SERVICE MANUAL

X8100

notebook

Notebook Computer

X8100

Service Manual

Notice

The company reserves the right to revise this publication or to change its contents without notice. Information contained herein is for reference only and does not constitute a commitment on the part of the manufacturer or any subsequent vendor. They assume no responsibility or liability for any errors or inaccuracies that may appear in this publication nor are they in anyway responsible for any loss or damage resulting from the use (or misuse) of this publication.

This publication and any accompanying software may not, in whole or in part, be reproduced, translated, transmitted or reduced to any machine readable form without prior consent from the vendor, manufacturer or creators of this publication, except for copies kept by the user for backup purposes.

Brand and product names mentioned in this publication may or may not be copyrights and/or registered trademarks of their respective companies. They are mentioned for identification purposes only and are not intended as an endorsement of that product or its manufacturer.

Version 1.0
February 2010

Trademarks

Intel and **Intel Core** are trademarks of Intel Corporation.
Windows® is a registered trademark of Microsoft Corporation.
Other brand and product names are trademarks and/or registered trademarks of their respective companies.

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 ***X8100*** 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 19V, 11.57A).

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.

Do not expose the computer to any shock or vibration.	*Do not place it on an unstable surface.*	*Do not place anything heavy on the computer.*

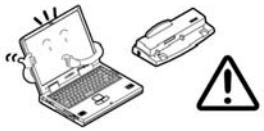
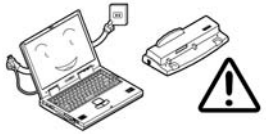
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

Do not expose it to excessive heat or direct sunlight.	*Do not leave it in a place where foreign matter or moisture may affect the system.*	*Don't use or store the computer in a humid environment.*	*Do not place the computer on any surface which will block the vents.*

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.

Do not turn off the power until you properly shut down all programs.	*Do not turn off any peripheral devices when the computer is on.*	*Do not disassemble the computer by yourself.*	*Perform routine maintenance on your computer.*

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**.

Use only approved brands of peripherals.	*Unplug the power cord before attaching peripheral devices.*
	

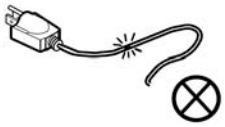
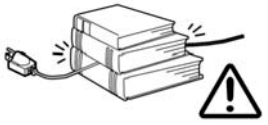
Power Safety

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.

Do not plug in the power cord if you are wet.	*Do not use the power cord if it is broken.*	*Do not place heavy objects on the power cord.*
		

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
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.

Contents

Introduction 1-1

Overview 1-1
System Specifications 1-2
External Locator - Top View with LCD Panel Open 1-4
External Locator - Front & Right side Views 1-5
External Locator - Left Side & Rear View 1-6
External Locator - Bottom View 1-7
Mainboard Overview - Top (Key Parts) 1-8
Mainboard Overview - Bottom (Key Parts) 1-9
Mainboard Overview - Top (Connectors) 1-10
Mainboard Overview - Bottom (Connectors) 1-11

Disassembly 2-1

Overview 2-1
Maintenance Tools 2-2
Connections 2-2
Maintenance Precautions 2-3
Disassembly Steps 2-4
Removing the Battery 2-5
Removing the Optical (CD/DVD) Device 2-6
Removing the Hard Disk Drive 2-7
Removing the System Memory (RAM) -1 2-9
Removing the System Memory (RAM) - 2 2-11
Removing and Installing the Processor 2-14
Removing the VGA Card 2-17
Installing the VGA Card 2-19
Removing the Wireless LAN Module 2-20
Removing the Bluetooth Module 2-21
Removing the TV Tuner Card 2-22

Part Lists A-1

Part List Illustration Location A-2
Top with Fingerprint A-3
Top without Fingerprint A-4
Bottom A-5
LCD - CCFL Panel A-6
LCD - LED Panel A-7
Mainboard A-8
DVD Super Multi A-9
DVD Super Multi - HLDS A-10

Schematic Diagrams.....B-1

System Block Diagram B-2
Processor 1/7 DMI, PEG B-3
Processor 2/7 CLK, MISC B-4
Processor 3/7 DDR3I B-5
Processor 4/7 Power B-6
Processor 5/7 GFX PWR B-7
Processor 6/7 GND, 7/7 RSVD B-8
DDR3 SO-DIMM_0 REV B-9
DDR SO-DIMM_1 REV B-10
MXM 3.0 Master B-11
MXM 3.0 Slave B-12
PCH 1/8 RTC, HDA, SATA B-13
PCH 2/8 PCIE, SMBUS, CLK B-14
PCH 3/8 DMI, PWRGD B-15
PCH 4/8 LVDS, DDI, GND B-16
PCH 5/8 PCI, USB, NVRAM B-17
PCH 6/8 GPIO, CPU B-18
PCH 7/8 PWR B-19
PCH 8/8 PWR B-20
CLK GEN, HDMI-In B-21

CRT, DVI B-22
Panel, Inverter, TPM B-23
HDMI Repeater, Fan Control B-24
HDMI Switch B-25
ODD, CCD, BT, USB2.0 ..... B-26
Codec, Subwoofer, DMIC B-27
Audio AMP B-28
New Card, Mini Card B-29
LAN-RTL8111DL, RJ45 ..... B-30
Card Reader, IEEE1394 ..... B-31
KBC ITE IT8512-J B-32
MB to Small B'd Connector A B-33
MB to Small B'd Connector B B-34
Power System B-35
Power VCore B-36
Power 1.1V_VTT, Screw Hole B-37
Power 1.5V/0.75VS B-38
Power 1.8VS/1.5VS B-39
Power 3.3V/5V B-40
Power Charger, DC-In B-41
Single HDD Board B-42
Dual HDD Board B-43
Audio Board B-44
Power Button Board B-45
Click & FP Board B-46
Game Key Board B-47
Front R Side LED Board B-48
Front L Side LED Board B-49
CIR Board B-50
Finger Board B-51
Logo LED Board B-52
TouchPad LED Board B-53
Back L Side LED Board B-54
Touch Sensor Board A B-55
Touch Sensor Board B B-56

Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the ***X8100*** 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 7*, 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 ***X8100*** 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.

System Specifications

Processor
Intel® Core i7-720QM Processor: 1.6GHz 45nm (45 Nanometer) Process Technology, 6M L3 Cache & FSB 1333MHz - TDP 45W rPGA988A Package **Intel® Core i7-820QM Processor: 1.73GHz** 45nm (45 Nanometer) Process Technology, 8M L3 Cache & FSB 1333MHz - TDP 45W rPGA988A Package **Intel® Core i7-920XM Processor: 2.00GHz** 45nm (45 Nanometer) Process Technology, 8M L3 Cache & FSB 1333MHz - TDP 55W rPGA988A Package
Core Logic
Intel® PM55 Chipset
Display
18.4" HD+/ FHD (1920 * 1080) TFT LCD
Memory
DDRIII (DDR3) Dual Channels Two 204 Pin SO-DIMM Sockets Supporting **DDRIII (DDR3)** 1066MHz/1333MHz Memory Modules Memory Expandable up to 8GB Compatible with 2GB or 4GB Modules

Video Adapter Options
nVIDIA® GeForce GTX 285M SLI PCIe Video Card 1GB GDDR3 Video RAM On Board Supports PCIe * 8 (SLI - 2 * PCIe * 8) Supports Microsoft DirectX® 11.0 Supports HDCP
BIOS
One 32Mb Flash ROM Phoenix™ BIOS
Storage
Up to three (**Factory Option**) Changeable 2.5" 9.5 mm (h) **SATA** (Serial) Hard Disk Drives supporting RAID level 0/1 One 12.7 mm Super Multi/Blu-Ray Combo/ Blu-Ray Writer SATA Optical Device Drive (**Factory Option**)
Audio
High Definition Audio 3D Enhanced Sound System S/PDIF Digital Output Built-In Microphone 5.1 Channel Speakers (with Subwoofer) Dolby Home Theater Certified

Keyboard & Pointing Device
Full Size Winkey Keyboard with Numeric Keypad Built-In TouchPad (with Multi Gesture Functionality) Eight Touch Sensor Instant Keys (Color, CCD, Bluetooth, WLAN, Internet, Silent Mode, Sound Effect, Mute) Eight Gaming Keys G1 ~ G8
Card Reader
Embedded 7-in-1 Card Reader (MS/ MS Pro/ SD/ Mini SD/ MMC/ RS MMC/ MS Duo) **Note:** MS Duo/ Mini SD/ RS MMC Cards require a PC adapter
Slots
One ExpressCard/34 Slot Two Mini Card Slots: **Slot 1** for PCIe WLAN Module **Slot 2** for PCIe TV Tuner Module

Interface
Four USB 2.0 Ports One eSATA Port One Mini-IEEE1394a Port One DVI-Out Port (with CRT out) One HDMI-Out (High-Definition Multimedia Interface) Port (with HDCP Support) One HDMI-In (High-Definition Multimedia Interface) Port (with HDCP Support) One RJ-45 LAN Jack One Headphone/Speaker-Out Jack One Microphone-In Jack One Line-In Jack One S/PDIF Out Jack One DC-In Jack One Consumer Infrared Port for TV Tuner Remote Controller One CATV-In Jack (for TV Tuner)

Communication
Built-In 10/100/1000 Base-TX Ethernet LAN Bluetooth 2.1 + EDR (Enhanced Data Rate) Module (**Factory Option**) Intel® WiFi Link 5300 Series (3*3 - 802.11a/g/n) Wireless LAN PCIe Interface Half Mini-Card Module (**Factory Option**) 3rd Party 802.11b/g/n Wireless LAN PCIe Interface Half Mini-Card Module (**Factory Option**) 2.0M Pixel PC Video Camera Module (**Factory Option**) Mini-Card TV Tuner Module (**Factory Option**)

Security
Security (Kensington® Type) Lock Slot BIOS Password Fingerprint Reader Module (**Factory Option**)

Operating System
Windows® 7 Note that the TV Tuner module (factory) option in is supported by the **Windows Media Center** software. **Windows Media Center** is not included in **Starter** or **Home Basic** versions of ***Windows 7***.

Power Management
Supports Wake on LAN Supports Wake on USB

Power
Full Range AC/DC Adapter – AC in 100 - 240V, 50 - 60Hz DC Output 19V, 11.57A (**220 Watts**) Removable Polymer Smart Lithium-Ion 68.82Wh Main Battery

Environmental Spec	
Temperature	
Operating:	5°C - 35°C
Non-Operating:	-20°C - 60°C
Relative Humidity	
Operating:	20% - 80%
Non-Operating:	10% - 90%

Physical Dimensions & Weight
439mm (w) * 299mm (d) * 44mm (h) Around 5.6kg with Battery and ODD

External Locator - Top View with LCD Panel Open

Figure 1
Top View

1. Optional Built-In PC Camera
2. LCD
3. LED Status Indicators
4. Touch Sensor Instant Keys
5. 8 * Gaming Keys
6. Keyboard
7. TouchPad and Buttons
8. Fingerprint Reader Module (**optional**)
9. LED Power Indicators

External Locator - Front & Right side Views

Figure 2
Front Views

1. Color LEDs
2. Speakers
3. LED Power Indicators
4. Consumer Infrared Transceiver (enabled with optional TV Tuner only)

Figure 3
Right Side Views

5. Headphone-Out Jack
6. Microphone-In Jack
7. Line-In Jack
8. S/PDIF-Out Jack
9. Cable (CATV) Antenna Jack*
10. Combined eSATA/USB Port
11. USB 2.0 Port
12. Security Lock Slot
13. Power Button

External Locator - Left Side & Rear View

Figure 4
Left Side View

1. DVI-Out Port
2. 2 * USB 2.0 Ports
3. RJ-45 LAN Jack
4. HDMI-Out Port
5. 7-in-1 Card Reader
6. ExpressCard Slot
7. HDMI-In Port
8. Mini-IEEE 1394 Port
9. Optional Device Drive Bay

Figure 5
Rear View

10. Color LEDs
11. Speakers
12. DC-In Jack

External Locator - Bottom View

Figure 6
Bottom View

1. Sub Woofer
2. Fan Outlet/Intake
3. Component Bay Cover
4. Battery (Secondary HDD Bay - HDD3)
5. Primary HDD Bay (HDD1 & 2)

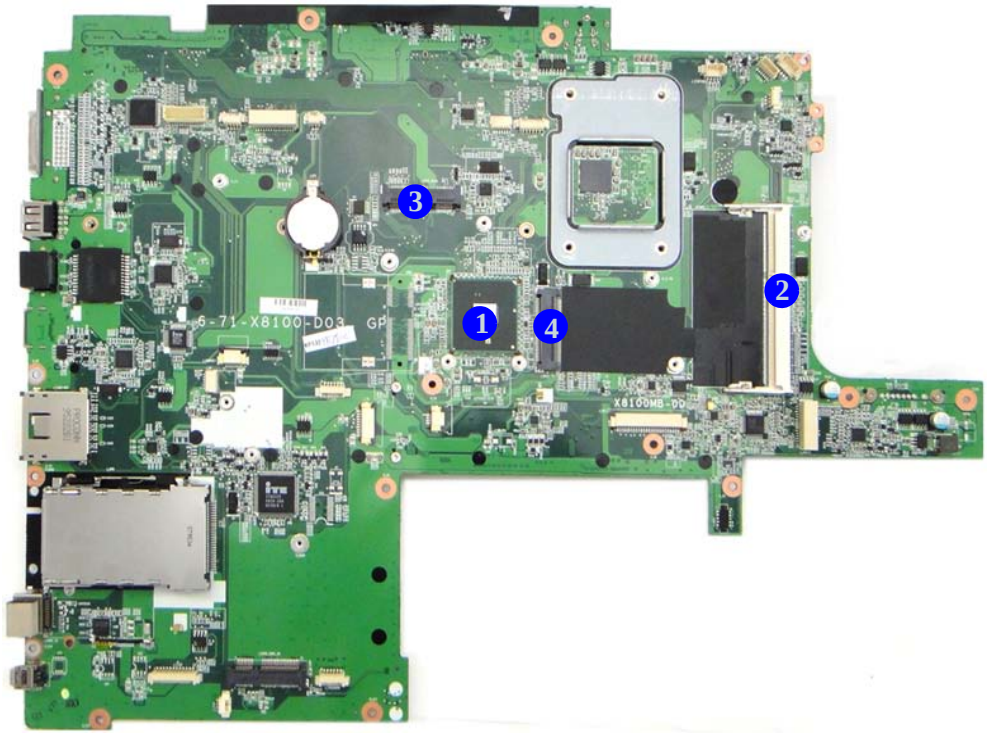
Overheating

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

Mainboard Overview - Top (Key Parts)

Figure 7
Mainboard Top Key Parts

1. North Bridge
2. Memory Slots DDR3 So-DIMM
3. Mini-Card Connector (WLAN Module)
4. Mini-Card Connector (TV Module)



Mainboard Overview - Bottom (Key Parts)

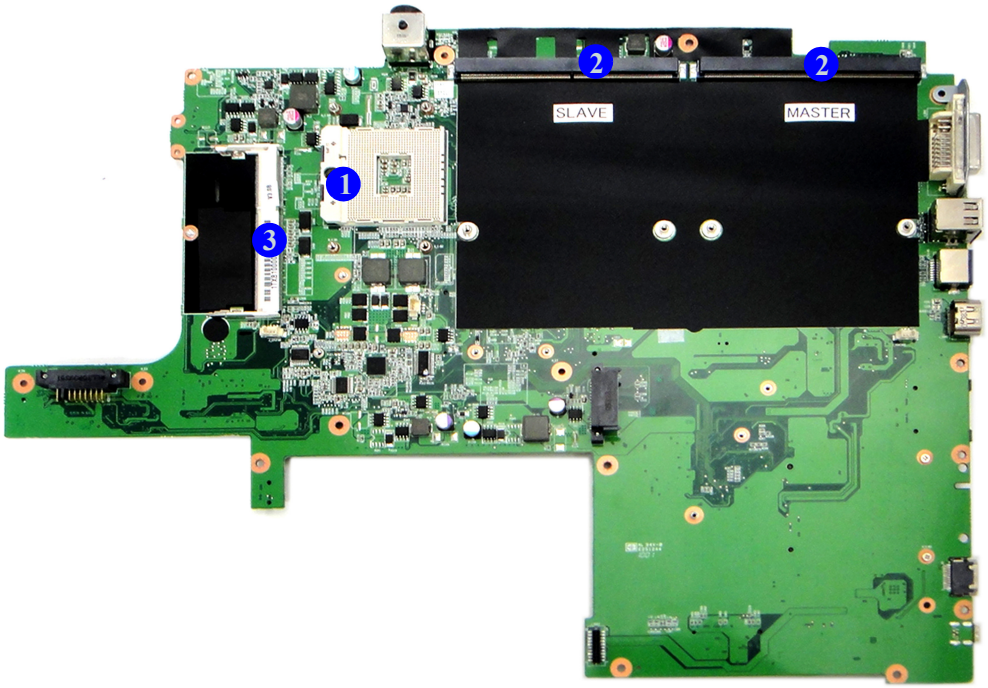


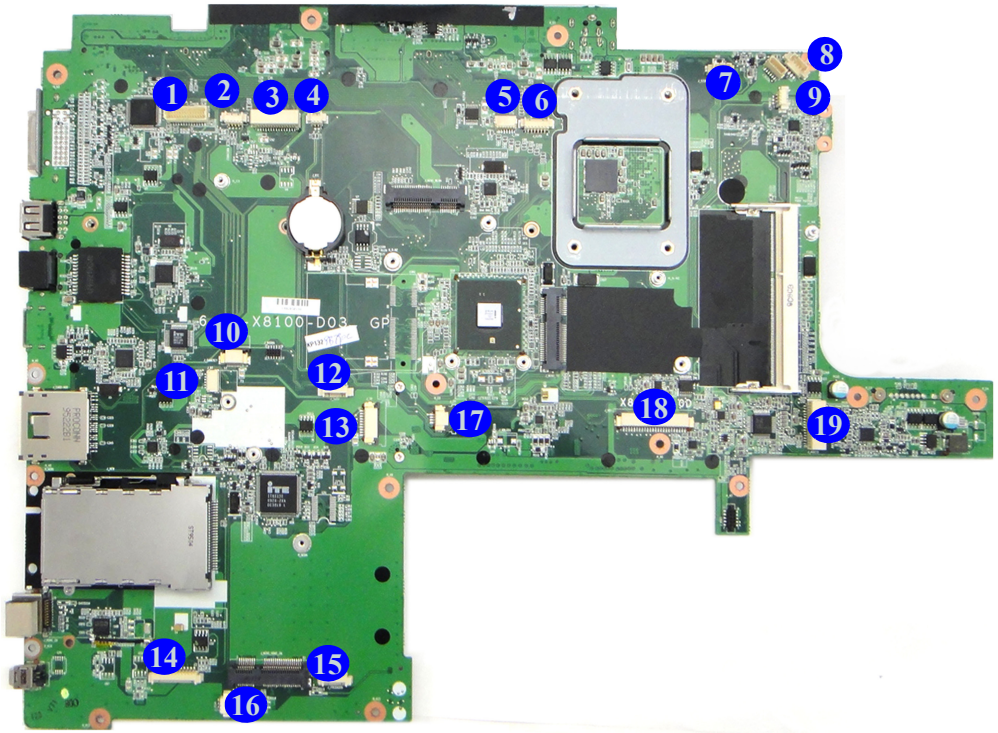
Figure 8
Mainboard Bottom Key Parts

1. CPU Socket
2. VGA Socket
3. Memory Slots DDR3 So-DIMM

Mainboard Overview - Top (Connectors)

Figure 9
Mainboard Top Connectors

1. Touch Sensor Connector
2. DMIC Connector
3. LCD Cable Connector
4. Side L Cable Connector
5. Inverter Cable Connector
6. LED Cable Connector
7. Subwoofer Connector
8. Power Button Connector
9. CCD Cable Connector
10. Game-Key Cable Connector
11. Bluetooth Module Connector
12. LED Cable Connector
13. Touch Pad Connector
14. LED Cable Connector
15. Speaker R-L Center Connector
16. CIR Connector
17. Fingerprint Connector
18. Keyboard Cable Connector
19. Audio Cable Connector



Mainboard Overview - Bottom (Connectors)

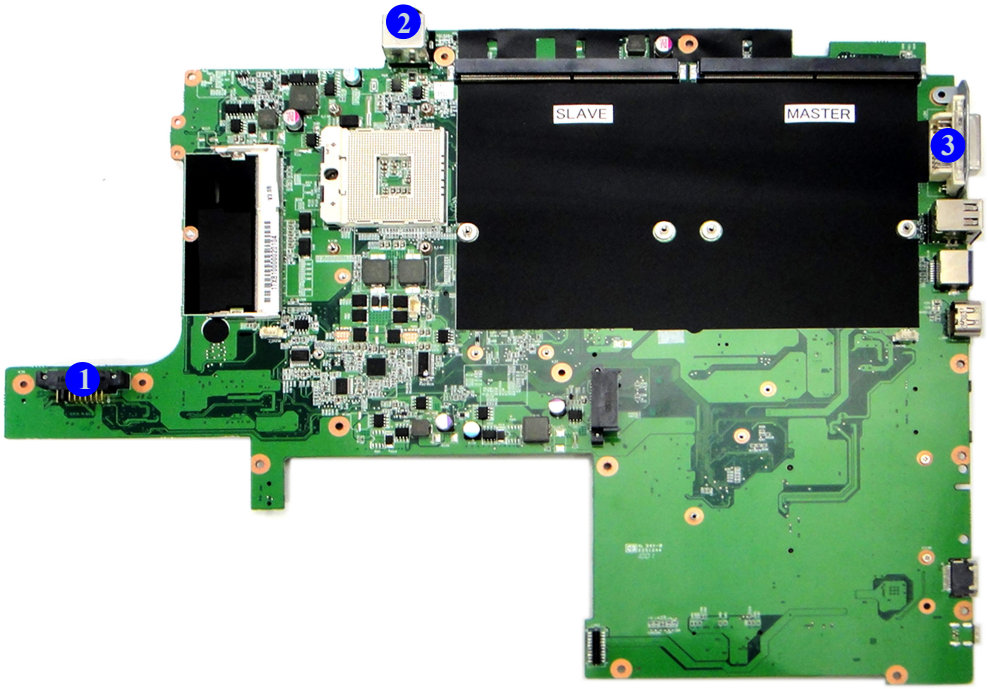


Figure 10
Mainboard Bottom Connectors

1. Battery Connector
2. DC-In Jack
3. DVI Port

Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the ***X8100*** series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

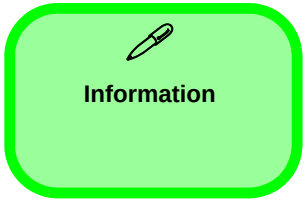
We suggest you completely review any procedure before you take the computer apart.

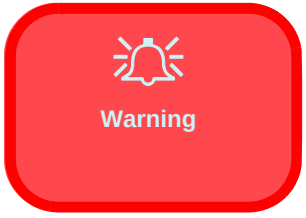
Procedures such as upgrading/replacing the RAM, optical device and hard disk are included in the User's Manual but are repeated here for your convenience.

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.





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.

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.

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.

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 the System Memory:

1. Remove the battery *page 2 - 5*
2. Remove the System Memory *page 2 - 9*

To remove and install the Processor:

1. Remove the battery *page 2 - 5*
2. Remove the Processor *page 2 - 14*
3. Install the Processor *page 2 - 16*

To remove the VGA card:

1. Remove the battery *page 2 - 5*
2. Remove the VGA card *page 2 - 17*

To remove the Wireless LAN Module:

1. Remove the battery *page 2 - 5*
2. Remove the System Memory *page 2 - 9*
3. Remove the Wireless LAN *page 2 - 20*

To remove the Bluetooth Module:

1. Remove the battery *page 2 - 5*
2. Remove the System Memory *page 2 - 9*
3. Remove the Bluetooth *page 2 - 21*

To remove the TV Tuner Card:

1. Remove the battery *page 2 - 5*
2. Remove the TV tuner card *page 2 - 22*

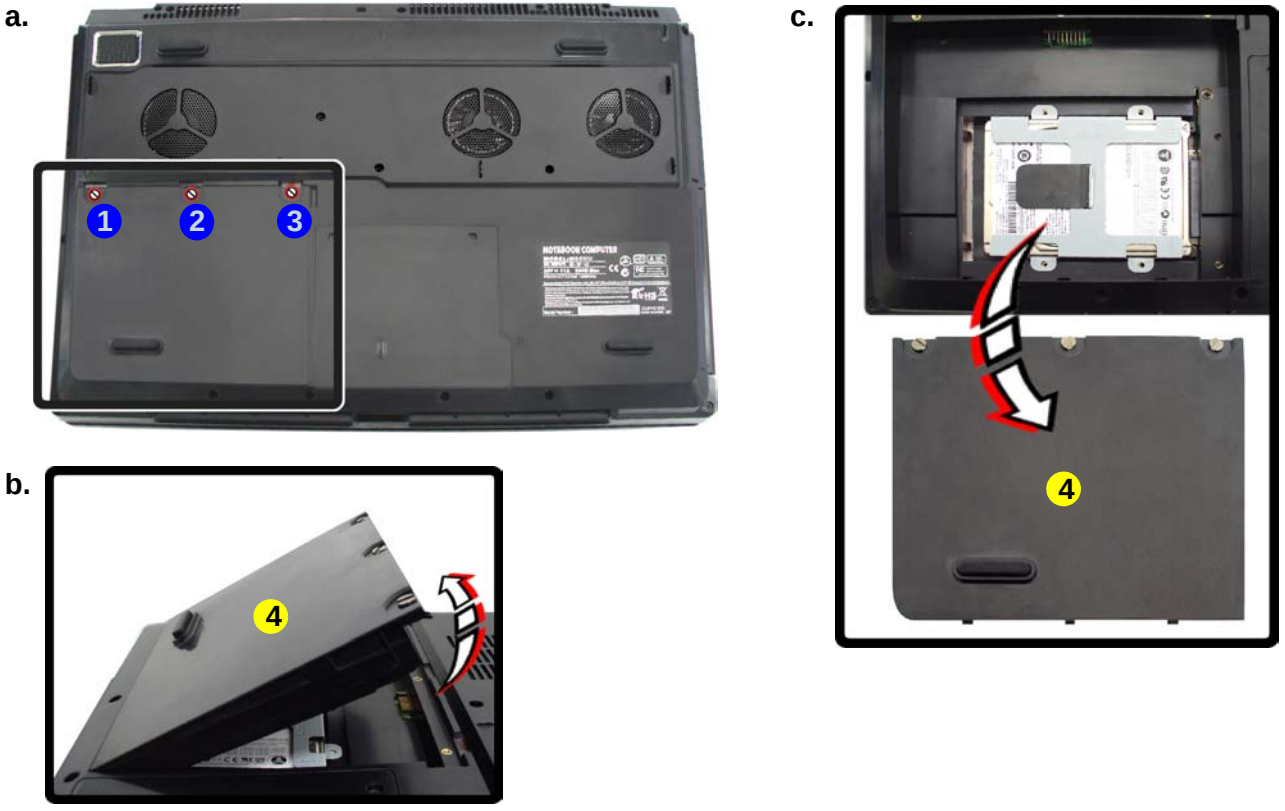
Removing the Battery

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. Loosen screws 1 - 3 and carefully lift the battery 4 up (***Figure b***) .
3. Remove the battery from the battery bay.

Figure 1
Battery Removal

a. Loosen screws.
b. Release the battery.
c. Lift the battery out of the bay as indicated.



4. Battery

- 3 Screws

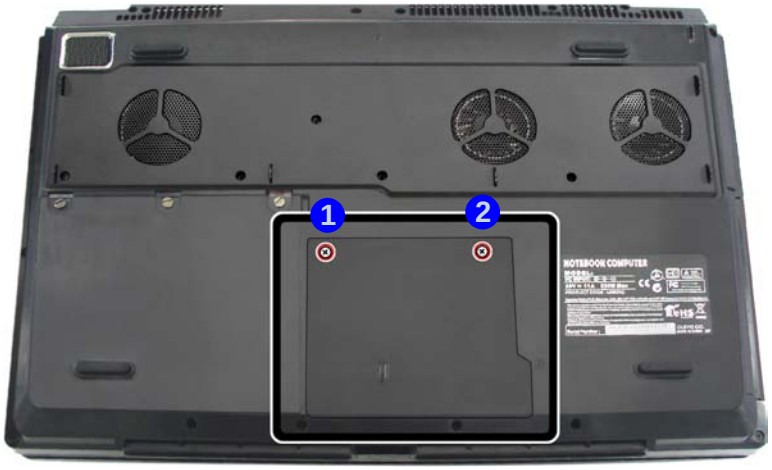
Figure 2
Optical Device Removal

a. Remove the screws.
b. Remove the cover.
c. Remove the screw and push the optical device out of the computer at point 5.

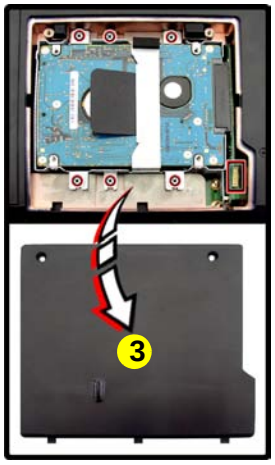
Removing the Optical (CD/DVD) Device

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 screws 1 & 2, and remove the bay cover 3.
3. Remove screw 4.
4. Use the screwdriver to push the optical device 6 out of the computer at point 5.
5. Reverse the process to install the new device.

a.



b.



c.

3. Hard Disk Bay Cover
6. Optical Device

- 3 Screws

Blu-Ray Device Bezel Removal

Note that some Blu-Ray modules (e.g. Pioneer) have a small piece of mylar inserted in the left side (as viewed front on) of the bezel cover; in order to prevent the bezel cover of the module from being removed accidentally. If you need to replace the bezel cover, you will need to use a screwdriver to ease out and remove the mylar before attempting to remove the bezel cover. You will need to re-insert the mylar when replacing the bezel cover.

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 (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

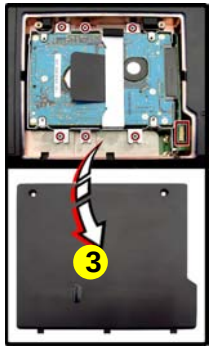
1. Turn off the computer, and turn it over and remove the battery (*page 2 - 5*).
2. Locate the hard disk bay cover and remove screws 1 & 2.
3. Remove the bay cover 3.
4. Remove screws 4 - 9 and pull the tab to disconnect the connector 10 from hard disk assembly.
5. Lift the hard disk assembly 11 out of the computer.
6. Remove screws 12 - 21 (depending on how many hard disks you have installed in the assembly).
7. Separate the hard disk board connector 22 from the case 23 .
8. Separate the hard disk(s) 24 from the case.
9. Reverse the process to install a new hard disk(s).

Figure 3
HDD Assembly Removal

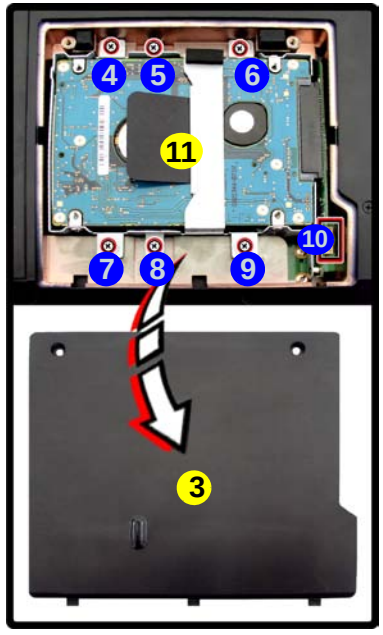
a. Remove the screws.
b. Remove the cover
c. Remove the screws and lift the hard disk assembly up out off the computer.
d. Remove the screws and separate the HDD(s) from the connector and case.

a.

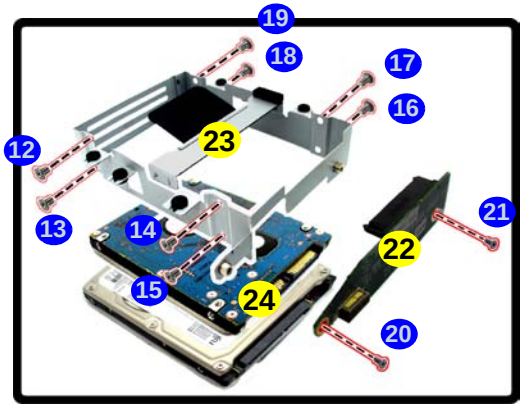
b.



c.



d.



3. Hard Disk Bay Cover
11. Hard Disk Assembly
22. HDD connector
23. HDD case
24. HDD

- 18 Screws

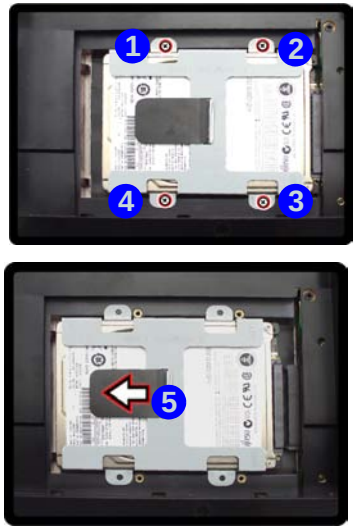
Figure 4
Secondary HDD Assembly Removal

a. Remove the screws and slide the hard disk assembly in the direction of the arrow.
b. Lift the hard disk assembly out off the computer.
c. Remove the screws to release the hard disk from the case.

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

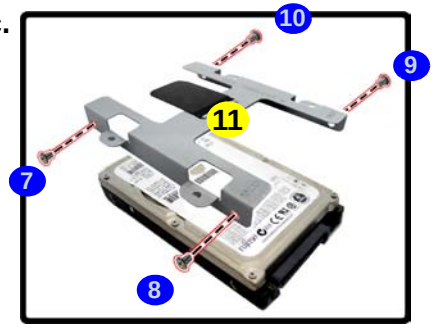
1. Turn **off** the computer, and turn it over and remove the battery.
2. The secondary hard disk bay is located under the battery compartment.
3. Remove screw 1 - 4.
4. Slide the hard disk assembly in the direction of the arrow 5.
5. Lift the hard disk assembly 6 out of the compartment.
6. Remove the screws 7 - 10 to release the hard disk from the case 11 .
7. Reverse the process to install any new hard disk(s).

a.



b.

c.



6. Hard Disk Assembly
11. Hard Disk Case

- 8 Screws

Removing the System Memory (RAM) -1

The computer has two memory sockets for 204 pin Small Outline Dual In-line Memory Modules (SO-DIMM) DDR III (DDR3) supporting 1066/1333 MHz. The main memory can be expanded up to 8GB. The total memory size is automatically detected by the POST routine once you turn on your computer.

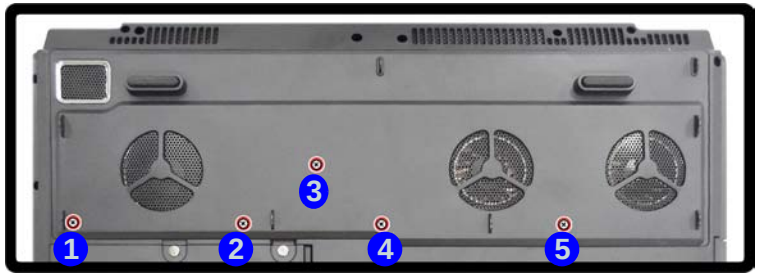
Memory Upgrade Process

1. Turn off the computer, and turn it over and remove the battery (*page 2 - 5*).
2. Locate the component bay cover and remove screws 1 - 5.
3. Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
4. Carefully disconnect the fan cable 6, and remove the bay cover 7 .
5. Loosen the CPU heat sink screws 8 - 11.
6. Carefully (it may be hot) lift up the heat sink 12 off the computer.

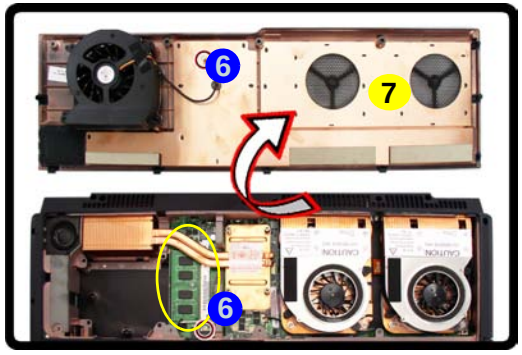
Figure 5
RAM-1 Module Removal

a. Remove the screws.
b. Lift the cover and disconnect the fan cable.
c. Loosen the screws and remove the heat sink..

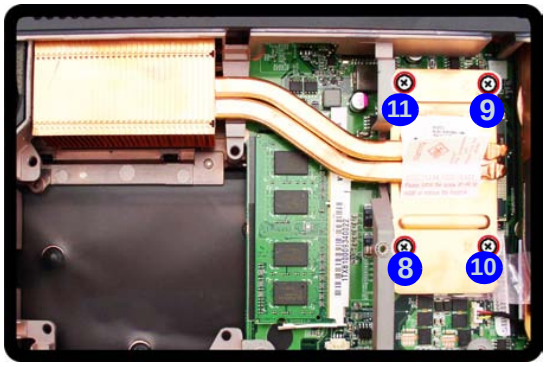
a.

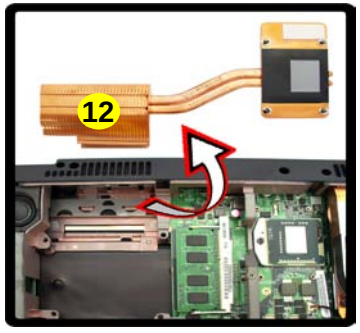


b.



c.





7. Bay Cover
12. Heat Sink

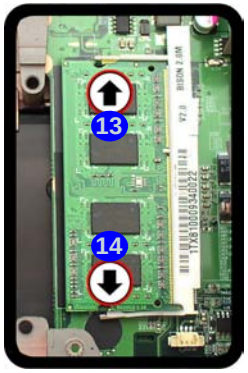
- 5 Screws

Figure 6
RAM-1 Module Removal (cont'd.)

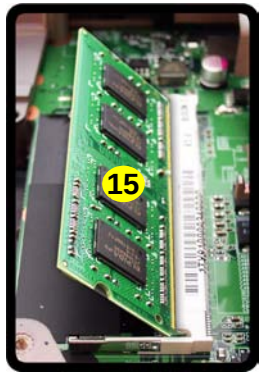
d. Pull the release latch.
e. Remove the module.
f Replace the heatsink and tighten the screws.

7. Gently pull the two ***release latches 13 & 14 on the sides of the memory socket in the direction indicated by the arrows (Figure f***).
8. The RAM module 15 will pop-up (***Figure g***), and you can then remove it.

d.



e.



Single Memory Module Installation

If your computer has a single memory module, then insert the module into the **Channel 0 (JDIMM1)** socket as shown in ***Figure 6 g***.

