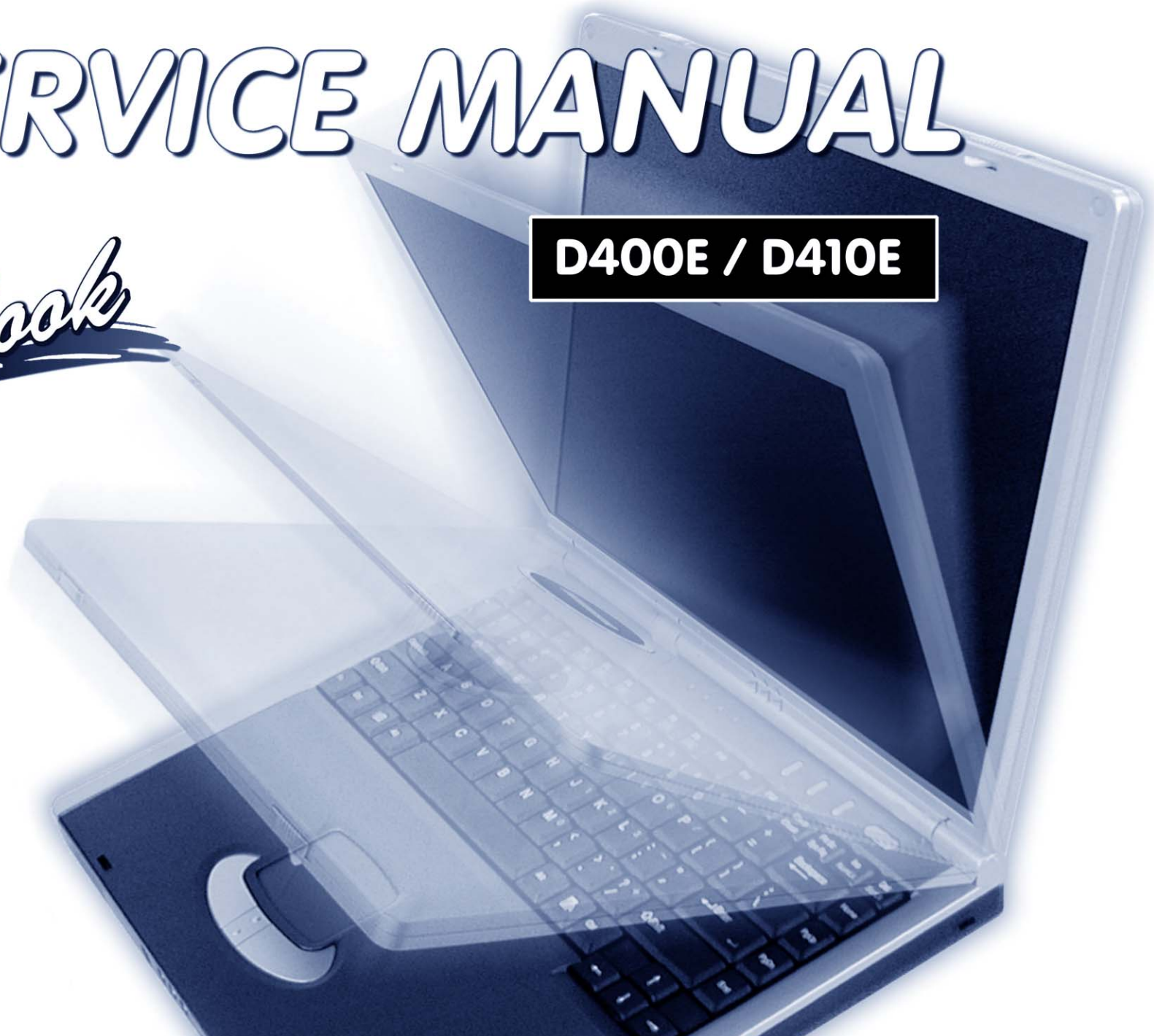
SERVICE MANUAL

notebook

D400E / D410E



Notebook Computer

D400E/D410E

Service Manual

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About this Manual

This manual is intended for service personnel who have completed sufficient training to undertake the maintenance and inspection of personal computers.

It is organized to allow you to look up basic information for servicing and/or upgrading components of the ***D400E/ D410E*** 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

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

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 (DC Output 20V, 6A).

CAUTION

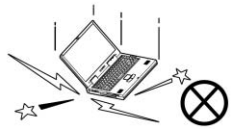
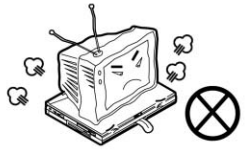
Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

TO REDUCE THE RISK OF FIRE, USE ONLY NO. 26 AWG OR LARGER, TELECOMMUNICATION LINE CORD

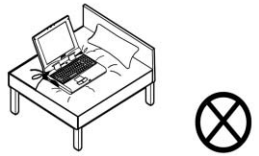
Instructions for Care and Operation

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

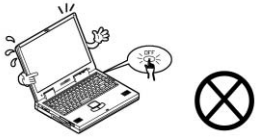
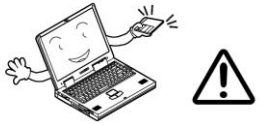
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.

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.*
		

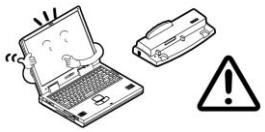
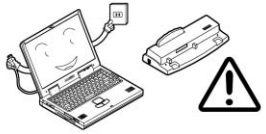
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

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.*
	

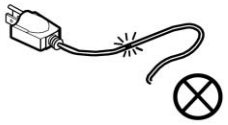
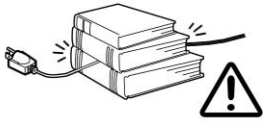
Power Safety

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.
- 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 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.

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
Processor 1-2
Core Logic 1-2
Security 1-2
Memory 1-2
BIOS 1-2
LCD Options 1-2
Display 1-3
Storage Devices 1-3
Audio 1-3
Keyboard 1-4
Interface 1-4
PC Card 1-4
Communication 1-4
Power Management 1-5
Power 1-5
Environmental Spec 1-5
Physical Dimensions 1-5
Weight 1-5
Optional 1-6
Design Differences 1-6
External Locator - Top View 1-7
External Locator - Front & Left Side Views 1-8
External Locator - Right Side & Rear Views 1-9
External Locator - Bottom View 1-10
Mainboard Overview - Top (Key Parts) 1-11
Mainboard Overview - Bottom (Key Parts) 1-12
Mainboard Overview - Top (Connectors) 1-13
Mainboard Overview - Bottom (Connectors) 1-14

Disassembly 2-1

Overview 2-1
Maintenance Tools 2-2
Connections 2-2
Maintenance Precautions 2-3
Cleaning 2-3
Disassembly Steps 2-4
Removing the Battery 2-8
Removing the Hard Disk Drive 2-9
Hard Disk Upgrade Process 2-9
Removing the System Memory (RAM) 2-10
Memory Upgrade Process 2-10
Removing the CD Device 2-12
Removing the Bluetooth Module 2-14
Removing the Wireless LAN Module 2-15
Removing the Processor 2-16
Removing the Keyboard 2-18
Removing the Keyboard Shielding Plate 2-19
Removing the LCD and Top Case 2-20
Removing the TouchPad and Click Board 2-22
Removing the Switch Board 2-23
Removing the Modem 2-24
Removing the Speakers 2-25
Removing the Mainboard 2-26
Removing the Fan Unit 2-27
Removing the Floppy Disk Drive Assembly 2-28
Removing the PC Card Assembly 2-29
Removing the LCD Front Panel Module 2-30
Removing the Inverter 2-31

Removing the PC Video Camera Module 2-32
Removing the LCD Module 2-33
Part Lists A-1
Part List Illustration Location A-2
Top (D400E) A-3
Bottom (D400E) A-4
LCD 14" (D400E) A-5
LCD 15" (D400E) A-6
CD-ROM Drive (D400E) A-7
CD-RW Drive (D400E) A-8
Combo Drive (D400E) A-9
DVD-ROM Drive (D400E) A-10
Floppy Disk Drive (D400E) A-11
Hard Disk Drive (D400E) A-12
Top (D410E) A-13
Bottom (D410E) A-14
LCD 14" (D410E) A-15
LCD 15" (D410E) A-16
CD-ROM Drive (D410E) A-17
CD-RW Drive (D410E) A-18
Combo Drive (D410E) A-19
DVD-ROM Drive (D410E) A-20
Floppy Disk Drive (D410E) A-21
Hard Disk Drive (D410E) A-22
Schematic Diagrams B-1
System Block Diagram B-2
Socket 478 1 of 2 ..... B-3
Socket 478 & ITP 2 of 2 ..... B-4
Clock Generator B-5
M645DX (Host/AGP) 1 of 4 ..... B-6
M645DX (Memory for DDR) 2 of 4 ..... B-7
M645DX (& CRT Out) 3 of 4 ..... B-8
M645DX (Power) 4 of 4 ..... B-9
DDR Memory DIMM B-10
DDR SSTL-2 Termination B-11
LVDS Interface (SiS302LV) B-12
Panel Con & LED Indicator B-13
962 (PCI/IDE/HyperZip) 1 of 4 ..... B-14
962 (Misc Signals) 2 of 4 ..... B-15
962 (USB I/F) 3 of 4 ..... B-16
962 (Power & RTC) 4 of 4 ..... B-17
HDD/Combo Connector B-18
USB Port B-19
PCMCIA ENE CB1410 ..... B-20
PCMCIA Power B-21
1394 PHY TSB41LV01 ..... B-22
LPC Super I/O B-23
LPT/COM Port B-24
LPC H8 ..... B-25
LAN RTL8100BL B-26
Audio Codec ALC201A B-27
Audio Out & Off Board Connectors B-28
System Power Control B-29
Fan Control and SpeedStep B-30
Mobility M9-P B-31
Mobility M9-P MEM A/B B-32
VGA DRAM 1 of 2 ..... B-33
VGA DRAM 1 of 2 - Termination B-34
VGA DRAM 2 of 2 ..... B-35
Mobility M9-P POW B-36
VCORE B-37
DDR Power B-38
System Power B-39

Charger B-40
SW Board and HotKey B-41
TouchPad and Switch Board B-42
Updating the FLASH ROM BIOS..... C-1

1: Introduction

Overview

This manual covers the information you need to service or upgrade the ***D400E/D410E*** 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. *DOS, Windows 9x, Windows NT 4.0, Windows 2000, Windows XP, OS/2 Warp, UNIX,* 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 ***D400E/D410E*** 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 Pentium 4 Processor - (478-pin) FC-PGA2 package

  (µ0.13) 0.13 Micron Process Technology, 512KB L2 Cache & 400MHz FSB - 2.0/ 2.2/ 2.4/ 2.5 /2.6 GHz
  (µ0.13) 0.13 Micron Process Technology, 512KB L2 Cache & 533MHz FSB - 2.26/ 2.4/ 2.53/ 2.66/ 2.8/ 3.06 GHz

- Intel Celeron Processor - (478-pin) FC-PGA2 package

  (µ0.18) 0.18 Micron Process Technology, 128KB L2 Cache & 400MHz FSB - 1.7/ 1.8/ 2.0/ 2.1/ 2.2 GHz

Core Logic

- SIS M645DX + 962 Chipset + ATI M9

Security

- Security (Kensington® Type) Lock
- BIOS Password

Memory

- Two 200-pin DDR SODIMM sockets, supporting DDR SDRAM SODIMM (2.5V) - DDR 200/ DDR 266 compliant
- Memory expandable up to 1024MB (128/256/512MB SODIMM Modules)

BIOS

- One 512KB Flash ROM
- Phoenix BIOS

LCD Options

- 14.1" XGA TFT (1024*768)
- 15.0" XGA TFT (1024*768)
- 15.0" SXGA+ TFT (1400*1050)

Display

- ATI Mobility Radeon 9000 high performance chip
- Support AGP™ 4X
- Integrated 128-bit 2D/3D Graphics Accelerator
  Advanced HW accelerator for DVD playback
  Fully Direct X 8.0 compliant graphics engine
- External memory up to 64MB DDR SGRAM on-board
- Dual-View display monitor

Video Memory

The system allocates or "shares" a portion of system memory for video use. "Shared" memory is user-configurable via the SCU. The default setting is set to 32MB.

Storage Devices

- 3.5" 3-mode **Floppy Disk Drive**

- Easy changeable 2.5" 9.5 mm (h) Hard Disk Drive
  Supporting Master mode IDE
  Supports PIO mode 4
  ATA-33/66/100/133
  Ultra DMA

- 12.7mm(h) **Device Bay** for **ONE** of the following drive configuration options:
- CD-ROM
- DVD-ROM
- CD-RW
- DVD-RW
- Combo CD-RW + DVD-ROM

Audio

- AC'97 2.1 compliant interface
- 3D stereo enhanced sound system
- Compatible with Sound-Blaster PRO™
- S/P DIF Digital output (5.1 CH) for DVD content and stereo audio
- Microphone-in jack
- Headphone-out jack
- Built-in microphone
- 2 built-in speakers (1 watt 35 * 16 mm)

Keyboard

- "Win Key" keyboard

Interface

- Built-in TouchPad (scrolling key functionality integrated)
- Three USB 2.0/1.1 ports
- One Mini-IEEE 1394 port
- One S-Video jack for TV output
- One serial port
- One parallel port (LPT1), supporting ECP / EPP
- Infrared transceiver IrDA 1.1 FIR/SIR/ASKIR
- One external CRT monitor port
- One PS/2 port
- One speaker-out/headphone-out jack
- One microphone-in jack
- One RJ-11 jack for modem
- One RJ-45 jack for 100M/10M LAN
- One S/P DIF out port
- One DC-in jack
- Wireless Device On/Off switch

PC Card

- One type II PCMCIA 3.3V/5V socket supporting CardBus

Communication

- Wireless Infrared transfer IrDA 1.1 compliant, 1cm - 1M operating distance, 115.2K bps SIR/ 4Mbps FIR
- 10/100Mb Ethernet LAN built-in
- V.90 & V.92 compliant 56K MDC modem
- 802.11b wireless LAN module (available as a factory option)
- Bluetooth module (available as a factory option)
- Built-in PC Video Camera module (available as a factory option)

Power Management

- Supports ACPI v1.0b
- Supports Hibernate mode
- Supports Standby mode
- Supports battery low sleep
- Supports resume from modem ring

Power

- Full range AC adapter
- AC-Input 100~240V, 50~60Hz
- DC Output 20V, 6A (**120W**)
- Supports one removable Smart Li-Ion battery 220mAh/8 cell

Environmental Spec

- Temperature

  Operating: 5°C ~ 35°C (w/o packing)

  Non-Operating: -20°C ~ 60°C (packing)

- Relative Humidity

  Operating: 20% ~ 80%

  Non-Operating: 10% ~ 90%

Physical Dimensions

- 329 (w) x 275 (d) x 36.5 (h) mm

Weight

- 2.8 Kg (-50/+250g) w/o battery

Optional

- DVD-ROM Drive
- CD-RW Drive
- Combination Drive
- Software DVD player
- Wireless LAN module
- Bluetooth module
- PC Video Camera

Design Differences

This manual refers to the two notebook designs pictured below. The designs vary slightly in external design. Photographs used throughout this manual are of Design I.

Figure 1
Design Differences

Design I

Design II

External Locator - Top View

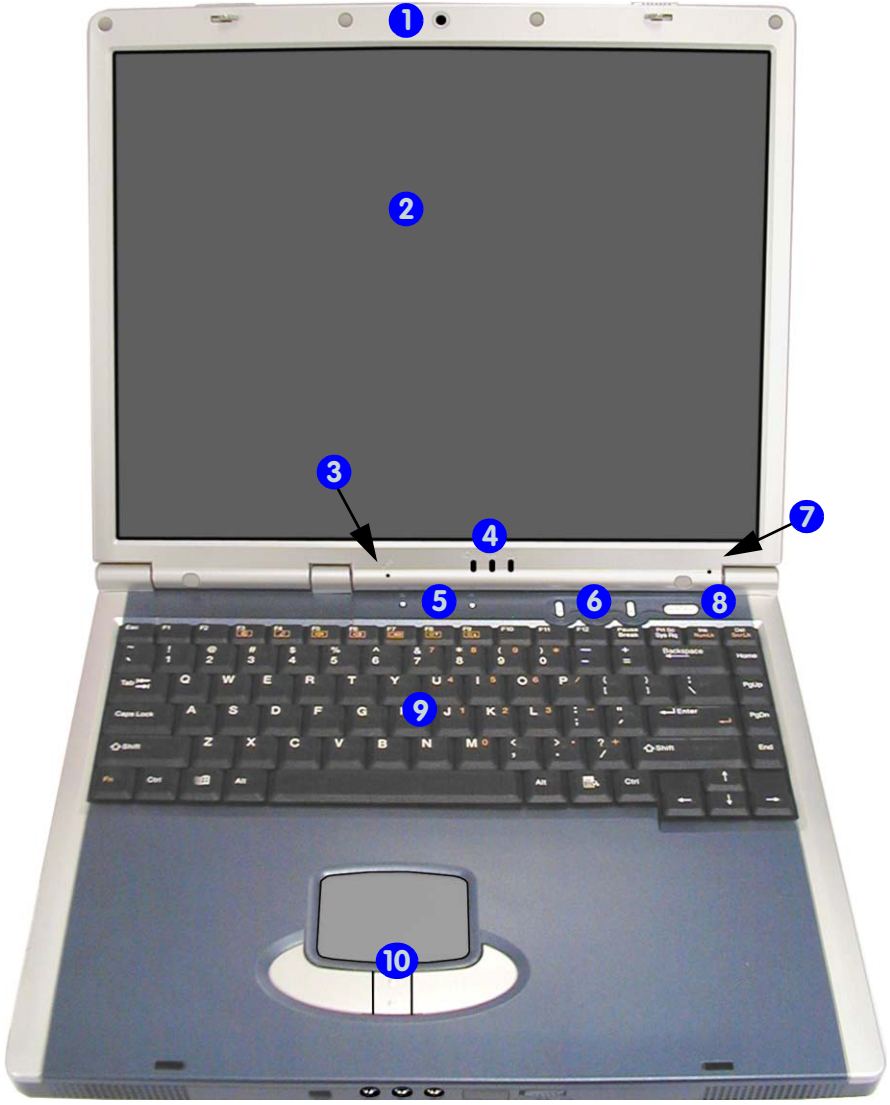
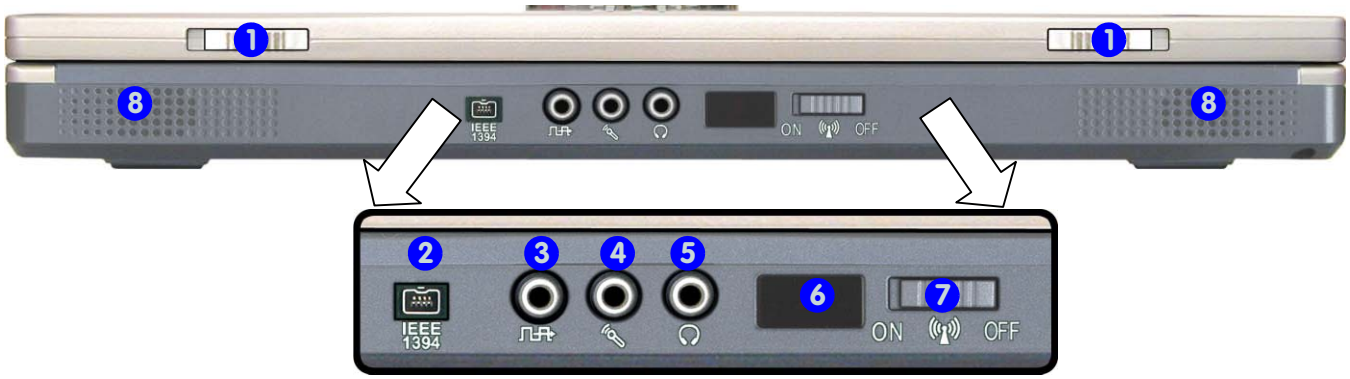


Figure 2
Top View

1. Optional Built-in PC Camera
2. LCD
3. Built-In Microphone
4. LED Power & Communication Indicators
5. LED Status Indicators
6. AP-Key buttons
7. Close Cover/Lid Switch
8. Power Button
9. Keyboard
10. TouchPad and Buttons

External Locator - Front & Left Side Views

Figure 3
Front View



1. LCD Latches
2. Mini IEEE 1394 Port
3. S/P DIF Out Port
4. Microphone Jack
5. Headphone Jack
6. Infrared Transceiver
7. Wireless Device ON/OFF Switch
8. Built-In Speakers

Figure 4
Left Side View

1. CD-ROM Bezel or CD-ROM Device
2. USB 2.0/1.1 Port
3. Floppy Disk Drive
4. PC Card/ PCMCIA Slot
5. PC Card/PCMCIA Slot Eject Buttons

External Locator - Right Side & Rear Views

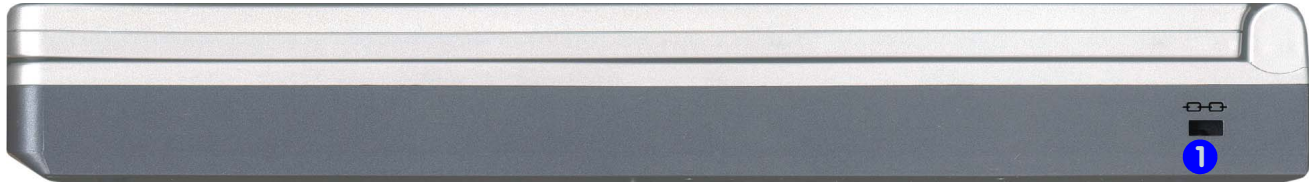


Figure 5
Right Side View

1. Security Lock Slot

Figure 6
Rear View

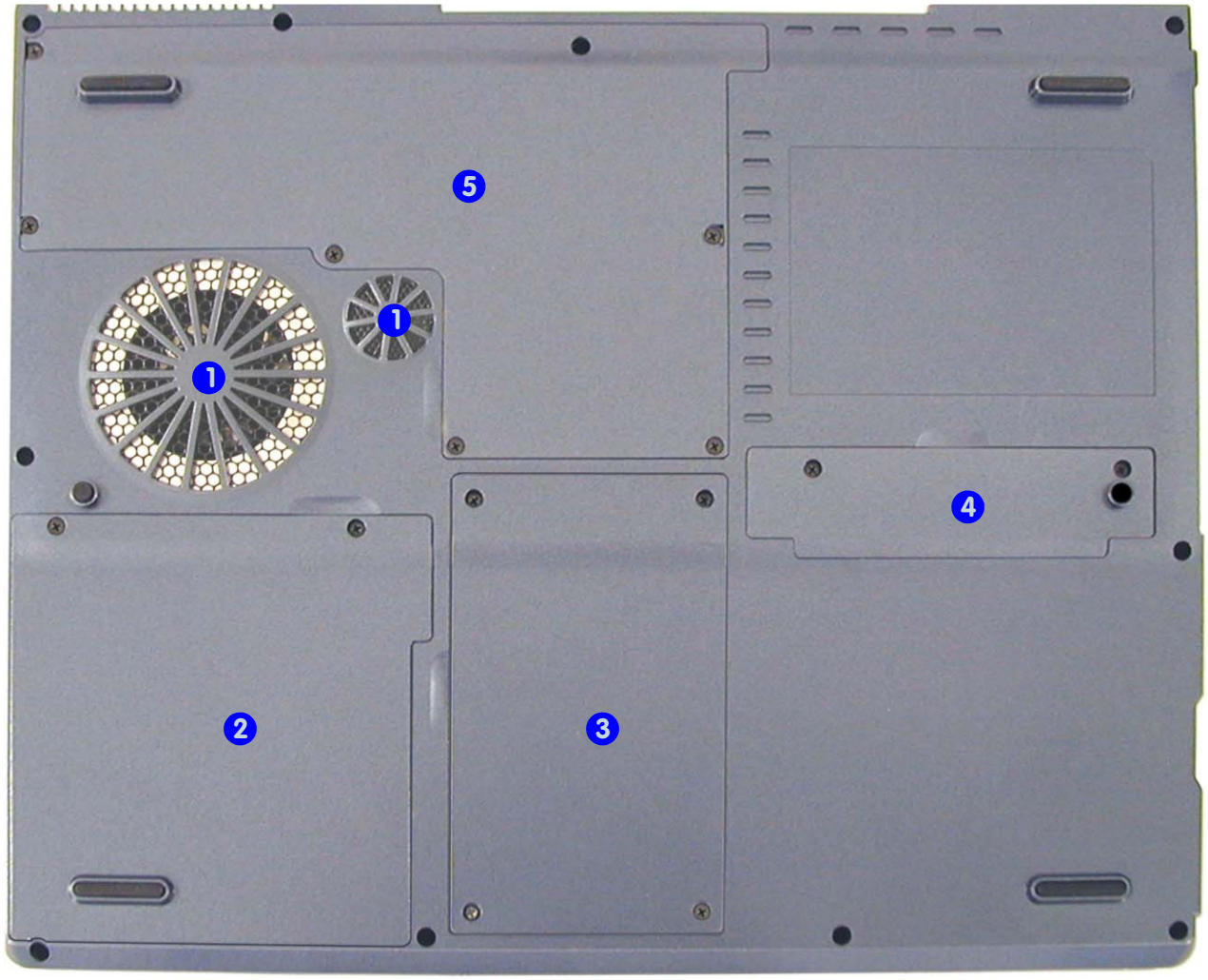
1. Vent
2. DC-In Jack
3. 2 * USB 2.0/1.1 Ports
4. External Monitor (CRT) Port
5. Parallel Port
6. Serial Port
7. S-Video-Out Port
8. PS/2 Type Port
9. RJ-11 Phone Jack
10. RJ-45 LAN Jack

External Locator - Bottom View

Figure 7
Bottom View

1. Vent/Fan Intake
2. Battery Cover
3. Hard Disk Cover
4. Bluetooth Module Cover
5. CPU, Heatsink, DDR, Wireless LAN Cover

Note: The RAM and optional Wireless LAN module are located under the CPU Heatsink Cover



Mainboard Overview - Top (Key Parts)

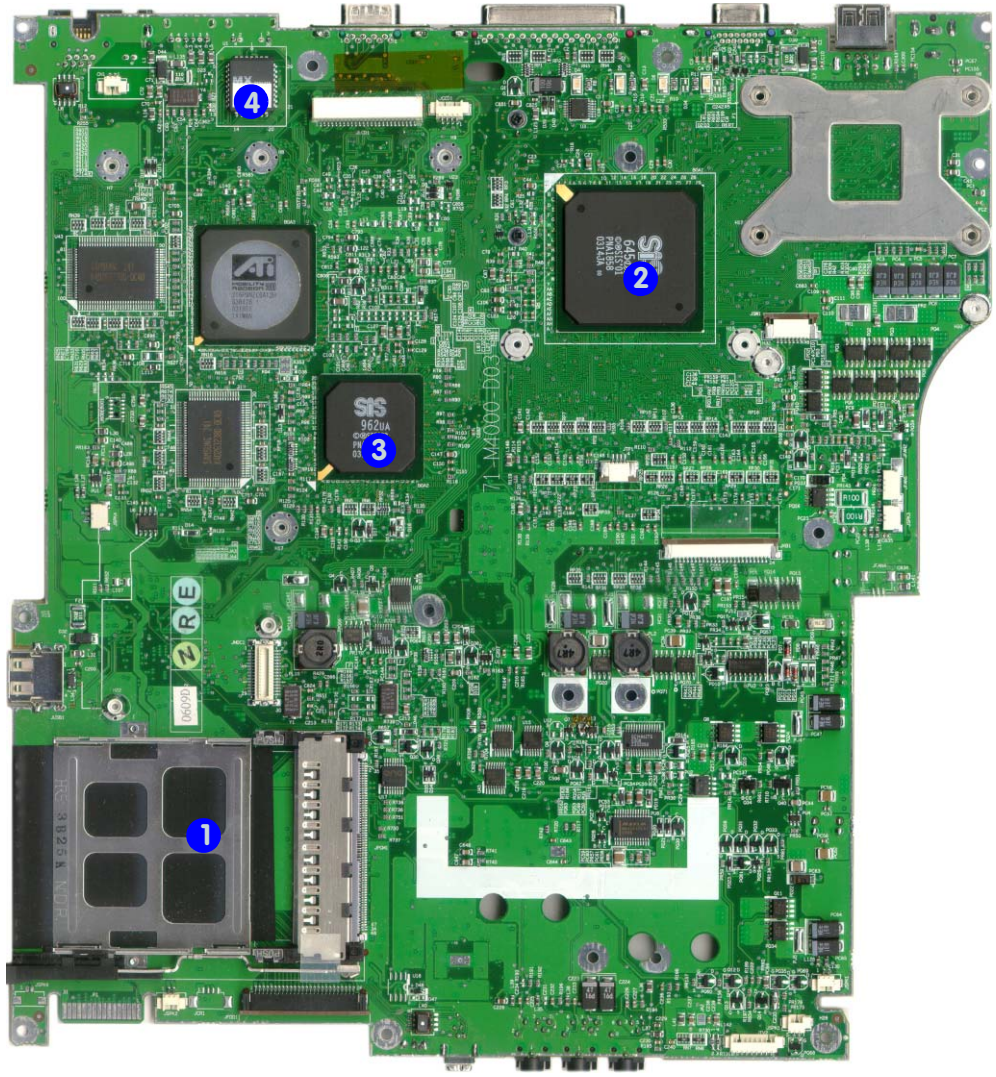


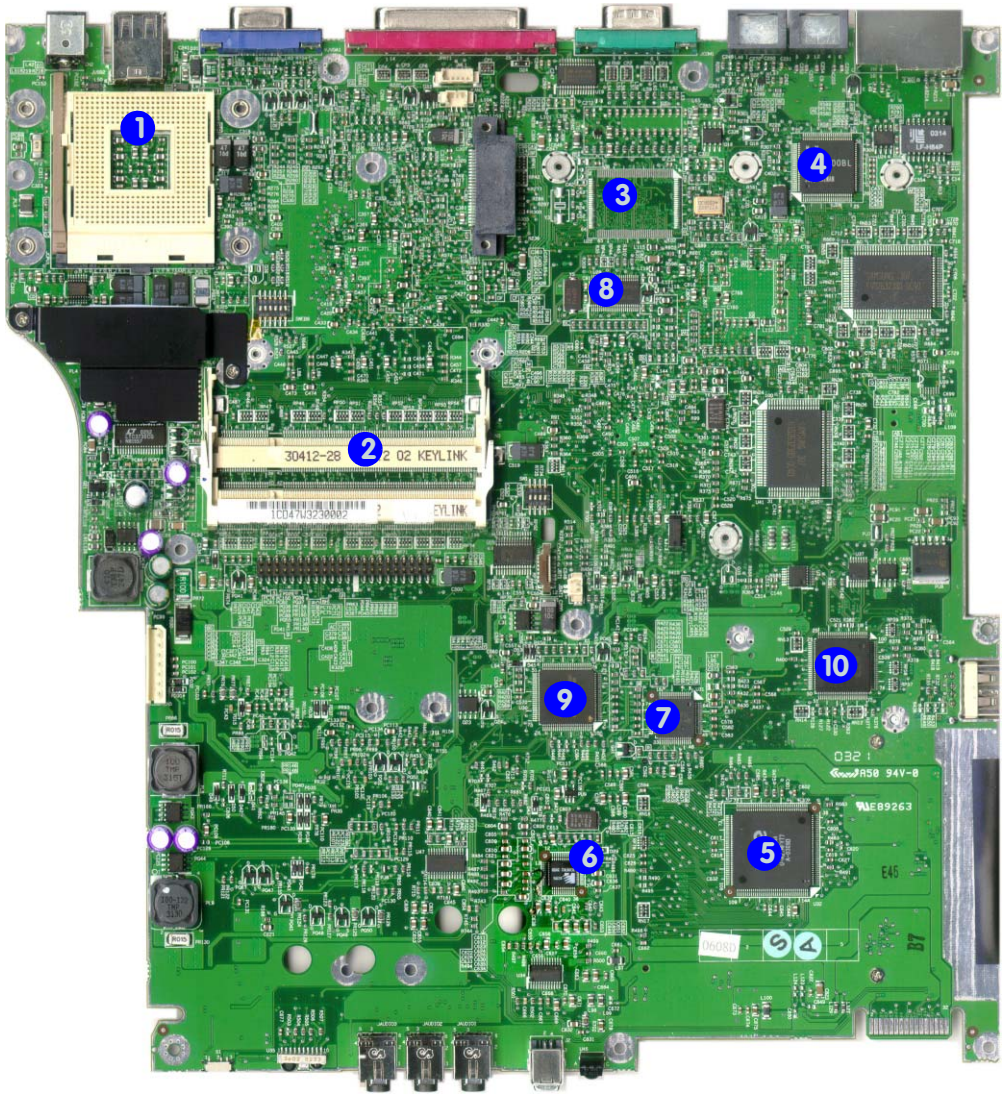
Figure 8
Mainboard Top Key Parts

1. PC Card Assembly
2. Northbridge - SiS M650
3. Southbridge - SiS 962
4. Flash BIOS ROM

Mainboard Overview - Bottom (Key Parts)

Figure 9
Mainboard Bottom Key Parts

1. CPU Socket (no CPU installed)
2. Memory Slots (no memory installed)
3. SiS 302LV TV-Out Controller
4. LAN Controller RTL8100BL
5. CardBus ENE CB1410
6. ALC202 - Audio Codec
7. 1394 PHY TSB41AB1
8. Clock Generator
9. Keyboard Controller - KBC H8 H8S-2149 HM
10. LPC Super I/O NS PC87393



Mainboard Overview - Top (Connectors)

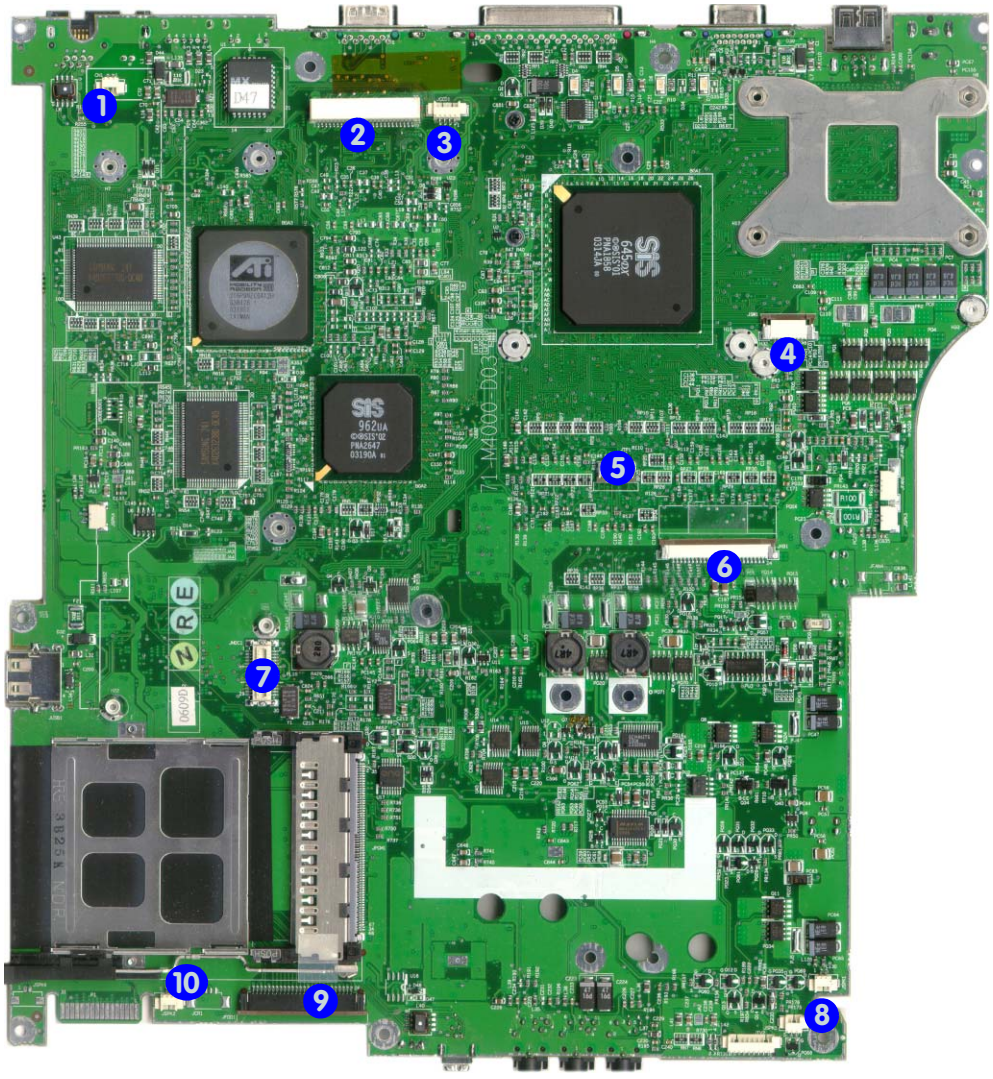


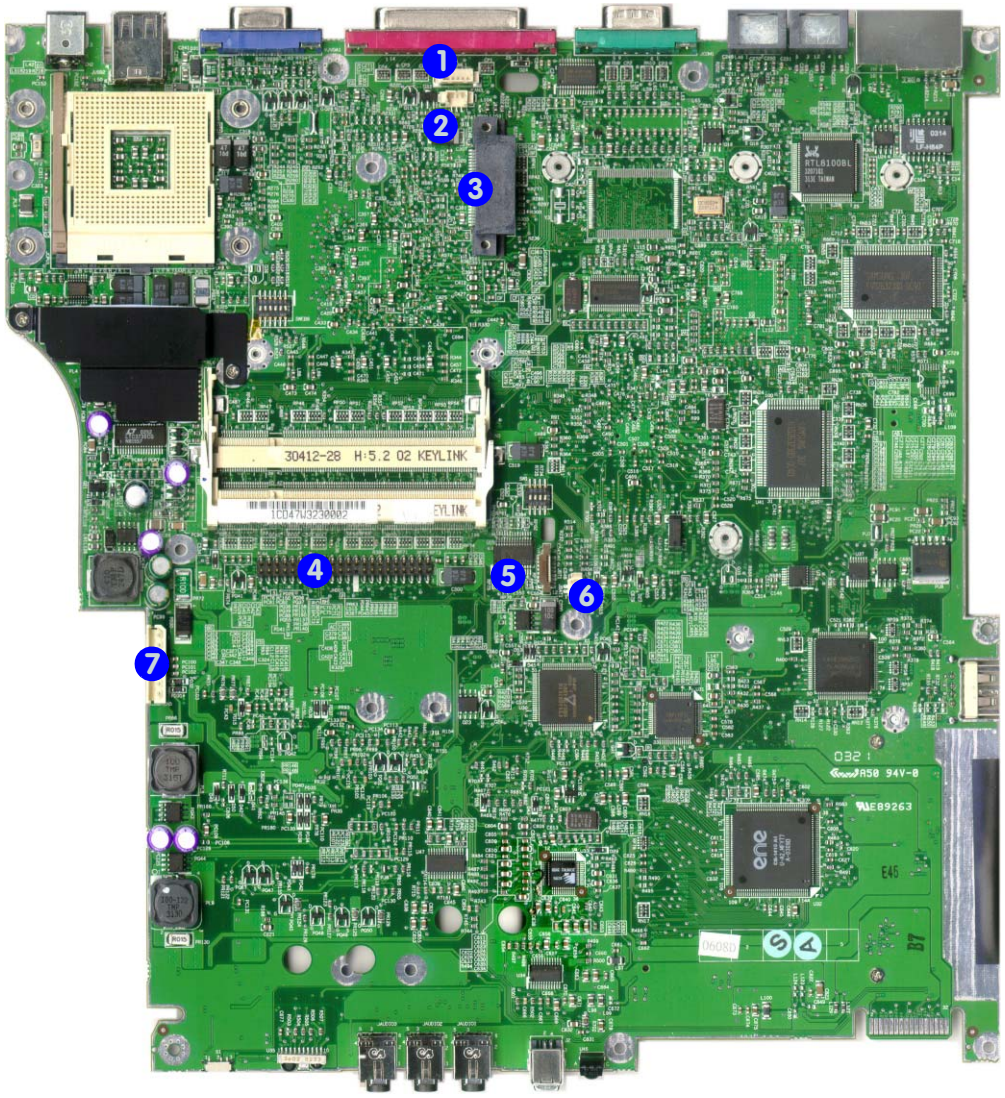
Figure 10
Mainboard Top Connectors

1. Modem Cable Connector (CN1)
2. LCD (and Inverter) Connector (JLCD1)
3. Video Camera Cable Connector (JCCD1)
4. Power Switch Board Cable Connector (JSW1)
5. TouchPad Cable Connector (JTP1)
6. Keyboard Cable Connector (JKB1)
7. Modem Module Connector (JMDC1)
8. Speaker Cable Connector (JSPK1)
9. Floppy Disk Connector (JFDD1)
10. Speaker Cable Connector (JSPK2)

Mainboard Overview - Bottom (Connectors)

Figure 11
Mainboard Bottom Connectors

1. Wireless LAN Connector (JWL1)
2. DDR Fan Cable Connector (JFAN2)
3. CD-ROM Device Connector (JCDROM1)
4. Hard Disk Cable Connector (JHDD1)
5. Bluetooth Module Connector (JBT1)
6. CMOS Battery Cable Connector (JBAT1)
7. Battery Cable Connector (CN5)



2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the ***D400E/D410E*** series notebook's parts and sub-systems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

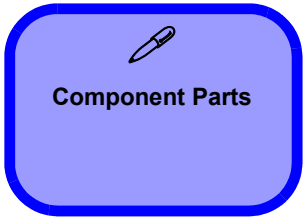
We suggest you completely review any procedure before you take the computer apart.

