N	
12	WIRE CABLE FOR EDP 20MM 20V 3P 0.4/1.4 CON.VOL308-202-HF) W9500	6-43-W9551-010-N	
13	WIRE CABLE FOR CCD I-MIC 420MM 3.3V 8P (HL) W9500U	6-43-W95KT-011	
14	LCD HINGE R W955SU2	6-33-W9551-0R1	
15	ANTENNA WLAN COMBO VGT M1414Z PCB 245/50/2 M1414Z-10M W9500	6-23-7W950-010	OPTION
16	ANTENNA PEAK 3614E VGT LTE-1 PCB 140/80/60/145/106/136/226/260 L=50MM	6-23-7W950-020	需要出SOLITE 標註 必須此知此在1天線

Combo (W950AU)

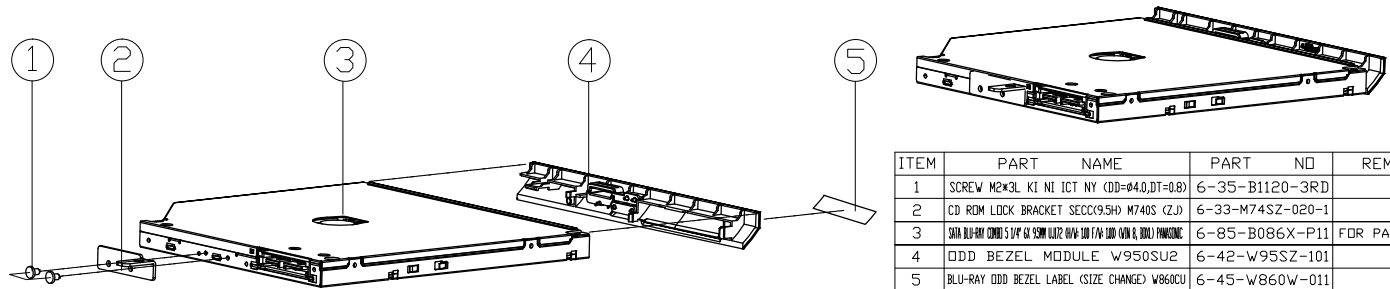


ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L KI NI ICT NY (DD=04.0,DT=0.8)	6-35-B1120-3RD	
2	CD ROM LOCK BRACKET SECC(9.5H) M740S (ZJ)	6-33-M74SZ-020-1	
3	SATA BLU-RAY COMBO 5.25" 6X 9.5MM 0.02" 0.04" 1.00" 1.00" 0.00" PANASONIC	6-85-B086X-P11	FOR PANASONIC
4	ODD BEZEL MODULE W950SU2	6-42-W95SZ-101	
5	BLU-RAY ODD BEZEL LABEL (SIZE CHANGE) W860CU	6-45-W860W-011	

Figure A - 8
Combo (W950AU)

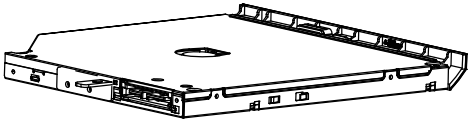
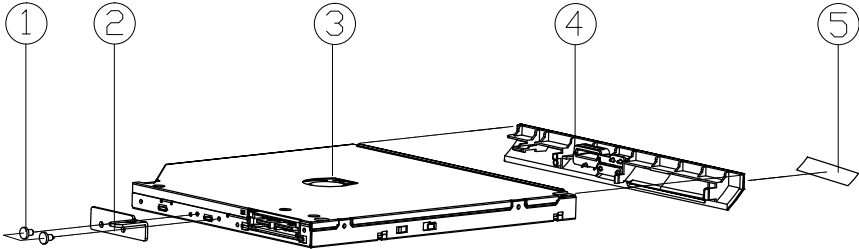
Combo (W955AU)

Figure A - 9
Combo (W955AU)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L 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	SAV BLU-RAY COMBO 5 1/4" 48 9500 0472 0476 100 1748 100 000 8, 000 PANASONIC	6-85-B086X-P11	FOR PANASONIC
4	ODD BEZEL MODULE W950SU2	6-42-W95SZ-101	
5	BLU-RAY ODD BEZEL LABEL (SIZE CHANGE) W860CU	6-45-W860W-011	

DVD DUAL (W950AU)

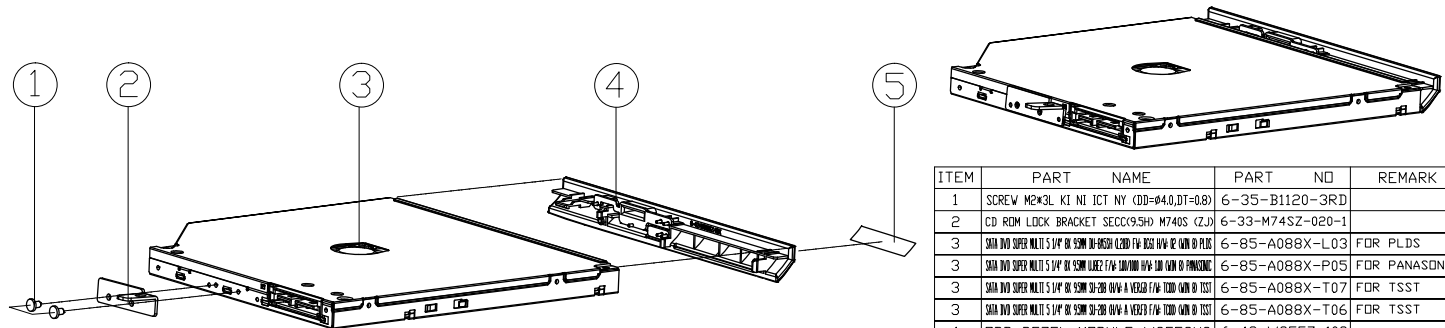


ITEM	PART NAME	PART NO	REMARK
1	SCREW M2x3L KI NI ICT NY (DD-#4.0,DT=0.8)	6-35-B1120-3RD	
2	CD ROM LOCK BRACKET SECC(9.5H) M740S (ZJ)	6-33-M74SZ-020-1	
3	SAVA DVD SUPER MULTI'S DVP BK SCMM 04200 0414-A VER03 F/W TOSH TOSH QM QD TSST	6-85-A088X-L03	FOR PLDS
3	SAVA DVD SUPER MULTI'S DVP BK SCMM 04200 0414-A VER03 F/W TOSH TOSH QM QD TSST	6-85-A088X-P05	FOR PANASONIC
3	SAVA DVD SUPER MULTI'S DVP BK SCMM 04200 0414-A VER03 F/W TOSH TOSH QM QD TSST	6-85-A088X-T06	FOR TSST
3	SAVA DVD SUPER MULTI'S DVP BK SCMM 04200 0414-A VER03 F/W TOSH TOSH QM QD TSST	6-85-A088X-T07	FOR TSST
4	DDD BEZEL MODULE W950SU2	6-42-W95SZ-101	
5	SUPER MULTI DDD BEZEL LABEL (SIZE CHANGE)	6-45-W860G-011	

Figure A - 10
DVD DUAL
(W950AU)

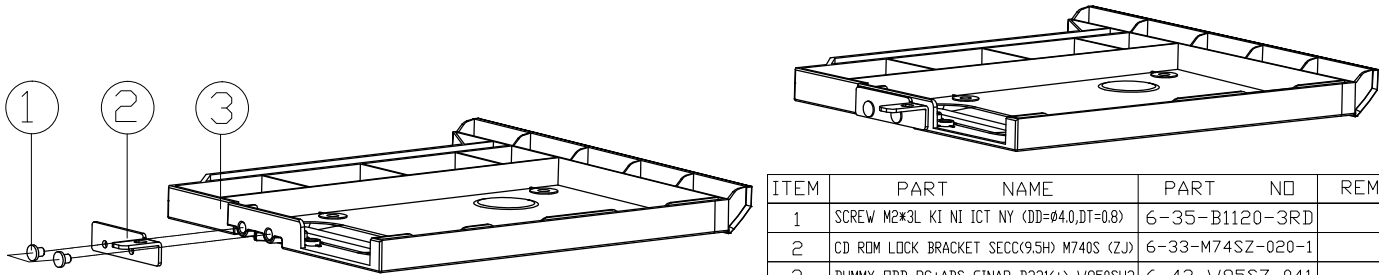
DVD DUAL (W955AU)

Figure A - 11
DVD DUAL
(W955AU)



ITEM	PART NAME	PART NO	REMARK
1	SCREW MEM3L 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	SMALL DVD SUPER MULTI 5.25" DR. SGM. DA-8589 Q.2RD F/W. RISE W/W. RZ. TWIN DR. PLUS	6-85-A088X-L03	FDR PLDS
3	SMALL DVD SUPER MULTI 5.25" DR. SGM. LAZEE F/W. LAMINUM W/W. TAN. TWIN DR. PANASONIC	6-85-A088X-P05	FDR PANASONIC
3	SMALL DVD SUPER MULTI 5.25" DR. SGM. SH-200 W/W. A. VER2.0 F/W. TWIN DR. TSST	6-85-A088X-T07	FDR TSST
3	SMALL DVD SUPER MULTI 5.25" DR. SGM. SH-200 W/W. A. VER2.0 F/W. TWIN DR. TSST	6-85-A088X-T06	FDR TSST
4	DDD BEZEL MODULE W955SU2	6-42-W955Z-102	
5	SUPER MULTI DDD BEZEL LABEL (SIZE CHANGE)	6-45-W860Q-011	

Dummy ODD



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L KI NI ICT NY (DD=Ø4.0,DT=0.8)	6-35-B1120-3RD	
2	CD ROM LOCK BRACKET SECC(9.5H) M740S (ZJ)	6-33-M74SZ-020-1	
3	DUMMY ODD PC+ABS GINAR D231(+) W950SU2	6-42-W95SZ-041	

Figure A - 12
Dummy ODD



Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the *W950AU /W955AU* 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>VGA PS8613 - Page B - 17</i>	<i>VCore - Page B - 32</i>
<i>Processor 1/7 - Page B - 3</i>	<i>LVDS PS8625 - Page B - 18</i>	<i>Charger, DC In - Page B - 33</i>
<i>Processor 2/7 - Page B - 4</i>	<i>USB Hub AU6259-JGF - Page B - 19</i>	<i>Audio Board - Page B - 34</i>
<i>Processor 3/7 - Page B - 5</i>	<i>Card Reader & LAN RTL8411B - Page B - 20</i>	<i>Audio Board - Page B - 35</i>
<i>Processor 4/7 - Page B - 6</i>	<i>HDMI, RJ45, Fan - Page B - 21</i>	<i>LID Switch Board - Page B - 36</i>
<i>Processor 5/7 - Page B - 7</i>	<i>WLAN, 3G, MSATA - Page B - 22</i>	<i>Power Switch Board - Page B - 37</i>
<i>Processor 6/7 - Page B - 8</i>	<i>Audio Codec ALC269 - Page B - 23</i>	<i>ODD Board - Page B - 38</i>
<i>Processor 7/7 - Page B - 9</i>	<i>USB 3.0, G-Sensor, TPM - Page B - 24</i>	<i>Power On Sequence - Page B - 39</i>
<i>Power 1 - Page B - 10</i>	<i>HDD, CCD, TPM, Power Con - Page B - 25</i>	
<i>Power 2 - Page B - 11</i>	<i>CCD, MIC, LID, I/O Connector - Page B - 26</i>	
<i>Power VSS - Page B - 12</i>	<i>HDD, ODD, LED - Page B - 27</i>	
<i>RSVD - Page B - 13</i>	<i>System Power - Page B - 28</i>	
<i>DDR3 SO-DIMM A - Page B - 14</i>	<i>VDD3, VDD5 - Page B - 29</i>	
<i>DDR3 SO-DIMM B - Page B - 15</i>	<i>ALC269Q, VT1802S - Page B - 30</i>	
<i>Panel, Inverter - Page B - 16</i>	<i>1.05V Series - Page B - 31</i>	

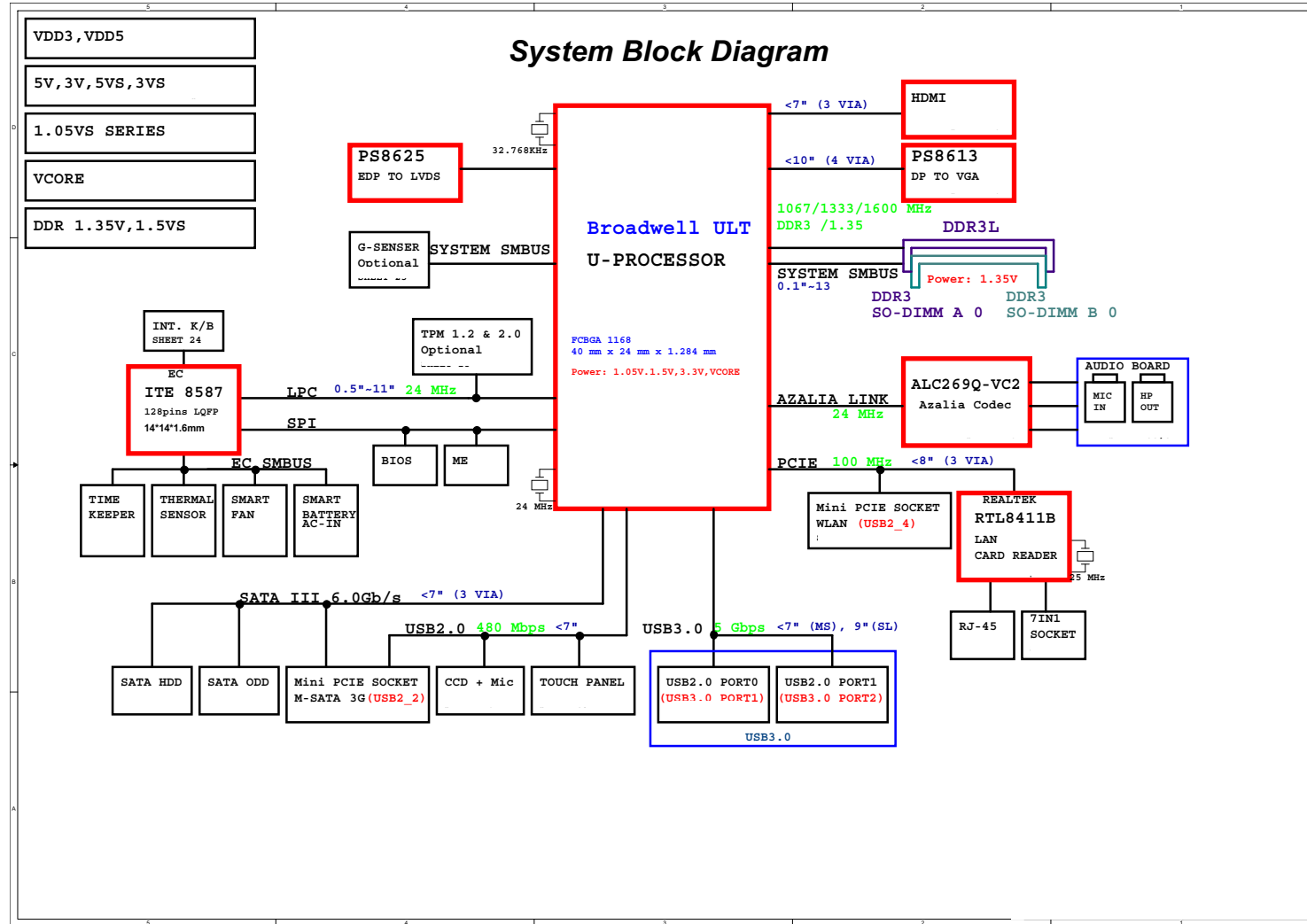
Table B - 1
**SCHEMATIC
DIAGRAMS**



Version Note

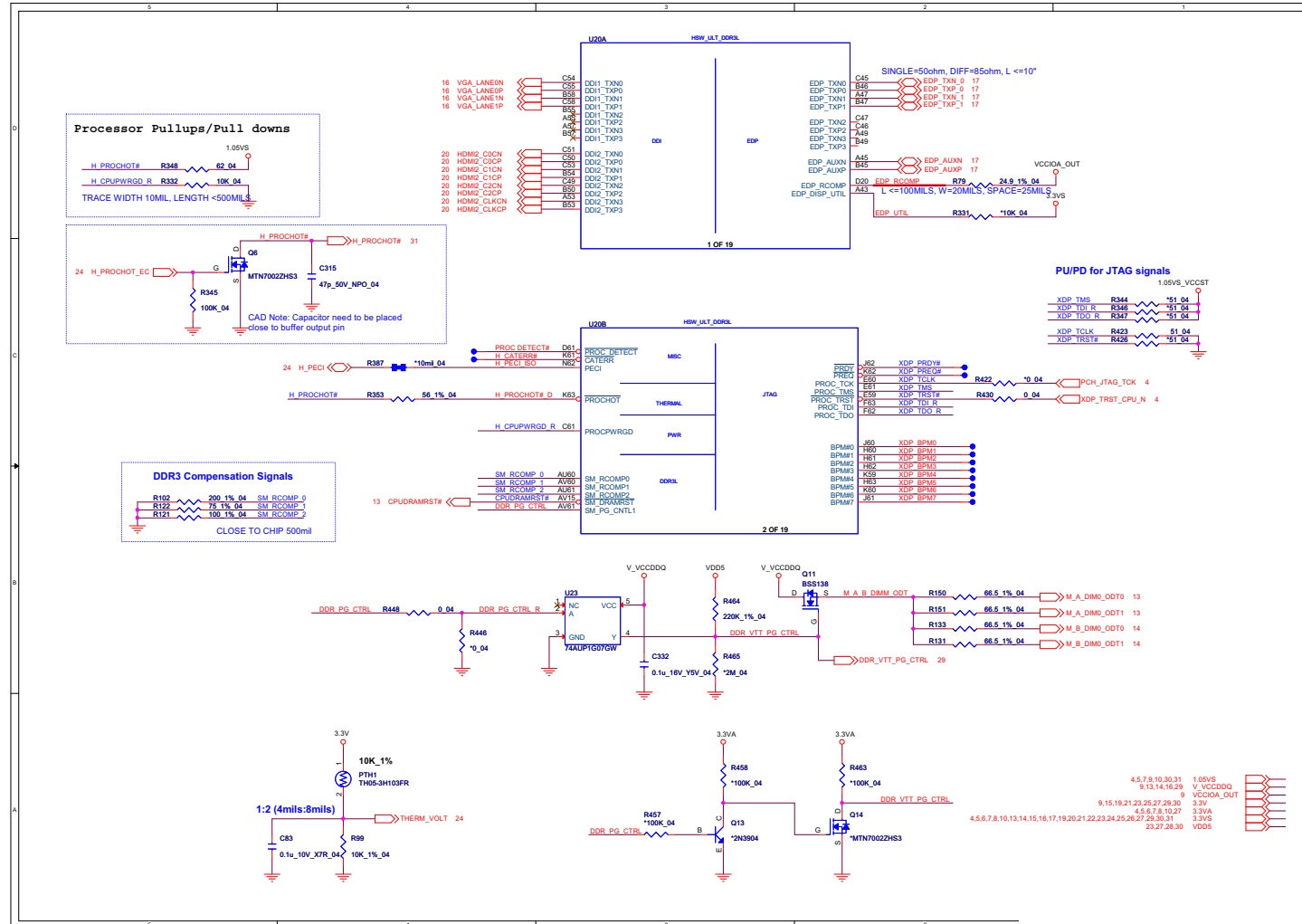
The schematic diagrams in this chapter are based upon version 6-7P-W5S27-006. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram



