

## Hardware Maintenance Manual

### Types

9636	9638	9640	9641
9642	9643	9644	9645



**ThinkCentre**

# Hardware Maintenance Manual

**Note:** Before using this information and the product it supports be sure to read the information under "Notices," on page 201.

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## Chapter 1. About this manual

This manual contains service and reference information for ThinkCentre® computers listed on the cover. It is intended only for trained servicers who are familiar with Lenovo computer products.

Before servicing a Lenovo product, be sure to read the Safety Information. See Chapter 2, "Safety information," on page 3.

The Symptom-to-FRU Index and Additional Service Information chapters are not specific to any machine type and are applicable to all ThinkCentre computers.

This manual includes a complete FRU part number listing for each machine type and model listed on the cover. If you have internet access, FRU part numbers are also available at:

<http://www.lenovo.com/support>

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## Important Safety Information

Be sure to read all caution and danger statements in this book before performing any of the instructions.

Veillez lire toutes les consignes de type DANGER et ATTENTION du présent document avant d'exécuter les instructions.

Lesen Sie unbedingt alle Hinweise vom Typ "ACHTUNG" oder "VORSICHT" in dieser Dokumentation, bevor Sie irgendwelche Vorgänge durchführen

Leggere le istruzioni introdotte da ATTENZIONE e PERICOLO presenti nel manuale prima di eseguire una qualsiasi delle istruzioni

Certifique-se de ler todas as instruções de cuidado e perigo neste manual antes de executar qualquer uma das instruções

Es importante que lea todas las declaraciones de precaución y de peligro de este manual antes de seguir las instrucciones.

تأكد من قراءة كل التحذيرات الموجودة في هذا الكتاب قبل اتباع هذه التعليمات .

执行任何说明之前，请确保已阅读本书中的所有警告和危险声明。

執行任何指示前，請確實閱讀本書中的所有警告及危險聲明。

ודאו שקראתם את כל הודעות האזהרה והסכנה במסמך זה לפני שתבצעו פעולה כלשהי.

본 사용 설명서에 기재된 내용을 실행하기 전에 모든 주의사항 및 위험사항을 숙지하십시오.

---

## Important information about replacing RoHS compliant FRUs

RoHS, The Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (2002/95/EC) is a European Union legal requirement affecting the global electronics industry. RoHS requirements must be implemented on Lenovo products placed on the market after June 2006. Products on the market before June 2006 are not required to have RoHS compliant parts. So, if the parts are not compliant originally, replacement parts can also be noncompliant, but in all cases, if the parts are compliant, the replacement parts must also be compliant.

Lenovo plans to transition to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo's requirements and schedule. Products sold in 2005, will contain some RoHS compliant FRUs. The following statement pertains to these products and any product Lenovo produces containing RoHS compliant parts.

RoHS compliant ThinkCentre parts have unique FRU part numbers. Before or after June, 2006, failed RoHS compliant parts must always be replaced using RoHS compliant FRUs, so only the FRUs identified as compliant in the system HMM or direct substitutions for those FRUs can be used.

Products marketed before June 2006		Products marketed after June 2006	
Current or original part	Replacement FRU	Current or original part	Replacement FRU
Non-RoHS	Can be Non-RoHS	Must be RoHS	Must be RoHS
Non-RoHS	Can be RoHS		
Non-RoHS	Can sub to RoHS		
RoHS	Must be RoHS		

**Note:** A direct substitution is a part with a different FRU part number that is automatically shipped by the distribution center at the time of order.



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## Chapter 2. Safety information

This chapter contains the safety information that you need to be familiar with before servicing a computer.

---

### General safety

Follow these rules to ensure general safety:

- Observe good housekeeping in the area of the machines during and after maintenance.
- When lifting any heavy object:
  1. Ensure you can stand safely without slipping.
  2. Distribute the weight of the object equally between your feet.
  3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift.
  4. Lift by standing or by pushing up with your leg muscles; this action removes the strain from the muscles in your back. *Do not attempt to lift any objects that weigh more than 16 kg (35 lb) or objects that you think are too heavy for you.*
- Do not perform any action that causes hazards to the customer, or that makes the equipment unsafe.
- Before you start the machine, ensure that other service representatives and the customer's personnel are not in a hazardous position.
- Place removed covers and other parts in a safe place, away from all personnel, while you are servicing the machine.
- Keep your tool case away from walk areas so that other people will not trip over it.
- Do not wear loose clothing that can be trapped in the moving parts of a machine. Ensure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing or fasten it with a nonconductive clip, approximately 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

**Remember:** Metal objects are good electrical conductors.
- Wear safety glasses when you are: hammering, drilling soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that might be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.

---

### Electrical safety



**CAUTION:**

Electrical current from power, telephone, and communication cables can be hazardous. To avoid personal injury or equipment damage, disconnect the attached power cords, telecommunication systems, networks, and modems before you open the server/workstation covers, unless instructed otherwise in the installation and configuration procedures.

Observe the following rules when working on electrical equipment.

**Important:** Use only approved tools and test equipment. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.

Many customers have, near their equipment, rubber floor mats that contain small conductive fibers to decrease electrostatic discharges. Do not use this type of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting switch, or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near equipment that has hazardous voltages.
- Disconnect all power before:
  - Performing a mechanical inspection
  - Working near power supplies
  - Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine and to lock the wall box in the off position.
- If you need to work on a machine that has exposed electrical circuits, observe the following precautions:
  - Ensure that another person, familiar with the power-off controls, is near you.  
**Remember:** Another person must be there to switch off the power, if necessary.
  - Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.  
**Remember:** There must be a complete circuit to cause electrical shock. By observing the above rule, you may prevent a current from passing through your body.
  - When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
  - Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.

Observe the special safety precautions when you work with very high voltages; these instructions are in the safety sections of maintenance information. Use extreme care when measuring high voltages.

- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- *Never assume* that power has been disconnected from a circuit. First, *check* that it has been powered-off.

- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.
- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- Do not service the following parts with the power on when they are removed from their normal operating places in a machine:
  - Power supply units
  - Pumps
  - Blowers and fans
  - Motor generators
 and similar units. (This practice ensures correct grounding of the units.)
- If an electrical accident occurs:
  - Use caution; do not become a victim yourself.
  - Switch off power.
  - Send another person to get medical aid.

---

## Safety inspection guide

The intent of this inspection guide is to assist you in identifying potentially unsafe conditions on these products. Each machine, as it was designed and built, had required safety items installed to protect users and service personnel from injury. This guide addresses only those items. However, good judgment should be used to identify potential safety hazards due to attachment of features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:

- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock).
- Explosive hazards, such as a damaged CRT face or bulging capacitor
- Mechanical hazards, such as loose or missing hardware

The guide consists of a series of steps presented in a checklist. Begin the checks with the power off, and the power cord disconnected.

Checklist:

1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Power-off the computer. Disconnect the power cord.
3. Check the power cord for:
  - a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and frame ground.
  - b. The power cord should be the appropriate type as specified in the parts listings.
  - c. Insulation must not be frayed or worn.
4. Remove the cover.

5. Check for any obvious alterations. Use good judgment as to the safety of any alterations.
6. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
7. Check for worn, frayed, or pinched cables.
8. Check that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

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## Handling electrostatic discharge-sensitive devices

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

### Notes:

1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

**Note:** The use of a grounding system is desirable but not required to protect against ESD damage.

- Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- Use an ESD common ground or reference point when working on a double-insulated or battery-operated system. You can use coax or connector-outside shells on these systems.
- Use the round ground-prong of the ac plug on ac-operated computers.

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## Grounding requirements

Electrical grounding of the computer is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

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## Safety notices (multi-lingual translations)

The caution and danger safety notices in this section are provided in the following languages:

- English
- Arabic
- Brazilian/Portuguese
- Chinese (simplified)
- Chinese (traditional)
- French
- German
- Hebrew
- Italian
- Korean
- Spanish



### DANGER

Electrical current from power, telephone and communication cables is hazardous.

To avoid a shock hazard:

- **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
- **Connect all power cords to a properly wired and grounded electrical outlet.**
- **Connect to properly wired outlets any equipment that will be attached to this product.**
- **When possible, use one hand only to connect or disconnect signal cables.**
- **Never turn on any equipment when there is evidence of fire, water, or structural damage.**
- **Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.**
- **Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.**

To Connect	To Disconnect
<ol style="list-style-type: none"><li>1. Turn everything OFF.</li><li>2. First attach all cables to devices.</li><li>3. Attach signal cables to connectors.</li><li>4. Attach power cords to outlet.</li><li>5. Turn device ON.</li></ol>	<ol style="list-style-type: none"><li>1. Turn everything OFF.</li><li>2. First remove power cords from outlet.</li><li>3. Remove signal cables from connectors.</li><li>4. Remove all cables from devices.</li></ol>



**CAUTION:**

When replacing the lithium battery, use only Part Number 33F8354 or an equivalent type battery recommended by the manufacturer. If your system has a module containing a lithium battery, replace it only with the same module type made by the same manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of.

*Do not:*

- Throw or immerse into water
- Heat to more than 100°C (212°F)
- Repair or disassemble

Dispose of the battery as required by local ordinances or regulations.



**CAUTION:**

When laser products (such as CD-ROMs, DVD-ROM drives, fiber optic devices, or transmitters) are installed, note the following:

- Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.
- Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.



**DANGER:** Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following:

Laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.



≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

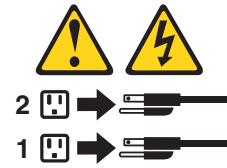
**CAUTION:**

Use safe practices when lifting.



**CAUTION:**

The power control button on the device and the power switch on the power supply do not turn off the electrical current supplied to the device. The device also might have more than one power cord. To remove all electrical current from the device, ensure that all power cords are disconnected from the power source.





## خطر

التيار الكهربى الموجود بمصدر الطاقة أو أجهزة التليفون أو أسلاك الإتصالات يشكل خطورة.

لتفادي مخاطر الصدمات الكهربائية:

لا تحاول توصيل أو فصل أي أسلاك أو القيام بعمليات تركيب أو صيانة أو إعادة توصيف لهذا المنتج أثناء وجود عاصفة كهربائية.

يجب توصيل كل أسلاك الكهرباء في مخارج كهرباء ذات توصيلات أسلاك وتوصيلات أرضية صحيحة  
يجب توصيل أي جهاز سيتم الحاقه بهذا المنتج في مخارج كهرباء ذات توصيلات أسلاك صحيحة.

وإن أمكن يجب استخدام يد واحدة فقط في توصيل أو فصل أسلاك الإشارة.

لا تحاول تشغيل أي جهاز إذا كان هناك أثر لحرق أو مياه أو تلف بالمكونات

يجب فصل أسلاك الكهرباء وأنظمة الاتصالات وشبكات الاتصال وأجهزة المودم الملحقة قبل فتح أغطية الجهاز، ما لم يتم طلب خلاف ذلك في التعليمات الخاصة بالتركيب والتوصيف.

قم بتوصيل وفصل الأسلاك كما هو موضح في الجدول التالي وذلك عند القيام بعمليات التركيب أو النقل أو فتح أغطية هذا المنتج أو الأجهزة الملحقة.

### للتوصيل:

قم بإيقاف كل شيء.

أولاً، قم بتوصيل كل الأسلاك بالأجهزة.

قم بتوصيل أسلاك الإشارة في لموصلات.

قم بتوصيل أسلاك الكهرباء في المخارج.

قم بتشغيل الجهاز.

### للفصل:

قم بإيقاف كل شيء.

أولاً، قم بفصل كل أسلاك الكهرباء من المخرج.

قم بفصل أسلاك الإشارة من الموصلات.

قم بفصل كل الأسلاك من الأجهزة.





تنبيه :

عند استبدال البطارية الليثيوم، استخدم فقط رقم الجزء الخاص **Part Number 33F8354** أو نوع آخر يكون على نفس مستوى الكفاءة يحدده لك المصنع.  
إذا كان النظام الخاص يستخدم معه بطارية ليثيوم قم باستبدالها بنفس النوع الذي تم صناعته من خلال نفس المصنع. تحتوي البطارية على مادة الليثيوم ويمكن أن تنفجر في حالة عدم استخدامها أو التعامل معها بطريقة صحيحة أو عند التخلص منها بطريقة خطأ.

لا تقم بـ:

- الفاء البطارية أو غمرها في الماء
- تسخينها أعلى من ١٠٠ درجة مئوية و(٢١٢ ° فهرنهايت)
- بتصليحها أو فكها

تخلص من البطارية طبقاً للقانون أو النظام المحلي .



تنبيه :

أثناء تركيب منتجات ليزر (مثل CD-ROMs أو وحدة تشغيل DVD أو أجهزة Fiber Optic أو وحدات الإرسال) يجب مراعاة الآتي:

لا تنزع الأغطية. قد ينتج عن نزع أغطية منتج الليزر انفجار أشعة الليزر شديدة الخطورة.  
لا يوجد أجزاء يمكن تغييرها داخل الجهاز. قد ينتج عن استخدام تحكيمات أو تعديلات أو عمل أي تصرفات أخرى تخالف ما هو محدد هنا إلى انفجار أشعة شديدة الخطورة.



خطر

تحتوي بعض منتجات الليزر على الفئة دايود ليزر مدمج من الفئة **Class 3A** أو **Class 3B**. يجب مراعاة الآتي .

أشعة الليزر عند الفتح. لا تحدد إلى الإشعاع و لا تنظر إليه مباشرة بواسطة أي أجهزة مرئية وتجنب التعرض المباشر للإشعاع .



≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



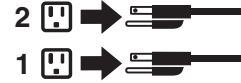
≥55 kg (121.2 lbs)



تنبيه :  
يجب استخدام ممارسات آمنة عند الرفع



تنبيهه :  
لا يقرم زر التحكم في التشغيل الموجود على الجهاز والمفتاح الكهربائي الموجود على لوحة التحكم بإيقاف التيار الكهربائي المار بالجهاز. قد يكون للجهاز أكثر من سلك كهربائي واحد. لايقاف التيار الكهربائي المار بالجهاز، تأكد من فصل جميع أسلاك الكهرباء من مصدر الكهرباء .





## PERIGO

A corrente elétrica proveniente de cabos de alimentação, de telefone e de comunicações é perigosa.

Para evitar risco de choque elétrico:

- Não conecte nem desconecte nenhum cabo ou execute instalação, manutenção ou reconfiguração deste produto durante uma tempestade com raios.
- Conecte todos os cabos de alimentação a tomadas elétricas corretamente instaladas e aterradas.
- Todo equipamento que for conectado a este produto deve ser conectado a tomadas corretamente instaladas.
- Quando possível, utilize apenas uma das mãos para conectar ou desconectar cabos de sinal.
- Nunca ligue nenhum equipamento quando houver evidência de fogo, água ou danos estruturais.
- Antes de abrir tampas de dispositivos, desconecte cabos de alimentação, sistemas de telecomunicação, redes e modems conectados, a menos que especificado de maneira diferente nos procedimentos de instalação e configuração.
- Conecte e desconecte os cabos conforme descrito na tabela apresentada a seguir ao instalar, mover ou abrir tampas deste produto ou de dispositivos conectados.

Para Conectar:	Para Desconectar:
<ol style="list-style-type: none"><li>1. DESLIGUE Tudo.</li><li>2. Primeiramente conecte todos os cabos aos dispositivos.</li><li>3. Conecte os cabos de sinal aos conectores.</li><li>4. Conecte os cabos de alimentação às tomadas.</li><li>5. LIGUE os dispositivos.</li></ol>	<ol style="list-style-type: none"><li>1. DESLIGUE Tudo.</li><li>2. Primeiramente remova os cabos de alimentação das tomadas.</li><li>3. Remova os cabos de sinal dos conectores.</li><li>4. Remova todos os cabos dos dispositivos.</li></ol>



#### **CUIDADO:**

Ao substituir a bateria de lítio, utilize apenas uma bateria com Número de Peça 33F8354 ou um tipo de bateria equivalente recomendado pelo Se o seu sistema possui um módulo com uma bateria de lítio, substitua-o apenas por um módulo do mesmo tipo e do mesmo fabricante. A bateria contém lítio e pode explodir se não for utilizada, manuseada ou descartada de maneira correta.

Não:

- Jogue ou coloque na água
- Aqueça a mais de 100°C (212°F)
- Conserte nem desmonte

Descarte a bateria conforme requerido pelas leis ou regulamentos locais.



#### **PRECAUCIÓN:**

Quando produtos a laser (como unidades de CD-ROMs, unidades de DVD-ROM, dispositivos de fibra ótica ou transmissores) estiverem instalados, observe o seguinte:

- Não remova as tampas. A remoção das tampas de um produto a laser pode resultar em exposição prejudicial à radiação de laser. Não existem peças que podem ser consertadas no interior do dispositivo.
- A utilização de controles ou ajustes ou a execução de procedimentos diferentes dos especificados aqui pode resultar em exposição prejudicial à radiação.

#### **PERIGO**

Alguns produtos a laser contêm diodo de laser integrado da Classe 3A ou da Classe 3B. Observe o seguinte:

Radiação a laser quando aberto. Não olhe diretamente para o feixe a olho nu ou com instrumentos ópticos e evite exposição direta ao feixe.



≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

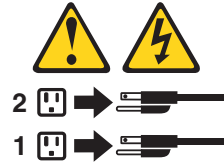
#### **CUIDADO:**

Utilize procedimentos de segurança para levantar equipamentos.



**CUIDADO:**

O botão de controle de alimentação do dispositivo e o botão para ligar/desligar da fonte de alimentação não desligam a corrente elétrica fornecida ao dispositivo. O dispositivo também pode ter mais de um cabo de alimentação. Para remover toda a corrente elétrica do dispositivo, assegure que todos os cabos de alimentação estejam desconectados da fonte de alimentação.





#### 危险

电源、电话和通信电缆中的电流是危险的。

为避免电击危险：

- 请勿在雷电期间连接或断开任何电缆的连接，或者对本产品进行安装、维护或重新配置。
- 将所有电源线连接到正确连线和妥善接地的电源插座。
- 将所有要连接到该产品的设备连接到正确连线的插座。
- 如果可能，请仅使用一只手来连接或断开信号电缆的连接。
- 切勿在有火、水、结构损坏迹象的情况下开启任何设备。
- 在打开设备外盖之前请断开已连接的电源线、远程通信系统、网络和调制解调器，除非在安装和配置过程中另有说明。
- 当安装、移动或打开该产品或连接设备的外盖时，请按照下表所述来连接或断开电缆的连接。

要连接	要断开连接
<ol style="list-style-type: none"><li>1. 切断所有电源。</li><li>2. 首先将所有电缆连接到设备。</li><li>3. 将信号电缆连接到接口。</li><li>4. 将电源线连接到插座。</li><li>5. 开启设备。</li></ol>	<ol style="list-style-type: none"><li>1. 切断所有电源。</li><li>2. 首先从插座上拔出电源线。</li><li>3. 从接口上拔出信号电缆。</li><li>4. 从设备上拔出所有电缆。</li></ol>



#### 警告：

更换锂电池时，请仅使用部件号为 33F8354 的电池或制造商推荐的同类电池。如果您的系统有包含锂电池的模块，请仅使用同一制造商生产的相同模块类型来替换该模块。该电池中含有锂，如果使用、操作或处理不当，可能会发生爆炸。

切勿：

- 投入或浸入水中
- 加热到 100 °C (212 °F) 以上
- 维修或拆卸

请按照当地法令或条例的要求处理电池。



警告：  
安装激光产品（例如 CD-ROM、DVD-ROM 驱动器、光纤设备或发射设备）时，  
请注意以下声明：

- 请勿卸下外盖。卸下激光产品的外盖可能导致遭受激光辐射的危险。该设备内没有可维修的部件。
- 如果不按照此处指定的过程进行控制、调整或操作，则有可能导致遭受辐射的危险。



危险

某些激光产品包含嵌入式 3A 类或 3B 类激光二极管。请注意以下声明：

打开后有激光辐射。请勿注视光束，请勿直接用光学仪器查看，并请避免直接暴露在光束中。



≥18 千克 (37 磅)



≥32 千克 (70.5 磅)



≥55 千克 (121.2 磅)

警告：  
抬起时请采取安全措施。



警告：  
设备上的电源控制按钮和电源上的电源开关不会切断供给该设备的电流。该设备还可能有多条电源线。要切断该设备的所有电流，请确保所有电源线都与电源断开连接。





#### 危險

電源、電話及通訊纜線上的電流都具有危險性。

若要避免觸電危險：

- 請勿在雷雨期間，連接或拔除纜線、執行安裝、維護或重新配置本產品。
- 將所有電源線連接到正確配線及接地的電源插座。
- 任何與本產品連接的設備都必須連接到配線妥當的電源插座。
- 請盡可能用單手連接或拔除信號線。
- 發生火災、水災或結構損害時，絕對不要開啟任何設備。
- 除非在安裝及配置程序中另有指示，否則在開啟裝置機蓋之前，請拔掉連接的電源線、電信系統、網路及數據機。
- 安裝、移動或開啟本產品或附屬裝置的機蓋時，請遵循下列說明連接及拔掉纜線。

連線	切斷連線
<ol style="list-style-type: none"> <li>1. 關閉所有開關。</li> <li>2. 首先，連接所有接線到裝置。</li> <li>3. 連接信號線到接頭。</li> <li>4. 連接電源線到插座。</li> <li>5. 開啟裝置。</li> </ol>	<ol style="list-style-type: none"> <li>1. 關閉所有開關。</li> <li>2. 首先，拔掉插座上的電源線。</li> <li>3. 拔掉接頭上的信號線。</li> <li>4. 拔掉裝置上所有接線。</li> </ol>



#### 警告：

更換鋰電池時，請僅使用產品編號 **33F8354** 或製造商所建議的同類型電池。  
 如果您的系統中含有鋰電池模組，請僅使用同一家製造商所生產的相同模組進行更換。  
 如果未以正確方式使用、處理或棄置含鋰的電池，會有爆炸的危險。

請勿：

- 沾溼或浸入水中
  - 置於 **100C (212F)** 以上的高溫環境
  - 修理或拆開
- 請按照各地區有關廢棄電池的法令和規定處理舊電池。



#### 警告：

- 請勿移除機蓋。移除雷射產品的機蓋，可能會導致暴露在危險的雷射輻射中。裝置內部並無可自行維修的零件。
- 利用或執行非本文中所指定的控制、調整及執行程序，可能會導致危險的輻射外洩。



#### 危險

部分雷射產品含有內嵌式 **Class 3A** 或 **Class 3B** 雷射二極體。請注意下列事項：  
 在開啟光碟機時，會發生雷射輻射。請勿直視光束或用光學儀器直接檢視，並避免直接暴露在光束中。





≥ 18 公斤 (37 磅)



≥ 32 公斤 (70.5 磅)



≥ 55 公斤 (121.2 磅)

警告：  
搬運時請注意安全。



警告：  
裝置上的電源控制按鈕及電源供應器上的電源開關，無法關閉裝置所產生的電流。  
該裝置可能有多條電源線。若要除去裝置流出的所有電流，請確認已切斷所有電源線的電源。





## DANGER

Le courant électrique provenant de l'alimentation, du téléphone et des câbles de transmission peut présenter un danger.

Pour éviter tout risque de choc électrique :

- Ne manipulez aucun câble et n'effectuez aucune opération d'installation, d'entretien ou de reconfiguration de ce produit au cours d'un orage.
- Branchez tous les cordons d'alimentation sur un socle de prise de courant correctement câblé et mis à la terre.
- Branchez sur des socles de prise de courant correctement câblés tout équipement connecté à ce produit.
- Lorsque cela est possible, n'utilisez qu'une seule main pour connecter ou déconnecter les câbles d'interface.
- Ne mettez jamais un équipement sous tension en cas d'incendie ou d'inondation, ou en présence de dommages matériels.
- Avant de retirer les carters de l'unité, mettez celle-ci hors tension et déconnectez ses cordons d'alimentation, ainsi que les câbles qui la relient aux réseaux, aux systèmes de télécommunication et aux modems (sauf instruction contraire mentionnée dans les procédures d'installation et de configuration).
- Lorsque vous installez, que vous déplacez, ou que vous manipulez le présent produit ou des périphériques qui lui sont raccordés, reportez-vous aux instructions ci-dessous pour connecter et déconnecter les différents cordons.

Connexion	Déconnexion
<ol style="list-style-type: none"><li>1. Mettez les unités HORS TENSION.</li><li>2. Commencez par brancher tous les cordons sur les unités.</li><li>3. Branchez les câbles d'interface sur des connecteurs.</li><li>4. Branchez les cordons d'alimentation sur des prises.</li><li>5. Mettez les unités SOUS TENSION.</li></ol>	<ol style="list-style-type: none"><li>1. Mettez les unités HORS TENSION.</li><li>2. Débranchez les cordons d'alimentation des prises.</li><li>3. Débranchez les câbles d'interface des connecteurs.</li><li>4. Débranchez tous les câbles des unités.</li></ol>



**ATTENTION:**

Remplacer la pile au lithium usagée par une pile de référence identique exclusivement, (référence 33F8354), ou suivre les instructions du fabricant qui en définit les équivalences. Si votre système est doté d'un module contenant une pile au lithium, vous devez le remplacer uniquement par un module identique, produit par le même fabricant. La pile contient du lithium et peut exploser en cas de mauvaise utilisation, de mauvaise manipulation ou de mise au rebut inappropriée.

Ne pas :

- la jeter à l'eau,
- l'exposer à des températures supérieures à 100°C,
- chercher à la réparer ou à la démonter.

Ne pas mettre la pile à la poubelle. Pour la mise au rebut, se reporter à la réglementation en vigueur.



**ATTENTION:**

Si des produits à laser (tels que des unités de CD-ROM, de DVD-ROM, des unités à fibres optiques, ou des émetteurs) sont installés, prenez connaissance des informations suivantes :

- Ne retirez pas le carter. En ouvrant l'unité de CD-ROM ou de DVD-ROM, vous vous exposez au rayonnement dangereux du laser. Aucune pièce de l'unité n'est réparable.
- Pour éviter tout risque d'exposition au rayon laser, respectez les consignes de réglage et d'utilisation des commandes, ainsi que les procédures décrites dans le présent manuel.



**DANGER**

Certains produits à laser contiennent une diode à laser intégrée de classe 3A ou 3B. Prenez connaissance des informations suivantes:

Rayonnement laser lorsque le carter est ouvert. Evitez toute exposition directe au rayon laser. Evitez de regarder fixement le faisceau ou de l'observer à l'aide d'instruments optiques.



≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

**ATTENTION:**

Soulevez la machine avec précaution.



**ATTENTION:**

L'interrupteur de contrôle d'alimentation de l'unité et l'interrupteur dubloc d'alimentation ne coupent pas le courant électrique alimentant l'unité. En outre, le système peut être équipé de plusieurs cordons d'alimentation. Pour mettre l'unité hors tension, vous devez déconnecter tous les cordons de la source d'alimentation.





## VORSICHT

An Netz-, Telefon- und Datenleitungen können gefährliche Spannungen anliegen.

### Aus Sicherheitsgründen:

- Bei Gewitter an diesem Gerät keine Kabel anschließen oder lösen. Ferner keine Installations-, Wartungs- oder Rekonfigurationsarbeiten durchführen.
- Gerät nur an eine Schutzkontaktsteckdose mit ordnungsgemäß geerdetem Schutzkontakt anschließen.
- Alle angeschlossenen Geräte ebenfalls an Schutzkontaktsteckdosen mit ordnungsgemäß geerdetem Schutzkontakt anschließen.
- Die Signalkabel nach Möglichkeit einhändig anschließen oder lösen, um einen Stromschlag durch Berühren von Oberflächen mit unterschiedlichem elektrischem Potenzial zu vermeiden.
- Geräte niemals einschalten, wenn Hinweise auf Feuer, Wasser oder Gebäudeschäden vorliegen.
- Die Verbindung zu den angeschlossenen Netzkabeln, Telekommunikationssystemen, Netzwerken und Modems ist vor dem Öffnen des Gehäuses zu unterbrechen, sofern in den Installations- und Konfigurationsprozeduren keine anders lautenden Anweisungen enthalten sind.
- Zum Installieren, Transportieren und Öffnen der Abdeckungen des Computers oder der angeschlossenen Einheiten die Kabel gemäß der folgenden Tabelle anschließen und abziehen.

Zum Anschließen der Kabel gehen Sie wie folgt vor	Zum Abziehen der Kabel gehen Sie wie folgt vor
<ol style="list-style-type: none"> <li>1. Schalten Sie alle Einheiten AUS.</li> <li>2. Schließen Sie erst alle Kabel an die Einheiten an.</li> <li>3. Schließen Sie die Signalkabel an die Buchsen an.</li> <li>4. Schließen Sie die Netzkabel an die Steckdose an.</li> <li>5. Schalten Sie die Einheit EIN.</li> </ol>	<ol style="list-style-type: none"> <li>1. Schalten Sie alle Einheiten AUS.</li> <li>2. Ziehen Sie zuerst alle Netzkabel aus den Netzsteckdosen.</li> <li>3. Ziehen Sie die Signalkabel aus den Buchsen.</li> <li>4. Ziehen Sie alle Kabel von den Einheiten ab.</li> </ol>



#### CAUTION:

Eine verbrauchte Lithiumbatterie nur durch eine Batterie mit der Teilenummer 33F8354 oder eine gleichwertige, vom Hersteller empfohlene Batterie ersetzen. Enthält das System ein Modul mit einer Lithiumbatterie, dieses nur durch ein Modul desselben Typs und von demselben Hersteller ersetzen. Die Batterie enthält Lithium und kann bei unsachgemäßer Verwendung, Handhabung oder Entsorgung explodieren.

Die Batterie nicht:

- mit Wasser in Berührung bringen.
- über 100 C erhitzen.
- reparieren oder zerlegen.

Die örtlichen Bestimmungen für die Entsorgung von Sondermüll beachten.



#### ACHTUNG:

**Bei der Installation von Lasergeräten (wie CD-ROM-Laufwerken, DVD-aufwerken, Einheiten mit Lichtwellenleitertechnik oder Sendern) Folgendes beachten:**

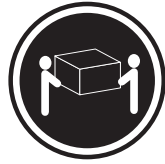
- Die Abdeckungen nicht entfernen. Durch Entfernen der Abdeckungen des Lasergeräts können gefährliche Laserstrahlungen freigesetzt werden. Das Gerät enthält keine zu wartenden Teile.
- Werden Steuerelemente, Einstellungen oder Durchführungen von Prozeduren anders als hier angegeben verwendet, kann gefährliche Laserstrahlung auftreten.



#### VORSICHT

**Einige Lasergeräte enthalten eine Laserdiode der Klasse 3A oder 3B. Beachten Sie Folgendes:**

**Laserstrahlung bei geöffneter Verkleidung. Nicht in den Strahl blicken. Keine Lupen oder Spiegel verwenden. Strahlungsbereich meiden.**



≥18 kg



≥32 kg



≥55 kg

**ACHTUNG:**

Arbeitsschutzrichtlinien beim Anheben der Maschine beachten.



**ACHTUNG:**

Mit dem Netzschalter an der Einheit und am Netzteil wird die Stromversorgung für die Einheit nicht unterbrochen. Die Einheit kann auch mit mehreren Netzkabeln ausgestattet sein. Um die Stromversorgung für die Einheit vollständig zu unterbrechen, müssen alle zum Gerät führenden Netzkabel vom Netz getrennt werden.





#### סכנה

זרם חשמלי המועבר בכבלי חשמל, טלפון ותקשורת הוא מסוכן.

כדי להימנע מסכנת התחשמלות:

- אל תחברו או תנתקו כבלים, ואל תבצעו פעולת התקנה, תחזוקה או שינוי תצורה במוצר זה במהלך סופת ברקים.
- חברו את כל כבלי החשמל לשקע חשמל מחווט ומוארק כהלכה.
- חברו כל ציוד שיחובר למוצר זה לשקעי חשמל מחוטים כהלכה.
- במידת האפשר, השתמשו ביד אחת בלבד לחיבור או לניתוק של כבלי אותות.
- לעולם אל תפעילו ציוד כלשהו כאשר יש עדות לנזק מבני או לנזק כתוצאה מאש או ממים.
- נתקו את כבלי החשמל, מערכות התקשורת, התקני הרשת והמודמים המחוברים לפני פתיחת כיסויי ההתקן, אלא אם הליכי ההתקנה וקביעת התצורה מורים אחרת.
- בעת התקנה, העברה או פתיחת כיסויים במוצר זה או בהתקנים המחוברים, חברו ונתקו את הכבלים כמתואר בטבלה שלהלן.

כדי לחבר	כדי לנתק
1. כבו הכל.	1. כבו הכל.
2. ראשית, חברו את כל הכבלים להתקנים.	2. ראשית, נתקו את כבלי החשמל מהשקעים.
3. חברו את כבלי האותות למחברים.	3. נתקו את כבלי האותות מהמחברים.
4. חברו את כבלי החשמל לשקעים.	4. הסירו את כל הכבלים מההתקנים.
5. הפעילו את ההתקן.	





זהירות:

בעת החלפת סוללת הליתיום, השתמשו רק בסוללה בעלת מק"ט 33F8354 או בסוג תואם שהומלץ על ידי היצרן. אם המערכת כוללת מודול המכיל סוללת ליתיום, החליפו אותו רק במודול מאותו סוג ומתוצרת אותו יצרן. הסוללה מכילה ליתיום, ועלולה להתפוצץ אם לא משתמשים ומטפלים בה או משליכים אותה כראוי.

לעולם:

- אל תטבלו במים

- אל תחממו לטמפרטורה הגבוהה מ-100°C (212°F)

- אל תתקנו או תפרקו

השליכו את הסוללה כנדרש לפי התקנות והחוקים המקומיים.



זהירות:

בעת התקנת מוצרי לייזר (כגון כונני תקליטורים ו-DVD, התקני סיב אופטי או משדרים), שימו לב לאזהרות הבאות:

- אל תסירו את הכיסויים. הסרת הכיסויים של מוצר הלייזר עלולה לגרום לחשיפה לקרינת לייזר מסוכנת. אין חלקים ברי טיפול בתוך ההתקן.

- שינויים, שימוש בבקרות או ביצוע הליכים אחרים מאלה המתוארים כאן, עלולים לגרום לחשיפה לקרינה מסוכנת.



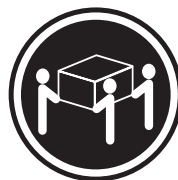
סכנה

מוצרי לייזר מסוימים מכילים דיודת לייזר מסוג Class 3A או Class 3B. שימו לב לאזהרה הבאה:

כאשר הוא פתוח, המוצר פולט קרינת לייזר. אל תביטו ישירות בקרן, אל תביטו ישירות בעזרת ציוד אופטי, והימנעו מחשיפה לקרן.



≤ 18 ק"ג (37 ליב')



≤ 32 ק"ג (70.5 ליב')

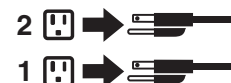


≤ 55 ק"ג (121.2 ליב')

זהירות:  
השתמשו בהליכים  
הנאותים בעת  
הרמת הציוד.



זהירות:  
לחצן ההפעלה של ההתקן ומתג ההפעלה של ספק החשמל אינם מפסיקים את זרם החשמל המסופק להתקן.  
בנוסף, ההתקן עשוי לכלול יותר מכבל חשמל אחד. כדי לסלק את כל הזרם החשמלי מההתקן,  
דאו שכל כבלי החשמל מנותקים ממקור החשמל.





## PERICOLO

La corrente elettrica proveniente dai cavi di alimentazione, del telefono e di comunicazione può essere pericolosa.

**Per evitare il rischio di scosse elettriche:**

- **Non collegare o scollegare qualsiasi cavo oppure effettuare l'installazione, la manutenzione o la riconfigurazione del prodotto durante un temporale.**
- **Collegare tutti i fili elettrici a una presa di alimentazione correttamente cablata e dotata di messa a terra.**
- **Collegare alle prese elettriche appropriate tutte le apparecchiature che verranno utilizzate per questo prodotto.**
- **Se possibile, utilizzare solo una mano per collegare o scollegare i cavi di segnale.**
- **Non accendere assolutamente apparecchiature in presenza di incendi, perdite d'acqua o danno strutturale.**
- **Scollegare i cavi di alimentazione, i sistemi di telecomunicazione, le reti e il modem prima di aprire i coperchi del dispositivo, salvo istruzioni contrarie relative alle procedure di installazione e configurazione.**
- **Collegare e scollegare i cavi come descritto nella seguente tabella quando vengono effettuate operazioni di installazione, spostamento o apertura dei coperchi di questo prodotto o delle unità collegate.**

Per collegarsi	Per scollegarsi
1. <b>SPEGNERE</b> le apparecchiature.	1. <b>SPEGNERE</b> le apparecchiature.
2. Innanzitutto collegare tutti i cavi alle unità.	2. Innanzitutto rimuovere i cavi di alimentazione dalla presa.
3. Collegare i cavi di segnale ai connettori.	3. Rimuovere i cavi di segnale dai connettori.
4. Collegare i cavi di alimentazione alla presa.	4. Rimuovere tutti i cavi dalle unità.
5. Accendere l'unità.	



#### ATTENZIONE:

Quando si sostituisce la batteria al litio, utilizzare solo il Numero parte 33F8354 o un tipo di batteria equivalente consigliato dal produttore. Se sul sistema è presente un modulo che contiene una batteria al litio, sostituirlo solo con un tipo di modulo dello stesso tipo della stessa casa di produzione. La batteria contiene litio e può esplodere se usata, maneggiata o smaltita in modo non corretto.

*Non:*

- Gettare o immergere la batteria nell'acqua
- Riscaldarla ad una temperatura superiore ai 100 gradi C (212 gradi F)
- Smontarla, ricaricarla o tentare di ripararla

Le batterie usate vanno smaltite in accordo alla normativa in vigore (DPR 915/82 e successive disposizioni e disposizioni locali).



#### ATTENZIONE:

Quando vengono installati prodotti laser (quali CD-ROM, unità DVD-ROM, unità a fibre ottiche o trasmettenti), tener presente quanto segue:

- Non rimuovere gli sportelli. L'apertura di un'unità laser può determinare l'esposizione a radiazioni laser pericolose. All'interno dell'unità non vi sono parti su cui effettuare l'assistenza tecnica.
- L'utilizzo di controlli, regolazioni o l'esecuzione di procedure non descritti nel presente manuale possono provocare l'esposizione a radiazioni pericolose.



#### PERICOLO

Alcune unità laser contengono un diodo laser di Classe 3A o Classe 3B. Tener presente quanto segue:

Aperto l'unità vengono emesse radiazioni laser. Non fissare il fascio, non guardarlo direttamente con strumenti ottici ed evitare l'esposizione al fascio.



≥18 kg



≥32 kg



≥55 kg

**ATTENZIONE:**

**Prestare attenzione nel sollevare l'apparecchiatura.**



**ATTENZIONE:**

**Il pulsante di controllo dell'alimentazione presente sull'unità e l'interruttore dell'alimentatore non disattivano l'alimentazione corrente fornita all'unità. E' possibile che l'unità disponga di più cavi di alimentazione. Per disattivare l'alimentazione dall'unità, accertarsi che tutti i cavi di alimentazione siano scollegati dalla fonte di alimentazione.**





**위험**

전원, 전화, 통신 케이블의 전류는 위험합니다.

감전의 위험을 피하려면 다음과 같이 하십시오.

- 번개가 치는 날에는 케이블을 연결 또는 분리하거나 본 제품을 설치, 보수, 재구성하지 마십시오.
- 모든 전원 코드는 올바르게 접지된 전기 콘센트에 연결하십시오.
- 본 제품에 연결될 장치는 올바르게 배선된 콘센트에 연결하십시오.
- 신호 케이블을 연결 또는 분리할 때 가능하면 한 손만을 사용하십시오.
- 불 또는 물로 인한 손상이나 구조적인 손상이 있을 경우 장치의 전원을 절대 켜지 마십시오.
- 설치 및 구성 과정에 별도의 지시 사항이 없는 경우, 장치의 덮개를 열기 전에 연결된 전원 코드, 원격 통신 시스템, 네트워크, 모뎀을 분리하십시오.
- 본 제품이나 연결된 장치를 설치, 이동하거나 덮개를 열 때 다음 표와 같은 순서로 케이블을 연결하거나 분리하십시오.

연결할 때:	분리할 때:
<ol style="list-style-type: none"> <li>1. 모든 장치의 전원을 끄십시오.</li> <li>2. 먼저 모든 케이블을 장치에 연결하십시오.</li> <li>3. 커넥터에 신호 케이블을 연결하십시오.</li> <li>4. 콘센트에 전원 코드를 연결하십시오.</li> <li>5. 장치의 전원을 켜십시오.</li> </ol>	<ol style="list-style-type: none"> <li>1. 모든 장치의 전원을 끄십시오.</li> <li>2. 먼저 콘센트에서 전원 코드를 분리하십시오.</li> <li>3. 커넥터에서 신호 케이블을 분리하십시오.</li> <li>4. 장치에서 모든 케이블을 분리하십시오.</li> </ol>



**주의:**

배터리를 교환할 때는 Part Number 33F8354 또는 제조업체에서 지정한 동일한 종류의 제품을 사용하십시오. 사용자의 시스템이 리튬 배터리를 포함하는 모듈일 경우, 동일한 제조업체에서 동일한 모듈 유형으로 생산된 제품으로 교체하십시오. 배터리에는 리튬이 함유되어 있어 잘못 사용, 취급 또는 폐기할 경우 폭발의 위험이 있습니다.

사고를 방지하려면 다음 사항을 준수하십시오.

- 배터리를 물 속에 던지거나 침수시키지 마십시오.
- 100℃(212°F) 이상 가열하지 마십시오.
- 수리하거나 분해하지 마십시오.

배터리를 폐기할 때는 법령 또는 회사의 안전 수칙에 따라 폐기하십시오.



**주의:**

CD-ROM, DVD-ROM 장치, 광섬유 장치 또는 송신 장치와 같은 레이저 제품을 설치할 때, 다음과 같은 취급 주의사항을 참고하십시오.

- 덮개를 열지 마십시오. 덮개를 열면 레이저 복사 에너지에 노출될 위험이 있습니다. 장치 내부에는 사용자가 조정하거나 수리할 수 있는 부품이 없습니다.
- 규정된 것 이외의 절차 수행, 제어 조정 등의 행위로 인해 해로운 레이저 복사에 노출될 수 있습니다.



**위험**

일부 장비에는 임베디드 클래스 3A 또는 클래스 3B 레이저 다이오드가 있습니다. 다음 주의사항에 유의하십시오.

드라이브가 열리면 레이저 복사 에너지가 방출됩니다. 광선이 눈에 직접 쏘이지 않도록 하십시오. 나안 또는 광학 기구를 착용한 상태에서 광선을 직접 바라보지 않도록 하십시오.



≥ 18 kg (37 lbs)



≥ 32 kg (70.5 lbs)



≥ 55 kg (121.2 lbs)

**주의:**

제품을 들어 올릴 때 안전 규제를 따르십시오.



**주의:**

장치의 전원 제어 버튼 및 전원 공급 장치의 전원 스위치를 사용하여 장치에 공급되는 전기를 차단하지 마십시오. 장치는 둘 이상의 코드를 가지고 있을 수 있습니다. 장치에서 모든 전원을 차단하려면 콘센트에서 코드가 모두 분리되어 있는지 확인하십시오.





## PELIGRO

La corriente eléctrica procedente de cables de alimentación, teléfonos y cables de comunicación puede ser peligrosa.

Para evitar el riesgo de descarga eléctrica:

- No conecte ni desconecte los cables ni realice ninguna tarea de instalación, mantenimiento o reconfiguración de este producto durante una tormenta eléctrica.
- Conecte todos los cables de alimentación a tomas de corriente debidamente cableadas y conectadas a tierra.
- Cualquier equipo que se conecte a este producto también debe conectarse a tomas de corriente debidamente cableadas.
- Siempre que sea posible, utilice una sola mano para conectar o desconectar los cables de señal.
- No encienda nunca un equipo cuando hay señales de fuego, agua o daños estructurales.
- Desconecte los cables de alimentación, los sistemas de telecomunicaciones, las redes y los módems conectados antes de abrir las cubiertas de los dispositivos, a menos que se indique lo contrario en los procedimientos de instalación y configuración.
- Conecte y desconecte los cables, como se describe en la tabla siguiente, cuando instale, mueva o abra las cubiertas de este producto o de los dispositivos conectados.

Para conectar	Para desconectar
<ol style="list-style-type: none"><li>1. APÁGUELO todo.</li><li>2. En primer lugar conecte todos los cables a los dispositivos.</li><li>3. Conecte los cables de señal a los conectores.</li><li>4. Enchufe los cables de alimentación a las tomas de corriente.</li><li>5. Encienda el dispositivo.</li></ol>	<ol style="list-style-type: none"><li>1. APÁGUELO todo.</li><li>2. En primer lugar desenchufe los cables de alimentación de las tomas de corriente.</li><li>3. Desconecte los cables de señal de los conectores.</li><li>4. Desconecte todos los cables de los dispositivos.</li></ol>





#### PRECAUCIÓN:

Cuando sustituya una batería de litio, utilice solamente una batería número de pieza 33F8354 u otra de tipo equivalente recomendada por el fabricante. Si su sistema dispone de un módulo que contiene una batería de litio, reemplácelo sólo con el mismo tipo de módulo, del mismo fabricante. La batería contiene litio y puede explotar si no se utiliza, manipula o desecha correctamente.

*No debe:*

- Arrojarla al agua o sumergirla en ella
- Exponerla a temperaturas superiores a 100°C (212°F)
- Repararla o desmontarla

Deshágase de la batería según especifiquen las leyes o normas locales.



#### PRECAUCIÓN:

Cuando haya productos láser (como unidades de CD-ROM, unidades de DVD, dispositivos de fibra óptica o transmisores) instalados, tenga en cuenta lo siguiente:

- No quite las cubiertas. Si quita las cubiertas del producto láser, podría quedar expuesto a radiación láser peligrosa. Dentro del dispositivo no existe ninguna pieza que requiera servicio técnico.
- Si usa controles o ajustes o realiza procedimientos que no sean los especificados aquí, podría exponerse a radiaciones peligrosas.