Procedures such as upgrading/replacing the RAM, CD 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 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 - 8*

To remove the HDD:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*

To remove the System Memory:

1. Remove the battery *page 2 - 8*
2. Remove the system memory *page 2 - 10*

To remove the CD Device:

1. Remove the battery *page 2 - 8*
2. Remove the CD Device *page 2 - 12*

To remove the Bluetooth Module:

1. Remove the battery *page 2 - 8*
2. Remove the Bluetooth module *page 2 - 14*

To remove the Wireless LAN Module:

1. Remove the battery *page 2 - 8*
2. Remove the Wireless LAN module *page 2 - 15*

To remove the Processor:

1. Remove the battery *page 2 - 8*
2. Remove the processor *page 2 - 16*

To remove the Keyboard:

1. Remove the battery *page 2 - 8*
2. Remove the keyboard *page 2 - 18*

To remove the Keyboard Shielding Plate:

1. Remove the battery *page 2 - 8*
2. Remove the keyboard *page 2 - 18*
3. Remove the keyboard shielding plate *page 2 - 19*

To remove the LCD and Top Case:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*

To remove the TouchPad and Click Board:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the TouchPad and Click Board *page 2 - 22*

To remove the Switch Board:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the switch board *page 2 - 23*

To remove the Modem:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the modem *page 2 - 24*

To remove the Speakers:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the speakers *page 2 - 25*

To remove the Mainboard:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the speakers *page 2 - 25*
12. Remove the mainboard *page 2 - 26*

To remove the Fan Unit:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the speakers *page 2 - 25*
12. Remove the mainboard *page 2 - 26*
13. Remove the fan unit *page 2 - 27*

To remove the Floppy Disk Drive Assembly:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the speakers *page 2 - 25*
12. Remove the mainboard *page 2 - 26*
13. Remove the floppy disk drive *page 2 - 28*

To remove the PC Card Assembly:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the speakers *page 2 - 25*
12. Remove the mainboard *page 2 - 26*
13. Remove the PC Card assembly *page 2 - 29*

To remove the LCD Front Panel Module:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the front panel module *page 2 - 30*

To remove the Inverter:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the front panel module *page 2 - 30*
12. Remove the inverter *page 2 - 31*

To remove the PC Video Camera Module:

1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the front panel module *page 2 - 30*
12. Remove the PC Video Camera *page 2 - 32*

To remove the LCD Module:

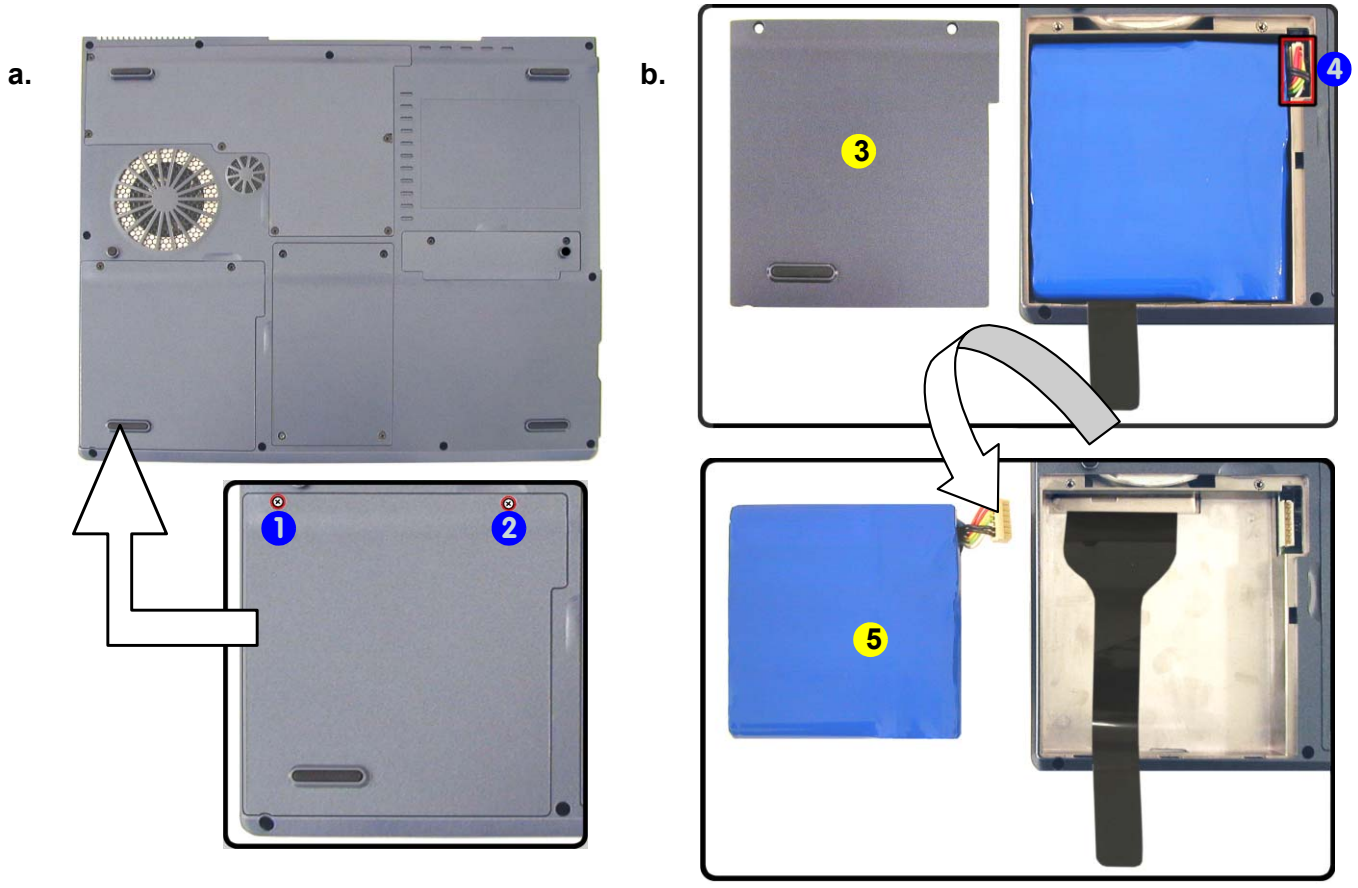
1. Remove the battery *page 2 - 8*
2. Remove the HDD *page 2 - 9*
3. Remove the system memory *page 2 - 10*
4. Remove the CD Device *page 2 - 12*
5. Remove the Bluetooth module *page 2 - 14*
6. Remove the Wireless LAN module *page 2 - 15*
7. Remove the processor *page 2 - 16*
8. Remove the keyboard *page 2 - 18*
9. Remove the keyboard shielding plate *page 2 - 19*
10. Remove the LCD & top case *page 2 - 20*
11. Remove the front panel module *page 2 - 30*
12. Remove the inverter *page 2 - 31*
13. Remove the LCD module *page 2 - 33*

Removing the Battery

1. Turn the computer **off**, and turn it over.
2. Remove screws 1 & 2 (*Figure 1a*) from the battery cover 3, and remove the cover.
3. Carefully (use a small screwdriver) disconnect the battery cable at point 4 (*Figure 1b*).
4. Lift the battery 5 out of the computer.
5. When replacing the battery, connect the cable first.

Figure 1
Battery Removal

a. Remove the 2 screws and the battery cover.
b. Carefully disconnect the battery cable and remove the battery.



3. Battery Cover
5. Battery

- 2 Screws

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" IDE 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, remove the battery (*page 2 - 8*) and turn it over.
2. Remove screws 1 - 4 (*Figure 2a*) from the hard disk cover 5, and remove the cover.
3. Carefully (use a small screwdriver) disconnect the battery cable at point 6 (*Figure 2b*).
4. Lift the HDD assembly 7 out of the computer.
5. Reverse the process to install a new hard disk.

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.

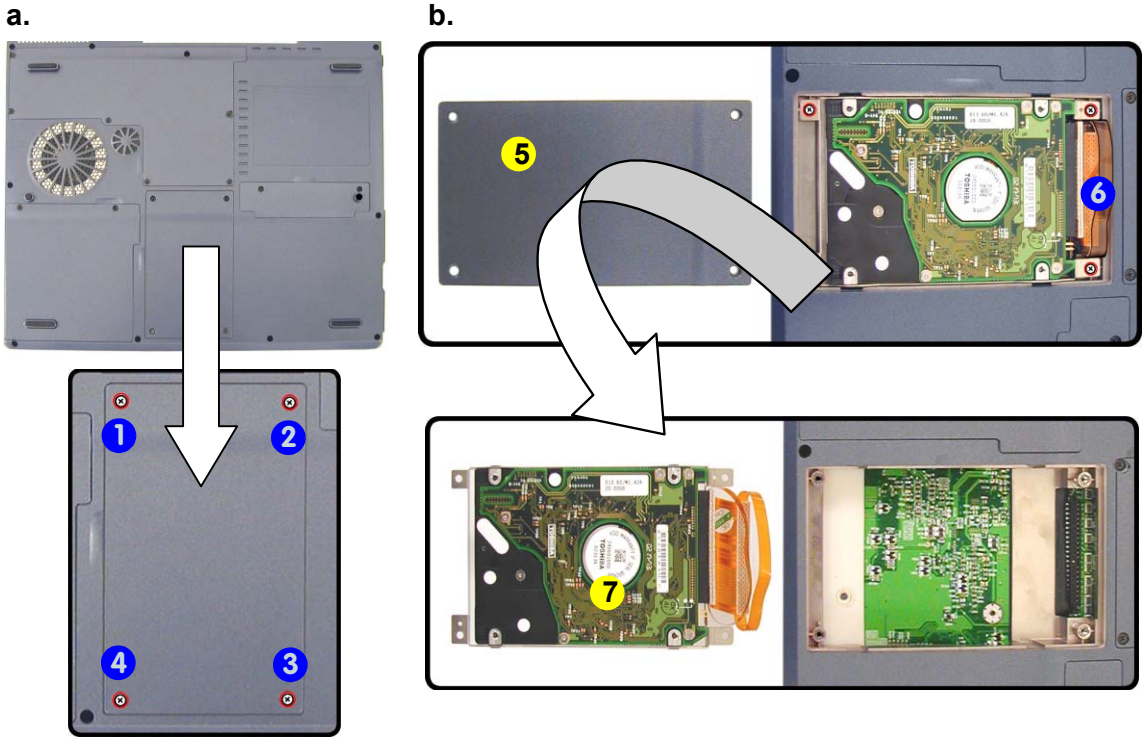


Figure 2
HDD Assembly Assembly Removal

a. Remove the 4 screws.
b. Disconnect the HDD cable and lift the HDD assembly out of the bay.

5. Hard Disk Cover
7. Hard Disk

- 4 Screws

Removing the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDR 200/266 MHz. The main memory can be expanded up to 1024MB. The SO-DIMM modules supported are 128Mb, 256Mb, and 512Mb. The total memory size is automatically detected by the POST routine once you turn on your computer.

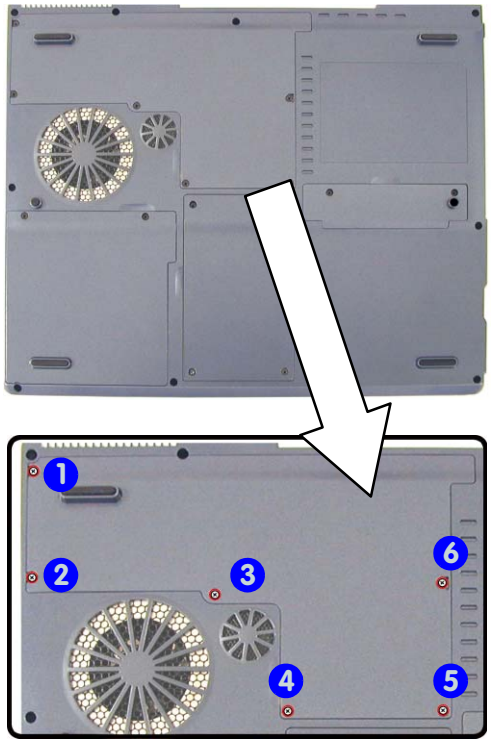
Memory Upgrade Process

1. Turn **off** the computer, remove the battery (*page 2 - 8*) and turn it over.
2. Remove screws 1 - 6 (*Figure 3a*) from the memory socket cover.
3. Carefully lift up the memory socket cover 7 (*Figure 3b*) (a fan cable 8 is still attached to the mainboard and you can disconnect it).
4. If there is a module currently installed which needs to be upgraded/replaced then remove it.

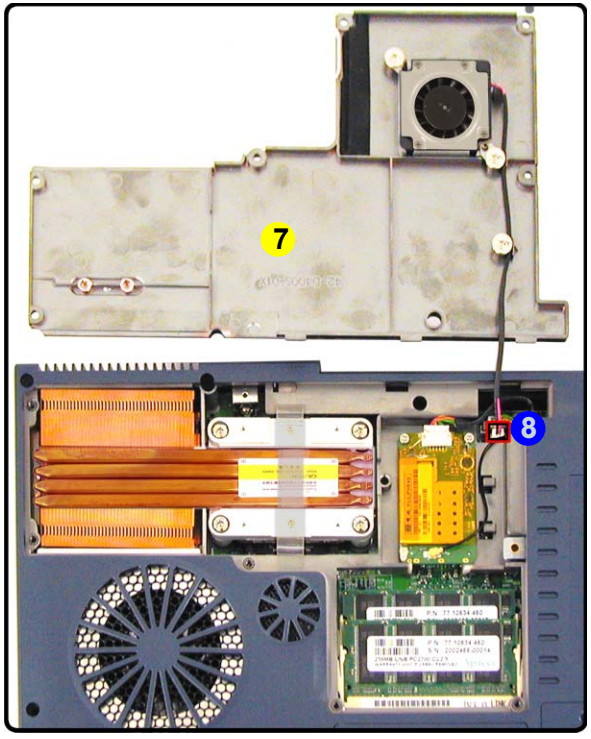
Figure 3
Memory Socket Cover Removal

a. Remove the screws.
b. Carefully lift the cover off the computer.

a.



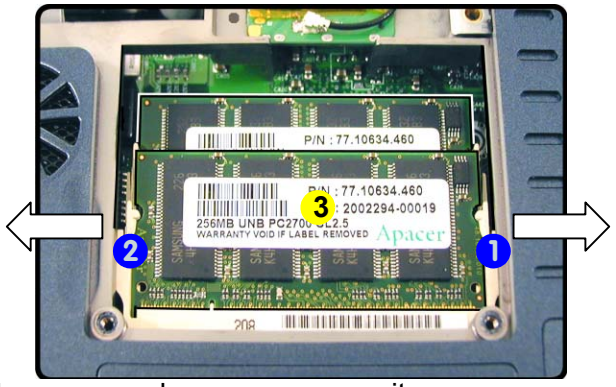
b.



7. Socket Cover
- 6 Screws

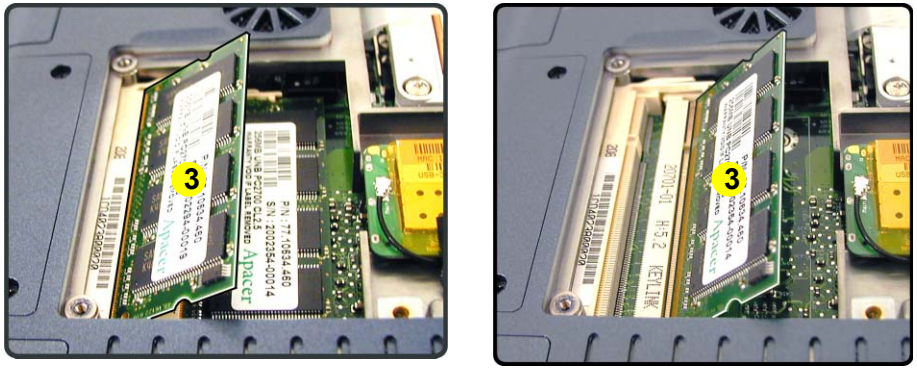
5. Gently pull the two release latches (1 & 2) on the sides of the memory socket toward the sides of the computer.

a.



6. The module 3 (*Figure 4b*) will pop-up, and you can remove it.
7. Repeat the process for the second module if necessary.
8. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
9. The module will only fit one way as defined by its pin alignment. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE IT; it should fit without much pressure.

b.



10. Press the module down towards the mainboard until the slot levers click into place to secure the module.
11. Replace the memory socket cover (be careful with the fan cable) and the **6** screws (see *page 2 - 10*).
12. Restart the computer.
13. The BIOS will register the new memory configuration as it starts up.

Figure 4
Removing/ Installing a RAM Module

a. Pull the release latches.
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.

3. RAM Module

Removing the CD Device

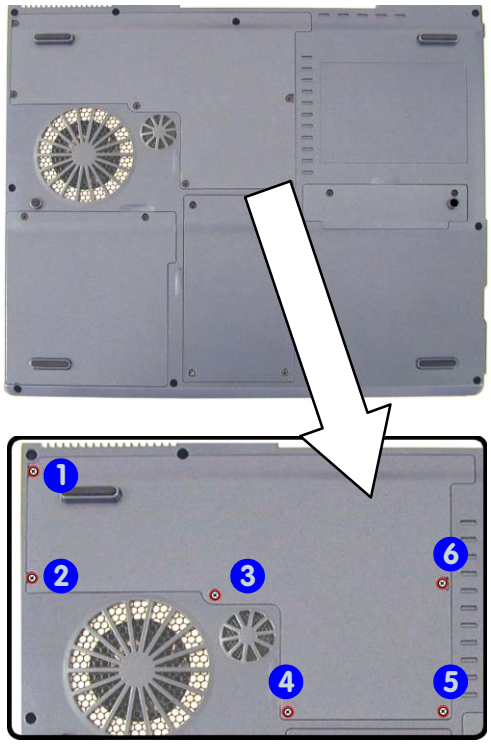
The easy changeable CD device may be upgraded or changed.

1. Turn **off** the computer, remove the battery (*page 2 - 8*) and turn it over.
2. Remove screws 1 - 6 (*Figure 5a*) from the memory socket cover.
3. Carefully lift up the memory socket cover 7 (a fan cable 8 is still attached to the mainboard and you can disconnect it).

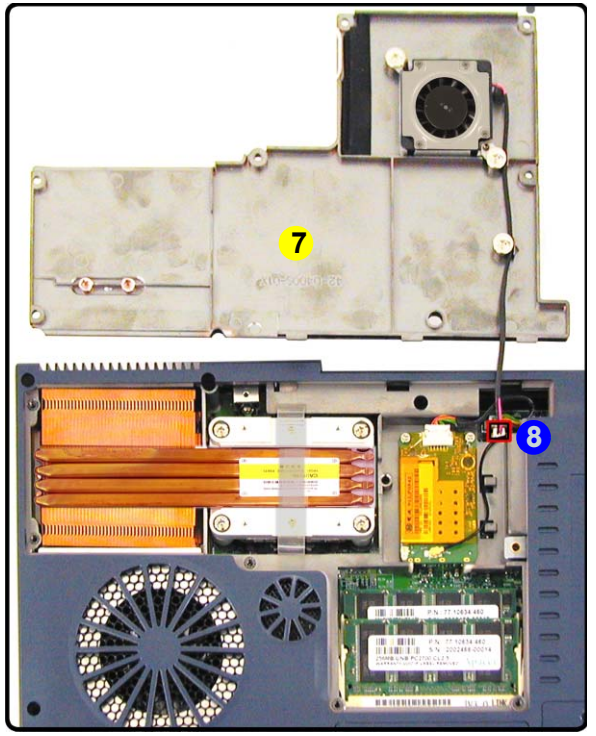
Figure 5
Memory Socket Cover Removal

a. Remove the screws.
b. Carefully lift the cover off the computer.

a.



b.



7. Socket Cover

- 6 Screws

4. Use a screwdriver to carefully push the CD device assembly 1 out of the computer at point 2.

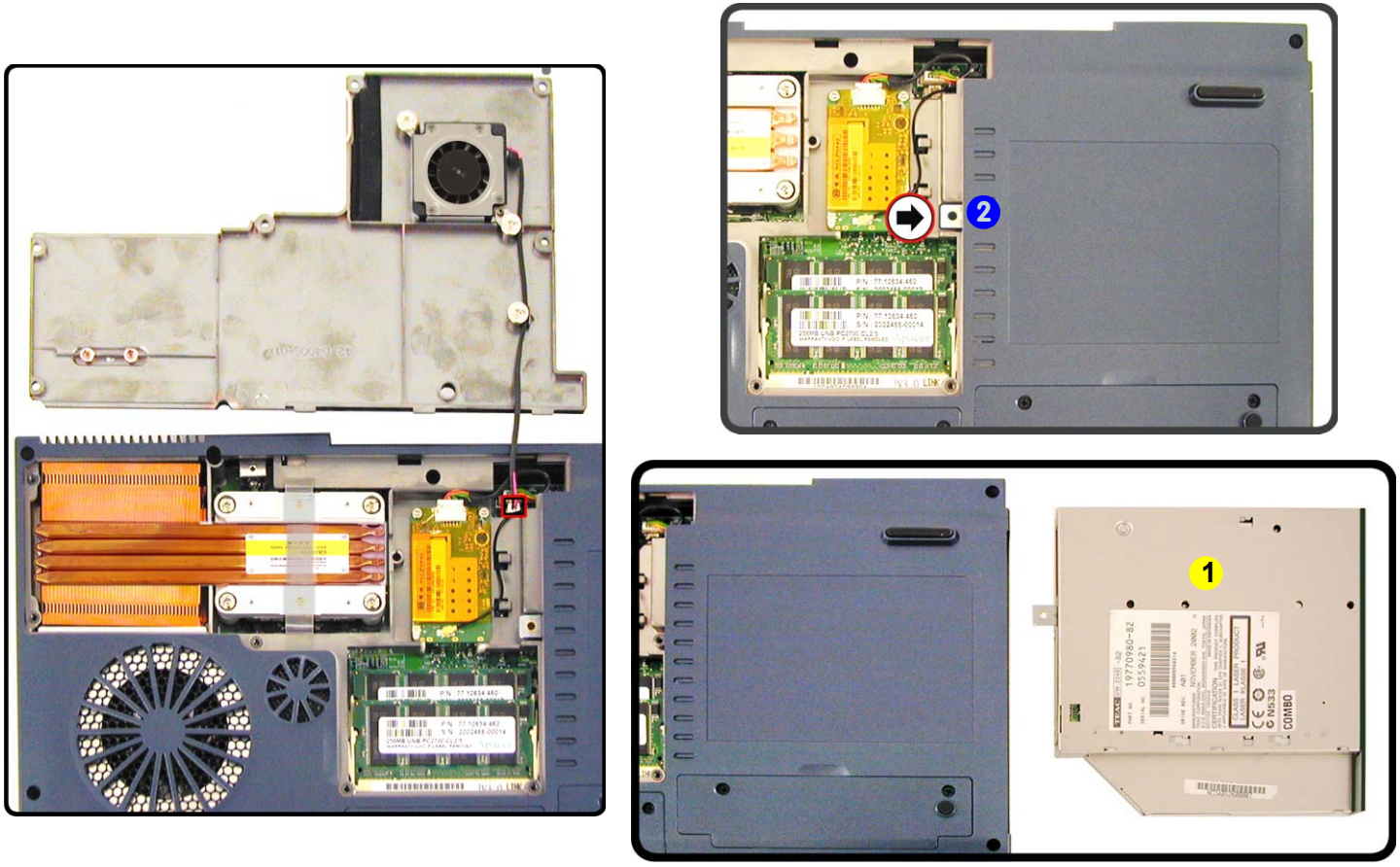


Figure 6
CD Device Removal

Push the CD device out off the computer at point 2.

5. 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.
6. Replace the memory socket cover (be careful with the fan cable) and the **6** screws (see *page 2 - 12*).
7. Restart the computer to allow it to automatically detect the new device.

1. CD Device

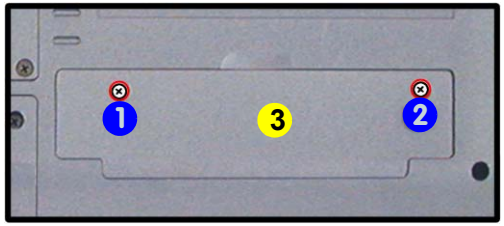
Removing the Bluetooth Module

1. Turn **off** the computer, remove the battery (*page 2 - 8*) and turn it over.
2. Remove screws 1 - 2 (*Figure 7a*) from the Bluetooth module cover.
3. Carefully lift up the Bluetooth module cover 3 off the computer.
4. Remove screws 3 - 6 (*Figure 7c*) and carefully disconnect cables 8 - 9, then remove the Bluetooth module 10 (*Figure 7d*).

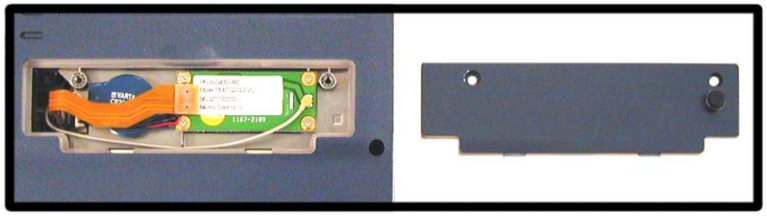
Figure 7
Bluetooth Module Removal

a. Remove the screws.
b. Carefully lift the cover off the computer.
c. Remove the screws and disconnect the cables.
d. Remove the Bluetooth module.

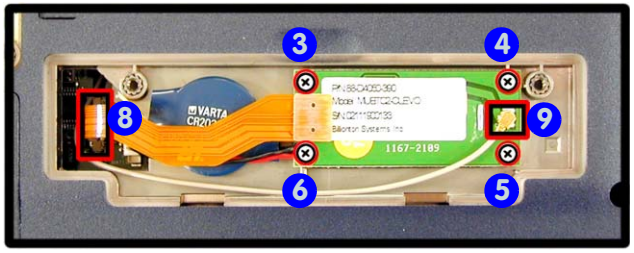
a.



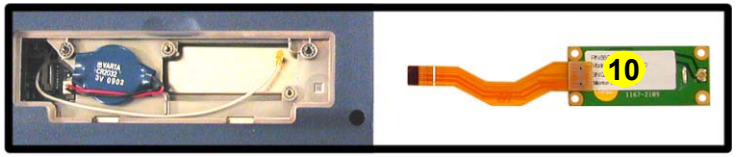
b.



c.



d.



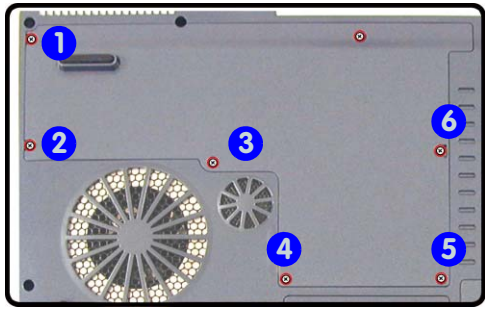
3. Bluetooth Cover
10. Bluetooth Module

- 6 Screws

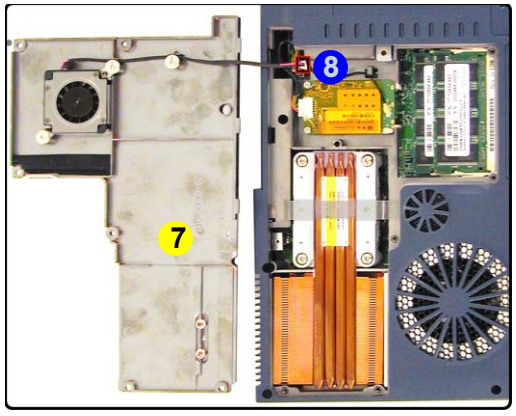
Removing the Wireless LAN Module

1. Turn **off** the computer, remove the battery (*page 2 - 8*) and turn it over.
2. Remove screws 1 - 6 from the memory socket cover.
3. Carefully lift up the memory socket cover 7 (a fan cable 8 is still attached to the mainboard and you can disconnect it).
4. Remove screws 9 - 10 (*Figure 8c*), and carefully disconnect cables 11 & 12.
5. Lift the Wireless LAN module 13 (*Figure 8d*) off the computer.

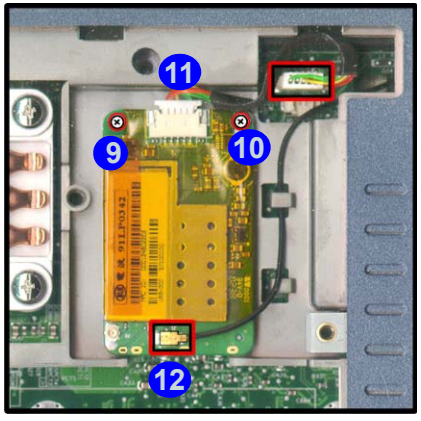
a.



b.



c.



d.

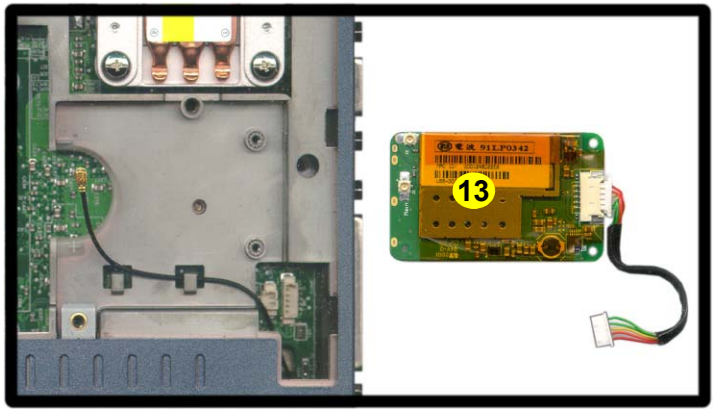


Figure 8
Wireless LAN Module Removal

a. Remove the screws.
b. Carefully lift the cover off the computer.

Antenna Cable Connection

When re-inserting a Wireless LAN module, make sure the antenna cable connects to the connector **J1** which is indicated as point **12** in *Figure 8c*.

7. Socket Cover
13. WLAN Module

- 8 Screws

Removing the Processor

1. Turn **off** the computer, remove the battery (*page 2 - 8*) and turn it over.
2. Remove screws 1 - 6 from the memory socket cover.
3. Carefully lift up the memory socket cover 7 (a fan cable 8 is still attached to the mainboard and you can disconnect it).
4. Remove screws 9 - 12 (*Figure 9c*) from the heat sink, **in the order indicated on the label**.
5. Carefully lift up the heat sink 13 (*Figure 9d*) off the computer.

Figure 9
Processor Removal

a. Remove the screws.
b. Carefully lift the cover off the computer.
c. Remove the screws in the order indicated.
d. Remove the heat sink.

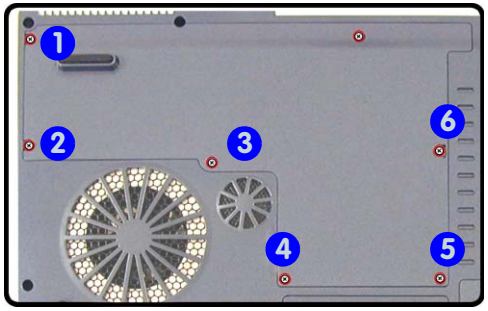
Reassembly Screw Order

When replacing the heat sink, make sure you insert the screws in the same order indicated on the label.

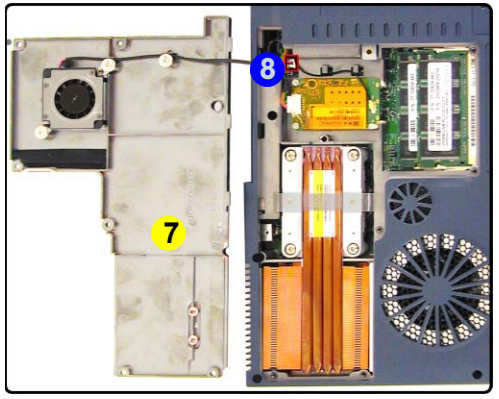
7. Socket Cover
13. Heat Sink

- 10 Screws

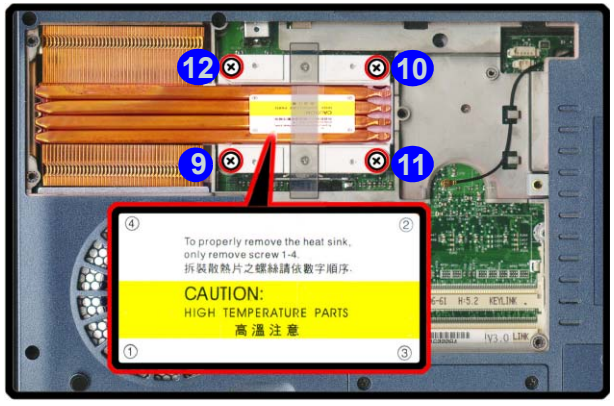
a.



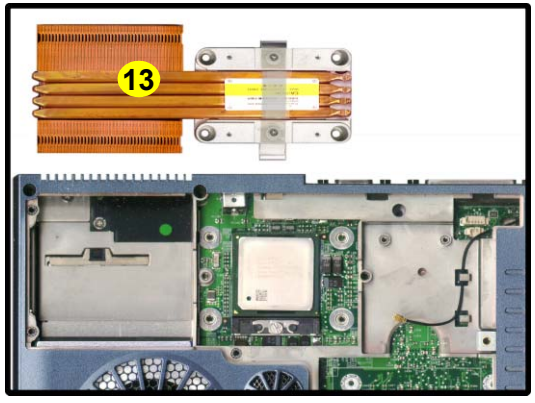
b.



c.

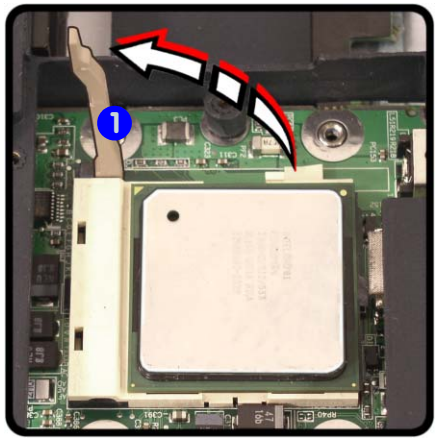


d.

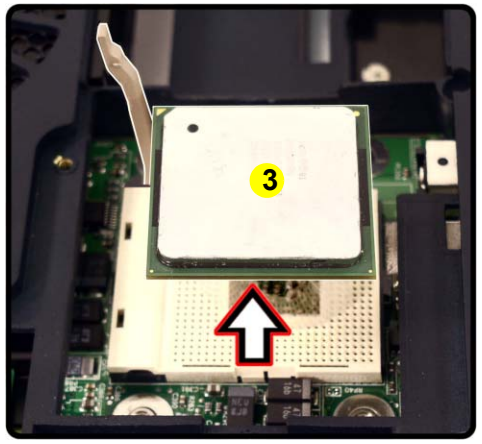


6. Unlock the processor by raising lever 1 (*Figure 10a*).
7. Lift the CPU 3 (*Figure 10***b**) off the computer.

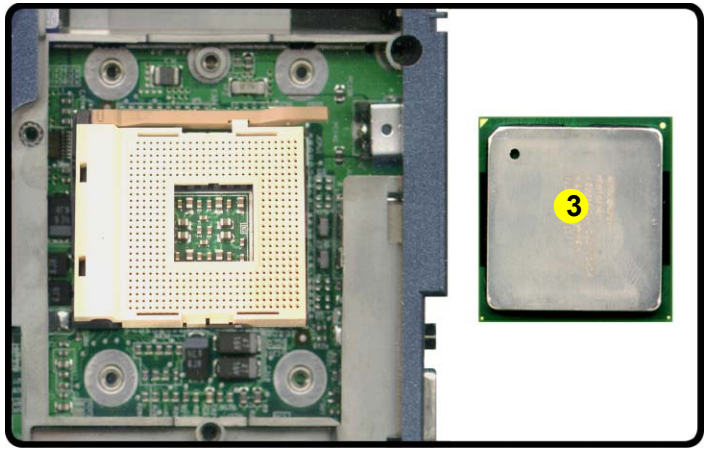
a.



b.



c.



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.

Figure 10
Processor Removal (cont'd)

a. Raise the lever to unlock the CPU.
b. Lift the CPU off the socket.

3. CPU

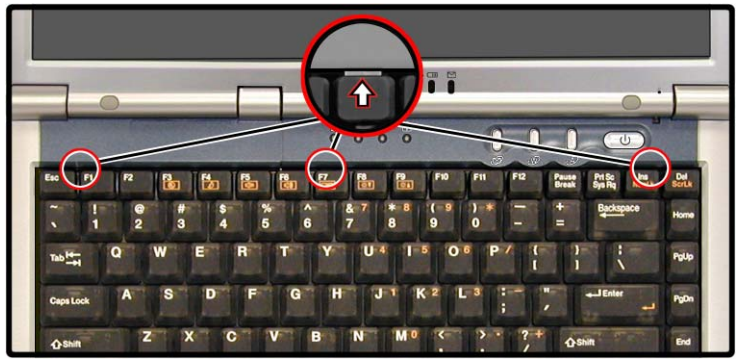
Removing the Keyboard

1. Turn **off** the computer, remove the battery (*page 2 - 8*).
2. Press the **three** keyboard latches at the top of the keyboard 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 and out, being careful not to bend the keyboard ribbon cable 1 (*Figure 11b*).
4. Disconnect the keyboard ribbon cable from the locking collar socket 2 (*Figure 11b*) and lift the keyboard 3 up out of the computer.

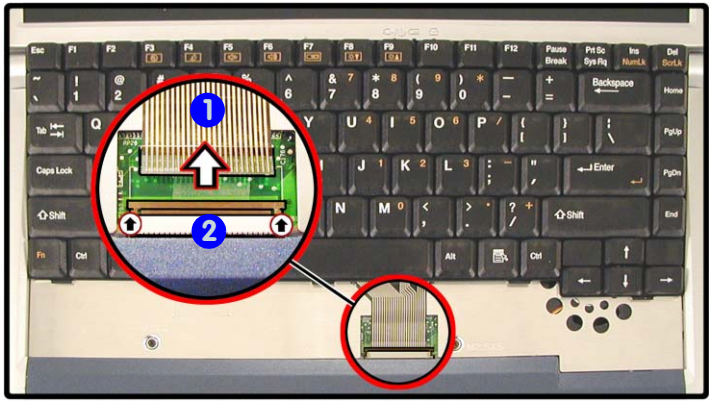
Figure 11
Keyboard Removal

a. Press the latches to elevate the keyboard.
b. Disconnect the keyboard cable form the locking collar.
c. Remove the keyboard.

a.



b.



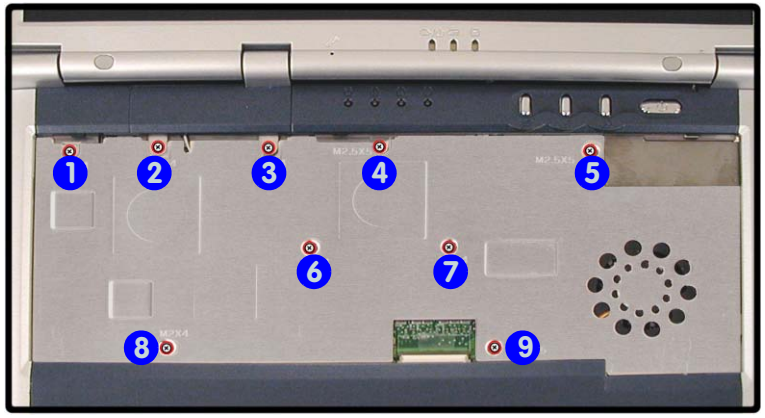
c.

3. Keyboard

Removing the Keyboard Shielding Plate

1. Turn **off** the computer, remove the battery (*page 2 - 8*) and keyboard (*page 2 - 18*).
2. Remove screws 1 - 9 (*Figure 12a*) from the keyboard shielding plate and lift the plate 10 off the computer.

a.



b.

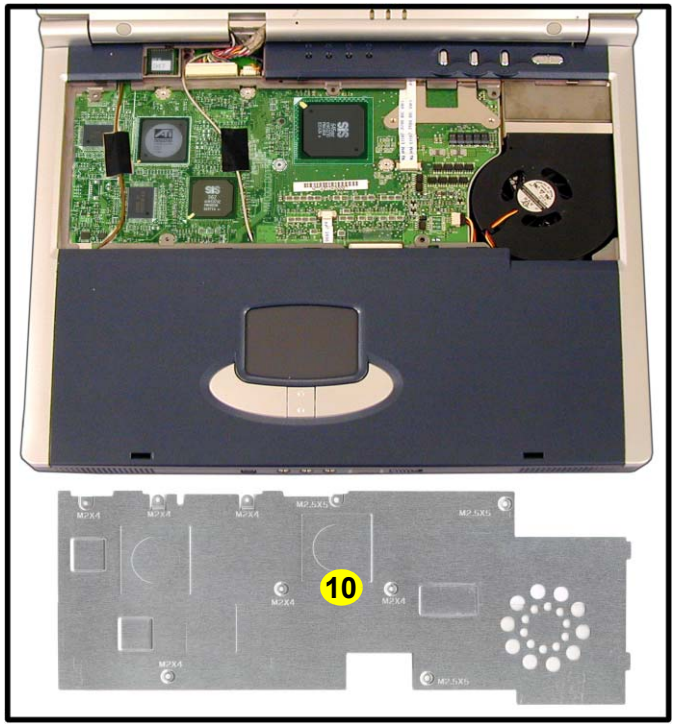


Figure 12
Keyboard Shielding Plate Removal

a. Remove the screws from the shielding plate.
b. Lift the plate off the computer.

10. Shielding Plate
- 9 Screws

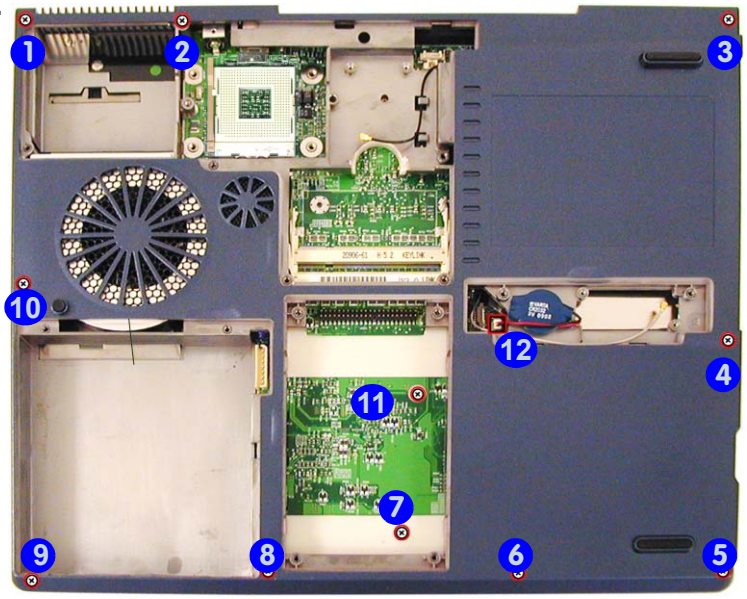
Removing the LCD and Top Case

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*) and keyboard shielding plate (*page 2 - 19*).
2. Remove screws 1 - 11, and disconnect cable 12 (*Figure 13a*) from the bottom off the computer.
3. Remove screws 13 - 16 (*Figure 13b*) from the rear off the computer.
4. Remove the LCD cable shielding cover 21 , screws 17 - 18 and disconnect cables 19 - 20 (*Figure 13c*).

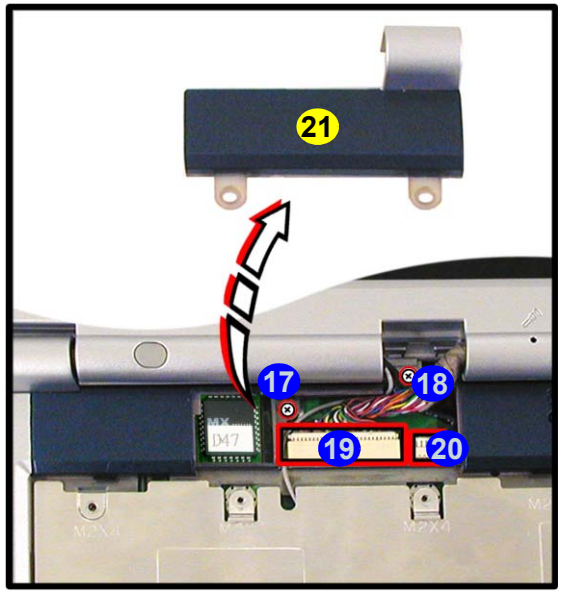
Figure 13
LCD & Top Case Removal

a. Remove the screws from the bottom of the computer.
b. Remove the screws from the rear of the computer.
c. Remove the LCD cable shielding cover and disconnect the cables.

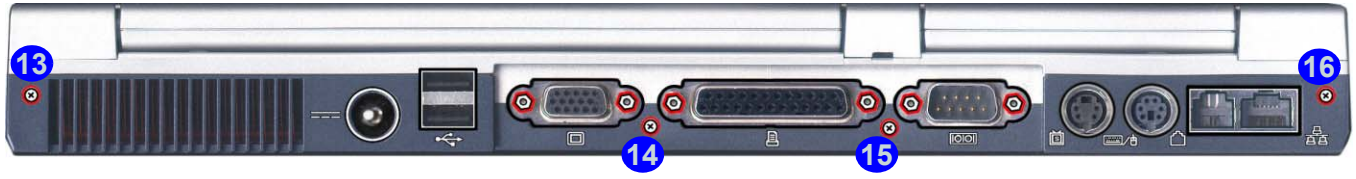
a.



c.



b.