Sheet 1 of 38
System Block
Diagram

Processor 1/7

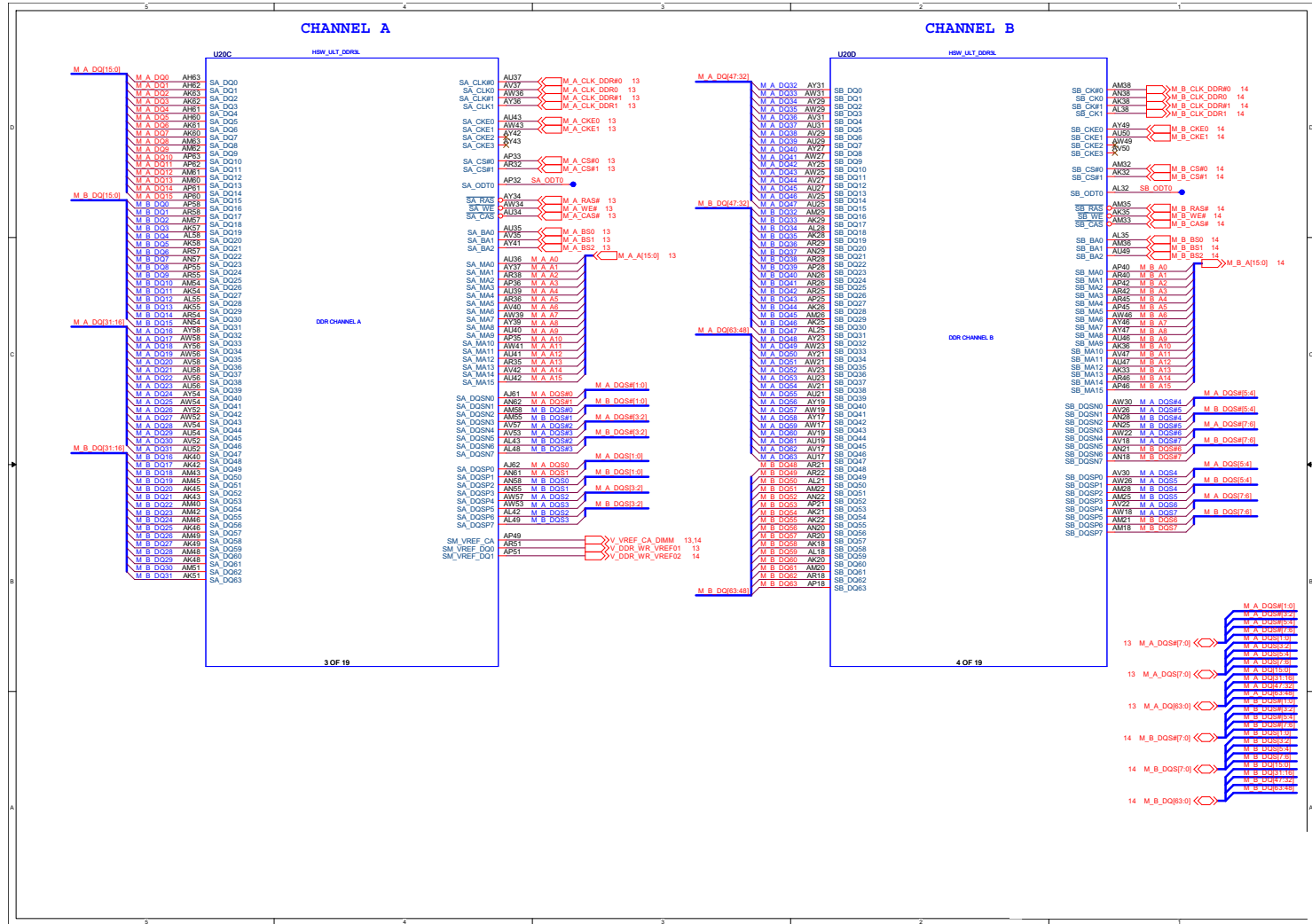


Sheet 2 of 38
Processor 1/7

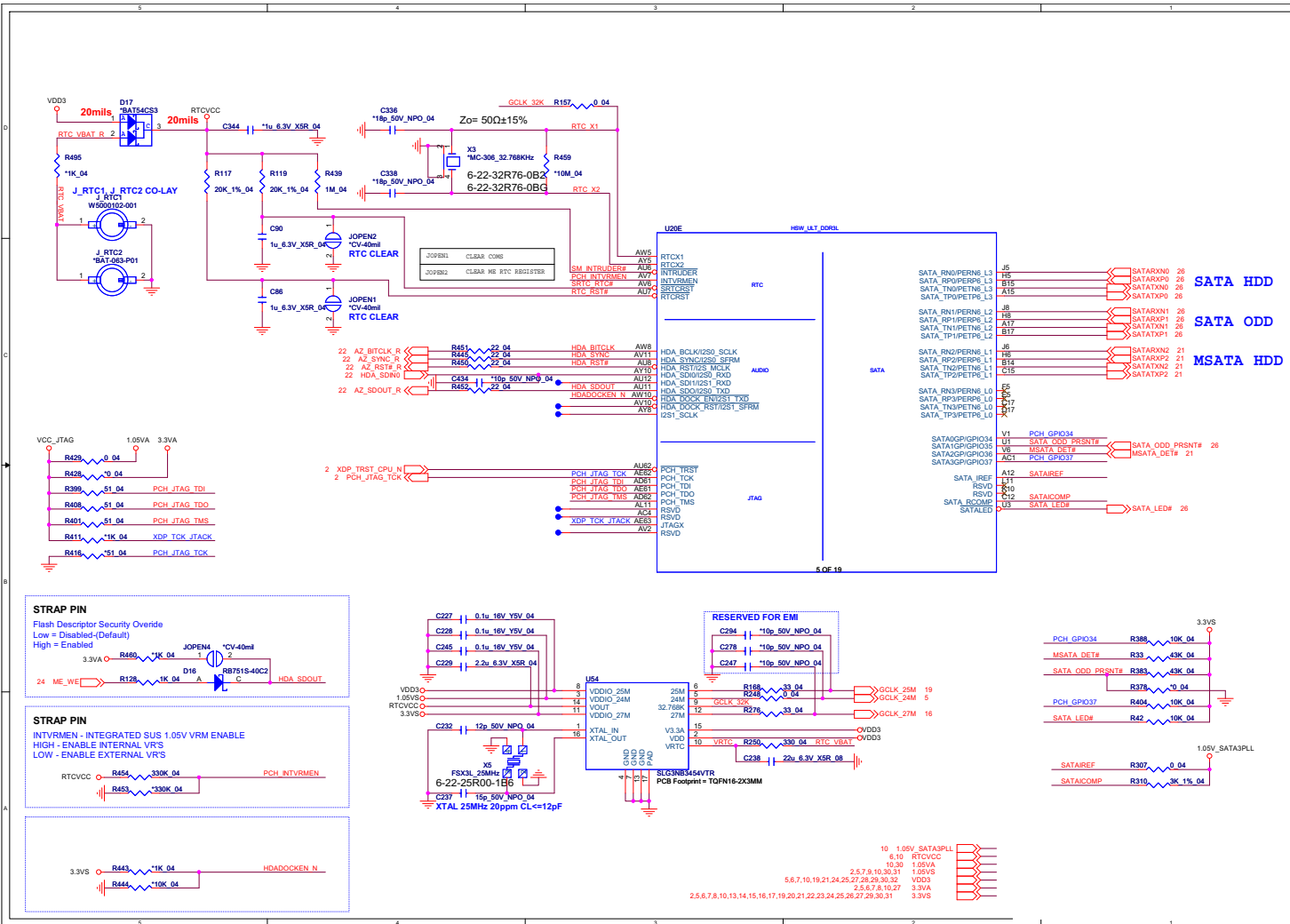
B.Schematic Diagrams

Processor 2/7

Sheet 3 of 38
Processor 2/7



Processor 3/7

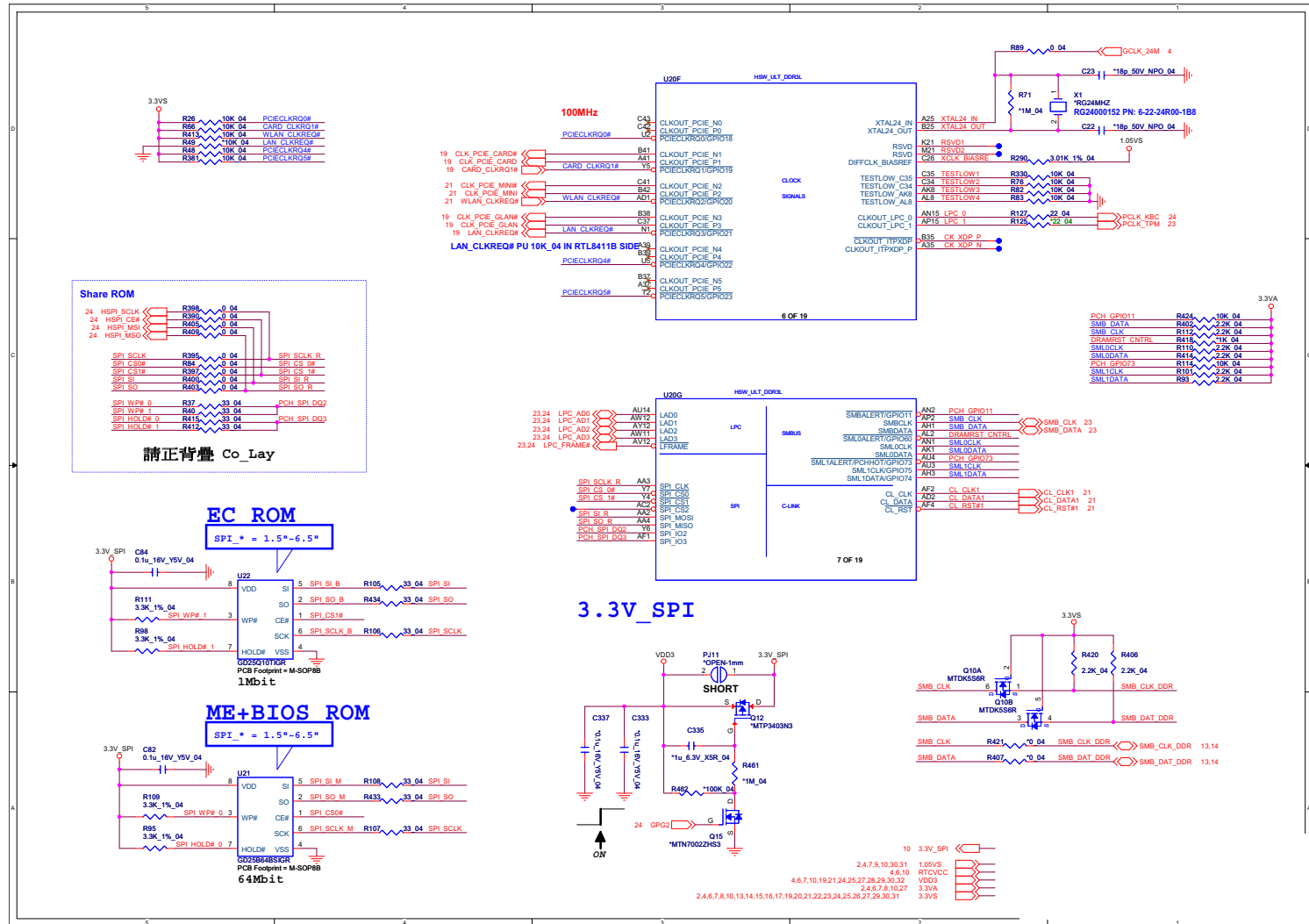


Sheet 4 of 38
Processor 3/7

B.Schematic Diagrams

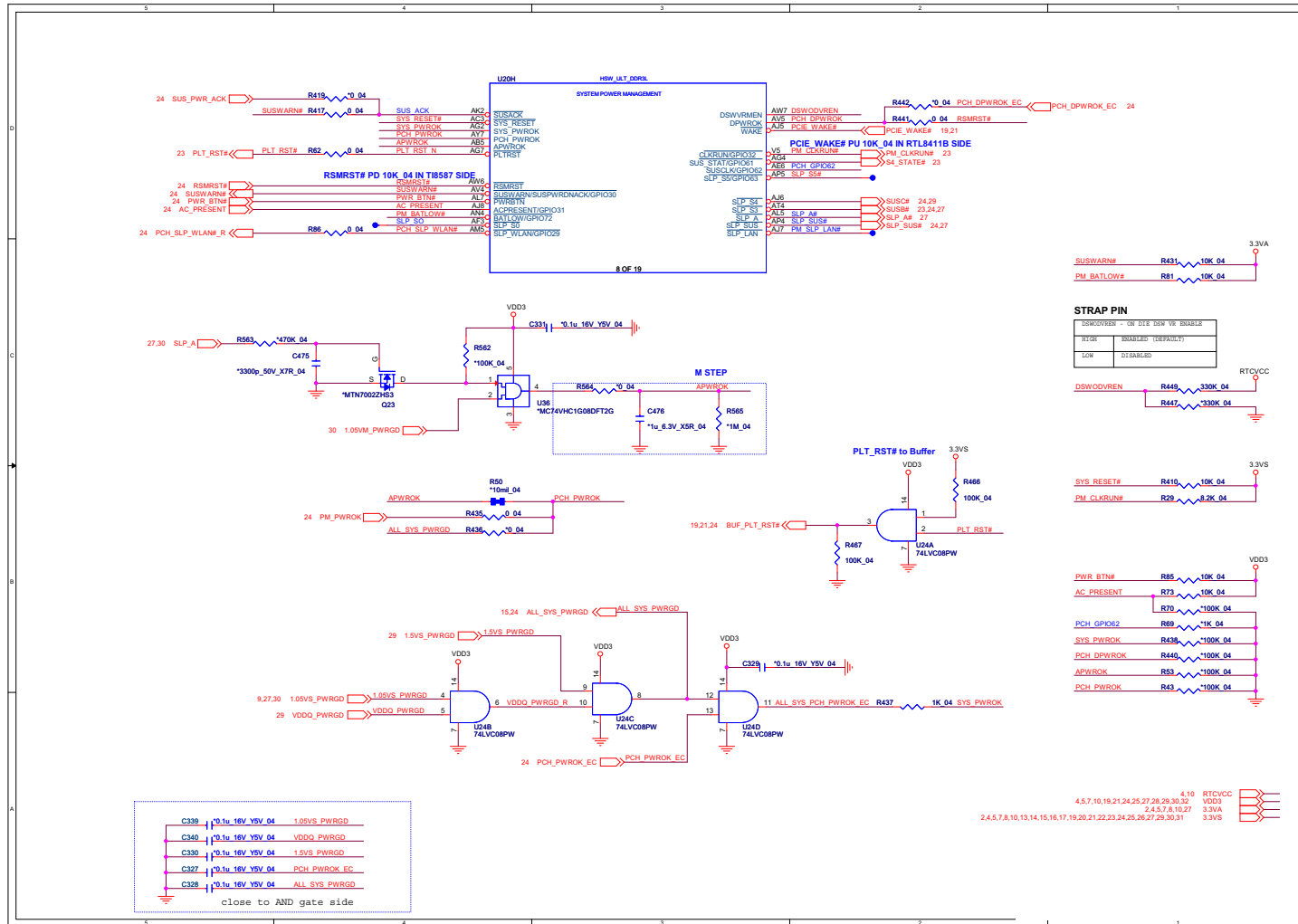
Processor 4/7

Sheet 5 of 38
Processor 4/7

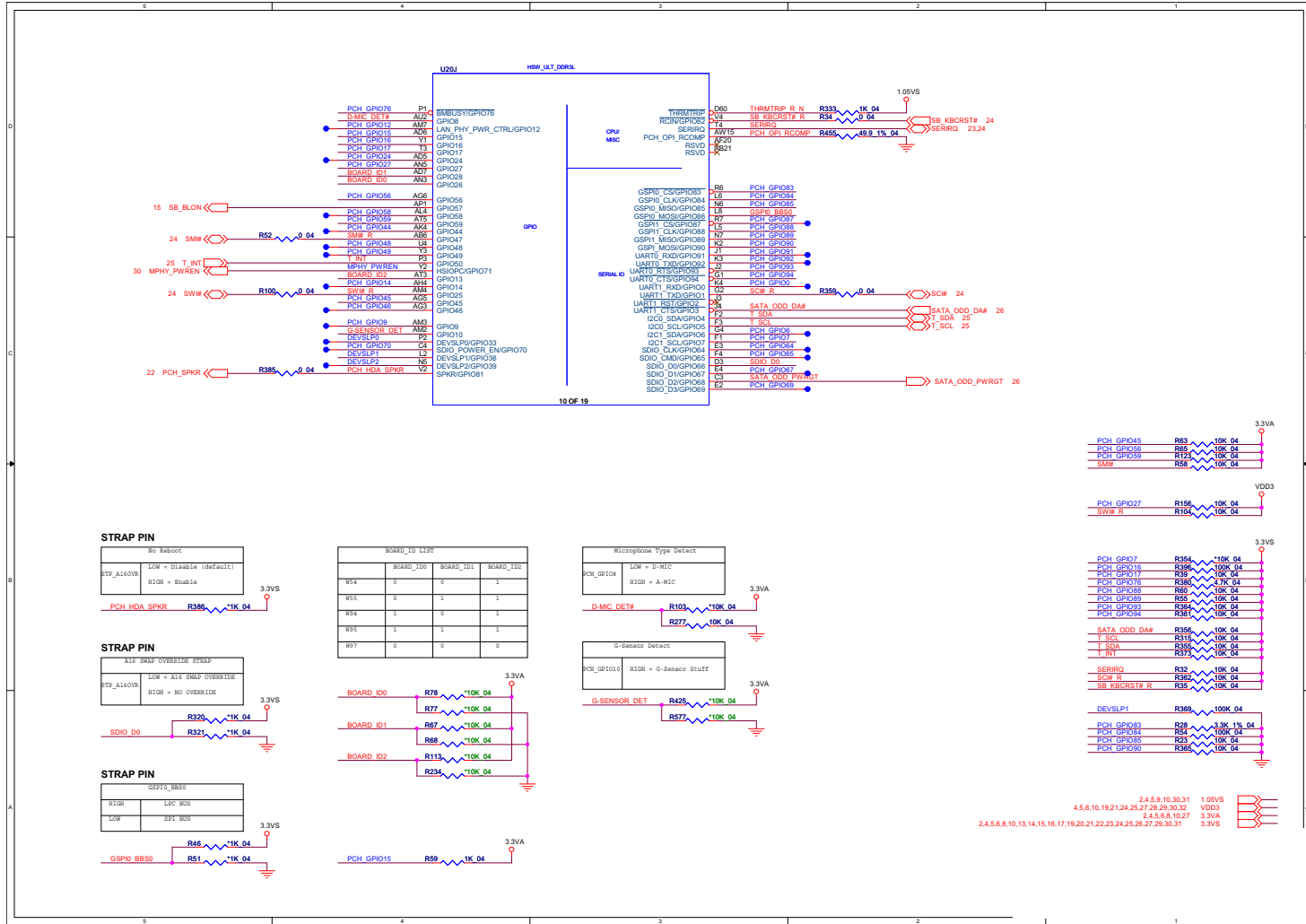


Processor 5/7

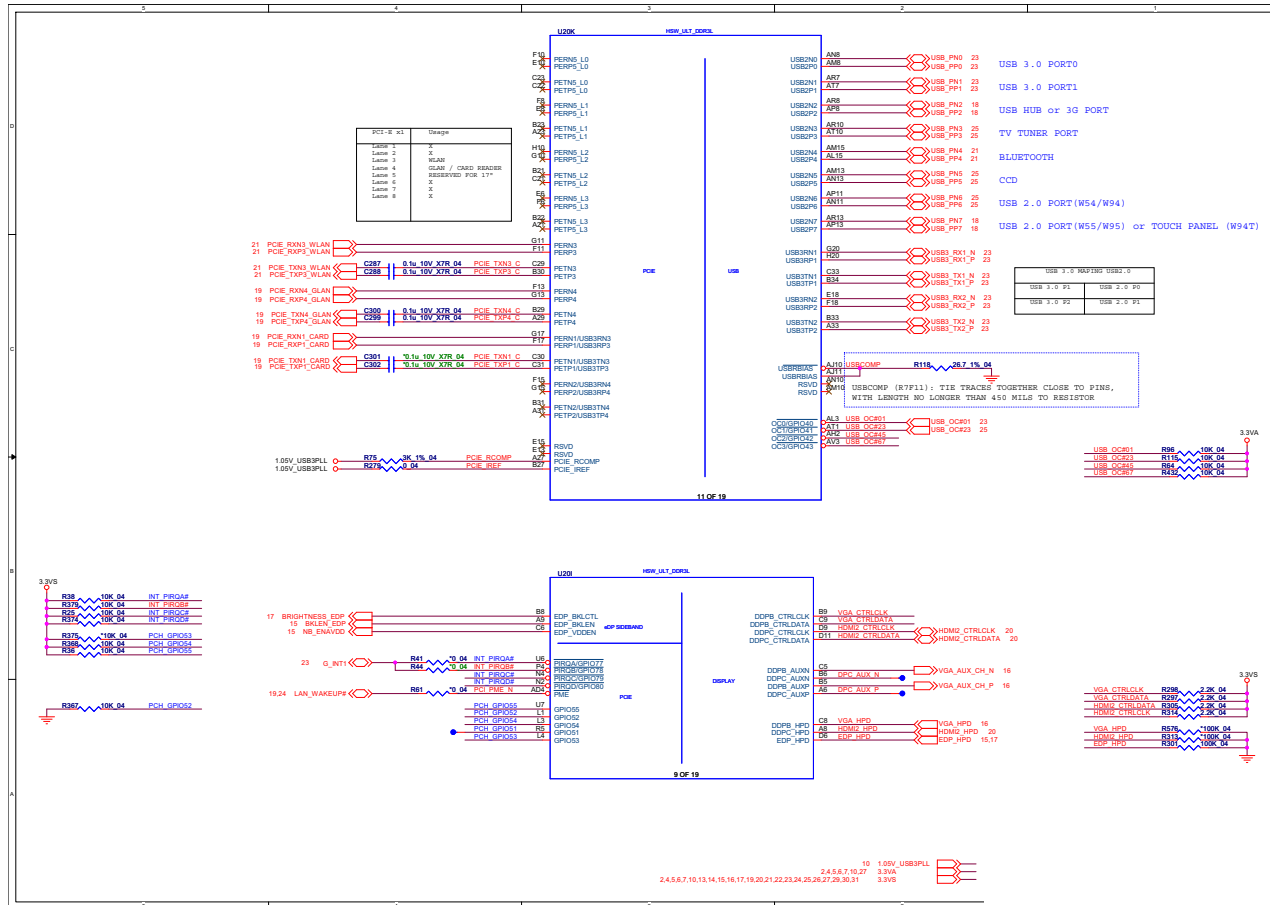
Sheet 6 of 38
Processor 5/7



Processor 6/7



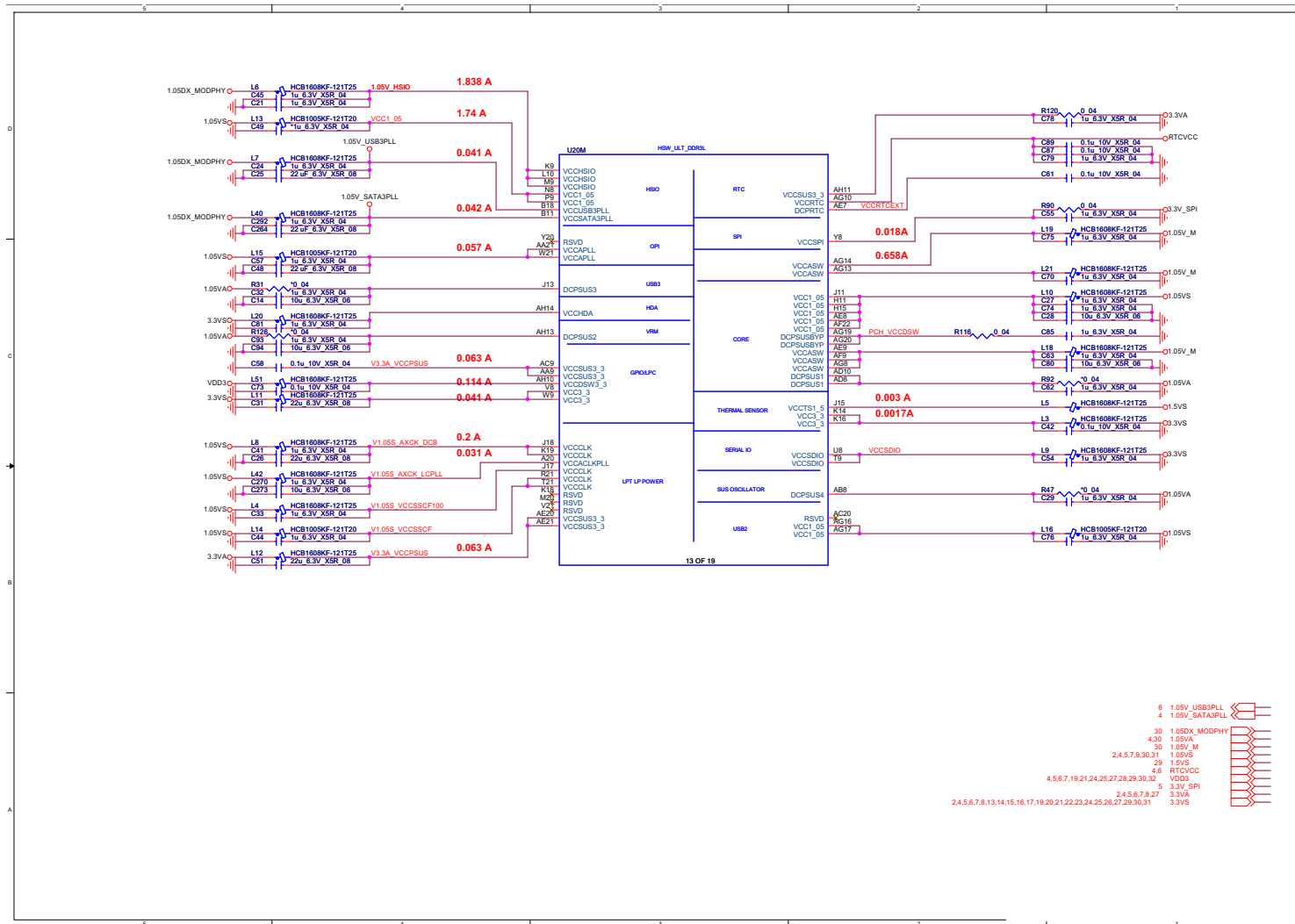
Processor 7/7



B.Schematic Diagrams

