

# ***SERVICE MANUAL***

LP300

LCD PC



**LCD Computer**  
**LP300**  
**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 LCD 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.

Appendix A, Part Lists

Appendix B, Schematic Diagrams

Appendix C, Switches

Appendix D, Updating the FLASH ROM BIOS

## Related Documents

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

### User's Manual on CD

This describes the LCD 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 LCD PC.



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## Preface

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# 1: Introduction

## Overview

This manual covers the information you need to service or upgrade the LP300 LCD 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 LP300 LCD computer is designed to be upgradeable. See **“Disassembly” on page 2 - 1** for a detailed description of the upgrade procedures for each specific component. Please note the warning and safety information indicated by the “” symbol.

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

## Introduction

# System Specifications

## Processor

- Intel® Pentium® 4 (400MHz System Bus) - 1.4 ~ 2.0+GHz
- Supporting mPGA478 Processor Package

## Core Logic

- Intel® 850  
MCH = 82850  
ICH-2 = 82801BA

## Structure

- Fully PC 2001 Compliant
- ACPI 2.0 Compliant

## Security

- BIOS password

## Memory

- Two DIMM sockets supporting PC800 RDRAM
- DRAM upgradeable to 1GB (128/256/512MB RDRAM modules)

## BIOS

- 2MB Flash ROM Phoenix BIOS
- Supports Plug and Play, ACPI 2.0

## LCD

- 17"/18.1" SXGA 1280 \* 1024 LCD Panel



### Memory Module Warning

There **must** be a memory module present in **both** DIMM sockets to make sure the computer will boot up. The memory modules must be the same size and specification. The options are listed in the table below.

### Display

- ATI M6-P Integrated AGP™ 4X
- Integrated 128-bit 2D/3D Graphics Accelerator
  - Advanced HW Acceleration for DVD Playback (Motion Compensation engine and IDCT)
  - Fully DirectX 8 Compliant Graphics Engine
- External memory of 32MB or 64MB of DDR SGRAM on board (factory option)
- Dual-View Display Monitor

### Storage

- One 3.5" 1.44MB 3-mode FDD (slim type)
- One 3.5" HDD
- Two slim storage bays for CD Devices
  - Device Bay Right:** Changeable with CD-ROM/CD-RW/DVD/Combo drive
  - Device Bay Left:** Changeable with CD-ROM/CD-RW/DVD/Dummy or RF module

### Audio

- AC97' 2.2 compatible
- Two Built-In speakers (3W)
- Three audio jacks for headphone-out, line-in, and microphone-in

### PC Card Sockets

- Supports two Type II or one Type III PCMCIA slots
- Integrated IEEE 1394a controller

## Introduction

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### Interface

- One parallel port
- One D-sub 15-pin CRT port compliant DC1.1
- Four USB ports
- One IEEE 1394 port
- One RJ-45 jack for 100M/10M Ethernet LAN
- One RJ-11 port for Modem
- One Video-in for TV-tuner (Optional TV-tuner)
- One S-Video connector
- One SPDIF out port

### Communication

- 802.11b Wireless LAN (Optional)
- One RJ-11 port for Modem
- One RJ-45 port for 10/100Mbps Ethernet

### Power Management

- ACPI v1.0 Compliant

### Power

- Internal switching power supply
- Full range AC adapter - AC in 90~264V, 160W

### Indicators

- LED indicators (HDD/FDD activity, status indicators)

### Environmental Spec

- |                               |                          |
|-------------------------------|--------------------------|
| • Temperature                 | Relative Humidity        |
| • Operating: 5°C ~ 35°C       | Operating: 20% ~ 80%     |
| • Non-Operating: -10°C ~ 60°C | Non-Operating: 10% ~ 90% |

## Physical Dimensions

- 460mm (H) \* 448 mm (W) \* 220mm (D)

## Weight

- 13.9Kg w/o Bay 2 device installed

## Optional

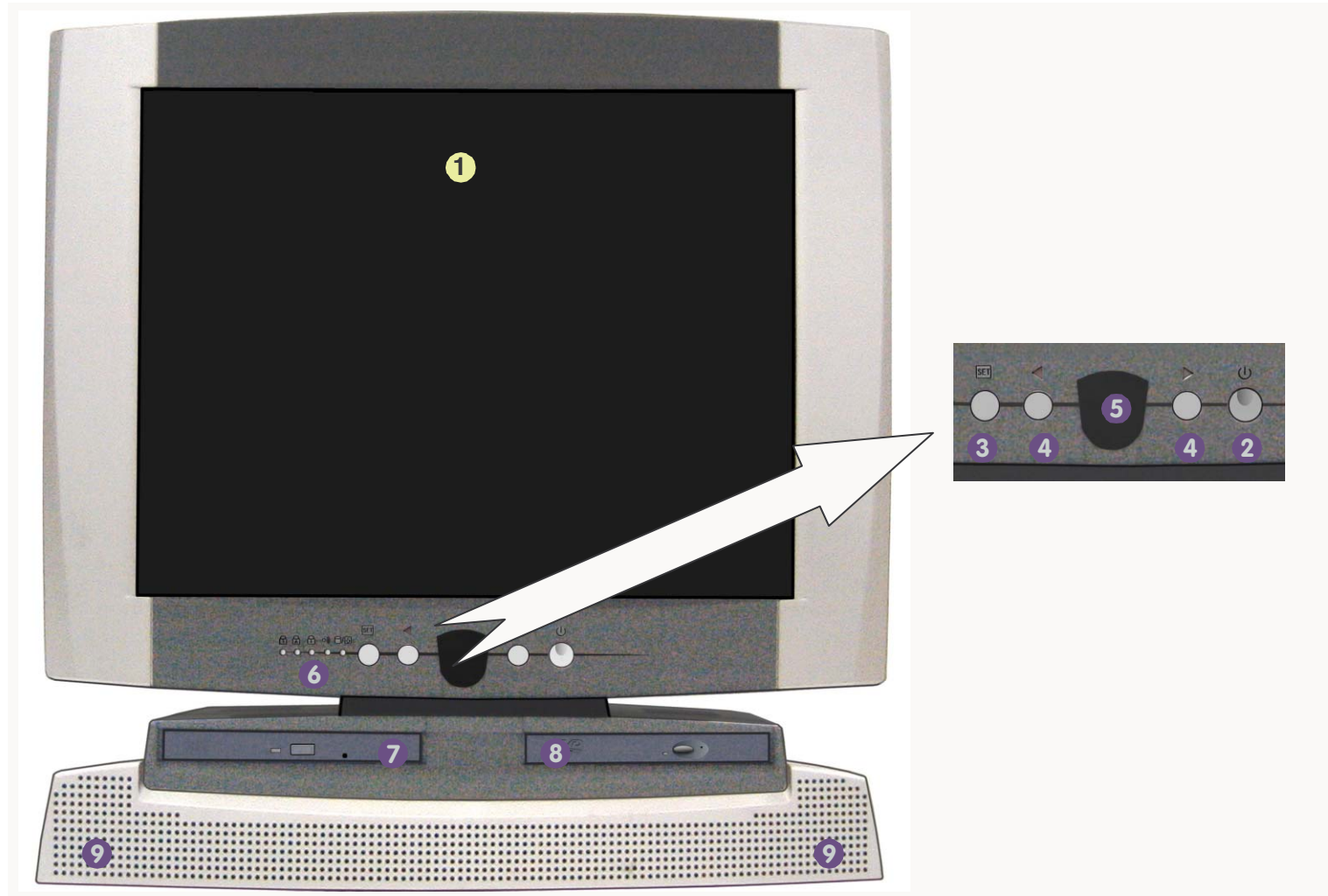
- IR Keyboard
- Wireless LAN Module
- RF Module for wireless Keyboard / Mouse

## Introduction

### External Locator - Top View

Figure 1 - 1  
Top View

1. LCD Panel
2. Power Button
3. Set Button
4. Scroll Buttons
5. Infrared Receiver
6. LED Status Indicators
7. Device Bay Left (for CD/CD-RW/ DVD device/RF module or Dummy Bay)
8. Device Bay Right (for CD/CD-RW/ DVD/Combo drive)
9. Speakers



## External Locator - Left & Right Side Views



*Figure 1 - 2*  
**Left & Right Views**

1. Floppy Disk Drive
2. Hard Disk Drive Bay
3. AC Power-In
4. Dual USB Ports
5. Kensington Lock Slot
6. Headphone-Out Jack
7. Line-In Jack
8. Microphone-In Jack
9. Volume Control Knob
10. PC Card Eject Buttons
11. Dual PC Card Slots



## Introduction

### External Locator - Right Side & Bottom Views

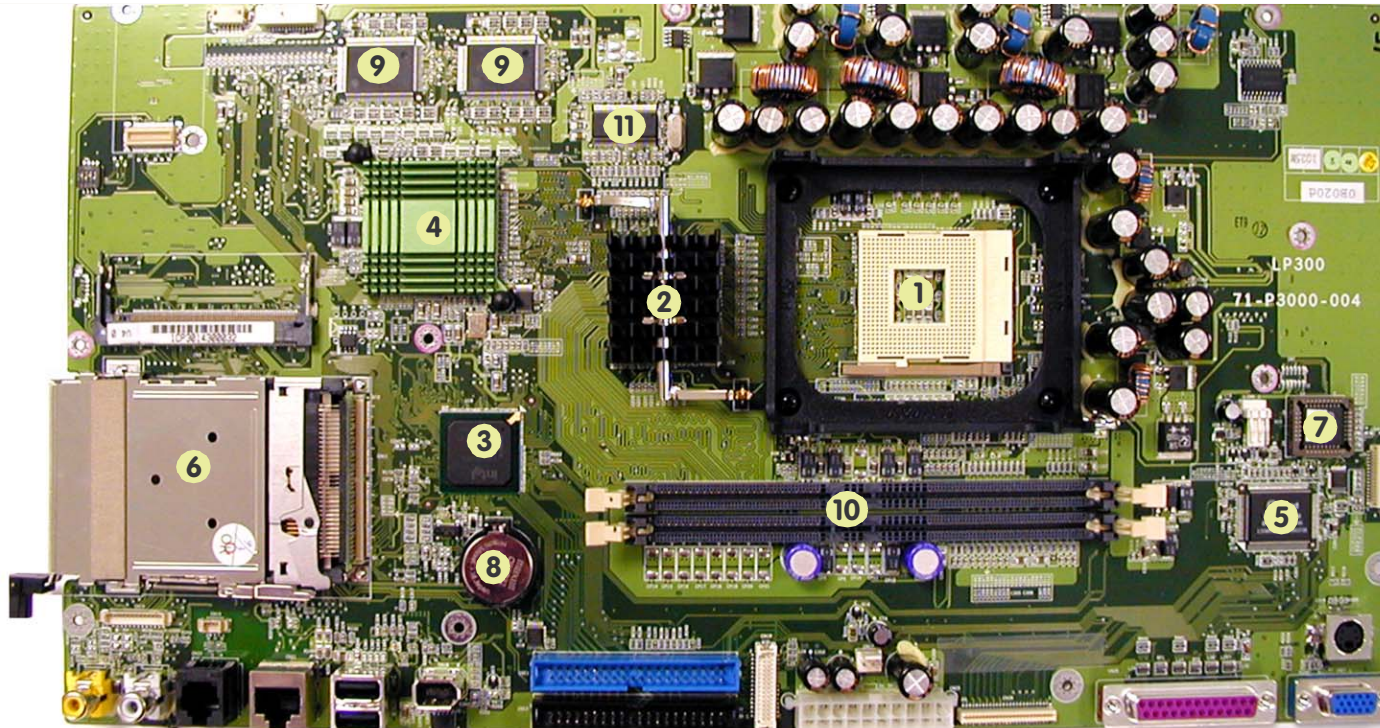
*Figure 1 - 3*  
**Right Side**

1. Video-In Port
2. S/PDIF Out Port
3. RJ-11 Phone Jack
4. RJ-45 LAN Jack
5. Dual USB Ports
6. Unpowered - IEEE 1394 Port
7. Printer/Parallel Port
8. External Monitor (CRT) Port
9. S-Video Connector
10. Vents



## Mainboard Overview - Top

### Key Parts



*Figure 1 - 4*  
**Mainboard  
Overview - Top  
Key Parts**

1. CPU Socket (no CPU Installed)
2. Northbridge Intel MCH 82850 615 OLGA
3. Southbridge Intel ICH-2 82801 BA 360 EBGA
4. VGA - ATI Mobility M6-P
5. W83627HF-AM Super I/O Controller
6. PCMCIA
7. W49V002FAP Firmware Hub
8. CMOS Battery
9. On-Board Video Memory
- 10.2 \* DIMM Sockets
11. Clock Generator

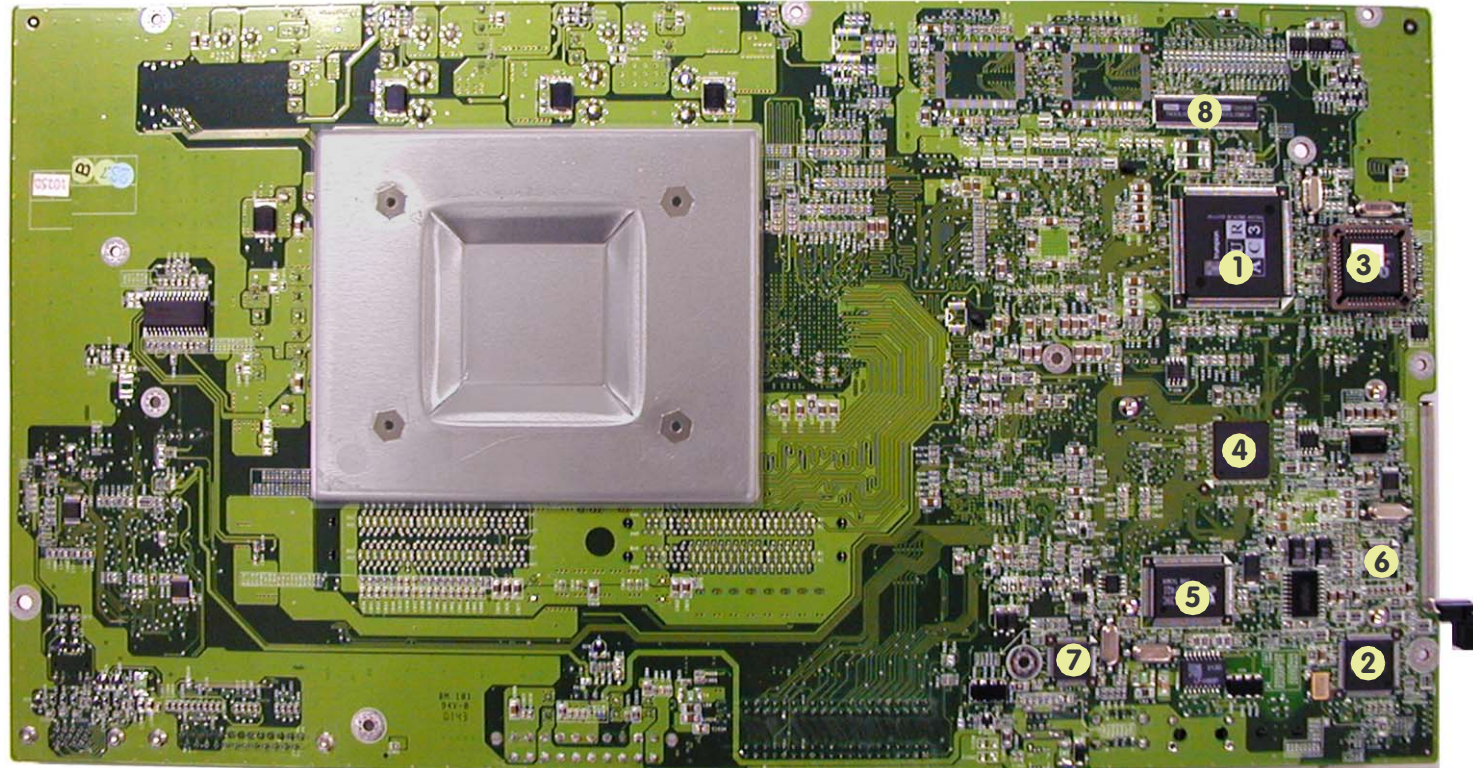


## Introduction

*Figure 1 - 5*  
**Mainboard  
Overview - Bottom  
Key Parts**

1. AC97 MDC Module
2. SAA7114 A/D (Analog to Digital)
3. Micro-P (OSD) W78E62BP
4. 1394a Integrated Cardbus Controller
5. RTL8139C LAN Controller
6. ALC201 - AC 97 Audio Codec
7. TSB41AB1 - 1394 PHY
8. TH63LVDM83A - LVDS

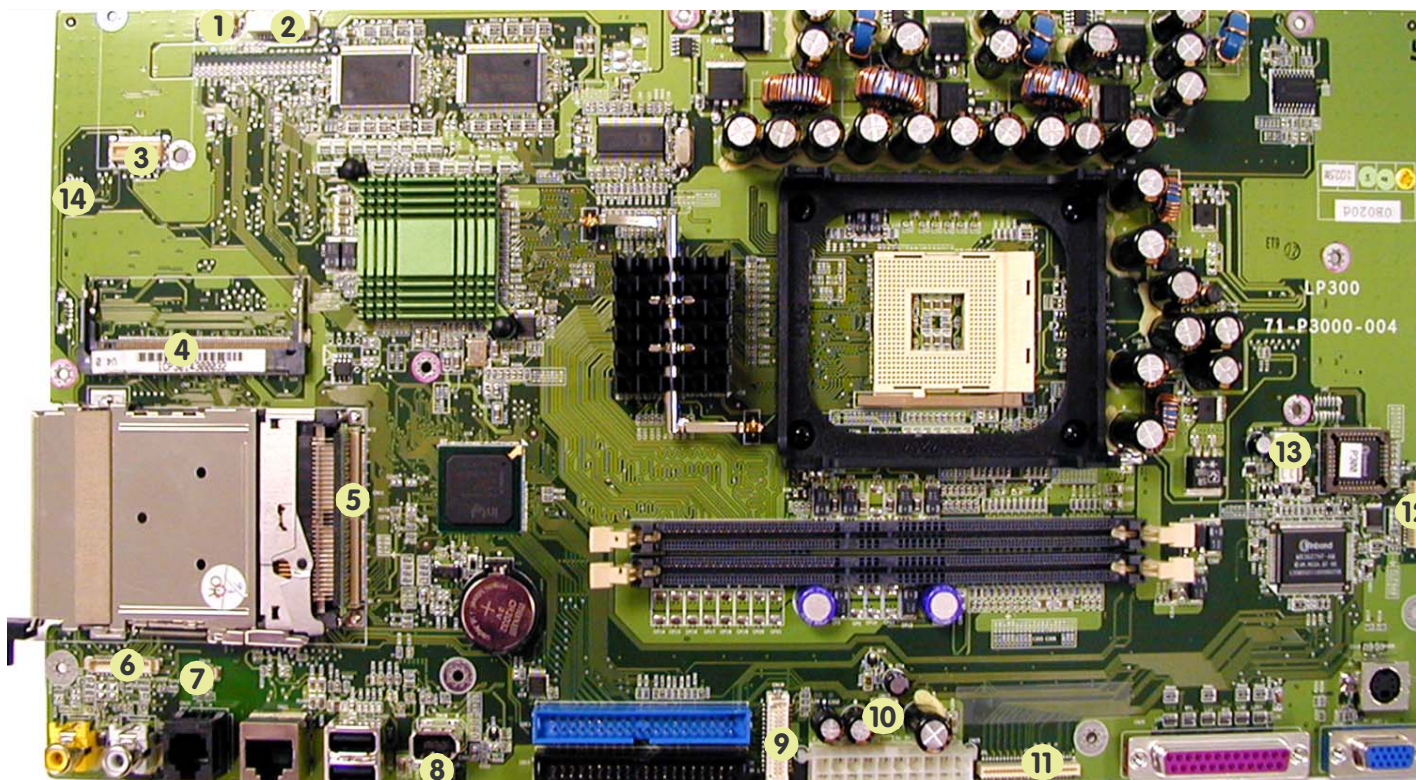
## Mainboard Overview - Bottom Key Parts





## Mainboard Overview - Top

### Cable Connectors and Switches



*Figure 1 - 6*  
**Mainboard Top  
Cable Connectors  
& Switches**

1. CN1(12V LCD Cable)
2. CN2 (3V or 5V LCD Cable)
3. CN3 (Modem Module)
4. CN5 (Wireless Lan Module)
5. CN11 (PCMCIA Module)
6. CN14 (Audio Cable)
7. CN15 (Modem Cable)
8. CN29 (Inverter Board)
9. CN19 (Bridge Board Cable)
10. CN17 (System Fan Cable)
11. CN28 (FDD Cable)
12. CN29 (LED Board)
13. CN8 (CPU Fan Cable)
14. SW1 (DIP Switch - "Settings" on page C - 2)




## 2: Disassembly


### Overview

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

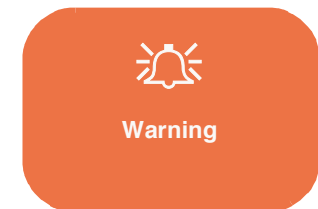
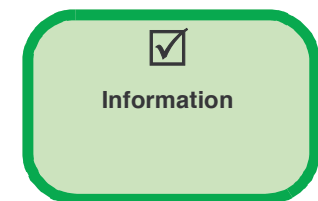
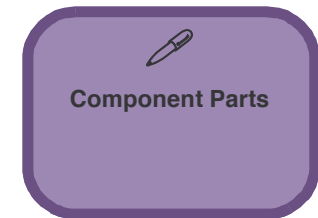
We suggest you completely review any procedure before you take the computer apart.

Procedures such as upgrading/replacing the RAM, 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.

Examples of these types of boxes are shown in the sidebar.



## Disassembly

**NOTE:** ALL DISASSEMBLY PROCEDURES ASSUME THAT THE SYSTEM IS TURNED **OFF**, DISCONNECTED FROM ANY POWER SUPPLY, AND THAT ALL PERIPHERAL CABLES ARE DISCONNECTED (INCLUDING TELEPHONE LINES AND NETWORK CABLES).

### Maintenance Tools

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

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

### Connections

Connections within the computer are one of four types:

Locking collar sockets for ribbon connectors

To release these connectors, use a small flat-head screwdriver to gently pry the locking collar away from its base. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.

Pressure sockets for multi-wire connectors

To release this connector type, grasp it at its head and gently rock it from side to side as you pull it out. Do not pull on the wires themselves. When replacing the connection, do not try to force it. The socket only fits one way.

Pressure sockets for ribbon connectors

To release these connectors, use a small pair of needle-nose pliers to gently lift the connector away from its socket. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.

Board-to-board or multi-pin sockets

To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - use just enough force to start.

## Maintenance Precautions

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

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

## Cleaning

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

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



## Disassembly Steps

The following 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 hard disk drive assembly:

- 1.Remove the hard disk drive assembly page 2 - 10

### To remove the CD device(s):

- 1.Remove the CD Device page 2 - 11

### To remove the RF module:

- 1.Remove the RF module page 2 - 12

### To remove the system memory:

- 1.Remove the LCD hinge cover page 2 - 14
- 2.Remove the IDE shielding plate page 2 - 14
- 3.Remove the LCD back cover page 2 - 15
- 4.Remove the LCD shielding plate page 2 - 16
- 5.Remove the system memory page 2 - 16

### To remove the CPU:

- 1.1.Remove the LCD hinge cover page 2 - 14
- 2.Remove the IDE shielding plate page 2 - 14
- 3.Remove the LCD back cover page 2 - 15
- 4.Remove the LCD shielding plate page 2 - 16
- 5.Remove the CPU page 2 - 17



#### Memory Module Warning

There **must** be a mem-ory module present in **both** DIMM sockets to make sure the compu-ter will boot up. The memory modules must be the same size and specification. The op-tions are listed in the table below.

### To remove the modem:

- 1.Remove the LCD hinge cover page 2 - 14
- 2.Remove the IDE shielding plate page 2 - 14
- 3.Remove the LCD back cover page 2 - 15
- 4.Remove the LCD shielding plate page 2 - 16
- 5.Remove the modem page 2 - 19

### To remove the floppy disk drive assembly:

- 1.Remove the LCD hinge cover page 2 - 14
- 2.Remove the IDE shielding plate page 2 - 14
- 3.Remove the LCD back cover page 2 - 15
- 4.Remove the LCD shielding plate page 2 - 16
- 5.Remove the FDD page 2 - 20

### To remove the optional wireless LAN module:

- 1.Remove the LCD hinge cover page 2 - 14
- 2.Remove the IDE shielding plate page 2 - 14
- 3.Remove the LCD back cover page 2 - 15
- 4.Remove the LCD shielding plate page 2 - 16
- 5.Remove the Wireless LAN module page 2 - 21

### To remove the inverter board:

- 1.Remove the LCD hinge cover page 2 - 14
- 2.Remove the IDE shielding plate page 2 - 14
- 3.Remove the LCD back cover page 2 - 15
- 4.Remove the LCD shielding plate page 2 - 16
- 5.Remove the inverter board page 2 - 23

## Disassembly

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### To remove the mainboard:

- |   |             |
|---|-------------|
| 1.Remove the LCD hinge cover              | page 2 - 14 |
| 2.Remove the IDE shielding plate          | page 2 - 14 |
| 3.Remove the LCD back cover               | page 2 - 15 |
| 4.Remove the LCD shielding plate          | page 2 - 16 |
| 5.Remove the system memory                | page 2 - 13 |
| 6.Remove the CPU                          | page 2 - 17 |
| 7.Remove the modem                        | page 2 - 19 |
| 8.Remove the optional wireless LAN module | page 2 - 21 |
| 9.Remove the I/O bracket                  | page 2 - 22 |
| 10.Remove the rear bracket                | page 2 - 22 |
| 11.Remove the inverter board              | page 2 - 23 |
| 12.Remove the mainboard                   | page 2 - 24 |

### To remove the LCD/LED board:

- |   |             |
|---|-------------|
| 1.Remove the LCD hinge cover              | page 2 - 14 |
| 2.Remove the IDE shielding plate          | page 2 - 14 |
| 3.Remove the LCD back cover               | page 2 - 15 |
| 4.Remove the LCD shielding plate          | page 2 - 16 |
| 5.Remove the system memory                | page 2 - 13 |
| 6.Remove the CPU                          | page 2 - 17 |
| 7.Remove the modem                        | page 2 - 19 |
| 8.Remove the optional wireless LAN module | page 2 - 21 |
| 9.Remove the I/O bracket                  | page 2 - 22 |
| 10.Remove the rear bracket                | page 2 - 22 |
| 11.Remove the inverter board              | page 2 - 23 |
| 12.Remove the mainboard                   | page 2 - 24 |
| 13.Remove the LCD                         | page 2 - 26 |
| 14.Remove the LED board                   | page 2 - 27 |

### To remove the base cover:

- |  |             |
|--|-------------|
| 1.Remove the LCD hinge cover                 | page 2 - 14 |
| 2.Remove the IDE shielding plate             | page 2 - 14 |
| 3.Remove the LCD back cover                  | page 2 - 15 |
| 4.Separate the bottom case from the LCD etc. | page 2 - 25 |
| 5.Remove the base cover                      | page 2 - 28 |

## Disassembly

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### To remove the speaker units:

- |  |             |
|--|-------------|
| 1.Remove the LCD hinge cover                 | page 2 - 14 |
| 2.Remove the IDE shielding plate             | page 2 - 14 |
| 3.Remove the LCD back cover                  | page 2 - 15 |
| 4.Separate the bottom case from the LCD etc. | page 2 - 25 |
| 5.Remove the base cover                      | page 2 - 28 |
| 6.Remove the speaker units                   | page 2 - 29 |

### To remove the bridge board:

- |  |             |
|--|-------------|
| 1.Remove the LCD hinge cover                 | page 2 - 14 |
| 2.Remove the IDE shielding plate             | page 2 - 14 |
| 3.Remove the LCD back cover                  | page 2 - 15 |
| 4.Separate the bottom case from the LCD etc. | page 2 - 25 |
| 5.Remove the base cover                      | page 2 - 28 |
| 6.Remove the speaker units                   | page 2 - 29 |
| 7.Remove the bridge board                    | page 2 - 29 |

### To remove the CD device base brackets:

- |  |             |
|--|-------------|
| 1.Remove the LCD hinge cover                 | page 2 - 14 |
| 2.Remove the IDE shielding plate             | page 2 - 14 |
| 3.Remove the LCD back cover                  | page 2 - 15 |
| 4.Separate the bottom case from the LCD etc. | page 2 - 25 |
| 5.Remove the base cover                      | page 2 - 28 |
| 6.Remove the speaker units                   | page 2 - 29 |
| 7.Remove the bridge board                    | page 2 - 29 |
| 8.Remove the CD device base brackets         | page 2 - 30 |

**To remove the USB board:**

- |  |             |
|--|-------------|
| 1.Remove the LCD hinge cover                 | page 2 - 14 |
| 2.Remove the IDE shielding plate             | page 2 - 14 |
| 3.Remove the LCD back cover                  | page 2 - 15 |
| 4.Separate the bottom case from the LCD etc. | page 2 - 25 |
| 5.Remove the base cover                      | page 2 - 28 |
| 6.Remove the speaker units                   | page 2 - 29 |
| 7.Remove the bridge board                    | page 2 - 29 |
| 8.Remove the CD device base brackets         | page 2 - 30 |
| 9.Remove the USB board                       | page 2 - 30 |

**To remove the power supply unit:**

- |  |             |
|--|-------------|
| 1.Remove the LCD hinge cover                 | page 2 - 14 |
| 2.Remove the IDE shielding plate             | page 2 - 14 |
| 3.Remove the LCD back cover                  | page 2 - 15 |
| 5.Separate the bottom case from the LCD etc. | page 2 - 25 |
| 6.Remove the base cover                      | page 2 - 28 |
| 7.Remove the speaker units                   | page 2 - 29 |
| 8.Remove the bridge board                    | page 2 - 29 |
| 9.Remove the CD device base brackets         | page 2 - 30 |
| 10.Remove the power supply unit              | page 2 - 31 |

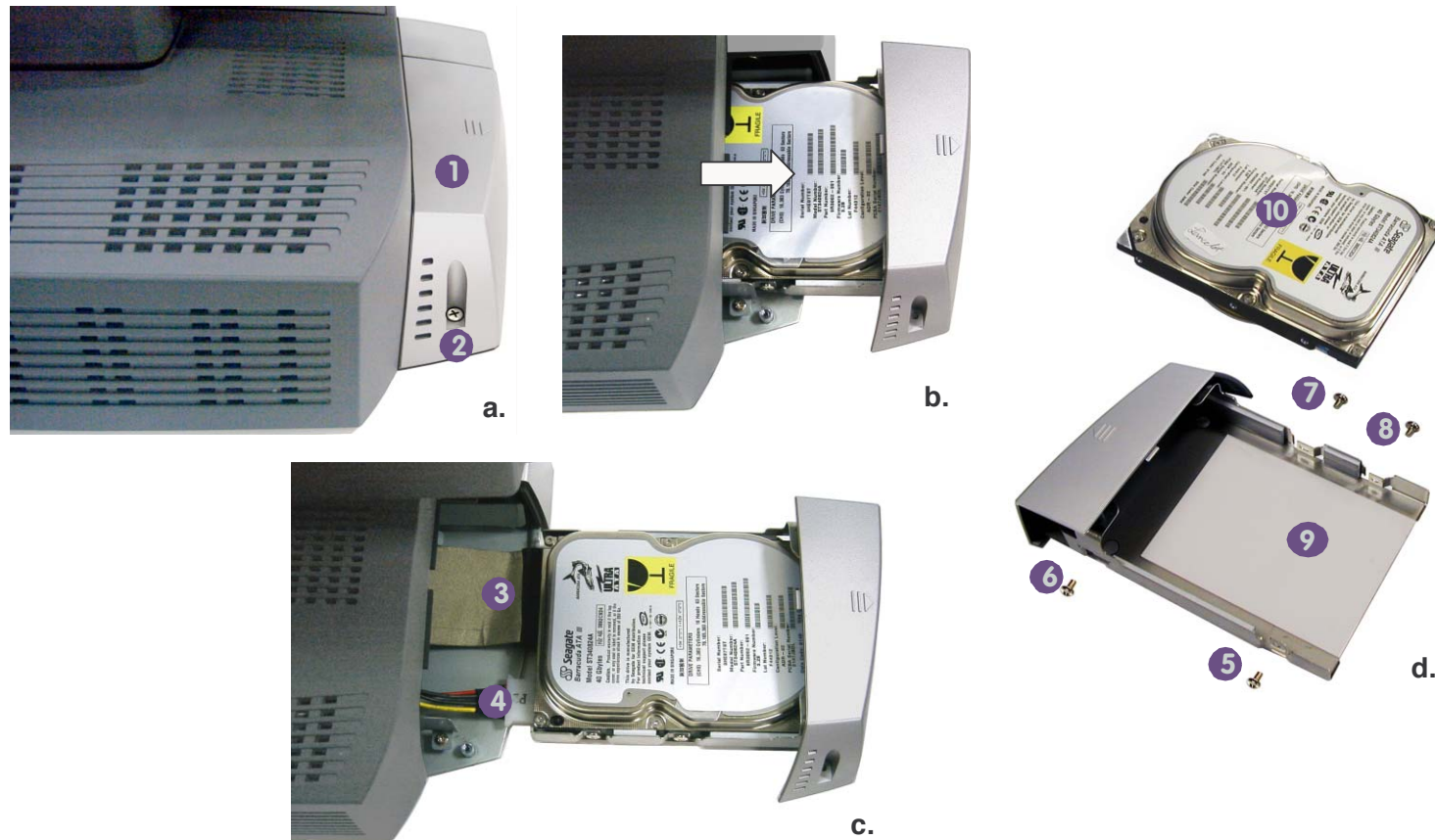
## Disassembly

*Figure 2 - 1*  
**Hard Disk Removal Sequence**

- a. Remove the screw from the HDD Bay.
- b. Pull the HDD assembly out.
- c. Disconnect the IDE and power cables.
- d. Remove the screws from the assembly and slide the hard disk out of the case.

