SERVICE MANUAL

L285S

LCD PC

LCD Computer

L285S

Service Manual

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Version 1.0
October 2002

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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 computer.

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, Switches

Related Documents

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

User's Manual on CD
This describes the computer'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 computer.

Contents

1: Introduction

Overview

This manual covers the information you need to service or upgrade the L285S 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 L285S 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.

System Specifications

Processor

- Intel Pentium®4 2.0/ 2.2/ 2.4/ 2.5 GHz (400 MHz front side bus)
- CPU Package - FC-PGA2 478 pin
- 0.13 Micron / 512KB L2 cache (on die)

- Intel Pentium®4 2.26/ 2.4/ 2.53 GHz (533 MHz front side bus)
- CPU Package - FC-PGA2 478 pin
- 0.13 Micron / 512KB L2 cache (on die)

- Intel Pentium®4 1.5/ 1.6/ 1.7/ 1.8 GHz (400MHz front side bus)
- CPU Package - FC-PGA2 478 pin
- 0.18 Micron / 256KB L2 cache (on die)

- Intel Celeron®4 2.0 GHz (400 MHz front side bus)
- CPU Package - FC-PGA2 478 pin
- 0.13 Micron / 128KB L2 cache (on die)

- Intel Celeron® 1.7/ 1.8 GHz (400 MHz front side bus)
- CPU Package - FC-PGA2 478 pin
- 0.18 Micron / 128KB L2 cache (on die)

Core Logic Chip

- SiS M650 + SiS 962

BIOS

- 4MB Flash ROM Phoenix BIOS
- Supports Plug and Play, ACPI 2.0

System Memory

- Two DIMM sockets supporting DDR 200/266/333 MHz
- Expandable memory up to 1GB (64MB/128MB/256MB/512MB DDR DIMM modules)

Video

- SiS M650 Integrated Chipset
- Share Memory Architecture (SMA) supporting up to 64MB
- Integrated 128-bit 2D/3D Graphics Accelerator
  - 128-bit GUI-to-MC bus to attain AGP 4x/8x equivalent
  - Advanced hardware acceleration logic for DVD Playback

LCD

- Color TFT 15” XGA LCD Panel supporting a resolution of 1024*768/256K color depth

Audio

- AC97’ 2.2 compatible
- SoundBlaster™ and Windows Sound System™ compatible
- Two Built-In speakers (3W)
- Three audio jacks for headphone-out, line-in, and microphone-in

Interface

- One serial port (16550A compatible, 9 pin shell, up to 115Kbps)
- One parallel port (25pin shell, SPP/Bi-Direction/ECP/EPP mode support)
- One external CRT port (15-pin D-sub) compliant DC1.1
- Two external PS/2 ports (keyboard and mouse)
- Four USB 2.0 ports
- One RJ-45 jack for 100M/10M Ethernet LAN
- One RJ-11 port for Modem
- One IEEE 1394 port (6 Pin No Power)

PC Card Sockets

- TI 1420
- Supports two Type II slots or one Type III PCMCIA slot (CardBus support)

Storage

- One 3.5”, 1.44MB 3-mode Floppy Disk Drive
- One 3.5”, 25.4mm height Hard Disk Drive (Ultra-66/100 I/F Support)
- One bay for the 12.7mm height 24X speed ATAPI CD-ROM, or 8X CD-RW, or 8X DVD-ROM, or 8X DVD-ROM & CD-RW Combo

Modem

- Removable Internal 56K Data/Fax MDC Module (optional)

LAN

- On board 10/100Mbps base auto-detection

Power

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

Power Management

- ACPI Support: S1, S3, S4, S5

Support for WFM Ver 2.0

- SMBIOS 2.2, DMI, ACPI, WOL, WOR

Indicators

- LED indicators (HDD/FDD/CD Device activity, Power)

Physical Dimensions

- 384mm (H) * 369 mm (W) * 188mm (D)

Weight

- 8.8Kg

Fan Bearing Type:

- Two ball bearings

Security

- BIOS password
- Security Lock Slot

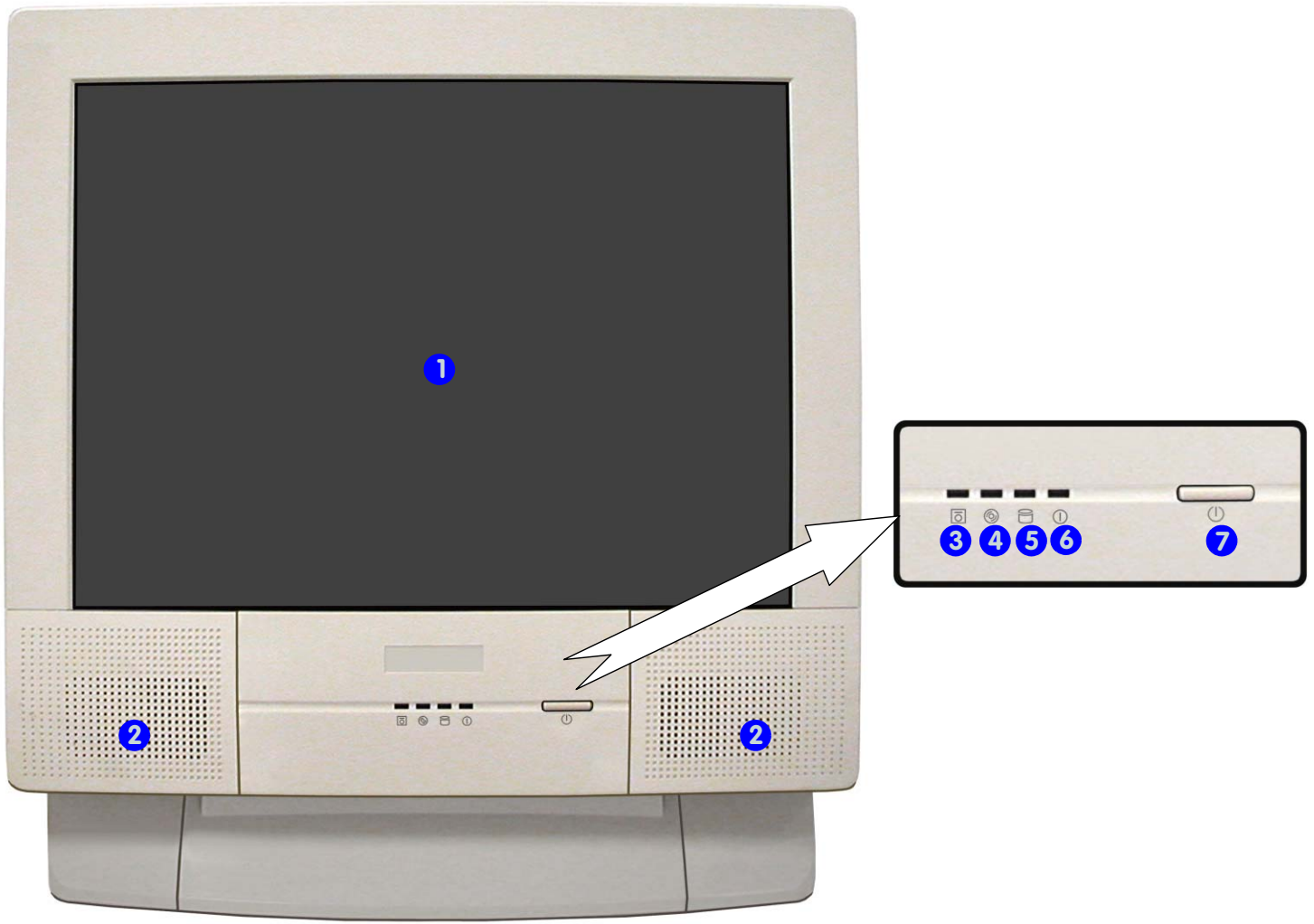
Optional

- MiniPCI I/F for IEEE 802.11b Wireless LAN Module
- MDC Module

External Locator - Front View

Figure 1 - 1
Front View

1. LCD
2. Speakers
3. FDD Activity LED
4. CD Device Activity LED
5. HDD Activity LED
6. Power LED
7. Power Button



External Location - Left & Right Side Views

Figure 1 - 2
Left & Right Views

1. Floppy Disk Drive
2. CD Device
3. Hard Disk Drive (HDD) Bay
4. LCD Brightness Control Knob
5. Volume Control Knob
6. Dual PC Card Slots
7. PC Card Eject Buttons
8. Dual USB Ports
9. AC Power-In
10. Kensington Lock Slot

External Locator - Rear View

Figure 1 - 3
Rear View

1. Carrying Handle
2. Headphone-Out Jack
3. Line-In Jack
4. Microphone-In Jack
5. RJ-45 LAN Jack
6. RJ-11 Phone Jack
7. Dual USB Ports
8. Unpowered - IEEE 1394 Port
9. PS/2 Mouse Port
10. PS/2 Keyboard Port
11. Printer/Parallel Port
12. Serial Port
13. External Monitor (CRT) Port
14. Vents

Mainboard Overview - Top

Key Parts

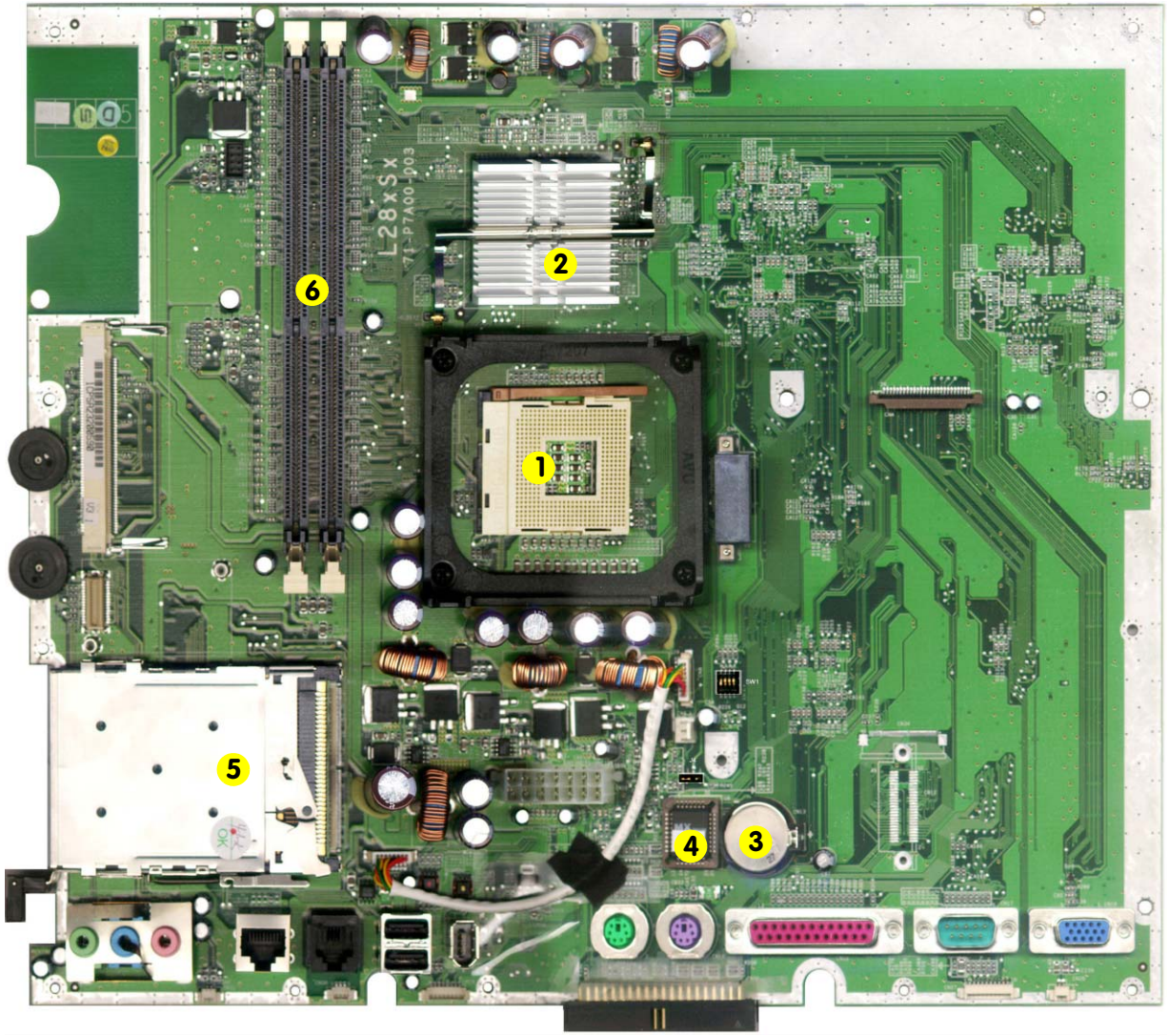


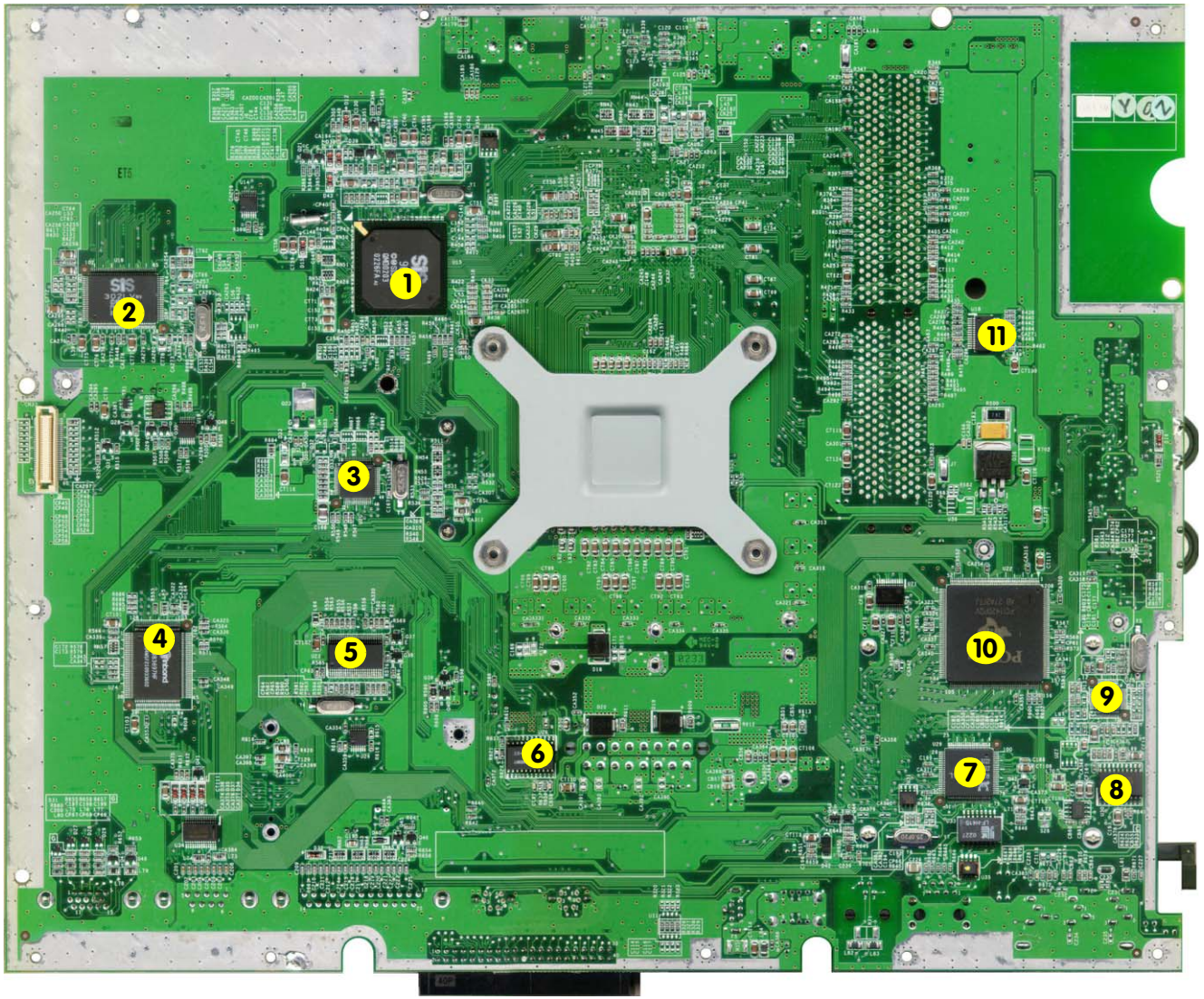
Figure 1 - 4
Mainboard Overview - Top Key Parts

1. CPU Socket (no CPU Installed)
2. Northbridge SiS M650
3. CMOS Battery
4. Flash BIOS ROM
5. PCMCIA
6. 2 * DIMM Sockets

Mainboard Overview - Bottom

Key Parts

Figure 1 - 5
Mainboard Overview - Bottom Key Parts



1. Southbridge SiS 962
2. SiS 302ELV (Video Controller)
3. TSB41AB1 - 1394 PHY (IEEE1394 Controller)
4. W83697HF Super I/O Controller
5. Clock Generator
6. V-Core PWM IC Controller
7. RTL8100BL LAN Controller
8. Audio Amplifier
9. ALC201 - AC'97 Audio Codec
10. CardBus Controller
11. Clock Buffer

Mainboard Overview - Top

Cable Connectors and Switches

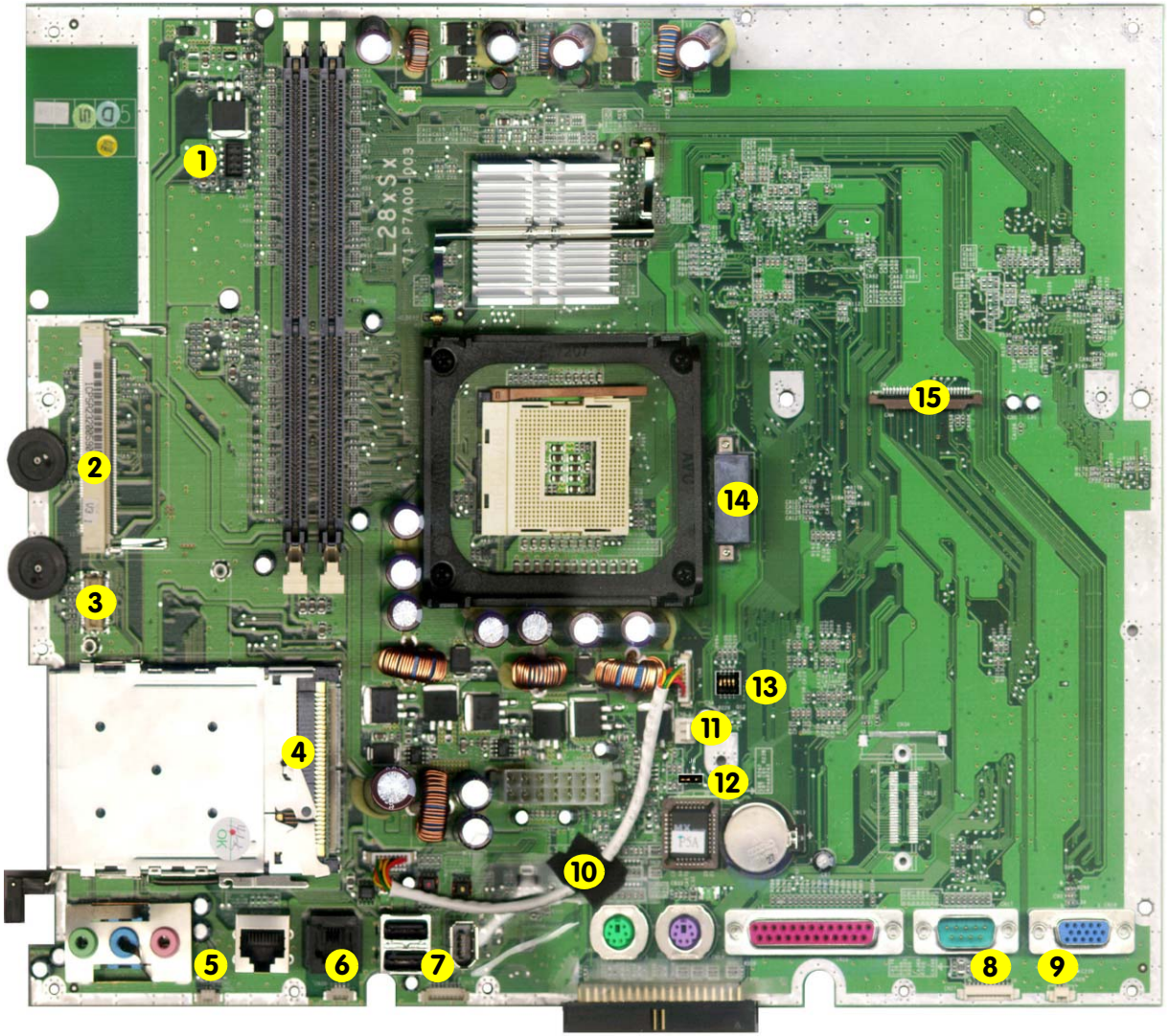


Figure 1 - 6
Mainboard Top Cable Connectors & Switches

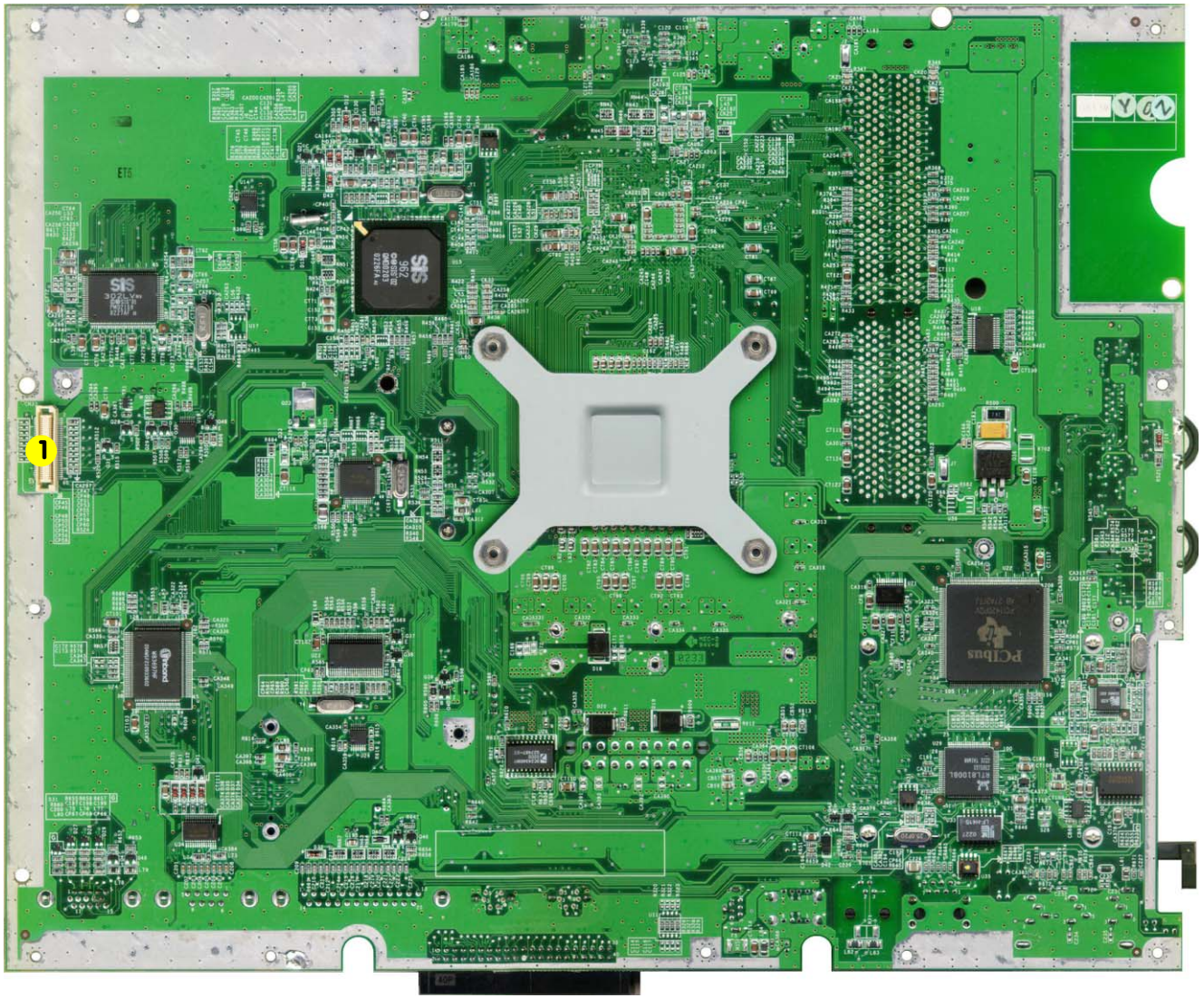
1. CN1 (Inverter Board)
2. CN5 (Wireless Lan Module)
3. CN7 (Modem Module)
4. CN11 (PCMCIA Module)
5. CN31 (Speaker Cable)
6. CN30 (Modem Cable)
7. CN29 (External USB Cable)
8. CN27 (LED Board)
9. CN28 (Speaker Cable)
10. CN8 (IEEE1394 Cable)
11. CN9 (CPU Fan Cable)
12. J4 (CMOS Jumper Switch)
13. SW1 (DIP Switch - *"Settings" on page C - 2*)
14. CN6 (CDROM Connector)
15. CN4 (FDD Cable)

Mainboard Overview - Bottom

Cable Connectors and Switches

Figure 1 - 7
Mainboard Bottom Cable Connectors & Switches

1. CN33 (LCD Connector)



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).

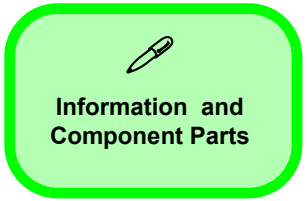
We suggest you completely review any procedure before you take the computer apart.

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.

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, and that all peripheral cables are disconnected (including telephone lines and network cables).

Maintenance Tools

The following tools are recommended when working on the computer:

- 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.**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.
7. **Beware of corrosion**. As you perform your job, avoid touching any connector leads. Even the cleanest hands produce oils which can attract corrosive elements.
8. **Keep your work environment clean**. Tobacco smoke, dust or other air-born particulate matter is often attracted to charged surfaces, reducing performance.
9. **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 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 assemblypage 2 - 6

To remove the system memory:

1. Remove the LCD back coverpage 2 - 7
2. Remove the system memorypage 2 - 7

To remove the CPU:

1. Remove the LCD back coverpage 2 - 7
2. Remove the CPUpage 2 - 9

To remove the I/O rear bracket:

1. Remove the LCD back coverpage 2 - 7
2. Remove the I/O rear bracketpage 2 - 11

To remove the modem:

1. Remove the LCD back coverpage 2 - 7
2. Remove the modempage 2 - 12

To remove the floppy disk drive assembly:

1. Remove the LCD back coverpage 2 - 7
2. Remove the FDDpage 2 - 13

To remove the CD Drive Assembly:

1. Remove the LCD back coverpage 2 - 7
2. Remove the CD Drivepage 2 - 14

To remove the inverter board:

1. Remove the LCD back coverpage 2 - 7
2. Remove the inverter boardpage 2 - 15

To remove the mainboard:

1. Remove the LCD back coverpage 2 - 7
2. Remove the system memorypage 2 - 7
3. Remove the CPUpage 2 - 9
4. Remove the I/O and rear bracketpage 2 - 11
5. Remove the FDDpage 2 - 13
6. Remove the CD Drivepage 2 - 14
7. Remove the inverter boardpage 2 - 15
8. Remove the mainboardpage 2 - 16

Separating bottom case from LCD & main assembly:

1. Remove the LCD back coverpage 2 - 7
2. Remove the system memorypage 2 - 7
3. Remove the CPUpage 2 - 9
4. Remove the I/O and rear bracketpage 2 - 11

To remove the LCD/LED board:

1. Remove the LCD back coverpage 2 - 7
2. Remove the system memorypage 2 - 7
3. Remove the CPUpage 2 - 9
4. Remove the I/O rear bracketpage 2 - 11
5. Remove the modempage 2 - 12
6. Remove the FDDpage 2 - 13
7. Remove the CD Drive Assemblypage 2 - 14
8. Remove the inverter boardpage 2 - 15
9. Remove the mainboardpage 2 - 16
10. Remove the LCDpage 2 - 18
11. Remove the LED boardpage 2 - 19

To remove the speaker units:

1. Remove the LCD back coverpage 2 - 7
2. Separate the bottom case from the LCD etc.page 2 - 17
3. Remove the LCDpage 2 - 18
4. Remove the speaker unitspage 2 - 19

To remove the base cover:

1. Remove the hard disk drive assemblypage 2 - 6
2. Remove the LCD back coverpage 2 - 7
3. Separate the bottom case from the LCD etc.page 2 - 17
4. Remove the base coverpage 2 - 20

To remove the USB board:

1. Remove the hard disk drive assemblypage 2 - 6
2. Remove the LCD back coverpage 2 - 7
3. Separate the bottom case from the LCD etc.page 2 - 17
4. Remove the base coverpage 2 - 20
5. Remove the USB boardpage 2 - 21

To remove the power supply unit:

1. Remove the hard disk drive assemblypage 2 - 6
2. Remove the LCD back coverpage 2 - 7
3. Separate the bottom case from the LCD etc.page 2 - 17
4. Remove the base coverpage 2 - 20
5. Remove the power supply unitpage 2 - 21

Removing the Hard Disk Drive Assembly

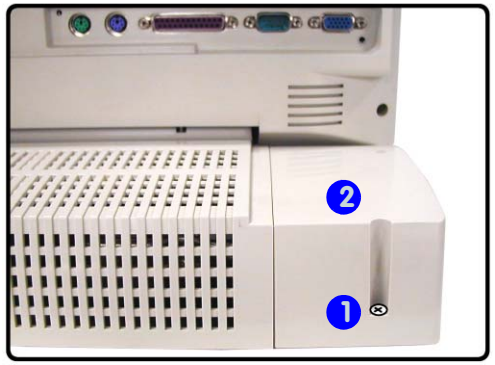
1. Turn the computer **OFF** and turn it around so that you may comfortably access the left side.
2. Remove screw 1 from the HDD Bay 2 (***Figure 2 - 1a***).
3. Carefully pull the HDD Assembly out from the bay (***Figure 2 - 1b***) and disconnect the IDE cable 3, and power cable 4 (***Figure 2 - 1c***).
4. Remove screws 5 - 14 (***Figure 2 - 1d***) from the assembly, and slide the hard disk 15 out of the case 16.

.

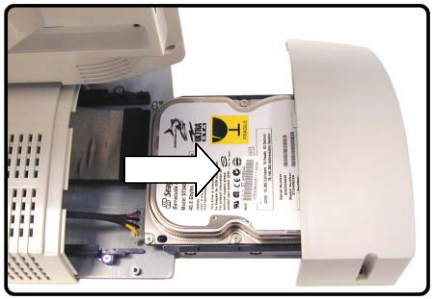
Figure 2 - 1
Hard Disk Removal Sequence

a. Remove the screw from the HDD Bay.
b. Slide the HDD assembly in the direction of the arrow.
c. Disconnect the IDE and power cables.
d. Remove the screws from the assembly and slide the HDD out of the case.

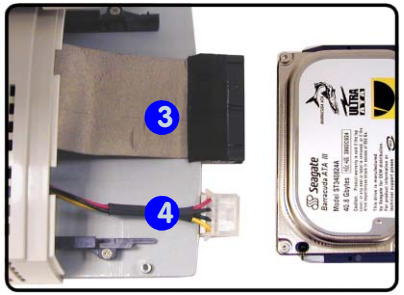
a.



