SERVICE MANUAL

W241BU/W241BUQ/W240BU/W245BUQ/W248BUQ/W249BUQ

Notebook Computer

W241BU / W241BUQ / W240BU / W245BUQ / W248BUQ / W249BUQ

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
May 2011

Trademarks

AMD® is a registered trademark of Advanced Micro Devices, Inc.
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 ***W241BU/ W241BUQ/W240BU/W245BUQ/W248BUQ/W249BUQ*** series notebook PC.

The following information is included:

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

Appendix A, Part Lists
Appendix B, Schematic Diagrams
Appendix C, Updating the FLASH ROM BIOS

IMPORTANT SAFETY INSTRUCTIONS

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

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit with an AC Input of 100 - 240V, 50 - 60Hz, DC Output of 19V, 1.58A (**30** Watts) minimum AC/DC Adapter.

CAUTION

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

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
This device may not cause harmful interference.
This device must accept any interference received, including interference that may cause undesired operation.

Instructions for Care and Operation

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

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

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.*
	

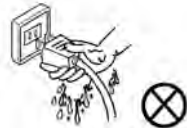
Power Safety

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.

System Startup

1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Insert the battery and make sure it is locked in position.
4. Securely attach any peripherals you want to use with the computer (e.g. keyboard and mouse) to their ports.
5. Attach the AC/DC adapter to the DC-In jack on the left of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
6. Use one hand to raise the lid/LCD to a comfortable viewing angle (do not exceed 130 degrees); use the other hand to support the base of the computer (**Note**: **Never** lift the computer by the lid/LCD).
7. Press the power button to turn the computer "on".

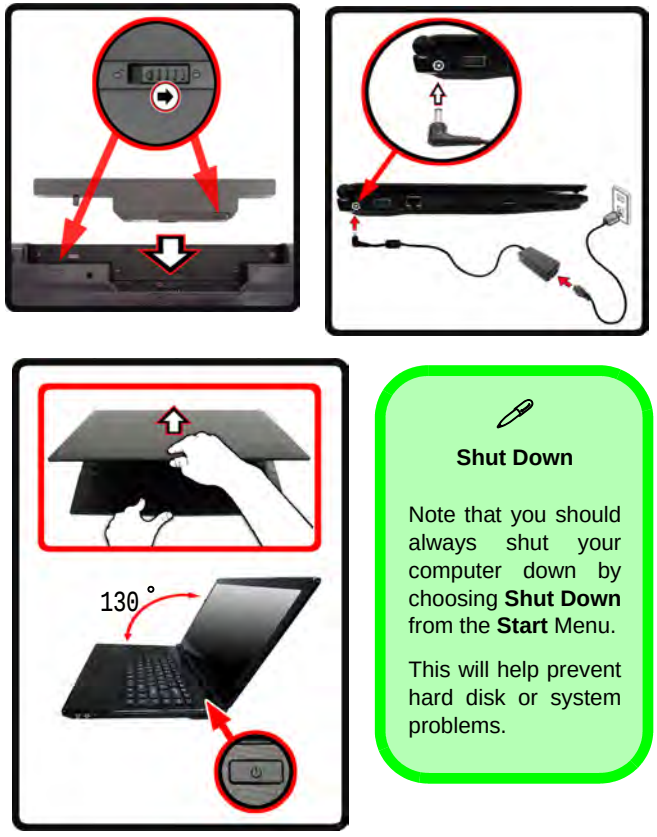


Figure 1
Opening the Lid/LCD/Computer with AC/DC Adapter Plugged-In

Shut Down

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

This will help prevent hard disk or system problems.

Contents

Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the ***W241BU/W241BUQ/W240BU/W245BUQ/ W248BUQ/W249BUQ*** 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 ***W241BU/W241BUQ/W240BU/W245BUQ/W248BUQ/W249BUQ*** 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.

Models Differences

This notebook series includes different models that vary slightly in design style, color and general appearance. Note that though your computer may look slightly different from that pictured throughout this documentation, all ports, jacks, indicators, specifications and general functions are the same for all the design styles.

Specifications

Latest Specification Information

The specifications listed here are correct at the time of sending them to the press. Certain items (particularly processor types/speeds) may be changed, delayed or updated due to the manufacturer's release schedule. Check with your service center for more details.

CPU

The CPU is not a user serviceable part. Accessing the CPU in any way may violate your warranty.

Processor Options

AMD-C Series Accelerated Processing Unit - C30 (1.2GHz)

512KB L2 Cache, 40nm, DDR3-1066MHz, TDP 9W

AMD-C Series (Dual-Core) Accelerated Processing Unit - C50 (1.0GHz)

1MB L2 Cache, 40nm, DDR3-1066MHz, TDP 9W

Core Logic

AMD A50M FCH

LCD

14" (35.56cm) HD TFT LCD

Memory

One 204 Pin SO-DIMM Socket Supporting **DDR3 1066/ 1333MHz** Memory

Memory Expandable up to **4GB**

BIOS

One 16Mb SPI Flash ROM

AMI BIOS

Storage

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

(**Factory Option**) Dummy ODD for Models W240,W241and W245 only

One Changeable 2.5" 9.5 mm (h) SATA HDD

Video Adapter

AMD Radeon™ HD 6250 (APU Integrated)

Shared Memory Architecture of up to **1469MB**

Microsoft® DirectX11 Compatible

Audio

High Definition Audio Compliant Interface

2 * Built-In Speakers

Built-In Microphone

Security

Security (Kensington® Type) Lock Slot

BIOS Password

Communication

Built-In 10Mb/100Mb Ethernet LAN

(**Factory Option**) 300K/1.3M Pixel USB PC Camera Module

(**Factory Option**) 3.75G/HSPA Mini-Card Module

WLAN/ Bluetooth Half Mini-Card Modules:

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

(**Factory Option**) Wireless LAN (**802.11b/g/n**) + Bluetooth 3.0

Keyboard

“WinKey” keyboard (with embedded numeric keypad)

Pointing Device

Built-in Touchpad

Interface

Three USB 2.0 Ports

One HDMI-Out Port

One Headphone-Out Jack

One Microphone-In Jack

One RJ-45 LAN Jack

One DC-in Jack

One External Monitor Port

Card Reader

Embedded Multi-In-1 Card Reader

- MMC (MultiMedia Card) / RS MMC
- SD (Secure Digital) / Mini SD / SDHC/ SDXC
- MS (Memory Stick) / MS Pro / MS Duo

Mini Card Slots

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

(**Factory Option**) Slot 2 for **3.75G/HSPA** Module

Power

3 Cell Smart Lithium-Ion Battery Pack, 24.42WH

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

(**Factory Option**) 4 Cell Smart Lithium-Ion Battery Pack

Full Range AC/DC Adapter

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

DC Output: 19V, 1.58A (**30W**)

Environmental Spec

Temperature

Operating: 5°C - 35°C

Non-Operating: -20°C - 60°C

Relative Humidity

Operating: 20% - 80%

Non-Operating: 10% - 90%

Dimensions & Weight

340mm (w) * 238mm (d) * 13.9 - 31.8mm (h)

2.05 kg (with 24.42WH Battery and ODD)

Or

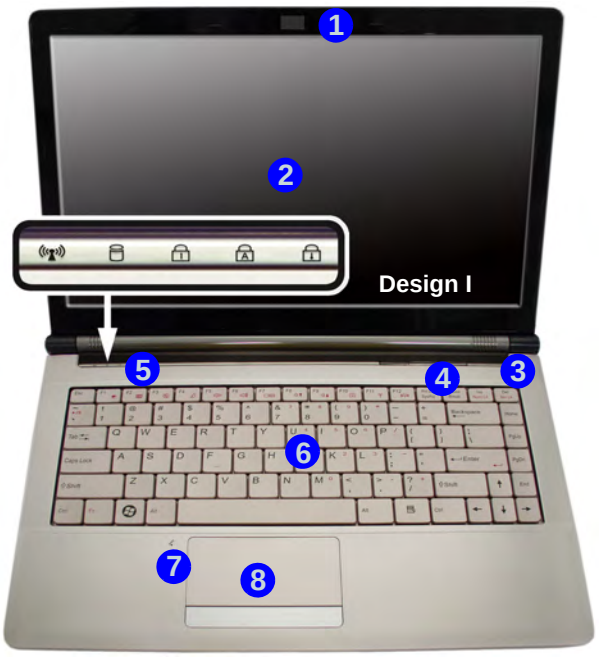
341mm (w) * 238.5mm (d) * 16 - 34mm (h)

2.05 kg (with 24.42WH Battery and ODD)

External Locator - Top View with LCD Panel Open

Figure 1
Top View

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



External Locator - Front & Right side Views

Figure 2
Front Views

1. LED Power Indicators

Figure 3
Right Side Views

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

External Locator - Left Side & Rear View

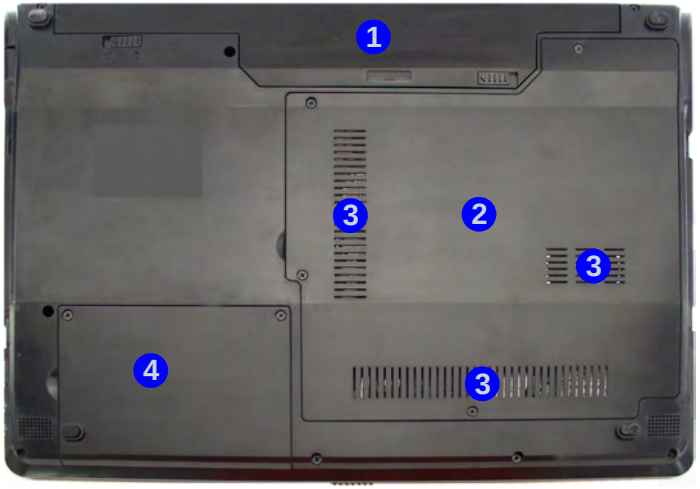
Figure 4
Left Side View

1. DC-In Jack
2. External Monitor Port
3. RJ-45 LAN Jack
4. HDMI-Out Port
5. 2 * USB 2.0 Ports
6. Vent
7. Multi-in-1 Card Reader

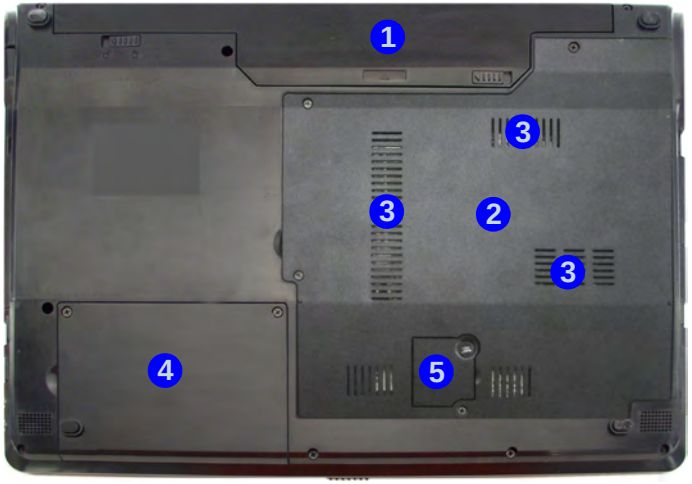
Figure 5
Rear View

1. Battery

External Locator - Bottom View



WITHOUT 3G



WITH 3G

Figure 6
Bottom View

1. Battery
2. Component Bay Cover
3. Vent/Fan Intake/ Outlet
4. Hard Disk Bay Cover
5. 3.75G/HSPA USIM Card Cover (optional)

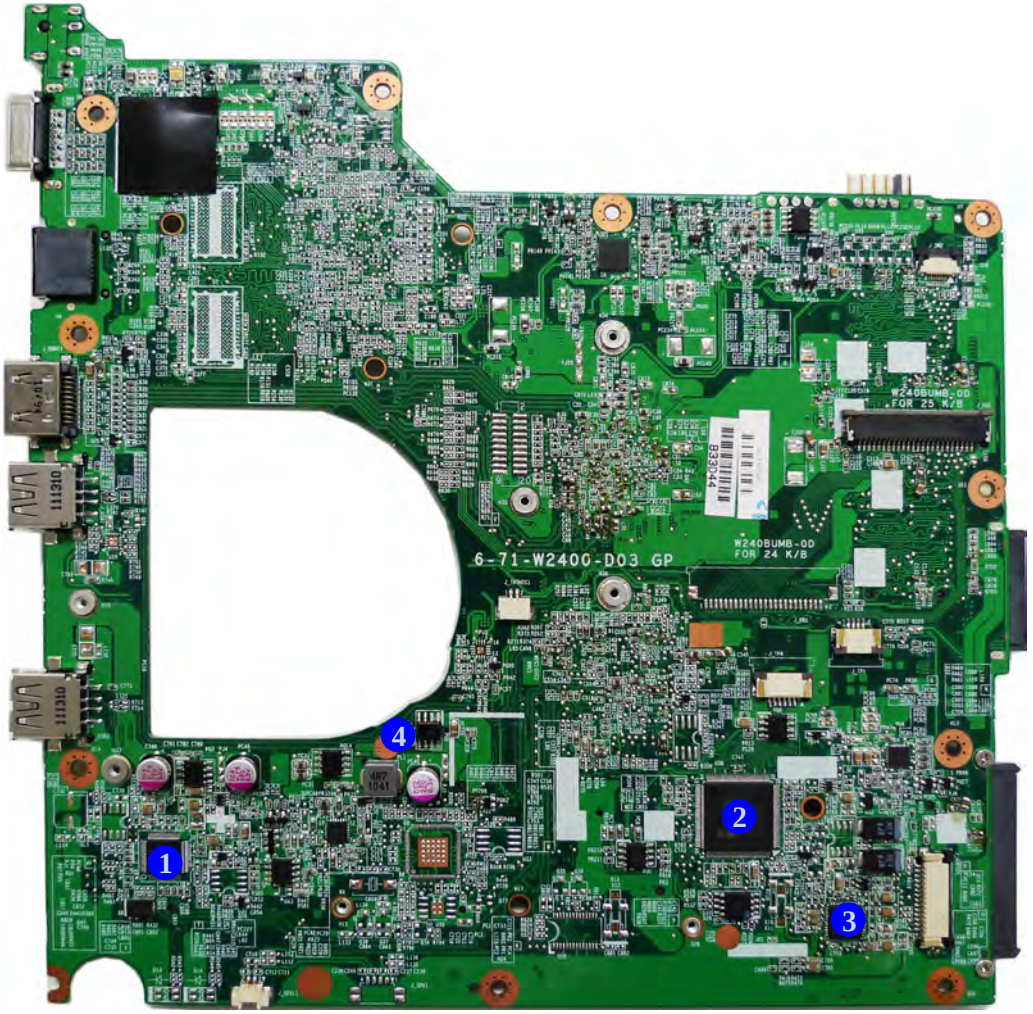
Overheating

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. JMC261
2. ITE T851E
3. AZALIA Codec



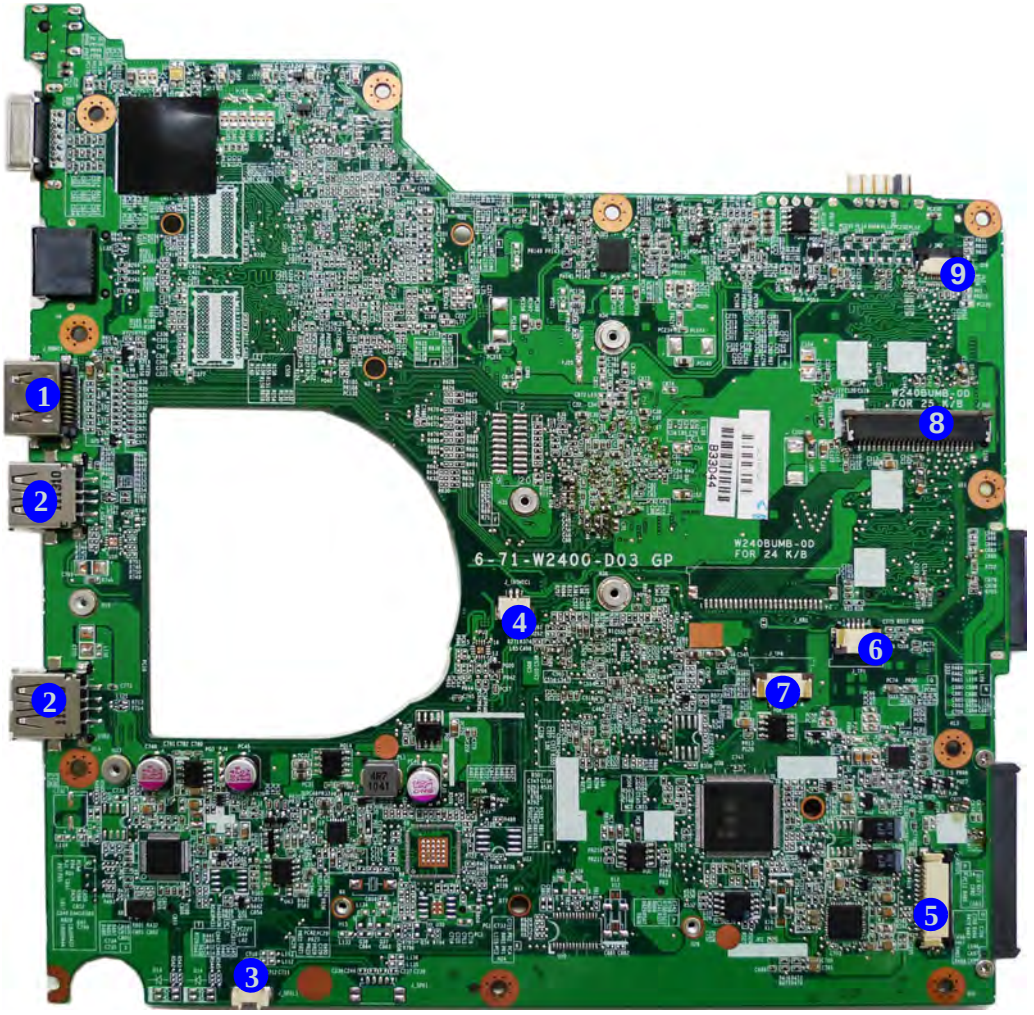
Mainboard Overview - Bottom (Key Parts)

Figure 8
Mainboard Bottom Key Parts

1. Memory Slots DDR3 SO-DIMM
2. Accelerated Processing Unit
3. AMD Hudson M1 FCH
4. Mini-Card Connector (3G Module)
5. SIMLOCK
6. Mini-Card Connector (WLAN Module)
7. CMOS Battery
8. Card Reader Socket

Mainboard Overview - Top (Connectors)

Figure 9
Mainboard Top Connectors



1. HDMI-Out Port
2. USB Port 2.0
3. Speaker Cable Connector
4. Microphone Cable Connector
5. Audio Board Connector
6. TouchPad Cable Connector 2
7. TouchPad Cable Connector 1
8. Keyboard Cable Connector
9. Switch Board Cable Connector

Mainboard Overview - Bottom (Connectors)

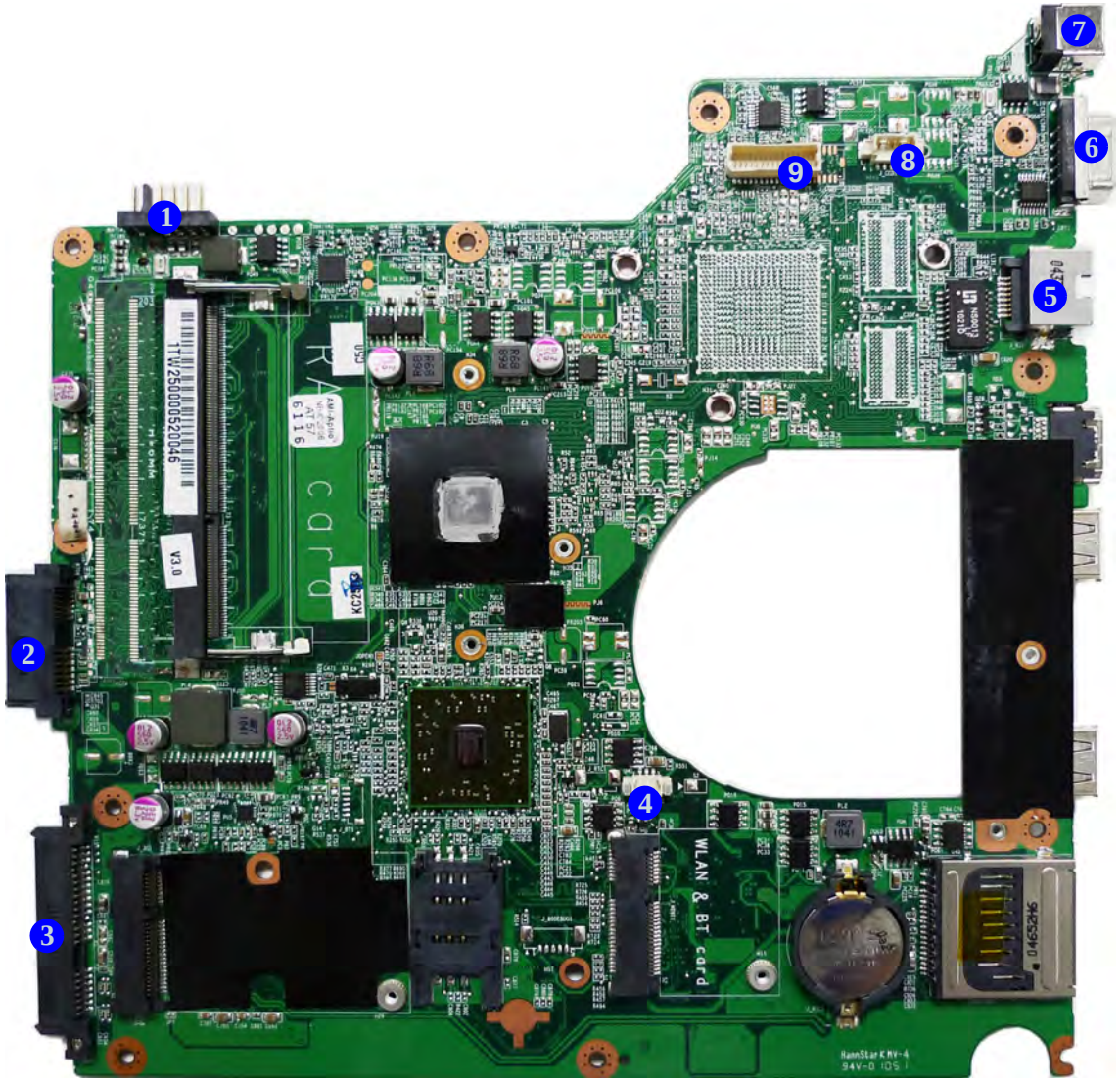


Figure 10
Mainboard Bottom Connectors

1. Battery Connector
2. ODD Connector
3. HDD Connector
4. CPU Fan Cable Connector
5. RJ-45 LAN Jack
6. External Monitor Port
7. DC-In Jack
8. CCD Cable Connector
9. LCD Cable Connector

Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the ***W241BU/W241BUQ/W240BU/W245BUQ/ W248BUQ/W249BUQ*** series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

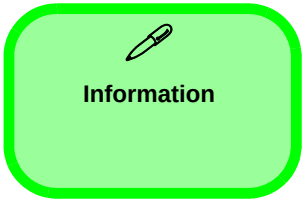
We suggest you completely review any procedure before you take the computer apart.

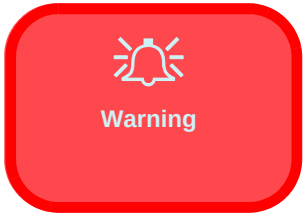
Procedures such as upgrading/replacing the RAM, optical device and hard disk are included in the User's Manual but are repeated here for your convenience.

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 HDD:

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

To remove the Optical Device:

1. Remove the battery *page 2 - 5*
2. Remove the Optical device *page 2 - 8*

To remove the System Memory:

1. Remove the battery *page 2 - 5*
2. Remove the system memory *page 2 - 9*

To remove and install a Processor:

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

To remove the WLAN Module:

1. Remove the battery *page 2 - 5*
2. Remove the wireless LAN *page 2 - 11*

To remove the 3.75G Module:

1. Remove the battery *page 2 - 5*
2. Remove the 3.75G *page 2 - 12*

To remove the Keyboard:

1. Remove the battery *page 2 - 5*
2. Remove the keyboard *page 2 - 13*

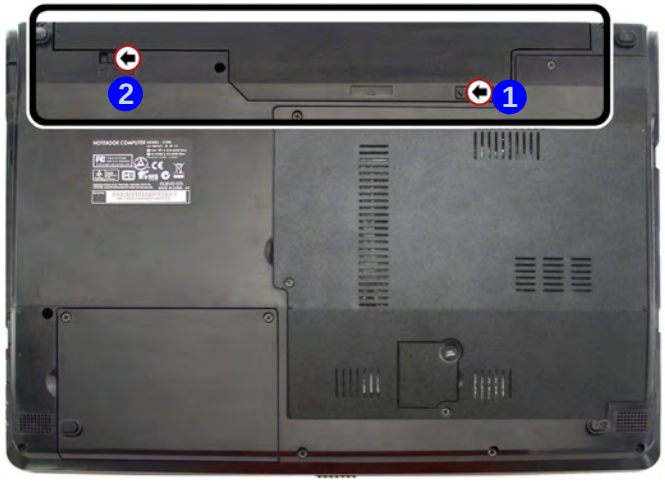
Removing the Battery

1. Turn the computer **off**, and turn it over.
2. Slide the latch 1 in the direction of the arrow.
3. Slide the latch 2 in the direction of the arrow, and hold it in place.
4. Slide the battery 3 in the direction of the arrow 4.

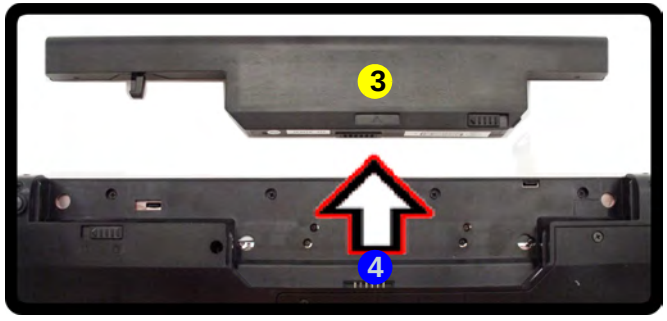
Figure 1
Battery Removal

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

a.



b.



3. Battery

Figure 2
HDD Assembly Removal

a. Locate the HDD bay cover and remove the screws.

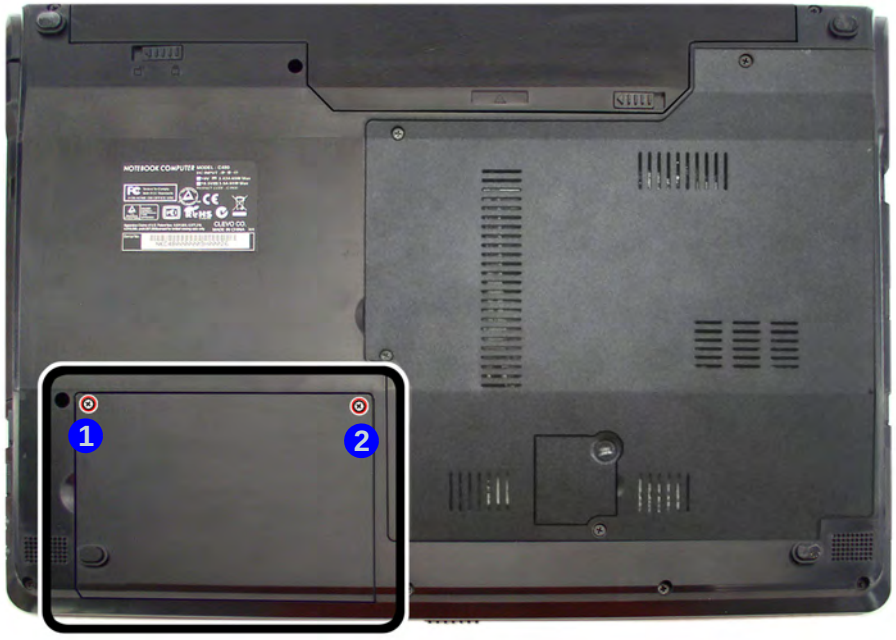
Removing the Hard Disk Drive

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

Hard Disk Upgrade Process

1. Turn **off** the computer, and remove the battery (***page 2 - 5***).
2. Locate the hard disk bay cover and remove screws 1 & 2.

a.



- 2 Screws

HDD System Warning

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

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

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

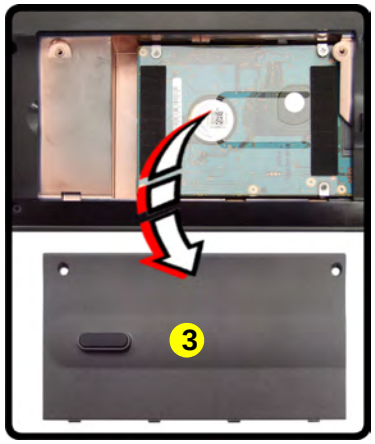
If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

3. Remove the hard disk bay cover 3.
4. Grip the tab and slide the hard disk in the direction of arrow 4.
5. Lift the hard disk out of the bay 5.
6. Remove the screws 6 - 9 and the mylar cover 10 from the hard disk 11 .
7. Reverse the process to install a new hard disk (do not forget to replace all the screws and covers).

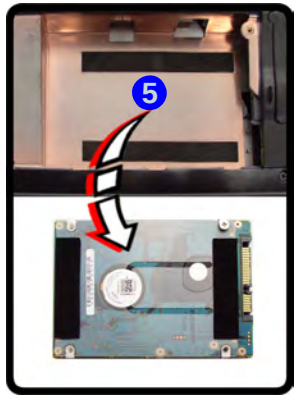
Figure 3
HDD Assembly Removal (cont'd.)

b. Remove the HDD bay cover.
c. Grip the tab and slide the HDD in the direction of the arrow.
d. Lift the HDD assembly out of the bay.
e. Remove the screw and mylar cover.

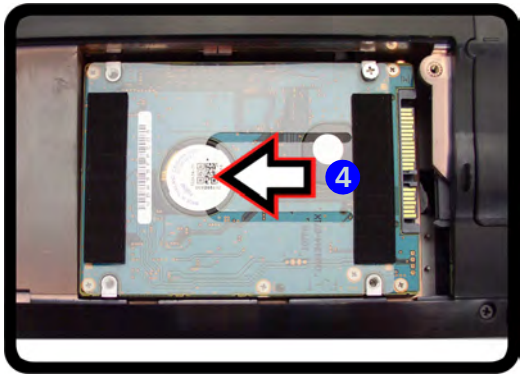
b.



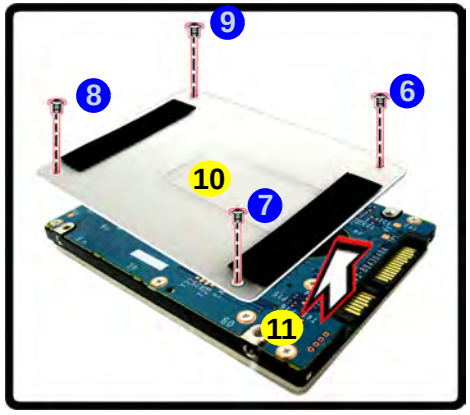
d.



c.



e.



3. HDD Bay Cover
10. Mylar Cover
11. HDD

- 4 Screws

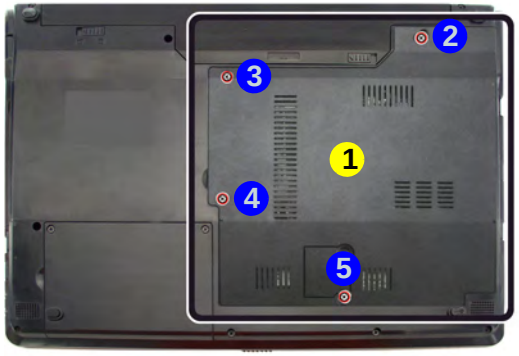
Figure 4
Optical Device Removal

a. Remove the screws.
b. Remove the cover.
c. Remove the screw and push the optical device out off the computer at point 8.