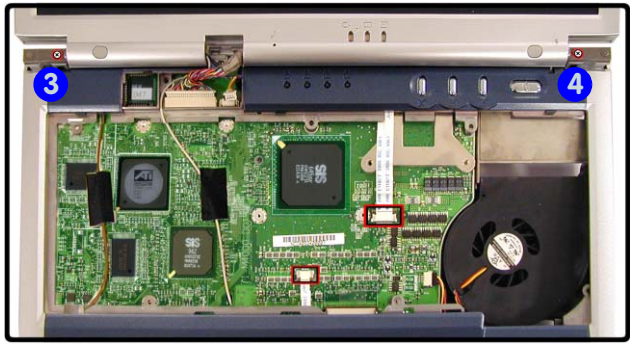
26. LCD cable cover

- 14 Screws

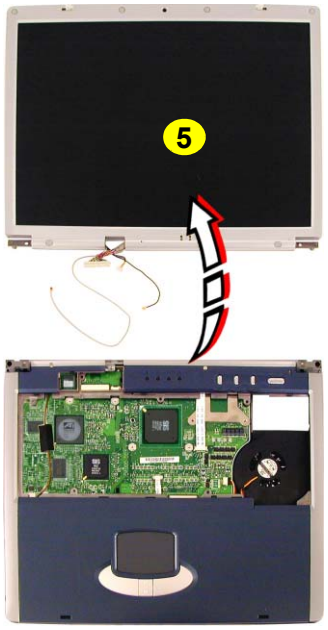
5. Slide the LCD hinge covers 1 & 2 (*Figure 14a*) out of the computer.
6. Remove screws 3 & 4 (*Figure 14b*) then carefully (pay careful attention to the antenna cables) lift the LCD assembly 5 (*Figure 14c*) off the computer.
7. Remove screws 6 & 7 (*Figure 14d*) and disconnect cables 8 & 9, then lift the top case assembly 10 off the computer.

a.

b.



c.



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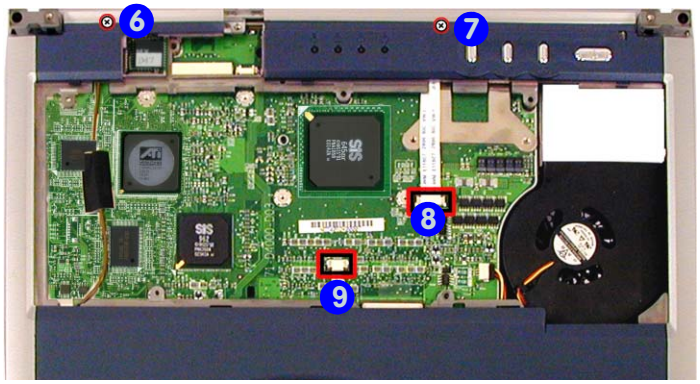


e.

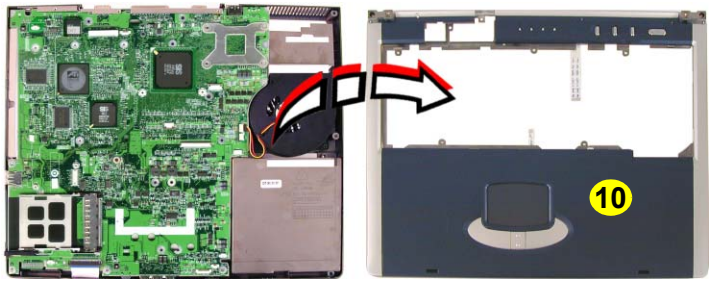


Figure 14
LCD & Top Case Removal Cont'd

a. Remove the hinge covers.
b. Remove the screws from the LCD.
c. Lift the LCD top case assembly.
d. Remove the screws and disconnect the cables.
e. Lift the top case assembly off the computer.

1&2. Hinge covers
5. LCD Assembly
10. Top Case

- 4 Screws

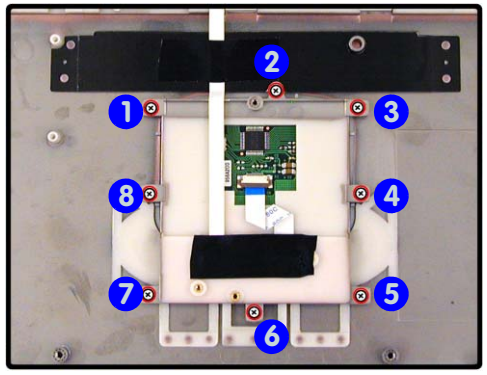
Removing the TouchPad and Click Board

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*) and the top case and LCD (*page 2 - 20*).
2. Remove screws 1 - 8 (*Figure 15a*) from the TouchPad and click board assembly, and lift the assembly off the top case.
3. Disconnect cable 9 (*Figure 15c*) and remove screws 10 - 11 (*Figure 15d*).
4. Separate the TouchPad 12 and click board 13 (*Figure 15e*).

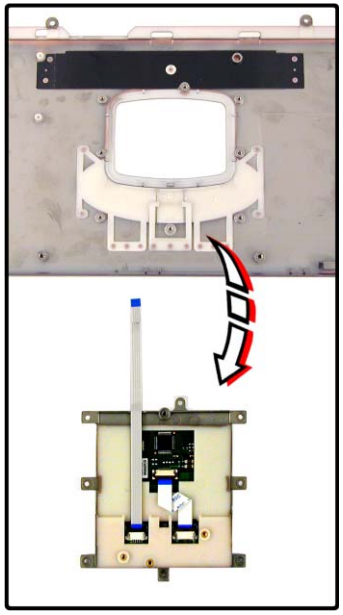
Figure 15
TouchPad and Click Board Removal

a. Remove the screws.
b. Separate the assembly from the top case.
c. Disconnect the cable.
d. Remove the screws.
e. Separate the TouchPad and click board.

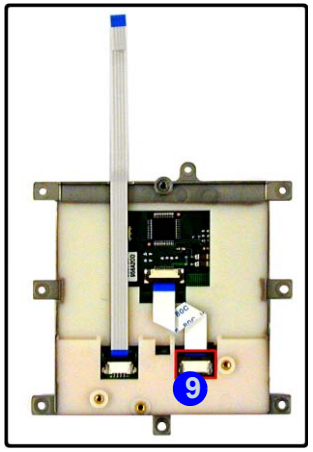
a.



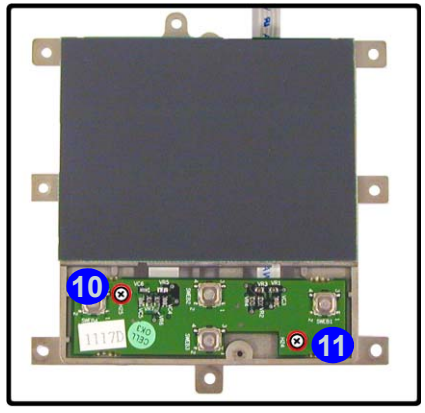
b.



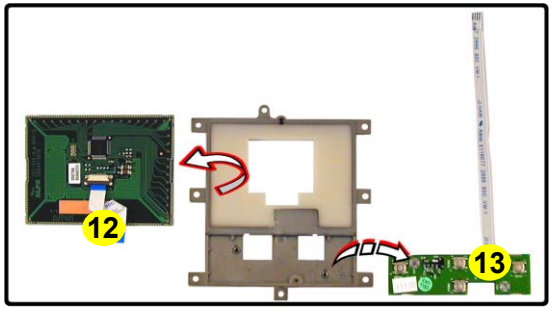
c.



d.



e.



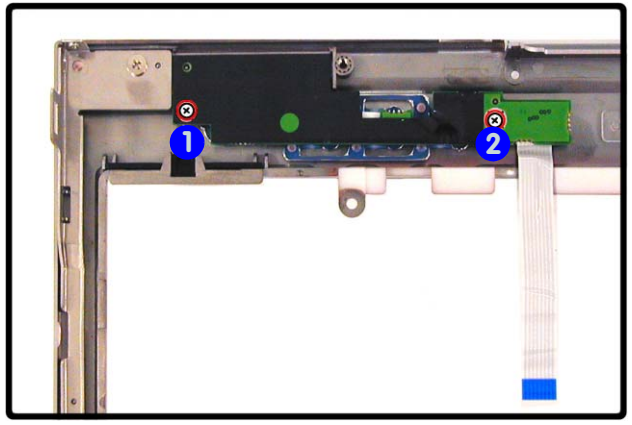
12. TouchPad
13. Click Board

- 10 Screws

Removing the Switch Board

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*) and the top case and LCD (*page 2 - 20*). 10
2. Remove screws 1 & 2 (*Figure 16a*) from the switch board assembly.
3. Lift the switch board assembly 3 (*Figure 16b*) off the top case.

a.



b.

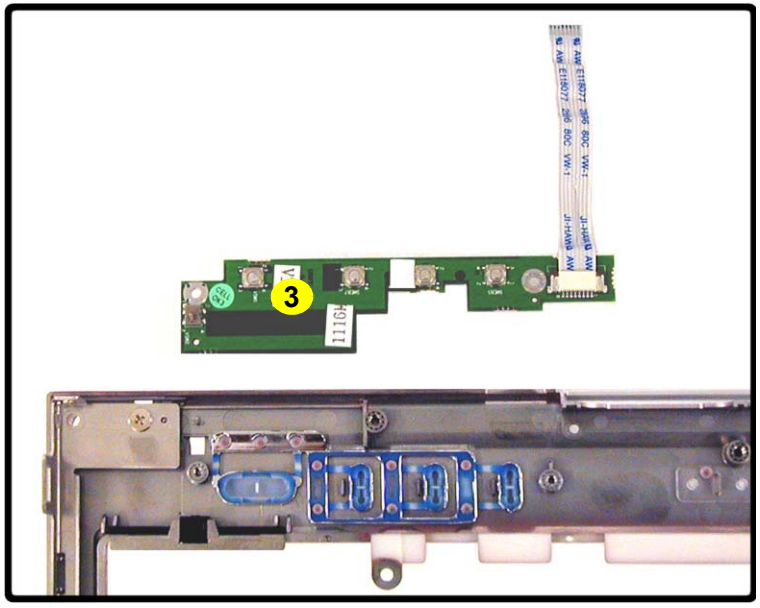


Figure 16
Switch Board Removal

a. Remove the screws.
b. Lift the switch board assembly off the top case.

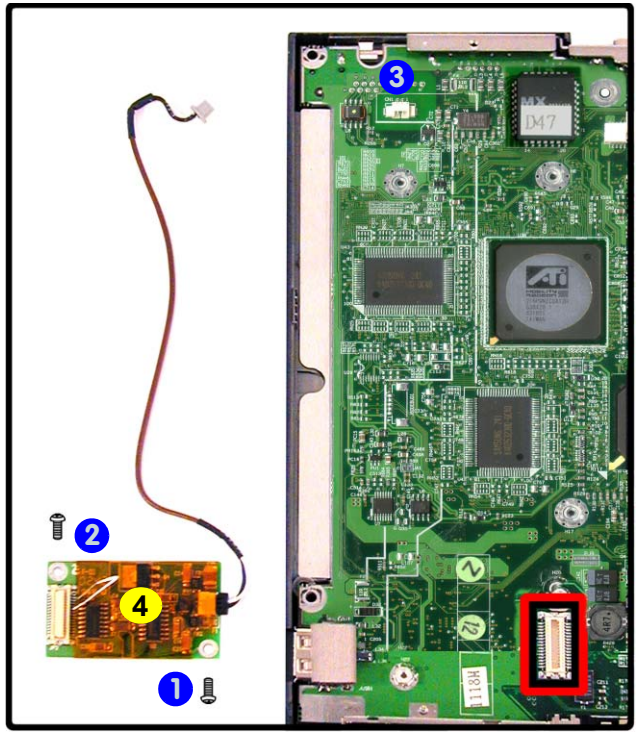
3. Switch Board
- 2 Screws

Removing the Modem

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*) and the top case and LCD (*page 2 - 20*).
2. Remove screws 1 & 2 (*Figure 17*) from the modem and disconnect cable 3.
3. Remove the modem module 4 .

Figure 17
Modem Removal

Remove the screws, disconnect the cable, and remove the modem module.

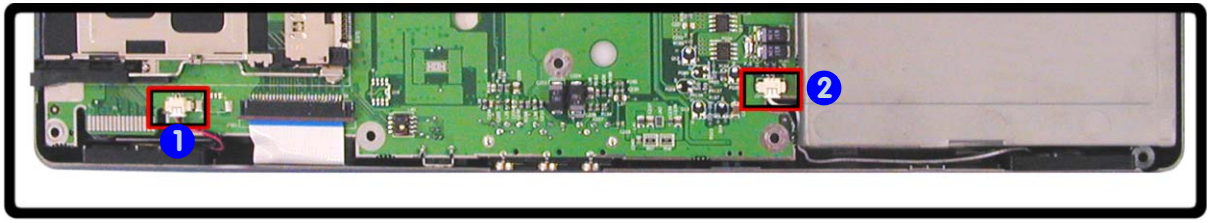


4. Modem
- 2 Screws

Removing the Speakers

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*) and the top case and LCD (*page 2 - 20*).
2. Disconnect cables 1 & 2 (***Figure 18a***) from the speakers to the mainboard.
3. Remove the speakers 3 (***Figure 18b***).

a.



b.

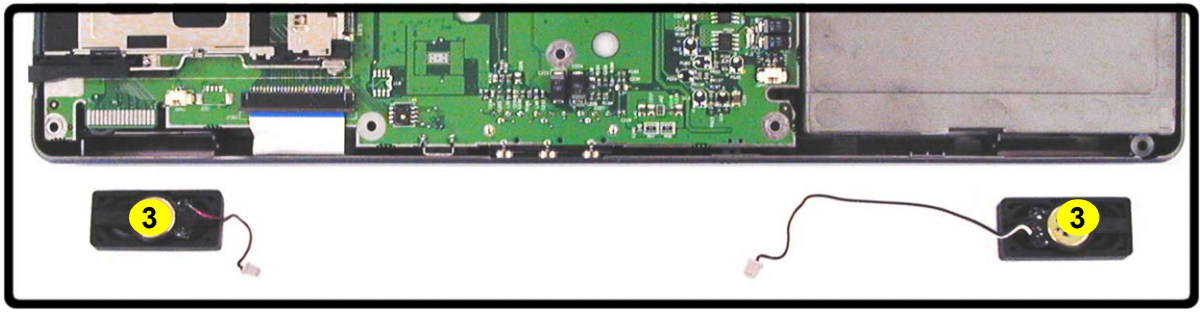


Figure 18
Speakers Removal

a. Disconnect the cables.
b. Remove the speakers.

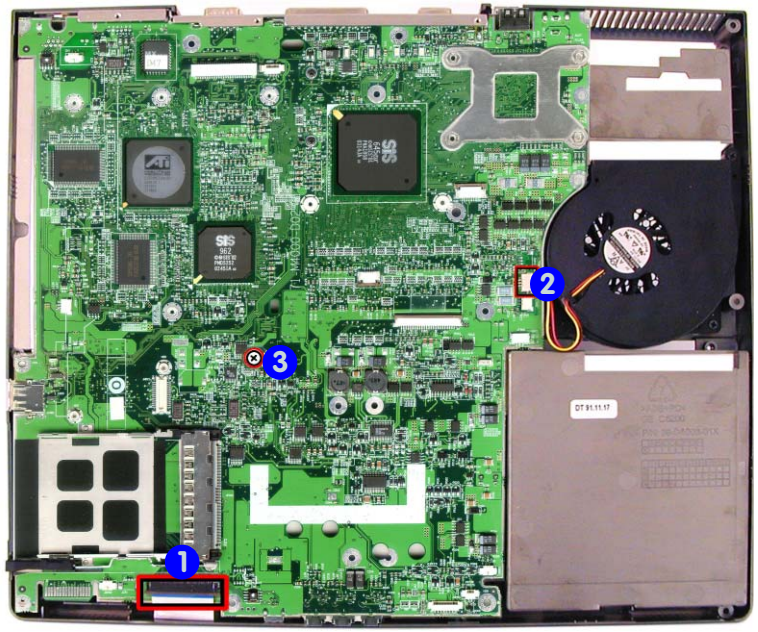
Removing the Mainboard

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*) and speakers (*page 2 - 25*).
2. Disconnect cables 1 & 2 (*Figure 19a*) and remove screws 3.
3. Remove screws 4 - 9, separate the mainboard 10 , rear bracket 11 and bottom case 12 (*Figure 19b*).

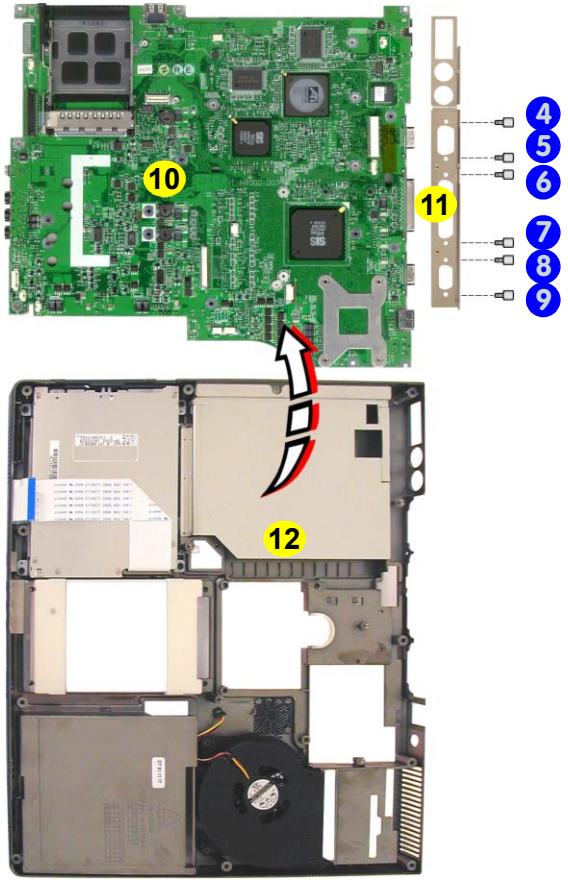
Figure 19
Mainboard Removal

a. Disconnect the cables and remove the screws.
b. Remove screws, separate the mainboard, rear bracket and bottom case.

a.



b.



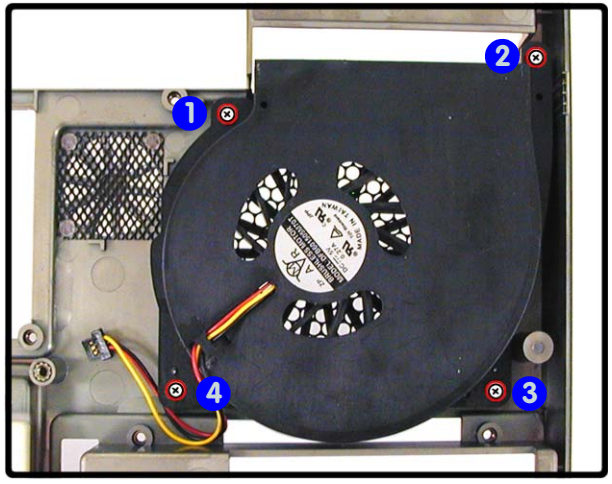
10. Mainboard
11. Rear Bracket
12. Bottom Case

- 8 Screws

Removing the Fan Unit

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*), speakers (*page 2 - 25*) and main-board (*page 2 - 26*).
2. Remove screws 1 - 4 (***Figure 20a***) and lift out the fan unit 5 .

a.



b.

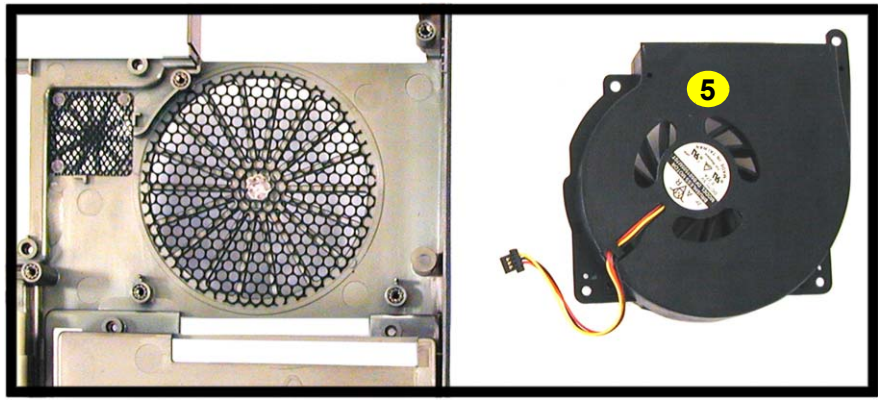


Figure 20
Fan Unit Removal

a. Remove the screws
b. Lift out the fan unit.

5. Fan Unit

- 4 Screws

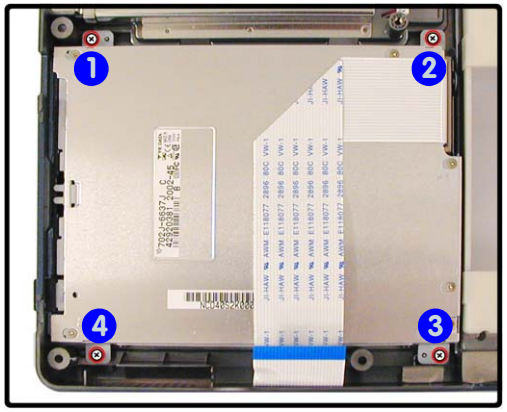
Removing the Floppy Disk Drive Assembly

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*), speakers (*page 2 - 25*) and main-board (*page 2 - 26*).
2. Remove screws 1 - 4 (***Figure 21a***) and lift out the floppy disk drive assembly.
3. Remove screws 5 - 8 (***Figure 21c***) and you can then separate the brackets 9 , floppy disk drive unit 10 , and cable 11 .

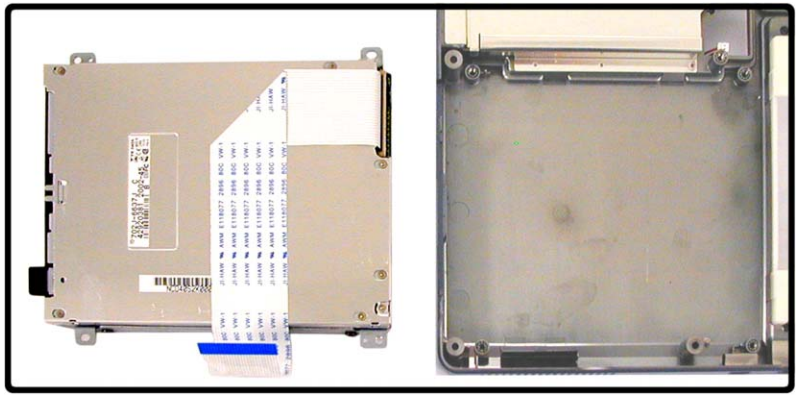
Figure 21
Floppy Disk Drive Assembly Removal

a. Remove the screws
b. Lift out the FDD assembly
c. Separate the brackets, FDD and cable.

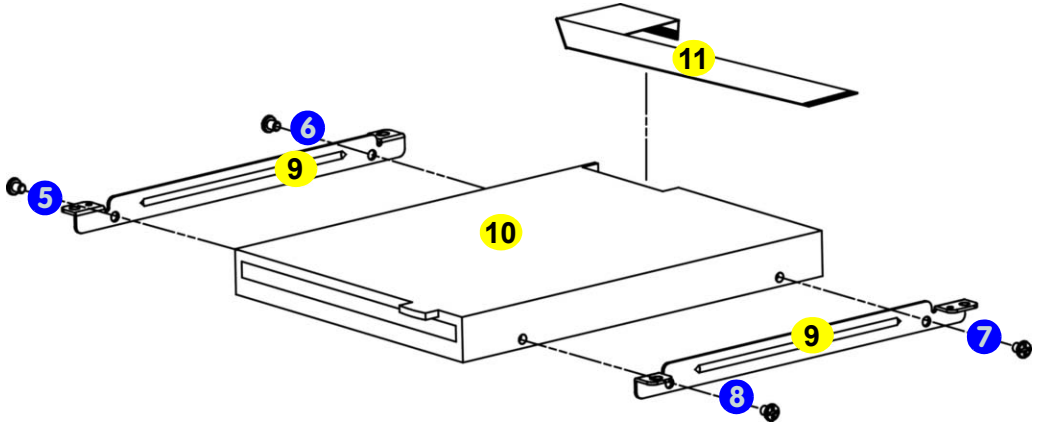
a.



b.



c.



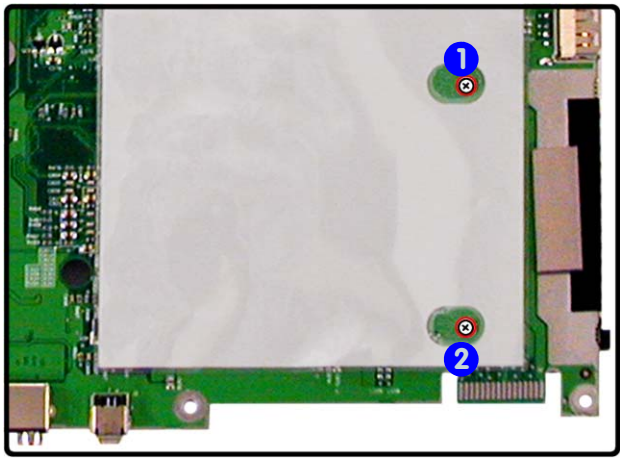
9. Brackets
10. Floppy Disk Drive
11. Cable

- 8 Screws

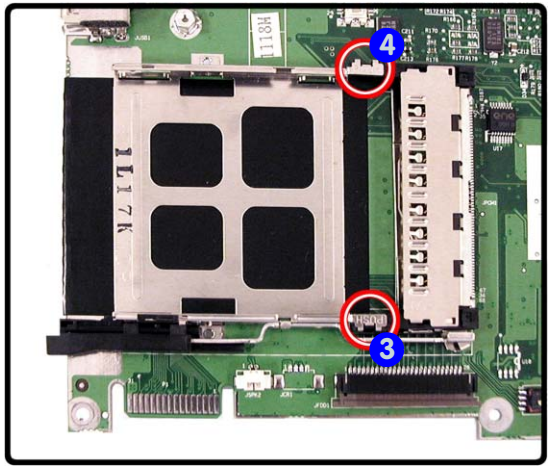
Removing the PC Card Assembly

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*), speakers (*page 2 - 25*) and mainboard (*page 2 - 26*).
2. Remove screws 1 & 2 (*Figure 22a*).
3. Carefully ease (use a small screwdriver) the metal pins which hold the PC Card assembly in place, at points 3 & 4 (*Figure 22b*) off the black plastic unit.
4. Lift off the PC Card assembly 5 (*Figure 22c*) off the mainboard.

a.



b.



c.

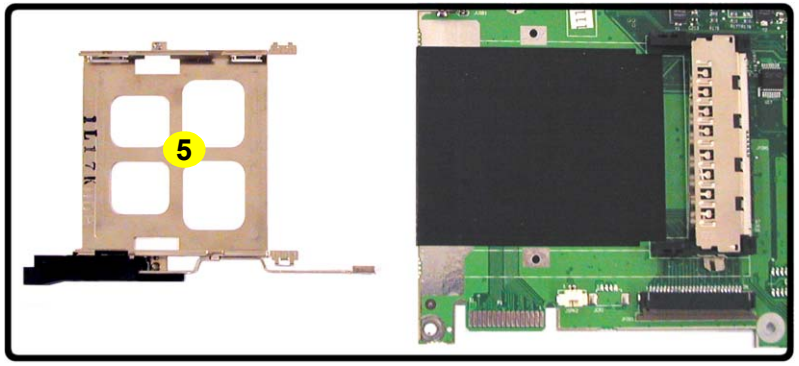


Figure 22
PC Card Assembly Removal

a. Remove the screws.
b. Separate the metal pins from the black plastic unit.
c. Lift the PC Card assembly off the mainboard.

5. PC Card Assembly
   - 2 Screws

Removing the LCD Front Panel Module

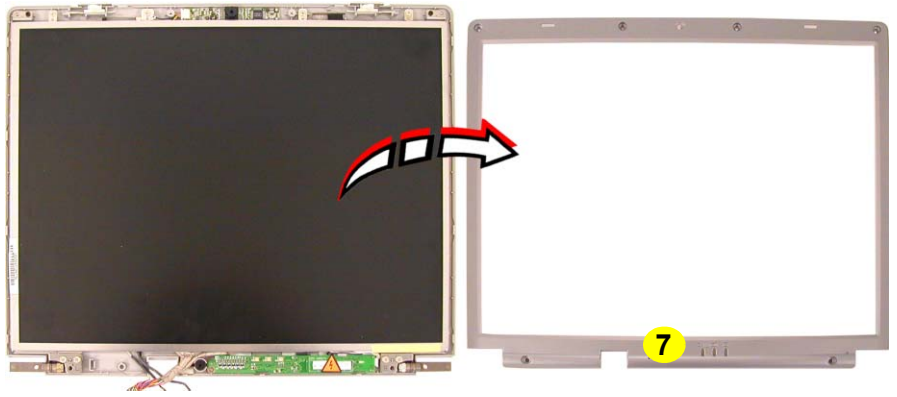
1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), and the top case and LCD (*page 2 - 20*).
2. Remove the rubber covers and screws at points 1 - 6 (***Figure 23a***).
3. Run your finger around the middle of the frame to carefully unsnap the LCD front panel module 7 (***Figure 23b***) from the back.

Figure 23
LCD Front Panel Module Removal

a. Remove the rubber covwers and screws.
b. Unsnap the LCD front panel from the back.

a.

b.



7. LCD Front Panel

- 6 Screws & Rubber Covers

Removing the Inverter

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*) and LCD front panel (*page 2 - 30*).
2. Remove screw 1 (*Figure 24a*).
3. Turn the inverter over and disconnect the cables 2 & 3 (*Figure 24b*).
4. Lift the inverter 4 (*Figure 24c*) off the LCD assembly.

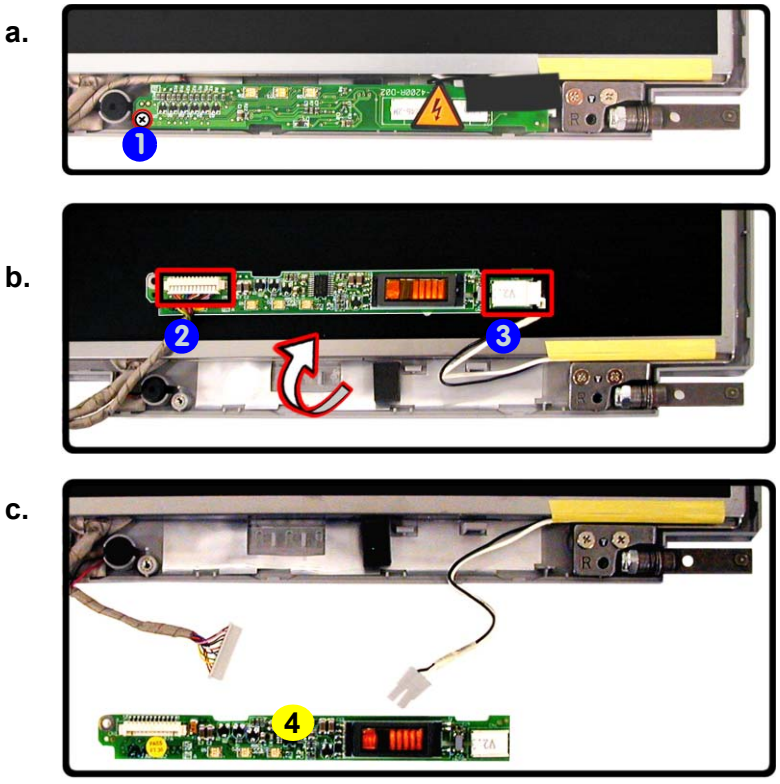


Figure 24
Inverter Removal

a. Remove the screw.
b. Turn the inverter over and disconnect the cables.
c. Lift the inverter off the LCD assembly.

4. Inverter

- 1 Screw

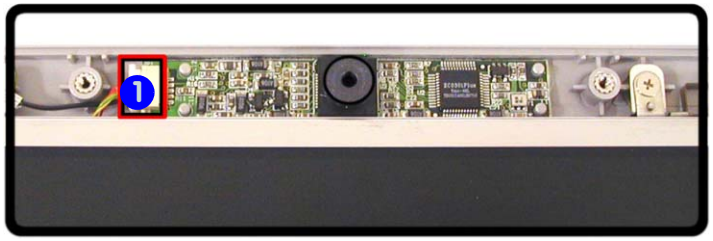
Removing the PC Video Camera Module

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*) and LCD front panel (*page 2 - 30*).
2. Disconnect cable 1 (*Figure 25a*).
3. Lift the PC camera module 2 (*Figure 25b*) off the LCD assembly.
4. If you need to remove the antenna cable, first remove the LCD module (*page 2 - 33*), then remove screw 3 and the antenna cable 4 (*Figure 25c*).

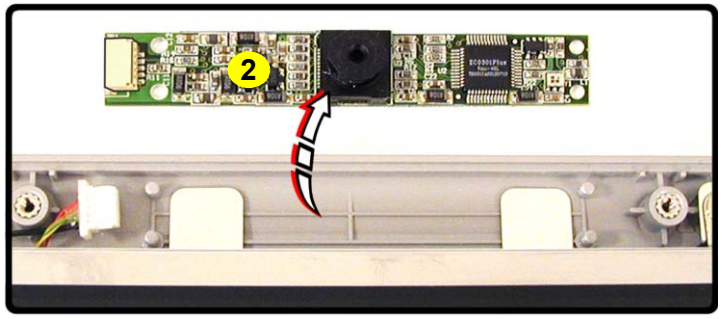
Figure 25
PC Camera Module Removal

a. Disconnect the cable.
b. Lift the PC Camera off the LCD assembly.
c. If you need to remove the antenna first remove the LCD module then the screw, and the antenna cable.

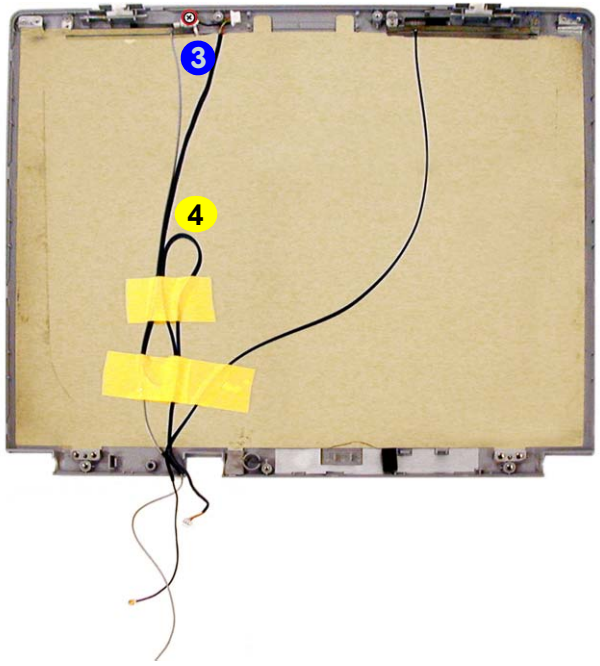
a.



b.



c.



2. PC Camera
4. Antenna Cable

- 1 Screw

Removing the LCD Module

1. Turn **off** the computer, remove the battery (*page 2 - 8*), hard disk (*page 2 - 9*), RAM (*page 2 - 10*), CD Device (*page 2 - 12*), Bluetooth module (*page 2 - 14*), Wireless LAN module (*page 2 - 15*), CPU (*page 2 - 16*), keyboard (*page 2 - 18*), keyboard shielding plate (*page 2 - 19*), the top case and LCD (*page 2 - 20*), LCD front panel (*page 2 - 30*) and inverter (*page 2 - 31*).
2. Remove screws 1 - 6 (*Figure 26a*).
3. Separate the display back panel 7 (*Figure 26b*), hinges 8 and LCD module assembly.
4. Remove screws 9 - 16 (*Figure 26c*) and separate the LCD module 17 and brackets 18 .

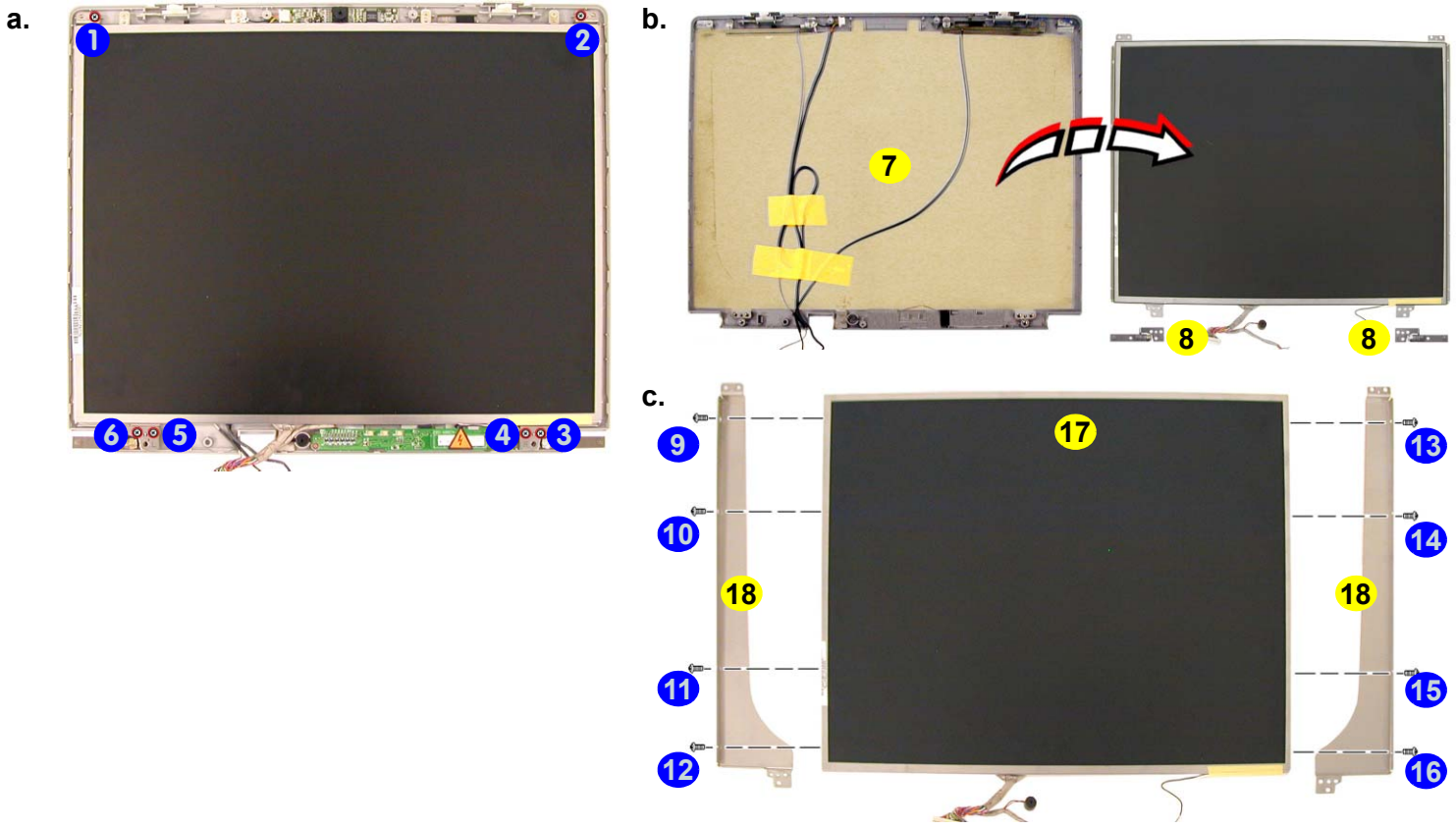


Figure 26
LCD Module Removal

a. Remove the screws.
b. Separate the back panel, hinges and LCD module assembly.
c. Remove the screws and separate the brackets and LCD module.

7. Back Panel
8. Hinges
17. LCD module
18. Brackets

- 14 Screws

Appendix A:Part Lists

This appendix breaks down the ***D400E/D410E*** 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.

