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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 W840AU series notebook PC.

The following information is included:

Chapter 1, Introduction, provides general information about the location of system elements and their specifications. Chapter 2, Disassembly, provides step-by-step instructions for disassembling parts and subsystems and how to upgrade elements of the system.

Appendix A, Part Lists
Appendix B, Schematic Diagrams
Appendix C, Updating the FLASH ROM BIOS
IMPORTANT SAFETY INSTRUCTIONS

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 as follows:

- AC Input of 100 - 240V, 50 - 60Hz, DC Output of 19V, 3.42A (65 Watts) minimum AC/DC Adapter.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
This device may not cause harmful interference.
This device must accept any interference received, including interference that may cause undesired operation.
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.

   ![Diagram](image1)

   - Do not expose the computer to any shock or vibration.
   - Do not place it on an unstable surface.
   - Do not place anything heavy on the computer.

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

   ![Diagram](image2)

   - Do not expose it to excessive heat or direct sunlight.
   - Do not leave it in a place where foreign matter or moisture may affect the system.
   - Don’t use or store the computer in a humid environment.
   - Do not place the computer on any surface which will block the vents.

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

   ![Diagram](image3)

   - Do not turn off the power until you properly shut down all programs.
   - Do not turn off any peripheral devices when the computer is on.
   - Do not disassemble the computer by yourself.
   - Perform routine maintenance on your computer.
4. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.

5. **Take care when using peripheral devices.**

   ![Use only approved brands of peripherals.](image1)
   ![Unplug the power cord before attaching peripheral devices.](image2)

**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.
Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- 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 Guidelines

The following can also apply to any backup batteries you may have.

- If you do not use the battery for an extended period, then remove the battery from the computer for storage.
- Before removing the battery for storage charge it to 60% - 70%.
- Check stored batteries at least every 3 months and charge them to 60% - 70%.

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.

Battery Level

Click the battery icon in the taskbar to see the current battery level and charge status. A battery that drops below a level of 10% will not allow the computer to boot up. Make sure that any battery that drops below 10% is recharged within one week.
Preface

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

User’s Manual on CD/DVD
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.

System Startup
1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Insert the battery and make sure it is locked in position.
4. Securely attach any peripherals you want to use with the computer (e.g. keyboard and mouse) to their ports.
5. Attach the AC/DC adapter to the DC-In jack on the right of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
6. Use one hand to raise the lid/LCD to a comfortable viewing angle (do not exceed 130 degrees); use the other hand (as illustrated in Figure 1) to support the base of the computer (Note: Never lift the computer by the lid/LCD).
7. Press the power button to turn the computer “on”.

Figure 1
Opening the Lid/LCD/ Computer with AC/DC Adapter Plugged-In

Shut Down
Note that you should always shut your computer down by choosing the Shut down command in Windows (see below). This will help prevent hard disk or system problems.

Click the icon in the Start Screen and choose Shut down from the menu.
Or
Right-click the Start button at the bottom of the Start Screen or the Desktop and choose Shut down or sign out > Shut down from the context menu.
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Chapter 1: Introduction

Overview
This manual covers the information you need to service or upgrade the \textit{W840AU} series notebook computer. Information about operating the computer (e.g. getting started, and the \textit{Setup} utility) is in the \textit{User’s Manual}. Information about drivers (e.g. VGA & audio) is also found in the \textit{User’s Manual}. The manual is shipped with the computer.

Operating systems (e.g. \textit{Window 8.1}, etc.) have their own manuals as do application softwares (e.g. word processing and database programs). If you have questions about those programs, you should consult those manuals.

The \textit{W840AU} series notebook is designed to be upgradeable. See \textit{Disassembly on page 2 - 1} for a detailed description of the upgrade procedures for each specific component. Please take note of the warning and safety information indicated by the “\textit{}” symbol.

The balance of this chapter reviews the computer’s technical specifications and features.
# Specifications

**CPU**
The CPU is not a user serviceable part. Accessing the CPU in any way may violate your warranty.

**Latest Specification Information**
The specifications listed here are correct at the time of sending them to the press. Certain items (particularly processor types/speeds) may be changed, delayed or updated due to the manufacturer’s release schedule. Check with your service center for more details.