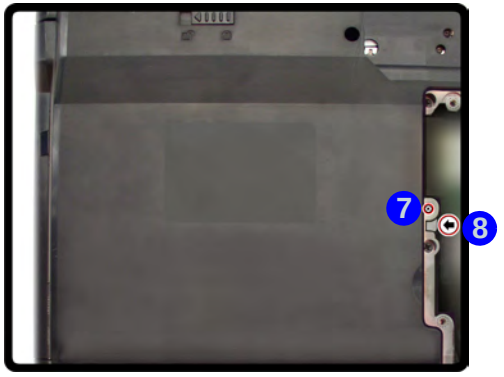
Removing the Optical (CD/DVD) Device

1. Turn **off** the computer, and remove the battery (*page 2 - 5*).
2. Locate the RAM & CPU bay cover 1, and remove screws 2 - 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 cover 1.
5. Remove the screw at point 7, and use a screwdriver to carefully push out the optical device 9 at point 8.
6. Insert the new device and carefully slide it into the computer (the device only fits one way. DO NOT FORCE IT; The screw holes should line up).
7. Restart the computer to allow it to automatically detect the new device.

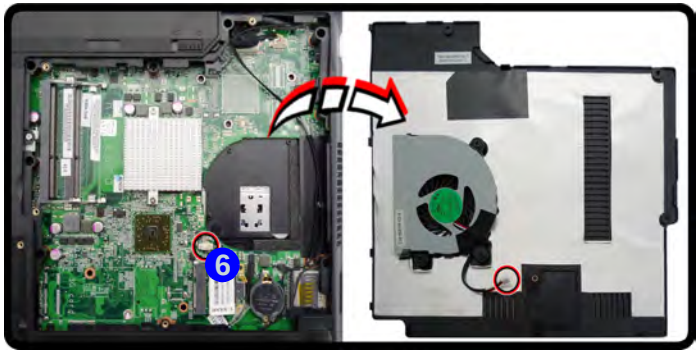
a.

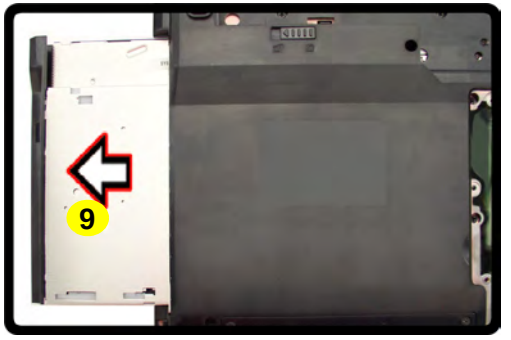


c.



b.





1. Component Bay Cover
9. Optical Device

- 5 Screws

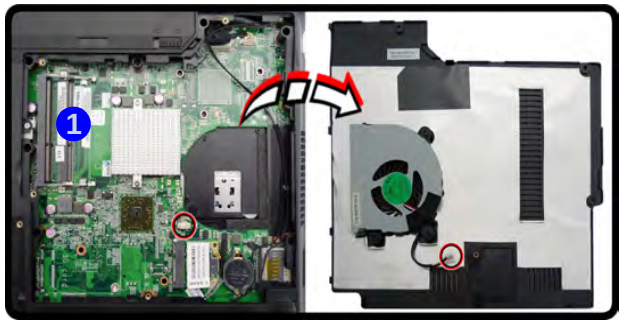
Removing the System Memory (RAM)

The computer has one memory socket for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting **DDR3** 1333/ 1066MHz. The main memory can be expanded up to 8GB. The SO-DIMM modules supported are 1GB, 2GB and 4GB and **DDRIII** 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, remove the battery (*page 2 - 5*) and the component bay cover (*page 2 - 8*).
2. The RAM modules will be visible at point 1 on the main board.
3. Gently pull the two release latches on the sides of the memory socket.
4. The RAM module 2 will pop-up (*Figure 6b*), and you can then remove it.

a.



b.

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

Figure 5
RAM Module Removal

a. Locate the memory socket.
b. Remove the module.

Contact Warning

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

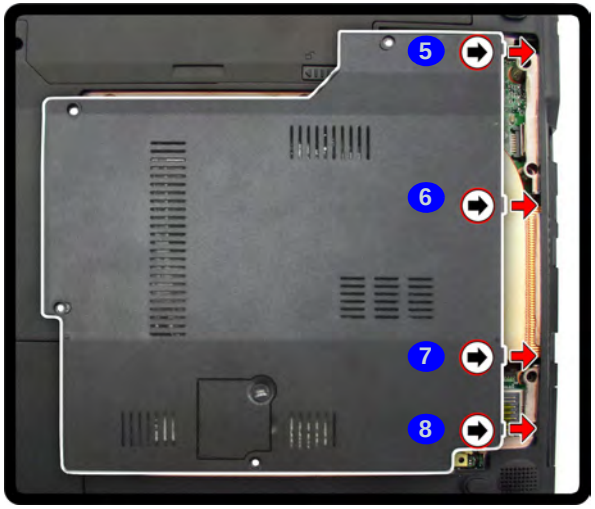
2. RAM Module

Figure 6
RAM Module Removal (cont'd.)

d. Properly re-insert the bay cover pins.

8. Replace the bay cover and screws (**make sure you reconnect the fan cable before screwing down the bay cover**).
Note that there are four 5 - 8 cover pins which need to be aligned with slots in the case, to insure a proper cover fit, before screwing down the bay cover.

c.



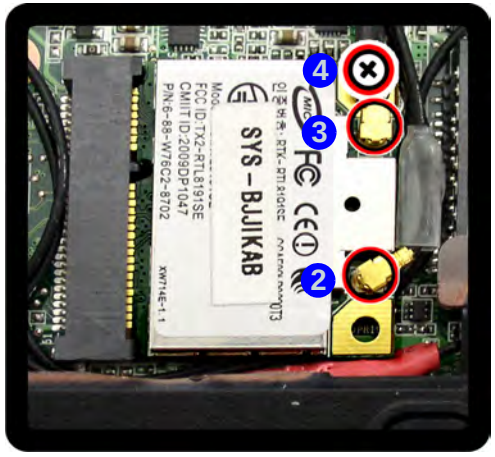
9. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Removing the Wireless LAN Module

1. Turn **off** the computer, remove the battery (*page 2 - 5*) and the component bay cover (*page 2 - 9*).
2. The Wireless LAN module will be visible at point 1 on the mainboard.
3. Carefully disconnect cables 2 - 3, then remove screw 4 from the module socket.
4. Lift the Wireless LAN module 5 (*Figure 7c*) up and off the computer.

a.

b.



c.

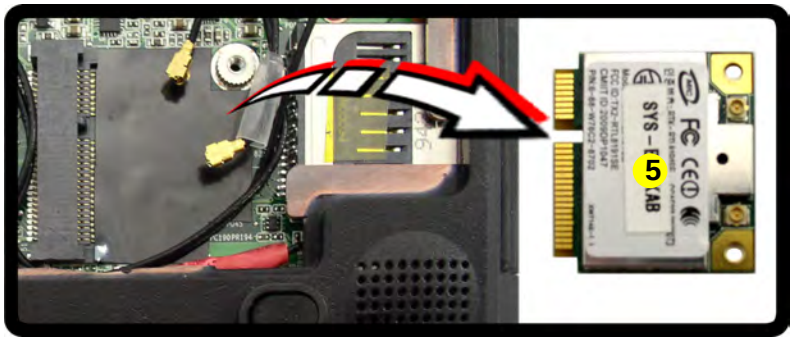


Figure 7
Wireless LAN Module Removal

a. Remove the cover.
b. Disconnect the cables and remove the screw.
c. Lift the WLAN module out.

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

5. WLAN Module.

- 1 Screw

Figure 8
3.75G Module Removal

a. Remove the cover.
b. Disconnect the cable and remove the screw.
c. The 3.75G module will pop up.
d. Lift the 3.75G module out.

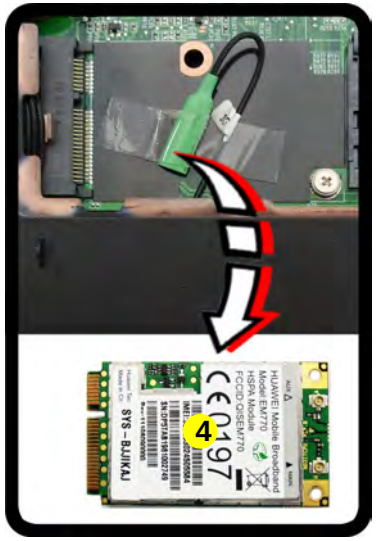
Removing the 3.75G Module

1. Turn **off** the computer, remove the battery (*page 2 - 5*) and the component bay cover (*page 2 - 9*).
2. The 3.75G module will be visible at point 1 on the mainboard.
3. Carefully disconnect the cable 2, then remove the screw 3 from the module socket.
4. The 3.75G module 4 will pop-up.
5. Lift the 3.75G module (*Figure 8d*) up and off the computer.

a.

c.

d.



b.

4. 3.75G Module.

- 1 Screw

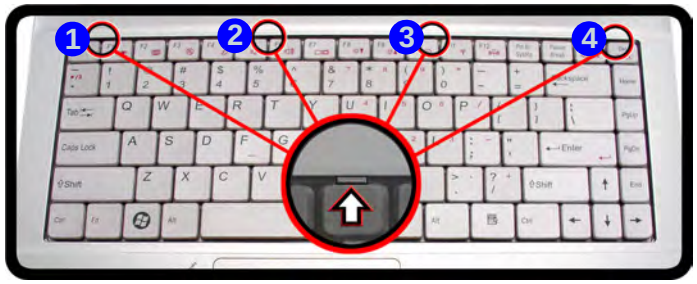
Removing the Keyboard

1. Turn **off** the computer, and remove the battery (*page 2 - 5*).
2. Press the **four** keyboard latches at the top of the keyboard (*Figure 9a*) to elevate the keyboard from its normal position (you may need to use a small screwdriver to do this).
3. Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable (*Figure 9b*).
4. Disconnect the keyboard ribbon cable 5 from the locking collar socket 6 (*Figure 9b*).
5. Carefully lift up the keyboard 7 (*Figure 9c*) off the computer.

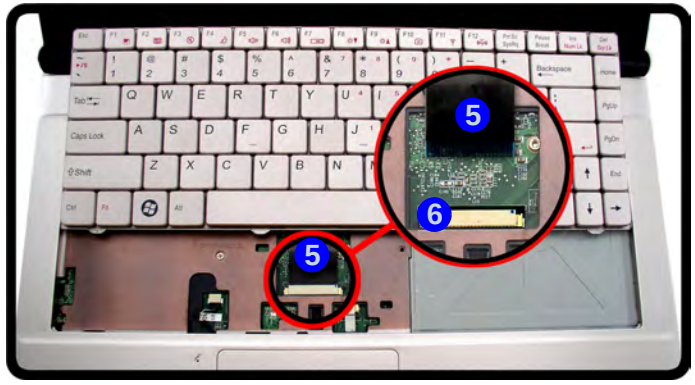
Figure 9
Keyboard Removal

a. Press the four latches to release the keyboard.
b. Lift the keyboard up and disconnect the cable from the locking collar.
c. Remove the keyboard.

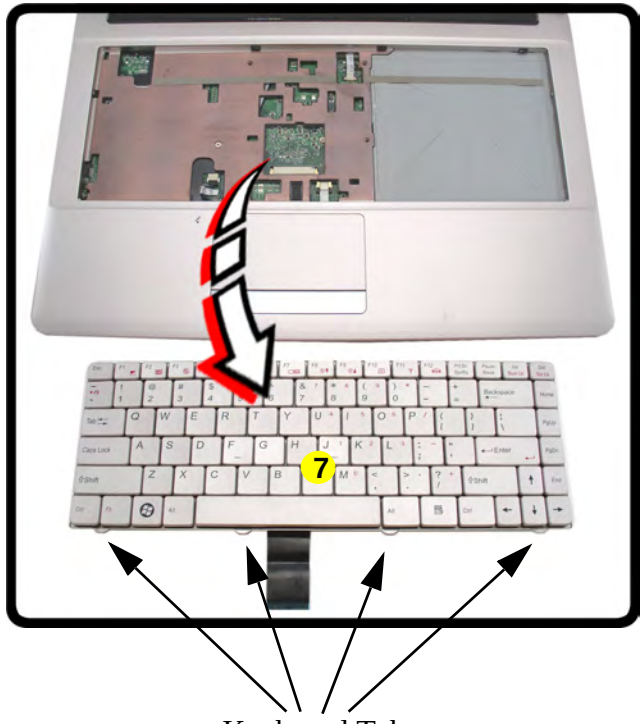
a.



b.



c.



Re-Inserting the Keyboard

When re-inserting the keyboard firstly align the **four** keyboard tabs at the bottom of the keyboard with the slots in the case.

7. Keyboard

Appendix A: Part Lists

This appendix breaks down the ***W241BU/W241BUQ/W240BU/W245BUQ/W248BUQ/W249BUQ*** 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.

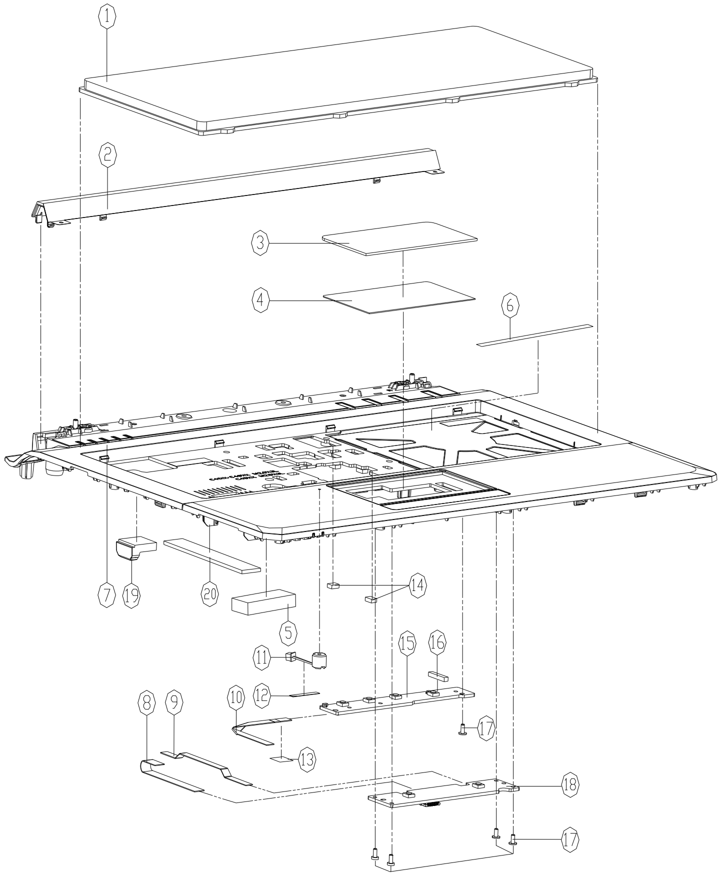
Part List Illustration Location

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

Table A- 1
Part List Illustration Location

Parts	W248BUQ	W245BUQ	W240BUQ, W241BU-C
Top	*page A - 3*		
Top		*page A - 4*	
Top			*page A - 5*
Bottom W/O USIM			*page A - 6*
Bottom W/ USIM		*page A - 7*	
Bottom (W248BUQ, W249BU-C)	*page A - 8*		
LCD			*page A - 9*
LCD		*page A - 10*	
LCD	*page A - 11*		
DVD-Super Multi Drive		*page A - 12*	
DVD-Super Multi Drive	*page A - 13*		
HDD	*page A - 14*		

Top (W248BUQ)

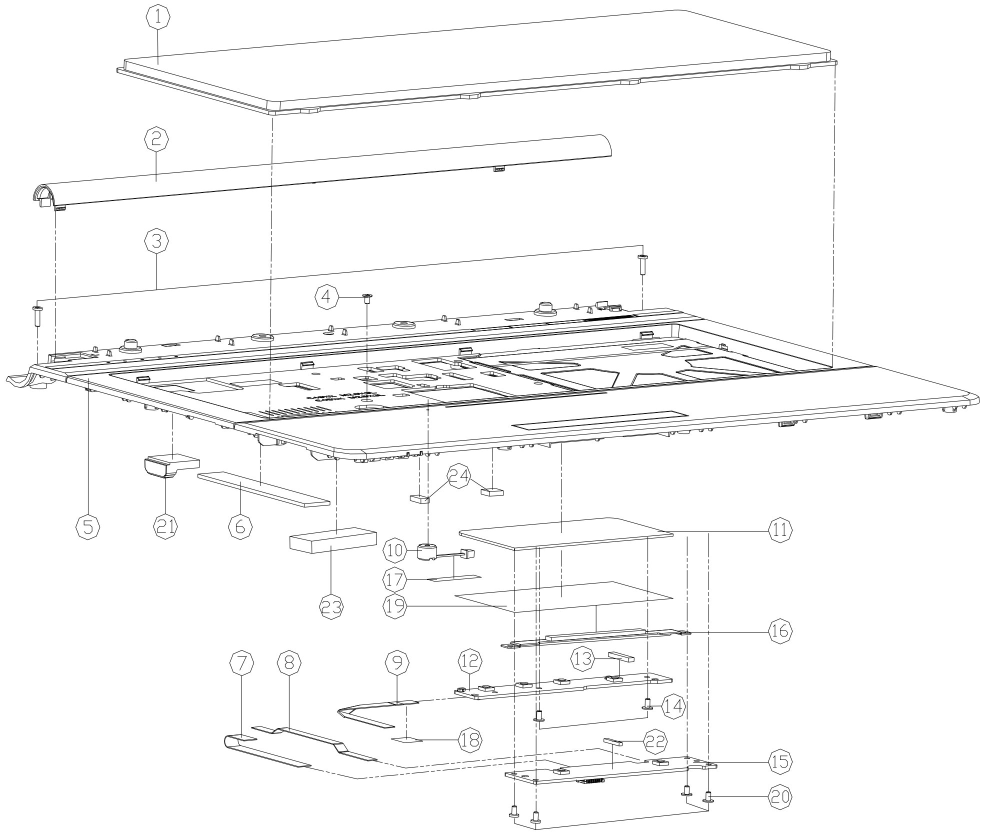


ITEM	PART NAME	PART NO	REMARK
1	K/B USA MP-07G33US-430 W840T黑色WITH VISTA KEY	6-80-W84T0-011-1	
2	TOP CASE HINGE COVER MODULE E4128	6-42-E4182-102	
3	TOUCH PAD COATING MYLAR PC E4128	6-40-E4182-021	
4	TOUCH PAD SYNAPTICS TM-01146-003 C4800	6-49-C4802-010	
5	SPONGE SM55 (39*12.5*7.15) FOR TOP CASE E4120	6-47-0019A-390	
6	TOP CASE 導電布(120*5*0.25T) C4500	6-47-C4502-030	
7	TOP CASE MODULE E4128-C	6-39-E4182-011-C	
8	FFC CABLE FOR TOUCH PAD 6PIN C4500 (今皓)	6-43-C4502-010-1	
9	FFC CABLE FOR M/B TO CLICK BOARD C4500 (今皓)	6-43-C4500-022-1	
10	FFC CABLE FOR M/B TO POWER BOARD C4500 (今皓)	6-43-C4500-031-1	
11	MIC 6MM*3.5(EM6035-FOL-U) 2V~10V 2.2K W/CABLE (灰色) L=40MM M540G	6-23-EM54G-012	
12	TAPE MYLAR (B),MYLAR M550J	6-40-M55J2-020	
13	TOP CASE FFC MYLAR (PET+3M 467) C4500	6-40-C4502-030	
14	RUBBER (5.5*4*1.5t) SILICON 70 度M670SU 黑色	6-47-M67U1-040	
15	POWER SWITCH BOARD V2.0 E5120Q	6-77-E51QS-D02	
16	POWER BOARD SPONGE (SM55+SONY G4000) C4500	6-47-C4502-021	
17	(非斷牙各)SCREW M2*3L K NI ICT GTY-PATCH (OD=Φ4.0,DT=0.8)	6-35-B1120-3RD	
18	CLICK BOARD V1.0 W240BU	6-77-W2402-D01	
19	HDMI RUBBER DUMMY (HC60) C4500	6-47-C4502-010	
20	SPONGE FOR TOP CASE (57*6*2) (SM55+SONY G4000)	6-47-0019A-570	

Figure A - 1
Top (W248BUQ)

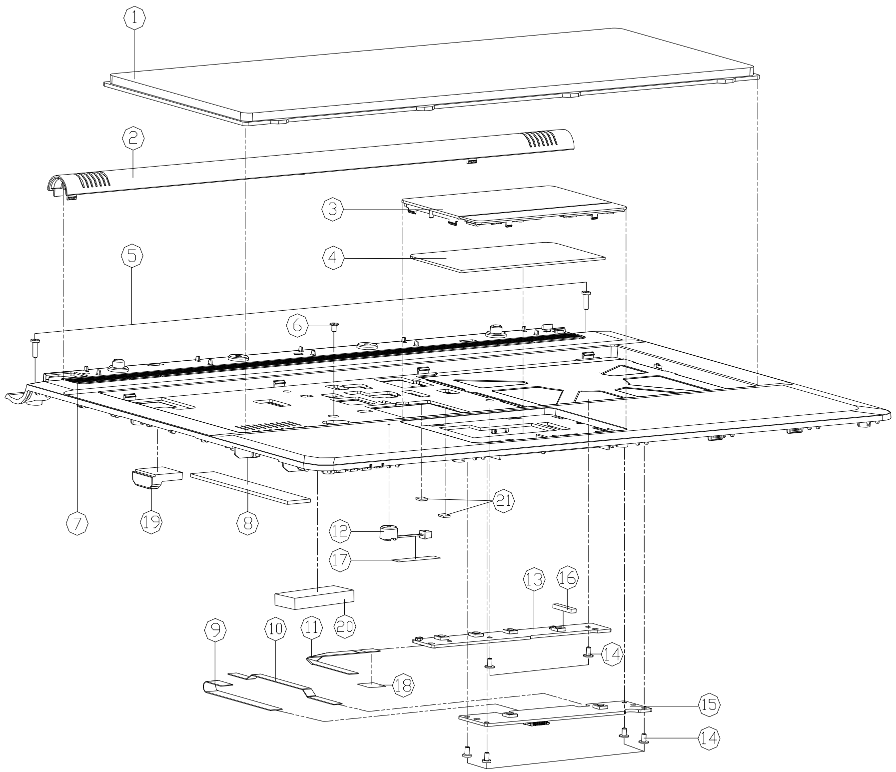
Top (W245BUQ)

Figure A - 2
Top (W245BUQ)



ITEM	PART NAME	PART NO	REMARK
1	K/B USA MP-07G33US-430 W840T黑色WITH VISTA KEY	6-80-W84T0-011-1	
2	HINGE COVER (PC+ABS) C4505	6-42-C4552-031	
3	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-8R0	
4	*(非耐落) SCREW M2*3L KI NI ICT GTY-PATCH (DD=ϕ4.0,DT=0.8)	6-35-B1120-3RD	
5	TOP CASE MODULE C4505(HOTKEY BUTTON CHANGE)	6-39-C4552-014	
5	TOP CASE MODULE C4505-C(HOTKEY BUTTON CHANGE)	6-39-C4552-013-C	
6	SPONGE FOR TOP CASE (57*6*2) (SM55+SONY G4000)	6-47-0019A-570	
7	FFC CABLE FOR TOUCH PAD 6PIN C4500	6-43-C4502-010	
8	FFC CABLE FOR M/B TO CLICK BOARD C4500	6-43-C4500-022	
9	FFC CABLE FOR M/B TO POWER BOARD C4500	6-43-C4500-031	
10	MIC 6MM*3.5(EM6035-FOL-U) 2V~10V 2.2K W/CABLE (灰色) L=40MM M540G	6-23-EM54G-012	
11	TOUCH PAD SYNAPTICS TM-01146-003 C4800	6-49-C4802-010	
12	POWER SWITCH BOARD V2.0 C4509	6-77-E51QS-D02-A	
13	POWER BOARD SPONGE (SM55+SONY G4000) C4500	6-47-C4502-021	
14	*(非耐落)SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
15	CLICK BOARD V1.0 W240BU	6-77-W2402-D01	
16	TOUCHPAD PLATE MODULE W240BU	6-33-W2402-100	
17	TAPE MYLAR (B),MYLAR M550J	6-40-M55J2-020	
18	TOP CASE FFC MYLAR (PET+3M 467) C4500	6-40-C4502-030	
19	TAPE MYLAR (C) (86.10*38.80MM) C4105	6-40-00150-860	
20	SCREW M2*4L I NI ICT NY 頭徑 3.5MM 頭厚 0.8MM 1 號	6-35-C1120-4RB	
21	HDMI RUBBER DUMMY (HC60) C4500	6-47-C4502-010	
22	RUBBER FOR CLICK BRK 18*2.7*2TMM CR W240BU	6-47-W2402-010	
23	SPONGE SM55 (39*12.5*7.15) FOR TOP CASE E4120	6-47-0019A-390	FOR W245BUQ-C ONLY
24	RUBBER (5.5*4*1.5t) SILICON 70 度 M670SU 黑色	6-47-M67U1-040	FOR W245BUQ-C ONLY

Top (W240BUQ, W241BU-C)



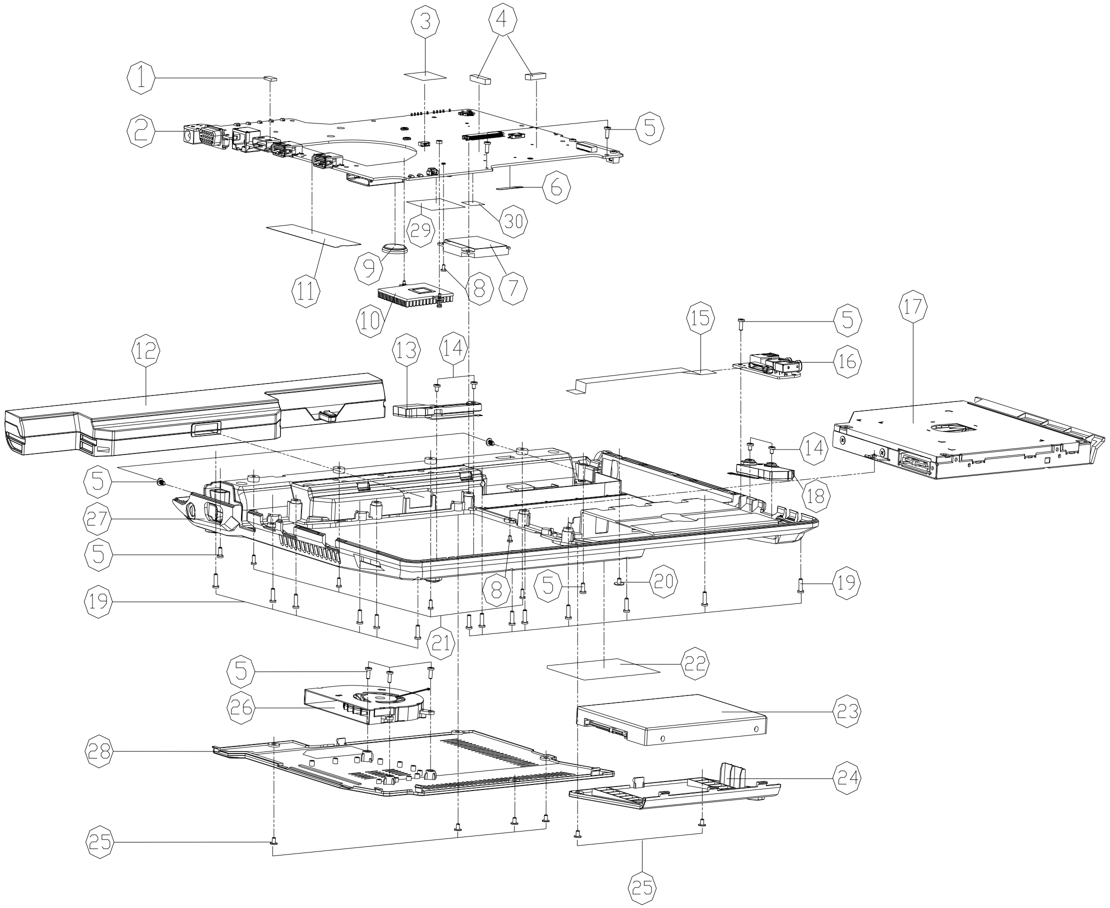
ITEM	PART NAME	PART NO	REMARK
1	K/B USA MP-07G33US-430 W840T 黑色 WITH VISTA KEY	6-80-W84T0-011-1	
2	HINGE COVER (PC+ABS) C4500	6-42-C4502-071	
3	TP COVER MODULE C4500	6-42-C4502-101	
3	TP COVER MODULE (MATT UV PAINT) C4501	6-42-C4512-101	
4	TOUCH PAD SYNAPTICS TM-01146-003 C4800	6-49-C4802-010	
5	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-8R0	
6	*(非耐落) SCREW M2*3L KI NI ICT GTY-PATCH (DD=Φ4.0,DT=0.8)	6-35-B1120-3RD	
7	TOP CASE MODULE C4500	6-39-C4502-014	
7	TOP CASE MODULE C4501-C (設變T/P COVER定位孔)	6-39-C4512-014-C	
8	SPONGE FOR TOP CASE (57*6*2) (SM55+SONY G4000)	6-47-0019A-570	
9	FFC CABLE FOR TOUCH PAD 6PIN C4500	6-43-C4502-010	
10	FFC CABLE FOR M/B TO CLICK BOARD C4500	6-43-C4500-022	
11	FFC CABLE FOR M/B TO POWER BOARD C4500	6-43-C4500-031	
12	MIC 6MM*3.5(EM6035-FOL-U) 2V~10V 2.2K W/CABLE (灰色) L=40MM M540G	6-23-EM54G-012	
13	POWER SWITCH BOARD V2.0 C4509	6-77-E51QS-D02-A	
14	*(非耐落)SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
15	CLICK BOARD V1.0 W240BU	6-77-W2402-D01	
16	POWER BOARD SPONGE (SM55+SONY G4000) C4500	6-47-C4502-021	
17	TAPE MYLAR (B),MYLAR M550J	6-40-M55J2-020	
18	TOP CASE FFC MYLAR (PET+3M 467) C4500	6-40-C4502-030	
19	HDMI RUBBER DUMMY (HC60) C4500	6-47-C4502-010	
20	SPONGE SM55 (39*12.5*7.15) FOR TOP CASE E4120	6-47-0019A-390	FOR W241BU-C ONLY
21	RUBBER (5.5*4*1.5t) SILICON 70度M670SU 黑色	6-47-M67U1-040	FOR W241BU-C ONLY

Figure A - 3
Top (W240BUQ, W241BU-C)