## Removing the Hard Disk Drive Assembly

1. Turn **off** the computer and turn it around so that you may comfortably access the left side..
2. Remove screw "2" from the HDD Bay "1" (**Figure 2 - 1a**).
3. Carefully pull the HDD Assembly out from the bay (**Figure 2 - 1b**) and disconnect the IDE cable "3", and power cable "4" (**Figure 2 - 1c**).
4. Remove screws "5" - "8" from the assembly, and slide the hard disk "9" out of the case "10".

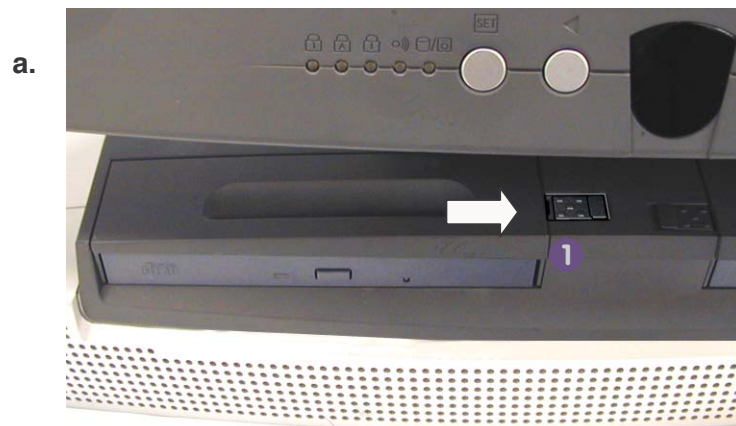


9. HDD case  
10. HDD

- 5 Screws

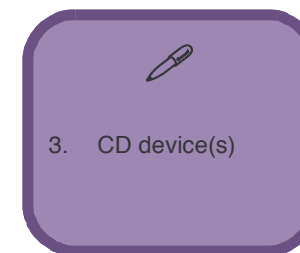
## Removing the CD Devices

1. Turn **off** the computer and pull the LCD up and forward to allow easier access to the latches “1” & “2”.
2. Slide the latches to unlock the drives and hold in place as you pull the drive out of the bay (the left bay latch slides to the right. the right bay to the right).
3. Pull the CD-device(s) "3" out of the bay(s).



*Figure 2 - 2*  
**CD Device  
Removal  
Sequence**

- a. Slide the latch and hold in place.
- b. Pull the drive out of the bay.





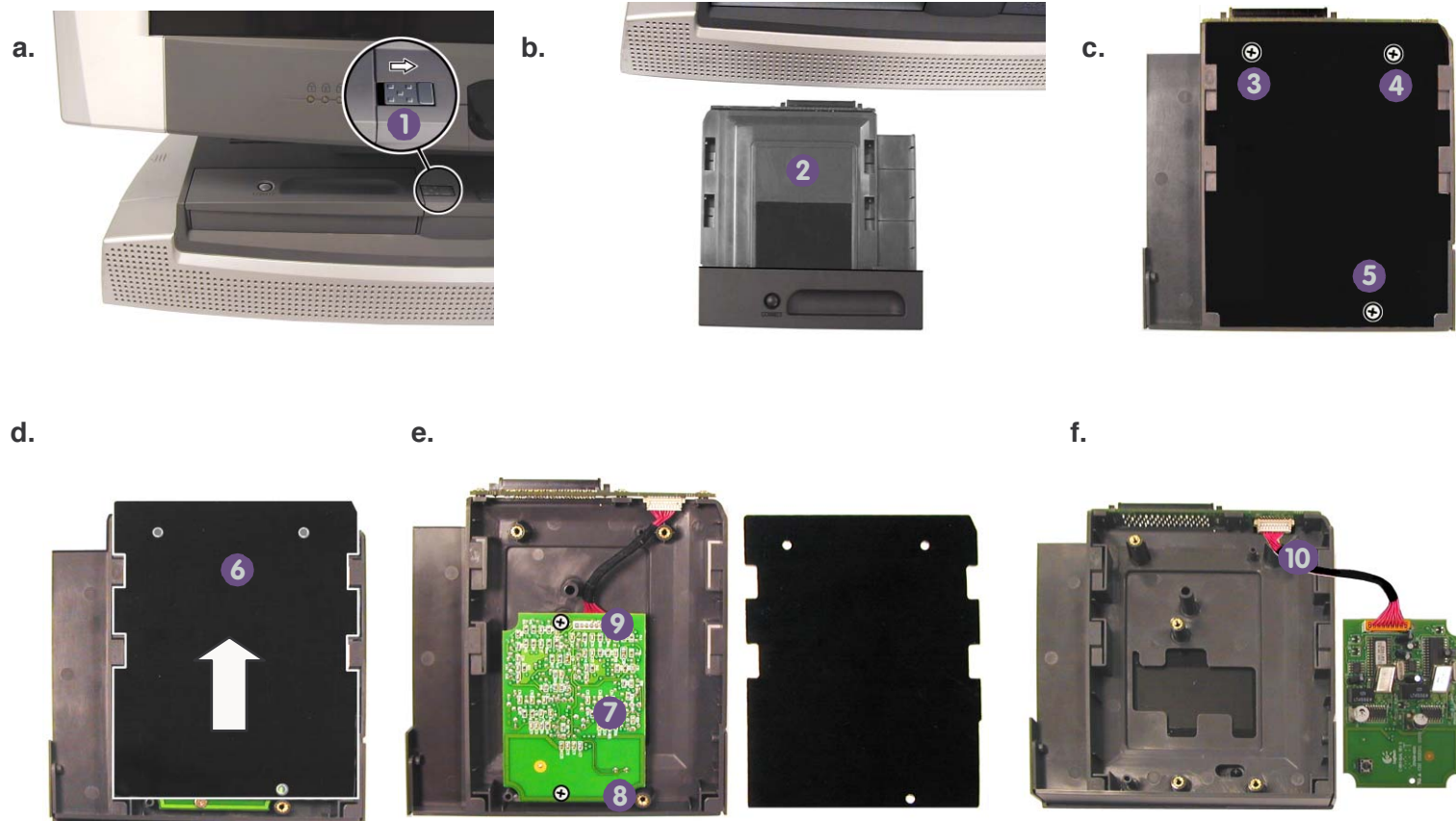
## Disassembly


*Figure 2 - 3*  
**RF Module  
Removal  
Sequence**

- Slide the latch and hold in place.
- Pull the module case out of the bay.
- Remove the three screws from the case cover.
- Remove the case cover.
- If there is an RF module in the case remove the screws.
- Remove the cable and RF module.

## Removing the RF Module

1. Turn **off** the computer and pull the LCD up and forward to allow easier access to the latch "1".
2. Slide the latch to unlock the module case and hold in place as you pull the case out of the bay (the left bay latch slides to the right).
3. Pull the RF module "2" case out of the bay.
4. Turn the case over and remove screws "3" - "5", then remove the case cover "6".
5. If there is an RF module "7" into the case, remove screws at positions "8" and "9" and disconnect cable "10".



- 
2. RF module case
  7. Optional RF module
- 5 screws (if module is included)

## Removing the System Memory

The computer can accommodate up to 1GB of memory in two DIMM sockets. It supports 128/256/512MB modules of PC800 RDRAM specification.

| Socket 1 | Socket 2 | Total RAM |
|----------|----------|-----------|
| 128MB    | 128MB    | 256MB     |
| 256MB    | 256MB    | 512MB     |
| 512MB    | 512MB    | 1024MB    |



### Memory Module Warning

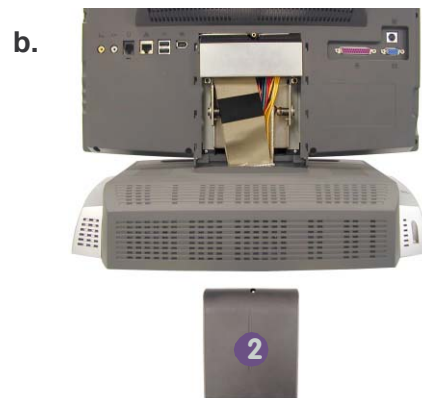
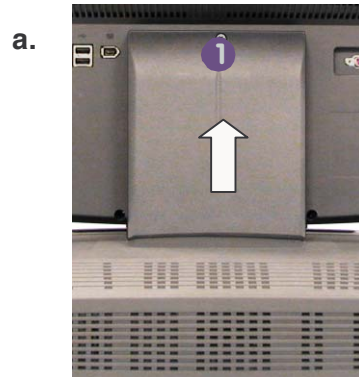
There **must** be a memory module present in **both** DIMM sockets to make sure the computer will boot up. The memory modules must be the same size and specification. The options are listed in the table below.

Table 2 - 1  
RAM Options

## Disassembly

*Figure 2 - 4*  
**Memory Removal Sequence**

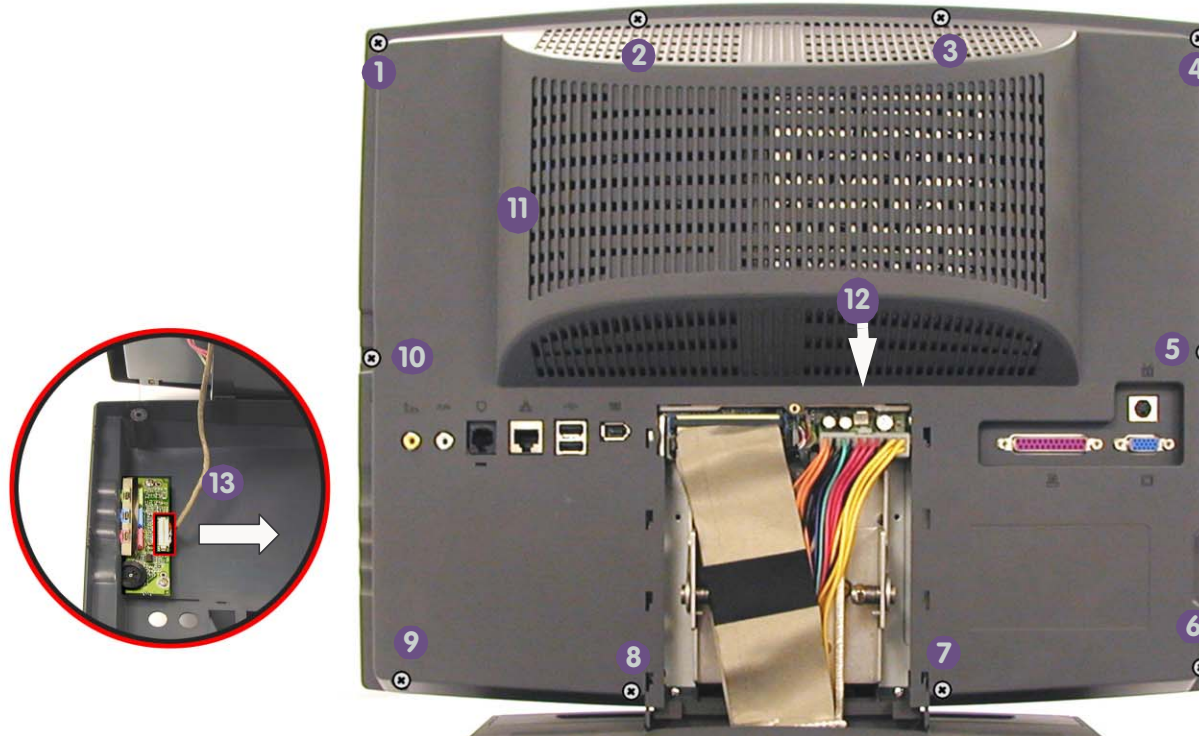
- a. Remove the screw from the LCD hinge cover.
  - b. Slide off the LCD hinge cover.
  - c. Remove the IDE shielding plate screws.
  - d. Ease the IDE shielding plate out of the computer.
1. Turn **off** the computer and place it with its LCD display facing down on a clean, dry, level surface.
  2. Remove screw "1" (**Figure 2 - 4a**) from the rear of the computer and slide the LCD hinge cover "2" (**Figure 2 - 4b**) up towards the top of the computer and remove it.
  3. Remove screws "3" and "4" (**Figure 2 - 4c**) from the IDE shielding plate "5" (**Figure 2 - 4d**) and carefully ease the IDE shielding plate out of the computer.



1. LCD hinge cover
2. IDE shielding plate

*Figure 2 - 5*  
**Memory Removal Sequence (Cont..)**

- Remove the screws from the LCD back cover. Ease up the back cover and disconnect the fan and audio cables, then lift the back cover away
- Remove the screws from the back of the LCD shielding plate.
- Slide the shielding plate forward and lift away from the main assembly.
- The memory socket will now be visible.



**Fan Cable**

Later models will not include the fan cable, and therefore this step may be ignored.



11. LCD back cover

- 10 Screws



## Disassembly

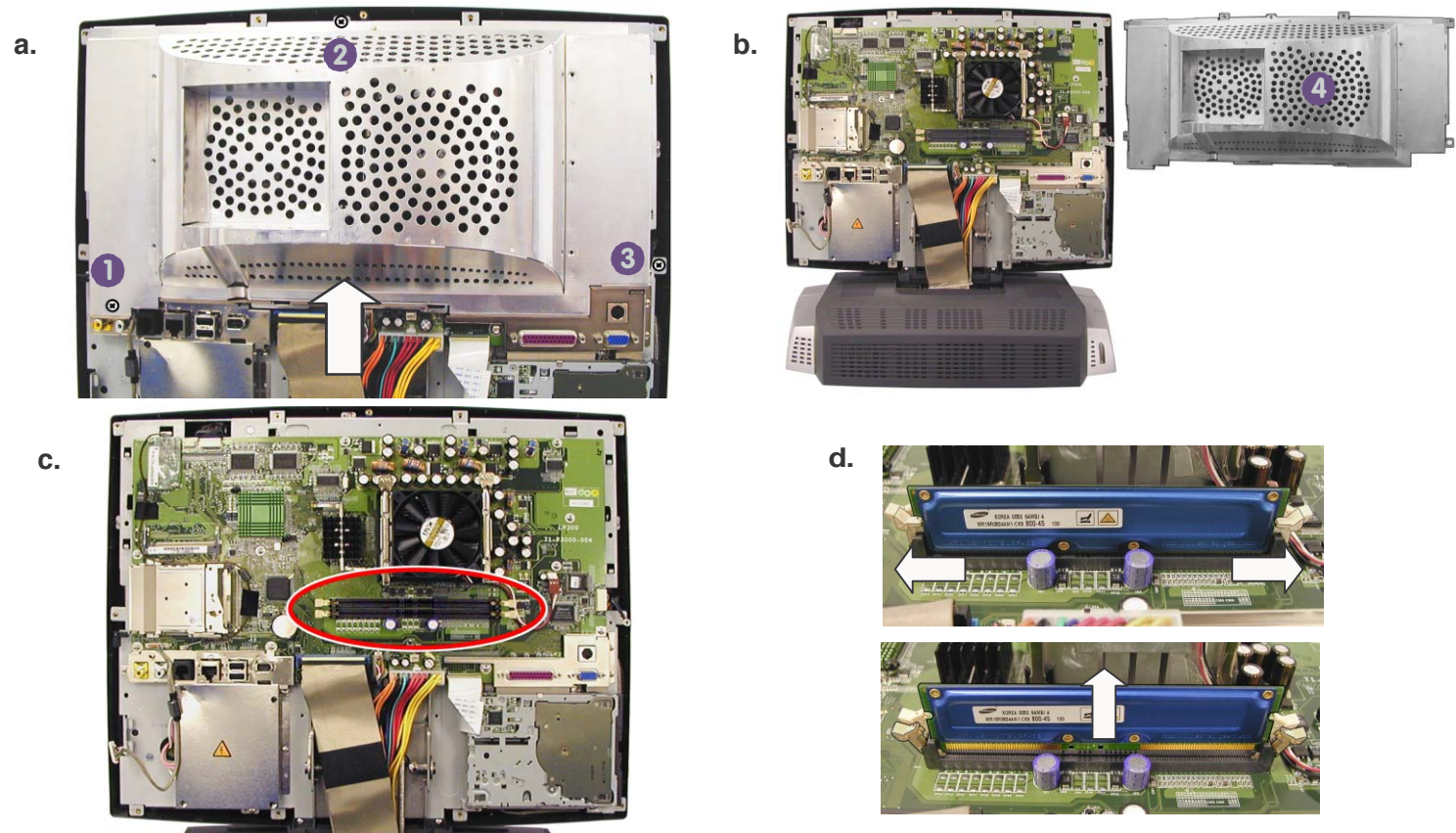
*Figure 2 - 6*  
**Memory Removal Sequence (Cont.)**

- a. Remove the screws from the back of the LCD shielding plate.
- b. Slide the shielding plate forward and lift away from the main assembly.
- c. The memory socket(s) will now be visible
- d. Pull the latches to release the module(s).
- d. Remove the memory module(s).

4. LCD shielding plate

- 3 screws

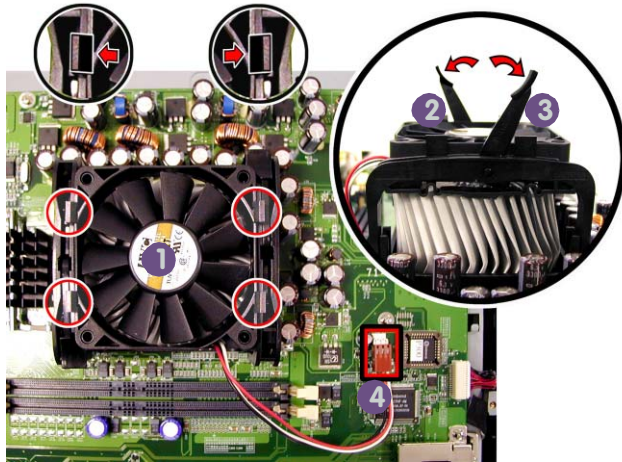
7. With the cables disconnected, lift the LCD back cover case away.
8. Remove screws "1"- "3" (**Figure 2 - 5ab**) from the LCD shielding plate.
9. Slide the LCD shielding plate "4" forward and lift it up and away from the main assembly.
10. The memory sockets will now be visible at point "18" (**Figure 2 - 5d**) on the mainboard
11. For each module you want to replace, gently pull the two latches toward the sides of the socket to release the module.
12. Remove the memory module(s).



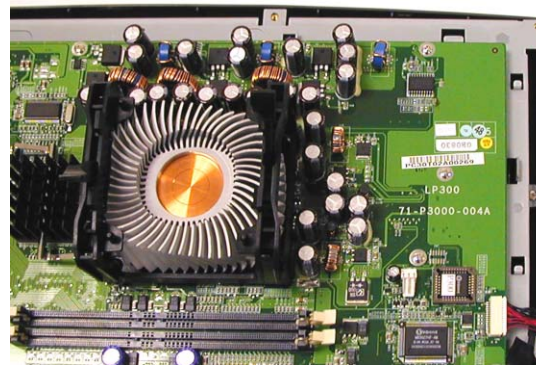
## Removing the CPU

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on page **2 - 14** to reveal the CPU heat sink and fan unit **"1"** in **Figure 2 - 7a**.
2. Release the latches from the top of the CPU heat sink and fan unit as indicated in **Figure 2 - 7a**, then remove the power cable **"4"** from the board and lift the fan unit away.
3. Release the heat sink as indicated in **Figure 2 - 7c**., and remove it.

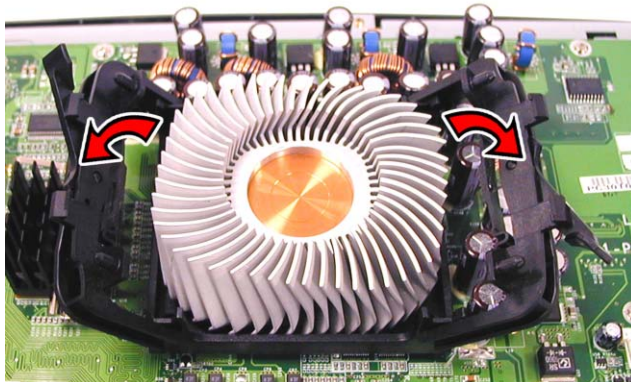
a.



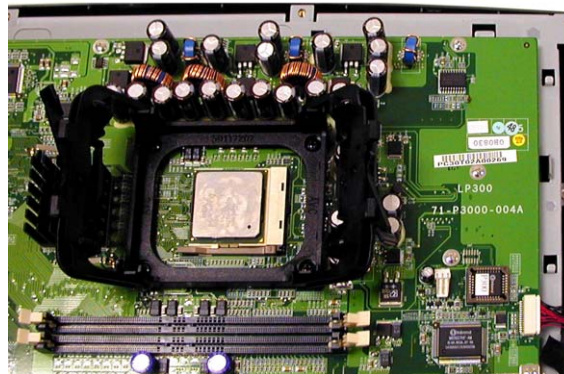
b.



c.



d.



*Figure 2 - 7*  
**CPU Removal Sequence**

- Release the latches from the top of the CPU heat sink and fan unit.
- Remove the power cable and lift the fan unit away
- Release the heat sink.
- Remove the heat sink.



**Caution**

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



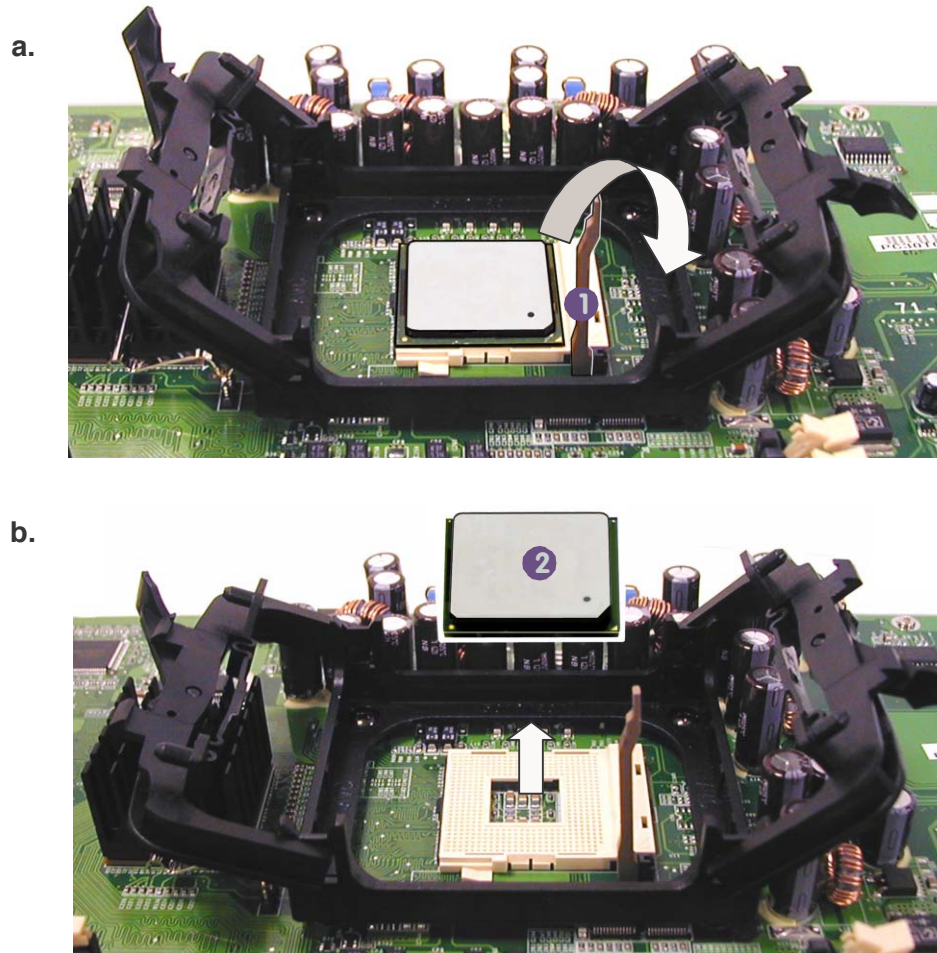
1. CPU Fan Unit
5. Heat Sink



## Disassembly

*Figure 2 - 8*  
**CPU Removal  
Sequence  
(Cont.)**

- a. Lift the latch to unlock the CPU.
  - b. Lift the CPU out of the socket.
4. Lift latch "1" in the direction indicated in **Figure 2 - 8a** to unlock the CPU.
  5. Carefully (it may be hot) lift the CPU up out of the socket.
  6. When re-inserting the CPU pay careful attention to the pin alignment, it will fit only one way (don't force it!).

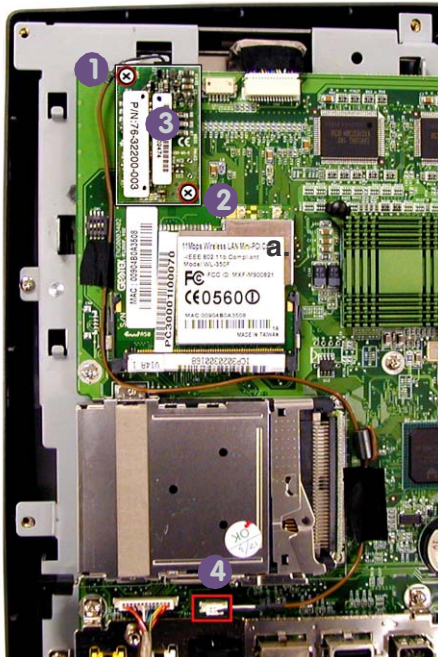


2. CPU

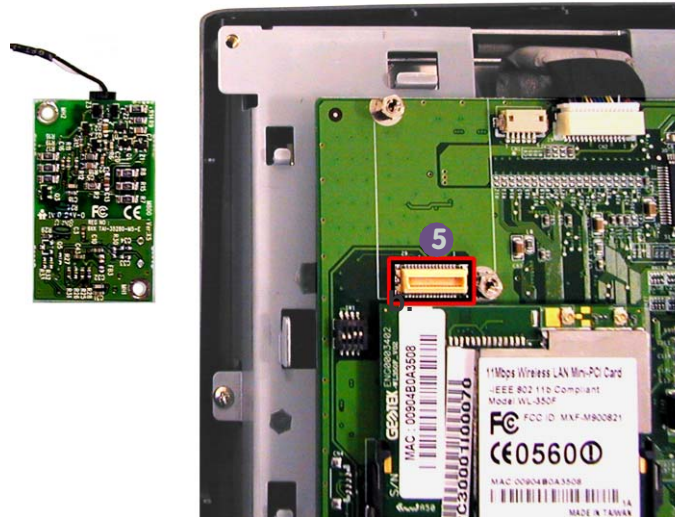
## Removing the Modem

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on page 2 - 14.
2. Remove screws “**1**” and “**2**” from the modem module “**3**”, then disconnect the modem cable “**4**”.
3. Disconnect the modem module from the connector socket “**5**”, and lift it and the cable off the board.

a.



b.



*Figure 2 - 9*  
**Modem Removal Sequence**

- Remove the screws from the modem unit, and disconnect the cable.
- Lift the modem and cable off the board.



3. Modem module  
4. Modem cable

- 2 Screws



## Disassembly

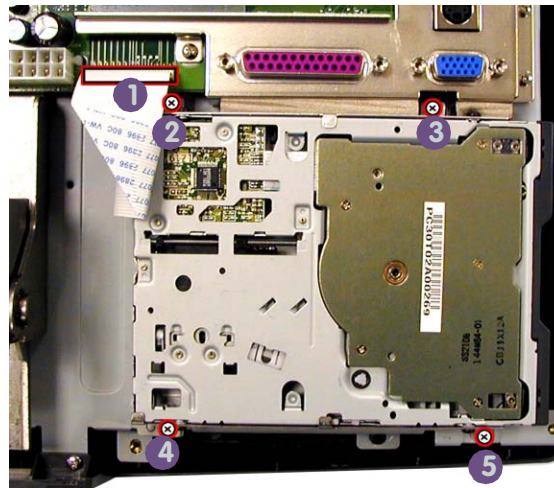
*Figure 2 - 10*  
**Floppy Disk  
 Drive Assembly  
 Removal  
 Sequence**

- a. Disconnect the FDD ribbon cable.
- b. Remove the screws from the FDD assembly.