#### PELIGRO

Algunos productos láser tienen incorporado un diodo láser de clase 3A o clase 3B. Tenga en cuenta lo siguiente:

Cuando se abre, queda expuesto a radiación láser. No mire directamente al rayo láser, ni siquiera con instrumentos ópticos, y evite exponerse directamente al rayo láser.



≥18 kg



≥32 kg



≥55 kg

**PRECAUCIÓN:**

Adopte procedimientos seguros al levantar el equipo.



**PRECAUCIÓN:**

El botón de control de alimentación del dispositivo y el interruptor de alimentación de la fuente de alimentación no desconectan la corriente eléctrica suministrada al dispositivo. Además, el dispositivo podría tener más de un cable de alimentación. Para suprimir toda la corriente eléctrica del dispositivo, asegúrese de que todos los cables de alimentación estén desconectados de la toma de corriente.



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## Chapter 3. General information

This chapter provides general information that applies to all machine types supported by this publication.

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### The ThinkVantage™ Productivity Center program

Use the ThinkVantage Productivity Center program for general information about the use, operation, and maintenance of the computer. The ThinkVantage Productivity Center program also contains information to help solve problems and get repair service or other technical assistance. The ThinkVantage Productivity Center program is preinstalled on most ThinkCentre products.

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### Additional information resources

If you have Internet access, the most up-to-date information for your computer is available from the World Wide Web.

You can find the following information:

- CRU removal and installation instructions
- Publications
- Troubleshooting information
- Parts information
- Downloads and drivers
- Links to other useful sources of information

To access this information, point your browser to <http://www.lenovo.com/support/>.

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## Specifications

This section lists the physical specifications.

### Dimensions

Height: 85 mm (3.35 in.)

Width: 310 mm (12.2 in.)

Depth: 358 mm (14.1 in.)

### Weight

Minimum configuration: 7.3 kg (16 lb)

Maximum configuration: 8.5 kg (18.7 lb)

### Environment

Air temperature:

Operating at 0 - 3000 ft (914.4.m): 10° to 35°C (50° to 95° F)

Operating at 3000 - 7000 ft (2134.m): 10° to 32°C (50° to 89.6° F)

Non-operating: 10° to 43°C (50° to 110° F)

Humidity:

Operating: 8% to 80%

Non-operating: 10% to 90%

Transit: 8% to 90%

### Electrical input

Input voltage:

Low range:

Minimum: 100V ac

Maximum: 127V ac

Input frequency: 50/60 Hz

Voltage switch setting: 115V ac

High range:

Minimum: 200V ac

Maximum: 240V ac

Input frequency: 50/60 Hz

Voltage switch setting: 230V ac

Input kilovolt-amperes (kVA) (approximate):

Minimum configuration as shipped: 0.10 kVA

Maximum configuration: 0.24 kVA

---

## Chapter 4. General Checkout

### Attention

The drives in the computer you are servicing might have been rearranged or the drive startup sequence changed. Be extremely careful during write operations such as copying, saving, or formatting. Data or programs can be overwritten if you select an incorrect drive.

General error messages appear if a problem or conflict is found by an application program, the operating system, or both. For an explanation of these messages, refer to the information supplied with that software package.

Before replacing any FRUs, ensure that the latest level of BIOS is installed on the system. A down-level BIOS might cause false errors and unnecessary replacement of the system board. For more information on how to determine and obtain the latest level BIOS, see “BIOS levels” on page 197.

Use the following procedure to help determine the cause of the problem:

1. Power-off the computer and all external devices.
2. Check all cables and power cords.
3. Set all display controls to the middle position.
4. Power-on all external devices.
5. Power-on the computer.
  - Look for displayed error codes
  - Listen for beep codes
  - Look for readable instructions or a main menu on the display.If you **did not** receive the correct response, proceed to step 6.  
If you **do** receive the correct response, proceed to step 7.
6. Look at the following conditions and follow the instructions:
  - If you hear beep codes during POST, go to “Beep symptoms” on page 75.
  - If the computer displays a POST error, go to “POST error codes” on page 76.
  - If the computer hangs and no error is displayed, continue at step 7.
7. Run the Diagnostic programs. See Chapter 5, “Diagnostics,” on page 41.
  - If you receive an error, replace the part that the diagnostic program calls out or go to “Diagnostic error codes” on page 54.
  - If the test stops and you cannot continue, replace the last device tested.

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### Problem determination tips

Due to the variety of hardware and software combinations that can be encountered, use the following information to assist you in problem determination. If possible, have this information available when requesting assistance from Service Support and Engineering functions.

- Machine type and model
- Processor or hard disk upgrades
- Failure symptom
  - Do diagnostics indicate a failure?

- What, when, where, single, or multiple systems?
- Is the failure repeatable?
- Has this configuration ever worked?
- If it has been working, what changes were made prior to it failing?
- Is this the original reported failure?
- Diagnostics version
  - Type and version level
- Hardware configuration
  - Print (print screen) configuration currently in use
  - BIOS level
- Operating system software
  - Type and version level

**Note:** To eliminate confusion, identical systems are considered identical only if they:

1. Are the exact machine type and models
2. Have the same BIOS level
3. Have the same adapters/attachments in the same locations
4. Have the same address jumpers/terminators/cabling
5. Have the same software versions and levels
6. Have the same Diagnostic Diskettes (version)
7. Have the same configuration options set in the system
8. Have the same setup for the operating system control files

Comparing the configuration and software set-up between “working and non-working” systems will often lead to problem resolution.

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## Chapter 5. Diagnostics

Diagnostic programs are used to test hardware components of the computer and report operating-system-controlled settings that can cause hardware failures. There are two diagnostic programs preinstalled on the computer to help diagnose problems:

- PC-Doctor for Windows (used when diagnosing problems while running the Windows operating system)
- PC-Doctor for DOS or PC-Doctor for Windows PE, depending upon your machine type and model (used when your Windows operating system will not start)

### Notes:

1. You can download the latest version of the PC-Doctor for Windows and PC-Doctor for DOS diagnostic programs from <http://www.lenovo.com/support/>. Type your machine type into the **Use Quick Path** field and click **Go** to find the downloadable files that are specific to the computer.
2. Log files are created when you run PC-Doctor for Windows and depending upon your machine type and model, PC-Doctor for DOS or PC-Doctor for Windows PE. Save and print the log files created by both diagnostic programs. The log file created by PC-Doctor for Windows is automatically saved in C:\PCDR\DETAILED.TXT.

---

### PC-Doctor for Windows

PC-Doctor for Windows is a diagnostic program that works through the Windows operating system. The PC-Doctor for Windows diagnostic program enables you to view symptoms and solutions for computer problems, access the Lenovo troubleshooting center, update system drivers, and review system information.

To run PC-Doctor for Windows, open the Start menu from the Windows desktop, select **All Programs**, select **PC-Doctor for Windows**, and click **PC-Doctor for Windows**. Follow the instructions on the screen. For additional information about running the diagnostic program, refer to the PC-Doctor for Windows help system.

If you still suspect a problem after PC-Doctor for Windows runs successfully, run PC-Doctor for DOS or PC-Doctor for Windows PE to help you diagnose the computer problem.

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### PC-Doctor for DOS

Depending upon your machine type and model, you either have PC-Doctor for DOS or PC-Doctor for Windows PE on each Lenovo computer. The PC-Doctor for DOS diagnostic program is part of the Rescue and Recovery workspace and runs independently of the Windows operating system. Use PC-Doctor for DOS, if you are unable to start the Windows operating system or if PC-Doctor for Windows has not been successful in isolating a possible problem. You can run PC-Doctor for DOS from a diagnostic CD image or diagnostic diskettes that have been created. You can also run PC-Doctor for DOS from the Rescue and Recovery workspace.

**Note:** It is important to create a diagnostic CD image or diagnostic diskettes in case PC-Doctor for DOS cannot be run from the Rescue and Recovery workspace.

## Creating a diagnostic CD image

To create a diagnostic CD image, download a self-starting bootable CD image (known as an .iso image) of the diagnostic program from <http://www.lenovo.com/support/>. After you download the image, you can create the CD using any CD burning software.

If the computer does not have a CD burner or you do not have Internet access, see “Creating diagnostic diskettes.”

## Creating diagnostic diskettes

To create diagnostic diskettes, download the PC-Doctor for DOS diagnostic program from <http://www.lenovo.com/support/> onto two blank, formatted diskettes.

If you do not have Internet access, create the diagnostic diskettes using the following procedure:

**Note:** You will need a diskette drive on the computer or a USB diskette drive to complete this procedure.

1. Shut down the operating system and turn off the computer.
2. If you are using a USB diskette drive, plug it into the computer.
3. Repeatedly press and release the F11 key as you turn on the computer.
4. When you hear beeps or see a logo screen, stop pressing the F11 key. The Rescue and Recovery workspace opens.

**Note:** For some models, press the Esc key to enter Rescue and Recovery.

5. From the Rescue and Recovery workspace, select **Create diagnostic disks**.
6. Follow the instructions on the screen.
7. When prompted, insert a blank, formatted diskette into the diskette drive and continue to follow the instructions on the screen.
8. When the operation is complete, remove the diskette and click **Quit**.
9. Insert another blank, formatted diskette into the diskette drive and continue to follow the instructions on the screen.
10. When the operation is complete, remove the diskette and click **Quit**.

## Running diagnostics from the CD or diskettes

1. If you are running diagnostics from diskettes using a USB diskette drive, plug in the USB drive.

**Note:** The optical drive or diskette drive must be selected in the startup sequence. See “Selecting a startup device” on page 51 for instructions on how to select the startup device.

2. Insert the CD or diskette.
3. Restart the computer.
4. When the diagnostics program opens, follow the instructions on the screen.



**Note:** If you are running diagnostics from a diskette, when prompted, remove the first diskette and insert the second diskette.

5. Select the diagnostic test you want to run. Press the F1 key for additional help.
6. Remove the CD or diskette when the program finishes.

## Running diagnostics from the Rescue and Recovery workspace

If you do not have a diagnostic CD image or diagnostic diskette, you can run the PC-Doctor for DOS diagnostic program from the Rescue and Recovery workspace. To run diagnostics from the Rescue and Recovery workspace, use the following procedure:

1. Shut down the operating system and turn off the computer.
2. Repeatedly press and release the F11 key as you turn on the computer.
3. When you hear beeps or see a logo screen, stop pressing the F11 key. The Rescue and Recovery workspace opens.

**Note:** For some models, press the Esc key to enter Rescue and Recovery.

4. From the Rescue and Recovery workspace, select **Diagnose hardware**.
5. Follow the prompts on the screen. The computer will reboot.
6. When the computer restarts, the diagnostic program opens automatically. Select the diagnostic test you want to run. Press the F1 key for additional help.

---

## PC-Doctor for Windows PE

Depending upon your machine type and model, you either have PC-Doctor for DOS or PC-Doctor for Windows PE on each Lenovo computer. The PC-Doctor for Windows PE diagnostic program is part of the Rescue and Recovery workspace. Use PC-Doctor for Windows PE, if you are unable to start the Windows operating system or if PC-Doctor for Windows has not been successful in isolating a possible problem.

## Running diagnostics from the Rescue and Recovery workspace

You can run the PC-Doctor for Windows PE diagnostic program from the Rescue and Recovery workspace. To run diagnostics from the Rescue and Recovery workspace, use the following procedure:

1. Shut down the operating system and turn off the computer.
2. Repeatedly press and release the F11 key as you turn on the computer.
3. When you hear beeps or see a logo screen, stop pressing the F11 key. The Rescue and Recovery workspace opens.
4. From the Rescue and Recovery workspace, select **Diagnose hardware**.
5. The diagnostic program opens automatically. Select the diagnostic test you want to run. Press the F1 key for additional help.
6. Follow the instructions on the screen.

**Note:** Rescue media includes PC-Doctor for Windows PE. For more information about rescue media, see the *User Guide* for the computer.

---

## Navigating through the diagnostics programs

Use the cursor movement keys to navigate within the menus.

- The **Enter** key is used to select a menu item.
- The **Esc** key is used to back up to the previous menu.
- For online help select **F1**.

---

## Running tests

There are four ways to run the diagnostic tests.

- Using the cursor movement keys, highlight **Run Normal Test** or **Run Quick Test** from the Diagnostics menu and then press **Enter**.

This automatically runs a pre-defined group of tests from each test category.

**Run Normal Test** runs a more extensive set of tests than does **Run Quick Test** and takes longer to complete.

- Press **F5** to automatically run all selected tests in all categories.
- From within a test category, press **Ctrl-Enter** to automatically run only the selected tests in that category.
- Using the cursor movement keys, highlight a single test within a test category, and then press **Enter**. This runs only that test.

Press **Esc** at any time to stop the testing process.

Test results (N/A, PASSED, FAILED, ABORTED) are displayed in the field beside the test description and in the test log. See “Viewing the test log” on page 47.

To select one or more tests, use the following procedure.

1. Open the corresponding test category.
2. Using the cursor movement keys, highlight the desired test.
3. Press the space bar.

A selected test is marked by >>. Pressing the space bar again de-selects a test and removes the >>.

4. Repeat steps 2 and 3 above to select all desired tests.

## Test results

Diagnostics test results produce the following error code format:

Function	Failure Type	DeviceID	Date	ChkDigits	Text
Code					

- **Function Code:**  
Represents the feature or function within the PC.
- **Failure Type:**  
Represents the type of error encountered.
- **DeviceID:**  
Contains the component’s unit-ID which corresponds to either a fixed disk drive, removable media drive, serial or parallel port, processor, specific RIMM, or a device on the PCI bus.
- **Date:**

Contains the date when the diagnostic test was run. The date is retrieved from CMOS and displayed using the YYYYMMDD format.

- **ChkDigits:**

Contains a 2-digit check-digit value to ensure the following:

- Diagnostics were run on the specified date.
- Diagnostics were run on the specified computer.
- The diagnostic error code is recorded correctly.

- **Text:**

Description of the error.

**Note:** See “Diagnostic error codes” on page 54 for error code listings.

## Fixed disk advanced test (FDAT)

PC-Doctor Fixed-Disk<sup>1</sup> Advanced Test module (FDAT) is a full-featured highly configurable fixed-disk test suite. The configurable capabilities of FDAT allow users to enable or disable specific tests, enable or disable testing features, control the test log detail, alter testing parameters, and so on. FDAT tests for and reports most commonly found errors on a fixed-disk drive and is able to test up to 128 SCSI and 4 IDE drives (up to 132 total drives).

Drive information is gathered through FDAT's enumeration of available devices and user specific configuration parameters located in the FDAT.INI. FDAT uses information supplied by these features to indicate specifically what devices are available for test, what tests are available for the device, device properties, and so on. To change testing parameters, you modify the FDAT.INI file in PC Doctor for DOS.

FDAT consists of the following subtests and features.

### Fixed-Disk Tests:

- *Seek Tests:* - checks the physical operation of the drive head.
  - Linear Seek
  - Random Seek
  - Min-Max Seek
  - Butterfly Seek
- *Verify Tests:* - checks the integrity of the data present on the media.
  - Linear Verify
  - Random Verify
- *Surface Scan Tests:* - checks the drive media for defects.
  - Surface Scan (Linear)
  - Surface Scan (Aggressive) - this is disabled for normal customer use.
  - Surface Scan (Random)
- Self-monitoring, Analysis and Reporting Technology (SMART) - checks the SMART functionality for drives that support SMART.
  - Start SMART Self-Test

### Other Test Features:

---

1. The terms fixed disk and hard disk are used interchangeably.

- *Write-Splice Repair* - detects and corrects Error Correction Code errors during Verify tests.
- *Auto Spin Down* - a gradual spin down of the drive platters to avoid damaging the media.
- *Manufacturer Log* - an in-depth manufacturer supported log of errors on the drive.

### **Multitasking:**

To allow simultaneous testing of multiple hard drives whenever possible, the FDAT module is written as a set of multitasking functions. Each drive under test can run the same test or run a different test at the same time. Each subtest is written to handle a single test pass and all test variables are kept track of in a structure unique for each drive.

However, when testing IDE drives, FDAT will not perform simultaneous testing of IDE drives that are attached to the same IDE cable. For example, if FDAT is testing four IDE drives on a PC, it will perform simultaneous testing on drives 1 and 3 first (master drives), then perform tests on 2 and 4 (slave drives). FDAT will also perform simultaneous testing on a master and slave that are on separate IDE cables, but will not perform simultaneous tests on a master and slave on the same IDE cable. This generally increases the amount of time needed to test multiple IDE drives.

Another limitation of FDAT'S multitasking capability is the use of Ultra DMA (UDMA). Only one drive at a time can access the UDMA channel and the UDMA channel buffer must be kept high in order to maintain a speed advantage over other data transfer modes. In order to use the UDMA channel during testing, users must disable the multitasking feature.

### **Destructive versus non-destructive testing:**

Most of the tests found in FDAT are non-destructive. This means that PC-Doctor program will preserve any data that is present on the tested media prior to beginning any destructive operations (such as write operations). However, users can run certain tests in destructive mode (i.e. surface scan tests). Destructive tests will speed up testing because FDAT does not preserve the data on the media prior to the test beginning. Unlike non-destructive tests, any data present on the media prior to the test beginning is lost.

FDAT allows for enabling or disabling destructive tests, as well as specifying a range of destructive and non-destructive sectors on the tested drive. This is done through the configuration of the FDAT.INI. If destructive and non-destructive ranges somehow overlap, then the overlapped area is considered non-destructive. For example, if users specify both destructive and non-destructive ranges as the same, then the entire drive is tested as non-destructive.

## **Quick and Full erase - hard drive**

The diagnostics program offers two hard drive format utilities:

- Quick Erase Hard Drive
- Full Erase Hard Drive

The Quick Erase Hard Drive provides a DOS utility that performs the following:

- Destroys the Master Boot Record (MBR) on the hard drive.

- Destroys all copies of the FAT Table on all partitions (both the master and backup).
- Destroys the partition table.
- Provides messages that warn the user that this is a non-recoverable process.

The Full Erase Hard Drive provides a DOS utility that performs the following:

- Performs all the steps in Quick Erase.
- Provides a DOS utility that writes random data to all sectors of the hard drive.
- Provides an estimate of time to completion along with a visual representation of completion status.
- Provides messages that warn the user about non-recoverable process.

<b>Important:</b> Make sure that all data is backed up before using the Quick or Full Erase functions.
--

To select the Quick Erase or Full Erase Hard Drive utility, use the following procedure:

1. Select the UTILITY option on the toolbar and press **Enter**.
2. Select either the QUICK ERASE or FULL ERASE HARD DISK option and follow the instructions.

---

## Viewing the test log

Errors reported by the diagnostic test will be displayed by the program as a failed test.

To view details of a failure or to view a list of test results, use the following procedure from any test category screen:

1. Press **F3** to activate the log file.
2. Press **F3** again to save the file to diskette or press **F2** to print the file.



---

## Chapter 6. Using the Setup Utility

The Setup Utility program is stored in the electrically erasable programmable read-only memory (EEPROM) of your computer. The Setup Utility program is used to view and change the configuration settings of your computer, regardless of which operating system you are using. However, the operating-system settings might override any similar settings in the Setup Utility program.

---

### Starting the Setup Utility program

To start the Setup Utility program, do the following:

1. If your computer is already on when you start this procedure, shut down the operating system and turn off the computer.
2. Press and hold the F1 key then turn on the computer. When you hear multiple beeps, release the F1 key.

**Notes:**

- a. If you are using a USB keyboard and the Setup Utility program does not display using this method, repeatedly press and release the F1 key rather than leaving it pressed when turning on the computer.
- b. If a user password or an administrator password has been set, the Setup Utility program menu is not displayed until you type your password. See “Using passwords” for more information.

The Setup Utility might start automatically when POST detects that hardware has been removed or new hardware has been installed in your computer.

---

### Viewing and changing settings

The Setup Utility program menu lists items that identify system configuration topics.

When working with the Setup Utility program menu, you must use the keyboard. The keys used to perform various tasks are displayed at the bottom of each screen.

---

### Using passwords

By using the Setup Utility program, you can set passwords to prevent unauthorized persons from gaining access to your computer and data. The following types of passwords are available:

- User Password
- Administrator Password

You do not have to set any passwords to use your computer. However, if you decide to set any passwords, read the following sections.

#### Password considerations

A password can be any combination of up to twelve characters (a-z and 0-9) and symbols. For security reasons, it is a good idea to use a strong password that cannot be easily compromised. Strong passwords typically adhere to the following rules:

- Have at least eight characters in length
- Contain at least one alphabetic character, one numeric character, and one symbol
- Contain at least one of the following symbols: , . / ` ; ' []
- You can also use the space bar
- Setup Utility program and hard disk drive passwords are not case sensitive
- Not be your name or your user name
- Not be a common word or a common name
- Be significantly different from your previous password

## User Password

When a User Password is set, the user is prompted to type a valid password each time the computer is turned on. The computer cannot be used until a valid password is typed from the keyboard.

## Administrator Password

Setting an Administrator Password deters unauthorized persons from changing configuration settings. If you are responsible for maintaining the settings of several computers, you might want to set an Administrator Password.

After you set an Administrator Password, a password prompt is displayed each time you try to access the Setup Utility program. If you type the wrong password, you will see an error message. If you type the wrong password three times, you must turn the computer off and start again.

If both the user and administrator passwords are set, you can type either password. However, to change any configuration settings, you must use your administrator password.

## Setting, changing, and deleting a password

To set, change, or delete a password, do the following:

**Note:** A password can be any combination of up to eight characters (A- Z, a-z, and 0-9). See "Password considerations" on page 49 for more information.

1. Start the Setup Utility program (see "Starting the Setup Utility program" on page 49).
2. From the Setup Utility program menu, select **Security** .
3. Select **Set Passwords**. Read the information displayed on the right side of the screen.

---

## Using Security Profile by Device

Security Profile by Device is used to enable or disable user access to the following devices:

### IDE controller

When this feature is set to **Disable**, all devices connected to the IDE controller (such as hard disk drives or the CD-ROM drive) are disabled and will not be displayed in the system configuration.

### Diskette Drive Access

When this feature is set to **Disable**, the diskette drive cannot be accessed.

To set Security Profile by Device, do the following:



1. Start the Setup Utility program (see “Starting the Setup Utility program” on page 49).
2. From the Setup Utility program menu, select **Security**.
3. Select **Security Profile by Device**.
4. Select the desired devices and settings and press Enter.
5. Return to the Setup Utility program menu and select **Exit** and then **Save Settings** or **Save and exit the Setup Utility**.

**Note:** If you do not want to save the settings, select **Exit the Setup Utility without saving**.

---

## Selecting a startup device

If your computer does not start up (boot) from a device such as the CD-ROM, diskette, or hard disk as expected, use one of the following procedures to select a startup device.

### Selecting a temporary startup device

Use this procedure to startup from any boot device.

**Note:** Not all CDs, hard disks, and diskettes are startable (bootable).

1. Turn off your computer.
2. Press and hold the F12 key then turn on the computer. When the Startup Device Menu (Boot Menu) appears, release the F12 key.

**Note:** If you are using a USB keyboard and the Startup Device Menu does not display using this method, repeatedly press and release the F12 key rather than leaving it pressed when turning on the computer.

3. Select the desired startup device from the Startup Device Menu and press Enter to begin.

**Note:** Selecting a startup device from the Startup Device (Boot) menu does not permanently change the startup sequence.

### Changing the startup device sequence

To view or permanently change the configured startup device sequence, do the following:

1. Start the Setup Utility program (see “Starting the Setup Utility program” on page 49).
2. Select **Startup**.
3. Select **Startup Sequence**. See the information displayed on the right side of the screen.
4. Select the devices for the Primary Startup Sequence, the Automatic Startup Sequence, and the Error Startup Sequence.
5. Select **Exit** from the Setup Utility menu and then **Save Settings** or **Save and exit the Setup Utility**.

If you have changed these settings and want to return to the default settings, select **Load Default Settings** on the Exit menu.

---

## Advanced settings

On some computer models the Advanced settings menu includes a setting to Enable/Disable HyperThreading. This feature works only with HyperThreading-aware operating systems such as Microsoft Windows XP. The default setting for HyperThreading is Enabled. However, if you select **Set Defaults** and are using an operating system other than Windows XP, your computer performance might be degraded. Therefore, you should always set HyperThreading to Disabled unless you are sure your operating system supports HyperThreading.

---

## Exiting from the Setup Utility program

When you finish viewing or changing settings, press Esc to return to the Setup Utility program menu (you might have to press Esc several times). If you want to save the new settings, select **Save Settings** or **Save and exit the Setup Utility**. Otherwise, your changes will not be saved.

---

## Chapter 7. Symptom-to-FRU Index

The Symptom-to-FRU index lists error symptoms and possible causes. The most likely cause is listed first. Always begin with Chapter 4, "General Checkout," on page 39. This index can also be used to help you decide which FRUs to have available when servicing a computer. If you are unable to correct the problem using this index, go to "Undetermined problems" on page 79.

**Notes:**

- If you have both an error message and an incorrect audio response diagnose the error message first.
- If you cannot run the diagnostic tests or you get a diagnostic error code when running a test but did receive a POST error message diagnose the POST error message first.
- If you did not receive any error message look for a description of your error symptoms in the first part of this index.

---

### Hard disk drive boot error

A hard disk drive boot error (error codes 1962 and I999030X) can have the following causes.

Error	FRU/Action
The start-up drive is not in the boot sequence in configuration.	Check the configuration and ensure the start-up drive is in the boot sequence.
No operating system installed on the boot drive.	Install an operating system on the boot drive.
The boot sector on the start-up drive is corrupted.	The drive must be formatted do the following: <ol style="list-style-type: none"><li>1. Attempt to back-up the data on the failing hard disk drive.</li><li>2. Using the operating systems programs format the hard disk drive.</li></ol>
The drive is defective.	Replace the hard disk drive.

---

### Power Supply Problems

If you suspect a power problem, use the following procedures.

Check/Verify	FRU/Action
Check the following for proper installation. <ul style="list-style-type: none"><li>• Power Cord</li><li>• On/Off Switch connector</li><li>• On/Off Switch Power Supply connector</li><li>• System Board Power Supply connectors</li><li>• Microprocessor(s) connection</li></ul>	Reseat connectors
Check the power cord for continuity.	Power Cord
Check the power-on switch for continuity.	Power-on Switch

## Diagnostic error codes

Refer to the following diagnostic error codes when using the diagnostic tests. See “Running tests” on page 44 for the specific type for information about the Diagnostic programs.

In the following index, X can represent any number.

Diagnostic Error Code	FRU/Action
<b>000-000-XXX</b> BIOS Test Passed	<b>No action</b>
<b>000-002-XXX</b> BIOS Timeout	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-024-XXX</b> BIOS Addressing test failure	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-025-XXX</b> BIOS Checksum Value error	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-026-XXX</b> FLASH data error	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-027-XXX</b> BIOS Configuration/Setup error	<ol style="list-style-type: none"><li>1. <b>Run Setup</b></li><li>2. Flash the system. See “Flash update procedures” on page 197</li><li>3. System board</li></ol>
<b>000-034-XXX</b> BIOS Buffer Allocation failure	<ol style="list-style-type: none"><li>1. <b>Reboot the system</b></li><li>2. Flash the system. See “Flash update procedures” on page 197</li><li>3. Run memory test</li><li>4. System board</li></ol>
<b>000-035-XXX</b> BIOS Reset Condition detected	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-036-XXX</b> BIOS Register error	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-038-XXX</b> BIOS Extension failure	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. Adapter card</li><li>3. System board</li></ol>
<b>000-039-XXX</b> BIOS DMI data error	<ol style="list-style-type: none"><li>1. <b>Flash the system.</b> See “Flash update procedures” on page 197</li><li>2. System board</li></ol>
<b>000-195-XXX</b> BIOS Test aborted by user	<b>Information only</b> Re-start the test if necessary

Diagnostic Error Code	FRU/Action
<b>000-196-XXX</b> BIOS test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. Press F3 to review the log file</li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>000-197-XXX</b> BIOS test warning	<ol style="list-style-type: none"> <li>1. Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>000-198-XXX</b> BIOS test aborted	<ol style="list-style-type: none"> <li>1. Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</li> <li>2. Flash the system and retest. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
<b>000-199-XXX</b> BIOS test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test</li> <li>3. Replace component under function test</li> </ol>
<b>000-250-XXX</b> BIOS APM failure	<ol style="list-style-type: none"> <li>1. Flash the system. See "Flash update procedures" on page 197</li> <li>2. System board</li> </ol>
<b>000-270-XXX</b> BIOS ACPI failure	<ol style="list-style-type: none"> <li>1. Flash the system. See "Flash update procedures" on page 197</li> <li>2. System board</li> </ol>
<b>001-000-XXX</b> System Test Passed	No action
<b>001-00X-XXX</b> System Error	System board
<b>001-01X-XXX</b> System Error	System board
<b>001-024-XXX</b> System Addressing test failure	System board
<b>001-025-XXX</b> System Checksum Value error	<ol style="list-style-type: none"> <li>1. Flash the system. See "Flash update procedures" on page 197</li> <li>2. System board</li> </ol>
<b>001-026-XXX</b> System FLASH data error	<ol style="list-style-type: none"> <li>1. Flash the system. See "Flash update procedures" on page 197</li> <li>2. System board</li> </ol>
<b>001-027-XXX</b> System Configuration/Setup error	<ol style="list-style-type: none"> <li>1. Run Setup</li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. System board</li> </ol>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
<b>001-032-XXX</b> System Device Controller failure	<b>System board</b>
<b>001-034-XXX</b> System Device Buffer Allocation failure	<ol style="list-style-type: none"> <li>1. <b>Reboot the system</b></li> <li>2. Flash the system. See “Flash update procedures” on page 197</li> <li>3. Run memory test</li> <li>4. System board</li> </ol>
<b>001-035-XXX</b> System Device Reset condition detected	<b>System board</b>
<b>001-036-XXX</b> System Register error	<b>System board</b>
<b>001-038-XXX</b> System Extension failure	<ol style="list-style-type: none"> <li>1. <b>Adapter card</b></li> <li>2. System board</li> </ol>
<b>001-039-XXX</b> System DMI data structure error	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 197</b></li> <li>2. System board</li> </ol>
<b>001-040-XXX</b> System IRQ failure	<ol style="list-style-type: none"> <li>1. <b>Power-off/on system and re-test</b></li> <li>2. System board</li> </ol>
<b>001-041-XXX</b> System DMA failure	<ol style="list-style-type: none"> <li>1. <b>Power-off/on system and re-test</b></li> <li>2. System board</li> </ol>
<b>001-195-XXX</b> System Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>001-196-XXX</b> System test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>001-197-XXX</b> System test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, “Using the Setup Utility,” on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>001-198-XXX</b> System test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, “Using the Setup Utility,” on page 49</b></li> <li>2. Flash the system and retest. See “Flash update procedures” on page 197</li> <li>3. Go to “Undetermined problems” on page 79</li> </ol>
<b>001-199-XXX</b> System test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to “Undetermined problems” on page 79</li> <li>2. Flash the system and re-test</li> <li>3. Replace component under function test</li> </ol>
<b>001-250-XXX</b> System ECC error	<b>System board</b>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
001-254-XXX 001-255-XXX 001-256-XXX 001-257-XXX System DMA error	<b>System board</b>
001-260-XXX 001-264-XXX System IRQ error	<b>System board</b>
001-268-XXX System IRQ1 failure	1. <b>Device on IRQ1</b> 2. System board
001-269-XXX System IRQ2 failure	1. <b>Device on IRQ2</b> 2. System board
001-270-XXX System IRQ3 failure	1. <b>Device on IRQ3</b> 2. System board
001-271-XXX System IRQ4 failure	1. <b>Device on IRQ4</b> 2. System board
001-272-XXX System IRQ5 failure	1. <b>Device on IRQ5</b> 2. System board
001-273-XXX System IRQ6 (diskette drive) failure	1. <b>Diskette Cable</b> 2. Diskette drive 3. System board
001-274-XXX System IRQ7 failure	1. <b>Device on IRQ7</b> 2. System board
001-275-XXX System IRQ8 failure	1. <b>Device on IRQ8</b> 2. System board
001-276-XXX System IRQ9 failure	1. <b>Device on IRQ9</b> 2. System board
001-277-XXX System IRQ10 failure	1. <b>Device on IRQ10</b> 2. System board
001-278-XXX System IRQ11 failure	1. <b>Device on IRQ11</b> 2. System board
001-279-XXX System IRQ12 failure	1. <b>Device on IRQ12</b> 2. System board
001-280-XXX System IRQ13 failure	1. <b>Device on IRQ13</b> 2. System board
001-281-XXX System IRQ14 (hard disk drive) failure	1. <b>Hard disk drive cable</b> 2. Hard disk drive 3. System board
001-282-XXX System IRQ15 failure	1. <b>Device on IRQ15</b> 2. System board

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
001-286-XXX 001-287-XXX 001-288-XXX System Timer failure	<b>System board</b>
001-292-XXX System CMOS RAM error	1. <b>Run Setup and re-test</b> 2. System board
001-293-XXX System CMOS Battery	1. <b>CMOS Battery</b> 2. System board
001-298-XXX System RTC date/time update failure	1. <b>Flash the system. See “Flash update procedures” on page 197</b> 2. System board
001-299-XXX System RTC periodic interrupt failure	<b>System board</b>
001-300-XXX System RTC Alarm failure	<b>System board</b>
001-301-XXX System RTC Century byte error	1. <b>Flash the system. See “Flash update procedures” on page 197</b> 2. System board
005-000-XXX Video Test Passed	<b>No action</b>
005-00X-XXX Video error	1. <b>Video card if installed</b> 2. System board
005-010-XXX 005-011-XXX 005-012-XXX 005-013-XXX Video Signal failure	1. <b>Video card if installed</b> 2. System board
005-016-XXX Video Simple Pattern test failure	1. <b>Video Ram</b> 2. Video card if installed 3. System board
005-024-XXX Video Addressing test failure	1. <b>Video card if installed</b> 2. System board
005-025-XXX Video Checksum Value error	1. <b>Video card if installed</b> 2. System board
005-027-XXX Video Configuration/Setup error	1. <b>Run Setup</b> 2. Video drivers update 3. Video card if installed 4. System board
005-031-XXX Video Device Cable failure	1. <b>Video cable</b> 2. Monitor 3. Video card if installed 4. System board
005-032-XXX Video Device Controller failure	1. <b>Video card if installed</b> 2. System board



Diagnostic Error Code	FRU/Action
<b>005-036-XXX</b> Video Register error	<ol style="list-style-type: none"> <li>1. <b>Video card if installed</b></li> <li>2. System board</li> </ol>
<b>005-038-XXX</b> System BIOS extension failure	<ol style="list-style-type: none"> <li>1. <b>Video card if installed</b></li> <li>2. System board</li> </ol>
<b>005-040-XXX</b> Video IRQ failure	<ol style="list-style-type: none"> <li>1. <b>Video card if installed</b></li> <li>2. System board</li> </ol>
<b>005-195-XXX</b> Video Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>005-196-XXX</b> Video test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>005-197-XXX</b> Video test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>005-198-XXX</b> Video test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
<b>005-199-XXX</b> Video test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
<b>005-2XX-XXX</b> <b>005-3XX-XXX</b> Video subsystem error	<ol style="list-style-type: none"> <li>1. <b>Video card if installed</b></li> <li>2. System board</li> </ol>
<b>006-000-XXX</b> Diskette interface Test Passed	<b>No action</b>
<b>006-0XX-XXX</b> Diskette interface error	<ol style="list-style-type: none"> <li>1. <b>Diskette drive Cable</b></li> <li>2. Diskette drive</li> <li>3. System board</li> </ol>
<b>006-195-XXX</b> Diskette interface Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>006-196-XXX</b> Diskette interface test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>

Diagnostic Error Code	FRU/Action
006-197-XXX Diskette interface test warning	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
006-198-XXX Diskette interface test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
006-199-XXX Diskette interface test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test</li> <li>3. Replace component under function test</li> </ol>
006-25X-XXX Diskette interface Error	<ol style="list-style-type: none"> <li>1. <b>Diskette drive cable</b></li> <li>2. Diskette drive</li> <li>3. System board</li> </ol>
011-000-XXX Serial port Interface Test Passed	<b>No action</b>
011-001-XXX Serial port Presence	<ol style="list-style-type: none"> <li>1. <b>Remove external serial device if present</b></li> <li>2. Run setup enable port</li> <li>3. System board</li> </ol>
011-002-XXX 011-003-XXX Serial port Timeout/Parity error	<b>System board</b>
011-013-XXX 011-014-XXX Serial port Control Signal/Loopback test failure	<b>System board</b>
011-015-XXX Serial port External Loopback failure	<ol style="list-style-type: none"> <li>1. <b>Wrap plug</b></li> <li>2. System board</li> </ol>
011-027-XXX Serial port Configuration/Setup error	<ol style="list-style-type: none"> <li>1. <b>Run Setup enable port</b></li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. System board</li> </ol>
011-03X-XXX 011-04X-XXX Serial port failure	<b>System board</b>
011-195-XXX Serial port Test aborted by user	<b>Information only</b> Re-start the test if necessary
011-196-XXX Serial port test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>

Diagnostic Error Code	FRU/Action
011-197-XXX Serial port test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
011-198-XXX Serial port test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
011-199-XXX Serial port test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
011-2XX-XXX Serial port signal failure	<ol style="list-style-type: none"> <li>1. <b>External serial device</b></li> <li>2. System board</li> </ol>
014-000-XXX Parallel port Interface Test Passed	<b>No action</b>
014-001-XXX Parallel port Presence	<ol style="list-style-type: none"> <li>1. <b>Remove external parallel device if present</b></li> <li>2. Run setup enable port</li> <li>3. System board</li> </ol>
014-002-XXX 014-003-XXX Parallel port Timeout/Parity error	<b>System board</b>
014-013-XXX 014-014-XXX Parallel port Control Signal/Loopback test failure	<b>System board</b>
014-015-XXX Parallel port External Loopback failure	<ol style="list-style-type: none"> <li>1. <b>Wrap plug</b></li> <li>2. System board</li> </ol>
014-027-XXX Parallel port Configuration/Setup error	<ol style="list-style-type: none"> <li>1. <b>Run Setup enable port</b></li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. System board</li> </ol>
014-03X-XXX 014-04X-XXX Parallel port failure	<b>System board</b>
014-195-XXX Parallel port Test aborted by user	<b>Information only</b> Re-start the test if necessary

Diagnostic Error Code	FRU/Action
<b>014-196-XXX</b> Parallel port test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. Press F3 to review the log file</li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>014-197-XXX</b> Parallel port test warning	<ol style="list-style-type: none"> <li>1. Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>014-198-XXX</b> Parallel port test aborted	<ol style="list-style-type: none"> <li>1. If a component is called out make sure it is connected and/or enabled</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
<b>014-199-XXX</b> Parallel port test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
<b>014-2XX-XXX</b> <b>014-3XX-XXX</b> Parallel port failure	<ol style="list-style-type: none"> <li>1. External parallel device</li> <li>2. System board</li> </ol>
<b>015-000-XXX</b> USB port Interface Test Passed	No action
<b>015-001-XXX</b> USB port Presence	<ol style="list-style-type: none"> <li>1. Remove USB device(s) and re-test</li> <li>2. System board</li> </ol>
<b>015-002-XXX</b> USB port Timeout	<ol style="list-style-type: none"> <li>1. Remove USB device(s) and re-test</li> <li>2. System board</li> </ol>
<b>015-015-XXX</b> USB port External Loopback failure	<ol style="list-style-type: none"> <li>1. Remove USB device(s) and re-test</li> <li>2. System board</li> </ol>
<b>015-027-XXX</b> USB port Configuration/Setup error	<ol style="list-style-type: none"> <li>1. Flash the system. See "Flash update procedures" on page 197</li> <li>2. System board</li> </ol>
<b>015-032-XXX</b> USB port Device Controller failure	System board
<b>015-034-XXX</b> USB port buffer allocation failure	<ol style="list-style-type: none"> <li>1. Reboot the system</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Run memory test</li> <li>4. System board</li> </ol>
<b>015-035-XXX</b> USB port Reset condition detected	<ol style="list-style-type: none"> <li>1. Remove USB device(s) and re-test</li> <li>2. System board</li> </ol>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
<b>015-036-XXX</b> USB port Register error	<b>System board</b>
<b>015-040-XXX</b> USB port IRQ failure	<ol style="list-style-type: none"> <li>1. <b>Run setup and check for conflicts</b></li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. System board</li> </ol>
<b>015-195-XXX</b> USB port Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>015-196-XXX</b> USB port test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>015-197-XXX</b> USB port test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>015-198-XXX</b> USB port test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
<b>015-199-XXX</b> USB port test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
<b>018-000-XXX</b> PCI Card Test Passed	<b>No action</b>
<b>018-0XX-XXX</b> PCI Card Failure	<ol style="list-style-type: none"> <li>1. <b>Riser card if installed</b></li> <li>2. System board</li> </ol>
<b>018-195-XXX</b> PCI Card Test aborted by user	<ol style="list-style-type: none"> <li>1. <b>PCI card</b></li> <li>2. <b>Information only</b> Re-start the test if necessary</li> </ol>
<b>018-196-XXX</b> PCI Card test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>

Diagnostic Error Code	FRU/Action
018-197-XXX PCI Card test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
018-198-XXX PCI Card test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
018-199-XXX PCI Card test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
018-250-XXX PCI Card Services error	<ol style="list-style-type: none"> <li>1. <b>PCI card</b></li> <li>2. Riser card if installed</li> <li>3. System board</li> </ol>
020-000-XXX PCI Interface Test Passed	<b>No action</b>
020-0XX-XXX PCI Interface error	<ol style="list-style-type: none"> <li>1. <b>PCI card</b></li> <li>2. Riser card if installed</li> <li>3. System board</li> </ol>
020-195-XXX PCI Test aborted by user	<b>Information only</b> Re-start the test if necessary
020-196-XXX PCI test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
020-197-XXX PCI test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>

Diagnostic Error Code	FRU/Action
020-198-XXX PCI test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
020-199-XXX PCI test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
020-262-XXX PCI system error	<ol style="list-style-type: none"> <li>1. PCI card</li> <li>2. Riser card if installed</li> <li>3. System board</li> </ol>
025-000-XXX IDE interface Test Passed	<b>No action</b>
025-00X-XXX 025-01X-XXX IDE interface failure	<ol style="list-style-type: none"> <li>1. <b>IDE signal cable</b></li> <li>2. Check power supply voltages</li> <li>3. Reseat IDE signal cable</li> <li>4. IDE device</li> <li>5. System board</li> </ol>
025-027-XXX IDE interface Configuration/Setup error	<ol style="list-style-type: none"> <li>1. <b>IDE signal cable</b></li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. Reseat IDE signal cable</li> <li>4. IDE device</li> <li>5. System board</li> </ol>
025-02X-XXX 025-03X-XXX 025-04X-XXX IDE Interface failure	<ol style="list-style-type: none"> <li>1. <b>IDE signal cable</b></li> <li>2. Check power supply</li> <li>3. Reseat IDE signal cable</li> <li>4. IDE device</li> <li>5. System board</li> </ol>
025-195-XXX IDE interface Test aborted by user	<b>Information only</b> Re-start the test if necessary
025-196-XXX IDE interface test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
025-197-XXX IDE interface test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>

Diagnostic Error Code	FRU/Action
025-198-XXX IDE interface test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
025-199-XXX IDE interface test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
030-000-XXX SCSI interface Test Passed	<b>No action</b>
030-00X-XXX 030-01X-XXX SCSI interface failure	<ol style="list-style-type: none"> <li>1. <b>SCSI signal cable</b></li> <li>2. Check power supply</li> <li>3. SCSI device</li> <li>4. SCSI adapter card if installed</li> <li>5. System board</li> </ol>
030-027-XXX SCSI interface Configuration/Setup error	<ol style="list-style-type: none"> <li>1. <b>SCSI signal cable</b></li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. SCSI device</li> <li>4. SCSI adapter card if installed</li> <li>5. System board</li> </ol>
030-03X-XXX 030-04X-XXX SCSI interface error	<ol style="list-style-type: none"> <li>1. <b>SCSI signal cable</b></li> <li>2. Check power supply</li> <li>3. SCSI device</li> <li>4. SCSI adapter card if installed</li> <li>5. System board</li> </ol>
030-195-XXX SCSI interface Test aborted by user	<b>Information only</b> Re-start the test if necessary
030-196-XXX SCSI interface test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
030-197-XXX SCSI interface test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>



Diagnostic Error Code	FRU/Action
030-198-XXX SCSI interface test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
030-199-XXX SCSI interface test failed cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
035-000-XXX RAID interface Test Passed	<b>No action</b>
035-0XX-XXX RAID interface Failure	<ol style="list-style-type: none"> <li>1. <b>RAID signal cable</b></li> <li>2. RAID device</li> <li>3. RAID adapter card if installed</li> <li>4. System board</li> </ol>
035-195-XXX RAID interface Test aborted by user	<b>Information only</b> Re-start the test if necessary
035-196-XXX RAID interface test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
035-197-XXX RAID interface test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
035-198-XXX RAID interface test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
035-199-XXX RAID interface test failed cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
071-000-XXX Audio port Interface Test Passed	<b>No action</b>

Diagnostic Error Code	FRU/Action
071-00X-XXX 071-01X-XXX 071-02X-XXX Audio port error	<ol style="list-style-type: none"> <li>1. <b>Run Setup</b></li> <li>2. Flash the system. See "Flash update procedures" on page 197</li> <li>3. System board</li> </ol>
071-03X-XXX Audio port failure	<ol style="list-style-type: none"> <li>1. <b>Speakers</b></li> <li>2. Microphone</li> <li>3. Audio card if installed</li> <li>4. System board</li> </ol>
071-04X-XXX Audio port failure	<ol style="list-style-type: none"> <li>1. <b>Run Setup</b></li> <li>2. Audio card if installed</li> <li>3. System board</li> </ol>
071-195-XXX Audio port Test aborted by user	<p><b>Information only</b> Re-start the test if necessary</p>
071-196-XXX Audio port test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
071-197-XXX Audio port test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
071-198-XXX Audio port test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
071-199-XXX Audio port test failed cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
071-25X-XXX Audio port failure	<ol style="list-style-type: none"> <li>1. <b>Speakers</b></li> <li>2. Audio card if installed</li> <li>3. System board</li> </ol>
080-000-XXX Game Port interface Test Passed	<b>No action</b>
080-XXX-XXX Game Port interface Error	<ol style="list-style-type: none"> <li>1. <b>Remove the game port device and re-test the system</b></li> </ol>
080-195-XXX Game Port interface Test aborted by user	<p><b>Information only</b> Re-start the test if necessary</p>

