



SERVICE MANUAL

M720T / M730T / M728T / M729T

notebook

Notebook Computer

M720T/M728T/M729T/M730T

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 *M720T/M728T/M729T/M730T* series notebook PC.

The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications.

Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.

Appendix A, Part Lists

Appendix B, Schematic Diagrams

FCC Statement (Federal Communications Commission)

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Warning

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

If your purchase option includes both **Wireless LAN** and **3.5G** modules, then the appropriate antennas will be installed. Note that in order to comply with FCC RF exposure compliance requirements, the antenna must not be co-located or operate in conjunction with any other antenna or transmitter.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the service representative or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

1. This device may not cause interference.
And
2. This device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and you body.

IMPORTANT SAFETY INSTRUCTIONS

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

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit (DC Output 19V, 3.42A OR 18.5V, 3.5A (**65W**) minimum AC/DC Adapter).

CAUTION

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

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

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

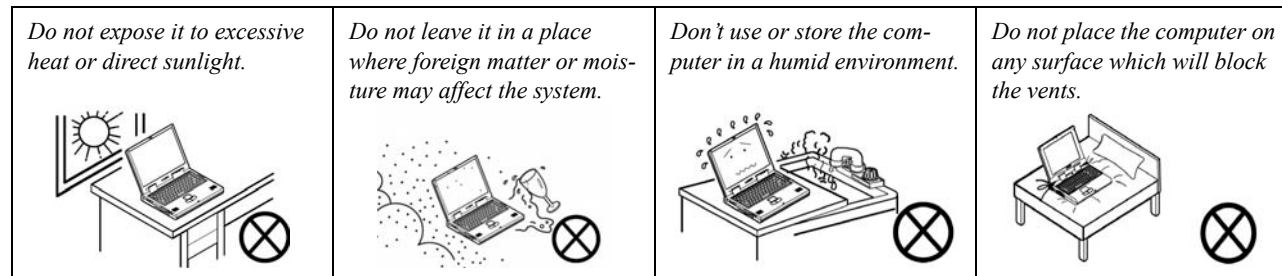
Instructions for Care and Operation

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

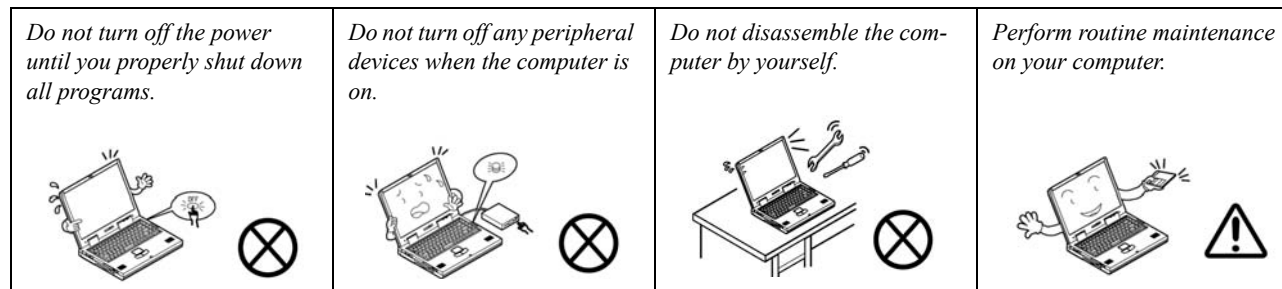
1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.



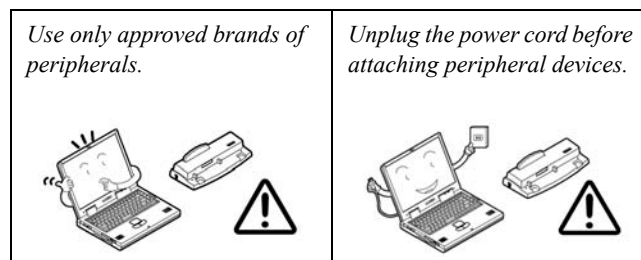
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.



3. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.



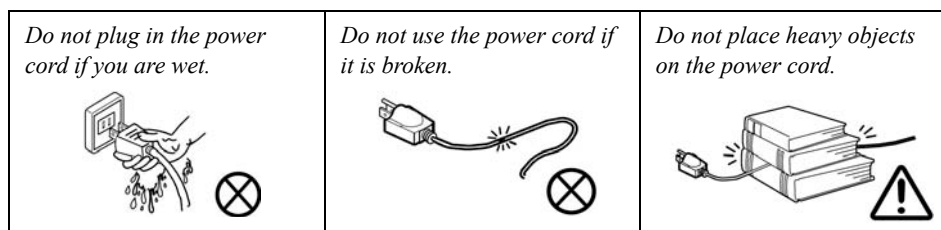
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
5. **Take care when using peripheral devices.**




Power Safety

The computer has specific power requirements:

- Only use a power adapter approved for use with this computer.
- Your AC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.
- The power adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies.





Power Safety Warning

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

Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not remove any batteries from the computer while it is powered on.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- Recharge the batteries using the notebook's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not touch the battery contacts with your hands or metal objects.



Battery Disposal

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Related Documents

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

User's Manual on CD

This describes the notebook PC's features and the procedures for operating the computer and its ROM-based setup program. It also describes the installation and operation of the utility programs provided with the notebook PC.

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Chapter 1: Introduction

Overview

This manual covers the information you need to service or upgrade the *M720T/M728T/M729T/M730T* series notebook computer. Information about operating the computer (e.g. getting started, and the *Setup* utility) is in the *User's Manual*. Information about drivers (e.g. VGA & audio) is also found in *User's Manual*. That manual is shipped with the computer.


Operating systems (e.g. *Windows XP*, *Windows Vista*, 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 *M720T/M728T/M729T/M730T* series notebook is designed to be upgradeable. See *“Disassembly” on page 2 - 1* for a detailed description of the upgrade procedures for each specific component. Please note the warning and safety information indicated by the “” symbol.

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


System Specifications

Feature	Specification	
Processor	Intel® Core™2 Duo Processor 35W - (478-pin) Micro-FC-PGA Package - Socket-P T9400/ T9600	45nm (45 Nanometer) Process Technology 6MB On-die L2 Cache & 1006MHz FSB 2.53/ 2.8 GHz
	Intel® Core™2 Duo Processor 25W - (478-pin) Micro-FC-PGA Package - Socket-P P8400/ P8600	45nm (45 Nanometer) Process Technology 3MB On-die L2 Cache & 1006MHz FSB 2.4/ 2.53 GHz
Core Logic	Intel GM45 + ICH9M Chipset	
LCD	M720T/M728T/M729T: 12.1" WXGA (1280 * 800) TFT LCD	M730T: 13.3" WXGA (1280 * 800) TFT LCD
Memory	64-bit Wide DDRII (DDR2) Data Channel Supports Dual Channel DDRII (DDR2) SDRAM Two 200 Pin SO-DIMM Sockets Supporting DDRII (DDR2) 667MHz/800MHz RAM Modules Memory Expandable up to 4GB (1024/2048 MB DDR2 Modules)	
Video Adapter	Intel GM45 Integrated Video High Preference 3D/2D Graphic Accelerator Supports Dynamic Video Memory Technology DVMT (up to 256MB dynamically allocated from system memory where needed) Supports DirectX10 3D Graphics Engine Accelerator	
Security	Security (Kensington® Type) Lock Slot	BIOS Password
	Fingerprint ID Reader Module (Factory Option)	Trusted Platform Module
BIOS	One 32Mb SPI Flash ROM	Phoenix™ BIOS
Storage	One Changeable 12.7mm(h) SATA (Serial) Optical Device (CD/DVD) Type Drive (see <i>"Optional" on page 1 - 4</i>) Easy Changeable 2.5" 9.5 mm (h) SATA (Serial) HDD	
Audio	High Definition Audio (HDA)	Direct Sound 3D™ Compatible
	Compliant with Microsoft UAA (Universal Audio Architecture)	2 * Built-In Speakers Built-In Microphone
Keyboard & Pointing Device	Winkey Keyboard	Built-In TouchPad with Scrolling Function

Feature	Specification
Interface	<p>Three USB 2.0 Ports One Headphone-Out Jack One Microphone-In Jack One S/PDIF Out Jack One Internal Microphone</p> <p>One RJ-11 Modem Jack One RJ-45 LAN Jack One DC-In Jack One External Monitor Port</p>
Card Reader	Embedded 7-in-1 Card Reader (MS/ MS Pro/ SD/ Mini SD/ MMC/ RS MMC/ MS Duo) Note: MS Duo/ Mini SD/ RS MMC Cards require a PC adapter
ExpressCard Slot	One ExpressCard/34(54) Slot
Communication * Note: The 3.5G and Intel Turbo Memory Modules cannot coexist. There is only one slot available for either of these factory option modules.	<p>10M/ 100/ 1000Mb Base-TX Ethernet LAN Azalia 56K Modem V.90 & V.92 Compliant Intel® WiFi Link 5300 Series (3*3 - 802.11a/g/n) Wireless LAN Mini-Card Module (Option) Intel® WiFi Link 5100 Series (1*2 - 802.11a/g/n) Wireless LAN Mini-Card Module (Option) 3rd Party 802.11b/g Wireless LAN Mini-Card Module with USB interface (Option) Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (Factory Option) 1.3M or 2.0M Pixel PC Camera Module with USB interface (Factory Option)</p> <p>3.5G Module (see sidebar): *UMTS/HSPDA-based 3.5G Mini-Card Module with USB Interface (Factory Option) Quad-band GSM/GPRS (850 MHz, 900 MHz, 1800 MHz, 1900 MHz) UMTS WCDMA FDD (2100 MHz)</p> <div style="text-align: center; border: 2px solid red; border-radius: 15px; padding: 10px; background-color: #ff0000; color: white; margin: 10px auto; width: fit-content;">  UMTS Modes Note that UMTS modes CAN NOT be used in North America. </div>
Power Management	<p>Supports ACPI 3.0</p> <p>Supports Wake on LAN Supports Resume from Modem Ring</p>
Power	Full Range AC/DC Adapter AC Input 100 - 240V, DC Output 50 - 60Hz, 19V, 3.42A or 18.5V, 3.5A (65 Watts)
Battery	<p>4 Cell Smart Lithium-Ion Battery Pack, 14.8V/2.4AH 8 Cell Smart Lithium-Ion Battery Pack, 14.8V/4.4AH (Option)</p>

Introduction

Feature	Specification	
Environmental Spec	Temperature Operating: 5°C - 35°C Non-Operating: -20°C - 60°C	Relative Humidity Operating: 20% - 80% Non-Operating: 10% - 90%
Dimensions & Weight	<u>M720T/M728T/M729T:</u> 299mm (w) * 219mm (d) * 26.5-35.7mm (h) 1.88 kg With 4 Cell Battery and ODD	<u>M730T:</u> 310mm (w) * 233mm (d) * 30-36mm (h) 2.0 kg With 4 Cell Battery and ODD
Optional *Note: The 3.5G and Intel Turbo Memory Modules cannot coexist. There is only one slot available for either of these factory option modules.	<u>Optical Drive Module Options:</u> SATA DVD/CD-RW Combo Drive Module SATA DVD Dual (Super Multi) Drive Module Intel® WiFi Link 5300 Series (3*3 - 802.11a/g/n) Wireless LAN Mini-Card Module Intel® WiFi Link 5100 Series (1*2 - 802.11a/g/n) Wireless LAN Mini-Card Module 3rd Party 802.11b/g Wireless LAN Mini-Card Module with USB interface 8 Cell Smart Lithium-Ion Battery Pack 1.3M or 2.0M Pixel USB PC Camera Module (Factory Option) Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (Factory Option)	Fingerprint ID Reader Module (Factory Option) *Intel Turbo Memory (Robson) NAND Flash Memory Card Module (Factory Option) OR *UMTS/HSPDA-based 3.5G Module with Mini Card Interface (Factory Option) Quad-band GSM/GPRS (850 MHz, 900 MHz, 1800 MHz, 1900 MHz) UMTS WCDMA FDD (2100 MHz)



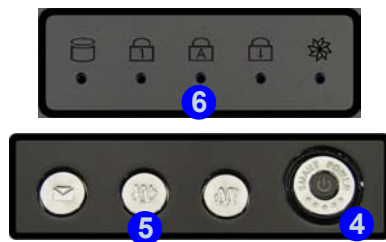
UMTS Modes

Note that UMTS modes CAN NOT be used in North America.

External Locator - Top View with LCD Panel Open



M720T/M728T/M729T



M730T

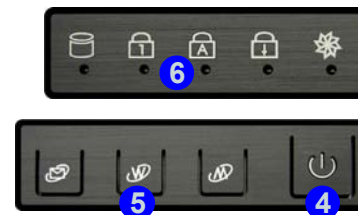


Figure 1
Top View

1. Optional Built-In PC Camera
2. LCD
3. Speakers
4. Power Button
5. Hot Key Buttons
6. LED Status Indicators
7. Keyboard
8. Touchpad & Buttons
9. LED Power & Communication Indicators
10. Fingerprint (Optional)
11. Built-In Microphone

***Note:** This model may have either a fingerprint module or card reader module, depending on your purchase configuration.

Introduction

Figure 2

Front Views

1. LED Power & Communication Indicators
2. 7-in-1 Card Reader
3. S/PDIF-Out Jack
4. Microphone-In Jack
5. Headphone-Out Jack

External Locator - Front & Right side Views



Figure 3

Right Side Views

1. Optical Device Drive Bay
2. USB 2.0 Port
3. RJ-11 Phone Jack
4. Security Lock Slot



External Locator - Left Side & Rear View



Figure 4
Left Side View

1. DC-In Jack
2. RJ-45 LAN Jack
3. External Monitor Port
4. Vent/Fan Intake/Outlet
5. 2 * USB 2.0 Ports
6. ExpressCard Slot

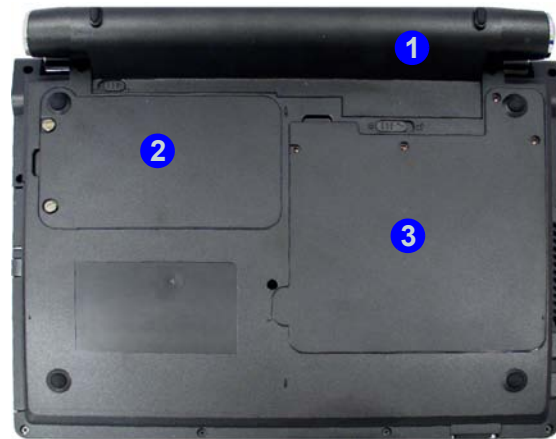
Figure 5
Rear View

1. Battery

External Locator - Bottom View

Figure 6
Bottom View

1. Battery (M730T 8 Cell Battery Pictured)
2. Hard Disk Bay Cover (3.5G Module Location)
3. RAM & CPU Bay Cover
4. Vent/Fan Intake/Outlet (M730T Only)
5. Speakers (M730T Only)



M720T/M728T/M729T



M730T



Overheating

To prevent your computer from overheating make sure nothing blocks the vent/fan intakes while the computer is in use.

Mainboard Overview - Top (Key Parts)

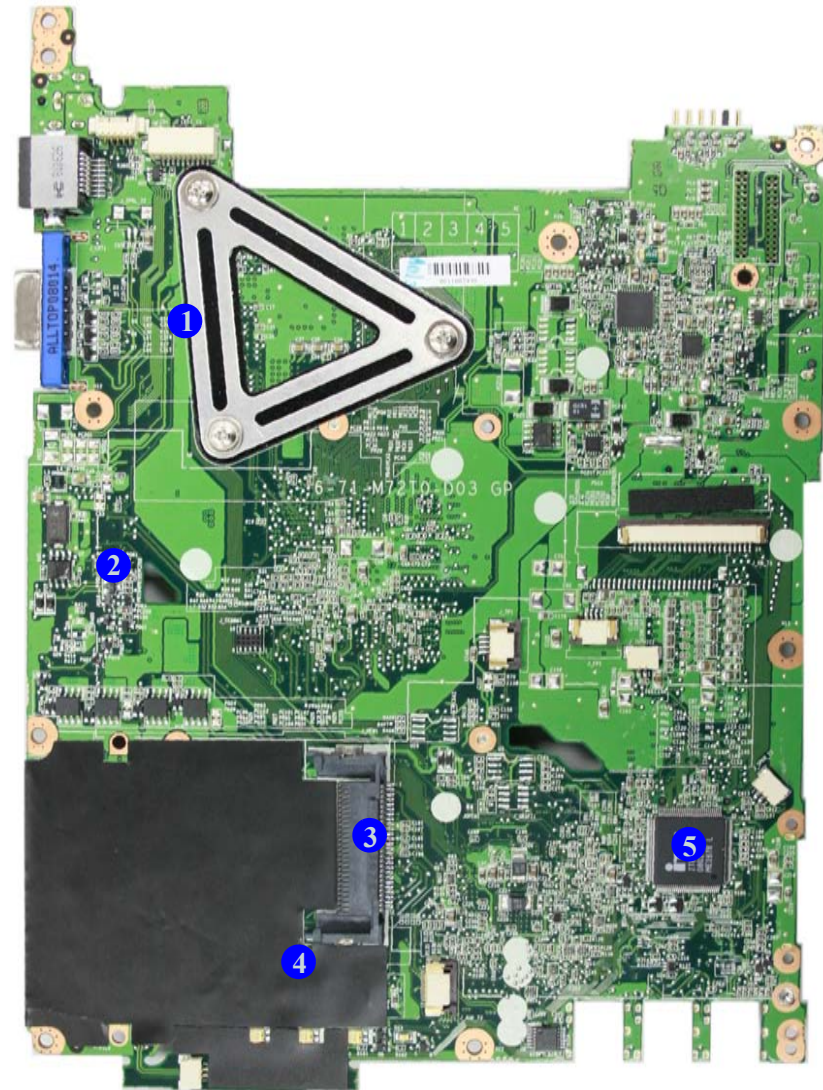


Figure 7
**Mainboard Top
Key Parts**

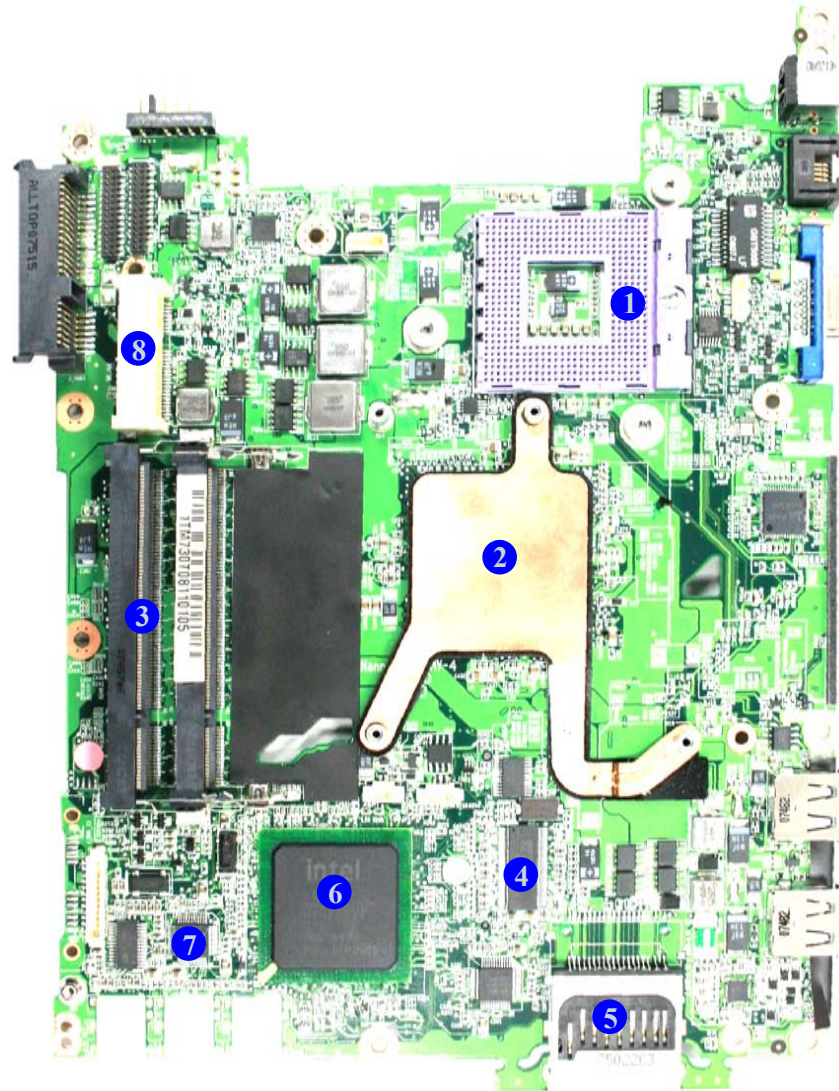
1. Transformer
2. VT6103L
3. ExpressCard Connector
4. ENE MR510
5. KBC ITE IT8512E

Introduction

Figure 8
**Mainboard Bottom
Key Parts**

1. CPU Socket (no CPU installed)
2. Northbridge
3. Memory Slots
DDR2 SO-DIMM
4. ICS
5. Card Reader
Socket
6. Southbridge
7. Audio Codec
8. Mini-Card
Connector (WLAN
Module)

Mainboard Overview - Bottom (Key Parts)



Mainboard Overview - Top (Connectors)

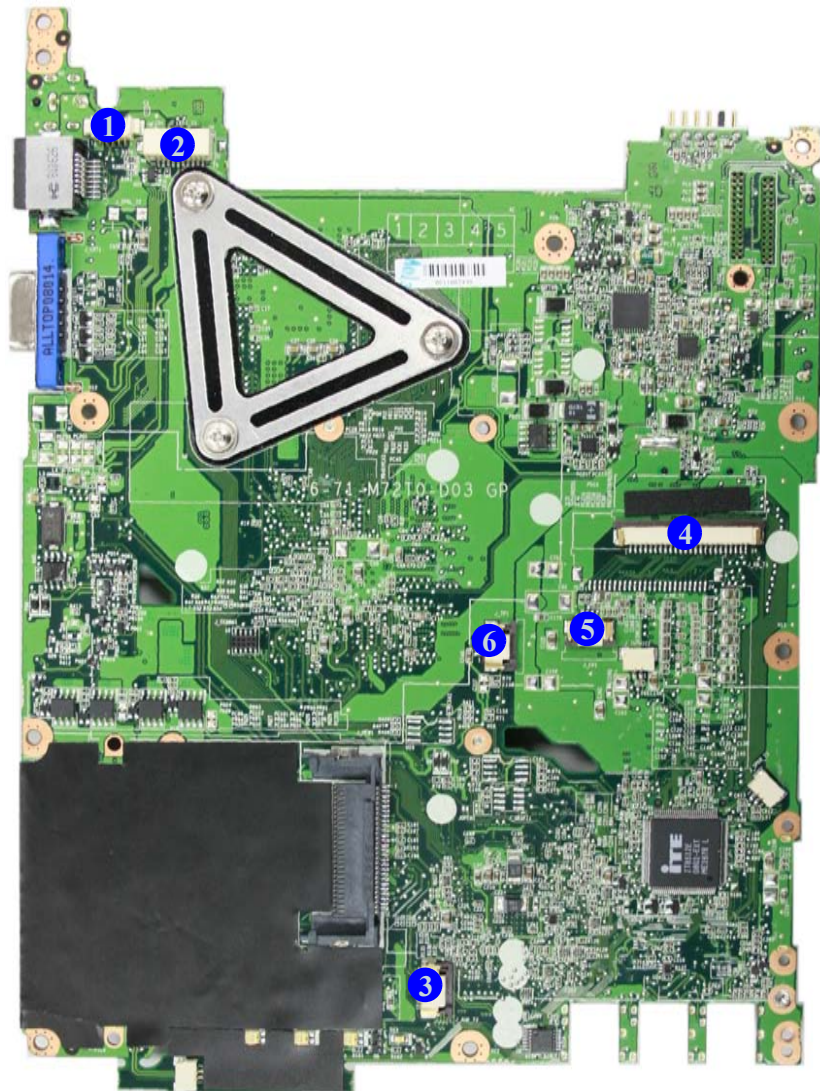


Figure 9
**Mainboard Top
Connectors**

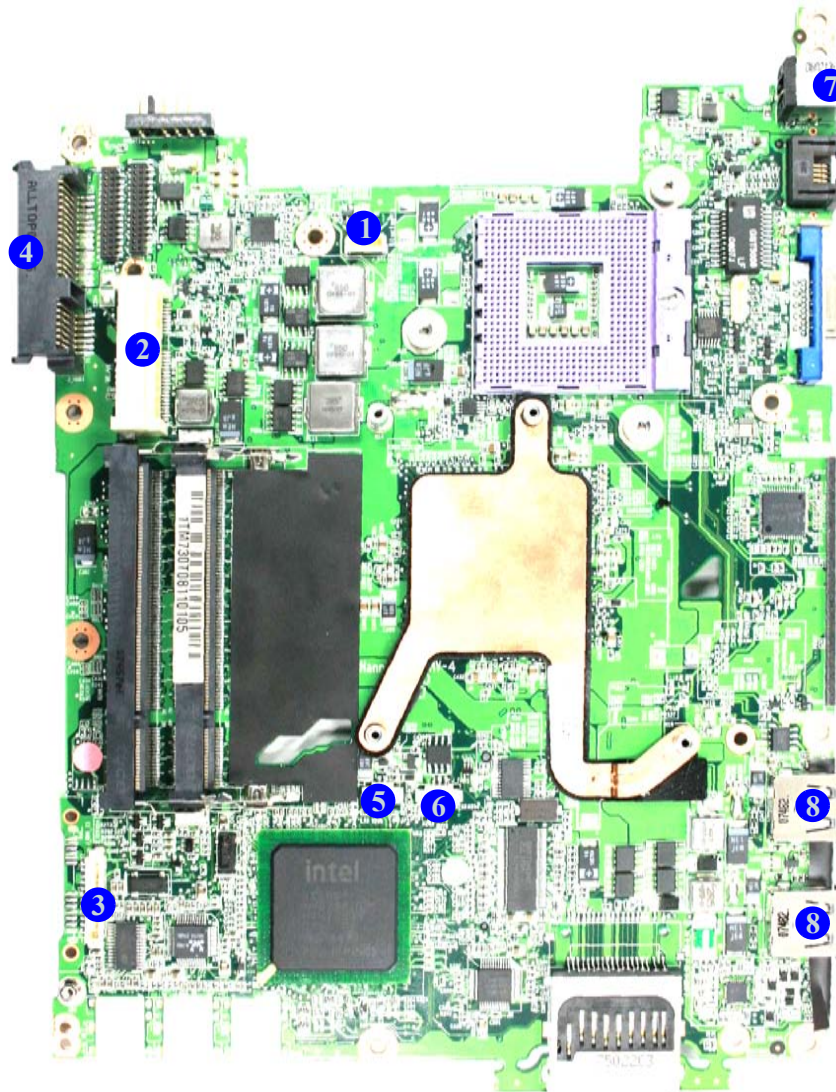
1. Hot-key Connector
2. LCD Cable Connector
3. Keyboard Cable Connector
4. Audio Board Connector
5. Microphone Cable Connector
6. TouchPad Cable Connector

Introduction

Figure 10
**Mainboard Bottom
Connectors**

1. BT Cable Connector
2. Multi Board Connector
3. CD-ROM Connector
4. HDD Connector
5. CMOS Bat. Connector
6. CPU Fan Cable Connector
7. DC-In Jack
8. USB Port

Mainboard Overview - Bottom (Connectors)




Chapter 2: Disassembly



Overview

This chapter provides step-by-step instructions for disassembling the *M720T/M728T/M729T/M730T* series notebook's parts and subsystems. When it comes to reassembly, reverse the procedures (unless otherwise indicated).

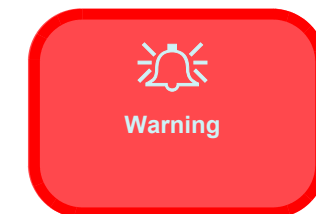
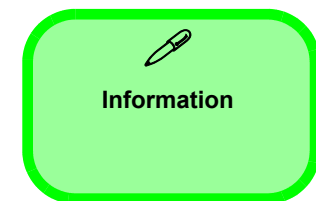
We suggest you completely review any procedure before you take the computer apart.

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

To make the disassembly process easier each section may have a box in the page margin. Information contained under the figure # will give a synopsis of the sequence of procedures involved in the disassembly procedure. A box with a  lists the relevant parts you will have after the disassembly process is complete. **Note:** The parts listed will be for the disassembly procedure listed ONLY, and not any previous disassembly step(s) required. Refer to the part list for the previous disassembly procedure. The amount of screws you should be left with will be listed here also.

A box with a  will also provide any possible helpful information. A box with a  contains warnings.

An example of these types of boxes are shown in the sidebar.



Disassembly

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-borne particulate matter is often attracted to charged surfaces, reducing performance.
10. **Keep track of the components.** When removing or replacing any part, be careful not to leave small parts, such as screws, loose inside the computer.

Cleaning

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

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



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.