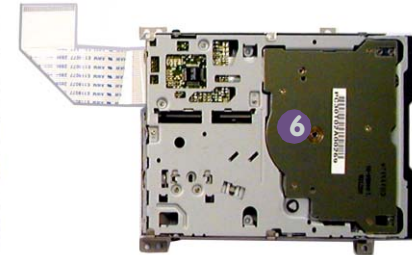
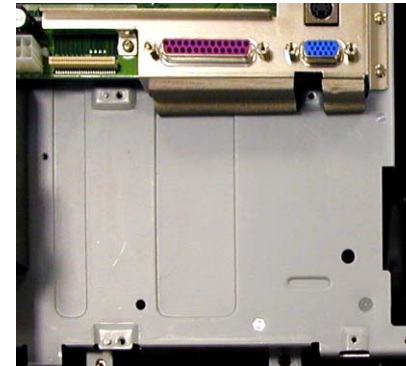
## Removing the Floppy Disk Drive Assembly

1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14, in order to remove the back case etc.
2. Carefully disconnect the floppy disk drive ribbon cable "1" in **Figure 2 - 10a**
3. Remove screws "4"- "5" (**Figure 2 - 10a**) from the floppy disk drive assembly.
4. Lift the floppy disk drive assembly "6" off the board.

a.



b.

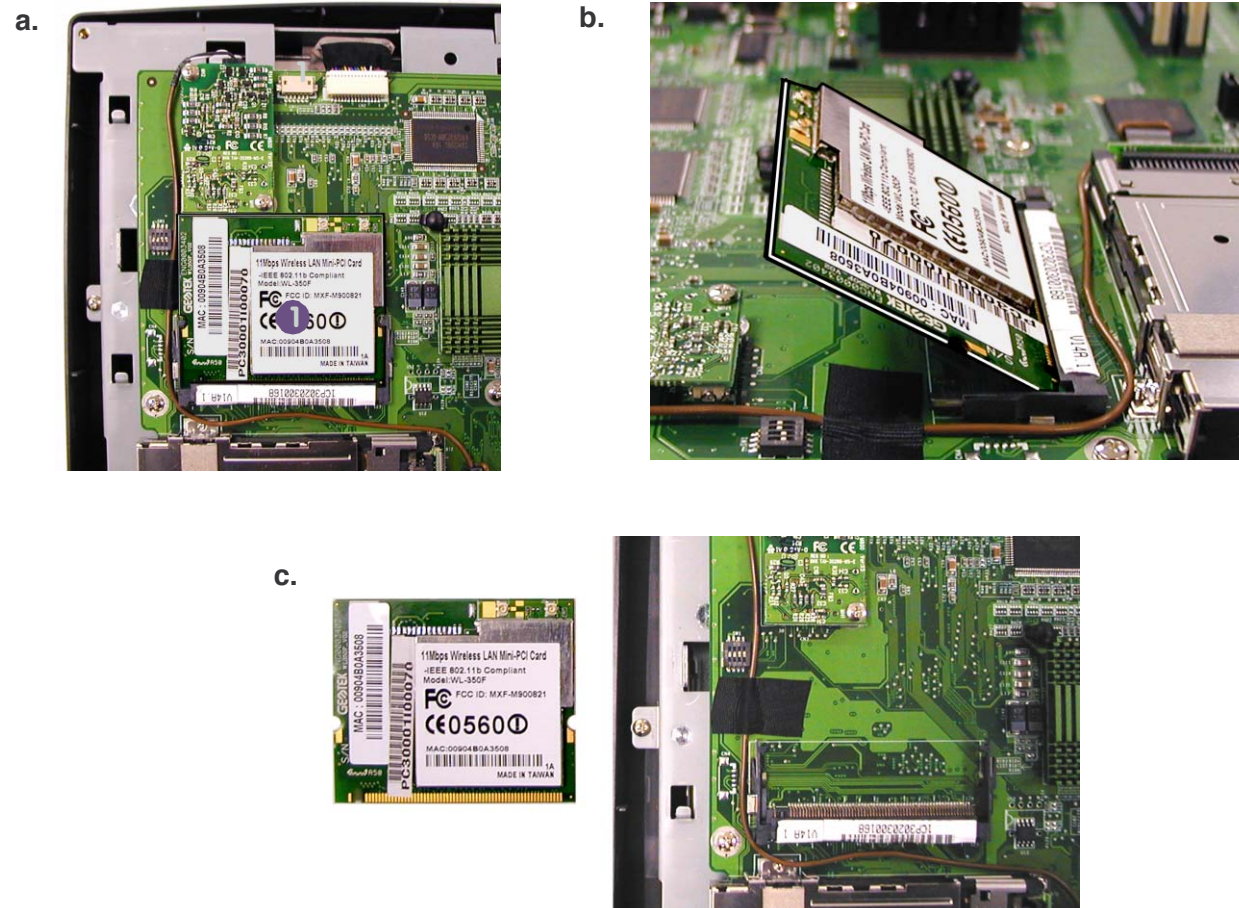


6. FDD Assembly

- 4 Screws

## Removing the Wireless LAN Module

1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14, in order to remove the back case etc.
2. Ease the wireless LAN module "1" slowly up and away from the mainboard.



*Figure 2 - 11*  
**Wireless LAN  
Module Removal  
Sequence**

- a. Locate the wireless LAN module.
- b. Ease the module up.
- c. Lift the module away from the mainboard.



1. Wireless LAN module

## Disassembly

*Figure 2 - 12*  
**I/O Bracket Removal Sequence**

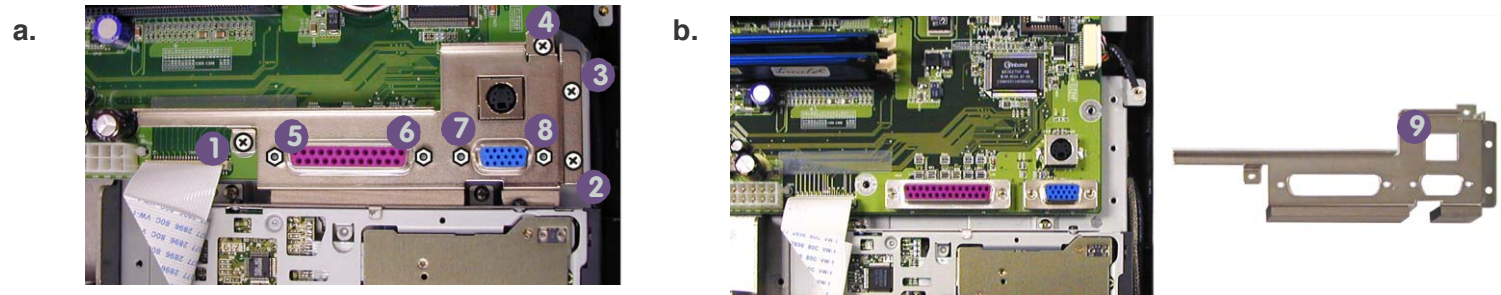
- a. Remove the screws, from the I/O bracket.
- b. Lift the I/O bracket up off the mainboard.



9. I/O bracket  
• 8 screws

## Removing the I/O Bracket

1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14, in order to remove the back case etc.
2. Remove the standard screws "1"- "4" (Figure 2 - 12a), and use long-nosed pliers to remove the connector type screws "5"- "8".
3. Lift the I/O bracket "9" up off the mainboard.



*Figure 2 - 13*  
**Rear Bracket Removal Sequence**

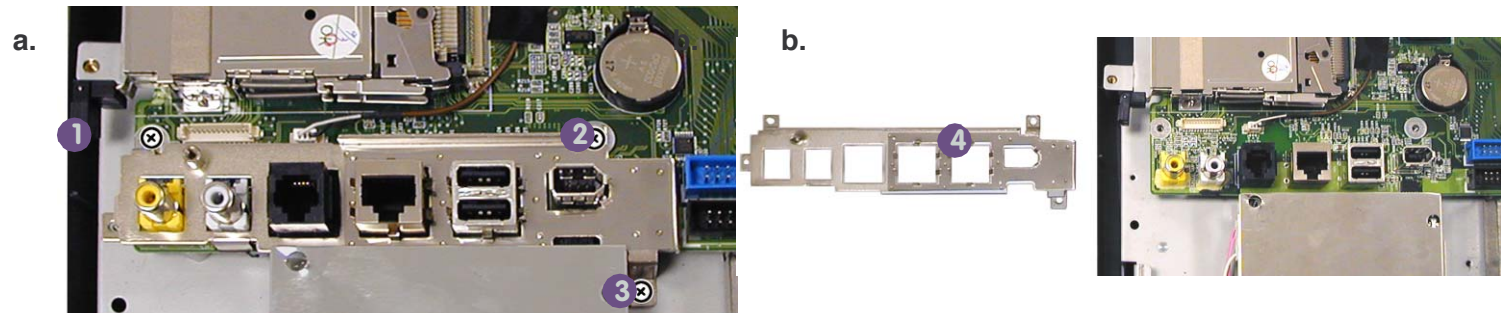
- a. Remove the screws, from the rear bracket.
- b. Ease the rear bracket up off the mainboard.



4. Rear bracket  
• 3 screws

## Removing the Rear Bracket

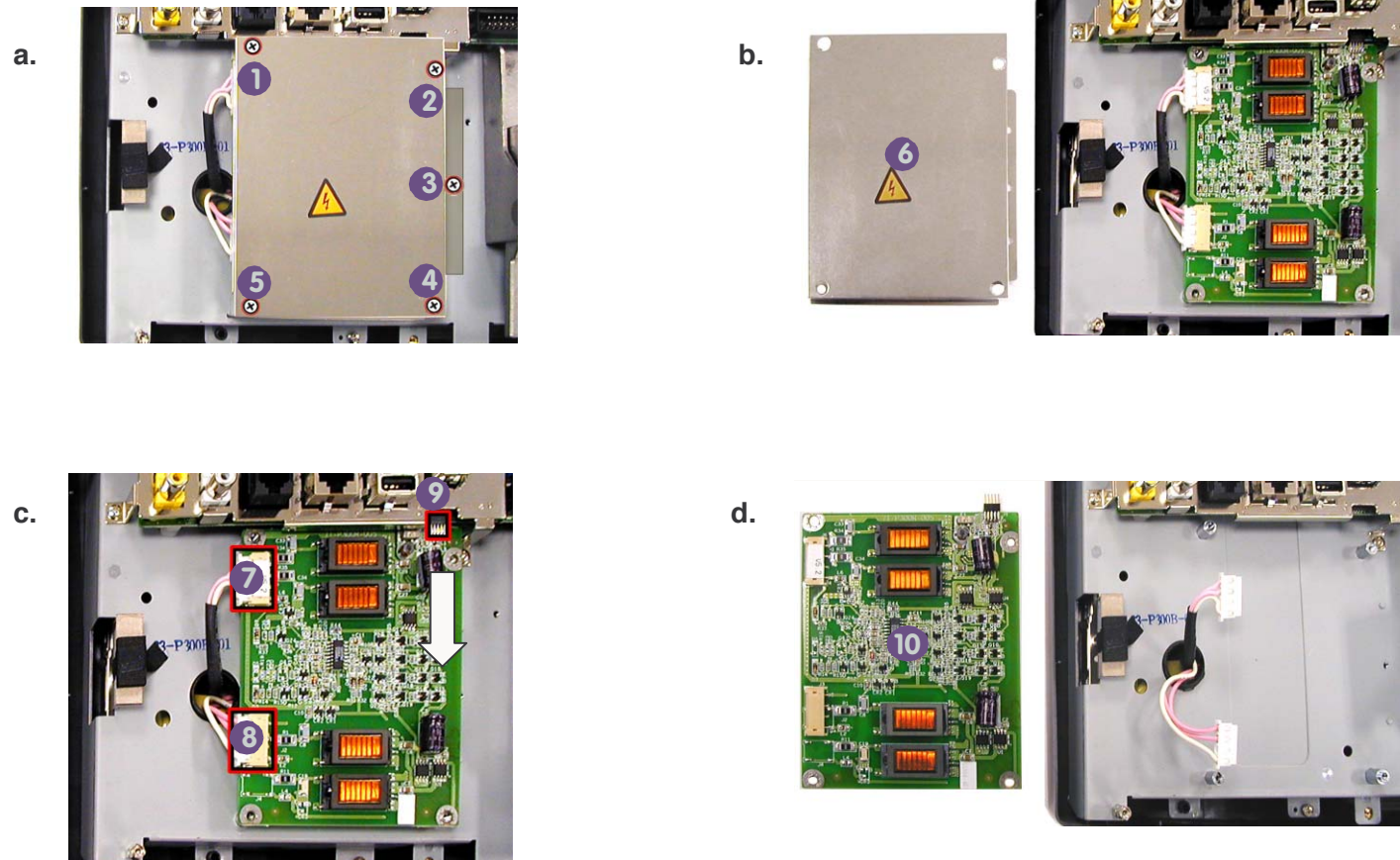
1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14 in order to remove the back case etc.
2. Remove screws "1"- "3" (Figure 2 - 13a).
3. Carefully ease the I/O bracket "4" up off the mainboard.





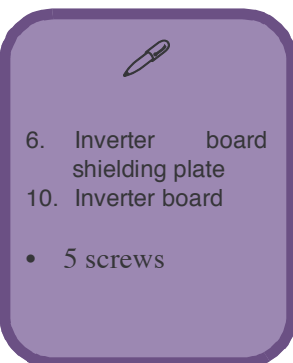
## Removing the Inverter Board

1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14 in order to remove the back case etc.
2. Remove screws "1"- "5" from the inverter board shielding plate, and lift out the shielding plate "6".
3. Disconnect the two connectors "7" and "8" from the inverter board, then elevate the inverter board slightly and pull it in the direction of the arrow (Figure 2 - 14c) to release it from the connector "9" on the mainboard.
4. Lift the inverter board "10" up and out from the mainboard.



*Figure 2 - 14*  
**Inverter Board  
Removal  
Sequence**

- a. Remove the screws from the shielding plate.
- b. Lift out the shielding plate.
- c. Disconnect the two connectors, elevate the inverter board slightly, and carefully pull in the direction of the arrow.
- d. Lift the inverter board up and out from the mainboard.



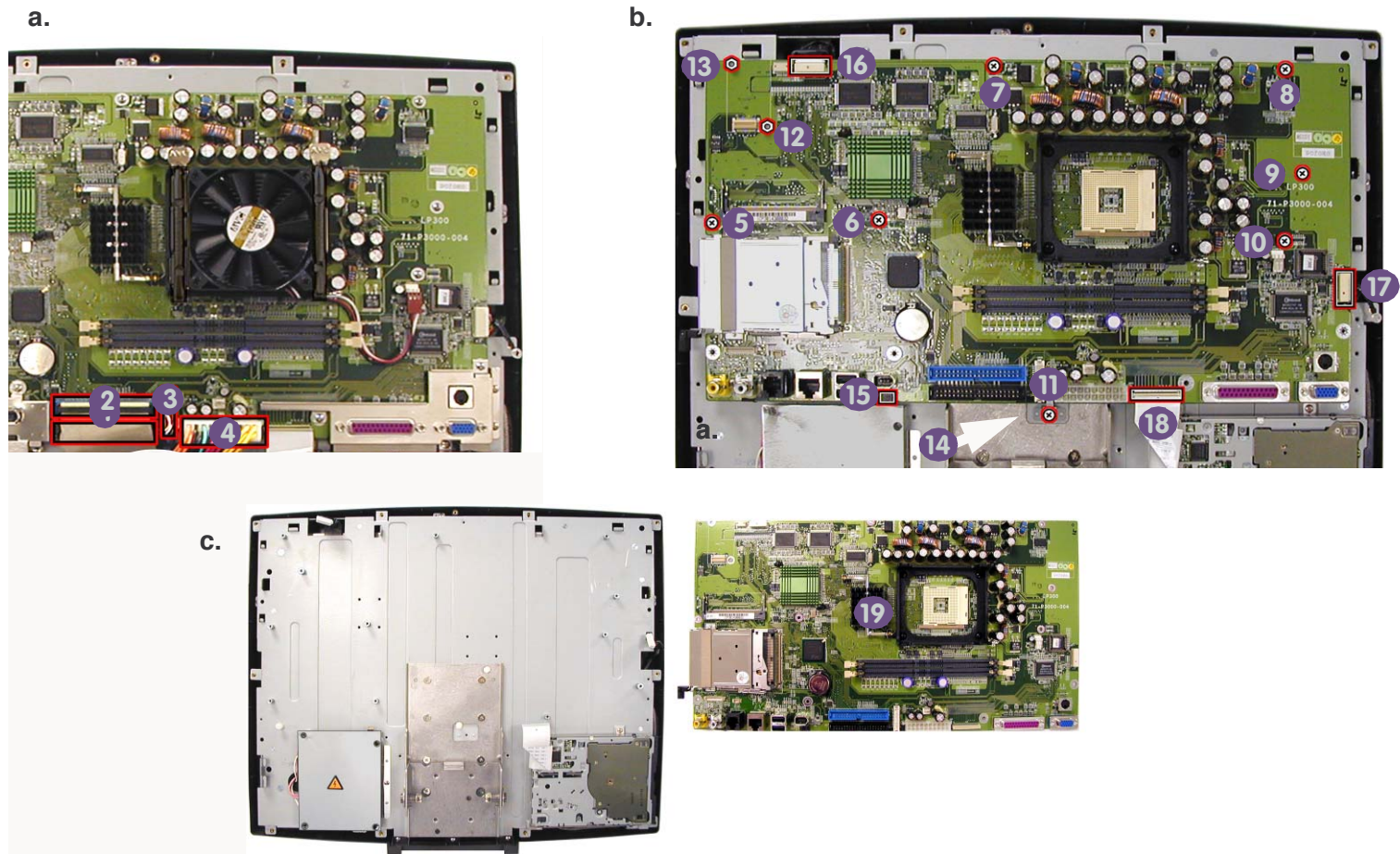
## Disassembly

Figure 2 - 15  
Rear Bracket  
Removal  
Sequence

- a. Disconnect the cables which connect the top half of the unit to the base.
- b. Remove the screws and connecting cables.
- c. Lift the mainboard up from the LCD bracket.

## Removing the Mainboard

1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14 in order to remove the back case etc.
2. Disconnect cables "1"- "4" which connect the top half of the unit to the base.
3. Remove the standard screws "5"- "11" and the connector type screws "12"- "13" (lift away the small bracket "14").
4. Disconnect cables "15"- "18" and lift the mainboard "19" up from the LCD bracket.

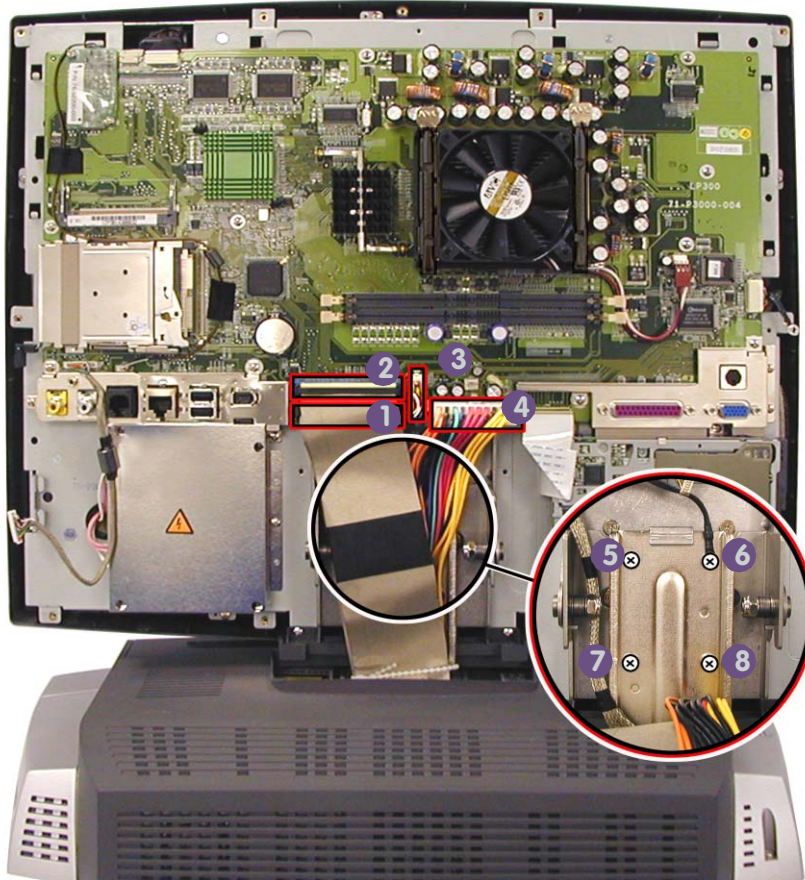




## Separating the Bottom Case from the LCD & Mainboard Assembly

1. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14 in order to remove the back case etc.
2. Disconnect cables "1"- "4" which connect the top half of the unit to the base.
3. Remove screws "5"- "8" and ease the bottom case away from the LCD & mainboard assembly.

a.



b.



*Figure 2 - 16*  
**Bottom Case Removal Sequence**

- Disconnect the cables, and remove the screws which connect the top half of the unit to the base.
- Ease the bottom case away from the LCD & mainboard.



9. Bottom case  
10. LCD & mainboard assembly
- 4 screws

## Disassembly

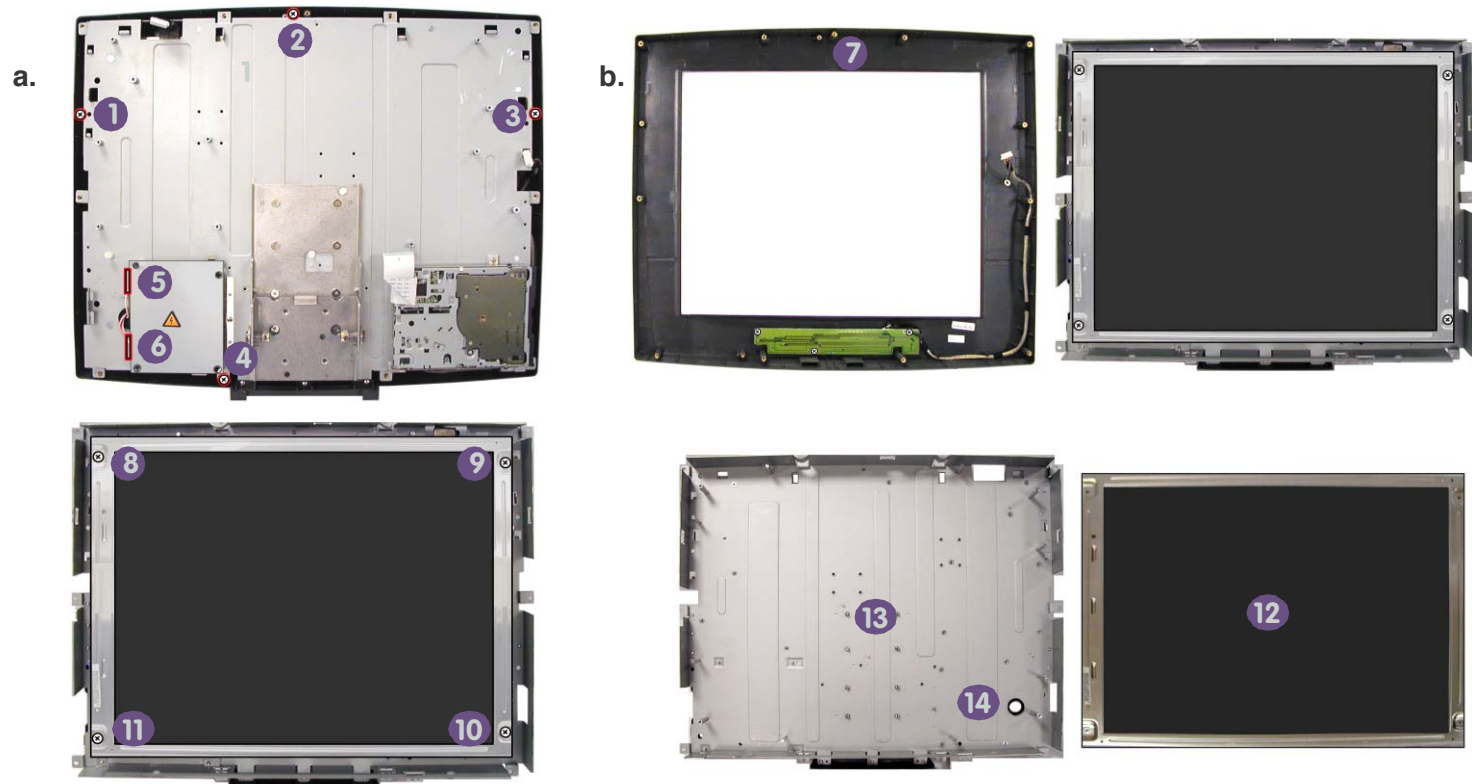
Figure 2 - 17

LCD  
Removal  
Sequence

- a. Remove the screws from the LCD bracket and disconnect the inverter cables.
- b. Separate the LCD bracket from the front of the case.
- c. Remove the screws from the LCD.
- d. Lift the LCD away from the bracket.

## Removing the LCD

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on **page 2 - 14** in order to remove the back case etc.
2. Follow the instructions in “**Separating the Bottom Case from the LCD & Mainboard Assembly**” on **page 2 - 25**.
3. Remove screws “**1**”-“**4**” from the back of the LCD bracket, and disconnect the inverter cables “**5**”-“**6**” (if you haven’t already done so).
4. Carefully separate the LCD bracket from the front of the case “**7**”.
5. Remove screws “**8**”-“**11**” from the LCD “**12**” and lift it away from the bracket “**13**” (pay careful attention to the inverter cables easing them through the hole at point “**14**”).



7. Front case  
12. LCD  
13. LCD bracket

- 8 screws

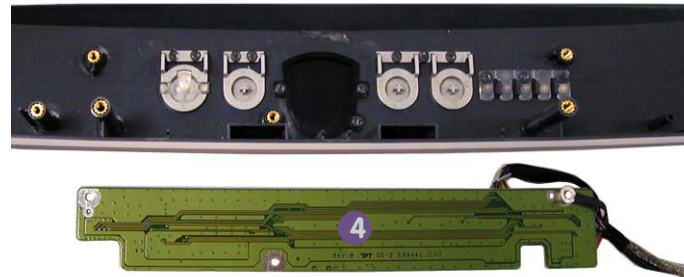
## Removing the LED Board

1. Follow the sequence of steps **1** to **9** as illustrated in “**Removing the System Memory**” on page 2 - 14 in order to remove the back case etc.
2. Follow the instructions in “**Separating the Bottom Case from the LCD & Mainboard Assembly**” on page 2 - 25.
3. Separate the front case from the LCD as illustrated in “**Removing the LCD**” on page 2 - 26.
4. Remove screws “**1**” - “**3**” and lift the LED board “**4**” and cable out from the front of the case.

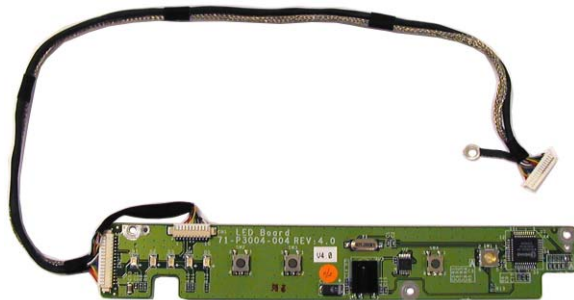
a.



b.



c.



*Figure 2 - 18*  
**LED Board  
Removal  
Sequence**

- a. Remove the screws from the LED board.
- b. Lift the board out from the front of the case.



4. LED board

- 3 screws



## Disassembly

*Figure 2 - 19*  
**Base Cover  
Removal  
Sequence**

- a. Remove the CD drives, hard disk and separate the bottom case from the LCD & mainboard assembly
- c. Remove the screws from the base.
- d. Lift the cover up from the bottom unit.

## Removing the Base Cover

1. Remove the CD drives as illustrated in “Removing the CD Devices” on page 2 - 11 (incl. RF Module page 2 - 12).
2. Remove the HDD drive as illustrated in “Removing the Hard Disk Drive Assembly” on page 2 - 10.
3. Follow the sequence of steps 1 to 9 as illustrated in “Removing the System Memory” on page 2 - 14 in order to remove the back case etc.
4. Follow the instructions in “Separating the Bottom Case from the LCD & Mainboard Assembly” on page 2 - 25.
5. Remove screws "1"- "9" from the base unit.
6. Lift the base cover "10" off the bottom of the unit.

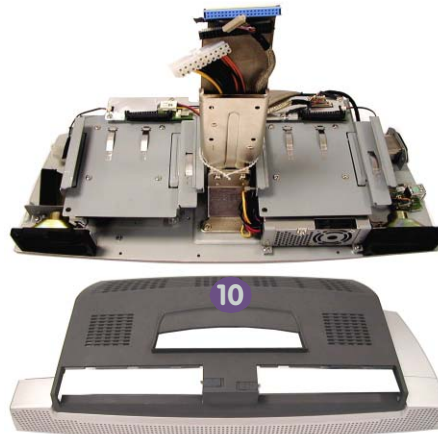
a.



b.



c.

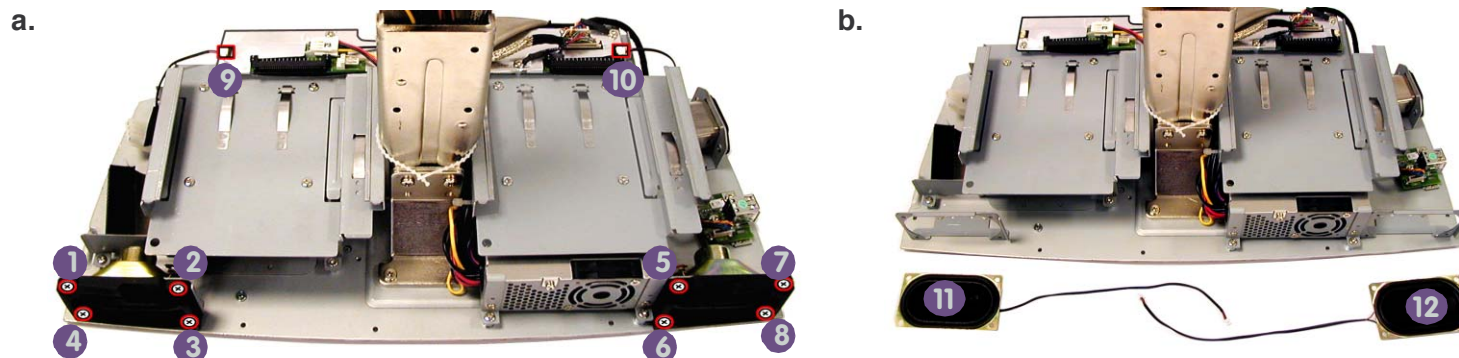


10. Base cover module

- 9 Screws

## Removing the Speaker Units

1. Follow the instructions to remove the base cover (“**Removing the Base Cover**” on page 2 - 28).
2. Remove screws "1" - "8" and disconnect the speaker cables "9" - "10", then remove the speaker units "11" - "12".