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Processor 7/7

Power 2

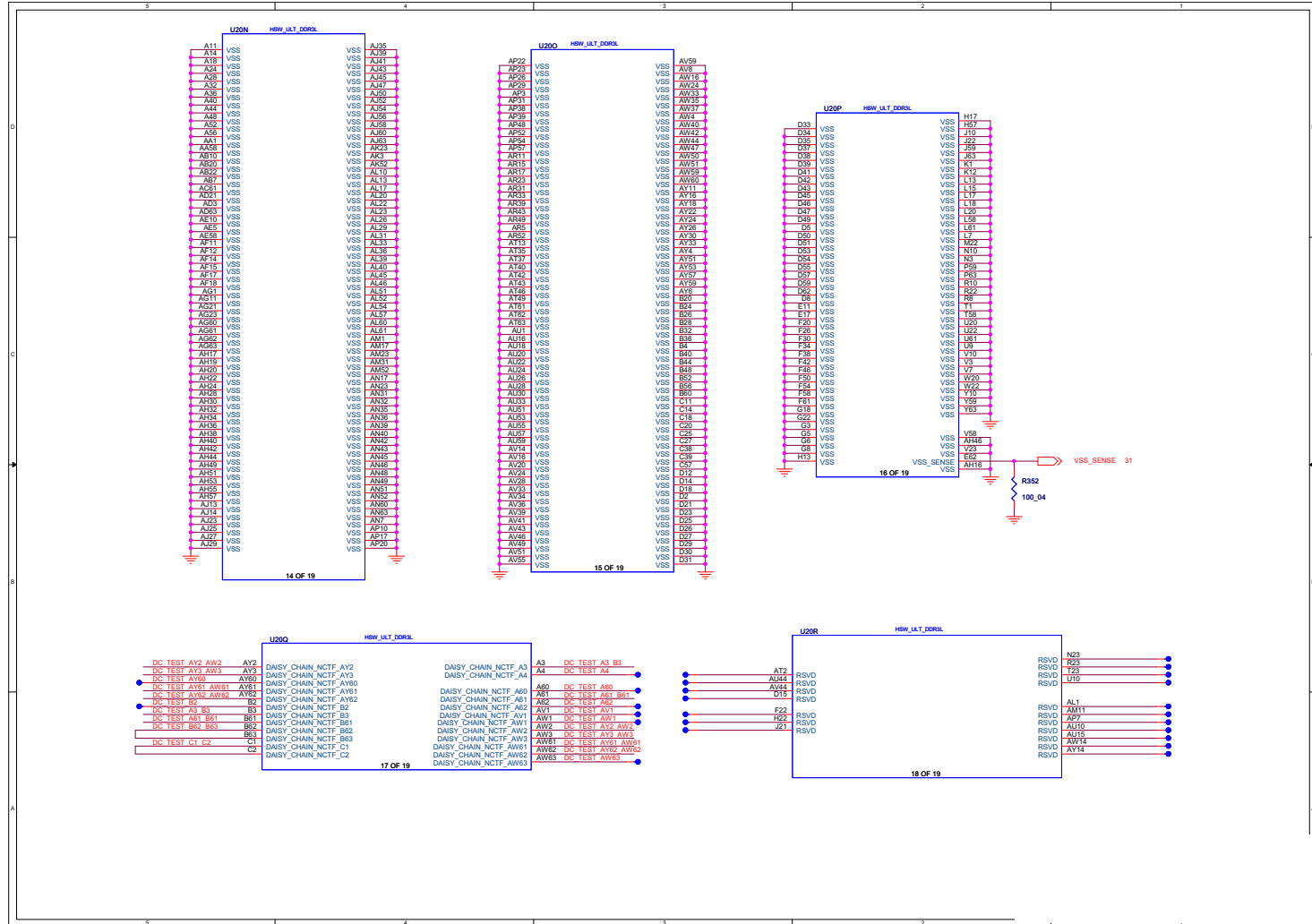


Sheet 10 of 38
Power 2

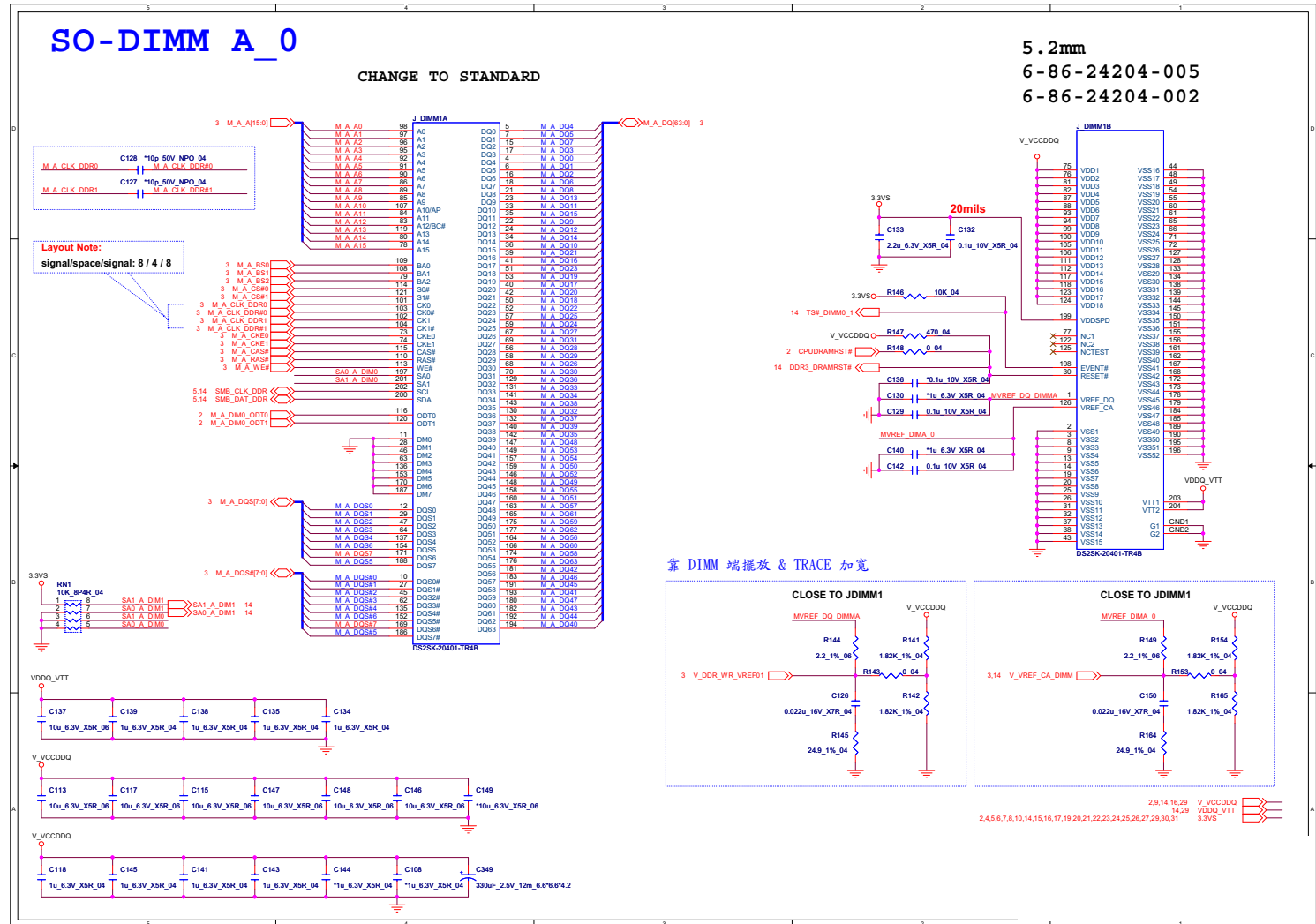
B.Schematic Diagrams

Power VSS

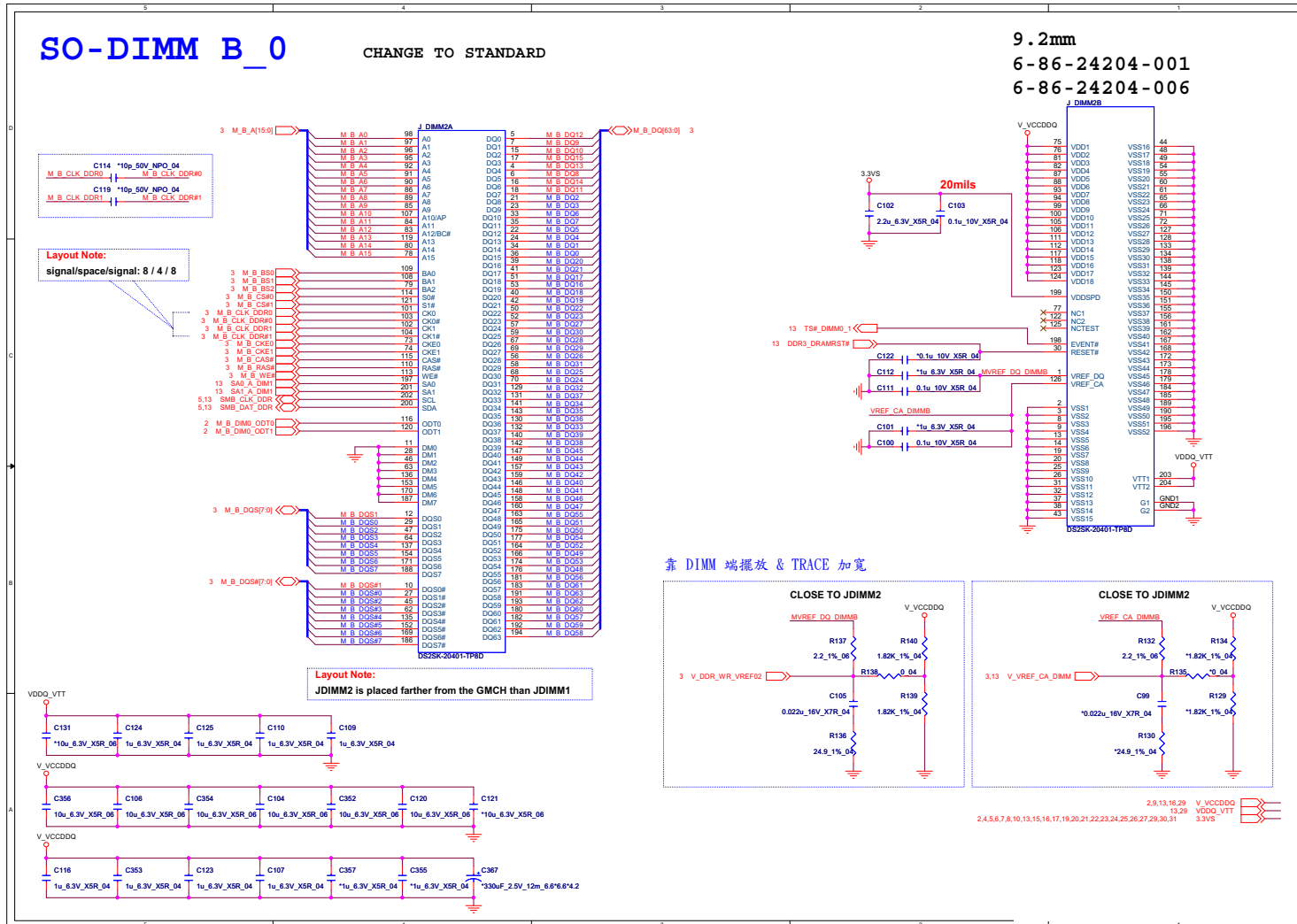
Sheet 11 of 38
Power VSS



DDR3 SO-DIMM A



DDR3 SO-DIMM B

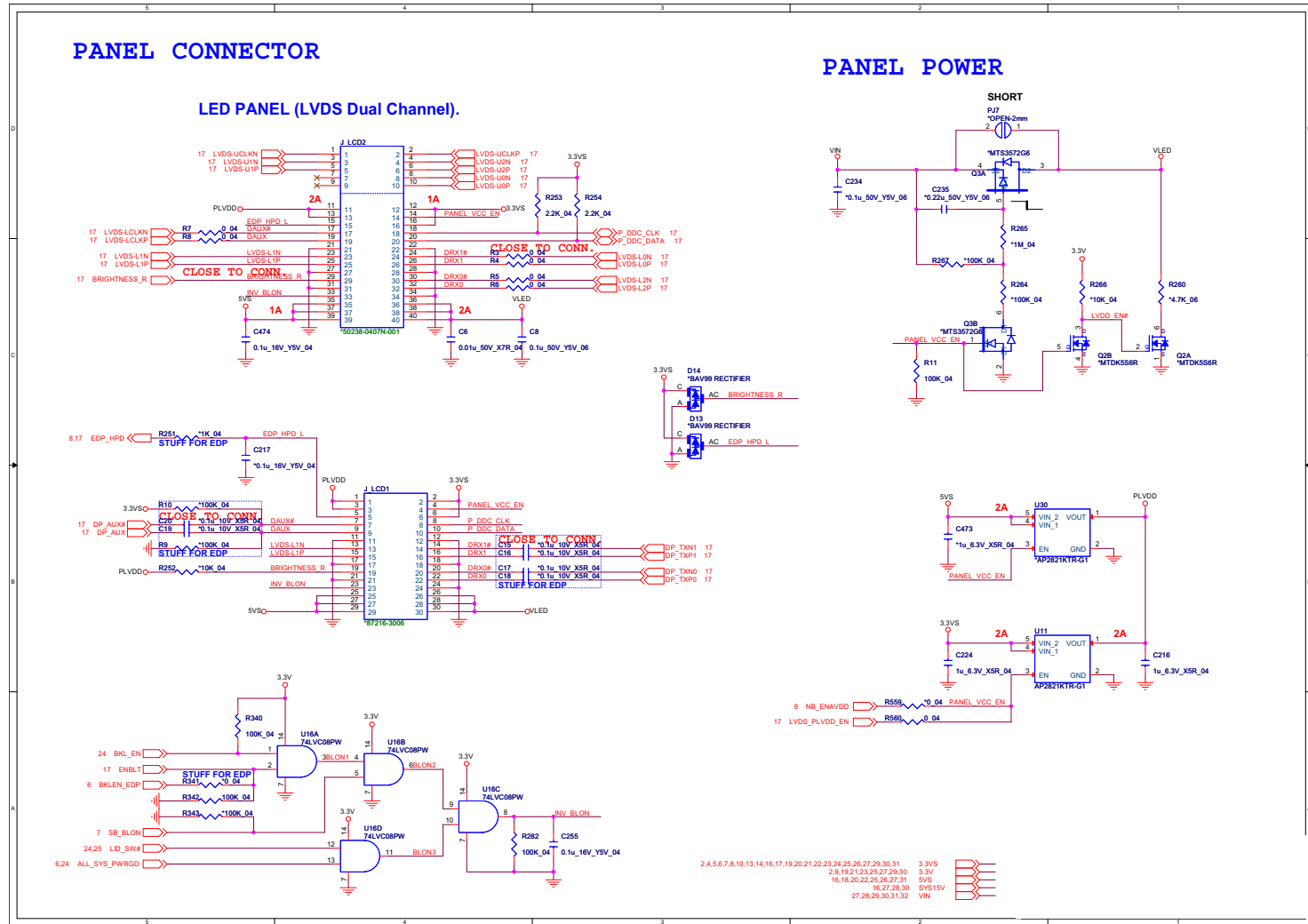


Sheet 14 of 38
DDR3 SO-DIMM B

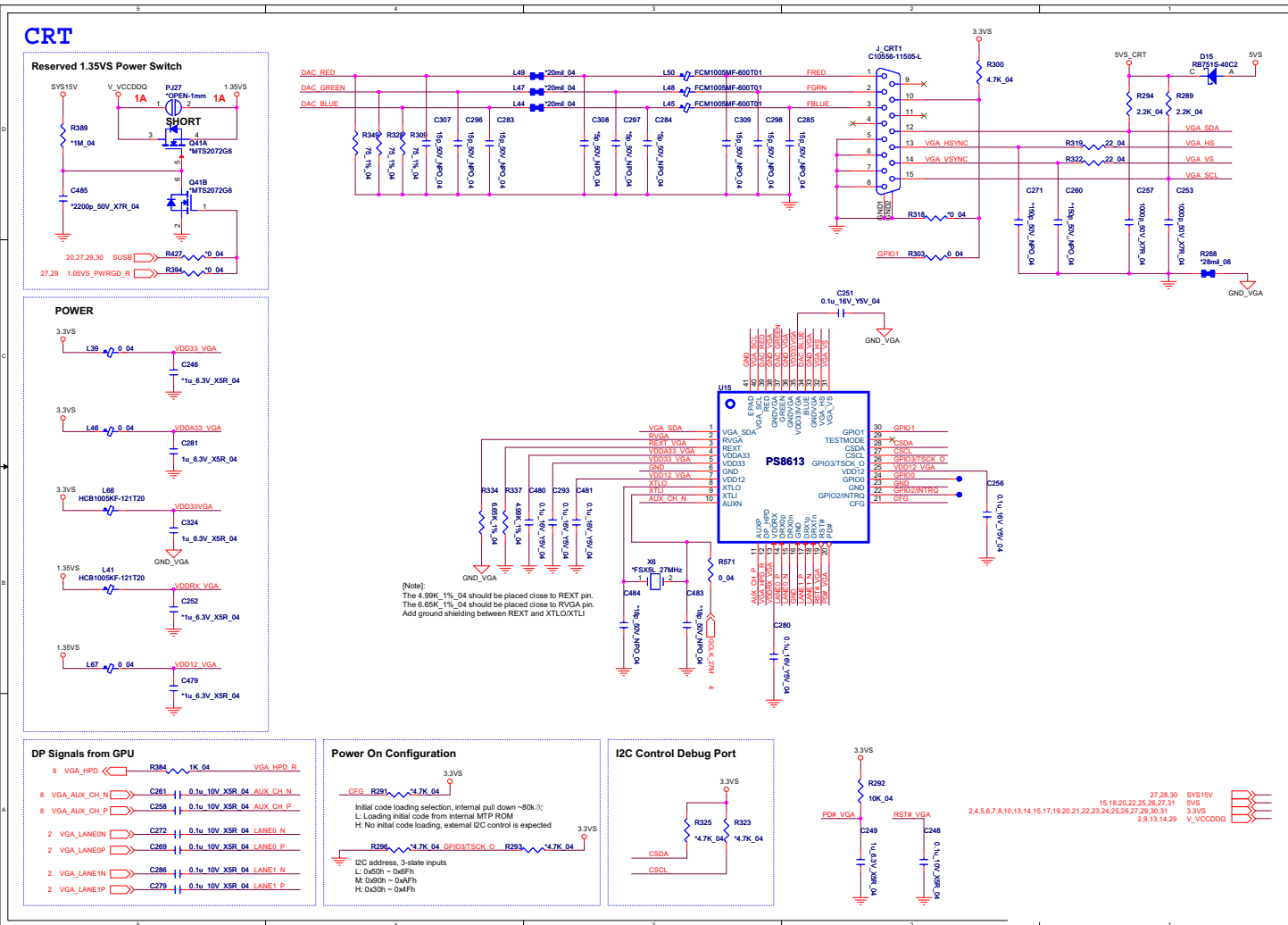
B.Schematic Diagrams

Panel, Inverter

Sheet 15 of 38
Panel, Inverter



VGA PS8613

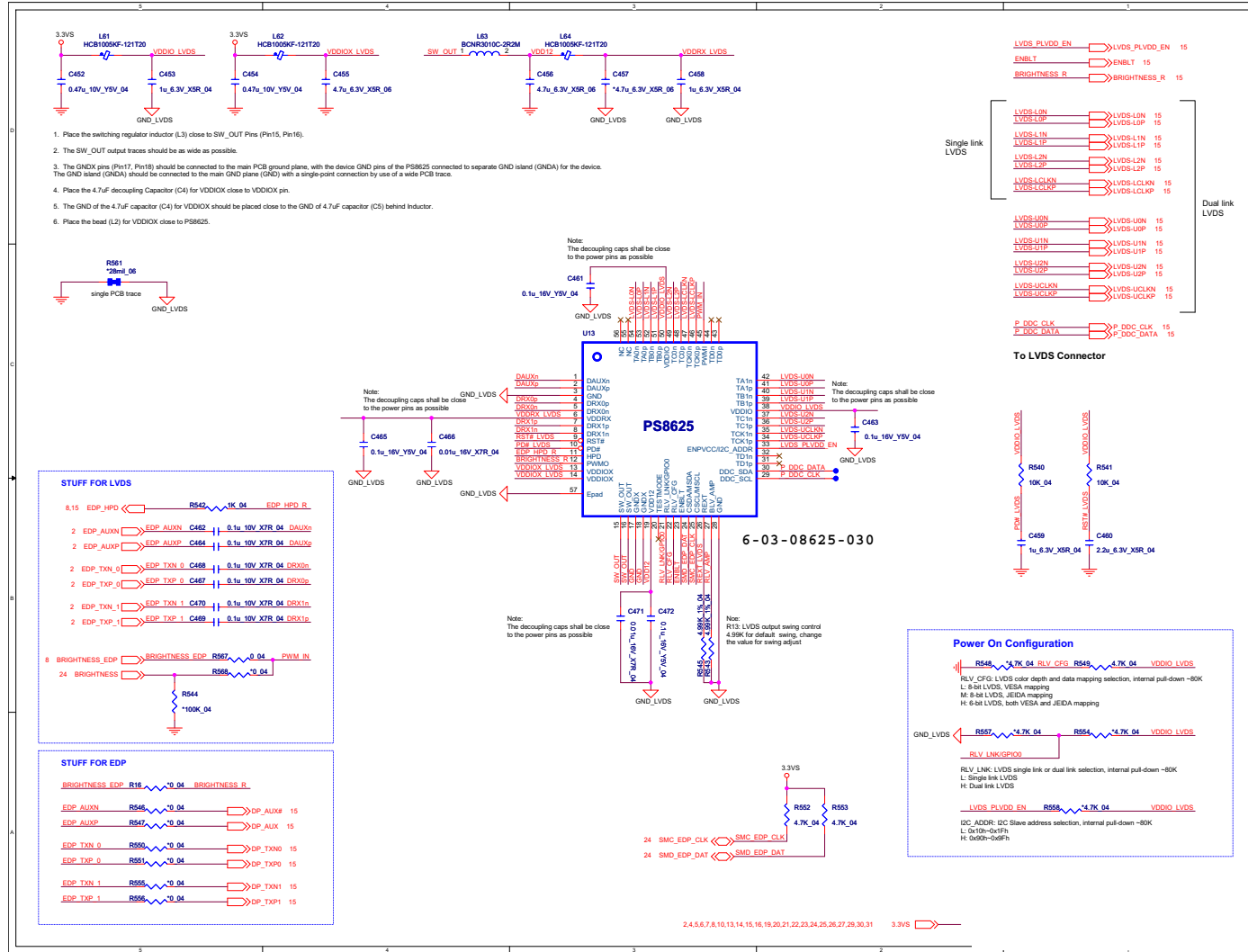


Sheet 16 of 38
VGA PS8613

B.Schematic Diagrams

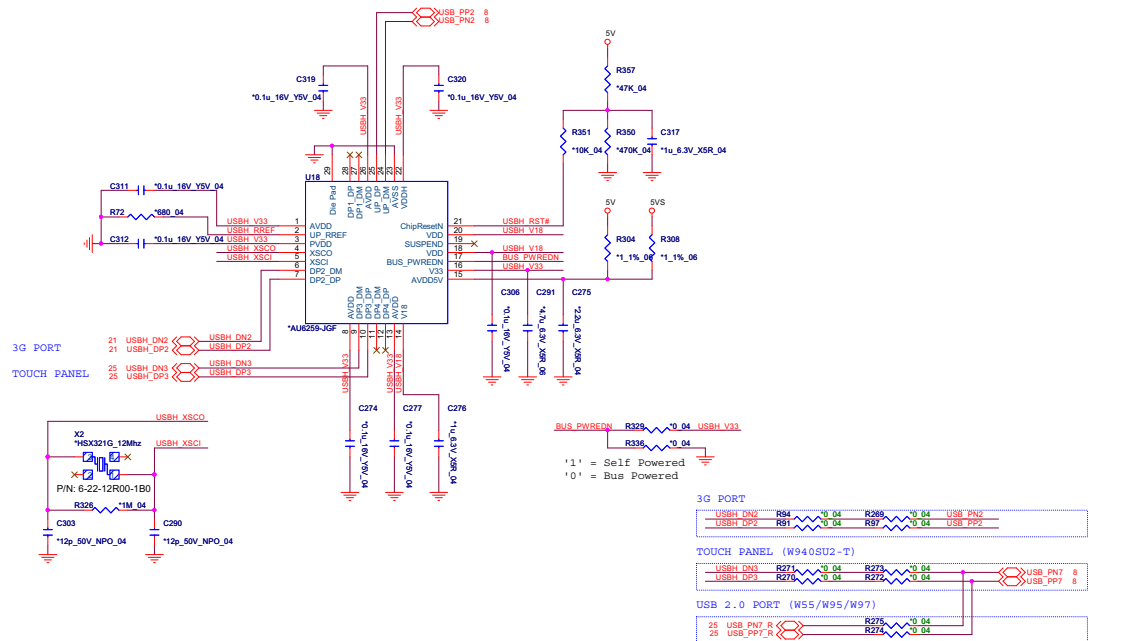
LVDS PS8625

