

# SERVICE MANUAL

W355SDQ

*notebook*





**Notebook Computer**

**W355SDQ**

**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 *W355SDQ* series notebook PC.

The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications.  
Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.

Appendix A, Part Lists

Appendix B, Schematic Diagrams

## **IMPORTANT SAFETY INSTRUCTIONS**

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

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit:
  - Full Range AC/DC Adapter - AC Input 100 - 240V, 50 - 60Hz, DC Output 19.5V, 6.15A (**120W**) minimum.

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

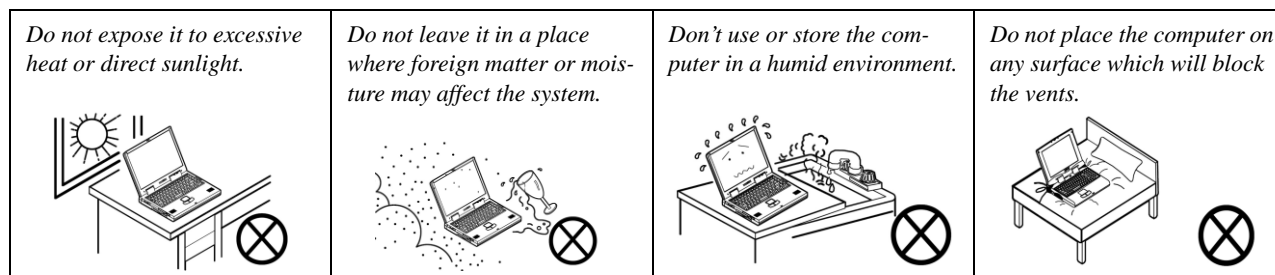
## Instructions for Care and Operation

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

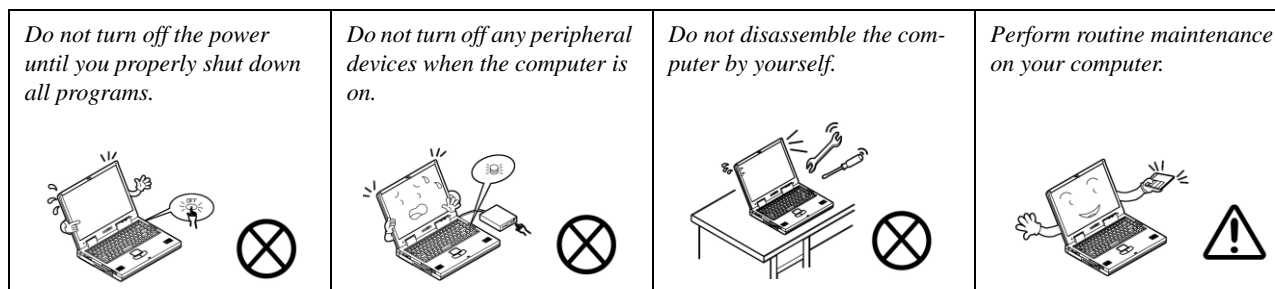
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



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

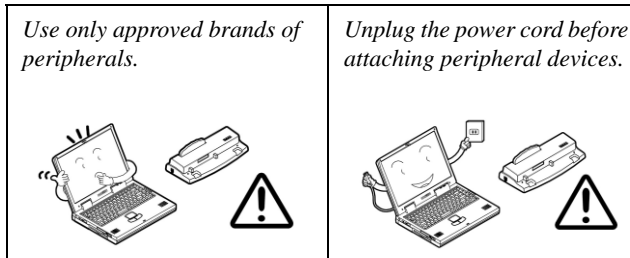


3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



## Preface

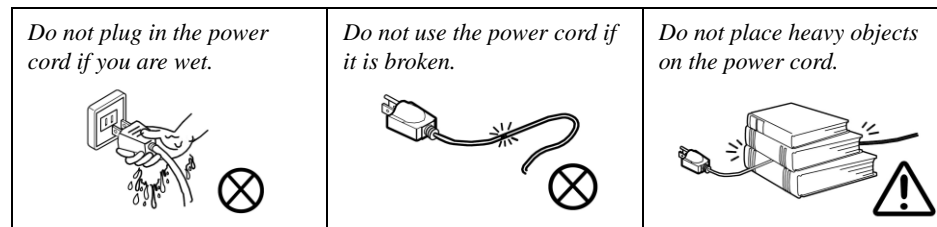
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**



## Power Safety

The computer has specific power requirements:

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



### Power Safety Warning

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



## Battery Precautions

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

## Battery Guidelines

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

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




### Battery Disposal

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

### Caution

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

### Battery Level

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

## Preface

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### Related Documents

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

#### User's Manual on CD

This describes the notebook PC's features and the procedures for operating the computer and its ROM-based setup program. It also describes the installation and operation of the utility programs provided with the notebook PC.

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# Chapter 1: Introduction

## Overview

This manual covers the information you need to service or upgrade the **W355SDQ** series notebook computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in *User's Manual*. That manual is shipped with the computer.

Operating systems (e.g. *Windows 8.1*, etc.) have their own manuals as do application software (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The **W355SDQ** series notebook is designed to be upgradeable. See [Disassembly on page 2 - 1](#) for a detailed description of the upgrade procedures for each specific component. Please note the warning and safety information indicated by the “” symbol.

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

## Introduction

# System Specifications

### Processor Options

#### Intel® Core™ i7 Processor

##### i7-4910MQ (2.90GHz)

8MB L3 Cache, 22nm, DDR3L-1600MHz, TDP 47W

##### i7-4810MQ (2.80GHz), i7-4710MQ (2.50GHz)

6MB L3 Cache, 22nm, DDR3L-1600MHz, TDP 47W

##### i7-4610M (3.00GHz)

4MB L3 Cache, 22nm, DDR3L-1600MHz, TDP 37W

#### Intel® Core™ i5 Processor

##### i5-4340M (2.90GHz), i5-4310M (2.70GHz), i5-4210M (2.60GHz)

3MB L3 Cache, 22nm, DDR3L-1600MHz, TDP 37W

#### Intel® Core™ i3 Processor

##### i3-4110M (2.60GHz)

3MB L3 Cache, 22nm, DDR3L-1600MHz, TDP 37W

### Core Logic

Intel® HM87 Chipset

### BIOS

One 48Mb SPI Flash ROM

AMI BIOS

### LCD

15.6" (39.62cm) FHD

### Security

BIOS Password

Security (Kensington® Type) Lock Slot

(Factory Option) Fingerprint Reader

(Factory Option) TPM 2.0

### Video Adapter

Intel® Integrated GPU and NVIDIA® Discrete GPU

Supports Microsoft Hybrid Graphics

Intel Integrated GPU

#### Intel® HD Graphics 4600

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

Microsoft DirectX®11.1 Compatible

NVIDIA Discrete GPU

#### NVIDIA® GeForce GTX 960M

2GB GDDR5 Video RAM

Microsoft DirectX®12 Compatible

### Audio

High Definition Audio Compliant Interface

Sound Blaster™ Cinema 2

2 \* Built-In Speakers

Built-In Microphone

### Memory

Three 204 Pin SO-DIMM Sockets Supporting

DDR3L 1600MHz Memory

Memory Expandable up to 24GB

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

**Note:** Three SO-DIMMs are only supported by Quad-Core CPUs; Dual-Core CPUs support two SO-DIMMs maximum

### Storage

(Factory Option) One 12.7mm(h) Optical Device Type Drive (Super Multi Drive)

(Factory Option) Two Changeable 2.5" (6cm) 9.5/7.0mm (h) SATA (Serial) Hard Disk Drives/ Solid State Drives (SSD) supporting RAID level 0/1

(Factory Option) One mSATA Solid State Drive (SSD)

### Interface

One USB 2.0 Port

Two USB 3.0 Ports

One eSATA Port (USB 3.0 Port Combined)

One External Monitor Port

One HDMI-Out Port

One Headphone-Out Jack

One Microphone-In Jack

One S/PDIF Out Jack

One RJ-45 LAN Jack

One DC-in Jack

### Keyboard

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

### Pointing Device

Built-in Touchpad (scrolling key functionality integrated)

### Card Reader

Embedded Multi-in-1 Push-Push Card Reader

MMC (MultiMedia Card) / RS MMC

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

MS (Memory Stick) / MS Pro / MS Duo

### Mini Card Slots

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

### Communication

Built-In Gigabit Ethernet LAN

2.0M FHD PC Camera

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

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

(Factory Option) Intel® Wireless-AC 7260 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

(Factory Option) Qualcomm® Atheros Killer Wireless-N 1202 Dual Band Wireless LAN (**802.11a/b/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: 19.5V, 6.15A (**120W**)

Removable 8 Cell Smart Lithium-Ion Battery Pack, 76.96WH

### Dimensions & Weight

374mm (w) \* 250mm (d) \* 16.7 - 43.1mm (h)

2.7kg (Barebone with ODD & 76.96WH Battery)

## Introduction

*Figure 1*  
**Top View**

1. Built-In PC Camera
2. \*PC Camera LED  
*\*When the PC camera is in use, the LED will be illuminated in red.*
3. LCD
4. Power Button
5. Speakers
6. LED Indicators
7. Hot Key Buttons
8. Keyboard
9. Microphone
10. Touchpad & Buttons
11. Fingerprint Reader Sensor (**Factory Option**)

## External Locator - Front View with LCD Panel Open





## External Locator - Front & Right side Views

*Figure 2*  
**Front Views**

1. LED Indicators



*Figure 3*  
**Right Side Views**

1. Multi-in-1 Card Reader
2. USB 3.0 Ports
3. Combined eSATA/USB 3.0 Port
4. HDMI-Out Port
5. RJ-45 LAN Jack



## Introduction

### External Locator - Left Side & Rear View

*Figure 4*  
**Left Side View**

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



*Figure 5*  
**Rear View**

1. External Monitor Port
2. DC-In Jack
3. Vent



## External Locator - Bottom View



*Figure 6*  
**Bottom View**

1. Component Bay Cover
2. Vent
3. Battery
4. HDD Bay



### Overheating

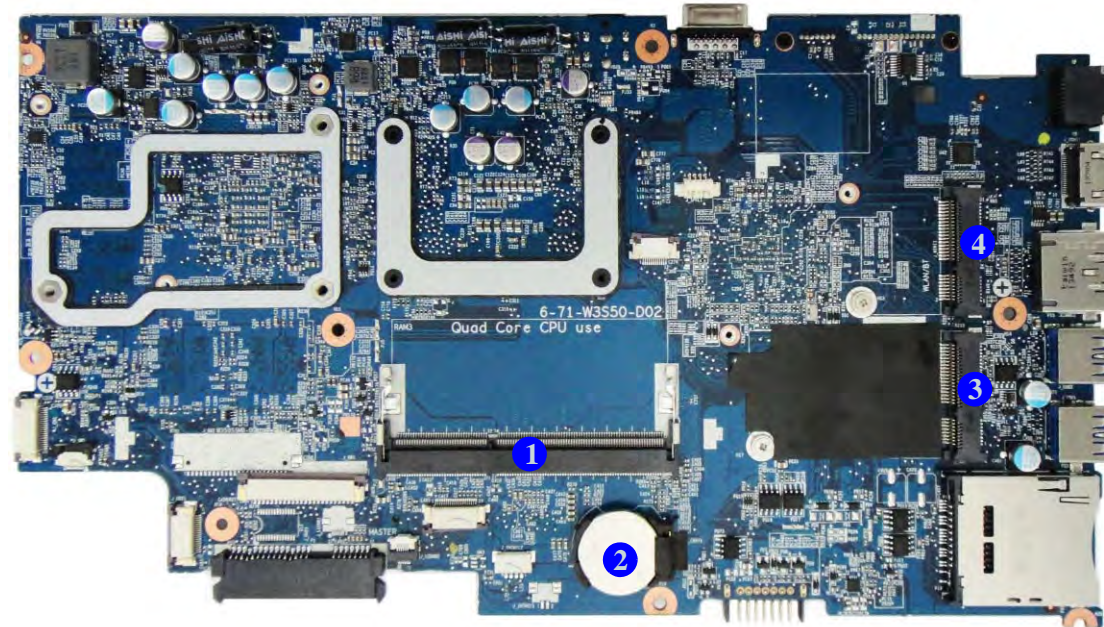
To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

## Introduction

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

1. Memory Slots DDR3L So-DIMM
2. CMOS Battery
3. Mini-Card Connector (3G Module)
4. Mini-Card Connector (MSATA & WLAN Module)

## Mainboard Overview - Top (Key Parts)

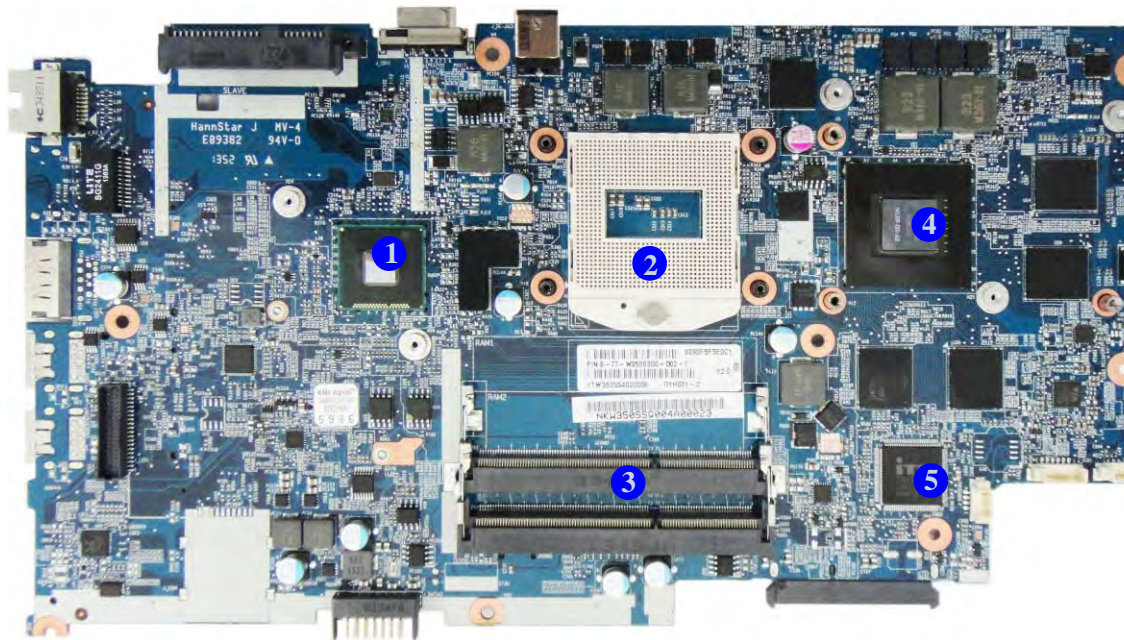




## Mainboard Overview - Bottom (Key Parts)

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

1. PantherPoint  
Controller
2. CPU Socket
3. Memory Slots  
DDR3L So-DIMM
4. NV Graphic
5. KBC

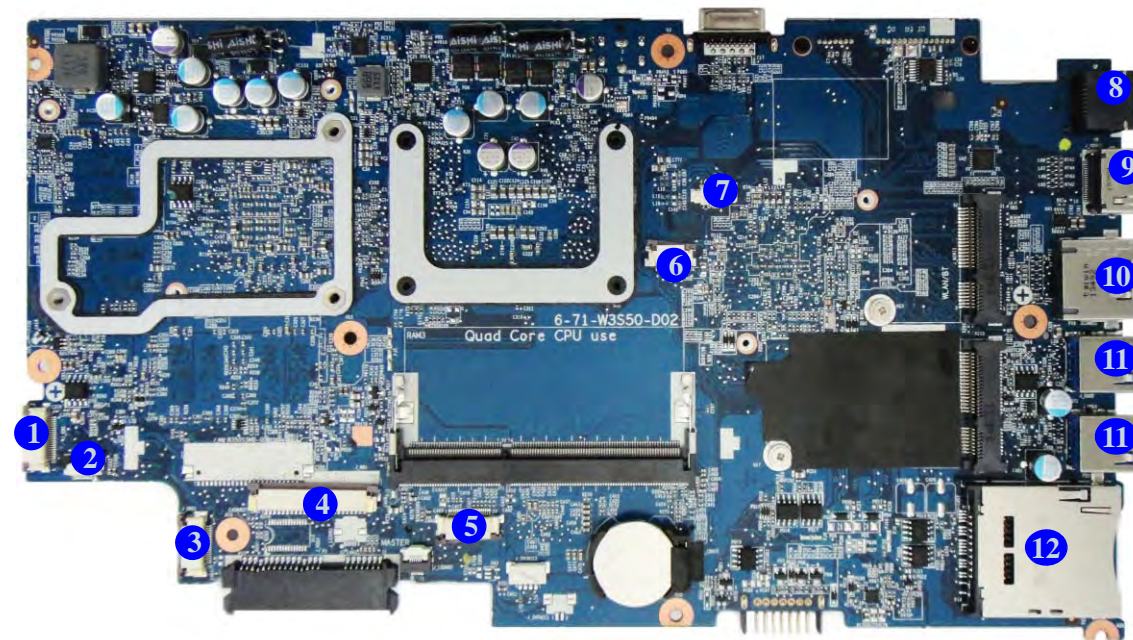


## Introduction

*Figure 9*  
**Mainboard Top  
Connectors**

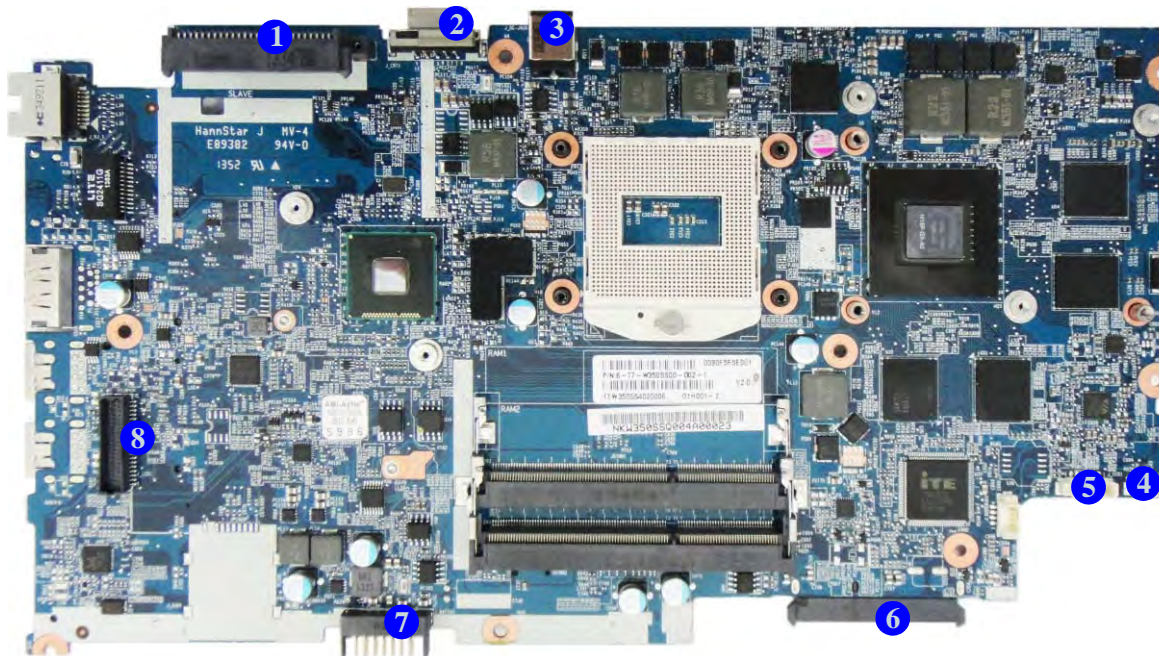
## Mainboard Overview - Top (Connectors)

1. Audio Cable Connector
2. Power Switch Cable Connector
3. ODD Cable Connector
4. Keyboard Cable Connector
5. Click Board Cable Connector
6. VGA SW Cable Connector
7. Speaker Cable Connector
8. RJ-45 LAN Jack
9. HDMI-Out Port
10. eSATA Connector
11. USB 3.0 Ports
12. Multi-in-1 Card Reader





## Mainboard Overview - Bottom (Connectors)



*Figure 10*  
**Mainboard Bottom  
Connectors**

1. HDD2 Connector
2. External Monitor Port
3. DC-In Jack
4. Fan Cable Connector
5. CCD Cable Connector
6. HDD1 Connector
7. Battery Connector
8. LCD Cable Connector






# Chapter 2: Disassembly

## Overview

This chapter provides step-by-step instructions for disassembling the **W355SDQ** series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

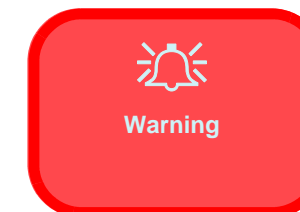
We suggest you completely review any procedure before you take the computer apart.

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

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**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 Optical Device:

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

### To remove the HDD:

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

### To remove and install the Processor:

1. Remove the battery *page 2 - 5*
2. Remove the Processor *page 2 - 11*
3. Install the Processor *page 2 - 13*

### To remove the Keyboard:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 14*

### To remove the WLAN:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 14*
3. Remove the WLAN *page 2 - 16*

### To remove the 3G:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 14*
3. Remove the 3G *page 2 - 18*

### To remove and install the mSATA:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 14*
3. Install the mSATA *page 2 - 19*
4. Remove the mSATA *page 2 - 20*

### To remove the System Memory:

1. Remove the battery *page 2 - 5*
2. Remove the system memory *page 2 - 21*

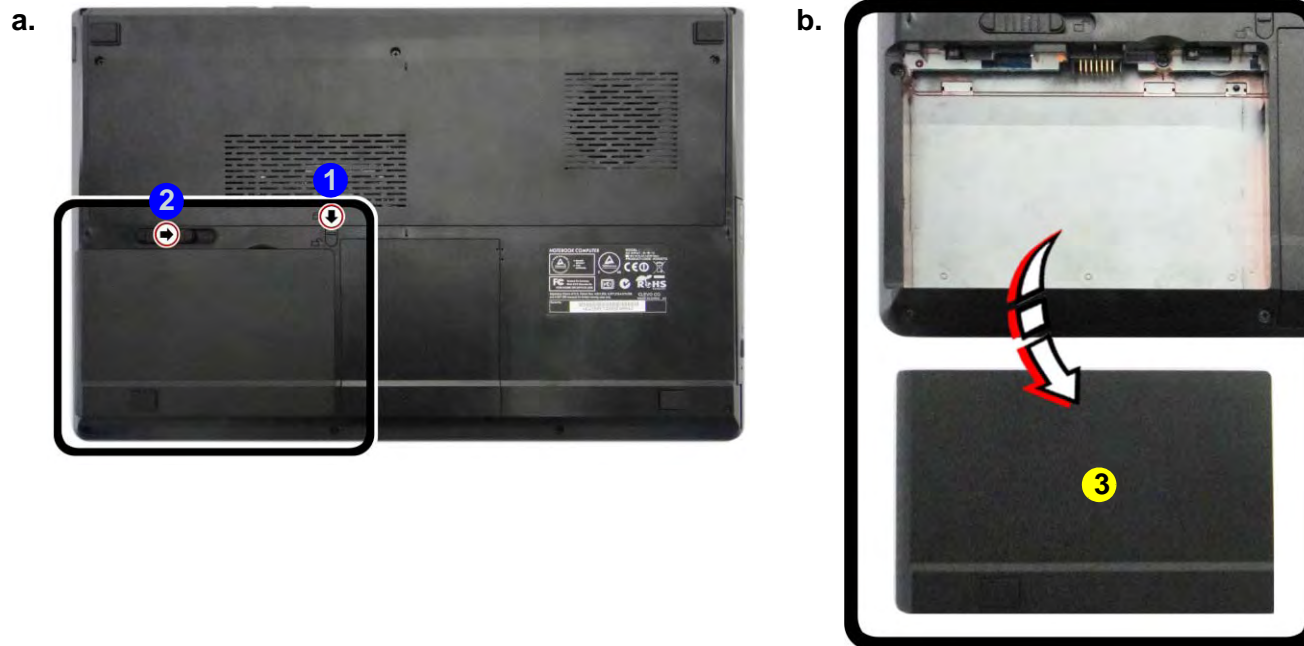
### To remove the Hinge Cover:

1. Remove the battery *page 2 - 5*
2. Remove the hinge cover *page 2 - 23*

## Removing the Battery

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

1. Turn the computer off, and turn it over.
2. Slide the latch **1** in the direction of the arrow.
3. Slide the latch **2** in the direction of the arrow and battery will pop-up.
4. Lift the battery **3** up (*Figure b*) and out of the battery bay.



*Figure 1*  
**Battery Removal**

- a. Slide the latch **1** in the direction of the arrow, and slide the latch **2** in the direction of the arrow and battery will pop-up.
- b. Lift the battery out of the bay as indicated.



3. Battery

## Disassembly

*Figure 2*  
**Optical Device  
Removal**

a. Remove the screw and push the optical device out of the computer.

### Removing the Optical (CD/DVD) Device

1. Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)) and remove the component bay cover ([page 2 - 10](#)).
2. Remove the screw **1**, and use a screwdriver to carefully push out the optical device **3** at point **2**.
3. Reverse the process to install the new device.

a.



3. Optical Device

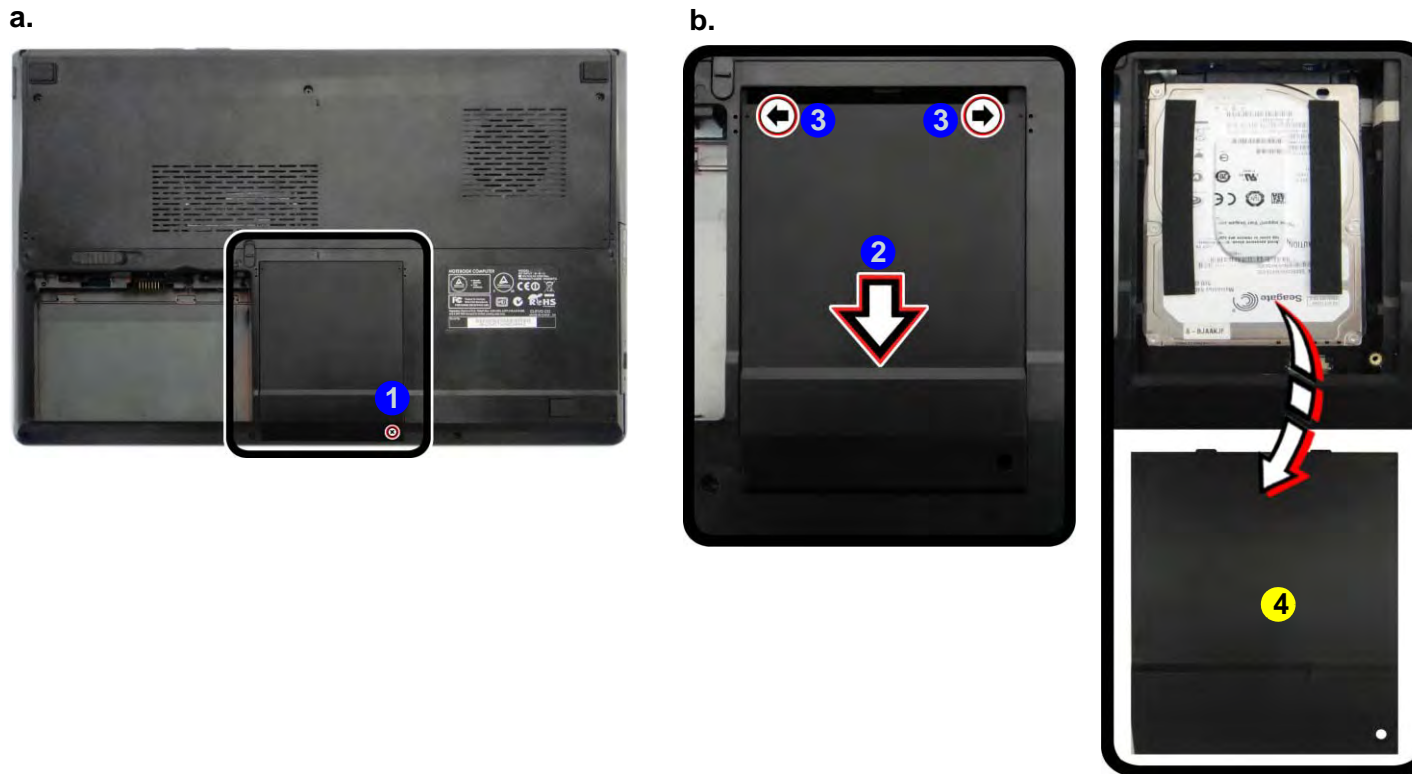
- 1 Screw

## Removing the Hard Disk Drive


The hard disk drive is mounted in a removable case and can be taken out to accommodate other 2.5" SATA hard disk drives with a height of 9.5mm or 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

1. Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)).
2. Locate the Hard disk bay cover and remove screw ①.
3. Slide the cover in the direction of the arrow ② (as illustrated) until the case markers ③ line up.
4. Remove the bay cover ④.



- a. Remove the screw.
- b. Remove the cover

- 
4. Hard Disk Bay Cover
- 1 Screw

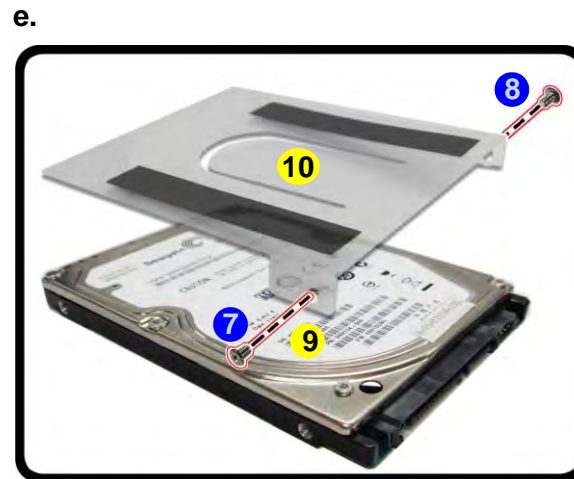
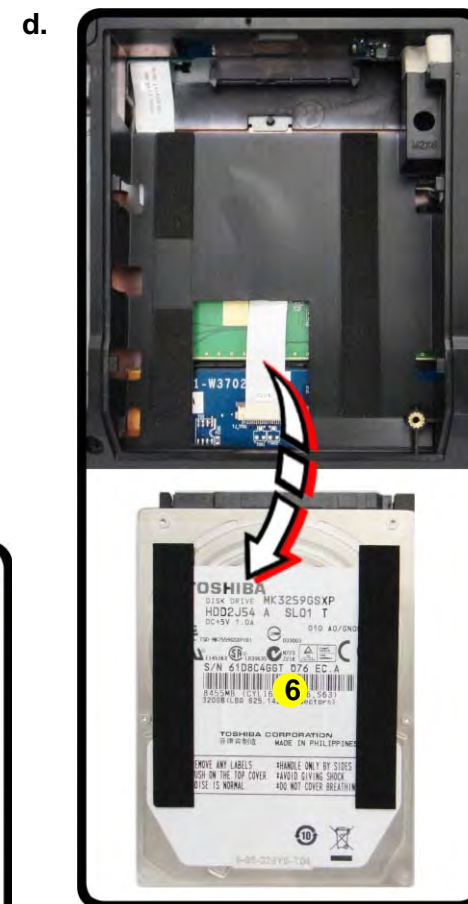
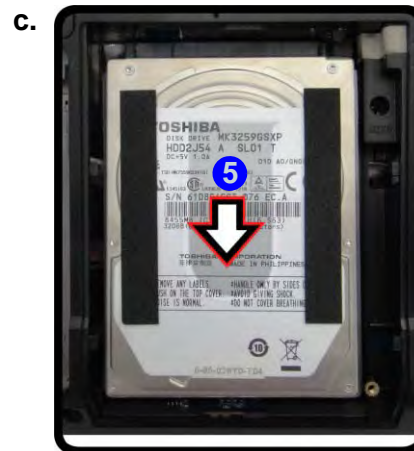


## Disassembly

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

- c. Slide the hard disk assembly out.
- d. Lift the hard disk assembly out of the computer.
- e. Remove the screws to release the hard disk from the mylar.

5. Grip the tab and slide the hard disk in the direction of arrow 5 (Figure 4e).
6. Lift the hard disk assembly 6 out of the computer.
7. Remove screws 7 - 8.
8. Separate the hard disk 9 and hard disk mylar 10.
9. Reverse the process to install a new hard disk.



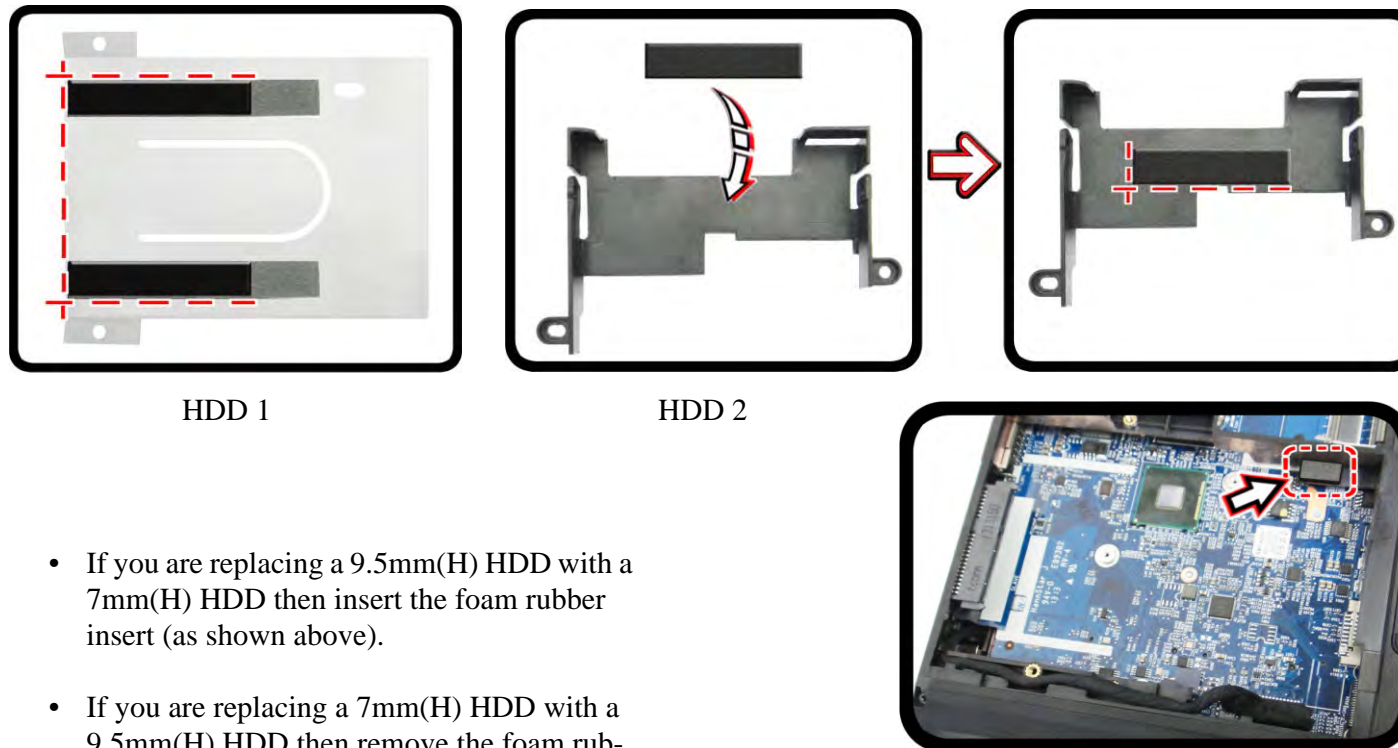
9. Hard Disk  
10. Hard Disk Mylar

- 2 Screws



### Hard Disk Size Note (Foam Rubber Insert)

Note that the hard disks pictured on the following pages are all 9.5mm(H) hard disk drives. In some cases 7mm(H) hard disk drives will be installed.