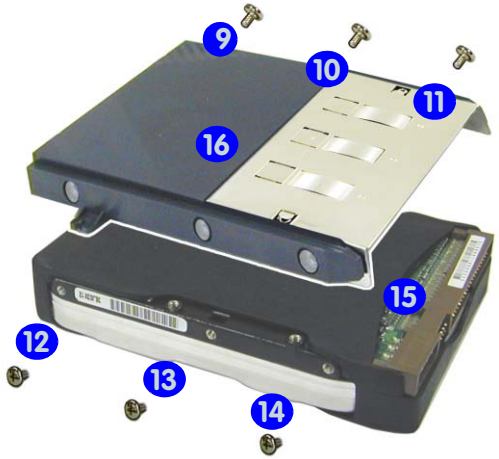
b.



c.



d.



15. HDD
16. HDD case

- 11 Screws

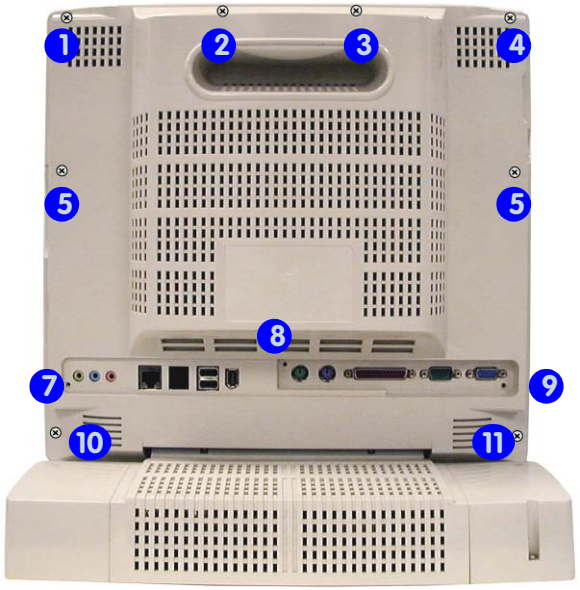
Removing the System Memory

1. Turn **OFF** the computer and place it with its LCD display facing down on a clean, dry, level surface.
2. Remove screws 1 - 11 (**Figure 2 - 2a**) from the LCD back cover 12 and carefully slide it up towards the top of the computer.
3. Carefully remove the LCD back cover 12 from the main unit and set it aside (**Figure 2 - 2b**).

Figure 2 - 2
Memory Removal Sequence

a. Remove the screws from the LCD back cover.
b. Lift the cover out and set it aside.

a.



b.

12. LCD back cover

- 11 Screws

Figure 2 - 3
Memory Removal Sequence (cont'd)

a. Locate the memory sockets.
b. Pull the latch(es) on the memory sockets to release the module(s).
b. When the module pops up, lift it out.

4. Memory module(s)

Contact Warning

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

4. The memory sockets will be visible at point 1 (**Figure 2 - 3a**) in the mainboard.
5. For each module you want to replace, gently pull the two latches 2 and 3 (**Figure 2 - 3b**) toward the sides of the socket to release the module.
6. The module 4 (**Figure 2 - 3c**) will pop-up, and you can remove it.
7. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.

a.

b.

c.

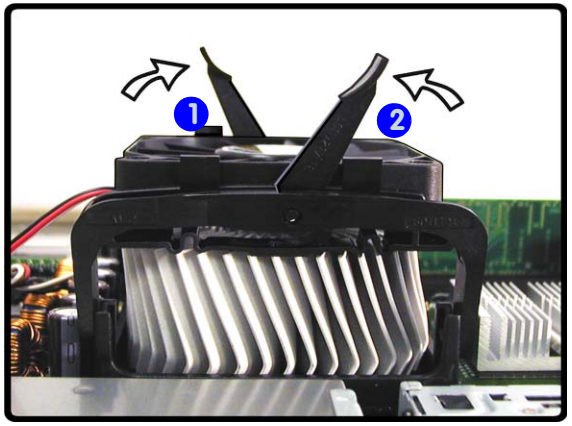
Removing the CPU

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* to reveal the CPU heat sink and fan unit in *Figure 2 - 4a*.
2. Release the latches from the top of the CPU heat sink and fan unit 1 - 2 as indicated in *Figure 2 - 4a*.
3. Remove the power cable 4 from the board and lift the fan unit away 3.

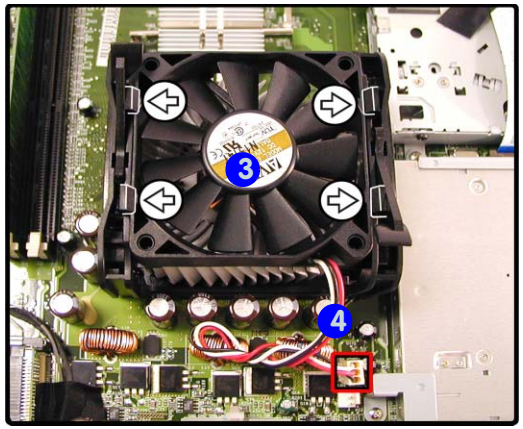
Caution

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.

a.



b.



c.

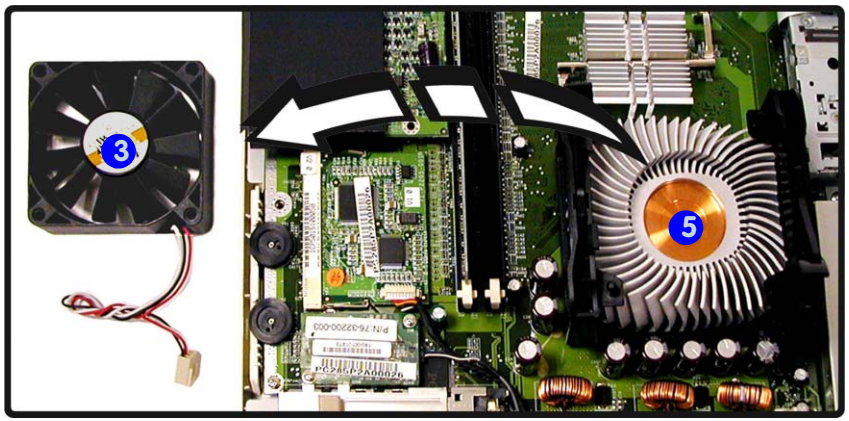


Figure 2 - 4
CPU Removal Sequence

a. Release the latches from the top of the CPU heat sink and fan unit.
b. Remove the power cable.
c. Lift the fan unit away.

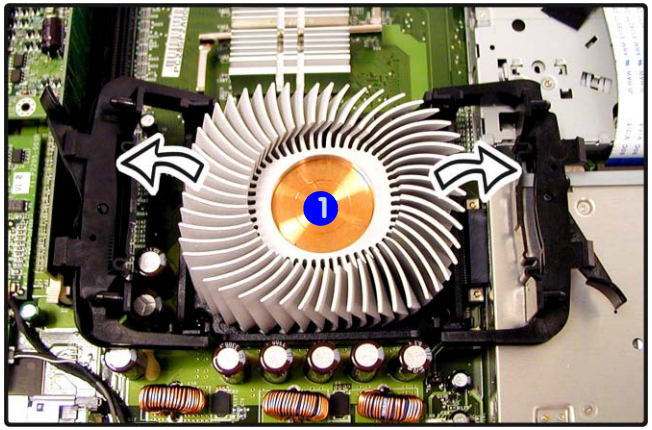
3. Fan unit
5. Heat Sink

Figure 2 - 5
CPU Removal Sequence (cont'd)

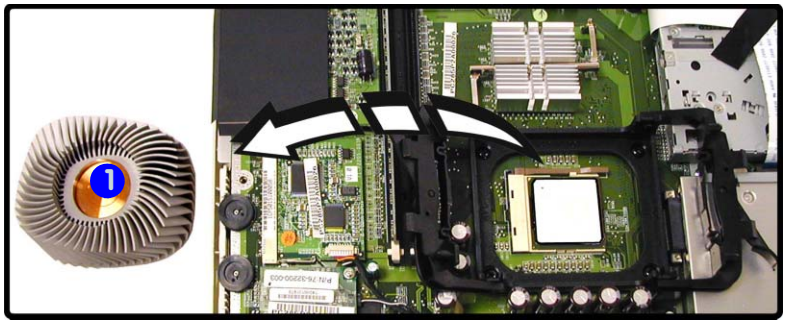
a. Release the heat sink.
b. Remove the hear sink.
c. Lift the latch to unlock the CPU.
d. Lift the CPU out of the socket.

4. Release the heat sink 1 as indicated in ***Figure 2 - 5a***, and remove it.
5. Lift latch 2 in the direction indicated in ***Figure 2 - 5c*** to unlock the CPU.
6. Carefully (it may be hot) lift the CPU 3 up out of the socket.
7. When re-inserting the CPU pay careful attention to the pin alignment, it will fit only one way (don't force it!)

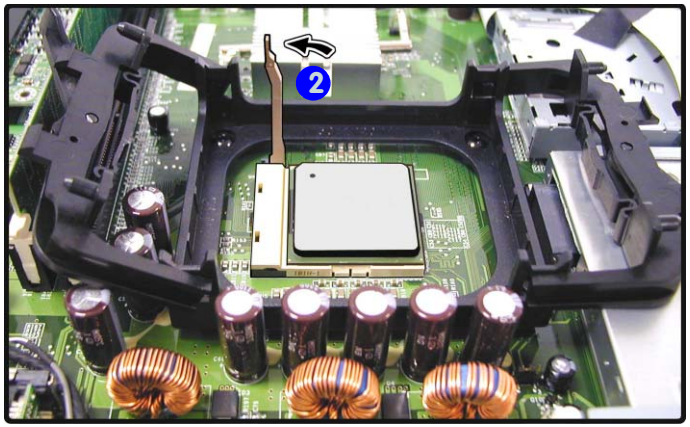
a.



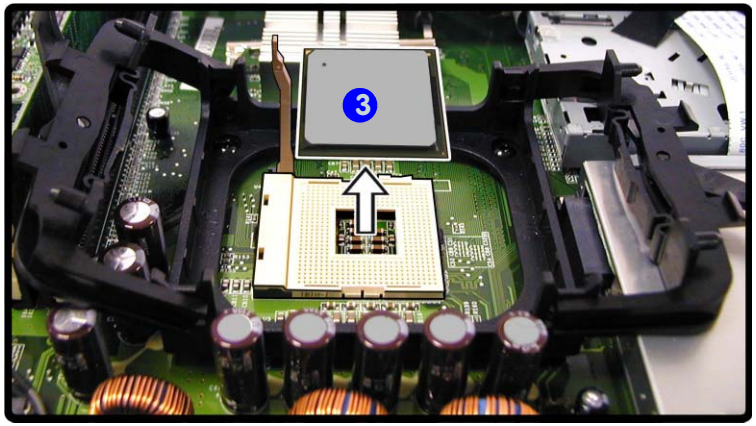
b.



c.



d.

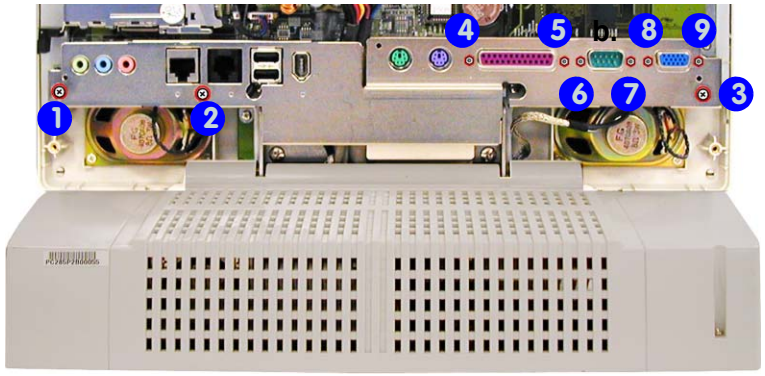


1. Heat sink
3. CPU

Removing the I/O Bracket

1. Follow steps **1** to **3** as illustrated in on *"Removing the System Memory" on page 2-7*, in order to remove the LCD back cover, etc.
2. Remove the standard screws 1 - 3 (*Figure 2 - 6a*), and use long-nosed pliers to remove the connector type screws 4 - 9.
3. Carefully ease the I/O bracket 10 off the mainboard.

a.



b.

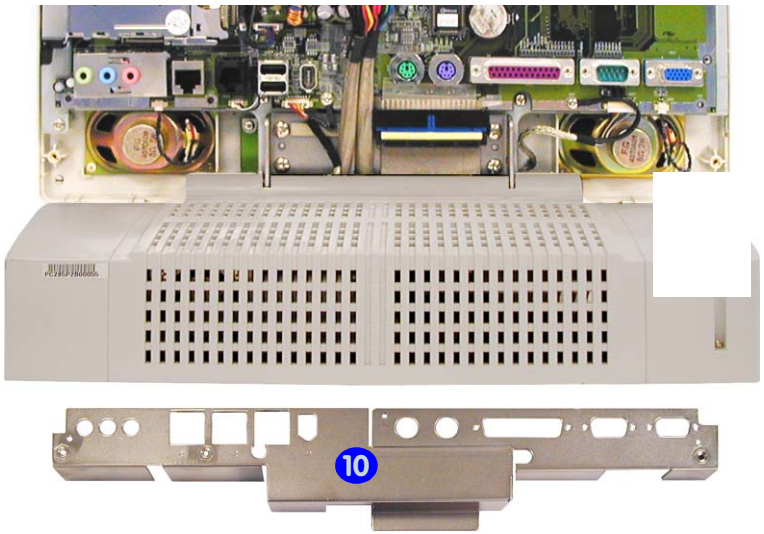


Figure 2 - 6
I/O Bracket Removal Sequence

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

10. I/O bracket

- 3 screws

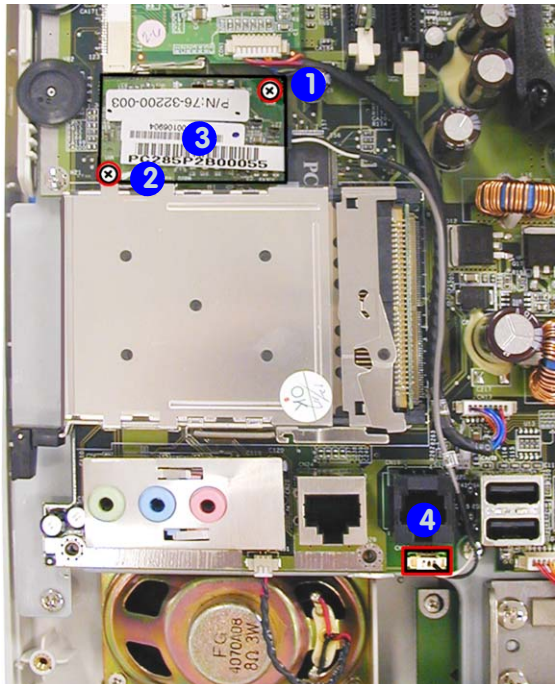
Removing the Modem

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7*.
2. Remove the I/O bracket as illustrated in *"Removing the I/O Bracket" on page 2-11.*
3. Remove screws 1 and 2 from the modem module 3, then disconnect the modem cable 4.
4. Disconnect the modem module from the connector socket 5, and lift it and the cable off the board.

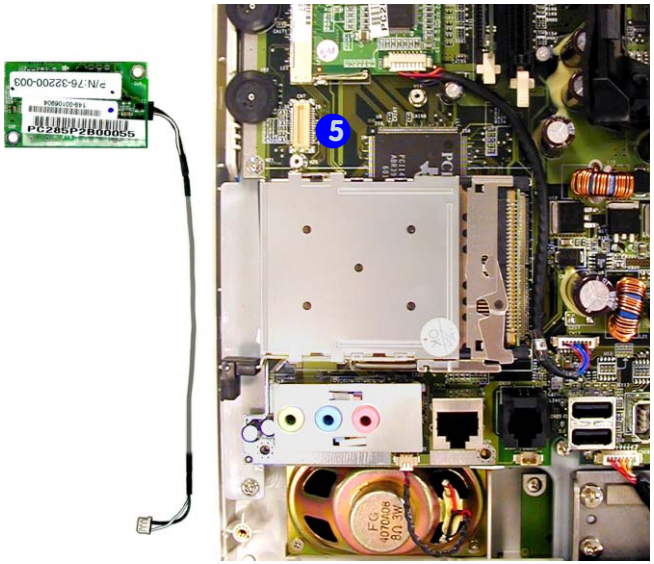
Figure 2 - 7
Modem Removal Sequence

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

a.



b.



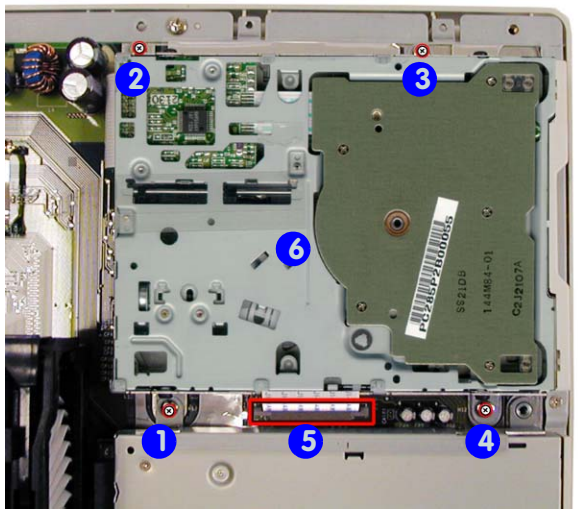
3. Modem module
4. Modem cable

- 2 Screws

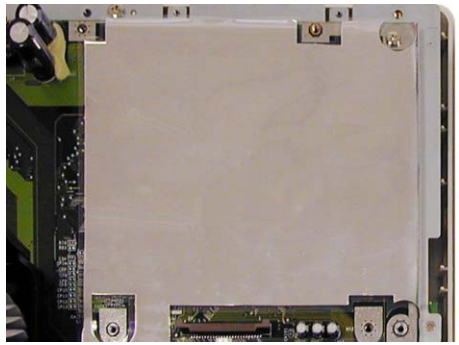
Removing the Floppy Disk Drive Assembly

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7*, in order to remove the LCD back cover, etc.
2. Remove screws 1 - 4 (*Figure 2 - 9a*) from the floppy disk drive assembly.
3. Carefully disconnect the floppy disk drive ribbon cable 5 in *Figure 2 - 9a*.
4. Lift the floppy disk drive assembly 6 off the mainboard.

a.



b.



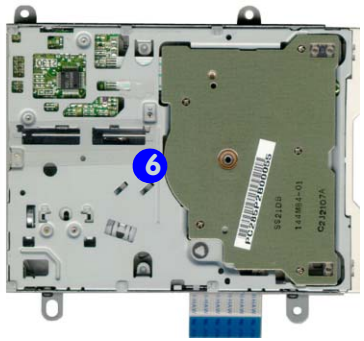


Figure 2 - 8
Floppy Disk Drive Assembly Removal Sequence

a. Remove the screws from the FDD assembly and disconnect the FDD ribbon cable.
b. Lift the FDD assembly off the board.

6. FDD Assembly
   - 4 Screws

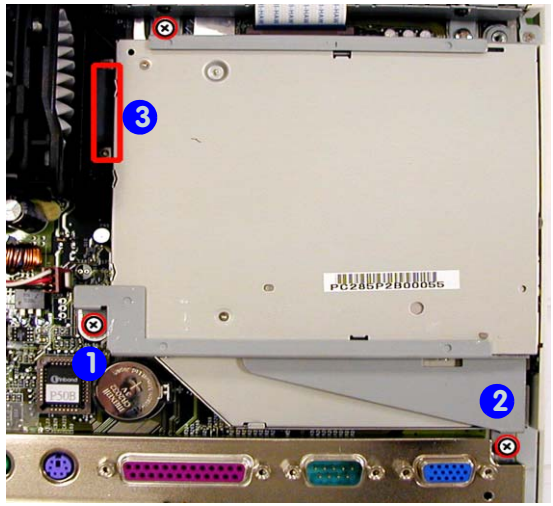
Removing the CD Device Drive Assembly

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7*, in order to remove the LCD back cover, etc.
2. Remove screws 1 - 2 (*Figure 2 - 9a*) from the CD assembly, and disconnect the connector cable 3.
3. Carefully slide the CD assembly 4 off the mainboard in *Figure 2 - 9b*.

Figure 2 - 9
CD Device Assembly Removal Sequence

a. Remove the screws from the CD assembly and disconnect the cable.
b. Slide the CD assembly off the board.

a.



b.

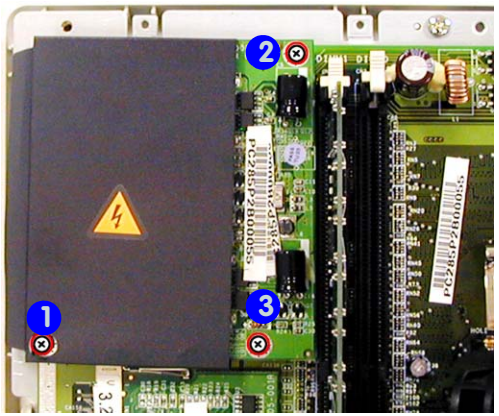
4. CD Assembly

- 2 Screws

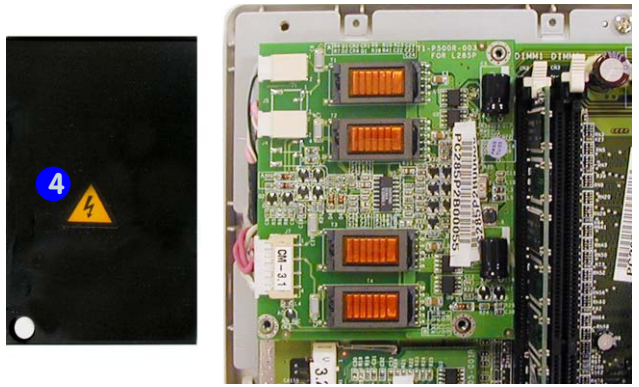
Removing the Inverter Board

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

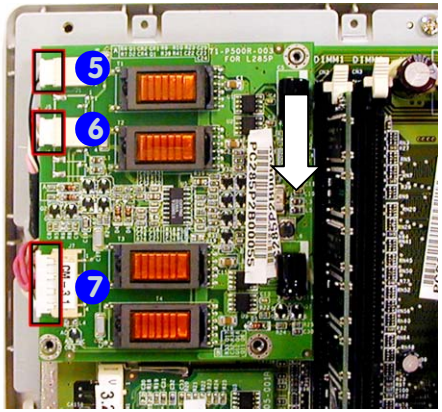
a.



b.



c.



d.

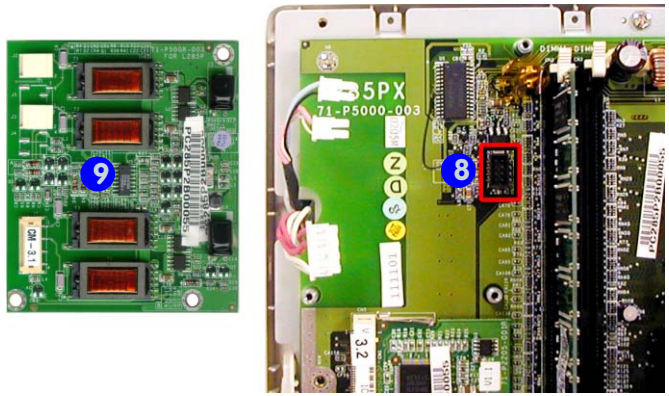


Figure 2 - 10
Inverter Board Removal Sequence

a. Remove the screws from the shielding plate.
b. Lift out the shielding plate.
c. Disconnect the connector cables, 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.

4. Inverter board shielding plate
9. Inverter board

- 3 screws

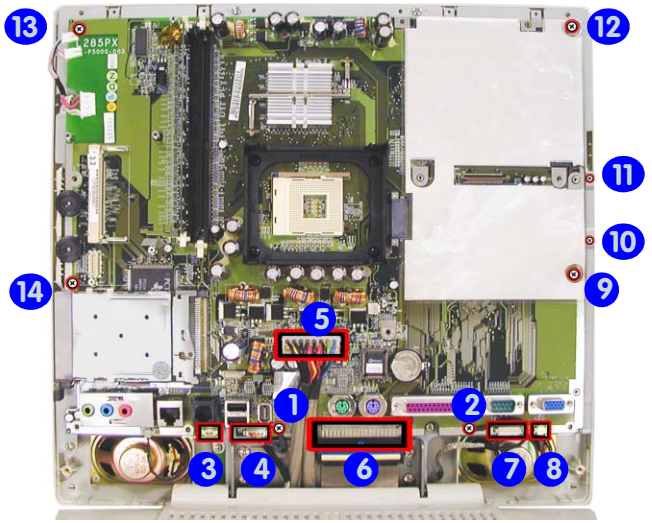
Removing the Mainboard

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* in order to remove the LCD back cover, etc.
2. Follow the instructions in *"Removing the I/O Bracket" on page 2 - 11, "Removing the Floppy Disk Drive Assembly" on page 2 - 13, "Removing the CD Device Drive Assembly" on page 2 - 14* and *"Removing the Inverter Board" on page 2 - 15*.
3. Remove screws 1 - 2 and disconnect cables 3 - 8 which connect the top half of the unit to the base.
4. Remove the standard screws 9 - 14 and disconnect cables 15, then lift the mainboard 16 up from the LCD bracket.

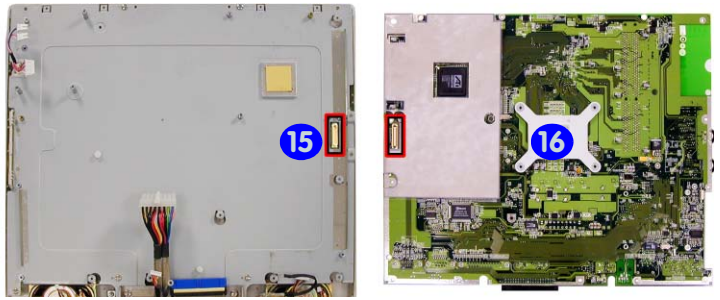
Figure 2 - 11
Rear Bracket Removal Sequence

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

a.



b.



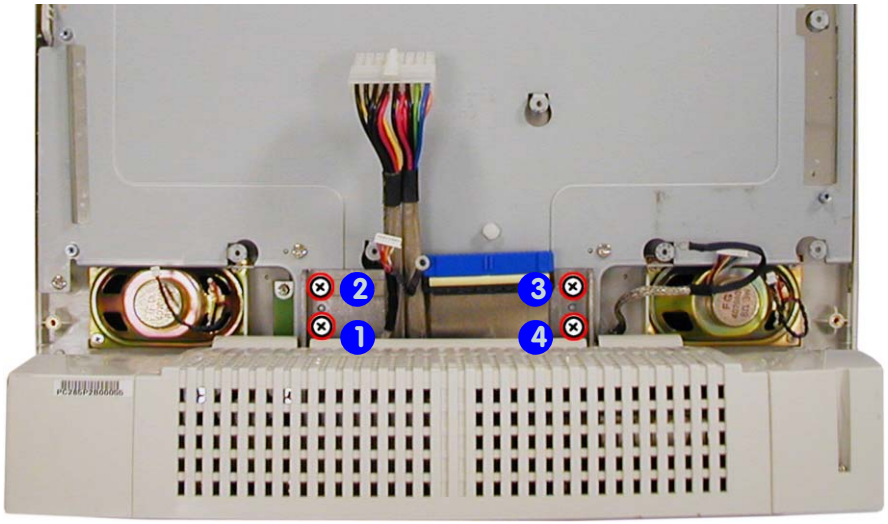
16.Mainboard

- 8 screws

Separating the Base Assembly from the LCD & Mainboard Assembly

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* and remove the mainboard as indicated in *"Removing the Mainboard" on page 2-16*.
2. Remove screws 1 - 4 and ease the base assembly 5 away from the LCD & mainboard assembly 6.

a.



b.

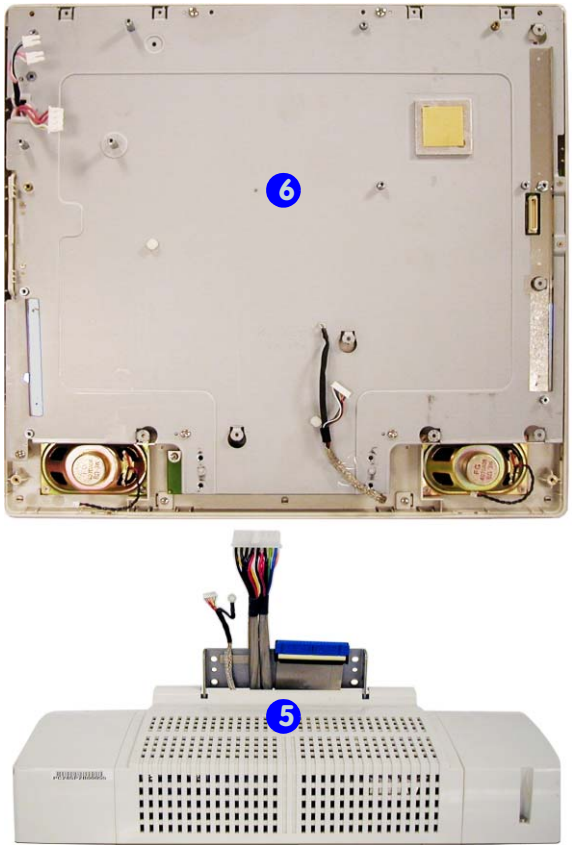


Figure 2 - 12
Base Assembly Removal Sequence

a. Disconnect the cables, and remove the screws which connect the top half of the unit to the base.
b. Ease the base assembly away from the LCD & mainboard.

5. Base assembly
6. LCD & mainboard assembly

- 4 screws

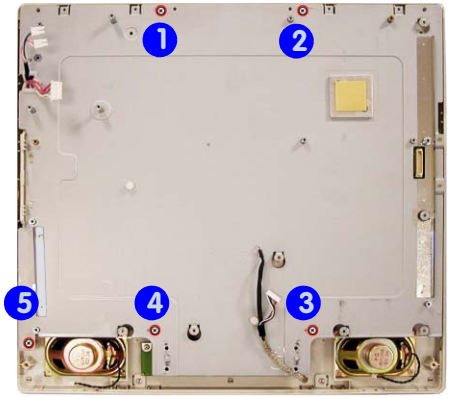
Figure 2 - 13
LCD Removal Sequence

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

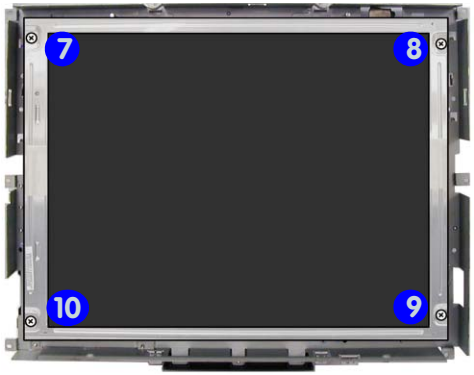
1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* in order to remove the LCD back cover, etc.
2. Follow the instructions in *"Separating the Base Assembly from the LCD & Mainboard Assembly" on page 2 - 17*.
3. Remove screws 1 - 5 from the back of the LCD bracket and disconnect the inverter cables.
4. Carefully separate the LCD bracket from the front of the case 6.
5. Remove screws 7 - 10 from the LCD 11 and lift it away from the bracket 12 (pay careful attention to the inverter cables easing them through the hole at point 13).

a.