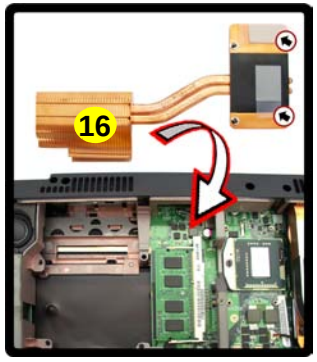
Contact Warning

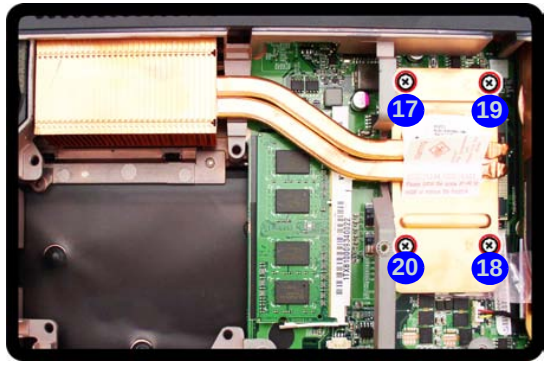
Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

9. Pull the latches to release the second module if necessary.
10. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
11. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the socket as it will go. DO NOT FORCE the module; it should fit without much pressure.
12. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
13. Replace the heat sink (make sure you tighten the screws in the order indicated on the label as below).

15. RAM Module
16. Heat Sink

f.





14. Replace the component bay cover and make sure you reconnect the fan cable (see ***Figure 6 on page 2 - 10***).
15. Replace all the component bay cover screws.
16. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

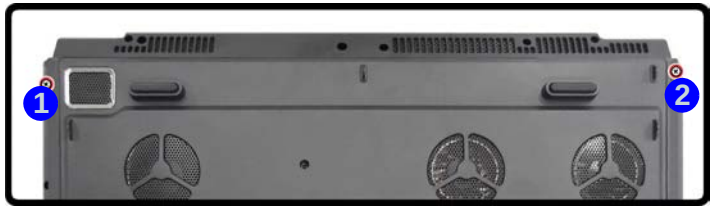
Removing the System Memory (RAM) - 2

The computer has two memory sockets for 204 pin Small Outline Dual In-line Memory Modules (SO-DIMM) DDR III (DDR3) supporting 1066/1333 MHz. The main memory can be expanded up to 4GB. The SO-DIMM modules supported are 1024MB and 2048MB **DDR** Modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

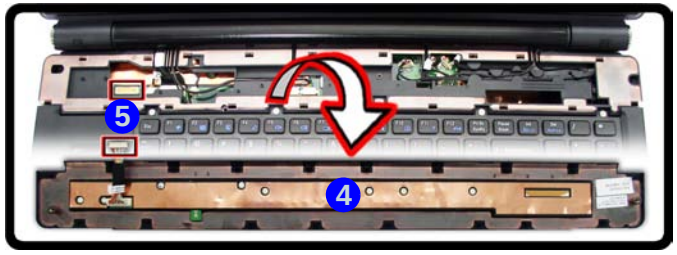
1. Turn off the computer, and turn it over and remove the battery (***page 2 - 5***).
2. Remove screws 1 & 2 from the bottom of the computer.
3. Turn the computer over, open the Lid/LCD, and carefully (a cable is connected to the underside of the LED cover module) unsnap up the LED cover module from point 3 on the right.
4. Lift up the LED cover module 4 and disconnect the cable 5.
5. Remove screws 6 - 10 from the keyboard.

a.



b.

c.



d.

Figure 7
RAM-2 Module Removal

a. Remove the screws from the bottom of the computer.
b. Turn the computer over, open the lid/LCD and unsnap the LED cover at point 3.
c. Lift the LED cover module and disconnect the cable.
d. Remove the screws from the keyboard.

- 7 Screws

Figure 8
RAM-2 Module Removal (cont'd.)

e. Disconnect the cable from the locking collar.
f. Remove the keyboard.
g. Remove screws and keyboard plate.
g Pull the release latch(es).
i. Remove the module(s).

Contact Warning

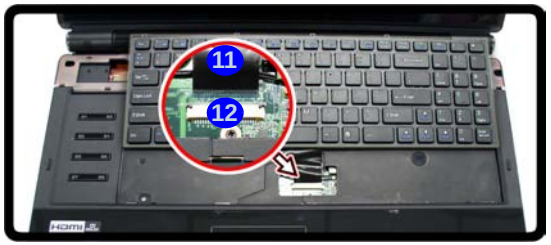
Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

13. Keyboard
18. Keyboard Shielding Plate
21. RAM Module(s)

- 4 Screws

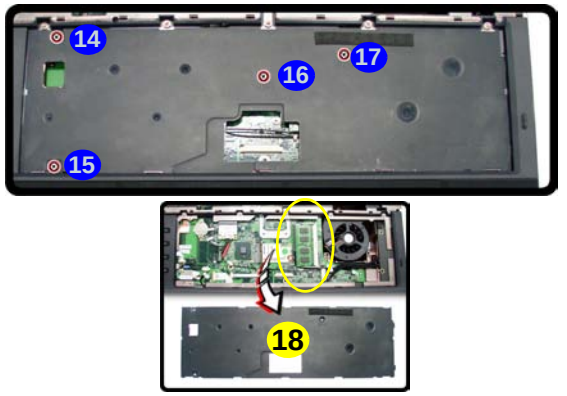
6. Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable.
7. Disconnect the keyboard ribbon cable 11 from the locking collar socket 12.
8. Remove the keyboard 13 .
9. Remove screws 14 - 17 from the keyboard shielding plate 18 and remove the keyboard shielding plate.

e.



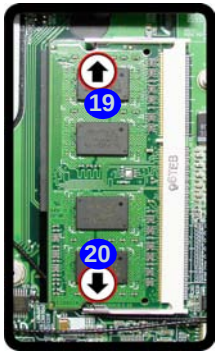
f.

g.

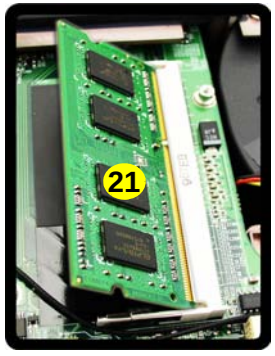


10. Gently pull the two ***release latches 19 & 20 on the sides of the memory socket in the direction indicated by the arrows (Figure h***).
11. The RAM module 21 will pop-up (***Figure i***), and you can then remove it.

h.



i.



Single Memory Module Installation

If your computer has a single memory module, then insert the module into the **Channel 0 (JDIMM1)** socket as shown in ***Figure 6 g***.

12. Pull the latches to release the second module if necessary.
13. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
14. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the socket as it will go. DO NOT FORCE the module; it should fit without much pressure.
15. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.

16. Replace the shielding plate, keyboard and screws (make sure to reconnect the keyboard cable).
17. Snap the LED cover module down at the top fo the module at point 22 & 23.

j.

18. Push the LED cover module down on the left side at point 24, and then slide the module to the right (as illustrated) and snap down to secure it in place.

k.

19. Replace the scews on the bottom of the computer.
20. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Figure 9
RAM-2 Module Removal (cont'd.)

j. Snap down the LED cover at point 22 & 23.
k. Push the LED cover on the left side at point 24 and the slide toward the right to secure it in place.

Figure 10
Processor Removal

a. Remove the screws.
b. Lift the cover and disconnect the fan cable.
c. Loosen the screws and remove the heat sink..

Removing and Installing the Processor

Processor Removal Procedure

1. Turn off the computer, and turn it over, remove the battery (*page 2 - 5*).
2. Locate the component bay cover and remove screws 1 - 5.
3. Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
4. Carefully disconnect the fan cable 6, and remove the bay cover 7 .
5. Loosen the CPU heat sink screws 8 - 11.
6. Carefully (it may be hot) lift up the heat sink 12 off the computer.

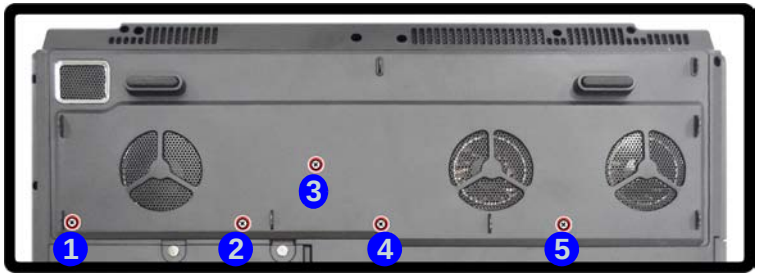
Caution

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.

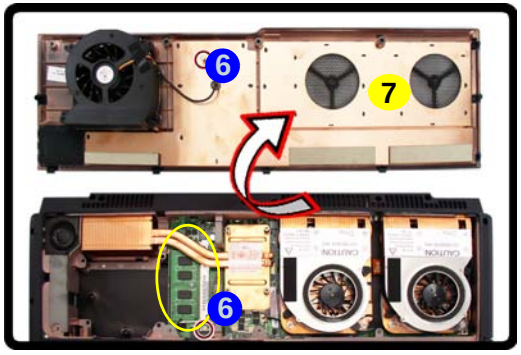
7. Bay Cover
12. CPU Heat Sink

- 5 Screws

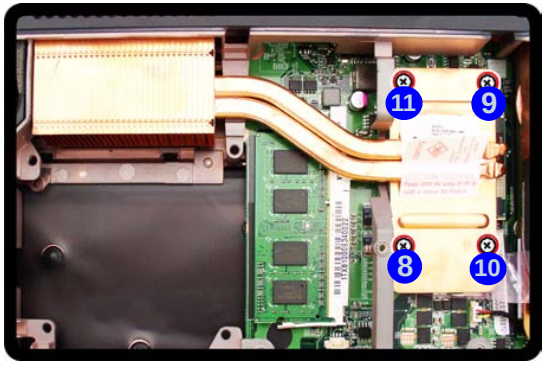
a.

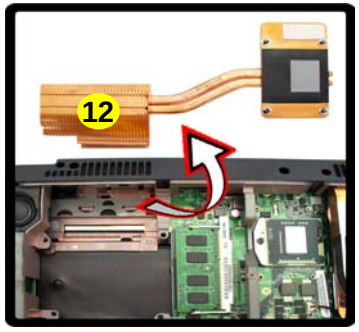


b.



c.



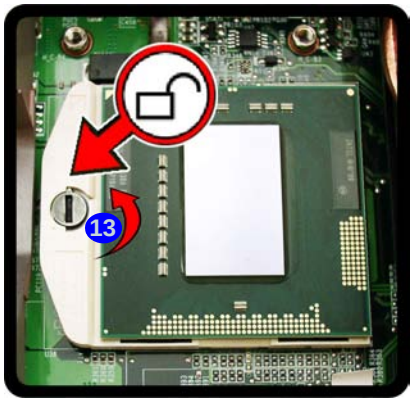


7. Turn the release latch 13 towards the unlock symbol, to release the CPU (*Figure 11a*).
8. Carefully (it may be hot) lift the CPU 14 up out of the socket (*Figure 11b*).
9. See *page 2 - 16* for information on inserting a new CPU.
10. Reverse the process to install a new CPU.
11. When re-inserting the CPU, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).

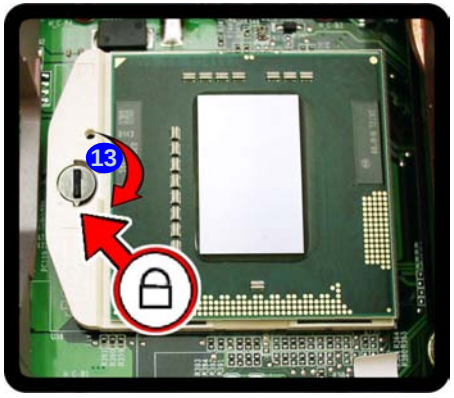
Figure 11
Processor Removal (cont'd)

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

d.

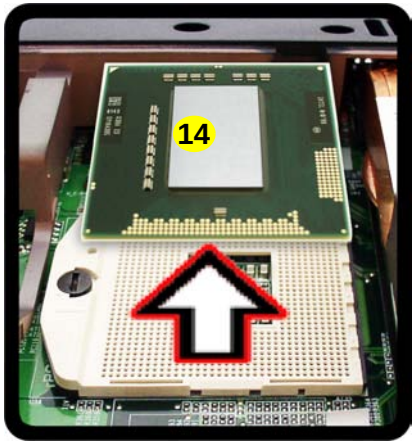


Unlock



Lock

e.



Caution

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

14. CPU

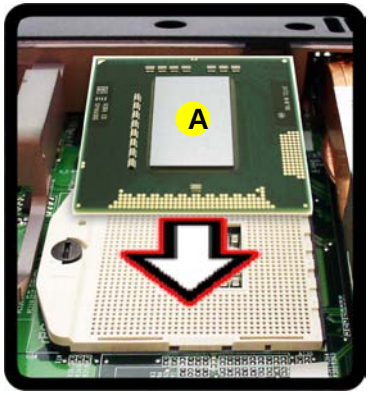
Figure 12
Processor Installation

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

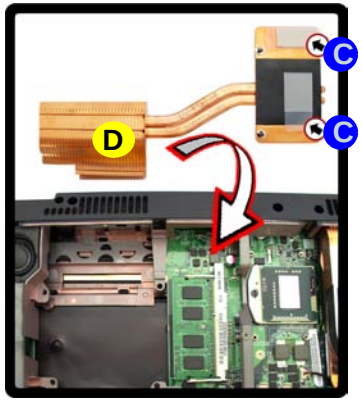
Processor Installation Procedure

1. Insert the CPU A, 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 12b***).
2. **Remove the sticker C** (***Figure 12c***) from the heat sink.
3. Insert the heat sink D as indicated in ***Figure 12c***.
4. Tighten the CPU heat sink screws 1, 2, 3, & 4 (***Figure 12d***).
5. Replace the component bay cover and tighten the screws (***page 2 - 14***).

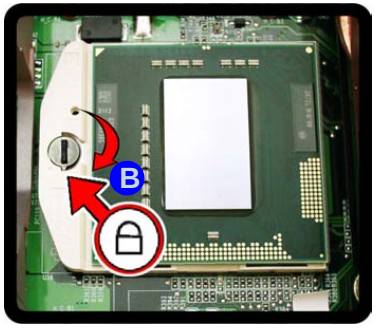
a.



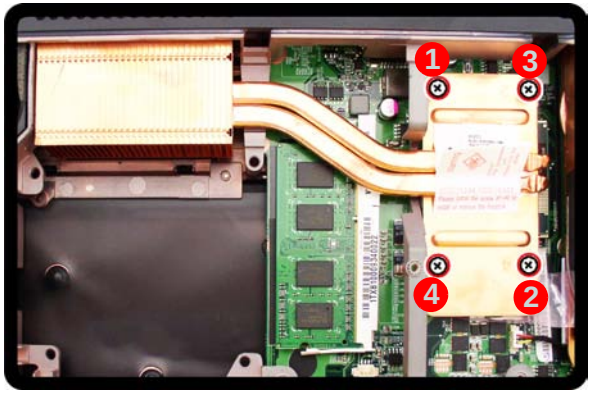
c.



b.



d.



A. CPU
D. Heat Sink

- 4 Screws

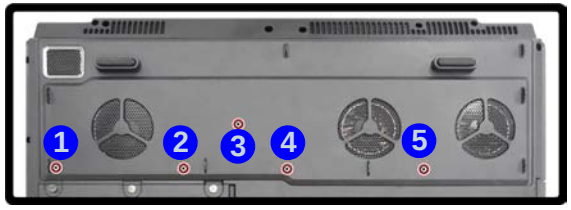
Removing the VGA Card

1. Turn off the computer, and turn it over and remove the battery (*page 2 - 5*).
2. Locate the component bay cover and remove screws 1 - 5
3. Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
4. Carefully disconnect the fan cable 6, and remove the bay cover 7 .
5. Remove screws 8 - 10 (two video cards are pictured here) from the video card fan(s) and disconnect the fan cable(s) 11 (if two cards are present).
6. Remove the VGA card fan 12 .

Figure 13
VGA Card Removal

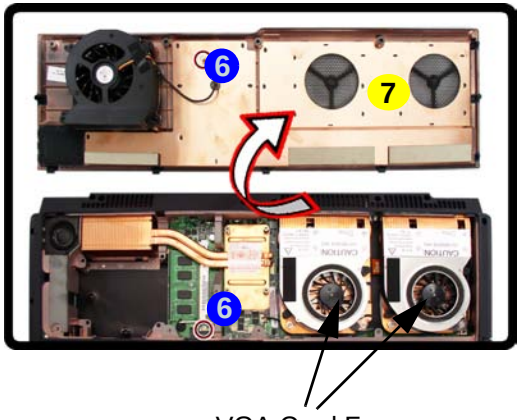
a. Remove the screws.
b. Remove the cover and disconnect the cable(s).
c. Remove the screws and release the VGA card fan.

a.

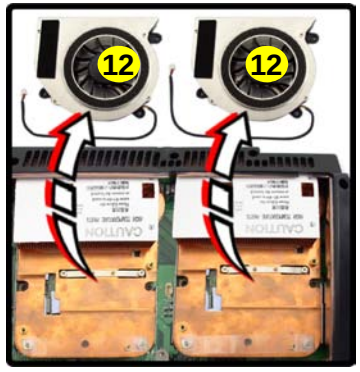


c.

b.



VGA Card Fans



7. Bay Cover
12. VGA card fan

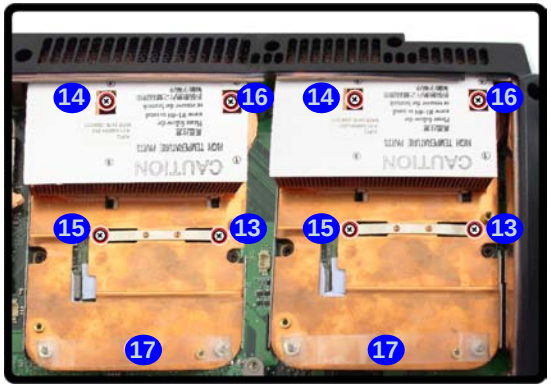
- 11 Screws

Figure 14
VGA Card Removal (cont'd.)

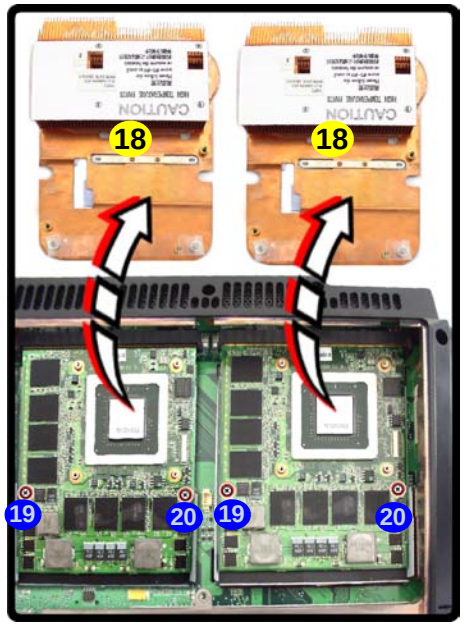
d. Remove the screws.
e. Remove the VGA heatsink.
f. Remove the VGA module.

7. Remove screws 13 - 16 from the heatsink **in the order indicated on the label** (two video cards are pictured here).
8. Grip the handle 17 and carefully remove the heatsink 18 .
9. Remove screws 19 - 20 from the video card.
10. Carefully remove the VGA card module 21 from the mainboard.

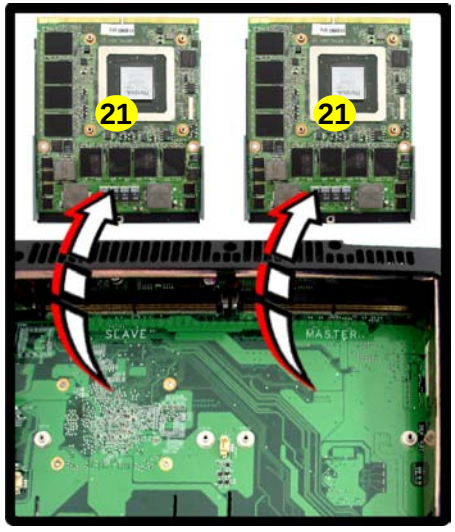
d.



e.



f.



18. VGA Card Heatsink
21. VGA Card Module

- 12 Screws

11. Reverse the process to install a new VGA card modules.

Installing the VGA Card

1. Prepare to fit the VGA card 22 into the slot by holding it at about a 30° angle.
2. The card needs to be fully into the slot, and the VGA card and socket have a guide-key and pin which align to allow the card to fit securely.
3. Fit the connectors firmly into the socket, straight and evenly.
4. DO NOT attempt to push one end of the card in ahead of the other.
5. The card's pin alignment will allow it to only fit one way. **Make sure the module is seated as far into the socket as it will go** (none of the gold colored contact should be showing). DO NOT FORCE the card; it should fit without much pressure.
6. Secure the card with screws 19 - 21 (***Figure 14e on page 2 - 18***).
7. Place the heatsink 18 back on the card, and secure the screws in the order indicated in ***Figure 14e on page 2 - 18***.
8. Attach the VGA card fan and secure with the screws as indicated in ***Figure 13 on page 2 - 17***.
9. Reinsert the component bay cover, and secure with the screws as indicated in ***Figure 13 on page 2 - 17***.

a.

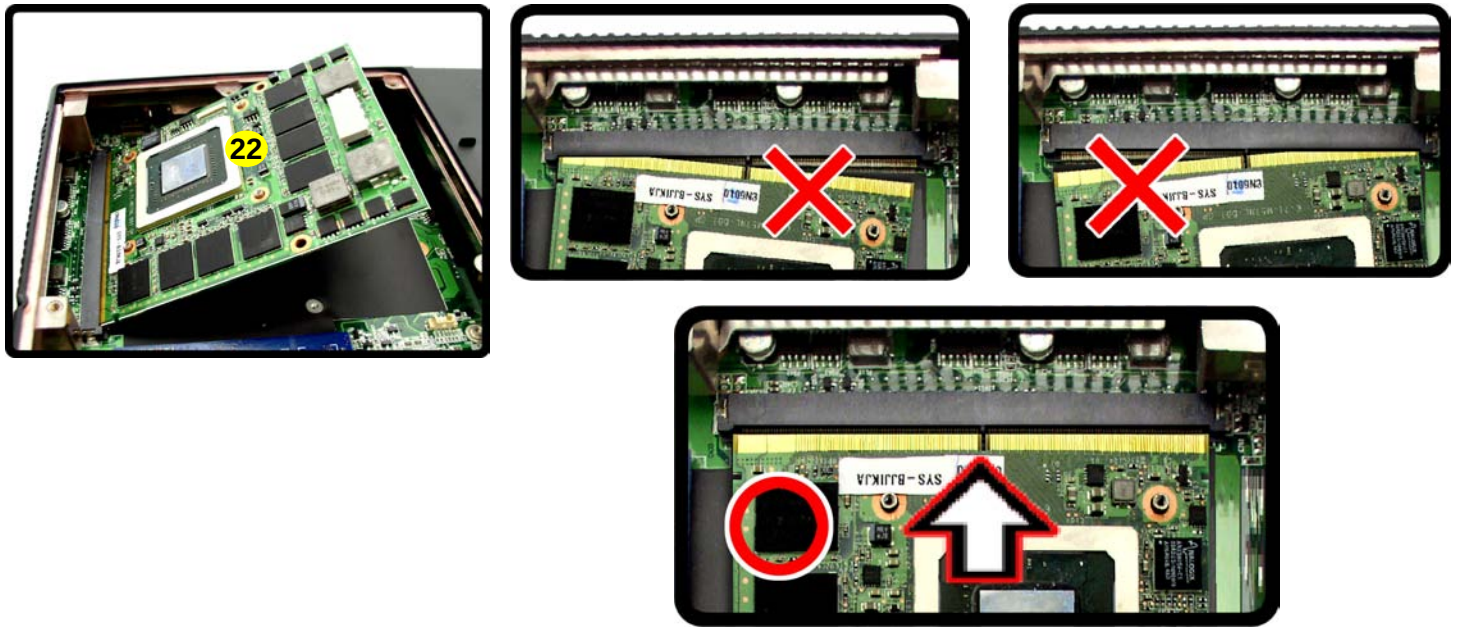


Figure 15
VGA Card Installation

a. Carefully Insert the VGA Card.

22. VGA card Module

Removing the Wireless LAN Module

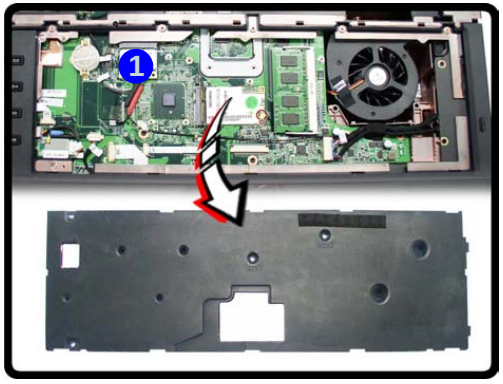
1. Turn off the computer, and turn it over, remove the battery (*page 2 - 5*), keyboard and keyboard shielding plate (*page 2 - 9*).
2. The Wireless LAN Module will be visible at point 1.
3. Remove the screw 2 and carefully disconnect cables 3 - 4.
4. The Wireless LAN Module 5 (*Figure c*) will pop-up, and you can remove it.

Figure 16
Wireless LAN Module Removal

a. Locate the WLAN module.
b. Remove the screw and disconnect the cables.
c. Remove the WLAN module.

Note: Make sure you reconnect the antenna cables.

a.



b.

c.

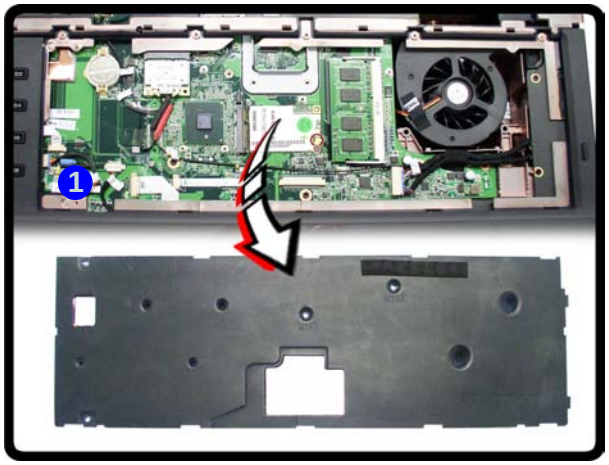
5. Wireless LAN Module

- 1 Screw

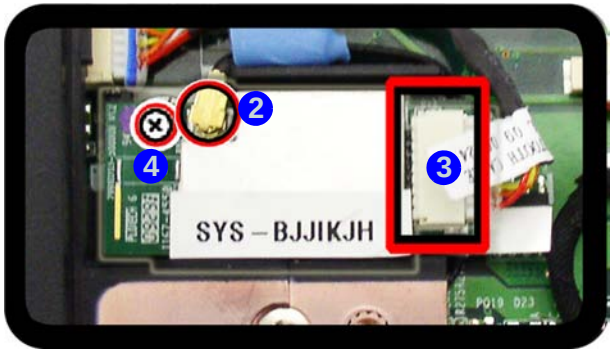
Removing the Bluetooth Module

1. Turn off the computer, and turn it over, remove the battery (*page 2 - 5*), keyboard and keyboard shielding plate (*page 2 - 9*).
2. The Bluetooth module is visible at point 1.
3. Carefully disconnect cables 2 & 3 and remove the screw 4.
4. Lift the Bluetooth module 5 off the computer.

a.



b.



c.

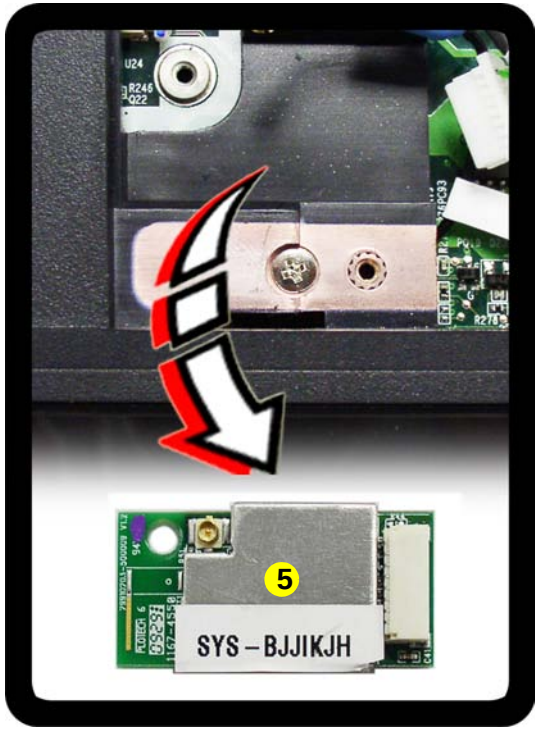


Figure 17
Bluetooth Module Removal

a. Locate the module.
b. Disconnect the cables and remove the screw.
c. Remove the Bluetooth module.

Note: Make sure you reconnect the antenna cables to the socket (*Figure a*).

5. Bluetooth Module

- 1 Screw

Figure 18
TV Tuner Card Removal

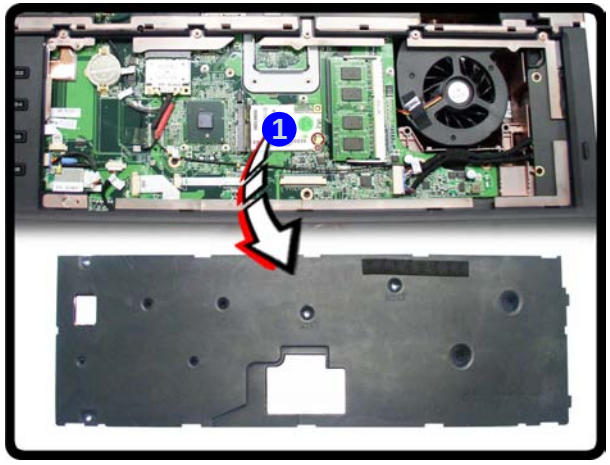
a. Locate the module.
b. Remove the screws and disconnect the cable.
c. The TV tuner card will pop up and remove it.

Removing the TV Tuner Card

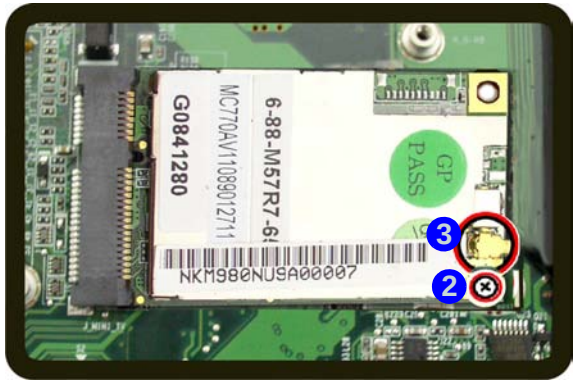
1. Turn off the computer, and turn it over, remove the battery (***page 2 - 5***), keyboard and keyboard shielding plate (***page 2 - 9***).
2. The TV tuner card is visible at point 1.
3. Remove the screw 2 from the TV tuner module and disconnect the cable 3 .
4. The TV tuner card 4 will pop-up and and you can remove it.

.

a.



b.



c.

4. TV tuner card

- 1 Screw

Appendix A: Part Lists

This appendix breaks down the ***X8100*** 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.

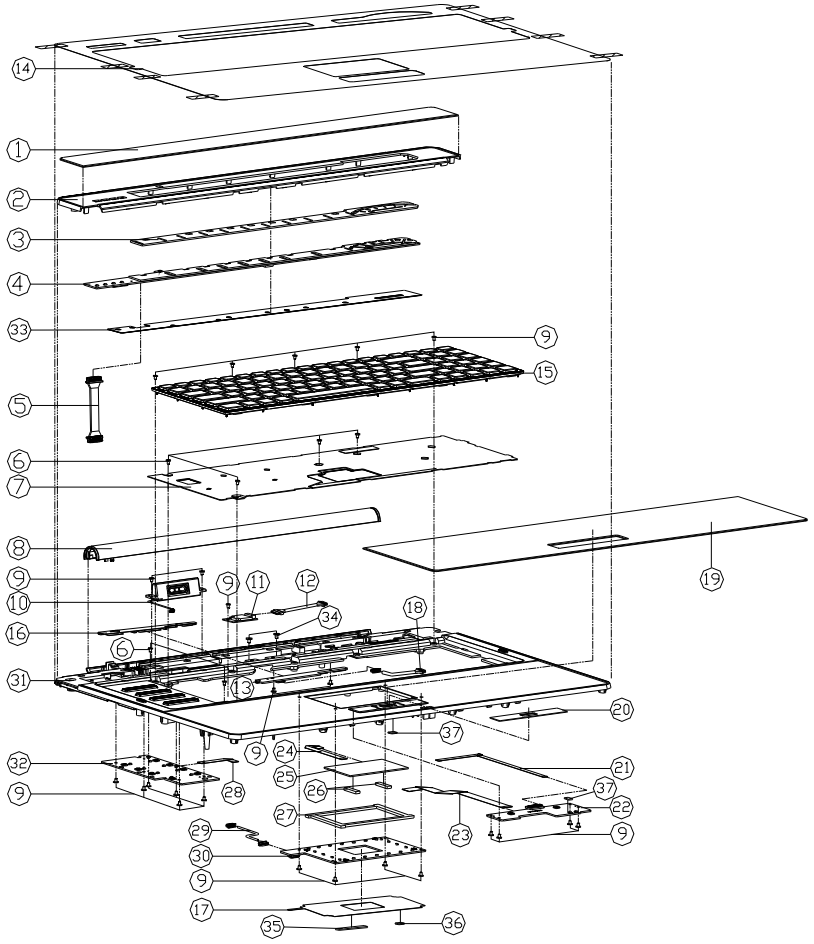
Part List Illustration Location

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

Table A- 1
Part List Illustration Location

Parts	X8100
Top with Fingerprint	*page A - 3*
Top without Fingerprint	*page A - 4*
Bottom	*page A - 5*
LCD - CCFL Panel	*page A - 6*
LCD - LED Panel	*page A - 7*
Mainboard	*page A - 8*
DVD Super Multi	*page A - 9*
DVD Super Multi - HLDS	*page A - 10*

Top with Fingerprint



ITEM	PART NAME	PART NO	REMARK
1	PMMA FOR CENTER COVER W980NU	6-42-M9802-011	
2	CENTER COVER MODULE W980NU	6-42-M9802-202	
3	LIGHT GUIDE FOR CENTER COVER PC W980NU	6-42-M9802-092	
4	TOUCH SENSOR BOARD V3.0A W980NU	6-77-M9801-D03A	
5	WIRE CABLE FOR M/B TO TOUCH-SENSOR ZIP W980NU	6-43-M9803-012	
6	SCREW M2*3L K1 NI ICT NY	6-35-B1120-3RA	
7	KB SHIELDING MODULE SECC W980NU	6-33-M9807-012	
8	INVERTOR COVER MODULE W980NU	6-33-M980R-201	
9	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
10	SPACER MODULE FOR TOP CASE ENG	6-23-SM980-030	
11	[illegible]	6-88-M7375-3900	
11	[illegible]	6-88-M77C5-5300	
12	WIRE CABLE 6PIN M/B TO 6PIN BLUETOOTH MODULE FOR W98	6-43-M74SB-010	
13	BACK L SIDE LED BOARD V3.0A W980NU	6-77-M9803-D03A	
14	TOP CASE PROTECT MYLAR PET W980NU	6-40-M9802-020	
15	K/B UK FRAME W/O MODULE W980NU	6-79-M980NU0K-190	
16	MYLAR FOR FAN LED PCB/FRED T-0.075*M9888	6-40-M980S-050	
17	TOUCH PAD LED BOARD MYLAR FRED W980NU	6-40-M980S-010	
18	WIRE CABLE FOR M/B TO FAN-LED EP W980NU V2.0	6-43-M9800-071	
19	PMMA FOR PLAM REST W980NU	6-42-M9802-061	
20	PMMA FOR EP KNOB WITH FINGER W980NU	6-42-M9802-071	
21	FFC CABLE 4P FOR M/B TO FINGERPRINT BOARD V2.0 W98	6-43-M980F-011	
22	CLICK BOARD/CABLE/EPOXY BOARD (QWERTZ&AZERTY KEY	6-77-M980A-N03A-2	
23	FFC CABLE 12P FOR M/B TO CLICK BOARD V2.0	6-43-M9800-041	
24	FFC CABLE 6P FOR M/B TO TOUCH PAD BOARD V2.0	6-43-M9802-011	
25	TOUCH PAD TM-00398-003 W84QT	6-49-W84T2-020	
26	TOUCH PAD SPONGE (58*54*2) CR4015 W980NU	6-47-M9802-020	
27	LIGHT GUIDE FOR TOUCH PAD PC W980NU	6-42-M9802-0A1	
28	FFC CABLE 12P FOR M/B TO GAME-KEY BOARD V2.0	6-43-M9800-011	
29	WIRE CABLE FOR M/B TO TOUCH-PAD-LED EP W980NU	6-43-M9802-021	
30	TOUCH PAD LED BOARD V3.0A W980NU	6-77-M980G-D03A	
31	TOP CASE MODULE W980NU	6-39-M9802-012	
32	GAME-KEY BOARD V3.0 W980NU	6-77-M9807-D03	
33	MYLAR CU FOIL FOR CENTER COVER W980NU	6-40-M9802-030	
34	SCREW M2.5*5 0.6MM K1 BK/Z ICT NY-	6-35-B6125-5R0	
35	RUBBER FOR TOP CASE 25*3.5*1.6T WW X8100	6-47-X8102-020	
36	RUBBER FOR TOP CASE 7.5*5.4*1.6T WW X8100	6-47-X8102-030	
37	RUBBER FOR TOP CASE 84*42T WW X8100	6-47-X8102-010	