A.Part Lists

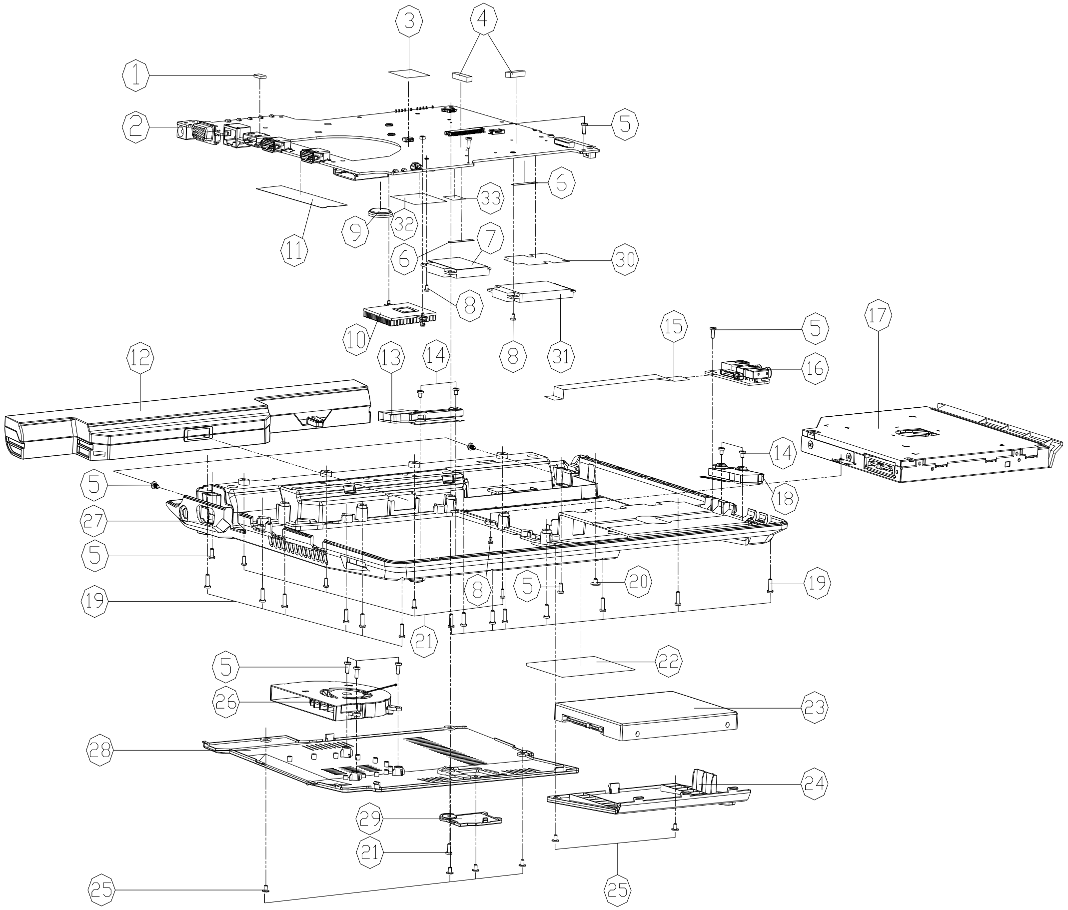
Bottom (W240BU, W241BU) W/O USIM

Figure A - 4
Bottom (W240BU, W241BU) W/O USIM



ITEM	PART NAME	PART NO	REMARK
1	GASKET (L10*W5*H1.5) FOR USB T890M	6-47-00190-1A9	
2	MAIN BOARD V2.0 (W/O 3G) W240BU	6-77-W2400-D03-1	
3	AUDIO BOARD MYLAR 20*20*0.15T (黑色 PET+3M 467) C4500	6-40-C450S-030	
4	RUBBER FOR TOP CASE (11*6T*5) C4505	6-47-C4552-030	ONLY FOR C4105 使用
5	SCREW M2.5*5L KI BK/Z ICT NY-	6-35-B6125-5RA	
6	TAPE MYLAR (C),MYLAR M550J	6-40-M55J2-030	
7	WLAN AZUREWAVE AW-NE139H 1 ANT. 802.11BGN HALF MINI-CARD PCI-E RTL8188CE E4129Q	6-88-E4192-7000	(OPTION)
7	WLAN 802.11BGN RTL8191SE 展達 XW714E HALF MINI-CARD PCI-E RTL8191SE 電容變更	6-88-W76C2-8702	(OPTION)
7	WLAN+BT COMBO CASTLENET RTL8188CEBT-G751 802.11BGN BT+BT3.0 HS HALF MINI-CARD PIN19 AND PIN51 (RTL8188CEBT) C5505	6-88-C555F-5300	(OPTION)
7	WLAN AZUREWAVE AW-NE104H 802.11BGN HALF MINI-CARD PCI-E RTL8191SE R30 DELETE W760C	6-88-W76C2-7001	(OPTION)
7	WLAN+BT COMBO AZUREWAVE AW-NB057H 802.11BGN BT+BT3.0 HS HALF MINI-CARD PIN19 AND PIN51(RTL8188CEBT) C5505	6-88-C555F-7001	(OPTION)
7	WLAN CASTLENET RTL8188CE 1 ANT. 802.11BGN HALF MINI-CARD PCI-E E4129Q	6-88-E4192-5300	(OPTION)
8	SCREW M2*3L KI NI ICT NY (DD=ø4.0,DT=0.8)	6-35-B1120-3RD	
9	BATTERY 3V 220MA BBBCR2032B (KTS)	6-23-6A2B2-030	
10	CPU (9W) HEATSINK MODULE W240BU	6-31-W240N-101	
11	MYLAR PET FOR M/B FIN W240BU	6-40-W240S-010	
12	BAT.P S LI 11.1V/4.4AH/48.84WH 3S2P CPT/BAK 910500001 E4120	6-87-E412S-4Y4	(OPTION)
12	BAT.P S LI 11.1V/2.2AH/24.42WH 3S1P CPT/BAK 910500005 W240BU	6-87-W240S-4YF	(OPTION)
12	BAT.P S LI 11.1V/2.2AH/24.42WH 3S1P SMP/BAK 980T2027F W240BU	6-87-W240S-4PF	(OPTION)
13	SPK+CABLE L ø18*T5.2 1.5W 8Ω36MM P18CUG08LF-A C4800 VECO	6-23-5C480-022	
14	SCREW M2*6.2L NI ICT NY FOR SPEAKER	6-35-Z1120-6R2	
15	FFC CABLE 14P M/B TO AUDIO BOARD W240BU (JH)	6-43-W2400-011	
16	AUDIO BOARD V3.0 W240BU	6-77-W2408-D03	
17	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W240HU0Q-000	
17	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W240BU0Q-010	
17	W/O ODD ASS'Y W240BU	6-79-W240BU0Z-000	
17	DUMMY ODD ASS'Y E5120Q	6-79-E5120Q0Z-010	
18	SPK+CABLE R ø18*T5.2 1.5W 8Ω25MM P18CUG08LF-A C4800 VECO	6-23-5C480-012	
19	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-8R0	
20	SCREW M2*2L KI BK/Z ICT NY (ø6,T=0.5)	6-35-B6120-2RC	
21	SCREW M2*4L KI BZ ICT NY-	6-35-B6120-4RA	
22	PRODUCT LABEL FOR W240BU	6-45-W240BU03-011	
22	PRODUCT LABEL FOR W241BU-C	6-45-W241BUC3-010	
22	PRODUCT LABEL FOR W245BUQ	6-45-W245BUQ3-011	
23	W/HDD ASS'Y E5120Q	6-79-E5120Q0J-020	
23	W/O HDD ASS'Y E5120Q	6-79-E5120Q0J-010	
24	HDD COVER MODULE C4500	6-42-C450J-102	
24	HDD COVER MODULE C4500-C	6-42-C450J-100-C	
25	SCREW M2.5*3L K1 BZ ICT NY-	6-35-B6125-3R0	
26	FAN+CON. 65*60*8.1 5V 0.35A AB6505HX-J03 4800RPM ADDA C4500	6-23-AC450-013	
27	BOTTOM CASE MODULE W240BU	6-39-W2403-010	
27	BOTTOM CASE MODULE W240BU-C	6-39-W2403-010-C	
28	CPU COVER MODULE C4800	6-42-C4803-103	
29	MYLAR VGA CHIP ATI 30*30 HOLE 10*10 FOR W150DAQ	6-40-E555S-020	
30	MB MYLAR PET (11*8*0.1T) W760TUN	6-40-W76TS-010	

Bottom (W240BU, W241BU) With USIM



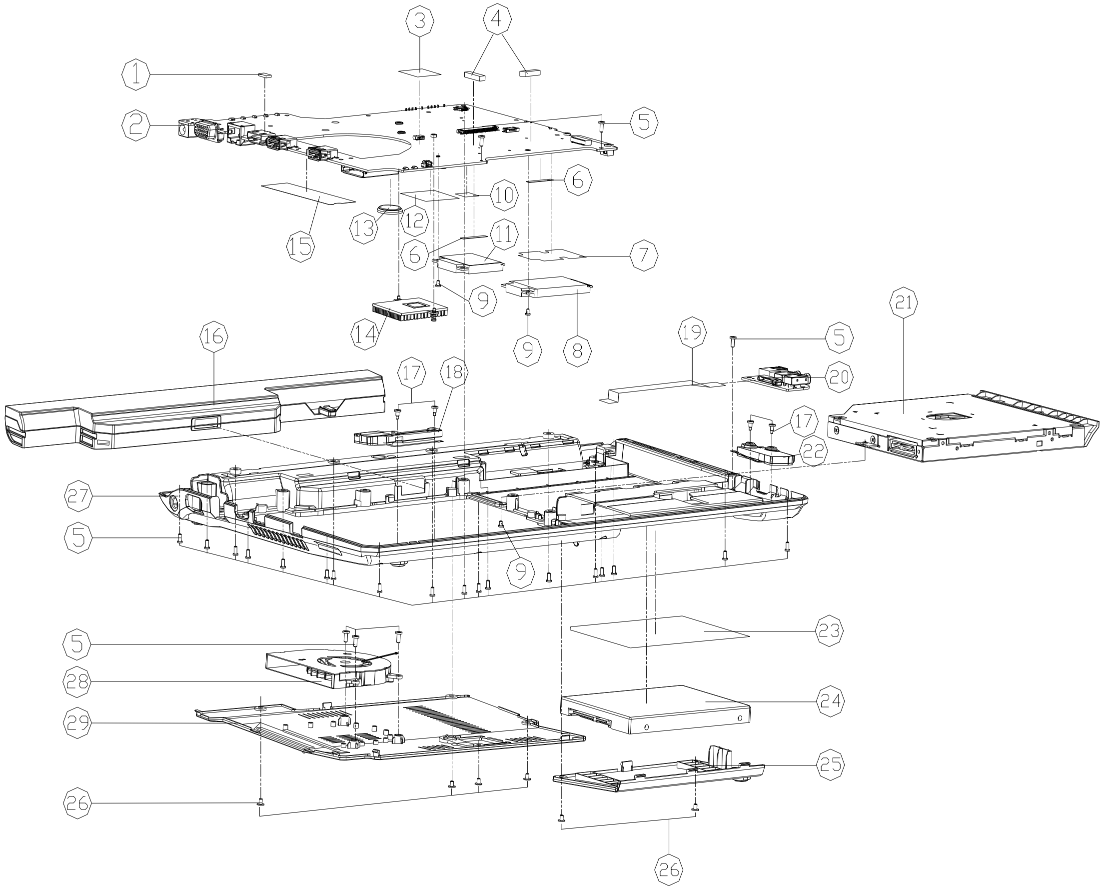
ITEM	PART NAME	PART NO	REMARK
1	GASKET (L10*W5*H1.5) FOR USB T890M	6-47-00190-1A9	
2	MAIN BOARD V3.0 (W/3G) W240BU	6-77-W2400-D03	
3	AUDIO BOARD MYLAR 20*20*0.15T (黑色 PET+3M 467) C4500	6-40-C450S-030	
4	RUBBER FOR TOP CASE (11*6T*5) C4505	6-47-C4552-030	ONLY FOR W245BUQ 使用
5	SCREW M2.5*5L KI BK/Z ICT NY-	6-35-B6125-5RA	
6	TAPE MYLAR (C),MYLAR M550J	6-40-M55J2-030	
7	WLAN AZUREWAVE AW-NE139H 1 ANT. 802.11BGN HALF MINI-CARD PCI-E RTL8188CE E4129Q	6-88-E4192-7000	(OPTION)
7	WLAN 802.11BGN RTL8191SE 展達 XW74E HALF MINI-CARD PCI-E RTL8191SE 電容變更	6-88-W76C2-8702	(OPTION)
7	WLAN+BT COMBO CASTLENET RTL8188CE(T)-G351 802.11BGN 1X+BT3.0 HS HALF MINI-CARD PIN9 AND PIN51 (RTL8188CE(T)) C5505	6-88-C555F-5300	(OPTION)
7	WLAN AZUREWAVE AW-NE104H 802.11BGN HALF MINI-CARD PCI-E RTL8191SE R30 DELETE W760C	6-88-W76C2-7001	(OPTION)
7	WLAN+BT COMBO AZUREWAVE AW-NB057H 802.11BGN 1X+BT3.0 HS HALF MINI-CARD PIN9 AND PIN51(RTL8188CE(T)) C5505	6-88-C555F-7001	(OPTION)
7	WLAN CASTLENET RTL8188CE 1 ANT. 802.11BGN HALF MINI-CARD PCI-E E4129Q	6-88-E4192-5300	(OPTION)
8	SCREW M2*3L KI NI ICT NY (DD=ø4.0,DT=0.8)	6-35-B1120-3RD	
9	BATTERY 3V 220MA BBBCR2032B (KTS)	6-23-6A2B2-030	
10	CPU (9W) HEATSINK MODULE W240BU	6-31-W240N-101	
11	MYLAR PET FOR M/B FIN W240BU	6-40-W240S-010	
12	BAT.P S LI 11.1V/4.4AH/48.84WH 3S2P CPT/BAK 910500001 E4120	6-87-E412S-4Y4	(OPTION)
12	BAT.P S LI 11.1V/2.2AH/24.42WH 3S1P CPT/BAK 910500005 W240BU	6-87-W240S-4YF	(OPTION)
12	BAT.P S LI 11.1V/2.2AH/24.42WH 3S1P SMP/BAK 980T2027F W240BU	6-87-W240S-4PF	(OPTION)
13	SPK+CABLE L ø18*T5.2 1.5W 8Ω36MM P18CUG08LF-A C4800 VECO	6-23-5C480-022	
14	SCREW M2*6.2L NI ICT NY FOR SPEAKER	6-35-Z1120-6R2	
15	FFC CABLE 14P M/B TO AUDIO BOARD W240BU (JH)	6-43-W2400-011	
16	AUDIO BOARD V3.0 W240BU	6-77-W2408-D03	
17	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W240HU0Q-000	
17	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W240BU0Q-010	
17	W/O ODD ASS'Y W240BU	6-79-W240BU0Z-000	
17	DUMMY ODD ASS'Y E5120Q	6-79-E5120Q0Z-010	
18	SPK+CABLE R ø18*T5.2 1.5W 8Ω25MM P18CUG08LF-A C4800 VECO	6-23-5C480-012	
19	SCREW M2.5*8L KI BK/Z NY ICT	6-35-B6125-8R0	
20	SCREW M2*2L KI BK/Z ICT NY (ø6,T=0.5)	6-35-B6120-2RC	
21	SCREW M2*4L KI BZ ICT NY-	6-35-B6120-4RA	
22	PRODUCT LABEL FOR W240BU	6-45-W240BU03-011	
22	PRODUCT LABEL FOR W245BUQ	6-45-W245BUQ3-011	
23	W/HDD ASS'Y E5120Q	6-79-E5120Q0J-020	
23	W/O HDD ASS'Y E5120Q	6-79-E5120Q0J-010	
24	HDD COVER MODULE C4500	6-42-C450J-102	
24	HDD COVER MODULE C4500-C	6-42-C450J-100-C	
25	SCREW M2.5*3L K1 BZ ICT NY-	6-35-B6125-3R0	
26	FAN+CON. 65*60*8.1 5V 0.35A AB6505HX-J03 4800RPM ADDA C4500	6-23-AC450-013	
27	BOTTOM CASE MODULE W240BU	6-39-W2403-010	
27	BOTTOM CASE MODULE W240BU-C	6-39-W2403-010-C	
28	CPU COVER MODULE (W/3G) FOR C4800	6-42-C4803-200	
29	SIM COVER MODULE FOR E412P-C	6-42-E412S-100-C	
30	MYLAR 47.5*31 (PET+3M467) C4100	6-40-C410S-010	
31	WCDMA ERICSSON F3307 HSPA FULL MINI-CARD USB	6-88-W24HW-2410	
31	WCDMA BANDRICH M280 HSPA MINI-CARD USB (FULL SIZE)	6-88-W150W-9100	
32	MYLAR VGA CHIP ATI 30*30 HOLE 10*10 FOR W150DAQ	6-40-E555S-020	
33	MB MYLAR PET (11*8*0.1T) W760TUN	6-40-W76TS-010	

Figure A - 5
Bottom (W240BU, W241BU) With USIM

A.Part Lists

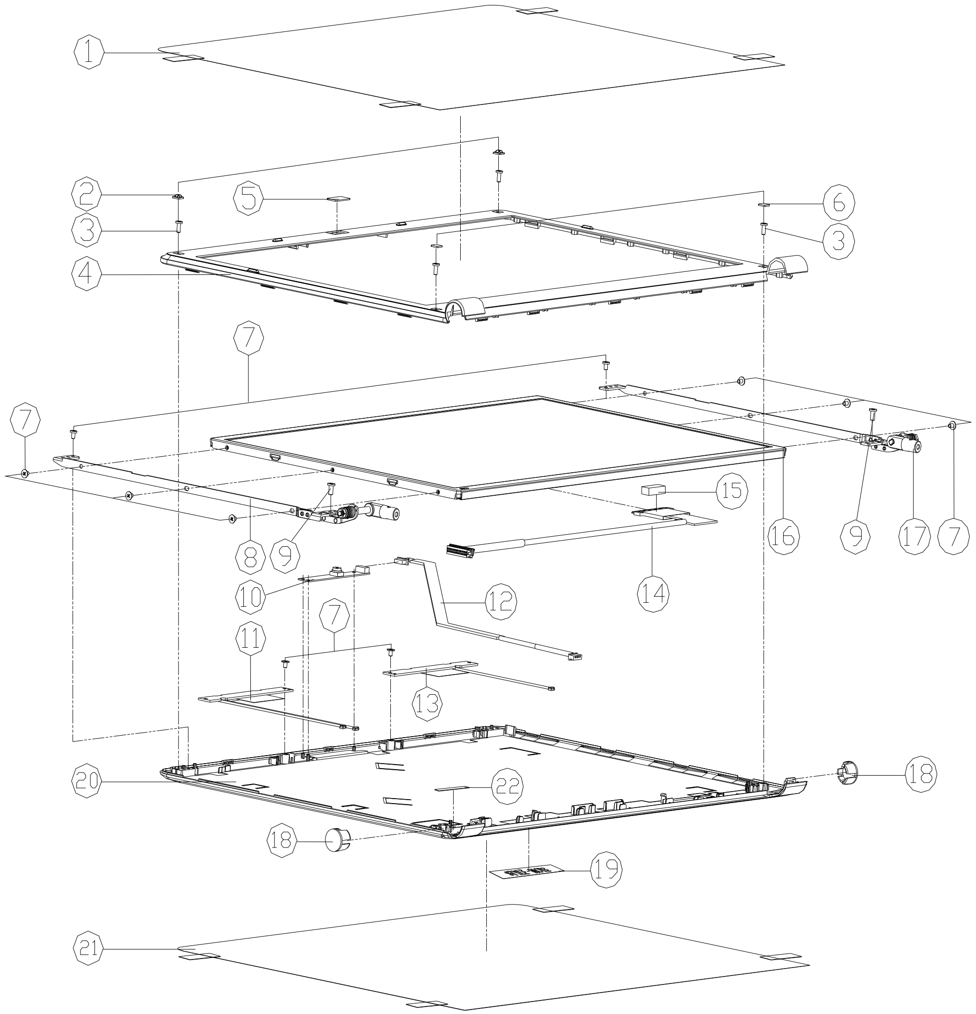
Bottom (W248BUQ, W249BU-C)

Figure A - 6
Bottom (W248BUQ, W249BU-C)



ITEM	PART NAME	PART NO	REMARK
1	GASKET (L10*W5*H1.5) FOR USB T890M	6-47-00190-1A9	
2	MAIN BOARD V3.0 (W/3G) W240BU	6-77-W2400-D03	
2	MAIN BOARD V3.0 (W/O 3G) W240BU	6-77-W2400-D03-1	
3	AUDIO BOARD MYLAR 20*20*0.15T (黑色 PET+3M 467) C4500	6-40-C450S-030	
4	RUBBER FOR TOP CASE (11*6T*5) C4505	6-47-C4552-030	
5	SCREW M2.5*5L KI BK/Z ICT NY-	6-35-B6125-5RA	
6	TAPE MYLAR (C),MYLAR M550J	6-40-M55J2-030	
7	MYLAR 47.5*31 (PET+3M467) C4100	6-40-C410S-010	FOR W/3G ONLY
8	WCDMA ERICSSON F3307 HSPA FULL MINI-CARD USB	6-88-W24HW-2410	(OPTION)
8	WCDMA BANDRICH M280 HSPA MINI-CARD USB (FULL SIZE)	6-88-W150W-9100	(OPTION)
9	SCREW M2*3L KI NI ICT NY (DD=ø4.0,DT=0.8)	6-35-B1120-3RD	
10	MB MYLAR PET (11*8*0.1T) W760TUN	6-40-W76TS-010	
11	WLAN AZUREWAVE AW-NE139H 1 ANT. 802.11BGN HALF MINI-CARD PCI-E RTL8188CE E4129Q	6-88-E4192-7000	(OPTION)
11	WLAN 802.11BGN RTL8191SE 展達 XW71AE HALF MINI-CARD PCI-E RTL8191SE 電容變更	6-88-W76C2-8702	(OPTION)
11	WLAN+BT COMBO CASTLENET [illegible] HALF MINI-CARD [illegible] C5505	6-88-C555F-5300	(OPTION)
11	WLAN AZUREWAVE AW-NE104H 802.11BGN HALF MINI-CARD PCI-E RTL8191SE R30 DELETE W760C	6-88-W76C2-7001	(OPTION)
11	WLAN+BT COMBO AZUREWAVE [illegible] HALF MINI-CARD [illegible] C5505	6-88-C555F-7001	(OPTION)
11	WLAN CASTLENET RTL8188CE 1 ANT. 802.11BGN HALF MINI-CARD PCI-E E4129Q	6-88-E4192-5300	(OPTION)
12	MYLAR VGA CHIP ATI 30*30 HOLE 10*10 FOR W150DAQ	6-40-E555S-020	
13	BATTERY 3V 220MA BBBCR2032B (KTS)	6-23-6A2B2-030	
14	CPU (9W) HEATSINK MODULE W240BU	6-31-W240N-101	
15	MYLAR PET FOR M/B FIN W240BU	6-40-W240S-010	
16	BAT.P S LI 11.1V/4.4AH/48.84WH 3S2P CPT/BAK 910500001 E4120	6-87-E412S-4Y4	(OPTION)
16	BAT.P S LI 11.1V/2.2AH/24.42WH 3S1P CPT/BAK 910500005 W240BU	6-87-W240S-4YF	(OPTION)
16	BAT.P S LI 11.1V/2.2AH/24.42WH 3S1P SMP/BAK 980T2027F W240BU	6-87-W240S-4PF	(OPTION)
17	SCREW M2*6.2L NI ICT NY FOR SPEAKER	6-35-Z1120-6R2	
18	SPK+CABLE L ?18*T5.2 1.5W 8Ω36MM PB18CMG08SL-3-7LK1 C4800 VECO	6-23-5C480-023	
19	FFC CABLE 14P M/B TO AUDIO BOARD W240BU (JH)	6-43-W2400-011	
20	AUDIO BOARD V3.0 W240BU	6-77-W2408-D03	
21	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-E4129Q0Q-010	
21	SATA DVD SUPER MULTI ASS'Y (OPTION)	6-79-W248BUQQ-010	
21	W/O ODD ASS'Y E4129Q	6-79-E4129Q0Z-000	
21	DUMMY ODD ASS'Y E5120Q	6-42-W240Z-010	
22	SPK+CABLE L ?18*T5.2 1.5W 8Ω36MM PB18CMG08SL-3-7LK1 C4800 VECO	6-23-5C480-023	
23	PRODUCT LABEL FOR W248BUQ	6-45-W248BUQ3-010	
23	PRODUCT LABEL FOR W249BUQ	6-45-W249BUQ3-010	
24	W/HDD ASS'Y E5120Q	6-79-E5120Q0J-020	
24	W/O HDD ASS'Y E5120Q	6-79-E5120Q0J-010	
25	HDD COVER MODULE E4128	6-42-E418J-101	
25	HDD COVER MODULE E4128-C	6-42-E418J-101-C	
26	SCREW M2.5*3L K1 BZ ICT NY-	6-35-B6125-3R0	
27	BOTTOM CASE MODULE E4128-C	6-39-E4183-014-C	
28	FAN+CON. 65*60*8.1 5V 0.35A AB6505HX-J03 4350RPM ADDA C4500	6-23-AC450-013	
29	CPU COVER MODULE E4128-C	6-42-E4183-102-C	

LCD (W240BU, W241BU)

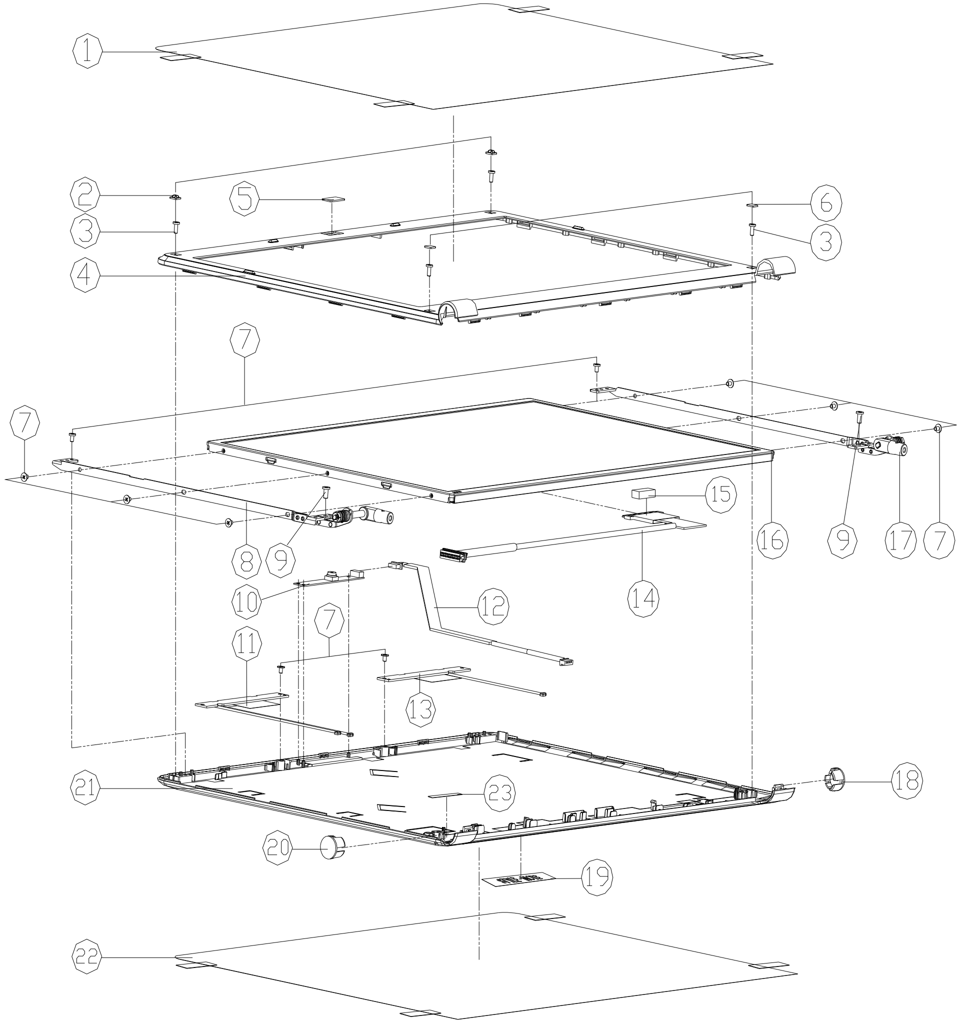


ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER PROTECTION MYLAR (PET+3M8915) C4500	6-40-C4501-011	
2	LCD FRONT COVER SCREW RUBBER SLICON C4500	6-47-C4501-031	
3	SCREW M2*5L KI(T=0.8 D=4.0) BK/Z ICT NY	6-35-B6120-5R0	
4	LCD FRONT COVER MODULE C4500	6-39-C4501-012	
5	CCD 銘板 PMMA M810L	6-42-M8101-011	
5	W/O CCD LENS PMMA 0.5T C4800	6-42-C480T-010	
6	FRONT COVER PC FOR SCREW C4500	6-40-C4501-071	
7	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
8	LCD HINGE-L SECC C4500	6-33-C4501-011	
9	SCREW M2.5*5L KI BK/Z ICT NY-	6-35-B6125-5RA	
10	UVC CAMERA BISON FIX BN28M6SG2-000_V1.0 1.3M 6AA E5120Q	6-88-E51QC-4901	OPTION
10	UVC CAMERA CHICONY FIX CNFA179 1.3M 6AA W150HNM	6-88-W150C-5100	OPTION
10	UVC CAMERA BISON FIX BN28V9VG2-000_V1.0 OV7675 300K M1100	6-88-M110C-4901	OPTION
11	ANTENNA WIMAX COMBO WGT WM1+WM2 PCB H=1MM 2.4G/3.5GHZ/5G WM1=585MM WM2=585MM	6-23-7C450-032	
12	WIRE CABLE FOR CCD 5P 310.5MM C4500 (HUALI)	6-43-C450T-011	
12	WIRE CABLE FOR CCD 5P 310.5MM C4501-CD (HUALI)	6-43-C450T-012	ONLY FOR W245BUQ-C
13	ANTENNA 3G WGT 3G PCB 0.8G/0.9G/1.8G/1.9G/2.1GHZ L=860MM E4120	6-23-7E412-010	OPTION
14	WIRE CABLE FOR LVDS 300MM C4800 (今皓/泰林CONN)	6-43-C4801-0A0	必選
14	WIRE CABLE FOR LVDS 300MM C4501-CD (HUALI / 玉鼎CONN)	6-43-C4801-051	選配
15	GASKET (10*6*6) FOR TV CONN. TOP CASE M570TU	6-47-00190-102	
16	LCD 14.0" HD IVO M140NWR2 (R1) (GLARE TYPE) 5.2MM (LED)	6-50-J8152-B01	
16	LCD 14.0" HD CHIMEI N140B6-L02 GLARE TYPE	6-50-J8152-D00	
16	LCD 14.0" HD LG LP140WH1-TLA1 GLARE TYPE (LED) 5.2MM	6-50-J8152-L03	
17	LCD HINGE-R SECC C4500	6-33-C4501-021	
18	HINGE COSMETIC RING ABS PA727 C4500	6-42-C4508-011	
19	STYLE NOTE中性LOGO電鑄薄膜鍍亮銘(字體連結)M741S	6-45-M741S-020	FOR 噴漆BACK CASE
20	LCD BACK COVER MODULE C4500	6-39-C4501-022	
21	BACK COVER PROTECTION MYLAR(8B35+3M8915) C4500	6-40-C4501-020	
22	TAPE MYLAR (B),MYLAR M550J	6-40-M55J2-020	

Figure A - 7
LCD (W240BU, W241BU)