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

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

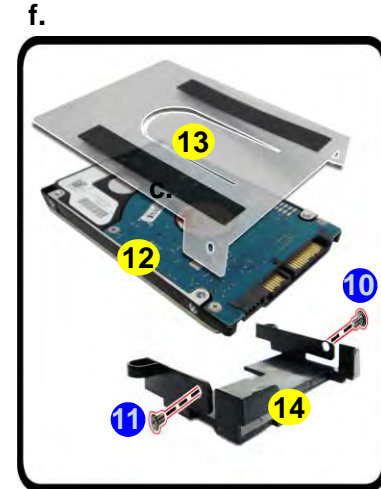
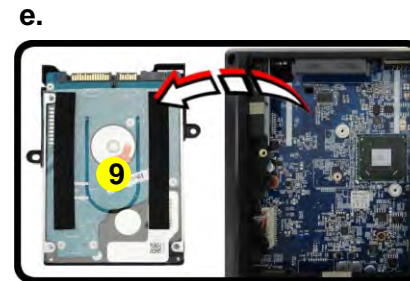
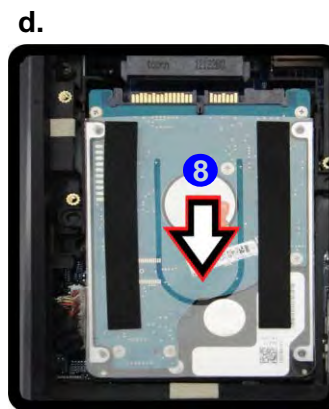
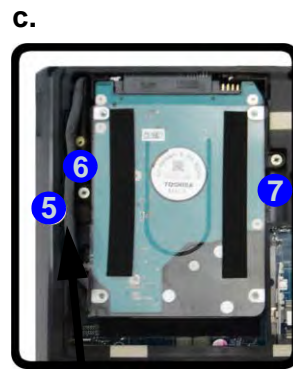
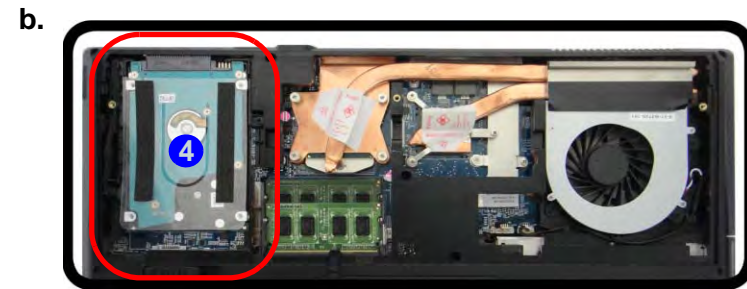
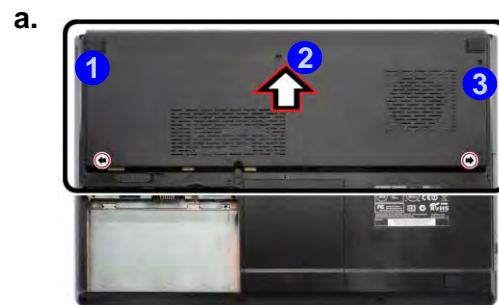
## Disassembly

*Figure 6*  
**Secondary HDD  
Assembly Removal**

- Remove the screws and cover.
- Locate the hard disk.
- Remove the screws.
- Slide the hard disk assembly out.
- Lift the hard disk assembly out of the computer.
- Remove the screws and separate the HDD(s) from case.

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

- Turn **off** the computer, and turn it over and remove the battery.
- Locate the component bay cover and remove screws **1** - **3** and the cover.
- The hard disk will be visible at point **4** on the mainboard.
- Remove screws **6** - **7** (Note that you need to set aside the cable **5** to see the screw **6**).
- Grip the tab and slide the hard disk in the direction of arrow **8** (*Figure 6e*).
- Lift the hard disk assembly **9** out of the compartment.
- Remove the screws **10** - **11** to release the hard disk(s) **12** and hard disk mylar **13** from the case **14**.
- Reverse the process to install any new hard disk.



12. Hard Disk  
13. Hard Disk Mylar  
14. Hard Disk Case

- 7 Screws

**Note:**

Re-insert the cable **5** after reinstalling the hard disk assembly and tightening the screws.

# Removing and Installing the Processor

## Processor Removal Procedure

1. Turn off the computer, and turn it over, remove the battery ([page 2 - 5](#)), and component bay cover ([page 2 - 10](#)).
2. The CPU heat sink will be visible at point **A** on the mainboard.
3. Remove screws **7**, **6**, **5**, **4**, **3**, **2**, **1**, the reverse order indicated on the label ([Figure 7b](#)).
4. Grip the heat sink tab **8** and carefully lift the heat sink **9** up straight (**do not angle it as you lift it**) about a centimeter in order to clear the fan unit, and then angle it around 45° to remove it from the computer.

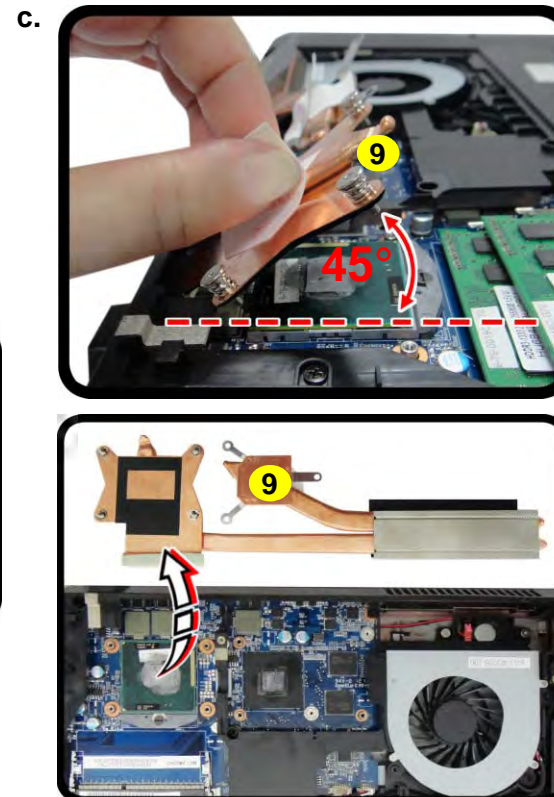
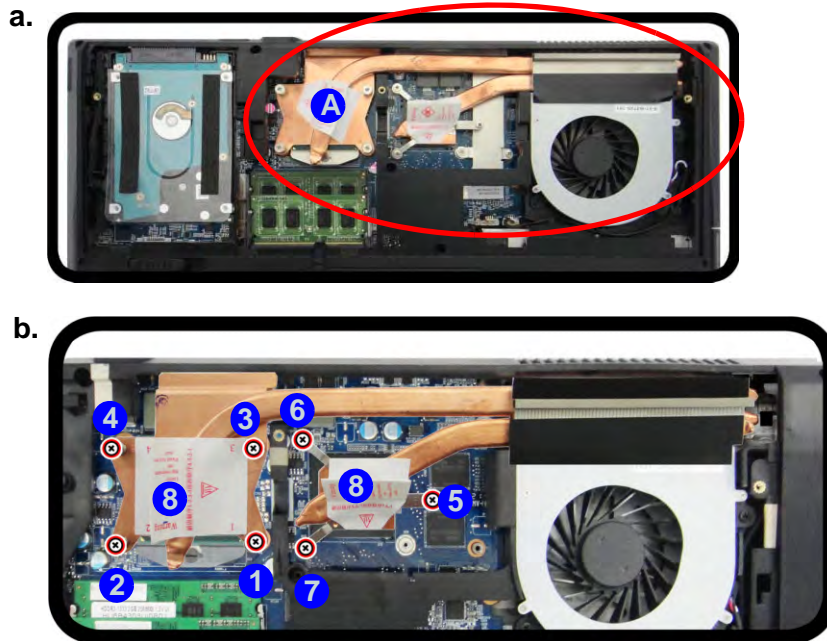


Figure 7  
Processor Removal

- a. Locate the heat sink.
- b. Remove the screws.
- c. Grip the heat sink tab and carefully lift the heat sink up and off the computer.



### Caution

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



9. CPU Heat Sink


- 7 Screws



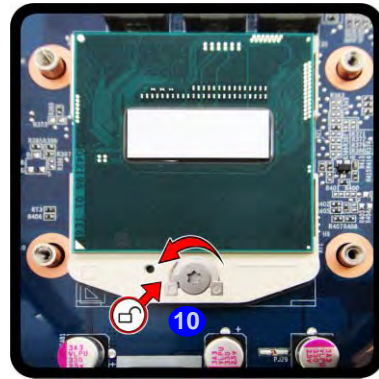
## Disassembly

*Figure 8*  
**Processor Removal**  
**(cont'd)**

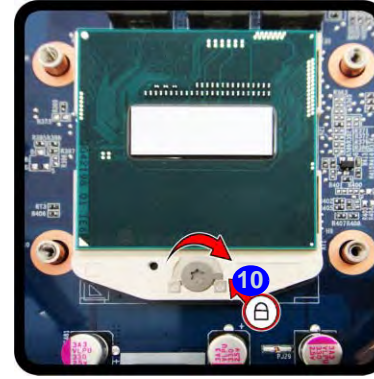
- d. Turn the release latch to unlock the CPU.  
e. Lift the CPU out of the socket.

5. Turn the release latch **10** towards the unlock symbol  to release the CPU (*Figure 8d*).
6. Carefully (it may be hot) lift the CPU **11** up and out of the socket (*Figure 8e*).
7. Reverse the process to install a new CPU.
8. When re-inserting the CPU, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).

d.

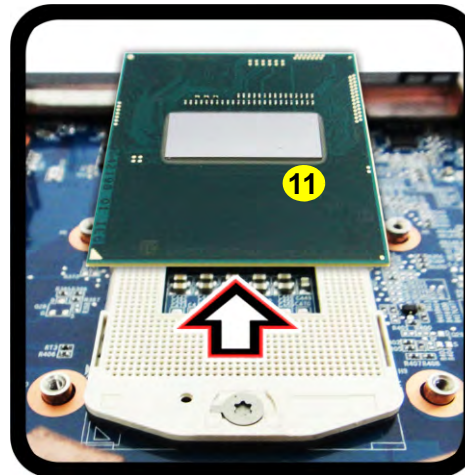


Unlock



Lock

e.




### Caution

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

11. CPU

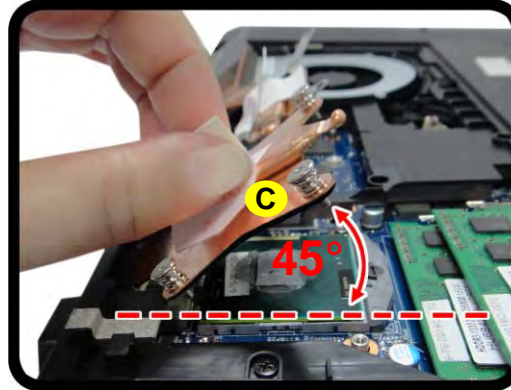
## Processor Installation Procedure

1. Insert the CPU **A** (**Figure 9a**), pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!), and turn the release latch **B** towards the lock symbol  (**Figure 9b**).
2. Insert the heat sink **C** at an angle of around 30° as indicated in **Figure 9c**.
3. Tighten the CPU heat sink screws in the order **1**, **2**, **3**, **4**, **5**, **6** & **7** (the order as indicated on the label and **Figure 9d**).
4. Replace the component bay cover.

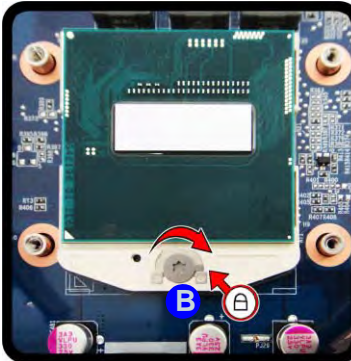
a.



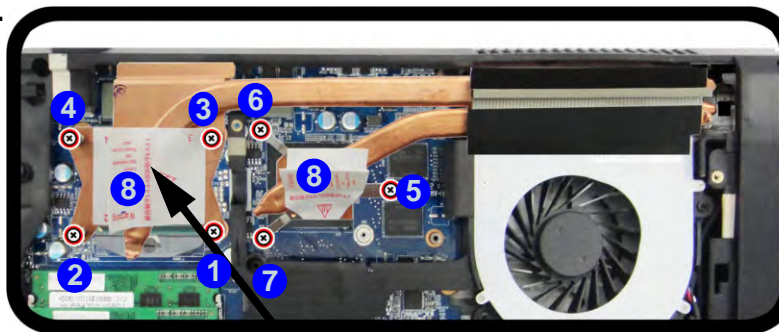
c.



b.



d.



**Note:**  
Tighten the screws in the order as indicated on the label.

*Figure 9*  
**Processor Installation**

- a. Insert the CPU.
- b. Turn the release latch towards the lock symbol.
- c. Insert the heat sink.
- d. Tighten the screws.



A. CPU  
C. Heat Sink

- 7 Screws

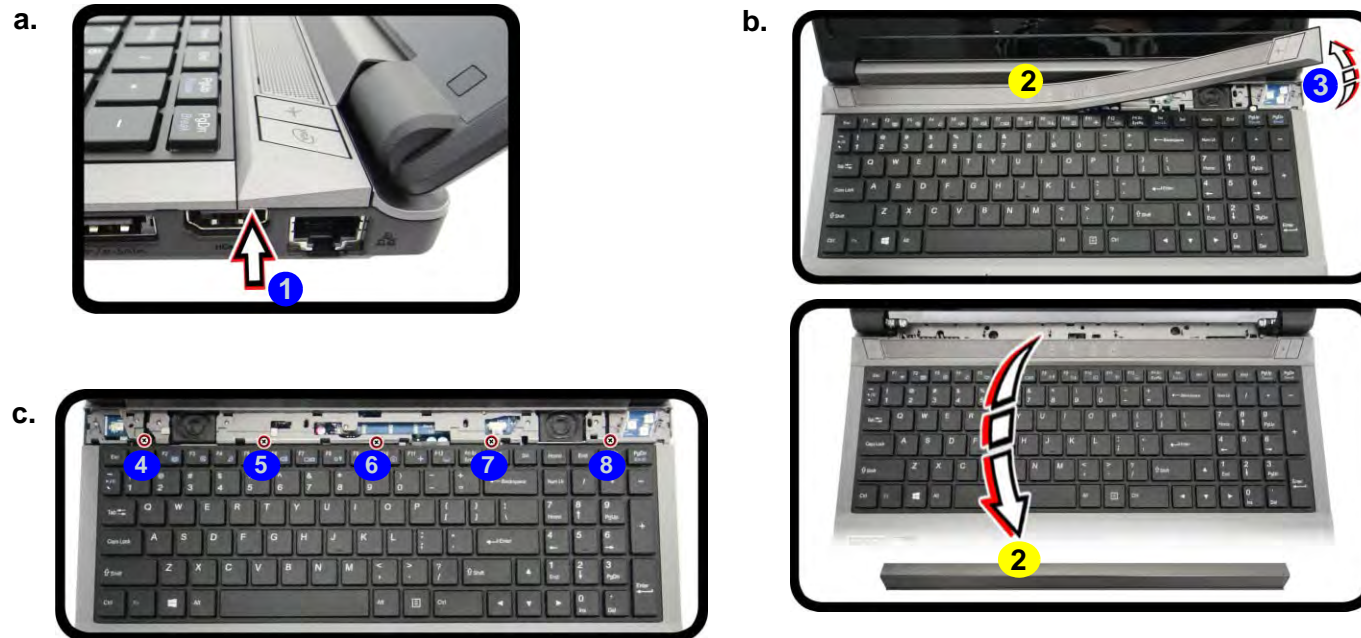
## Disassembly

*Figure 10*  
**Keyboard Removal**

- a. Turn the computer over, unsnap the speaker cover upward at point ①.
- b. Remove the speaker off the computer.
- c. Remove screws from the keyboard.

## Removing the Keyboard

1. Turn off the computer, and turn it over and remove the battery ([page 2 - 5](#)).
2. Turn the computer over, unsnap the speaker cover ② upward at point ① ([Figure 10a](#)).
3. Lift the speaker cover at point ③ up and off the computer ([Figure 10b](#)).
4. Remove screws ④ - ⑧ from the keyboard ([Figure 10c](#)).

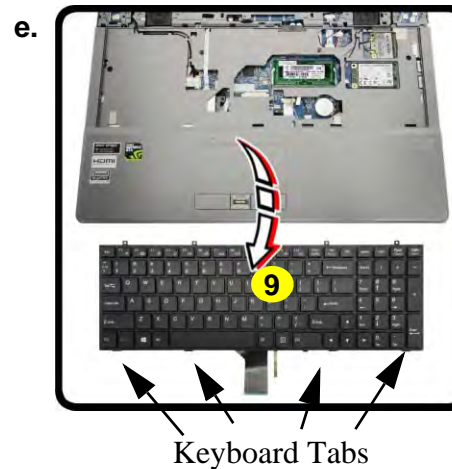


### 2. Speaker Cover

- 5 Screws

*Figure 11*  
**Keyboard Removal (Contd.)**

- d. Disconnect the keyboard ribbon cable from the locking collar socket by using a flat-head screwdriver to pry the locking collar pins away from the base.
- e. Remove the keyboard.



### Re-Inserting the Keyboard

When re-inserting the keyboard firstly align the **four** keyboard tabs at the bottom (*Figure 10e*) at the bottom of the keyboard with the slots in the case.

9. Keyboard



## Disassembly

*Figure 12*  
**Wireless LAN  
Module Removal**

- Locate the WLAN.
- Disconnect the cables and remove the screw.
- The WLAN module will pop up.

Note: Make sure you reconnect the antenna cable to the “1 + 2” socket (*Figure 12b*).

## Removing the Wireless LAN Module

- Turn **off** the computer, turn it over, remove the battery (*page 2 - 5*) and keyboard (*page 2 - 14*).
- The Wireless LAN module will be visible at point **1** on the mainboard (*Figure 12a*).
- Carefully disconnect the cables **2** & **3**, and then remove the screw **4** (*Figure 12b*).
- The Wireless LAN module **5** (*Figure 12c*) will pop-up, and you can remove it from the computer.

a.



c.



b.



5. Wireless LAN Module

- 1 Screw



## Wireless LAN, Combo, 3G & LTE 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).

## Disassembly

Figure 13  
3G Module Removal

- Locate the 3G module.
- Remove the screw.
- Slide the module in the direction of the arrow and lift it out.
- Remove the 3G module.
- Remove the screw.
- Remove the interface adaptor.

## Removing the 3G Module

- Turn **off** the computer, turn it over, remove the battery ([page 2 - 5](#)) and keyboard ([page 2 - 14](#)).
- The 3G module will be visible at point **1** on the mainboard ([Figure 13a](#)).
- Carefully remove the screw **2** ([Figure 13b](#)).
- Carefully slide the 3G module **3** (in the direction of the arrow **4** - [Figure 13c](#)) out of the interface adaptor and then lift it up (do not exceed 10degrees) to remove it from the computer ([Figure 13d](#)).
- Carefully remove the screw **5** ([Figure 13e](#)). The min-card interface adaptor **6** will pop-up,
- Remove the min-card interface adaptor **6** from the computer ([Figure 13f](#)).

a.



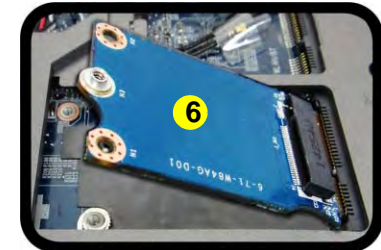
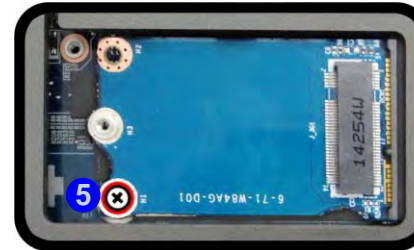
d.



b.



e.



c.



f.



3. 3G Module  
6. Interface Adaptor

- 2 Screws

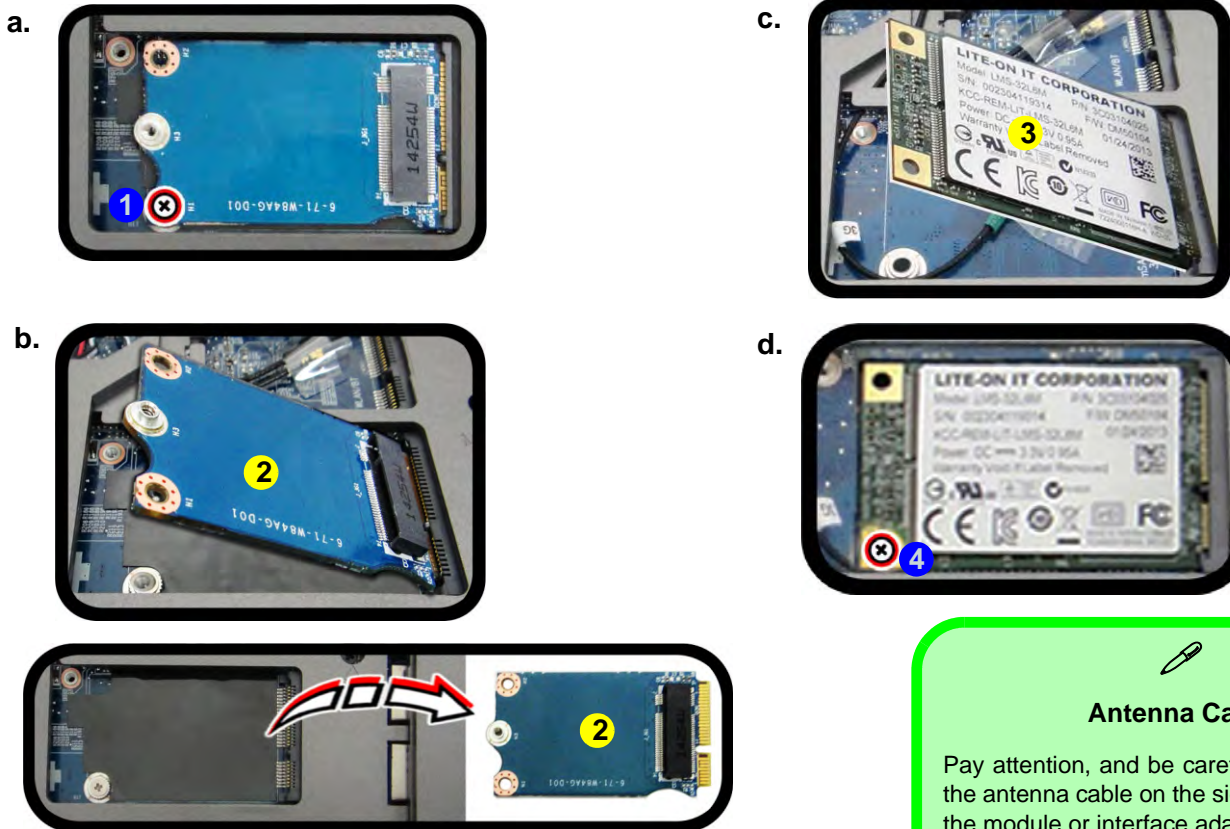
# Installing and Removing the mSATA Module

## mSATA Module installation procedure:

1. Turn **off** the computer, turn it over, remove the battery ([page 2 - 5](#)), keyboard ([page 2 - 14](#)) and 3G ([page 2 - 18](#)).
2. Carefully remove the screw **1** ([Figure 14a](#)).
3. The interface adaptor **2** will pop-up, and you can remove it from the computer ([Figure 14b](#)).
4. Insert the mSATA module **3** ([Figure 14c](#)), and you can tighten the screw **4** ([Figure 14d](#)).

*Figure 14*  
**mSATA Module Installation**

- a. Remove the screw.
- d. Remove the interface adaptor.
- c. Install the module.
- d. Tighten the screw.



### Antenna Cable

Pay attention, and be careful not to damage the antenna cable on the side when installing the module or interface adaptor.

2. Interface Adaptor
3. SSD Module

- 2 Screws

## Disassembly

*Figure 15*  
**mSATA Module Removal**

- Locate the module.
- Remove the screw.
- The module will pop-up.
- Remove the module.

### mSATA Module removal procedure:

- Turn **off** the computer, turn it over, remove the battery ([page 2 - 5](#)), keyboard ([page 2 - 14](#)) and 3G ([page 2 - 18](#)).
- If an interface adaptor is installed (see [page 2 - 19](#)), remove it before installing an SSD.
- The module will be visible at point **1** on the mainboard ([Figure 15a](#)).
- Carefully remove the screw **2** ([Figure 15b](#)).
- The module **3** ([Figure 15c](#)) will pop-up, and you can remove it from the computer ([Figure 15d](#)).
- Reverse the process to install a new module.

a.



c.



#### Power Button Cable

The power button cable is underneath the module. When disassembling the mainboard, the power button cable must be disconnected.

b.



d.



#### 3. SSD Module

- 1 Screw



## Removing the System Memory (RAM)

The computer has **three** memory sockets for 204 pin Small Outline Dual In-line (SO-DIMM) **DDR3L** type memory modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Note that **three SO-DIMMs are only supported by Quad-Core CPUs; Dual-Core CPUs support two SO-DIMMs maximum.**

**Two primary memory sockets are located under component bay cover (the bottom case cover), and one secondary memory sockets are located under the keyboard. If you are installing only two RAM modules then they should be installed in the primary memory sockets under the component bay cover.**

### Primary System Memory Upgrade Process

1. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)) and remove the component bay cover ([page 2 - 10](#)).
2. The RAM modules will be visible at point **1** on the mainboard.
3. Gently pull the two release latches (**2** & **3**) on the sides of the memory socket in the direction indicated by the arrows ([Figure 16b](#)). The RAM module **4** will pop-up ([Figure 16c](#)), and you can then remove it.
4. Pull the latches to release the second module if necessary.

*Figure 16*  
**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.

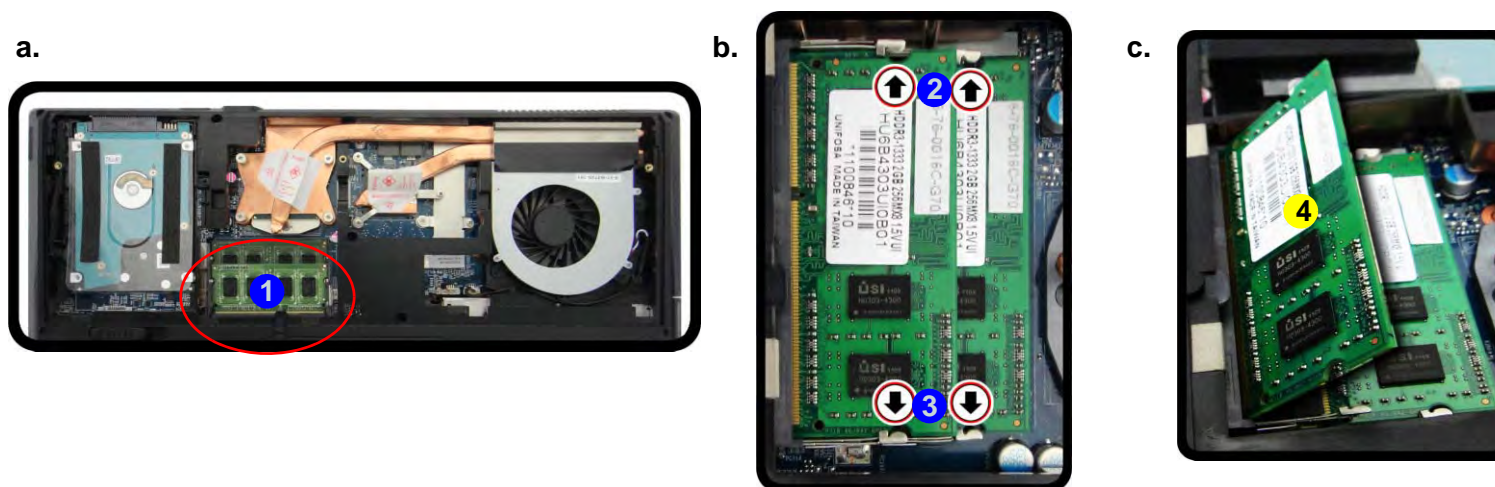


#### Contact Warning

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



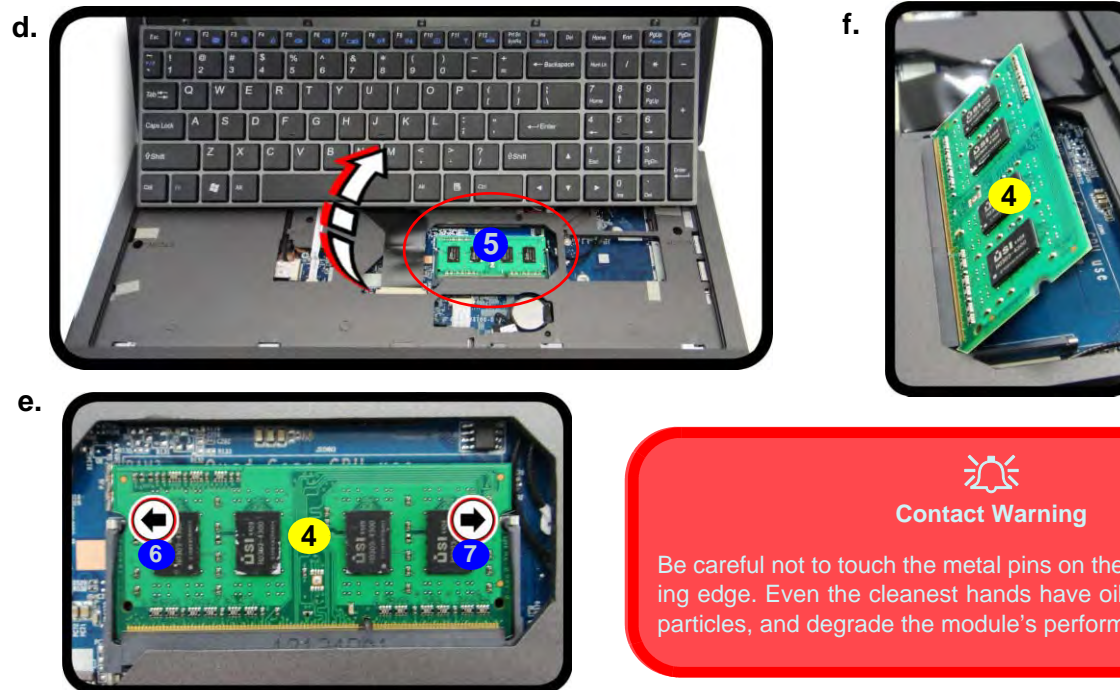
## Disassembly

*Figure 17*  
**RAM Module  
(under keyboard)  
Removal**

- d. The secondary RAM module will be visible at point 5.
- e. Pull the release latches.
- f. Remove the module.

### Memory (under Keyboard) Upgrade Process

5. Turn **off** the computer, turn it over and remove the battery ([page 2 - 5](#)), component bay cover ([page 2 - 10](#)) and keyboard ([page 2 - 14](#)).
6. The memory socket will be visible at point 5 ([Figure 17d](#)).
7. Gently pull the two release latches (6 & 7) on the sides of the memory socket in the direction indicated below.
8. The RAM module 4 will pop-up, and you can 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.



4 RAM Module

9. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
10. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. **DO NOT FORCE** the module; it should fit without much pressure.
11. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
12. Replace the bay cover and screws.
13. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

## Removing the Hinge Cover

1. Turn off the computer, turn it over and remove the battery ([page 2 - 5](#)), and component bay cover ([page 2 - 10](#)).
2. Remove screws ① - ② and use a screwdriver to carefully push out the hinge cover ④ at point ③.
3. Turn the computer over, carefully lift the hinge cover ④ out of the computer ([Figure 18b](#)).



*Figure 18*  
**Hinge Cover  
Removal**

- a. Remove the screws and use a screwdriver to push out the hinge cover.
- b. Turn the computer over, remove the hinge cover.