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LVDS PS8625



USB Hub AU6259-JGF

USB HUB AU6259-JGF



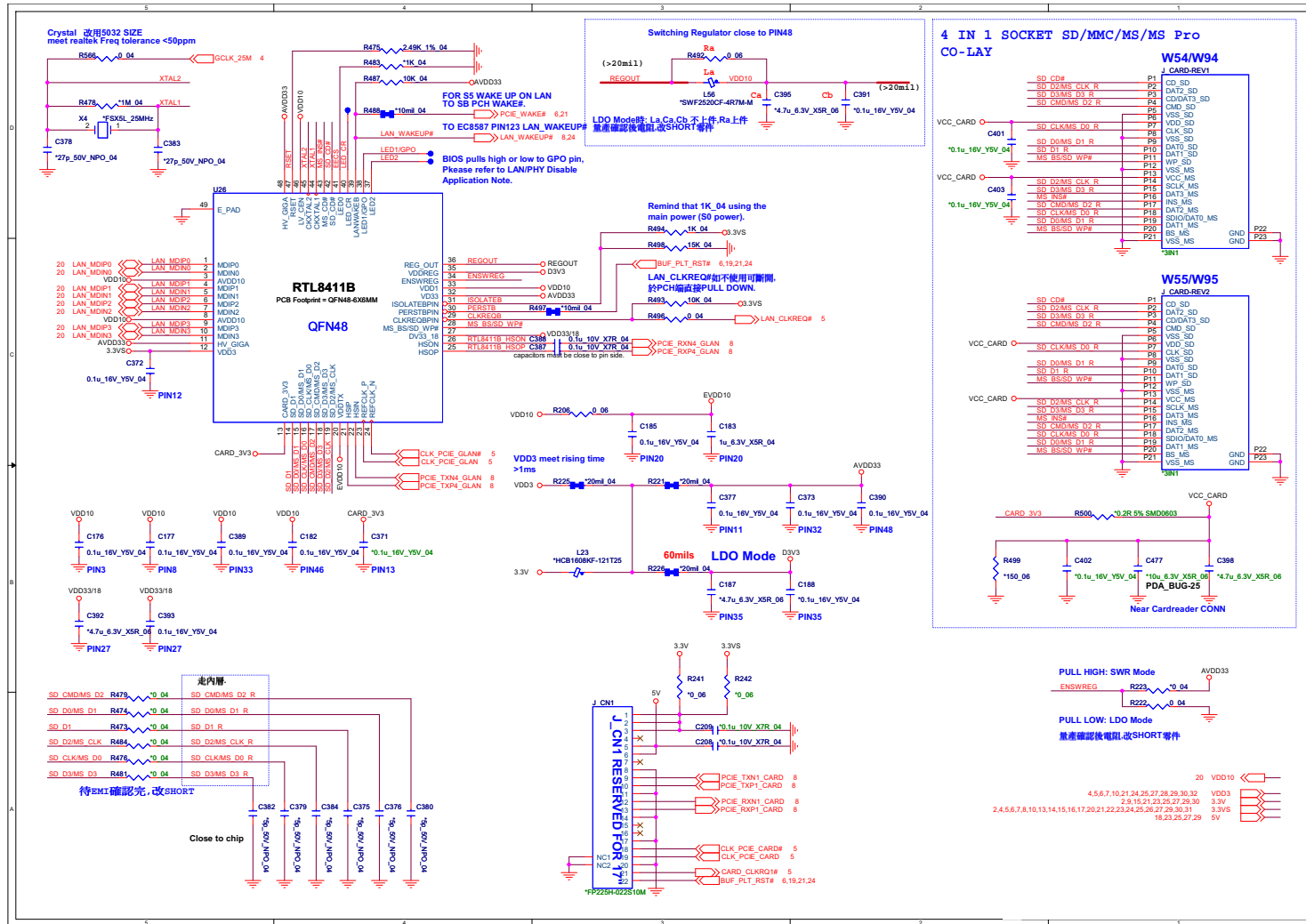
- USB signal line trace:
1. Keep traces of USB bus D+ and D- the same length.
 2. Achieve 90 ohm differential characteristic impedance.
 3. Achieve 45 ohm common characteristic impedance.
 4. Maintain parallelism between D+ and D-.
 5. Do not route USB2.0 D+ and D- over the power plane split.
 6. Do not route USB2.0 D+ and D- over the other high frequency signals.
 7. It is preferred to route USB2.0 D+ and D- over ground layer.
 8. It is preferred to route USB2.0 D+ and D- using single layer.
- For more detail, see design guideline in design kit.