Disassembly Steps

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

To remove the Battery:

1. Remove the battery [page 2 - 5](#)

To remove the HDD:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)

To remove the Optical Device:

1. Remove the battery [page 2 - 5](#)
2. Remove the Optical device [page 2 - 8](#)

To remove the System Memory:

1. Remove the battery [page 2 - 5](#)
2. Remove the system memory [page 2 - 10](#)

To remove the Inverter Board:

1. Remove the battery [page 2 - 5](#)
2. Remove the inverter board [page 2 - 12](#)

To remove and install a Processor:

1. Remove the battery [page 2 - 5](#)
2. Remove the processor [page 2 - 13](#)

To remove the Wireless LAN Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the wireless LAN [page 2 - 15](#)

To remove the Bluetooth Module:

1. Remove the battery [page 2 - 5](#)
2. Remove the Bluetooth [page 2 - 16](#)

To remove the Keyboard:

1. Remove the battery [page 2 - 5](#)
2. Remove the keyboard [page 2 - 17](#)

To remove the Modem:

1. Remove the battery [page 2 - 5](#)
2. Remove the HDD [page 2 - 6](#)
3. Remove the system memory [page 2 - 10](#)
4. Remove the Optical device [page 2 - 8](#)
5. Remove the processor [page 2 - 13](#)
6. Remove the keyboard [page 2 - 17](#)
7. Remove the modem [page 2 - 18](#)

Removing the Battery

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

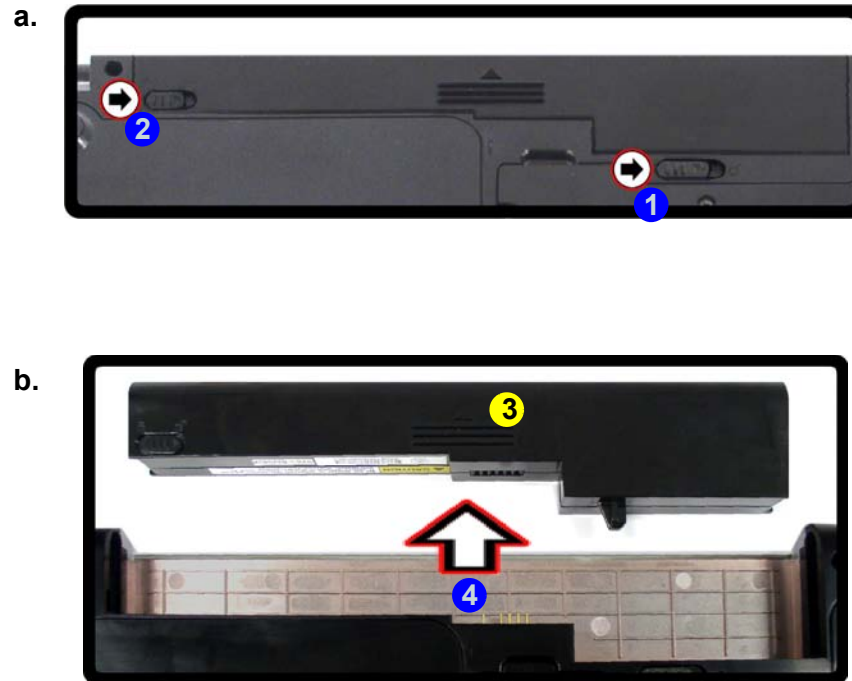
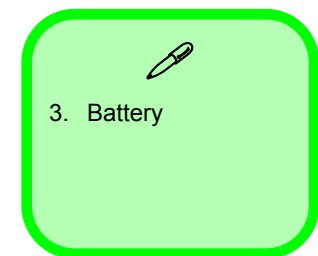


Figure 1
Battery Removal

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



Disassembly

Figure 2 HDD Assembly Removal

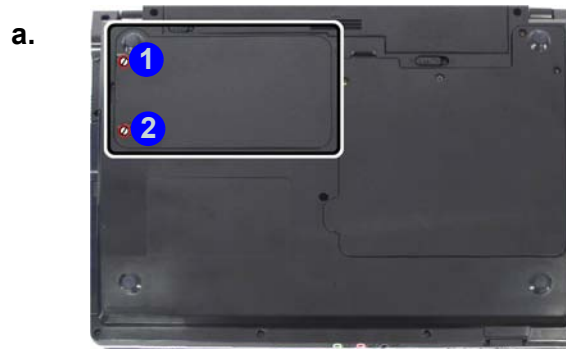
- Locate the HDD bay cover and remove the screw(s).

Removing the Hard Disk Drive

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

Hard Disk Upgrade Process

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



Note:

Only one model is pictured here, however the component locations are the same for both models.



- 2 Screws



HDD System Warning

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

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

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

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

3. Remove the hard disk bay cover **3**.
4. Grip the tab and slide the hard disk in the direction of arrow **4**.
5. Lift the hard disk out of the bay **5**.
6. Remove the screw **6** & **7** and the adhesive cover **8** from the hard disk **9**.
7. Reverse the process to install a new hard disk (do not forget to replace all the screws and covers).

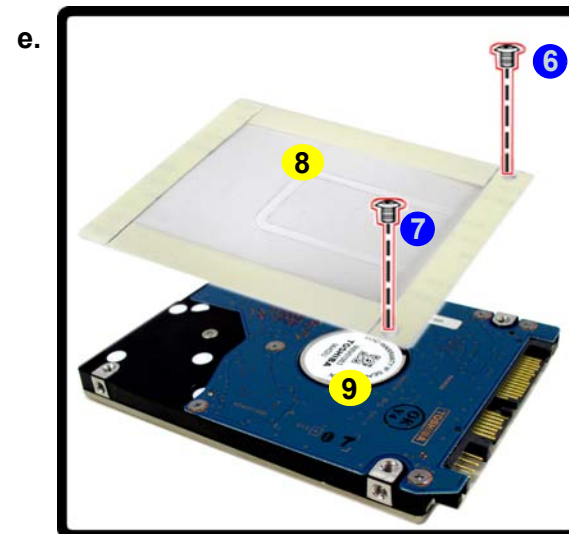
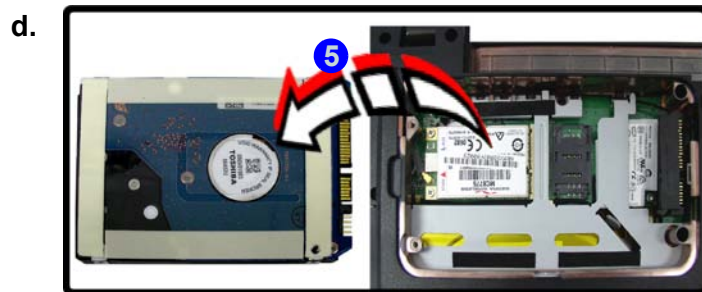


Figure 3
**HDD Assembly
Removal (cont'd.)**

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



- 3. HDD Bay Cover
- 7. Adhesive Cover
- 8. HDD
- 2 Screws

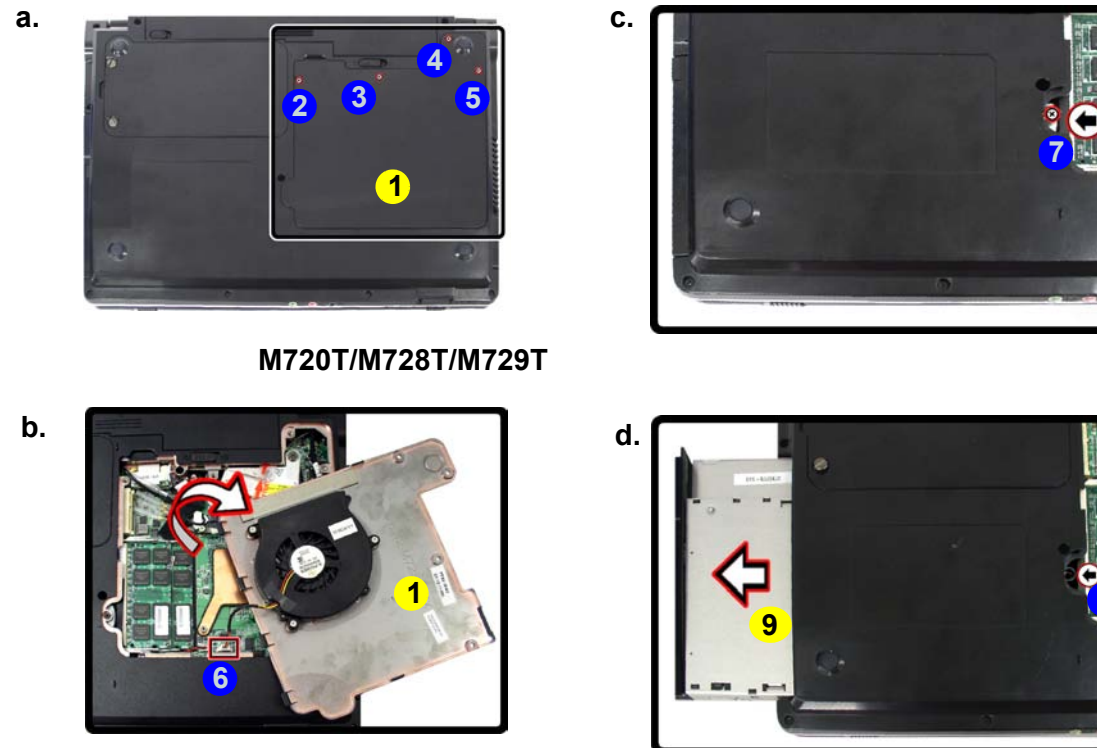
Disassembly

Figure 4
Optical Device
Removal

- Remove the screws.
- Disconnect the fan cable and remove the cover.
- Remove the screw.
- Push the optical device out off the computer at point 8.

Removing the Optical (CD/DVD) Device

- Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
- M720T/M728T/M729T: (see over for M730T)** Locate the component bay cover **1** and remove screws **2** - **5**.
- Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
- Carefully disconnect the fan cable **6**, and remove the cover **1**.
- Remove the screw at point **7**, and use a screwdriver to carefully push out the optical device **9** at point **8**.
- Insert the new device and carefully slide it into the computer (the device only fits one way. **DO NOT FORCE IT**; The screw holes should line up).
- Restart the computer to allow it to automatically detect the new device.



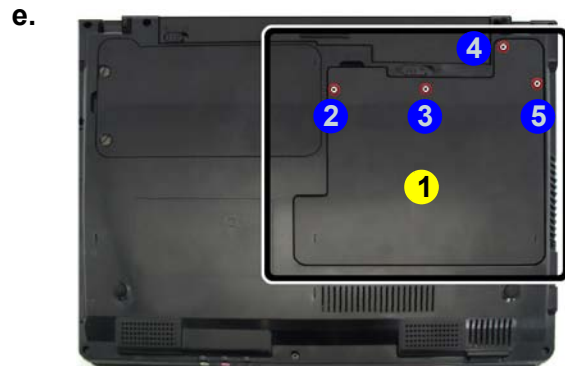
- Component Bay Cover
- Optical Device

- 5 Screws

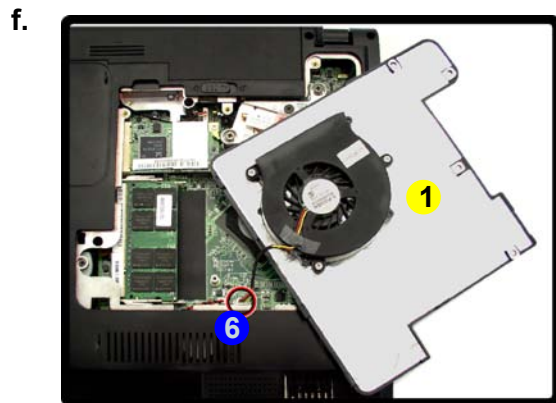
8. **M730T:** Locate the component bay cover **1** and remove screws **2** & **5**.
9. Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
10. Carefully disconnect the fan cable **6** and remove the bay cover **1**.
11. Remove the screw at point **7**, and use a screwdriver to carefully push out the optical device **9** at point **8**.
12. Insert the new device and carefully slide it into the computer (the device only fits one way. **DO NOT FORCE IT**; The screw holes should line up).
13. Restart the computer to allow it to automatically detect the new device.


Figure 5
Optical Device Removal (cont'd.)

- e. Remove the screws.
- f. Disconnect the fan cable and remove the cover.
- g. Remove the screw.
- h. Push the optical device out off the computer at point 8.



M730T





- 1. HDD Bay Cover
- 8. Optical Device
- 4 Screws

Figure 6
RAM Module
Removal

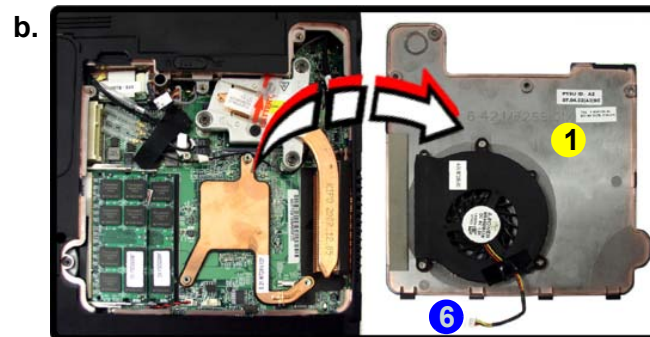
- Remove the screws.
- Remove the cover.

Removing the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting **DDR2** 667/800MHz. The main memory can be expanded up to 4GB. The SO-DIMM modules supported are 1024MB, and 2048MB and **DDRII** Modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process

- Turn **off** the computer, remove the battery ([page 2 - 5](#)).
- Locate the component bay cover **1**, and remove screws **2 - 5**.
- Carefully (**a fan and cable are attached to the under side of the cover**) lift up the bay cover.
- Carefully disconnect the fan cable **6**, and remove the cover **1**.



Note:

Only one model is pictured here, however the component locations are the same for both models.



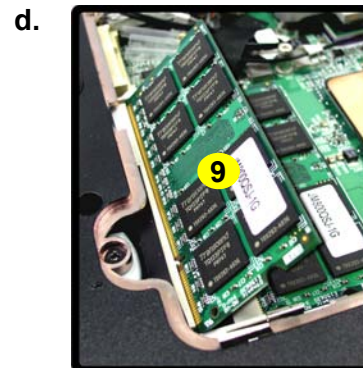
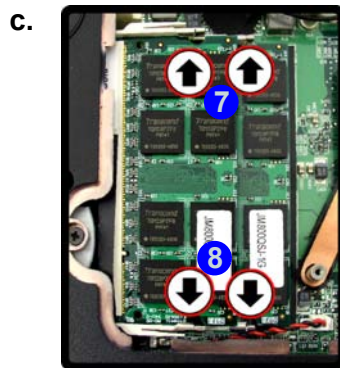
Contact Warning

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.

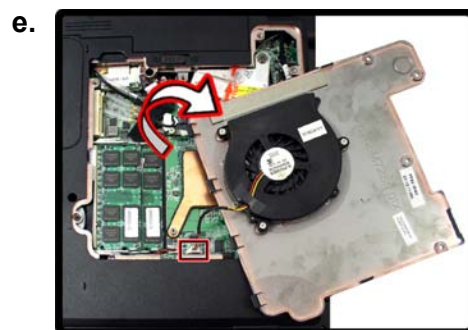


- Component Bay Cover
- 3 Screws

- Gently pull the two release latches (7 & 8) on the sides of the memory socket in the direction indicated by the arrows (Figure 7c).



- The RAM module(s) 9 will pop-up (Figure 7d), and you can then remove it.
- Pull the latches to release the second module if necessary.
- Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
- The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE the module; it should fit without much pressure.
- Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
- Replace the bay cover and screws (**make sure you reconnect the fan cable before screwing down the bay cover**).



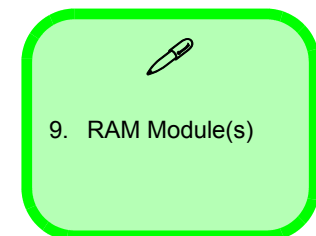
Note:

Only one model is pictured here, however the component locations are the same for both models.

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

Figure 7
RAM Module Removal (cont'd.)

- Pull the release latch(es).
- Remove the module(s).



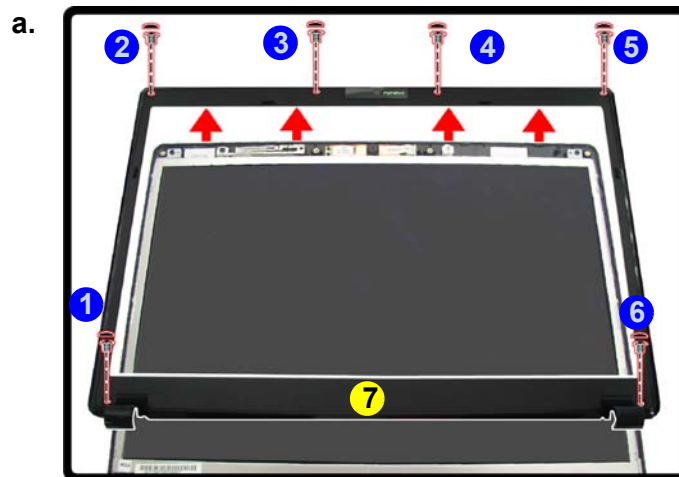
Disassembly

Figure 8
Inverter Board Removal

- Remove the 6 screws and unsnap the LCD front panel module from the back.
- Remove the screw and discharge the remaining power from the inverter board and lift the board up slightly.
- Disconnect the cables from the inverter.
- Remove the inverter.

Removing the Inverter Board

- Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
- Remove any rubber covers, screws **1** - **6** ([Figure 8a](#)), then run your finger around the middle of the frame to carefully unsnap the LCD front panel module **7** from the back.
- Discharge the remaining system power (see [“Inverter Power Warning”](#) below).
- Remove screws **8** - **9** ([Figure 8b](#)) from the inverter, and carefully lift the inverter board up slightly.
- Disconnect cables **10** & **11** ([Figure 8c](#)) from the inverter, then remove the inverter **12** ([Figure 8d](#)) from the top case assembly.



7. LCD Front Panel
 12. Inverter Board

- 8 Screws

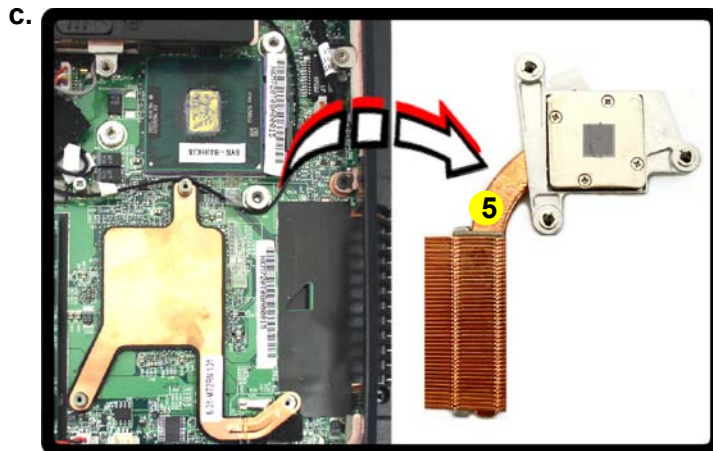
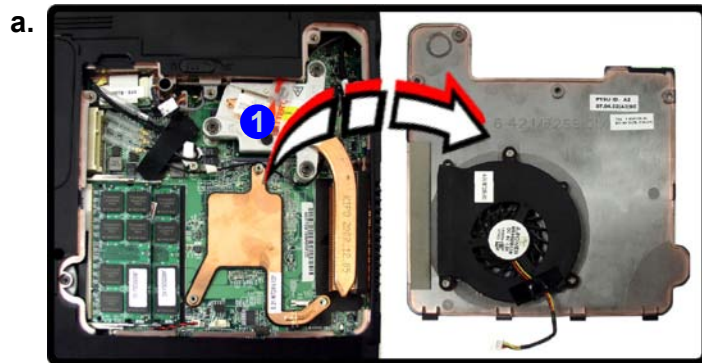


Inverter Power Warning

In order to prevent a short circuit when removing the inverter it is necessary to discharge any remaining system power. To do so, press the computer's power button for a few seconds before disconnecting the inverter cable.

Removing the Processor

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)) and the CPU/RAM bay cover ([page 2 - 10](#)).
2. The CPU heat sink will be visible at point **1** on the mainboard.
3. Loosen screws **2** - **4** from the heat sink in the order indicated.
4. Carefully lift up the heat sink **5** ([Figure c](#)) off the computer.



Note:

Only one model is pictured here, however the component locations are the same for both models.

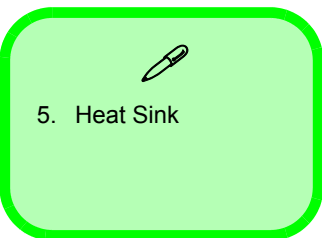
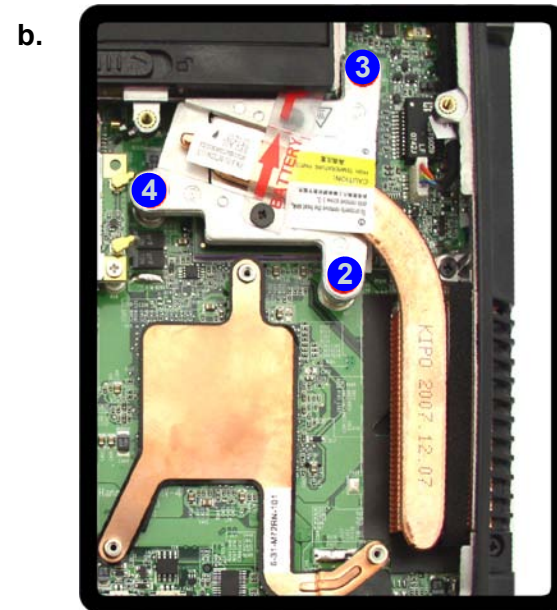



Figure 9
Processor Removal

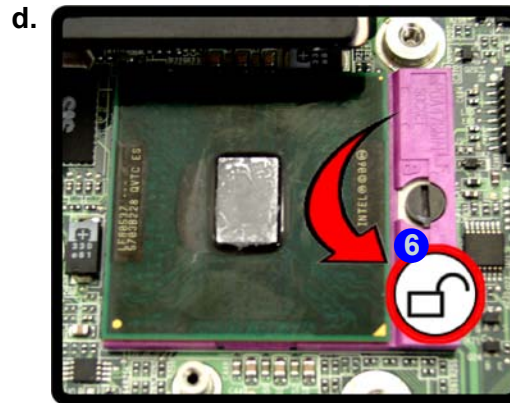
- a. Remove the cover and locate the heat sink.
- b. Remove the 3 screws in the order indicated.
- c. Remove the heat sink.

Disassembly

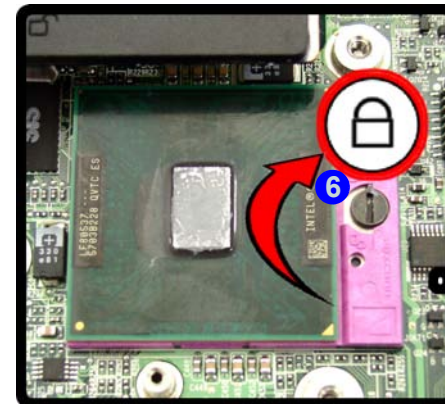
Figure 10 Processor Removal Sequence

- d. Turn the release latch to unlock the CPU.
e. Lift the CPU out of the socket.

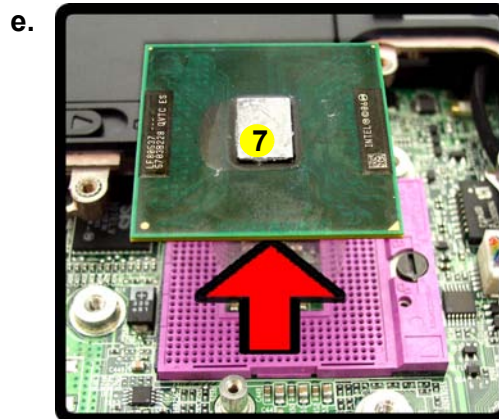
5. Turn the release latch **6** towards the unlock symbol , to release the CPU (*Figure d*).
6. Carefully (it may be hot) lift the CPU **7** up out of the socket (*Figure e*).
7. Reverse the process to install a new CPU.
8. When re-inserting the CPU, pay careful attention to the pin alignment, it will fit only one way (DO NOT FORCE IT!).



Unlock



Lock



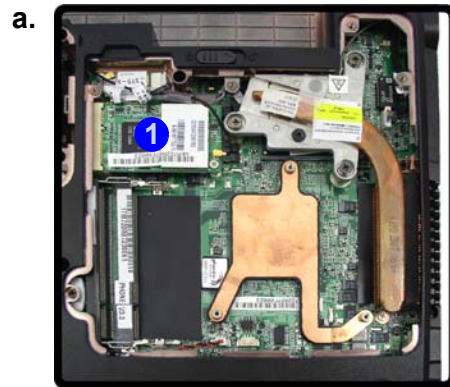
Caution

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.

7. CPU

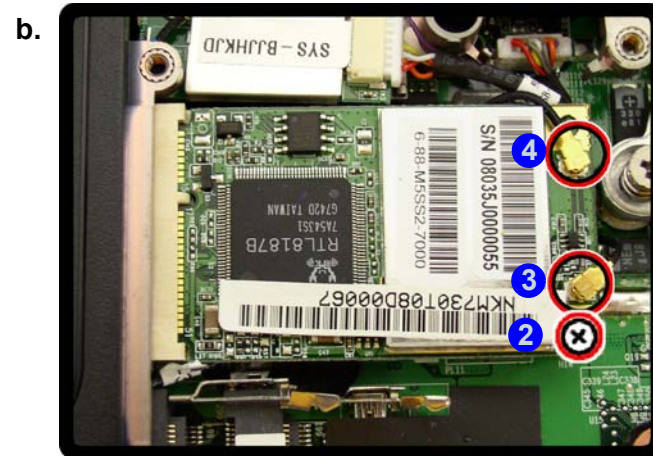
Removing the Wireless LAN Module

1. Turn **off** the computer, remove the battery ([page 2 - 5](#)) and the component bay cover ([page 2 - 10](#)).
2. The Wireless LAN module will be visible at point **1** on the mainboard.
3. Carefully disconnect cables **2** - **3**, then remove screw **4** from the module socket.
4. The Wireless LAN module **5** will pop-up.
5. Lift the Wireless LAN module ([Figure 11d](#)) up and off the computer.



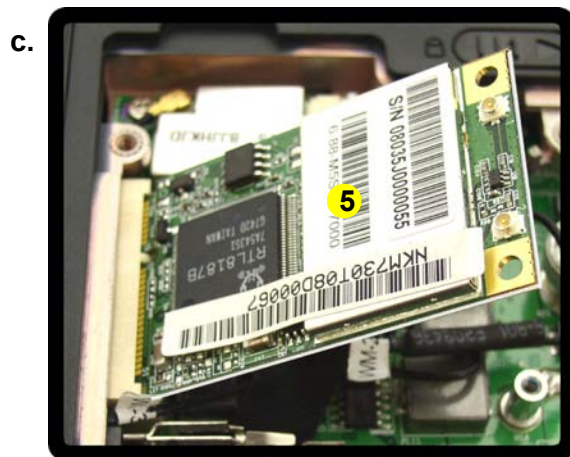
Note:


Only one model is pictured here, however the component locations are the same for both models.



- a. Remove the cover.
- b. Disconnect the cables and remove the screw.
- c. The WLAN module will pop up.
- d. Lift the WLAN module out.

Note: Make sure you reconnect the antenna cable to “1” + “2” socket ([Figure b](#)).





5. WLAN Module.

- 1 Screw

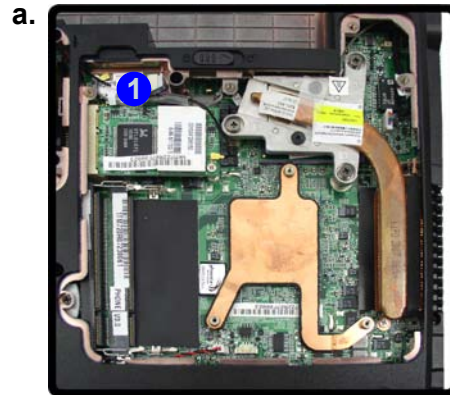
Disassembly

Figure 12
Bluetooth Removal

- Remove the cover and locate the Bluetooth module.
- Remove the screw and disconnect the cable and separate the connector.
- Lift the Bluetooth module out.

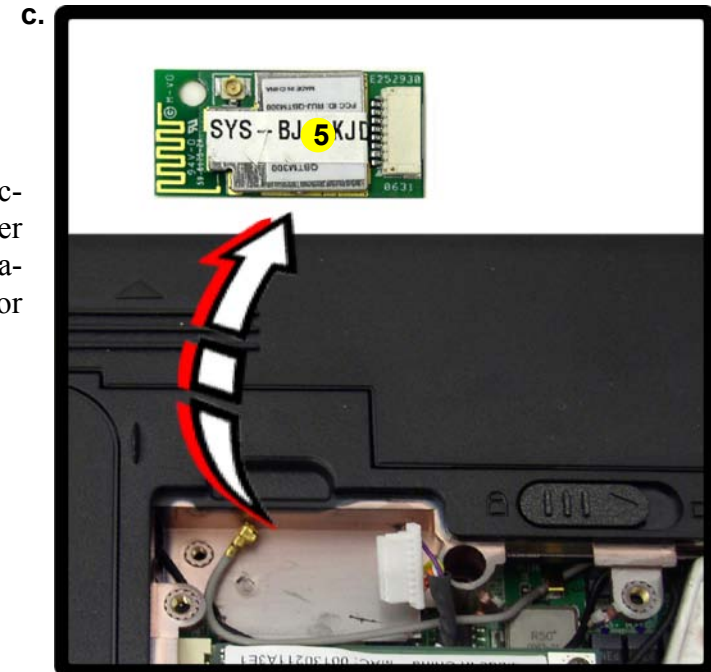
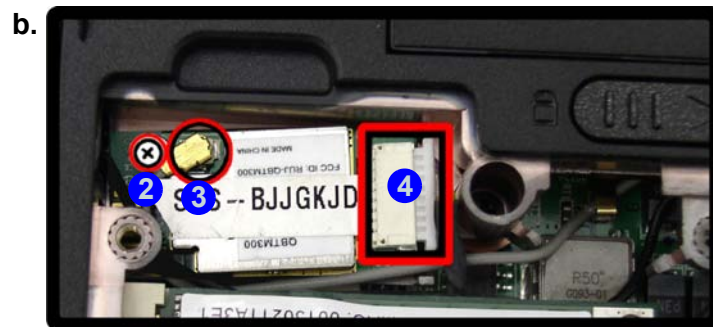
Removing the Bluetooth Module

- Turn off the computer, remove the battery ([page 2 - 5](#)).
- The Bluetooth module will be visible at point ① on the mainboard.
- Remove screw ② and carefully disconnect the cable ③ and separate the module from the connector ④.
- Lift the Bluetooth module ⑤ up and off the computer.