## Processor Options

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</tr>
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</tr>
</tbody>
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**BIOS**
- 64Mb SPI Flash ROM
- AMI BIOS

**Memory**
- Two 204 Pin SO-DIMM Sockets Supporting DDR3L 1600MHz Memory
- Memory Expandable up to 16GB
  (The real memory operating frequency depends on the FSB of the processor.)

**Storage**
- One Changeable 2.5" 7mm (h) SATA HDD/SSD
  *(Factory Option)* One mSATA Solid State Drive (SSD)

**LCD Options**
- 14" (35.56cm) HD/HD+/FHD

## Audio
- High Definition Audio Compliant Interface
- 2 * Built-In Speakers
- Built-In Microphone

## Video Adapter
- **Intel GPU (CPU integrated)**
- **Intel HD Graphics 5500 (Core i7/i5/i3 CPU)**
  Dynamic Frequency (Intel Dynamic Video Memory Technology for up to 1.7GB)
  Microsoft DirectX®11.1 Compatible
- **Intel HD Graphics (Pentium/Celeron CPU)**
  Dynamic Frequency (Intel Dynamic Video Memory Technology for up to 1.7GB)
  Microsoft DirectX®11.1 Compatible

## Security
- Security (Kensington® Type) Lock Slot
- BIOS Password
- Intel® PTT *(Factory Option)* TPM 2.0

## Pointing Device
- Built-in Touchpad

## Keyboard
- "WinKey" keyboard (with embedded numeric keypad)

## Mini Card Slots
- Slot 1 for WLAN and Bluetooth Combo Module
- Slot 2 for mSATA SSD
- Or *(Factory Option)* Slot 2 for M.2 3G/4G Module
# Introduction

## Card Reader
- Embedded Multi-In-1 Card Reader
  - MMC (MultiMedia Card) / RS MMC
  - SD (Secure Digital) / Mini SD / SDHC/ SDXC

## Communication
- Built-In Gigabit Ethernet LAN
- 1.0M HD PC Camera Module
  - (Factory Option) 3G or 4G M.2 Module
- WLAN/ Bluetooth Half Mini-Card Modules:
  - (Factory Option) Intel® Wireless-AC 3160 Wireless LAN (802.11ac) + Bluetooth 4.0
  - (Factory Option) Intel® Wireless-AC 7260 Wireless LAN (802.11ac) + Bluetooth 4.0
  - (Factory Option) Intel® Wireless-N 7260 Wireless LAN (802.11b/g/n) + Bluetooth 4.0
  - (Factory Option) Third-Party Wireless LAN (802.11b/g/n) + Bluetooth 4.0

## Interface
- Two USB 3.0 Ports
- One HDMI-Out Port
- One Headphone-Out Jack
- One Microphone-In Jack
- One RJ-45 LAN Jack
- One DC-in Jack

## Environmental Spec
- **Temperature**
  - Operating: 5°C - 35°C
  - Non-Operating: -20°C - 60°C
- **Relative Humidity**
  - Operating: 20% - 80%
  - Non-Operating: 10% - 90%

## Power
- Full Range AC/DC Adapter
- AC Input: 100 - 240V, 50 - 60Hz
- DC Output: 19V, 3.42A (65W)
- Removable 4 Cell Smart Lithium-Ion Battery Pack, 44.6WH

## Dimensions & Weight
- 340mm (w) * 240mm (d) * 21mm (h)
- 1.8kg (Barebone with Battery)
1. PC Camera
2. PC Camera LED
3. Built-In Microphone
4. LCD
5. Power Button
6. Keyboard
7. Touchpad & Buttons
External Locator - Front & Right Side Views

**Figure 2**
Front View
1. LED Indicator

**Figure 3**
Right Side View
1. Multi-in-1 Card Reader
2. USB 3.0 Ports
3. HDMI-Out Port
4. RJ-45 LAN Jack
5. DC-In Jack
Introduction

