SERVICE MANUAL

888E

notebook

Notebook Computer

8880/888E Series

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 notebook PC.

The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications.
Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.
Appendices A & B, Part Lists
Appendices C & D, Schematic Diagrams
Appendix E, 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 notebook PC's features and the procedures for operating the computer and its ROM-based setup program. It also describes the installation and operation of the utility programs provided with the notebook PC.

Contents

1: Introduction

Overview

This manual covers the information you need to service or upgrade the **8880/888E** series notebook computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in *User's Manual*. That manual is shipped with the computer.

Operating systems (e.g. *DOS, Windows 9x, Windows NT 4.0, Windows 2000, Windows XP, OS/2 Warp, UNIX,* etc.) have their own manuals as do application software (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The 8880/888E series notebook is designed to be upgradeable. See ***"Disassembly" on page 2 - 1*** for a detailed description of the upgrade procedures for each specific component. Please note the warning and safety information indicated by the "  " symbol.

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

Model Differences

You may identify if the computer is an 8880 or 888E from the video card. After you have installed the video driver go to **the Advanced Display Properties** and check the card type. If the card is a **MOBILITY RADEON 7500**, then the machine is **an 8880**. If the video card is a **MOBILITY RADEON 9000** then the machine is an **888E**, and supports **USB 2.0**.

System Specifications

The differences between the 8880 and 888E notebook computer series are as follows:

Feature	8880 Series	888E Series
Video Card	ATI Radeon7500	ATI Radeon 9000
Direct X Compliance	Direct X 6	Direct X 8.1
USB Port Type	1.1	2.0

Table 1 - 1 **- Model Differences**

Processor Options

- Intel Pentium® 4 Processor - 2.0/ 2.2/ 2.4/2.6 GHz (400MHz FSB)
- (µ0.13) 0.13 Micron Process Technology
- CPU Package - FC-PGA2 (478-pin)
- 512K L2 Cache (on die)

- Intel Pentium® 4 Processor - 2.26/ 2.4/ 2.53/ 2.66/ 2.8/ **3.06*** GHz (533MHz FSB*)
- (µ0.13) 0.13 Micron Process Technology
- CPU Package - FC-PGA2 (478-pin)
- 512K L2 Cache

***** Only **888E** notebooks with processors of **3.06**GHz support Hyper-Threading (see ***"Hyper-Threading" on page E - 2***).

Core Logic

- Intel® 845E + ICH3

Structure

- Fully PC99 Compliant
- ACPI 1.0B Compliant
- PC2001 Compliant

Security

- Security (Kensington® Type) Lock Slot
- BIOS Password

Memory

- 64 bit data bus system memory
- Two 200-pin DDR SODIMM sockets, supporting DDR SDRAM SODIMM (2.5V) - DDR200 or DDR266 compliant
- Expandible memory up to 1GB (128/256/512MB SODIMM Modules)

BIOS

- One 256KB Flash ROM
- Insyde BIOS with smart battery
- Plug and Play (1.0a), ACPI 1.0B

LCD

- 15.0" 1600 x 1200 UXGA TFT **(8880)**
- 15.7" 1280 x 1024 SXGA TFT **(8880 & 888E)**
- 16.0" 1600 x 1200 UXGA TFT **(888E)**
- 16.0" 1280 x 1024 SXGA TFT **(888E)**

Display

- ATI Mobility M7 **(8880)**
- ATI Mobility M9 **(888E)**

  64MB DDR graphic memory on board
  OR
  128MB DDR graphic memory on board

  4 * UltraAGP™
  128-bit 2D/3D graphics engine
  Motion compensation and IDCT for DVD content playback accelerator
  Fully DirectX 6 compliant graphics engine **(8880)**
  Fully DirectX 8.1 compliant graphics engine **(888E)**
  CRT resolution up to 1920*1200 * 16M

Model Differences

You may identify if the computer is an 8880 or 888E from the video card. After you have installed the video driver go to **the Advanced Display Properties** and check the card type. If the card is a **MOBILITY RADEON 7500**, then the machine is **an 8880**. If the video card is a **MOBILITY RADEON 9000** then the machine is an **888E**, and supports **USB 2.0**.

Jumper Settings for Multiple Hard Disk Use

If you are using **more than one hard disk** in your computer, make sure to set the jumpers on **all** your hard disks to the **cable select option** in order for the system to recognize all the disks (see your hard disk manual or the information printed on the hard disk itself for details on the jumper settings).

Storage

- One fixed FDD 9.5/12.7mm
- One changeable 2.5" 9.5mm primary HDD
- Changeable primary drive (Bay One) for one of the following:
  DVD-ROM (12.7mmH) 8X
  CD-ROM (12.7mmH) 24X
  CD-RW (12.7mmH) 8X/ 4X/ 24X
  Combo Drive (DVD-ROM + CD-RW) 8X/ 8X/ 8X/ 24X
  DVD-RW (12.7mmH) 1X/1X/12X/16X/24X
- Built-in modular drive (Bay Two) for one of the following:
  DVD-ROM (12.7mmH) 8X
  CD-ROM (12.7mmH) 24X
  CD-RW (12.7mmH) 8X/ 4X/ 24X
  Combo Drive (DVD-ROM + CD-RW) 8X/ 8X/ 8X/ 24X
  DVD-RW (12.7mmH) 1X/1X/12X/16X/24X
  3rd HDD
  IP sharing module
- Changeable drive (Bay Three) for one of the following:
  2nd HDD (optional)
  TV-Tuner (optional)
- One portable MP3 player (optional)

Software Installation Warning

Make sure the MP3 player is **not** in the slot when installing **operating systems**, and any of the **drivers** listed in User's Manual.

Audio

- AC'97 2.2 compliant interface
- Compatible with Sound-Blaster PRO™ 16
- S/PDIF Digital output (5.1 CH) for DVD content and Stereo Audio
- Built-in microphone
- Audio DJ
- Advanced Wavetable Synthesizer
- 2 built-in speakers
- Virtual AC3
- Full Duplex
- Direct Sound™ 3D Accelerator

Keyboard

- “Win Key” keyboard including a numeric keyboard
- Built-in 3 instant keys, www, email, and player

PC Card

- Two type II PCMCIA 3.3V/5V sockets, OR one type III PCMCIA 3.3V/5V socket (no Zoomed Video support)

Interface

- Built-in TouchPad (PS/2)
- Four USB ports
  USB 2.0 ports for 888E (USB 1.1 compatible)
  USB 1.1 ports for 8880
- One IEEE 1394 port
- One S-Video-Out jack for TV output
- One S-Video-In jack (**The S-Video in jack will only be available if you have the Optional TV Tuner installed.**)
- One parallel port (LPT1), supporting ECP / EPP 1.7 and 1.9
- One COM port
- Fast Infrared (FIR) file transfer IrDA 1.1
- One external CRT monitor
- One external keyboard/mouse (through Y cable) PS/2 port
- One line-in jack
- One microphone-in jack
  (**You must use the Y-cable provided to enable the S/PDIF Out and Microphone-In functions (S/PDIF connection is to the longer end of the cable.**)
- One Sony Memory Stick™ socket
- One RJ-11 jack for 56k MDC modem
- One RJ-45 jack for 100M/10M LAN
- One S/PDIF out port
  (**You must use the Y-cable provided to enable the S/PDIF Out and Microphone-In functions (S/PDIF connection is to the longer end of the cable.**)
- DC-in jack

Communication

- Wireless Infrared transfer IrDA 1.1, 1cm~1M operating distance, 4Mbps FIR
- 10/100Mb Ethernet LAN built-in
- 802.11b Wireless LAN, Mini-PCI interface (optional)
- 56K MDC modem V.90 compliant (V.92 software driver upgradeable)
- IP sharing module for xDSL or Cable Modem (optional)

Power Management

- Supports ACPI v1.0B
- Supports APM v1.2
- Soft Off by system power button
- Supports suspend to disk
- Battery low suspend
- Resume from alarm
- Close-cover switch

Power

- Full Range 120 watts AC adapter - AC in 100~240V, 47~63Hz
- Supports Smart Lithium-Ion battery 12 cells

Indicators

- LED indicator (HDD, power status, Num Lock, Caps Lock, Scroll Lock, AC-In, battery charging, e-mail)
- Audio DJ control display (power, MP3, Audio, Play/Pause, FWD, RWD, Stop, Volume+, Volume-, EQ)

Environmental Spec

- TemperatureRelative Humidity
- Operating: 5°C~ 35°C Operating: 20% ~ 80%
- Non-Operating: -20°C ~ 60°CNon-Operating: 10% ~ 90%

Physical Dimensions

- 329 (w) x 299 (d) x 54.5 (h) mm

Weight

- 4.9 kg with 12-cell Lithium-Ion battery

Optional

- DVD-ROM Drive (12.7mmH)
- CD-RW Drive (12.7mmH)
- Combo Drive (DVD-ROM and CD-RW, 12.7mmH)
- DVD-RW Drive (12.7mmH)
- Portable MP3 player
- Mini PCI Wireless LAN module
- Software DVD player
- IP sharing module
- TV-Tuner module

External Locator - Top Views

Figure 1 - 1
Top Views

1. LCD
2. LED Power, Battery & E-Mail Status Indicators
3. Built-In Microphone
4. Hot-Key buttons
5. LED Status Indicators
6. Power Button
7. Close Cover Switch
8. Keyboard
9. TouchPad and Buttons
10. LCD Latch

External Locator - Front View & Left Side View

Figure 1 - 2
Front View

1. LCD Latch
2. Audio “DJ” CD Player Control Panel On/Off Switch
3. Previous Track
4. Next Track
5. LCD
6. Play/Pause
7. Stop
8. Volume Down
9. Volume Up
10. Speakers

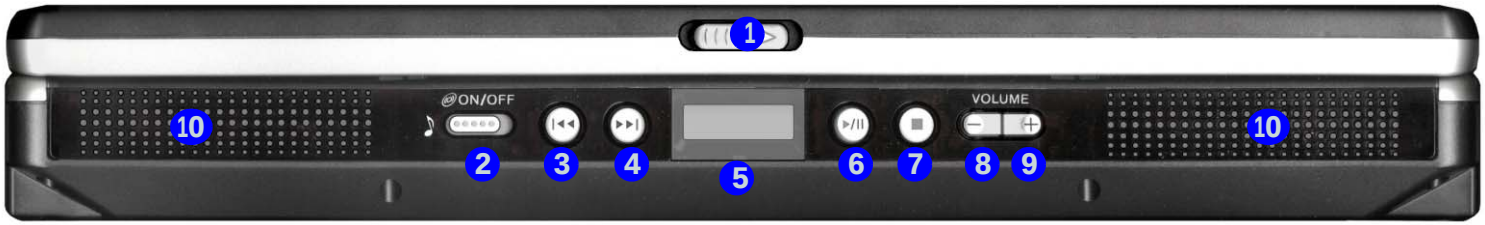


Figure 1 - 3
Left Side View

1. S/PDIF Out Port/ Microphone-In Jack
2. Y-Cable
3. Line-In Jack
4. Headphone-Out Jack
5. Infrared Transceiver
6. Sony Memory Stick™ Socket
7. PC Card Slot Eject Buttons
8. PC Card Slot
9. FDD
10. Drive BayOne
11. Drive Bay Two

S/PDIF Out & Microphone-In Functions

You must use the Y-cable provided to enable the S/PDIF Out and Microphone-In functions (S/PDIF connection is to the longer end of the cable).

Line-In Function with TV Tuner Installed

With the TV Tuner installed, the line-in jack will only be functional while the TV Studio software is running.

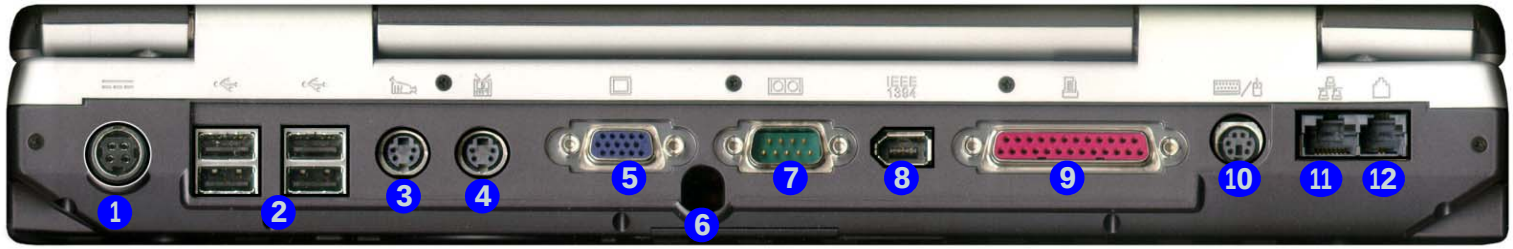
External Locator - Right Side & Rear Views

Software Installation Warning

Make sure the MP3 player is **not** in the slot when installing **operating systems**, and any of the **drivers** listed in User's Manual.

Figure 1 - 4
Right Side View

1. MP3 Player (Optional)
2. MP3 Player SD/ MMC Slot
3. MP3 Player Release Switch
4. Vent
5. Kensington Lock
6. MP3 Player Slot (no MP3 Player installed)



S-Video-In Port

The S-Video-In port will only be available if you have the Optional TV Tuner installed.

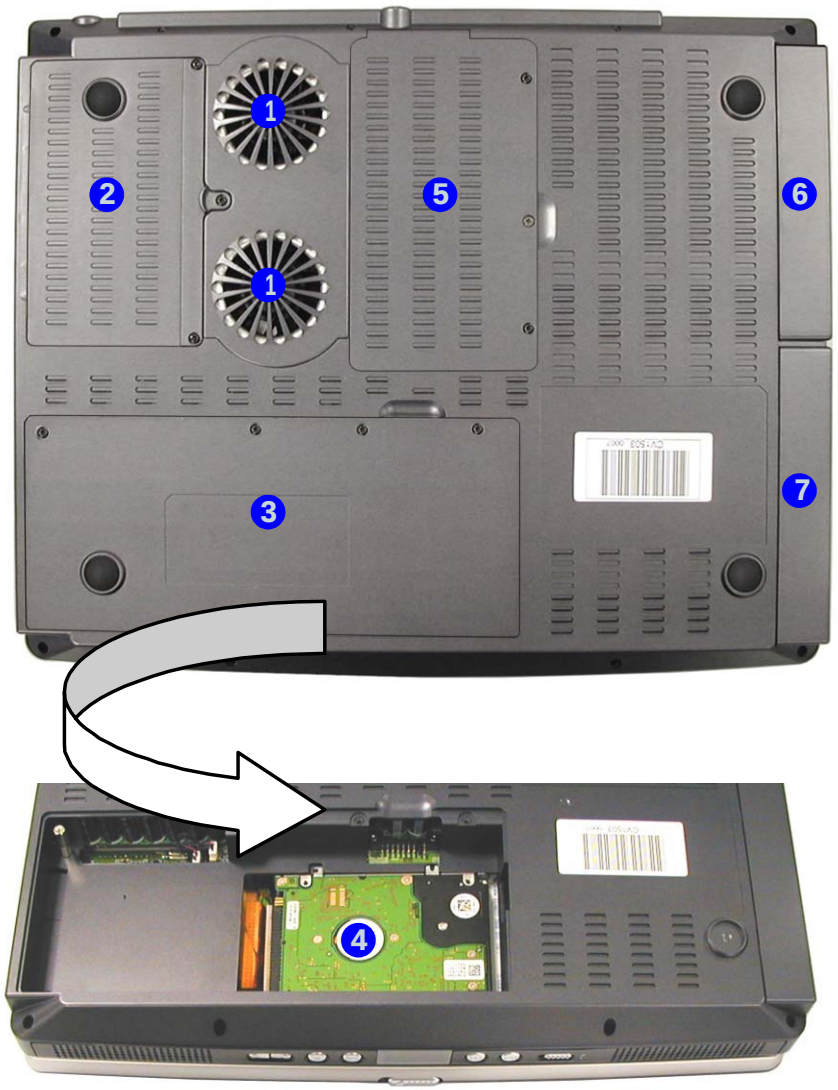
Figure 1 - 5
Rear View

1. DC-In Jack
2. 4 * USB Ports
3. S-Video-In Port (**Optional**)
4. S-Video-Out Port
5. External Monitor (CRT) Port
6. Coaxial TV Antenna Input (Optional)
7. Serial Port
8. IEEE 1394 Port
9. Parallel Port
10. PS/2 Type Port
11. RJ-45 LAN Jack
12. RJ-11 Phone Jack

External Locator - Bottom View

Figure 1 - 6
Bottom View

1. Vent/Fan Outlets
2. CPU Cover
3. Battery (the primary HDD is located under the battery)
4. Primary Hard Disk
5. Changeable Drive Bay 3 (for TV Tuner or HDD)
6. Modular Drive - Bay Two
7. Primary Drive - Bay One



Mainboard Overview - Top

Key Parts

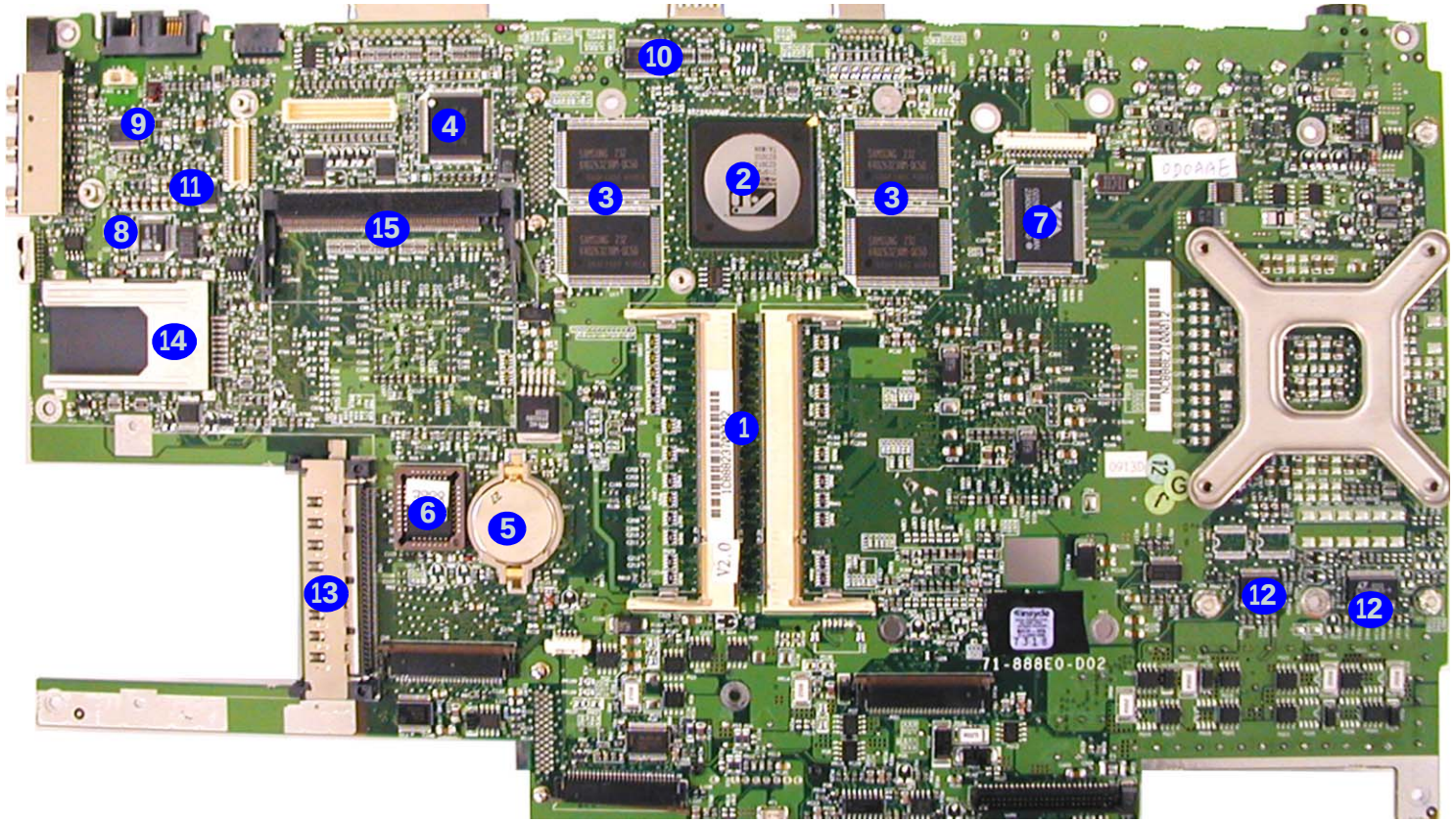


Figure 1 - 7
Mainboard Top Key Parts

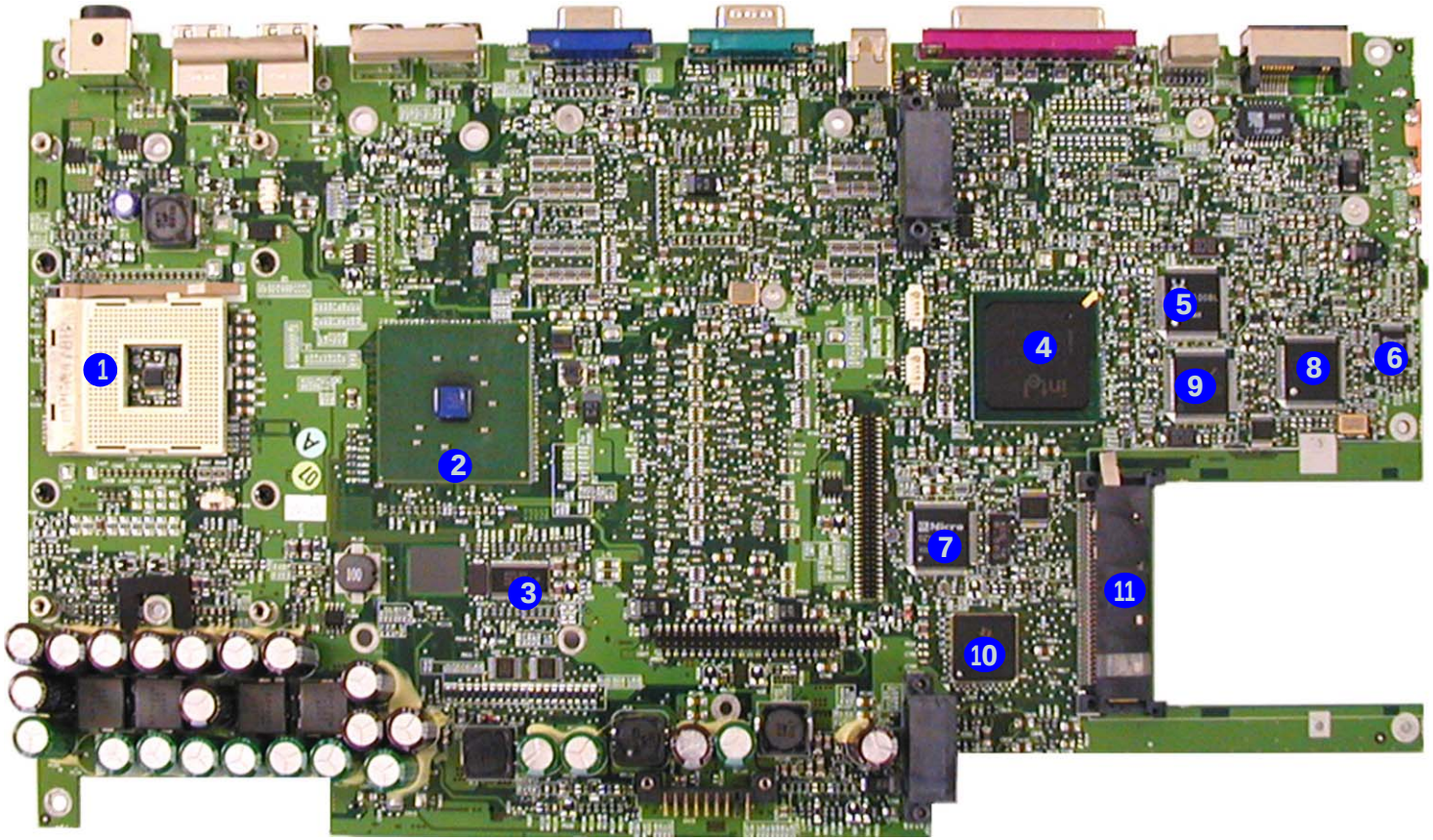
1. Memory Sockets (no memory installed)
2. ATI Mobility M9-P (or M7-P for 8880 models)
3. DDR-SGRAM
4. 1394 Controller - TSB43AB21
5. CMOS Battery
6. Flash ROM BIOS
7. USB 2.0
8. ALC201A
9. TPA0132
10. I/O Connector
11. LED Indicator
12. VCORE
13. CARDBUS
14. Memory Stick Socket
15. Wireless LAN Module Socket

Mainboard Overview - Bottom

Key Parts

Figure 1 - 8
Mainboard Bottom Key Parts

1. CPU Socket (no CPU installed)
2. MCH
3. Clock
4. ICH3-M
5. Realtek RTL8100
6. Media Reader W83518D
7. Audio DJ Controller
8. LPC Bridge & Super I/O
9. KBC H8
10. PCI 1520
11. Cardbus



Mainboard Overview - Top

Connectors

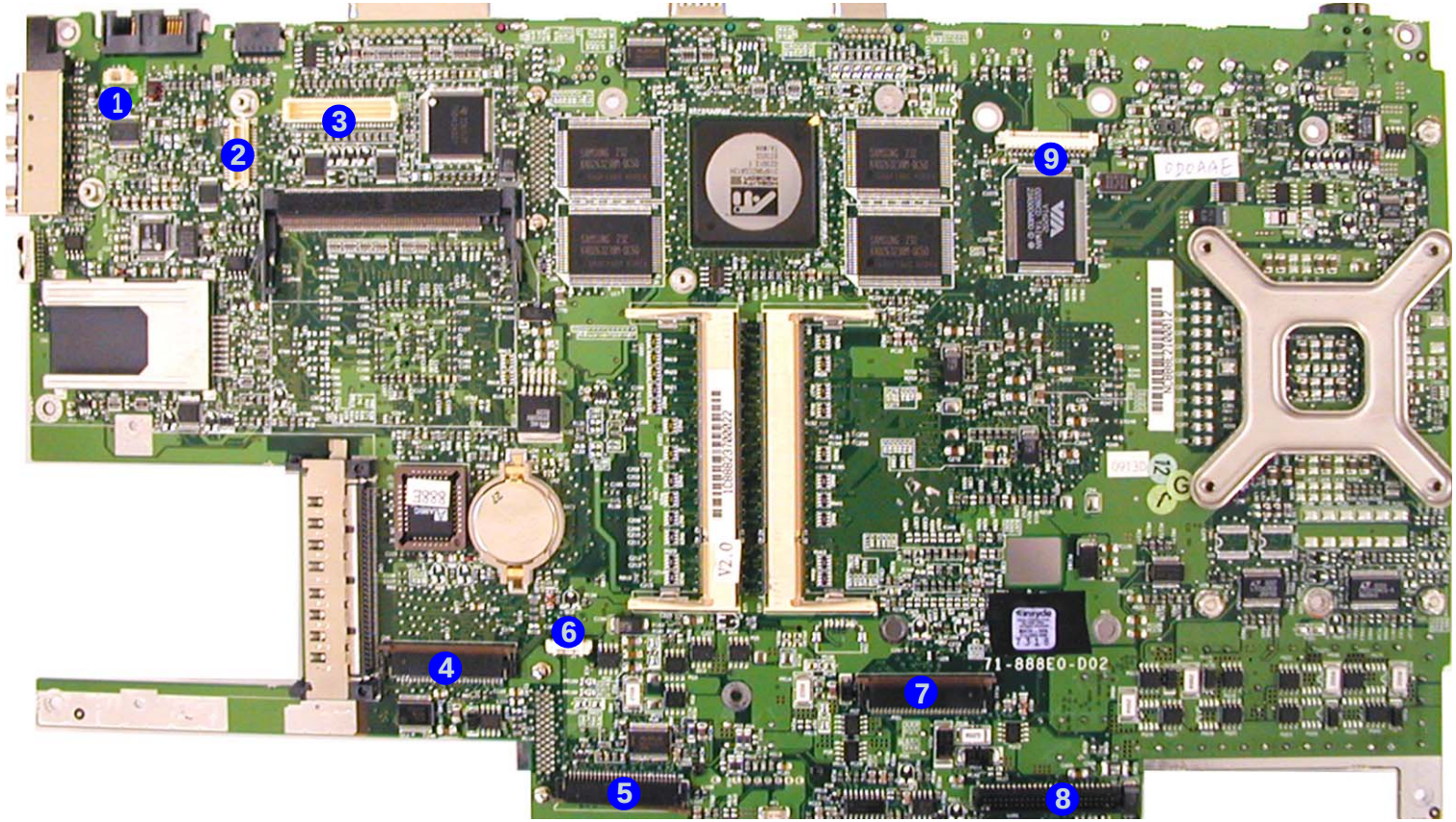


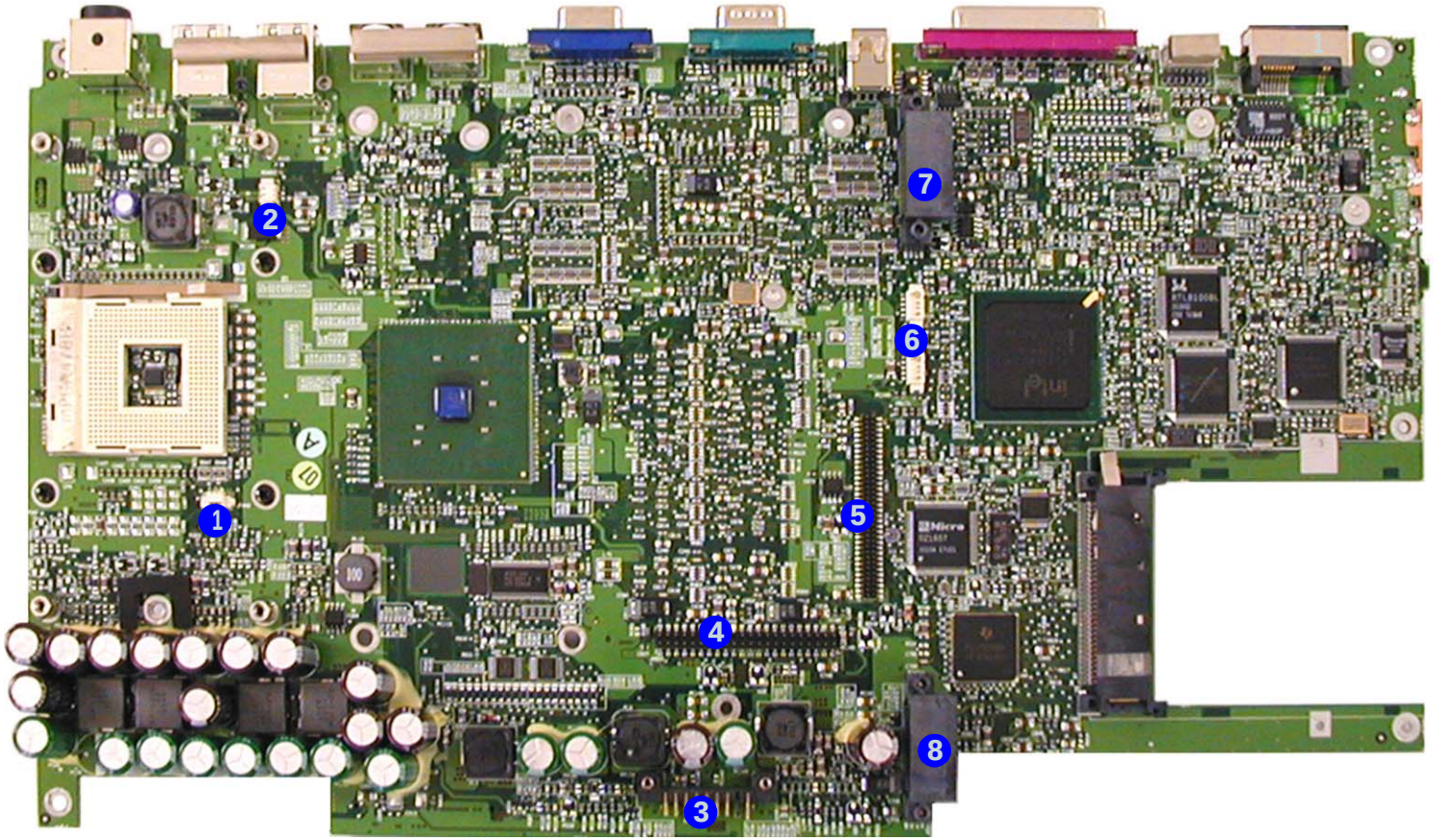
Figure 1 - 9
Mainboard Top Connectors

1. Modem Power (JFAN1)
2. Modem Connector (JMDC1)
3. LCD/Inverter connector (CN4)
4. Floppy Disk Drive Connector (CN6)
5. Audio Board Connector (J2)
6. TouchPad Connector (J1)
7. Keyboard Connector (JKB1)
8. Hard Disk Drive & MP3 Board Connector (CON1)
9. Switch Keyboard Connector(J3)

Mainboard Overview - Bottom

Connectors

Figure 1 - 10
Mainboard Bottom Connectors



1. Fan Connector (JFAN2)
2. Fan Connector (JFAN3)
3. Battery Connector (CN15)
4. Hard Disk Connector (JHDD1)
5. TV Tuner Connector (CN17)
6. IP Sharing Module Jumper (J6 & J7)

Note: J6 & J7 must have a terminator inserted in order to use the IP sharing module.

7. Bay Two Device Connector (CON2)
8. Bay One Device Connector (JCD1)

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).

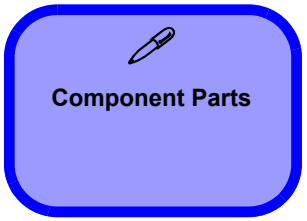
We suggest you completely review any procedure before you take the computer apart.

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 (the battery is removed too).

Maintenance Tools

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

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

Connections

Connections within the computer are one of four types:

Locking collar sockets for ribbon connectors	To release these connectors, use a small flat-head screwdriver to gently pry the locking collar away from its base. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Pressure sockets for multi-wire connectors	To release this connector type, grasp it at its head and gently rock it from side to side as you pull it out. Do not pull on the wires themselves. When replacing the connection, do not try to force it. The socket only fits one way.
Pressure sockets for ribbon connectors	To release these connectors, use a small pair of needle-nose pliers to gently lift the connector away from its socket. When replacing the connection, make sure the connector is oriented in the same way. The pin1 side is usually not indicated.
Board-to-board or multi-pin sockets	To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - use just enough force to start.

Maintenance Precautions

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

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

Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

Cleaning

Do not apply cleaner directly to the computer, use a soft clean cloth.
Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Disassembly Steps

The following table lists the disassembly steps, and on which page to find the related information. **PLEASE PERFORM THE DISASSEMBLY STEPS IN THE ORDER INDICATED.**

To remove the Battery:

1. Remove the battery *page 2 - 6*

To remove the Bay One Device:

1. Remove the battery *page 2 - 6*
2. Remove the Bay One device *page 2 - 7*

To remove the Bay Two Device:

1. Remove the battery *page 2 - 6*
2. Remove the Bay Two device *page 2 - 8*

To remove the Primary HDD:

1. Remove the battery *page 2 - 6*
2. Remove the primary HDD *page 2 - 9*

To remove the HDD in Bay Two:

1. Remove the battery *page 2 - 6*
2. Remove the HDD in Bay Two *page 2 - 10*

To remove the HDD in Bay Three:

1. Remove the battery *page 2 - 6*
2. Remove the HDD in Bay Three *page 2 - 11*

To remove the TV Tuner Module:

1. Remove the battery *page 2 - 6*
2. Remove the TV Tuner module *page 2 - 12*

To remove the Keyboard:

1. Remove the battery *page 2 - 6*
2. Remove the keyboard *page 2 - 13*

To remove the System Memory:

1. Remove the battery *page 2 - 6*
2. Remove the keyboard *page 2 - 13*
3. Remove the memory *page 2 - 14*

To remove the CPU:

1. Remove the battery *page 2 - 6*
2. Remove the CPU *page 2 - 15*

To remove the Wireless LAN Module:

1. Remove the battery *page 2 - 6*
2. Remove the keyboard *page 2 - 13*
3. Remove the WLAN module *page 2 - 17*

To remove the Switch Keyboard Assembly:

1. Remove the battery *page 2 - 6*
2. Remove the keyboard *page 2 - 13*
3. Remove the switch keyboard assembly *page 2 - 18*

To remove the Bottom Case Assembly:

1. Remove the battery *page 2 - 6*
2. Remove the Bay One device *page 2 - 7*
3. Remove the Bay Two device *page 2 - 8*

4. Remove the primary HDD *page 2 - 9*
5. Remove the HDD in Bay Two *page 2 - 10*
6. Remove the HDD in Bay Three *page 2 - 11*
7. Remove the TV Tuner Module *page 2 - 12*
8. Remove the keyboard *page 2 - 13*
9. Remove the memory *page 2 - 14*
10. Remove the CPU *page 2 - 15*
11. Remove the WLAN module *page 2 - 17*
12. Remove the switch keyboard assembly *page 2 - 18*
13. Remove the bottom case assembly *page 2 - 19*

To remove the HDD & MP3 Converter Board:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the HDD & MP3 con board *page 2 - 21*

To remove the Audio Board:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the audio board *page 2 - 22*

To remove the Chip Heat Sink & Modem:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the chip heat sink and modem *page 2 - 23*

To remove the Mainboard:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the mainboard *page 2 - 24*

To remove the Fan Module:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the fan module *page 2 - 25*

To remove the Cardbus Module:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the cardbus module *page 2 - 26*

To remove the Floppy Disk Drive Assembly:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the FDD assembly *page 2 - 27*

To remove the TouchPad Module:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the TouchPad module *page 2 - 28*

To remove the Inverter Board:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the inverter board *page 2 - 29*

To remove the LCD:

1. Remove the battery *page 2 - 6*
2. Remove the bottom case assembly *page 2 - 19*
3. Remove the inverter board *page 2 - 29*
4. Remove the LCD *page 2 - 30*

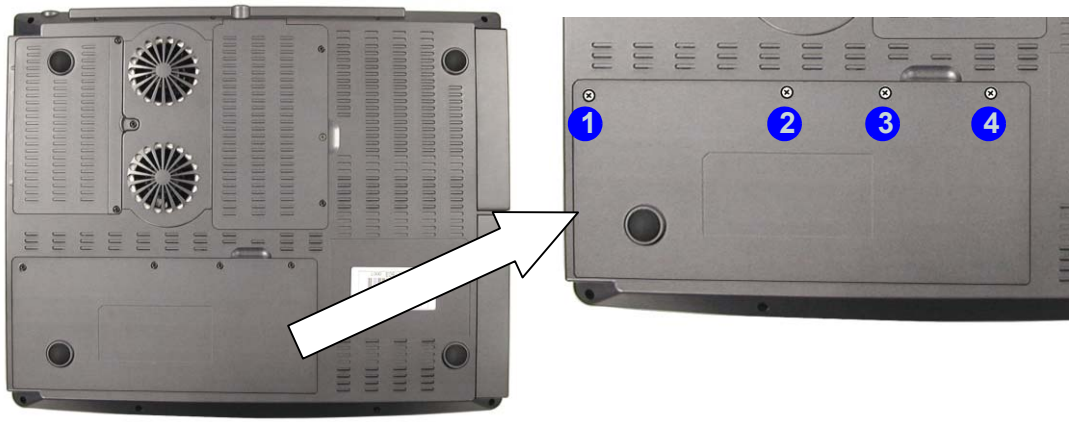
Figure 2 - 1
Battery Removal Sequence

a. Remove the 4 screws.
b. Apply pressure at point 5 to push the battery out.

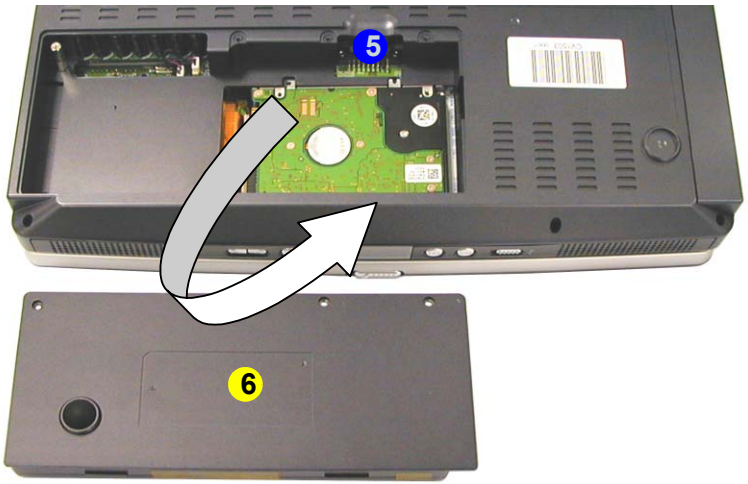
Removing the Battery

1. Turn the computer **OFF** and turn it over.
2. Remove screws 1 - 4 in **Figure 2 - 1a**.
3. Apply gentle pressure at point 5 to push the battery up and out of the computer.

a.



b.



6. Battery

- 4 Screws

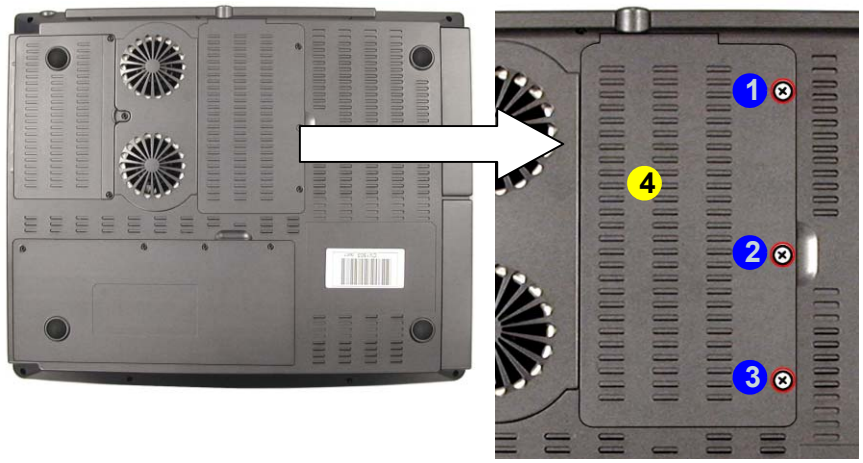
Removing the Primary Drive Bay (Bay One) CD Device

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 - 3 in (**Figure 2 - 2a**), then lift the cover off the changeable drive bay 4 and set it aside.
3. Remove screw 5 (**Figure 2 - 2b**), then gently push the device out of the bay (you may need to use a screwdriver to do this).

Figure 2 - 2
Primary Drive (Bay One) CD Device Removal Sequence

a. Remove the screws from the changeable drive bay cover.
b. Remove screw 5.
c. Push the device out of the computer.

a.



b.

c.

4. Drive bay cover
6. CD device

- 4 Screws

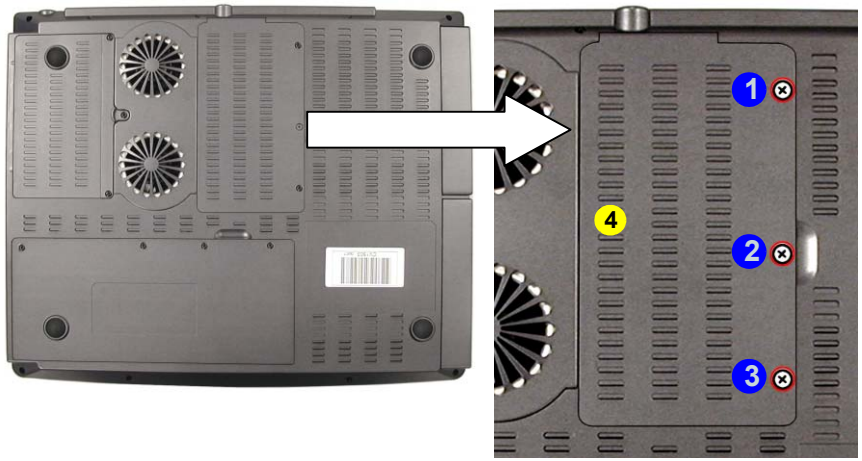
Figure 2 - 3
Modular Drive (Bay Two) Device Removal Sequence

a. Remove the screws from the changeable drive bay cover.
b. Remove screw 5.
c. Push the device out of the computer.

Removing the Modular Drive Bay (Bay Two) Device

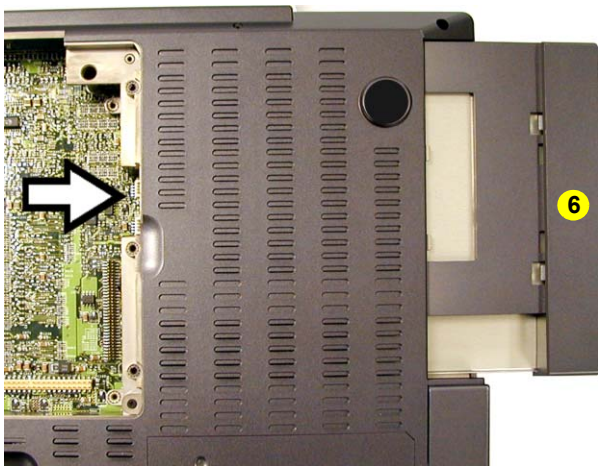
1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 - 3 in (**Figure 2 - 3a**), then lift the cover off the changeable drive bay 4 and set it aside.
3. Remove screw 5 (**Figure 2 - 3b**), then gently push the device out of the bay (you may need to use a screwdriver).

a.



b.

c.



4. Drive bay cover
6. CD device

- 4 Screws

Removing the Primary Hard Disk

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 and 2 (**Figure 2 - 4a**) and release the HDD connector cable 3.
3. Remove the HDD assembly from the bay.
4. Remove screws 5 and 8 (**Figure 2 - 4c**) and the HDD connector cable 3.

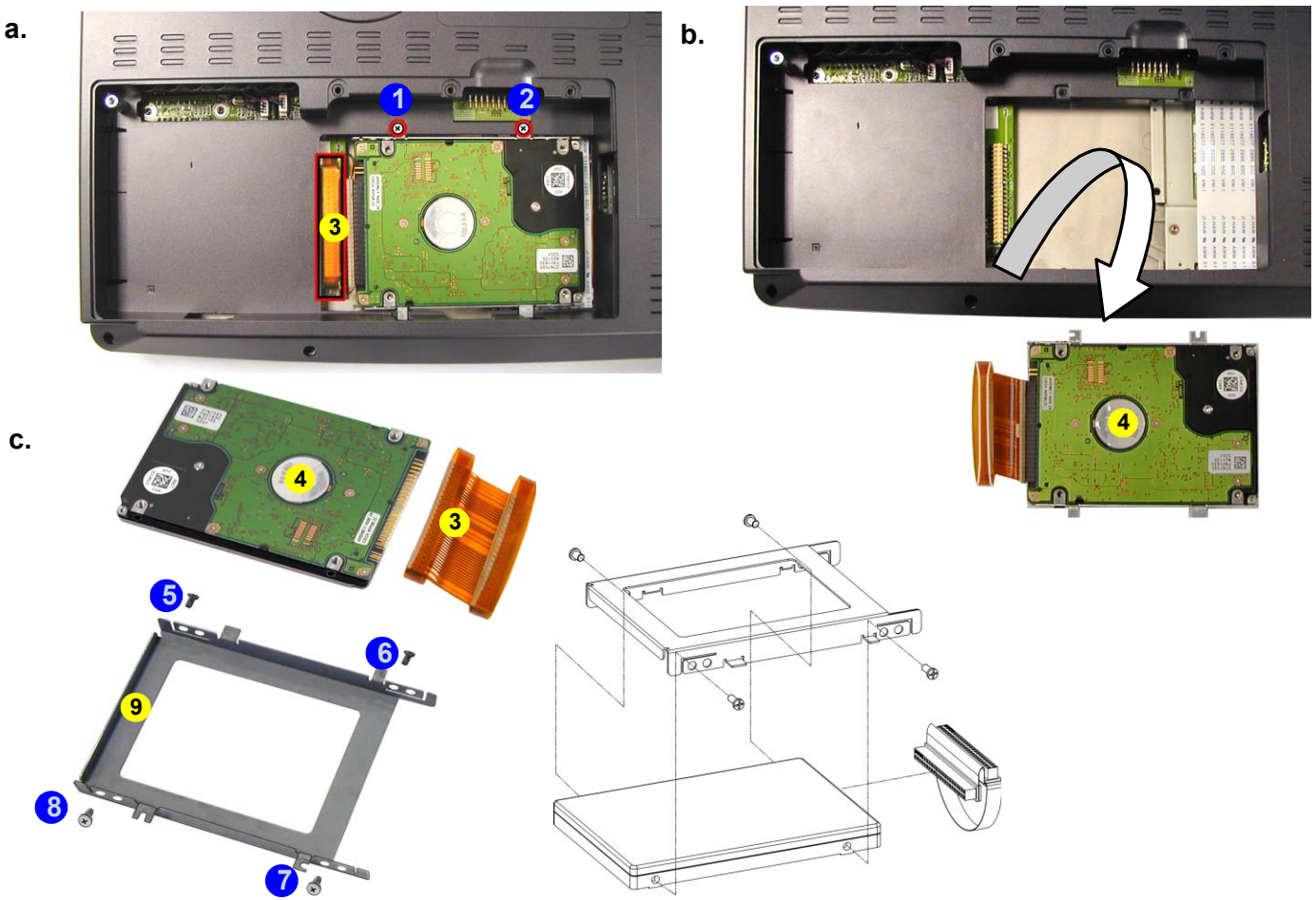


Figure 2 - 4
Primary Hard Disk Removal Sequence

a. Remove the 2 screws and release the HDD cable
b. Remove the HDD assembly.
c. Remove the 4 screws and HDD cable.

HDD Cables

The illustrated HDD cable may differ from the one in your model depending on the configuration purchased.

Be careful not to bend the pins on the hard disk when removing the cable.

3. HDD cable
4. HDD
9. HDD case

- 6 Screws

Figure 2 - 5
Bay Two HDD Removal Sequence

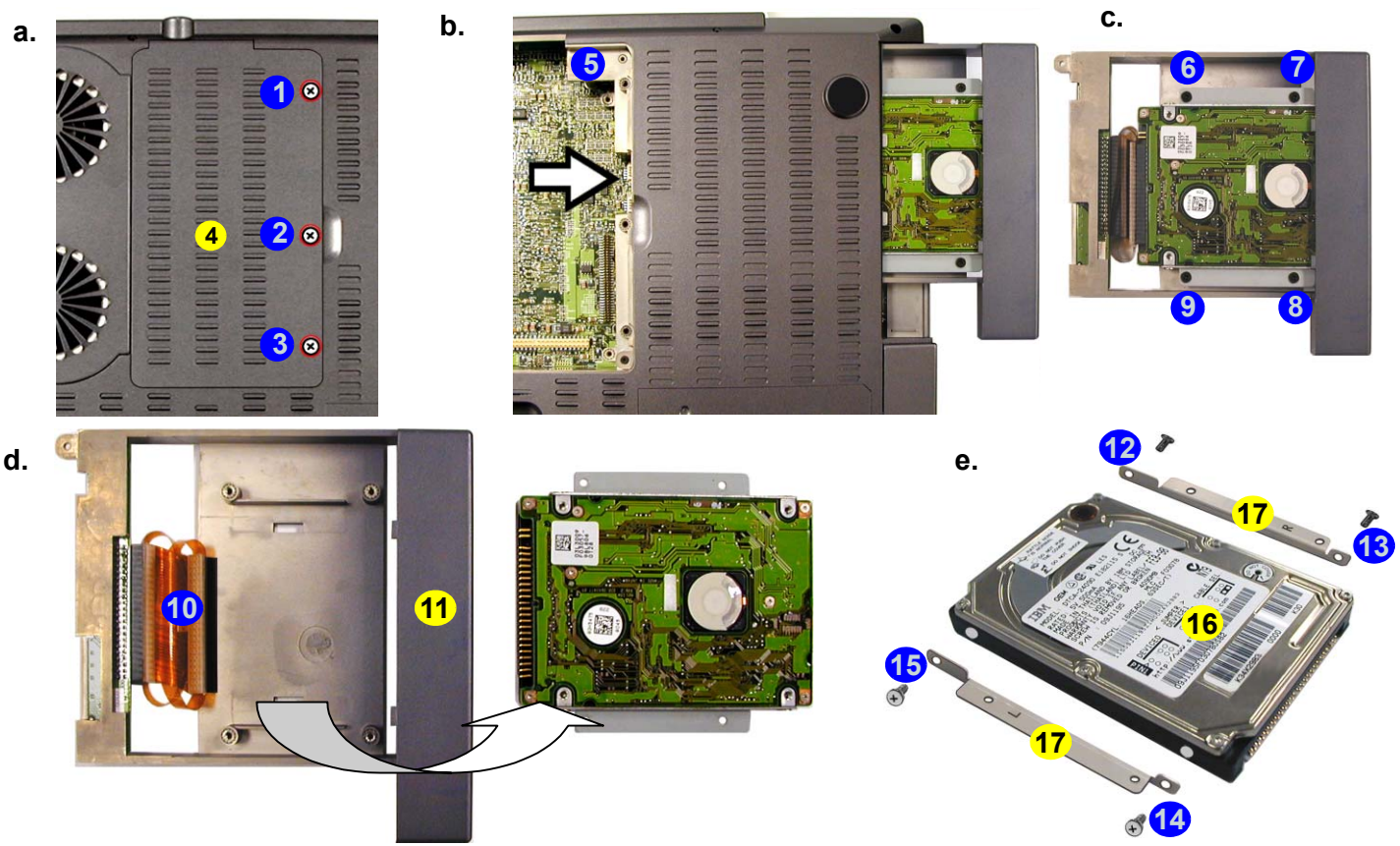
a. Remove the screws from the changeable drive bay cover.
b. Remove screw 5 and push the device out of the computer.
c. Remove the 4 screws from the HDD case.
d. Disconnect the cable and remove the HDD assembly.
e. Remove the screws from the assembly brackets.

4. Drive bay cover
11. Drive case
16. HDD
17. Assembly brackets

- 9 Screws

Removing the Hard Disk Drive in Bay Two

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 - 3 (**Figure 2 - 5a**), then lift the cover off the changeable drive bay 4 and set it aside.
3. Remove screw 5 (**Figure 2 - 5b**), then gently push the device out of the bay (you may need to use a screwdriver to do this).
4. Remove screws 6 - 9 (**Figure 2 - 5c**), and disconnect cable 10 (**Figure 2 - 5d**), then take the HDD assembly out of the case.
5. Remove screws 12 - 15 (**Figure 2 - 5e**) from the HDD assembly (note the disk orientation within the brackets).



Removing the Hard Disk Drive in Bay Three

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 - 3 (**Figure 2 - 6a**), then lift the cover off the changeable drive bay 4 and set it aside.
3. Remove screws 5 - 8 (**Figure 2 - 6b**), then lift the HDD assembly out of the bay.
4. Remove screws 9 - 12 (**Figure 2 - 6d**) to separate the HDD from the case, and disconnect cable 13 .

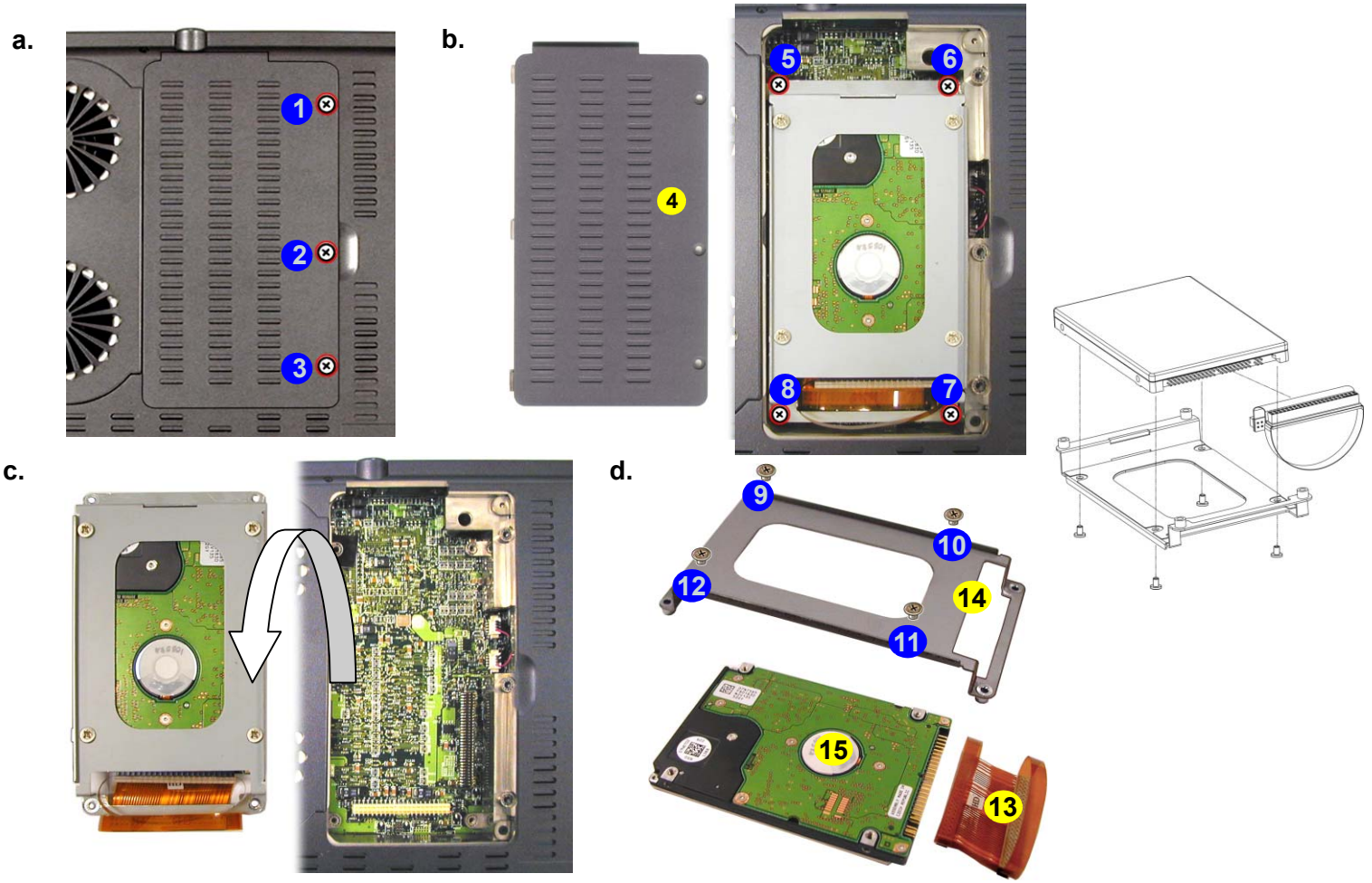


Figure 2 - 6
Bay Three HDD Removal Sequence

a. Remove the screws from the changeable drive bay cover.
b. Remove the 4 screws.
c. Lift the HDD assembly out of the bay.
d. Remove the 4 screws from the HDD case, and disconnect the cable.

4. Drive bay cover
13. HDD cable
14. Drive case
15. HDD

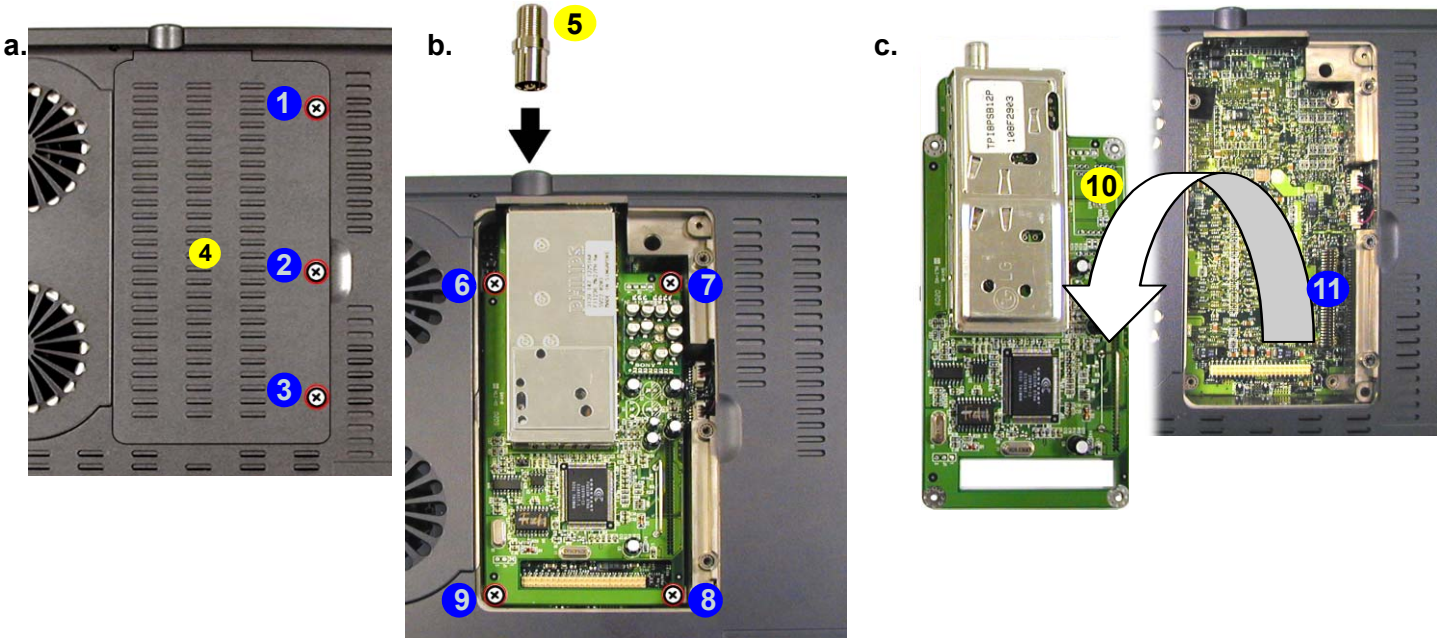
- 11 Screws

Figure 2 - 7
TV Tuner Module Removal Sequence

a. Remove the screws from the changeable drive bay cover.
b. Remove cable connector and the 4 screws.
c. Lift the TV Tuner module out of the computer.

Removing the TV Tuner Module

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 - 3 (**Figure 2 - 7a**), then lift the cover off the changeable drive bay 4 and set it aside.
3. Remove the cable connector 5 (**Figure 2 - 7b**).
4. Remove screws 6 - 9 (**Figure 2 - 7b**), and carefully lift the TV tuner module out of the computer.
5. When re-inserting the TV tuner, the module should align with the connecting pins at point 11 (push firmly down to make sure the module is secure).



4. Drive bay cover
5. Cable connector
10. TV tuner module

- 7 Screws

Removing the Keyboard

1. Turn the computer **OFF** and remove the battery (*page 2 - 6*).
2. Press the **two** keyboard latches at the top of the keyboard to elevate the keyboard from its normal position (you may need to use a small screwdriver to do this).
3. Carefully lift the keyboard up and out, being careful not to bend the keyboard ribbon cable 3 (**Figure 2 - 8b**).
4. Disconnect the keyboard ribbon cable from the locking collar socket 4 (**Figure 2 - 8b**).

a.

b.

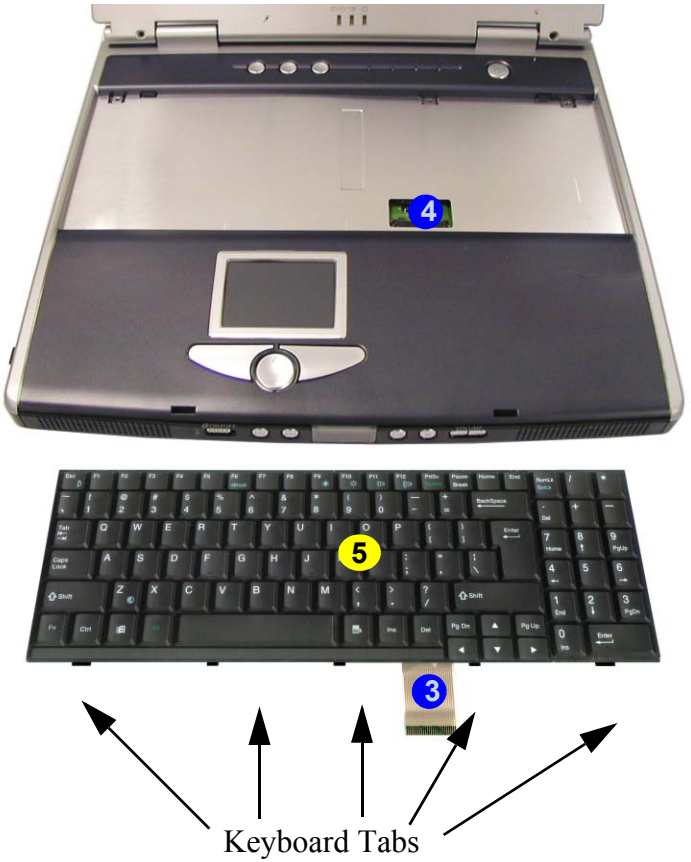


Figure 2 - 8
Keyboard Removal Sequence

a. Press the two latches to release the keyboard.
b. Lift the keyboard out and disconnect the cable from the locking collar.

Re-Inserting the Keyboard

When re-inserting the keyboard firstly align the **five** keyboard tabs (**Figure 2 - 5b**) at the bottom of the keyboard with the slots in the case.

5. Keyboard

Figure 2 - 9
Memory Removal Sequence

a. Remove the screws from the shielding plate.
b. Remove the shielding plate.
c. Pull the latches on the memory sockets to release the module(s). When the module pops up, lift it out.

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. Shielding plate
7. Memory module(s)

• 3 Screws

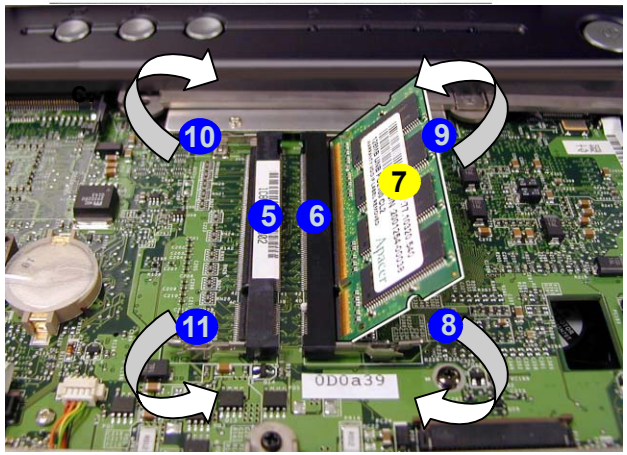
Removing the System Memory

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and keyboard (*page 2 - 13*).
2. Remove screws 1 - 3 (**Figure 2 - 9a**) from the shielding plate 4 (**Figure 2 - 9b**), and lift the plate up off the computer.
3. Locate the memory sockets 5 & 6 (**Figure 2 - 9c**), and gently pull the latches 8 & 9 (and/or 10 & 11) on the memory socket toward the front and rear of the computer as indicated.
4. The module 7 (**Figure 2 - 9c**) will pop-up, and you can remove it.
5. 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. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and turn it over.
2. Remove screws 1 - 3 (**Figure 2 - 10a**), and lift the cover 5 (**Figure 2 - 10c**) up off the computer (it may be necessary to lift up the cover sticker 4 (**Figure 2 - 10b**) in order to reveal the heat sink caution label).

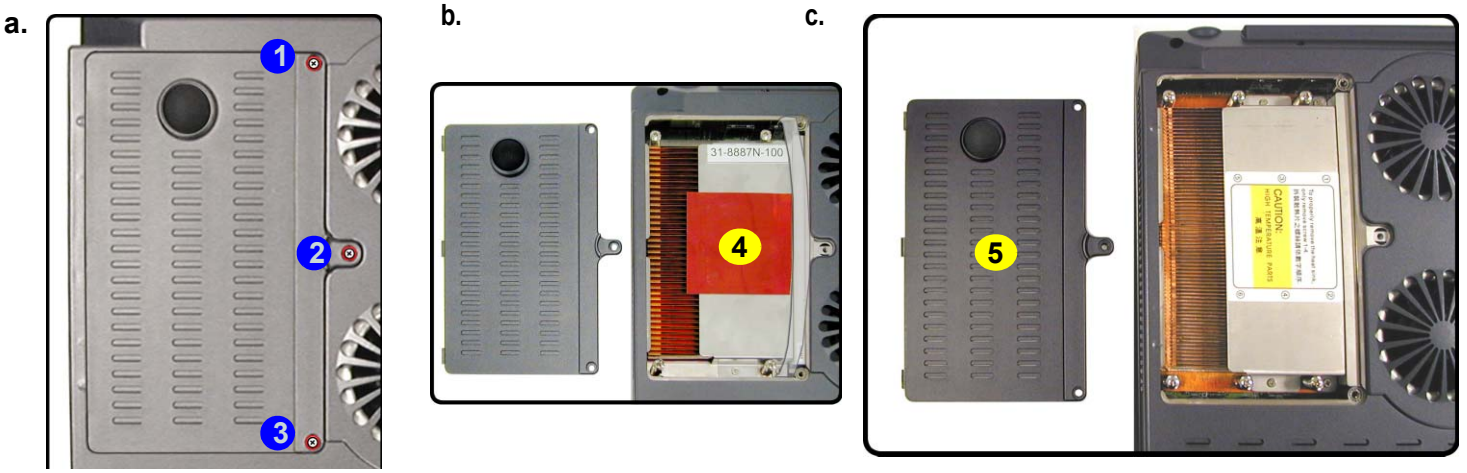


Figure 2 - 10
Processor Removal Sequence

a. Remove the three screws from the CPU cover.
b. Remove the CPU cover
c. Lift up the cover sticker if necessary.

.

3. Remove the **four** screws from the heat sink in order indicated on the label, and lift out the heat sink 6 **Figure 2 - 11**.

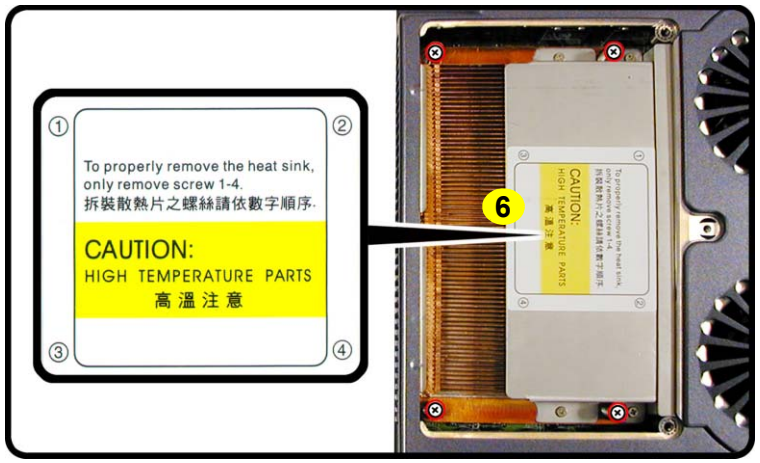


Figure 2 - 11
Processor Removal Sequence (cont'd)

Remove the four screws from the heat sink in **the order indicated**.

Caution

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

Reassembly Screw Order

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

5. CPU Cover
6. Heat Sink

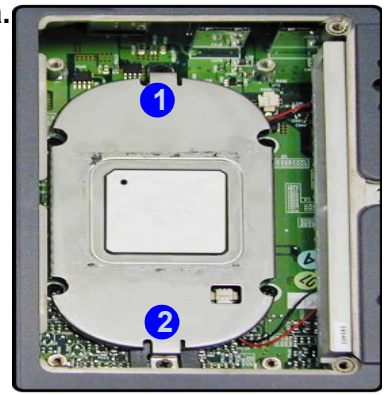
- 7 Screws

Figure 2 - 12
Processor Removal Sequence (cont'd)

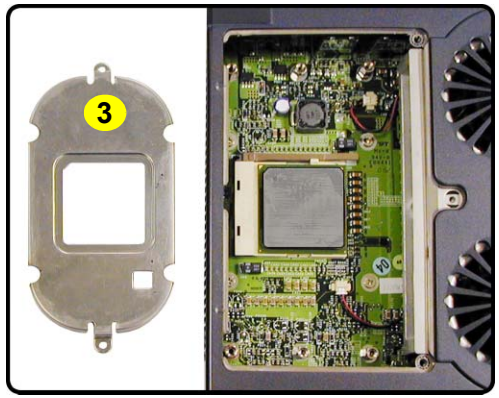
a. Remove the screws from the bracket.
b. Lift the bracket up.
c. Raise the latch to unlock the CPU.
d. Lift the CPU out of the socket.

4. Remove screws 1 & 2 (**Figure 2 - 12a**) from the CPU bracket, then lift the bracket 3 off the CPU (**Figure 2 - 12b**).
5. Fully raise latch 4 in the direction indicated in **Figure 2 - 12c** to unlock the CPU.
6. Carefully (it may be hot) lift the CPU 5 up out of the socket. (**Figure 2 - 12d**).
7. When re-inserting the CPU pay careful attention to the pin alignment, it will fit only one way (don't force it!).