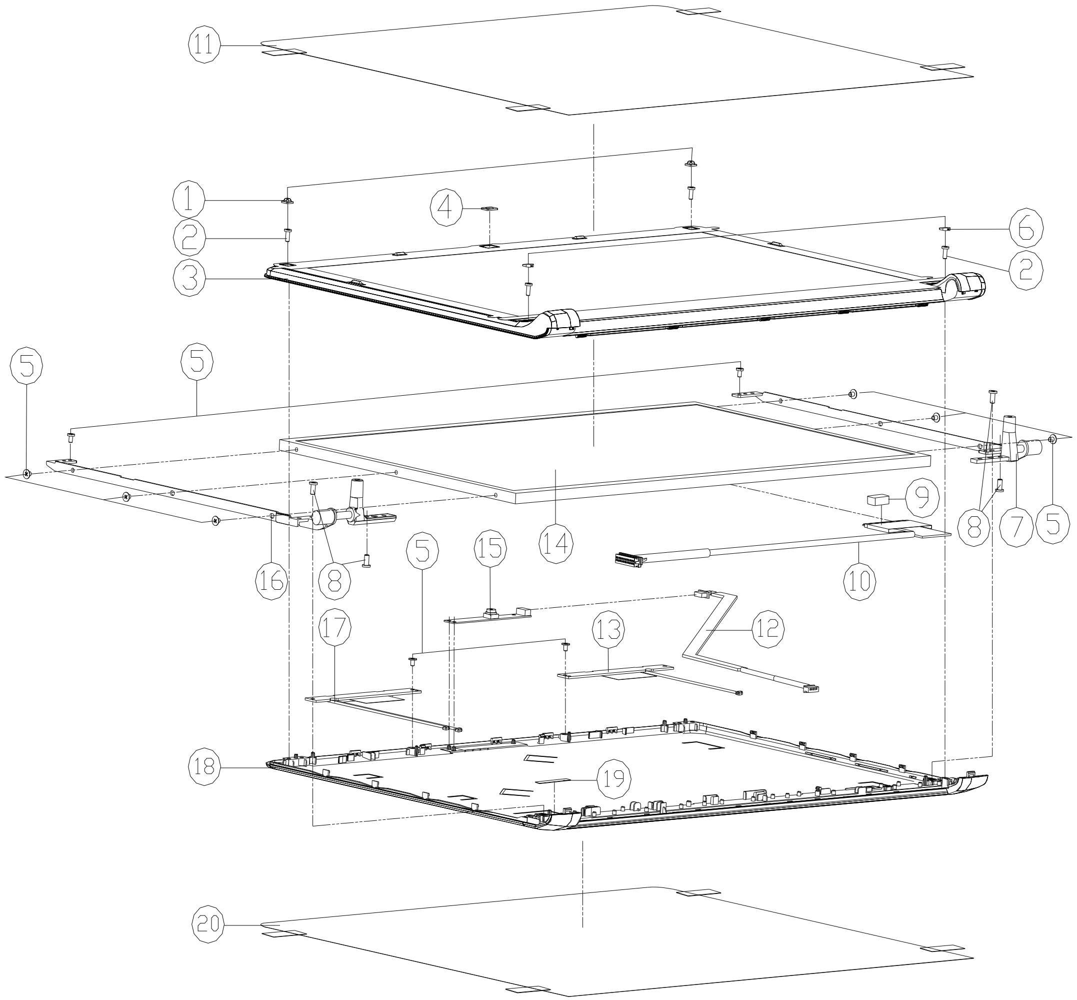
LCD (W245BUQ)

Figure A - 8
LCD (W245BUQ)



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER PROTECTION MYLAR (PET+3M8915) C4500	6-40-C4501-011	
2	LCD FRONT COVER SCREW RUBBER SLICON C4500	6-47-C4501-031	
3	SCREW M2*5L KI(T=0.8 D=4.0) BK/Z ICT NY	6-35-B6120-5R0	
4	LCD FRONT COVER MODULE C4500	6-39-C4501-012	
5	CCD 銘板 PMMA M810L	6-42-M8101-011	
5	W/O CCD LENS PMMA 0.5T C4800	6-42-C480T-010	
6	FRONT COVER PC FOR SCREW C4500	6-40-C4501-071	
7	SCREW M2*3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
8	LCD HINGE-L SECC C4500	6-33-C4501-011	
9	SCREW M2.5*5L KI BK/Z ICT NY-	6-35-B6125-5RA	
10	UVC CAMERA BISON FIX BN28M6SG2-000_V1.0 1.3M 6AA E5120Q	6-88-E51QC-4901	OPTION
10	UVC CAMERA CHICONY FIX CNFA179 1.3M 6AA W150HNM	6-88-W150C-5100	OPTION
10	UVC CAMERA BISON FIX BN28V9VG2-000_V1.0 OV7675 300K M1100	6-88-M110C-4901	OPTION
11	ANTENNA WIMAX COMBO WGT WM1+WM2 PCB H:1MM 2.4G/3.5GHZ/5G WM1=585MM WM2=585MM	6-23-7C450-032	
12	WIRE CABLE FOR CCD 5P 310.5MM C4500 (華力)	6-43-C450T-011	
13	ANTENNA 3G WGT 3G PCB H:1MM 0.8G/0.9G/1.8G/1.9G/2.1GHZ L=840MM(銅箔接地) C4800	6-23-7C480-010	OPTION
14	WIRE CABLE FOR LVDS 300MM C4800 (今皓/泰林CONN)	6-43-C4801-0A0	
15	GASKET (10*6*6) FOR TV CONN. TOP CASE M570TU	6-47-00190-102	
16	LCD 14.0" HD IVO M140NWR2 (R1) (GLARE TYPE) 5.2MM (LED)	6-50-J8152-B01	
16	LCD 14.0" HD CHIMEI N140B6-L02 GLARE TYPE	6-50-J8152-D00	
16	LCD 14.0" HD LG LP140WH1-TLA1 GLARE TYPE (LED) 5.2MM	6-50-J8152-L03	
17	LCD HINGE-R SECC C4500	6-33-C4501-021	
18	HINGE COSMETIC RING R (CM6140) C4505	6-42-C4558-011	
19	STYLE NOTE中性LOGO電鑄薄膜鍍亮銘(字體連結) M741S	6-45-M741S-020	
20	HINGE COSMETIC RING L (CM6140) C4505	6-42-C4558-021	
21	LCD BACK COVER IMR MODULE C4505	6-39-C4551-021	
21	LCD BACK COVER IMR MODULE (CHANGE) C4505-C	6-39-C4551-022-C	
22	BACK COVER PROTECTION MYLAR(8B35+3M8915) C4500	6-40-C4501-020	
23	TAPE MYLAR (B),MYLAR M550J	6-40-M55J2-020	

LCD (W248BUQ - C)

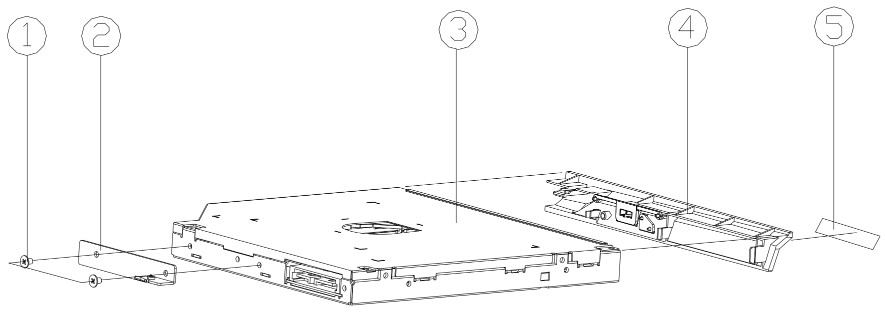


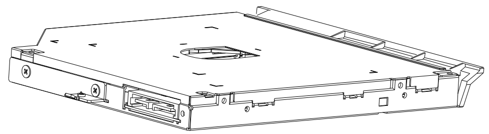
ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER SCREW RUBBER SLICON C4500	6-47-C4501-031	
2	SCREW M2*5L KI(T=0.8 D=4.0) BK/Z ICT NY	6-35-B6120-5R0	
3	LCD FRONT COVER MODULE E4128Q	6-39-E4181-011	
4	CCD LENS PMMA E4128	6-42-E4181-011	OPTION
4	W/O CCD LENS PMMA E4128	6-42-E4181-030	OPTION
5	*(非耐落)SCREW M2*3L KI NI ICT GTY-PATCH (DD=ϕ4.0,DT=0.8)	6-35-B1120-3RD	
6	LCD HINGE SCREW RUBBER SLICON E4128	6-47-E4181-011	
7	LCD HINGE L SECC E4128	6-33-E4181-021	
8	SCREW M2.5*5L KI BK/Z ICT NY-無鉛	6-35-B6125-5RA	
9	GASKET (10*6*6) FOR TV CONN. TOP CASE M570TU	6-47-00190-102	
10	WIRE CABLE FOR LVDS 300MM C4501-CD	6-43-C4801-051	
11	LCD FRONT COVER PROTECTION MYLAR (PET+3M8915) (設變C4500)	6-40-C4501-011	
12	WIRE CABLE FOR CCD 5P 310.5MM C4500 (華力)	6-43-C450T-011	
13	ANTENNA WCDMA PCB 3G 860MM 精乘E4120	6-23-7E412-010	
14	LCD 14.0" HD CHIMEI N140B6-L02 GLARE TYPE	6-50-J8152-D00	OPTION
14	LCD 14.0" HD BOE HT140WXB-100 GLARE TYPE	6-50-J8152-H00	OPTION
15	UVC CAMERA CHICONY FIX CNF9121 1.3M OV9665	6-88-M74TC-5101	OPTION
15	UVC CAMERA BISON FIX BN28M6SA8-000 1.3M M810L	6-88-M810C-4910	OPTION
15	UVC CAMERA CHICONY FIX CNF9085 300K OV7675 M1100	6-88-M110C-5100	OPTION
16	LCD HINGE R SECC E4128	6-33-E4181-011	
17	ANTENNA WIMAX COMBO WGT WM1+WM2 PCB H=1MM 2.4G/3.5GHZ/5G WM1=585MM WM2=585MM	6-23-7C450-032	
18	LCD BACK COVER MODULE E4128-C	6-39-E4181-022-C	
19	TAPE MYLAR (B),MYLAR M550J	6-40-M55J2-020	
20	BACK COVER PROTECTION MYLAR(8B35+3M8915) C4500	6-40-C4501-020	

Figure A - 9
LCD (W248BUQ - C)

SATA-DVD SUPER MULTI (W245BUQ/ W240BUQ/ W241BU-C)

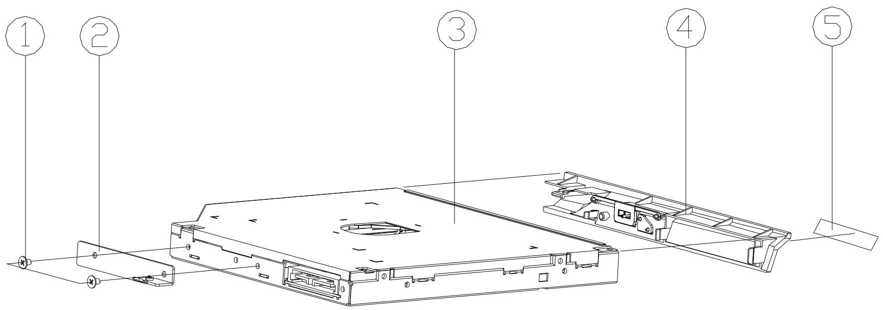
Figure A - 10
LCD (W245BUQ/ W240BUQ/ W241BU-C)

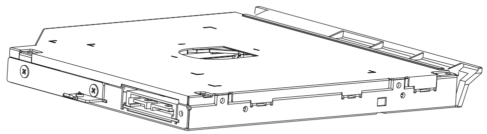




ITEM	PART NAME	PART NO	REMARK
1	*(非耐落)SCREW M2*3L K1 NI ICT GTY-PATCH (DD=Ø4.0,DT=0.8) 無鉛	6-35-B1120-3RD	
2	ODD BRACKET SECC C4500	6-33-C450Z-010	
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM DS-8A5S F/W: WX13 (WINDOWS 7, ZERO POWER) PLDS	6-85-A078X-L05	FOR PLDS
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM GT40 ROM VER. SL00 (WINDOWS 7 SUPPORT) HLDS	6-85-A078X-508	FOR HLDS
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM TS-L633F/TMCFZ F/W TM00 H/W: A VERF (WINDOWS 7 SUPPORT) TSST	6-85-A078X-T09	FOR TSST
4	ODD BEZEL MODULE C4500	6-42-C450Z-102	
5	ODD BEZEL LABEL (SUPER MULTI) C4500	6-45-C450Z-011	

SATA-DVD SUPER MULTI (W248BUQ)



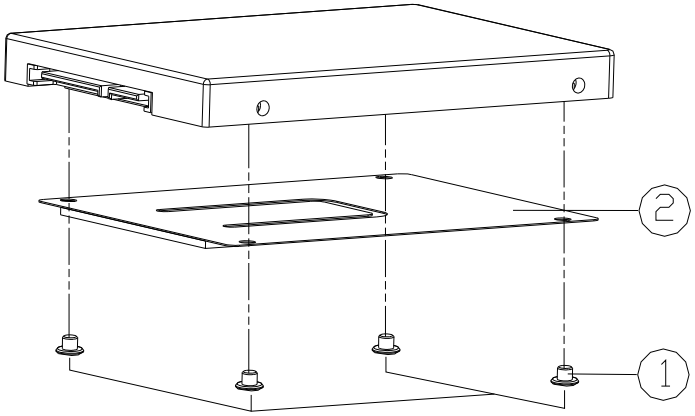


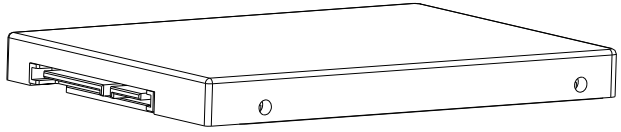
ITEM	PART NAME	PART NO	REMARK
1	*(非耐落)SCREW M2*3L KI NI ICT GTY-PATCH (DD=Ø4.0,DT=0.8) 無鉛	6-35-B1120-3RD	
2	ODD BRACKET SECC C4500	6-33-C450Z-010	
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM DS-8A5S F/W: WXI3 (WINDOWS 7, ZERO POWER) PLDS	6-85-A078X-L05	FOR PLDS
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM GT40 ROM VER. SL00 (WINDOWS 7 SUPPORT) HLDS	6-85-A078X-508	FOR HLDS
3	SATA DVD SUPER MULTI 5 1/4" 8X 12.7MM TS-L633F/TMCFZ F/W TM00 H/W: A VERF (WINDOWS 7 SUPPORT) TSST	6-85-A078X-T09	FOR TSST
4	ODD BEZEL MODULE C4500	6-42-C450Z-102	
5	ODD BEZEL LABEL (SUPER MULTI) C4500	6-45-C450Z-011	

Figure A - 11
SATA-DVD SUPER MULTI (W248BUQ)

A.Part Lists

HDD





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

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the ***W241BU/W241BUQ/W240BU/W245BUQ/W248BUQ/W249BUQ*** notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

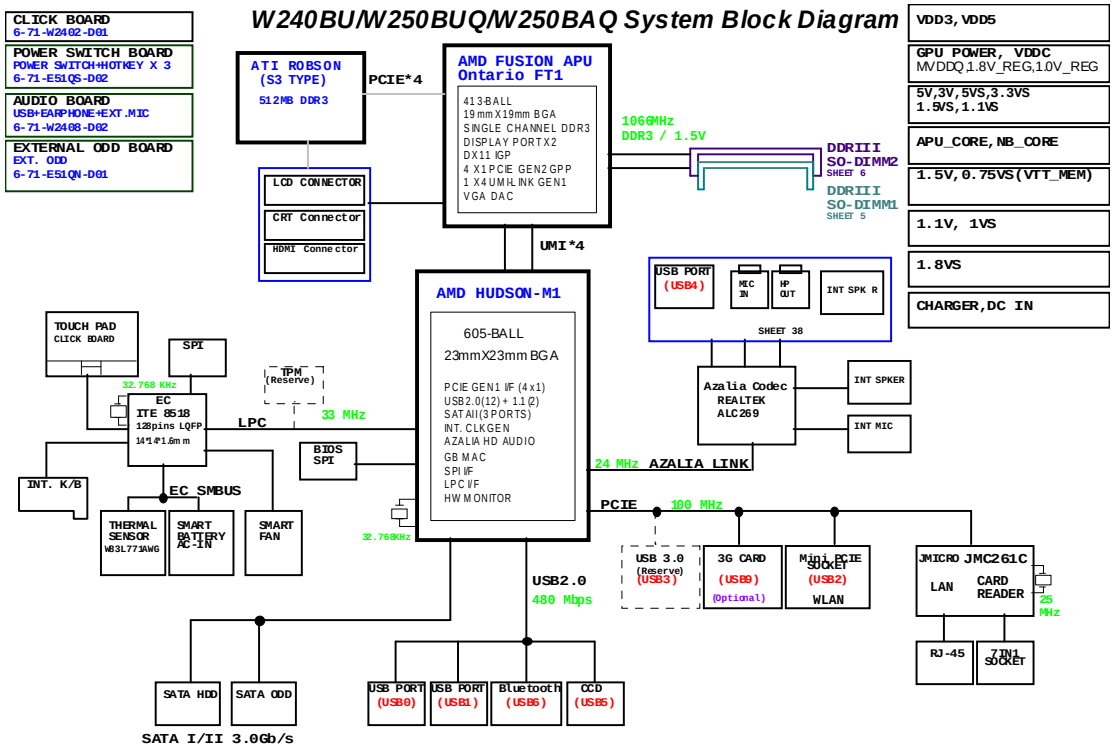
Table B - 1
Schematic Diagrams

Version Note

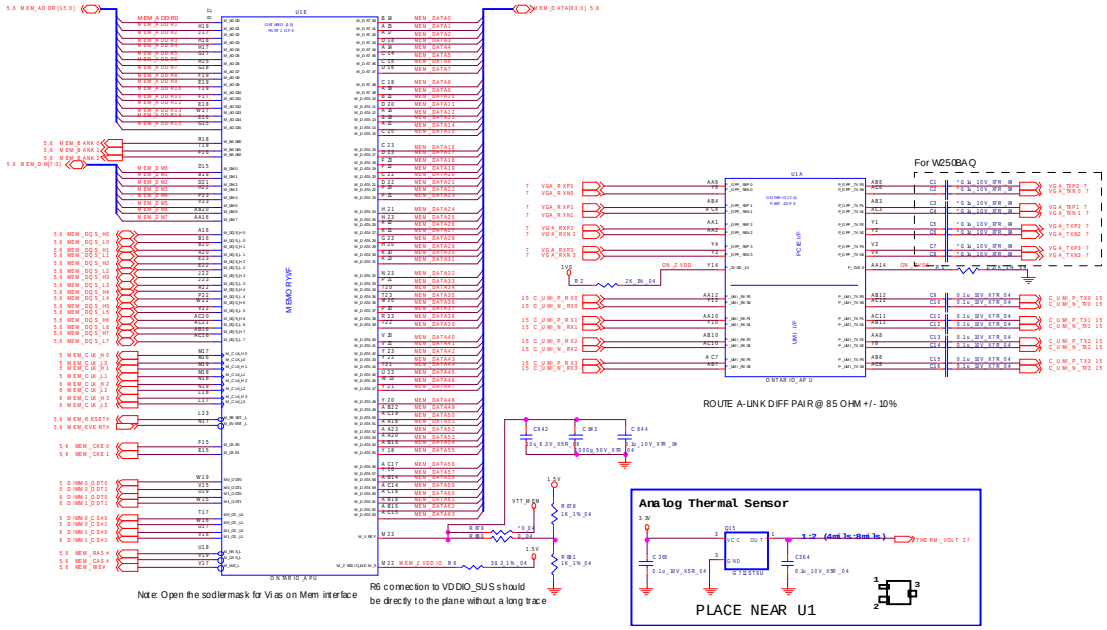
The schematic diagrams in this chapter are based upon version 6-7P-W2405-003. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram

Sheet 1 of 41
System Block Diagram



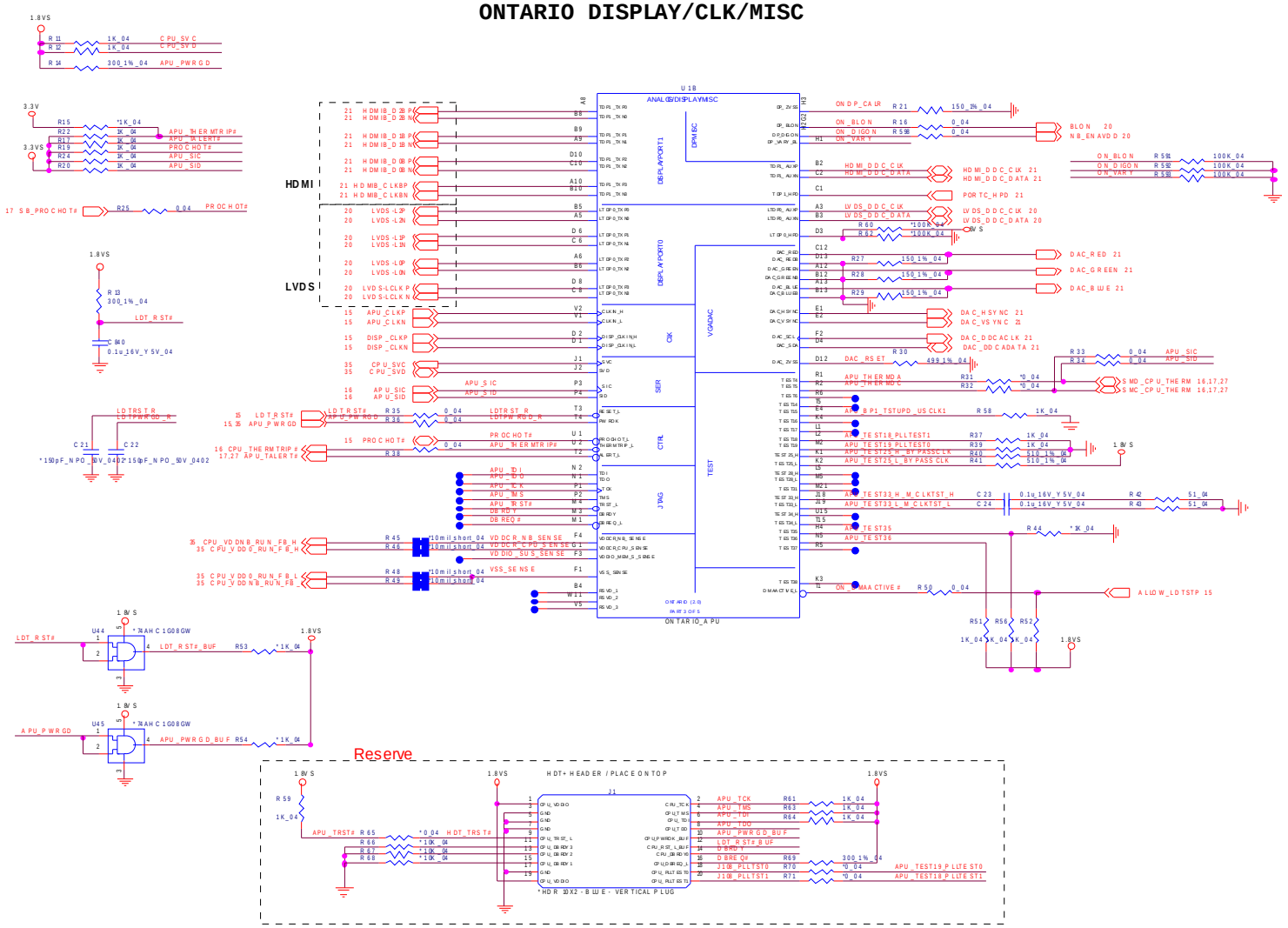
ONTARIO MEM & PCIE I/F, AP



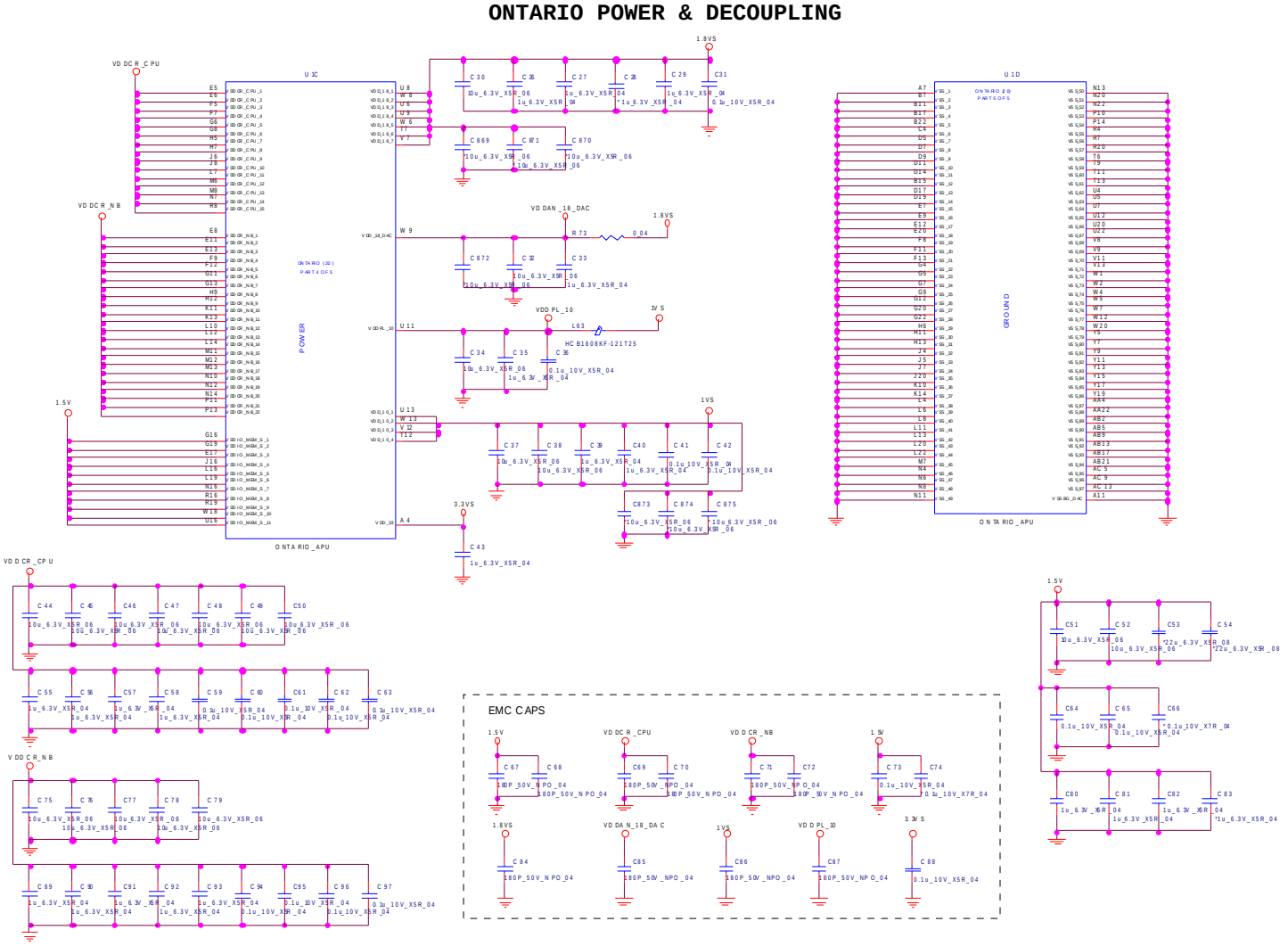
Sheet 2 of 41
ONTARIO MEM & PCIE I/F, AP

ONTATIO DISPLAY/ CLK/ MISC

Sheet 3 of 41
ONTATIO
DISPLAY/ CLK/
MISC



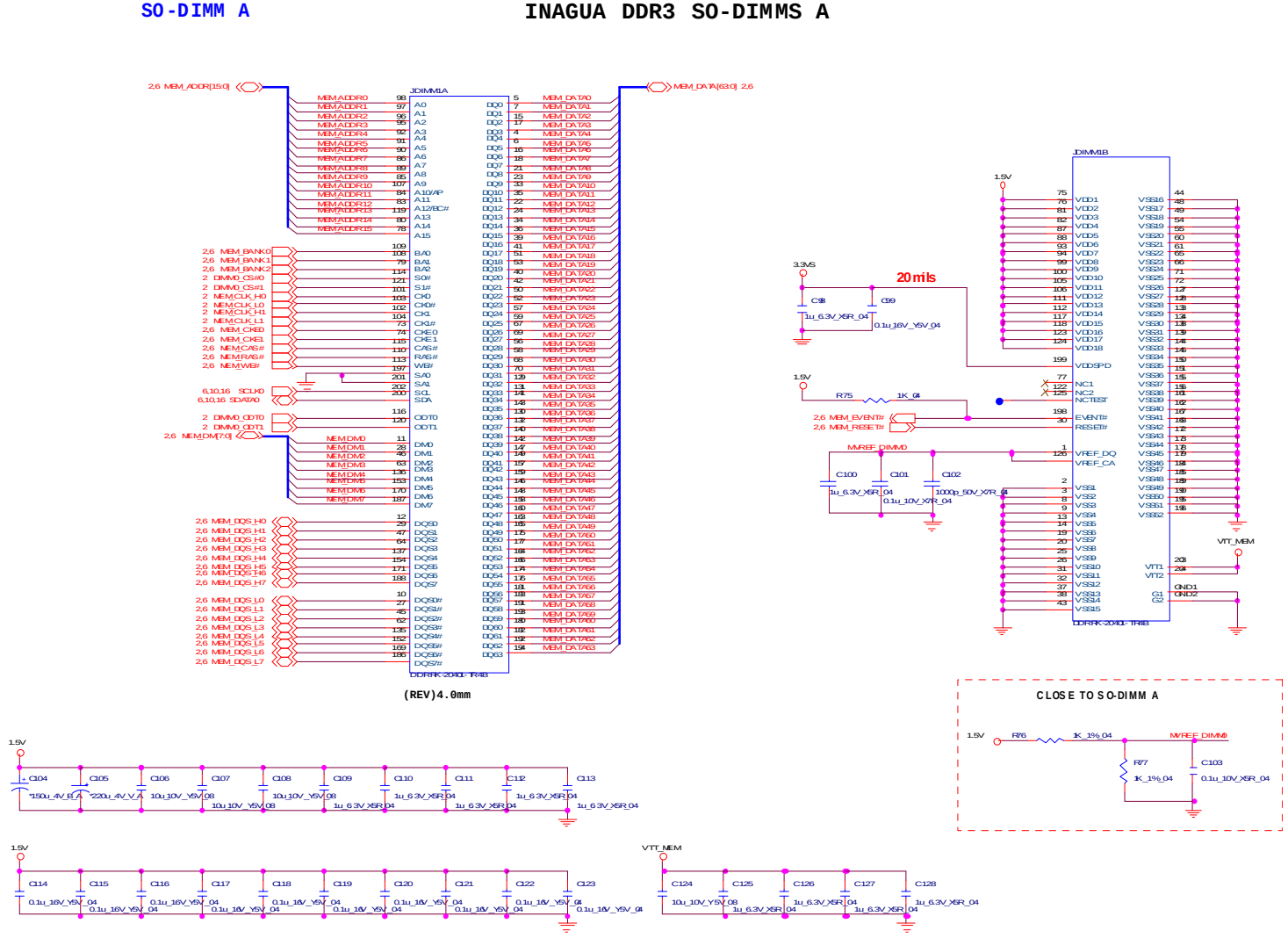
ONTARIO POWER & DECOUPLING



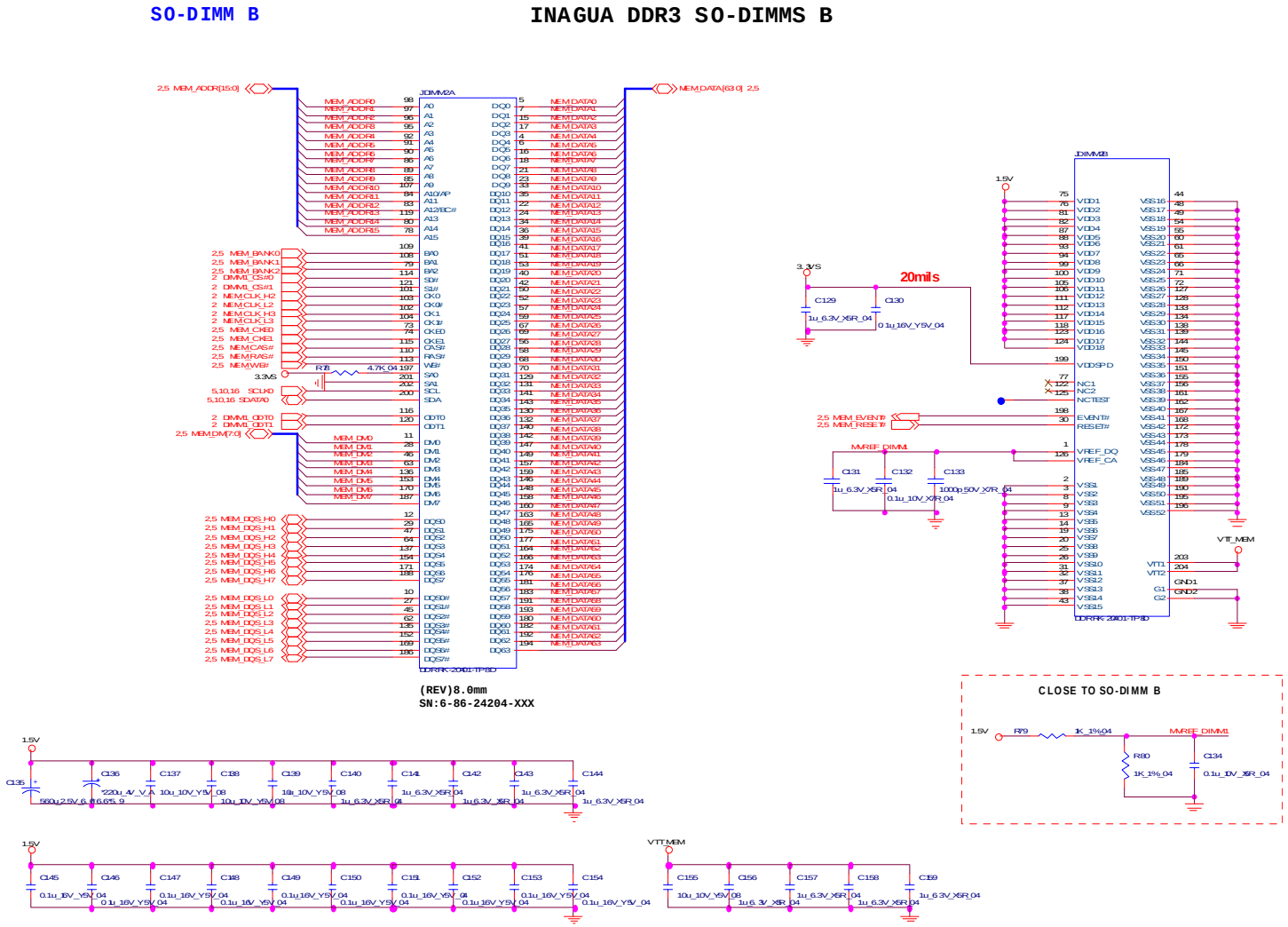
Sheet 4 of 41
ONTARIO POWER
& DECOUPLING