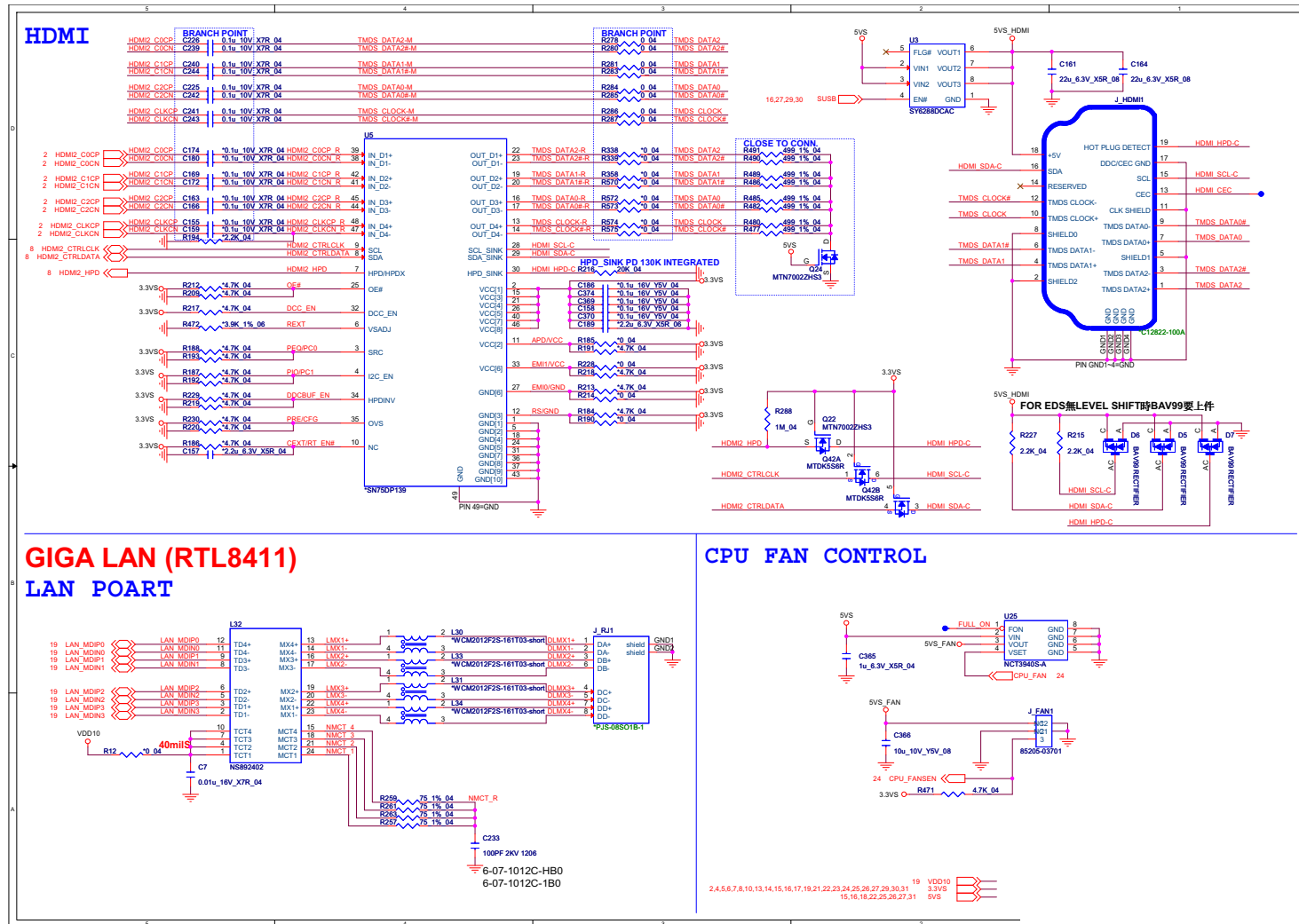
Sheet 18 of 38
USB Hub
AU6259-JGF

Card Reader & LAN RTL8411B

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Card Reader & LAN
RTL8411B



HDMI, RJ45, Fan

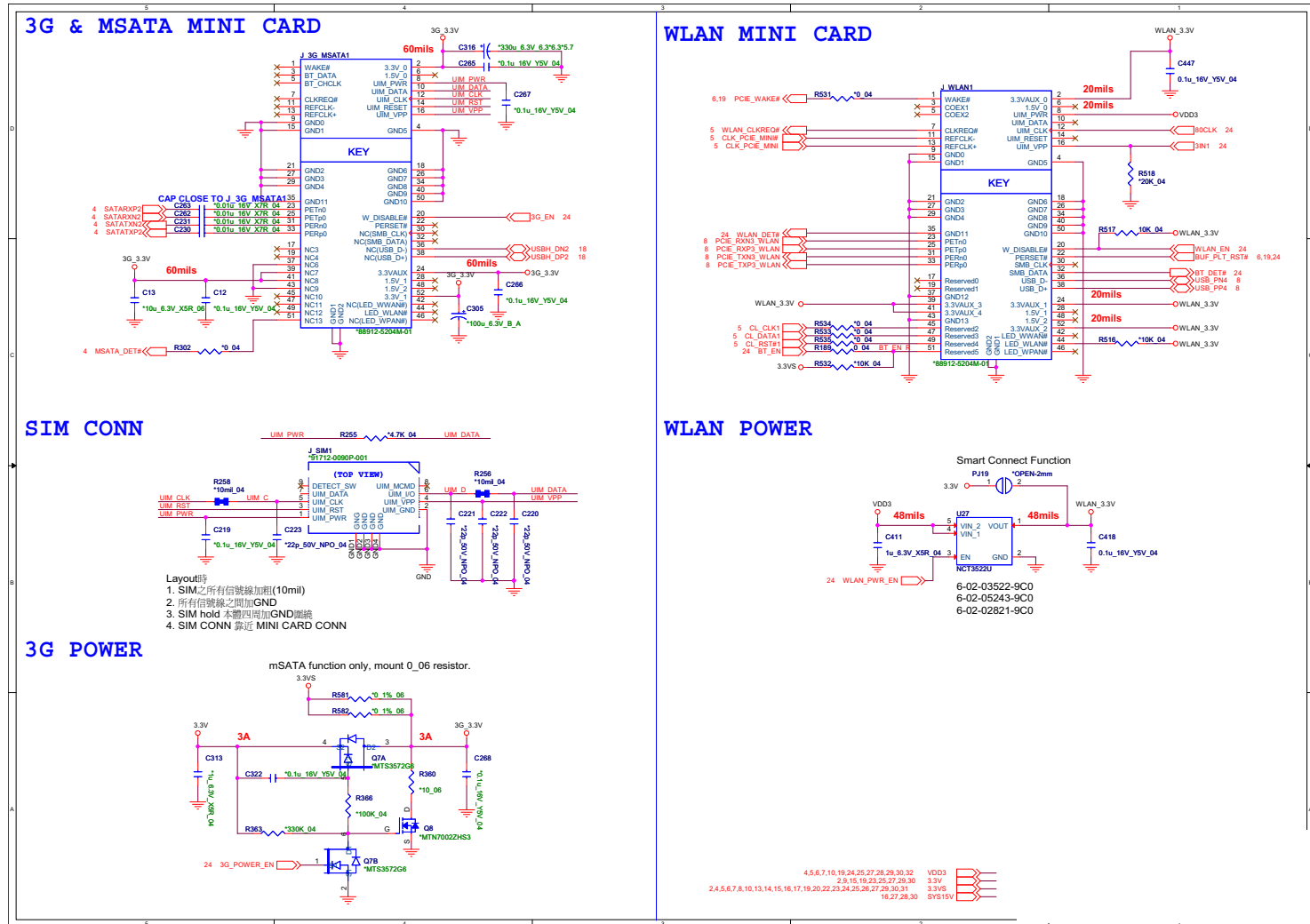


Sheet 20 of 38
 HDMI, RJ45, Fan

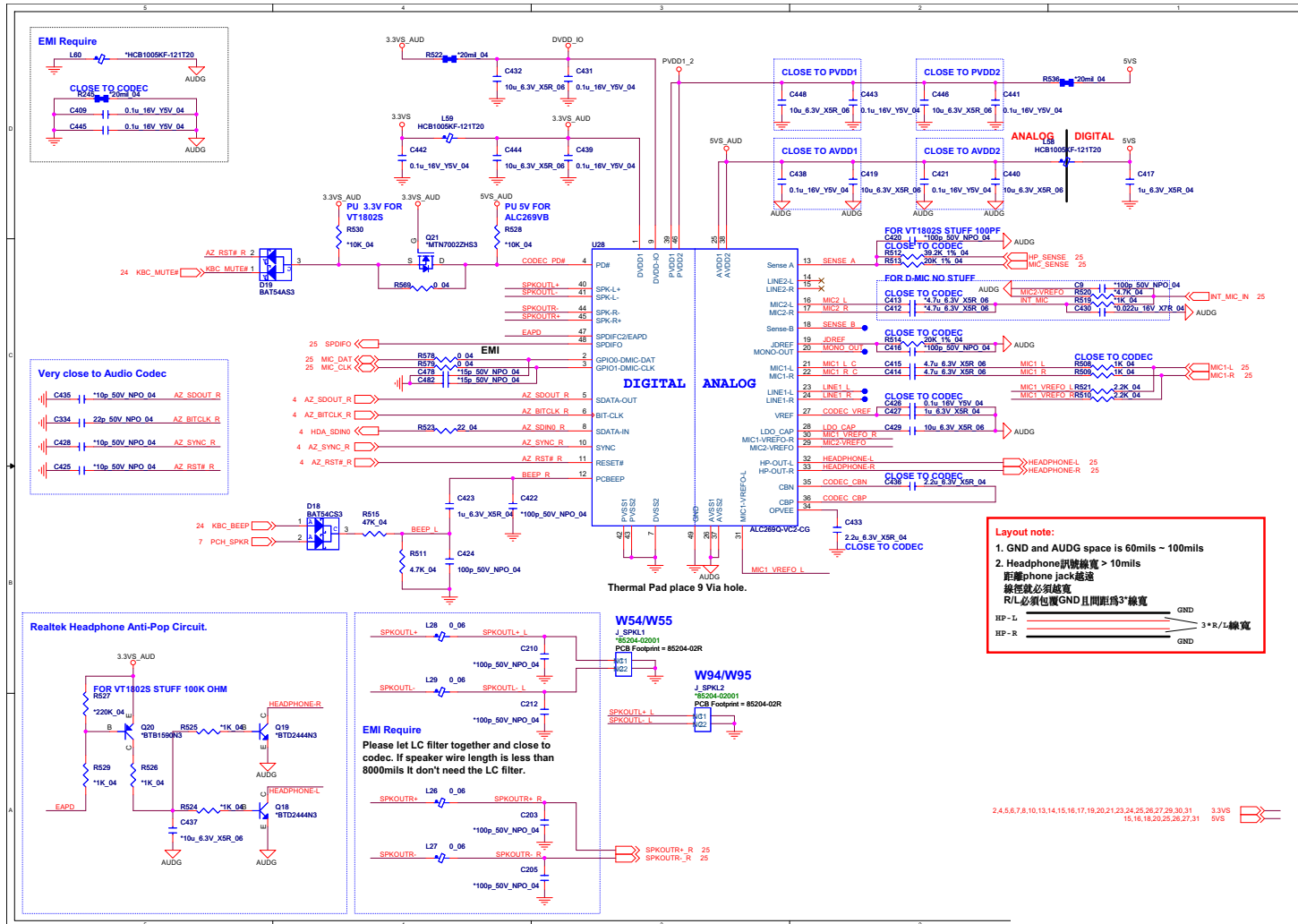
B.Schematic Diagrams

WLAN, 3G, MSATA

Sheet 21 of 38
WLAN, 3G, MSATA



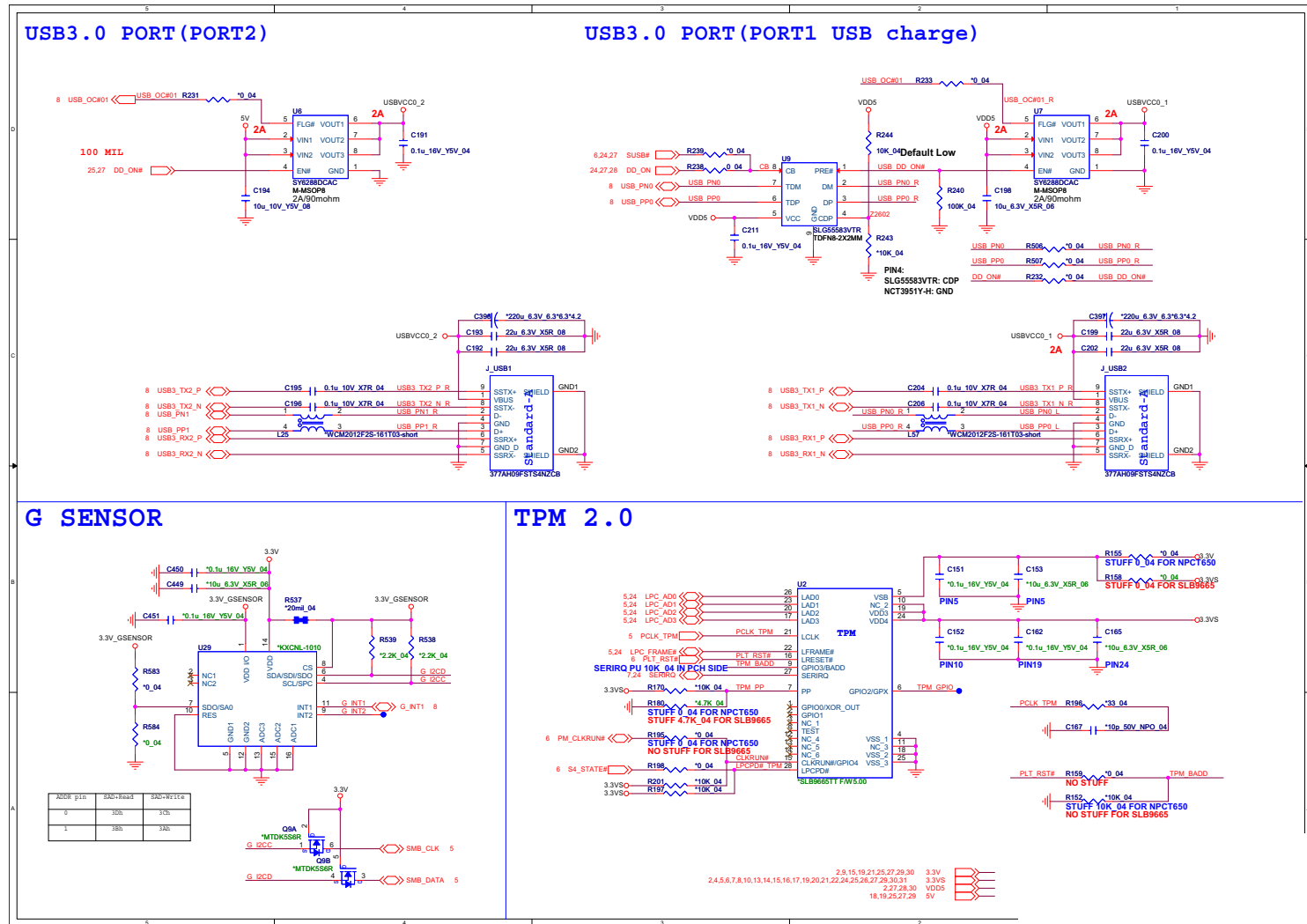
Audio Codec ALC269