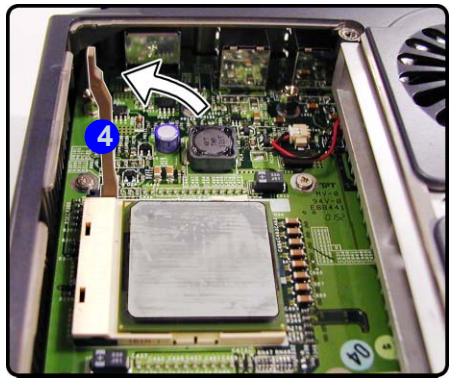
a.



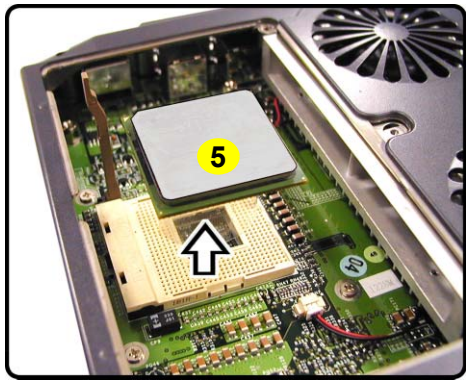
b.



c.



d.



3. CPU bracket
5. CPU

- 2 Screws

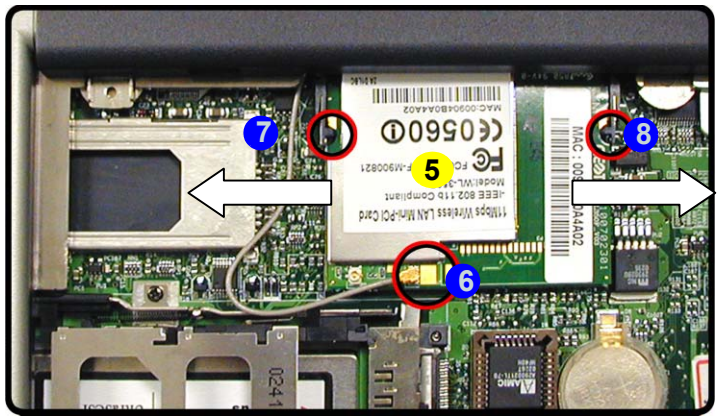
Removing the Wireless LAN Module

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and keyboard (*page 2 - 13*).
2. Remove screws 1 - 3 (**Figure 2 - 13a**) from the shielding plate 4 (**Figure 2 - 13b**), and lift the plate up off the computer.
3. Locate the Wireless LAN module 5 (**Figure 2 - 13c**) and disconnect the antenna cable at point 6. (**See sidebar for information on which connection point on the WLAN module is to be connected to the antenna cable.**)
4. Pull the levers in the direction of the arrows at points 7 & 8 (**Figure 2 - 13c**) and carefully lift the Wireless LAN module out of the computer.

a.

b.

c.



d.

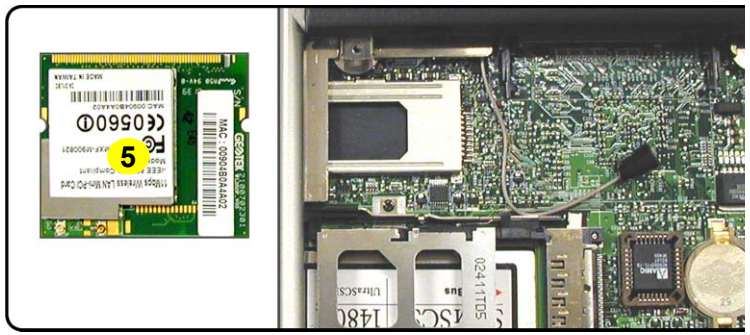


Figure 2 - 13
WLAN Removal Sequence

a. Remove the screws from the shielding plate.
b. Remove the shielding plate.
c. Disconnect the antenna cable.
d. Pull the latches on the WLAN socket to release the module and lift it out.

Antenna Cable Connection

When re-inserting a Wireless LAN module, make sure the antenna cable connects to the connector **J7** which is indicated as point **6** in **Figure 2 - 13c**.

4. Shielding plate
5. WLAN module

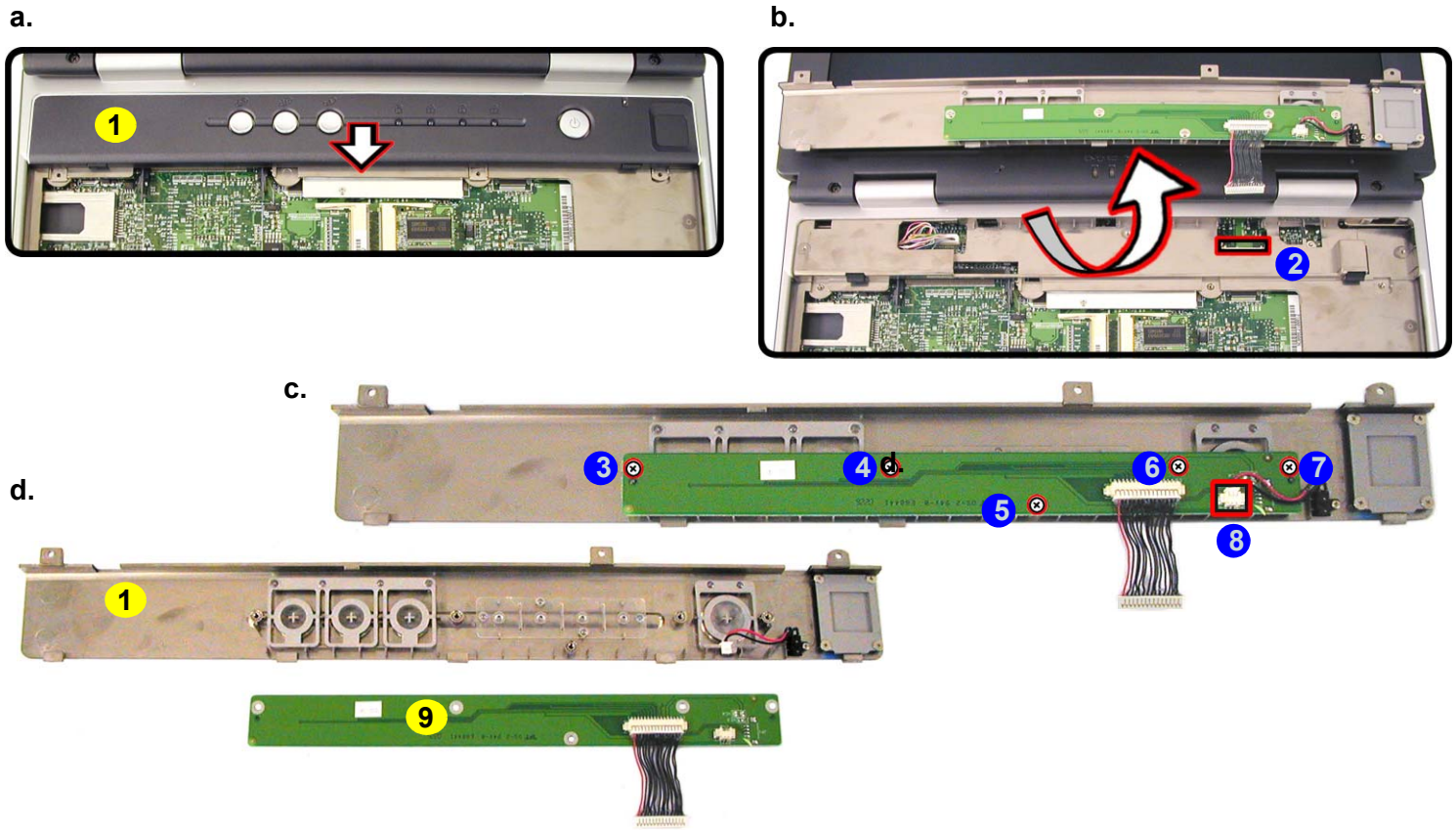
- 3 Screws

Removing the Switch Keyboard Assembly

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), keyboard (*page 2 - 13*), memory (*page 2 - 14*) and Wireless LAN module (*page 2 - 17*).
2. Carefully slide the center cover assembly 1 (**Figure 2 - 14a**) forward.
3. Carefully disconnect the cable at point 2 (**Figure 2 - 14b**) and lift the center cover assembly out of the computer.
4. Remove screws 3 - 7 (**Figure 2 - 14c**) and disconnect the cable at point 8, then lift up the switch keyboard assembly 9.

Figure 2 - 14
Switch Keyboard Assembly Removal Sequence

a. Slide the center cover assembly forward.
b. Disconnect the cable and lift off the cover assembly.
c. Remove the screws and disconnect the cable from the switch keyboard assembly.
d. Lift the switch keyboard assembly off the center cover assembly.



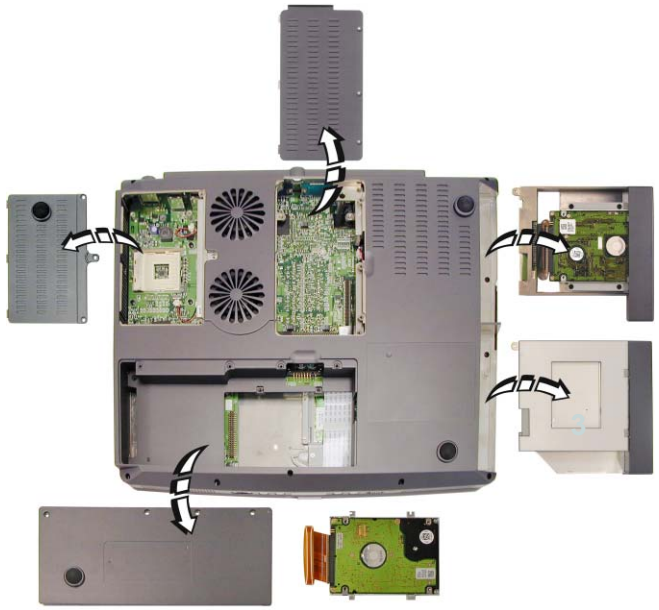
1. Center cover assembly
9. Switch keyboard assembly

- 5 Screws

Removing the Bottom Case Assembly

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), **and all applicable devices** listed in the previous pages (from *page 2 - 7* to *page 2 - 18*,).
2. Remove screws 1 - 14 (**Figure 2 - 15b**) from the bottom of the computer.

a.



b.

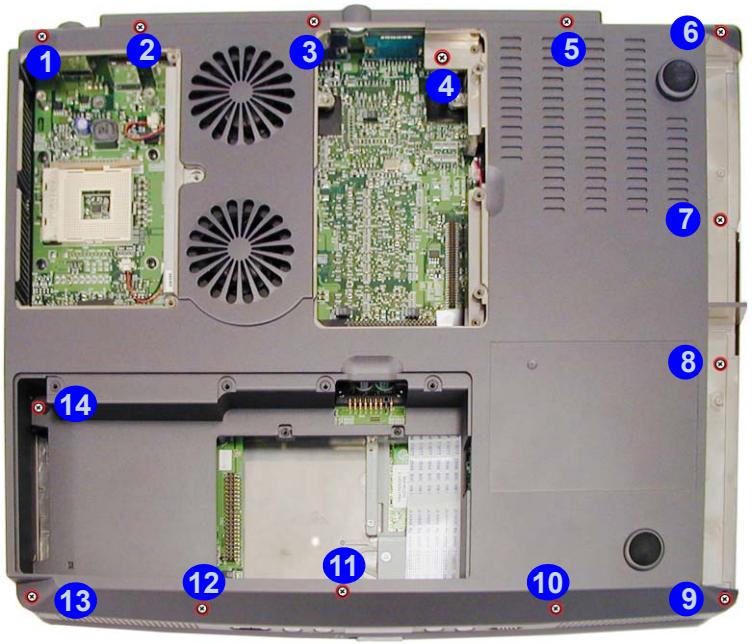


Figure 2 - 15
Bottom Case Assembly Removal Sequence

a. Remove all the previously listed devices and components prior to this page (as applicable).
b. Remove the 14 screws from the bottom of the computer.

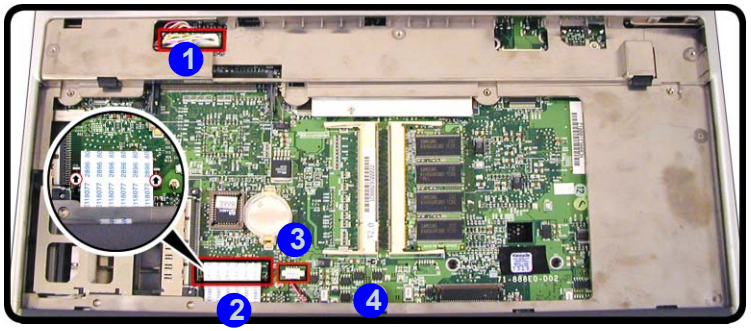
- 14 Screws

Figure 2 - 16
Bottom Case Assembly Removal Sequence (cont'd)

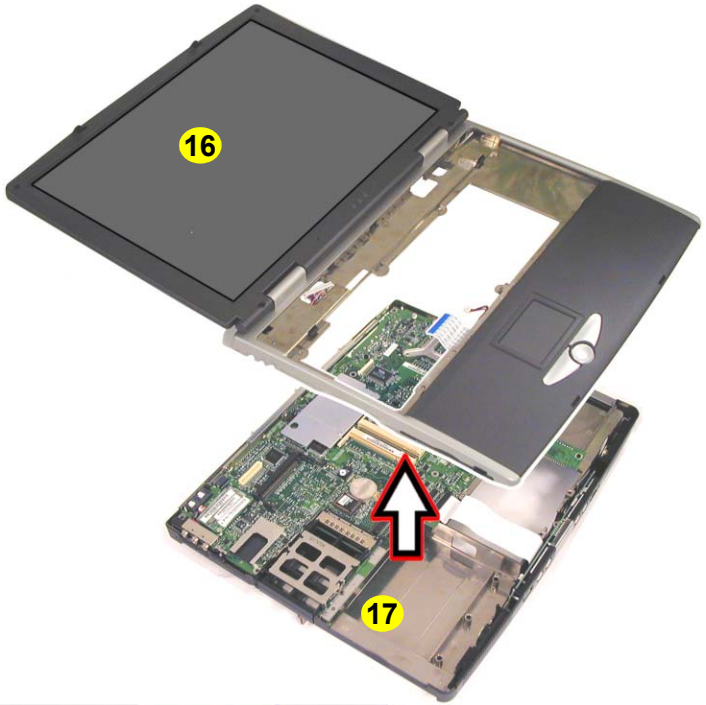
a. Disconnect the cables and remove the screw from inside the top case assembly.
b. Remove the 11 screws from the rear of the computer
c. Carefully lift the top case assembly up and off the bottom case assembly.

3. Turn the computer back over and disconnect cables 1 - 3 (**Figure 2 - 16a**), and remove screw 4.
4. Remove screws 5 - 15 (**Figure 2 - 16b**) from the rear of the computer.
5. Carefully ease the top case assembly 16 (**Figure 2 - 16c**) off the bottom case assembly 17 .

a.



c.



b.

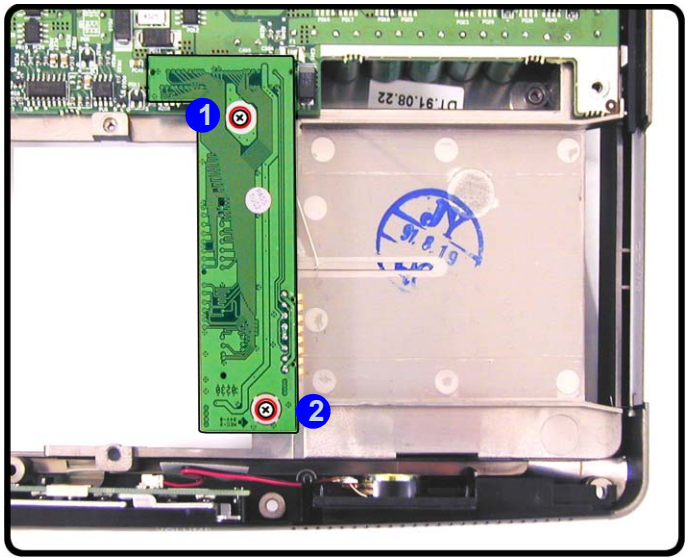
16. Top case assembly
17. Bottom case assembly

- 12 Screws

Removing the HDD & MP3 Converter Board

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), and the bottom case assembly (*page 2 - 19*).
2. Remove screws 1 & 2 (**Figure 2 - 17a**) from the HDD & MP3 converter board.
3. Lift the converter board 3 (**Figure 2 - 17b**) off the connector 4 on the mainboard.

a.



b.

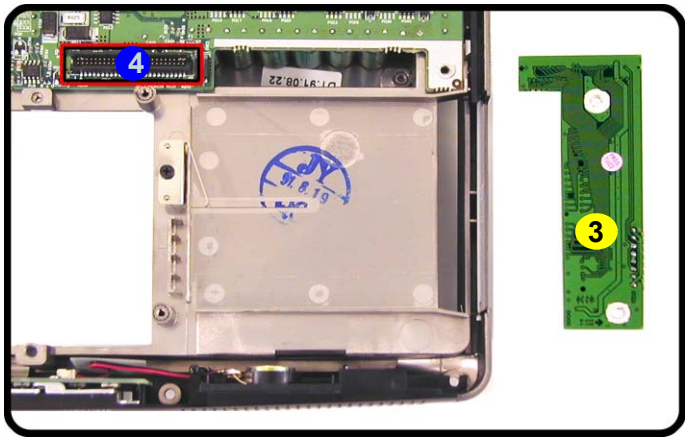


Figure 2 - 17
HDD & MP3 Converter Board Removal Sequence

a. Remove the 2 screws.
b. Lift the HDD & MP3 converter board off the connector.

3. HDD & MP3 converter board

- 2 Screws

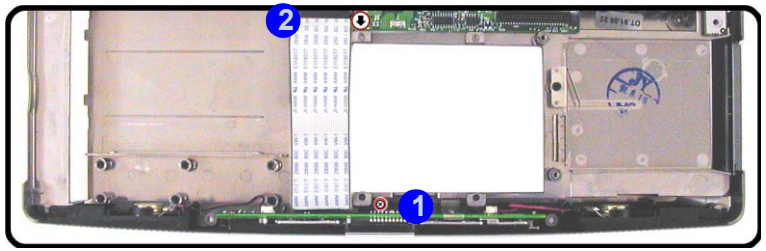
Figure 2 - 18
Audio Board Removal Sequence

a. Remove the screw and disconnect the cable.
b. Lift the Audio DJ bezel out of the computer and remove the connector cable.
c. Remove the screws and cables from the rear of the audio board.
d. Remove the audio board from the Audio DJ bezel.

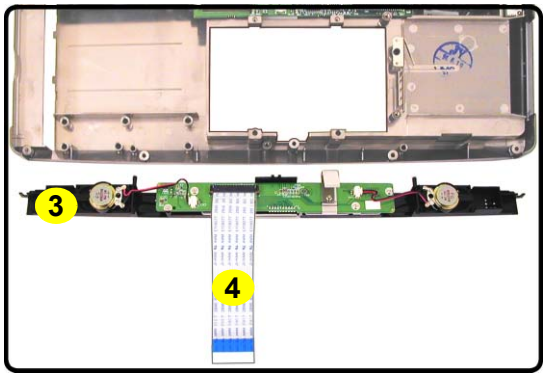
Removing the Audio Board

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), and the bottom case assembly (*page 2 - 19*).
2. Remove screw 1 (**Figure 2 - 18a**) and disconnect cable 2 from the mainboard.
3. Lift the Audio DJ bezel module 3 (**Figure 2 - 18b**) out off the computer, and remove cable 4.
4. Remove screws 5 - 10 (**Figure 2 - 18c**), and disconnect cables 11 & 12.
5. Lift the audio board 13 (**Figure 2 - 18d**) off the Audio DJ bezel.

a.

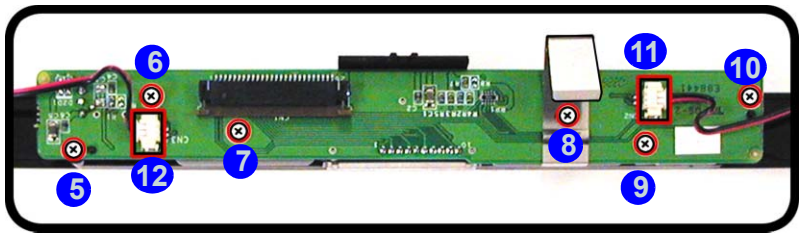


b.

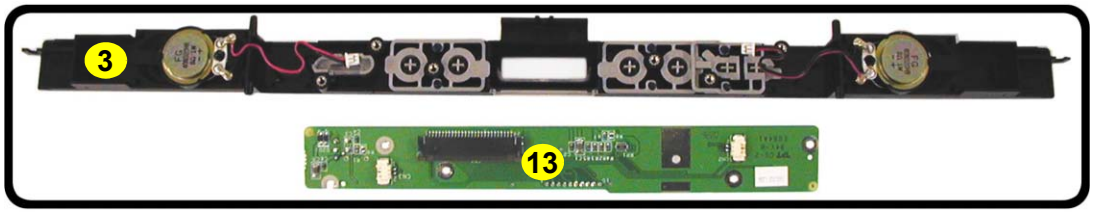


12

c.



d.



3. Audio DJ bezel
4. Audio DJ cable
13. Audio board

- 7 Screws

Removing the Chip Heat Sink and Modem Module

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), and the bottom case assembly (*page 2 - 19*).

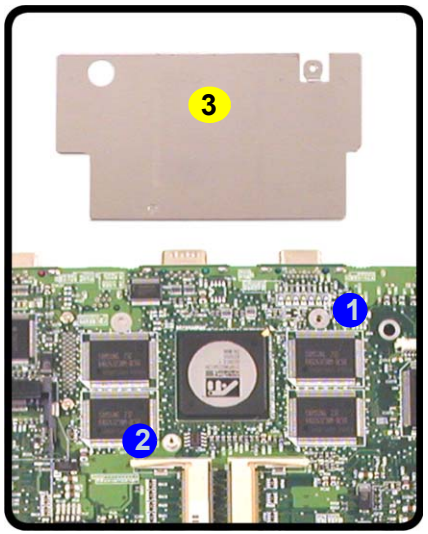
To Remove the Chip Heat Sink:

2. Remove screws 1 - 2 (**Figure 2 - 19a**) and lift the chip heat sink 3 off the mainboard.

To Remove the Modem Module:

3. Remove screws 4 - 5 (**Figure 2 - 19b**) and lift the modem module 7 off the mainboard modem connector 6.

a.



b.

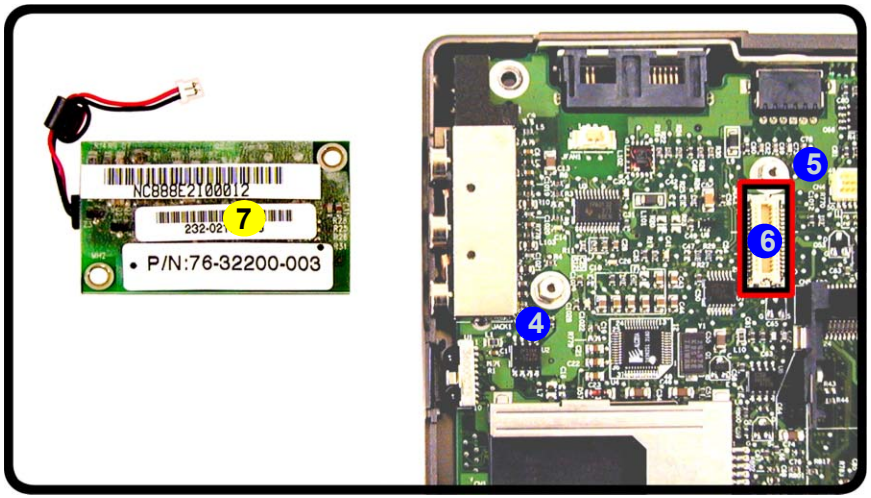


Figure 2 - 19
Chip Heat Sink & Modem Module Removal Sequence

a. Remove the screws and lift the chip heat sink off the mainboard.
b. Remove the screws and lift the modem module off the mainboard.

3. Chip heat sink
7. Modem module

- 4 Screws

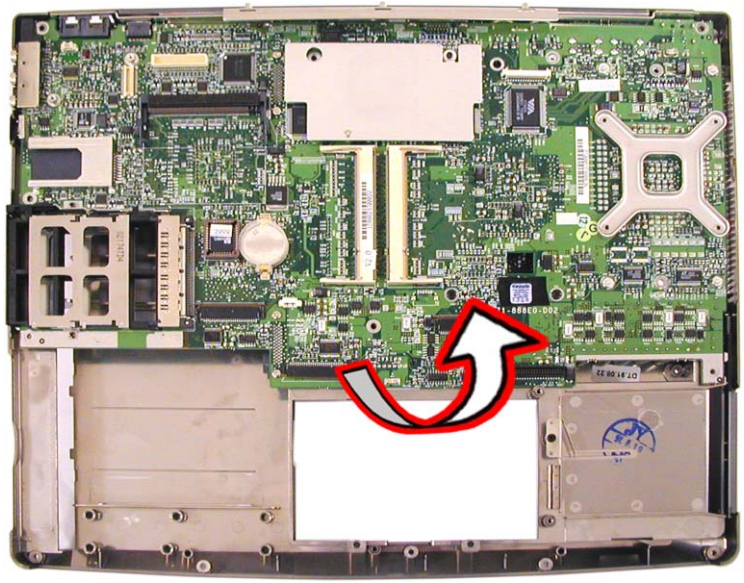
Removing the Mainboard

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), bottom case assembly (*page 2 - 19*) and HDD & MP3 converter board (*page 2 - 21*).
2. Carefully lift the mainboard 1 (**Figure 2 - 20b**) off the bottom case assembly.
3. Separate the rear I/O bracket 2, and bottom case assembly 3 (**Figure 2 - 20b**).

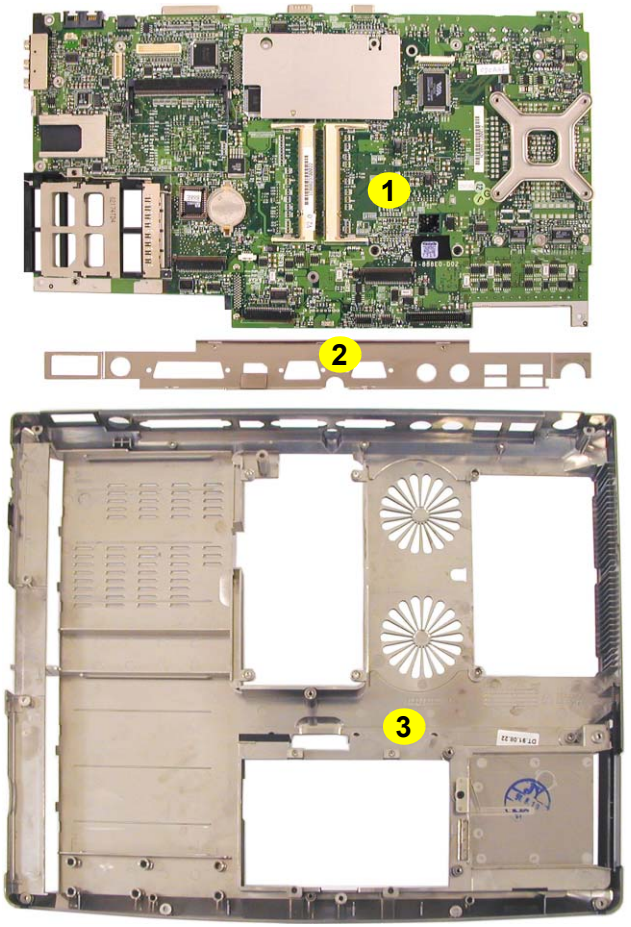
Figure 2 - 20
Mainboard Removal Sequence

a. Carefully lift the mainboard off the bottom case.
b. Separate the rear I/O bracket and bottom case assembly.

a.



b.

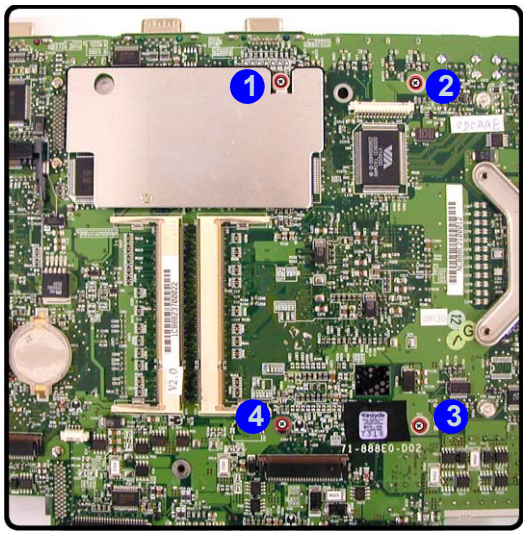


1. Mainboard
2. Rear I/O bracket
3. Bottom case assembly

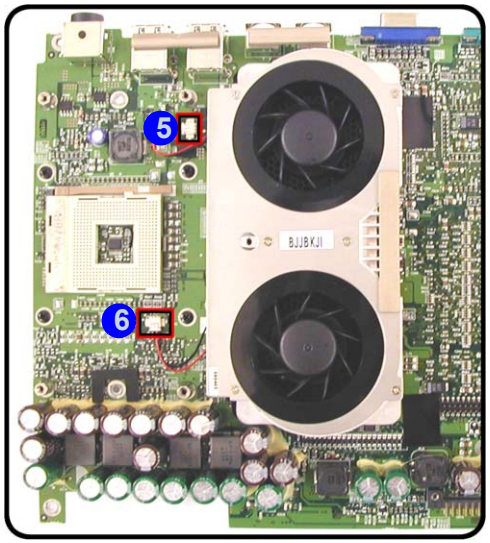
Removing the Fan Module

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), the bottom case assembly (*page 2 - 19*) and the mainboard (*page 2 - 24*).
2. Remove screws 1 - 4 (**Figure 2 - 21a**) on the top of the mainboard.
3. While holding the fan, carefully turn the mainboard over, and disconnect cables 5 & 6 (**Figure 2 - 21b**).
4. Lift the fan module 7 (**Figure 2 - 21c**) off the mainboard.

a.



b.



c.

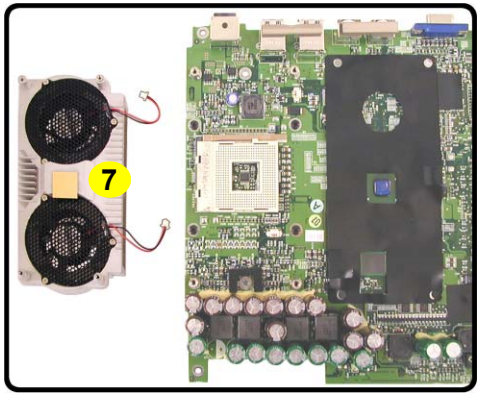


Figure 2 - 21
Fan Module Removal Sequence

a. Remove the 4 screws.
b. Hold the fan module, turn the mainboard over, and disconnect the cables.
c. Lift the fan module off the mainboard.

7. Fan module

- 4 Screws

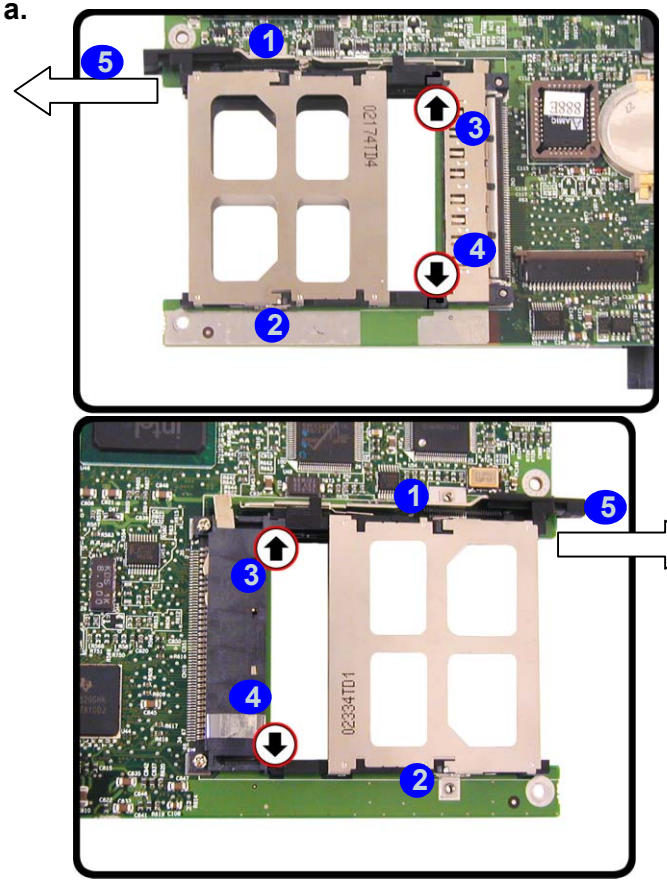
Figure 2 - 22
Cardbus Modules Removal Sequence

a. Remove the screws.
b. Apply pressure at the illustrated points to carefully prize the module off the mainboard.

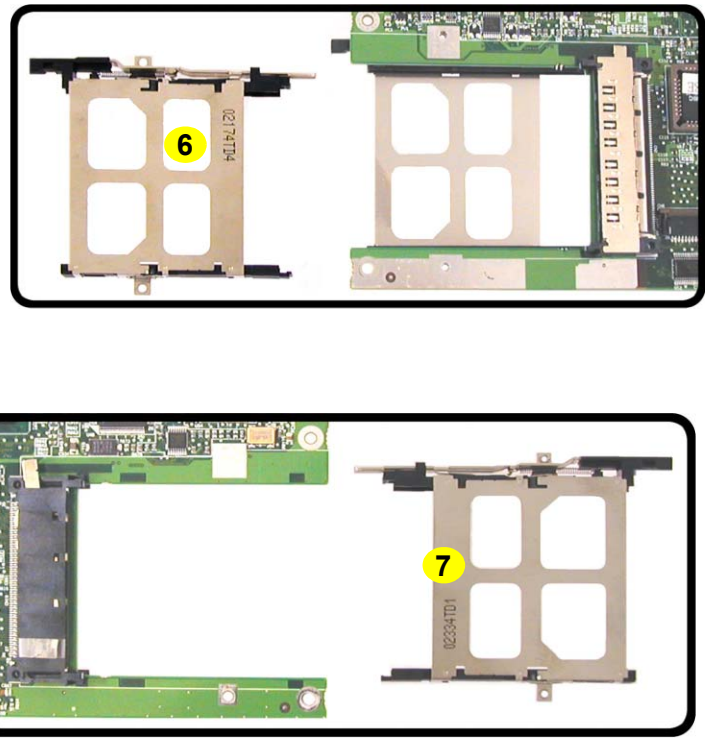
Removing the Cardbus Modules

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), the bottom case assembly (*page 2 - 19*) and the mainboard (*page 2 - 24*).
2. Remove screws 1 - 2 (**Figure 2 - 22a**) on the cardbus assembly.
3. Carefully, but firmly, apply pressure with your thumb and forefinger at point 3 or 4 (**Figure 2 - 22a**) to ease the cardbus assembly 6 off the mainboard (it is advantageous to have the eject mechanism 5 in the out position so as not to interfere with the separation process).
4. Turn the mainboard over and repeat the process for the other side (**Figure 2 - 22b**).

a.



b.



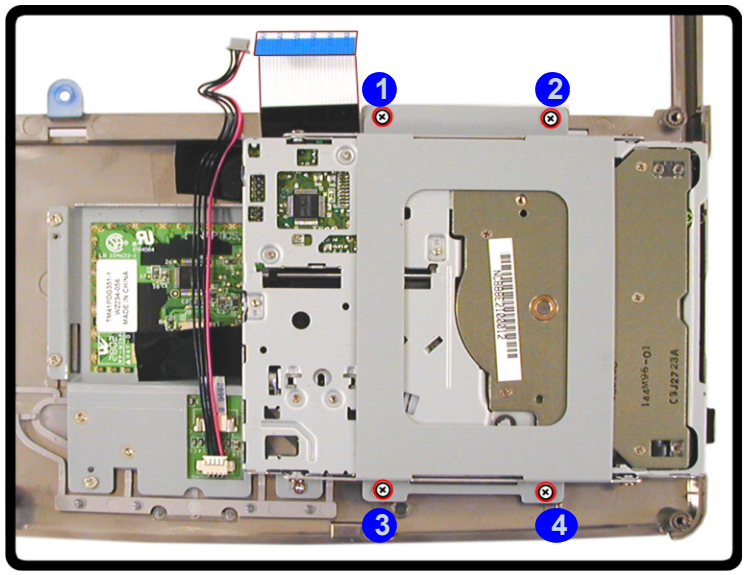
6. Cardbus module (top)
7. Cardbus module (bottom)

- 2 Screws

Removing the Floppy Disk Drive Assembly

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and the bottom case assembly (*page 2 - 19*).
2. Remove screws 1 - 4 (**Figure 2 - 23a**) on the floppy disk drive assembly 5 (located under the top casse assembly).
3. Lift the floppy disk drive assembly off the top case.

a.



b.

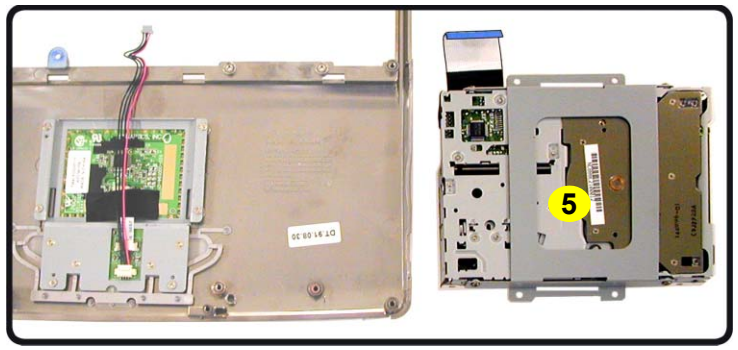


Figure 2 - 23
Floppy Disk Drive Assembly Removal Sequence

a. Remove the 4 screws.
b. Lift the FDD assembly off the top case.

5. FDD assembly

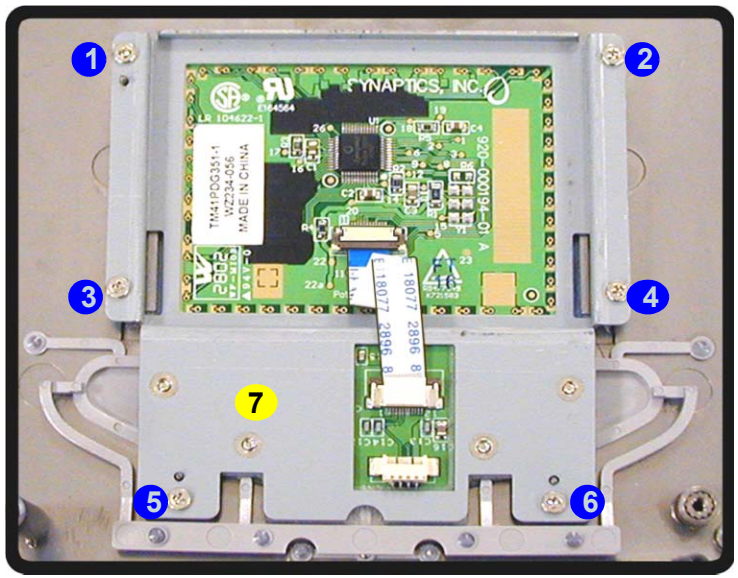
4 Screws

Figure 2 - 24
TouchPad Module Removal Sequence

Remove the 6 screws and lift the TouchPad module off the top case.

Removing the TouchPad Module

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), the bottom case assembly (*page 2 - 19*) and the floppy disk drive assembly (*page 2 - 27*).
2. Remove screws 1 - 6 (**Figure 2 - 24**) on the TouchPad module 7.
3. Lift the TouchPad module off the top case.



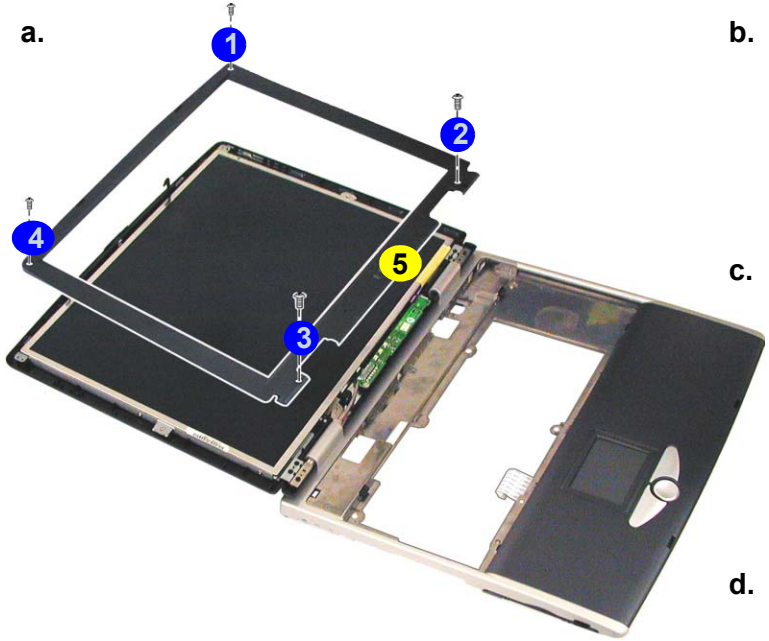
7. TouchPad module

- 6 Screws

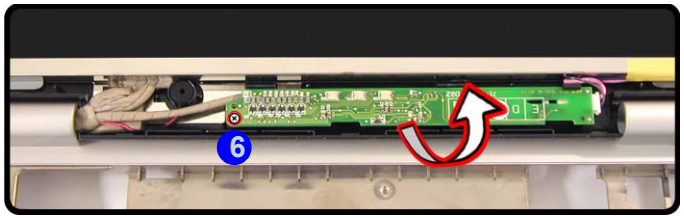
Removing the Inverter Board

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*) and the bottom case assembly (*page 2 - 19*).
2. Remove any rubber covers and screws 1 - 4 (**Figure 2 - 25a**), then run your finger around the middle of the frame to carefully unsnap the LCD front panel module 5 from the back.
3. Remove screw 6 (**Figure 2 - 25b**) from the inverter, and carefully lift the inverter board up slightly.
4. Disconnect cables 7 & 8 (**Figure 2 - 25c**) from the inverter, then remove the inverter 9 (**Figure 2 - 25d**) from the top case assembly.

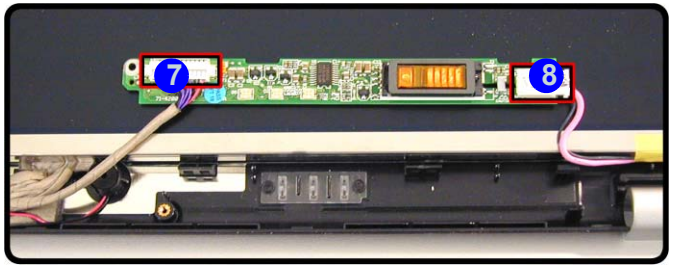
a.



b.



c.



d.

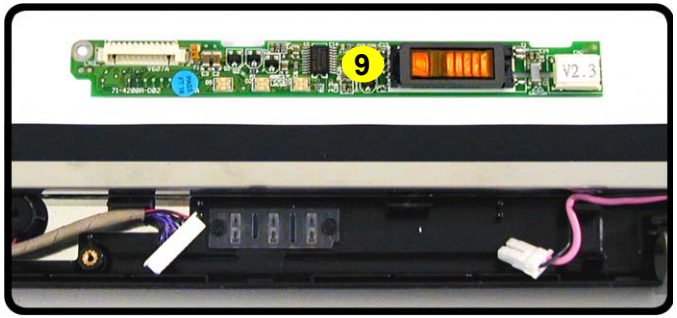


Figure 2 - 25
Inverter Board Removal Sequence

a. Remove the 4 screws and unsnap the LCD front panel module from the back.
b. Remove the screw from the inverter board and lift the board up slightly.
c. Disconnect the cables from the inverter.
d. Remove the inverter.

5. LCD front panel
9. Inverter board

- 5 Screws

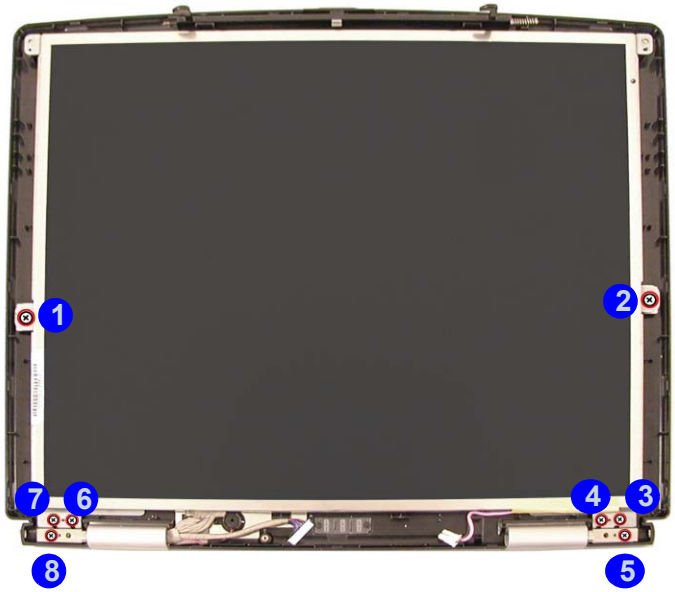
Figure 2 - 26
LCD Removal Sequence

a. Remove the 8 screws from the LCD.
b. Disconnect the cable and lift up the LCD.
d. Remove the screws and separate the brackets from the LCD.

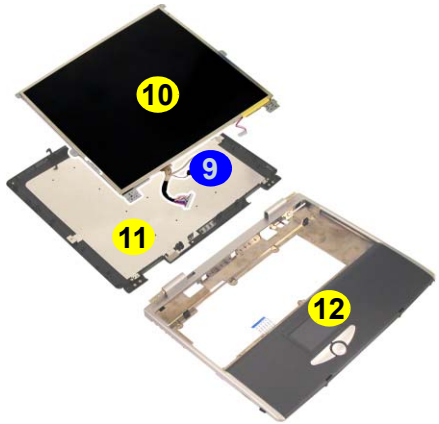
Removing the LCD

1. Turn the computer **OFF**, remove the battery (*page 2 - 6*), the bottom case assembly (*page 2 - 19*) and the inverter board (*page 2 - 29*).
2. Remove screws 1 - 8 (**Figure 2 - 26a**) from the LCD.
3. Disconnect the cable at point 9 (**Figure 2 - 26b**), then lift the LCD 10 up off the display back panel 11 and top case module.
4. Remove screws 13 - 18 (**Figure 2 - 26c**) from the LCD brackets 19 & 20 , then separate the LCD from the brackets.

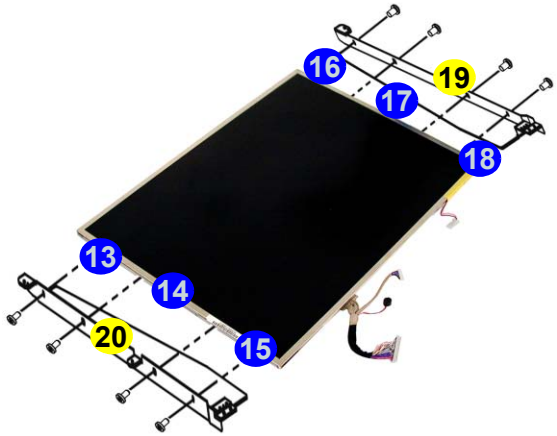
a.



b.



c.



10. LCD
11. Display back panel
12. Top case module
19. LCD bracket
20. LCD bracket

- 14 Screws

Appendix A:Part Lists for 888E

This appendix breaks down the **888E** model notebook's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

Note: This section indicates the *manufacturer's* part numbers. Your organization may use a different system, so be sure to cross-check any relevant documentation.

Note: Some assemblies may have parts in common (especially screws). However, the part lists DO NOT indicate the total number of duplicated parts used.

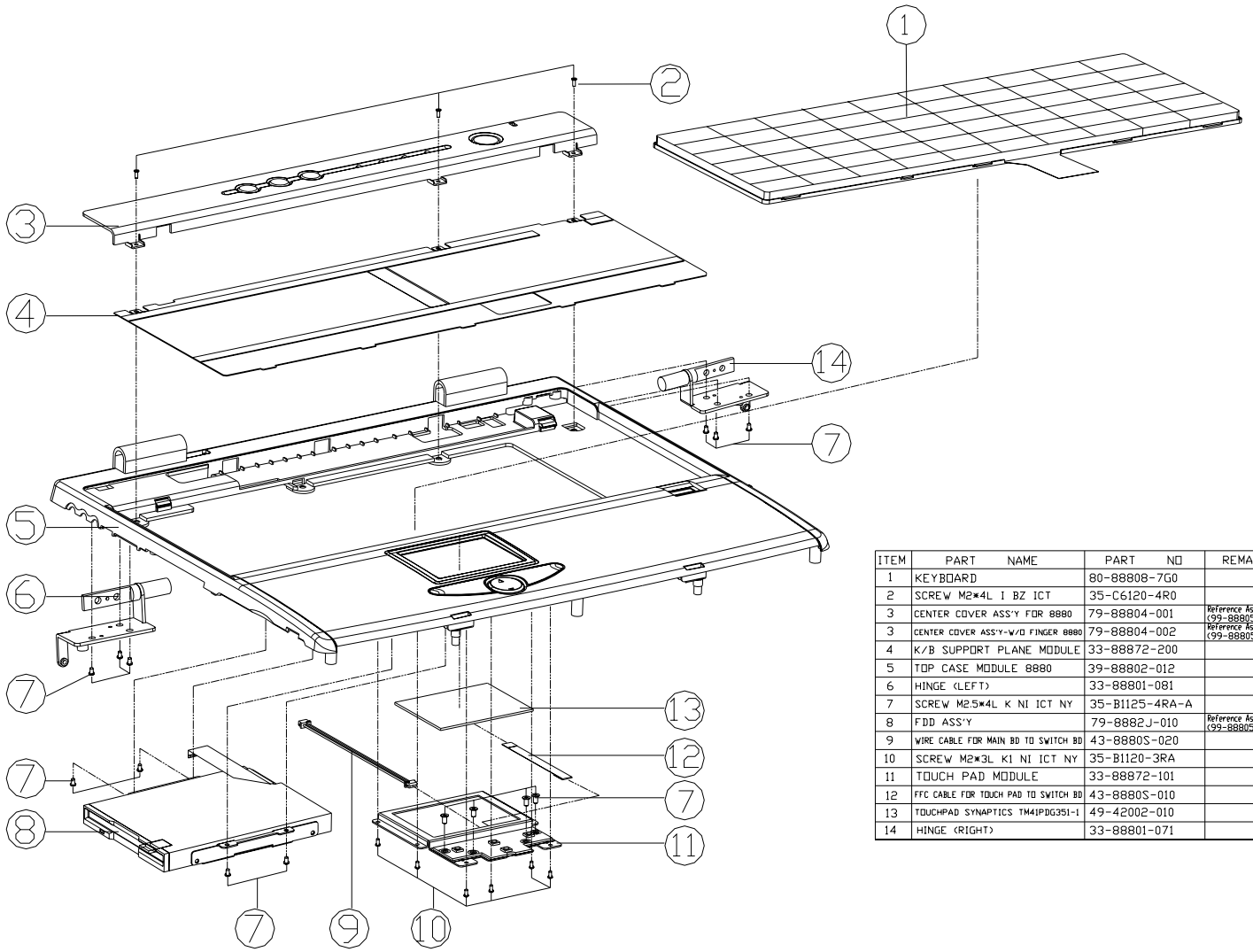
Note: Be sure to check any update notices. The parts shown in these illustrations are appropriate for the system at the time of publication. Over the product life, some parts may be improved or re-configured, resulting in *new* part numbers.

Part List Illustration Location

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

Table A- 1
Part List Illustration Location

Top (888E)



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD	80-88808-7G0	
2	SCREW M2*4L I BZ ICT	35-C6120-4R0	
3	CENTER COVER ASS'Y FOR 8880	79-88804-001	Reference Ass'y Dwg (99-88805-100)
3	CENTER COVER ASS'Y-W/O FINGER 8880	79-88804-002	Reference Ass'y Dwg (99-88805-101)
4	K/B SUPPORT PLANE MODULE	33-88872-200	
5	TOP CASE MODULE 8880	39-88802-012	
6	HINGE (LEFT)	33-88801-081	
7	SCREW M2.5*4L K NI ICT NY	35-B1125-4RA-A	
8	FDD ASS'Y	79-8882J-010	Reference Ass'y Dwg (99-88805-040)
9	WIRE CABLE FOR MAIN BD TO SWITCH BD	43-8880S-020	
10	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
11	TOUCH PAD MODULE	33-88872-101	
12	FFC CABLE FOR TOUCH PAD TO SWITCH BD	43-8880S-010	
13	TOUCHPAD SYNAPTICS TM41PDG351-1	49-42002-010	
14	HINGE (RIGHT)	33-88801-071	

Figure A-1
Top (888E)

Bottom (888E)

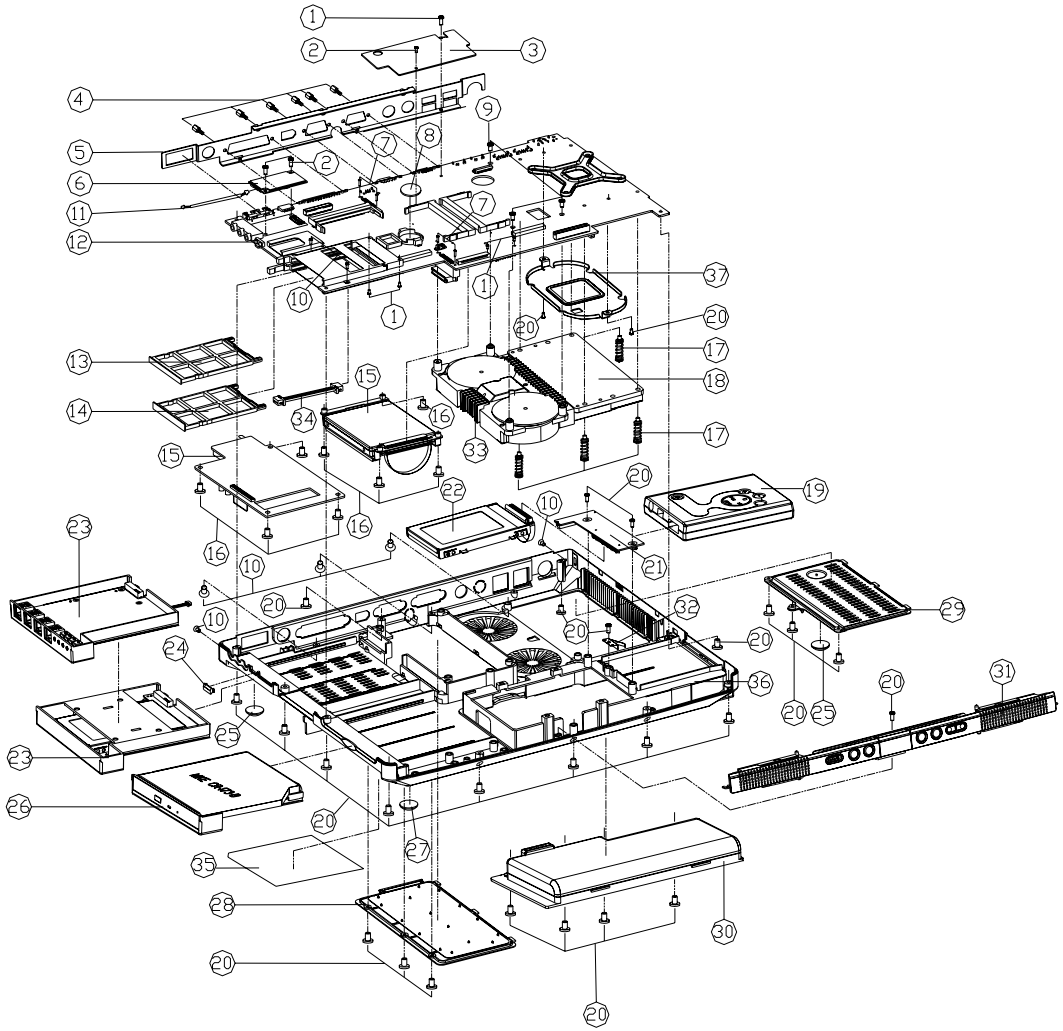


Figure A-2
Bottom (888E)

ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
2	SCREW M2*3L K1 NI NY	35-B1120-3RA	
3	CHIP HEAT SINK FOR 8880	31-8880N-010	
4	HEX STUD (SUM22 NI-PL) 11MM	34-07009-011-A	
5	I/O BRACKET 8880	33-8880S-010	
6	(INCLUDE TELCABLE) MDC MODEM MODULE	76-32200-003	
7	SCREW M2*10L B NI ICT	35-41120-100	
8	BATTERY 3V 210mA CR2032	23-62015-407	
9	SCREW M2.5*4L B BNI ICT	35-49125-4R0	
10	SCREW M2*4 P BN ICT	35-09120-4R0	
11	CABLE FOR MDC 30MM	43-8880Z-011-1	
12	MAIN BOARD	77-888E0-D0X	
13	CARBUS UP HOUSING 8880	42-88843-010	
14	CARBUS DOWN HOUSING 8880	42-88843-020	
15	TV TUNNER ASS'Y(OPTION)	79-8882T-010	Reference Ass'y Dwg (99-88805-060)
16	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
17	SCREW M2.5*0.45P*17 d=3.5 L=17.5 S=2.5 B	35-41025-175	
18	HEAT SINK MODULE FOR 8880	31-8887N-100	
19	MP3 ASS'Y	79-8882H-010	Reference Ass'y Dwg (99-88805-090)
20	SCREW M2.5*6LK BZ ICT	35-82125-6R0	
21	HDD & MP3 CONVERTER BOARD	77-8880N-D0X	
22	FIRST HDD ASS'Y	79-88821-010	Reference Ass'y Dwg (99-88805-051)
23	SECOND HDD(W/O) ASS'Y	79-88821-020	Reference Ass'y Dwg (99-88805-052)
23	THIRD HDD(W/O) ASS'Y	79-88821-030	Reference Ass'y Dwg (99-88805-053)
23	THIRD DUMMY HDD CASE ASS'Y	79-88821-040	Reference Ass'y Dwg (99-88805-054)
23	IP SHARE ASS'Y(OPTION)	79-8882U-010	Reference Ass'y Dwg (99-88805-056)
23	CD-RW ASS'Y(OPTION)	79-8882W-010	Reference Ass'y Dwg (99-88805-054)
23	COMBO ASS'Y(OPTION)	79-8882X-010	Reference Ass'y Dwg (99-88805-055)
24	IR LENS 8880	42-8881J-010	
25	BOTTOM CASE BACK RUBBER FOR 8880	47-88823-020	
26	CD-ROM ASS'Y (OPTION)	79-8882W-010	Reference Ass'y Dwg (99-88805-061)
26	DVD ASS'Y (OPTION)	79-8882V-010	Reference Ass'y Dwg (99-88805-062)
27	BOTTOM CASE RUBBER FOR 8880	47-88823-011	
28	2ND HDD COVER MODULE	42-8887I-200	
29	CPU COVER 8880	42-88873-020	
30	BATTERY(OPTION)	87-8888S-498	Reference Ass'y Dwg (99-88805-070)
30	BATTERY(OPTION)	87-8888S-4E8	Reference Ass'y Dwg (99-88805-070)
31	AUDIO DJ ASS'Y	79-88808-001	Reference Ass't Dwg (99-88805-069)
32	MP3 BRACKET(BATTERY PLATE)	33-8880H-030	
33	FAN MODULE FOR 8880	31-8887S-100	
34	WIRE CABLE FOR MAIN BD TO LAN	43-8880U-010	
35	PRODUCT LABEL(TUV) FOR 8880E	45-888E3-010	
36	BOTTOM CASE MODULE 8880	39-88803-012	
37	CPU FIXED BRACKET FOR 8880	33-8880S-031	
38	SCREW M2.5*4L B BNI ICT	35-49125-4R0	

LCD 15" (888E)

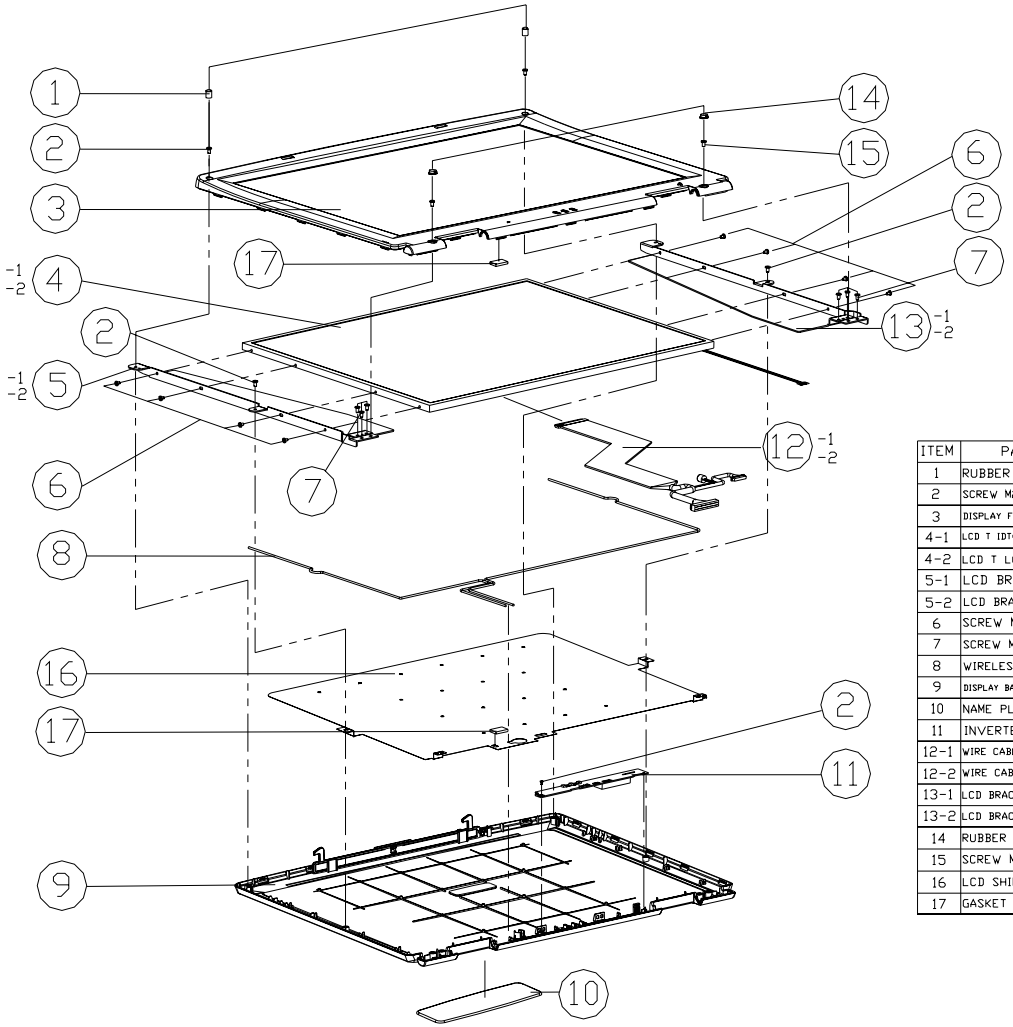


Figure A-3
LCD 15" (888E)

ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR LCD UP	47-88831-010	
2	SCREW M2*5L P NI ICT	35-01120-5R0-A	
3	DISPLAY FRONT PANEL MODULE FOR 15.0"	39-88801-011	
4-1	LCD T IDT(IBM) IAUX14(W/IPS) 15.0" UXGA	50-L4207-E01	
4-2	LCD T LG LP150U1-A2 15" UXGA	50-L4207-L00	
5-1	LCD BRACKET (LEFT) IBM 15"	33-88801-021	
5-2	LCD BRACKET (LEFT) LG 15.0"	33-88801-421	
6	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
7	SCREW M2.5*6L K1 NI ICT NY	35-82125-6R0	
8	WIRELESS LAN ANTENNA	23-742R4-030	
9	DISPLAY BACK PANEL MODULE FOR 15.0"/15.7"	39-88801-022	
10	NAME PLATE "NOTEBOOK"	45-18N01-010	
11	INVERTER BOARD	77-4200R-D02	
12-1	WIRE CABLE FOR 15.0" LCD UXGA IBM	43-88801-150	
12-2	WIRE CABLE FOR 15.0" LCD UXGA LG	43-88801-131	
13-1	LCD BRACKET (RIGHT) IBM 15.0"	33-88801-011	
13-2	LCD BRACKET (RIGHT) LG 15.0"	33-88801-411	
14	RUBBER FOR LCD DOWN	47-88821-020	
15	SCREW M2.5*7L B BN ICT NY	35-49125-7R0	
16	LCD SHIELDING	33-88801-090	
17	GASKET (L20*W9*H4.5)	47-00190-1J0	

LCD 15.7" (888E)

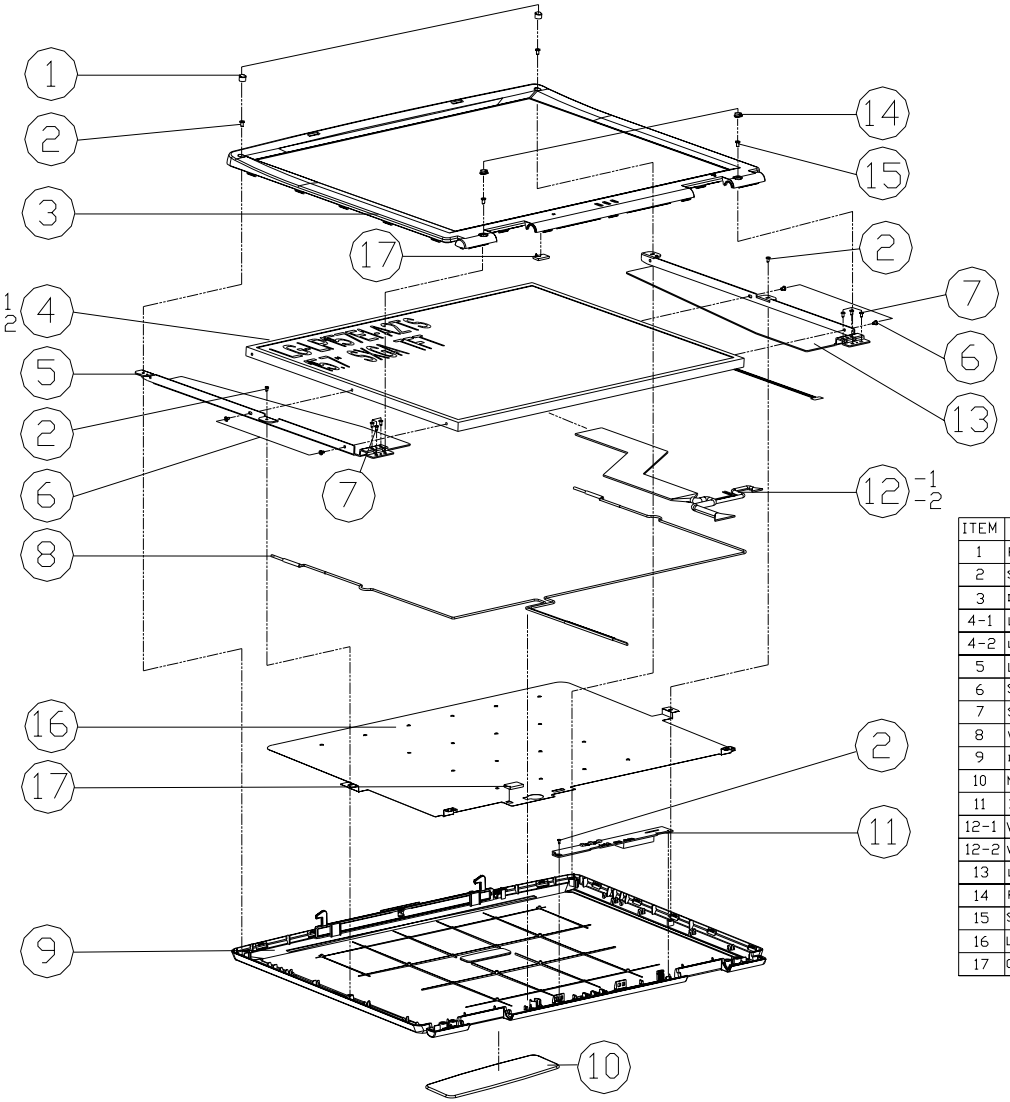
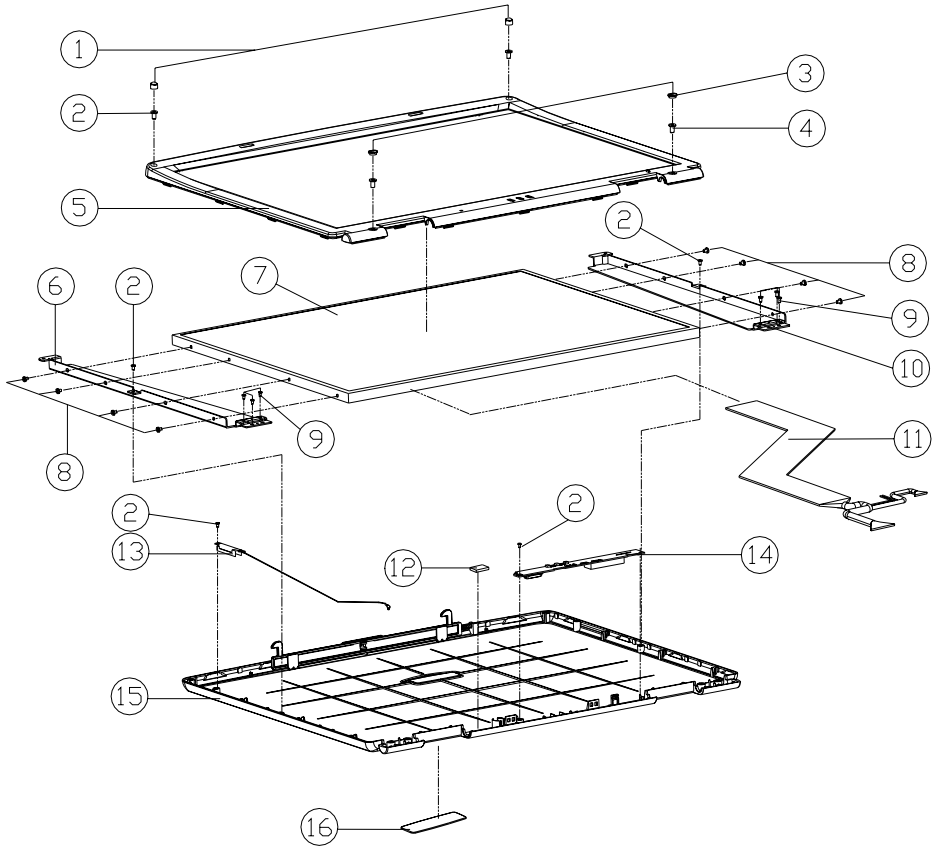


Figure A-4
LCD 15.7" (888E)

ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR LCD UP	47-88831-010	
2	SCREW M2*5L P NI ICT	35-01120-5R0-A	
3	DISPLAY FRONT PANEL MODULE FOR 15.7"	39-88801-111	
4-1	LCD 15.7" LG TFT LP157E1-A2TS	50-L3274-L00	
4-2	LCD 15.7" LG TFT LP157E1-C2 SXGA 7.4MM	50-L3274-L02	
5	LCD BRACKET (LEFT) LG 15.7"	33-88801-321	
6	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
7	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
8	WIRELESS LAN ANTENNA	23-742R4-030	
9	DISPLAY BACK PANEL MODULE FOR 15.0"/15.7"	39-88801-022	
10	NAME PLATE "NOTEBOOK"	45-88801-010	
11	INVERTER BOARD	77-4200R-D02	
12-1	WIRE CABLE FOR 15.7" LCD LG	43-88801-031	
12-2	WIRE CABLE FOR LG(LP157E1-C2) 15.7"	43-88801-060	
13	LCD BRACKET (RIGHT) LG 15.7"	33-88801-311	
14	RUBBER FOR LCD DOWN	47-88821-020	
15	SCREW M2.5*7L B BN ICT NY	35-49125-7R0	
16	LCD SHIELDING	33-88801-090	
17	GASKET (L20*W9*H4.5)	47-00190-1J0	

LCD 16" (888E)