External Locator - Left Side & Rear View

1. Security Lock Slot
2. Microphone-In Jack
3. Headphone-Out Jack
4. Vent/Fan Intake/Outlet

Figure 4
Left Side View
1. Security Lock Slot
2. Microphone-In Jack
3. Headphone-Out Jack
4. Vent/Fan Intake/Outlet

Figure 5
Rear View
1. Battery
Introduction

External Locator - Bottom View

1. Battery
2. Vent/Fan Intake/Outlet
3. Component Bay Cover
4. HDD Bay
5. Speakers

To prevent your computer from overheating, make sure nothing blocks any vent while the computer is in use.
Mainboard Overview - Top (Key Parts)

1. KBC-ITE IT8518
2. 
Mainboard Overview - Bottom (Key Parts)

1. Mini-Card Connector (3G Module)
2. Memory Slots DDR3 SO-DIMM
3. Mini-Card Connector (WLAN Module)
Mainboard Overview - Top (Connectors)

1. Speaker Cable Connector
2. Audio Board Cable Connector
3. Keyboard Cable Connector
4. USB Port 3.0
5. HDMI-Out Port
6. RJ-45 LAN Jack
7. DC-In Jack
1. Multi-in-1 Card Reader
2. Battery Connector
3. ODD Connector
4. 
5. 

Mainboard Overview - Bottom (Connectors)
Chapter 2: Disassembly

Overview

This chapter provides step-by-step instructions for disassembling the **W840AU** 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.
NOTE: All disassembly procedures assume that the system is turned OFF, and disconnected from any power supply (the battery is removed too).

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

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

**Connections**
Connections within the computer are one of four types:

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

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

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

- **Board-to-board or multi-pin sockets**
  To separate the boards, gently rock them from side to side as you pull them apart. If the connection is very tight, use a small flat-head screwdriver - use just enough force to start.
Maintenance Precautions
The following precautions are a reminder. To avoid personal injury or damage to the computer while performing a removal and/or replacement job, take the following precautions:

1. **Don't drop it.** Perform your repairs and/or upgrades on a stable surface. If the computer falls, the case and other components could be damaged.

2. **Don't overheat it.** Note the proximity of any heating elements. Keep the computer out of direct sunlight.

3. **Avoid interference.** Note the proximity of any high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage components and/or data. You should also monitor the position of magnetized tools (i.e. screwdrivers).

4. **Keep it dry.** This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

5. **Be careful with power.** Avoid accidental shocks, discharges or explosions.
   - Before removing or servicing any part from the computer, turn the computer off and detach any power supplies.
   - When you want to unplug the power cord or any cable/wire, be sure to disconnect it by the plug head. Do not pull on the wire.

6. **Peripherals –** Turn off and detach any peripherals.

7. **Beware of static discharge.** ICs, such as the CPU and main support chips, are vulnerable to static electricity. Before handling any part in the computer, discharge any static electricity inside the computer. When handling a printed circuit board, do not use gloves or other materials which allow static electricity buildup. We suggest that you use an anti-static wrist strap instead.

8. **Beware of corrosion.** As you perform your job, avoid touching any connector leads. Even the cleanest hands produce oils which can attract corrosive elements.

9. **Keep your work environment clean.** Tobacco smoke, dust or other air-born particulate matter is often attracted to charged surfaces, reducing performance.

10. **Keep track of the components.** When removing or replacing any part, be careful not to leave small parts, such as screws, loose inside the computer.

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

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 System Memory:
1. Remove the battery  page 2 - 5
2. Remove the system memory  page 2 - 6

To remove the HDD:
1. Remove the battery  page 2 - 5
2. Remove the HDD  page 2 - 8

To remove the SSD:
1. Remove the battery  page 2 - 5
2. Remove the SSD  page 2 - 10

To remove the Wireless LAN Module:
1. Remove the battery  page 2 - 5
2. Remove the WLAN  page 2 - 11

To remove the Keyboard:
1. Remove the battery  page 2 - 5
2. Remove the keyboard  page 2 - 12
Removing the Battery

1. Turn the computer off, and turn it over.
2. Slide the latch 1 in the direction of the arrow (Figure 1a).
3. Slide the latch 2 in the direction of the arrow, and hold it in place (Figure 1a).
4. Slide the battery 3 in the direction of the arrow 4 (Figure 1b).
5. Reinsert the battery as illustrated below 5 (Figure 1c).