INAGUA DDR3 SO-DIMMS A

Sheet 5 of 41
INAGUA DDR3 SO-DIMMS A



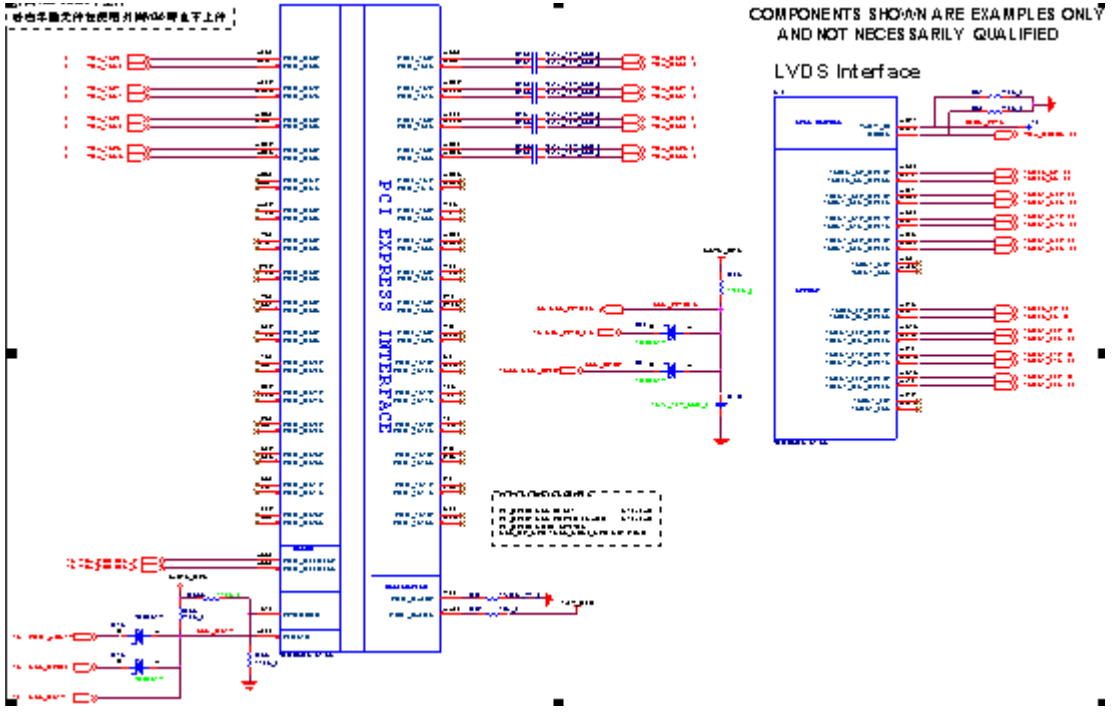
INAGUA DDR3 SO-DIMMS B



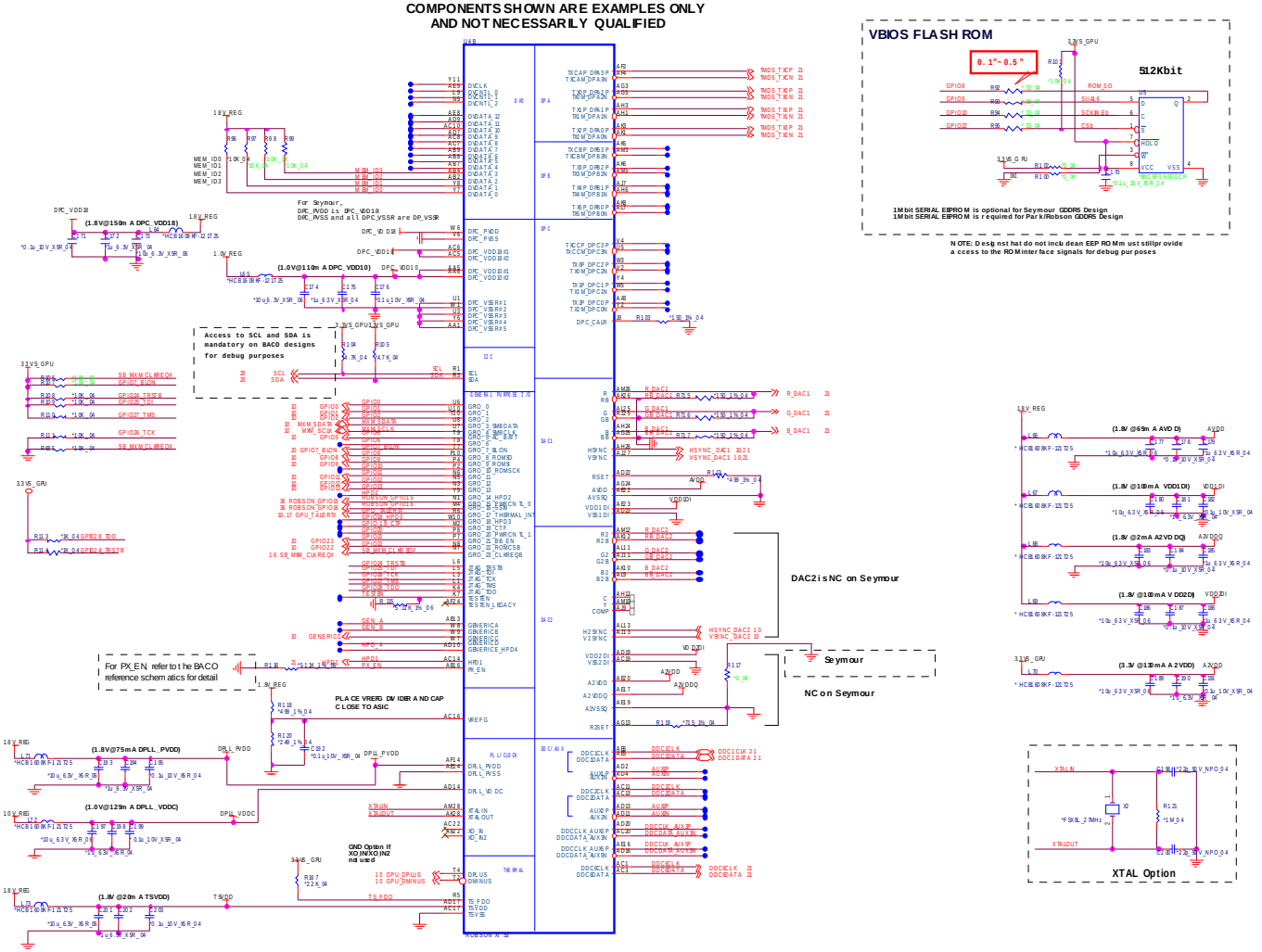
Sheet 6 of 41
INAGUA DDR3 SO-DIMMS B

Robson S3 PCIE/ LVDS 1/6

Sheet 7 of 41
Robson S3 PCIE/
LVDS 1/6



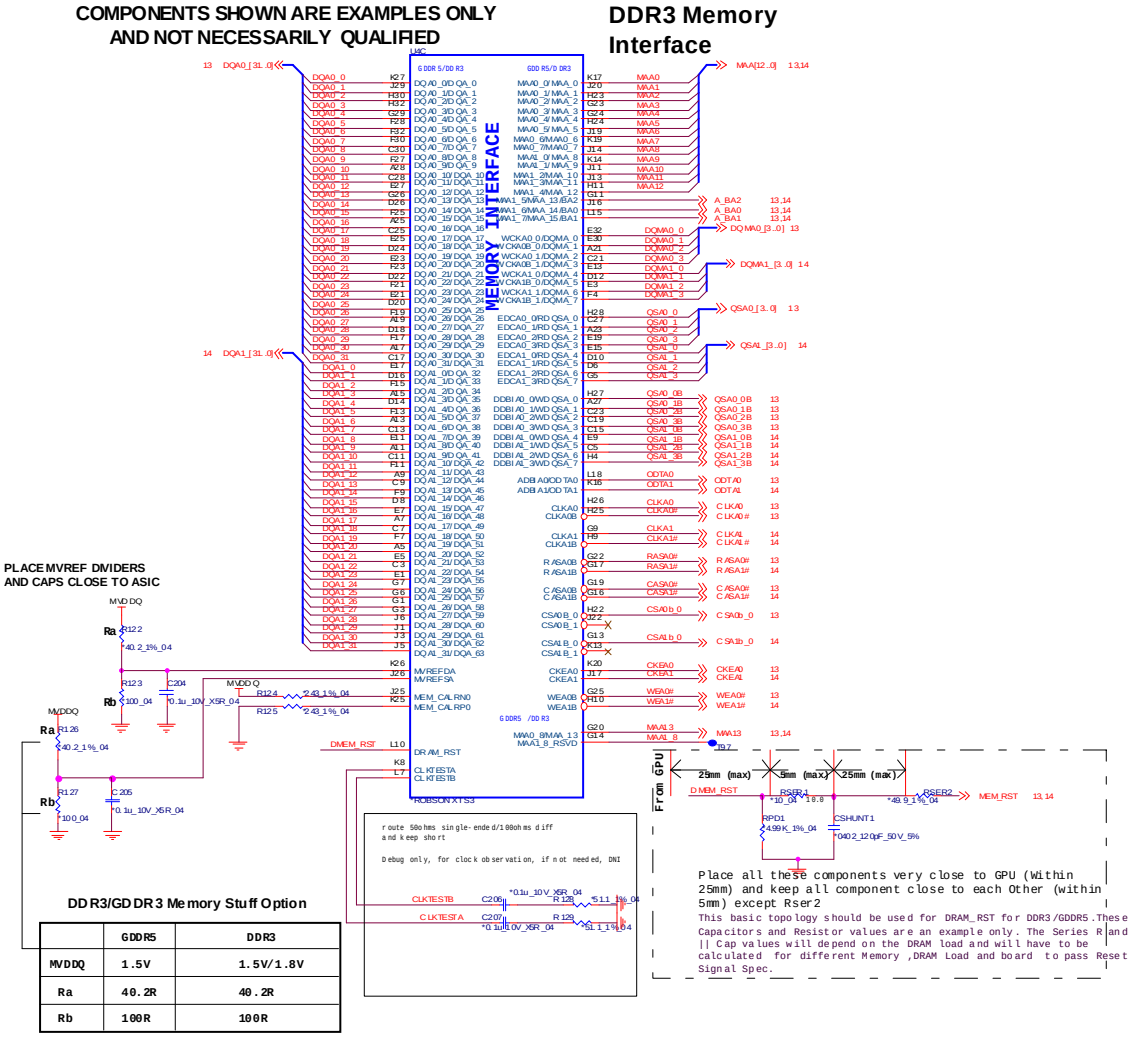
Robson S3 MAIN 2/6



Sheet 8 of 41
Robson S3 MAIN 2/6

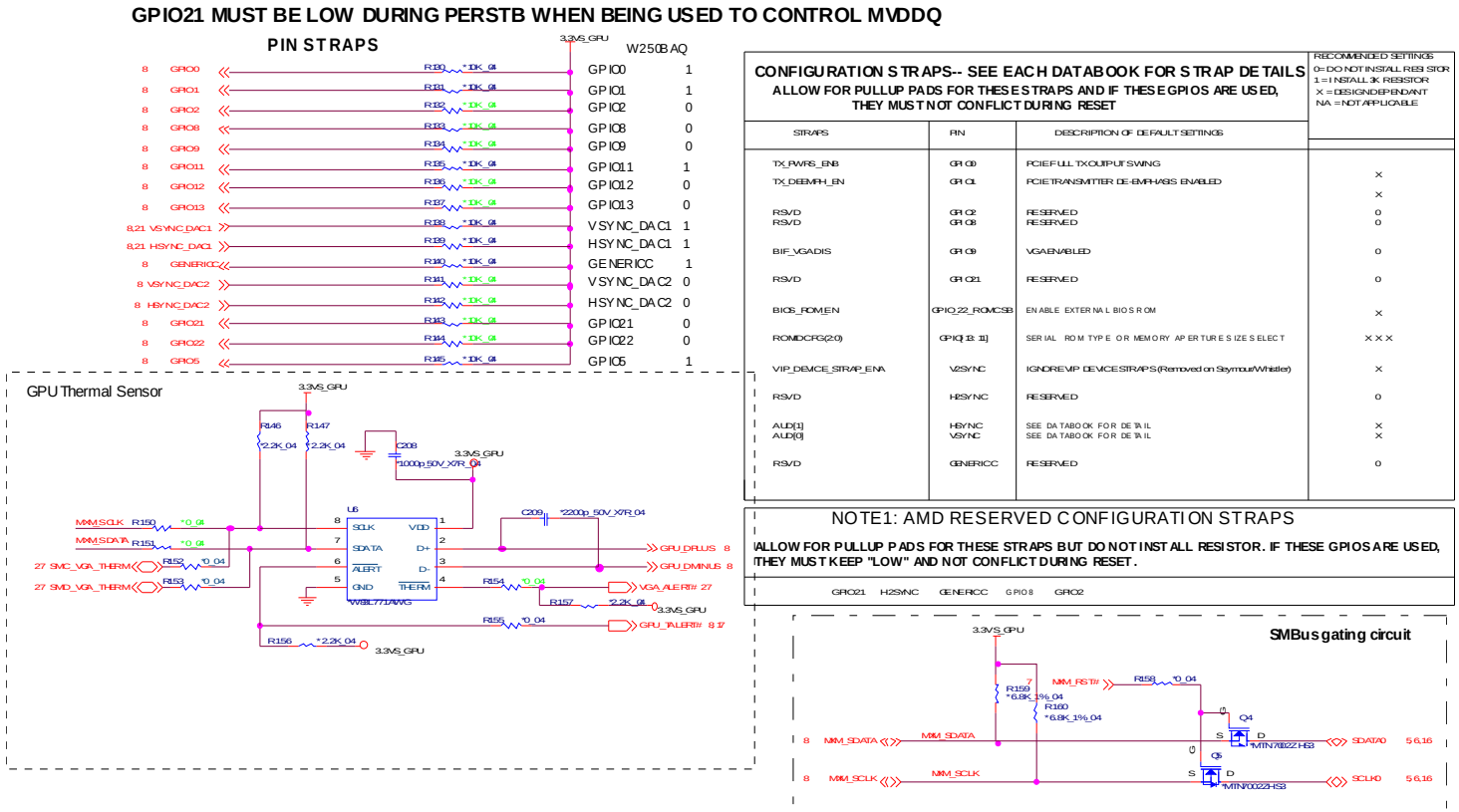
Robson S3 MEM Interface 3/6

Sheet 9 of 41
Robson S3 MEM InTERFACE 3/6



	GDDR5	DDR3
MVDDQ	1.5V	1.5V/1.8V
Ra	40.2R	40.2R
Rb	100R	100R

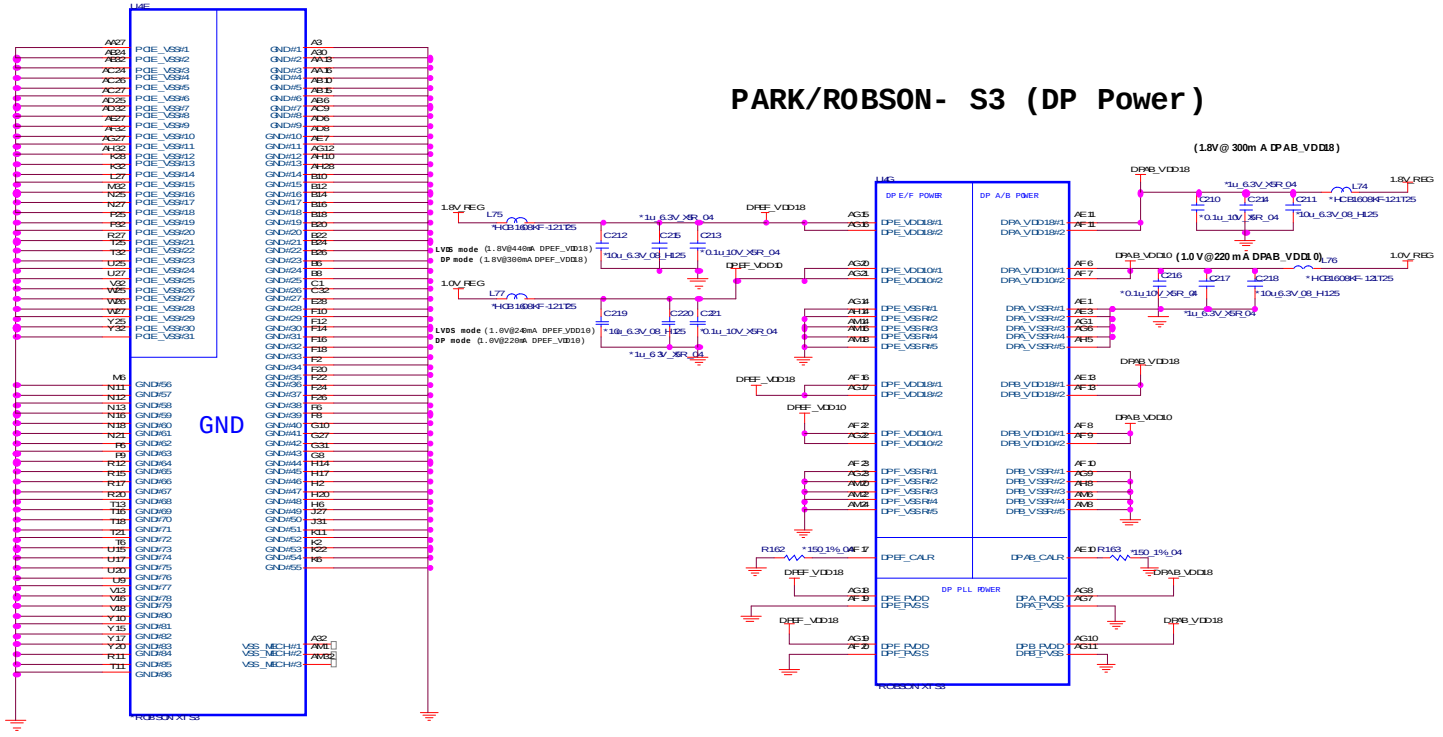
Robson S3 Straps 4/6



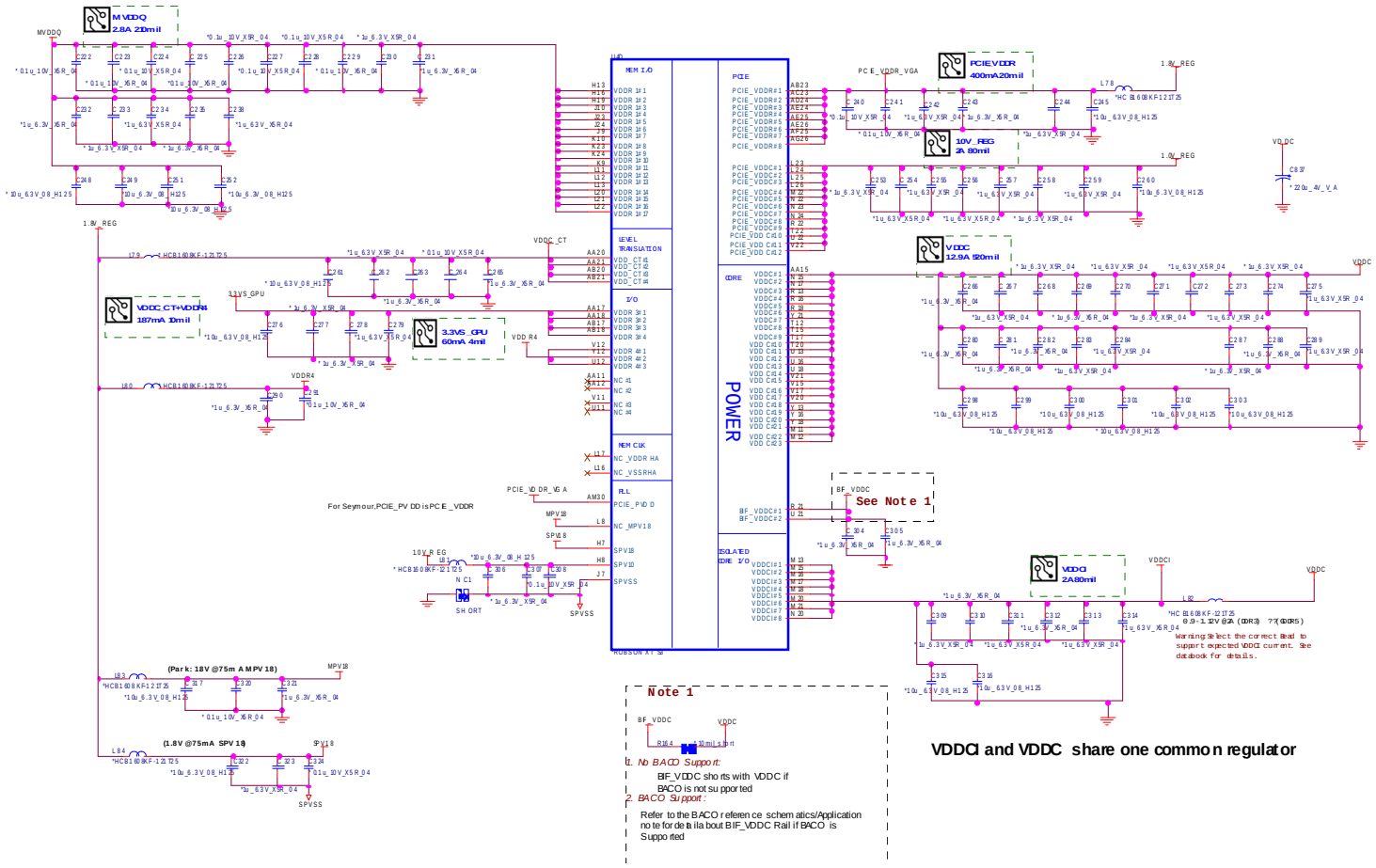
Sheet 10 of 41
Robson S3 Straps 4/6

Robson S3 Power 5/6

Sheet 11 of 41
Robson S3 Power 5/6



Robson S3 Power 6/6



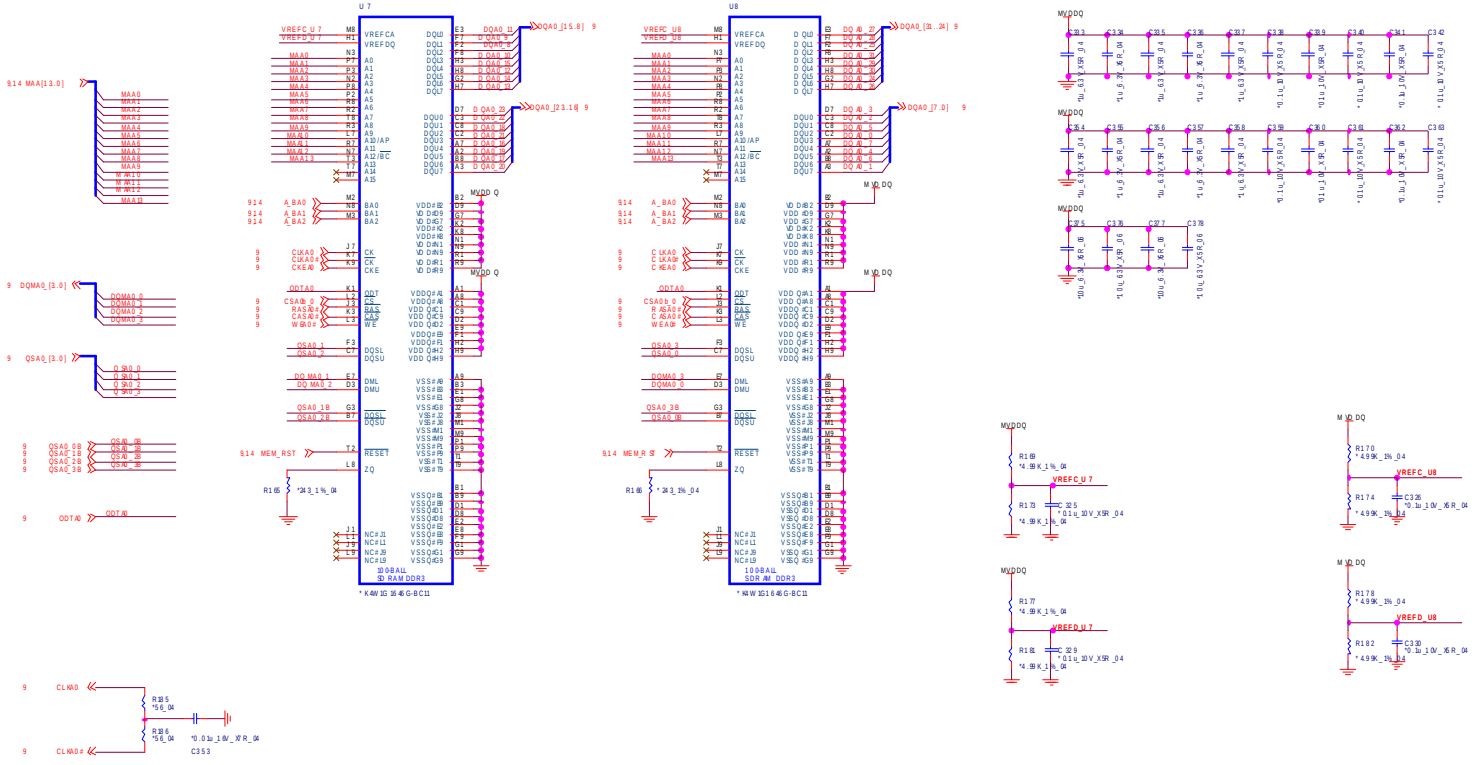
Sheet 12 of 41
Robson S3 Power 6/6

Robson DDR3 MEM CH-A

CHANNEL A: 64M X 16 bit X8 DDR3 (RANK0)

COMPONENTS SHOWN ARE EXAMPLES ONLY
AND NOT NECESSARILY QUALIFIED

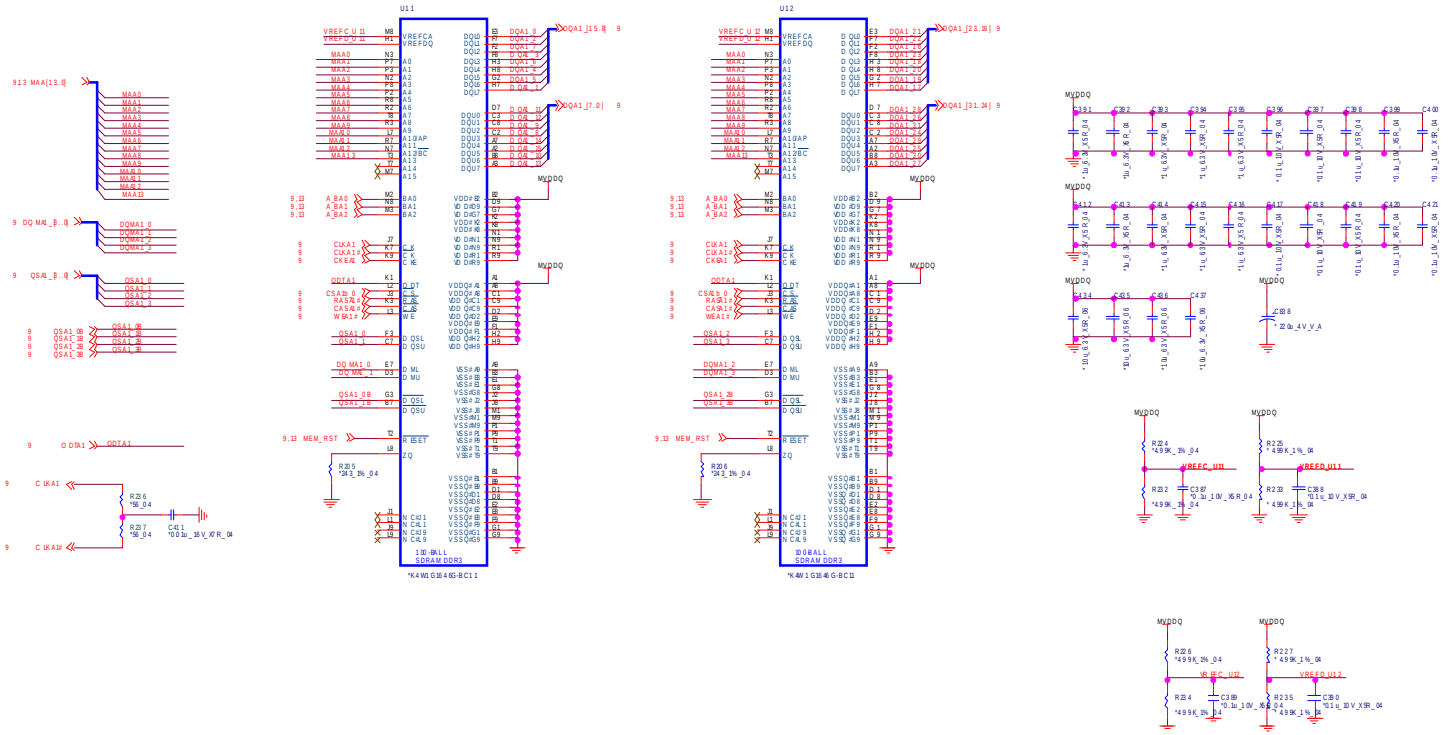
Sheet 13 of 41
Robson DDR3 MEM CH-A



Robson DDR3 MEM CH-B

COMPONENTS SHOWN ARE EXAMPLES ONLY
AND NOT NECESSARILY QUALIFIED

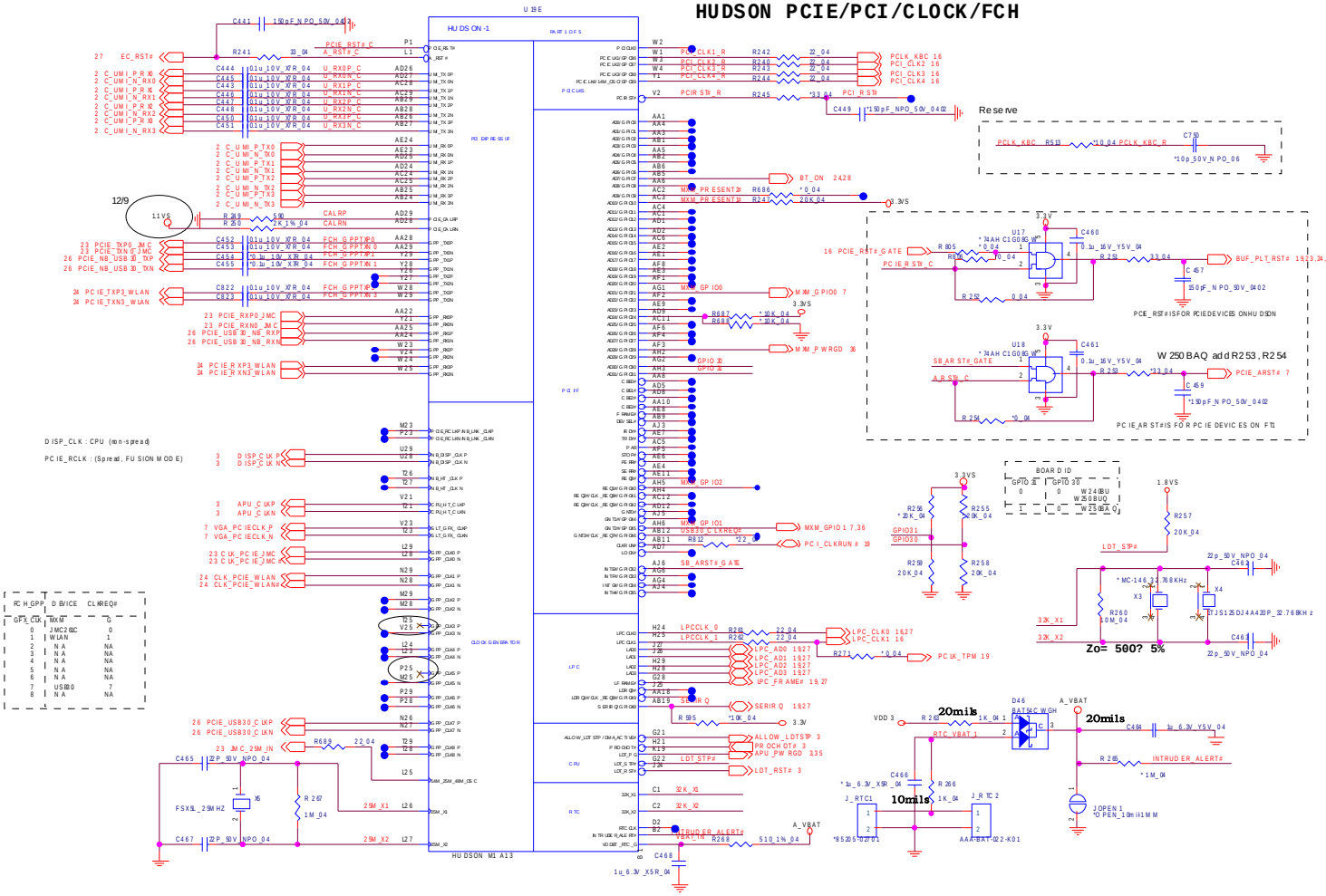
CHANNEL A: 64M X 16 bit X8 DDR3 (RANK1)