4. Hinge Cover

- 2 Screws





# Appendix A: Part Lists

This appendix breaks down the *W355SDQ* series notebook's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

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

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

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

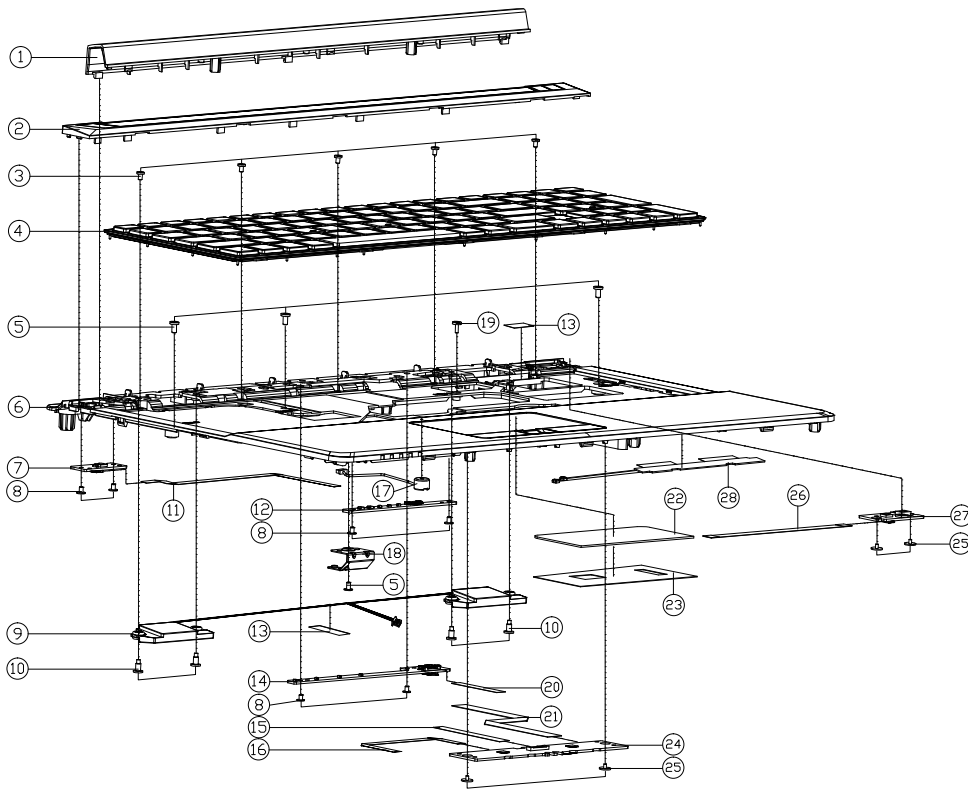
## Part List Illustration Location

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

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

Parts	
Top with Fingerprint	<i>page A - 3</i>
Top without Fingerprint	<i>page A - 4</i>
Bottom	<i>page A - 5</i>
LCD	<i>page A - 6</i>
HDD	<i>page A - 7</i>

# Top with Fingerprint

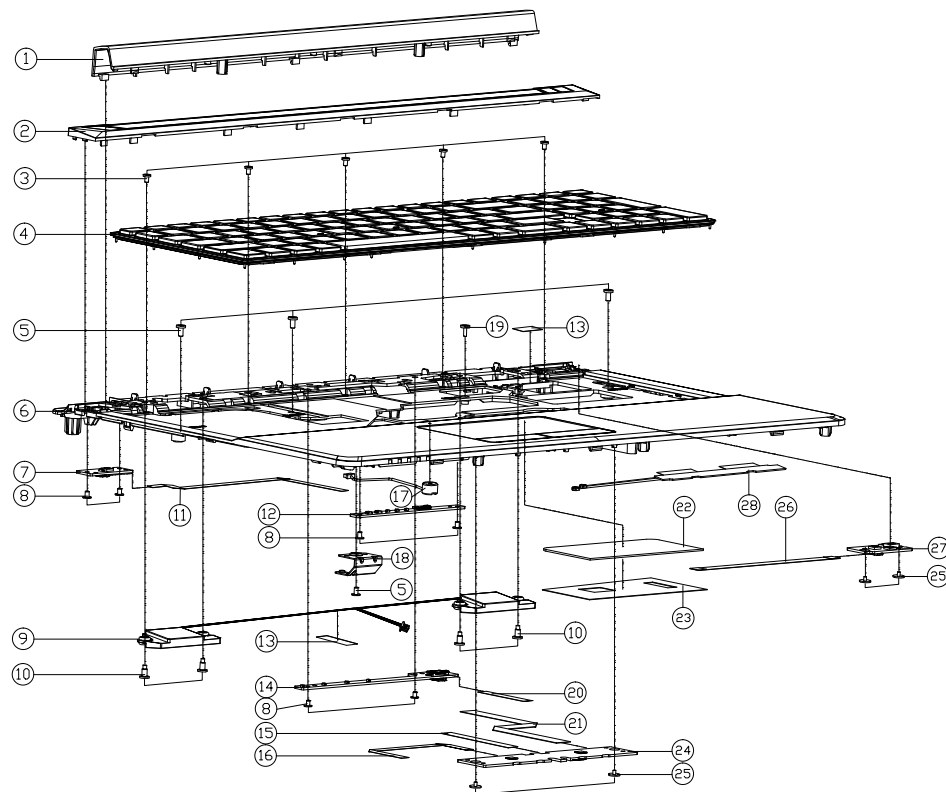


ITEM	PART NAME	PART NO	REMARK
1	HINGE COVER(PC+ABS)W355STQ	6-42-W3552-031	
2	CENTER COVER MODULE W355SSQ	6-42-W3552-100-S	
3	SCREW M2*4L KI NI ICT NY (DD=14.5,DT=0.4)	6-35-B1120-4RE	
4	WIRE B.U TO VIA P-PROCESSOR W/355 BLACK COILATION INSULANT WITH VIB KEY + VIB FRAME	6-80-W67C0-010-1	
5	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6125-5RA	
6	(PRE-PROCESS)TOP CASE (W/FINGER) ASSY W355SQ	6-78-W355SD02-020	
7	POWER SWITCH BOARD V2.0 W355STQ	6-77-W355S-D02	
8	SCREW M2*3L KI NI ICT NY (DD=14.5,DT=0.4)	6-35-B1120-3RE	
9	SPK CABLE FRONT RL SH88 TS2 2W R1 EEDR20H L=200MM P150H-A	6-23-5P15S-011	
10	SCREW M2*6.2L NI ICT NY FOR SPEAKER	6-35-Z1120-6R2	
11	FFC CABLE FOR MB TO POWER BOARD 8PIN (CULS) W350ET	6-43-W35E0-031	
12	POWER LED BOARD V1.0 W350STQ	6-77-W35S4-D01	
13	TAPE MYLAR TRANSPARENT (20*10*0.05) P180HM	6-40-P1803-020	
14	LID VGA LED BOARD V1.0 W350STQ	6-77-W35S5-D01	
15	FFC CABLE FOR TP TO CLICK BOARD 6PIN P150HM (YC)	6-43-X5102-011-3	
16	FFC CABLE FOR FRONT LED TO CLICK 10PIN (CULS) W350ET	6-43-W35E2-021	
17	D-MIC 8.0MM*7.55MM W/CABLE(CBLACK) L=153MM W370ST	6-23-EW37S-011	
18	TOP CASE BOSS BKT SECC W350ETQ	6-33-W35E2-010	
19	SCREW M2*5L K/ICT=0.8 D=4.0 BK/Z ICT NY	6-35-B6120-5R0	
20	FFC CABLE FOR MB TO HALL SENSOR BOARD 12PIN (CULS) W350ET	6-43-W35E0-040	
21	FFC CABLE FOR CLICK BOARD TO MB 20PIN (CULS) W350ET	6-43-W35E0-021	
22	TOUCH PAD SYNAPTICS TM-00146-003 MULTI-GEASURE C4800	6-49-C4802-010	
23	MYLAR FOR TOUCHPAD (TRANSPARENT MYLAR+TESA4965) W340CU	6-40-W3402-020	
24	CLICK BOARD V3.0 (W/FP) W355STQ	6-77-W35S2-D03-B	
25	SCREW M2*2L KI BK/Z ICT NY (16,T=0.5)	6-35-B6120-2RC	
26	FFC CABLE FOR HIT KEY TO HALL SENSOR 6PIN (CULS) W350ETQ	6-43-W35E2-011	
27	VGA/WLAN SW BOARD V2.0 W355SSQ	6-77-W355S-D12-A	
28	INFORM PEK-1 BATE NO LIE-1 P23 150MM*85MM*16MM*0.5MM W355SQ	6-23-7W355-020	

Figure A - 1  
Top with  
Fingerprint

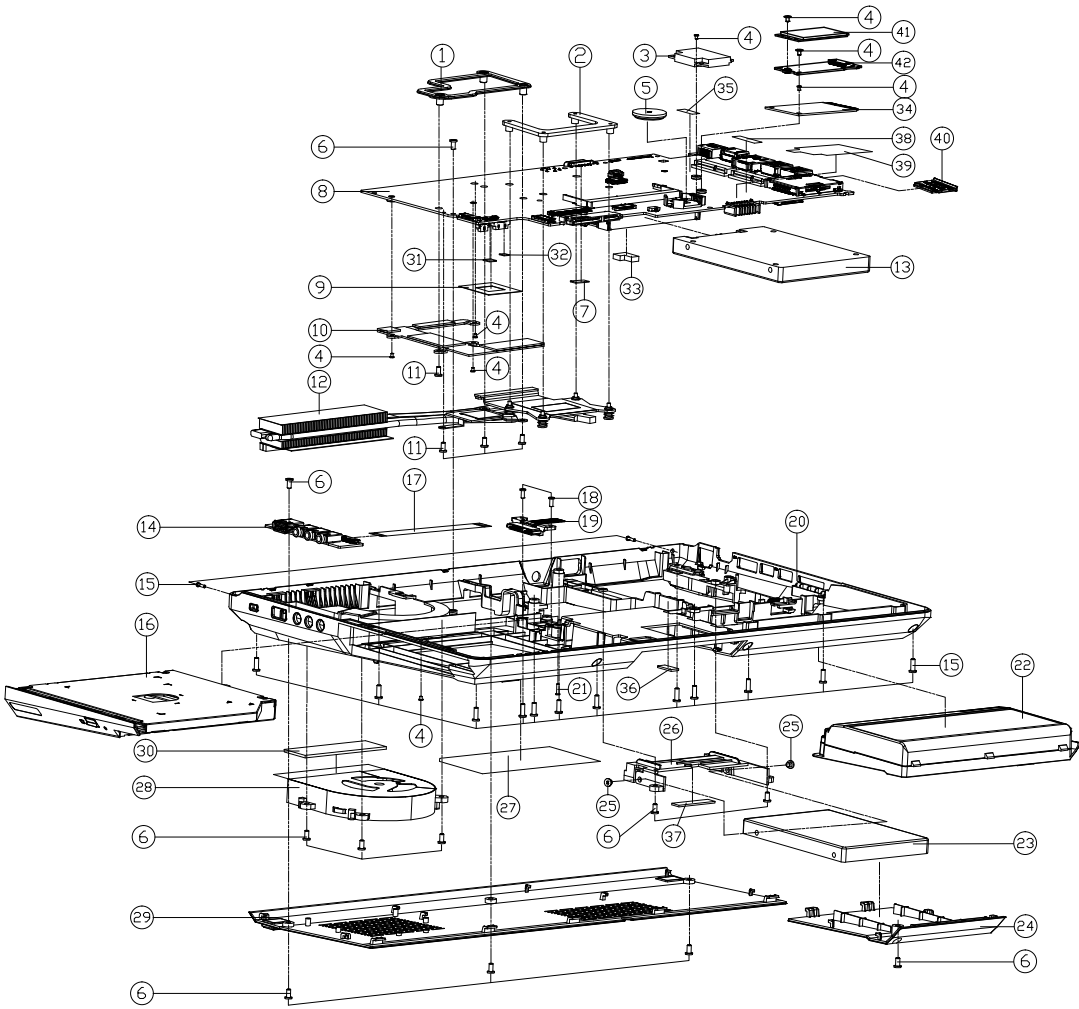
## A.Part Lists

*Figure A - 2*  
**Top without  
Fingerprint**



ITEM	PART NAME	PART NO	REMARK
1	HINGE COVER(PC+ABS) W35SS1TQ	6-42-W3552-031	
2	CENTER COVER MODULE W35SSSQ	6-42-W3552-100-S	
3	SCREW M2x4L KI NI ICT NY (DD=74.5,DIT=0.4)	6-35-B1120-4RE	
4	WIRE & IN P-COVERAGE WIREDS BULKY INSULATION WITH VOM KIT AND FUSE	6-80-W67C0-010-I	
5	SCREW M2.5x5L KI BK/Z ICT NY	6-35-B6125-5RA	
6	TOP CASE MODULE (W/O FP), OMNO SPEAKER W35SSQXAPKX	6-39-W3552-013-SN	
7	POWER SWITCH BOARD V2.0 W35SSTQ	6-77-W3555-D02	
8	SCREW M2x3L KI NI ICT NY (DD=44.5,DIT=0.4)	6-35-B1120-3RE	
9	SPEAKER FRONT L/R SPKR 2SW 22Ω AT CENTER L-CONNECTION POSITION-A	6-23-5P15S-011	
10	SCREW M2x6.2L NI ICT NY FOR FP SPEAKER	6-35-Z1120-6R2	
11	FFC CABLE FOR MB TO POWER BOARD 6PIN (JUS) W35ET	6-43-W35E0-031	
12	POWER LED BOARD V1.0 W35OSTQ	6-77-W3554-D01	
13	TAPE MYLAR TRANSPARENT (20x10x0.05) P180HM	6-40-P1803-020	
14	LID VGLA LED BOARD V1.0 W35OSTQ	6-77-W3555-S	
15	FFC CABLE FOR TP TO CLICK BOARD 6PIN P150M (V)	6-43-X5102-011-3	
16	FFC CABLE FOR FRONT LED TO CLICK 10PIN (JUS) W35ET	6-43-W35E2-021	
17	D-MIC BLUWW759M W/CABLE(GRACKO L-153MM K73) W35T	6-23-EW37S-011	
18	TOP CASE BRSS BKT SECC W350ETQ	6-33-W35E2-010	
19	SCREW M2x5L KI(T=0.8 D=4.0) BK/Z ICT NY	6-35-B6120-5R0	
20	FFC CABLE FOR MB TO HALL SENSOR BOARD 12PIN (JUS) W35ET	6-43-W35E0-040	
21	FFC CABLE FOR CLICK BOARD TO MB 20PIN (JUS) W35ET	6-43-W35E0-021	
22	TOUCH PAD SYMPACTICS TM-0146-003 MULTI-GESTURE C4800	6-49-C4802-010	
23	MYLAR FOR TOUCHPAD (TRANSPARENT MYLAR)(TS4965) W34UEI	6-40-W3402-020	
24	CLICK BOARD V3.0 (W/O FP) W35SSTQ	6-77-W3552-D03-C	
25	SCREW M2x2L KI BK/Z ICT NY (#6,T=0.5)	6-35-B6120-2RC	
26	FFC CABLE FOR HOT KEY TO HALL SENSOR 6PIN (JUS) W35ET	6-43-W35E2-011	
27	VGA/WLAN SW BOARD V2.0 W35SSSQ	6-77-W3555-D12-A	
28	INTERIOR PCB+SLATE LW LE+PCB (W/4INCHESX4INCHESX2.0MM) 100% V355SI	6-23-TW3555-020	

Bottom



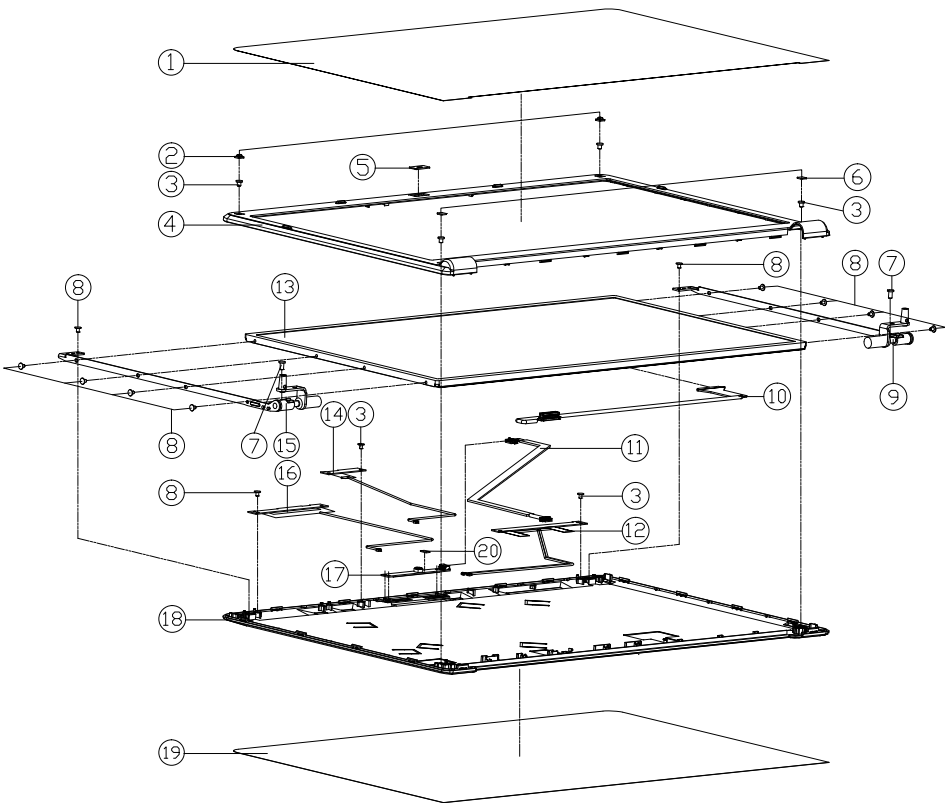
ITEM	PART NAME	PART NO	REMARK
1	VGA SUPPORTER SECC W150ERQ	6-33-W15ES-012	
2	CPU SUPPORT BRACKET SECC T=1.5 PISDUM	6-33-X510S-011	
3	RAM COVER (OPTION) RUBBER W/150ERQ SECC W/150ERQ	6-88-W54SF-9400	(OPTION)
3	RAM COVER (OPTION) RUBBER W/150ERQ SECC W/150ERQ	6-88-P6502-4240	(OPTION)
3	RAM COVER (OPTION) RUBBER W/150ERQ SECC W/150ERQ	6-88-P6502-4280	(OPTION)
3	RAM COVER (OPTION) RUBBER W/150ERQ SECC W/150ERQ	6-88-P3702-9400	(OPTION)
3	RAM COVER (OPTION) RUBBER W/150ERQ SECC W/150ERQ	6-88-P375F-9600	(OPTION)
3	RAM COVER (OPTION) RUBBER W/150ERQ SECC W/150ERQ	6-88-P6502-4270	(OPTION)
4	SCREW M2X3 KI NI ICT NY (D=44.5,T=6.4)	6-35-B1120-3RE	
5	BATTERY 3V 220MA BBBCR2032B (KTS)	6-23-6A2B2-030	
6	SCREW M2.5XSL KI BK/Z ICT NY	6-35-B6125-5RA	
7	GASKET(L2X4W4H0.7) FOR USB BOARD W540N	6-47-00190-12J	
8	MAIN BOARD V2.0B (W/36.TPM) W355SDQ	6-77-W355SDQ-0000-1	
8	MAIN BOARD V2.0B (W/36.TPM) W355SDQ	6-77-W355SDQ-0000-2	
8	MAIN BOARD V2.0B (W/36.TPM) W355SDQ	6-77-W355SDQ-0000-3	
9	VGA COP MYLAR (OPTION) FOR MIE-G3 VHD01	6-40-W870L-010	
10	VRAM THERMAL MODULE W350STQ	6-31-W35SN-103	
11	SCREW M2.5XSL KI NI ICT NY	6-35-B1125-5RA	
12	CPU THERMAL MODULE W350STQ	6-31-W35SN-100	
13	W/1HDD ASS'Y W350SKQ	6-79-W350SKQ-020	
13	W/D HDD ASS'Y W350SKQ	6-79-W350SKQ-010	
14	AUDIO BOARD V2.0A W350SSQ	6-77-W355B-D02A	
15	SCREW M2.5XBL KI BK/Z NY ICT	6-35-B6125-8R0	
16	W/D HDD ASS'Y W355SDQ (OPTION)	6-79-W355SDQ-000	(OPTION)
16	DATA DVD SUPER MULTI BK ASSY W355SDQ	6-79-W355SDQ-001	(OPTION)
17	FTC CABLE FOR AUDIO BOARD TO MB 2P CABLE W350ET	6-43-W35E0-011	
18	SCREW M2XSL K3T-0.8 D=4.0 BK/Z ICT NY	6-35-B6120-5R0	
19	FOR CONNECTION OF CABLE FOR CABLE FOR CABLE FOR CABLE	6-23-FW35E-011	
20	BOTTOM CASE MODULE W350TOCHANGE/FOR LITE-2	6-39-W35E3-014	
21	SCREW M2XBL KI BK/Z ICT NY	6-35-B6120-8R0	
22	IMP 5.1U HAN/250W/250W 42P 0.010V PE 0.000000 V2001	6-87-W37SS-427	
22	IMP 5.1U HAN/250W/250W 42P 0.010V PE 0.000000 V2001	6-87-W37SS-4271	
23	W/1HDD & W/2HDD ASSY W350SKQ	6-79-W350SKQ-030	
23	W/D 2HDD ASS'Y W350SKQ	6-79-W350SKQ-040	
24	HDD COVER MODULE W350ETQ	6-42-W35EJ-100	
25	SCREW M2XSL KI BZ ICT NY (D=4.8 T=0.5)	6-35-B6130-4R0	
26	SECOND HDD HOUSING MODULE W350STQ	6-42-W35SJ-100	
27	PRODUCT LABEL FOR W355SDQ	6-45-W355SDQ-010	
28	FAN MODULE (ADDA) W370ET	6-31-W370S-101	
29	CPU COVER MODULE (CHANGE RUBBER) W350ET	6-42-W35EB-102	
30	SPRINGER L SPRING 0.000000 0.000000 0.000000	6-47-0019A-660	
31	MB VGA SIDE RUBBER W350STQ	6-47-W35SS-010	
32	MB VGA SIDE MYLAR W350STQ	6-40-W35SS-020	
33	MB CPU SIDE RUBBER W350STQ	6-47-W35SS-030	
34	SSD MATA 200GB SAMSUNG M-METABIN SATA0 04H EVD	6-85-D401T-S00	
34	MATA0 200GB MLC SAMSUNG M-METABIN SATA0 04H EVD	6-85-D4000-Z01	
34	MATA0 200GB MLC SAMSUNG M-METABIN SATA0 04H EVD	6-85-D404J-100	
34	MATA0 200GB MLC SAMSUNG M-METABIN SATA0 04H EVD	6-85-D4000-100	
35	TAPE MYLAR TRANSPARENT (OPTION) PISDUM	6-40-P1803-020	
36	SPRINGER (OPTION) 0.000000 0.000000 0.000000	6-47-0019A-135	ONLY FOR SHD
37	HDD 7MM SPONGE (OPTION) 0.000000 0.000000	6-47-0019A-405	ONLY FOR SHD
38	TAPE MYLAR (OPTION) MYLAR M300	6-40-M55J2-030	ONLY FOR SHD
39	TV THERMAL MYLAR (OPTION) T=0.075X0.075 T=0.075	6-40-X810S-031	
40	DUMMY 200 PUSH PUSHER TYPE PUSHER 0.000000 0.000000	6-42-W970B-020	
41	MYLAR 0.000000 0.000000 0.000000 0.000000	6-88-S210W-8810	
41	MYLAR 0.000000 0.000000 0.000000 0.000000	6-88-W3306-8841	
42	MYLAR PCE TO MYLAR CARD FOR 36 MYLAR VIA W4000-1	6-77-W84AG-D01	

Figure A - 3  
Bottom

Part Lists

LCD

Figure A - 4  
LCD



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER PROTECTION MYLAR (PET+3095) BS00M	6-40-B51M8-010	
2	LCD FRONT COVER SCREW RUBBER SLICION C4500	6-47-C4501-031	
3	SCREW M2*5L K1T=0.8 D=4.0 BK/Z ICT NY	6-35-B6120-5R0	
4	LCD FRONT COVER MODULE (ADD RIBS/CHANGED) BS00M	6-39-B51M1-015	
5	CCD LENS PMMA M810L	6-42-M8101-012	
6	FRONT COVER PC FOR SCREW C4500	6-40-C4501-071	
7	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6125-5RA	
8	W355STQ SCREW M2*3L KI NI ICT GITY-PATCH	6-35-B1120-3RE	
9	HINGE R (SECC+SK7) W355STQ	6-33-W3551-0R1	
10	WIRE CABLE FOR LCD TO M/B (CONV/THL CONVL/9002) W30ET	6-43-W35E1-011-1C	
11	WIRE CABLE SPIN TO 6PIN FOR CCD W355STQHL	6-43-W35ST-010	
12	ANTENNA VMAX CONVL VET W355 PCB 24G/350HZ/5G W355M W355M W355M	6-23-7W35E-011	
13	LCD 15.6" FHD (GLARE TYPE) LG LP156WH1-TL02 (LED) 5.7MM	6-50-LB257-L08	
13	LCD 15.6" FHD AU B156HW02 V1 (LED) 5.7MM	6-50-LB257-G06	
13	LCD 15.6" FHD LG LP156WH1-TL02 (LED) (40/60HZ) 5.7MM	6-50-LB257-L05	
13	LCD 15.6" FHD CHIMEI N156HGE-L11 5.5MM (LED)	6-50-LB255-D00	
14	ANTENNA VMAX WGT W355 PCB 24G/350HZ/5G W355M W355M	6-23-7W35E-021	
15	HINGE L (SECC+SK7) W355STQ	6-33-W3551-0L1	
16	ANTENNA PCB 4 SATE WGT W355 PCB 24G/350HZ/5G W355M W355M	6-23-7W35E-010	
17	LCD CAMERA CHIMEI FTD CHIMEI IN HD HIND 32 V300Z F4505 V455 V455 V455	6-88-W310C-5102	OPTION
17	LCD CAMERA CHIMEI FTD CHIMEI IN HD HIND 32 V300Z F4505 V455 V455 V455	6-88-P570C-4900	OPTION
17	LCD CAMERA CHIMEI FTD CHIMEI IN HD HIND 32 V300Z F4505 V455 V455 V455	6-88-W310C-4901	OPTION
18	LCD BACK COVER IMR MODULE W350ETQ	6-39-W35E1-022	
19	LCD BACK COVER PROTECTION MYLAR (BGS+3095) W350M	6-40-E5558-010	
20	CCD SPONGE (8*4*5) SM55 W370ET	6-47-W3701-010	

HDD

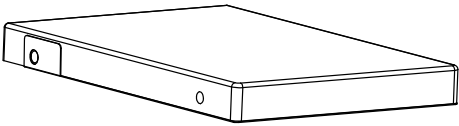
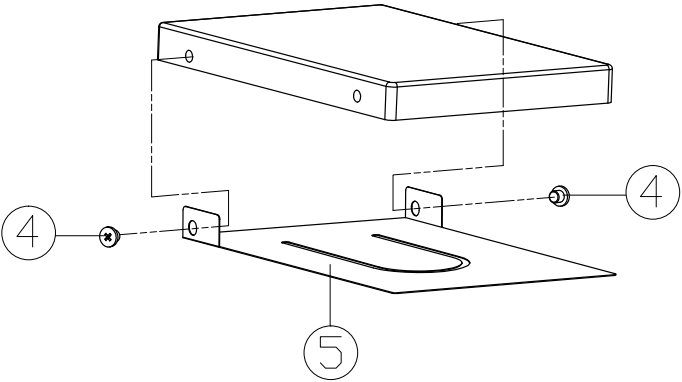
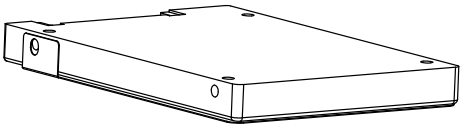
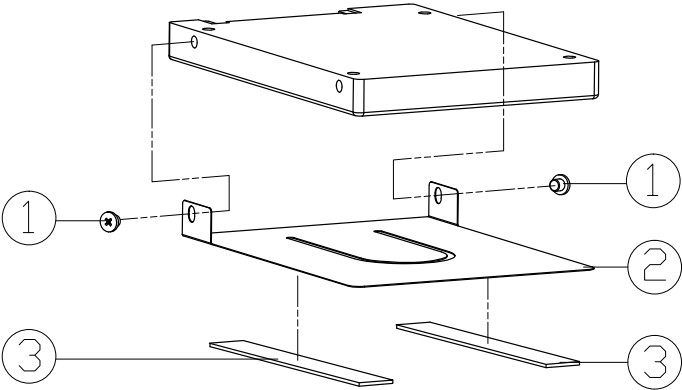


Figure A - 5  
HDD

ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*4L KI BZ ICT NY (D=4.8 T=0.5)	6-35-B6130-4RB	
2	HDD MYLAR PET+SPONGE W370ET	6-40-W370J-012	
3	HDD 7MM SPONGE (40*8*2.5) CR4305 P157SM	6-47-0019A-405	ONLY FOR 7mm HDD
4	SCREW M3*4L KI BZ ICT NY (D=4.8 T=0.5)	6-35-B6130-4RB	
5	HDD MYLAR PET+SPONGE P150HM	6-40-X510J-011	





# Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the W355SDQ 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	VGA NVVDD Decoupling - Page B - 22	VDD3, VDD5 - Page B - 42
Haswell 1/7 - Page B - 3	Lynx 1/9 - Page B - 23	1.5V or 1.35V / 0.75VS, 1.5VS - Page B - 43
Haswell 2/7 - Page B - 4	Lynx 2/9 - Page B - 24	1.05VS, 1.05V_M, 1.05V_LAN_M - Page B - 44
Haswell 3/7 - Page B - 5	Lynx 3/9 - Page B - 25	Power V-Core - Page B - 45
Haswell 4/7 - Page B - 6	Lynx 4/9 - Page B - 26	VGA NVVDD, PEX_VDD - Page B - 46
Haswell 5/7 - Page B - 7	Lynx 5/9 - Page B - 27	FBVDDQ - Page B - 47
Haswell 6/7 - Page B - 8	Lynx 6/9 - Page B - 28	AC-In, Charger - Page B - 48
Haswell 7/7 - Page B - 9	Lynx 7/9 - Page B - 29	W370SS/W350SSQ Audio Board - Page B - 49
DDR SO-DIMM A_0 - Page B - 10	Lynx 8/9 - Page B - 30	W370SS/W35XSSQ Power LED Board - Page B -
DDR SO-DIMM B_0 - Page B - 11	Lynx 9/9 - Page B - 31	W370SS/W35XSSQ Click Board - Page B - 51
DDR SO-DIMM A_1 - Page B - 12	Mini PCIE, Fan, Audio Con - Page B - 32	W350SSQ Power Switch Board - Page B - 52
PS8625 - Page B - 13	USB Charge, CCD, TPM, Multi-Con - Page B - 33	W35XSSQ LID / VGA LED Board - Page B - 53
Panel, Inverter, CRT - Page B - 14	ESATA/USB3.0 Connector - Page B - 34	W350SSQ VGA / WLAN SW Board - Page B - 54
VGA PCI-E Interface - Page B - 15	Card Reader / LAN RTL8411B - Page B - 35	W355SSQ Power Switch Board - Page B - 55
VGA Frame Buffer Interface - Page B - 16	SATA HDD, VLED CON, LID SW - Page B - 36	W355SSQ VGA / WLAN SW Board - Page B - 56
VGA Frame Buffer A - Page B - 17	HDMI, RJ45 - Page B - 37	POWER SEQUENCE - Page B - 57
VGA Frame Buffer A - Page B - 18	Audio Codec VT1802S - Page B - 38	
VGA Frame Buffer B - Page B - 19	Audio AMP & Con - Page B - 39	
VGA Frame Buffer B - Page B - 20	KBC ITE IT8587 - Page B - 40	
VGA I/O - Page B - 21	5V, 5VS, 3.3V, 3VS, 3.3VM - Page B - 41	

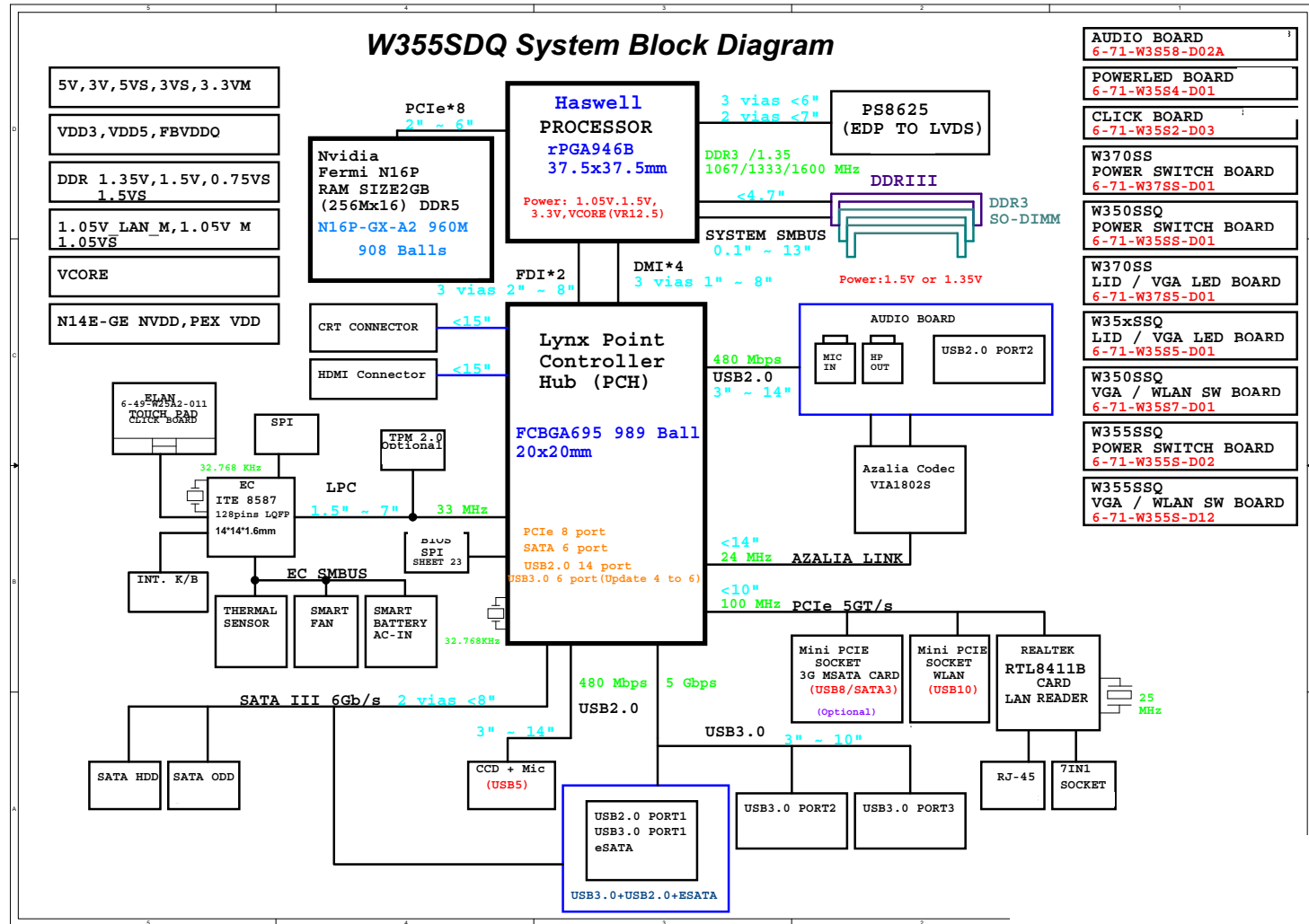
Table B - 1  
Schematic  
Diagrams



## Version Note

The schematic diagrams in this chapter are based upon version 6-7P-W3S5B-005. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