Figure 1
Battery Removal

a. Slide the latch and hold it in place.
b. Slide the battery out.
c. Reinsert the battery.
Disassembly

Removing the System Memory (RAM)

The computer has two memory sockets for 204 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDR3L Up to 1600 MHz. The SO-DIMM modules supported are 1024MB and 2048MB DDR3 Modules. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process
1. Turn off the computer, turn it over, remove the battery (page 2 - 5).
2. Locate the component bay cover and remove screws 1 - 2 (Figure 2a).
3. Slide the bay cover 3 until the cover and case indicators 4 are aligned (Figure 2b).
4. The RAM modules will be visible at point 5 on the mainboard (Figure 2).

Figure 2
RAM Module Removal

a. Remove the screws.
b. Slide the component bay cover out.
c. Remove the component bay cover.

2 - 6 Removing the System Memory (RAM)
5. Gently pull the two release latches (6 & 7) on the sides of the memory socket in the direction indicated by the arrows (Figure 2b). The RAM module (8) will pop-up, and you can then remove it.
6. Pull the latches to release the second module if necessary.
7. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
8. The module will only fit one way as defined by its pin alignment. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE IT; it should fit without much pressure.
9. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
10. Reinsert the component bay cover by placing it on the bottom case assembly, and make sure the case markers line up 9.
11. Apply downward pressure and sliding the cover in the direction of arrow 10.
12. Replace the screws and battery (see page 2 - 6).
13. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

**Disassembly**

**Figure 3**
RAM Module Removal (contd)

d. Pull the release latches to remove the module(s).
e. Remove the module(s).
f. Reinstall the component bay cover.

**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.
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 or 7mm (h). Follow your operating system’s installation instructions, and install all necessary drivers and utilities (as outlined in Chapter 4 of the User’s Manual) when setting up a new hard disk.

Hard Disk Upgrade Process

1. Turn off the computer, turn it over.
2. Locate the hard disk bay cover and remove screws 1 - 2 from the bottom cover (Figure 4a).
3. Slide the bay cover 3 until the cover and case indicators 4 are aligned (Figure 4b).

HDD System Warning

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

- You have backed up any data you want to keep from your old HDD.
- You have all the CD-ROMs and FDDs required to install your operating system and programs.
- If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

Figure 4
HDD Assembly
Removal

a. Remove the screws.
b. Remove the cover.

3. Hard Disk Bay Cover
   • 2 Screws
4. Remove the HDD bay cover (Figure 5c).
5. Grip the tab and slide the hard disk assembly in the direction of arrow (Figure 5d).
6. Lift the hard disk assembly out of the bay (Figure 5e).
7. Remove the screws and the hard disk cover from the hard disk (Figure 5f).
8. Replace the HDD assembly by using a finger to push it in at point in the direction of arrow.
9. Reinsert the HDD bay cover by placing it on the bottom case assembly, and make sure the case markers line up.
10. Apply downward pressure with both thumbs at points & and slide the cover in the direction of the arrows as illustrated.
11. Replace the screws and battery (see page 2 - 8).
Disassembly

**Removing the SSD Module**

1. Turn off the computer, turn it over, remove the battery (page 2 - 5) and component bay cover (page 2 - 6).
2. The SSD module will be visible at point 1 on the mainboard (Figure 6a).
3. Remove the screw 2 (Figure 6b)
4. The SSD module 3 (Figure 6c) will pop-up, and you can remove it from the computer.
5. Replace the SSD by angling it as illustrated, and then fit the connector firmly into the slot.
6. The SSD 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.
7. Press the SSD module down towards the mainboard and replace screw 2 and the component bay cover.