Figure A - 1
Top with Fingerprint

Top without Fingerprint

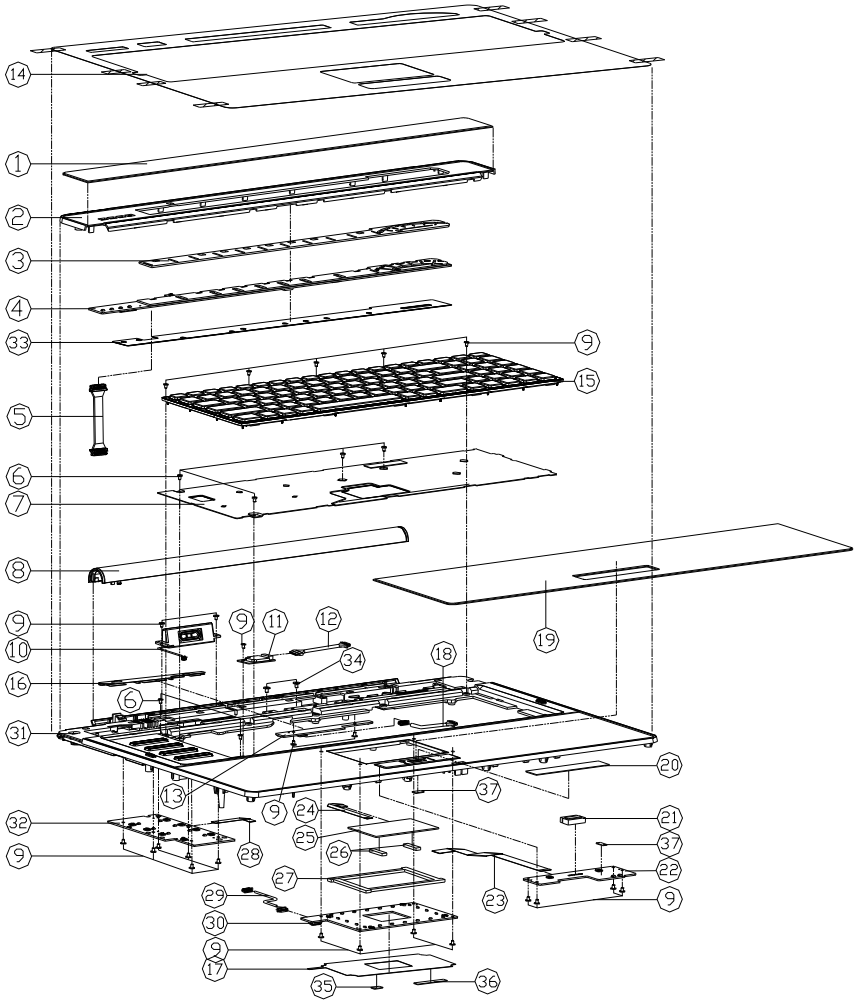
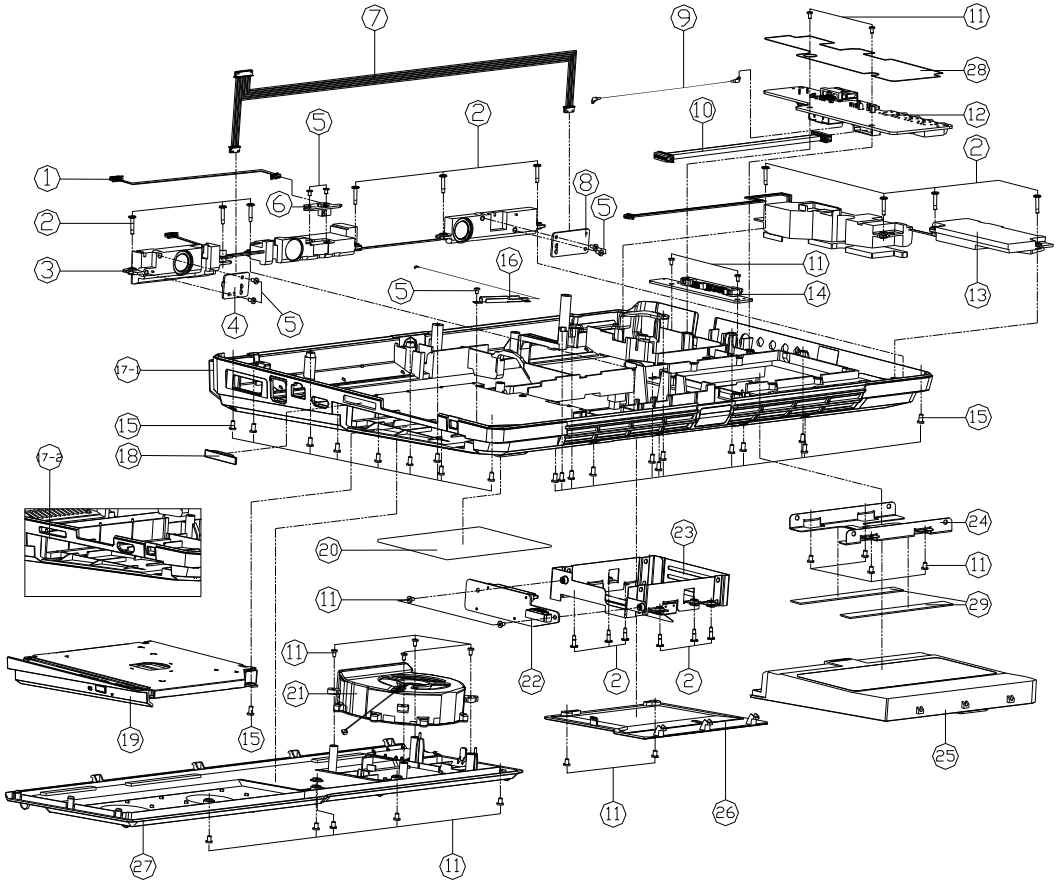


Figure A - 2
Top without Fingerprint

ITEM	PART NAME	PART NO	REMARK
1	PMMA FOR CENTER COVER M980NU	6-42-M9802-011	
2	CENTER COVER MODULE M980NU	6-42-M9802-202	
3	LIGHT GUIDE FOR CENTER COVER PC M980NU	6-42-M9802-092	
4	TOUCH SENSOR BOARD V3.0A M980NU	6-77-M9801-D03A	
5	WIRE CABLE FOR M/B TO TOUCH-SENSOR 2P M980NU	6-43-M9803-012	
6	SCREW M2*3L K1 NI ICT NY	6-35-B1120-3RA	
7	KB SHIELDING MODULE SECC M980NU	6-33-M9807-012	
8	INVERTOR COVER MODULE M980NU	6-33-M980R-201	
9	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
10	SPEAKER MODULE FOR TOP CASE (5W)	6-23-5M980-030	
11		6-88-M73T5-3900	
11		6-88-M77C5-5300	
12	WIRE CABLE 6P(H) W/O TO 6P(H) BLUETOOTH MODULE FOR M745	6-43-M74SB-010	
13	BACK L SIDE LED BOARD V3.0A M980NU	6-77-M9803-D03A	
14	TOP CASE PROTECT MYLAR PET M980NU	6-40-M9802-020	
15	K/B UK	6-79-M980NUGK-190	
16	MYLAR FOR FAN LED PCB(TRD T=0.075+3M9888)	6-40-M980S-050	
17	TOUCH PAD LED BOARD MYLAR FRD3 M980NU	6-40-M980S-010	
18	WIRE CABLE FOR M/B TO FAN-LED 6P M980NU V2.0	6-43-M9800-071	
19	PMMA FOR PLAM REST M980NU	6-42-M9802-061	
20	PMMA FOR GP KNOB W/O FINGER M980NU	6-42-M9802-081	
21	RUBBER FOR GP KNOB DUMMY M980NU	6-47-M9802-050	
22	CLICK BOARD V3.0A(W/O FP) M980NU	6-77-M9802-D03A	
23	FFC CABLE 12P FOR M/B TO CLICK BOARD V2.0	6-43-M9800-041	
24	FFC CABLE 12P FOR M/B TO TOUCH PAD BOARD V2.0	6-43-M9802-011	
25	TOUCH PAD SYNAPTICS TM-00396-001 M740S	6-49-M74S2-010	
26	TOUCH PAD SPONGE (18*5*2) CR4305 M980NU	6-47-M9802-020	
27	LIGHT GUIDE FOR TOUCH PAD PC M980NU	6-42-M9802-0A1	
28	FFC CABLE 12P FOR M/B TO GAME-KEY BOARD V2.0	6-43-M9800-011	
29	WIRE CABLE FOR M/B TO TOUCH-PAD-LED 6P M980NU	6-43-M9802-021	
30	TOUCH PAD LED BOARD V3.0A M980NU	6-77-M980G-D03A	
31	TOP CASE MODULE M980NU	6-39-M9802-012	
32	GAME-KEY BOARD V3.0 M980NU	6-77-M9807-D03	
33	MYLAR CU FOIL FOR CENTER COVER M980NU	6-40-M9802-030	
34	SCREW M2.5*5L 0.4MM K1 BK/Z ICT NY-	6-35-B6125-5R0	
35	RUBBER FOR TOP CASE 10*5*1.6T WH X8100	6-47-X8102-030	
36	RUBBER FOR TOP CASE 25*3.5*1.6T WH X8100	6-47-X8102-020	
37	RUBBER FOR TOP CASE 10*6*2T WH X8100	6-47-X8102-010	

Bottom

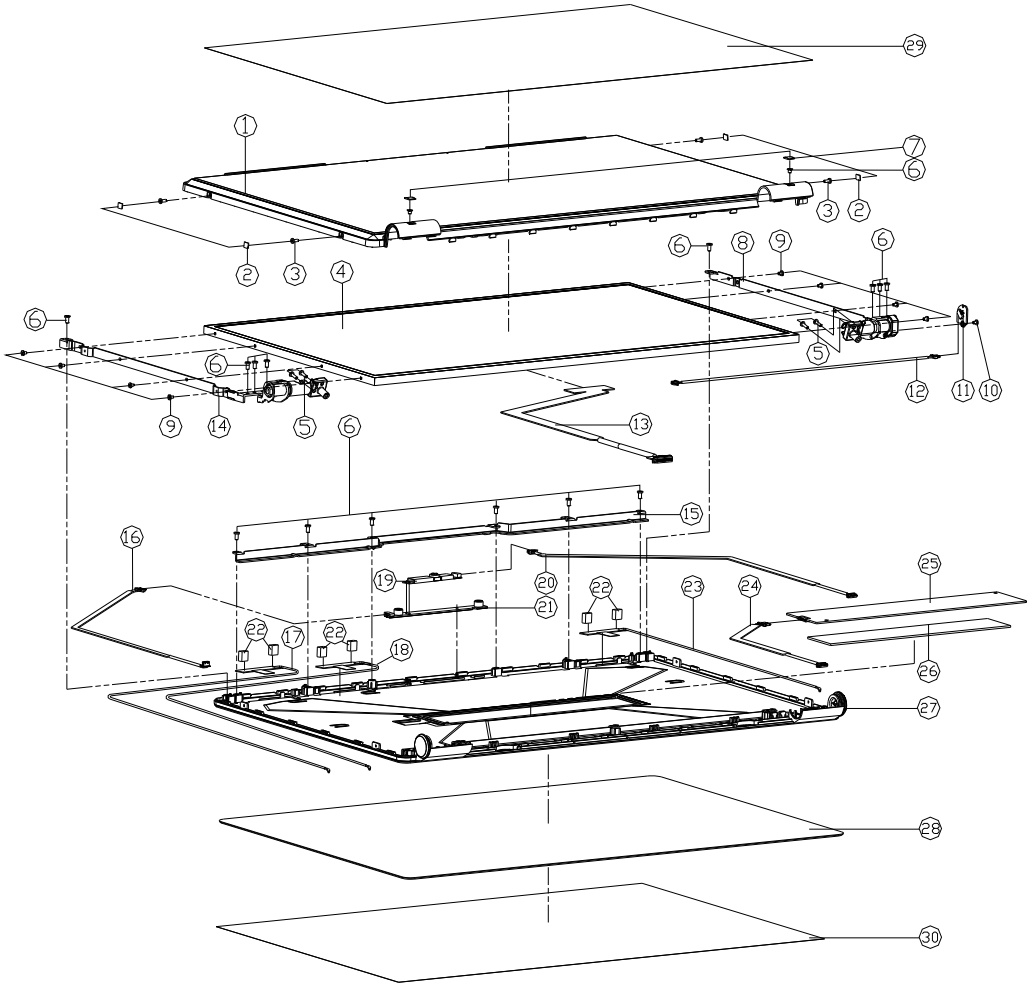


ITEM	PART NAME	PART NO	REMARK
1	WIRE CABLE FOR M/B TO POWER-BOTTOM 3P M980NU 無鉛	6-43-M9800-020	
2	SCREW M2*7.5L DI=21 L=4.5 S=25 K NI ICT 無鉛	6-35-81120-750	
3	SPEAKER L-M-R MODULE 2W 4 Ω 6P 鴻立 M980NU 無鉛	6-23-5M980-022	
4	FRONT R SIDE LED BOARD V3.0A M980NU 無鉛	6-77-M9804-D03A	
5	*1.2印刷膜SCREW M2*3L KI NI ICT GTY-PATCH無鉛	6-35-81120-3RE	
6	CIR BOARD V3.0 ASS'Y M980NU 無鉛	6-77-M980H-D03	
7	WIRE CABLE FOR M/B TO LED-R-L 6P M980NU V1.0 無鉛	6-43-M9800-061	
8	FRONT L SIDE LED BOARD V3.0A M980NU 無鉛	6-77-M9805-D03A	
9	COAXIAL CABLE FOR TV TUNER 125MM BLACK L=200MM 精業 LV28CA 無鉛	6-43-L22CT-010	
10	WIRE CABLE FOR M/B TO AUDIO 30P M980NU V1.0 無鉛	6-43-M9800-051	
11	SCREW M2.5*5L KI BK/Z ICT NY-無鉛	6-35-86125-5RA	
12	AUDIO BOARD V3.0 X8100 無鉛	6-77-X8108-D03	
13	SPEAKER SUB,WOOFER MODULE 2W 4 Ω 4P 鴻立 M980NU 無鉛	6-23-5M980-011	
14	SINGLE HDD BOARD V2.0(W/O RE-DRIVER) X8100 無鉛	6-77-X810J-D02	
14	SINGLE HDD BOARD V2.0 (W/ RE-DRIVER) X8100 無鉛	6-77-X810J-D02-1	
15	SCREW M2.5*8L KI BK/Z NY ICT 無鉛	6-35-86125-8R0	
16	ANTENNA-BLUETOOTH 2.4G PIFA ,L=150MM BT 精業 M980NU 無鉛	6-23-7M980-040	
17-1	BOTTOM CASE MODULE M980N 鐵網封精油 無鉛	6-39-M9803-016	FOR W/O HDMI IN
17-2	BOTTOM CASE MODULE X8100 鐵網封精油 無鉛	6-39-X8103-012	FOR WITH HDMI IN
18	CARD READER RUBBER (切割 KE-56250 BLACK 60 M980NU 無鉛	6-47-M980E-011	
19	SATA DVD SUPER MULTI 24X/8X ASS'Y X8100 無鉛	6-79-X8100000-010	
20	PRODUCT LABEL X8100 無鉛	6-45-X8100003-010	
21	CPU FAN MODULE M980NU 無鉛	6-31-M980S-300	
22	DUAL HDD BOARD V2.0 (W/O RE-DRIVER) X8100 無鉛	6-77-X810K-D02	
22	DUAL HDD BOARD V2.0 (W/ RE-DRIVER) X8100 無鉛	6-77-X810K-D02-1	
23	2IN1 HDD BKT MODULE M980NU 無鉛	6-33-M980J-100	
24	HDD 3 BKT MODULE M980NU 無鉛	6-33-M980J-200	
25	[illegible]	6-87-X810S-4X5	
26	HDD COVER PC+ABS(CM6140) M980NU 無鉛	6-42-M980J-011	
27	CPU COVER MODULE M980NU 無鉛	6-42-M980S-102	
28	AUDIO BOARD MYLAR FR83 M980NU 無鉛	6-40-M980S-020	
29	SPONGE FOR HP CRT[illegible]	6-47-M9802-070	

Figure A - 3
Bottom

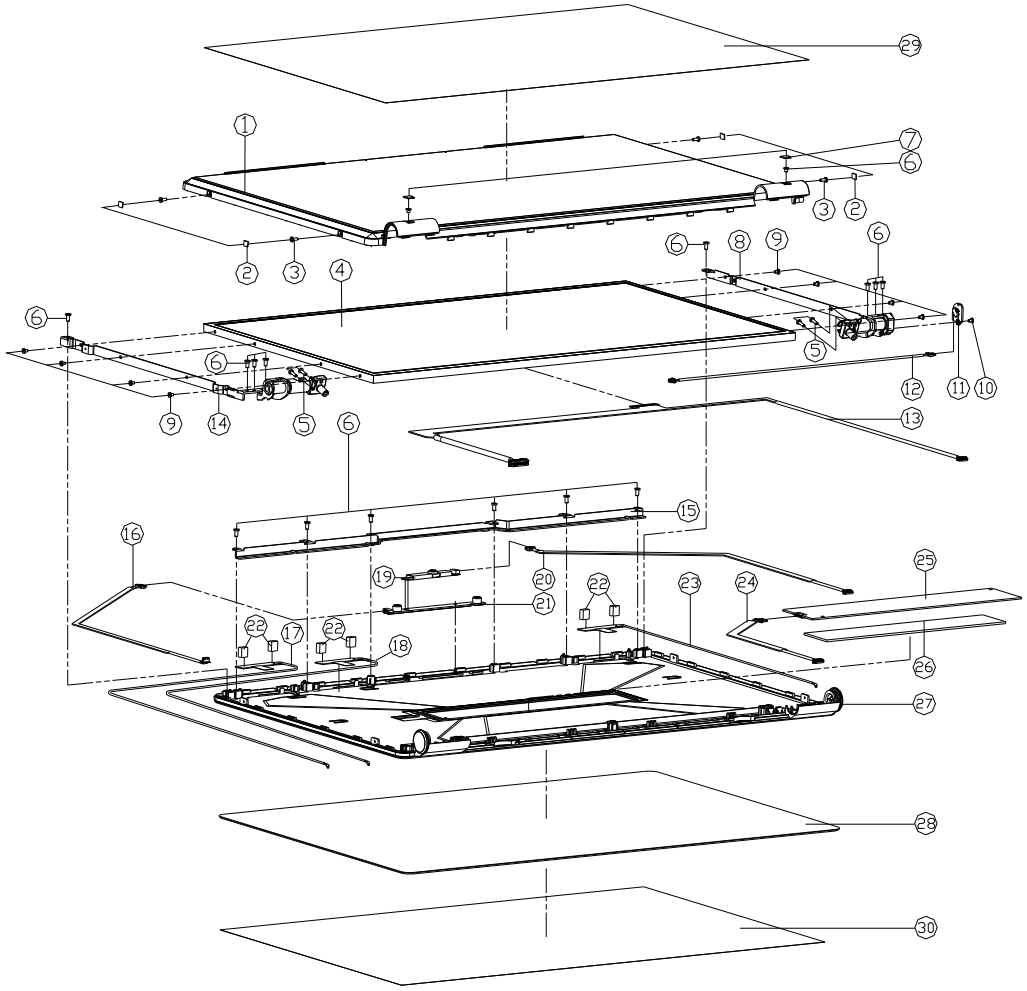
LCD - CCFL Panel

Figure A - 4
LCD - CCFL Panel



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER MODULE M980NU	6-39-M9801-014	
2	LCD SCREW MYLAR M980NU	6-40-M9801-021	
3	SCREW M2*5L K1 NI ICT NY	6-35-B1120-5R0	
4	LCD BKT HD SHIELDING L(NB0810-HE GLARE TYPE) 0.5MM	6-50-PA165-M00	
4	LCD BKT FHD SHIELDING L(NB0810-A02 GLARE TYPE) 0.5MM	6-50-PB265-M01	
4	LCD BKT FHD CAMEL NB0810-LW CHROMIUM GLARE TYPE 0.5MM	6-50-PB265-D01	
5	SCREW M2.5*6L K1 BK/Z NY ICT	6-35-B6125-8R0	
6	SCREW M2.5*5L K1 BK/Z ICT NY	6-35-B6125-5RA	
7	HINGE CAP RUBBER SILICONE 80 M980NU	6-47-M9801-020	
8	LCD HINGE R 125°(SECC+SS0C) M980NU	6-33-M9801-022	
9	SCREW M2*3L K1 NI ICT NY	6-35-B1120-3RA	
10	*(非耐刮版) SCREW M2*3L K1 NI ICT GIY-PATCH	6-35-B1120-3RE	
11	POWER BUTTON BOARD V3.0A M980NU	6-77-M980W-D03A	
12	WIRE CABLE FOR M/B TO POWER-BOTTOM 3P M980NU	6-43-M9800-020	
13	WIRE CABLE FOR M/B TO LCD 30P M980NU V20	6-43-M9801-011	
14	LCD HINGE L 125°(SECC+SS0C) M980NU	6-33-M9801-032	
15	LCD BRACKET TOP SECC M980NU	6-33-M9801-011	
16	WIRE CABLE FOR M/B TO DIG-MIC 4P M980NU V20	6-43-M9804-011	
17	ANTENNA WWAN 2.4G/3.7G/5G PCB WHT 5CSMM 80880	6-23-7X810-010	
18	ANTENNA WWAN 2.4G/3.7G/5G PCB, WHT-3, 5CSMM 80880	6-23-7X810-030	
19	UVC CAMERA BISON FIX BN282457-010 2M M7401	6-88-M740C-4913	(OPTION)
20	WIRE CABLE FOR M/B TO CCD 5P M980NU V20	6-43-M980T-021	
21	DIGITAL-MIC MODULE DK-A02 FOR M980NU	6-23-EM980-010	
22	ANTENNA SPONGE (8*7*4) (SPONGE+3M9448) M980NU	6-47-0019A-080	
23	ANTENNA WWAN 2.4G/3.7G/5G PCB, WHT-2, 7CSMM 80880	6-23-7X810-020	
24	WIRE CABLE FOR M/B TO LOGO+LIGHT 6P M980NU	6-43-M9800-031	
25	LOGO LED BOARD V3.0A M980NU	6-77-M9806-D03A	
26	LIGHT GUIDE FOR LCD BACK COVER M980NU	6-42-M9801-080	
27	LCD BACK COVER MODULE 定位柱加胶 M980N	6-39-M9801-023	
28	中性 LOGO PANA FOR LCD BACK COVER(M8200)	6-42-M9801-032	
29	LCD FRONT COVER PROTECT MYLAR PET M980NU	6-40-M9801-050	
30	LCD PROTECT MYLAR(PET+3M9915) M980NU	6-40-M9801-040	

LCD - LED Panel

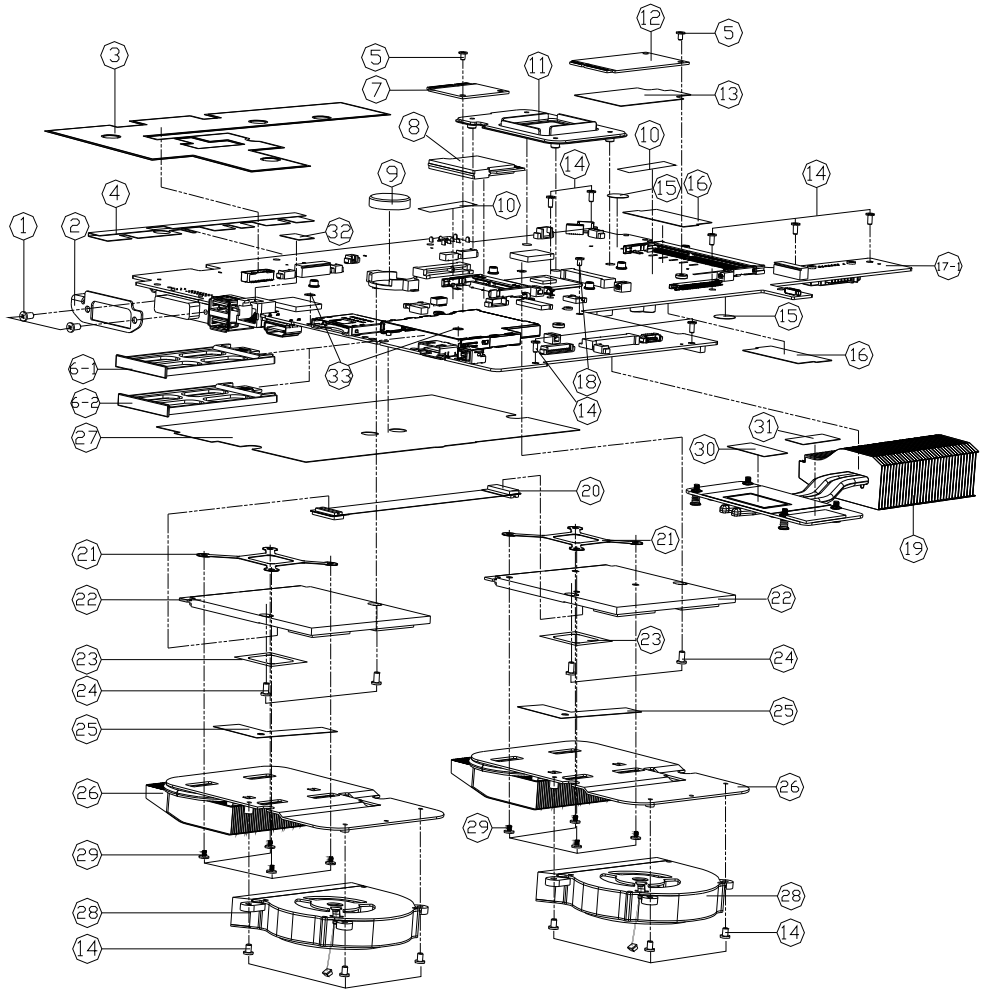


ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER MODULE X8100	6-39-X8101-011	
2	LCD SCREW MYLAR M980NU	6-40-M9801-021	
3	SCREW M2*5L KI NI ICT NY	6-35-B1120-5R0	
4	LCD 揚声器 FHD CHIREI WAHL-LXP GLARE TYPE 6.5W 4Ω LCD	6-50-PB263-D00	
5	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-8R0	
6	SCREW M2.5*5L KI BK/Z ICT NY	6-35-B6125-5RA	
7	HINGE CAP RUBBER SILICONE 80 M980NU	6-47-M9801-020	
8	LCD HINGE R (SECC+S50C) X8100	6-33-X8101-010	
9	SCREW M2*3L KI NI ICT NY	6-35-B1120-3RA	
10	★(AM模组) SCREW M2*3L KI NI ICT GIY-PATCH	6-35-B1120-3RE	
11	POWER BUTTON BOARD V3.0A M980NU	6-77-M980W-D03A	
12	WIRE CABLE FOR M/B TO POWER-BUTTION 3P M980NU	6-43-M9800-020	
13	[illegible]	6-43-X8101-011	
14	LCD HINGE L (SECC+S50C) X8100	6-33-X8101-020	
15	LCD BRACKET TOP SECC M980NU	6-33-M9801-011	
16	WIRE CABLE FOR M/B TO DIG-MIC 4P M980NU V28	6-43-M9804-011	
17	ANTENNA WIMAX 2.4G/3.7G/5G PCB WH 3.5CM X8100	6-23-7X810-010	
18	ANTENNA WIMAX 2.4G/3.7G/5G PCB, WH-3, 5.6CM X8100	6-23-7X810-030	
19	UVC CAMERA BISON FIX BN282457-008 2M M740T	6-88-M740C-4913	(OPTION)
20	WIRE CABLE FOR M/B TO CCD 5P M980NU V2.0	6-43-M980T-021	
21	DIGITAL-MIC MODULE DK-A02 FOR M980NU	6-23-EM980-010	
22	ANTENNA SPONGE (8x7x4) SPONGE+3M9448 M980NU	6-47-0019A-080	
23	ANTENNA WIMAX 2.4G/3.7G/5G PCB, WH-2, 7.6CM X8100	6-23-7X810-020	
24	WIRE CABLE FOR M/B TO LOGO-LIGHT 6P M980NU	6-43-M9800-031	
25	LOGO LED BOARD V3.0A M980NU	6-77-M9806-D03A	
26	LIGHT GUIDE FOR LCD BACK COVER M980NU	6-42-M9801-080	
27	LCD BACK COVER MODULE 定位柱加胶 M980NU	6-39-M9801-023	
28	中性 LOGO PMMA FOR LCD BACK COVER/NR200	6-42-M9801-032	
29	LCD FRONT COVER PROTECT MYLAR PET M980NU	6-40-M9801-050	
30	LCD PROTECT MYLAR(PET+3M8915) M980NU	6-40-M9801-040	

Figure A - 5
LCD - LED Panel

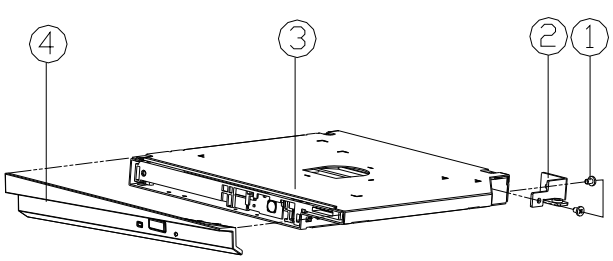
Mainboard

Figure A - 6
Mainboard



ITEM	PART NAME	PART NO	REMARK
1	SCREW 4-40*5L K NI ACT NY	6-35-81304-5R0	
2	MB DVI BKT SECC M980NU	6-33-M980S-021	
3	MYLAR CU FOIL FOR NB M980NU	6-40-M980S-082	
4	[illegible]	6-40-M980S-060	
5	SCREW M2*3L KI NI ICT NY	6-35-81120-3RA	
6-1	DUMMY NEW CARD PC+ABS TN[28R	6-42-T12R3-011	FOR W/O HDMI IN
6-2	DUMMY NEW CARD PC+ABS X8100	6-42-X8108-010	FOR W/ HDMI IN
7	[illegible]	6-88-M7352-4200	<OPTION>
7	[illegible]	6-88-W76C2-7000	<OPTION>
7	[illegible]	6-88-W76C2-8701	<OPTION>
8	[illegible]	6-88-X810H-6501	<OPTION>
9	BATTERY 3V 210MA CR2032 (MITSUBISHI)	6-23-62015-607	
10	TAPE MYLAR (C),MYLAR M550J	6-40-M55J2-030	
11	CPU SUPPORT MODULE SECC X8100	6-33-X810S-100	
12	[illegible]	6-88-W8707-6500	<OPTION>
12	[illegible]	6-88-D90F7-6501	<OPTION>
13	TV TUNER MYLAR 47X63 T-0675-5STN T-0.15	6-40-X810S-031	
14	SCREW M2.5*5L KI BK/Z ICT NY-	6-35-86125-5RA	
15	MYLAR DIO FR83 M760S	6-40-M76S0-010	
16	DDR MYLAR FR83 X8100	6-40-X810S-020	
17-1	MAIN BOARD V30KW/ HDMI IN/ X8100	6-77-X8100-D03	FOR W/ HDMI IN
17-2	MAIN BOARD V30KW/O HDMI IN/ X8100	6-77-X8100-D03-1	FOR W/O HDMI IN
18	SCREW M2*3L KI NI ICT NY	6-35-81120-3RA	
19	CPU HEATSINK MODULE X8100	6-31-X810N-102	
20	FPC CABLE FOR VGA CARD 40P NON-ZI VGA Winbay	6-43-M980L-011	
21	CPU SUPPORTER FOR NVIDIA GTX SUS430 D900F	6-33-D90FS-020	
22	VGA BOARD NVIDIA N10E-GTX DDR3 512/256*32	6-77-M57NL-101-A	<OPTION>
22	[illegible]	6-77-M57NL-101-G	<OPTION>
23	VGA N10E-GTX1 MYLAR D900F	6-40-D90FS-050	
24	SCREW M2.5*3L KI BZ ICT NY-	6-35-86125-3R0	
25	MYLAR FOR VGA SLI M980NU	6-40-M9800-010	
26	VGA HEATSINK FOR N10 GTX1 X8100	6-31-X810N-201	
27	VGA MYLAR FR83 X8100	6-40-X810S-011	
28	VGA FAN MODULE M980NU	6-31-M980S-200	
29	SCREW M2.6*3.5L KT=1.2 D=4.5) BZ ICT NY	6-35-82116-3R5	
30	THERMAL PAD PSX(26*54*0.21) FOR X8100	6-48-X8108-030	
31	THERMAL PAD T-FLEX 200 (27*13.5) FOR X8100	6-48-X8108-010	
32	MYLAR [illegible]	6-40-X810S-040	
33	WASHER AL FOIL(Ø6*Ø3*H0.25 NA)	6-37-02000-602	

DVD Super Multi

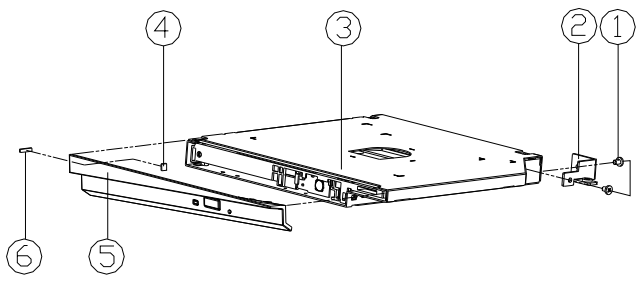


ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*2.5L KI NI ICT NY (ø4 t=0.3)~ 無鉛	6-35-B1120-2R5	
2	CD ROM BRACKET SECC M980NU無鉛	6-33-M980Z-010	
3	[illegible] 無鉛	6-85-A078X-L00	
3	[illegible] 無鉛	6-85-A078X-T08	
4	SUPER MULTI G-BEZEL MODULE M980NU 無鉛	6-42-M980Q-101	

Figure A - 7
DVD Super Multi

DVD Super Multi - HLDS

Figure A - 8
DVD Super Multi - HLDS



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*2.5L KI NI ICT NY (Φ4 t=0.3)~ 無鉛	6-35-B1120-2R5	
2	CD ROM BRACKET SECC M980NU無鉛	6-33-M980Z-010	
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM GT30 無鉛	6-85-A078X-503	
4	MYLAR FOR G BEZEL (PC+3M467) X8100 無鉛	6-40-X810Z-010	
5	SUPER MULTI G-BEZEL MODULE M980NU 無鉛	6-42-M980Q-101	
6	G BEZEL MYLAR 2 (PC+G9000) M980NU無鉛	6-40-M980Z-020	

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the ***X8100*** 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	*CLK GEN, HDMI-In - Page B - 21*	*Power 3.3V/5V - Page B - 40*
Processor 1/7 DMI, PEG - Page B - 3	*CRT, DVI - Page B - 22*	*Power Charger, DC-In - Page B - 41*
Processor 2/7 CLK, MISC - Page B - 4	*Panel, Inverter, TPM - Page B - 23*	*Single HDD Board - Page B - 42*
Processor 3/7 DDR3I - Page B - 5	*HDMI Repeater, Fan Control - Page B - 24*	*Dual HDD Board - Page B - 43*
Processor 4/7 Power - Page B - 6	*HDMI Switch - Page B - 25*	*Audio Board - Page B - 44*
Processor 5/7 GFX PWR - Page B - 7	*ODD, CCD, BT, USB2.0 - Page B - 26*	*Power Button Board - Page B - 45*
Processor 6/7 GND, 7/7 RSVD - Page B - 8	*Codec, Subwoofer, DMIC - Page B - 27*	*Click & FP Board - Page B - 46*
DDR3 SO-DIMM_0 REV - Page B - 9	*Audio AMP - Page B - 28*	*Game Key Board - Page B - 47*
DDR SO-DIMM_1 REV - Page B - 10	*New Card, Mini Card - Page B - 29*	*Front R Side LED Board - Page B - 48*
MXM 3.0 Master - Page B - 11	*LAN-RTL8111DL, RJ45 - Page B - 30*	*Front L Side LED Board - Page B - 49*
MXM 3.0 Slave - Page B - 12	*Card Reader, IEEE1394 - Page B - 31*	*CIR Board - Page B - 50*
PCH 1/8 RTC, HDA, SATA - Page B - 13	*KBC ITE IT8512-J - Page B - 32*	*Finger Board - Page B - 51*
PCH 2/8 PCIE, SMBUS, CLK - Page B - 14	*MB to Small B'd Connector A - Page B - 33*	*Logo LED Board - Page B - 52*
PCH 3/8 DMI, PWRGD - Page B - 15	*MB to Small B'd Connector B - Page B - 34*	*TouchPad LED Board - Page B - 53*
PCH 4/8 LVDS, DDI, GND - Page B - 16	*Power System - Page B - 35*	*Back L Side LED Board - Page B - 54*
PCH 5/8 PCI, USB, NVRAM - Page B - 17	*Power VCore - Page B - 36*	*Touch Sensor Board A - Page B - 55*
PCH 6/8 GPIO, CPU - Page B - 18	*Power 1.1V_VTT, Screw Hole - Page B - 37*	*Touch Sensor Board B - Page B - 56*
PCH 7/8 PWR - Page B - 19	*Power 1.5V/0.75VS - Page B - 38*	
PCH 8/8 PWR - Page B - 20	*Power 1.8VS/1.5VS - Page B - 39*	