Diagnostic Error Code	FRU/Action
<b>080-196-XXX</b> Game Port interface test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>080-197-XXX</b> Game Port interface test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>080-198-XXX</b> Game Port interface test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
<b>080-199-XXX</b> Game Port interface test failed cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
<b>086-000-XXX</b> Mouse Port interface Test Passed	<b>No action</b>
<b>086-001-XXX</b> Mouse Port interface Presence	<ol style="list-style-type: none"> <li>1. <b>Mouse</b></li> <li>2. System board</li> </ol>
<b>086-032-XXX</b> Mouse Port interface Device controller failure	<ol style="list-style-type: none"> <li>1. <b>Mouse</b></li> <li>2. System board</li> </ol>
<b>086-035-XXX</b> Mouse Port interface Reset	<ol style="list-style-type: none"> <li>1. <b>Mouse</b></li> <li>2. System board</li> </ol>
<b>086-040-XXX</b> Mouse Port interface IRQ failure	<ol style="list-style-type: none"> <li>1. <b>Run Setup</b></li> <li>2. Mouse</li> <li>3. System board</li> </ol>
<b>086-195-XXX</b> Mouse Port interface Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>086-196-XXX</b> Mouse Port interface test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>

Diagnostic Error Code	FRU/Action
086-197-XXX Mouse Port interface test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
086-198-XXX Mouse Port interface test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
086-199-XXX Mouse Port interface test failed cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
089-000-XXX Microprocessor Test Passed	<b>No action</b>
089-XXX-XXX Microprocessor failure	<ol style="list-style-type: none"> <li>1. <b>Microprocessor(s)</b></li> <li>2. System board</li> </ol>
089-195-XXX Microprocessor Test aborted by user	<b>Information only</b> Re-start the test if necessary
089-196-XXX Microprocessor test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
089-197-XXX Microprocessor test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
089-198-XXX Microprocessor test aborted	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See "Flash update procedures" on page 197</b></li> <li>2. Go to "Undetermined problems" on page 79</li> </ol>
089-199-XXX Microprocessor test failed cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 79</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
170-000-XXX Voltage Sensor(s) Test Passed	<b>No action</b>

Diagnostic Error Code	FRU/Action
<b>170-0XX-XXX</b> Voltage Sensor(s) failure	<ol style="list-style-type: none"> <li>1. <b>Flash system</b></li> <li>2. System board</li> </ol>
<b>170-195-XXX</b> Voltage Sensor(s) Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>170-196-XXX</b> Voltage Sensor(s) test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>
<b>170-197-XXX</b> Voltage Sensor(s) test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
<b>170-198-XXX</b> Voltage Sensor(s) test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
<b>170-199-XXX</b> Voltage Sensor(s) test failed cause unknown	<ol style="list-style-type: none"> <li>1. <b>See "Undetermined problems" on page 79</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
<b>170-250-XXX</b> <b>170-251-XXX</b> Voltage Sensor(s) Voltage limit error	<ol style="list-style-type: none"> <li>1. <b>Power supply</b></li> <li>2. System board</li> </ol>
<b>170-254-XXX</b> Voltage Sensor(s) Voltage Regulator Module error	<ol style="list-style-type: none"> <li>1. <b>Voltage Regulator Module (VRM)</b></li> <li>2. Microprocessor</li> <li>3. System board</li> </ol>
<b>175-000-XXX</b> Thermal Sensor(s) Test Passed	<b>No action</b>
<b>175-0XX-XXX</b> Thermal Sensor(s) failure	<ol style="list-style-type: none"> <li>1. <b>Flash system</b></li> <li>2. System board</li> </ol>
<b>175-195-XXX</b> Thermal Sensor(s) Test aborted by user	<b>Information only</b> Re-start the test if necessary
<b>175-196-XXX</b> Thermal Sensor(s) test halt error threshold exceeded	<ol style="list-style-type: none"> <li>1. <b>Press F3 to review the log file</b></li> <li>2. Re-start the test to reset the log file</li> </ol>

Diagnostic Error Code	FRU/Action
175-197-XXX Thermal Sensor(s) test warning	<ol style="list-style-type: none"> <li>1. <b>Make sure the component that is called out is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 49</b></li> <li>2. Re-run test</li> <li>3. Replace the component that is called out in warning statement</li> <li>4. Replace the component under test</li> </ol>
175-198-XXX Thermal Sensor(s) test aborted	<ol style="list-style-type: none"> <li>1. <b>If a component is called out make sure it is connected and/or enabled</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Go to "Undetermined problems" on page 79</li> </ol>
175-199-XXX Thermal Sensor(s) test failed cause unknown	<ol style="list-style-type: none"> <li>1. <b>See "Undetermined problems" on page 79</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 197</li> <li>3. Replace component under function test</li> </ol>
175-250-XXX 175-251-XXX Thermal Sensor(s) limit error	<ol style="list-style-type: none"> <li>1. <b>Check fans</b></li> <li>2. Check Power supply voltages</li> <li>3. Microprocessor</li> <li>4. System board</li> </ol>
185-000-XXX Asset Security Test Passed	<b>No action</b>
185-XXX-XXX Asset Security failure	<ol style="list-style-type: none"> <li>1. <b>Flash system</b></li> <li>2. System board</li> </ol>
185-278-XXX Asset Security Chassis Intrusion	<ol style="list-style-type: none"> <li>1. <b>Assure Asset Security Enabled</b></li> <li>2. C2 Cover Switch</li> <li>3. System board</li> </ol>
201-000-XXX System Memory Test Passed	<b>No action</b>
201-XXX-XXX System Memory error	<ol style="list-style-type: none"> <li>1. <b>Replace the memory module called out by the test</b></li> <li>2. System board</li> </ol>
202-000-XXX System Cache Test Passed	<b>No action</b>
202-XXX-XXX System Cache error	<ol style="list-style-type: none"> <li>1. <b>Cache if removable</b></li> <li>2. System board</li> <li>3. Microprocessor</li> </ol>
206-000-XXX Diskette Drive Test Passed	<b>No action</b>
206-XXX-XXX Diskette Drive error	<ol style="list-style-type: none"> <li>1. <b>Diskette Drive Cable</b></li> <li>2. Check power supply voltages</li> <li>3. Diskette drive</li> <li>4. System board</li> </ol>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
<b>215-000-XXX</b> CD-ROM Drive Test Passed	<b>No action</b>
<b>215-XXX-XXX</b> CD-ROM Drive error	<ol style="list-style-type: none"> <li>1. <b>CD-ROM Drive Cable</b></li> <li>2. Check power supply voltages</li> <li>3. CD-ROM drive</li> <li>4. System board</li> </ol>
<b>217-000-XXX</b> Hard Disk Drive Test Passed	<b>No action</b>
<b>217-25X-XXX</b> <b>217-26X-XXX</b> Hard Disk Drive (IDE) error	<ol style="list-style-type: none"> <li>1. <b>Hard Disk Drive Cable</b></li> <li>2. Check power supply voltages</li> <li>3. Reseat the hard disk drive cable</li> <li>4. Hard Disk drive (IDE)</li> <li>5. System board</li> </ol>
<b>217-28X-XXX</b> <b>217-29X-XXX</b> Hard Disk Drive (SCSI) error	<ol style="list-style-type: none"> <li>1. <b>Hard Disk Drive Cable</b></li> <li>2. Check power supply voltages</li> <li>3. Reseat the hard disk drive cable</li> <li>4. Hard Disk drive (SCSI)</li> <li>5. SCSI adapter card</li> <li>6. System board</li> </ol>
<b>220-000-XXX</b> Hi-Capacity Cartridge Drive Test Passed	<b>No action</b>
<b>220-XXX-XXX</b> Hi-Capacity Cartridge Drive error	<ol style="list-style-type: none"> <li>1. <b>Remove the Hi-Capacity Cartridge Drive and re-test the system</b></li> </ol>
<b>301-XXX-XXX</b> Keyboard error	<ol style="list-style-type: none"> <li>1. <b>Keyboard</b></li> <li>2. Check and test mouse</li> <li>3. System board</li> </ol>
<b>301-000-XXX</b> Keyboard Test Passed	<b>No action</b>
<b>302-000-XXX</b> Mouse Test Passed	<b>No action</b>
<b>302-XXX-XXX</b> Mouse error	<ol style="list-style-type: none"> <li>1. <b>Mouse</b></li> <li>2. Check and test Keyboard</li> <li>3. System board</li> </ol>
<b>303-000-XXX</b> Joystick Test Passed	<b>No action</b>
<b>303-XXX-XXX</b> Joystick error	<b>Remove the Joystick and re-test the system</b>
<b>305-000-XXX</b> Monitor DDC Test Passed	<b>No action</b>
<b>305-250-XXX</b> Monitor DDC self test failure	<ol style="list-style-type: none"> <li>1. <b>Run Setup to enable DDC</b></li> <li>2. Cable</li> <li>3. Monitor</li> <li>4. Video card</li> <li>5. System board</li> </ol>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
415-000-XXX Modem Test Passed	No action
415-XXX-XXX Modem error	Remove the Modem and re-test the system



## Beep symptoms

Beep symptoms are tones or a series of tones separated by pauses (intervals without sound) during POST.

The following table describes beep symptoms.

Beep Symptom	FRU/Action
<b>2 short beeps</b> CMOS setting error	Perform the following actions in order. <ol style="list-style-type: none"><li>1. Start the Setup Utility program and press F10 to Save and exit. See Chapter 6, "Using the Setup Utility," on page 49.</li><li>2. Start the Setup Utility program and press F7 to load defaults and then press F10 to Save and exit.</li><li>3. Perform a Boot block recovery. See "Recovering from a POST/BIOS update failure" on page 198.</li></ol>
<b>1 long and 2 short beeps</b> Monitor or video adapter card error	Perform the following actions in order. <ol style="list-style-type: none"><li>1. Make sure the monitor is properly connected to the computer.</li><li>2. Replace the video adapter card (if present).</li><li>3. Replace the system board.</li></ol>
<b>1 long and 3 short beeps</b> Keyboard error	Perform the following actions in order. <ol style="list-style-type: none"><li>1. Make sure the keyboard is properly connected to the keyboard connector.</li><li>2. Replace the keyboard.</li><li>3. Replace the system board.</li></ol>
<b>1 long and 9 short beeps</b> BIOS ROM error	Perform the following actions in order. <ol style="list-style-type: none"><li>1. Start the Setup Utility program and press F7 to load defaults and then press F10 to Save and exit. See Chapter 6, "Using the Setup Utility," on page 49.</li><li>2. Perform a Boot block recovery. See "Recovering from a POST/BIOS update failure" on page 198.</li><li>3. Replace the system board.</li></ol>
<b>Continuos long beeps</b> DRAM memory error	Perform the following actions in order. <ol style="list-style-type: none"><li>1. Make sure the memory module(s) are properly seated in the connector(s).</li><li>2. Replace the memory module(s).</li><li>3. Replace the system board.</li></ol>

## POST error codes

Each time you power-on the system, it performs a series of tests that check the operation of the system and some options. This series of tests is called the *Power-On Self-Test*, or *POST*. POST does the following operations.

- Checks some basic system-board operations
- Checks the memory operation
- Starts the video operation
- Verifies that the boot drive is working

If the POST detects a problem, an error message appears on the screen. A single problem can cause several error messages to appear. When you correct the cause of the first error message, the other error messages probably will not appear on the screen the next time you turn on the system.

POST Error Message	Description/Action
CMOS battery failed	The CMOS battery is no longer functional. Replace the battery.
CMOS checksum error - defaults loaded	Checksum of CMOS is incorrect. The computer loads the default configuration settings. This error might indicate that CMOS has become corrupt due to a weak CMOS battery.
CPU at nnnn	nnnn is the running speed of the microprocessor.
Press Esc to skip memory test	Pressing Esc skips the full memory test
HARD DISK INSTALL FAILURE	Cannot find or initialize the hard disk drive controller or the drive. Make sure the hard disk drive is correctly installed. If no hard disk drives are installed make sure the hard disk drive selection in Setup is set to NONE.
Keyboard error or no keyboard present	Cannot initialize the keyboard. Make sure the keyboard is properly connected to the computer and that no keys are held pressed during POST. To purposely configure the computer without a keyboard set the error halt condition in Setup to HALT ON ALL BUT KEYBOARD. The BIOS then ignores the missing keyboard during POST.
Memory Test:	This message displays during a full memory test counting down the memory areas being tested.
Memory test fail	If POST detects an error during memory testing additional information appears. This information gives specifics about the type and location of the memory error.

POST Error Message	Description/Action
Press TAB to show POST screen	Pressing the TAB key permits the user to toggle between the default POST display screen and a custom POST display screen.
Error: Non-System disk or disk error Replace and press any key when ready	<p>The BIOS was unable to find a suitable boot device.</p> <p>Make sure the boot drive is properly connected to the computer.</p> <p>Make sure you have bootable media.</p>

## Miscellaneous error messages

Message/Symptom	FRU/Action
Changing display colors	<b>Display/Monitor</b>
Computer will <i>not</i> power-off. See "Power Supply Problems" on page 53.	<ol style="list-style-type: none"> <li><b>Power Switch</b></li> <li>System Board</li> <li>Riser card if installed</li> </ol>
Computer will <i>not</i> RPL from server	<ol style="list-style-type: none"> <li><b>Ensure that network is in startup sequence as first device or first device after diskette</b></li> <li>Ensure that network adapter is enabled for RPL</li> <li>Network adapter (Advise network administrator of new MAC address)</li> </ol>
Computer will <i>not</i> perform a Wake On LAN <sup>®</sup> (if applicable)	<ol style="list-style-type: none"> <li><b>Check power supply and signal cable connections to network adapter</b></li> <li>Ensure that the operating system settings are set to enable Wake on LAN<sup>®</sup></li> <li>Ensure Wake On LAN feature is enabled in Setup/Configuration (see "Starting the Setup Utility program" on page 49)</li> <li>Ensure network administrator is using correct MAC address</li> <li>Ensure no interrupt or I/O address conflicts</li> <li>Network adapter (advise network administrator of new MAC address)</li> </ol>
Dead computer. See "Power Supply Problems" on page 53.	<ol style="list-style-type: none"> <li><b>Power Supply</b></li> <li>System Board</li> </ol>
Diskette drive in-use light remains on or does not light when drive is active.	<ol style="list-style-type: none"> <li><b>Diskette Drive</b></li> <li>System Board</li> <li>Diskette Drive Cable</li> </ol>
Flashing cursor with an otherwise blank display.	<ol style="list-style-type: none"> <li><b>System Board</b></li> <li>Primary Hard Disk Drive</li> <li>Hard Disk Drive Cable</li> </ol>
Incorrect memory size during POST	<ol style="list-style-type: none"> <li><b>Run the Memory tests</b></li> <li>Memory Module</li> <li>System Board</li> </ol>
"Insert a Diskette" icon appears with a known-good diagnostics diskette in the first 3.5-inch diskette drive.	<ol style="list-style-type: none"> <li><b>System Board</b></li> <li>Diskette Drive Cable</li> <li>Network Adapter</li> </ol>
Intensity or color varies from left to right of characters and color bars	<ol style="list-style-type: none"> <li><b>Display</b></li> <li>Video adapter (if present)</li> <li>System Board</li> </ol>
No power or fan not running	<ol style="list-style-type: none"> <li><b>See "Power Supply Problems" on page 53.</b></li> </ol>

Message/Symptom	FRU/Action
Non-system disk or disk error-type message with a known-good diagnostic diskette.	<ol style="list-style-type: none"> <li>1. <b>Diskette Drive</b></li> <li>2. System Board</li> <li>3. Diskette Drive Cable</li> </ol>
Other display symptoms not listed above (including blank or illegible display)	<ol style="list-style-type: none"> <li>1. <b>Display</b></li> <li>2. System Board</li> </ol>
Power-on indicator or hard disk drive in-use light not on but computer works correctly	<ol style="list-style-type: none"> <li>1. Power switch/LED assembly</li> <li>2. System Board</li> </ol>
Printer problems	<ol style="list-style-type: none"> <li>1. <b>Printer</b></li> <li>2. System Board</li> </ol>
Program loads from the hard disk with a known-good diagnostics diskette in the first 3.5-inch diskette drive	<ol style="list-style-type: none"> <li>1. <b>Run Setup</b> and check Startup sequence.</li> <li>2. Diskette Drive</li> <li>3. Diskette Drive Cable</li> <li>4. System Board</li> <li>5. Power Supply</li> </ol>
RPL computer cannot access programs from its own hard disk.	<ol style="list-style-type: none"> <li>1. <b>If network administrator is using LCCM Hybrid RPL check startup sequence:</b> <ol style="list-style-type: none"> <li>a. <b>First device - network</b></li> <li>b. <b>Second device - hard disk</b></li> </ol> </li> <li>2. Hard disk drive</li> </ol>
RPL computer does not RPL from server	<ol style="list-style-type: none"> <li>1. <b>Check startup sequence</b></li> <li>2. Check the network adapter LED status</li> </ol>
Serial or parallel port device failure (system board port)	<ol style="list-style-type: none"> <li>1. <b>External Device Self-Test OK?</b></li> <li>2. External Device</li> <li>3. Cable</li> <li>4. System Board</li> </ol>
Serial or parallel port device failure (adapter port)	<ol style="list-style-type: none"> <li>1. <b>External Device Self-Test OK?</b></li> <li>2. External Device</li> <li>3. Cable</li> <li>4. Alternate Adapter</li> <li>5. System Board</li> </ol>
Some or all keys on the keyboard do not work	<ol style="list-style-type: none"> <li>1. <b>Keyboard</b></li> <li>2. Keyboard Cable</li> <li>3. System Board</li> </ol>

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## Undetermined problems

If this computer has a parallel ATA hard disk drive, make sure that the hard disk drive is jumpered as a master and the optical drive is jumpered as a slave.

1. Power-off the computer.
2. Remove or disconnect the following components (if installed) one at a time.
  - a. External devices (modem, printer, or mouse)
  - b. Any adapters

- c. Memory modules
  - d. Extended video memory
  - e. External Cache
  - f. External Cache RAM
  - g. Hard disk drive
  - h. Diskette drive
3. Power-on the computer to re-test the system.
  4. Repeat steps 1 through 3 until you find the failing device or adapter.

If all devices and adapters have been removed, and the problem continues, replace the system board.

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## Chapter 8. Replacing FRUs

**Important**

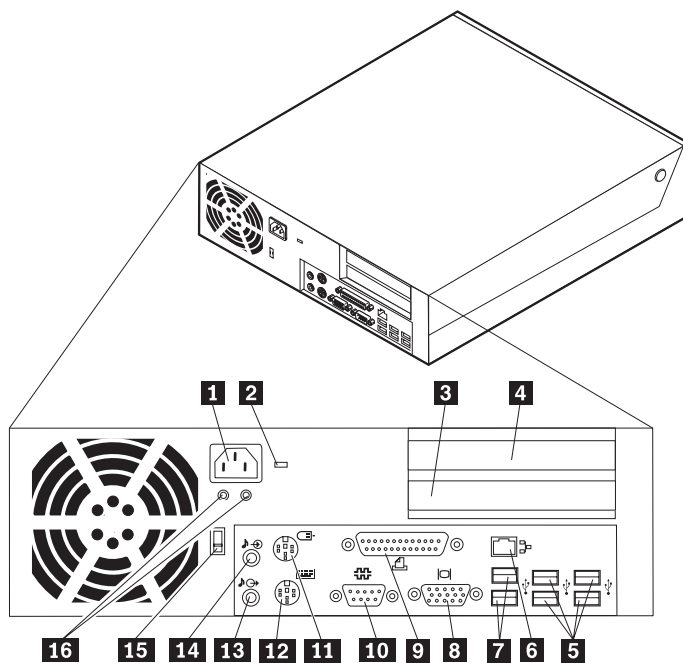
Before you replace any FRU, read Chapter 2, "Safety information," on page 3. These precautions and guidelines will help you work safely.

FRU replacements are to be done by trained service technicians only.

This chapter does not contain a remove and replace procedure for all FRUs. Only the major FRUs are documented.

## Locating connectors on the rear of your computer

The following illustration shows locations of connectors on the rear of your computer.



- |          |                                  |           |  |
|----------|----------------------------------|-----------|--|
| <b>1</b> | Power cord connector             | <b>9</b>  | Parallel connector                     |
| <b>2</b> | Cable lock latch                 | <b>10</b> | Serial connector                       |
| <b>3</b> | PCI Express x1 adapter connector | <b>11</b> | Mouse connector                        |
| <b>4</b> | PCI adapter connector            | <b>12</b> | Keyboard connector                     |
| <b>5</b> | USB connectors (4)               | <b>13</b> | Audio line out connector               |
| <b>6</b> | Ethernet connector               | <b>14</b> | Audio line in connector                |
| <b>7</b> | USB connectors (2)               | <b>15</b> | Voltage selection switch (some models) |
| <b>8</b> | VGA monitor connector            | <b>16</b> | Power supply diagnostic LEDs           |



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## Opening the cover

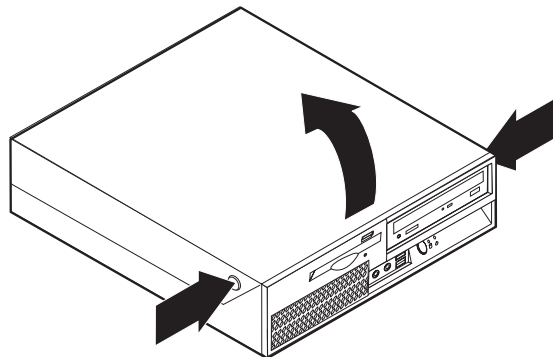
### Important



**Turn off the computer and wait 3 to 5 minutes to let the computer cool before opening the computer cover.**

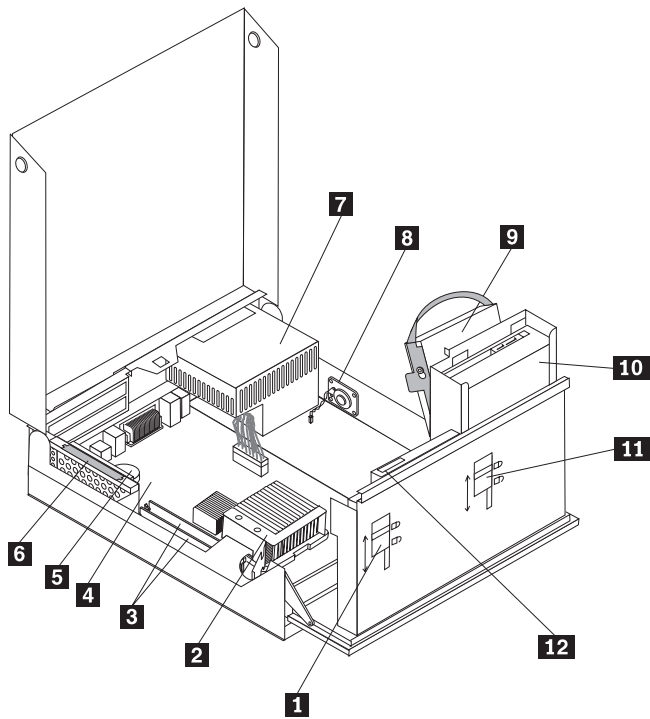
To open the computer cover, do the following:

1. Remove any media (diskettes, CDs, or tapes) from the drives, shut down your operating system, turn off all attached devices and the computer.
2. Unplug all power cords from electrical outlets.
3. Disconnect the cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer.
4. Remove any locking devices, such as a cable lock that secure the computer cover.
5. Press the buttons on the sides of the computer and pivot the cover upward to open the computer as shown.



## Locating FRUs

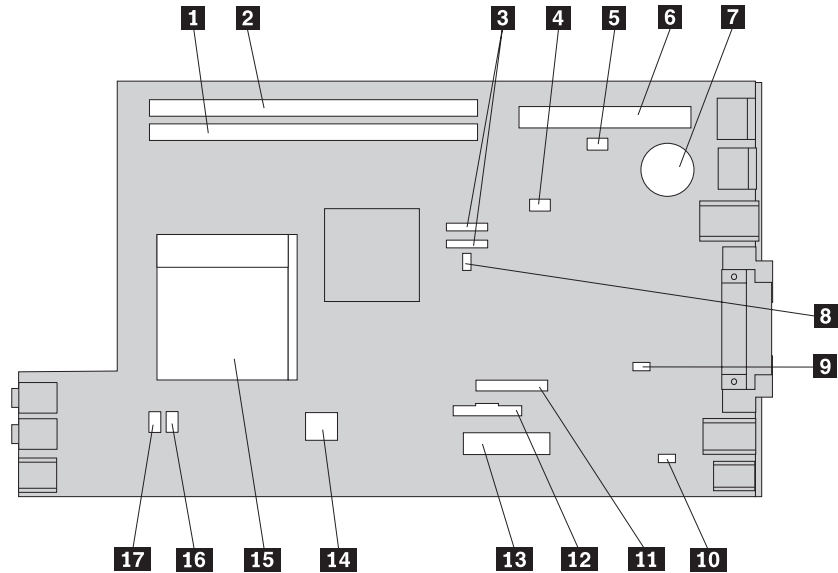
The following illustration will help you locate the various FRUs in your computer.



- |          |                              |           |   |
|----------|------------------------------|-----------|---|
| <b>1</b> | Diskette drive lock          | <b>7</b>  | Power supply assembly                     |
| <b>2</b> | Microprocessor and heat sink | <b>8</b>  | Internal speaker                          |
| <b>3</b> | Memory connectors (2)        | <b>9</b>  | Hard disk drive                           |
| <b>4</b> | System board                 | <b>10</b> | Optical drive (such as a CD or DVD drive) |
| <b>5</b> | Battery                      | <b>11</b> | Optical drive lock                        |
| <b>6</b> | PCI riser assembly           | <b>12</b> | Diskette drive                            |

## Identifying parts on the system board

The following illustration shows the locations of parts on the system board.

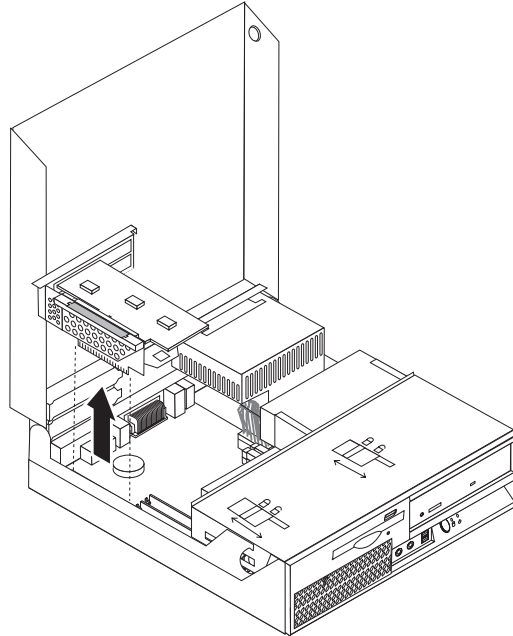


- |          |                              |           |                              |
|----------|------------------------------|-----------|------------------------------|
| <b>1</b> | Memory connector 1           | <b>10</b> | Internal speaker connector   |
| <b>2</b> | Memory connector 2           | <b>11</b> | Diskette drive connector     |
| <b>3</b> | SATA IDE connectors (2)      | <b>12</b> | Front panel connector        |
| <b>4</b> | BIOS WP                      | <b>13</b> | Power supply connector       |
| <b>5</b> | Tamper switch                | <b>14</b> | 12V power connector          |
| <b>6</b> | PCI riser connector          | <b>15</b> | Microprocessor and heat sink |
| <b>7</b> | Battery                      | <b>16</b> | Fan connector 2              |
| <b>8</b> | Clear CMOS/Recovery jumper   | <b>17</b> | Fan connector 1              |
| <b>9</b> | Temperature sensor connector |           |                              |

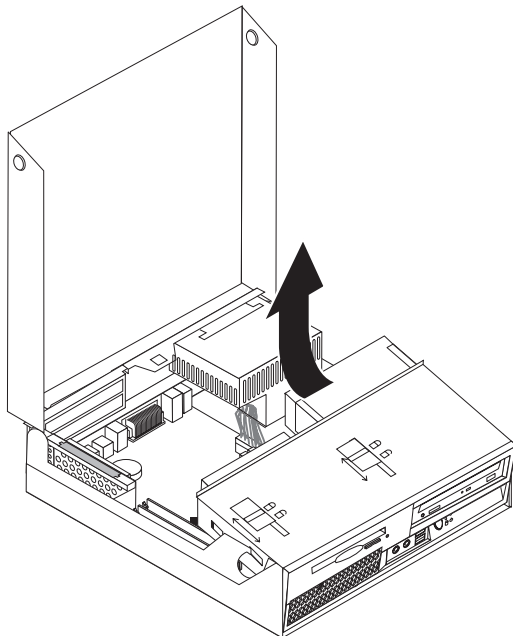
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## Replacing a memory module

1. Open the computer cover. See “Opening the cover” on page 83.
2. While holding the rear of the computer chassis down, pull upward on the handle provided to remove the PCI riser assembly and any adapters that are currently installed.

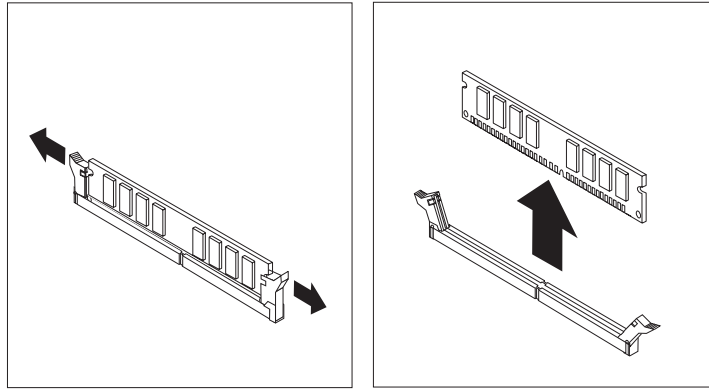


3. Pivot the drive bay assembly upward to gain access to the system board.

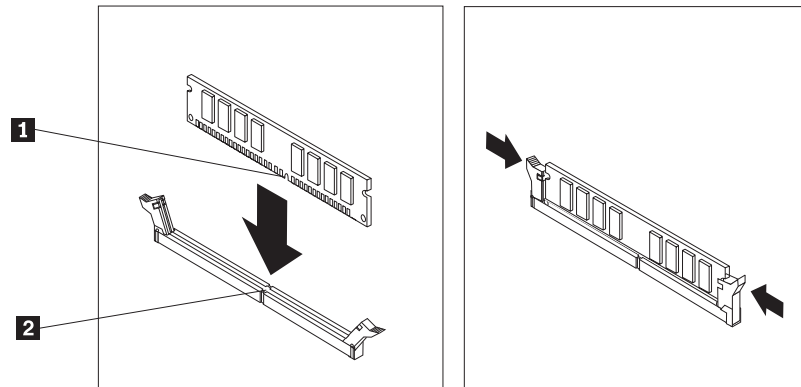


4. Locate the memory connectors. See “Identifying parts on the system board” on page 85.

5. Remove the memory module being replaced by opening the retaining clips as shown.



6. Position the replacement memory module over the memory connector. Make sure the notch **1** on the memory module aligns correctly with the connector key **2** on the system board. Push the memory module straight down into the connector until the retaining clips close.

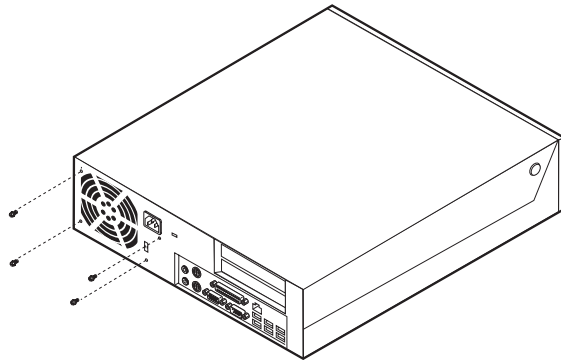


7. Reinstall the PCI riser assembly and adapters.
8. Go to “Completing the FRU replacement” on page 114.

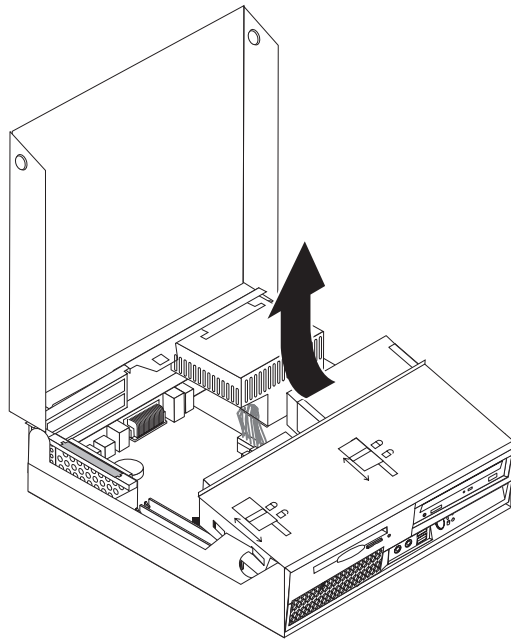
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## Replacing the power supply assembly

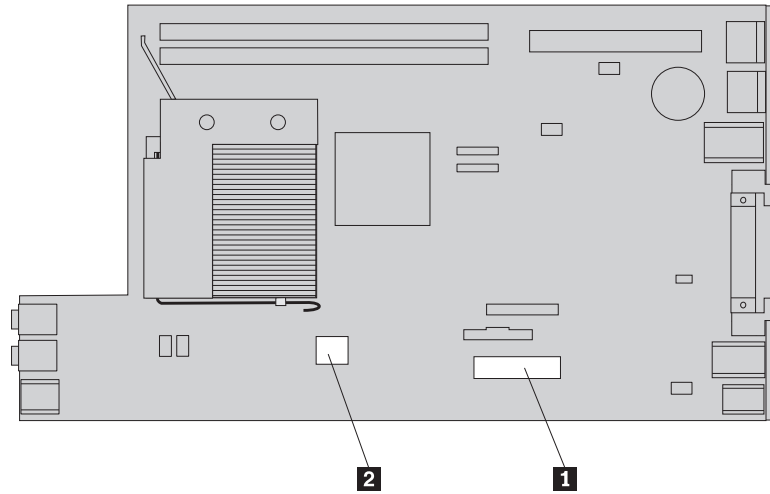
1. Remove the four screws at the rear of the chassis that secure the power supply.



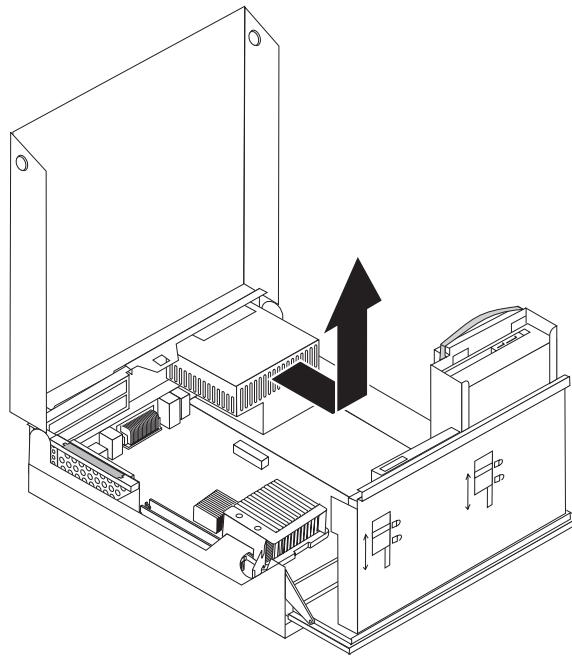
2. Open the computer cover. See the “Opening the cover” on page 83.
3. Pivot the drive bay assembly upward to gain access to the system board.



4. Disconnect the power supply cables **1** and **2** from the system board connectors and from all drives.



5. Remove the power supply cables from the cable clips and ties.
6. Slide the power supply assembly forward and remove it from the computer.



7. Install the new power supply assembly into the chassis so that the screw holes in the power supply assembly align with those in the chassis.

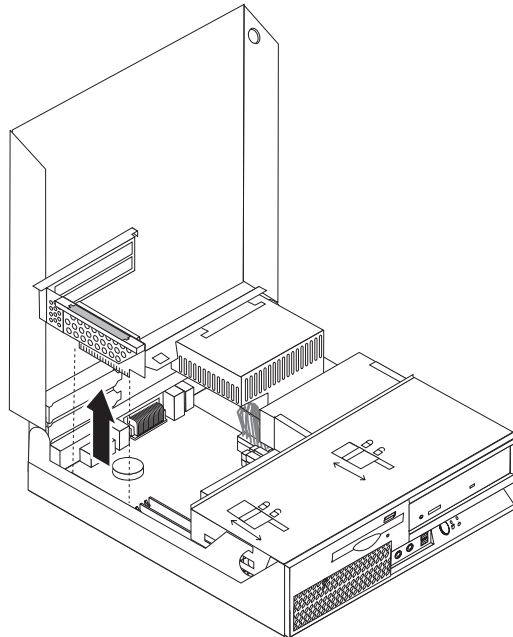
**Note:** Use only the screws provided by Lenovo.

8. Install and tighten the four screws at the rear of the chassis to secure the power supply assembly.
9. Reconnect all the power supply cables to the drives and the system board.
10. Go to “Completing the FRU replacement” on page 114.

---

## Replacing the system board

1. Turn off the computer and allow the computer to cool for one hour.
2. Open the computer cover. See “Opening the cover” on page 83.
3. Pivot the drive bay assembly upward to gain access to the system board.
4. While holding the rear of the computer chassis down, pull upward on the handle provided to remove the PCI riser assembly and any adapters that are currently installed.



5. Carefully take note of the location of all cable connections on the system board. It will be necessary to reconnect them properly when installing a new system board.

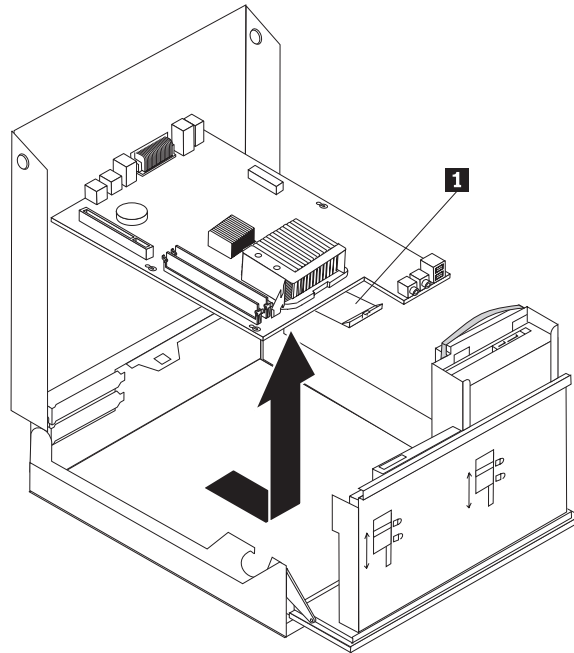
### Important

Note the cable routing. It is important to route the cables the same way after you install the new system board.

6. Disconnect all cables connected to the system board. See “Identifying parts on the system board” on page 85.
7. Pull upward on the handle **1** to release the system board from the front latch, slide the system board toward the drive bay assembly, and then carefully lift the system board out of the chassis.

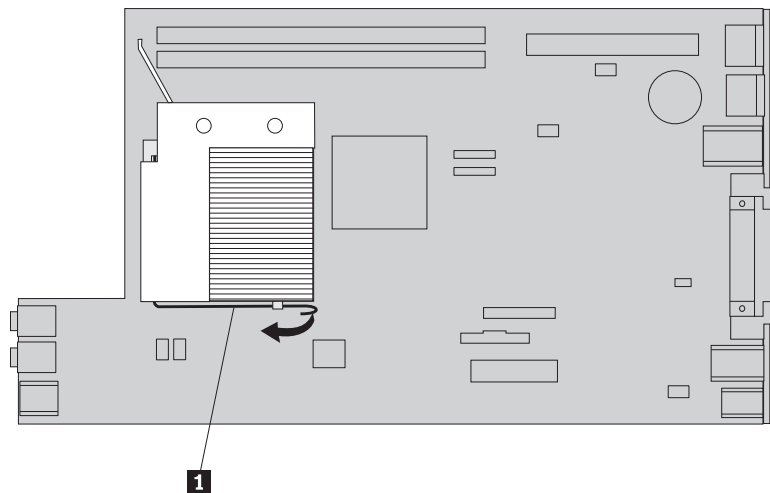
**Note:** You might have to tilt the front end of the system board between the diskette drive and the fan assembly to remove it completely from the chassis.



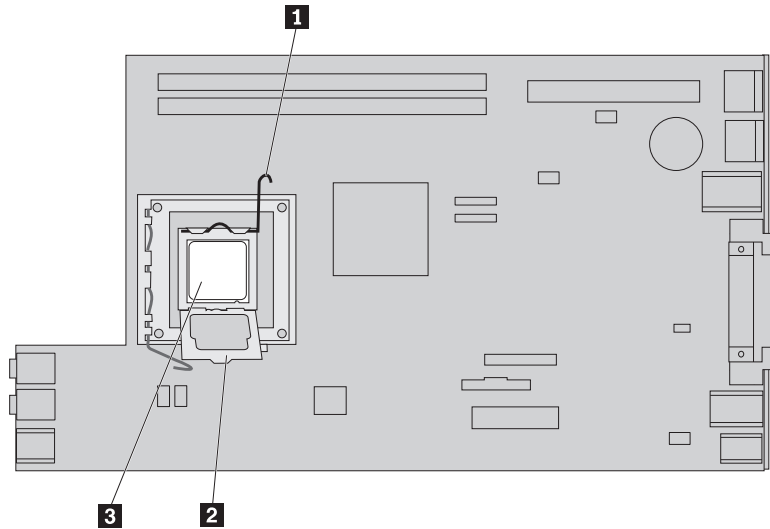


8. Place the failing system board next to the new system board on a clean, flat surface.
9. Remove all memory modules from the failing system board and install them in the same connectors on the new system board. See “Identifying parts on the system board” on page 85.
10. Remove the heat sink from the failing system board by pivoting the lever **1** until it is fully in the vertical position. Carefully lift the heat sink off of the failing system board.

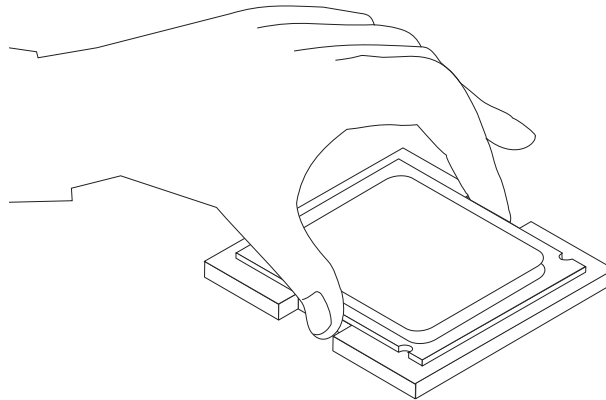
**Note:** Place the heat sink on its side on a clean, flat surface so the thermal grease on the bottom of the heat sink does not touch the surface and become contaminated.



11. To remove the microprocessor from the failing system board, release the lever **1** securing the microprocessor **3** then pivot the microprocessor retainer **2** until it is fully open.



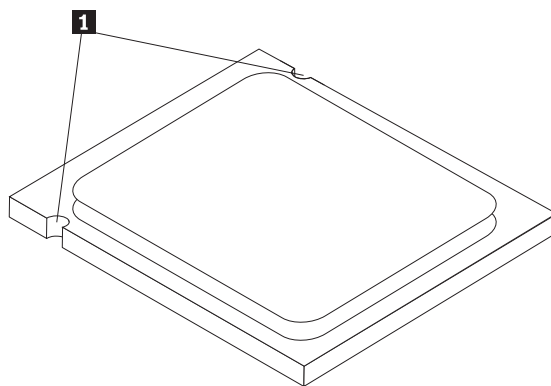
12. Lift the microprocessor straight up and out of the socket.



**Important**

Do not touch the gold contacts on the bottom of the microprocessor. When handling the microprocessor, touch only the sides.

- a. Note the orientation of the notches **1** on the microprocessor. This is important when installing the microprocessor on the new system board.



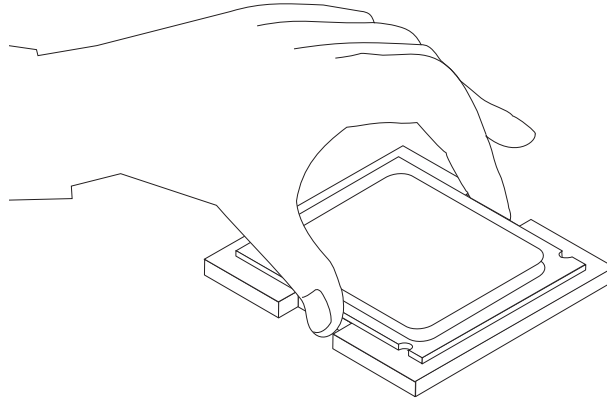
- b. Do not drop anything into the microprocessor socket while it is open. Keep all contacts as clean as possible.

13. On the new system board, release the lever securing the microprocessor retainer and then pivot the retainer until it is fully open.
14. Position the microprocessor so that the notches on the microprocessor are aligned with the tabs in the microprocessor socket on the new system board.