# System Block Diagram

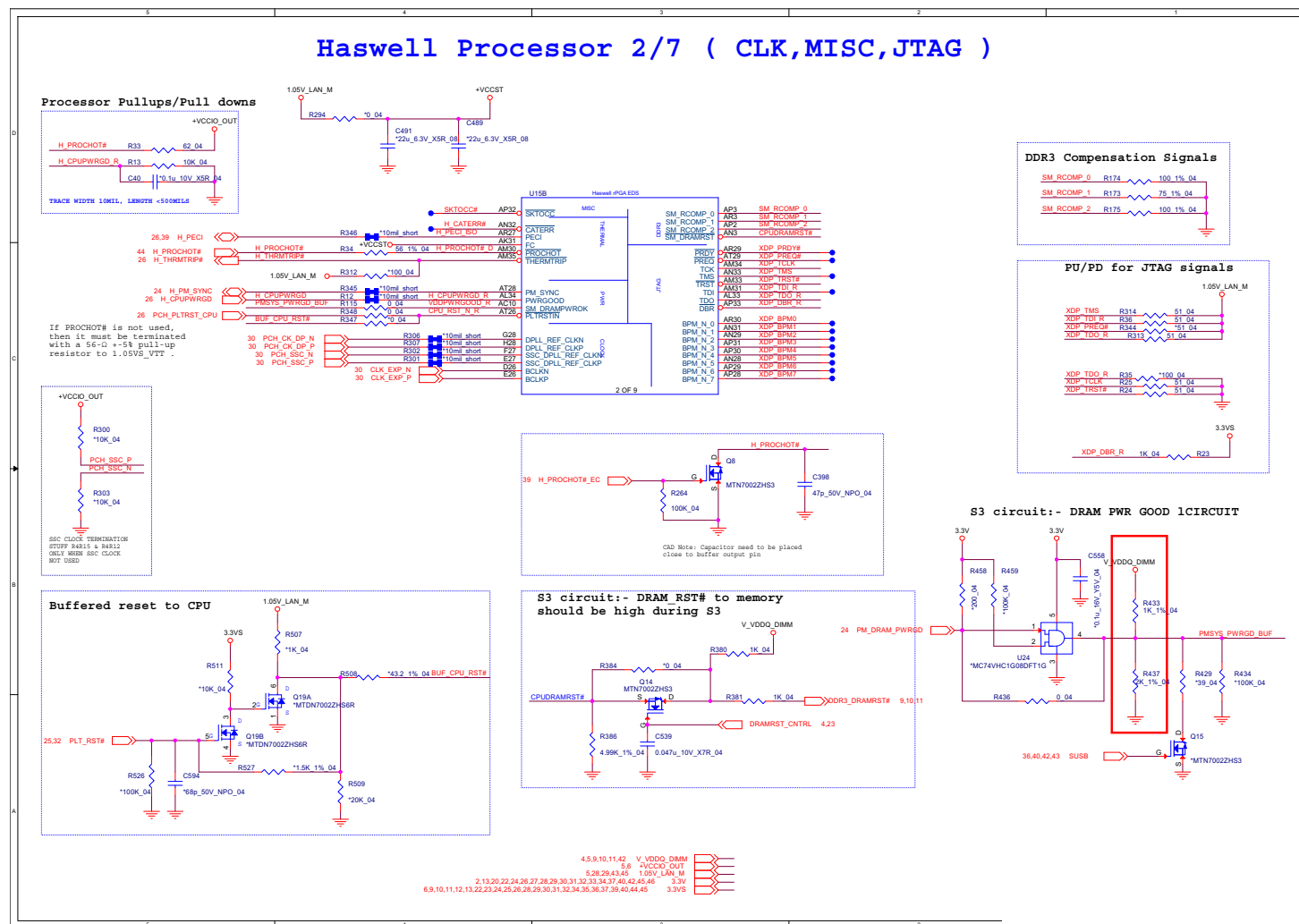


Sheet 1 of 56  
System Block  
Diagram

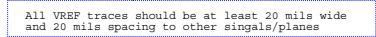


## Haswell 2/7

Sheet 3 of 56  
Haswell 2/7

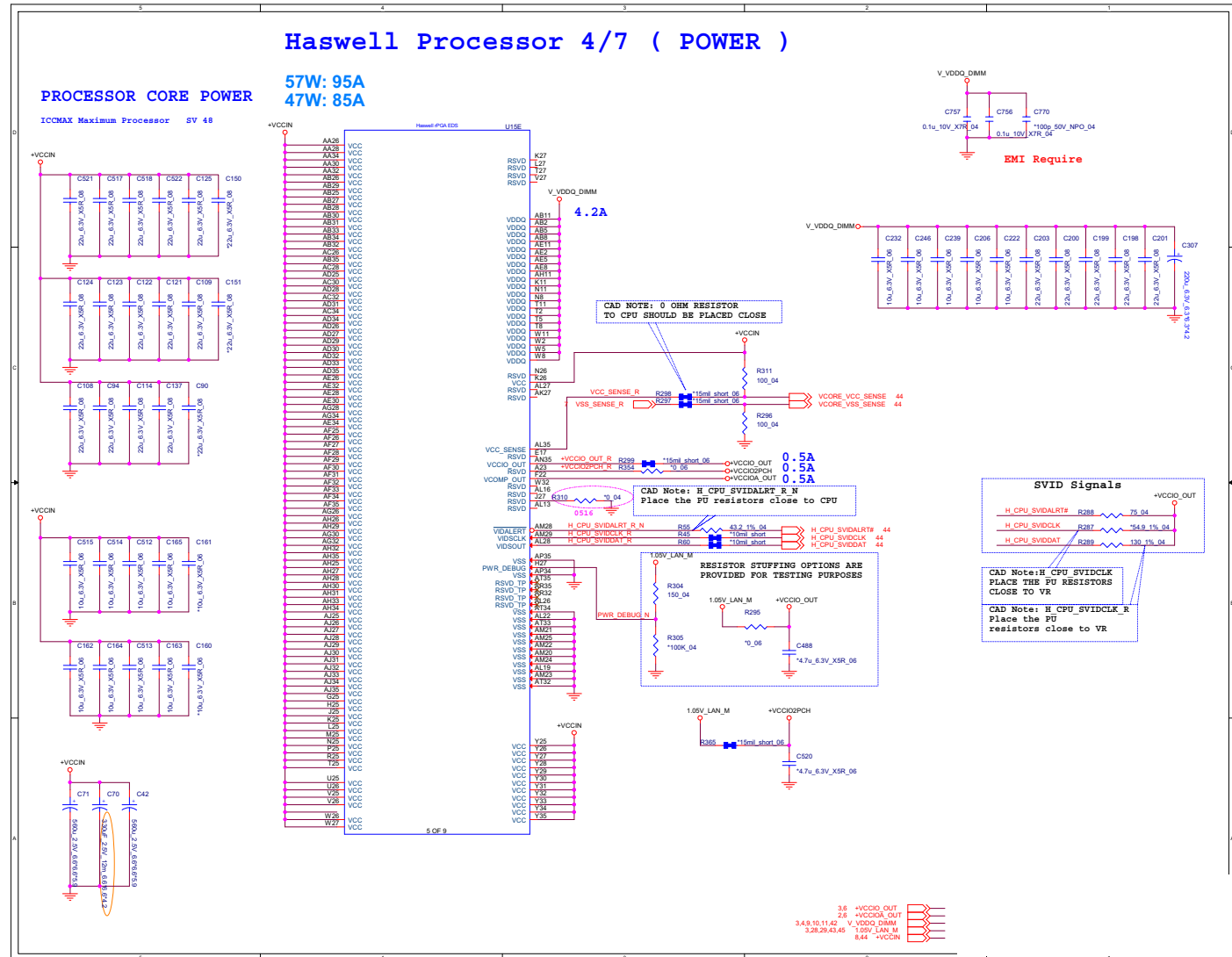


## Haswell 3/7



# Haswell 4/7

Sheet 5 of 56  
Haswell 4/7



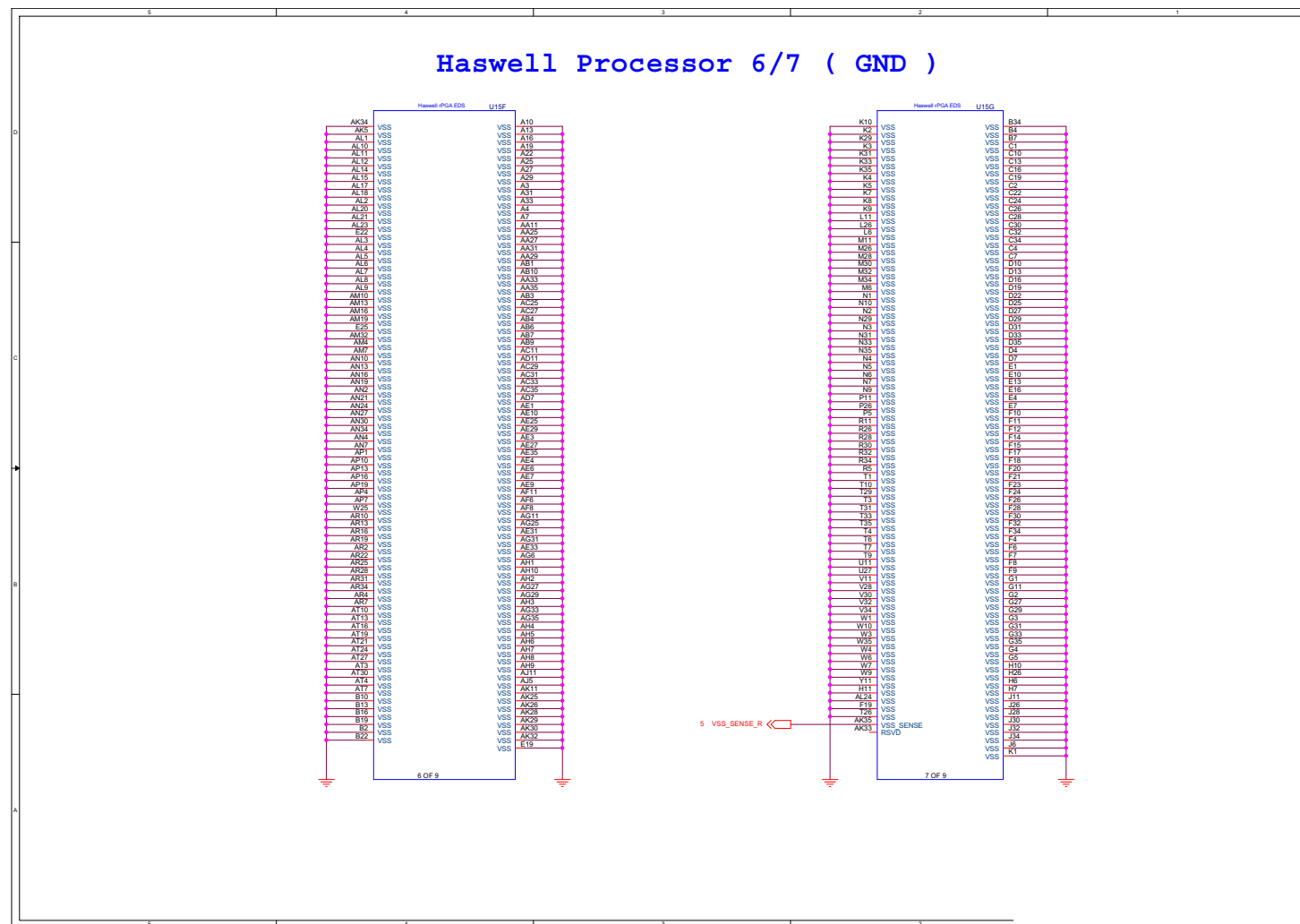


**Haswell 5/7 B - 7**

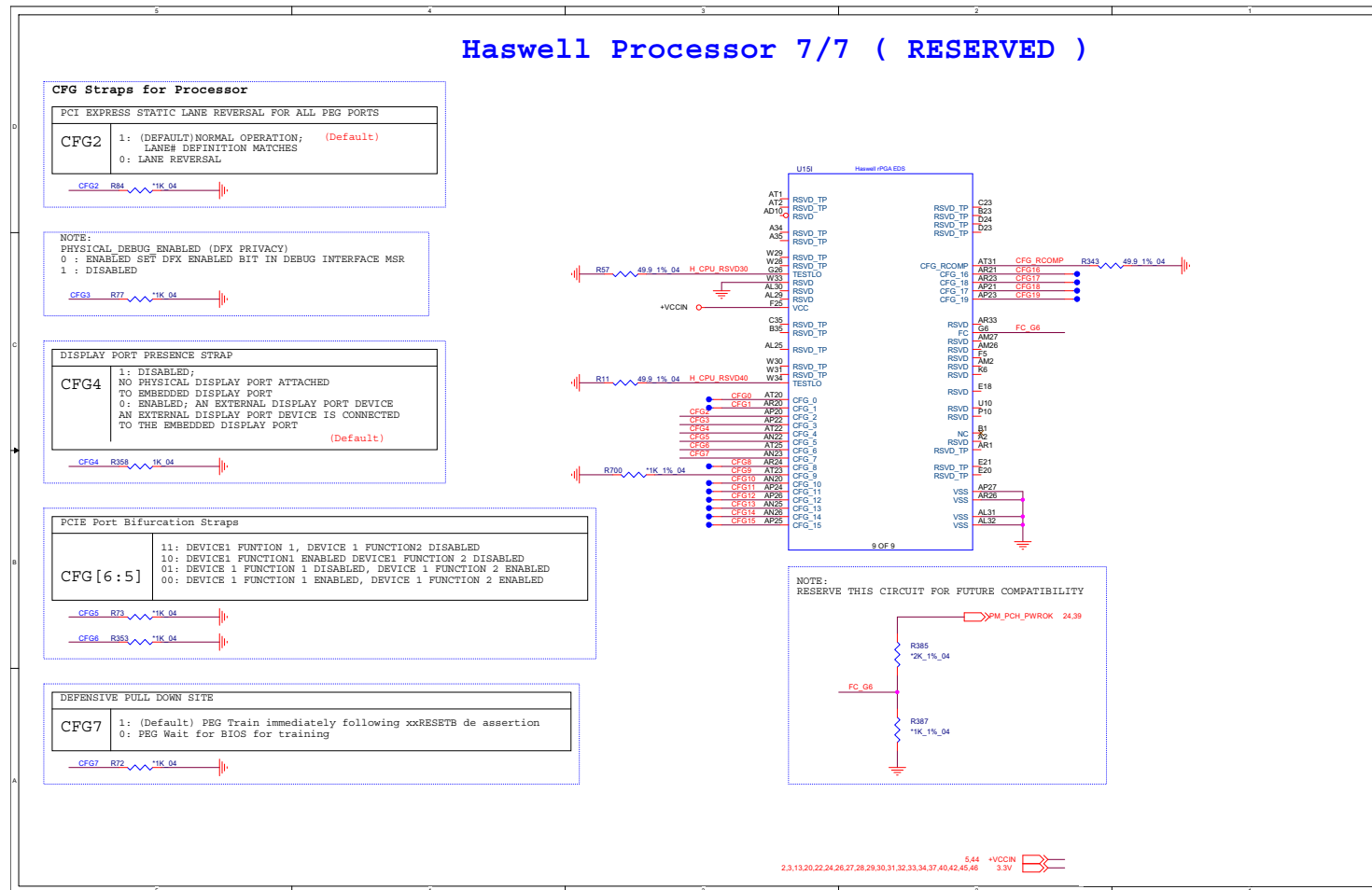


## B. Schematic Diagrams

Sheet 7 of 56  
Haswell 6/7

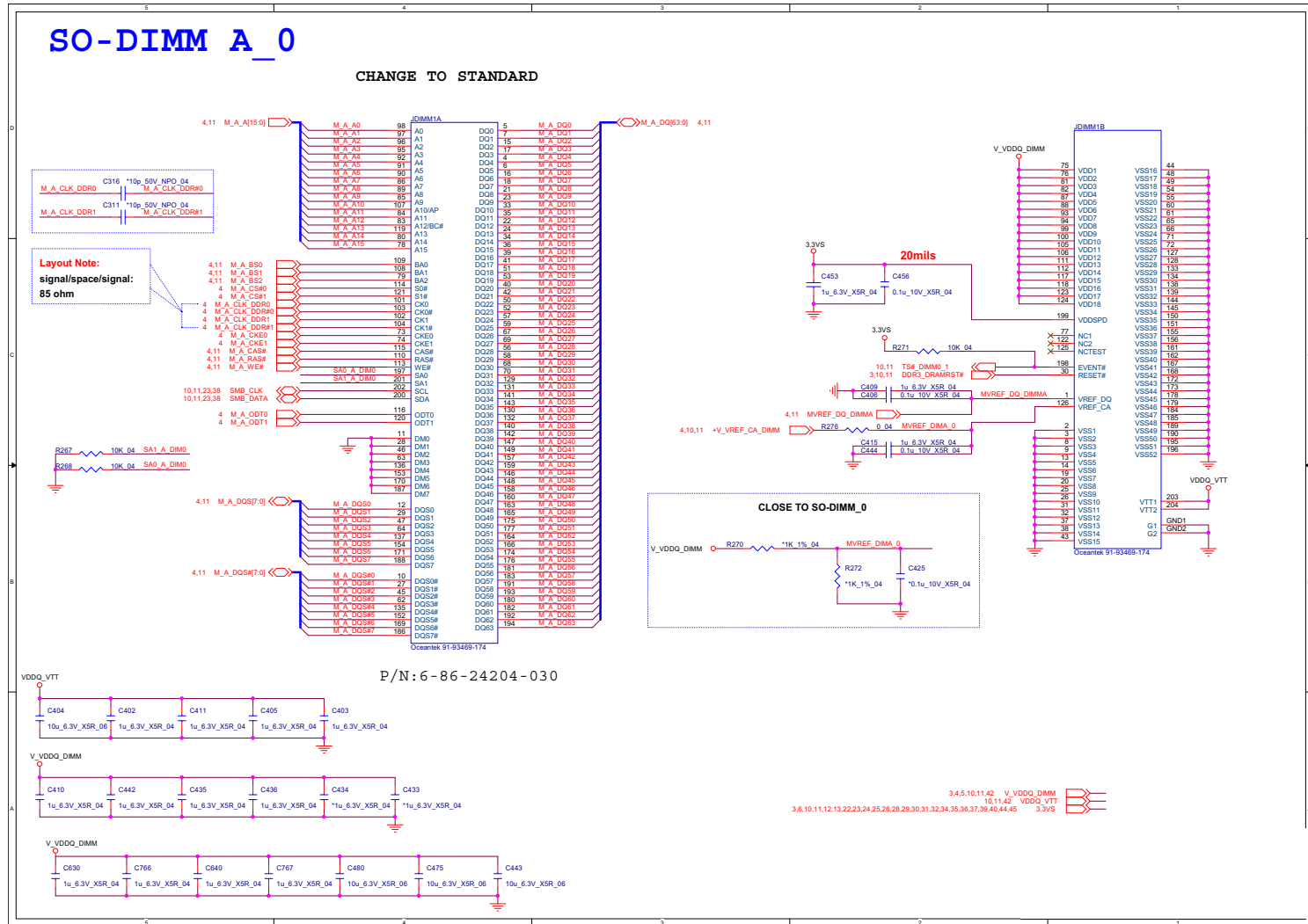


## Haswell 7/7

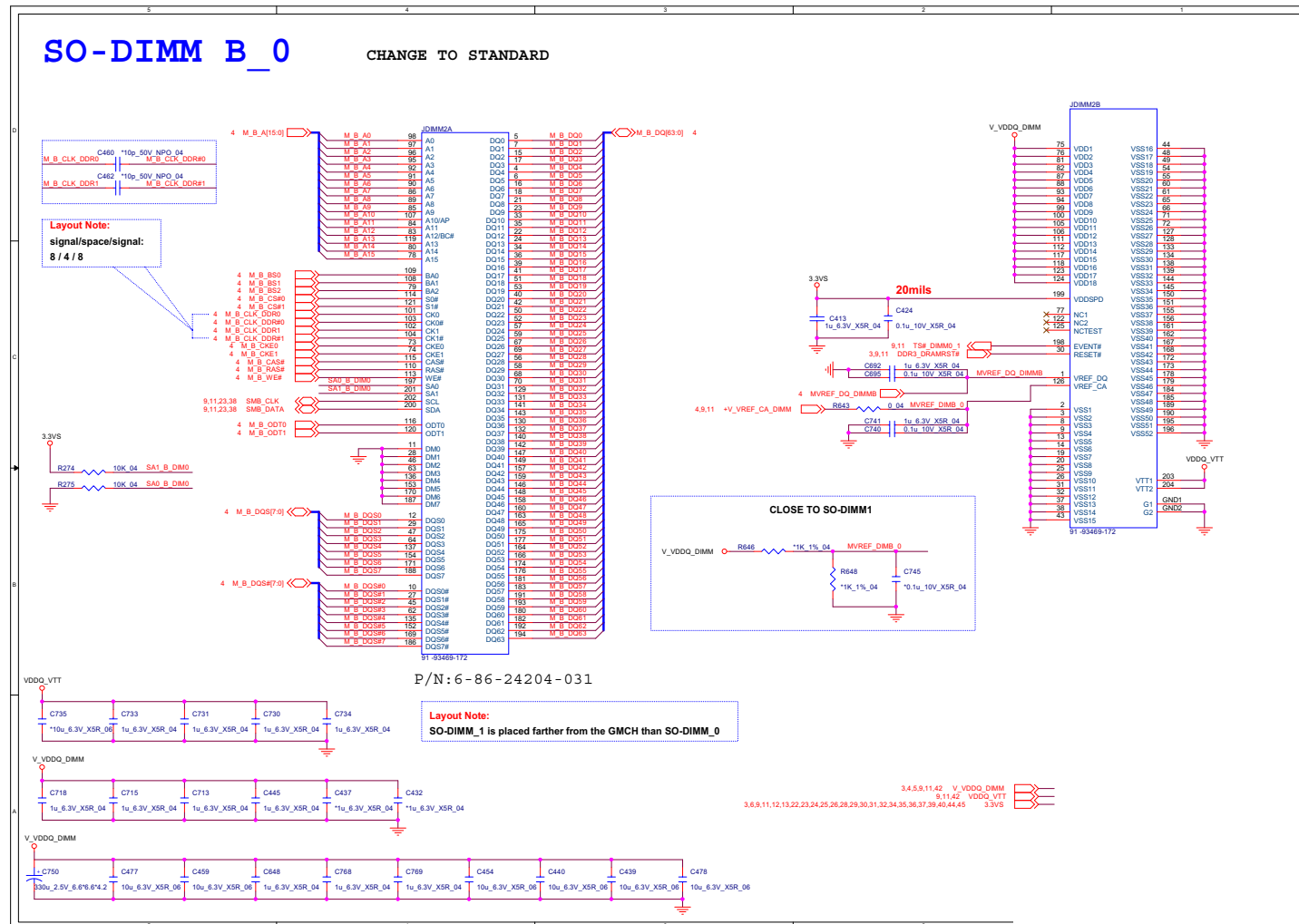
Sheet 8 of 56  
Haswell 7/7

# DDR SO-DIMM A\_0

Sheet 9 of 56  
DDR SO-DIMM A\_0



Sheet 10 of 56  
DDR SO-DIMM B\_0



## DDR SO-DIMM A\_1

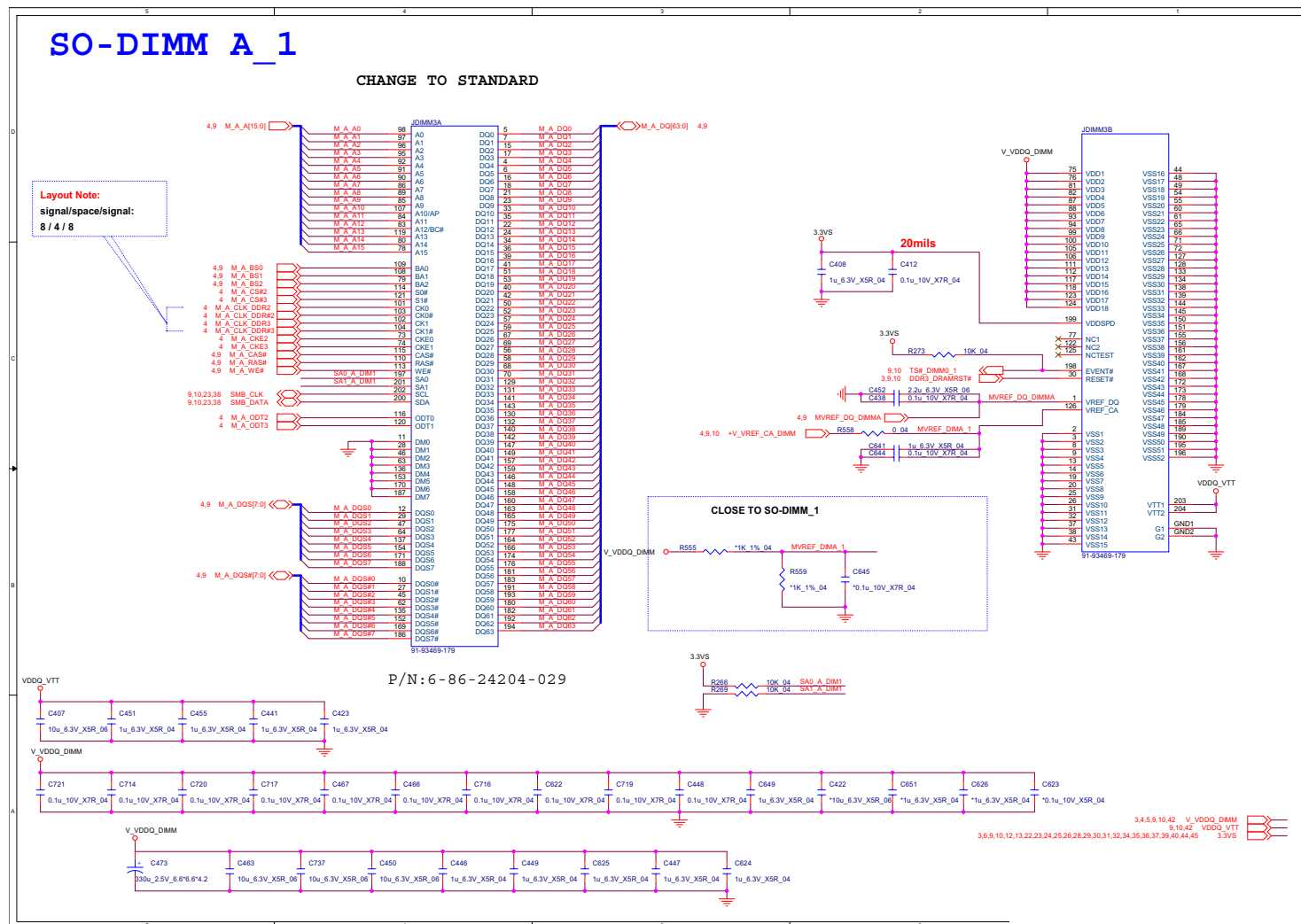
SO-DIMM A 1

CHANGE TO STANDARD

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

Sheet 11 of 56  
DDR SO-DIMM A\_1

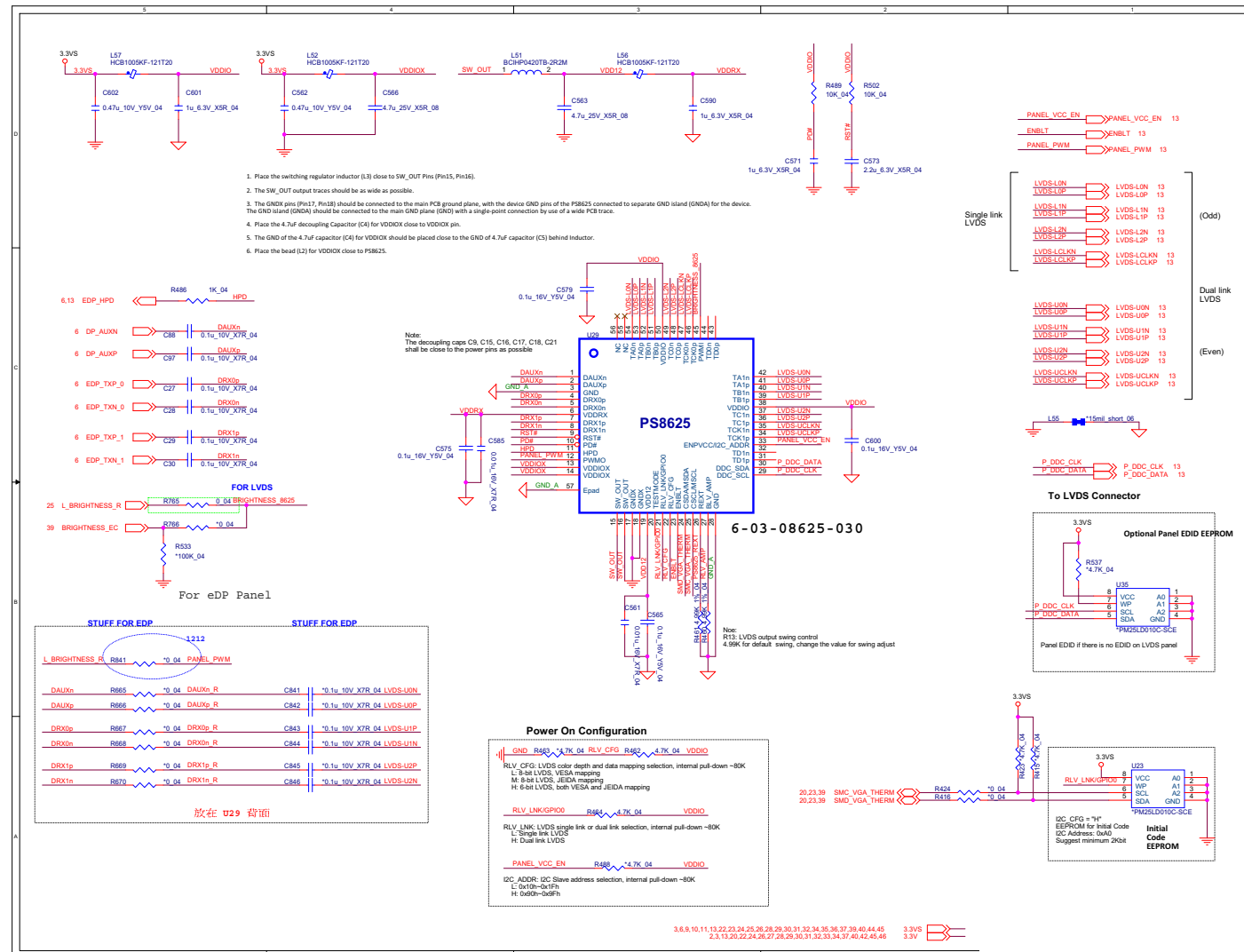
## B. Schematic Diagrams





## Schematic Diagrams

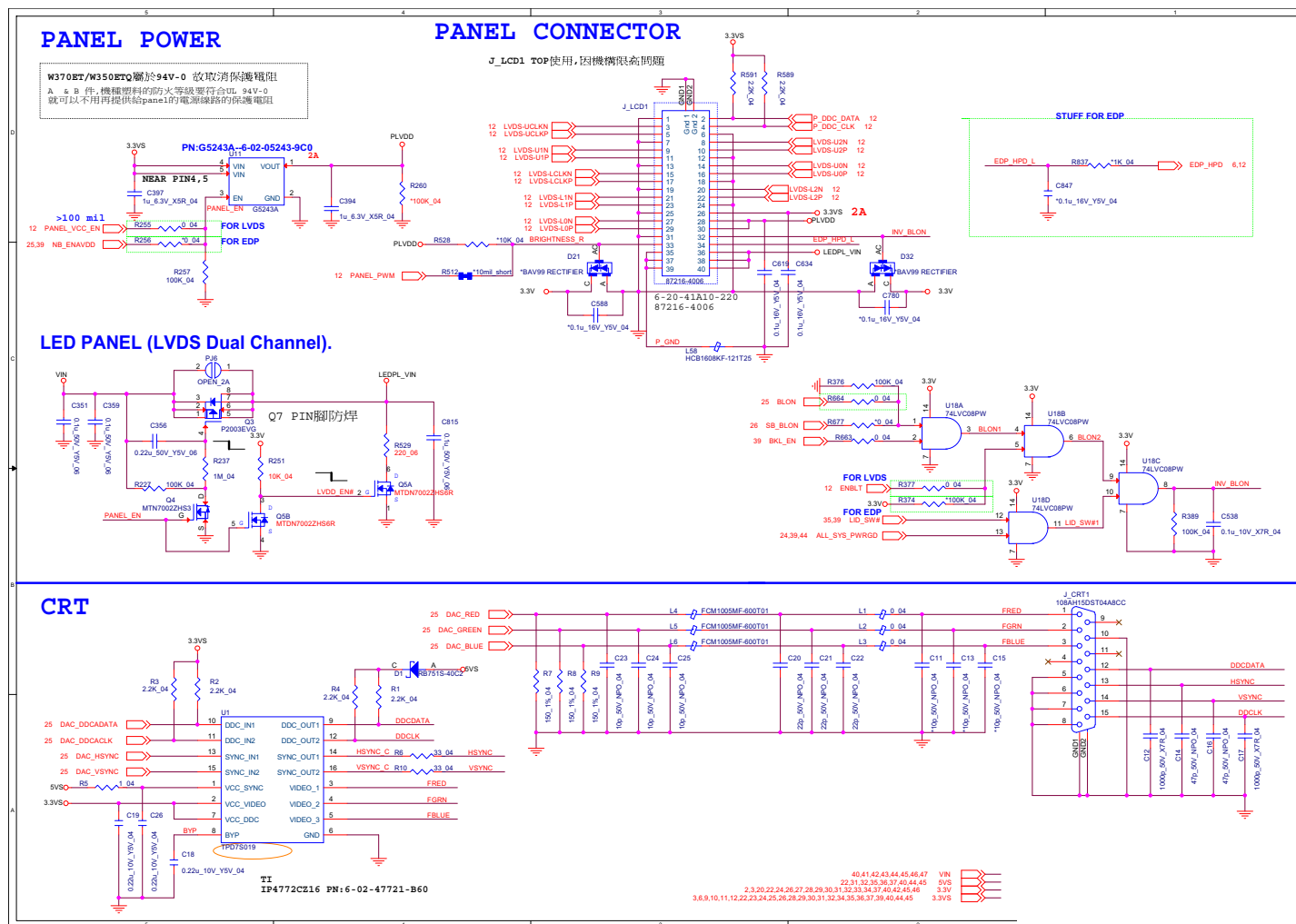
**PS8625**



**Sheet 12 of 56**  
**PS8625**

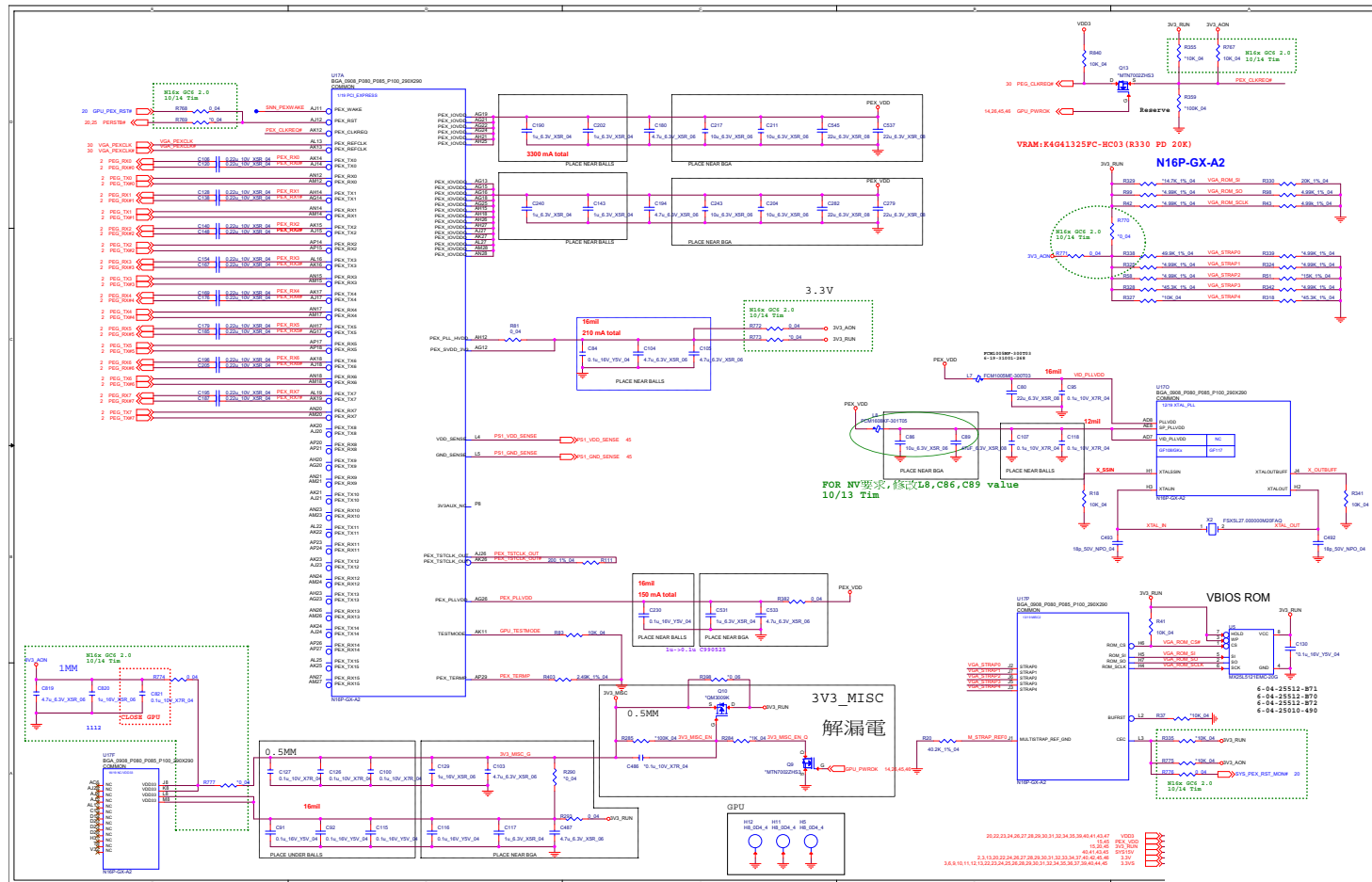
## B.Schematic Diagrams

**Sheet 13 of 56**  
**Panel, Inverter,**  
**CRT**



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## VGA PCI-E Interface

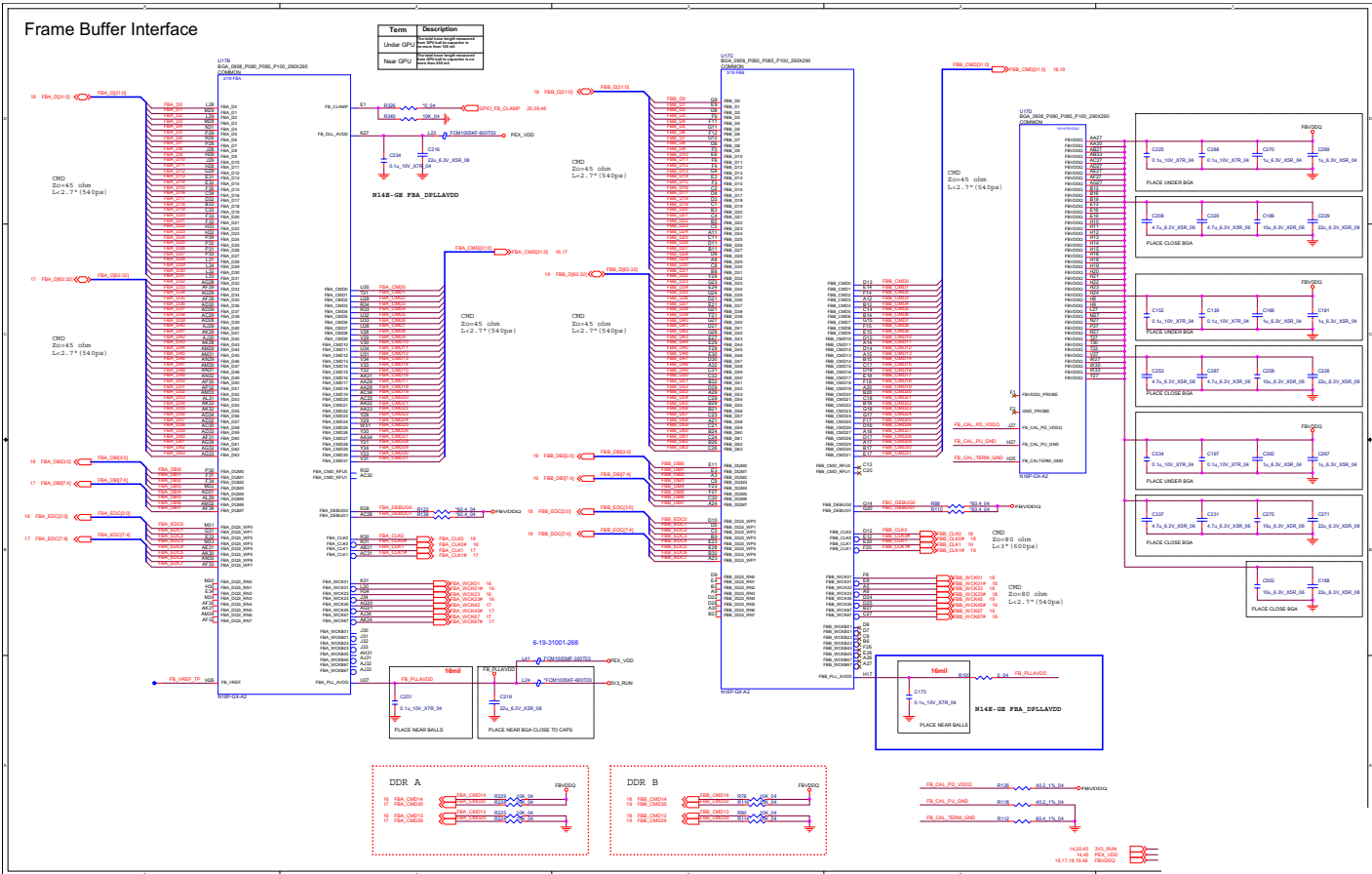


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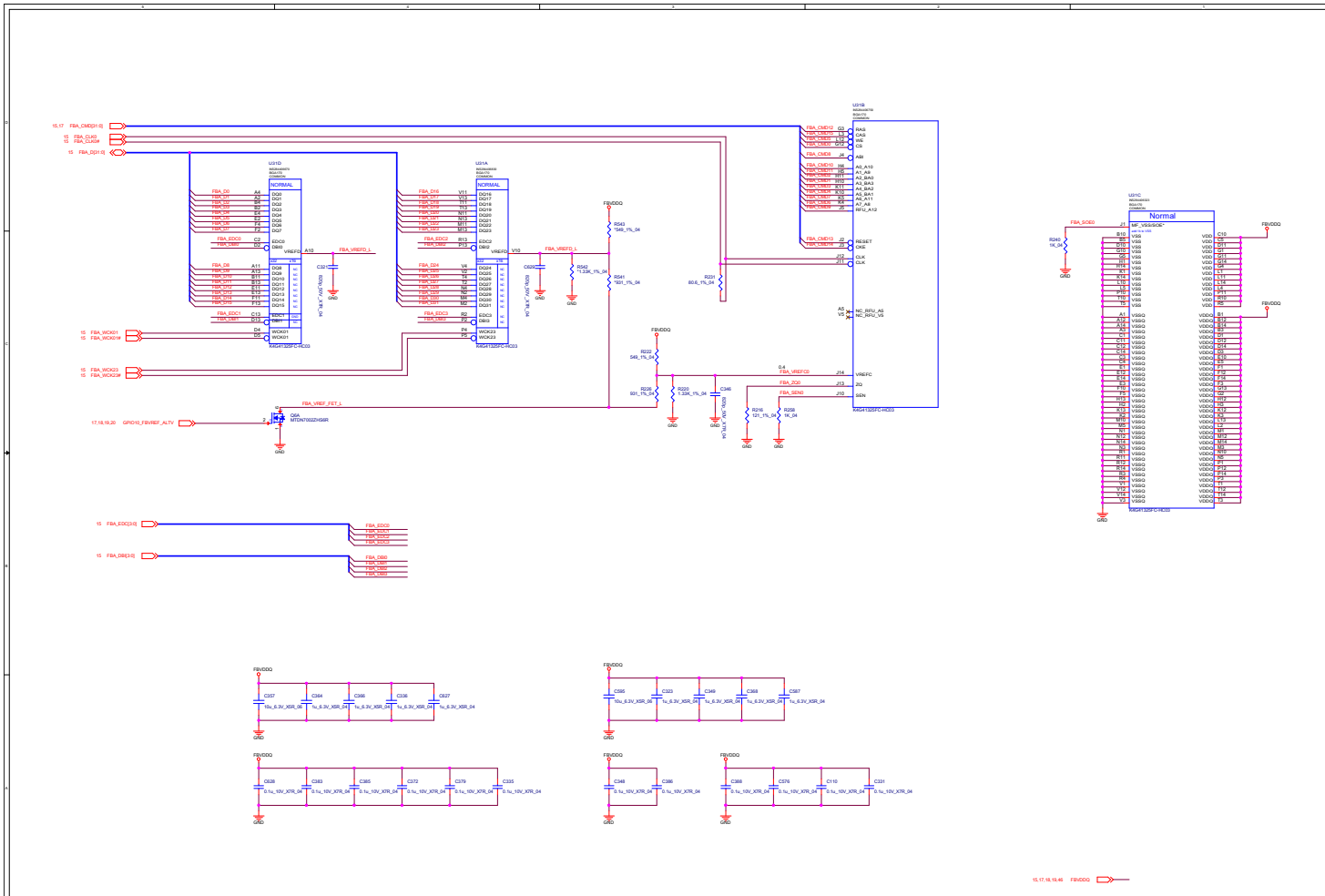
# VGA Frame Buffer Interface

## B.Schematic Diagrams

**Sheet 15 of 56**  
**VGA Frame Buffer**  
**Interface**



# VGA Frame Buffer A



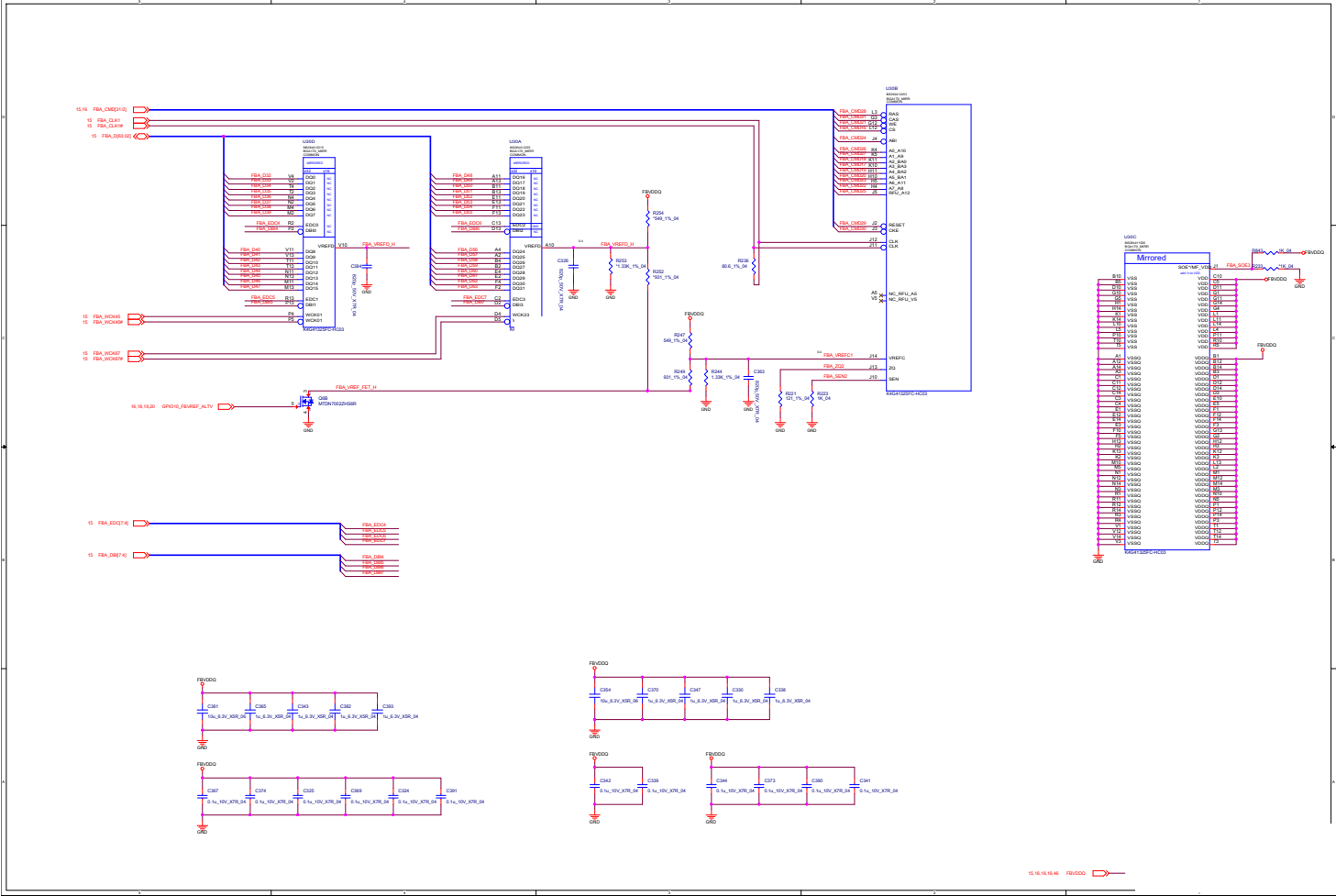
Sheet 16 of 56  
VGA Frame Buffer A