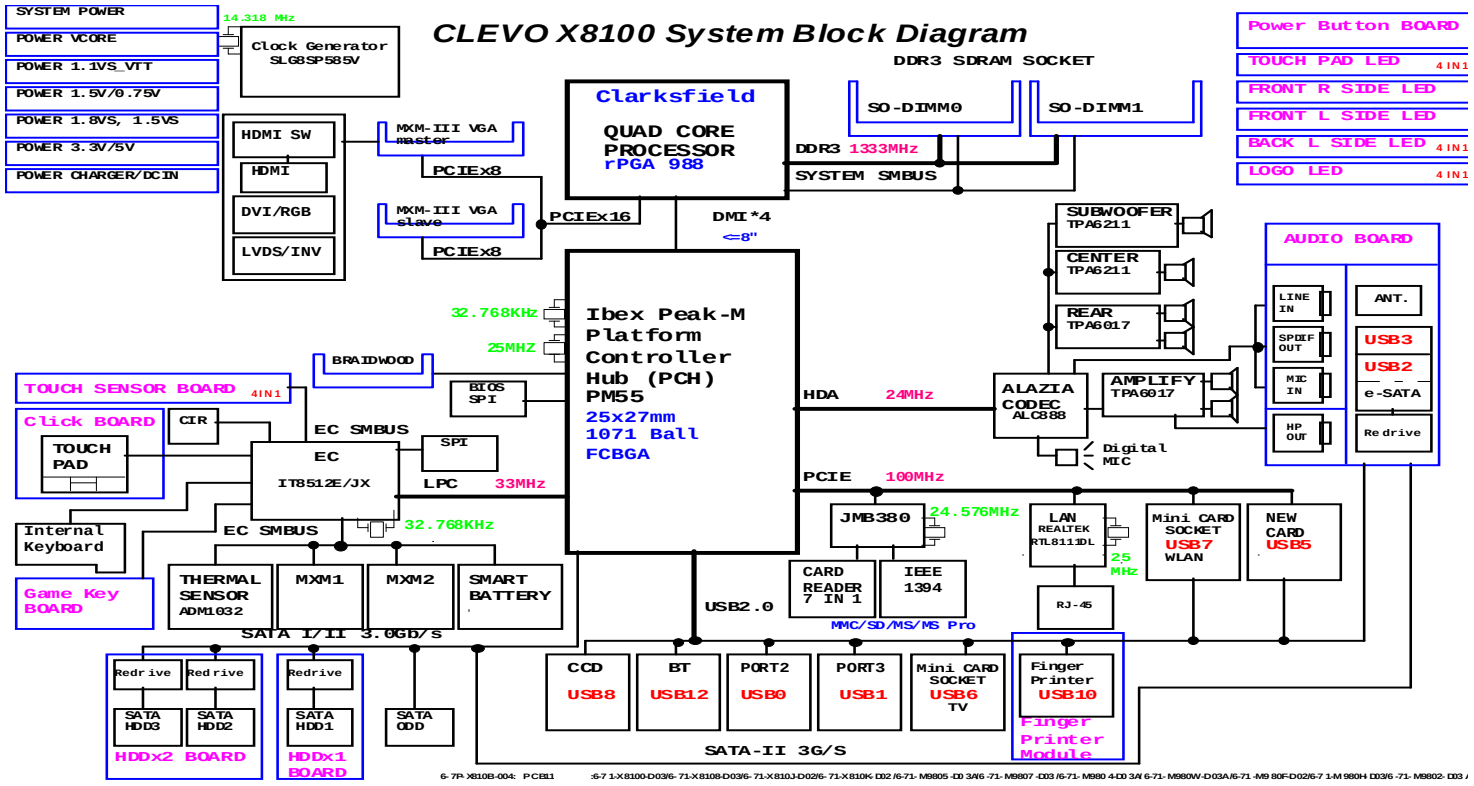
Table B - 1
Schematic Diagrams

Version Note

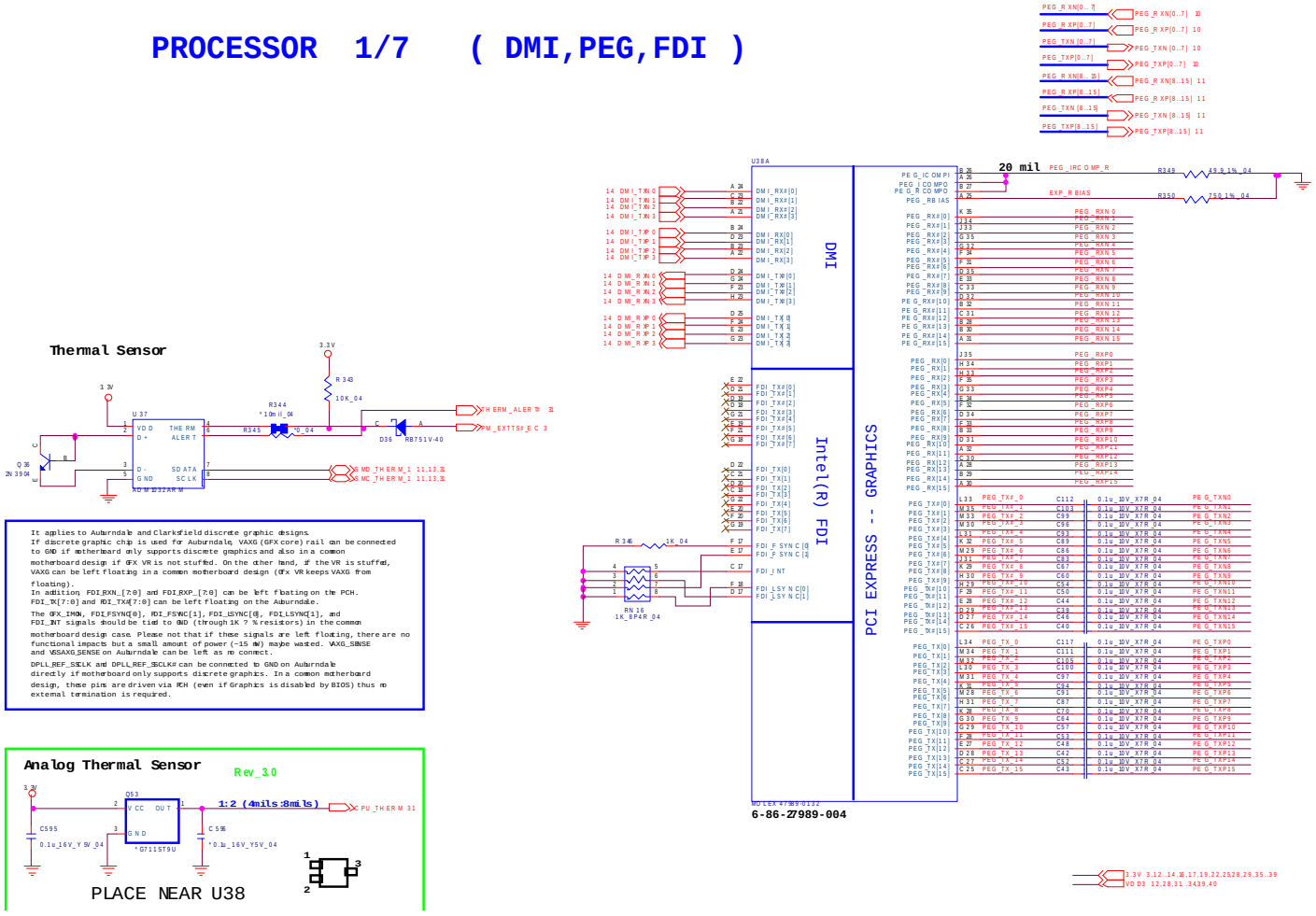
The schematic diagrams in this chapter are based upon version 6-7P-X810B-004. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram

Sheet 1 of 55
System Block Diagram



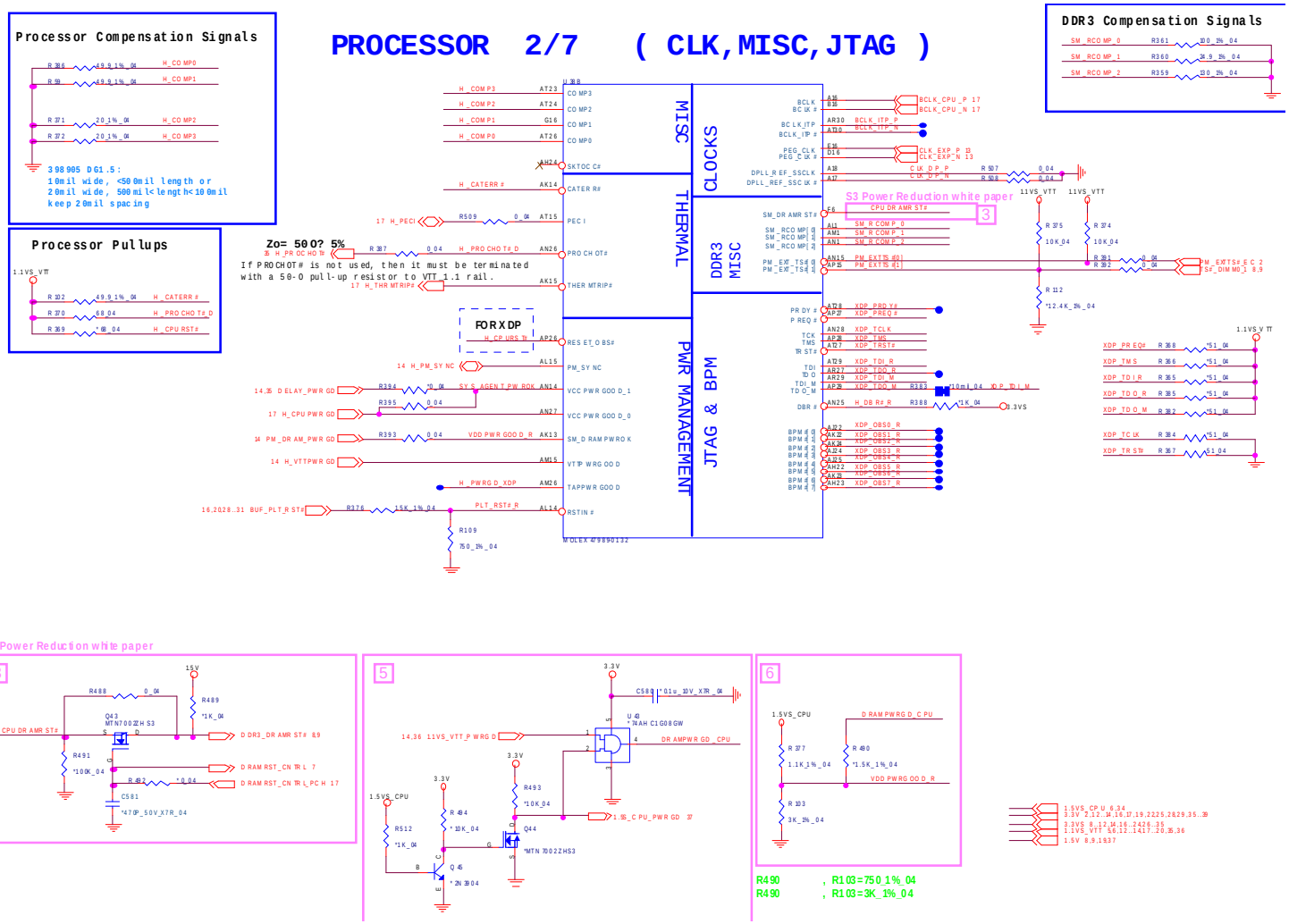
Processor 1/7 DMI, PEG



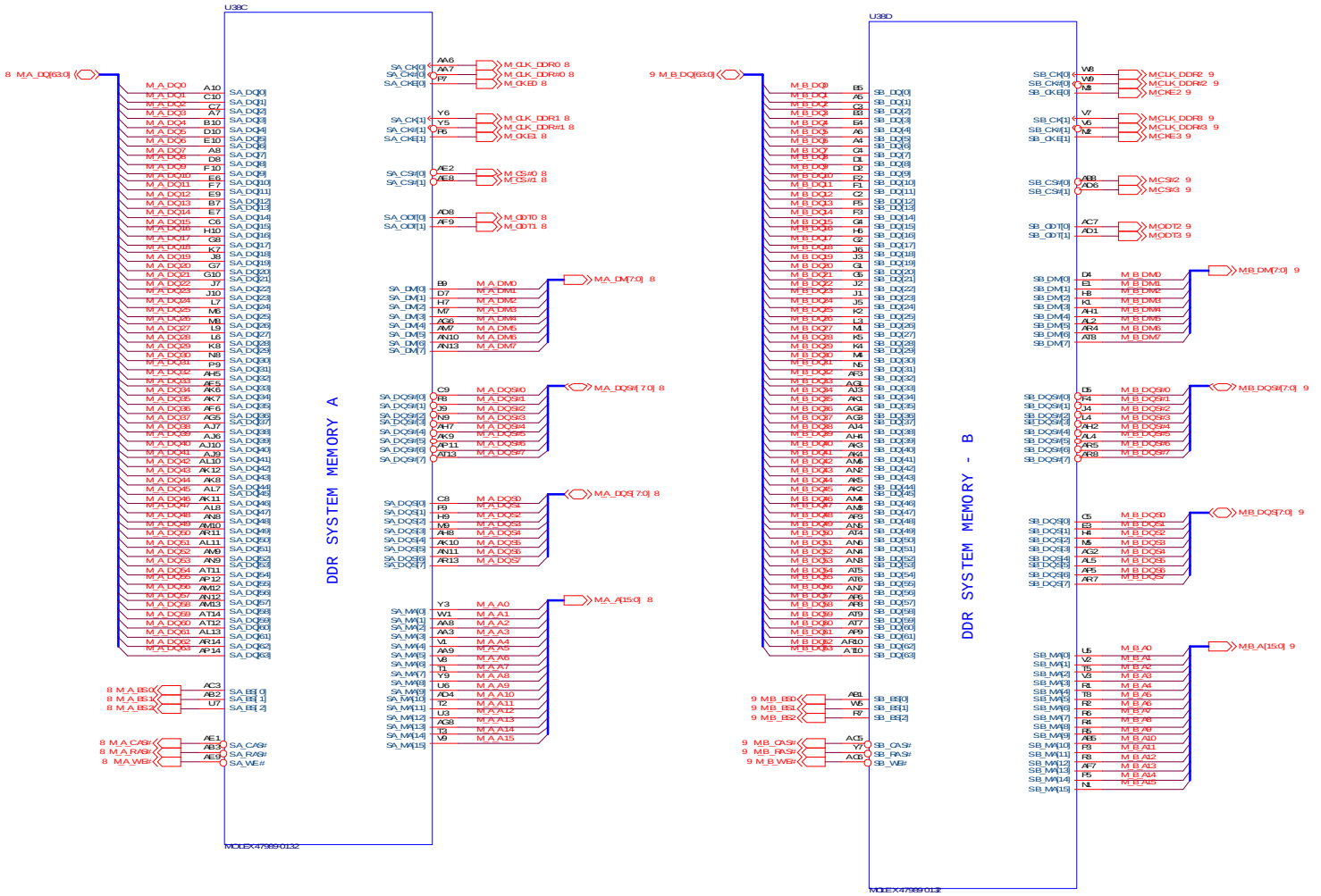
Sheet 2 of 55
Processor 1/7
DMI, PEG

Processor 2/7 CLK, MISC

Sheet 3 of 55
Processor 2/7
CLK, MISC



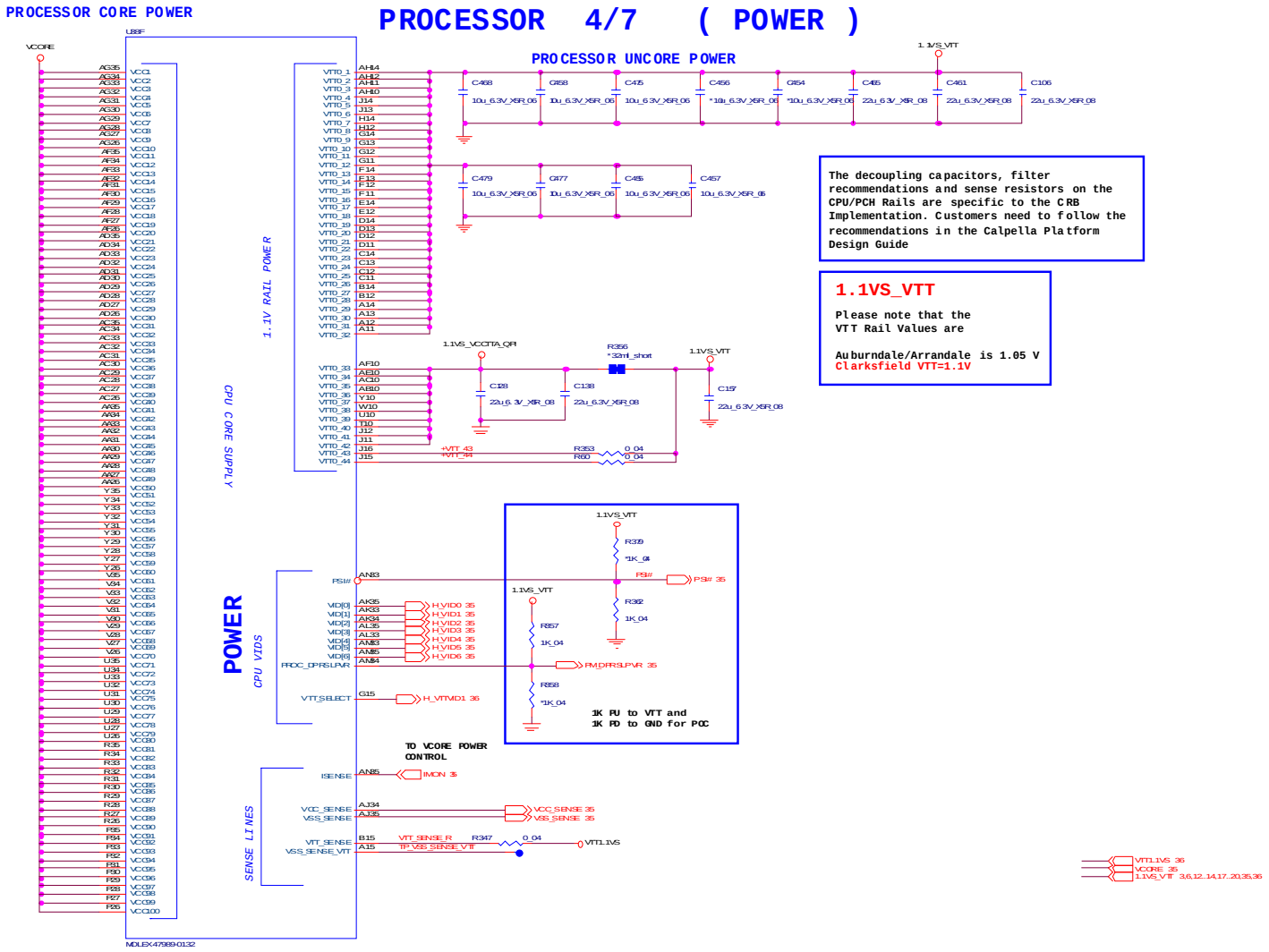
Processor 3/7 DDR3I



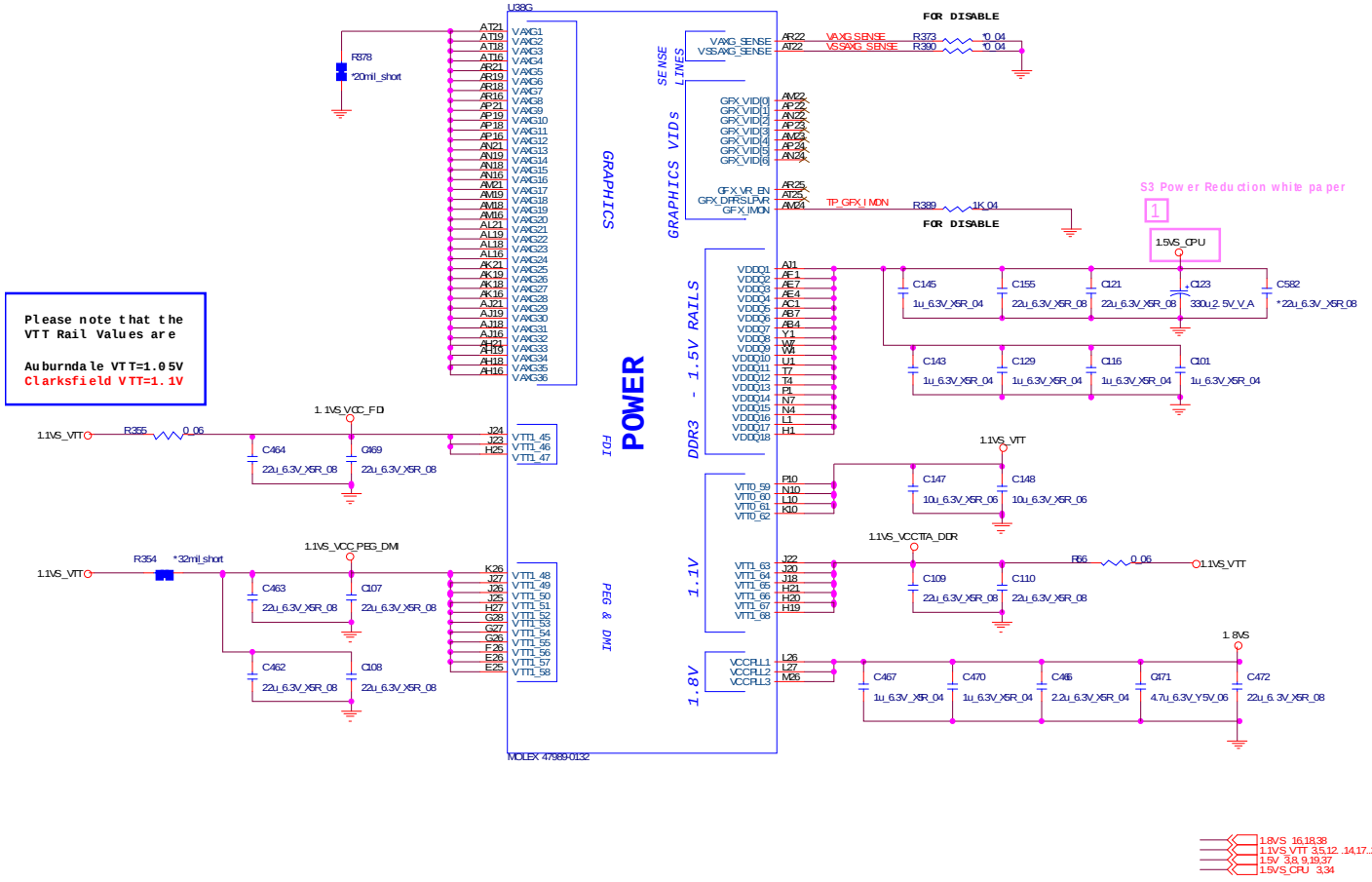
Sheet 4 of 55
Processor 3/7
DDR3

Processor 4/7 Power

Sheet 5 of 55
Processor 4/7
Power



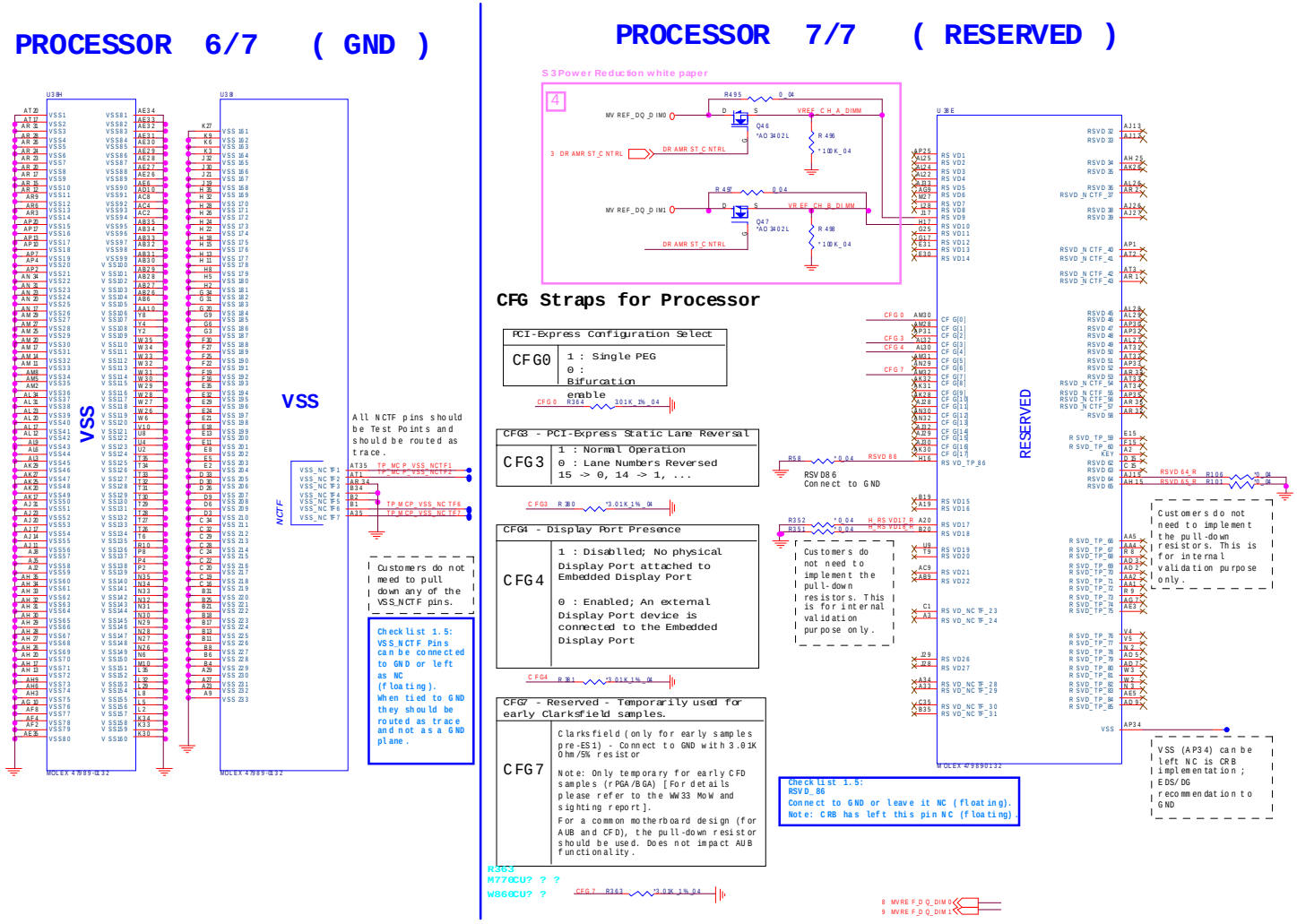
Processor 5/7 GFX PWR



Sheet 6 of 55
Processor 5/7
GFX PWR

Processor 6/7 GND, 7/7 RSVD

Sheet 7 of 55
Processor 6/7 GND,
7/7 RSVD

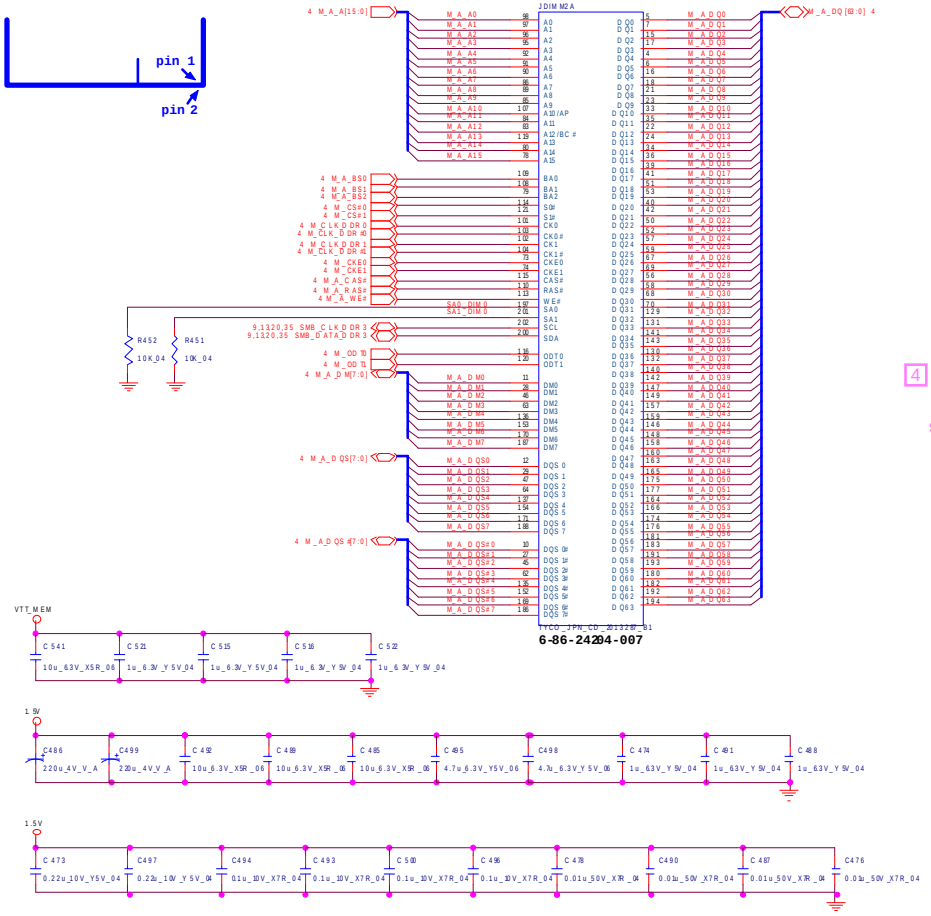


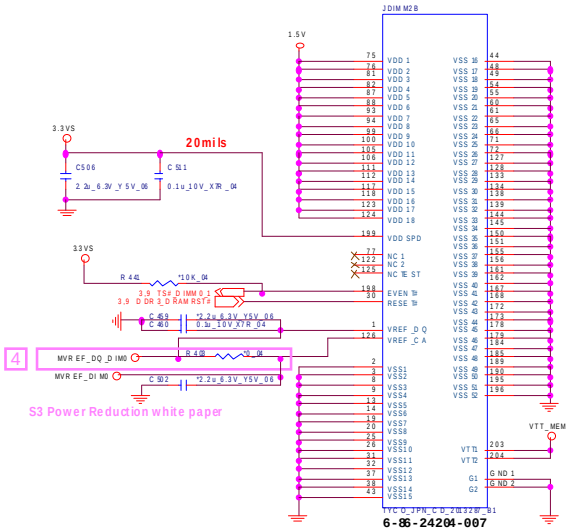
DDR3 SO-DIMM_0 REV

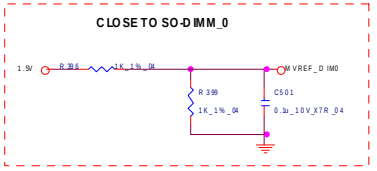
SO-DIMM 0

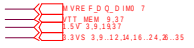
REVERSE TYPE

H=4.0mm





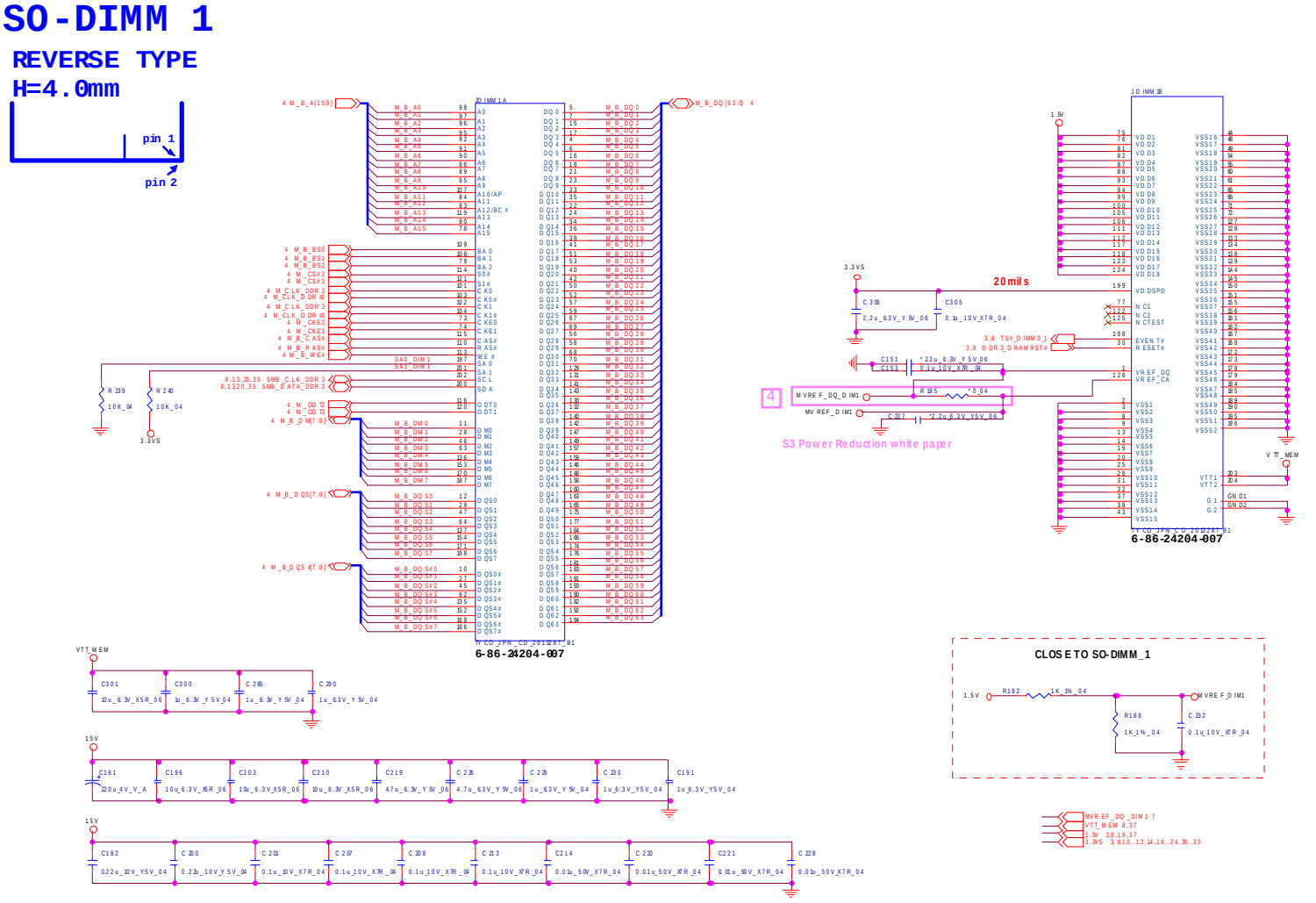




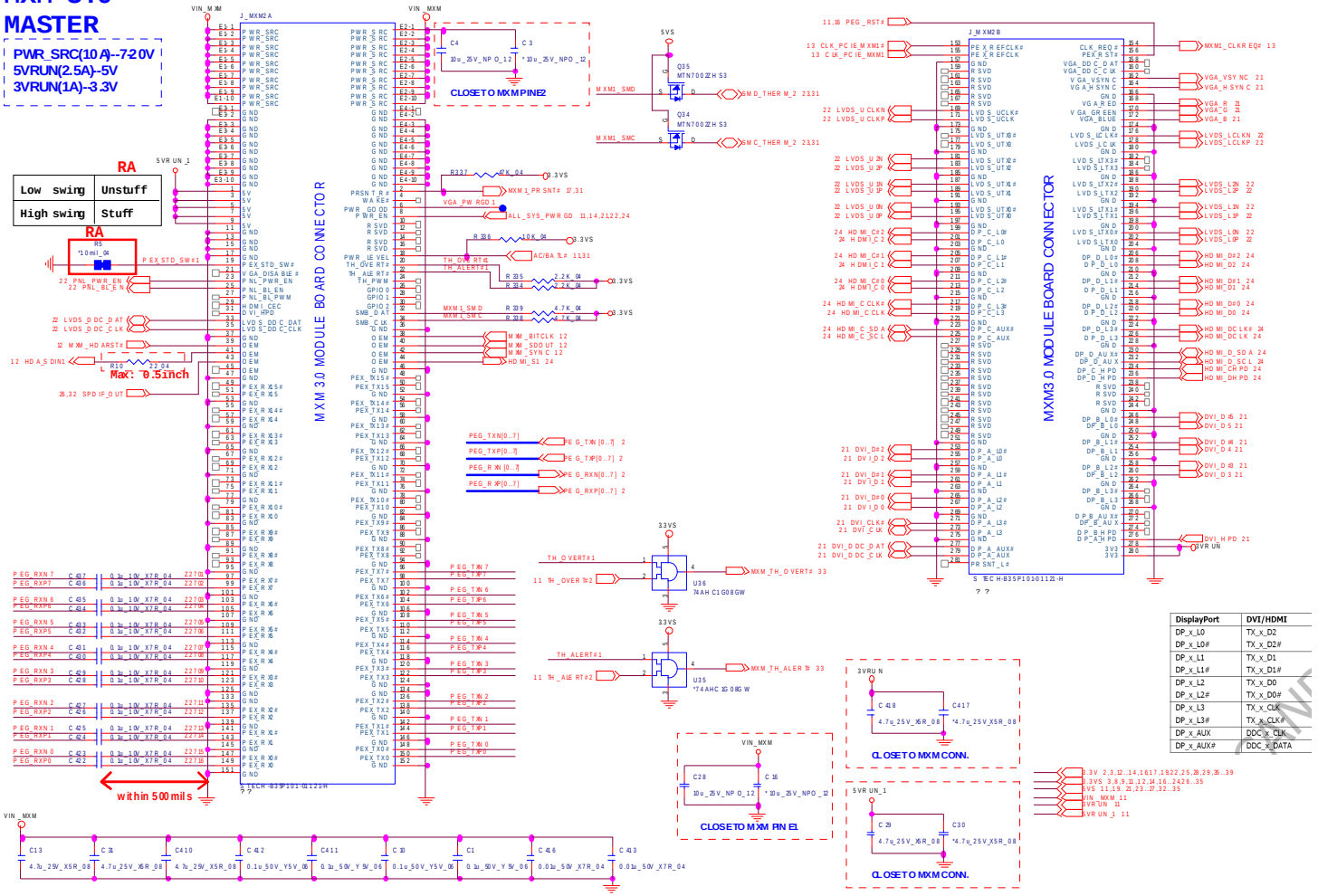
Sheet 8 of 55
DDR3 SO-DIMM_0
REV

DDR SO-DIMM_1 REV

Sheet 9 of 55
DDR3 SO-DIMM_1
REV



MXM 3.0 Master



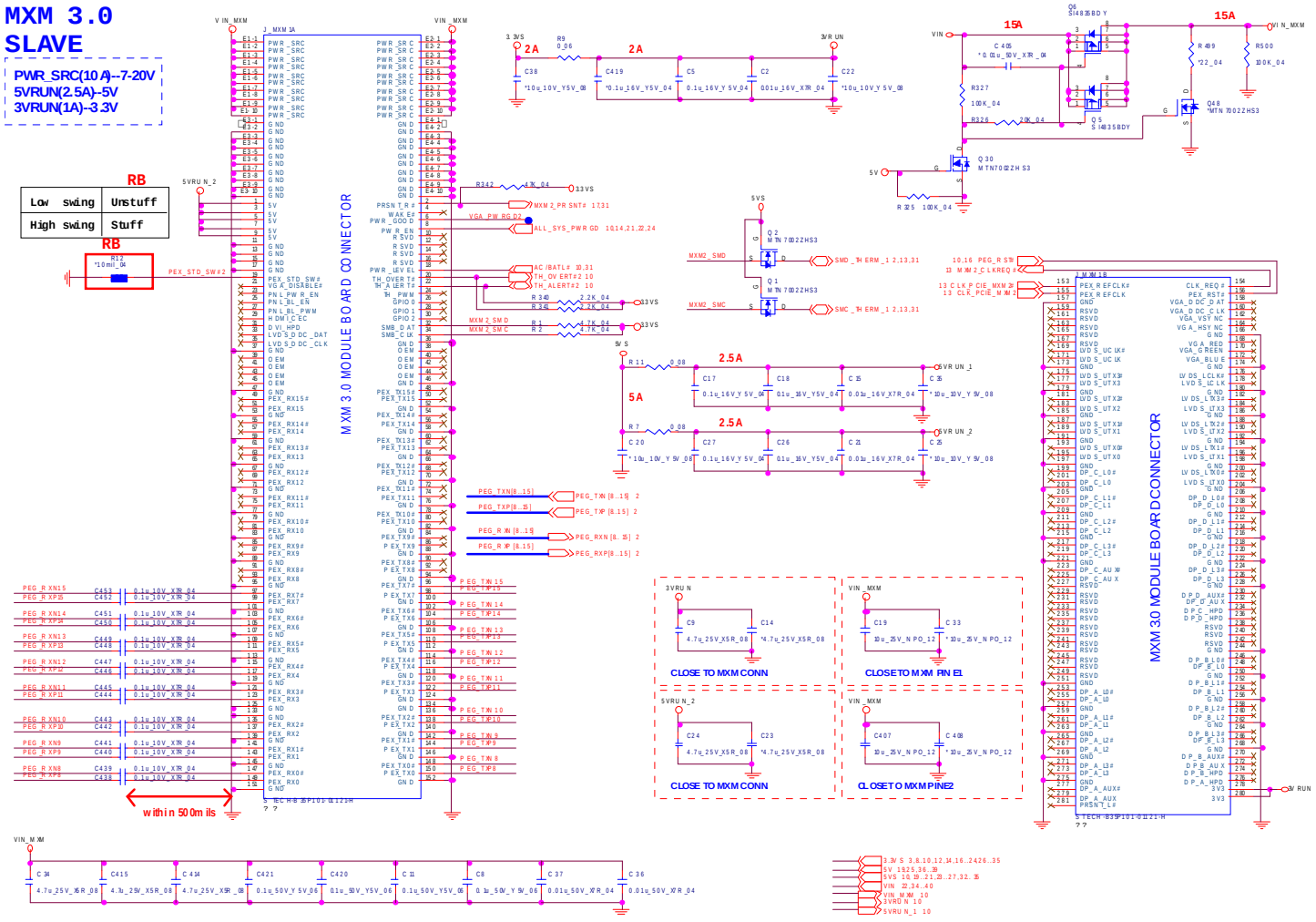
DisplayPort	DVI/HDMI
DP_X_L0	TX_x_D2
DP_X_L0#	TX_x_D2#
DP_X_L1	TX_x_D1
DP_X_L1#	TX_x_D1#
DP_X_L2	TX_x_D0
DP_X_L2#	TX_x_D0#
DP_X_L3	TX_x_CLK
DP_X_L3#	TX_x_CLK#
DP_X_AUX	DDC_x_CLK
DP_X_AUX#	DDC_x_DATA