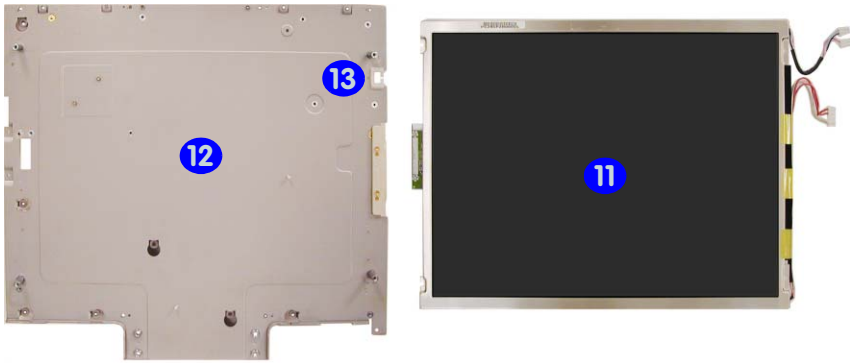


b.

c.



d.



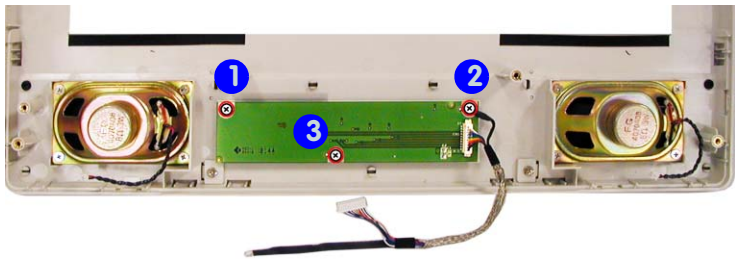
6. Front case
11. LCD
12. LCD bracket

- 9 screws

Removing the LED Board

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* in order to remove the LCD back cover, etc.
2. Follow the instructions in *"Separating the Base Assembly from the LCD & Mainboard Assembly" on page 2 - 17*.
3. Separate the front case from the LCD as illustrated in *"Removing the LCD" on page 2 - 18*.
4. Remove screws 1 - 3 and lift the LED board 4 and cable out from the front of the case.

a.



b.

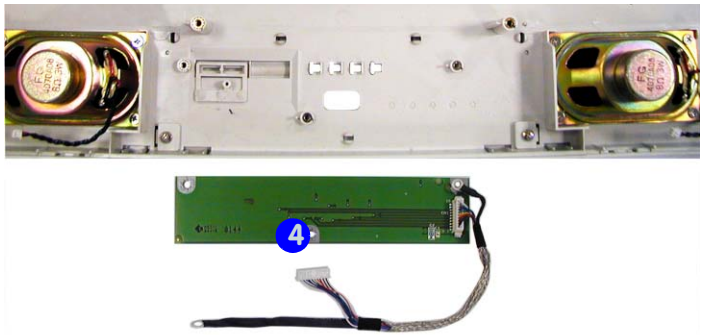


Figure 2 - 14
LED Board Removal Sequence

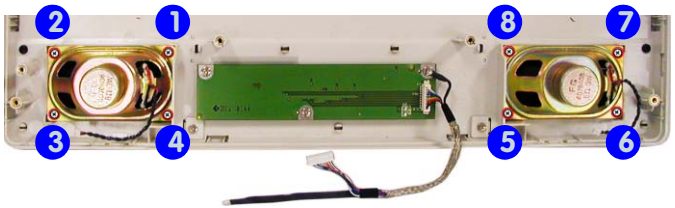
a. Remove the screws from the LED board.
b. Lift the board out from the front of the case.

4. LED board
- 3 screws

Removing the Speaker Units

1. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* in order to remove the LCD back cover, etc.
2. Follow the instructions in *"Separating the Base Assembly from the LCD & Mainboard Assembly" on page 2 - 17*.
3. Separate the front case from the LCD as illustrated in *"Removing the LCD" on page 2 - 18*.
4. Remove screws 1 - 8 and remove the speaker units 9 - 10.

a.



b.

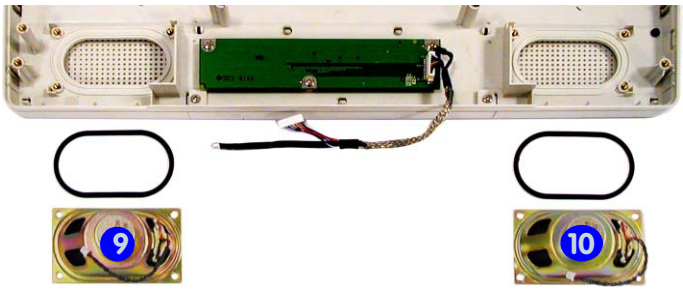


Figure 2 - 15
Speaker Unit Removal Sequence

a. Remove the screws from the speaker units.
b. Remove the speaker units.

11. Speaker units
- 8 screws

Figure 2 - 16
Base Cover Removal Sequence

a. Remove the screws from the rotating plate.
b. Separate the rotating plate and remove the screws from the base bracket.
c. Lift the cover up from the bottom unit.

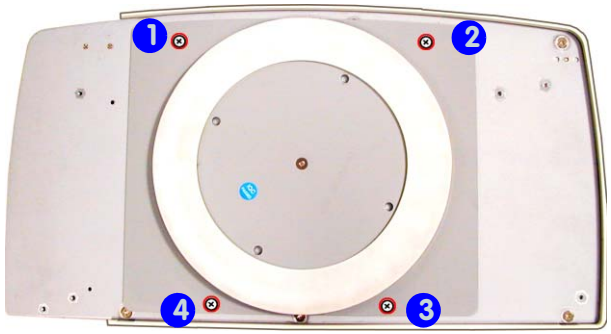
11. Rotating plate
12. Base cover module

- 10 Screws

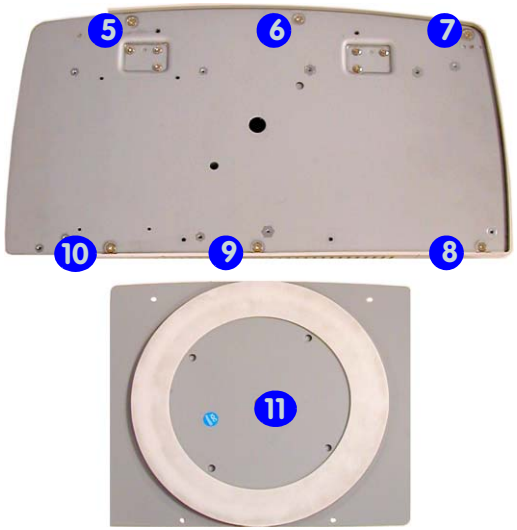
Removing the Base Assembly Cover

1. Remove the HDD drive as illustrated in *"Removing the Hard Disk Drive Assembly" on page 2 - 6*.
2. Follow steps **1** to **3** as illustrated in *"Removing the System Memory" on page 2-7* in order to remove the LCD back cover etc.
3. Follow the instructions in *"Separating the Base Assembly from the LCD & Mainboard Assembly" on page 2 - 17*.
4. Remove screws 1 - 4 and separate the rotating plate 11 from the base bracket.
5. Remove screws 5 - 10 from the base bracket and lift the base cover 12 off the bottom of the unit.

a.



b.

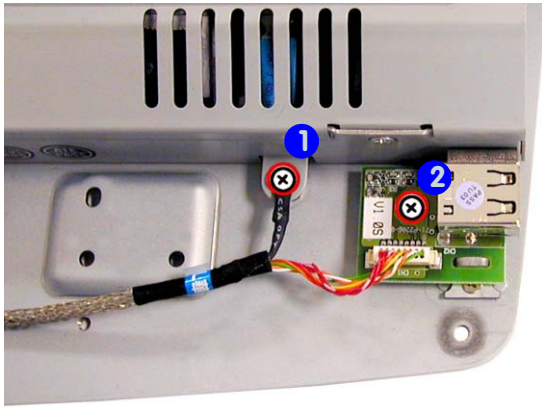


c.

Removing the USB Board

1. Follow the instructions in *"Removing the Base Assembly Cover" on page 2 - 20*.
2. Remove screws 1 - 2 and remove the USB board 3.

a.



b.

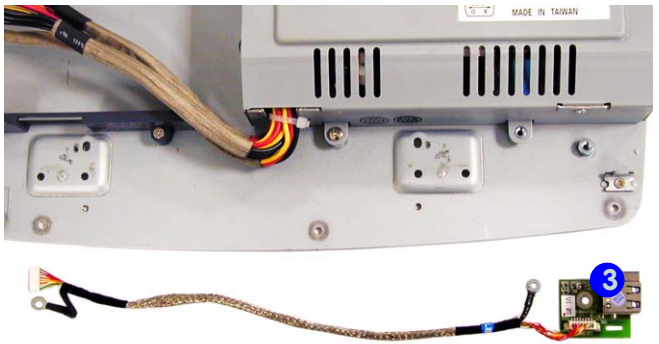


Figure 2 - 17
USB Board Removal Sequence

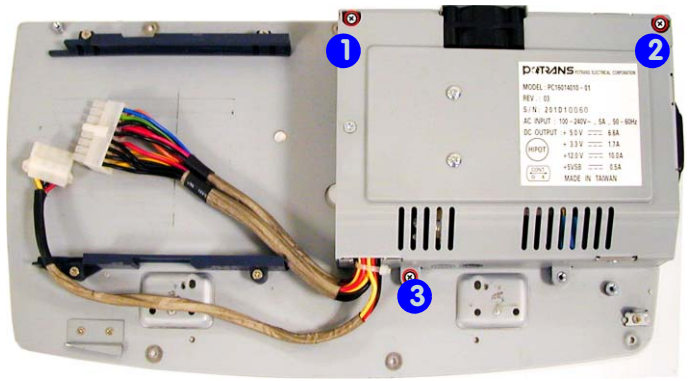
a. Remove the screws from the USB board, and disconnect the cable.
b. Remove the USB board.

3. USB board
- 2 screws

Removing the Power Supply Unit

1. Follow the instructions in *"Removing the Base Assembly Cover" on page 2 - 20*.
2. Remove screws 1 - 3 and lift the power supply 4 off the base bracket.

a.



b.

Figure 2 - 18
Power Supply Removal Sequence

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

4. Power supply unit
- 3 screws

Appendix A:Part Lists

This appendix breaks down the computer'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
Part List Illustration Location

Part	Page #
Base-1	page A - 3
Back	page A - 4
LCD Front	page A - 5
Floppy Disk Drive	page A - 6
Hard Disk Drive	page A - 7
TEAC CD-ROM	page A - 8
TEAC Combo	page A - 9
KME CD-RW Drive	page A - 10

Base-1 (L285S)

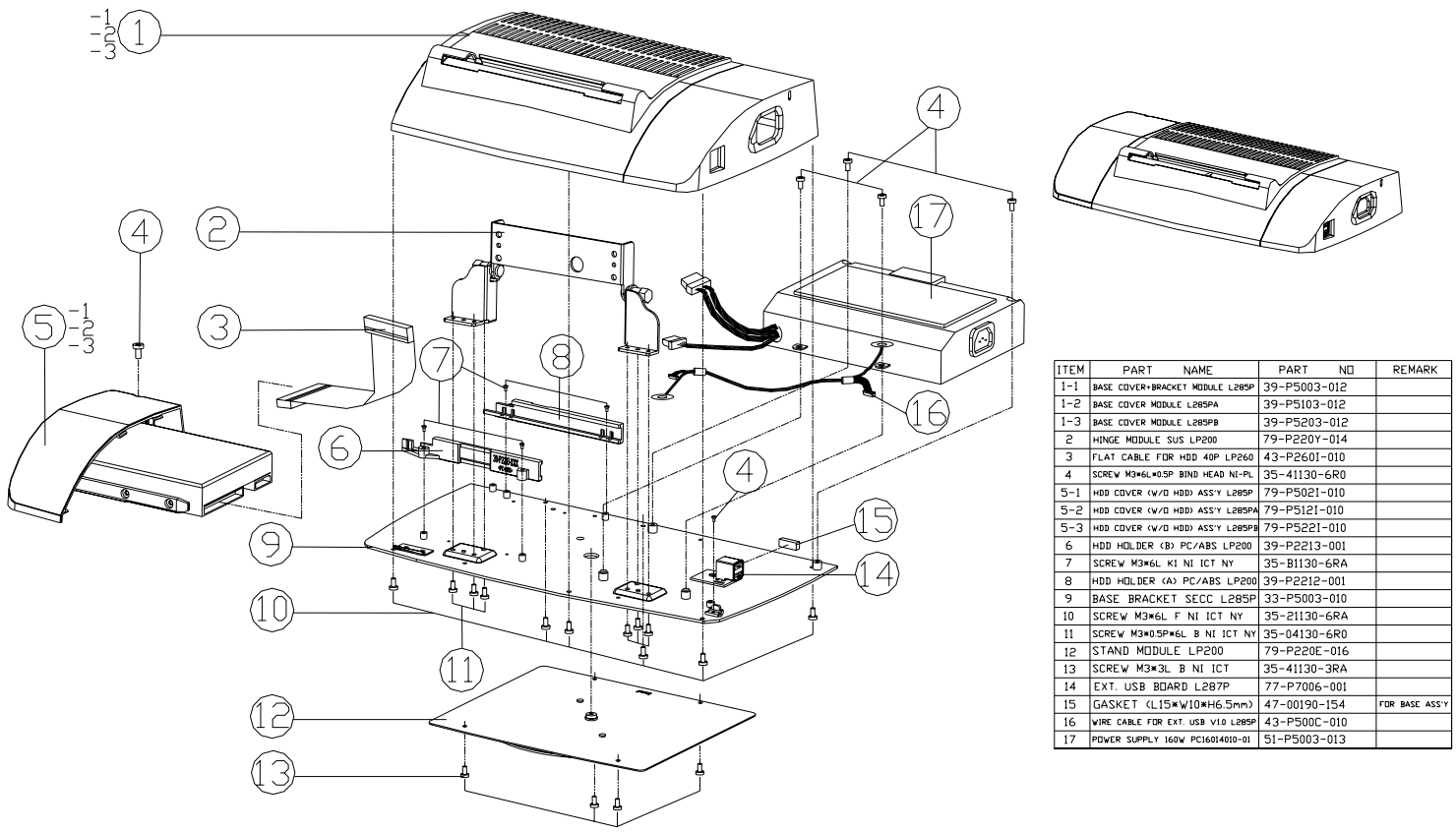
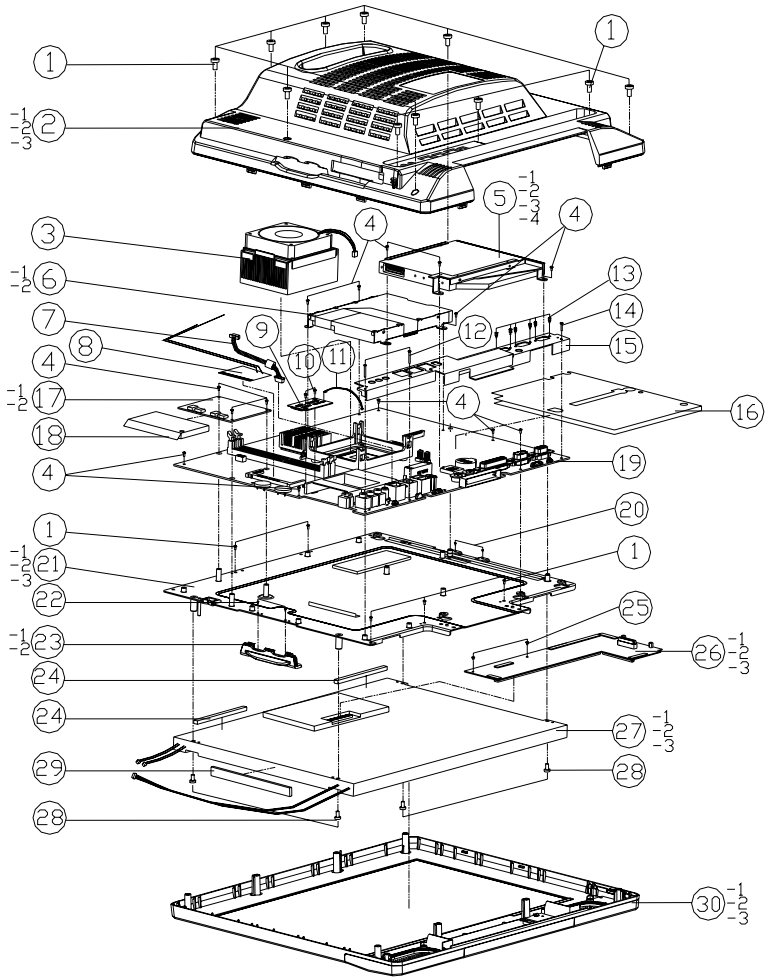


Figure 1
Base-1 (L285S)

ITEM	PART NAME	PART NO	REMARK
1-1	BASE COVER+BRACKET MODULE L285P	39-P5003-012	
1-2	BASE COVER MODULE L285PA	39-P5103-012	
1-3	BASE COVER MODULE L285PB	39-P5203-012	
2	HINGE MODULE SUS LP200	79-P220Y-014	
3	FLAT CABLE FOR HDD 40P LP260	43-P260I-010	
4	SCREW M3*6L*0.5P BIND HEAD NI-PL	35-41130-6R0	
5-1	HDD COVER (W/O HDD) ASS'Y L285P	79-P5021-010	
5-2	HDD COVER (W/O HDD) ASS'Y L285PA	79-P5121-010	
5-3	HDD COVER (W/O HDD) ASS'Y L285PB	79-P5221-010	
6	HDD HOLDER (B) PC/ABS LP200	39-P2213-001	
7	SCREW M3*6L KI NI ICT NY	35-B1130-6RA	
8	HDD HOLDER (A) PC/ABS LP200	39-P2212-001	
9	BASE BRACKET SECC L285P	33-P5003-010	
10	SCREW M3*6L F NI ICT NY	35-21130-6RA	
11	SCREW M3*0.5P*6L B NI ICT NY	35-04130-6R0	
12	STAND MODULE LP200	79-P220E-016	
13	SCREW M3*3L B NI ICT	35-41130-3RA	
14	EXT. USB BOARD L287P	77-P7006-001	
15	GASKET (L15*W10*H6.5mm)	47-00190-154	FOR BASE ASS'Y
16	WIRE CABLE FOR EXT. USB V1.0 L285P	43-P500C-010	
17	POWER SUPPLY 160W PC16014010-01	51-P5003-013	

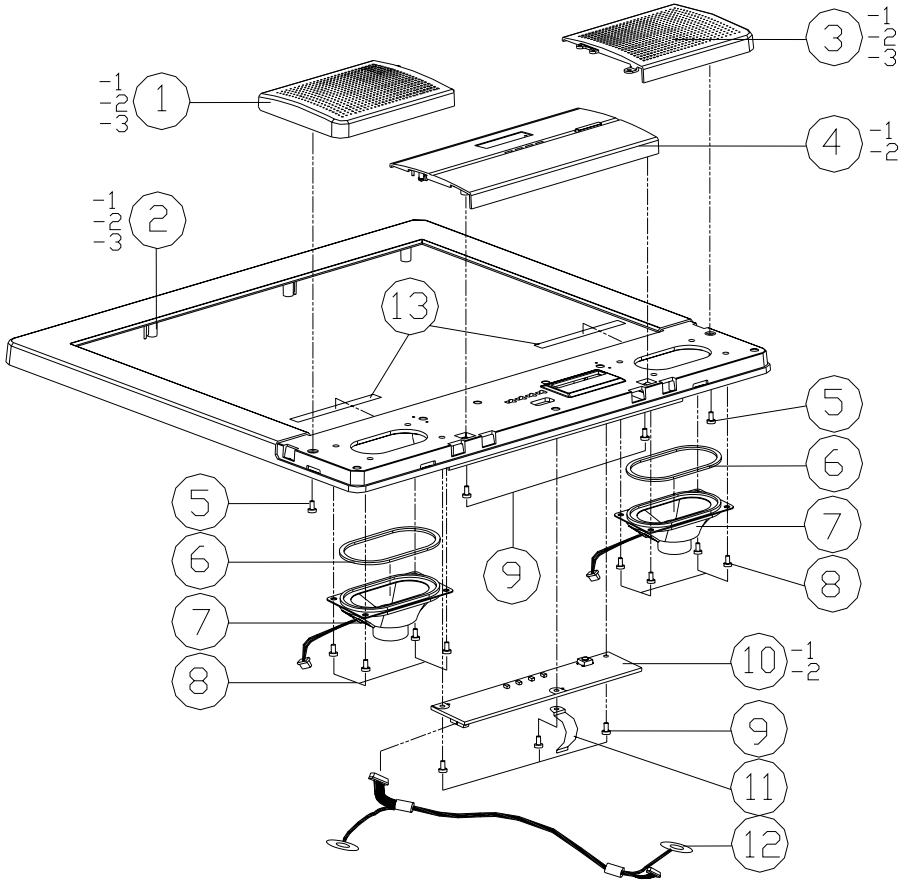
Back (L285S)

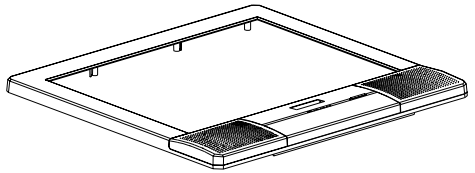
Figure 2
Back (L285S)



ITEM	PART NAME	PART NO	REMARK
1	M3*6L*0.5P BIND HEAD NI-PL	35-41130-6R0	
2-1	LCD BACK COVER MODULE FOR L285P	39-P5001-023	AU./CHI MEI.
2-2	LCD BACK COVER MODULE FOR L285PA	39-P5101-023	AU./CHI MEI.
3	HEAK SINK MODULE W/FAN (70*70*15)	31-P507S-104	
4	SCREW M2.5*5L B NI ICT	35-41125-5R0	
5-1	CD-ROM ASS'Y L285SD	79-P5A2Z-010	24x TEAC CD-224E-C28
5-2	CD-ROM ASS'Y L285SA	79-P5B2Z-010	
5-3	CD-ROM ASS'Y L285ST	79-P5D2Z-010	
6-1	FDD ASS'Y L285S	79-P5A2J-010	
6-2	FDD ASS'Y L285SA	79-P5B2J-010	
6-3	FDD ASS'Y L285ST	79-P5D2J-010	
7	WIRE CABLE FOR 1394 L285S	43-P5A0P-010	
8	WIRELESS LAN ASS'Y L285P	79-P5020-010	
9	MDC MODEM ASS'Y L285P	79-P502U-010	
10	SCREW M2*0.4P*3L B NI ICT	35-41120-3R0	
11	WIRE CABLE FOR MDC MODEM L285P	43-P500U-010	
12	SCREW M2.5*2.3L KI NI ICT	35-B1125-230	
13	HEX STUD SUM22 NI-PL 10mm	34-96002-000	
14	SCREW M2.5*14L KI NI ICT	35-B1125-14A	
15	I/O BRACKET+GASKET MODULE SECC L285P	33-P507S-102	
16	(247*192*t=0.25)mm FOR MB L285P	47-00190-240	
17-1	INVERTER BOARD FOR CHI MEI 15"	77-P500R-013	
17-2	INVERTER BOARD FOR AU.150	77-P500R-032	
18	INVERTER MYLAR PC L285P	40-P505S-012	
19	MAIN BOARD	77-P5A00-XXX	
20	SCREW M2*4L KI NI ICT	35-B1120-4RB	
21-1	LCD BRACKET FOR CHI MEI 15.0" SECC L285S	33-P5A01-021	
21-2	LCD BRACKET FOR AU.150" SECC L285S	33-P5A01-011	
22	SCREW M2*5L KI NI ICT	35-B1120-5RA	
23-1	VR COVER L285P	42-P507B-011	
23-2	VR COVER FOR L285PA/B	42-P517B-011	AU.150
24	CONDUCTIVE GASKET(L100*W10*H10.5)mm	47-00190-105	
25	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	
26-1	LCD CONVERTER BOARD FOR CHI MEI 15" L285S	77-P5A06-001	
26-2	LCD CONVERTER BOARD FOR AU.150 L285S	77-P5A06-011	
27-1	LCD 15.0" TFT CHI MEI M150X3 13.0mm	50-L22D0-D00	
27-2	LCD 15" TFT AU L15X2M-1 13.5mm	50-L22D5-G00	
28	SCREW M3*10L P NI ICT NY	35-01130-100	
29-1	SPONGE FOR CHI-MEI(171*W15*H6) L285P	47-0019A-170	
29-2	SPONGE FOR AU (L145*W15*H6) L285P	47-0019A-142	
30-1	LCD F-CVR ASS'Y FOR HYU/SHARP/CHI MEI L285P	79-P5001-003	
30-2	LCD F-CVR ASS'Y FOR SHARP/CHI MEI L285PA	79-P5101-002	
30-3	LCD F-CVR ASS'Y FOR AU./CHI MEI	79-P5501-001	

LCD Front (L285S)



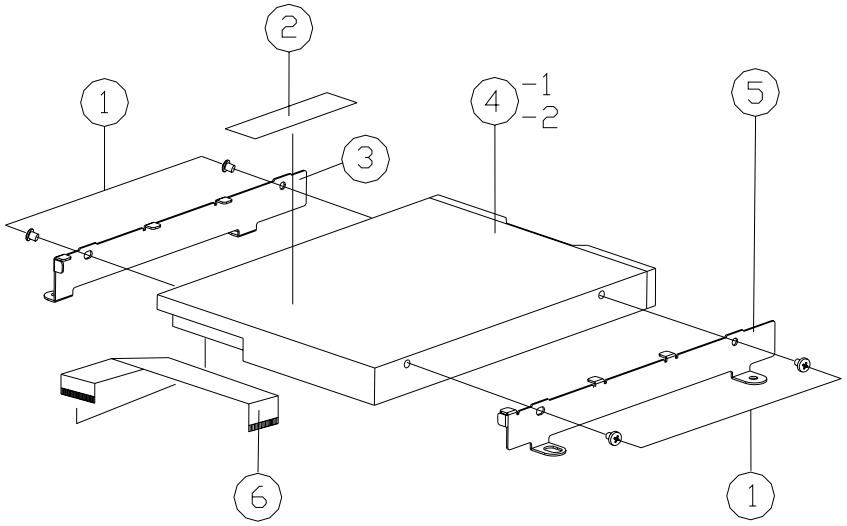


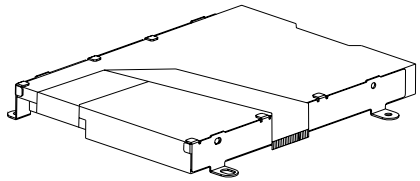
ITEM	PART NAME	PART NO	REMARK
1-1	SPEAKER COVER(L) PC/ABS LP200C	42-P2010-001	FOR L285P
1-2	SPEAKER COVER(L) PC/ABS LP200E	42-P2E71-120	FOR L285PA
1-3	SPEAKER COVER(L) MODULE L285PB	42-P527T-100	FOR L285PB
2-1	LCD F-CVR MODULE FOR CHI/HYU/SHARP L285P	39-P5001-010	FOR L285P
2-2	LCD F-CVR MODULE FOR CHI/HYU/SHARP L285PA	39-P5101-010	FOR L285PA
2-3	LCD F-CVR MODULE LP2600T(ADD MYLAR)	79-P220D-0A4	FOR L285PB
3-1	SPEAKER COVER(R) PC/ABS LP200C	39-P2009-001	FOR L285P
3-2	SPEAKER COVER(R) PC/ABS LP200E	39-P2E71-110	FOR L285PA
3-3	SPEAKER COVER MODULE LP200	79-P2200-022	FOR L285PB
4-1	CONTROL PANEL MODULE L285P	42-P5071-101	
4-2	CONTROL PANEL MODULE L285PA	42-P5191-101	
5	SCREW M2.5*4L B BNI ICT	35-49125-4R0	
6	SPEAKER RUBBER, SILICONE LP200	47-P2202-000	
7	SPK+CON. 71W*41D*28.7H 3W	23-5A230-13A	
8	SCREW M3*4L KI NI ICT	35-B1130-4RB	
9	SCREW M2.5*5L B NI ICT	35-41125-5R0	
10-1	LED BOARD	77-P5004-001	FOR L285ST
10-2	LED BOARD	77-P5004-011	
11	SPRING PLATE FOR LED BOARD(7404-02R)H=21	38-P500S-010	
12	WIRE CABLE FOR LED SIGNAL 10P L285P	43-P500F-011	
13	SPONGE (90*5.5*0.5t) FOR F-CVR SPK LP200C	47-00191-030	FOR L285ST

Figure 3
LCD Front (L285S)

Floppy Disk Drive (L285S)

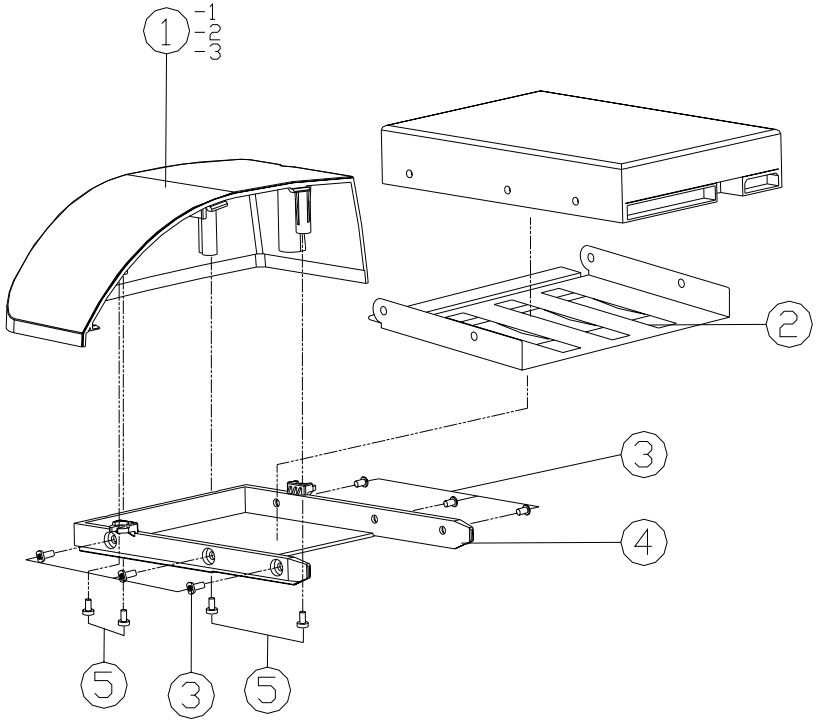
Figure 4
Floppy Disk Drive (L285S)

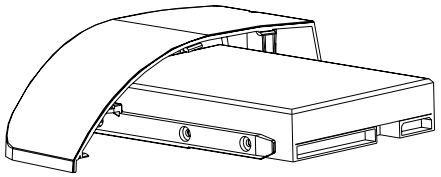




ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5*3L P BZ ICT NY	35-06125-3R0	
2	FDD MYLAR L285P	40-P505J-010	
3	FDD BRACKET (R) SECC L285P	33-P500J-012	
4-1	FDD 3.5" 1.44MB 12.7mm YD-702J-6637J-691061	85-11700-Y05-1	
4-2	FDD 3.5" 1.44MB 12.7mm YD-702J-6637J-64476	85-11700-Y06-1	
5	FDD BRACKET (L) SECC L285P	33-P500J-022	
6	FFC CABLE FOR FDD L285P	43-P500J-013	