**Note:** Make sure you reconnect the antenna cable to the “1 + 2” socket (Figure 7b).

---

**3. SSD Module**

- 1 Screw
Removing the Wireless LAN Module

1. Turn off the computer, turn it over, remove the battery (page 2 - 5) and keyboard (page 2 - 12).
2. The Wireless LAN module will be visible at point 1 on the mainboard (Figure 7a).
3. Carefully disconnect the cable 2 & 3, and then remove the screw 4 (Figure 7b).
4. The Wireless LAN module 5 (Figure 7c) will pop-up, and you can remove it from the computer.

Note: Make sure you reconnect the antenna cable to the “1 + 2” socket (Figure 7b).
Removing the Keyboard

1. Turn off the computer, turn it over, remove the battery (page 2 - 5).
2. Lift the center cover at point 1 toward the direction of the arrow 2 (Figure 8a).
3. Remove the center cover module 3 and screws 4 - 7 (Figure 8b).
4. Carefully lift the keyboard 8 up, being careful not to bend the keyboard ribbon cable 9 (Figure 8c).
5. Disconnect the keyboard ribbon cable from the locking collar socket 10 (Figure 8c).

- Lift the center cover.
- Remove the center cover and screws.
- Disconnect the keyboard ribbon cable from the locking collar socket.
6. Carefully lift up the keyboard off the computer (Figure 9d).
7. Reverse the process to install a new keyboard.
8. Replace the center cover module as shown (Figure 9e).

d. Remove the keyboard.
e. Remove the keyboard shielding plate.
Disassembly
Appendix A: Part Lists

This appendix breaks down the *W840AU* 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>
<thead>
<tr>
<th>Part</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>page A - 3</td>
</tr>
<tr>
<td>Bottom</td>
<td>page A - 4</td>
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<tr>
<td>HDD</td>
<td>page A - 5</td>
</tr>
<tr>
<td>LCD</td>
<td>page A - 6</td>
</tr>
</tbody>
</table>
Figure A - 1
Top

<table>
<thead>
<tr>
<th>DC</th>
<th>PART NAME</th>
<th>PART NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BASE DOCUMENT</td>
<td>123-456-789-010</td>
</tr>
<tr>
<td>2</td>
<td>FRONT SURFACE</td>
<td>123-456-789-011</td>
</tr>
<tr>
<td>3</td>
<td>MIDDLE SURFACE</td>
<td>123-456-789-012</td>
</tr>
<tr>
<td>4</td>
<td>BACK SURFACE</td>
<td>123-456-789-013</td>
</tr>
<tr>
<td>5</td>
<td>TOP COVER</td>
<td>123-456-789-014</td>
</tr>
<tr>
<td>6</td>
<td>BOTTOM COVER</td>
<td>123-456-789-015</td>
</tr>
<tr>
<td>7</td>
<td>LEFT COVER</td>
<td>123-456-789-016</td>
</tr>
<tr>
<td>8</td>
<td>RIGHT COVER</td>
<td>123-456-789-017</td>
</tr>
<tr>
<td>9</td>
<td>TOP COVER DUCT</td>
<td>123-456-789-018</td>
</tr>
<tr>
<td>10</td>
<td>BOTTOM COVER DUCT</td>
<td>123-456-789-019</td>
</tr>
<tr>
<td>11</td>
<td>LEFT COVER DUCT</td>
<td>123-456-789-020</td>
</tr>
<tr>
<td>12</td>
<td>RIGHT COVER DUCT</td>
<td>123-456-789-021</td>
</tr>
<tr>
<td>13</td>
<td>TOP COVER DUCT MEMBER</td>
<td>123-456-789-022</td>
</tr>
<tr>
<td>14</td>
<td>BOTTOM COVER DUCT MEMBER</td>
<td>123-456-789-023</td>
</tr>
<tr>
<td>15</td>
<td>LEFT COVER DUCT MEMBER</td>
<td>123-456-789-024</td>
</tr>
<tr>
<td>16</td>
<td>RIGHT COVER DUCT MEMBER</td>
<td>123-456-789-025</td>
</tr>
</tbody>
</table>
Figure A - 2
Bottom
HDD

Figure A - 3

HDD
Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the W840AU notebook’s PCB’s. The following table indicates where to find the appropriate schematic diagram.