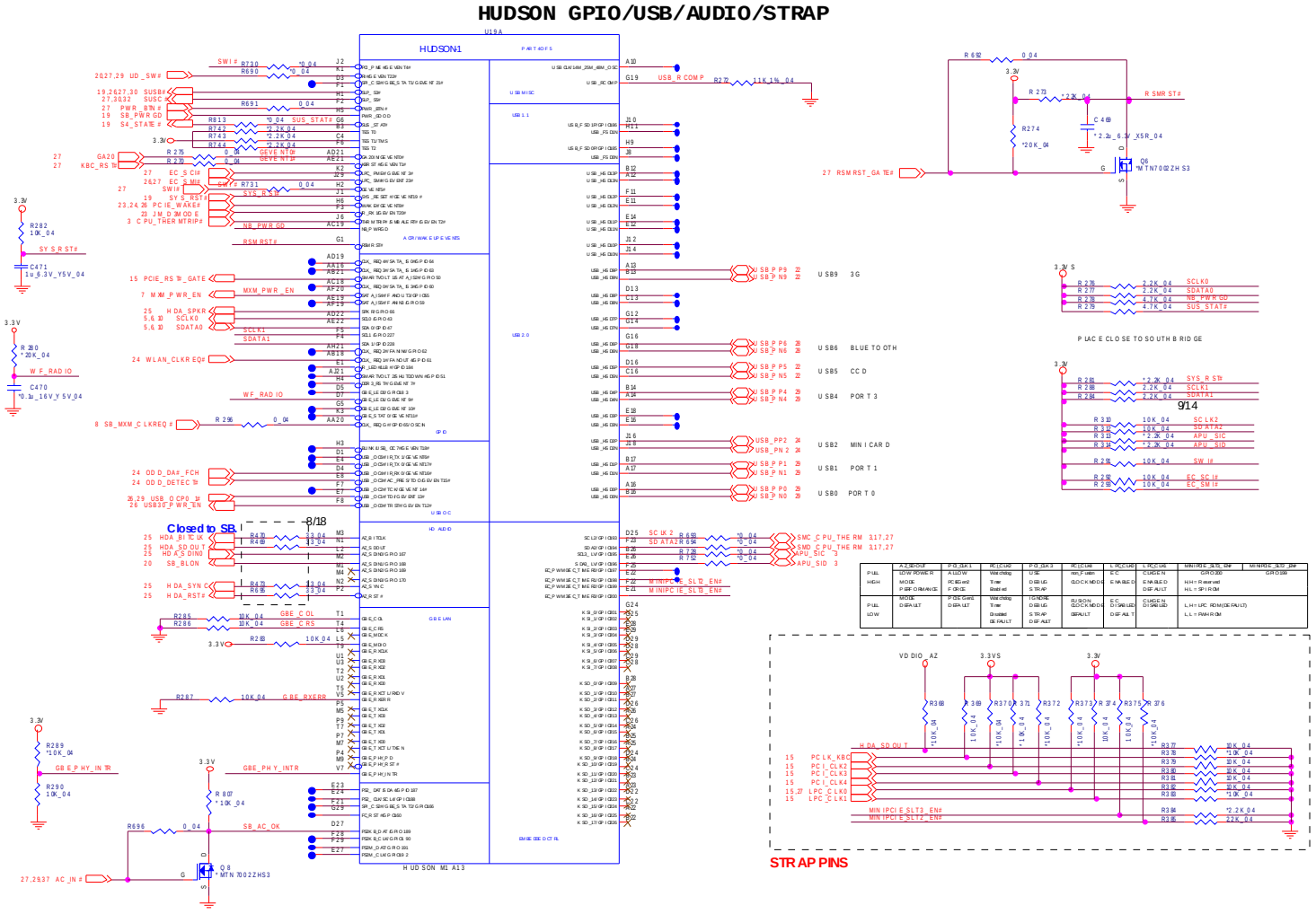
Sheet 14 of 41
Robson DDR3 MEM CH-B

HUDSON PCIE/ PCI/ CLOCK/ FCH

Sheet 15 of 41
HUDSON PCIE/
PCI/ CLOCK/ FCH



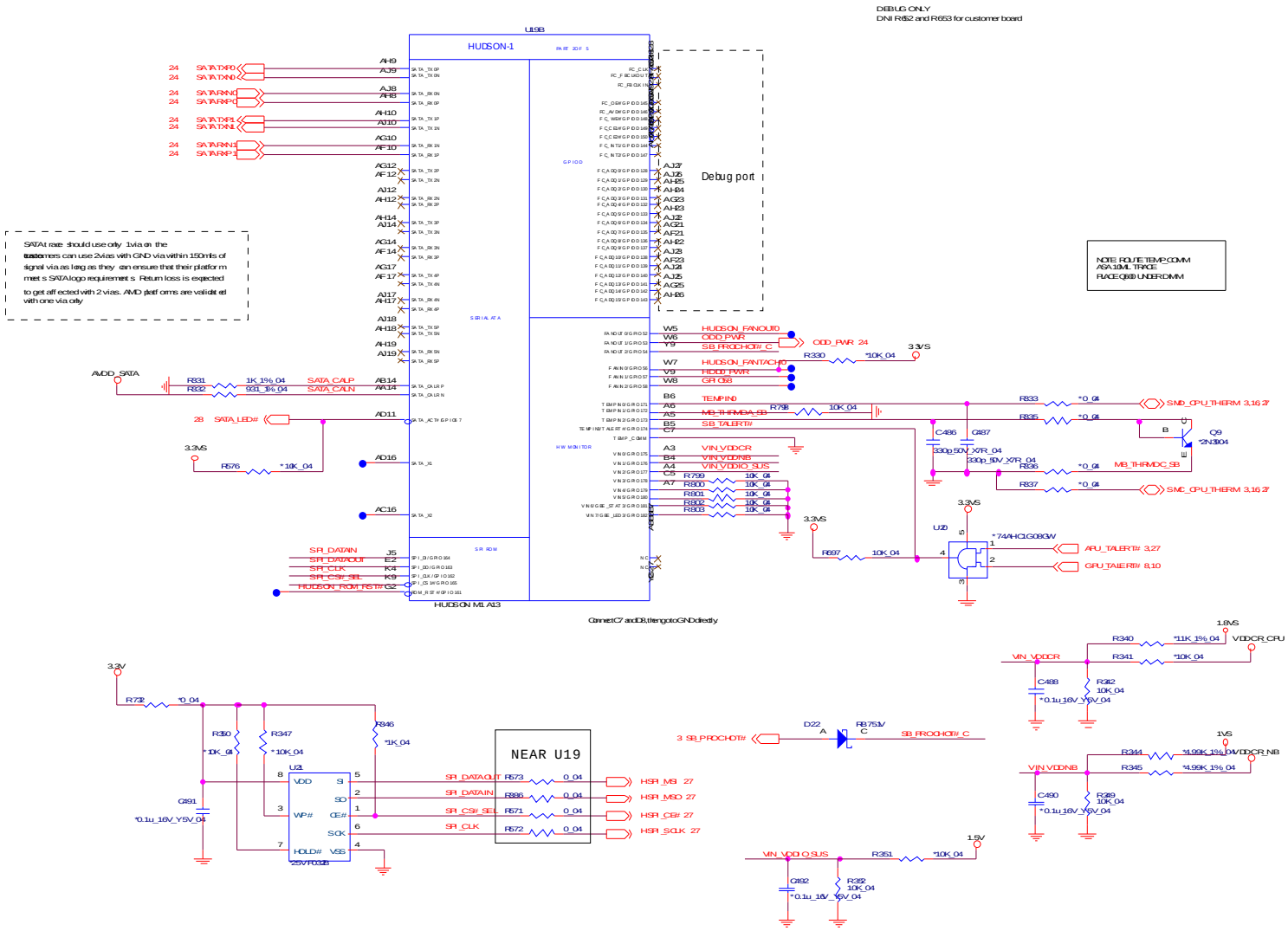
HUDSON GPIO/ USB/ STRAP



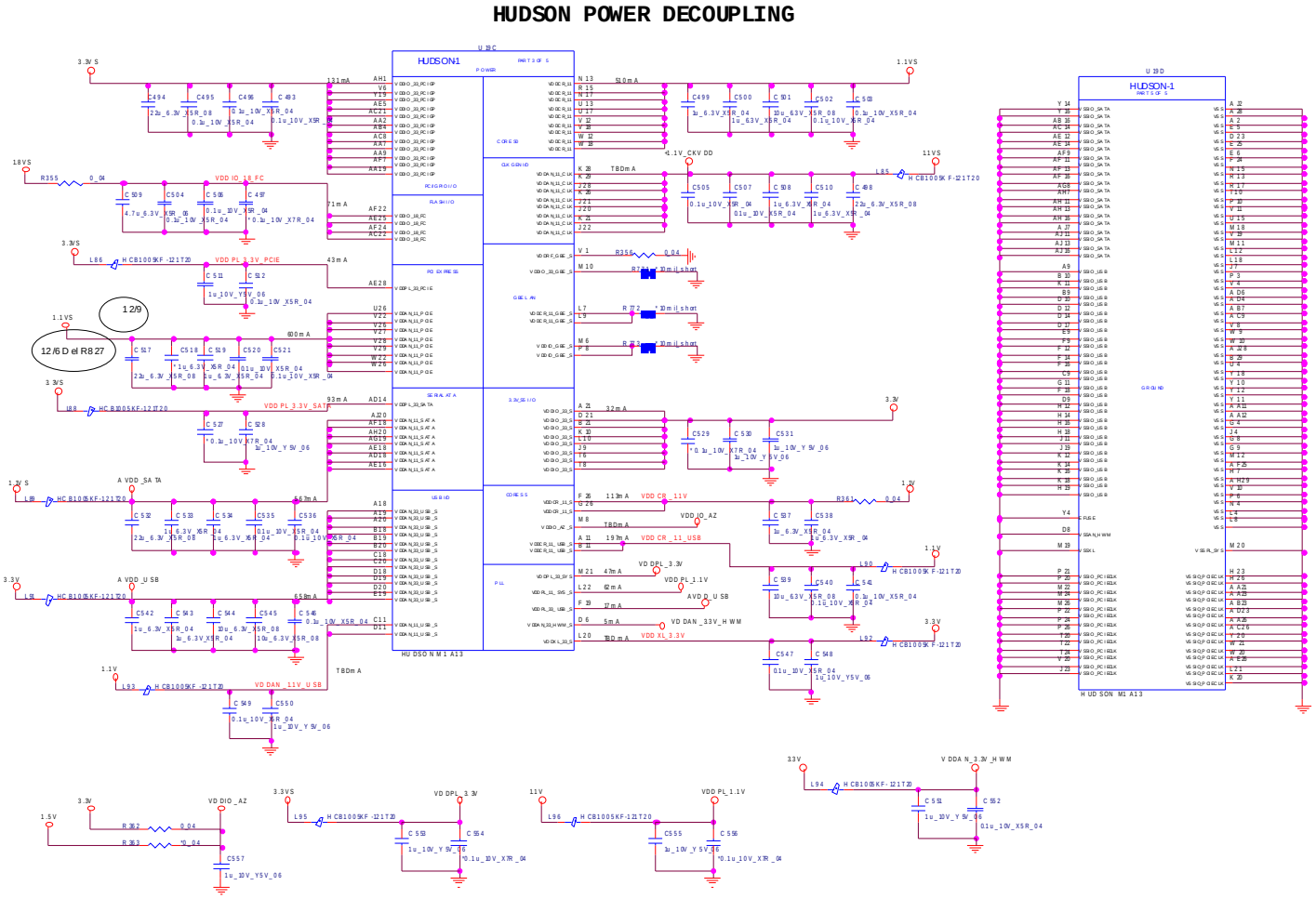
Sheet 16 of 41
HUDSON GPIO/
USB/ STRAP

HUDSON SATA/ DEBUG IO/ SPI

Sheet 17 of 41
HUDSON SATA/ DEBUG IO/ SPI

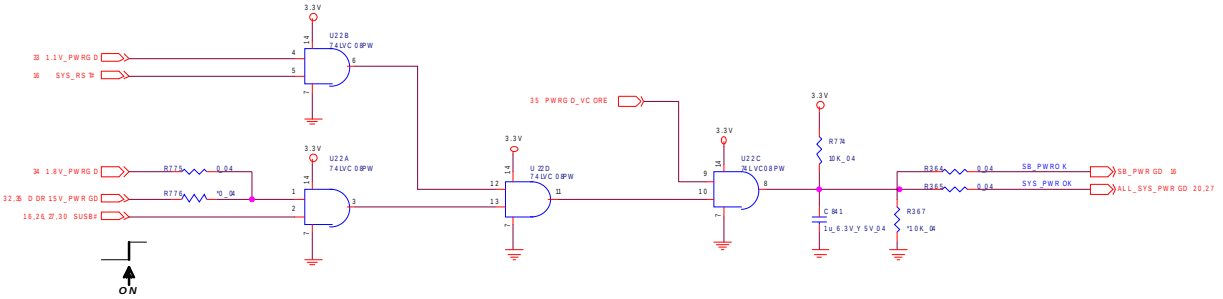


HUDSON POWER DECOUPLING



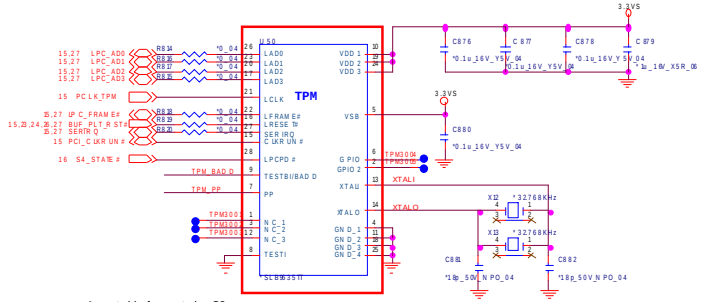
Sheet 18 of 41
HUDSON POWER DECOUPLING

POWERGOOD/ TPM



Sheet 19 of 41
POWERGOOD/ TPM

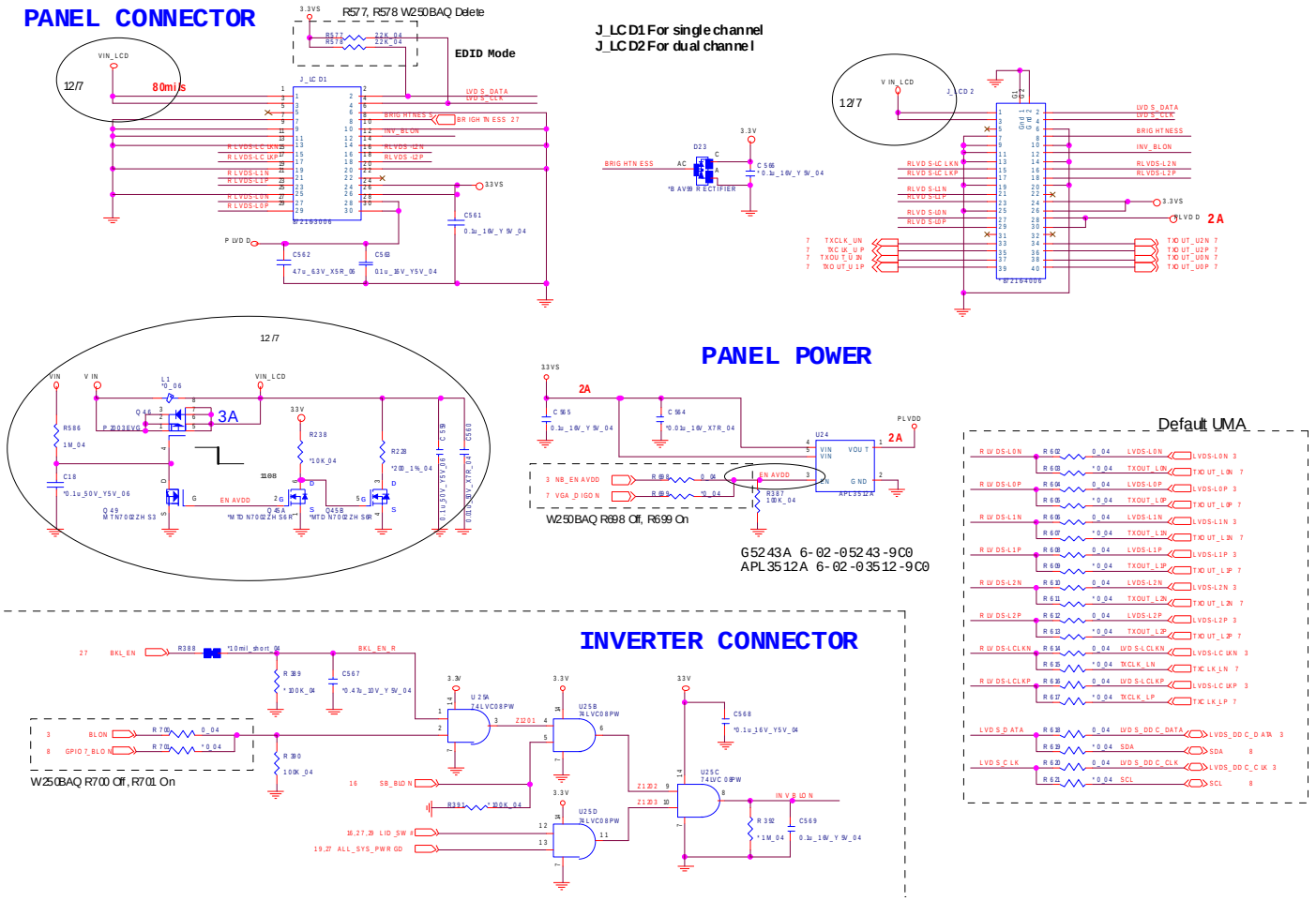
TPM 1.2



Asserted before entering S3
LPC reset timing:
LPCPD# inactive to LRST# inactive 32~96us

TPM_PP	HI: ACCESS LOW: NORMAL(Internal PD)
TPM_BADD	HI: 4E/4FH LOW: 2E/2FH

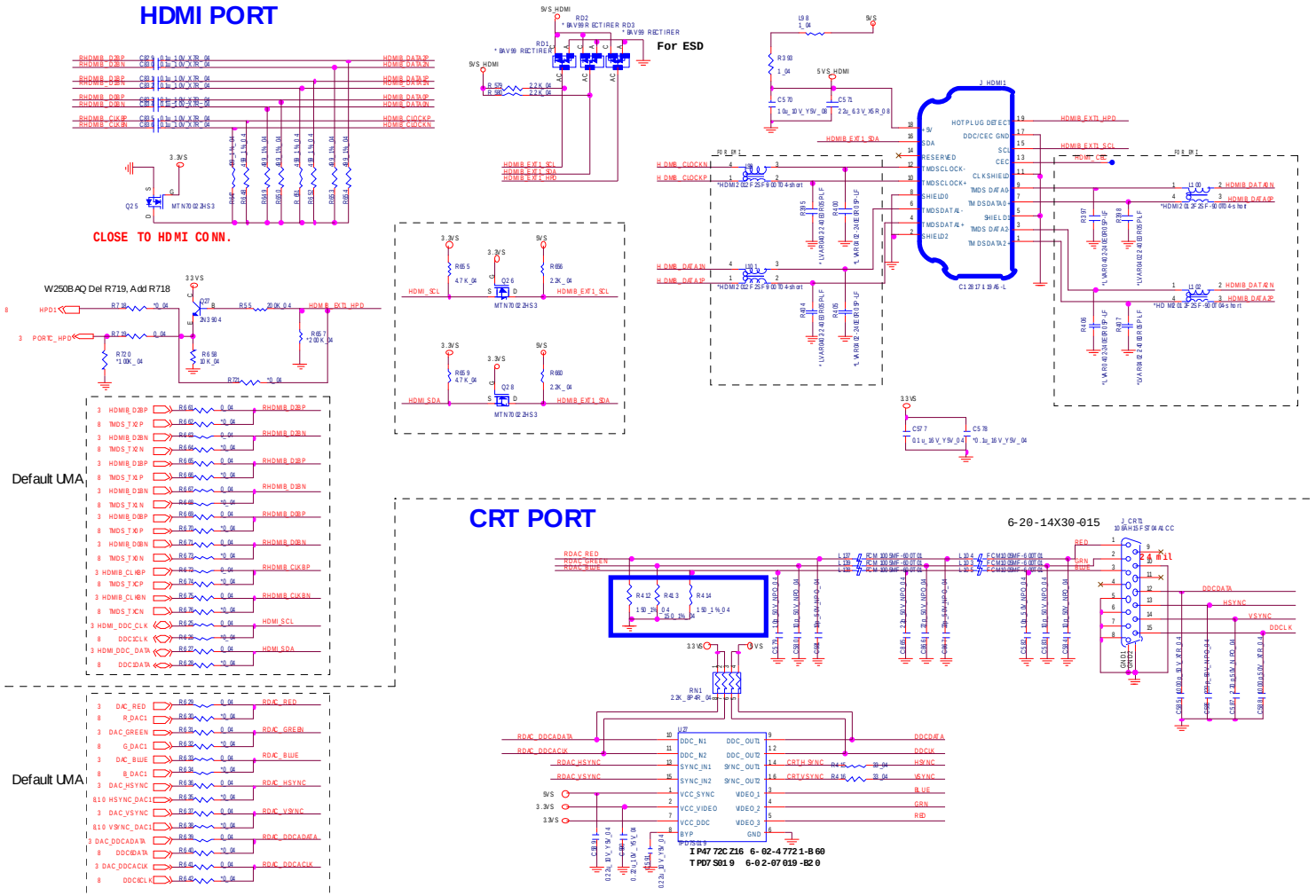
LVDS, INVERTER



Sheet 20 of 41
LVDS, INVERTER

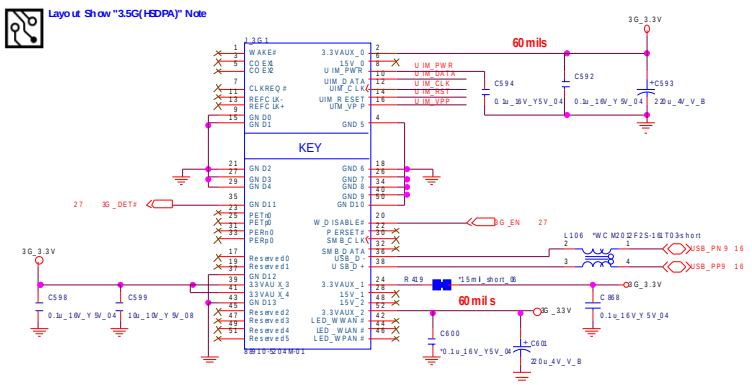
HDMI/ CRT

Sheet 21 of 41
HDMI/ CRT



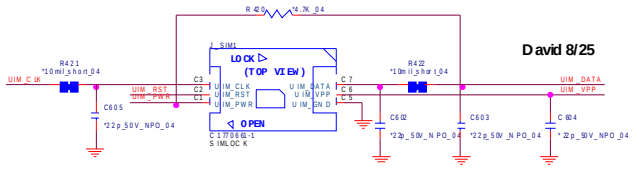
CCD/ 3G

MINI CARD 3G(Port 6)



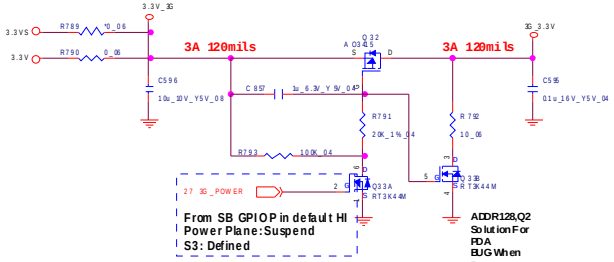
Layout?
1. SIM? ? ? ? ? ? ? ? (10mil)
2. ? ? ? ? ? ? ? ? GND
3. SIM hold ? ? ? ? ? GND? ?
4. SIM CONN ? ? MINI CARD CONN

SIM CONN

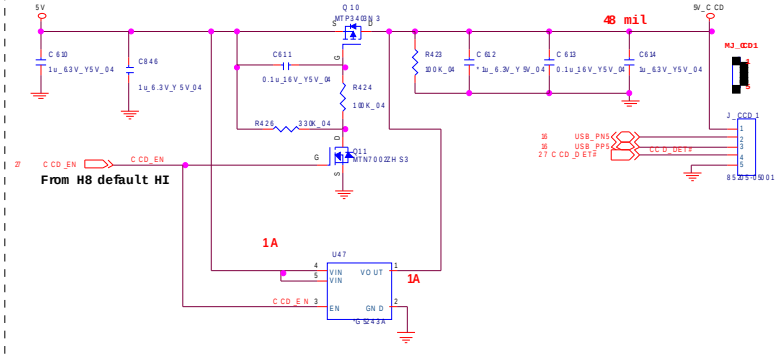


3G POWER

AO3409? ? ?
AO3409(90mohm) Change to AO3415(45mohm).