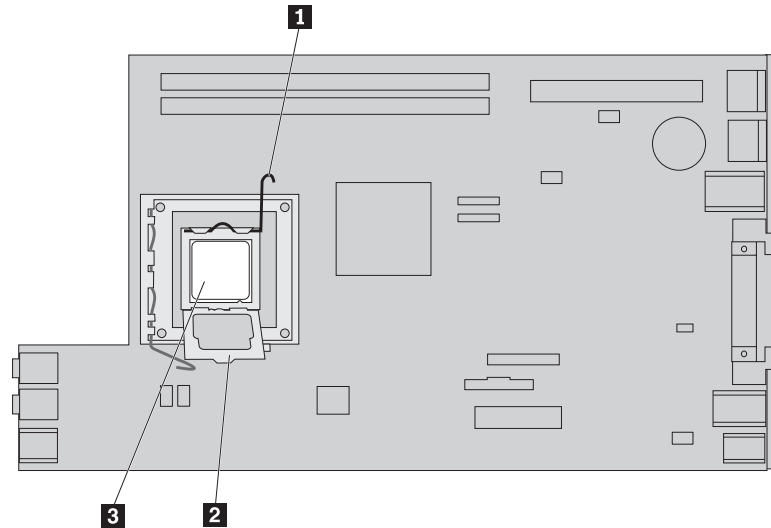
**Important**

To avoid damaging the microprocessor, do not tilt the microprocessor when installing it into the microprocessor socket.

15. Lower the microprocessor straight down into the microprocessor socket.



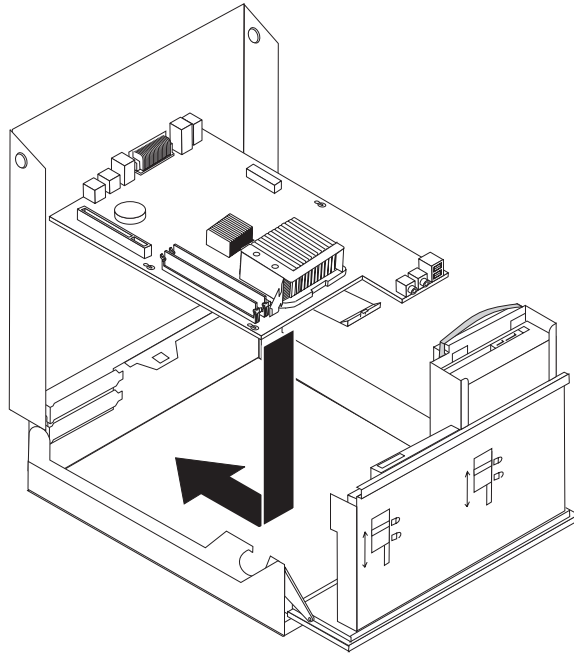
16. Lower the microprocessor retainer **2** and then lower the lever **1** to secure the retainer. Make sure the lever is securely locked into position.



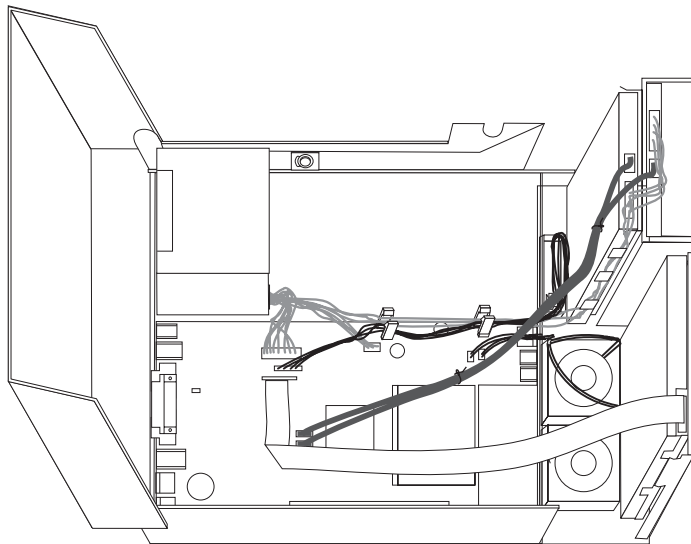
**Note:** There will be a black plastic cover on the microprocessor retainer to protect the socket on the new system board. Remove the black plastic cover as you lock the microprocessor in position. Place the black plastic cover on the microprocessor retainer of the failing system board.

17. Place the heat sink into position and lower the lever to secure the heat sink.
18. To install the new system board, tilt the front end of the system board between the diskette drive and the fan assembly, and position it so that the slots in the new system board are aligned with the pins in the chassis.

19. Slide the system board toward the rear of the computer until the front latch snaps into position.



20. Reconnect the cables that were disconnected from the system board. Make sure all cables are routed correctly.



21. Reinstall the PCI riser assembly and adapters.
22. Go to "Completing the FRU replacement" on page 114.

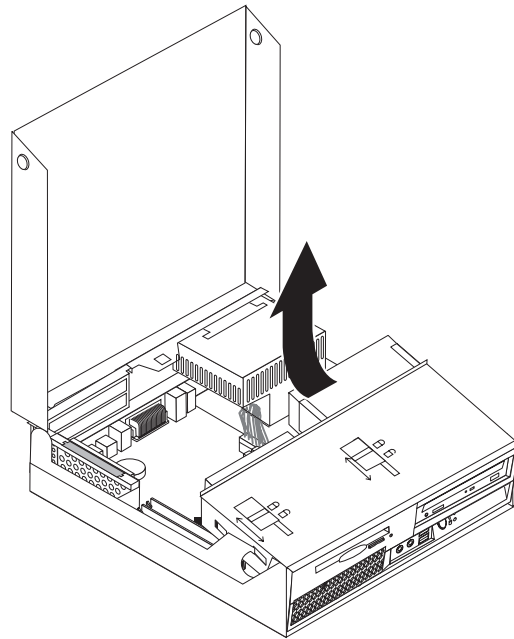
## Replacing the microprocessor

### Important

Do not touch the gold contacts on the bottom of the microprocessor. When handling the microprocessor, touch only the sides.

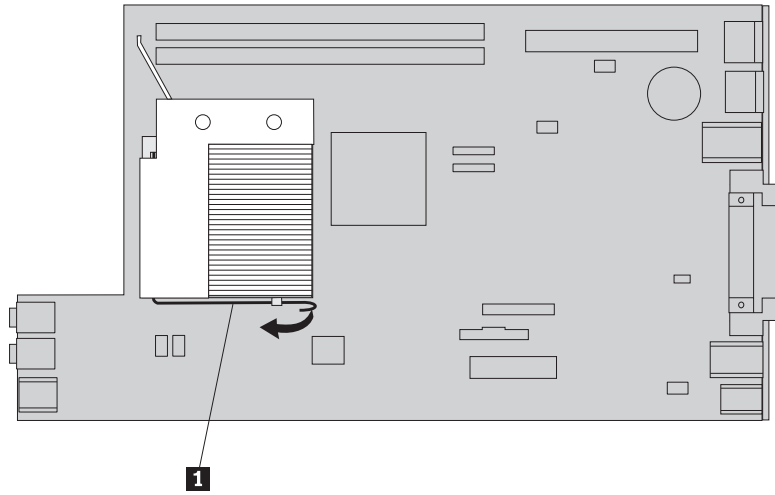
Turn off your computer for at least one hour before removing the microprocessor to allow the thermal grease between the microprocessor and the heat sink time to cool down.

1. Open the computer cover. See “Opening the cover” on page 83.
2. Pivot the drive bay assembly upward to gain access to the microprocessor.

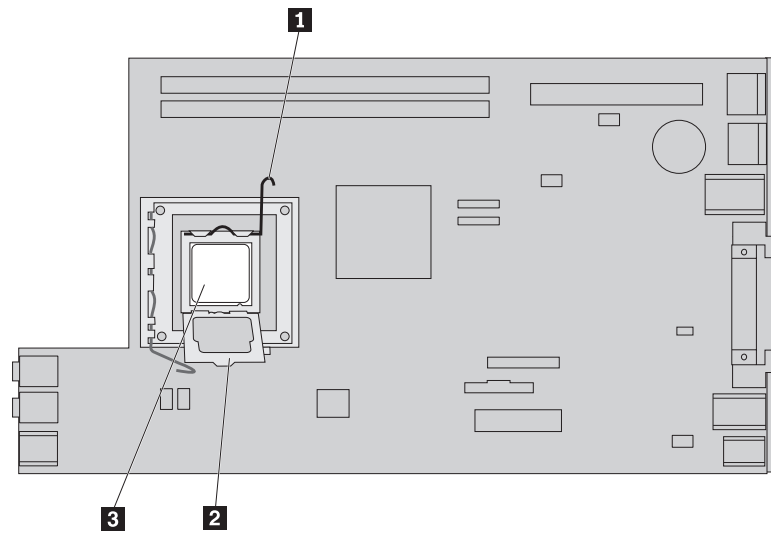


3. Remove the heat sink from the system board by pivoting the lever **1** until it is fully in the vertical position. Carefully lift the heat sink off of the system board.

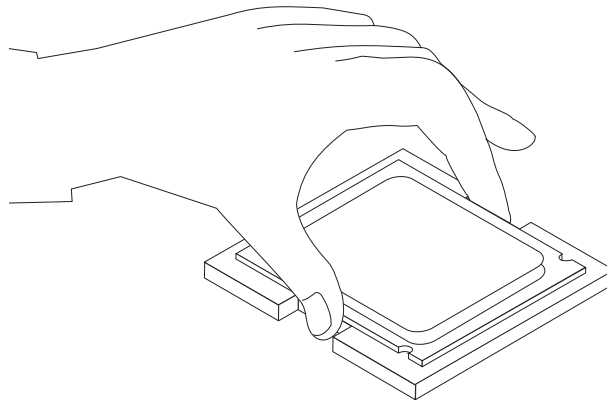
**Note:** Place the heat sink on its side on a clean, flat surface so the thermal grease on the bottom of the heat sink does not touch the surface and become contaminated.



4. Release the lever **1** for the microprocessor retainer **2** securing the microprocessor **3** and pivot the retainer upward until it is fully open.



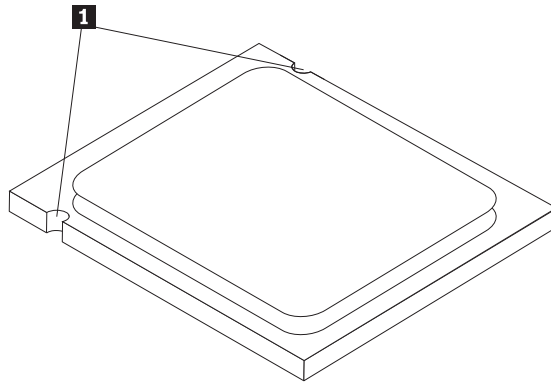
5. Remove the microprocessor from the system board socket by lifting the microprocessor straight up and out of the socket.



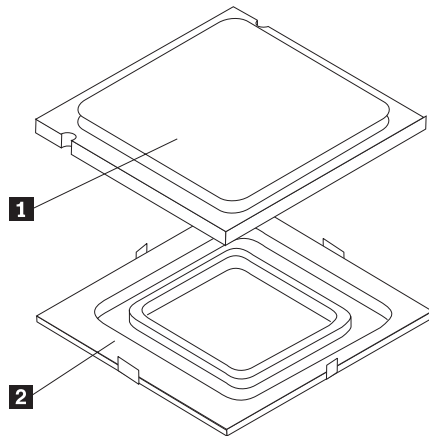
**Important**

Do not touch the gold contacts on the bottom of the microprocessor. When handling the microprocessor, touch only the sides.

- a. Note the orientation of the notches **1** on the microprocessor. This is important when installing the new microprocessor on the system board.



- b. Do not drop anything into the socket while it is open. Keep all contacts as clean as possible.
6. Make sure that the lever on the microprocessor retainer is fully open.
7. Remove the black cover **2** that protects the gold contacts on the new microprocessor **1**.



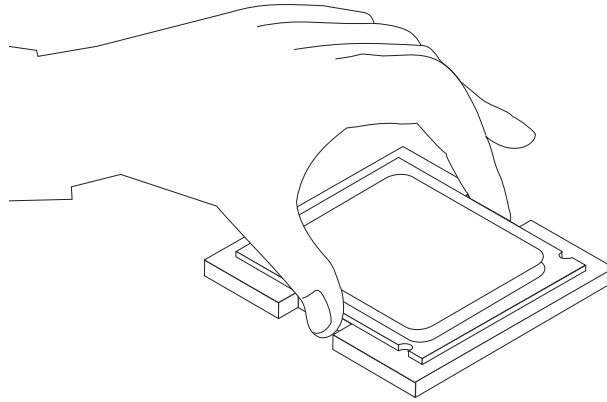
8. Position the microprocessor so that the notches on the microprocessor are aligned with the tabs in the microprocessor socket.

**Important**

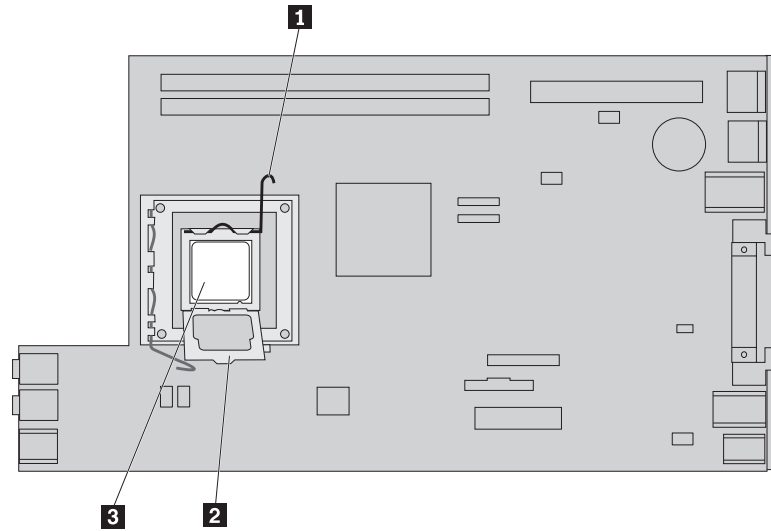
To avoid damaging the microprocessor contacts, do not tilt the microprocessor when installing it into the socket.



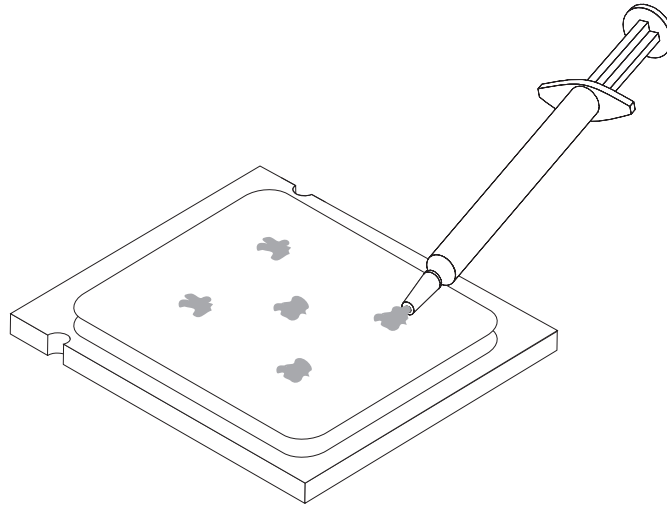
9. Lower the microprocessor straight down into the microprocessor socket.



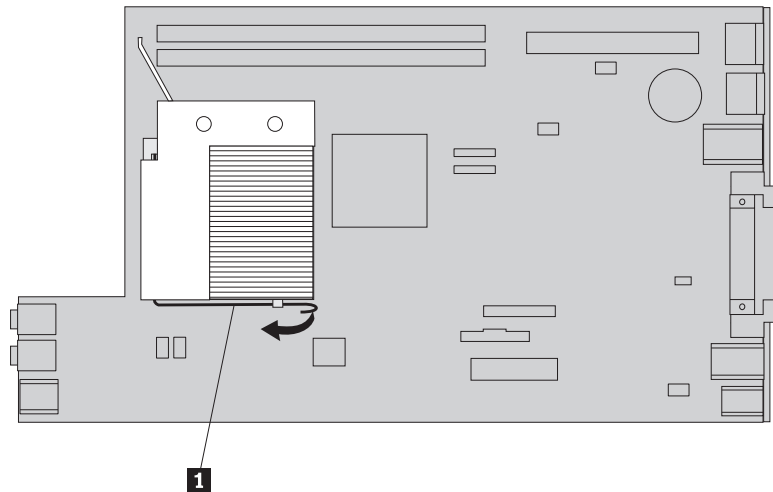
10. Lower the microprocessor retainer **2** and then lower the lever **1** to secure the retainer. Make sure the lever is securely locked into position.



11. Use the thermal grease syringe to place five drops of grease on the top of the microprocessor. Each drop of grease should be 0.03ml (3 tick marks on the grease syringe).



12. Place the heat sink into position and lower the lever **1** to secure the heat sink.



13. Go to "Completing the FRU replacement" on page 114.

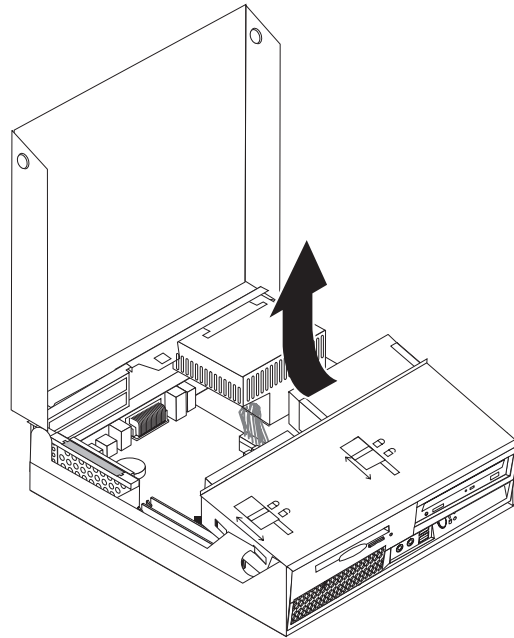
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## Replacing a hard disk drive

### Important

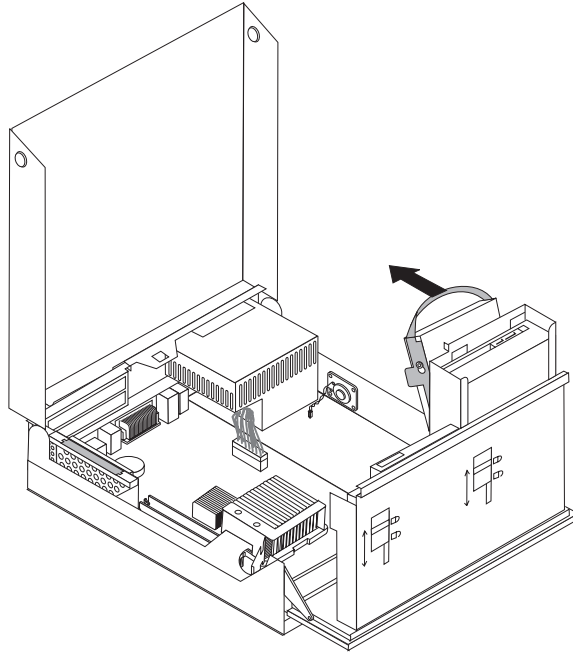
When you install a new hard disk drive, you also need a set of *Product Recovery* discs. The set of *Product Recovery* discs will enable the contents of the hard disk to be restored to the same state as when the computer was originally shipped from the factory. For more information on recovering factory-installed software, refer to “Recovering software” in the *User Guide*.

1. Open the computer cover. See “Opening the cover” on page 83.
2. Pivot the drive bay assembly upward to gain access to the system board.



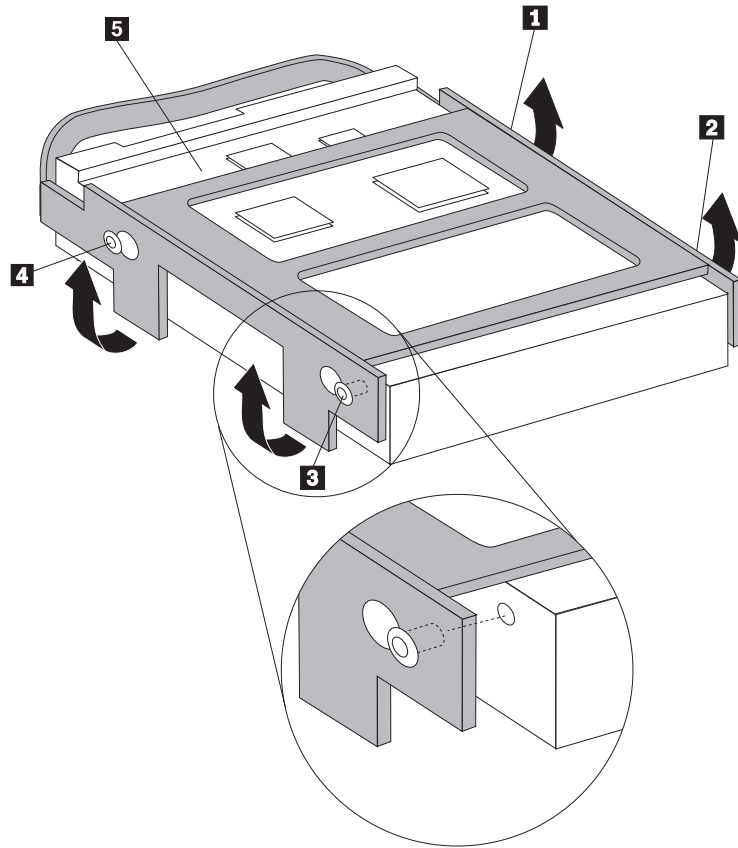
3. If an optical drive is installed, disconnect the signal cable from the drive to access the hard disk drive cables.
4. Disconnect the signal and power cables from the rear of the hard disk drive.

5. Pivot the hard disk drive and bracket to the rear, then pull the drive and bracket out of the drive bay by pulling on the blue handle.



6. Remove the failing hard disk drive from the bracket by flexing the bracket.

7. To install the new drive into the blue bracket, flex the bracket, and align the pins **1** through **4** on the bracket with the holes in the hard disk drive. Do not touch the circuit board **5** on the bottom of the hard disk drive.

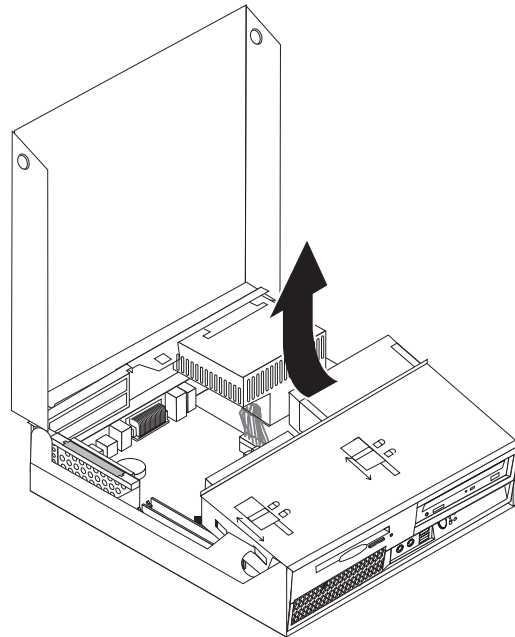


8. Install the hard disk drive and bracket into the drive bay.
9. Pivot the drive and bracket towards the front of the computer and snap it into position.
10. Connect the signal and power cables to the rear of the new hard disk drive.
11. Go to “Completing the FRU replacement” on page 114.

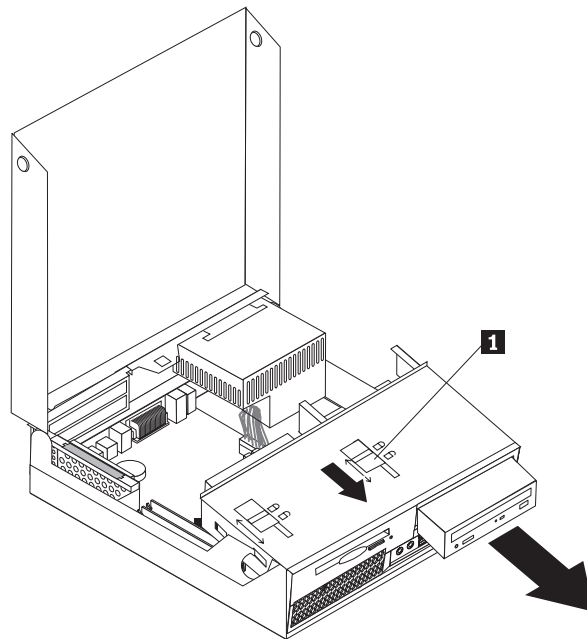
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## Replacing an optical drive

1. Open the computer cover. See “Opening the cover” on page 83.
2. Pivot the drive bay assembly upward to gain access to the hard disk drive.



3. Disconnect the signal and power cables from the rear of the optical drive.
4. Slide the optical drive lock **1** to the unlocked position.

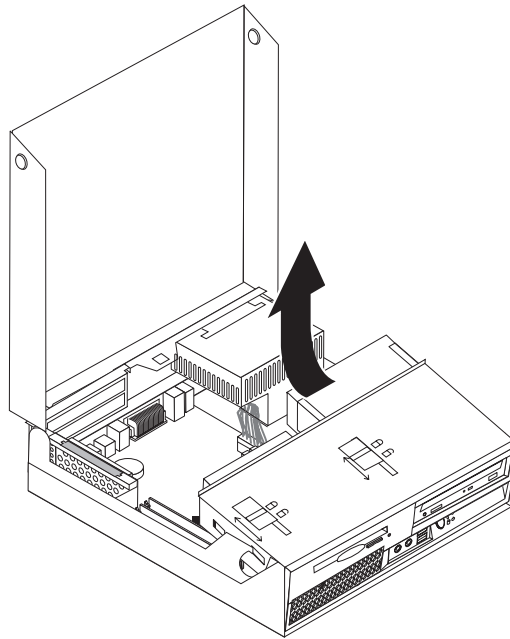


5. Open the door at the front of the optical drive and slide it out the front of the computer.
6. Install the new optical drive into the bay. Slide the optical drive lock to the locked position.
7. Connect the signal and power cables to the rear of the optical drive.
8. Go to “Completing the FRU replacement” on page 114.

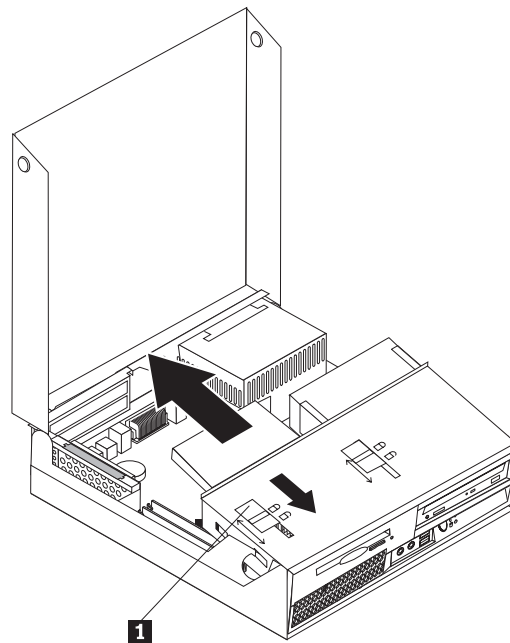
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## Replacing the diskette drive

1. Open the computer cover. See “Opening the cover” on page 83.
2. Pivot the drive bay assembly upward to gain access to the diskette drive.



3. Slide the diskette drive lock **1** to the unlocked position.
4. Slide the diskette drive towards the rear of the computer and remove the drive.

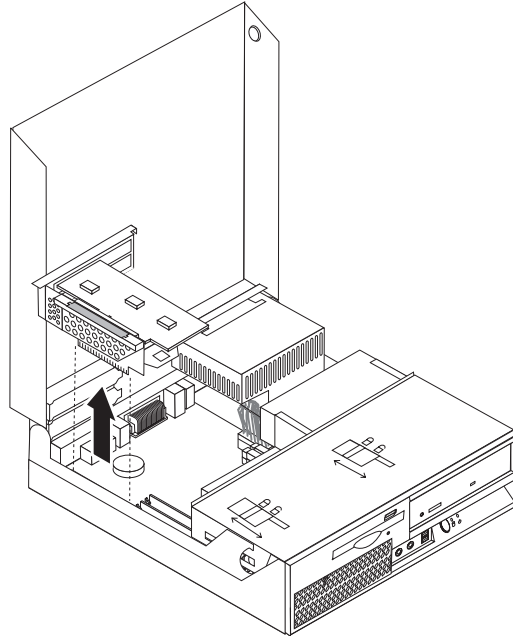


5. Disconnect the flat cable from the rear of the diskette drive.
6. Connect the flat cable to the new diskette drive.
7. Install the new drive from the rear of the drive bay assembly and lock the drive into position.
8. Go to “Completing the FRU replacement” on page 114.

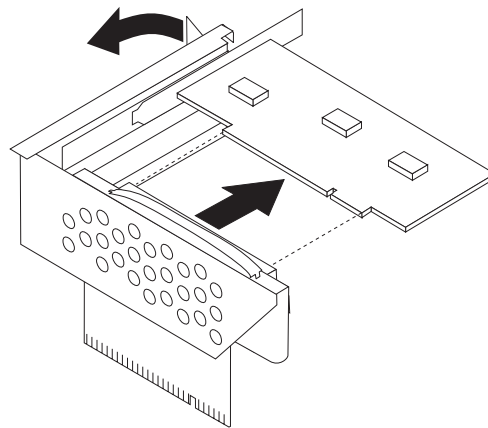
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## Replacing a PCI adapter

1. Open the computer cover. See “Opening the cover” on page 83.
2. While holding the left rear of the computer chassis down, pull upward on the handle provided to remove the PCI riser assembly including any adapters that are already installed.

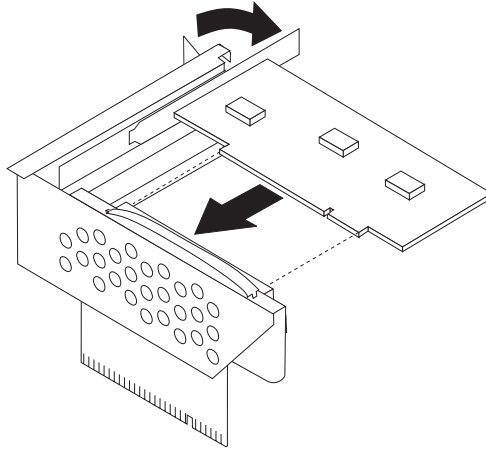


3. Open the adapter latch and remove the failing adapter.



4. Remove the new adapter from its static-protective package.
5. Install the new adapter into the expansion connector into the PCI riser.
6. Ensure the adapter is fully seated into the adapter connector.
7. Close the adapter latch to retain the adapter.

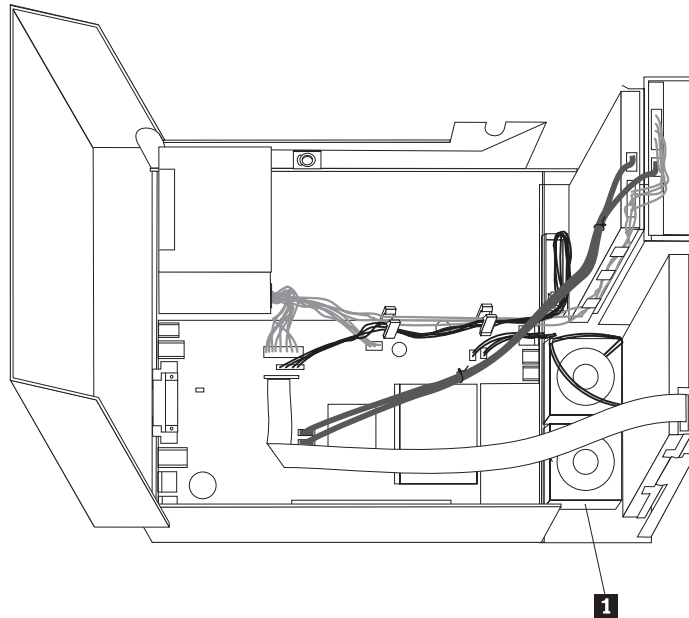




8. Reinstall the PCI riser assembly into the system board.
9. Go to “Completing the FRU replacement” on page 114.

## Replacing the fan assembly

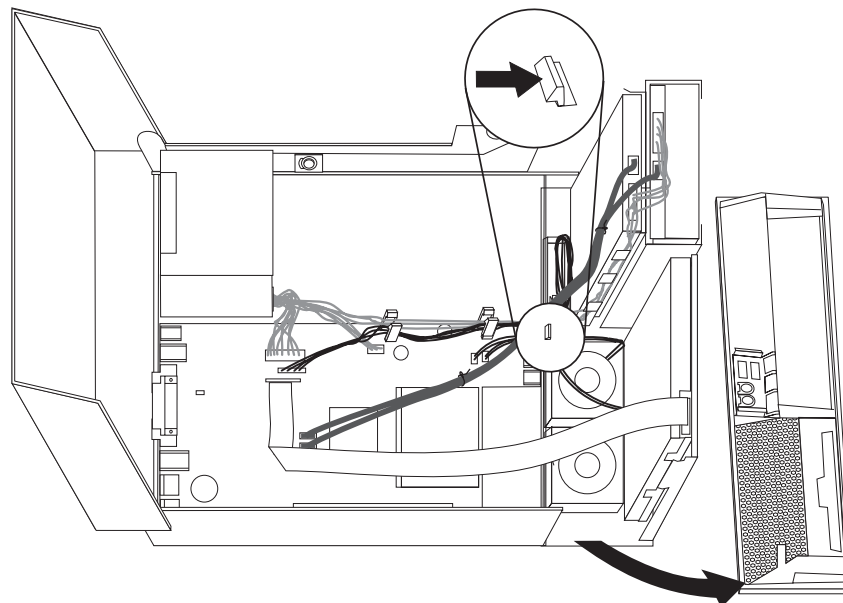
1. Open the computer cover. See “Opening the cover” on page 83.
2. Pivot the drive bay assembly upward to gain access to the fan assembly **1**.



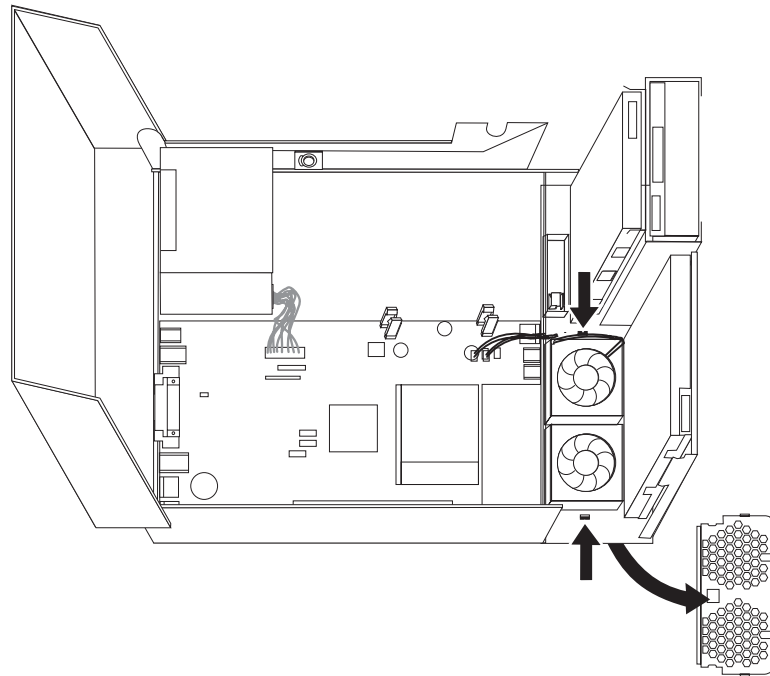
3. Disconnect the fan assembly cables from the system board. See “Identifying parts on the system board” on page 85.

**Note:** Make sure you note the location of the fan cables when you disconnect the cables from the system board.

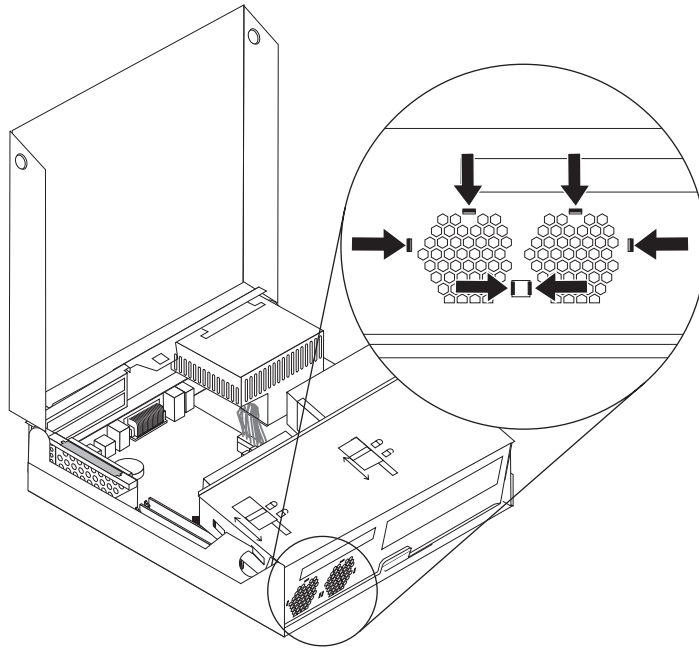
4. Remove the front bezel by releasing the tab as shown and pivoting the bezel outward from the bottom.



5. Remove the plastic fan insert behind the bezel by releasing the tabs as shown.



6. Remove the fan assembly by releasing the tabs as shown.

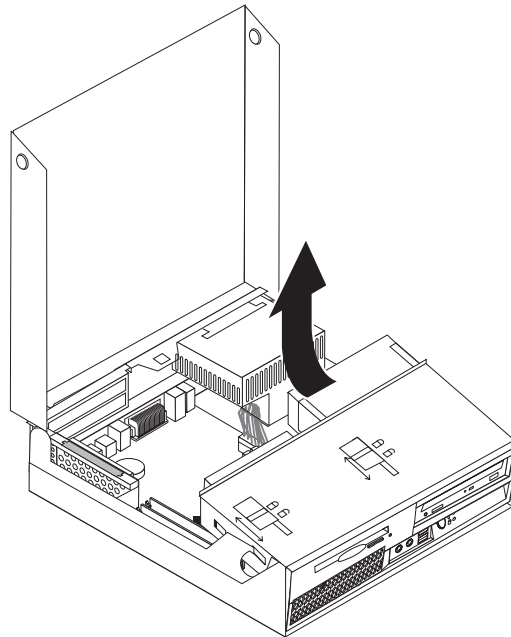


7. Install the new fan assembly and connect the fan cables to the system board.
8. Reinstall the plastic fan insert.
9. Reinstall the front bezel.
10. Go to "Completing the FRU replacement" on page 114.

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## Replacing the internal speaker

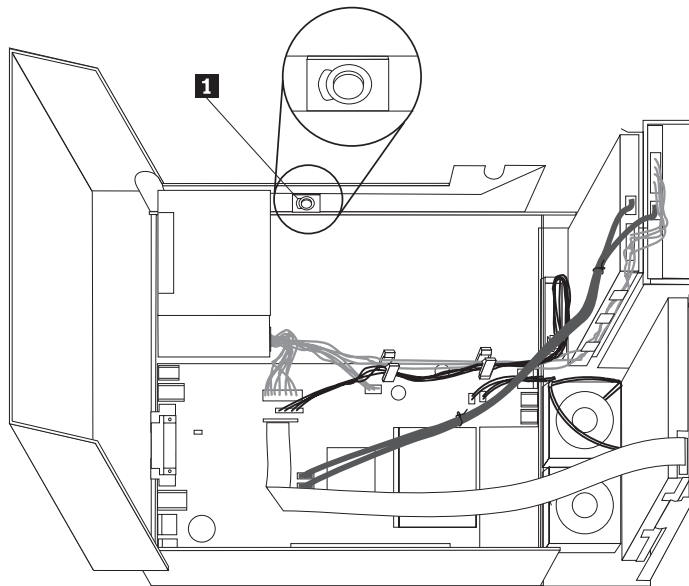
1. Open the computer cover. See “Opening the cover” on page 83.
2. Pivot the drive bay assembly upward to gain access to the system board.



3. Locate and disconnect the internal speaker connector on the system board. See “Identifying parts on the system board” on page 85.

**Note:** Make sure you note the location of the speaker cable when you disconnect it from the system board.

4. Slide the internal speaker **1** upward until the speaker is released from the metal tabs that secure it at the bottom. Then pivot the bottom of the internal speaker outward and remove the speaker from the chassis.



5. Position the bottom of the new internal speaker into the metal tabs and then pivot the top of the internal speaker inward until the speaker snaps into position.
6. Connect the speaker cable to the system board. See “Identifying parts on the system board” on page 85.
7. Go to “Completing the FRU replacement” on page 114.

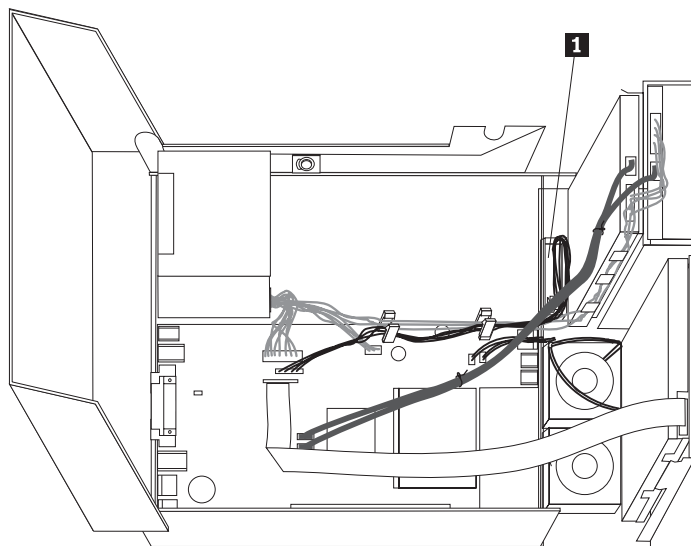
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## Replacing the power button and LED assembly

1. Turn off the computer and disconnect the power cord from the electrical outlet and from the computer.
2. Open the cover. See “Opening the cover” on page 83.
3. Rotate the drive bay assembly upward to gain access to the power button and LED assembly.
4. Disconnect the power button and LED assembly cable from the system board. See “Identifying parts on the system board” on page 85.

**Note:** Make sure you note the location of the power button and LED assembly cable when you disconnect it from the system board.

5. Lift the tab and slide the power button and LED assembly **1** out of the chassis.



6. Install the new power button and LED assembly and reconnect the power button and LED assembly cable.
7. Lower the drive bay assembly.
8. Go to “Completing the FRU replacement” on page 114.

## Completing the FRU replacement

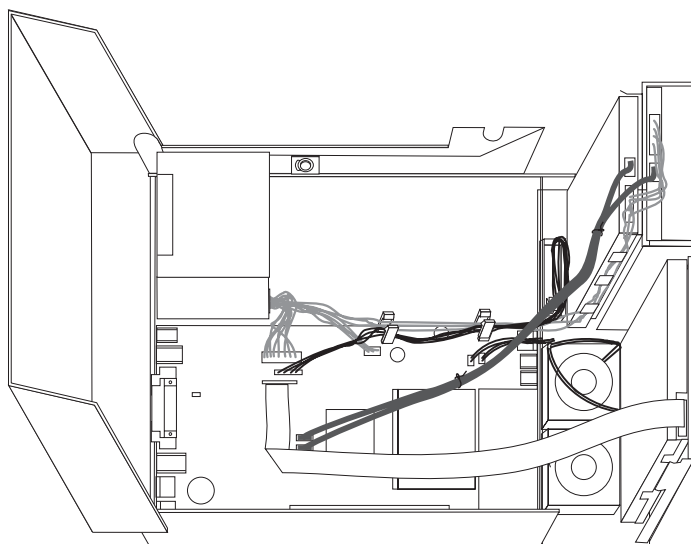
After replacing the parts, you need to close the cover and reconnect cables, including telephone lines and power cords. Also, depending on the part that was replaced, you might need to confirm the updated information in the Setup Utility program. See "Using the Setup Utility program" in your *User Guide*.

To complete the part installation:

1. Ensure that all components have been reassembled correctly and that no tools or loose screws are left inside your computer. See "Locating FRUs" on page 84 for the location of various components.
2. Make sure that the cables are routed correctly before lowering the drive bay assembly.

### Important

Correctly route all power supply cables to avoid interference with the drive bay assembly. Keep cables clear of the hinges and sides of the computer chassis.



3. Lower the drive bay assembly and position the drive locks to the locked position. Otherwise, you cannot close the computer cover.
4. Close the computer cover.
5. If a cover lock is installed, lock the cover.
6. Reconnect the external cables and power cords to the computer. See "Locating connectors on the rear of your computer" on page 82.
7. If you are replacing the system board or microprocessor, you must update (flash) the BIOS. See "Updating (flashing) BIOS from a diskette or CD-ROM" on page 115.
8. To update your configuration, see "Using the Setup Utility program" in the *User Guide*.

**Note:** In most areas of the world, Lenovo requires the return of the defective CRU. Information about this will come with the CRU or will come a few days after the CRU arrives.



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## Updating (flashing) BIOS from a diskette or CD-ROM

### Important

Start the Setup Utility program to view your system information. See “Using the Setup Utility program” in your *User Guide*. If the serial number and the machine type/model listed on the Main menu do not match what is printed on the label of your computer, you must update (flash) the BIOS to change the serial number and the machine type/model.

To update (flash) the BIOS from a diskette or CD-ROM, do the following:

1. Insert a system program update (flash) diskette or CD into the diskette drive or optical drive. System program updates are available at <http://www.lenovo.com/support> on the World Wide Web.