Sheet 10 of 55
MXM 3.0 Master

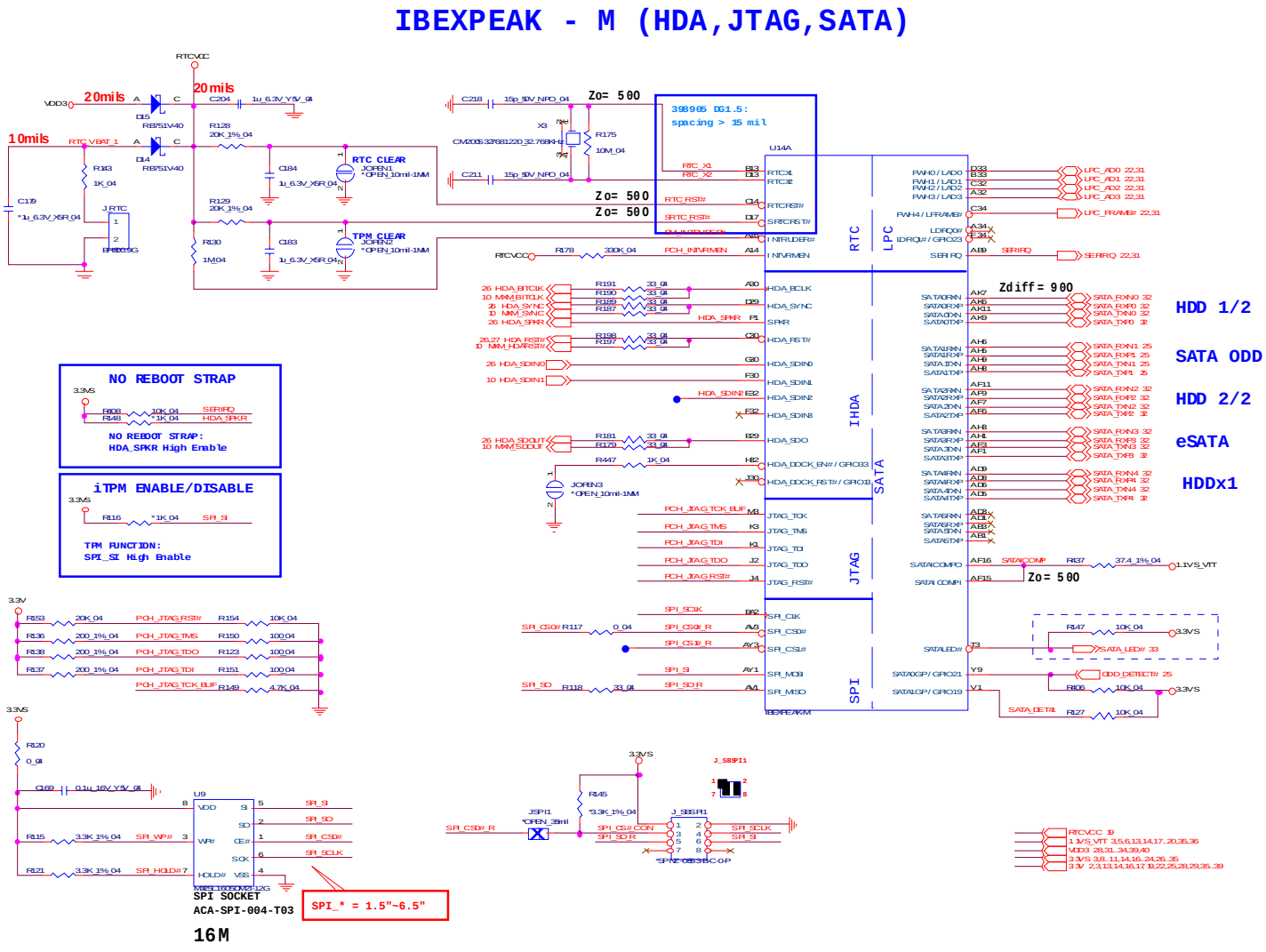
B.Schematic Diagrams

MXM 3.0 Slave

Sheet 11 of 55
MXM 3.0 Slave



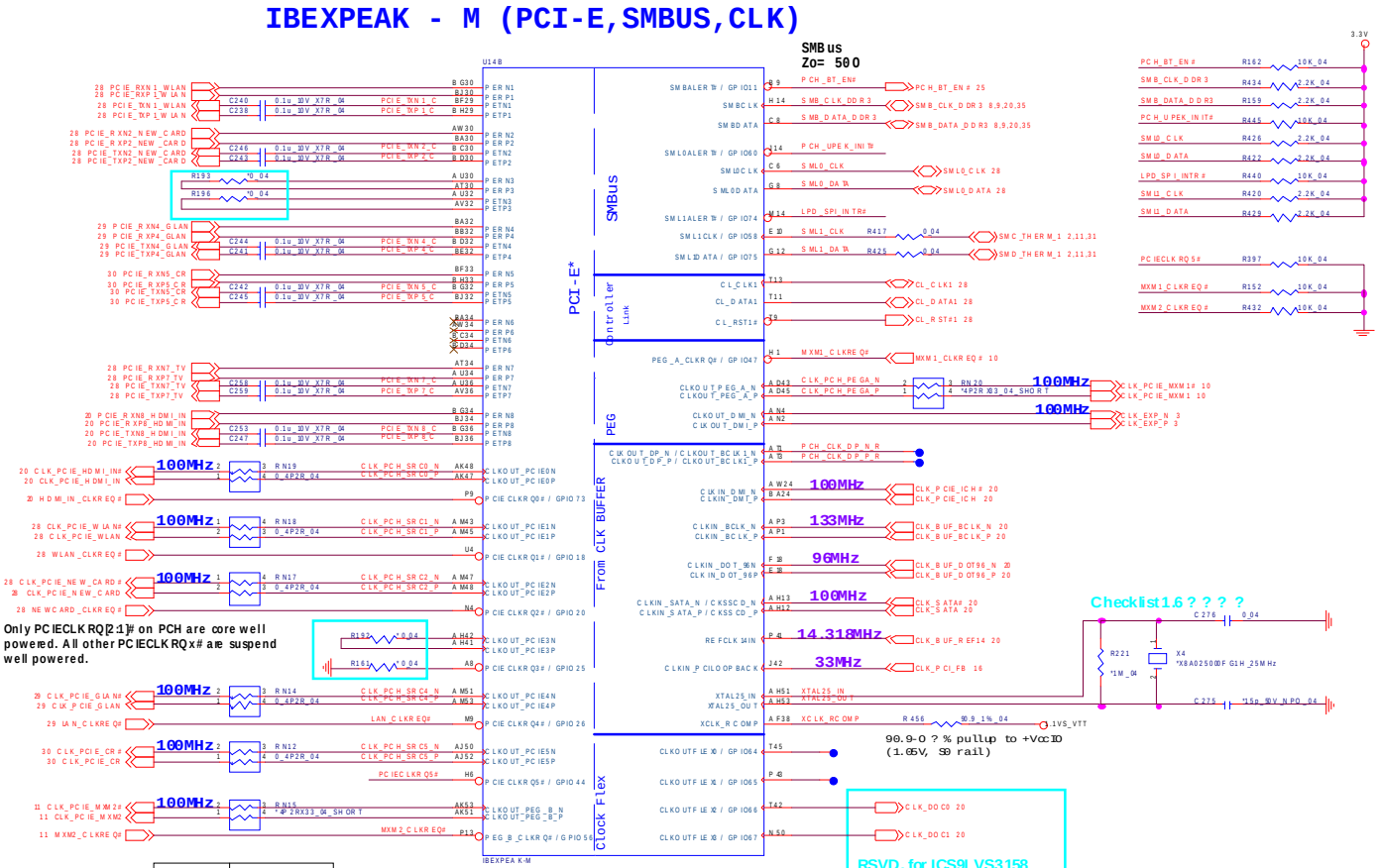
PCH 1/8 RTC, HDA, SATA



Sheet 12 of 55
PCH 1/8
RTC, HDA, SATA

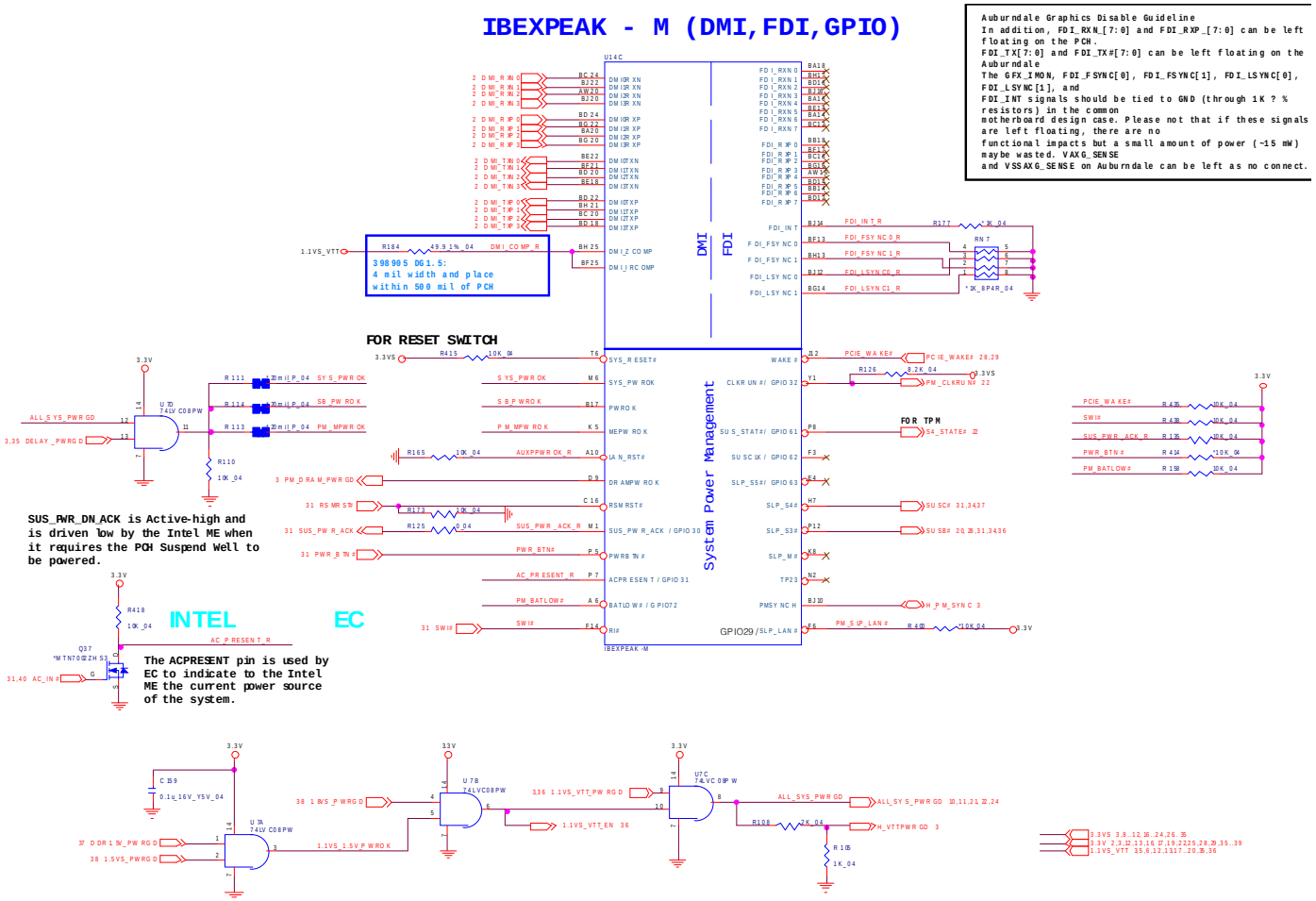
PCH 2/8 PCIE, SMBUS, CLK

Sheet 13 of 55
PCH 2/8
PCIE, SMBUS, CLK



PCI-E x1	Usage
Port 0	WLAN
Port 1	NEW ARD
Port 2	X
Port 3	GLAN
Port 4	CARD READER
Port 5	X
Port 6	TV
Port 7	HDMI IN

PCH 3/8 DMI, PWRGD

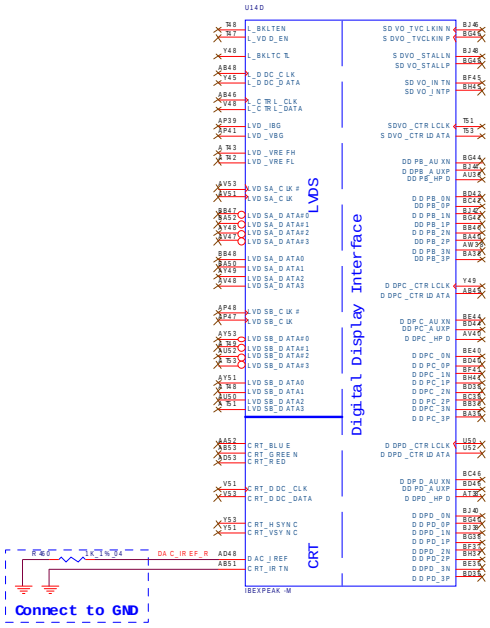


Sheet 14 of 55
PCH 3/8
DMI, PWRGD

PCH 4/8 LVDS, DDI, GND

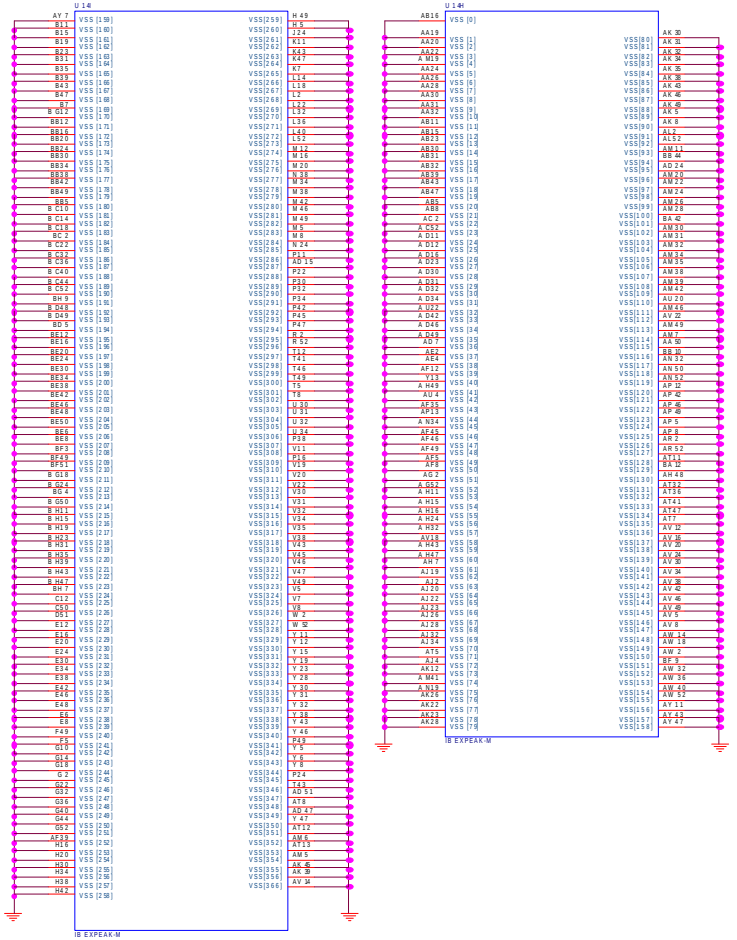
Sheet 15 of 55
PCH 4/8
LVDS, DDI GND

IBEXPEAK - M (LVDS,DDI)

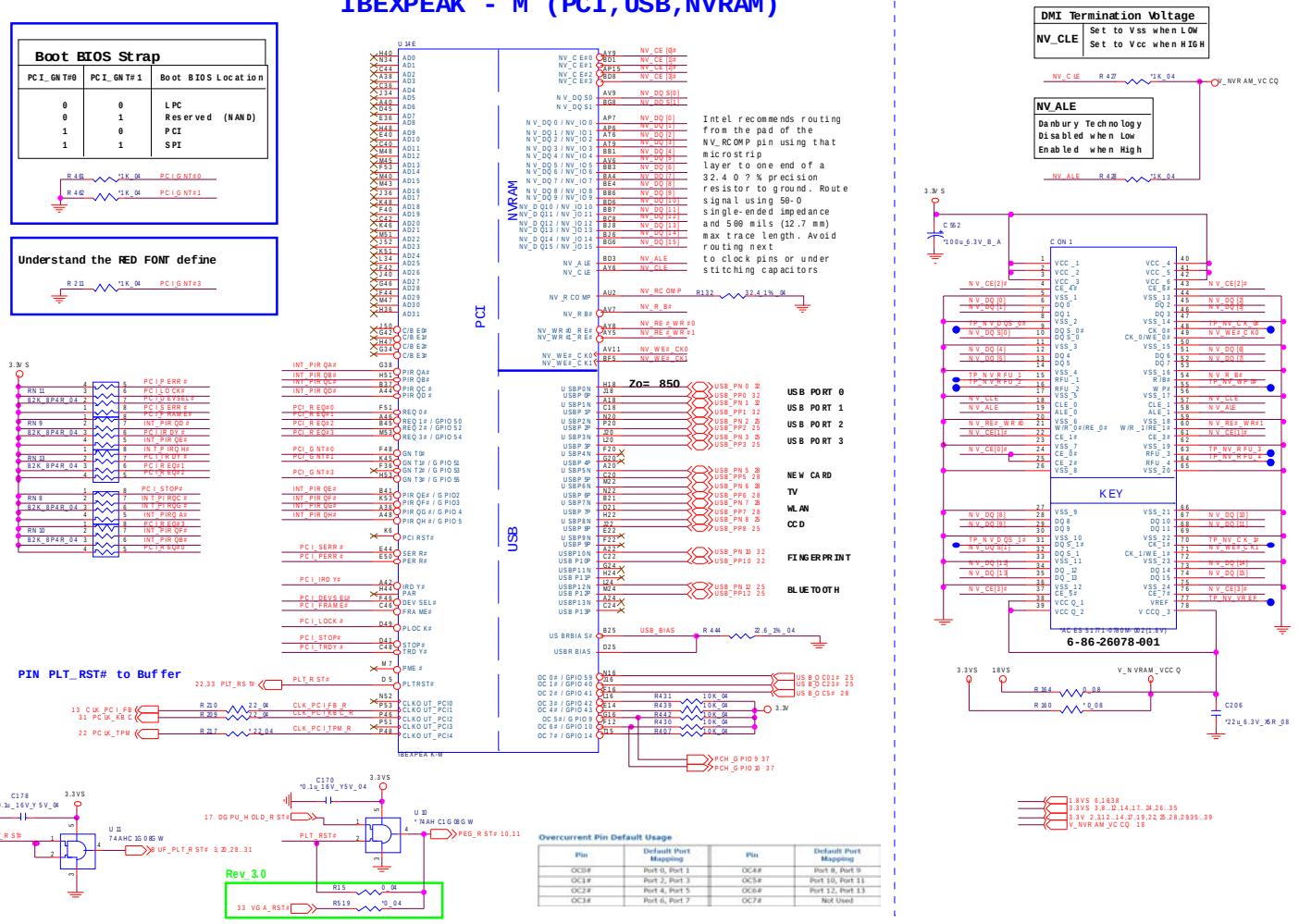


External Graphics (PCH Integrated Graphics Disable)

IBEXPEAK - M (GND)



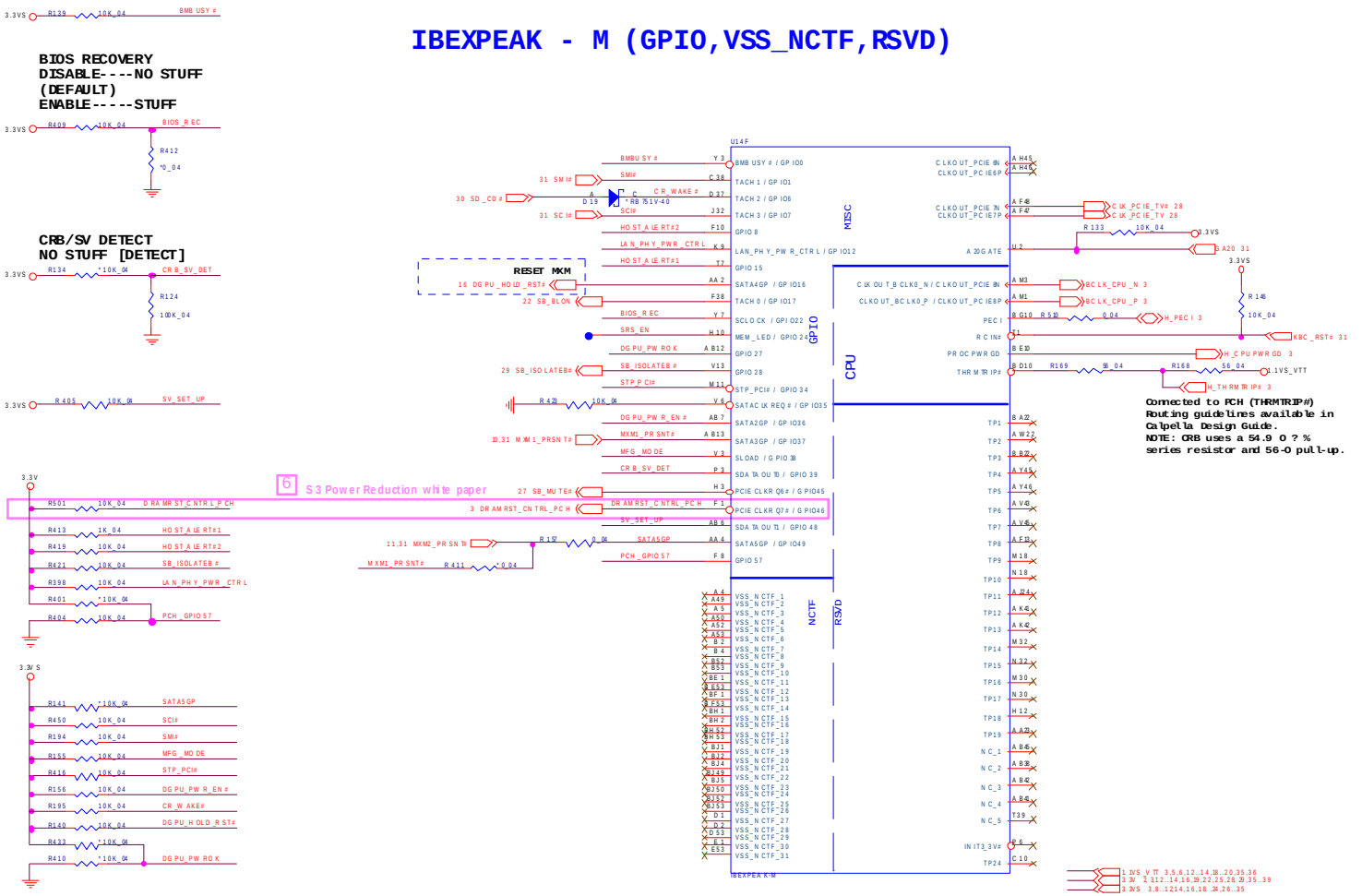
PCH 5/8 PCI, USB, NVRAM



Sheet 16 of 55
PCH 5/8
PCI, USB, NVRAM

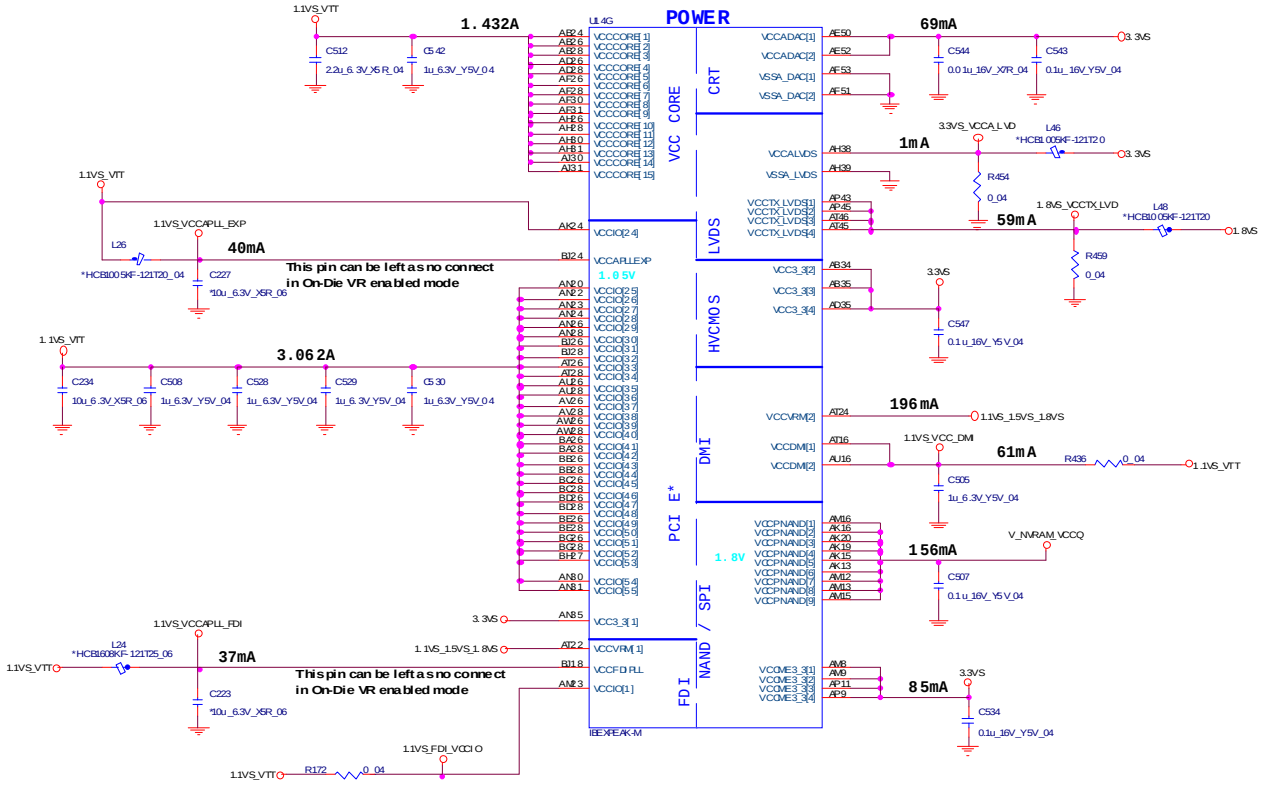
PCH 6/8 GPIO, CPU

Sheet 17 of 55
PCH 6/8
GPIO, CPU



PCH 7/8 PWR

IBEXPEAK - M (POWER)

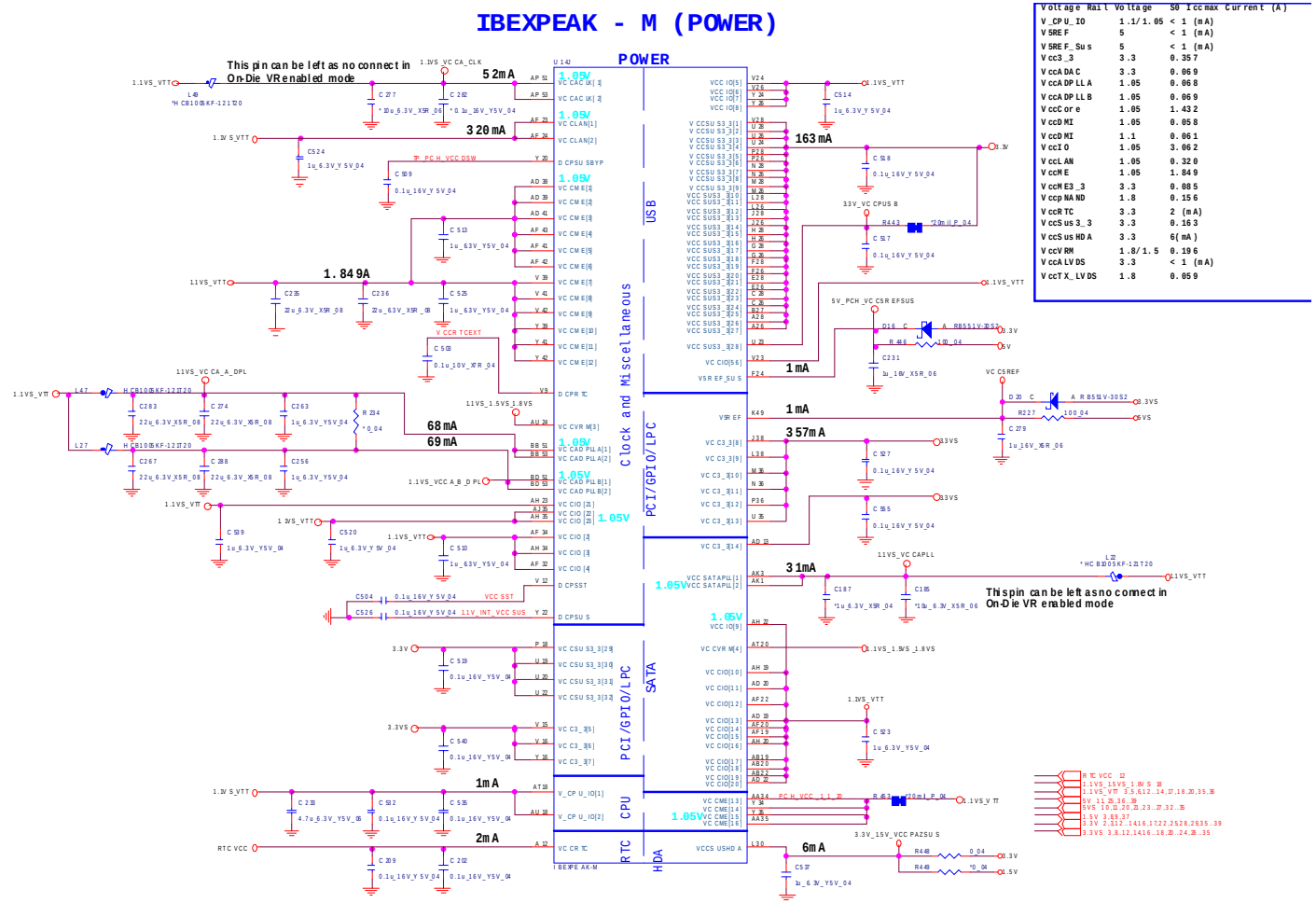


Ibex Peak power supply range		
Min	Voltage	Max
1.00V	1.05V	1.10V
1.43V	1.5V	1.58V
1.71V	1.8V	1.89V
3.14V	3.3V	3.47V
4.75V	5V	5.25V

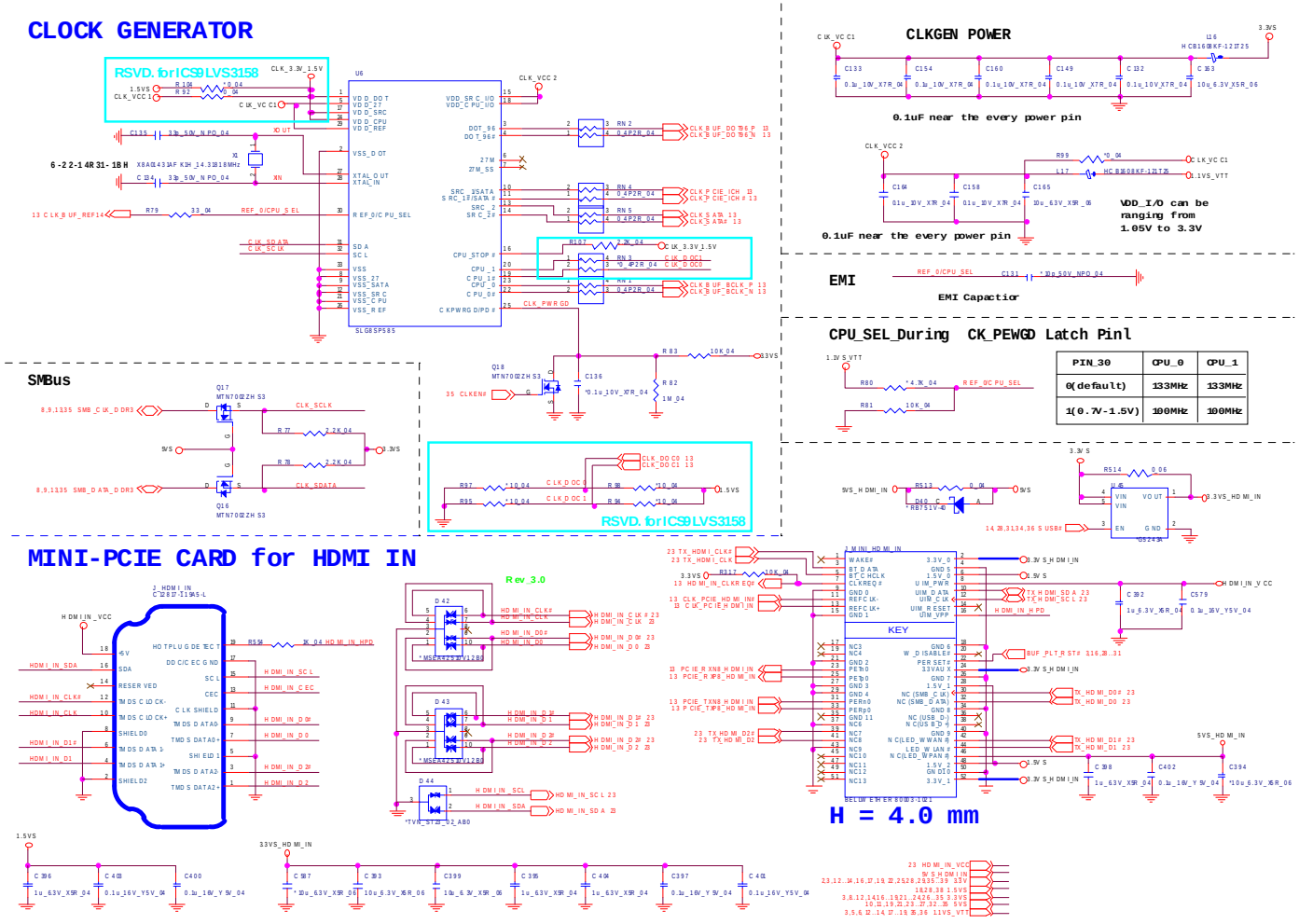
Sheet 18 of 55
PCH 7/8
PWR

PCH 8/8 PWR

Sheet 19 of 55
PCH 8/8
PWR



CLK GEN, HDMI-In

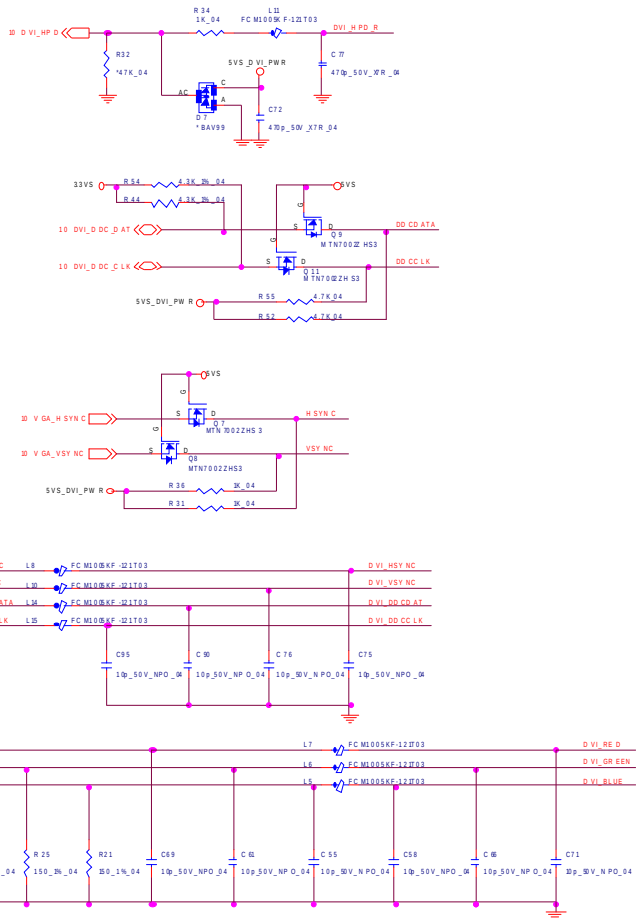


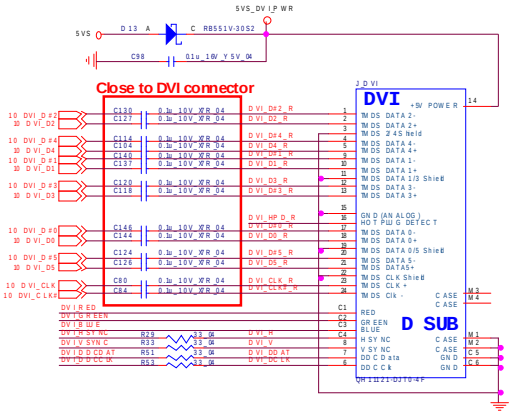
Sheet 20 of 55
CLK GEN, HDMI-In

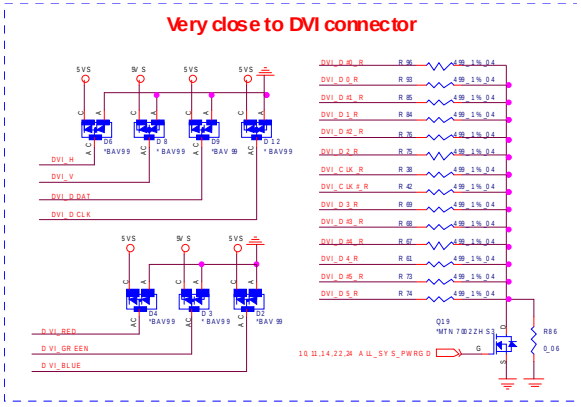
CRT, DVI

Sheet 21 of 55
CRT, DVI

DVI PORT

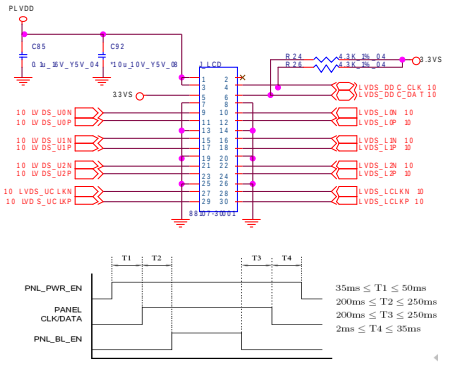




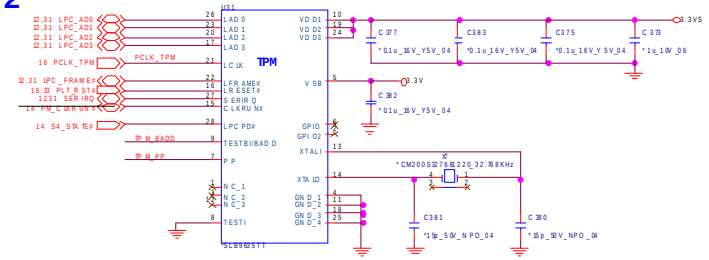


Panel, Inverter, TPM

18.4" PANEL

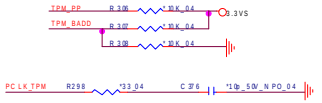


TPM 1.2

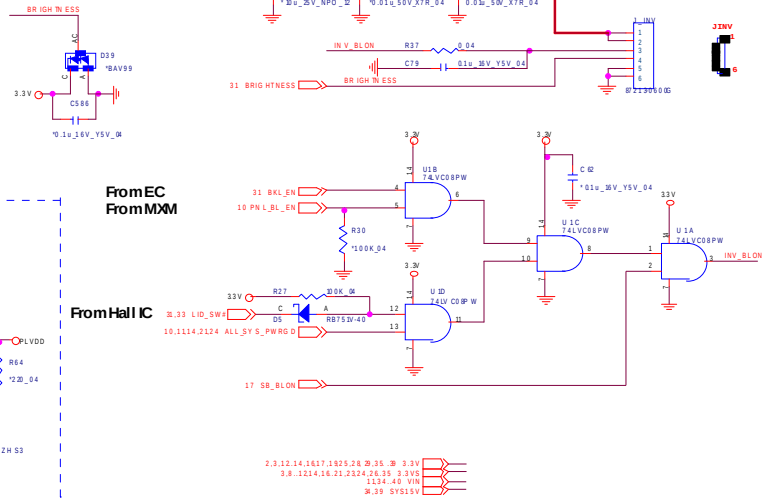


Asserted before entering S3
LPC reset timing:
LPC_PD# inactive to LPC_RST# inactive 32~96us