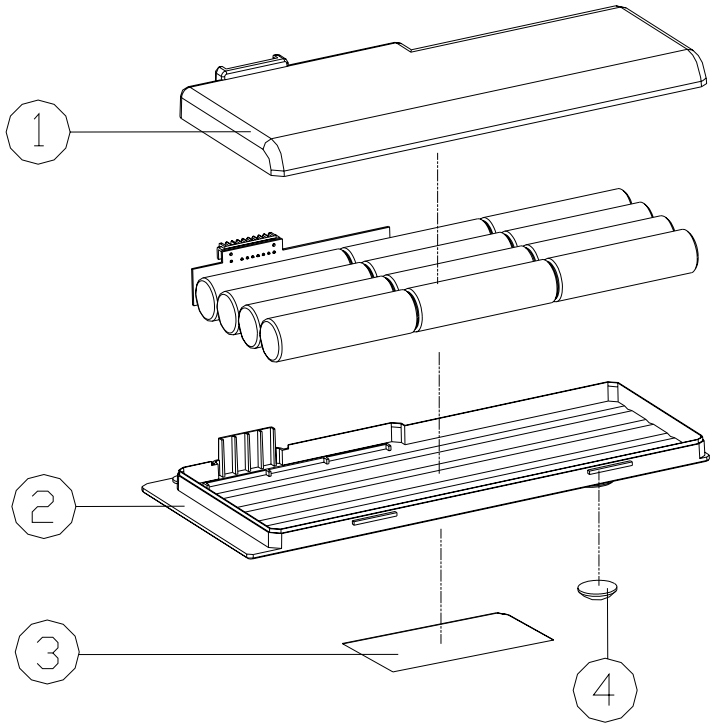


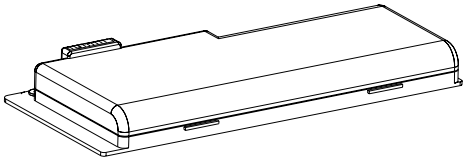
ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR LCD UP	47-88831-010	
2	SCREW M2*5L P NI ICT	35-01120-5R0-A	
3	RUBBER FOR LCD DOWN	47-88821-020	
4	SCREW M2.5*7L B BNI ICT	35-49125-7R0	
5	DISPLAY FRONT PANEL HITACHI 16.0 MODULE	39-888E1-110	
5	DISPLAY FRONT PANEL SHAPR 16.0 MODULE	39-888E1-010	
6	LCD BRACKET (LEFT) HITACHI 16.0"	33-888E1-020	
6	LCD BRACKET (LEFT) SHAPR 16.0"	33-888E1-040	
7	LCD 16.0" HITACHI TX41D56VC1CAA 8.0MM	50-M4275-I00	
7	LCD 16.0" SHARP LQ160E1LW02R 7.5MM	50-M4275-A00	
8	SCREW M2.5*4L K NI ICT NY	35-B1125-4RA-A	FOR HITACHI
8	SCREW M2*3L KI NI ICT NY	35-B1120-3RA	FOR SHAPR
9	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
10	LCD BRACKET (RIGHT) HITACHI 16.0"	33-888E1-010	
10	LCD BRACKET (RIGHT) SHAPR 16.0"	33-888E1-030	
11	LCD CABLE FOR HITACHI (16" UXGA)	43-888E1-010	
11	LCD CABLE FOR SHAPR (16" SXGA+)	43-888E1-020	
12	GASKET (L20*W9*H4.5)	47-00190-1J0	
13	ANTENNA PIFA PIFA 2.4G L L=460MM 888E	23-742R4-A50	
14	INVERTER BOARD	77-4200R-D02-1	FOR HITACHI
14	INVERTER BOARD	77-4200R-D02-3	FOR HITACHI/SHAPR
15	DISPLAY BACK PANEL MODULE 16.0"	39-888E1-020	
16	NAME PLATE "NOTEBOOK"	45-88801-010	

Figure A-5
LCD 16" (888E)

Battery (888E)

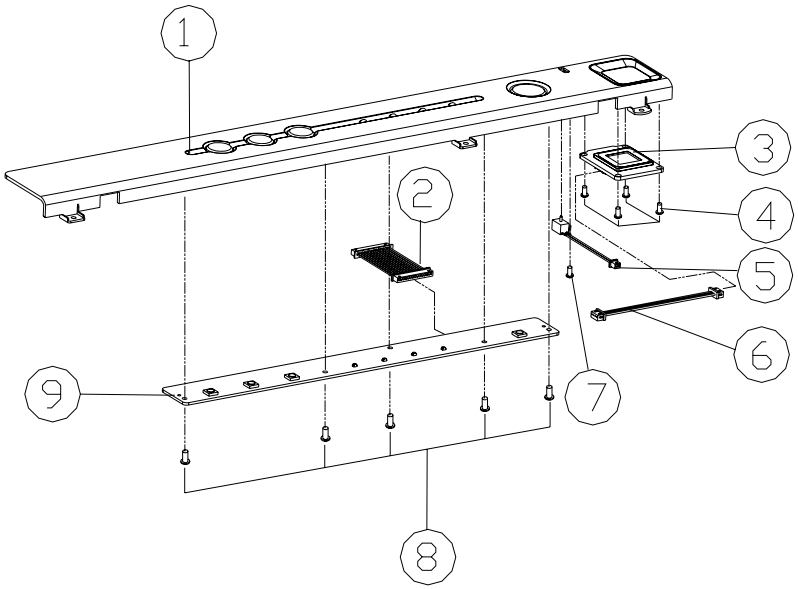
Figure A-6
Battery (888E)

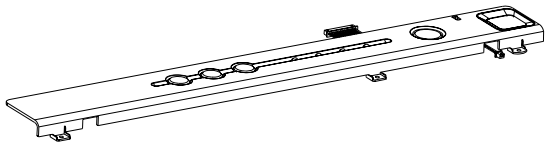




ITEM	PART NAME	PART NO	REMARK
1	BATTERY TOP CASE	42-8887M-010	
2	BATTERY BOTTOM CASE	42-8887M-020	
3	BATTERY LABEL	87-8888S-498	
3	BATTERY LABEL	87-8888S-4E8	
4	BOTTOM CASE RUBBER FOR 8880	47-88823-010	

Center Cover (888E)



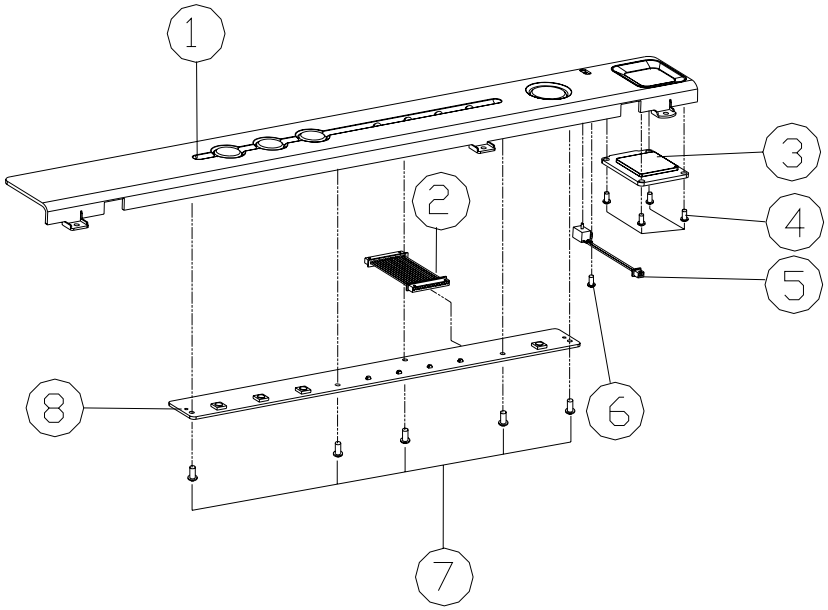


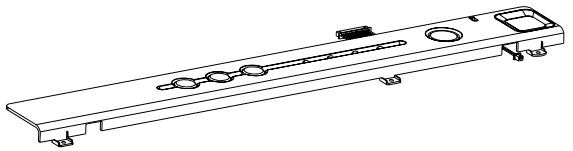
ITEM	PART NAME	PART NO	REMARK
1	CENTER COVER MODULE FOR 8880	42-88872-100	
2	WIRE CABLE FOR HOT KEY TO POWER SWITCH	43-8880S-031	
3	FINGER USB BOARD	77-8880F-D0X	
4	SCREW 11.4*3	35-01714-3R0	
5	WIRE CABLE FOR PANEL OFF 43-88804-010+53-70108-020	43-88804-011	
6	WIRE CABLE FOR MAIN BD TO FINGERPRINT BD	43-8880F-010	
7	SCER 11.4*4	35-01714-4R0	
8	SCERW M2*3L K1 NI ICT NY	35-B1120-3RA	
9	SWITCH KEY BOARD	77-88804-D0X	

Figure A-7
Center Cover (888E)

Center Cover Finger (888E)

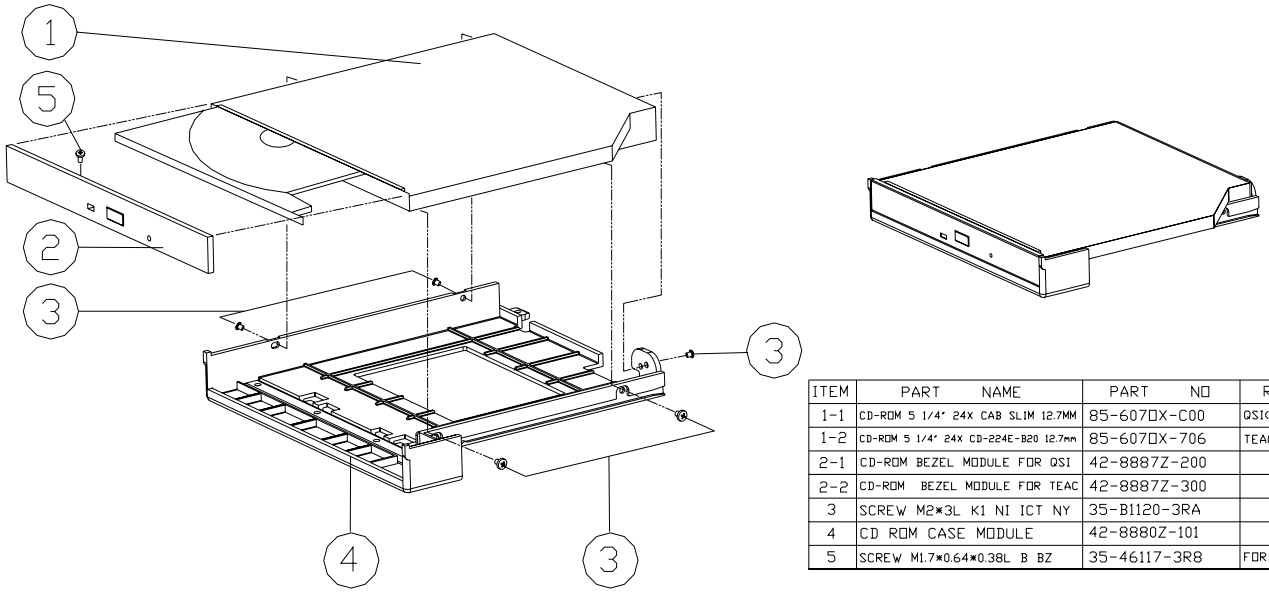
Figure A-8
Center Cover Finger (888E)





ITEM	PART NAME	PART NO	REMARK
1	CENTER COVER MODULE FOR 8880	42-88872-100	
2	WIRE CABLE FOR HOT KEY TO POWER SWITCH	43-8880S-031	
3	FINGER PRINT COVER	42-88882-060	
4	SCREW 11.4*3	35-01714-3R0	
5	WIRE CABLE FOR PANEL OFF 43-88804-010+53-70108-020	43-88804-011	
6	SCER 11.4*4	35-01714-4R0	
7	SCERW M2*3L K1 NI ICT NY	35-B1120-3RA	
8	SWITCH KEY BOARD	77-88804-D0X	

CD-ROM Drive (888E)

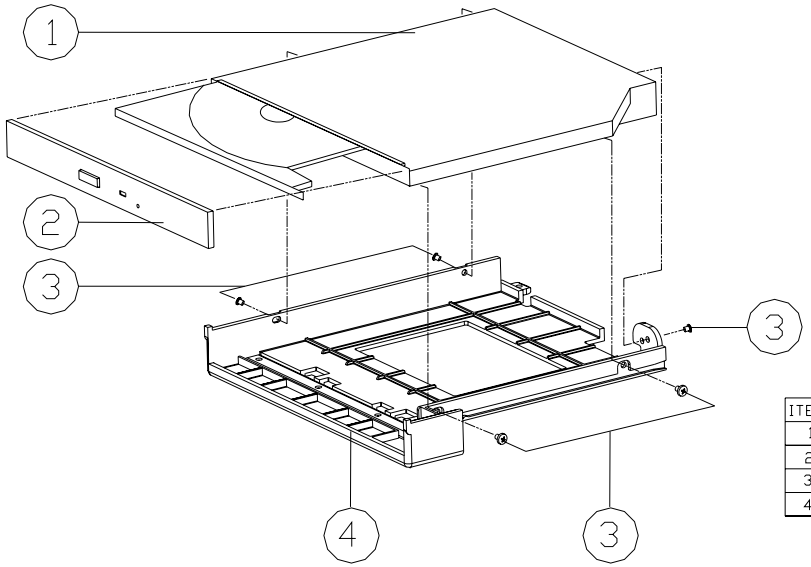


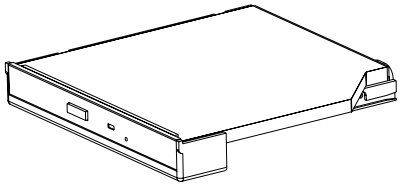
ITEM	PART NAME	PART NO	REMARK
1-1	CD-ROM 5 1/4" 24X CAB SLIM 12.7MM	85-607□X-C00	QSI(SCR-242)
1-2	CD-ROM 5 1/4" 24X CD-224E-B20 12.7mm	85-607□X-706	TEAC(REV:A02)
2-1	CD-ROM BEZEL MODULE FOR QSI	42-8887Z-200	
2-2	CD-ROM BEZEL MODULE FOR TEAC	42-8887Z-300	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE MODULE	42-8880Z-101	
5	SCREW M1.7*0.64*0.38L B BZ	35-46117-3R8	FOR QSI

Figure A-9
CD-ROM Drive (888E)

CD-RW Drive (888E)

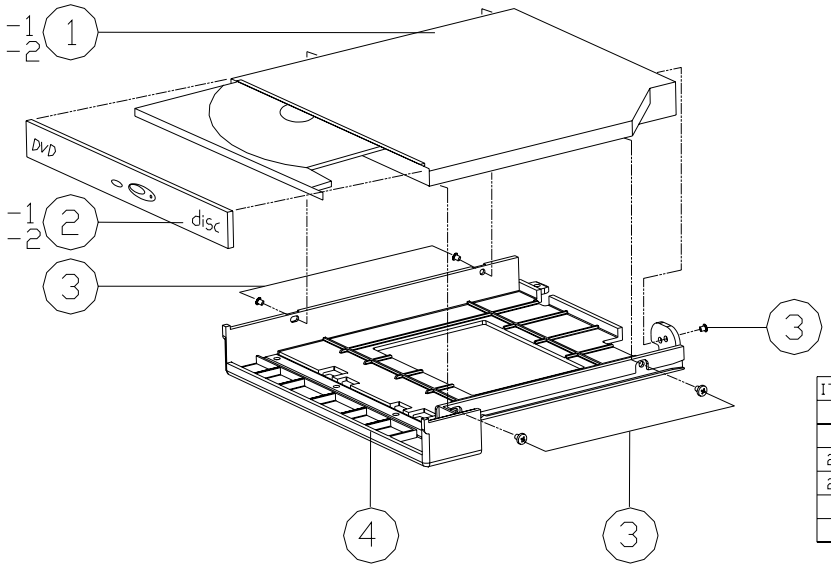
Figure A-10
CD-RW Drive (888E)

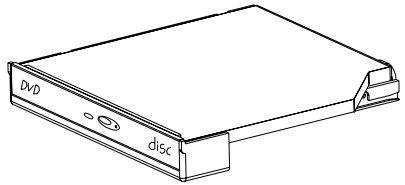




ITEM	PART NAME	PART NO	REMARK
1	CD-R/W 5 1/4" 8X 12.7	85-8078X-K00	UJDA330CL-Z KME
2	KME CD-RW BEZEL MODULE	42-8887W-100	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE FOR 8880	42-8880Z-101	

Combo Drive (888E)



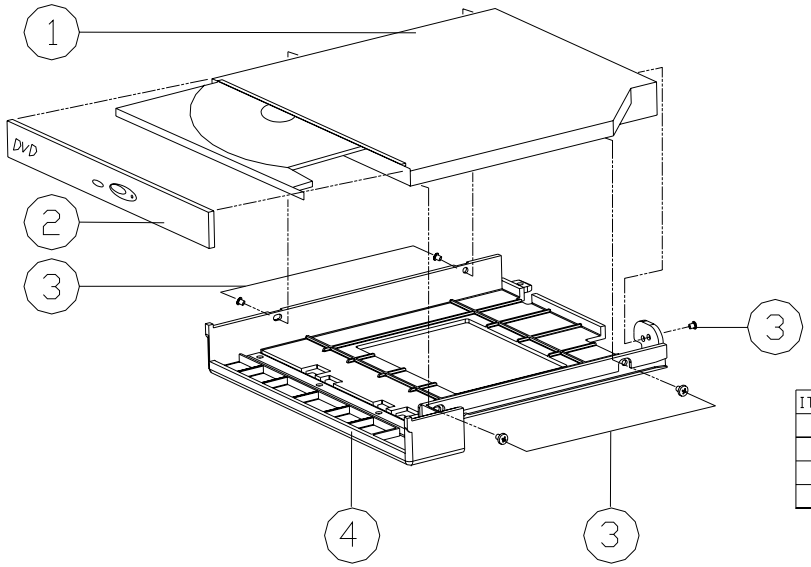


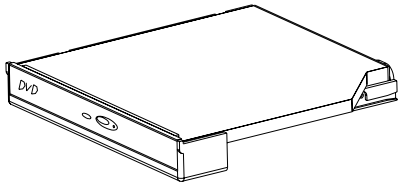
ITEM	PART NAME	PART NO	REMARK
1-1	CD-RW/DVD 5 1/4" 8X 12.7mm	85-8078X-T00	SD-R2102 TOSHIBA
1-2	CD-RW/DVD 5 1/4" 8X 12.7mm	85-9078X-700	DW-28E-82 TEAC
2-1	TOSHIBA COMBO BEZEL MODULE	42-8887X-100	
2-2	TEAC COMBO BEZEL MODULE	42-8887X-200	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE FOR 8880	42-8880Z-101	

Figure A-11
Combo Drive (888E)

DVD-ROM Drive (888E)

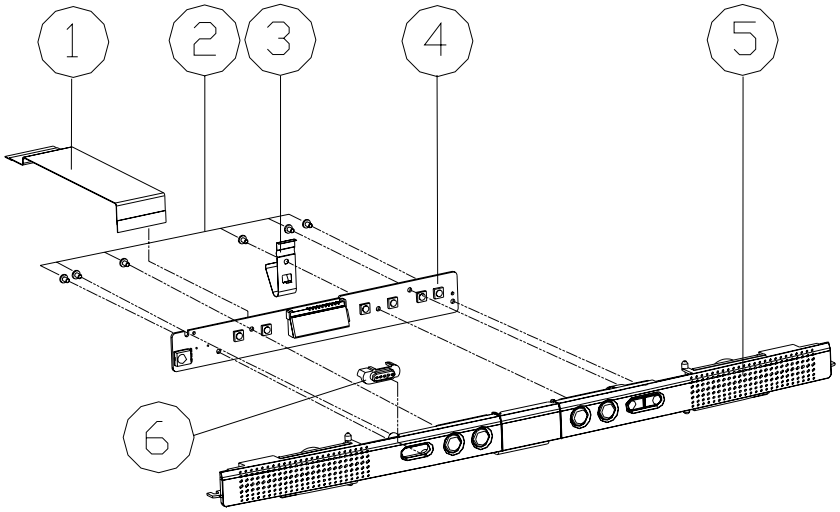
Figure A-12
DVD-ROM Drive (888E)

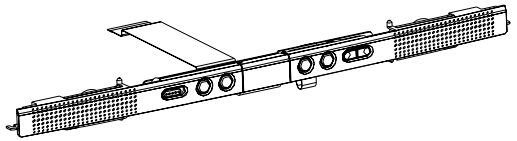




ITEM	PART NAME	PART NO	REMARK
1	DVD 5 1/4" 8X 12.7mm	85-7078X-T04	SD-C2502 TOSHIBA
2	TOSHIBA DVD (8X SD-C2502)BEZEL MODULE	42-8887V-200	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE MODULE	42-8880Z-101	

Audio DJ (888E)



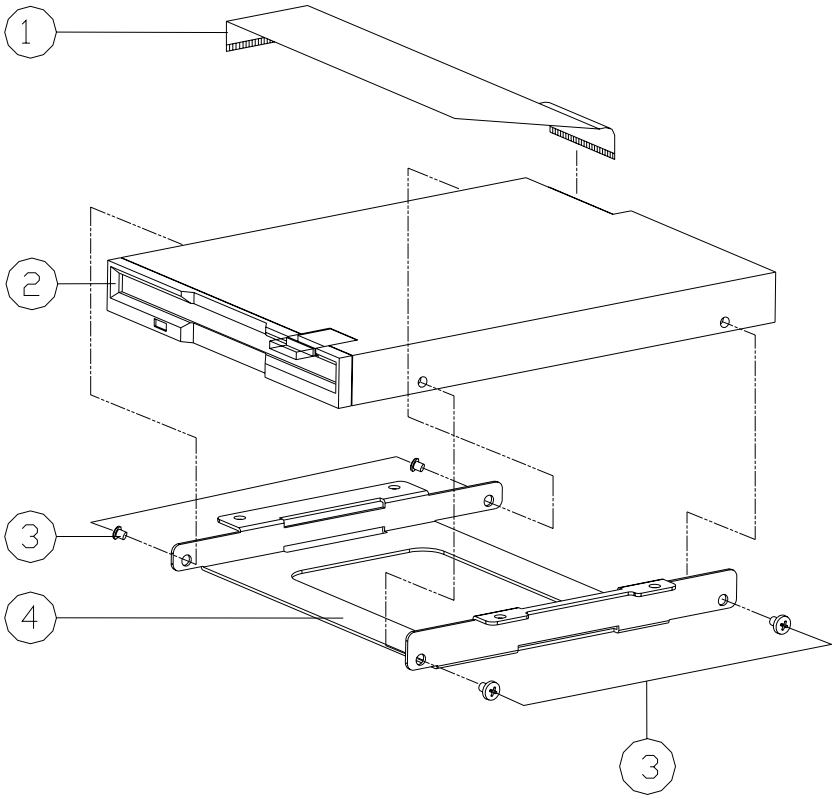


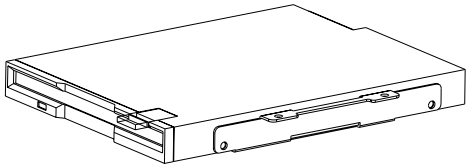
ITEM	PART NAME	PART NO	REMARK
1	FFC CABLE FOR MAIN BD TO LCM CTRL BD	43-88808-011	
2	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
3	AUDIO DJ EMI SPRING FOR 8880	38-88808-010	
4	AUDIO CONTROL LCM BOARD	77-88808-D03	
5	AUDIO JACK BEZEL MODULE FOR 8880	42-88878-100	
6	AUDIO DJ POWER KNOB FOR 8880	42-88888-020	

Figure A-13
Audio DJ (888E)

Floppy Disk Drive (888E)

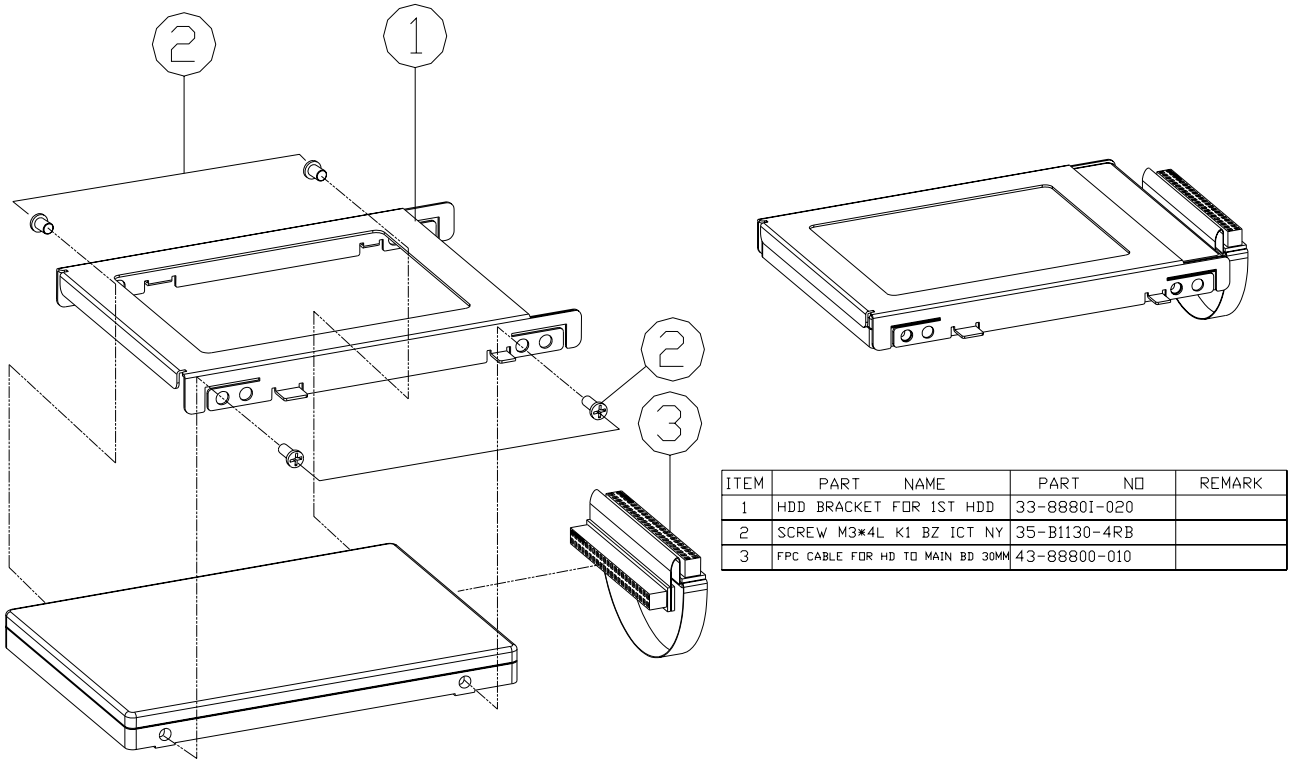
Figure A-14
Floppy Disk Drive (888E)





ITEM	PART NAME	PART NO	REMARK
1	FFC CABLE FOR MAIN BD TO FLOPPY DISK	43-8880I-010	
2	3.5" FDD 12.7mm Y-E DATA	85-11700-Y01-1	YD-702J-6637J
3	SCREW M2.5*3L K1 BK/O. NY	35-B4125-3RA	
4	FDD BRACKET FOR 8880	33-8880J-010	

First Hard Disk Drive (888E)

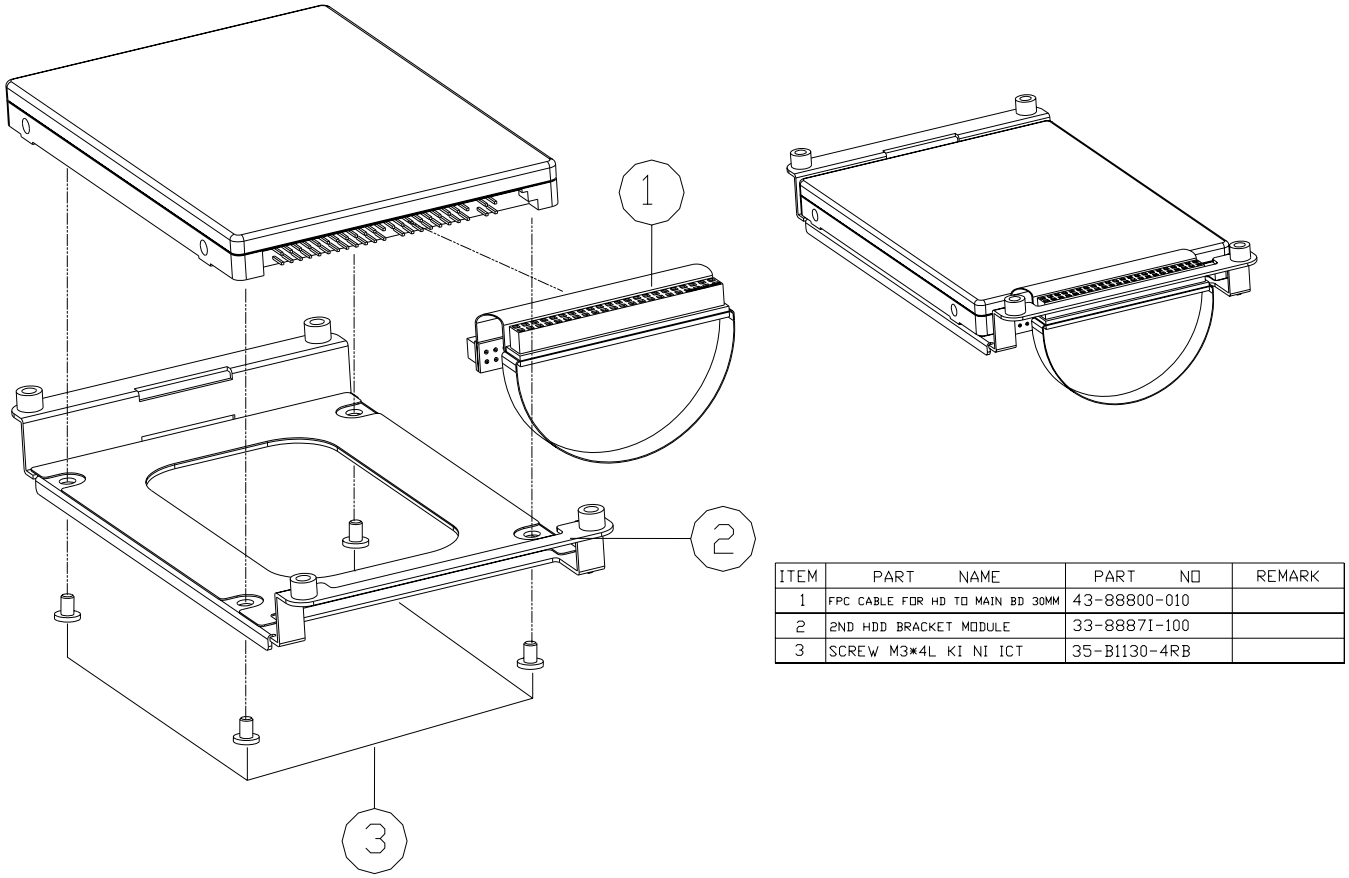


ITEM	PART NAME	PART NO	REMARK
1	HDD BRACKET FOR 1ST HDD	33-8880I-020	
2	SCREW M3*4L K1 BZ ICT NY	35-B1130-4RB	
3	FPC CABLE FOR HD TO MAIN BD 30MM	43-88800-010	

Figure A-15
First HDD Drive (888E)

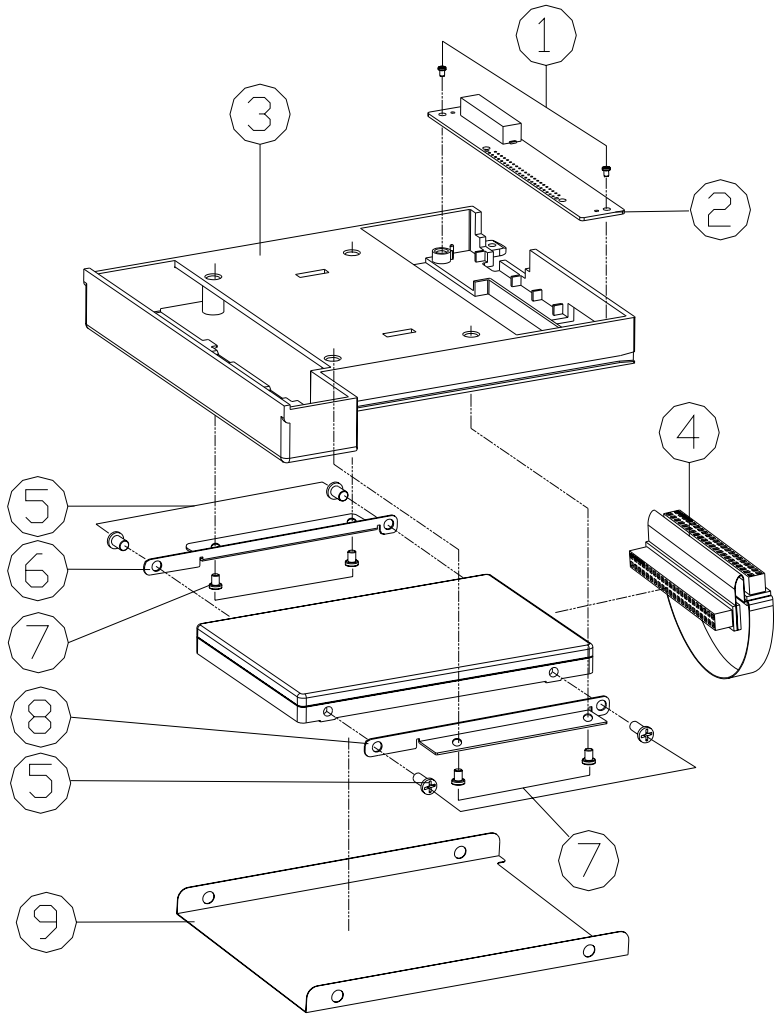
Second Hard Disk Drive (888E)

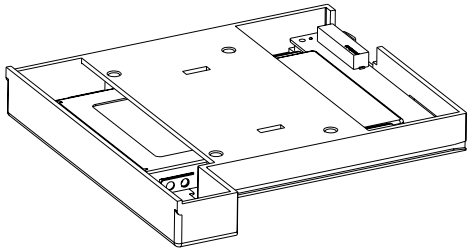
Figure A-16
Second HDD Drive (888E)



ITEM	PART NAME	PART NO	REMARK
1	FPC CABLE FOR HD TO MAIN BD 30MM	43-88800-010	
2	2ND HDD BRACKET MODULE	33-8887I-100	
3	SCREW M3*4L KI NI ICT	35-B1130-4RB	

Third Hard Disk Drive (888E)



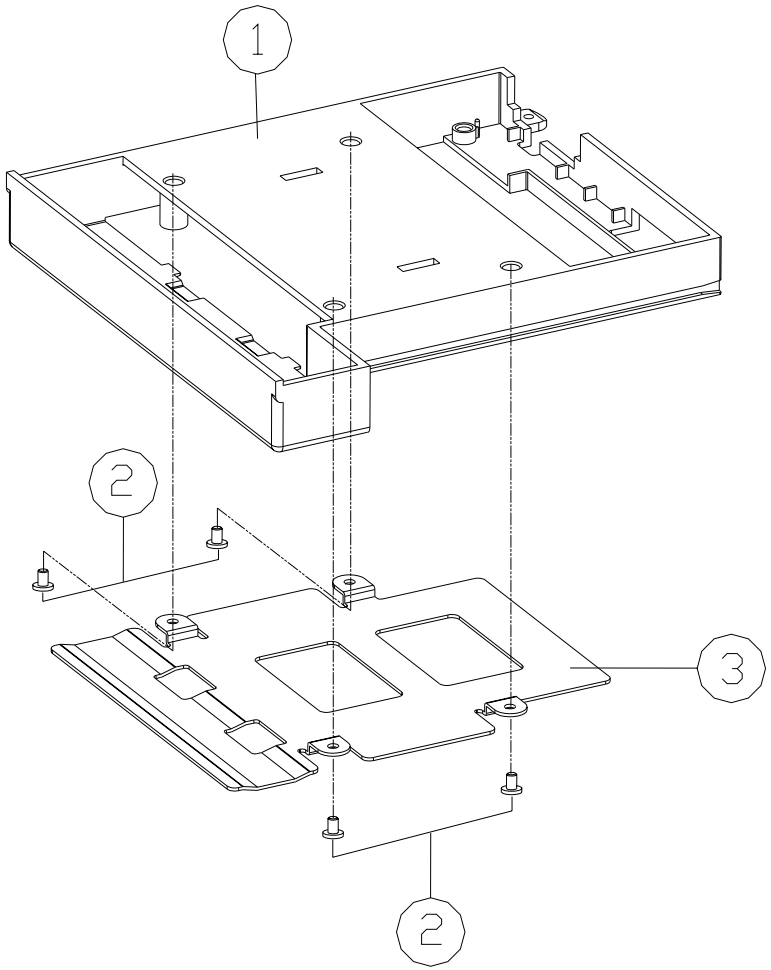


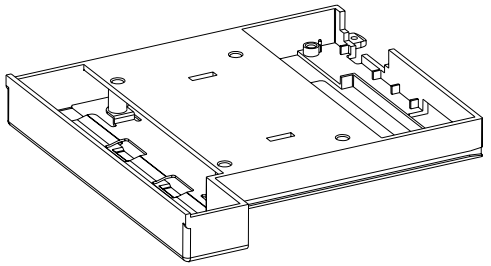
ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
2	3RD HDD CONVERTER BOARD	77-8881N-D0X	
3	3RD HDD CASE FOR 8880	42-8887I-010	
4	FPC CABLE FOR HD TO MAIN BD 30MM	43-88800-010	
5	SCREW M3*4L K1 BZ ICT NY	35-B6130-4RA	
6	3RD HDD BRACKET-L	33-8880I-050	
7	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
8	3RD HDD BRACKET-R	33-8880I-040	
9	3RD HDD MYLAR	40-8885I-020	

Figure A-17
Third Hard Disk Drive (888E)

Third Hard Disk - Dummy (888E)

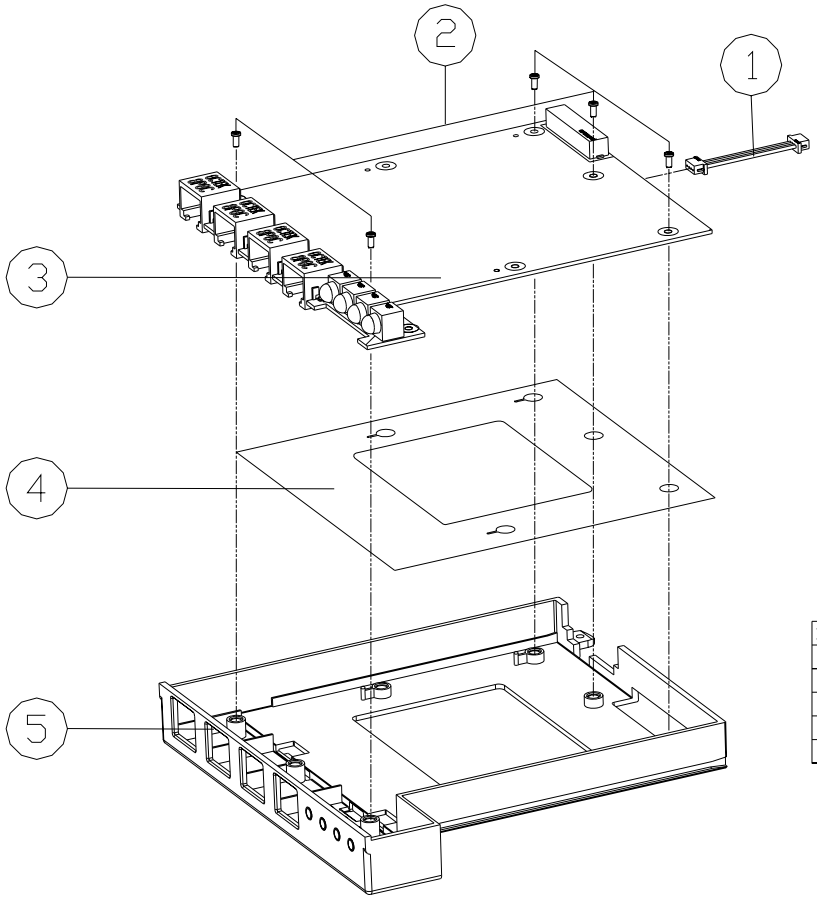
Figure A-18
Third Hard Disk - Dummy (888E)

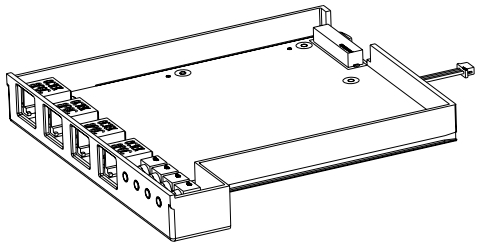




ITEM	PART NAME	PART NO	REMARK
1	3RD HDD CASE FOR 8880	42-8887I-010	
2	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
3	SUPPORT BRACKET FOR 3RD HDD	33-8880I-060	

IP Sharing Module (888E)



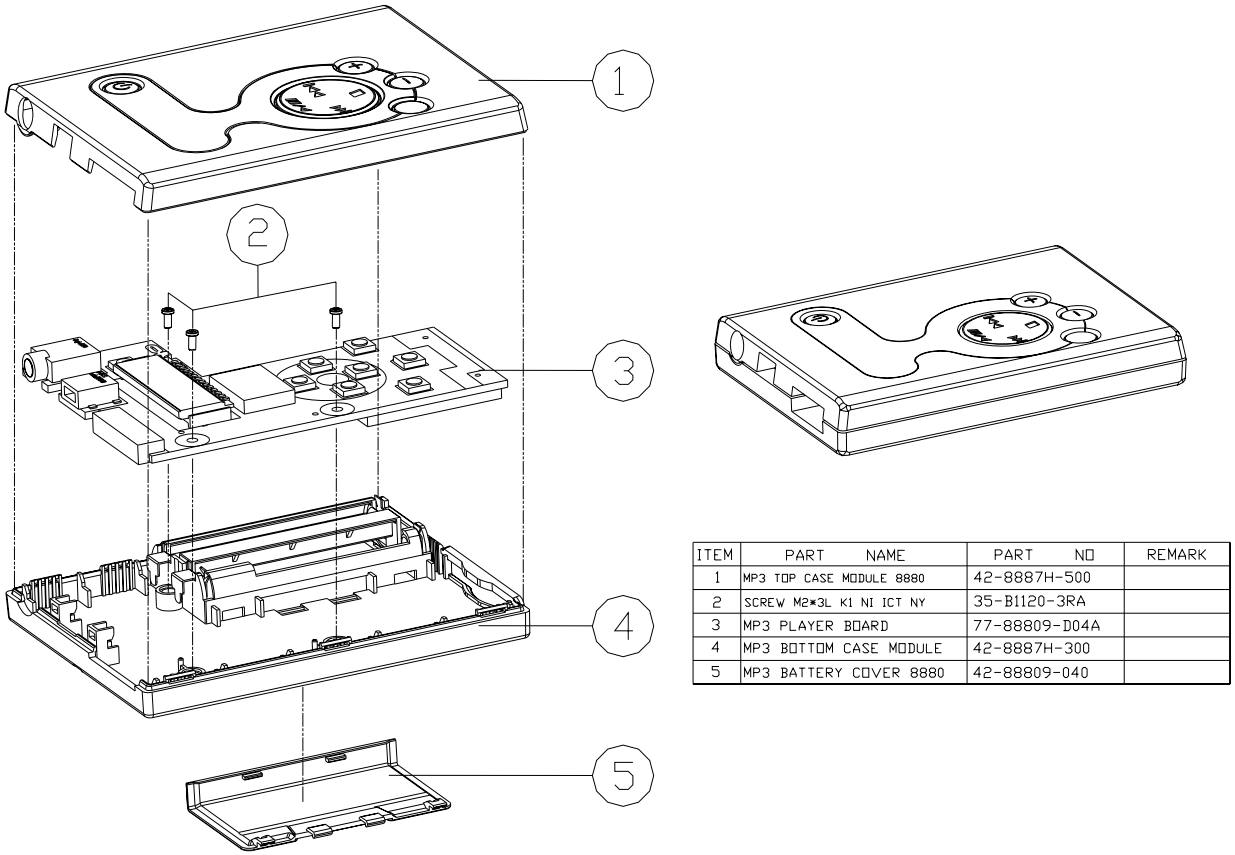


ITEM	PART NAME	PART NO	REMARK
1	WIRE CABLE FOR MAIN BD TO LAN	43-8880U-010	
2	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
3	IP SHARE BOARD MODULE	88-88820-300	
4	IP CASE MYLAR	40-8880U-010	
5	IP CASE MODULE	42-8887U-100	

Figure A-19
IP Sharing Module (888E)

MP3 Player (888E)

Figure A-20
MP3 Player (888E)



ITEM	PART NAME	PART NO	REMARK
1	MP3 TOP CASE MODULE 8880	42-8887H-500	
2	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
3	MP3 PLAYER BOARD	77-88809-D04A	
4	MP3 BOTTOM CASE MODULE	42-8887H-300	
5	MP3 BATTERY COVER 8880	42-88809-040	

Appendix B:Part Lists for 8880

This appendix breaks down the **8880** model notebook's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

Note: This section indicates the *manufacturer's* part numbers. Your organization may use a different system, so be sure to cross-check any relevant documentation.

Note: Some assemblies may have parts in common (especially screws). However, the part lists DO NOT indicate the total number of duplicated parts used.

Note: Be sure to check any update notices. The parts shown in these illustrations are appropriate for the system at the time of publication. Over the product life, some parts may be improved or re-configured, resulting in *new* part numbers.

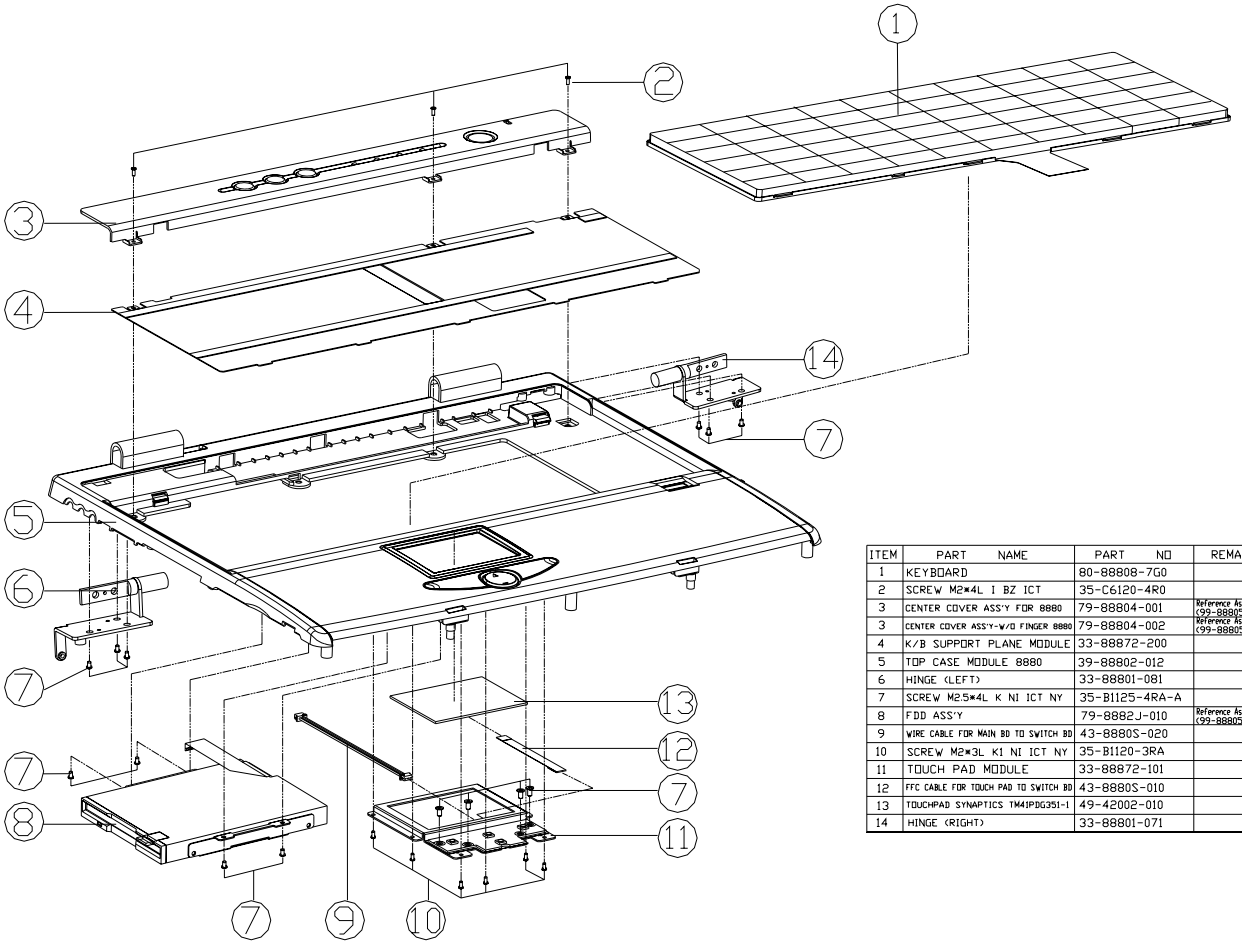
Part List Illustration Location

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

Table B - 1
Part List Illustration Location

Part	8880	Part	8880
Top	*page B- 3*	DVD-ROM Drive	*page B- 13*
Bottom	*page B- 4*	Audio DJ	*page B- 14*
LCD 15"	*page B- 5*	Floppy Disk Drive	*page B- 15*
LCD 15.7"	*page B- 6*	First Hard Disk Drive	*page B- 16*
Battery	*page B- 7*	Second Hard Disk Drive	*page B- 17*
Center Cover	*page B- 8*	Third Hard Disk Drive	*page B- 18*
Center Cover Finger	*page B- 9*	Third Hard Disk - Dummy	*page B- 19*
CD-ROM Drive	*page B- 10*	IP Sharing Module	*page B- 20*
CD-RW Drive	*page B- 11*	MP3 Player	*page B- 21*
Combo Drive	*page B- 12*		

Top (8880)



ITEM	PART NAME	PART NO	REMARK
1	KEYBOARD	80-88808-7G0	
2	SCREW M2*4L I BZ ICT	35-C6120-4R0	
3	CENTER COVER ASS'Y FOR 8880	79-88804-001	Reference Ass'y Dwg (99-88805-100)
3	CENTER COVER ASS'Y-W/O FINGER 8880	79-88804-002	Reference Ass'y Dwg (99-88805-101)
4	K/B SUPPORT PLANE MODULE	33-88872-200	
5	TOP CASE MODULE 8880	39-88802-012	
6	HINGE (LEFT)	33-88801-081	
7	SCREW M2.5*4L K NI ICT NY	35-B1125-4RA-A	
8	FDD ASS'Y	79-8882J-010	Reference Ass'y Dwg (99-88805-040)
9	WIRE CABLE FOR MAIN BD TO SWITCH BD	43-8880S-020	
10	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
11	TOUCH PAD MODULE	33-88872-101	
12	FFC CABLE FOR TOUCH PAD TO SWITCH BD	43-8880S-010	
13	TOUCHPAD SYNAPTICS TM41PDG351-1	49-42002-010	
14	HINGE (RIGHT)	33-88801-071	

Figure B-1
Top (8880)

Bottom (8880)

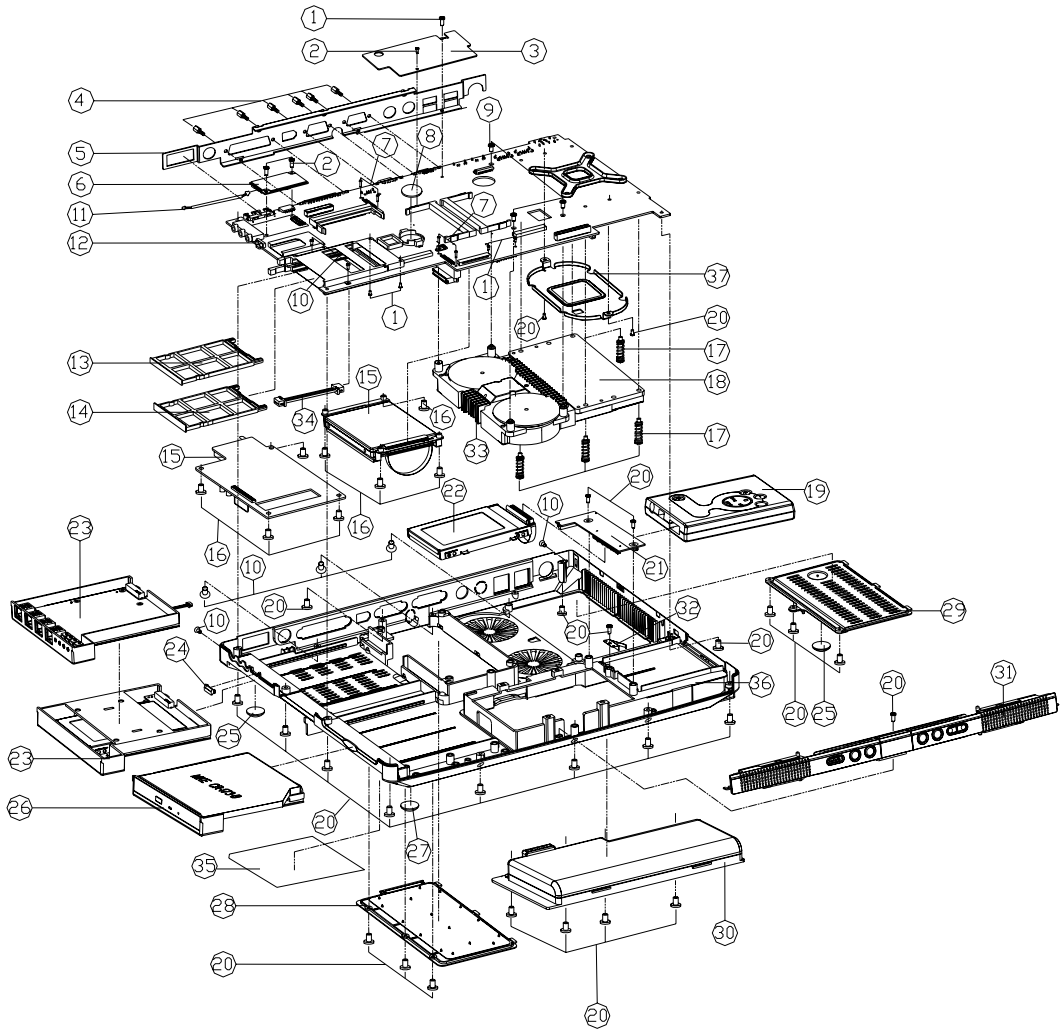
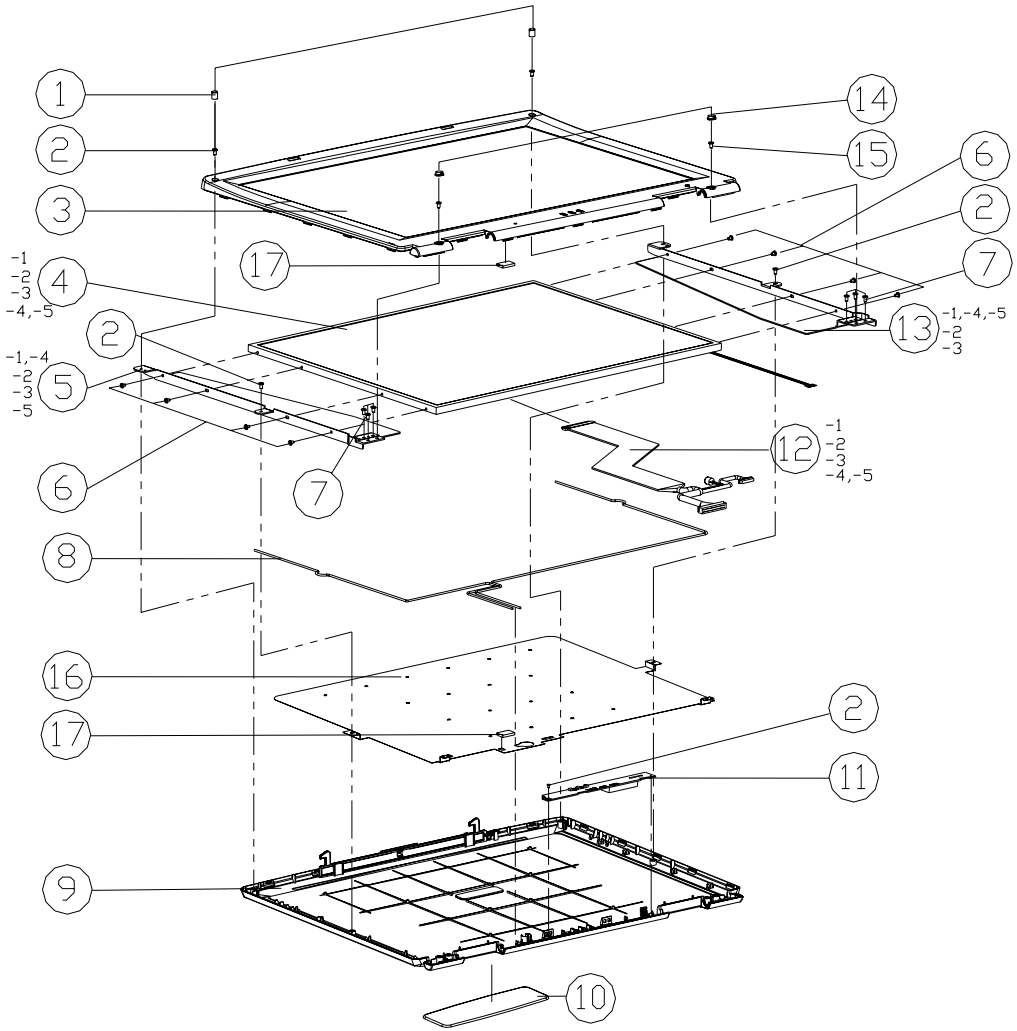


Figure B-2
Bottom (8880)

ITEM	PART NAME	PART NO	REMARK
1	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
2	SCREW M2*3L K1 NI NY	35-B1120-3RA	
3	CHIP HEAT SINK FOR 8880	31-8880N-010	
4	HEX STUD (SUM22 NI-PL) 11MM	34-07009-011-A	
5	I/O BRACKET 8880	33-8880S-010	
6	(INCLUDE TEL.CABLE) MDC MODEM MODULE	76-32200-003	
7	SCREW M2*10L B NI ICT	35-41120-100	
8	BATTERY 3V 210mA CR2032	23-62015-407	
9	SCREW M2.5*4L B BNI ICT	35-49125-4R0	
10	SCREW M2*4 P BN ICT	35-09120-4R0	
11	CABLE FOR MDC 30MM JAE-F1-S2S	43-8880Z-010	
12	MAIN BOARD	77-88800-D0X	
13	CARBUS UP HOUSING 8880	42-88843-010	
14	CARBUS DOWN HOUSING 8880	42-88843-020	
15	TV TUNNER ASS'Y(OPTION)	79-8882T-010	Reference Ass'y Dwg (99-88805-060)
16	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
17	SCREW M2.5*0.45P*17 d=3.5 L=17.5 S=2.5 B	35-41025-175	
18	HEAT SINK MODULE FOR 8880	31-8887N-100	
19	MP3 ASS'Y	79-8882H-010	Reference Ass'y Dwg (99-88805-090)
20	SCREW M2.5*6LK BZ ICT	35-82125-6R0	
21	HDD & MP3 CONVERTER BOARD	77-8880N-D0X	
22	FIST HDD ASS'Y	79-8882I-010	Reference Ass'y Dwg (99-88805-051)
23	SECOND HDD(W/O) ASS'Y	79-8882I-020	Reference Ass'y Dwg (99-88805-052)
23	THIRD HDD(W/O) ASS'Y	79-8882I-030	Reference Ass'y Dwg (99-88805-053)
23	THIRD DUMMY HDD CASE ASS'Y	79-8882I-040	Reference Ass'y Dwg (99-88805-053-1)
23	IP SHARE ASS'Y(OPTION)	79-8882U-010	Reference Ass'y Dwg (99-88805-056)
23	CD-RW ASS'Y(OPTION)	79-8882W-010	Reference Ass'y Dwg (99-88805-054)
23	COMBO ASS'Y(OPTION)	79-8882X-010	Reference Ass'y Dwg (99-88805-055)
24	IR LENS 8880	42-88813-010	
25	BOTTOM CASE BACK RUBBER FOR 8880	47-88823-020	
26	CD-ROM ASS'Y (OPTION)	79-8882W-010	Reference Ass'y Dwg (99-88805-061)
26	DVD ASS'Y (OPTION)	79-8882V-010	Reference Ass'y Dwg (99-88805-062)
27	BOTTOM CASE RUBBER FOR 8880	47-88823-010	
28	2ND HDD COVER MODULE	42-88871-200	
29	CPU COVER 8880	42-88873-020	
30	BATTERY(OPTION)	87-8888S-498	Reference Ass'y Dwg (99-88805-070)
30	BATTERY(OPTION)	87-8888S-4E8	Reference Ass'y Dwg (99-88805-070)
31	AUDIO DJ BEZEL MODULE	42-88878-100	Reference Ass'y Dwg (99-88805-080)
32	MP3 BRACKET(BATTERY PLATE)	33-8880H-030	
33	FAN MODULE FOR 8880	31-8887S-100	
34	WIRE CABLE FOR MAIN BD TO LAN	43-8880U-010	
35	PRODUCT LABEL(TUV) FOR 8880	45-88803-010	
36	BOTTOM CASE MODULE 8880	39-88803-011	
37	CPU FIXED BRACKET	33-8880S-030	
38	SCREW M2.5*4L B BNI ICT	35-49125-4R0	

LCD 15" (8880)

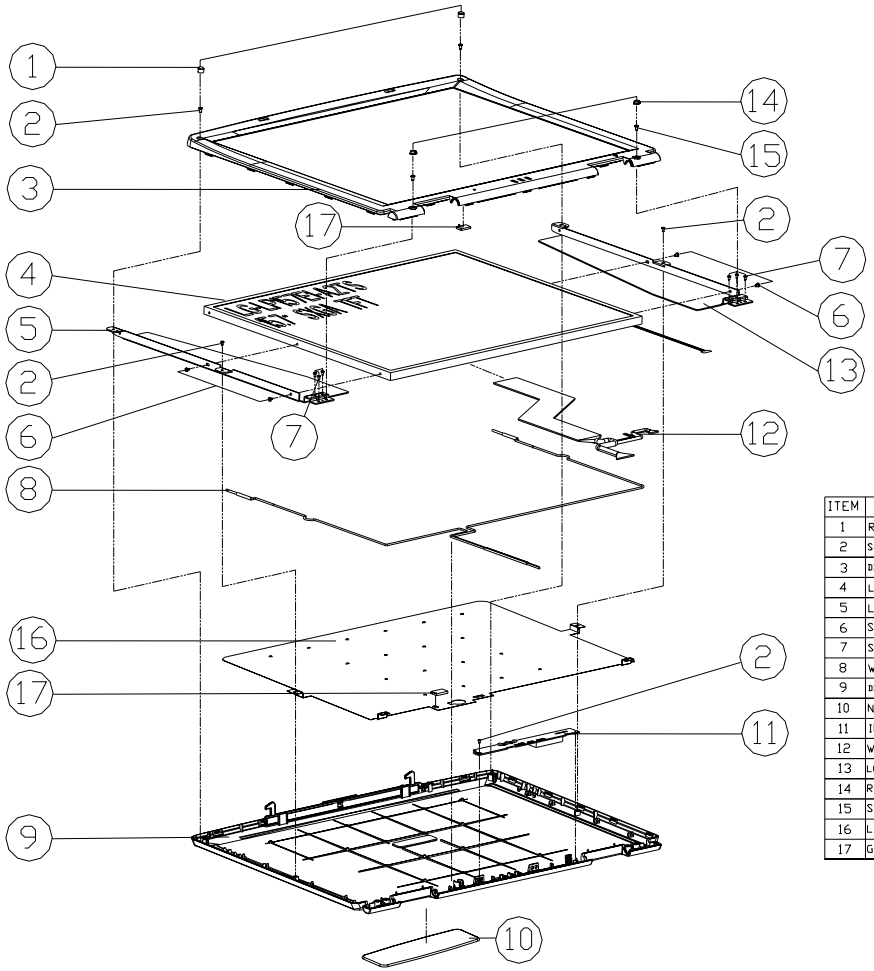


ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR LCD UP	47-88831-010	
2	SCREW M2*5L P NI ICT	35-01120-5R0-A	
3	DISPLAY FRONT PANEL MODULE FOR 15.0"	39-88801-011	
4-1	LCD 15.0 IBM TFT OEM95C-02	50-L3241-E00	
4-2	LCD 15.0 UNIPAC TFT B150PN01	50-L5259-U10	
4-3	LCD T CPT CLAA150PA01 15.0"	50-L5270-C00	
4-4-5	LCD T IDT(IBM) TAUX14(W/IPS) 15.0" UXGA	50-L4207-E01	
5-1-4	LCD BRACKET (LEFT) IBM 15"	33-88801-021	
5-2	LCD BRACKET (LEFT) UNIPAC 15.0"	33-88801-221	
5-3	LCD BRACKET (LEFT) CPT 15.0"	33-88801-121	
5-5	LCD BRACKET (LEFT) LG 15.0"	33-88801-421	
6	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
7	SCREW M2.5*6L K1 NI ICT NY	35-82125-6R0	
8	WIRELESS LAN ANTENNA	23-742R4-030	
9	DISPLAY BACK PANEL MODULE FOR 15.0"/15.7"	39-88801-021	
10	NAME PLATE "NOTEBOOK"	45-18N01-010	
11	INVERTER BOARD	77-4200R-D02	
12-1	WIRE CABLE FOR 15.0" LCD IBM	43-88801-050	
12-2	WIRE CABLE FOR 15.0" LCD UNIPAC	43-88801-010	
12-3	WIRE CABLE FOR 15.0" LCD CPT	43-88801-040	
12-4-5	WIRE CABLE FOR 15.0" LCD UXGA LG	43-88801-130	
13-1-4-5	LCD BRACKET (RIGHT) IBM 15.0"	33-88801-011	
13-2	LCD BRACKET (RIGHT) UNIPAC 15.0"	33-88801-211	
13-3	LCD BRACKET (RIGHT) CPT 15.0"	33-88801-111	
14	RUBBER FOR LCD DOWN	47-88821-020	
15	SCREW M2.5*7L B BN ICT NY	35-49125-7R0	
16	LCD SHIELDING	33-88801-090	
17	GASKET (L20*W9*H4.5)	47-00190-1J0	

Figure B-3
LCD 15" 8880

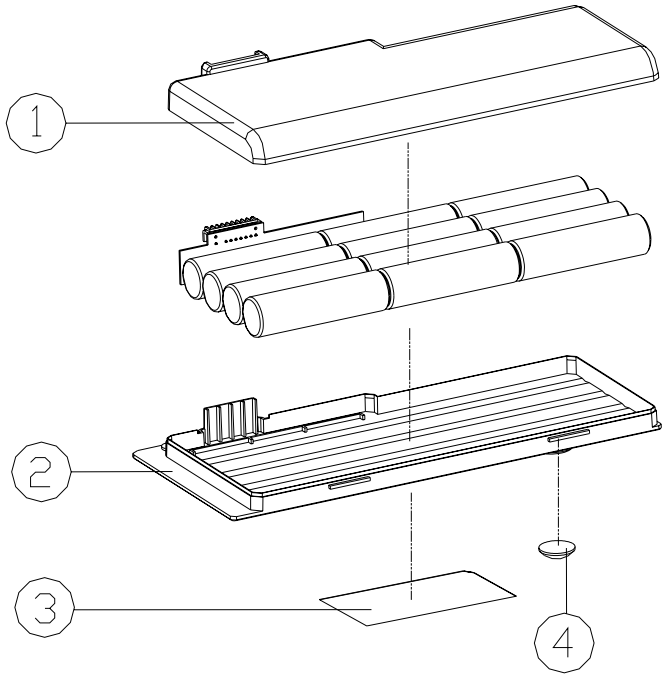
LCD 15.7" (8880)

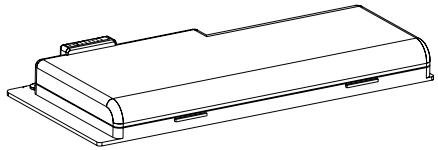
Figure B-4
LCD 15.7" 8880



ITEM	PART NAME	PART NO	REMARK
1	RUBBER FOR LCD UP	47-88831-010	
2	SCREW M2*5L P NI ICT	35-01120-5R0-A	
3	DISPLAY FRONT PANEL MODULE FOR 15.7"	39-88801-111	
4	LCD 15.7" LG TFT LP157E1-A2TS	50-L3274-L00	
5	LCD BRACKET (LEFT) LG 15.7"	33-88801-321	
6	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
7	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
8	WIRELESS LAN ANTENNA	23-742R4-030	
9	DISPLAY BACK PANEL MODULE FOR 15.0"/15.7"	39-88801-021	
10	NAME PLATE "NOTEBOOK"	45-88801-010	
11	INVERTER BOARD	77-4200R-D0X	
12	WIRE CABLE FOR 15.7" LCD LG	43-88801-131	
13	LCD BRACKET (RIGHT) LG 15.7"	33-88801-311	
14	RUBBER FOR LCD DOWN	47-88821-020	
15	SCREW M2.5*7L B BN ICT NY	35-49125-7R0	
16	LCD SHIELDING	33-88801-090	
17	GASKET (L20*W9*H4.5)	47-00190-1J0	

Battery (8880)



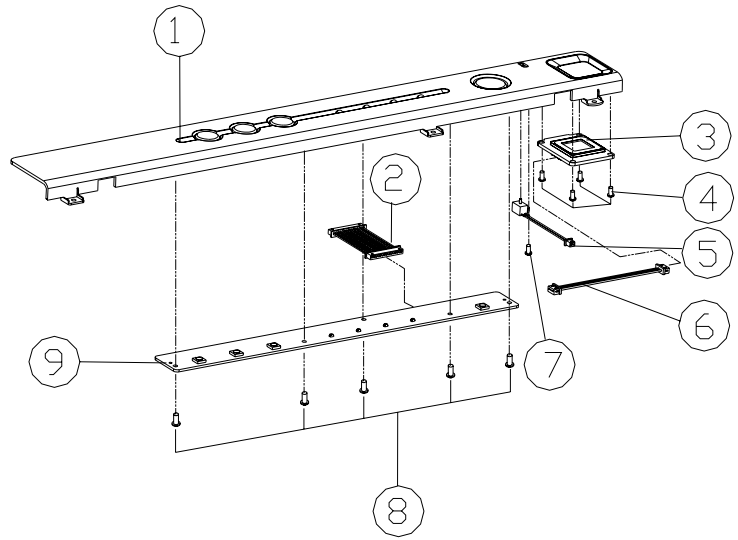


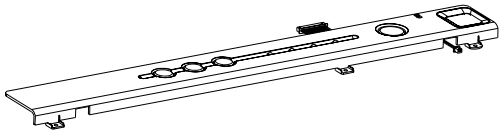
ITEM	PART NAME	PART NO	REMARK
1	BATTERY TOP CASE	42-8887M-010	
2	BATTERY BOTTOM CASE	42-8887M-020	
3	BATTERY LABEL	87-8888S-498	
3	BATTERY LABEL	87-8888S-4E8	
4	BOTTOM CASE RUBBER FOR 8880	47-88823-010	

Figure B-5
Battery (8880)

Center Cover (8880)

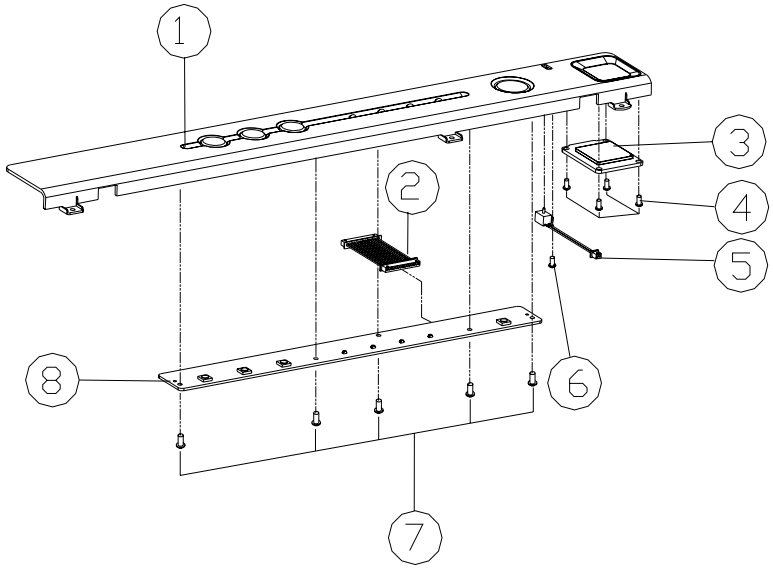
Figure B-6
Center Cover (8880)

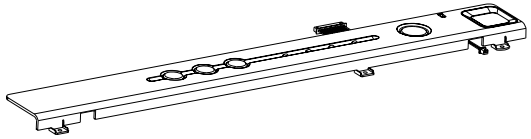




ITEM	PART NAME	PART NO	REMARK
1	CENTER COVER MODULE FOR 8880	42-88872-100	
2	WIRE CABLE FOR HOT KEY TO POWER SWITCH	43-8880S-031	
3	FINGER USB BOARD	77-8880F-D0X	
4	SCREW 11.4*3	35-01714-3R0	
5	WIRE CABLE FOR PANEL OFF 43-88804-010+53-70108-020	43-88804-011	
6	WIRE CABLE FOR MAIN BD TO FINGERPRINT BD	43-8880F-010	
7	SCER 11.4*4	35-01714-4R0	
8	SCERW M2*3L K1 NI ICT NY	35-B1120-3RA	
9	SWITCH KEY BOARD	77-88804-D0X	