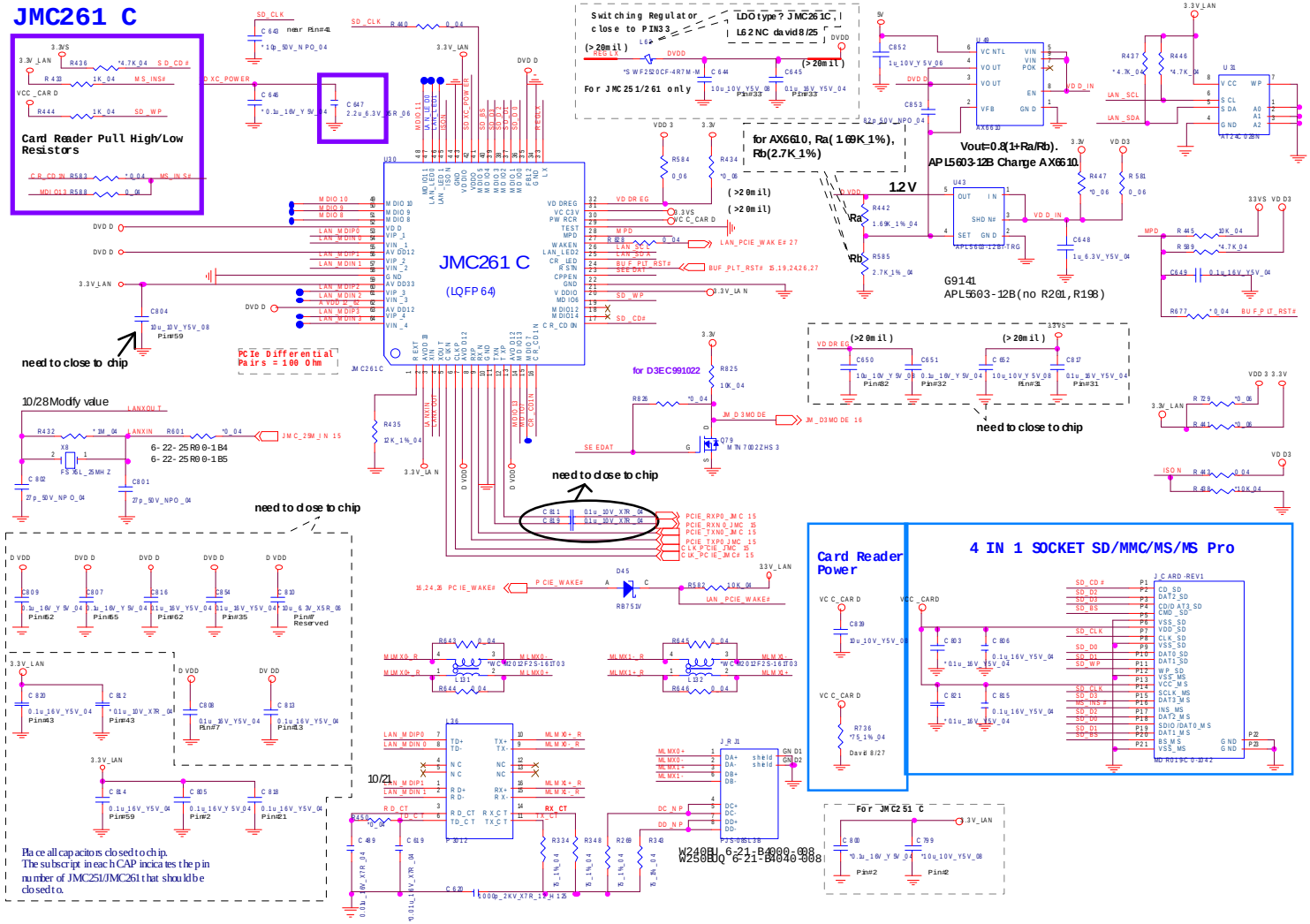
CCD



Sheet 22 of 41
CCD/ 3G

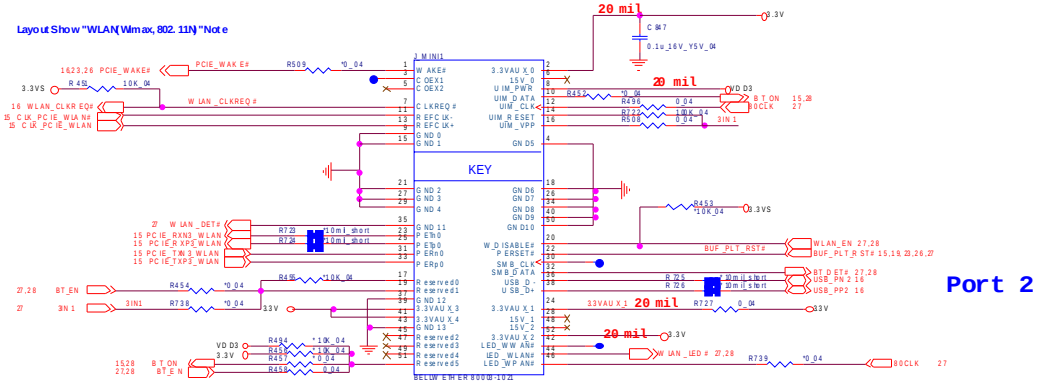
Card Reader/ LAN JMC261C

Sheet 23 of 41
Card Reader/ LAN
JMC261C



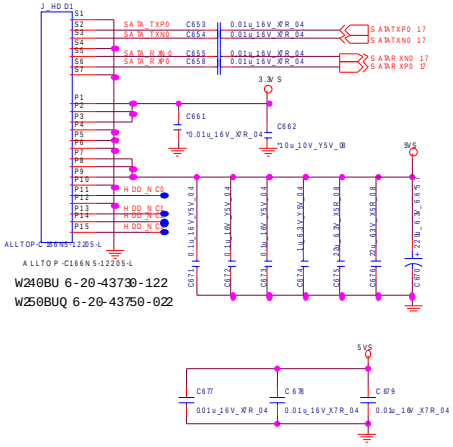
MINI PCIE/ SATA HDD/ ODD

MINI CARD (WLAN,Port 5)

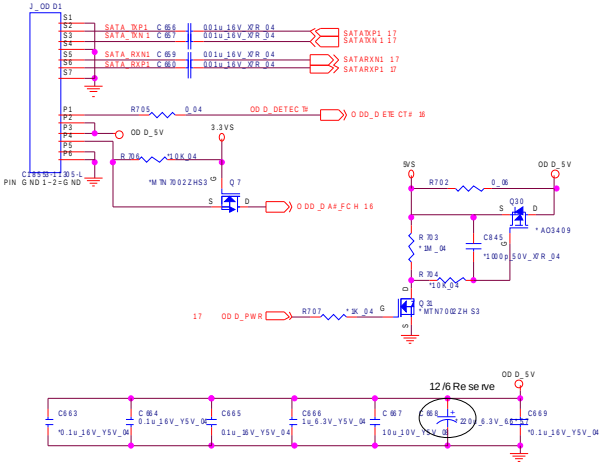


Sheet 24 of 41
MINI PCIE/ SATA HDD/ ODD

SATA HDD

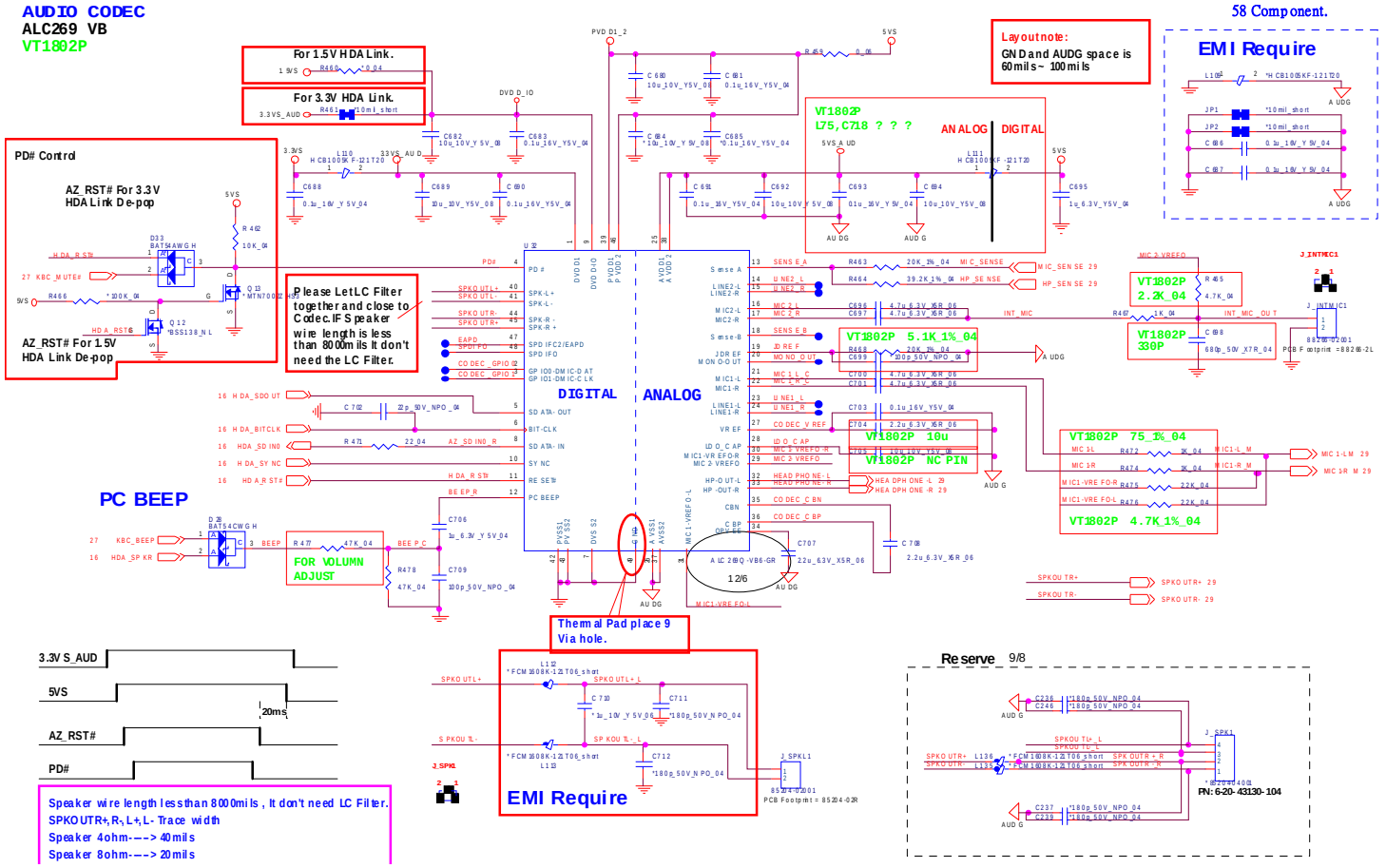


SATA ODD

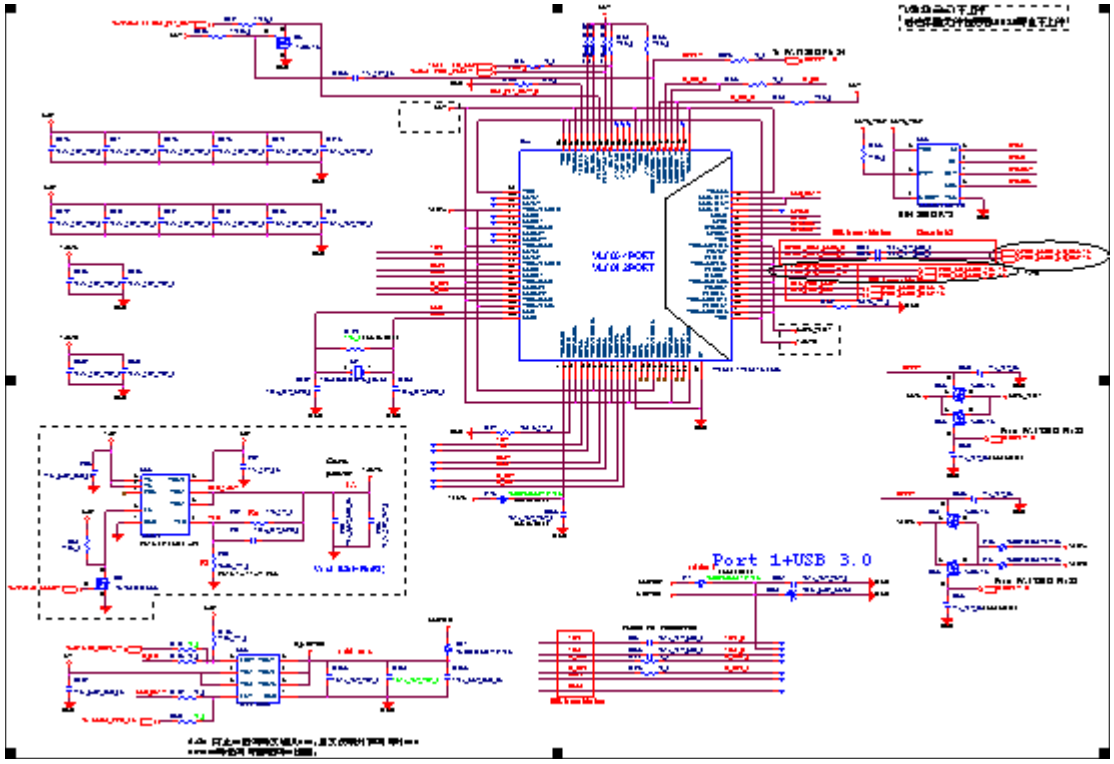


AUDIO CODEC ALC261C

Sheet 25 of 41
AUDIO CODEC
ALC261C



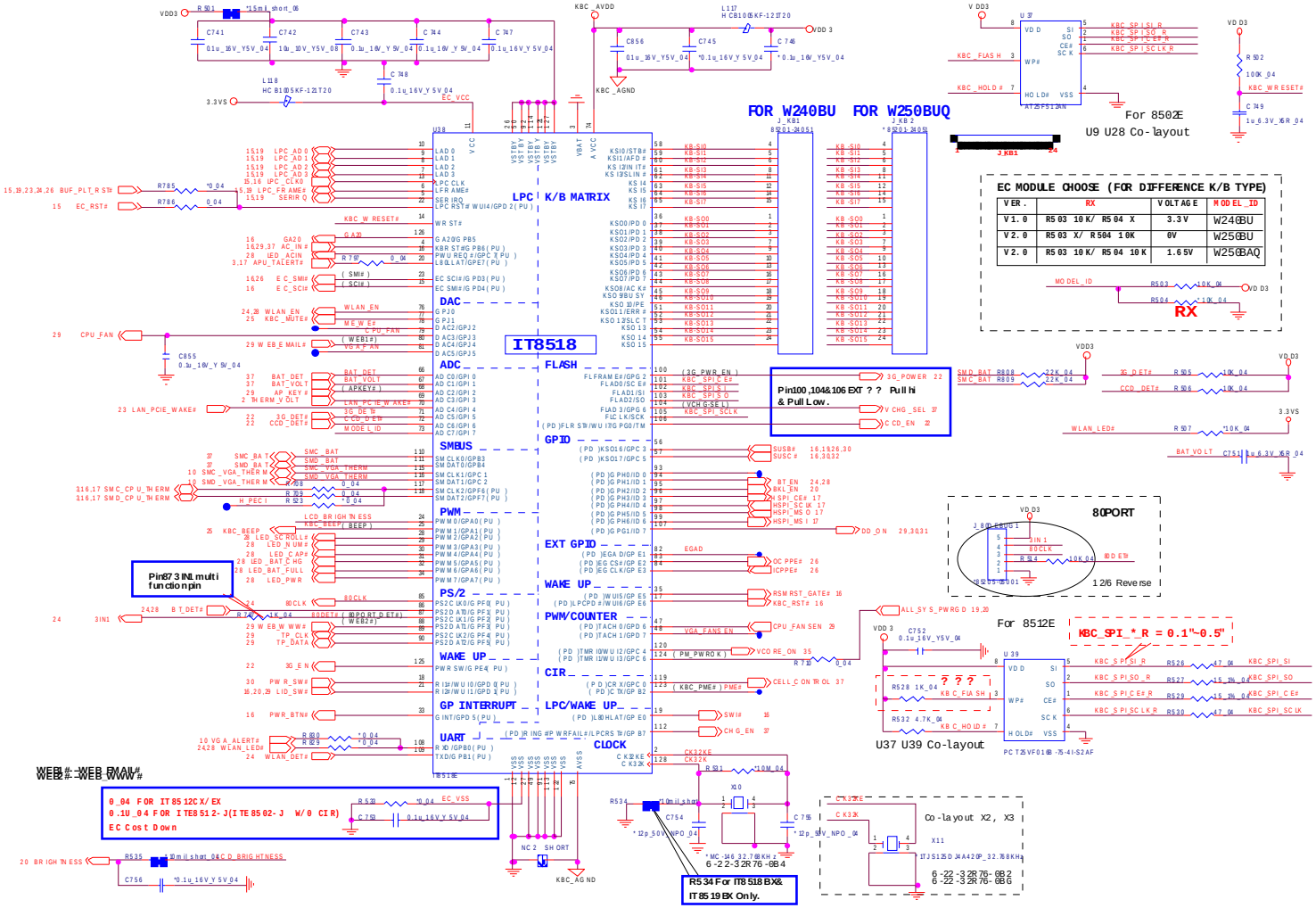
USB 3.0 VL800



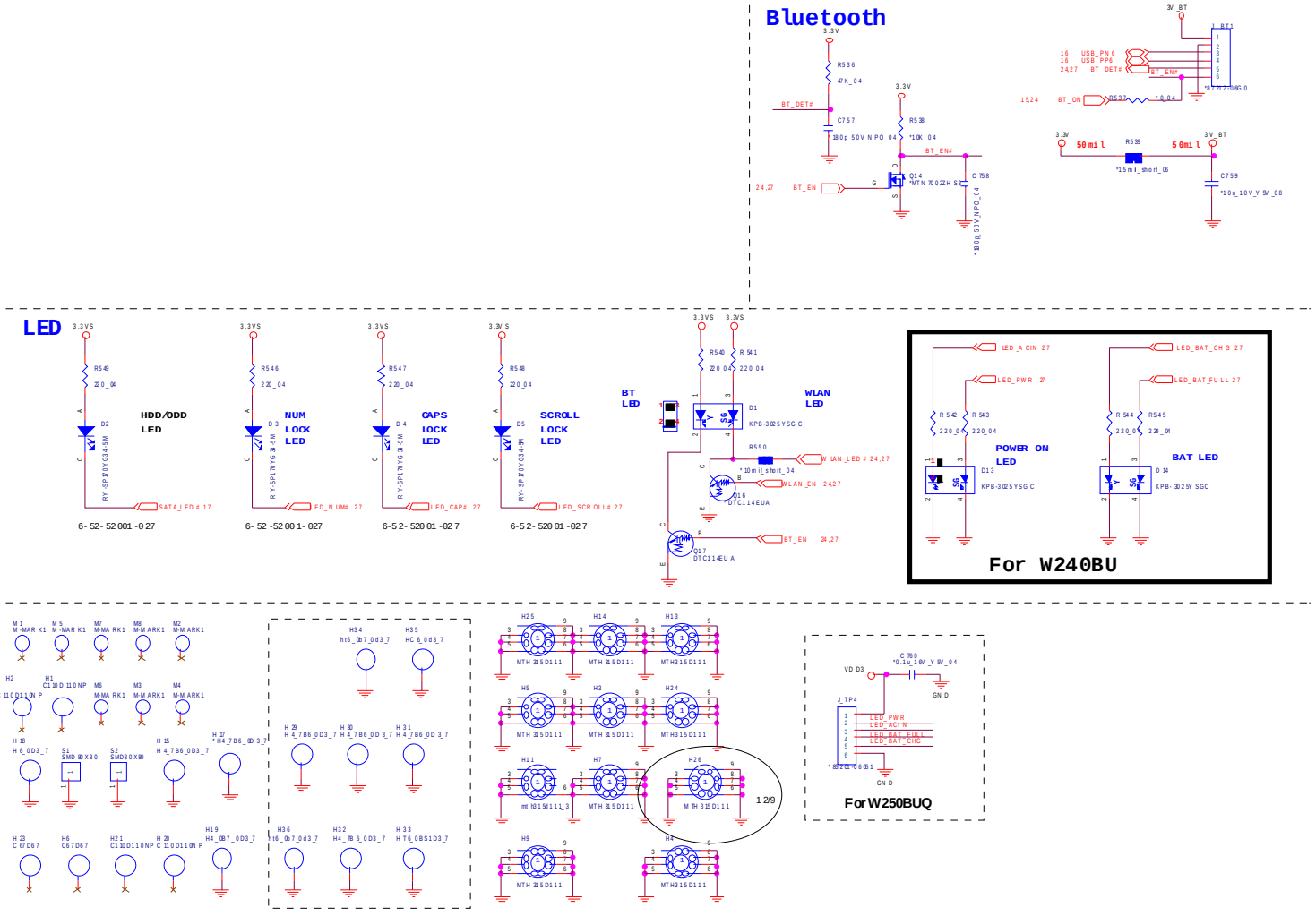
Sheet 26 of 41
USB 3.0 VL800

KBC- ITE IT8518

Sheet 27 of 41
KBC- ITE IT8518



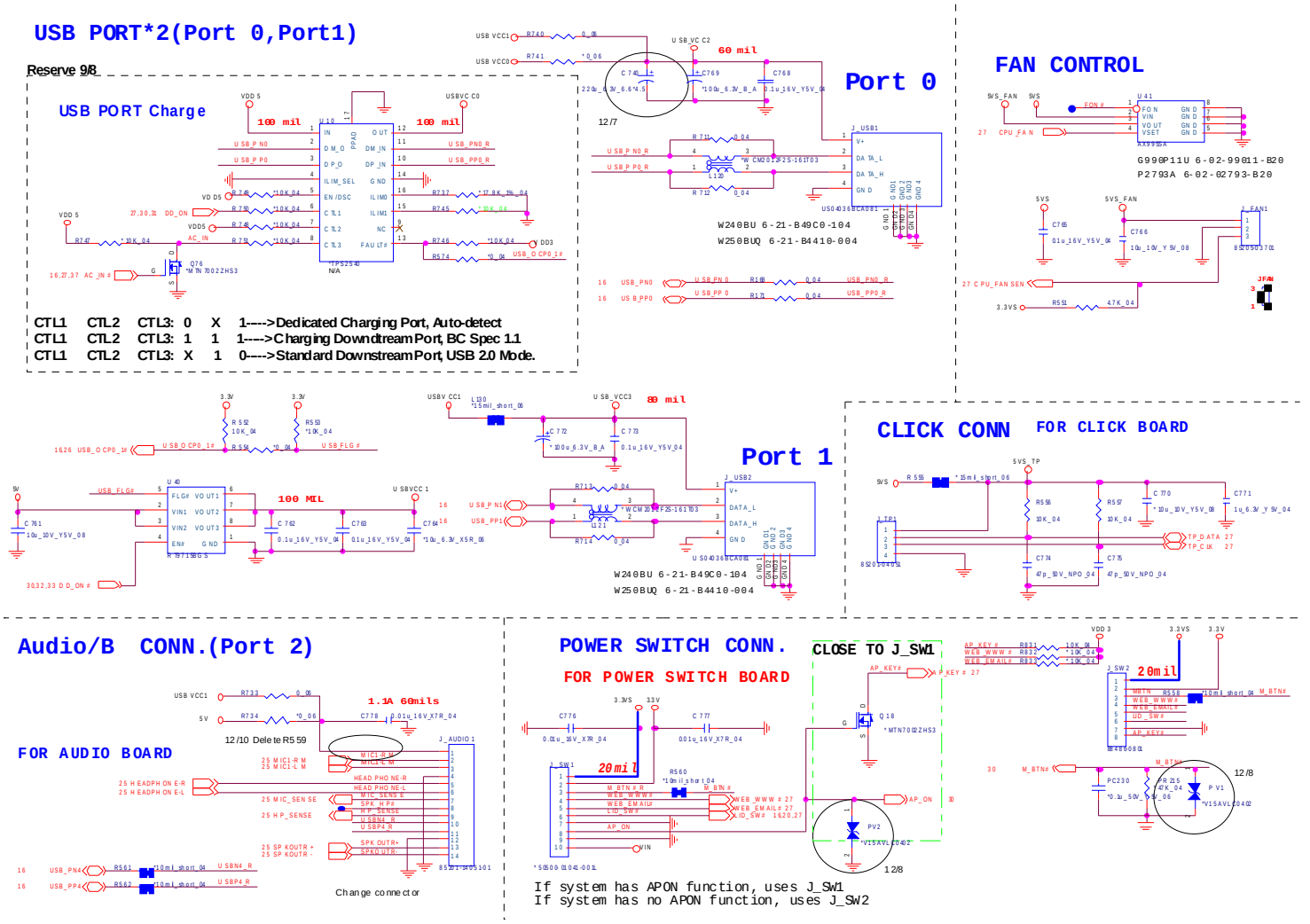
LED/ MDC/ BT



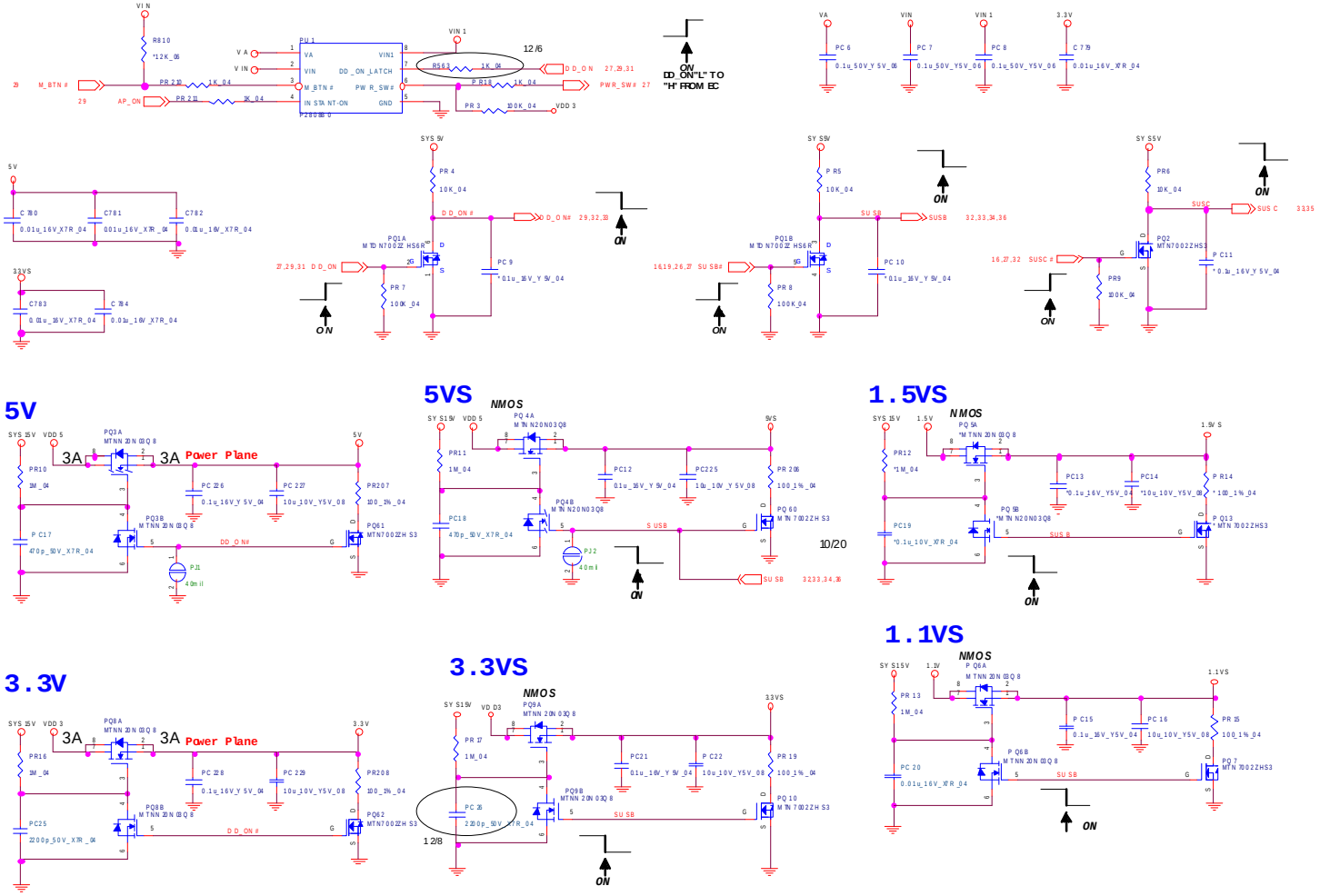
Sheet 28 of 41
LED/ MDC/ BT

USB/ FAN/ TP/ MULTI CON

Sheet 29 of 41
USB/ FAN/ TP/
MULTI CON



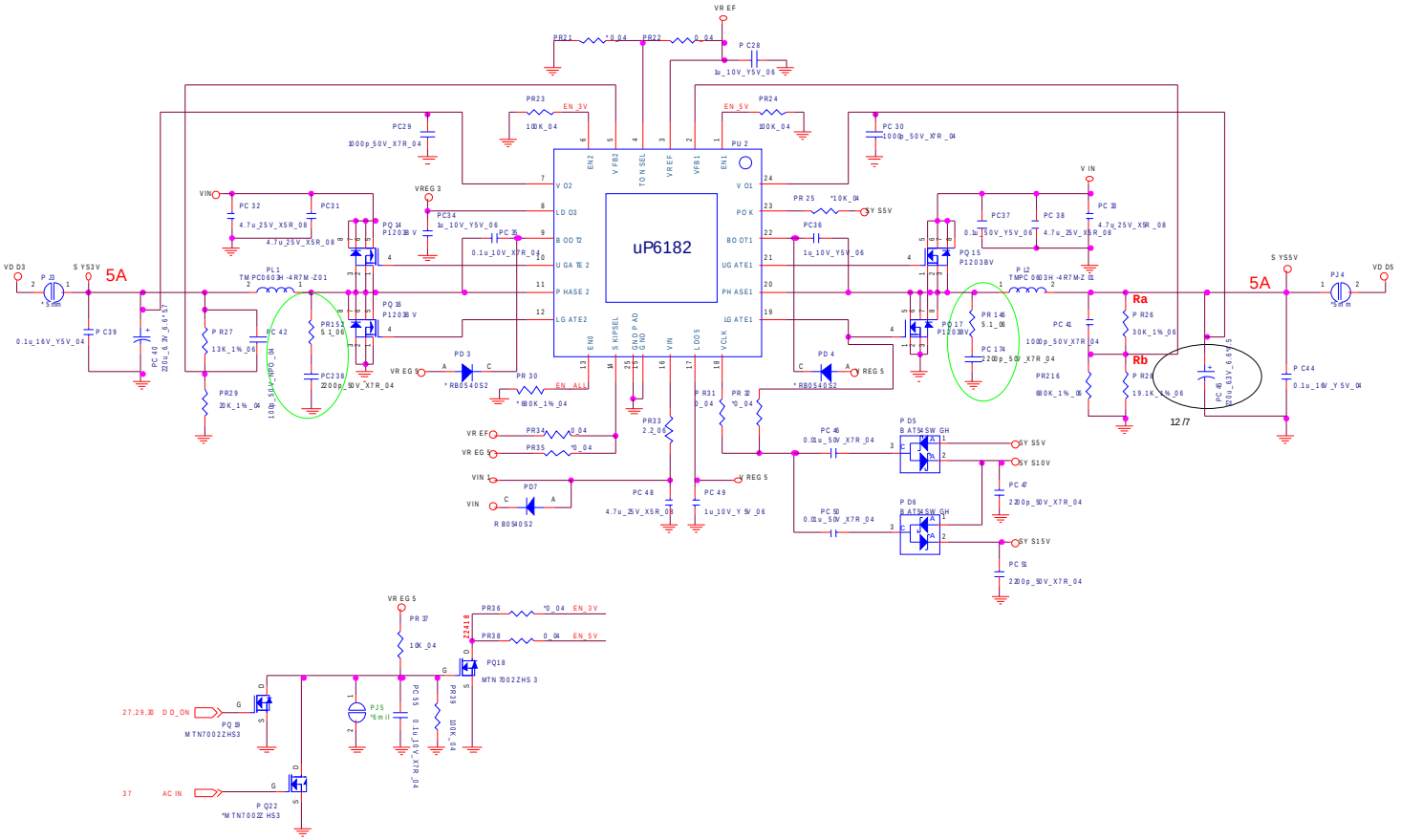
5VS/ 3.3VS/ 1.8VS/ 1.5VS/ 1.1VS



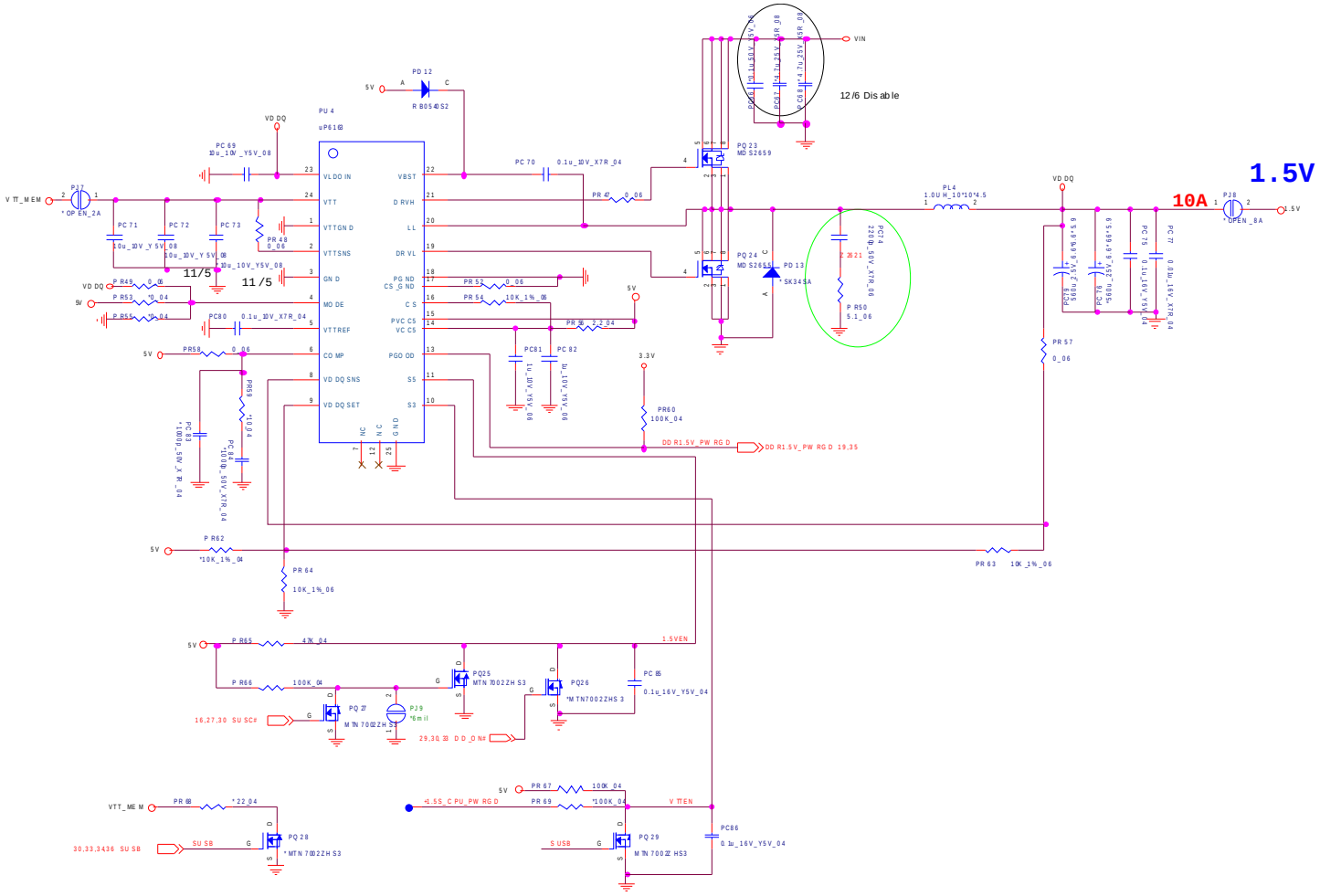
Sheet 30 of 41
5VS/ 3.3VS/ 1.8VS/
1.5VS/ 1.1VS