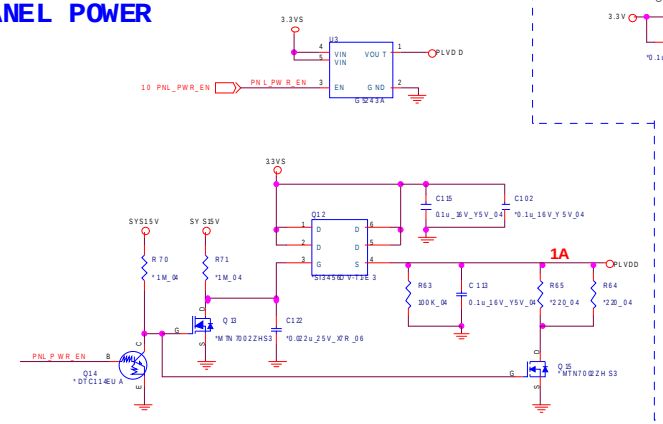
TPM_PP	HI : ACCESS LOW : NORMAL (Default)
TPM_BADD	HI : 4E / 4Fh (Default) LOW : 2E / 2Fh



INVERTER



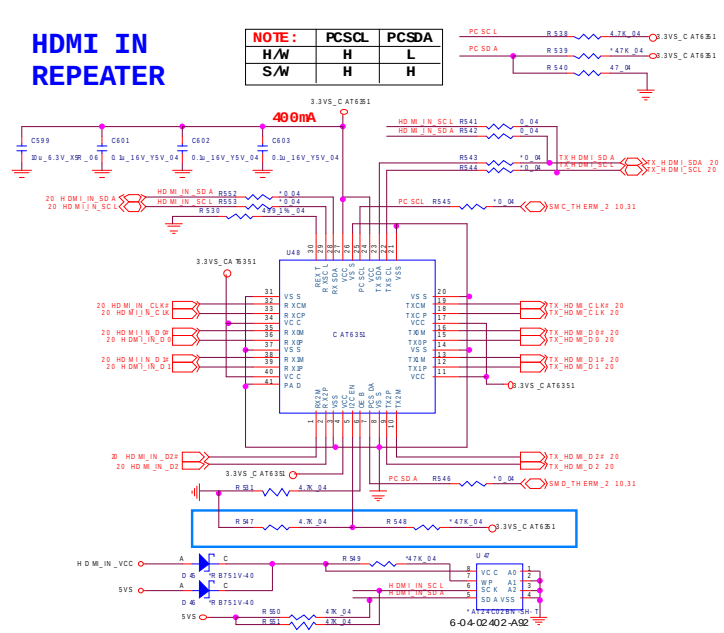
PANEL POWER



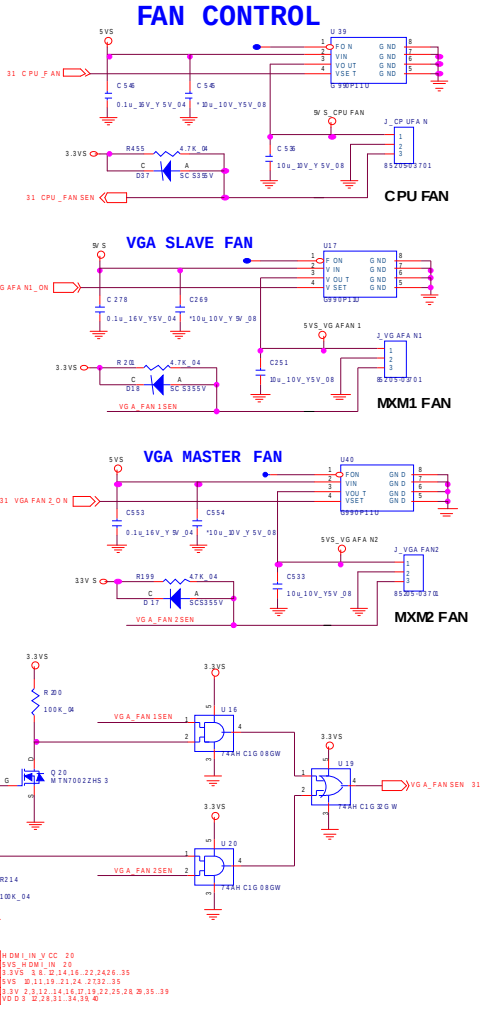
Sheet 22 of 55
Panel, Inverter, TPM

HDMI Repeater, Fan Control

Sheet 23 of 55
HDMI Repeater,
Fan Control



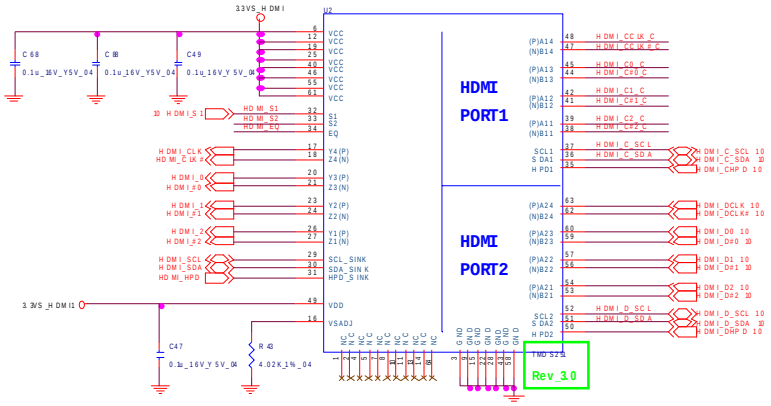
NOTE:	R547	R548	U47,R549,D45,D46	R541,R542	R543,R544	R552,R553
W/EEPROM	X	V	V	V	V	X
W/O EEPROM, ? ? repeater	V	X	X	X	V	V
W/O EEPROM, ? ? repeater	V	X	X	V	X	X



Rev_3.0

HDMI Switch

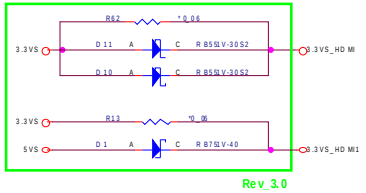
HDMI SWITCH



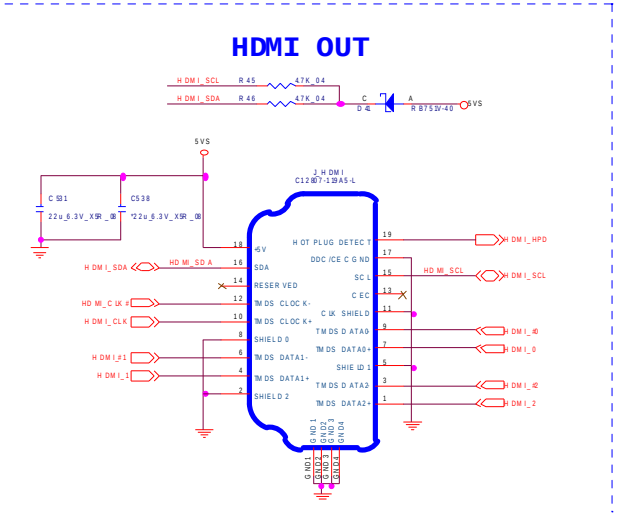
TMDS Input equalization selector (control pin)		
HDMI_EQ	L	HDMI 1.3 compliant cable
	H	10m 28 AWG HDMI cable

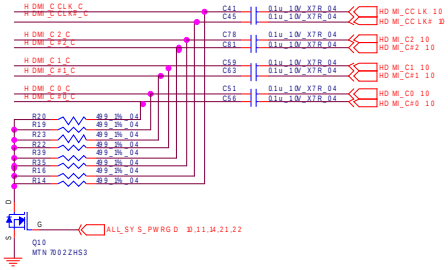
VGA CARD TYPE	HDMI_S1	HDMI_S2	HDMI PORT	HDMI_SCL HDMI_SDA	HDMI_HPD
N10 Later	H	H	PORT1	HDMI_C_SCL HDMI_C_SDA	HDMI_CHPD
N10 (N9 Core)	L	H	PORT2	HDMI_D_SCL HDMI_D_SDA	HDMI_DHPD

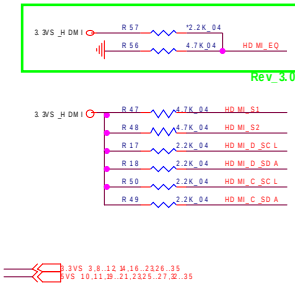
Chipset	R56	R57	D10, D11, D42	R62, R13
TMDS251	Stuff	x	Stuff	x
TMDS261	x	Stuff	x	Stuff