*Figure 2 - 20*  
**Speaker Unit  
Removal  
Sequence**

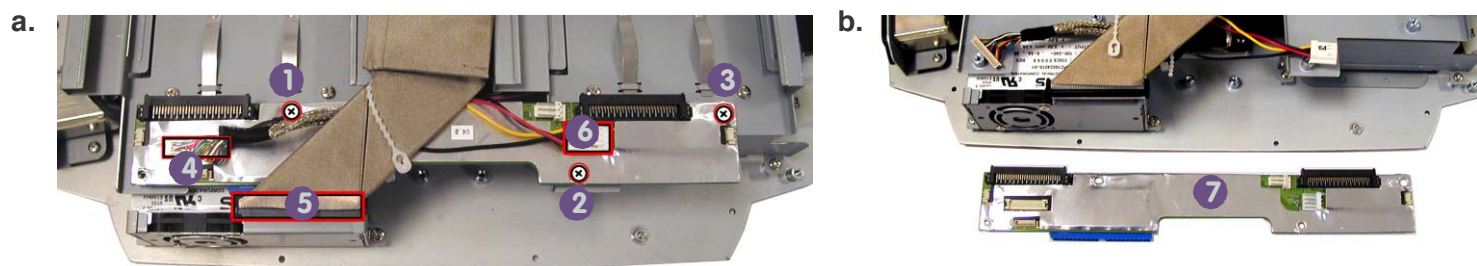
- Remove the screws from the speaker units and disconnect the cables.
- Remove the speaker units.



11. Speaker units  
• 8 screws

## Removing the Bridge Board

1. Follow the instructions to remove the base cover (“**Removing the Base Cover**” on page 2 - 28).
2. Disconnect the speaker cables "9" - "10" (Figure 2 - 20a) above.
3. Remove screws "1" - "3" and disconnect cables "3" - "6".
4. Lift the bridge board "7" up off the base unit.



*Figure 2 - 21*  
**Bridge Board  
Removal  
Sequence**

- Remove the screws and disconnect the cables.
- Remove the bridge board.



7. Bridge board  
• 3 screws

## Disassembly

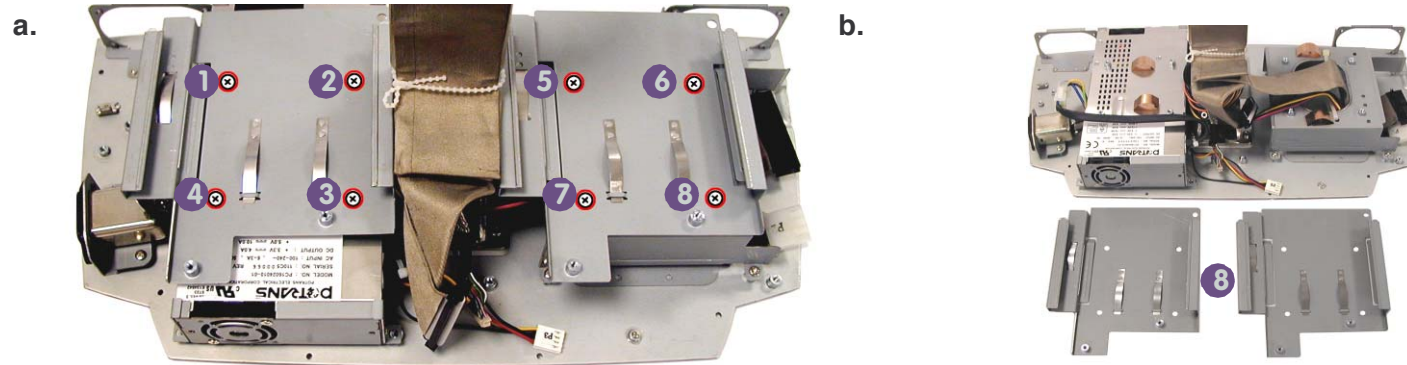
*Figure 2 - 22*  
**CD Device Base Bracket Removal Sequence**

- Remove the screws from the base brackets.
- Remove the base brackets.

8. 2 \* Base brackets  
• 8 screws

## Removing the CD Device Base Brackets

- Follow the instructions to remove the bridge board (“Removing the Bridge Board” on page 2 - 29).
- Remove screws "1"- "8" and lift away the CD device base brackets.



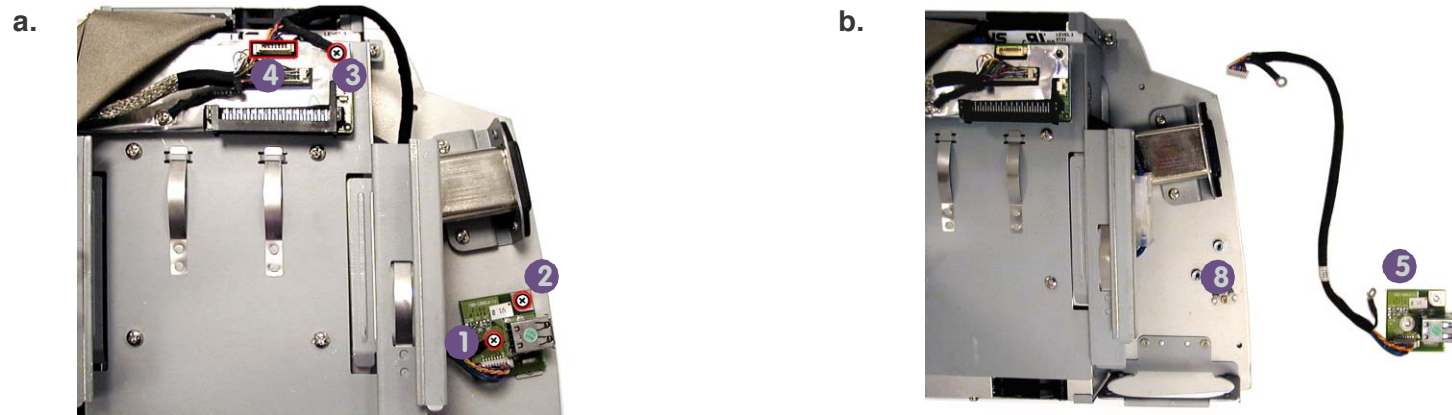
*Figure 2 - 23*  
**USB Board Removal Sequence**

- Remove the screws from the USB board, and disconnect the cable.
- Remove the USB board.

5. USB board  
• 3 screws

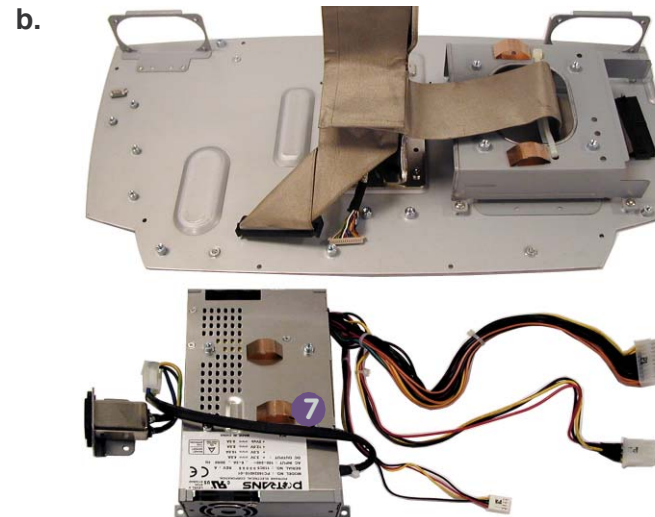
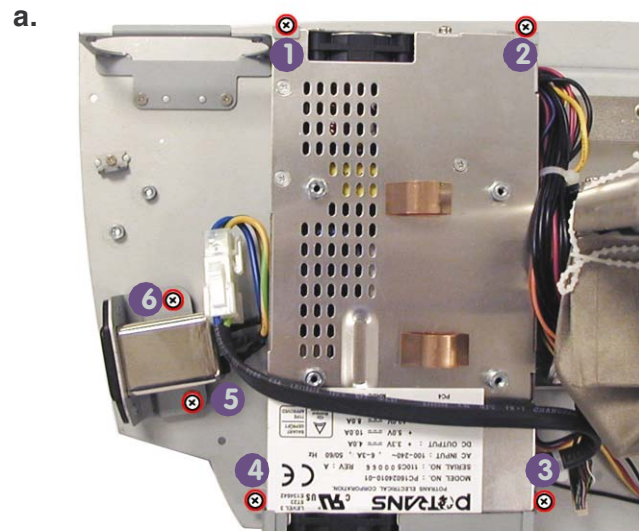
## Removing the USB Board

- Follow the instructions to remove the bridge board (“Removing the Bridge Board” on page 2 - 29).
- Remove screws "1"- "3" (you may have already removed screw "3" as part of the process of removing the bridge board).
- Disconnect the cable at point "4", then remove the USB board "5".



## Removing the Power Supply Unit

1. Follow the instructions to remove the bridge board (“**Removing the Bridge Board**” on page 2 - 29).
2. Follow the instructions to remove CD device base brackets (“**Removing the CD Device Base Brackets**” on page 2 - 30).
3. Remove screws "1"- "6" and lift the power supply "7" off the base bracket.



*Figure 2 - 24*  
**Power Supply  
Removal  
Sequence**

- a. Remove the screws from the power supply unit.
- b. Remove the power supply unit.



7. Power supply unit
- 6 screws





# Appendix A:Part Lists

This appendix breaks down the LCD PC’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 Lists

## Part List Illustration Location

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

Table 1 - 1  
Part List Illustration  
Location

| Part              | Page #      |
|-------------------|-------------|
| Base-1            | page 1 - 3  |
| Back Acer17"      | page 1 - 4  |
| Back LG 18"       | page 1 - 5  |
| LCD Front         | page 1 - 6  |
| Floppy Disk Drive | page 1 - 7  |
| Hard Disk Drive   | page 1 - 8  |
| CD-ROM Drive      | page 1 - 9  |
| DVD-ROM Drive     | page 1 - 10 |
| CD-RW Drive       | page 1 - 11 |



Base-1 (LP300)

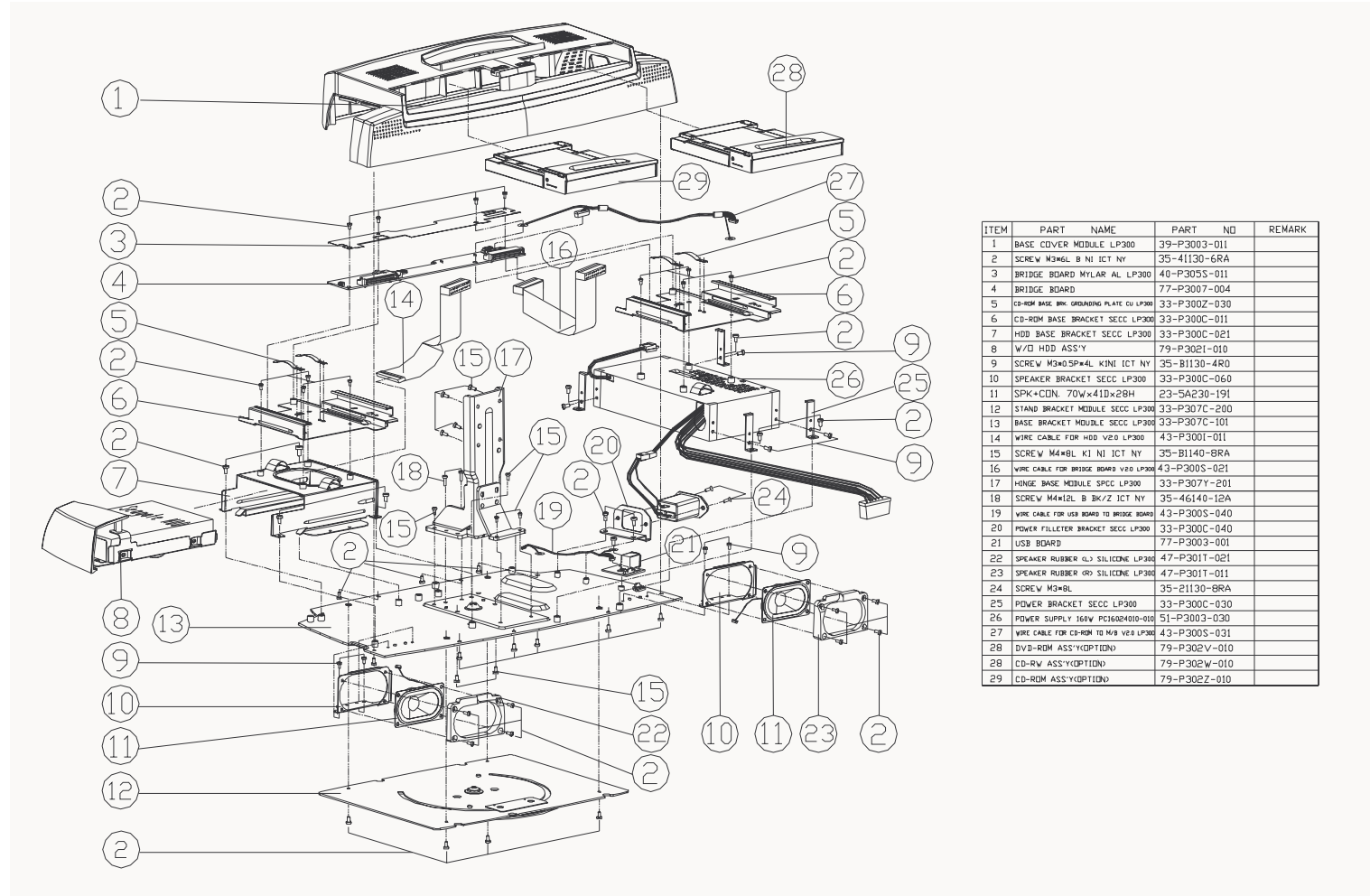


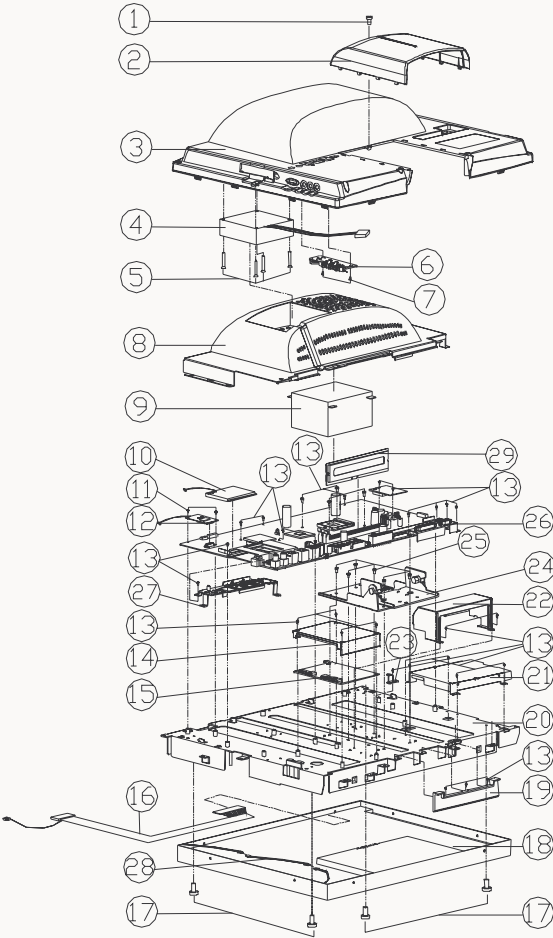
Figure 1 - 1  
Base-1

| ITEM | PART NAME                                 | PART NO      | REMARK |
|------|---|--------------|--------|
| 1    | BASE COVER MODULE LP300                   | 39-P3003-011 |        |
| 2    | SCREW M3*6L B NI ICT NY                   | 35-41130-6RA |        |
| 3    | BRIDGE BOARD MYLAR AL LP300               | 40-P3055-011 |        |
| 4    | BRIDGE BOARD                              | 77-P3007-004 |        |
| 5    | CD-ROM BASE BRK. GROUNDING PLATE CU LP300 | 33-P3002-030 |        |
| 6    | CD-ROM BASE BRACKET SECC LP300            | 33-P300C-011 |        |
| 7    | HDD BASE BRACKET SECC LP300               | 33-P300C-021 |        |
| 8    | W/O HDD ASS'Y                             | 79-P3021-010 |        |
| 9    | SCREW M3*0.5P*4L KINI ICT NY              | 35-B1130-4R0 |        |
| 10   | SPEAKER BRACKET SECC LP300                | 33-P300C-060 |        |
| 11   | SPK+CON. 70W*41D*28H                      | 23-5A230-191 |        |
| 12   | STAND BRACKET MODULE SECC LP300           | 33-P307C-200 |        |
| 13   | BASE BRACKET MODULE SECC LP300            | 33-P307C-101 |        |
| 14   | WIRE CABLE FOR HDD V2.0 LP300             | 43-P3001-011 |        |
| 15   | SCREW M4*6L KI NI ICT NY                  | 35-B1140-8RA |        |
| 16   | WIRE CABLE FOR BRIDGE BOARD V2.0 LP300    | 43-P3005-021 |        |
| 17   | HINGE BASE MODULE SECC LP300              | 33-P307Y-201 |        |
| 18   | SCREW M4*12L B BK/Z ICT NY                | 35-46140-12A |        |
| 19   | WIRE CABLE FOR USB BOARD TO BRIDGE BOARD  | 43-P3005-040 |        |
| 20   | POWER FILTER BRACKET SECC LP300           | 33-P300C-040 |        |
| 21   | USB BOARD                                 | 77-P3003-001 |        |
| 22   | SPEAKER RUBBER GLD SILICONE LP300         | 47-P3011-021 |        |
| 23   | SPEAKER RUBBER GRD SILICONE LP300         | 47-P3011-011 |        |
| 24   | SCREW M3*6L                               | 35-21130-8RA |        |
| 25   | POWER BRACKET SECC LP300                  | 33-P300C-030 |        |
| 26   | POWER SUPPLY 160W PC16024010-010          | 51-P3003-030 |        |
| 27   | WIRE CABLE FOR CD-ROM TO H/B V2.0 LP300   | 43-P3005-031 |        |
| 28   | DVD-ROM ASS'Y(OPTION)                     | 79-P302V-010 |        |
| 28   | CD-RW ASS'Y(OPTION)                       | 79-P302W-010 |        |
| 29   | CD-ROM ASS'Y(OPTION)                      | 79-P302Z-010 |        |

Part Lists

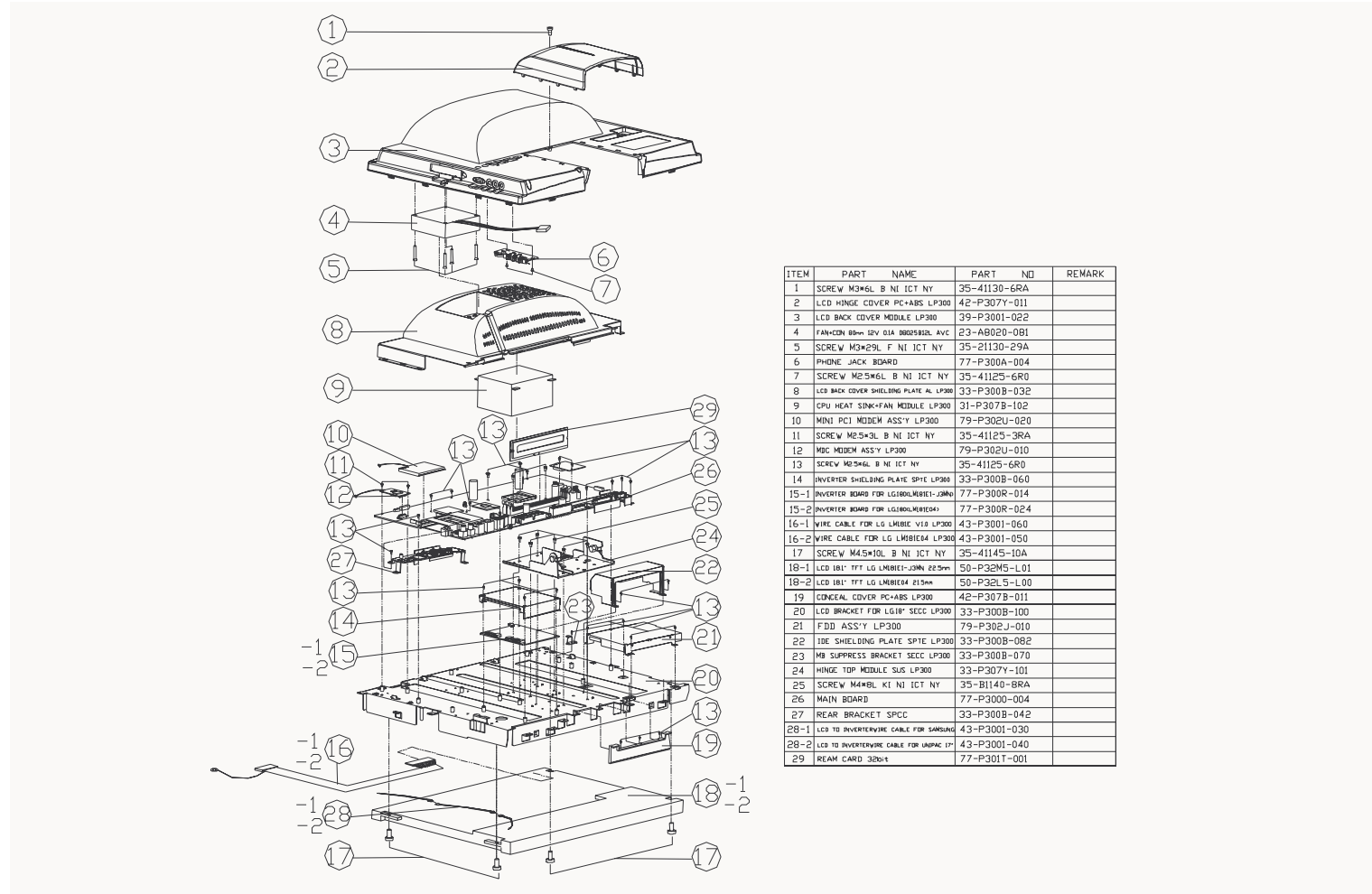
Back - Acer 17" (LP300)

Figure 1 - 2  
Back Acer 17" (LP300)



| ITEM | PART NAME                               | PART NO      | REMARK |
|------|---|--------------|--------|
| 1    | SCREW M3*6L B NI ICT NY                 | 35-41130-6RA |        |
| 2    | LCD HINGE COVER PC+ABS LP300            | 42-P307Y-011 |        |
| 3    | LCD BACK COVER MODULE LP300             | 39-P3001-022 |        |
| 4    | FAN+CDN 80mm 12V 0.1A 3000RPM AYC       | 23-AB020-081 |        |
| 5    | SCREW M3*2.9L F NI ICT NY               | 35-21130-29A |        |
| 6    | PHONE JACK BOARD                        | 77-P300A-004 |        |
| 7    | SCREW M2.5*6L B NI ICT NY               | 35-41125-6R0 |        |
| 8    | LCD BACK COVER SHIELDING PLATE AL LP300 | 33-P300B-032 |        |
| 9    | CPU HEAT SINK+FAN MODULE LP300          | 31-P307B-102 |        |
| 10   | MINI PCI MODEM ASS'Y LP300              | 79-P302U-020 |        |
| 11   | SCREW M2.5*3L B NI ICT NY               | 35-41125-3RA |        |
| 12   | MOD. MODEM ASS'Y LP300                  | 79-P302U-010 |        |
| 13   | SCREW M2.5*6L B NI ICT NY               | 35-41125-6R0 |        |
| 14   | INVERTER SHIELDING PLATE SPTE LP300     | 33-P300B-060 |        |
| 15   | INVERTER BOARD FOR ACER/DEI MEI 17"     | 77-P300R-004 |        |
| 16   | WIRE CABLE FOR SAMSUNG LTM70E4-L01      | 43-P3001-011 |        |
| 17   | SCREW M3*6L B NI ICT NY                 | 35-41130-6RA |        |
| 18   | LCD 17" TFT ACER LT170E3-1 20mm         | 50-N32K0-800 |        |
| 19   | CONCEAL COVER PC+ABS LP300              | 42-P307B-011 |        |
| 20   | LCD BRACKET FOR ACER 17" SECC LP300     | 33-P300B-022 |        |
| 21   | FDD ASS'Y LP300                         | 79-P302J-010 |        |
| 22   | IDB SHIELDING PLATE SPTE LP300          | 33-P300B-082 |        |
| 23   | MB SUPPRESS BRACKET SECC LP300          | 33-P300B-070 |        |
| 24   | HINGE TOP MODULE SUS LP300              | 33-P307Y-101 |        |
| 25   | SCREW M4*6L K1 NI ICT NY                | 35-B1140-8RA |        |
| 26   | MAIN BOARD                              | 77-P3000-004 |        |
| 27   | REAR BRACKET SPCC                       | 33-P300B-042 |        |
| 28   | LCD TO INVERTER CABLE FOR SAMSUNG 17"   | 43-P3001-040 |        |
| 29   | REAR CARD 3200i                         | 77-P3011-001 |        |

Back - LG 18" (LP300)



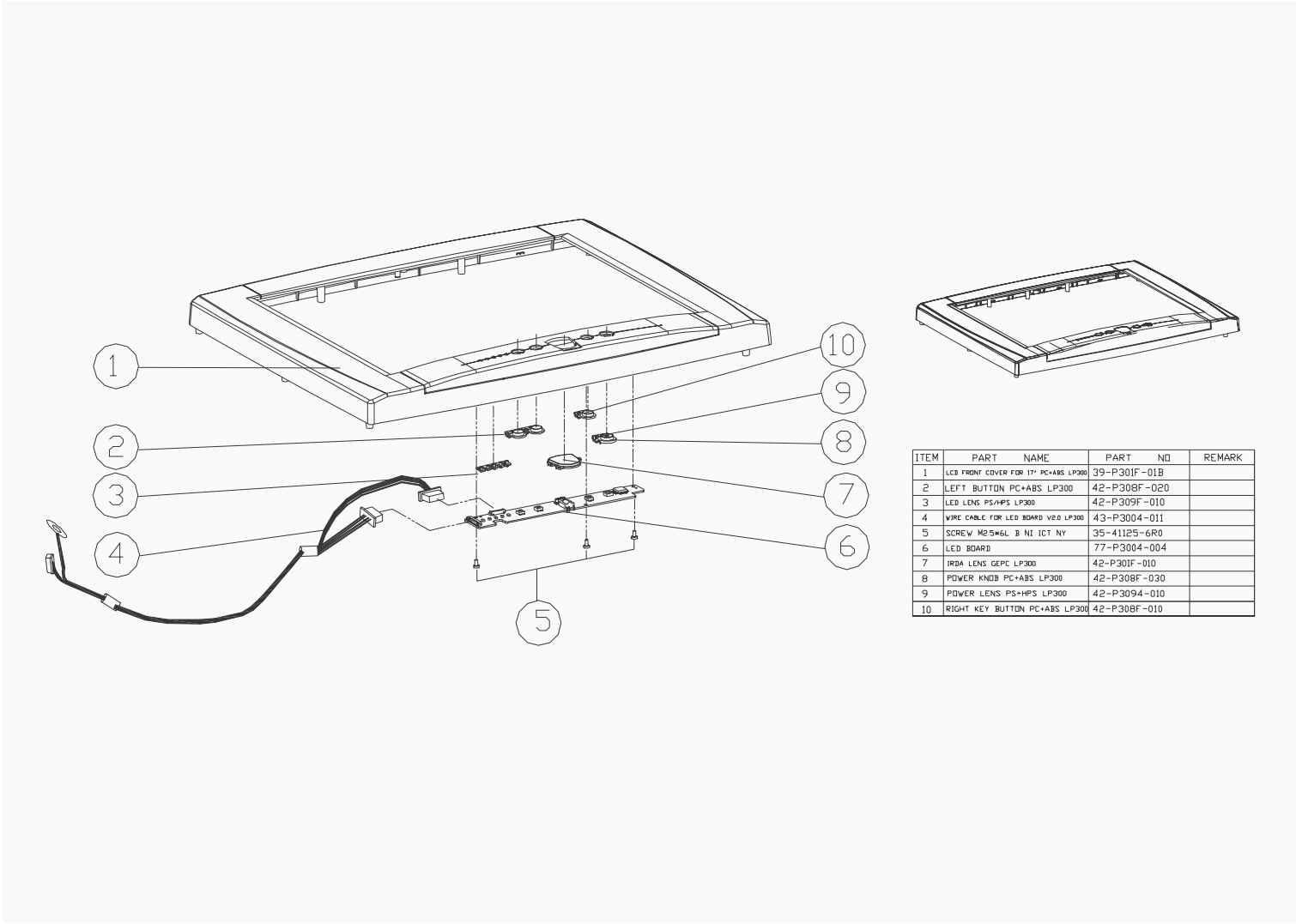
| ITEM | PART NAME                                 | PART NO      | REMARK |
|------|---|--------------|--------|
| 1    | SCREW M3*6L B NI ICT NY                   | 35-41130-6RA |        |
| 2    | LCD HINGE COVER PC+ABS LP300              | 42-P307Y-011 |        |
| 3    | LCD BACK COVER MODULE LP300               | 39-P3001-022 |        |
| 4    | FAN+CON 80mm 12V 0.1A 00055RDL AVC        | 23-AB020-0B1 |        |
| 5    | SCREW M3*29L F NI ICT NY                  | 35-21130-29A |        |
| 6    | PHONE JACK BOARD                          | 77-P300A-004 |        |
| 7    | SCREW M2.5*6L B NI ICT NY                 | 35-41125-6R0 |        |
| 8    | LCD BACK COVER SHIELDING PLATE AL LP300   | 33-P300B-032 |        |
| 9    | CPU HEAT SINK-FAN MODULE LP300            | 31-P307B-102 |        |
| 10   | MINI PCI MODEM ASS'Y LP300                | 79-P302U-020 |        |
| 11   | SCREW M2.5*3L B NI ICT NY                 | 35-41125-3RA |        |
| 12   | MOE MODEM ASS'Y LP300                     | 79-P302U-010 |        |
| 13   | SCREW M2.5*6L B NI ICT NY                 | 35-41125-6R0 |        |
| 14   | INVERTER SHIELDING PLATE SPTE LP300       | 33-P300B-060 |        |
| 15-1 | INVERTER BOARD FOR LG180LMUB1E4 (J386)    | 77-P300R-014 |        |
| 15-2 | INVERTER BOARD FOR LG180LMUB1E4 (J386)    | 77-P300R-024 |        |
| 16-1 | WIRE CABLE FOR LG LMB1E4 V10 LP300        | 43-P3001-060 |        |
| 16-2 | WIRE CABLE FOR LG LMB1E4 LP300            | 43-P3001-050 |        |
| 17   | SCREW M4.5*10L B NI ICT NY                | 35-41145-10A |        |
| 18-1 | LCD 18" TFT LD LMB1E4 (J386) 22.5mm       | 50-P32MS-L01 |        |
| 18-2 | LCD 18" TFT LD LMB1E4 22.5mm              | 50-P32LS-L00 |        |
| 19   | CONCEAL COVER PC+ABS LP300                | 42-P307B-011 |        |
| 20   | LCD BRACKET FOR LG18" SECC LP300          | 33-P300B-100 |        |
| 21   | FDD ASS'Y LP300                           | 79-P302J-010 |        |
| 22   | IDC SHIELDING PLATE SPTE LP300            | 33-P300B-082 |        |
| 23   | MB SUPPRESS BRACKET SECC LP300            | 33-P300B-070 |        |
| 24   | HINGE TOP MODULE SUS LP300                | 33-P307Y-101 |        |
| 25   | SCREW M4*8L KI NI ICT NY                  | 35-B1140-8RA |        |
| 26   | MAIN BOARD                                | 77-P3000-004 |        |
| 27   | REAR BRACKET SPCC                         | 33-P300B-042 |        |
| 28-1 | LCD TO INVERTER/WIRE CABLE FOR SAMSUNG    | 43-P3001-030 |        |
| 28-2 | LCD TO INVERTER/WIRE CABLE FOR UNIPAC 17" | 43-P3001-040 |        |
| 29   | REAR CARD 32014                           | 77-P3011-001 |        |