Center Cover Finger (8880)



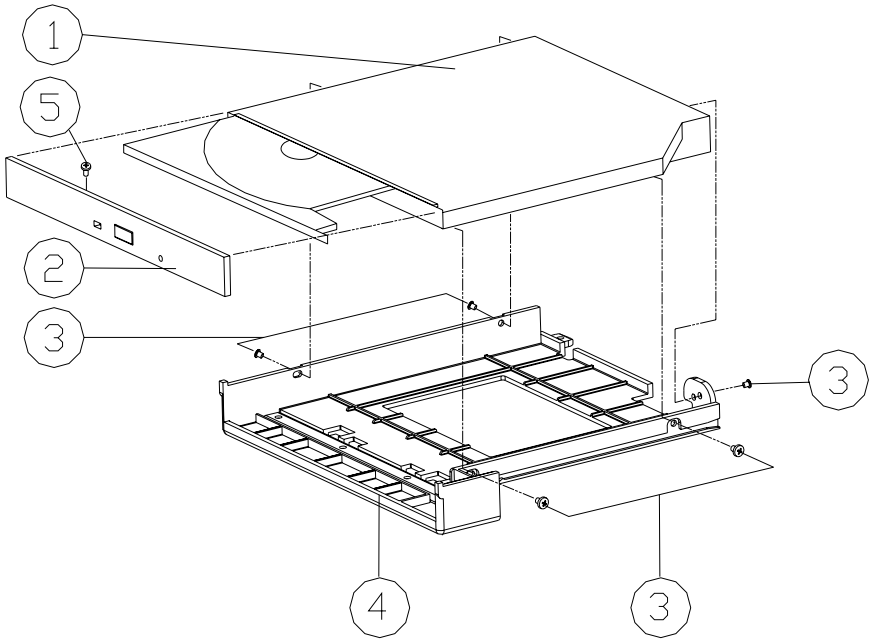


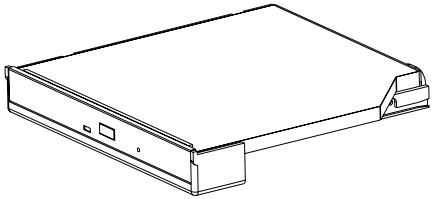
ITEM	PART NAME	PART NO	REMARK
1	CENTER COVER MODULE FOR 8880	42-88872-100	
2	WIRE CABLE FOR HOT KEY TO POWER SWITCH	43-8880S-031	
3	FINGER PRINT COVER	42-88882-060	
4	SCREW 11.4*3	35-01714-3R0	
5	WIRE CABLE FOR PANEL OFF 43-88804-010+53-7010B-020	43-88804-011	
6	SCER 11.4*4	35-01714-4R0	
7	SCERW M2*3L K1 NI ICT NY	35-B1120-3RA	
8	SWITCH KEY BOARD	77-88804-D0X	

Figure B-7
Center Cover Finger (8880)

CD-ROM Drive (8880)

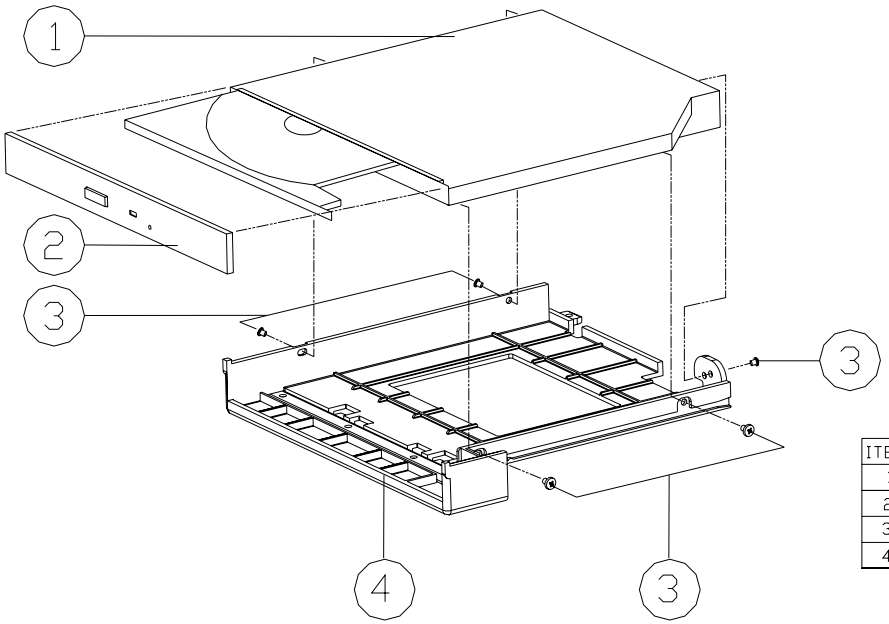
Figure B-8
CD-ROM Drive (8880)

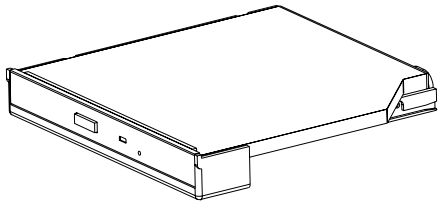




ITEM	PART NAME	PART NO	REMARK
1-1	CD-ROM 5 1/4" 24X CAB SLIM 12.7MM	85-607□X-C00	QSI(SCR-242)
1-2	CD-ROM 5 1/4" 24X CD-224E-B20 12.7mm	85-607□X-706	TEAC(REV:A02)
2-1	CD-ROM BEZEL MODULE FOR QSI	42-8887Z-200	
2-2	CD-ROM BEZEL MODULE FOR TEAC	42-8887Z-300	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE MODULE	42-8880Z-101	
5	SCREW M1.7*0.64*0.38L B BZ	35-46117-3R8	FOR QSI

CD-RW Drive (8880)



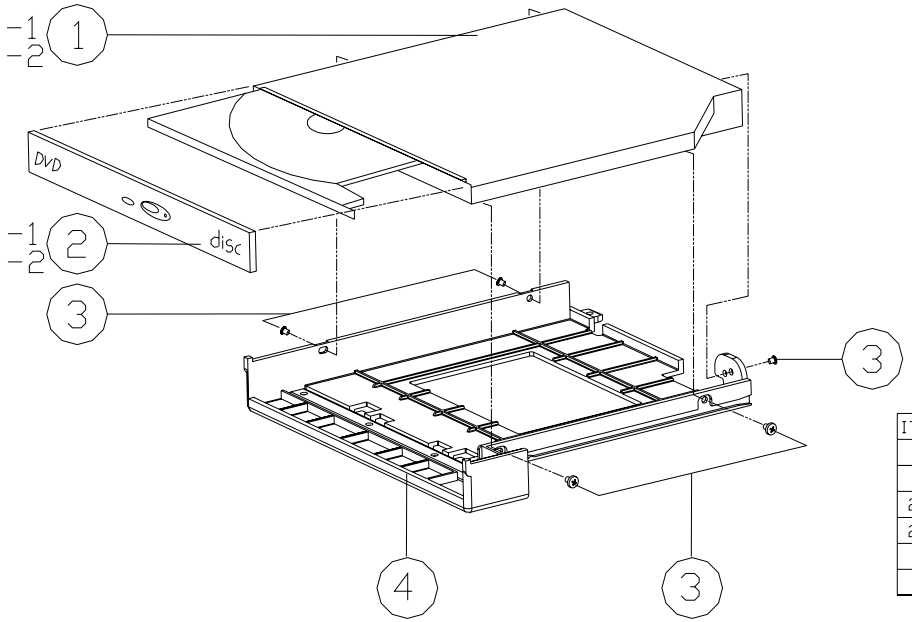


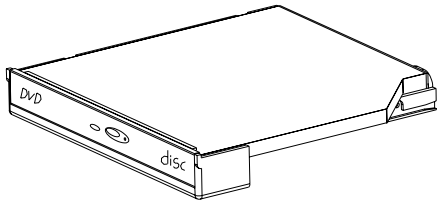
ITEM	PART NAME	PART NO	REMARK
1	CD-R/W 5 1/4" 8X 12.7	85-8078X-K00	UJDA330CL-Z KME
2	KME CD-RW BEZEL MODULE	42-8887W-100	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE FOR 8880	42-8880Z-101	

Figure B-9
CD-RW Drive (5600P)

Combo Drive (8880)

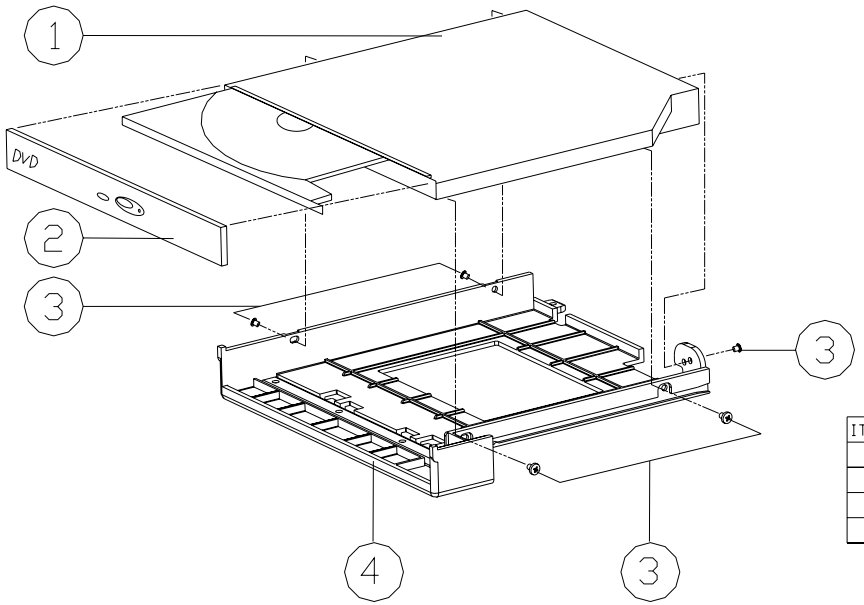
Figure B-10
Combo Drive (8880)

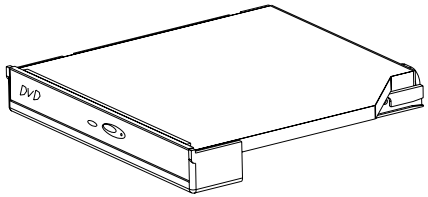




ITEM	PART NAME	PART NO	REMARK
1-1	CD-RW/DVD 5 1/4" 8X 12.7mm	85-8078X-T00	SD-R2102 TOSHIBA
1-2	CD-RW/DVD 5 1/4" 8X 12.7mm	85-9078X-700	DW-28E-82 TEAC
2-1	TOSHIBA COMBO BEZEL MODULE	42-8887X-100	
2-2	TEAC COMBO BEZEL MODULE	42-8887X-200	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE FOR 8880	42-8880Z-101	

DVD-ROM Drive (8880)



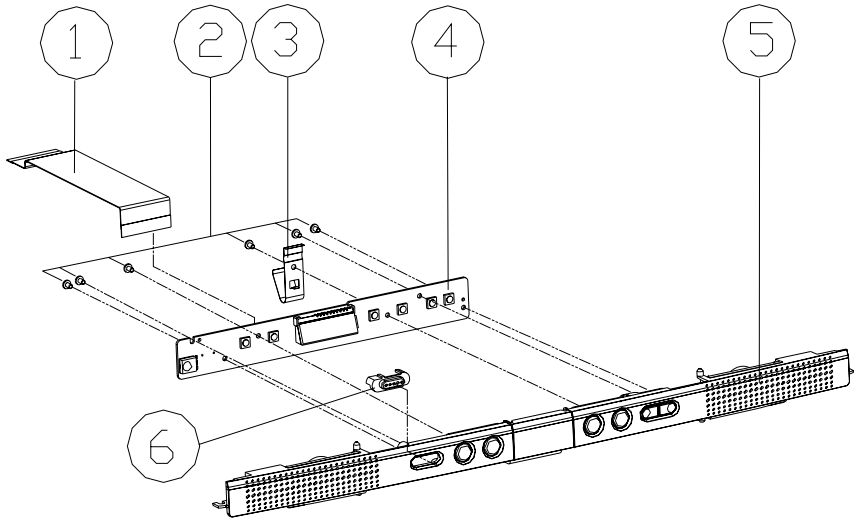


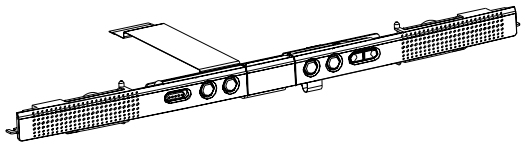
ITEM	PART NAME	PART NO	REMARK
1	DVD 5 1/4" 8X 12.7mm	85-7078X-T04	SD-C2502 TOSHIBA
2	TOSHIBA DVD (8X SD-C2502)BEZEL MODULE	42-8887V-200	
3	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
4	CD ROM CASE MODULE	42-8880Z-101	

Figure B-11
DVD-ROM Drive (8880)

Audio DJ (8880)

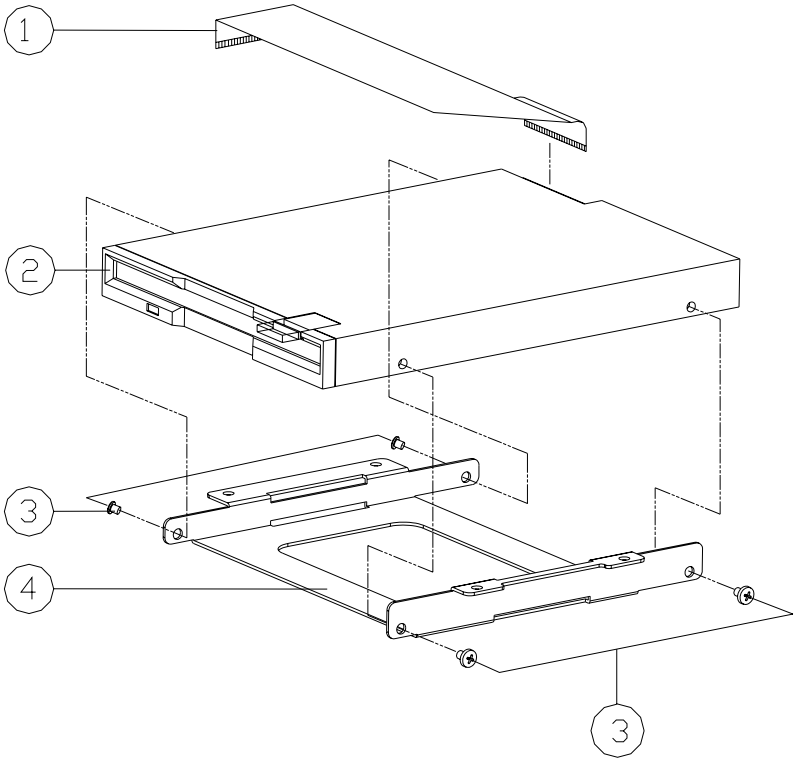
Figure B-12
Audio DJ (8880)

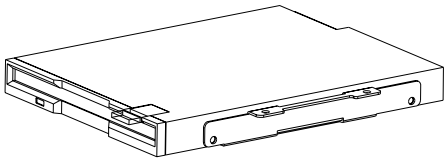




ITEM	PART NAME	PART NO	REMARK
1	FFC CABLE FOR MAIN BD TO LCM CTRL BD	43-88808-011	
2	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
3	AUDIO DJ EMI SPRING FOR 8880	38-88808-010	
4	AUDIO CONTROL LCM BOARD	77-88808-D03	
5	AUDIO JACK BEZEL MODULE FOR 8880	42-88878-100	
6	AUDIO DJ POWER KNOB FOR 8880	42-88888-020	

Floppy Disk Drive (8880)



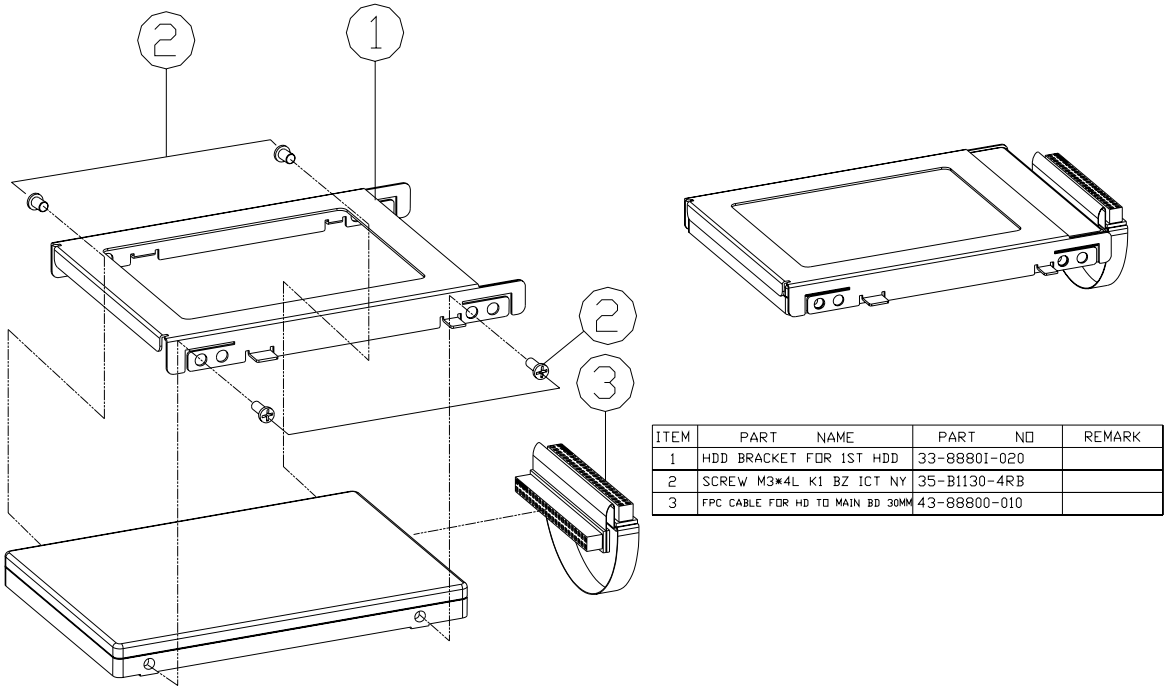


ITEM	PART NAME	PART NO	REMARK
1	FFC CABLE FOR MAIN BD TO FLOPPY DISK	43-8880I-010	
2	3.5" FDD 12.7mm Y-E DATA	85-11700-Y01-1	YD-702J-6637J
3	SCREW M2.5*3L K1 BK/O. NY	35-B4125-3RA	
4	FDD BRACKET FOR 8880	33-8880J-010	

Figure B-13
Floppy Disk Drive (8880)

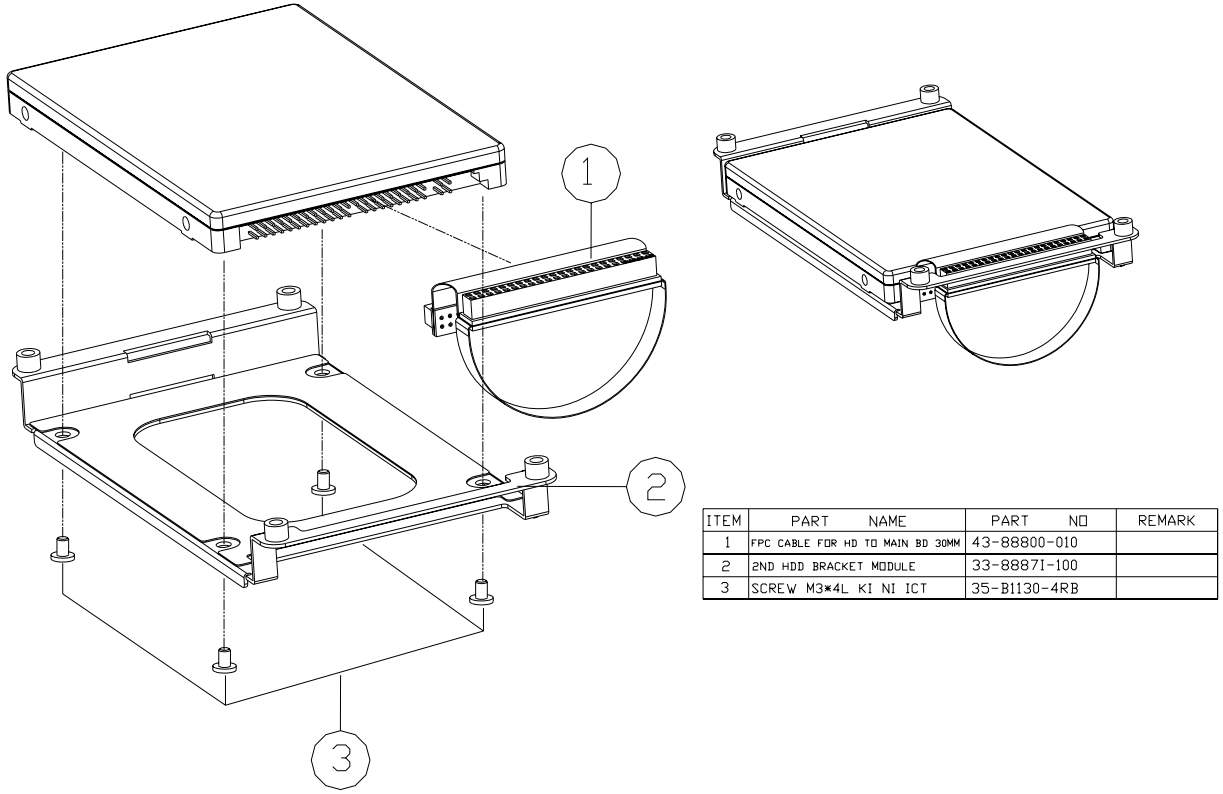
First Hard Disk Drive (8880)

Figure B-14
First HDD Drive (8880)



ITEM	PART NAME	PART NO	REMARK
1	HDD BRACKET FOR 1ST HDD	33-8880I-020	
2	SCREW M3*4L K1 BZ ICT NY	35-B1130-4RB	
3	FPC CABLE FOR HD TO MAIN BD 30MM	43-88800-010	

Second Hard Disk Drive (8880)

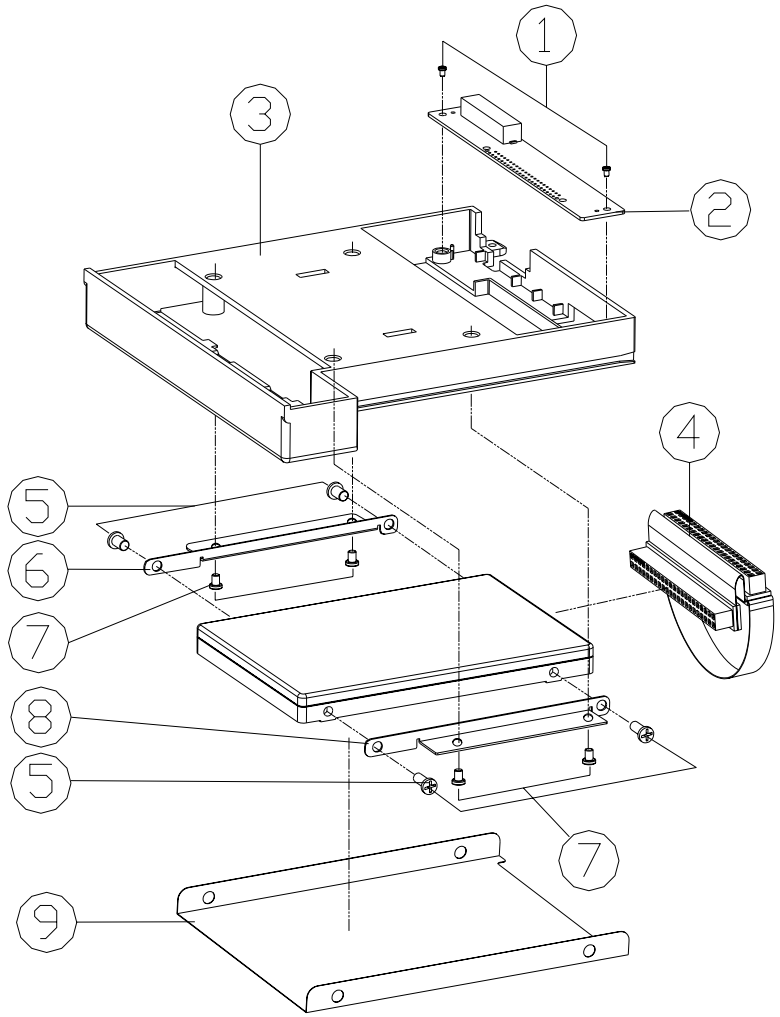


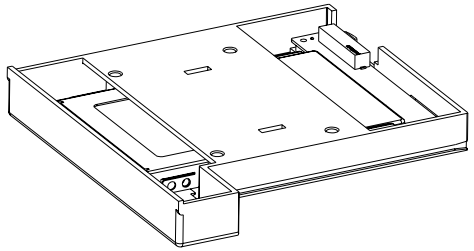
ITEM	PART NAME	PART NO	REMARK
1	FPC CABLE FOR HD TO MAIN BD 30MM	43-88800-010	
2	2ND HDD BRACKET MODULE	33-88871-100	
3	SCREW M3*4L KI NI ICT	35-B1130-4RB	

Figure B-15
Second HDD Drive (8880)

Third Hard Disk Drive (8880)

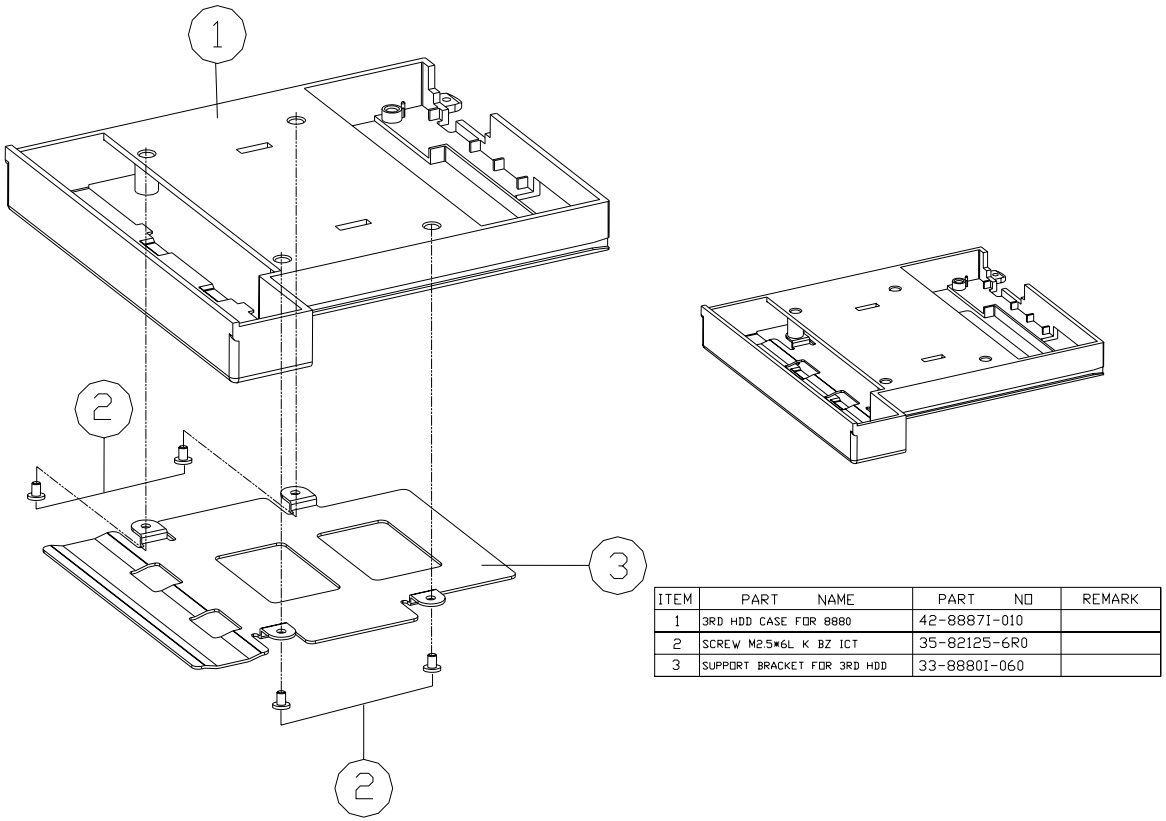
Figure B-16
Third Hard Disk Drive (8880)





ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
2	3RD HDD CONVERTER BOARD	77-8881N-D0X	
3	3RD HDD CASE FOR 8880	42-8887I-010	
4	FPC CABLE FOR HD TO MAIN BD 30MM	43-88800-010	
5	SCREW M3*4L K1 BZ ICT NY	35-B6130-4RA	
6	3RD HDD BRACKET-L	33-8880I-050	
7	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
8	3RD HDD BRACKET-R	33-8880I-040	
9	3RD HDD MYLAR	40-8885I-020	

Third Hard Disk - Dummy (8880)

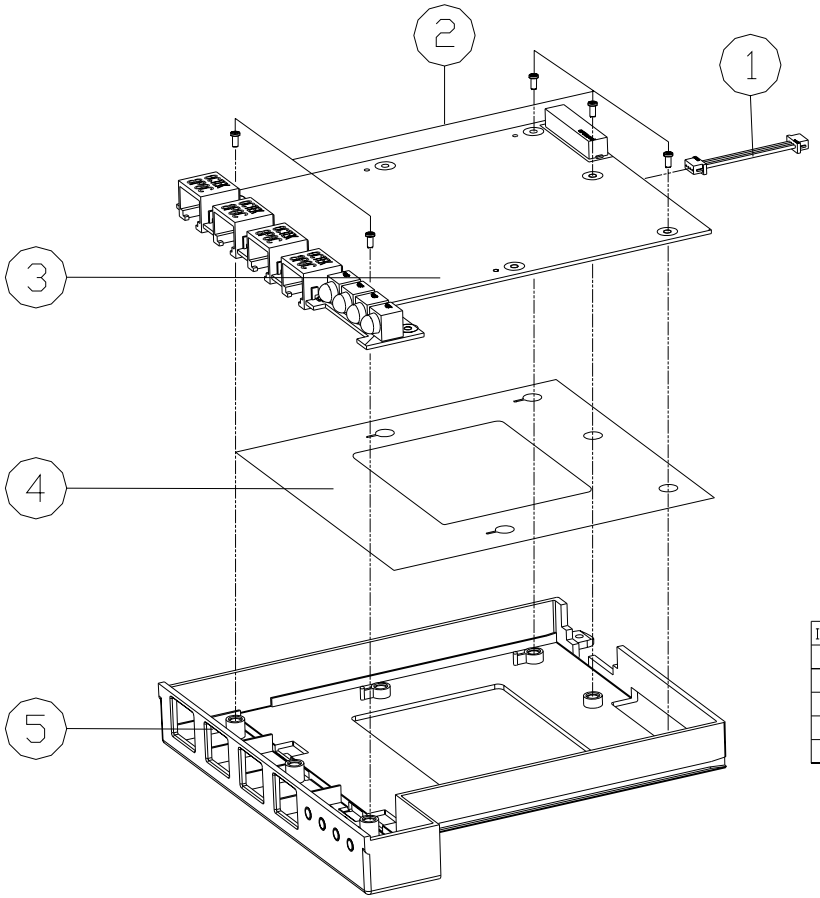


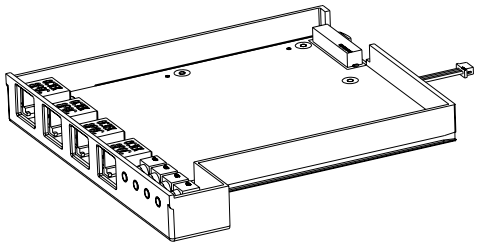
ITEM	PART NAME	PART NO	REMARK
1	3RD HDD CASE FOR 8880	42-8887I-010	
2	SCREW M2.5*6L K BZ ICT	35-82125-6R0	
3	SUPPORT BRACKET FOR 3RD HDD	33-8880I-060	

Figure B-17
Third Hard Disk - Dummy (5620P)

IP Sharing Module (8880)

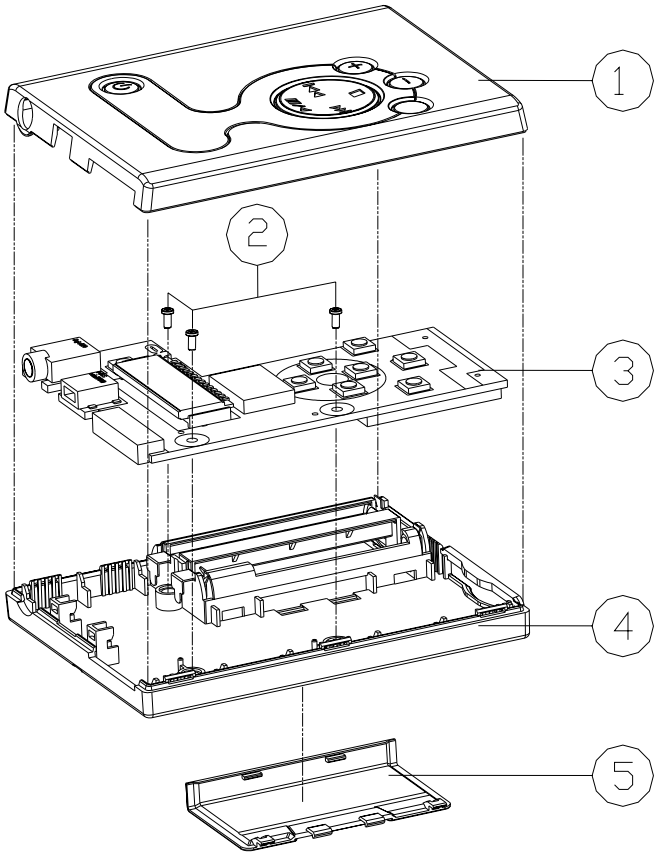
Figure B-18
IP Sharing Module (8880)

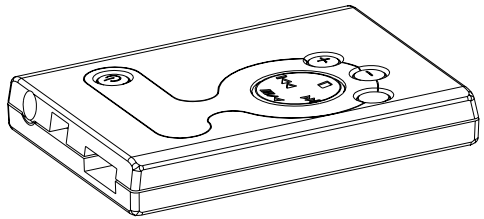




ITEM	PART NAME	PART NO	REMARK
1	WIRE CABLE FOR MAIN BD TO LAN	43-8880U-010	
2	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
3	IP SHARE BOARD MODULE	88-88820-300	
4	IP CASE MYLAR	40-8880U-010	
5	IP CASE MODULE	42-8887U-100	

MP3 Player (8880)





ITEM	PART NAME	PART NO	REMARK
1	MP3 TOP CASE MODULE 8880	42-8887H-500	
2	SCREW M2*3L K1 NI ICT NY	35-B1120-3RA	
3	MP3 PLAYER BOARD	77-88809-D04A	
4	MP3 BOTTOM CASE MODULE	42-8887H-300	
5	MP3 BATTERY COVER 8880	42-88809-040	

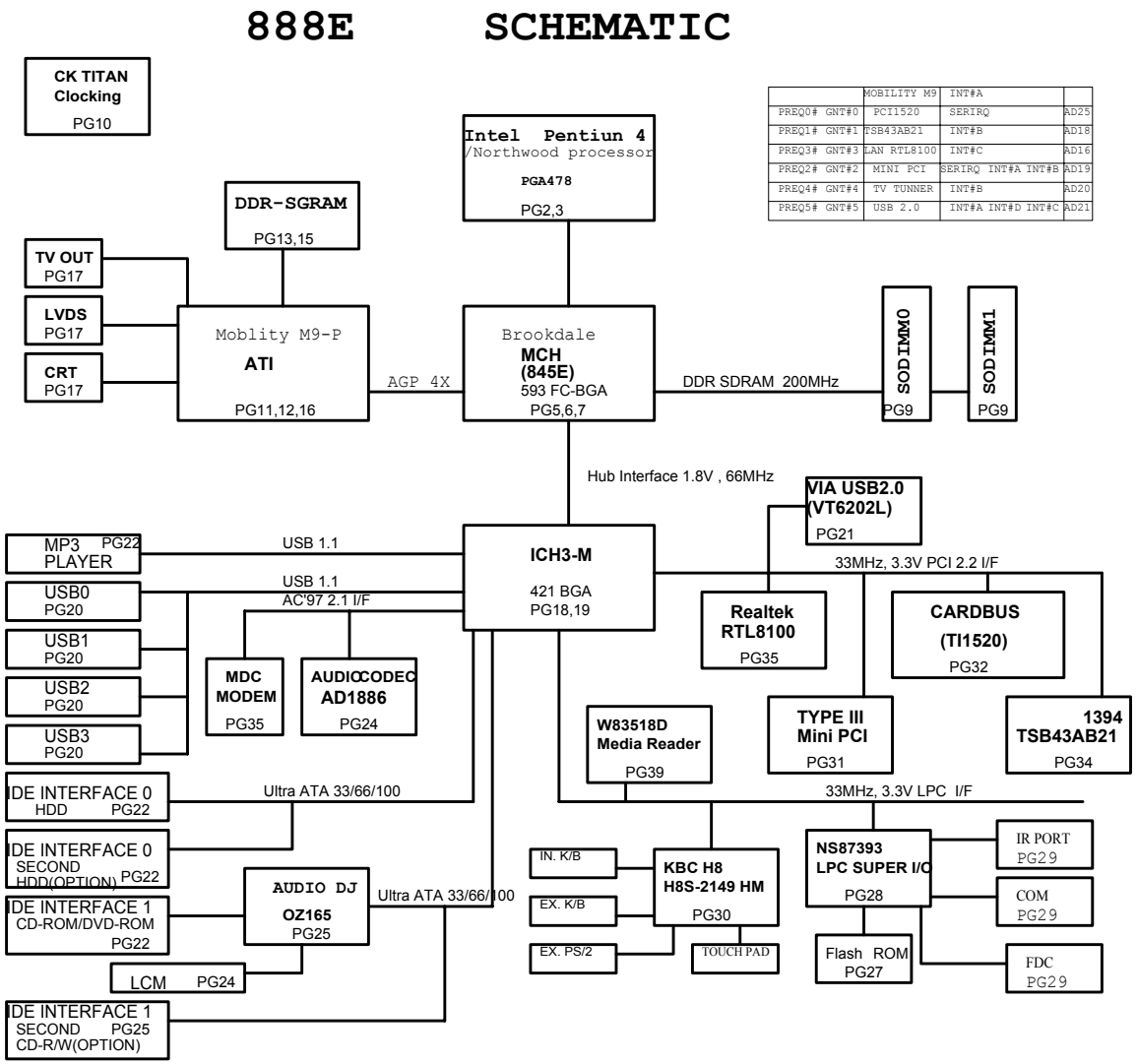
Figure B-19
MP3 Player (8880)

Appendix C:Schematic Diagrams for 888E

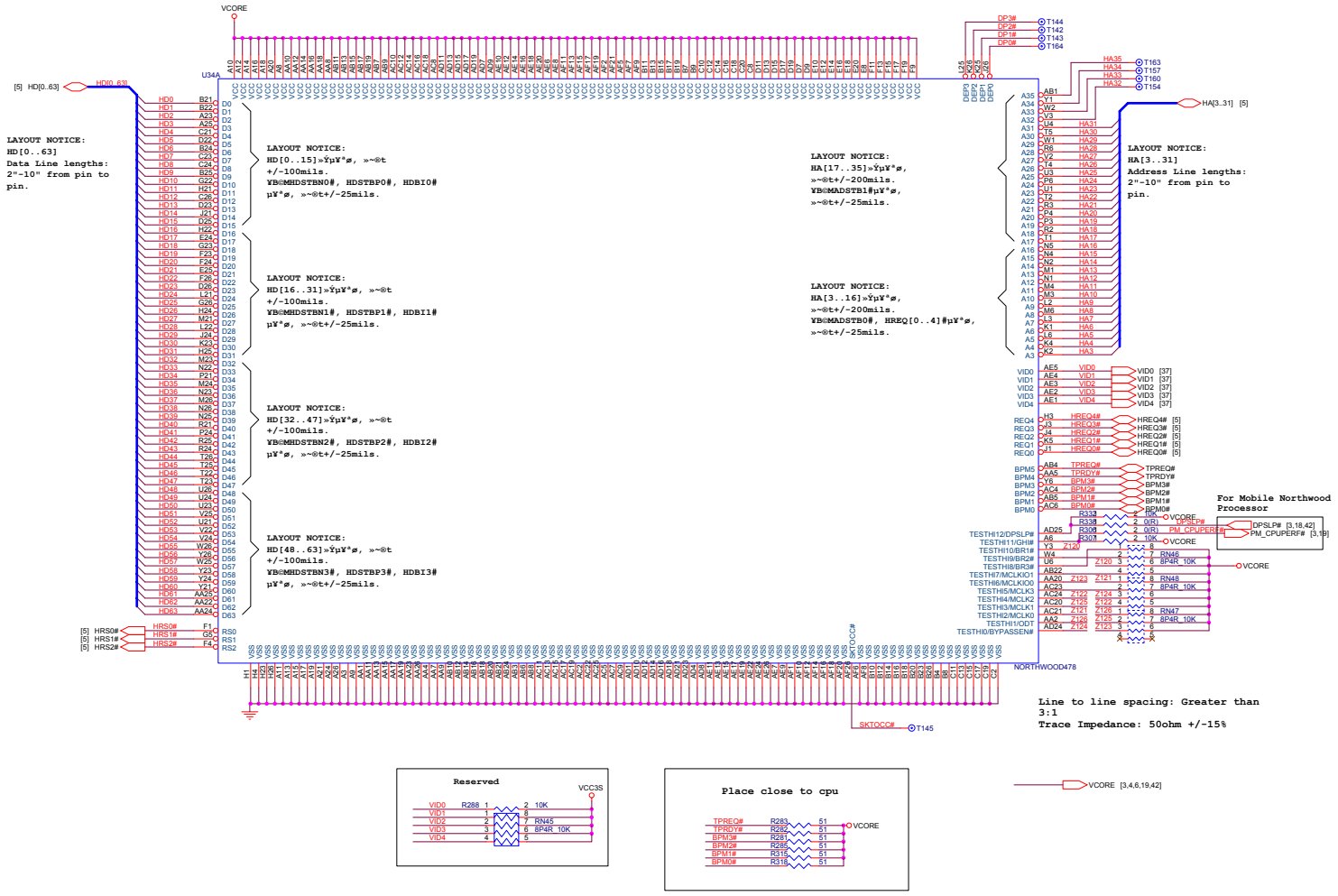
This appendix has circuit diagrams of the **888E notebook** computer's PCBs.

System Block Diagram

Sheet 1 of 44
System Block Diagram (888E)



CPU (Northwood) 1 of 2

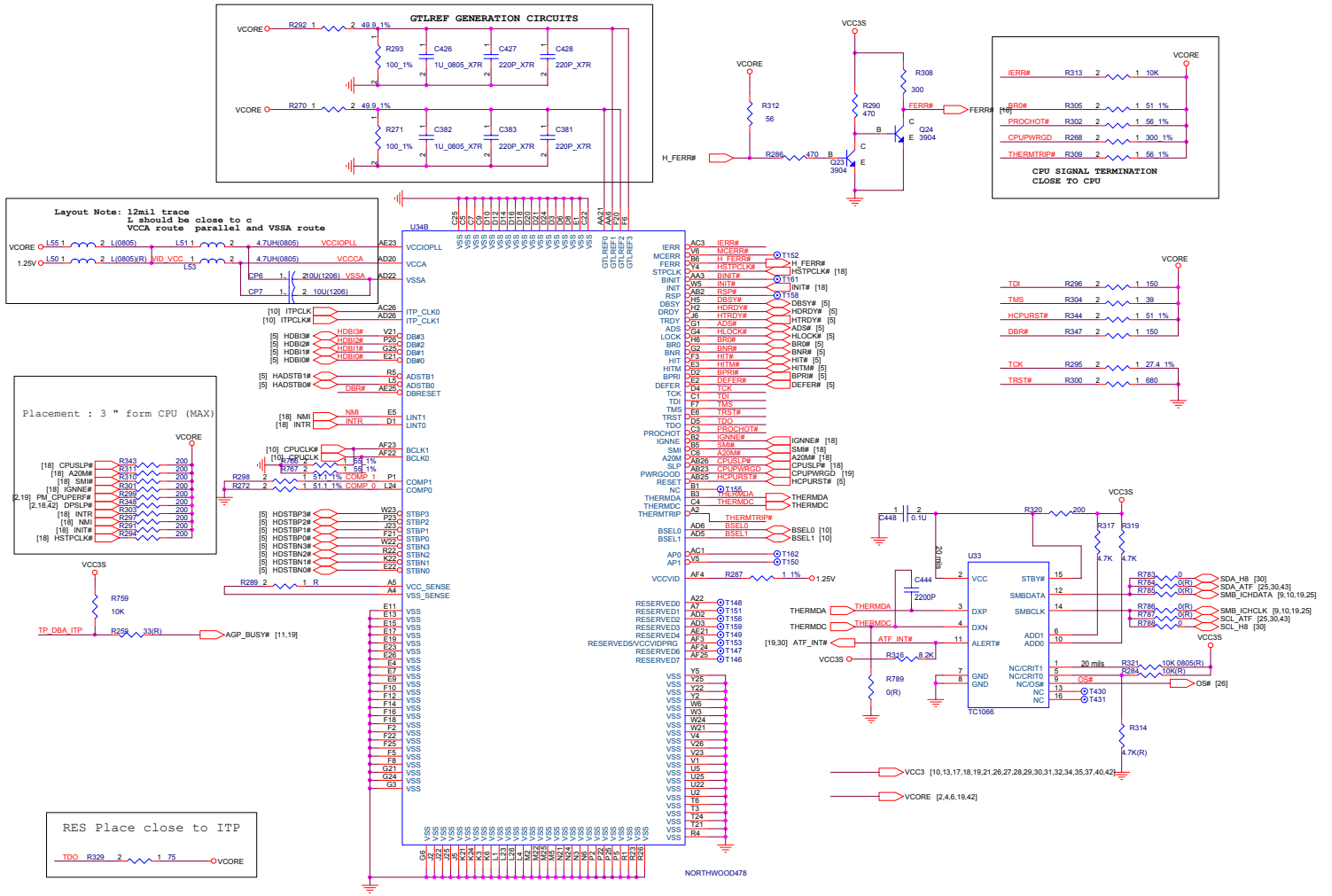


Sheet 2 of 44
CPU 1 of 2 (888E)

888E Schematic Diags

CPU (Northwood) 2 of 2

Sheet 3 of 44
CPU 2 of 2 (888E)

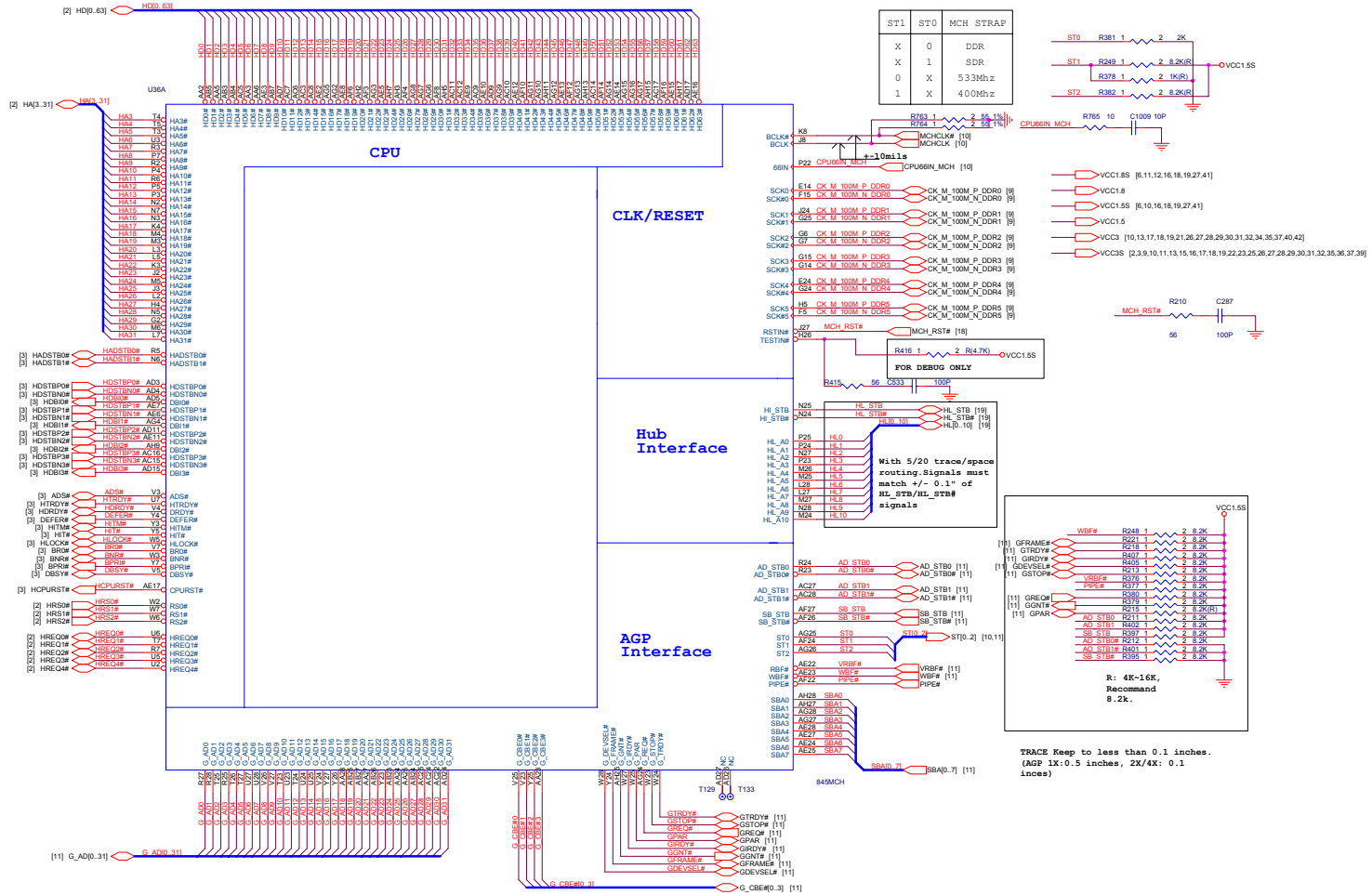


CPU Decoupling

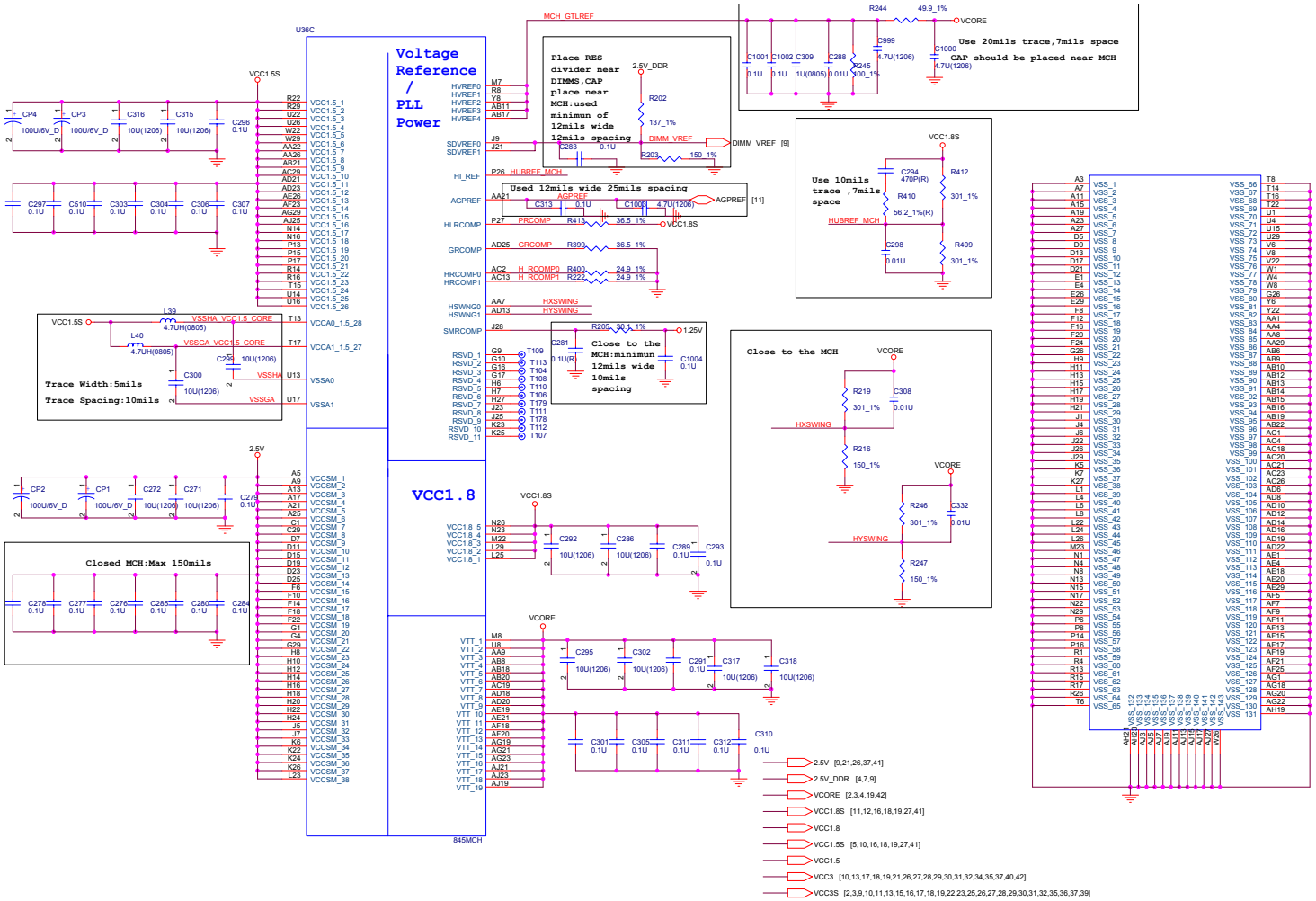
Sheet 4 of 44
CPU Decoupling
(888E)

MCH (Host, AGP, Hub)

Sheet 5 of 44
MCH
(Host, AGP, Hub) -
(888E)



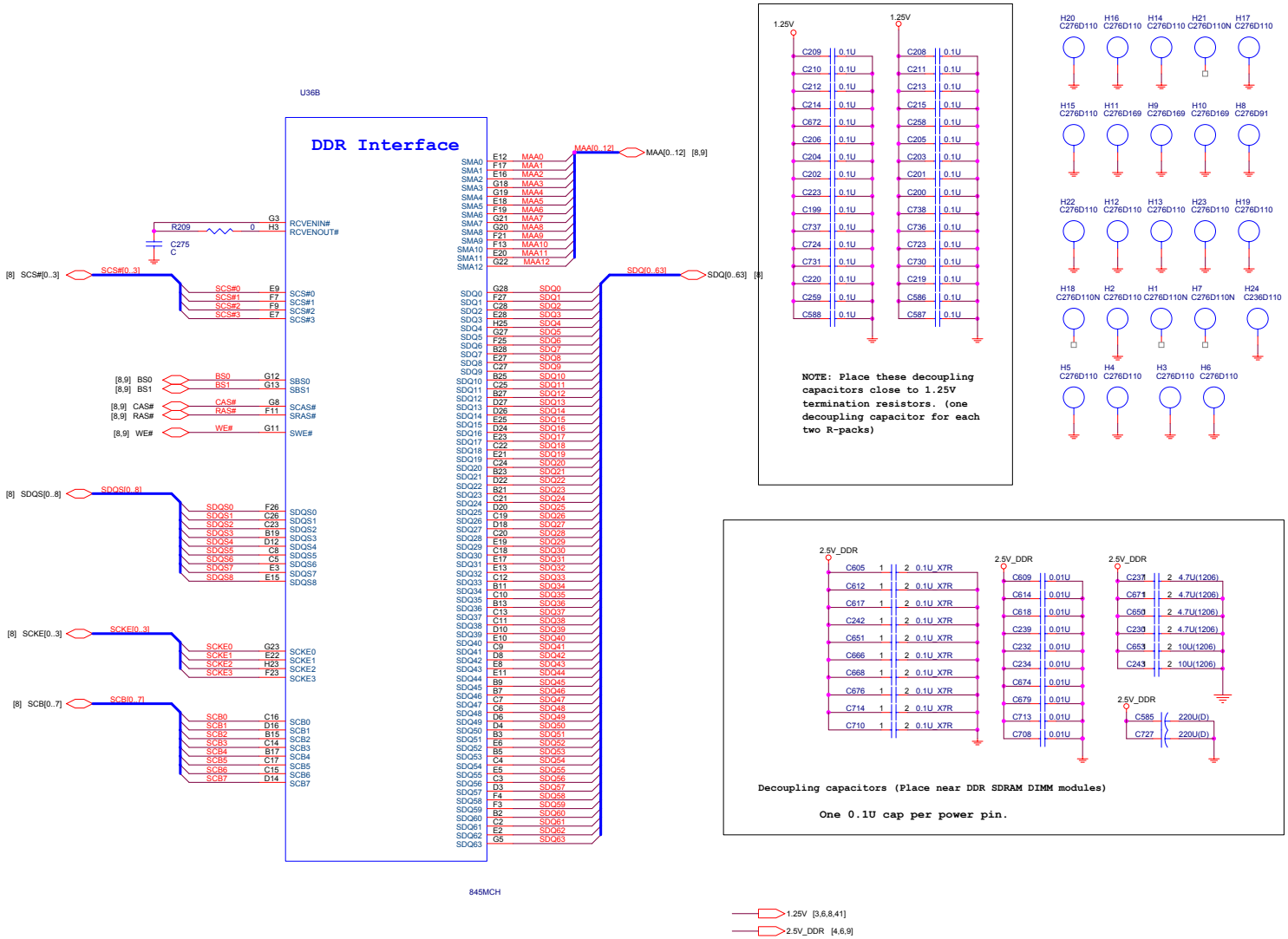
MCH (Voltage, PLL, VSS)



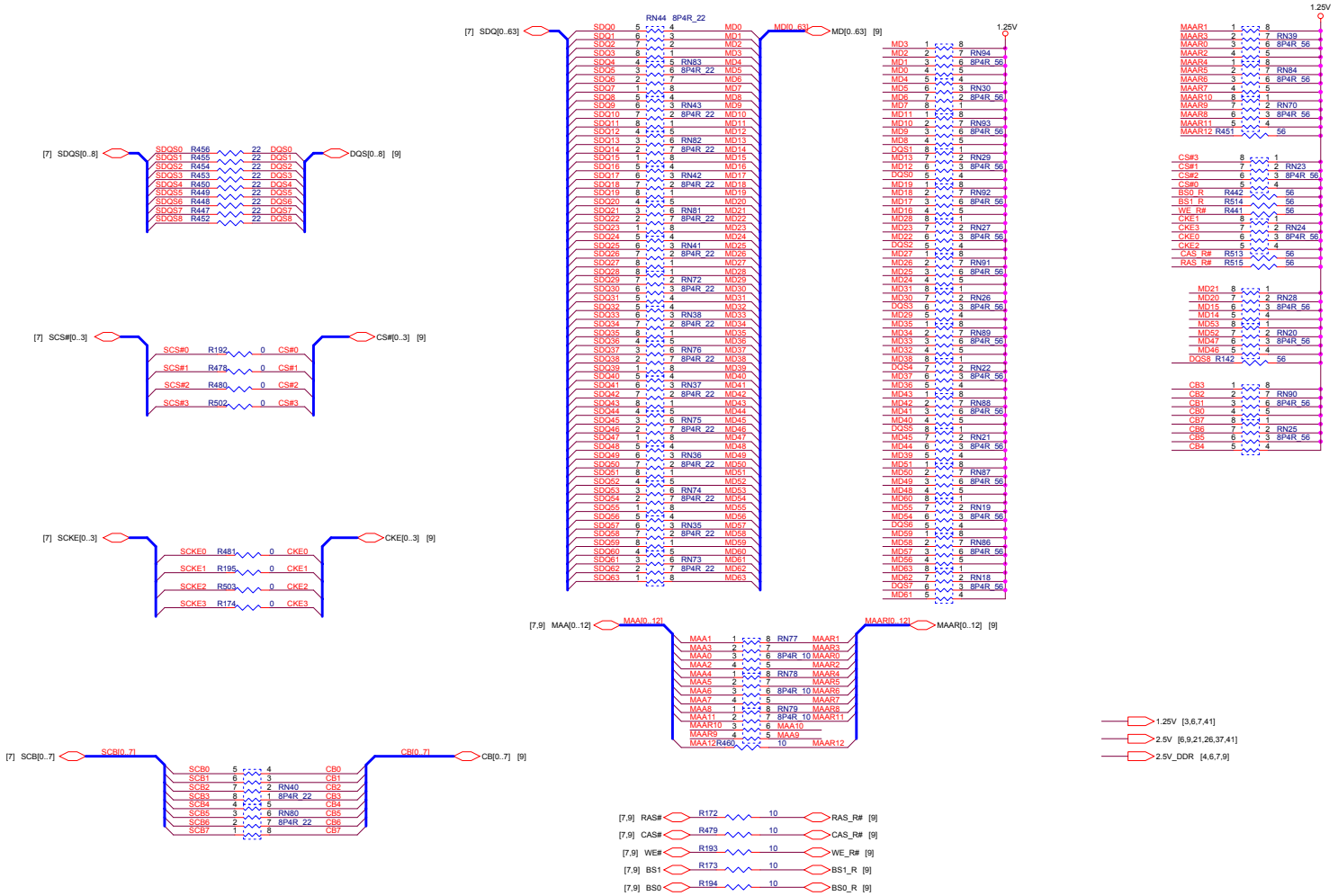
Sheet 6 of 44
MCH
(Voltage, PLL, VSS)
- (888E)

MCH (DDR)

Sheet 7 of 44
MCH
(DDR) - (888E)



DDR Termination

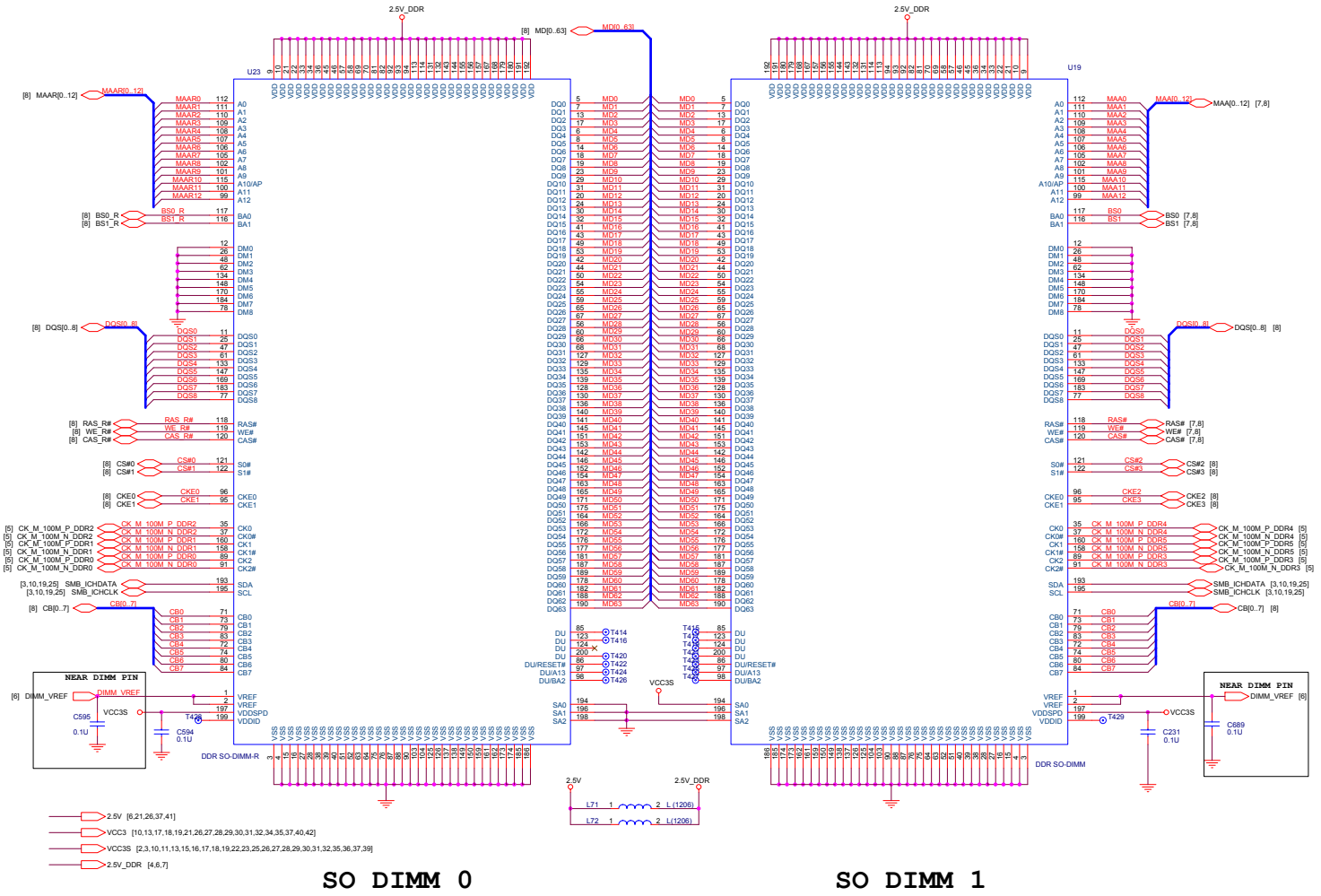


Place these damping resistors close to SO-DIMM

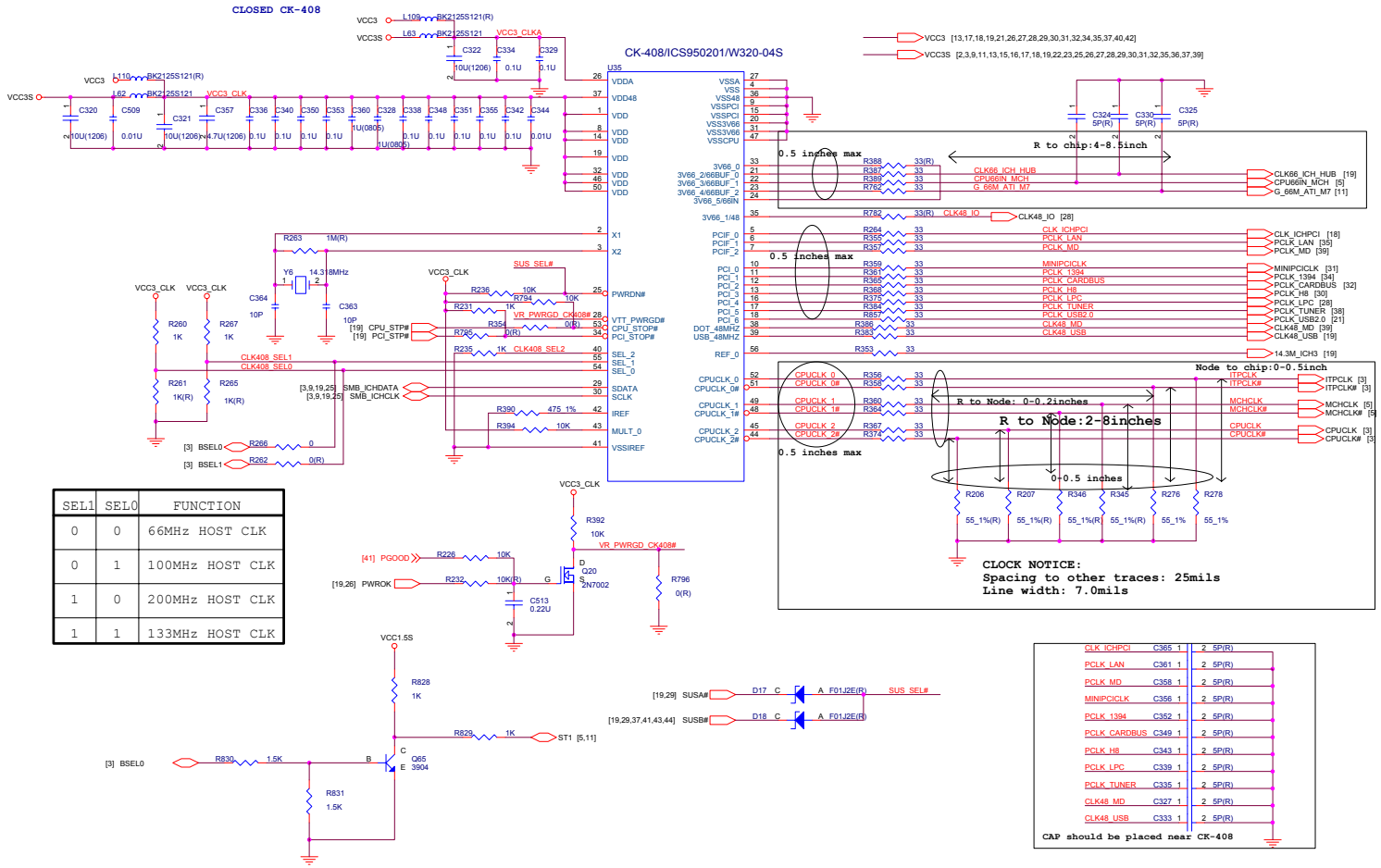
Sheet 8 of 44
DDR Termination
(888E)

DDR SODIMM

Sheet 9 of 44
DDR SODIMM
(888E)



CLK

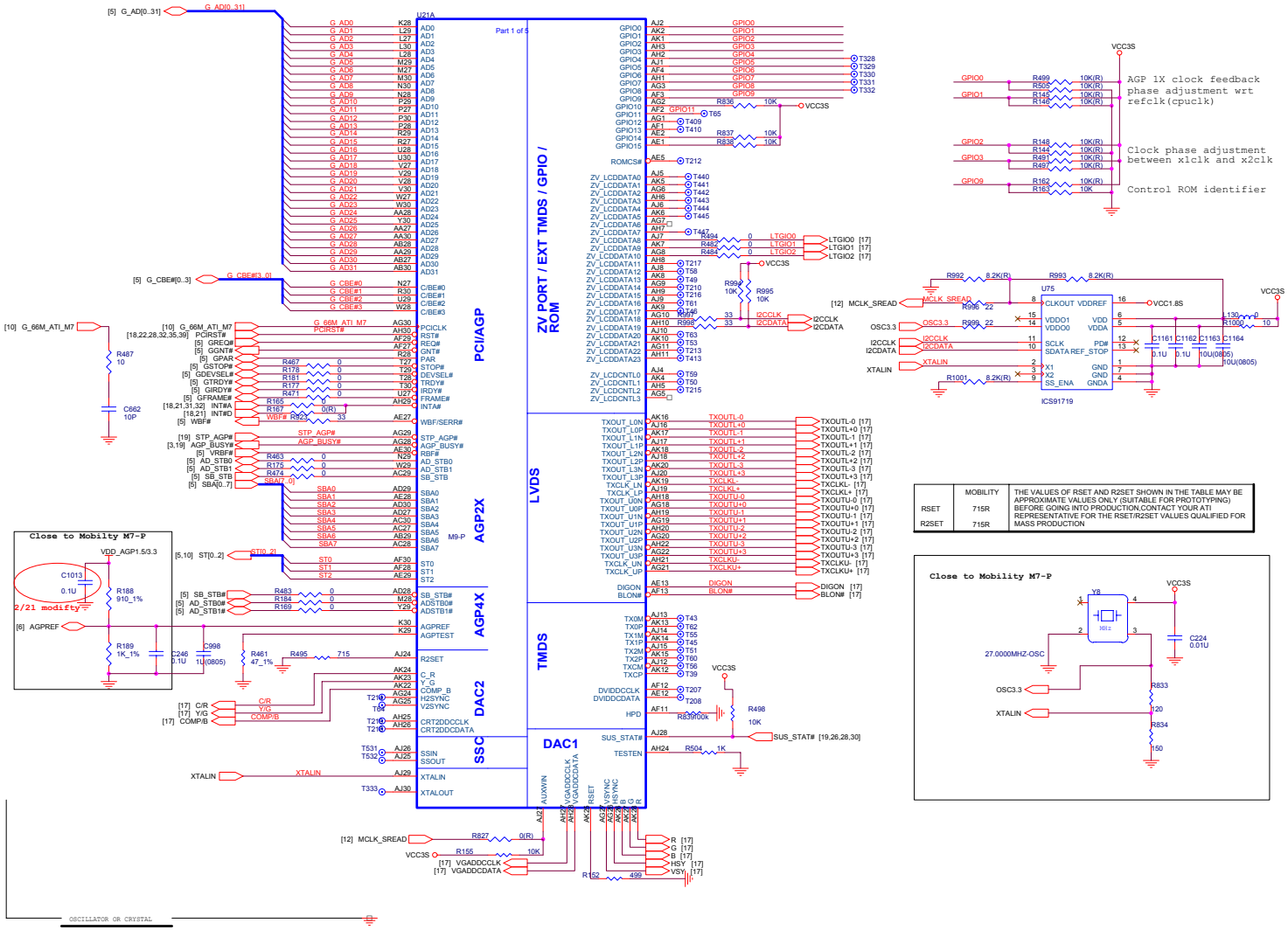


SEL1	SEL0	FUNCTION
0	0	66MHz HOST CLK
0	1	100MHz HOST CLK
1	0	200MHz HOST CLK
1	1	133MHz HOST CLK

Sheet 10 of 44
CLK (888E)