Note:

Only one model is pictured here, however the component locations are the same for both models.



5. Bluetooth Module

- 1 Screw

Removing the Keyboard

1. Turn **off** the computer, and remove the battery ([page 2 - 5](#)).
2. Press the **three** keyboard latches at the top of the keyboard to elevate the keyboard from its normal position (you may need to use a small screwdriver to do this).
3. Carefully lift the keyboard up, being careful not to bend the keyboard ribbon cable ([Figure 13b](#)).
4. Disconnect the keyboard ribbon cable **4** from the locking collar socket **5**.
5. Carefully lift up the keyboard **6** ([Figure 13c](#)) off the computer.

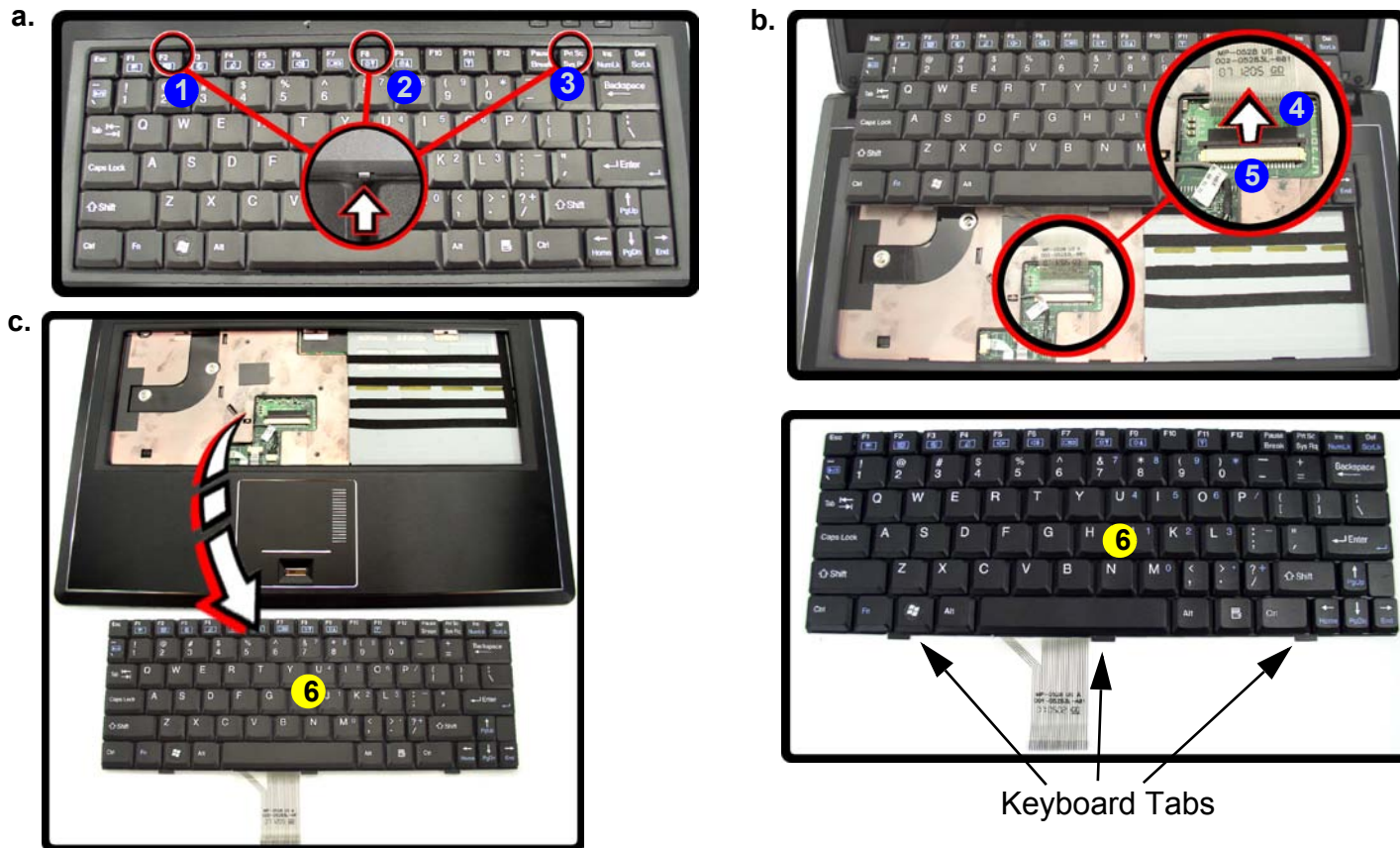




Figure 13
Keyboard Removal

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



Re-Inserting the Keyboard

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



6. Keyboard Module.

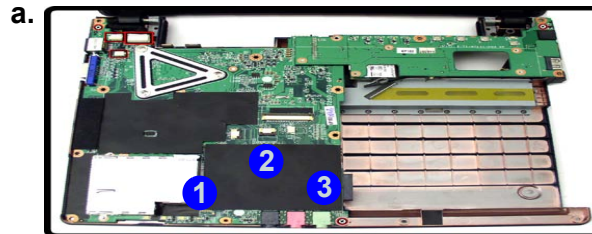
Disassembly

Figure 14
Modem Removal

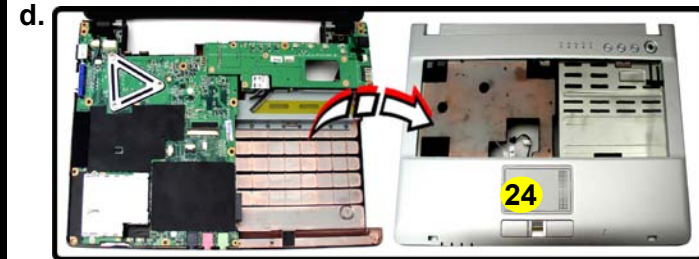
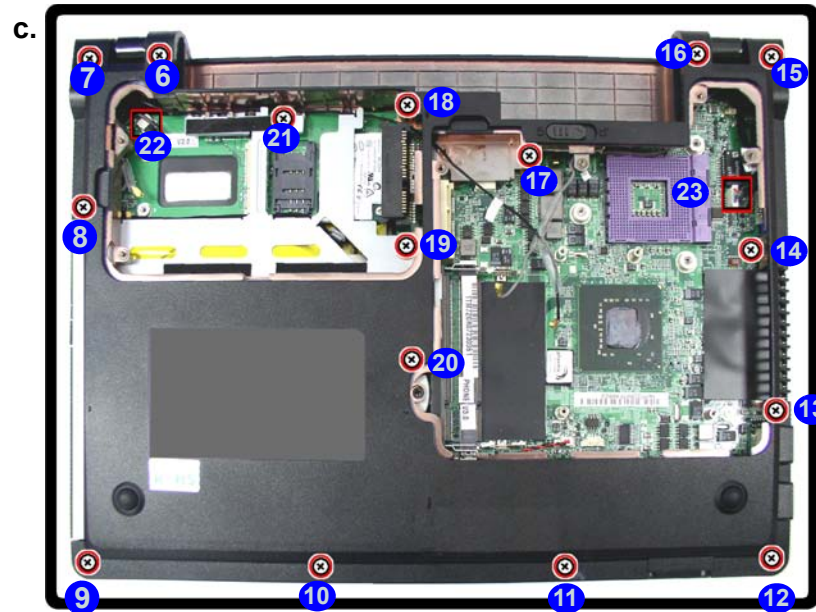
- Disconnect the connectors from under the keyboard.
- Remove the screws.
- Remove the screws and disconnect the connectors from the mainboard.
- Remove the top case.

Removing the Modem

- Turn **off** the computer, remove the battery ([page 2 - 5](#)), HDD ([page 2 - 6](#)), component bay cover ([page 2 - 10](#)), optical device ([page 2 - 8](#)), CPU ([page 2 - 13](#)), bluetooth ([page 2 - 16](#)) and keyboard ([page 2 - 17](#)).
- Disconnect the connectors **1** - **3** from under the keyboard and turn it over.
- Remove screws **4** - **5** from the rear of the computer.



- Remove the screws **6** - **21** from the bottom case and disconnect the connectors **22** - **23** on the mainboard.
- Carefully lift up the top case **24** off the computer.

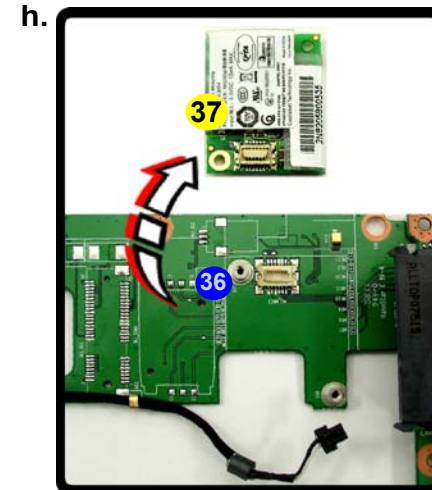
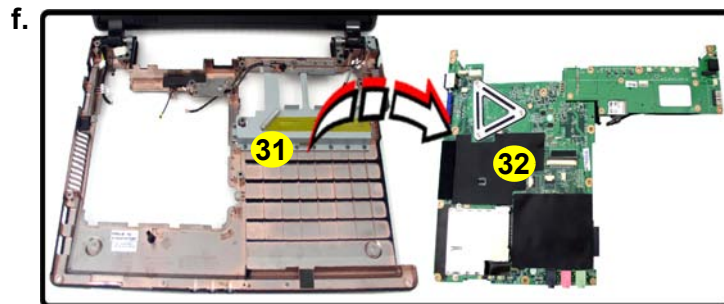
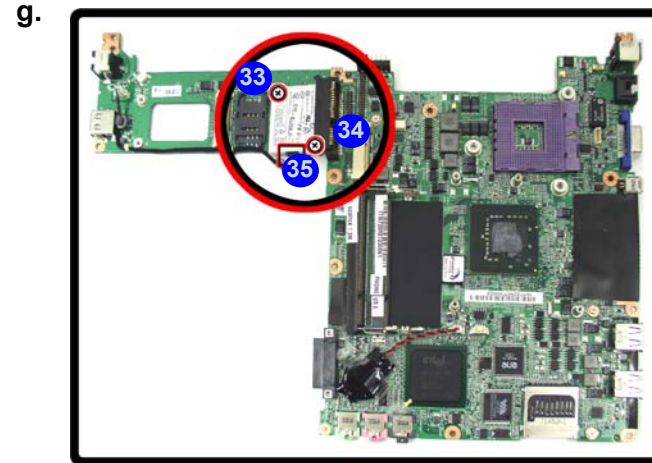
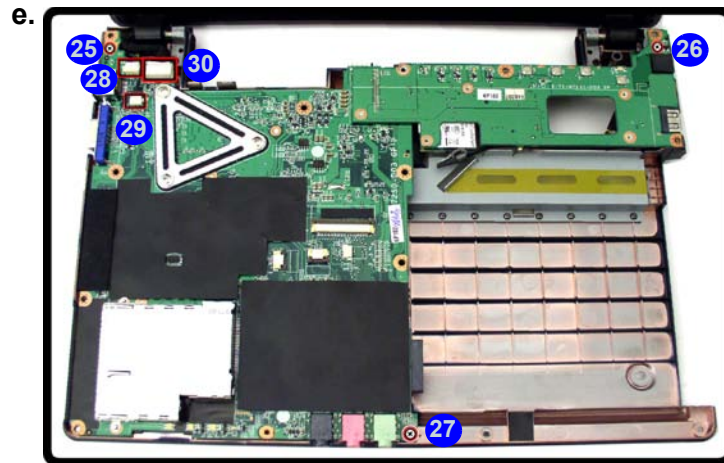


24. Top Case

- 18 Screws

Figure 15
Modem Removal Sequence

6. Remove screws 25 - 27 and disconnect the connectors 28 - 30 from the mainboard.
7. Separate the bottom case 31 from the mainboard 32 and turn it over.
8. Remove the screws 33 - 34 and disconnect the connector 35 from the modem.
9. Lift the modem 37 up off the socket 36.



- e. Remove the screws and disconnect the connectors.
- f. Separate the bottom case from the mainboard.
- g. Remove the screws and disconnect the connector.
- h. Lift the modem up off the socket.

31. Bottom Case
32. Main Board
37. Modem

- 5 Screws

Appendix A: Part Lists

This appendix breaks down the *M720T/M728T/M729T/M730T* series notebook's construction into a series of illustrations. The component part numbers are indicated in the tables opposite the drawings.

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

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

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

Part List Illustration Location

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

Table A- 1
**Part List Illustration
Location**

Parts	M720T	M728T	M729T	M730T
Top with Fingerprint	<i>page A - 3</i>	<i>page A - 10</i>	<i>page A - 17</i>	<i>page A - 24</i>
Top without Fingerprint	<i>page A - 4</i>	<i>page A - 11</i>	<i>page A - 18</i>	<i>page A - 25</i>
Bottom	<i>page A - 5</i>	<i>page A - 12</i>	<i>page A - 19</i>	<i>page A - 26</i>
LCD	<i>page A - 6</i>	<i>page A - 13</i>	<i>page A - 20</i>	<i>page A - 27</i>
HDD	<i>page A - 7</i>	<i>page A - 14</i>	<i>page A - 21</i>	<i>page A - 28</i>
COMBO	<i>page A - 8</i>	<i>page A - 15</i>	<i>page A - 22</i>	<i>page A - 29</i>
DVD-Dual Drive	<i>page A - 9</i>	<i>page A - 16</i>	<i>page A - 23</i>	<i>page A - 30</i>

Top with Fingerprint (M720T)

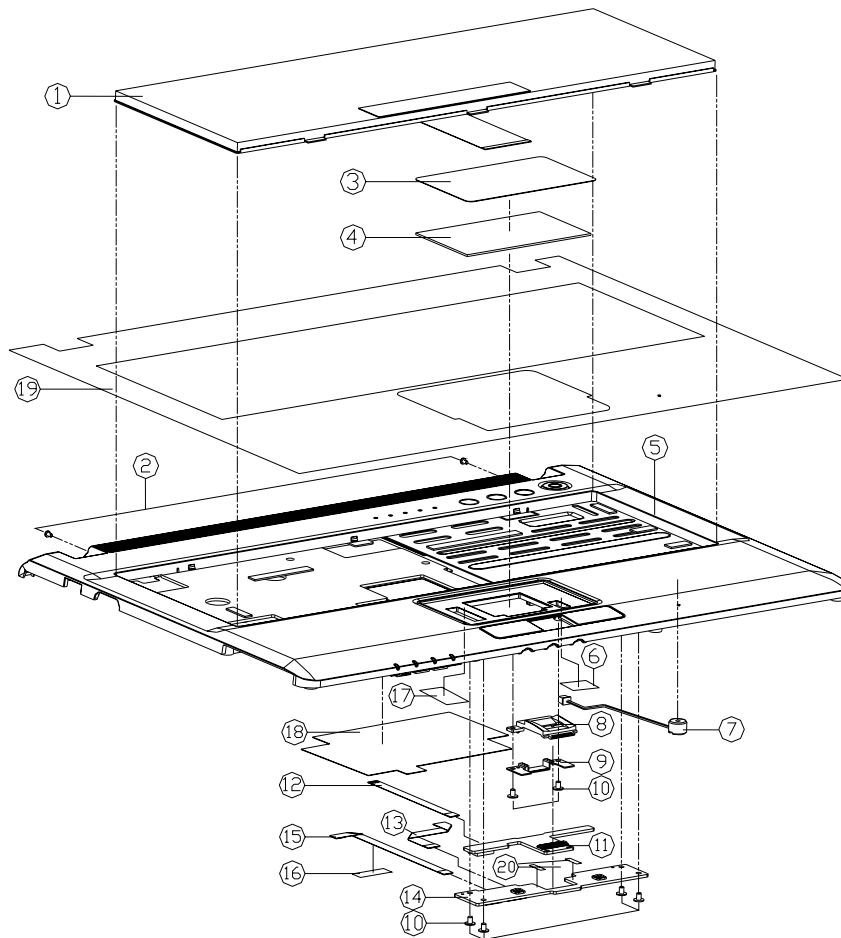


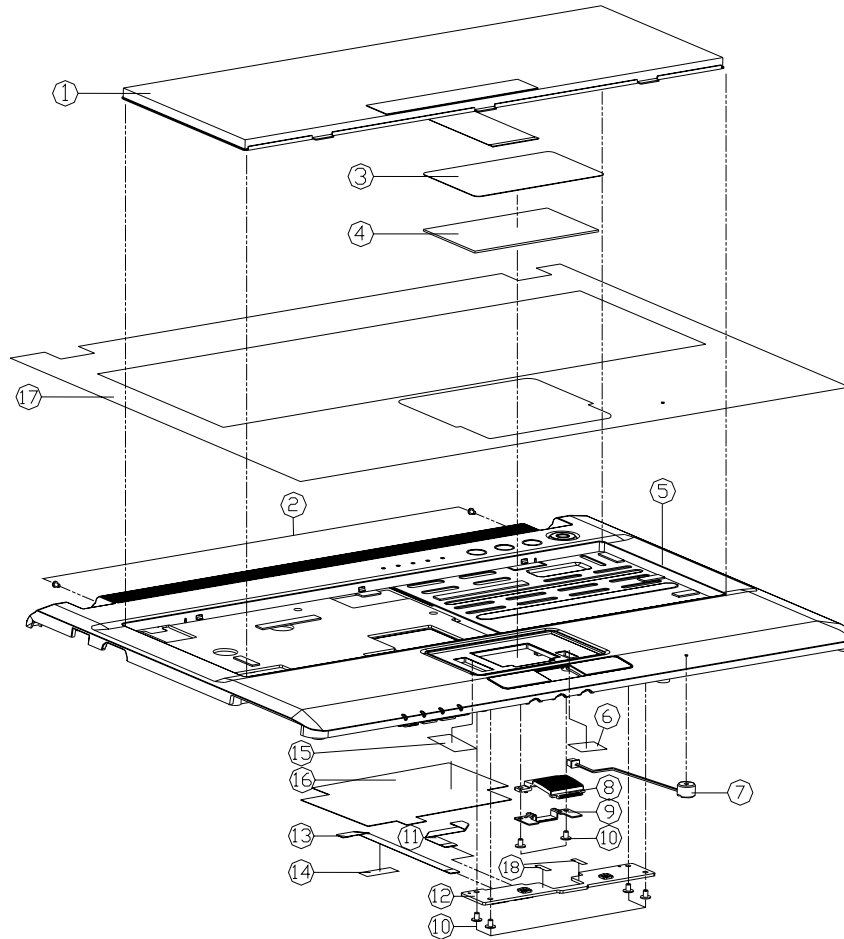
Figure A - 1
Top with Fingerprint
(M720T)

ITEM	PART NAME	PART NO	REMARK
1	K/B USA HP-0526205-4302 M720S	6-80-M7250-011-1	FDR M720T/M722T
1	K/B USA HP-0526205-4302 M721S	6-80-M7210-011-1	FDR M721T
2	SCREW M2x3L KI NI ICT NY	6-35-B1120-3RA	
3	TOUCH PAD MYLAR 8835 M720S	6-40-M7252-011	FDR M720T
3	TOUCH PAD MYLAR 8835 M721S	6-40-M7212-011	FDR M721T
3	TOUCH PAD MYLAR 8835 M725S	6-40-M7252-010	FDR M722T
4	TOUCH PAD TM61P21R389 M666JE	6-49-M66E2-010	
5	TOP CASE MODULE FLOATING M720T	6-39-M7212-012	FDR M720T
5	TOP CASE MODULE FLOATING M721T	6-39-M7212-112	FDR M721T
5	TOP CASE MODULE FLOATING M722T	6-39-M7222-112	FDR M722T
6	TOUCH PAD GROUND FOLIOGRAPH FOR DUAL	6-47-M55G2-010	
7	SCREW M2x3L KI NI ICT NY	6-23-EM55G-011	
8	OP KNOB CENTER PC-ABSICK7240 M720S	6-42-M7252-031-1	FDR M720T
8	OP KNOB CENTER PC-ABSICK7240 M721S	6-42-M7212-030	FDR M721T
8	OP KNOB CENTER PC-ABSICK7240 M725S	6-42-M7222-030	FDR M722T
9	FINGER BRACKET MODULE M720S	6-33-M7252-201	
10	SCREW M2x3L KI NI ICT GTY-PATCH	6-35-B1120-3RE	
11	FINGERPRINT BOARD V10A M720T	6-77-M721F-001A	
12	FTC CABLE FOR FINGERPRINT TO W/B 4P M720S	6-43-M7250-030	
13	FTC CABLE FOR TOUCH PAD TO W/B 4P M720S	6-43-M7250-010	
14	CLICK BOARD V1.0 M720T	6-77-M7212-001	
15	FTC CABLE FOR CLICK TO W/B 4P M720S	6-43-M7250-020	
16	TAPE MYLAR (C)MYLAR M550J	6-40-M55J2-030	
17	TOUCH PAD GROUND FOLIOGRAPH FOR DUAL	6-47-M55G2-020	
18	FDR TOP CASE M720T	6-47-M7212-010	
19	TOP CASE PROTECT MYLAR 14118 8835 M720S	6-40-M7212-024	
20	CLICK BRD MYLAR FOLIOGRAPH FOR DUAL	6-40-M729S-011	

A.Part Lists

Top without Fingerprint (M720T)

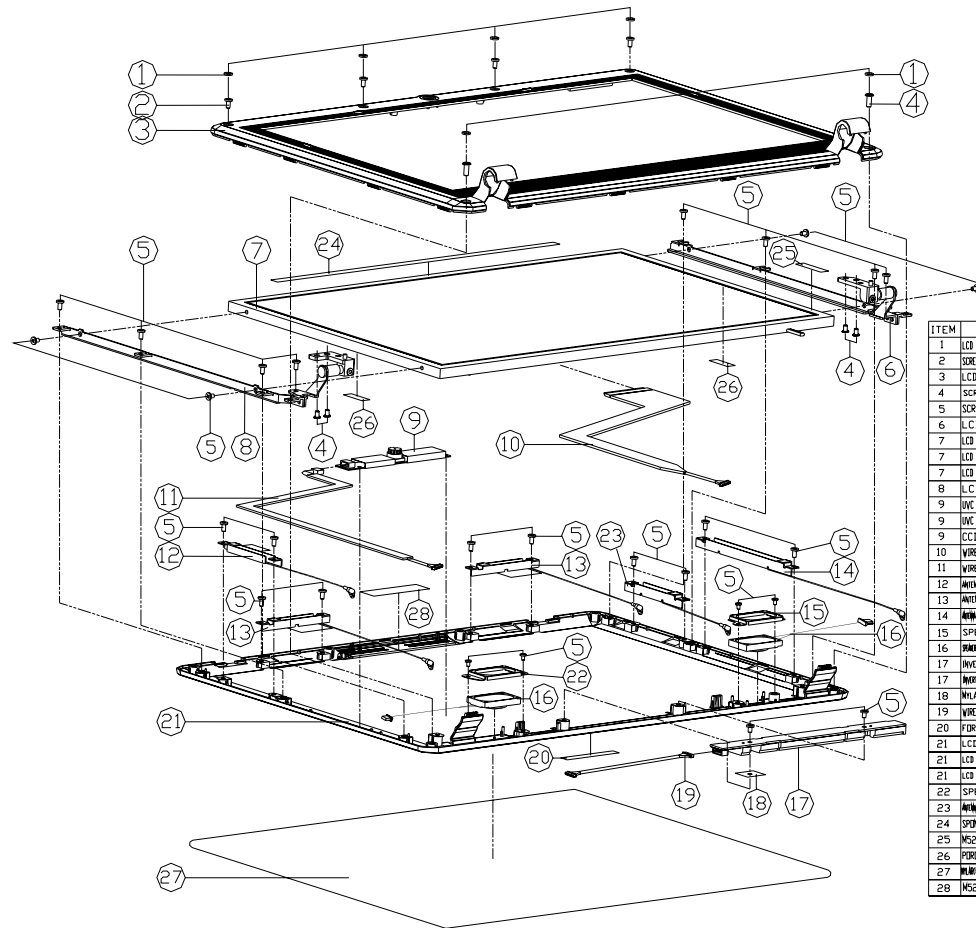
Figure A - 2
Top without Fingerprint
(M720T)



ITEM	PART NAME	PART NO	REMARK
1	K/B USA W/45283US-4302 M720S	6-80-M7250-011-1	FOR M7201/M7221
1	K/B USA W/45283US-4302 M721S	6-80-M7210-011-1	FOR M721T
2	SCREW M4x3L K1 NI ICT NY	6-35-B1120-3RA	
3	TOUCH PAD MYLAR 8835 M720S	6-40-M7252-011	FOR M720T
3	TOUCH PAD MYLAR 8835 M721S	6-40-M7212-011	FOR M721T
3	TOUCH PAD MYLAR 8835 M722S	6-40-M7252-010	FOR M722T
4	TOUCH PAD 1M61PDZIR309 M66JJC	6-49-M66E2-010	
5	TOP CASE MODULE(FLOATING) M720T	6-39-M7212-012	FOR M720T
5	TOP CASE MODULE(FLOATING) M721T	6-39-M7212-112	FOR M721T
5	TOP CASE MODULE(FLOATING) M722T	6-39-M7222-112	FOR M722T
6	TOUCH PAD GROUND AL 1749	6-47-M55G2-010	
7	IC UNIDENTIFIED W/2V 2K VOLTAGE	6-23-EM55G-011	
8	IP KMER CENTER DUMMY PC-M55G2240 M720S	6-42-M7252-041-1	FOR M720T
8	IP KMER CENTER DUMMY PC-M55G2240 M721S	6-42-M7212-040	FOR M721T
8	IP KMER CENTER DUMMY PC-M55G2240 M722S	6-42-M7222-040	FOR M722T
9	FINGER BRACKET MODULE M720S	6-33-M7252-201	
10	SCREW M4x3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
11	FFC CABLE FOR TOUCH PAD TO W3 IP M720S	6-43-M7250-010	
12	CLICK BOARD V20 FOR M720T	6-77-M7212-001	
13	FFC CABLE FOR CLICK TO W3 IP M720S	6-43-M7250-020	
14	TAPE MYLAR (C)MYLAR M550J	6-40-M55J2-030	
15	TOUCH PAD GROUND AL 1749 FOR ORAL	6-47-M55G2-020	
16	FOR TOP CASE M720T	6-47-M7212-010	
17	TOP CASE PROTECT MYLAR 8835 M721S	6-40-M7212-024	
18	CLICK BOARD FOR M720T	6-40-M7295-011	

LCD (M720T)

Figure A - 4
LCD
(M720T)



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER SCREW HOLE RUBBER M720S	6-47-M72S1-021	
2	SCREW NYLON 1.8X ICT G1Y-PATCH (1-88 B-4)	6-35-C6120-4R-B	
3	LCD FRONT COVER MODULE M720T	6-39-M72T1-011	
4	SCREW M2.5xSL KI BK/2 ICT NY	6-35-B6125-5RA	
5	SCREW M2x3L KI NI ICT G1Y-PATCH	6-35-B1120-3RE	
6	LCD HINGE R SECC M720T	6-33-M72T1-011	
7	LCD REP VISA TOSHIBA LTM2E9VY 04K30	6-50-FC255-100	
7	LCD REP VISA AU SONY V4 LGARE TYPE	6-50-FC255-G03	
7	LCD REP VISA DE GHYND HTEW2-NE3 GL	6-50-FC252-H00	
8	LCD HINGE L SECC M720T	6-33-M72T1-021	
9	IOC CAMERA RESIN (1X INCH4372000 HAYO)	6-88-M5E4C-4921	
9	IOC CAMERA RESIN (1X INCH4372000 2N M545)	6-88-M5E4C-4913	
9	CCD RUBBER SILICONE M720S	6-47-M72S1-010	W/O CCD
10	WIRE CABLE FOR LCD TO W/B 2P M720S	6-43-M72S1-012	
11	WIRE CABLE FOR CCD TO W/B 2P M720S	6-43-M72S1-012	
12	ANTENNA ALUMINUM 24X26 PFA W/ BUBBLE BUBB MOUSE	6-23-7M72S-020	(OPTION)
13	ANTENNA NYLON 24X26 PFA W/ BUBBLE BUBB MOUSE	6-23-7M72S-030	
14	ANTENNA NYLON 24X26 PFA W/ BUBBLE BUBB MOUSE	6-23-7M72T-010	(OPTION)
15	SPEAKER FIXTURE-R	6-33-M300T-031	
16	SPK1 2W 8 OHM 100HZ 100V P M720S	6-23-5M72S-020	
17	INVERTER MODULE 60A NYAC 0A-000-CV200	6-76-M660R-010	
17	INVERTER MODULE 60A NYAC 0A-000-CV200	6-76-M660R-011	
18	NYLAR FOR INVERTER (44X14X4) M720S	6-40-M660S-060	
19	WIRE CABLE FOR INVERTER TO W/B 4P M720S	6-43-M72SR-012	
20	FDR M540G (1P) LOGO STYLE-NOTICE	6-45-M54G1-020	
21	LCD BACK COVER MODULE M720T	6-39-M72T1-021	
21	LCD BACK COVER AUTO-LOCK MODULE M720S	6-39-M72T1-120	
21	LCD BACK COVER AUTO-LOCK MODULE M720S	6-39-M7221-120	
22	SPEAKER FIXTURE-L	6-33-M300T-041	
23	SPK1 2W 8 OHM 100HZ 100V P M720S	6-23-5M72S-040	
24	SPRING (20X54X5) FOR BACK CASE M720S	6-47-0019A-153	
25	MS20N NYLAR FOR CCD BACK CASE	6-40-MS2N1-010	
26	PERON (20X54X5) FOR BACK CASE M720S	6-47-00191-103	
27	MS20N NYLAR FOR CCD BACK CASE	6-40-00151-M70	
28	MS20N NYLAR FOR CCD BACK CASE	6-40-MS2N1-010	