Figure 1 - 3  
Back LG 18"  
(LP300)

Part Lists

LCD Front (LP300)

Figure 1 - 4  
LCD Front (LP300)



Floppy Disk Drive (LP300)

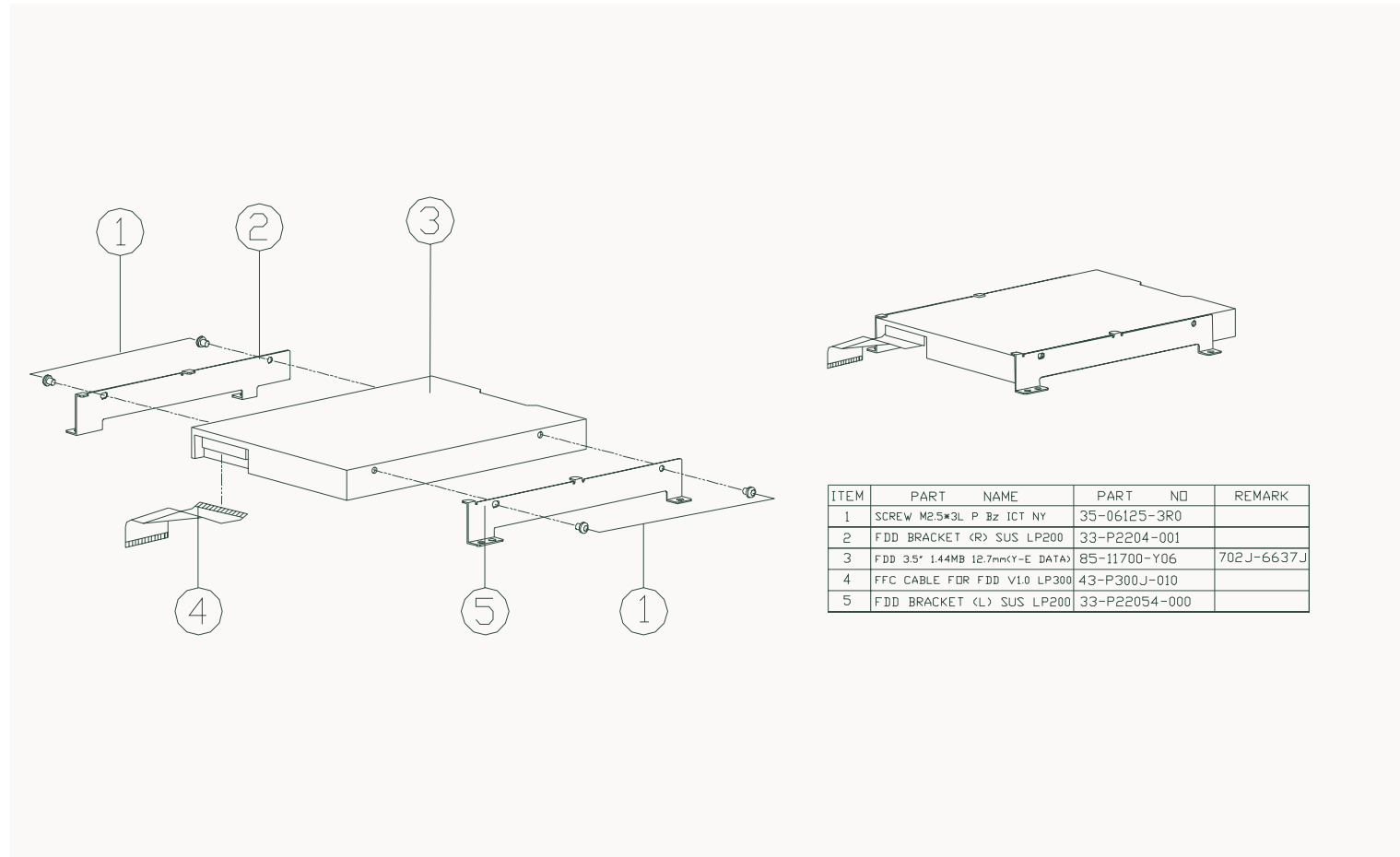
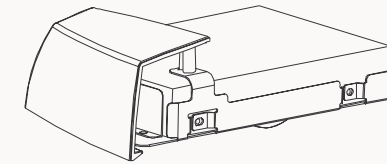
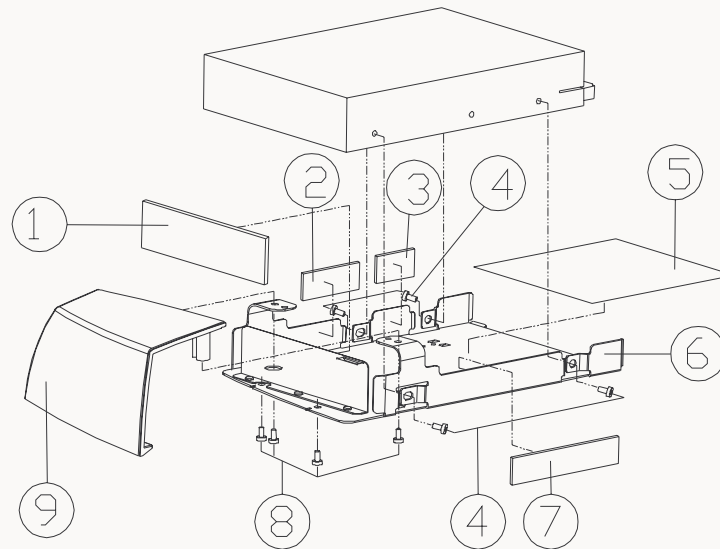


Figure 1 - 5  
Floppy Disk Drive  
(LP300)

## Part Lists

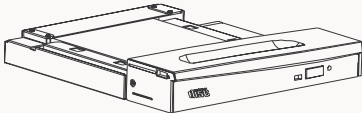
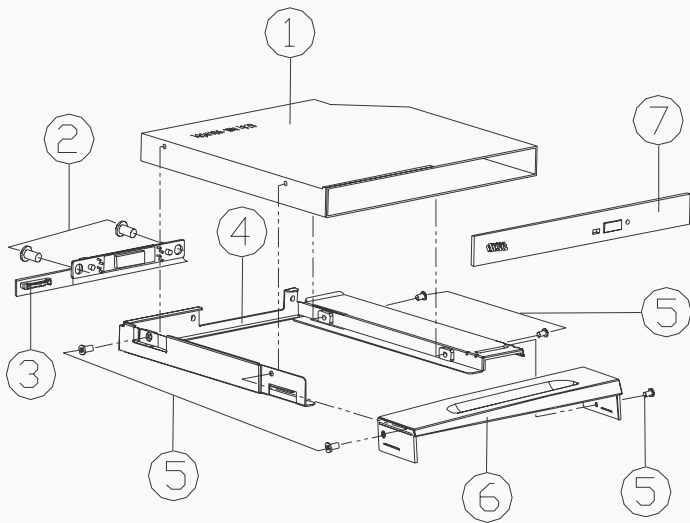
### Hard Disk Drive (LP300)

Figure 1 - 6  
Hard Disk Drive  
(LP300)



| ITEM | PART NAME                                  | PART NO      | REMARK |
|------|--|--------------|--------|
| 1    | THERMAL PAD FOR HDD BRK:SIDE 43 L90*W23*H3 | 47-P302I-050 |        |
| 2    | THERMAL PAD FOR HDD BRK:SIDE 29 L50*W13*H3 | 47-P302I-030 |        |
| 3    | THERMAL PAD FOR HDD BRK:SIDE 11 L20*W13*H3 | 47-P302I-020 |        |
| 4    | SCREW M3*6L B NI ICT NY                    | 35-41130-6RA |        |
| 5    | THERMAL PAD FOR HDD BRK:BOTTOM L120*W85*H3 | 47-P302I-040 |        |
| 6    | HDD HOUSING BRACKET SUS LP300              | 33-P300I-011 |        |
| 7    | THERMAL PAD FOR HDD BRK:SIDE 30 L80*W13*H3 | 47-P302I-010 |        |
| 8    | SCREW #6-32*5L B NI ACT                    | 35-41306-5R0 |        |
| 9    | HDD HOUSING PC+ABS LP300                   | 42-P304I-010 |        |

CD-ROM Drive (LP300)



| ITEM | PART NAME                         | PART NO      | REMARK           |
|------|-----------------------------------|--------------|------------------|
| 1    | CD-ROM W/BEZEL 5 1/4" 24X 12.7mm  | 85-6070X-P04 | CR-177-BPK-(MKE) |
| 2    | SCREW M2.5*3L B NI ICT NY         | 35-41125-3RA |                  |
| 3    | FPC CABLE FOR CD-ROM V1.0 LP300   | 43-P300Z-010 |                  |
| 4    | CD-ROM BRACKET SUS LP300          | 33-P300Z-011 |                  |
| 5    | SCREW M2*3L KI NI ICT NY          | 35-B1120-3RC |                  |
| 6    | CD-ROM TRAY(L) PC+ABS LP300       | 42-P303Z-021 |                  |
| 7    | CD-ROM BEZEL MODULE FOR MKE LP200 | 79-P2202-011 |                  |

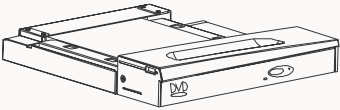
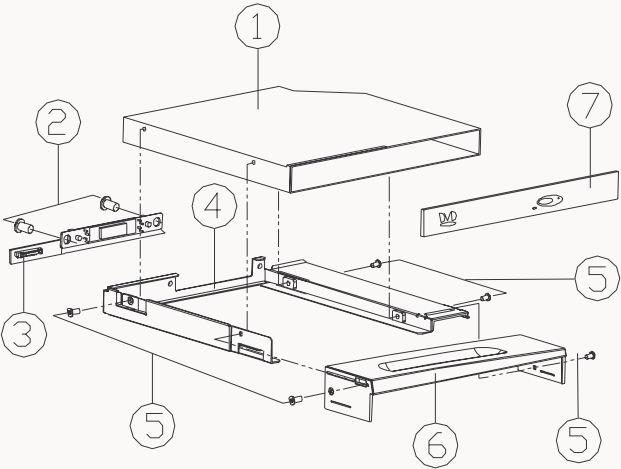
Figure 1 - 7  
CD-ROM Drive  
(LP300)



# Part Lists

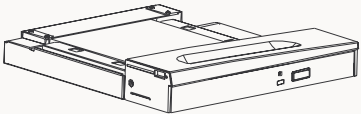
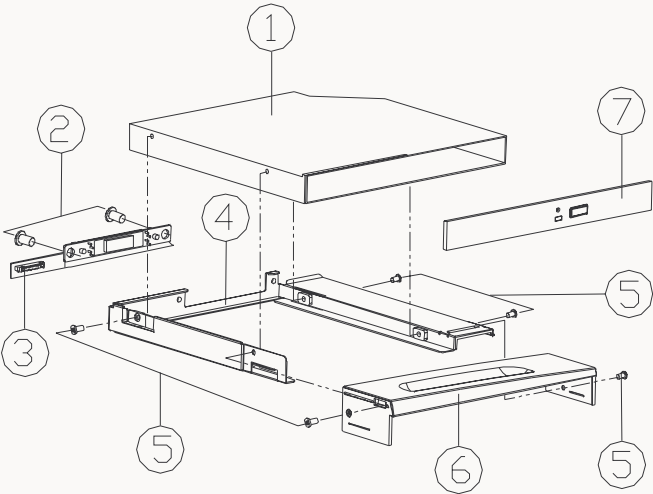
## DVD-ROM Drive (LP300)

Figure 1 - 8  
DVD-ROM Drive  
(LP300)



| ITEM | PART NAME                      | PART NO      | REMARK             |
|------|--------------------------------|--------------|--------------------|
| 1    | DVD 5 1/4" 8X 12.7mm           | 85-7078X-T02 | 10-C2592 (TOSHIBA) |
| 2    | SCREW M2.5x3L B NI ICT NY      | 35-41125-3RA |                    |
| 3    | FPC CABLE FOR CD-ROM V10 LP300 | 43-P300Z-010 |                    |
| 4    | CD-ROM BRACKET SUS LP300       | 33-P300Z-011 |                    |
| 5    | SCREW M2x3L KI NI ICT NY       | 35-B1120-3RC |                    |
| 6    | CD-ROM TRAY(R) PC+ABS LP300    | 42-P303Z-011 |                    |
| 7    | TOSHIBA DVD BEZEL MODULE       | 39-P227V-024 |                    |

CD-RW Drive (LP300)



| ITEM | PART NAME                      | PART NO      | REMARK            |
|------|--------------------------------|--------------|-------------------|
| 1    | CD-RW 5 1/4" BX 12.7mm         | 85-B078X-K00 | UJ-0A330CL-Z0KMD3 |
| 2    | SCREW M2.5x3L B NI ICT NY      | 35-41125-3RA |                   |
| 3    | FPC CABLE FOR CD-ROM V10 LP300 | 43-P300Z-010 |                   |
| 4    | CD-ROM BRACKET SUS LP300       | 33-P300Z-011 |                   |
| 5    | SCREW M2x3L KI NI ICT NY       | 35-B1120-3RC |                   |
| 6    | CD-ROM TRAY(R) PC+ABS LP300    | 42-P303Z-011 |                   |
| 7    | CD-RW BEZEL MODULE BX          | 42-P227W-020 | UJ-0A330CL-Z0KMD3 |

Figure 1 - 9  
CD-RW Drive  
(LP300)



# Appendix B:Schematic Diagrams

This appendix has circuit diagrams of the systems PCB's:

**Printed Circuit Board****Part No. of the Latest Version**

|                    |               |
|--------------------|---------------|
| System Board       | 71-P3000-004A |
| External USB Board | 71-P3003-002  |
| LED Board          | 71-P3004-004  |
| Inverter Board     | 71-P300R-005  |

## Schematic Diagrams

The following table indicates where to find the appropriate schematic diagram.

*Table 1 - 1*  
**Schematic Diagram**

| Diagram - Page                          | Diagram - Page                           |
|---|--|
| System Block Diagram - Page B - 3       | IDE, PCI Reset - Page B - 21             |
| Clock Generator - Page B - 4            | PCMCIA 1394 - Page B - 22                |
| DRCG - Panel Type - Page B - 5          | 1394 PHY, PCMCIA Ejecter - Page B - 23   |
| CPU (P4 mPGA478) 1 of 2 - Page B - 6    | LAN 8139C - Page B - 24                  |
| CPU (P4 mPGA478) 2 of 2 - Page B - 7    | Super I/O - Page B - 25                  |
| MCH (CPU, HUB, AGP) 1 of 2 - Page B - 8 | USB, Bluetooth - Page B - 26             |
| MCH (RDRAM, PCI) 2 of 2 - Page B - 9    | LPT, IR/RF - Page B - 27                 |
| RAMBUS A,B - Page B - 10                | Mini PCI, MDC - Page B - 28              |
| CPU Decoupling - Page B - 11            | Power 1 of 2 - Page B - 29               |
| ATI Mobility M6 1 of 3 - Page B - 12    | Power 2 of 2 - Page B - 30               |
| ATI Mobility M6 2 of 3 - Page B - 13    | SSC, VGA Power - Page B - 31             |
| ATI Mobility M6 3 of 3 - Page B - 14    | VRAM DDR 1 of 2 - Page B - 32            |
| VRAM Terminator - Page B - 15           | VRAM DDR 2 of 2 - Page B - 33            |
| Z3, LVDS - Page B - 16                  | Video In - Page B - 34                   |
| Micro-P, LCD PWR - Page B - 17          | EXT USB Board - Page B - 35              |
| ICH2 1 of 2 - Page B - 18               | LED Board - Page B - 36                  |
| ICH2 2 of 2 - Page B - 19               | Inverter Board 1 of 2 - Page B - 37      |
| Audio Codec, AMP - Page B - 20          | Inverter Board Page 2 of 2 - Page B - 38 |

**Sheet 1 of 32**  
**System Block**  
**Diagram**

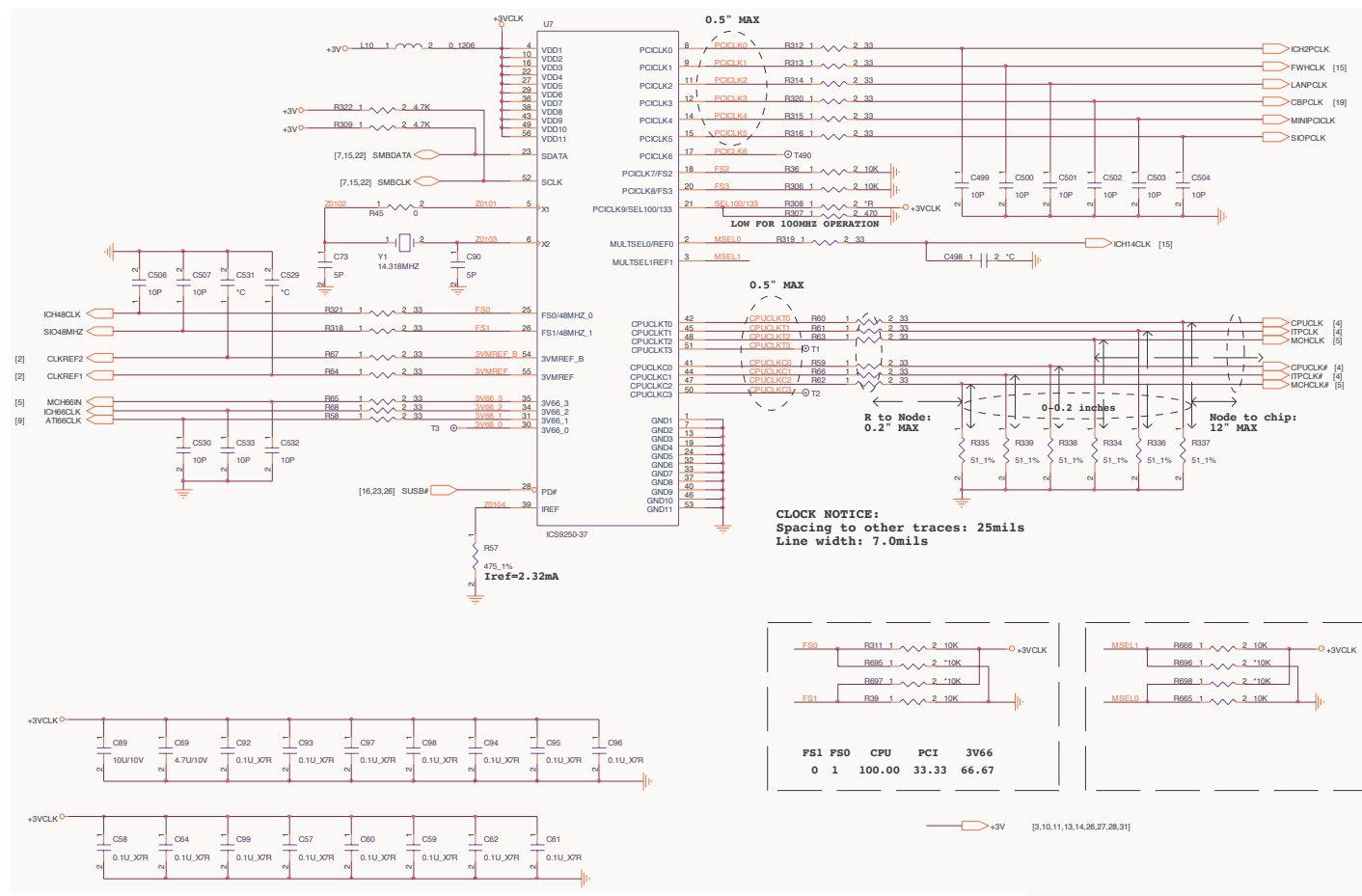




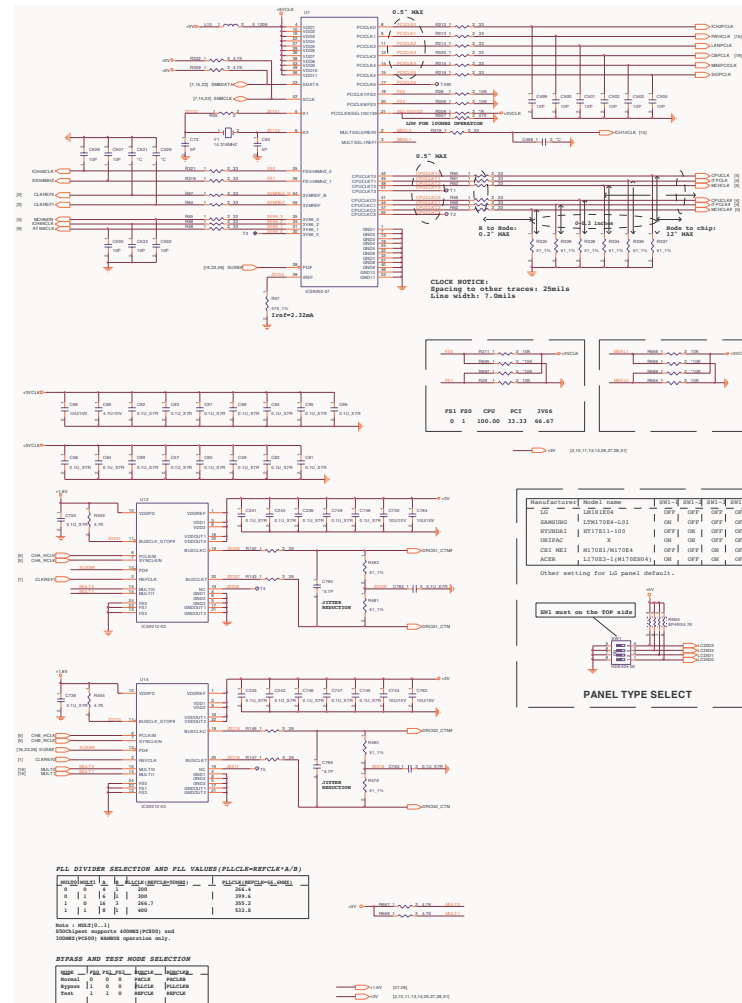
## Clock Generator

Sheet 2 of 32  
CLK GEN

# Schematic Diagrams



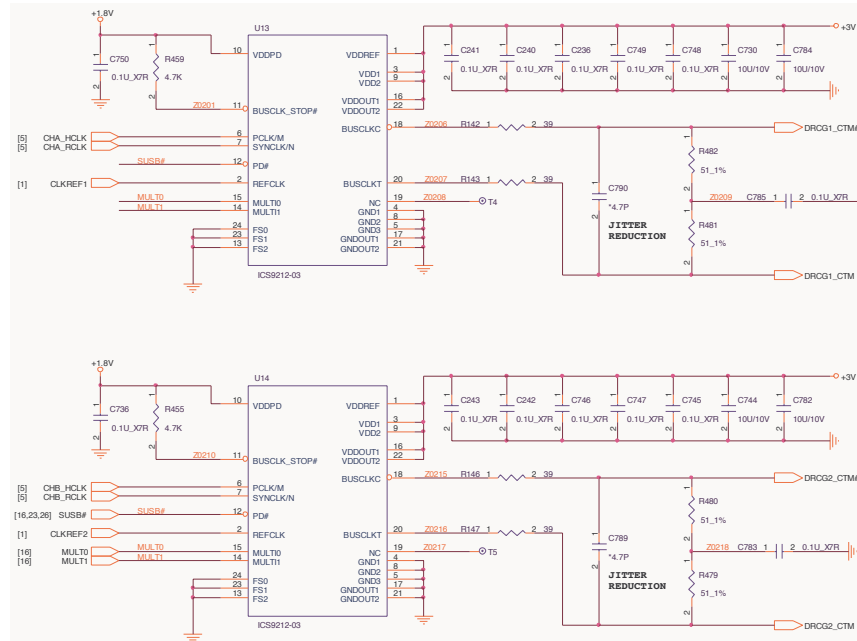
## DRCG Panel Type

Sheet 3 of 32  
DRCG - Panel Type

## Schematic Diagrams

## CPU (P4 mPGA 478) - 1 of 2

Sheet 4 of 32  
CPU (P4 mPGA478)  
1 of 2



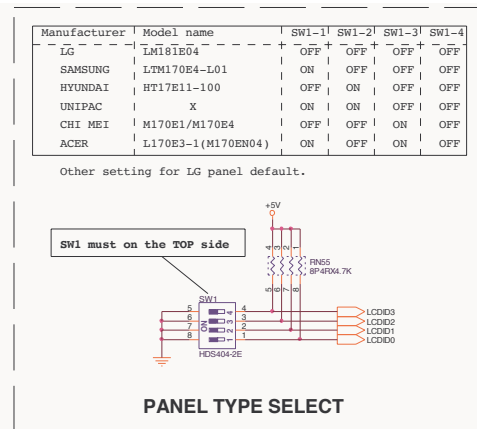
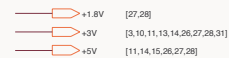
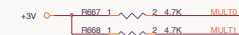
PLL DIVIDER SELECTION AND PLL VALUES(PLLCLK=REFCLK\*A/B)

| MULT0 | MULT1 | A  | B | PLLCLK(REFCLK=50MHZ) | PLLCLK(REFCLK=66.6MHZ) |
|-------|-------|----|---|----------------------|------------------------|
| 0     | 0     | 4  | 1 | 200                  | 266.4                  |
| 0     | 1     | 6  | 1 | 300                  | 399.6                  |
| 1     | 0     | 16 | 3 | 266.7                | 355.2                  |
| 1     | 1     | 8  | 1 | 400                  | 532.8                  |

Note : MULT[0..1]  
850Chipset supports 400MHZ(PC800) and  
300MHZ(PC600) RAMBUS operation only.