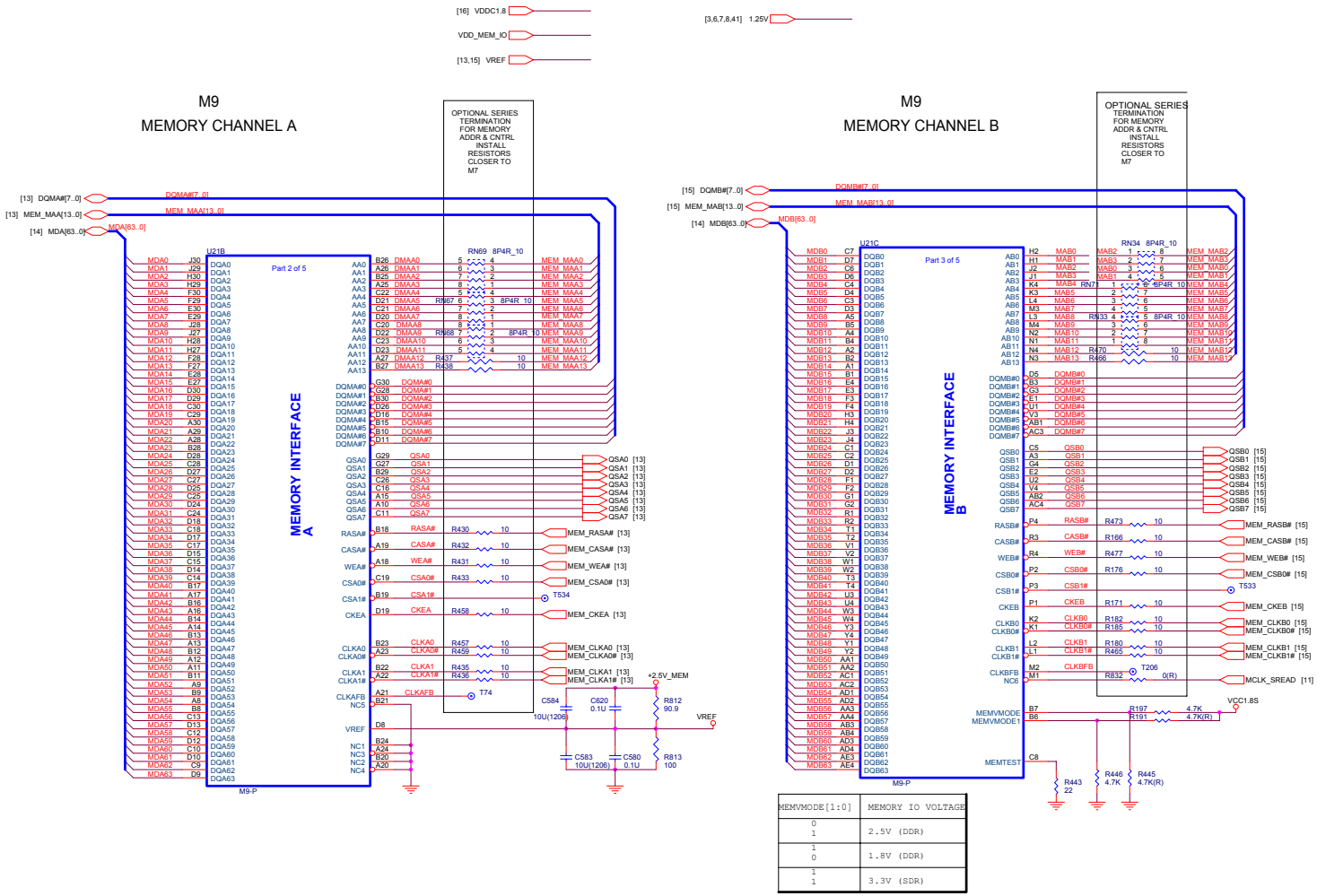
Mobility M9 - P

Sheet 11 of 44
Mobility M9 - P
(888E)



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

Mobility M9 - P Mem A/B

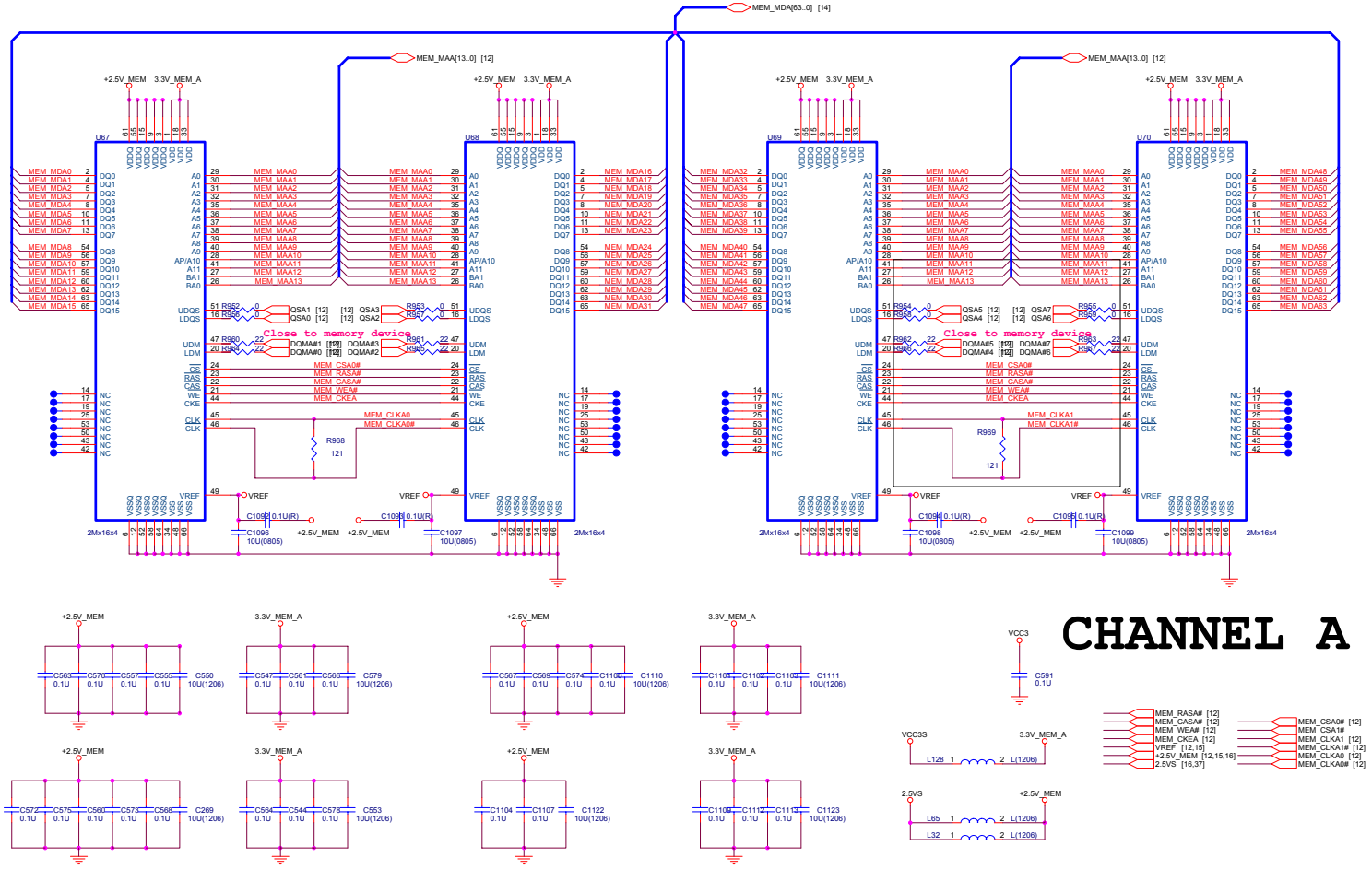


Sheet 12 of 44
Mobility M9 - P Mem A/B (888E)

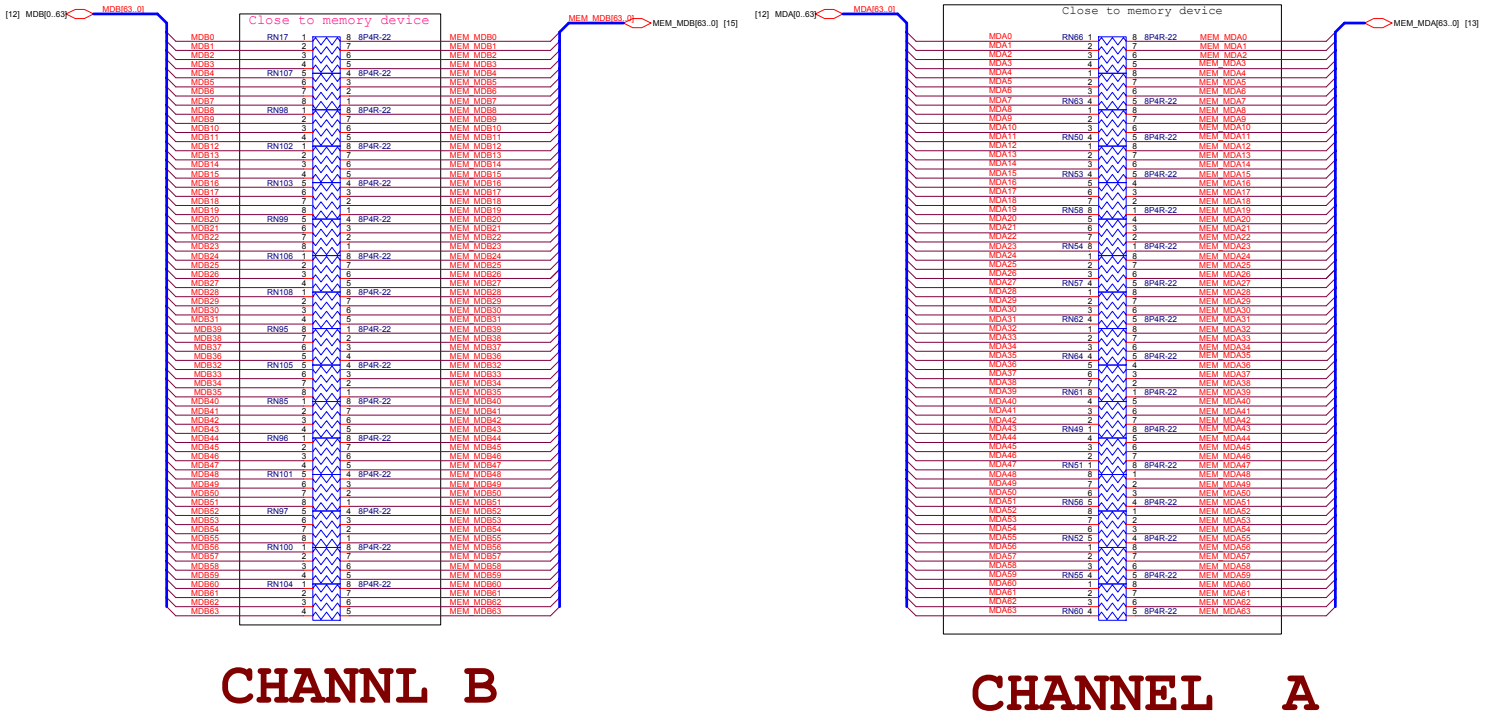
888E Schematic Diags

VGA DDR DRAM Channel A

Sheet 13 of 44
VGA DDR DRAM
Channel A (888E)



VGA DDR DRAM Termination

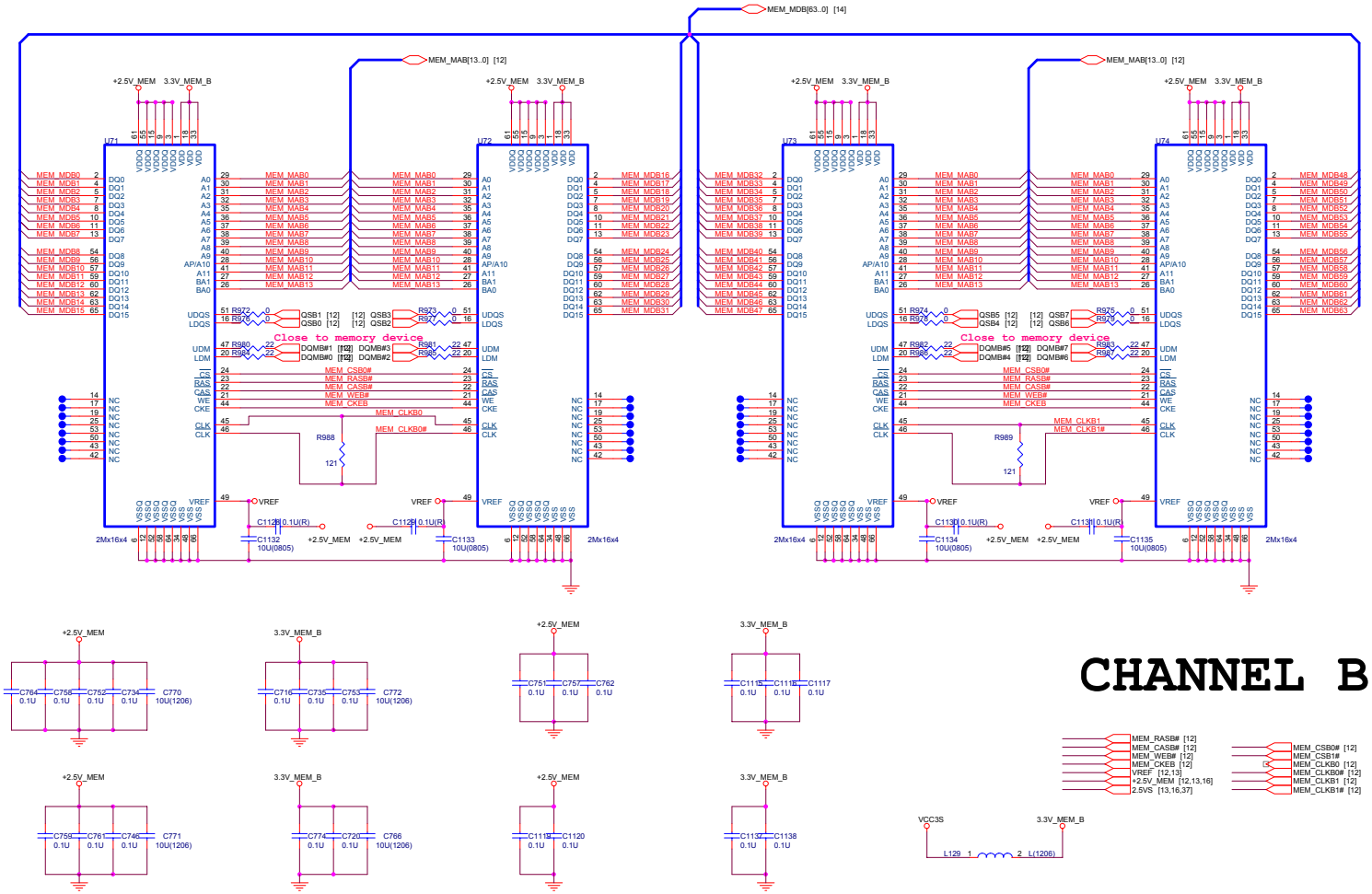


Sheet 14 of 44
VGA DDR DRAM
Termination (888E)

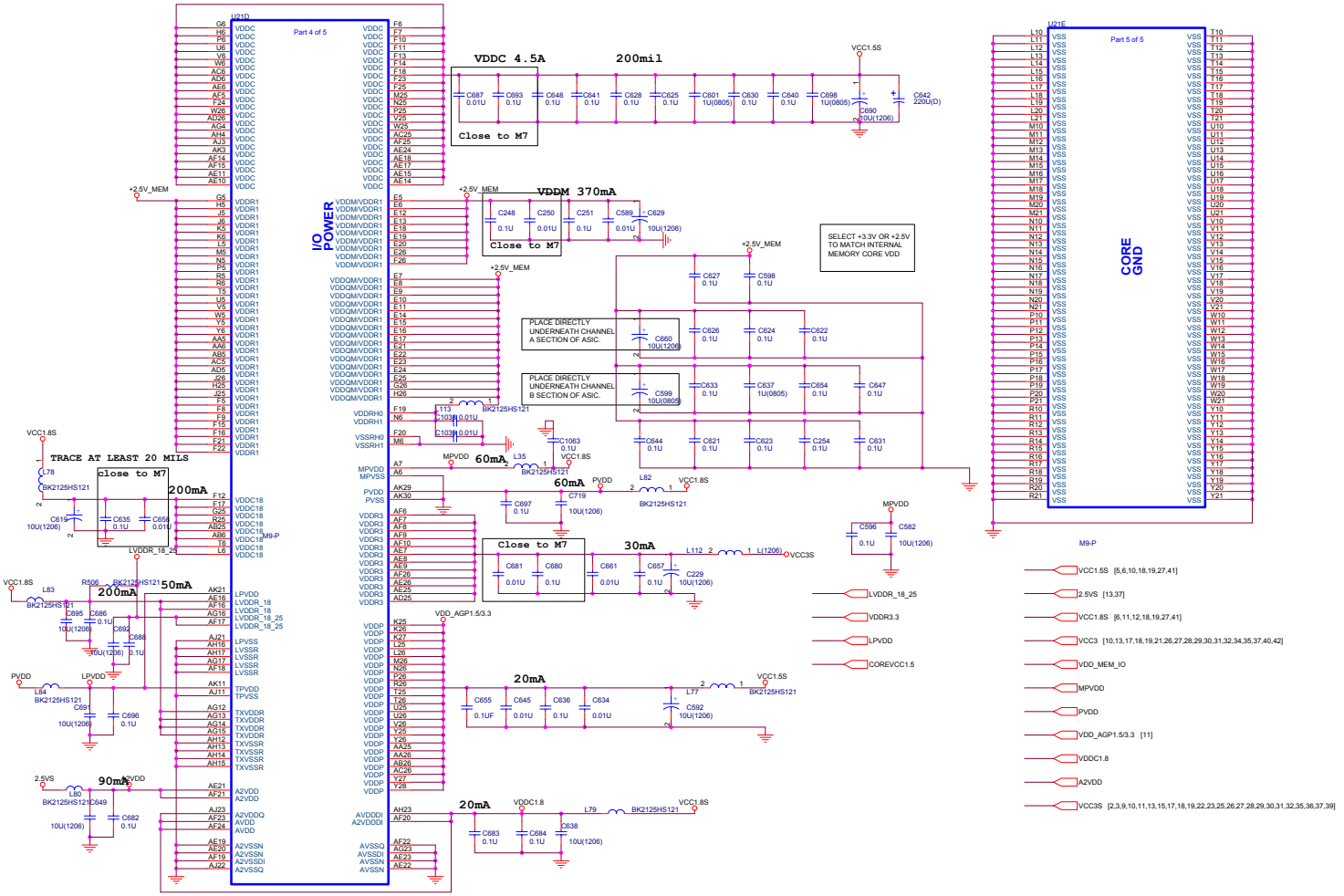
888E Schematic Diags

VGA DDR DRAM Channel B

Sheet 15 of 44
VGA DDR DRAM Channel B (888E)



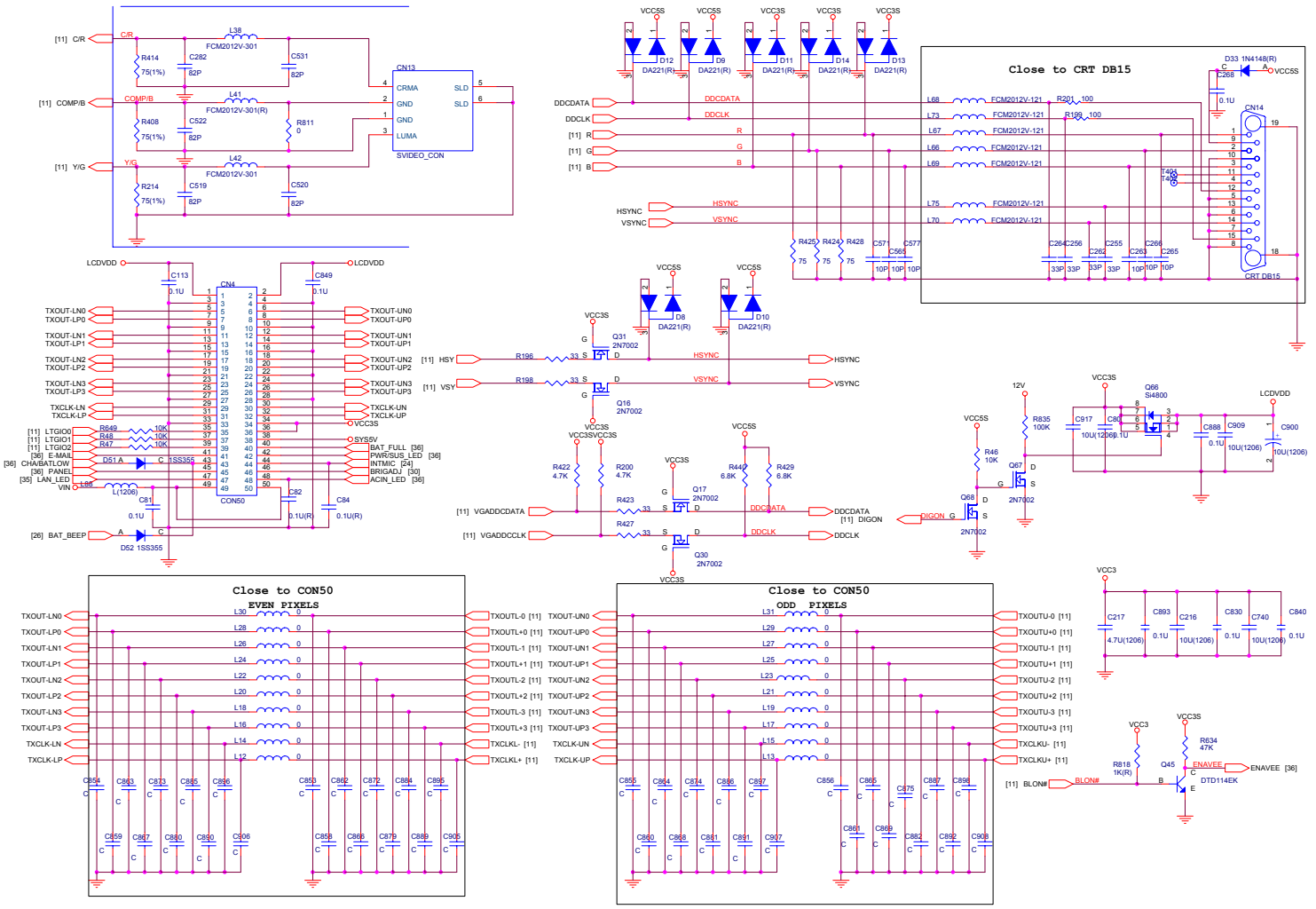
Moblility M9-P Power



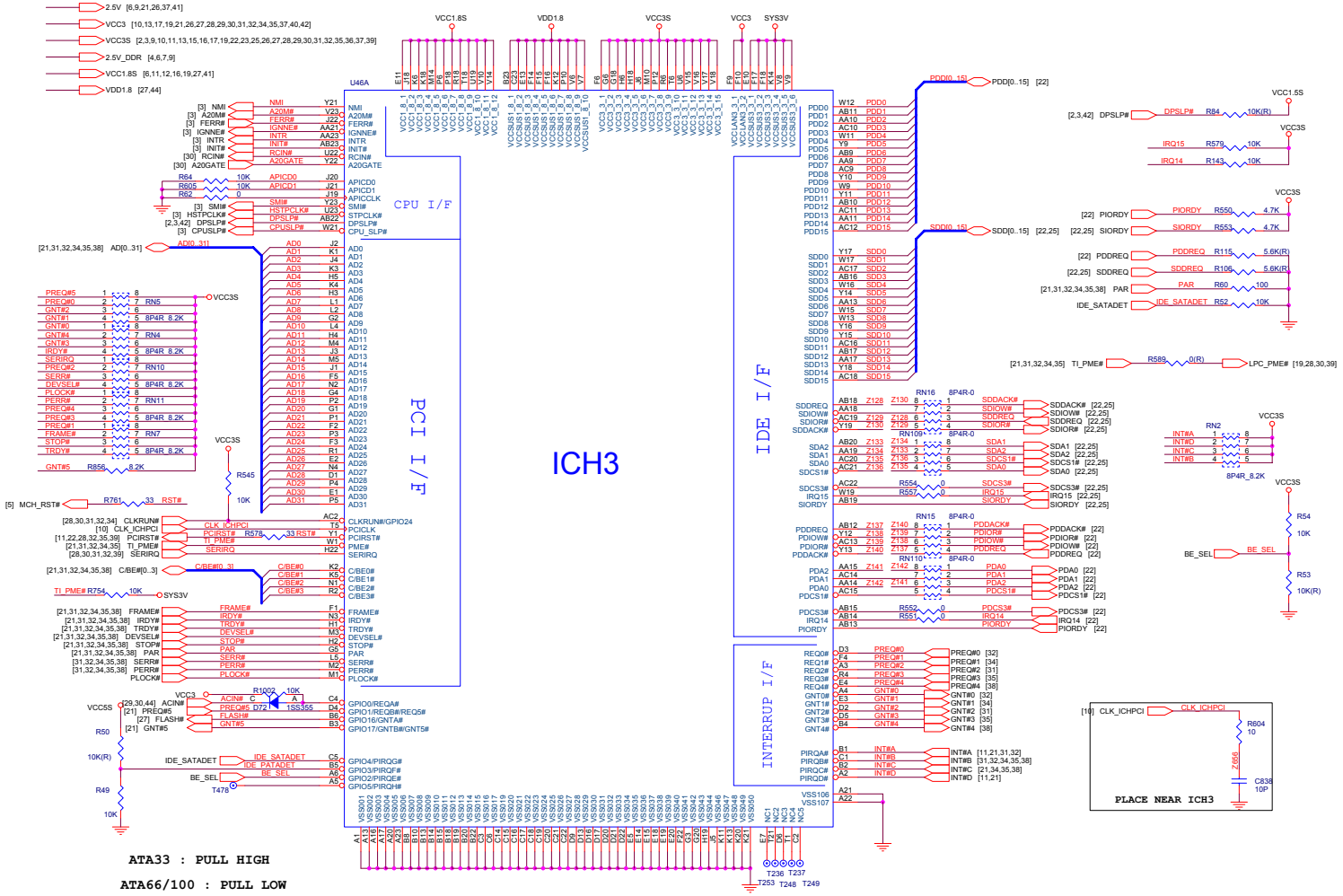
Sheet 16 of 44
Mobility M9-P
Power (888E)

TV CRT & LVDS

Sheet 17 of 44
TV CRT & LVDS
(888E)



ICH3 1 of 2

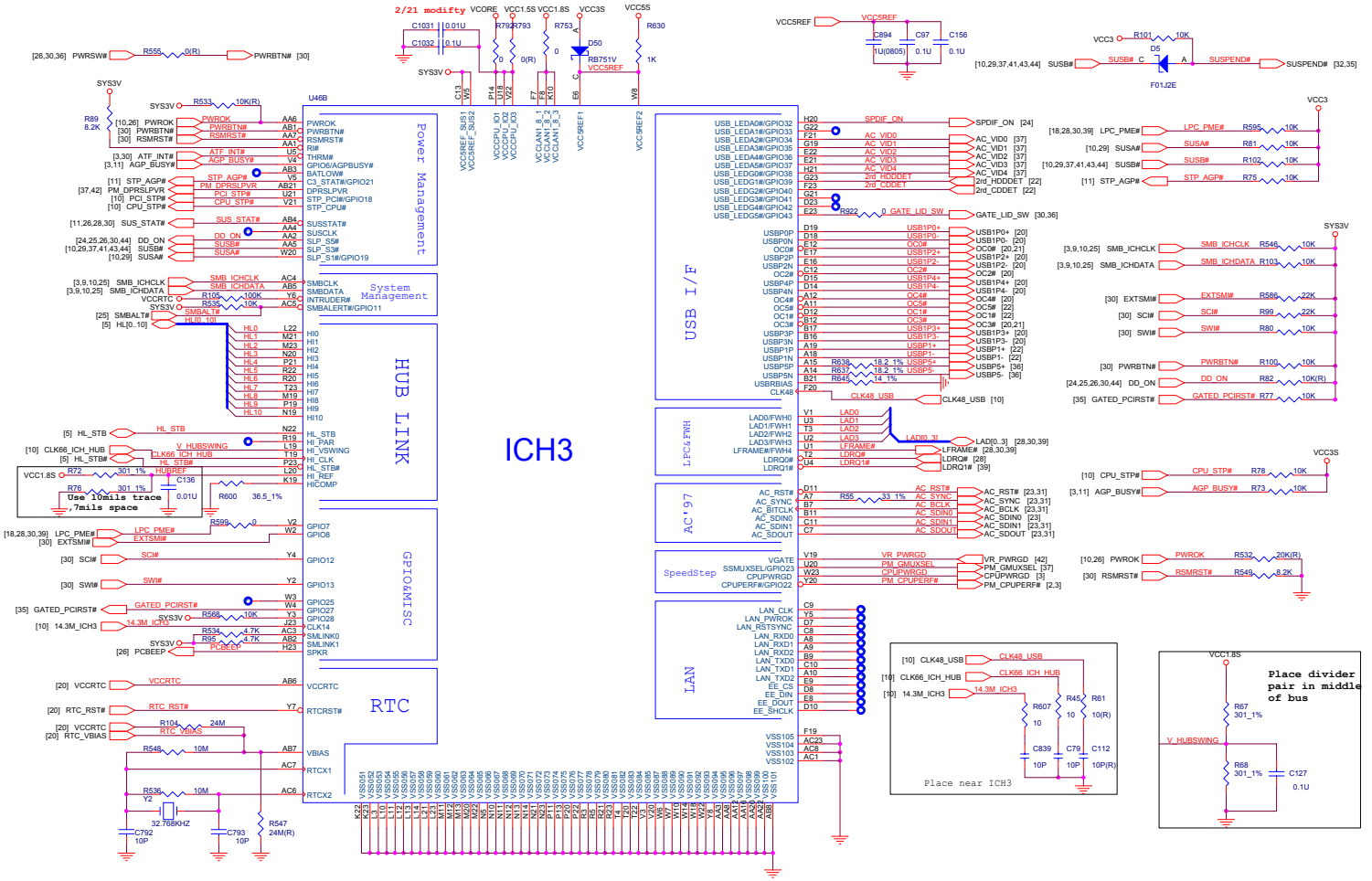


Sheet 18 of 44
ICH3 1 of 2 (888E)

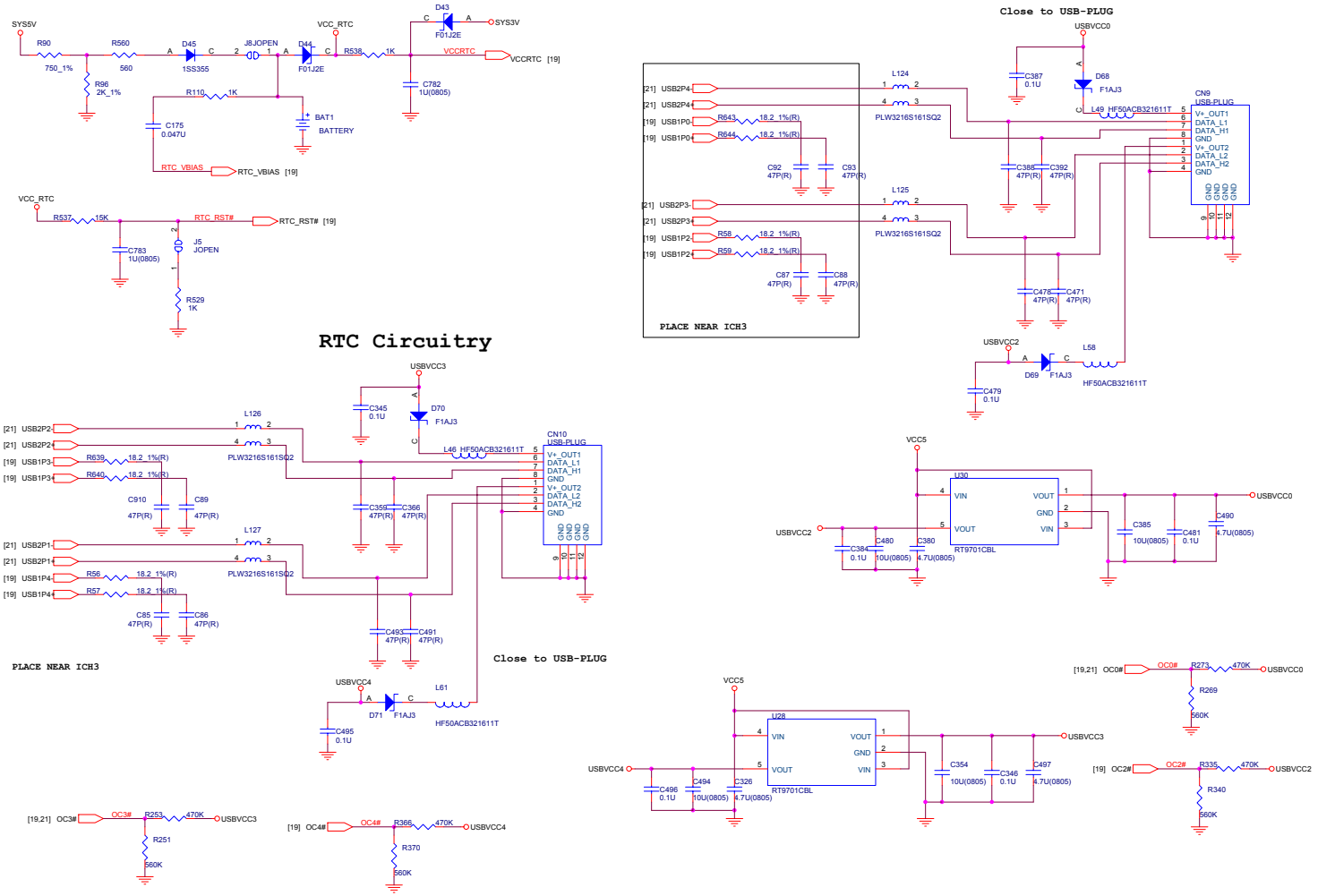
888E Schematic Diags

ICH3 2 of 2

Sheet 19 of 44
ICH3 2 of 2 (888E)



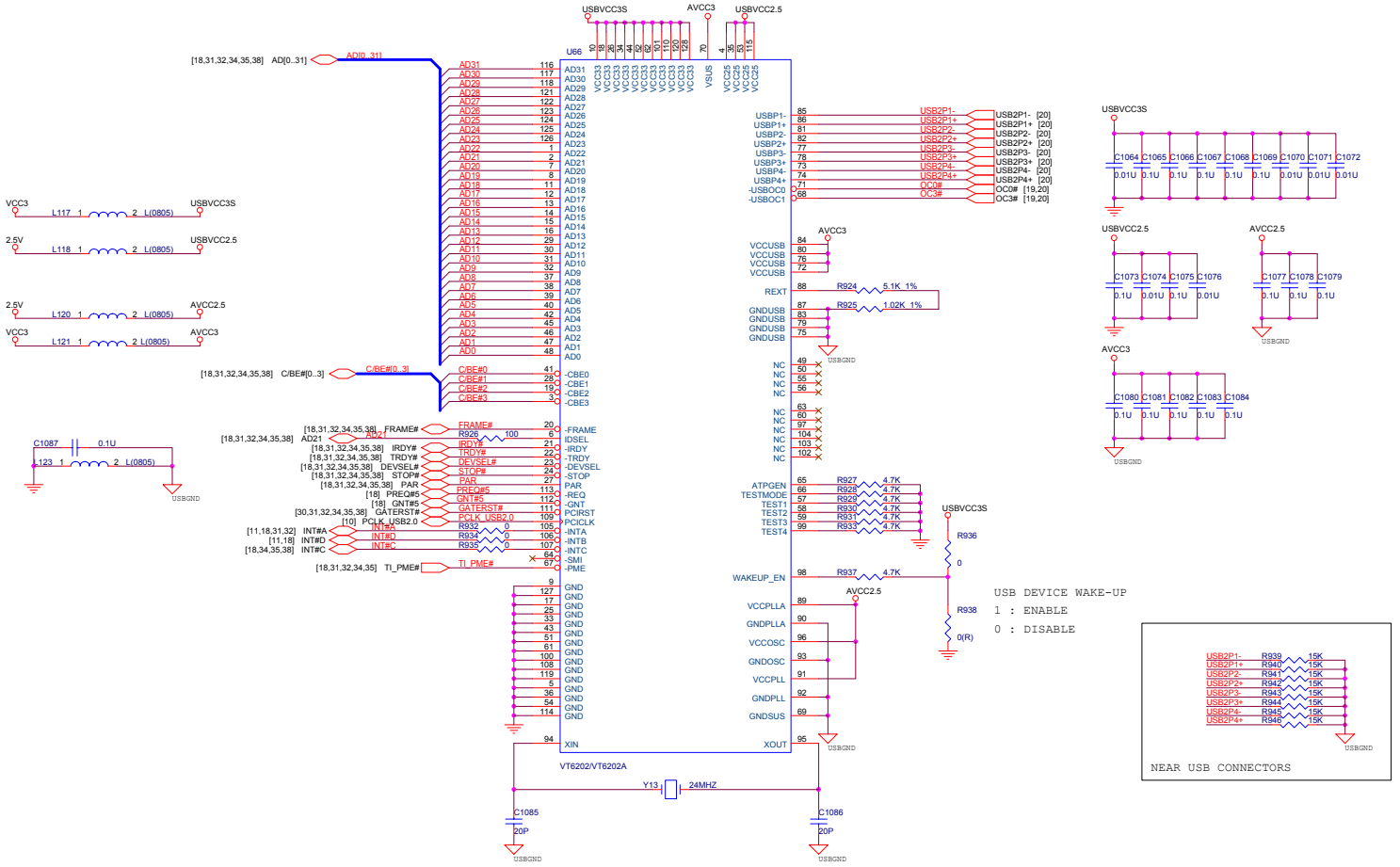
USB RTC



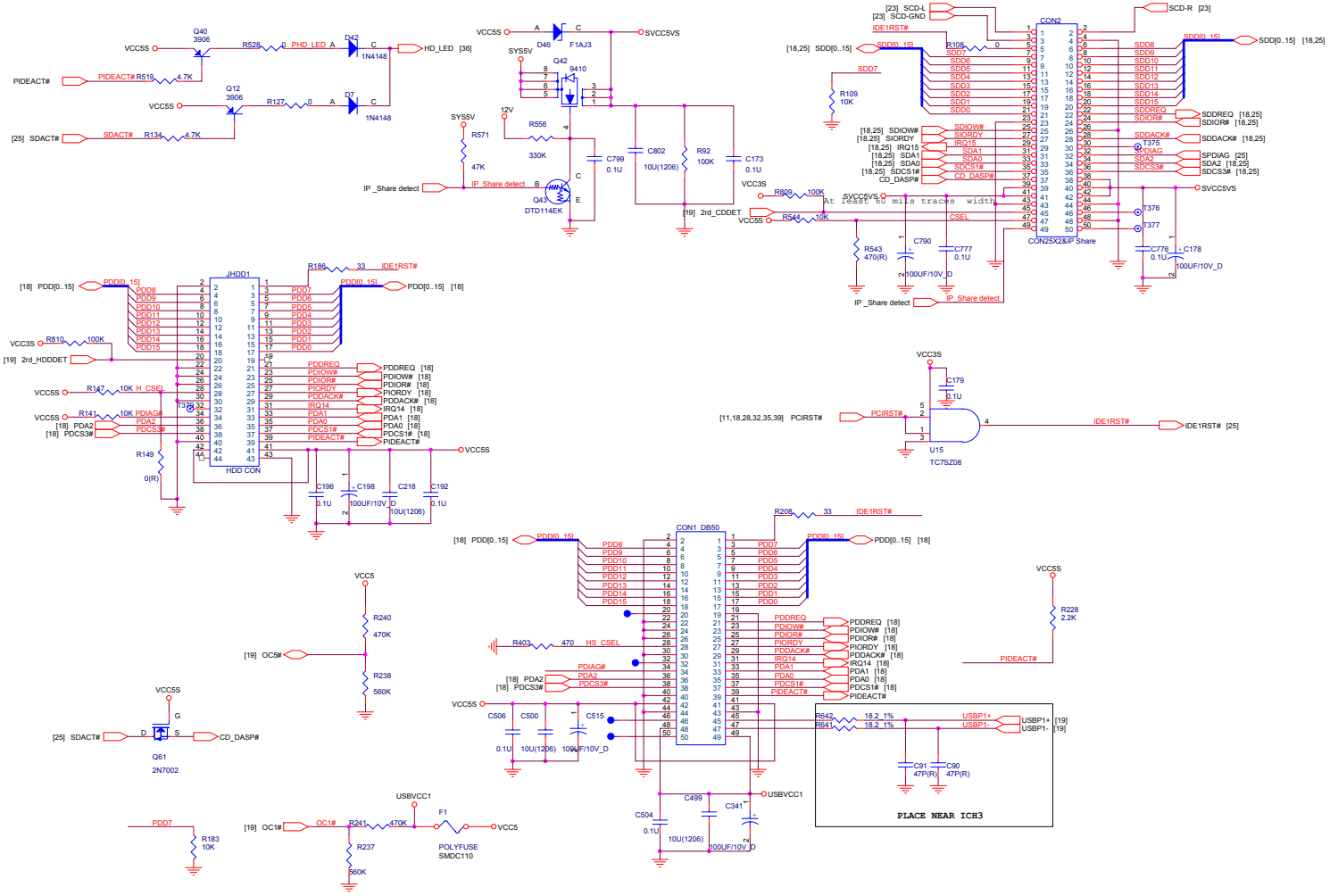
Sheet 20 of 44
USB RTC (888E)

USB 2.0

Sheet 21 of 44
USB 2.0 (888E)



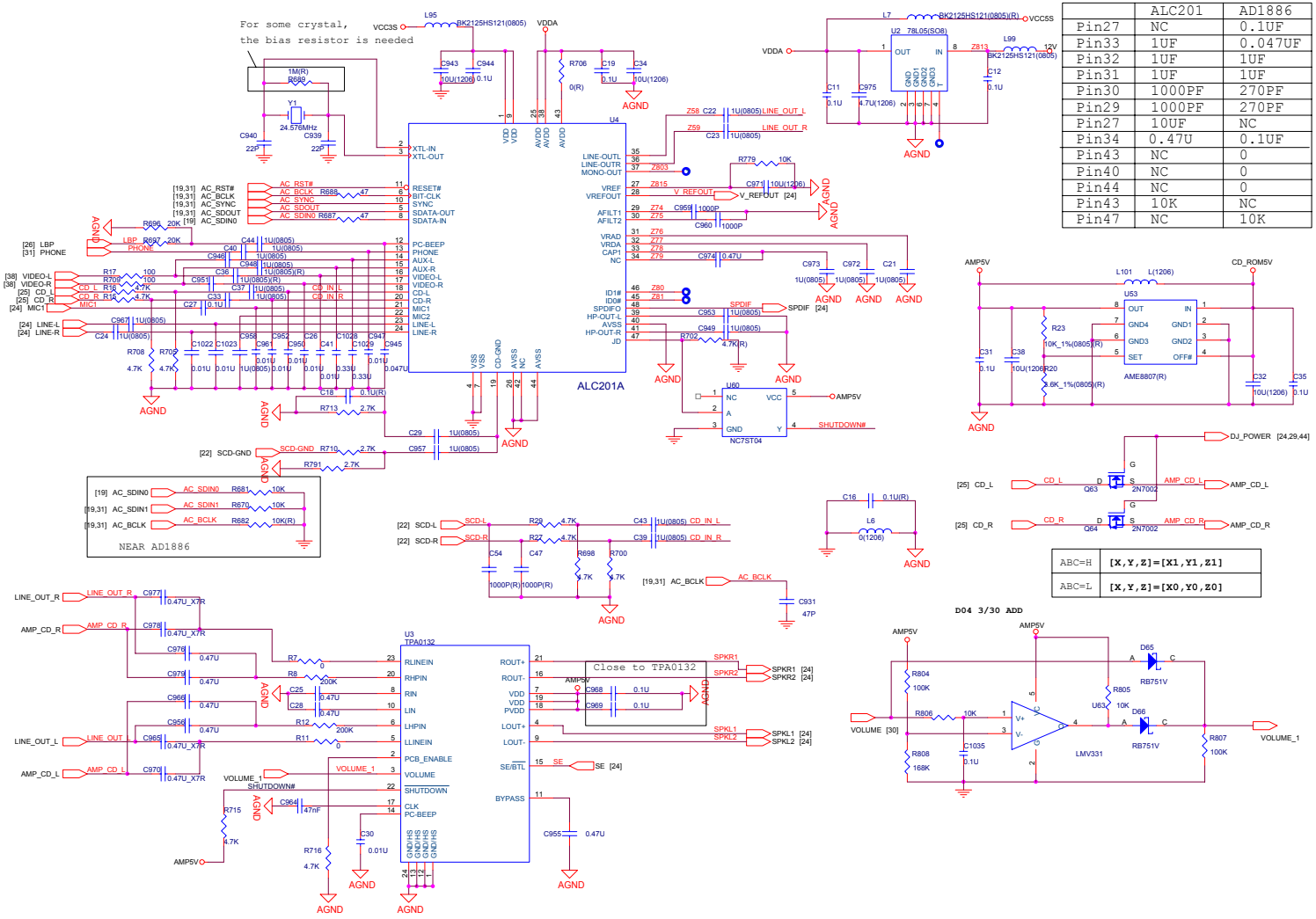
HDD & CD-R/W & MP3 CNN & IP Share



Sheet 22 of 44
HDD & CD-R/W & MP3 CNN & IP Share (888E)

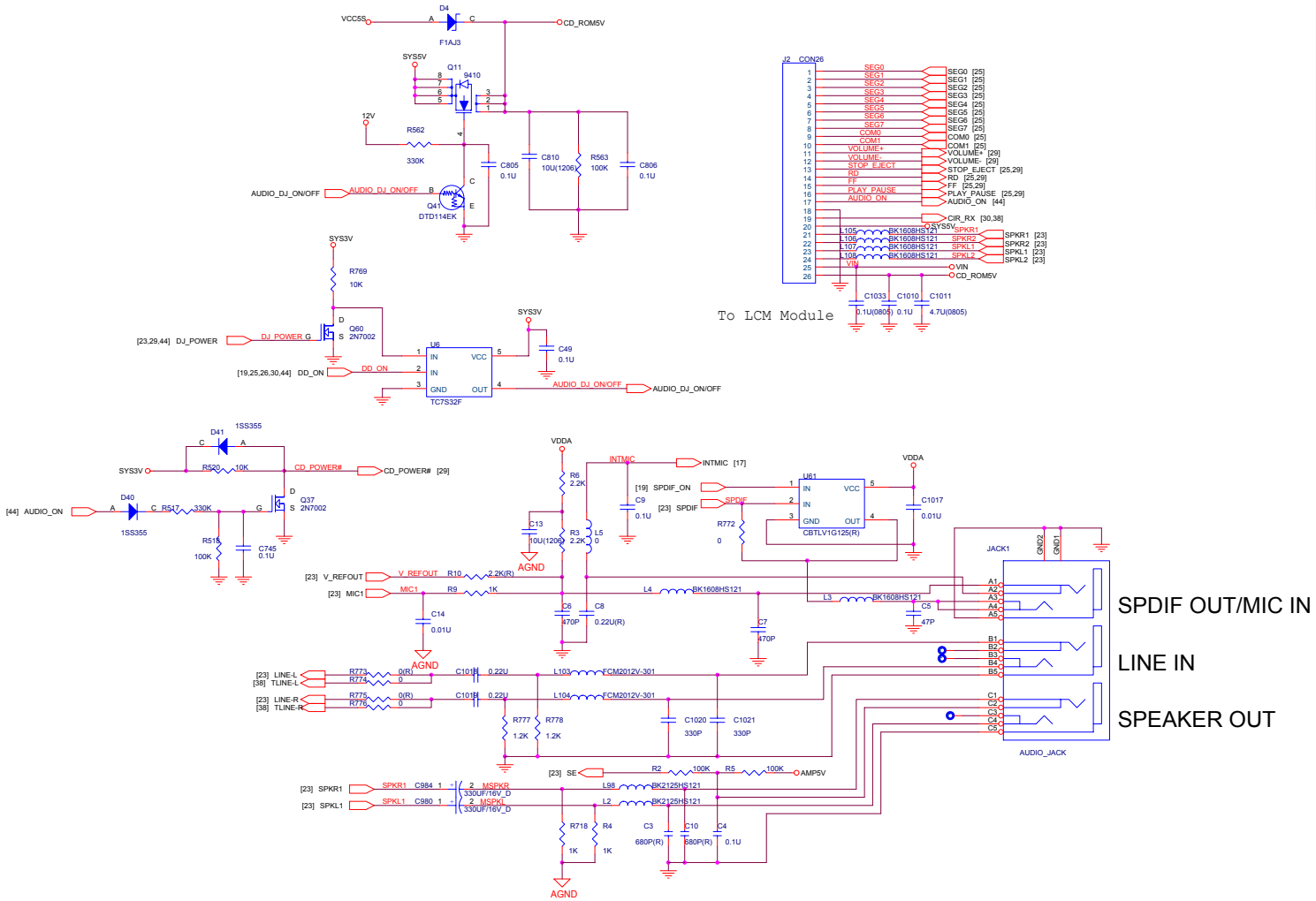
AMP TPA0132/ALC201A 1 of 2

Sheet 23 of 44
AMP TPA0132/
ALC201A
1 of 2 (888E)



	ALC201	AD1886
Pin27	NC	0.1UF
Pin33	1UF	0.047UF
Pin32	1UF	1UF
Pin31	1UF	1UF
Pin30	1000PF	270PF
Pin29	1000PF	270PF
Pin27	10UF	NC
Pin34	0.47U	0.1UF
Pin43	NC	0
Pin40	NC	0
Pin44	NC	0
Pin43	10K	NC
Pin47	NC	10K

AMP TPA0132/ALC201A 2 of 2



Sheet 24 of 44
AMP TPA0132/
ALC201A
2 of 2 (888E)

Audio DJ CD-ROM

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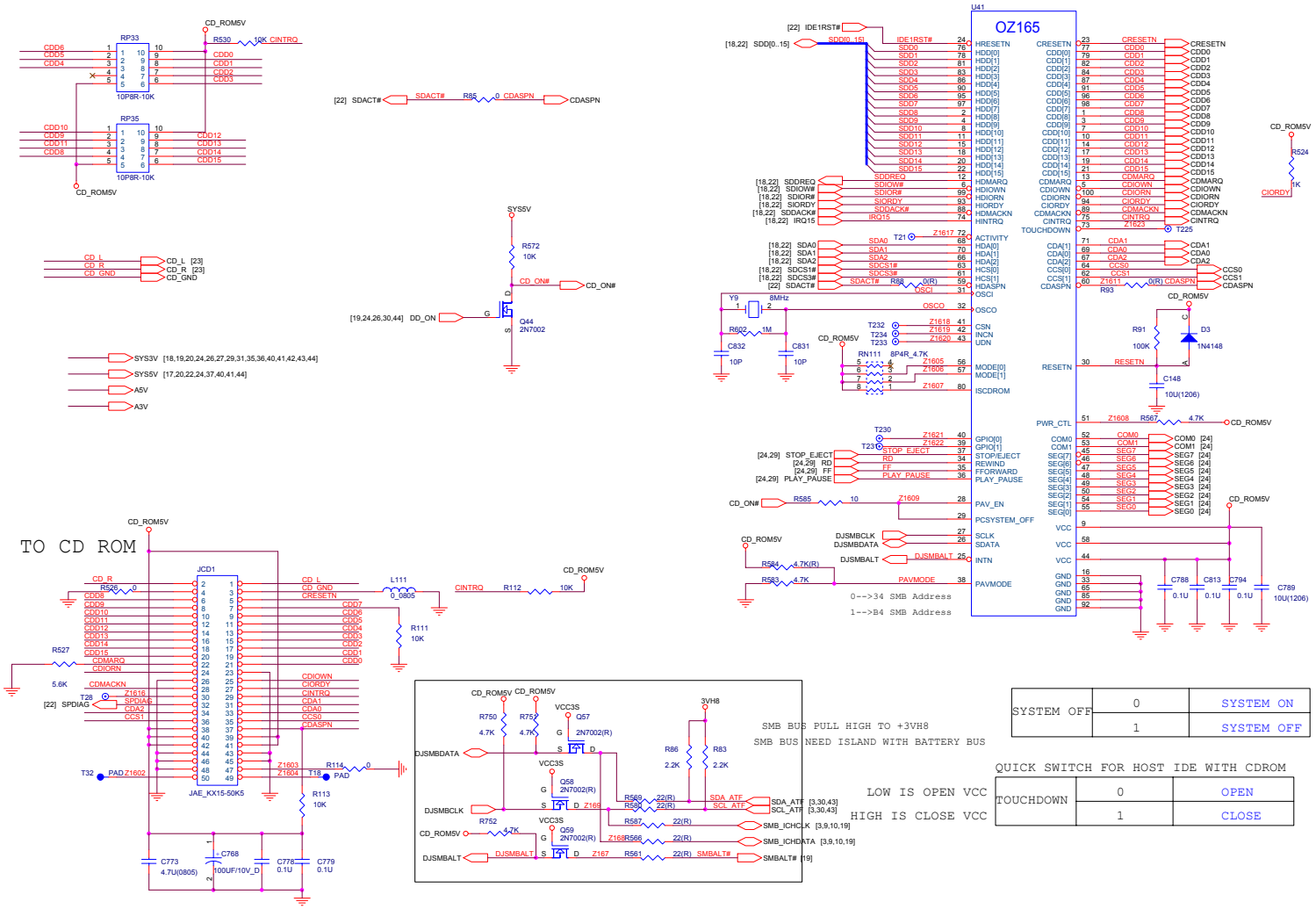
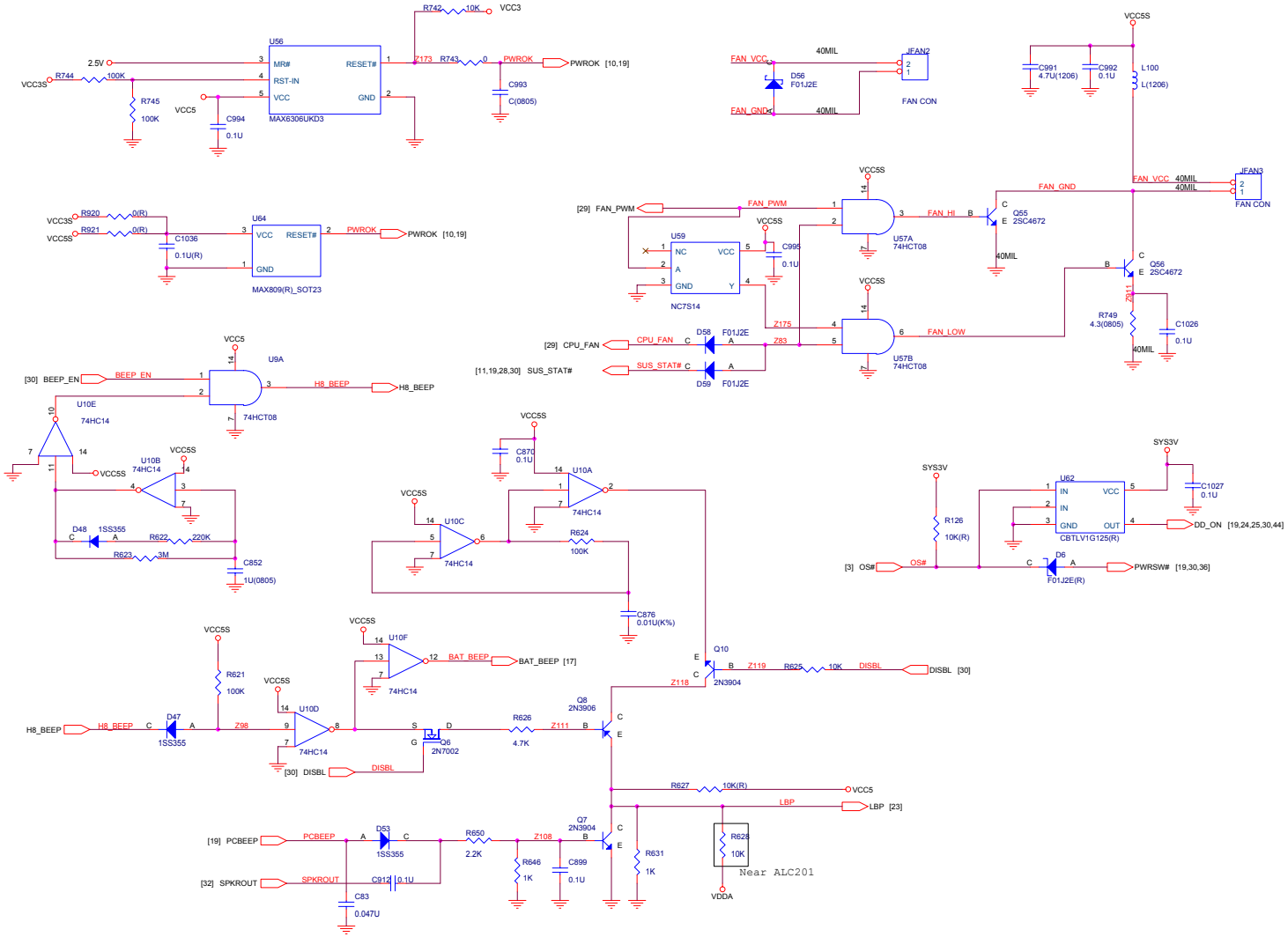
Audio DJ CD-ROM
(888E)



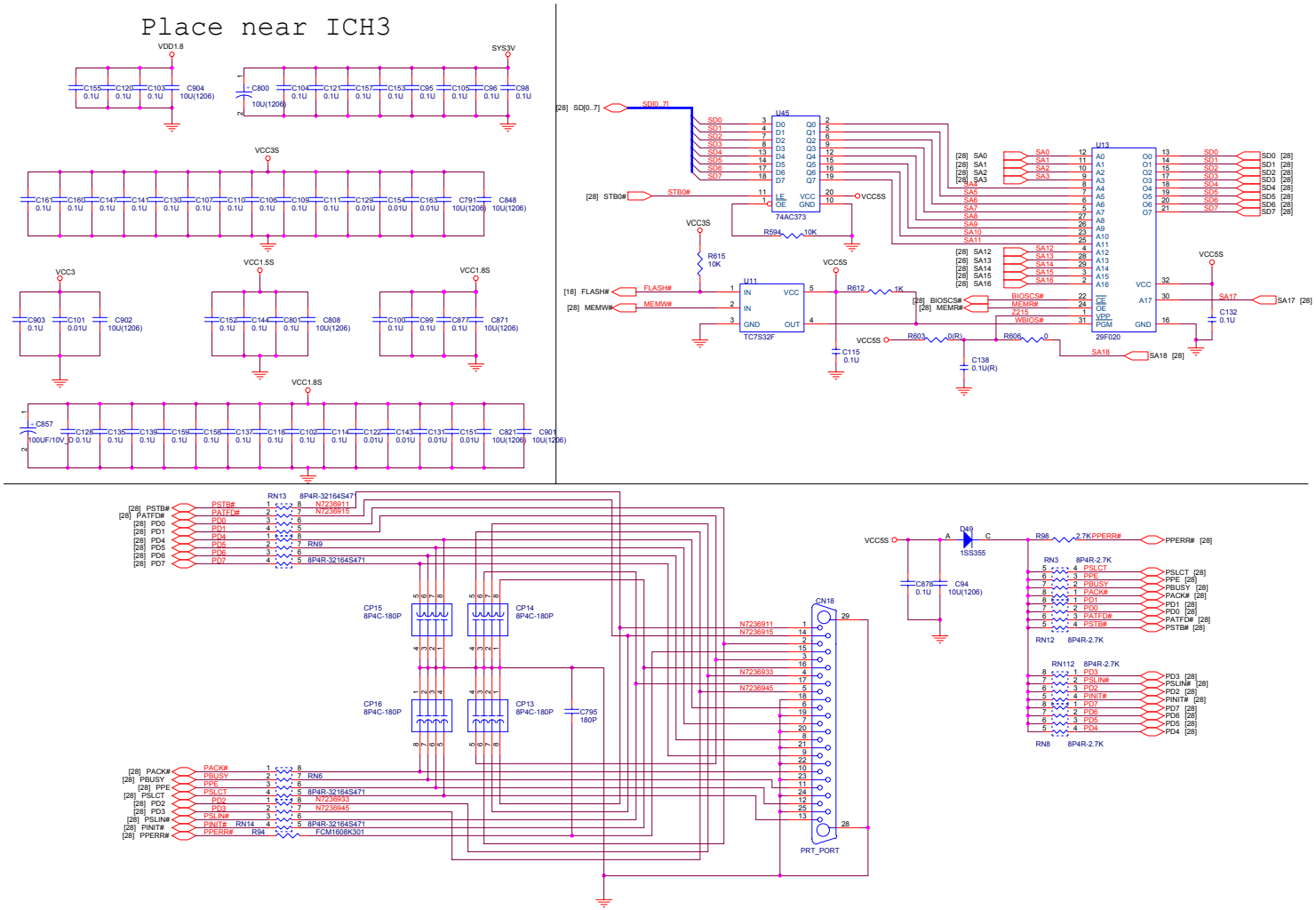
Fan Control



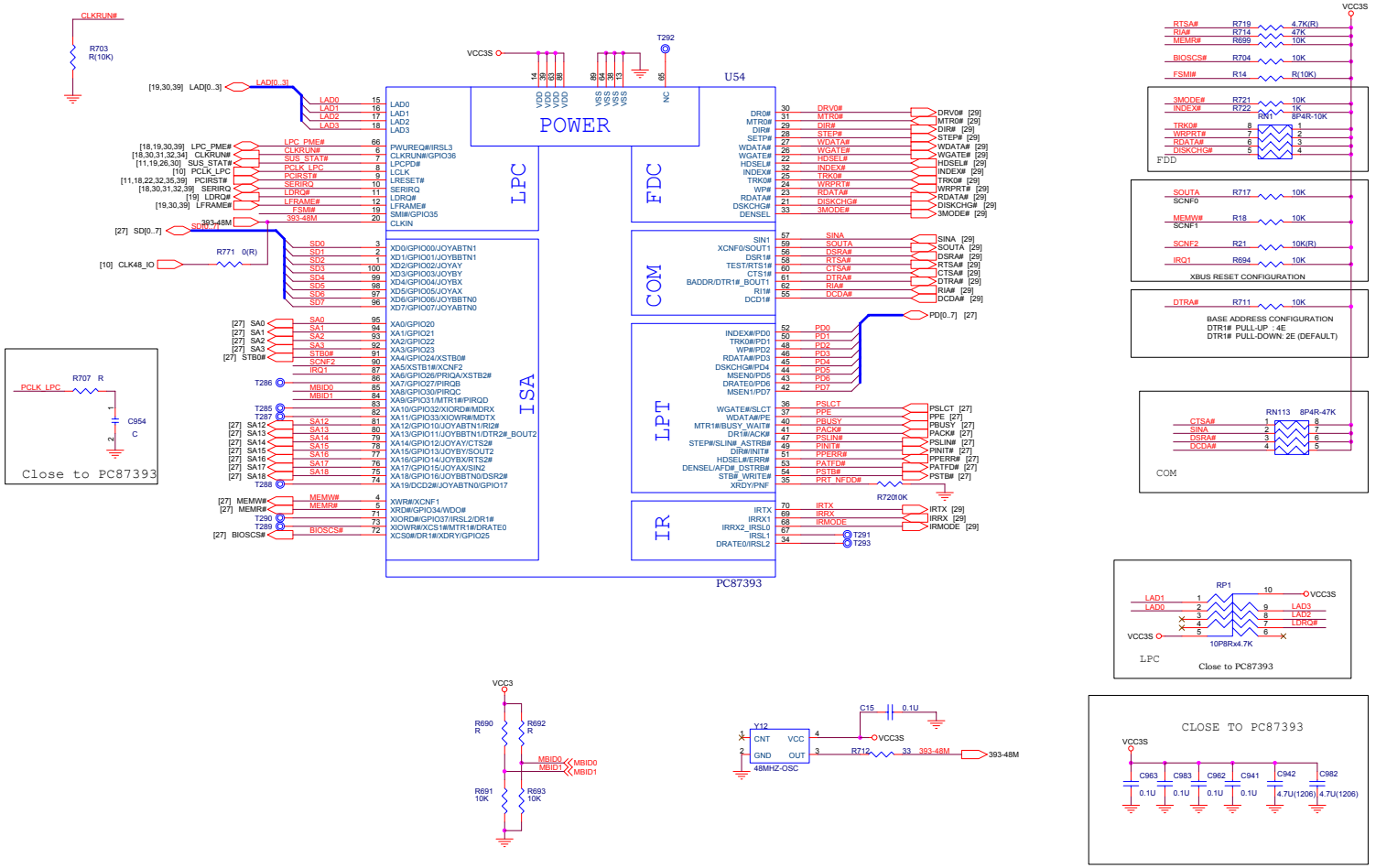
Sheet 26 of 44
Fan Control (888E)

Flash ROM LPT1

Sheet 27 of 44
Flash ROM LPT1
(888E)



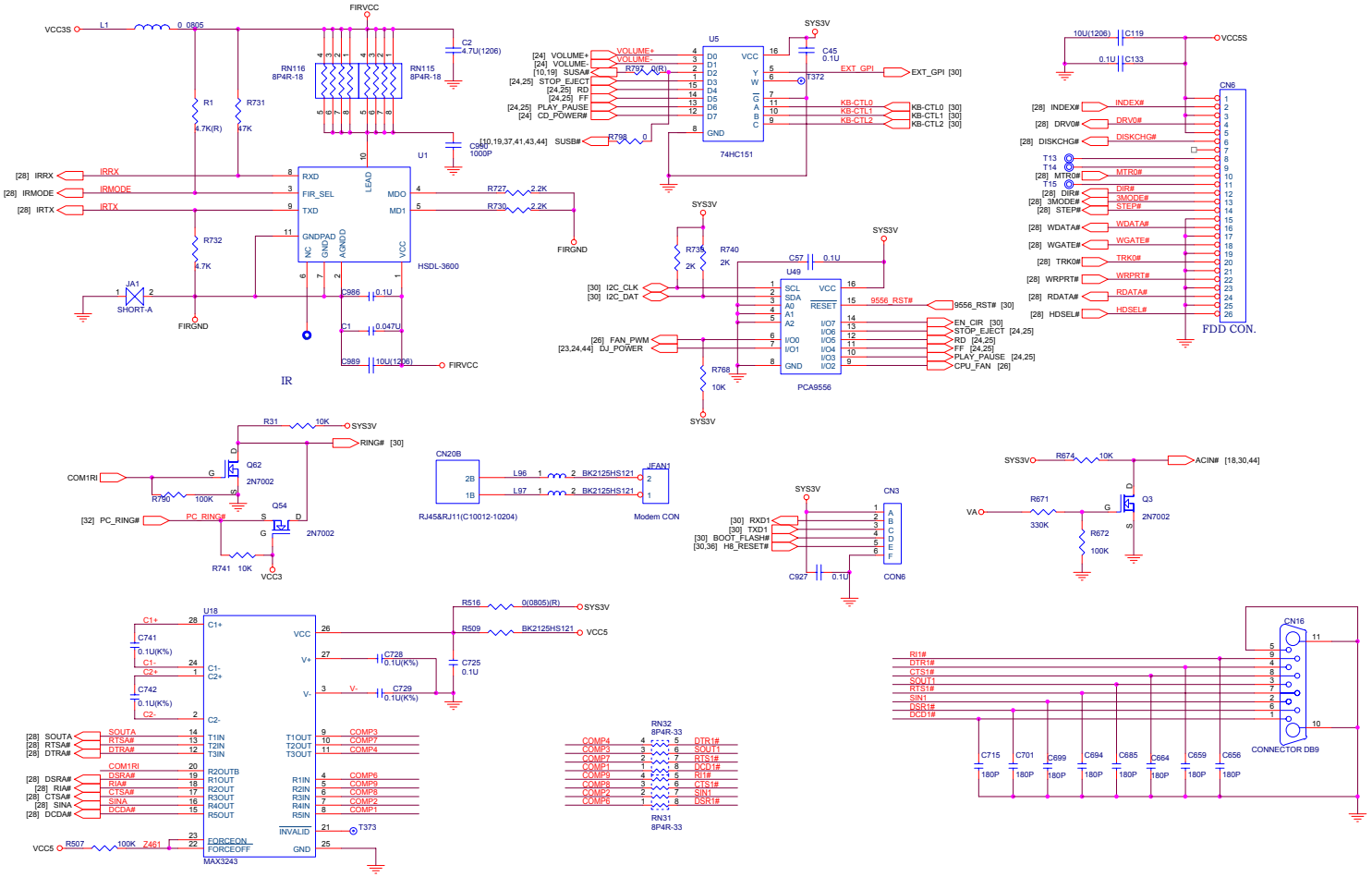
LPC Bridge & Super I/O



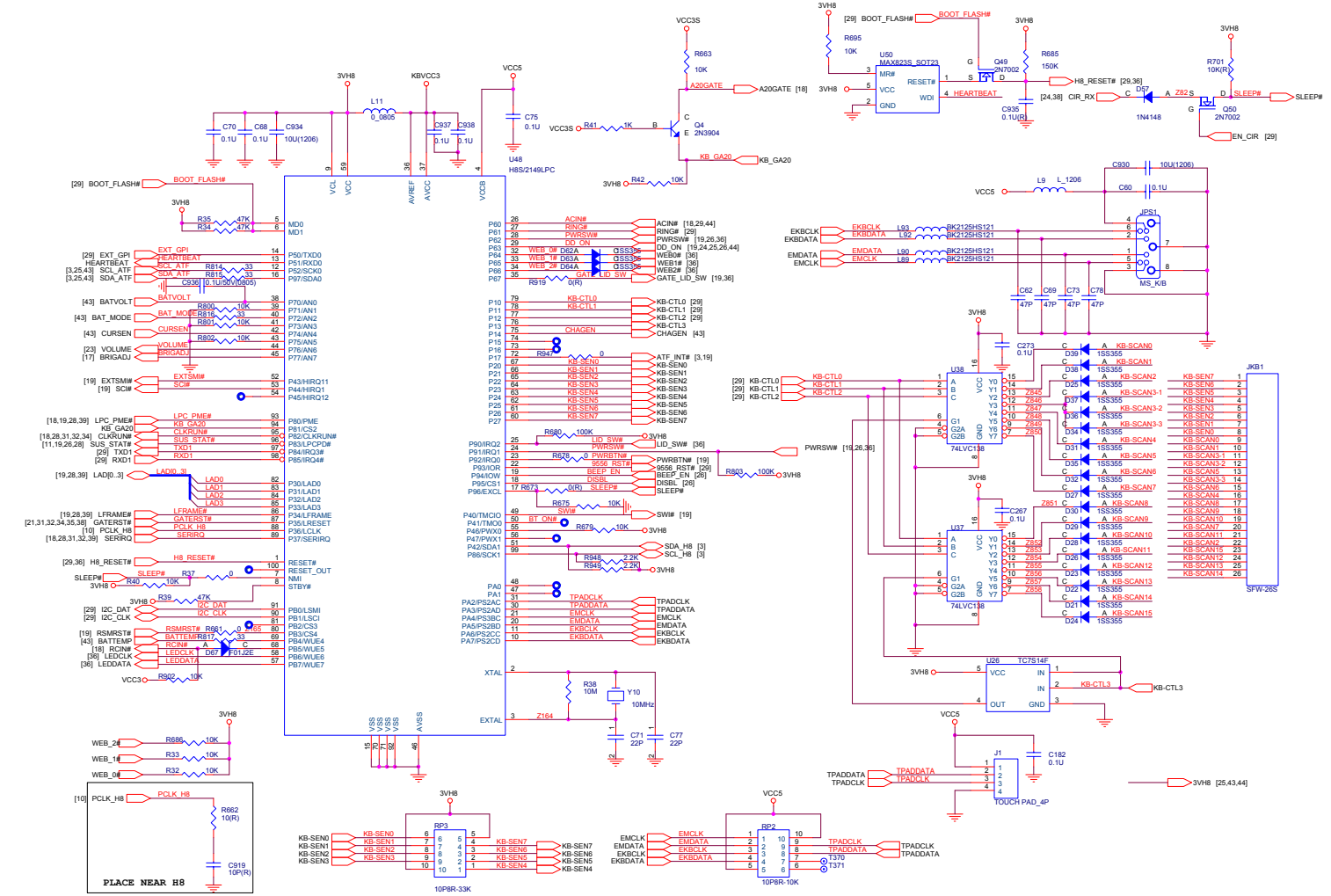
Sheet 28 of 44
LPC Bridge & Super I/O (888E)