Hard Disk Drive (L285S)



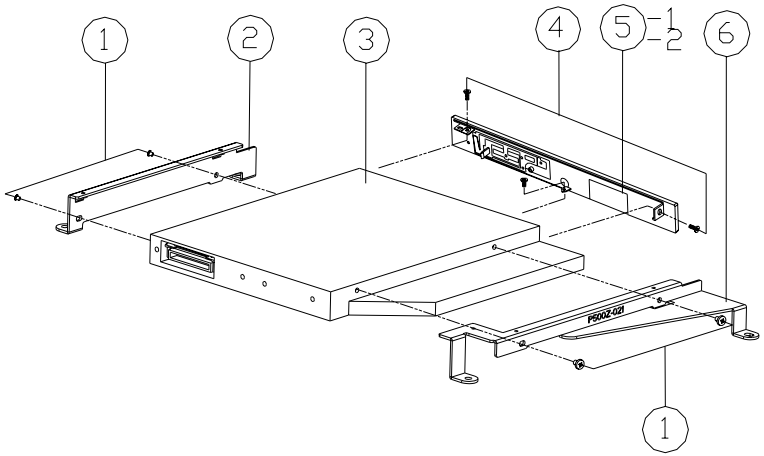


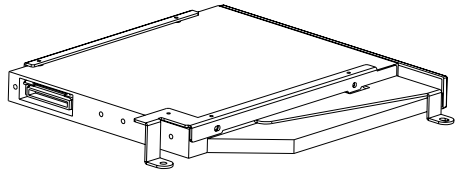
ITEM	PART NAME	PART NO	REMARK
1-1	HDD COVER ABS+PC L285P	42-P507I-012	
1-2	HDD COVER L285PA	42-P517I-012	
1-3	HDD COVER L285PB	42-P527I-012	
2	HDD SHIELDING PLATE	33-P2C7I-100	
3	SCREW #6-32*5L B NI ACT	35-41306-5R0	
4	HDD HOLDER PC/ABS LP200	39-P2211-001	
5	M3*6L*0.5P BIND HEAD NI-PL	35-41130-6R0	

Figure 5
Hard Disk Drive (L285S)

MKE-TEAC CD-ROM Drive (L285S)

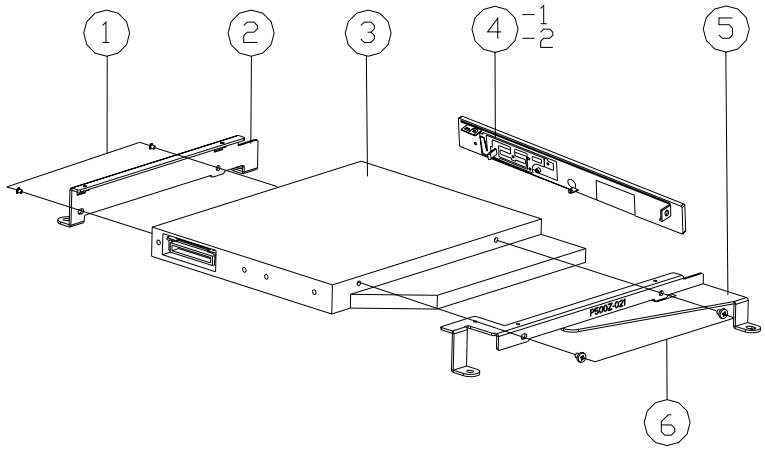
Figure 6
MKE-TEAC CD-ROM (L285S)

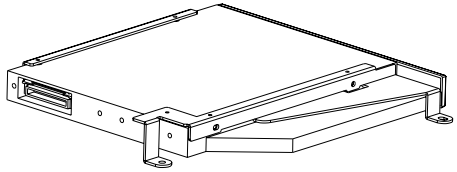




ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.0*3L F NI ICT NY	35-21120-3RA	
2	CD-ROM BRACKET (R) SECC L285P H=11.6	33-P500Z-050	
3	CD-ROM 5 1/4" 24X 12.7mm TEAC	85-607□X-709	CD-224E-C20
4	SCREW Ø2.0*5L F BZ TAP	35-26720-5R0	
5-1	TEAC CD-ROM BEZEL MODULE	39-P207Z-010	L285S
5-2	TEAC CD-ROM BEZEL MODULE	39-P227Z-010	L285SA/T
6	CD-ROM BRACKET (L) SECC L285P	33-P500Z-030	

MKE-TEAC Combo Drive (L285S)



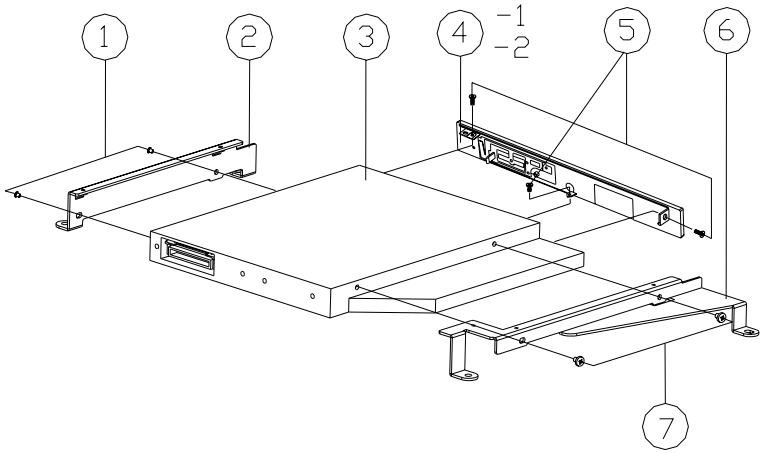


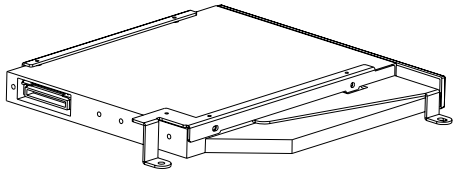
ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L F NI ICT NY	35-21120-3RA	
2	CD-ROM BRACKET (R) SECC L285P H=12.2	33-P500Z-041	
3	CD-RW/DVD 5 1/4" 8X 12.7mm DW-28E-B2 TEAC	85-9078X-700	
4-1	TEAC COMBO BEZEL MODULE L285P	42-P507X-100	
4-2	TEAC COMBO BEZEL MODULE L285PA	42-P517X-200	
5	CD-ROM BRACKET (L) SECC L285P	33-P500Z-030	
6	SCREW M2*3.5L F BNI ICT NY<Dd=3.2 Dt=1.0>	35-21120-35B	

Figure 7
MKE-TEAC Combo (L285S)

KME CD-RW Drive (L285S)

Figure 8
KME CD-RW (L285S)





ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L F NI ICT NY	35-21120-3RA	
2	CD-ROM BRACKET (R) SECC L285P	33-P500Z-022	KME 8X UJDA340CL-Z
3	CD-R/W 5 1/4" 8X 12.7mm UJDA-340CL-Z KME	85-8078X-K01	
4-1	CD-RW BEZEL MODULE KME 8X(UJDA330CL-Z)	42-P207W-020	
4-2	CD-RW BEZEL MODULE KME 8X(UJDA330CL-Z)	42-P227W-020	
5	SCREW M1.7*3.5L K BZ TAP	35-86717-3R5	
6	CD-ROM BRACKET (L) SECC L285P	33-P500Z-030	
7	SCREW M2*3.5L F BNI ICT NY(Da=3.2 Dt=1.0)	35-21120-35B	

Appendix B:Schematic Diagrams

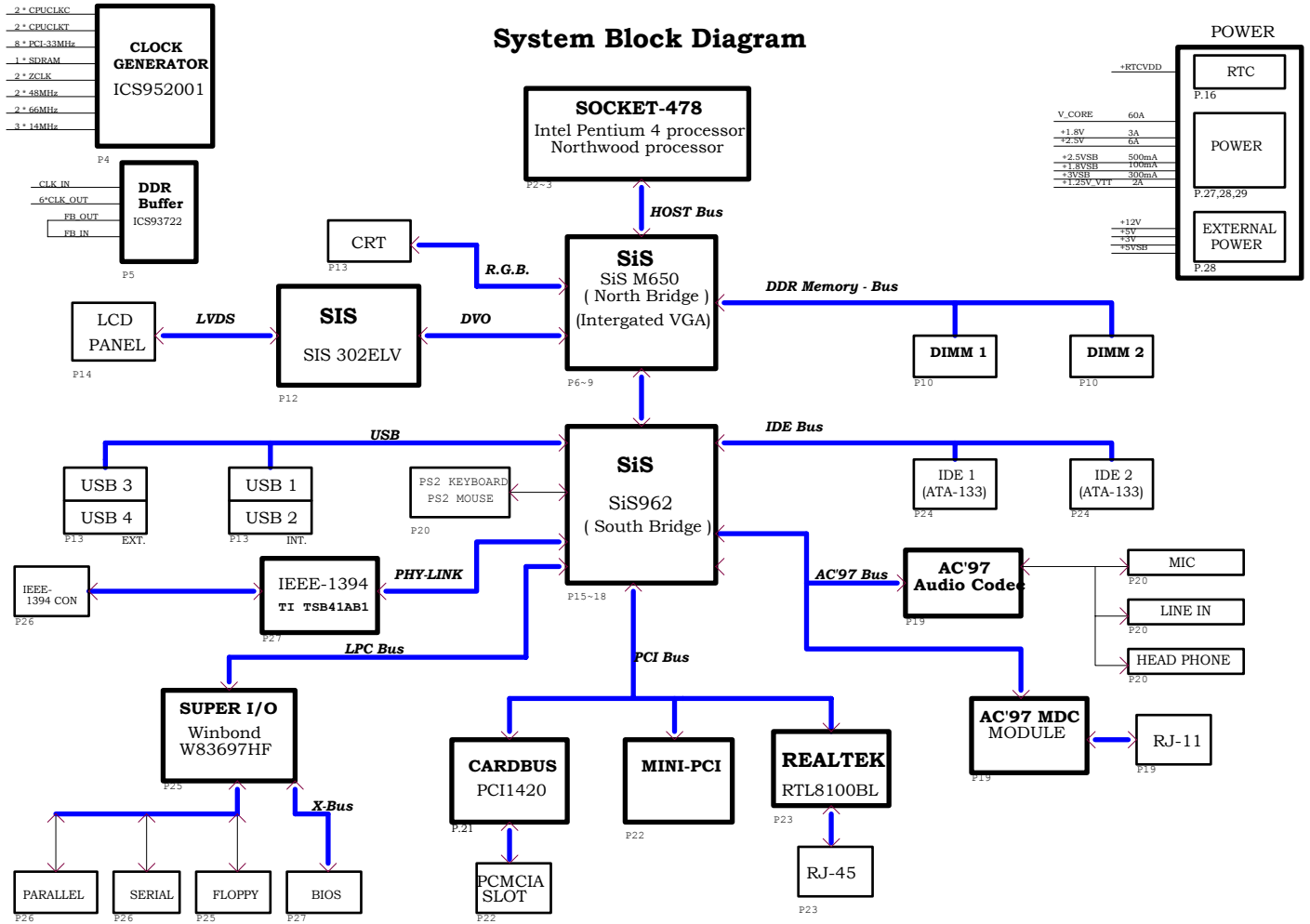
This appendix has circuit diagrams of the systems PCB's:

Printed Circuit Board	Part No. of the Latest Version
System Board	71-P7A00-003
USB Board	71-P7A03-001
LCD Transfer Board (CHI MEI)	71-P5A06-001
LCD Transfer Board (AU)	71-P5A06-011
PCB Inverter Board	71-P500R-003
PCB Inverter Board	71-P500R-032