HDMI OUT







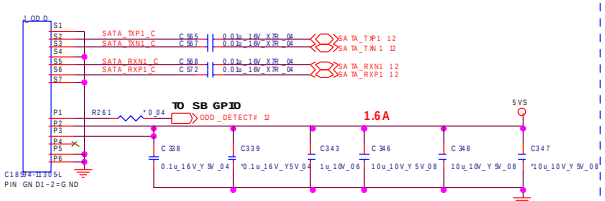
Sheet 24 of 55
HDMI Switch

B.Schematic Diagrams

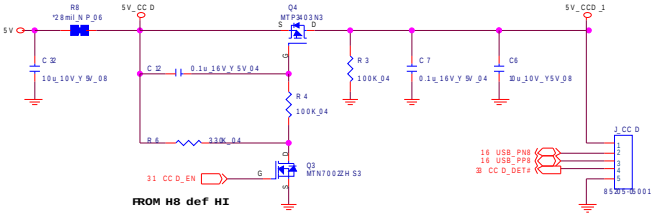
ODD, CCD, BT, USB2.0

Sheet 25 of 55
ODD, CCD, BT, USB2.0

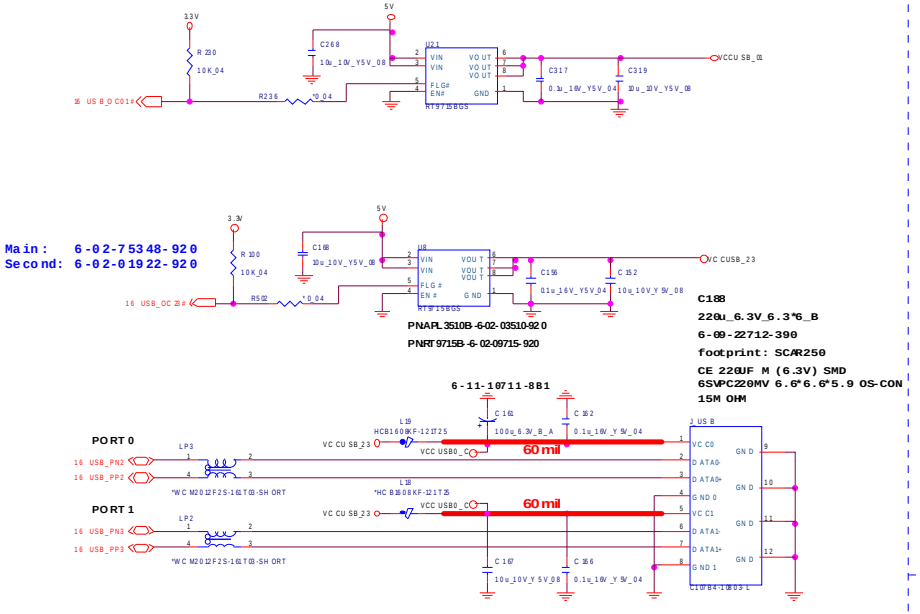
SATA ODD



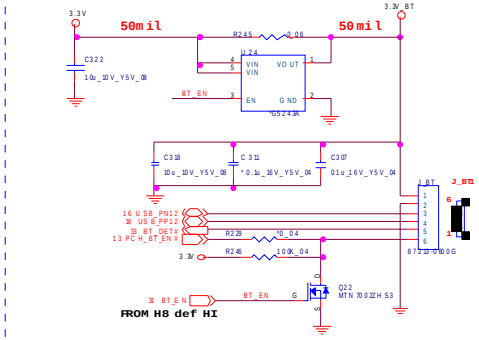
CCD



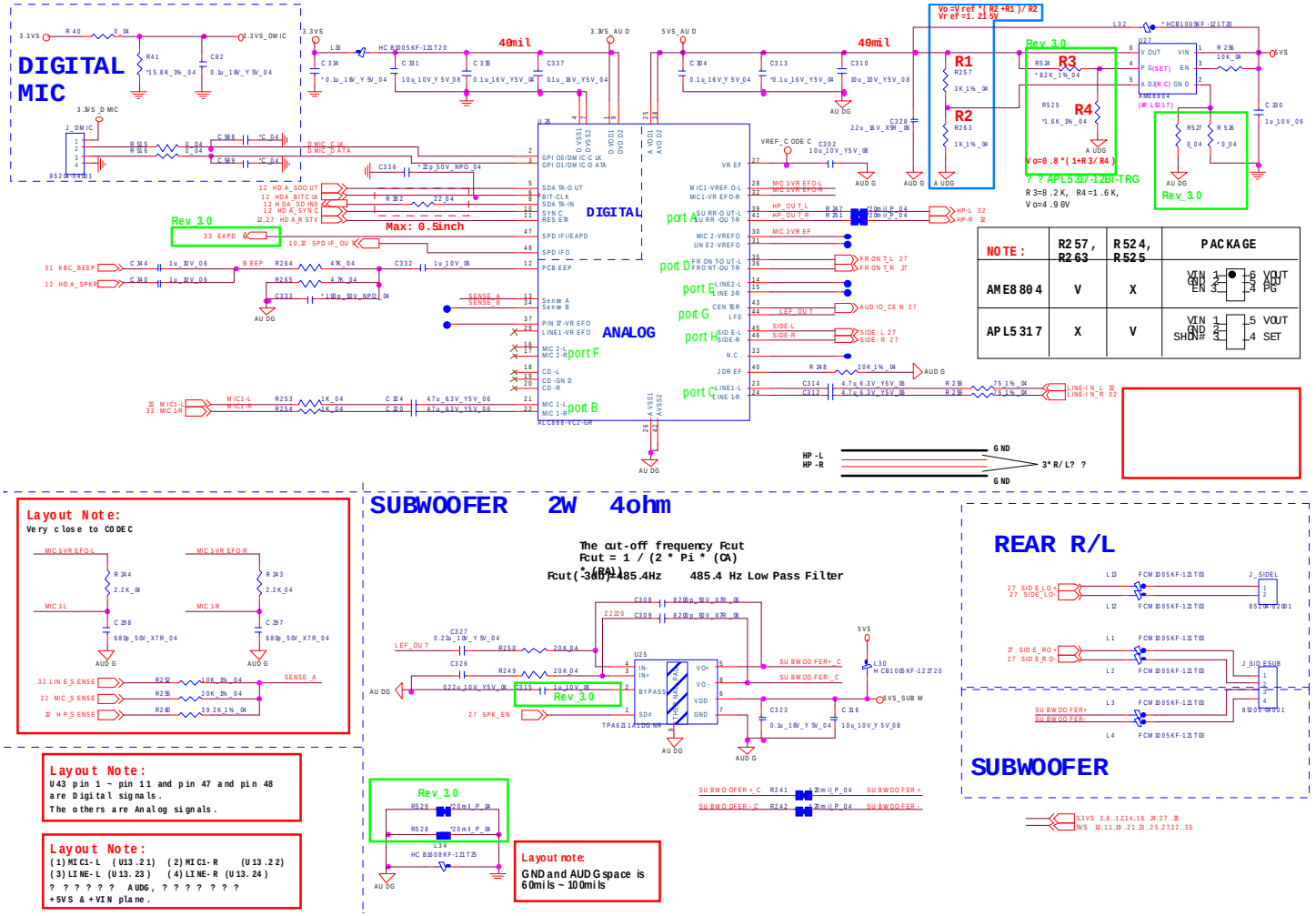
USB 2.0



BLUETOOTH



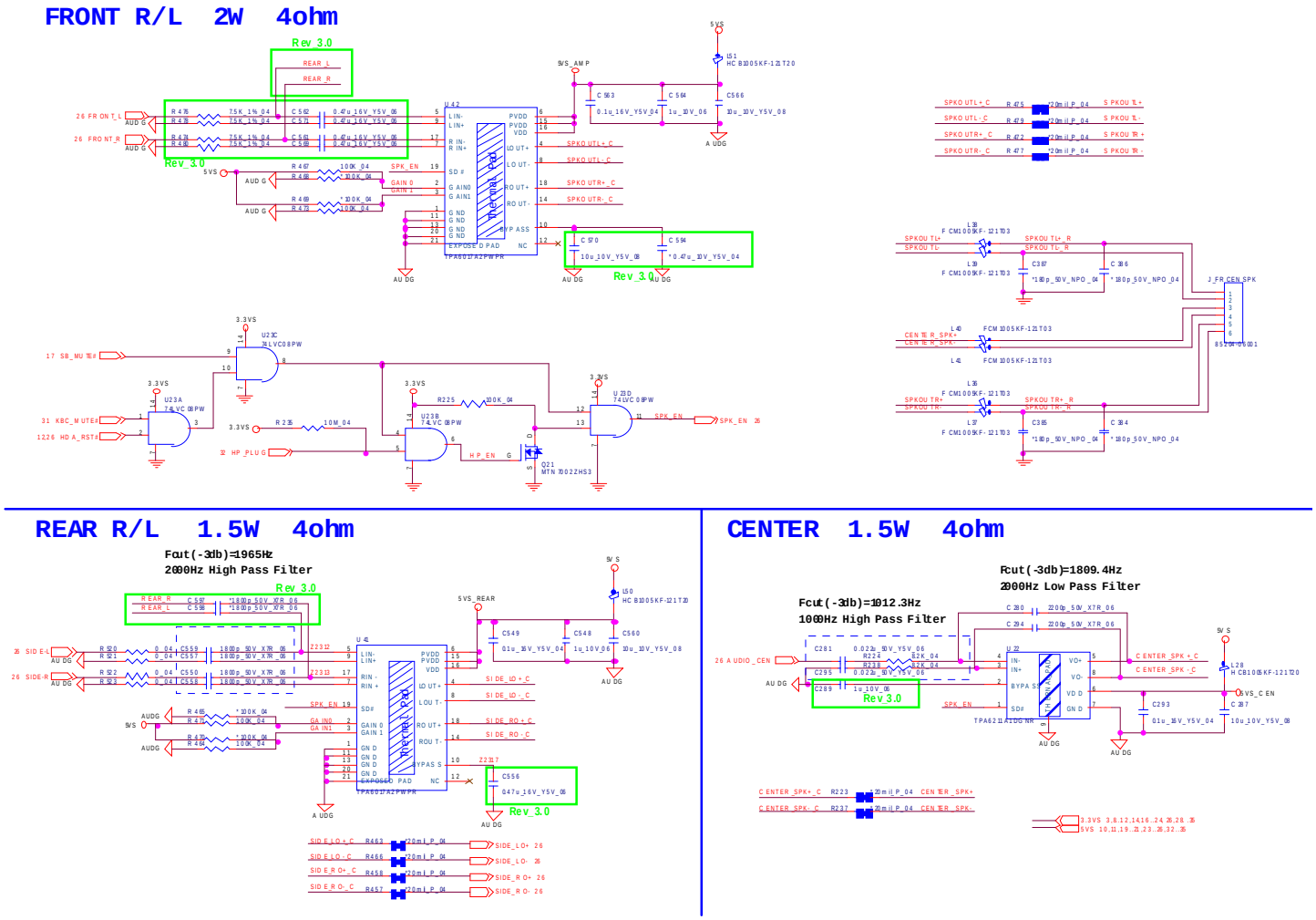
Codec, Subwoofer, DMIC



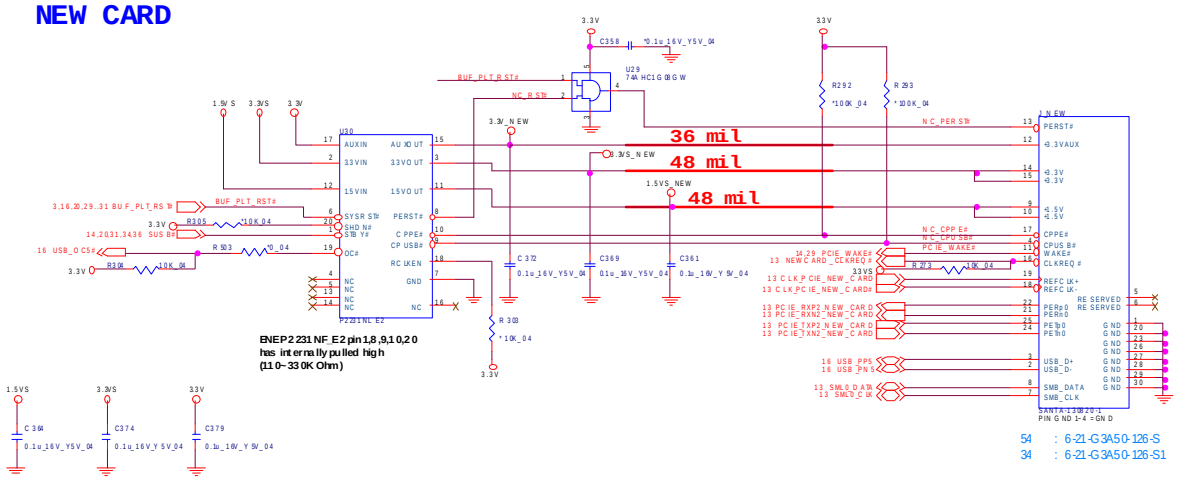
Sheet 26 of 55
Codec, Subwoofer, DMIC

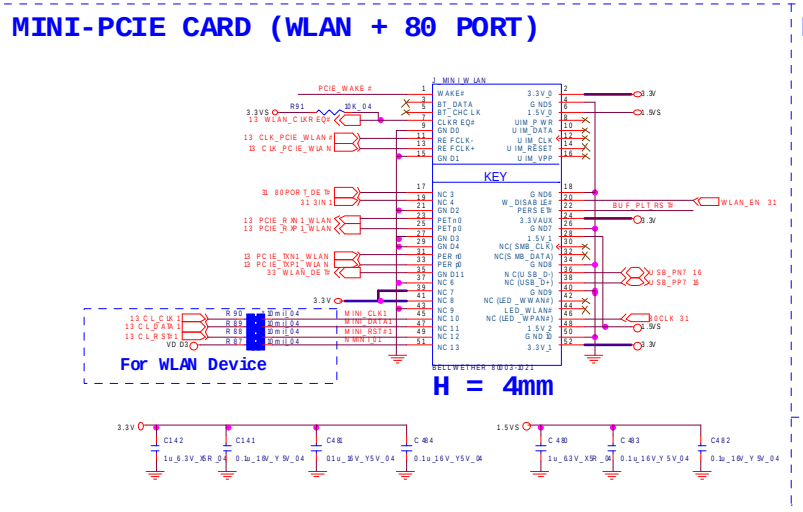
Audio AMP

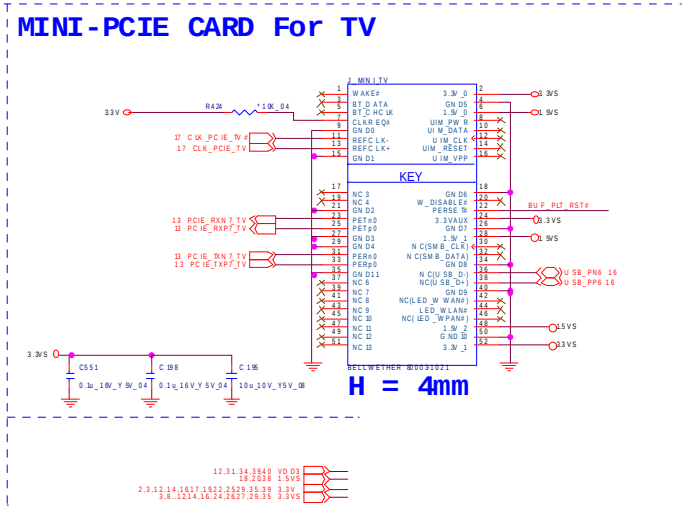
Sheet 27 of 55
Audio AMP



New Card, Mini Card



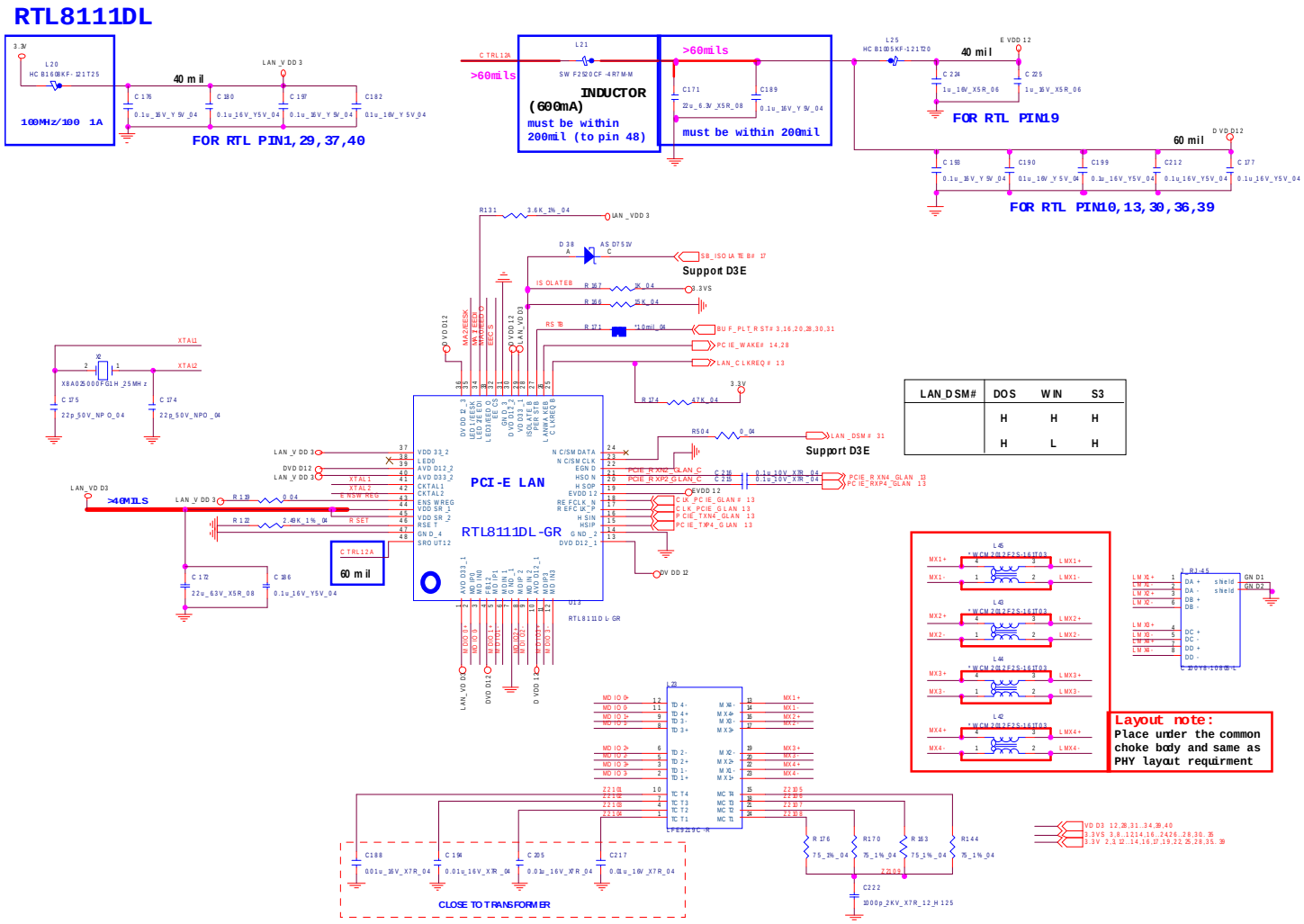




Sheet 28 of 55
New Card,
Mini Card

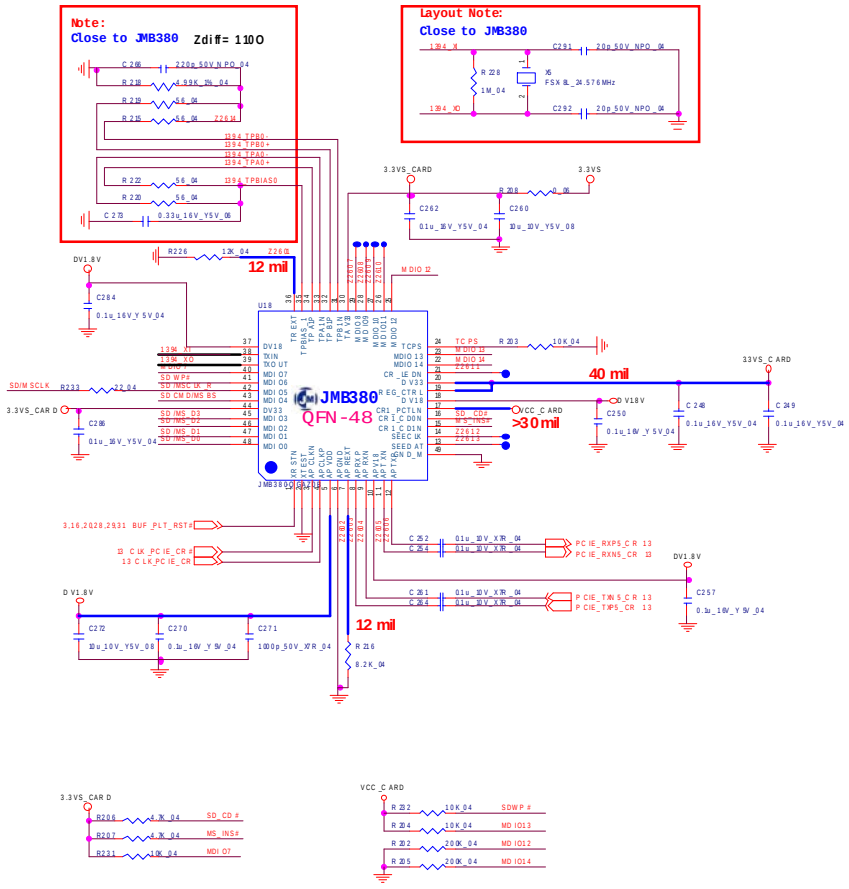
LAN-RTL8111DL, RJ45

Sheet 29 of 55
LAN-RTL8111DL, RJ45

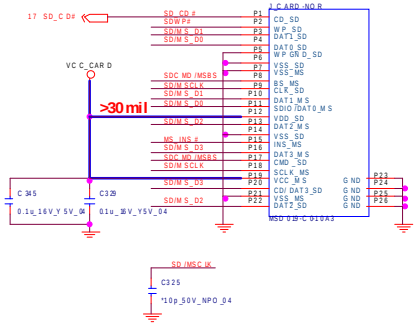


Card Reader, IEEE1394

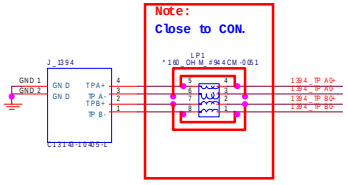
JMB380



7 in 1 SOCKET



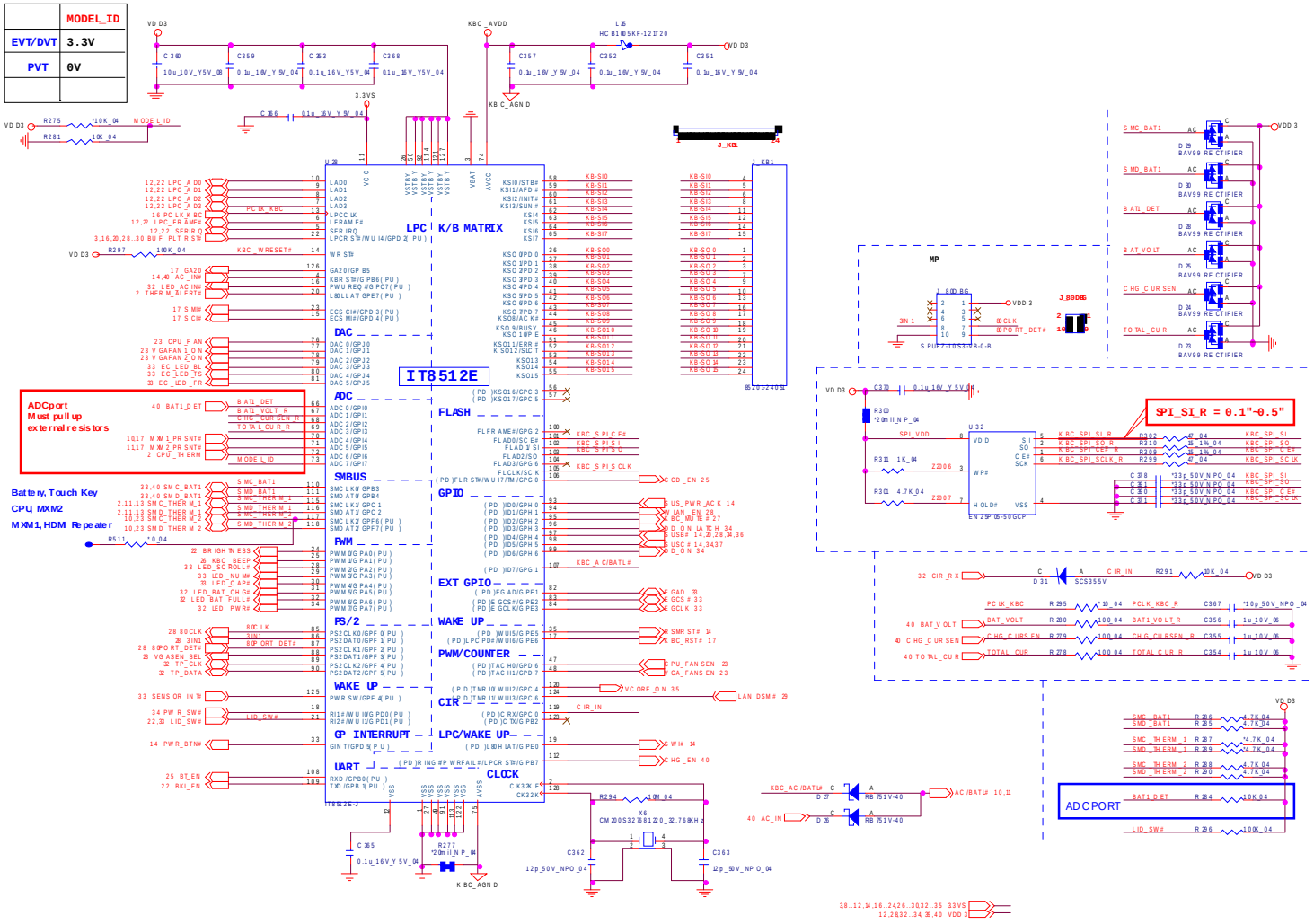
IEEE1394



Sheet 30 of 55
Card Reader, IEEE1394

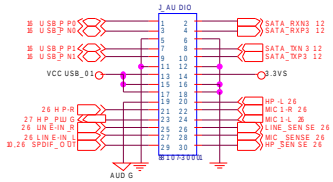
KBC ITE IT8512-J

Sheet 31 of 55
KBC ITE IT8512-J

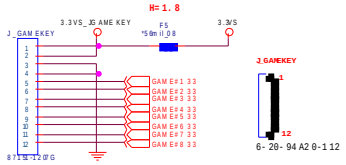


MB to Small B'd Connector A

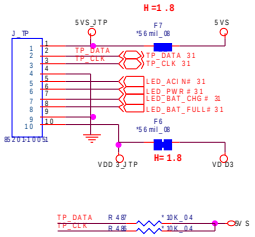
AUDIO B'd



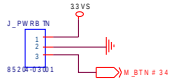
GAME KEY B'd



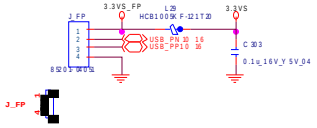
Click B'd



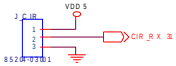
PWR BUTTON B'd



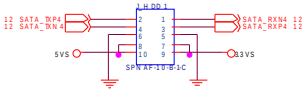
Finger Printer B'd



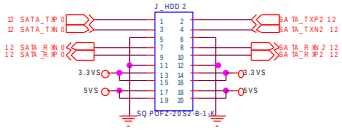
CIR BOARD

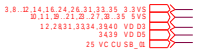


HDDx1 B'd



HDDx2 B'd

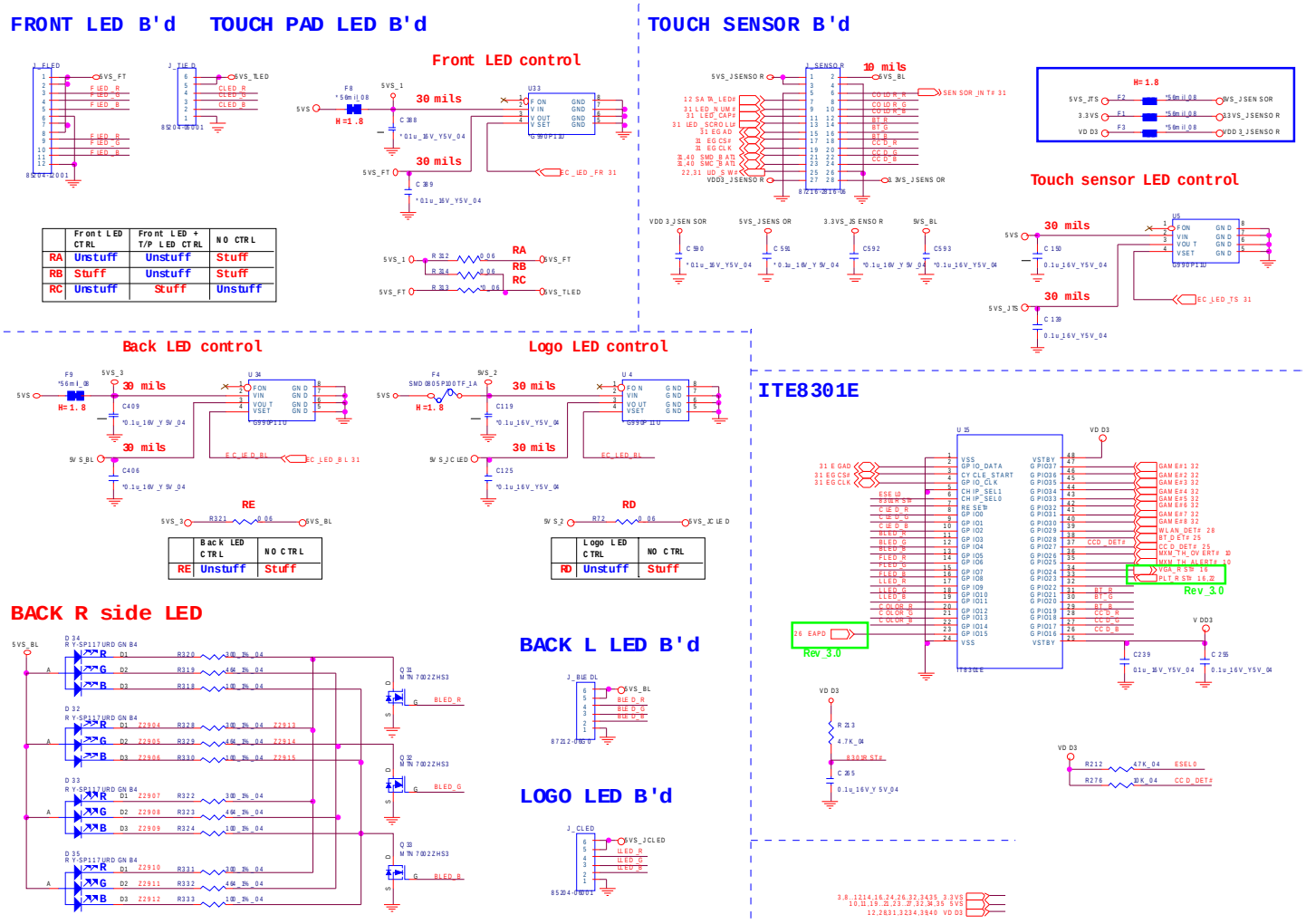




Sheet 32 of 55
MB to Small B'd
Connector A

MB to Small B'd Connector B

Sheet 33 of 55
MB to Small B'd
Connector B

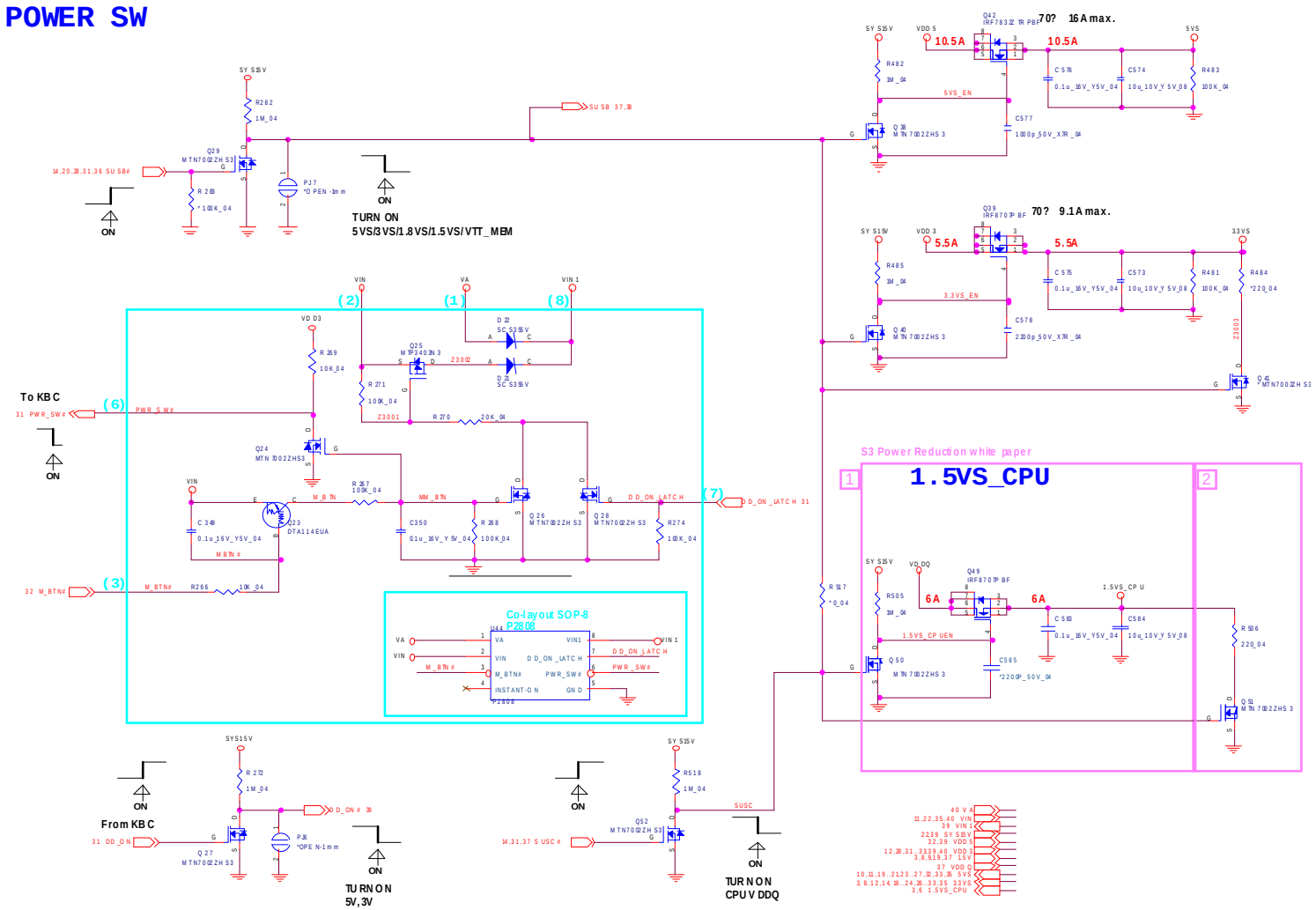


	Front LED CTRL	Front LED + T/P LED CTRL	NO CTRL
RA	Unstuff	Unstuff	Stuff
RB	Stuff	Unstuff	Stuff
RC	Unstuff	Stuff	Unstuff

	Back LED CTRL	NO CTRL
RE	Unstuff	Stuff

	Logo LED CTRL	NO CTRL
RD	Unstuff	Stuff

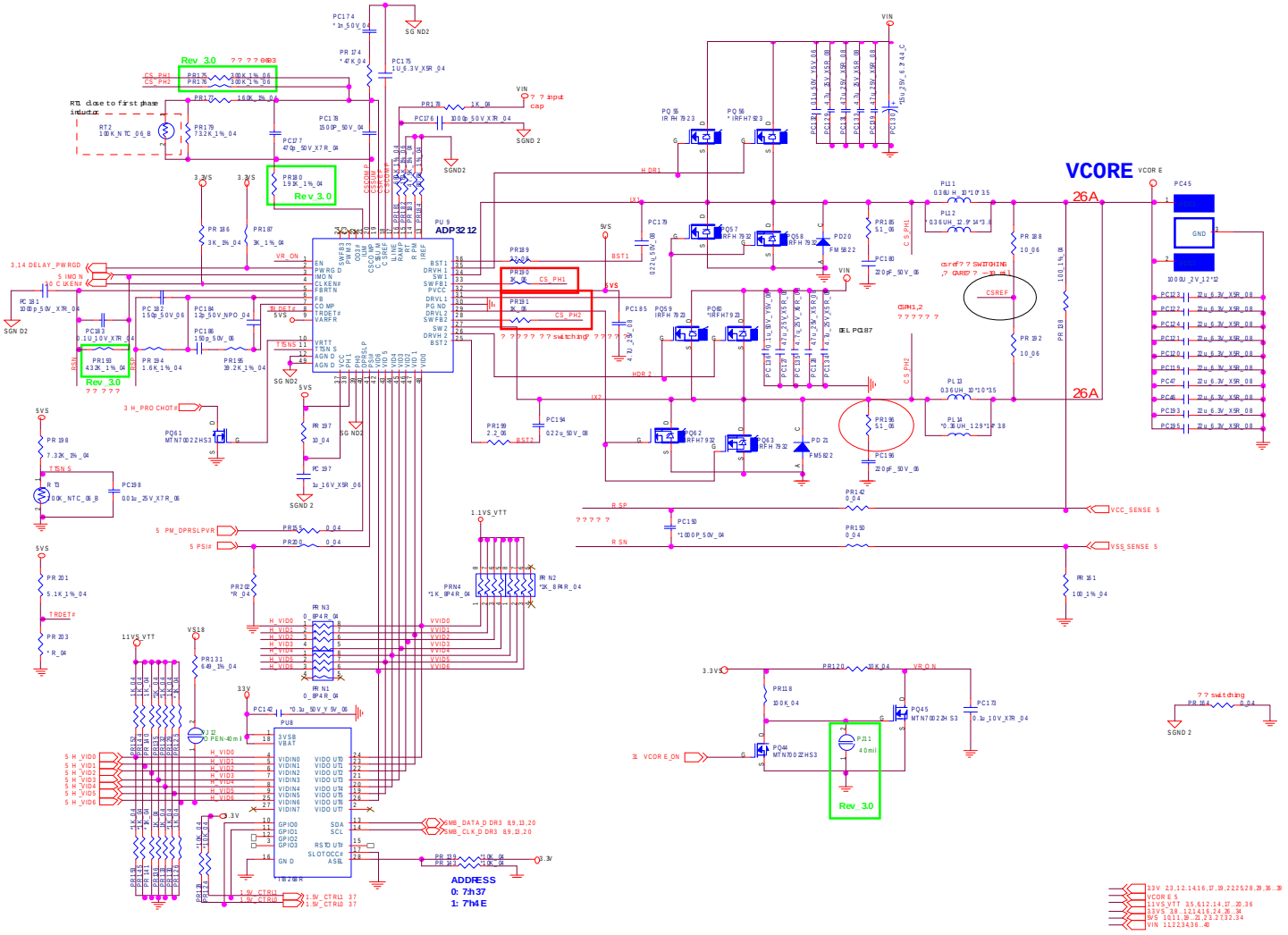
Power System



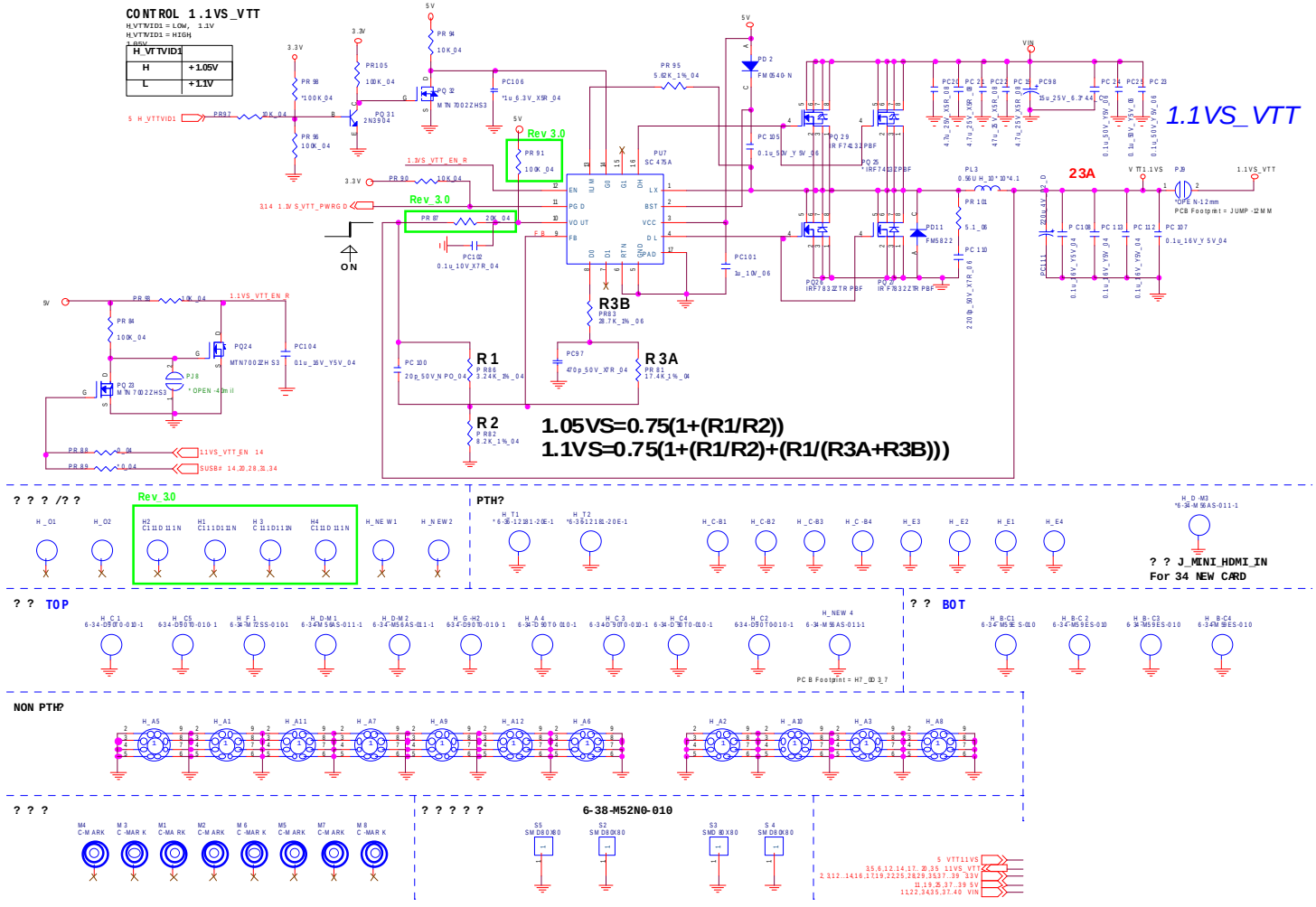
Sheet 34 of 55
Power System

Power VCore

Sheet 35 of 55
Power VCore



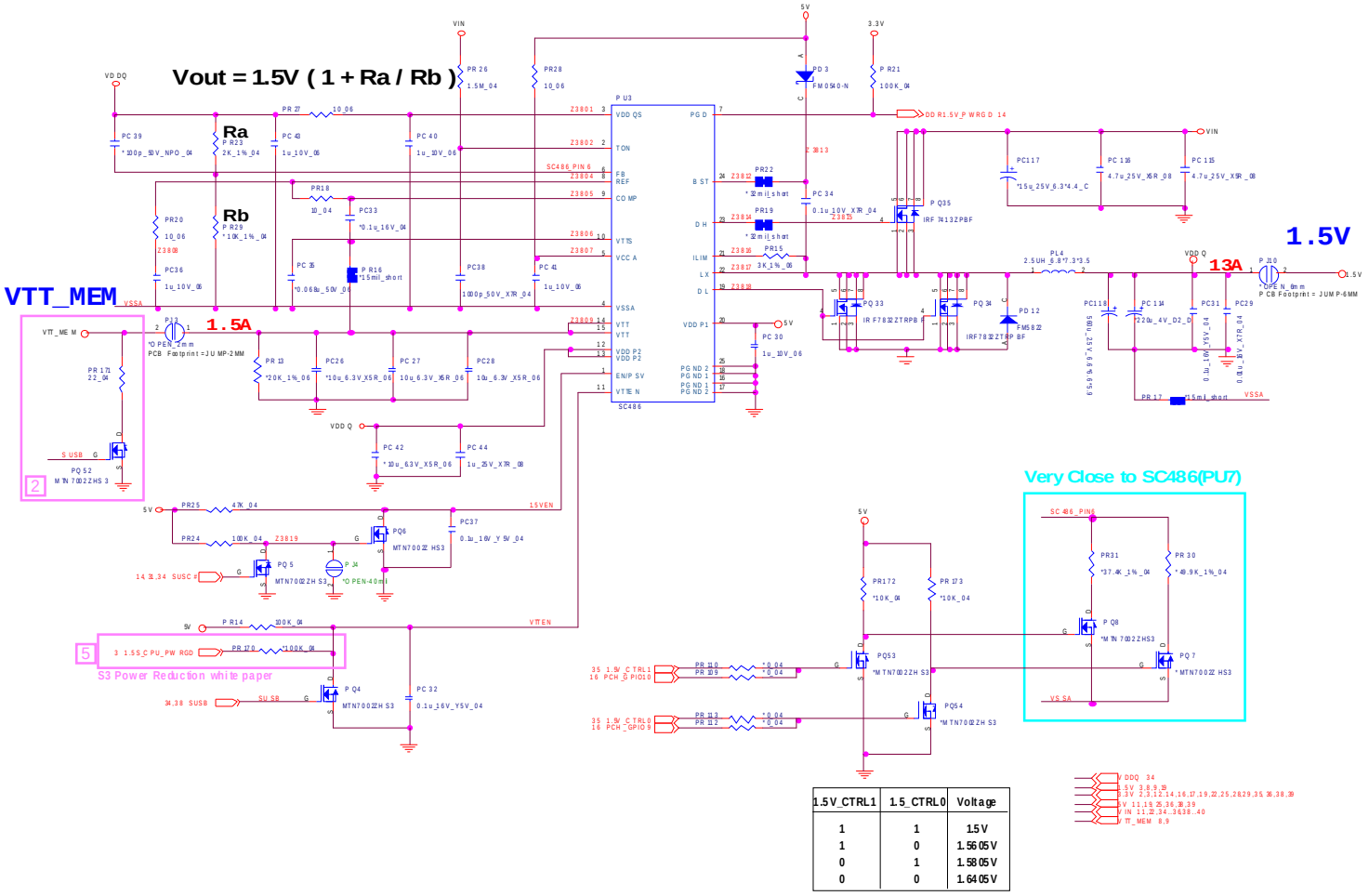
Power 1.1V_VTT, Screw Hole



Sheet 36 of 55
Power 1.1V_VTT, Screw Hole

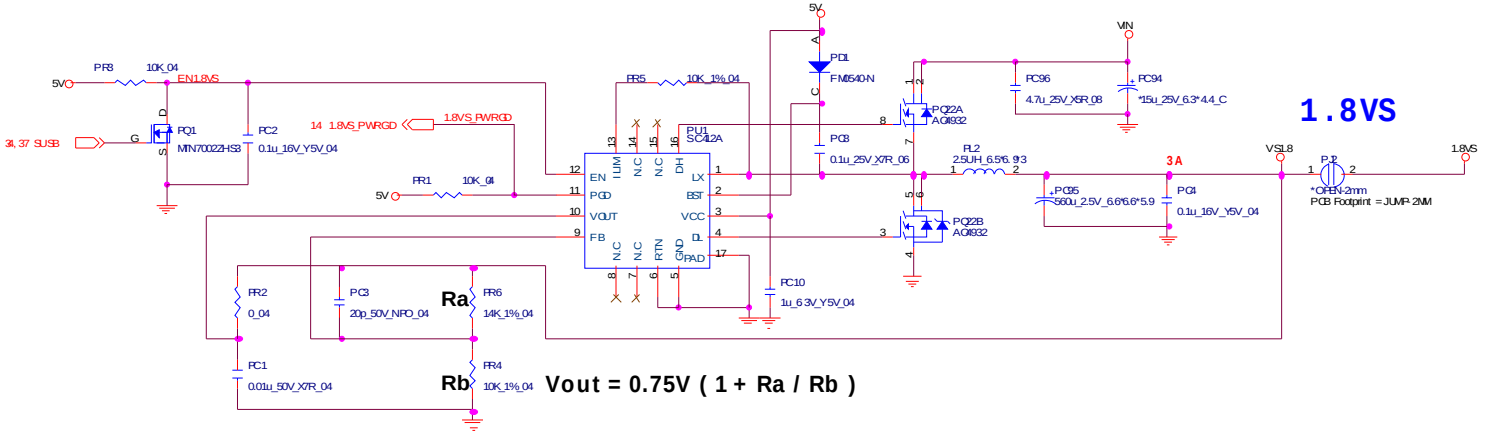
Power 1.5V/0.75VS

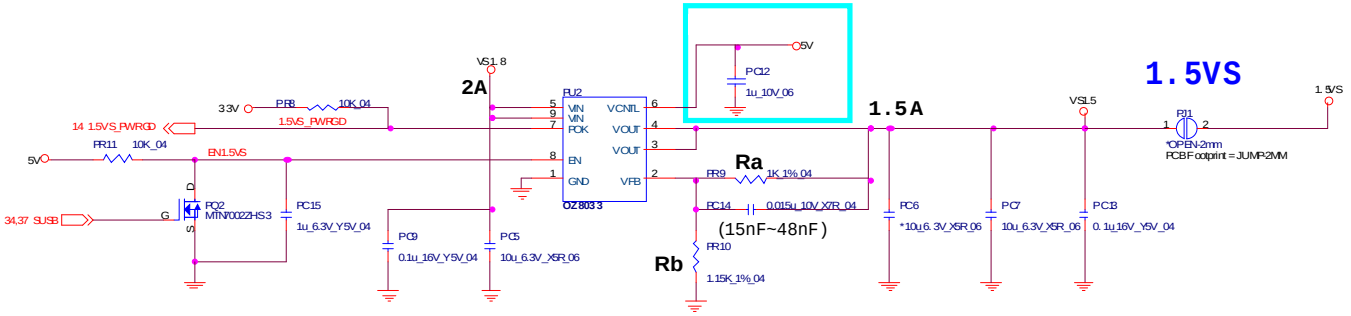
Sheet 37 of 55
Power 1.5V/0.75VS



1.5V_CTRL1	1.5_CTRL0	Voltage
1	1	1.5V
1	0	1.56.05V
0	1	1.58.05V
0	0	1.64.05V

Power 1.8VS/1.5VS



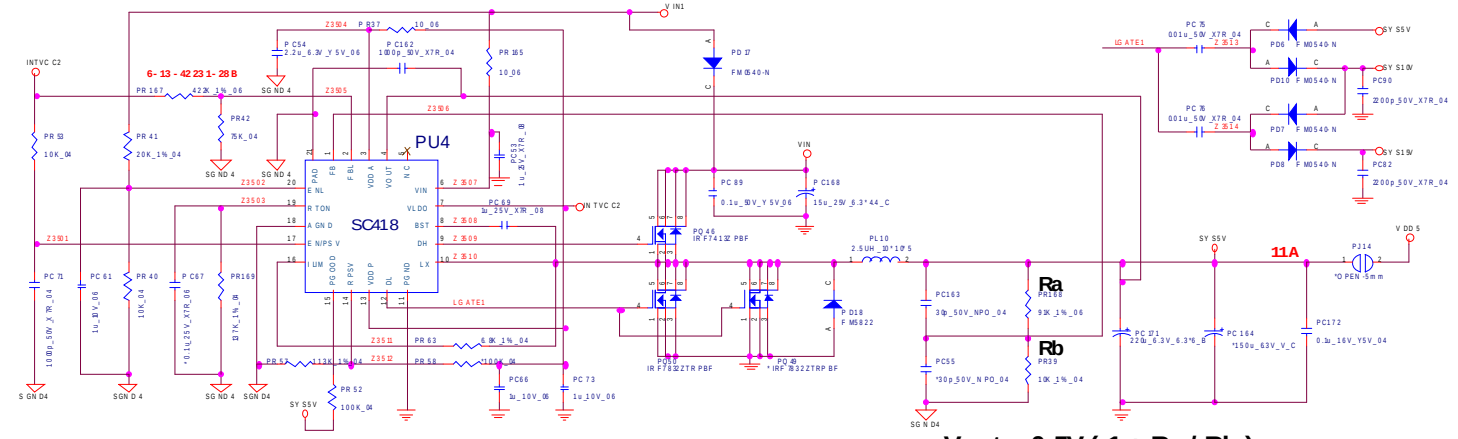


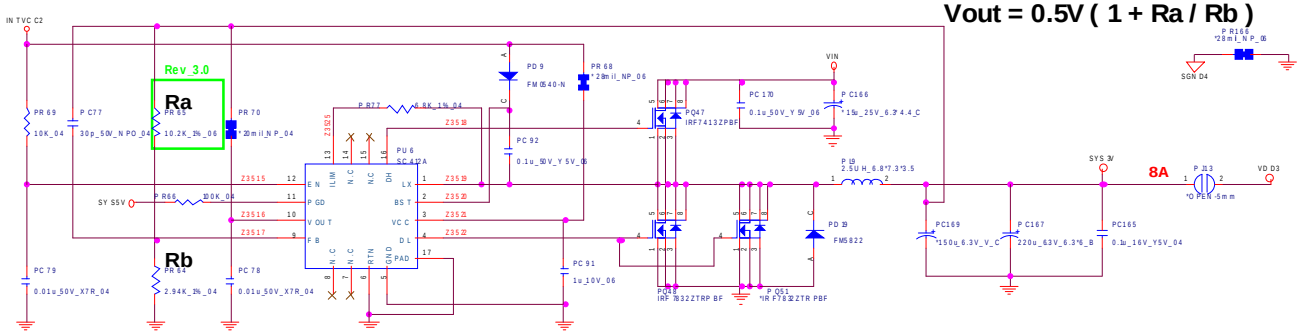
Vout = 0.8V (1 + Ra / Rb)

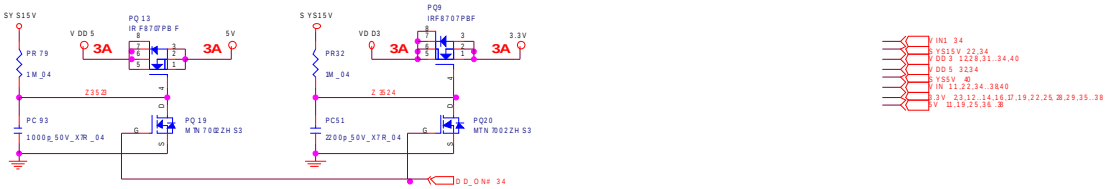
Sheet 38 of 55
Power 1.8VS/1.5VS

Power 3.3V/5V

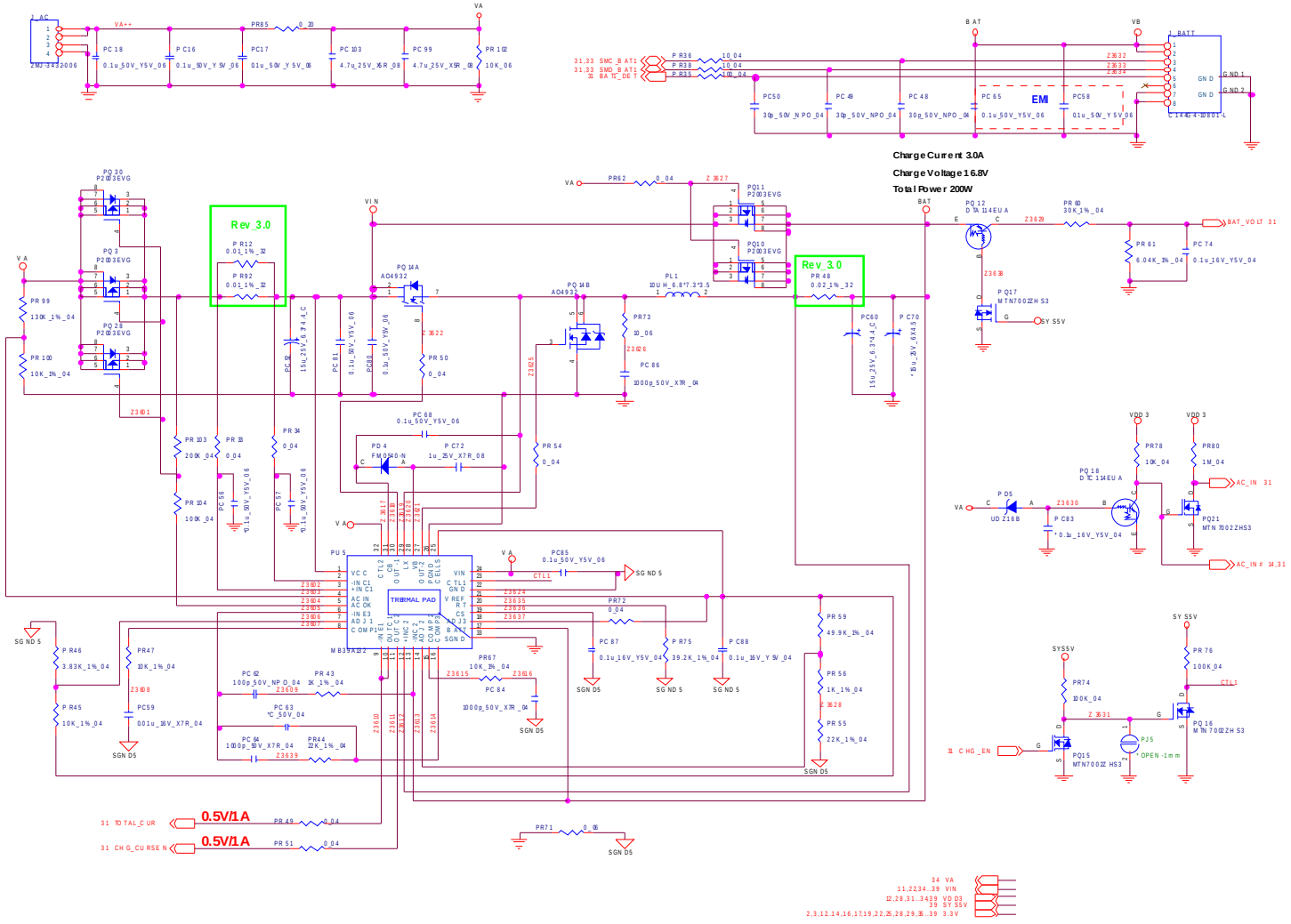
Sheet 39 of 55
Power 3.3V/5V







Power Charger, DC-In



Sheet 40 of 55
Power Charger, DC-In

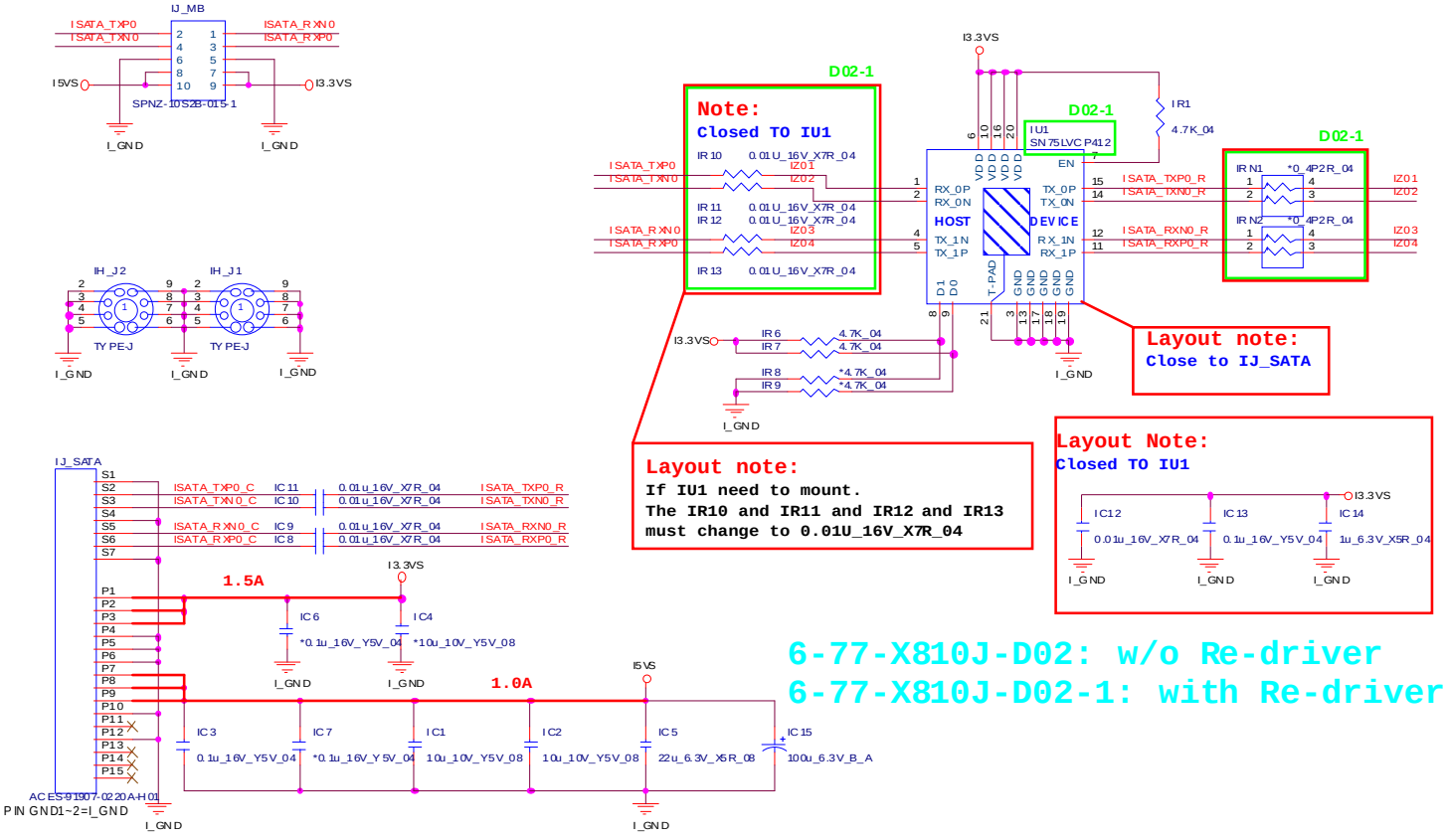
Single HDD Board

Sheet 41 of 55
Single HDD Board

SINGAL SATA HDD

	IU1	IR10 IR11 IR12 IR13	IRN1 IRN2	IR1 IR6 IR7	IC12 IC13 IC14
W/ Re-drive	V	0.01U	X	V	V
W/O Re-drive	X	0 ohm	V	X	X

D0	D1	Function
0	0	CH0 & CH1 -> 0 dB
1	0	CH0 -> 5 dB CH1 -> 0 dB
0	1	CH0 -> 0 dB CH1 -> 5 dB
1	1	CH0 -> 5 dB CH1 -> 5 dB



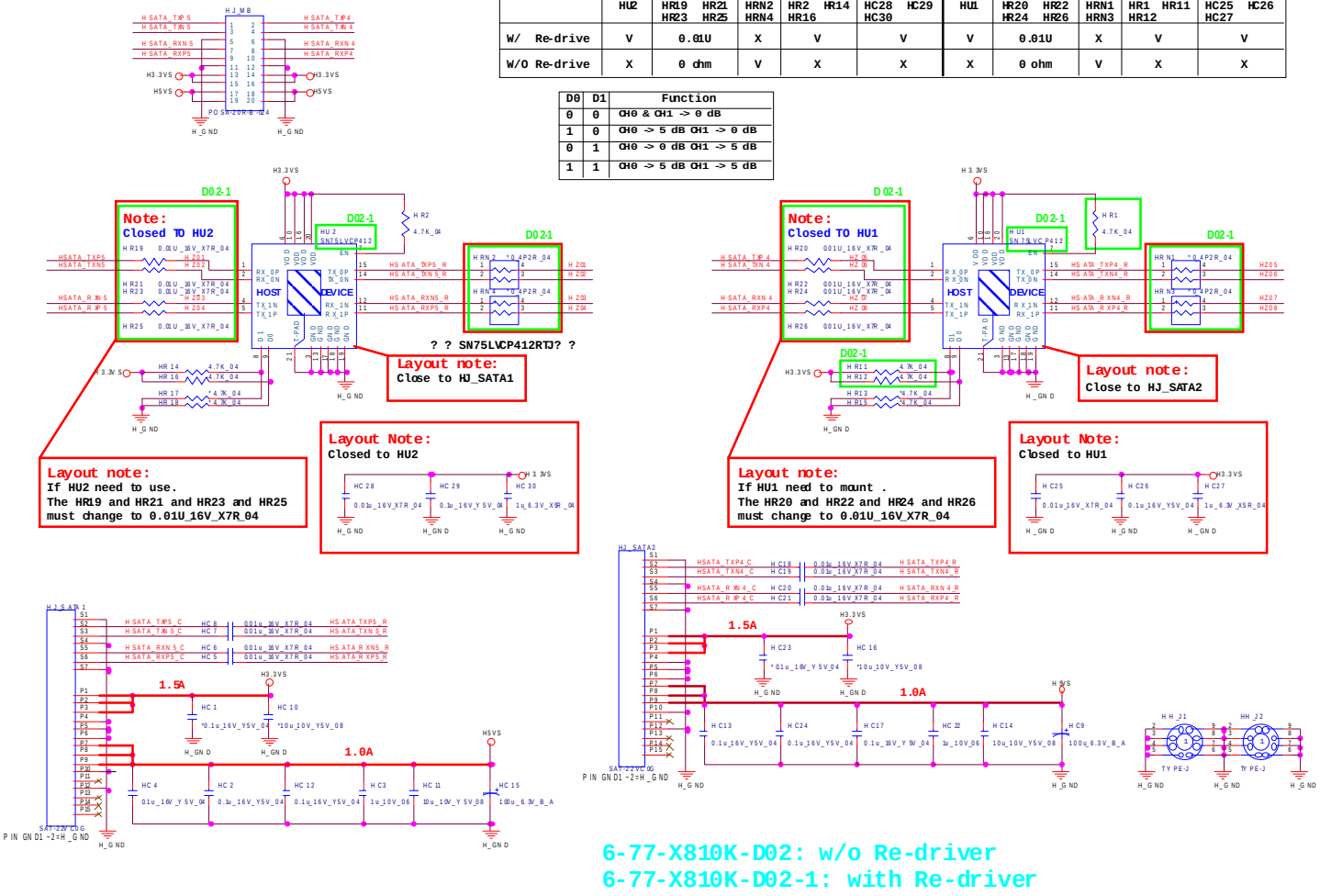
6-77-X810J-D02: w/o Re-driver
6-77-X810J-D02-1: with Re-driver

Dual HDD Board

DUAL SATA HDD

	HU2	HR19 HR21 HR23 HR25	HRN2 HRN4	HR2 HR14 HR16	HC28 HC29 HC30	HU1	HR20 HR22 HR24 HR26	HRN1 HRN3	HR1 HR11 HR12	HC25 HC26 HC27
W/ Re-drive	V	0.01U	X	V	V	V	0.01U	X	V	V
W/O Re-drive	X	0 ohm	V	X	X	X	0 ohm	V	X	X