I/O Connector

Sheet 29 of 44
I/O Connector
(888E)



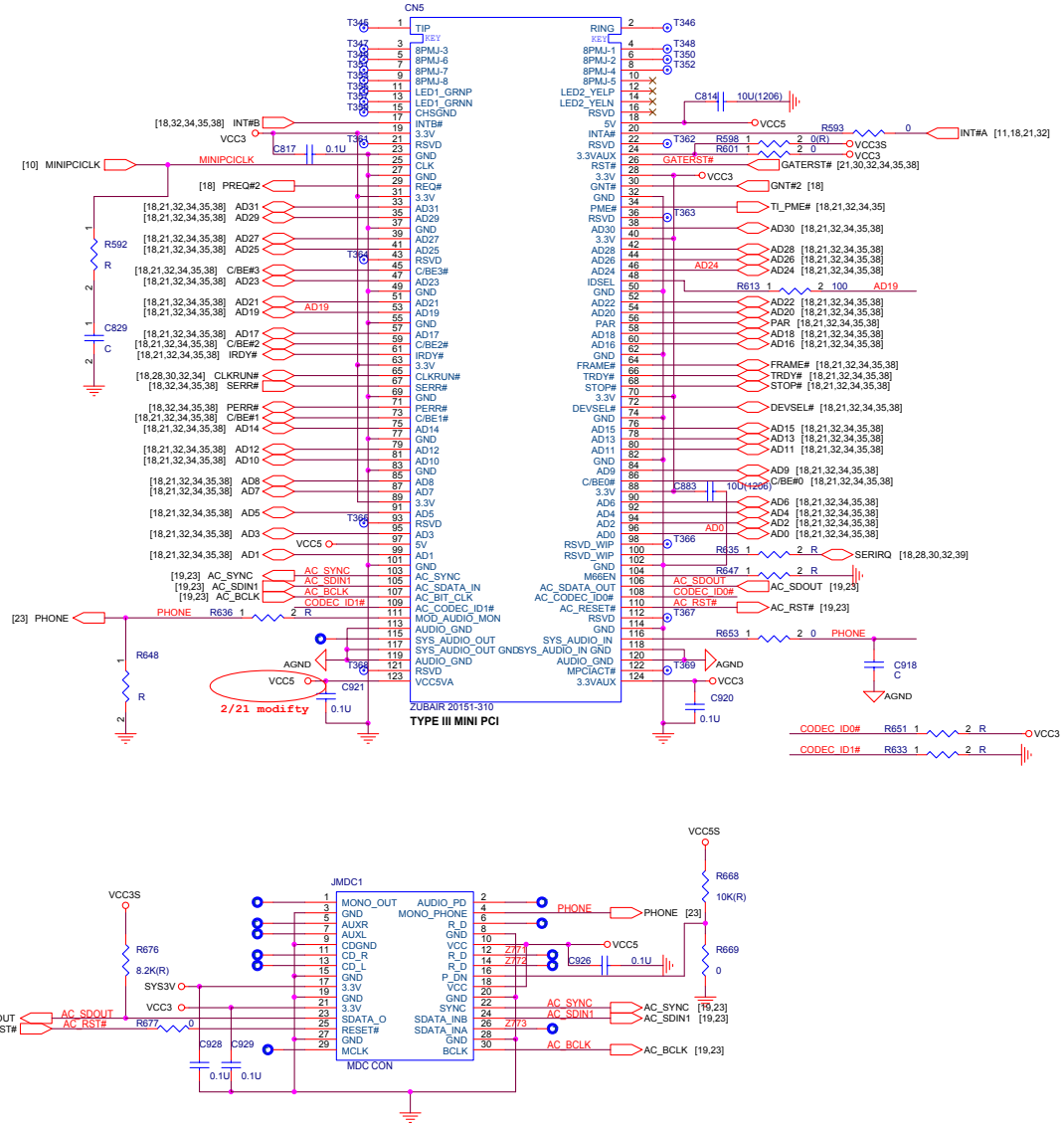
KBC H8



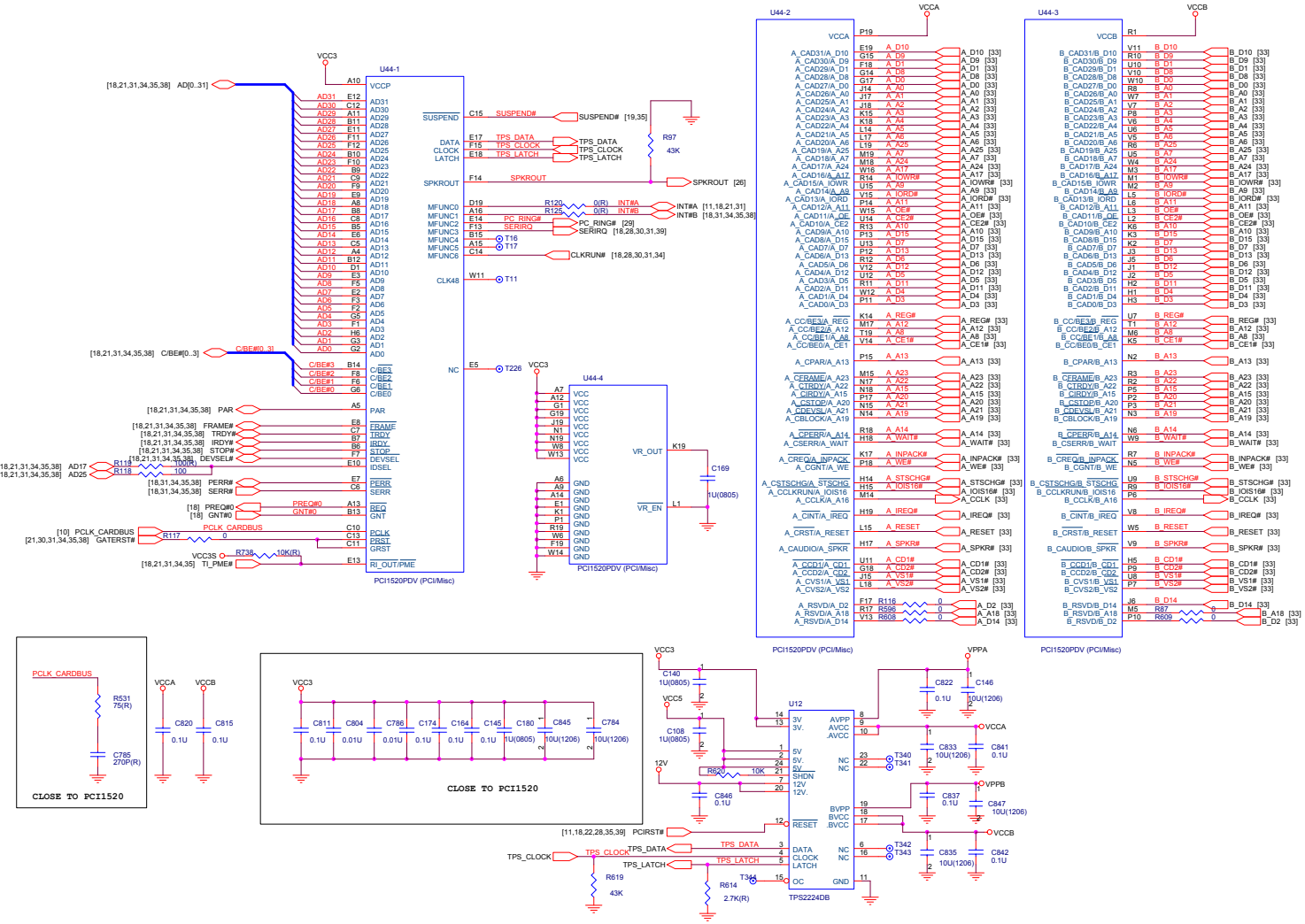
Sheet 30 of 44
KBC H8 (888E)

Mini PCI/MDC

Sheet 31 of 44
Mini PCI/MDC
(888E)



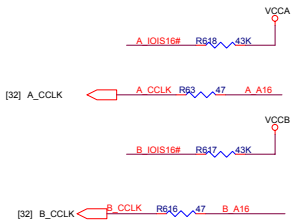
PCI 1520

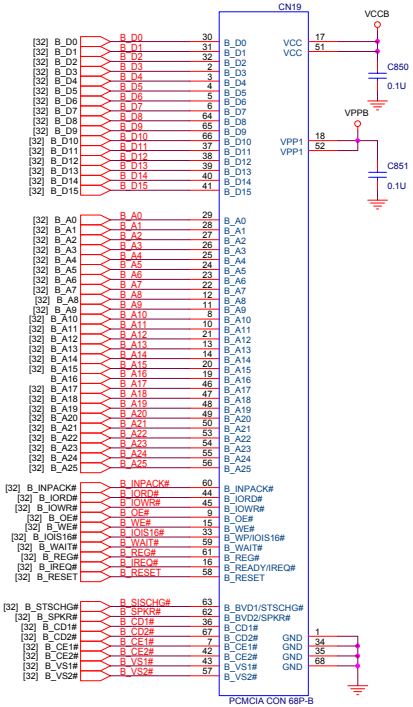


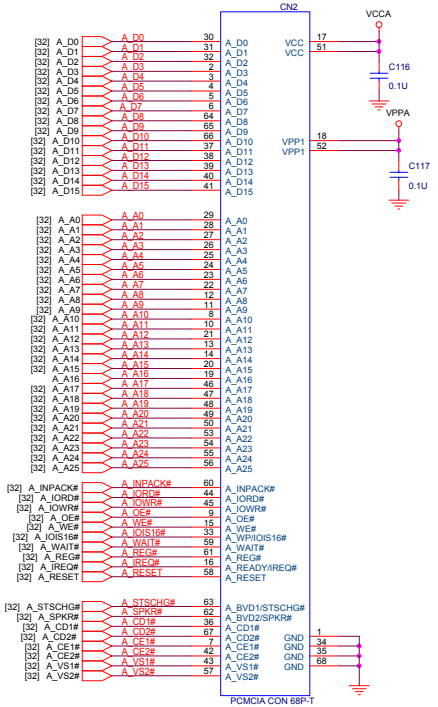
Sheet 32 of 44
PCI 1520 (888E)

PCMCIA Connector

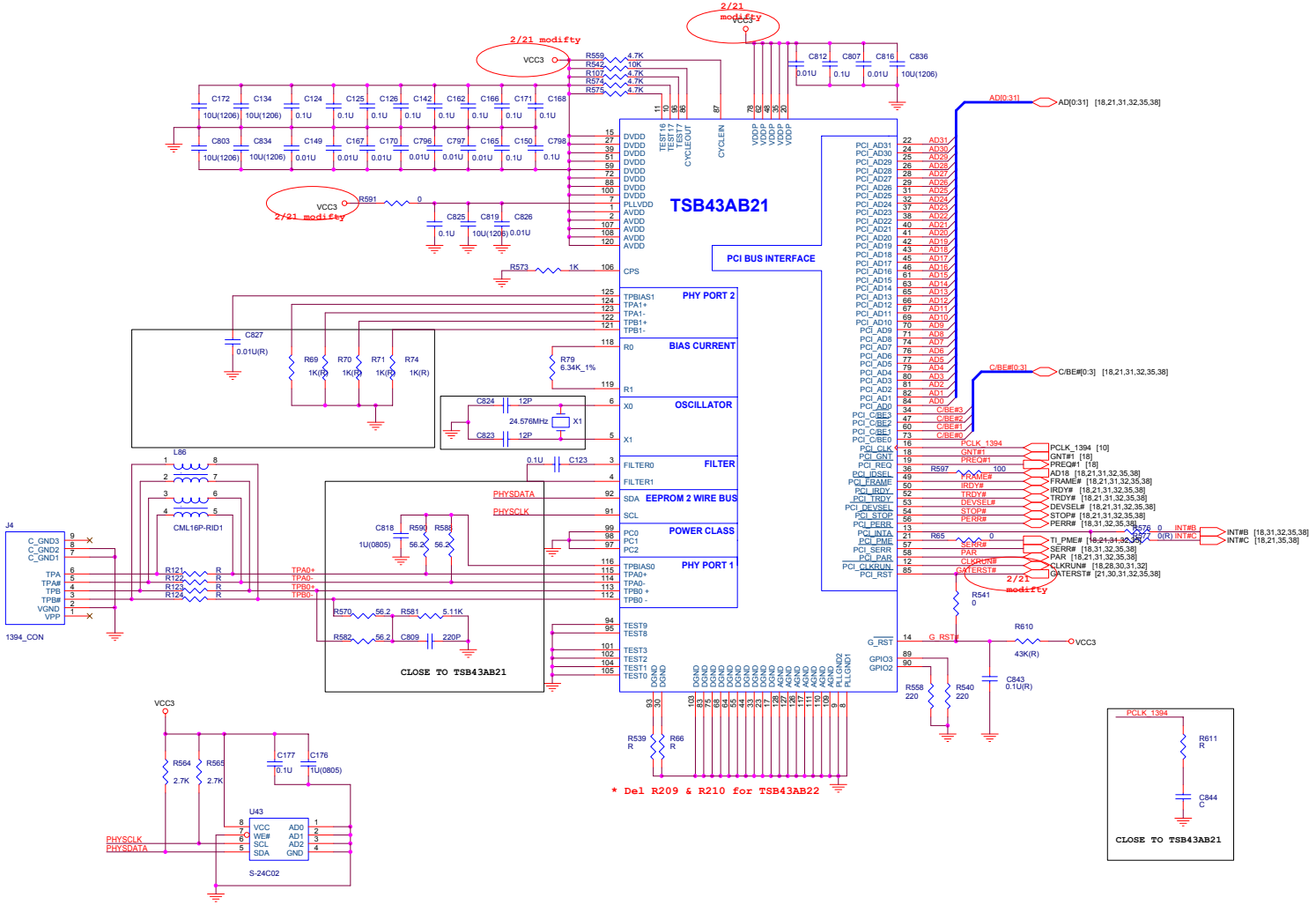
Sheet 33 of 44
PCMCIA Connector
(888E)







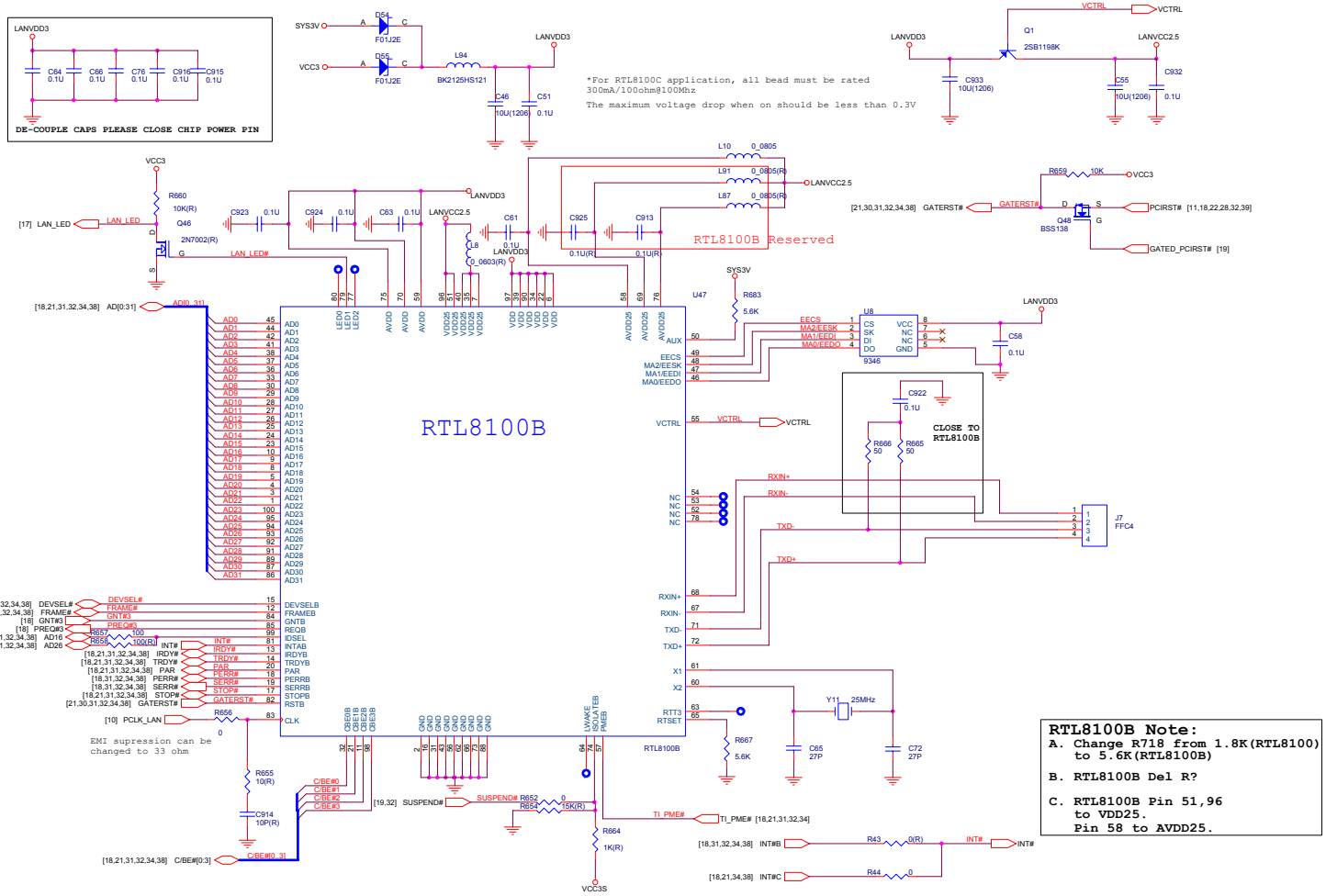
1394 TSB43AB21



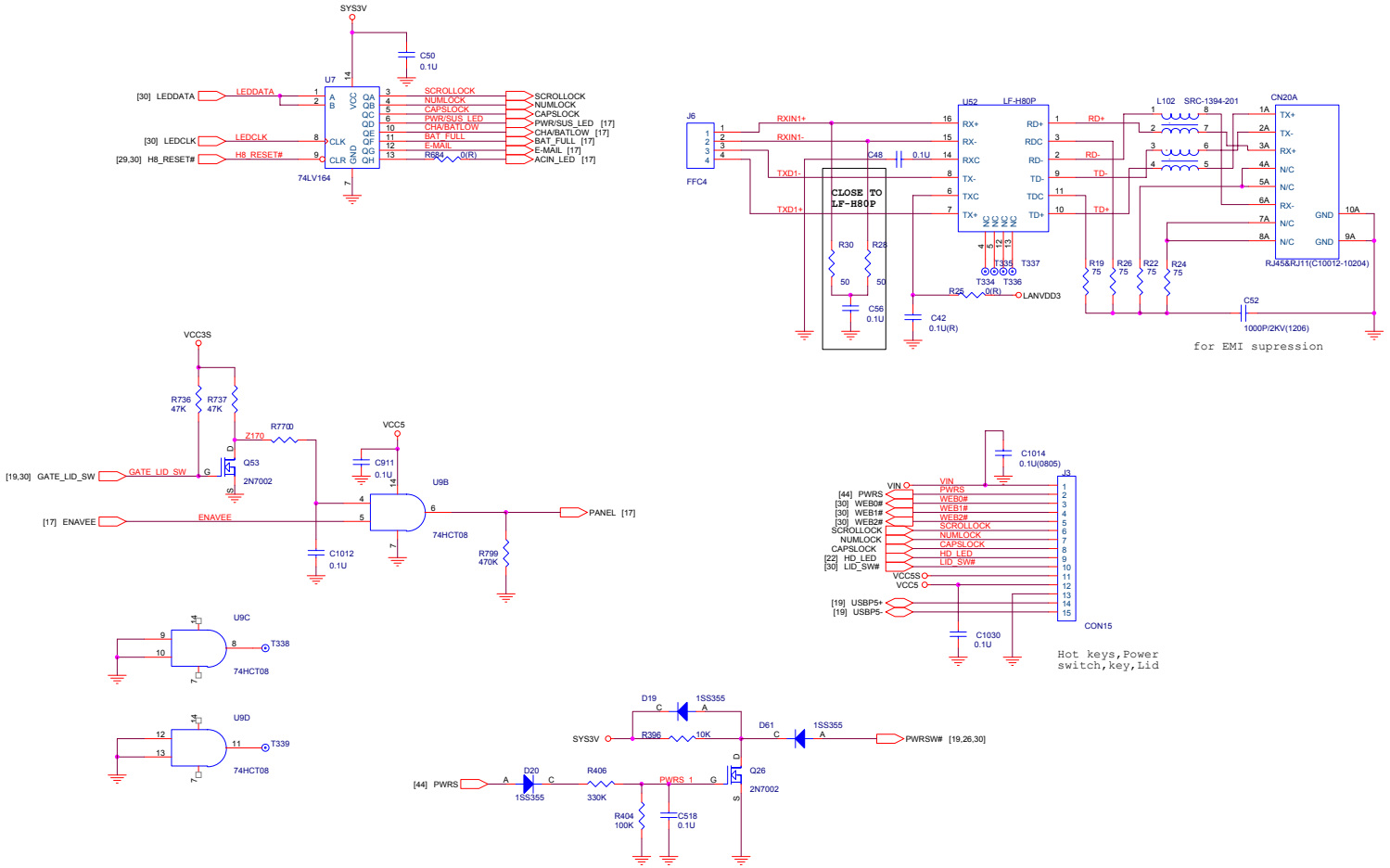
Sheet 34 of 44
1394 TSB43AB21
(888E)

LAN RTL8100B

Sheet 35 of 44
LAN RTL8100B
(888E)



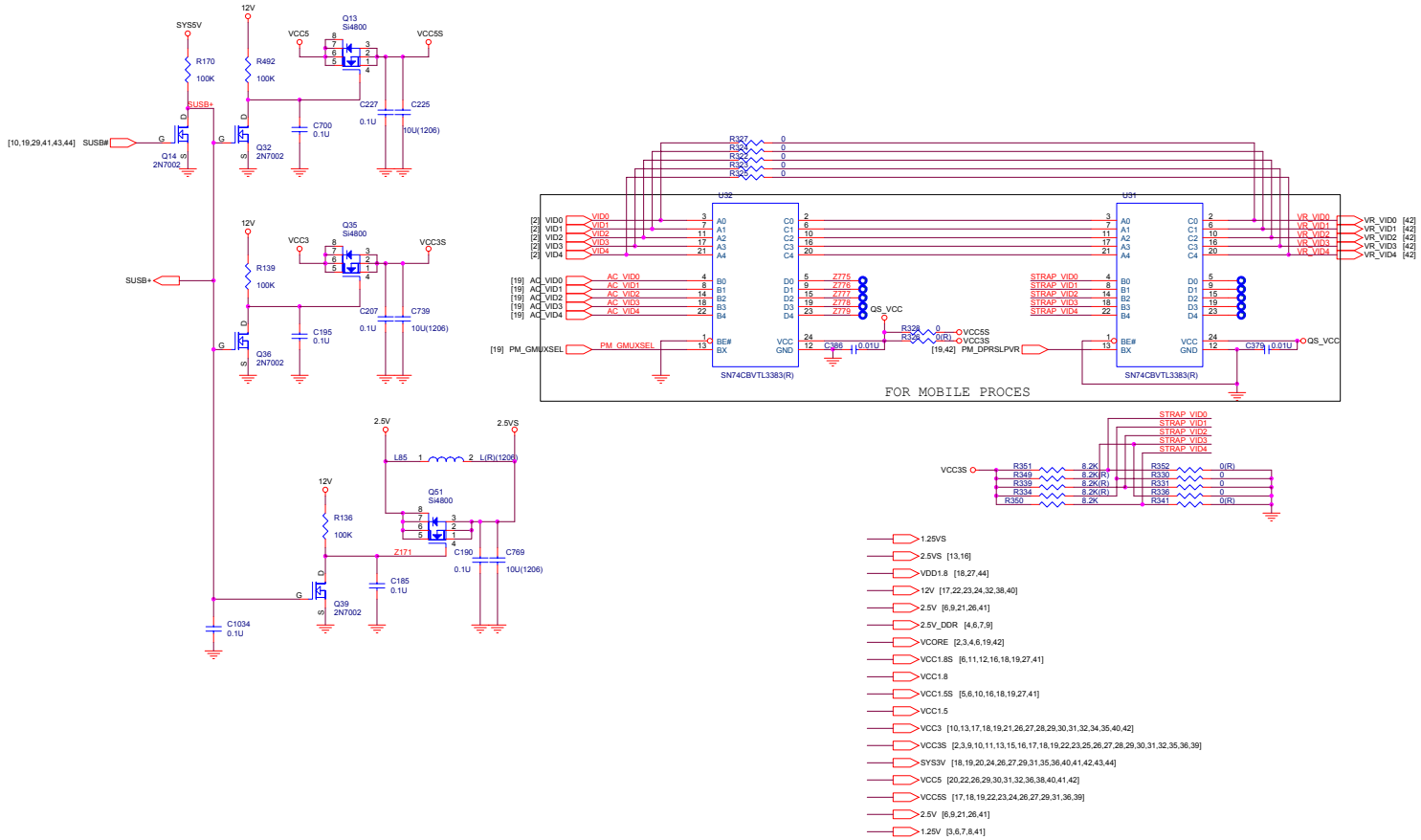
LED Indicator



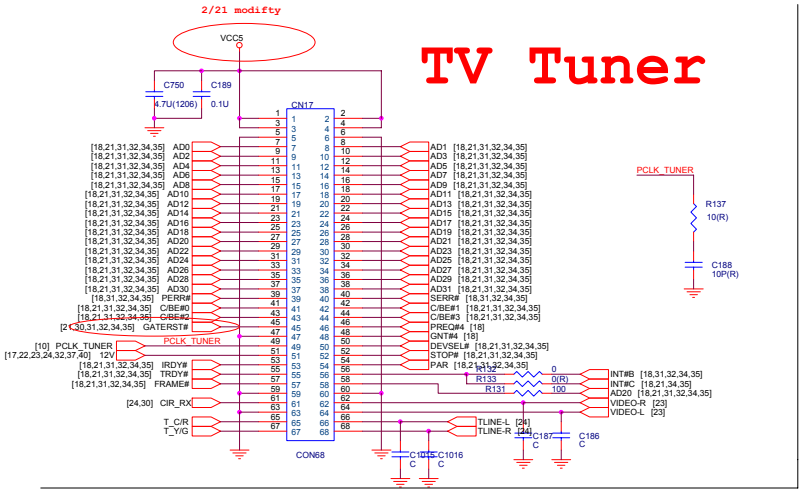
Sheet 36 of 44
LED Indicator
(888E)

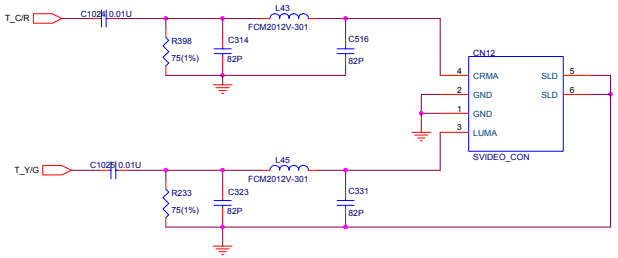
Power Plane

Sheet 37 of 44
Power Plane (888E)



TV Tuner / Fingerchip

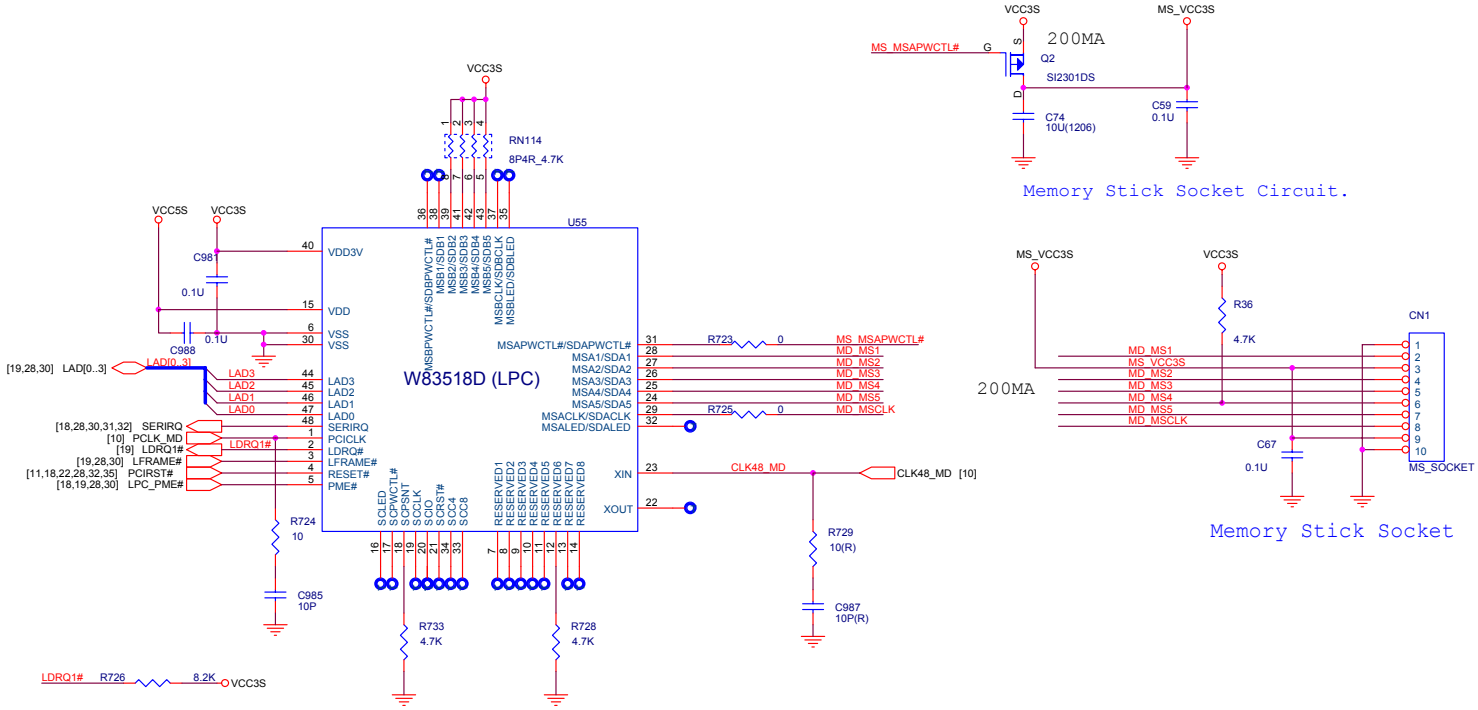




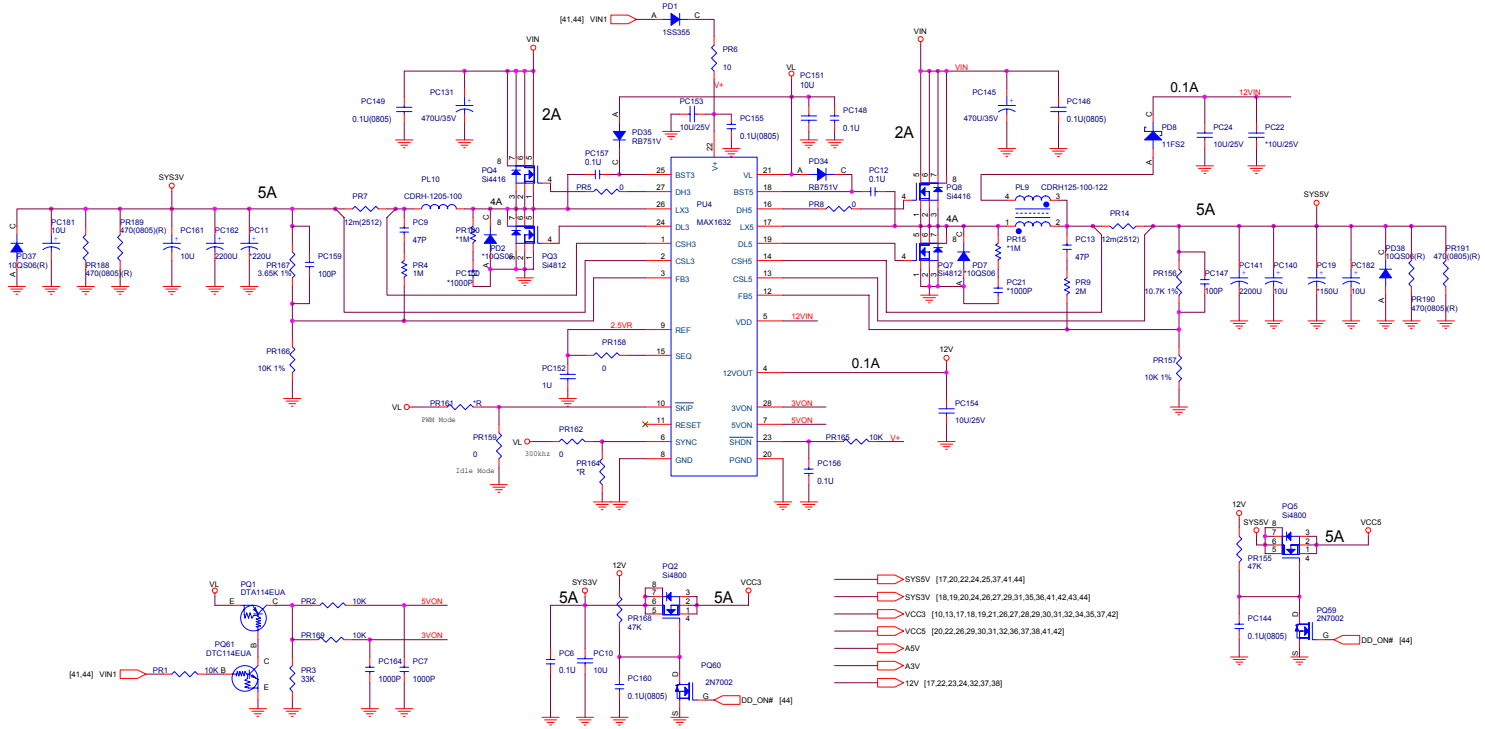
Sheet 38 of 44
TV Tuner/
Fingerchip (888E)

W83518D Media Reader

Sheet 39 of 44
W83518D Media Reader (888E)



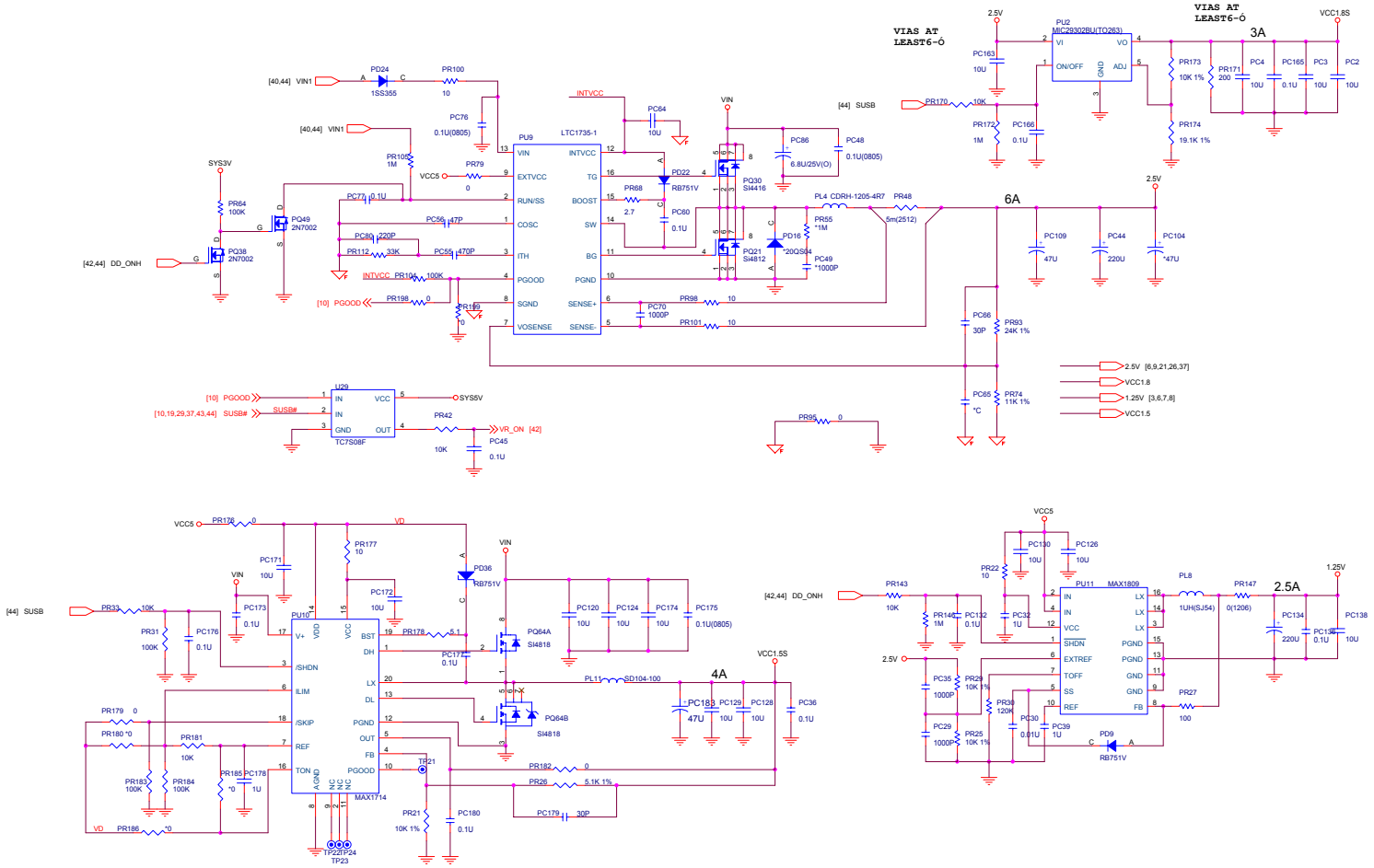
System Power 1 SCH



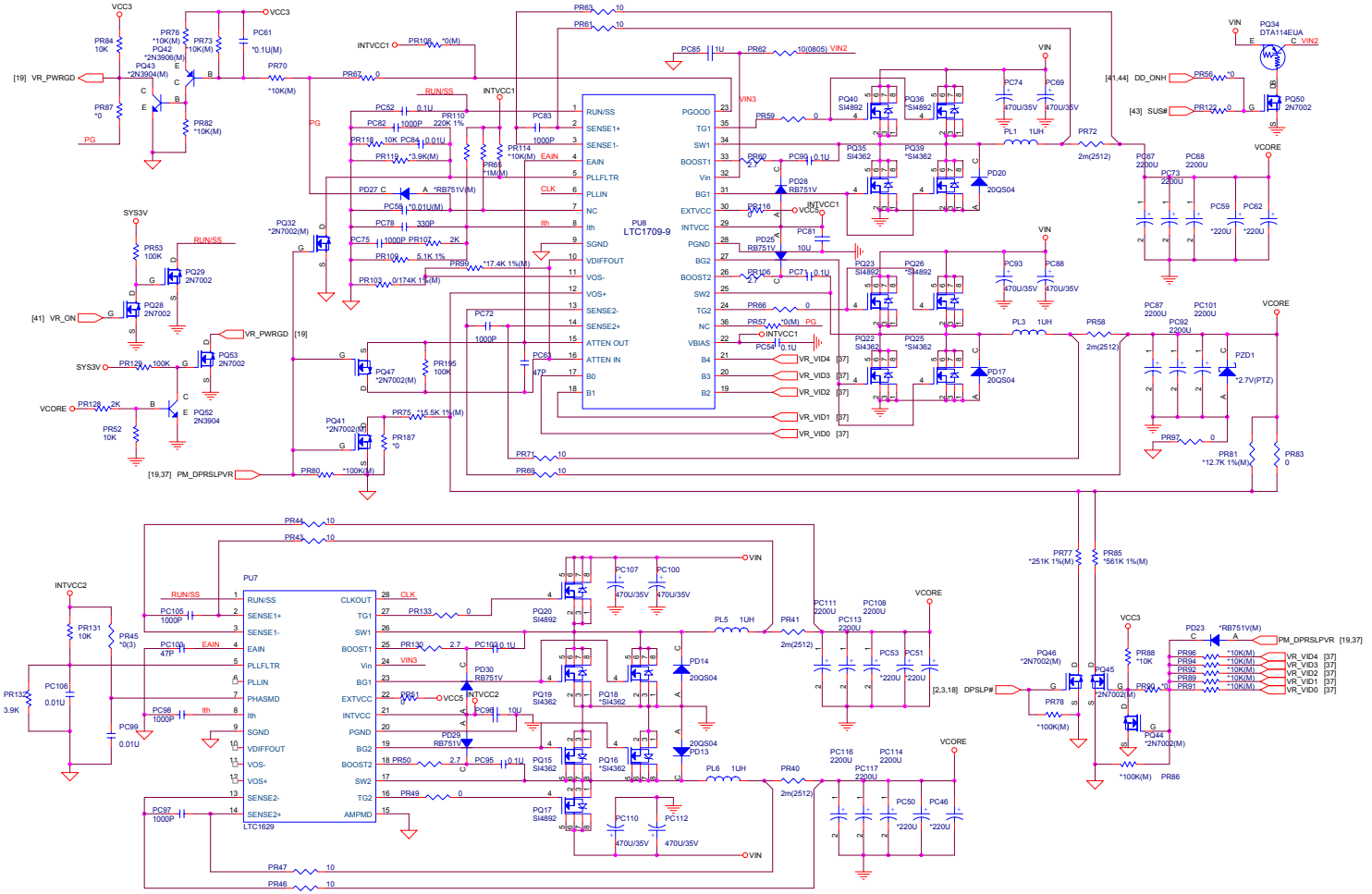
Sheet 40 of 44
System Power 1 SCH (+3V, +5V, +12V) - (888E)

System Power 2 SCH

Sheet 41 of 44
System Power 2 SCH (+2.5V, +18V, +1.5V, +1.25V) - (888E)



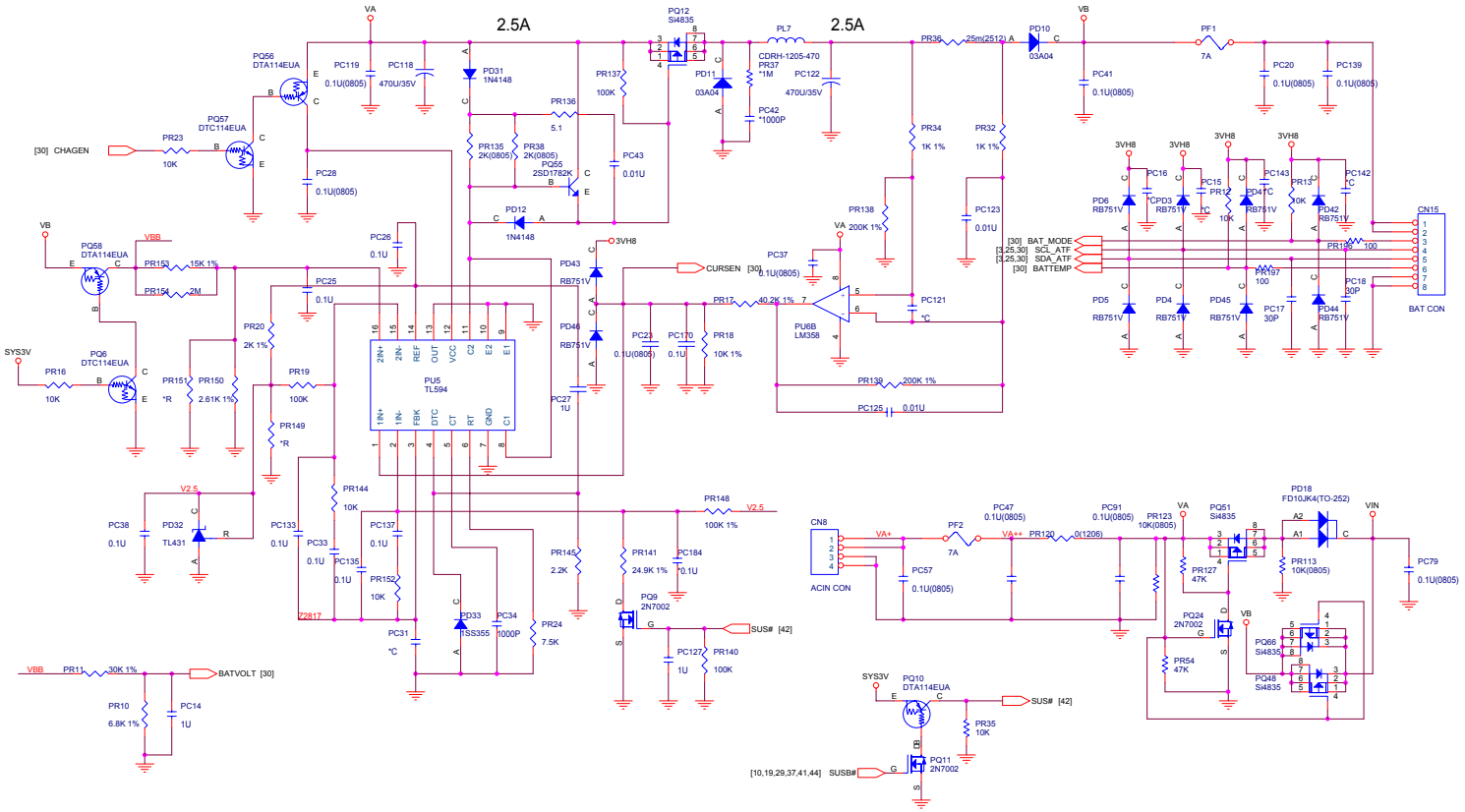
VCORE



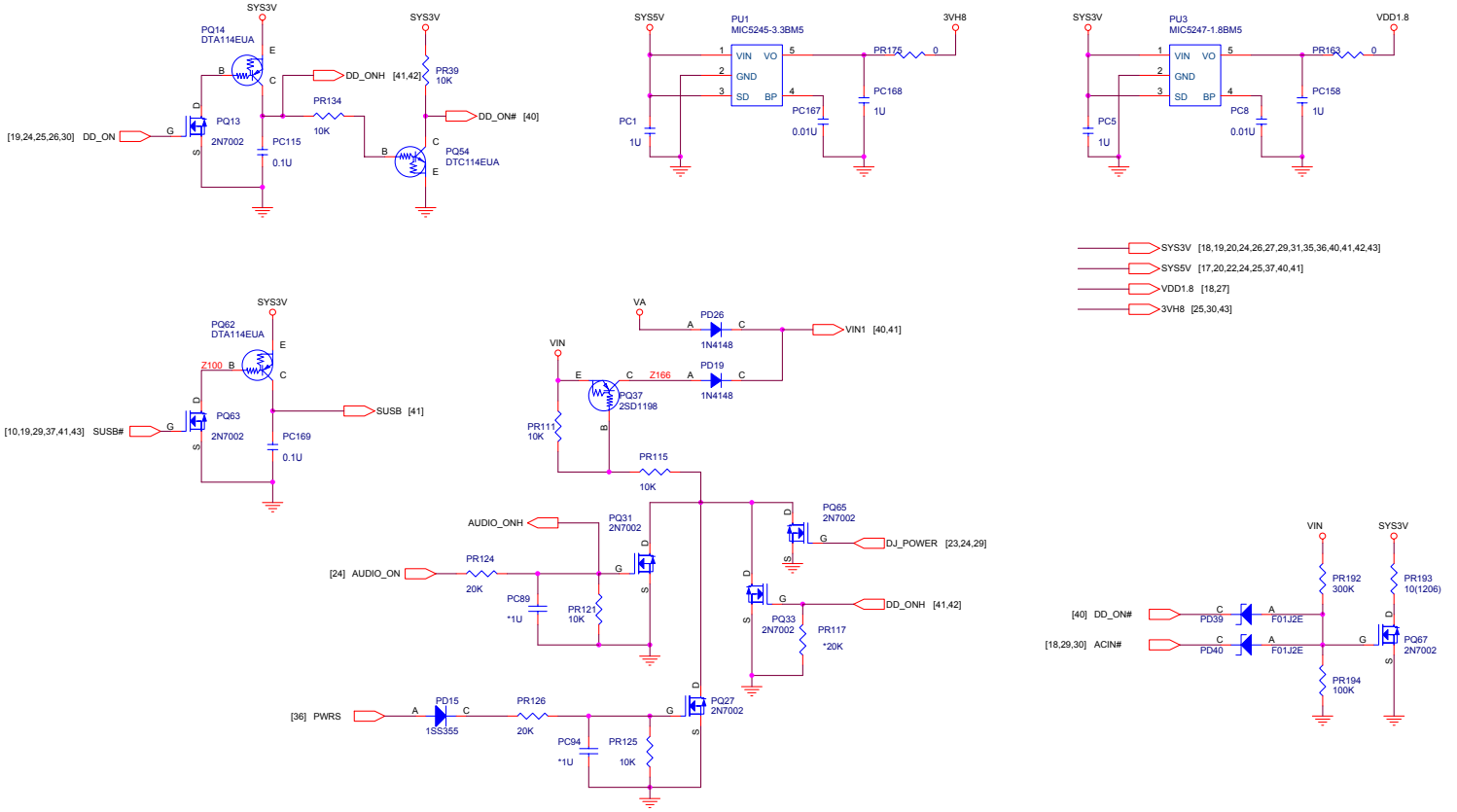
Sheet 42 of 44
VCORE (888E)

Charger-PWM

Sheet 43 of 44
Charger-PWM
(888E)



3VH8 VDD1.8



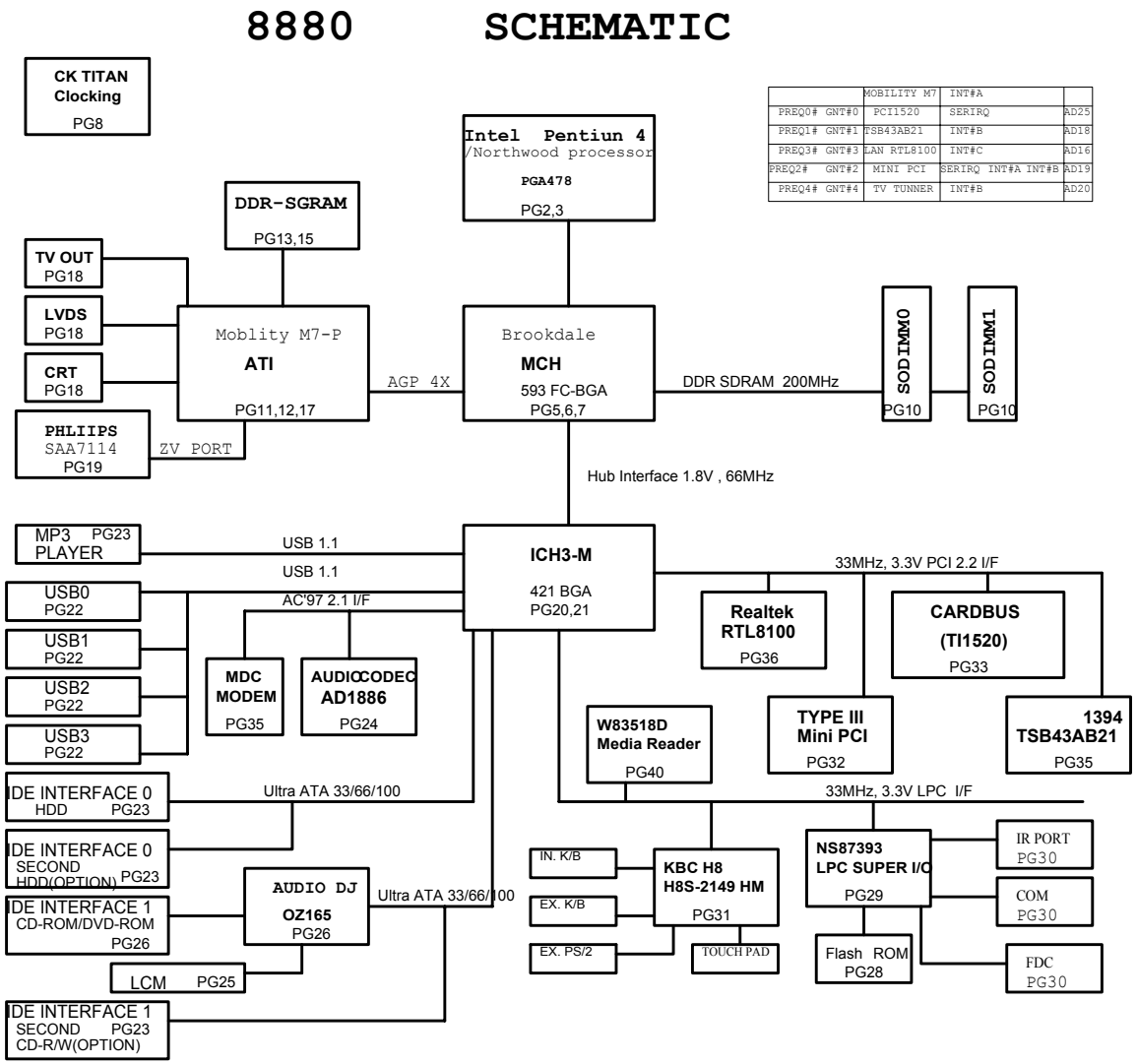
Sheet 44 of 44
3VH8 VDD1.8
(888E)

Appendix D:Schematic Diagrams For 8880

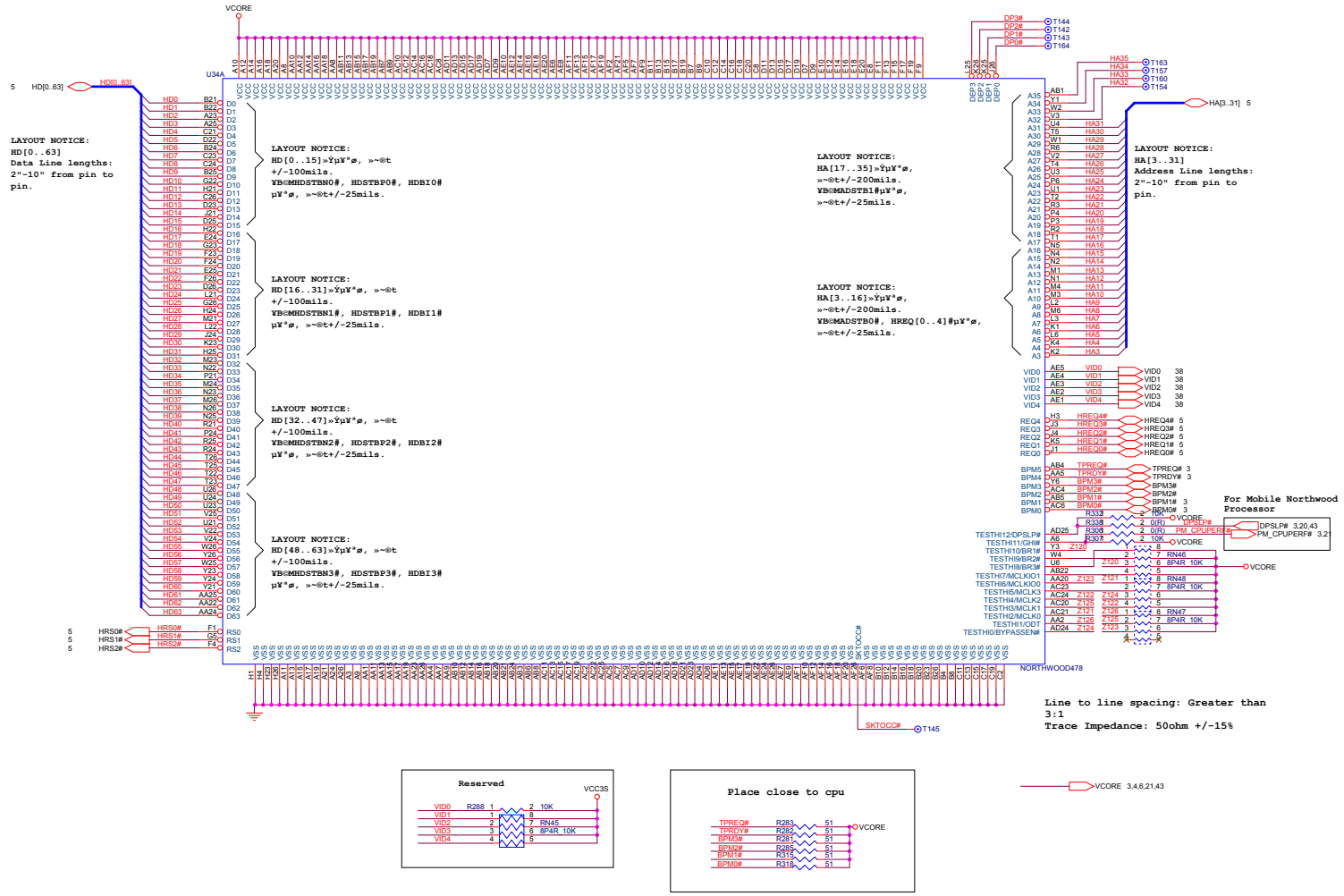
This appendix has circuit diagrams of the **8880 notebook** computer's PCBs.

System Block Diagram

Sheet 1 of 45
System Block Diagram (8880)



CPU (Northwood) 1 of 2

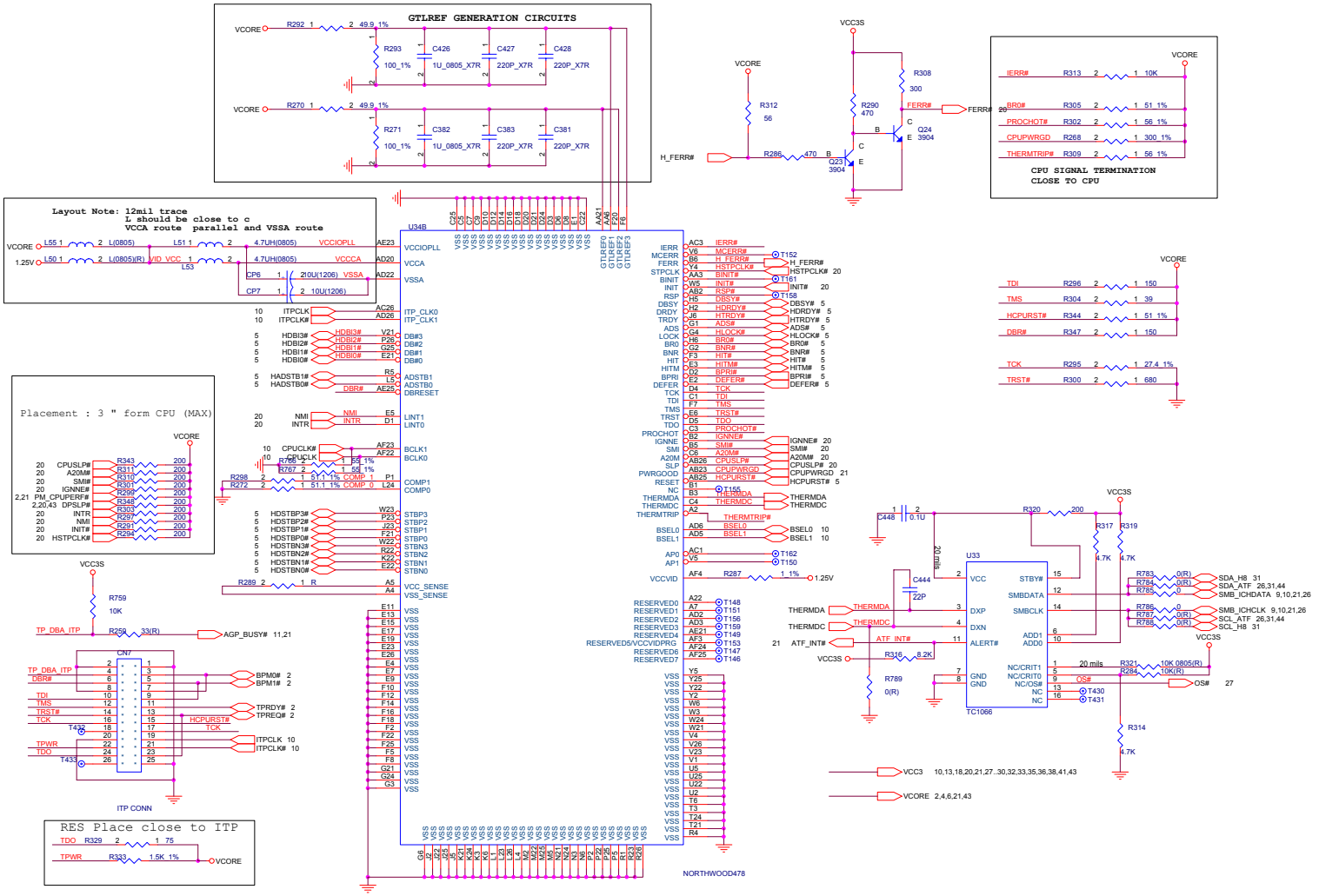


Sheet 2 of 45
CPU 1 of 2 (888C)

8880 Schematic Diags

CPU (Northwood) 2 of 2

Sheet 3 of 45
CPU 2 of 2 (888C)

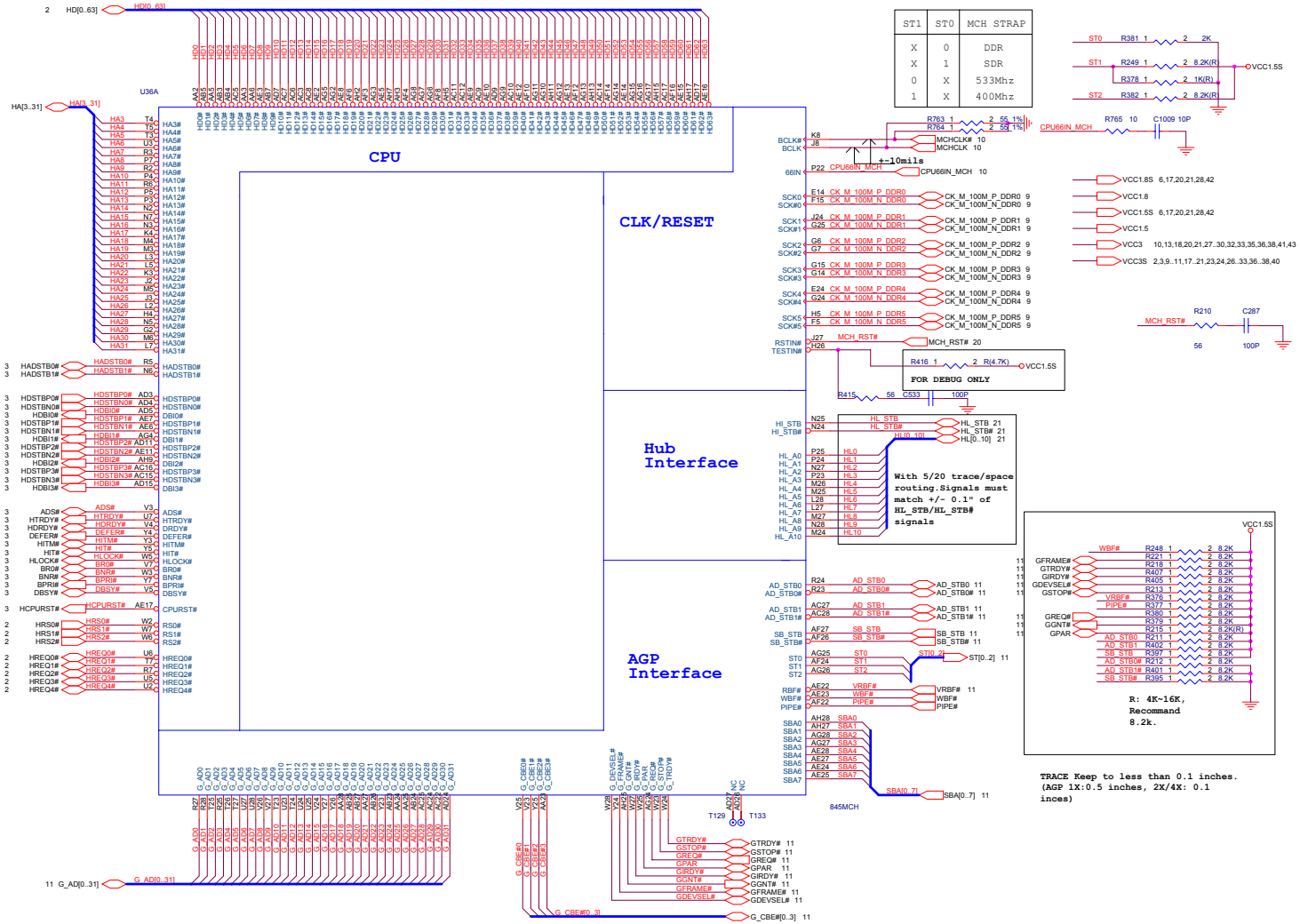


CPU Decoupling

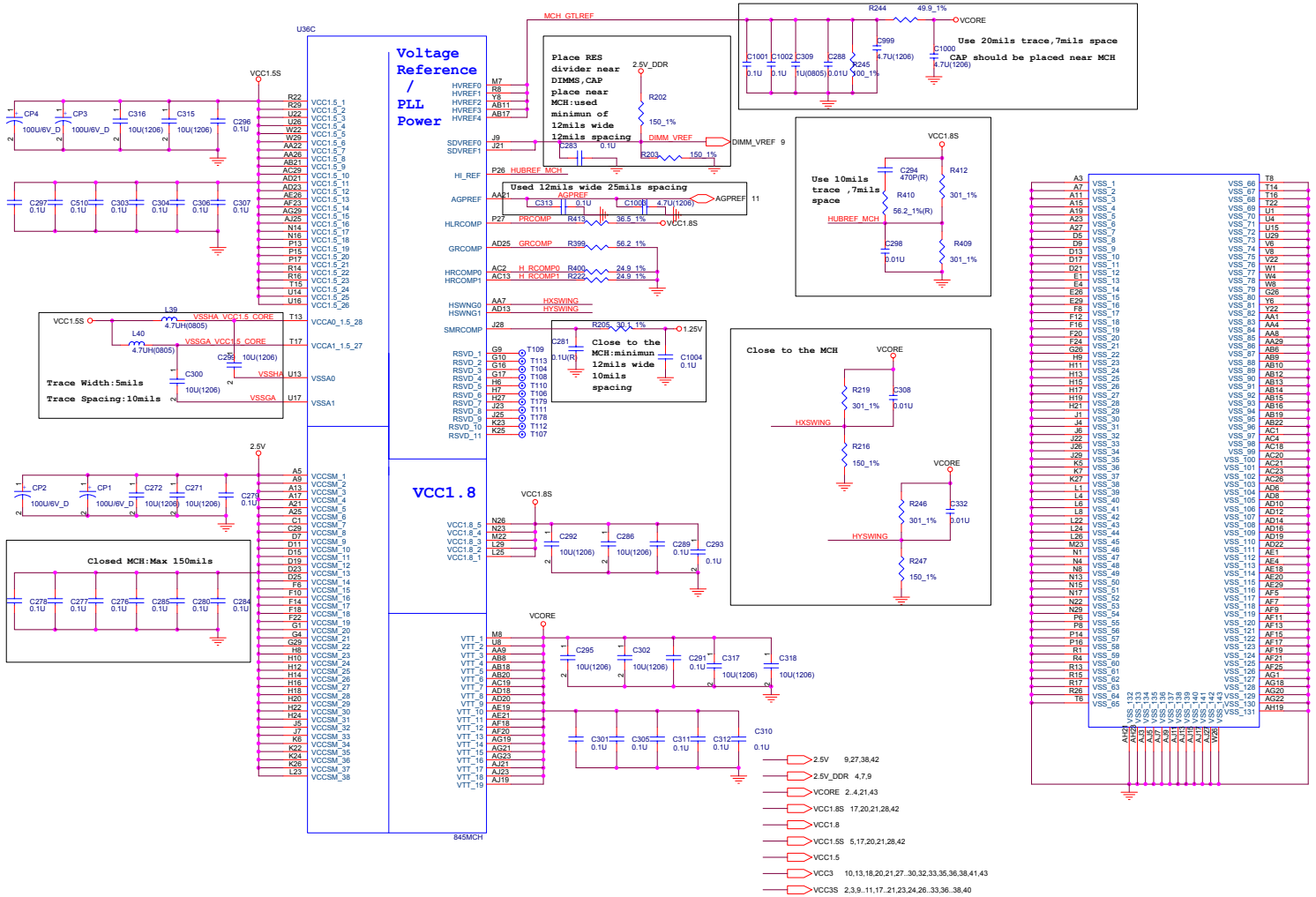
Sheet 4 of 45
CPU Decoupling
(8880)

MCH (Host, AGP, Hub)

Sheet 5 of 45
MCH
(Host, AGP, Hub) -
(8880)



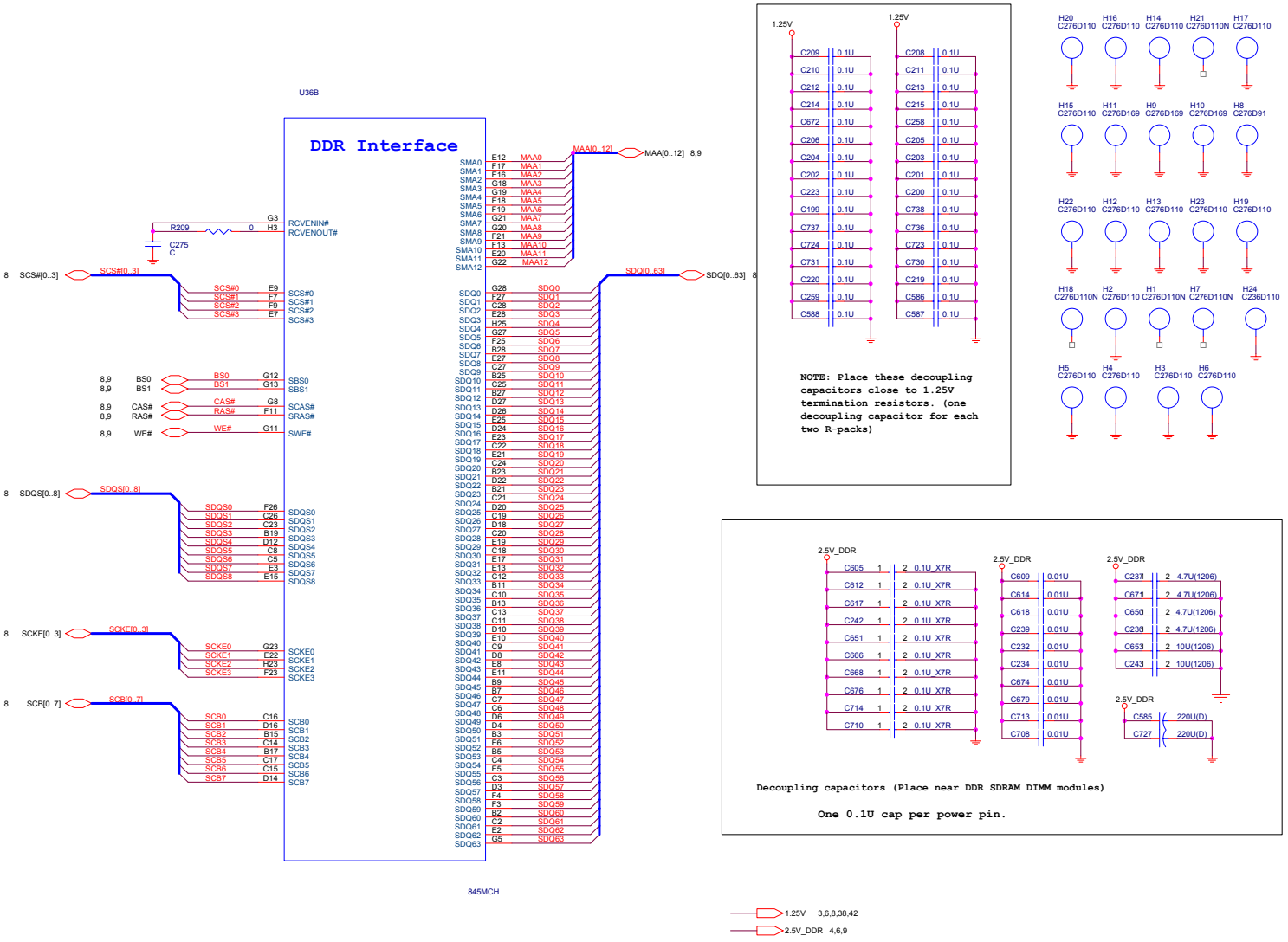
MCH (Voltage, PLL, VSS)