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Audio Codec
ALC269

B.Schematic Diagrams

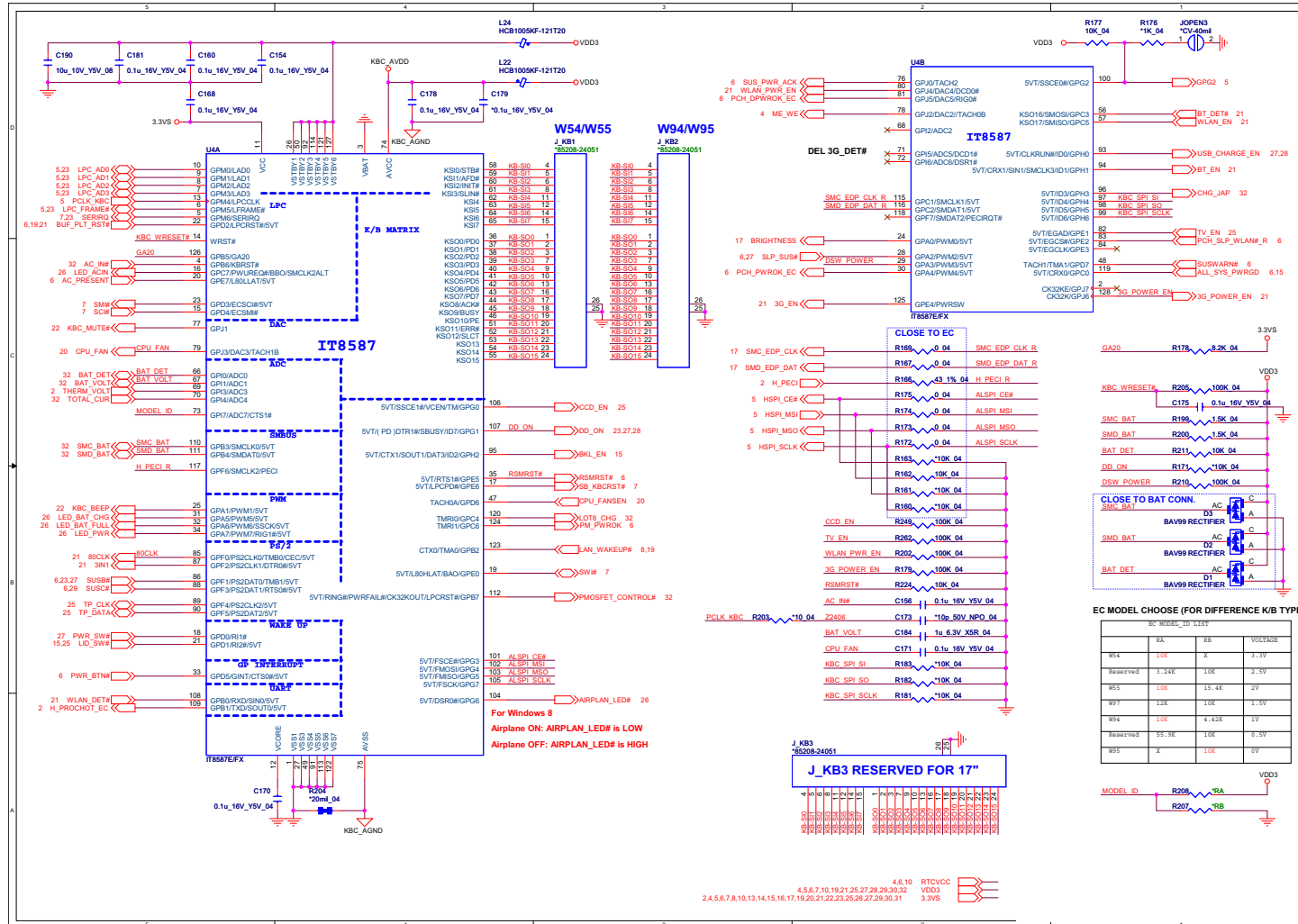
USB 3.0, G-Sensor, TPM



B.Schematic Diagrams

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USB 3.0, G-Sensor,
TPM

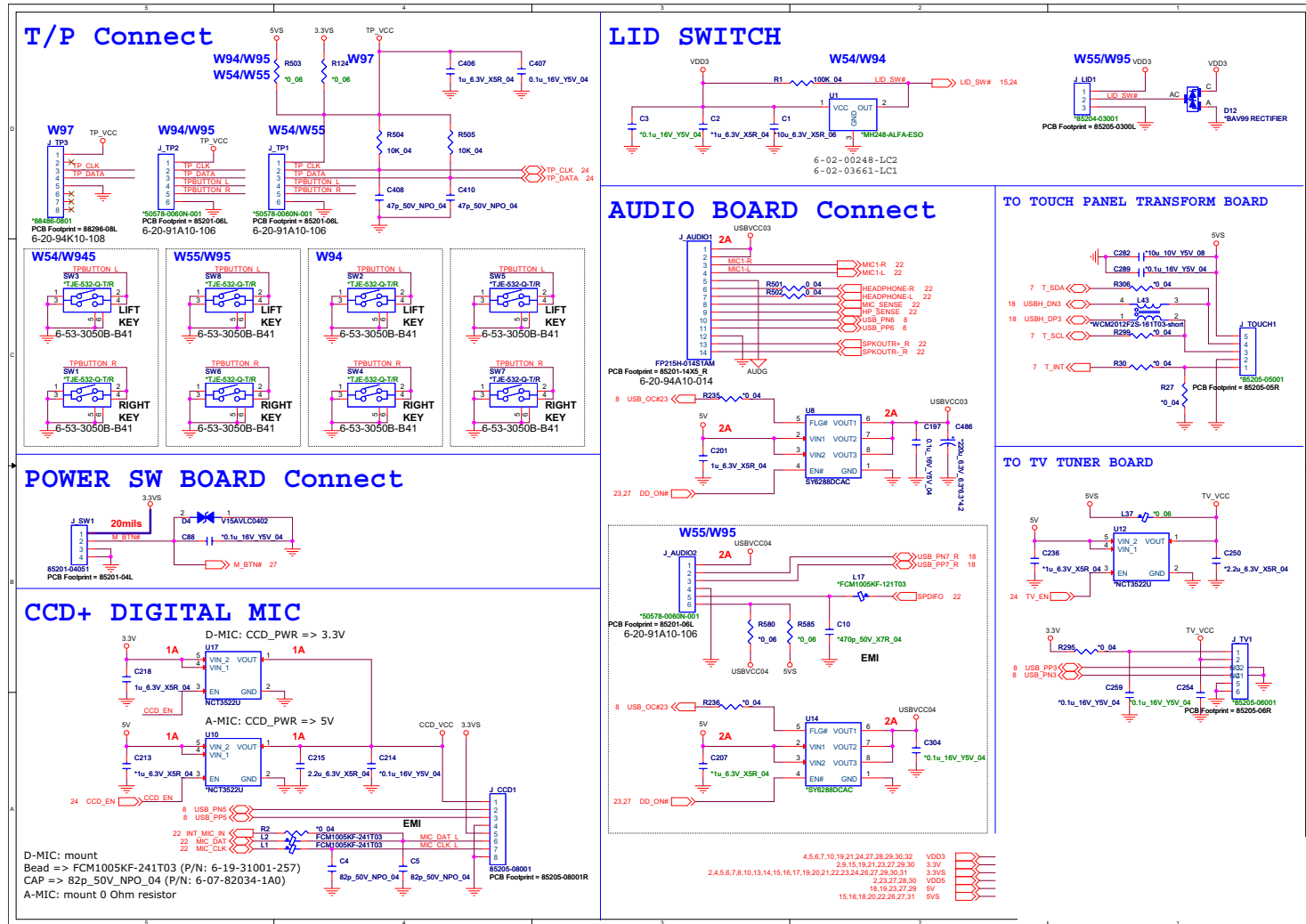
HDD, CCD, TPM, Power Con



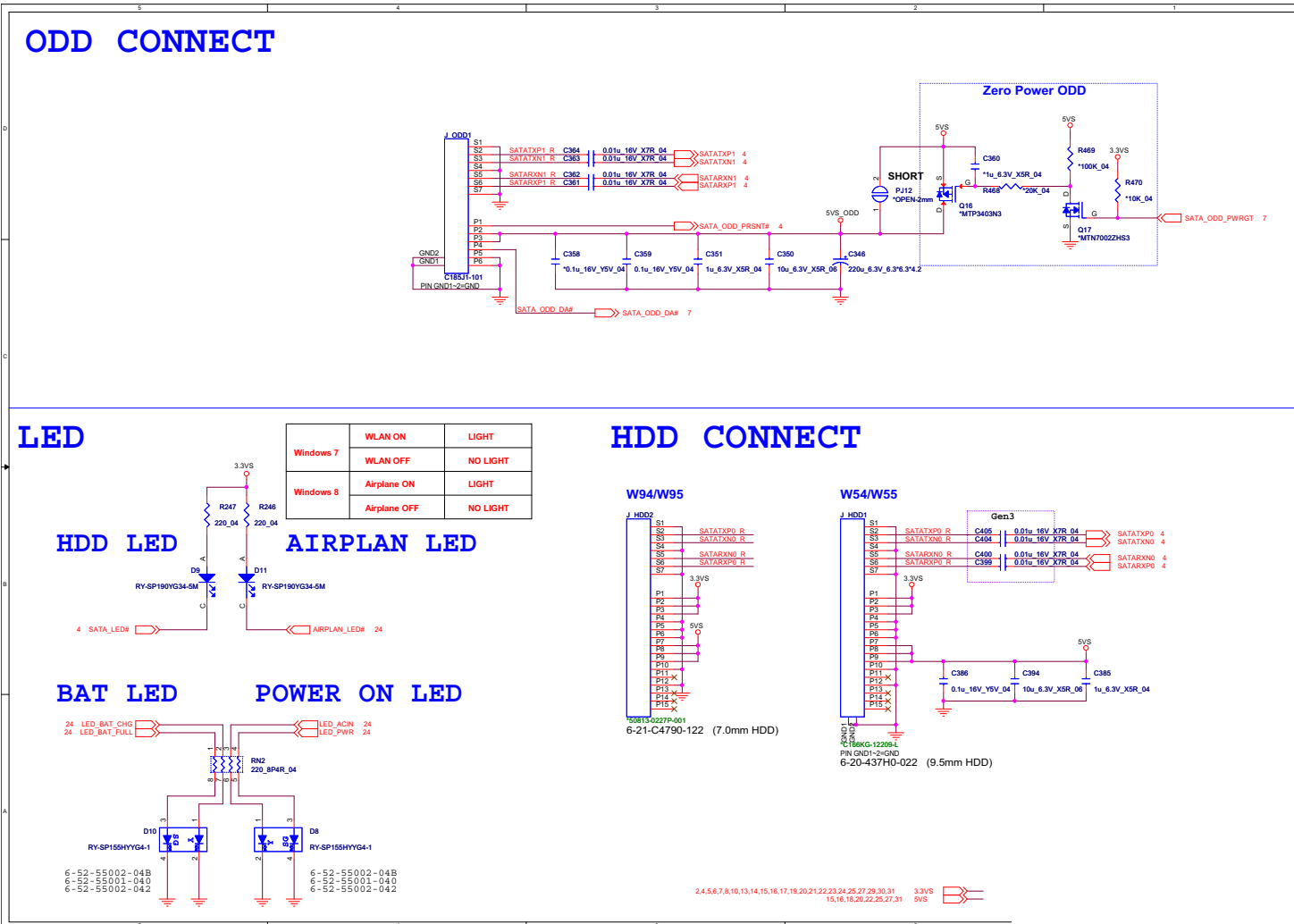
B.Schematic Diagrams

CCD, MIC, LID, I/O Connector

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CCD, MIC, LID,
I/O Connector