HDD (M720T)

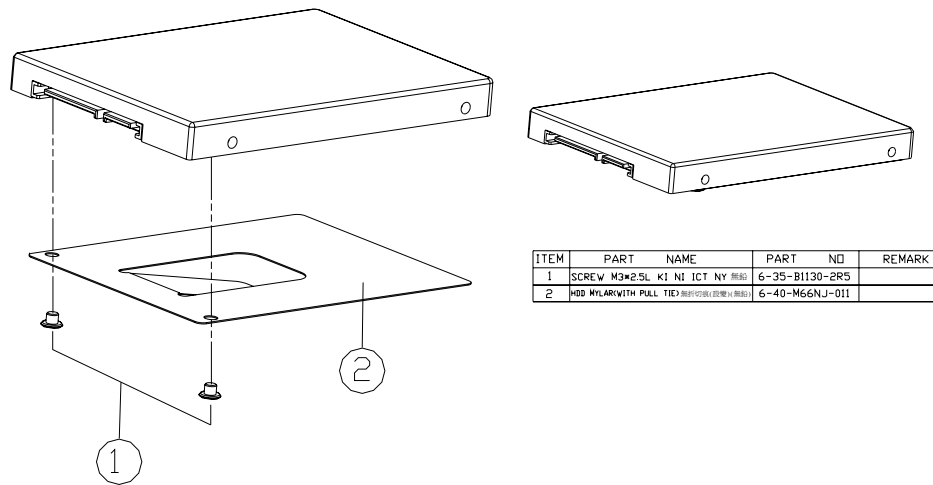
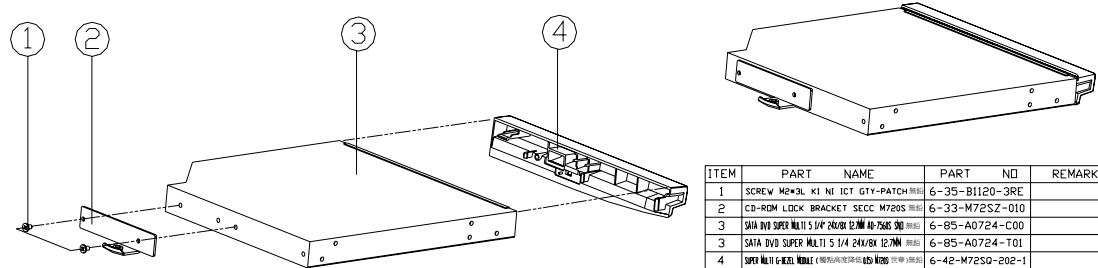


Figure A - 5
HDD
(M720T)

DVD-Dual Drive (M720T)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2x3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET SECC M720S	6-33-M72SZ-010	
3	SATA DVD SUPER MULTI 5 1/4 24X/8X 12.7MM	6-85-A0724-C00	
3	SATA DVD SUPER MULTI 5 1/4 24X/8X 12.7MM	6-85-A0724-T01	
4	SATA MULTI G-READER	6-42-M72SQ-202-1	

Figure A - 7
DVD-Dual Drive
(M720T)

Part Lists

Top with Fingerprint (M728T)

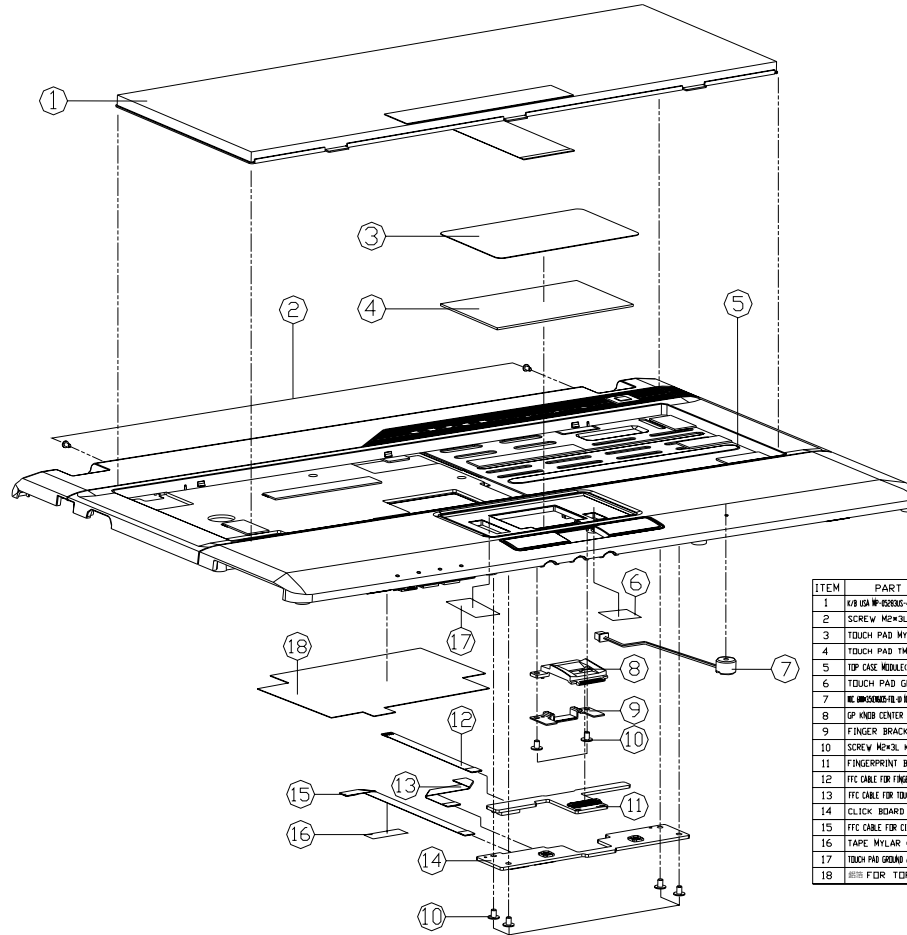
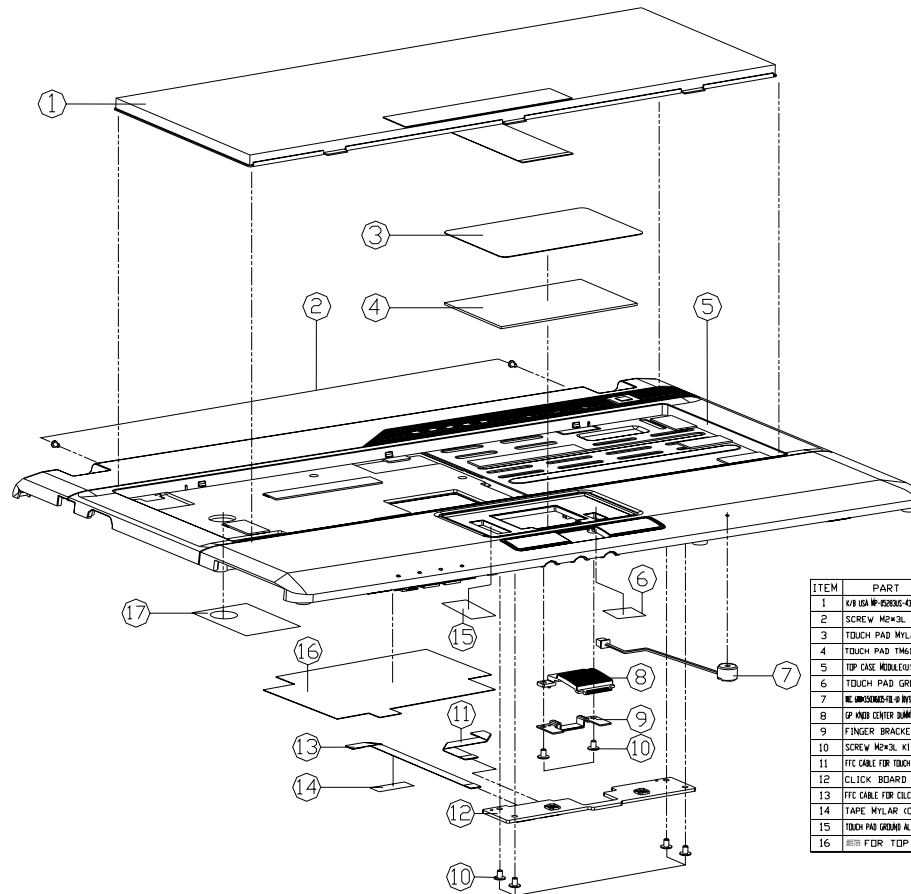


Figure A - 8
Top with
Fingerprint
(M728T)

ITEM	PART NAME	PART NO	REMARK
1	TOP CASE M728T-010 M728T-010 WIN VET	6-80-M7280-011-1	
2	SCREW M2X3. KI NI ICT NY	6-35-B1120-3RA	
3	TOUCH PAD MYLAR 0835 M728S	6-40-M7252-010	
4	TOUCH PAD TMS6P22K389 M660JC	6-49-M66E2-010	
5	TOP CASE MIDDLE FOR FLOATING M728S	6-39-M7252-015	
6	TOUCH PAD GROUND AL 17X9	6-47-M55G2-010	
7	TOP CASE MIDDLE FOR FLOATING M728S	6-23-E-M55G-011	
8	OP KNOB CENTER PC-ABS(CX740) M728S	6-42-M7222-030	
9	FINGER BRACKET MODULE M720S	6-33-M7252-201	
10	SCREW M2X3. KI NI ICT QTY-PATCH	6-35-B1120-3RE	
11	FINGERPRINT BOARD V10A M720T	6-77-M721F-D01A	
12	FFC CABLE FOR FINGERPRINT TO M728T	6-43-M7250-030	
13	FFC CABLE FOR TOUCH PAD TO M728T	6-43-M7250-010	
14	CLICK BOARD V10 M720T	6-77-M7212-D01	
15	FFC CABLE FOR CLICK TO M728T	6-43-M7250-020	
16	TAPE MYLAR (C)MYLAR M550J	6-40-M55J2-030	
17	TOUCH PAD GROUND AL TOLL2240 FOR DNAL	6-47-M55G2-020	
18	TOP CASE M720T	6-47-M7212-010	

Top without Fingerprint (M728T)



ITEM	PART NAME	PART NO	REMARK
1	K/B USA M-120205-430 M7205	6-80-M7250-011-1	
2	SCREW M2*3L KI NI ICT NY	6-35-B1120-3RA	
3	TOUCH PAD MYLAR B835 M7255	6-40-M7252-010	
4	TOUCH PAD TM61P22R3B9 M660JE	6-49-M66E2-010	
5	TOP CASE MODULE KB FLOATING M7255	6-39-M7252-015	
6	TOUCH PAD GROUND AL 17*9	6-47-M55G2-010	
7	IC ASSY M7205	6-23-EM55G-011	
8	CP M720 CENTER DUMMY PC ASSY M7205	6-42-M7222-040	
9	FINGER BRACKET MODULE M7205	6-33-M7252-201	
10	SCREW M2*3L KI NI ICT GTY-PATCH	6-35-B1120-3RE	
11	FFC CABLE FOR TOUCH PAD TO M7205	6-43-M7250-010	
12	CLICK BOARD V1.0 M720T	6-77-M72T2-001	
13	FFC CABLE FOR CLICK TO M7205	6-43-M7250-020	
14	TAPE MYLAR (C)MYLAR M550J	6-40-M55J2-030	
15	TOUCH PAD GROUND AL FLOORPAD FOR DUAL	6-47-M55G2-020	
16	FDR TDP CASE M720T	6-47-M72T2-010	

Figure A - 9
Top without
Fingerprint
(M728T)

A.Part Lists

Bottom (M728T)

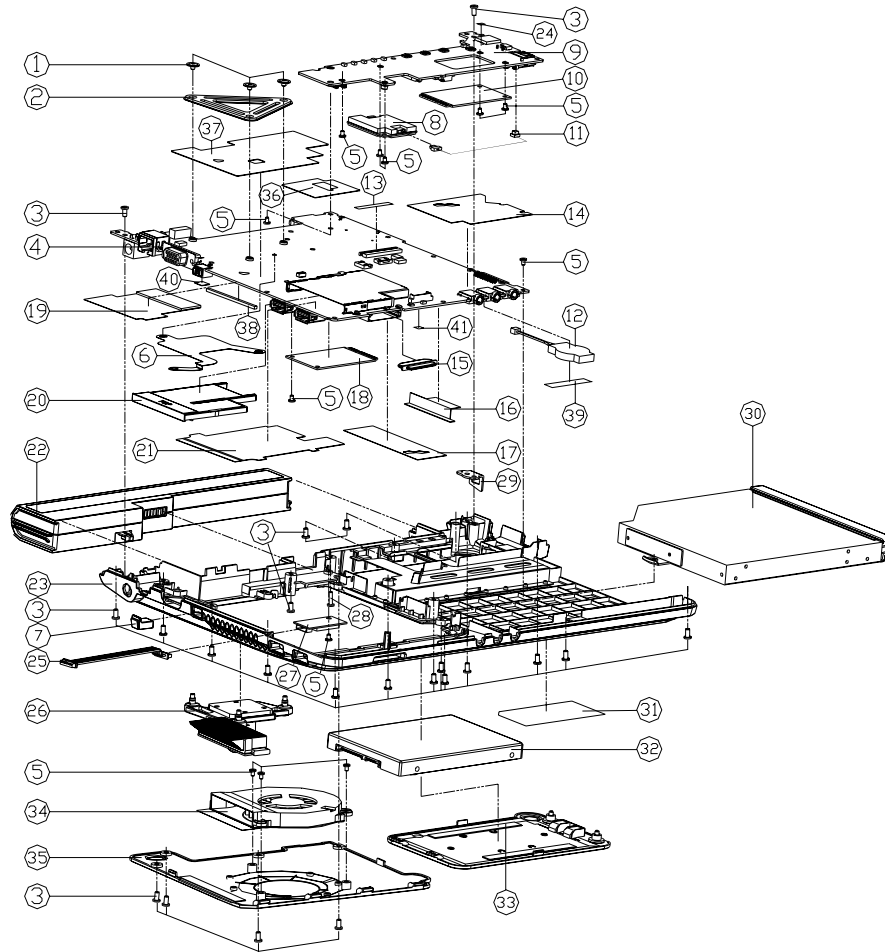
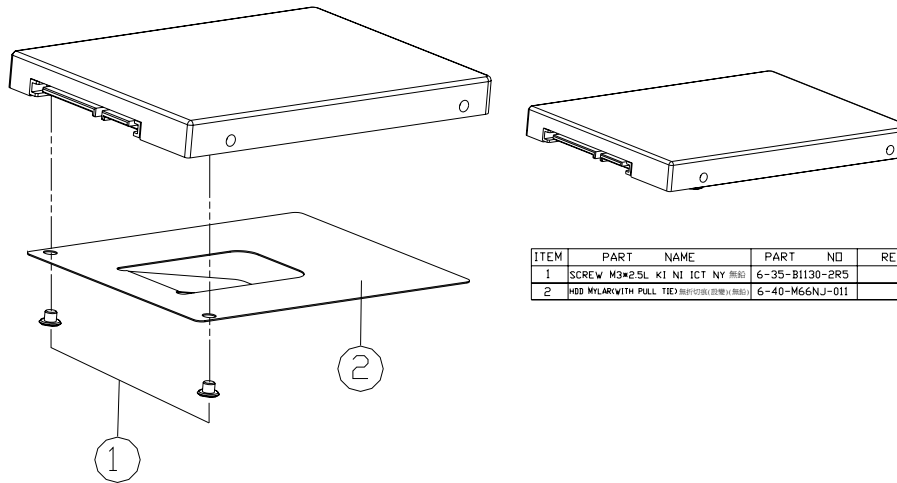


Figure A - 10
Bottom
(M728T)

ITEM	PART NAME	PART NO	REMARK
1	KEY-OPS-PC-1025S-2RS	6-35-41025-2RS	
2	CPU SUPPORTER MODULE AL M720S	6-33-M72SS-011	
3	SCREW M2.5xSL K1 BK/Z ICT NY	6-35-B6125-SRA	
4	MAIN BOARD V30A M720T	6-77-M72T0-D03A	
5	SCREW M2xSL K1 NI ICT NY	6-35-B1120-3RA	
6	NORTH BRIDGE HEATSHW MODULE COU M720R	6-31-M72RN-101	
7	1394 RUBBER M720S	6-47-M72SP-010	
8	MAIN BOARD V30A M720T	6-88-L39T1-5300	
9	MULTI I/O BOARD V30A (w/30) M720T	6-77-M72T1-D03A	
9	MULTI I/O BOARD V30A (w/30) M720T	6-77-M72T1-D03A-1	
10	WLAN MEDIA MODULE SERIAL/IEEE802.11n WLAN USB 3.5G	6-88-M72SW-720	(OPTION)
11	WIRE CABLE FOR RJ-11 TO MIC 2P M720S	6-43-M72SU-010	(OPTION)
12	MAIN BOARD V30A M720T	6-23-2201S-P2C	
13	M520G K/B CONN MYLAR	6-40-M520S-060	
14	MAIN BOARD AL FOIL M730T	6-40-M73TS-0D0	
15	M520G CARD READER RUBBER	6-47-M52GB-010	
16	DDR DIM M/LAR FR83+TERADAF501 M720S	6-40-M72SZ-010	
17	DDR MYLAR FR83 M730T	6-40-M73TS-060	
18	COMPLEXION BR2140N INTEL SHIELD PE	6-88-M72T2-4211	
18	WLAN BR2140N INTEL SHIELD PEAK D2E NI	6-88-M72T2-4240	(OPTION)
18	COMPLEXION BR2140N INTEL SHIELD PEAK	6-88-M72T2-4241	(OPTION)
18	WLAN BR2140N INTEL SHIELD PEAK USB R1	6-88-M5SS2-7000	(OPTION)
19	NORTH BRIDGE M/LAR FR83+TERADAF501 M730T	6-40-M73TS-021	
20	DUMMY NEW CARD PC+ABS T1E20R	6-42-T1E2R3-011	
21	NEW CARD M/LAR FR83+TERADAF501 M730T	6-40-M73TS-050	
22	MAP S LL H/W/AM KCP SH/SONIC SH/2700P M720S	6-87-M72SS-4DF2	
22	MAP S LL H/W/AM KCP SH/SONIC SH/2700P M720S	6-87-M72SS-4D42	
22	MAP S LL H/W/AM KCP SH/SONIC T2P-02000P	6-87-M72SS-5DF2	
23	BOTTOM CASE MODULE CROSS	6-39-M72SS-018	
24	SPEAKER CABLE PASTE (FR83+SH) M720S	6-40-M72SS3-010	
25	WIRE CABLE FOR BLUETOOTH TO M/B 8P M720S	6-43-M72SB-010	
26	HEAT SINK MODULE M720S	6-31-M72SN-103	
27	BLUETOOTH V20 GUTERAW NG D2M 8 PIN USB	6-88-M5S45-620	(OPTION)
27	BLUETOOTH V20 GUTERAW NG D2M 8 PIN USB	6-88-M5S45-390	(OPTION)
28	SCREW M2xSL K1 BK/Z ICT NY	6-35-B6120-BR0	
29	LOCK BRACKET SECC M720S	6-33-M72S3-010	
30	SATA DVD SUPER MULTI 24X/8X DVD	6-79-M72T0-000	
30	SATA DVD COMBO 24X/8X DVD/8X DVD	6-79-M72T1-000	
31	PRODUCT LABEL FOR M720T	6-45-M72T3-010	
31	PRODUCT LABEL FOR M725T	6-45-M725T-010	
31	PRODUCT LABEL FOR M721T	6-45-M721T-010	
31	PRODUCT LABEL FOR M722T	6-45-M722T-010	
31	PRODUCT LABEL FOR M728T	6-45-M728T-010	
31	PRODUCT LABEL FOR M729T	6-45-M729T-010	
32	V/D HDD ASSY M720S	6-79-M72SJ-010	
33	HDD COVER MODULE M720S	6-42-M72S-J-103	
34	FAN MODULE M720S	6-31-M72SS-103	
35	CPU COVER MODULE M720T	6-42-M72TS-100	
36	RJ45 CONNECT M/LAR FOR NI FR83+TERADAF501 M730T	6-40-M73TS-040	
37	M/LAR FOR NI FR83+TERADAF501 M730T	6-40-M73TS-010	
38	M/LAR-I FOR NI (50x2x1.65) PC M720S	6-40-M72SS-051	
39	TAPE MYLAR (A)MYLAR M550J	6-40-M55J2-010	
40	PROTECT MB MYLAR FR83 M720S	6-40-M72SS-040	

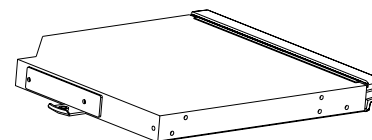
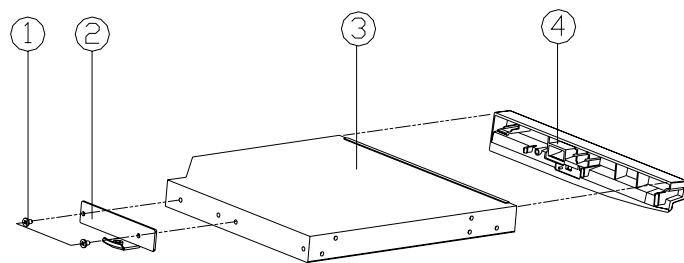
HDD (M728T)

Figure A - 12
HDD
(M728T)



ITEM	PART	NAME	PART	NO	REMARK
1	SCREW	M3*2.5L K1 NI ICT NY #80	6-35-B1130-2R5		
2	HDD MYLAR WITH PULL TAB	REF: 6-40-M66N-J-011	6-40-M66N-J-011		

COMBO (M728T)

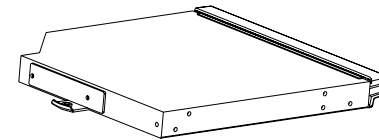
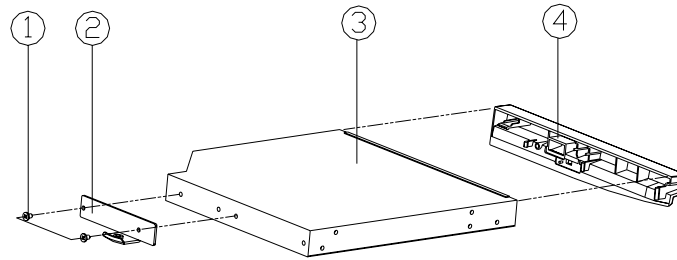


ITEM	PART NAME	PART NO	REMARK
1	SCREW M2x3L K1 NI ICT GTY-PATCH (REF)	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET SECC M720S (REF)	6-33-M72SZ-010	
3	SATA DVD SUPER MULTI 5.1x4 24x/8x 12mm 1531 T (REF)	6-85-90724-C00	
3	SATA DVD COMBO 5.1x4 24x/8x 12mm 1531 T (REF)	6-85-90724-T00	
4	COMBO 6-BAY. MODULE (REF) (REF) (REF) (REF) (REF) (REF)	6-42-M72SX-102-1	

Figure A - 13
COMBO
(M728T)

DVD-Dual Drive (M728T)

Figure A - 14
DVD-Dual Drive
(M728T)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2x3L K1 NI ICT GTY-PATCH 附品	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET SECC M720S 附品	6-33-M72SZ-010	
3	SATA DVD SUPER MULTI 5 1/4 24X/18X/1270M 附品	6-85-A0724-C00	
3	SATA DVD SUPER MULTI 5 1/4 24X/18X/1270M 附品	6-85-A0724-T01	
4	DVD MULTI 6-RZDL MODULE (附品) 附品	6-42-M72SD-202-1	

Top with Fingerprint (M729T)

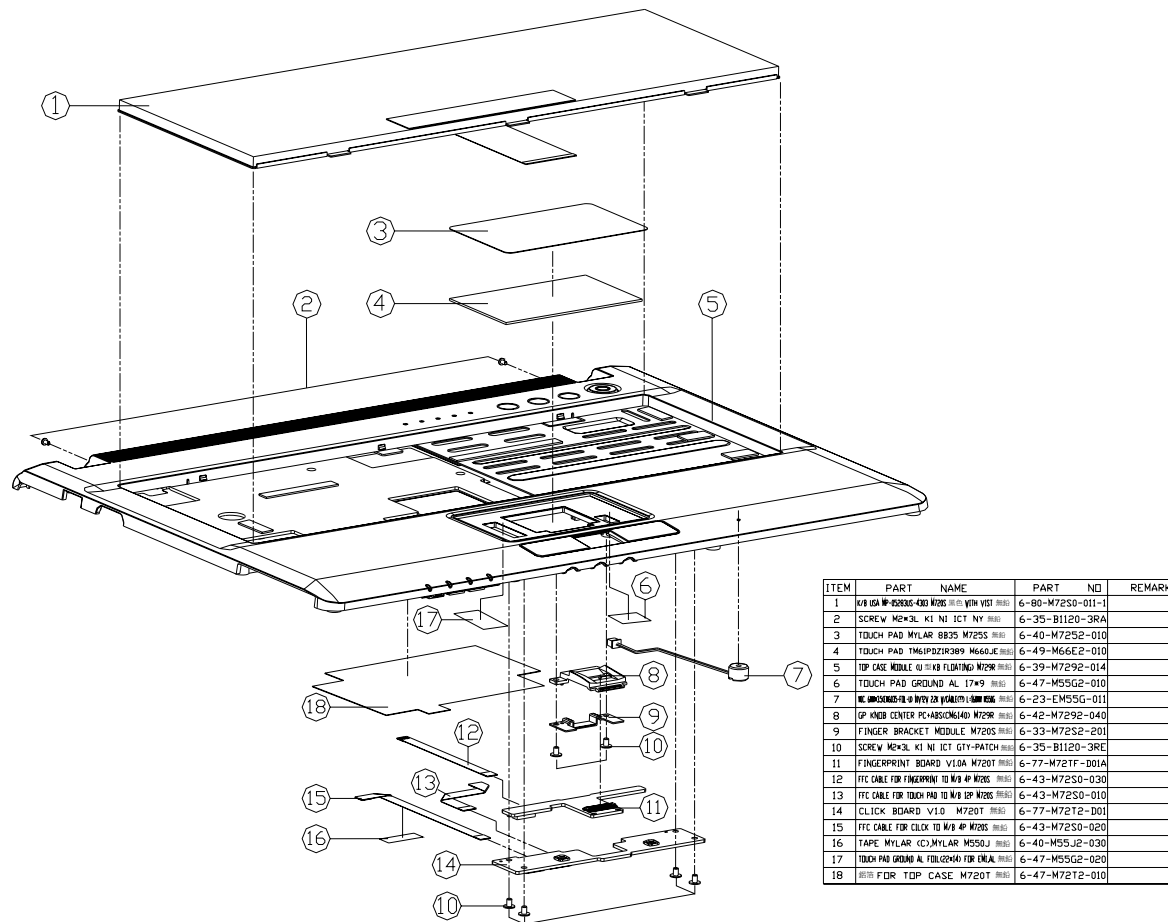
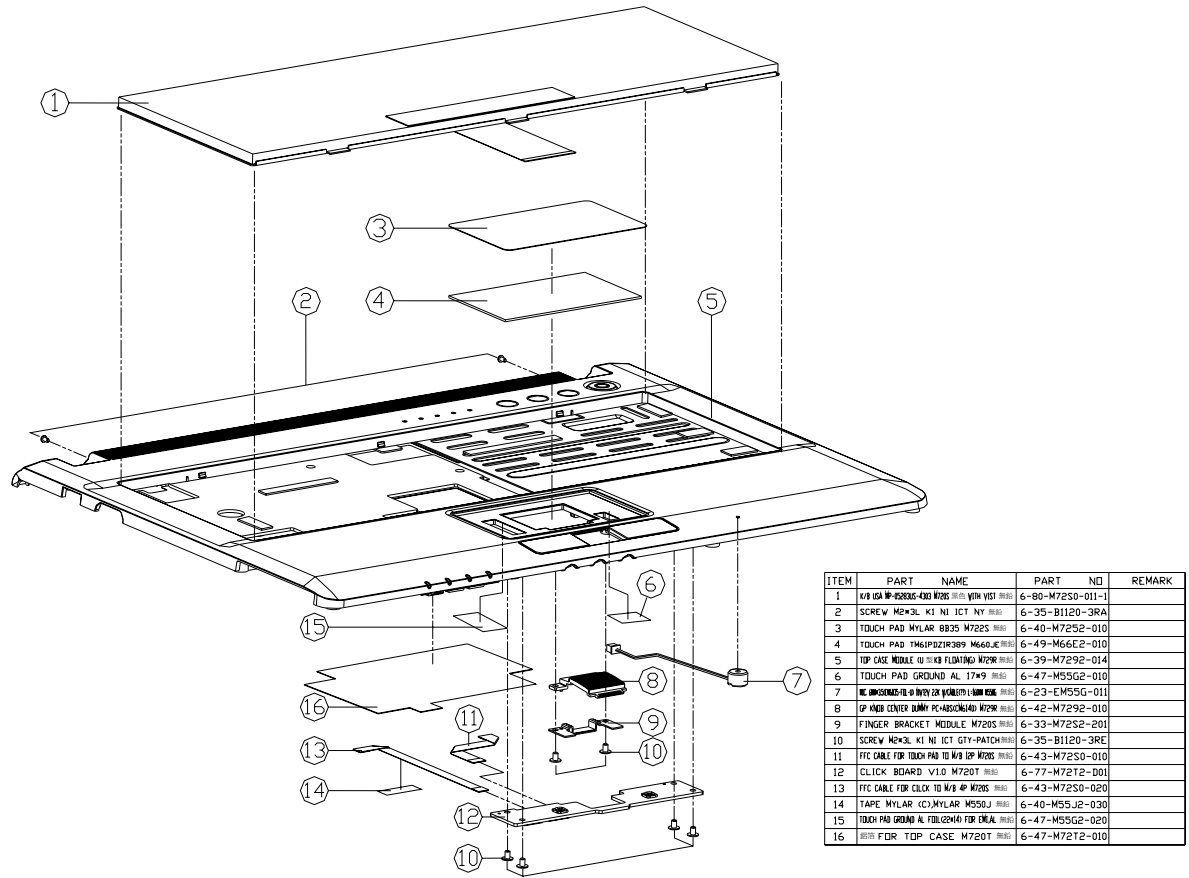