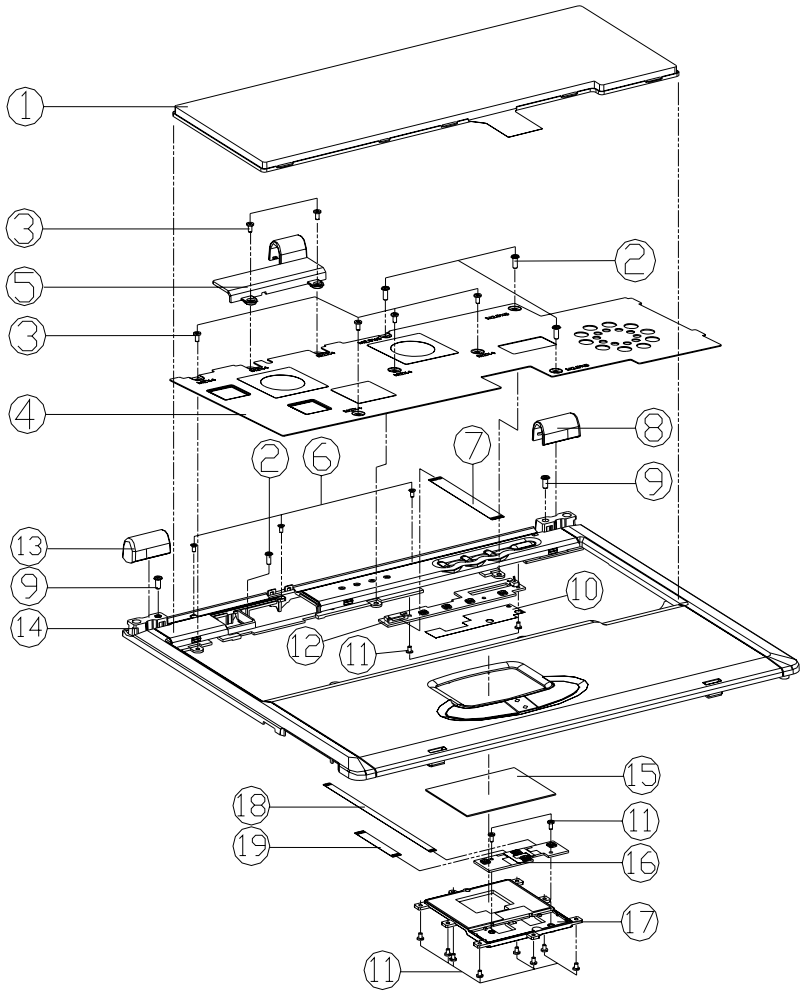
Part List Illustration Location

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

Table 1 - 1
Part List Illustration Location

Part	D400E	D410E
Top	*page A - 3*	*page A - 13*
Bottom	*page A - 4*	*page A - 14*
LCD 14”	*page A - 5*	*page A - 15*
LCD 15"	*page A - 6*	*page A - 16*
CD-ROM Drive	*page A - 7*	*page A - 17*
CD-RW Drive	*page A - 8*	*page A - 18*
Combo Drive	*page A - 9*	*page A - 19*
DVD-ROM Drive	*page A - 10*	*page A - 20*
Floppy Disk Drive	*page A - 11*	*page A - 21*
Hard Disk Drive	*page A - 12*	*page A - 22*

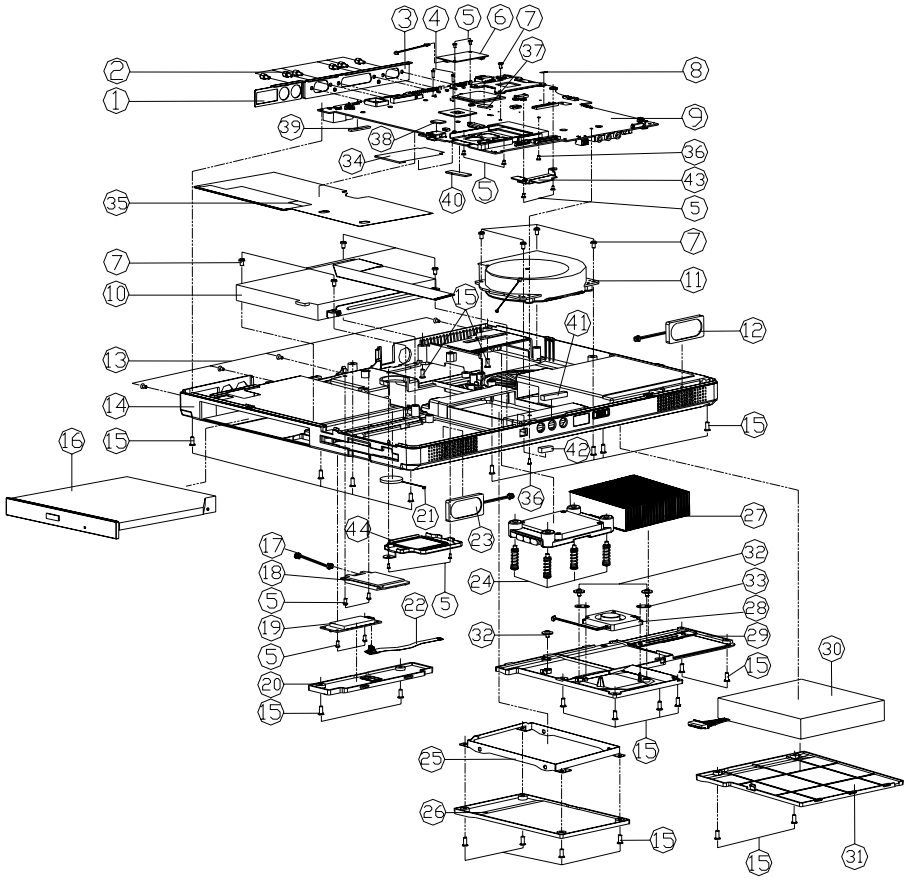
Top (D400E)



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD	80-88808-7G0	
2	SCREW M2.5*5L K1 BNI ICT NY	35-B9125-5R0	
3	SCREW M2*4L 1 BZ ICT NY	35-C6120-4RA	
4	KB SHIELDING	33-M4007-011	
5	CONNECTOR COVER	42-D40E8-010	
6	SCREW M2*4L F NI ICT NY	35-21120-4RA	
7	FFC CABLE FOR MAIN BD TO POWER SWITCH BOARD	43-D4000-020	
8	HINGE COVER(R)	42-D400Y-012	
9	SCREW M3*6L K1 NI ICT NY	35-B1130-6RA	
10	MYLAR FOR FUNCTION BOARD	40-D400S-010	
11	SCREW M2*3L K1 NI ICT NY	35-B1120-3RB	
12	SWITCH BOARD	77-D400S-D0X	
13	HINGE COVER (L)	42-D400Y-022	
14	TOP CASE MODULE D400S	39-D40E2-010	
15	TOUCHPAD ALPS KKGDDFT956A M190S	49-M1902-010	
16	CLICK BOARD	77-D4002-D0X	
17	G/P HOLDER	42-D4002-020	
18	FFC CABLE FOR MAIN BD TO CLICK BD 126MM	43-D4000-030	
19	FFC CABLE FOR CLICK TO TOUCH PAD 45MM	43-D4000-040	

Figure 1
Top (D400E)

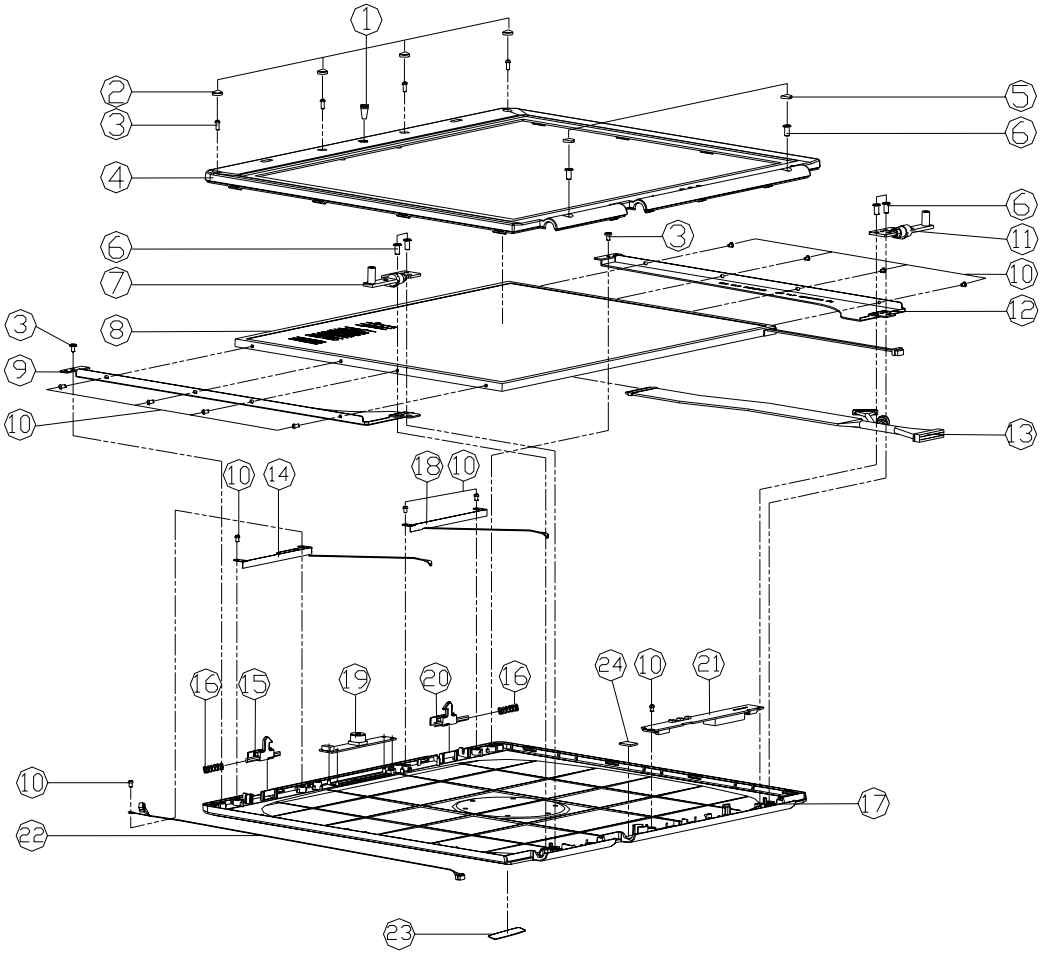
Bottom (D400E)



ITEM	PART NAME	PART NO	REMARK
1	I/O BRACKET	33-D400S-010	
2	HEX STUD(SUM22 NI-PL) 11MM	34-07009-011-A	
3	CABLE FOR MDC,175MM,JAE FI-S25JACES 85286	43-D400U-011	
4	SCREW M2*6L P BZ ICT NY	35-06120-6RA	
5	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	
6	MDC MODEM+TEL.CABLE MODULE	76-32200-100	
7	SCREW M2.5*5L KI BNI ICT NY	35-B9125-5R0	
8	MYLAR(54*8*0.25t) FOR 85V LCD(SAMSUNG)	40-00150-150	
9	MAIN BOARD	77-D40E0-D0X	
10	FDD ASS'Y(OPTION)	79-D400J-010	Reference Assy No (99-D400S-360)
11	D400S FAN MODULE	31-D400S-102	
12	SPEAKER 85mm 1W 8 FYH-35N68 RIGHT	23-38510-801A	
13	SCREW M2*4L F NI ICT NY	35-21120-4RA	
14	BOTTOM CASE MODULE	39-D40E3-010	
15	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
16	CD-ROM QSI(SCR-242) ASS'Y D400S	79-D40EZ-000	Reference Assy No (99-D40ES-070)
16	DVD-ROM QSI(SDR-083) ASS'Y D400S	79-D40EV-000	Reference Assy No (99-D40ES-080)
16	CD-RW TEAC(CD-W224E-A82) ASS'Y D400S	79-D40EW-000	Reference Assy No (99-D40ES-090)
16	COMBO QSI(SBW-161) ASS'Y D400S	79-D40EX-000	Reference Assy No (99-D40ES-100)
17	WIRE CABLE FOR MAIN BD TO WLAN USB BD	43-D4000-070	
18	WLAN 802.11 b USB INTERFACE USB-300	88-D4020-380	
19	BLUETOOTH MODULE V1.1 USB INTERFACE(USB)	88-18250-370	
20	BLUETOOTH COVER MODULE	42-D40EB-100	
21	BAT. 2600 3V 2300MH W/CABLE SUM CR2032/07.2MP	23-22015-P2B	
22	FPC CABLE FOR MAIN BD TO BLUETOOTH BD D400	43-D4000-011	
23	SPEAKER 25mm 1W 8 FYH-35N068 LEFT	23-32510-801A	
24	SCREW M2.5*0.45P*15.5 dl=3.5 L=15.5 S=2.5	35-49025-155	
25	HDD BRACKET	33-D400I-010	
26	HDD COVER	42-D40EI-010	
27	D400E HEAT SINK MODULE	31-D40EN-100	
28	FAN 35*35*6T	23-A3510-462	
29	CPU COVER MODULE	42-D40ES-100	
30	Smart batt 4S2P 14.8V 4400MAH(SMP)	87-D408S-4D5	
30	Smart batt 4S2P 14.8V 4400MAH(G/LG)	87-D408S-4E5	
31	BATTERY COVER MODULE	42-D40EM-100	
32	SCREW M2.5*2.5L B NI ICT W/WAS NY	35-41025-2R5	
33	FAN BRACKET	33-D400S-060	
34	PCMCIA MYLAR MYLAR 320	40-32004-000	
35	EMI SHIELDING FOR M/B	47-D400S-020	
36	SCREW M2*4L I BZ ICT NY	35-C6120-4RA	
37	GASKET FOR USB(W10mm H2mm L17mm)	47-00190-174	
38	GASKET FOR USB CONNECTOR(W10mm H4mm L25mm)	47-00190-157	
39	GASKET FOR PS2 AND S-VIDEO(W5mm H5mm L35mm)	47-00190-353	
40	GASKET FOR LEFT SIDE OF M/B(W10mm H3mm L30mm)	47-00190-308	
41	GASKET FOR AUDIO(W10mm H6.5mm L35mm)	47-00190-354	
42	GASKET FOR 1394(W5mm H5.5mm L13mm)	47-00190-133	
43	CHOCK SINK FOR MB	33-D40ES-010	
44	CPU HOLDER	33-D40ES-030	

Figure 2
Bottom (D400E)

LCD 14" (D400E)

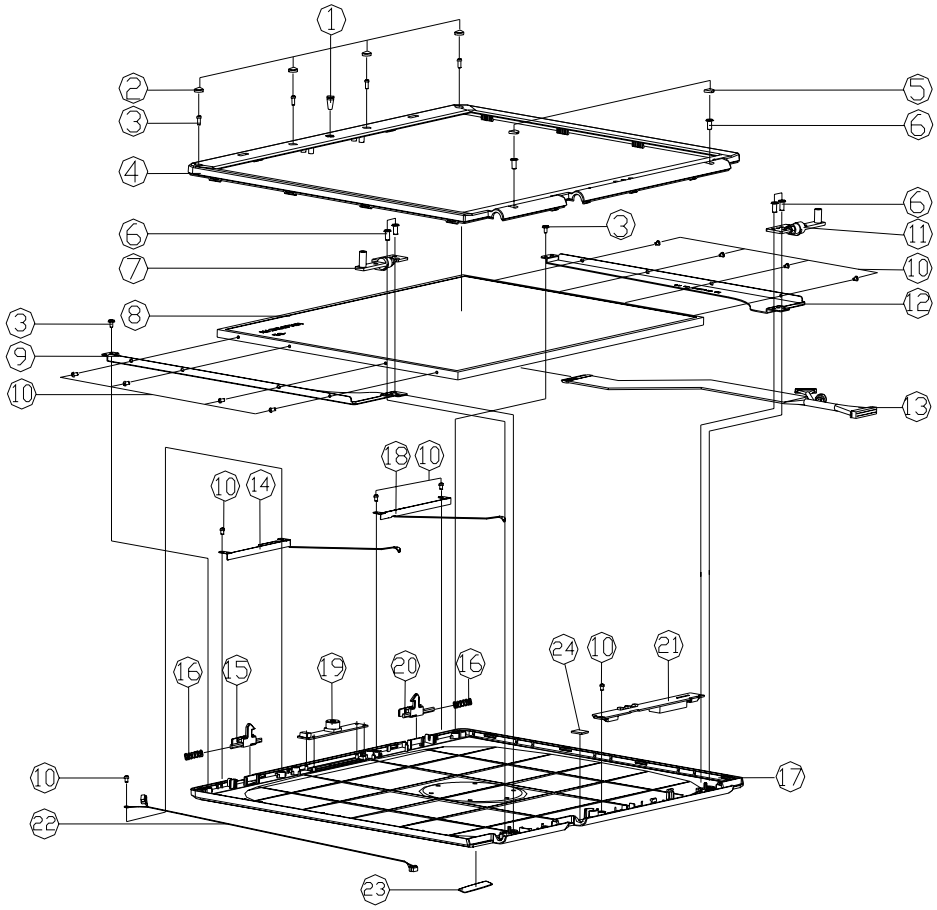


ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR VIDEO CAMERA	47-D400P-010	
2	RUBBER FOR LCD (TOP)	47-56P32-010	
3	SCREW M2*4L I BZ ICT	35-C6120-4R0	
4	DISPLAY FRONT PANEL 14.1" MODULE	39-D4001-101	
5	DISPLAY RUBBER PAD (DOWN)	47-D4001-020	
6	SCREW M3*6L KI NI ICT NY	35-BI130-6RA	
7	HINGE (L)	33-D400Y-021	
8	LCD T AU B141XN04 V.1 14.1" XGA	50-J2287-G04	
8	LCD T IBM ITX77-E53-029 14.1" XGA	50-J2287-E01	
8	LCD 14.1" CPT TFT CLAA141XF01 XGA 52mm	50-J2252-C00	
9	LCD BRACKET (L) FOR AU 14.1" LCD	33-D4001-120	FOR AU
9	LCD BRACKET (L) FOR 14.1" LCD	33-D4001-020	FOR CPT/IDT
10	SCREW M2*3L KI NI ICT NY	35-BI120-3RB	
11	HINGE (R)	33-D400Y-011	
12	LCD BRACKET (R) FOR AU 14.1" LCD	33-D4001-110	FOR AU
12	LCD BRACKET (R) FOR 14.1" LCD	33-D4001-010	FOR CPT/IDT
13	WIRE CABLE FOR 14" LCD XGA AU	43-D4001-021	FOR AU/IDT
13	WIRE CABLE FOR 14" LCD XGA CPT CLAA141XF01	43-M4001-010	FOR CPT
14	ANTENNA BLUETOOTH PIFA 2.4G L=540mm	23-742R4-005	
15	LCD HOOK(L)	42-D4001-021	
16	SPRING FOR HOOK(Ø3.7*15*0.3d)	38-21P30-011	
17	DISPLAY BACK PANEL MODULE	39-D40E1-200	
18	WIRELESS ANTENNA PIFA 2.4G L=430mm D400S	23-742R4-004	
19	VIDEO CAMERA CMM3130, 300K Pixels Resolu	88-D40C0-410	OPTION
20	LCD HOOK(R)	42-D4001-011	
21	INVERTER BOARD	77-4200R-D02-1	
22	WIRE CABLE MAIN BD TO CCD MODULE	43-D4000-060	OPTION
23	NAME PLATE "NOTEBOOK"	45-42001-010	
24	GASKET FOR Y CABLE(W:10mm H:2mm L:15mm)	47-00190-158	

Figure 3
LCD 14" (D400E)

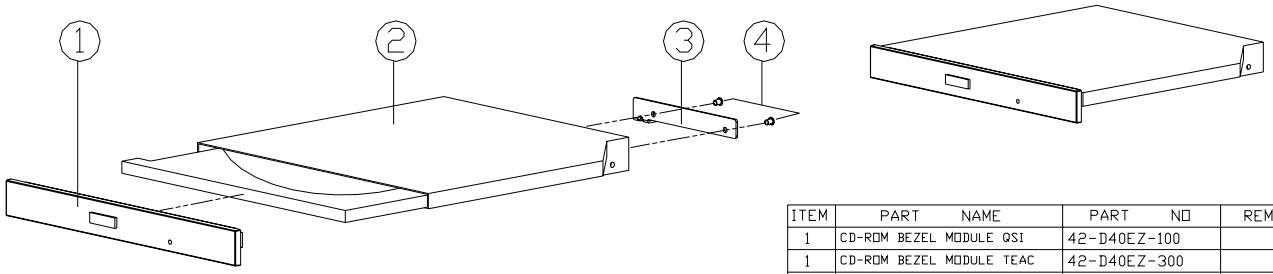
LCD 15" (D400E)

Figure 4
LCD 15" (D400E)



ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR VIDEO CAMERA	47-D400P-010	
2	RUBBER FOR LCD (TOP)	47-56P32-010	
3	SCREW M2*4L I BZ ICT	35-C6120-4R0	
4	DISPLAY FRONT PANEL 15" MODULE	39-D4001-111	
5	DISPLAY RUBBER PAD (DOWN)	47-D4001-020	
6	SCREW M3*6L K1 NI ICT NY	35-B1130-6RA	
7	HINGE (L)	33-D400Y-021	
8	LCD 15.0" TFT AU B150PN01 1400*1050 SXGA+	50-L5259-U10	FOR AU
8	LCD 15.0 IBM TFT CEM95C-02 SXGA+ 4.1mm	50-L3241-E00	FOR IDT
9	LCD BRACKET (L) FOR AU 15.1" LCD	33-D4001-140	FOR AU
9	LCD BRACKET (L) FOR IBM 15.1" LCD	33-D4001-240	FOR IDT
10	SCREW M2*3L K1 NI ICT NY	35-B1120-3RB	
11	HINGE (R)	33-D400Y-011	
12	LCD BRACKET (R) FOR AU 15.1" LCD	33-D4001-130	FOR AU
12	LCD BRACKET (R) FOR IBM 15.1" LCD	33-D4001-230	FOR IDT
13	WIRE CABLE FOR 15" LCD SXGA+ AU	43-D4001-121	FOR AU
13	WIRE CABLE FOR 15" LCD SXGA+ IDT	43-D4001-111	FOR IDT
14	ANTENNA BLUETOOTH PIFA 2.4G L=540mm	23-742R4-005	
15	LCD HOOK(L)	42-D4001-021	
16	SPRING FOR HOOK(Φ3.7*15*0.3d)	38-21P30-011	
17	DISPLAY BACK PANEL MODULE	39-D40E1-200	
18	WIRELESS ANTENNA PIFA 2.4G L=430mm D400S	23-742R4-004	
19	VIDEO CAMERA CMOS130, 300K Pixels Resolu	88-D40C0-410	OPTION
20	LCD HOOK(R)	42-D4001-011	
21	INVERTER BOARD	77-4200R-D02-1	
22	WIRE CABLE MAIN BD TO CCD MODULE	43-D4000-060	OPTION
23	NAME PLATE "NOTEBOOK"	45-42001-010	
24	GASKET FOR Y CABLE(W10mm H2mm L15mm)	47-00190-158	

CD-ROM Drive (D400E)

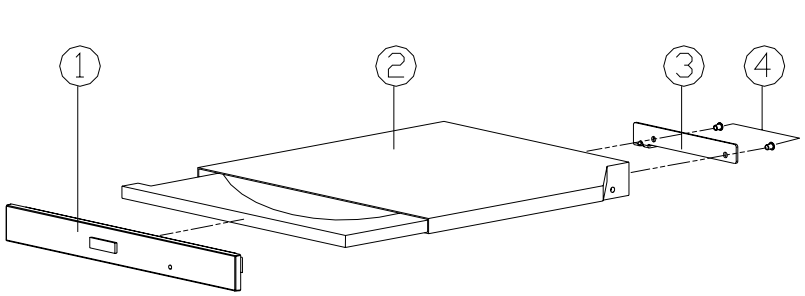


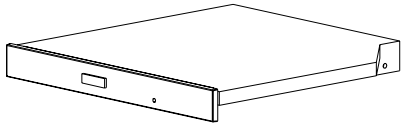
ITEM	PART NAME	PART NO	REMARK
1	CD-ROM BEZEL MODULE QSI	42-D40EZ-100	
1	CD-ROM BEZEL MODULE TEAC	42-D40EZ-300	
2	CD-ROM 5 1/4" 24X CAB SLIM QSI(SCR-242)	85-607□X-C00	
2	CD-ROM 5 1/4" 24X CD-224E-C20 12.7mm TEAC	85-607□X-709	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Figure 5
CD-ROM Drive (D400E)

CD-RW Drive (D400E)

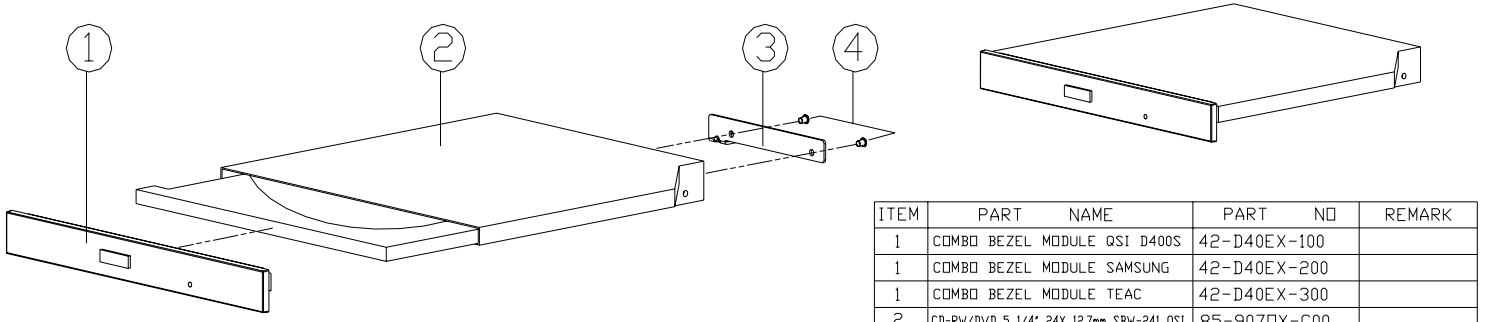
Figure 6
CD-RW Drive (D400E)





ITEM	PART NAME	PART NO	REMARK
1	CD-RW BEZEL MODULE TEAC	42-D40EW-100	
1	CD-RW BEZEL MODULE TOSHIBA	42-D40EW-200	
2	CD-R/W 5 1/4" 24X CD-W224E-A82 12.7mm TEAC	85-807□X-700	
2	CD-R/W 5 1/4" 16X SR-C8102 12.7mm TOSHIBA	85-807GX-T00	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Combo Drive (D400E)

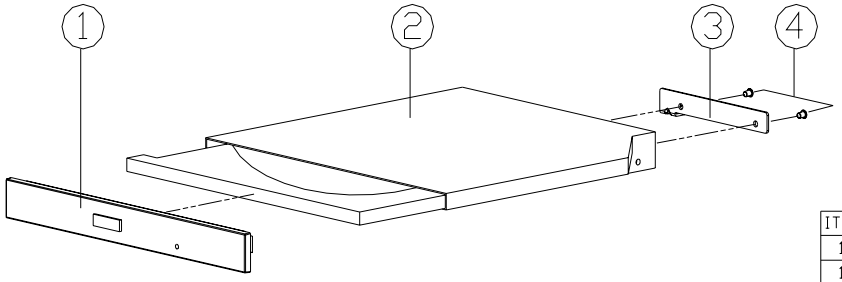


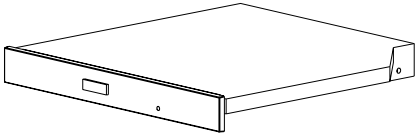
ITEM	PART NAME	PART NO	REMARK
1	COMBO BEZEL MODULE QSI D400S	42-D40EX-100	
1	COMBO BEZEL MODULE SAMSUNG	42-D40EX-200	
1	COMBO BEZEL MODULE TEAC	42-D40EX-300	
2	CD-RW/DVD 5 1/4" 24X 12.7mm SBW-241 QSI	85-907□X-C00	
2	CD-RW/DVD 5 1/4" 24X 12.7mm SN-324 SAMSUNG	85-907□X-S00	
2	CD-RW/DVD 5 1/4" 24X 12.7mm DW-224E-82 TEAC	85-907□X-700	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Figure 7
Combo Drive (D400E)

DVD-ROM Drive (D400E)

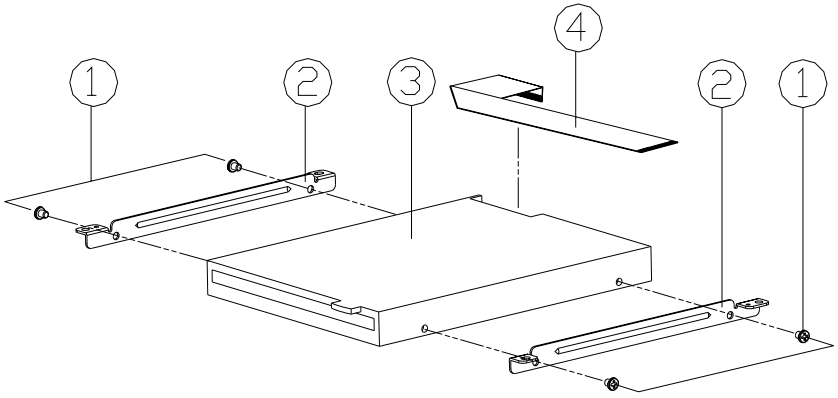
Figure 8
DVD-ROM Drive (D400E)

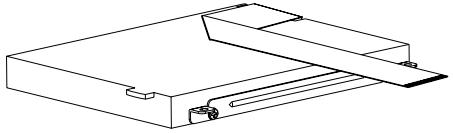




ITEM	PART NAME	PART NO	REMARK
1	DVD-ROM BEZEL MODULE QSI	42-D40EV-100	
1	DVD-ROM BEZEL MODULE TEAC	42-D40EV-200	
2	DVD 5 1/4" 8X 12.7mm SDR-083 QSI	85-7078X-C02	
2	DVD 5 1/4" 8X 12.7mm DV-28E-B82 TEAC	85-7078X-700	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Floppy Disk Drive (D400E)



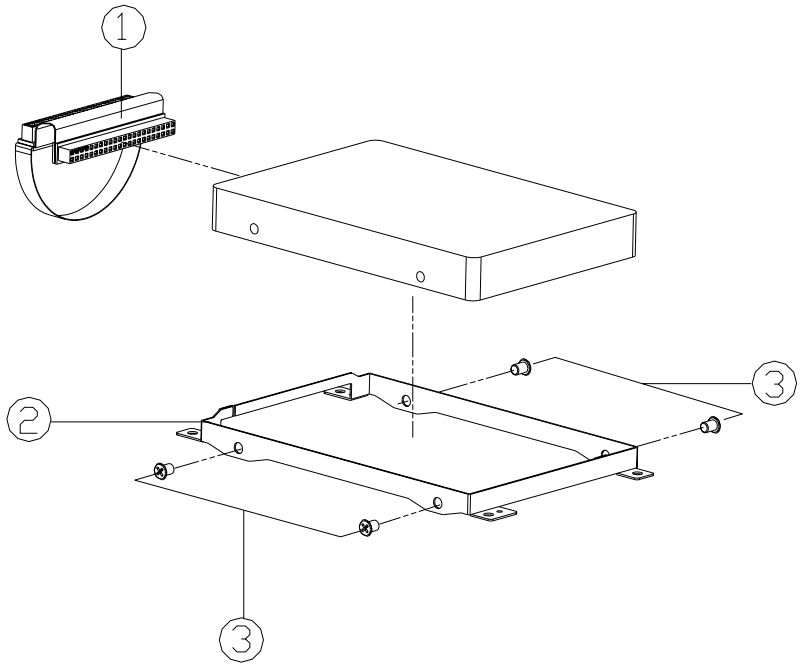


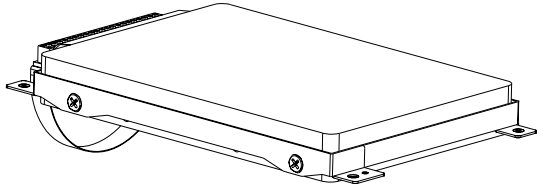
ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5*3L KI BK/ZINC	35-B4125-3RA	
2	FDD BRACKET	33-D400J-010	
3	FDD 3.5" 1.44MB 12.7mm (YD-702J-6637J)	85-11700-Y01-01	
4	FFC CABLE FOR MAIN BD TO FDD 180MM	43-D4000-050	

Figure 9
Floppy Disk Drive (D400E)

Hard Disk Drive (D400E)

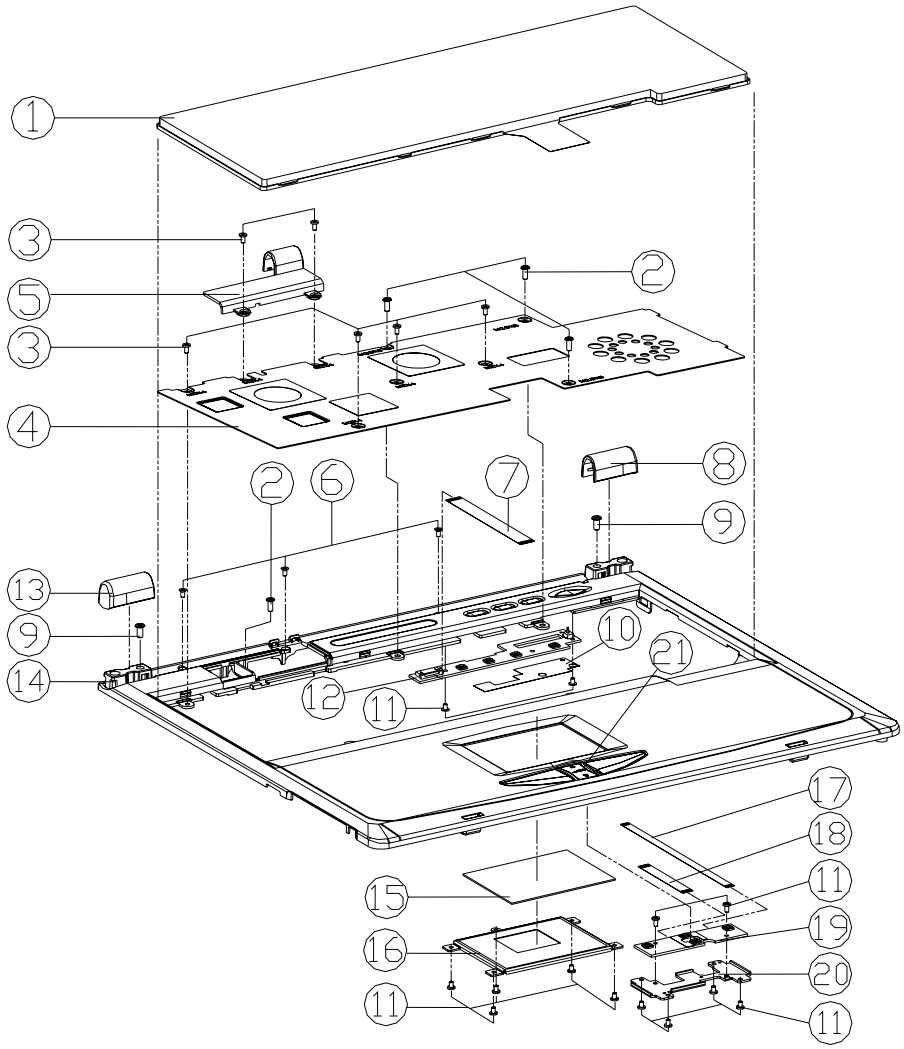
Figure 10
HDD Drive (D400E)





ITEM	PART NAME	PART NO	REMARK
1	FPC CABLE FOR HD TO MAIN BD, 30MM,8880	43-88800-010	
2	HDD BRACKET	77-22004-D03A	
3	SCREW M3*4L KI BZ ICT NY	35-B6130-4RB	

Top (D410E)

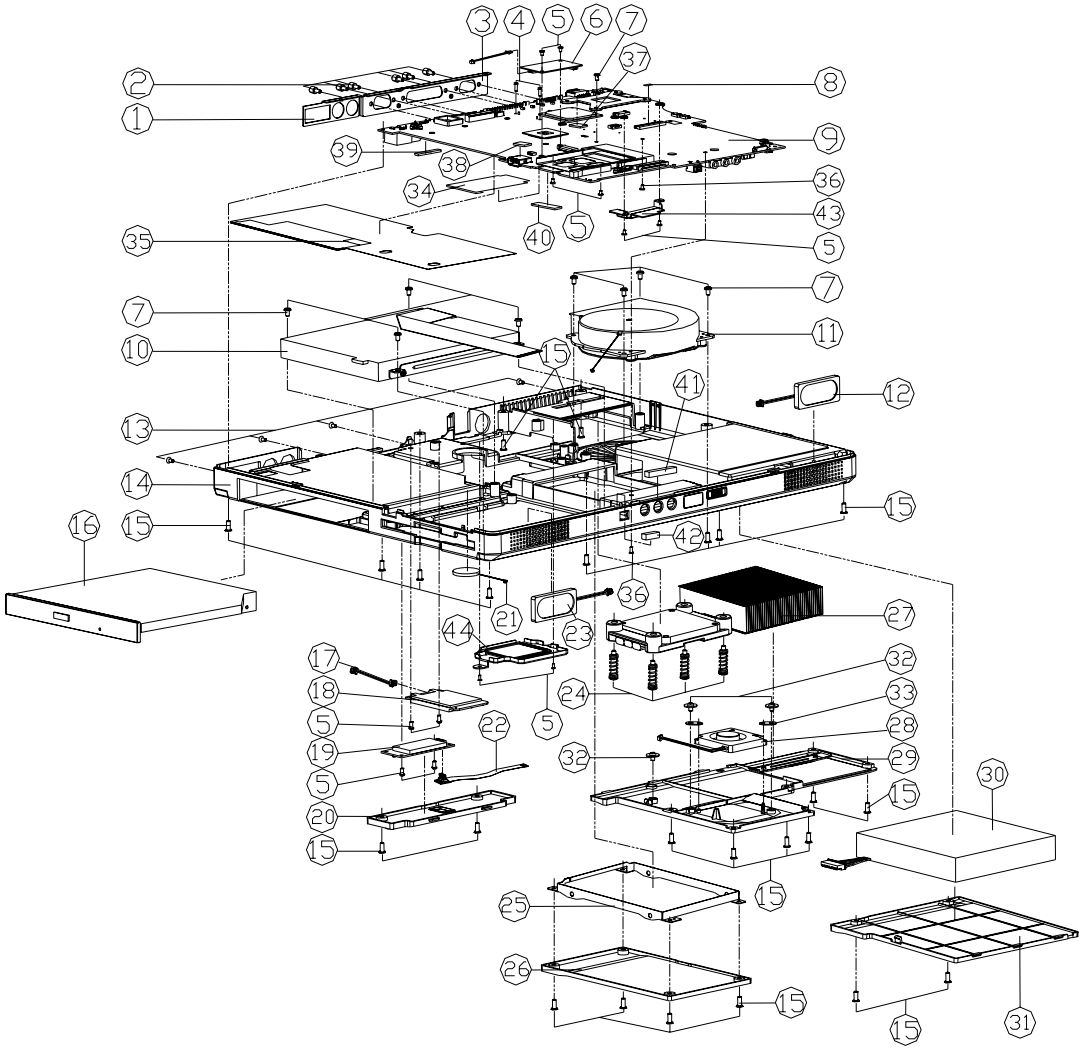


ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD	80-88808-7G0	
2	SCREW M2.5*5L K1 BNI ICT NY	35-B9125-5R0	
3	SCREW M2*4L I BZ ICT NY	35-C6120-4RA	
4	KB SHIELDING	33-M4007-011	
5	CONNECTOR COVER FOR D410S	42-D41E8-010	
6	SCREW M2*4L F NI ICT NY	35-21120-4RA	
7	FFC CABLE FOR MAIN BD TO POWER SWITCH BOARD	43-D4000-020	
8	HINGE COVER(R) D410E	42-D41EY-010	
9	SCREW M3*5L K1 NI ICT NY	35-B1130-5RA	
10	MYLAR FOR FUNCTION BOARD	40-D400S-011	
11	SCREW M2*3L K1 NI ICT NY	35-B1120-3RB	
12	SWITCH BOARD	77-D400S-D0X	
13	HINGE COVER (L) D410E	42-D41EY-020	
14	TOP CASE MODULE D410E	39-D41E2-010	
15	TOUCHPAD ALPS KKGD0FT956A M190S	49-M1902-010	
16	TOUCH PAD BRACKET	33-D4102-011	
17	FFC CABLE FOR MAIN BD TO CLICK BD 126MM	43-D4000-030	
18	FFC CABLE FOR CLICK TO TOUCH PAD 45MM	43-D4000-040	
19	CLICK BOARD	77-D4002-D0X	
20	CLICK PCB BRACKET	33-D410S-010	
21	SCROLL KNOB	42-D4102-021	

Figure 11
Top (D410E)

Bottom (D410E)

Figure 12
Bottom (D410E)



ITEM	PART NAME	PART NO	REMARK
1	I/O BRACKET	33-D400S-010	
2	HEX STUD(SUM22 NI-PL) 11MM	34-07009-011-A	
3	CABLE FOR MDC,175MM,JAE FI-S2S,ACES 85206	43-D400U-011	
4	SCREW M2*6L P BZ ICT NY	35-06120-6RA	
5	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	
6	MDC MODEM+TEL.CABLE MODULE	76-32200-100	
7	SCREW M2.5*5L KI BNI ICT NY	35-B9125-5R0	
8	MYLAR(154*80.25t) FOR 85V LCD(SAMSUNG)	40-00150-150	
9	MAIN BOARD	77-D40E0-D0X	
10	FDD ASS'Y(OPTION)	79-D400J-010	Reference Ass'y Bag (99-D4005-060)
11	D400S FAN MODULE	31-D400S-102	
12	SPEAKER 85mm IW 8 FYH-35N16B RIGHT	23-38510-801A	
13	SCREW M2*4L F NI ICT NY	35-21120-4RA	
14	BOTTOM CASE MODULE FOR D400E	39-D40E3-010	
15	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
16	CD-ROM QSI(SCR-242) ASS'Y	79-D41EZ-000	Reference Ass'y Bag (99-D41E5-070)
16	DVD-ROM QSI(SDR-083) ASS'Y	79-D41EV-000	Reference Ass'y Bag (99-D41E5-080)
16	CD-RW TEAC(CD-W224E-A82) ASS'Y	79-D41EW-000	Reference Ass'y Bag (99-D41E5-090)
16	COMBO QSI(SBW-161) ASS'Y	79-D41EX-000	Reference Ass'y Bag (99-D41E5-100)
17	WIRE CABLE FOR MAIN BD TO WLAN USB BD	43-D4000-070	
18	WLAN 802.11 b USB INTERFACE USB-300	88-D4020-380	
19	BLUETOOTH MODULE V1.1 USB INTERFACE(USI)	88-18250-370	
20	BLUETOOTH COVER MODULE D400E	42-D40EB-100	
21	BAT. 20MM 3V 230MH W/CABLE 50MM CR2032/07304P	23-22015-P2B	
22	FPC CABLE FOR MAIN BD TO BLUETOOTH BD D400	43-D4000-011	
23	SPEAKER 25mm IW 8 FYH-35N16B LEFT	23-32510-801A	
24	SCREW M2.5*0.45P*15.5 dl=3.5 L=15.5 S=2.5	35-49025-155	
25	HDD BRACKET	33-D400I-010	
26	HDD COVER FOR D400E	42-D40EI-010	
27	D400E HEAT SINK MODULE	31-D40EN-100	
28	FAN 35*35*6T	23-A3510-462	
29	CPU COVER MODULE D400E	42-D40ES-100	
30	Smart batt 4S2P 14.8V 4400MAH(SMP)	87-D408S-4D5	
30	Smart batt 4S2P 14.8V 4400MAH(G/LG)	87-D408S-4E5	
31	BATTERY COVER MODULE D410S	42-D40EM-100	
32	SCREW M2.5*2.5L B NI ICT W/WAS NY	35-41025-2R5	
33	FAN BRACKET	33-D400S-060	
34	PCMCIA MYLAR MYLAR 320	40-32004-000	
35	EMI SHIELDING FOR M/B	47-D400S-020	
36	SCREW M2*4L I BZ ICT NY	35-C6120-4RA	
37	GASKET FOR USB(W10mm H2mm L17mm)	47-00190-174	
38	GASKET FOR USB CONNECTOR(W10mm H4mm L15mm)	47-00190-157	
39	GASKET FOR PS2 AND S-VIDEO(W5mm H5mm L35mm)	47-00190-353	
40	GASKET FOR LEFT SIDE OF M/B(W10mm H3mm L30mm)	47-00190-30B	
41	GASKET FOR AUDIO(W10mm H6.5mm L35mm)	47-00190-354	
42	GASKET FOR 1394(W5mm H5.5mm L13mm)	47-00190-133	
43	CHOCK SINK FOR MB	33-D40ES-010	
44	CPU HOLDER	33-D40ES-030	

LCD 14" (D410E)