HDD, ODD, LED

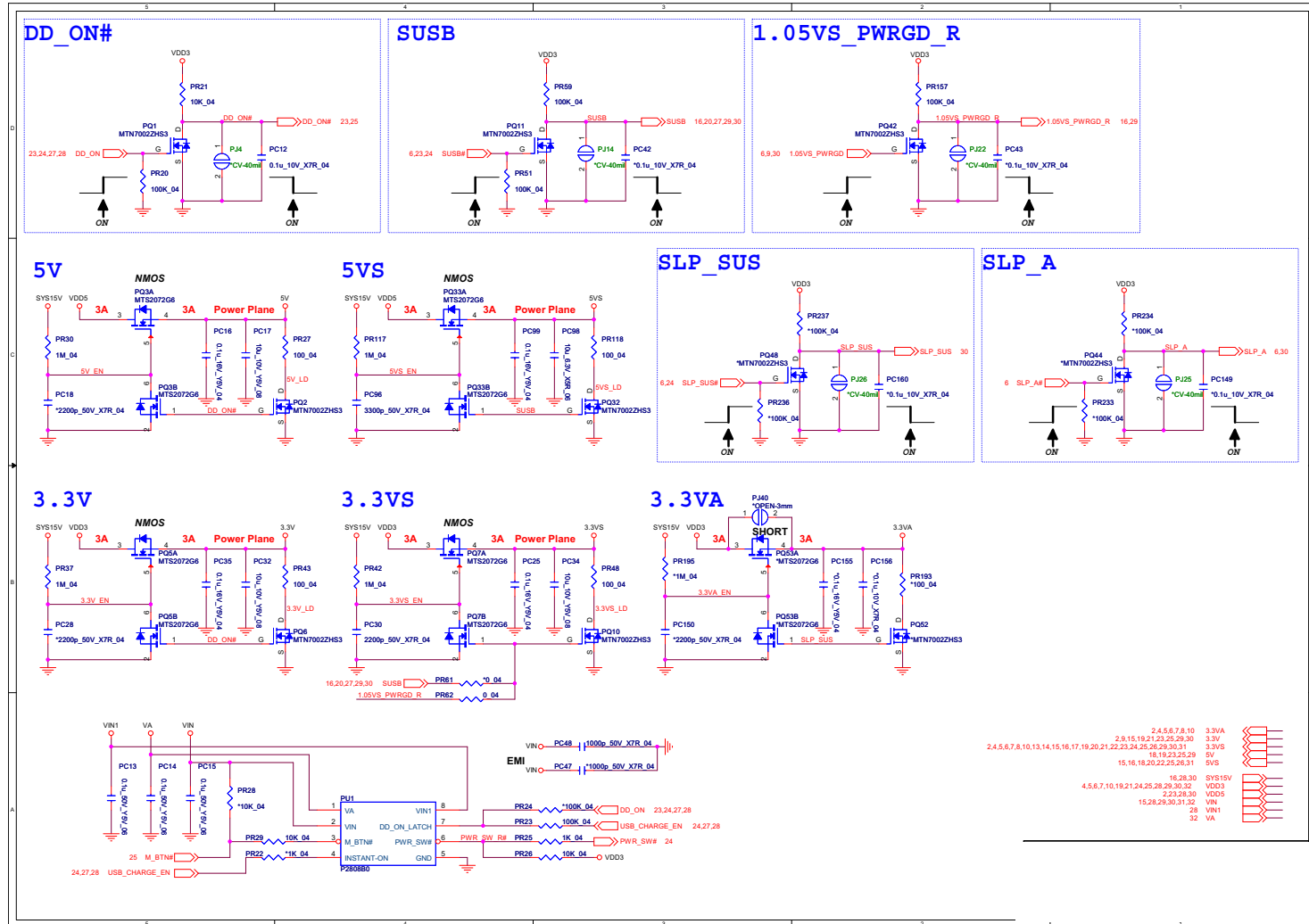


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HDD, ODD, LED

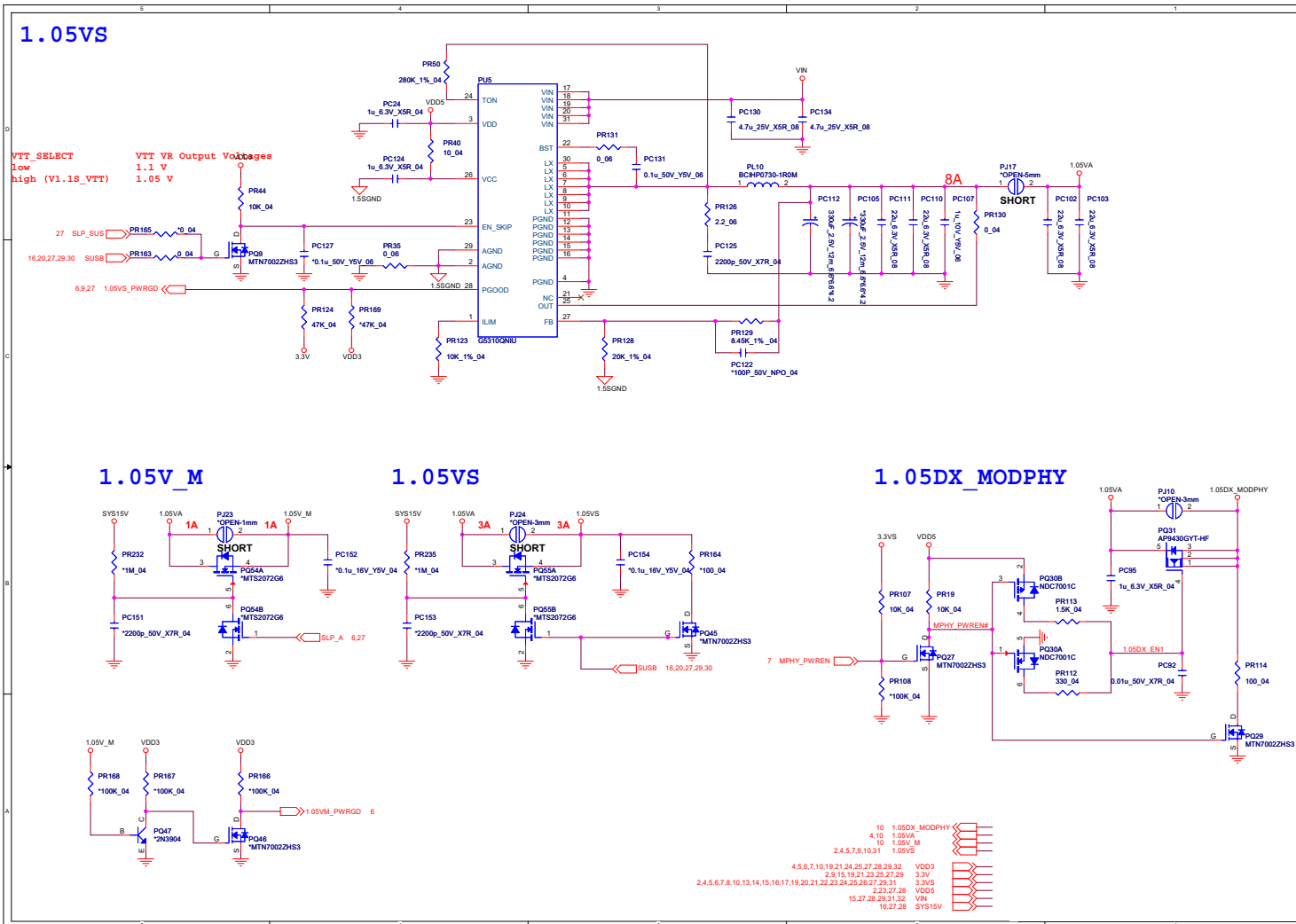
B.Schematic Diagrams

System Power

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System Power



1.05V Series



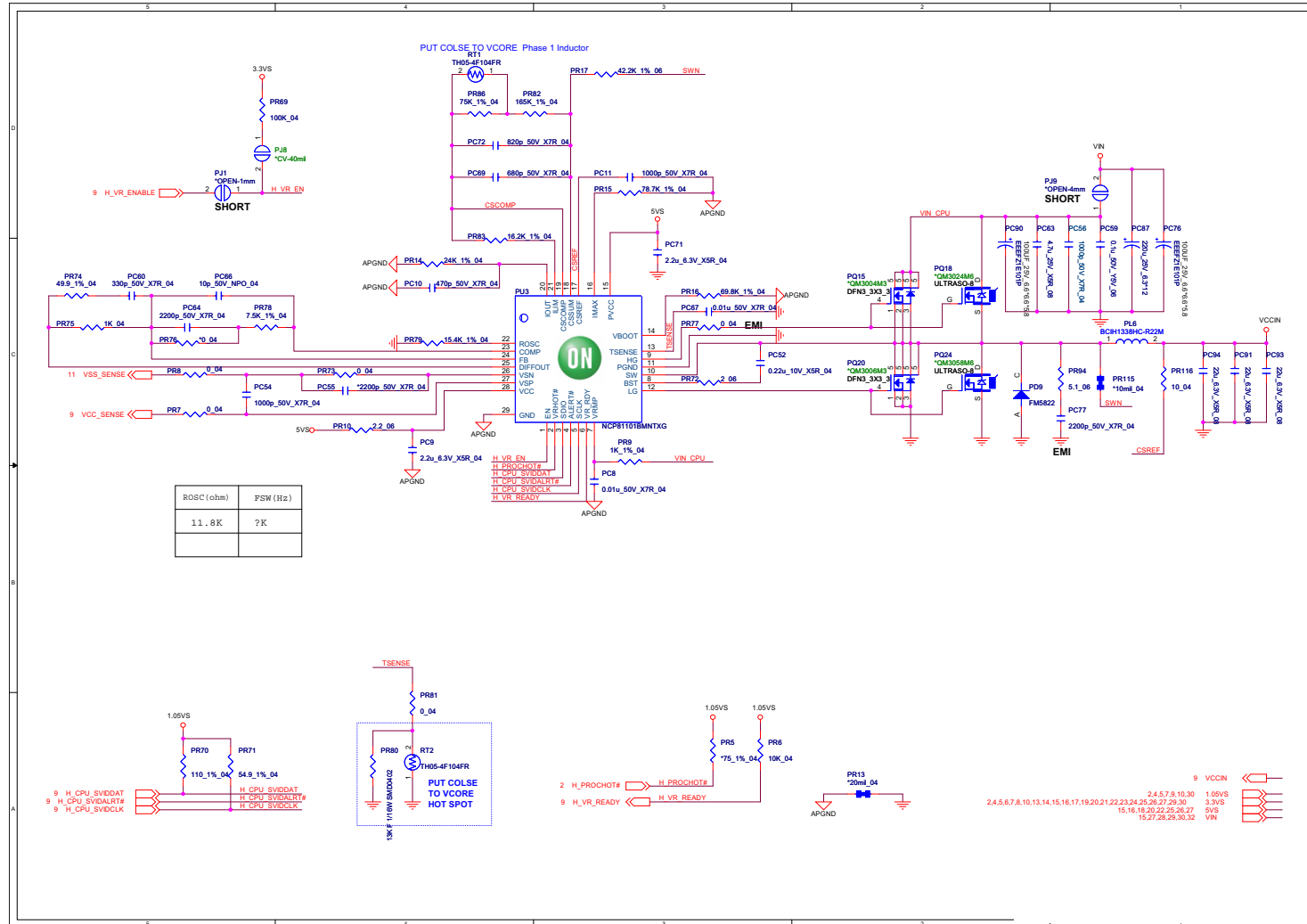
Sheet 30 of 38
1.05V Series

B.Schematic Diagrams

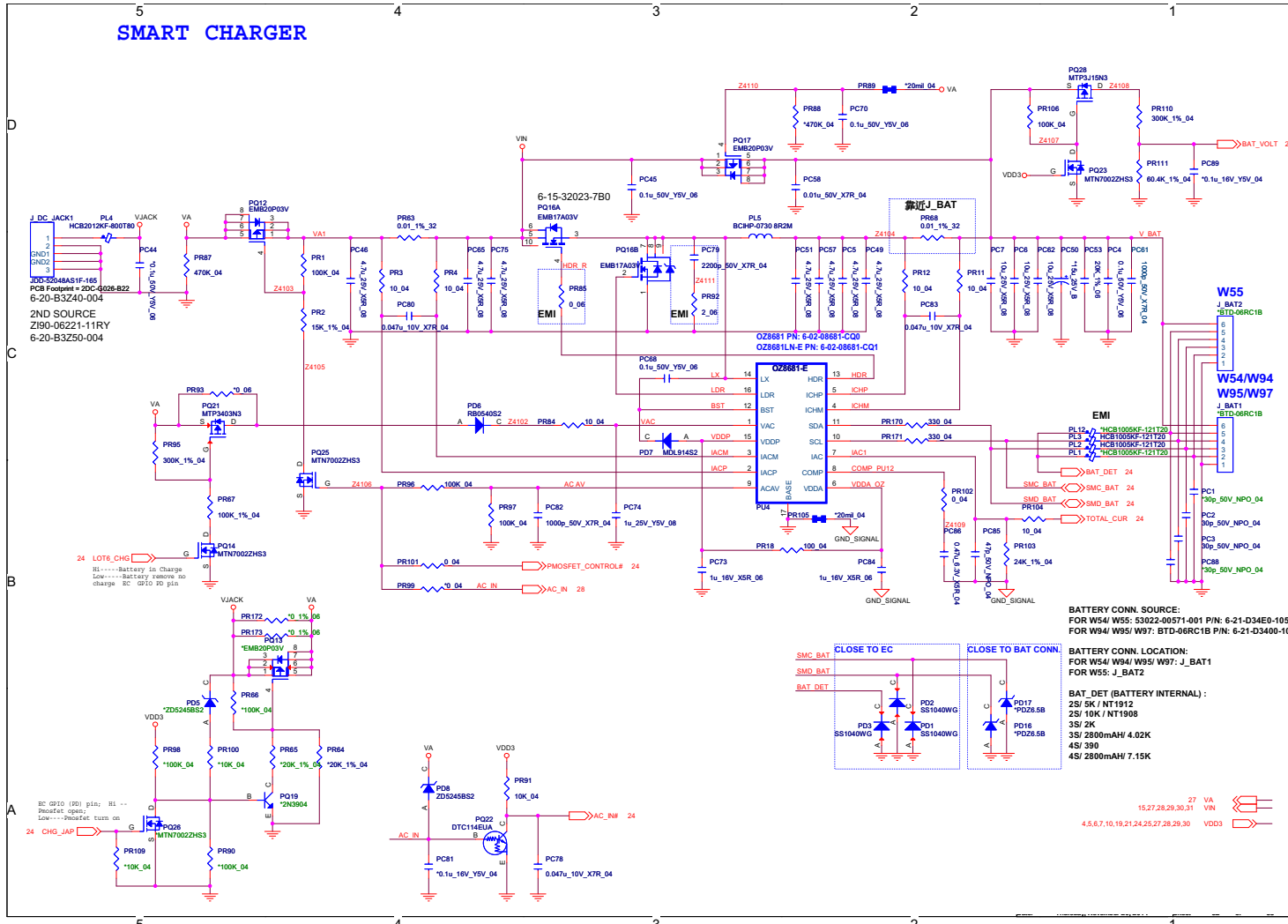
Schematic Diagrams

VCore

Sheet 31 of 38
VCore



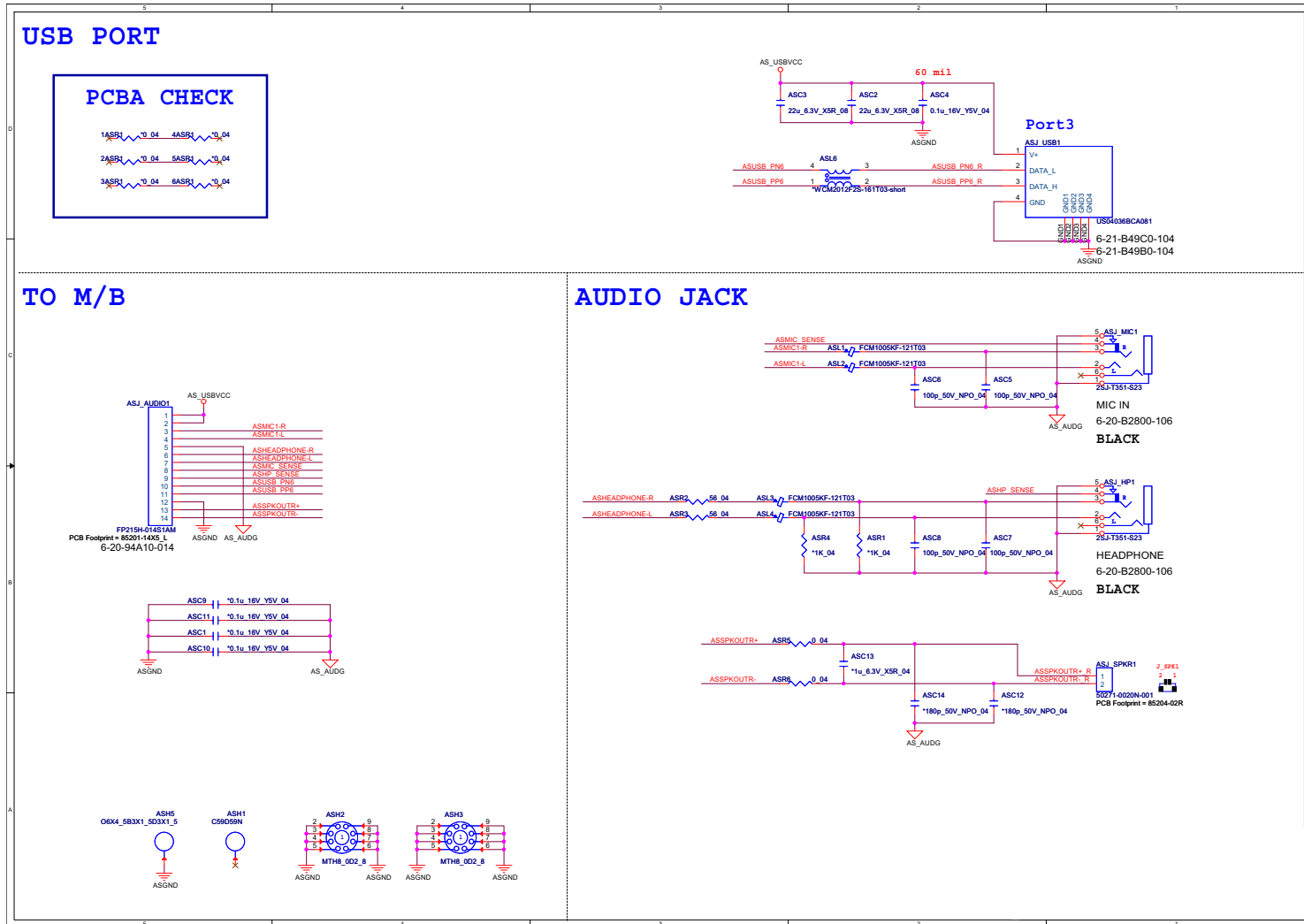
Charger, DC In



Sheet 32 of 38
Charger, DC In

B.Schematic Diagrams

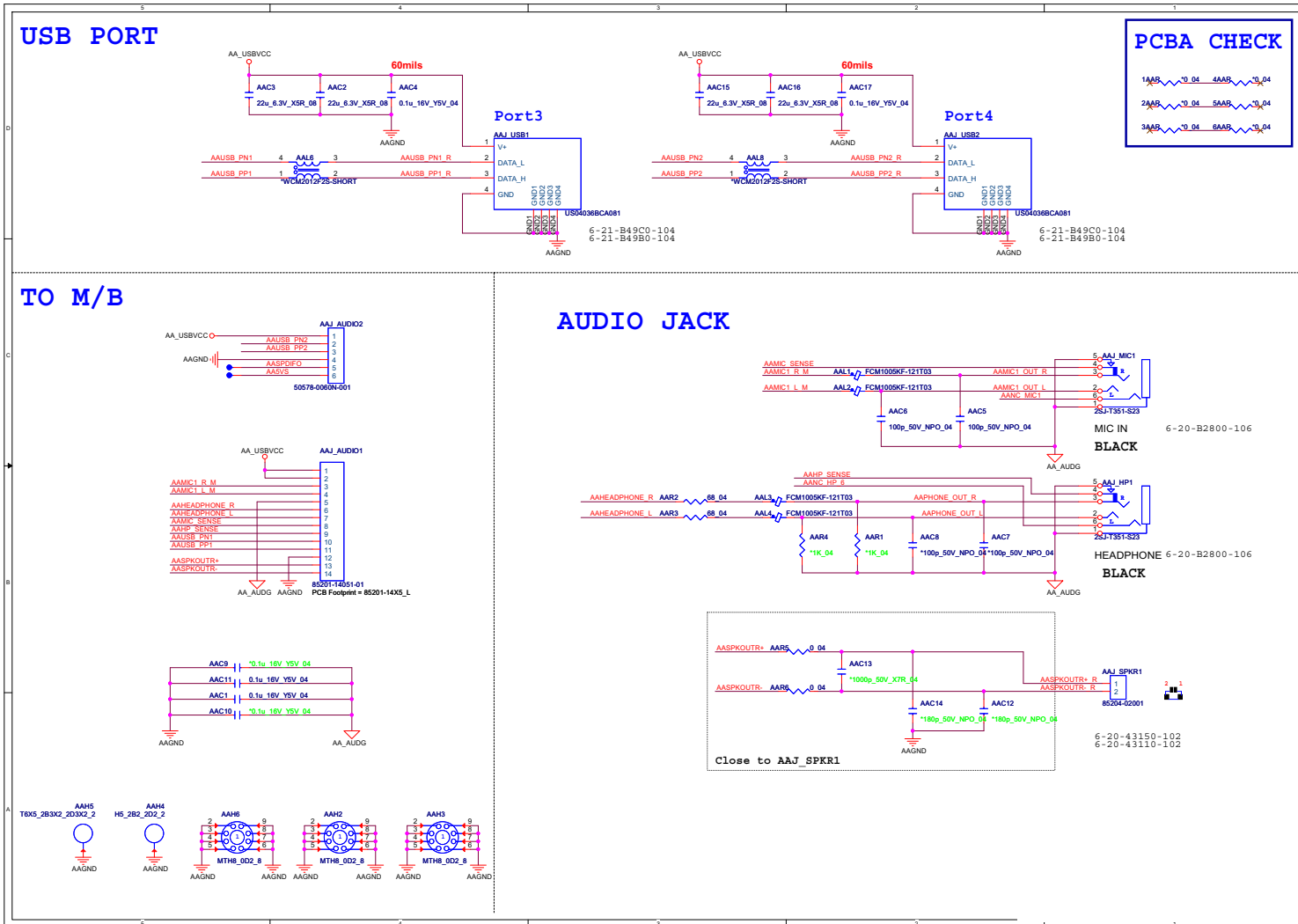
Audio Board



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Audio Board

B.Schematic Diagrams

Audio Board

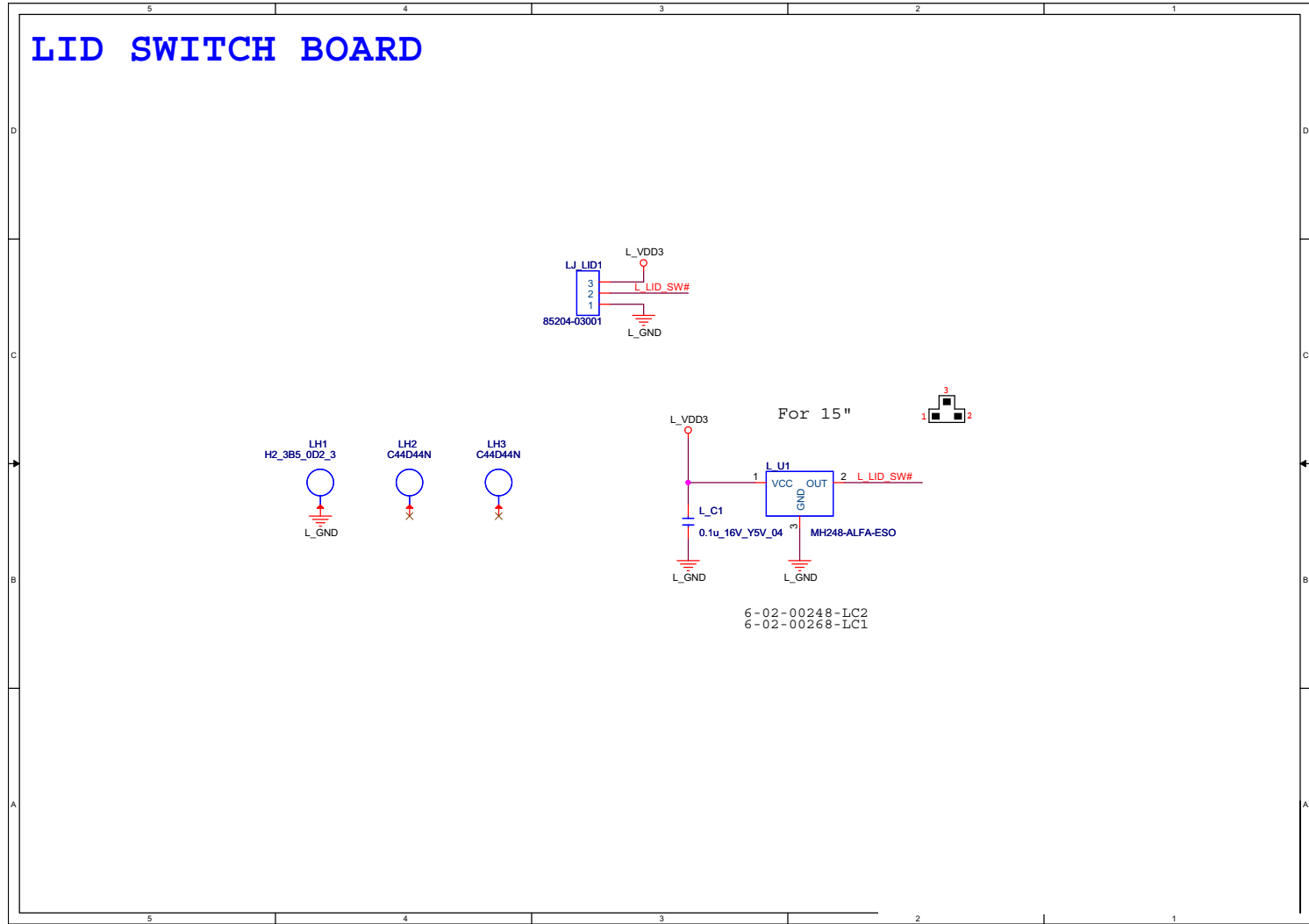


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Audio Board

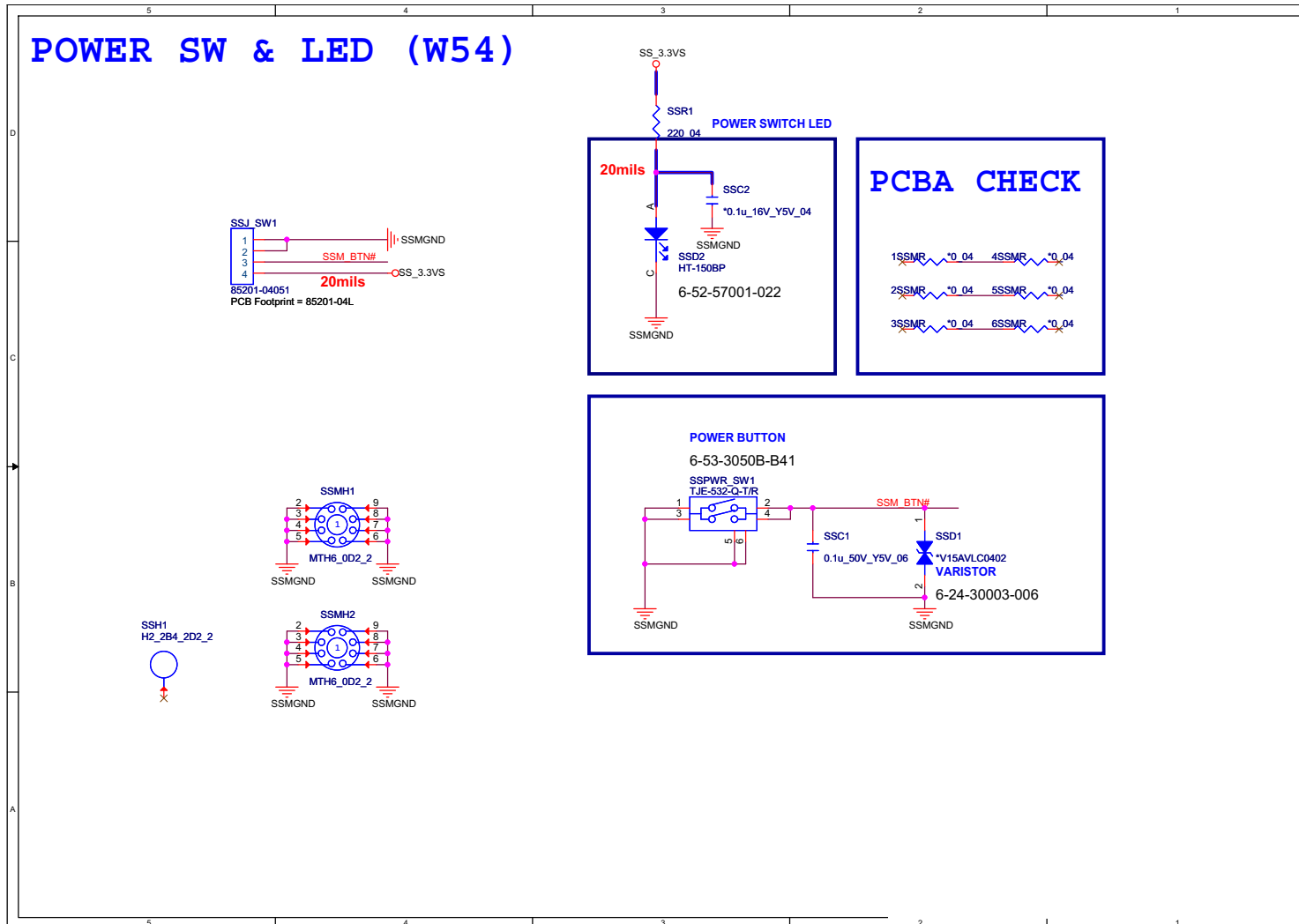
B.Schematic Diagrams

LID Switch Board

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LID Switch Board



Power Switch Board

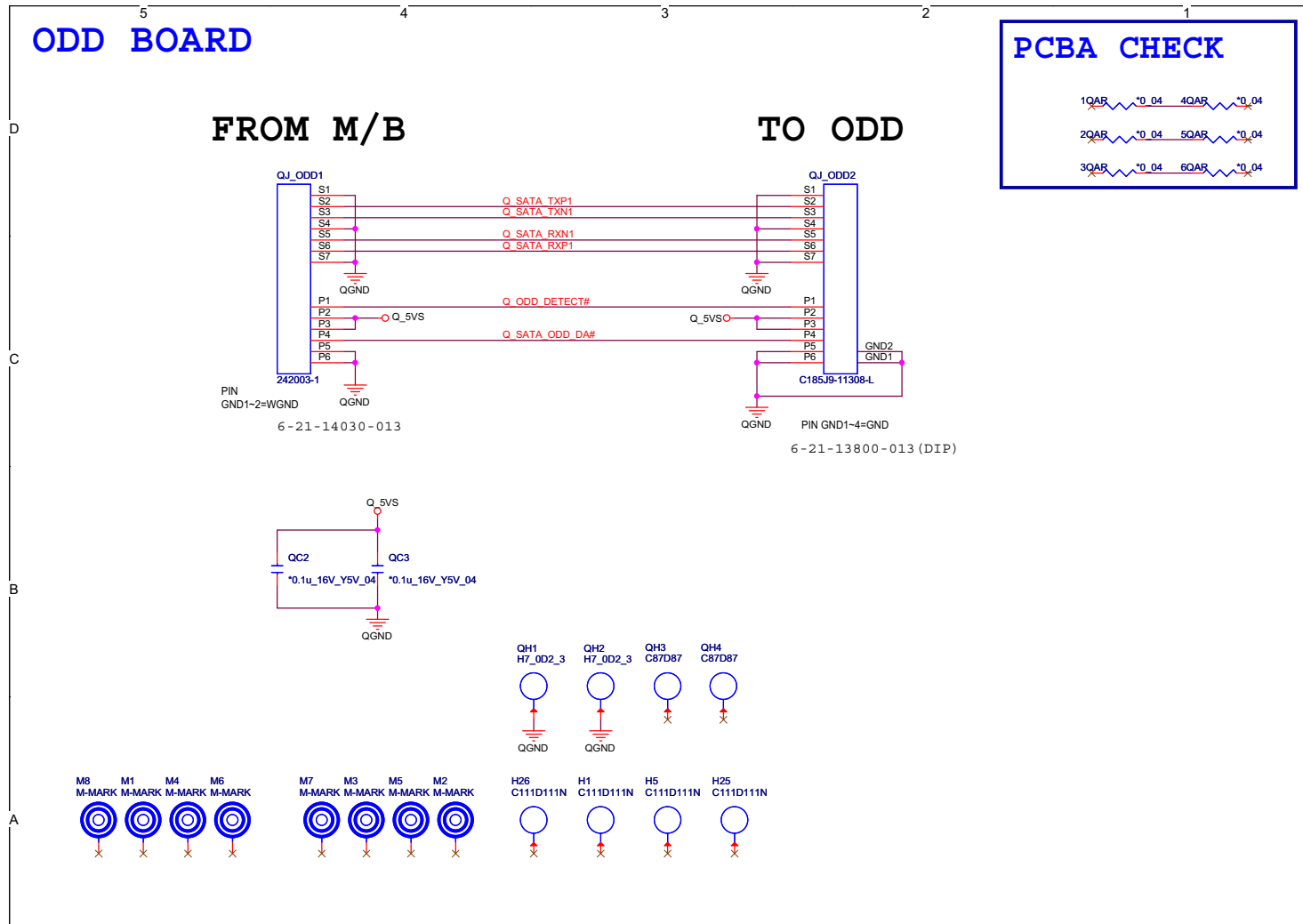


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Power Switch
Board

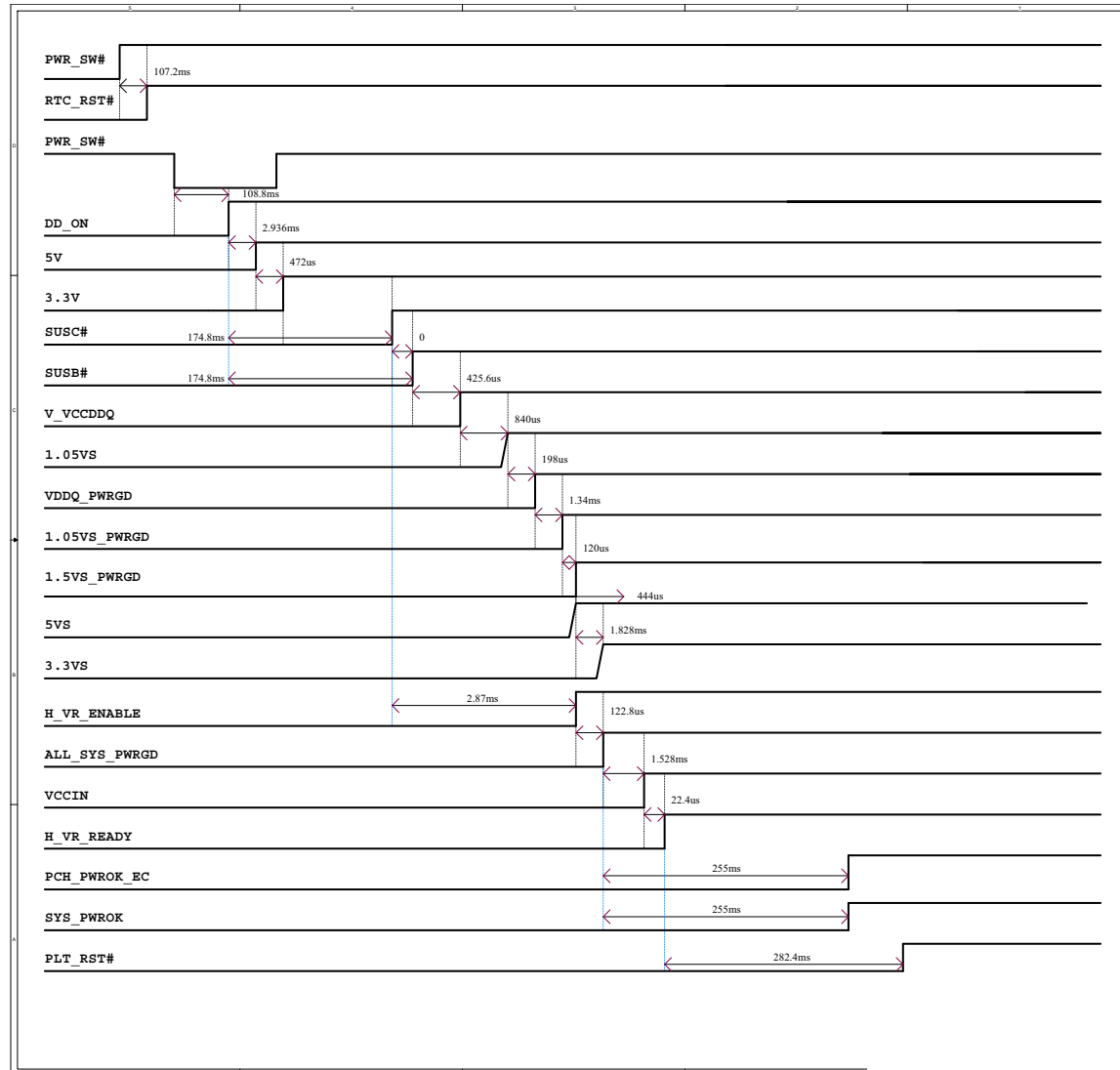
B.Schematic Diagrams

ODD Board

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ODD Board



Power On Sequence



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Power On
Sequence

Schematic Diagrams

Appendix C: Updating the FLASH ROM BIOS

To update the FLASH ROM BIOS, you must:

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

Download the BIOS

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

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

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

Set the computer to boot from the external drive

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



BIOS Version

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

You should only download BIOS versions that are **V1.00.XX or higher** as appropriate for your computer model.

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

BIOS Update

Use the flash tools to update the BIOS

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

C:\> Flash.bat

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

Restart the computer (booting from the HDD)

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

Your computer is now running normally with the updated BIOS

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