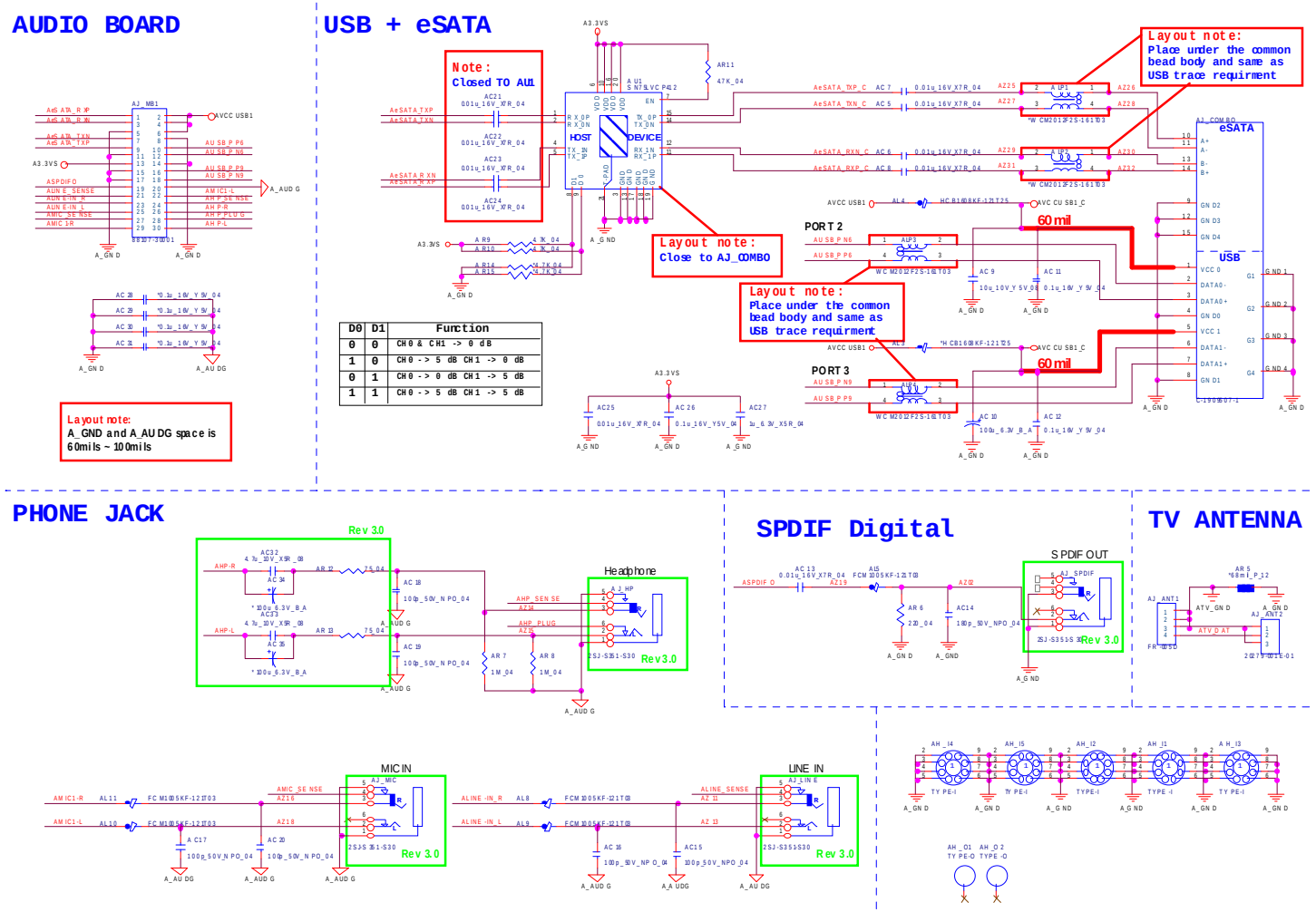
D0	D1	Function
0	0	CH0 & CH1 -> 0 dB
1	0	CH0 -> 5 dB CH1 -> 0 dB
0	1	CH0 -> 0 dB CH1 -> 5 dB
1	1	CH0 -> 5 dB CH1 -> 5 dB



6-77-X810K-D02: w/o Re-driver
6-77-X810K-D02-1: with Re-driver

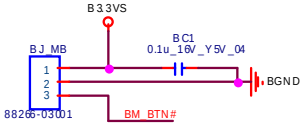
Audio Board

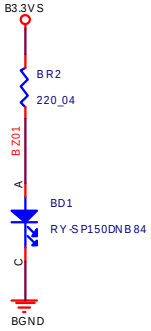
Sheet 43 of 55
Audio Board

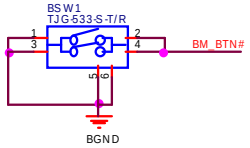


Power Button Board

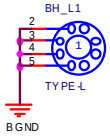
POWER BUTTON B'D





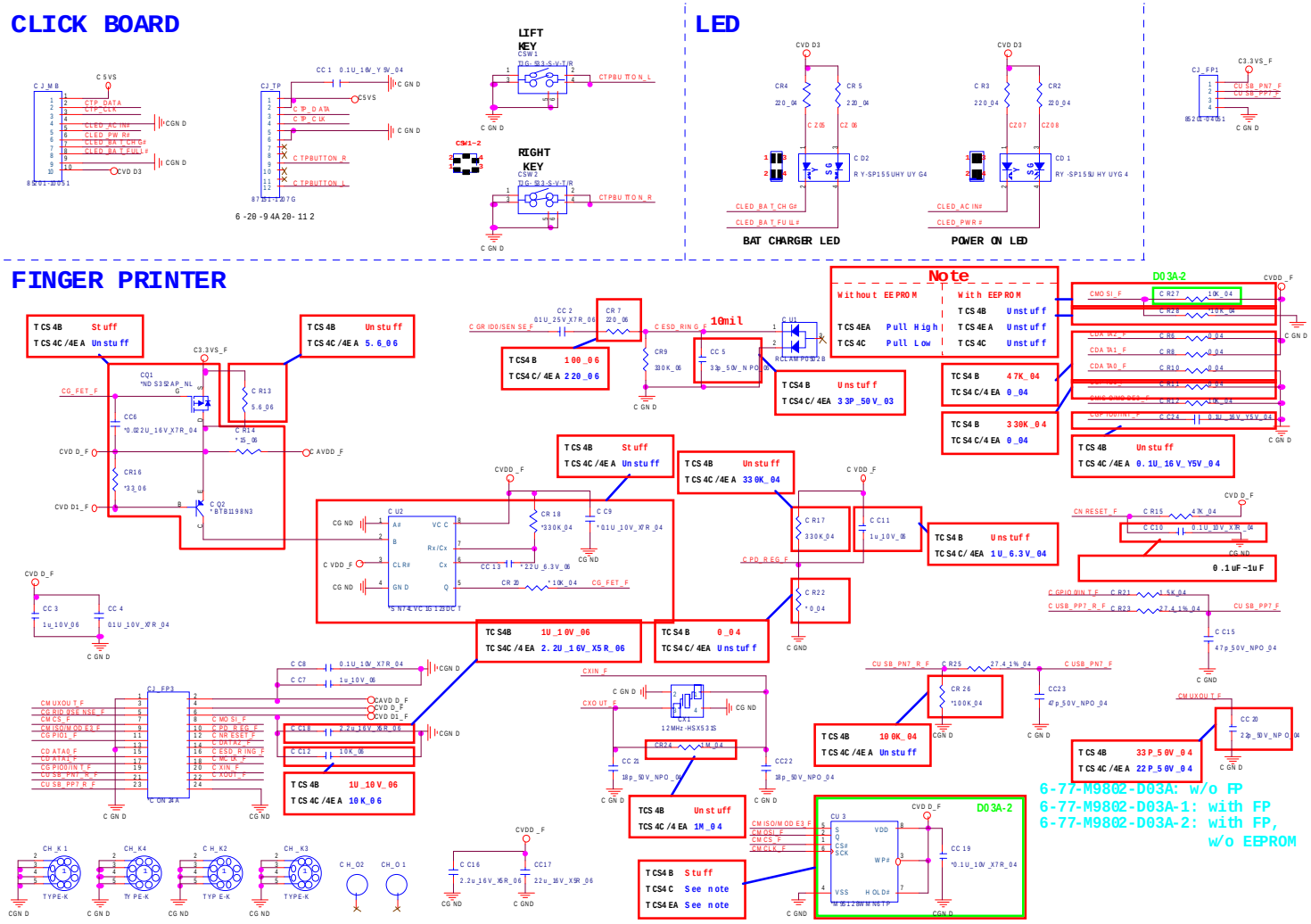


Sheet 44 of 55
Power Button Board



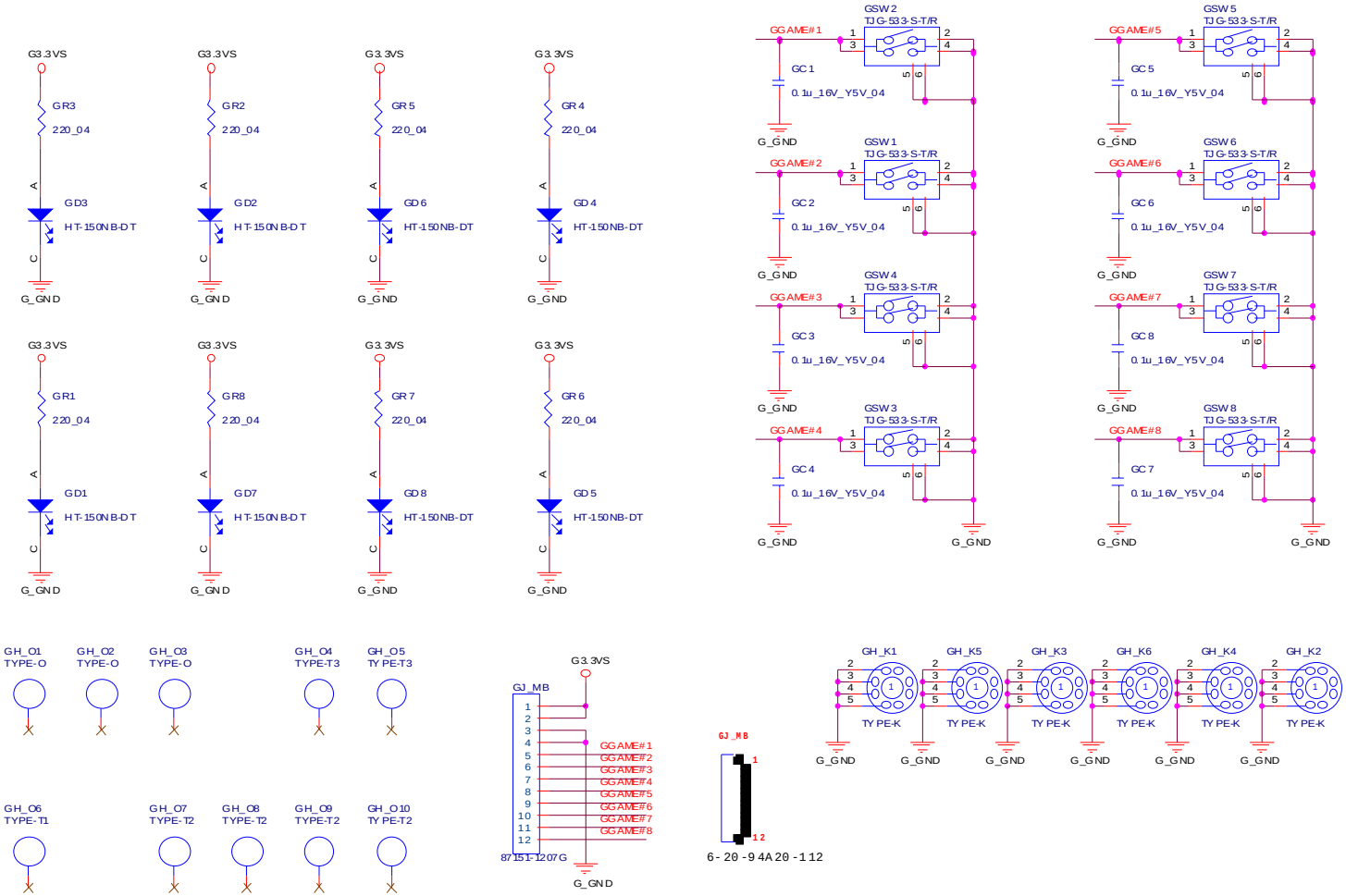
Click & FP Board

Sheet 45 of 55
Click & FP Board



Game Key Board

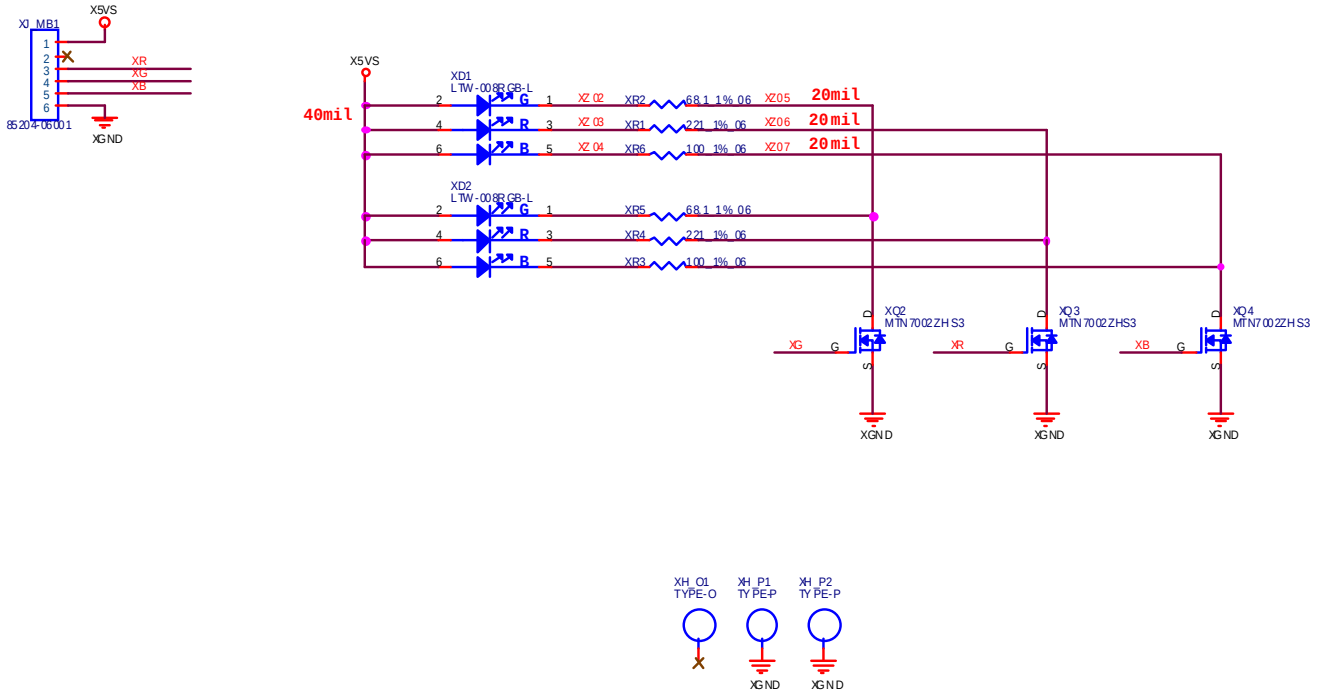
GAME KEY BOARD



Sheet 46 of 55
Game Key Board

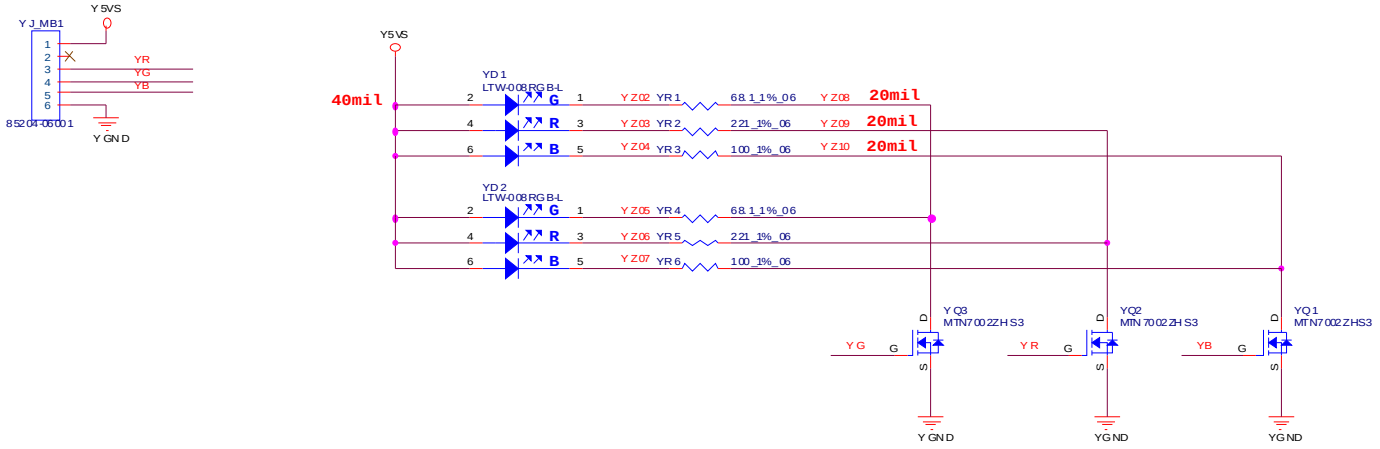
Front R Side LED Board

Sheet 47 of 55
Front R Side LED Board

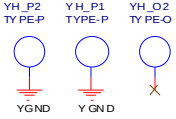


Front L Side LED Board

FRONT L SIDE LED B'd



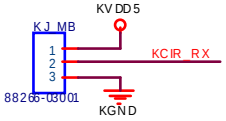
Sheet 48 of 55
Front L Side LED Board

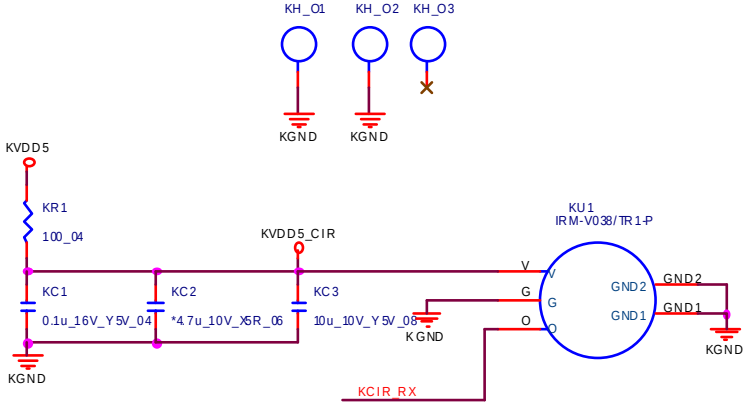


CIR Board

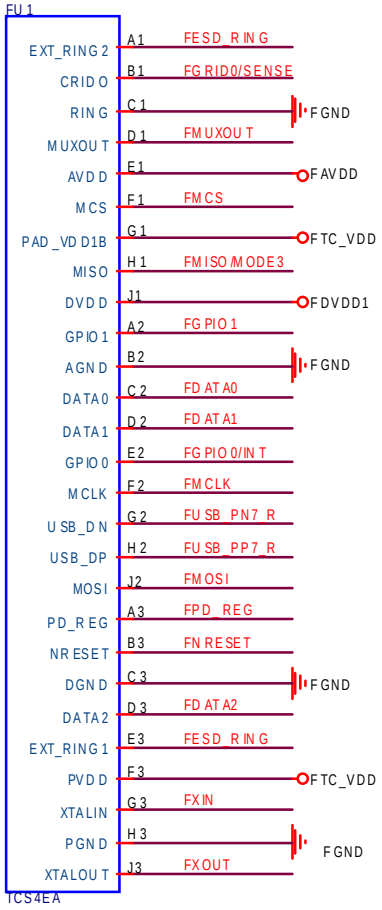
CIR BOARD

Sheet 49 of 55
CIR Board

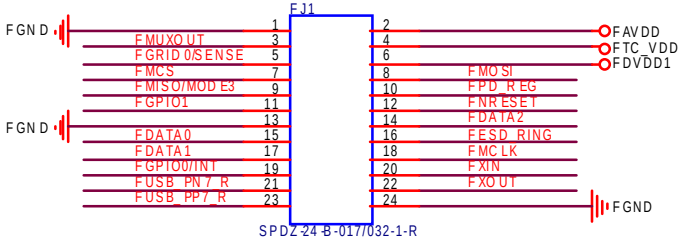




Finger Board



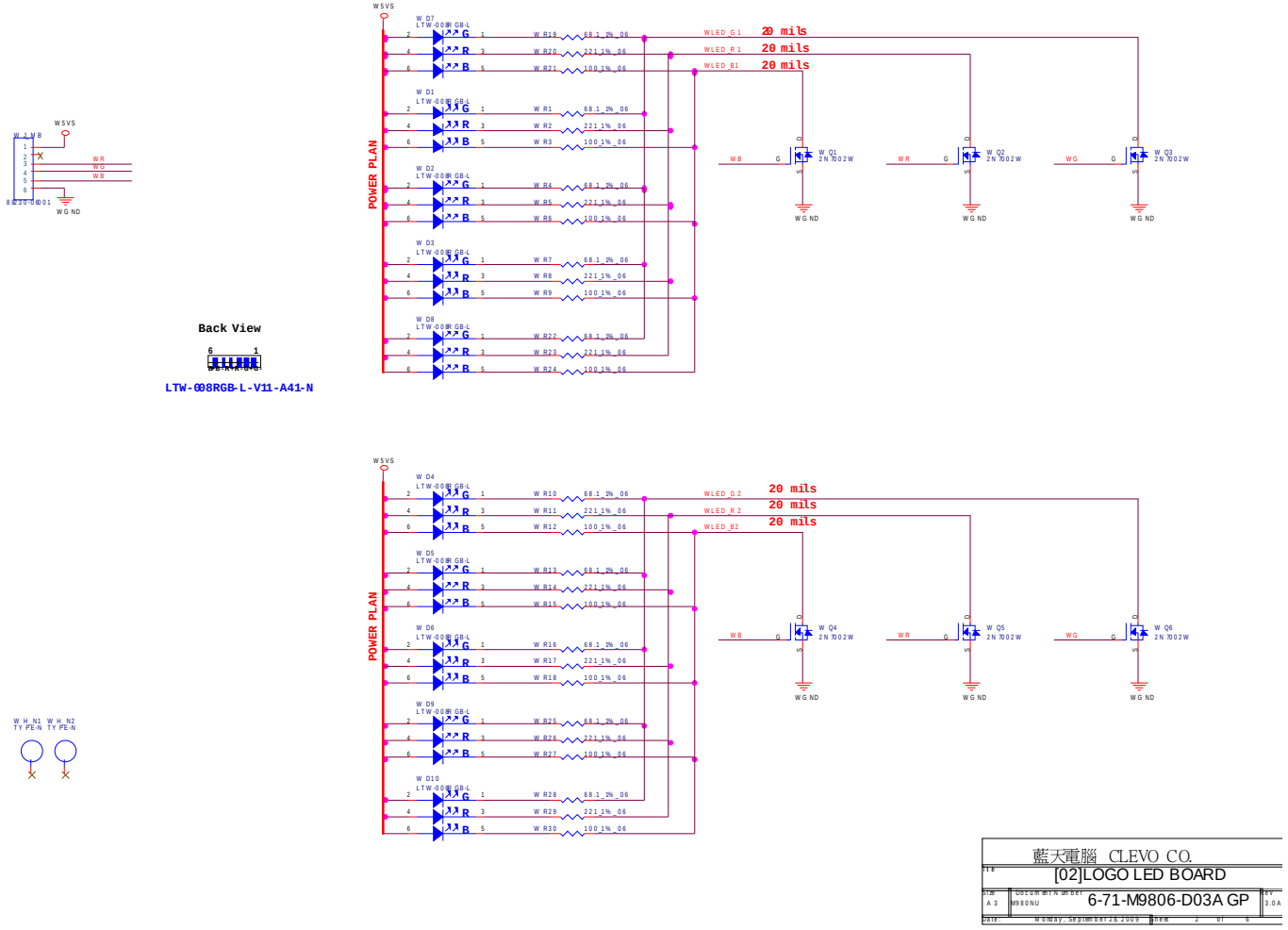
Change Footprint



Sheet 50 of 55
Finger Board

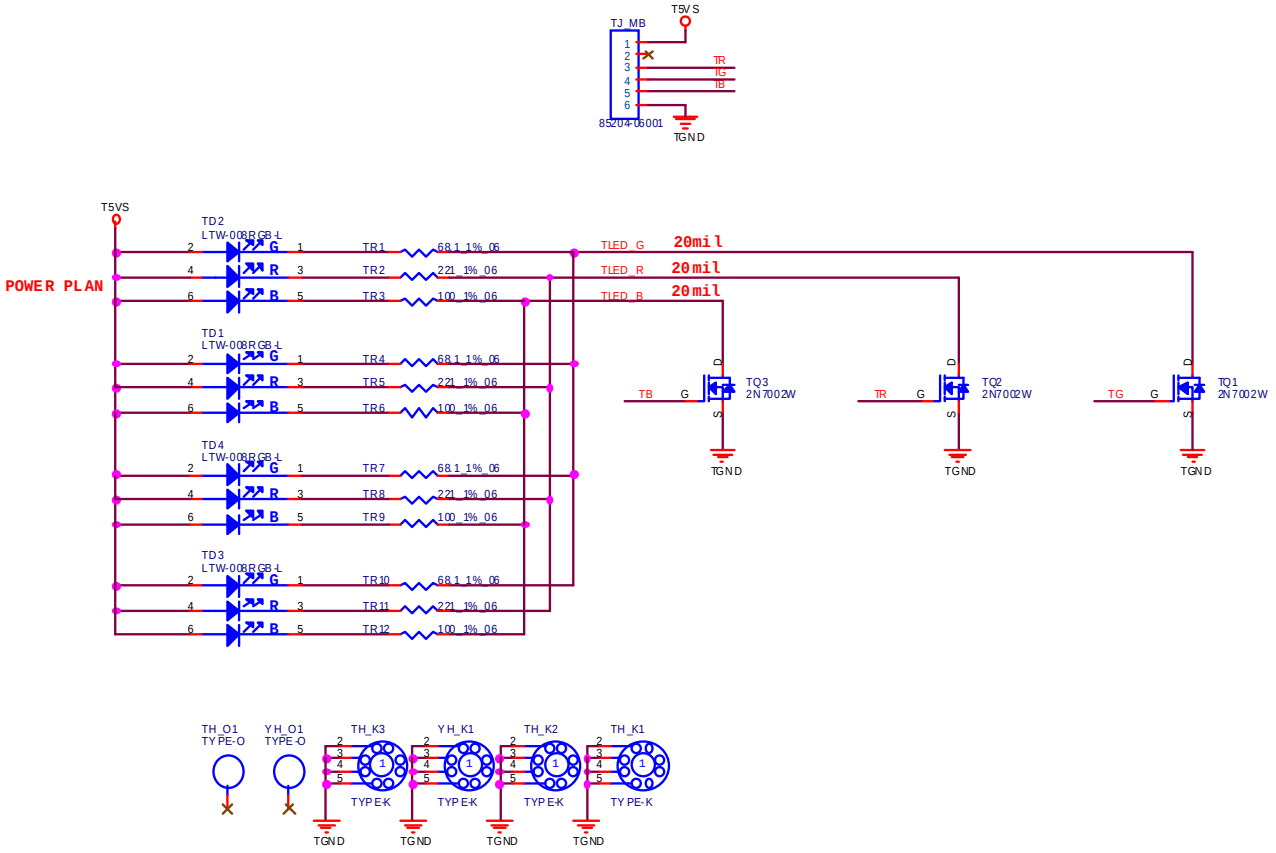
Logo LED Board

Sheet 51 of 55
Logo LED Board



TouchPad LED Board

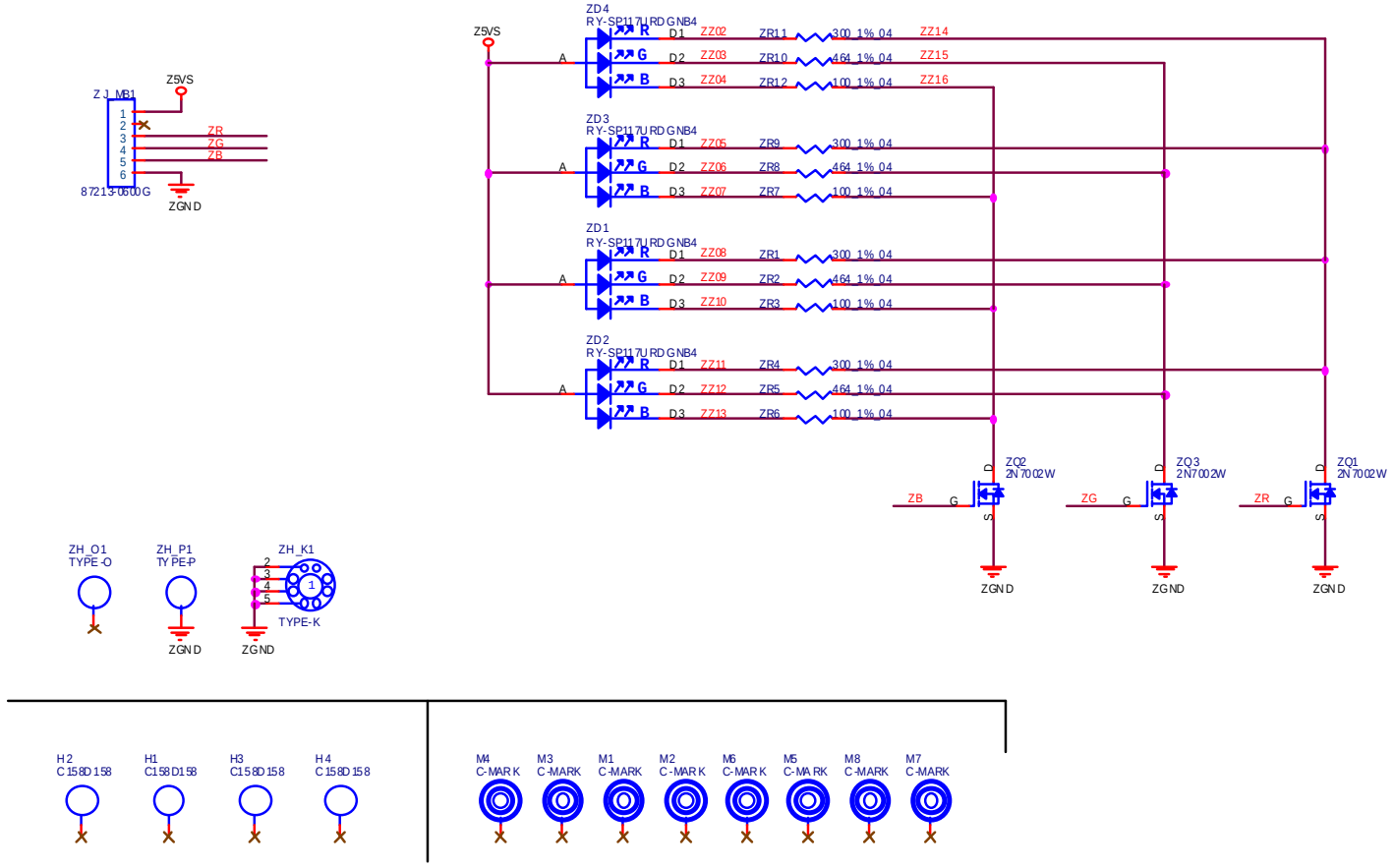
TOUCH PAD LED B'd



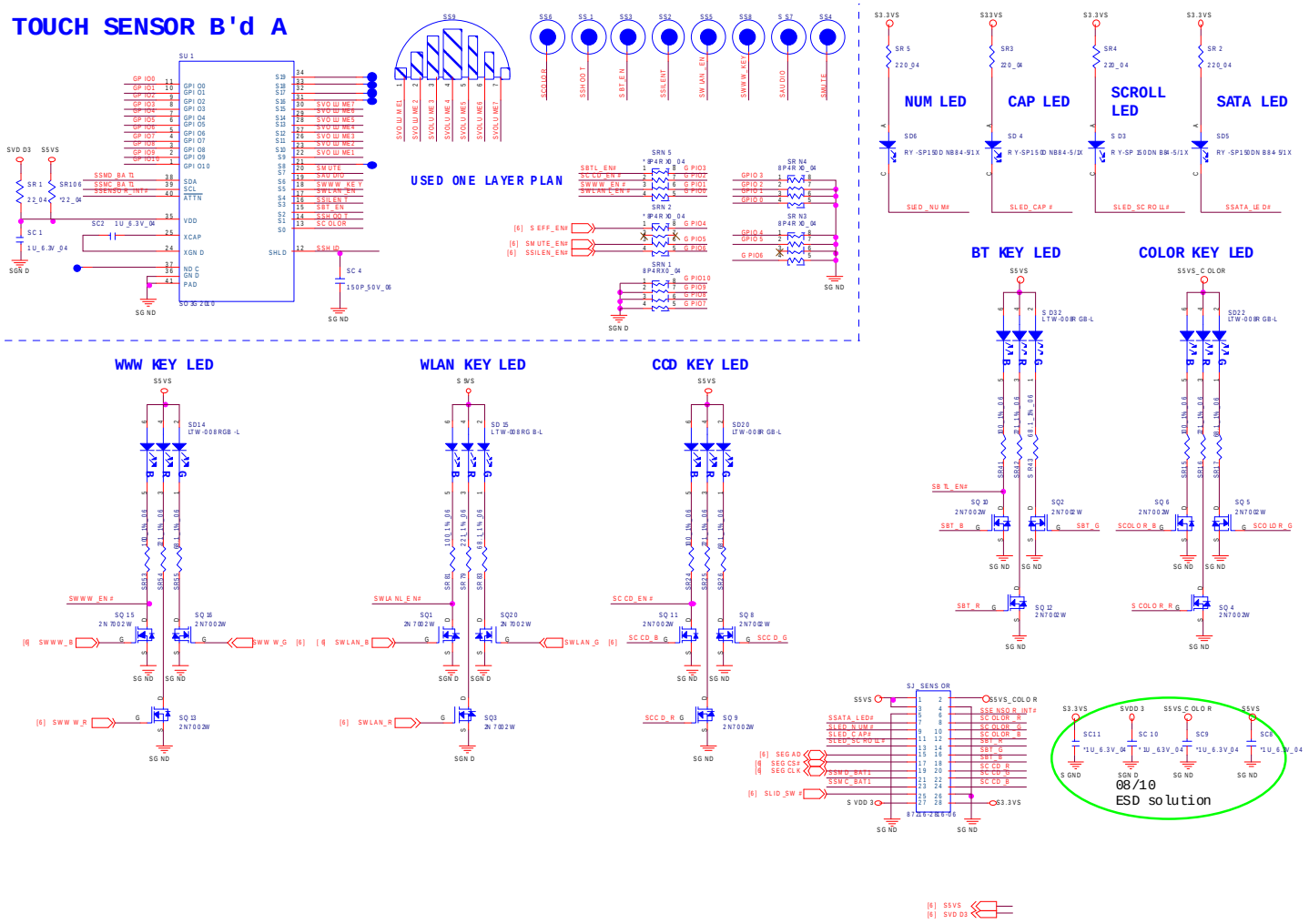
Sheet 52 of 55
TouchPad LED Board

Back L Side LED Board

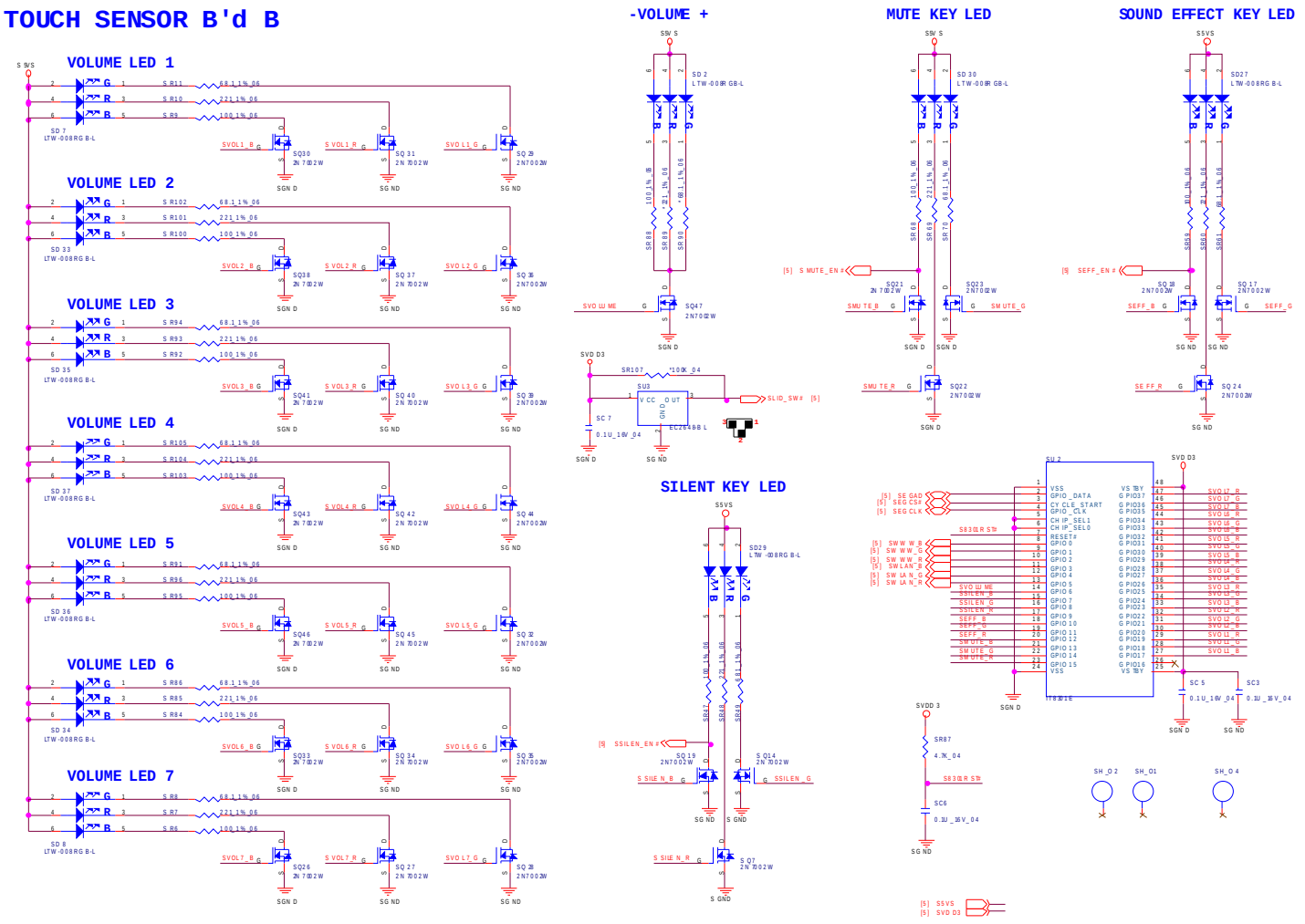
Sheet 53 of 55
Back L Side LED Board



Touch Sensor Board A



Sheet 54 of 55
Touch Sensor Board A

Touch Sensor Board B

Sheet 55 of 55
Touch Sensor
Board B