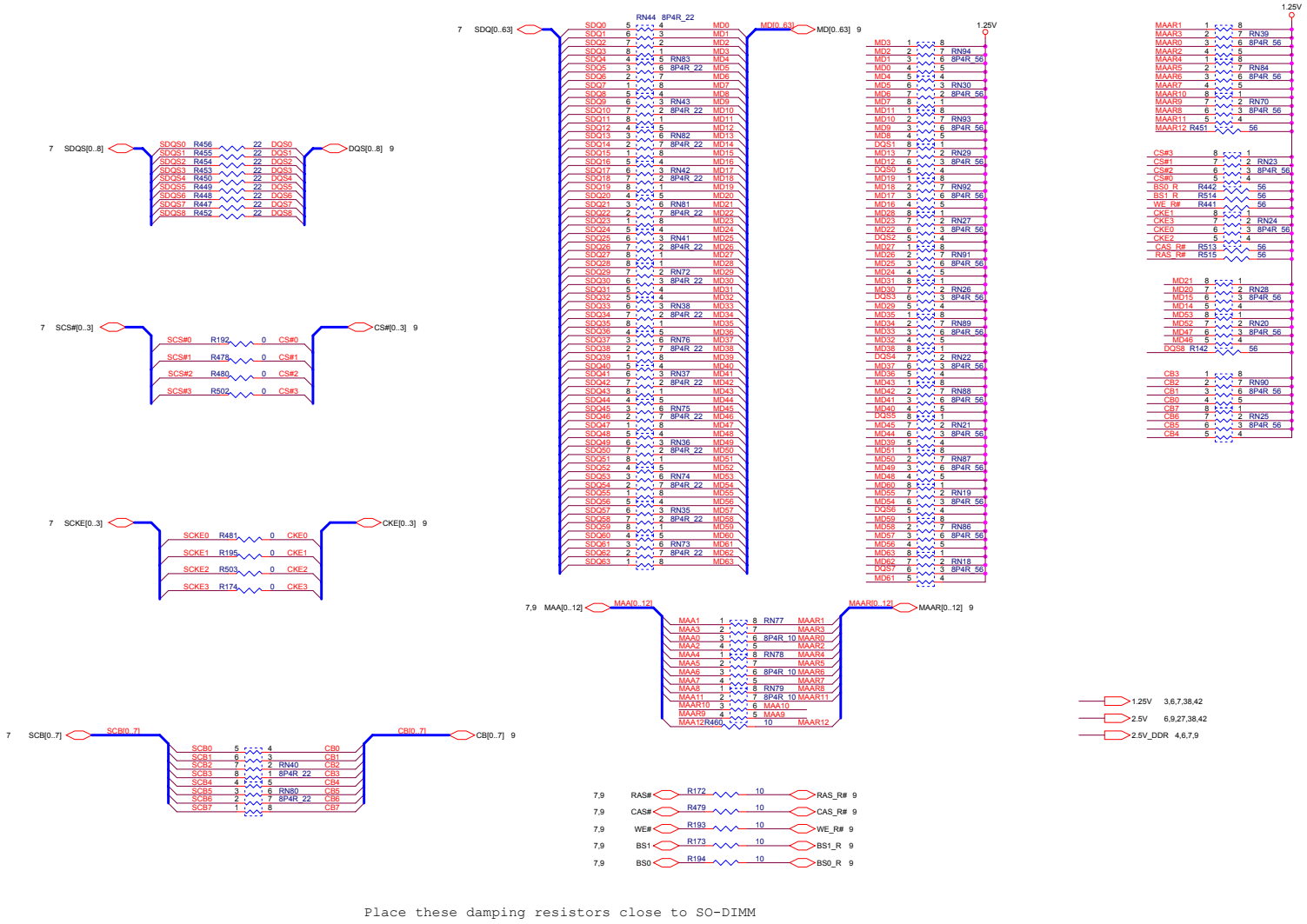
Sheet 6 of 45
MCH
(Voltage, PLL, VSS)
- (8880)

MCH (DDR)

Sheet 7 of 45
MCH
(DDR) - (8880)



DDR Termination

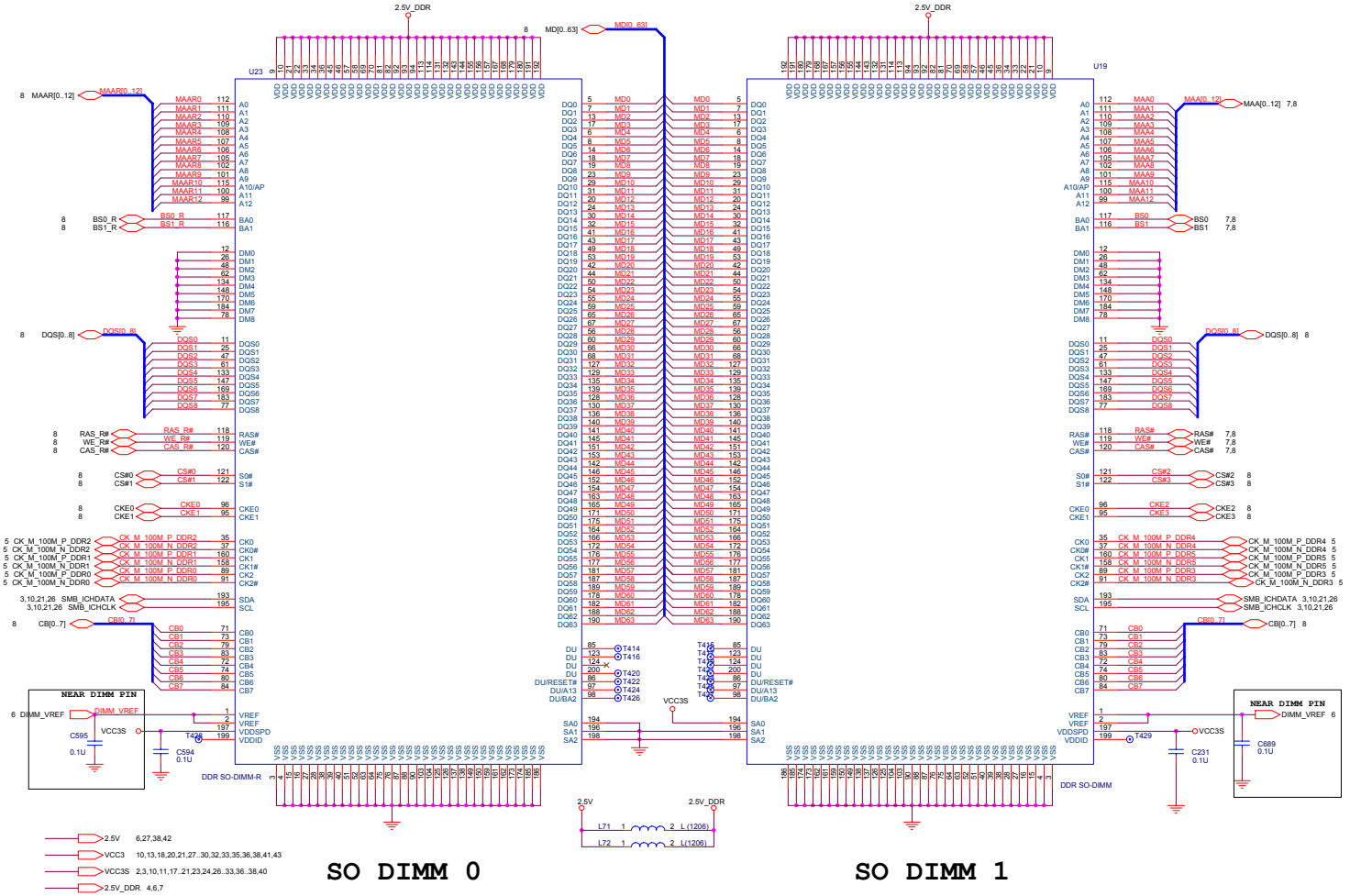


Place these damping resistors close to SO-DIMM

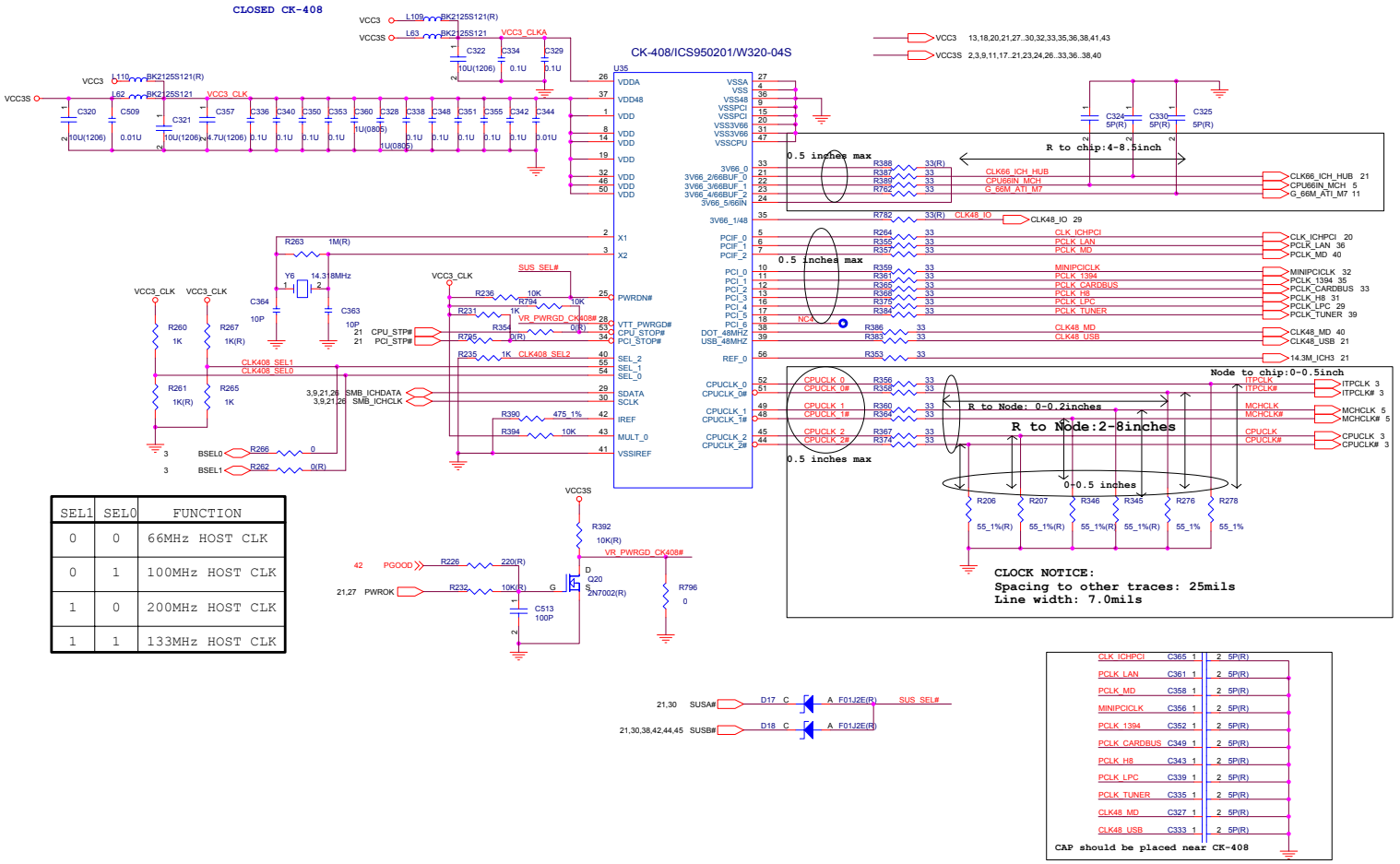
Sheet 8 of 45
DDR Termination
(8880)

DDR SODIMM

Sheet 9 of 45
DDR SODIMM
(8880)



CLK



SEL1	SEL0	FUNCTION
0	0	66MHz HOST CLK
0	1	100MHz HOST CLK
1	0	200MHz HOST CLK
1	1	133MHz HOST CLK

Sheet 10 of 45
CLK (8880)

Mobility M7 - P

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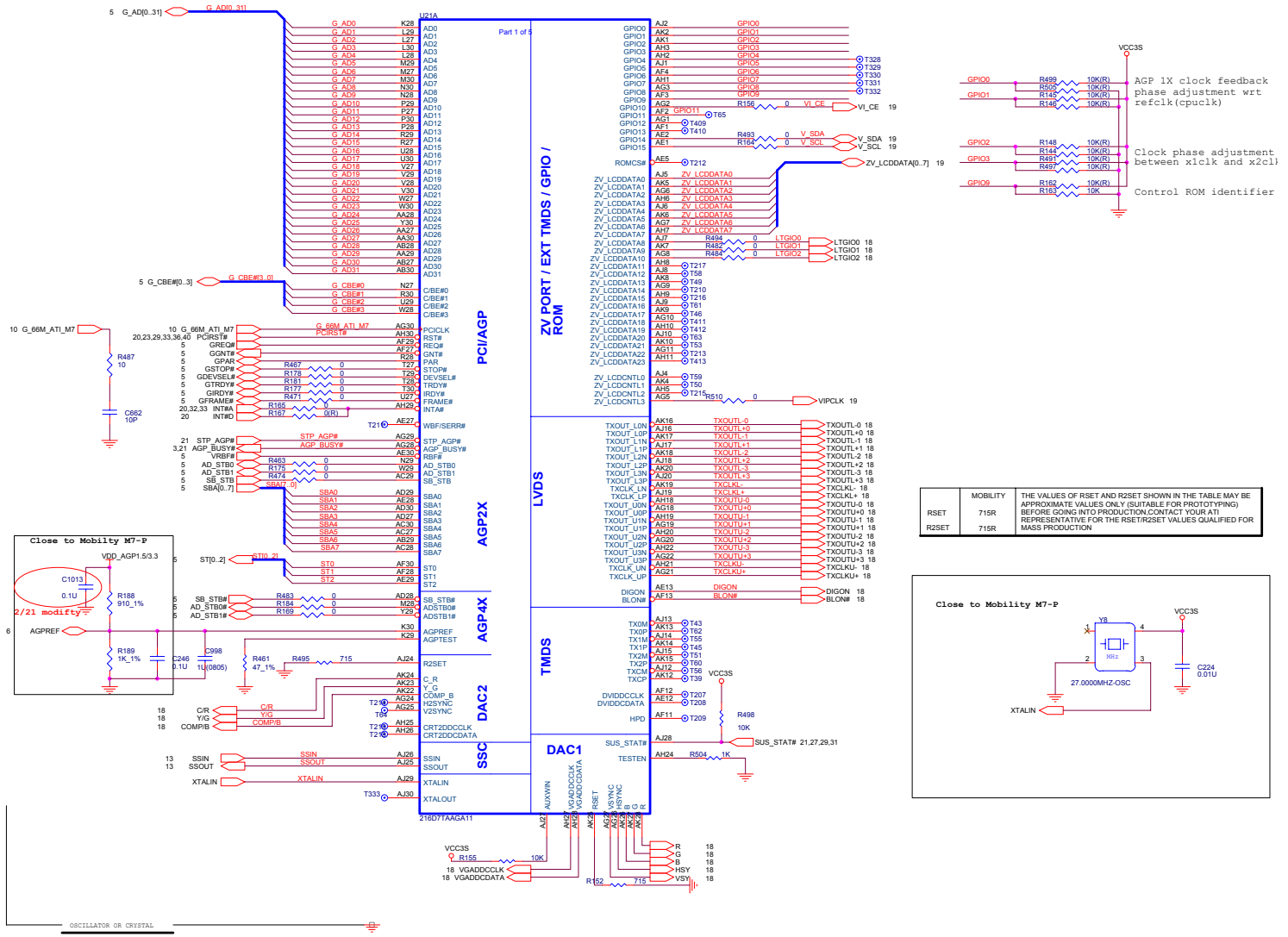
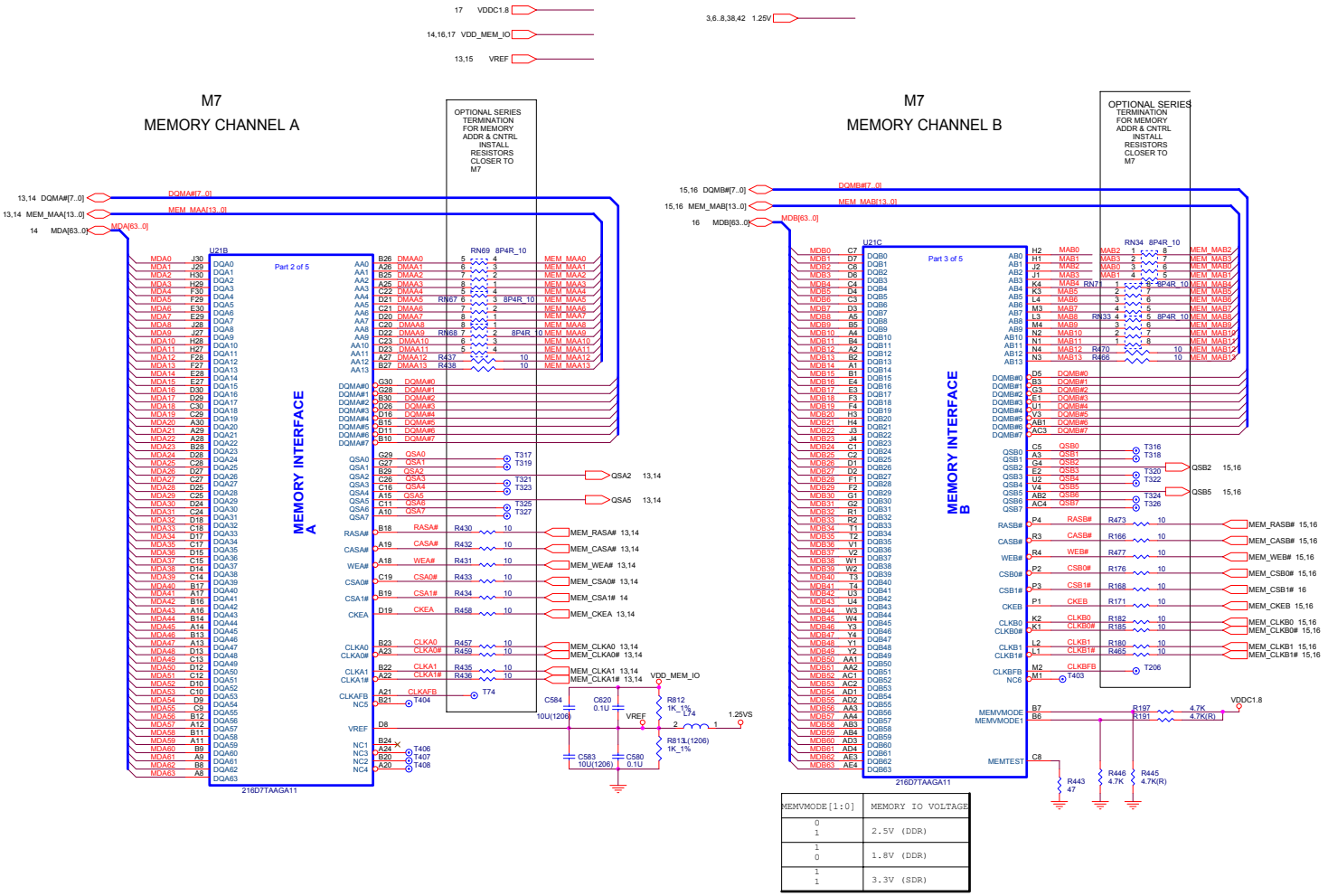
Mobility M7 - P
(8880)



	MOBILITY	
RSET	715R	
R2SET	715R	

Mobility M7 - P Mem A/B



Sheet 12 of 45
Mobility M7 - P Mem A/B (8880)

VGA DDR DRAM Channel A

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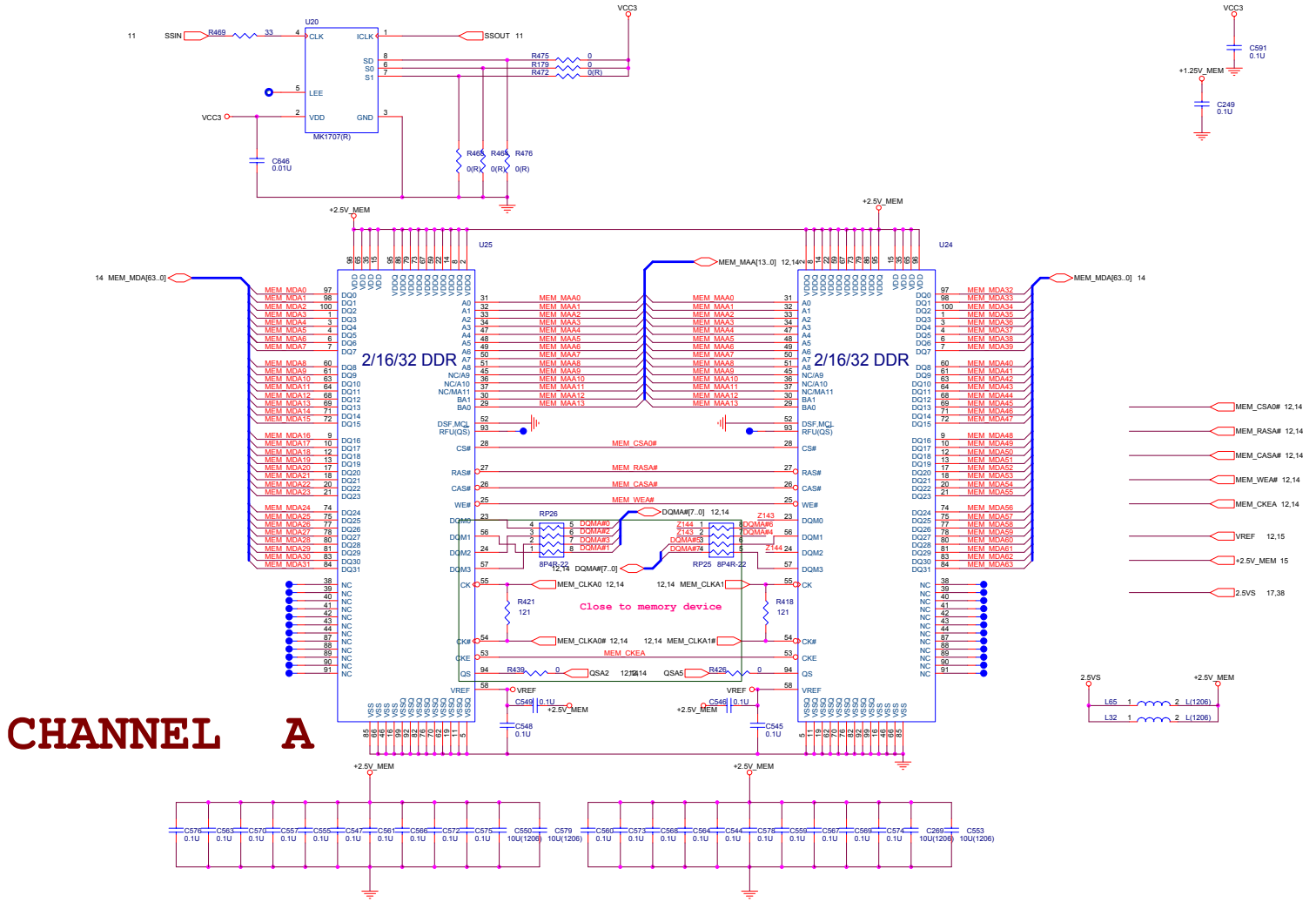
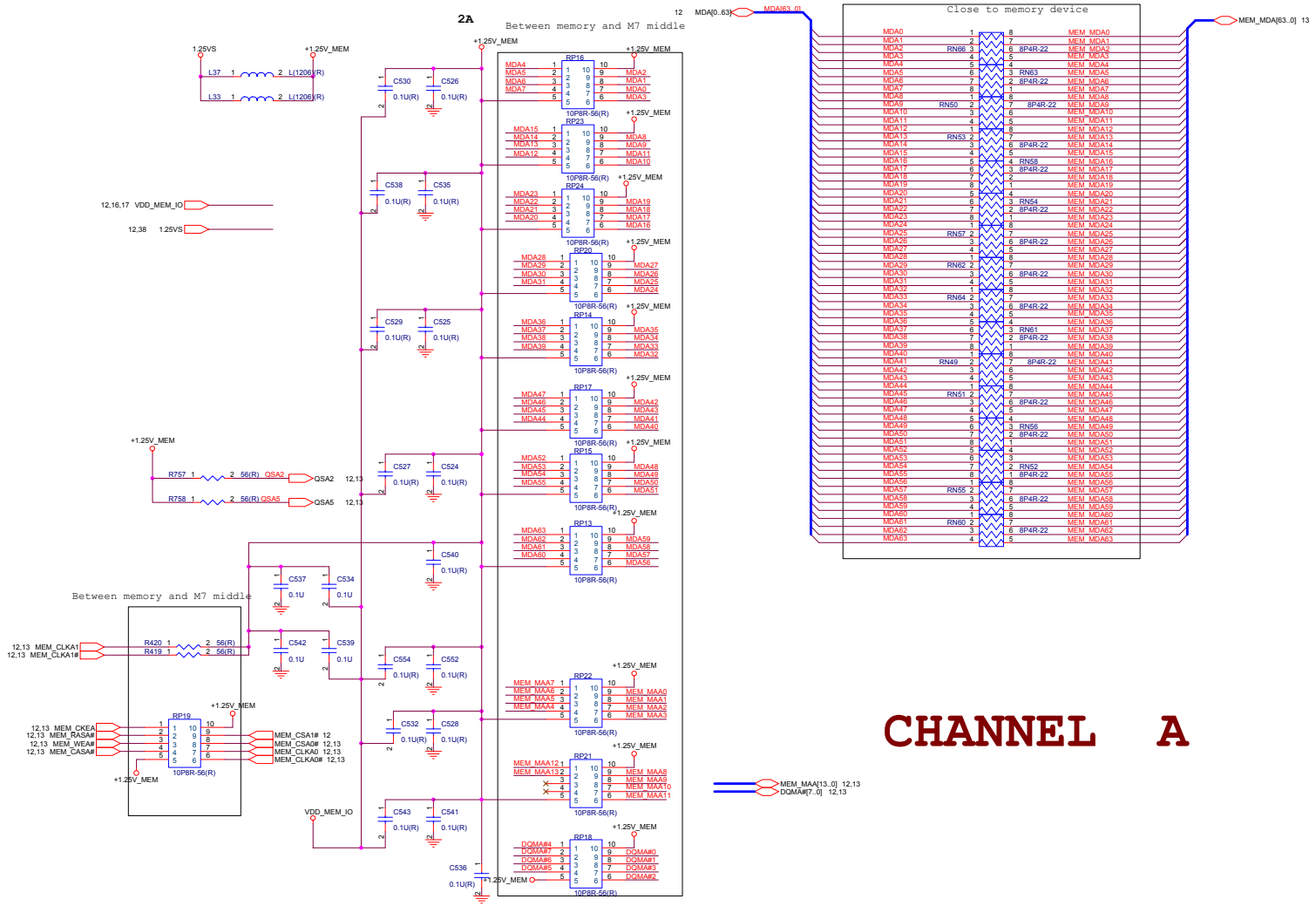
VGA DDR DRAM
Channel A (8880)



VGA DDR DRAM Channel A Termination

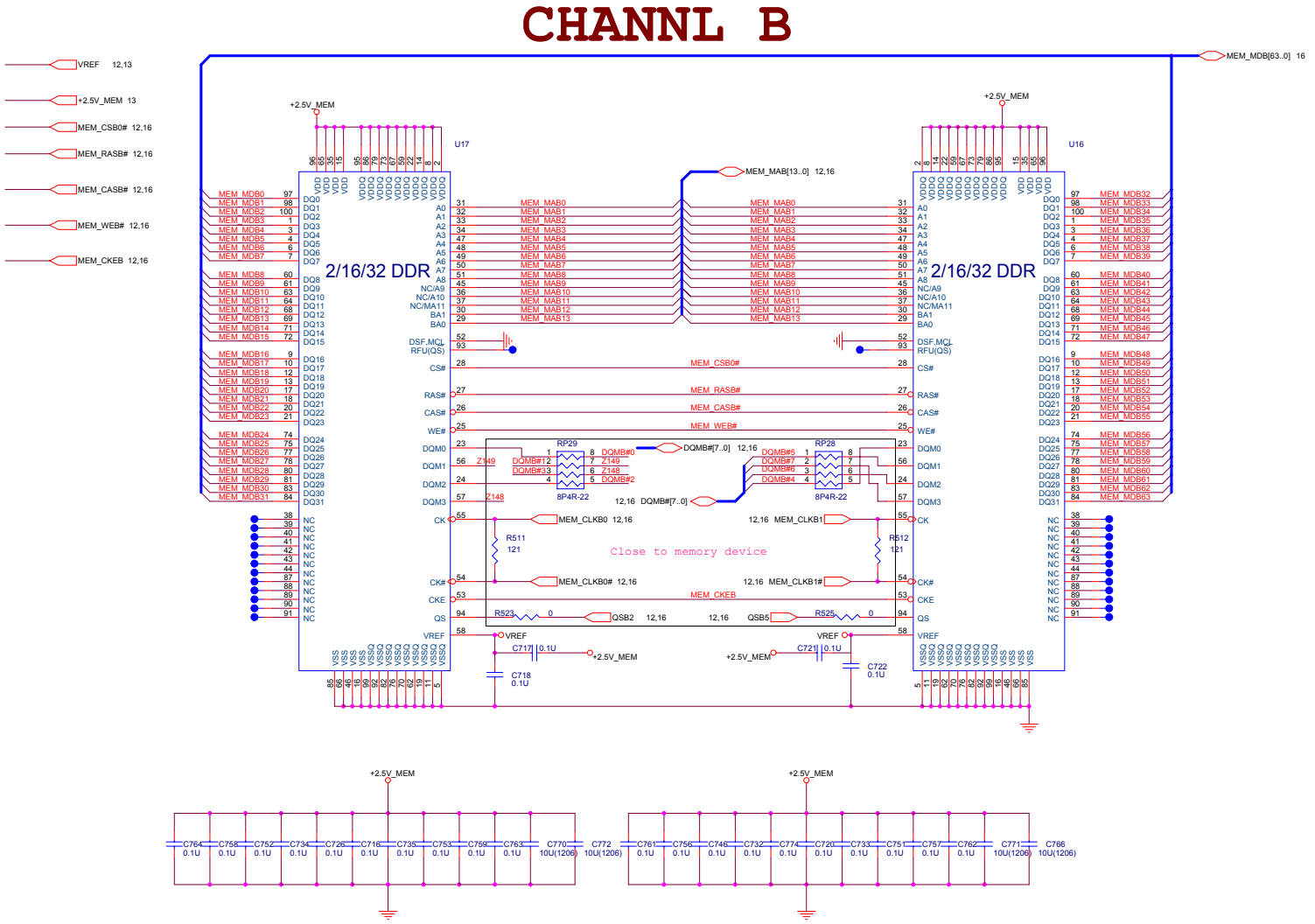


Sheet 14 of 45
VGA DDR DRAM
Channel A
Termination (8880)

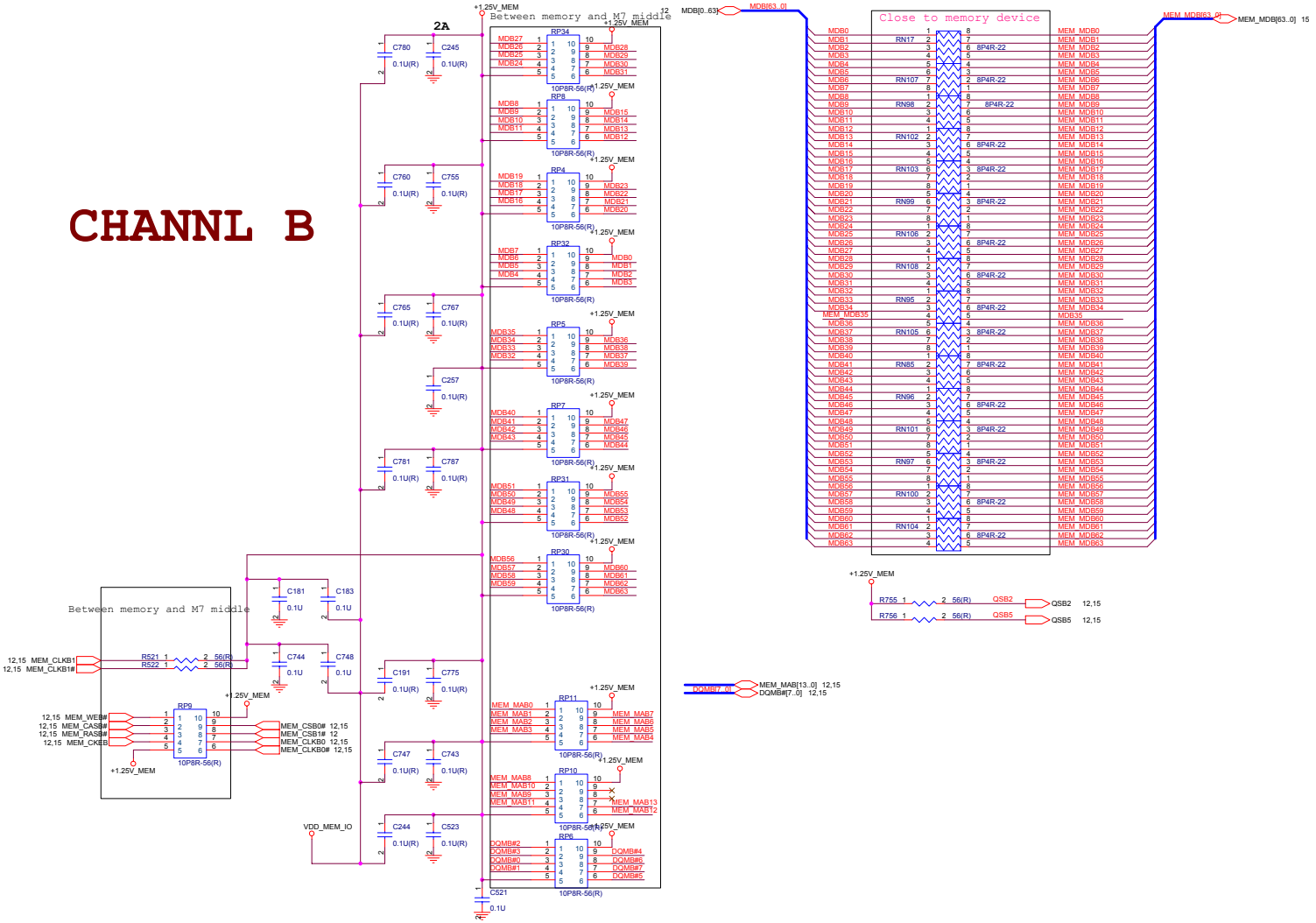
8880 Schematic Diags

VGA DDR DRAM Channel B

Sheet 15 of 45
VGA DDR DRAM
Channel B (8880)



VGA DDR DRAM Channel B Termination



Sheet 16 of 45
VGA DDR DRAM
Channel B
Termination (8880)

Moblility M7-P Power

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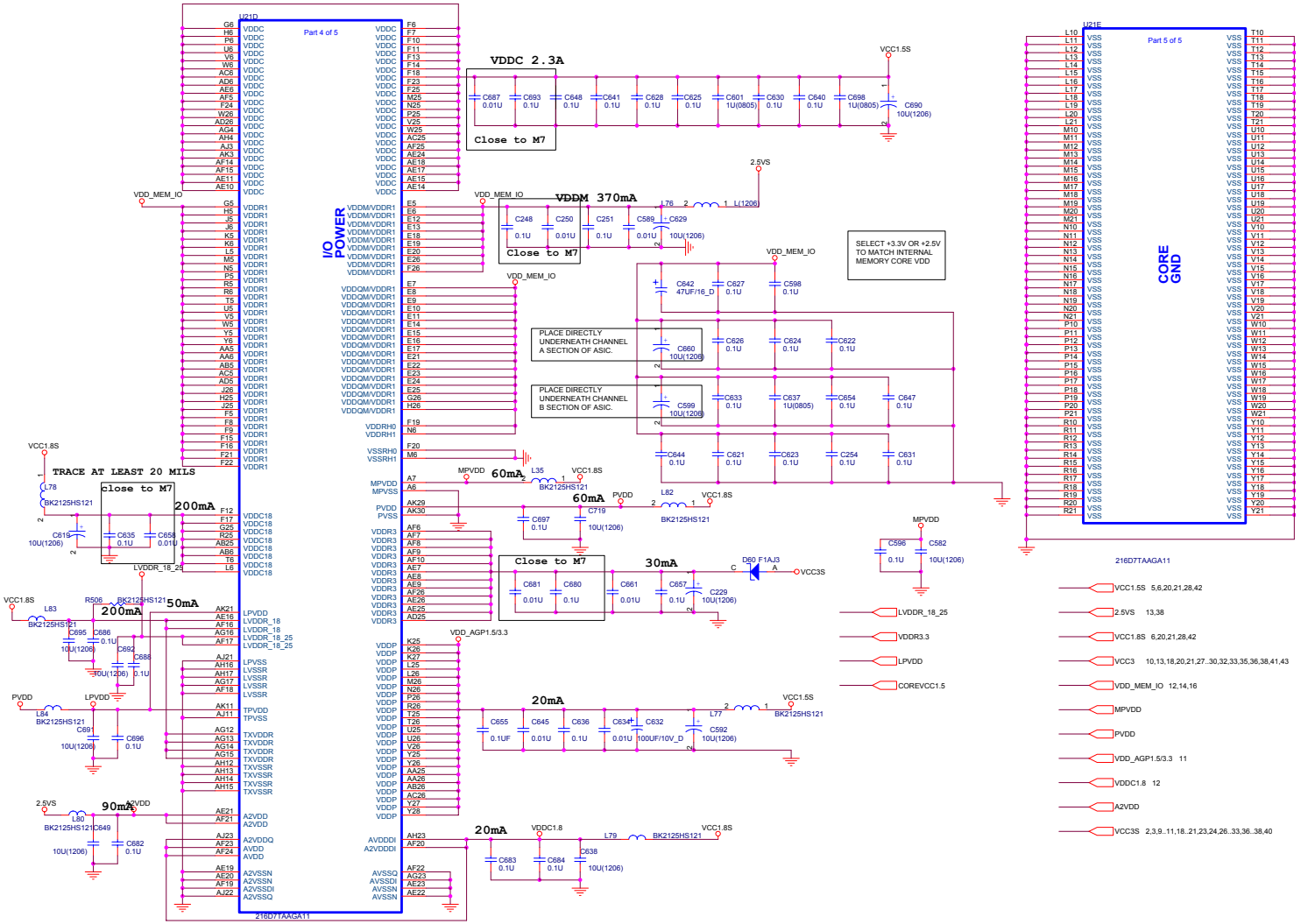
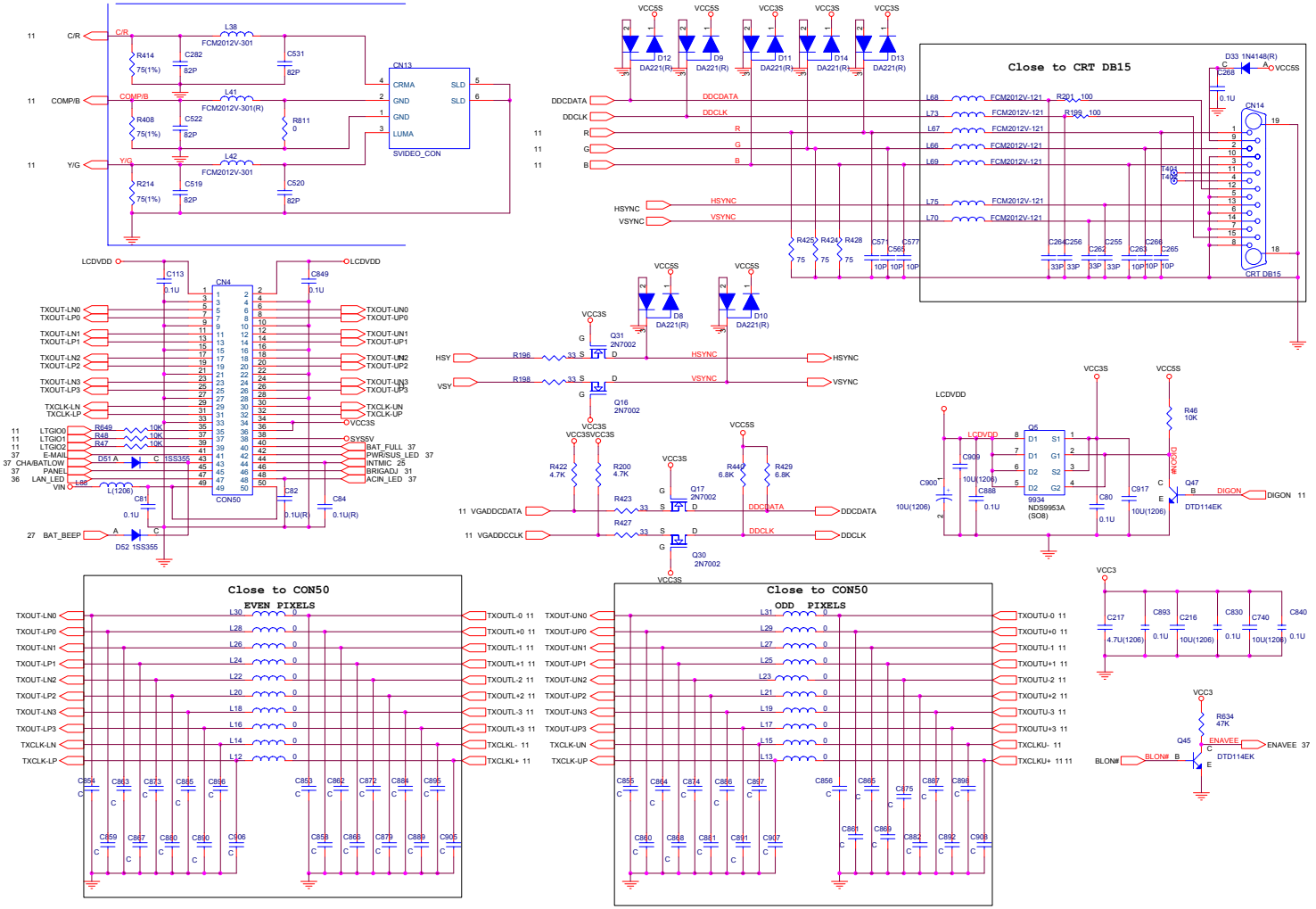
Mobility M7-P
Power (8880)



TV CRT & LVDS



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TV CRT & LVDS
(8880)

Video In 7114

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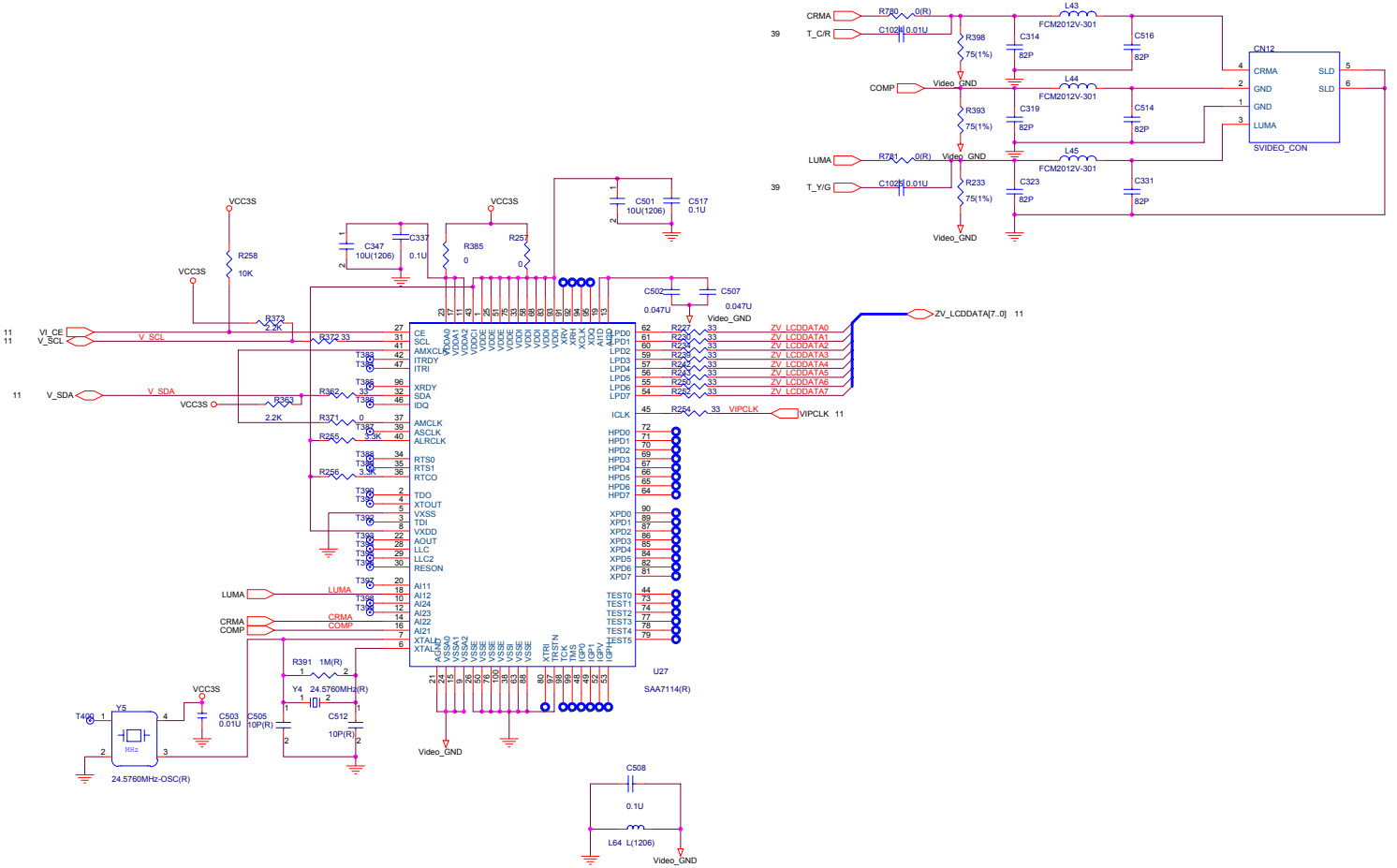
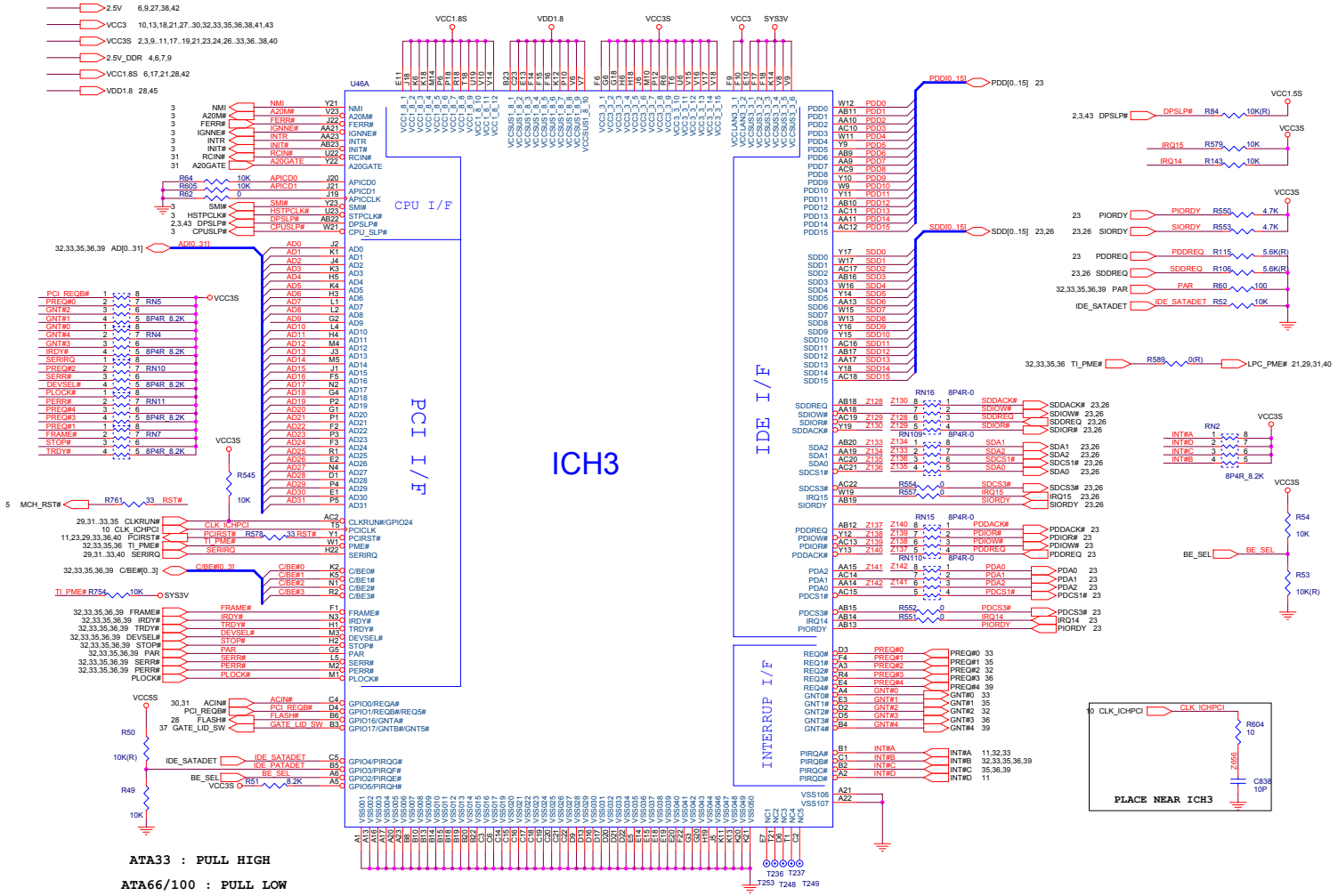
Video In 7114
(8880)



ICH3 1 of 2



Sheet 20 of 45
ICH3 1 of 2 (888C)

8880 Schematic Diags

ICH3 2 of 2

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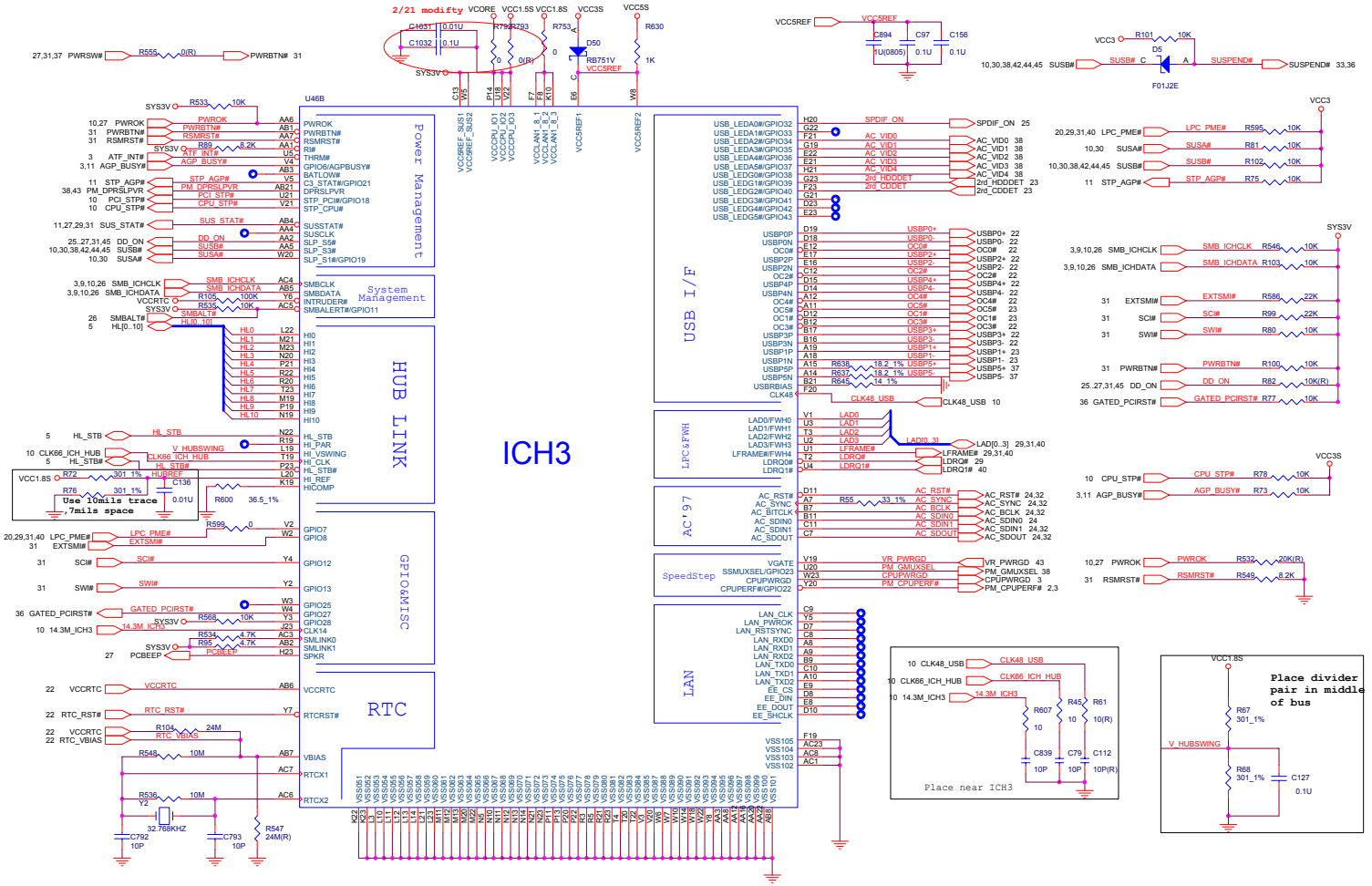
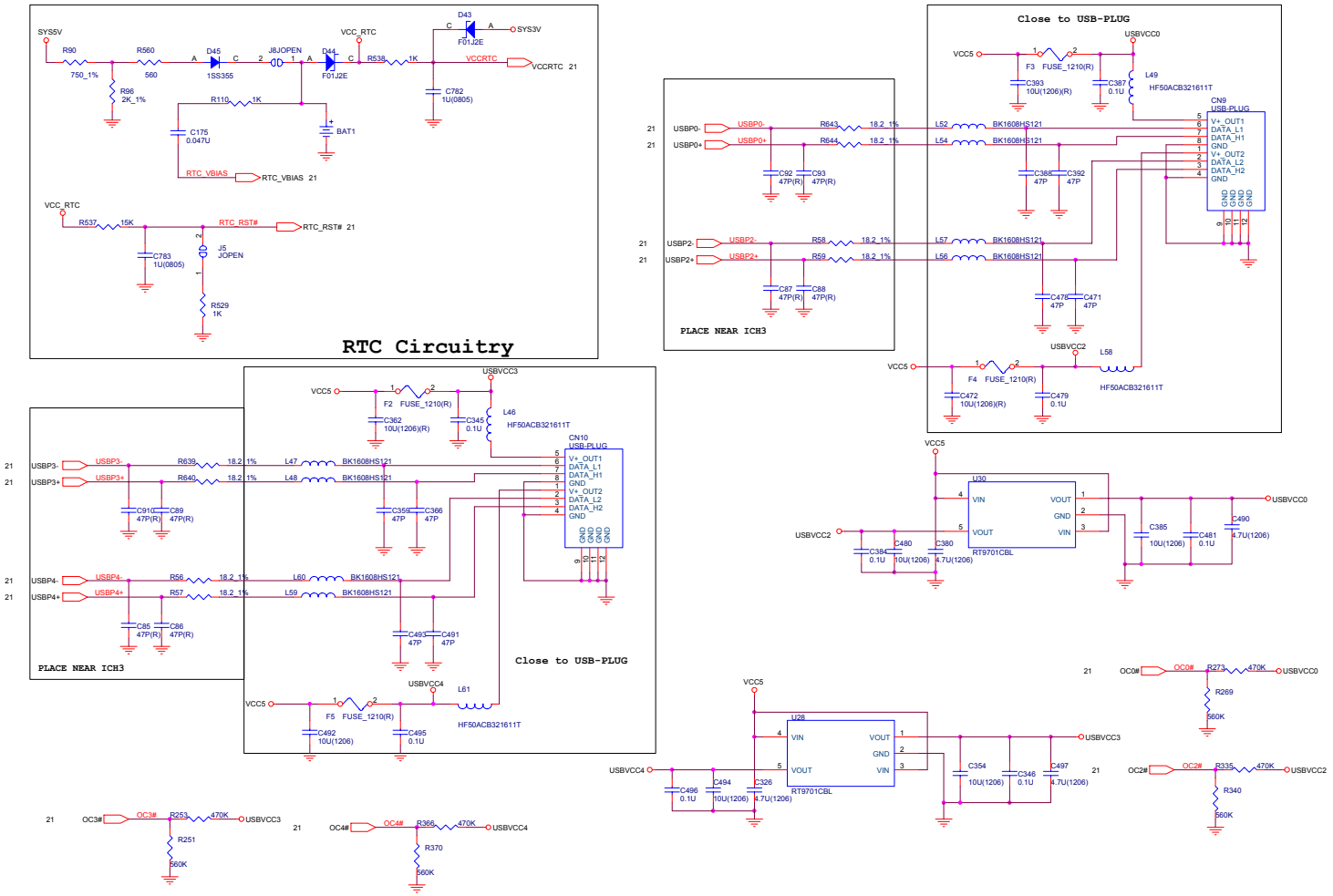
ICH3 2 of 2 (8880)



USB RTC



Sheet 22 of 45
USB RTC (8880)

HDD & CD-R/W & MP3 CNN & IP Share

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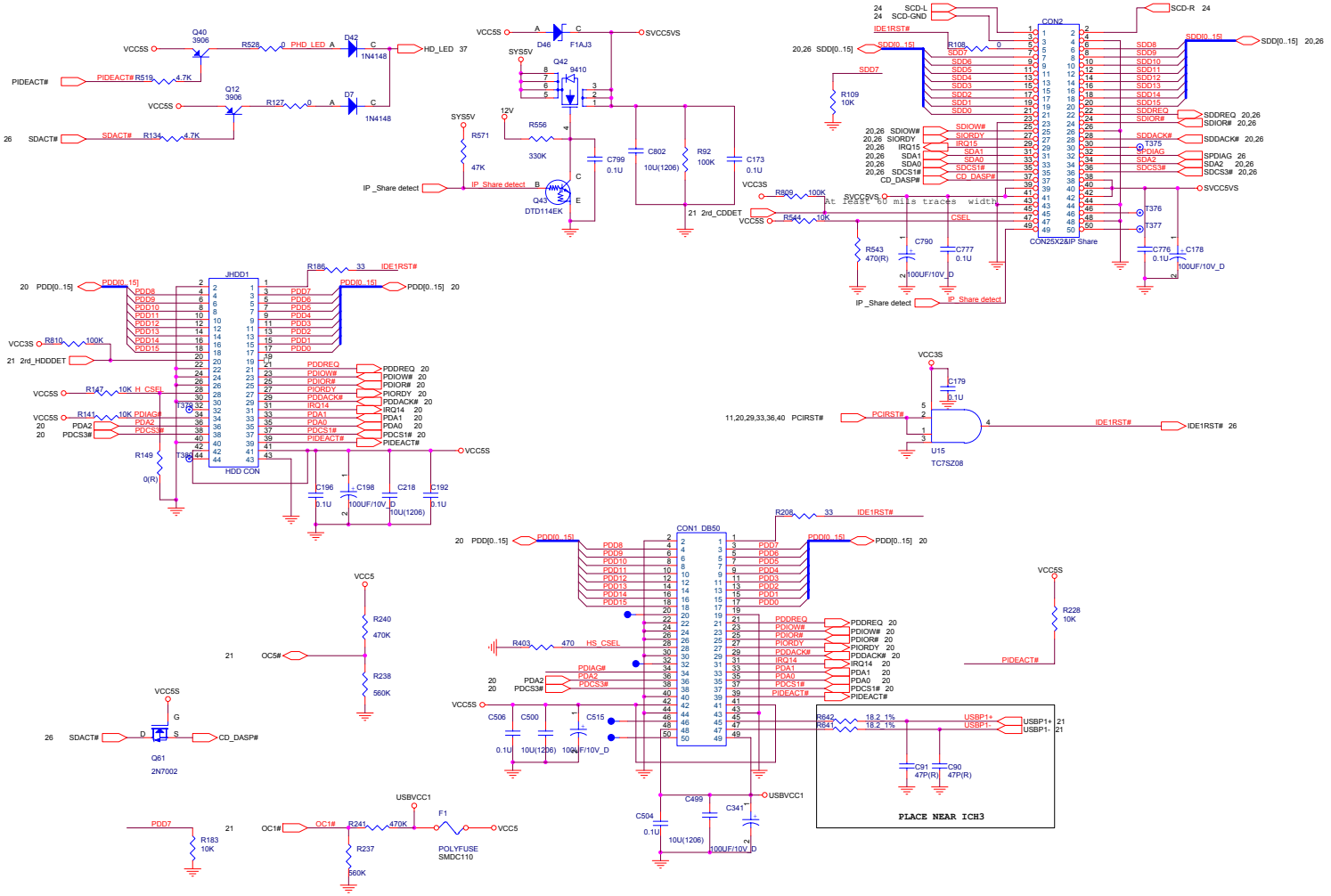
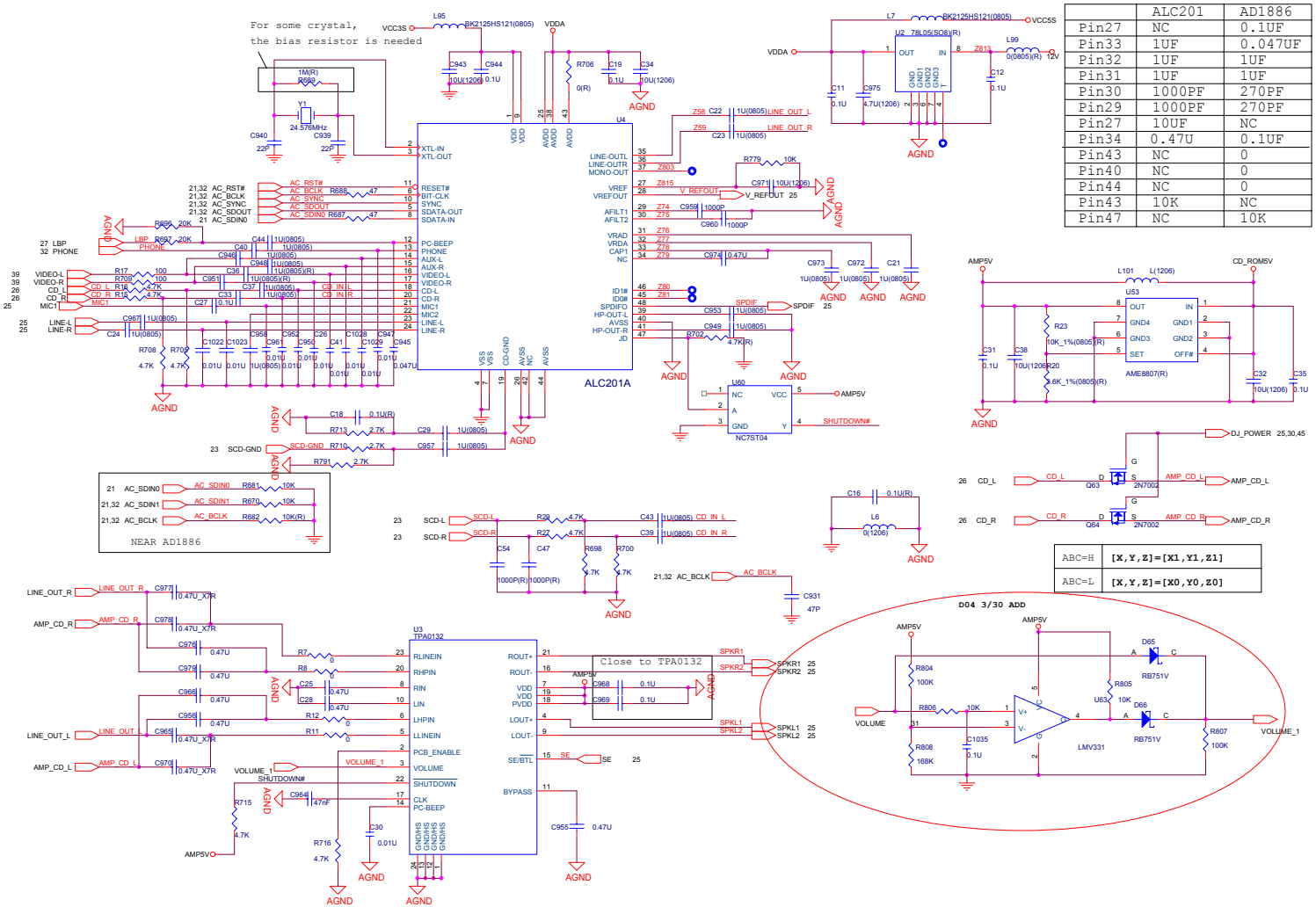
HDD & CD-R/W & MP3 CNN & IP Share (8880)



AMP TPA0132/ALC201A 1 of 2



	ALC201	AD1886
Pin27	NC	0.1UF
Pin33	1UF	0.047UF
Pin32	1UF	1UF
Pin31	1UF	1UF
Pin30	1000PF	270PF
Pin29	1000PF	270PF
Pin27	10UF	NC
Pin34	0.47U	0.1UF
Pin43	NC	0
Pin40	NC	0
Pin44	NC	0
Pin43	10K	NC
Pin47	NC	10K

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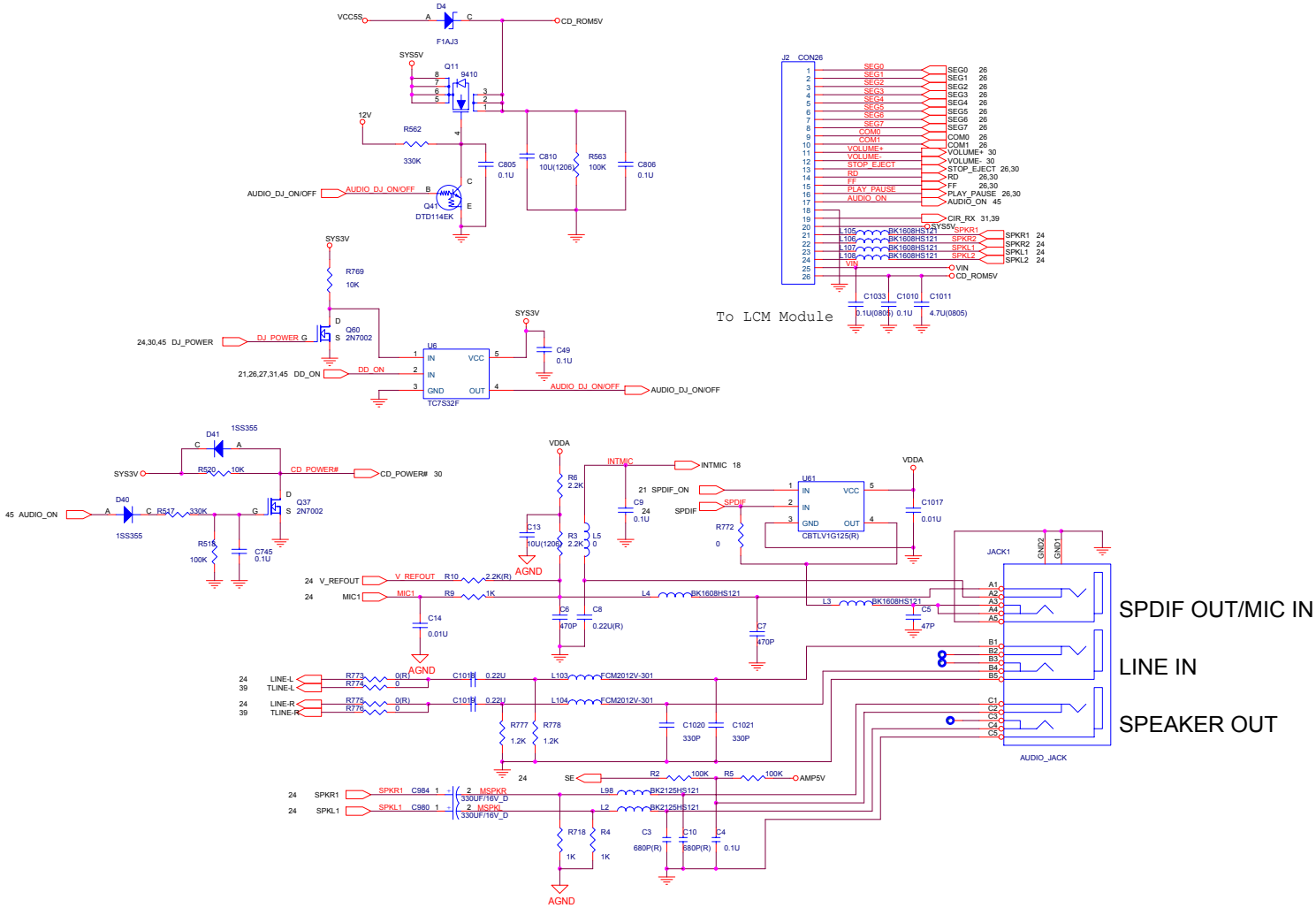
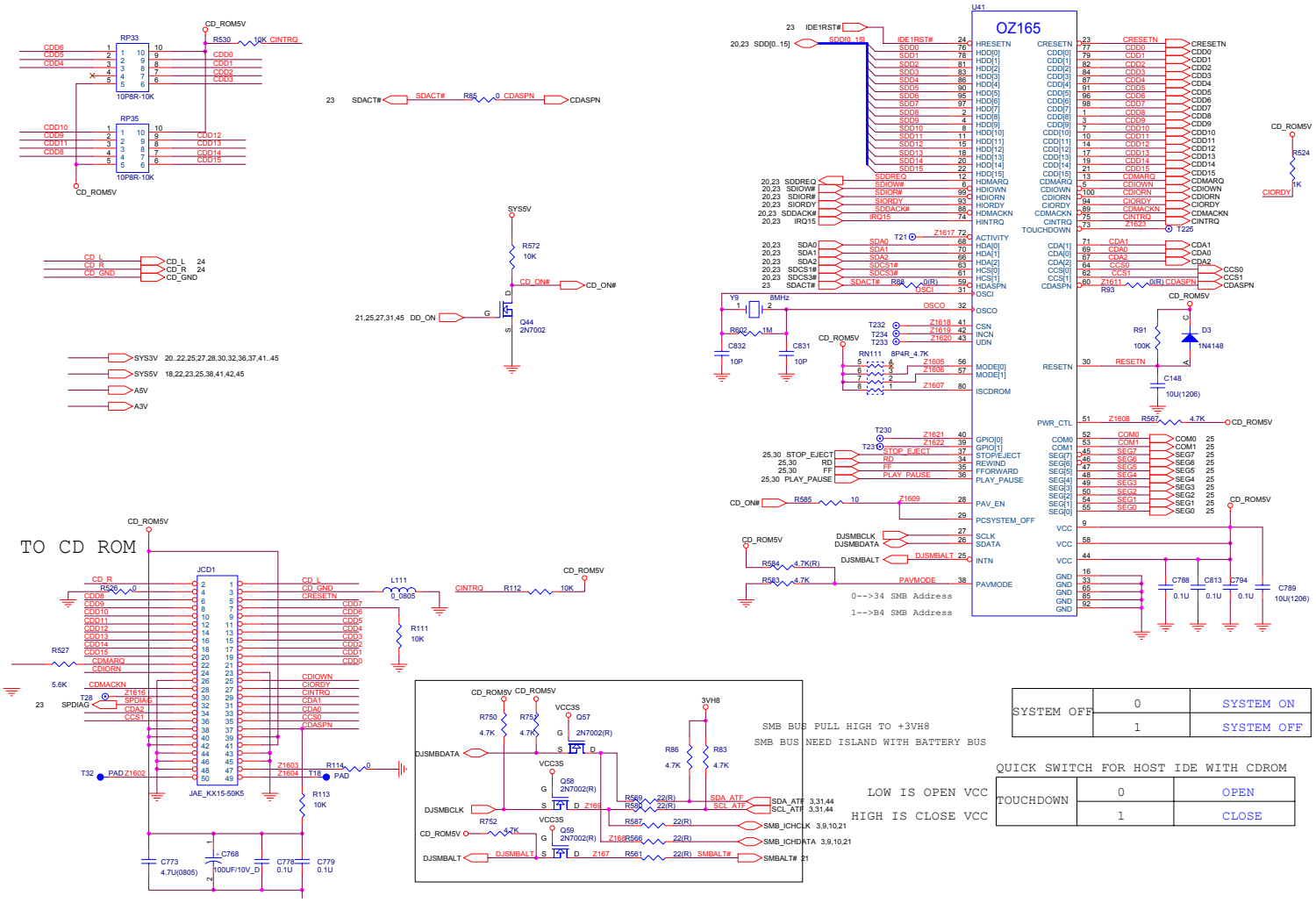
AMP TPA0132/ ALC201A
1 of 2 (8880)

AMP TPA0132/ALC201A 2 of 2

Sheet 25 of 45
AMP TPA0132/
ALC201A
2 of 2 (8880)



Audio DJ CD-ROM



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Audio DJ CD-ROM
(8880)