**Note:** If you are inserting a CD-ROM into the optical drive, make sure that the computer is turned on.

2. Turn on the computer. If it is on already, you must turn it off and back on again. The update begins.
3. When you are prompted to select a language, press the number on your keyboard that corresponds to the language and then press Enter.
4. When prompted to change the serial number, press Y.
5. Type in the seven character serial number of your computer and then press Enter.
6. When prompted to change the machine type/model, press Y.
7. Type in the seven character machine type/model of your computer and then press Enter.
8. Follow the instructions on the screen to complete the update.

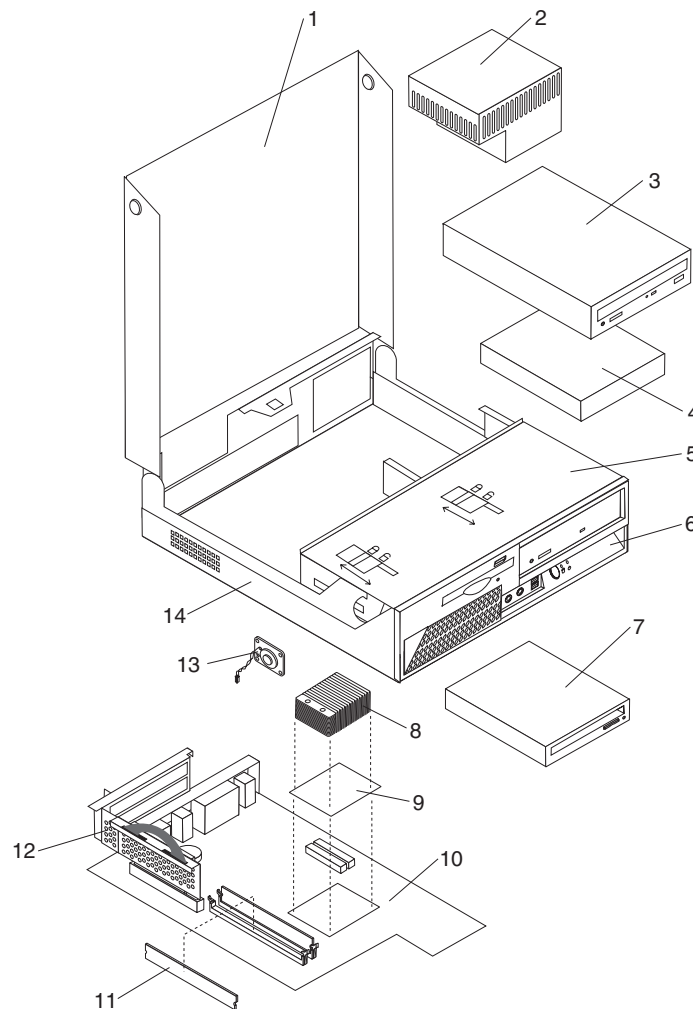


## Chapter 9. FRU lists

### Notes:

1. In the following tables, A CRU (Customer Replaceable Unit) is identified by either a 1, 2, or N in the CRU Tier column. A "1" means that the part is a Tier 1 CRU, A "2" means that the part is a Tier 2 CRU, and an "N" means that the part is not a CRU.
2. All replacement FRUs for this product are RoHS compliant.

### Machine Type 9300



Item #	9300 FRUs	FRU#	CRU Tier
1	Cover (all models)	41R6220	1
2	225 Watt Power Supply - WW, DMO (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21K 21R 21T 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22T 22K 22R 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23T 23K 23R 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24T 24K 24R 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25T 25K 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26T 26K 26R)	41A9629	2

Item #	9300 FRUs	FRU#	CRU Tier
2	225 Watt Power Supply - Japan, DMO (models 21E 21J 22E 22J 23E 23J 24E 24J 25E 25J 26E 26J )	41A9632	2
2	225 Watt Power Supply-Robust DMO (models 21Q 21C 21B 21H 21V 22Q 22C 22B 22H 22V 23Q 23C 23B 23H 23V 24Q 24C 24B 24H 24V 25Q 25C 25B 25H 25V 26Q 26C 26B 26H 26V )	41A9635	2
3	DVD-ROM 16X/48X - Black-VISTA AND NONVISTA (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 23J 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J 25U 25F 25S 25P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	41N3325	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 23J 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J)	40Y9035	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (all models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models )	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models )	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J)	41X7776	N
9	CONROE E4300 800/1800MHZ-2M L2, LGA, EM64T B2-Value (models 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	42Y8009	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J)	41X2495	N
10	System Board (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 23J 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	43C3480	2
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 23J )	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	41X4256	1
12	Riser card assembly (all models)	41A7730	1

Item #	9300 FRUs	FRU#	CRU Tier
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9300 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9300 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models 21U 22U 23U 24U 25U 26U 21G 22G 23G 24G 25G 26G 21M 22M 23M 24M 25M 26M 21A 22A 23A 24A 25A 26A 21Q 22Q 23Q 24Q 25Q 26Q 21H 22H 23H 24H 25H 26H 21R 22R 23R 24R 25R 26R 21E 22E 23E 24E 25E 26E)	41A5289	1
China (models 21C 22C 23C 24C 25C 26C)	TBD	1
Arabic (models 21G 22G 23G 21G)	41A5290	1
Arabic/French (models 21G 22G 23G 21G)	41A5291	1
Belgian/French (models 21G 22G 23G 21G)	41A5292	1
Belgian/UK (models 21G 22G 23G 21G)	41A5293	1
Brazilian (models 21P 22P 23P 24P 25P 26P)	41A5294	1
Bulgarian (models 21G 22G 23G 21G)	41A5295	1
Chinese/US (models 21B 21V 22B 22V 23B 23V 24B 25B 25V 26B 26V)	41A5296	1
Czech (models 21G 22G 23G 21G)	41A5297	1
Danish (models 21G 22G 23G 21G)	41A5298	1
Dutch (models 21G 22G 23G 21G)	41A5299	1
French (models 21G 22G 23G 21G)	41A5300	1
French Canadian 445 (models 21G 22G 23G 21G)	41A5301	1
French Canadian 58 (models 21G 22G 23G 21G)	41A5302	1
German (models 21G 22G 23G 21G)	41A5303	1
Greek (models 21G 22G 23G 21G)	41A5304	1
Greek/US (models 21G 22G 23G 21G)	41A5305	1
Hebrew (models 21G 22G 23G 21G)	41A5306	1
Hungarian (models 21G 22G 23G 21G)	41A5307	1
Iceland (models 21G 22G 23G 21G)	41A5308	1

9300 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
Italian 141 (models 21G 22G 23G 21G)	41A5309	1
Japanese (models 21J 22J 23J 24J 25J 26J )	41A5310	1
Korean (models 21K 22K 23K 24K 25K 26K )	41A5311	1
LA Spanish (models 21S 21D 21Y 22S 22D 22Y 23S 23D 23Y 24S 24D 24Y 25S 25D 25Y 26S 26D 26Y)	41A5312	1
Norwegian (models 21G 22G 23G 21G)	41A5313	1
Polish (models 21G 22G 23G 21G)	41A5314	1
Portuguese (models 21G 22G 23G 21G)	41A5315	1
Romanian 096 (models 21G 22G 23G 21G)	41A5317	1
Romanian 446 (models 21G 22G 23G 21G)	41A5316	1
Russian/Cyrillic (models 21G 22G 23G 21G)	41A5318	1
Serbian/Cyrillic (models 21G 22G 23G 21G)	41A5319	1
Slovak (models 21G 22G 23G 21G)	41A5320	1
Spanish (models 21G 22G 23G 21G)	41A5321	1
Swedish/Finn (models 21G 22G 23G 21G)	41A5322	1
Swiss (models 21G 22G 23G 21G)	41A5323	1
Thailand (models 21T 22T 23T 24T 25T 26T )	41A5324	1
Turkish 440 (models 21G 22G 23G 21G)	41A5325	1
Turkish 179 (models 21G 22G 23G 21G)	41A5326	1
UK English (models 21G 22G 23G 21G)	41A5327	1
US Euro (models 21G 22G 23G 21G)	41A5328	1
Slovenian (models 21G 22G 23G 21G)	41A5329	1

9300 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 23J 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J 22U 22F 22S 22P 22L 22D 22Y 22G 22M 22A 22Q 22T 22C 22B 22H 22V 22E 22K 22R 22J 23U 23F 23S 23P 23L 23D 23Y 23G 23M 23A 23Q 23T 23C 23B 23H 23V 23K 23R 23E 23J 24U 24F 24S 24P 24L 24D 24Y 24G 24M 24A 24Q 24T 24C 24B 24H 24V 24R 24E 24J 25U 25F 25S 24P 25L 25D 25Y 25G 25M 25A 25Q 25T 25C 25B 25H 25V 25E 25J 25R 26U 26F 26S 26P 26L 26D 26Y 26G 26M 26A 26Q 26T 26C 26B 26H 26V 26K 26R 26E 26J )	41U3030	1

9300 Adapters and miscellaneous FRUs	FRU#	CRU
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models 21U 21S 22U 22S 23U 23S 24U 24S 25U 25S 26U 26S)	89P8571	*

9300 Power Cords	FRU#	CRU
Power cord - US (models 21U 21F 21S 21D 21L 21A 21T 22U 22F 22S 22D 22L 22A 22T 23U 23F 23S 23D 23L 23A 23T 24U 24F 24S 24D 24L 24A 24T 25U 25F 25S 25D 25L 25A 25T26U 26F 26S 26D 26L 26A 26T)	39M5080	*
Power cord - China (models 21C 22C 23C 24C 25C 26C )	39M5205	*
Power cord - Japan (models 21E 21J 22E 22J 23E 23J 24E 23J 24E 24J 25E 25J 26E 26J )	24R2633	*
Power cord - Brazil (models 21P 22P 23P 24P 25P 26P )	39M5232	*
Power cord - LA High Volt (APU) (models 21Y 21L 22Y 22L 23Y 23L 24Y 24L 25Y 25L 26Y 26L )	39M5067	*
Power cord - Australia/New Zealand (models 21M 22M 23M 24M 25M 26M )	39M5102	*
Power cord - Korea (models 21R 21E 22R 22E 23R 23E 24R 24E 25R 25E 26R 26E )	39M5212	*
Power cord - Hong Kong (models 21B 21H 22B 22H 23B 23H 24B 24H 25B 25H 26B 26H )	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models 21G 21A 22G 22A 23G 23A 24G 24A 25G 25A 26G 26A)	39M5150	*
Power cord - Taiwan (models 21V 22V 23V 24V 25V 26V )	39M5246	*
Power cord - Italy (models )	39M5164	*
Power cord - G models (models 21A 22A 23A 24A 25A 26A )	39M5122	*
Power cord - Denmark (models 21A 22A 23A 24A 25A 26A)	39M5129	*
Power cord - Switzerland (models 21A 22A 23A 24A 25A 26A)	39M5157	*
Power cord - Israel (models 21A 22A 23A 24A 25A 26A)	39M5171	*
Power cord - South Africa (models 21G 21M 21A 22G 22M 22A 23G 23M 23A 24G 24M 24A 25G 25M 25A 26G 26M 26A)	39M5143	*
Power cord - India (models 21Q 22Q 23Q 24Q 25Q 26Q )	41R3175	*

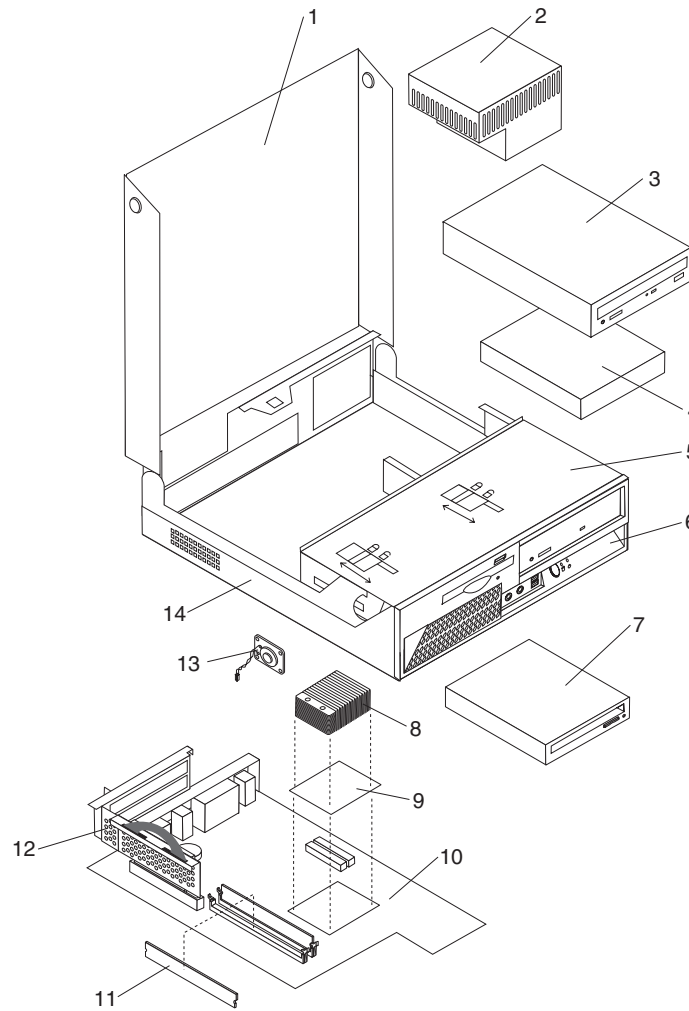
9300 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models 21U 21G 21M 21A 21Q 21H 21R 21E 22U 22G 22M 22A 22Q 22H 22R 22E 23U 23G 23M 23A 23Q 23H 23R 23E 24U 24G 24M 24A 24Q 24H 24R 24E 25U 25G 25M 25A 25Q 25H 25R 25E 26U 26G 26M 26A 26Q 26H 26R 26E)	42Y3549	1
FR/CF (models 21F 22F 23F 21G 22G 23G 24F 24G 25F 25G 26F 26G)	42Y3550	1
GR (models 21G 22G 23G 24G 25G 26G)	42Y3551	1
IT (models 21G 22G 23G 24G 25G 26G)	42Y3553	1
BR (models 21G 22G 23G 24P 25P 26P)	42Y3554	1
SP/LA (models 21S 21D 21Y 22S 22D 22Y 23S 23D 23Y 24G 25G 26G)	42Y3552	1
DK (models 21G 22G 23G 24G 25G 26G)	42Y3556	1
NL (models 21G 22G 23G 24G 25G 26G)	42Y3720	1
AE (models 21G 22G 23G 24G 25G 26G)	42Y3724	1
SV (models 21G 22G 23G 24G 25G 26G)	42Y3555	1
HE (models 21G 22G 23G 24G 25G 26G)	42Y3721	1
FI (models 21G 22G 23G 24G 25G 26G)	42Y3718	1
NO (models 21G 22G 23G 24G 25G 26G)	42Y3719	1
PL (models 21G 22G 23G 24G 25G 26G)	42Y3722	1
PO (models 21G 22G 23G 24G 25G 26G)	42Y3728	1
RU (models 21G 22G 23G 24G 25G 26G)	42Y3725	1
RE (models 21G 22G 23G 24G 25G 26G)	42Y3717	1

9300 Windows XP Pro Recovery Discs	FRU#	CRU Tier
HU (models 21G 22G 23G 24G 25G 26G)	42Y3727	1
CZ (models 21G 22G 23G 24G 25G 26G)	42Y3723	1
TR (models 21G 22G 23G 24G 25G 26G)	42Y3726	1
GK (models 21G 22G 23G 24G 25G 26G)	42Y3729	1
SL (models 21G 22G 23G 24G 25G 26G)	42Y3730	1
Japanese (models 21J 22J 23J 24J 25J 26J)	41W7767	1
Simplified Chinese (models 21C 22C 23C )	41W7751	1
Taiwan-TC (models 21T 22T 23T)	41W7757	1
Hong Kong - TC (models 21B 22B 23B 24B 25B 26B)	41W7762	1
Korea (models 21K 22K 23K 24K 25K 26K)	41W7746	1
Multilingual 1 -- EN NL FR GR IT (models 21G 22G 23G 24G 25G 26G)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models 21G 22G 23G 24G 25G 26G)	42Y3879	1

9300 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models 24U 24G 24M 24A 24Q 24H 24R 24E 25U 25G 25M 25A 25Q 25H 25R 25E 26U 26G 26M 26A 26Q 26H 26R 26E)	87H4476	1
FR/CF (models 24F 24G 25F 25G 26F 26G)	87H4477	1
GR (models 21G)	87H4478	1
SP/LA (models 21G)	87H4479	1
BR (models 24P 25P 26P)	87H4480	1
IT (models 21G)	87H4481	1
JP (models 24J 25J 26J )	87H4482	1
NO (models 21G)	87H4483	1
SV (models 21G)	87H4484	1
DK (models 21G)	87H4485	1
NL (models 21G)	87H4486	1
CZ (models 21G)	87H4487	1
FI (models 21G)	87H4488	1
PL (models 21G)	87H4489	1
RU (models 21G)	87H4490	1
TR (models 21G)	87H4491	1
HU (models 21G)	87H4492	1
GK (models 21G)	87H4493	1
PO (models 21G)	87H4494	1
CS (models 24C 25C 26C)	87H4495	1
TW (models 24B 25B 26B )	87H4496	1
HK (models 24B 25B 26B )	87H4497	1
KR (models 24K 25K 26K )	87H4498	1
SL (models 21G)	87H4499	1
RE (models 21G)	43C1308	1



# Machine Type 9301



Item #	9301 FRUs	FRU#	CRU Tier
1	Cover (all models)	41R6220	1
2	225 Watt Power Supply - WW, DMO (models 21U 21F 21S 21P 21D 21Y 21G 21M 21A 21T 21K 21R)	41A9629	2
2	225 Watt Power Supply - Japan, DMO (models 21J 21E)	41A9632	2
2	225 Watt Power Supply-Robust DMO (models 21Q 21C 21B 21H 21V)	41A9635	2
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA No Software / No Royalty for VISTA (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J )	42Y9353	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J)	40Y9035	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (all models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models )	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models )	40Y9111	1
8	Heat Sink (all models)	41A7705	2

Item #	9301 FRUs	FRU#	CRU Tier
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J )	41X7776	N
10	System Board (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J )	43C3480	2
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J )	41X4256	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9301 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9301 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models 21U 21G 21M 21A 21Q 21H 21R 21E)	41A5289	1
China (models 21C)	TBD	1
Arabic (models 21G)	41A5290	1
Arabic/French (models)	41A5291	1
Belgian/French (models 21G)	41A5292	1
Belgian/UK (models 21G)	41A5293	1
Brazilian (models 21P)	41A5294	1
Bulgarian (models 21G)	41A5295	1
Chinese/US (models 21B 21H)	41A5296	1
Czech (models 21G)	41A5297	1
Danish (models 21G)	41A5298	1
Dutch (models 21G)	41A5299	1
French (models 21G)	41A5300	1
French Canadian 445 (models 21F)	41A5301	1
French Canadian 58 (models 21F)	41A5302	1
German (models 21G)	41A5303	1

<b>9301 Lenovo Keyboard (Preferred Pro Fullsize)</b>	<b>FRU#</b>	<b>CRU Tier</b>
Greek (models 21G)	41A5304	1
Greek/US (models 21G)	41A5305	1
Hebrew (models 21G)	41A5306	1
Hungarian (models 21G)	41A5307	1
Iceland (models 21G)	41A5308	1
Italian 141 (models 21G)	41A5309	1
Japanese (models 21J)	41A5310	1
Korean (models 21K)	41A5311	1
LA Spanish (models 21S 21D 21Y)	41A5312	1
Norwegian (models 21G)	41A5313	1
Polish (models 21G)	41A5314	1
Portuguese (models 21G)	41A5315	1
Romanian 096 (models 21G)	41A5317	1
Romanian 446 (models 21G)	41A5316	1
Russian/Cyrillic (models 21G)	41A5318	1
Serbian/Cyrillic (models 21G)	41A5319	1
Slovak (models 21G)	41A5320	1
Spanish (models 21G)	41A5321	1
Swedish/Finn (models 21G)	41A5322	1
Swiss (models 21G)	41A5323	1
Thailand (models 21T)	41A5324	1
Turkish 440 (models 21G)	41A5325	1
Turkish 179 (models 21G)	41A5326	1
UK English (models 21G)	41A5327	1
US Euro (models 21G)	41A5328	1
Slovenian (models 21G)	41A5329	1

<b>9301 Mice</b>	<b>FRU#</b>	<b>CRU Tier</b>
Mouse, Optical Wheel (400DPI USB) (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J )	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models 21U 21F 21S 21P 21L 21D 21Y 21G 21M 21A 21Q 21T 21C 21B 21H 21V 21K 21R 21E 21J )	41U3030	1

<b>9301 Adapters and miscellaneous FRUs</b>	<b>FRU#</b>	<b>CRU</b>
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models 21U 21S)	89P8571	*

<b>9301 Power Cords</b>	<b>FRU#</b>	<b>CRU</b>
Power cord - US (models 21U 21F 21S 21D 21L)	39M5080	*
Power cord - China (models 21C)	39M5205	*
Power cord - Japan (models 21J )	24R2633	*
Power cord - Brazil (models 21P)	39M5232	*

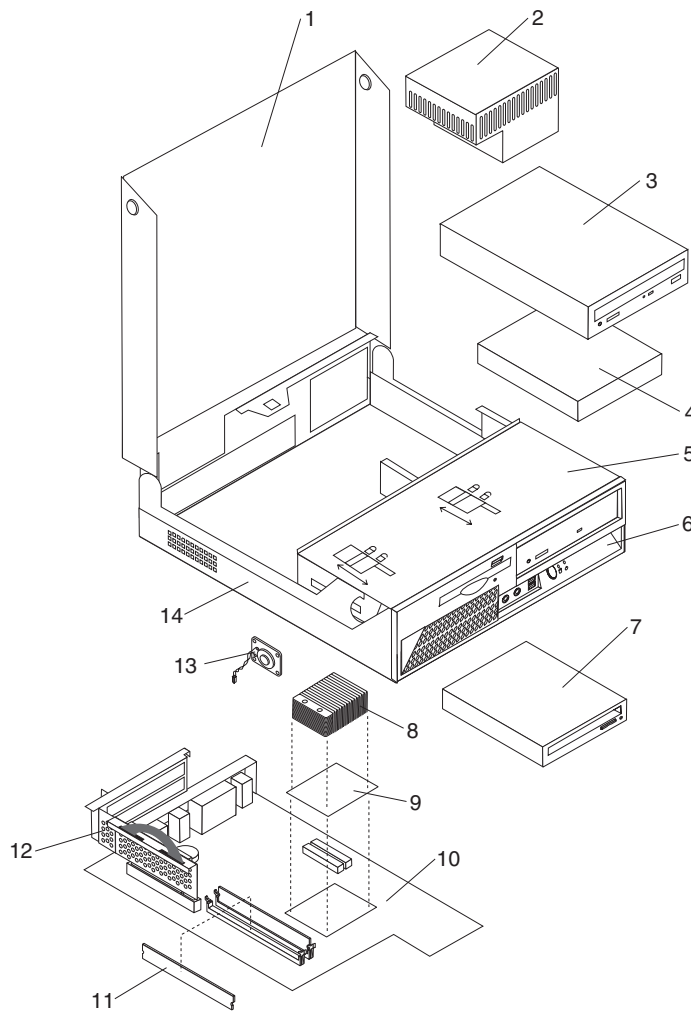
9301 Power Cords	FRU#	CRU
Power cord - LA High Volt (APU) (models 21Y 21L)	39M5067	*
Power cord - Australia/New Zealand (models 21M)	39M5102	*
Power cord - Korea (models 21R 21K)	39M5212	*
Power cord - Hong Kong (models 21B 21H)	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models 21G 21A)	39M5150	*
Power cord - Taiwan (models 21V)	39M5246	*
Power cord - Italy (models 21S 21Y 21L 21G)	39M5164	*
Power cord - G models (models 21A )	39M5122	*
Power cord - Denmark (models 21G)	39M5129	*
Power cord - Switzerland (models 21G)	39M5157	*
Power cord - Israel (models 21G)	39M5171	*
Power cord - South Africa (models 21G 21M 21A)	39M5143	*
Power cord - India (models 21Q)	41R3175	*

9301 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models 21U 21G 21M 21A 21Q 21H 21R 21E)	42Y3549	1
FR/CF (models 21F 26G)	42Y3550	1
GR (models 21G)	42Y3551	1
IT (models 21G)	42Y3553	1
BR (models 21P)	42Y3554	1
SP/LA (models 21G)	42Y3552	1
DK (models 21G)	42Y3556	1
NL (models 21G)	42Y3720	1
AE (models 21G)	42Y3724	1
SV (models 21G)	42Y3555	1
HE (models 21G)	42Y3721	1
FI (models 21G)	42Y3718	1
NO (models 21G)	42Y3719	1
PL (models 21G)	42Y3722	1
PO (models 21G)	42Y3728	1
RU (models 21G)	42Y3725	1
RE (models 21G)	42Y3717	1
HU (models 21G)	42Y3727	1
CZ (models 21G)	42Y3723	1
TR (models 21G)	42Y3726	1
GK (models 21G)	42Y3729	1
SL (models 21G)	42Y3730	1
Japanese (models 21J)	41W7767	1
Simplified Chinese (models 21C)	41W7751	1
Taiwan-TC (models 21V)	41W7757	1
Hong Kong - TC (models 21B)	41W7762	1

<b>9301 Windows XP Pro Recovery Discs</b>	<b>FRU#</b>	<b>CRU Tier</b>
Korea (models 21K)	41W7746	1
Multilingual 1 -- EN NL FR GR IT (models 21G)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models 21G)	42Y3879	1

<b>9301 Vista Business 32 Recovery DVDs</b>	<b>FRU#</b>	<b>CRU Tier</b>
US/UK/AP/TH (models 21U 21G 21M 21A 21Q 21H 21R 21E)	87H4476	1
FR/CF (models 21F 21G)	87H4477	1
GR (models 21G)	87H4478	1
SP/LA (models 21G)	87H4479	1
BR (models 21P)	87H4480	1
IT (models 21G)	87H4481	1
JP (models 21J)	87H4482	1
NO (models 21G)	87H4483	1
SV (models 21G)	87H4484	1
DK (models 21G)	87H4485	1
NL (models 21G)	87H4486	1
CZ (models 21G)	87H4487	1
FI (models 21G)	87H4488	1
PL (models 21G)	87H4489	1
RU (models 21G)	87H4490	1
TR (models 21G)	87H4491	1
HU (models 21G)	87H4492	1
GK (models 21G)	87H4493	1
PO (models 21G)	87H4494	1
CS (models 21C)	87H4495	1
TW (models 21V)	87H4496	1
HK (models 21V)	87H4497	1
KR (models 21K )	87H4498	1
SL (models 21G)	87H4499	1
RE (models 21G)	43C1308	1

# Machine Type 9636



Item #	9636 FRUs	FRU#	CRU Tier
1	Cover (models)	41R6220	1
2	Power Supply (225 Watt) (models E1U F1U G1U H1U J1U QAU)	41N3409	2
2	Power Supply - (225 Watt) (models E1U F1U G1U H1U J1U QAU)	41A9629	2
2	Power Supply - (225 Watt) (Japan) (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ)	41N3417	2
2	Power Supply - (225 Watt) (Japan) (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ)	41A9632	2
3	DVD-ROM 16X/48X - Black-VISTA AND NONVISTA (models D1J D2J D5J B1J Q1J QBJ QAU QTJ QUJ QHU QMU QWU QKU QNK QLU 2DJ 2EJ )	41N3325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA No Software / No Royalty for VISTA (models B2J E1U F1U G1U H1U J1U D3J QQJ QRJ QSJ QVU QJU QMU QWK)	42Y9353	1
3	DVD Recorder Rambo 8 - SATA vista and nonvista (models QPJ 2BJ 2CJ)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models D1J D2J D3J B1J B2J B3J E1U F1U G1U H1U J1U QBJ QAU QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ QHU QVU QJU QKU QLU QMU 2DJ 2EJ)	40Y9034	1

Item #	9636 FRUs	FRU#	CRU Tier
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models D4J D5J Q1J Q3J Q4J QNK QWK 2BJ 2CJ)	40Y9035	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ 2BJ 2CJ 2DJ 2EJ )	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ 2BJ 2CJ 2DJ 2EJ)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models B1J B2J B3J)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models H1U QUA QEJ)	41X2413	N
9	Pentium D 935 Processor 3.2 GHz 800 FSB 2MBx2 L2 (models D1J)	41X8050	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models J1U)	41X7776	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models D4J D5J F1U)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models G1U)	41T1713	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models QLU QNU 2CJ 2DJ )	43C1968	N
9	Pentium E2140 800/1600MHZ-1M, LGA, EM64T (models QPJ QJU QKU QWK )	43C1967	N
9	Celeron D 336 Processor 2.80GHz 533 FSB 256KB L2 (models E1U)	41T1695	N
9	Celeron D 352 Processor 3.2GHz 533MHz FSB 512KB L2 B1-Value (84W) (models D2J D3J)	41T4966	N
9	Celeron 420 Processor 800/1600MHZ-512K,LGA,EM64T A1 (models QQJ QRJ QSJ QTJ QUJ QHU QVU QNK)	43C3835	N
9	CONROE E4300 800/1800MHZ-2M L2, LGA, EM64T B2-Value (models QBJ QCJ)	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models 2BJ 2EJ )	43C2056	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models Q1J Q3J Q4J)	41X2495	N
10	System Board (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J E1U F1U G1U H1U J1U QBJ QCJ QAU QEJ QPJ QQJ QRJ QSJ QTJ QUJ QHU QVU QJU QKU QLU QMU QNK QWK 2BJ 2CJ 2DJ 2EJ )	43C3480	2
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models E1U F1U G1U H1U J1U QAU)	41X4251	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ QHU QKU QLU QNK QWK)	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models D1J QVU QJU QMU 2BJ 2CJ 2DJ 2EJ )	41X4256	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9636 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9636 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models E1U F1U G1U H1U J1U QAU QHU QVU QJU QKU QLU QMU )	41A5289	1
Japanese (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ 2BJ 2CJ 2DJ 2EJ )	41A5310	1
Korean (models QNK QWK)	41A5311	1

9636 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J E1U F1U G1U H1U J1U QBJ QAU QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ QHU QVU QJU QKU QLU QMU QNK QWK 2BJ 2CJ 2DJ 2EJ )	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J E1U F1U G1U H1U J1U QBJ QAU QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ QHU QVU QJU QKU QLU QMU QNK QWK 2BJ 2CJ 2DJ 2EJ)	41U3030	1

9636 Adapters and miscellaneous FRUs	FRU#	CRU
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models QJU QKU QLU QMU QNU QWU)	89P8571	*

9636 Power Cords	FRU#	CRU
Power cord - US (models E1U F1U G1U H1U J1U QAU QJU QKU QLU QMU)	39M5080	*
Power cord - Japan (models D1J D2J D3J D4J D5J B1J B2J B3J Q1J Q3J Q4J QBJ QCJ QEJ QPJ QQJ QRJ QSJ QTJ QUJ 2BJ 2CJ 2DJ 2EJ)	24R2633	*
Power cord - Korea (models QNK QWK)	39M5212	*

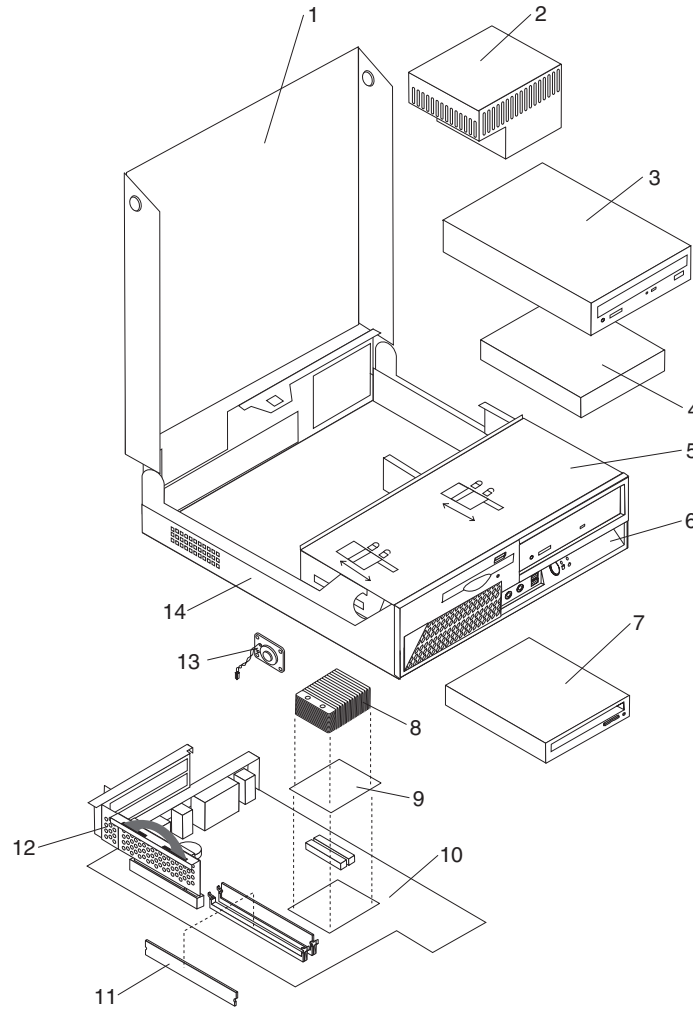
9636 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models QAU E1U F1U G1U H1U J1U)	42Y3549	1
Japanese (models D1J D2J D3J D4J D5J QBJ QCJ QEJ QPJ QRJ QSJ QTJ QUJ QHU QKU QLU 2BJ 2CJ 2DJ 2EJ B1J B2J B3J Q1J Q3J Q4J QQJ)	41W7767	1

9636 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
KR (models QNK QWK)	87H4442	1



9636 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models E1U F1U G1U H1U J1U QVU QJU QMU)	87H4476	1
JP (models B1J B2J B3J Q1J Q3J Q4J QQJ)	87H4482	1

## Machine Type 9638



Item #	9638 FRUs	FRU#	CRU Tier
1	Cover (models)	26K1263	1
2	Power Supply - (225 Watt) (models)	41A9629	2
2	Power Supply - (225 Watt) (Japan) (models)	41A9632	2
2	Power Supply - (225 Watt) (Robust) (models)	41A9635	2
3	CD-RW/DVD-ROM Combo Drive 48X/32X/48X/16X Max (models)	42Y6325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA (models)	42Y9353	1
3	DVD Recorder Rambo 8 - SATA (models)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models)	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models)	40Y9035	1
4	Hard Disk Drive 250GB 7200 rpm Serial ATA (models)	40Y9036	1

Item #	9638 FRUs	FRU#	CRU Tier
4	Hard Disk Drive 500GB 7200 rpm Serial ATA (models)	41X5582	1
5	Rotating bay assembly (all models)	03R0285	2
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models)	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models)	41X2413	N
9	Pentium D 935 Processor 3.2 GHz 800 FSB 2MBx2 L2 (models)	41X8050	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models)	41X7776	N
9	Pentium D 805 Processor 2.66GHz 533MHz FSB 2Mx1 L2 (models)	41X7626	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models)	41T1704	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models)	41T1713	N
9	Pentium 4 651 Processor 3.4 GHz 800 FSB 2MB L2 (models)	41T1714	N
9	Pentium 4 661 Processor 3.6 GHz 800MHz FSB 2MB L2 (models)	41T1715	N
9	Pentium 4 630 Processor 3.0 GHz 800 FSB 2MB L2 (models)	41T1709	N
9	Pentium 4 524 Processor 3.06GHz 533MHz FSB 1M L2 (models)	41T4104	N
9	Pentium 4 531 Processor 3.0GHz 800MHz FSB 1M L2 (models)	41T1701	N
9	Pentium 4 541 Processor 3.2GHz 800MHz FSB 1M L2 (models)	41T1702	N
9	Celeron D 331 Processor 2.66GHz 533MHz FSB 256KB L2 (models)	41T1694	N
9	Celeron D 336 Processor 2.80GHz 533 FSB 256KB L2 (models)	41T1695	N
9	Celeron D 341 Processor 2.93GHz 533 FSB 256KB L2 (models)	41T1696	N
9	Celeron D 346 Processor 3.06GHz 533 FSB 256KB L2 (models)	41T1697	N
9	Celeron D 351 Processor 3.2 GHz 533 FSB 256KB L2 (models)	41T1698	N
9	Celeron D 352 Processor 3.2GHz 533MHz FSB 512KB L2 B1-Value (84W) (models)	41T4966	N
9	Celeron D 356 Processor 3.33 GHz 533 FSB 512KB L2 (models)	41T4968	N
9	CONROE E4300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models)	42Y8009	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models)	41X2495	N
9	CONROE E6400 1066/2130MHZ-2M L2 LGA EM64T B2-Value (models)	41X2496	N
9	CONROE E6600 1066/2400MHZ-4M L2 LGA EM64T B2-Value (models)	41X5743	N
9	CONROE E6700 1066/2670MHZ-4M L2 LGA EM64T B2-Value (models)	41X5744	N
10	System Board (models CTO)	87H4659	2
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models)	41X4251	1
11	1 GB PC2-4200 (533MHz) DDR2 SDRAM (models)	41X4252	1
11	2 B PC2-4200 (533MHz) DDR2 SDRAM (models)	41X4253	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models)	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models)	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1

Item #	9638 FRUs	FRU#	CRU Tier
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9638 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9638 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models)	41A5289	1
Arabic (models)	41A5290	1
Arabic/French (models)	41A5291	1
Belgian/French (models)	41A5292	1
Belgian/UK (models)	41A5293	1
Brazilian (models)	41A5294	1
Bulgarian (models)	41A5295	1
Chinese/US (models)	41A5296	1
Czech (models)	41A5297	1
Danish (models)	41A5298	1
Dutch (models)	41A5299	1
French (models)	41A5300	1
French Canadian 445 (models)	41A5301	1
French Canadian 58 (models)	41A5302	1
German (models)	41A5303	1
Greek (models)	41A5304	1
Greek/US (models)	41A5305	1
Hebrew (models)	41A5306	1
Hungarian (models)	41A5307	1
Iceland (models)	41A5308	1
Italian 141 (models)	41A5309	1
Japanese (models)	41A5310	1
Korean (models)	41A5311	1

<b>9638 Lenovo Keyboard (Preferred Pro Fullsize)</b>	<b>FRU#</b>	<b>CRU Tier</b>
LA Spanish (models)	41A5312	1
Norwegian (models)	41A5313	1
Polish (models)	41A5314	1
Portuguese (models)	41A5315	1
Romanian 096 (models)	41A5317	1
Romanian 446 (models)	41A5316	1
Russian/Cyrillic (models)	41A5318	1
Serbian/Cyrillic (models)	41A5319	1
Slovak (models)	41A5320	1
Spanish (models)	41A5321	1
Swedish/Finn (models)	41A5322	1
Swiss (models)	41A5323	1
Thailand (models)	41A5324	1
Turkish 440 (models)	41A5325	1
Turkish 179 (models)	41A5326	1
UK English (models)	41A5327	1
US Euro (models)	41A5328	1
Slovenian (models)	41A5329	1

<b>9638 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models)	41A4961	*
Arabic (models)	41A4962	*
Arabic/French (models)	41A4963	*
Belgian/French (models)	41A4964	*
Belgian/UK (models)	41A4965	*
Brazilian (models)	41A4966	*
Bulgarian (models)	41A4967	*
Hong Kong/Taiwan (models)	41A4968	*
Czech (models)	41A4969	*
Danish (models)	41A4970	*
Dutch (models)	41A4971	*
French (models)	41A4972	*
French Canadian 445 (models)	41A4973	*
French Canadian 58 (models)	41A4974	*
German (models)	41A4975	*
Greek (models)	41A4976	*
Hebrew (models)	41A4977	*
Hungarian (models)	41A4978	*
Iceland (models)	41A4979	*
Italian (models)	41A4980	*
Japanese (models)	41A4981	*

<b>9638 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
Korean (models)	41A4982	*
LA Spanish (models )	41A4983	*
Norwegian (models)	41A4984	*
Polish (models)	41A4985	*
Portuguese (models)	41A4986	*
Romanian (models)	41A4987	*
Russian/Cy (models)	41A4988	*
Serbian/Cyrillic (models)	41A4989	*
Slovak (models)	41A4990	*
Spanish (models)	41A4991	*
Swedish/Finn (models)	41A4992	*
Swiss F/G (models)	41A4993	*
Thailand (models)	41A4994	*
Turkish 440 (models)	41A4995	*
Turkish 179 (models)	41A4996	*
UK English (models)	41A4997	*
US Euro (models)	41A4998	*
Slovenian (models)	41A4999	*

<b>9638 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models)	41A5248	*
Arabic (models)	41A5249	*
Arabic/French (models)	41A5250	*
Belgian/French (models)	41A5251	*
Belgian/UK (models)	41A5252	*
Brazilian (models)	41A5253	*
Bulgarian (models)	41A5254	*
Chinese/US (models)	41A5255	*
Czech (models)	41A5256	*
Danish (models)	41A5257	*
Dutch (models)	41A5258	*
French (models)	41A5259	*
French Canadian 445 (models)	41A5260	*
French Canadian 58 (models)	41A5261	*
German (models)	41A5262	*
Greek (models)	41A5263	*
Hebrew (models)	41A5265	*
Hungarian (models)	41A5266	*
Iceland (models)	41A5267	*
Italian (models)	41A5268	*
Japanese (models)	41A5269	*

<b>9638 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
Korean (models)	41A5270	*
LA Spanish (models)	41A5271	*
Norwegian (models)	41A5272	*
Polish (models)	41A5273	*
Portuguese (models)	41A5274	*
Romanian 446 (models)	41A5275	*
Romanian 96 (models)	41A5276	*
Russian/Cy (models)	41A5277	*
Serbian/Cyrillic (models)	41A5278	*
Slovak (models)	41A5279	*
Spanish (models)	41A5280	*
Swedish/Finn (models)	41A5281	*
Swiss F/G (models)	41A5282	*
Thailand (models)	41A5283	*
Turkish 440 (models)	41A5284	*
Turkish 179 (models)	41A5285	*
UK English (models)	41A5286	*
US Euro (models)	41A5287	*
Slovenian (models)	41A5288	*

<b>9638 Lenovo Keyboard (Wireless, Enhanced)</b>	<b>FRU#</b>	<b>CRU</b>
US English/Chinese/US (models)	41A5219	*
Belgian/French (models)	41A5220	*
Belgian/UK (models)	41A5221	*
Chinese/US (models)	41A5222	*
Czech (models)	41A5223	*
Danish (models)	41A5224	*
Dutch (models)	41A5225	*
French (models)	41A5226	*
French Canadian (models)	41A5227	*
French Canadian (models)	41A5228	*
German (models)	41A5229	*
Greek (models)	41A5230	*
Hungarian (models)	41A5232	*
Iceland (models)	41A5233	*
Italy (models)	41A5234	*
Japanese (models)	41A5235	*
Norwegian (models)	41A5236	*
Polish (models)	41A5237	*
Portuguese (models)	41A5238	*
Slovak (models)	41A5239	*

<b>9638 Lenovo Keyboard (Wireless, Enhanced)</b>	<b>FRU#</b>	<b>CRU</b>
Spanish (models)	41A5240	*
Swedish/Finn (models)	41A5241	*
Swiss (models)	41A5242	*
UK English (models)	41A5243	*
US Euro (models)	41A5244	*
Slovenian (models)	41A5245	*

<b>9638 Keyboard (PS2 Preferred Pro)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models)	41A5039	*
Arabic (models)	41A5040	*
Belgian/French (models)	41A5042	*
Belgian/UK (models)	41A5043	*
Brazil/Portuguese (models)	41A5044	*
Bulgarian (models)	41A5045	*
Chinese/US (models)	41A5046	*
Czech (models)	41A5047	*
Danish (models)	41A5048	*
Dutch (models)	41A5049	*
French (models)	41A5050	*
French Canadian 445 (models)	41A5051	*
French Canadian 58 (models)	41A5052	*
German (models)	41A5053	*
Greek (models)	41A5054	*
Greek/US (models)	41A5080	*
Hebrew (models)	41A5055	*
Hungarian (models)	41A5056	*
Iceland (models)	41A5057	*
Italian (models)	41A5058	*
Japanese (models)	41A5059	*
Korean (models)	41A5060	*
LA Spanish (models)	41A5061	*
Norwegian (models )	41A5062	*
Polish (models)	41A5063	*
Portuguese (models)	41A5064	*
Romanian (models)	41A5065	*
Russian/Cyrilic (models)	41A5066	*
Serbian/Cyrilic (models)	41A5067	*
Slovak (models)	41A5068	*
Spanish (models)	41A5069	*
Swedish/Finn (models)	41A5070	*
Swiss F/G (models)	41A5071	*

9638 Keyboard (PS2 Preferred Pro)	FRU#	CRU
Thailand (models)	41A5072	*
Turkish (models)	41A5073	*
Turkish (models)	41A5074	*
UK English (models)	41A5075	*
US Euro (models)	41A5076	*
Slovenian (models)	41A5077	*

9638 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models)	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models)	41U3030	1
Mouse, ScrollPoint Optical (800DPI, USB) (models)	41U3019	1

9638 Adapters and miscellaneous FRUs	FRU#	CRU
Wireless mouse (models)	41A5247	*
USB Transceiver for wireless kybd/mouse (models)	41A5246	*
IEEE 1394 Adapter - Firewire (models)	41D2781	*
Soft Modem V.90/V.44 (models)	29R9729	*
Speakers, 2-piece) Lenovo Logo (models)	41A5331	*
Speakers, 2-piece) Lenovo Logo (models)	41A5334	*
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models)	89P8571	*
Thermal Grease Syringe (models)	91P8835	*
Casper (DVI-I card, full height) (models)	39J9334	*

9638 Power Cords	FRU#	CRU
Power cord - US (models)	39M5080	*
Power cord - China (models)	39M5205	*
Power cord - Japan (models)	24R2633	*
Power cord - Brazil (models)	39M5232	*
Power cord - LA High Volt (APU) (models)	39M5067	*
Power cord - Australia/New Zealand (models)	39M5102	*
Power cord - Korea (models)	39M5212	*
Power cord - Hong Kong (models)	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models)	39M5150	*
Power cord - Taiwan (models)	39M5246	*
Power cord - Italy (models)	39M5164	*
Power cord - G models (models)	39M5122	*
Power cord - Denmark (models)	39M5129	*
Power cord - Switzerland (models)	39M5157	*
Power cord - Israel (models)	39M5171	*
Power cord - South Africa (models)	39M5143	*