BYPASS AND TEST MODE SELECTION

| MODE   | FS0 | FS1 | FS2 | BUSCLK | BUSCLKB |
|--------|-----|-----|-----|--------|---------|
| Normal | 0   | 0   | 0   | PACLB  | PACLB   |
| Bypass | 1   | 0   | 0   | PLLCLK | PLLCLK  |
| Test   | 1   | 1   | 0   | REFCLK | REFCLK  |

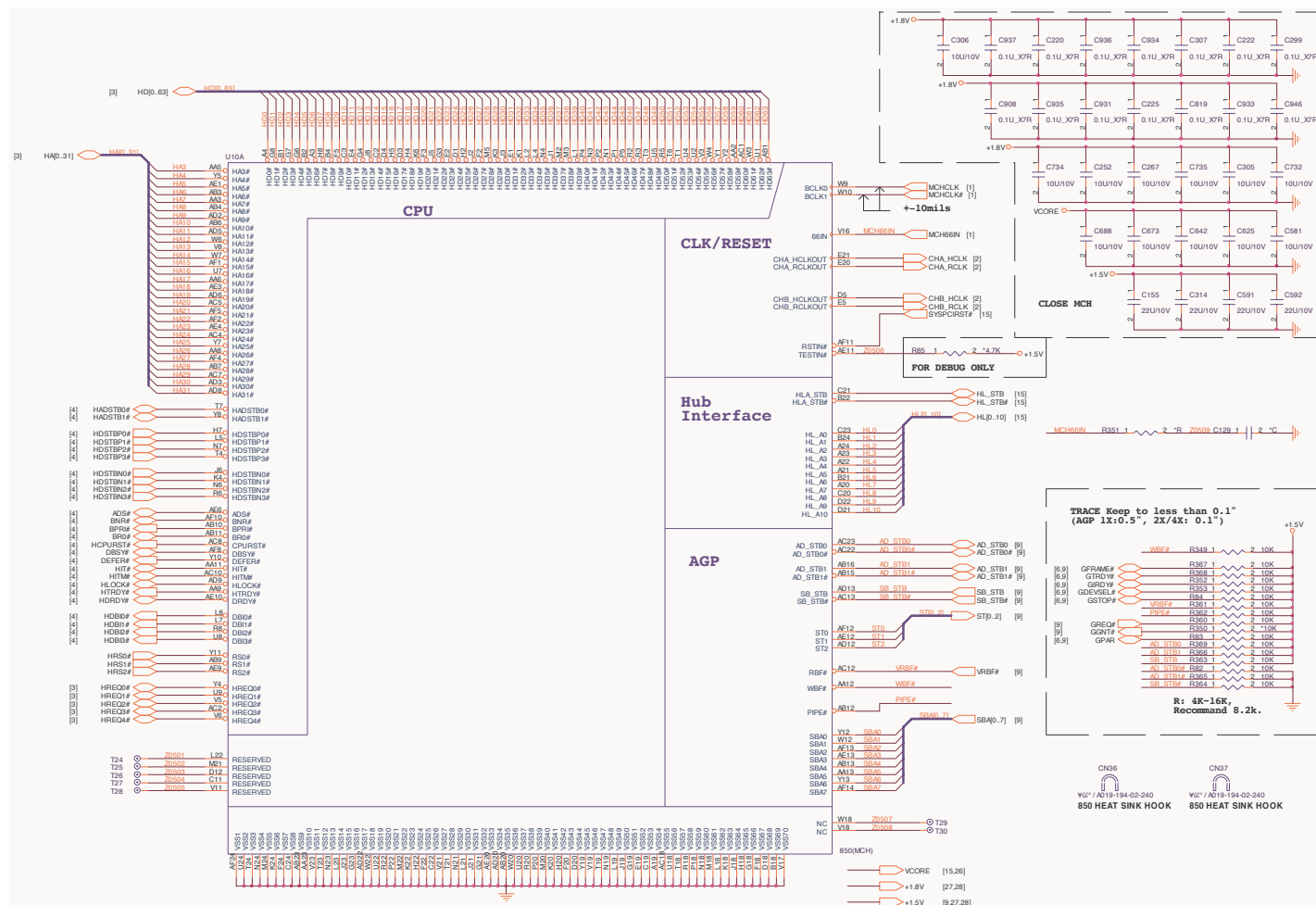


## Schematic Diagrams



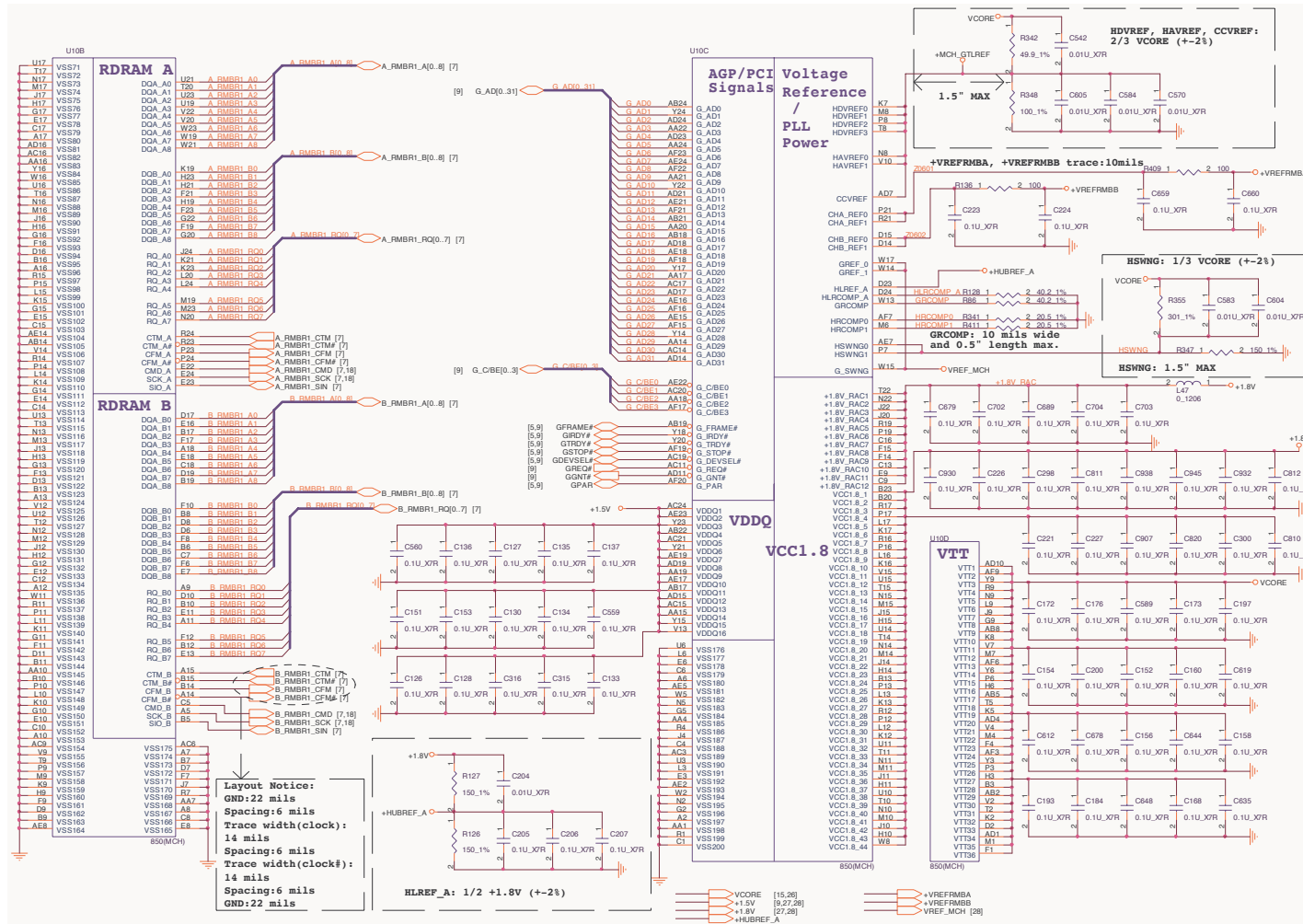
## Schematic Diagrams

Sheet 6 of 32  
MCH  
(CPU, HUB, AGP)  
1 of 2



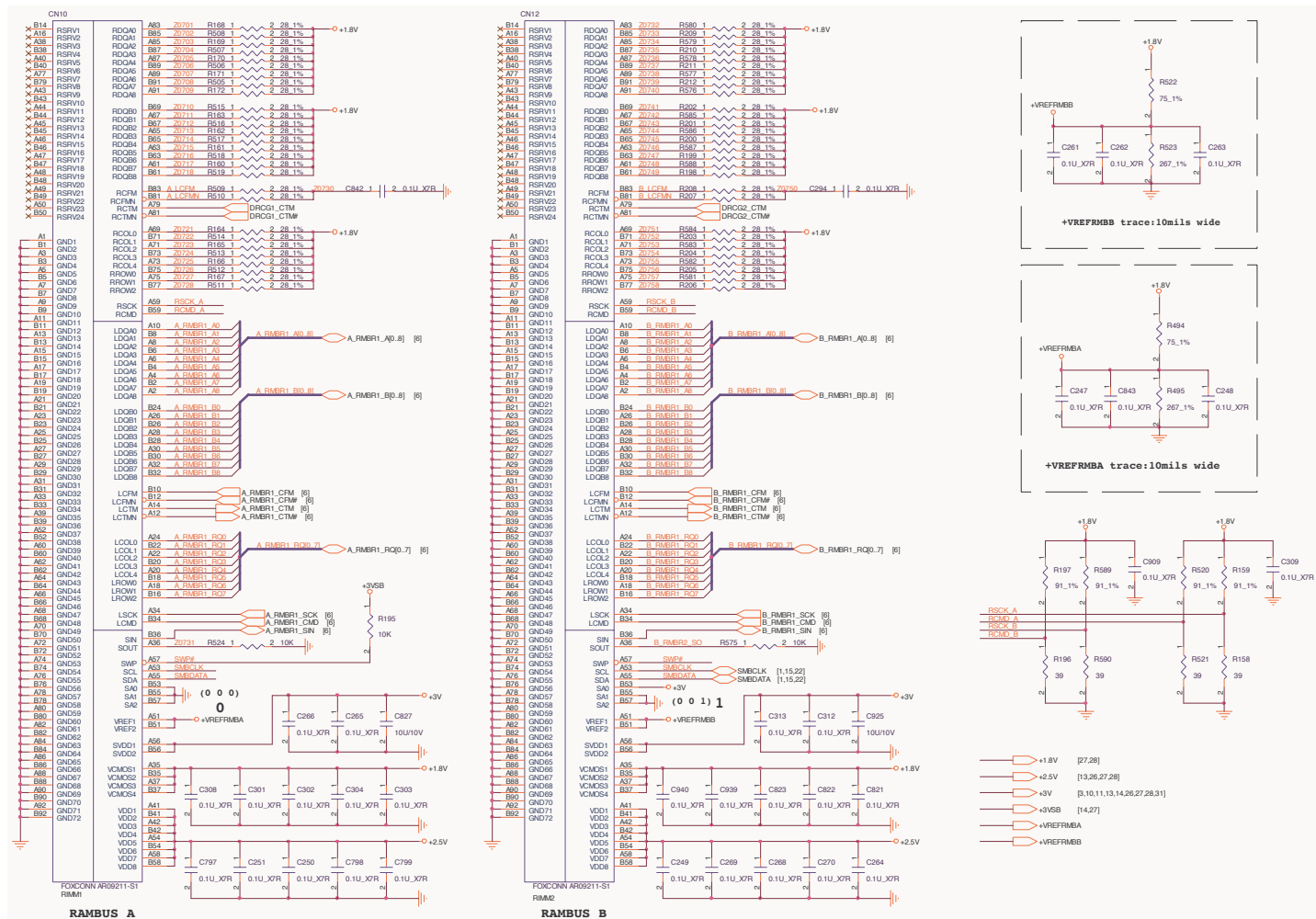


Sheet 7 of 32  
MCH (RDRAM, PCI)  
2 of 2



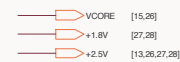
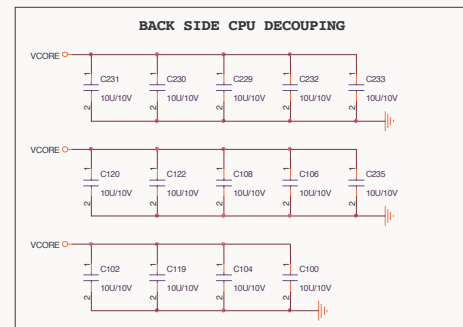
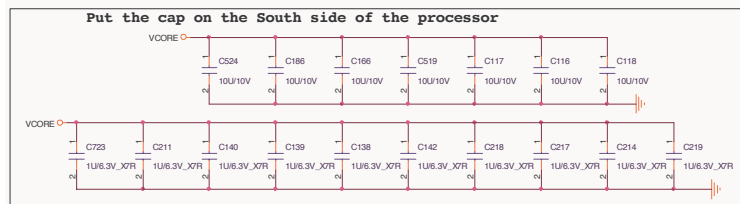
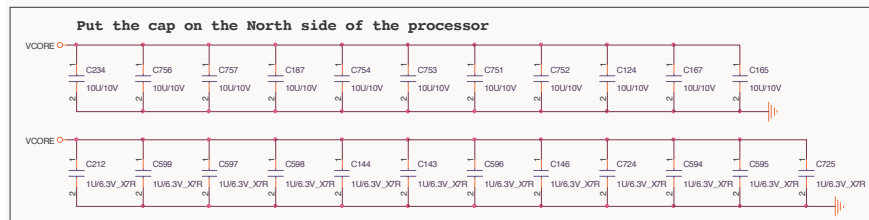
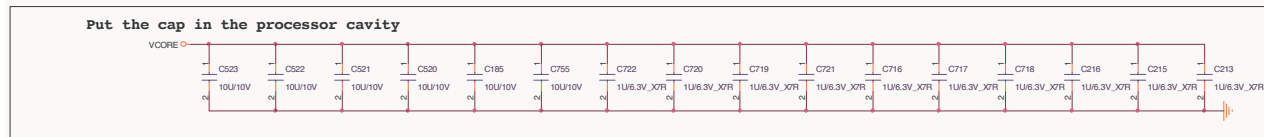
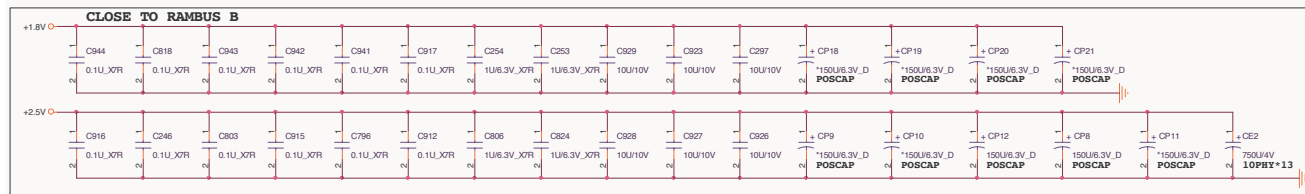
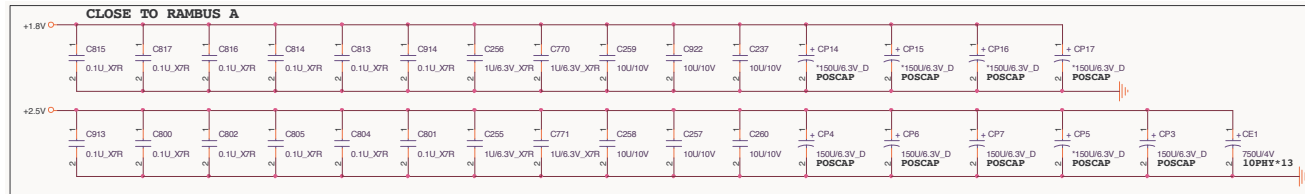
## RAMBUS A,B