\_\_\_\_\_

# VGA Frame Buffer A

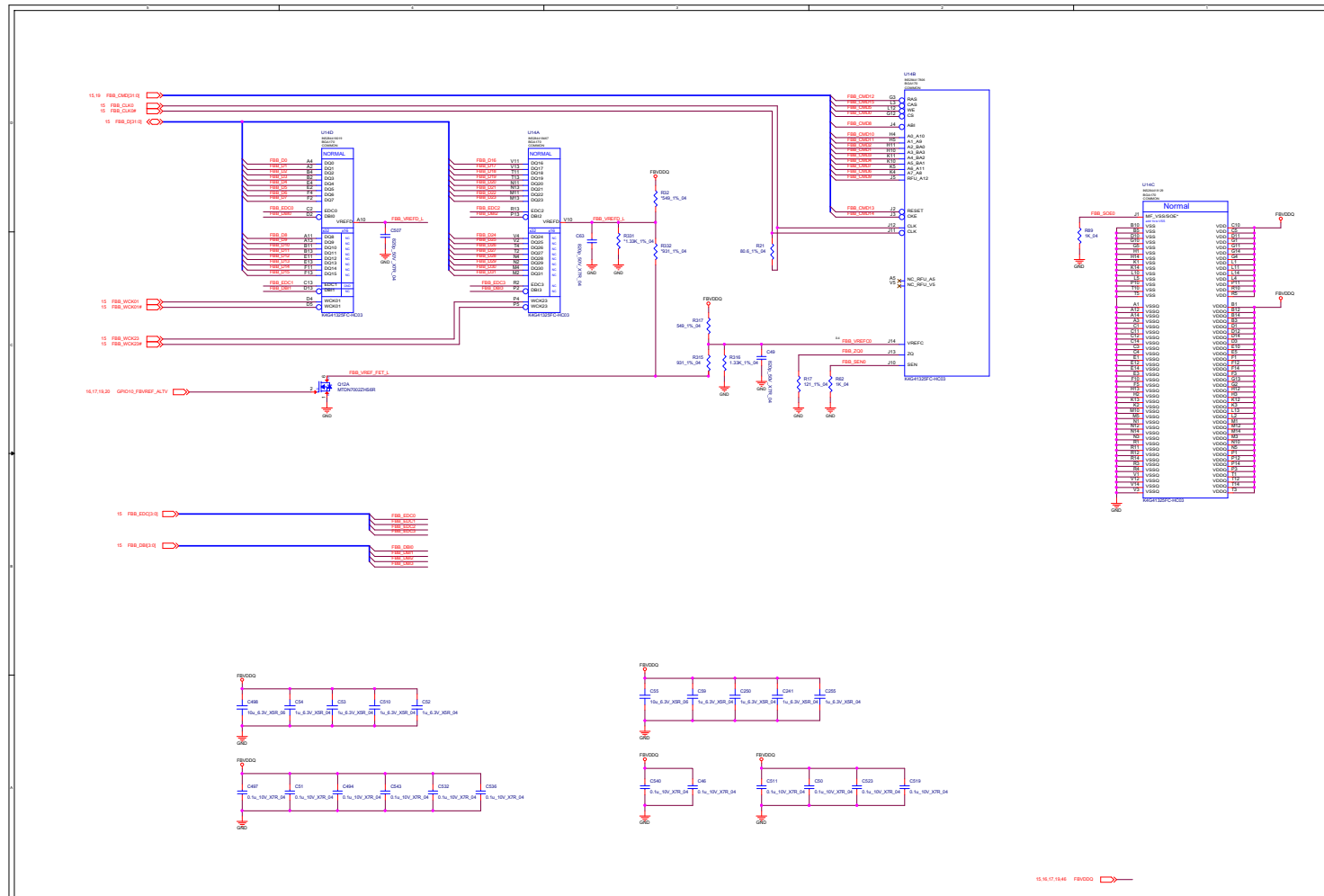
## B.Schematic Diagrams

**Sheet 17 of 56**  
**VGA Frame Buffer**  
**A**





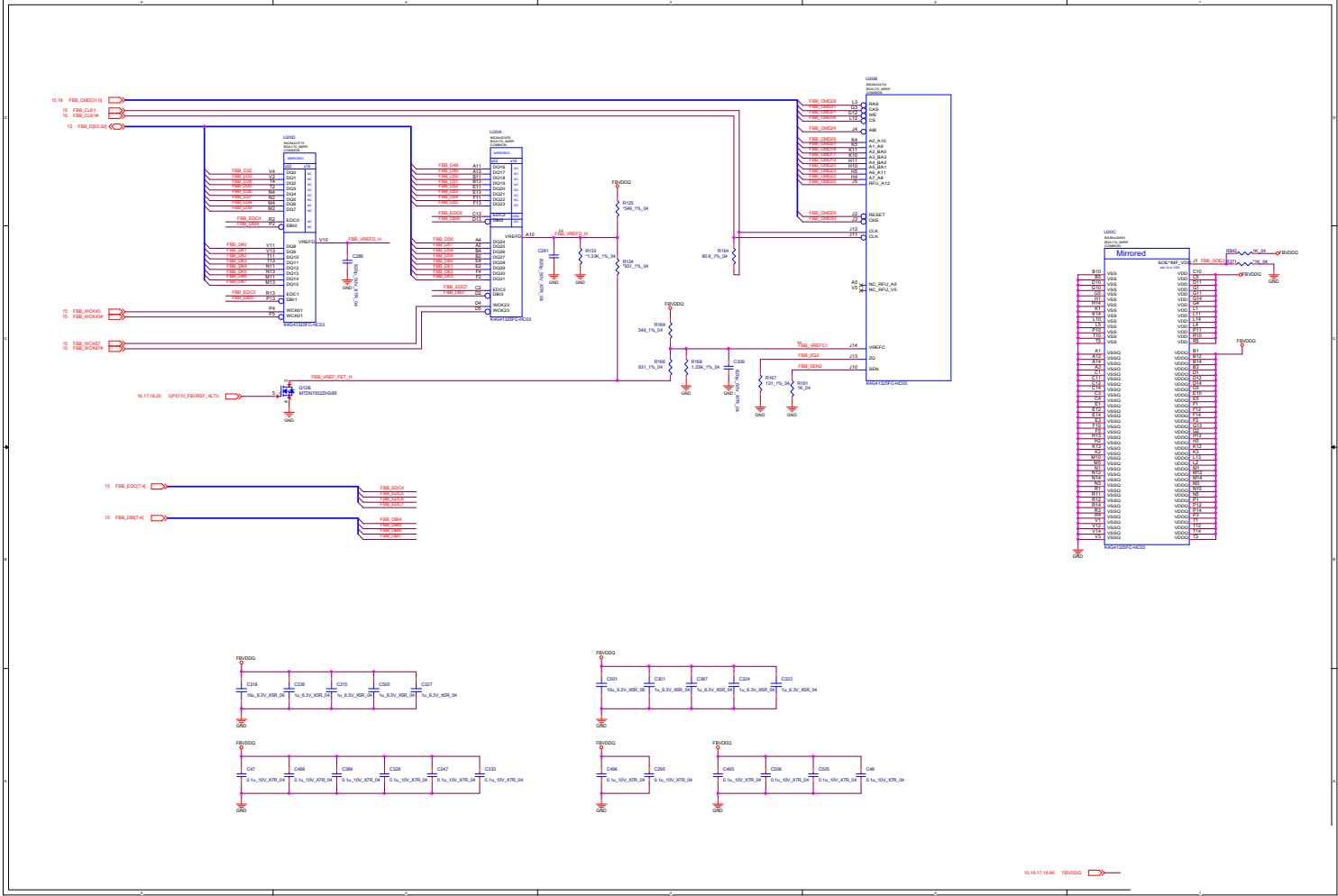
## VGA Frame Buffer B



## VGA Frame Buffer B

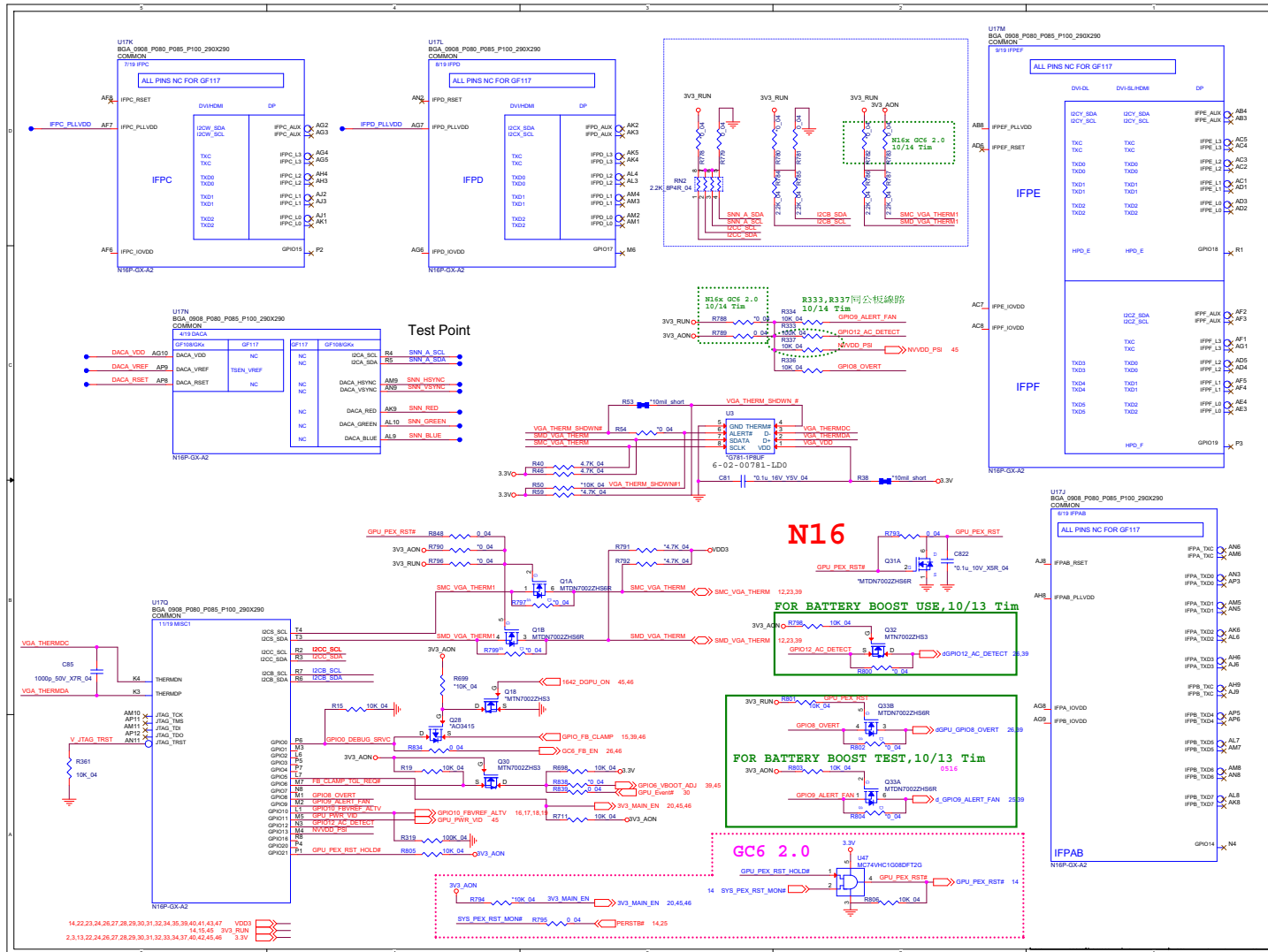
## B.Schematic Diagrams

**Sheet 19 of 56**  
**VGA Frame Buffer**  
**B**



## Schematic Diagrams

## VGA I/O

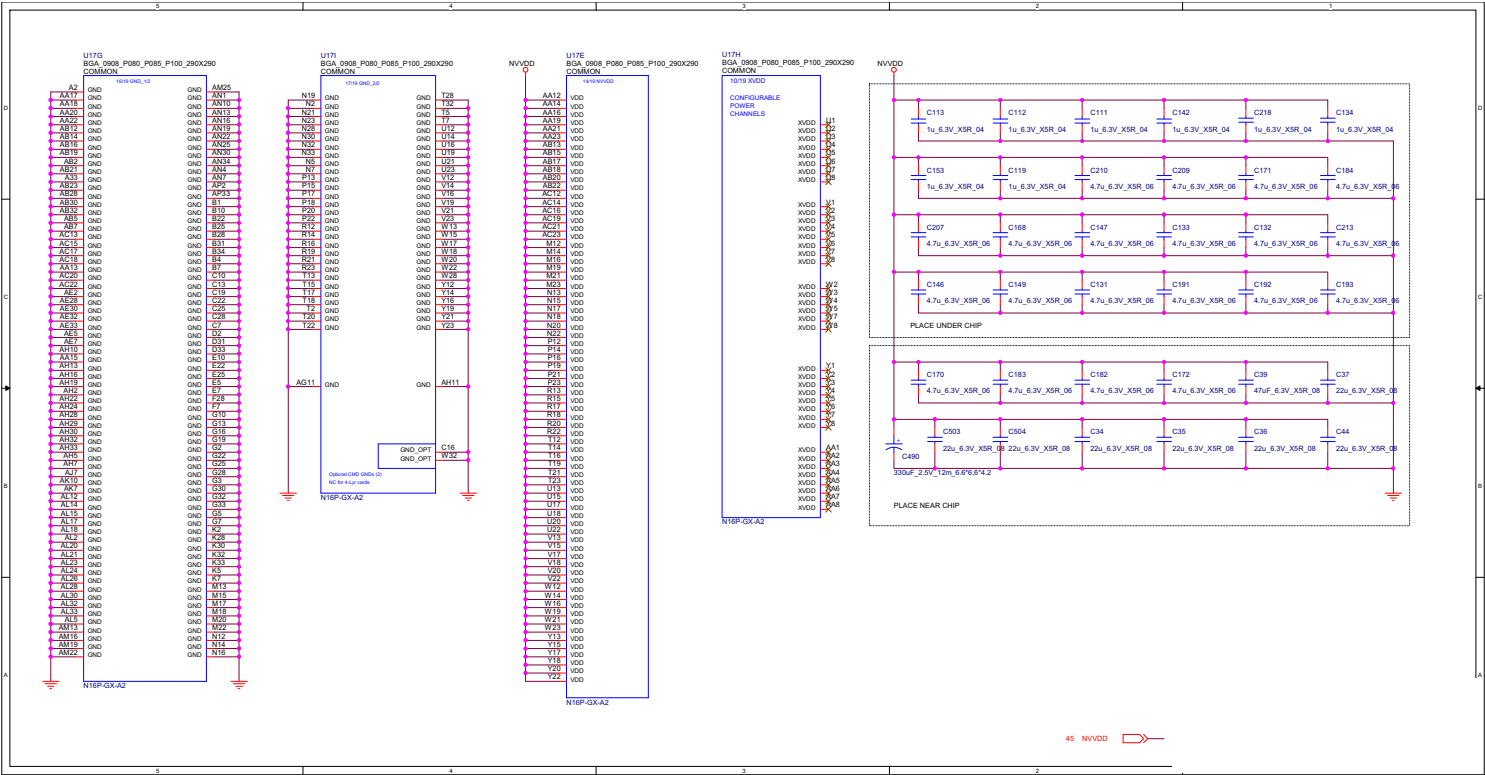


Sheet 20 of 56  
VGA I/O

## B.Schematic Diagrams

# VGA NVVDD Decoupling

Sheet 21 of 56  
VGA NVVDD  
Decoupling



**Lynx Point - M (HDA, JTAG, SATA)**

**Main Source** -6-66-2B002-004-E (footprint BAT-W5000102-001)  
**Second Source** -4-66-2B002-002 (footprint BHAAA-BAT-063-P01)

**Flash Descriptor:**  
 SataBootDevice = Disabled (Default)  
 Low = Disabled  
 High = Enabled

**SATA HDD1**  
 SATA\_RXN0\_35  
 SATA\_RXPO\_35  
 SATA\_TXN0\_35  
 SATA\_TXP0\_35  
 SATA\_RXN1\_35  
 SATA\_RXP1\_35  
 SATA\_TXN1\_35  
 SATA\_TXP1\_35

**SATA HDD2**  
 SATA\_RXN2\_35  
 SATA\_RXP2\_35  
 SATA\_TXN2\_35  
 SATA\_TXP2\_35

**SATA ODD**  
 SATA\_RXN3\_35  
 SATA\_RXP3\_35  
 SATA\_TXN3\_35  
 SATA\_TXP3\_35

**E-SATA HDD**  
 SATA\_RXN4\_35  
 SATA\_RXP4\_35  
 SATA\_TXN4\_35  
 SATA\_TXP4\_35  
 SATA\_RXN5\_35  
 SATA\_RXP5\_35  
 SATA\_TXN5\_35  
 SATA\_TXP5\_35

**mSATA**  
 SATA\_RXN6\_35  
 SATA\_RXP6\_35  
 SATA\_TXN6\_35  
 SATA\_TXP6\_35

**ODD CONN**  
 SATA\_ODD\_PRES#\_26  
 SATA\_ODD\_Dat#\_25  
 SATA\_ODD\_PWRST#\_26

**Layout Note:**  
 Closed to U4

BBS_BIT1	BBS_BIT0	Boot BIOS Location
0	0	LPC (Default)
0	1	Reserved (RANDOM)
1	0	PCI
1	1	SPI