9638 Windows XP Home Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models)		1
FR/CF (models)		1
GR (models)		1
IT (models)		1
BR (models)		1
SP/LA (models)		1
DK (models)		1
NL (models)		1
AE (models)		1
SV (models)		1
HE (models)		1
FI (models)		1
NO (models)		1
PL (models)		1
PO (models)		1
RU (models)		1
RE (models)		1
HU (models)		1
CZ (models)		1
TR (models)		1
GK (models)		1
Japanese (models)		1
Simplified Chinese (models)		1
Taiwan-TC (models)		1
Hong Kong-TC (models)		1
Korean (models)		1

9638 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models)		1
FR/CF (models)		1
GR (models)		1
IT (models)		1
BR (models)		1
SP/LA (models)		1
DK (models)		1
NL (models)		1
AE (models)		1
SV (models)		1
HE (models)		1
FI (models)		1
NO (models)		1

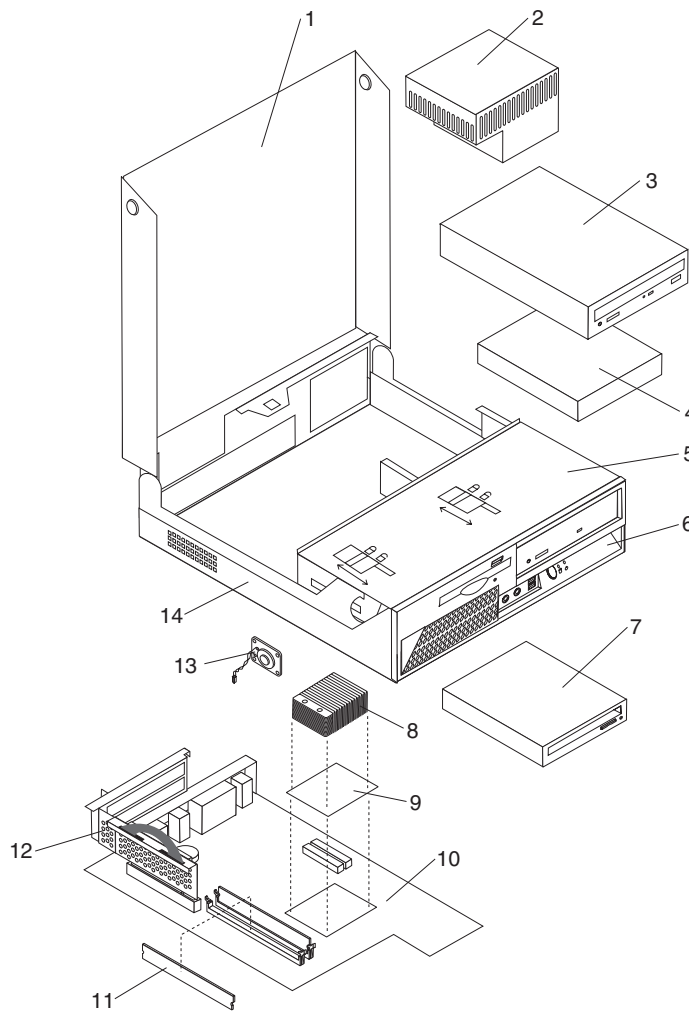
9638 Windows XP Pro Recovery Discs	FRU#	CRU Tier
PL (models)		1
PO (models)		1
RU (models)		1
RE (models)		1
HU (models)		1
CZ (models)		1
TR (models)		1
GK (models)		1
SL (models)		1
Japanese (models)		1
Simplified Chinese (models)		1
Taiwan-TC (models)		1
Hong Kong-TC (models)		1
Korean (models)		1
Multilingual 1 -- EN NL FR GR IT (models)		1
Multilingual 2 -- EN DK FI NO SV (models)		1

9638 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models)	87H4420	1
FR/CF (models)	87H4421	1
GR (models)	87H4422	1
SP/LA (models)	87H4423	1
BR (models)	87H4424	1
IT (models)	87H4425	1
JP (models)	87H4426	1
NO (models)	87H4427	1
SV (models)	87H4428	1
DK (models)	87H4429	1
NL (models)	87H4430	1
CZ (models)	87H4431	1
FI (models)	87H4432	1
PL (models)	87H4433	1
RU (models)	87H4434	1
TR (models)	87H4435	1
HU (models)	87H4436	1
GK (models)	87H4437	1
PO (models)	87H4438	1
CS (models)	87H4439	1
TW (models)	87H4440	1
HK (models)	87H4441	1
KR (models)	87H4442	1

9638 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
SL (models)	87H4443	1
RE (models)	43C1306	1

9638 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models)	87H4476	1
FR/CF (models)	87H4477	1
GR (models)	87H4478	1
SP/LA (models)	87H4479	1
BR (models)	87H4480	1
IT (models)	87H4481	1
JP (models)	87H4482	1
NO (models)	87H4483	1
SV (models)	87H4484	1
DK (models)	87H4485	1
NL (models)	87H4486	1
CZ (models)	87H4487	1
FI (models)	87H4488	1
PL (models)	87H4489	1
RU (models)	87H4490	1
TR (models)	87H4491	1
HU (models)	87H4492	1
GK (models)	87H4493	1
PO (models)	87H4494	1
CS (models)	87H4495	1
TW (models)	87H4496	1
HK (models)	87H4497	1
KR (models)	87H4498	1
SL (models)	87H4499	1
RE (models)	43C1308	1

# Machine Type 9640



Item #	9640 FRUs	FRU#	CRU Tier
1	Cover (models)	41R6220	1
2	Power Supply - (225 Watt) (models A1M A2M B1M D1M E1M E2M F1M 74G H1M 78G B2M B2A B2T D2M E3M F2M G1M 77G 79G 7CG 7DG H3M H4M 7EG 7FG 7GG 7HG 7JG)	41A9629	2
2	Power Supply - (225 Watt) (RObust) (models H1V B2Q E3V H5V H6Q)	41A9635	2
3	DVD-ROM 16X/48X - Black (models H1M H1V H5V H6Q)	41N3325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA No Software / No Royalty for VISTA (models B2M B2A B2Q B2T 77G 78G)	42Y9353	1
3	DVD Recorder Rambo 8 - SATA vista and nonvista (models H3M H4M 7EG 7FG 7GG 7HG 7JG)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models A1M D1M E1M F1M 78G B2M B2A B2Q B2T 77G H3M H6Q)	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models A2M B1M E2M 74G H1M H1V D2M E3M F2M F2V G1M 79G 7CG 7DG H5V H4M 7EG 7FG 7GG 7HG 7JG)	40Y9035	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (models)	41A7718	2

Item #	9640 FRUs	FRU#	CRU Tier
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models H1M H1V B2M B2A B2Q B2T)	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models H1M H1V B2M B2A B2Q B2T)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models 78G 77G)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO 74G D2M 79G 7CG)	41X2413	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models E1M E2M E3M)	41X7776	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models B1M B2M B2A B2Q B2T)	41T1704	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models A1M A2M)	41T1713	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models H4M H6Q)	43C1968	N
9	Pentium E2140 800/1600MHZ-1M, LGA, EM64T (models H5V H3M 7EG 7FG 7GG)	43C1967	N
9	CONROE E4300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models H1M H1V 7DG)	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models 7HG 7JG)	43C2056	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models F1M F2M F2V)	41X2495	N
9	CONROE E6400 1066/2130MHZ-2M L2 LGA EM64T B2-Value (models G1M)	41X2496	N
10	System Board (models A1M A2M B1M D1M E1M E2M F1M 74G H1M H1V 78G B2M B2A B2Q B2T D2M E3M F2M F2V G1M 77G 79G 7CG 7DG H5V H3M H4M H6Q 7EG 7FG 7GG 7HG 7JG)	43C3480	2
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models A1M D1M E1M F1M H1M H1V 78G B2M B2A B2Q B2T D2M E3M F2M F2V G1M H5V H6Q 7EG )	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models A2M B1M E2M 74G 77G 79G 7CG 7DG H3M H4M 7GG 7HG 7JG)	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models 7FG)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9640 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2

9640 FRUs	FRU#	CRU Tier
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9640 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models A1M A2M B1M D1M E1M E2M F1M 74G H1M 78G B2M D2M E3M F2M G1M B2A B2Q 7CG 7DG H3M H4M H6Q 7EG 7FG 7GG 7HG 7JG)	41A5289	1
Arabic (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5290	1
Belgian/French (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5292	1
Belgian/UK (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5293	1
Bulgarian (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5295	1
Chinese/US (models CTO-B CTO-H H1V E3V)	41A5296	1
Czech (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5297	1
Danish (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5298	1
Dutch (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5299	1
French (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5300	1
German (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5303	1
Greek (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5304	1
Greek/US (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5305	1
Hebrew (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5306	1
Hungarian (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5307	1
Iceland (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5308	1
Italian 141 (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5309	1
Norwegian (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5313	1
Polish (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5314	1
Portuguese (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5315	1
Romanian 096 (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5317	1
Romanian 446 (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5316	1
Russian/Cyrillic (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5318	1
Serbian/Cyrillic (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5319	1
Slovak (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5320	1
Spanish (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5321	1
Swedish/Finn (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5322	1
Swiss (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5323	1
Turkish 440 (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5325	1
Turkish 179 (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5326	1
UK English (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5327	1
US Euro (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5328	1
Slovenian (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG)	41A5329	1

9640 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models A1M A2M B1M D1M E1M E2M F1M 74G H1M H1V 78G B2M B2A B2Q B2T D2M E3M F2M F2V G1M 77G 79G 7CG 7DG H5V H3M H4M H6Q 7EG 7FG 7GG 7HG 7JG )	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models A1M A2M B1M D1M E1M E2M F1M 74G H1M H1V 78G B2M B2A B2Q B2T D2M E3M F2M F2V G1M 77G 79G 7CG 7DG H5V H3M H4M H6Q 7EG 7FG 7GG 7HG 7JG )	41U3030	1

9640 Adapters and miscellaneous FRUs	FRU#	CRU
Casper (DVI-I card, full height) (models 74G 78G)	39J9334	*

9640 Power Cords	FRU#	CRU
Power cord - US (models B2A B2T)	39M5080	*
Power cord - Australia/New Zealand (models A1M A2M B1M D1M E1M E2M F1M H1M B2M D2M E3M F2M G1M H3M H4M )	39M5102	*
Power cord - Korea (models H5V )	39M5212	*
Power cord - Hong Kong (models 74G 78G B2A 77G 79G 7CG 7DG 7GG 7HG 7JG )	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models 7EG 7FG 7GG 7HG 7JG )	39M5150	*
Power cord - Italy (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG )	39M5164	*
Power cord - G models (models B2A)	39M5122	*
Power cord - Denmark (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG )	39M5129	*
Power cord - Switzerland (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG )	39M5157	*
Power cord - Israel (models 74G 78G 77G 79G 7CG 7DG 7EG 7FG 7GG 7HG 7JG )	39M5171	*
Power cord - South Africa (models A1M A2M B1M D1M E1M E2M F1M 74G H1M 78G B2M D2M E3M F2M G1M B2A 77G 79G 7CG 7DG H3M H4M 7EG 7FG 7GG 7HG 7JG )	39M5143	*
Power cord - India (models B2Q)	41R3175	*

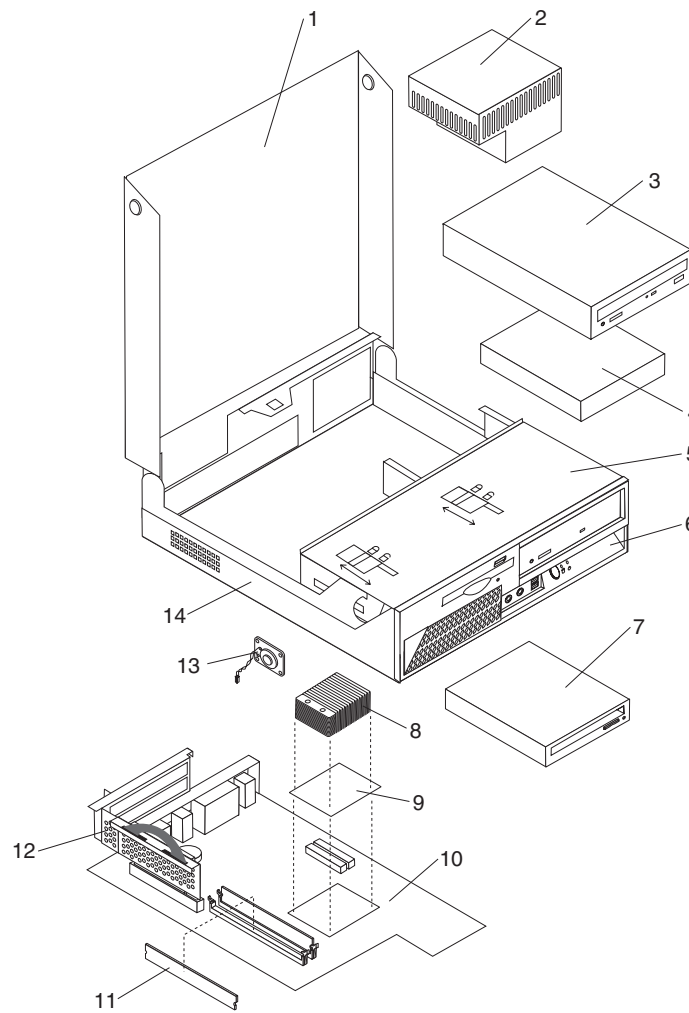
9640 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models A1M A2M B1M D1M E1M E2M F1M H1M 74G 78G 7EG 7HG B2M D2M E3M F2M G1M B2A B2Q 77G 79G 7CG 7DG H6Q H3M H4M 7FG 7GG 7JG)	42Y3549	1
FR/CF (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3550	1
GR (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3551	1
IT (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3553	1
SP/LA (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3552	1
DK (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3556	1
NL (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3720	1
AE (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3724	1
SV (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3555	1
HE (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3721	1
FI (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3718	1
NO (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3719	1
PL (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3722	1
PO (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3728	1
RU (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3725	1

9640 Windows XP Pro Recovery Discs	FRU#	CRU Tier
RE (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3717	1
HU (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3727	1
CZ (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3723	1
TR (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3726	1
GK (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3729	1
SL (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3730	1
Taiwan-TC (models H1V F2V H5V)	41W7757	1
Multilingual 1 -- EN NL FR GR IT (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models 74G 78G 7EG 7HG 77G 79G 7CG 7DG 7FG 7GG 7JG)	42Y3879	1

9640 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models B2M D2M E3M F2M G1M B2A B2Q 77G 79G 7CG 7DG H6Q H3M H4M 7FG 7GG 7JG )	87H4476	1
FR/CF (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4477	1
GR (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4478	1
SP/LA (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4479	1
IT (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4481	1
NO (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4483	1
SV (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4484	1
DK (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4485	1
NL (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4486	1
CZ (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4487	1
FI (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4488	1
PL (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4489	1
RU (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4490	1
TR (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4491	1
HU (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4492	1
GK (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4493	1
PO (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4494	1
TW (models F2V)	87H4496	1
HK (models F2V)	87H4497	1
SL (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	87H4499	1
RE (models 77G 79G 7CG 7DG 7FG 7GG 7JG )	43C1308	1



# Machine Type 9641



Item #	9641 FRUs	FRU#	CRU Tier
1	Cover (models)	41R6220	1
2	Power Supply - (225 Watt) (models A1A A1T 71G 7KG B1S B1P B1D B1Y B1A B1T Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y G1S G1P G1D G1Y G1A G1T 75G 78G 7BG 7CG Q2M 71G 7MG 7PG 7QG 7RG 7NG)	41A9629	2
2	Power Supply - (225 Watt) (RObust) (models A2Q B1Q Q4C Q2H Q5H Q6H Q7H)	41A9635	2
3	DVD-ROM 16X/48X - Black (models A1A A1T A2Q Q1S Q1P Q1D Q1Y D2S D2P D2D D2Y E1S E1P E1D E1Y F1S F1P F1D F1Y Q5H Q6H Q7H )	41N3325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA No Software / No Royalty for VISTA (models B1S B1P B1D B1Y B1A B1Q B1T D1S D1P D1D D1Y E2S E2P E2D E2Y G1S G1P G1D G1Y G1A G1T 78G 71G Q2M Q2H )	42Y9353	1
3	DVD-RW/CD-RW Rambo 7 - SATA No Software / No Royalty for VISTA (models 7KG 75G Q4C 7BG 7CG)	42Y9354	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models A1A A1T 71G A2Q B1S B1P B1D B1Y B1A B1Q B1T Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y G1S G1P G1D G1Y G1A G1T 78G Q4C Q6H)	40Y9034	1

Item #	9641 FRUs	FRU#	CRU Tier
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models 7KG 7BG 7CG Q2M Q2H Q5H Q7H 71G 7MG)	40Y9035	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models A1A A1T A2Q B1S B1P B1D B1Y B1A B1Q B1T G1S G1P G1D G1Y G1A G1T)	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models A1A A1T A2Q B1S B1P B1D B1Y B1A B1Q B1T G1S G1P G1D G1Y G1A G1T)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models E1S E1P E1D E1Y E2S E2P E2D E2Y 78G)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models 7KG 75G 7BG)	41X2413	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models B1S B1P B1D B1Y B1A B1Q B1T)	41T1704	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models D1S D1P D1D D1Y D2S D2P D2D D2Y)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models A1A A1T A2Q)	41T1713	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models Q5H Q6H Q7H )	43C1968	N
9	Pentium E2140 800/1600MHZ-1M, LGA, EM64T (models 71G 7MG 7NG 7PG)	43C1967	N
9	CONROE E4300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models G1S G1P G1D G1Y G1A G1T 7CG)	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models Q4C Q2M Q2H Q4C 7QG 7RG )	43C2056	N
10	System Board (models 71G A1A A1T 7KG A2Q B1S B1P B1D B1Y B1A B1Q B1T Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y G1S G1P G1D G1Y G1A G1T 75G 78G Q4C 7BG 7CG Q2M Q2H Q4C Q5H Q6H Q7H 71G 7MG 7NG 7PG 7QG 7RG)	43C3480	2
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y)	41X4251	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models A1A A1T 71G A2Q B1S B1P B1D B1Y B1T B1A B1Q G1S G1P G1D G1Y G1A G1T Q4C Q2M Q2H Q4C Q6H Q7H 71G 7NG)	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models 7KG 75G 78G 7BG 7CG Q5H 7PG 7QG 7RG)	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models 7MG)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9641 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1

9641 FRUs	FRU#	CRU Tier
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9641 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models A1A 71G 7KG 75G 78G 7BG 7CG Q2M Q2H Q5H Q6H Q7H 7MG 7PG 7QG 7RG 7NG)	41A5289	1
China (models Q4C)	TBD	1
Arabic (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5290	1
Arabic/French (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5291	1
Belgian/French (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5292	1
Belgian/UK (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5293	1
Brazilian (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5294	1
Bulgarian (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5295	1
Czech (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5297	1
Danish (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5298	1
Dutch (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5299	1
French (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5300	1
German (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5303	1
Greek (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5304	1
Greek/US (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5305	1
Hebrew (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5306	1
Hungarian (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5307	1
Iceland (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5308	1
Italian 141 (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5309	1
LA Spanish (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5312	1
Norwegian (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5313	1
Polish (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5314	1
Portuguese (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5315	1
Romanian 096 (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5317	1
Romanian 446 (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5316	1
Russian/Cyrillic (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5318	1
Serbian/Cyrillic (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5319	1
Slovak (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5320	1
Spanish (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5321	1

9641 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
Swedish/Finn (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5322	1
Swiss (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5323	1
Turkish 440 (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5325	1
Turkish 179 (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5326	1
UK English (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5327	1
US Euro (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5328	1
Slovenian (models 71G 7KG 75G 78G 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	41A5329	1

9641 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models A1A A1T 71G 7KG A2Q B1S B1P B1D B1Y B1A B1Q B1T Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y G1S G1P G1D G1Y G1A G1T 75G 78G 7BG 7CG Q4C Q2M Q2H Q5H Q6H Q7H 7MG 7MG 7PG 7QG 7RG 7NG)	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models A1A A1T 71G 7KG A2Q B1S B1P B1D B1Y B1A B1Q B1T Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y G1S G1P G1D G1Y G1A G1T 75G 78G 7BG 7CG Q4C Q2M Q2H Q5H Q6H Q7H 7MG 7MG 7PG 7QG 7RG 7NG)	41U3030	1

9641 Adapters and miscellaneous FRUs	FRU#	CRU
IEEE 1394 Adapter - Firewire (models A1A A1T A2Q G1S G1P G1D G1Y G1A G1T)	41D2781	*
Casper (DVI-I card, full height) (models 71G 7KG Q1S Q1P Q1D Q1Y D1S D1P D1D D1Y D2S D2P D2D D2Y E1S E1P E1D E1Y E2S E2P E2D E2Y F1S F1P F1D F1Y 75G 78G)	39J9334	*

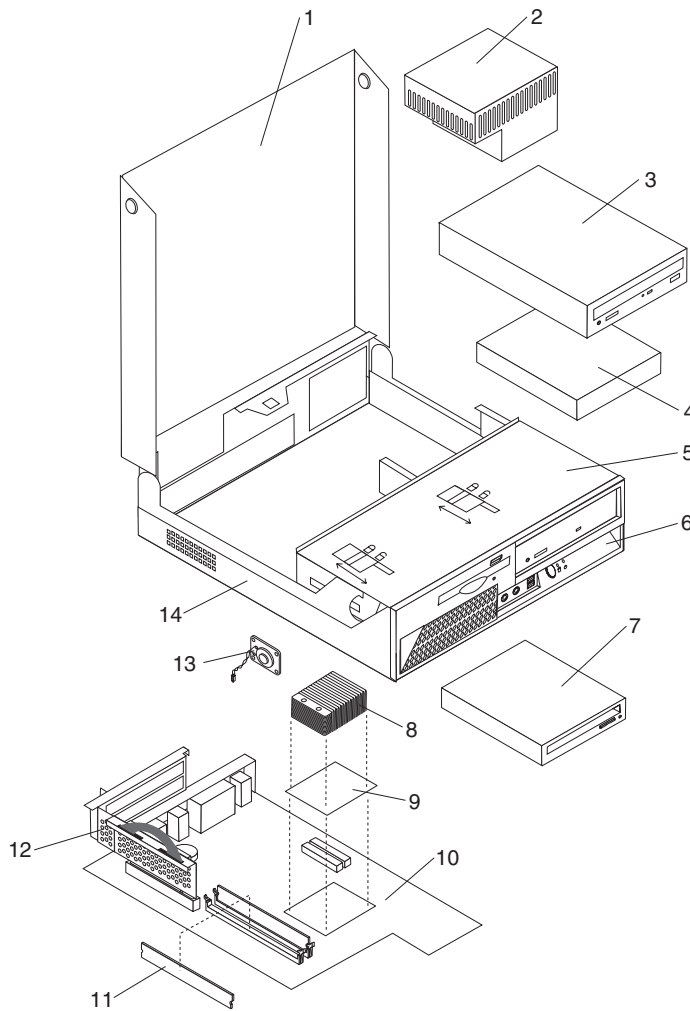
9641 Power Cords	FRU#	CRU
Power cord - US (models A1A A1T B1S B1D B1A B1T Q1S Q1D D1S D1D D2S D2D E1S E1D E2S E2D F1S F1D G1S G1D G1A G1T)	39M5080	*
Power cord - China (models Q4C)	39M5205	*
Power cord - Japan (models CTO-J CTO-E)	24R2633	*
Power cord - Brazil (models B1P Q1P D1P D2P E1P E2P F1P G1P)	39M5232	*
Power cord - LA High Volt (APU) (models B1Y Q1Y D1Y D2Y E1Y E2Y F1Y G1Y)	39M5067	*
Power cord - Australia/New Zealand (models Q2M)	39M5102	*
Power cord - Hong Kong (models Q2H Q5H Q6H Q7H )	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models 71G A1A 7KG B1A F1A 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	39M5150	*
Power cord - Italy (models 71G 7KG B1S Q1S D1S D2S E1S E2S F1S G1S B1Y Q1Y D1Y D2Y E1Y E2Y F1Y G1Y 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	39M5164	*
Power cord - G models (models A1A B1A F1A)	39M5122	*
Power cord - Denmark (models 71G 7KG 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	39M5129	*
Power cord - Switzerland (models 71G 7KG 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	39M5157	*
Power cord - Israel (models 71G 7KG 7BG 7CG 7MG 7PG 7QG 7RG 7NG)	39M5171	*
Power cord - South Africa (models 71G A1A 7KG B1A F1A 7BG 7CG Q2M 7MG 7PG 7QG 7RG 7NG)	39M5143	*
Power cord - India (models A2Q B1Q)	41R3175	*

9641 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models 71G A1A 7KG 7NG 7RG A2Q 75G 78G A2Q B1A B1Q G1A 7BG 7CG Q2M Q2H Q5H Q6H Q7H 71G 7MG 7PG 7QG)	42Y3549	1
FR/CF (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3550	1
GR (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3551	1
IT (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3553	1
SP/LA (models 71G 7KG 7NG 7RG B1S Q1S D1S D2S E1S E2S F1S G1S B1D B1Y Q1D Q1Y D1D D1Y D2D D2Y E1D E1Y E2D E2Y F1D F1Y G1D G1Y 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3552	1
DK (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3556	1
NL (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3720	1
AE (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3724	1
SV (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3555	1
HE (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3721	1
FI (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3718	1
NO (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3719	1
PL (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3722	1
PO (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3728	1
RU (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3725	1
RE (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3717	1
HU (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3727	1
CZ (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3723	1
TR (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3726	1
GK (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3729	1
SL (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3730	1
Simplified Chinese (models QAC)	41W7751	1
Multilingual 1 -- EN NL FR GR IT (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models 71G 7KG 7NG 7RG 75G 78G 7BG 7CG 71G 7MG 7PG 7QG)	42Y3879	1

9641 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models A2Q 75G 78G A2Q B1A B1Q G1A 7BG 7CG Q2M Q2H Q5H Q6H Q7H 71G 7MG 7PG 7QG )	87H4476	1
FR/CF (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4477	1
GR (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4478	1
SP/LA (models B1S Q1S D1S D2S E1S E2S F1S G1S B1D B1Y Q1D Q1Y D1D D1Y D2D D2Y E1D E1Y E2D E2Y F1D F1Y G1D G1Y 75G 78G 7BG 7CG 71G 7MG 7PG 7QG 71G 7MG 7PG 7QG )	87H4479	1
BR (models B1P Q1P D1P D2P E1P E2P F1P G1P)	87H4480	1
IT (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4481	1
NO (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4483	1
SV (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4484	1
DK (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4485	1

9641 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
NL (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4486	1
CZ (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4487	1
FI (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4488	1
PL (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4489	1
RU (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4490	1
TR (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4491	1
HU (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4492	1
GK (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4493	1
SL (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	87H4499	1
RE (models 75G 78G 7BG 7CG 71G 7MG 7PG 7QG )	43C1308	1

## Machine Type 9642



Item #	9642 FRUs	FRU#	CRU Tier
1	Cover (models)	41R6220	1

Item #	9642 FRUs	FRU#	CRU Tier
2	Power Supply - (225 Watt) (models CTO-U CTO-F CTO-S CTO-P CTO-D CTO-Y CTO-G CTO-M CTO-A CTO-T CTO-K CTO-K CTO-R G1A G1T G1K D1A D1T D1K D2K A2A A2T A2K B3A B3T B4K H2A H2T H2K)	41A9629	2
2	Power Supply - (225 Watt) (Japan) (models CTO-J G2J G3J G4J Q2J Q3J Q4J Q5J Q6J Q7J)	41A9632	2
2	Power Supply - (225 Watt) (RObust) (models A1B A1H B1B B1H B2B B2H G1V Q1V A3B A3H B3B B3H B4V B5B B5H H1B H1H H2V)	41A9635	2
3	DVD-ROM 16X/48X - Black (models CTO G1A G1T G1V G1K G2J G3J B4K B4V Q4J Q2J Q7J)	41N3325	1
3	DVD Recorder Rambo 8 - SATA vista and nonvista (models CTO Q6J)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models CTO G2J G3J G4J Q1V Q2J Q3J Q4J Q5J Q6J Q7J )	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models A1B A1H B1B B1H B2B B2H G1A G1T G1V G1K D1A D1T D1K D2K A2A A2T A2K A3B A3H B3A B3T B3B B3H B4K B4V B5B B5H H1B H1H H2A H2T H2K H2V)	40Y9035	1
4	Hard Disk Drive 250GB 7200 rpm Serial ATA (models CTO)	40Y9036	1
4	Hard Disk Drive 500GB 7200 rpm Serial ATA (models CTO)	41X5582	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models CTO G1A G1T G1V G1K G2J G3J G4J Q1V B4K B4V Q2J Q3J Q4J Q5J Q6J Q7J )	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models CTO G1A G1T G1V G1K G2J G3J G4J Q1V B4K B4V Q2J Q3J Q4J Q5J Q6J Q7J )	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models CTO Q1V)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO D1A D1T D1K D2K Q2J Q3J)	41X2413	N
9	Pentium D 930 Processor 3.2 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO)	41T1717	N
9	Pentium D 935 Processor 3.2 GHz 800 FSB 2MBx2 L2 (models CTO G4J H1B H1H H2A H2T H2K H2V)	41X8050	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models A1B A1H A2A A2T A2K A3B A3H)	41X7776	N
9	Pentium D 805 Processor 2.66GHz 533MHz FSB 2Mx1 L2 (models CTO)	41X7626	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models CTO)	41T1704	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models CTO G3J)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models CTO)	41T1713	N
9	Pentium 4 651 Processor 3.4 GHz 800 FSB 2MB L2 (models CTO)	41T1714	N
9	Pentium 4 661 Processor 3.6 GHz 800MHz FSB 2MB L2 (models CTO)	41T1715	N
9	Pentium 4 630 Processor 3.0 GHz 800 FSB 2MB L2 (models CTO)	41T1709	N
9	Pentium 4 524 Processor 3.06GHz 533MHz FSB 1M L2 (models CTO)	41T4104	N
9	Pentium 4 531 Processor 3.0GHz 800MHz FSB 1M L2 (models CTO)	41T1701	N
9	Pentium 4 541 Processor 3.2GHz 800MHz FSB 1M L2 (models CTO)	41T1702	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models CTO)	43C1968	N
9	Pentium E2140 800/1800MHZ-1M, LGA, EM64T (models CTO Q6J Q7J)	43C1967	N
9	Celeron D 331 Processor 2.66GHz 533MHz FSB 256KB L2 (models CTO)	41T1694	N

Item #	9642 FRUs	FRU#	CRU Tier
9	Celeron D 336 Processor 2.80GHz 533 FSB 256KB L2 (models CTO)	41T1695	N
9	Celeron D 341 Processor 2.93GHz 533 FSB 256KB L2 (models CTO)	41T1696	N
9	Celeron D 346 Processor 3.06GHz 533 FSB 256KB L2 (models CTO)	41T1697	N
9	Celeron D 351 Processor 3.2 GHz 533 FSB 256KB L2 (models CTO)	41T1698	N
9	Celeron D 355 Processor 3.33 GHz 533 FSB 256KB L2 (models CTO)	41T1699	N
9	Celeron D 352 Processor 3.2GHz 533MHz FSB 512KB L2 B1-Value (84W) (models CTO G2J)	41T4966	N
9	Celeron D 356 Processor 3.33 GHz 533 FSB 512KB L2 (models CTO)	41T4968	N
9	Celeron 440 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C1965	N
9	Celeron 430 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C1964	N
9	Celeron 420 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C3835	N
9	CONROE E6300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models CTO G1A G1T G1V G1K Q4J Q5J)	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models CTO)	43C2056	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models B1B B1H B2B B2H B3A B3T B3B B3H B4K B4V B5B B5H)	41X2495	N
9	Core 2 Duo E6320 Processor 1.86GHz 1066MHz FSB 4M B2 (models CTO)	43C3829	N
9	CONROE E6400 1066/2130MHZ-2M L2 LGA EM64T B2-Value (models CTO)	41X2496	N
9	Core 2 Duo E6420 Processor 2.13GHz 1066MHz FSB 4M B2 (models CTO)	43C3831	N
9	CONROE E6600 1066/2400MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5743	N
9	CONROE E6700 1066/2670MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5744	N
10	System Board (models A1B A1H B1B B1H B2B B2H G1A G1T G1V G1K G2J G3J G4J Q1V D1A D1T D1K D2K A2A A2T A2K A3B A3H B3A B3T B3B B3H B4K B4V B5B B5H H1B H1H H2A H2T H2K H2V Q2J Q3J Q4J Q5J Q6J Q7J)	43C3480	2
11	256 MB PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4250	1
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4251	1
11	1 GB PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4252	1
11	2 B PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4253	1
11	256 MB PC2-5300 (667MHz) DDR2 SDRAM (models CTO)	41X4254	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models A1B A1H G1A G1T G1V G1K G2J G3J Q1V D2K A3B A3H B4K B4V B5B B5H H2A H2T H2K H2V Q2J Q3J Q4J Q5J Q6J Q7J )	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models B1B B1H B2B B2H G4J D1A D1T D1K A2A A2T A2K B3A B3T B3B B3H H1B H1H)	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models CTO)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9642 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1



9642 FRUs	FRU#	CRU Tier
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9642 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models A1H B1H B2H G1A D1A A2A B3A H2A A3H B3H B5H H1H)	41A5289	1
Arabic (models CTO-G)	41A5290	1
Arabic/French (models CTO-G)	41A5291	1
Belgian/French (models CTO-G)	41A5292	1
Belgian/UK (models CTO-G)	41A5293	1
Brazilian (models CTO-L)	41A5294	1
Bulgarian (models CTO-G)	41A5295	1
Chinese/US (models A1B B1B B2B G1V A3B B3B B5B H1B Q1V B4V H2V)	41A5296	1
Czech (models CTO-G)	41A5297	1
Danish (models CTO-G)	41A5298	1
Dutch (models CTO-G)	41A5299	1
French (models CTO-G)	41A5300	1
French Canadian 445 (models CTO-U)	41A5301	1
French Canadian 58 (models CTO-U)	41A5302	1
German (models CTO-G)	41A5303	1
Greek (models CTO-G)	41A5304	1
Greek/US (models CTO-G)	41A5305	1
Hebrew (models CTO-G)	41A5306	1
Hungarian (models CTO-G)	41A5307	1
Iceland (models CTO-G)	41A5308	1
Italian 141 (models CTO-G)	41A5309	1
Japanese (models CTO-J G2J G3J G4J Q2J Q3J Q4J Q5J Q6J Q7J)	41A5310	1
Korean (models CTO-K G1K D1K D2K A2K B4K H2K)	41A5311	1
LA Spanish (models CTO-L)	41A5312	1
Norwegian (models CTO-G)	41A5313	1
Polish (models CTO-G)	41A5314	1
Portuguese (models CTO-G)	41A5315	1
Romanian 096 (models CTO-G)	41A5317	1
Romanian 446 (models CTO-G)	41A5316	1
Russian/Cyrillic (models CTO-G)	41A5318	1

<b>9642 Lenovo Keyboard (Preferred Pro Fullsize)</b>	<b>FRU#</b>	<b>CRU Tier</b>
Serbian/Cyrillic (models CTO-G)	41A5319	1
Slovak (models CTO-G)	41A5320	1
Spanish (models CTO-G)	41A5321	1
Swedish/Finn (models CTO-G)	41A5322	1
Swiss (models CTO-G)	41A5323	1
Thailand (models CTO-A G1T D1T A2T B3T H2T)	41A5324	1
Turkish 440 (models CTO-G)	41A5325	1
Turkish 179 (models CTO-G)	41A5326	1
UK English (models CTO-G)	41A5327	1
US Euro (models CTO-G)	41A5328	1
Slovenian (models CTO-G)	41A5329	1

<b>9642 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A4961	*
Arabic (models CTO-G)	41A4962	*
Arabic/French (models CTO-G)	41A4963	*
Belgian/French (models CTO-G)	41A4964	*
Belgian/UK (models CTO-G)	41A4965	*
Brazilian (models CTO-L)	41A4966	*
Bulgarian (models CTO-G)	41A4967	*
Hong Kong/Taiwan (models CTO-B CTO-H)	41A4968	*
Czech (models CTO-G)	41A4969	*
Danish (models CTO-G)	41A4970	*
Dutch (models CTO-G)	41A4971	*
French (models CTO-G)	41A4972	*
French Canadian 445 (models CTO-U)	41A4973	*
French Canadian 58 (models CTO-U)	41A4974	*
German (models CTO-G)	41A4975	*
Greek (models CTO-G)	41A4976	*
Hebrew (models CTO-G)	41A4977	*
Hungarian (models CTO-G)	41A4978	*
Iceland (models CTO-G)	41A4979	*
Italian (models CTO-G)	41A4980	*
Japanese (models CTO-J)	41A4981	*
Korean (models CTO-K)	41A4982	*
LA Spanish (models CTO-L)	41A4983	*
Norwegian (models CTO-G)	41A4984	*
Polish (models CTO-G)	41A4985	*
Portuguese (models CTO-G)	41A4986	*
Romanian (models CTO-G)	41A4987	*
Russian/Cy (models CTO-G)	41A4988	*

<b>9642 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
Serbian/Cyrillic (models CTO-G)	41A4989	*
Slovak (models CTO-G)	41A4990	*
Spanish (models CTO-G)	41A4991	*
Swedish/Finn (models CTO-G)	41A4992	*
Swiss F/G (models CTO-G)	41A4993	*
Thailand (models CTO-A)	41A4994	*
Turkish 440 (models CTO-G)	41A4995	*
Turkish 179 (models CTO-G)	41A4996	*
UK English (models CTO-G)	41A4997	*
US Euro (models CTO-G)	41A4998	*
Slovenian (models CTO-G)	41A4999	*

<b>9642 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A5248	*
Arabic (models CTO-G)	41A5249	*
Arabic/French (models CTO-G)	41A5250	*
Belgian/French (models CTO-G)	41A5251	*
Belgian/UK (models CTO-G)	41A5252	*
Brazilian (models CTO-L)	41A5253	*
Bulgarian (models CTO-G)	41A5254	*
Chinese/US (models CTO-B CTO-H)	41A5255	*
Czech (models CTO-G)	41A5256	*
Danish (models CTO-G)	41A5257	*
Dutch (models CTO-G)	41A5258	*
French (models CTO-G)	41A5259	*
French Canadian 445 (models CTO-U)	41A5260	*
French Canadian 58 (models CTO-U)	41A5261	*
German (models CTO-G)	41A5262	*
Greek (models CTO-G)	41A5263	*
Hebrew (models CTO-G)	41A5265	*
Hungarian (models CTO-G)	41A5266	*
Iceland (models CTO-G)	41A5267	*
Italian (models CTO-G)	41A5268	*
Japanese (models CTO-J)	41A5269	*
Korean (models CTO-K)	41A5270	*
LA Spanish (models CTO-L)	41A5271	*
Norwegian (models CTO-G)	41A5272	*
Polish (models CTO-G)	41A5273	*
Portuguese (models CTO-G)	41A5274	*
Romanian 446 (models CTO-G)	41A5275	*
Romanian 96 (models CTO-G)	41A5276	*

<b>9642 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
Russian/Cy (models CTO-G)	41A5277	*
Serbian/Cyrillic (models CTO-G)	41A5278	*
Slovak (models CTO-G)	41A5279	*
Spanish (models CTO-G)	41A5280	*
Swedish/Finn (models CTO-G)	41A5281	*
Swiss F/G (models CTO-G)	41A5282	*
Thailand (models CTO-A)	41A5283	*
Turkish 440 (models CTO-G)	41A5284	*
Turkish 179 (models CTO-G)	41A5285	*
UK English (models CTO-G)	41A5286	*
US Euro (models CTO-G)	41A5287	*
Slovenian (models CTO-G)	41A5288	*

<b>9642 Lenovo Keyboard (Wireless, Enhanced)</b>	<b>FRU#</b>	<b>CRU</b>
US English/Chinese/US (models CTO-U CTO-G)	41A5219	*
Belgian/French (models CTO-U CTO-G)	41A5220	*
Belgian/UK (models CTO-G)	41A5221	*
Chinese/US (models CTO-B CTO-H)	41A5222	*
Czech (models CTO-G)	41A5223	*
Danish (models CTO-G)	41A5224	*
Dutch (models CTO-G)	41A5225	*
French (models CTO-G)	41A5226	*
French Canadian (models CTO-U)	41A5227	*
French Canadian (models CTO-U)	41A5228	*
German (models CTO-G)	41A5229	*
Greek (models CTO-G)	41A5230	*
Hungarian (models CTO-G)	41A5232	*
Iceland (models CTO-G)	41A5233	*
Italy (models CTO-G)	41A5234	*
Japanese (models CTO-J)	41A5235	*
Norwegian (models CTO-G)	41A5236	*
Polish (models CTO-G)	41A5237	*
Portuguese (models CTO-G)	41A5238	*
Slovak (models CTO-G)	41A5239	*
Spanish (models CTO-G)	41A5240	*
Swedish/Finn (models CTO-G)	41A5241	*
Swiss (models CTO-G)	41A5242	*
UK English (models CTO-G)	41A5243	*
US Euro (models CTO-G)	41A5244	*
Slovenian (models CTO-G)	41A5245	*

9642 Keyboard (PS2 Preferred Pro)	FRU#	CRU
US English (models CTO-U CTO-G)	41A5039	*
Arabic (models CTO-G)	41A5040	*
Arabic/French (models CTO-G)	41A5041	*
Belgian/French (models CTO-G)	41A5042	*
Belgian/UK (models CTO-G)	41A5043	*
Brazil/Portuguese (models CTO-L)	41A5044	*
Bulgarian (models CTO-G)	41A5045	*
Chinese/US (models CTO-B CTO-H)	41A5046	*
Czech (models CTO-G)	41A5047	*
Danish (models CTO-G)	41A5048	*
Dutch (models CTO-G)	41A5049	*
French (models CTO-G)	41A5050	*
French Canadian 445 (models CTO-U)	41A5051	*
French Canadian 58 (models CTO-U)	41A5052	*
German (models CTO-G)	41A5053	*
Greek (models CTO-G)	41A5054	*
Greek/US (models CTO-G)	41A5080	*
Hebrew (models CTO-G)	41A5055	*
Hungarian (models CTO-G)	41A5056	*
Iceland (models CTO-G)	41A5057	*
Italian (models CTO-G)	41A5058	*
Japanese (models CTO-J)	41A5059	*
Korean (models CTO-K)	41A5060	*
LA Spanish (models CTO-L)	41A5061	*
Norwegian (models CTO-G)	41A5062	*
Polish (models CTO-G)	41A5063	*
Portuguese (models CTO-G)	41A5064	*
Romanian (models CTO-G)	41A5065	*
Russian/Cyrilic (models CTO-G)	41A5066	*
Serbian/Cyrilic (models CTO-G)	41A5067	*
Slovak (models CTO-G)	41A5068	*
Spanish (models CTO-G)	41A5069	*
Swedish/Finn (models CTO-G)	41A5070	*
Swiss F/G (models CTO-G)	41A5071	*
Thailand (models CTO-A)	41A5072	*
Turkish (models CTO-G)	41A5073	*
Turkish (models CTO-A)	41A5074	*
UK English (models CTO-G)	41A5075	*
US Euro (models CTO-G)	41A5076	*
Slovenian (models CTO-G)	41A5077	*

9642 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models A1B A1H B1B B1H B2B B2H G1A G1T G1V G1K G2J G3J G4J Q1V D1A D1T D1K D2K A2A A2T A2K A3B A3H B3A B3T B3B B3H B4K B4V B5B B5H H1B H1H H2A H2T H2K H2V Q2J Q3J Q4J Q5J Q6J Q7J)	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models A1B A1H B1B B1H B2B B2H G1A G1T G1V G1K G2J G3J G4J Q1V D1A D1T D1K D2K A2A A2T A2K A3B A3H B3A B3T B3B B3H B4K B4V B5B B5H H1B H1H H2A H2T H2K H2V Q2J Q3J Q4J Q5J Q6J Q7J)	41U3030	1
Mouse, ScrollPoint Optical (800DPI, USB) (models CTO)	41U3019	1

9642 Adapters and miscellaneous FRUs	FRU#	CRU
Wireless mouse (models CTO)	41A5247	*
USB Transceiver for wireless kybd/mouse (models CTO)	41A5246	*
IEEE 1394 Adapter - Firewire (models A1A A1T)	41D2781	*
Soft Modem V.90/V.44 (models CTO)	29R9729	*
Speakers, 2-piece) Lenovo Logo (models CTO)	41A5331	*
Speakers, 2-piece) Lenovo Logo (models CTO)	41A5334	*
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models CTO)	89P8571	*
Thermal Grease Syringe (models CTO)	91P8835	*
Casper (DVI-I card, full height) (models CTO)	39J9334	*

9642 Power Cords	FRU#	CRU
Power cord - US (models CTO-U CTO-F CTO-S CTO-D CTO-L CTO-A CTO-T G1A G1T D1A A2A B3A H2A D1T A2T B3T H2T)	39M5080	*
Power cord - China (models CTO-C)	39M5205	*
Power cord - Japan (models CTO-J CTO-E G2J G3J G4J Q2J Q3J Q4J Q5J Q6J Q7J)	24R2633	*
Power cord - Brazil (models CTO-P)	39M5232	*
Power cord - LA High Volt (APU) (models CTO-L CTO-Y)	39M5067	*
Power cord - Australia/New Zealand (models CTO-M)	39M5102	*
Power cord - Korea (models ADD CTO-K CTO-R G1K D1K D2K A2K B4K H2K)	39M5212	*
Power cord - Hong Kong (models A1B A1H B1B B1H B2B B2H A3B B3B B5B H1B A3H B3H B5H H1H)	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models CTO-G CTO-A G1A D1A A2A B3A H2A)	39M5150	*
Power cord - Taiwan (models CTO-V G1V Q1V B4V H2V)	39M5246	*
Power cord - Italy (models CTO-S CTO-Y CTO-L CTO-G)	39M5164	*
Power cord - G models (models CTO-A G1A D1A A2A B3A H2A)	39M5122	*
Power cord - Denmark (models CTO-G)	39M5129	*
Power cord - Switzerland (models CTO-G)	39M5157	*
Power cord - Israel (models CTO-G)	39M5171	*
Power cord - South Africa (models CTO-G G1A D1A A2A B3A H2A)	39M5143	*
Power cord - India (models CTO-Q)	41R3175	*