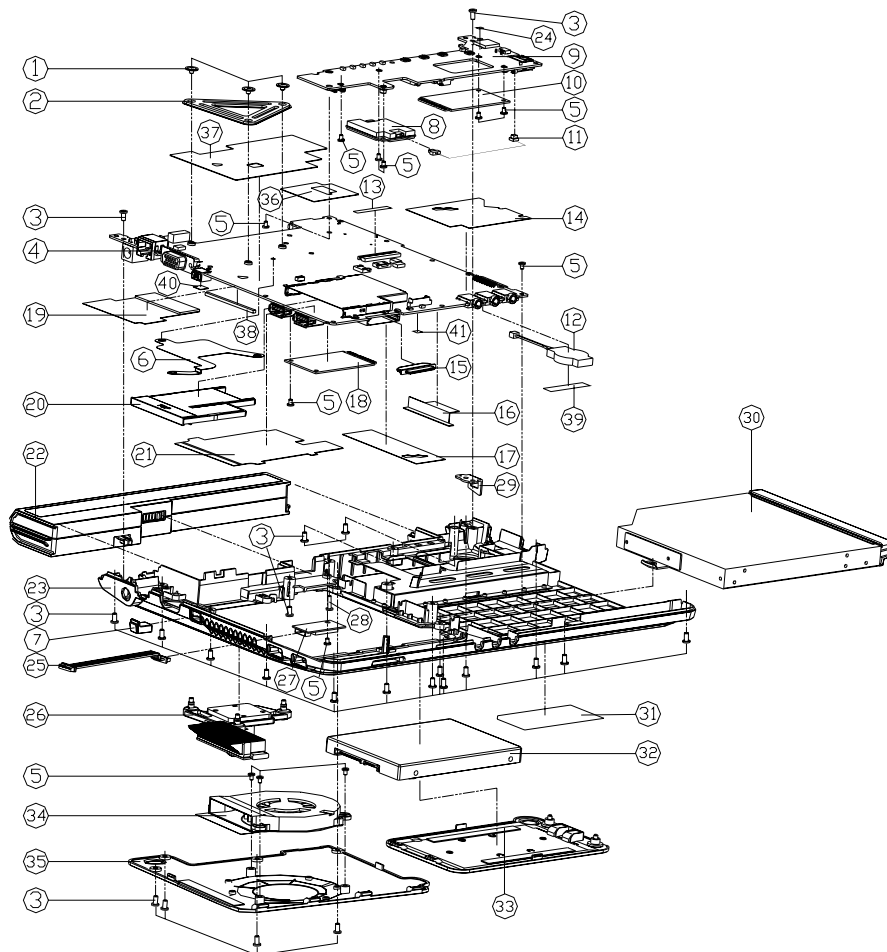
Figure A - 15
Top with
Fingerprint
(M729T)

Top without Fingerprint (M729T)

Figure A - 16
Top without
Fingerprint
(M729T)



Bottom (M729T)



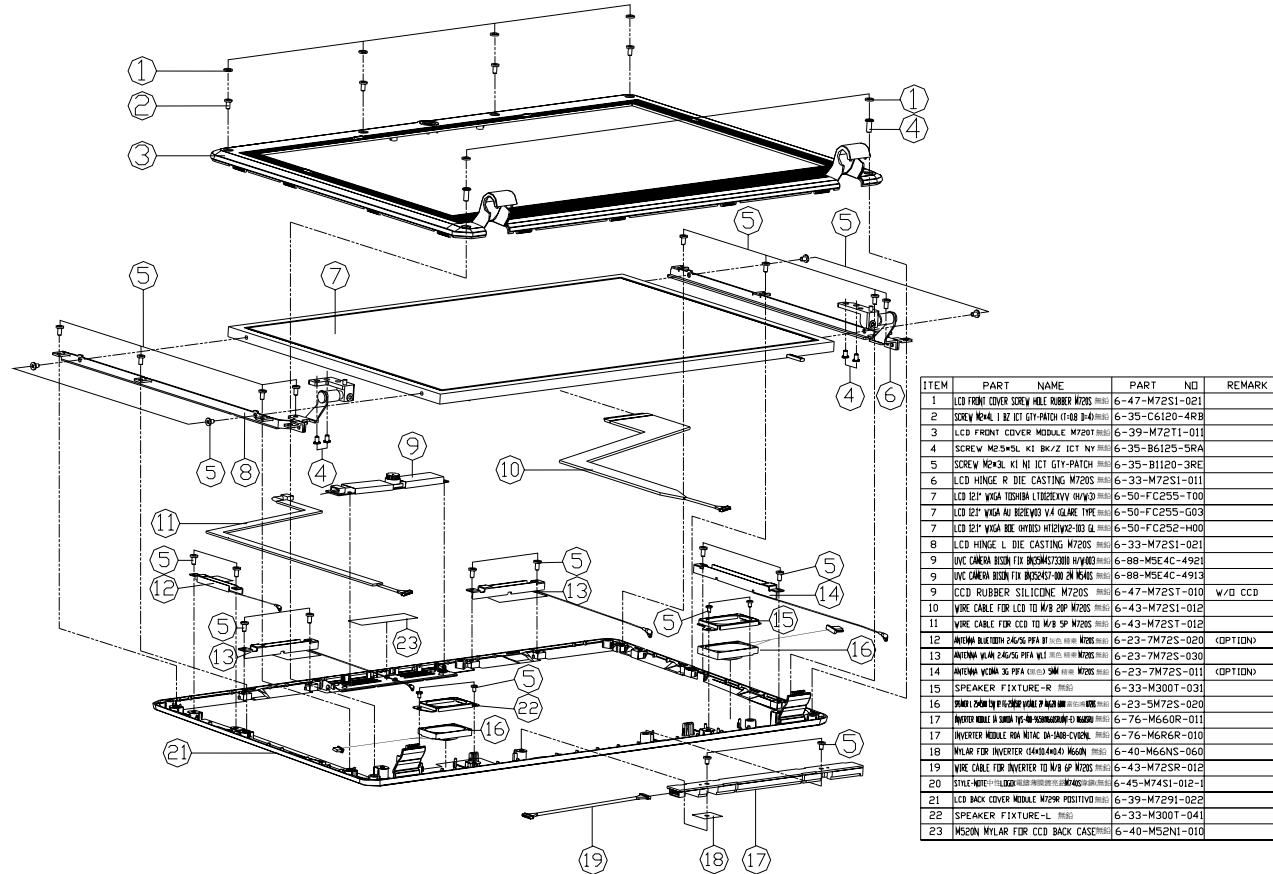
ITEM	PART NAME	PART NO	REMARK
1	45-4025-265 (C0EY) B5645 JACKET W/KEY HULL 40	6-35-41025-2R5	
2	CPU SUPPORTER MODULE AL M720S	6-33-M72SS-011	
3	SCREW M2.5xL KI BK/Z ICT NY	6-35-B612S-5RA	
4	MAIN BOARD V3.0A M720T	6-77-M72T0-D03A	
5	SCREW M2x3L KI NI ICT NY	6-35-B1120-3RA	
6	NORTH BRIDGE HEATSIK MODULE (CPU M720R)	6-31-M72RN-101	
7	1394 RUBBER M720S	6-47-M72SP-010	
8	ANTI-STATIC KEYBOARD MAT (2 PIN) M720T	6-88-L3911-5300	
9	MULTI I/O BOARD V3.0A (W/O 3D) M720T	6-77-M72T1-D03A-I	
10	W/HD HDD REAR COVER/KEYLESS KEY CARD USB 3.0	6-88-M72SW-720	<OPTION>
11	WIRE CABLE FOR R-J-H TO MDC 2P M720S	6-43-M72SU-010	<OPTION>
12	MS20G K/B CONN MYLAR	6-23-22015-P2C	
13	MS20G K/B CONN MYLAR	6-40-MS2GS-060	
14	MAIN BOARD AL FOIL M730T	6-40-M73TS-0D0	
15	MS20G CARD READER RUBBER	6-47-MS2GB-010	
16	FOR HDD BKT MYLAR (FRONT+REAR) M720S	6-40-M72SZ-010	
17	DDR MYLAR FR83 M730T	6-40-M73TS-060	
18	ISABELLA INTEL (2.5) INTEL SHIRLEY PE	6-588-M72T2-4211	
18	ISABELLA INTEL (2.5) INTEL SHIRLEY PEAK ICE	6-88-M72T2-4240	<OPTION>
18	ISABELLA INTEL (2.5) INTEL SHIRLEY PEAK	6-588-M72T2-4241	<OPTION>
18	ISABELLA INTEL (2.5) INTEL SHIRLEY PEAK	6-88-M55S2-7000	<OPTION>
19	NORTH BRIDGE MYLAR (FRONT+REAR) M720T	6-40-M73TS-021	
20	DUMMY NEW CARD PC+ABS T120R	6-42-T12R3-011	
21	NEW CARD MYLAR (FRONT+REAR) M730T	6-40-M73TS-050	
22	IMP S/LI NEW/2AH REP (S) M720S	6-87-M72SS-4DF2	
22	IMP S/LI NEW/2AH REP (S) M720S	6-87-M72SS-4D42	
22	IMP S/LI NEW/2AH REP (S) M720S	6-87-M72SS-5DF2	
23	BOTTOM CASE MODULE (HDD) M720S	6-39-M72S3-01B	
24	SPEAKER CABLE PASTE (FRONT) M720S	6-40-M72S3-010	
25	WIRE CABLE FOR BLUE TOOTH TO W3 2P M720S	6-43-M72SB-010	
26	HEAT SINK MODULE M720S	6-31-M72SN-103	
27	BLUETOOTH V2.0 (2.5) INTEL SHIRLEY PEAK	6-88-M55S45-620	<OPTION>
27	BLUETOOTH V2.0 (2.5) INTEL SHIRLEY PEAK	6-88-M55S45-390	<OPTION>
28	SCREW M2x4L KI BK/Z ICT NY	6-35-B6120-6R0	
29	LOCK BRACKET SECC M720S	6-33-M72S3-010	
30	SATA DVD SUPER MULTI 24X/8X DVD	6-79-M72T0-000	
30	SATA DVD COMBO 24X/8X DVD	6-79-M72T1-000	
31	PRODUCT LABEL FOR M720T	6-45-M72T3-010	
31	PRODUCT LABEL FOR M725T	6-45-M725T-010	
31	PRODUCT LABEL FOR M721T	6-45-M721T-010	
31	PRODUCT LABEL FOR M722T	6-45-M722T-010	
31	PRODUCT LABEL FOR M728T	6-45-M728T-010	
31	PRODUCT LABEL FOR M729T	6-45-M729T-010	
32	W/O HDD ASS'Y M720S	6-79-M72S-J-010	
33	HDD COVER MODULE M720S	6-42-M72S-J-103	
34	FAN MODULE M720S	6-31-M72SS-103	
35	CPU COVER MODULE M720T	6-42-M72TS-100	
36	REAR PCB CONN MYLAR FOR HD (FRONT+REAR) M720T	6-40-M73TS-040	
37	MYLAR FOR MB (FRONT+REAR) M730T	6-40-M73TS-010	
38	MYLAR-1 FOR MB (S) M720S	6-40-M72SS-051	
39	TAPE MYLAR (A) MYLAR M550J	6-40-M55J2-010	
40	PROTECT MB MYLAR FR83 M720S	6-40-M72SS-040	

Figure A - 17
Bottom (M729T)

A.Part Lists

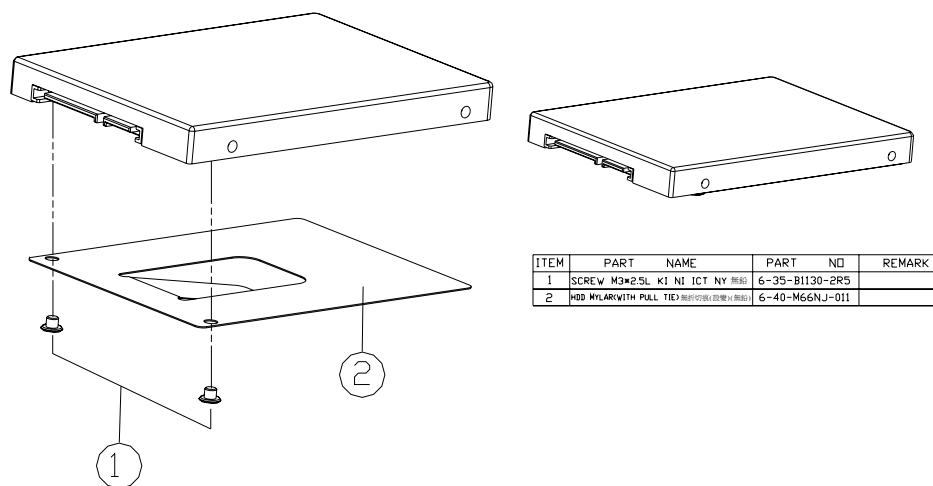
LCD (M729T)

Figure A - 18
LCD
(M729T)



ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER SCREW HOLE RUBBER W/20S	6-47-M72S1-021	
2	SCREW M2x4.1 1/2 ICT GY-PATCH (1-68 3-40)	6-35-C6120-4RB	
3	LCD FRONT COVER MIDDLE W/20P	6-39-M72T1-011	
4	SCREW M2x5xL KI BK/YZ ICT NY	6-35-B6125-5RA	
5	SCREW M2x3.6 KI NI ICT GY-PATCH	6-35-B1120-3RE	
6	LCD HINGE R DIE CASTING W/20S	6-33-M72S1-011	
7	LCD DEP W/GA TOSHIBA L102REXVY 09V3D	6-50-FC255-T00	
7	LCD DEP W/GA AU H92EWS3 V4 K2LAKI TYPE	6-50-FC255-G03	
7	LCD DEP W/GA KEE 09050 H102V32-003 (L)	6-50-FC252-H00	
8	LCD HINGE L DIE CASTING W/20S	6-33-M72S1-021	
9	DVC CAMERA BISON TX INCOMS10000 09V40D	6-88-M5E4C-492H	
9	DVC CAMERA BISON TX INCOMS10000 09V40D	6-88-M5E4C-4913	
9	CCD RUBBER SILICONE W/20S	6-47-M72S1-010	w/d CCD
10	WIRE CABLE FOR LCD TO W/R 20P W/20S	6-43-M72S1-012	
11	WIRE CABLE FOR CCD TO W/R 5P W/20S	6-43-M72S1-012	
12	ANTENNA BLUETOOTH 2425L PPA 01	6-23-7M72S-020	(OPTION)
13	ANTENNA W/GA 2425G PPA W/L	6-23-7M72S-030	
14	ANTENNA W/GA 2425G PPA 01	6-23-7M72S-011	(OPTION)
15	SPEAKER FIXTURE-R	6-33-M300T-031	
16	FRONT COVER FIXTURE W/20P	6-23-5M72S-020	
17	INVERTER MODULE 5.0V 1.5A	6-76-M660R-011	
17	INVERTER MODULE FOR N16C DA-LAB-EV200	6-76-M660R-010	
18	W/LAR FIBR INVERTER (440-440A) W/20P	6-40-M660S-060	
19	WIRE CABLE FOR INVERTER TO W/R 6P W/20S	6-43-M72SR-012	
20	STAKE-NOTE	6-45-M74S1-012-1	
21	LCD BACK COVER MIDDLE W/20R POSITIVE	6-39-M7291-022	
22	SPEAKER FIXTURE-L	6-33-M300T-041	
23	W/20N W/LAR FIBR CCD BACK CASE	6-40-M52N1-010	

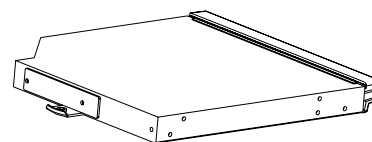
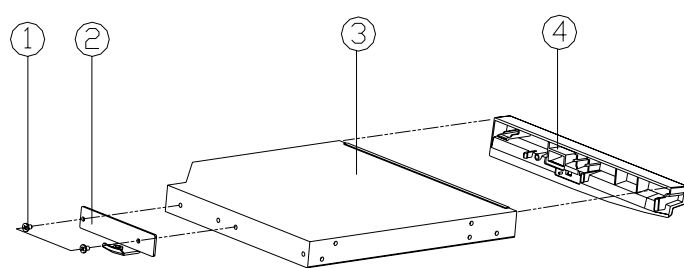
HDD (M729T)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*2.5L K1 NI ICT NY 無鉛	6-35-B1130-2R5	
2	HDD MYLAR WITH PULL TIE 無鉛	6-40-M66NJ-011	

Figure A - 19
HDD
(M729T)

DVD-Dual Drive (M729T)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2x3L K1 NI ICT GTY-PATCH	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET SECC M7205	6-33-M72SZ-010	
3	SATA DVD SUPER MULTI 5 1/4 24X/8X 12.7MM	6-85-A0724-C00	
3	SATA DVD SUPER MULTI 5 1/4 24X/8X 12.7MM	6-85-A0724-T01	
4	SUPER MULTI 6 HEAD 16MBIT	6-42-M72SQ-202-1	

Figure A - 21
DVD-Dual Drive
(M729T)

Top without Fingerprint (M730T)

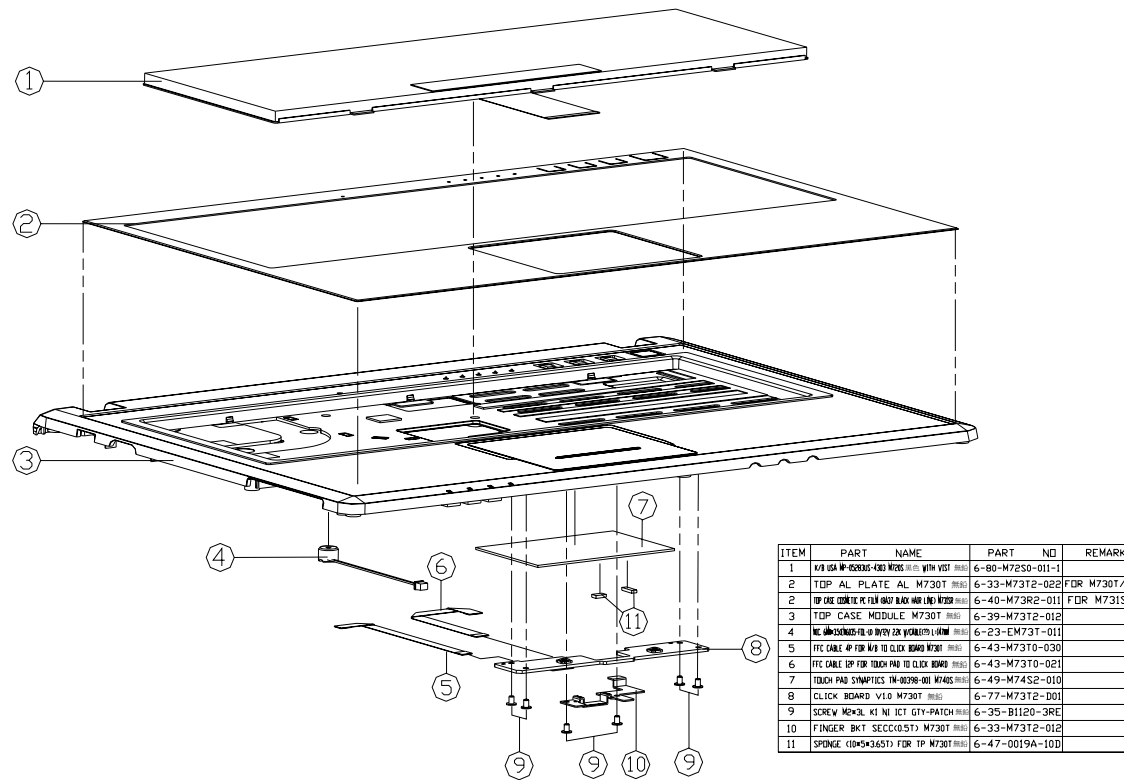


Figure A - 23
Top without Fingerprint (M730T)

LCD (M730T)

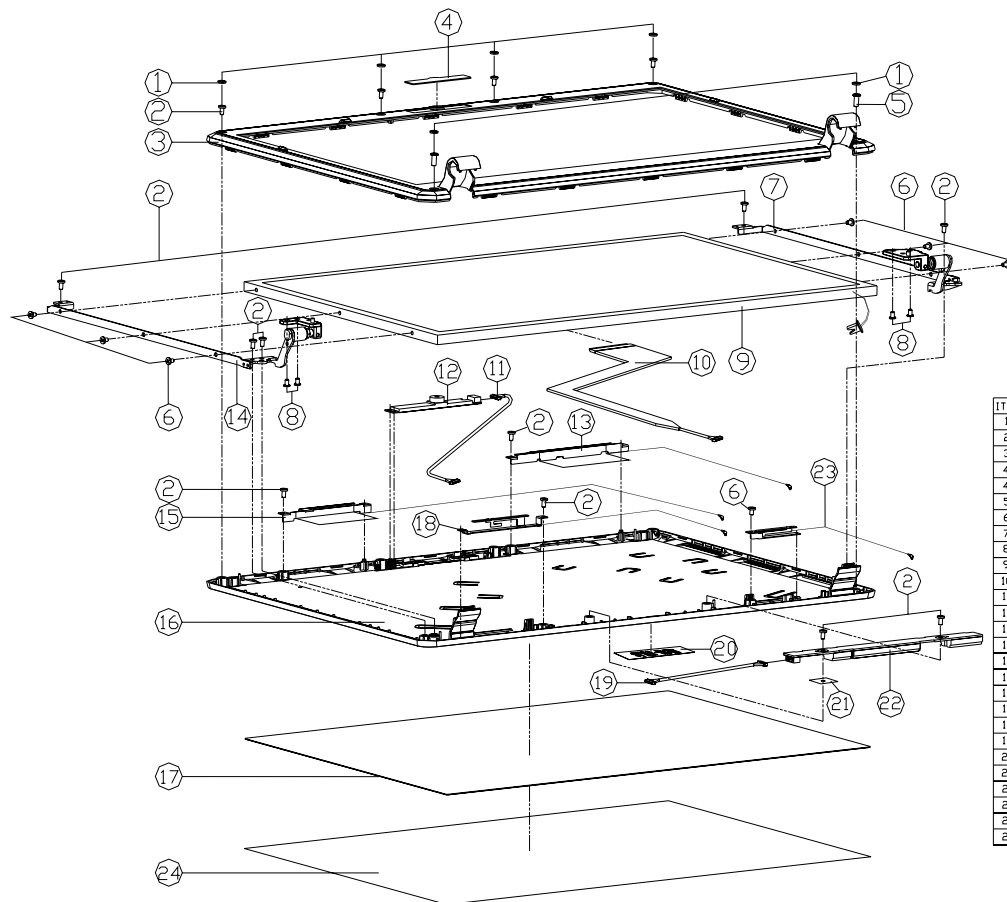


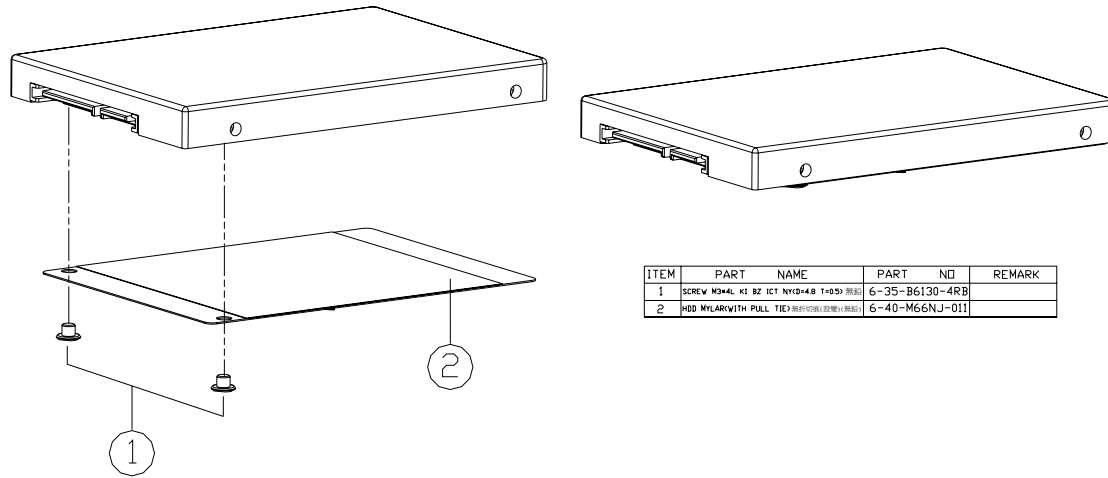
Figure A - 25
LCD
(M730T)

ITEM	PART NAME	PART NO	REMARK
1	LCD FRONT COVER SCREW HOLE RUBBER WEDGE	6-47-M72S1-021	
2	SCREW NYLON L RZ KT DTY-PATCH (F-H) D=4	6-35-C6120-4RB	
3	LCD FRONT COVER MODULE M730T	6-39-M73T1-012	
4	CCD COSMETIC PLATE PMMA M730T	6-42-M73T1-010	W/CCD
4	CCD MYLAR FR700 M730T	6-40-M73T1-010	W/D CCD
5	SCREW M2.5*5L K1 BK/2 ICT NY	6-35-B6125-5RA	
6	SCREW NYLON L RZ KT DTY-PATCH (F-H) D=4	6-35-C6120-4RB	
7	LCD HINGE R SECC-SKT*ZN M730T	6-33-M73T1-021	
8	SCREW M2.5*6L K BZ ICT	6-35-B2125-6R0	
9	LCD TFP WGA IN BROWN V3 GLASS TPO SSM	6-50-G8255-G00	
10	WIRE ONLY FOR LCD BY W/REVERSE V3 GLASS TPO SSM	6-43-M73T1-011	
11	WIRE CABLE W/B TO CCD M730T	6-43-M73T1-011	
12	LVC CAMERA BRACKET FOR M730T-001 ON W/PART	6-08-M740C-4921	
12	LVC CAMERA BRACKET FOR M730T-001 ON W/PART	6-08-M740C-4911	
13	HINGE L M730T/M730T	6-23-7M73T-050	(OPTION)
14	LCD HINGE L SECC-SKT*ZN M730T	6-33-M73T1-032	
15	HINGE R M730T/M730T	6-23-7M73T-031	(OPTION)
16	LCD BACK COVER MODULE M730T	6-39-M73T1-022	
17	BACK COVER COSMETIC PLATE AL M730T	6-33-M73T1-011	
18	HINGE R M730T/M730T	6-23-7M73T-021	
19	CABLE FOR INVERTER M730T	6-43-M73TR-011	
20	ITYPE-NOTEBOOK	6-45-M7451-012-1	
21	MYLAR FOR INVERTER (SH4040) M650	6-40-M66NS-060	
22	INVERTER MODULE FOR M730T	6-76-M66OR-011	
22	INVERTER MODULE FOR M730T	6-76-M66R-010	
23	HINGE L M730T/M730T	6-23-7M73T-011	
24	BACK COVER PROTECT MYLAR (B85) M730T	6-40-M73T1-020	

A.Part Lists

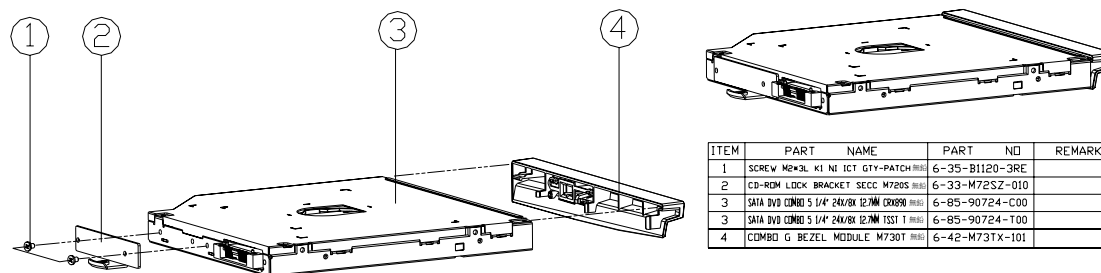
HDD (M730T)