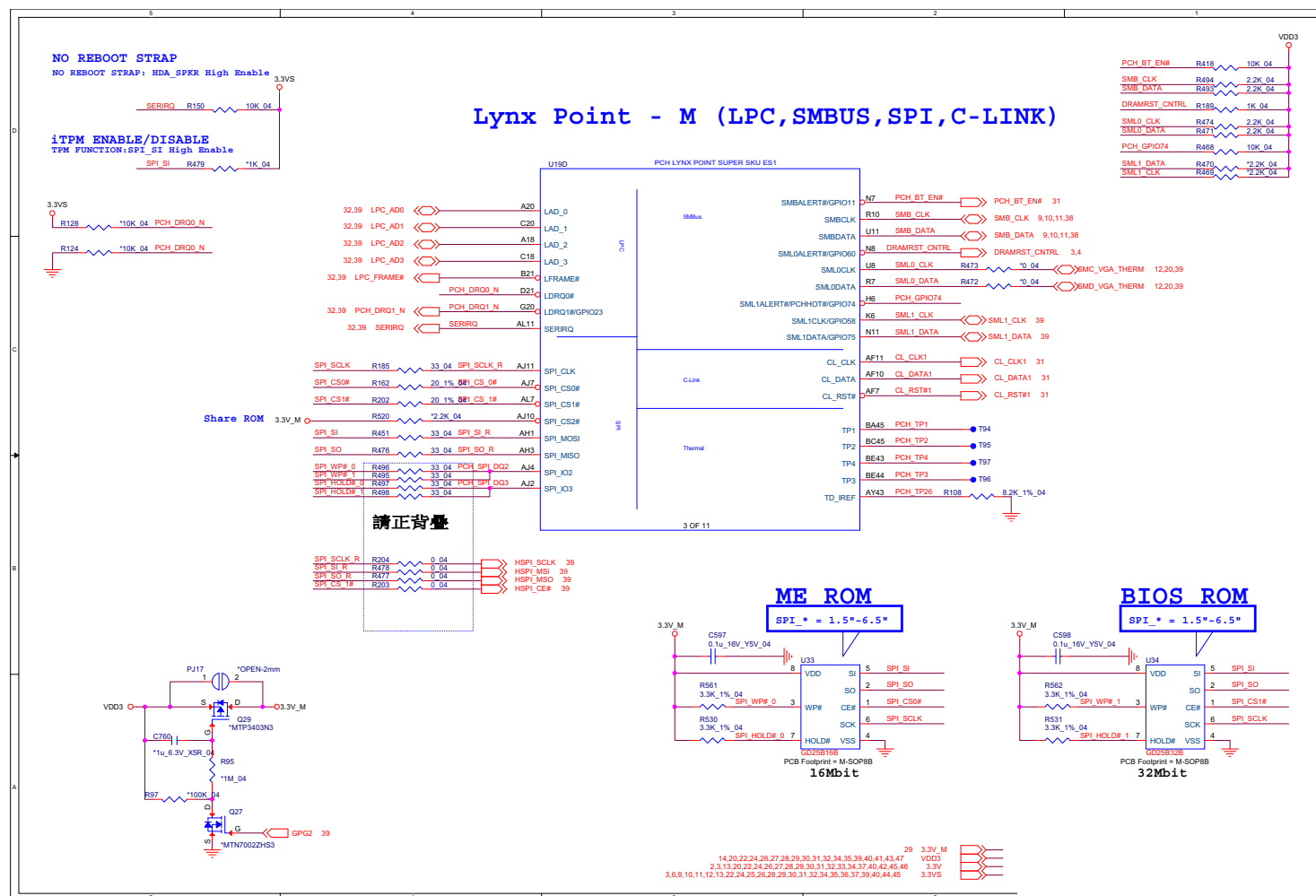
**Boot BIOS Strap**

**ODD Zero Power ODD**

**Pin Headers:**  
 28 3.3V, 1.5A\_HDA\_IO  
 24,27,28,30,32,45 1.5V  
 24,29 RTCVCC  
 13,31,32,35,36,37,40,44,45 5V  
 2,3,10,23,24,25,26,28,30,31,32,33,34,37,40,42,45,46 3.3V  
 1,6,8,10,11,12,13,22,24,25,26,28,30,31,32,34,35,36,37,39,40,44,45 3.3V

## Lynx 2/9

Sheet 23 of 56  
Lynx 2/9





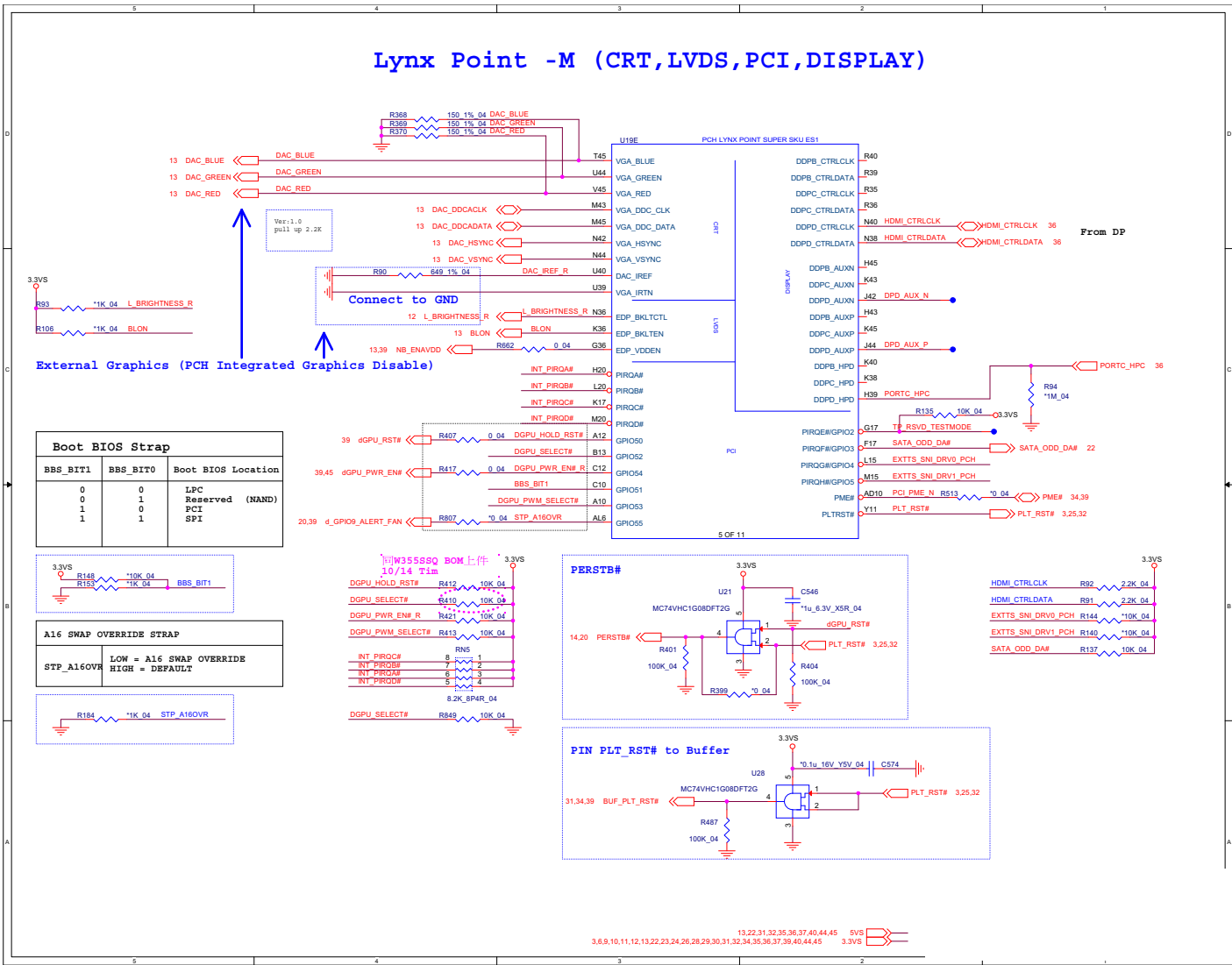
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**Lynx 3/9 B - 25**

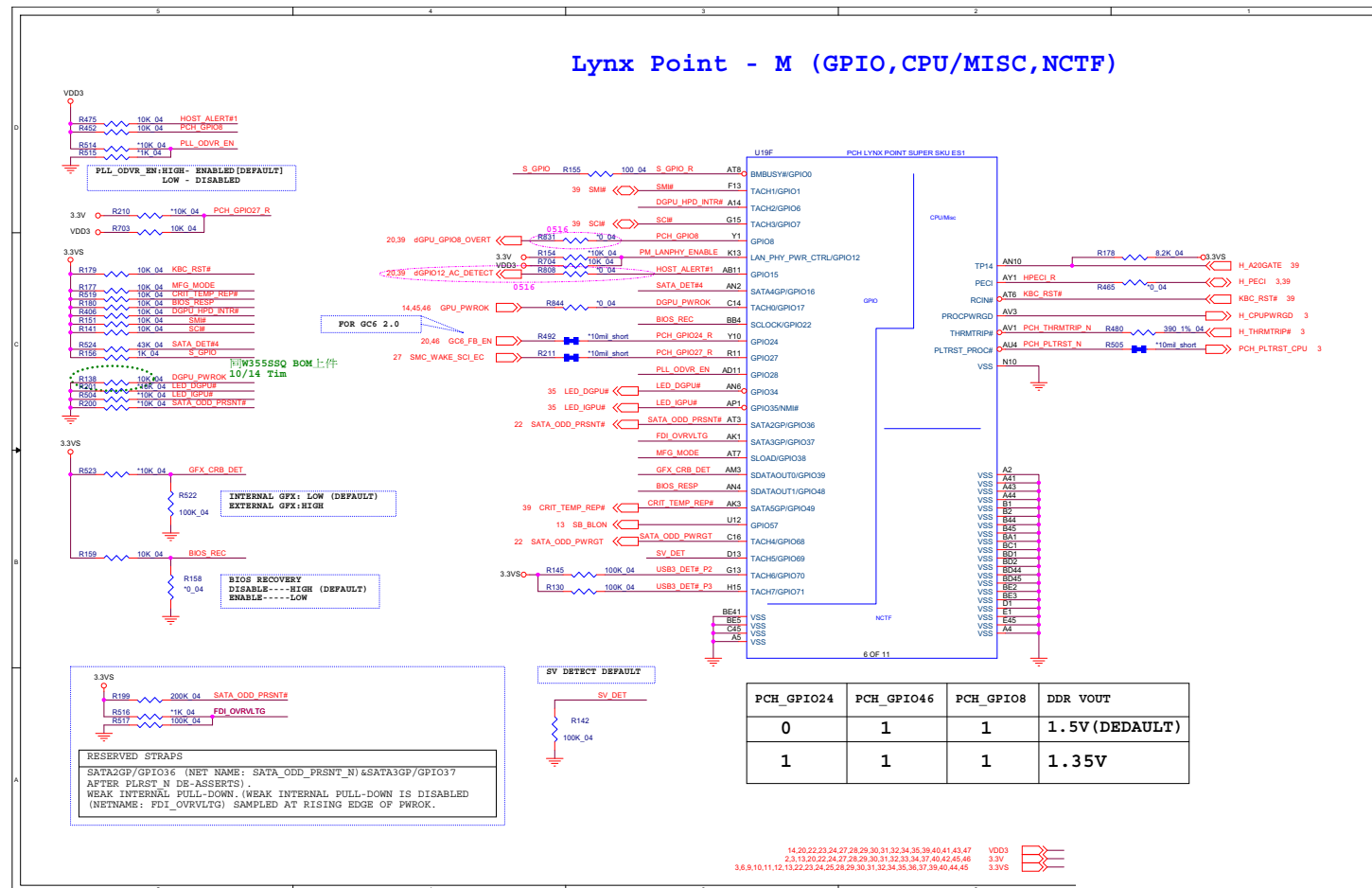
Schematic Diagrams

Lynx 4/9

Sheet 25 of 56  
Lynx 4/9

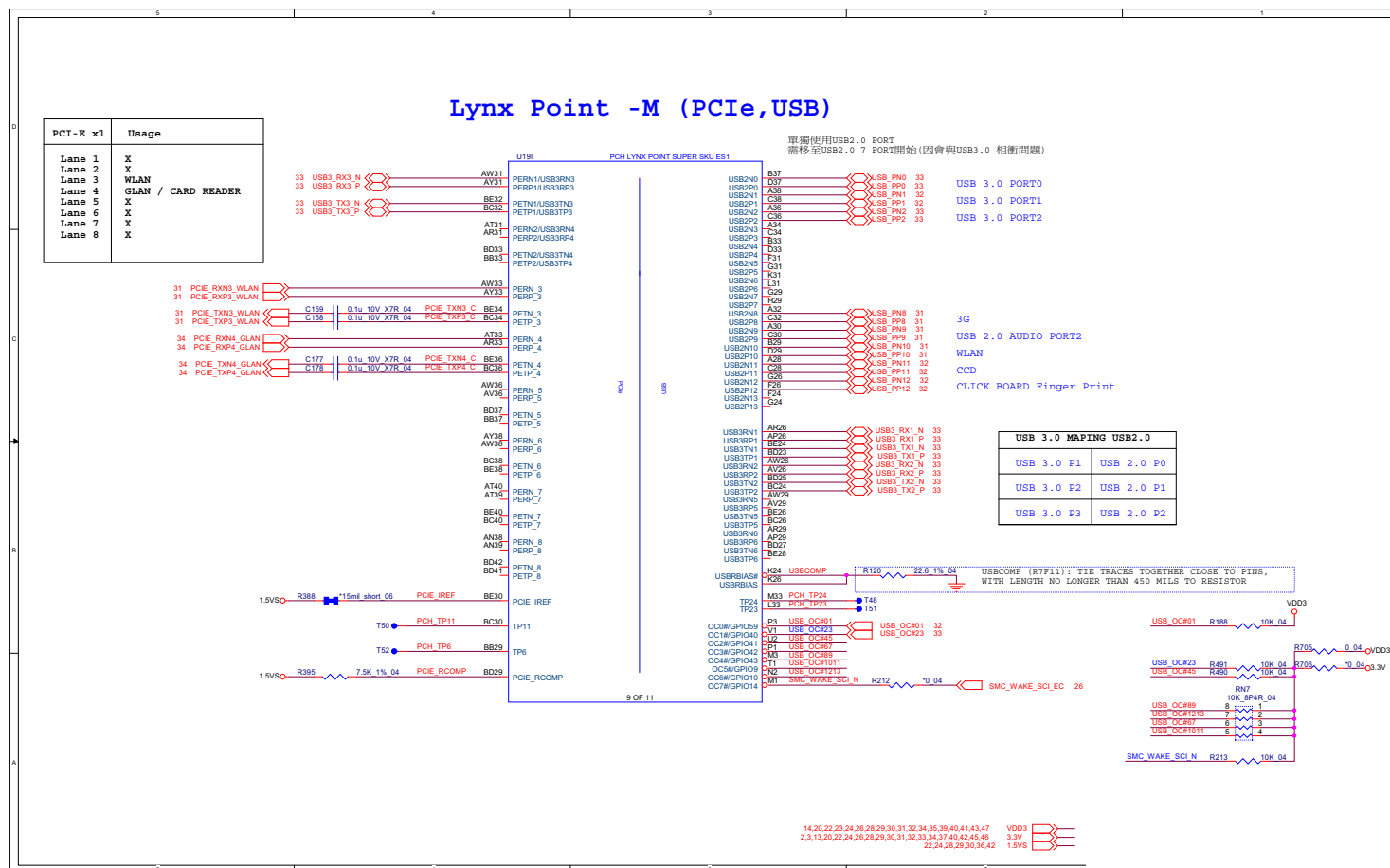


## Lynx 5/9

Sheet 26 of 56  
Lynx 5/9

## Lynx 6/9

Sheet 27 of 56  
Lynx 6/9

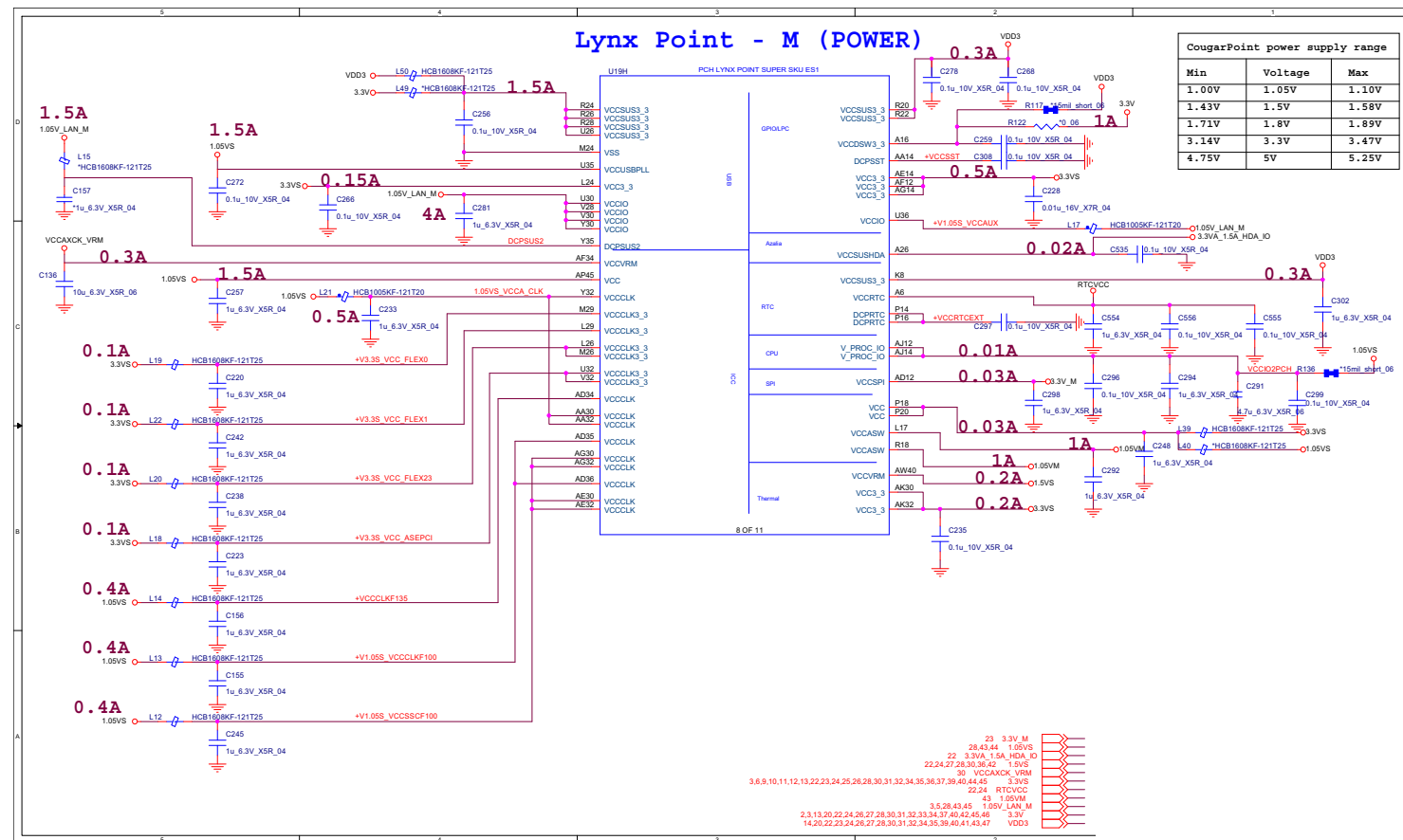


**Lynx 7/9 B - 29**



## Lynx 8/9

Sheet 29 of 56  
Lynx 8/9



**Lynx Point -M (GND)**

**Lynx Point -M (CLK)**

**U19K PCH LYNX POINT SUPER SKU E51**

**U19C PCH LYNX POINT SUPER SKU E51**

**U19J PCH LYNX POINT SUPER SKU E51**

**STUFF FOR TPM**

**CLKOUT\_33MHZ~4 Breakout 300mils Breakout 1500mils**

**Table 1: Voltage Rail Voltage**

Voltage Rail	Voltage	50 Iomax Current (A)
V CPU I/O	1.05	1 (mA)
V5REF	5	1 (mA)
V5REF_Sus	5	1 (mA)
Vcc3_3	3.3	0.266
VccADAC3	1.05	1 (mA)
VccADPLL1	1.05	0.08
VccADPLL2	1.05	0.08
VccCore	1.05	1.3
VccDMI	1.1	0.042
VccIO	1.05	2.925
VccASW	1.05	1.01
VccSP1	3.3	0.020
VccDW3_3	3.3	2 (mA)
VccDFTBM	1.05	0.19
VccSua3_3	3.3	0.097
VccSuaHDA	3.3	1 (mA)
VccVFM	1.5	0.16
VccCLKDMI	1.05	0.02
VccSSC	1.05	0.095
VccDFFCLKN	1.05	0.055
VccALVDS	3.3	1 (mA)
VccTX_LVDS	1.8	0.06

**Table 2: Voltage Rail Voltage**

Voltage Rail	Voltage	50 Iomax Current (A)
V CPU I/O	1.05	1 (mA)
V5REF	5	1 (mA)
V5REF_Sus	5	1 (mA)
Vcc3_3	3.3	0.266
VccADAC3	1.05	1 (mA)
VccADPLL1	1.05	0.08
VccADPLL2	1.05	0.08
VccCore	1.05	1.3
VccDMI	1.1	0.042
VccIO	1.05	2.925
VccASW	1.05	1.01
VccSP1	3.3	0.020
VccDW3_3	3.3	2 (mA)
VccDFTBM	1.05	0.19
VccSua3_3	3.3	0.097
VccSuaHDA	3.3	1 (mA)
VccVFM	1.5	0.16
VccCLKDMI	1.05	0.02
VccSSC	1.05	0.095
VccDFFCLKN	1.05	0.055
VccALVDS	3.3	1 (mA)
VccTX_LVDS	1.8	0.06

**Table 3: Voltage Rail Voltage**

Voltage Rail	Voltage	50 Iomax Current (A)
V CPU I/O	1.05	1 (mA)
V5REF	5	1 (mA)
V5REF_Sus	5	1 (mA)
Vcc3_3	3.3	0.266
VccADAC3	1.05	1 (mA)
VccADPLL1	1.05	0.08
VccADPLL2	1.05	0.08
VccCore	1.05	1.3
VccDMI	1.1	0.042
VccIO	1.05	2.925
VccASW	1.05	1.01
VccSP1	3.3	0.020
VccDW3_3	3.3	2 (mA)
VccDFTBM	1.05	0.19
VccSua3_3	3.3	0.097
VccSuaHDA	3.3	1 (mA)
VccVFM	1.5	0.16
VccCLKDMI	1.05	0.02
VccSSC	1.05	0.095
VccDFFCLKN	1.05	0.055
VccALVDS	3.3	1 (mA)
VccTX_LVDS	1.8	0.06

**Table 4: Voltage Rail Voltage**

Voltage Rail	Voltage	50 Iomax Current (A)
V CPU I/O	1.05	1 (mA)
V5REF	5	1 (mA)
V5REF_Sus	5	1 (mA)
Vcc3_3	3.3	0.266
VccADAC3	1.05	1 (mA)
VccADPLL1	1.05	0.08
VccADPLL2	1.05	0.08
VccCore	1.05	1.3
VccDMI	1.1	0.042
VccIO	1.05	2.925
VccASW	1.05	1.01
VccSP1	3.3	0.020
VccDW3_3	3.3	2 (mA)
VccDFTBM	1.05	0.19
VccSua3_3	3.3	0.097
VccSuaHDA	3.3	1 (mA)
VccVFM	1.5	0.16
VccCLKDMI	1.05	0.02
VccSSC	1.05	0.095
VccDFFCLKN	1.05	0.055
VccALVDS	3.3	1 (mA)
VccTX_LVDS	1.8	0.06

**Table 5: Voltage Rail Voltage**

Voltage Rail	Voltage	50 Iomax Current (A)
V CPU I/O	1.05	1 (mA)
V5REF	5	1 (mA)
V5REF_Sus	5	1 (mA)
Vcc3_3	3.3	0.266
VccADAC3	1.05	1 (mA)
VccADPLL1	1.05	0.08
VccADPLL2	1.05	0.08
VccCore	1.05	1.3
VccDMI	1.1	0.042
VccIO	1.05	2.925
VccASW	1.05	