9642 Windows XP Home Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models B2H CTO)	42Y5058	1
FR/CF (models CTO)	42Y3598	1
GR (models CTO)	42Y3599	1
IT (models CTO)	42Y3601	1
BR (models CTO)	42Y3602	1
SP/LA (models CTO)	42Y3600	1
DK (models CTO)	42Y3604	1
NL (models CTO)	42Y3804	1
AE (models CTO)	42Y3808	1
SV (models CTO)	42Y3603	1
HE (models CTO)	42Y3805	1
FI (models CTO)	42Y3802	1
NO (models CTO)	42Y3803	1
PL (models CTO)	42Y3806	1
PO (models CTO)	42Y3812	1
RU (models CTO)	42Y3809	1
RE (models CTO)	42Y3801	1
HU (models CTO)	42Y3811	1
CZ (models CTO)	42Y3807	1
TR (models CTO)	42Y3810	1
GK (models CTO)	42Y3813	1
Japanese (models)	41W7796	1
Simplified Chinese (models)	41W7778	1
Taiwan-TC (models CTO)	41W7784	1
Hong Kong-TC (models B2B CTO)	41W7790	1
Korean (models CTO)	41W7773	1

9642 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models A1H B1H CTO G1A A3H B5H)	42Y3549	1
FR/CF (models CTO)	42Y3550	1
GR (models CTO)	42Y3551	1
IT (models CTO)	42Y3553	1
BR (models CTO)	42Y3554	1
SP/LA (models CTO)	42Y3552	1
DK (models CTO)	42Y3556	1
NL (models CTO)	42Y3720	1
AE (models CTO)	42Y3724	1
SV (models CTO)	42Y3555	1
HE (models CTO)	42Y3721	1
FI (models CTO)	42Y3718	1
NO (models CTO)	42Y3719	1

9642 Windows XP Pro Recovery Discs	FRU#	CRU Tier
PL (models CTO)	42Y3722	1
PO (models CTO)	42Y3728	1
RU (models CTO)	42Y3725	1
RE (models CTO)	42Y3717	1
HU (models CTO)	42Y3727	1
CZ (models CTO)	42Y3723	1
TR (models CTO)	42Y3726	1
GK (models CTO)	42Y3729	1
SL (models CTO)	42Y3730	1
Japanese (models G2J G3J G4J Q6J Q7J Q1J B4J)	41W7767	1
Taiwan-TC (models G1V CTO)	41W7757	1
Hong Kong - TC (models A1B B1B CTO A3B B5B)	41W7762	1
Korea (models G1K CTO D2K B4K)	41W7746	1
Multilingual 1 -- EN NL FR GR IT (models CTO)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models CTO)	42Y3879	1

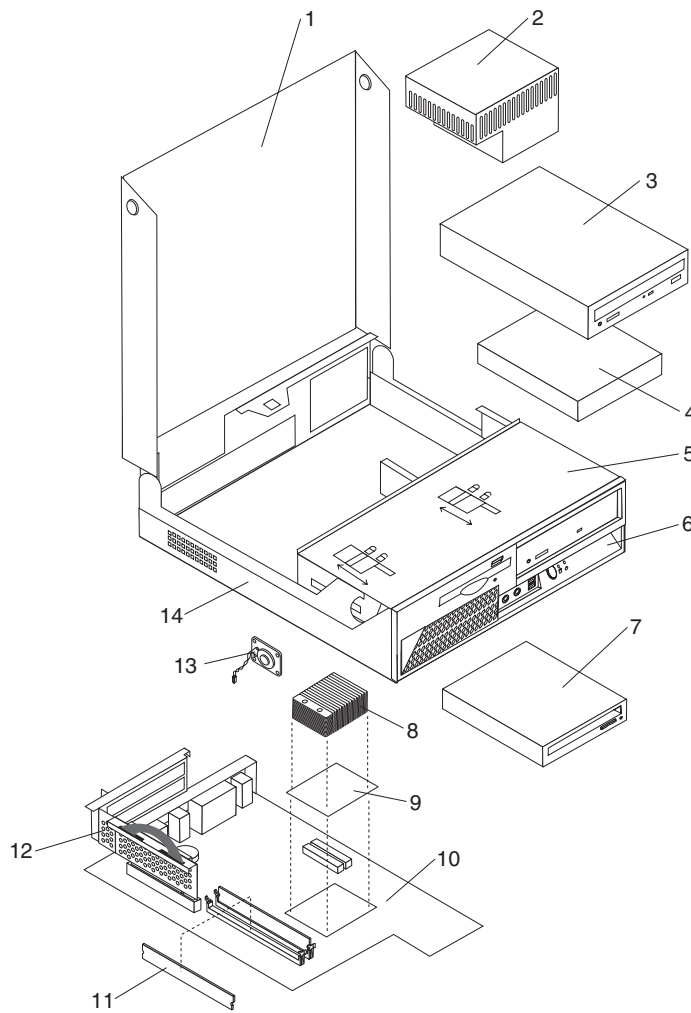
9642 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models CTO D1A A2A B3A B3H H1H H2A)	87H4420	1
FR/CF (models CTO)	87H4421	1
GR (models CTO)	87H4422	1
SP/LA (models CTO)	87H4423	1
BR (models CTO)	87H4424	1
IT (models CTO)	87H4425	1
JP (models CTO)	87H4426	1
NO (models CTO)	87H4427	1
SV (models CTO)	87H4428	1
DK (models CTO)	87H4429	1
NL (models CTO)	87H4430	1
CZ (models CTO)	87H4431	1
FI (models CTO)	87H4432	1
PL (models CTO)	87H4433	1
RU (models CTO)	87H4434	1
TR (models CTO)	87H4435	1
HU (models CTO)	87H4436	1
GK (models CTO)	87H4437	1
PO (models CTO)	87H4438	1
CS (models CTO)	87H4439	1
TW (models CTO B3B H1B)	87H4440	1
HK (models CTO B3B H1B)	87H4441	1
KR (models CTO D1K A2K H2K)	87H4442	1
SL (models CTO)	87H4443	1



9642 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
RE (models CTO)	43C1306	1

9642 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models CTO A3H B5H)	87H4476	1
FR/CF (models CTO)	87H4477	1
GR (models CTO)	87H4478	1
SP/LA (models CTO)	87H4479	1
BR (models CTO)	87H4480	1
IT (models CTO)	87H4481	1
JP (models Q1J B4J)	87H4482	1
NO (models CTO)	87H4483	1
SV (models CTO)	87H4484	1
DK (models CTO)	87H4485	1
NL (models CTO)	87H4486	1
CZ (models CTO)	87H4487	1
FI (models CTO)	87H4488	1
PL (models CTO)	87H4489	1
RU (models CTO)	87H4490	1
TR (models CTO)	87H4491	1
HU (models CTO)	87H4492	1
GK (models CTO)	87H4493	1
PO (models CTO)	87H4494	1
CS (models)	87H4495	1
TW (models CTO A3B B5B)	87H4496	1
HK (models CTO A3B B5B)	87H4497	1
KR (models D2K B4K)	87H4498	1
SL (models CTO)	87H4499	1
RE (models CTO)	43C1308	1

# Machine Type 9643



Item #	9643 FRUs	FRU#	CRU Tier
1	Cover (all models)	41R6220	1
2	Power Supply - (225 Watt) (models CTO)	41A9629	2
2	Power Supply - (225 Watt) (Japan) (models)	41A9632	2
2	Power Supply - (225 Watt) (RObust) (models)	41A9635	2
3	DVD-ROM 16X/48X - Black (models CTO)	41N3325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA No Software / No Royalty for VISTA (models CTO)	42Y9353	1
3	DVD Recorder Rambo 8 - SATA vista and nonvista (models CTO)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models)	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models)	40Y9035	1
4	Hard Disk Drive 250GB 7200 rpm Serial ATA (models)	40Y9036	1
4	Hard Disk Drive 500GB 7200 rpm Serial ATA (models)	41X5582	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models)	40Y9109	1

Item #	9643 FRUs	FRU#	CRU Tier
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models CTO)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO)	41X2413	N
9	Pentium D 930 Processor 3.2 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO)	41T1717	N
9	Pentium D 935 Processor 3.2 GHz 800 FSB 2MBx2 L2 (models CTO)	41X8050	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models CTO)	41X7776	N
9	Pentium D 805 Processor 2.66GHz 533MHz FSB 2Mx1 L2 (models CTO)	41X7626	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models CTO)	41T1704	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models CTO)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models CTO)	41T1713	N
9	Pentium 4 651 Processor 3.4 GHz 800 FSB 2MB L2 (models CTO)	41T1714	N
9	Pentium 4 661 Processor 3.6 GHz 800MHz FSB 2MB L2 (models CTO)	41T1715	N
9	Pentium 4 630 Processor 3.0 GHz 800 FSB 2MB L2 (models CTO)	41T1709	N
9	Pentium 4 524 Processor 3.06GHz 533MHz FSB 1M L2 (models CTO)	41T4104	N
9	Pentium 4 531 Processor 3.0GHz 800MHz FSB 1M L2 (models CTO)	41T1701	N
9	Pentium 4 541 Processor 3.2GHz 800MHz FSB 1M L2 (models CTO)	41T1702	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models CTO)	43C1968	N
9	Pentium E2140 800/1800MHZ-1M, LGA, EM64T (models CTO)	43C1967	N
9	Celeron D 331 Processor 2.66GHz 533MHz FSB 256KB L2 (models CTO)	41T1694	N
9	Celeron D 336 Processor 2.80GHz 533 FSB 256KB L2 (models CTO)	41T1695	N
9	Celeron D 341 Processor 2.93GHz 533 FSB 256KB L2 (models CTO)	41T1696	N
9	Celeron D 346 Processor 3.06GHz 533 FSB 256KB L2 (models CTO)	41T1697	N
9	Celeron D 347 Processor 3.06GHz 533 FSB 512KB L2 (models CTO)	42Y8530	N
9	Celeron D 351 Processor 3.2 GHz 533 FSB 256KB L2 (models CTO)	41T1698	N
9	Celeron D 352 Processor 3.2GHz 533MHz FSB 512KB L2 B1-Value (84W) (models CTO)	41T4966	N
9	Celeron D 356 Processor 3.33 GHz 533 FSB 512KB L2 (models CTO)	41T4968	N
9	Celeron 440 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C1965	N
9	Celeron 430 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C1964	N
9	Celeron 420 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C3835	N
9	CONROE E6300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models CTO)	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models CTO)	43C2056	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models CTO)	41X2495	N
9	Core 2 Duo E6320 Processor 1.86GHz 1066MHz FSB 4M B2 (models CTO)	43C3829	N
9	CONROE E6400 1066/2130MHZ-2M L2 LGA EM64T B2-Value (models CTO)	41X2496	N
9	Core 2 Duo E6420 Processor 2.13GHz 1066MHz FSB 4M B2 (models CTO)	43C3831	N
9	CONROE E6600 1066/2400MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5743	N
9	CONROE E6700 1066/2670MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5744	N
10	System Board (models CTO)	43C3480	N
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models)	41X4251	1

Item #	9643 FRUs	FRU#	CRU Tier
11	1 GB PC2-4200 (533MHz) DDR2 SDRAM (models)	41X4252	1
11	2 B PC2-4200 (533MHz) DDR2 SDRAM (models)	41X4253	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models)	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models)	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9643 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9643 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models)	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models)	41U3030	1
Mouse, ScrollPoint Optical (800DPI, USB) (models)	41U3019	1

9643 Adapters and miscellaneous FRUs	FRU#	CRU
Wireless mouse (models)	41A5247	*
USB Transceiver for wireless kybd/mouse (models)	41A5246	*
IEEE 1394 Adapter - Firewire (models)	41D2781	*
Soft Modem V.90/V.44 (models)	29R9729	*
Speakers, 2-piece) Lenovo Logo (models)	41A5331	*
Speakers, 2-piece) Lenovo Logo (models)	41A5334	*
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models)	89P8571	*
Thermal Grease Syringe (models)	91P8835	*
Casper (DVI-I card, full height) (models)	39J9334	*

9643 Power Cords	FRU#	CRU
Power cord - US (models CTO)	39M5080	*
Power cord - Brazil (models CTO)	39M5232	*
Power cord - LA High Volt (APU) (models CTO)	39M5067	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models CTO)	39M5150	*
Power cord - Italy (models CTO)	39M5164	*
Power cord - Denmark (models CTO)	39M5129	*
Power cord - Switzerland (models CTO)	39M5157	*
Power cord - Israel (models CTO)	39M5171	*
Power cord - South Africa (models CTO)	39M5143	*

9643 Windows XP Home Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models B2H CTO)	42Y5058	1
FR/CF (models CTO)	42Y3598	1
GR (models CTO)	42Y3599	1
IT (models CTO)	42Y3601	1
BR (models CTO)	42Y3602	1
SP/LA (models CTO)	42Y3600	1
DK (models CTO)	42Y3604	1
NL (models CTO)	42Y3804	1
AE (models CTO)	42Y3808	1
SV (models CTO)	42Y3603	1
HE (models CTO)	42Y3805	1
FI (models CTO)	42Y3802	1
NO (models CTO)	42Y3803	1
PL (models CTO)	42Y3806	1
PO (models CTO)	42Y3812	1
RU (models CTO)	42Y3809	1
RE (models CTO)	42Y3801	1
HU (models CTO)	42Y3811	1
CZ (models CTO)	42Y3807	1
TR (models CTO)	42Y3810	1
GK (models CTO)	42Y3813	1

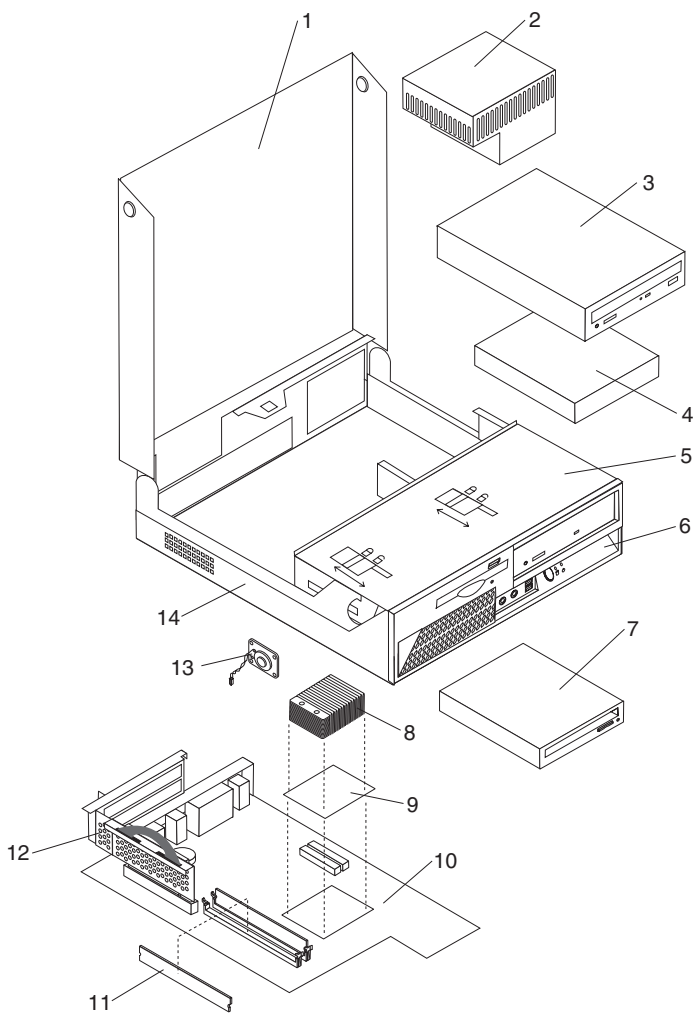
9643 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models A1H B1H CTO G1A)	42Y3549	1
FR/CF (models CTO)	42Y3550	1
GR (models CTO)	42Y3551	1
IT (models CTO)	42Y3553	1
BR (models CTO)	42Y3554	1
SP/LA (models CTO)	42Y3552	1
DK (models CTO)	42Y3556	1

9643 Windows XP Pro Recovery Discs	FRU#	CRU Tier
NL (models CTO)	42Y3720	1
AE (models CTO)	42Y3724	1
SV (models CTO)	42Y3555	1
HE (models CTO)	42Y3721	1
FI (models CTO)	42Y3718	1
NO (models CTO)	42Y3719	1
PL (models CTO)	42Y3722	1
PO (models CTO)	42Y3728	1
RU (models CTO)	42Y3725	1
RE (models CTO)	42Y3717	1
HU (models CTO)	42Y3727	1
CZ (models CTO)	42Y3723	1
TR (models CTO)	42Y3726	1
GK (models CTO)	42Y3729	1
SL (models CTO)	42Y3730	1
Multilingual 1 -- EN NL FR GR IT (models CTO)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models CTO)	42Y3879	1

9643 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models CTO)	87H4420	1
FR/CF (models CTO)	87H4421	1
GR (models CTO)	87H4422	1
SP/LA (models CTO)	87H4423	1
BR (models CTO)	87H4424	1
IT (models CTO)	87H4425	1
NO (models CTO)	87H4427	1
SV (models CTO)	87H4428	1
DK (models CTO)	87H4429	1
NL (models CTO)	87H4430	1
CZ (models CTO)	87H4431	1
FI (models CTO)	87H4432	1
PL (models CTO)	87H4433	1
RU (models CTO)	87H4434	1
TR (models CTO)	87H4435	1
HU (models CTO)	87H4436	1
GK (models CTO)	87H4437	1
PO (models CTO)	87H4438	1
SL (models CTO)	87H4443	1
RE (models CTO)	43C1306	1

9643 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models CTO)	87H4476	1
FR/CF (models CTO)	87H4477	1
GR (models CTO)	87H4478	1
SP/LA (models CTO)	87H4479	1
BR (models CTO)	87H4480	1
IT (models CTO)	87H4481	1
NO (models CTO)	87H4483	1
SV (models CTO)	87H4484	1
DK (models CTO)	87H4485	1
NL (models CTO)	87H4486	1
CZ (models CTO)	87H4487	1
FI (models CTO)	87H4488	1
PL (models CTO)	87H4489	1
RU (models CTO)	87H4490	1
TR (models CTO)	87H4491	1
HU (models CTO)	87H4492	1
GK (models CTO)	87H4493	1
PO (models CTO)	87H4494	1
SL (models CTO)	87H4499	1
RE (models CTO)	43C1308	1

# Machine Type 9644



Item #	9644 FRUs	FRU#	CRU Tier
1	Cover (models)	41R6220	1
2	Power Supply - (225 Watt) (models A1A A1T B1G D1G F1G G1G E3G H1A H1T F2G J1G E4G J2J J4J J6G J7G )	41A9629	2
2	Power Supply - (225 Watt) (Japan) (models CTO A2J A3J A4J J5J J8J)	41A9632	2
2	Power Supply - (225 Watt) (RObust) (models CTO H1Q G2V J3Q)	41A9635	2
3	DVD-ROM 16X/48X - Black (models A1A A1T B1G D1G G1G A2J A3J G2V J2J J3Q J8J J6G)	41N3325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA (models H1A H1Q H1T F2G J1G E4J F1G E3G J7G )	42Y9353	1
3	DVD Recorder Rambo 8 - SATA vista and nonvista (models CTO J5J)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models A1A A1T B1G D1G G1G E3G A2J A3J A4J H1A H1Q H1T J1G E4G J3Q J2J J4J J5J J8J J6G)	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models F1G F2G G2V J7J)	40Y9035	1
4	Hard Disk Drive 250GB 7200 rpm Serial ATA (models CTO)	40Y9036	1
4	Hard Disk Drive 500GB 7200 rpm Serial ATA (models CTO)	41X5582	1
5	Rotating bay assembly (models)		2



Item #	9644 FRUs	FRU#	CRU Tier
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models A1A A1T A2J A3J A4J H1A H1Q H1T G2V J2J J4J J5J J8J)	40Y9109	1
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models A1A A1T A2J A3J A4J H1A H1Q H1T G2V J2J J4J J5J J8J)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models CTO J1G)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO J2J J4J J3Q)	41X2413	N
9	Pentium D 930 Processor 3.2 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO)	41T1717	N
9	Pentium D 935 Processor 3.2 GHz 800 FSB 2MBx2 L2 (models CTO E3G A4J E4G)	41X8050	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models F1G F2G)	41X7776	N
9	Pentium D 805 Processor 2.66GHz 533MHz FSB 2Mx1 L2 (models CTO)	41X7626	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models CTO H1A H1Q H1T)	41T1704	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models D1G A3J)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models CTO A1A A1T)	41T1713	N
9	Pentium 4 651 Processor 3.4 GHz 800 FSB 2MB L2 (models CTO)	41T1714	N
9	Pentium 4 661 Processor 3.6 GHz 800MHz FSB 2MB L2 (models CTO)	41T1715	N
9	Pentium 4 630 Processor 3.0 GHz 800 FSB 2MB L2 (models CTO)	41T1709	N
9	Pentium 4 524 Processor 3.06GHz 533MHz FSB 1M L2 (models CTO)	41T4104	N
9	Pentium 4 531 Processor 3.0GHz 800MHz FSB 1M L2 (models CTO)	41T1701	N
9	Pentium 4 541 Processor 3.0GHz 800MHz FSB 1M L2 (models A1A A1T)	41T1702	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models CTO)	43C1968	N
9	Pentium E2140 800/1800MHZ-1M, LGA, EM64T (models CTO J5J J8J J7J)	43C1967	N
9	Celeron D 331 Processor 2.66GHz 533MHz FSB 256KB L2 (models CTO)	41T1694	N
9	Celeron D 336 Processor 2.80GHz 533 FSB 256KB L2 (models CTO)	41T1695	N
9	Celeron D 341 Processor 2.93GHz 533 FSB 256KB L2 (models CTO)	41T1696	N
9	Celeron D 346 Processor 3.06GHz 533 FSB 256KB L2 (models CTO)	41T1697	N
9	Celeron D 351 Processor 3.2 GHz 533 FSB 256KB L2 (models CTO)	41T1698	N
9	Celeron D 352 Processor 3.2GHz 533MHz FSB 512KB L2 B1-Value (84W) (models CTO A2J)	41T4966	N
9	Celeron D 356 Processor 3.33 GHz 533 FSB 512KB L2 (models B1G)	41T4968	N
9	Celeron 440 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C1965	N
9	Celeron 430 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO)	43C1964	N
9	Celeron 420 Processor 800/2000MHZ-512K,LGA,EM64T A1 (models CTO J6G)	43C3835	N
9	CONROE E6300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models CTO)	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models CTO)	43C2056	N
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models G1G G2V)	41X2495	N
9	Core 2 Duo E6320 Processor 1.86GHz 1066MHz FSB 4M B2 (models CTO)	43C3829	N
9	CONROE E6400 1066/2130MHZ-2M L2 LGA EM64T B2-Value (models CTO)	41X2496	N
9	Core 2 Duo E6420 Processor 2.13GHz 1066MHz FSB 4M B2 (models CTO)	43C3831	N

Item #	9644 FRUs	FRU#	CRU Tier
9	CONROE E6600 1066/2400MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5743	N
9	CONROE E6700 1066/2670MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5744	N
10	System Board (models A1A A1T B1G D1G F1G G1G E3G A2J A3J A4J H1A H1Q H1T F2G G2V J1G E4G J2J J4J J3Q J5J J8J J6G J7G)	43C3480	2
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4251	1
11	1 GB PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4252	1
11	2 B PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4253	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models A1A A1T B1G D1G A2J A3J H1A H1Q H1TG2V J2J J4J J5J J8J )	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models F1G G1G E3G A4J F2G J1G E4G J3J J6G J7G )	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models CTO)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1
14	Chassis (all models)	41A7717	2

The FRUs listed in the following table are not illustrated.

9644 FRUs	FRU#	CRU Tier
Cable SATA 18" (all models)	26K1186	1
Cable SATA Device (all models)	39K5026	1
C2 Cable (Squall) (models)	39K5022	1
Cable pwr/LED (all models)	26K1242	1
Cable Diskette Drive (all models)	26K1248	1
Fan assembly (all models)	26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)	32P4743	1
Retention module tool less heat sink (all models)	26K1281	2
Shield, system board (all models)	41R4826	2
Latch bar on cover (all models)	41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)	26K1234	2

9644 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models A1A B1G D1G F1G G1G E3G F2G J1G E4G H1A H1Q J3Q J6G J7G)	41A5289	1
Arabic (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5290	1
Arabic/French (models CTO)	41A5291	1
Belgian/French (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5292	1
Belgian/UK (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5293	1
Brazilian (models CTO-L)	41A5294	1
Bulgarian (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5295	1
Chinese/US (models CTO-B CTO-H)	41A5296	1
Czech (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5297	1
Danish (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5298	1

<b>9644 Lenovo Keyboard (Preferred Pro Fullsize)</b>	<b>FRU#</b>	<b>CRU Tier</b>
Dutch (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5299	1
French (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5300	1
French Canadian 445 (models CTO-U)	41A5301	1
French Canadian 58 (models CTO-U)	41A5302	1
German (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5303	1
Greek (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5304	1
Greek/US (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5305	1
Hebrew (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5306	1
Hungarian (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5307	1
Iceland (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5308	1
Italian 141 (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5309	1
Japanese (models CTO-J A2J A3J A4J J2J J4J J5J J8J)	41A5310	1
Korean (models CTO-K )	41A5311	1
LA Spanish (models CTO-L)	41A5312	1
Norwegian (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5313	1
Polish (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5314	1
Portuguese (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5315	1
Romanian 096 (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5317	1
Romanian 446 (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5316	1
Russian/Cyrillic (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5318	1
Serbian/Cyrillic (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5319	1
Slovak (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5320	1
Spanish (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5321	1
Swedish/Finn (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5322	1
Swiss (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5323	1
Thailand (models A1T H1T)	41A5324	1
Turkish 440 (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5325	1
Turkish 179 (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5326	1
UK English (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5327	1
US Euro (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5328	1
Slovenian (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	41A5329	1

<b>9644 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A4961	*
Arabic (models CTO-G)	41A4962	*
Arabic/French (models CTO-G)	41A4963	*
Belgian/French (models CTO-G)	41A4964	*
Belgian/UK (models CTO-G)	41A4965	*
Brazilian (models CTO-L)	41A4966	*
Bulgarian (models CTO-G)	41A4967	*
Hong Kong/Taiwan (models CTO-B CTO-H)	41A4968	*

<b>9644 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
Czech (models CTO-G)	41A4969	*
Danish (models CTO-G)	41A4970	*
Dutch (models CTO-G)	41A4971	*
French (models CTO-G)	41A4972	*
French Canadian 445 (models CTO-U)	41A4973	*
French Canadian 58 (models CTO-U)	41A4974	*
German (models CTO-G)	41A4975	*
Greek (models CTO-G)	41A4976	*
Hebrew (models CTO-G)	41A4977	*
Hungarian (models CTO-G)	41A4978	*
Iceland (models CTO-G)	41A4979	*
Italian (models CTO-G)	41A4980	*
Japanese (models CTO-J)	41A4981	*
Korean (models CTO-K)	41A4982	*
LA Spanish (models CTO-L)	41A4983	*
Norwegian (models CTO-G)	41A4984	*
Polish (models CTO-G)	41A4985	*
Portuguese (models CTO-G)	41A4986	*
Romanian (models CTO-G)	41A4987	*
Russian/Cy (models CTO-G)	41A4988	*
Serbian/Cyrillic (models CTO-G)	41A4989	*
Slovak (models CTO-G)	41A4990	*
Spanish (models CTO-G)	41A4991	*
Swedish/Finn (models CTO-G)	41A4992	*
Swiss F/G (models CTO-G)	41A4993	*
Thailand (models CTO-A)	41A4994	*
Turkish 440 (models CTO-G)	41A4995	*
Turkish 179 (models CTO-G)	41A4996	*
UK English (models CTO-G)	41A4997	*
US Euro (models CTO-G)	41A4998	*
Slovenian (models CTO-G)	41A4999	*

<b>9644 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A5248	*
Arabic (models CTO-G)	41A5249	*
Arabic/French (models CTO-G)	41A5250	*
Belgian/French (models CTO-G)	41A5251	*
Belgian/UK (models CTO-G)	41A5252	*
Brazilian (models CTO-L)	41A5253	*
Bulgarian (models CTO-G)	41A5254	*
Chinese/US (models CTO-B CTO-H)	41A5255	*

<b>9644 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
Czech (models CTO-G)	41A5256	*
Danish (models CTO-G)	41A5257	*
Dutch (models CTO-G)	41A5258	*
French (models CTO-G)	41A5259	*
French Canadian 445 (models CTO-U)	41A5260	*
French Canadian 58 (models CTO-U)	41A5261	*
German (models CTO-G)	41A5262	*
Greek (models CTO-G)	41A5263	*
Hebrew (models CTO-G)	41A5265	*
Hungarian (models CTO-G)	41A5266	*
Iceland (models CTO-G)	41A5267	*
Italian (models CTO-G)	41A5268	*
Japanese (models CTO-J)	41A5269	*
Korean (models CTO-K)	41A5270	*
LA Spanish (models CTO-L)	41A5271	*
Norwegian (models CTO-G)	41A5272	*
Polish (models CTO-G)	41A5273	*
Portuguese (models CTO-G)	41A5274	*
Romanian 446 (models CTO-G)	41A5275	*
Romanian 96 (models CTO-G)	41A5276	*
Russian/Cy (models CTO-G)	41A5277	*
Serbian/Cyrillic (models CTO-G)	41A5278	*
Slovak (models CTO-G)	41A5279	*
Spanish (models CTO-G)	41A5280	*
Swedish/Finn (models CTO-G)	41A5281	*
Swiss F/G (models CTO-G)	41A5282	*
Thailand (models CTO-A)	41A5283	*
Turkish 440 (models CTO-G)	41A5284	*
Turkish 179 (models CTO-G)	41A5285	*
UK English (models CTO-G)	41A5286	*
US Euro (models CTO-G)	41A5287	*
Slovenian (models CTO-G)	41A5288	*

<b>9644 Lenovo Keyboard (Wireless, Enhanced)</b>	<b>FRU#</b>	<b>CRU</b>
US English/Chinese/US (models CTO-U CTO-G)	41A5219	*
Belgian/French (models CTO-U CTO-G)	41A5220	*
Belgian/UK (models CTO-G)	41A5221	*
Chinese/US (models CTO-B CTO-H)	41A5222	*
Czech (models CTO-G)	41A5223	*
Danish (models CTO-G)	41A5224	*
Dutch (models CTO-G)	41A5225	*

<b>9644 Lenovo Keyboard (Wireless, Enhanced)</b>	<b>FRU#</b>	<b>CRU</b>
French (models CTO-G)	41A5226	*
French Canadian (models CTO-U)	41A5227	*
French Canadian (models CTO-U)	41A5228	*
German (models CTO-G)	41A5229	*
Greek (models CTO-G)	41A5230	*
Greek/US (models CTO-G)	41A5231	*
Hungarian (models CTO-G)	41A5232	*
Iceland (models CTO-G)	41A5233	*
Italy (models CTO-G)	41A5234	*
Japanese (models CTO-J)	41A5235	*
Norwegian (models CTO-G)	41A5236	*
Polish (models CTO-G)	41A5237	*
Portuguese (models CTO-G)	41A5238	*
Slovak (models CTO-G)	41A5239	*
Spanish (models CTO-G)	41A5240	*
Swedish/Finn (models CTO-G)	41A5241	*
Swiss (models CTO-G)	41A5242	*
UK English (models CTO-G)	41A5243	*
US Euro (models CTO-G)	41A5244	*
Slovenian (models CTO-G)	41A5245	*

<b>9644 Keyboard (PS2 Preferred Pro)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A5039	*
Arabic (models CTO-G)	41A5040	*
Arabic/French (models CTO-G)	41A5041	*
Belgian/French (models CTO-G)	41A5042	*
Belgian/UK (models CTO-G)	41A5043	*
Brazil/Portuguese (models CTO-L)	41A5044	*
Bulgarian (models CTO-G)	41A5045	*
Chinese/US (models CTO-B CTO-H)	41A5046	*
Czech (models CTO-G)	41A5047	*
Danish (models CTO-G)	41A5048	*
Dutch (models CTO-G)	41A5049	*
French (models CTO-G)	41A5050	*
French Canadian 445 (models CTO-U)	41A5051	*
French Canadian 58 (models CTO-U)	41A5052	*
German (models CTO-G)	41A5053	*
Greek (models CTO-G)	41A5054	*
Greek/US (models CTO-G)	41A5080	*
Hebrew (models CTO-G)	41A5055	*
Hungarian (models CTO-G)	41A5056	*

9644 Keyboard (PS2 Preferred Pro)	FRU#	CRU
Iceland (models CTO-G)	41A5057	*
Italian (models CTO-G)	41A5058	*
Japanese (models CTO-J)	41A5059	*
Korean (models CTO-K)	41A5060	*
LA Spanish (models CTO-L)	41A5061	*
Norwegian (models CTO-G)	41A5062	*
Polish (models CTO-G)	41A5063	*
Portuguese (models CTO-G)	41A5064	*
Romanian (models CTO-G)	41A5065	*
Russian/Cyrilic (models CTO-G)	41A5066	*
Serbian/Cyrilic (models CTO-G)	41A5067	*
Slovak (models CTO-G)	41A5068	*
Spanish (models CTO-G)	41A5069	*
Swedish/Finn (models CTO-G)	41A5070	*
Swiss F/G (models CTO-G)	41A5071	*
Thailand (models CTO-A)	41A5072	*
Turkish (models CTO-G)	41A5073	*
Turkish (models CTO-A)	41A5074	*
UK English (models CTO-G)	41A5075	*
US Euro (models CTO-G)	41A5076	*
Slovenian (models CTO-G)	41A5077	*

9644 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models A1A A1T E3G A2J A3J A4J H1A H1Q H1T F2G G2V J1G E4G J2J J3Q J4J J5J J8J J6G J7G )	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models A1A A1T E3G A2J A3J A4J H1A H1Q H1T F2G G2V J1G E4G J2J J3Q J4J J5J J8J J6G J7G )	41U3030	1
Mouse, ScrollPoint Optical (800DPI, USB) (models CTO)	41U3019	1
PS/2 Three Button ball mouse (models CTO)	41R0018	1

9644 Adapters and miscellaneous FRUs	FRU#	CRU
Wireless mouse (models CTO)	41A5247	*
USB Transceiver for wireless kybd/mouse (models CTO)	41A5246	*
IEEE 1394 Adapter - Firewire (models A1A A1T)	41D2781	*
Soft Modem V.90/V.44 (models CTO)	29R9729	*
Speakers, 2-piece) Lenovo Logo (models CTO)	41A5331	*
Speakers, 2-piece) Lenovo Logo (models CTO)	41A5334	*
Speaker Power brick - US, Canada, LA low voltage, ASEAN (models CTO)	89P8571	*
Thermal Grease Syringe (models CTO)	91P8835	*
Casper (DVI-I card, full height) (models CTO)	39J9334	*

9644 Power Cords	FRU#	CRU
Power cord - US (models A1A A1T H1A H1T)	39M5080	*
Power cord - China (models CTO-C)	39M5205	*
Power cord - Japan (models CTO-J CTO-E A2J A3J A4J J2J J4J J5J J8J)	24R2633	*
Power cord - Brazil (models CTO-P)	39M5232	*
Power cord - LA High Volt (APU) (models CTO-L CTO-Y)	39M5067	*
Power cord - Australia/New Zealand (models CTO-M)	39M5102	*
Power cord - Korea (models CTO-K CTO-R)	39M5212	*
Power cord - Hong Kong (models CTO-B CTO-H)	39M5151	*
Power cord - UK, Ireland, Singapore, Malaysia, Brunei (models A1A B1G D1G F1G G1G E3G F2G J1G E4G H1A J6G J7G)	39M5150	*
Power cord - Taiwan (models CTO-V)	39M5246	*
Power cord - Italy (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	39M5164	*
Power cord - G models (models A1A H1A)	39M5122	*
Power cord - Denmark (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	39M5129	*
Power cord - Switzerland (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	39M5157	*
Power cord - Israel (models B1G D1G F1G G1G E3G F2G J1G E4G J6G J7G)	39M5171	*
Power cord - South Africa (models A1A B1G D1G F1G G1G E3G F2G J1G E4G H1A J6G J7G )	39M5143	*
Power cord - India (models CTO-Q J3Q)	41R3175	*

9644 Windows XP Home Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models CTO)	42Y5058	1
FR/CF (models CTO)	42Y3598	1
GR (models CTO)	42Y3599	1
IT (models CTO)	42Y3601	1
BR (models CTO)	42Y3602	1
SP/LA (models CTO)	42Y3600	1
DK (models CTO)	42Y3604	1
NL (models CTO)	42Y3804	1
AE (models CTO)	42Y3808	1
SV (models CTO)	42Y3603	1
HE (models CTO)	42Y3805	1
FI (models CTO)	42Y3802	1
NO (models CTO)	42Y3803	1
PL (models CTO)	42Y3806	1
PO (models CTO)	42Y3812	1
RU (models CTO)	42Y3809	1
RE (models CTO)	42Y3801	1
HU (models CTO)	42Y3811	1
CZ (models CTO)	42Y3807	1
TR (models CTO)	42Y3810	1



9644 Windows XP Home Recovery Discs	FRU#	CRU Tier
GK (models CTO)	42Y3813	1
Hong Kong-TC (models CTO)	41W7790	1
Korean (models CTO)	41W7773	1

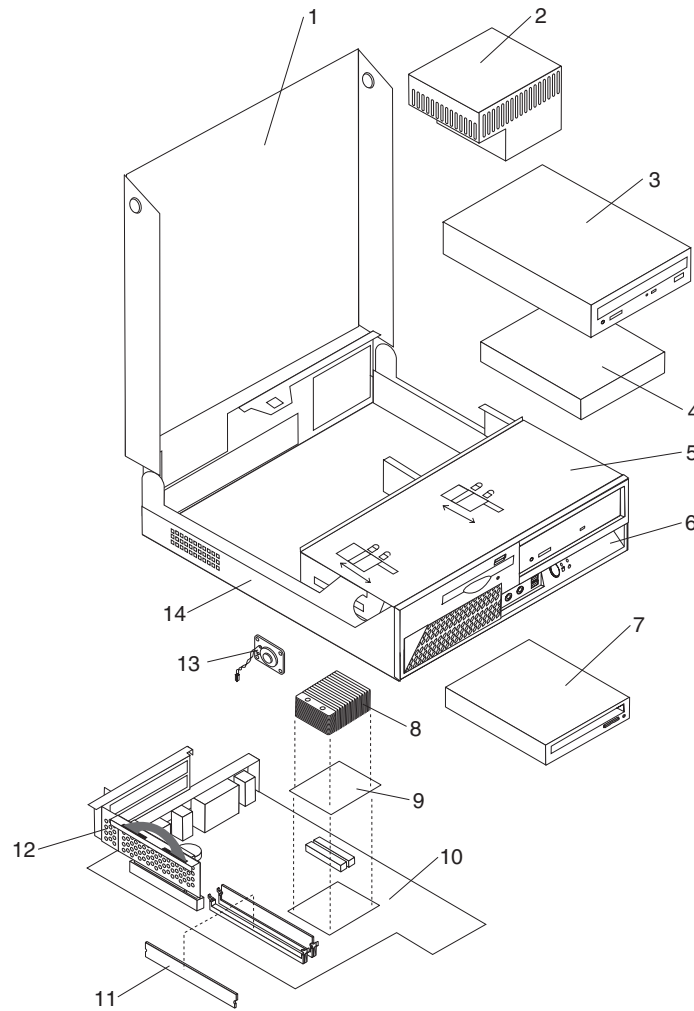
9644 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models A1A B1G D1G E3G F1G G1G CTO J3Q J6G F2G J1G E4G H1A H1Q J7G)	42Y3549	1
FR/CF (models CTO J6G F2G J1G E4G J7G)	42Y3550	1
GR (models CTO J6G F2G J1G E4G J7G)	42Y3551	1
IT (models CTO J6G F2G J1G E4G J7G)	42Y3553	1
BR (models CTO)	42Y3554	1
SP/LA (models CTO)	42Y3552	1
DK (models CTO J6G F2G J1G E4G J7G)	42Y3556	1
NL (models CTO J6G F2G J1G E4G J7G)	42Y3720	1
AE (models CTO J6G F2G J1G E4G J7G)	42Y3724	1
SV (models CTO J6G F2G J1G E4G J7G)	42Y3555	1
HE (models CTO J6G F2G J1G E4G J7G)	42Y3721	1
FI (models CTO J6G F2G J1G E4G J7G)	42Y3718	1
NO (models CTO J6G F2G J1G E4G J7G)	42Y3719	1
PL (models CTO J6G F2G J1G E4G J7G)	42Y3722	1
PO (models CTO J6G F2G J1G E4G J7G)	42Y3728	1
RU (models CTO J6G F2G J1G E4G J7G)	42Y3725	1
RE (models CTO)	42Y3717	1
HU (models CTO J6G F2G J1G E4G J7G)	42Y3727	1
CZ (models CTO J6G F2G J1G E4G J7G)	42Y3723	1
TR (models CTO J6G F2G J1G E4G J7G)	42Y3726	1
GK (models CTO J6G F2G J1G E4G J7G)	42Y3729	1
SL (models CTO J6G F2G J1G E4G J7G)	42Y3730	1
Japanese (models A2J A3J A4J J2J J5J J8J)	41W7767	1
Taiwan-TC (models G2V)	41W7757	1
Hong Kong - TC (models CTO)	41W7762	1
Korea (models CTO)	41W7746	1
Multilingual 1 -- EN NL FR GR IT (models CTO F2G J1G E4G J7G)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models CTO F2G J1G E4G J7G)	42Y3879	1

9644 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models CTO)	87H4420	1
FR/CF (models CTO)	87H4421	1
GR (models CTO)	87H4422	1
SP/LA (models CTO)	87H4423	1
BR (models CTO)	87H4424	1

9644 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
IT (models CTO)	87H4425	1
NO (models CTO)	87H4427	1
SV (models CTO)	87H4428	1
DK (models CTO)	87H4429	1
NL (models CTO)	87H4430	1
CZ (models CTO)	87H4431	1
FI (models CTO)	87H4432	1
PL (models CTO)	87H4433	1
RU (models CTO)	87H4434	1
TR (models CTO)	87H4435	1
HU (models CTO)	87H4436	1
GK (models CTO)	87H4437	1
PO (models CTO)	87H4438	1
KR (models CTO)	87H4442	1
SL (models CTO)	87H4443	1
RE (models CTO)	43C1306	1

9644 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models CTO F2G J1G E4G H1A H1Q J7G)	87H4476	1
FR/CF (models CTO F2G J1G E4G J7G)	87H4477	1
GR (models CTO F2G J1G E4G J7G)	87H4478	1
SP/LA (models CTO F2G J1G E4G J7G)	87H4479	1
BR (models CTO F2G J1G E4G J7G)	87H4480	1
IT (models CTO F2G J1G E4G J7G)	87H4481	1
NO (models CTO F2G J1G E4G J7G)	87H4483	1
SV (models CTO F2G J1G E4G J7G)	87H4484	1
DK (models CTO F2G J1G E4G J7G)	87H4485	1
NL (models CTO F2G J1G E4G J7G)	87H4486	1
CZ (models CTO F2G J1G E4G J7G)	87H4487	1
FI (models CTO F2G J1G E4G J7G)	87H4488	1
PL (models CTO F2G J1G E4G J7G)	87H4489	1
RU (models CTO F2G J1G E4G J7G)	87H4490	1
TR (models CTO F2G J1G E4G J7G)	87H4491	1
HU (models CTO F2G J1G E4G J7G)	87H4492	1
GK (models CTO F2G J1G E4G J7G)	87H4493	1
PO (models CTO F2G J1G E4G J7G)	87H4494	1
TW (models G2V)	87H4496	1
HK (models G2V)	87H4497	1
KR (models CTO F2G J1G E4G J7G)	87H4498	1
SL (models CTO F2G J1G E4G J7G)	87H4499	1
RE (models CTO F2G J1G E4G J7G)	43C1308	1

# Machine Type 9645



The FRUs listed in the following table are not illustrated.