Figure A - 26
HDD
(M730T)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M3*4L KI BZ ICT NYD#48 T=0.55 REEG	6-35-B6130-4RB	
2	HDD MYLAR(WITH PULL TIE) REEF070A(BEHEU) REEG	6-40-M66NJ-011	

COMBO (M730T)

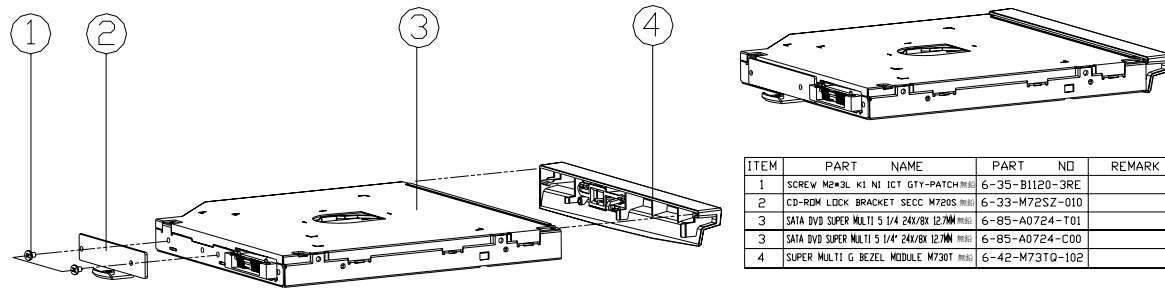


ITEM	PART NAME	PART NO	REMARK
1	SCREW M2*3L KI NI ICT GTY-PATCH (R)(E)	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET SECC M720S (R)(E)	6-33-M72SZ-010	
3	SATA DVD COMBO 5.14" 24X/8X 12.7MM (R)(E)	6-B5-90724-C00	
3	SATA DVD COMBO 5.14" 24X/8X 12.7MM TSST 1 (R)(E)	6-B5-90724-T00	
4	COMBO G BEZEL MODULE M730T (R)(E)	6-42-M73TX-101	

Figure A - 27
COMBO
(M730T)

DVD-Dual Drive (M730T)

Figure A - 28
DVD-Dual Drive
(M730T)



ITEM	PART NAME	PART NO	REMARK
1	SCREW M2x3L K1 NI 1CT GY-PATCH (HIS)	6-35-B1120-3RE	
2	CD-ROM LOCK BRACKET SECC M720S (HIS)	6-33-M72SZ-010	
3	SATA DVD SUPER MULTI 5 1/4 24x8x12.7MM (HIS)	6-85-A0724-T01	
3	SATA DVD SUPER MULTI 5 1/4 24x8x12.7MM (HIS)	6-85-A0724-C00	
4	SUPER MULTI G BEZEL MODULE M730T (HIS)	6-42-M73T0-102	

Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the *M720T/M728T/M729T/M730T* notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

Diagram - Page	Diagram - Page	Diagram - Page
<i>System Block Diagram - Page B - 2</i>	<i>ICH9-M 3/5 - GPIO, PWR Management - Page B - 16</i>	<i>Power 1.5VS, 1.05VS, 3.3V, 5V - Page B - 30</i>
<i>Intel Penryn (Socket-P) 1/2 - Page B - 3</i>	<i>ICH9-M 4/5 - Power - Page B - 17</i>	<i>Power 1.8V, 0.9VSM - Page B - 31</i>
<i>Intel Penryn (Socket-P) 2/2 - Page B - 4</i>	<i>ICH9-M 5/5 - GND - Page B - 18</i>	<i>Power V CORE - Page B - 32</i>
<i>Cantiga 1/6 - Host - Page B - 5</i>	<i>Clock Generator - Page B - 19</i>	<i>Power AC-IN, Charger - Page B - 33</i>
<i>Cantiga 2/6 - VGA, CRT - Page B - 6</i>	<i>Multi I/O, ODD, CCD, BT, TPM - Page B - 20</i>	<i>Multi I/O Board 1/2 - Page B - 34</i>
<i>Cantiga 3/6 - DDR - Page B - 7</i>	<i>New Card, Mini PCIE - Page B - 21</i>	<i>Multi I/O Board 2/2 - Page B - 35</i>
<i>Cantiga 4/6 - Power - Page B - 8</i>	<i>LED, FAN, TP, FP, USB - Page B - 22</i>	<i>Finger Printer Board - Page B - 36</i>
<i>Cantiga 5/6 - Power - Page B - 9</i>	<i>JMB385 Card Reader - Page B - 23</i>	<i>Click Board - Page B - 37</i>
<i>Cantiga 6/6 - GND - Page B - 10</i>	<i>PCI-E LAN RTL8111C - Page B - 24</i>	<i>M730T ODD Bridge Board - Page B - 38</i>
<i>DDRII CHANNEL A - Page B - 11</i>	<i>Audio Codec ALC662 - Page B - 25</i>	<i>M730T Audio Board - Page B - 39</i>
<i>DDRII CHANNEL B - Page B - 12</i>	<i>Audio AMP2056 - Page B - 26</i>	<i>Power Sequence Diagram - Page B - 40</i>
<i>Panel, Inverter, CRT - Page B - 13</i>	<i>KBC-ITE IT8512E - Page B - 27</i>	<i>Power Sequence v3.0 - Page B - 41</i>
<i>ICH9-M 1/5 - SATA - Page B - 14</i>	<i>System Power, LED BKLT - Page B - 28</i>	
<i>ICH9-M 2/5 - PCIE, PCI, USB - Page B - 15</i>	<i>Power VDD3, VDD5 - Page B - 29</i>	

Table B - 1
Schematic Diagrams

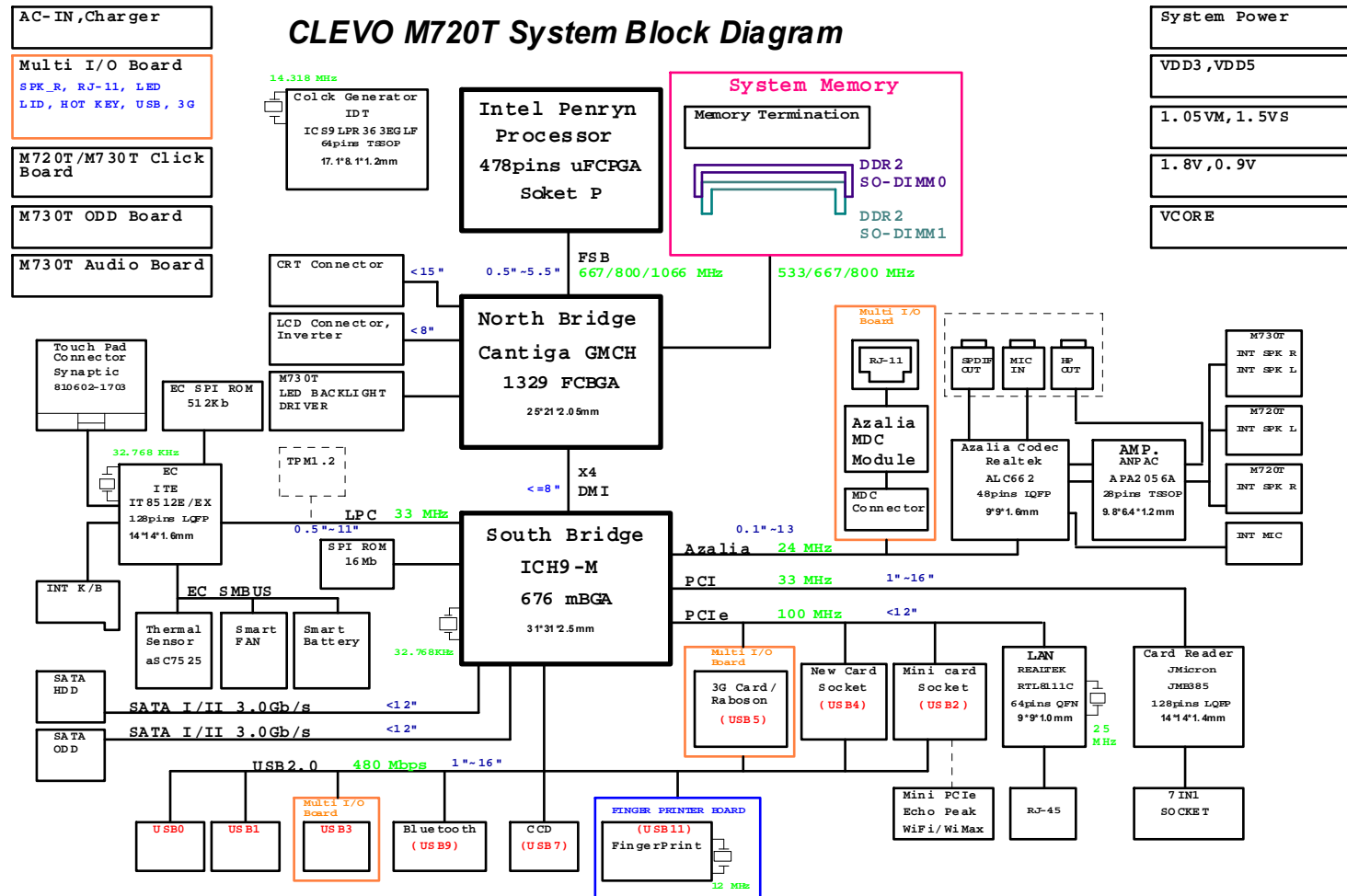


Version Note

The schematic diagrams in this chapter are based upon version 6-7P-M72T6-005. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

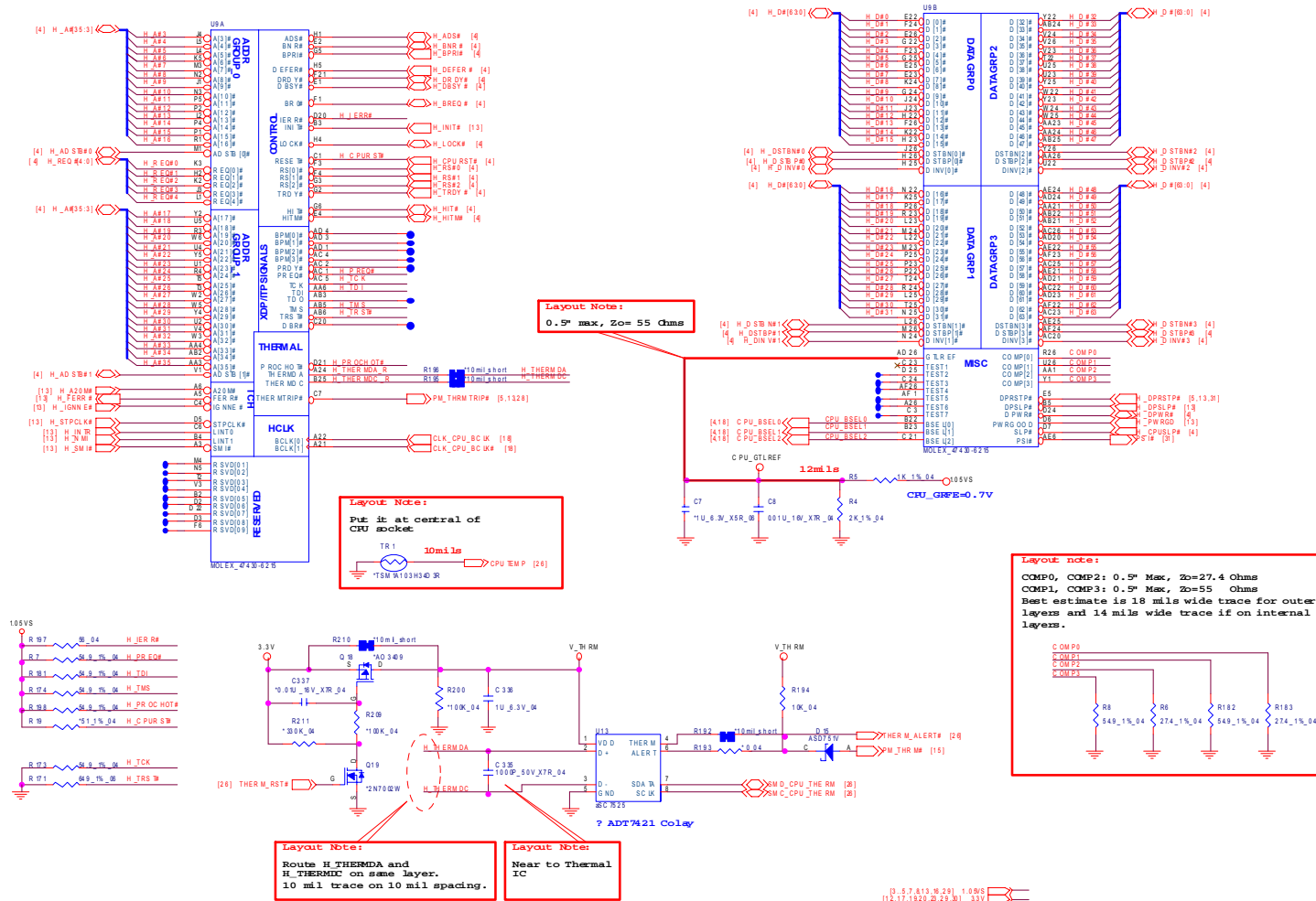
System Block Diagram

Sheet 1 of 40
System Block
Diagram



Intel Penryn (Socket-P) 1/2

CPU ONLY SUPPORT TO 35W

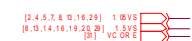
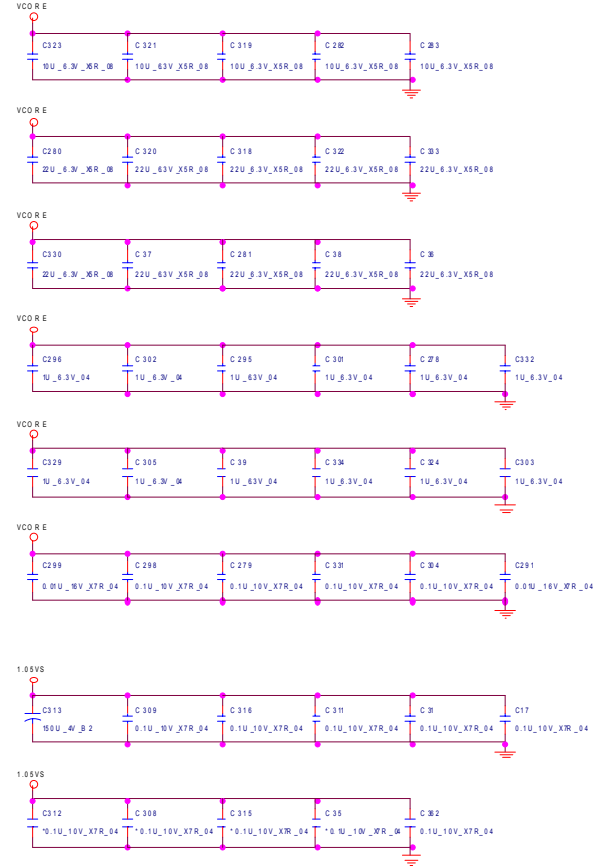
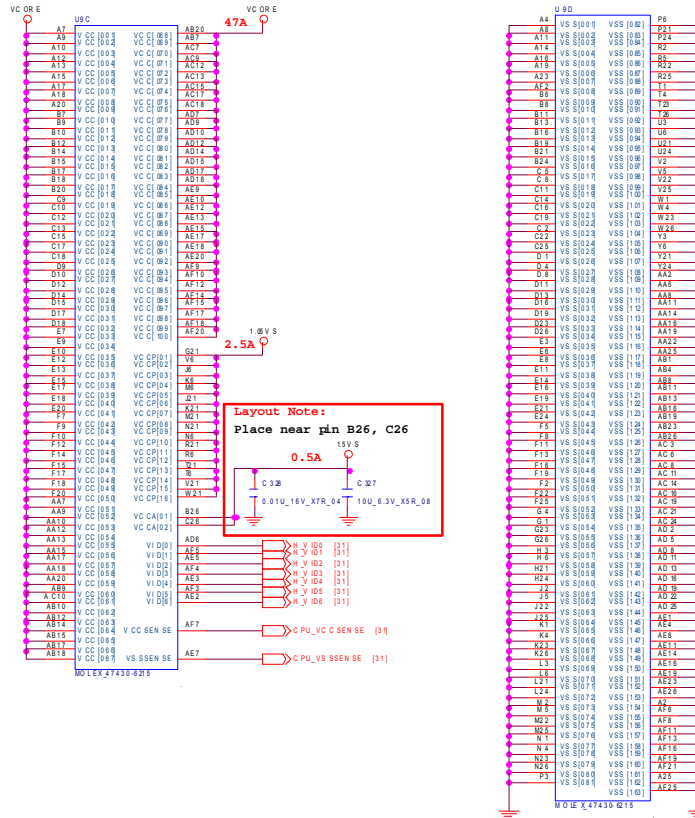