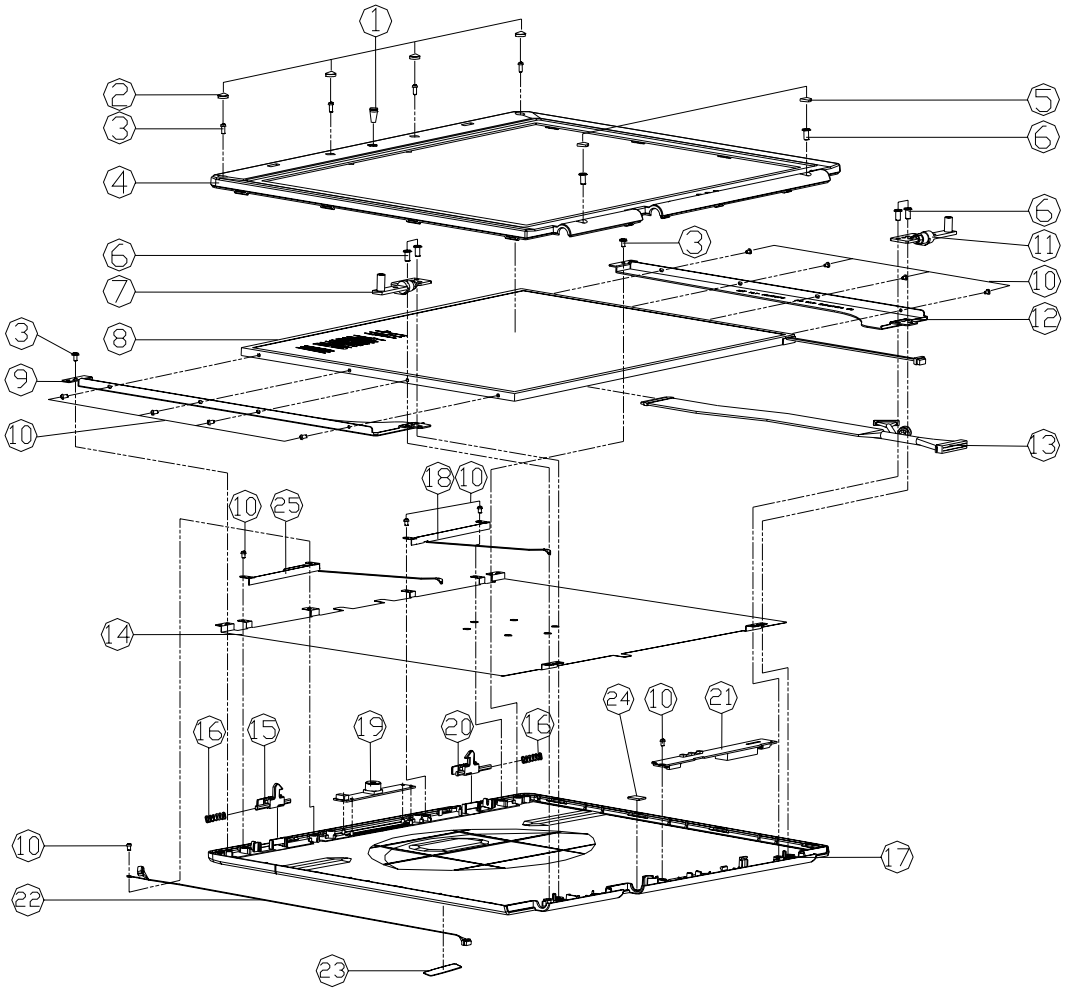
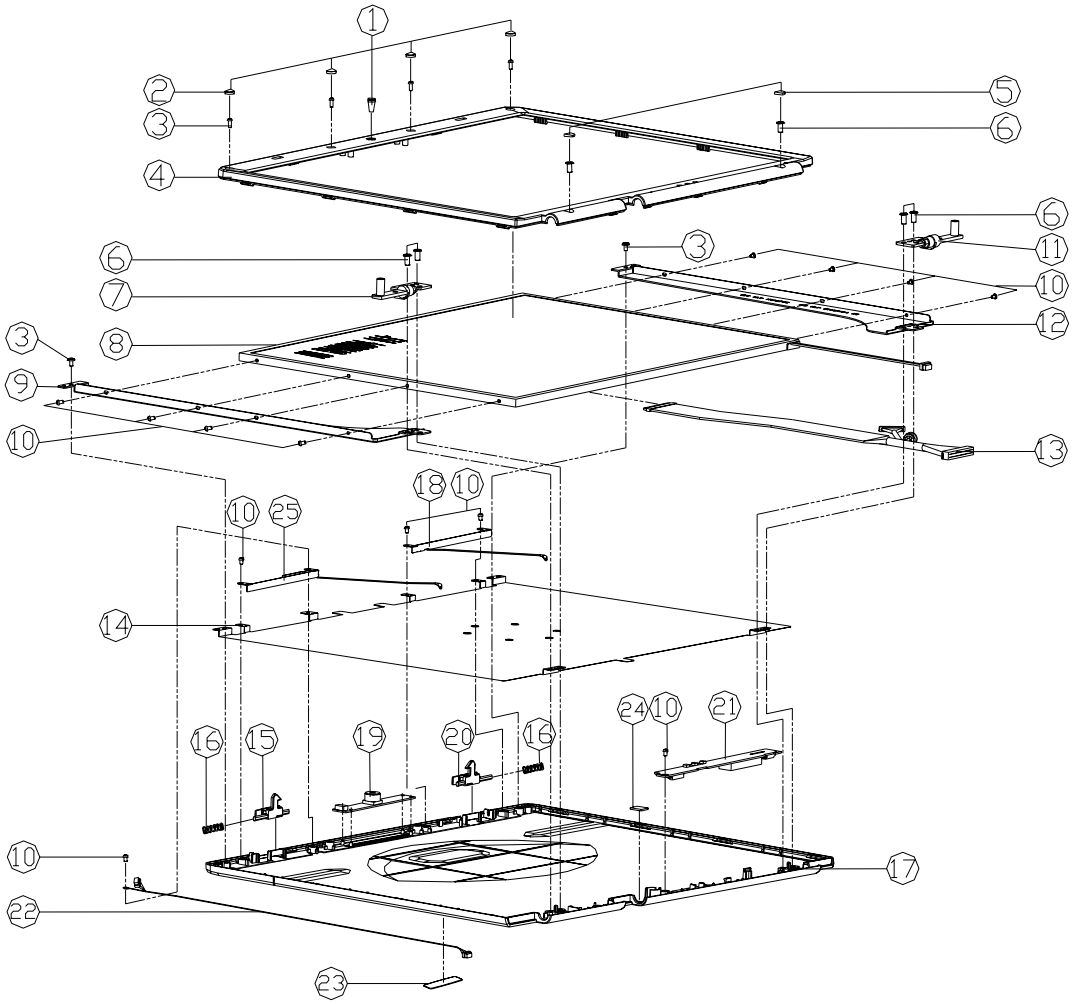


Figure 13
LCD 14" (D410E)

ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR VIDEO CAMERA	47-D400P-010	
2	RUBBER FOR LCD (TOP)	47-D41E1-010	
3	SCREW M2*4L I BZ ICT	35-C6120-4R0	
4	DISPLAY FRONT PANEL 14.1" MODULE	39-D4001-100	
5	DISPLAY RUBBER PAD (DOWN)	47-D41E1-020	
6	SCREW M3*6L K1 NI ICT NY	35-B1130-6RA	
7	HINGE (L)	33-D400Y-021	
8	LCD T AU B141XN04 V.1 14.1" XGA	50-J2287-G04	
8	LCD T IBM ITX77-E53-029 14.1" XGA	50-J2287-E01	
9	LCD BRACKET (L) FOR AU 14.1" LCD	33-D4001-120	
9	LCD BRACKET (L) FOR 14.1" LCD	33-D4001-020	
10	SCREW M2*3L K1 NI ICT NY	35-B1120-3RB	
11	HINGE (R)	33-D400Y-011	
12	LCD BRACKET (R) FOR AU 14.1" LCD	33-D400Y-110	
12	LCD BRACKET (R) FOR 14.1" LCD	33-D400Y-010	
13	WIRE CABLE FOR 14" LCD XGA AU	43-D4001-021	
14	LCD SHIELDING	33-D4001-050	
15	LCD HOOK(L)	42-D4001-021	
16	SPRING FOR HOOK(Ø3.7*15*0.3d)	38-21P30-011	
17	DISPLAY BACK PANEL MODULE D410S	39-D4101-200	
17	DISPLAY BACK PANEL MODULE M410S	39-M4101-200	
18	WIRELESS ANTENNA PIFA 2.4G L=430mm D400S	23-742R4-004	
19	VIDEO CAMERA CMM3130, 300K Pixels Resolu	88-D40C0-410	OPTION
20	LCD HOOK(R)	42-D4001-011	
21	INVERTER BOARD	77-4200R-D02-1	
22	WIRE CABLE MAIN BD TO CCD MODULE	43-D4000-060	OPTION
23	NAME PLATE "NOTEBOOK"	45-42001-010	
24	GASKET FOR Y CABLE(W:10mm H:2mm L:15mm)	47-00190-158	
25	ANTENNA BLUETOOTH PIFA 2.4G L=540mm	23-742R4-005	

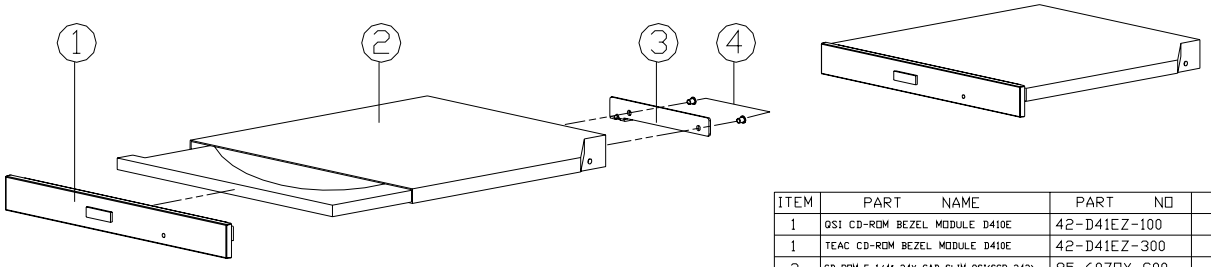
LCD 15" (D410E)

Figure 14
LCD 15" (D410E)



ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR VIDEO CAMERA	47-D400P-010	
2	RUBBER FOR LCD (TOP)	47-D41E1-010	
3	SCREW M2*4L I BZ ICT	35-C6120-4R0	
4	DISPLAY FRONT PANEL 15" MODULE	39-D41E1-110	
5	DISPLAY RUBBER PAD (DOWN)	47-D41E1-020	
6	SCREW M3*6L K1 NI ICT NY	35-B1130-6RA	
7	HINGE (L)	33-D400Y-021	
8	LCD 15.0" TFT AU B150PN01 1400*1050 SXGA+	50-L5259-U10	
8	LCD 15.0 IBM TFT CEM95C-02 SXGA+ 4.1mm	50-L3241-E00	
9	LCD BRACKET (L) FOR AU 15.1" LCD	33-D4001-140	
9	LCD BRACKET (L) FOR IBM 15.1" LCD	33-D4001-240	
10	SCREW M2*3L K1 NI ICT NY	35-B1120-3RB	
11	HINGE (R)	33-D400Y-011	
12	LCD BRACKET (R) FOR AU 15.1" LCD	33-D4001-130	
12	LCD BRACKET (R) FOR IBM 15.1" LCD	33-D4001-230	
13	WIRE CABLE FOR 15" LCD SXGA+ AU	43-D4001-121	
13	WIRE CABLE FOR 15" LCD SXGA+ IDT	43-D4001-111	
14	LCD SHIELDING	33-D4001-050	
15	LCD HOOK(L)	42-D4001-021	
16	SPRING FOR HOOK(ø3.7*15*0.3d)	38-21P30-011	
17	DISPLAY BACK PANEL MODULE D410E	39-D41E1-200	
18	WIRELESS ANTENNA PIFA 2.4G L=430mm D400S	23-742R4-004	
19	VIDEO CAMERA CMM3130, 300K Pixels Resolu	88-D40C0-410	OPTION
20	LCD HOOK(R)	42-D4001-011	
21	INVERTER BOARD	77-4200R-D02-1	
22	WIRE CABLE MAIN BD TO CCD MODULE	43-D4000-060	OPTION
23	NAME PLATE "NOTEBOOK"	45-42001-010	
24	GASKET FOR Y CABLE(W=10mm H=2mm L=15mm)	47-00190-158	
25	ANTENNA BLUETOOTH PIFA 2.4G L=540mm	23-742R4-005	

CD-ROM Drive (D410E)

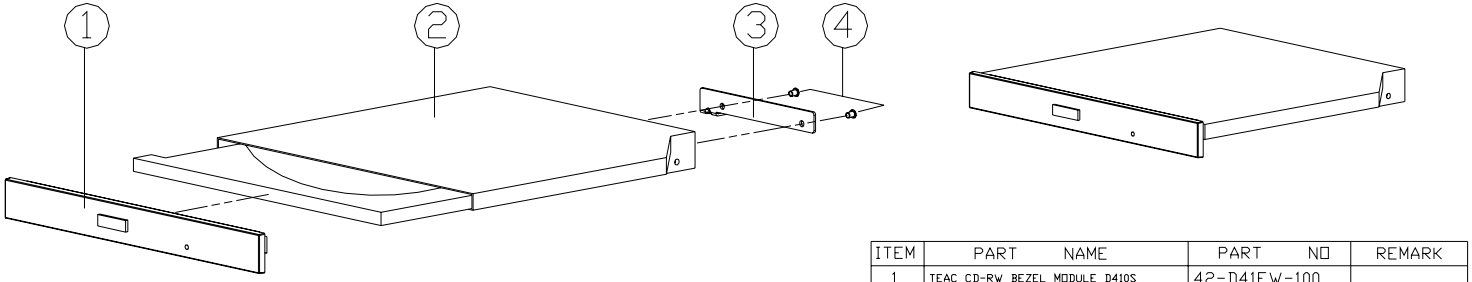


ITEM	PART NAME	PART NO	REMARK
1	QSI CD-ROM BEZEL MODULE D410E	42-D41EZ-100	
1	TEAC CD-ROM BEZEL MODULE D410E	42-D41EZ-300	
2	CD-ROM 5 1/4" 24X CAB SLIM QSI(SCR-242)	85-607□X-C00	
2	CD-ROM 5 1/4" 24X CD-224E-C20 12.7mm TEAC	85-607□X-709	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L K1 NI ICT NY	35-B1120-3RB	

Figure 15
CD-ROM Drive (D410E)

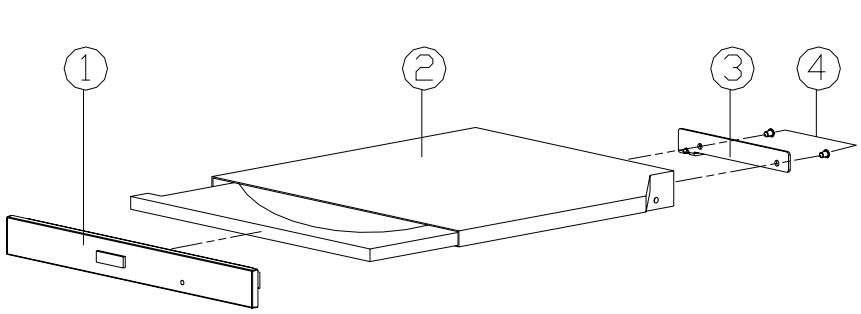
CD-RW Drive (D410E)

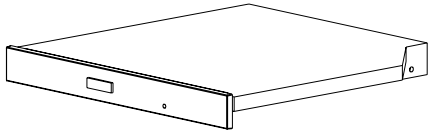
Figure 16
CD-RW Drive (D410E)



ITEM	PART NAME	PART NO	REMARK
1	TEAC CD-RW BEZEL MODULE D410S	42-D41EW-100	
1	TOSHIBA CD-RW BEZEL MODULE D410S	42-D41EW-200	
2	CD-R/W 5 1/4" 24X CD-W224E-A82 12.7mm TEAC	85-807□X-700	
2	CD-R/W 5 1/4" 16X SR-C8102 12.7mm TOSHIBA	85-807GX-T00	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Combo Drive (D410E)



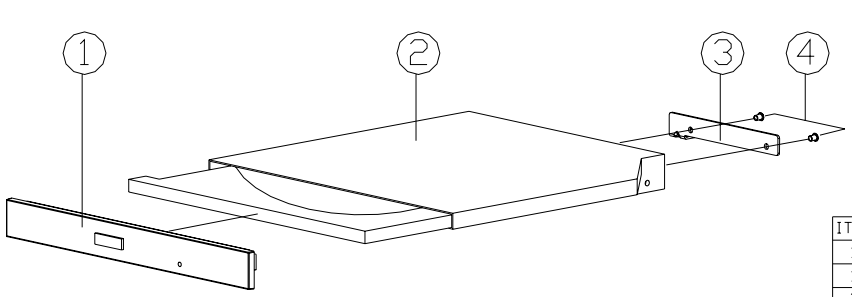


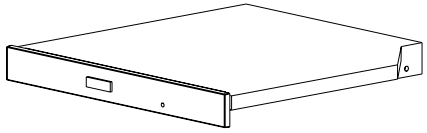
ITEM	PART NAME	PART NO	REMARK
1	QSI COMBO BEZEL MODULE D410E	42-D41EX-100	
1	SAMSUNG COMBO BEZEL MODULE D410E	42-D41EX-200	
1	TEAC COMBO BEZEL MODULE D410E	42-D41EX-300	
2	CD-RW/DVD 5 1/4" 24X 12.7mm SBW-241 QSI	85-907□X-C00	
2	CD-RW/DVD 5 1/4" 24X 12.7mm SN-324 SAMSUNG	85-907□X-S00	
2	CD-RW/DVD 5 1/4" 24X 12.7mm DW-224E TEAC	85-907□X-700	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Figure 17
Combo Drive (D410E)

DVD-ROM Drive (D410E)

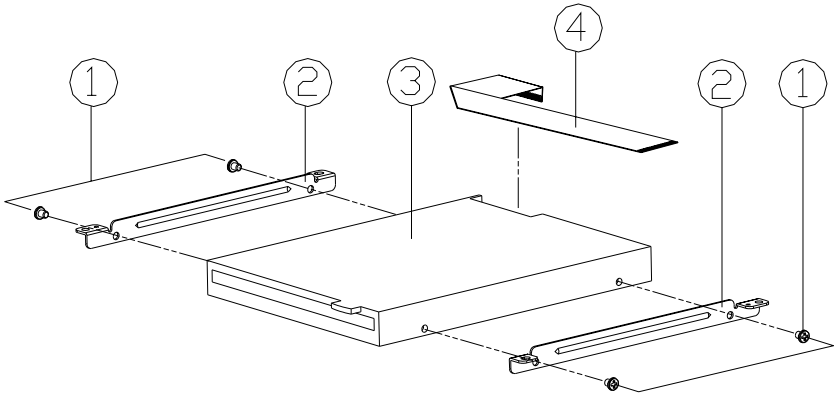
Figure 18
DVD-ROM Drive (D410E)

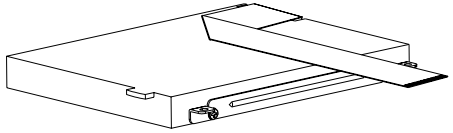




ITEM	PART NAME	PART NO	REMARK
1	QSI DVD-ROM BEZEL MODULE D410E	42-D41EV-100	
1	TEAC DVD-ROM BEZEL MODULE D410E	42-D41EV-200	
2	DVD 5 1/4" 8X 12.7mm SDR-083 QSI	85-7078X-C02	
2	DVD 5 1/4" 8X 12.7mm DV-28E-B82 TEAC	85-7078X-700	
3	CDROM LOCK BRACKET	33-D400Z-010	
4	SCREW M2*3L KI NI ICT NY	35-B1120-3RB	

Floppy Disk Drive (D410E)



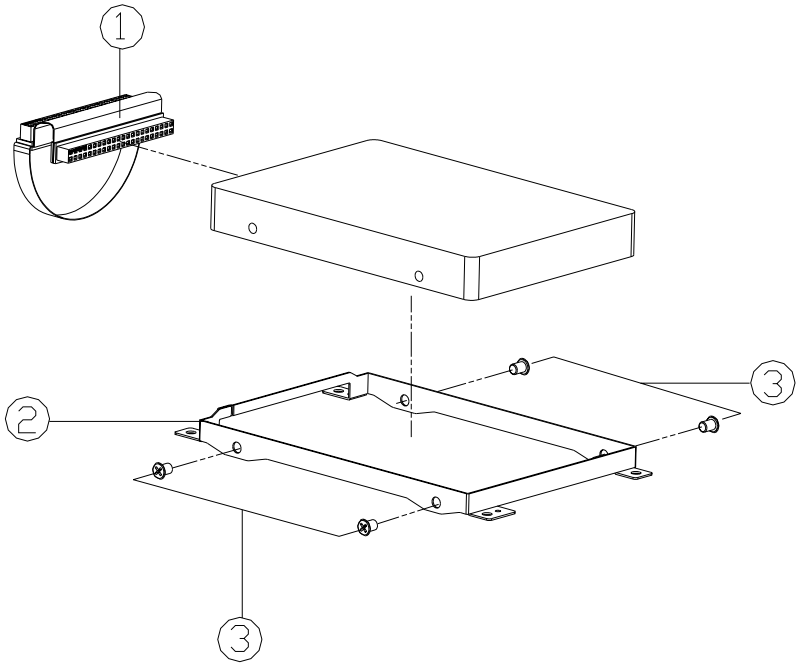


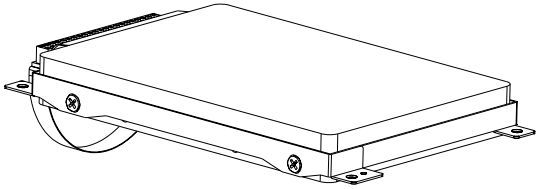
ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5*3L KI BK/□NY	35-B4125-3RA	
2	FDD BRACKET	33-D400J-010	
3	FDD 3.5" 1.44MB 12.7mm (YD-702J-6637J)	85-11700-Y01-01	
4	FFC CABLE FOR MAIN BD TO FDD 180MM	43-D4000-050	

Figure 19
Floppy Disk Drive (D410E)

Hard Disk Drive (D410E)

Figure 20
HDD Drive (D410E)





ITEM	PART NAME	PART NO	REMARK
1	FPC CABLE FOR HD TO MAIN BD, 30MM,8880	43-88800-010	
2	HDD BRACKET	77-22004-D03A	
3	SCREW M3*4L KI BZ ICT NY	35-B6130-4RB	

Appendix B:Schematic Diagrams

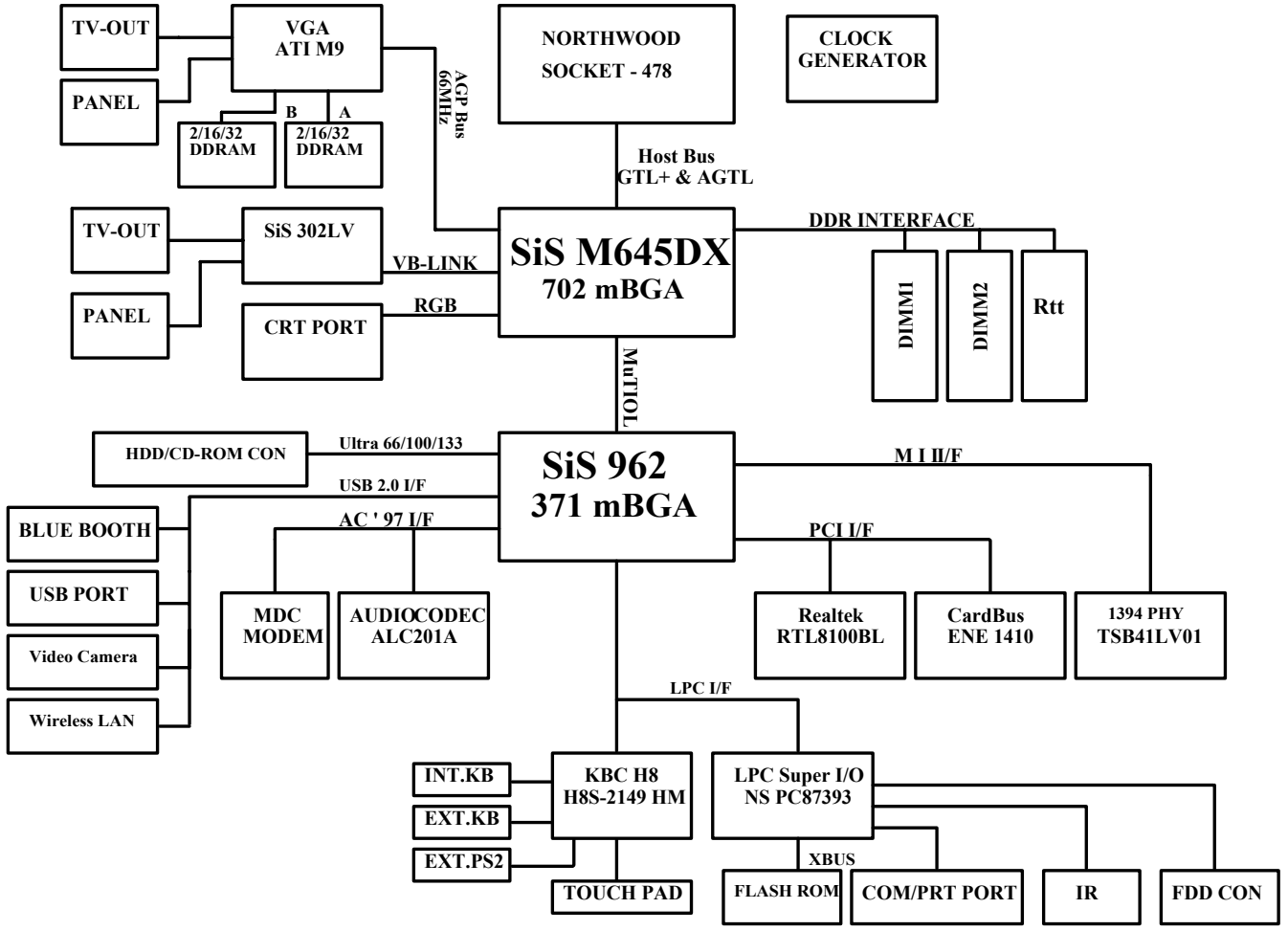
This appendix has circuit diagrams of the ***D400E/D410E*** notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

Diagram - Page	Diagram - Page	Diagram - Page
System Block Diagram - Page B - 2	*962 (USB I/F) 3 of 4 - Page B - 16*	*Fan Control and SpeedStep - Page B - 30*
Socket 478 1 of 2 - Page B - 3	*962 (Power & RTC) 4 of 4 - Page B - 17*	*Mobility M9-P - Page B - 31*
Socket 478 & ITP 2 of 2 - Page B - 4	*HDD/Combo Connector - Page B - 18*	*Mobility M9-P MEM A/B - Page B - 32*
Clock Generator - Page B - 5	*USB Port - Page B - 19*	*VGA DRAM 1 of 2 - Page B - 33*
M645DX (Host/AGP) 1 of 4 - Page B - 6	*PCMCIA ENE CB1410 - Page B - 20*	*VGA DRAM 1 of 2 - Termination - Page B - 34*
M645DX (Memory for DDR) 2 of 4 - Page B - 7	*PCMCIA Power - Page B - 21*	*VGA DRAM 2 of 2 - Page B - 35*
M645DX (& CRT Out) 3 of 4 - Page B - 8	*1394 PHY TSB41LV01 - Page B - 22*	*Mobility M9-P POW - Page B - 36*
M645DX (Power) 4 of 4 - Page B - 9	*LPC Super I/O - Page B - 23*	*Mobility M9-P - Page B - 31*
DDR Memory DIMM - Page B - 10	*LPT/COM Port - Page B - 24*	*DDR Power - Page B - 38*
DDR SSTL-2 Termination - Page B - 11	*LPC H8 - Page B - 25*	*System Power - Page B - 39*
LVDS Interface (SiS302LV) - Page B - 12	*LAN RTL8100BL - Page B - 26*	*Charger - Page B - 40*
Panel Con & LED Indicator - Page B - 13	*Audio Codec ALC201A - Page B - 27*	*SW Board and HotKey - Page B - 41*
962 (PCI/IDE/HyperZip) 1 of 4 - Page B - 14	*Audio Out & Off Board Connectors - Page B - 28*	*TouchPad and Switch Board - Page B - 42*
962 (Misc Signals) 2 of 4 - Page B - 15	*System Power Control - Page B - 29*	