Table 1 - 1
Schematic Diagram

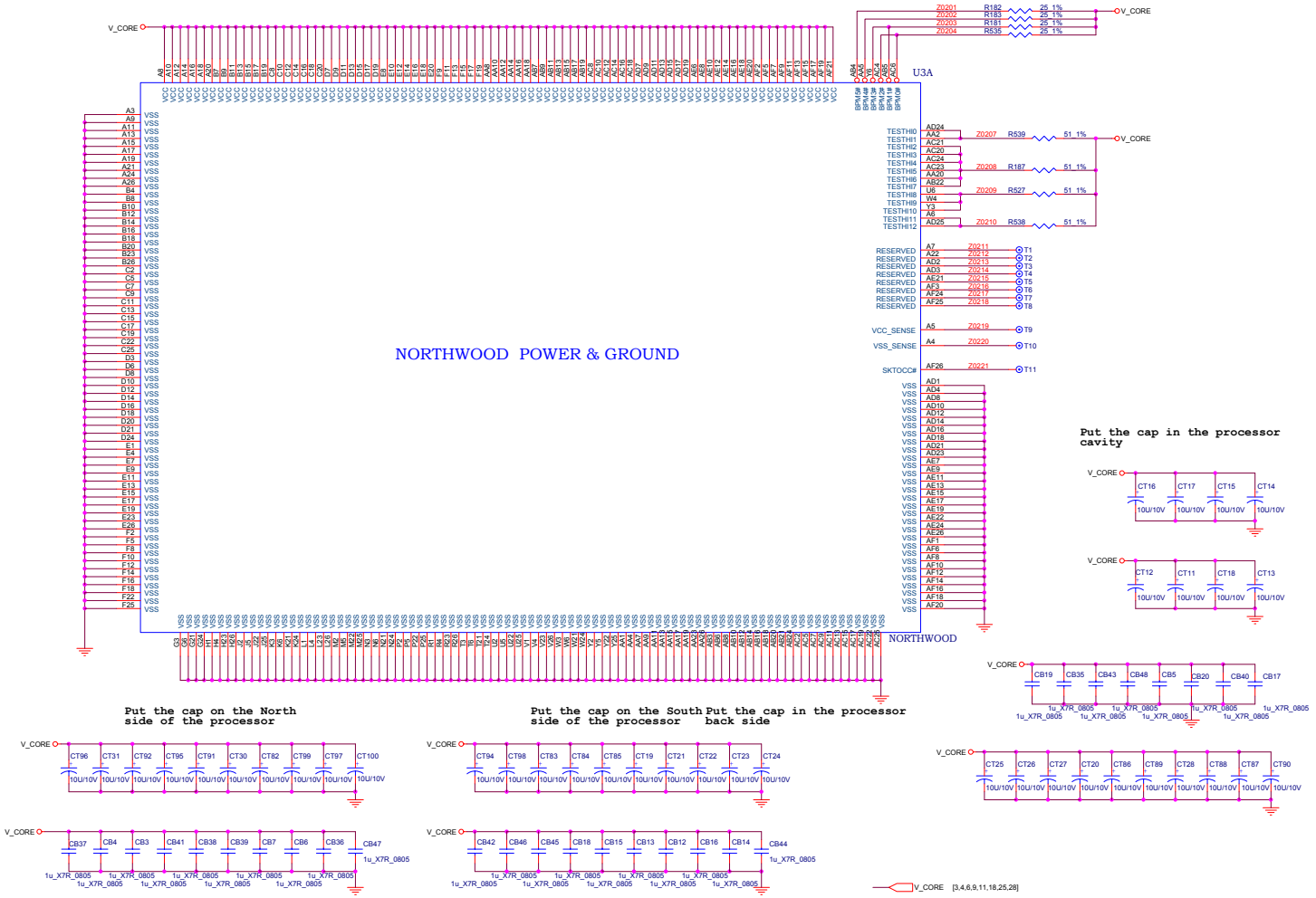
System Block Diagram

Sheet 1 of 30
System Block Diagram



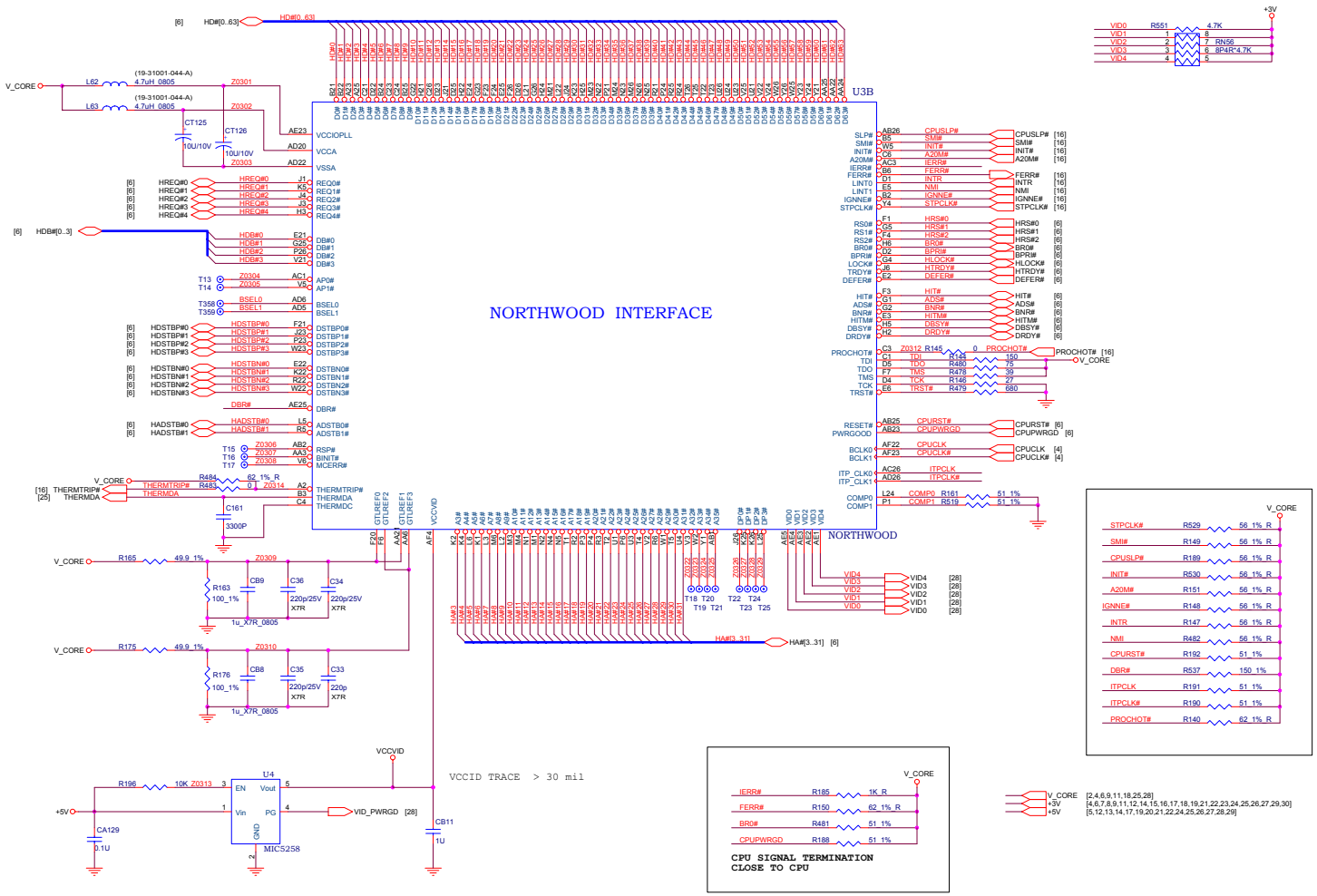
Northwood Power & Ground - 1 of 2

Sheet 2 of 30
Northwood 845
1 of 2



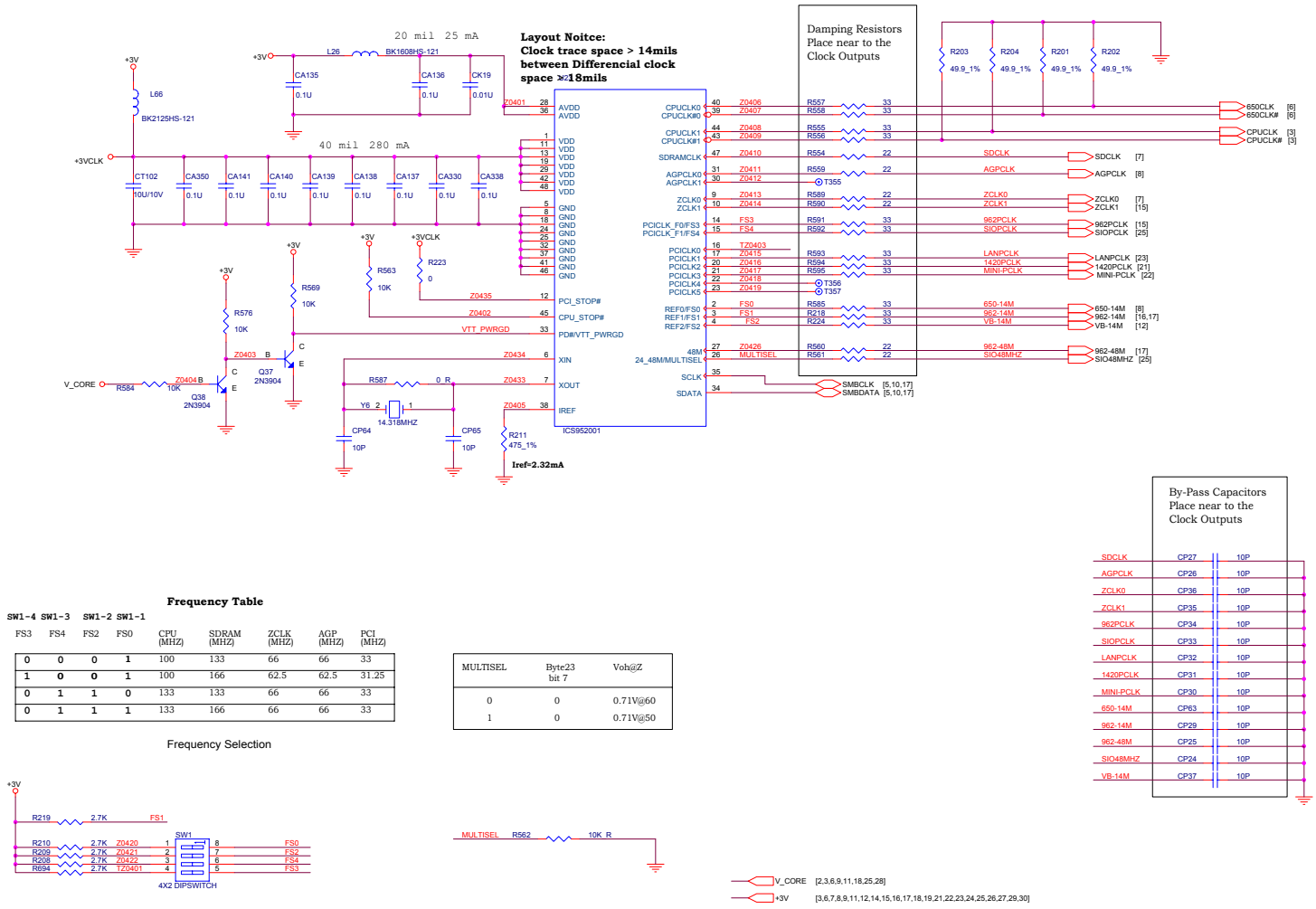
Northwood Memory Interface - 2 of 2

Sheet 3 of 30
Northwood Memory
2 of 2



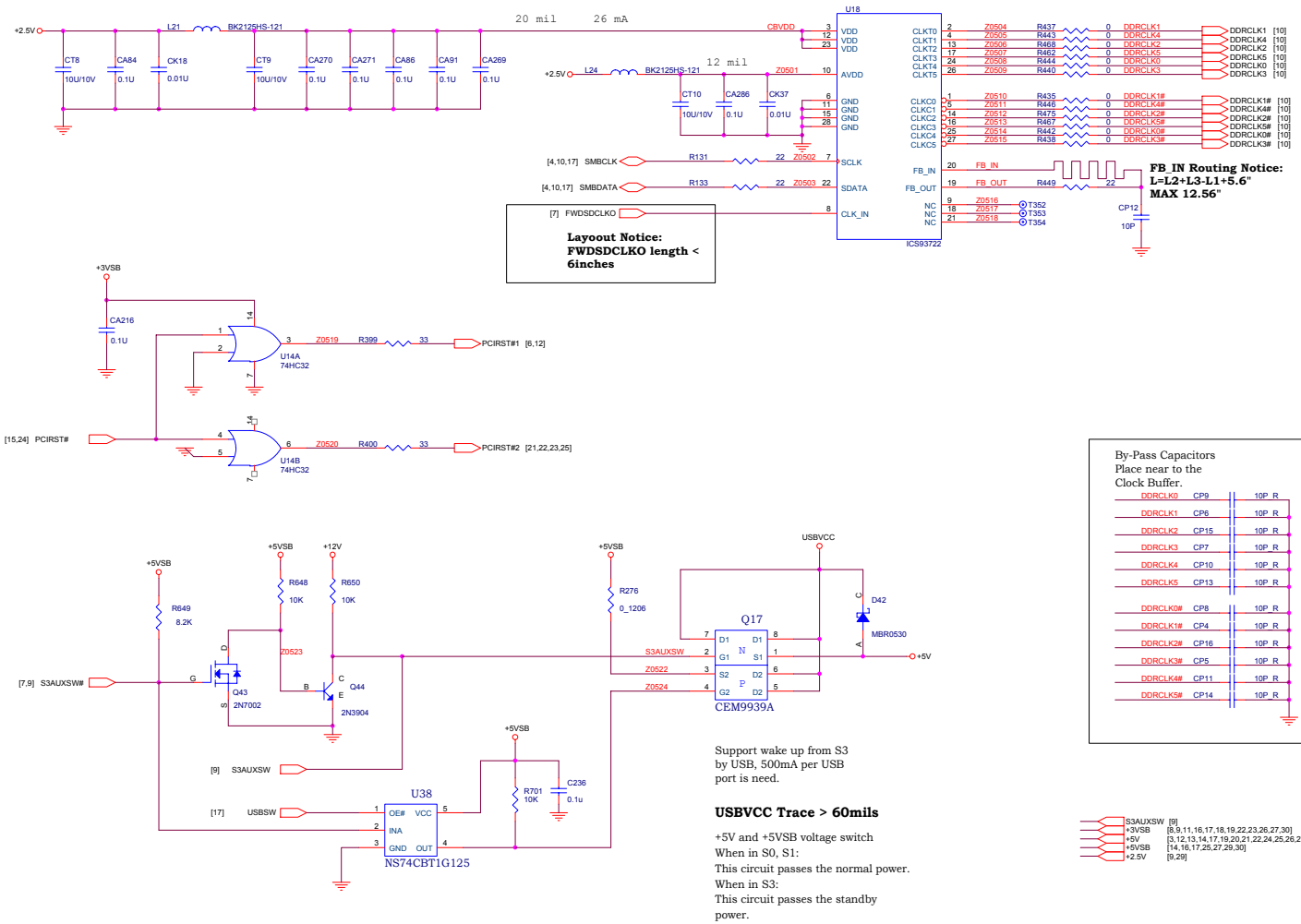
Clock Generator

Sheet 4 of 30
Clock Generator



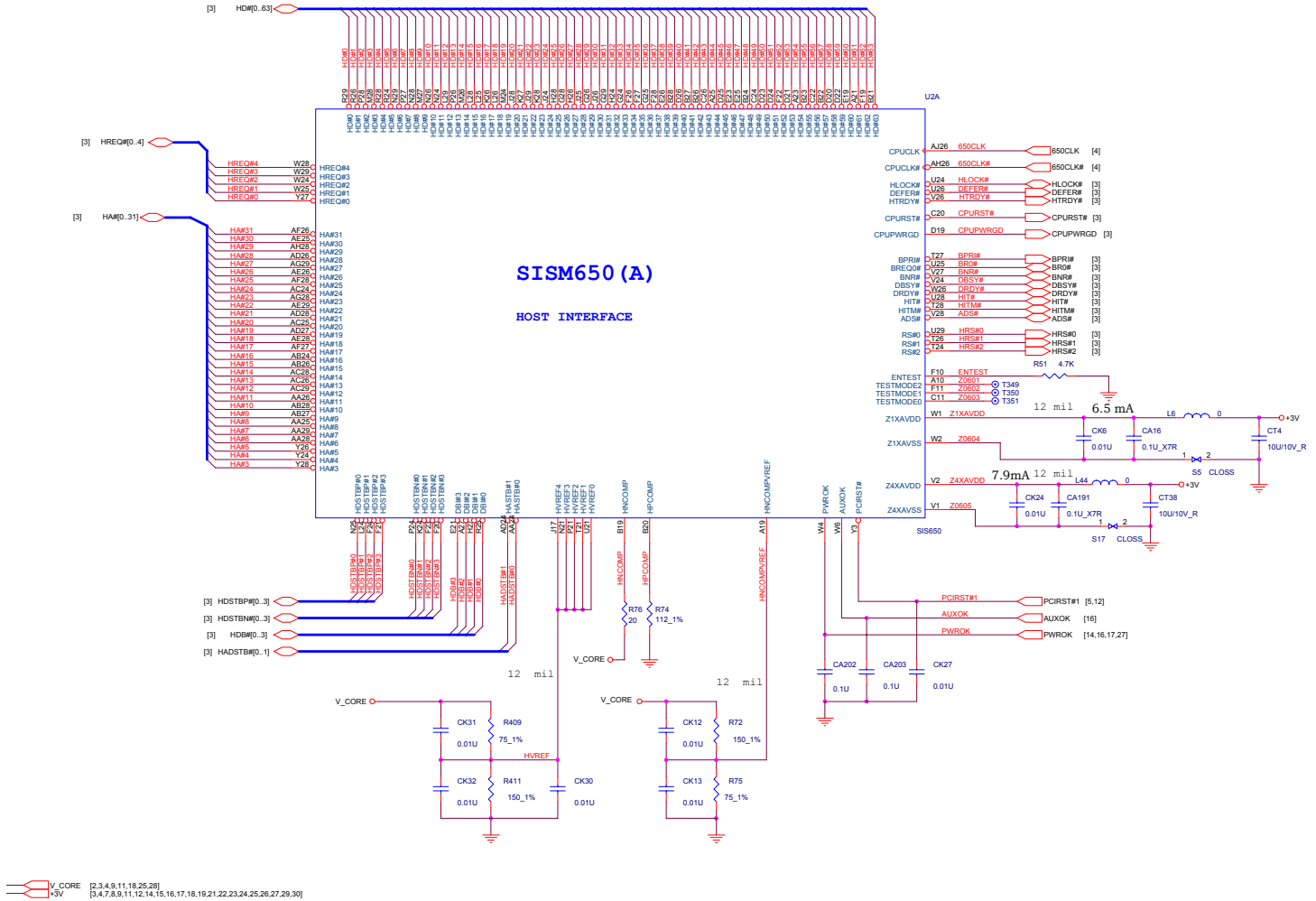
Clock Buffer

Sheet 5 of 30
Clock Buffer



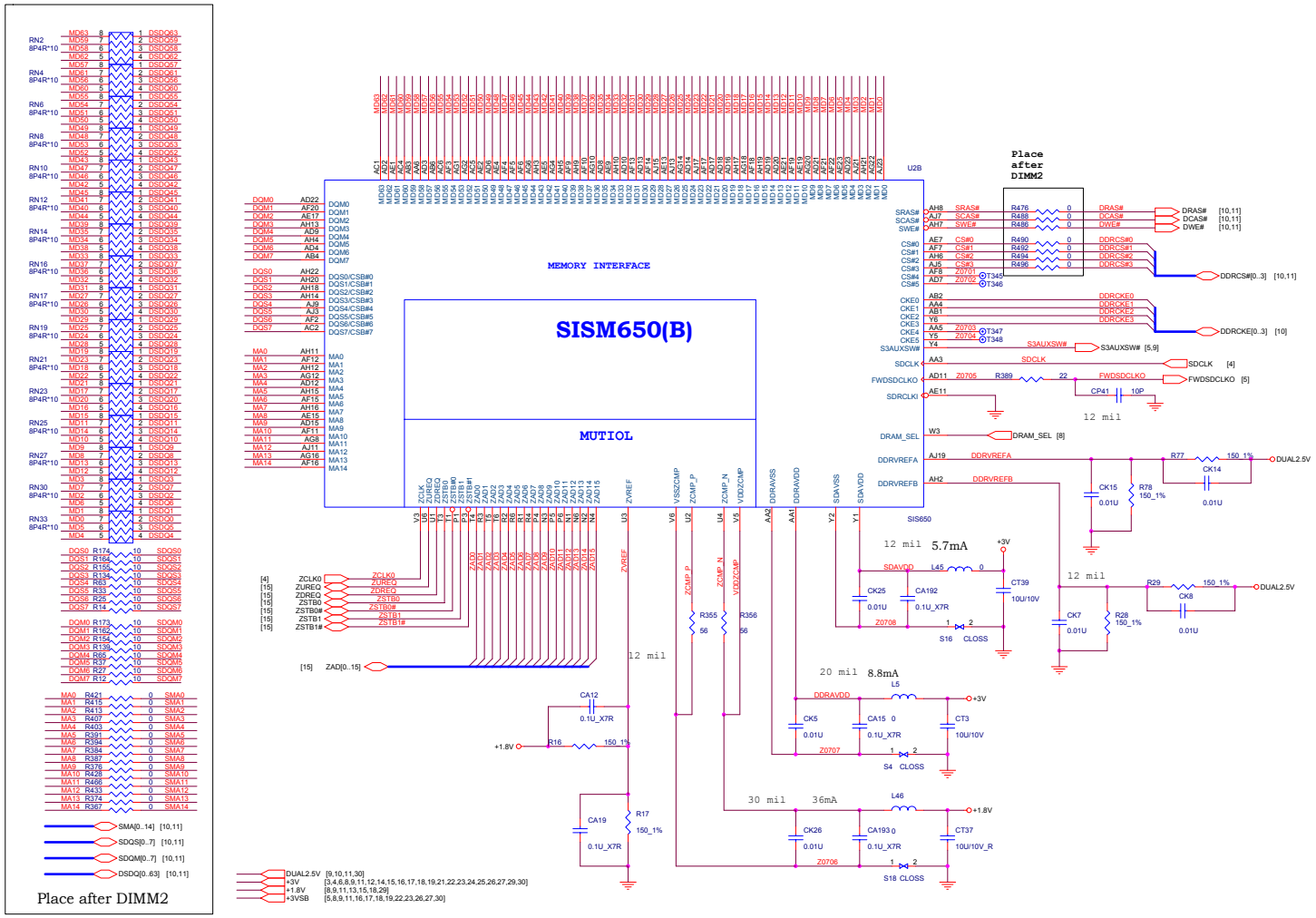
SIS650 Host Interface - 1 of 4

Sheet 6 of 30
SIS650
Host Interface
1 of 4



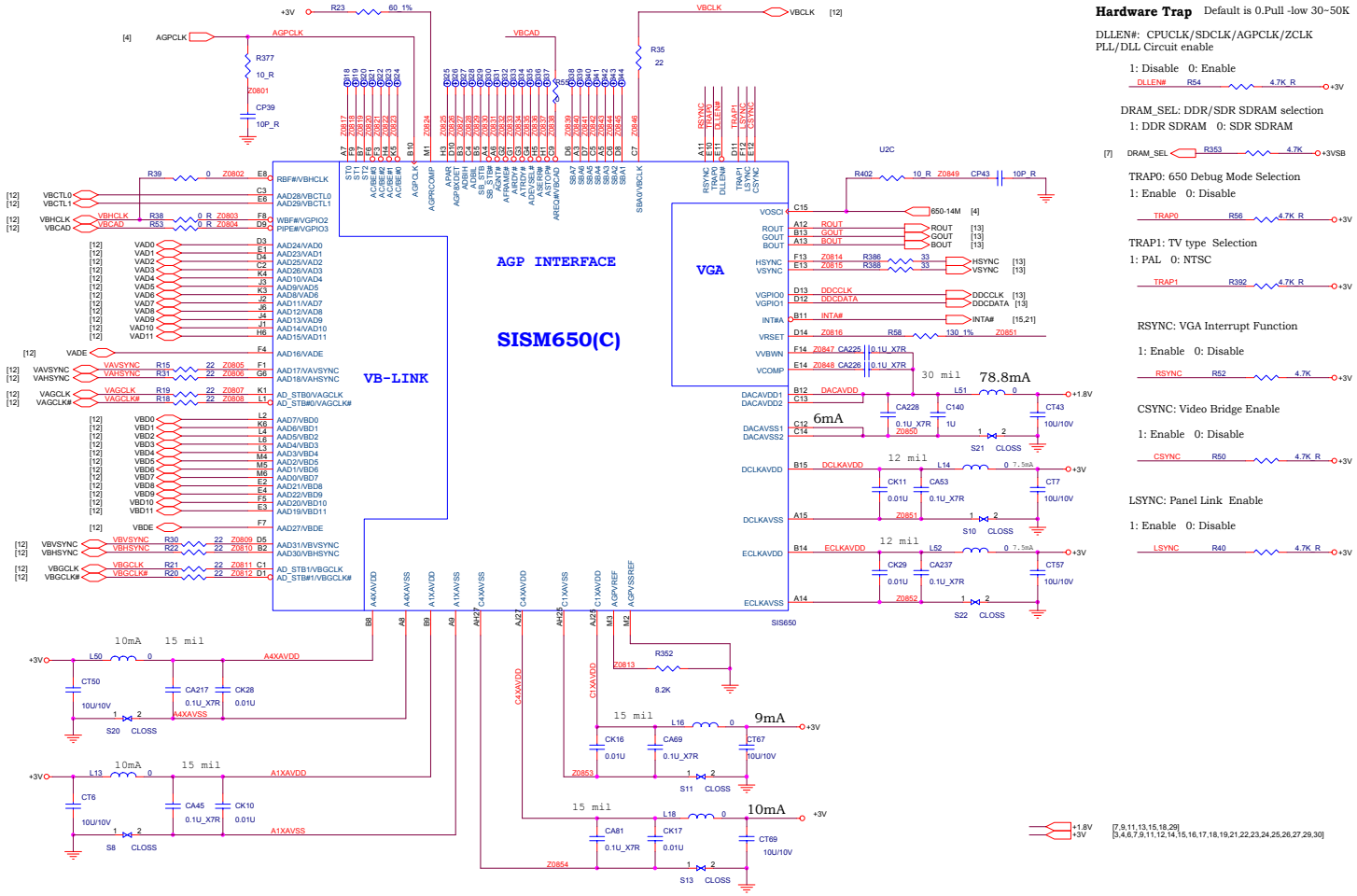
SIS650 Memory Interface - 2 of 4

Sheet 7 of 30
SIS650
Memory Interface
2 of 4



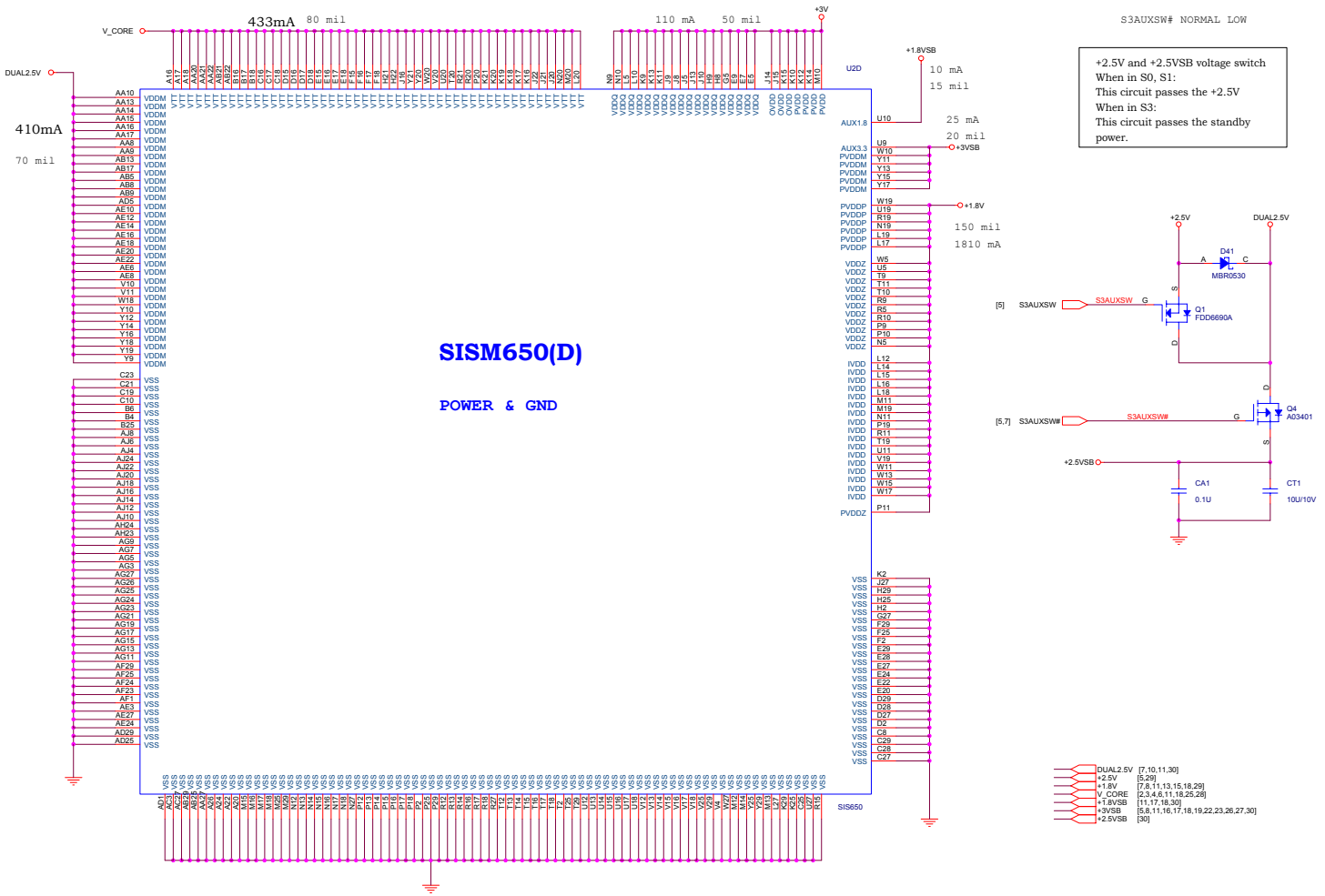
SIS650 AGP Interface - 3 of 4

Sheet 8 of 30
SIS650
AGP Interface
3 of 4



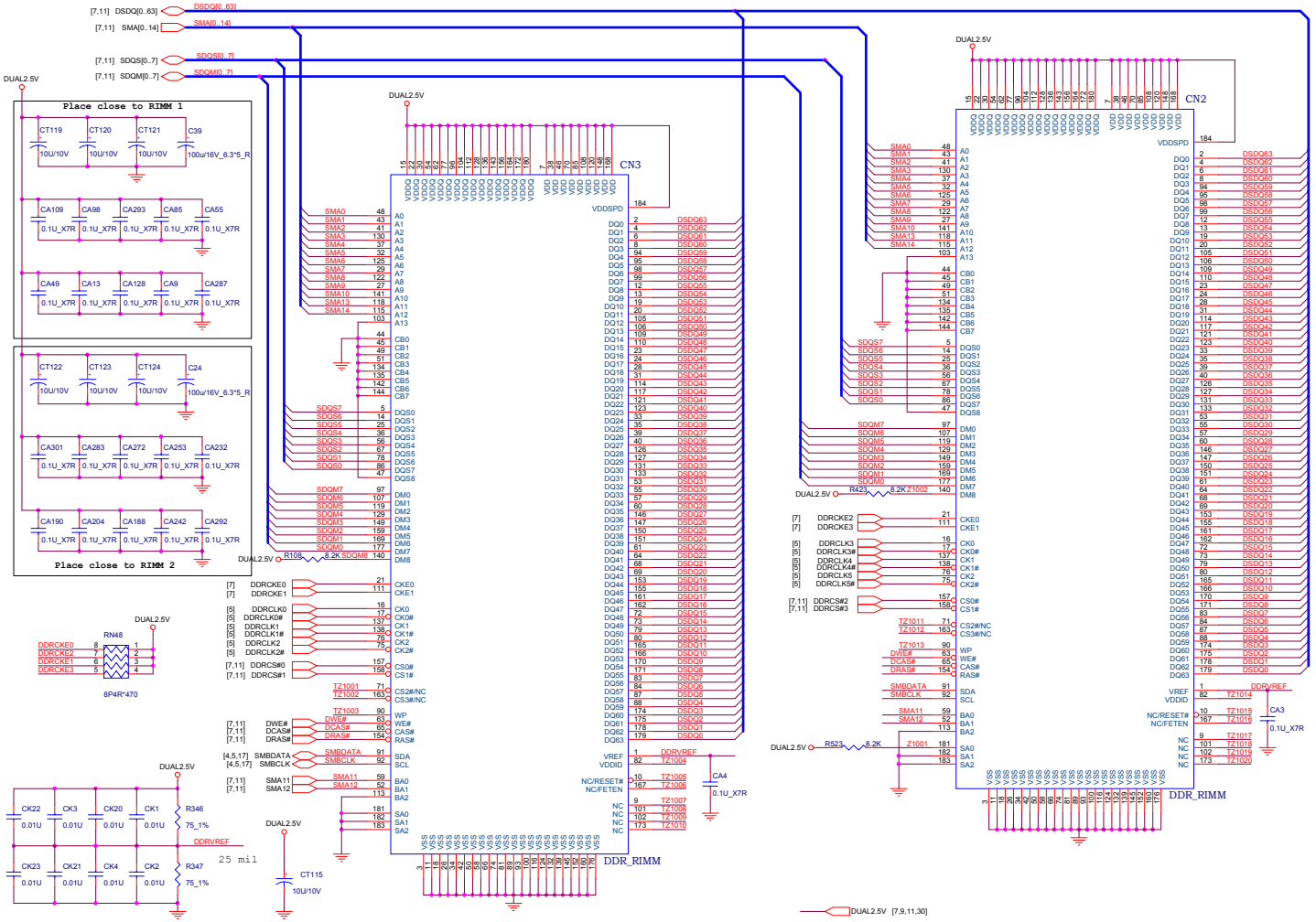
SIS650 Power & Ground - 4 of 4

Sheet 9 of 30
SIS650
Power & Ground
4 of 4



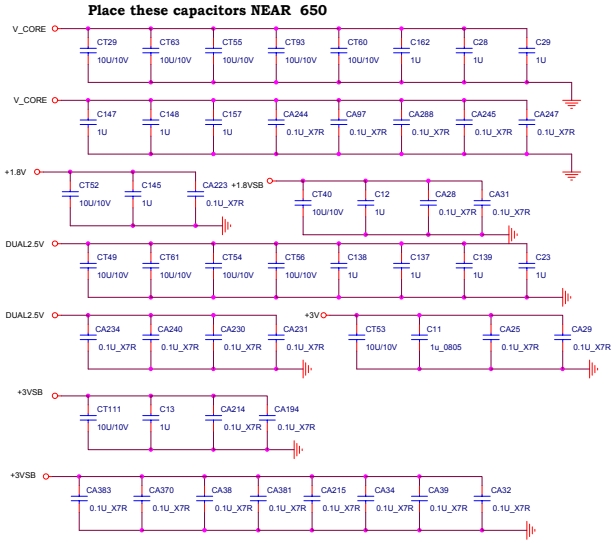
DDR RIMM

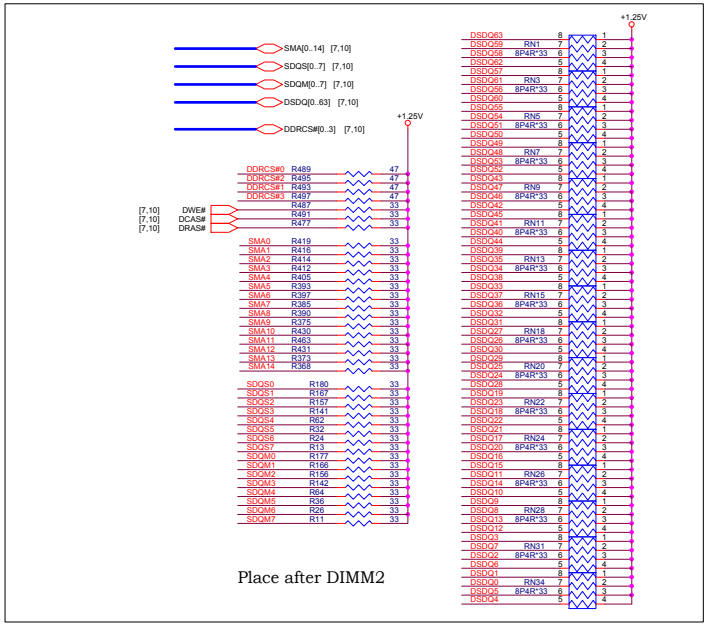
Sheet 10 of 30
DDR RIMM

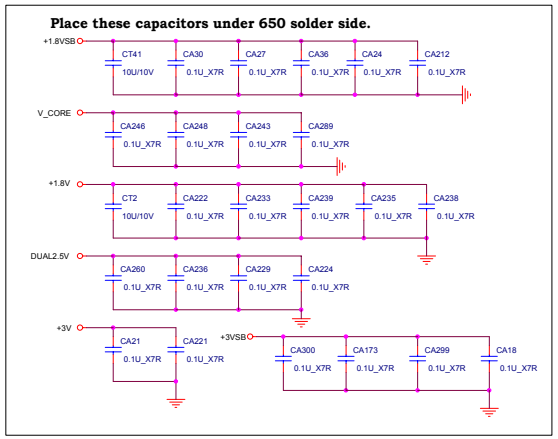


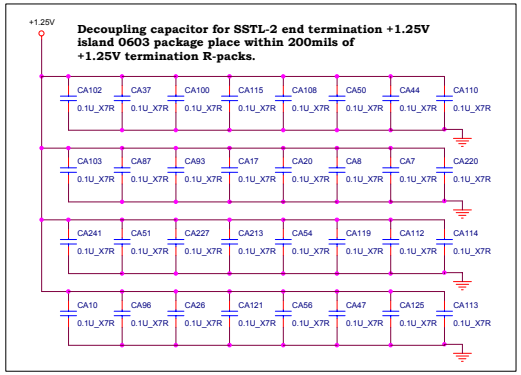
CPU Decopling & Termination

Sheet 11 of 30
CPU Decopling
& Termination





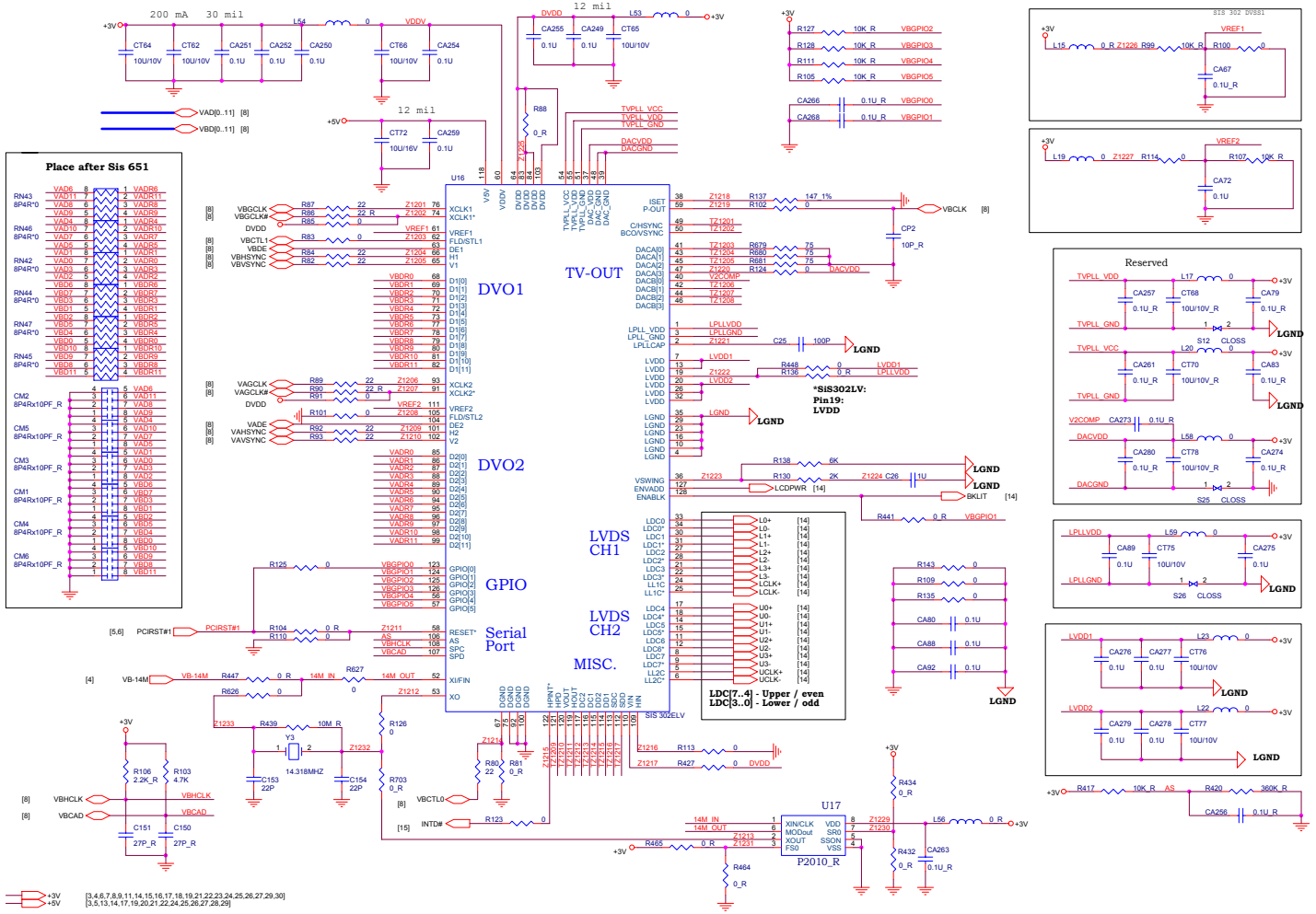




+3VSB [5,8,9,16,17,18,19,22,23,26,27,30]
+1.8VSB [9,17,18,30]
DUAL2.5V [7,9,10,30]
+1.8V [7,8,9,13,15,18,29]
V_CORE [2,3,4,6,9,18,25,28]
+1.25V [30]
+3V [3,4,6,7,8,9,12,14,15,16,17,18,19,21,22,23,24,25,26,27,29,30]