Sheet 2 of 40
Intel Penryn
(Socket-P) 1/2

B. Schematic Diagrams

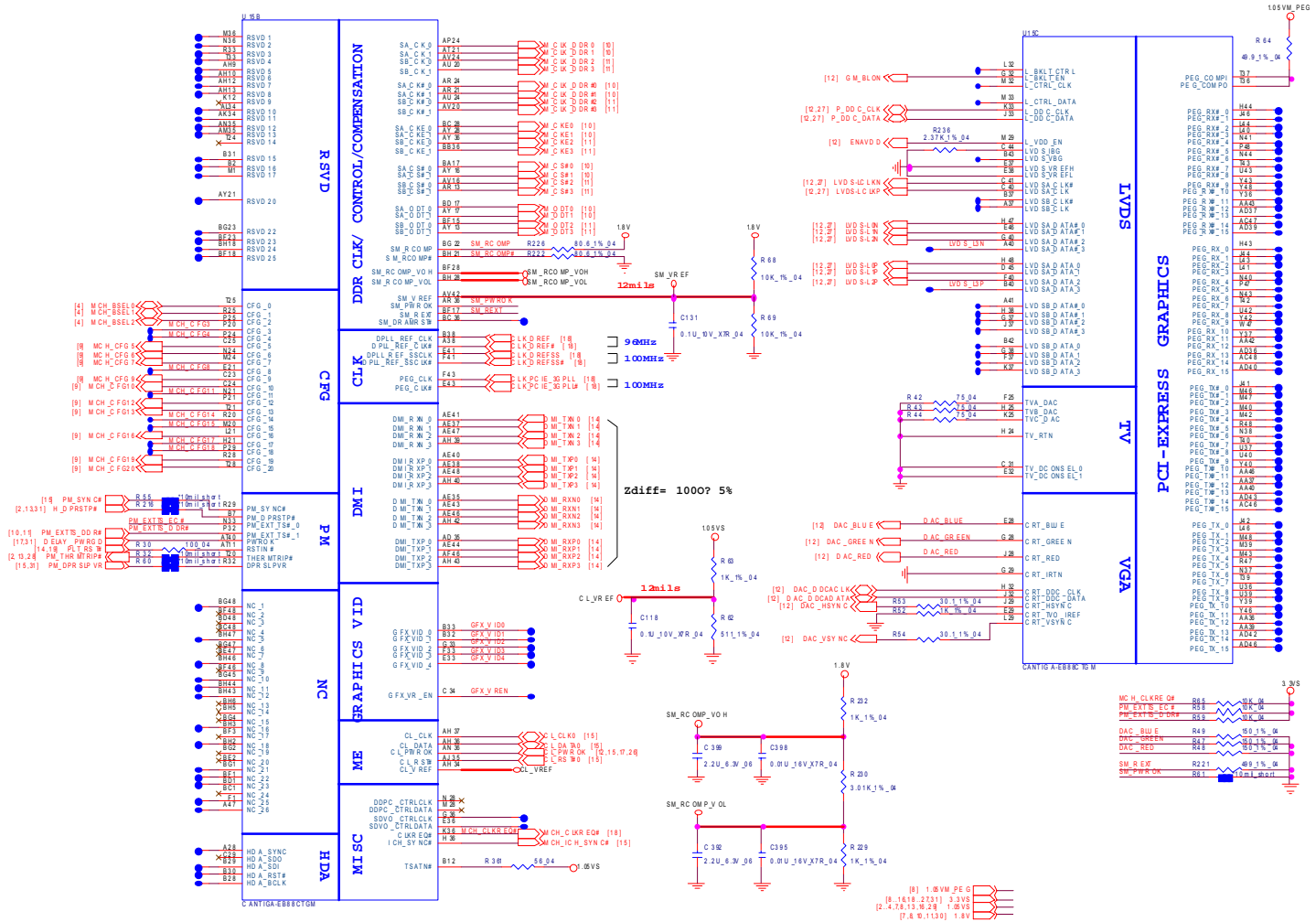
Intel Penryn (Socket-P) 2/2

Sheet 3 of 40
Intel Penryn
(Socket-P) 2/2

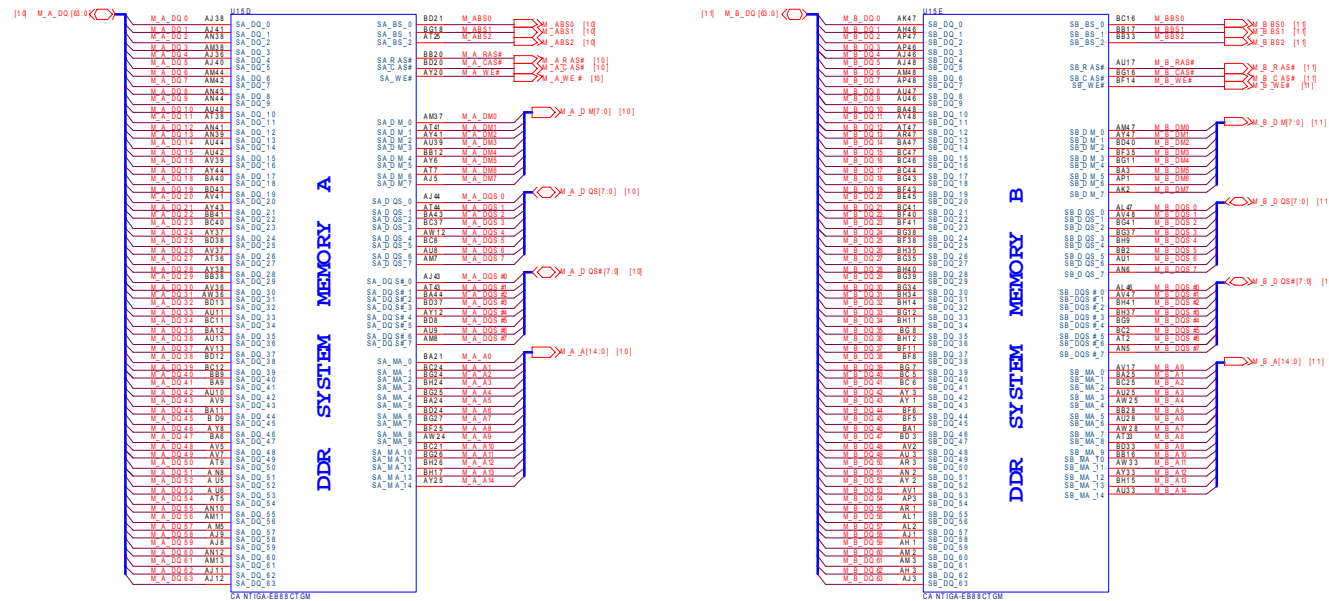


Cantiga 2/6 - VGA, CRT

Sheet 5 of 40
Cantiga 2/6 -
VGA, CRT

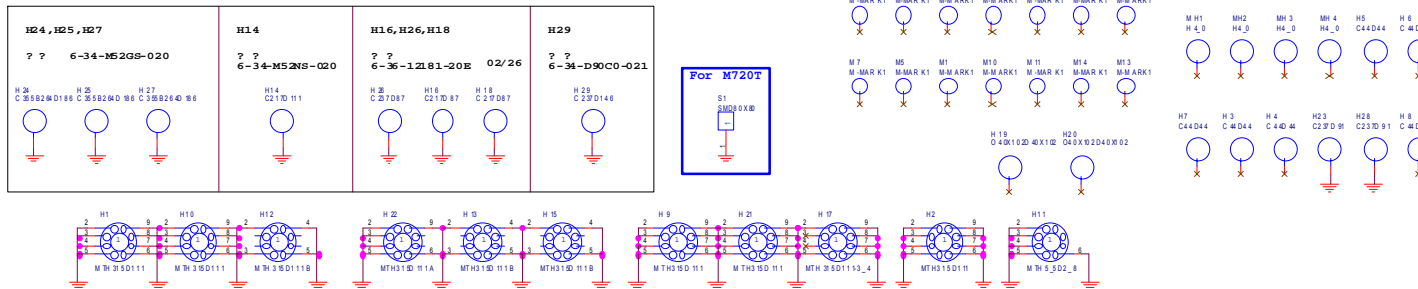


Cantiga 3/6 - DDR



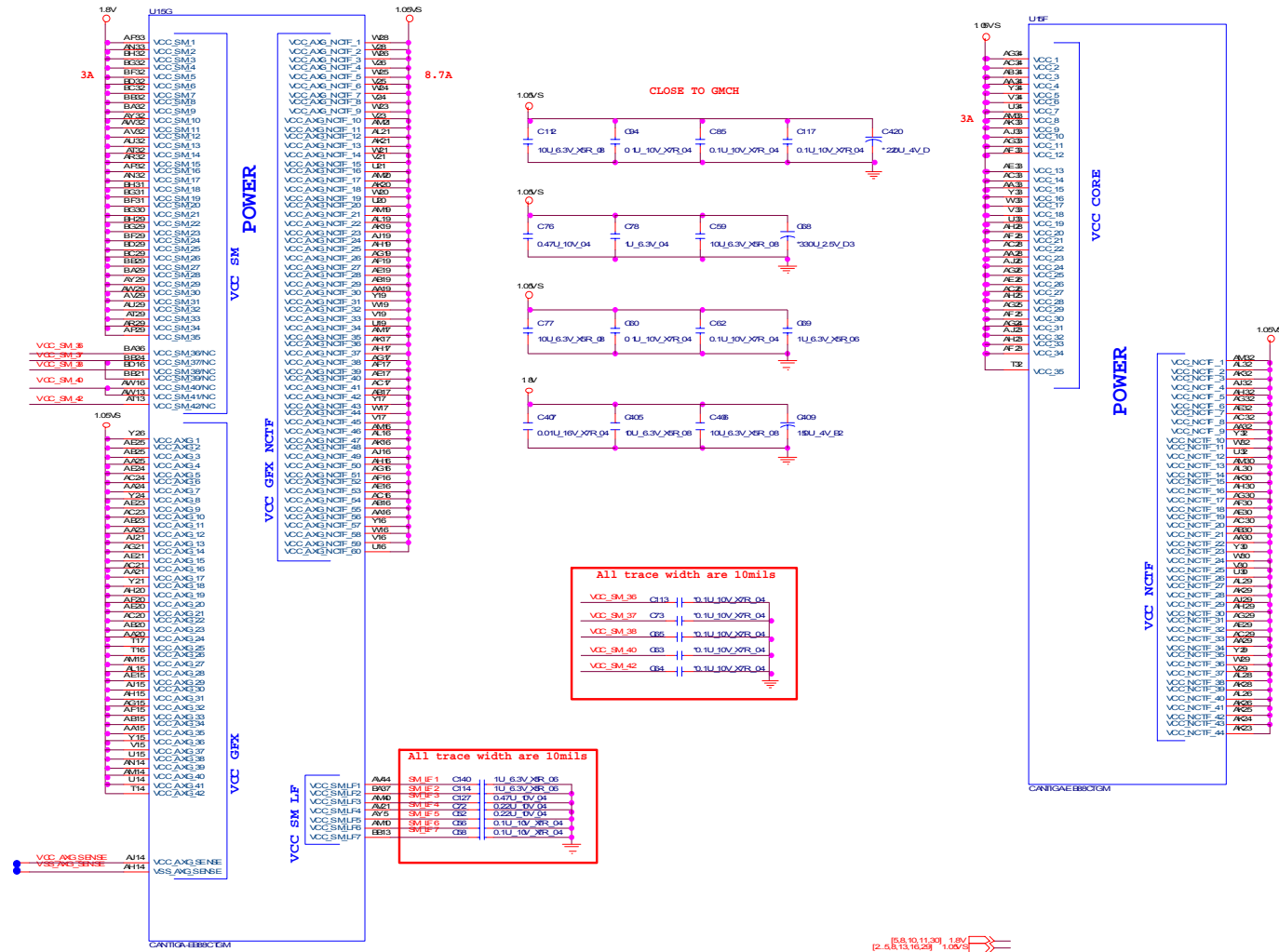
Sheet 6 of 40
Cantiga 3/6 -DDR

B.Schematic Diagrams



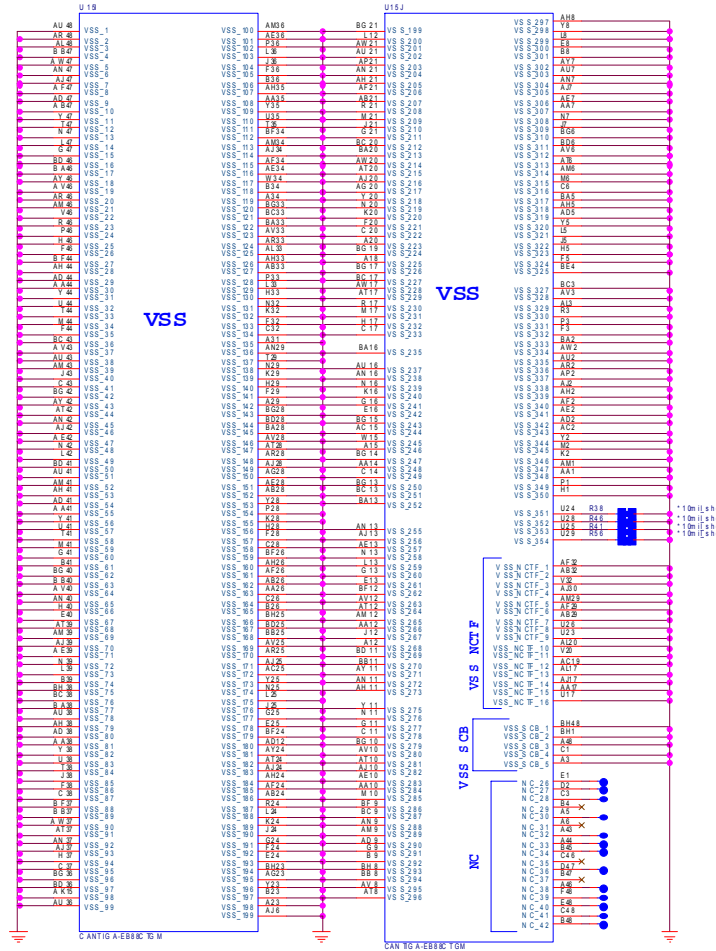
Cantiga 4/6 - Power

Sheet 7 of 40
Cantiga 4/6 - Power



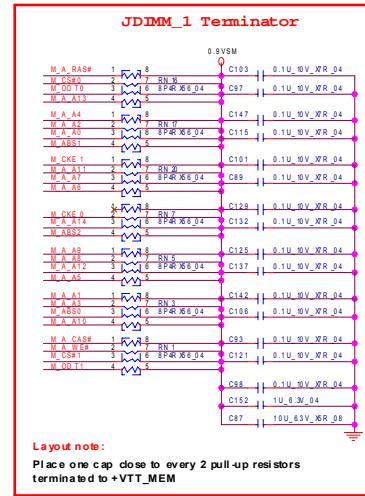
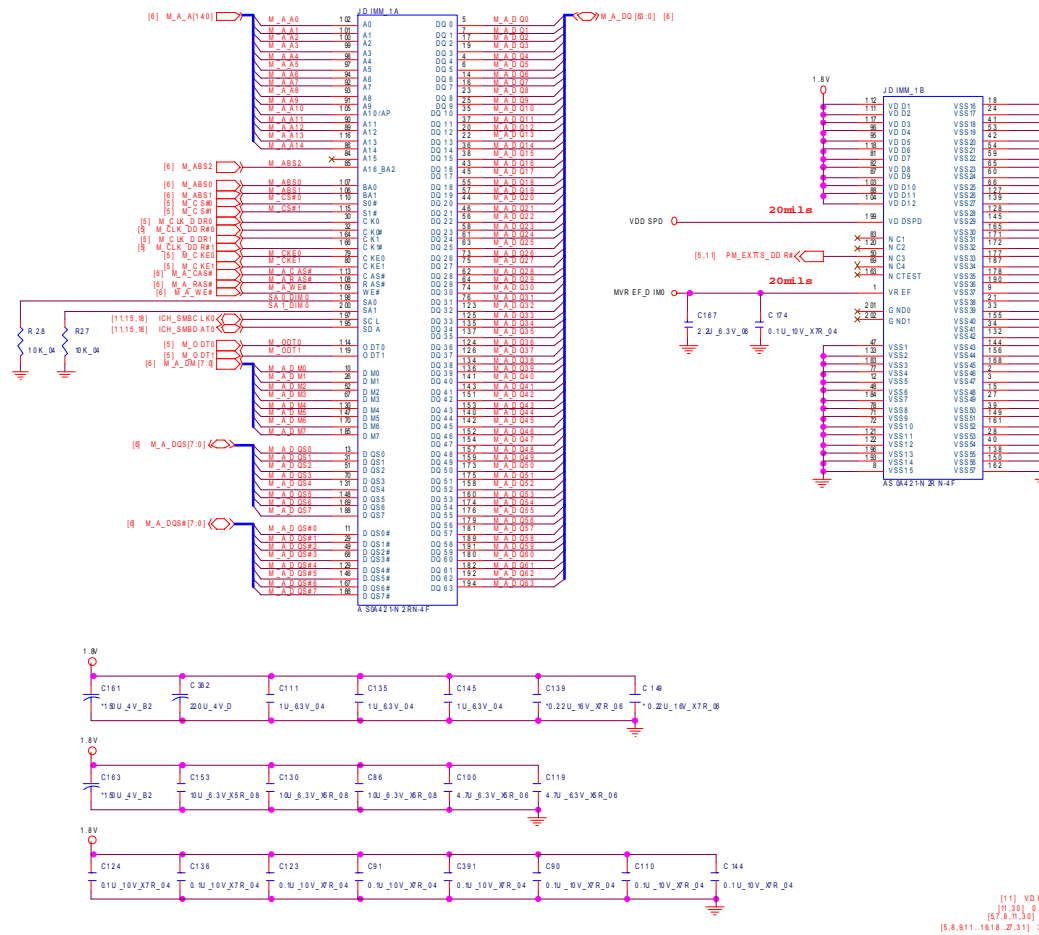
Cantiga 6/6 - GND

Sheet 9 of 40
Cantiga 6/6 - GND

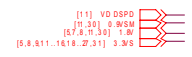
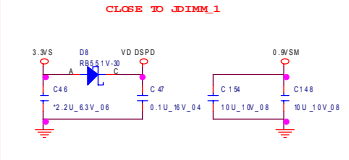
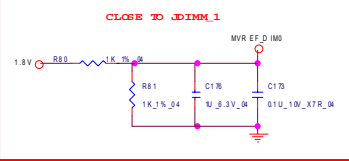


DDRII CHANNEL A

SO-DIMM 1



Layout note:
Place one cap close to every 2 pull-up resistors terminated to +VTT_MEM

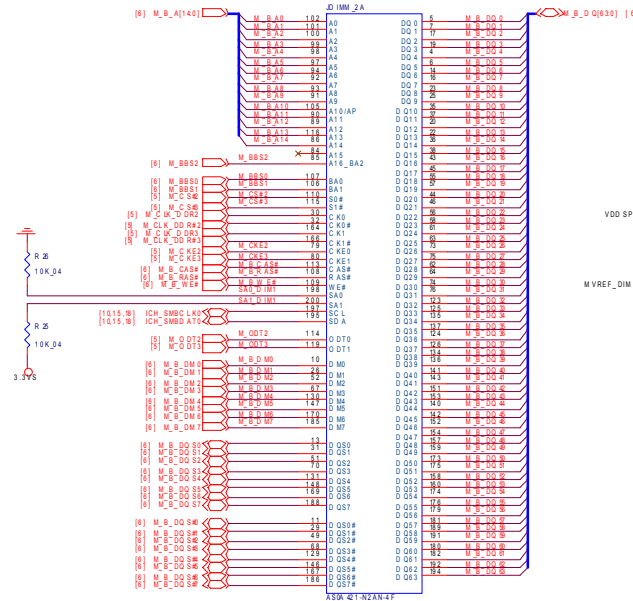


B.Schematic Diagrams

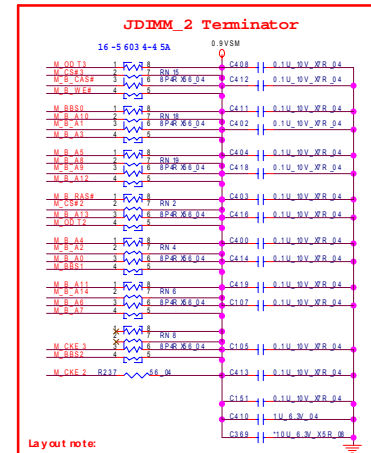
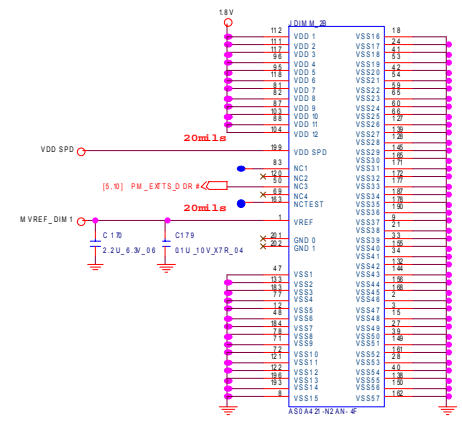
Sheet 10 of 40
DDRII CHANNEL A

DDRII CHANNEL B

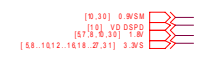
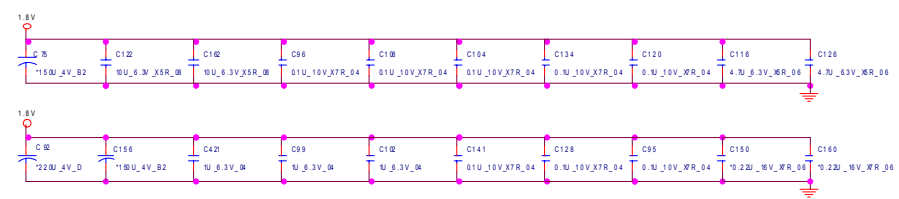
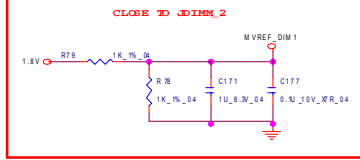
SO-DIMM 2



Layout note:
 JDIMM_2 is placed farther from the GMCH than JDIMM_1



Layout note:
 Place one cap close to every 2 pull-up resistors terminated to +VTT_MEM

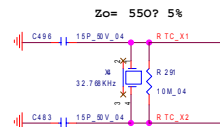
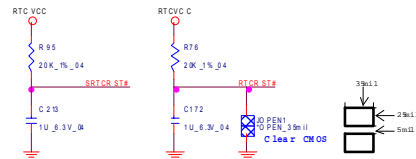
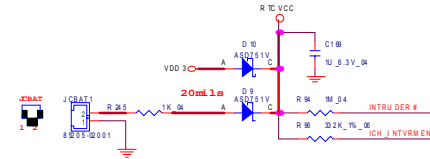


Schematic Diagrams

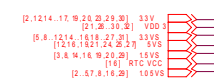
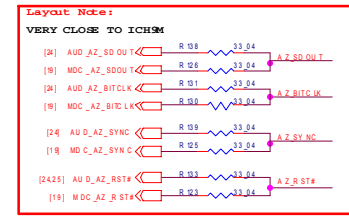
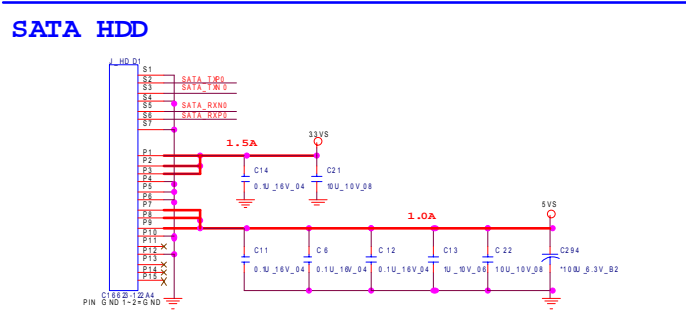
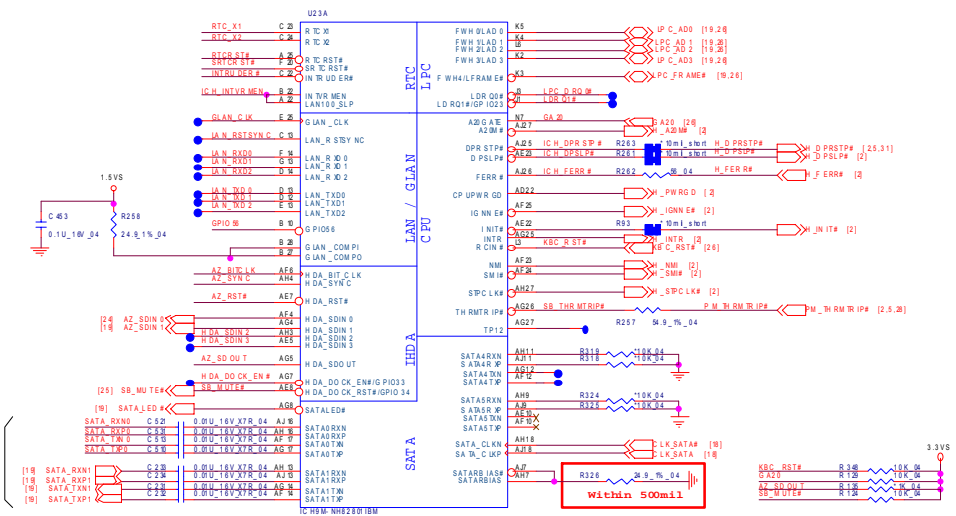
ICH9-M 1/5 - SATA

B.Schematic Diagrams

Sheet 13 of 40
ICH9-M 1/5 - SATA



Zo= 550? 5%
Zdiff= 1000? 0%



Schematic Diagrams

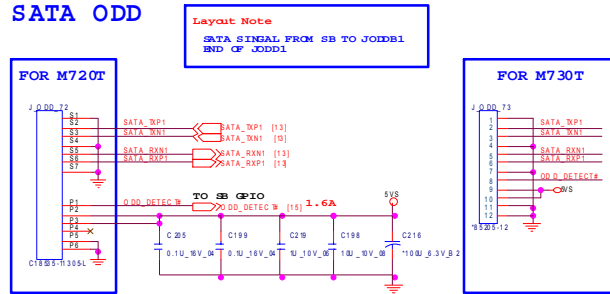
ICH9-M 5/5 - GND

Sheet 17 of 40
ICH9-M 5/5 - GND

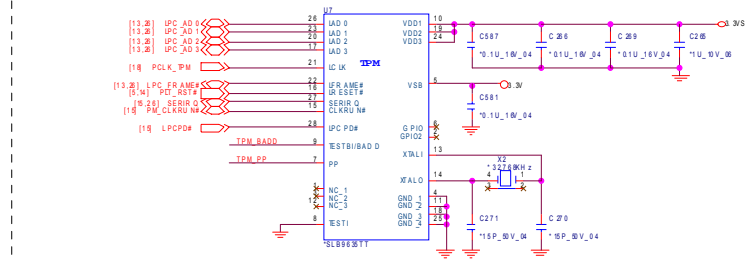
U2:3E	
AK6	VSS10
AK7	VSS9
AK3	VSS5
AK5	VSS3
AK8	VSS4
AK2	VSS2
AK1	VSS1
AK4	VSS6
AK9	VSS7
AK8	VSS8
AK5	VSS9
AK7	VSS10
AK3	VSS11
AK5	VSS12
AK2	VSS13
AK1	VSS14
AK4	VSS15
AK9	VSS16
AK8	VSS17
AK5	VSS18
AK7	VSS19
AK3	VSS20
AK5	VSS21
AK2	VSS22
AK1	VSS23
AK4	VSS24
AK9	VSS25
AK8	VSS26
AK5	VSS27
AK7	VSS28
AK3	VSS29
AK5	VSS30
AK2	VSS31
AK1	VSS32
AK4	VSS33
AK9	VSS34
AK8	VSS35
AK5	VSS36
AK7	VSS37
AK3	VSS38
AK5	VSS39
AK2	VSS40
AK1	VSS41
AK4	VSS42
AK9	VSS43
AK8	VSS44
AK5	VSS45
AK7	VSS46
AK3	VSS47
AK5	VSS48
AK2	VSS49
AK1	VSS50
AK4	VSS51
AK9	VSS52
AK8	VSS53
AK5	VSS54
AK7	VSS55
AK3	VSS56
AK5	VSS57
AK2	VSS58
AK1	VSS59
AK4	VSS60
AK9	VSS61
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AK7	VSS64
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AK4	VSS159
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AK7	VSS163
AK3	VSS164
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AK2	VSS166
AK1	VSS167
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AK5	VSS174
AK2	VSS175
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AK4	VSS177
AK9	VSS178
AK8	VSS179
AK5	VSS180
AK7	VSS181
AK3	VSS182
AK5	VSS183
AK2	VSS184
AK1	VSS185
AK4	VSS186
AK9	VSS187
AK8	VSS188
AK5	VSS189
AK7	VSS190
AK3	VSS191
AK5	VSS192
AK2	VSS193
AK1	VSS194
AK4	VSS195
AK9	VSS196
AK8	VSS197
AK5	VSS198
AK7	VSS199
AK3	VSS200
AK5	VSS201
AK2	VSS202
AK1	VSS203
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AK5	VSS228
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AK1	VSS230
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AK7	VSS235
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AK5	VSS237
AK2	VSS238
AK1	VSS239
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AK5	VSS243
AK7	VSS244
AK3	VSS245
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AK1	VSS248
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AK5	VSS255
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AK5	VSS261
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AK5	VSS264
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AK1	VSS266
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AK8	VSS269
AK5	VSS270
AK7	VSS271
AK3	VSS272
AK5	VSS273
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AK4	VSS276
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AK1	VSS302
AK4	VSS303
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AK5	VSS306
AK7	VSS307
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AK5	VSS309
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AK1	VSS311
AK4	VSS312
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AK8	VSS314
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AK7	VSS316
AK3	VSS317
AK5	VSS318
AK2	VSS319
AK1	VSS320
AK4	VSS321
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AK5	VSS327
AK2	VSS328
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AK7	VSS379
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AK4	VSS384
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AK5	VSS387
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AK3	VSS389
AK5	VSS390
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AK3	VSS479
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AK1	VSS482
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AK5	VSS489
AK2	VSS490
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AK7	VSS496
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AK5	VSS522
AK7	VSS523
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AK1	VSS563
AK4	VSS564
AK9	VSS565
AK8	VSS566
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AK7	VSS568
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AK4	VSS573
AK9	VSS574
AK8	VSS575
AK5	VSS576
AK7	VSS577
AK3	VSS578
AK5	VSS579
AK2	VSS580

Multi I/O, ODD, CCD, BT, TPM

SATA ODD

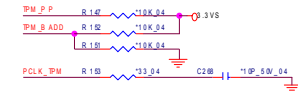


TPM 1.2

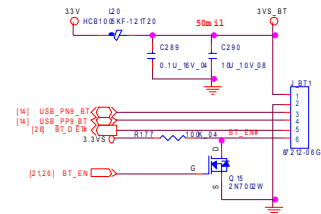


Asserted before entering S3
LPC reset timing:
LPCPD# inactive to IRS# inactive 32-96us

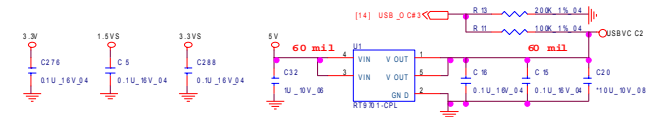
TPM_PP	HI : ACCBSB	
	LOW : NORMAL (Default)	
TPM_BADD	HI : 4B / 4F h (Default)	
	LOW : 2B / 2F h	



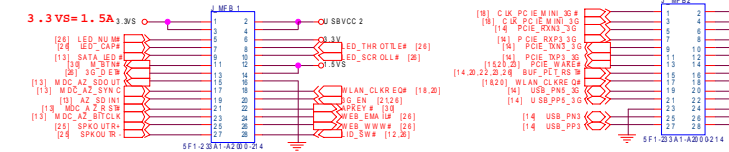
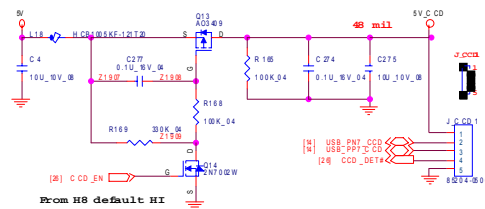
Bluetooth



MULTI I/O CONN



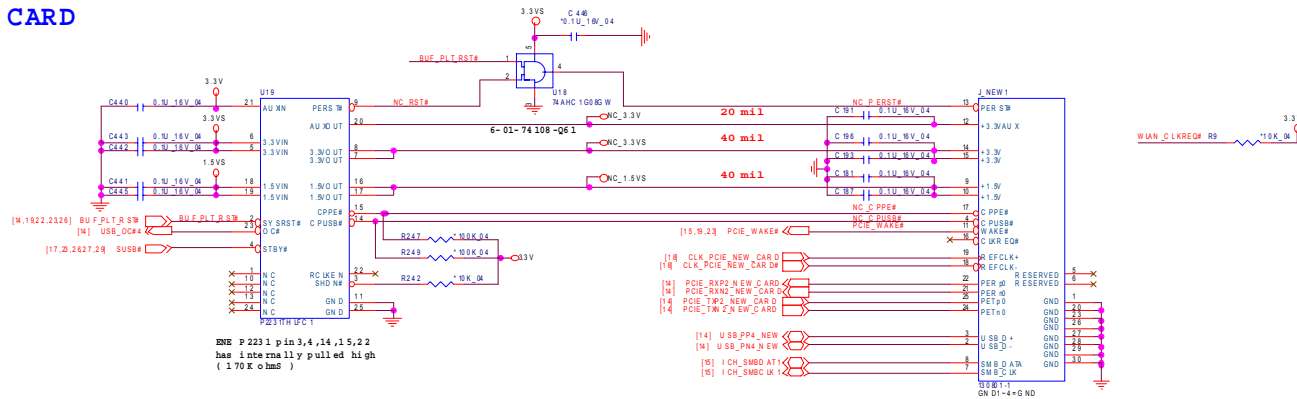
CCD



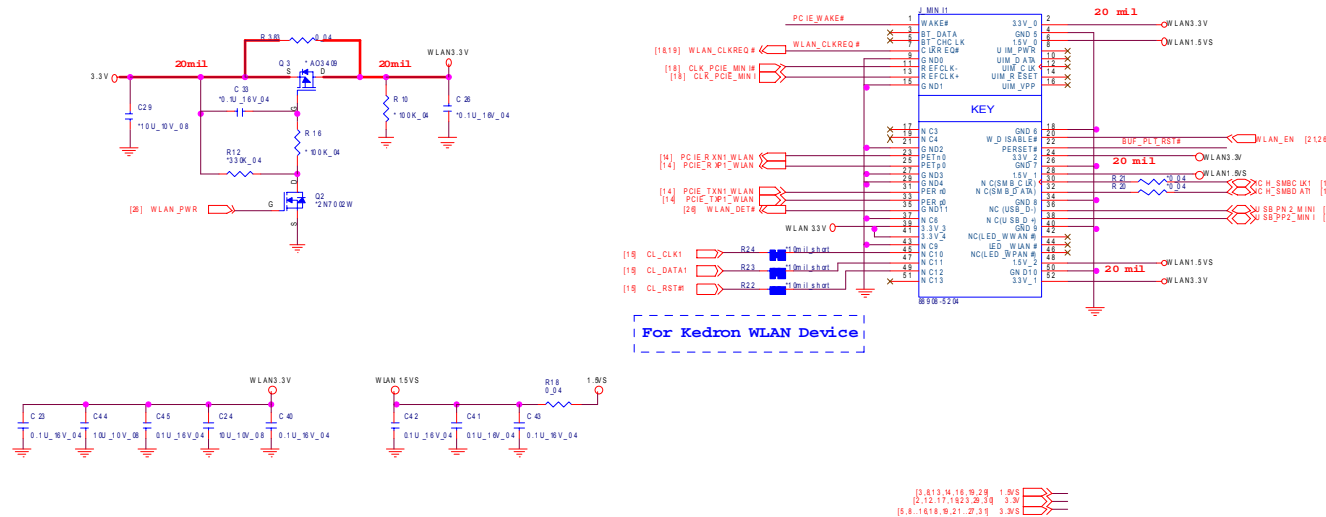
Sheet 19 of 40
Multi I/O, ODD,
CCD, BT, TPM

New Card, Mini PCIE

NEW CARD



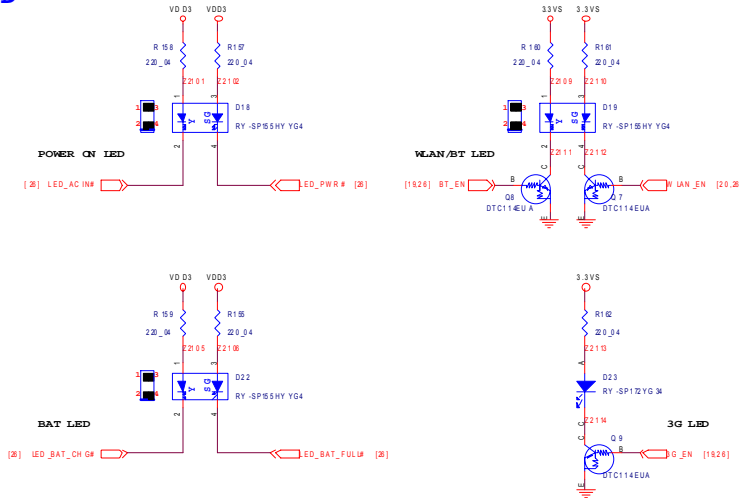
MINI CARD



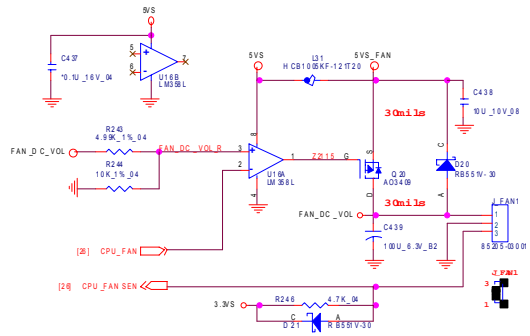
LED, FAN, TP, FP, USB

Sheet 21 of 40
LED, FAN, TP, FP,
USB

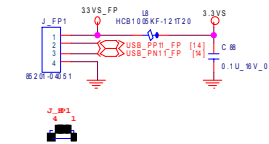
LED



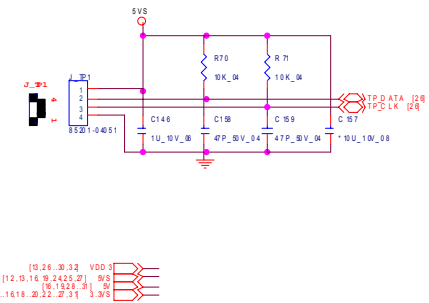
FAN CONTROL



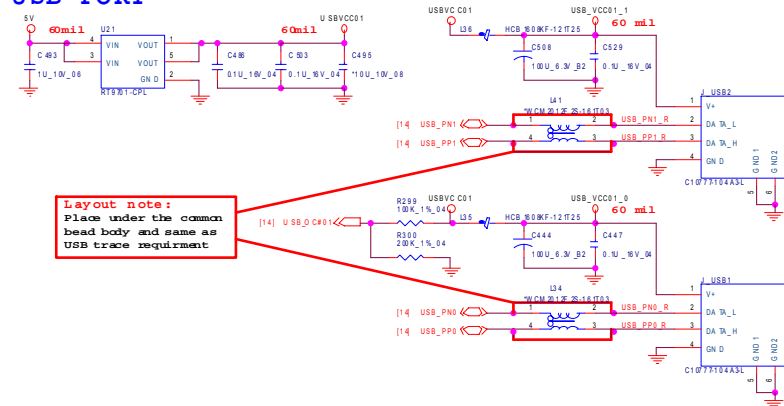
FP CONN



CLICK CONN



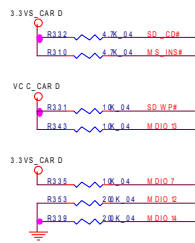
USB PORT



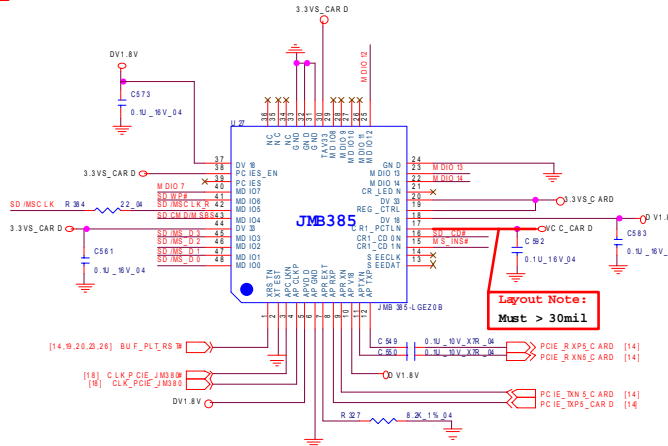
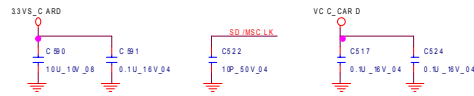
Layout note:
Place under the common
bead body and same as
USB trace requirement

JMB385 Card Reader

JMB385 CARD READER



	HIGH	LOW
MDIO7	On Board	Adi-in Card
MDIO1 2	CRU_PCTLN High Active	CRU_PCTLN Low Active
MDIO1 4	CRU_LEIN High Active	CRU_LEIN Low Active