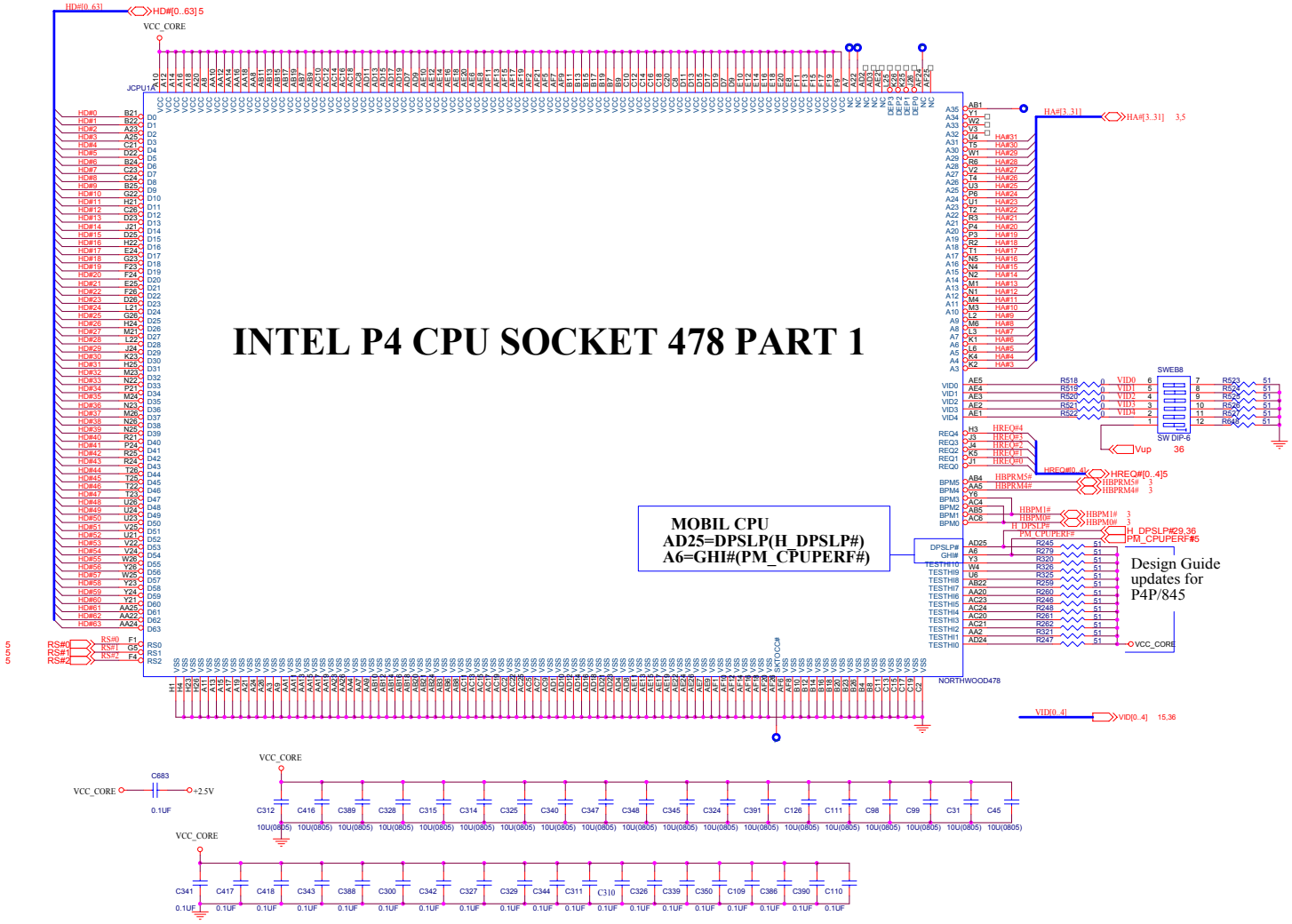
Table 1
Schematic Diagrams

System Block Diagram

Sheet 1 of 41
System Block Diagram



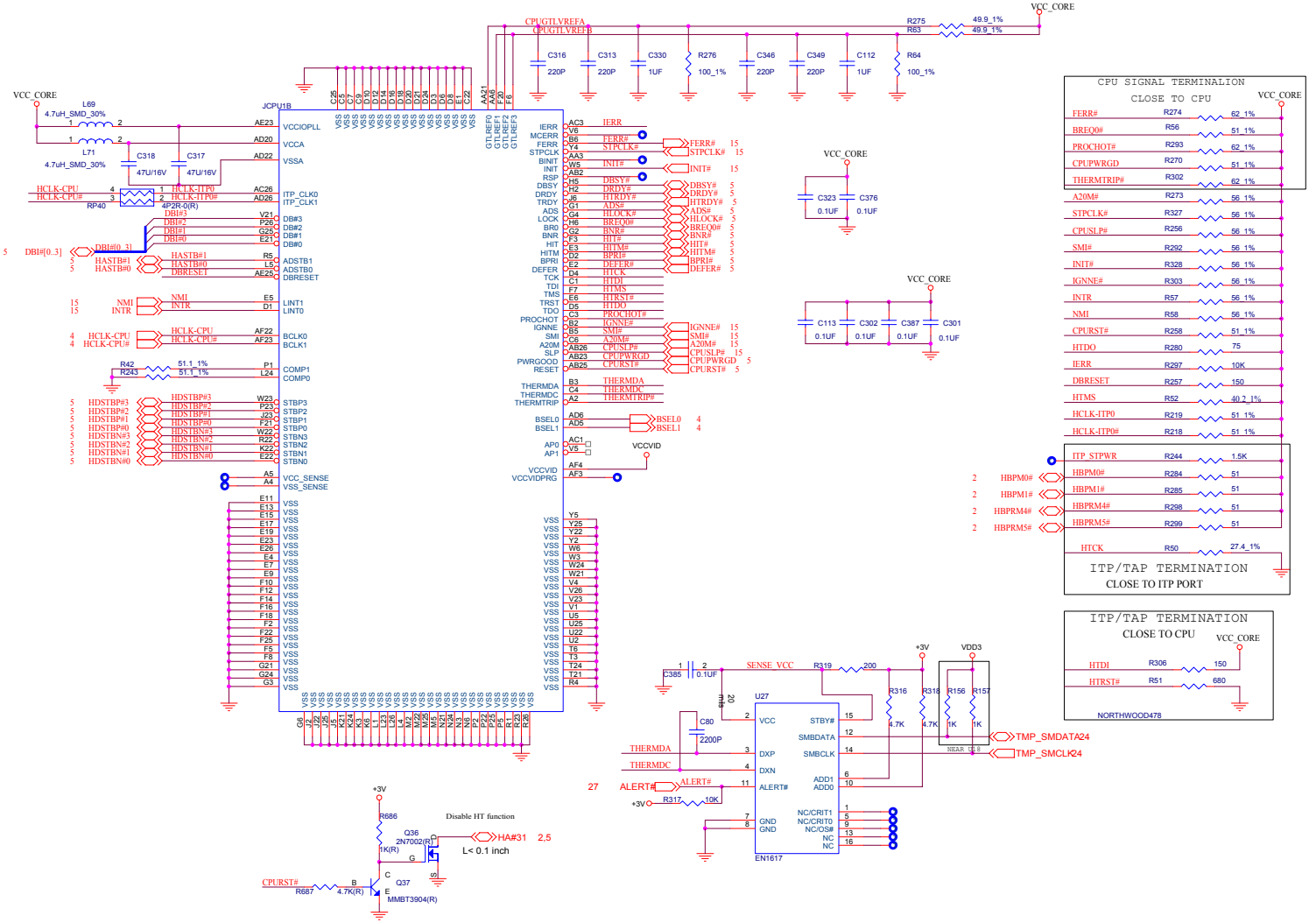
Socket 478 1 of 2



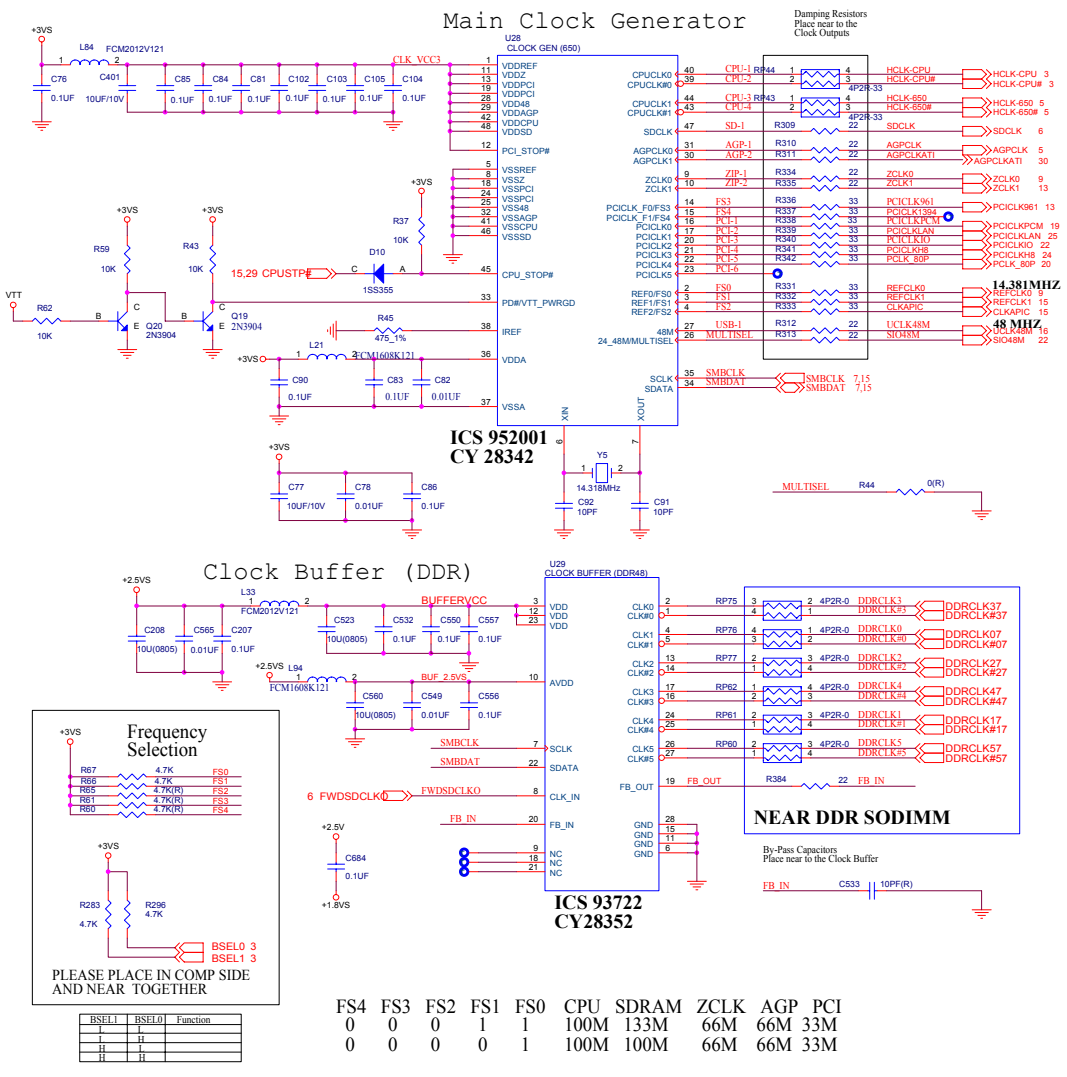
Sheet 2 of 41
Socket 478 1 of 2

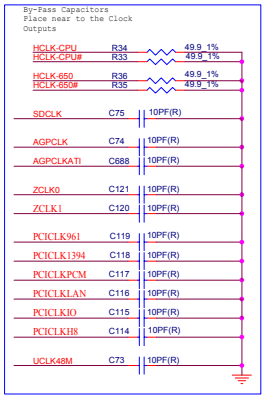
Socket 478 & ITP 2 of 2

Sheet 3 of 41
Socket 478 & ITP
2 of 2



Clock Generator

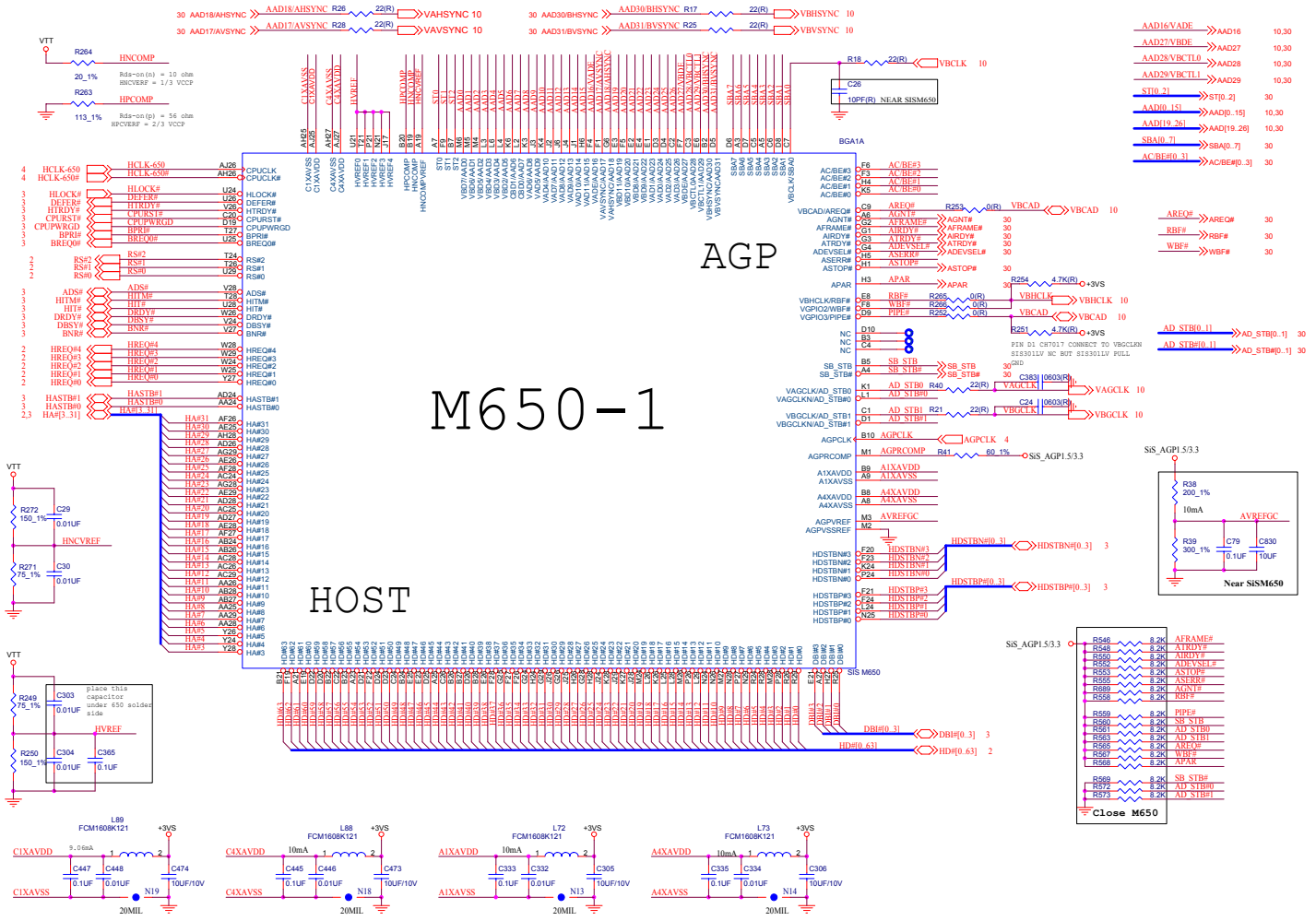




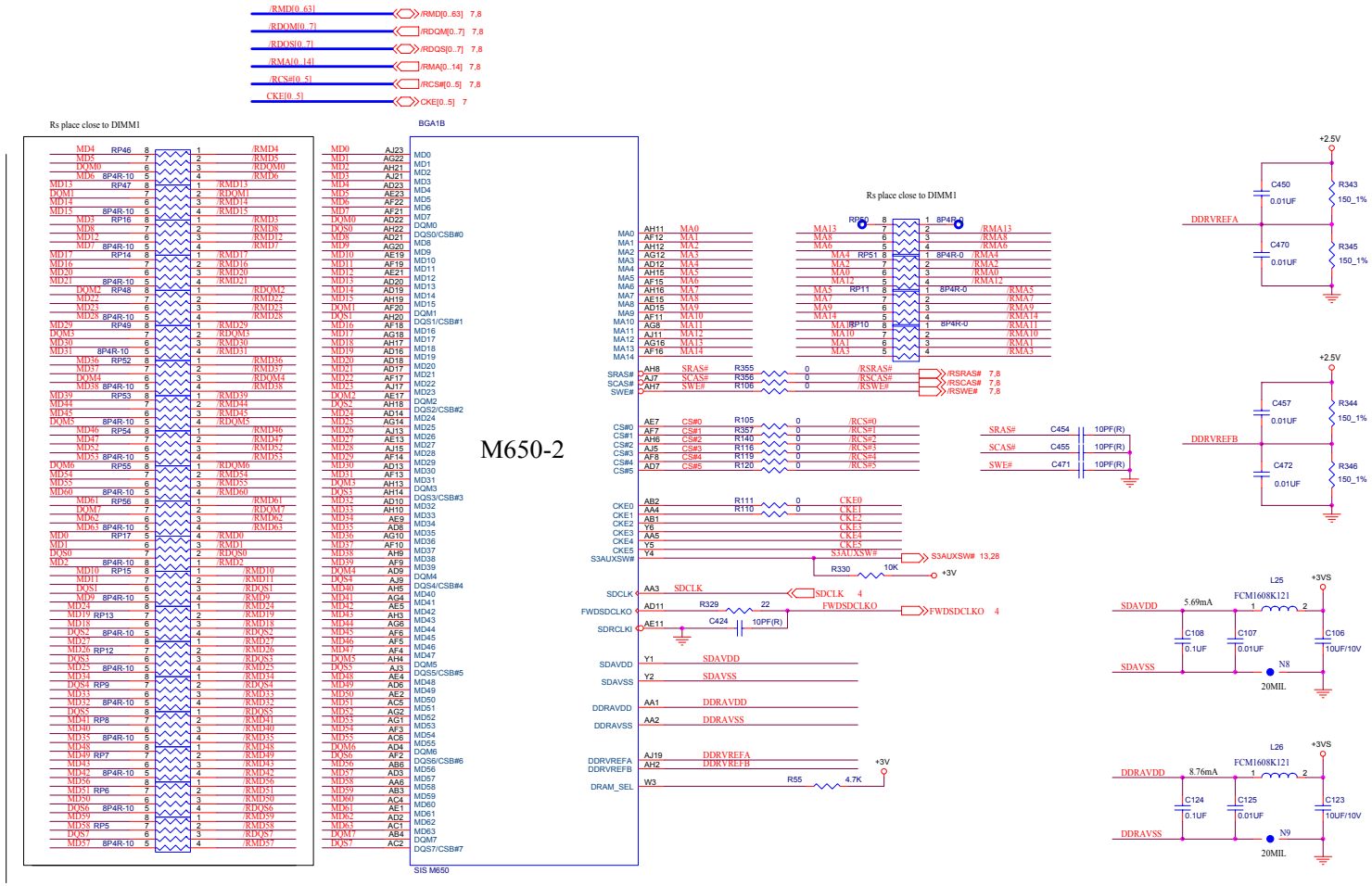
Sheet 4 of 41
Clock Generator

M645DX (Host/AGP) 1 of 4

Sheet 5 of 41
M650 (Host/AGP)
1 of 4



M645DX (Memory for DDR) 2 of 4

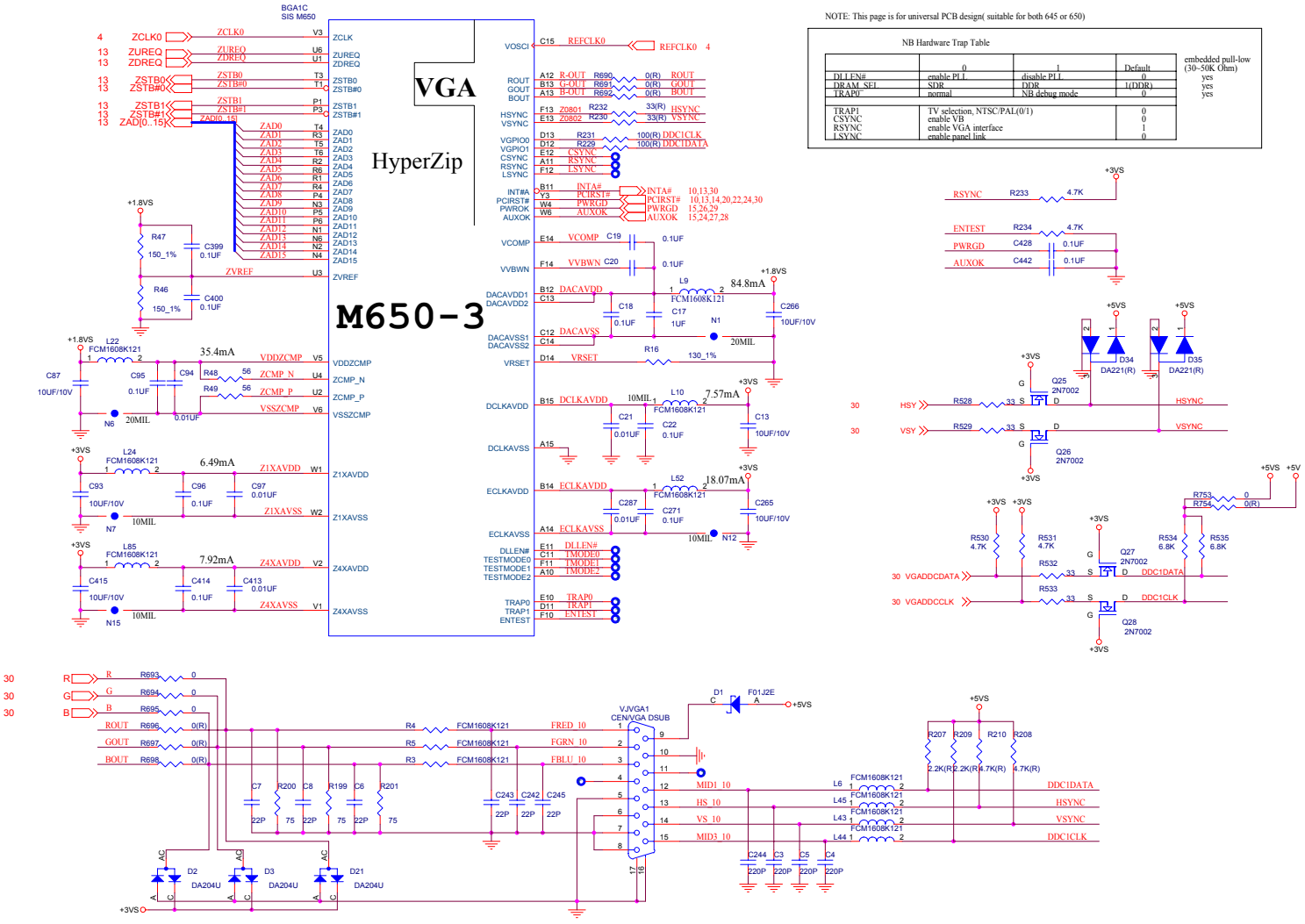


Sheet 6 of 41
M650
(Memory for DDR)
2 of 4

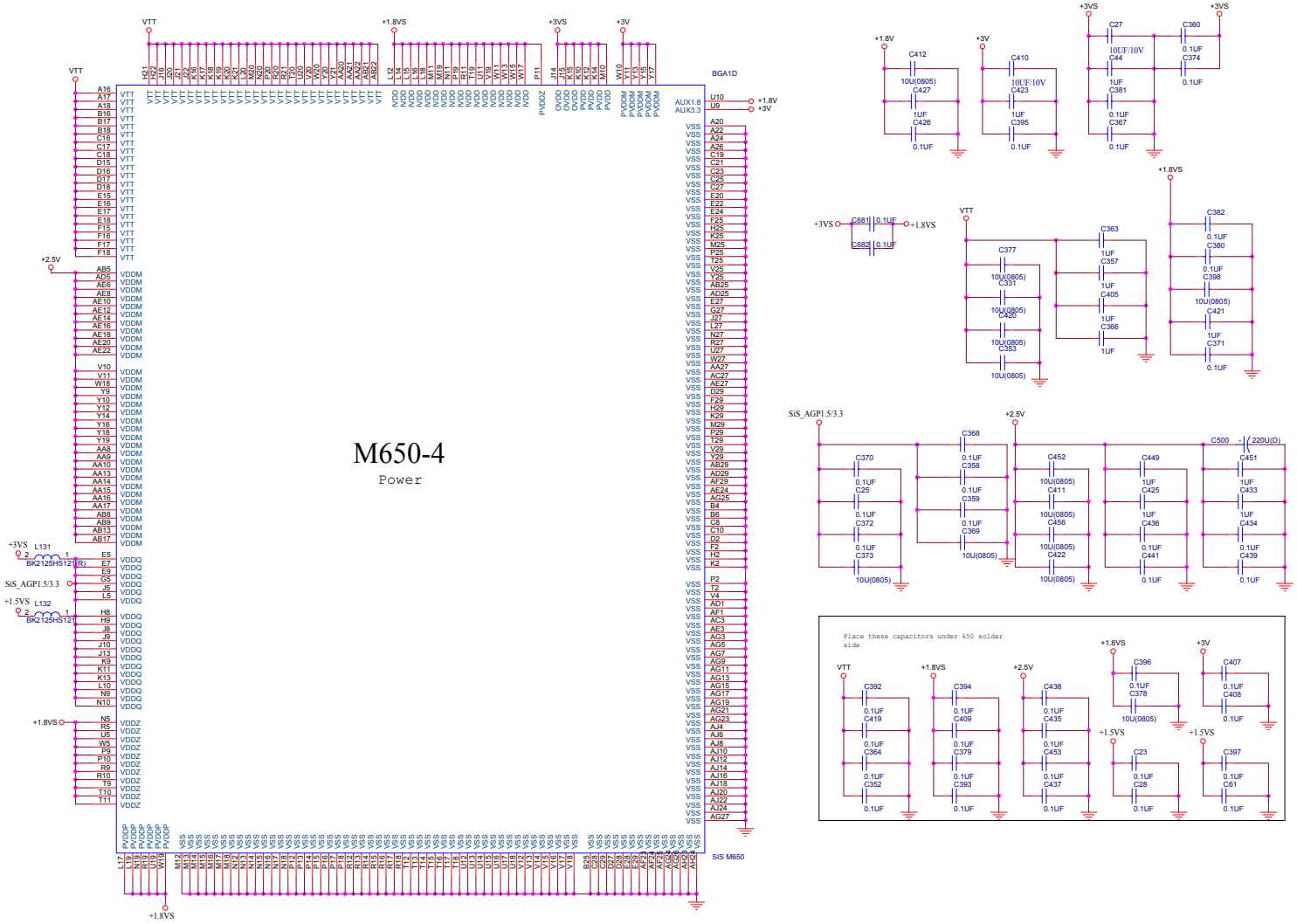
B.Schematic Diagrams

M645DX (& CRT Out) 3 of 4

Sheet 7 of 41
M650 & CRT Out
3 of 4



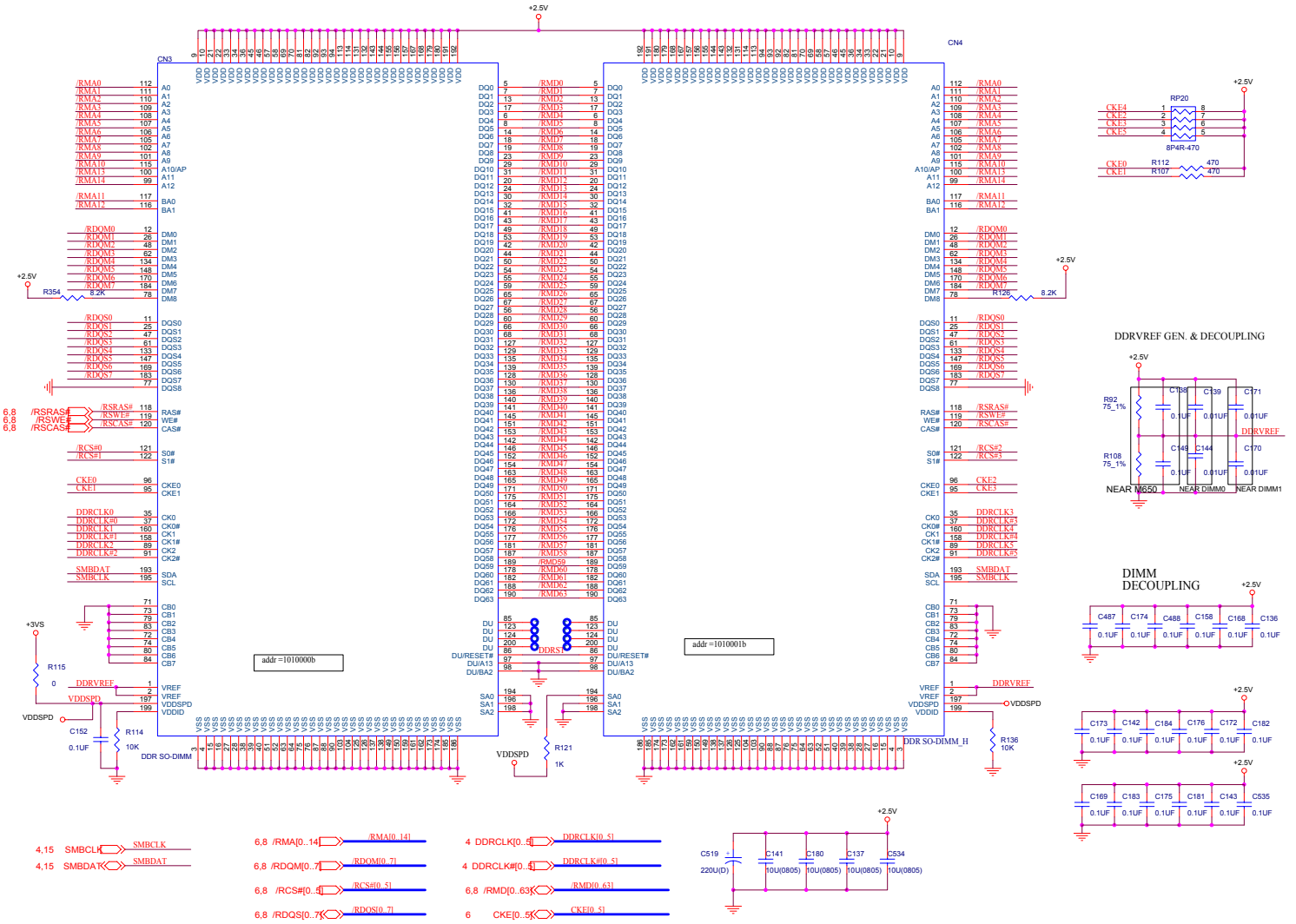
M645DX (Power) 4 of 4



Sheet 8 of 41
M650 (Power)
4 of 4

DDR Memory DIMM

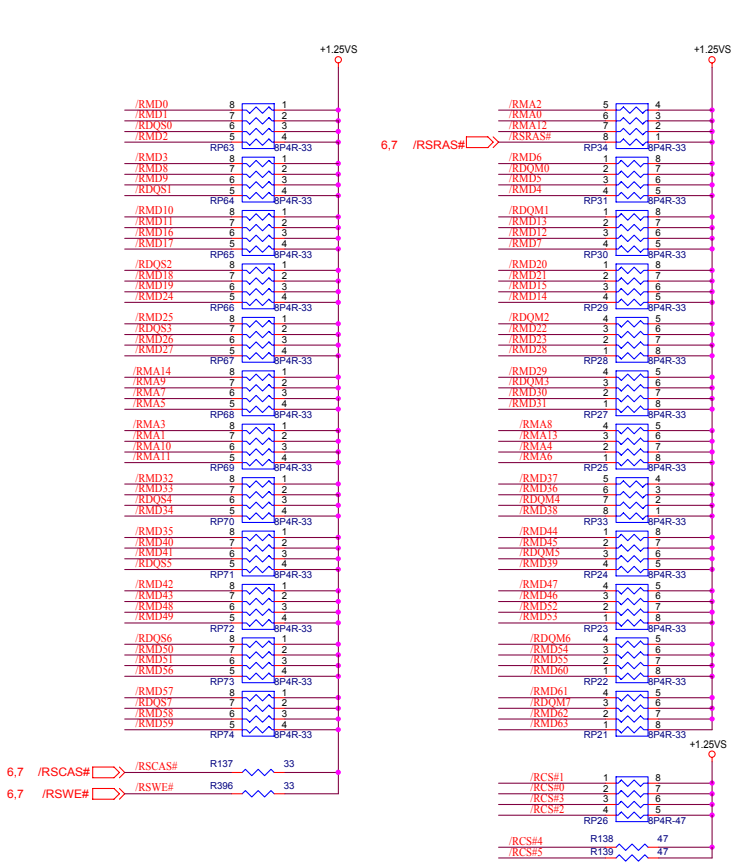
Sheet 9 of 41
DDR Memory DIMM



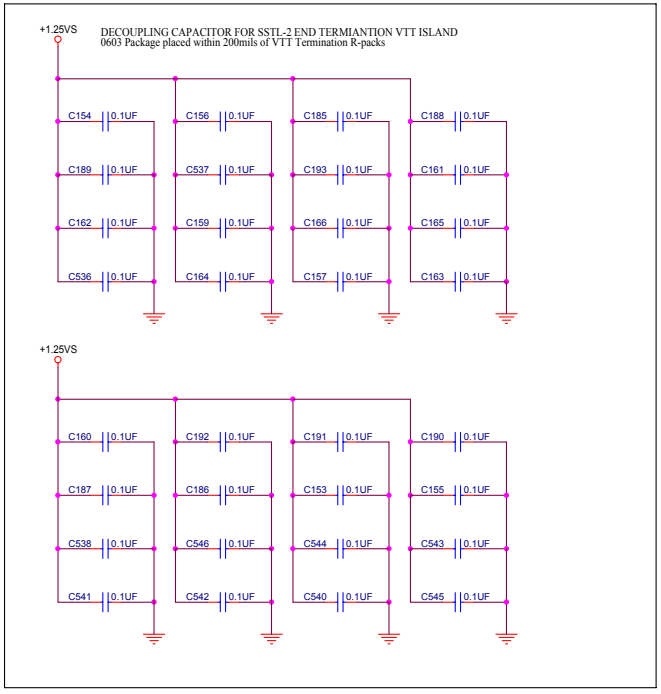
DDR SSTL-2 Termination

SSTL-2 Termination Resistors

	DDR	Rs	Rtt
MD/DQM(/DQS)	SSTL-2	10	33
MA/Control	SSTL-2	0	33
CS	SSTL-2	0	47
CKE	OD 2.5V		



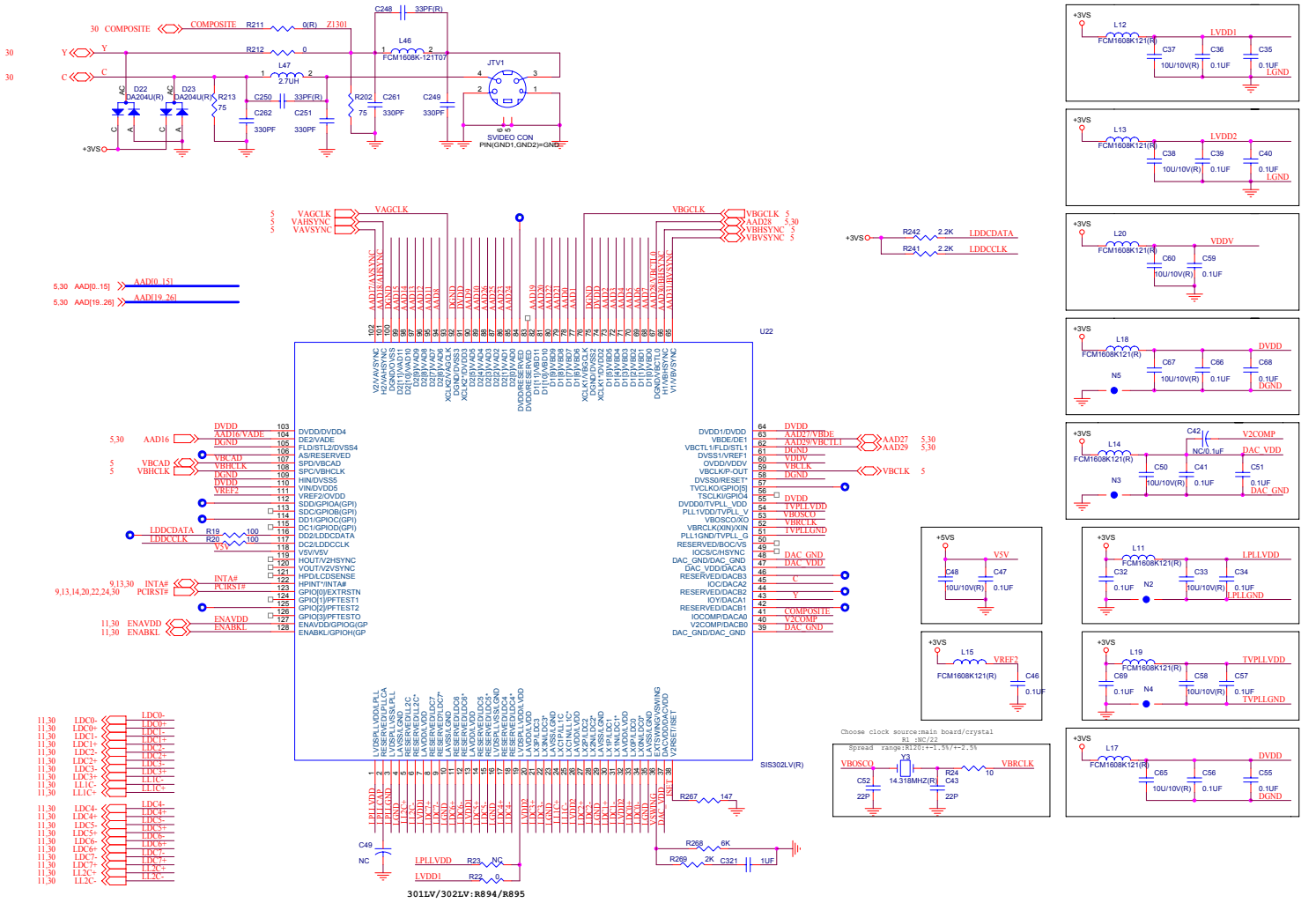
/RMD[0..63] /RMD[0..63]6,7
/RDQM[0..7] /RDQM[0..7]6,7
/RDQS[0..7] /RDQS[0..7]6,7
/RMA[0..14] /RMA[0..14] 6,7
/RCS#[0..5] /RCS#[0..5]6,7



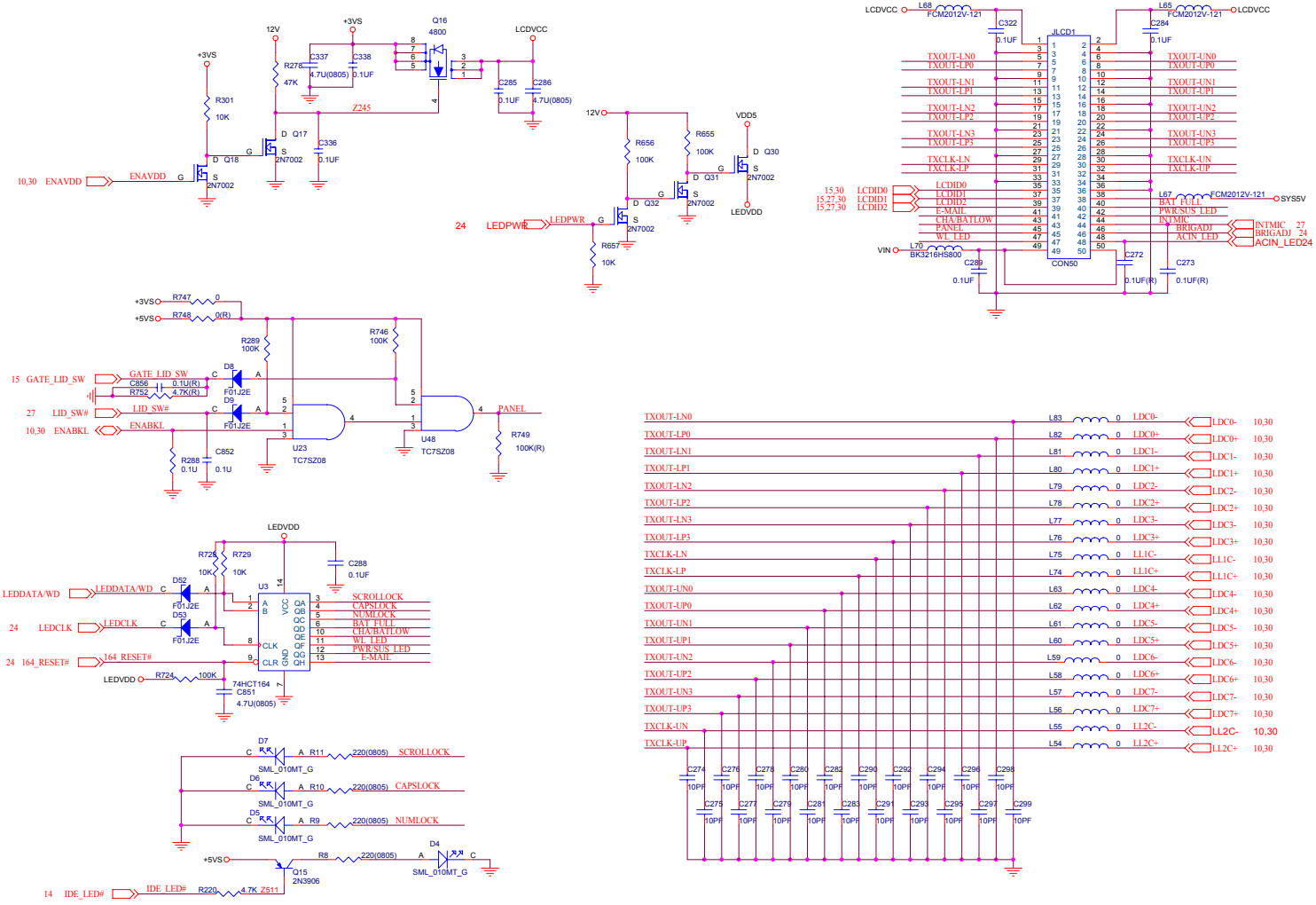
Sheet 10 of 41
DDR SSTL-2 Termination

LVDS Interface (SiS302LV)

Sheet 11 of 41
LVDS interface
(SiS302LV)



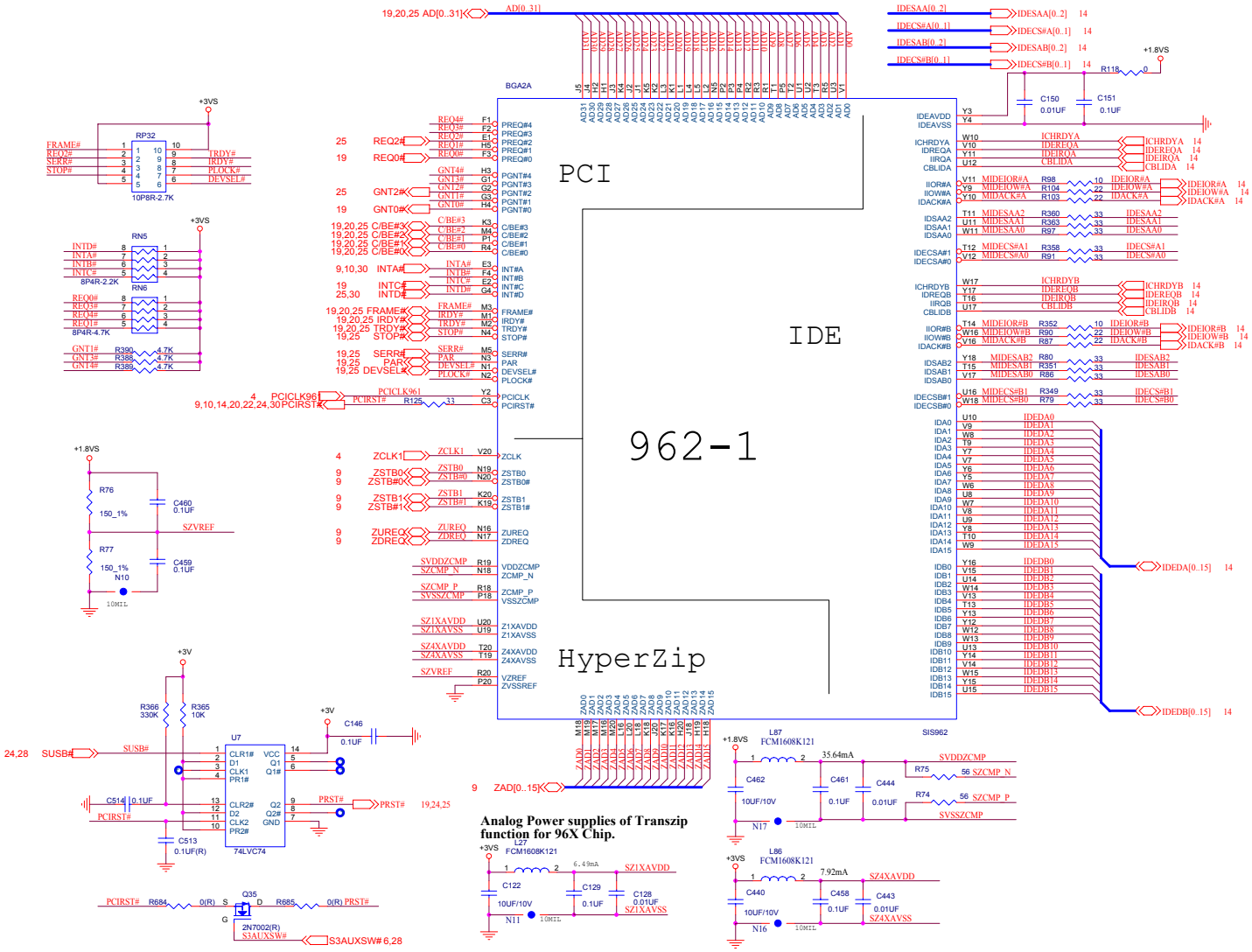
Panel Con & LED Indicator



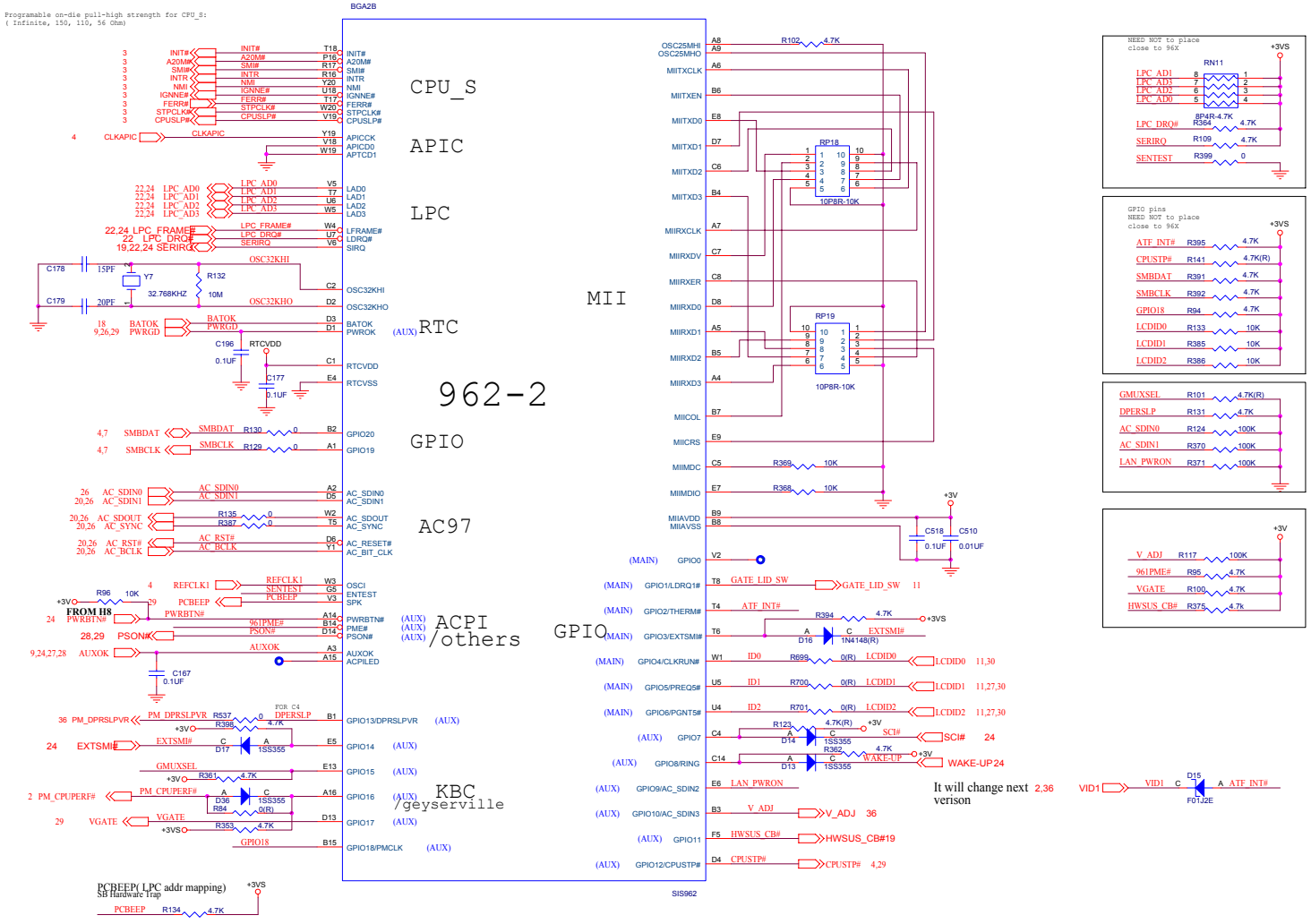
Sheet 12 of 41
Panel Con & LED Indicator

962 (PCI/IDE/HyperZip) 1 of 4

Sheet 13 of 41
962 (PCI/IDE/ HyperZip)
1 of 4



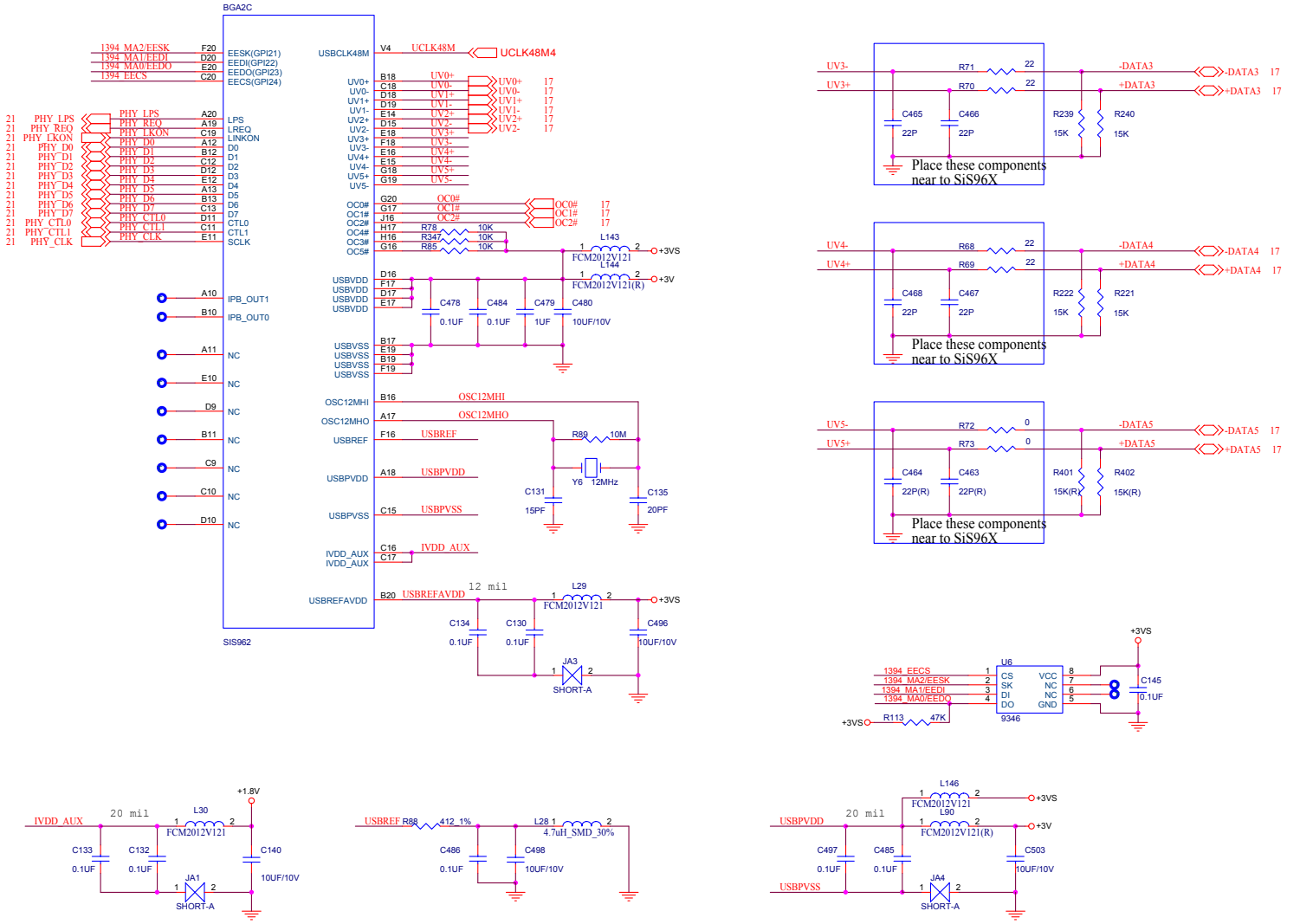
962 (Misc Signals) 2 of 4



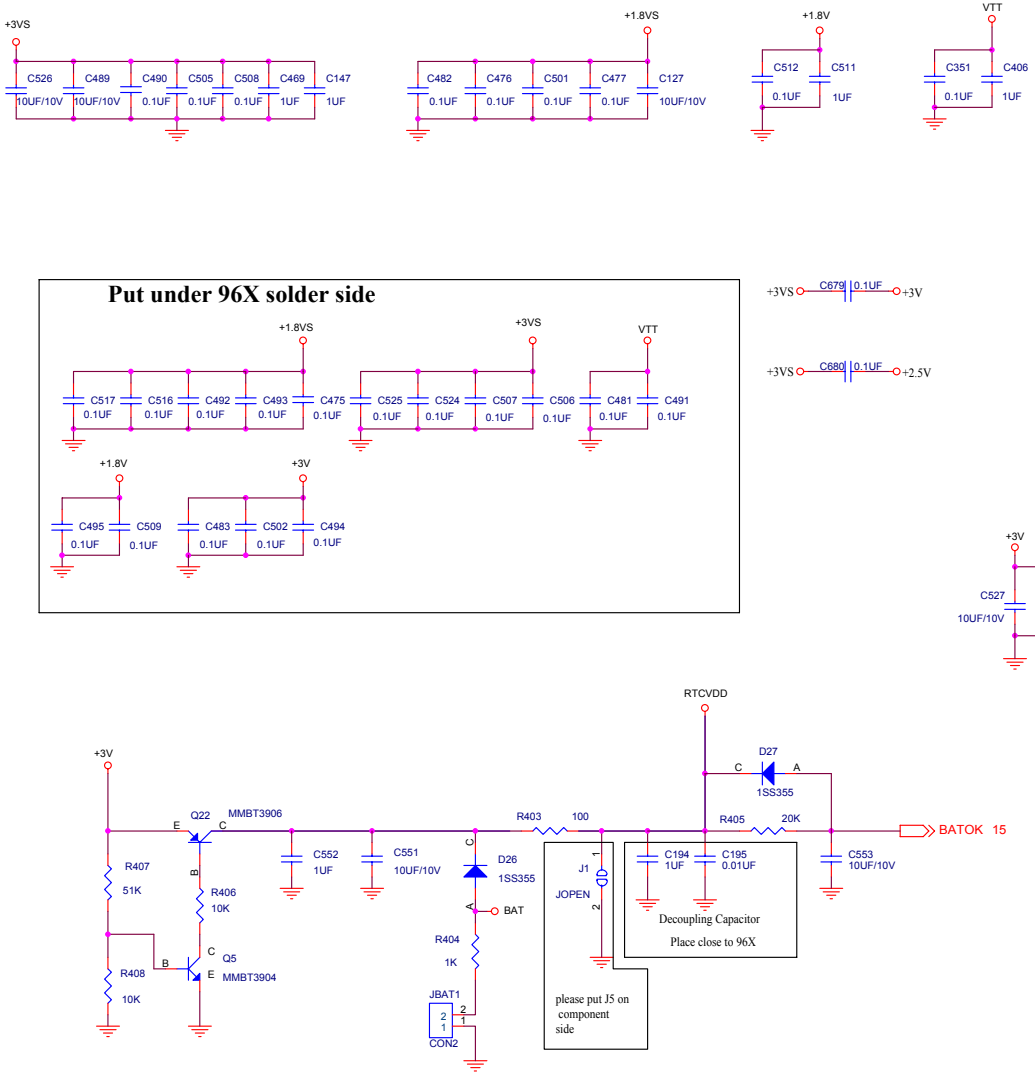
Sheet 14 of 41
962 (Misc Signals)
2 of 4