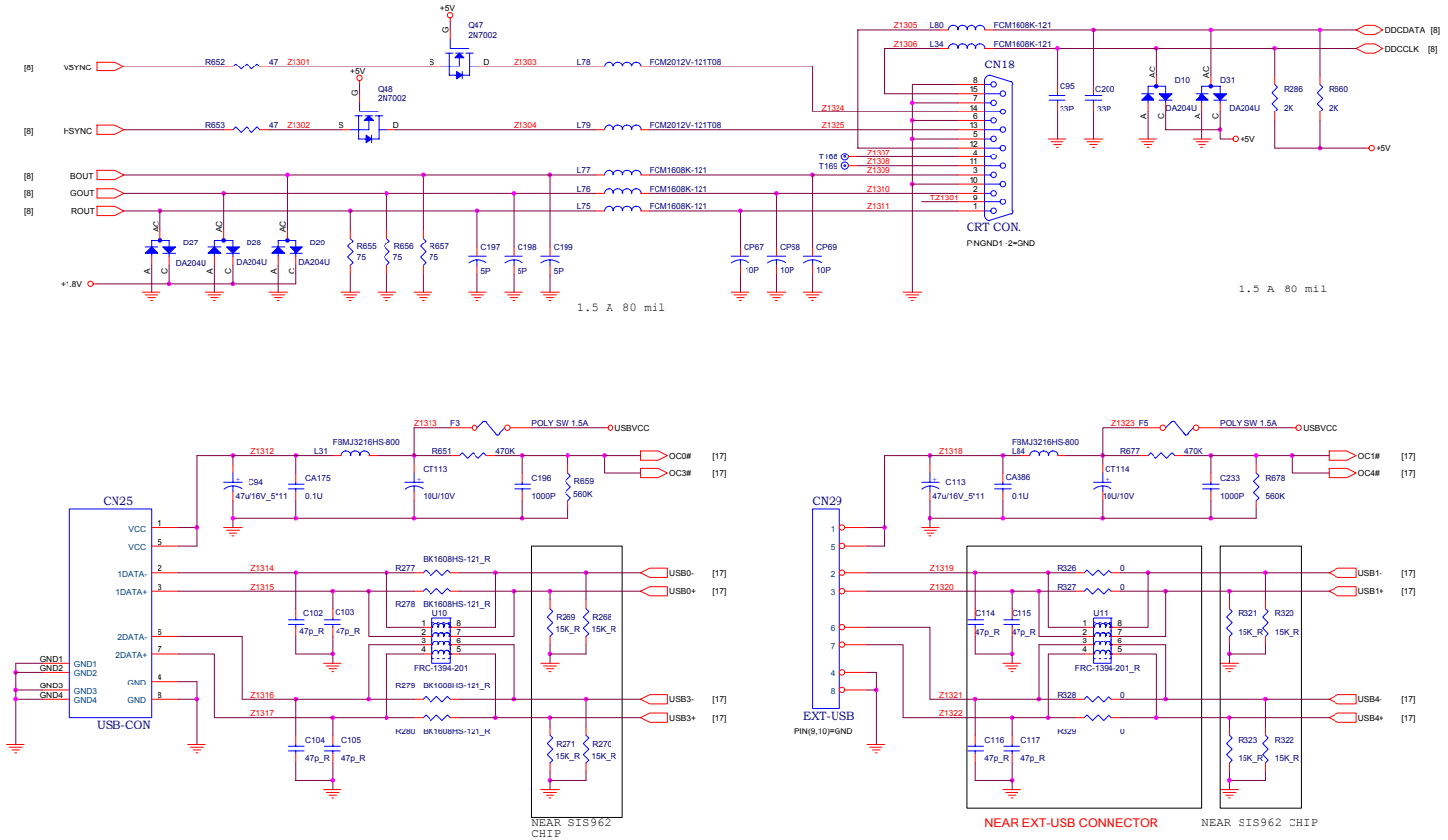
CH7302/SIS302LV

Sheet 12 of 30
CH7302/SIS302LV



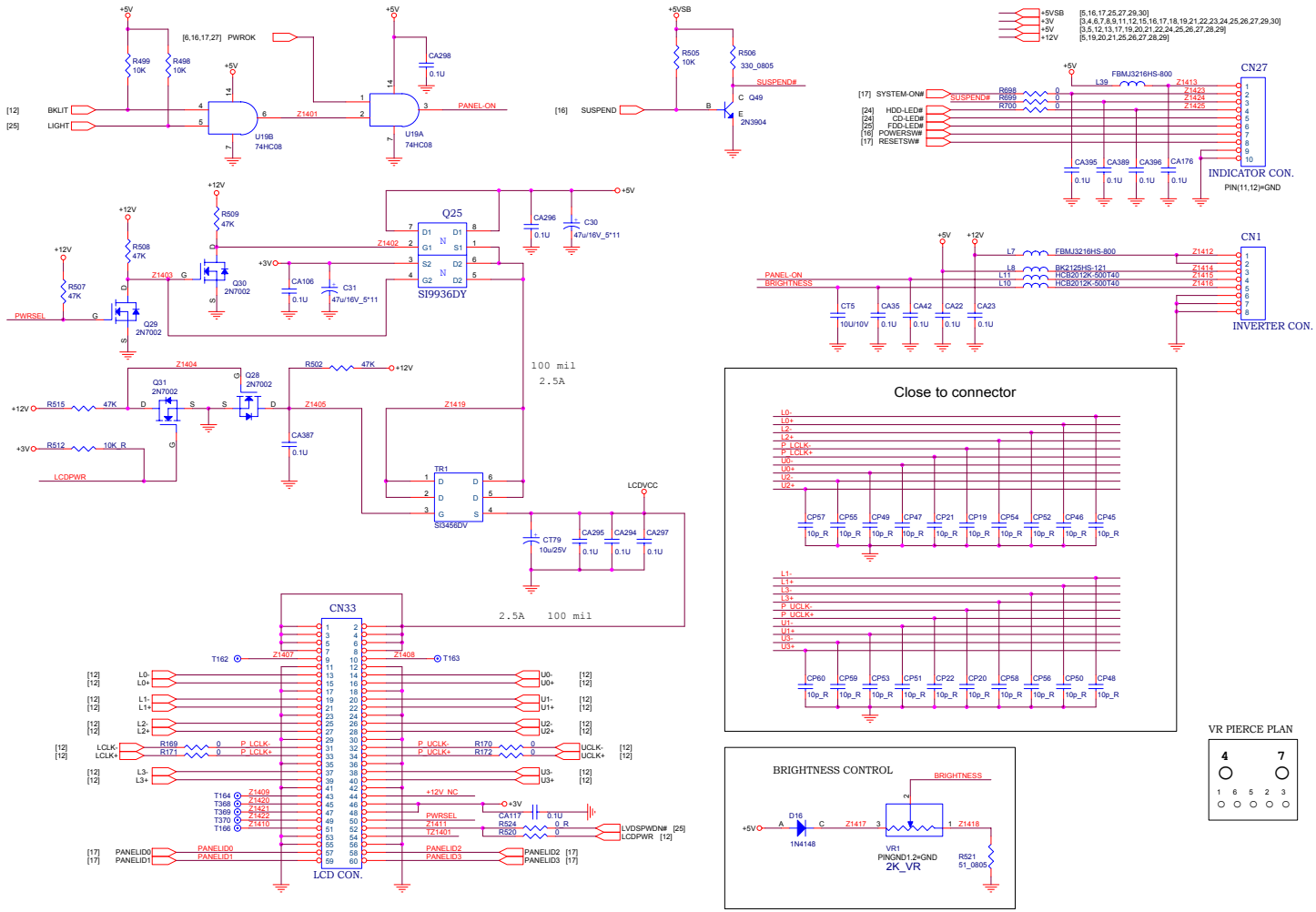
CRT & USB

Sheet 13 of 30
CRT & USB



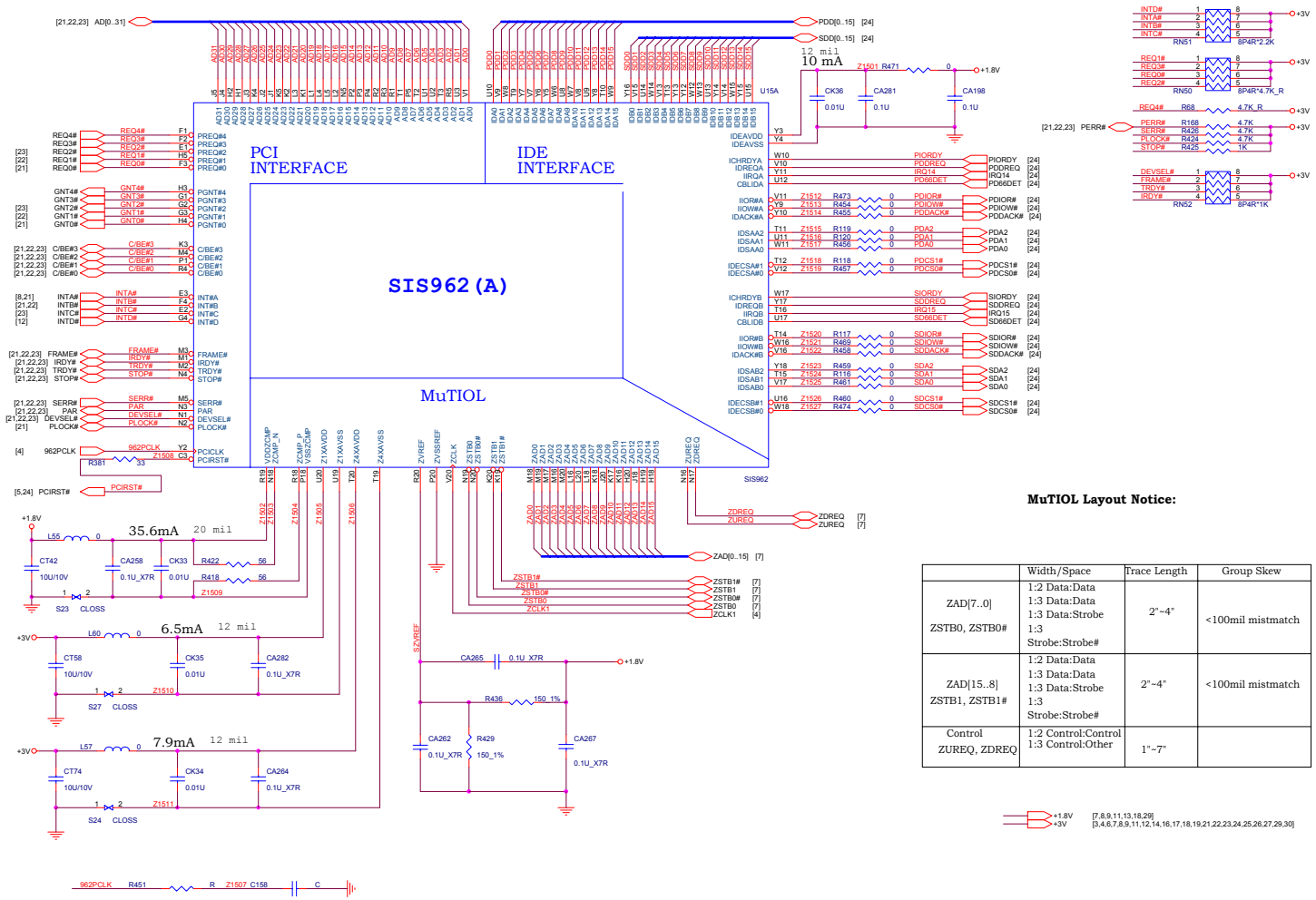
LCD Connector

Sheet 14 of 30
LCD Connector



SIS962 (PCI, IDE, MUTIOL) - 1 of 4

Sheet 15 of 30
SIS962 (PCI, IDE, MUTIOL)
1 of 4

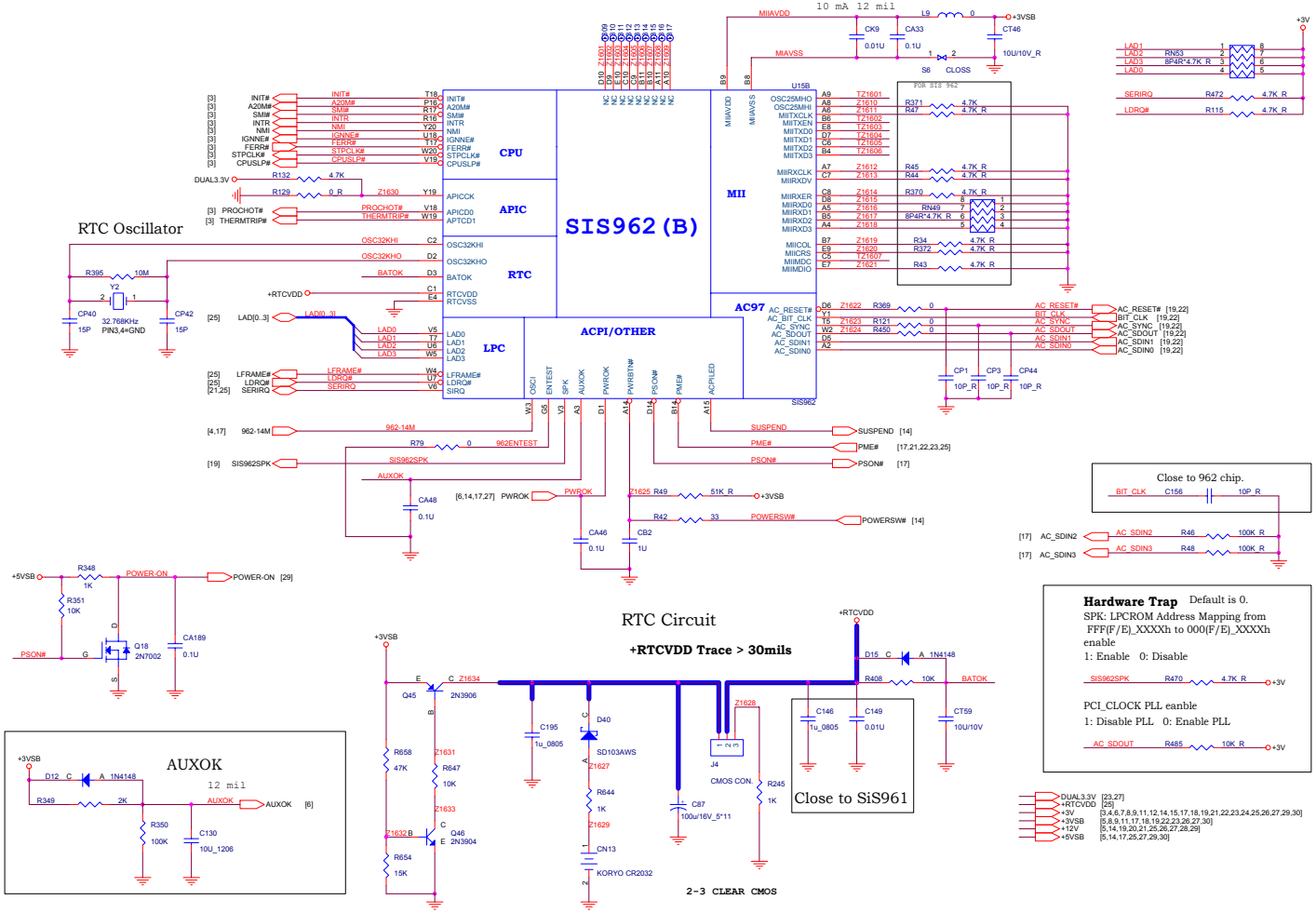


MuTIOL Layout Notice:

	Width/Space	Trace Length	Group Skew
ZAD[7..0] ZSTB0, ZSTB0#	1:2 Data:Data 1:3 Data:Data 1:3 Data:Strobe 1:3 Strobe:Strobe#	2"~4"	<100mil mistmatch
ZAD[15..8] ZSTB1, ZSTB1#	1:2 Data:Data 1:3 Data:Data 1:3 Data:Strobe 1:3 Strobe:Strobe#	2"~4"	<100mil mistmatch
Control ZUREQ, ZDREQ	1:2 Control:Control 1:3 Control:Other	1"~7"	

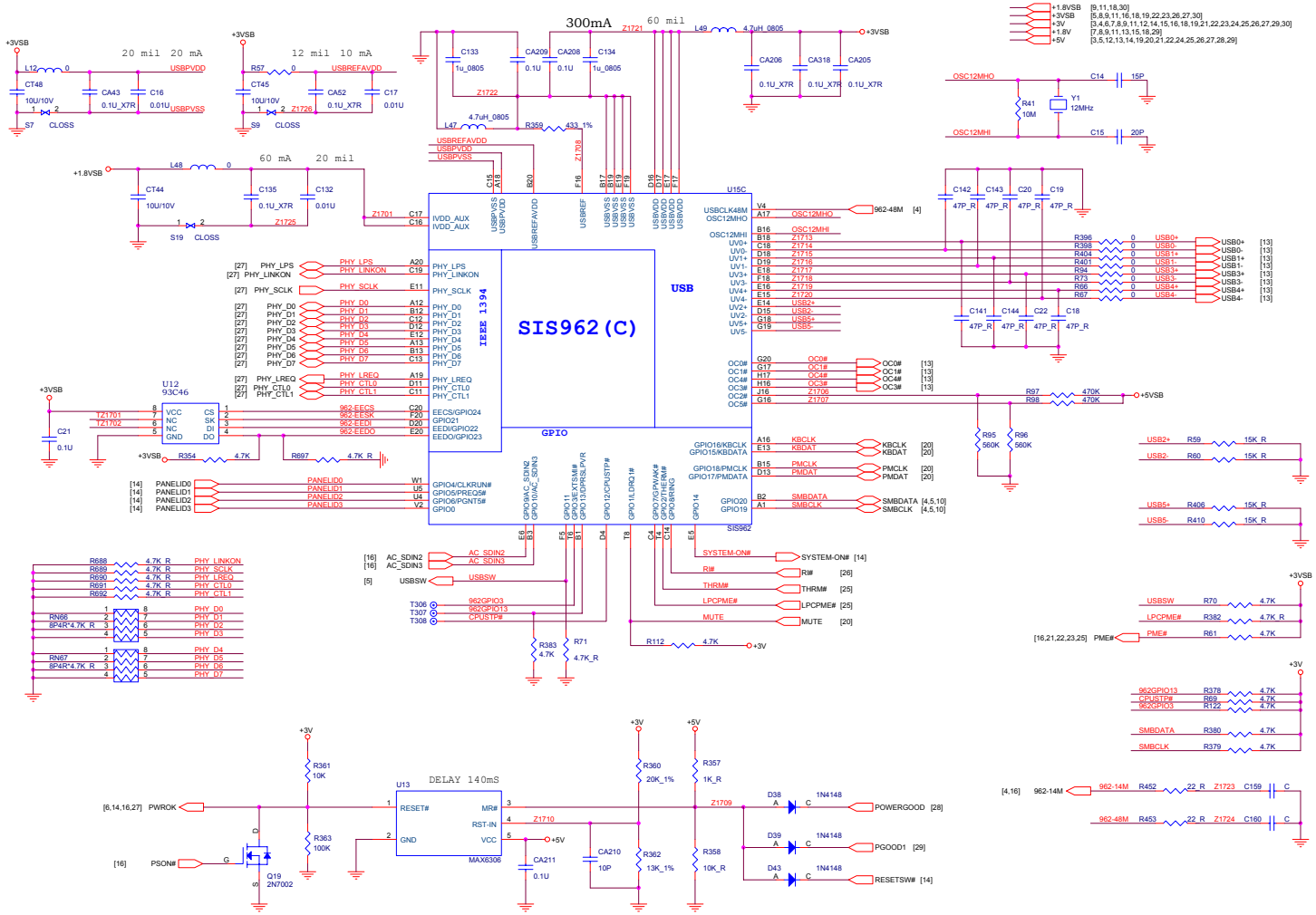
SIS962 (CPU, LPC, AC'97, RTC) - 2 of 4

Sheet 16 of 30
SIS962 (CPU, LPC, AC'97, RTC)
2 of 4



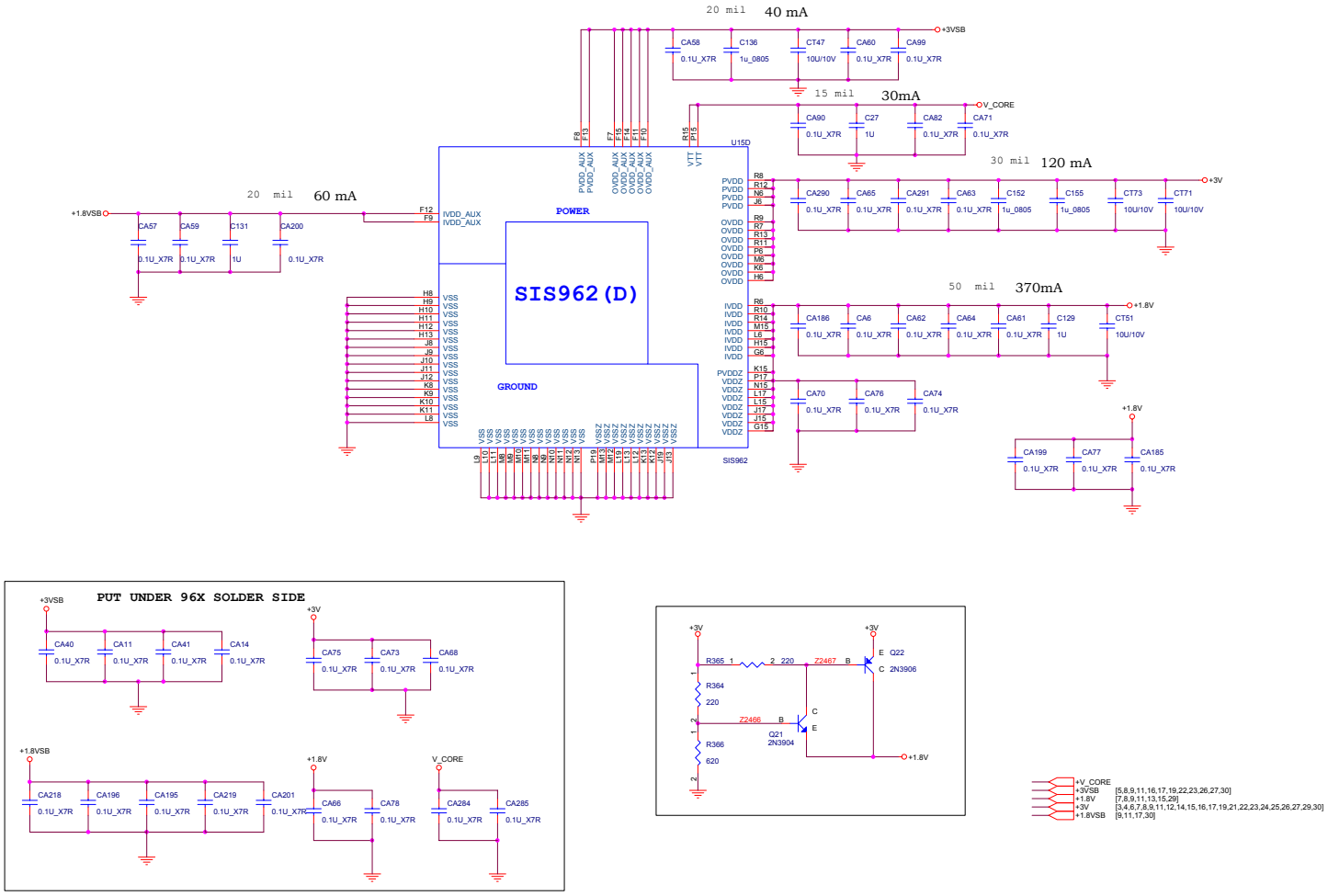
SIS962 (USB, 1394, GPIO, PWROK) - 3 of 4

Sheet 17 of 30
SIS962 (USB, 1394, GPIO, PWROK)
3 of 4



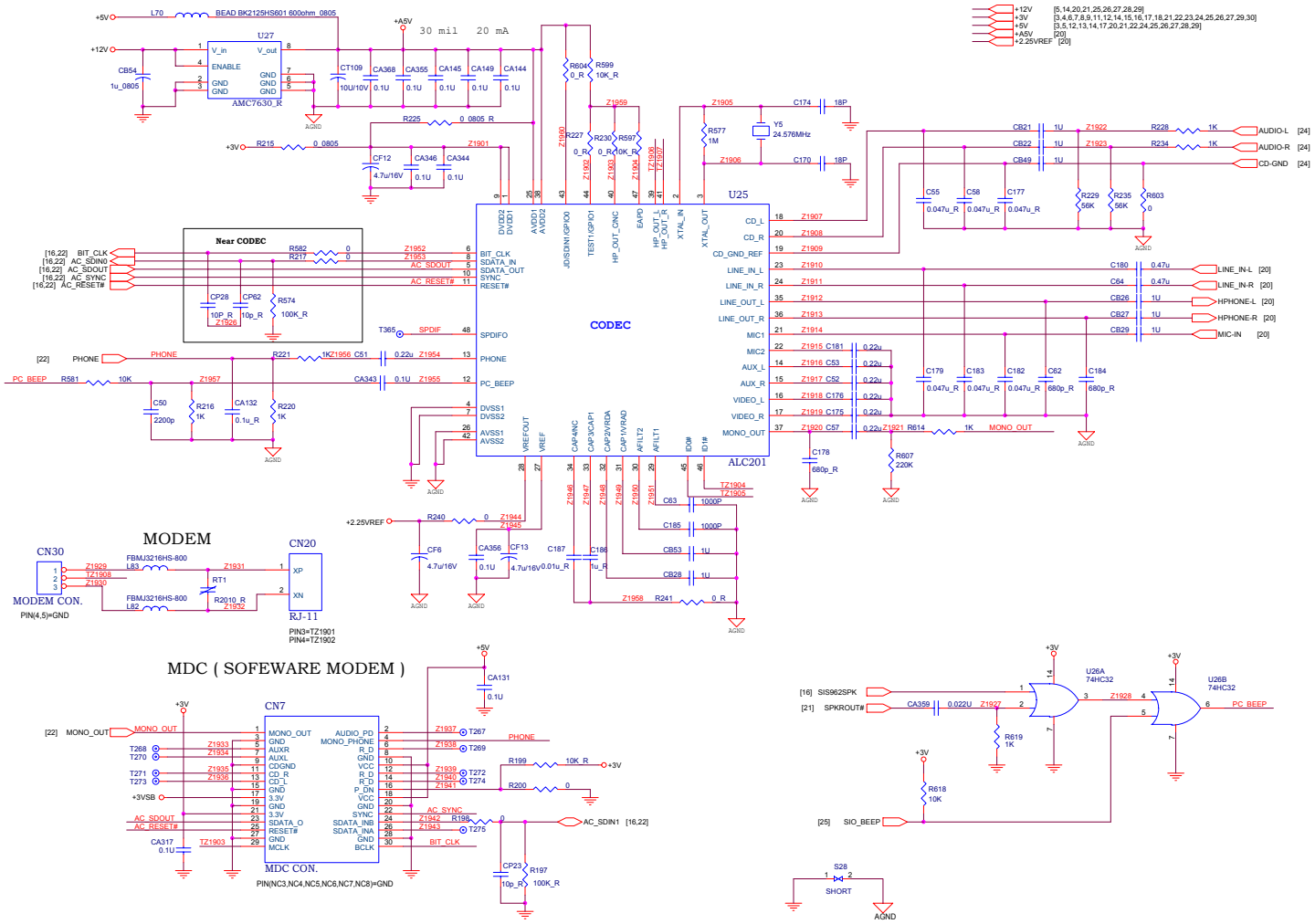
SIS962 (Power & Ground) - 4 of 4

Sheet 18 of 30
SIS962 (Power & Ground)
4 of 4



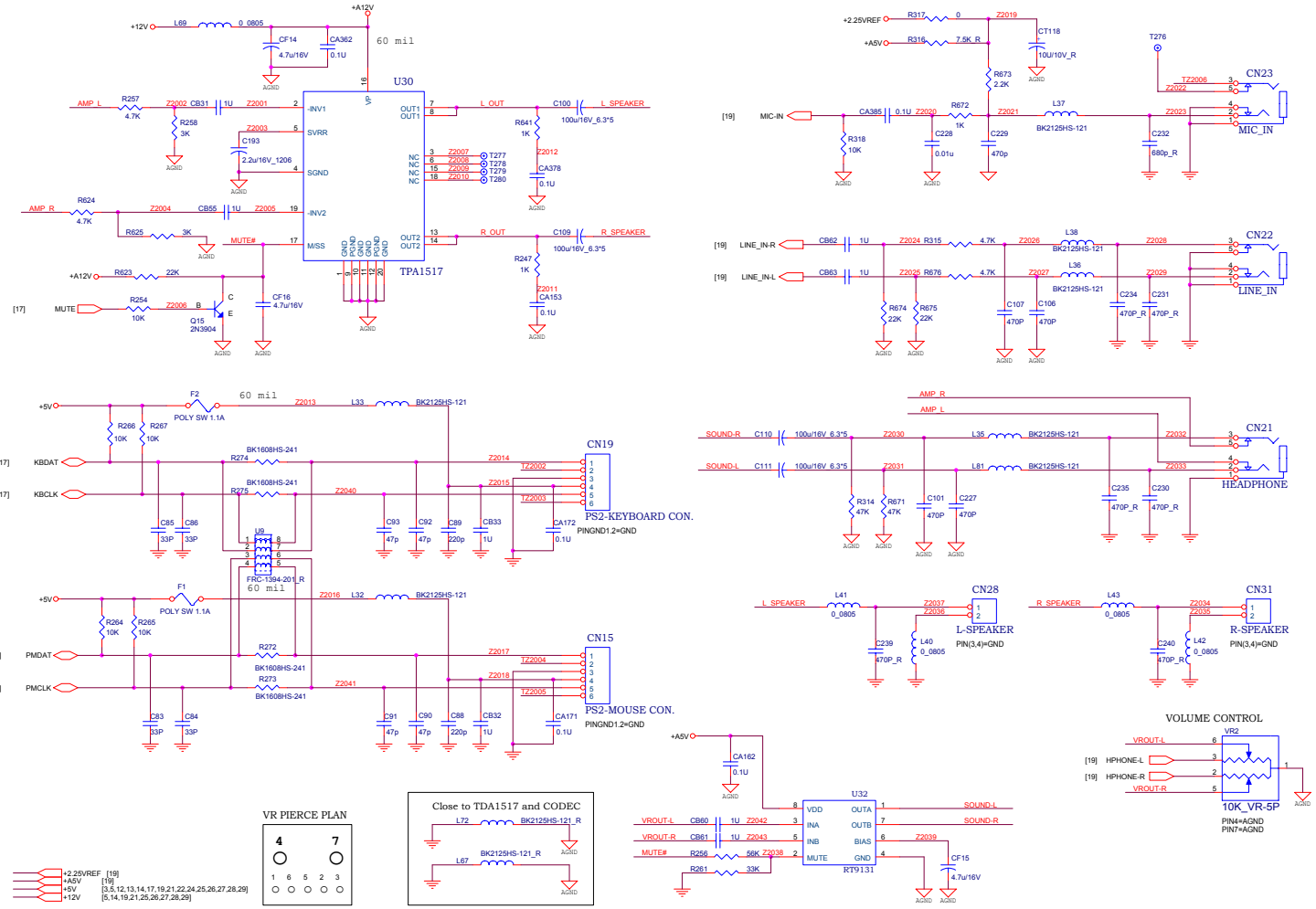
AC'97 Codec

Sheet 19 of 30
AC'97 Codec



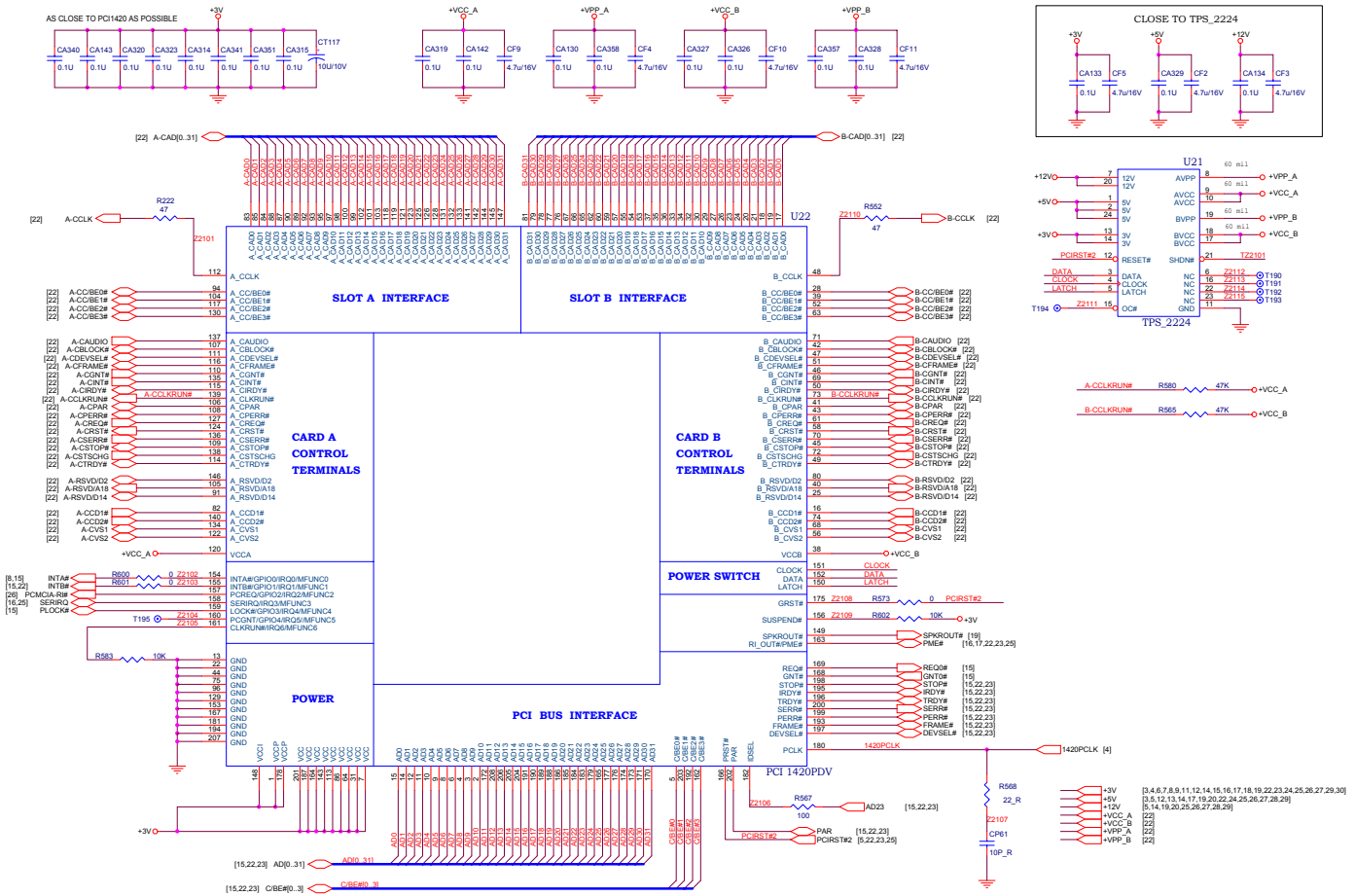
Amplifier & Inverter Con

Sheet 20 of 30
Amplifier & Inverter Con



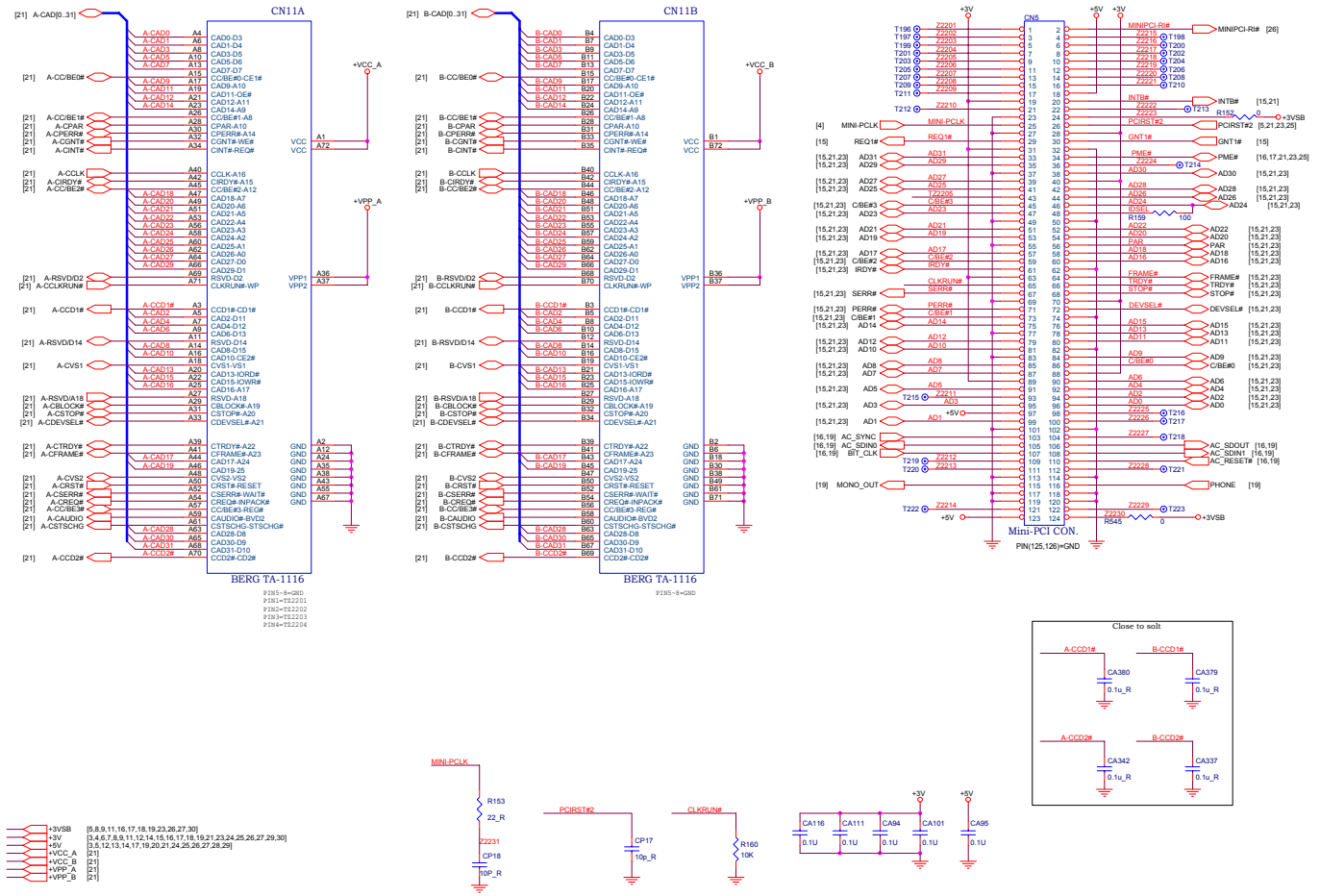
CardBus (TI PCI1420)

Sheet 21 of 30
CardBus (TI PCI1420)