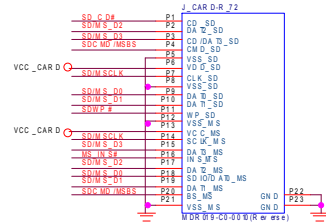


Sheet 22 of 40
JMB385 Card Reader

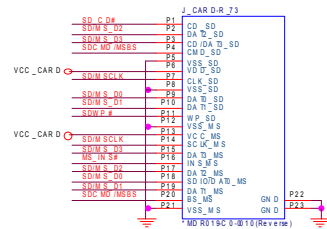
B.Schematic Diagrams

Near Cardreader CON

M720T Card Reader Connector

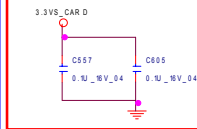


M730T Card Reader Connector



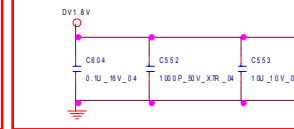
Layout note:

Very closed between pin 19 and pin 20



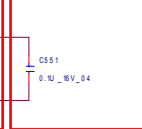
Layout note:

Very closed to pin 5 (Trace width/length: 20mil / <120mil)



Layout note:

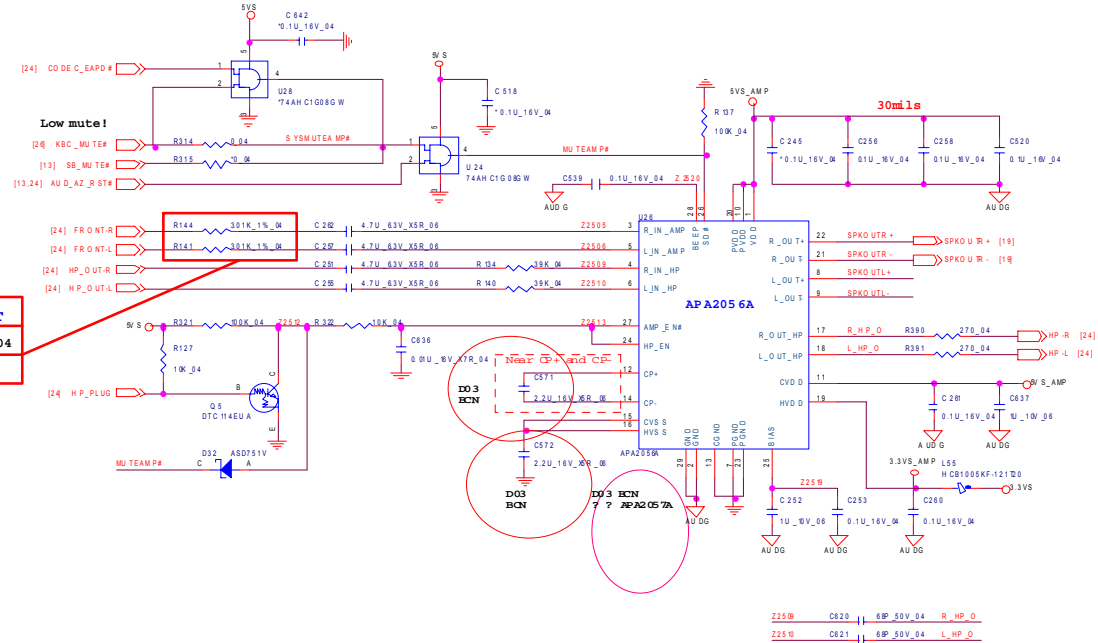
Very closed between pin 10



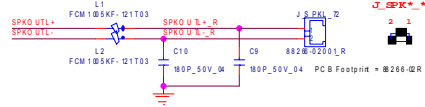
Audio AMP2056

Sheet 25 of 40
Audio AMP2056

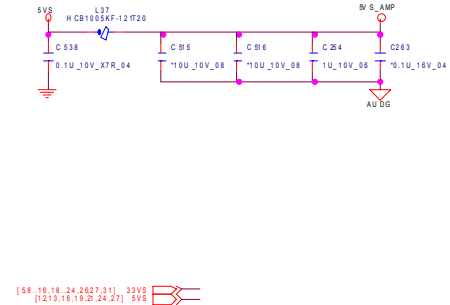
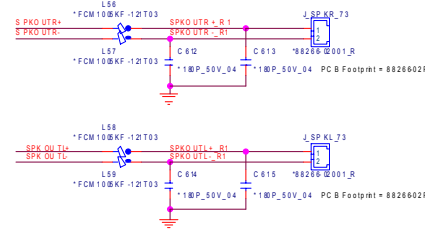
	M720T	M730T
R144	3.01K_1%_04	6.2K_1%_04
R141	3.01K_1%_04	5.6K_04



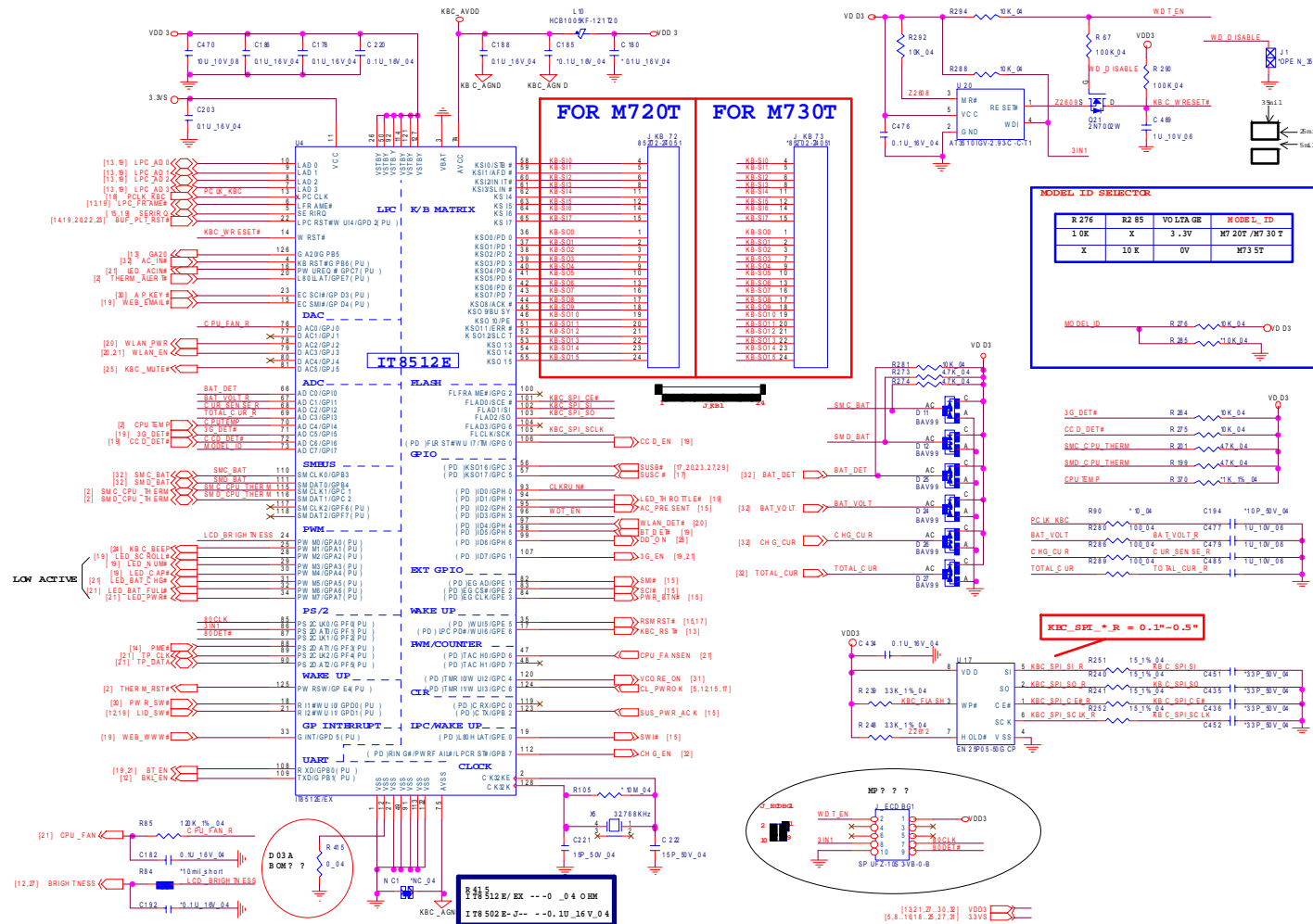
For M720T



For M730T



KBC-ITE IT8512E

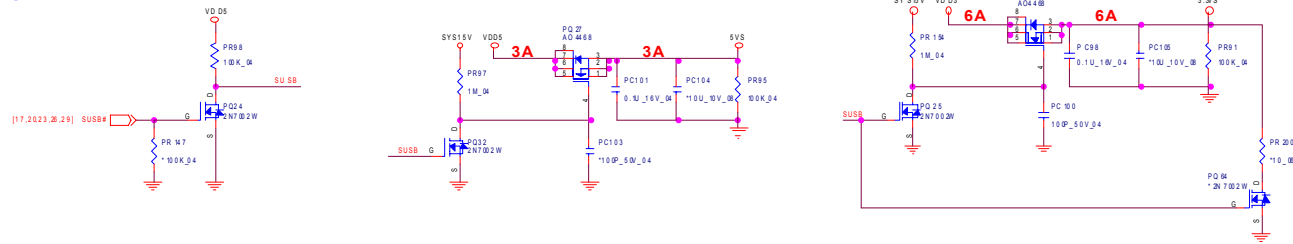


Sheet 26 of 40
KBC-ITE IT8512E

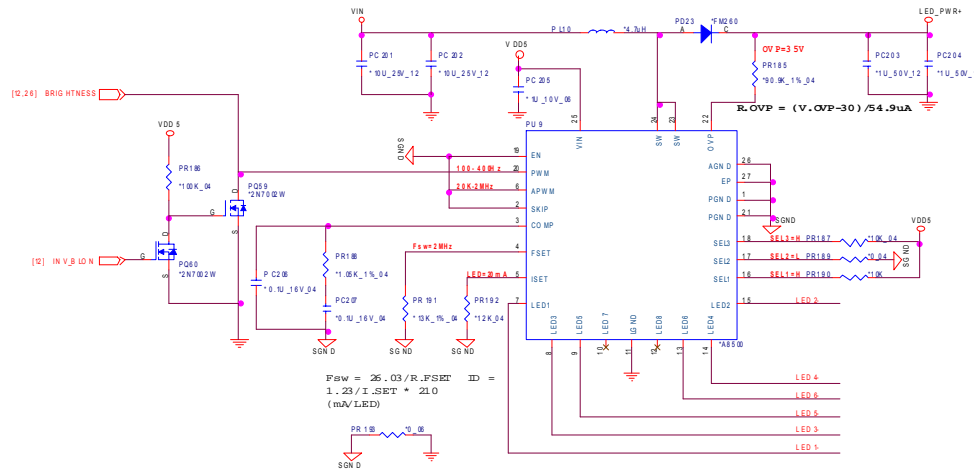
B.Schematic Diagrams

System Power, LED BKLT

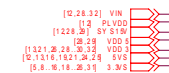
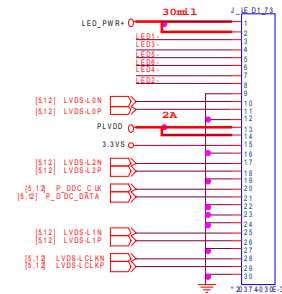
5VS, 3.3VS



M735T LED PANEL BACKLIGHT DRIVER



SEL1	SEL2	SEL3	LEDx Output
0	0	0	Only LED1 on
1	0	0	LED1 through LED2 on
0	1	0	LED1 through LED3 on
1	1	0	LED1 through LED4 on
0	0	1	LED1 through LED5 on
1	0	1	LED1 through LED6 on
0	1	1	LED1 through LED7 on
1	1	1	LED1 through LED8 on

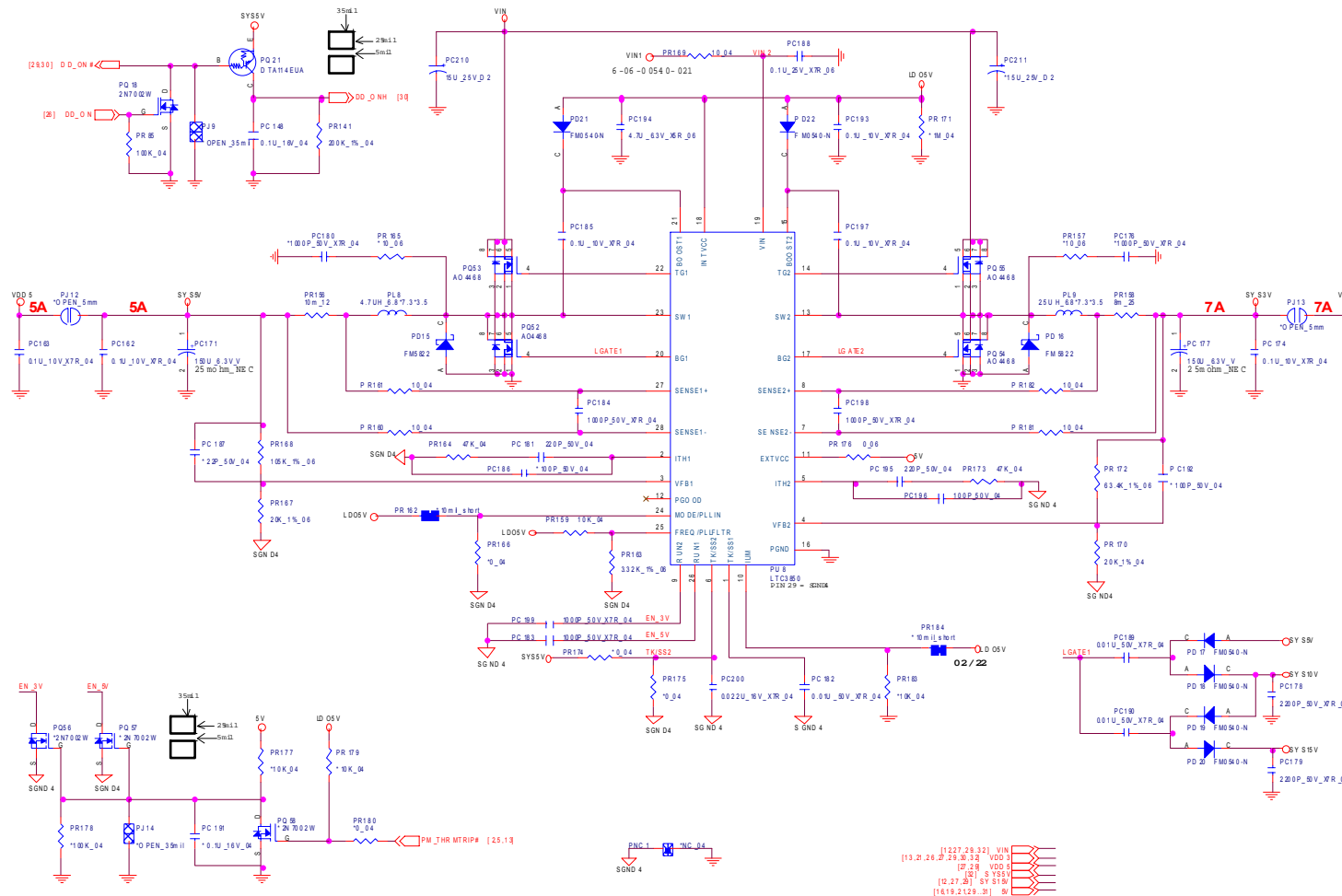


Sheet 27 of 40
System Power,
LED BKLT

B.Schematic Diagrams

Power VDD3, VDD5

VDD3, VDD5



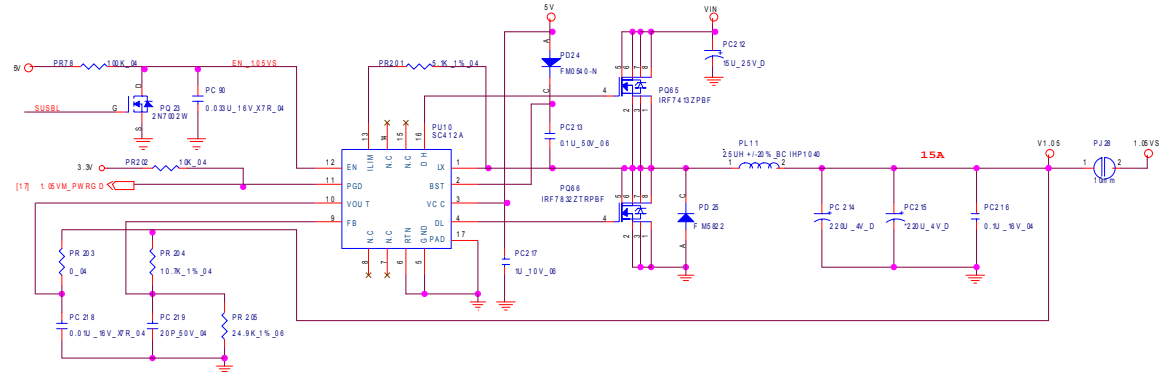
Sheet 28 of 40
Power VDD3, VDD5

B.Schematic Diagrams

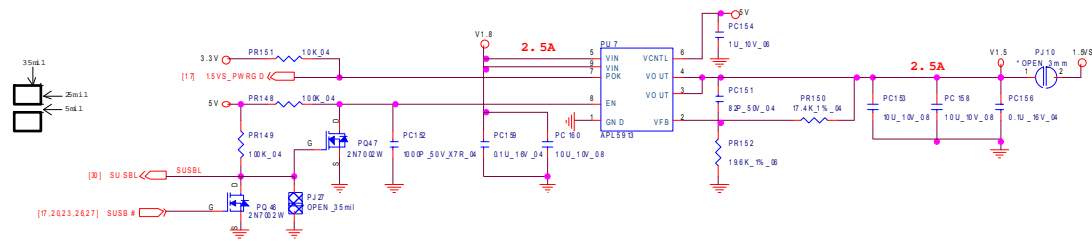
Schematic Diagrams

Power 1.5VS, 1.05VS, 3.3V, 5V

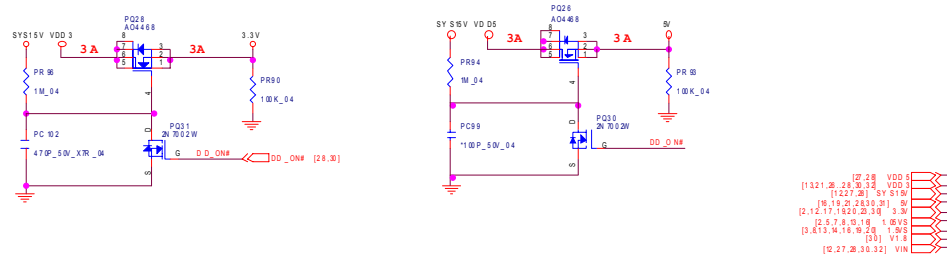
1.05VS



1.5V



3.3V, 5V

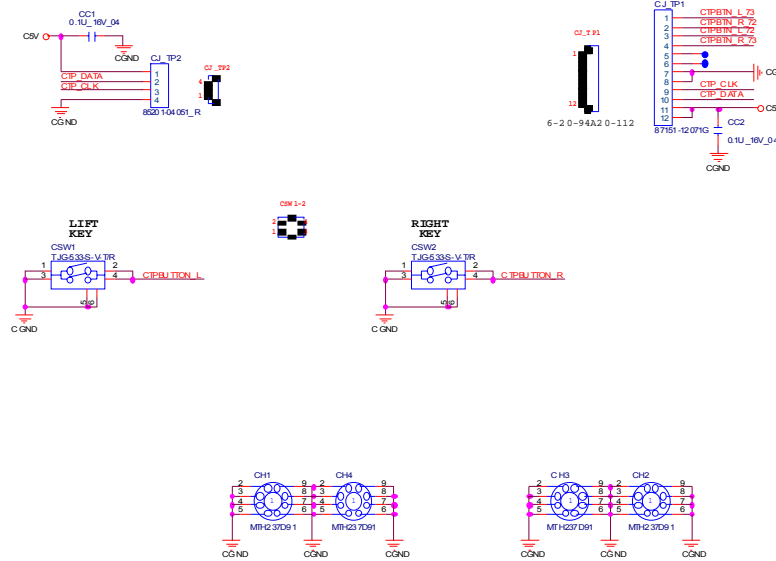


B.Schematic Diagrams

Sheet 29 of 40
Power 1.5VS,
1.05VS, 3.3V, 5V

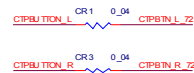
Click Board

CLICK BOARD

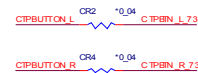


Sheet 36 of 40
Click Board

For M720T



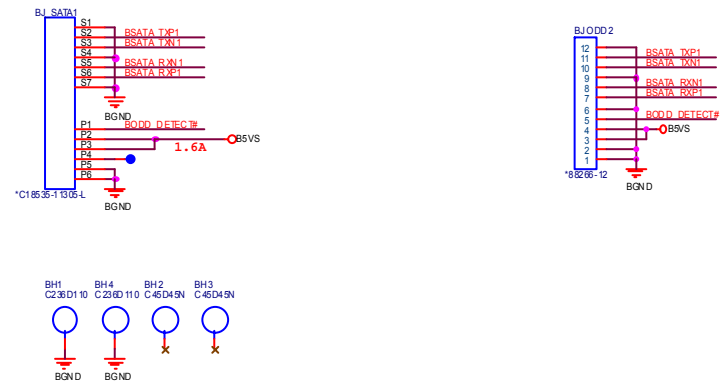
For M730T



M730T ODD Bridge Board

Sheet 37 of 40
M730T ODD Bridge
Board

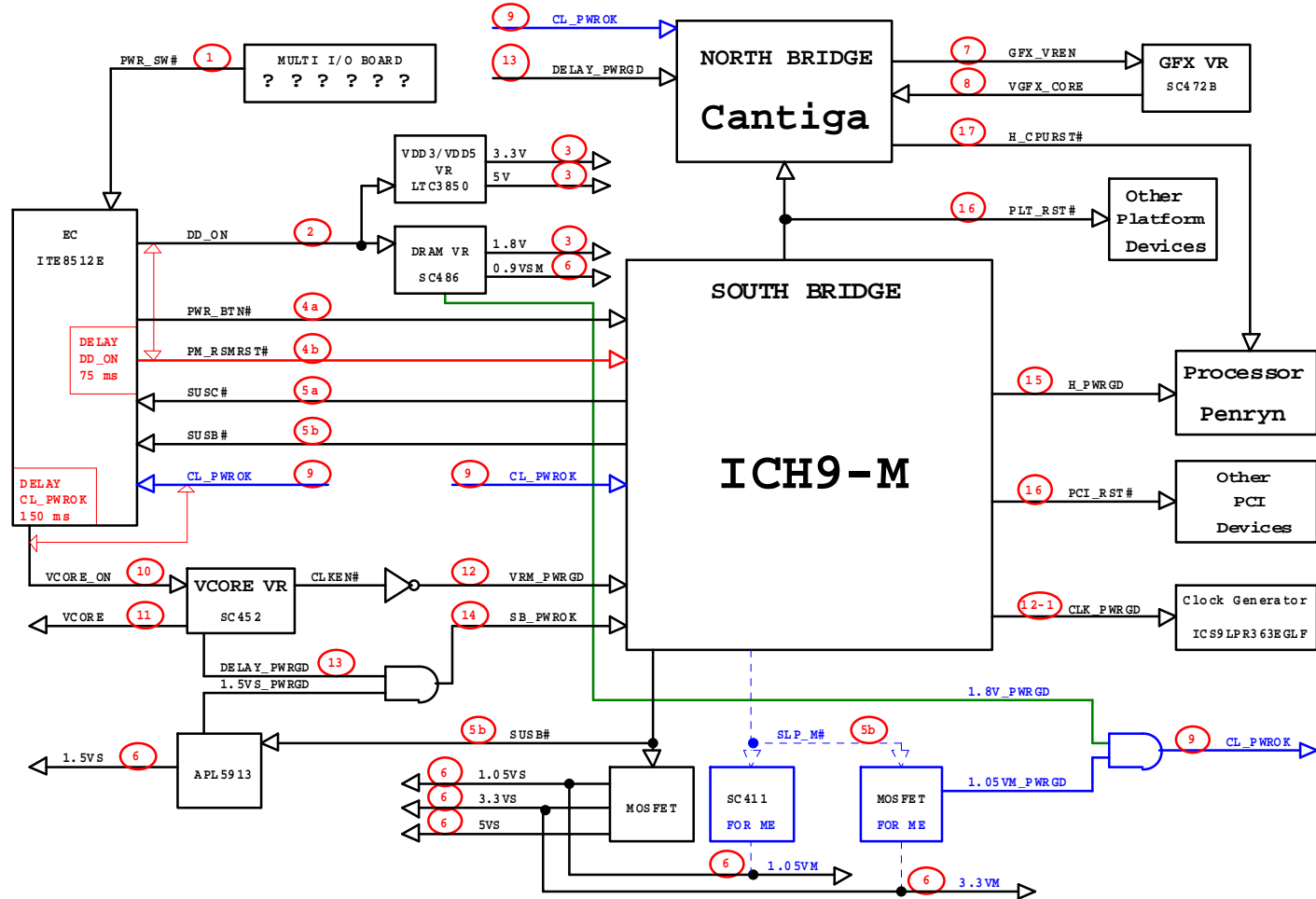
M730T ODD BRIDGE BOARD



Power Sequence Diagram

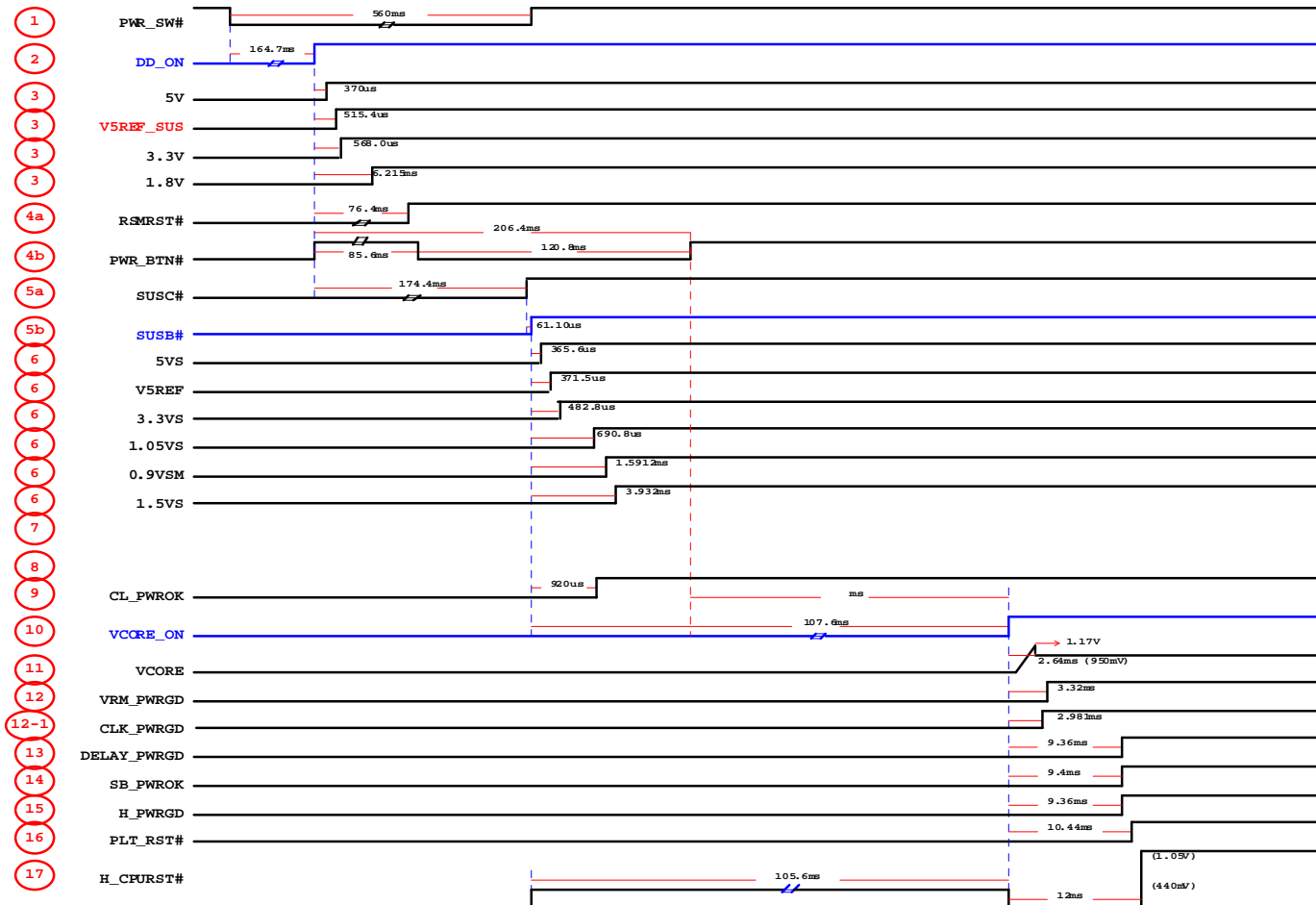
M720T V0.0 BOOT BLOCK DIAGRAM

Sheet 39 of 40
Power Sequence
Diagram



Power Sequence v3.0

M720T V3.0 POWER ON SEQUENCE



Sheet 40 of 40
Power Sequence
v3.0

Schematic Diagrams