962 (USB I/F) 3 of 4

Sheet 15 of 41
962 (USB I/F)
3 of 4



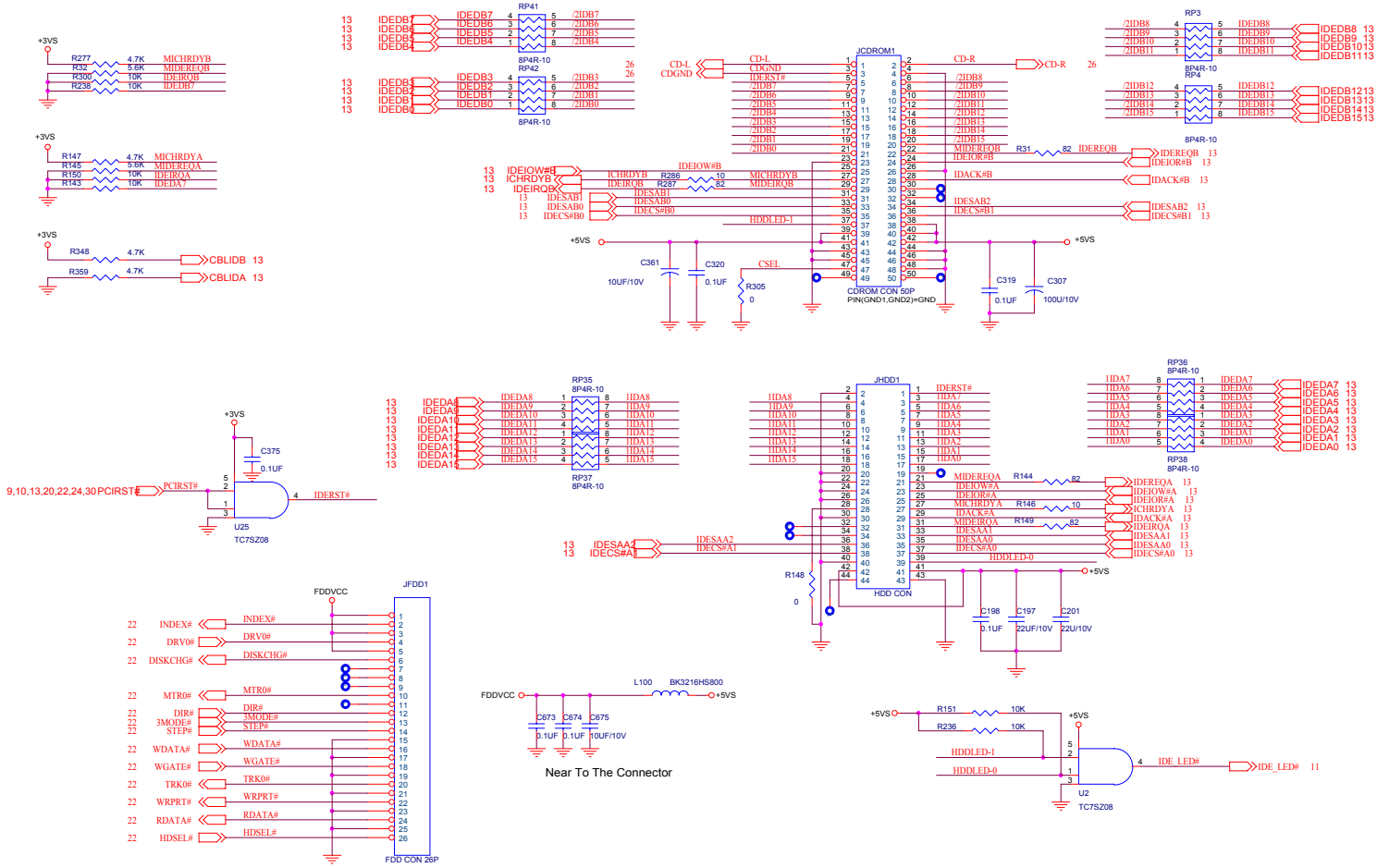
962 (Power & RTC) 4 of 4



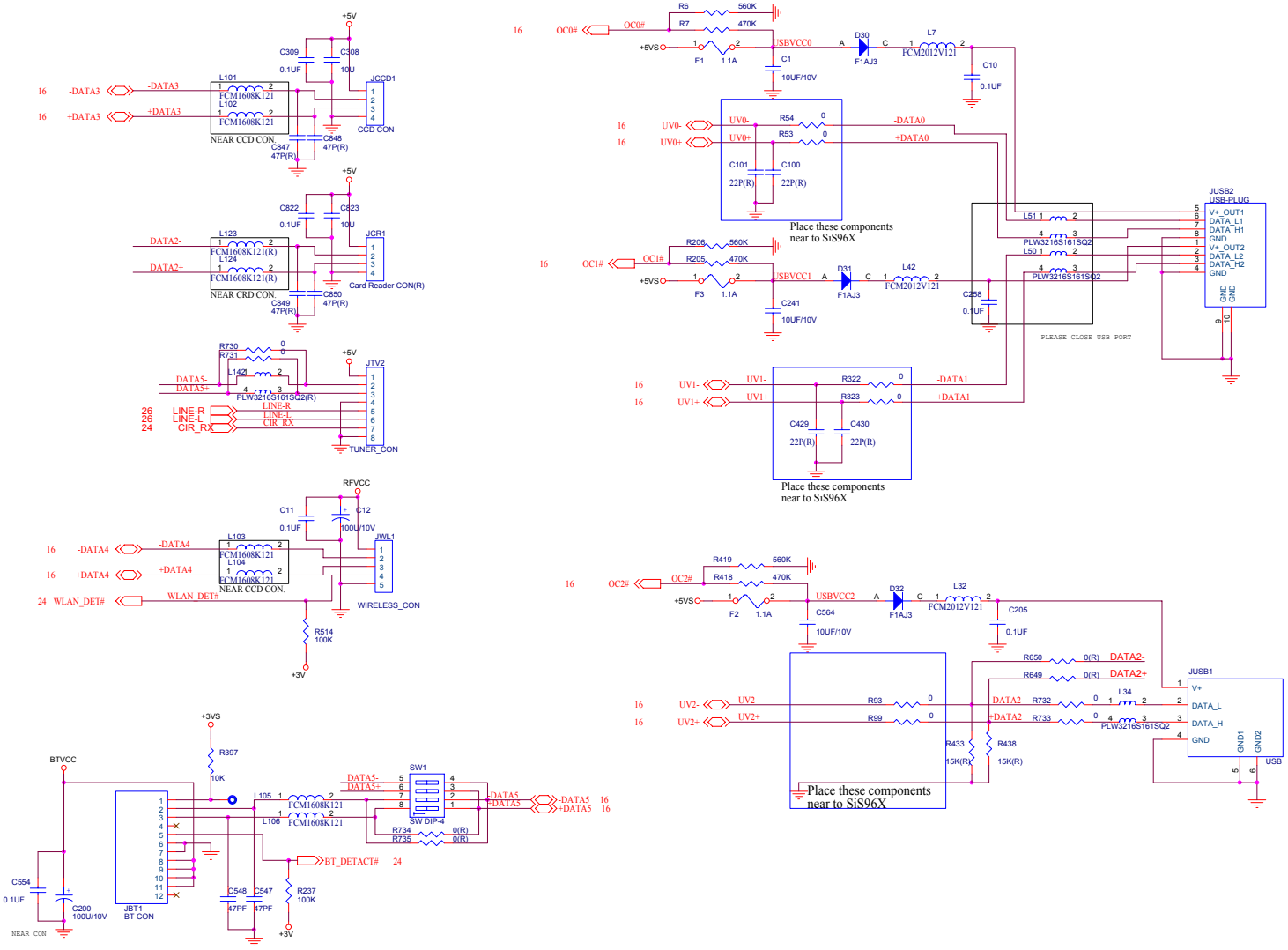
Sheet 16 of 41
962 (Power & RTC)
4 of 4

HDD/Combo Connector

Sheet 17 of 41
HDD/Combo Connector



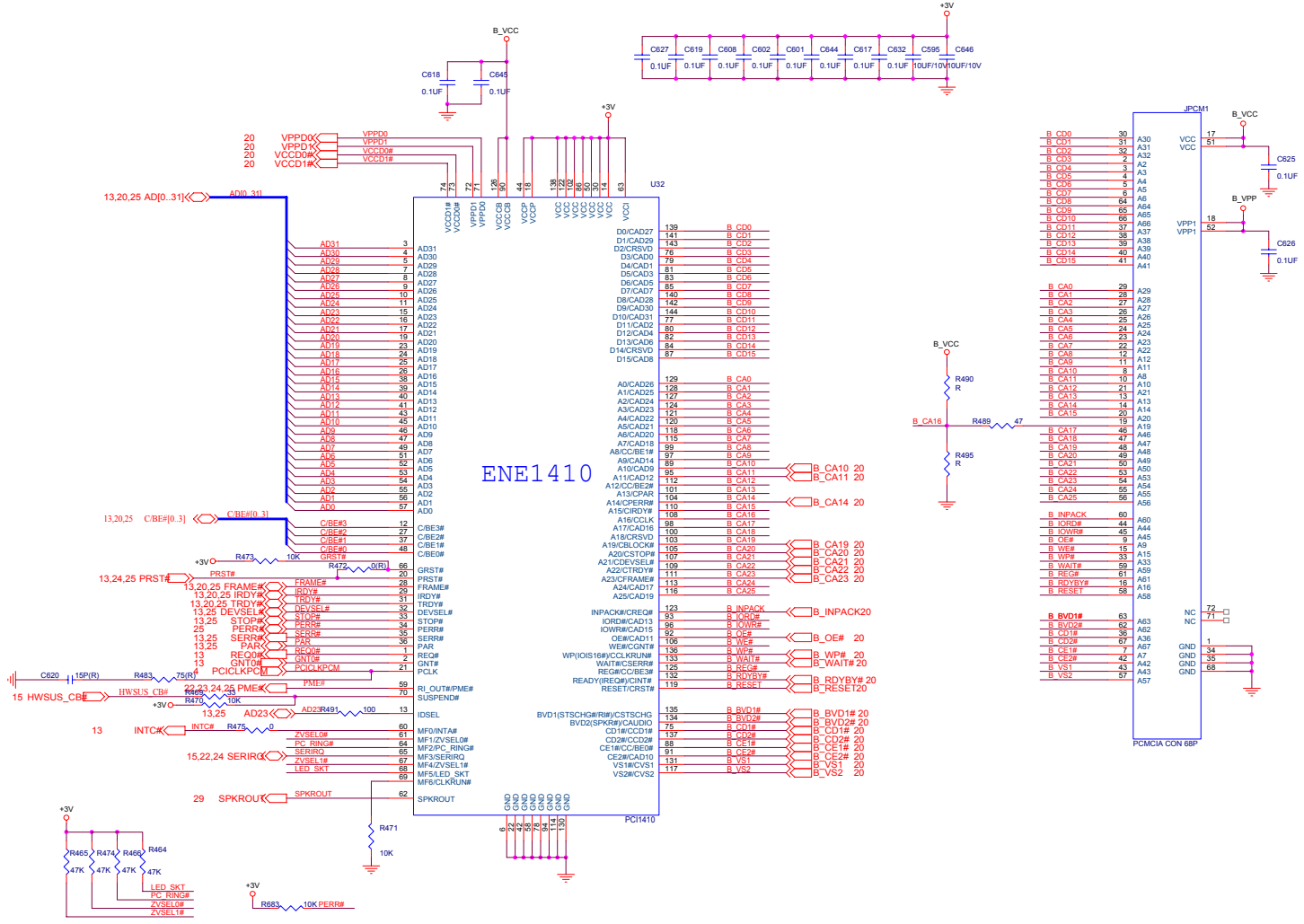
USB Port



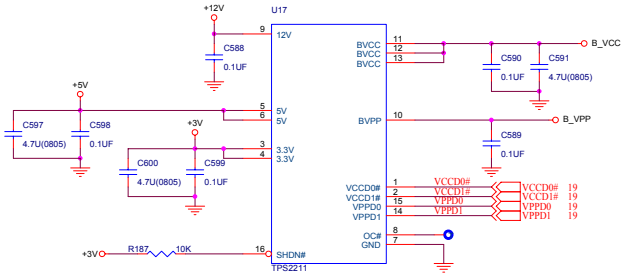
Sheet 18 of 41
USB Port

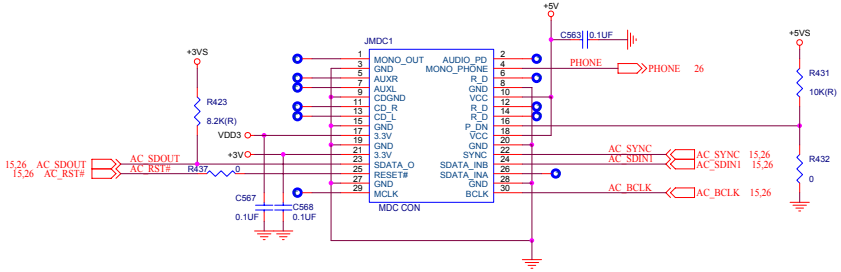
PCMCIA ENE CB1410

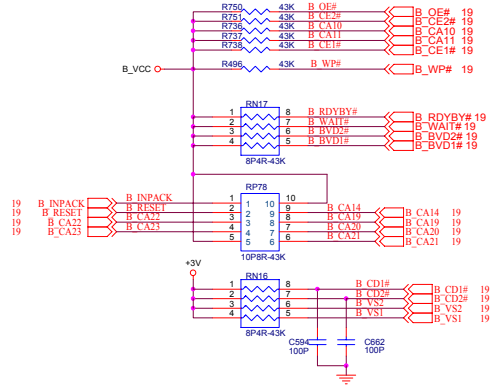
Sheet 19 of 41
PCMCIA TI1410

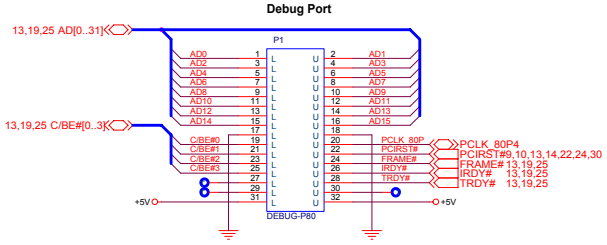


PCMCIA Power





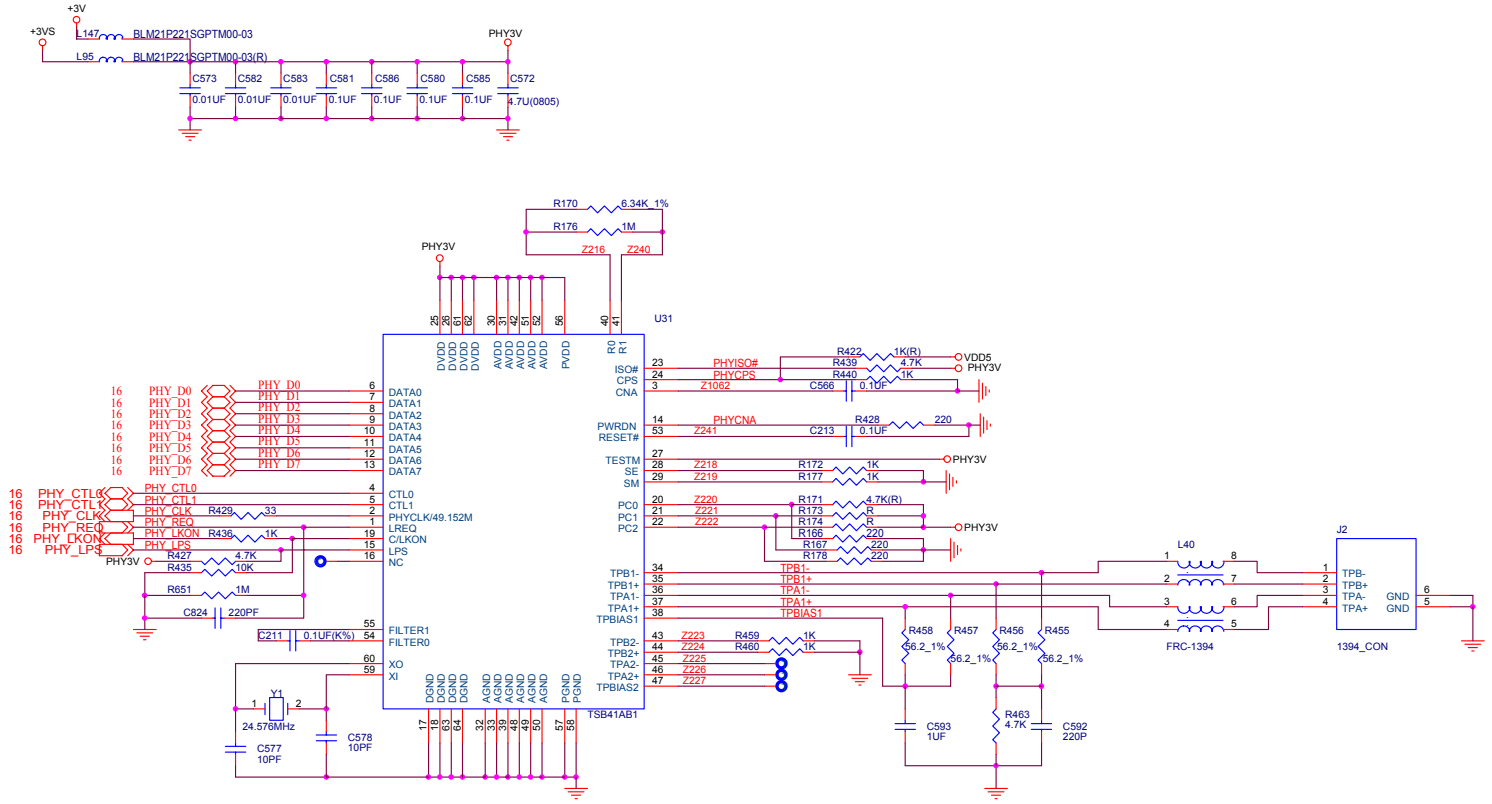




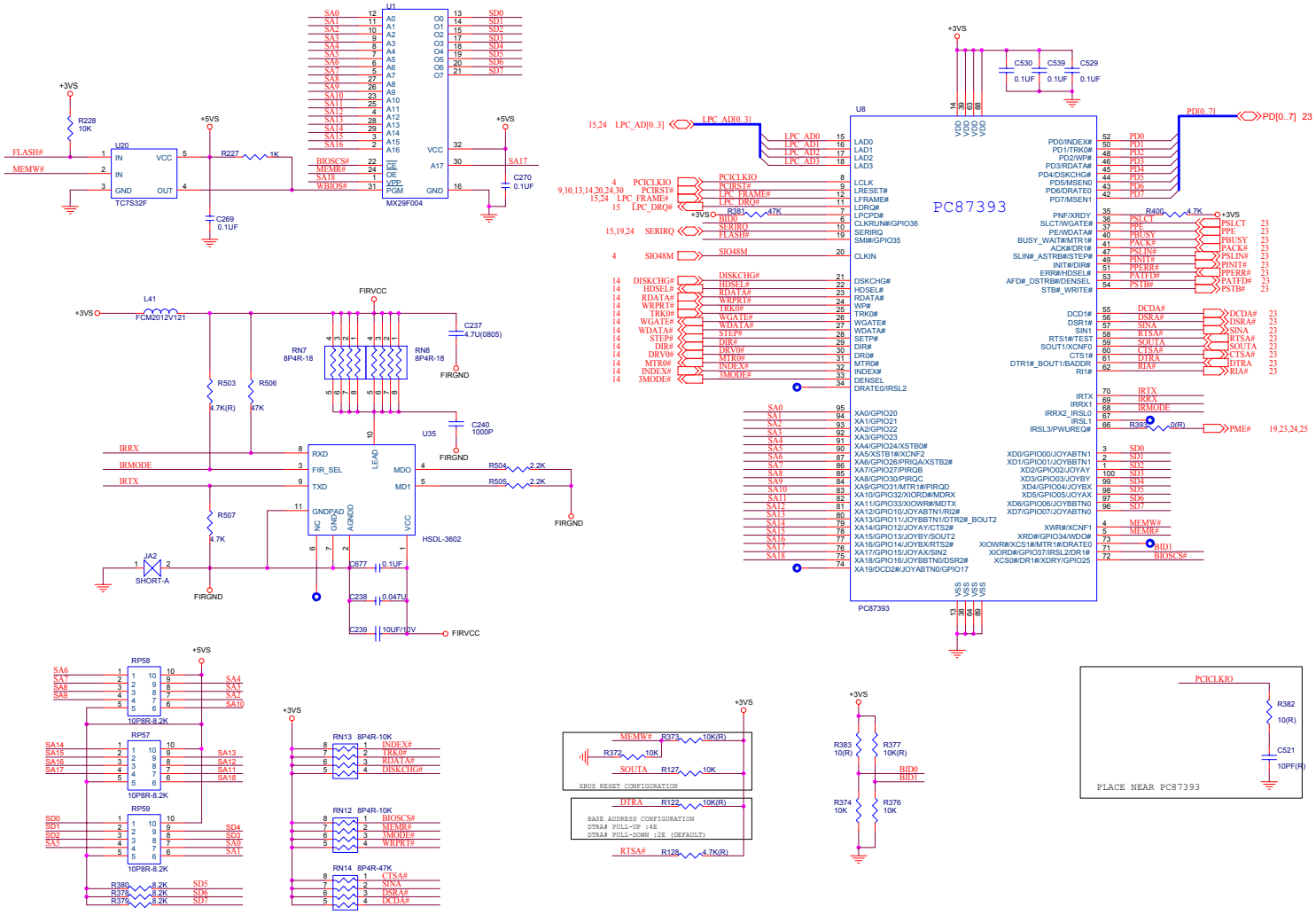
Sheet 20 of 41
PCMCIA Power

1394 PHY TSB41LV01

Sheet 21 of 41
1394 PHY
TSB41LV01



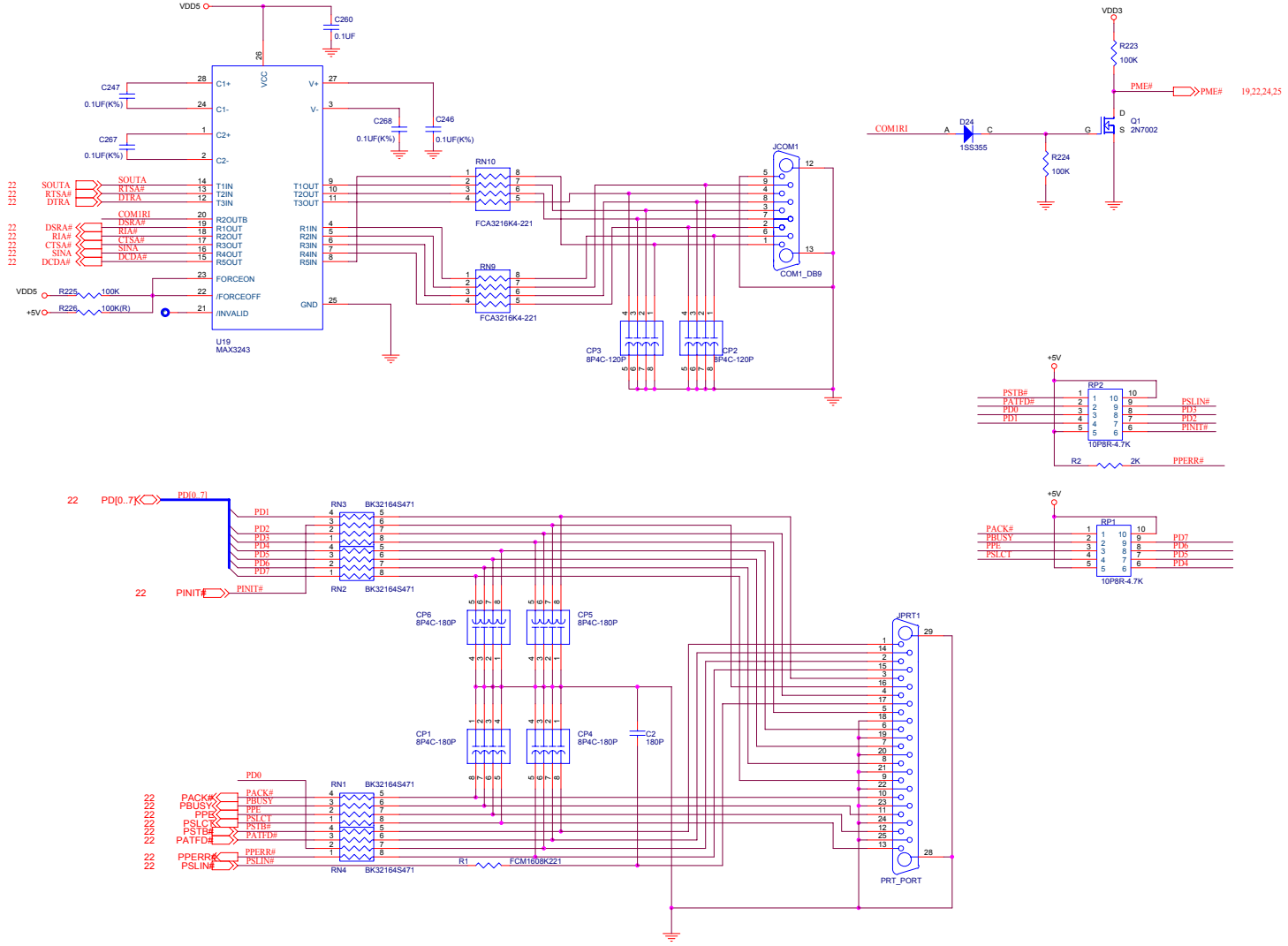
LPC Super I/O



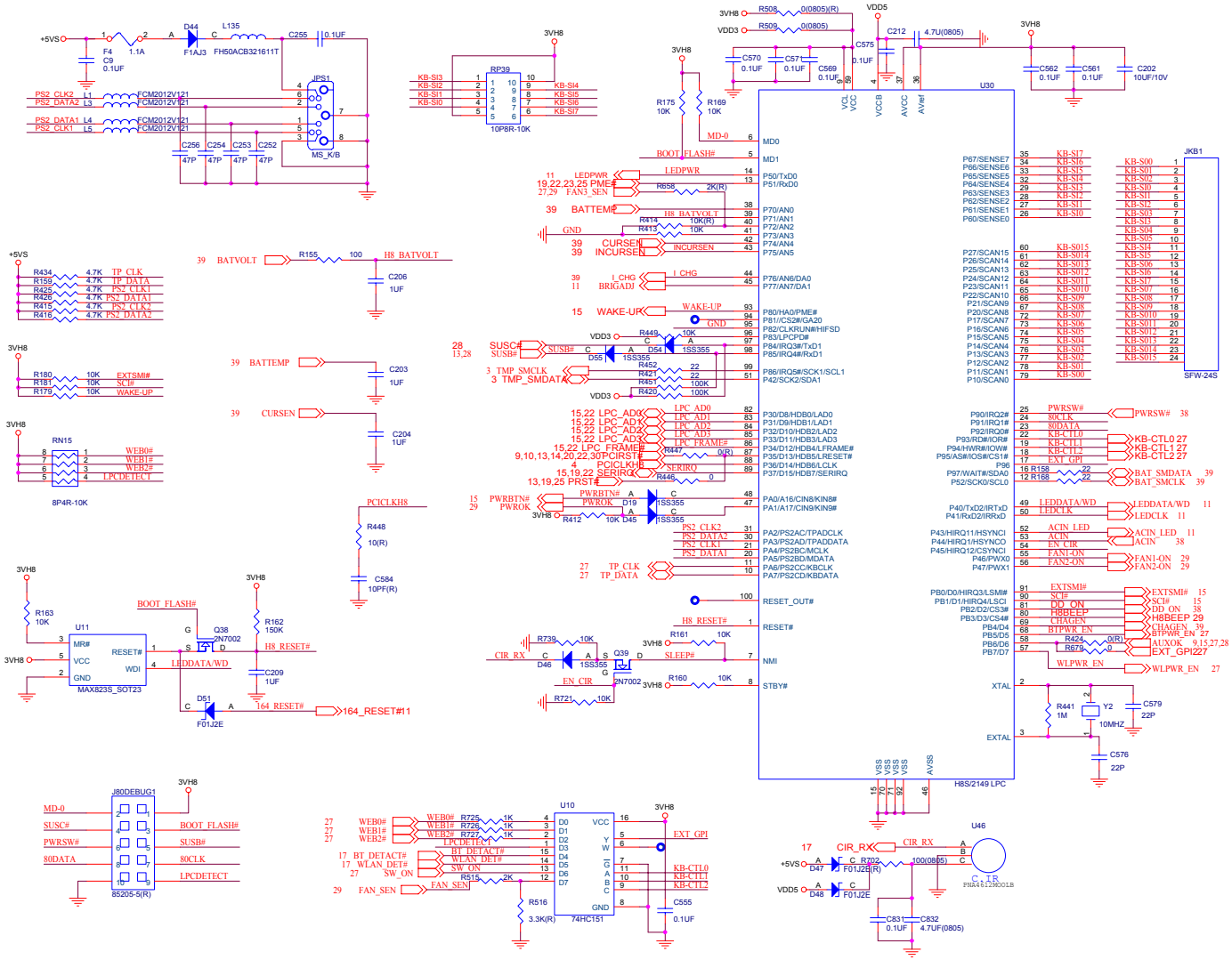
Sheet 22 of 41
LPC Super I/O

LPT/COM Port

Sheet 23 of 41
LPT/COM Port



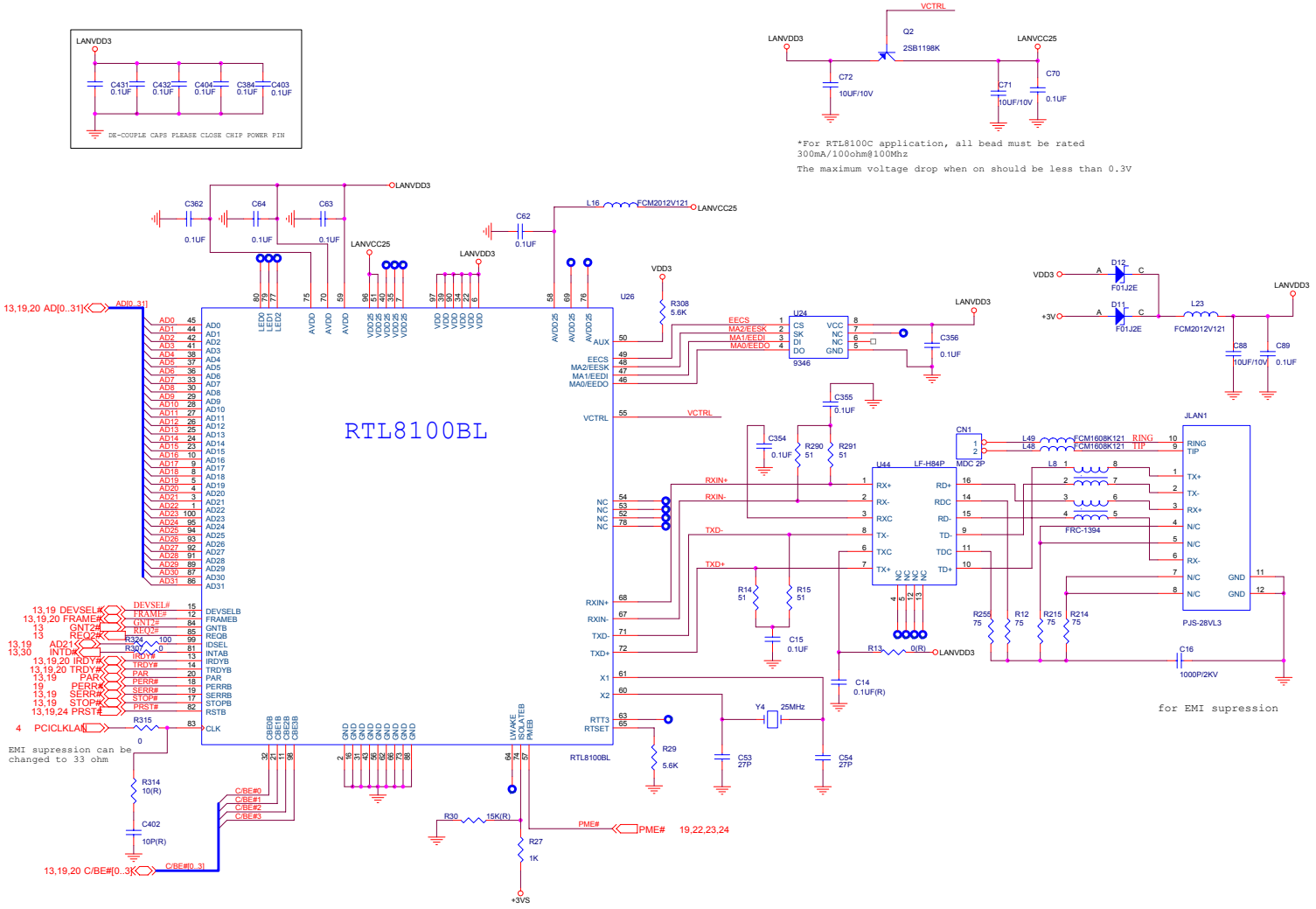
LPC H8



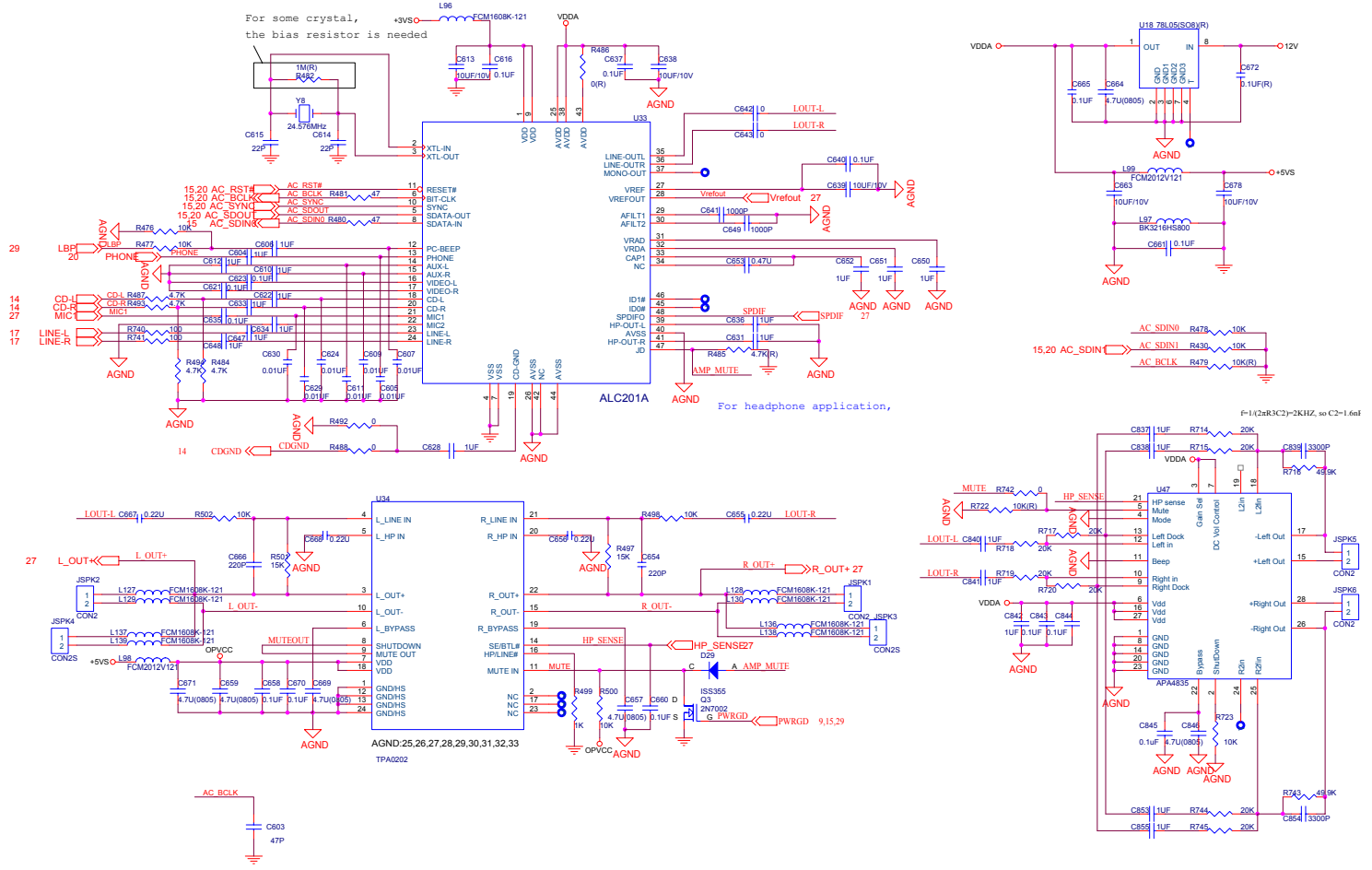
Sheet 24 of 41
LPC H8

LAN RTL8100BL

Sheet 25 of 41
LAN RTL8100BL



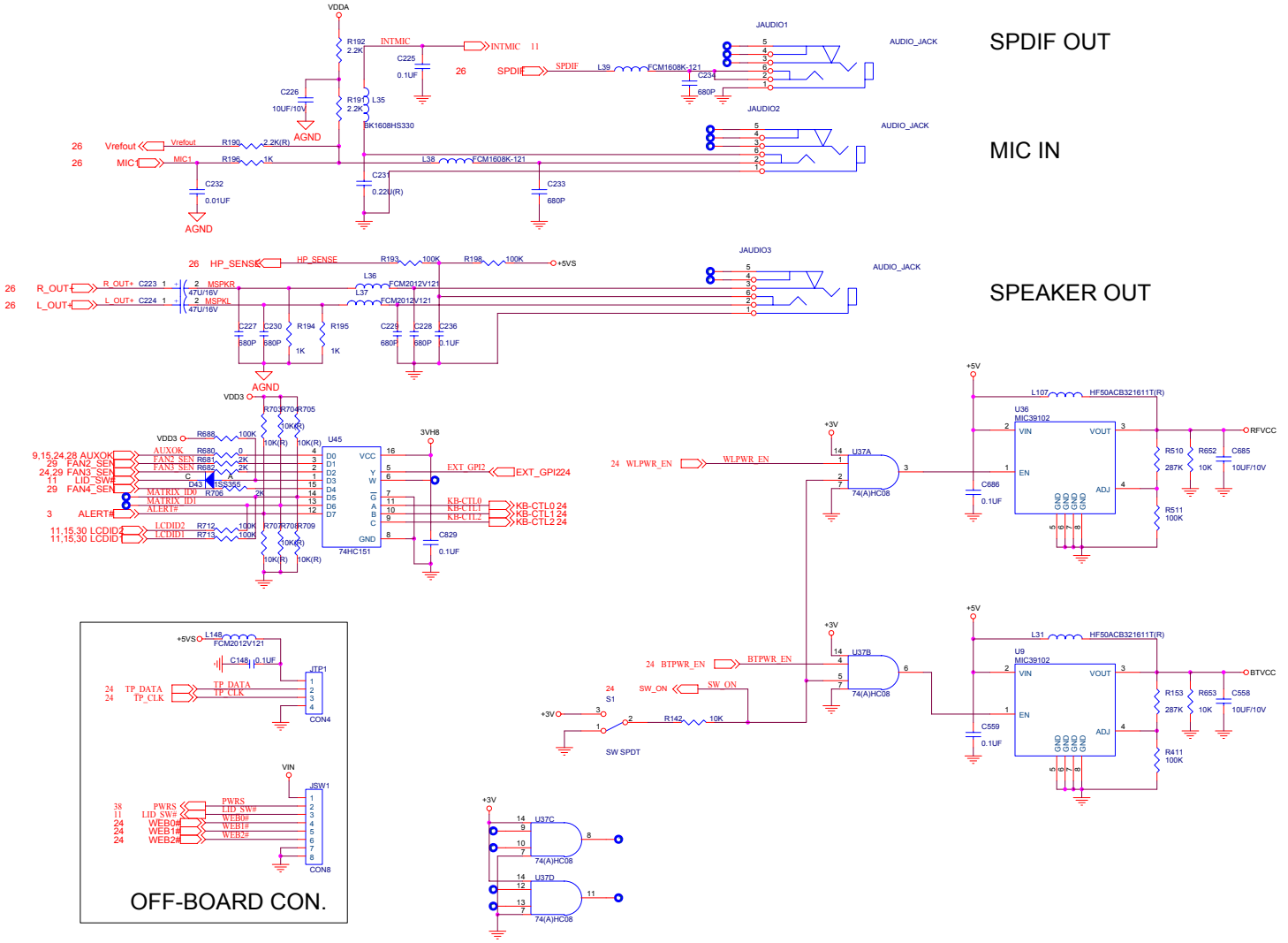
Audio Codec ALC201A



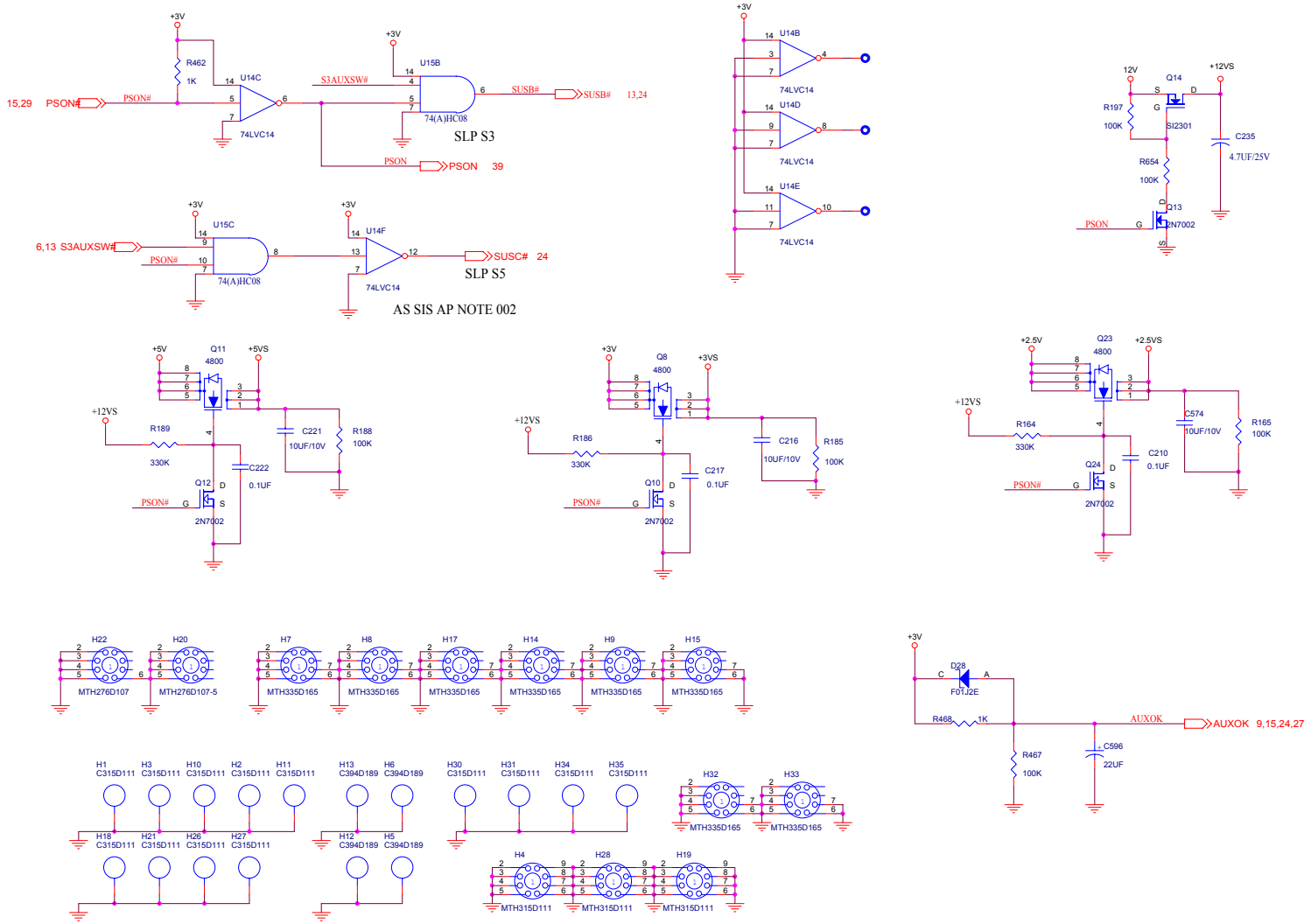
Sheet 26 of 41
Audio Codec
ALC201A

Audio Out & Off Board Connectors

Sheet 27 of 41
Audio Out & Off Board Connectors



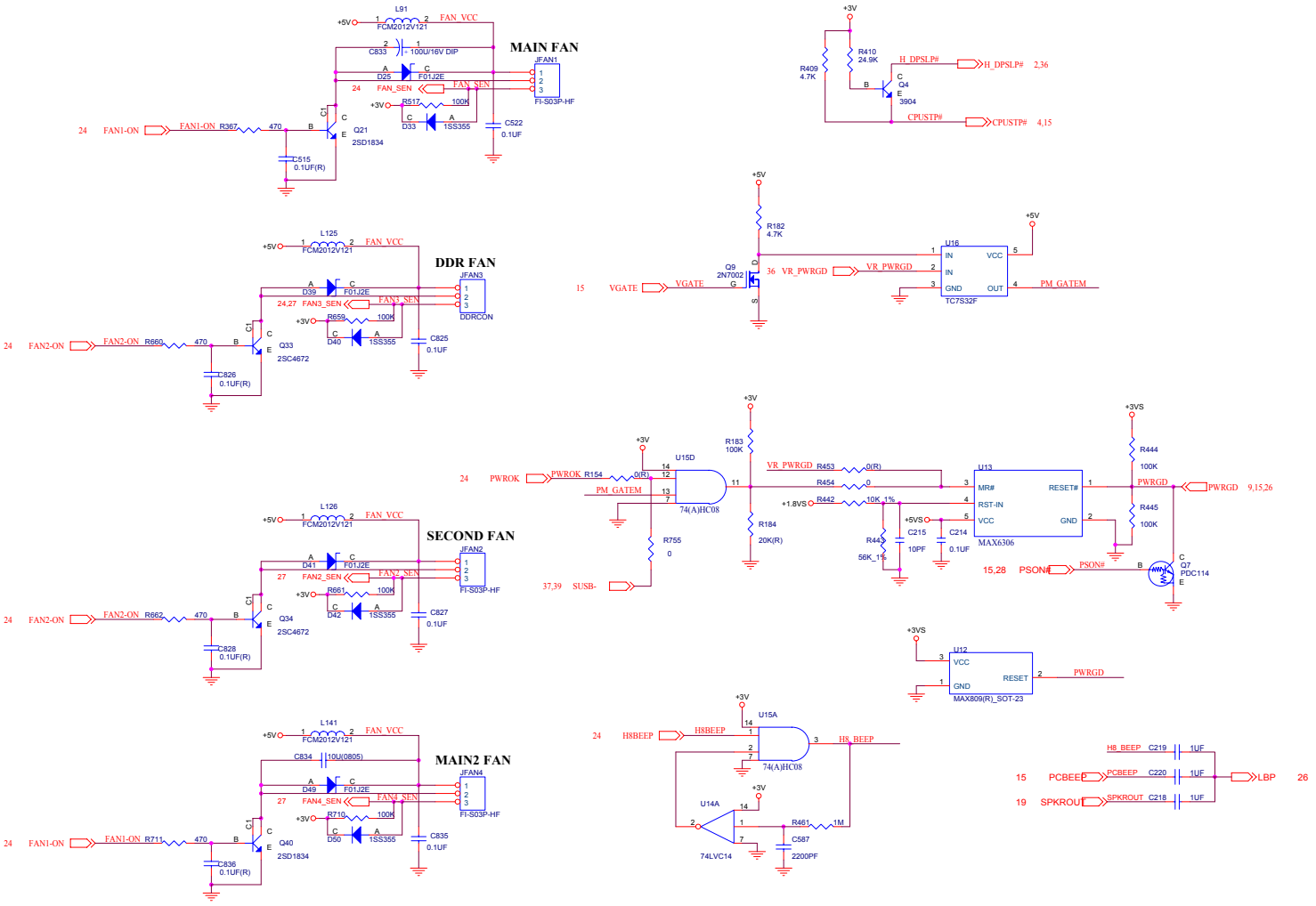
System Power Control



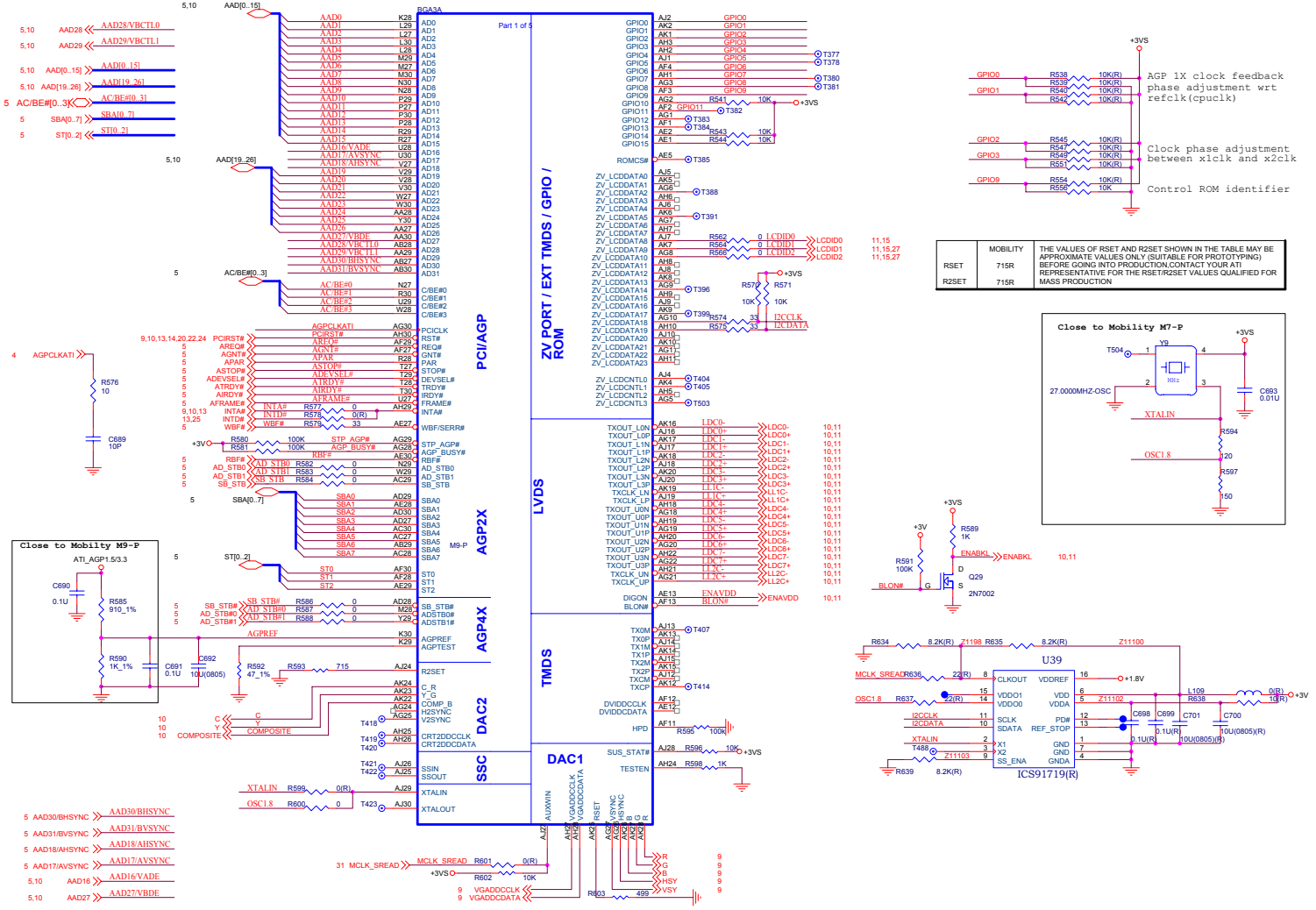
Sheet 28 of 41
System Power Control

Fan Control and SpeedStep

Sheet 29 of 41
Fan Control & SpeedStep



Mobility M9-P



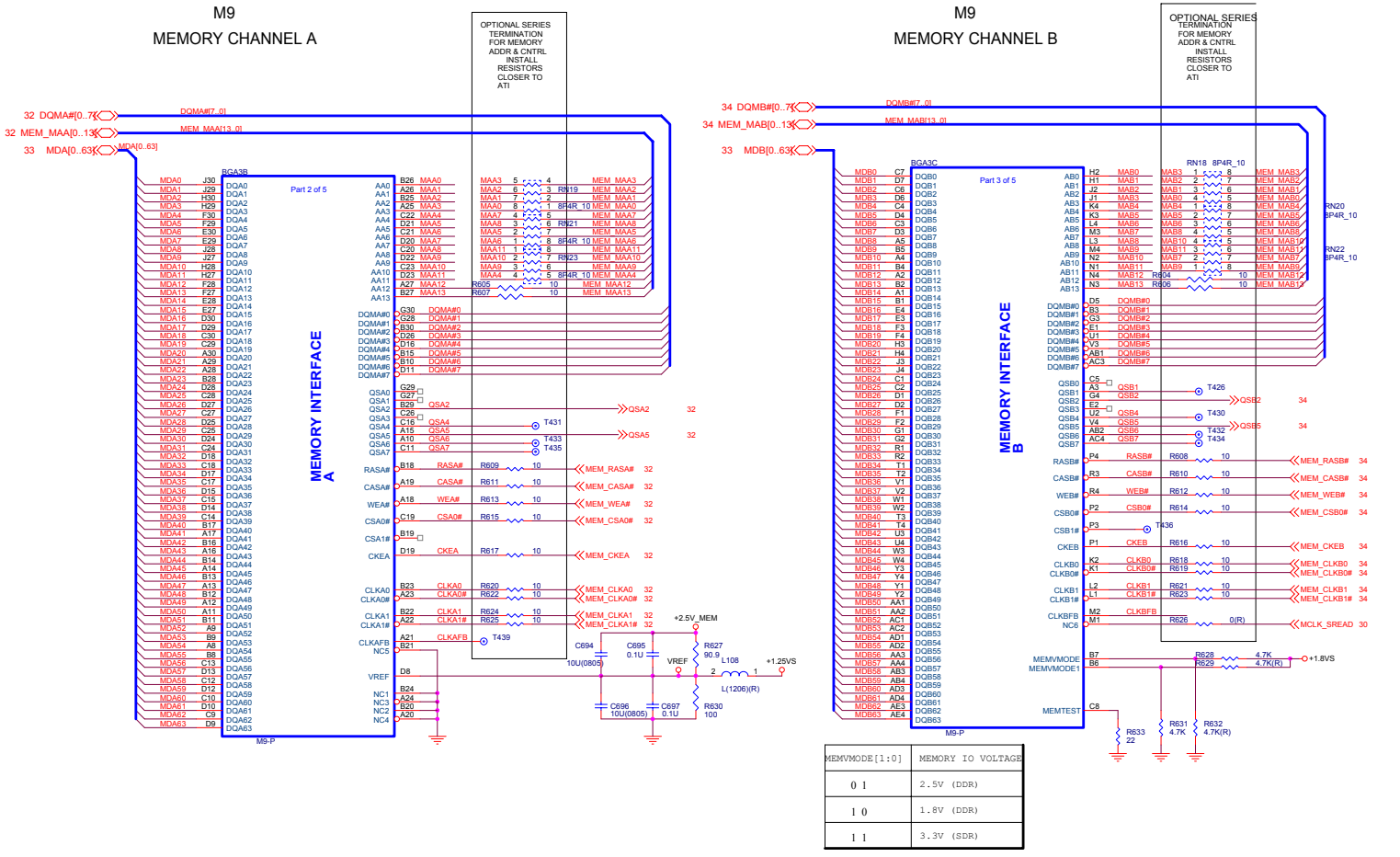
	MOBILITY	THE VALUES OF RSET AND R2SET SHOWN IN THE TABLE MAY BE APPROXIMATE VALUES ONLY (SUITABLE FOR PROTOTYPING) BEFORE GOING INTO PRODUCTION,CONTACT YOUR ATI REPRESENTATIVE FOR THE RSET/R2SET VALUES QUALIFIED FOR MASS PRODUCTION
RSET	715R	
R2SET	715R	

Sheet 30 of 41
Mobility M9-P

B.Schematic Diagrams

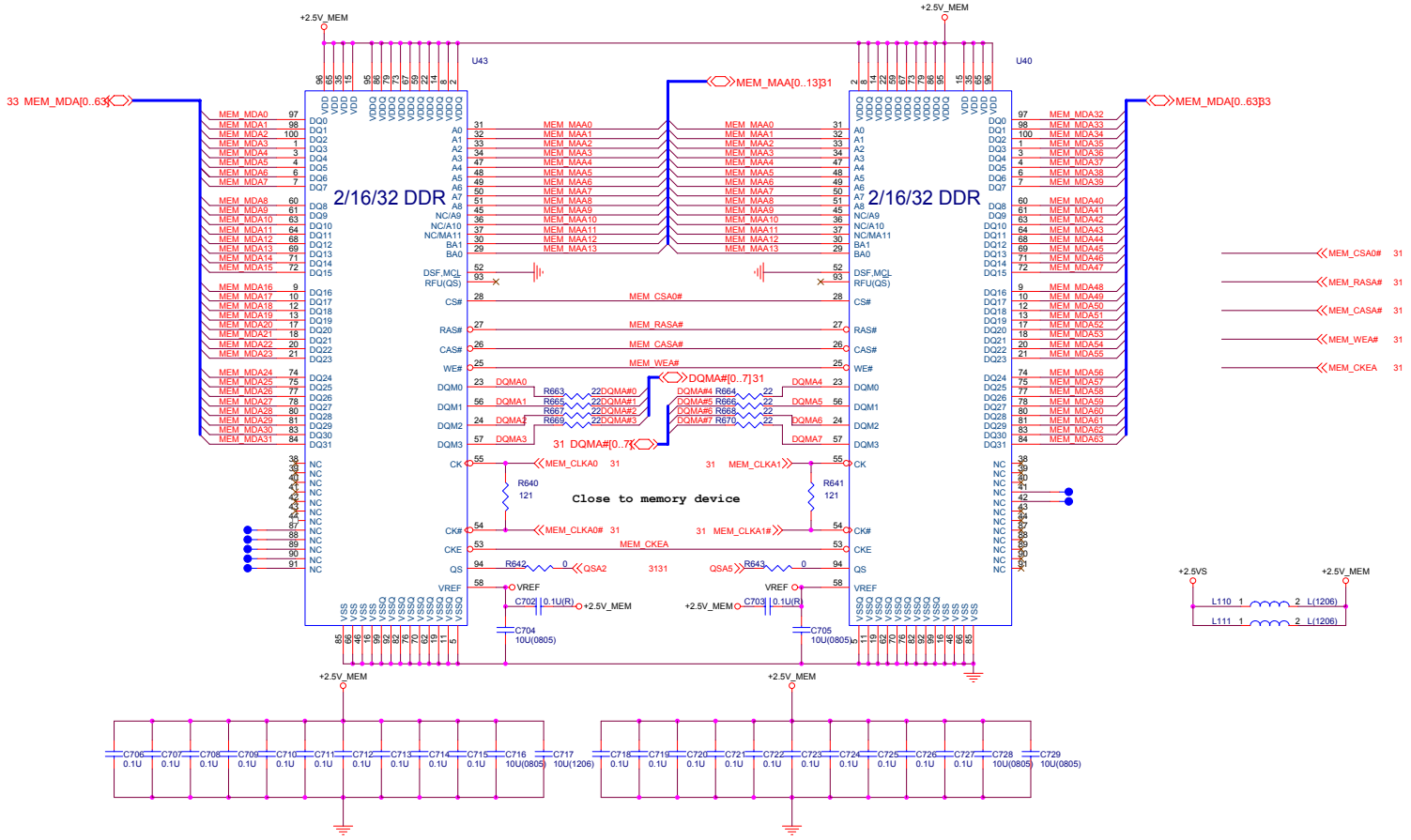
Mobility M9-P MEM A/B

Sheet 31 of 41
Mobility M9-P
MEM A/B



VGA DRAM 1 of 2

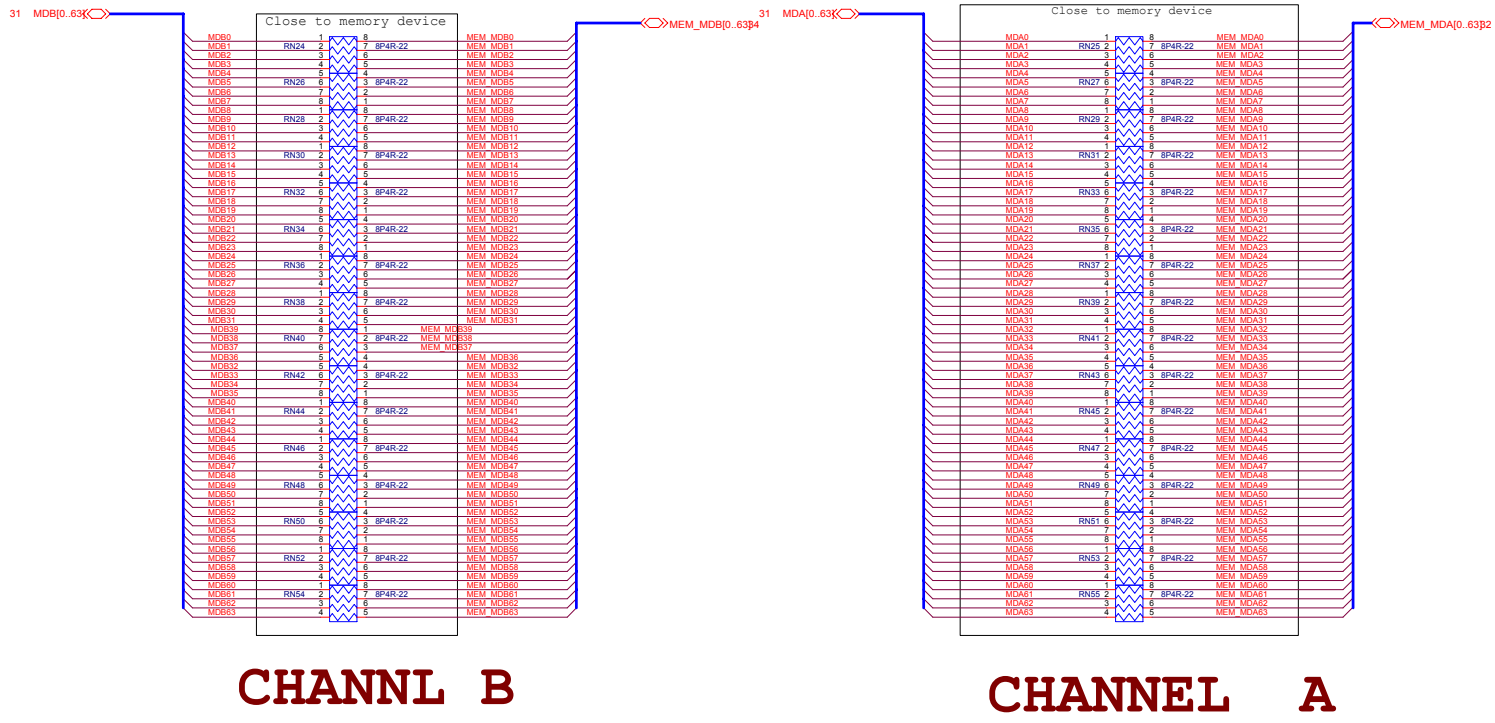
CHANNEL A



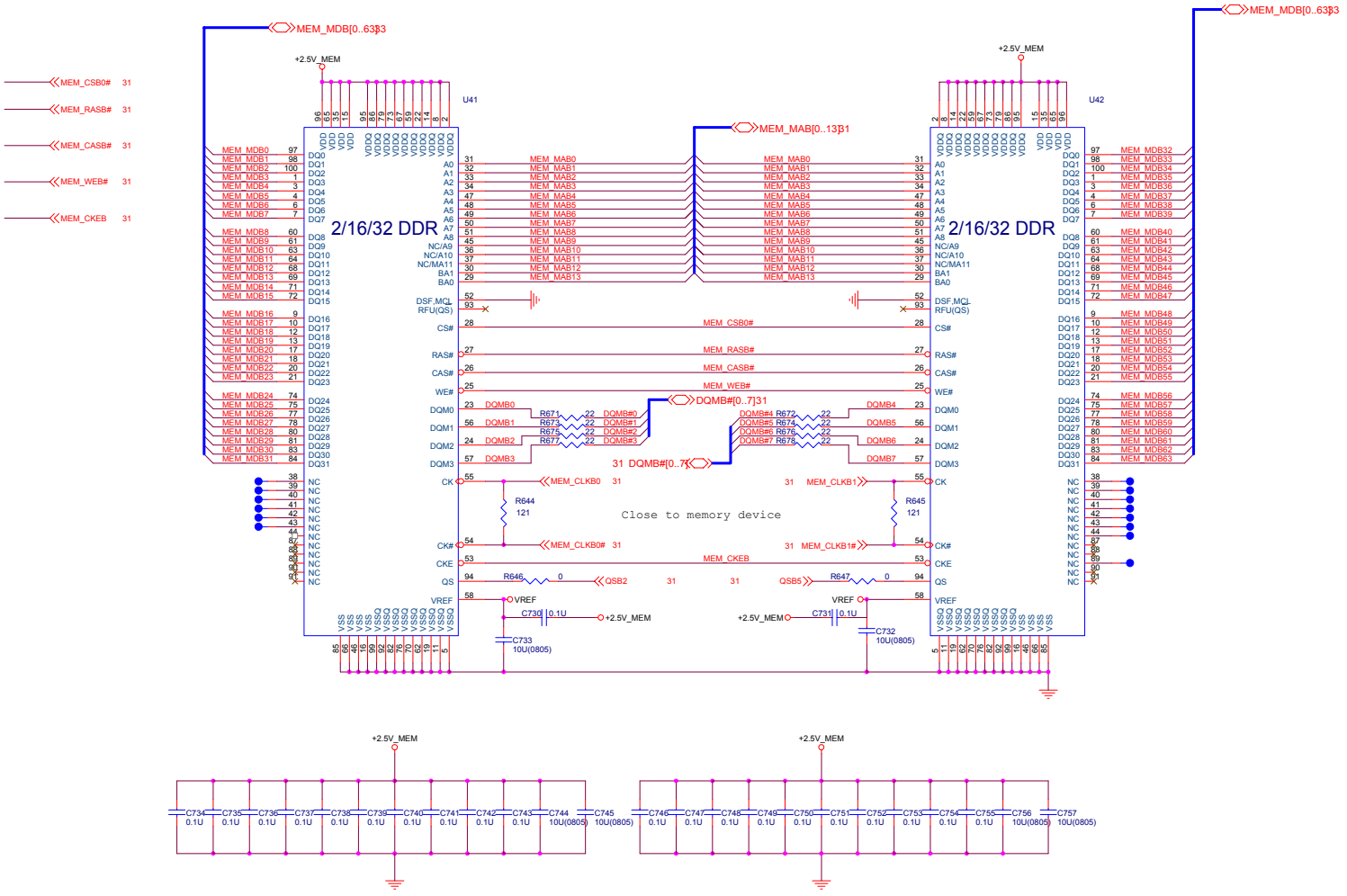