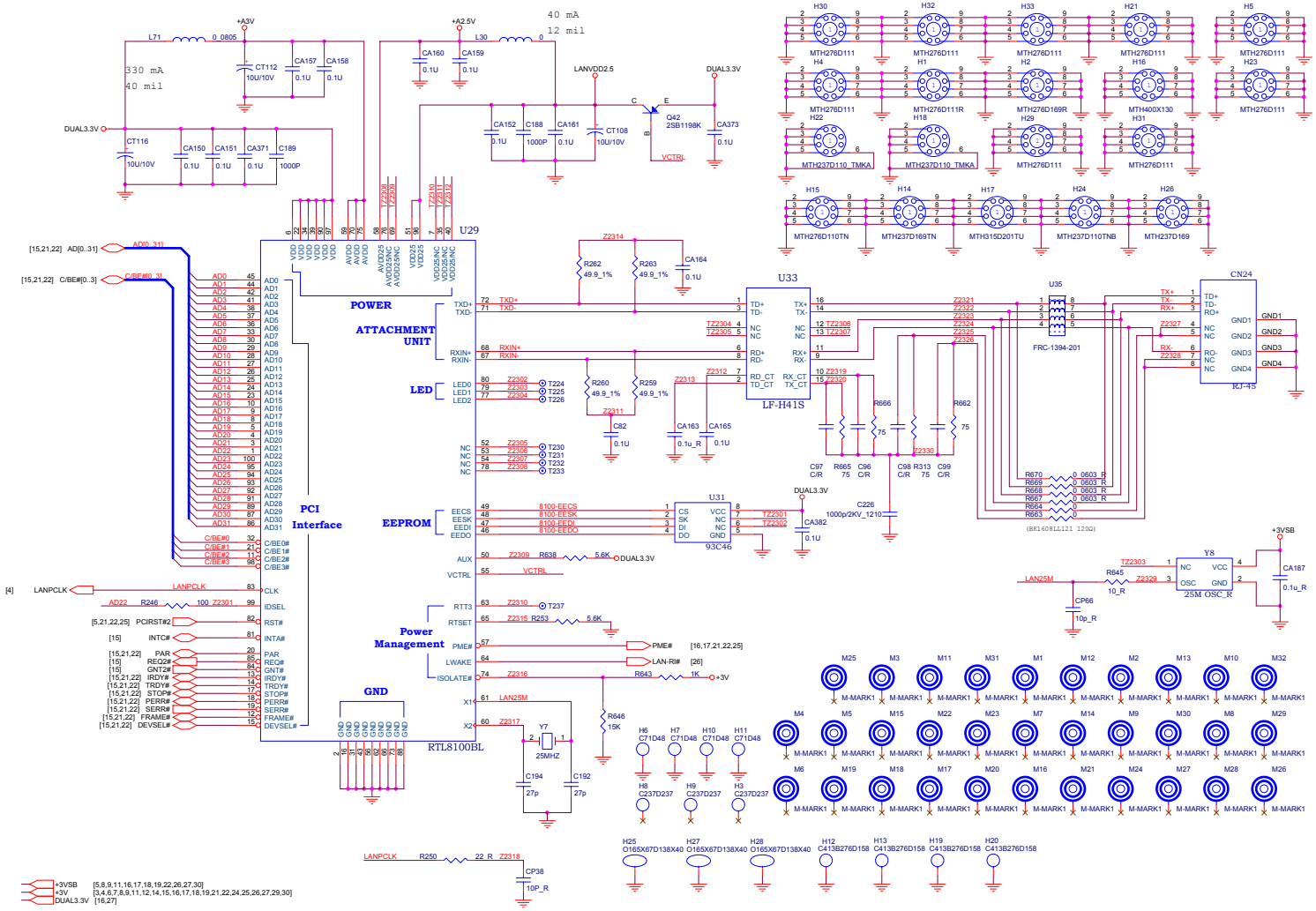
CardBus Slot & Mini PCI

Sheet 22 of 30
CardBus Slot
& Mini PCI



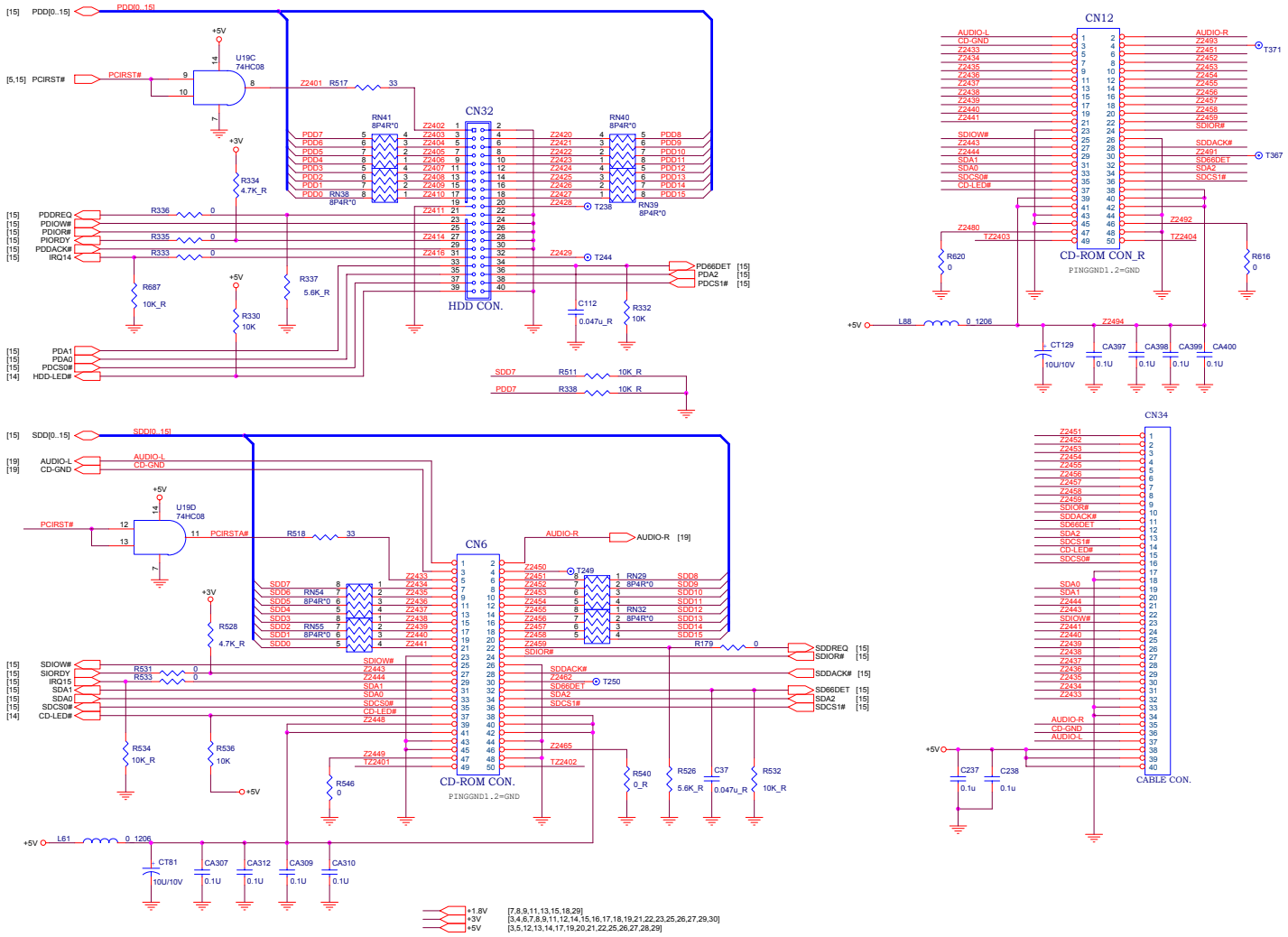
LAN RTL8100BL

Sheet 23 of 30
LAN RTL8100BL



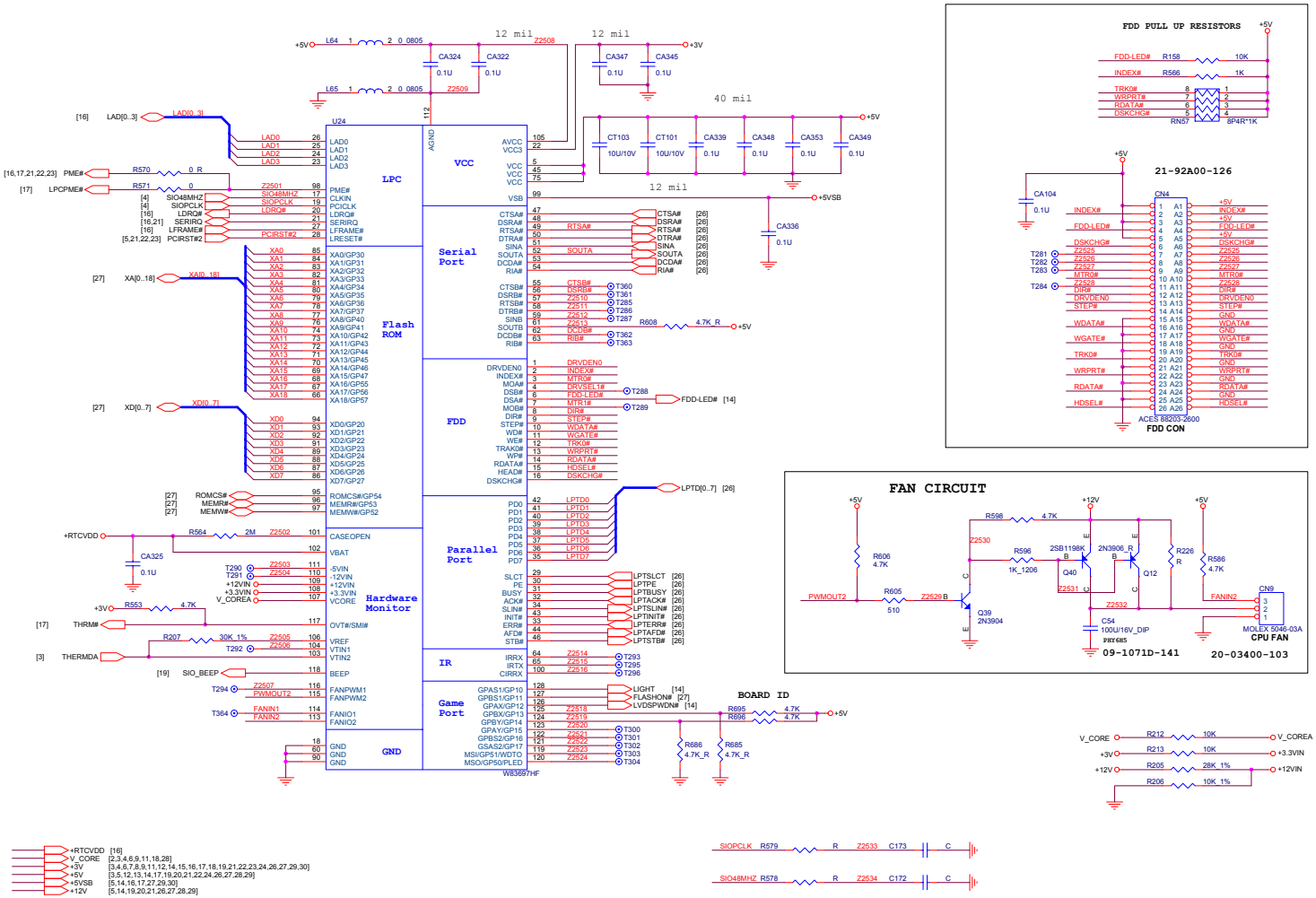
IDE Connector & Firmware HUB

Sheet 24 of 30
IDE Connector & Firmware HUB



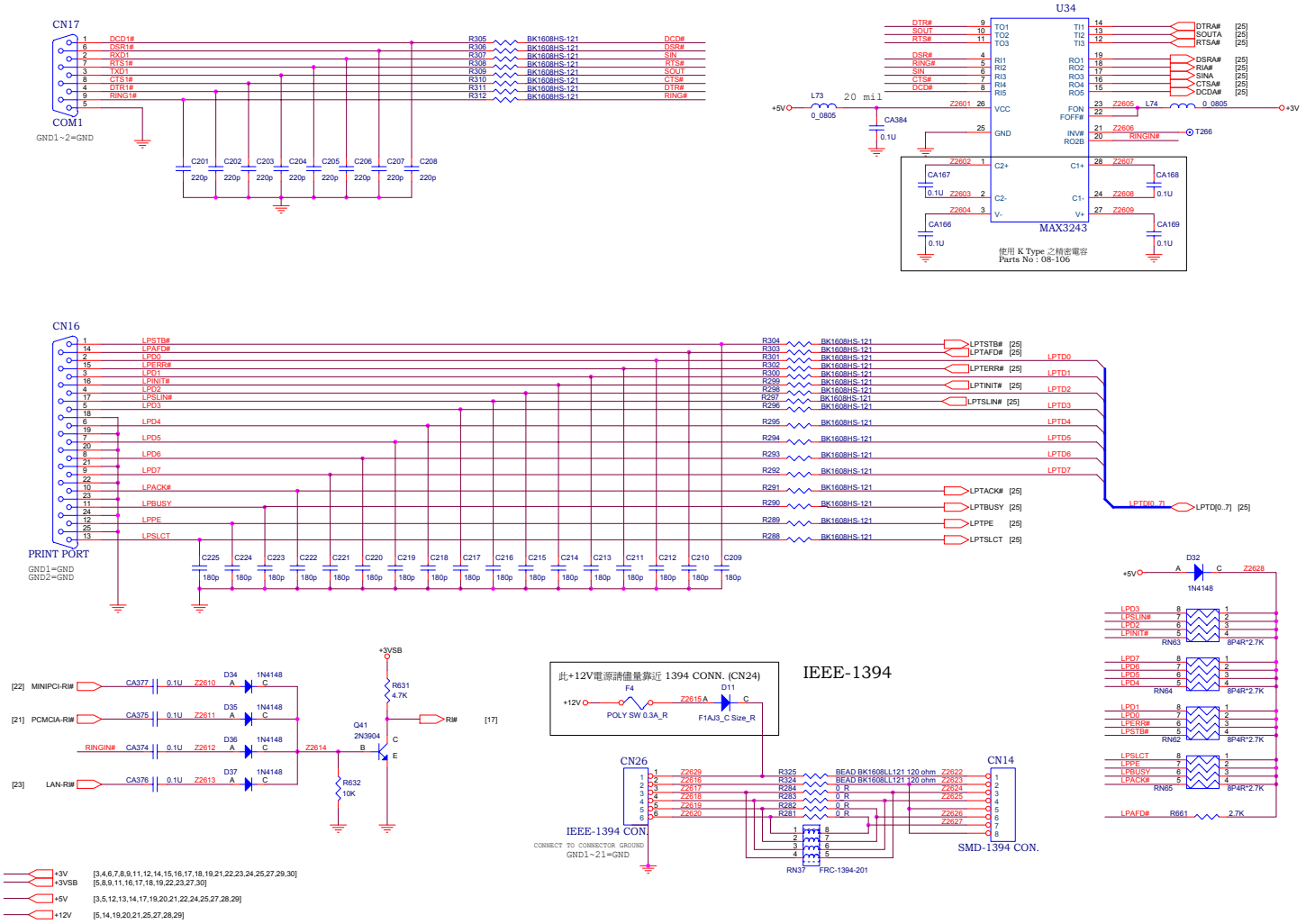
Super I/O W83697HF

Sheet 25 of 30
Super I/O W83697HF



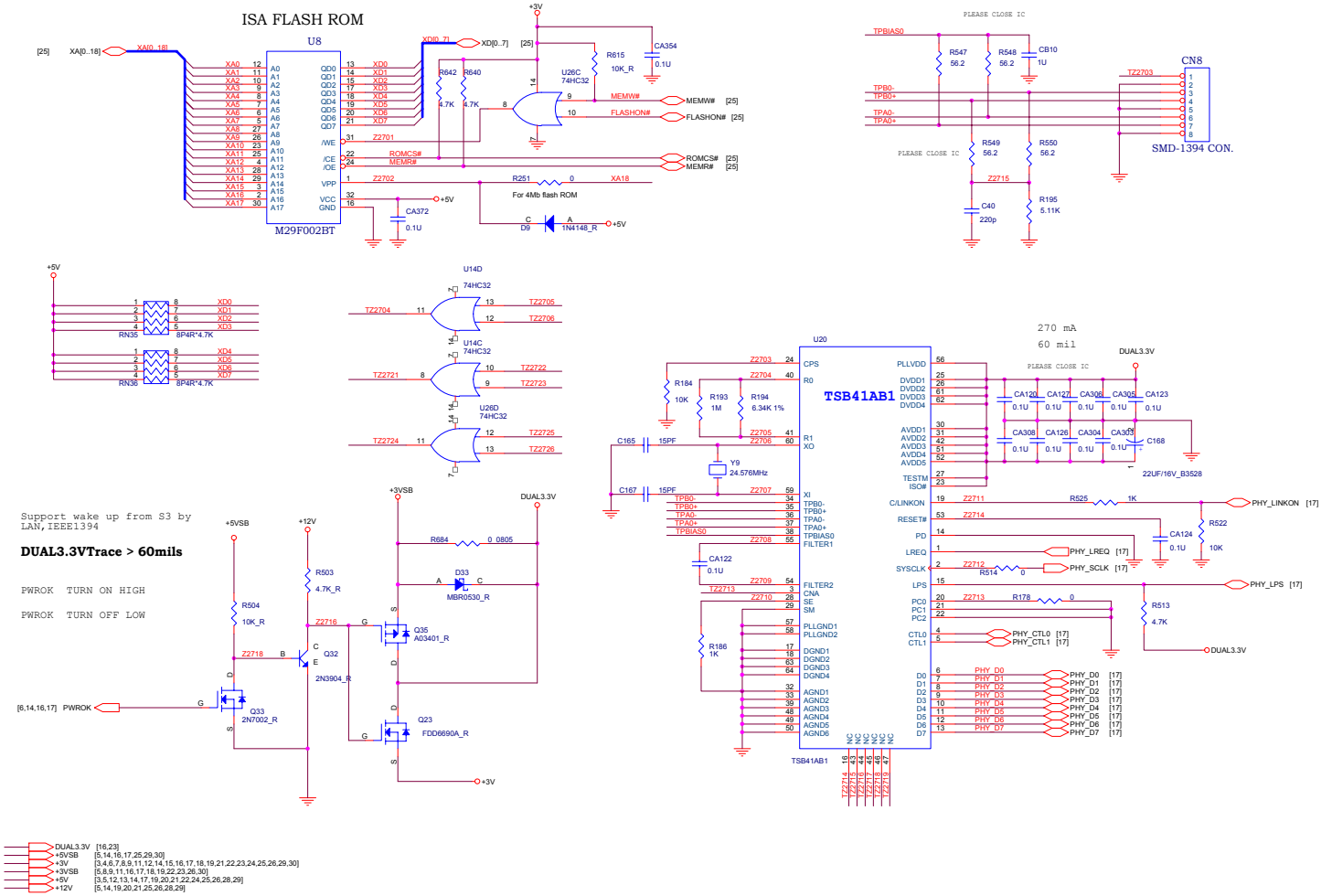
Serial & Parallel Port, MDC

Sheet 26 of 30
Serial & Parallel Port, MDC



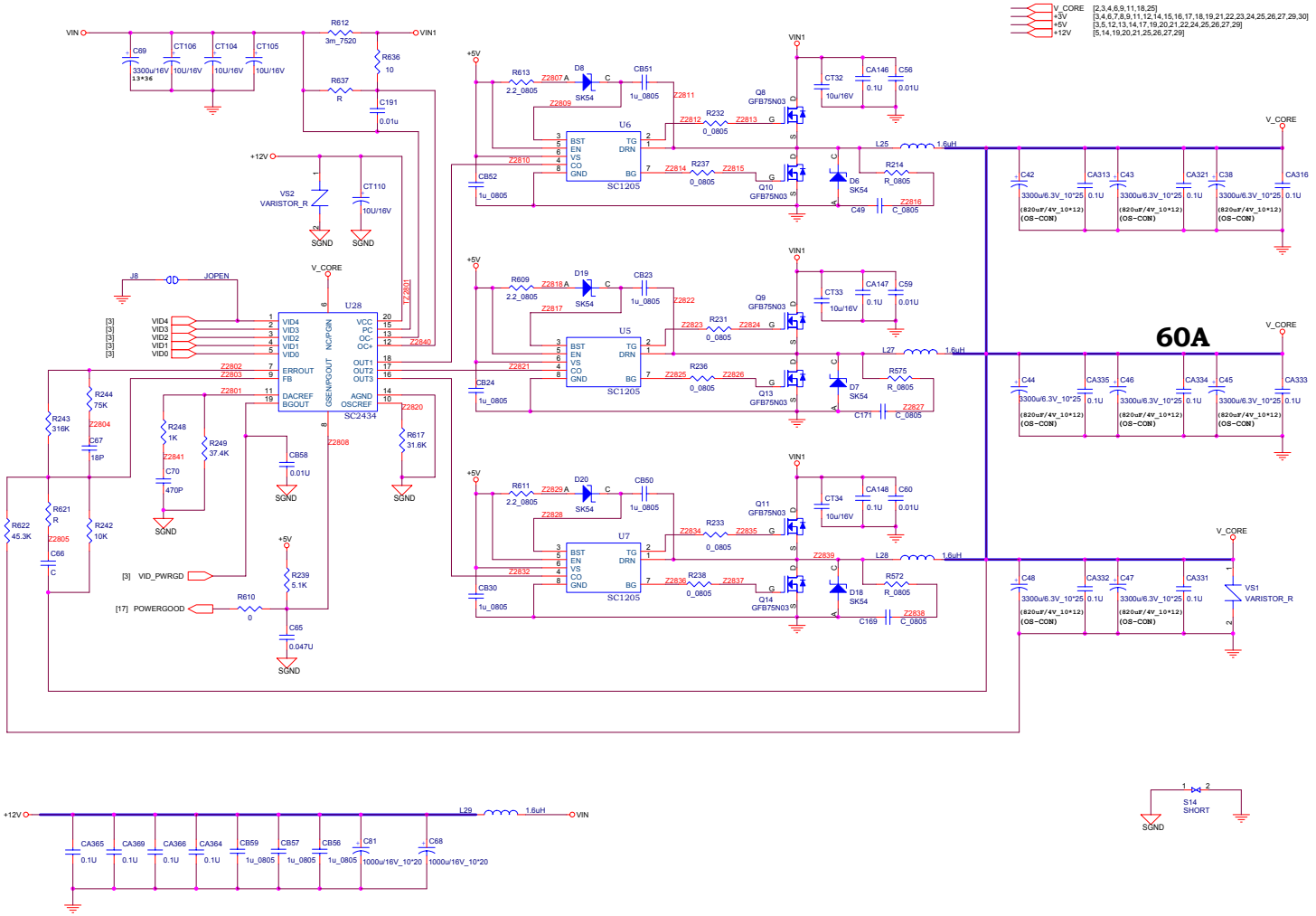
ISA BIOS & IEEE1394

Sheet 27 of 30
ISA BIOS & IEEE1394



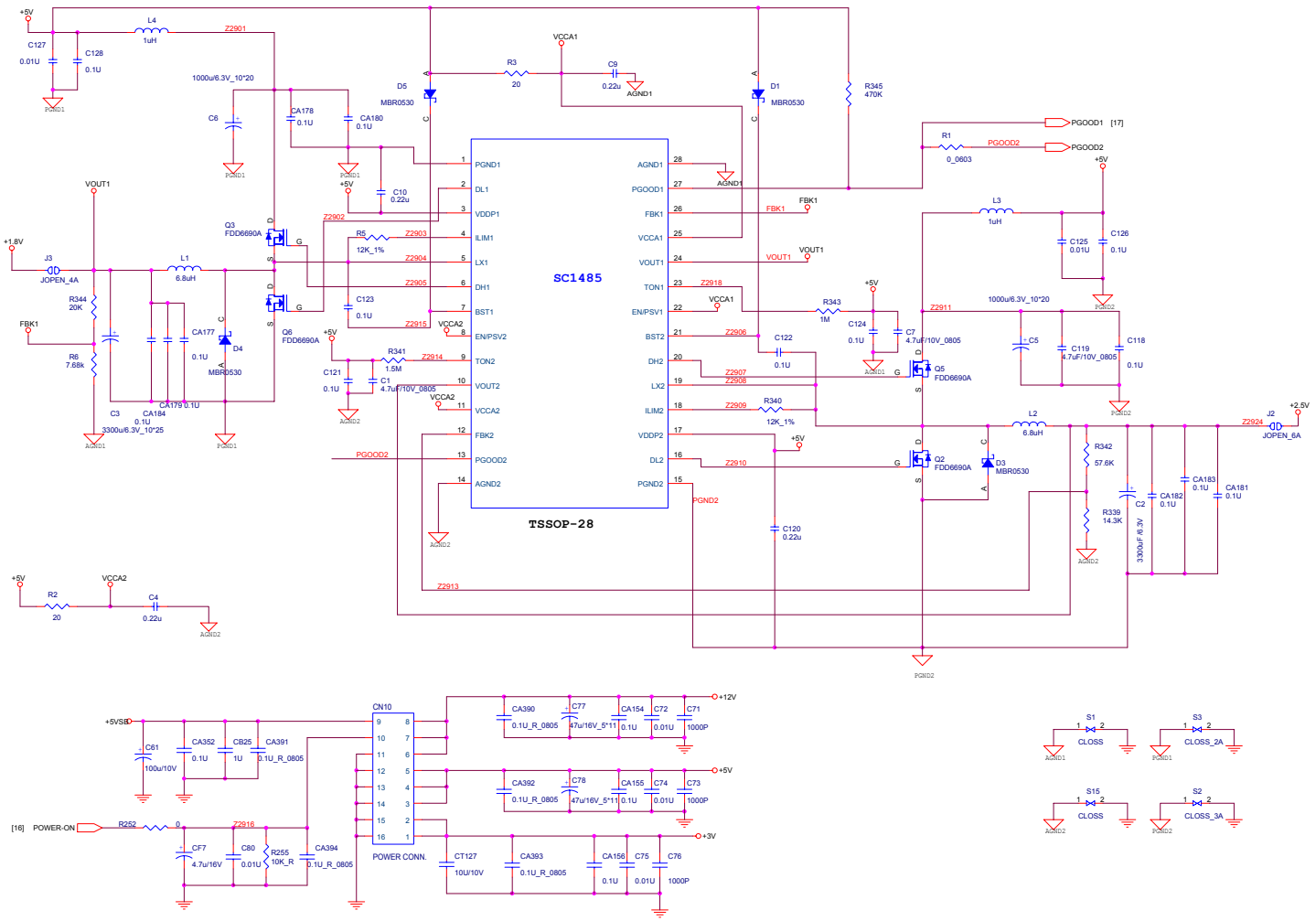
Power - 1 of 3

Sheet 28 of 30
Power
1 of 3



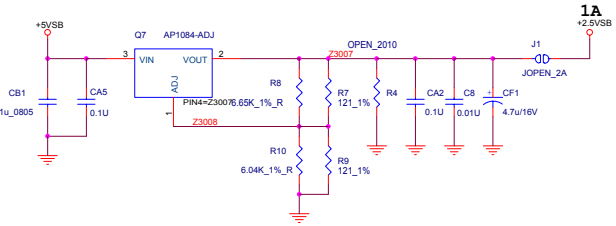
Power - 2 of 3

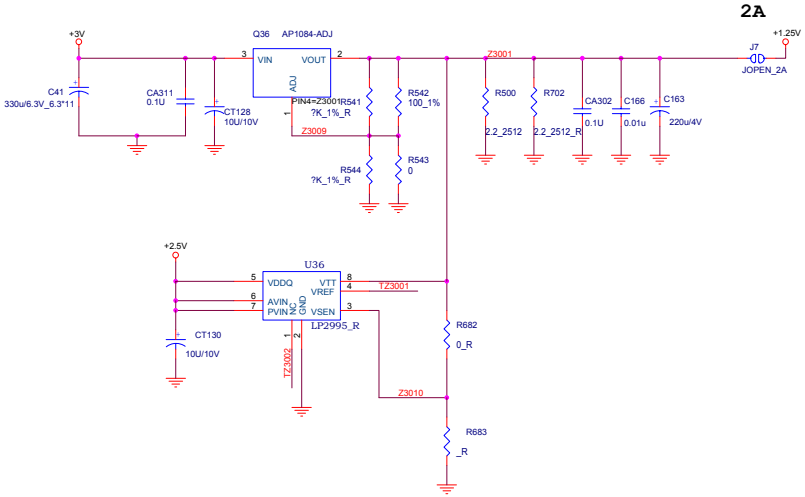
Sheet 29 of 30
Power
2 of 3

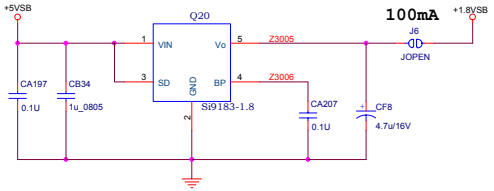


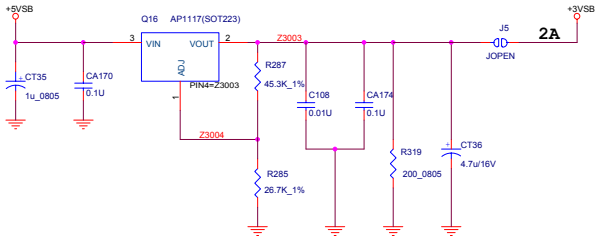
Power - 3 of 3

Sheet 30 of 30
Power
3 of 3



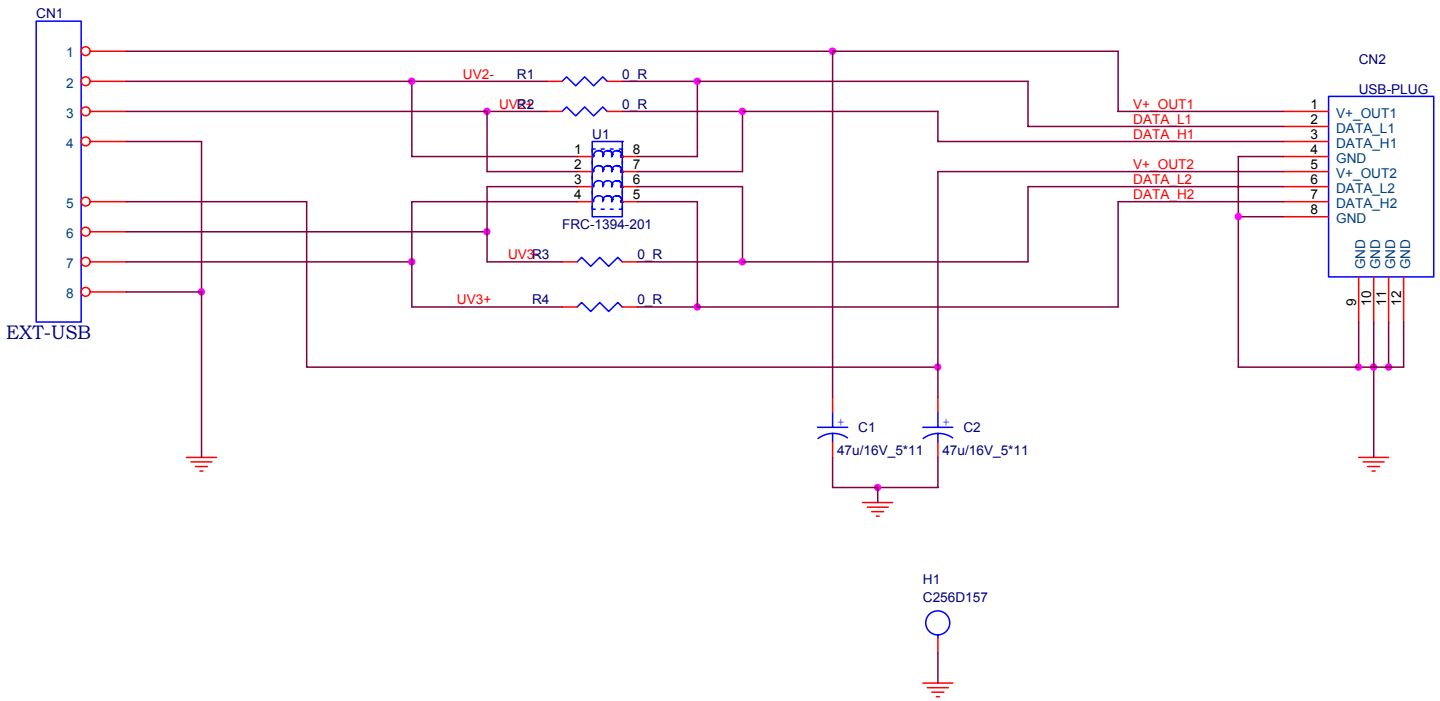






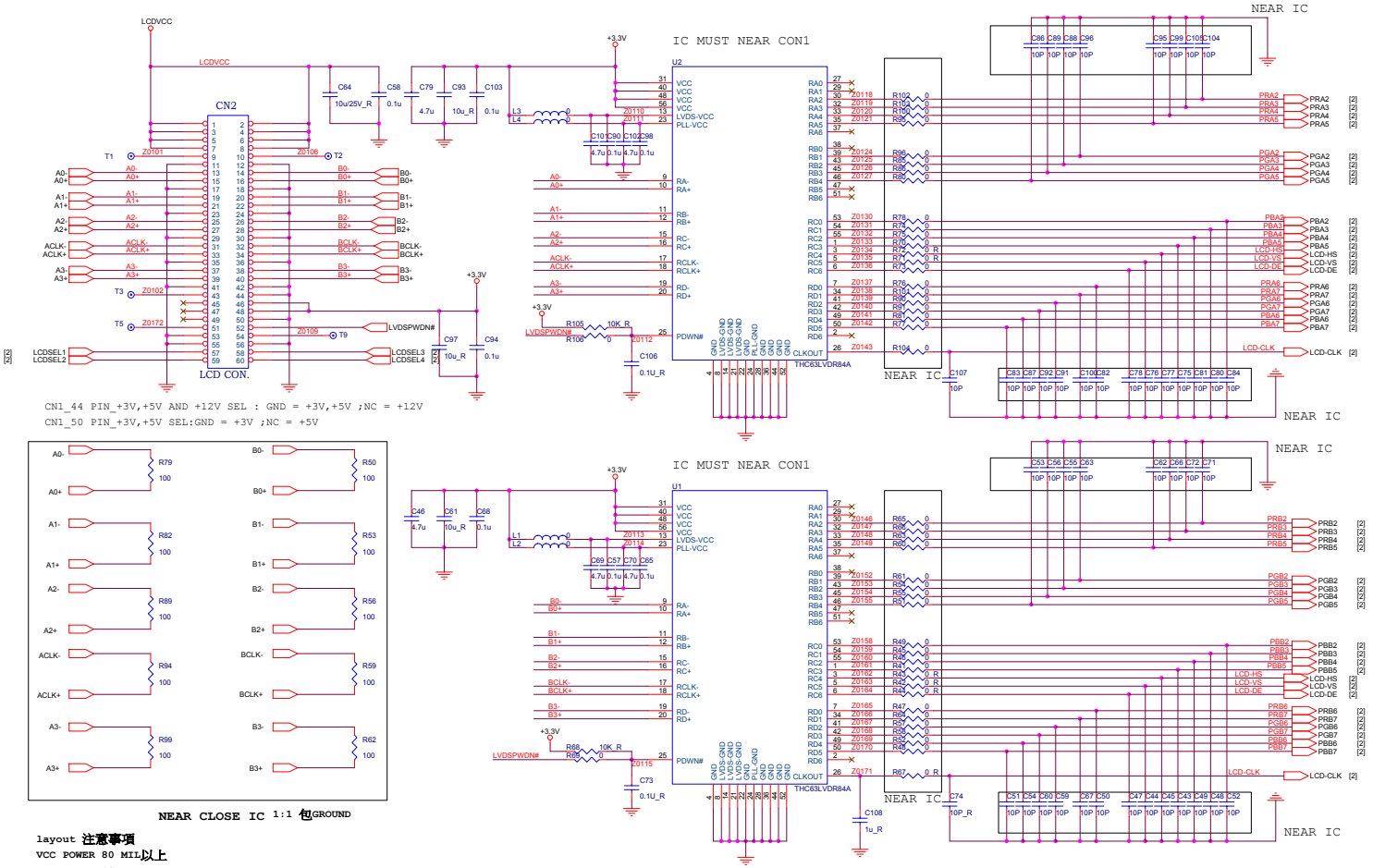
USB Board

Sheet 1 of 1
USB Board



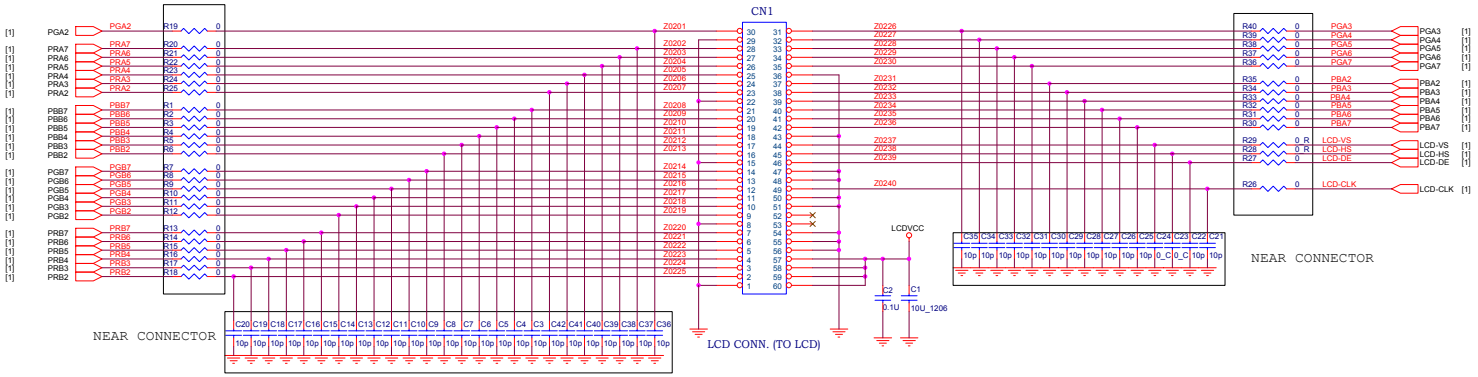
LCD Transfer Board - Chi Mei

Sheet 1 of 2
LCD Transfer Board
(Chi Mei M150X3-T05)

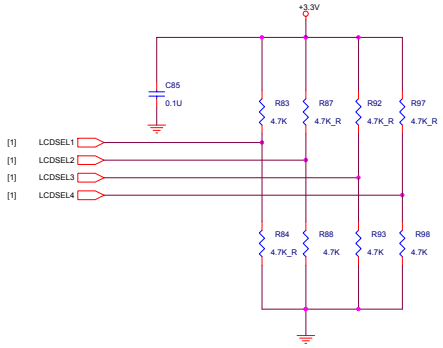


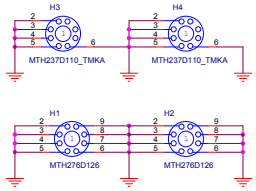
LCD Transfer Board - Chi Mei

Sheet 2 of 2
LCD Transfer Board
(Chi Mei M150X3-T05)



LCD PANEL ID					
	LCDSEL1	LCDSEL2	LCDSEL3	LCDSEL4	NOTE
CHI MEI M150X2-T03	1	0	0	0	+3.3V
HYUNDAI HT15X11-200	0	1	0	0	+5V
SHARP LQ150X1DG51	1	1	0	0	+5V
SHARP LQ160E1LG01	0	0	1	0	+12V
ACER L170E3	1	0	1	0	+5V
CHIMEI M170E3-L01	1	1	1	0	+5V
HYUNDAI HT17E11-100	0	0	0	1	+5V
SAMSUNG LTM170E4-L01	1	0	0	1	+5V

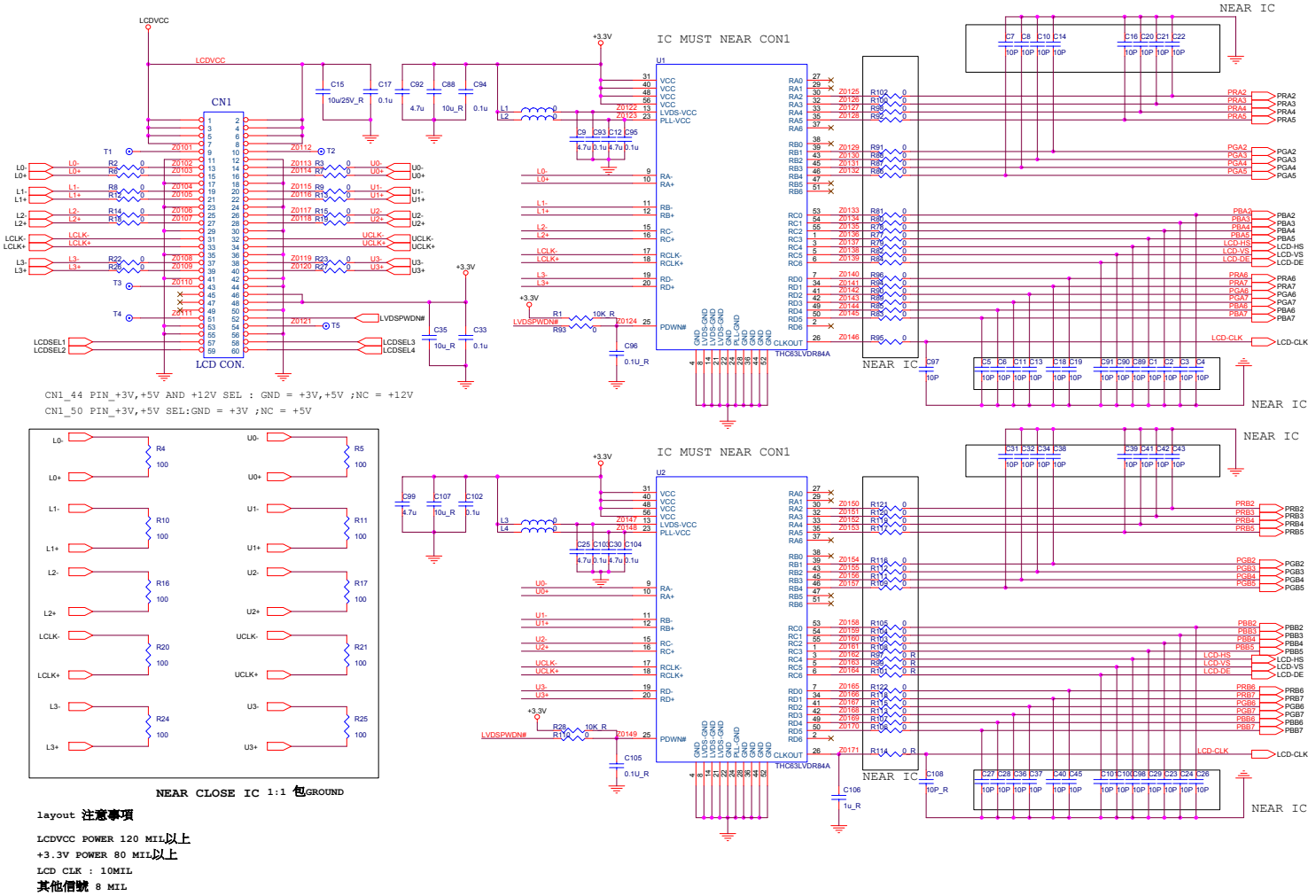




板號: L285PX
71-P5006-023
FOR CHI MEI

LCD Transfer Board - AU

Sheet 1 of 2
LCD Transfer Board
(AU L150X2M-1)

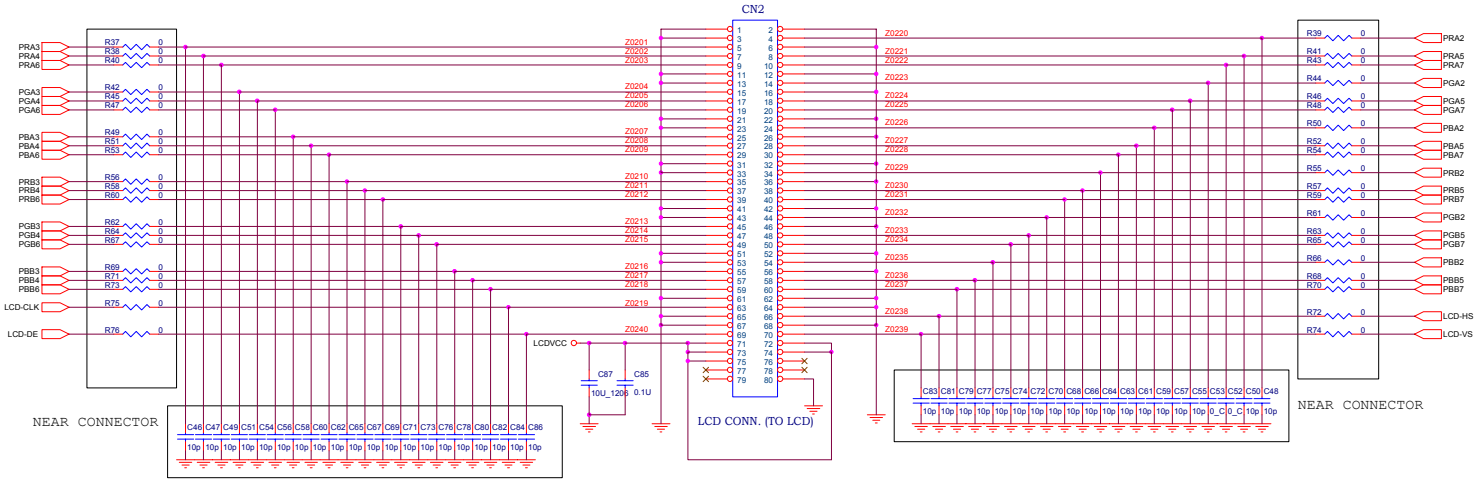


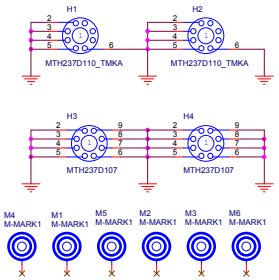
layout 注意事項

LCDVCC POWER 120 MIL以上
+3.3V POWER 80 MIL以上
LCD CLK : 10MIL
其他信號 8 MIL

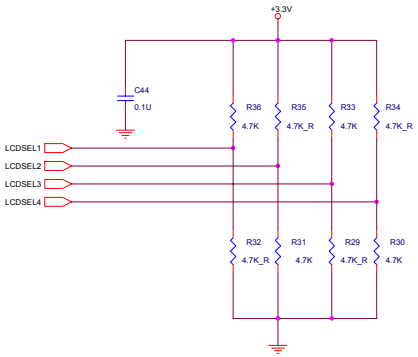
LCD Transfer Board - AU

Sheet 2 of 2
LCD Transfer Board
(AU L150X2M-1)





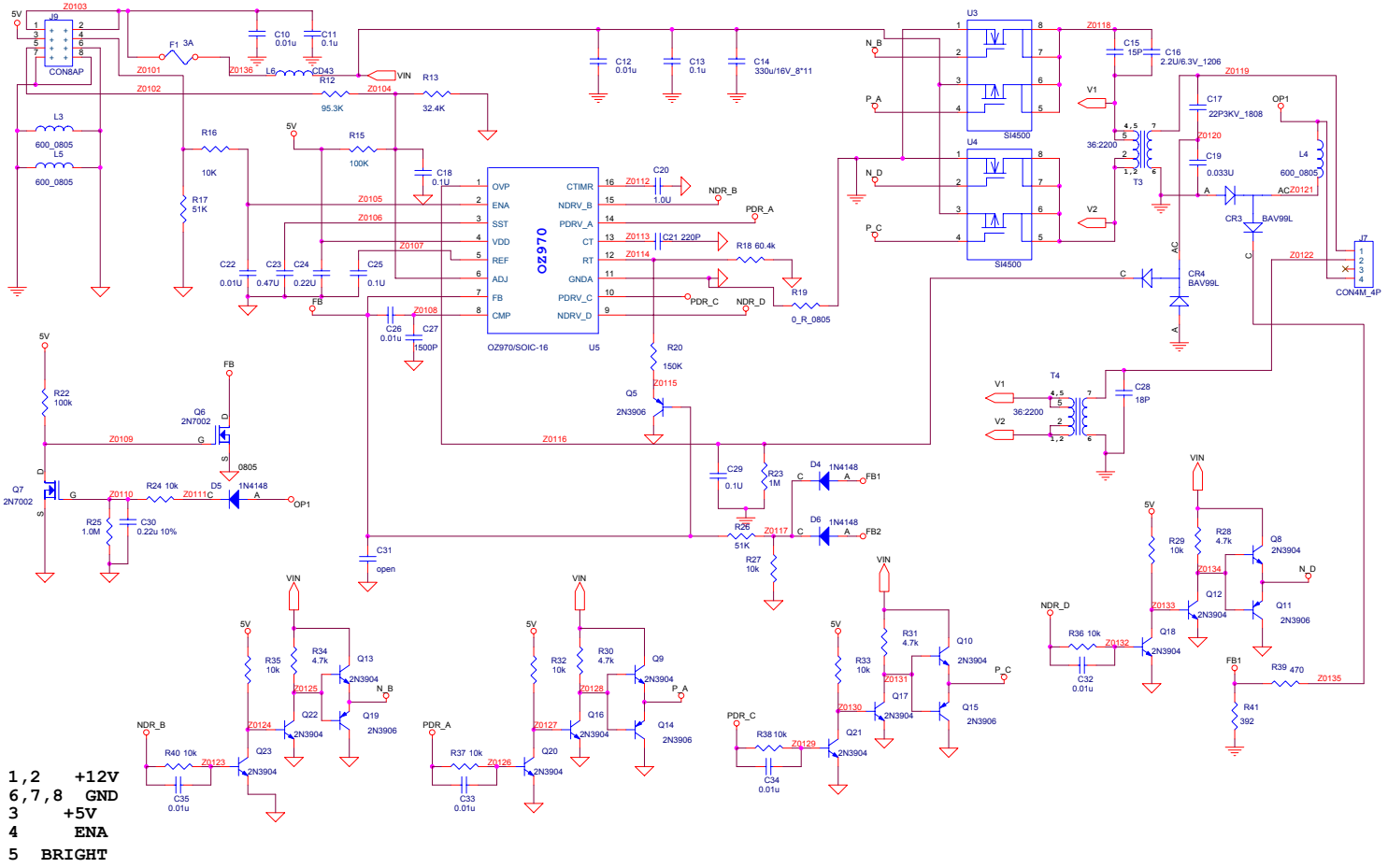