## B. Schematic Diagrams

**Sheet 31 of 56**  
**Mini PCIE, FAN,**  
**Audio Con**

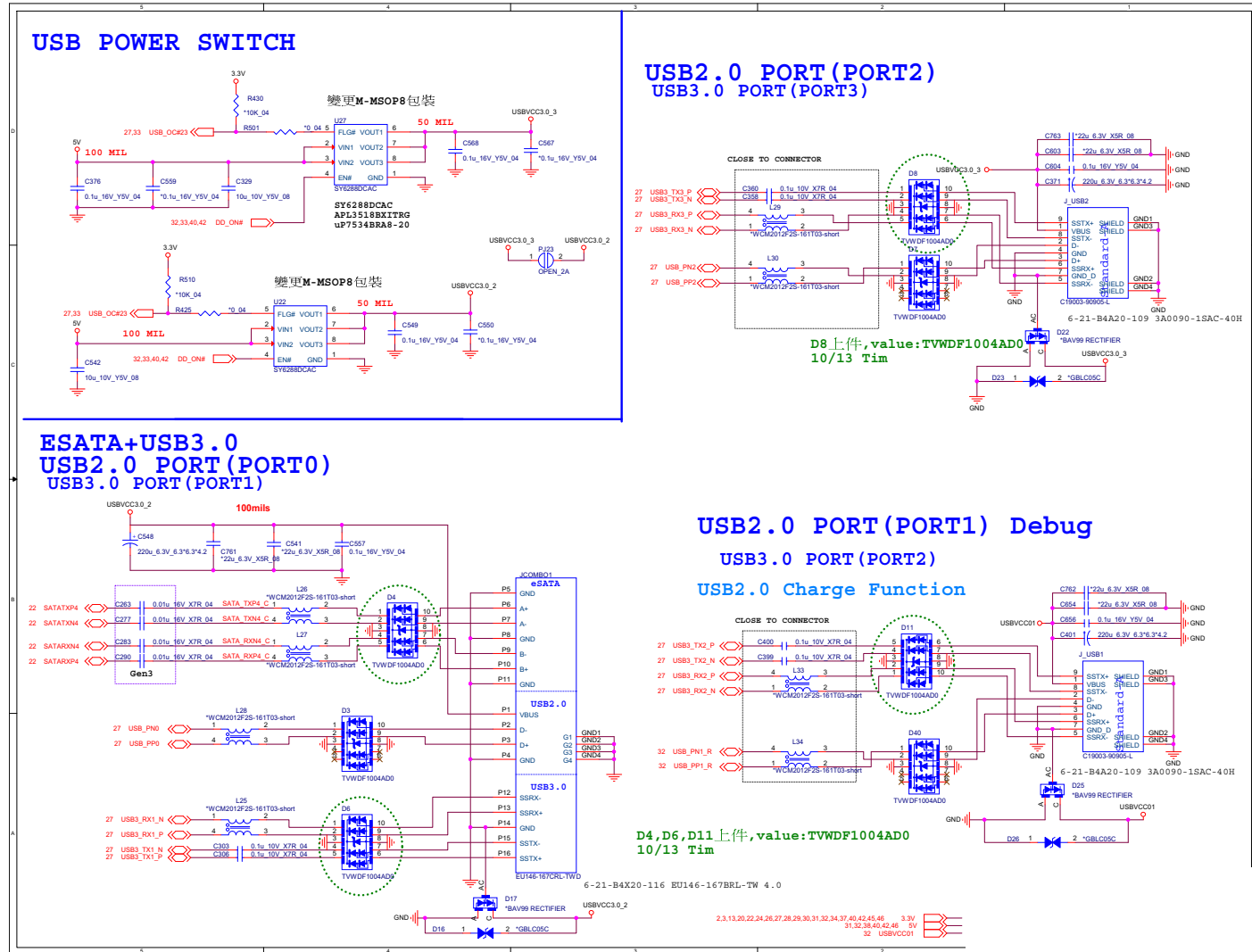


## Schematic Diagrams

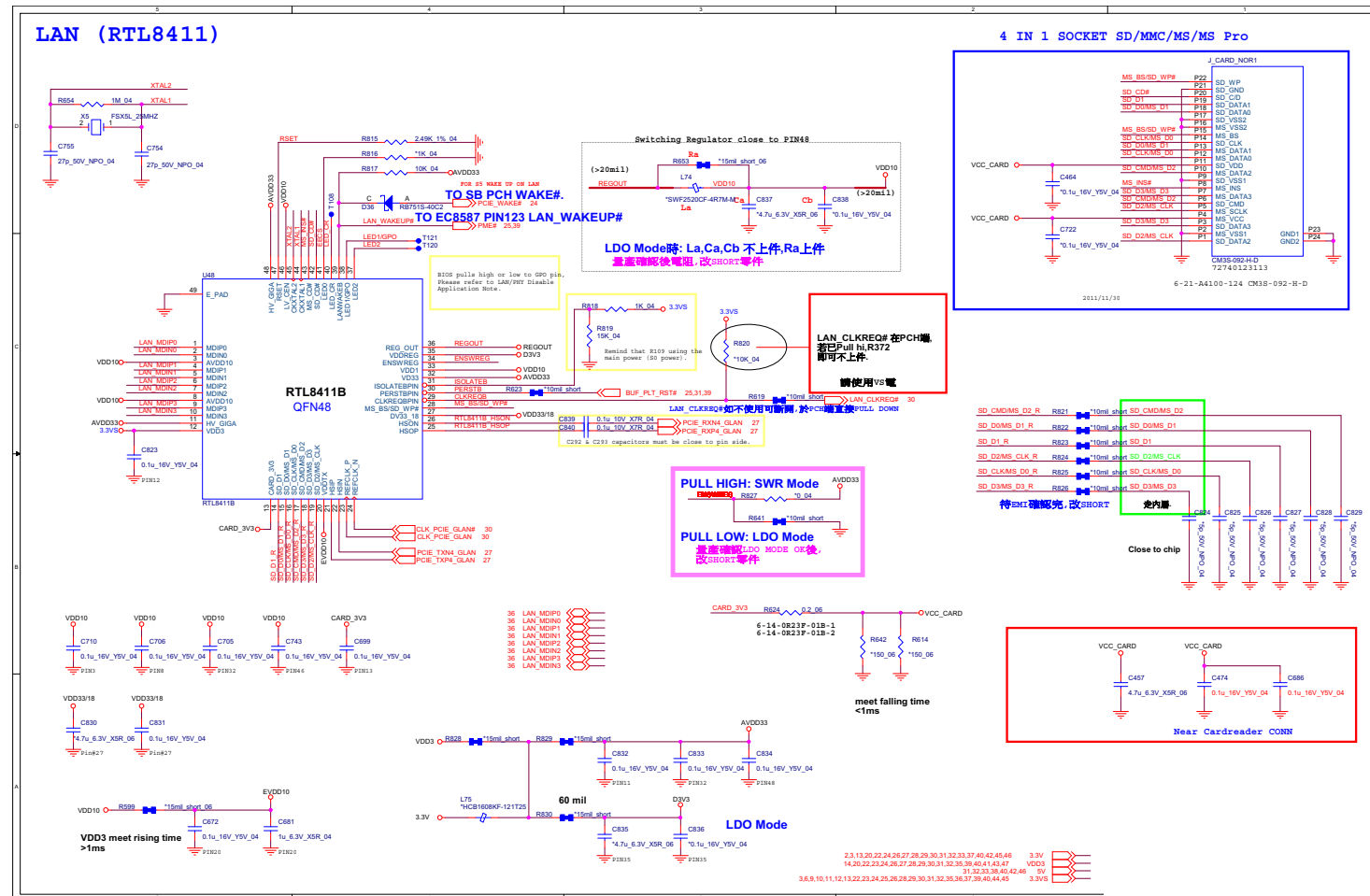


# ESATA/USB3.0 Connector

Sheet 33 of 56  
ESATA/USB3.0  
Connector



## Card Reader / LAN RTL8411B

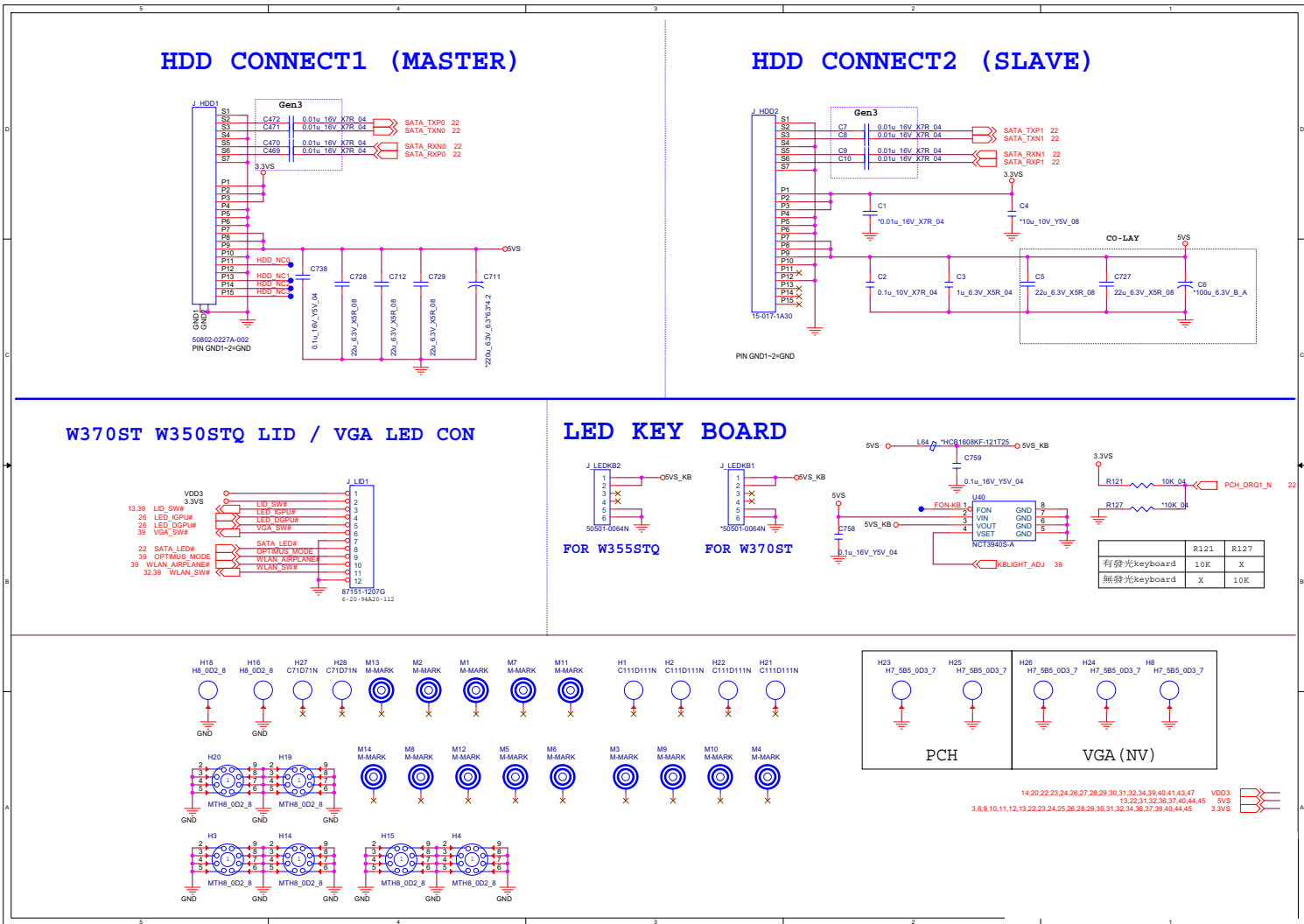


Sheet 34 of 56  
Card Reader /  
LAN RTL8411B

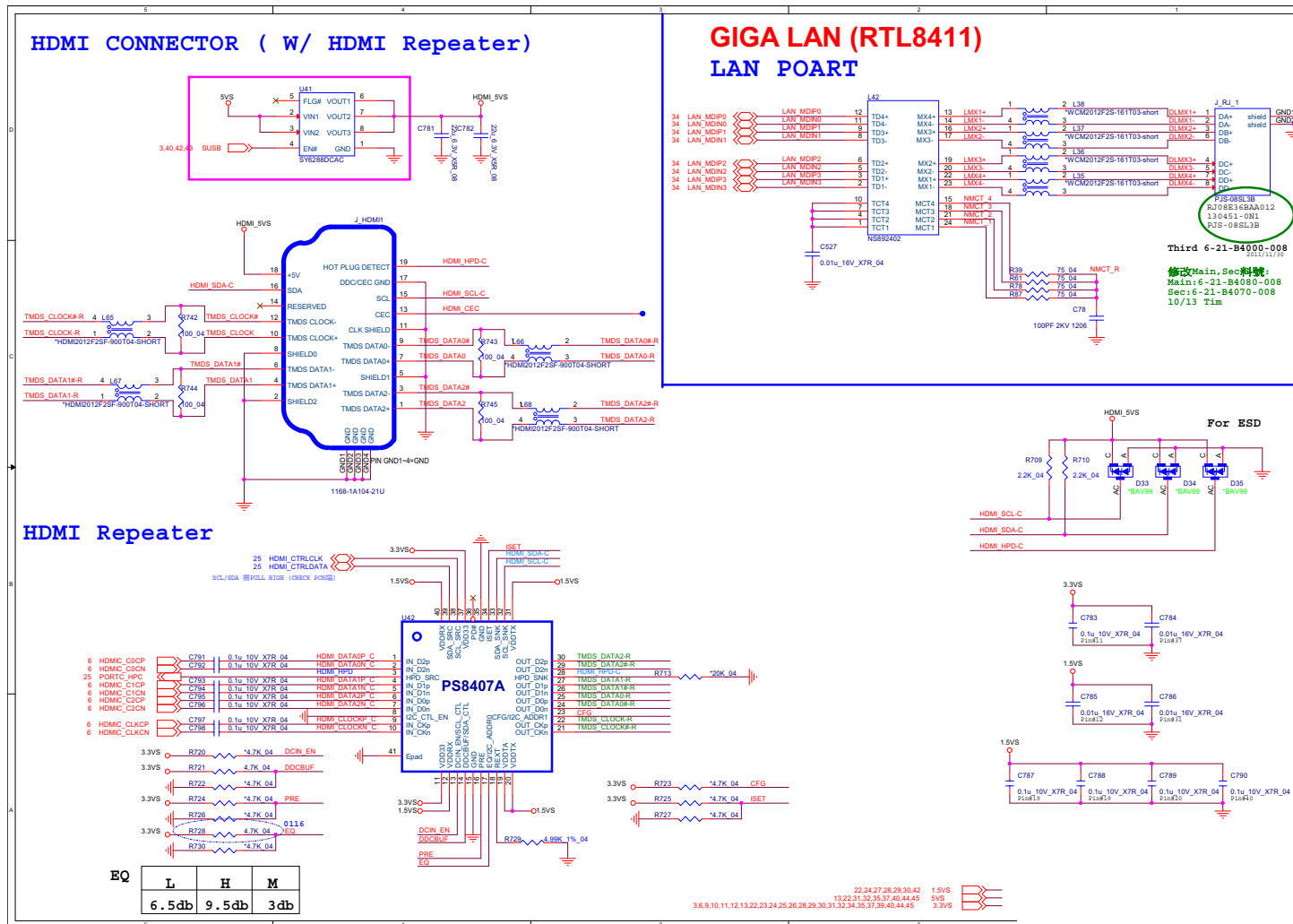
Schematic Diagrams

SATA HDD, VLED CON, LID SW

Sheet 35 of 56  
SATA HDD, VLED  
CON, LI DSW



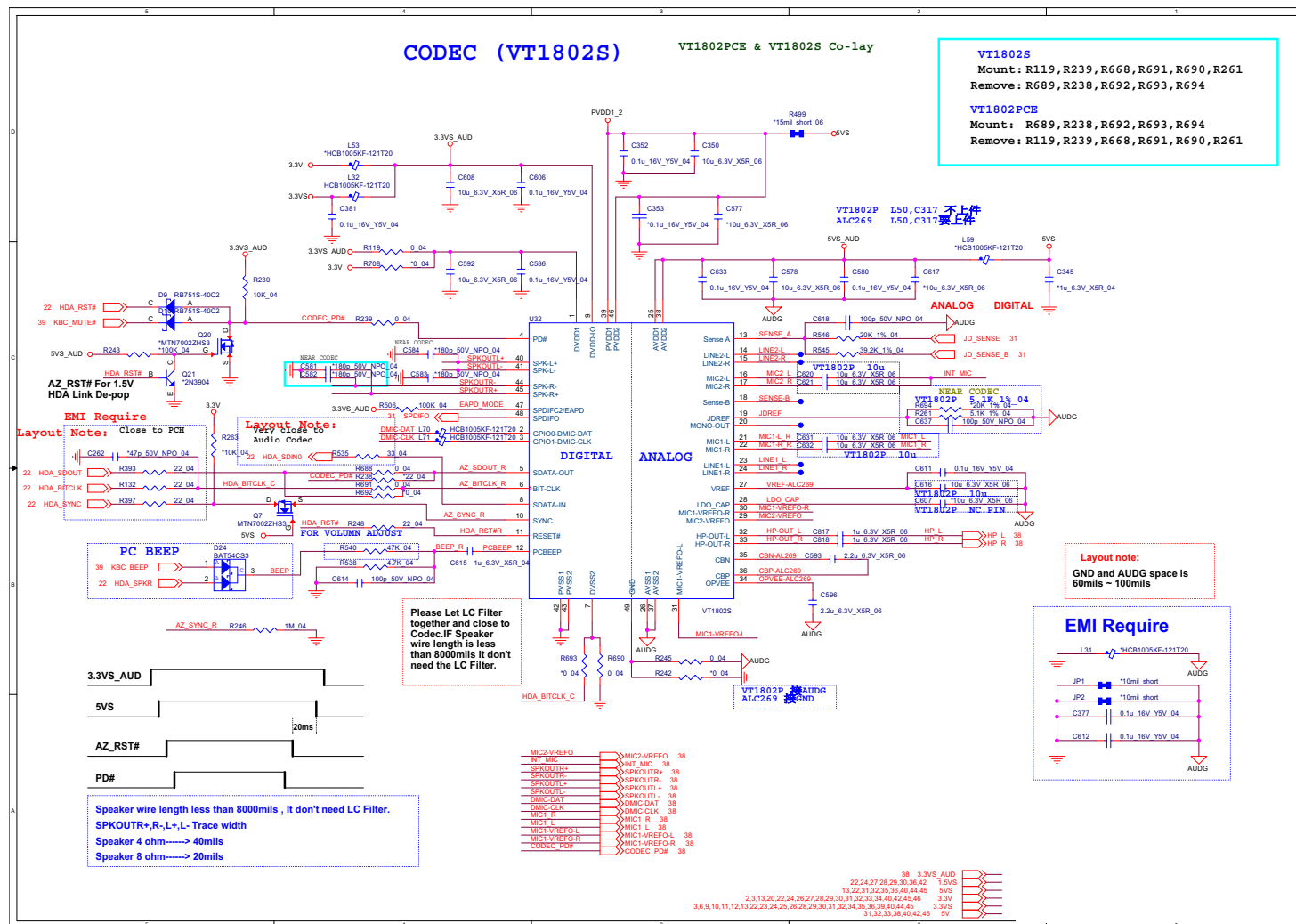
## HDMI, RJ45

Sheet 36 of 56  
HDMI, RJ45

# Audio Codec VT1802S

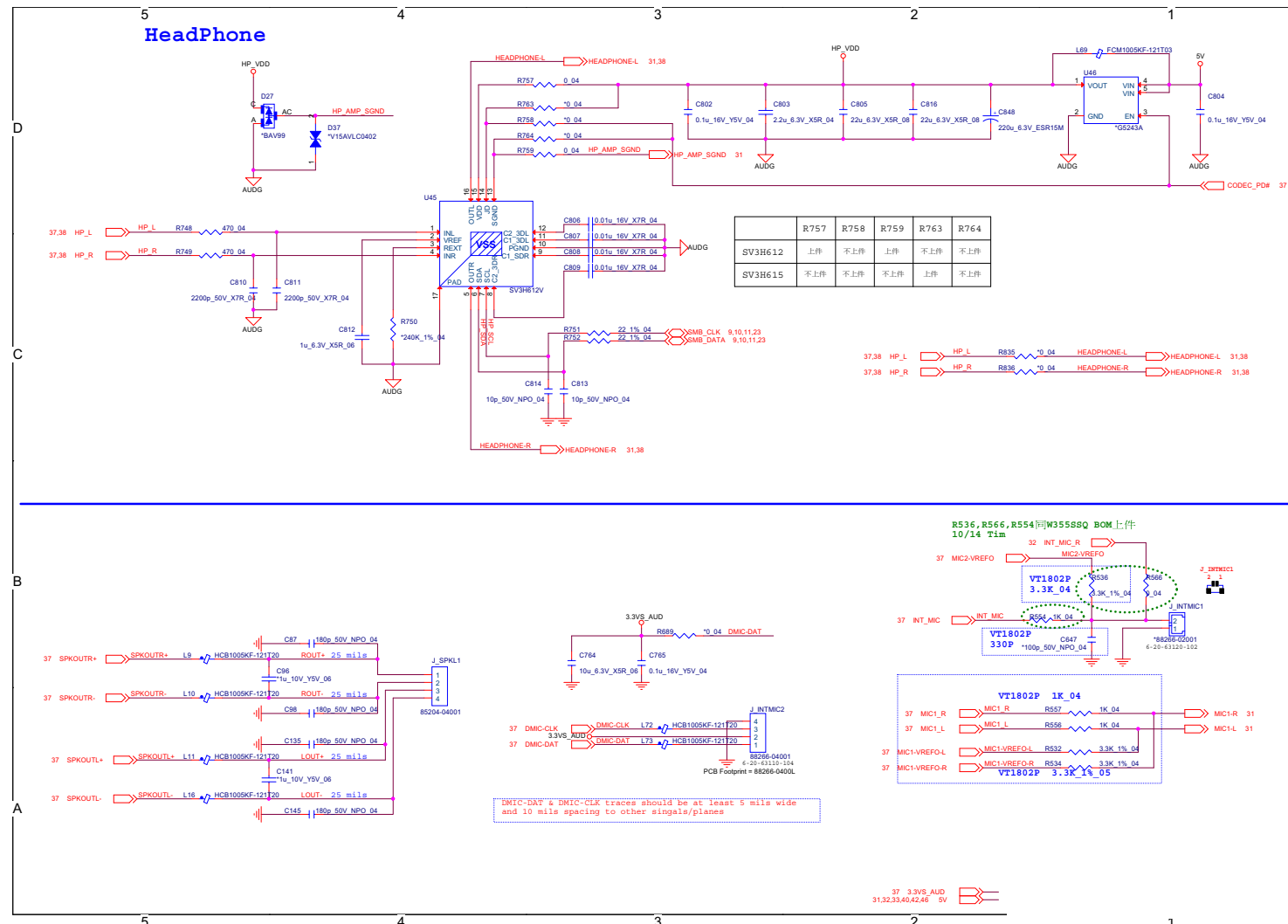
## B. Schematic Diagrams

Sheet 37 of 56  
Audio Codec  
VT1802S



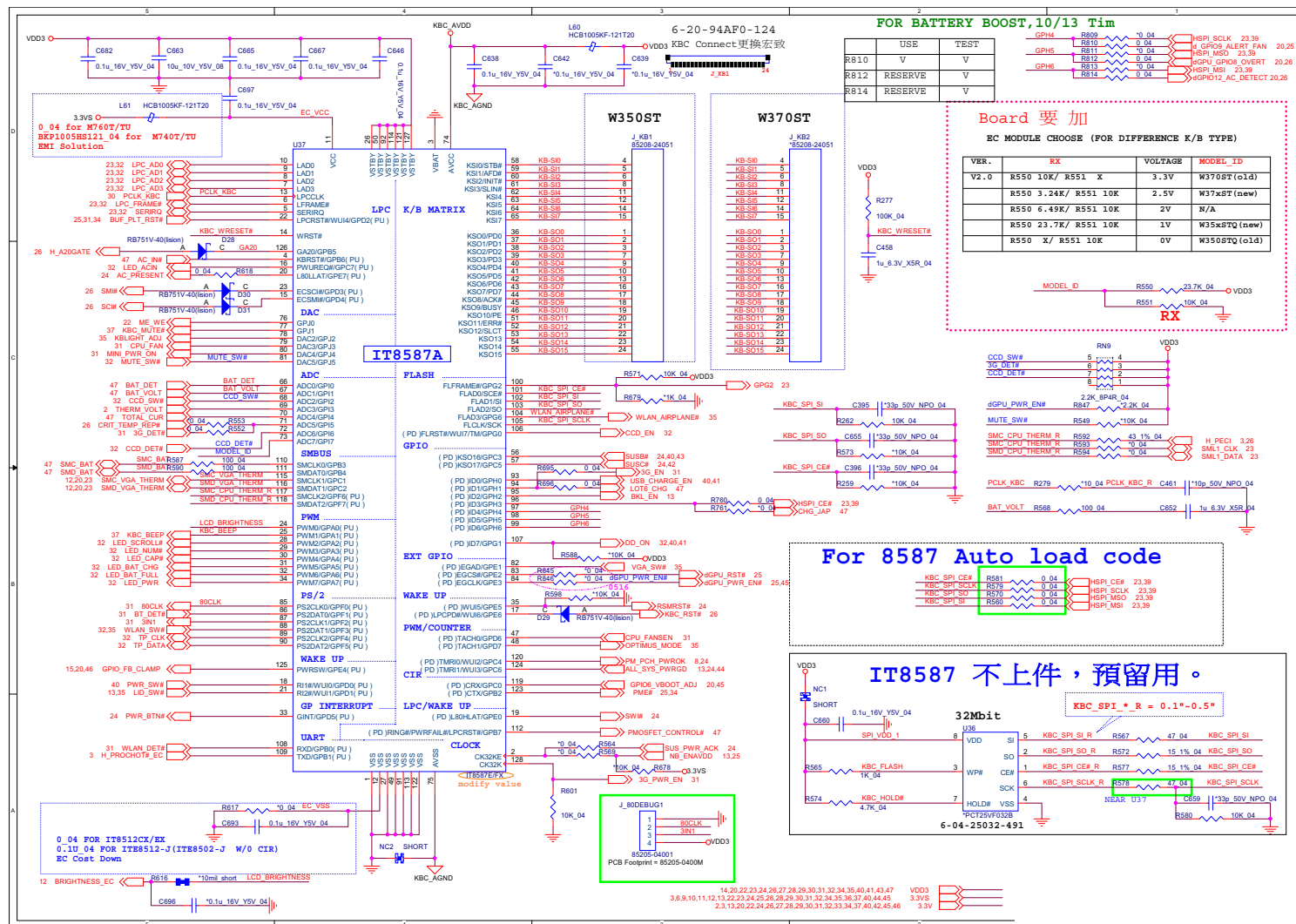


## Audio AMP &amp; Con



Sheet 38 of 56  
Audio AMP & Con

**B - 40 KBC ITE IT8587**



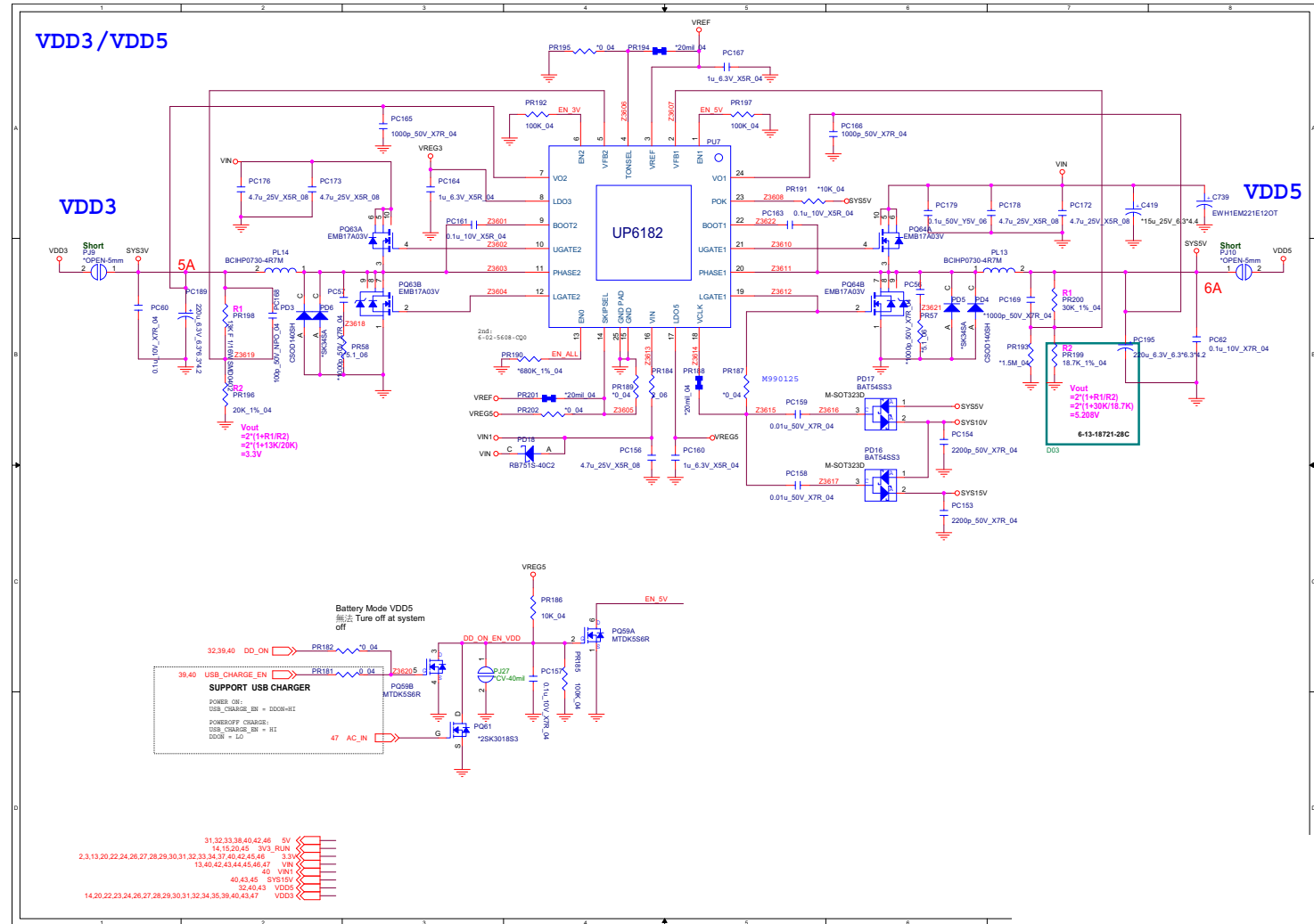
**Sheet 40 of 56**  
**5V, 5VS, 3.3V, 3VS,**  
**3.3VM**



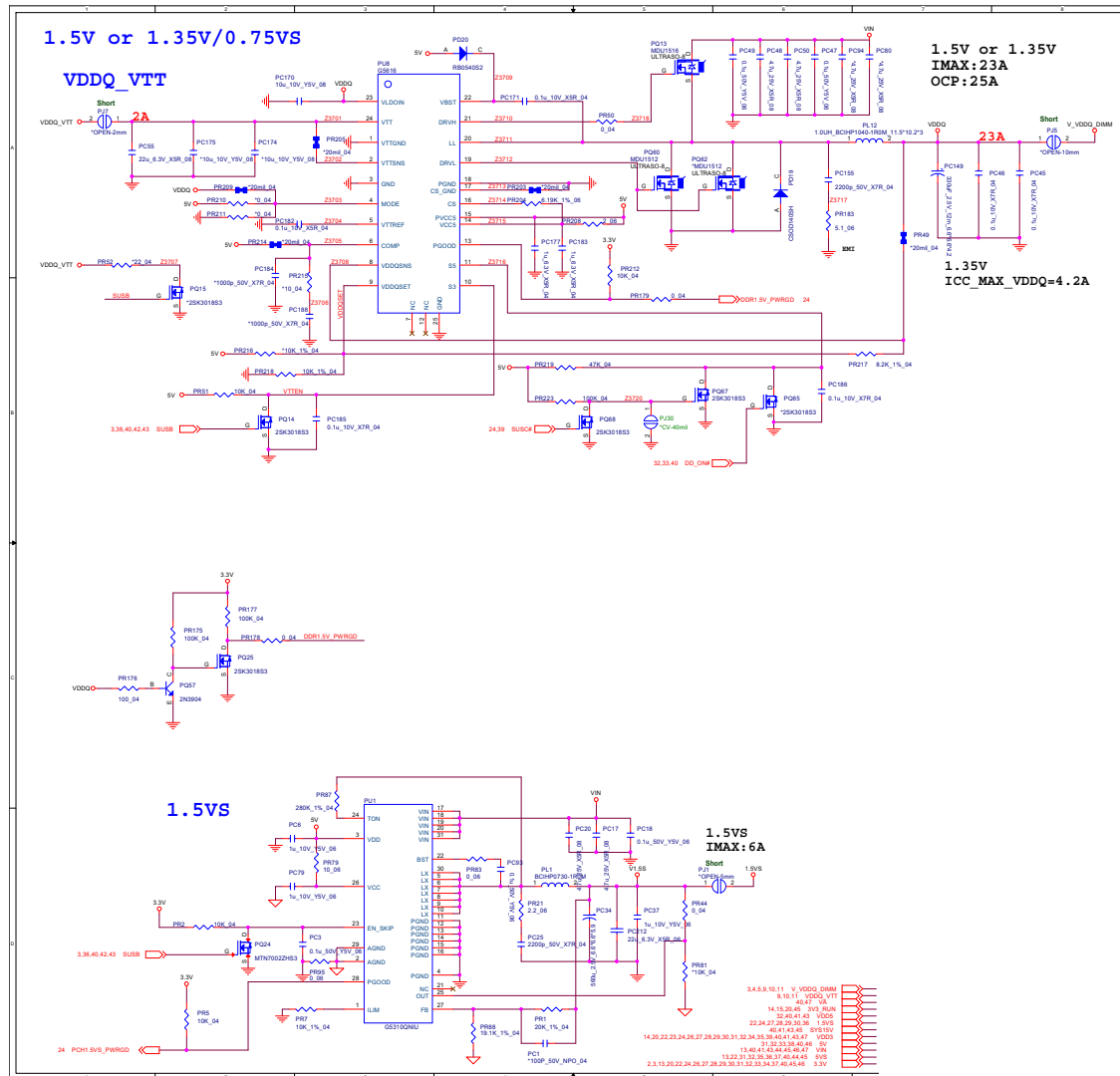
## Schematic Diagrams

## VDD3, VDD5

Sheet 41 of 56  
VDD3, VDD5



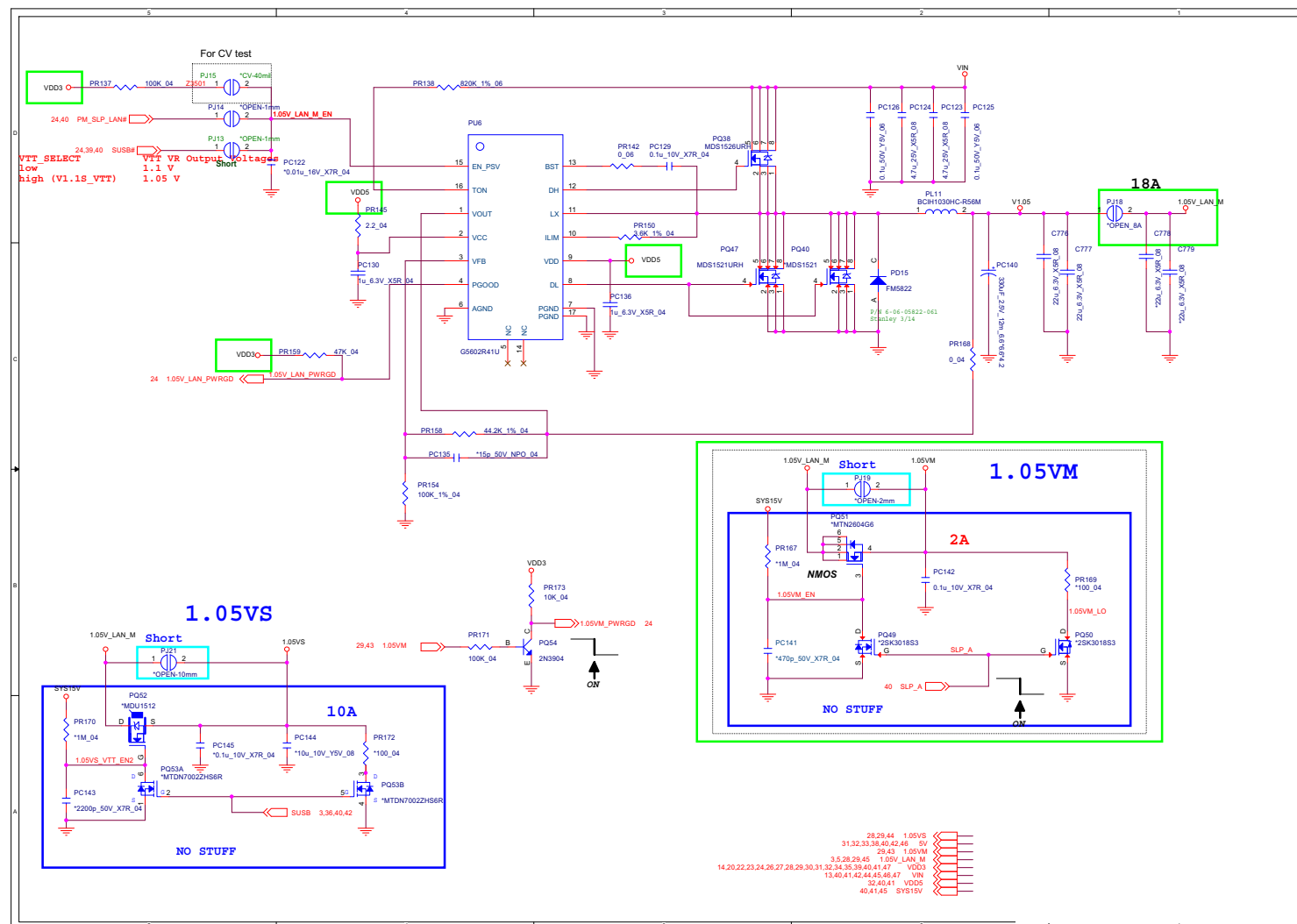
# 1.5V or 1.35V / 0.75VS, 1.5VS



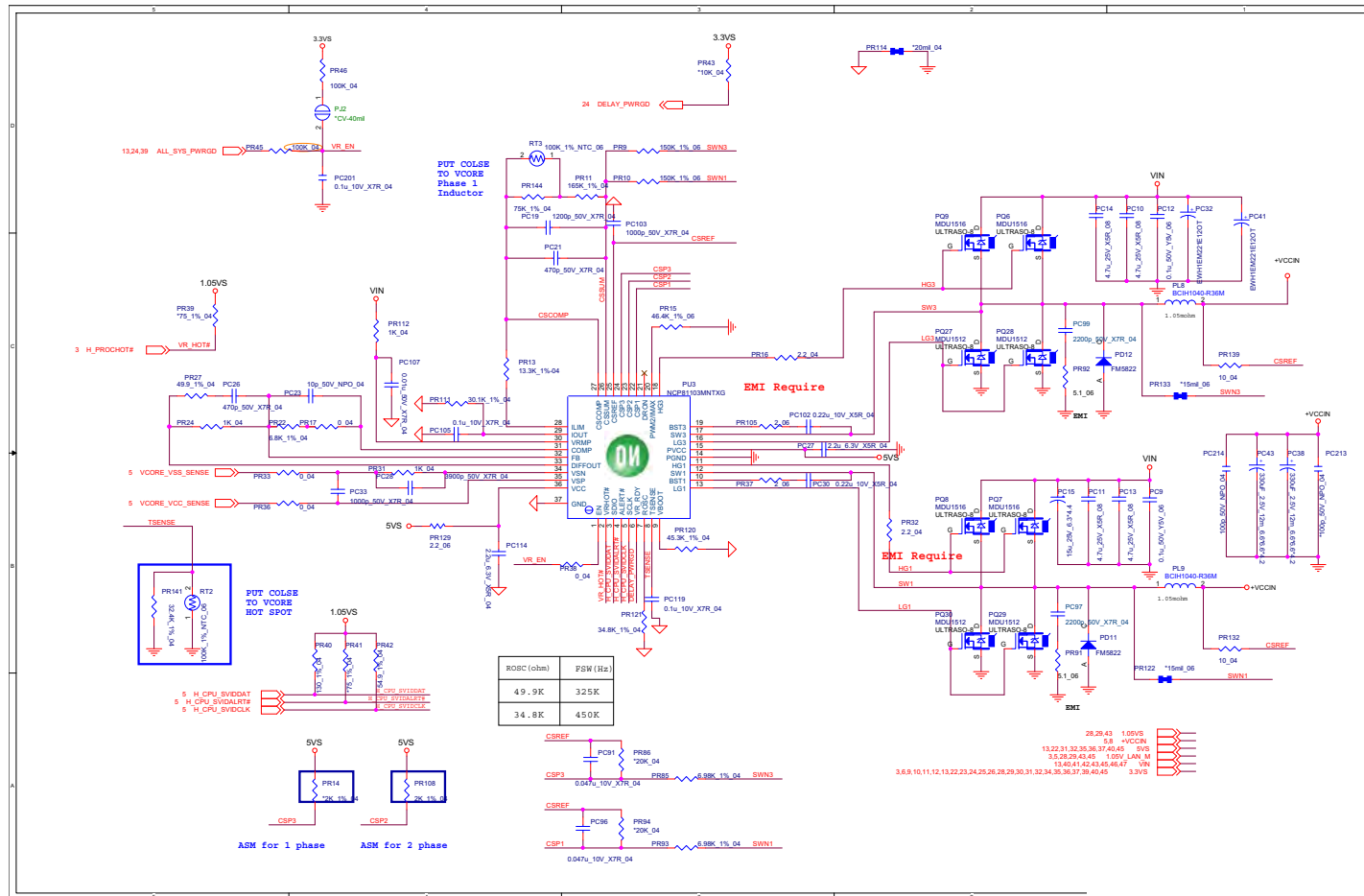
Sheet 42 of 56  
1.5V or 1.35V /  
0.75VS, 1.5VS