## Schematic Diagrams



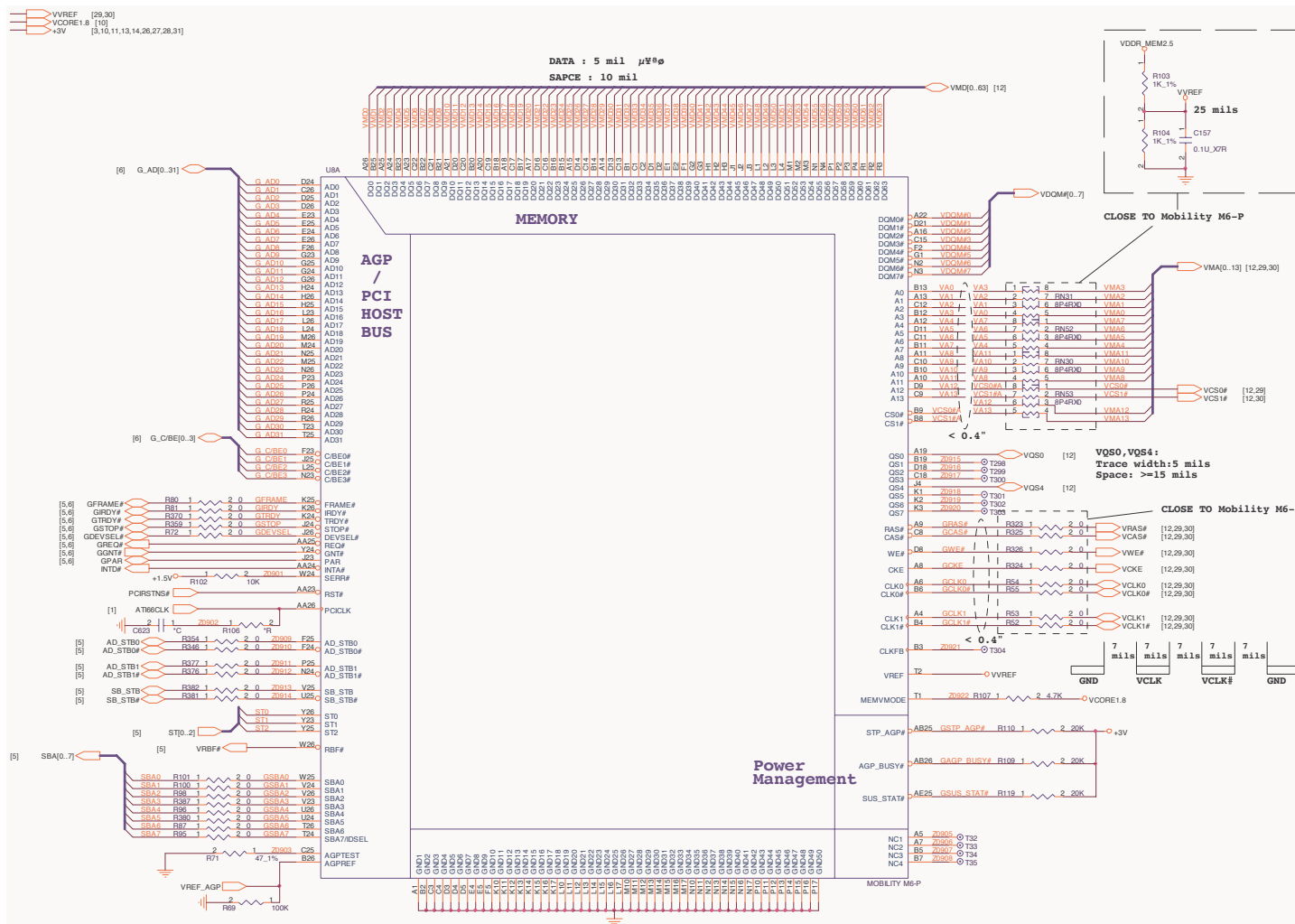
## CPU Decoupling

Sheet 9 of 32  
CPU Decoupling



# Schematic Diagrams

Sheet 10 of 32  
ATI Mobility M6  
1 of 3



Sheet 11 of 32  
ATI Mobility M6  
2 of 3

## Schematic Diagrams

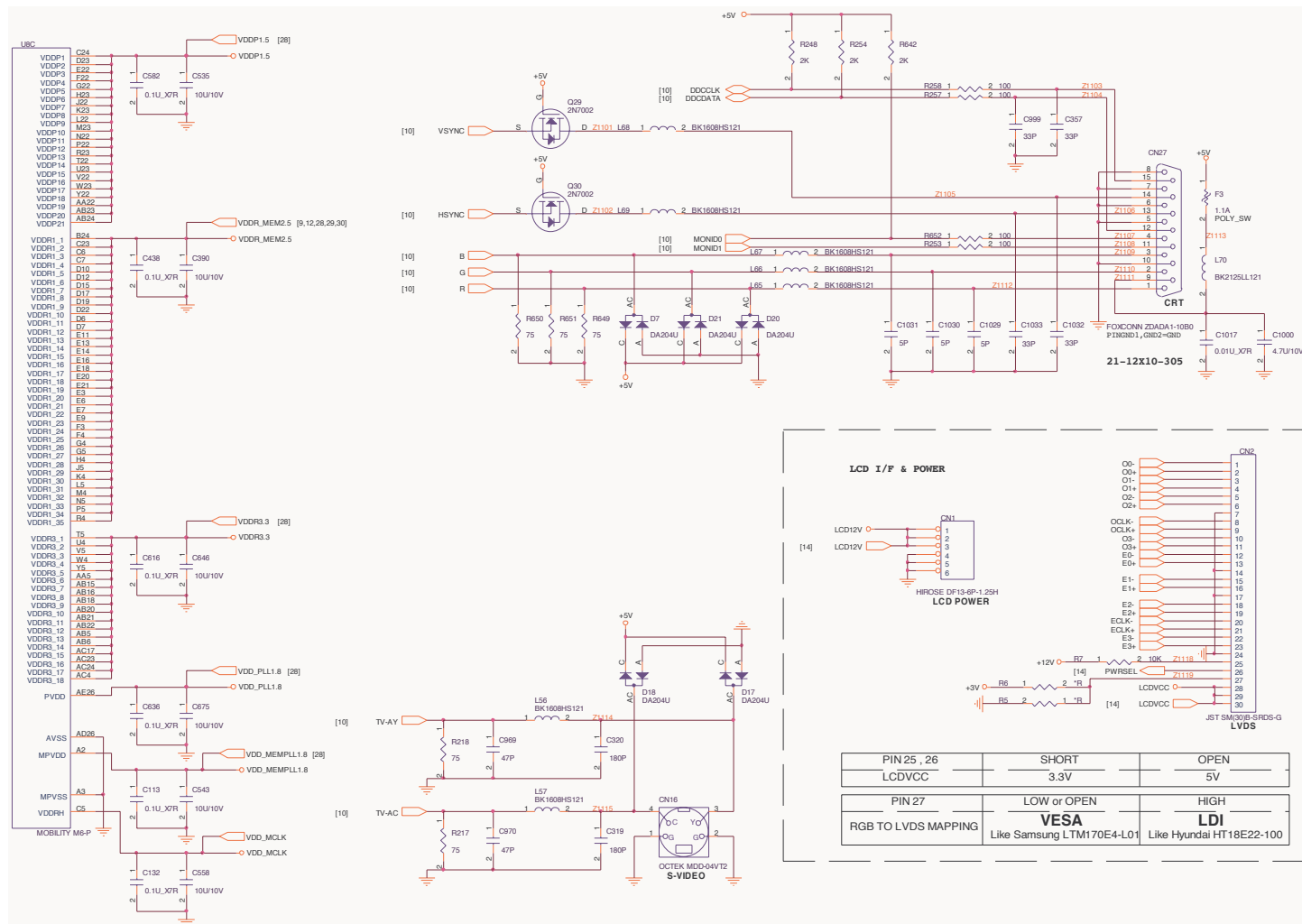




## ATI Mobility M6 - 3 of 3

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ATI Mobility M6  
3 of 3

# Schematic Diagrams



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VRAM Terminator

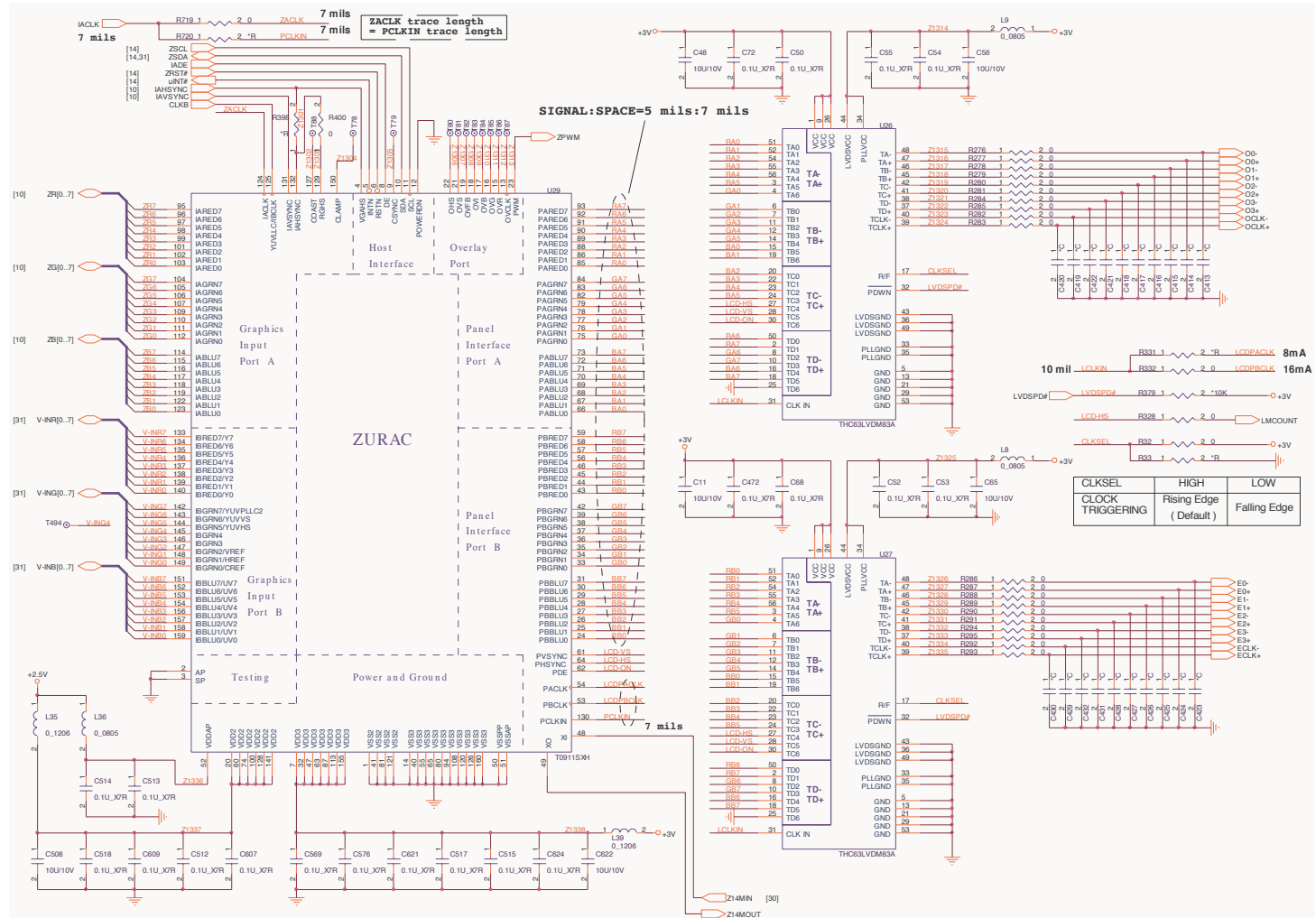
## Schematic Diagrams



## Schematic Diagrams

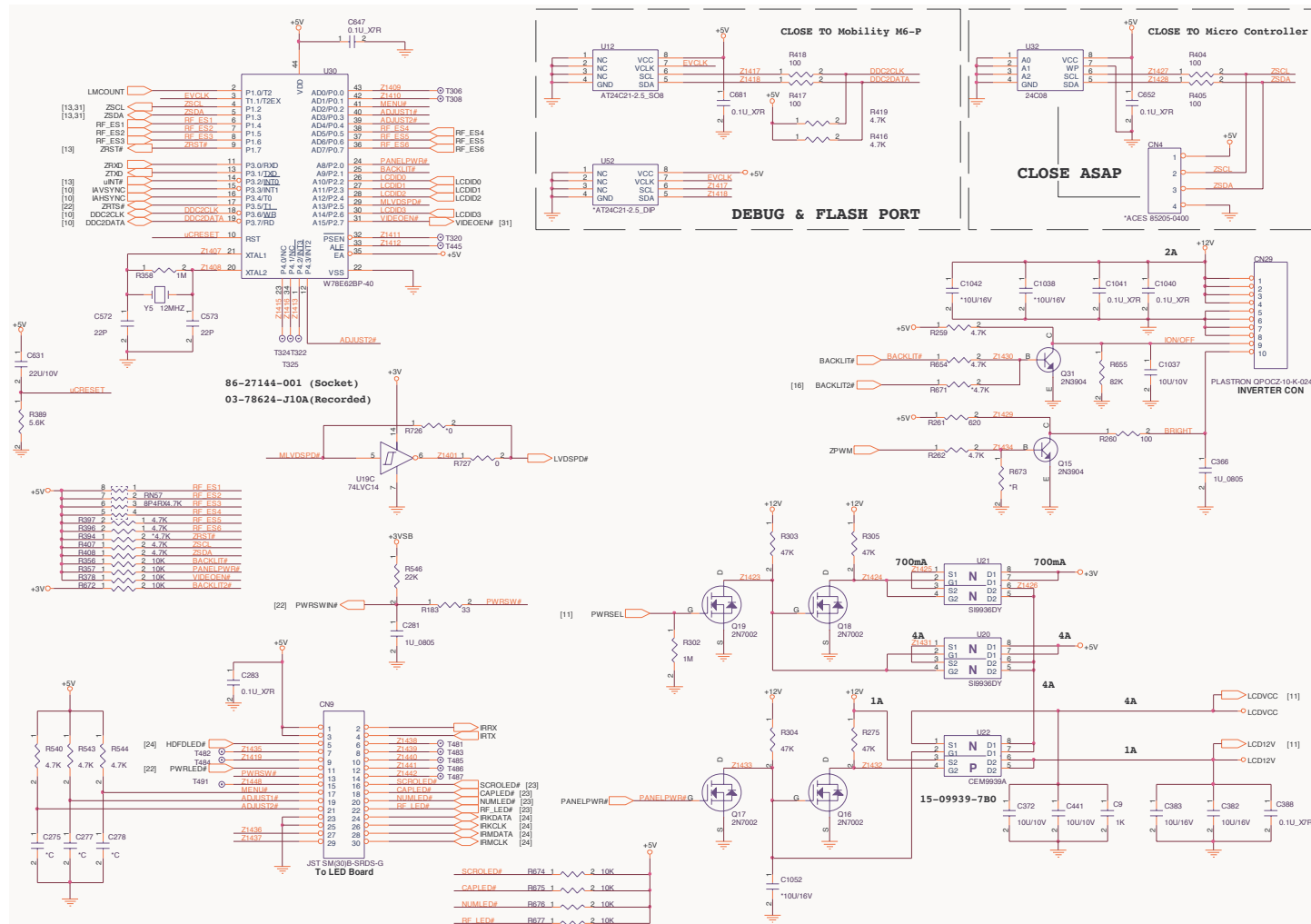
# Z3, LVDS

Sheet 14 of 32  
Z3, LVDS



# Micro-P, LCD PWR

Sheet 15 of 32  
Micro-P, LCD PWR



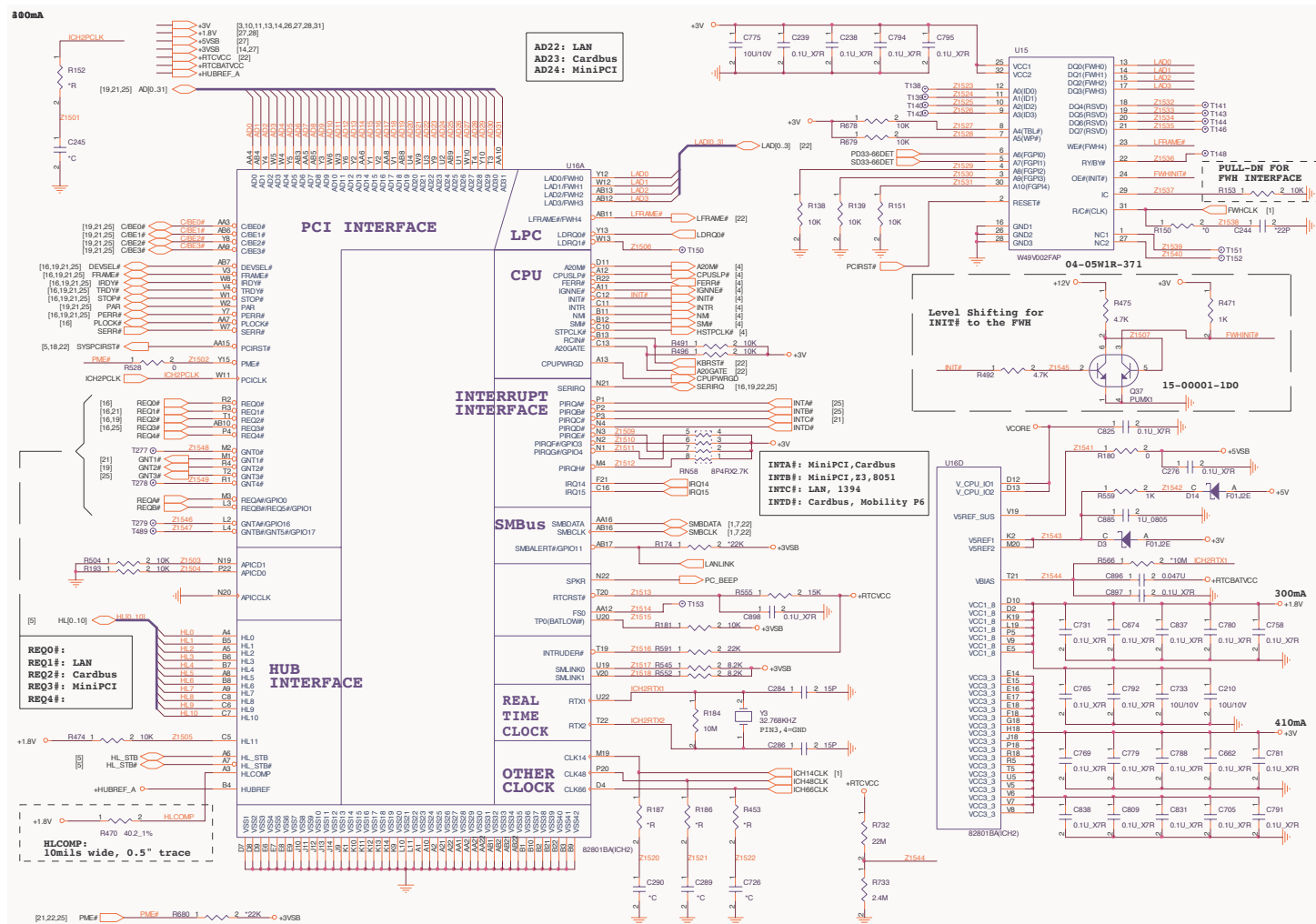
**ICH2 - 1 of 2**

Sheet 16 of 32

## ICH2

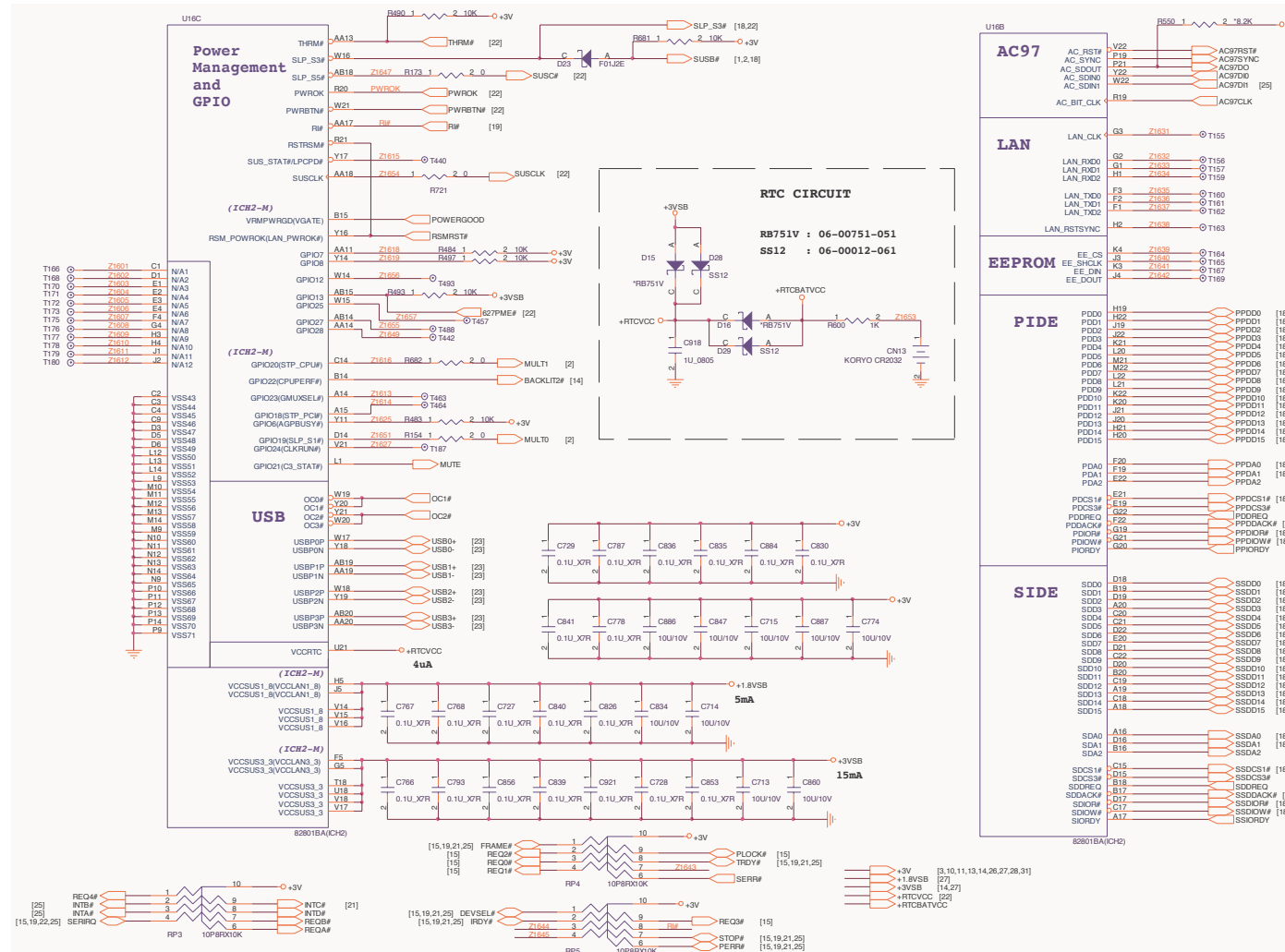
1 of 2

# Schematic Diagrams





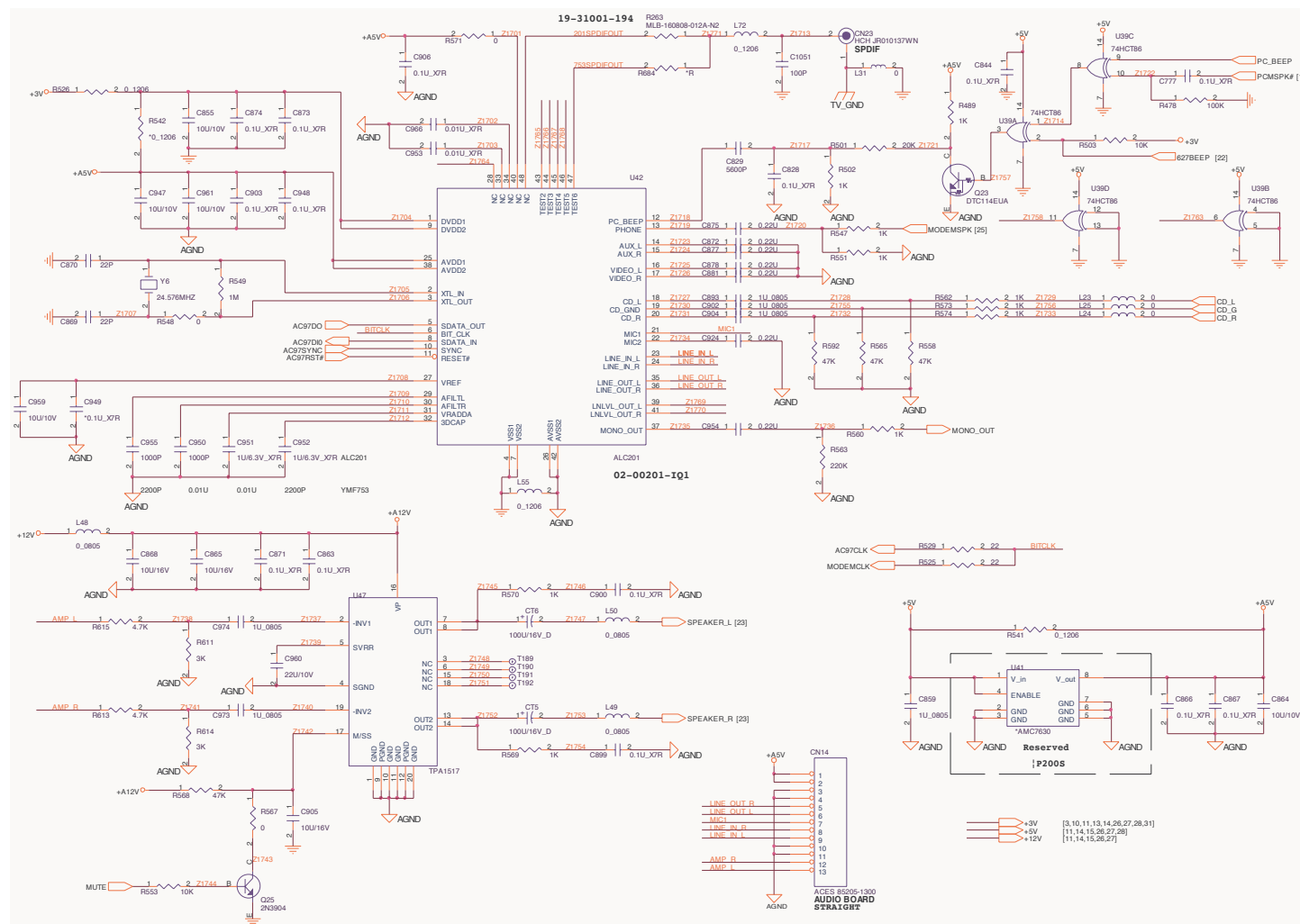
## ICH2 - 2 of 2



## Audio Codec, AMP

Sheet 18 of 32  
Audio Codec, AMP

# Schematic Diagrams



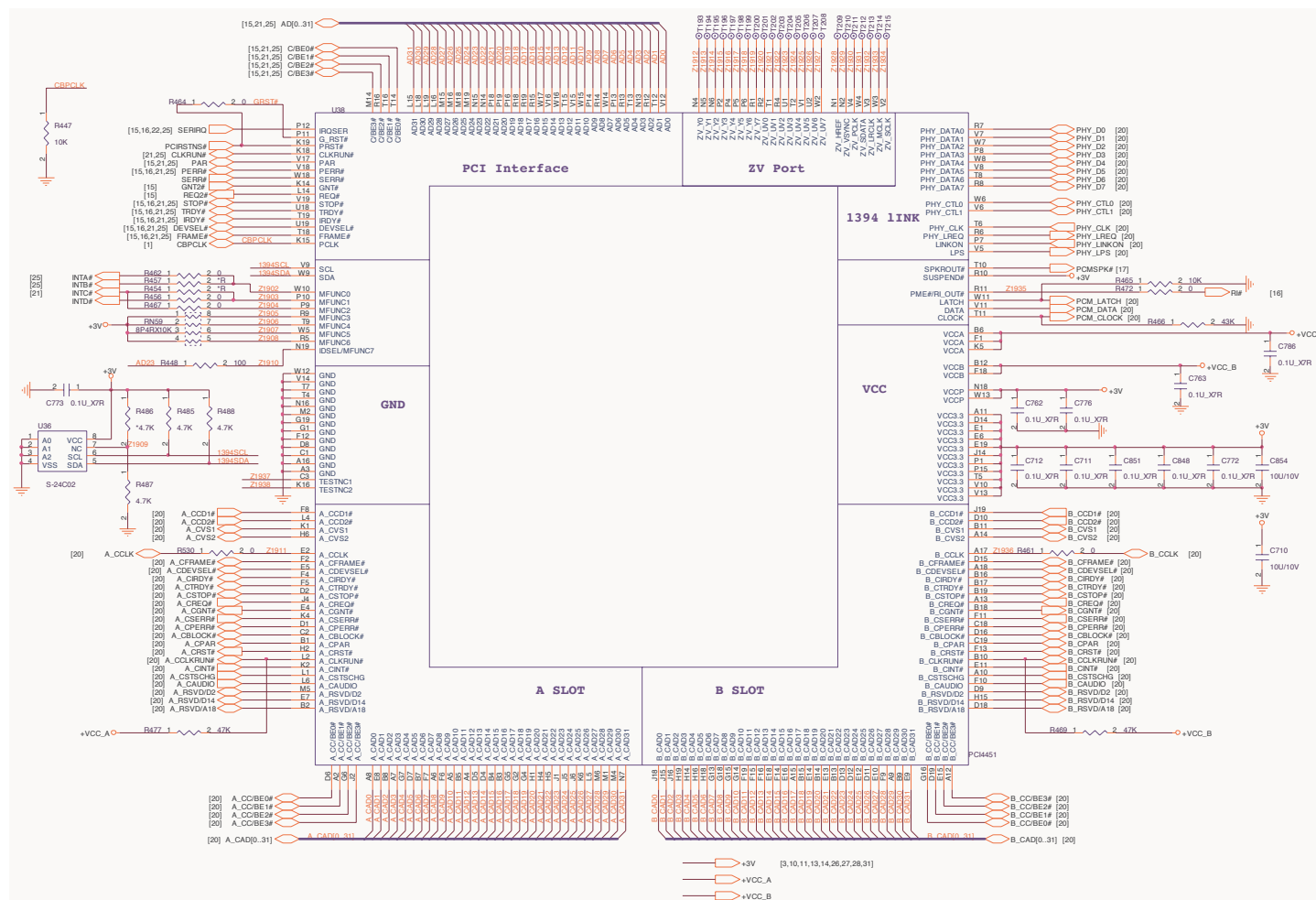
Sheet 19 of 32  
IDE, PCI Reset

Sheet 19 of 32  
IDE, PCI Reset



## Schematic Diagrams

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PCMCIA 1394



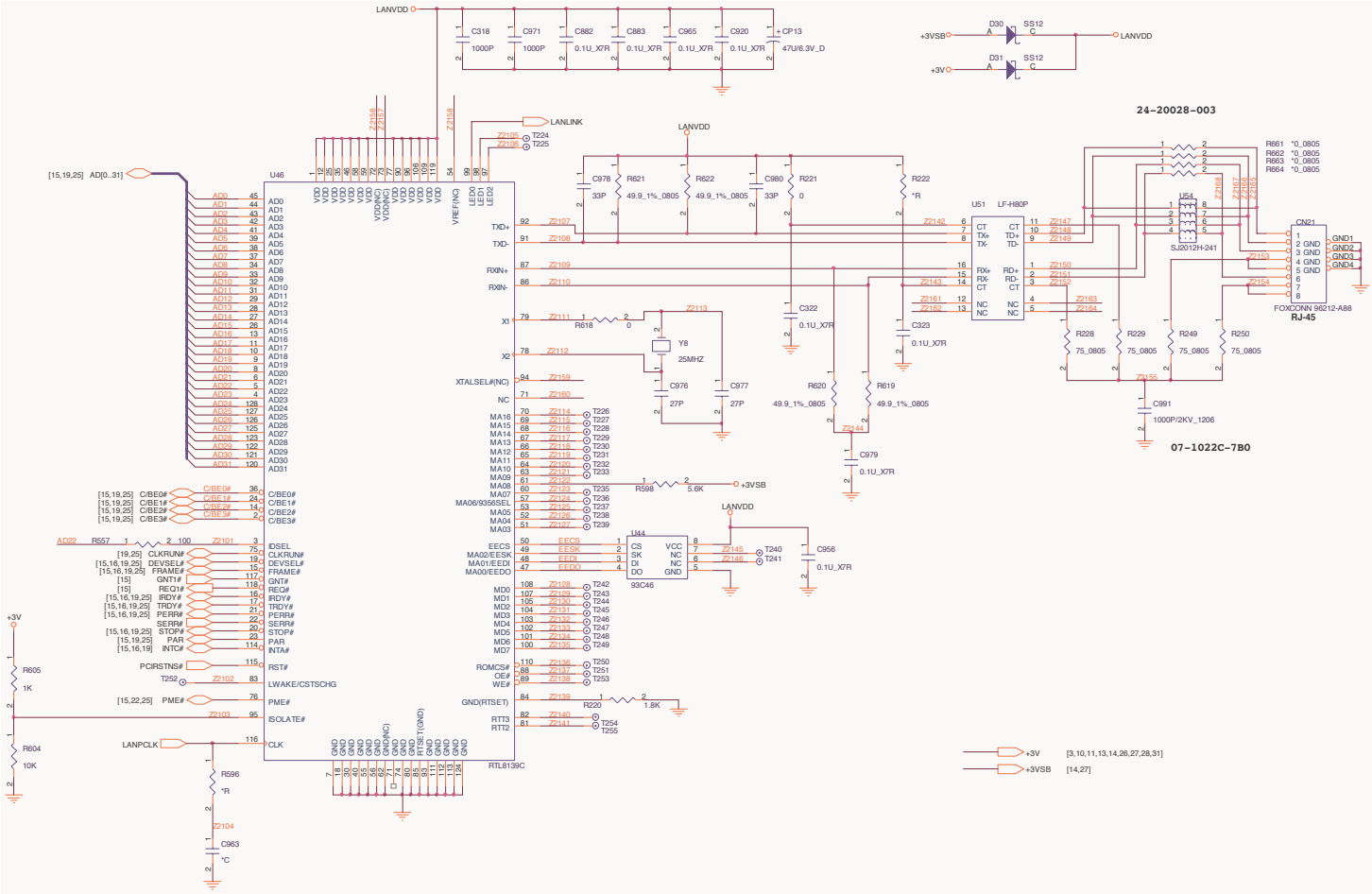
## Schematic Diagrams



Schematic Diagrams

LAN 8139C

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LAN 8139C





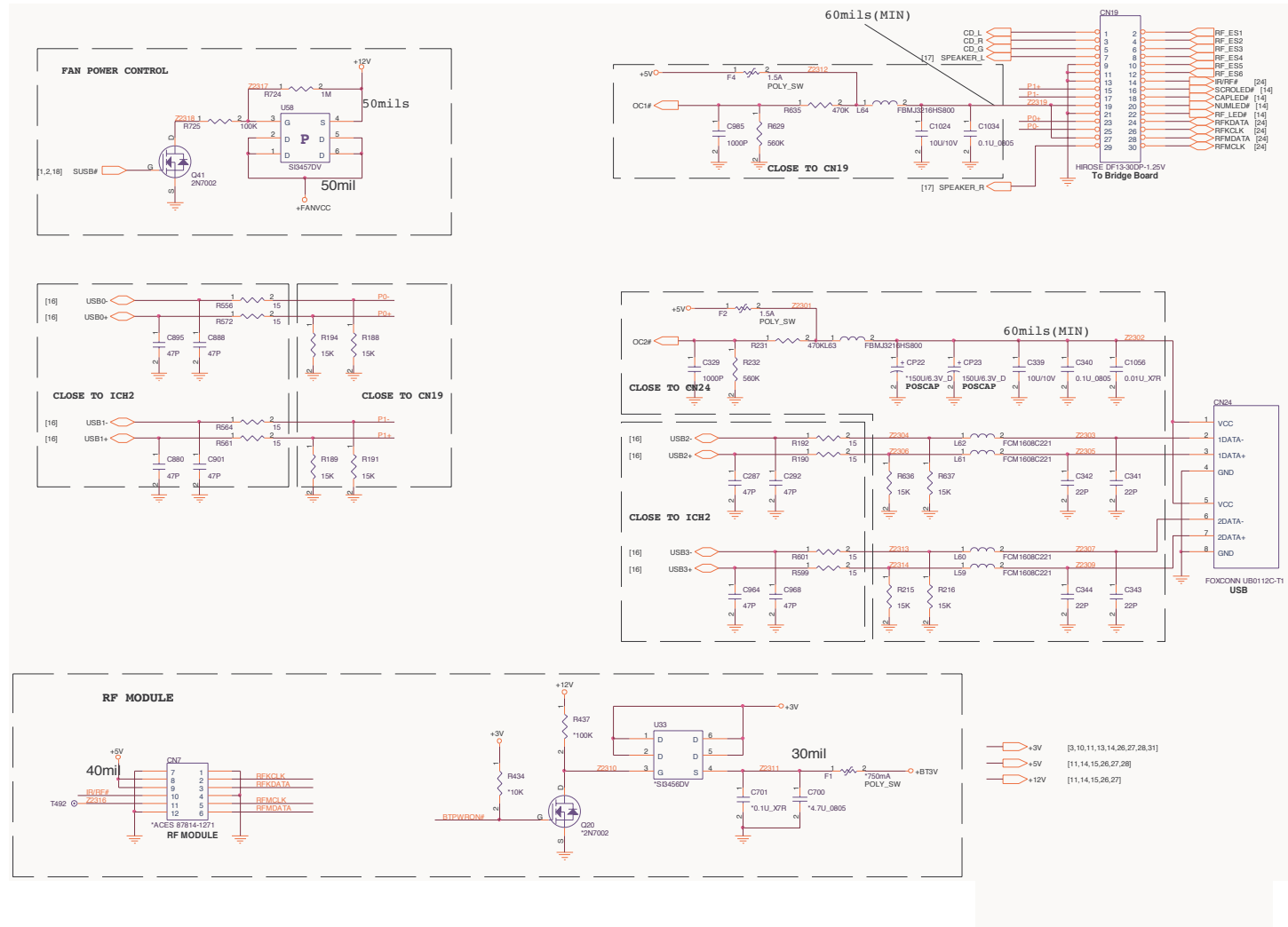
## Schematic Diagrams



## Schematic Diagrams

## USB, Bluetooth

Sheet 24 of 32  
USB, Bluetooth



Sheet 25 of 32  
LPT, IR/RF

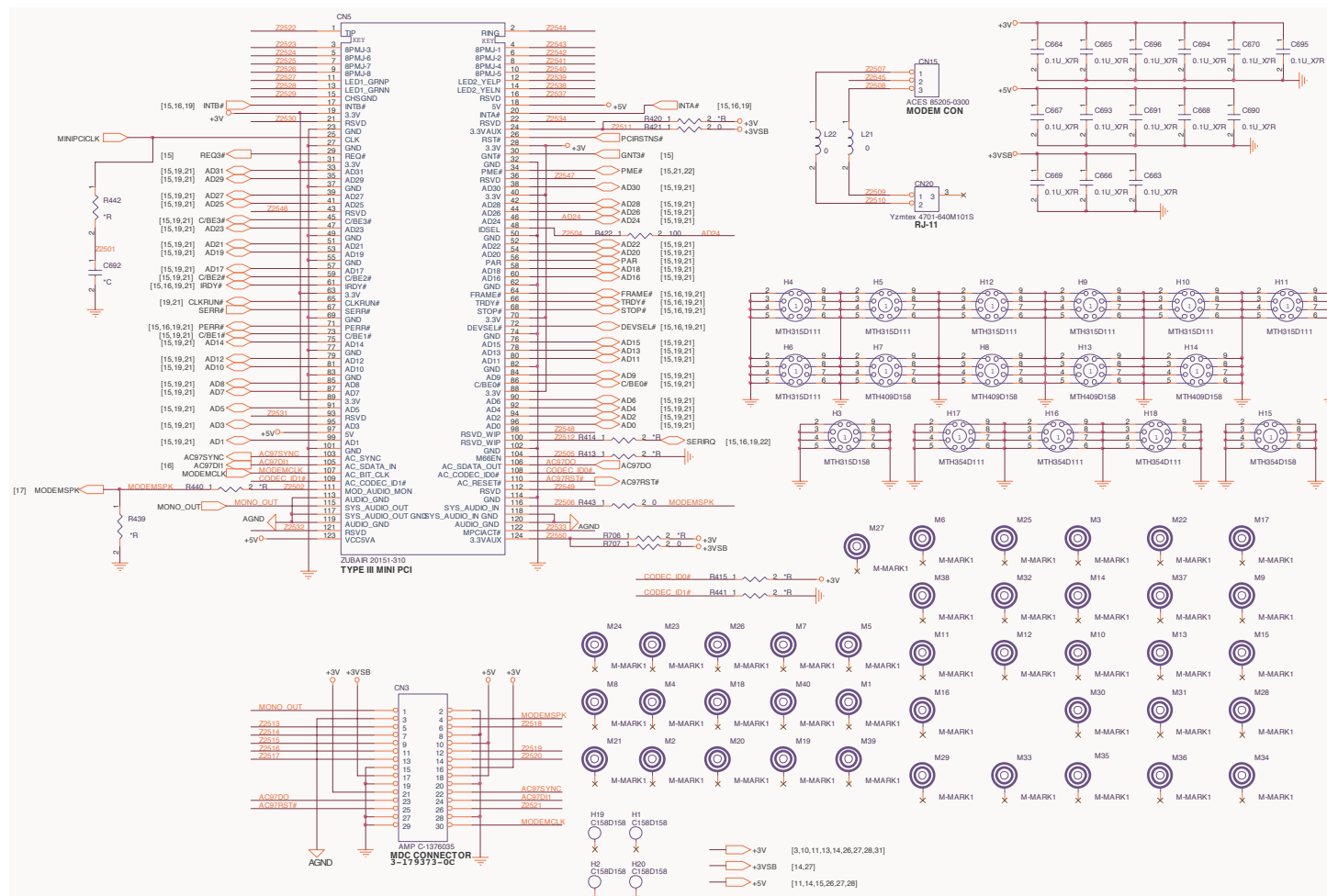
## Schematic Diagrams

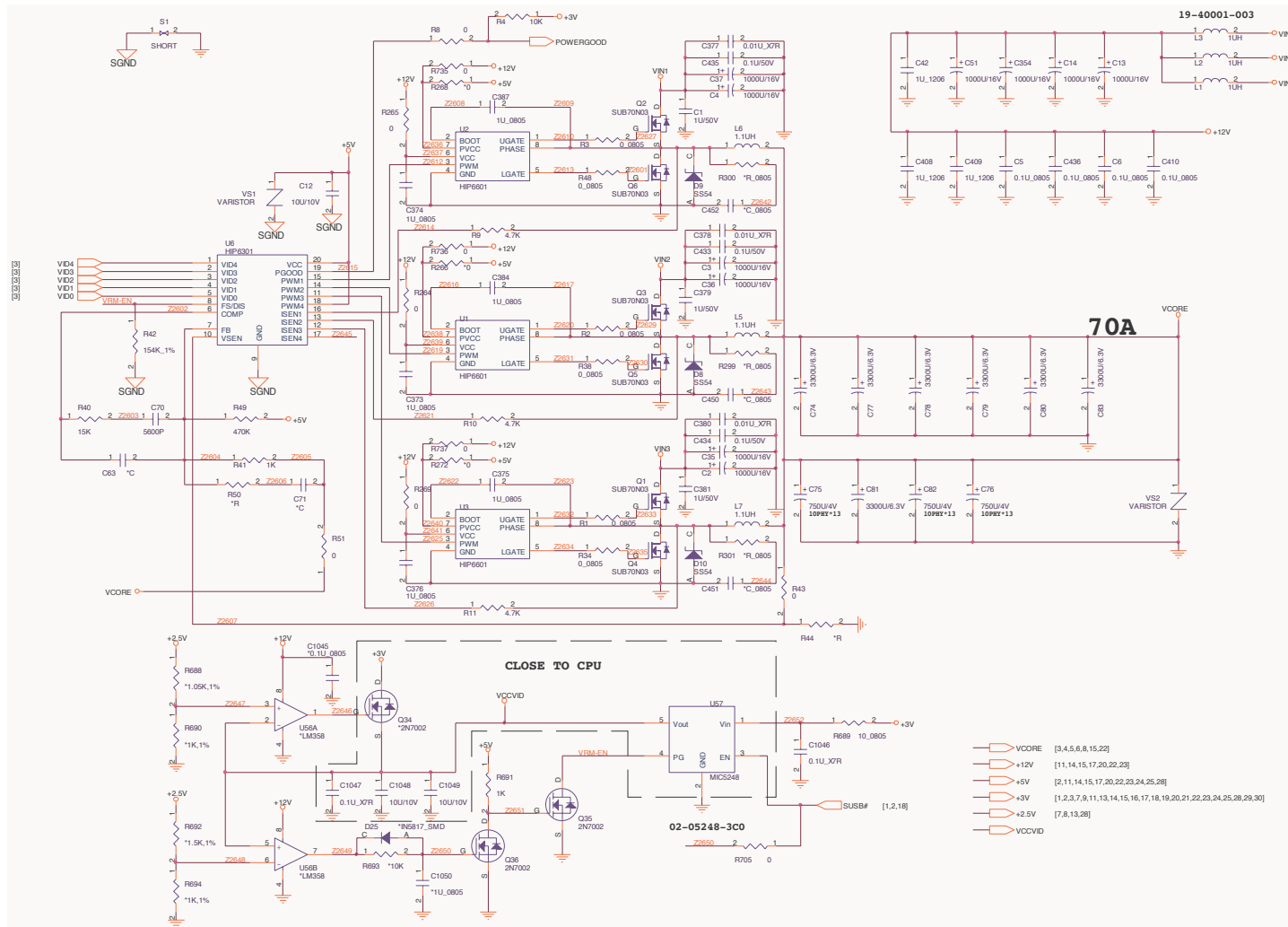


## Mini PCI, MDC

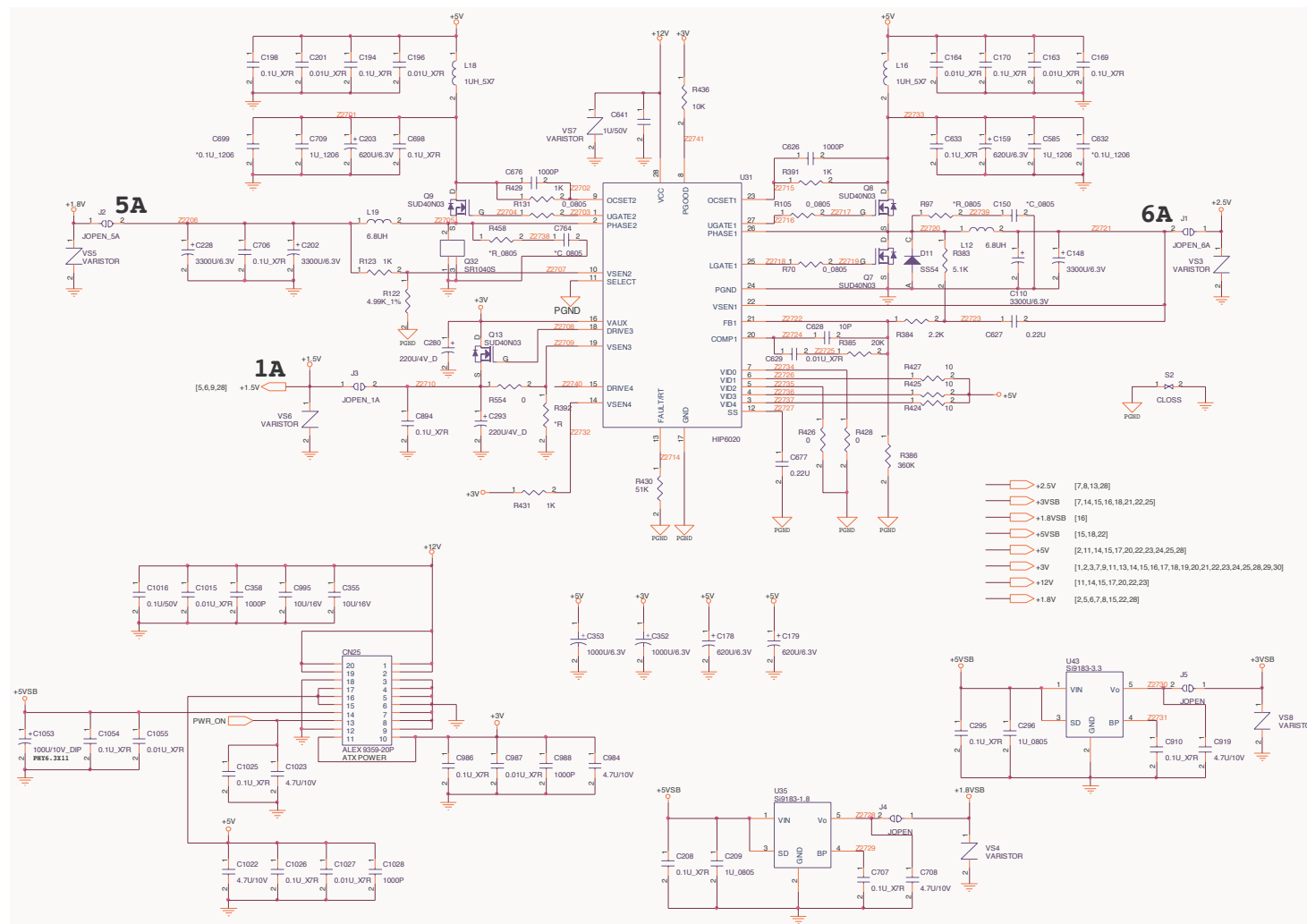
**Sheet 26 of 32**  
**Mini PCI, MDC**

# Schematic Diagrams





Sheet 28 of 32  
Power  
2 of 2



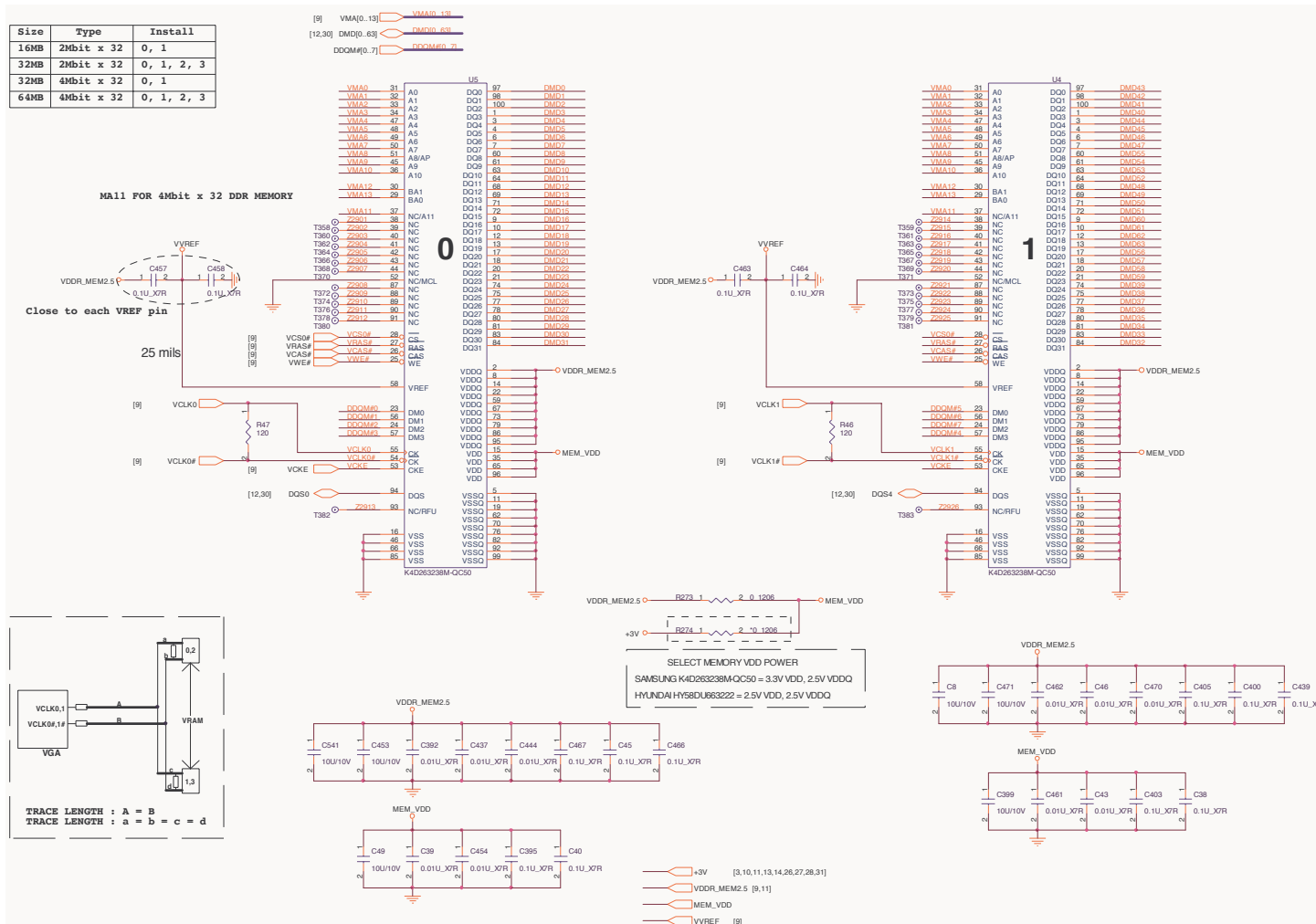


Sheet 29 of 32  
SSC, VGA Power

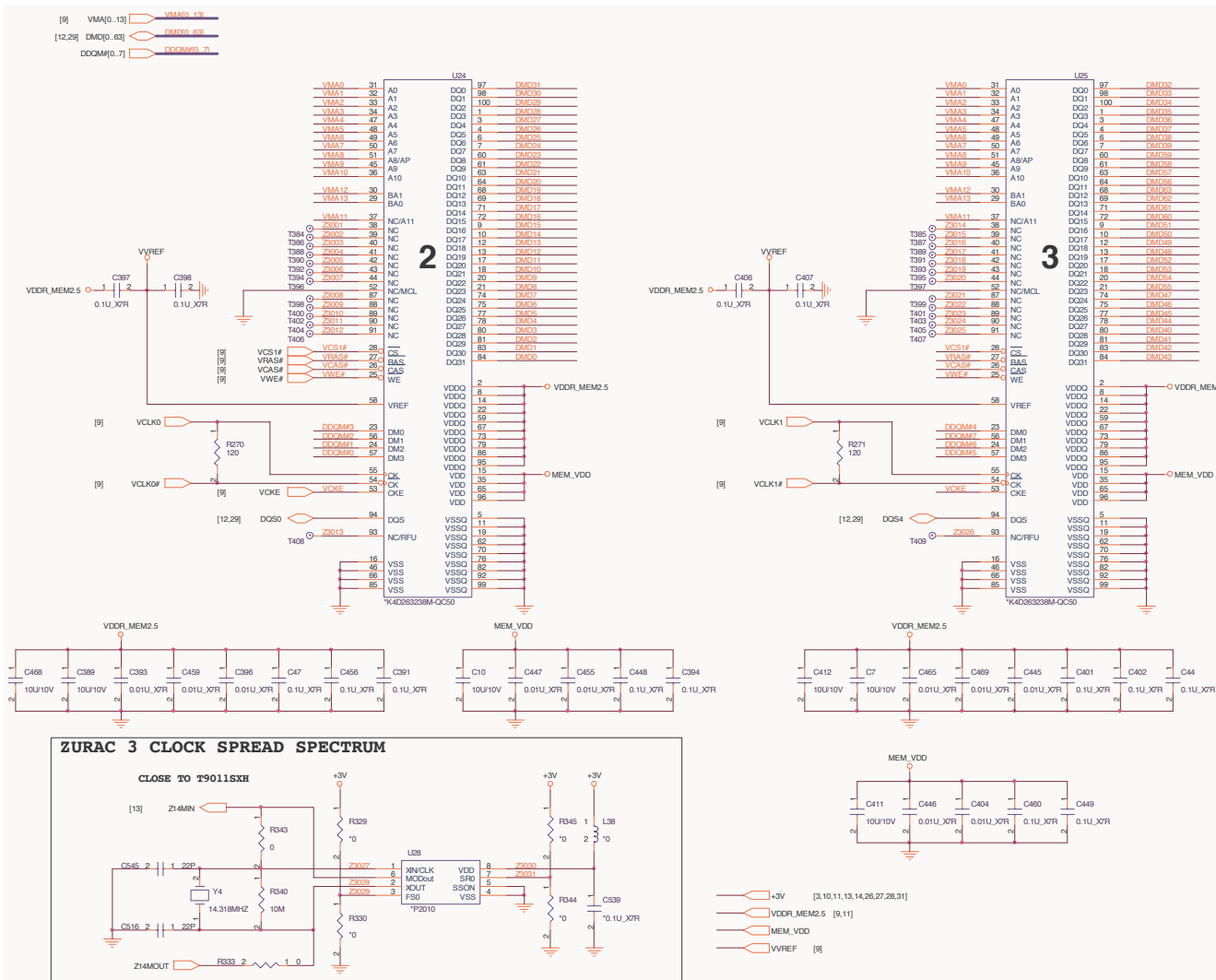


## VRAM DDR - 1 of 2

# Schematic Diagrams



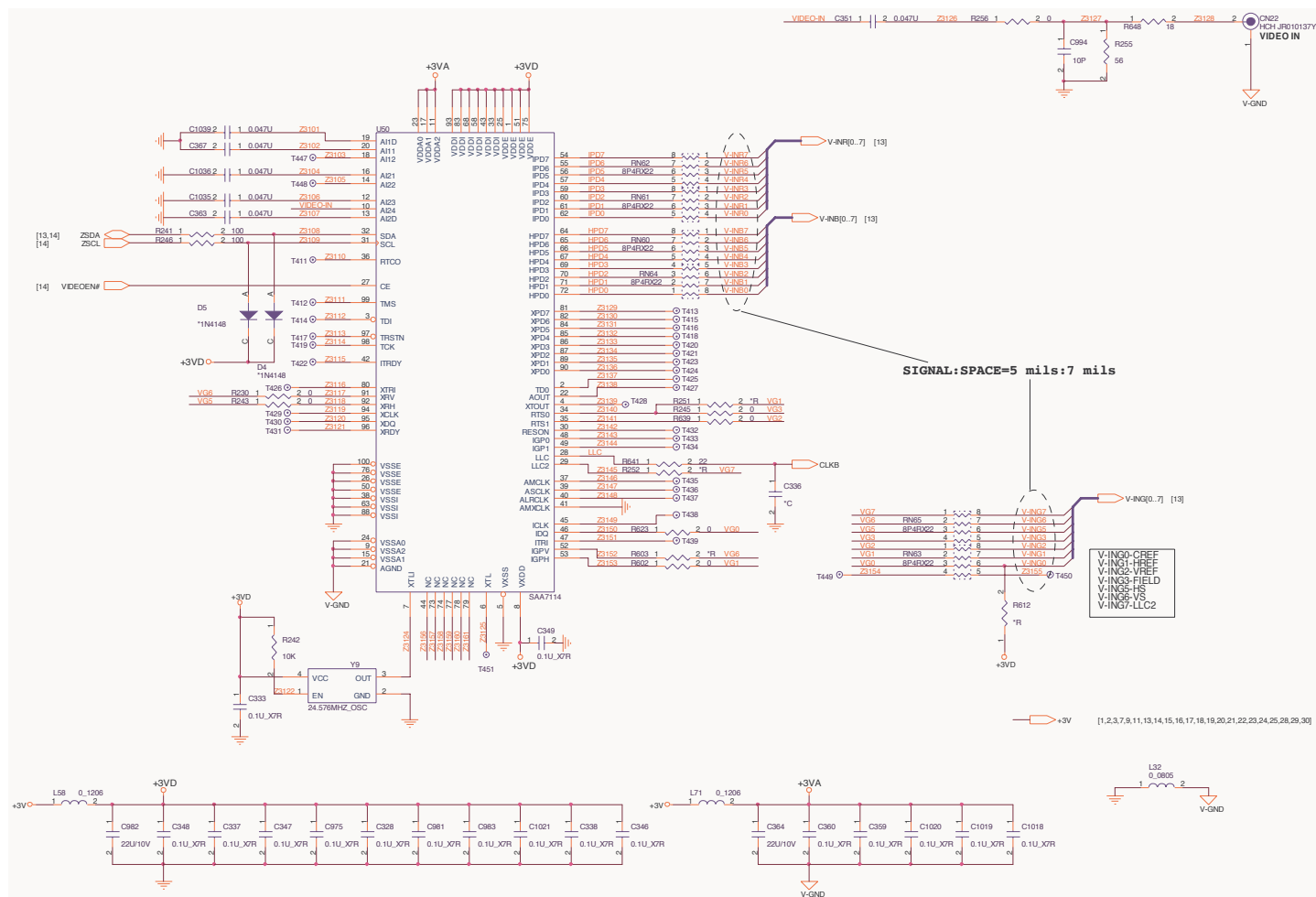
Sheet 31 of 32  
VRAM DDR  
2 of 2



## Video In

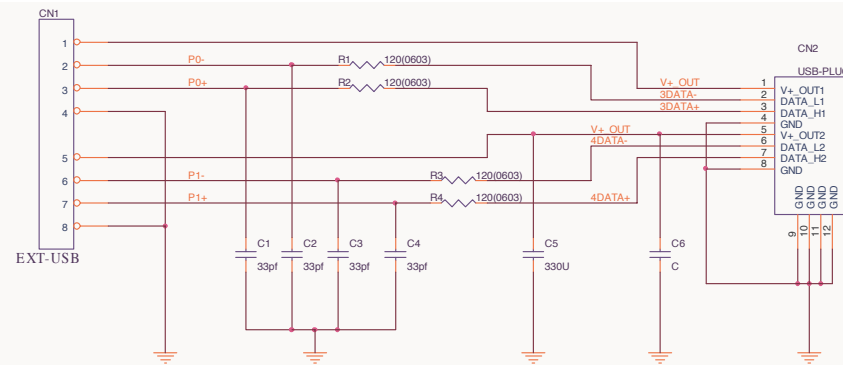
Sheet 32 of 32  
Video In

## Schematic Diagrams



# External USB Board

Sheet 1 of 1  
EXT USB Board



Schematic Diagrams

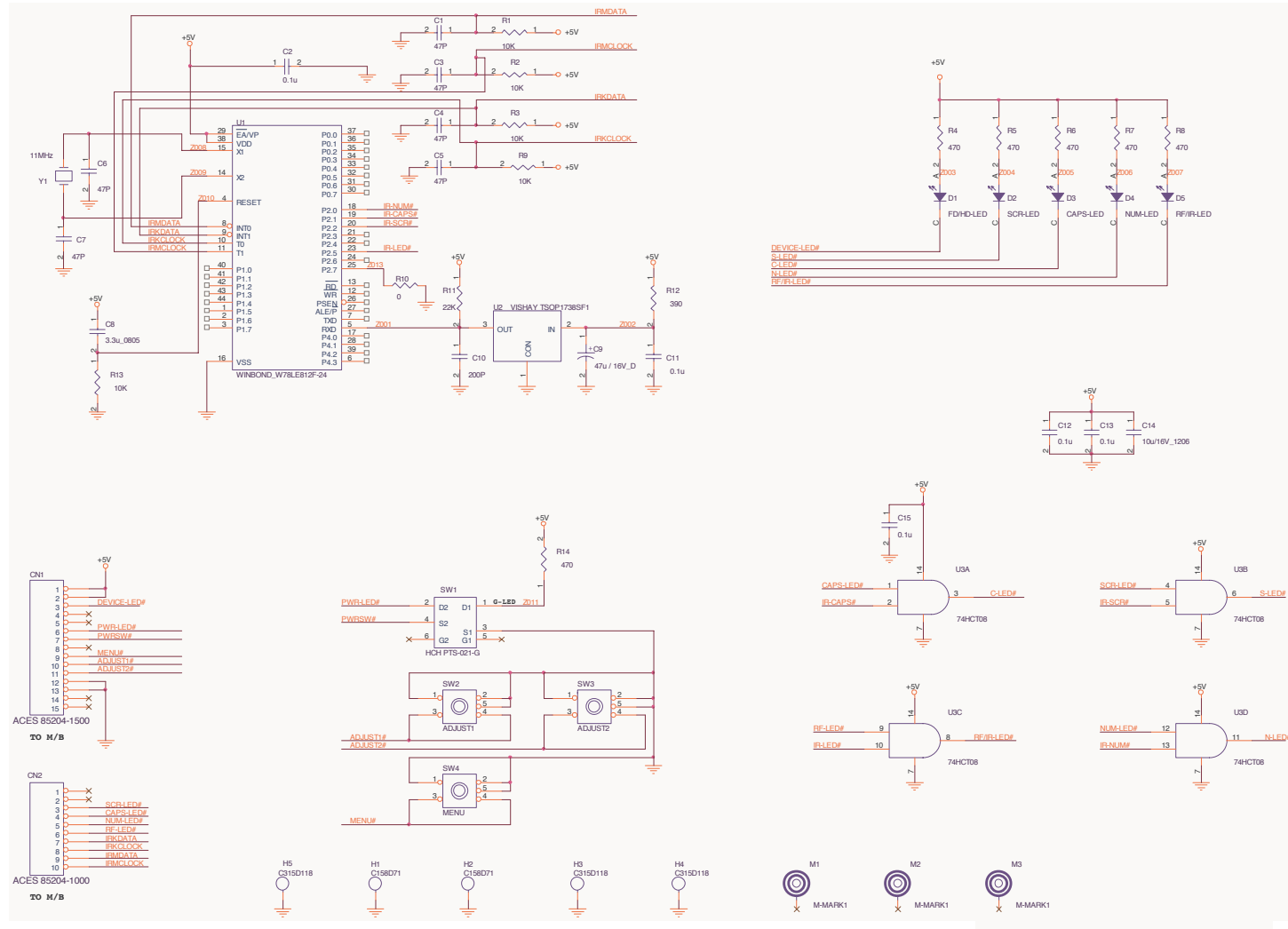
LAYOUT 11\$C@Ma`·N`E1μ

- 1:P0+/- trace width 9 mil ,|Ówidth :space~°1:1`Ã¥]GND  
©Mμ¥aø
- 2:P1+/- trace width 9 mil ,|Ówidth :space ~°1:1`Ã¥]GND  