LCD PANEL ID					
	LCDSEL1	LCDSEL2	LCDSEL3	LCDSEL4	NOTE
CHI MEI M150X2-T03	1	0	0	0	+3.3V
HYUNDAI HT15X11-200	0	1	0	0	+5V
SHARP LQ150X1DG51	1	1	0	0	+5V
SHARP LQ160E1LG01	0	0	1	0	+12V
AU L150X2M-1	1	0	1	0	+3V
CHIMEI M170E3-L01	1	1	1	0	+5V
HYUNDAI HT17E11-100	0	0	0	1	+5V
SAMSUNG LTM170E4-L01	1	0	0	1	+5V



板號: L285PX
71-P5006-031
FOR AU

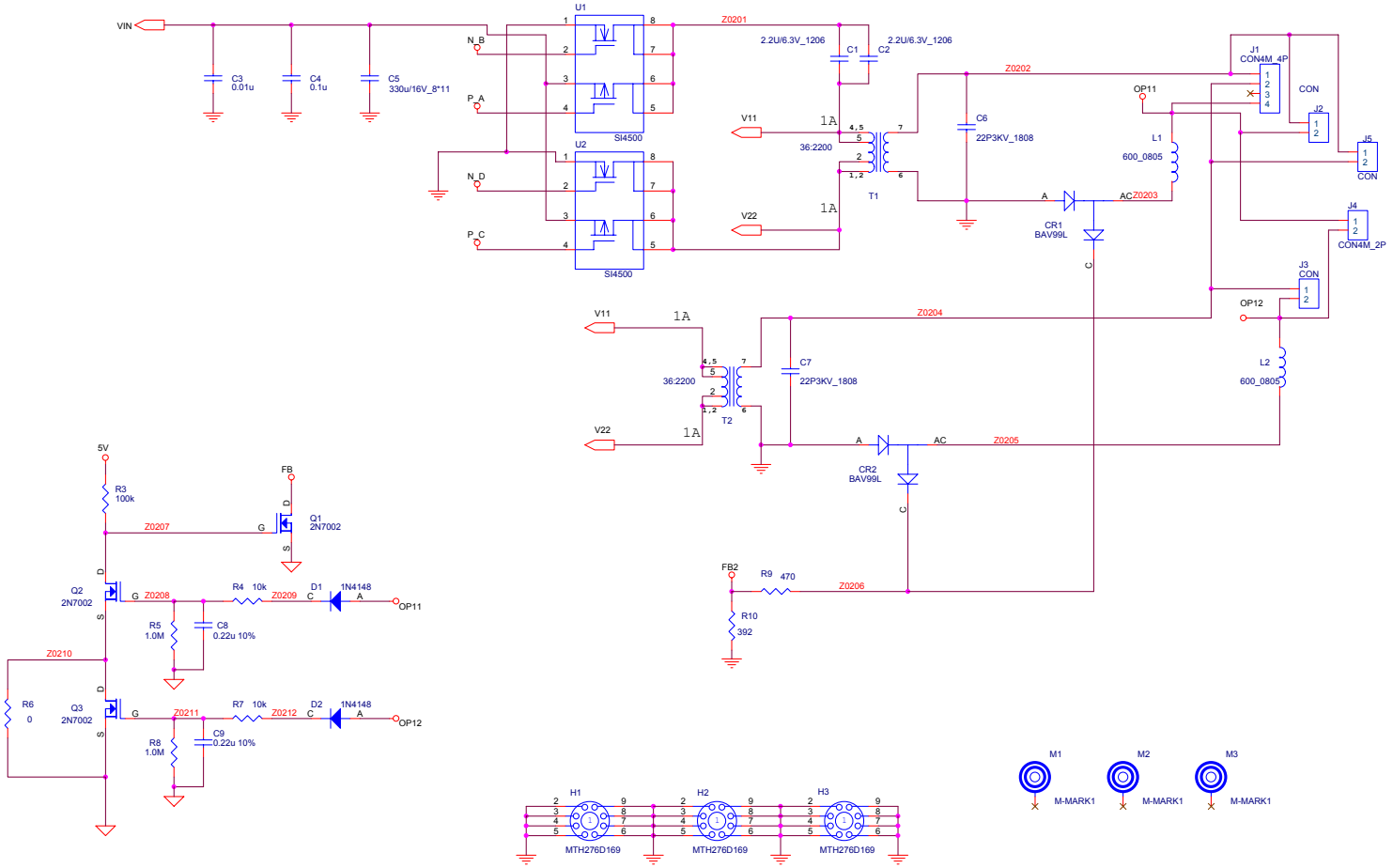
PCB Inverter Board - 1 of 2

Sheet 1 of 2
PCB Inverter Board
1 of 2



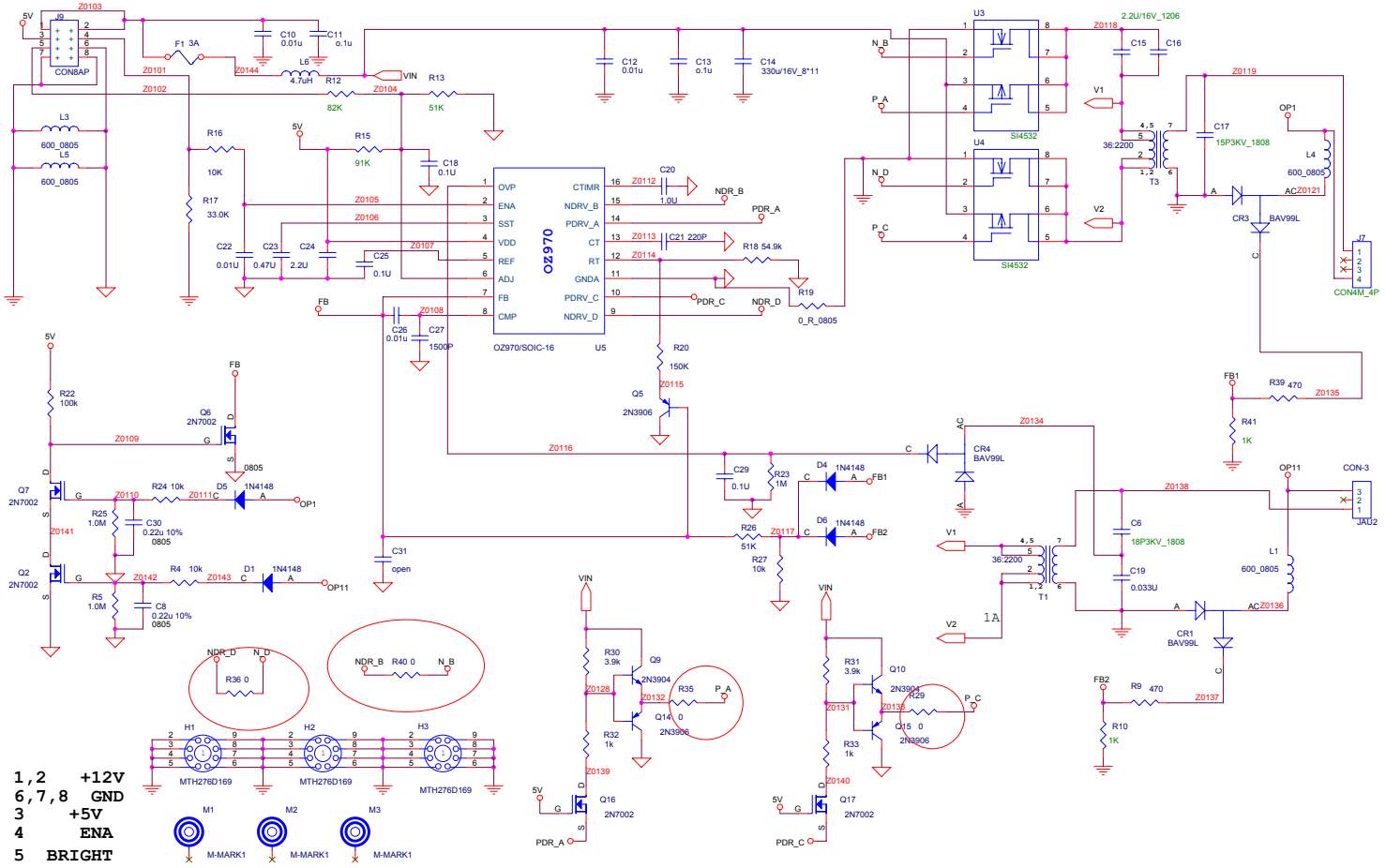
PCB Inverter Board - 2 of 2

Sheet 2 of 2
PCB Inverter Board
2 of 2



PCB Inverter Board

Sheet 1 of 1
PCB Inverter Board
(71-P500R-032)



Appendix C:Switches and Jumpers

This appendix is about the system's switch and jumper settings.

The following figure shows the location of the DIP Switch and Jumper the system uses. You can access them after you remove the LCD back cover. Be sure to turn OFF the system before you perform any part removal procedure.

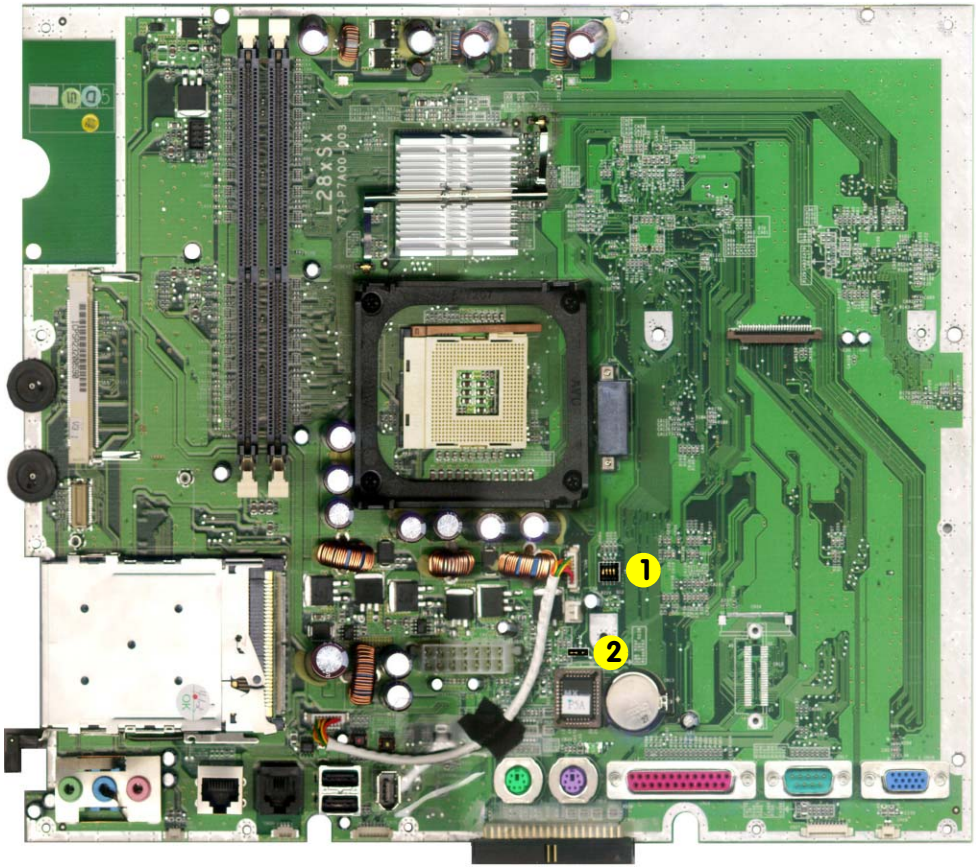


Figure C - 1
Mainboard Switch and Jumper Location

1. SW1
2. J4

Settings

CPU Clock Setup (Switch SW1)

CPU (MHZ)	DDRAM (MHZ)	SW1-1 FS0	SW1-2 FS2	SW1-3 FS4	SW1-4 FS3
100 (FSB 400)	133 MHZ (PC266)	ON	OFF	OFF	OFF
133 (FSB 533)	133 MHZ (PC266)	OFF	ON	ON	OFF
133 (FSB 533)	166 MHZ (PC333)	ON	ON	ON	OFF

RTC VCC Jumper Settings (Jumper J4)

Type	Pins 1 & 2	Pins 2 & 3
Close (default)	ON	
Clear		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**
2. Choose **Download** from the menu bar at the top of the page.
3. In the **Driver** section select the model of your computer (**LP285S Series**) and the driver type (**BIOS**).
4. Select **GO**.
5. Click on L28xSxxx.zip. to download the BIOS files (including BIOS refresh tools).

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

(*Some of the files you should see on this disk are: Runme.bat, Platform.bin, Phlash.exe & L28XS.XXX)*
With the bootable floppy disk containing the BIOS files in your Floppy Drive, restart the computer.

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 :

   Runme.bat or Phlash L28XS.XXX

4. Remove the floppy disk from the drive.

Your notebook is now running normally with the updated BIOS.