## B. Schematic Diagrams

Sheet 43 of 56  
1.05VS,1.05V\_M,  
1.05V\_LAN\_M



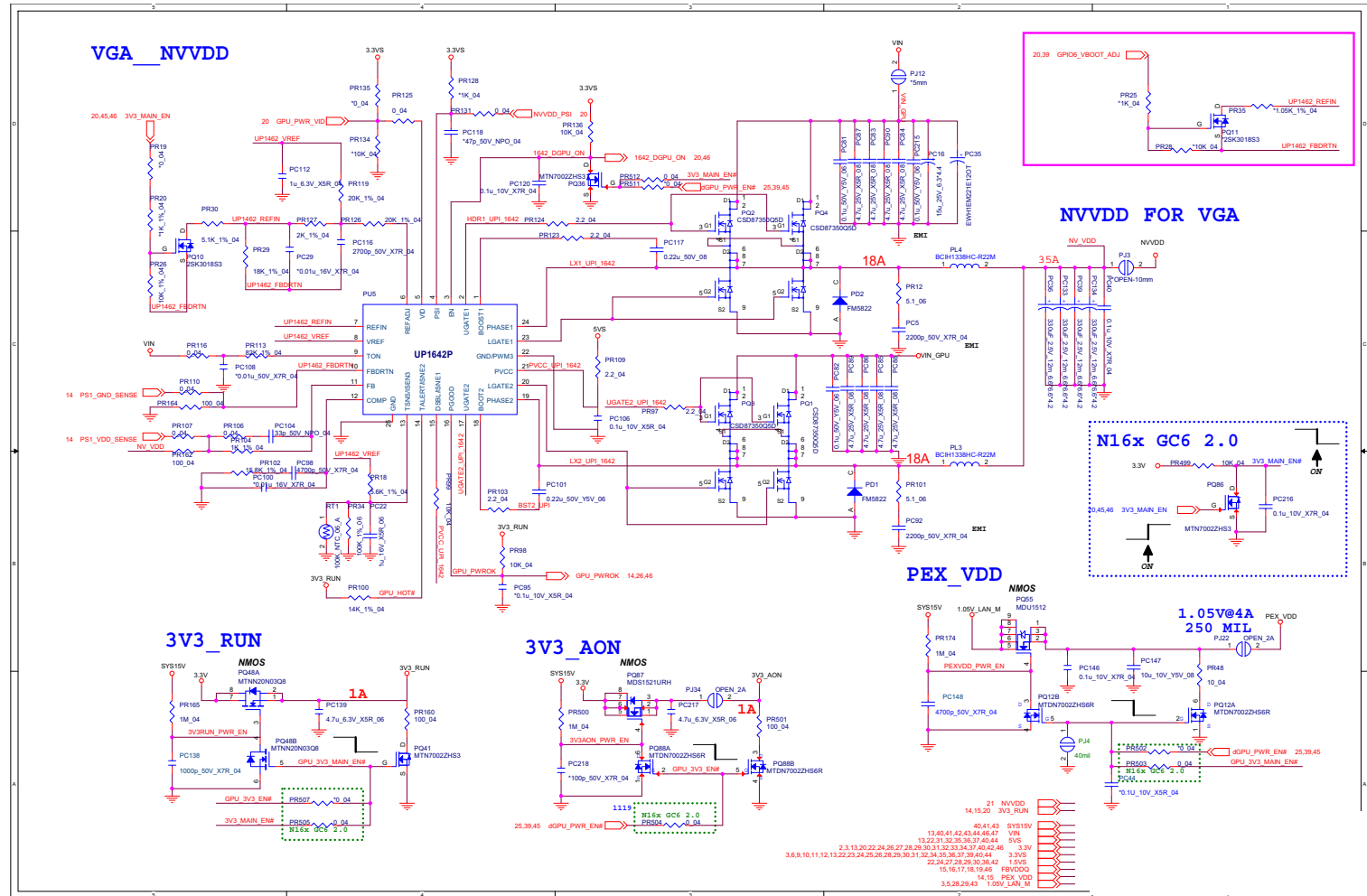
## Power V-Core

Sheet 44 of 56  
Power V-Core



# VGA NVVDD, PEX\_VDD

Sheet 45 of 56  
VGA NVVDD,  
PEX\_VDD



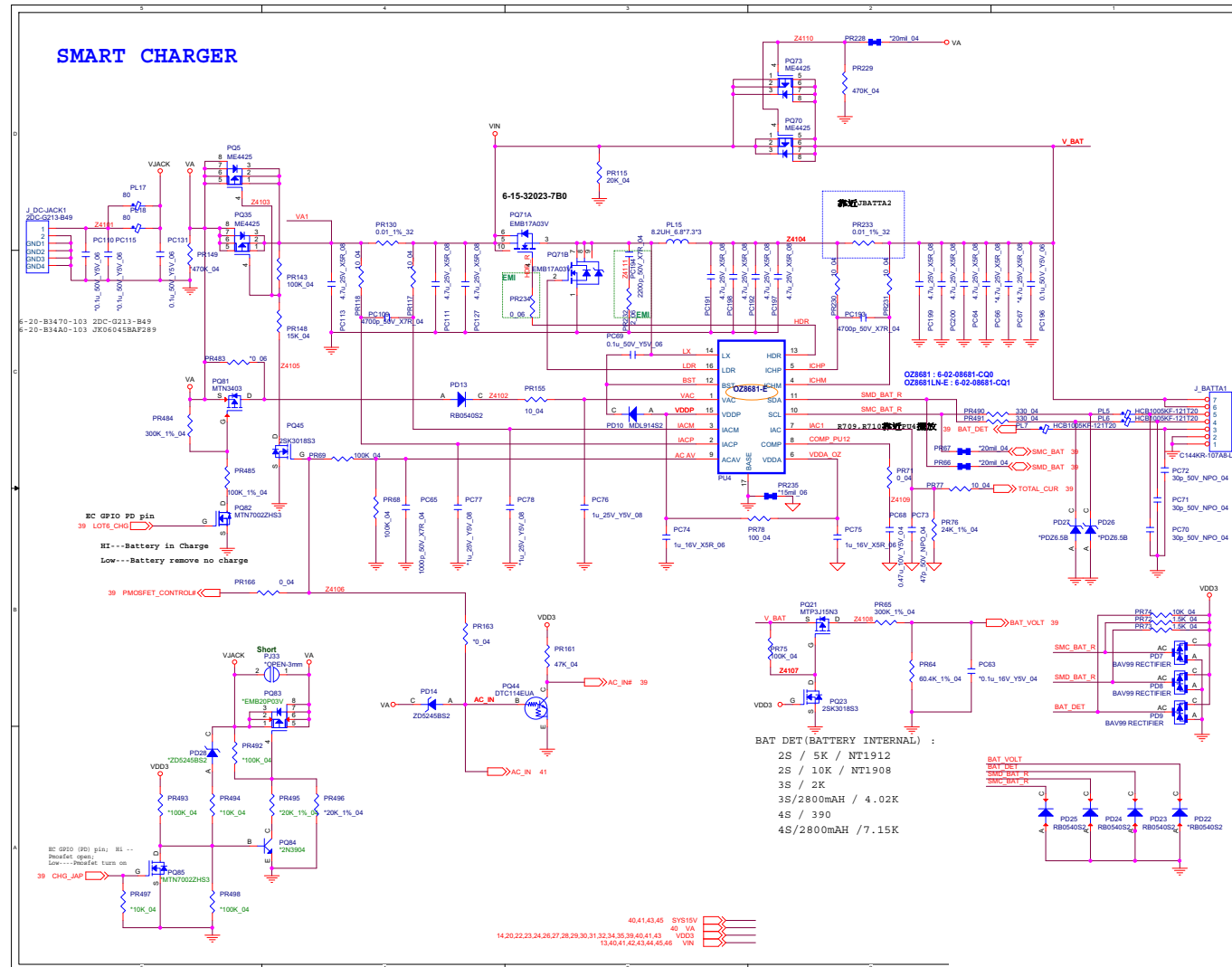
**Sheet 46 of 56**  
**FBVDDQ**



## Schematic Diagrams

## AC-In, Charger

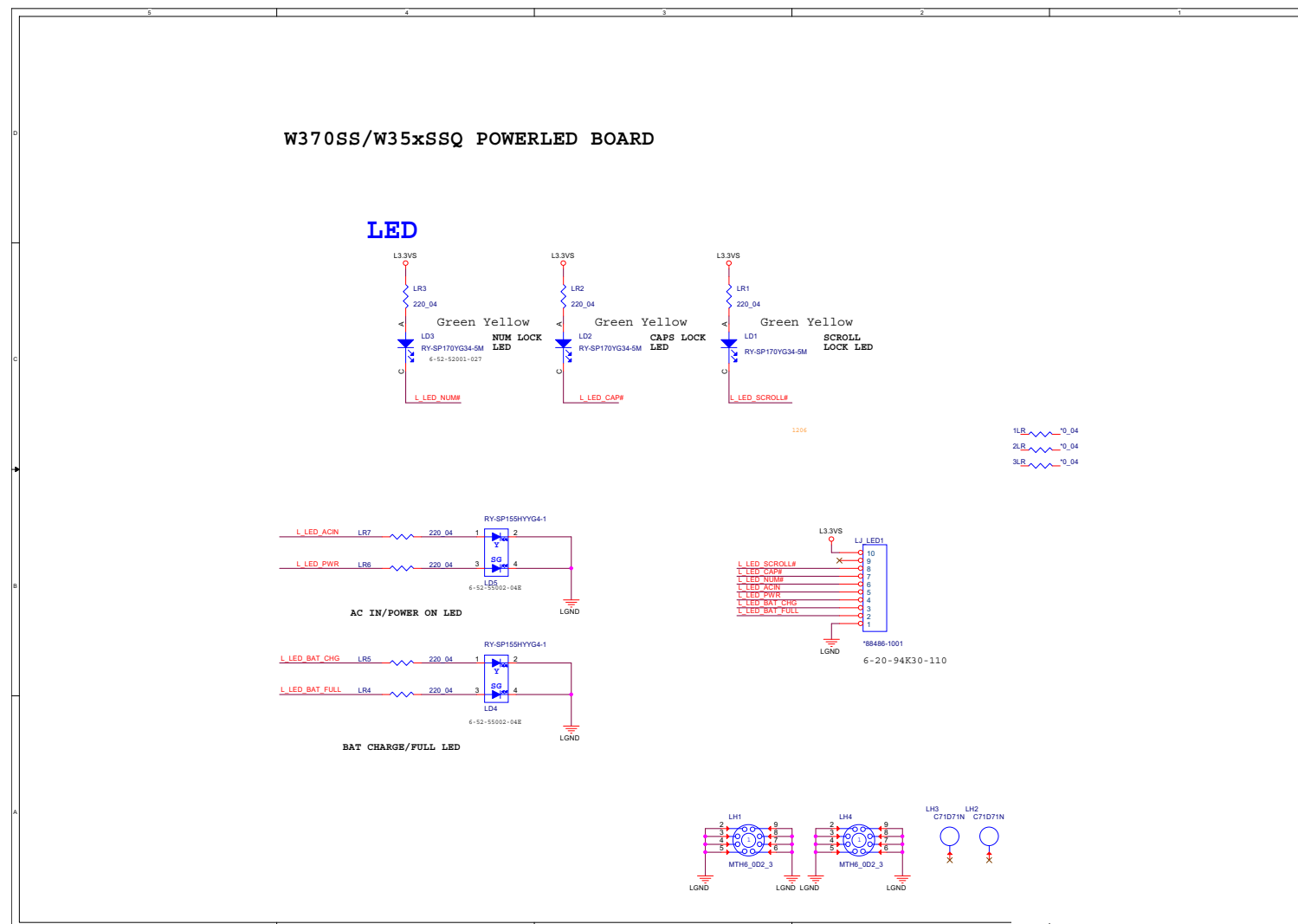
Sheet 47 of 56  
AC-In, Charger



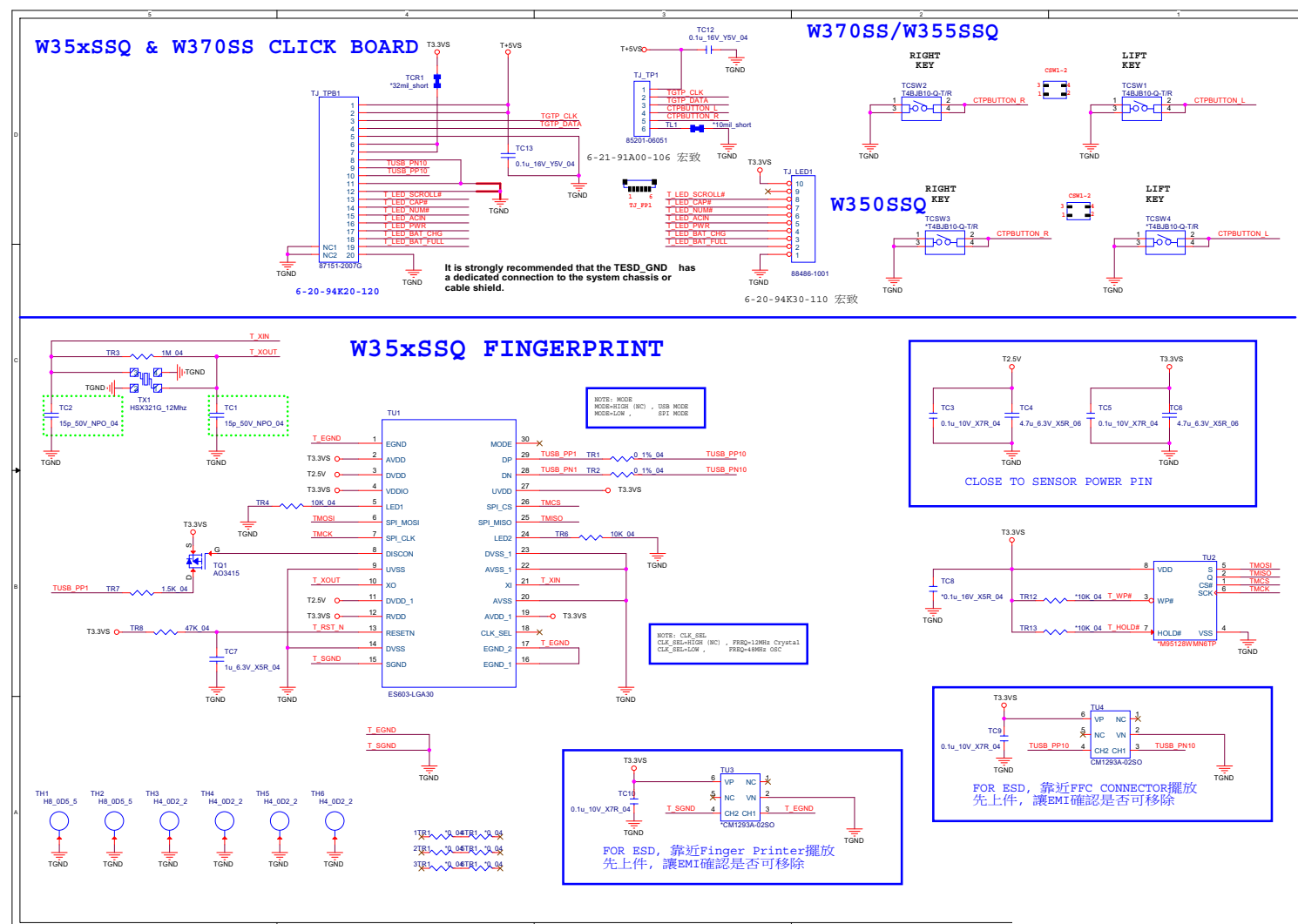
[illegible]

## W370SS/W35XSSQ Power LED Board

Sheet 49 of 56  
W370SS/W35XSSQ  
Power LED Board



# W370SS/W35XSSQ Click Board

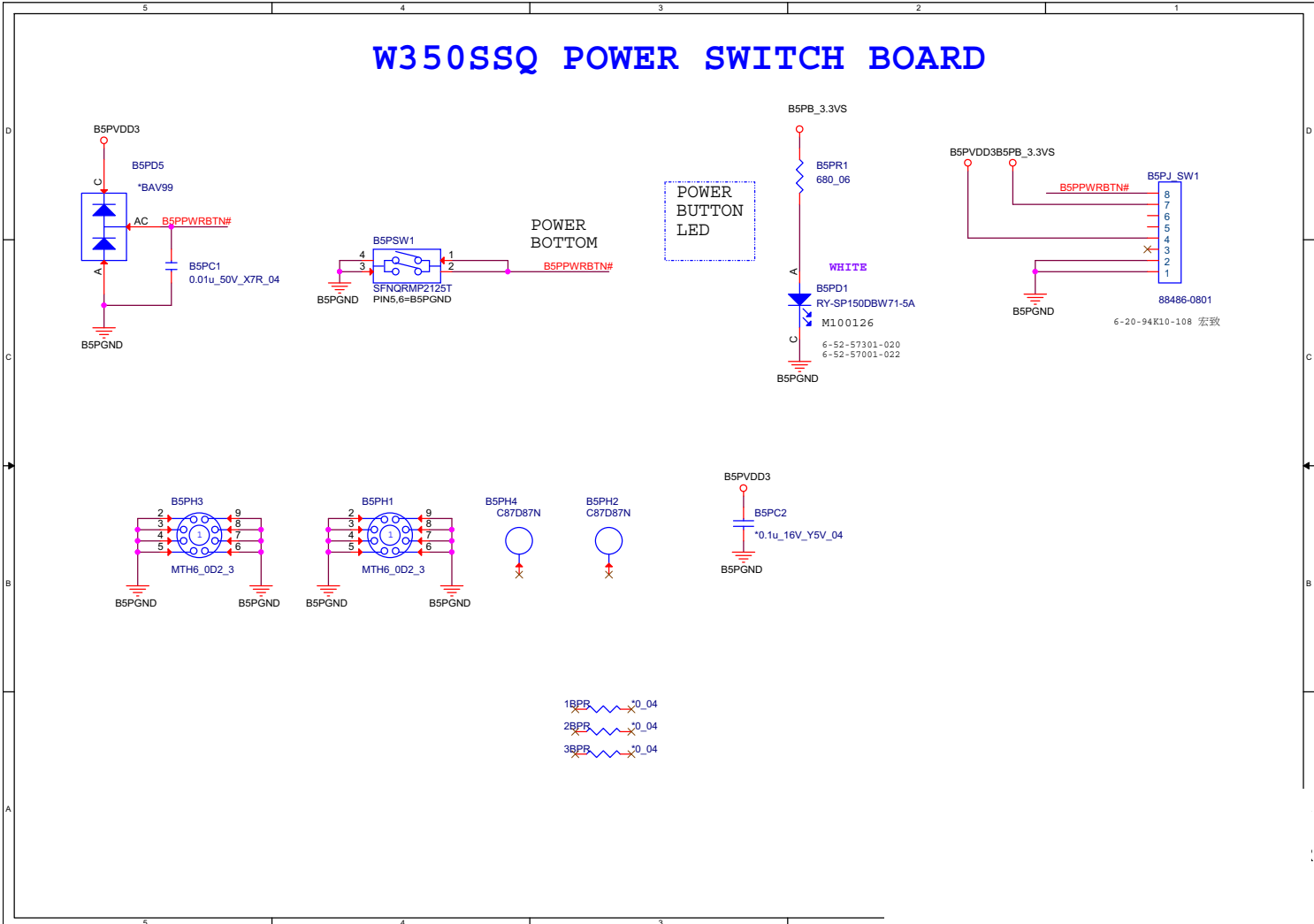


Sheet 50 of 56  
W370SS/W35XSSQ  
Click Board

Schematic Diagrams

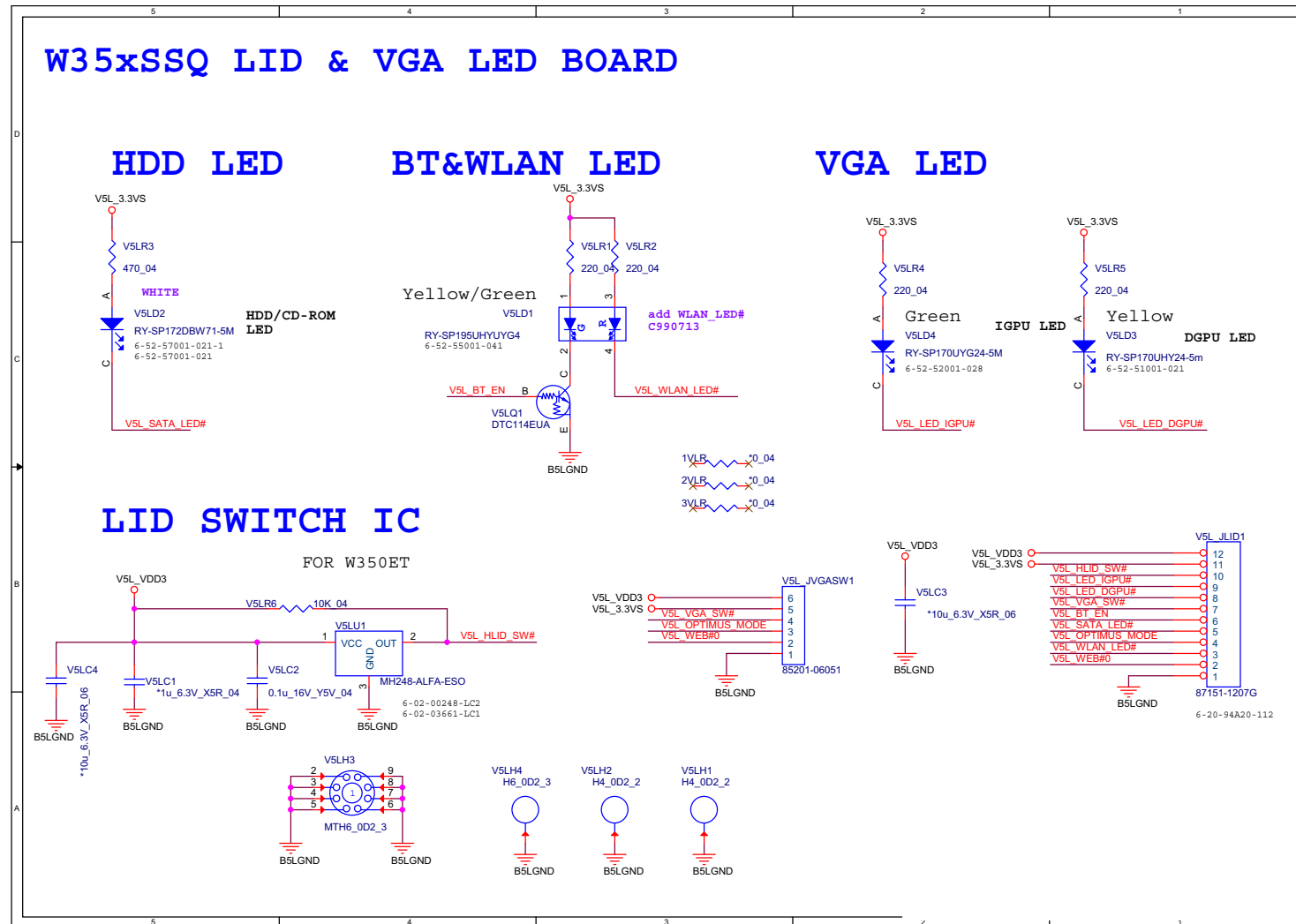
W350SSQ Power Switch Board

Sheet 51 of 56  
W350SSQ Power  
Switch Board





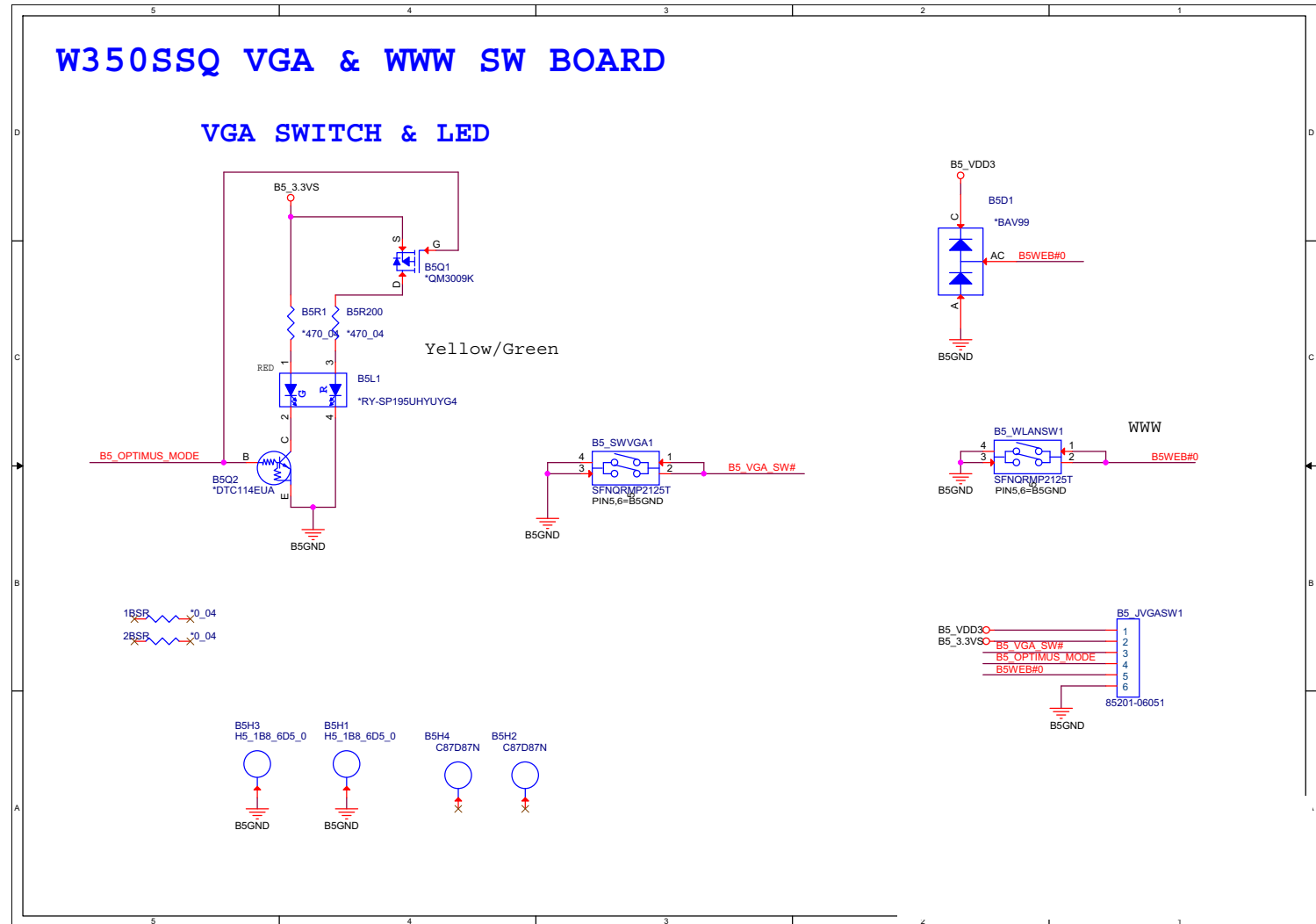
# W35XSSQ LID / VGA LED Board



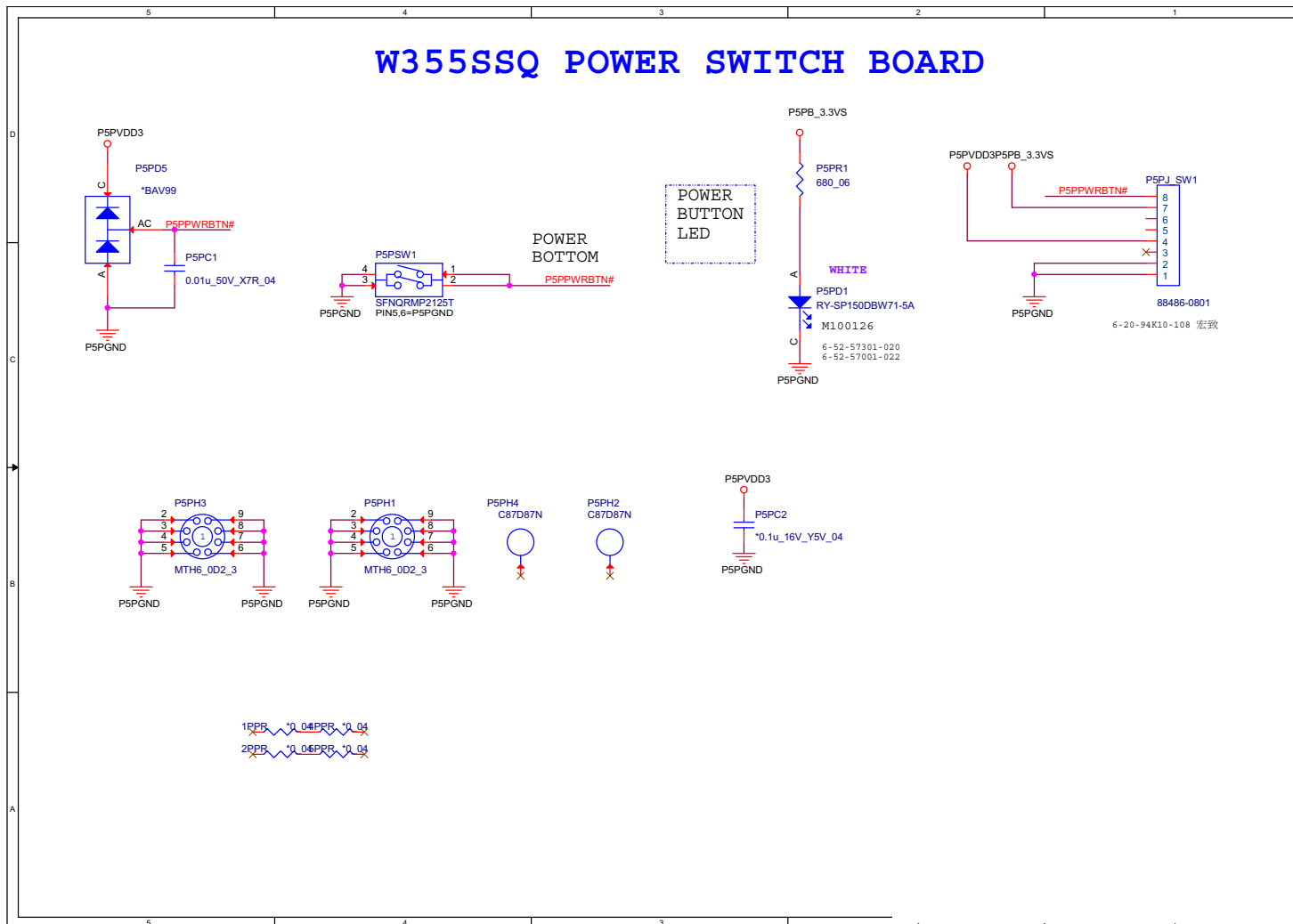
Sheet 52 of 56  
W35XSSQ LID /  
VGA LED Board

# W350SSQ VGA / WLAN SW Board

Sheet 53 of 56  
W350SSQ VGA /  
WLAN SW Board

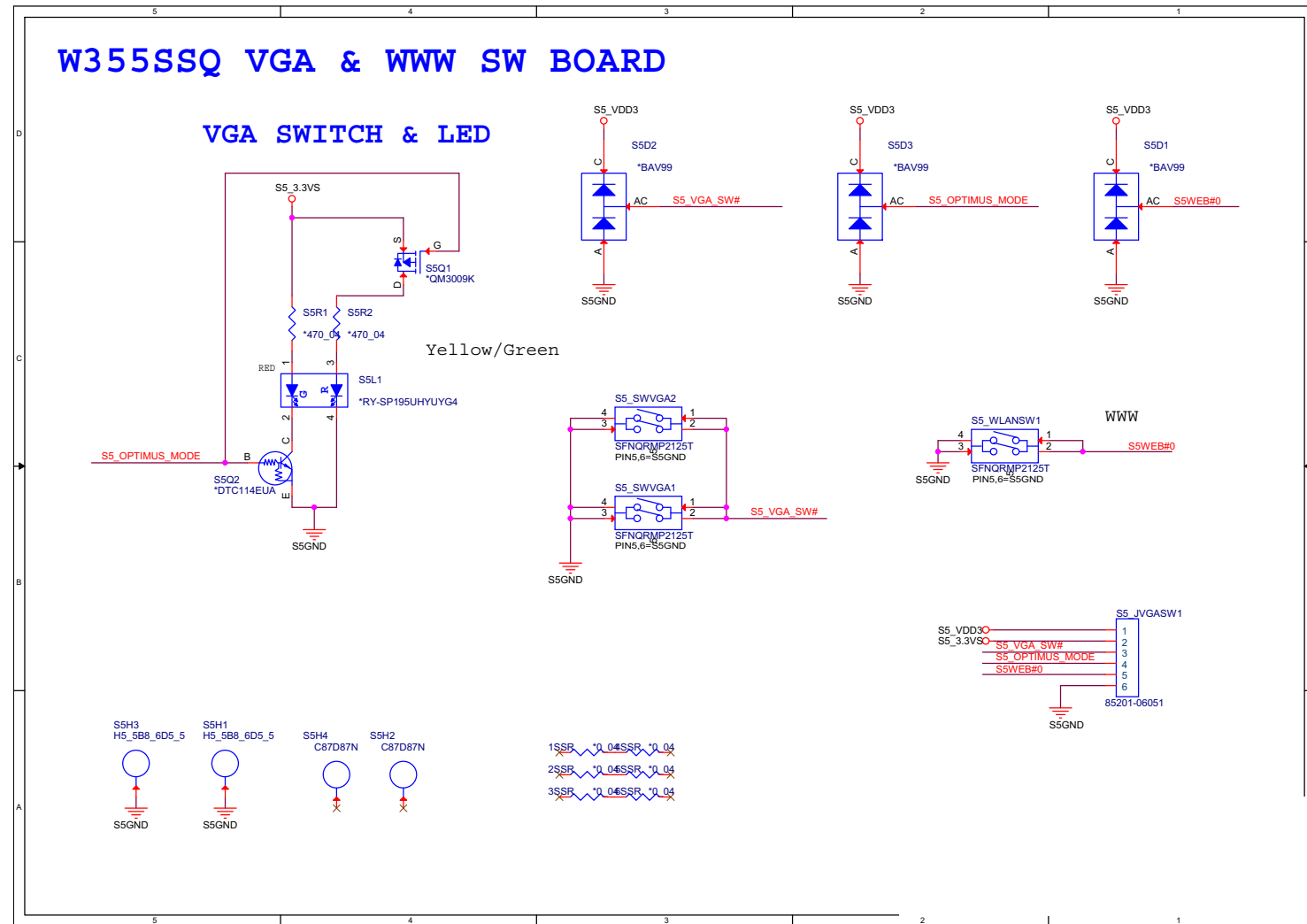


# W355SSQ Power Switch Board

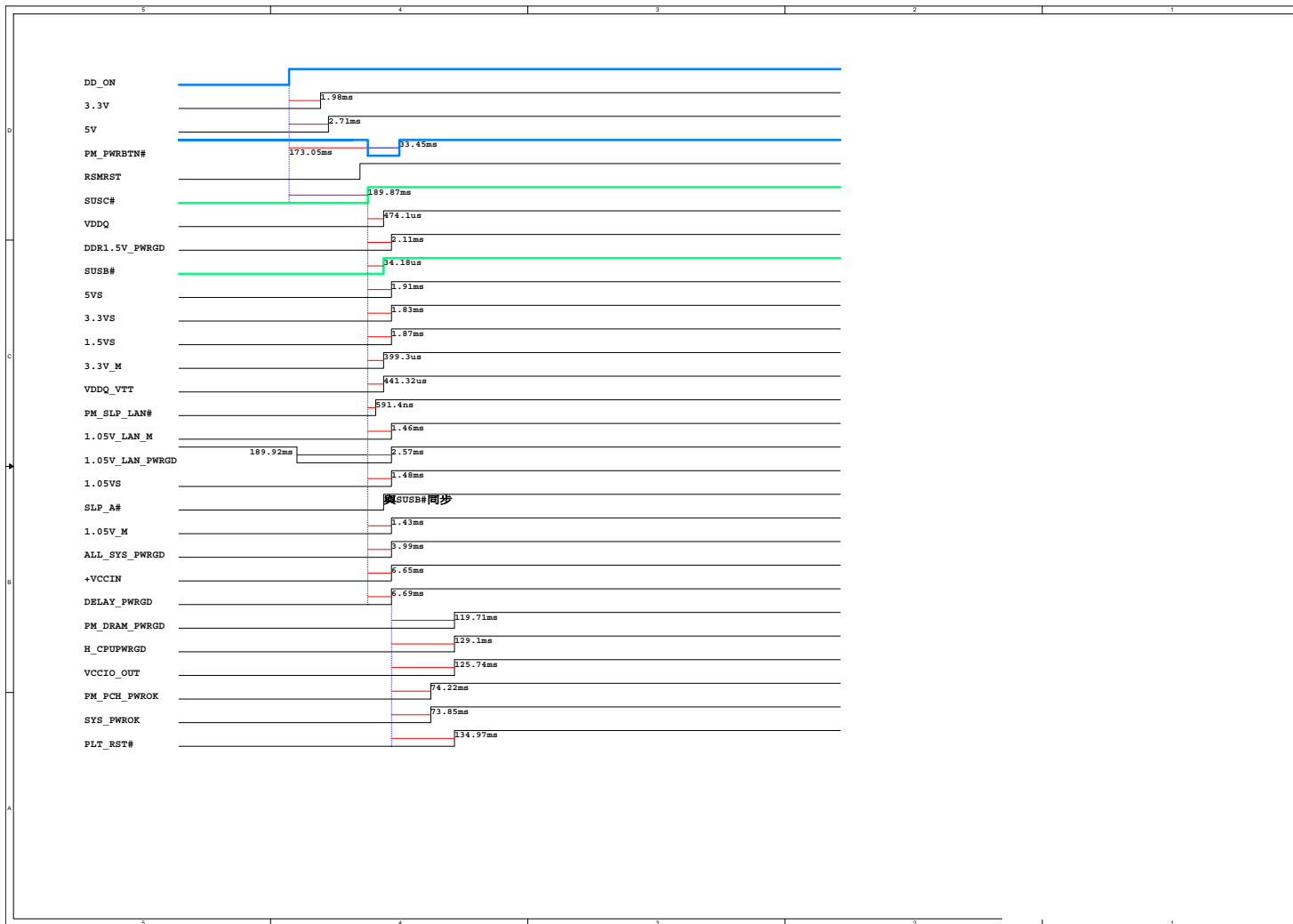


Sheet 54 of 56  
W355SSQ Power  
Switch Board

# W355SSQ VGA & WWW SW BOARD



## POWER SEQUENCE



Sheet 56 of 56  
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 from the BIOS - Legacy Mode (UEFI disabled) and save the settings and exit the BIOS to restart the computer.
- After rebooting the computer you may restart the computer again and make any required changes to the default BIOS settings.

## Download the BIOS

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

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

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

## Set the computer to boot from the external drive

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



### BIOS Version

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

You should only download BIOS versions that are **V1.00.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 1.00.05, you **MAY NOT** then go back and flash the BIOS to ver 1.00.04).



## 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.