Item #	9645 FRUs	FRU#	CRU Tier
1	Cover (models)	41R6220	1
2	Power Supply - (225 Watt) (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y F2S F2P F2Y F3U F3F F3S F3P F3Y G1U G1F G1S G1P G1Y G2U G2F G2S G2P G2Y G2A G2T J1U J1F J1S J1P J1D J1Y J1G J1M J1A J1T J1K J1R J2U J2F J2S J2P J2Y K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1T K1K K1R K2U K2F K2S K2P K2Y L1G M1G Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1T Q1K Q1R Q2U P2G QFM QKU QKF QLU QLF QMU QMF QSD QSS QSY QTS 21M QPM QQM QRM 28G 29G QWU QWF 22U 22F23U 23F 24U 24F 25U 26U 27U F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5K G6U G6F G7S G7P G7Y J5S J5P J5Y J6U J6F J6S J6P J6Y J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7T J7K J7R J7E J7J K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7T K7K K7R K7E K7J K8S K8P K8Y K9U K9F K9S K9P K9Y L2G L3M Q4U Q4G Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5T Q5K Q5R Q5E Q5J P3G Q7S Q7D Q7Y QAS QAD QAY QGM QEA QET QHU QNU QMU 31U 2AM 2AA 2BM 2BA)	41A9629	2
2	Power Supply - (225 Watt) (Japan) (models J1E J1J Q1E Q1J F4J J7E J7J K7E K7J Q5E Q5J)	41A9632	2

Item #	9645 FRUs	FRU#	CRU Tier
2	Power Supply - (225 Watt) (RObust) (models G3C G3B G3H G4C G4B G4H J1Q J1C J1B J1H J1V J3C J3B J3H K1Q K1C K1B K1H K1V K3C K3B K3H K4C K4B K4H J8Q Q1Q Q1C Q1B Q1H Q1V Q3C P1C G5Q G7C G7B G7H G9C G9B G9H J6C J6B J6H J7Q J7C J7B J7H J7V K7Q K7C K7B K7H K7V KKC KKB KKH KAC KAB KAH L3Q Q5Q Q5C Q5B Q5H Q6C Q6B Q6H Q5V QDC QFH QCQ QDC QVB QVH QUQ 2AQ 3AQ)	41A9635	2
3	DVD-ROM 16X/48X - Black (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y G1U G1F G1S G1P G1Y G3C G3B G3H G4C G4B G4H J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1Q J1T J1C J1B J1H J1V J1K J1R J1E J1J K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J J8Q Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J Q3C P1C QKU QKF QVB QVH QSS QSD QSY QTS 21M QPM QWU QWF 22U 22F 25M 26M 27M QUQ 31U G7S G7P G7Y G7C G7B G7H G9C G9B G9H J5S J5P J5Y J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J QAS QAD QAY 3AM 3AA 3AQ 2AM 2AA 2AQ)	41N3325	1
3	DVD-ROM/CD-RW Combo Drive - 48x/32x/48x/16x - SATA No Software / No Royalty for VISTA (models F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5Q G5K J6U J6F J6S J6P J6Y J6C J6B J6H K9U K9F K9S K9P K9Y L2G Q4U Q4G Q6C Q6B Q6H P3G F3U F3F F3S F3P F3Y G2U G2F G2S G2P G2Y G2A G2T J2U J2F J2S J2P J2Y J3C J3B J3H K2U K2F K2S K2P K2Y L1G M1G Q2U P2G Q7S Q7D Q7Y QEA QET QHU QNU QMU QFM QFH QMU QMF QLU QLF QMU QMF QCQ QRM 28G 23U 23F 24U 24F )	42Y9353	1
3	DVD Recorder Rambo 8 - SATA vista and nonvista (models CTO QDC QQM 29M)	43C1042	1
4	Hard Disk Drive 80GB 7200 rpm Serial ATA (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y F2S F2P F2Y F3U F3F F3S F3P F3Y G1U G1F G1S G1P G1Y G2U G2F G2S G2P G2Y G2A G2T G3C G3B G3H G4C G4B G4H J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1Q J1T J1C J1B J1H J1V J1K J1R J1E J1J J2U J2F J2S J2P J2Y K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J K2U K2F K2S K2P K2Y J8Q Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J Q2U Q3C P1C P2G F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5Q G5K G7S G7P G7Y G7C G7B G7H G9C G9B G9H J5S J5P J5Y K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y L3M L3Q Q4U Q4G Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J P3G Q7S Q7D Q7Y QAS QAD QAY QHU QMU QDC QKU QKF QLU QLF QMU QMF QVB QVH QSS QSD QSY QTS 21M QPM QRM 28G QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U 31U 2AM 2AA 2AQ)	40Y9034	1
4	Hard Disk Drive 160GB 7200 rpm Serial ATA (models J3C J3B J3H K3C K3B K3H K4C K4B K4H L1G G6U G6F J6U J6F J6S J6P J6Y J6C J6B J6H J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J K9U K9F K9S K9P K9Y KKC KKB KKH KAC KAB KAH L2G Q6C Q6B Q6H QGM QEA QET QNUQFM QFH QCQ QQM 29M QUQ 3AM 3AA 3AQ)	40Y9035	1
4	Hard Disk Drive 250GB 7200 rpm Serial ATA (models M1G)	40Y9036	1
4	Hard Disk Drive 500GB 7200 rpm Serial ATA (models CTO)	41X5582	1
5	Rotating bay assembly (models)		2
6	Bezel Plastic Kit (models)	41A7718	2
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models E1A E1T F2S F2P F2Y G3C G3B G3H G4C G4B G4H 9AZ F4J G7C G7B G7H G9C G9B G9H J5C J5B J5H K8S K8P K8Y F4J Q7S Q7D Q7Y QAS QAD QAY)	40Y9109	1

Item #	9645 FRUs	FRU#	CRU Tier
7	Slim Diskette Drive 1.44 MB 3 mode (without FDD cable and bezel ) (models E1A E1T F2S F2P F2Y G3C G3B G3H G4C G4B G4H 9AZ F4J G7C G7B G7H G9C G9B G9H J5C J5B J5H K8S K8P K8Y F4J Q7S Q7D Q7Y QAS QAD QAY)	40Y9111	1
8	Heat Sink (all models)	41A7705	2
9	Pentium D 915 2.8GHz 800MHz FSB 2Mx2 L2 (models F1U F1F F1S F1P F1Y F2S F2P F2Y F3U F3F F3S F3P F3Y F4J F5U F5F F5S F5P F5Y F5G)	41X7775	N
9	Pentium D 925 Processor 2.8 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO G5U G5F G5S G5P G5Y G5M G5Q G5K G6U G6F G7S G7P G7Y G7C G7B G7H G9C G9B G9H)	41X2413	N
9	Pentium D 930 Processor 3.2 GHz 800 FSB 2MBx2 L2 C1-Value (models CTO)	41T1717	N
9	Pentium D 935 Processor 3.2 GHz 800 FSB 2MBx2 L2 (models CTO P1C P2G P3G Q7S Q7D Q7Y QAS QAD QAY)	41X8050	N
9	Pentium D 945 Processor 3.4 GHz 800MHz FSB 2Mx2 L2 (models J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1G J1T J1C J1B J1H J1V J1K J1R J1E J1J J2U J2F J2S J2P J2Y J3C J3B J3H J8Q J5S J5P J5Y J6U J6F J6S J6P J6Y J6C J6B J6H J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J)	41X7776	N
9	Pentium D 805 Processor 2.66GHz 533MHz FSB 2Mx1 L2 (models CTO)	41X7626	N
9	Pentium D 820 Processor 2.8 GHz 800 FSB 2MB L2 B0-Value (95W) (models E1A E1T)	41T1704	N
9	Pentium 4 631 Processor 3.0 GHz 800 FSB 2MB L2 (models B1G)	41T1712	N
9	Pentium 4 641 Processor 3.2 GHz 800 FSB 2MB L2 (models CTO)	41T1713	N
9	Pentium 4 661 Processor 3.6 GHz 800MHz FSB 2MB L2 (models CTO)	41T1715	N
9	Pentium 4 630 Processor 3.0 GHz 800 FSB 2MB L2 (models CTO)	41T1709	N
9	Pentium 4 531 Processor 3.0GHz 800MHz FSB 1M L2 (models CTO)	41T1701	N
9	Pentium 4 541 Processor 3.2GHz 800MHz FSB 1M L2 (models CTO)	41T1702	N
9	Pentium E2160 800/1800MHZ-1M, LGA, EM64T (models 2AM 2AA 2AQ)	43C1968	N
9	Pentium E2140 800/1800MHZ-1M, LGA, EM64T (models QVB QVH QSS QSD QSY QTS QPM QQM QRM 29G 23U 23F 24U 24F QUQ )	43C1967	N
9	Celeron D 331 Processor 2.66GHz 533MHz FSB 256KB L2 (models CTO)	41T1694	N
9	Celeron D 336 Processor 2.80GHz 533 FSB 256KB L2 (models CTO)	41T1695	N
9	Celeron D 341 Processor 2.93GHz 533 FSB 256KB L2 (models CTO)	41T1696	N
9	Celeron D 346 Processor 3.06GHz 533 FSB 256KB L2 (models CTO)	41T1697	N
9	Celeron D 347 Processor 3.06GHz 533 FSB 512KB L2 (models CTO)	42Y8530	N
9	Celeron D 351 Processor 3.2 GHz 533 FSB 256KB L2 (models CTO)	41T1698	N
9	Celeron D 352 Processor 3.2GHz 533MHz FSB 512KB L2 B1-Value (84W) (models CTO)	41T4966	N
9	Celeron D 356 Processor 3.33 GHz 533 FSB 512KB L2 (models A1G)	41T4968	N
9	Celeron 420 Processor 800/1600MHZ-512K,LGA,EM64T A1 (models 21M 28G QWU QWF 22U 22F )	43C3835	N
9	CONROE E4300 800/1800MHZ-2M L2 LGA EM64T B2-Value (models CTO Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J Q2U Q3C Q4U Q4G Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J Q6C Q6B Q6H QGM QEA QET QHU QNU 25U 26U 27U 31U )	42Y8009	N
9	Core 2 Duo E4400 Processor 2.0GHz 800MHz FSB 2M L2 (models QMU QDC QFM QFH QKU QKF QLU QLF QMU QMF QCQ 2BM 2BA 2BQ)	43C2056	N

Item #	9645 FRUs	FRU#	CRU Tier
9	CONROE E6300 1066/1860MHZ-2M L2 LGA EM64T B2-Value (models K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J K2U K2F K2S K2P K2Y K3C K3B K3H K4C K4B K4H K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y K9U K9F K9S K9P K9Y KKC KKB KKH KAC KAB KAH)	41X2495	N
9	CONROE E6400 1066/2130MHZ-2M L2 LGA EM64T B2-Value (models L1G L2G L3M L3Q)	41X2496	N
9	CONROE E6600 1066/2400MHZ-4M L2 LGA EM64T B2-Value (models M1G)	41X5743	N
9	CONROE E6700 1066/2670MHZ-4M L2 LGA EM64T B2-Value (models CTO)	41X5744	N
10	System Board (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y F2S F2P F2Y F3U F3F F3S F3P F3Y G1U G1F G1S G1P G1Y G2U G2F G2S G2P G2Y G2A G2T G3C G3B G3H G4C G4B G4H J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1Q J1T J1C J1B J1H J1V J1K J1R J1E J1J J2U J2F J2S J2P J2Y J3C J3B J3H K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J K2U K2F K2S K2P K2Y K3C K3B K3H K4C K4B K4H L1G M1G J8Q Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J Q2U Q3C P1C P2G F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5Q G5K G6U G6F G7S G7P G7Y G7C G7B G7H G9C G9B G9H J5S J5P J5Y J6U J6F J6S J6P J6Y J6C J6B J6H J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y K9U K9F K9S K9P K9Y KKC KKB KKH KAC KAB KAH L2G L3M L3Q Q4U Q4G Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J Q6C Q6B Q6H P3G Q7S Q7D Q7Y QAS QAD QAY QGM QEA QET QHU QNU QMU QDC QFM QFH QKU QKF QLU QLF QMU QMF QCQ QVB QVH QSS QSD ASY QTS 21M QPM QQM QRM 28G 29G QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U QUQ 31U 2AM 2AA 2AQ 2BM 2BA 2BQ)	43C3480	N
11	512 MB PC2-4200 (533MHz) DDR2 SDRAM (models CTO QAS QAD QAY )	41X4251	1
11	1 GB PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4252	1
11	2 B PC2-4200 (533MHz) DDR2 SDRAM (models CTO)	41X4253	1
11	512 MB PC2-5300 (667MHz) DDR2 SDRAM (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y F2S F2P F2Y G1U G1F G1S G1P G1Y G3C G3B G3H G4C G4B G4H Q2U Q3C P1C F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5Q G5K G6U G6F G7S G7P G7Y G7C G7B G7H G9C G9B G9H J5S J5P J5Y J6U J6F J6S J6P J6Y J6C J6B J6H J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y K9U K9F K9S K9P K9Y KKC KKB KKH L3M L3Q Q4U Q4G Q5U Q5F Q5S Q5P Q5D Q5L Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J Q6C Q6B Q6H Q7S Q7D Q7Y QEA QET QDC QFM QFH QDC QVB QVH QSS QSD QSY QTS 21M 2AM 2AA 2AQ)	41X4255	1
11	1 GB PC2-5300 (667MHz) DDR2 SDRAM (models F3U F3F F3S F3P F3Y G2U G2F G2S G2P G2Y G2A G2T J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1Q J1T J1C J1B J1H J1V J1K J1R J1E J1J J2U J2F J2S J2P J2Y J3C J3B J3H K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J K2U K2F K2S K2P K2Y K3C K3B K3H K4C K4B K4H L1G M1G J8Q Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J P2G KAC KAB KAH L2G P3G QGM QHU QNU QMU QKU QKF QLU QLF QMU QMF QCQ QPM QQM QRM 28G 29G QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U QUQ 31U 2BM 2BA 2BQ)	41X4256	1
11	2 GB PC2-5300 (667MHz) DDR2 SDRAM (models CTO)	41X4257	1
12	Riser card assembly (all models)	41A7730	1
13	Speaker/cable assembly (all models)	39K5012	1

Item #	9645 FRUs	FRU#	CRU Tier
14	Chassis (all models)	41A7717	2

9645 FRUs		FRU#	CRU Tier
Cable SATA 18" (all models)		26K1186	1
Cable SATA Device (all models)		39K5026	1
C2 Cable (Squall) (models)		39K5022	1
Cable pwr/LED (all models)		26K1242	1
Cable Diskette Drive (all models)		26K1248	1
Fan assembly (all models)		26K1253	2
Universal Adapter Bracket 5.25 to 3.5-inch (all models)		32P4743	1
Retention module tool less heat sink (all models)		26K1281	2
Shield, system board (all models)		41R4826	2
Latch bar on cover (all models)		41R6188	2
Internal Plastic Kit (does not include hardfile tray) (all models)		26K1234	2

9645 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
US English (models A1G B1G J1G K1G L1G M1G E1A F1U F3U G1U G2U G2A G3H G4H J1U J1M J1A J1Q J1H J1R J1E J2U J3H K1U K1M K1A K1Q K1H K1R K1E K2U K3H K4H J8Q Q1U Q1G Q1M Q1A Q1Q Q1H Q1R Q1E Q2U P2G F5U G5U G6U J6U J7U K7U K9U Q4U Q5U F5G J7G K7G L2G Q4G Q5G P3G G5M J7M K7M L3M Q5M J7A K7A Q5A G5Q J7Q K7Q L3Q Q5Q G7H G9H J6H J7H K7H KKH KAH Q5H Q6H J7R J7E K7R K7E Q5R Q5E J7L K7L Q5L QHU QNU QMU QGM QEA QFM QFH QKU QLU QMU QCQ QVH 21M QPM QQM QRM 28G 29G QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U QUQ 31U 3AM 3AA 3AQ 2AM 2AA 2AQ)	41A5289	1
China (models G3C G3C J1C J3C K1C K3C K4C Q1C Q3C P1C G7C G9C J6C J7C K7C KKC KAC Q5C Q6C QDC)	TBD	1
Arabic (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G 28G 29G )	41A5290	1
Arabic/French (models CTO-G Q1G)	41A5291	1
Belgian/French (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5292	1
Belgian/UK (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5293	1
Brazilian (models F1P F2P F3P G1P G2P J1P J2P K1P K2P Q1P F5P G5P G7P J5P J6P J7P K7P K8P K9P Q5P 28G 29G )	41A5294	1
Bulgarian (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G QVB 28G 29G )	41A5295	1
Chinese/US (models G3B G4B J1B J1V J3B K1B K1V K3B K4B Q1B Q1V G7B G9B J6B J7B K7B J7V K7V KKB KAB Q5B Q6B)	41A5296	1
Czech (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5297	1
Danish (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5298	1
Dutch (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5299	1

9645 Lenovo Keyboard (Preferred Pro Fullsize)	FRU#	CRU Tier
French (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5300	1
French Canadian 445 (models F1F F3F G1F G2F J1F J2F K1F K2F Q1F F5F G5F G6F J6F J7F K7F K9F Q5F QKF QLF QMF)	41A5301	1
French Canadian 58 (models F1F F3F G1F G2F J1F J2F K1F K2F Q1F F5F G5F G6F J6F J7F K7F K9F Q5F QKF QLF QMF)	41A5302	1
German (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5303	1
Greek (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5304	1
Greek/US (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5305	1
Hebrew (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5306	1
Hungarian (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5307	1
Iceland (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5308	1
Italian 141 (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5309	1
Japanese (models J1J K1J Q1J F4J J7J K7J Q5J)	41A5310	1
Korean (models J1K K1K Q1K G5K J7K K7K Q5K)	41A5311	1
LA Spanish (models F1S F1Y F2S F2Y F3S F3Y G1S G1Y G2S G2Y J1S J1D J1Y J2S J2Y K1S K1D K1Y K2S K2Y Q1S Q1D Q1Y F5S G5S G7S J5S J6S J7S K7S K8S K9S Q5S F5Y G5Y G7Y J5Y J6Y J7D J7Y K7D K7Y K8Y K9Y Q5D Q5Y Q7S QAS Q7D QAD Q7Y QAY QSS QSD QSY )	41A5312	1
Norwegian (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5313	1
Polish (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5314	1
Portuguese (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5315	1
Romanian 096 (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5317	1
Romanian 446 (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5316	1
Russian/Cyrillic (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5318	1
Serbian/Cyrillic (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5319	1
Slovak (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5320	1
Spanish (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5321	1
Swedish/Finn (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5322	1
Swiss (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5323	1



<b>9645 Lenovo Keyboard (Preferred Pro Fullsize)</b>	<b>FRU#</b>	<b>CRU Tier</b>
Thailand (models E1T G2T J1T K1T Q1T QET)	41A5324	1
Turkish 440 (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5325	1
Turkish 179 (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5326	1
UK English (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5327	1
US Euro (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5328	1
Slovenian (models A1G B1G J1G K1G L1G M1G Q1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G )	41A5329	1

<b>9645 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A4961	*
Arabic (models CTO-G)	41A4962	*
Arabic/French (models CTO-G)	41A4963	*
Belgian/French (models CTO-G)	41A4964	*
Belgian/UK (models CTO-G)	41A4965	*
Brazilian (models CTO-L)	41A4966	*
Bulgarian (models CTO-G)	41A4967	*
Hong Kong/Taiwan (models CTO-B CTO-H)	41A4968	*
Czech (models CTO-G)	41A4969	*
Danish (models CTO-G)	41A4970	*
Dutch (models CTO-G)	41A4971	*
French (models CTO-G)	41A4972	*
French Canadian 445 (models CTO-U)	41A4973	*
French Canadian 58 (models CTO-U)	41A4974	*
German (models CTO-G)	41A4975	*
Greek (models CTO-G)	41A4976	*
Hebrew (models CTO-G)	41A4977	*
Hungarian (models CTO-G)	41A4978	*
Iceland (models CTO-G)	41A4979	*
Italian (models CTO-G)	41A4980	*
Japanese (models CTO-J)	41A4981	*
Korean (models CTO-K)	41A4982	*
LA Spanish (models CTO-L)	41A4983	*
Norwegian (models CTO-G)	41A4984	*
Polish (models CTO-G)	41A4985	*
Portuguese (models CTO-G)	41A4986	*
Romanian (models CTO-G)	41A4987	*
Russian/Cy (models CTO-G)	41A4988	*
Serbian/Cyrillic (models CTO-G)	41A4989	*

<b>9645 Keyboard (Lenovo, USB Enhanced Performance)</b>	<b>FRU#</b>	<b>CRU</b>
Slovak (models CTO-G)	41A4990	*
Spanish (models CTO-G)	41A4991	*
Swedish/Finn (models CTO-G)	41A4992	*
Swiss F/G (models CTO-G)	41A4993	*
Thailand (models CTO-A)	41A4994	*
Turkish 440 (models CTO-G)	41A4995	*
Turkish 179 (models CTO-G)	41A4996	*
UK English (models CTO-G)	41A4997	*
US Euro (models CTO-G)	41A4998	*
Slovenian (models CTO-G)	41A4999	*

<b>9645 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models CTO-U CTO-G)	41A5248	*
Arabic (models CTO-G)	41A5249	*
Arabic/French (models CTO-G)	41A5250	*
Belgian/French (models CTO-G)	41A5251	*
Belgian/UK (models CTO-G)	41A5252	*
Brazilian (models CTO-L)	41A5253	*
Bulgarian (models CTO-G)	41A5254	*
Chinese/US (models CTO-B CTO-H)	41A5255	*
Czech (models CTO-G)	41A5256	*
Danish (models CTO-G)	41A5257	*
Dutch (models CTO-G)	41A5258	*
French (models CTO-G)	41A5259	*
French Canadian 445 (models CTO-U)	41A5260	*
French Canadian 58 (models CTO-U)	41A5261	*
German (models CTO-G)	41A5262	*
Greek (models CTO-G)	41A5263	*
Hebrew (models CTO-G)	41A5265	*
Hungarian (models CTO-G)	41A5266	*
Iceland (models CTO-G)	41A5267	*
Italian (models CTO-G)	41A5268	*
Japanese (models CTO-J)	41A5269	*
Korean (models CTO-K)	41A5270	*
LA Spanish (models CTO-L)	41A5271	*
Norwegian (models CTO-G)	41A5272	*
Polish (models CTO-G)	41A5273	*
Portuguese (models CTO-G)	41A5274	*
Romanian 446 (models CTO-G)	41A5275	*
Romanian 96 (models CTO-G)	41A5276	*
Russian/Cy (models CTO-G)	41A5277	*

<b>9645 Keyboard (Fingerprint reader USB)</b>	<b>FRU#</b>	<b>CRU</b>
Serbian/Cyrillic (models CTO-G)	41A5278	*
Slovak (models CTO-G)	41A5279	*
Spanish (models CTO-G)	41A5280	*
Swedish/Finn (models CTO-G)	41A5281	*
Swiss F/G (models CTO-G)	41A5282	*
Thailand (models CTO-A)	41A5283	*
Turkish 440 (models CTO-G)	41A5284	*
Turkish 179 (models CTO-G)	41A5285	*
UK English (models CTO-G)	41A5286	*
US Euro (models CTO-G)	41A5287	*
Slovenian (models CTO-G)	41A5288	*

<b>9645 Lenovo Keyboard (Wireless, Enhanced)</b>	<b>FRU#</b>	<b>CRU</b>
US English/Chinese/US (models CTO-U CTO-G)	41A5219	*
Belgian/French (models CTO-U CTO-G)	41A5220	*
Belgian/UK (models CTO-G)	41A5221	*
Chinese/US (models CTO-B CTO-H)	41A5222	*
Czech (models CTO-G)	41A5223	*
Danish (models CTO-G)	41A5224	*
Dutch (models CTO-G)	41A5225	*
French (models CTO-G)	41A5226	*
French Canadian (models CTO-U)	41A5227	*
French Canadian (models CTO-U)	41A5228	*
German (models CTO-G)	41A5229	*
Greek (models CTO-G)	41A5230	*
Greek/US (models CTO-G)	41A5231	*
Hungarian (models CTO-G)	41A5232	*
Iceland (models CTO-G)	41A5233	*
Italy (models CTO-G)	41A5234	*
Japanese (models CTO-J)	41A5235	*
Norwegian (models CTO-G)	41A5236	*
Polish (models CTO-G)	41A5237	*
Portuguese (models CTO-G)	41A5238	*
Slovak (models CTO-G)	41A5239	*
Spanish (models CTO-G)	41A5240	*
Swedish/Finn (models CTO-G)	41A5241	*
Swiss (models CTO-G)	41A5242	*
UK English (models CTO-G)	41A5243	*
US Euro (models CTO-G)	41A5244	*
Slovenian (models CTO-G)	41A5245	*

9645 Keyboard (PS2 Preferred Pro)	FRU#	CRU
US English (models CTO-U CTO-G)	41A5039	*
Arabic (models CTO-G)	41A5040	*
Arabic/French (models CTO-G)	41A5041	*
Belgian/French (models CTO-G)	41A5042	*
Belgian/UK (models CTO-G)	41A5043	*
Brazil/Portuguese (models CTO-L)	41A5044	*
Bulgarian (models CTO-G)	41A5045	*
Chinese/US (models CTO-B CTO-H)	41A5046	*
Czech (models CTO-G)	41A5047	*
Danish (models CTO-G)	41A5048	*
Dutch (models CTO-G)	41A5049	*
French (models CTO-G)	41A5050	*
French Canadian 445 (models CTO-U)	41A5051	*
French Canadian 58 (models CTO-U)	41A5052	*
German (models CTO-G)	41A5053	*
Greek (models CTO-G)	41A5054	*
Greek/US (models CTO-G)	41A5080	*
Hebrew (models CTO-G)	41A5055	*
Hungarian (models CTO-G)	41A5056	*
Iceland (models CTO-G)	41A5057	*
Italian (models CTO-G)	41A5058	*
Japanese (models CTO-J)	41A5059	*
Korean (models CTO-K)	41A5060	*
LA Spanish (models CTO-L)	41A5061	*
Norwegian (models CTO-G)	41A5062	*
Polish (models CTO-G)	41A5063	*
Portuguese (models CTO-G)	41A5064	*
Romanian (models CTO-G)	41A5065	*
Russian/Cyrilic (models CTO-G)	41A5066	*
Serbian/Cyrilic (models CTO-G)	41A5067	*
Slovak (models CTO-G)	41A5068	*
Spanish (models CTO-G)	41A5069	*
Swedish/Finn (models CTO-G)	41A5070	*
Swiss F/G (models CTO-G)	41A5071	*
Thailand (models CTO-A)	41A5072	*
Turkish (models CTO-G)	41A5073	*
Turkish (models CTO-A)	41A5074	*
UK English (models CTO-G)	41A5075	*
US Euro (models CTO-G)	41A5076	*
Slovenian (models CTO-G)	41A5077	*

9645 Mice	FRU#	CRU Tier
Mouse, Optical Wheel (400DPI USB) (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y F2S F2P F2Y F3U F3F F3S F3P F3Y G1U G1F G1S G1P G1Y G2U G2F G2S G2P G2Y G2A G2T G3C G3B G3H G4C G4B G4H J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1Q J1T J1C J1B J1H J1V J1K J1R J1E J1J J2U J2FJ2S J2P J2Y J3C J3B J3H K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J K2U K2F.K2S K2P K2Y K3C K3B K3H K4C K4B K4H L1G M1G J8Q Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J Q2U Q3C P1C P2G F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5Q G5K G6U G6F G7S G7P G7Y G7C G7B G7H G9C G9B G9H J5S J5P J5Y J6U J6F J6S J6P J6Y J6C J6B J6H J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y K9U K9F K9S K9P K9Y KKC KKB KKH KAC KAB KAH L2G L3M L3Q Q4U Q4G Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J Q6C Q6B Q6H P3G Q7S Q7D Q7Y QAS QAD QAY QGM QEA QET QHU QNU QMU QDC QFM QFH QKU QKF QLU QLF QMU QMF QCQ QVB QVH QSS QSD ASY QTS 21M QPM QQM QRM 28G 29G QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U QUQ 31U 3AM 3AA 3AQ 2AM 2AA 2AQ)	41U3013	1
Mouse, Optical Wheel (400DPI USB) -- alt to 41U3013 (models A1G B1G E1A E1T F1U F1F F1S F1P F1Y F2S F2P F2Y F3U F3F F3S F3P F3Y G1U G1F G1S G1P G1Y G2U G2F G2S G2P G2Y G2A G2T G3C G3B G3H G4C G4B G4H J1U J1F J1S J1P J1L J1D J1Y J1G J1M J1A J1Q J1T J1C J1B J1H J1V J1K J1R J1E J1J J2U J2FJ2S J2P J2Y J3C J3B J3H K1U K1F K1S K1P K1L K1D K1Y K1G K1M K1A K1Q K1T K1C K1B K1H K1V K1K K1R K1E K1J K2U K2F.K2S K2P K2Y K3C K3B K3H K4C K4B K4H L1G M1G J8Q Q1U Q1F Q1S Q1P Q1L Q1D Q1Y Q1G Q1M Q1A Q1Q Q1T Q1C Q1B Q1H Q1V Q1K Q1R Q1E Q1J Q2U Q3C P1C P2G F4J F5U F5F F5S F5P F5Y F5G G5U G5F G5S G5P G5Y G5M G5Q G5K G6U G6F G7S G7P G7Y G7C G7B G7H G9C G9B G9H J5S J5P J5Y J6U J6F J6S J6P J6Y J6C J6B J6H J7U J7F J7S J7P J7L J7D J7Y J7G J7M J7A J7Q J7T J7C J7B J7H J7V J7K J7R J7E J7J K7U K7F K7S K7P K7L K7D K7Y K7G K7M K7A K7Q K7T K7C K7B K7H K7V K7K K7R K7E K7J K8S K8P K8Y K9U K9F K9S K9P K9Y KKC KKB KKH KAC KAB KAH L2G L3M L3Q Q4U Q4G Q5U Q5F Q5S Q5P Q5L Q5D Q5Y Q5G Q5M Q5A Q5Q Q5T Q5C Q5B Q5H Q5V Q5K Q5R Q5E Q5J Q6C Q6B Q6H P3G Q7S Q7D Q7Y QAS QAD QAY QGM QEA QET QHU QNU QMU QDC QFM QFH QKU QKF QLU QLF QMU QMF QCQ QVB QVH QSS QSD ASY QTS 21M QPM QQM QRM 28G 29G QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U QUQ 31U 3AM 3AA 3AQ 2AM 2AA 2AQ)	41U3030	1
Mouse, ScrollPoint Optical (800DPI, USB) (models CTO)	41U3019	1
PS/2 Three Button ball mouse) (models CTO)	41R0018	1

9645 Adapters and miscellaneous FRUs	FRU#	CRU
Wireless mouse (models CTO)	41A5247	*
USB Transceiver for wireless kybd/mouse (models CTO)	41A5246	*
IEEE 1394 Adapter - Firewire (models E1A E1T)	41D2781	*
Soft Modem V.90/V.44 (models CTO 9AZ)	29R9729	*
Speakers, 2-piece) Lenovo Logo (models CTO)	41A5331	*
Speakers, 2-piece) Lenovo Logo (models CTO)	41A5334	*
Speaker Power brick - US, Canada, LA low voltage, ASEAN (modelsCTO QKU QLU QMU QWU 22U 23U 24U 25U 26U 27U QSS QTS 31U)	89P8571	*
Thermal Grease Syringe (models CTO)	91P8835	*
Casper (DVI-I card, full height) (models CTO)	39J9334	*

9645 Power Cords	FRU#	CRU Tier
Power cord - US (models E1A E1T F1U F1F F1S F2S F3U F3F F3S G1U G1F G1S G2U G2F G2S G2A G2T J1U J1FJ1S J1D J1L J1A J1T J2U J2F J2S K1U K1F K1S K1D K1L.K1A K1T K2U K2F K2S Q1U Q1F Q1S Q1D Q1L Q1A Q1T Q2U F5U G5U J6U J7U K7U K9U Q4U Q5U G6U F5F G5F G6F J6F J7F K7F K9F Q5F F5S G5S G7S J5S J6S J7S K7S K8S K9S Q5S QHU QNU QMU Q7S QAS Q7D QAD QEA QET QKU QKF QLU QLF QMU QMF QWU QWF 22U 22F 23U 23F 24U 24F 25U 26U 27U QSS QTS QSD 31U 2AA 3AA )	39M5080	1
Power cord - China (models G3C G4C J1C J3C K1C K3C K4C Q3C P1C G7C G9C J6C J7C K7C KKC KAC Q5C Q6C QDC)	39M5205	1
Power cord - Japan (models J1E J1J K1E K1J F4J J7E J7J K7E K7J Q5E Q5J)	24R2633	1
Power cord - Brazil (models F1P F2P F3P G1P G2P J1P J2P K1P K2P F5P G5P G7P J5P J6P J7P K7P K8P K9P Q5P)	39M5232	1
Power cord - LA High Volt (APU) (models F1Y F2Y F3Y G1Y G2Y J1Y J1L J2Y K1Y K1L K2Y Q1Y Q1L F5Y G5Y G7Y J5Y J6Y J7Y K7Y K8Y K9Y Q5Y J7L K7L Q5L Q7Y QAY QSY)	39M5067	1
Power cord - Australia/New Zealand (models J1M K1M Q1M G5M J7M K7M L3M Q5M QGM 21M QPM QQM QRM 2AM 3AM)	39M5102	1
Power cord - Korea (models J1K J1R K1K K1R Q1K G5K J7K J7R K7K K7R Q5K Q5RQ1A)	39M5212	1
Power cord - Hong Kong (models G3B G3H G4B G4H J1B J1H J3B J3H K1B K1H K3B K3H K4B K4H G7B G7H G9B G9H J6B J6H J7B J7H K7B K7H KKB KKH KAB KAH Q5B Q5H Q6B Q6H)	39M5151	1
Power cord - UK Ireland Singapore Malaysia Brunei (models A1G B1G E1A G2A J1G J1A K1G K1A L1G M1G P2G F5G J7G K7G L2G Q4G Q5G P3G J7A K7A Q5A QEA 28G 29G 2AA 3AA)	39M5150	1
Power cord - Taiwan (models J1V K1V J7V K7V Q5V)	39M5246	1
Power cord - Italy/Chile (models A1G B1G F1S F2S F3S G1S G2S F1Y F2Y F3Y G1Y G2Y J1S J1Y J1L J1G J2S J2Y K1S K1Y K2S K2Y L1G M1G P2G F5G J7G K7G L2G Q4G Q5G P3G F5S G5S G7S J5S J6S J7S K7S K8S K9S Q5S F5Y G5Y G7Y J5Y J6Y J7Y K7Y K8Y K9Y Q5Y J7L K7L Q5L Q7S QAS Q7Y QAY QSS QTS Q5Y 28G 29G)	39M5164	1
Power cord - A/G Models (models E1A G2A J1A K1A J7A K7A Q5A QEA 2AA 3AA )	39M5122	1
Power cord - Denmark (models A1G B1G J1G K1G L1G M1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G)	39M5129	1
Power cord - Switzerland (models A1G B1G J1G K1G L1G M1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G)	39M5157	1
Power cord - Israel (models A1G B1G J1G K1G L1G M1G P2G F5G J7G K7G L2G Q4G Q5G P3G 28G 29G)	39M5171	1
Power cord - South Africa (models A1G B1G E1A G2A J1G J1M J1A K1G K1M K1A L1G M1G P2G F5G J7G K7G L2G Q4G Q5G P3G G5M J7M K7M L3M Q5M J7A K7A Q5A QGM QEA 28G 29G 21M QPM QQM QRM 2AM 3AM 2AA 3AA )	39M5143	1
Power cord - India (models J1Q K1Q J8Q Q1Q G5Q J7Q K7Q L3Q Q5Q QCQ QUQ 2AQ 3AQ)	41R3175	1

9645 Windows XP Home Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models E1A G4H K4H CTO)	42Y5058	1
FR/CF (models CTO)	42Y3598	1
GR (models CTO)	42Y3599	1
IT (models CTO)	42Y3601	1
BR (models CTO)	42Y3602	1
SP/LA (models CTO)	42Y3600	1

9645 Windows XP Home Recovery Discs	FRU#	CRU Tier
DK (models CTO)	42Y3604	1
NL (models CTO)	42Y3804	1
AE (models CTO)	42Y3808	1
SV (models CTO)	42Y3603	1
HE (models CTO)	42Y3805	1
FI (models CTO)	42Y3802	1
NO (models CTO)	42Y3803	1
PL (models CTO)	42Y3806	1
PO (models CTO)	42Y3812	1
RU (models CTO)	42Y3809	1
RE (models CTO)	42Y3801	1
HU (models CTO)	42Y3811	1
CZ (models CTO)	42Y3807	1
TR (models CTO)	42Y3810	1
GK (models CTO)	42Y3813	1
Simplified Chinese (models G4C K4C)	41W7778	1
Hong Kong-TC (models G4B K4B CTO)	41W7790	1
Korean (models CTO)	41W7773	1

9645 Windows XP Pro Recovery Discs	FRU#	CRU Tier
US/UK/AP/TH (models A1G B1G F1U F3U G1U G2U G2A G3H J1U J1G J1M J1A J1Q J1H J1R J1E J2U J3H K1U K1G K1M K1A K1Q K1H K1R K1E K2U K3H L1G M1G Q1G P2G CTO Q1U Q1M Q1A Q1Q Q1H Q1R Q1E Q2U QHU QNU QMU QGM QEA QMU 21M QRM 28G 2AM 2AA 2AQ 3AA 3AQ 3AM F5U F5G G5U G5M G5Q G6U G7H J6U J6H J7U J7G J7M J7A J7Q J7H J7R J7E K7U K7G K7M K7A K7Q K7H K7R K7E Q5U Q5G Q5M Q5A Q5Q Q5H Q5R Q5E K9U KKH L3M L3Q Q4U L2G Q4G P3G CTO QFM QFH QKU QKF QLU QLF QCQ QVH QPM QQM 29G QWU 24U 27U QUQ 31U)	42Y3549	1
FR/CF (models F1F F3F G1F G2F J1F J1G J2F K1G K1F K2F L1G M1G Q1G P2G CTO Q1F CTO QMF 28G F5F F5G G5F G6F J6F J7F K7F Q5F K9F J7G K7G Q5G L2G Q4G P3G CTO 29G QWF 24F)	42Y3550	1
GR (models J1G K1G L1G M1G Q1G P2G CTO 28G)	42Y3551	1
IT (models J1G K1G L1G M1G Q1G P2G CTO 28G)	42Y3553	1
BR (models F1P F2P F3P G1P G2P J1P J2P K1P K2P Q1P CTO)	42Y3554	1
SP/LA (models F1S F1Y F2S F2Y F3S F3Y G1S G1Y G2S G2Y J1S J1D J1Y J1G J2S J2Y K1G K1S K1Y K1D K2S K2Y L1G M1G Q1G P2G CTO Q1S Q1D Q1Y Q7S Q7D Q7Y QAS QAD QAY QTS 28G F5S F5Y F5G G5S G5Y G7S G7Y J5S J5Y J6S J6Y J7S J7D J7Y K7S K7D K7Y Q5S Q5D Q5Y K8S K8YK9S K9Y J7G K7G Q5G L2G Q4G P3G CTO QSS QSD QSY)	42Y3552	1
DK (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3556	1
NL (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3720	1
AE (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3724	1
SV (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3555	1

9645 Windows XP Pro Recovery Discs	FRU#	CRU Tier
HE (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3721	1
FI (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3718	1
NO (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3719	1
PL (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3722	1
PO (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3728	1
RU (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3725	1
RE (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3717	1
HU (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3727	1
CZ (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3723	1
TR (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3726	1
GK (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3729	1
SL (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3730	1
Japanese (models J1J K1J Q1J)	41W7767	1
Simplified Chinese (models G3C J1C J3C K1C K3C Q1C QDC G7C J6C J7C K7C Q5C KKC)	41W7751	1
Taiwan - TC (models J1V K1V Q1V CTO)	41W7757	1
Hong Kong - TC (models G3B J1B J3B K1B K3B Q1B CTO G7B J6B J7B K7B Q5B KKB QVB)	41W7762	1
Korea (models J1K K1K Q1K CTO G5K)	41W7746	1
Multilingual 1 -- EN NL FR GR IT (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3645	1
Multilingual 2 -- EN DK FI NO SV (models J1G K1G L1G M1G Q1G P2G CTO 28G F5G J7G K7G Q5G L2G Q4G P3G 29G)	42Y3879	1

9645 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models G9H KAH CTO)	87H4420	1
FR/CF (models CTO)	87H4421	1
GR (models CTO)	87H4422	1
SP/LA (models CTO)	87H4423	1
BR (models CTO)	87H4424	1
IT (models CTO)	87H4425	1
NO (models CTO)	87H4427	1
SV (models CTO)	87H4428	1
DK (models CTO)	87H4429	1
NL (models CTO)	87H4430	1



9645 Vista Home Basic 32 Recovery DVDs	FRU#	CRU Tier
CZ (models CTO)	87H4431	1
FI (models CTO)	87H4432	1
PL (models CTO)	87H4433	1
RU (models CTO)	87H4434	1
TR (models CTO)	87H4435	1
HU (models CTO)	87H4436	1
GK (models CTO)	87H4437	1
PO (models CTO)	87H4438	1
CS (models G9C KAC)	87H4439	1
TW (models G9C KAB)	87H4440	1
HK (models G8B KAB)	87H4441	1
KR (models CTO)	87H4442	1
KR (models CTO)	87H4442	1
SL (models CTO)	87H4443	1
RE (models CTO)	43C1306	1

9645 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
US/UK/AP/TH (models F5U F5G G5U G5M G5Q G6U G7H J6U J6H J7U J7G J7M J7A J7Q J7H J7R J7E K7U K7G K7M K7A K7Q K7H K7R K7E Q5U Q5G Q5M Q5A Q5Q Q5H Q5R Q5E K9U KKH L3M L3Q Q4U L2G Q4G P3G CTO QFM QFH QKU QKF QLU QLF QCQ QVH QPM QQM 29G QWU 24U 27U QUQ 31U )	87H4476	1
FR/CF (models F5F F5G G5F G6F J6F J7F K7F Q5F K9F J7G K7G Q5G L2G Q4G P3G CTO 29G QWF 24F)	87H4477	1
GR (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G 29G )	87H4478	1
SP/LA (models F5S F5Y F5G G5S G5Y G7S G7Y J5S J5Y J6S J6Y J7S J7D J7Y K7S K7D K7Y Q5S Q5D Q5Y K8S K8YK9S K9Y J7G K7G Q5G L2G Q4G P3G CTO QSS QSD QSY)	87H4479	1
BR (models F5P G5P G7P J5P J6P J7P K7P Q5P K8P K9P CTO)	87H4480	1
IT (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4481	1
Japanese (models F4J J7J K7J Q5J CTO)	87H4482	1
NO (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4483	1
SV (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4484	1
DK (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4485	1
NL (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4486	1
CZ (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4487	1
FI (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4488	1
PL (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4489	1
RU (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4490	1
TR (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4491	1
HU (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4492	1
GK (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4493	1
PO (models F5G J7G K7G Q5G L2G Q4G P3G CTO 29G )	87H4494	1
Simplified Chinese (models G7C J6C J7C K7C Q5C KKC)	87H4495	1

9645 Vista Business 32 Recovery DVDs	FRU#	CRU Tier
TW (models G7B J6B J7B K7B Q5B KKB CTO QVB)	87H4496	1
HK (models G7B J6B J7B K7B Q5B KKB CTO QVB)	87H4497	1
KR (models G5K CTO)	87H4498	1
SL (models F5G CTO)	87H4499	1
RE (models F5G CTO)	43C1308	1

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## Chapter 10. Additional Service Information

This chapter provides additional information that the service representative might find helpful.

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### Security features

Security features in this section include the following:

- Passwords
- Vital Product Data
- Management Information Format (MIF)

### Hardware controlled Passwords

Hardware controlled passwords are set using the Setup Utility program. For more information about passwords, see "Using passwords" on page 49.

### Operating system password

An operating system password is very similar to a power-on password and denies access to the computer by an unauthorized user when the password is activated. The computer is unusable until the password is entered and recognized by the computer.

### Vital product data

Each computer has a unique Vital Product Data (VPD) code stored in the nonvolatile memory on the system board. After you replace the system board, the VPD must be updated. To update the VPD, see "Flash update procedures."

---

### BIOS levels

An incorrect level of BIOS can cause false errors and unnecessary FRU replacement. Use the following information to determine the current level of BIOS installed in the computer, the latest BIOS available for the computer, and where to obtain the latest level of BIOS.

- To determine the current Level of BIOS:
  - Start the Setup Utility.
  - Select Standard CMOS Features.
- Sources for obtaining the latest level BIOS available
  1. Lenovo support web site:  
<http://www.lenovo.com/support/>
  2. Lenovo Customer Support Center
  3. Levels 1 and 2 Support

To update (flash) the BIOS, see "Flash update procedures."

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### Flash update procedures

This section details how to flash (update) the BIOS.

## Updating (flashing) BIOS from a diskette

1. Insert a system program update (flash) diskette into the diskette drive. system program updates are available at <http://www.lenovo.com/support> on the World Wide Web.
2. Turn on the computer. If it is already on, you must turn it off and back on. The update begins.
3. Follow the instructions on the screen to complete the update.

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## Recovering from a POST/BIOS update failure

**Attention:** If an interruption occurs during a POST/BIOS update (flash update), the computer might not restart correctly. If this occurs, perform the following procedure (also known as a Boot-block recovery).

**Note:** If your computer has no internal diskette drive, an optional USB diskette drive must be connected to use the BIOS flash diskette.

1. Turn the computer off and insert the special recovery BIOS flash diskette in the diskette drive.
2. Turn the computer on.
3. The recovery session takes two to three minutes. During this time you will hear a series of beeps. After the update session completes, the series of beeps ends and the computer automatically turns off. There is no video during the recovery session.
4. Remove the special recovery BIOS flash diskette from the diskette drive.

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## Power management

Power management reduces the power consumption of certain components of the computer such as the system power supply, processor, hard disk drives, and some monitors.

### Automatic configuration and power interface (ACPI) BIOS

Being an ACPI BIOS system, the operating system is allowed to control the power management features of the computer and the setting for Advanced Power Management (APM) BIOS mode is ignored. Not all operating systems support ACPI BIOS mode.

### Automatic Power-On features

The Automatic Power-On features within the Power Management menu allow you to enable and disable features that turn on the computer automatically.

- **Serial Port A Ring Detect:** With this feature set to **Enabled** and an external modem connected to serial port (COM1), the computer will turn on automatically when a ring is detected on the modem.
- **PCI Modem Ring Detect:** With this feature set to **Enabled**, the computer will turn on automatically when a ring is detected on the internal modem.
- **PCI Wake Up:** This feature allows PCI cards that support this capability to wake the system.
- **Wake Up on Alarm:** You can specify a date and time at which the computer will be turned on automatically. This can be either a single event or a daily event.
- **Wake on LAN:** If the computer has a properly configured token-ring or Ethernet LAN adapter card that is Wake on LAN-enabled and there is remote network management software, you can use the Wake on LAN feature. When you set Wake on LAN to **Enabled**, the computer will turn on when it receives a specific signal from another computer on the local area network (LAN).



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