©Mμ¥aø
- 3:~C±øPower Line trace width 60 mil ¥H²W
- 4:GND ¾Q|a@E~° ¥p³i,¼f¥i¥iøôa~
- 5:LAYOUT ¥I`â¾haO

## Schematic Diagrams

## LED Board

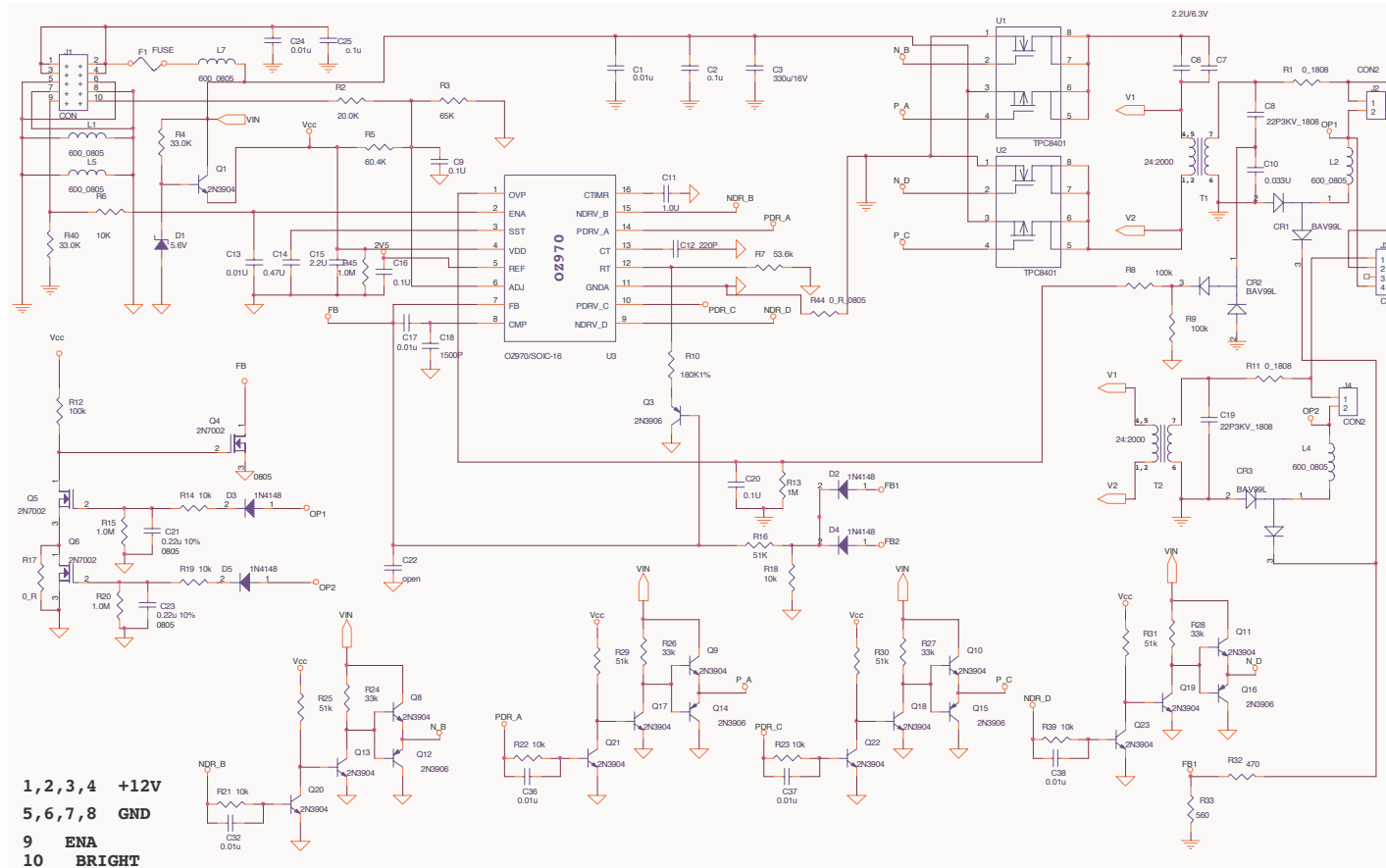
Sheet 1 of 1  
LED Board





# Inverter Board - Page 1 of 2

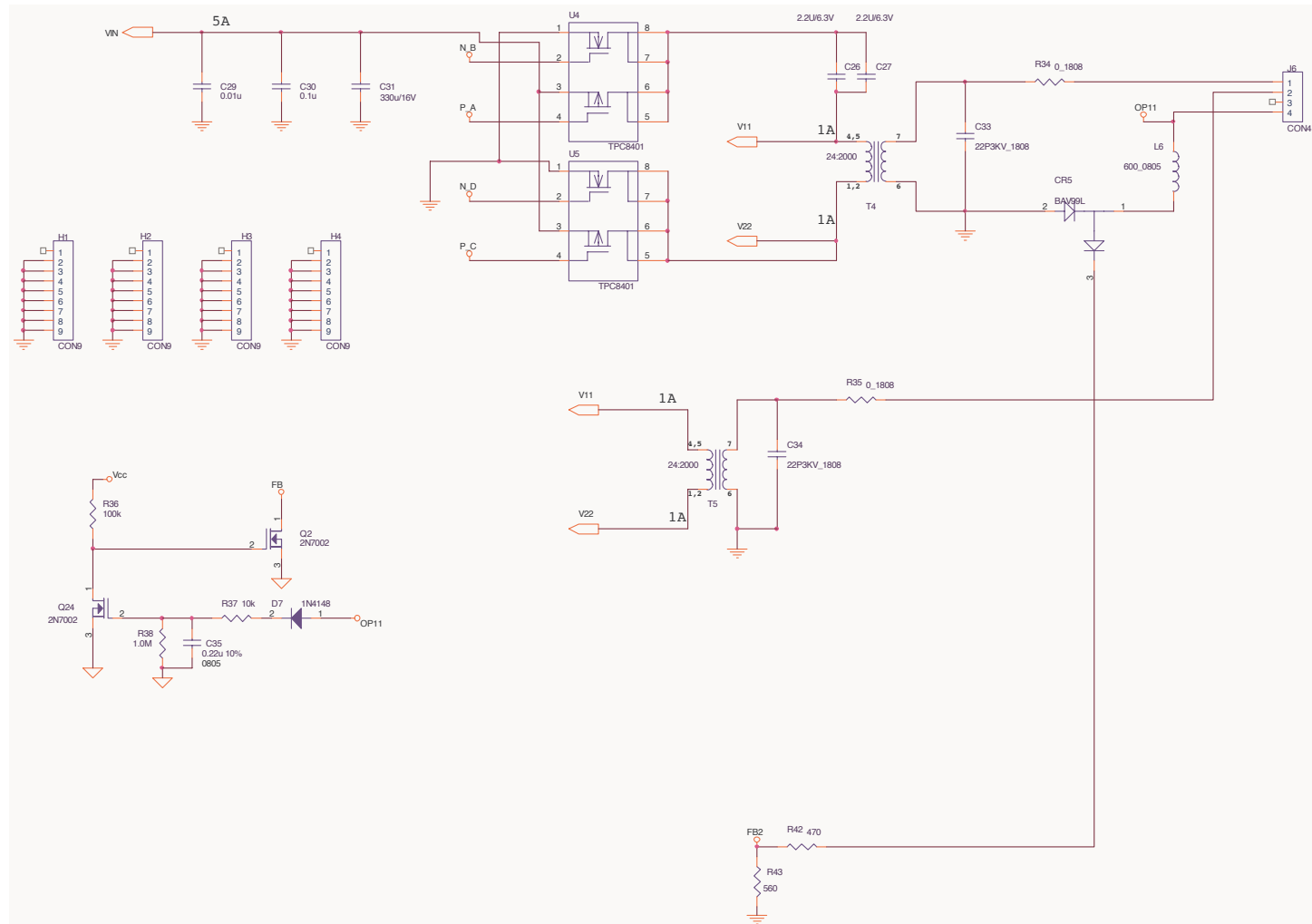
Sheet 1 of 2  
Inverter Board 1 of 2



## Schematic Diagrams

## Inverter Board - Page 2 of 2

Sheet 2 of 2  
Inverter Board Page 2  
of 2

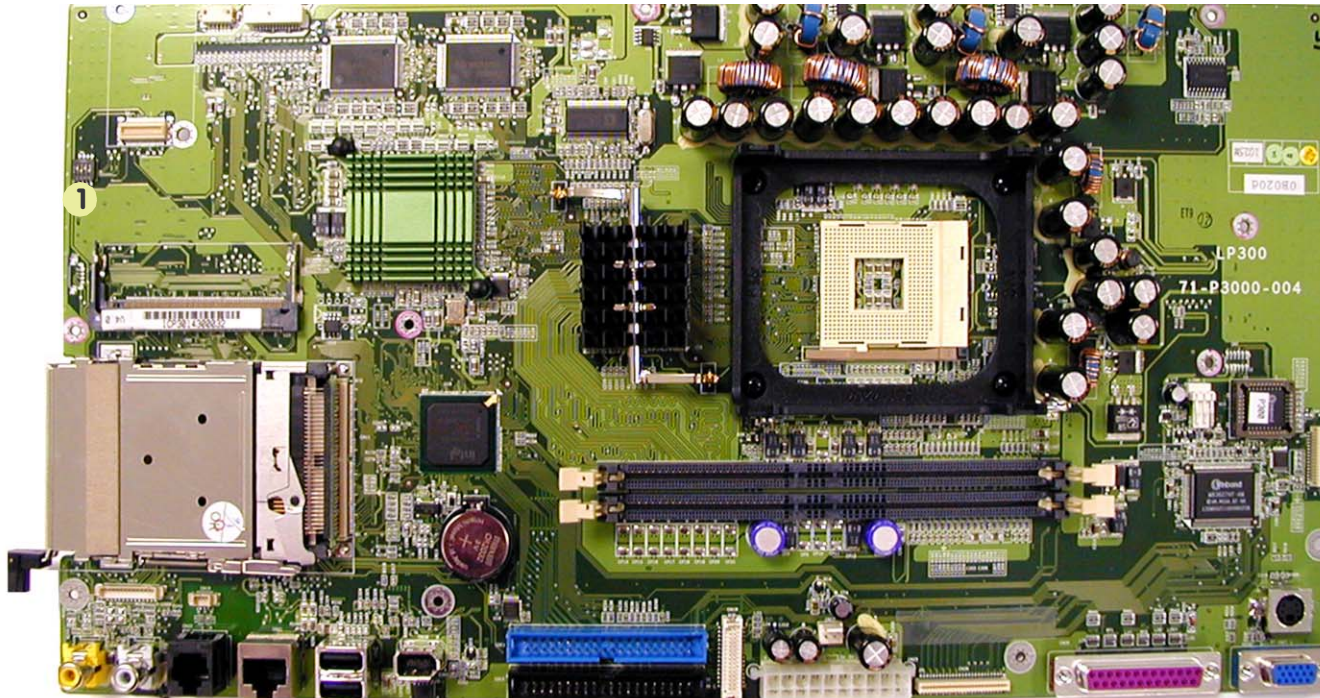


# Appendix C: Switches

This appendix is about the system's switch settings.

*Figure 1 - 1*  
**Mainboard Switch Location**

1. SW1



## Settings

| Switch SW 1 LCD Type Switch |       |       |       |
|-----------------------------|-------|-------|-------|
| LCD Type                    | SW1-1 | SW1-2 | SW1-3 |
| LG 18"                      | OFF   | OFF   | OFF   |
| CHI MEI 17"                 | OFF   | OFF   | ON    |
| ACER 17"                    | ON    | OFF   | ON    |

| Display Scaler Signal        |       |
|------------------------------|-------|
| ZURAC 3                      | SW1-4 |
| OLD (Date code: Before 0145) | OFF   |
| NEW (Date code: After 0145)  | ON    |

## Appendix D: 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](http://www.clevo.com.tw)
  2. Choose **Download** from the menu bar at the top of the page.
  3. In the **Download Driver** section select the model of your computer (**LP300 series**) and the driver type (**BIOS**).
  4. Select **GO**.
  5. Click on LP300xxx.zip. to download the BIOS files

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

*(The files you should see on this disk are: PLATFORM.BIN, PHLASH.EXE & LP300.XXX)*

With the bootable floppy disk containing the BIOS files in your Floppy Drive, restart the computer.

### As the computer boots from the floppy disk:

1. Make sure you are not loading any memory management programs such as HIMEM by holding the **F8** key as you see the message “**Starting MS-DOS**”. You will then be prompted to give “**Y**” or “**N**” responses to the programs being loaded by DOS. Choose “**N**” for any memory management programs.
2. You should now be at the DOS prompt: DISK A:\>
3. If you have chosen to extract the zipped files to the floppy disk (A:) type the following command at the DOS prompt:

Phlash LP300.XXX

4. Remove the floppy disk from the drive.

**Your notebook is now running normally with the updated BIOS.**