POWER VDD3/ VDD5

Sheet 31 of 41
POWER VDD3/ VDD5



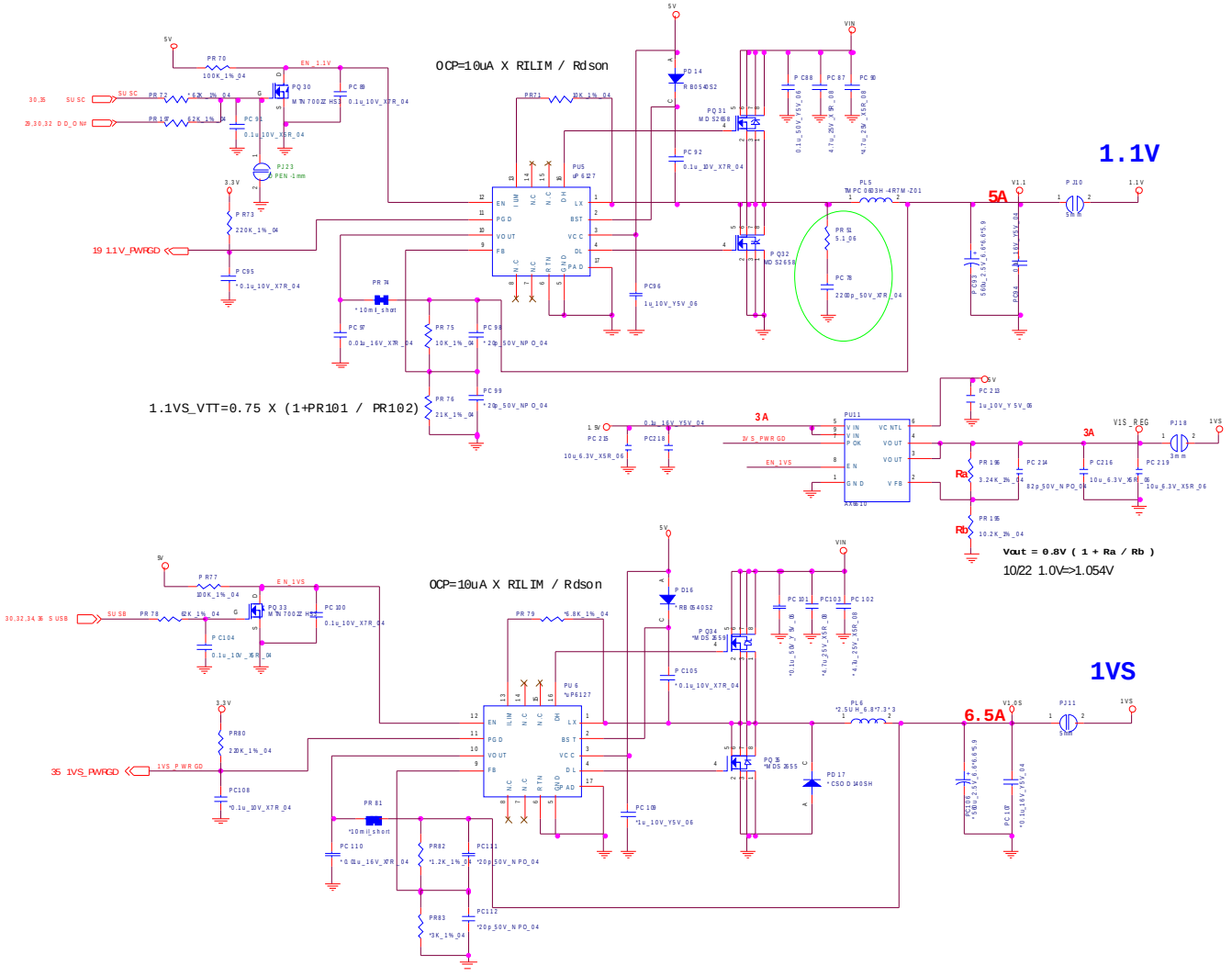
Power 1.5V/ 0.75



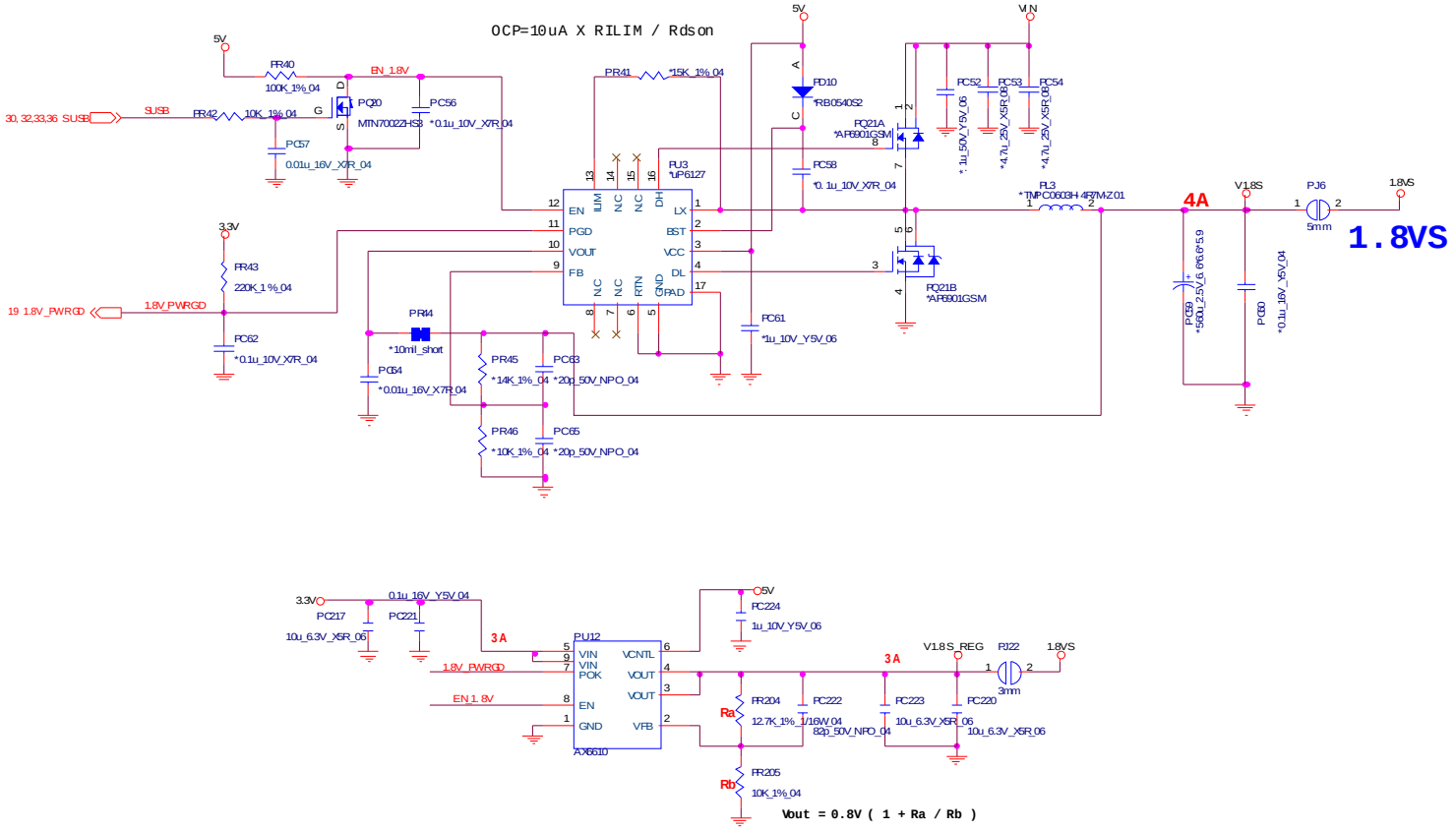
Sheet 32 of 41
Power 1.5V/0.75V

Power 1.1V/ 1VS

Sheet 33 of 41
Power 1.1V/ 1VS



Power 1.8VS



Sheet 34 of 41
Power 1.8VS

APU CORE/ NB CORE

Sheet 35 of 41
APU CORE/ NB CORE

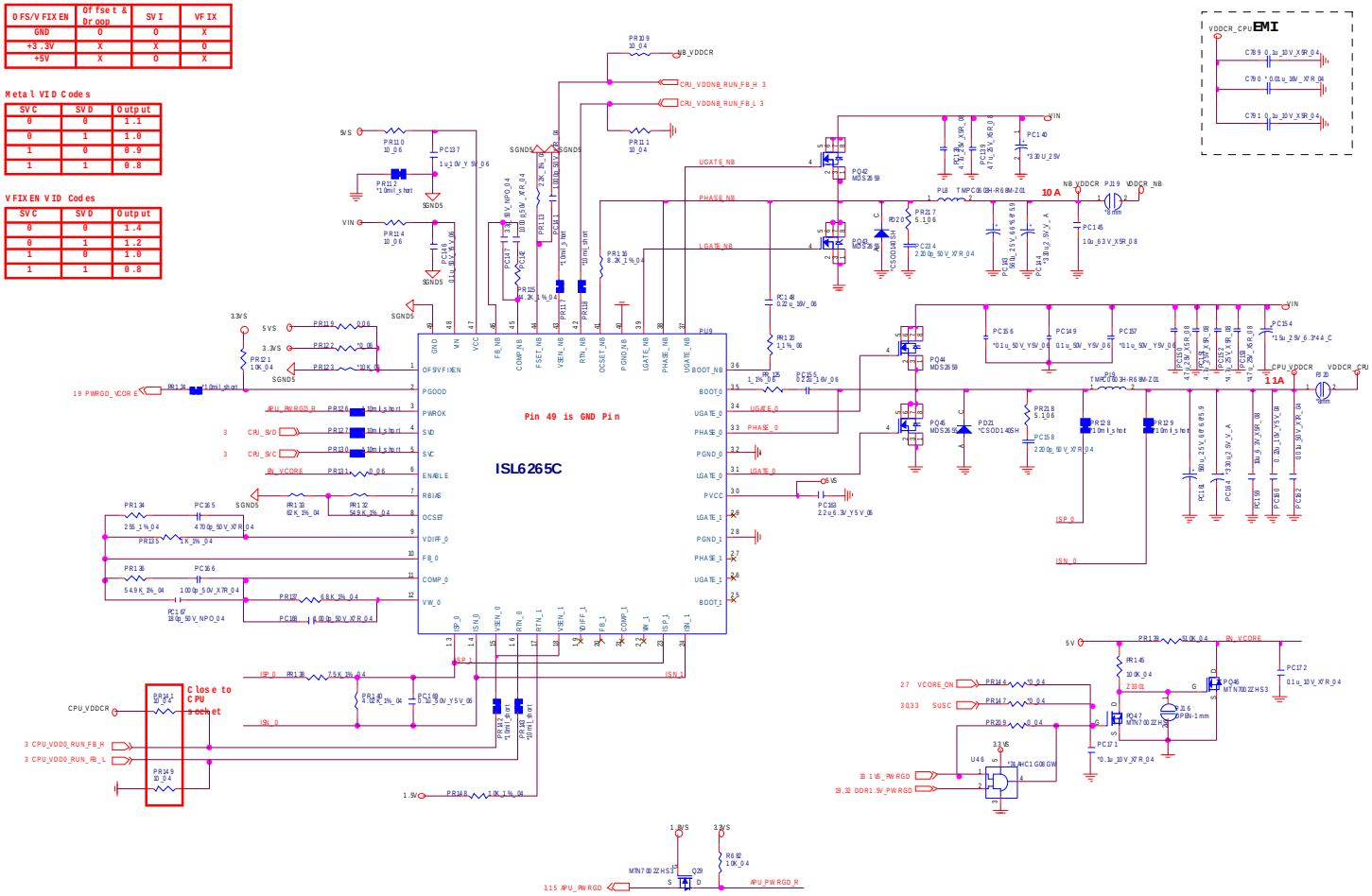
OFS/VFIXEN	Offset & Droop	SVI	VFIX
GND	0	0	X
+3.3V	X	X	0
+5V	X	0	X

Metal VID Codes

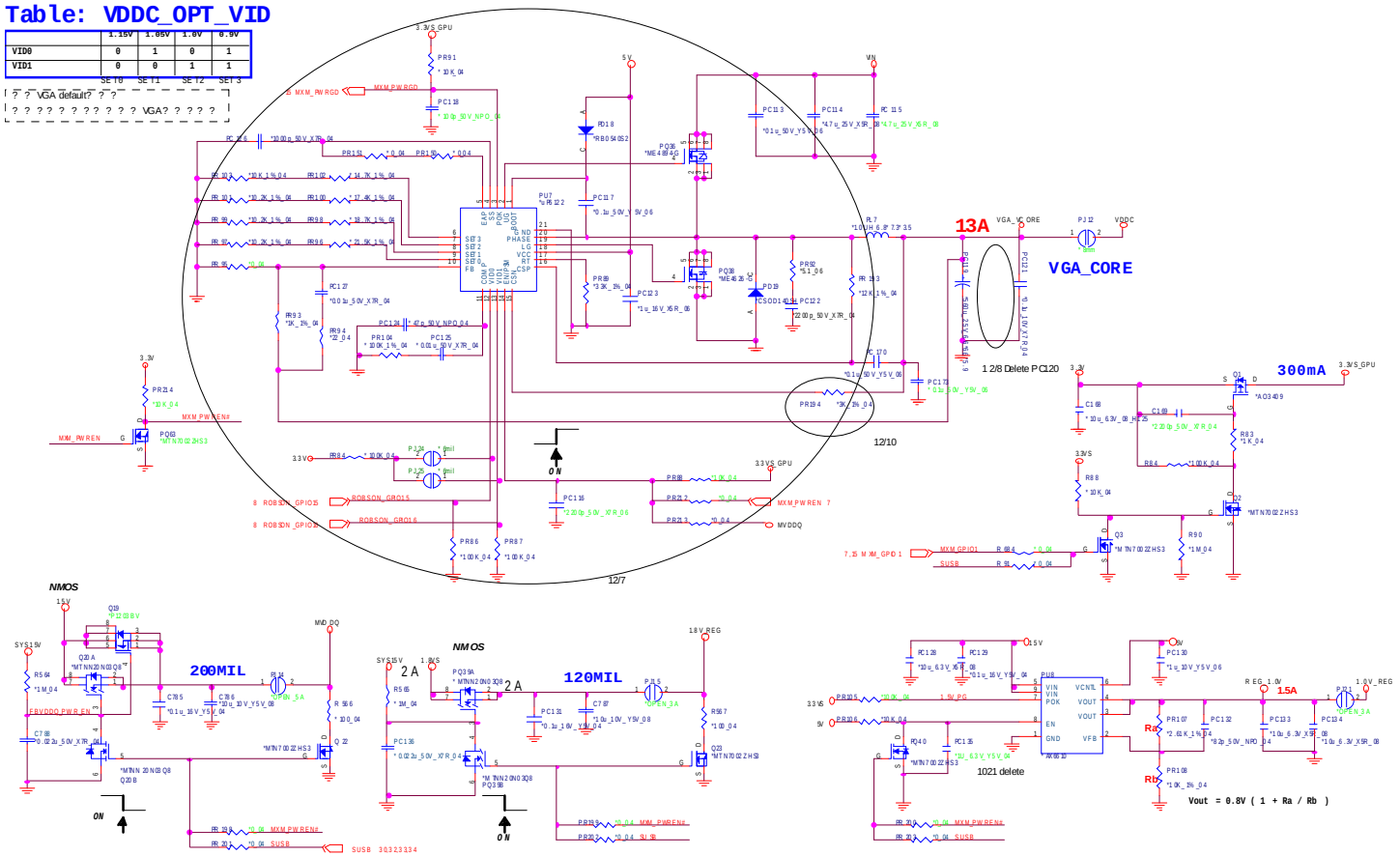
SVC	SVD	Output
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8

VFIXEN VID Codes

SVC	SVD	Output
0	0	1.4
0	1	1.2
1	0	1.0
1	1	0.8



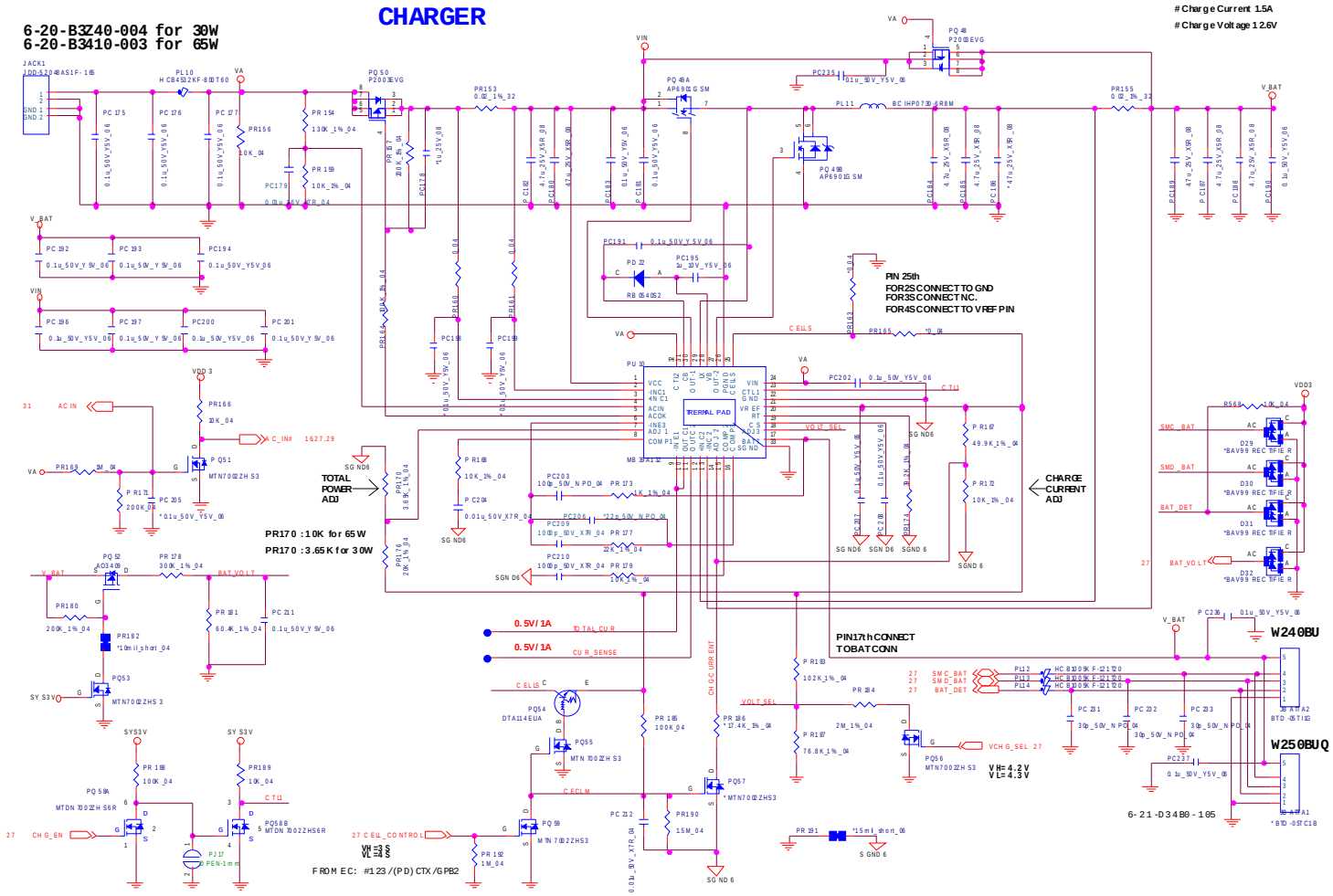
VGA POWER



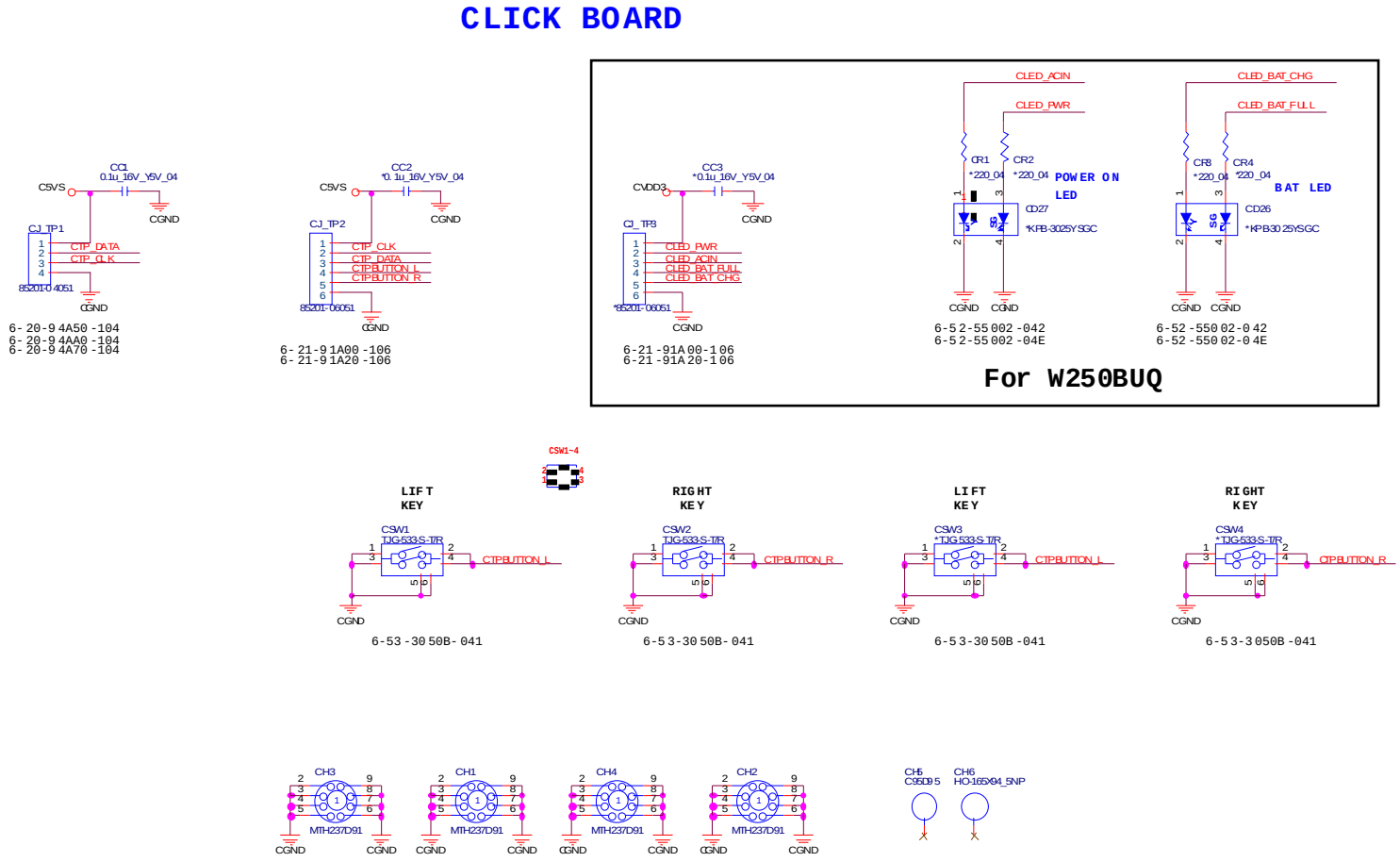
Sheet 36 of 41
VGA POWER

CHARGER/ DC IN

Sheet 37 of 41
CHARGER/ DC IN



Click Board

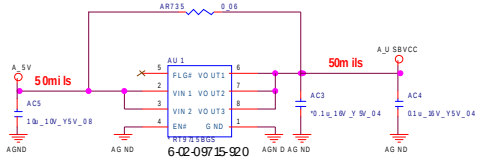


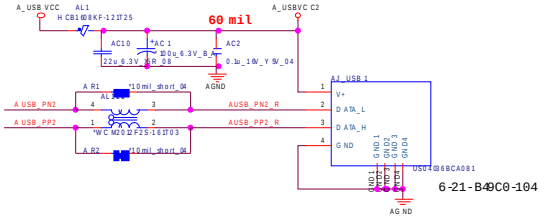
Sheet 38 of 41
Click Board

Audio Board/ USB

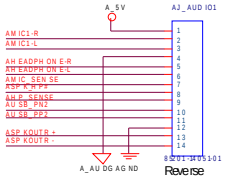
Sheet 39 of 41
Audio Board/ USB

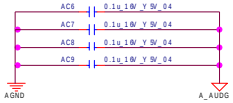
USB PORT

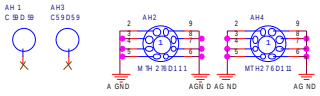




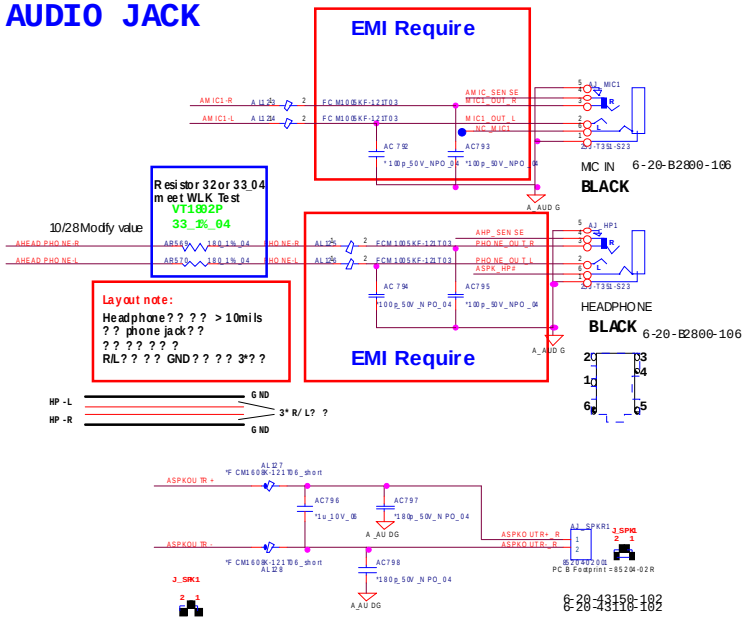
TO M/B





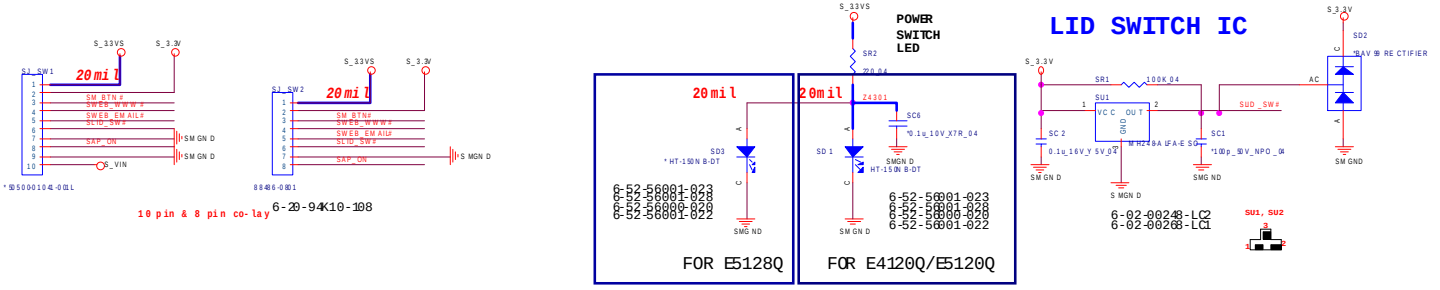


AUDIO JACK

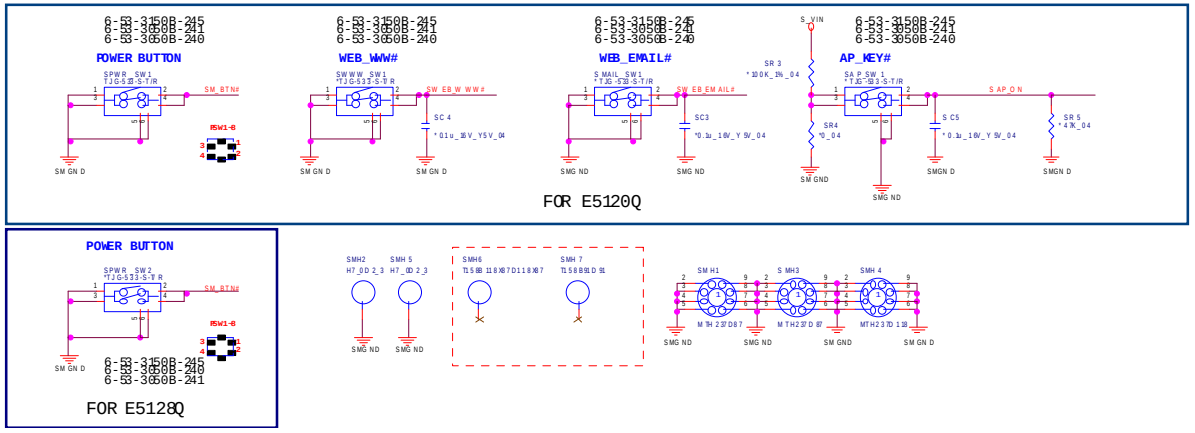


Power Switch & LID Board

POWER SW & LED & HOT KEY

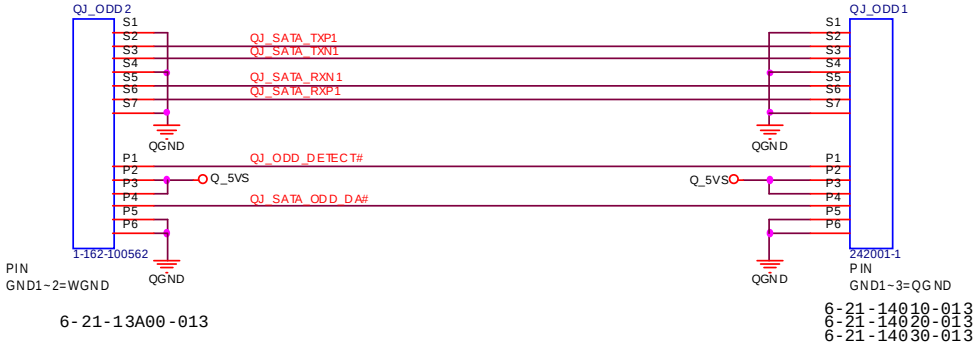


HOT KEY

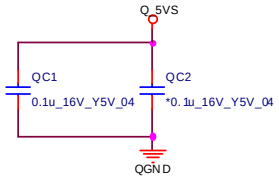


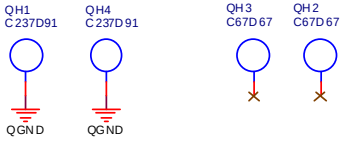
Sheet 40 of 41
Power Switch & LID Board

EXTERNAL ODD Board



Sheet 41 of 41
EXTERNAL ODD Board





Appendix C:Updating the FLASH ROM BIOS

To update the FLASH ROM BIOS you must:

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

Download the BIOS

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

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

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

Set the computer to boot from the external drive

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

BIOS Version

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

You should only download BIOS versions that are V1.01.XX or higher as appropriate for your computer model.

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

Use the flash tools to update the BIOS

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

   C:\> Flash.bat

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

Restart the computer (booting from the HDD)

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

Your computer is now running normally with the updated BIOS

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