Fan Control

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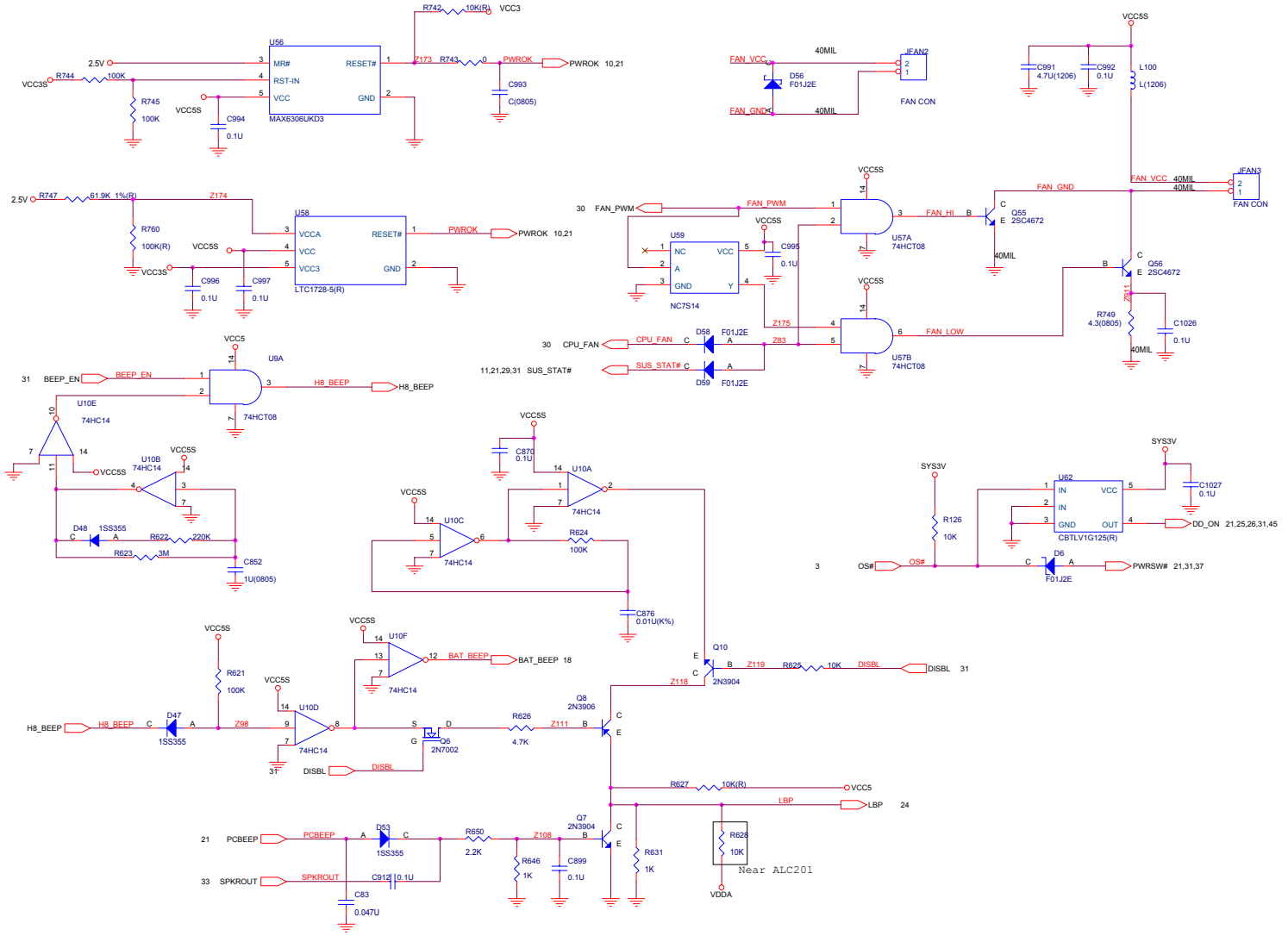
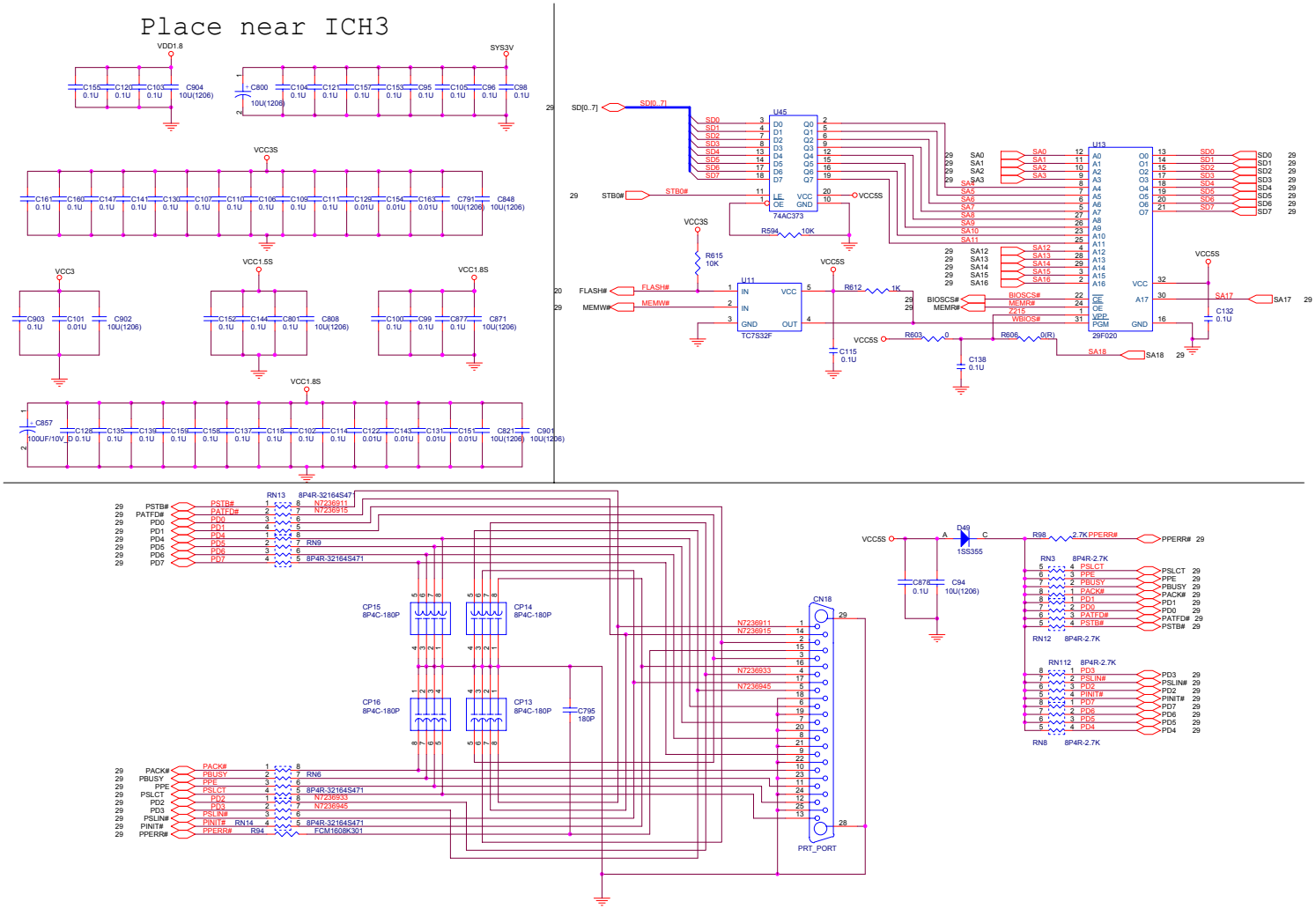
Fan Control (8880)



Flash ROM LPT1



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Flash ROM LPT1
(8880)

LPC Bridge & Super I/O

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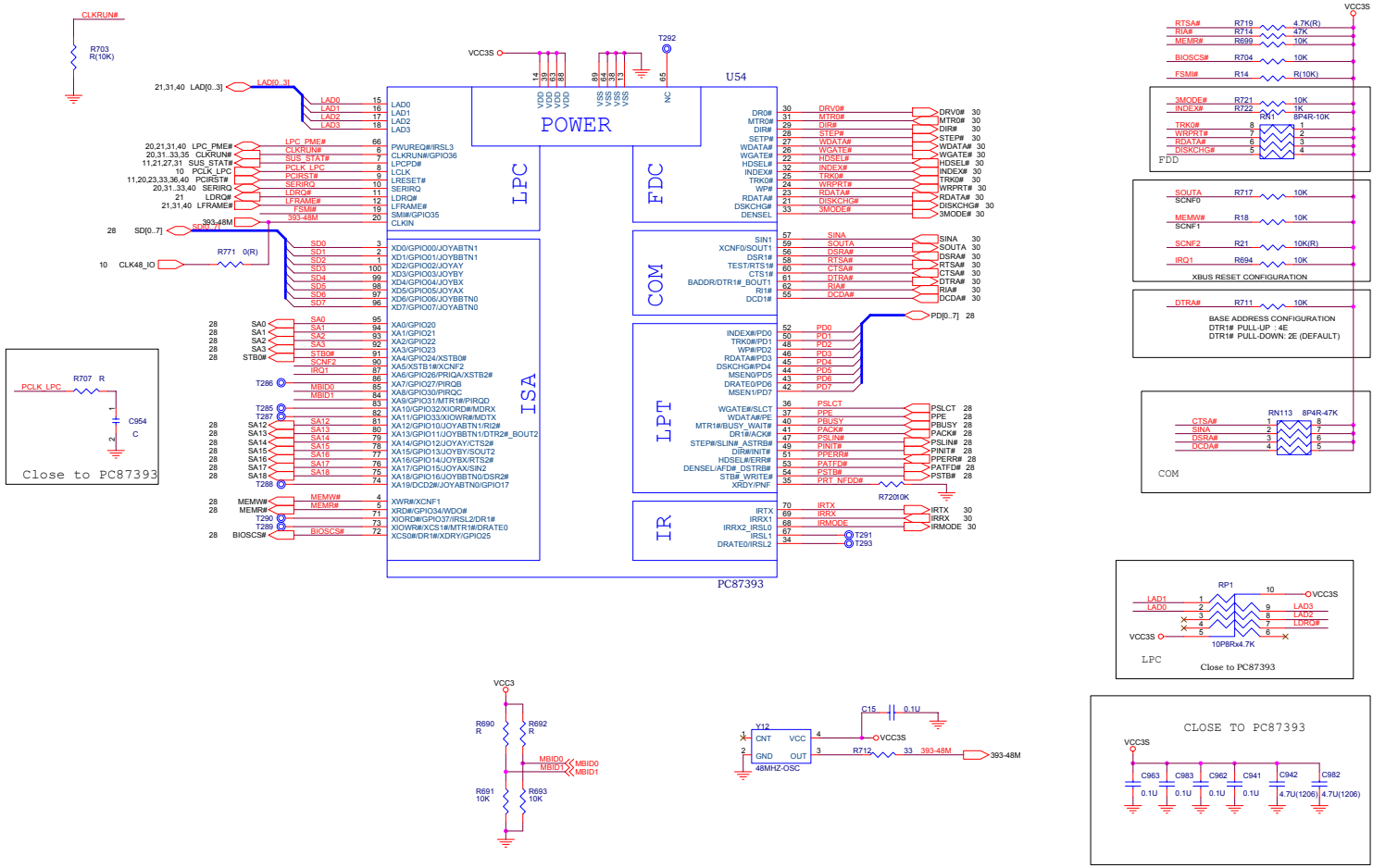
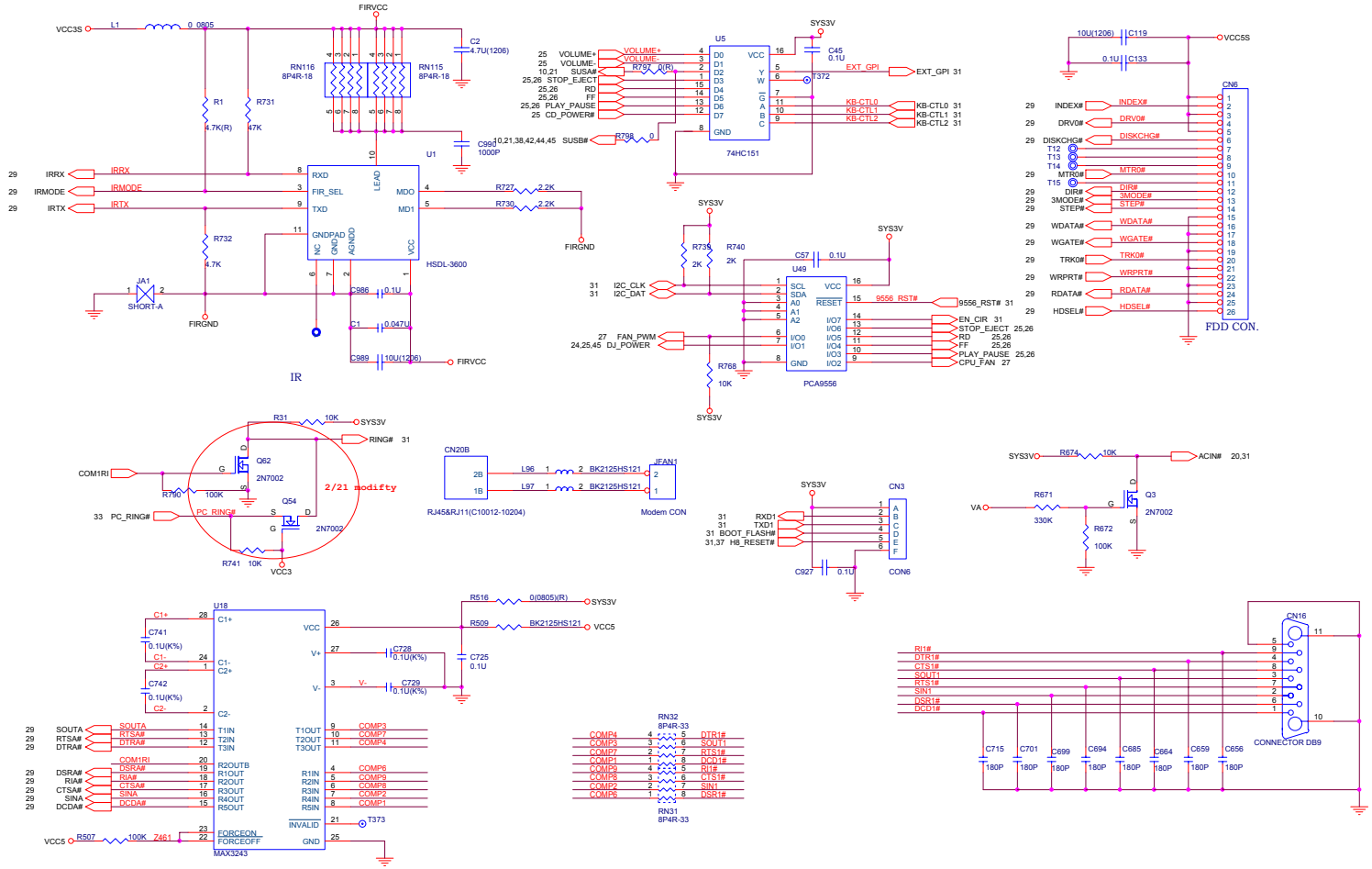
LPC Bridge &
Super I/O (8880)



I/O Connector



Sheet 30 of 45
I/O Connector
(8880)

KBC H8

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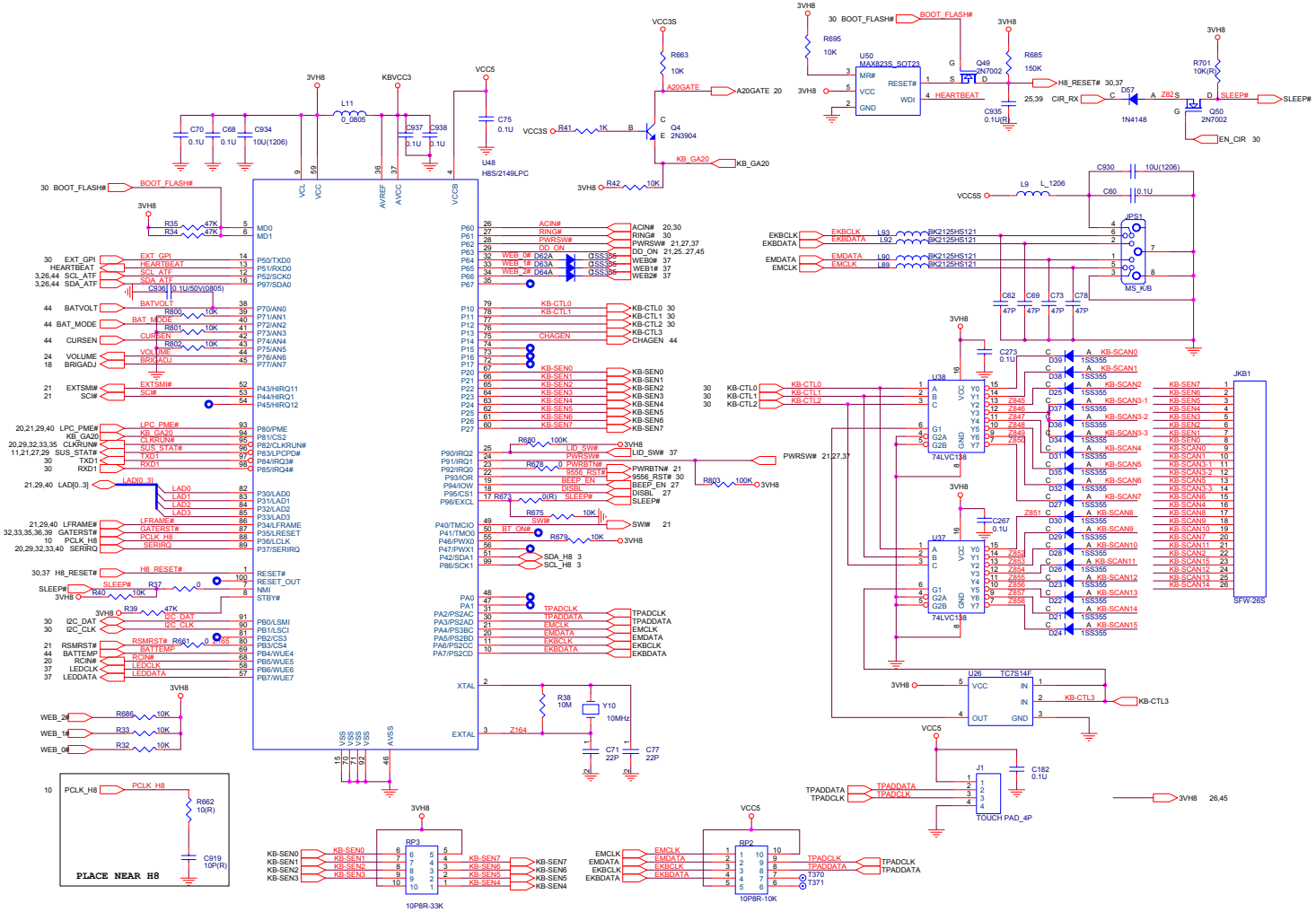
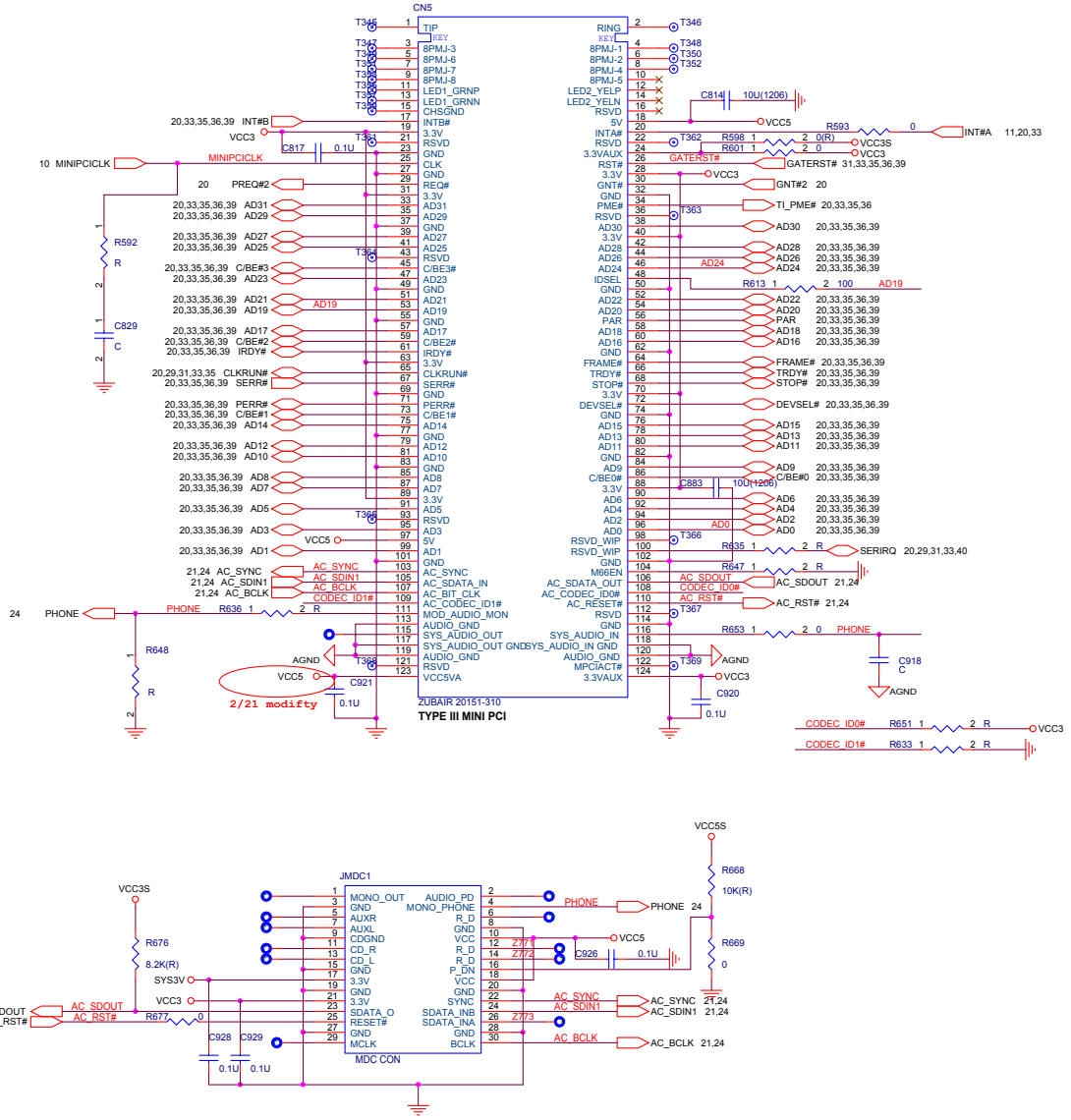
KBC H8 (8880)



Mini PCI/MDC



Sheet 32 of 45
Mini PCI/MDC
(8880)

PCI 1520

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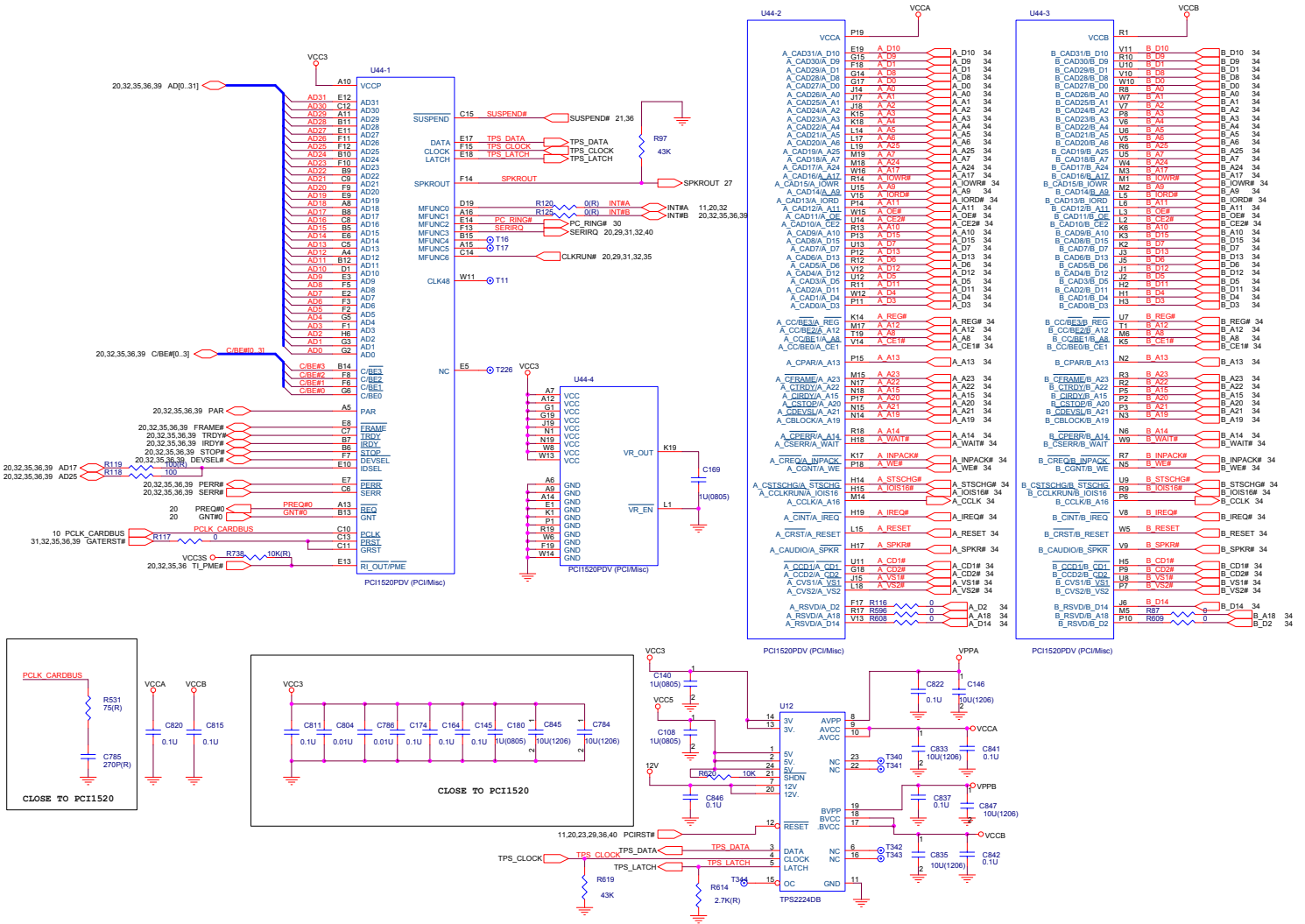
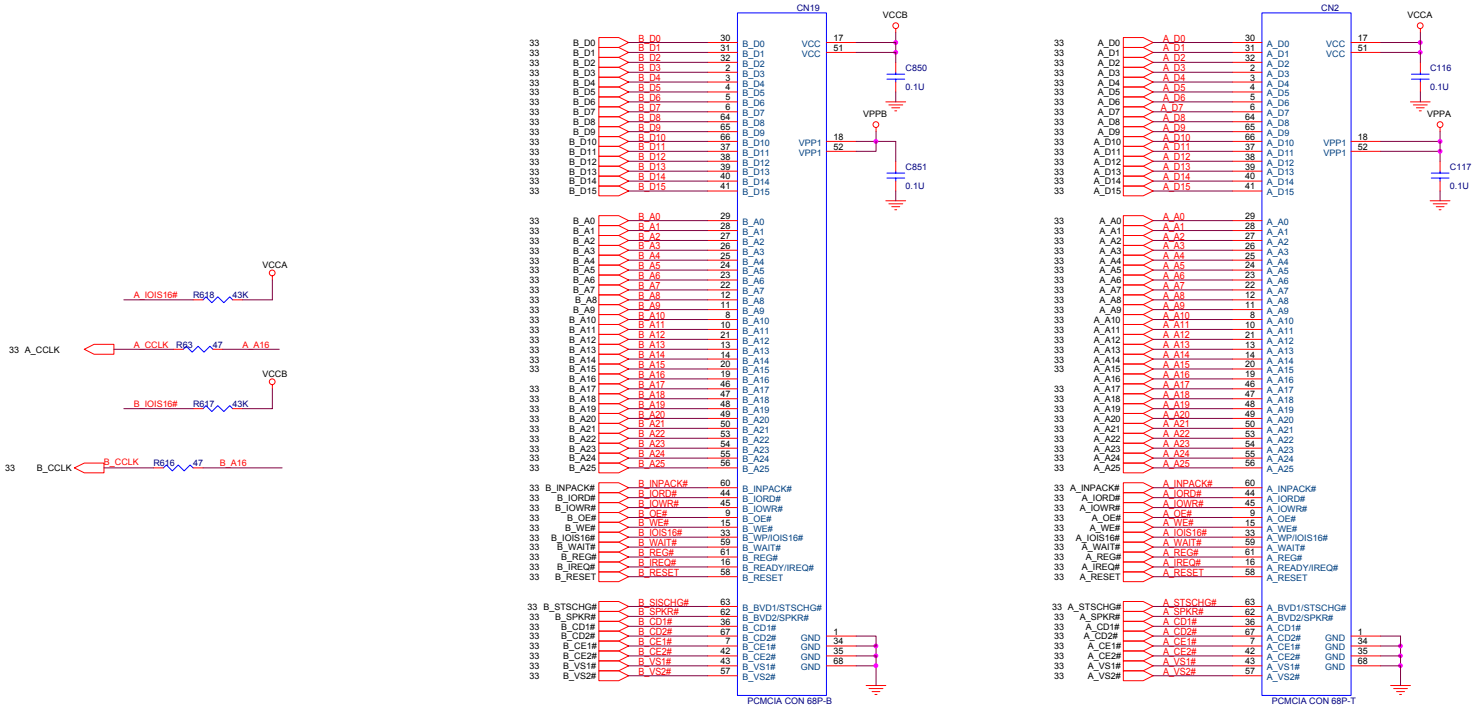
PCI 1520 (8880)



PCMCIA Connector



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PCMCIA Connector (8880)

1394 TSB43AB21

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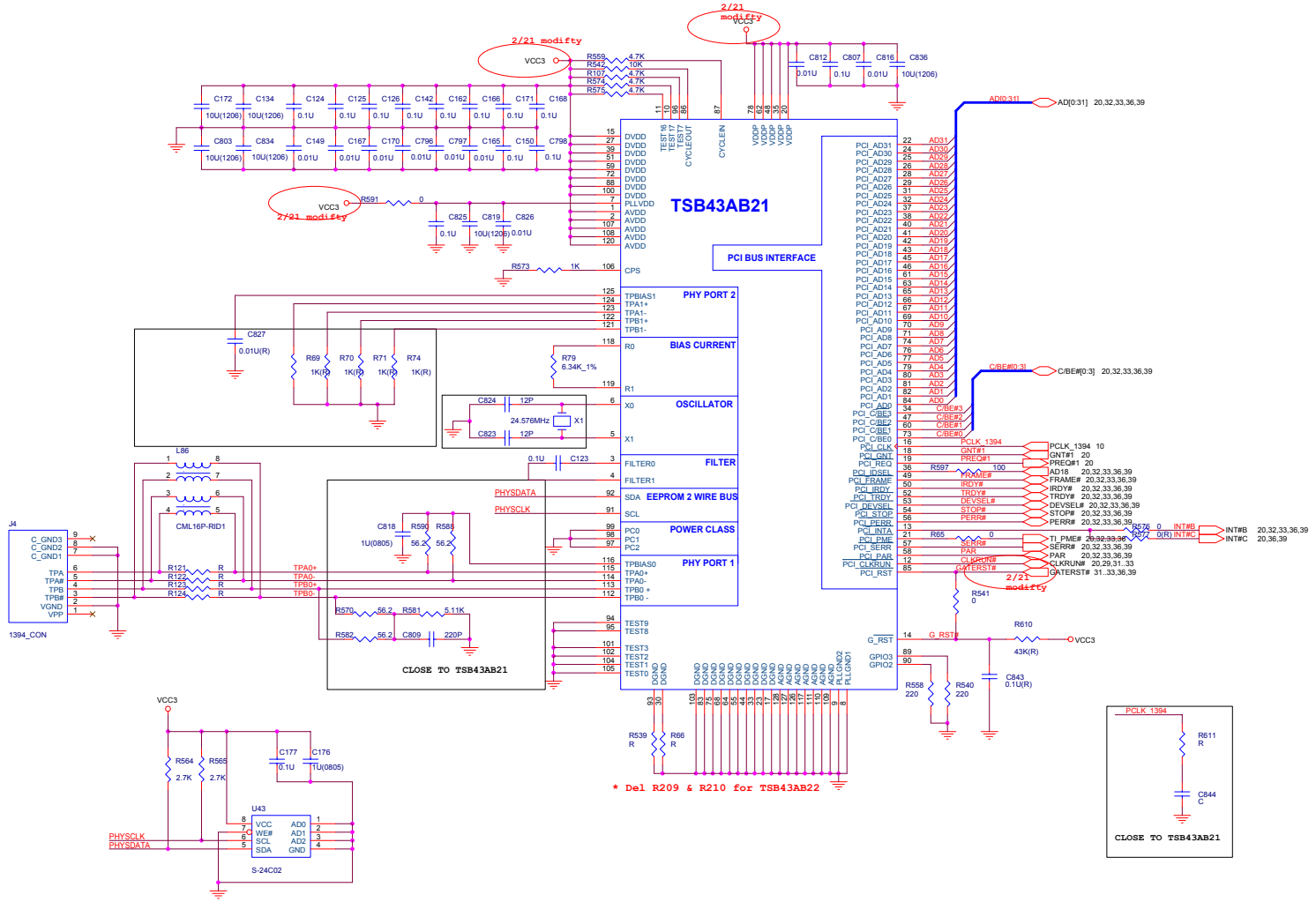
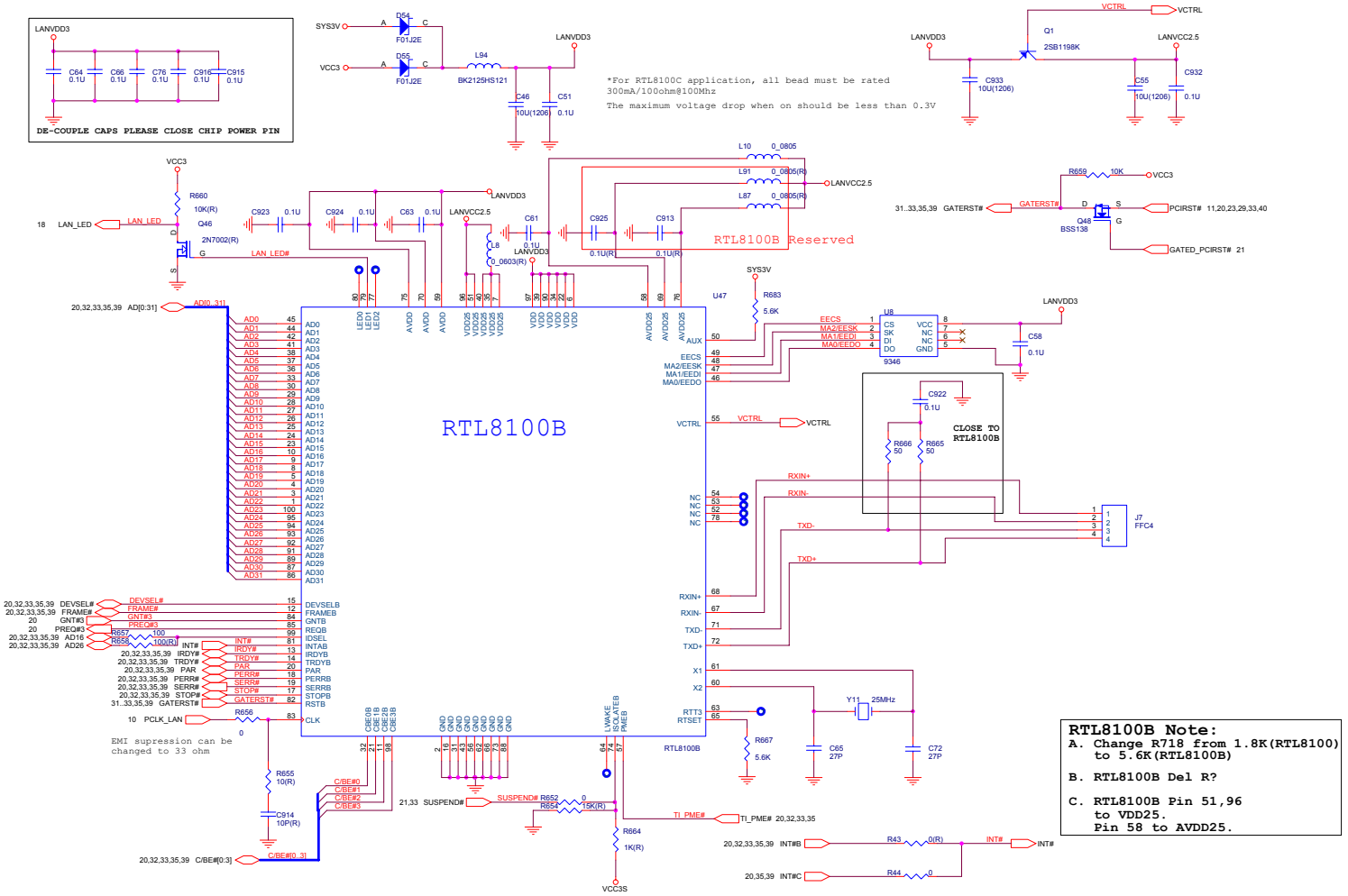
1394 TSB43AB21
(8880)



LAN RTL8100B



Sheet 36 of 45
LAN RTL8100B
(8880)

LED Indicator

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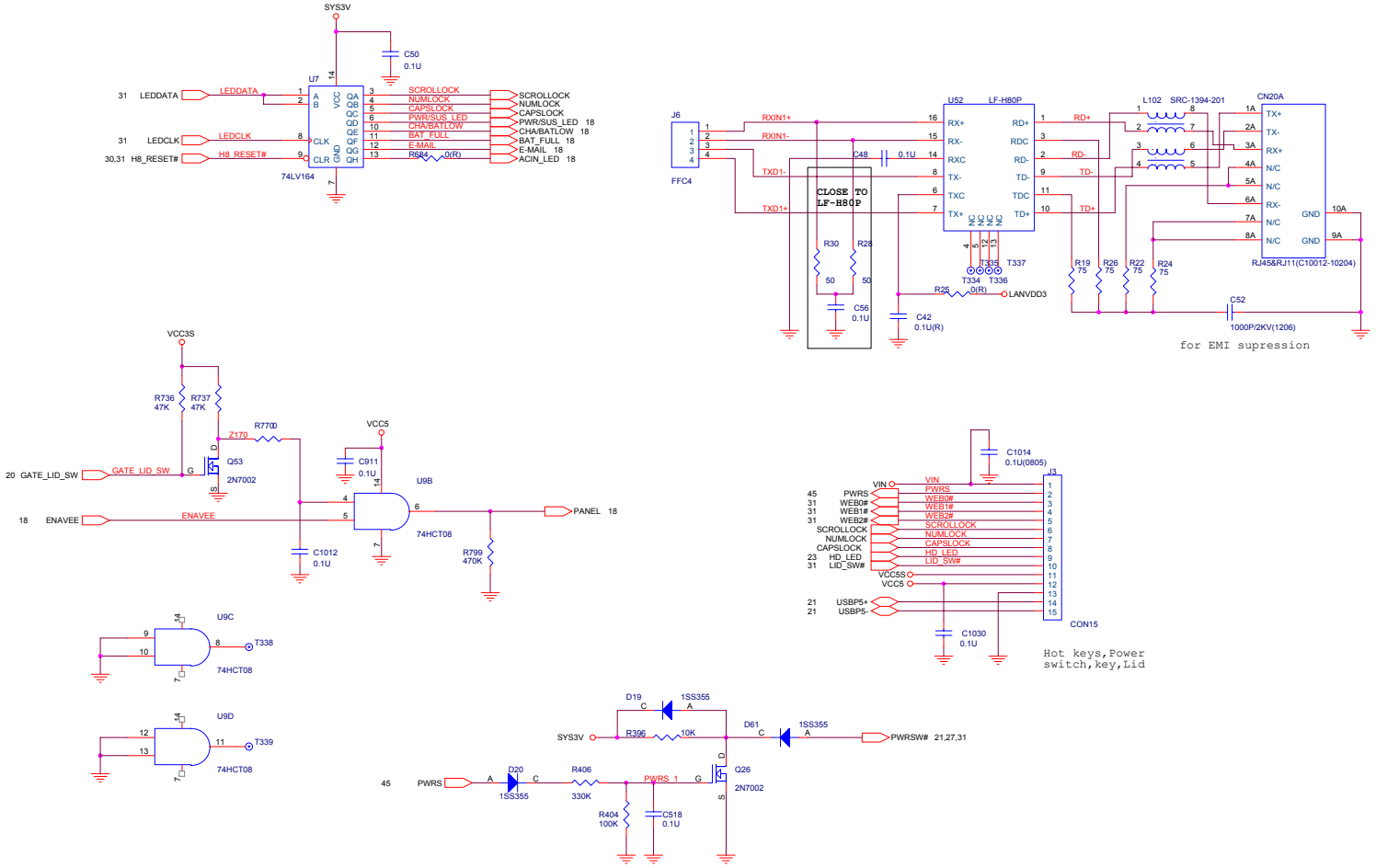
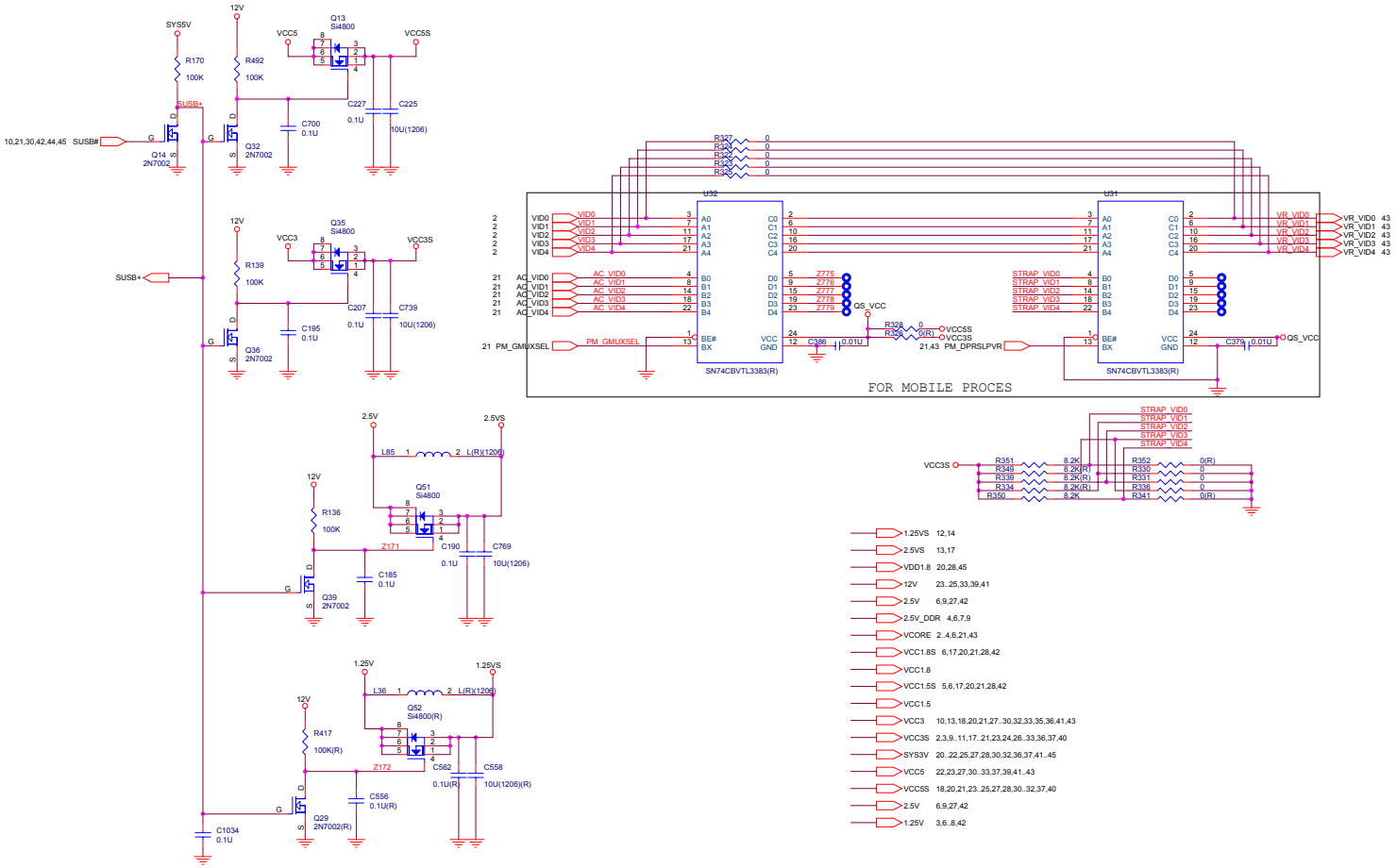
LED Indicator
(8880)



Power Plane



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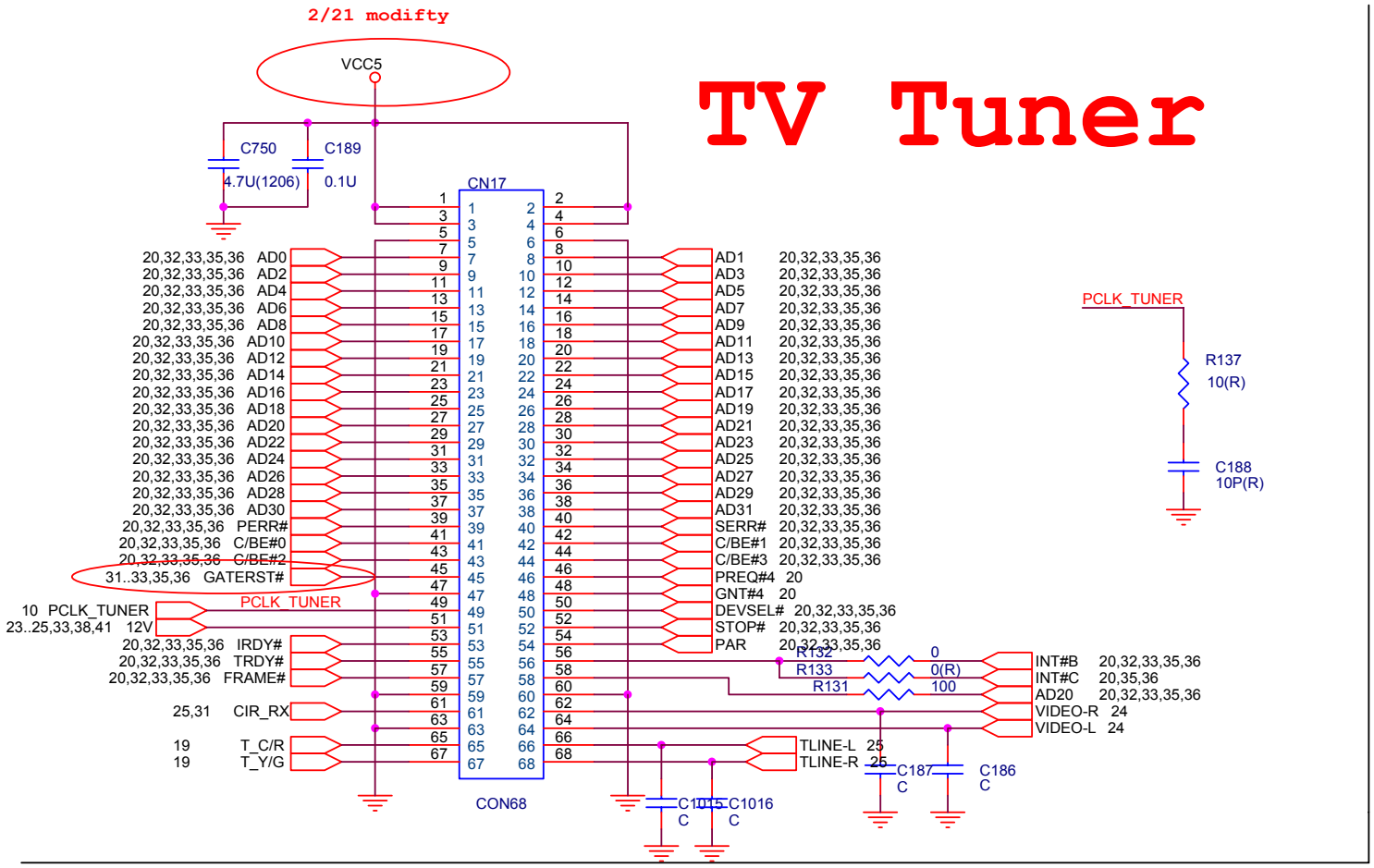
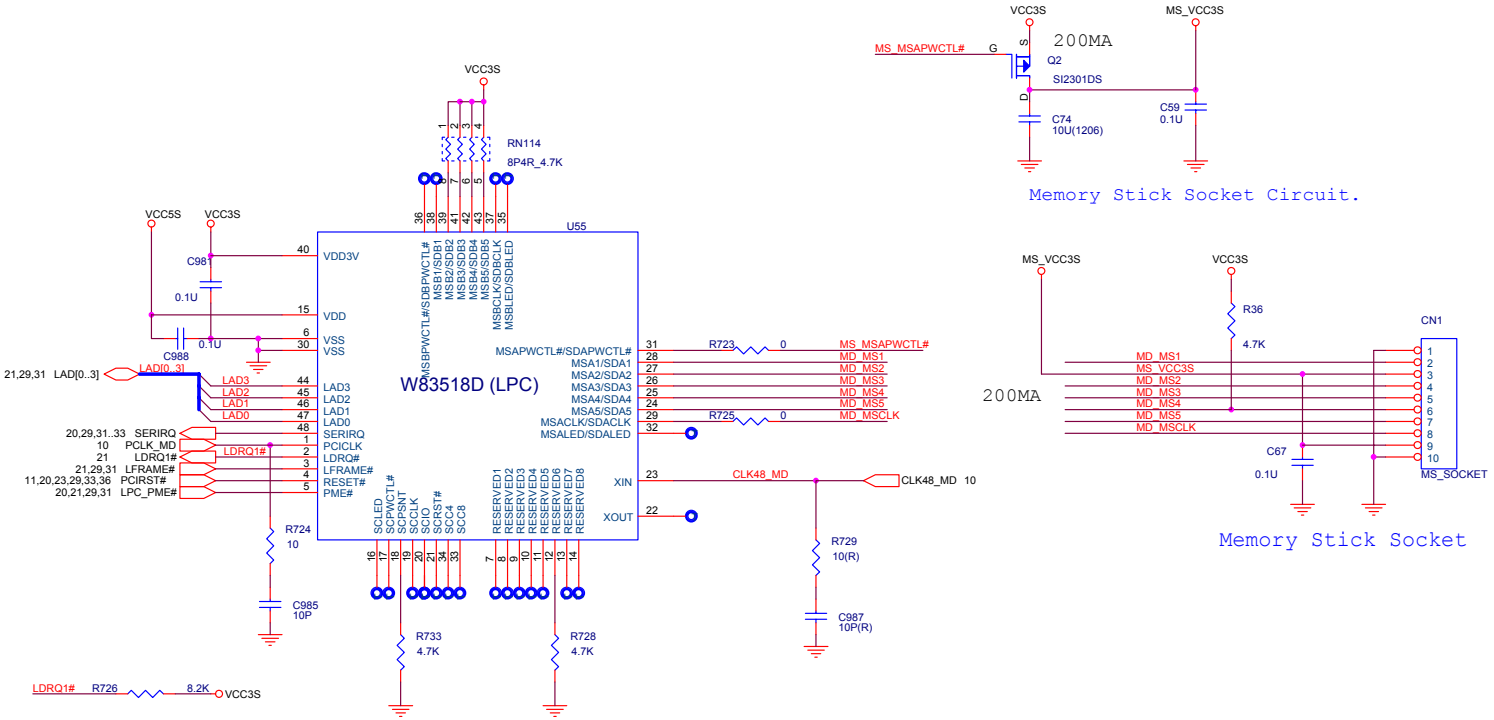
Power Plane (8880)

TV Tuner / Fingerchip

Sheet 39 of 45
TV Tuner/
Fingerchip (8880)



W83518D Media Reader



Memory Stick Socket Circuit.

Memory Stick Socket

Sheet 40 of 45
W83518D Media Reader (8880)

System Power 1 SCH

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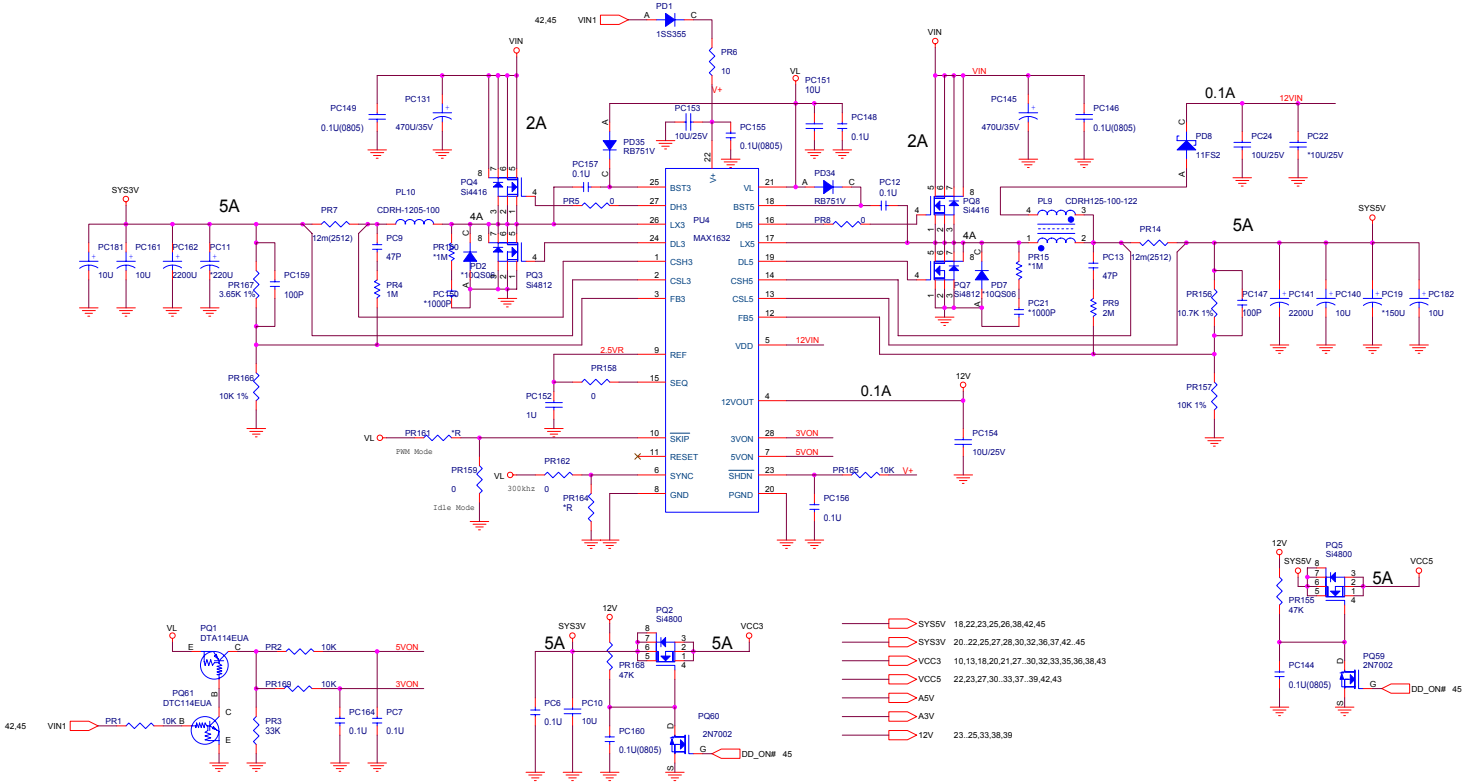
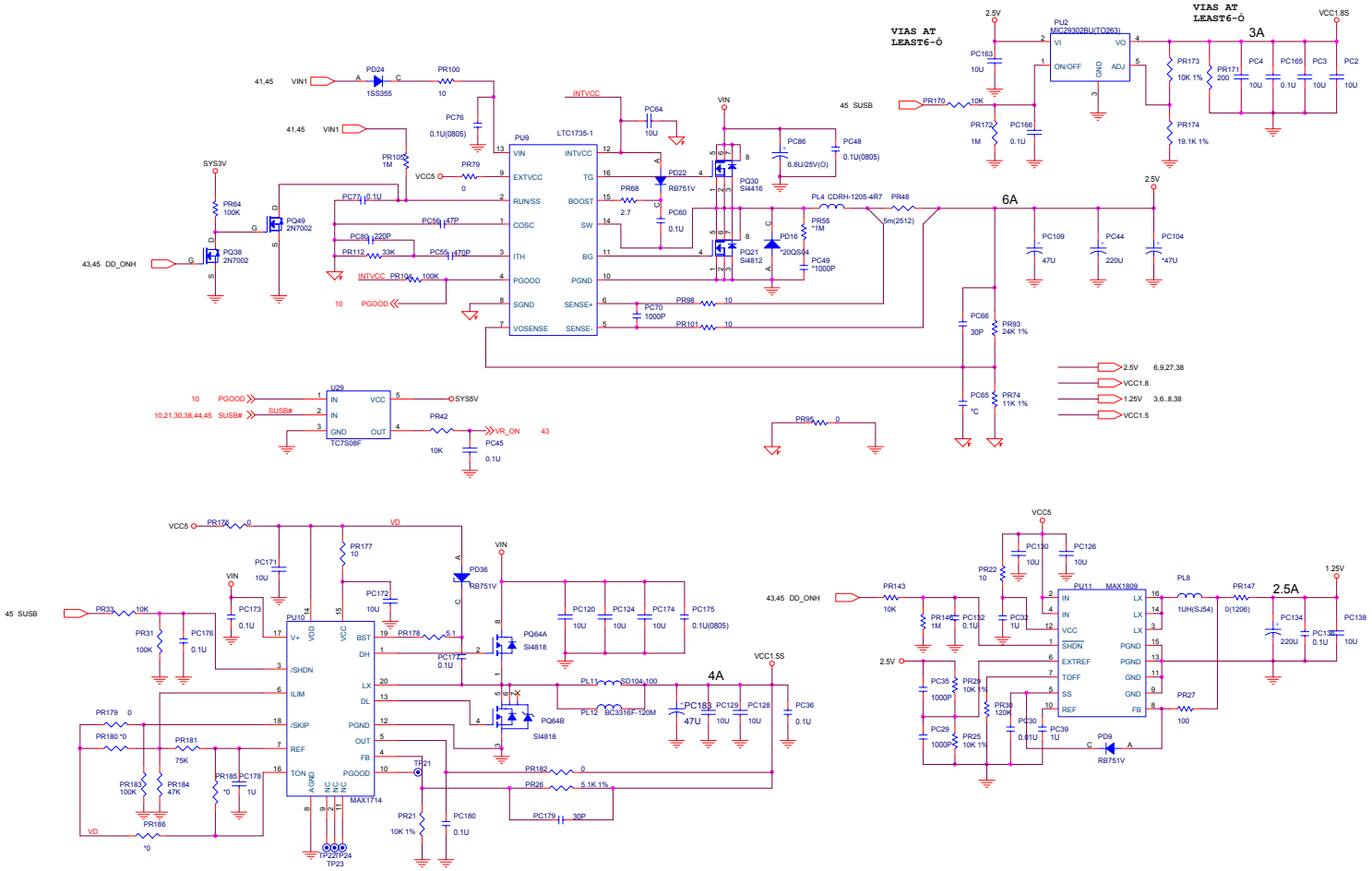
System Power 1 SCH (+3V, +5V, +12V) - (8880)



System Power 2 SCH



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System Power 2 SCH (+2.5V, +18V, +1.5V, +1.25V) - (8880)

VCORE

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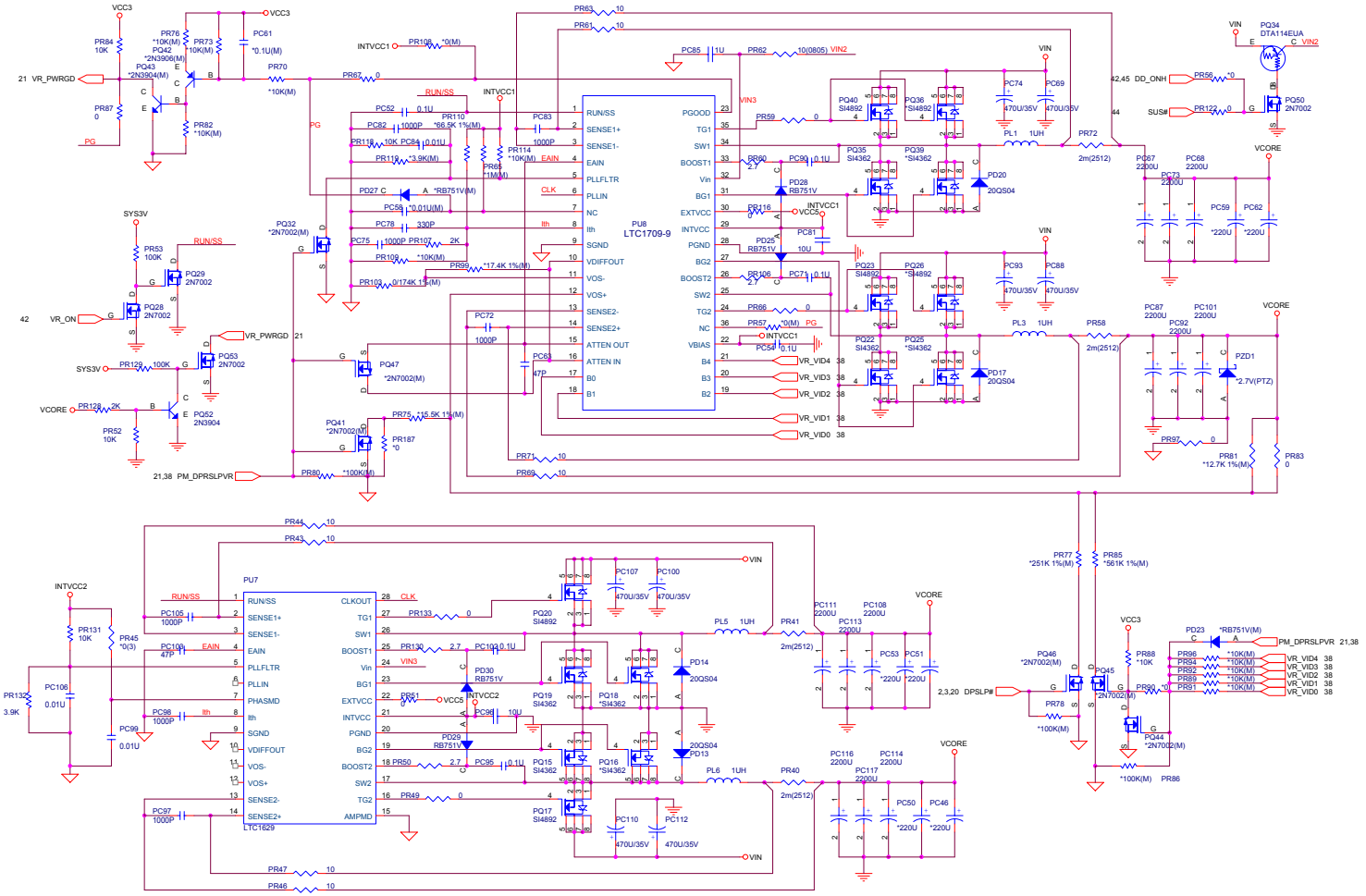
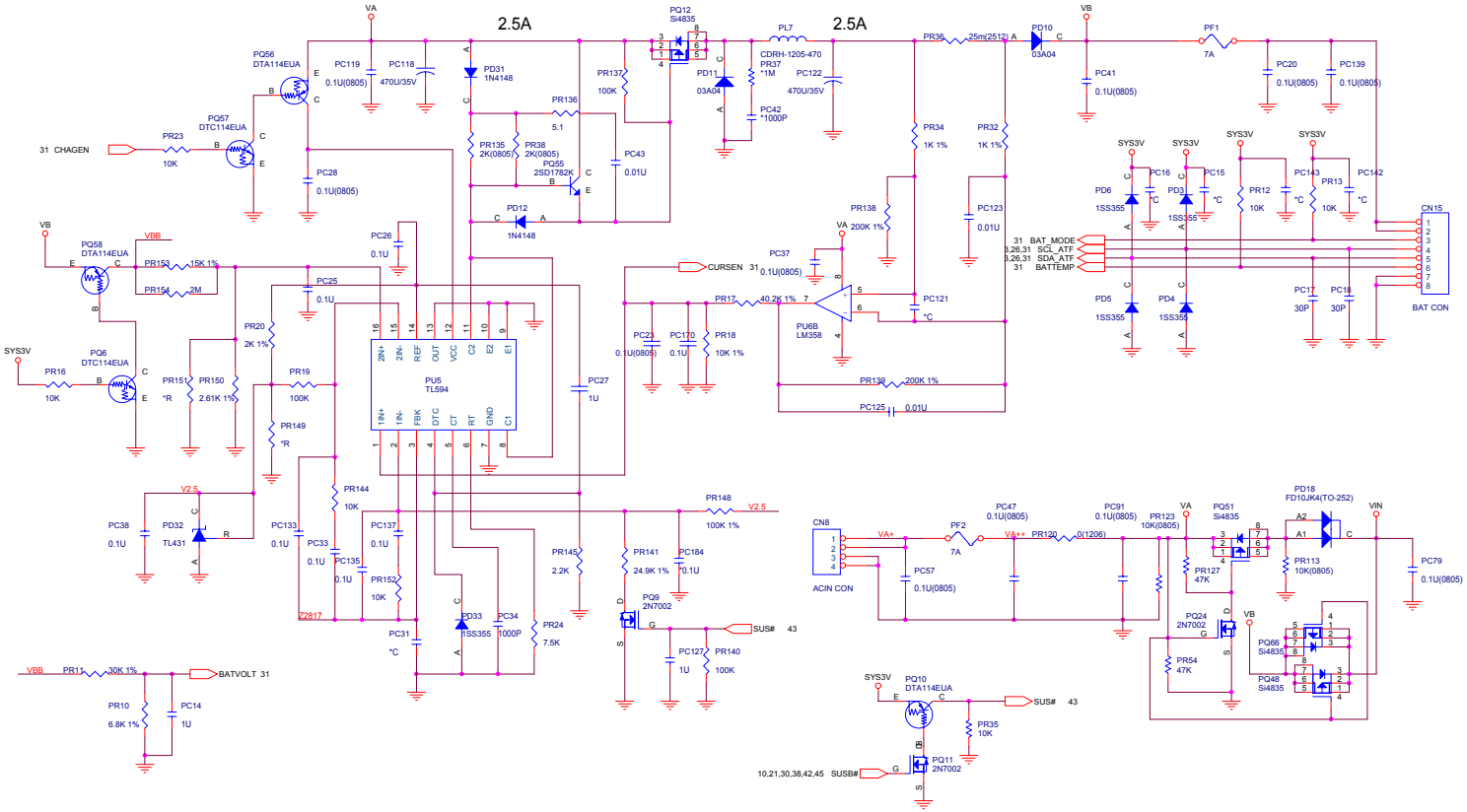
VCORE (8880)



Charger-PWM



Sheet 44 of 45
Charger-PWM
(8880)

3VH8 VDD1.8

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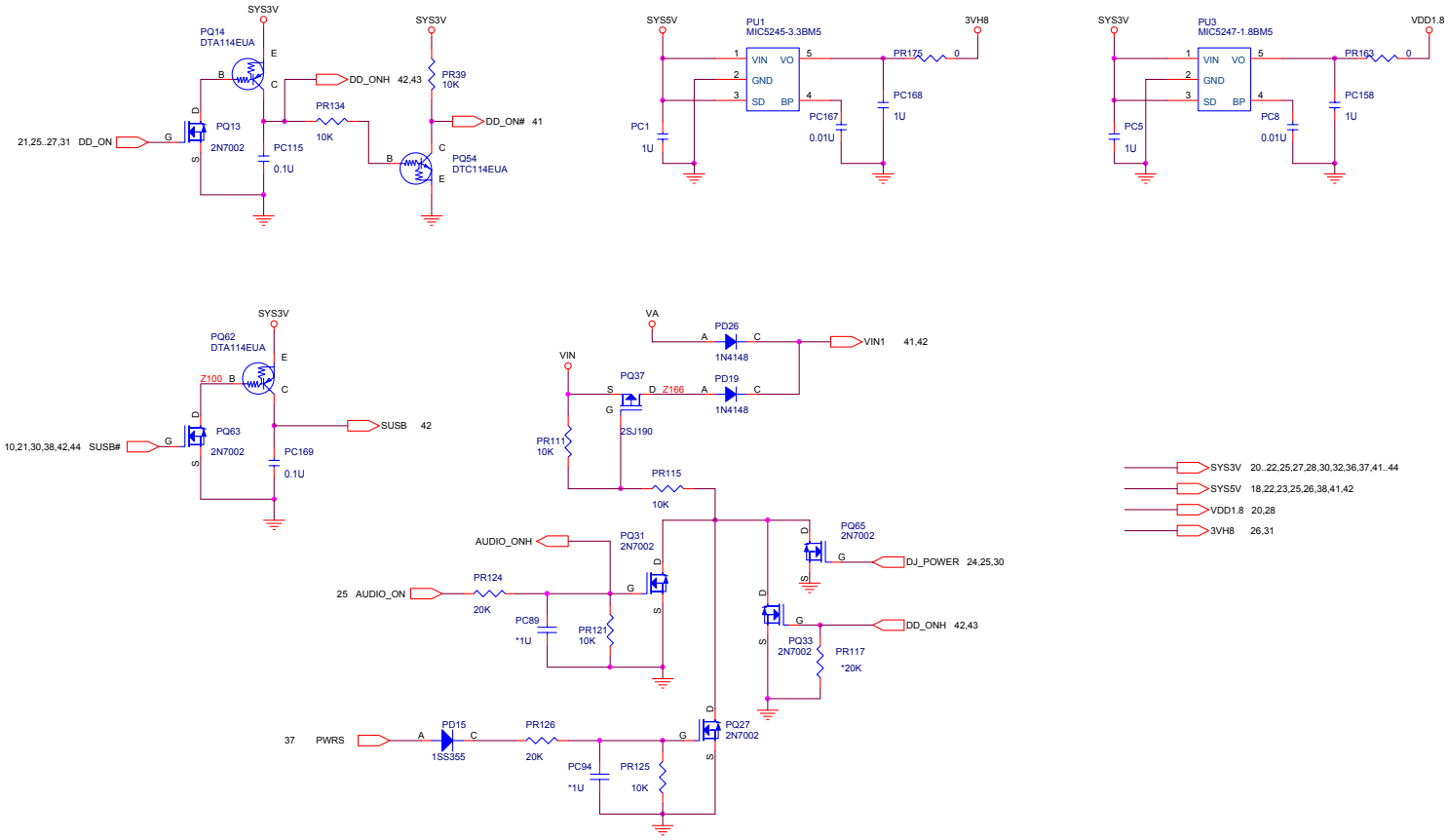
3VH8 VDD1.8
(8880)



Appendix E: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 (**8880 Series OR 888E series**) and the driver type (**BIOS**).
4. Select **GO**.
5. Click on **888ERxxx.zip** or **8880Rxxx.zip** to download the BIOS files (including BIOS refresh tools).

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

(*The files you should see on this disk are: FP.exe, Flash.exe & 888*Rxxx.bin)*
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. Go to the DOS prompt.
3. If you have chosen to extract the zipped files to the floppy disk then browse to where the files are located and type the following command:

   A: **fp 888*rxxx.bin**

Remove the floppy disk from the drive and restart your computer.
Your notebook is now running normally with the updated BIOS.

Hyper-Threading

You can enable (the default setting is disabled) Hyper-Threading from the **Power Menu** in the BIOS. Hyper-Threading is only supported if the computer has an Intel Pentium® 4 Processor with Hyper-Threading Technology, running the ***Windows XP*** OS. In the 888 series **only the 888E models with 3.06GHz will support this option**. Depending on the hardware and software used, Hyper-Threading will increase performance of the computer by enabling a single processor to run two separate threads of software at the same time, (applications may be written to take advantage of Hyper-Threading Technology). **If you do not have a Processor with Hyper-Threading Technology, the menu option to enable Hyper-Threading will not appear**.

Hyper-Threading Notes:

Hyper-Threading is only supported in ***Windows XP***, so **DO NOT enable this option if you are using *Windows 2000***.

If you have updated the Flash ROM BIOS from a previous version, which did not have the **Enable Hyper-Threading** option, you must **reinstall *Windows XP*** after the BIOS update. After installing ***Windows XP*** you must install the latest versions of the **modem & video drivers**. (If you are unsure which driver versions you have, download the latest versions from the website **www.clevo.com.tw**.)

Once you have **enabled** Hyper-Threading, **DO NOT disable the option** or the computer may not startup (returning to the BIOS and enabling the option will correct this in case of accidental disabling of the option).

If you are changing the processor from a CPU which supports Hyper-Threading, to one which does not support Hyper-Threading, you will need to reinstall your OS.

If you **have enabled the Hyper-Threading option in the BIOS, DO NOT** install the Intel Application Accelerator driver as part of the driver installation procedure.