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<th>Diagram - Page</th>
<th>Diagram - Page</th>
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<td>Charger, DC In - Page B - 32</td>
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<tr>
<td>Processor 1/11 - Page B - 3</td>
<td>VGA Frame Buffer Interface - Page B - 18</td>
<td>1.05V - Page B - 33</td>
</tr>
<tr>
<td>Processor 2/11 - Page B - 4</td>
<td>VGA Frame Buffer A - Page B - 19</td>
<td>VDD3, VDD5 - Page B - 34</td>
</tr>
<tr>
<td>Processor 3/11 - Page B - 5</td>
<td>VGA Frame Buffer B - Page B - 20</td>
<td>1.8VS, 1.5VS, 5V, 5VS, SATA_5VS - Page B - 35</td>
</tr>
<tr>
<td>Processor 4/11 - Page B - 6</td>
<td>VGA I/O - Page B - 21</td>
<td>DDR 1.5V or 1.35V / 0.75VS PCH 1.5VS - Page B - 36</td>
</tr>
<tr>
<td>Processor 5/11 - Page B - 7</td>
<td>VGA NVDD Decoupling - Page B - 22</td>
<td>VCORE - Page B - 37</td>
</tr>
<tr>
<td>Processor 8/11 - Page B - 10</td>
<td>WLAN, MSATA - Page B - 25</td>
<td>HDD Board - Page B - 40</td>
</tr>
<tr>
<td>Processor 9/11 - Page B - 11</td>
<td>HDMI, RJ45, Fan - Page B - 26</td>
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<tr>
<td>Processor 10/11 - Page B - 12</td>
<td>Audio Codec ALC282 - Page B - 27</td>
<td>LED Board - Page B - 42</td>
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<tr>
<td>DDR3 SO-DIMM_0 - Page B - 14</td>
<td>KBC-ITE IT8587 - Page B - 29</td>
<td></td>
</tr>
<tr>
<td>DDR3 SO-DIMM_1 - Page B - 15</td>
<td>CCD, TPM, I/O Connector, LID - Page B - 30</td>
<td></td>
</tr>
<tr>
<td>Panel, Inverter - Page B - 16</td>
<td>3.3V_SPI, 3.3VS, 3.3V_M, 3.3V - Page B - 31</td>
<td></td>
</tr>
</tbody>
</table>

Version Note
The schematic diagrams in this chapter are based upon version 6-7P-W8405-006. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).
Sheet 1 of 42
System Block Diagram
Processor 3/11
Panel Connector (40Pin)

LED PANEL (LVDS Dual Channel)

Panel Power

EDP (8428)

Panel, Inverter
Schematic Diagrams

VGA Frame Buffer Interface

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VGA Frame Buffer Interface
VGA Frame Buffer A
VGA Frame Buffer B

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VGA Frame Buffer B
**Mode Configure Table (Power On Latch)**

<table>
<thead>
<tr>
<th>MODE_CFG (Pin47)</th>
<th>0</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROM ONLY MODE</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EEPROM MODE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- RTD136 Supports three operation modes for system design. Recommended 4.7k resistor pull-up option for mode selection.
- ROM ONLY Mode: Pin47 pull low, Pin48 pull high.
- EEPROM Mode: Pin48 pull low, Pin47 pull high.

**Initial Code EEPROM**

- initial code EEPROM: 0x9F

**Conclusion:**
- Capacitors should be connected to Pin47.
HDMI, RJ45, Fan

Schematic Diagrams

HDMI, RJ45, Fan

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HDMI, RJ45, Fan

GIGA LAN (RTL8411)
LAN POART

HDMI Repeater

HDMI CONNECTOR

CPU FAN CONTROL

B - 26  HDMI, RJ45, Fan
Audio Codec ALC282
Schematic Diagrams

CCD, TPM, I/O Connector, LID

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CCD, TPM, I/O Connector, LID
3.3V_SPI, 3.3VS, 3.3V_M, 3.3V