Sheet 32 of 41
VGA DRAM
1 of 2

VGA DRAM 1 of 2 - Termination

Sheet 33 of 41
VGA DRAM
1 of 2 - Termination



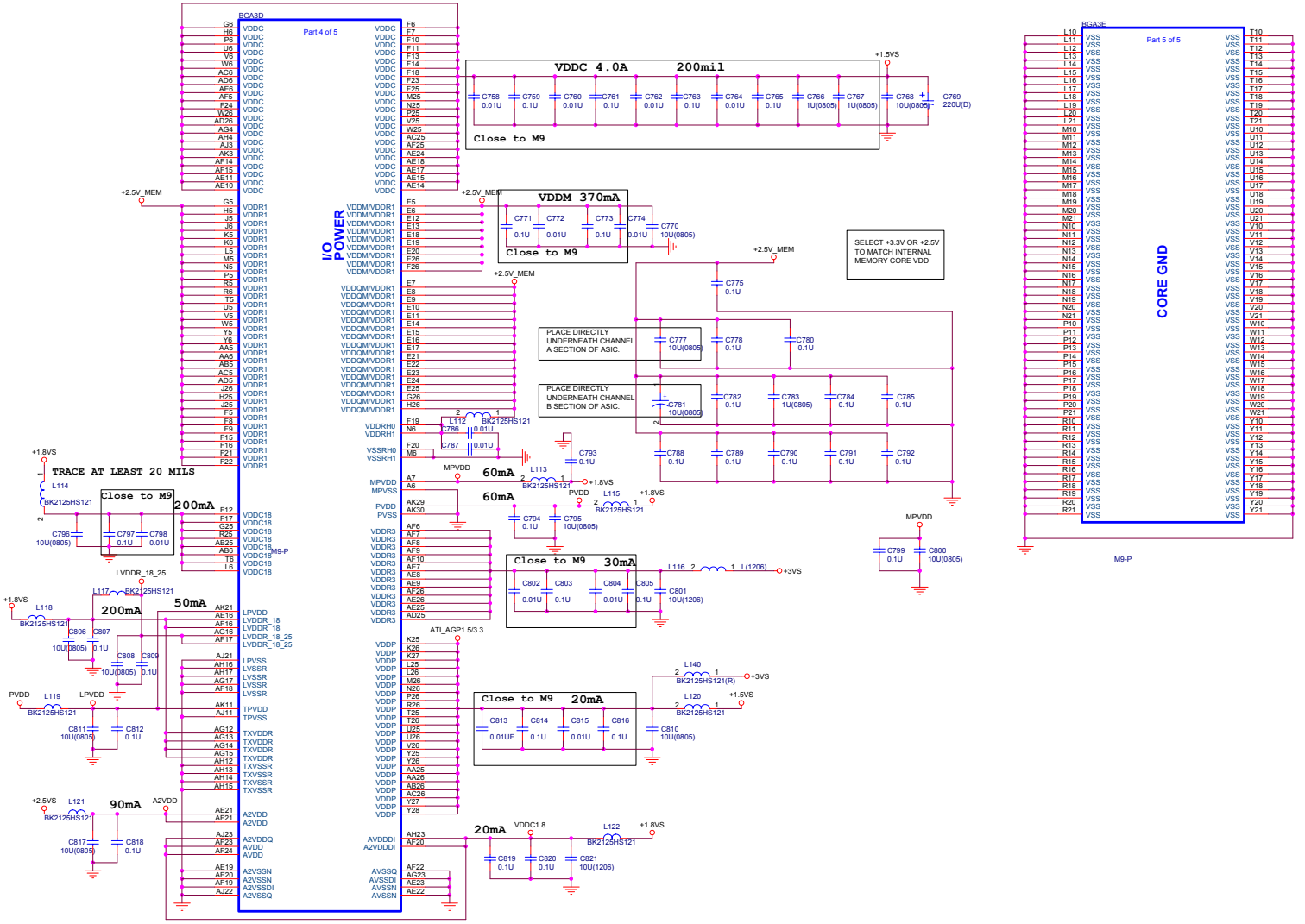
VGA DRAM 2 of 2



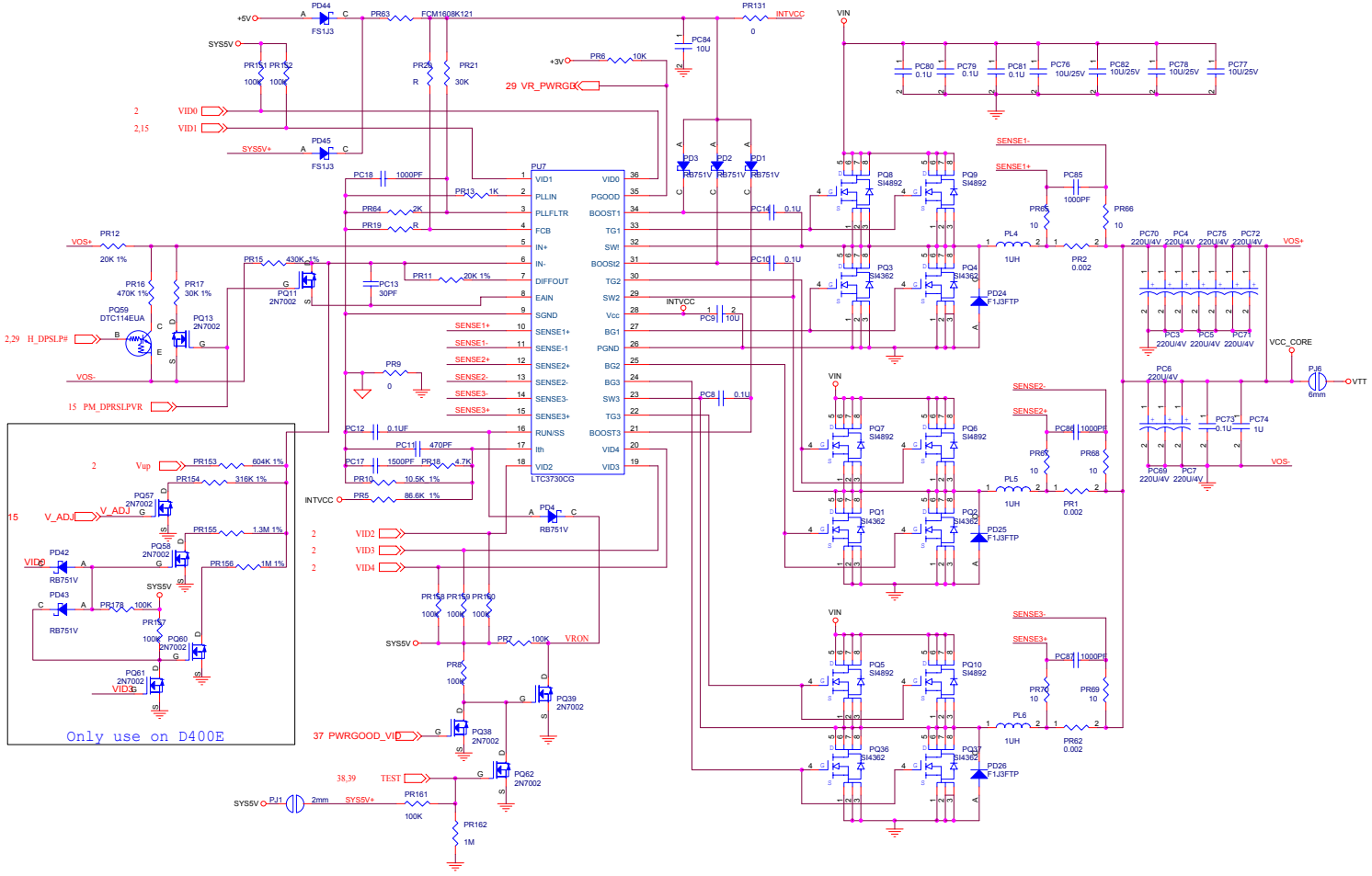
Sheet 34 of 41
VGA DRAM
2 of 2

Mobility M9-P POW

Sheet 35 of 41
Mobility M9-P POW



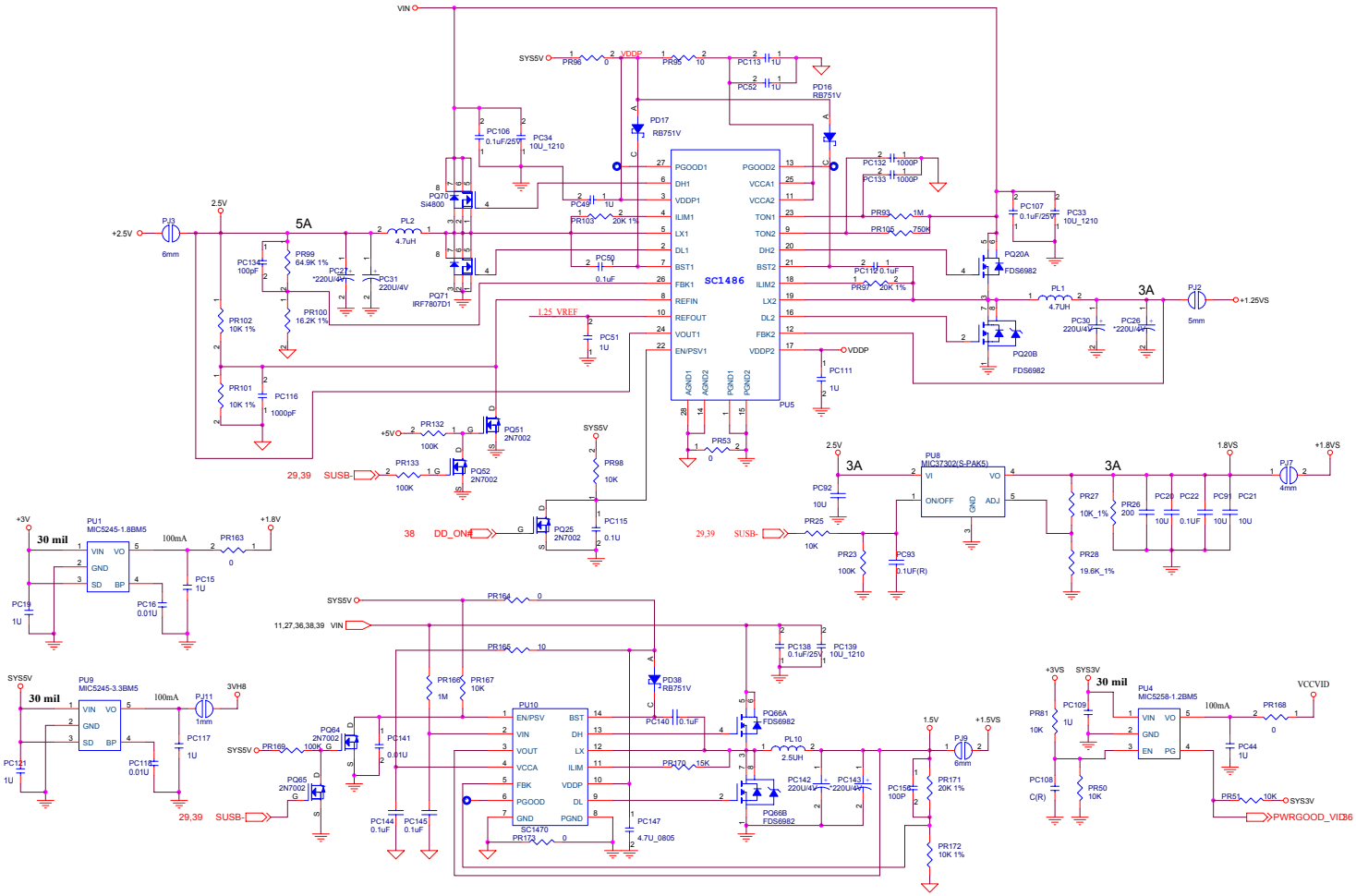
VCORE



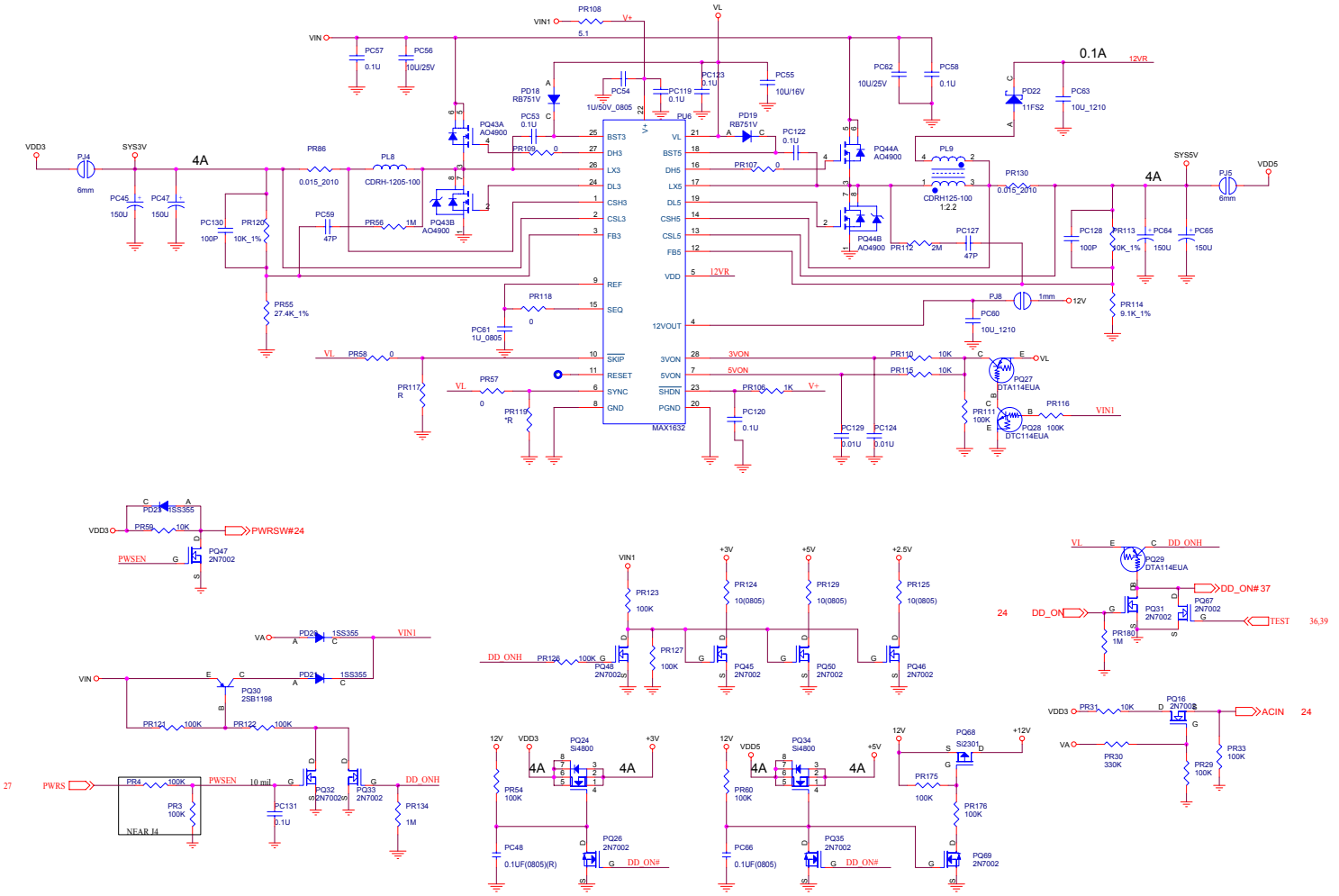
Sheet 36 of 41
VCORE

DDR Power

Sheet 37 of 41
DDR Power



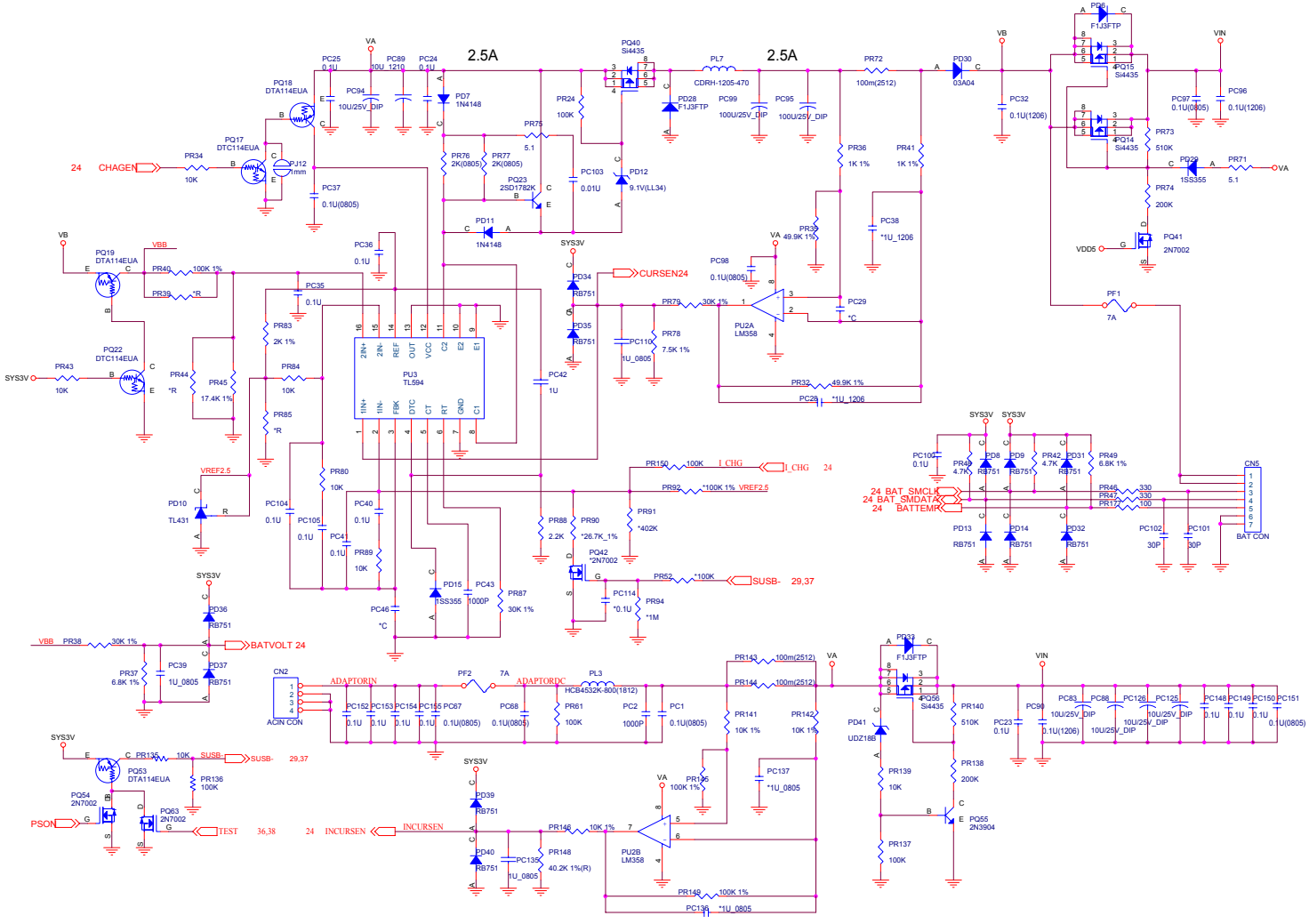
System Power



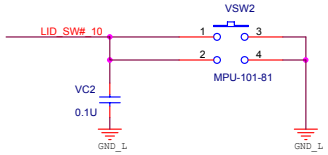
Sheet 38 of 41
System Power

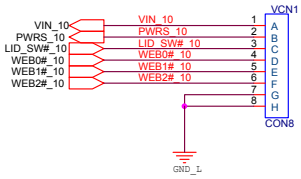
Charger

Sheet 39 of 41
Charger

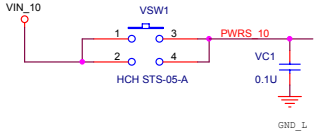


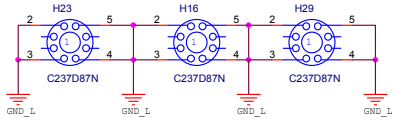
SW Board and HotKey

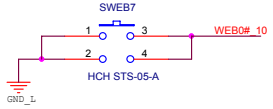


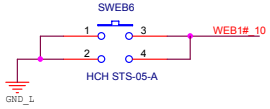


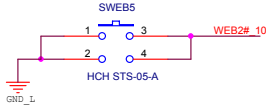
Hot keys,Power switch,key,Lid







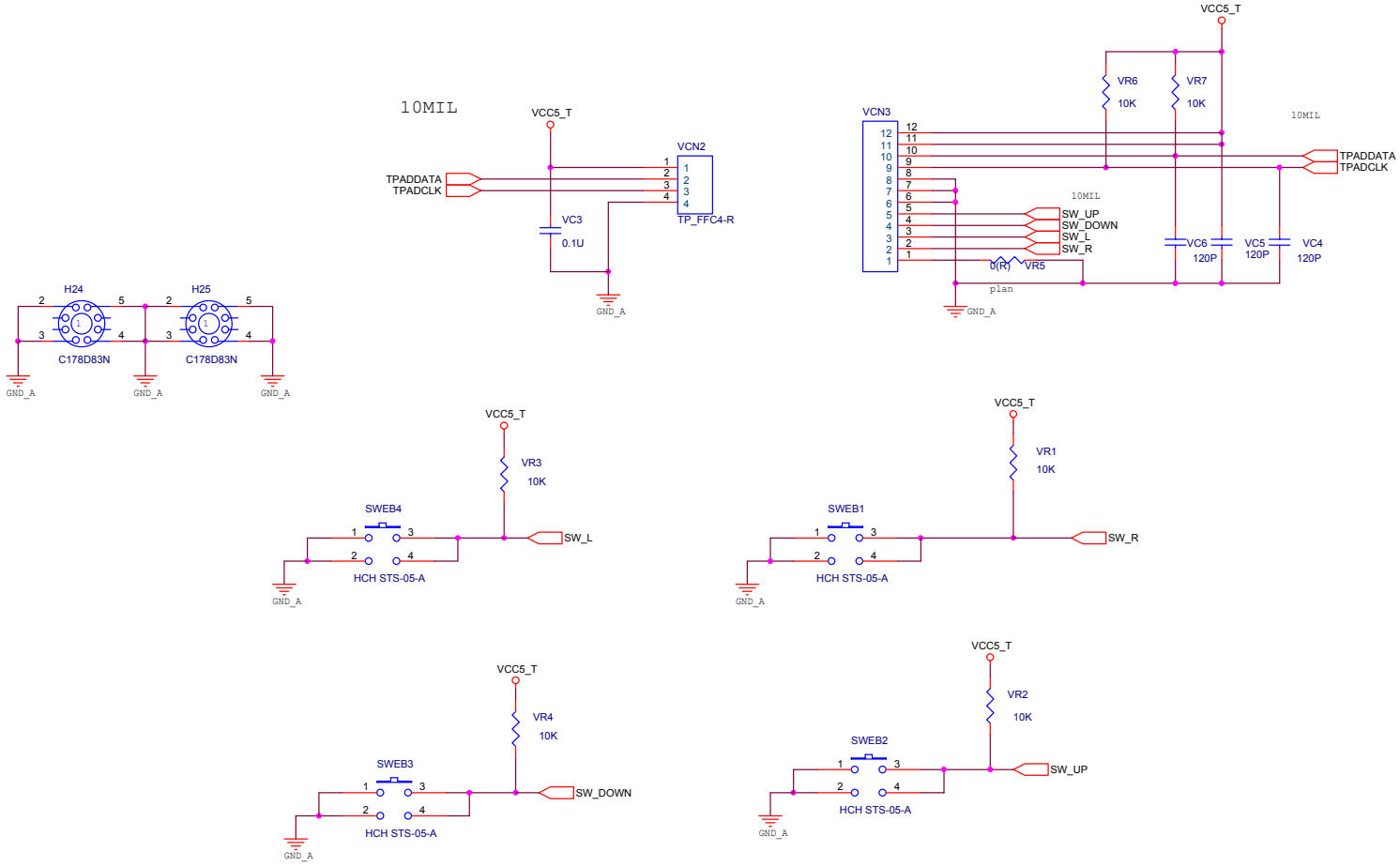




Sheet 40 of 41
SW Board and HotKey

TouchPad and Switch Board

Sheet 41 of 41
TouchPad and Switch 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 Floppy Disk.
- Reboot your computer from the FDD.
- Use the flash tools to update the flash BIOS.
- Restart the computer booting from the HDD.

1. Using your web browser go to **www.clevo.com.tw**
2. Choose **Download** from the menu bar at the top of the page.
3. In the **Driver** section select the model of your computer (**D400E/D410E Series**) and the driver type (**BIOS**).
4. Select **GO**.
5. Click on **D4xE_xxx.zip** to download the BIOS files (including BIOS refresh tools).

Unzip the file you have just downloaded on to a bootable floppy disk.

(*The files you should see on this disk are: Phlash.exe, autoexec.bat, Platform.bin, D4xE_xxx.ROM & Readme.txt)*

1. With the bootable floppy disk containing the BIOS files in your floppy drive, restart the computer.
2. The BIOS refresh process will execute automatically.
3. Reboot the computer and enter the BIOS setup.
4. Exit the BIOS and restore the default settings by choosing “Save and Exit”.