Schematic Diagrams

Sheet 30 of 42
3.3V_SPI, 3.3VS, 3.3V_M, 3.3V
1.05V

1.05V

1.05V M

1.05DX_MODPHY

1.05VS

1.05V

IMAX: 8

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1.05V

B. Schematic Diagrams
1.8VS, 1.5VS, 5V, 5VS, SATA_5VS

Schematic Diagrams

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1.8VS, 1.5VS, 5V, 5VS, SATA_5VS
Schematic Diagrams

DDR 1.5V or 1.35V / 0.75VS PCH 1.5VS

1.35V/0.675VS

Schematic Diagrams

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DDR 1.5V or 1.35V / 0.75VS PCH 1.5VS
Schematic Diagrams

N14P, NVVDD, PEX, FBVDDQ

Sheet 37 of 42
N14P, NVVDD, PEX, FBVDDQ

VGA__NVVDD

3V3 RUN

FBVDDQ

1.05V@4A 250 MIL

PEX_VDD

N385 Close to PQ27

NVVDD FOR N14_VGA

Page dimensions: 842.0x595.0
Audio Board
Schematic Diagrams
Appendix C: Updating the FLASH ROM BIOS

To update the FLASH ROM BIOS, you must:

- Download the BIOS update from the web site.
- Unzip the files onto a bootable CD/DVD/USB Flash Drive.
- Reboot your computer from an external CD/DVD/USB Flash Drive.
- Use the flash tools to update the flash BIOS using the commands indicated below.
- Restart the computer booting from the HDD and press F2 at startup enter the BIOS.
- Load setup defaults from the BIOS and save the default settings and exit the BIOS to restart the computer.
- After rebooting the computer you may restart the computer again and make any required changes to the default BIOS settings.

Download the BIOS
1. Go to www.clevo.com.tw and point to E-Services and click E-Channel.
2. Use your user ID and password to access the appropriate download area (BIOS), and download the latest BIOS files (the BIOS file will be contained in a batch file that may be run directly once unzipped) for your computer model (see sidebar for important information on BIOS versions).

Unzip the downloaded files to a bootable CD/DVD/ or USB Flash drive
1. Insert a bootable CD/DVD/USB flash drive into the CD/DVD drive/USB port of the computer containing the downloaded files.
2. Use a tool such as Winzip or Winrar to unzip all the BIOS files and refresh tools to your bootable CD/DVD/USB flash drive (you may need to create a bootable CD/DVD with the files using a 3rd party software).

Set the computer to boot from the external drive
1. With the bootable CD/DVD/USB flash drive containing the BIOS files in your CD/DVD drive/USB port, restart the computer and press F2 (in most cases) to enter the BIOS.
2. Use the arrow keys to highlight the Boot menu.
3. Use the “+” and “-” keys to move boot devices up and down the priority order.
4. Make sure that the CD/DVD drive/USB flash drive is set first in the boot priority of the BIOS.
5. Press F4 to save any changes you have made and exit the BIOS to restart the computer.
BIOS Update

Use the flash tools to update the BIOS

1. Make sure you are not loading any memory management programs such as HIMEM by holding the F8 key as you see the message “Starting MS-DOS”. You will then be prompted to give “Y” or “N” responses to the programs being loaded by DOS. Choose “N” for any memory management programs.

2. You should now be at the DOS prompt e.g: DISK C:\> (C is the designated drive letter for the CD/DVD drive/USB flash drive).

3. **Type the following command** at the DOS prompt:

   ```
   C:\> Flash.bat
   ```

4. The utility will then proceed to flash the BIOS.

5. You should then be prompted to press any key to restart the system or turn the power off, and then on again but make sure you remove the CD/DVD/USB flash drive from the CD/DVD drive/USB port before the computer restarts.

**Restart the computer (booting from the HDD)**

1. With the CD/DVD/USB flash drive removed from the CD/DVD drive/USB port the computer should restart from the HDD.

2. Press F2 as the computer restarts to enter the BIOS.

3. Use the arrow keys to highlight the **Exit** menu.

4. Select **Load Setup Defaults** (or press F3) and select “Yes” to confirm the selection.

5. Press F4 to save any changes you have made and exit the BIOS to restart the computer.

**Your computer is now running normally with the updated BIOS**

You may now enter the BIOS and make any changes you require to the default settings.